



RF & Microwave

PRODUCT SELECTION
GUIDE

MACOM[®]

Partners from RF to Light

macom.com

MACOM's 2024 RF & Microwave Product Selection Guide features our catalog of thousands of products, which include integrated circuits (ICs), multi-chip modules (MCMs), power pallets and transistors, MMICs, diodes, amplifiers, switches and switch limiters, passive and active components, linearizers and complete subsystems. Inside are detailed product specifications designed to help engineers quickly evaluate and select the right products to differentiate their designs. Our selection guide includes application diagrams and key technologies to further assist you in your selection process.

Additional product information can be found on our website at [macom.com](https://www.macom.com). Contact our worldwide sales offices, authorized representatives and industry-leading distributors to request samples, test boards and application support. All contacts are listed on our website at: www.macom.com/contact



Why MACOM?	4 – 5	Frequency Generation	70 – 71
MACOM Technologies	6 – 7	Voltage Controlled Oscillators (VCOs)	71
Markets & Applications	8 – 9	NLTL GaAs Comb Generators	71
Block Diagrams	10 – 11	Low Noise Gain Block Amplifiers	71
RF Power Products	12 – 20	Integrated ICs & Modules	72 – 74
High Voltage GaN	13	Radar Core Chips	73
MMICs	13	5G Switch LNA Modules	73
GaN MMICs	13	PMIC	74
MACOM PURE CARBIDE	14 – 16	5G Transmit/Receive Front End Modules	74
GaN: Unmatched Packaged Transistors	14	High Power Switch and Bias Module	74
GaN: Internally Matched	14 – 15	Passives	75 – 93
GaN: Transistor Die	15	MACOM KV CAPS	76 – 78
GaN: Partially Matched Packaged Transistors	15	50 V	76
GaN: Power Amplifier	15 – 16	200 V	76 – 77
Power Amplifiers:	16 – 17	500 V	77 – 78
Si LDMOS	17	1000 V	78
Silicon Bipolar, MOSFET and Pallets	17 – 20	Bias Networks	79
Pallets: GaN-on-SiC	20	Couplers	79 – 82
Pallets: Silicon Bipolar and MOSFET Pallets	20	Power Dividers/Combiners	82 – 85
Amplifiers	21 – 33	Transformers/Baluns	85 – 88
Active Splitters	22	MNS Chip Capacitors	88
Amplifier Gain Blocks	22 – 23	High Q MNOS Series Chip Capacitors	88 – 89
MMIC Power Amplifiers	23 – 24	Beam Lead Capacitors	89
Linear Amplifiers	24	Binary Chip Capacitors	89
High Frequency Amplifiers	24 – 25	DC Floating/RF Bypass Mounting Capacitors	89 – 90
Low Noise Amplifiers	25 – 26	MNOS Series Capacitors	90 – 91
Low Phase Noise Amplifiers	26	Filters/Diplexers	91 – 93
Variable Gain Amplifiers	27	Equalizers	93
CATV Amplifiers	27	Small Signal Transistor	94
Distributed Amplifiers	27 – 28	Silicon Bipolar	94
FTTx Amplifiers	28	Silicon MMIC Gain Blocks	94
Hybrid Amplifiers	28 – 33	Space & High-Reliability	95 – 118
Gain Block	28 – 30	General Purpose Gain Block	96 – 98
Low Noise	30 – 33	Low Noise Hybrid Amplifiers	98 – 102
Limiting	33	Mixers	102 – 105
Diodes	34 – 54	Power Dividers	105
Variable Varactor Diodes	35 – 37	Varactor Tuning Diodes	105
Step Recovery Diodes	37 – 39	Multiplier Step Recovery Diodes	105 – 106
PIN Switch and Attenuator Diodes	39 – 46	PIN Switch and Attenuator Diodes	106 – 109
PIN Limiter Diodes	46 – 48	PIN Limiter Diodes	109 – 110
Schottky Mixer and Detector Diodes	48 – 53	Schottky Mixer and Detector Diodes	110 – 114
THz Schottky Barrier Diodes	53	Schottky THz Barrier Diodes	114
Low Magnetic and Non-Magnetic PIN Diodes	54	Switches	114 – 115
Control Products	55 – 62	Phase Detectors	115
Limiters	56	MNS Chip Capacitors	115
Power Detectors	56	High Q MNOS Series Chip Capacitors:	
Digital Phase Shifters	56 – 57	9000 Series VB >50 V & 9100 Series VB >100 V	115
Digital Attenuators	57	Beam Lead Capacitors: 9000 Series VB >50 V	116
Fixed Attenuators	57	DC Floating/RF Bypass Mounting Capacitors:	
CMOS Switch Drivers	57 – 58	9100 & 9000 Series	116 – 117
Voltage Variable Attenuators	58	MNOS Series Capacitors	117 – 118
Switches	58 – 62	NLTL GaAs Comb Generators	118
Phase Detectors	62	True Time Delay	118
Frequency Conversion	63 – 69	Linear Modules and Subsystems	119 – 120
Frequency Multipliers	64	Linear Module Space	120
Hybrid Mixers	64 – 68	Linear Products	120
Receivers/Down Converters	68	Appendix and Index	121 – 138
Transceivers	68	Package Selection Guide	122 – 126
Up Converters	68	Decibels-Volts-Watts Conversions	127
Mixers	68 – 69	Wavelength and Frequency	128
		Part Number Index	129 – 141



Partners from RF to Light

MACOM Technology Solutions Holdings, Inc. (MACOM) supplies key enabling technologies for the Cloud Connected Apps Economy and Modern Networked Battlefield. Recognized for its broad catalog portfolio of technologies and products, MACOM provides high-performance RF optical semiconductor products for diverse applications ranging from high speed optical, satellite communications, wired and wireless infrastructure networks, to military and civil radar systems. A pillar of the semiconductor industry, we thrive on over 70 years of solving our customers' most complex problems as their trusted partner for solutions from RF to Light. Headquartered in Lowell, Massachusetts, MACOM has achieved certification to the IATF16949 automotive standard, the AS9100D aerospace standard, the ISO9001 international quality standard and the ISO14001 environmental management standard. MACOM has design centers and sales offices throughout North America, Europe and Asia.

RF to Light Capabilities

MACOM offers end-to-end customer solutions and support, from proprietary process technologies to high-quality customer service. MACOM can produce and process semiconductor materials, design and manufacture complex devices and combine these devices into multifunction components. We offer dual-use technologies that enable us to service commercial and aerospace and defense markets. We have unique technologies and capabilities to create innovative design solutions, including:

- > Si, GaAs, AlGaAs, InGaAs, InP, GaN-on-Si, SiPh, SiGe, SAEFT™ and RF CMOS IC products
- > Unique processes: HMIC™, GMIC™ and AlGaAs
- > In-house design, fabrication, assembly and screening capabilities
- > Foundry service
- > Build-to-print turnkey assembly capabilities
- > Multiple design and sales locations to provide global coverage
- > Wide spectrum coverage across RF, microwave and millimeterwave frequencies
- > One of the broadest selections of standard and custom products in the industry

Commercial, Industrial and Military Products

This guide features our catalog of thousands of products. We work with you, engineer-to-engineer, to provide custom products to meet your unique application-specific requirements.

If you cannot find a product that meets your needs in this guide, please contact us and we will work together to develop or recommend an appropriate solution. Our team of product managers and engineers are available to support all product and design needs and offer the experience and attention to detail that ensure success.

Quality and Reliability

MACOM is committed to delivering high-quality products and services that meet our customers' and internal operations' needs in terms of delivery, reliability, performance and value. Process controls are implemented to ensure that tasks are performed properly the first time, so that products and services meet established, agreed-to requirements. It is the personal responsibility of every MACOM employee to ensure quality, customer satisfaction, continual improvement, maintenance of our quality management system and compliance with customer and regulatory requirements.

Design and Manufacturing Facilities

MACOM has multiple design centers, Si, SiC, GaAS and InP fabrication, manufacturing, assembly and test and operational facilities throughout North America, Europe and Asia.

How to Purchase

Sales Representatives and Distribution Partners

Find solutions for your most complex applications today! You can purchase MACOM products directly through our sales offices and through one of our many distribution and sales representative partners.

Visit our website to see a list of our industry-leading distributors and to get additional information about ordering samples and product.

To see inventory availability from MACOM and our Distributors the Order tab on your selected product page at macom.com

MACOM produces custom products and modifications to standard products to meet your specific requirements.

Please contact us with your specifications if you cannot find a standard product for your application.

See the back cover of this catalog for contact information.

Or visit us at macom.com for more information.



Aluminium Gallium Arsenide (AlGaAs)

Band gap engineering has been used to produce novel semiconductor structures in the microwave industry for over two decades. These band gap principles have been applied to the development of MACOM's AlGaAs technology, resulting in a significant advancement in the RF performance of PIN diodes. Key applications include industrial, scientific and medical, test and measurement, wireless backhaul, aerospace and defense.

Gallium Arsenide (GaAs)

For over three decades, MACOM has been the world leader in the advancement of GaAs technology, producing state-of-the-art, high performance discrete devices; control components; mixed signal processing and converters; driver amplifiers; CATV amplifiers; LNAs; and power amplifiers as single purpose and multi-function MMICs. Key applications include industrial, scientific and medical, CATV and wired broadband, wireless backhaul, aerospace and defense, satellite communication.

Gallium Nitride (GaN)

MACOM is driving the commercialization of GaN into mainstream RF Power applications designing solutions with GaN-on-Si and GaN-on-SiC. Our **MACOM PURE CARBIDE** series of GaN-on-SiC power amplifiers is our most recent addition and offers high performance and reliability for the most demanding applications. We offer the RF and microwave industry a broad portfolio of GaN products spanning a wide range of package options for pulsed and continuous wave applications and address key applications in all markets including aerospace and defense, 5G wireless infrastructure and industrial, scientific and medical.

Heterolithic Microwave Integrated Circuit (HMIC™)

Developed at MACOM, this process joins two different materials—glass and silicon—into a single monolithic structure. This technology integrates the best properties of each material and therefore allows monolithic circuit solutions that reduce both size and cost. Key applications include CATV and wired broadband, wireless backhaul, industrial, scientific and medical, test and measurement, chip and wire high frequency microwave applications.

Indium Phosphide (InP)

MACOM has assumed a key position in the market as a premier supplier of both photonic devices such as lasers and optoelectronics products such as high speed modulator drivers, based on InP technology. *Key applications include laser diodes for silicon photonics, data and metro markets, modulator drivers for 100G and 400G coherent networks, metro networks and data centers.*

SAEFT™

MACOM's patented Self Aligning Etched Technology (SAEFT™) allows self-alignment of a laser either in edge-emitting or surface-emitting format to a silicon PIC, forming a Laser-PIC (L-PIC). *Key applications include base stations, FTTx/PON, wireless fronthaul/backhaul, cloud data centers, metro and long haul.*

Silicon (Si)

Leveraging our deep understanding of silicon technology, MACOM offers a broad portfolio of product offerings ranging from PIN and varactor tuning diodes to multi-hundred watt silicon power MOSFETs. *Key applications include aerospace and defense, industrial, scientific and medical, test and measurement, CATV and wired broadband, wireless networking.*

Silicon Germanium (SiGe)

Building upon a long history in designing integrated circuits and subsystems for radar and mmW markets, MACOM leads the way in applying SiGe BiCMOS technology to both commercial and military needs. We see SiGe as a high value, differentiating technology which we will continue to leverage in MACOM's core product segments. *Key applications include high-speed optical network transceivers, base stations, wired broadband communications, high speed cross-point switches.*

Silicon Photonics (SiPh)

MACOM is focused on integrated silicon microphotonics. These technologies enable high performance optics with low power in small form factors. Silicon microphotonics in particular brings the benefits of high-density, low-cost and performance scalability, similar to silicon CMOS chip manufacturing. *Key applications include 100G/400G datacom, telecom-metro and long haul applications, functional passive optical elements including AWGs, optical filters, couplers and splitters.*

MACOM produces and processes semiconductor materials and offers unique technologies and capabilities to create innovative design solutions to solve our customers' most complex challenges.



Wireless Networking and Communication

- > Wireless Network Infrastructure
- > Wireless Backhaul
- > Wireless LAN (WiFi)
- > SatCom/VSAT
- > 5G Communications
- > Hybrid Optoelectronic Assembly and Package Capability

Optical Networking

- > FTTx/PON
- > Wireless Fronthaul
- > Cloud Data Center
- > Network Security
- > Long Haul & Metro



Industrial, Scientific and Medical

- > Industrial
- > Test and Measurement
- > Healthcare
- > RF Energy

Wired Broadband

- > DOCSIS Infrastructure/CPE



Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box. All specifications are subject to change.



Broadcast Video

- > Cameras
- > Distribution Amplifiers
- > Format Conversion
- > Monitors
- > Routers and Switches
- > CoaXPress



Aerospace & Defense

- > Communication
- > EW
- > Radar
- > MACOM in Active Active Antennas
- > Space & Hi-Rel
- > Free-space Optical Communication



Surveillance

- > Cameras
- > DVRs



Enterprise Solutions

- > Backplane Connectivity
- > Packet Switchers and Routers
- > Storage Area Networks
- > Transport Networks/OTN

Recognized for our broad portfolio of technologies and products, MACOM serves a range of diverse markets and thrives on more than 70 years of solving our customers' most complex problems.

MACOM is your partner for applications from RF to Light.

For more in-depth information, visit macom.com/applications

MRI

RECEIVE COIL

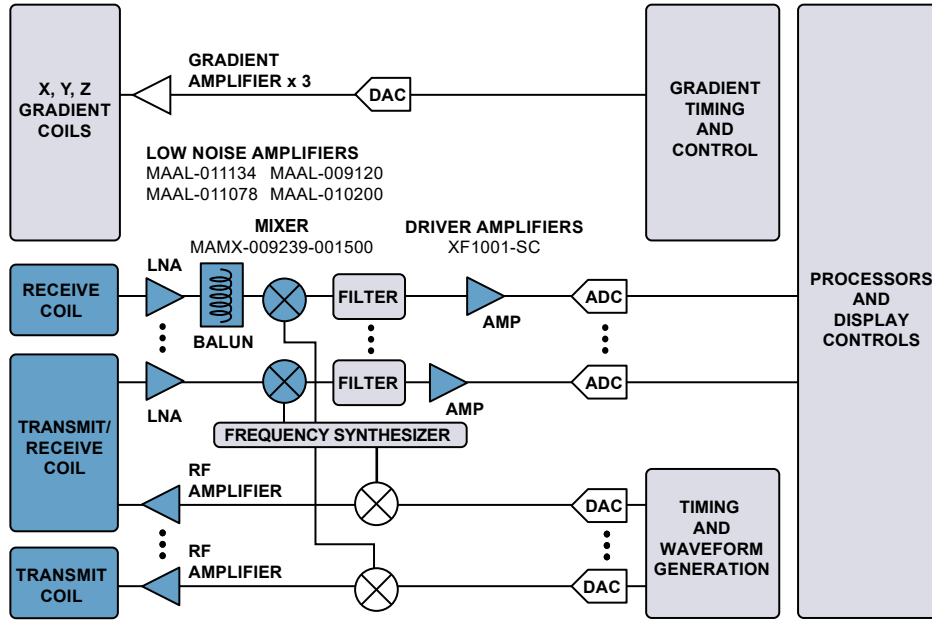
- MA44781
- MADP-011048
- MADP-009989-14320T
- MADP-009989-14340T
- MADP-009989-14420T
- MADP-010015-14320T
- MADP-010015-14420T
- MADP-047668-1134B0
- MADP-047668-1441BN

TRANSMIT RECEIVE COIL

- MA4P7446F-1091T
- MA4P7452F-1072T
- MA4P7461F-1072T
- MA4P7470F-1072T
- MADP-000235-10720T
- MADP-000504-10720T
- MADP-011034-10720T
- MADP-009989-14320T
- MADP-009989-14340T
- MADP-009989-14420T
- MADP-010015-14320T
- MADP-010015-14420T
- MA4P1200NM-401T
- MA4P7435NM-1091T
- MA4P7441F-1091

TRANSMIT COIL

- MA4PK2000 MA4PK3001
- MA4PK2001 MA4PK3002
- MA4PK2002 MA4PK3003
- MA4PK2003 MA4PK3004
- MA4PK2004 MA4P709-150
- MA4PK3000



RF AMPLIFIERS

- MRF137
- MRF141
- MRF148A
- MRF150
- MRF151
- MRF151G
- MRF154
- MRF157
- DU28120T
- DU28120V
- DU28200M
- DU2840S
- DU2860U
- DU2880T
- DU2880U
- MAGX-100027-100
- MAGX-100027-300
- MAPC-A1511

LNAS

- MAAL-011204
- MAAL-011227
- MAAL-011228
- MAAL-011234/5/6/7

WIRELESS ACCESS TDD

HIGH POWER SWITCH

- MASW-000822-12770T
- MASW-000834-13560T
- MASW-000932
- MASW-000936
- MAMF-011070
- MASW-011120

LOW NOISE AMPLIFIER

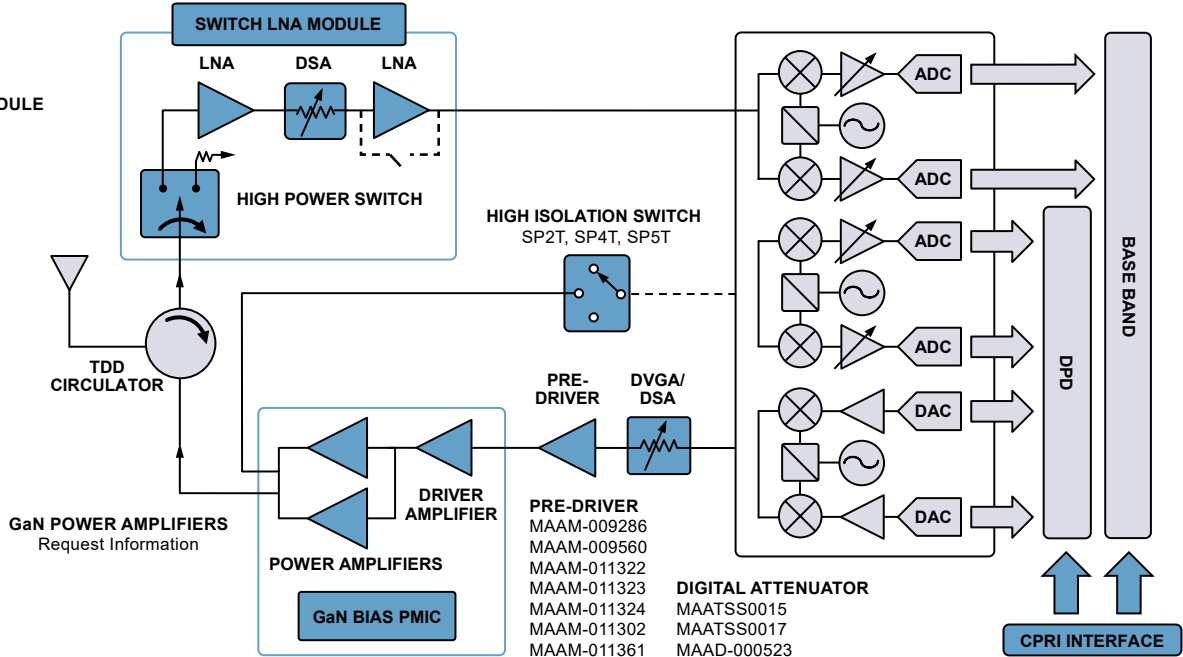
- MAAL-011078 MAAL-011188
- MAAL-010704

HIGH ISOLATION SWITCH

- MASW-008543
- MASW-010351

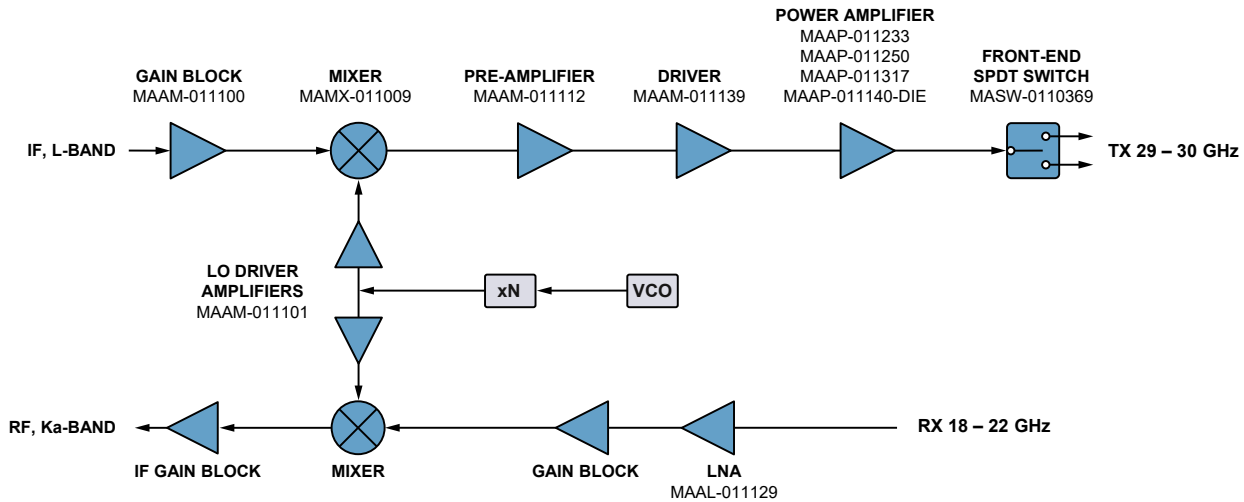
SWITCH LNA MODULE

- MAIA-011002
- MAIA-011004
- MAMF-011069
- MAMF-011119
- MAMF-011133
- MAMF-011139
- MAMF-011145
- MAMF-011149
- MAMF-011150
- MAMF-011152
- MAMF-011153

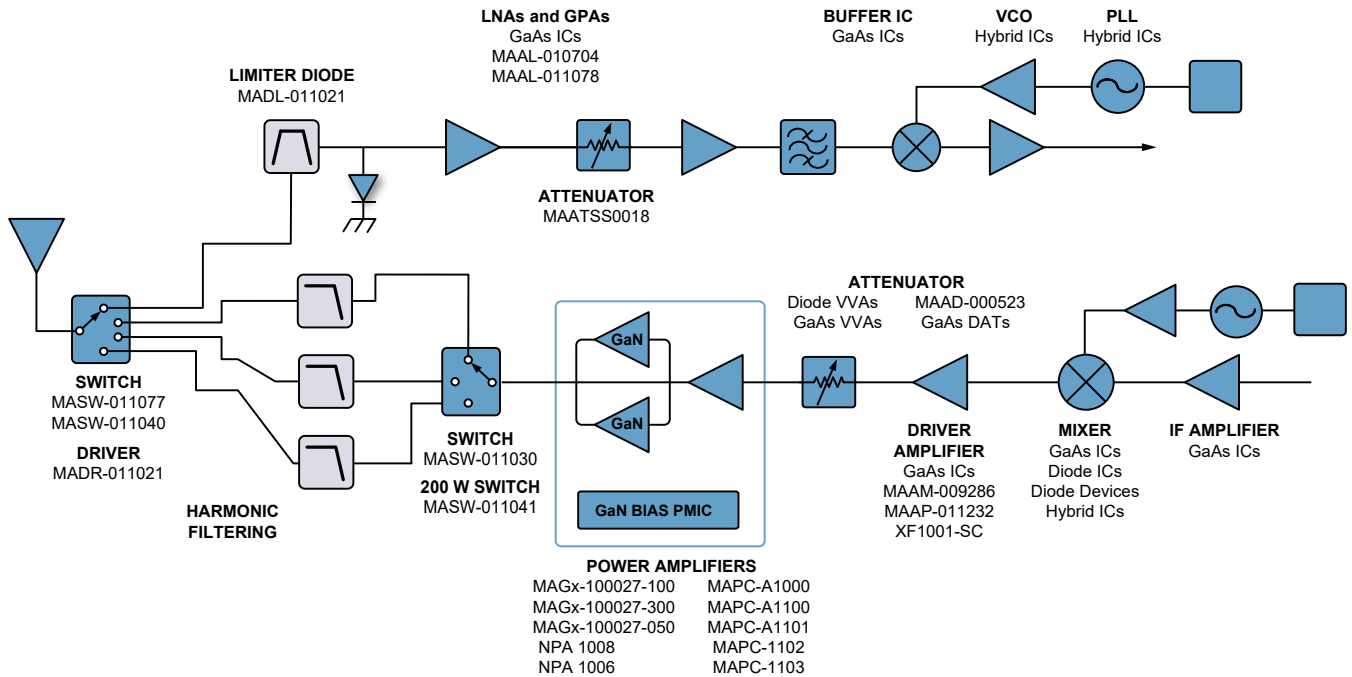


Note: Part numbers are RoHS compliant. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

Ka-BAND SATCOM



LAND MOBILE RADIO



Note: Part numbers are RoHS compliant. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

RF POWER PRODUCTS

MACOM offers a broad range of RF power semiconductor products as discrete devices, modules and pallets designed to operate from DC to 12 GHz. These high power amplifiers are ideal for civil avionics, military communications, 5G networks, radar, industrial, scientific and medical applications. Our product portfolio leverages MACOM's more than 70-year heritage of providing both standard and custom solutions using GaN, bipolar and MOSFET technologies to meet the most demanding specifications. The **MACOM PURE CARBIDE** line is our latest addition to the GaN portfolio.



GaN-on-SiC **MACOM PURE CARBIDE**

- > Includes RF Power products as discrete devices, modules and pallets
- > Designed to operate from 1 MHz to 15 GHz
- > Market leading high power/high voltage solutions exceeding 6 kW
- > Excellent RF performance, long-term reliability and ruggedness for pulsed and CW applications

Bipolar

- > Discrete devices, modules and pallets from 1 MHz to 3.5 GHz
- > For civil avionics, communications, networks, radar and industrial, scientific and medical applications
- > All gold metallization fabrication processes ensure high performance and long-term reliability

:Si LDMOS

- > Discrete devices at 50 V from 1 MHz to 1600 MHz.
- > For avionics, communications, radar and ISM applications
- > Proven field reliability from a higher performance process

GaN-on-Si

- > Discrete and integrated amplifiers
- > Includes a broad range of RF power products as discrete devices, modules and pallets
- > Designed to operate from 1 MHz to 6 GHz
- > Market leading high power/high voltage solutions exceeding 6 kW
- > Excellent RF performance, long-term reliability and ruggedness for pulsed and CW applications

MOSFET

- > TMOS and DMOS RF Power MOSFET transistor products as discrete devices from 1 MHz to 1 GHz
- > All gold metallization fabrication processes ensures high performance and long-term reliability

Pallets

- > Easy to use 50 Ω matched building blocks easily cascaded and/or parallel combined to achieve high system power levels
- > Standard and custom options available
- > Single and multi-stage pallets with connector options
- > Pallet options with MACOM's Power Management IC (PMIC) to facilitate sequencing, control and monitoring

High Voltage GaN								
Part Number	Min Freq (MHz)	Max Freq (MHz)	Supply Voltage (V)	Output Power P _{SAT} (W)	Gain (dB)	Efficiency (%)	Test Freq (GHz)	Package
MAPC-A1602	960	1215	130	2500	22	65	1.15	AC-780
MAPC-A1604	960	1215	150	5000	20	60	1.08	AC-1230
MAPC-A1605	960	1215	150	7000	20	57	1.06	AP-1230

MMICs								
Part Number	Description	Min Frequency (MHz)	Max Frequency (MHz)	Output P1dB (dBm)	P _{SAT} (dBm)	Gain (dB)	OIP3 (dBm)	Package
CGY2135UH	Power Amplifier, 33 dBm	18000	23000	31.2	33	25	—	DIE

GaN MMICs								
Part Number	Min Freq (MHz)	Max Freq (MHz)	P _{SAT} (dBm)	PAE (%)	LSG (dB)	V _D (V)	Package	
CMPA0527005F	500	2700	39	39	13.5	50	Flange	
CMPA0530002S	500	3000	33	33	13	28	DFN	
CMPA2735015S	2700	3500	42	42	27.5	50	DIE, QFN	
CMPA2735030S	2700	3500	45	45	28	50	DIE, QFN	
CMPA2735075F1	2700	3500	48.5	48.5	20	28	DIE, Flange	
CMPA2935150S	2900	3500	52.7	52.7	25	50	QFN	
CMPA2935250S	2900	3500	54	54	24	50	QFN	
CMPA3135060S	3100	3500	48	48	29	50	QFN	
CMPA2738060F	2700	3800	48	48	27	50	Flange	
CMPA1842040F	1800	4200	47	47	24	28	DIE, Flange	
CMPA5259025S	5200	5900	44	44	25	28	QFN, Flange	
CMPA5259050S	5200	5900	47	47	23	28	DIE, QFN, Flange	
CMPA5259080S	5200	5900	50	50	21	40	QFN	
CMPA5259100S	5200	5900	50	50	25	50	QFN	
CMPA0060002F1	0	6000	36	36	10	28	Flange	
CMPA0060025F1	0	6000	44	44	11	50	Flange	
CMPA0560008S	500	6000	40	40	11	28	QFN	
CMPA0760020F	700	6000	44	44	33	28	Flange	
CMPA2060035F1	2000	6000	45.5	45.5	18	28	DIE, Flange	
CMPA2560025F	2500	6000	45	45	20	28	DIE Flange	
CMPA5585030F	5500	8500	45	45	21	28	DIE, Flange	
CMPA9396025S	9300	9600	45.5	45.5	27	40	QFN	
CMPA901A020S	9000	10000	43	43	30	28	QFN	
CMPA901A035F1	9000	10000	45.5	45.5	23	28	DIE, Flange	
CMPA851A005S	8500	10500	37	37	28	28	QFN	
CMPA851A012S	8500	10500	43	43	28.5	28	DIE, QFN	
CMPA851A025S	8500	10500	46	46	29.5	28	DIE, QFN	
CMPA851A050S	8500	10500	49	49	29	28	DIE, QFN, Flange	
CMPA801B030S	8000	11000	46	46	20	28	DIE, QFN, Flange	
CMPA601C025F	6000	12000	47	47	25	28	DIE, Flange	
CMPA1CID080F	12750	13250	49.5	49.5	16	40	Flange	
CMPA1D1E025F	13750	14500	46	46	15	40	Flange	
CMPA1EIF060F	13400	15500	48	48	26	28	DIE, Flange	
CMPA1FIH060S	15400	17700	49	49	25	28	DIE, QFN, Flange	
CMPA601J025F	6000	18000	44	44	20	22	DIE, Flange	
CMPA1D1J001S	12700	18000	30	30	23	22	QFN	
CMPA1H1J050F	17300	18400	48	48	25	28	Flange	

Note: Part numbers are RoHS compliant. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

GaN: Unmatched Packaged Transistors: **MACOM PURE CARBIDE**

Product	Min Frequency (MHz)	Max Frequency (MHz)	Operating Voltage (V)	Peak Output Power (W)	Gain (dB)	Efficiency (%)	Form
CGHV40180	0	2000	50	200	24	70	Flange, Pill
CG2H40120	0	2500	28	130	20	70	Flange, Pill
CGHV27060	0	2700	50	60	16.5	64	Flange, Pill
CGH40025	0	3000	28	25	13	62	Flange, Pill
CGH40120	0	3000	28	120	15	70	Flange, Pill
CGH40180	0	3000	28	180	15	70	Push-pull
CGHV40100	0	3000	50	100	17.5	55	Flange, Pill
CGHV40200	0	3000	50	250	21	75	Push-pull
CGH35060P2	3100	3500	28	60	12	60	Pill
CGH35060P1	3300	3600	28	60	12	25	Pill
CG2H40045	0	4000	28	45	13	55	Flange, Pill
CGH27060F	0	4000	28	60	14	27	Flange
CGH40045	0	4000	28	45	12	55	Flange, Pill
CGH40090	0	4000	28	90	14	55	Push-pull
CGHV40050	0	4000	50	50	16	53	Flange, Pill
CG2H40010	0	6000	28	10	15	65	Flange, Pill
CG2H40025	0	6000	28	25	15	62	Flange, Pill
CG2H40035	0	6000	28	35	14	64	Flange, Pill
CGH27015	0	6000	28	15	14.5	28	Flange, Pill
CGH27030	0	6000	28	30	18	33	Flange, Pill
CGH35015	0	6000	28	15	12	26	Flange, Pill
CGH40006	0	6000	28	6	11	65	DFN, 3 x 3
CGH40010	0	6000	28	10	14	65	Flange, Pill
CGH40035	0	6000	28	35	13	60	Flange
CGH55015	0	6000	28	10	12	60	Flange, Pill
CGH55030	0	6000	28	30	10	25	Flange, Pill
CGHV27015S	0	6000	50	15	21	32	DFN, 3 x 4
CGHV27030	0	6000	50	30	21	32	DFN, 3 x 4
CGHV40030	0	6000	50	30	16	70	Flange, Pill
CGHV1F006	0	15000	40	6	17	52	DFN, 3 x 4
CGHV1F025	0	15000	40	25	11	51	DFN, 3 x 4

Power Amplifier: GaN: IM (Internally Matched) 50-Ω FETs: **MACOM PURE CARBIDE**

Product	Min Frequency (MHz)	Max Frequency (MHz)	Operating Voltage (V)	Peak Output Power (W)	Gain (dB)	Efficiency (%)	Form
GTVA10700	960	1215	50	700	20	70	Flange
GTVA101K4	960	1400	50	1400	17	68	Flange
GTVA12600	1200	1400	50	600	20	63	Flange
CGH31240F	2700	3100	28	240	12	60	Flange
CGHV31500	2700	3100	50	500	12.7	60	Flange
CGHV35400	2900	3500	50	400	11	60	Flange
CGH35240	3100	3500	28	240	11.6	57	Flange
CGHV37400F	3300	3700	48	550	14	55	Flange
CGHV38375F	2750	3750	50	400	9	55	Flange
CGHV50200F	4400	5000	40	200	11.5	33	Flange
CGHV59350	5200	5900	50	350	11	55	Flange, Pill
CGHV96050F1	7900	8400	40	50	13	33	Flange
CGHV96050F2	7900	9600	40	50	10	55	Flange

Note: Part numbers are RoHS compliant.
Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box.
All specifications are subject to change.

Power Amplifier: GaN: IM (Internally Matched) 50-Ω FETs: **MACOM PURE CARBIDE** (continued)

Product	Min Frequency (MHz)	Max Frequency (MHz)	Operating Voltage (V)	Peak Output Power (W)	Gain (dB)	Efficiency (%)	Form
CGHV96100	7900	9600	40	100	10	45	Flange
CGHV96130F	8400	9600	40	130	12.2	42	Flange
CGHV1A250F	8800	9600	45	300	12	40	Flange

GaN: Transistor Die: **MACOM PURE CARBIDE**

Product	Min Frequency (MHz)	Max Frequency (MHz)	Operating Voltage (V)	Peak Output Power (W)	Gain (dB)	Efficiency (%)	Form
CGHV40320D	0	4000	50	320	19	65	N/A
CGH60008D	0	6000	28	8	12	65	N/A
CGH60015D	0	6000	28	15	12	65	N/A
CGH60030D	0	6000	28	30	12	65	N/A
CGH60060D	0	6000	28	60	12	65	N/A
CGH60120D	0	6000	28	120	12	65	N/A
CGHV60040D	0	6000	50	40	18	62	N/A
CGHV60075D5	0	6000	50	75	17	65	N/A
CGHV60170D	0	6000	50	170	17	65	N/A
CG2H80015D	0	8000	28	15	15	70	N/A
CG2H80030D	0	8000	28	30	16.5	65	N/A
CG2H80045D	0	8000	28	45	15	65	N/A
CG2H80060D	0	8000	28	60	14	70	N/A
CG2H80120D	0	8000	28	120	12	65	N/A
CGHV1J006D	0	18000	40	6	17	60	N/A
CGHV1J025D	0	18000	40	25	17	60	N/A
CGHV1J070D	0	18000	40	70	17	60	N/A

GaN: Partially Matched Packaged Transistors: **MACOM PURE CARBIDE**

Product	Min Frequency (MHz)	Max Frequency (MHz)	Operating Voltage (V)	Peak Output Power (W)	Gain (dB)	Efficiency (%)	Form
CGHV14500	1200	1400	50	500	16	68	Flange
CGHV14800	1200	1400	50	800	16	65	Flange
CGHV14250	0	1600	50	250	18	77	Flange
CGH21240F	1800	2300	28	240	15	33	Flange
CGH25120F	2500	2700	28	120	7	30	Flange
CG2H30070	500	3000	28	80	15	55	Flange
WST33HONC	2400	3000	50	300	17	75	TO-270
CGHV35150	2900	3500	50	150	13.5	50	Flange
CGHV35120	3100	3500	50	120	12.8	62	Flange
CGHV35060MP	2700	3800	50	60	14.5	67	Flange
CGHV59070	4500	5900	50	70	12	50	Flange

Amplifier: GaN: **MACOM PURE CARBIDE**

Part Number	Min Freq (MHz)	Max Freq (MHz)	Supply Voltage (V)	Output Power P _{SAT} (W)	Gain (dB)	Efficiency (%)	Test Freq (GHz)	Package
MAPC-A1511	3	300	100	3000	19	79	0.13	AC-1230
MAPC-A1502	400	460	50	1250	17	83	400	AC-1230
MAPC-A1508	900	930	50	700 (CW)	16.5	73	0.915	AC-780
MAPC-A1507	900	930	50	1400 (CW)	16	73	0.915	AC-1230
MAPC-A1501	960	1215	65	1300	17.2	64.5	1.06	AC-780B-2
MAPC-A1500	960	1215	65	2600	18.5	66.2	1.06	AC-1230S-4
MAPC-A1504	1200	1400	50	500	17	54	1400	AC-780

Note: Part numbers are RoHS compliant.
Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box.
All specifications are subject to change.

Amplifier: GaN: MACOM PURE CARBIDE (continued)								
Part Number	Min Freq (MHz)	Max Freq (MHz)	Supply Voltage (V)	Output Power P _{SAT} (W)	Gain (dB)	Efficiency (%)	Test Freq (GHz)	Package
MAPC-A1513	1300	1850	52	450	14	59	1.6	AP-780
MAPC-A1506	2000	2400	52	450	14	58	2.9	AP-780
MAPC-A1516	2400	2500	50	500 (CW)	14.5	70	2450	AC-780
MAPC-A1103	0	2700	50	270	18.4	68.2	2.6	AC-650S-4
MAPC-A1000	30	2700	50	25	13	51	2.7	DFN, 7 x 6.5 mm
MAPC-A2021	1800	2700	30	8	16.2	67	2.7	QFN, 4 x 4 mm
MAPC-A1522	2700	3100	65	1000	14.5	61	2900	AP-1230S-4
MAPC-A1505	2700	3300	50	700	14	68	2.2	AC-1230
MAPC-A1101	0	3500	50	85	15	70	3.5	AC-360S-2
MAPC-A1102	0	3500	50	150	13	65	3.5	AC-360S-2
MAPC-A1100	1	3500	50	65	18	71	3.5	AC-360S-2
MAPC-A2004	3300	3800	50	90	14.5	52	3.6	DFN, 7 x 6.5 mm
MAPC-A2517	3400	3800	50	29	14	52.3	3.6	AC-780S-4
MAPC-A2002	3400	4000	50	50	16.2	61	3.6	DFN, 7 x 6.5 mm
MAPC-A2001	3400	4000	50	50	17.2	62	3.85	DFN, 7 x 6.5 mm
MAPC-A2500	3400	4000	50	450	13	52	3.6	AC-780S-4
MAPC-A2506	3700	4000	50	29	12.5	52.3	3.85	AC-780S-4
MAPC-A2011	3700	4000	50	90	14.5	52	3.8	DFN, 7 x 6.5 mm

Amplifiers: GaN								
Part Number	Min Freq (MHz)	Max Freq (MHz)	Operating Voltage (V)	Output Power P _{SAT} (W)	Gain (dB)	Efficiency (%)	Test Freq (GHz)	Package
MAGE-100809-500G00	896	928	50	500	18	76	0.93	AC-780S-4
NPA1006A	20	1000	28	12.5	14	>45	0.9	DFN-8, 6 x 5 mm
MAGX-101011-700E00	1000	1100	50	700	19.3	70	1.09	AC-780B-2
MAGX-101214-500L00	1200	1400	50	500	16	73.5	3	AC-780B-2
NPA1003QA	20	1500	28	7	15	>40	1	QFN-16, 4 x 4 mm
NPA1007	30	2500	28	10	10	>50	2	DFN-8, 6 x 5 mm
MAGE-102425-300S00	2400	2500	50	300	16.7	75	2.45	AC-780S-2
MAMG-100227-010COL	225	2600	28	10	23	45	2.6	MD1, 14 x 18 mm
MAGX-100027-002SOP	0	2700	50	2	18.7	58.5	4	DFN, 6 x 3 mm
MAGX-100027-015SOP	0	2700	50	15	17.2	60	2.5	DFN, 6 x 3 mm
MAGX-100027-050COP	0	2700	50	50	16.8	72	2.5	TO-272S-2
MAGX-100027-100COP	0	2700	50	100	15.1	59	2.5	TO-272S-2
MAGX-100027-300COP	0	2700	50	300	16.3	5	2	TO-272S-4I
NPA1008A	20	2700	28	5	12	>45	1.9	PQFN-24, 4 x 4 mm
NPT25100B	2100	2700	28	90	16	>60	3	AC-780B-2
MAGB-102327-010BOP	2300	2700	50	8	17.2	23	2.5	DFN-6, 4 x 4 mm
MAGB-102327-012BOP	2300	2700	50	10	17.3	21	2.7	DFN-6, 4 x 4 mm
NPT25015	1	3000	28	23	14	>60 PEP	2.5	SOIC-8NE
NPT2018	1	3500	50	12.5	17.5	>50	2.5	PDFN-14, 6 x 3 mm
MAGB-101836-025BOP	1800	3600	50	25	16.9	29	3.5	QFN, 5 x 7 mm
NPT35015	1	3800	28	18	11	>48 PEP	3.5	SOIC-8NE
MAGB-103440-005BOP	3300	3800	50	5	17	15.5	3.6	DFN-6, 4 x 4 mm
MAGB-103338-050SOP	3300	3800	50	44	16.3	15.1	3.6	DFN, 6 x 6.5 mm
MAGB-103438-020SOP	3400	3800	50	20	17	28	3.5	QFN, 5 x 7 mm
NPTB00025B	1	4000	28	25	13	>50	3	AC-360B-2
MAGB-103440-010BOP	3300	4000	50	10	18.1	18.3	3.8	DFN-6, 4 x 4 mm

Note: Part numbers are RoHS compliant.
 Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box.
 All specifications are subject to change.

Amplifiers: GaN (continued)								
Part Number	Min Freq (MHz)	Max Freq (MHz)	Operating Voltage (V)	Output Power P _{SAT} (W)	Gain (dB)	Efficiency (%)	Test Freq (GHz)	Package
MAGB-103340-015BOP	3300	4000	50	15	16.4	17	3.6	DFN-6, 4 x 4 mm
MAGB-103740-008BOP	3700	4000	50	8	17.9	16.2	3.9	DFN-6, 4 x 4 mm
MAGX-101050-002SOP	1000	5000	50	2	15	50	4	DFN, 4 x 4 mm
MAGX-011086A	1	6000	28	4	9	>50	5.8	QFN-24, 4 x 4 mm
NPTB00004B	1	6000	28	5	17	>50	2.5	SOIC-8NE

Si LDMOS							
Product	Min Frequency (MHz)	Max Frequency (MHz)	Operating Voltage (V)	Peak Output Power (W)	Gain (dB)	Efficiency (%)	Form
PTVA03012	390	450	50	12	25	69	Flange
PTVA03500	390	450	50	450	18	64	Flange
PTVA04250	470	806	50	250	19	26	Flange, Pill
PTVA04700	470	806	50	700	17.5	29	Flange
PTVA101K0	1030	1090	50	900	18	65	Flange
PTVA10450	960	1215	50	450	17.5	58	Flange
PTVA04350	0	1350	50	350	18	30	Flange, Pill
PTVA12025	500	1400	50	25	18	54	Flange, Pill
PTVA12050	1200	1400	50	50	17	50	Flange
PTVA12350	1200	1400	50	350	17	55	Flange, Pill
PTVA12700	1200	1400	50	700	16	56	Flange
PTVA10200	960	1600	50	200	18.5	60	Flange

Amplifiers: Silicon Bipolar and MOSFET							
Part Number	Min Freq (MHz)	Max Freq (MHz)	P _{OUT} (W)	Gain (dB)	Efficiency (%)	Package	
MRF421	1	30	100	10	40	Flange Ceramic	
MRF448A	1	30	250	12	45	Flange Ceramic	
MRF426	2	30	25	22	35	Flange Ceramic	
MRF455	2	30	60	13	55	Flange Ceramic	
MRF454	2	30	80	12	50	Flange Ceramic	
MRF422	2	30	150	10	40	Flange Ceramic	
MRF428	2	30	150	13	45	Flange Ceramic	
MRF448	2	30	250	12	45	Flange Ceramic	
MRF429	2	60	150	13	45	Flange Ceramic	
MRF154	5	80	600	17	45	Flange Ceramic	
MRF157	5	80	600	21	45	Flange Ceramic	
MRF157H	5	80	600	21	45	Flange Ceramic	
MRF140	5	150	150	15	40	Flange Ceramic	
MRF150	5	150	150	17	45	Flange Ceramic	
MRF148A	5	175	30	18	40	Flange Ceramic	
MRF173	5	175	80	11	60	Flange Ceramic	
MRF173CQ	5	175	80	13	60	Flange Ceramic	
MRF151	5	175	150	13	40	Flange Ceramic	
MRF151A	5	175	150	13	40	Flange Ceramic	
MRF141	5	175	150	18	40	Flange Ceramic	
MRF141G	5	175	300	12	50	Flange Ceramic	
MRF151G	5	175	300	14	50	Flange Ceramic	
DU2805S	30	175	5	11	55	Flange Ceramic	
DU2810S	30	175	10	13	55	Flange Ceramic	

Note: Part numbers are RoHS compliant. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

Amplifiers: Silicon Bipolar and MOSFET <small>(continued)</small>						
Part Number	Min Freq (MHz)	Max Freq (MHz)	P _{OUT} (W)	Gain (dB)	Efficiency (%)	Package
DU1215S	30	175	15	9.5	60	Flange Ceramic
DU2820S	30	175	20	13	60	Flange Ceramic
DU2840S	30	175	40	13	60	Flange Ceramic
DU2860U	30	175	60	13	60	Flange Ceramic
DU2880T	30	175	80	13	60	Flange Ceramic
DU2880U	30	175	80	13	60	Flange Ceramic
DU28120T	30	175	120	13	60	Flange Ceramic
DU28120V	30	175	120	13	60	Flange Ceramic
DU28200M	30	175	200	13	55	Flange Ceramic
MRF174	5	200	125	9	50	Flange Ceramic
MRF314	30	200	30	10	50	Flange Ceramic
MRF316	30	200	80	10	55	Flange Ceramic
MRF317	30	200	100	9	55	Flange Ceramic
MRF171A	100	200	45	17	60	Flange Ceramic
MRF175GV	5	225	200	14	65	Flange Ceramic
MRF176GV	5	225	200	15	50	Flange Ceramic
MRF134	5	400	5	11	50	Flange Ceramic
MRF136	5	400	15	16	60	Flange Ceramic
MRF136Y	5	400	30	14	54	Flange Ceramic
MRF137	5	400	30	13	60	Flange Ceramic
MRF175LU	5	400	100	10	55	Flange Ceramic
MRF177	5	400	100	12	60	Flange Ceramic
MRF175GU	5	400	150	12	55	Flange Ceramic
MRF176GU	5	400	150	12	45	Flange Ceramic
MRF313	100	400	1	15	45	Flange Ceramic
MRF392	100	400	125	10	55	Flange Ceramic
MRF321	150	400	10	12	50	Flange Ceramic
MRF323	150	400	20	10	50	Flange Ceramic
2N6439	225	400	60	7.8	55	Flange Ceramic
MRF327	225	400	80	7.3	50	Flange Ceramic
MRF158	5	500	2	16	55	Flange Ceramic
MRF160	5	500	4	16	55	Flange Ceramic
MRF166C	5	500	20	13.5	50	Flange Ceramic
MRF166W	5	500	40	14	50	Flange Ceramic
MRF275L	5	500	100	8.8	55	Flange Ceramic
MRF275G	5	500	150	10	50	Flange Ceramic
MRF587	100	500	0.17	13	12	Flange Ceramic
UF2805B	100	500	5	10	50	Flange Ceramic
UF2810P	100	500	10	10	50	Flange Ceramic
UF2815B	100	500	15	10	50	Flange Ceramic
UF2820P	100	500	20	10	50	Flange Ceramic
UF2840G	100	500	40	10	50	Flange Ceramic
UF2840P	100	500	40	10	50	Flange Ceramic
MRF393	100	500	100	9.5	55	Flange Ceramic
UF28100M	100	500	100	10	50	Flange Ceramic
UF28100V	100	500	100	10	50	Flange Ceramic
UF28150J	100	500	150	8	55	Flange Ceramic
LF2805A	500	1000	5	10	50	Flange Ceramic

Note: Part numbers are RoHS compliant. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

Amplifiers: Silicon Bipolar and MOSFET <small>(continued)</small>						
Part Number	Min Freq (MHz)	Max Freq (MHz)	P _{OUT} (W)	Gain (dB)	Efficiency (%)	Package
MAPRST1030-1KS	1030	1030	1000	8	45	Flange Ceramic
PH1090-15L	1030	1090	15	9	40	Flange Ceramic
PH1090-75L	1030	1090	75	9	45	Flange Ceramic
PH1090-175L	1030	1090	175	8.3	55	Flange Ceramic
PH1090-350L	1030	1090	350	8	55	Flange Ceramic
PH1090-550S	1030	1090	550	7.4	55	Flange Ceramic
PH1090-700B	1030	1090	700	7.5	50	Flange Ceramic
MRF10150	1025	1150	150	9.5	40	Flange Ceramic
MRF10350	1025	1150	350	8.5	40	Flange Ceramic
MAPR-001090-350S00	1025	1150	350	9	45	Flange Ceramic
MRF10502	1025	1150	500	8.5	40	Flange Ceramic
MAPR-001011-850S00	1025	1150	850	7.8	42	Flange Ceramic
MRF1000MB	960	1215	0.7	10	—	Flange Ceramic
MRF1004MB	960	1215	4	10	40	Flange Ceramic
MRF10005	960	1215	5	8.5	45	Flange Ceramic
MRF10031	960	1215	30	9	40	Flange Ceramic
MAPRST0912-50	960	1215	50	9.1	40	Flange Ceramic
MRF1090MB	960	1215	90	8.4	35	Flange Ceramic
MRF10120	960	1215	120	8	50	Flange Ceramic
MRF1150MB	960	1215	150	7.8	35	Flange Ceramic
MAPRST0912-350	960	1215	350	9.4	45	Flange Ceramic
MAPR-000912-500S00	960	1215	500	9	45	Flange Ceramic
PH1214-2M	1200	1400	2	7	40	Flange Ceramic
PH1214-6M	1200	1400	6	7	45	Flange Ceramic
PH1214-12M	1200	1400	12	9	45	Flange Ceramic
PH1214-25M	1200	1400	25	9.5	50	Flange Ceramic
PH1214-40M	1200	1400	40	8.5	50	Flange Ceramic
PH1214-55EL	1200	1400	55	6.6	50	Flange Ceramic
PH1214-80M	1200	1400	80	7.5	50	Flange Ceramic
PH1214-100EL	1200	1400	100	6	52	Flange Ceramic
PH1214-110M	1200	1400	110	7.4	50	Flange Ceramic
PH1214-220M	1200	1400	220	7.4	50	Flange Ceramic
PH1214-300M	1200	1400	300	8.75	50	Flange Ceramic
PH1617-2	1600	1700	2	10	35	Flange Ceramic
PH2226-50M	2200	2600	50	8	45	Flange Ceramic
PH2226-110M	2200	2600	110	7	40	Flange Ceramic
PH2729-25M	2700	2900	25	9.2	45	Flange Ceramic
PH2729-65M	2700	2900	65	8.5	40	Flange Ceramic
PH2729-110M	2700	2900	110	6.8	35	Flange Ceramic
PH2729-130M	2700	2900	130	7.5	40	Flange Ceramic
MAPR-002729-170M00	2700	2900	170	9	45	Flange Ceramic
PH2731-5M	2700	3100	5	7	30	Flange Ceramic
PH2731-20M	2700	3100	20	8.2	45	Flange Ceramic
PH2731-75L	2700	3100	75	7	40	Flange Ceramic
PH3134-10M	3100	3400	10	8	35	Flange Ceramic
PH3134-20L	3100	3400	20	7.5	35	Flange Ceramic
PH3134-55L	3100	3400	55	7.5	35	Flange Ceramic

Note: Part numbers are RoHS compliant. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

Amplifiers: Silicon Bipolar and MOSFET *(continued)*

Part Number	Min Freq (MHz)	Max Freq (MHz)	P _{OUT} (W)	Gain (dB)	Efficiency (%)	Package
PH3135-5M	3100	3500	5	8.5	30	Flange Ceramic
PH3135-20M	3100	3500	20	7.5	35	Flange Ceramic
PH3135-25S	3100	3500	25	7.5	35	Flange Ceramic
PH3135-65M	3100	3500	65	7.5	35	Flange Ceramic
PH3135-90S	3100	3500	90	7.5	35	Flange Ceramic

Pallets: GaN-on-SiC

Part Number	Min Freq (MHz)	Max Freq (MHz)	P _{OUT} (W)	Gain (dB)	Efficiency (%)	Package
MAPC-P1026	900	930	1300	15	70	Pallet
MAPC-P1012	1030	1090	2000	17	65	Pallet
MAPC-P1008	960	1215	2000	17	60	Pallet
MAPC-P1015	1300	1850	400	15	55	Pallet
MAPC-P1009	2700	2900	700	14	60	Pallet
MAPC-P1010	2700	3100	250	28	52	Pallet
MAPC-P1017	3000	36000	120	30	43	Pallet

Pallets: Silicon Bipolar and MOSFET Pallets

Part Number	Min Freq (MHz)	Max Freq (MHz)	P _{OUT} (W)	Gain (dB)	Efficiency (%)	Package
PHA2729-300M	2700	2900	300	7.5	36	Pallet
PHA2731-190M	2700	3100	190	7.5	33	Pallet
PHA3135-130M	3100	3500	130	7.4	35	Pallet

AMPLIFIERS

For Voice, Data and Point-to-Point Applications for A&D and Commercial Markets

MACOM designs, manufactures and supports a wide variety of amplifiers for RF, microwave and mmWave applications. Our products cover frequency ranges from 40 kHz to 90 GHz. We use a variety of semiconductor processes such as GaAs MESFET for linearity, pHEMT for power and low noise and HBT for linearity and high gain. Additionally, our 50 to 1100 MHz cable band amplifiers exhibit best-in-class composite linearity performance. MACOM amplifiers are used in a variety of commercial and aerospace and defense applications.



Active Splitters

- > Available in 2, 3, 4, 5, 6 and 8-way splits
- > Designed for today's advanced CATV, FTTx and direct broadcast satellite (DBS) subscriber equipment
- > Used in high definition flat screen TVs, set top boxes (STBs), embedded multi media terminal adapter (eMTAs), cable modems and PCTV cards
- > Surface mount PDFN and PQFN plastic packages

Amplifier Gain Blocks

- > Frequencies from DC to 45 GHz
- > 50 Ω and 75 Ω applications include: networks, commercial and aerospace and defense
- > Plastic packaging and bare die

Linear and Power Amplifiers

- > 40 kHz to 90 GHz frequencies for both linear and saturated applications including: network infrastructure, radar, test and measurement and communication systems
- > Many of the power amplifiers include an on-chip temperature-compensated detector

Low Noise Amplifiers

- > Frequencies from 20 MHz to 86 GHz
- > For network infrastructure, radar and communication systems
- > Available in a variety of packages

CATV Amplifiers

- > Single-ended and Push-Pull 75 Ω broadband amplifiers cover head-end, HFC infrastructure nodes, network and drop amplifiers
- > Flat gain response, low distortion and high linearity
- > Offered in small, plastic leaded and leadless packages

Hybrid Amplifiers

- Gain Block
- Low Noise Amplifiers
- Limiting Amplifiers
- > 10 kHz to 6 GHz
- > Unconditionally stable with excellent cascading
- > Designed using thin film technology
- > Hermetically sealed and screened up to space level, these amplifiers are perfect for military applications



Active Splitters									
Part Number	Min Freq (MHz)	Max Freq (MHz)	Splits (#)	Gain (dB)	Noise Figure (dB)	CSO (dBc)	CTB	Bias Current/Voltage (mA)/(V)	Package
MAAM-009811	50	1100	2	2.4	4.5	-55	-65	90/3	PDFN-8, 2 mm
MAAM-008818	50	1100	2	3.2	3.4	-60	-63	120/5	PDFN-8, 2 mm
MAAM-009879	50	1100	2	3.5	3.8	-60	-65	100/5	PQFN-12, 3 mm
MAAM-007805	50	1100	2	8.5	4	-60	-75	100/5	PQFN-12, 3 mm
MAAM-008819	50	1100	3	2.6	3.8	-60	-63	120/5	PDFN-8, 2 mm
MAAM-009451	50	1100	3	3	3.5	-55	-67	90/3	PDFN-8, 2 mm
MAAM-009450	50	1100	3	3.5	3.8	-65	-65	100/5	PQFN-12, 3 mm
MAAM-007239	50	1100	3	6	4.5	-65	-77	125/5	PQFN-16, 3 mm
MAAM-009452	50	1100	4	2.5	3.5	-56	-65	96/3.3	PQFN-12, 3 mm
MAAM-009778	50	1100	4	2.5	4.5	-60	-65	100/5	PQFN-12, 3 mm
MAAM-008820	50	1100	4	3	3.8	-62	-70	120/5	PQFN-12, 3 mm
MAAM-009779	50	1100	5	1.5	3.9	-60	-65	110/5	PQFN-12, 3 mm
MAAM-008821	50	1100	5	3.5	3.8	-60	-70	120/5	PQFN-12, 3 mm
MAAM-010237	50	1100	8	1.9	4.4	-50	-65	190/5	PQFN-24, 4 mm
MAAM-008970	950	2150	2	4.8	5	—	—	60/5	PQFN-12, 3 mm

Amplifier Gain Block									
Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Output P1dB (dBm)	OIP3 (dBm)	Bias Current (mA)	Package	
MAAM-008198-00A162	Cascadable, High Eff	10	1200	13	6	18	15	TO-8	
MAAM02350-A2	Wideband Amplifier	200	3000	18	14	24	65	CR-3	
MAAM02350	Wideband Amplifier	200	3000	19	14	24	65	DIE	
MAAM-011229	Broadband Low Noise	50	4000	19	20	34	80	PDFN-8, 2 mm	
MAAM-011229-CQ3	Broadband Low Noise	50	4000	19	20	36	80	CQFN-12, 3 mm	
MAAM-011357	Wideband Amplifier	400	6000	20	19	33	90	SOT-89 Plastic	
XF1001-SC	Packaged HFET	0	6000	15.5	30	46.5	300	SOT-89	
MAAM-011326	Gain Block	500	6000	21	20	36	90	PDFN-8, 2 mm	
MAAM-011326-DIE	Gain Amplifier	500	6000	21	20	36	90	DIE	
MAAM-011305	Broadband Low Noise	30	8000	15.25	20	35	65	PDFN-8, 2 mm	
MAAM-011305-DIE	Broadband Amplifier	30	8000	16	20	37	66	DIE	
MAAM-011252	Broadband Low Noise	30	8000	20	20	34	56	PDFN-8, 2 mm	
MAAM-011252-DIE	Broadband Amplifier	30	8000	20	20	34	60	DIE	
MAAM-011252-CQ3	Broadband Low Noise	30	8000	20	20	34	65	CQFN-12, 3 mm	
MAAM28000-A1	Wideband Amplifier	2000	8000	17	14	24	70	CR-3	
MAAM28000-A1G	Wideband Amplifier	2000	8000	17	14	24	70	CR-10	
MAAM28000	Wideband Amplifier	2000	8000	18	14	24	60	DIE	
XB1007-QT	Buffer Amplifier	4000	11000	23	19	31	100	PQFN-16, 3 mm	
XB1007-BD	Buffer Amplifier	4000	11000	23	20	30	100	DIE	
CMM0511-QT	Driver Amplifier	5000	14000	20	11	22	90	PQFN-16, 3 mm	
MAAM-011206	Driver Amplifier	DC	15000	13.5	18	28	72	TDFN-6, 1.5 x 1.2 mm	
CGY2731UH	Gain Block	12000	15000	19	—	—	—	DIE	
MAAM-011101	Wideband Amplifier	4000	20000	16	19	30	45	TDFN-6, 1.5 x 1.2 mm	
MAAM-011289-DIE	Driver Amplifier	5000	20000	15	19.5	31	100	DIE	
MAAM-011289	Driver Amplifier	5000	20000	16.5	20	30	102	AQFN-12, 3 mm	
MAAM-011290-DIE	Driver Amplifier	5000	20000	20	19.5	32	115	DIE	
MAAM-011290	Driver Amplifier	5000	20000	20.5	20	29	110	AQFN-12, 3 mm	
XB1008-QT	Buffer Amplifier	10000	21000	17	18	32	100	PQFN-16, 3 mm	
XB1008-BD	Buffer Amplifier	10000	21000	18	20	30	100	DIE	

Note: Part numbers are RoHS compliant.
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Amplifier Gain Block (continued)

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Output P1dB (dBm)	OIP3 (dBm)	Bias Current (mA)	Package
MAAM-011132	Driver Amplifier	17700	23600	23	21	33	180	PQFN-16, 4 mm
XB1004-BD	Buffer Amplifier	16000	30000	21	19	29	100	DIE
MAAM-011112	Buffer Amplifier	20000	37000	24	18	30	335	PQFN-1, 3 mm
XB1006-BD	Buffer Amplifier	18000	38000	21	15	25	50	DIE
MAAM-011109	Wideband Amplifier	10	40000	13	18	22	170	LGA-9, 5 mm
XB1005-BD	Buffer Amplifier	35000	45000	23	16	26	50	DIE
MAAM-010651	Buffer Amplifier	37000	45000	21	20	30.5	50	PQFN-16, 3 mm

Power Amplifiers

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Output P1dB (dBm)	PsAT (dBm)	Gain (dB)	OIP3 (dBm)	Package
MAAP-011232	Power Amplifier	100	3000	29	30	25	40	PQFN-16, 3 mm
MAAP-010168	10 W Power Amplifier	500	3000	39	41	24	—	Ceramic Flanged-10
MAAP-011022	7 W Pulsed High Power Amplifier	2700	3000	37.5	38.3	23	—	PQFN-28, 6 mm
MAAP-010171	8 W Power Amplifier	2500	3500	38	39	27.3	—	PQFN-20, 5 mm
MAAP-011027	8 W Power Amplifier	5200	5900	—	39	20	—	PQFN-20, 5 mm
MAAM26100-B1	Power Amplifier	2000	6000	27	30.5	19	39	CR-2
MAAM26100-P1	Power Amplifier	2000	6000	28	30.5	20	40	CR-15
MAAP-010169	10 W Power Amplifier	2000	6000	38	41	18	—	Ceramic Flanged-10
MAAM26100	GaAs MMIC Power Amplifier	2000	6500	28	30.5	19	39	DIE
XPI039-QJ	2.5 W Power Amplifier	5600	7100	33	34	17	48	QFN-24, 6 mm
MAAP-011161	4 W Power Amplifier	7100	7900	35.5	36.5	22	46.5	SMT, 7 mm
MAAP-011193	4 W Power Amplifier	7700	8500	35.5	36.5	20	46.5	SMT, 7 mm
XPI035-QH	0.5 W Power Amplifier	5900	9500	28	29	26	39	PQFN-24, 4 mm
MAAM71100	GaAs MMIC Power Amplifier	7000	11000	28	31	18	38	DIE
MAAP-015035-DIE	12 W Power Amplifier	8500	11500	40	41	36	—	DIE
MAAP-015030-DIE	13 W Power Amplifier	8500	11750	38	41	25	—	DIE
MAAP-008924	1.2 W Power Amplifier	10000	13300	31	32	20	44	PQFN-20, 5 mm
MAAP-011313	4 W Power Amplifier	13500	15000	34.5	36	36	—	AQFN-32, 5 mm
MAAP-011333-DIE	4 W Power Amplifier	13500	15000	37	38	26	—	Bare Die
MAAP-010150	10 – 15.35 GHz Power Amplifier	10000	15350	33.5	36	27	42	QFN-48, 7 mm
MAAP-011202	2.5 W Power Amplifier	12700	15400	33.5	34.5	30	41	QFN-24, 5 mm
MAAP-010517	3 W Power Amplifier	14400	15400	35	36.4	24	42	PQFN-24, 5 mm
XPI042-QT	0.5 W Power Amplifier	12000	16000	25	27	21	38	PQFN-16, 3 mm
XPI043-QH	1.5 W Power Amplifier	12000	16000	30	32	21.5	41	PQFN-24, 4 mm
MAAP-011145-STD	2 W Power Amplifier	17650	19750	33	34.5	25	43	Cavity, 7 mm
MAAP-011327	1 W Power Amplifier	1	22000	28.5	30.5	13.5	47	AQFN-32, 5 mm
MAAP-011327-DIE	1 W Power Amplifier	1	22000	30	32	14	47	DIE
MAAP-011146-STD	2 W Power Amplifier	21150	23650	34	35	24	41	Cavity, 7 mm
MAAP-118260	Power Amplifier	18000	26000	28.5	31	28.5	37	QFN-24, 5 mm
MAAP-011324-DIE	0.25 W, DC – 40 GHz Power Amplifier	0	27000	25	26	18	35	DIE
MAAP-011324	0.25 W, DC – K-Band Power Amplifier	0	27000	25.5	27	18	35	AQFN-32, 5 mm
MAAP-011319	0.5 W, Ka-Band Power Amplifier	24000	30000	26	27	24	37	AQFN-24, 4 mm
MAAP-011358-DIE	6 W, Ka-Band Power Amplifier	27000	30000	37.5	39	27	—	DIE
MAAP-011250	4 W, Ka-Band Power Amplifier	27500	30000	34.8	36	24	—	AQFN-32, 5 mm
MAAP-011289	3 W, Ka-Band Power Amplifier	28000	30000	34	36	24	—	AQFN-32, 5 mm
MAAP-011316	2 W, Ka-Band Power Amplifier	27000	31000	33.5	34	26	—	AQFN-32, 5 mm
MAAP-011317	4 W Power Amplifier	27500	31000	36.5	36	27.5	36	QFN-32, 5 mm

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Power Amplifiers (continued)

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Output P1dB (dBm)	P _{SAT} (dBm)	Gain (dB)	OIP3 (dBm)	Package
MAAP-011139	4 W Power Amplifier	28500	31000	34.5	36	23	36	AQFN-32, 5 mm
MAAP-011233	4 W, Ka-Band Power Amplifier	28500	31000	34.5	37	25	—	AQFN-32, 5 mm
MAAP-011139-DIE	4 W Power Amplifier	29000	31000	34.5	36.5	22	—	DIE
MAAP-011340-DIE	0.25 W, Ka-Band Amplifier	27000	31500	24	26	24	33	DIE
MAAP-011340	0.25 W, Ka-Band Amplifier	27000	31500	24	—	25	33	AQFN-24, 4 mm
MAAP-011341	0.5 W, Ka-Band Power Amplifier	27000	31500	27	28	28	36	AQFN-24, 4 mm
MAAP-011246	Power Amplifier	27500	31500	30	33	23	—	AQFN 32, 5 mm
MAAP-011298	2.3 W, Ka-Band Power Amplifier	28000	31500	32.5	33.5	24.5	—	AQFN-32, 5 mm
MAAP-015016-DIE	4 W Ka-Band Power Amplifier	32000	38000	—	37	18	—	DIE
MAAP-011325-DIE	0.25 W, DC — 40 GHz Power Amplifier	0	40000	27	28	11	35	DIE
MAAP-011170	Power Amplifier	37000	40000	27	28	27	38	SMD-16, 7 mm
XPI080-QU	38 GHz Power Amplifier	37000	40000	27	28.9	25	38	LGA-16, 7 mm
MAAP-010512	42 GHz Power Amplifier	40500	43500	27	29	22	38	LGA-16, 7 mm
MAAP-011205	0.25 W Power Amplifier	71000	86000	21	24	19	—	AQFN-16, 7 mm
MAAP-011218-DIE	0.5 W Power Amplifier	71000	86000	26	27	20	31	DIE
MAAP-011199	Power Amplifier	80000	100000	22	24	12	—	DIE
MAAP-011341-DIE	0.5 W, Ka-Band Power Amplifier	27000	315000	26.5	28	27	36	DIE

Linear Amplifiers

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	OIP3 (dBm)	Output P1dB (dBm)	Package
MAAM-011106	Power Amplifier Module	1616	1627	30.5	30	33	DIE
MAAM-011117	Broadband, Low Distortion	50	2700	16	35	19.5	PDFN-8, 2 mm
MAAM-011322	Driver Amplifier	1700	2800	19	39	24	3 mm 16 Lead SMT
MAAM-011302	Driver Amplifier	1700	2900	38	41	26	Lead-Free SMT
MAAM-011324	Driver Amplifier	3300	3800	17	40	26	Lead-Free 3 mm 16 Lead SMT
MAAM-011323	Driver Amplifier	3000	4400	17	39	25	3 mm 16 Lead SMT
MAAM-011361	Driver Amplifier	3000	4400	35	40	26	Lead-Free SMT
XPI044-QL	Power Amplifier Module	4000	5900	18.5	46	34	SMD-28, 7 mm
XF1001-SC	Packaged HFET	DC	6000	15.5	47	30	SOT-89
MAAM-011326	21 dB Gain Amplifier	500	6000	21	36	20	PDFN-8, 2 mm
XPI050-QJ	2.5 W Power Amplifier	7100	8500	15.5	47	33	QFN-24, 6 mm
MAAP-015035-DIE	12 W Power Amplifier	8500	11500	36	—	—	DIE
MAAP-015024-DIE	8 W Power Amplifier	14500	17500	21	—	—	DIE
XPI027-BD	Power Amplifier	27000	31000	25	43	34	DIE
XPI026-BD	Power Amplifier	27000	32000	21	40	32	DIE
MAAM-011139	Driver Amplifier	27500	33400	21	32	20	QFN-24, 4 mm
XPI017-BD	Power Amplifier	30000	36000	16	33	24	DIE
MAAM-011167	Medium Power Amplifier	71000	86000	18	27	21	DIE
MAAP-011205	Power Amplifier	71000	86000	19	—	21	DIE
MAAP-011106	Power Amplifier	71000	86000	20	30	23	DIE
MAAP-011388-DIE	1 W High Linearity Power Amplifier	71000	86000	28	42	29	DIE, 4 x 4.3 mm

High Frequency

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	OIP3 (dBm)	Package
MAAP-011215-DIE	Power Amplifier	55000	70000	25	32	DIE
MADC-011021	E-Band Direct Downconverter	71000	86000	—	—	SMT, 8 x 8 mm
MAAM-011167	Power Amplifier	71000	86000	18	27	DIE
MAAP-011205	Power Amplifier	71000	86000	18	27	SMT, 7 x 7 mm

Note: Part numbers are RoHS compliant.
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High Frequency (continued)						
Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	OIP3 (dBm)	Package
MAAP-011106	Power Amplifier	71000	86000	20	30	DIE
MAAP-011218-DIE	0.5 W Power Amplifier	71000	86000	20	31	DIE
MAMF-011142	E-Band Direct Upconverter	71000	86000	30	25.5	SMT, 12 x 8 mm
MAAP-011199-DIE	Power Amplifier	80000	100000	12	—	DIE

Low Noise Amplifiers									
Part Number	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Noise Figure (dB)	OIP3 (dBm)	Output P1dB (dBm)	Bias Voltage (V)	Bias Current (mA)	Package
MAAL-011204 †	62.87	128.74	28	0.6	28	11.5	3	37	PDFN-8, 4 mm
MAAL-011227	62.87	128.74	28	0.6	28	11.5	3	37	15.24 x 10.16 mm module
MAAL-011136	45	1218	20.5	1.2	32	17.5	5	50	SOT-89 Plastic
MAAL-010705	500	1600	21	0.5	32	18.5	4	60	PDFN-8, 2 mm
MAALSS0042	1500	1600	27	1.15	13	1	5	20	Lead-Free SOIC-8,
MAAM-011297	5	1800	17	2.0	42	24	5	290	SOIC-8EP
MAAM-011299	5	1800	18.7	2.5	42	24	5	290	SOIC-8EP
MAALSS0048	1400	2000	18	1.6	13	1	3	7	SOT-26
MAAL-009120	70	3000	11	1.4	35	18.5	3	80	SOT-363
MAAL-010200	70	3000	11	1.4	36	17.5	3	77	SOT-89
CGY2106XHV	100	3000	19	0.45	35	19	2.5	50	QFN
MAAL-007304	500	3000	25.5	0.7	19	7	3	12	SOT-26
MAAL-009053	800	3000	11	1.4	35	18	3	80	SOT-363
MAAL-010570	100	3500	16	0.75	34	18.8	5	15	SOT-363
MAAL-010704	100	3500	16	0.8	34	19	3	60	SOT-363
MAAL-011138	2500	3500	21	1	28	—	5	55	PDFN-8, 2 mm
MAAM-011229-CQ3	50	4000	19	1.3	38	19.0	5	80	CQFN-12, 3 mm
MAAM-011229	50	4000	19	1.3	45	19.5	5	80	QFN-8, 2 mm
CGY2105XHV	500	4000	19	0.42	35	21	3	50	QFN
MAAL-010706	1400	4000	17.5	0.6	34.5	19	4	60	PDFN-8, 2 mm
MAAL-011207-Q	150	6000	23	0.3	33	17.5	3	50	PDFN-8, 2 mm
CGY2108GS	500	6000	21	0.6	36	10	5	50	Hermetic Ceramic
MAAM-011326	500	6000	21	1.5	36	20	5	90	PDFN-8, 2 mm
CGY2108HV	500	6000	21.5	0.5	36	22	5	50	Hermetic Ceramic
CGY2107HV	500	6000	24	0.5	36	19	5	50	QFN
MAAL-011134	700	6000	15	0.85	28	15	3	50	PDFN-8, 2 mm
MAAL-011134-CQ3	700	6000	15	0.85	28	15	3	50	CQFN-12, 3 mm
MAAL-011078	700	6000	23	0.35	33	17.5	3	50	PDFN-8, 2 mm
MAAL-011188	1000	6000	35	0.79	31	17.5	5	80	PQFN-16, 3 mm
CGY2178UH	5000	6000	30	1	22	15	3	40	DIE
MAAL-01124	1400	6500	34	0.9	35	—	—	—	QFN
MAAM37000	3500	7000	17	1.8	24	14	4	75	DIE
MAAM37000-A1	3500	7000	17	2.2	25	14	4	75	Ceramic-8
MAAM37000-A1G	3500	7000	17	2.2	25	14	4	75	Ceramic Gull Wing-8
CGY2120XUH	5000	7000	13	0.5	—	12	1	50	DIE
MAAM-011305	30	8000	15.3	1.7	35	20	5	65	PDFN-8, 2 mm
MAAM-011305-DIE	30	8000	16	1.6	37	20	5	55	DIE
MAAM-011252	30	8000	20	1.2	34	19.5	5	56	PDFN-8, 2 mm
MAAM-011252-DIE	30	8000	20	1.2	34	20	5	60	DIE
MAAM-011252-CQ3	30	8000	20	1.4	34	20	5	65	CQFN-12, 3 mm
CGY2220UH	1000	12000	36	1.5	12	—	1.5	54	DIE

Note: Part numbers are RoHS compliant. † Indicates Non-magnetic.
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Low Noise Amplifiers (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Noise Figure (dB)	OIP3 (dBm)	Output P1dB (dBm)	Bias Voltage (V)	Bias Current (mA)	Package
MAAM71200-H1	7500	12000	15.5	2.7	21	11	4	40	Leadless Ceramic
MAAM71200	7500	12000	16.5	2.3	22	12	4	40	DIE
CGY2221UH	8000	12000	16	1.6	29	17	5	82	DIE
MAAL-010528	8000	12000	20	1.6	26	14	4	60	PQFN, 3 mm
CGY2124UH	8000	12000	33	1.1	20	10	5	55	DIE
CGY2221HV	7500	13000	16	1.6	29	17	5	82	QFN
CGY2221HV	7500	13000	17	1.6	—	17	5	82	QFN
CGY2232UH	12750	14750	24	1.3	—	0	3	24	DIE
CGY2125AUH	13000	15000	25	1.5	—	8	3.3	20	DIE
CGY2230UH	1000	18000	35	1.5	12	0	1.5	50	DIE
MAAL-011151	2000	18000	15	3.5	—	5	3	2	PQFN-32, 5 mm
MAAL-011130	2000	18000	21	1.4	24	14	3	80	PQFN-8, 2 mm
CGY2290SUH	6000	18000	8.5	3	—	13	5	30	DIE
MAAL-011181	0	20000	15	2.5	29	18	5	—	PQFN-32, 5 mm
MAAL-011181-DIE	0	20000	15	2.5	29	18	5	—	DIE
MAAL-011182	2000	20000	15	1.5	24	14	5	65	PQFN-32, 5 mm
MAAL-011182-DIE	2000	20000	15	2.5	25	14	5	65	DIE
MAAL-011146	17250	21500	17	1.4	14	12	2	30	PQFN-16, 3 mm
CGY2121XUH	18000	26000	19	1.3	5	7	1.5	60	DIE
MAAL-011141	DC	28000	17.5	1.4	27.5	16	6	75	AQFN-32, 5 mm
MAAL-011141-DIE	DC	28000	17.5	1.4	27.5	16	6	75	DIE
MAAL-011129	18000	31500	23	2.5	25	16	3	80	PQFN-8, 2 mm
CGY2128UH	24000	34000	23	1.6	17.5	8.5	3.5	47	DIE
MAAL-011138	25000	35000	21	1	28	—	5	80	PDFN-8, 3 mm
XL1002-BD	20000	36000	23	2.6	16	4	5	85	DIE
MAAL-011198	32000	37000	18.5	3	23	18	3.3	90	PDFN-8, 2 mm
XL1010-BD	20000	38000	17	3	—	—	4	45	DIE
XL1010-QT	20000	38000	17	3	—	6	4	45	QFN-16, 3 mm
MAAL-011111	22000	38000	19	2.5	—	5	3	55	QFN-16, 3 mm
XL1000-BD	20000	40000	20	2	16	9	3	35	DIE
CGY2122XUH	25000	43000	32	1.5	10	1.2	1.1	30	DIE
CGY2260UH	24000	44000	25.5	1.7	22	6	1.5	50	DIE
MAAL-011186	20000	55000	20	2.5	24	14	3.5	130	SMT, 5 mm
MAAL-011186-DIE	20000	60000	20	2.5	24	14	3.5	130	DIE
CGY2272UH	44000	69000	29	1.7	—	5	1.5	46	DIE
CGY2190UH	75000	110000	23	2.8	—	1	1	33	DIE

Low Phase Noise Amplifiers

Part Number	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Noise Figure (dB)	Phase Noise (dBc/Hz)	Package
MAAL-011154-DIE	4000	8000	15	5.1	-165	DIE
MAAL-011154	4000	8000	15.7	5	-165	PQFN-16, 4 mm
MAAL-011155-DIE	6000	12000	15	5.1	-167	DIE
MAAL-011155	6000	12000	15.5	5	-167	PQFN-16, 4 mm
MAAL-011151	2000	18000	15	4	-154	PQFN-32, 5 mm
MAAL-011159-DIE	2000	27000	23	4	-164	DIE
MAAL-011158-DIE	2000	28000	12	4	-172	DIE

Note: Part numbers are RoHS compliant.
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Variable Gain Amplifiers								
Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	OIP3 (dBm)	Output P1dB (dBm)	Atten Range	Package
MAAM-010399	Differential Variable Gain Amplifier	50	1200	28	48	26	25	PQFN, 5 x 7 mm
MAAM-011100	Variable Gain Amplifier	400	20000	12	25	15	30	TDFN-6, 1.5 x 1.2 mm
MAAM-010651	Amplifier, Buffer	37000	40000	21	30.5	20	15	QFN, 3 mm

CATV Amplifiers									
Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	OIP3 (dBm)	Bias Current (mA)	Bias Voltage (V)	Noise Figure (dB)	Package
MAAM-011156	Amplifier, CATV Return Path Differential	5	300	19	44	210	8	7	PQFN-16, 3 mm
MAAM-011184	CATV Return Path Single-ended Amplifier	5	300	21	43	95	5	2.5	MSOP 8-EP
MAAM-011185	CATV Return Path Differential Amplifier	5	300	21.2	43	290	5	3.1	PQFN-16, 3 mm
MAAM-011186	Differential CATV Variable Gain Amplifier	5	300	39	42	280	8	3	PQFN-48, 7 mm
MAAM-011168	Differential CATV Variable Gain	5	300	40	44	290	8	2.6	PQFN-48, 7 mm
MAAMSS0067	Low Noise, Low Distortion Amplifier	50	1000	12.2	32	190	5	3.3	PQFN-20, 4 mm
MAAMSS0044	Low Noise, Low Distortion Amplifier	50	1000	12.2	42	225	5	3.3	PQFN-20, 4 mm
MAAM-009100	Broadband CATV Amplifier	50	1000	14.3	34	105	5	3	SOT-89
MAAM-007724	Low Noise, Low Distortion Amplifier	50	1005	12.2	32	190	5	3.3	PQFN-20, 4 mm
MAAM-010373	Broadband CATV Amplifier	50	1100	22	40	148	8	1.66	SOT-89
MAAM-011169	CATV 75 Ω Push Pull Amplifier	45	1200	25	54	480	12	4.4	PQFN-40, 5 x 7 mm
MAAMSS0041	Low Noise, Low Distortion Amplifier	50	1200	15	36	100	8	2.7	SOT-89
MAAMSS0042	Low Noise, Low Distortion Amplifier	50	1200	15	38	110	5	3	SOT-89
MAAMSS0060	Low Noise, Low Distortion Amplifier	50	1200	17	37	120	8	1.8	SOT-89
MAAM-009633	Broadband CATV Amplifier	50	1200	17	37	120	8	1.9	SOT-89
MAAM-011251	75 Ω, High Linearity, Low Noise CATV Amplifier	5	1218	15	37	100	5	1.9	SOT-89
MAAM-011258	75 Ω, High Linearity, Low Noise CATV Amplifier	5	1218	15	37	100	5	2.2	SOT-89
MAAM-011240	75 Ω, Differential RF Amplifier	5	1218	17	44	290	5	1.7	SOIC-8EP
MAAM-011163	75 Ω, Differential RF Amplifier	5	1218	19	42	290	5	1.7	SOIC-8EP
MAAM-011182	75 Ω, 8 V RF Amplifier	45	1218	18	38	130	8	2.7	PDFN-8, 2 mm
MAAM-011297	75 Ω, RF Differential Amplifier	5	1800	17	42	290	5	2	SOIC-8EP
MAAM-011299	75 Ω, RF Differential Amplifier	5	1800	18.7	42	290	5	2	SOIC-8EP
MAAL-011119	Satellite TV Amplifier	900	2200	10.5	32	80	2.5	1.5	SOT-363
MAAL-009053	Satellite TV Amplifier	800	3000	11	35	80	3	1.4	SOT-363
MAAL-011139	Low Noise Amplifier	5	4000	21	34	85	5	1	SOT-89

Distributed Amplifiers								
Part Number	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Gain Flatness (dB)	Noise Figure (dB)	OIP3 (dBm)	Output P1dB (dBm)	Package
MAAM-011289	5000	20000	16	1	5	30	20	AQFN-12, 3 mm
MAAM-011290	5000	20000	20	2.5	4	29	20	AQFN-12, 3 mm
MAAP-011327-DIE	2000	22000	13	—	—	42	28	DIE
MAAP-011327	2000	22000	13	—	—	45	28	AQFN-32, 5 mm
MAAP-011324	DC	27000	18	—	—	34	25	AQFN-32, 5 mm
MAAP-011325-DIE	DC	40000	11	—	—	35	27	DIE
MAAM-011275-DIE	0	40000	15	0.75	5	33	21	DIE
MAAM-011286-DIE	0	44000	16	1	4	30	22	DIE
MAAM-011109	10	40000	13	18	3.5	22	18	LGA-9, 5 mm
MAAM-015023-DIE	18000	40000	26	0.5	6	30	21	DIE
CGY2145UH	500	45000	12.7	—	4.5	—	18	DIE
MAAM-011291-DIE	20000	45000	19	—	—	35	28.5	DIE
MAAM-011277-DIE	20000	45000	24.5	—	—	30	23.5	DIE

Note: Part numbers are RoHS compliant. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

Distributed Amplifiers (continued)								
Part Number	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Gain Flatness (dB)	Noise Figure (dB)	OIP3 (dBm)	Output P1dB (dBm)	Package
CGY2141UH	10	46000	16	—	4	—	19	DIE
CGY2160UH	1500	47000	14.5	—	1.5	—	17	DIE
MAAM-011275	0	50000	15	0.75	5	29	20	AQFN-12, 5 mm
MAAM-011238	0	50000	14	3.5	5.5	27	17	LGA-12, 5 mm
MAAM-011231-DIE	0	50000	15	1.5	3.5	24	15	DIE
XD1001-BD	18000	50000	17	1	5	24	15	DIE
CGY2144UH	10	54000	13	—	2.5	—	15	DIE
MAAM-011238-DIE	0	67500	15	2	7	27	17.6	DIE

FTTx Amplifiers									
Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	OIP3 (dBm)	Bias Current (mA)	Bias Voltage (V)	Noise Figure (dB)	Package
MAAM-007807	CATV and 2nd Stage FTTx Amplifier	50	1000	9	35	60	5	3.8	SOT-89
MAAM-008863	FTTx RF Amplifier	50	1000	37	—	220	5	4.8	PQFN-24, 4 mm
MAAM-010333	Optical Node RF Amplifier	50	1200	33	—	260	5	—	PQFN-24, 4 mm

Hybrid Amplifiers: Gain Blocks							
Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	OIP3 (dBm)	Package	
A72	Cascadable, High Efficiency	5	500	15	26	TO-8	
SMA72	Cascadable, High Efficiency	5	500	15	26	SMT	
A54	Cascadable	5	500	15.5	21	TO-8	
A77	Cascadable	5	500	16.5	30	TO-8	
CA77 ♦	Cascadable	5	500	16.5	30	Connectorized	
SMA77	Cascadable	5	500	16.5	30	SMT	
A88	Cascadable	5	500	18.7	30	TO-8	
SMA88	Cascadable	5	500	18.7	30	SMT	
A74-2	Cascadable, High Efficiency	5	500	26	10	TO-8	
RA89	Cascadable, High Gain	5	500	26.5	35	TO-8B	
CRA89 ♦	Cascadable, High Gain	5	500	26.5	35	Connectorized	
A55	Cascadable	10	500	14.7	24	TO-8	
A57	Cascadable	10	500	14.7	28	TO-8	
SMA57	Cascadable	10	500	14.7	28	SMT	
PA512	Cascadable, Medium Power	10	500	18	40	TO-8	
MAAM-007502-CPA512 ♦	Cascadable, Medium Power	10	500	18	40	Connectorized	
SMA513	Cascadable	10	500	20	30	SMT	
MAAM-008200-000A83	Cascadable, High Efficiency	10	500	30	10	TO-8	
RA89-1	Cascadable, High Gain	10	500	30	36	TO-8B	
CRA89-1 ♦	Cascadable, High Gain	10	500	30	36	Connectorized	
SMRA89-1	Cascadable, High Gain	10	500	30	36	SMT	
A77-1	Cascadable	5	600	16	30	TO-8	
CA77-1 ♦	Cascadable	5	600	16	30	Connectorized	
SMA77-1	Cascadable	5	600	16	30	SMT	
A5-6	Cascadable	6	600	15.5	21	TO-8	
SMA5-6	Cascadable	6	600	16	21	SMT	
A59-1	Cascadable, High Dynamic Range	10	700	10.5	36	TO-8	
SMA59-1	Cascadable, High Dynamic Range	10	700	10.5	36	SMT	
A89	Cascadable	50	800	22	30	TO-8	
SMA89	Cascadable	100	800	22	30	SMT	
AMC-184-SMA ♦	Cascadable	5	1000	20	20	Connectorized	

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Hybrid Amplifiers: Gain Blocks (continued)						
Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	OIP3 (dBm)	Package
AMC-145-SMA ♦	Cascadable	10	1000	10.7	32	Connectorized
A19-1	Cascadable Amplifier	10	1000	11.5	35	TO-8
CA19-1 ♦	Cascadable	10	1000	11.5	35	Connectorized
SMA19-1	Cascadable	10	1000	11.5	35	SMT
A17	Cascadable Amplifier	10	1000	12	27	TO-8
CA17 ♦	Cascadable	10	1000	12	27	Connectorized
SMA17	Cascadable	10	1000	12	27	SMT
RA69	Cascadable, High Gain	10	1000	25	34	TO-8B
CRA69 ♦	Cascadable, High Gain	10	1000	25	34	Connectorized
SMRA69	Cascadable, High Gain	10	1000	25	34	SMT
A1021	Cascadable, High Gain	10	1000	26	26	TO-8
CA1021 ♦	Cascadable, High Gain	10	1000	26	26	Connectorized
SMA1021	Cascadable, High Gain	10	1000	26	26	SMT
A66-1	Cascadable, High Gain	10	1000	27.5	28	TO-8
CA66-1	Cascadable, High Gain	10	1000	27.5	28	Connectorized
SMA66-1	Cascadable, High Gain	10	1000	27.5	28	SMT
RA66	Cascadable, High Gain	10	1000	37	30	TO-8B
CRA66 ♦	Cascadable, High Gain	10	1000	37	30	Connectorized
SMRA66	Cascadable, High Gain	10	1000	37	30	SMT
AMC-155-SMA ♦	Cascadable, High Dynamic Range	300	1000	12.3	30	Connectorized
A66	Cascadable	10	1200	23.5	28	TO-8
CA66 ♦	Cascadable	10	1200	23.5	28	Connectorized
SMA66	Cascadable	10	1200	23.5	28	SMT
A64	Cascadable, High Gain	10	1200	26	20	TO-8
CA64 ♦	Cascadable, High Gain	10	1200	26	20	Connectorized
SMA64	Cascadable, High Gain	10	1200	26	20	SMT
A27	Cascadable	5	1500	8.5	28	TO-8
A25	Cascadable Amplifier	5	1500	10	21	TO-8
A24	Cascadable	5	1500	20	21	TO-8
CA24 ♦	Cascadable	5	1500	20	21	Connectorized
SMA24	Cascadable	5	1500	20	21	SMT
A29-1	Cascadable	10	1500	9	32	TO-8
CA29-1 ♦	Cascadable	10	1500	9	32	Connectorized
SMA29-1	Cascadable	10	1500	9	32	SMT
A28	Cascadable	10	1500	11	29	TO-8
CA28 ♦	Cascadable	10	1500	11	29	Connectorized
SMA28	Cascadable	10	1500	11	29	SMT
A26	Cascadable Amplifier	10	1500	20.5	27	TO-8
CA26 ♦	Cascadable	10	1500	20.5	27	Connectorized
SMA26	Cascadable	10	1500	20.5	27	SMT
A39	Cascadable	10	2000	7.5	34	TO-8
SMA39	Cascadable	10	2000	7.5	34	SMT
A38	Cascadable	10	2000	9.5	30	TO-8
CA38 ♦	Cascadable	10	2000	9.5	30	Connectorized
SMA38	Cascadable	10	2000	9.5	30	SMT
A35	Cascadable	10	2000	10	21	TO-8
CA35 ♦	Cascadable	10	2000	10	21	Connectorized
SMA35	Cascadable	10	2000	10	21	SMT

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Hybrid Amplifiers: Gain Blocks (continued)							
Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	OIP3 (dBm)	Package	
A37	Cascadable	10	2000	10	28	TO-8	
SMA37	Cascadable	10	2000	10	28	SMT	
A34	Cascadable	100	2000	16	18	TO-8	
SMA34	Cascadable	100	2000	16	18	SMT	
A36	Cascadable	100	2000	16.5	23	TO-8	
SMA36	Cascadable	100	2000	16.5	23	SMT	
RA36	Cascadable, High Gain	100	2000	24	22	TO-8	
CRA36 ♦	Cascadable, High Gain	100	2000	24	22	Connectorized	
SMRA36	Cascadable, High Gain	100	2000	24	22	SMT	
SMPA2010	Cascadable, Medium Power	200	2000	10	33	SMT	
CA36-1 ♦	Cascadable	100	2300	16.2	23	Connectorized	
Hybrid Amplifiers: Low Noise Amplifiers							
Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Noise Figure (mA)	OIP3 (dBm)	Package
A101	Cascadable, High Linearity	5	100	17	3	36	TO-8
SMA101	Cascadable, High Linearity	5	100	17	3	36	SMT
AMS-162-PIN ♦	Cascadable, High Dynamic Range	10	100	12.5	1.5	30	TO-8
AMC-162-SMA ♦	Cascadable, Low Noise, High Dynamic Range	10	100	12.5	1.5	30	Connectorized
AM-162-PIN ♦	Cascadable, High Dynamic Range	10	100	12.5	1.1	32	TO-8
A80-1	Cascadable	10	200	27.3	2	28	TO-8
SMA80-1	Cascadable	10	200	27.3	2	28	SMT
MAAM-007844-OCA801 ♦	Cascadable	10	200	27.3	2	28	Connectorized
A74-1	Cascadable, High Gain	5	250	31	4.5	21	TO-8
A70	Cascadable, High Dynamic Range	10	250	8	1.6	24	TO-8
SMA70	Cascadable, High Dynamic Range	10	250	8	1.6	24	SMT
A70-1	Cascadable, High Dynamic Range	10	250	8	1.8	28	TO-8
SMA70-1	Cascadable, High Dynamic Range	10	250	8	1.8	28	SMT
A70-2	Cascadable, High Dynamic Range	10	250	8	2.2	38	TO-8
CA70-2 ♦	Cascadable, High Dynamic Range	10	250	8	2.2	38	Connectorized
A231	Cascadable, High Gain	10	250	26	1.7	22	TO-8
CA231 ♦	Cascadable, High Gain	10	250	26	1.7	22	Connectorized
SMA231	Cascadable, High Gain	10	250	26	1.7	22	SMT
A83-1	Cascadable	10	250	35.5	2.5	9	TO-8
CA83-1 ♦	Cascadable	10	250	35.5	2.5	9	Connectorized
SMA83-1	Cascadable	10	250	35.5	2.5	9	SMT
A70-3	Cascadable, High Dynamic Range	20	250	8	2.8	40	TO-8
A82-1	Cascadable	20	250	19	2.8	26	TO-8
SMA82-1	Cascadable	20	250	19	2.8	26	SMT
SMA81	Cascadable	20	250	24.5	2.6	28	Ceramic SMT0-8
A81-1	Cascadable	20	250	25	2.5	27	TO-8
SMA81-1	Cascadable	20	250	25	2.5	27	SMT
A82	Cascadable	20	250	25	2.8	31	TO-8
CA82 ♦	Cascadable	20	250	25	2.8	31	Connectorized
SMA82	Cascadable	20	250	25	2.8	31	SMT
A81	Cascadable	20	250	25.5	3	28	TO-8
A78	Cascadable	5	300	14	3.5	35	TO-8
CA78 ♦	Cascadable	5	300	14	3.5	35	Connectorized

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Hybrid Amplifiers: Low Noise Amplifiers (continued)

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Noise Figure (mA)	OIP3 (dBm)	Package
SMA78	Cascadable	5	300	14	3.5	35	SMT
SMA70-2	Cascadable, High Dynamic Range	10	300	8	2.2	38	Ceramic SMT0-8
A87-2	Cascadable	10	300	16	2.9	24	TO-8
SMA87-2	Cascadable	10	300	16	2.9	24	SMT
SMA70-3	Cascadable, High Dynamic Range	15	300	8	2.8	40	Ceramic SMT0-8
PAW1027 ♦	Ultra Linear Power, Multi Carrier	35	350	38.5	3.7	43	SOT115J
EA1	Cascadable	5	400	14	4.3	13	TO-5
MAAM-008199-000A51	Cascadable	10	400	15	2.7	10	TO-8
A411	Cascadable	10	400	15.8	3	24	TO-8
SMA411	Cascadable	10	400	15.8	3	24	SMT
A87-1	Cascadable	10	400	16	3.4	31	TO-8
CA87-1 ♦	Cascadable	10	400	16	3.4	31	Connectorized
SMA87-1	Cascadable	10	400	16	3.4	31	SMT
AMC-123-SMA ♦	Cascadable, Low Noise, High Linearity	5	500	10	5.5	30	Connectorized
A58	Cascadable	5	500	11.5	4	34	TO-8
SMA58	Cascadable	5	500	11.5	4	34	SMT
AM-131-PIN	Cascadable, Low Noise, High Linearity	5	500	11.5	4	34	TO-8
A59	Cascadable, High Dynamic Range	5	500	11.5	4.3	36	TO-8
SMA59	Cascadable, High Dynamic Range	5	500	11.5	4.3	36	SMT
AMC-143-SMA ♦	Cascadable	5	500	15.8	2.5	20	Connectorized
A1	Cascadable Amplifier	5	500	16	2.4	11	TO-8
SMA1	Cascadable	5	500	16	2.4	11	SMT
AMC-147-SMA ♦	Cascadable, High Linearity	5	500	17	3.4	33	Connectorized
EA53-2	Cascadable	5	500	19	3.6	24	TO-5
A75	Cascadable Amplifier	5	500	21	2.1	21	TO-8
CA75 ♦	Cascadable	5	500	21	2.1	21	Connectorized
SMA75	Cascadable	5	500	21	2.1	21	SMT
A76-1	Cascadable, High Efficiency	5	500	27.5	3	26	TO-8
SMA76-1	Cascadable, High Efficiency	5	500	27.5	3	26	SMT
A515	Cascadable, High Gain	5	500	27.5	3.5	33	TO-8
MAAM-007272-OCA515 ♦	Cascadable, High Gain	5	500	27.5	3.5	33	Connectorized
MAAM-007272-SMA515	Cascadable, High Gain	5	500	27.5	3.5	33	SMT0-8
SMA76	Cascadable, High Gain	5	500	28	3	28	SMT
CA76 ♦	Cascadable, High Gain	5	500	28	3	28	Connectorized
A76	Cascadable, High Gain	5	500	28	3	28	TO-8
A514	Cascadable, High Gain	5	500	28	4	32	TO-8
MAAM-007272-OCA514	Cascadable, High Gain	5	500	28	4	32	Connectorized
MAAM-007272-SMA514	Cascadable, High Gain	5	500	28	4	32	SMT0-8
A74	Cascadable, High Gain	5	500	30	3	20	TO-8
CA74 ♦	Cascadable, High Gain	5	500	30	3	20	Connectorized
SMA74	Cascadable, High Gain	5	500	30	3	20	SMT
A73	Cascadable, High Gain	5	500	32	3.5	15	TO-8
SMA73	Cascadable, High Gain	5	500	32	3.5	15	SMT
A180	Cascadable	10	500	16.5	3.4	33	TO-8
CA180 ♦	Cascadable	10	500	16.5	3.4	33	Connectorized
SMA180	Cascadable	10	500	16.5	3.4	33	SMT
A511	Cascadable Amplifier	10	500	17	3.4	33	TO-8

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Hybrid Amplifiers: Low Noise Amplifiers (continued)

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Noise Figure (mA)	OIP3 (dBm)	Package
CA511 ♦	Cascadable	10	500	17	3.4	33	Connectorized
A75-3	Cascadable	10	500	20.5	1.7	16	TO-8
SMA75-3	Cascadable	10	500	20.5	1.7	16	SMT
MAAM-008317-CA7503 ♦	Cascadable	10	500	20.5	1.7	16	Connectorized
A531	Cascadable	10	500	31.7	2	14	TO-8
CA531 ♦	Cascadable	10	500	31.7	2	14	Connectorized
A81-3	Cascadable	20	500	17	4	20	TO-8
A81-2	Cascadable	20	500	24.5	3	28	TO-8
CA81-2 ♦	Cascadable	20	500	24.5	3	28	Connectorized
SMA81-2	Cascadable	20	500	24.5	3	28	SMT
A80	Cascadable	20	500	29	2.5	27	TO-8
SMA80	Cascadable	10	550	29	2.3	27	Ceramic SMT0-8
A67-1	Cascadable, High Efficiency	10	600	15	3.7	30	TO-8
CA67-1 ♦	Cascadable, High Efficiency	10	600	15	3.7	30	Connectorized
SMA67-1	Cascadable, High Efficiency	10	600	15	3.7	30	SMT
A611	Cascadable, Low Noise, Low Volt	5	700	15	3.2	24	TO-8
SMA611	Cascadable, Low Noise, Low Volt	5	700	15	3.2	24	SMT
A67	Cascadable, High Efficiency	10	800	14	4	30	TO-8
AMC-176-SMA ♦	Cascadable	5	1000	13.2	4	27	Connectorized
A11	Cascadable Amplifier	5	1000	14.7	3.1	10	TO-8
SMA11-2	Cascadable	5	1000	16	2.5	10	SMT
A63	Cascadable	5	1000	16	3	15	TO-8
SMA63	Cascadable	5	1000	16	3	15	SMT
AMC-182-SMA ♦	Cascadable, High Gain	5	1000	28.2	3.5	20	Connectorized
A18-1	Cascadable, High Dynamic Range	10	1000	14.7	3.8	30	TO-8
CA18-1 ♦	Cascadable, High Dynamic Range	10	1000	14.7	3.8	30	Connectorized
SMA18-1	Cascadable, High Dynamic Range	10	1000	14.7	3.8	30	SMT
A12	Cascadable Amplifier	10	1000	16	2.8	22	TO-8
A66-3	Cascadable, High Efficiency	10	1000	26	3	13	TO-8
CA66-3 ♦	Cascadable, High Efficiency	10	1000	26	3	13	Connectorized
SMA66-3	Cascadable, High Efficiency	10	1000	26	3	13	SMT
A1031	Cascadable, High Gain	10	1000	28.5	2.7	22	TO-8
SMA1031	Cascadable, High Gain	10	1000	28.5	2.7	22	SMT
MAAM-008198-OCA162	Cascadable, High Efficiency	10	1200	13	3.5	18	Connectorized
MAAM-008198-SMA162	Cascadable, High Efficiency	10	1200	13	3.5	18	SMT0-8
CA12 ♦	Cascadable, Low Volt	10	1200	14	2.8	20	Connectorized
A1211	Cascadable Amplifier	10	1200	14	2.8	20	TO-8
SMA1211	Cascadable, Low Volt	10	1200	14	2.8	20	SMT
A1212	Cascadable Amplifier	100	1200	14	1.8	29	TO-8
CA1212 ♦	Cascadable, Low Volt	100	1200	14	1.8	29	Connectorized
SMA1212	Cascadable, Low Volt	100	1200	14	1.8	29	SMT
A25-1	Cascadable	2	1500	13.5	3	22	TO-8
CA25-1 ♦	Cascadable	2	1500	13.5	3	22	Connectorized
A28-2	Cascadable, High Efficiency	10	1500	14	3.5	24	TO-8
CA28-2 ♦	Cascadable, High Efficiency	10	1500	14	3.5	24	Connectorized
SMA28-2	Cascadable, High Efficiency	10	1500	14	3.5	24	SMT
AM-153-PIN ♦	Cascadable, Low Noise	300	1800	12.4	2.5	17	TO-8

Note: Part numbers are RoHS compliant. ♦ indicates non-RoHS compliant. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

Hybrid Amplifiers: Low Noise Amplifiers (continued)

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Noise Figure (mA)	OIP3 (dBm)	Package
A31-1	Cascadable Amplifier	10	2000	11.5	3.5	9	TO-8
A32-1	Cascadable, Low Noise, Low Volt	100	2000	11.5	2.5	25	TO-8
CA32-1 ♦	Cascadable, Low Noise, Low Volt	100	2000	11.5	2.5	25	Connectorized
SMA32-1	Cascadable, Low Noise, Low Volt	100	2000	11.5	2.5	25	SMT
A32	Cascadable, High Linearity	100	2000	13	2.1	32	TO-8
CA32 ♦	Cascadable, High Linearity	100	2000	13	2.1	32	Connectorized
SMA32	Cascadable, High Linearity	100	2000	13	2.1	32	SMT
PA38	Cascadable, Medium Power	200	2000	10	4	34	TO-8
CPA38 ♦	Cascadable, Medium Power	200	2000	10	4	34	Connectorized
SMPA38	Cascadable, Medium Power	200	2000	10	4	34	SMT
MAAM-007501-0A2002	Cascadable	20	2700	11.5	2.5	40	TO-8
MAAM-007501-CA2002	Cascadable	20	2700	11.5	2.5	40	Connectorized
MAAM-007501-SA2002	Cascadable	20	2700	11.5	2.5	40	SMTO-8
A4011	Cascadable, Low Noise, Low Volt	1000	4000	15.5	2	29	TO-8
SMA4011	Cascadable, Low Noise, Low Volt	1000	4000	15.5	2	29	SMT
A45-1	Cascadable	1000	4000	17.5	4	26	TO-8
SMA45-1	Cascadable	1000	4000	17.5	4	26	SMT
A45	Cascadable	1000	4000	17.5	4	29	TO-8
CA45 ♦	Cascadable	1000	4000	17.5	4	29	Connectorized
SMA45	Cascadable	1000	4000	17.5	4	29	SMT
A4012	Cascadable, Low Noise, Low Volt	1000	4000	18	3.5	26	TO-8
SMA4012	Cascadable, Low Noise, Low Volt	1000	4000	18	3.5	26	SMT
A61	Cascadable, Low Noise, Low Volt	2000	6000	7.5	3.2	25	TO-8
SMA61	Cascadable, Low Noise, Low Volt	2000	6000	7.5	3.2	25	SMT
A6011	Cascadable, Low Noise, Low Volt	2000	6000	14.8	1.5	30	TO-8
CA6011 ♦	Cascadable, Low Noise, Low Volt	2000	6000	14.8	1.5	30	Connectorized
SMA6011	Cascadable, Low Noise, Low Volt	1500	6000	14.8	1.5	30	Ceramic SMTO-8

Hybrid Amplifiers: Limiting Amplifiers

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dBm)	Package
LA7	Cascadable, Limiting Amplifier	50	500	12.5	TO-8
CLA7 ♦	Cascadable, Limiting Amplifier	50	500	12.5	SMA
SMLA7	Cascadable, Limiting Amplifier	50	500	12.5	Ceramic SMTO-8
AL7	Cascadable, Limiting Amplifier	50	500	13	TO-8
CAL7 ♦	Cascadable, Limiting Amplifier	50	500	13	SMA
SMAL7	Cascadable, Limiting Amplifier	20	550	13	Ceramic SMTO-8
LA17	Cascadable, Limiting Amplifier	10	1000	11.5	TO-8
CLA17 ♦	Cascadable, Limiting Amplifier	10	1000	11.5	SMA
SMLA17	Cascadable, Limiting Amplifier	10	1000	11.5	Ceramic SMTO-8
L1	Cascadable, Signal Limiter	5	3000	—	TO-8
SML1	Cascadable, Signal Limiter	5	3000	—	Ceramic SMTO-8
L42	Cascadable, Signal Limiter	50	4000	—	TO-8
CL42 ♦	Cascadable, Signal Limiter	50	4000	—	SMA
SML42	Cascadable, Signal Limiter	50	4000	—	SMT

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DIODES

For Microwave Circuit Applications from 1 MHz to 80 GHz

MACOM designs, manufactures and supports one of the widest variety of PIN, Schottky, Varactor and Multiplier diodes in the industry for microwave circuit applications from 1 MHz to 80 GHz. Our diodes are manufactured in die, SURMOUNT™, plastic and ceramic packaging for a variety of circuit configurations providing high performance.



Variable Varactor Diodes

- > GaAs constant gamma series for higher frequency and high Q applications
- > Plastic packaged silicon varactor diodes for surface mount applications, including VCOs, tunable filters and phase shifters

Step Recovery Diodes

- > Flip Chip series for higher frequency mmWave applications
- > Plastic packaged series for microwave frequency surface mount applications
- > Ceramic packaged series for high power waveguide and coaxial applications

PIN Switch and Attenuator Diodes

- > Broadband performance from 1 MHz to 70 GHz
- > Excellent choices for switch, limiter, phase shifter and attenuator circuit applications
- > Plastic series for cost effective, surface mount applications
- > AlGaAs series for low loss, high isolation mmWave frequency applications
- > GaAs and silicon flip chip series for surface mount mmWave applications
- > SURMOUNT™ chipscale style for surface mount high performance applications

PIN Limiter Diodes

- > Die series for chip and wire high frequency microwave applications
- > Ceramic packaged series for waveguide, coaxial and surface mount applications

Schottky Mixer and Detector Diodes

- > Best choice for microwave circuit detector and mixer applications ranging from DC to 80 GHz
- > Available in die form, SURMOUNT™, flip chip, plastic and ceramic packaging

THz Diodes

- > The intrinsic cutoff frequencies of these Schottky junction devices exceed 1 THz
- > Well-suited for use in mixers and detectors operating in the frequency bands from 60 GHz into the hundreds of GHz bands

Variable Varactor Diodes						
Part Number	Total Capacitance (pF)	Gamma	Quality Factor @ 50 MHz, Min	Breakdown Voltage (V)	Package	
MAVR-011020-1411	0.025	0.9	3000	22	ODS-287/SOT-23	
MAVR-011005-12790T	0.27	1	—	20	ODS-1279 (SC-79)	
MA46600-134 S	0.3	0.5	8000	30	ODS-134 DIE	
MGV075-08	0.3	0.75	4000	22	C01A	
MA46H120	0.35	1	3000	15	Flip Chip DIE	
MAVR-000120-12030W	0.35	1	3000	15	Flip Chip DIE	
MAVR-000120-14110G	0.35	1	3000	20	Flip Chip DIE	
MAVR-000120-14110P	0.35	1	3000	20	Flip Chip DIE	
MGV100-08	0.35	1	4000	22	DIE/Various	
MTV4030-01	0.4	0.5	5000	30	DIE/Various	
MGV075-09	0.4	0.75	4000	22	C01A	
MGV100-09	0.45	1	4000	22	DIE/Various	
MGV075-10	0.5	0.75	3000	22	C01A	
MA46580-1209	0.5	1.25	3000	18	ODS-1209 DIE	
MA46585-1209	0.5	1.25	3000	18	ODS-1209 DIE	
MA46470-120	0.5	1.25	4000	22	ODS-120	
MA46470-134	0.5	1.25	4000	22	ODS-134 DIE	
MGV100-20	0.55	1	4000	22	DIE/Various	
MTV4030-02	0.6	0.5	5000	30	DIE/Various	
MA46H070-1056 S	0.6	0.75	4500	20	ODS-1056	
MA46603-134 S	0.6	0.5	6500	30	ODS-134 DIE	
MA46603-276	0.6	0.5	6500	30	ODS-276	
MA46H200-1056	0.6	1.25	3000	22	ODS-1056	
MA46471-134	0.7	1.25	4000	22	ODS-134 DIE	
MTV4030-03	0.8	0.5	4800	30	DIE/Various	
MTV4030-04	1	0.5	4800	30	DIE/Various	
MA46H071-1088	1	0.75	4500	20	ODS-1088	
MA46H071-1056 S	1	0.75	4500	20	ODS-1056	
MA46452-134	1	1	3000	22	ODS-134 DIE	
MA46472-94	1	1.25	3000	22	ODS-94	
MA46472-134	1	1.25	3000	22	ODS-134 DIE	
MA46H201-1056	1	1.25	3000	22	ODS-1056	
MA46H201-1088	1	1.25	3000	22	ODS-1088	
MA46413-120	1	1.5	2500	18	ODS-120	
MA46H501-1056	1	1.5	2500	18	ODS-1056	
MTV4030-05	1.2	0.5	4600	30	DIE/Various	
MA46473-134	1.2	1.25	3000	22	ODS-134 DIE	
MA46473-186	1.2	1.25	3000	22	ODS-186	
MA46474-94	1.5	1.25	3000	22	ODS-94	
MA46474-95	1.5	1.25	3000	22	ODS-95	
MA46474-120	1.5	1.25	3000	22	ODS-120	
MA46474-134	1.5	1.25	3000	22	ODS-134 DIE	
MGV100-26	1.7	1	3000	22	DIE/Various	
MTV4030-08	1.8	0.5	4200	30	DIE/Various	
MA46416-134 S	1.8	1.5	2500	18	ODS-134 DIE	
MTV4030-09	2.2	0.5	4000	30	DIE/Various	
MA46477-134	2.2	1.25	3000	22	ODS-134 DIE	

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Variable Varactor Diodes (continued)						
Part Number	Total Capacitance (pF)	Gamma	Quality Factor @ 50 MHz, Min	Breakdown Voltage (V)	Package	
MA46477-186	2.2	1.25	3000	22	ODS-186	
MTV4030-10	2.7	.05	3800	30	DIE/Various	
MAVR-000250-0287AT	2.7	1	450	12	SOT-23	
MAVR-000250-0287FT	2.7	1	450	12	SOT-23	
MAVR-000250-11410T	2.7	1	450	12	SOT-23	
MAVR-000250-1146AT	2.7	1	450	12	SC-703LD	
MAVR-000250-12790T	2.7	1	450	12	ODS-1279 (SC-79)	
MA46H072-1056 S	3	0.75	3000	20	ODS-1056	
MAVR-000202-12790T	3	1.25	2000	22	ODS-1279 (SC-79)	
MA46H202-1056	3	1.25	2000	22	ODS-1056	
MA46H202-1088	3	1.25	2000	22	ODS-1088	
MA4ST1241-1141T	3.4	1	1200	12	ODS-1141 (SOT-323)	
MAVR-001240-12790T	3.4	1	1200	12	ODS-1279 (SC-79)	
MAVR-000240-0287AT	3.5	1	450	12	ODS-287 (SOT-23)	
MAVR-000240-11410T	3.5	1	450	12	ODS-1141 (SOD323)	
MAVR-000240-1146FT	3.5	1	450	12	ODS-1146 (SC-703LD)	
MA46480-134	3.8	1.25	2000	22	ODS-134 DIE	
MA46461-186	4.7	1	1500	22	ODS-186	
MA4ST1231-1141T	4.7	1	1700	12	ODS-1141 (SOT-323)	
MAVR-001230-12790T	4.7	1	1700	12	ODS-1279 (SC-79)	
MAVR-045436-0287AT	4.7	0.5	1800	30	SOT-23	
MAVR-045436-0287FT	4.7	0.5	1800	30	SOT-23	
MAVR-045436-12790T	4.7	0.5	1800	30	SC-79	
MA46H073-1056 S	5	0.75	2200	20	ODS-1056	
MA46H203-1056	5	1.25	1500	22	ODS-1056	
MA46H203-1088	5	1.25	1500	22	ODS-1088	
MAVR-000083-0287AT	5	1.3	450	12	ODS-287 (SOT-23)	
MAVR-000083-0287FT	5	1.3	450	12	ODS-287 (SOT-23)	
MA46H503	5	1.5	1200	18	ODS-1056	
MTV4030-15	5.6	0.5	3000	30	DIE/Various	
MAVR-001350-12790T	5.9	1	690	12	ODS-1279 (SC-79)	
MAVR-001350-1146FT	5.9	1	690	12	ODS-1146 (SC-70-3LD)	
MAVR-000350-11410T	6.2	1	400	12	ODS-1141 (SOT-323)	
MAVR-045438-0287AT	6.8	0.5	1600	30	SOT-23	
MAVR-045438-0287FT	6.8	0.5	1600	30	SOT-23	
MA46483-186	6.8	1.25	1500	22	ODS-186	
MAVR-000082-0287AT	7.3	1.3	350	12	ODS-287 (SOT-23)	
MAVR-001340-11410T	9.2	1	600	12	SOT-323	
MAVR-001340-1146FT	9.2	1	600	12	ODS-1146 (SC-70-3LD)	
MAVR-001340-12790T	9.2	1	600	12	ODS-1279 (SC-79)	
MAVR-000340-11410T	9.5	1	350	12	ODS-1141 (SOT-323)	
MAVR-045440-0287AT	10	0.5	1300	30	SOT-23	
MAVR-045440-0287FT	10	0.5	1300	30	SOT-23	
MAVR-000401-0287AT	10	1	250	22	ODS-287 (SOT-23)	
MAVR-000401-0287FT	10	1	250	22	ODS-287 (SOT-23)	
MA46485-120	10	1.25	1500	22	ODS-120	
MA46H204-1056	10	1.25	1500	22	ODS-1056	

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Variable Varactor Diodes (continued)						
Part Number	Total Capacitance (pF)	Gamma	Quality Factor @ 50 MHz, Min	Breakdown Voltage (V)	Package	
MA46H204-1088	10	1.25	1500	22	ODS-1088	
MAVR-000081-0287AT	10.1	1.3	300	12	ODS-287 (SOT-23)	
MAVR-000081-0287FT	10.1	1.3	300	12	ODS-287 (SOT-23)	
MAVR-045441-0287AT	12	0.5	1200	30	SOT-23	
MAVR-045441-0287FT	12	0.5	1200	30	SOT-23	
MAVR-001330-11410T	13.2	1	530	12	ODS-1141 (SOT-323)	
MAVR-001330-1146FT	13.2	1	530	12	ODS-1146 (SC-70-3LD)	
MAVR-001330-12790T	13.2	1	530	12	ODS-1279 (SC-79)	
MTV4030-20	15	0.5	2000	30	DIE/Various	
MAVR-000403-0287AT	15	1	250	22	SOT-23	
MAVR-000403-0287FT	15	1	250	22	ODS-287 (SOT-23)	
MTV4030-21	18	0.5	1800	30	DIE/Various	
MAVR-000404-0287FT	18	1	175	22	ODS-287 (SOT-23)	
MTV4030-22	22	0.5	1600	30	DIE/Various	
MAVR-000405-0287FT	22	1	175	22	SOT-23	
MAVR-000080-0287AT	24.8	1.3	150	12	ODS-287 (SOT-23)	
MAVR-000080-0287FT	24.8	1.3	150	12	ODS-287 (SOT-23)	
MAVR-000320-11410T	28	1	300	12	ODS-1141 (SOT-323)	
MAVR-001320-11410T	28.3	1	350	12	ODS-1141 (SOT-323)	
MAVR-001320-1146FT	28.3	1	350	12	ODS-1146 (SC-70-3LD)	
MTV4030-24	33	0.5	1400	30	DIE/Various	
MAVR-045446-0287AT	33	0.5	750	30	SOT-23	
MAVR-000407-0287AT	33	1	150	22	ODS-287 (SOT-23)	
MAVR-000407-0287FT	33	1	150	22	SOT-23	
MTV4030-26	47	0.5	1000	30	DIE/Various	
MAVR-000409-0287FT	47	1	150	22	ODS-287 (SOT-23)	
MAVR-000079-0287FT	54.1	1.3	80	12	ODS-287 (SOT-23)	

Step Recovery Diodes						
Part Number	Total Capacitance Min (pF)	Total Capacitance Max (pF)	Reverse Voltage (V)	Lifetime (Typ vs Min) (ns)	Tt (Typ vs Max) (ps)	Package
MMDB45-B11 S	0.11	0.2	25	8	40	B11
MMDB35-B11 S	0.13	0.2	16	4	35	B11
MMDB30-B11 S	0.15	0.25	14	4	30	B11
MMDB45-0402	0.21	0.28	25	8	45	0402
MMDB35-0402	0.22	0.28	16	4	35	0402
MMDB45-0805-2	0.22	0.29	25	8	45	0805-2
MMDB35-0805-2	0.23	0.29	16	4	35	0805-2
MMDB45-E28/28X	0.24	0.31	25	8	45	E28/28X
MMDB35-E28/28X	0.25	0.31	16	4	35	E28/28X
MMDB30-0402	0.25	0.32	14	4	30	0402
MMDB30-0805-2	0.26	0.33	14	4	30	0805-2
MMDB30-E28/28X	0.28	0.36	14	4	30	E28/28X
SMMD840-SOD323	0.2	0.4	15	5	90	SOD323
SMMD840-SOT23-0S	0.2	0.4	15	5	90	SOT23-0S
MMDB40-C11 S	0.2	0.4	15	7	70	DIE
MSD700 S	0.2	0.4	15	8	60	DIE/Various
MSD700-12	0.2	0.4	15	8	60	CS12

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Step Recovery Diodes (continued)						
Part Number	Total Capacitance Min (pF)	Total Capacitance Max (pF)	Reverse Voltage (V)	Lifetime (Typ vs Min) (ns)	Tt (Typ vs Max) (ps)	Package
MMD837-C11 S	0.2	0.4	20	5	70	DIE
SMMD837-SOD323	0.2	0.4	20	5	90	SOD323
SMMD837-SOT23-0S	0.2	0.4	20	5	90	SOT23-0S
SMMD837-SOT23-1S	0.2	0.4	20	5	90	SOT23-1S
MSD710 S	0.2	0.4	20	11	70	DIE/Various
MSD720 S	0.2	0.4	30	17	100	DIE/Various
MMD840-0805	0.26	0.46	15	7	70	0805-2
MMD837-0805	0.26	0.46	20	5	70	805-2
MMD840-E28	0.28	0.48	15	7	70	E28
MMD840-E28X	0.28	0.48	15	7	70	E28X
MMD837-E28	0.28	0.48	20	5	70	E28
MMD837-E28X	0.28	0.48	20	5	70	E28X
MMD840-H27 S	0.32	0.52	15	7	70	H27
MMD837-H27 S	0.32	0.52	20	5	70	H27
MMD840-T86 S	0.38	0.58	15	7	70	T86
MMD837-T86 S	0.38	0.58	20	5	70	T86
MSD701 S	0.4	0.6	15	8	60	DIE/Various
MSD711 S	0.4	0.6	20	11	70	DIE/Various
MSD731 S	0.4	0.6	40	21	150	DIE/Various
MMD835-C11 S	0.3	0.7	15	10	70	DIE
MMD0840-A15 S	0.6	0.75	15	20	75	A15
MMD0151-A15 S	0.7	0.8	15	15	100	A15
MMD832-C11 S	0.4	0.8	20	10	80	DIE
SMMD832-SOD323	0.4	0.8	20	10	100	SOD323
SMMD832-SOT23-0S	0.4	0.8	20	10	100	SOT23-0S
SMMD832-SOT23-1S	0.4	0.8	20	10	100	SOT23-1S
MSD722 S	0.6	0.8	30	17	100	DIE/Various
MMD835-0805	0.36	0.86	15	10	60	0805-2
MMD832-0805	0.46	0.86	20	10	80	0805-2
MMD835-E28	0.38	0.88	15	10	70	E28
MMD835-E28X	0.38	0.88	15	10	50	E28X
MMD832-E28	0.48	0.88	20	10	80	E28
MMD835-H20 S	0.42	0.92	15	10	70	H20
MMD835-T86 S	0.48	0.98	15	10	70	T86
MMD832-H20 S	0.58	0.98	20	10	60	H20
MMD832-T86 S	0.58	0.98	20	10	60	T86
MMD830-C11 S	0.5	1	25	15	80	DIE
SMMD830-SOD323	0.5	1	25	15	110	SOD323
SMMD830-SOT23-0S	0.5	1	25	15	110	SOT23-0S
SMMD830-SOT23-1S	0.5	1	25	15	110	SOT23-1S
MSD703 S	0.8	1	15	8	60	DIE/Various
MSD723 S	0.8	1	30	17	100	DIE/Various
MSD733 S	0.8	1	40	21	150	DIE/Various
MMD830-0805	0.56	1.06	25	15	80	0805-2
MMD830-E28	0.58	1.08	25	15	80	E28
MMD830-E28X	0.58	1.08	25	15	80	E28X
MMD830-T86 S	0.68	1.18	25	10	80	T86

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Step Recovery Diodes (continued)						
Part Number	Total Capacitance Min (pF)	Total Capacitance Max (pF)	Reverse Voltage (V)	Lifetime (Typ vs Min) (ns)	Tt (Typ vs Max) (ps)	Package
MMD830-H20 S	0.68	1.18	25	15	80	H20
MA144769-287T	0.8	1.2	30	50	150	ODS-287 (SOT-23)
MAVR-044769-0287FT	0.8	1.2	30	50	150	ODS-287 (SOT-23)
MAVR-044769-12790T	0.8	1.2	30	50	150	ODS-1279 (SC-79)
MSD724 S	1	1.4	30	17	100	DIE/Various
MMD820-C12 S	1	1.7	40	30	100	DIE
SMMD820-SOD323	1	1.7	40	30	125	SOD323
SMMD820-SOT23-0S	1	1.7	40	30	125	SOT23-0S
SMMD820-SOT23-1S	1	1.7	40	30	125	SOT23-1S
MMD820-0805	1.06	1.76	40	30	100	0805-2
MMD820-E28	1.08	1.78	40	30	100	E28
MMD820-E28X	1.08	1.78	40	30	100	E28X
MMD820-H20 S	1.18	1.88	40	30	100	H20
MMD820-T86 S	1.18	1.88	40	30	100	T86
SMMD810-SOD323	1.5	2.5	50	40	250	SOD323
SMMD810-SOT23-0S	1.5	2.5	50	40	250	SOT23-0S
SMMD810-SOT23-1S	1.5	2.5	50	40	250	SOT23-1S
MMD810-T86 S	1.68	2.68	50	40	250	T86
MSD726 S	2	3	30	17	100	DIE/Various
MSD736 S	2	3	40	21	150	DIE/Various
SMMD805-SOD323	2.5	3.5	60	80	300	SOD323
SMMD805-SOT23-0S	2.5	3.5	60	80	300	SOT23-0S
SMMD805-SOT23-1S	2.5	3.5	60	80	300	SOT23-1S
MMD805-0805	2.56	3.56	60	80	300	0805-2
MMD0815-A15 S	—	4.15	50	135	320	A15

PIN Switch and Attenuator Diodes								
Part Number	Min Freq (MHz)	Max Freq (MHz)	CW Power Dissipation (W)	Total Capacitance (pF)	Resistance (Ω)	T _L (ns)	Breakdown Voltage Min (V)	Package
MMP7078 S	0.1	100	—	1	0.5	2500	400	DIE/Various
MMP7078-127-1	0.1	100	5	1	0.5	2500	400	CS127-1
MA4P1450NM-1091T †	1	300	30	1.8	5	8000	50	ODS-1091
MADP-011048	5	400	4.7	3	0.5	200	100	HQFN-8, 4 mm
MA4P4301B-402	DC	500	10	2	1	15000	100	ODS-402
MA4P4001B-402	DC	500	12	2.2	0.5	20000	100	ODS-402
MA4P4002B-402	DC	500	12	2.2	0.5	20000	200	ODS-402
MA4P4006B-402	DC	500	12	2.2	0.5	20000	600	ODS-402
MA4PK2003 †	DC	500	37.5	3.2	0.2	30000	2000	ODS-1080
MA4PK2004 †	DC	500	37.5	3.2	0.2	30000	2000	ODS-1038
MA4PK2000 †	DC	500	50	3.2	0.2	30000	2000	ODS-1027
MA4PK2001	DC	500	50	3.2	0.2	30000	2000	ODS-1082
MA4PK2002 †	DC	500	50	3.2	0.2	30000	2000	ODS-1048
MA4PK3003	DC	500	50	4	0.2	65000	3000	ODS-1085
MA4PK3004	DC	500	50	4	0.2	65000	3000	ODS-1075
MA4P709-150	DC	500	75	3.3	0.3	10000	1500	ODS-150
MA4PK3000	DC	500	75	4	0.2	65000	3000	ODS-1073
MA4PK3001	DC	500	75	4	0.2	65000	3000	ODS-1084
MA4PK3002	DC	500	75	4	0.2	65000	3000	ODS-1074

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PIN Switch and Attenuator Diodes (continued)								
Part Number	Min Freq (MHz)	Max Freq (MHz)	CW Power Dissipation (W)	Total Capacitance (pF)	Resistance (Ω)	T _L (ns)	Breakdown Voltage Min (V)	Package
MMP7089-127-1	0.1	500	5	0.5	0.6	1000	500	CS127-1
MA4P504-30 S	1	500	7.5	0.4	0.6	1000	500	ODS-30
MA4P504-186 S	1	500	7.5	0.4	0.6	1000	500	ODS-186
MA4P504-255 S	1	500	7.5	0.4	0.6	1000	500	ODS-255
MA4PH611	1	500	10	1	0.4	5000	1000	ODS-1091
MA4P505-255 S	1	500	10.7	0.55	0.5	2000	500	ODS-255
MA4P506-255	1	500	13.6	0.95	0.3	3000	500	ODS-255
MA4P506-258	1	500	13.6	0.95	0.3	3000	500	ODS-258
MA4P506-30 S	1	500	13.6	0.95	0.3	3000	500	ODS-30
MA4P506-31 S	1	500	13.6	0.95	0.3	3000	500	ODS-31
MADP-000015-000030 S	1	500	15	0.55	0.4	2000	500	ODS-30
MA4P604-255 S	1	500	15	0.6	1	3000	1000	ODS-255
MA4P606-30 S	1	500	15	0.8	0.7	4000	1000	ODS-30
MA4P606-258	1	500	20	0.98	0.7	4000	1000	ODS-258
MA4P606-36 S	1	500	20	0.99	0.7	4000	1000	ODS-36
MA4P607-43	1	500	25	2	0.4	5000	100	ODS-43
MA4P607-296 S	1	500	25	2.35	0.4	5000	1000	ODS-296
MA4P607-212	1	500	37.5	1.3	0.4	12000	1000	ODS-212 DIE
MA4P1200-401T	5	500	5.5	1.2	0.5	8000	50	ODS-401
MA4P1200NM-401T †	5	500	5.5	1.2	0.5	8000	50	ODS-401
MA4P1250NM-1072T	5	500	18	0.8	0.5	8000	50	ODS-1072
MA4PH238-1072T	DC	1000	1	0.5	6	2000	200	Ceramic SMT
MA4PH239-1079T	DC	1000	1	0.8	6	2000	200	ODS-1079
MADP-000504-10720T †	DC	1000	2.9	0.5	0.6	1000	500	ODS-1072
MA4P4301F-1091T	DC	1000	5	2	1	15000	100	ODS-1091
MA4P4001F-1091T	DC	1000	7.5	2.2	0.5	20000	100	ODS-1091
MA4P4002F-1091T	DC	1000	7.5	2.2	0.5	20000	200	ODS-1091
MA4P4006F-1091T	DC	1000	7.5	2.2	0.5	20000	600	ODS-1091
MADP-007417-10720T	DC	1000	12	0.7	0.8	6500	1000	ODS-1072
MA4P1450-1091T	DC	1000	30	1.8	0.5	8000	50	ODS-1091
MA47047-54 S	1	1000	0.3	0.3	1.5	1000	200	ODS-54
MA47266-146 S	1	1000	0.5	1.5	0.6	4000	200	ODS-146
MA4P606-4 S	1	1000	1	0.7	0.7	4000	1000	ODS-4
MA4PH237-1079T	1	1000	1	1.5	0.6	3000	200	ODS-1079
MA4P7002B-401T	1	1000	5	0.7	0.9	5000	200	ODS-401
MA4P7006B-401T	1	1000	5	0.7	0.9	5000	600	ODS-401
MA4P7102B-401T	1	1000	6	1	0.5	2500	200	ODS-401
MA4P7104B-401T	1	1000	6	1	0.5	2500	400	ODS-401
MA4P7101F-1072T	1	1000	11.5	1	0.5	2500	100	ODS-1072
MA4P606-131 S	1	1000	15	0.6	0.7	4000	1000	ODS-131 DIE
MA47208	1	1000	15	1.3	0.3	1300	1000	ODS-114
MSWSE-020-10	10	1000	7.5	0.37	0.8	490	250	0503
MSWSE-020-05	10	1000	10	0.62	0.3	600	250	0503
SMPN7335-SOD323	5	1200	0.75	0.3	1.5	500	200	SOD323
MADP-000234-10720T	DC	1500	3	1.7	0.3	3000	500	ODS-1072
MA4P7001F-1072T	DC	1500	10	0.7	0.9	5000	100	ODS-1072
MA4P7002F-1072T	DC	1500	10	0.7	0.9	5000	200	ODS-1072

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PIN Switch and Attenuator Diodes (continued)								
Part Number	Min Freq (MHz)	Max Freq (MHz)	CW Power Dissipation (W)	Total Capacitance (pF)	Resistance (Ω)	T _L (ns)	Breakdown Voltage Min (V)	Package
MA4P7006F-1072T	DC	1500	10	0.7	0.9	5000	600	ODS-1072
MA4P7418-1072T	DC	1500	11.5	0.8	1.2	7000	1100	ODS-1072
MA4P7102F-1072T	DC	1500	11.5	1	0.5	2500	200	ODS-1072
MA4P7104F-1072T	DC	1500	11.5	1	0.5	2500	400	ODS-1072
MA4P505-1072T	DC	1500	15	0.7	0.5	2000	500	ODS-1072
MA4P506-1072T	DC	1500	15	1	0.3	3000	500	ODS-1072
MA4PI250-1072T	DC	1500	18	0.9	0.5	8000	50	ODS-1072
MA4PH235-1072T	1	1500	1	1.2	0.5	300	35	ODS-1072
SMPN7316-SOT23	50	1500	0.75	0.25	0.6	200	100	SOT23
MADP-000488-13740W S	100	1500	3.3	0.16	1.6	4000	900	ODS-1374 DIE
MADP-000135-01340W S	100	1500	5	0.15	1.2	440	200	ODS-134 DIE
MADP-000208-13180W	30	1800	2.6	0.81	0.4	500	90	ODS-1318 SURMOUNT™
MPN3001 S	—	2000	—	0.25	1	—	200	A15
MA4P203-54	DC	2000	0.25	0.25	1.5	100	100	ODS-54
MA4P404-54	DC	2000	0.25	0.3	0.7	1000	250	ODS-54
MA4PH401-54T	DC	2000	0.25	0.3	1.5	1000	50	ODS-54
MA47600-54	DC	2000	0.25	0.3	6	2000	200	ODS-54
MA47123-139	DC	2000	0.25	0.5	3	1000	200	ODS-139
MA4P506-4	DC	2000	0.25	0.85	0.3	2500	500	ODS-4
MA47120-54T	DC	2000	0.25	1	0.5	3000	35	ODS-54
MA4PH301	DC	2000	0.25	1.1	1	4000	200	ODS-146
MA4PH151-139T	DC	2000	0.25	1.2	0.6	1000	100	ODS-139
MSWSE-044-10	1	2000	7.5	0.3	0.5	1200	300	0805P
MA4P404-30 S	5	2000	7.5	0.4	0.6	1000	250	ODS-30
MA4P404-258	5	2000	7.5	0.58	0.7	1000	250	ODS-258
MA4PH236-1072T	10	2000	1	0.5	3	1500	600	ODS-1072
SMPN7316-SOD323	50	2000	0.75	0.25	0.6	200	100	SOD323
MADP-042505-130600 S	50	2000	1.3	0.6	0.8	210	80	ODS-1306 DIE
MADP-042508-130600 S	50	2000	1.3	0.6	0.9	310	100	ODS-1306 DIE
MADP-000165-01340W S	100	2000	5	0.06	2.5	200	200	ODS-134 DIE
MADP-007167-11410T	1	2500	0.2	0.42	16	3000	200	ODS-1141 SOD-323 (2L)
MADP-007167-0287AT	1	2500	0.3	0.42	16	3000	200	ODS-287 SOT-23
MADP-007167-0287BT	1	2500	0.3	0.42	16	3000	200	ODS-287 SOT-23
MADP-007167-0287DT	1	2500	0.3	0.42	16	3000	200	ODS-287 SOT-23
MADP-007167-0287FT	1	2500	0.3	0.42	16	3000	200	ODS-287 SOT-23
MADP-007167-0287GT	1	2500	0.3	0.42	16	3000	200	ODS-287 SOT-23
MA4P604-30 S	1	2500	15	0.5	1	3000	1000	ODS-30
MA4P604-258	1	2500	15	0.68	1	3000	1000	ODS-258
MADP-007455-1146DT	5	2500	0.2	0.42	3	1000	100	ODS-1146 SC70 (3L)
MA4P7455CK-1146T	5	2500	0.2	0.47	3	1000	100	ODS-1146 SC70 (3L)
MA4P7455CA-1146T	5	2500	.25	0.47	3	1000	100	ODS-1146 SC70 (3L)
MA4P7455CA-287T	5	2500	0.3	0.35	3	1000	100	ODS-287 SOT-23
MA4P7455CK-287T	5	2500	0.3	0.35	3	1000	100	ODS-287 SOT-23
MADP-007455-0287DT	5	2500	0.3	0.47	3	400	100	ODS-287 SOT-23
MA4P7455-287T	5	2500	0.3	0.47	3	1000	100	ODS-287 SOT-23
MA4P7455ST-287T	5	2500	0.3	0.47	3	1000	100	ODS-287 SOT-23
MA4P7455ST-1146T	5	2500	0.3	0.47	3	1000	100	ODS-1146 SC-70 (3L)

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PIN Switch and Attenuator Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	CW Power Dissipation (W)	Total Capacitance (pF)	Resistance (Ω)	T_L (ns)	Breakdown Voltage Min (V)	Package
MA4P7447-1141T	15	2500	0.2	1.31	0.6	1000	100	ODS-1141 SOD-323
MA4P7447-287T	15	2500	0.3	1.32	0.6	1000	100	ODS-287 SOT-23
MA4P7447CA-287T	15	2500	0.3	1.32	0.6	1000	100	ODS-287 SOT-23
MA4P7447CK-287T	15	2500	0.3	1.32	0.6	1000	100	ODS-287 SOT-23
MA4P7447ST-287T	15	2500	0.3	1.32	0.6	1000	100	ODS-287 SOT-23
MADP-007155-0287DT	15	2500	0.3	1.32	0.6	1000	100	ODS-287 SOT-23
MADP-007448-1146DT	25	2500	—	0.25	2	—	100	SMT
MADP-007448-1279OT	25	2500	0.2	0.35	2	400	100	ODS-1279 SC-79
MADP-007448-1141OT	25	2500	0.2	0.36	2	400	100	ODS-1141 SOD-323
MADP-007448-1146BT	25	2500	0.2	0.37	2	400	100	ODS-1146 SC70 (3L)
MADP-007448-1146GT	25	2500	0.2	0.37	2	400	100	ODS-1146 SC70 (3L)
MA4P7433-1141T	25	2500	0.2	0.46	1.5	200	75	ODS-1141 SOD-323 (2L)
MA4P7433CA-1146T	25	2500	0.2	0.47	1.5	200	75	ODS-1146 SC-70 (3L)
MA4P7433CK-1146T	25	2500	0.2	0.47	1.5	200	75	ODS-1146 SC-70 (3L)
MA4P7433ST-1146T	25	2500	0.2	0.47	1.5	200	75	ODS-1146 SC-70 (3L)
MA4P7436-1141T	25	2500	0.2	1.11	0.5	200	75	ODS-1141 SOD-323
MA4P7436-1146T	25	2500	0.2	1.12	0.5	200	75	ODS-1146 SC-70 (3L)
MA4P7436CA-1146T	25	2500	0.2	1.12	0.5	200	75	ODS-1146 SC-70 (3L)
MA4P7436CK-1146T	25	2500	0.2	1.12	0.5	200	75	ODS-1146 SC70 (3L)
MA4P7436ST-1146T	25	2500	0.2	1.12	0.5	200	75	ODS-1146 SC-70 (3L)
MADP-007436-0287DT	25	2500	0.2	1.12	0.5	200	75	ODS-287 SOT-23
MADP-007436-1146DT	25	2500	0.2	1.12	0.5	200	75	ODS-1141 SOT-323
MADP-007448-0287AT	25	2500	0.3	0.37	2	400	100	ODS-287 SOT-23
MADP-007448-0287BT	25	2500	0.3	0.37	2	400	100	ODS-287 SOT-23
MADP-007448-0287DT	25	2500	0.3	0.37	2	400	100	ODS-287 SOT-23
MADP-007448-0287FT	25	2500	0.3	0.37	2	400	100	ODS-287 SOT-23
MADP-007448-0287GT	25	2500	0.3	0.37	2	400	100	ODS-287 SOT-23
MADP-007433-0287DT	25	2500	0.3	0.42	1.5	200	75	ODS-287 SOT-23
MADP-007433-1146DT	25	2500	0.3	0.42	1.5	200	75	ODS-1146 SC70 (3L)
MA4P7433-287T	25	2500	0.3	0.47	1.5	200	75	ODS-287 SOT-23
MA4P7433CA-287T	25	2500	0.3	0.47	1.5	200	75	ODS-287 SOT-23
MA4P7433CK-287T	25	2500	0.3	0.47	1.5	200	75	ODS-287 SOT-23
MA4P7433ST-287T	25	2500	0.3	0.47	1.5	200	75	ODS-287 SOT-23
MA4P7436-287T	25	2500	0.3	1.12	0.5	200	75	ODS-287 SOT-23
MA4P7436CA-287T	25	2500	0.3	1.12	0.5	200	75	ODS-287 SOT-23
MA4P7436CK-287T	25	2500	0.3	1.12	0.5	200	75	ODS-287 SOT-23
MA4P7436ST-287T	25	2500	0.3	1.12	0.5	200	75	ODS-287 SOT-23
MSWSE-010-16S	1	3000	10	0.15	0.9	1000	250	0402P
MSWSE-040-10	1	3000	40	0.12	0.6	700	250	0805P
MADP-010630-13920T	25	3000	2	0.35	1.5	200	100	ODS-1392
MADP-010631-13920T	25	3000	5	1	0.5	200	100	ODS-1392
MADP-010633-13920T	25	3000	6	0.4	0.6	1000	500	ODS-132
MA4SPS422	50	3000	1.8	0.34	3.1	10000	200	SURMOUNT™ DIE
MSWSE-050-10	100	3000	15	0.53	0.4	3200	500	0805P
MSWSE-050-17	100	3000	60	0.2	0.7	1600	500	0805P
MMP7068	0.5	4000	—	0.3	0.8	2000	500	DIE/Various
MADP-007167-0287HT	1	4000	0.3	0.42	16	3000	200	ODS-287 SOT-23

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PIN Switch and Attenuator Diodes (continued)								
Part Number	Min Freq (MHz)	Max Freq (MHz)	CW Power Dissipation (W)	Total Capacitance (pF)	Resistance (Ω)	T_L (ns)	Breakdown Voltage Min (V)	Package
MADP-000506-014400 S	1	4000	10	0.7	0.3	100	500	ODS-144
MA4P506-131 S	1	4000	13.6	0.7	0.3	3000	500	ODS-131 DIE
MA4P505-36 S	1	4000	15	0.55	0.5	2000	500	ODS-36
MADP-007455-12790T	5	4000	0.2	0.45	3	1000	100	ODS-1279 SC-79
MA4P7455-1225	10	4000	—	0.47	1.4	1000	100	ODS-1225 SOT-25
MA4P303-186 S	20	4000	0.3	0.35	1.5	200	200	ODS-186
MA4P303-1088	20	4000	0.3	0.47	1.5	200	200	ODS-1088
MA4P303-120 S	20	4000	5	0.35	1.5	200	200	ODS-120
MADP-007433-12790T	25	4000	0.2	0.4	1.5	200	75	SC-79
MADP-007436-12790T	25	4000	0.2	1.1	0.5	200	75	ODS-1279 SC-79
MADP-007433-0287HT	25	4000	0.3	0.42	1.5	200	75	ODS-287 SOT-23
MA4P203-1056 S	30	4000	0.3	0.35	1.5	100	100	ODS-1056
MA4P203-30 S	30	4000	5	0.35	1.5	100	100	ODS-30
MA4P202-120 S	50	4000	0.3	0.25	2.5	60	100	ODS-120
MA4P202-276	50	4000	0.3	0.25	2.5	60	100	ODS-276
MADP-042405-130600 S	50	4000	1.3	0.27	0.8	210	80	ODS-1306 DIE
MADP-042408-130600	50	4000	1.5	0.36	0.6	380	100	ODS-1306 DIE
MMP7036	1	5000	—	0.3	0.7	225	200	DIE/Various
MADP-007438-0287FT	5	5000	0.2	0.42	10	3000	200	ODS-287 SOT-23
MA4P7455-1141T	5	5000	0.2	0.46	3	1000	100	ODS-1141 SOT-323
MA4P7437-1141T	5	5000	0.2	0.46	6	2000	200	ODS-1141 SOT-323
MA4P7438-1141T	5	5000	0.2	0.46	10	3000	200	ODS-1141 SOD-323 (2L)
MA4P7438-287T	5	5000	0.2	0.47	10	3000	200	ODS-287 SOT-23
MADP-007437-0287BT	5	5000	0.3	0.42	6	2000	200	ODS-287 SOT-23
MADP-007437-0287DT	5	5000	0.3	0.42	6	2000	200	ODS-287 SOT-23
MADP-007437-0287FT	5	5000	0.3	0.42	6	2000	200	ODS-287 SOT-23
MADP-007438-0287BT	5	5000	0.3	0.42	10	3000	200	ODS-287 SOT-23
MADP-007438-0287DT	5	5000	0.3	0.42	10	3000	200	ODS-287 SOT-23
MA4P7437-287T	5	5000	0.3	0.47	6	2000	200	ODS-287 SOT-23
MA4P7437CA-287T	5	5000	0.3	0.47	6	2000	200	ODS-287 SOT-23
MA4P7438CA-287T	5	5000	0.3	0.47	10	3000	200	ODS-287 SOT-23
MMP7064	0.5	6000	—	0.3	0.8	1500	250	DIE/Various
MMP7092 S	1	6000	—	0.2	0.6	1000	500	DIE/Various
MMP7024 S	1	6000	—	0.25	0.5	60	70	DIE/Various
MPN7420 S	1	6000	2.5	0.06	1	1000	400	C12
MPN7453A S	1	6000	3	0.1	0.7	700	300	C22
MPN7453B S	1	6000	3	0.15	0.6	2500	400	C22
MPN7453C S	1	6000	3	0.18	0.4	1000	300	C22
MADP-017025-1314 S	1	6000	5	0.23	1	2300	1335	ODS-1314 DIE
MADP-017015-1314 S	1	6000	5	0.32	0.7	1300	115	ODS-1314 DIE
MPN7360 S	1	6000	10	0.8	0.2	2500	600	C37
MPN7380 S	1	6000	10	0.4	0.3	2500	800	C38
MPN7370 S	1	6000	10	2	0.2	5000	700	C39
MA4P505-131 S	1	6000	10.7	0.35	0.5	2000	500	ODS-131 DIE
MADP-030025-1314 S	1	6000	11.5	0.5	0.7	2800	135	ODS-1314 DIE
MADP-030015-13140P S	1	6000	11.5	0.78	0.5	1600	115	ODS-1314 DIE
MPN7320-H20 S	5	6000	1	0.2	3	120	150	H20

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PIN Switch and Attenuator Diodes (continued)								
Part Number	Min Freq (MHz)	Max Freq (MHz)	CW Power Dissipation (W)	Total Capacitance (pF)	Resistance (Ω)	T_L (ns)	Breakdown Voltage Min (V)	Package
MPN7345 S	5	6000	4	0.3	0.3	500	300	C40
MADP-008120-12790T	10	6000	0.2	0.15	2.5	200	100	ODS-1279 SC-79
MPN7315-H20 S	10	6000	1	0.26	1.2	180	150	H20
MSWSE-005-15	10	6000	4	0.11	2	180	200	0503
MSWSE-005-10S	10	6000	5	0.08	2	180	200	0402P
MPN7312A-H20 S	20	6000	1	0.26	1.2	150	120	H20
MPN7312B-H20 S	20	6000	1	0.36	0.8	250	120	H20
MADP-042305-130600 S	50	6000	1	0.14	1.3	180	80	ODS-1306 DIE
MADP-042308-130600 S	50	6000	1	0.14	1.3	280	100	ODS-1306 DIE
MA4SPS421	50	6000	1.8	0.13	6.2	5000	200	SURMOUNT™ DIE
MSWSH-040-30	50	6000	40	0.42	0.4	600	500	2012
MPN7306-H20 S	100	6000	1	0.26	1.2	50	70	H20
MSWSH-020-30	100	6000	20	0.13	0.6	600	100	2012
MSWSH-100-30	100	6000	100	0.4	0.4	3400	700	CM22
MMP7063	0.5	8000	—	0.2	1	1000	250	DIE/Various
MMP7067	0.5	8000	—	0.2	1	1500	500	DIE/Various
MMP7023 S	1	8000	—	0.2	0.7	60	70	DIE/Various
MMP7035	1	8000	—	0.2	0.8	225	200	DIE/Various
MA47222 S	1	8000	3.8	0.4	1.6	160	150	ODS-144
MA47223 S	1	8000	7.5	0.4	0.6	1000	500	ODS-144
MA4P504-144 S	1	8000	7.5	0.4	0.6	1000	500	ODS-144
MA4P604-131 S	1	8000	15	0.3	1	3000	1000	ODS-131 DIE
MNP0012A-T55P S	5	8000	0.25	0.31	0.6	650	350	T55p
MNP0012A-T54P S	5	8000	0.25	0.36	0.6	650	350	T54p
MNP0012A-T89P S	5	8000	0.25	0.43	0.6	650	350	T89p
MNP0012A S	5	8000	1	0.18	0.6	650	350	C22p
MNP0012A-ET47P	5	8000	1	0.58	0.6	650	350	ET47p
MA47416-132 S	DC	10000	5	0.15	6	2000	200	ODS-132 DIE
MMP7022 S	1	10000	—	0.15	0.9	60	70	DIE/Various
MMP7028	1	10000	—	0.15	1	100	100	DIE/Various
MMP7034	1	10000	—	0.15	1	225	200	DIE/Various
MNP0014-T55P S	1	10000	0.1	0.25	0.8	750	450	T55p
MNP0014-T54P S	1	10000	0.1	0.32	0.8	750	450	T54p
MNP0014-T89P S	1	10000	0.1	0.37	0.8	750	450	T89p
MNP0014-ET47P	1	10000	0.5	0.52	0.8	750	450	ET47p
MNP0014 S	1	10000	1.5	0.12	1.3	750	500	C22p
MA4P504-132 S	1	10000	7.5	0.2	0.6	1000	500	ODS-132 DIE
MPN7320-0805-2	5	10000	1	0.08	3	120	150	0805-2
MA47418-134 S	5	10000	6	0.15	3	1000	200	ODS-134 DIE
MA4P404-132 S	5	10000	7.5	0.2	0.7	600	250	ODS-132 DIE
MPN7315-0805-2	10	10000	1	0.14	1.2	180	150	0805-2
MPN7312A-0805-2	20	10000	1	0.14	1.2	150	120	0805-2
MPN7312B-0805-2	20	10000	1	0.24	0.8	250	120	0805-2
MSWSHC-040-40	50	10000	40	0.5	—	3000	300	2615
MSWSHB-020-30	50	10000	40	0.5	—	4000	200	2012
MPN7306-0805-2	100	10000	1	0.14	1.2	50	70	0805-2
MSAT-N25	100	10000	2	—	1.5	3000	200	2012

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PIN Switch and Attenuator Diodes (continued)								
Part Number	Min Freq (MHz)	Max Freq (MHz)	CW Power Dissipation (W)	Total Capacitance (pF)	Resistance (Ω)	T_L (ns)	Breakdown Voltage Min (V)	Package
MSAT-P25	100	10000	2	—	1.5	3000	200	2012
MPN7302-0805-2	500	10000	1	0.14	1.2	8	20	0805-2
MMP7062	0.5	12000	—	0.1	1.2	1000	250	DIE/Various
MMP7066-11	0.5	12000	—	0.1	1.2	1500	500	DIE/Various
MMP7041	1	12000	—	0.07	1.5	400	200	DIE/Various
MNP0012-T55P S	5	12000	0.25	0.21	3.5	350	300	T55p
MNP0012-T54P S	5	12000	0.25	0.28	3.5	350	300	T54p
MNP0012-T89P S	5	12000	0.25	0.33	3.5	350	300	T89p
MPN7320 S	5	12000	1	0.02	3	120	150	C01
MNP0012 S	5	12000	1	0.08	3.5	350	300	C12p
MNP0012-ET47P	5	12000	1	0.48	3.5	350	300	ET47p
MNP0010-ET47P	10	12000	1	0.48	2	300	150	ET47p
MNP0010-T55P S	10	12000	0.25	0.21	2	300	150	T55p
MNP0010-T54P S	10	12000	0.25	0.28	2	300	150	T54p
MNP0010-T89P S	10	12000	0.25	0.33	2	300	150	T89p
MPN7312B S	20	12000	1	0.18	0.8	250	120	C12
MADP-011027-14150T	50	12000	3.3	0.24	1.9	1000	100	TDFN-6, 1.5 x 1.2 mm
MADP-011028-14150T	50	12000	4.3	0.24	3.4	2000	200	TDFN-6, 1.5 x 1.2 mm
MADP-011029-14150T	50	12000	7.5	0.31	1.5	1000	400	TDFN-6, 1.5 x 1.2 mm
MNP0008-T55P S	100	12000	0.25	0.21	2	150	100	T55p
MNP0008-T54P S	100	12000	0.25	0.28	2	150	100	T54p
MNP0008-T89P S	100	12000	0.25	0.33	2	150	100	T89p
MPN7306 S	100	12000	1	0.08	1.2	50	70	C12
MNP0008-ET47P	100	12000	1	0.48	2	150	100	ET47p
MMP7011 S	200	12000	—	0.15	0.8	10	25	DIE/Various
MPN7302 S	500	12000	1	0.08	1.2	8	20	C11
MMP7061	0.5	14000	—	0.08	1.5	1000	250	DIE/Various
MMP7065	0.5	14000	—	0.08	1.5	1500	500	DIE/Various
MMP7026	1	14000	—	0.07	1.5	100	100	DIE/Various
MMP7021 S	1	14000	—	0.1	1	60	70	DIE/Various
MMP7027	1	14000	—	0.1	1.2	100	100	DIE/Various
MMP7033	1	14000	—	0.1	1.6	225	200	DIE/Various
MMP7040	1	15000	—	0.03	2.6	400	200	DIE/Various
MMP7060	0.5	16000	—	0.05	2	1000	250	DIE/Various
MADP-042905-130600 S	50	16000	0.8	0.06	3.1	140	80	ODS-1306 DIE
MADP-042908-130600 S	50	16000	0.8	0.06	3.1	230	100	ODS-1306 DIE
MPN1103-12	500	17000	0.1	0.06	4.0	50	50	Beam Lead
MMP7025 S	1	18000	—	0.03	1.9	100	100	DIE/Various
MMP7031	1	18000	—	0.03	3	225	200	DIE/Various
MMP7020 S	1	18000	—	0.05	1.2	60	70	DIE/Various
MA4P303-134 S	20	18000	5	0.15	1.5	200	200	ODS-134 DIE
MA4P203-134 S	30	18000	5	0.15	1.5	100	100	ODS-134 DIE
MADP-000402-12530P S	50	18000	1	0.04	4.5	200	70	ODS-1253 DIE
MA4SPS402 S	50	18000	1	0.04	5	200	100	ODS-1253 DIE
MADP-000402-12530G S	50	18000	1	0.04	5	200	1000	ODS-1253 DIE
MADP-064908-131000 S	50	18000	1	0.05	5	200	100	ODS-1310 DIE
MA4P7493-134 S	50	18000	2.5	0.05	1.8	80	150	ODS-134 DIE

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PIN Switch and Attenuator Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	CW Power Dissipation (W)	Total Capacitance (pF)	Resistance (Ω)	T_L (ns)	Breakdown Voltage Min (V)	Package
MA4PBL027 S	100	18000	0.2	0.03	4	150	90	Beam Lead DIE
MA4PI61-134 S	100	18000	2.3	0.1	1.5	150	100	ODS-134 DIE
MMPN080045 S	2000	20000	—	—	—	—	200	C50
MA4FCP305	100	24000	0.2	0.06	2.1	25	40	ODS-1269 DIE
MA4SPS302 S	1	26000	0.8	0.4	1.3	460	100	SURMOUNT™ DIE
MA4SPS502 S	1	26000	35	0.14	2.4	2800	275	ODS-1270
MA4SPS552 S	50	26000	1	0.06	1.7	2500	200	ODS-1270
MSWSH-020-24	100	26000	2	—	—	600	200	2020
MADP-000907-14020P	100	30000	0.1	0.03	5.2	4	45	Flip Chip DIE
MADP-000907-14020W	100	30000	0.1	0.03	5.2	4	45	Flip Chip DIE
MA4AGP907	100	30000	0.1	0.03	5.2	4	50	Flip Chip DIE
MA4FCP300	100	30000	0.2	0.03	2.6	140	70	ODS-1269
MA4GP907	100	30000	0.3	0.03	4.2	2	45	Flip Chip DIE
MADP-001907-13050P	100	30000	0.5	0.03	4.2	4	50	Flip Chip DIE
MMPN080150 S	2000	35000	—	—	—	—	200	C51
MA4FCP200	100	40000	0.1	0.02	2.8	100	70	ODS-1264 DIE
MA4AGBLP912 S	100	40000	0.1	0.02	4	5	50	Beam Lead DIE
MA4AGFCP910	100	40000	0.1	0.02	5.2	4	75	Flip Chip DIE
MA4GP905	100	40000	0.1	0.03	3	2	50	DIE
MA4GP030 S	100	40000	0.3	0.06	2	25	100	ODS-277
MA4GP022 S	100	40000	0.3	0.15	1	20	50	ODS-277
MMSPN050-C53 S	1000	40000	40	—	0.6	4000	200	C53
MMSPN050-C54 S	1000	40000	40	—	0.6	4000	200	C54

PIN Limiter Diodes

Part Number	Incident Power, Max (W)	Thermal Resistance	Junction Capacitance (pF)	Resistance (Ω)	Lifetime (ns)	V_B (V)	Package
MADL-011021-14150T	2.5	100	0.4	1.5	10	—	TDFN-6, 1.5 x 1.2 mm
MADL-011008	30	150	0.3	1.5	15	—	PDFN-6, 1.2 x 1.5 mm
MLP7140 S	50	100	0.12	2	7	30 - 40	DIE/Various
MLP7100 S	50	100	0.2	1.5	5	20 - 45	DIE/Various
MLP7130 S	50	120	0.12	2	5	15 - 30	DIE/Various
MLP7130-0805-2	50	120	0.12	2	5	15 - 30	DIE/Various
MA4L011-134 S	80	175	0.18	2.1	10	—	ODS-134 DIE
MADL-000011-13880G S	80	175	0.18	2.1	10	—	ODS-13880G DIE
MA4L011-1088	80	175	0.3	2.1	10	—	ODS-1088
MA4L011-137	80	175	0.32	2.1	10	—	ODS-137
MA4L011-186 S	80	175	0.33	2.1	10	—	ODS-186
MA4L011-30 S	80	175	0.36	2.1	10	—	ODS-30
MA4L011-31 S	80	175	0.36	2.1	10	—	ODS-31
MA4L011-1056 S	80	175	0.38	2.1	10	—	ODS-1056
MA4L011-32 S	80	175	0.48	2.1	10	—	ODS-32
MA4L022-134 S	90	175	0.19	2	10	—	ODS-134 DIE
MA4L021-134 S	90	175	0.2	2.1	10	—	ODS-134 DIE
MADL-011021-14210G S	90	175	0.2	2.1	10	—	ODS-1056
MA4L022-120 S	90	175	0.32	2	10	—	ODS-120
MA4L022-137	90	175	0.33	2	10	—	ODS-137
MA4L021-120 S	90	175	0.33	2.1	10	—	ODS-120

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PIN Limiter Diodes (continued)							
Part Number	Incident Power, Max (W)	Thermal Resistance	Junction Capacitance (pF)	Resistance (Ω)	Lifetime (ns)	V_B (V)	Package
MA4L022-186 S	90	175	0.34	2	10	—	ODS-186
MA4L022-30 S	90	175	0.37	2	10	—	ODS-30
MA4L021-31 S	90	175	0.38	2.1	10	—	ODS-31
MADL-000021-003000 S	90	175	0.38	21	10	—	ODS-30
MA4L022-1056 S	90	175	0.39	2	10	—	ODS-1056
MA4L021-1056 S	90	175	0.4	2.1	10	—	ODS-1056
MA4L022-32 S	90	175	0.49	2	10	—	ODS-32
MLP7102 S	100	55	0.7	1	10	20 – 45	DIE/Various
MLP7141 S	100	70	0.2	1.5	7	30 – 60	DIE/Various
MLP7131 S	100	80	0.2	1.5	5	15 – 30	DIE/Various
MLP7101 S	100	80	0.5	1.2	10	20 – 45	DIE/Various
MADL-011023-14150T	100	175	0.2	1.3	10	—	TDFN-6, 1.5 x 1.2 mm
MA4L032-134 S	125	150	0.2	2.5	15	—	ODS-134 DIE
MA4L031-134 S	125	150	0.21	2	20	—	ODS-134 DIE
MADL-000031-13880G S	125	150	0.21	2.1	20	—	ODS-1388
MADL-000032-003000 S	125	150	0.21	2.1	20	—	ODS-3000
MADL-011010-01340W S	125	150	0.24	1.5	15	—	ODS-134
MA4L032-186 S	125	150	0.35	2.5	15	—	ODS-186
MA4L031-186 S	125	150	0.36	2	20	—	ODS-186
MA4L032-31 S	125	150	0.38	2.5	15	—	ODS-31
MA4L031-31 S	125	150	0.39	2	20	—	ODS-31
MA4L032-1056 S	125	150	0.4	2.5	15	—	ODS-1056
MA4L031-1056 S	125	150	0.41	2	20	—	ODS-1056
MA4L032-32 S	125	150	0.5	2.5	15	—	ODS-32
MLP7110 S	200	80	0.2	1.5	10	45 – 75	DIE/Various
MA4L062-134 S	200	150	0.15	2.5	10	—	ODS-134 DIE
MADL-000062-13880G S	200	150	0.15	2.5	10	—	ODS-13880G DIE
MADL-011011-01340W S	200	150	0.17	2.3	10	—	ODS-134
MADL-000062-105600 S	200	150	0.35	2.5	10	—	ODS-1056
MA4L101-134 S	250	30	0.15	2	90	—	ODS-134 DIE
MADL-000101-13880G S	250	30	0.15	2	90	—	ODS-13880G DIE
MA4L101-186 S	250	30	0.3	2	90	—	ODS-186
MA4L101-30 S	250	30	0.33	2	90	—	ODS-30
MLP7111 S	400	60	0.5	1.2	15	45 – 75	DIE/Various
MADL-000301-01340W S	500	30	0.2	1.5	200	—	ODS-134 DIE
MADL-000301-13870G S	500	30	0.2	1.5	200	—	ODS-1370
MA4L301-31 S	500	30	0.38	1.5	200	—	ODS-31
MA4L301-1056 S	500	30	0.4	1.5	200	—	ODS-1056
MADL-011052-14280W S	500	36	0.19	2	222	—	ODS-134 DIE
MLP7112 S	795	40	0.7	1	20	45 – 75	DIE/Various
MADL-000401-13870G S	1000	25	0.3	1.2	800	—	ODS-13870G DIE
MA4L401-134 S	1000	25	0.3	1.2	800	—	ODS-134 DIE
MA4L401-120 S	1000	25	0.43	1.2	800	—	ODS-32
MA4L401-30 S	1000	25	0.48	1.2	800	—	ODS-30
MA4L401-31 S	1000	25	0.48	1.2	800	—	ODS-31
MA4L401-1056 S	1000	25	0.5	1.2	800	—	ODS-1056
MLP7120 S	1000	40	0.2	1.5	50	120 – 180	DIE/Various

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PIN Limiter Diodes (continued)							
Part Number	Incident Power, Max (W)	Thermal Resistance	Junction Capacitance (pF)	Resistance (Ω)	Lifetime (ns)	V_B (V)	Package
MLP7120-2012	1000	45	0.2	1.5	50	120 – 180	2012
MLP7121 S	2000	20	0.6	1	50	120 – 180	DIE/Various
MLP7122 S	4000	15	0.8	0.5	100	120 – 180	DIE/Various

Schottky Mixer and Detector Diodes							
Part Number	Min Freq (MHz)	Max Freq (MHz)	Total Capacitance (pF)	Dynamic Resistance (Ω)	V_F (mV)	V_B (V)	Package
1NS819	–	–	0.04	–	110	30	DO-7
MGR703 S	DC	1000	1	–	0.41	20	DIE/Various
MGR700 S	DC	1000	1.2	–	0.34	8	DIE/Various
MGR705 S	DC	1000	1.2	–	0.41	70	DIE/Various
MA4E2532L-1113	DC	1800	0.1	16	440	5	ODS-1113
MNM207 S	DC	2600	0.14	20	0.425	4	DIE/Various
MNM201 S	DC	2600	0.2	20	0.4	3	DIE/Various
MNM212 S	DC	2600	0.21	20	0.475	5	DIE/Various
MNM211	DC	2600	0.25	20	0.45	5	DIE/Various
SM5D6012-SOD323	DC	3000	0.25	15	630	2	SOD-323W
SM5T6004-SOT23	DC	3000	0.6	10	600	2	SOT-23
MSS20-054-C15 S	DC	8000	0.2	80	–	0.8	C15P
MSS20-055-C15 S	DC	8000	0.2	80	–	0.8	C15P
MZB600-19-6	DC	8000	0.2	3500	0.3	3	CS19-6
MZB600-32 S	DC	8000	0.2	3500	0.3	3	CS32
MZB600-B11	DC	8000	0.2	3500	0.3	3	B11
MZB600-C15P	DC	8000	0.2	3500	0.3	3	C15P
MZB604-B11 S	DC	8000	0.2	5000	0.3	4	B11
MZB604-C15P	DC	8000	0.2	5000	0.3	4	C15P
MSS20-054-E25	DC	8000	0.3	80	–	0.8	E25
MSS20-055-E25	DC	8000	0.3	80	–	0.8	E25
MSS20-054-H27 S	DC	8000	0.35	80	–	0.8	H27
MSS20-055-H27 S	DC	8000	0.35	80	–	0.8	H27
MSS20-054-T86 S	DC	8000	0.41	80	–	0.8	T86p
MSS20-055-T86 S	DC	8000	0.41	80	–	0.8	T86p
MADS-011010-1419	DC	10000	0.15	7	–	3	ODS-1419
MA40147-213	DC	10000	0.32	–	–	–	ODS-213
MA40264 S	DC	10000	0.32	–	–	3	ODS-186
MSS39-048-C15	DC	12000	0.15	–	–	5	C15p
MSS20-050-C15 S	DC	12000	0.15	80	–	0.8	C15P
MSS20-051-C15 S	DC	12000	0.15	80	–	0.8	C15P
MSS39-152-B10B S	DC	12000	0.18	–	–	3.5	B10Bp
MSS20-050-E25	DC	12000	0.25	80	–	0.8	E25
MSS20-051-E25	DC	12000	0.25	80	–	0.8	E25
MSS39-152-E25	DC	12000	0.28	–	–	3.5	E25
MSS39-048-P55 S	DC	12000	0.3	–	0.4	5	P55p
MSS20-050-H27 S	DC	12000	0.3	80	–	0.8	H27
MSS20-051-H27 S	DC	12000	0.3	80	–	0.8	H27
MSS20-054-0805-2 S	DC	12000	0.3	80	–	0.8	0805-2
MSS20-055-0805-2	DC	12000	0.3	80	–	0.8	0805-2
MSS20-046-T86 S	DC	12000	0.31	80	–	0.8	T86p

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Schottky Mixer and Detector Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Total Capacitance (pF)	Dynamic Resistance (Ω)	V_F (mV)	V_B (V)	Package
MSS20-047-T86 S	DC	12000	0.31	80	—	0.8	T86p
MSS39-048-P86 S	DC	12000	0.32	—	—	5	P86p
MSS39-148-H20 S	DC	12000	0.33	—	—	3.5	H20
MSS20-050-T86 S	DC	12000	0.36	80	—	0.8	T86p
MSS20-051-T86 S	DC	12000	0.36	80	—	0.8	T86p
MA40215-120 S	DC	16000	0.32	—	0.39	5	ODS-1200
MADS-011030-14280W S	DC	16000	0.33	6.5	100	3.5	DIE
MSS39-045-C15 S	DC	18000	0.1	—	0.4	5	C15p
MSS30-142-B10B S	DC	18000	0.1	22	0.29	2	B10B
MSS30-242-B20 S	DC	18000	0.1	22	0.29	2	B20
MSS30-442-B42 S	DC	18000	0.1	22	0.29	2	B42
MSS30-442-E45	DC	18000	0.1	22	0.29	2	E45
MSS30-442-H40 S	DC	18000	0.1	22	0.29	2	H40
MSS40-141-B10B S	DC	18000	0.1	22	0.42	3	B10B
MSS30-442-B41 S	DC	18000	0.1	22	0.4	4	B41
MSS20-046-C15 S	DC	18000	0.1	80	—	0.8	C15P
MSS20-047-C15 S	DC	18000	0.1	80	—	0.8	C15P
MADS-002545-1307HG	DC	18000	0.11	10	0.65	5	ODS-1307
MADS-002545-1307MG	DC	18000	0.11	10	0.39	5	ODS-1307
MADS-002545-1307LG	DC	18000	0.11	11	0.3	5	ODS-1307
MSS39-148-B10B S	DC	18000	0.12	—	0.38	3.5	B10Bp
MSS40-045-C15 S	DC	18000	0.12	15	0.42	3	C15
MSS30-046-C15 S	DC	18000	0.12	18	0.29	2	C15
MSS50-146-B10B S	DC	18000	0.12	18	0.5	4	B10B
MSS30-PCB46-B48 S	DC	18000	0.12	20	0.3	2	B48
MSS40-PCB46-B48 S	DC	18000	0.12	20	0.47	3	B48
MSS50-046-C26	DC	18000	0.12	20	0.5	4	C26
MSS40-244-B20 S	DC	18000	0.12	22	0.4	3	B20
MSS30-CR46-B49	DC	18000	0.125	22	0.3	2	B49
MSS30-B46-B45 S	DC	18000	0.125	25	0.3	2	B45
MSS50-B46-B45 S	DC	18000	0.13	20	0.5	4	B45
MSS30 PCR46-B47 S	DC	18000	0.13	22	0.29	2	B47
MSS40-PCR46-B47 S	DC	18000	0.13	22	0.47	3	B47
MSS40-B46-B45 S	DC	18000	0.13	25	0.47	3	B45
MSS30-148-B10B S	DC	18000	0.15	15	0.27	2	B10B
MSS30-248-B20 S	DC	18000	0.15	15	0.27	2	B20
MSS30-448-B41 S	DC	18000	0.15	15	0.4	2	B41
MSS30-448-B42 S	DC	18000	0.15	15	0.3	2	B42
MSS40-048-C15 S	DC	18000	0.15	15	0.42	3	C15
MSS40-148-B10B S	DC	18000	0.15	17	0.4	3	B10B
MSS40-248-B20 S	DC	18000	0.15	17	0.44	3	B20
MSS40-448-B42 S	DC	18000	0.15	17	0.4	3	B42
MSS50-048-C15	DC	18000	0.15	15	0.5	4	C15
MSS39-144-0402	DC	18000	0.16	—	0.38	3.5	0402
MSS39-144-0805-2	DC	18000	0.17	—	0.38	3.5	0805-2
MSS39-146-0402	DC	18000	0.18	—	0.38	3.5	0402
MSS30-050-C15 S	DC	18000	0.18	15	0.27	2	C15

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Schottky Mixer and Detector Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Total Capacitance (pF)	Dynamic Resistance (Ω)	V_F (mV)	V_B (V)	Package
MSS40-141-0402	DC	18000	0.18	18	0.42	3	0402
MSS39-146-0805-2	DC	18000	0.2	—	0.38	3.5	0805-2
MSS39-148-0402	DC	18000	0.2	—	0.38	3.5	0402
MSS50-244-B20	DC	18000	0.2	16	0.5	4	B20
MSS50-146-0402	DC	18000	0.2	18	—	4	0402
MSS20-046-E25	DC	18000	0.2	80	—	0.8	E25
MSS20-047-E25	DC	18000	0.2	80	—	0.8	E25
SMS202	DC	18000	0.2	80	-3.88	1	0503
MSS30-242-E35	DC	18000	0.21	22	0.29	2	E35
MSS39-148-0805-2	DC	18000	0.22	—	0.39	3.5	0805-2
MSS39-148-E25	DC	18000	0.22	—	0.38	3.5	E25
MSS40-141-E25	DC	18000	0.22	18	0.42	3	E25
MSS50-146-0805-2	DC	18000	0.22	18	—	4	0805-2
MSS30-CR46-E45	DC	18000	0.22	22	0.3	2	E45
MSS40-CR46-E45	DC	18000	0.23	15	—	3	E45
MSS39-144-H27 S	DC	18000	0.24	—	0.38	3.5	H27
MSS40-148-0402	DC	18000	0.24	15	0.4	3	0402
MSS50-146-E25	DC	18000	0.24	18	0.5	4	E25
MSS40-B46-E45	DC	18000	0.24	25	0.47	3	E45
MSS40-244-E35	DC	18000	0.24	28	0.44	3	E35
MSS39-146-H27 S	DC	18000	0.25	—	0.38	3.5	H27
MSS39-152-0402	DC	18000	0.25	—	0.38	3.5	0402
MSS30-154-B10B S	DC	18000	0.25	12	0.25	2	B10B
MSS30-254-B20 S	DC	18000	0.25	12	0.25	2	B20
MSS30-454-B40 S	DC	18000	0.25	12	0.3	2	B40
MSS50-448-B40 S	DC	18000	0.25	14	0.5	4	B40
MSS40-B53-B45 S	DC	18000	0.25	15	0.43	3	B45
MSS50-B53-B45 S	DC	18000	0.25	15	0.5	4	B45
MSS50-CR53-B49 S	DC	18000	0.25	15	0.5	4	B49
MSS50-PCR53-B48 S	DC	18000	0.25	15	0.5	4	B47
MSS30-CR53-B49 S	DC	18000	0.25	15	0.3	2	B49
MSS30 PCR53-B47 S	DC	18000	0.25	15	0.29	2	B47
MSS30-248-E35	DC	18000	0.25	15	0.27	2	E35
MSS30-B53-B45 S	DC	18000	0.25	15	0.3	2	B45
MSS40-448-E45	DC	18000	0.25	15	0.4	3	E45
MSS40-248-0805-4	DC	18000	0.25	18	0.44	3	0805-4
MSS50-B46-E45	DC	18000	0.25	20	0.5	4	E45
MSS30-B46-E45	DC	18000	0.25	25	0.3	2	E45
MSS20-046-H27 S	DC	18000	0.25	80	—	0.8	H27
MSS20-047-H27 S	DC	18000	0.25	80	—	0.8	H27
MSS20-050-0805-2	DC	18000	0.25	80	—	0.8	0805-2
MSS20-051-0805-2	DC	18000	0.25	80	—	0.8	0805-2
MSS39-045-P55	DC	18000	0.26	—	0.4	5	P55p
MSS30-448-E45	DC	18000	0.26	15	0.3	2	E45
MSS30-142-E25	DC	18000	0.26	22	0.29	2	E25
MSS39-152-0805-2	DC	18000	0.27	—	0.38	3.5	0805-2
MSS39-045-P86 S	DC	18000	0.27	—	0.4	5	P86p

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Schottky Mixer and Detector Diodes (continued)							
Part Number	Min Freq (MHz)	Max Freq (MHz)	Total Capacitance (pF)	Dynamic Resistance (Ω)	V_F (mV)	V_B (V)	Package
MSS40-045-P55 S	DC	18000	0.28	15	0.42	3	P55
MSS40-148-E25	DC	18000	0.28	15	0.4	3	E25
MSS40-248-E35	DC	18000	0.28	18	0.44	3	E35
MSS50-046-P55 S	DC	18000	0.28	20	—	4	P55
MSS40-155-B10B	DC	18000	0.3	13	0.38	3	B10B
MSS40-045-P86 S	DC	18000	0.3	15	0.42	3	P86
MSS40-048-P55	DC	18000	0.3	15	0.42	3	P55
MSS40-255-0805-4	DC	18000	0.3	15	—	3	0805-4
MSS30-346-B21 S	DC	18000	0.3	16	0.27	2	B2
MSS40-455-B40 S	DC	18000	0.3	17	0.38	3	B40
MSS30-046-P55 S	DC	18000	0.3	18	0.29	2	P55
MSS40-141-H20 S	DC	18000	0.3	18	0.42	3	H20
MSS50-046-P86	DC	18000	0.3	20	—	4	P86
MSS30-148-E25	DC	18000	0.31	15	0.27	2	E25
MSS50-244-E35	DC	18000	0.31	16	0.5	4	E35
MSS30-142-H20 S	DC	18000	0.31	22	0.29	2	H20
MSS30-242-H30 S	DC	18000	0.31	22	0.29	2	H30
MSS40-455-H40 S	DC	18000	0.32	14	0.38	3	H40
MSS40-048-P86 S	DC	18000	0.33	15	0.4	3	P86
MSS30-046-P86 S	DC	18000	0.33	18	0.29	2	P86
MSS30-CR46-H40 S	DC	18000	0.33	22	0.3	2	H40
MSS50-146-H20 S	DC	18000	0.34	18	0.5	4	H2
MSS50-448-0805-4	DC	18000	0.35	10	—	4	0805-4
MSS30-254-E35	DC	18000	0.35	12	0.25	2	E35
MSS30-454-E45	DC	18000	0.35	12	0.3	2	E45
MSS30-050-P55 S	DC	18000	0.35	15	0.27	2	P55
MSS30-448-H40 S	DC	18000	0.35	15	0.3	2	H40
MSS30-B53-E45	DC	18000	0.35	15	0.3	2	E45
MSS30-CR53-E45	DC	18000	0.35	15	0.3	2	E45
MSS40-CR46-H40 S	DC	18000	0.35	15	—	3	H40
MSS50-B46-H40 S	DC	18000	0.35	20	0.5	4	H40
MSS30-B46-H40 S	DC	18000	0.35	25	0.3	2	H40
MSS39-152-H20 S	DC	18000	0.36	—	0.38	3.5	H20
MSS50-448-E45 S	DC	18000	0.36	10	0.5	4	E45
MSS30-148-H20 S	DC	18000	0.36	15	0.27	2	H20
MSS30-248-H30 S	DC	18000	0.36	15	0.27	2	H30
MSS40-148-H20	DC	18000	0.36	15	0.4	3	H20
MSS40-448-H40 S	DC	18000	0.36	15	0.4	3	H40
MSS40-B53-E45	DC	18000	0.36	15	0.43	3	E45
MSS50-CR53-E45	DC	18000	0.36	15	—	4	E45
MSS50-B53-E45 S	DC	18000	0.36	15	0.5	4	E45
MSS40-244-0805-4	DC	18000	0.36	28	0.44	3	0805-4
MSS40-155-0402 S	DC	18000	0.38	14	0.38	3	0402
MSS30-050-P86 S	DC	18000	0.38	15	0.27	2	P86
MSS40-455-E45	DC	18000	0.4	14	0.38	3	E45
MSS50-155-0805-2	DC	18000	0.4	15	—	4	0805-2A
MSS30-346-E25	DC	18000	0.4	16	0.29	2	E25

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Schottky Mixer and Detector Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Total Capacitance (pF)	Dynamic Resistance (Ω)	V_F (mV)	V_B (V)	Package
MSS30-154-E25	DC	18000	0.41	12	0.25	2	E25
MSS40-155-E25	DC	18000	0.41	14	0.38	3	E25
MSS40-255-E35	DC	18000	0.41	14	—	3	E35
MSS50-244-H30	DC	18000	0.42	16	0.5	4	H30
MSS50-244-0805-4	DC	18000	0.44	16	—	4	0805-4
MSS30-CR53-H40	DC	18000	0.45	15	0.3	2	H40
MSS30-154-H20 S	DC	18000	0.46	12	0.25	2	H20
MSS30-254-H30 S	DC	18000	0.46	12	0.25	2	H30
MSS30-454-H40 S	DC	18000	0.46	12	0.3	2	H40
MSS30-B53-H40 S	DC	18000	0.46	15	0.3	2	H40
MSS50-CR53-H40 S	DC	18000	0.46	15	0.5	4	H40
MSS50-448-H40 S	DC	18000	0.48	10	0.5	4	H40
MSS50-B53-H40 S	DC	18000	0.48	15	—	4	H40
MSS30-346-H20 S	DC	18000	0.5	16	0.29	2	H20
MSS40-155-H20 S	DC	18000	0.51	14	0.38	3	H20
MSS39-146-B10B S	DC	26000	0.1	—	0.38	3.5	B10Bp
MA4E2513L-1289 S	DC	26000	0.12	10	-0.7	3	ODS-1289
MA4E2501L-1290 S	DC	26000	0.12	10	0.33	5	ODS-1290
MADS-002501-1290LP	DC	26000	0.12	10	0.3	5	ODS-1290
MADS-002502-1246HP	DC	26000	0.12	11	0.7	3	ODS-1246
MA4E2502H-1246 S	DC	26000	0.12	11	0.65	3	ODS-1246
MADS-002502-1246MP	DC	26000	0.12	12	0.47	3	ODS-1246
MA4E2514M-1116 S	DC	26000	0.12	12	0.4	3	ODS-1116
MA4E2502M-1246 S	DC	26000	0.12	12	0.42	3	ODS-1246
MADS-002502-1246LP	DC	26000	0.12	16	0.33	3	ODS-1246
MA4E2502L-1246 S	DC	26000	0.12	16	0.3	3	ODS-1246
MA4E2514L-1116 S	DC	26000	0.12	16	0.3	3	ODS-1116
MSS20-140-0402	DC	26000	0.15	80	—	0.8	0402
MA4E2532M-1113 S	DC	26000	0.16	10	0.47	5	ODS-1113
MSS20-046-0805-2	DC	20000	0.2	80	—	0.8	0805-2
MSS20-047-0805-2	DC	20000	0.2	80	—	0.8	0805-2
MA4E2508H-1112 S	DC	26000	0.24	6	0.7	5	ODS-1112
MA4E2508M-1112 S	DC	26000	0.24	12	0.42	5	ODS-1112
MA4E2508L-1112 S	DC	26000	16	0.24	0.3	5	ODS-1112
SMS201	DC	26500	0.1	80	0.09	1	0503
SMGS11	DC	26500	0.13	13	0.69	4.5	0503
MSS39-144-B10B S	DC	40000	0.08	—	0.38	3.5	B10Bp
MSS25-141-B10D S	DC	40000	0.08	65	0.28	3	B10D
MSS20-140-B10D S	DC	40000	0.08	80	—	0.8	B10D
MSS20-141-0402	DC	40000	0.08	80	—	0.8	0402
MSS20-141-B10D S	DC	40000	0.08	80	—	0.8	B10D
MSS25-143-B10D S	DC	40000	0.1	60	0.26	3	B10D
MSS25-047-C15c S	DC	40000	0.1	65	0.26	3	C15c
MSS20-142-0402 S	DC	40000	0.1	80	—	0.8	0402
MSS20-142-B10D S	DC	40000	0.1	80	—	0.8	B10D
MSS20-143-0402	DC	40000	0.1	80	—	0.8	0402
MSS20-143-B10D S	DC	40000	0.1	80	—	0.8	B10D

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Schottky Mixer and Detector Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Total Capacitance (pF)	Dynamic Resistance (Ω)	V_F (mV)	V_B (V)	Package
MSS25-049-C15c S	DC	40000	0.12	52	0.22	3	C15c
MSS25-145-B10D S	DC	40000	0.12	52	0.22	3	B10D
MSS20-145-0402	DC	40000	0.12	80	—	0.8	0402
MSS20-145-B10D S	DC	40000	0.12	80	—	0.8	B10D
MSS20-146-0402	DC	40000	0.12	80	—	0.8	0402
MSS20-146-B10D S	DC	40000	0.12	80	—	0.8	B10D
MGS912 S	DC	60000	0.03	28	1.95	20	B89
MGS906 S	DC	60000	0.04	14	1.4	10	B90
MGS907 S	DC	60000	0.04	14	1.4	10	B85
MGS908 S	DC	60000	0.04	14	1.4	10	B86
MA4E2037 S	DC	60000	0.05	4	0.7	4.5	Beam Lead
MA4E2039 S	DC	60000	0.05	4	0.7	4.5	Beam Lead
MA4E2040 S	DC	60000	0.05	4	0.7	4.5	Beam Lead
MADS-001317-1500AG	DC	80000	0.05	4	0.7	4.5	ODS-1500
MA4E2160	DC	80000	0.05	4	0.7	7	ODS-1262
MADS-001317-1500AP	DC	80000	0.05	4	0.7	7	ODS-1500
MGS904 S	DC	60000	0.06	7	0.7	5	B85
MGS803	DC	60000	0.06	7	0.7	5	Flip Chip
MGS901 S	DC	60000	0.06	7	0.7	5	Beam Lead
MGS903 S	DC	60000	0.06	7	0.7	5	Beam Lead
MGS905 S	DC	60000	0.06	7	0.7	5	B86
MGS907A S	DC	60000	0.06	12	1.4	10	B85
MGS904A S	DC	60000	0.08	5	0.7	5	B85
MGS802	DC	60000	0.1	7	0.7	5	Flip Chip
MGS902 S	DC	60000	0.1	7	0.7	5	Beam Lead
MGS909 S	DC	60000	0.1	21	1.4	15	B90
MGS910 S	DC	60000	0.1	21	1.4	15	B87
MGS802A	DC	60000	0.15	5	0.7	5	Flip Chip
MA4E1317	DC	80000	0.05	4	0.7	4.5	ODS-1278
MA4E1319-1	DC	80000	0.05	4	0.7	4.5	ODS-1199
MA4E1318	DC	80000	0.09	4	0.7	4.5	ODS-1197
MADS-001318-1197HP	DC	80000	0.09	4	0.7	7	Tape & Reel
MA4E1310	DC	110000	0.04	7	0.7	7	ODS-1278

THz Schottky Barrier Diodes

Part Number	Total Capacitance (fF)	Cutoff Frequency (THz)	Resistance (Ω)	Configuration (mV)
MADZ-011001	40	1.27	3.4	Single
MADZ-011002	49	1	3.5	Single
MADZ-011003	49	1	3.5	Anti-Parallel
MADZ-011004	49	1	3.5	Reverse Tee
MADZ-011005	49	1	3.5	Unconnected Anti-Parallel Pair

Note: Part numbers are RoHS compliant. **S** indicates these parts are also available with Space and Hi-Rel Screening & Qualification. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

Low Magnetic and Non-Magnetic PIN Diodes

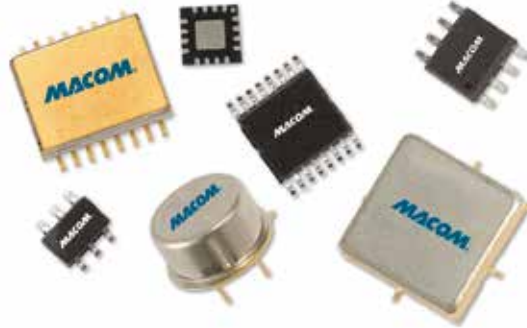
Product	Min Frequency (MHz)	Max Frequency (MHz)	CW Power Dissipation (W)	Total Capacitance (pF)	Resistance (Ω)	Lifetime (ns)	Breakdown Voltage Minimum (V)	Package
MADP-047668-1134B0	—	—	—	—	—	20	75	Surface Mount
MMP7089-128-1	—	—	—	0.5	0.6	1000	500	CS128-1
MMP7080-128-1	—	—	—	0.7	0.8	3	600	CS128-1
MADP-047668-1441BN	—	—	—	1	—	20	75	Lead-free Surface Mount
MMP7078-128-1	—	—	—	1	0.5	3	400	CS128-1
MADP-010015-14320T	—	—	—	6	0.6	7.5	75	ODS-1432 (SMT)
MADP-010015-14340T	—	—	—	6	0.6	7.5	75	ODS-1434 (Axial)
MADP-010015-14420T	—	—	—	6	0.6	7.5	75	ODS-1442 (AP Pair)
MADP-011143-10720T	0	120	6	1	0.2	4000	500	ODS-1072
MADP-011084-1134B0	5	400	50	2	1	55	50	Ceramic 2-Lead
MADP-011084-TR0500	5	400	50	2	1	55	50	HQFN, 4 mm 8-lead
MA4P4001BNM-402	DC	500	12	2.2	0.5	20000	100	ODS-402
MADP-04002B-NM402T	DC	500	12	2.2	0.5	20000	200	ODS-402
MA4P1250NM-1072T	5	500	18	1	0.5	3500	50	ODS-1072
MA4P1200NM-401T	5	500	5.5	1.2	0.5	3500	50	ODS-401
MA4P7441F-1091T	0	1000	30	2.2	0.5	18000	100	ODS-1091
MA44781	10	1000	1.7	1.5	0.8	200	60	ODS-1134
MA45471	10	1000	1.7	3	—	200	75	ODS-1134
MADP-000504-10720T	0	1000	2.9	0.16	0.6	1000	500	ODS-1072
MADP-07006B-NM401T	1	1000	5	0.7	0.9	5000	600	ODS-401
MA4P7446F-1091T	0	1000	25	2.2	0.5	19000	600	ODS-1091
MA4P7435NM-1091T	0	1000	50	2.5	0.2	14000	1100	ODS-1091
MA4P7464F-1072T	0	1500	7.5	0.8	0.5	4500	400	ODS-1072
MADP-000235-10720T	0	1500	7.5	1.2	0.5	300	35	ODS-1072
MA4P7452F-1072T	0	1500	10	0.7	0.9	9000	150	ODS-1072
MA4P7470F-1072T	0	1500	12	0.7	0.8	6500	800	ODS-1072
MADP-011034-10720T	10	1500	6	1	0.4	300	150	ODS-1072
MADP-009989-14320T	30	1500	4	1.2	0.3	6500	75	ODS-1432 (SMT)
MADP-009989-14340T	30	1500	4	1.2	0.3	6500	75	ODS-1434 (Axial)
MADP-009989-14420T	30	1500	4	1.2	0.3	6500	75	ODS-1442 (AP Pair)
MADP-000404-10720T	100	1500	7.5	0.6	0.7	100	250	ODS-1072
MADP-011127-11410T	25	2500	0.2	0.35	1.5	200	75	ODS-1141 SOT-323
MADP-011128-11410T	25	2500	0.2	1	0.5	200	75	ODS-1141 SOT-323
MADP-011136-11410T	50	3000	0.25	0.5	2	20	70	SOD-323
MADP-011136-N287BT	50	3000	0.25	0.5	2	20	70	SOT-23
MADP-011136-N287T0	50	3000	0.25	0.5	2	20	70	SOT-23

Note: Part numbers are RoHS compliant.
Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box.
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CONTROL PRODUCTS

For a Wide Range of A&D and Commercial Applications

MACOM offers control products for a wide range of A&D and commercial applications, covering a broad frequency spectrum from DC to 100 GHz, using Silicon, AlGaAs and GaAs based technologies.



Power Detectors

- > Broadband devices with integrated low loss directional couplers and built-in temperature compensation circuits
- > Lead-free plastic surface mount packages
- > For power monitoring and leveling in point-to-point radios, IMS, radar, VSAT, EW, A&D systems

Digital Phase Shifters

- > 4-Bit and 6-Bit with either serial or parallel control inputs
- > For military or weather radar, transmit/receive modules and EW
- > Convenient surface mount PQFN with 360° coverage, fast switching speed and low phase error

Voltage Variable Attenuators

- > Automotive and wireless markets
- > Ideal for cellular infrastructure, handset gain control, radar systems, satellite radios and test equipment

Digital Attenuators

- > Used in a variety of applications for automotive and wireless markets,
- > Typical applications include: CATV infrastructure, cellular infrastructure, handset gain control, radar systems, satellite radios and test equipment including 75 Ω versions for CATV

Limiters

- > Thin-film hybrid manufacturing for the highest levels of performance, repeatability, reliability and cost-effectiveness

CMOS Switch Drivers

- > For wireless infrastructure base stations and A&D applications including: cordless and mobile phones, satellite radio, GPS and DAB, 2.4 GHz and 5.0 GHz WLAN, VSAT, CATV and broadband, commercial and military radar and multi-market applications

Switches

- > Frequency spectrum from DC to 100 GHz
- > (HMIC™) PIN diodes: high power and broadband from 50 MHz to 26 GHz
- > AlGaAs PIN diode: upper frequency ranges for instrumentation and radar
- > GaAs pHEMT and MESFET for fast switching and low control voltage for narrow band and broadband
- > 75 Ω absorptive switches for CATV, FTTx and DBS infrastructure and CPE applications

Phase Detectors

- > SRD reference frequency multiplier, coupling capacitors and a Schottky diode microwave sampler/phase detector in a 0.075" by 0.100" hybrid
- > Used to phase lock microwave oscillators up to 22 GHz to a much lower reference frequency



Limiters								
Part Number	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Ave. Power (W)	Peak Power (W)	Leakage (mW)	Recovery Time (ns)	Package
MADL-011012	300	1000	0.2	360	55.6	100	3000	SMT Hermetic
MADL-011014	1000	2000	0.35	200	320	100	3500	SMT Hermetic
2690-1001 ♦	1000	2000	0.7	1	100	75	100	Coax
2690-1003 ♦	1000	2000	0.9	3	1000	100	1000	Coax
MADL-011173-DIE	2000	4000	0.5	12.5	—	40	80	DIE
MADL-011015	2000	4000	0.6	100	250	30	3000	SMT Hermetic
LM202602-H-A-300	2000	6000	0.85	100	100	63	100	Surface Mount
MADL-011087-DIE	2000	8000	0.6	12.5	—	35	30	DIE
LM202802-L-C-300	2000	8000	1	4	100	79	75	Surface Mount
2690-1005 ♦	2000	8000	1.1	1	100	50	100	Coax
LM202802-Q-B-301	2000	8000	1.1	100	125	126	5000	Surface Mount
LM202802-Q-C-301	2000	8000	1.1	100	125	126	5000	Surface Mount
2690-1007 ♦	2000	8000	1.3	3	1000	100	1000	Coax
MADL-011074-DIE	4000	8000	0.6	10	—	50	130	DIE
MADL-011078-DIE	4000	8000	0.6	12.5	—	40	70	DIE
MADL-011088-DIE	6000	12000	0.4	8	—	56	60	DIE
MADL-011092	100	18000	1	3.1	400	500	11000	SMT, 8.8 x 5 mm
2690-1014 ♦	2000	18000	2.3	2	500	75	250	Coax
2690-1015 ♦	2000	18000	2.3	3	1000	100	1000	Coax
2690-1009 ♦	8000	18000	1.8	1	100	50	100	Coax
2690-1011 ♦	8000	18000	2.3	3	1000	100	1000	Coax
MADL-011100	1000	20000	1.1	5	500	39	0.27	SMT Ceramic

Power Detectors							
Part Number	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Sensitivity (dBm)	Directivity (dB)	Max Power (dBm)	Package
MACP-010571	2000	6000	0.2	-15	15	30	TDFN-6, 1.5 x 1.2 mm
MACP-010572	6000	18000	0.25	-18	16	30	TDFN-6, 1.5 x 1.2 mm
MACP-010573	10000	30000	0.5	-17	14	30	TDFN-7, 1.5 x 1.2 mm
MADT-011000	5000	44000	—	—	—	15	QFN, 3 mm
MADT-011000-DIE	5000	44000	—	—	—	15	DIE

Digital Phase Shifters								
Part Number	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Bit Count	LSB (°)	P3 (dBm)	RMS Phase (dBm)	Package
MAPS-011021	900	1200	3.5	6	5.6	42	—	PQFN-24, 4 mm
MAPS-011007	1200	1400	3.8	6	5.6	48	2	PQFN-24, 4 mm
MAPS-010143	1400	2400	3.2	4	22.5	40	2	PQFN-24, 4 mm
MAPS-010163-DIE	1400	2400	3.8	6	5.6	40	3	DIE
MAPS-010163	1400	2400	5	6	5.6	40	3	PQFN-24, 4 mm
MAPS-010144	2300	3800	2.5	4	22.5	47	2.2	PQFN-24, 4 mm
MAPS-010164	2300	3800	3.2	6	5.6	45	3	PQFN-24, 4 mm
MAPS-010164-DIE	2300	3800	3.6	6	5.6	45	3	DIE
MAPS-011019	2400	5100	4.5	6	5.6	48	—	PQFN-24, 4 mm
MAPS-010165-DIE	3500	6000	4.9	6	5.6	40	4	DIE
MAPS-010145	3500	6000	5	4	22.5	45	3	PQFN-24, 4 mm
MAPS-010165	3500	6000	5.5	6	5.6	40	4	PQFN-24, 4 mm
MAPS-011008	5000	6000	4	6	5.6	48	2	PQFN-24, 4 mm
CGY2177AUH	4800	6800	5	6	5.625	—	2	DIE

Note: Part numbers are RoHS compliant. ♦ indicates non-RoHS compliant
 Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box.
 All specifications are subject to change.

Digital Phase Shifters (continued)								
Part Number	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Bit Count	LSB (°)	P3 (dBm)	RMS Phase (dBm)	Package
MAPS-010146	8000	12000	6.5	4	22.5	40	5	PQFN-24, 4 mm
MAPS-010166	8000	12000	6.5	6	5.6	40	5	PQFN-24, 4 mm
CGY2172XAUH	8000	12000	8	6	5.625	—	2	DIE
CGY2172XBUH	8000	12000	8	6	5.625	—	2	DIE
CGY2174UH	14000	16000	8	6	5.625	—	6	DIE
CGY2392SHV	6000	18000	10.8	6	5.625	—	1.09	5 x 5 mm
CGY2392SUH	6000	18000	10.8	6	5.625	—	1.7	DIE
CGY2173UH	6000	18000	13	6	5.625	—	4	DIE

Digital Attenuators								
Part Number	Min Freq (MHz)	Max Freq (MHz)	Attenuator Range (dB)	Insertion Loss (dB)	Bit Count	IIP3	LSB	Package
CGY2176AUH	1000	8000	31.5	5.6	6	—	—	DIE
CGY2171XBUH	1000	15000	31.5	5	6	—	—	DIE
CGY2390SUH	6000	18000	35	2.2	3	—	—	DIE
CGY2169UH	10000	18000	23.5	4	6	—	—	DIE

Fixed Attenuators							
Part Number	Min Freq (MHz)	Max Freq (MHz)	Attenuation (dB)	Return Loss (dB)	Input P1dB (dBm)	Input OIP3 (dBm)	Package
MAAT-011022-DIE	DC	50000	0.2	17.5	—	—	DIE
MAAT-011023-DIE	DC	50000	0.3	17.5	—	—	DIE
MAAT-011024-DIE	DC	50000	2.0	17.5	27	40	DIE
MAAT-011025-DIE	DC	50000	3.1	17.5	27	40	DIE
MAAT-011026-DIE	DC	50000	4.2	17.5	27	40	DIE
MAAT-011027-DIE	DC	50000	6.3	17.5	27	40	DIE
MAAT-011028-DIE	DC	50000	10.3	17.5	27	40	DIE
MAAT-011029-DIE	DC	50000	15.4	17.5	27	40	DIE
MAAT-011030-DIE	DC	50000	20.4	17.5	27	40	DIE

CMOS Switch Drivers							
Part Number	Type	Rise Time/Fall Time (ns)	V _{CC} (V)	V _{EE} (-V)	cc (mA)	Package	
MADR-007131-000100	Dual Linearizer	25000	5	—	1	CSP-9	
MADR-007097-000100	Single	2	5	-5	1	SOIC-8	
MADR-010574	PIN	2	3	—	170	PQFN-16, 7 mm	
MADR-011021	4CH HV Driver	3	5	180 (V _{DD})	5	PQFN-18, 6 mm	
MADR-010410	TR Module	6	3	3	—	PQFN-40, 5 mm	
MADR-011007	FET	6	6	-5	—	PQFN-48, 6 mm	
MADR-010269-DIE	Hex FET	8/4.5	3.3	-5	1	DIE	
MADRCC0004	Quad	25	5	-5	—	SO-16	
MADRCC0005	Single	25	5	-5	1	SO-8	
MADR-009150	PIN	30	3.3	-5	.05	PQFN-16, 3 mm	
MADR-011022	2CH Driver	30	5	-25	20	PQFN-16, 4 mm	
MADR-011020	2CH Driver	50	5	-50	50	PQFN-16, 4 mm	
MADR-009151-000DIE	Single	300	5	-5	1	DIE	
MADR-009190-000100	Quad	300	5	-5	1	SOIC-16	
MADR-009269-000100	Single, PIN	300	5	5	1	SOIC-8	
MADR-009443-000100	Quad	500	5	-5	20	PQFN-20, 4 mm	
MADRCC0006	Single	500	5	-5	—	SO-8	

Note: Part numbers are RoHS compliant. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

CMOS Switch Drivers (continued)

Part Number	Type	Rise Time/Fall Time (ns)	V _{CC} (V)	V _{EE} (-V)	I _{CC} (mA)	Package
MADRCC0007	Quad	500	5	-5	—	SOIC16
MADRCC0002 †	Dual	5000	20	—	—	CSP-9

Voltage Variable Attenuators

Part Number	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Attenuator Range (dB)	Input IP3 (dBm)	Voltage (V)	Current (mA)	Package
LG1 *	—	—	—	—	—	—	—	TO-8
CLG1	—	—	—	—	—	—	—	SMA
MAATCC0013	824	960	1.7	25	40	—	—	SOT-25
MAAV-007088-000100	50	1000	2.8	42	34	—	—	SOW-16
MA4VAT900-1277T	800	1000	1	24	40	—	—	PQFN-16, 3 mm
MA4VAT904-1061T	800	1000	1	24	49	—	—	SOIC-8
MA4VAT907-1061T	800	1000	1	24	49	—	—	SOIC-8
MAAV-007092-000100	800	1000	3.6	34	40	—	30	PQFN-28, 6 mm
MAAV-007941	0	2000	3.2	12	36	-4	0.02	SOIC-8
SMG2	5	2000	2.3	23	—	—	—	SMT
MAAM-007987-000CG2	5	2000	2.6	23	—	—	—	SMA
SMG1	5	2000	2	30	—	—	—	SMTO-8
G1 †	5	2000	2.5	25	—	+15	15	TO-8, SMT, SMA
G2	5	2000	2.6	28	—	+5	15	TO-8
G30	100	2000	2.3	44	—	—	—	TO-8
CG30	100	2000	2.3	44	—	—	—	SMA
SMG30	100	2000	2.3	44	—	—	—	SMTO-8
MAAV-008022	500	2000	2.7	40	32	+5	0.05	SOIC-8
MAAVSS0008	500	2000	2.8	30	28	+5	0.3	SOIC-8
MA4VAT2004-1061T	1700	2000	1.4	24	49	—	—	SOIC-8
MA4VAT2007-1061T	1700	2000	1.4	23	52	—	—	SOIC-8
MAAV-007090-000100	1700	2000	3.5	35	31	—	—	SOW-16
MA4VAT2000-1277T	1700	2200	1.2	24	21	—	—	PQFN-16, 3 mm
MAAVSS0006	0	2500	3.6	25	36	-3	0.025	SOT-25
MAAVSS0001	1800	2500	2.4	42	32	+2.25	0.05	SOT-25
MADP-007167-12250T	5	3000	2.8	36	50	—	—	SOT-25
MA4P7455-1225T	10	4000	1	29	43	—	—	SOT-25
SMG40	500	4000	2.5	25	—	—	—	SMT
CG40	500	4000	2.5	32	—	—	—	SMA
G40	500	4000	2.5	32	—	+15	12	TO-8
MAAT-010521-L2	5800	12000	2	30	29	—	—	PQFN-16, 3 mm
MAAT-010521-L1	5800	16000	2	30	29	—	—	PQFN-16, 3 mm
MAAT-010521-H1	17600	40000	2	30	29	—	—	PQFN-16, 3 mm
MAAV-011013	5000	45000	1.5	30	42	—	—	PQFN-16, 3 mm
MAAV-011014-DIE	80000	100000	3	25	40	—	—	DIE

Switches

Part Number	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Isolation (dB)	Input IP3 (dBm)	Package
SPST						
MASW-008177	5	1000	0.7	53	52	PQFN-12, 3 mm
MASW-001150-1316 S	45	2500	0.3	65	40	DIE

Note: Part numbers are RoHS compliant. **S** indicates these parts are also available with Space and Hi-Rel Screening & Qualification. † Indicates Non-magnetic.

* LG1 Linearizer is compatible with the G1 Attenuator. Yields linear attenuation (dB) for linear control voltage. Available in TO-8, SMT, SMA.

Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

Switches (continued)						
Part Number	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Isolation (dB)	Input IP3 (dBm)	Package
MASWSS0162	50	2500	1	48	46	SOIC-8
SW-209-PIN	0	3000	1.5	27	40	CR10
SW05-0311	0	3000	40	46	CR-9	CR-9
SW-231-PIN	5	4000	2	22	46	FP-16
MASWSS0148	300	4000	1.6	51	49	PQFN-12, 3 mm
MASW6020G	100	6000	0.9	45	46	DIE
MA4SW110 S	50	26500	0.6	48	40	HMIC DIE
MASW-011138-CS0240 S	1000	26500	3.1	50	38	Hermetic, 2.4 mm connectors
MASW-011138-CS0292 S	1000	26500	3.1	50	38	Hermetic, 2.92 mm connectors
MA4AGSW1 S	50	50000	0.2	43	40	DIE
MA4AGSW1A S	50	50000	1.2	48	40	DIE
SPDT						
MASWSS0103	5	1000	0.8	71	47	PQFN-20, 4 mm
MA8334-001	20	1000	0.4	25	80	844-001
MA8334-004	20	1000	0.4	25	—	844-004
MASWSS0179	50	2000	0.5	28	52	SOT-26
MASWSS0161	500	2000	0.6	30	55	SOIC-8
MASWSS0157	50	2500	0.6	35	45	SOIC-8
MASWSS0180	50	2500	0.6	38	46	SOIC-8
MASWSS0201	50	2500	1	45	44	PQFN-12, 3 mm
MASWSS0136	0	3000	0.4	27	48	SC-70 (SOT-363)
MASWSS0151	0	3000	0.6	28	55	SC-70 (SOT-363)
MASW2000	0	3000	0.6	40	53	DIE
MASW-007935	0	3000	0.7	34	50	SOT-26
MASW-007075-000100	0	3000	1.8	36	46	SOW-24
MASW-008801	5	3000	0.8	85	47	PQFN-16, 3 mm
MASW-009101	5	3000	1	65	39	PQFN-16, 3 mm
MASW-011207	5	3000	1.2	55	51	PQFN-16, 3 mm
MASWSS0178	10	3000	0.6	57	43	MSOP-8
MASWSS0192	50	3000	0.2	24	53	SC-70 (SOT-363)
MASWSS0176	50	3000	0.3	23	45	SOT-26
MASWSS0115	50	3000	0.3	24	46	SC-70 (SOT-363)
SW-313-PIN	50	3000	0.8	52	46	CR-9
MASWSS0143	100	3000	0.4	18	58	SOT-26
MASWSS0166	100	3000	0.4	21	55	SC-70 (SOT-363)
MASWSS0169	100	3000	0.7	48	50	MSOP-10
MASWSS0204	300	3000	0.3	22	56	SC-70 (SOT-363)
MASWSS0181	300	3000	0.5	23	57	SOT-26
MASW-008899	500	3000	0.3	24	48	SC-70 (SOT-363)
MASW-007221	500	3000	0.4	22	52	SC-70 (SOT-363)
MASWSS0167	500	3000	0.4	28	48	PQFN-6, 1.2 x 1.5 mm
MASWSS0121	500	3000	0.7	54	46	PQFN-16, 4 mm
SW-228-PIN	0	4000	0.7	42	46	CR-2
SW-226-PIN	0	4000	1	48	46	CR-2
MASW-007071-000100	0	4000	1.8	30	46	PQFN, 4 x 6 mm
MASW-008543	10	4000	0.7	58	53	MSOP-8
MASW-000932	10	4000	53	43	72	PQFN-16, 4 mm

Note: Part numbers are RoHS compliant. **S** indicates these parts are also available with Space and Hi-Rel Screening & Qualification. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

Switches (continued)						
Part Number	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Isolation (dB)	Input IP3 (dBm)	Package
MASW4030G	50	4000	0.6	53	46	DIE
MASW-009588	500	4000	0.4	26	55	PDFN-6, 1 mm
MASW-010370	1500	4000	0.5	37	—	3 PQFN-16, mm
MASW-008853	0	5000	0.3	25	56	SC-70 (SOT-363)
MASW-011184	1000	5000	0.35/0.5	29/27	54/51	PQFN-16, 3 mm
MASW-008206-000DIE	2400	5800	0.85	30	54	DIE
MASW6010	0	6000	0.8	38	46	DIE
MASW-011120	30	6000	0.25	44	68	HQFN-20, 5 mm
MASW-000822-12770T	50	6000	0.2	32	60	PQFN-16, 3 mm
MASW-000936	50	6000	0.2	45	72	PQFN, 4 mm
MASW-000834-13560T	50	6000	0.2	53	65	PQFN-16, 4 mm
MASW-000825-12770T	50	6000	0.3	35	64	PQFN-16, 3 mm
MASW-009444	200	6000	0.3	28	54	PDFN-6, 1 mm
MASW6010G	200	6000	0.8	38	46	DIE
MASWSS0202	1000	6000	0.6	25	52	PQFN-12, 3 mm
MASW-007588	1000	6000	0.9	28	55	PQFN-12, 3 mm
MASW-007921	50	7000	0.7	30	58	PDFN-8, 2 mm
MASW-011191	500	7500	—	—	—	PQFN
MASW-007107	0	8000	0.5	30	54	PDFN-8, 2 mm
MASW-010647 S	8000	10500	0.8	37	60	DIE
MASW-011071	8000	10500	1	38	60	PQFN-44, 7 mm
MASW-011021 S	6000	14000	0.7	34	60	SURMOUNT™ DIE
MASW-002102-13580 S	2	18000	1.8	55	40	DIE
MASW-011108-DIE S	6000	18000	0.6	44	—	DIE
CGY2890SUH	6000	18000	1.5	50	—	DIE
MASW-002103-1363 S	50	20000	0.8	38	40	SURMOUNT™ DIE
MASW20000	50	20000	1.4	58	43	DIE
MASW-008322	500	20000	1	45	48	PQFN-24, 4 mm
MASW-011057 Reflective	13000	20000	0.8	42	55	4 QFN-20, mm
MASW-011129-DIE	2000	22000	0.6	45	50	DIE
MASW-011052 S	2000	26000	0.8	50	43	DIE
MA4SW210B-1 S	2000	26000	1.2	48	40	DIE
MASW-011135-CS0240 S	2000	26000	3.3	30	45	Hermetic, 2.4 mm Connectors
MASW-011135-CS0292 S	2000	26000	3.3	30	45	Hermetic, 2.92 mm Connectors
MASW-011107-DIE	DC	26500	1.3	46	45	DIE
MASW-002100-1191 S	50	26500	0.3	65	40	DIE
MA4SW210 S	50	26500	0.6	52	40	HMIC DIE
MASW-011128-DIE	50	26500	1.7	48	42	DIE
MASW-011102	0	30000	1.8	40	45	PQFN-14, 3 mm
MASW-011105	17700	31000	1.6	30	43	PQFN-14, 3 mm
MASW-011145	27000	31000	1.3	45	60	Laminate, 3 mm 20-Lead
MASW-011144-DIE S	20000	40000	0.65	30	—	DIE
MASW-010646 S	26000	40000	0.6	39	60	DIE
MASW-011036 S	26000	40000	0.7	40	60	DIE
MASW-011098	26000	40000	1.17	38	—	Laminate, 5 mm 20-Lead
MASW-011197	0	44000	1.4	46	52	Laminate, 2.25 mm 12-Lead
MASW-011198	0	44000	1.8	47	52	Laminate, 3 mm 20-Lead

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Switches (continued)						
Part Number	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Isolation (dB)	Input IP3 (dBm)	Package
MA4AGSW2 S	50	50000	0.6	46	40	DIE
MASW-011131-CS0240 S	8000	50000	2.2	35	—	Hermetic, 1.85 mm Connectors
MASW-011152	0	55000	3.3	38	52	Laminate, 3 mm 20-Lead
MASW-011173	20000	55000	1.0	35	50	DIE
MASW-011151	0	67000	3.0	33	52	Laminate, 2.25 mm 12-Lead
MASW-011111-DIE S	80000	100000	0.8	25	—	DIE
SP3T						
MASW-011041	50	1500	0.3	51	73	HQFN-20, 9 mm
MASW-011030	50	2500	0.4	27	77	HQFN-16, 7 mm
MASWSS0199	500	2500	0.5	30	58	PQFN-12, 3 mm
MASWSS0200	500	2500	0.6	24	61	PQFN-12, 3 mm
MASW-008955	0	3000	0.6	22	54	PDFN-8, 2 mm
MASW-007074-000100	0	3000	2	32	45	SOW-24
MASW-008330	500	3000	0.5	24	50	PQFN-8, 2 mm
MASWSS0144	500	3000	0.6	24	55	PQFN-12, 3 mm
MASWSS0191	500	3000	0.7	30	58	STDFN-8LD, 2 mm
MASW-010612	0	3500	0.6	21	54	PDFN-8, 1.5 mm
MASW-009482	50	4000	0.75	23	65	STQFN-12, 2 mm
MASW-011053 S	2000	18000	0.8	50	48	DIE
MASW-003102-13590 S	2000	18000	0.8	50	40	DIE
MASW-003103-1364 S	50	20000	0.8	40	40	SURMOUNT™ DIE
MASW-011130-DIE	2000	22000	0.6	45	45	DIE
MA4SW310B-1 S	2000	26000	1.2	47	40	DIE
MASW-003100-1192 S	50	26500	0.3	65	40	DIE
MA4SW310 S	50	26500	0.8	48	40	DIE
MA4AGSW3 S	50	50000	0.6	48	40	DIE
MASW-011185	50	60000	1.5	35	44	QFN-4, 5 mm
MASW-011029 S	75000	100000	1.3	33	—	DIE
SP4T						
MASW-011077	50	1000	0.3	48	50	XHQFN-28, 12 mm
MASW-011040	50	1500	0.3	51	73	HQFN-20, 9 mm
MASWCC0009	3	3000	1.4	42	46	QSOP24
MASW-008566	100	3000	0.7	26	57	PQFN-16, 4 mm
MASW-007813-000000	500	3000	0.8	27	58	PQFN-16, 3 mm
MASW4060G	0	4000	1.3	50	46	DIE
MASWCC0010	0	4000	2.3	38	40	CSP-2
MASW-010350	10	4000	0.8	60	50	PQFN-24, 4 mm
MASW-011127	0	4200	0.55	—	78	QFN, 4 mm
MASW-011226	0	10000	1.35	50	51	QFN, 4 mm
MASW-004102-12760 S	2	18000	1.5	50	40	DIE
MA4SW410B-1 S	2000	18000	0.8	48	40	DIE
MASW-004103-1365 S	50	20000	0.8	50	63	SURMOUNT™ DIE
MASW-004240-13170 S	10	24000	2.5	50	—	DIE
MASW-004100-1193 S	50	26500	0.3	65	40	DIE
MA4SW410 S	50	26500	0.7	48	40	DIE
MASW-011137-CS0240 S	500	30000	3.8	30	45	Hermetic, 2.4 mm Connectors
MASW-011087 S	27000	30000	0.85	50	55	DIE

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Switches (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Isolation (dB)	Input IP3 (dBm)	Package
MASW-011199	0	44000	2.6	34	51	Laminate, 3 mm 22-Lead
MASW-011200	0	44000	3.3	41	51	Laminate, 3 mm 22-Lead
MA4AGSW4 S	50	50000	0.8	42	40	DIE
MASW-011153	0	57000	3.5	34	51	Laminate, 3 mm 22-Lead
MASW-011154	0	57000	4.0	39	51	Laminate, 3 mm 22-Lead

SP5T

MASW-010351	10	4000	1.4	57	50	PQFN-24, 4 mm
MA4SW510B-1 S	2000	18000	0.9	40	40	DIE
MASW-005102-13600 S	2000	18000	0.9	40	40	DIE
MASW-006102-13610 S	50	26500	0.3	65	40	DIE
MA4SW510 S	50	26500	0.9	38	40	DIE
MASW-005100-1194 S	50	26500	0.9	38	40	DIE
MA4AGSW5 S	50	50000	1.1	47	40	DIE
MASW-011170	50	50000	1.1	47	40	DIE

SP6T

MASWCC0006	0	4000	2.1	25	40	CSP-2
MA4SW610B-1 S	2000	18000	1.3	45	40	DIE
MASW-006102-13610 S	2000	18000	1.3	45	40	DIE

SP8T

MA4AGSW8-1 S	50	50000	1.5	37	40	DIE
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DPDT

MASW2040	0	2000	0.4	20	46	DIE
MASW-009460	500	3000	0.6	19	52	PQFN-12, 3 mm
MASWSS0130	500	3000	0.6	25	55	PQFN-12, 3 mm
MASWSS0184	200	4000	0.7	35	58	PQFN-12, 3 mm
MASW-007587-000000	200	4000	0.7	38	59	PQFN-12, 3 mm
MASW6030G	0	6000	0.6	40	45	DIE
MASWSS0190	2000	6000	0.8	43	50	UTQFN-8, 2 mm

Phase Detectors

Part Number	SRD VBR Min (V)	SRD CJ Typ (pF)	SRD TL Typ (ns)	SRD TT Max (ps)	Cap CT Typ (pF)	SD CJ Typ (pF)	SD VF Typ	SD RD Typ (mV)	FMW Typ (GHz)	Package
MSPD2018-E50/E50SM	15	0.35	5	55	0.6	0.1	430	16	22	E50/E50SM
MSPD2018-H50 S	15	0.35	5	55	0.6	0.1	430	16	22	H50
MSPD1012-E50/E50SM	15	0.5	10	70	2.5	0.18	270	9	12	E50/E50SM
MSPD1012-H50 S	15	0.5	10	70	2.5	0.18	270	9	12	H50
MSPD1002-E50/E50SM	15	0.5	20	70	3.5	0.22	270	8	2	E50/E50SM
MSPD1000-E50/E50SM	15	1	35	95	20	0.4	270	7	0.5	E50/E50SM
MSPD1000-H50 S	15	1	35	95	20	0.4	270	7	0.5	H50
MSPD1011-122/121	15	22	10	100	0.5	0.08	300	20	20	CS122/CS121
MSPD1012-121	15	22	10	100	0.5	0.08	450	20	20	CS121
MSPD1012-122	15	22	10	100	0.5	0.08	450	20	20	CS122
MSPD1013-121	15	22	10	100	0.5	0.08	550	20	20	CS121
MSPD1013-122	15	22	10	100	0.5	0.08	550	20	20	CS122

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FREQUENCY CONVERSION

Offering a Broad Range of Frequency and Performance Specifications

MACOM's frequency conversion products include hybrid-mixers, mixers, receivers, transceivers, up converters and frequency multipliers. Our frequency conversion devices are ideal for point-to-point radio, aerospace and defense and other broadband communications applications. Available as surface mount devices, our reliable products enable easy assembly and integration for real estate constrained customers.



Frequency Multipliers

- > Combining an active doubler with an output buffer amplifier to deliver constant power over a range of input powers
- > Available as bare die or in surface mount lead-free QFN packages

Hybrid Mixers

- > For aerospace and defense, wireless, test and measurement and broadband communications applications
- > Available in subsets of the frequency range:
 - RF and LO: 50 kHz to 24 GHz
 - IF: DC to 8 GHz
- > Double and triple balanced designs
- > Variety of technologies
 - GaAs pHEMT
 - Si HMIC™
- > Connectorized, flatpack, drop-in and surface mount packages

Receivers

- > Widely used in point-to-point radio, aerospace and defense and broadband communications applications
- > Features an integrated LNA, mixer and LO buffer amplifier on a single chip
- > 4500 to 45000 MHz frequency range
- > Excellent noise figure and conversion gain performance
- > Lead-free QFN or SMD packages

Transceivers

- > Monolithic and stereo doppler transceivers for directional motion detection
- > Used in automatic door openers, ground speed recorders and police radar detectors

Up Converters

- > Applications include point-to-point radio and broadband communications
- > Featuring an integrated image reject (balanced) mixer, LO buffer, RF buffer and LO doubler or variable attenuator on a single chip
- > 5600 to 40000 MHz frequency range
- > Lead-free QFN or SMD packages
- > Excellent variable gain control with adjustable bias, high linearity and image rejection, with low LO leakage

Mixers

- > Constructed using broadband ferrite balun transformers and matched silicon Schottky diodes
- > Ideal for use in CATV head end systems and up converter applications



Frequency Multipliers								
Part Number	Min Freq RF (MHz)	Max Freq RF (MHz)	Min Output (MHz)	Max Output (MHz)	Input Power (dB)	Multiply Factor	Conversion Loss (dB)	Package
FM-105-PIN ♦	10	750	20	1500	24	2	12	RH-3
FM-104-PIN ♦	75	1500	150	3000	24	2	10	FP-3
FM-107-PIN ♦	5	2400	10	4800	10	2	11	FP-2
FMS-109-PIN ♦	5	2400	10	4800	10	2	11	SF-1
FD25 ♦	5	2400	10	4800	10	2	11.5	TO-8
FD25C ♦	5	2400	10	4800	10	2	11.5	Conn
FD25E ♦	5	2400	10	4800	10	2	11.5	Flatpack
FD25H ♦	5	2400	10	4800	23	2	12	TO-8
FD25HC ♦	5	2400	10	4800	23	2	12	Conn
SFD25H	5	2400	10	4800	23	2	12	SMT
CSFD25 ♦	10	2400	20	4800	10	2	11.5	SMT
CSFD25H ♦	10	2400	20	4800	23	2	12	SMT
SFD26	50	3300	100	6600	10	2	13	SMT
CSFD26 ♦	50	3300	100	6600	10	2	13.5	SMT
FD26	50	3300	100	6600	10	2	13	TO-8
FD26C ♦	50	3300	100	6600	110	2	13	Conn
XX1002-QH	2500	6000	5000	12000	3	2	13	PQFN-24, 4 mm
FDC2310 ♦	1500	8000	3000	16000	10	2	11	Open Carrier
FDC2710 ♦	3500	8000	7000	16000	10	2	11.2	Open Carrier
FD93 ♦	2000	9000	4000	18000	12	2	12	Versapac
FD93C ♦	2000	9000	4000	18000	12	2	12	Conn
FD93H	2000	9000	4000	18000	19	2	12	Versapac
FD93HC ♦	2000	9000	4000	18000	19	2	12	Conn
FDZ5013 ♦	3000	12000	6000	24000	13	2	12	Versapac
FDZ5013C ♦	3000	12000	6000	24000	13	2	12	Conn
MAFC-004403	8000	12000	16000	24000	0	2	17	QFN, 4 mm
MAFC-010511	8000	12000	16000	24000	0	2	17	PQFN-16, 3 mm
XX1010-QT	14625	15000	29250	30000	4.5	2	14	QFN-16, 3 mm
XX1007-QT	13500	17000	27000	34000	8	2	10	PQFN-16, 3 mm
XX1007-BD	13500	17000	27000	34000	8	2	12	DIE
XX1000-QT	7500	22500	15000	45000	6	2	12	QFN-16, 3 mm
XX1000-BD	7500	25000	15000	50000	0	2	13	DIE

Hybrid Mixers							
Part Number	Min Freq RF/LO (MHz)	Max Freq RF/LO (MHz)	Min Freq IF (MHz)	Max Freq IF (MHz)	LO Drive (dB)	Conversion Loss/Gain (dB)	Package
M6D-50 ♦	0.05	200	0	200	7	7	Relay Can
SM6D	0.05	200	0	200	7	7	SMT
MAC-50-PIN ♦	0.2	200	0	200	7	6	TO-5-2
MDS-222-PIN ♦	0.2	200	0.2	200	7	7.5	SF-1
SM6V	0.4	500	0	500	7	6.5	SMT
M9BC ♦	0.5	500	0	500	17	7	Relay Can
MD-161-PIN ♦	1	500	0	500	13	8	FP-2
MAC-51-PIN ♦	5	500	0	500	7	7	TO-5-2
MDS-223-PIN ♦	10	500	10	500	7	7	SF-1
M1H ♦	180	620	0	200	7	7	SMA Relay Can
M6EH ♦	5	750	0	500	20	7.5	Relay Can
SM6EH	5	750	0	500	20	7.5	SMT

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Hybrid Mixers (continued)							
Part Number	Min Freq RF/LO (MHz)	Max Freq RF/LO (MHz)	Min Freq IF (MHz)	Max Freq IF (MHz)	LO Drive (dB)	Conversion Loss/Gain (dB)	Package
M2E	10	1000	0	600	20	8	TO-8
M2EC ♦	10	1000	0	600	20	8	SMA
SM2E	10	1000	0	600	20	8	SMT
MD-160-PIN ♦	1	1500	1	1000	13	9	RH-3
MDS-158-PIN ♦	5	1500	5	1500	7	9	SF-1
MD-158-PIN ♦	5	1500	5	1000	7	7	FP-2
M9HC ♦	10	1500	0	600	20	8	SMA
M2AC ♦	10	1500	0	800	7	7.5	SMA
M4A ♦	10	1500	0	1000	7	7.5	Flatpack
SM4A	10	1500	0	1000	7	7.5	SMT
SM4B ♦	10	1500	0	1000	13	7.5	SMT
CSM1-13	10	1500	1	500	13	7.5	SMT
CSM1-17	10	1500	1	500	17	7.5	SMT
MD-149-PIN ♦	10	1500	10	1500	7	7.5	FP-2
MDS-149-PIN ♦	10	1500	10	1500	7	6	SF-1
MD-148-PIN ♦	10	1500	10	1500	10	6	FP-2
MDS-148-PIN	10	1500	10	1500	10	6	SF-1
M2B ♦	10	1600	0	800	13	7.5	TO-8
M2BC ♦	10	1600	0	800	13	7.5	SMA
CSM1-10	10	2000	1	500	10	7.5	SMT
M2TC ♦	10	2400	1	1000	13	8	SMA
SM4G ♦	800	2400	0	1500	7	7.5	SMT
CSM2-10	10	2800	10	2000	10	8.5	SMT
CSM2-13	10	2800	10	2000	13	8.5	SMT
CSM2-17	10	2800	10	2000	17	8.5	SMT
MD-123-PIN ♦	10	3000	10	3000	7	8	FP-2
M8T ♦	1	3400	1	2000	10	7	TO-8
M8TC ♦	1	3400	1	2000	10	7	SMA
CSM4T	1	3400	1	2000	10	8	SMT
SM4T	1	3400	1	2000	10	8	SMT
SM4T17	1	3400	1	2000	17	8	SMT
CSM4T17	1	3400	1	2000	17	8	SMT
M8TH ♦	1	3400	1	2000	23	7.5	TO-8
M8THC ♦	1	3400	1	2000	23	7.5	SMA
M4TH ♦	1	3400	1	2000	23	8	Flatpack
SM4TH	1	3400	1	2000	23	8	SMT
CSM4TH	1	3400	1	2000	23	8	SMT
MD-169-PIN ♦	1	3500	1	3500	10	10	FP-2
MDC-169-SMA ♦	1	3500	1	3500	10	10	C-7
MD-189-PIN ♦	1	3500	1	3500	23	8	FP-2
MDS-189-PIN ♦	1	3500	1	3500	23	8	SF-1
MDS-169-PIN ♦	1	3500	5	1500	10	8	SF-1
M2G	800	3500	0	1500	7	8	TO-8
M2GC ♦	800	3500	0	1500	7	8	SMA
MD-179-PIN ♦	1	4000	5	1500	7	10.5	FP-2
MDC-179-SMA ♦	1	4000	5	1500	7	10.5	C-7
M8H-3 ♦	3700	4200	0	2000	7	5	TO-8

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Hybrid Mixers (continued)							
Part Number	Min Freq RF/LO (MHz)	Max Freq RF/LO (MHz)	Min Freq IF (MHz)	Max Freq IF (MHz)	LO Drive (dB)	Conversion Loss/Gain (dB)	Package
MC2110 ♦	3400	4700	0	1000	10	6.2	Open Carrier
CSM5T	50	4800	50	3000	10	7.2	SMT
CSM5T17	50	4800	50	3000	17	7.8	SMT
CSM5TH	50	4800	50	3000	23	7	SMT
SM5T	50	5000	50	3000	10	7.5	SMT
SM5T17	50	5000	50	3000	17	7.5	SMT
SM5TH	50	5000	50	3000	23	7.7	SMT
MZ6310C ♦	250	5500	0	1500	10	7	SMA
M63C ♦	2500	5500	0	1500	9	5.5	SMA
M8H-7 ♦	2400	6000	0	2000	7	6	TO-8
M8HC-7 ♦	2400	6000	0	2000	7	6	SMA
MDC-162-SMA ♦	1000	7000	10	2000	13	6	C-2
MY63 ♦	2500	7000	0	15000	9	5.8	Versapac
MY63C ♦	2500	7000	0	15000	9	5.8	SMA
M63H ♦	2500	7500	0	1500	20	6	Minpac
M63HC ♦	2500	7500	0	1500	20	6	SMA
MY63H ♦	2500	7500	0	1500	20	6	Versapac
MY63HC ♦	2500	7500	0	1500	20	6	SMA
MC2307 ♦	2200	8000	0	2000	7	7	Open Carrier
M76H ♦	4500	8500	0	2000	20	7	Minpac
MY76H ♦	4500	8500	0	2000	20	7	Versapac
MY76HC ♦	4500	8500	0	2000	20	7	SMA
M76 ♦	4500	9500	0	2000	10	6	Minpac
M76C ♦	4500	9500	0	2000	10	6	SMA
MY76 ♦	4500	9500	0	2000	10	6	Versapac
MY76C ♦	4500	9500	0	2000	10	6	SMA
MY84 ♦	1800	10000	0	1000	9	6.5	Versapac
MY84C ♦	1800	10000	0	1000	9	6.5	SMA
MC4107 ♦	2000	10000	0	2000	7	7.5	Open Carrier
MC4113 ♦	2000	10000	0	2000	13	7.5	Open Carrier
MC4120 ♦	2000	10000	0	2000	20	7.5	Open Carrier
M77C ♦	8000	12500	0	2500	10	5.5	SMA
MY77 ♦	8000	12500	0	2500	10	5.5	Versapac
MY77C ♦	8000	12500	0	2500	10	5.5	SMA
M14A ♦	6000	14000	0	2000	7	6.5	SMA
M67C ♦	9000	15000	0	2500	10	6.5	SMA
MC2707 ♦	10000	15000	0	2000	7	7	Open Carrier
MC2710 ♦	10000	15000	0	2000	10	6	Open Carrier
MC2720 ♦	10000	15000	0	2000	20	6	Open Carrier
MC3013 ♦	20000	16000	1000	8000	13	8	Open Carrier
MY83H ♦	2000	18000	30	5000	20	8.5	Versapac
MY83HC ♦	2000	18000	30	5000	20	8.5	SMA
M83	1000	18000	30	5000	13	7.5	Minpac
M83C ♦	1000	18000	30	5000	13	7.5	SMA
M89C ♦	1000	18000	1000	8000	10	8	SMA
MY88HC ♦	1000	18000	1000	8000	21	8	SMA
MY85C ♦	2000	18000	0	1000	7	8	SMA

Note: Part numbers are RoHS compliant. ♦ indicates non-RoHS compliant. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

Hybrid Mixers (continued)							
Part Number	Min Freq RF/LO (MHz)	Max Freq RF/LO (MHz)	Min Freq IF (MHz)	Max Freq IF (MHz)	LO Drive (dB)	Conversion Loss/Gain (dB)	Package
M85 ♦	2000	18000	0	1000	7	8	Minpac
M85C ♦	2000	18000	0	1000	7	8	SMA
MY85 ♦	2000	18000	0	1000	7	8	Versapac
M93C ♦	2000	18000	30	4000	10	8	SMA
MY93 ♦	2000	18000	30	4000	10	8	Versapac
MY93C ♦	2000	18000	30	4000	10	8	SMA
MZ9310 ♦	2000	18000	30	5000	10	7.5	Versapac
MY82 ♦	2000	18000	30	5000	13	7.5	Versapac
MY82C ♦	2000	18000	30	5000	13	7.5	SMA
MZ8810C ♦	2000	18000	1000	8000	10	7.5	SMA
MZ8813 ♦	2000	18000	1000	8000	13	7	Versapac
M88C ♦	2000	18000	1000	8000	13	8	SMA
MY88	2000	18000	1000	8000	13	8	Versapac
MY88C ♦	2000	18000	1000	8000	13	8	SMA
MZ9313 ♦	2000	18000	30	5000	13	7	Versapac
MZ9313C ♦	2000	18000	30	5000	13	7	SMA
MY89 ♦	2000	18000	2000	8000	10	8	Versapac
MY89C ♦	2000	18000	2000	8000	10	8	SMA
M88H ♦	2000	18000	2000	8000	21	8	Minpac
M88HC ♦	2000	18000	2000	8000	21	8	SMA
M50A ♦	2000	18000	2000	18000	10	8	Minpac
M86C ♦	3500	18000	0	3000	7	7	SMA
M80C ♦	4000	18000	0	3000	7	6.5	SMA
M79C ♦	5000	18000	0	3000	10	7	SMA
M79H ♦	5000	18000	0	3000	20	7.5	Minpac
M79HC ♦	5000	18000	0	3000	20	7.5	SMA
MZ7407 ♦	6000	18000	0	3000	7	6.5	Versapac
MZ7407C ♦	6000	18000	0	3000	7	6.5	SMA
MZ7410 ♦	6000	18000	0	3000	10	6.5	Versapac
MZ7410C ♦	6000	18000	0	3000	10	6.5	SMA
MZ7420 ♦	6000	18000	0	3000	20	7.5	Versapac
MZ7420C ♦	6000	18000	0	3000	20	7.5	SMA
M74 ♦	7000	18000	0	3000	10	6.5	Minpac
M74C ♦	7000	18000	0	3000	10	6.5	SMA
M87C ♦	500	19000	30	5000	13	9	SMA
MY87 ♦	500	19000	30	5000	13	10.5	Versapac
MY87C ♦	500	19000	30	5000	13	10.5	SMA
MC4507 ♦	4000	20000	0	4000	7	7.5	Open Carrier
MC4510 ♦	4000	20000	0	4000	10	7.5	Open Carrier
MC4513 ♦	4000	20000	0	4000	13	7.5	Open Carrier
M52C ♦	2000	24000	100	5000	10	8	SMA
MY52 ♦	2000	24000	100	5000	10	8	Versapac
MY52C ♦	2000	24000	100	5000	10	8	SMA
MY51 ♦	2000	24000	1000	15000	10	8	Versapac
M51C ♦	2000	24000	1000	15000	10	8	SMA
MY51C ♦	2000	24000	1000	15000	10	8	SMA
MZ5010 ♦	2000	26000	1	15000	10	8.5	Versapac

Note: Part numbers are RoHS compliant. ♦ indicates non-RoHS compliant. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

Hybrid Mixers (continued)							
Part Number	Min Freq RF/LO (MHz)	Max Freq RF/LO (MHz)	Min Freq IF (MHz)	Max Freq IF (MHz)	LO Drive (dB)	Conversion Loss/Gain (dB)	Package
MZ5010C ♦	2000	26000	1	15000	10	8.5	SMA
M53C ♦	2000	26000	100	6000	10	8	SMA
MY50A ♦	2000	26000	1000	12000	10	8	Versapac
MY50AC ♦	2000	26000	1000	12000	10	8	SMA
MY50 ♦	2000	26000	1000	15000	10	8	Versapac
M50C ♦	2000	26000	1000	15000	10	8	SMA
MY50C ♦	2000	26000	1000	15000	10	8	SMA

Receivers/Down Converters							
Part Number	Min Freq (MHz)	Max Freq (MHz)	Conversion Gain (dB)	Noise Figure (dBm)	Image Rejection (dBm)	LO Input Power (dBm)	Package
XR1011-QH	45000	10500	13	1.8	20	5	QFN-24, 4 mm
XR1015-QH	10000	16000	12	2.5	20	5	QFN-24, 4 mm
XR1019-QH	27500	33400	13	2.5	20	4	QFN-24, 4 mm
XR1008-QB	37000	40000	9	3.5	18	2	SMT, 7 mm
MADC-011010	37400	40000	13	3.8	25	4	QFN-24, 4 mm
MADC-010736	40500	43500	12	3.5	20	2	SMD-13, 6 mm
MADC-011021	71000	86000	12	5	-20	-5	SM, 8 mm

Transceivers							
Part Number	Description	Op Freq (GHz)	Output Power (mW)	Op Current (mA)	IF Bandwidth	Package	
MACS-007801-0M1R10	Mono Transceiver	24.125 +/-25 MHz	8	175	10 Hz to 5 kHz	Die Cast Waveguide	
MACS-007802-0M1R10	Stereo Transceiver	24.125 +/-25 MHz	8	175	10 Hz to 5 kHz	Die Cast Waveguide	
MACS-007801-0M1RMO	Mono Transceiver	24.125 +/-25 MHz	5	85	10 Hz to 5 kHz	Die Cast Waveguide	
MACS-007802-0M1RSO	Stereo Transceiver	24.125 +/-25 MHz	5	85	10 Hz to 5 kHz	Die Cast Waveguide	
MACS-007800-0M1R00	Local Oscillator	24.125 +/-25 MHz	8	175	—	Die Cast Waveguide	

Up Converters							
Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dBm)	OIP3 (dBm)	Package	
MAUC-010506	Up Converter	17680	23620	14	35	PQFN-24, 4 mm	
MAUC-011003	Up Converter	27500	33400	12	32	PQFN-24, 4 mm	
XU1019-QH	Up Converter	37000	40000	7	27	PQFN-24, 4 mm	
MAMF-011142	Up Converter	71000	86000	30	31	SMT	

Mixers							
Part Number	Min Freq RF/LO (MHz)	Max Freq RF/LO (MHz)	Min Freq IF (MHz)	Max Freq IF (MHz)	Conversion Loss/Gain (dBm)	LO Drive (dBm)	Package
CGY2180UH	700	3700	0	1700	-7	15	DIE
CGY2181UH	1000	4500	0	2500	-7	—	DIE
CGY2183UH	100	6000	0	3000	11	-5	DIE
CGY2184UH	100	6000	0	3000	18	0	DIE
MAMX-011044-DIE	2500	9000	0	3500	7.5	18	Bare Die
MAMX-011044	2500	9000	0	3500	8.5	18	QFN-24, 4 mm
CGY2182UH	3000	10000	0	3000	-7	—	DIE
MAMX-011035	5500	19000	0	6000	6	15	AQFN-12, 3 mm
MAMX-011067	5000	20000	0	6000	6	15	PQFN-12, 3 mm
MAMX-011023	5000	25000	4000	2300	9	-2	TDFN-6, 1.5 x 1.2 mm
MAMX-011040	8000	26000	0	4000	8	14	AQFN-24, 4 mm
MAMX-011040-DIE	8000	26000	0	4000	8	—	Bare Die

Note: Part numbers are RoHS compliant. ♦ indicates non-RoHS compliant. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

Mixers (continued)							
Part Number	Min Freq RF/LO (MHz)	Max Freq RF/LO (MHz)	Min Freq IF (MHz)	Max Freq IF (MHz)	Conversion Loss/ Gain (dBm)	LO Drive (dBm)	Package
MAMX-011075	8000	26000	0	4000	8	—	AQFN-24, 4 mm
MAMX-011009	14000	32000	0	7000	-10	—	TDFN-6, 1.5 x 1.2 mm
MAMX-011021	5000	35000	0	4500	8	14	TDFN-6, 1.5 x 1.2 mm
MAMX-011071	8000	36000	0	10000	9.5	—	PQFN-12, 3 mm
MAMX-011066	5000	37000	0	4500	8	20	TDFN-6, 1.5 x 1.2 mm
XM1001-BD	12000	40000	0	4000	8	—	DIE
MAMX-011116	27000	42000	0	5000	9	13	PDFN-8, 2 mm
MAMX-011097	27000	42000	0	5000	9	23	PDFN-8, 2 mm
XM1003-BD	32000	42000	0	4000	12	—	DIE
MAMX-011036-DIE	8000	43000	0	10000	8	15	DIE
MAMX-011036	8000	43000	0	10000	8.5	—	AQFN-12, 3 mm
CGY2460UH	40500	43500	5000	6000	33	—	DIE
MAMX-011043	15000	45000	0	10000	9	15	QFN-24, 4 mm
MAMX-011043-DIE	15000	45000	0	10000	9	16	Bare Die
MAMX-011037-DIE	18000	46000	0	20000	6.5	—	DIE
MAMX-011054	18000	46000	0	20000	6.5	—	AQFN-12, 3 mm
MAMX-011074	18000	46000	0	20000	7	—	PQFN-12, 3 mm
XM1002-BD	34000	46000	0	4000	9	—	DIE
MAMX-011122	17000	53000	0	20000	8	—	QFN-12, 3 mm
MAMX-011088	17000	55000	0	20000	8	15	AQFN-12, 3 mm
MAMX-011088-DIE	17000	64000	0	20000	8	—	DIE, 1.3 x 1.0 mm
CGY2470UH	92000	96000	5100	6000	-3	—	DIE
CGY2471UH	92000	96000	5200	6000	-10	—	DIE

Note: Part numbers are RoHS compliant. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

FREQUENCY GENERATION

Leading-edge Solutions for Challenging Communications Needs

MACOM voltage controlled oscillators (VCOs) generate frequency in aerospace and defense, point-to-point microwave backhaul and other commercial communications applications. IC VCOs support a variety of applications operating between the 500 to 14400 MHz frequency range.

Featuring low phase noise, stable performance over temperature, low power consumption and highly linear tuning, MACOM's VCOs provide leading edge solutions for challenging communications needs.



VCOs

- > Low phase noise
- > Wide tuning range
- > Low power consumption
- > Bandwidths greater than 10%
- > RoHs compliant package

NLTL GaAs Comb Generators

- > Superior phase noise performance up to -18 dBc/Hz better than a SRD
- > Usable harmonics out to 50 GHz
- > Available in SMT or connectorized packages



Voltage Controlled Oscillators (VCOs)							
Part Number	Min Freq (MHz)	Max Freq (MHz)	Phase Noise at 10 kHz Offset (Vt = 5 V)(dBc/Hz)	Phase Noise at 100 kHz Offset (Vt = 5 V)(dBc/Hz)	P _{OUT} at Fo (dBm)	DC Current (mA)	Package
MAOC-011030	5458	6129	-93	-117	14	185	PQFN-32, 5 mm
MAOC-009259	5700	6400	-93	-117	12	190	PQFN-32, 5 mm
MAOC-009260	6100	7000	-92	-117	8.5	205	PQFN-32, 5 mm
MAOC-009261	7100	7900	-93	-116	10	180	PQFN-32, 5 mm
MAOC-009262	7400	8210	-92	-117	14	170	PQFN-32, 5 mm
MAOC-009263	7800	8700	-90	-115	10.5	180	PQFN-32, 5 mm
MAOC-010334	8400	9250	-88	-115	10	168	PQFN-32, 5 mm
MAOC-009264	8800	9800	-88	-115	9	185	PQFN-32, 5 mm
MAOC-009871	9200	10200	-86	-113	7	185	PQFN-32, 5 mm
MAOC-009265	9400	10800	-86	-113	8.5	175	PQFN-32, 5 mm
MAOC-009266	10200	11300	-87	-114	8.5	200	PQFN-32, 5 mm
MAOC-009872	11000	11800	-83	-112	7	165	PQFN-32, 5 mm
MAOC-009267	11200	12600	-82	-112	6	175	PQFN-32, 5 mm
MAOC-009269	11400	12800	-83	-110	5	180	PQFN-32, 5 mm
MAOC-009270	12200	13800	-78	-107	6.5	165	PQFN-32, 5 mm
MAOC-009268	12700	14200	-79	-108	9	165	PQFN-32, 5 mm
MAOC-011027	13400	14400	-79	-108	8	205	PQFN-32, 5 mm

NLTL GaAs Comb Generators						
Part Number	Power Min (dBm)	Power Max (dBm)	Output Harmonics 1	Output Harmonics 2	Output Harmonics 3	Package
MLPNC-7100S1-SMA800 S	18 @ 75 MHz	24 @ 250 MHz	-15 @ 1 GHz	-18 @ 2 GHz	-24 @ 4 GHz	SMA800
MLPNC-7100S1-SMT580	18 @ 75 MHz	24 @ 250 MHz	-15 @ 1 GHz	-18 @ 2 GHz	-24 @ 4 GHz	SMT580
MLPNC-7100-SMA850 S	20 @ 100 MHz	24 @ 400 MHz	-8 @ 4 GHz	-18 @ 12 GHz	-35 @ 20 GHz	SMA850
MLPNC-7102S1-SMA800 S	18 @ 300 MHz	24 @ 700 MHz	-10 @ 4 GHz	-15 @ 8 GHz	-22 @ 12 GHz	SMA800
MLPNC-7102S1-SMT580	18 @ 300 MHz	24 @ 700 MHz	-10 @ 4 GHz	-15 @ 8 GHz	-22 @ 12 GHz	SMT580
MLPNC-7102-SMA800 S	19 @ 300 MHz	24 @ 700 MHz	-8 @ 4 GHz	-16 @ 12 GHz	-20 @ 20 GHz	SMA800
MLPNC-7102-SMT680	19 @ 300 MHz	24 @ 700 MHz	-8 @ 4 GHz	-16 @ 12 GHz	-20 @ 20 GHz	SMT680
MLPNC-7103S1SMA800 S	18 @ 600 MHz	24 @ 1500 MHz	-10 @ 4 GHz	-8 @ 8 GHz	-20 @ 15 GHz	SMA800
MLPNC-7103S1SMT580	18 @ 600 MHz	24 @ 1500 MHz	-10 @ 4 GHz	-8 @ 8 GHz	-20 @ 15 GHz	SMT580
MLPNC-7103-SMA800 S	19 @ 600 MHz	24 @ 1500 MHz	-5 @ 6 GHz	-15 @ 18 GHz	-20 @ 30 GHz	SMA800
MLPNC-7103-SMT680	19 @ 600 MHz	24 @ 1500 MHz	-5 @ 6 GHz	-15 @ 18 GHz	-20 @ 30 GHz	SMT680

Low Noise Gain Block Amplifiers									
Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Noise Figure (dB)	OIP3 (dBm)	Bias Voltage (V)	Bias Current (mA)	Package
MAAM-011229-CQ3	Broadband Low Noise	50	4000	19	1.3	38	5	80	CQFN-12, 3 mm
MAAM-011252-CQ3	Broadband Low Noise	30	8000	19.5	1.4	34	5	65	CQFN-12, 3 mm

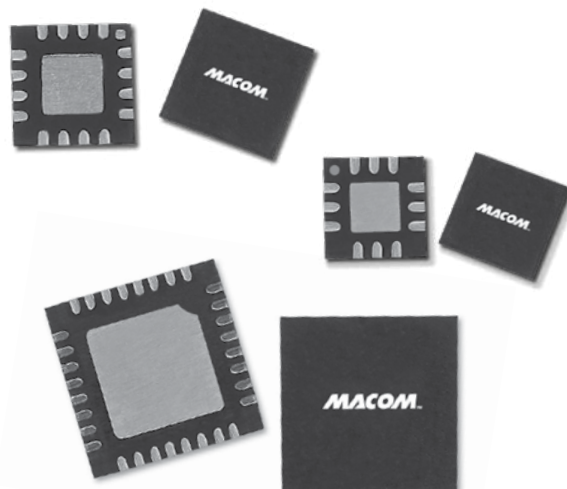
Note: Part numbers are RoHS compliant. **S** indicates these parts are also available with Space and Hi-Rel Screening & Qualification. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

INTEGRATED IC & MODULES

Integrating Size, Weight, Power and Cost for Next Generation Applications

MACOM's multifunctional modules are designed to provide customers with an affordable, highly integrated unit while delivering reliability and performance.

Applications such as radar and commercial 5G face size constraints and the need for higher frequency necessitates multifunction integration. From MACOM, one can expect an even higher level of integration of RF and microwave chipsets. In the data center and optical transport world, integrated products will provide data conversion and data transport solutions coupled with RF and microwave solutions to provide a very high level of integration that will ultimately drive optimal affordability and reliability.



Radar Core Chips

- > Designed for communication radar and weather applications
- > Ideal for high levels of integration on a single IC
- > Includes "common path" circuit which incorporates a 4-Bit digital attenuator, a 6-Bit digital phase shifter and a T/R SPDT switch
- > RoHS compliant

5G Switch LNA Modules

- > Multifunction MMIC includes a SPDT switch and LNA with by-pass mode for RDX path
- > Compact surface mount module
- > Ideally suited for base stations and for use on the front end of WLAN 802.11a modules where small size is critical

High Power Switch and Integrated Bias Module

- > High power broadband PIN SPDT switch with 5 V power management chip for 0.7 – 6 GHz TDD-LTE applications
- > Integrated bias controller utilizes a boost circuit
- > Requires only a single 5 V supply
- > Single Tx/Rx control signal is compatible with 1.8 V or 3.3 V logic



Radar Core Chips							
Part Number	Min Freq (GHz)	Max Freq (GHz)	Transmit Gain (dB)	Transmit P1dB (dBm)	Receive Gain (dB)	Receive Noise Figure (dBm)	Package
CGY2175AHV	4	6	—	20	—	—	QFN
CGY2175AUH	4	6	—	20	—	—	DIE
MAMF-011015	8	11	11	23	24	2	PQFN-44, 7 mm
CGY2170YHV	8	12	6	12	6	—	QFN
CGY2170YUH	8	12	6	11	6	—	DIE
CGY2179UH	11	13	12	3	—	2	DIE
CGY2179HV	11	13	12	3	—	1.9	QFN
CGY2330UH	13	15	—	—	—	—	DIE
MAMF-011099	24.25	29.5	21	28	24	3.6	AQFN, 6.5 mm
CGY2351UH	26	30	—	—	—	—	DIE
CGY2350UH	34	36	3	—	—	—	DIE

5G Switch LNA Modules									
Part Number	Min Freq (GHz)	Max Freq (GHz)	Rx Gain (dB)	Rx Noise Figure (dB)	Rx OIP3 (dBm)	Tx IPO.1 dB CW (dBm)	Bias Voltage (V)	Bias Current (mA)	Package
MAMF-011152	1.7	2.7	34	1.6	30	—	—	Tx: 100 mA @ 5 V (500 mW) Rx: 130 mA @ 5 V (650 mW)	Lead-Free 8 mm 16-Lead
MAMF-011144	2.3	3.8	38	1.25	—	—	5	—	QFN 6 mm 40-Lead
MAMF-011069	1.8	3.9	33 @ 2.6 GHz 34 @ 3.5 GHz	1.2 @ 2.6 GHz 1.5 @ 3.5 GHz	32	44	LNA 3 Switch 3/28	LNA: 105; Switch: 20 (per Channel)	PQFN-32, 5 mm
MAIA-011002	0.4	4	34 @ 2.7 GHz 32 @ 3.5 GHz	1.1 @ 2.7 GHz 1.3 @ 3.5 GHz	36	50	LNA 3 Switch 3/28	Tx: 100 (3 V), 10 (28 V) Rx: 240 (3 V), 0 (28 V)	HQFN-32, 5 mm
MAMF-011145	2.3	4.2	38	1.25	—	—	—	—	QFN 6 mm 40-Lead
MAMF-011150	1.5	4.2	37	1.1	—	—	—	—	HQFN Lead-Free 6 mm 40-Lead
MAIA-011004	0.4	5	34 @ 2.7 GHz 32 @ 3.5 GHz	1.1 @ 2.7 GHz 1.3 @ 3.5 GHz	36	50	LNA 3 Switch 3/28	Tx: 100 (3 V), 10 (28 V) Rx: 240 (3 V), 0 (28 V)	HQFN-32, 5 mm
MAMF-011153	1.5	5	34	1.6	30	—	—	Tx: 100 mA @ 5 V (500 mW) Rx: 130 mA @ 5 V (650 mW)	Lead-Free 8 mm 16-Lead
MAMF-011133	2.3	5	32 – 34 in HG mode 18 – 20 in LG mode	1.3 @ 3.5 GHz	34	43	5	Tx: 2 (per Channel) Rx: 95 HG; 45 LG	QFN-40, 6 mm
MAMF-011170	2	5	38.5	0.9	—	41	—	—	Lead-Free QFN 3 mm 16-Lead
MAMF-011119	1	6	35 @ 2.5 GHz 33.5 @ 4.5 GHz	1.2 @ 2.5 GHz 1.5 @ 4.5 GHz	31	40.5	5	Tx: 1.4 Rx: 78	QFN-20, 6 mm
MAMF-011126	1	6	35.2 @ 2.5 GHz 34 @ 3.75 GHz 33.5 @ 4.5 GHz	1.2 @ 2.5 GHz 1.3 @ 3.75 GHz 1.4 @ 4.5 GHz	30	40.5	5	78	QFN-20, 6 mm
MAMF-011139	1.4	6	34	1.2	—	51	—	—	5 mm 32-Lead
MAMF-011138	2	6	35	1.2	35	42	5	115	QFN-40, 6 mm
MAMF-011038	5	6	12	2.2	22	31	3	10	STQFN-12, 2 mm
MAMF-011139	1.4	6	34	1.2	35	51	—	—	32-Lead 5 mm
MAMF-011149	1	6	34	1.2	—	—	—	—	QFN 3 mm 16-Lead
MAMF-011156	1	6	35	0.9	—	40.6	—	—	QFN 3 mm 16-Lead
MAMF-011164	1	6	36	1.2	—	41	—	—	QFN Lead-Free 3 mm x 5 mm 24-Lead

Note: Part numbers are RoHS compliant. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

Power Management Controller

Product	Description	ADC Channels (#)	ADC Resolution (mV)	DAC Channels (#)	DAC Resolution (Bits)	GPIOs (#)	Output Current Capability (mA)	Package
MABC-11040	Power Management Bias Controller (PMIC)/ Sequencer Supply	4	12	4	12	4	+100mA/-60mA	6 x 6 mm PQFN48
MABC-11050	5G GaN FEM Power Management Controller (PMIC) Supply :-6V, +5V	4	12	4	12	4	+10mA/-6mA	6 x 6 mm PQFN48

5G Transmit/Receive Front End Modules

Product	Description	Min Frequency (GHz)	Max Frequency (GHz)	Transmit Gain (dB)	Transmit P1dB (dB)	RX Gain (dB)	RX Noise Figure (dB)
MAMF-011099	Ka-Band TR Front End Module 24.25 - 29.5 GHz	24.25	29.5	21	28	24	3.6

High Power Switch and Bias Module

Product	Description	Min Frequency (GHz)	Max Frequency (GHz)	Transmit Input P0.1dB CW (dBm)	Transmit Insertion Loss (dB)	Receive Insertion Loss (dB)	Receive Isolation (dB)
MAMF-011070	High Power Switch with Integrated Bias Control	0.03	6	50.5	0.3	0.4	43

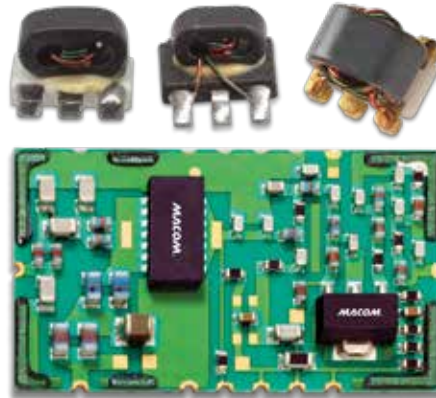
PASSIVES

A Variety of Solutions for A&D and Communications

MACOM offers a variety of passive solutions for a wide range of A&D, wireless and wireline communication applications. Passive components include transformers, capacitors, dividers/combiners, couplers and filters/diplexers.

MACOM KV CAPS

Silicon high voltage capacitors are high-density, high-working voltage silicon capacitors which employ a novel topology that essentially folds the parallel plates of the capacitors into three-dimensional structures, producing greater capacitance per unit area of die footprint than that of a simple parallel plate capacitor.



Bias Networks

MACOM offers 30 MHz to 67 GHz bias networks suitable for DC biasing of PIN diode control circuits.

- > Functions as RF to DC decoupling networks, as well as a DC return
- > Can also be used as bi-directional reactive couplers for Schottky detector circuits in multi-market applications

Couplers

- > Used extensively in a range of A&D, wireless and wireline communications applications. MACOM offers connectorized and surface mount devices with a broad range of coupling values

Hybrid Couplers

- > Products available in subsets of the 2 – 3000 MHz frequency range
- > Available as TO-Cans, flatpacks, surface mount and connectorized

Directional Couplers

- > Coupling values of 6 dB to 30 dB
- > Products available in subsets of the 2 MHz to 18 GHz frequency range
- > 75 Ω products available for CATV, DTV and DBS applications

Power Dividers/Combiners

Used in a range of A&D, wireless and wireline communications applications.

- > 50 Ω and 75 Ω devices
- > Products available in subsets of 400 kHz to 26 GHz frequency range
- > 2, 3, 4, 5, 6 and 8 channel versions available

Transformers/Baluns

MACOM offers many standard transformers used for a variety of wireless, wireline and A&D communications applications.

- > Standard impedance ratios up to 4:1
- > Balanced/unbalanced versions
- > 50 Ω and 75 Ω nominal impedance devices available
- > Surface mount, flatpack and connectorized packages

Filters/Diplexers

MACOM offers a variety of highpass, lowpass, and diplex filter components and assemblies used in common wireless communications standards and CATV, DBS and DTV applications.

- > 50 Ω and 75 Ω diplexers
- > Multi-chip and MMIC products
- > Low cost surface mount packaging

Capacitors

- > Suitable for DC blocking and RF bias networks in a variety of control and filter circuits
- > Capacitance-temperature coefficient provides <200 ppm/ $^{\circ}$ C
- > Insertion loss <0.1 dB at 15 GHz
- > Ideal for chip and wire/ribbon microwave high performance circuits



MACOM KV CAPS. 50 V

Product	Capacitance Value (pF)	Capacitance Tolerance	Working Voltage (V)	Die size (mil ²)	Package Type	Package
MKVC-050100-1453	100	+/-5	50	15	Waffle & Gel	ODS-1453
MKVC-0547R0-1453	47	+/-5	50	15	Waffle & Gel	ODS-1453
MKVC-050100-1454	100	+/-5	50	15X45	Waffle & Gell	ODS-1454

MACOM KV CAPS. 200 V

Product	Capacitance Value (pF)	Capacitance Tolerance	Working Voltage (V)	Die Size (mil ²)	Package Type	Package
MKVC-2A02R7	2.7	+/-1	200	15	Waffle & Gel	ODS-1438
MKVC-2A03R0	3	+/-1	200	15	Waffle & Gel	ODS-1438
MKVC-2A03R3	3.3	+/-1	200	15	Waffle & Gel	ODS-1438
MKVC-2A03R6	3.6	+/-1	200	15	Waffle & Gel	ODS-1438
MKVC-2A03R9	3.9	+/-1	200	15	Waffle & Gel	ODS-1438
MKVC-2A04R3	4.3	+/-1	200	15	Waffle & Gel	ODS-1438
MKVC-2A04R7	4.7	+/-1	200	15	Waffle & Gel	ODS-1438
MKVC-2A05R1	5.1	+/-1	200	15	Waffle & Gel	ODS-1438
MKVC-2A05R6	5.6	+/-1	200	15	Waffle & Gel	ODS-1438
MKVC-2A06R2	6.2	+/-1	200	15	Waffle & Gel	ODS-1438
MKVC-2A06R8	6.8	+/-1	200	15	Waffle & Gel	ODS-1438
MKVC-2A07R5	7.5	+/-1	200	15	Waffle & Gel	ODS-1438
MKVC-2A08R2	8.2	+/-1	200	15	Waffle & Gel	ODS-1438
MKVC-2A09R1	9.1	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A10R0	10	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A11R0	11	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A12R0	12	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A13R0	13	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A15R0	15	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A16R0	16	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A18R0	18	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A20R0	20	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A22R0	22	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A24R0	24	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A27R0	27	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A30R0	30	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A33R0	33	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A36R0	36	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A39R0	39	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A43R0	43	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A47R0	47	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A51R0	51	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A56R0	56	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A62R0	62	+/-1	200	32	Waffle & Gel	ODS-1440
MKVC-2A68R0	68	+/-1	200	32	Waffle & Gel	ODS-1440
MKVC-2A75R0	75	+/-1	200	32	Waffle & Gel	ODS-1440
MKVC-2A82R0	82	+/-1	200	32	Waffle & Gel	ODS-1440
MKVC-2A91R0	91	+/-1	200	32	Waffle & Gel	ODS-1440
MKVC-2A0100	100	+/-1	200	32	Waffle & Gel	ODS-1440
MKVC-2A0110	110	+/-1	200	32	Waffle & Gel	ODS-1440
MKVC-2A0120	120	+/-1	200	32	Waffle & Gel	ODS-1440

Note: Part numbers are RoHS compliant.
 Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box.
 All specifications are subject to change.

MACOM KV CAPS. 200 V (continued)

Product	Capacitance Value (pF)	Capacitance Tolerance	Working Voltage (V)	Die Size (mil ²)	Package Type	Package
MKVC-2A0130	130	+/-1	200	32	Waffle & Gel	ODS-1440
MKVC-2A0150	150	+/-1	200	32	Waffle & Gel	ODS-1440
MKVC-2A0160	160	+/-1	200	32	Waffle & Gel	ODS-1440
MKVC-2A0180	180	+/-1	200	32	Waffle & Gel	ODS-1440
MKVC-2A0200	200	+/-1	200	32	Waffle & Gel	ODS-1440
MKVC-2A0220	220	+/-1	200	32	Waffle & Gel	ODS-1440
MKVC-2A0240	240	+/-1	200	32	Waffle & Gel	ODS-1440
MKVC-2A0270	270	+/-1	200	40	Waffle & Gel	ODS-1441
MKVC-2A0300	300	+/-1	200	40	Waffle & Gel	ODS-1441
MKVC-2A0330	330	+/-1	200	40	Waffle & Gel	ODS-1441
MKVC-2A0360	360	+/-1	200	40	Waffle & Gel	ODS-1441
MKVC-2A0390	390	+/-1	200	40	Waffle & Gel	ODS-1441
MKVC-2A0430	430	+/-1	200	40	Waffle & Gel	ODS-1441
MKVC-2A0470	470	+/-1	200	40	Waffle & Gel	ODS-1441
MKVC-2A0510	510	+/-1	200	50	Waffle & Gel	ODS-1442
MKVC-2A0560	560	+/-1	200	50	Waffle & Gel	ODS-1442
MKVC-2A0620	620	+/-1	200	50	Waffle & Gel	ODS-1442
MKVC-2A0680	680	+/-1	200	50	Waffle & Gel	ODS-1442
MKVC-2A0750	750	+/-1	200	50	Waffle & Gel	ODS-1442
MKVC-2A0820	820	+/-1	200	50	Waffle & Gel	ODS-1442
MKVC-2A0910	910	+/-1	200	50	Waffle & Gel	ODS-1442
MKVC-2A1000	1000	+/-1	200	64	Waffle & Gel	ODS-1443
MKVC-2A1100	1100	+/-1	200	64	Waffle & Gel	ODS-1443
MKVC-2A1200	1200	+/-1	200	64	Waffle & Gel	ODS-1443
MKVC-2A1300	1300	+/-1	200	64	Waffle & Gel	ODS-1443
MKVC-2A1500	1500	+/-1	200	64	Waffle & Gel	ODS-1443
MKVC-2A1600	1600	+/-1	200	64	Waffle & Gel	ODS-1443
MKVC-2A1800	1800	+/-1	200	100	Waffle & Gel	ODS-1444
MKVC-2A2000	2000	+/-1	200	100	Waffle & Gel	ODS-1444
MKVC-2A2200	2200	+/-1	200	100	Waffle & Gel	ODS-1444
MKVC-2A2400	2400	+/-1	200	100	Waffle & Gel	ODS-1444
MKVC-2A2700	2700	+/-1	200	100	Waffle & Gel	ODS-1444

MACOM KV CAPS. 500 V

Product	Capacitance Value (pF)	Capacitance Tolerance	Working Voltage (V)	Die Size (mil ²)	Package Type	Package
MKVC-5A05R1	5.1	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A05R6	5.6	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A06R2	6.2	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A06R8	6.8	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A07R5	7.5	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A08R2	8.2	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A09R1	9.1	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A10R0	10	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A11R0	11	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A12R0	12	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A13R0	13	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A15R0	15	+/-1	500	32	Waffle & Gel	ODS-1445

Note: Part numbers are RoHS compliant.
 Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box.
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MACOM KV CAPS. 500 V (continued)

Product	Capacitance Value (pF)	Capacitance Tolerance	Working Voltage (V)	Die Size (mil ²)	Package Type	Package
MKVC-5A16R0	16	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A18R0	18	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A20R0	20	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A22R0	22	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A24R0	24	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A27R0	27	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A30R0	30	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A33R0	30	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A36R0	36	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A39R0	39	+/-1	500	40	Waffle & Gel	ODS-1446
MKVC-5A43R0	43	+/-1	500	40	Waffle & Gel	ODS-1446
MKVC-5A47R0	47	+/-1	500	40	Waffle & Gel	ODS-1446
MKVC-5A51R0	51	+/-1	500	40	Waffle & Gel	ODS-1446
MKVC-5A56R0	56	+/-1	500	40	Waffle & Gel	ODS-1446
MKVC-5A62R0	62	+/-1	500	40	Waffle & Gel	ODS-1446
MKVC-5A68R0	68	+/-1	500	40	Waffle & Gel	ODS-1446
MKVC-5A75R0	75	+/-1	500	40	Waffle & Gel	ODS-1446
MKVC-5A82R0	82	+/-1	500	40	Waffle & Gel	ODS-1446
MKVC-5A91R0	91	+/-1	500	40	Waffle & Gel	ODS-1446

MACOM KV CAPS. 1000 V

Product	Capacitance Tolerance	Voltage (V)	Value (pF)	Package Type	Package
MKVC-1A03R6	+/-5%	1000	3.6	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A03R9	+/-5%	1000	3.9	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A04R7	+/-5%	1000	4.7	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A05R6	+/-5%	1000	5.6	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A06R8	+/-5%	1000	6.8	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A07R5	+/-5%	1000	7.5	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A08R2	+/-5%	1000	8.2	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A10R0	+/-5%	1000	10	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A11R0	+/-5%	1000	11	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A13R0	+/-5%	1000	13	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A15R0	+/-5%	1000	15	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A18R0	+/-5%	1000	18	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A20R0	+/-5%	1000	20	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A24R0	+/-5%	1000	24	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A27R0	+/-5%	1000	27	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A33R0	+/-5%	1000	33	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A36R0	+/-5%	1000	36	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A39R0	+/-5%	1000	39	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A47R0	+/-5%	1000	47	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A51R0	+/-5%	1000	51	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A62R0	+/-5%	1000	62	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A75R0	+/-5%	1000	75	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A0100	+/-5%	1000	100	Tape & Reel	3.4 x 2.5 x 0.9 mm

Note: Part numbers are RoHS compliant.
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Bias Networks					
Part Number	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Isolation Loss (dB)	Package
MABT-011000-14230G	2000	18000	0.2	35	DIE
MABT-011000-14230P	2000	18000	0.2	35	DIE
MABT-011000-14230W	2000	18000	0.2	35	DIE
MABT-011000-14235P	2000	18000	0.2	35	DIE
MA4BN1840-1	18000	40000	0.2	35	DIE
MA4BN1840-2	18000	40000	0.2	35	DIE
MABT-011001	30	45000	1	—	4mm SMT
MABT-011011	30	67000	1.3	—	4mm SMT

Couplers									
Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Coupling, Nom (dB)	Isolation (dB)	Input Power (dBm)	IL (dB)	Impedance (Ω)	Package
JHS-113-PIN ♦	Quad Hybrid	7	14	3	28	36	—	50	SF-1
MACP-011088	17 dB Bi-Directional Coupler 2 - 18 GHz	2	18	17	18	34.5	0.8	75	4 mm PQFN
JHS-114-PIN ♦	Quad Hybrid	20	40	3	28	37	—	50	SF-1
JH-133-PIN ♦	Quad Hybrid	20	40	3	28	37	—	50	TO-8-2
JH-114-PIN ♦	Quad Hybrid	20	40	3	30	37	—	50	FP-2
JH-115-PIN ♦	Quad Hybrid	40	80	3	30	30	—	50	FP-2
JHS-115-PIN ♦	Quad Hybrid	40	80	3	30	30	—	50	SF-1
MACP-010507-CH0160	Coupler, 17 dB	5	120	17	38	27	0.5	75	Ceramic
JH-119-PIN ♦	Quad Hybrid	80	160	3	33	36	—	50	FP-2
JHS-119-PIN ♦	Quad Hybrid	80	160	3	33	36	—	50	SF-1
HH-106-PIN ♦	Hybrid Junction	2	200	3	30	30	—	50	FP-2
HH-109-PIN ♦	Hybrid Junction	5	200	3	40	27	—	50	FP-2
HHS-109-PIN	Hybrid Junction	5	200	3	40	27	—	50	SF-1
JH-121-PIN ♦	Quad Hybrid	100	200	3	25	36	—	50	FP-2
JHS-121-PIN	Quad Hybrid	100	200	3	25	36	—	50	SF-1
MACP-011047	Coupler, 14 dB	5	300	14	30	27	0.35	75	FR4
JH-136-PIN ♦	Quad Hybrid	175	350	3	28	36	—	50	FP-2
CHS-137-PIN ♦	Bi-Directional	1	400	20	40	35	—	50	SF-1
JHS-142-PIN ♦	Quad Hybrid	200	400	3	30	37	—	50	SF-1
MACP-007984-MDC201	Coupler, 20 dB	350	450	20	38	24	0.3	50	Ceramic
HH-110-PIN ♦	Hybrid Junction	10	500	3	37	30	—	50	FP-2
HHS-110-PIN	Hybrid Junction	10	500	3	40	30	—	50	SF-1
CH-134-PIN ♦	Bi-Directional	10	500	11	31	30	—	50	FP-2
CHS-134-PIN ♦	Bi-Directional	10	500	11	31	30	—	50	SF-1
JHS-139-PIN ♦	Quad Hybrid	250	500	3	30	36	—	50	SF-1
JH-139-PIN ♦	Quad Hybrid	250	500	3	30	36	—	50	FP-2
MACPCC0002	Bi-Directional 17 dB Coupler	824	960	17	32	33	—	50	SOIC-8
MACP-010389-CE0880	Coupler, 14 dB	4	862	14	38	24	1	75	FR4
MACP-010382-CFOA40	Coupler, 15 dB	4	862	15	33	24	0.7	75	FR4
MACP-010383-CHOA40	Coupler, 17 dB	4	862	17	35	24	0.6	75	FR4
MACP-009821-CG0650	Coupler, 16 dB	5	862	16	33	24	1.1	75	FR4
ELDC-10	Coupler 10 dB, 75 Ω	5	870	10	28	24	—	50	FR4
MACP-009598-C80160	Coupler, 9 dB	5	900	9	26	24	1.9	75	Ceramic
CH-132-BNC ♦	Bi-Directional	1	1000	20	40	—	—	50	C-8-132
MACP-009404-C80370	Coupler, 8 dB	5	1000	8	25	24	1.5	75	FR4

Note: Part numbers are RoHS compliant. ♦ indicates non-RoHS compliant. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

Couplers (continued)									
Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Coupling, Nom (dB)	Isolation (dB)	Input Power (dBm)	IL (dB)	Impedance (Ω)	Package
MACP-009596-CA0160	Coupler, 10 dB	5	1000	10	30	24	1.3	75	Ceramic
MACP-007490-CA0010	Coupler, 10.5 dB	5	1000	11	30	24	1.3	75	FR4
MACP-009736-CD0160	Coupler, 13 dB	5	1000	13	28	24	1.3	75	Ceramic
MACP-008311-CE0370	Coupler, 14 dB	5	1000	14	39	24	1	75	FR4
MACP-007486-CH0010	Coupler, 17 dB	5	1000	17	38	24	0.6	75	FR4
MACP-009943-CH07F0	Coupler, 17 dB	5	1000	17	37	24	0.6	75	FR4
MACP-008764-CH0370	Coupler, 17 dB	5	1000	17	39	24	1.3	75	FR4
MACP-009944-CK07F0	Coupler, 20 dB	5	1000	20	30	24	0.5	75	FR4
MACP-008125-CK07F0	Coupler, 20 dB	5	1000	20	34	24	0.5	75	FR4
CH-140-PIN ♦	Directional	5	1000	20	40	35	—	50	FP-2
2031-6330-00 ♦	Stripline 180° Hybrid	500	1000	3	25	45	—	50	Conn
MACP-010718-CG09E0	Coupler, 17 dB	40	1002	17	35	24	0.6	75	Ceramic
MACP-009730-C60370	Coupler, 6 dB	5	1200	6	16	24	2.5	75	FR4
MACP-010446-C80370	Coupler, 8 dB	5	1200	8	21	24	1.9	75	FR4
MACP-009011-C80370	Coupler, 8 dB	5	1200	8	25	24	1.8	75	FR4
MACP-010250-C808A0	Coupler, 8 dB	5	1200	9	24	28	1.6	75	SOT
MACP-010414-CA0370	Coupler, 10 dB	5	1200	10	21	24	1.3	75	FR4
MACP-007741-CG09E0	Coupler, 17 dB	5	1200	17	32	24	0.8	75	Ceramic
MACP-007727-CI07B0	Coupler, 18 dB	5	1200	18	26	24	1	75	FR4
MACP-010249-CI08A0	Coupler, 18 dB	5	1200	18	32	24	0.6	75	SOT
MACP-009945-CH0670	Coupler, 18 dB	5	1200	18	33	24	1.3	75	FR4
MACP-011109	Coupler, 16 dB	5	1200	15.5	28	33	0.5	75	FR4
MACP-011090	Coupler, 16 dB 5 - 1200 MHz	5	1200	16	32	30	1.6	75	FR4
MACP-011095	Coupler, 13 dB 5 - 1218 MHz	5	1218	13	39	33	0.8	75	FR4
MACP-011029	Coupler, 17.5 dB	5	1218	17.5	30	27	0.6	75	FR4
MACP-011032	Coupler, 7 dB	5	1225	7	17	27	1.8	75	FR4
MACP-011051	Coupler, 7.5 dB	5	1225	7.5	42	33	2	75	FR4
MACP-011033	Coupler, 8 dB	5	1225	8	18	27	1.5	75	FR4
MACP-011050	Coupler, 9 dB	5	1225	9	42	33	1.6	75	FR4
MACP-011054	Coupler, 9 dB	5	1225	9	42	33	1.6	75	FR4
MACP-011037	Coupler, 10 dB	5	1225	10	24	27	1.5	75	FR4
MACP-011010	Coupler, 12 dB	5	1225	12	20	24	1.6	75	FR4
MACP-011035	Coupler, 12 dB	5	1225	12	29	27	1.5	75	FR4
MACP-011062	Coupler, 12.5 dB	5	1225	12.5	42	33	0.95	75	FR4
MACP-011055	Coupler, 15.2 dB	5	1225	15.2	37	32	0.9	75	FR4
MACP-011038	Coupler, 16 dB	5	1225	16	33	32	0.9	75	FR4
MACP-011036	Coupler, 16 dB	5	1225	16	34	27	1	75	FR4
MACP-011056	Coupler, 16 dB	5	1225	16	43	33	0.7	75	FR4
MACP-011014	Coupler, 17.5 dB	5	1225	17	36	27	0.65	75	FR4
MACP-011045	Coupler, 23 dB	5	1225	23	39	40	0.6	50	FR4
MACP-011058	Coupler, 10 dB	5	1250	10	42	33	1.5	75	FR4
MACP-011059	Coupler, 12 dB	5	1250	12	32	33	0.95	75	FR4
MACP-011015	Coupler, 8 dB	40	1250	8	27	24	1.8	75	FR4
MACP-011034	Coupler, 10 dB	5	1255	7	30	27	1.35	75	FR4
MACP-011013	Coupler, 20 dB	5	1500	20	27	27	0.9	75	FR4
MACP-011117	Coupler, 8 dB	5	1800	8	26	33	1.7	75	Ceramic
MACP-011079	Coupler, 8 dB	5	1800	8	28	33	1.8	75	FR4

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Couplers (continued)									
Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Coupling, Nom (dB)	Isolation (dB)	Input Power (dBm)	IL (dB)	Impedance (Ω)	Package
MACP-011102	Coupler, 9 dB	5	1800	9	30	33	1.2	75	FR4
MACP-011102	Coupler, 9 dB	5	1800	9	30	33	1.2	75	FR4
MACP-011099	Coupler, 14.5 dB	5	1800	14.5	35	33	1	75	FR4
MACP-011081	Coupler, 14.5 dB 5 - 1800 MHz	5	1800	14.5	35	33	1	75	FR4
MACP-011118	Coupler, 17.3 dB 5 - 1800 MHz	5	1800	17.3	34	33	1.1	75	FR4
MACP-011108	Coupler, 17.3 dB	5	1800	17.3		33	1.1	75	FR4
MACP-011108	Coupler, 17.3 dB	5	1800	17.3		33	1.1	75	FR4
H-9-N	Hybrid Junction	2	2000	4	40	44	—	50	Conn
MACP-011068	Coupler, 17.3 dB	5	2000	17.3	26	33	1.1	75	FR4
MACP-011098	Coupler 17.3 dB 5 MHz - 2 GHz	5	2000	17.3	23	33	1.4	75	FR4
MACP-011068	Coupler, 17.3 dB 5 - 2000 MHz	5	2000	17.3	26	33	1.1	75	FR4
HH-128-PIN ♦	Hybrid Junction	20	2000	3	35	27	—	50	FP-3
2025-6002-10 ♦	Stripline Directional	500	2000	10	28	47	—	50	Conn
2025-6004-20 ♦	Stripline Directional	500	2000	20	42	47	—	50	Conn
2035-6364-00 ♦	Air Dielectric 90° Hybrid	1000	2000	3	20	47	—	50	Conn
2032-6344-00 ♦	Stripline 90° Hybrid	1000	2000	3	22	45	—	50	Conn
2031-6331-00 ♦	Stripline 180° Hybrid	1000	2000	3	25	45	—	50	Conn
JH-141-PIN ♦	High-Freq Quad Hybrid	1000	2000	3	27	44	—	50	FP-2
2020-6605-10 ♦	Directional Mini Octave	1000	2000	10	35	47	—	50	Conn
2020-6606-20 ♦	Directional Mini Octave	1000	2000	20	45	47	—	50	Conn
2020-6607-30 ♦	Directional Mini Octave	1000	2000	30	55	47	—	50	Conn
MACPCC0001	Bi-Directional 17 dB Coupler	1700	2000	17	34	33	—	50	SOIC-8
MACP-010381-C70880	Coupler, 7 dB	5	2400	7	21	24	2.5	75	FR4
MACP-011086	Coupler, 14 dB	5	3000	14	25	3	—	50	SMT
MACP-011086	14 dB Coupler, 5 - 3000 MHz	5	3000	14	25	34.5	2.7	75	FR4
H-183-4-N ♦	Hybrid Junction	30	3000	5	20	37	—	50	Conn
MACP-011031	Coupler, 14 dB	5	3250	14	36	27	1.8	75	FR4
MACP-011074	14 dB Couplers	5	3250	14	36	30	1	75	SMT
2032-6345-00 ♦	Stripline 90° Hybrid	2000	4000	3	22	45	—	50	Conn
2020-6609-10 ♦	Directional Mini Octave	2000	4000	10	32	47	—	50	Conn
MACP-011097	90° Hybrid Coupler	2000	5000	30	30	30	0.75	50	FR4
2020-6614-20 ♦	Directional Mini Octave	2600	5200	20	40	47	—	50	Conn
2020-6615-30 ♦	Directional Mini Octave	2600	5200	30	50	47	—	50	Conn
2031-6334-00 ♦	Stripline 180° Hybrid	4000	8000	3	20	45	—	50	Conn
2032-6347-00 ♦	Stripline 90° Hybrid	4000	8000	3	20	45	—	50	Conn
2020-6616-06 ♦	Directional Mini Octave	4000	8000	6	28	47	—	50	Conn
2020-6617-10 ♦	Directional Mini Octave	4000	8000	10	30	47	—	50	Conn
2020-6618-20 ♦	Directional Mini Octave	4000	8000	20	40	47	—	50	Conn
2020-6619-30 ♦	Directional Mini Octave	4000	8000	30	50	47	—	50	Conn
2025-6009-06 ♦	Stripline Directional	2000	8400	6	24	47	—	50	Conn
2025-6010-10 ♦	Stripline Directional	2000	8400	10	28	47	—	50	Conn
2025-6012-20 ♦	Stripline Directional	2000	8400	20	40	47	—	50	Conn
2026-6001-10 ♦	Stripline Directional	1000	12400	10	28	47	—	50	Conn
2025-6014-10 ♦	Stripline Directional	4000	12400	10	25	47	—	50	Conn

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Couplers (continued)									
Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Coupling, Nom (dB)	Isolation (dB)	Input Power (dBm)	IL (dB)	Impedance (Ω)	Package
2025-6016-20 ♦	Stripline Directional	4000	12400	20	35	47	—	50	Conn
2020-4018-20 ♦	Directional Mini Octave	7000	12400	20	38	—	—	50	Conn
2020-6622-20 ♦	Directional Mini Octave	7000	12400	20	38	47	—	50	Conn
2020-6623-30 ♦	Directional Mini Octave	7000	12400	30	47	47	—	50	Conn
2031-6335-00 ♦	Stripline 180° Hybrid	8000	12400	3	17	45	—	50	Conn
2026-6010-10 ♦	Stripline Directional	500	18000	10	25	47	—	50	Conn
2026-6007-10 ♦	Stripline Directional	1000	18000	10	25	47	—	50	Conn
2026-6009-20 ♦	Stripline Directional	1000	18000	20	37	47	—	50	Conn
2026-6004-10 ♦	Stripline Directional	2000	18000	10	25	47	—	50	Conn
2032-6371-00 ♦	Stripline 90° Hybrid	2000	18000	3	20	47	—	50	Conn
2025-6017-06 ♦	Stripline Directional	6000	18000	6	21	47	—	50	Conn
2025-6018-10 ♦	Stripline Directional	6000	18000	10	26	47	—	50	Conn
2025-6019-16 ♦	Stripline Directional	6000	18000	16	32	47	—	50	Conn
2032-6374-00 ♦	Stripline 90° Hybrid	6500	18000	3	18	45	—	50	Conn
2031-6339-00 ♦	Stripline 180° Hybrid	7000	18000	3	14	43	—	50	Conn
2020-6624-06 ♦	Directional Mini Octave	7000	18000	6	21	47	—	50	Conn
2020-6626-20 ♦	Directional Mini Octave	7000	18000	20	35	47	—	50	Conn
2020-6627-30 ♦	Directional Mini Octave	7000	18000	30	45	47	—	50	Conn
2020-6628-06 ♦	Directional Mini Octave	12400	18000	6	21	47	—	50	Conn

Power Dividers/Combiners									
Part Number	Min Freq (MHz)	Max Freq (MHz)	Channels (#)	Amplitude Balance (dB)	Phase Bal (°)	Isolation (dB)	Max Input Power (dBm)	Impedance (Ω)	Package
MTH-50-PIN ♦	1	100	2	0.1	1	30	30	50	TO-5-1
M3H-50-PIN ♦	1	100	3	0.2	1	30	30	50	TO-5
MAPD-008762-ES0001	120	160	2	1	1	20	30	50	FR4
MAPD-009850-HW1268	112	168	2	1	1	18	30	50	FR4
THV-50-N ♦	2	200	2	0.2	1	30	33	50	Conn
THV-50-BNC ♦	2	200	2	0.2	1	30	33	50	Conn
THV-50-TNC ♦	2	200	2	0.2	1	30	33	50	Conn
MAPD-008109-C30040	5	200	3	0.1	1	30	30	75	FR4
THV-50-SMA ♦	2	200	33	0.2	1	30	33	50	Conn
DS-310-PIN ♦	0	300	4	0.2	4	25	30	50	FP-5
DS-117-PIN ♦	1	300	3	0.3	4	20	30	50	FP-3
DS-308-BNC ♦	1	300	3	0.3	4	20	30	50	C-8
MAPD-011026	5	300	3	0.1	0.6	22	27	75	FR4
M3V-50-PIN ♦	50	300	3	0.2	2	25	30	50	TO-5
DS-113-PIN ♦	0	400	2	0.2	1	25	30	50	FP-2
DSS-113-PIN ♦	0	400	2	0.2	1	25	30	50	SF-1
TU-50-N ♦	20	400	2	0.2	1	35	33	50	Conn
TU-50-SMA ♦	20	400	2	0.2	1	35	33	50	Conn
TU-50-BNC ♦	20	400	33	0.2	1	35	33	50	Conn
MTV-50-PIN ♦	40	400	2	0.2	2	30	30	50	TO-5-1
DS-309-BNC ♦	2	500	8	0.2	2	30	33	50	C-18
DS-318-PIN ♦	5	500	2	0.2	2	18	30	50	RH-1
MAPD-007249-ESML21	5	500	2	0.2	1	25	30	50	Ceramic
DS-109-PIN ♦	10	500	2	0.2	1	25	30	50	FP-2
DS-319-PIN ♦	10	500	2	0.2	1	25	30	50	TO-8-2

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Power Dividers/Combiners (continued)									
Part Number	Min Freq (MHz)	Max Freq (MHz)	Channels (#)	Amplitude Balance (dB)	Phase Bal (°)	Isolation (dB)	Max Input Power (dBm)	Impedance (Ω)	Package
DSS-333-PIN ♦	10	500	2	0.2	2	25	30	50	SF-1
DS-312-BNC ♦	10	500	4	0.2	2	25	30	50	C-14
DS-112-PIN ♦	10	500	4	0.2	5	25	30	50	FP-5
DS-328-PIN ♦	3	700	3	0.3	3	20	30	50	TO-8-2
MAPD-011078	5	700	30	3	0.3	2	22	75	SMT
MAPD-008072-ESSM26	5	900	2	0.1	0.1	20	30	50	Ceramic
MAPDCC0001	824	960	2	0.1	0.5	15	30	50	SOIC-8
MAPDCC0011	824	960	2	0.1	3	13	30	50	SOT-26
MAPDCC0005	824	960	3	0.6	2	15	30	50	SOIC-8
MAPDCC0009	824	960	4	0.3	3	20	30	50	SOIC-8
MAPDCC0017	824	960	6	0.2	6	20	30	50	SOW-16
MAPDCC0021	824	960	8	0.4	5	20	30	50	SSOP-20
MAPD-007246-ES4700	2	1000	4	0.2	5	20	30	50	FR4
MAPD-008108-C202CO	5	1000	2	0.1	0.8	18	30	75	Ceramic
MAPD-009278-5T1000	5	1000	2	0.2	1	16	24	50	FR4
MAPDCT0030	5	1000	2	0.2	1	20	30	75	SOT
DS-327-PIN ♦	5	1000	2	0.2	3	20	30	50	FP-2
MAPD-010038-C209CO	5	1000	2	0.3	0.3	30	30	75	FR4
MAPD-009918-C209CO	5	1000	2	0.3	0.9	26	30	75	FR4
MAPDCT0029	5	1000	2	0.3	1	14	30	75	FR4
MAPDCT0027	5	1000	2	0.3	1	15	30	75	FR4
DSS-327-PIN ♦	5	1000	2	0.3	3	16	30	50	SF-1
MAPDCT0033	5	1000	2	0.4	0	22	30	75	FR4
MAPD-010362-C20FA0	5	1000	2	0.4	3	19	24	75	FR4
H-81-4-N ♦	5	1000	2	0.5	2.5	25	33	50	Conn
H-81-4-SMA ♦	5	1000	2	0.5	2.5	25	33	50	Conn
ELPD-20-1	5	1000	2	0.5	4	22	30	50	SM-139
MAPD-008812-0003HW	5	1000	3	0.2	2	20	24	50	FR4
MAPDCT0028	5	1000	4	0.3	0.5	20	30	75	FR4
T-1000-N ♦	10	1000	2	0.1	1	25	33	50	Conn
T-1000-BNC ♦	10	1000	2	0.1	1	25	33	50	Conn
T-1000-SMA ♦	10	1000	2	0.1	1	25	33	50	Conn
T-1000-TNC ♦	10	1000	2	0.1	1	25	33	50	Conn
DS-323-PIN ♦	25	1000	3	0.4	4	24	30	50	FP-3
DS-324-PIN ♦	25	1000	4	0.3	6	20	30	50	FP-5
MAPD-011020	5	1200	2	0	0.6	19	30	75	FR4
MAPD-010047-C2W24M	5	1200	2	0.2	1.3	—	30	75	FR4
MAPD-010281-C2W024	5	1200	2	0.2	1.3	—	30	75	FR4
MAPDCT0024	5	1200	2	0.3	2.1	—	14	75	FR4
MAPDCT0032	5	1200	3	0.3	3	20	24	75	FR4
MAPD-009492-C2W180	5	1200	2	1.3	1.3	—	17	75	FR4
MAPDCT0017	46	1200	3	0.3	3	20	24	75	SM-4
MAPD-010274-C209CO	5	1218	2	0.2	0.6	16	30	75	FR4
MAPD-011053	5	1218	2	0.3	3	41	33	75	FR4
MAPD-011050	5	1218	2	0.4	1.5	27	27	75	FR4
MAPD-011039	5	1218	2	0.6	2.5	26	30	75	FR4
MAPD-011040	5	1225	2	0.3	5	17	30	75	FR4

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Power Dividers/Combiners (continued)									
Part Number	Min Freq (MHz)	Max Freq (MHz)	Channels (#)	Amplitude Balance (dB)	Phase Bal (°)	Isolation (dB)	Max Input Power (dBm)	Impedance (Ω)	Package
MAPD-011052	5	1225	2	0.3	0	27	27	75	FR4
MAPD-011035	5	1225	2	0.5	5	17	30	75	FR4
MAPD-011051	5	1225	2	0.5	5	27	27	75	FR4
MAPD-011032	5	1250	2	0.2	0.4	18	27	75	SOT
MAPD-011027	5	1500	3	0.3	6	18	27	75	FR4
DS-331-PIN ♦	750	1500	2	0.2	6	10	30	50	TO-8
MAPD-011002	5	1600	2	0.3	0.7	26	30	75	FR4
MAPD-010638-C2WSOT	5	1600	2	0.3	1	23	24	75	FR4
MAPDCC0003	1510	1660	2	0.1	1	15	30	50	SOIC-8
MAPDCC0004	1700	1900	2	0.1	2	15	30	50	SOIC-8
MAPDCC0002	1850	1990	2	0.1	1	15	30	50	SOIC-8
MAPDCC0006	1850	1990	3	0.3	7	12	30	50	SOIC-8
H-8-4-SMA ♦	2	2000	2	0.1	2.5	25	33	50	Conn
DS-4-4-N ♦	2	2000	4	1	5	30	30	50	Conn
DS-4-4-BNC ♦	2	2000	4	1	5	30	30	50	Conn
DS-4-4-SMA ♦	2	2000	4	1	5	30	30	50	Conn
DS-313-PIN ♦	10	2000	2	0.3	4	23	24	50	FP-2
DSS-313-PIN ♦	10	2000	2	0.3	4	23	24	50	SF-1
DS-409-4BNC ♦	10	2000	4	0.5	5	25	37	50	Conn
DS-409-4SMA ♦	10	2000	4	0.5	5	25	37	50	Conn
DS-409-4TNC ♦	10	2000	4	0.5	5	25	37	50	Conn
DS-808-4TNC ♦	20	2000	8	0.6	5	20	37	50	Conn
DS-808-4N ♦	20	2000	8	5	0.6	20	37	50	Conn
DS-808-4BNC ♦	20	2000	8	0.6	5	20	37	50	Conn
DS-808-4SMA ♦	20	2000	8	0.6	5	20	37	50	Conn
2089-6206-00 ♦	500	2000	2	0.3	4	20	36	50	Conn
2089-6406-00 ♦	500	2000	4	0.4	6	20	36	50	Conn
2089-6201-00 ♦	1000	2000	2	0.2	4	20	33	50	Conn
2089-6401-00 ♦	1000	2000	4	0.4	6	20	36	50	Conn
2089-6801-00 ♦	1000	2000	8	0.8	8	20	38	50	Conn
MAPD-007530-000100	1700	2000	2	0.2	1.5	16	30	50	SOT-26
MAPDCC0014	1700	2000	4	0.8	5	18	30	50	SOIC-16
MAPDCC0018	1700	2000	6	0.5	8	18	30	50	SOW-16
MAPD-011007	5	2150	2	0.3	1	30	27	75	FR4
MAPD-010424-C20C80	5	2400	2	0.2	5	6	24	75	FR4
MAPDCT0026	5	2400	2	0.8	2	10	30	75	FR4
MAPDCC0010	2200	2500	2	0.1	2	22	30	50	SOT-25
MAPD-008957-CT0012	1	2700	2	0.5	2	12	30	50	FR4
2089-6202-00 ♦	2000	4000	2	0.2	4	20	33	50	Conn
2089-6402-00 ♦	2000	4000	36	0.4	6	20	36	50	Conn
2089-6203-00 ♦	4000	8000	2	0.2	6	20	33	50	Conn
2089-6207-00 ♦	2000	8000	2	0.3	8	18	36	50	Conn
2089-6403-00 ♦	4000	8000	4	0.4	8	20	36	50	Conn
2089-6807-00 ♦	2000	8000	8	1.2	16	15	41	50	Conn
2089-6204-00 ♦	8000	12400	2	0.2	6	20	33	50	Conn
2089-6404-00 ♦	8000	12400	4	0.5	8	18	36	50	Conn
2090-6304-00 ♦	500	18000	3	0.5	—	18	49	50	Conn

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Power Dividers/Combiners (continued)									
Part Number	Min Freq (MHz)	Max Freq (MHz)	Channels (#)	Amplitude Balance (dB)	Phase Bal (°)	Isolation (dB)	Max Input Power (dBm)	Impedance (Ω)	Package
2090-6214-00 ♦	1000	18000	2	0.4	5	22	47	50	Conn
2090-6414-00 ♦	1000	18000	4	1	12	18	47	50	Conn
2090-6205-00 ♦	2000	18000	2	0.3	5	23	46	50	Conn
2089-6208-00 ♦	2000	18000	2	0.3	8	17	40	50	Conn
2089-6408-00 ♦	2000	18000	4	0.5	12	17	20	50	Conn
2089-6808-00 ♦	2000	18000	8	1.8	24	15	45	50	Conn
2089-6209-00 ♦	4000	18000	2	0.3	8	17	36	50	Conn
2089-6409-00 ♦	4000	18000	4	0.5	12	15	39	50	Conn
2089-6410-00 ♦	7000	18000	4	0.5	12	15	38	50	Conn
2089-6405-00 ♦	12400	18000	4	0.5	8	15	38	50	Conn
2089-6805-00 ♦	12400	18000	8	0.8	24	15	40	50	Conn
MAPD-011062-DIE	2000	20000	34.5	2	0.2	2	15	50	3mm PQFN
MAPD-011062	2000	20000	30	2	0.2	2	15	50	DIE

Transformers/Baluns								
Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Impedance Ratio	Insertion Loss (dB)	Impedance (Ω)	Package	
MABA-009807-CF4010	Flux Coupled Balun, sealed cover	0	3	1:4	1	50	Ceramic	
MABA-011006	Flux Coupled Unun	8	8	1:20	0.9	50	FR4	
MABA-011125	Balun, 1:2, 2 - 20 GHz	2	20	1:2	2	—	3 mm 16-lead PQFN	
MABA-009412-CF1BC0	Flux Coupled Balun, CT on both sides	1	50	1:1	0.4	75	FR4 8	
MABA-010411-CT1160	Transmission Line Balun	30	60	1:1	0.8	75	SOT	
MABA-011017	Flux Coupled Balun, Step Down	5	85	2:1	0.5	75	SOT	
MABA-008282-CFGA40	Flux Coupled Balun	5	90	1:16	1.5	75	FR4	
MABA-010181-CF9A40	Flux Coupled Balun	5	90	1:9	1.3	75	FR4	
MABA-010655-CF1A40	Flux Coupled Transformer, Ethernet	1	100	1:1	0.3	50	FR4	
MABA-011073	Flux Coupled Balun	1	100	1:1	0.3	75	SOT	
MABA-008124-CF1FA0	Flux Coupled Balun	5	100	1:1	0.7	75	SOT	
MABA-009573-CF1A40	Flux Coupled Balun	5	100	1:1.77	0.3	75	FR4	
MABA-010061-CF4FA0	Flux Coupled Balun	5	100	1:4	1.2	75	SOT	
MABA-009776-CF28A0	Flux Coupled Unun, Step Down	5	100	2:1	0.4	75	FR4	
MABA-008570-ETC414	Flux Coupled Unun	3	110	1:4	0.3	50	Ceramic	
MABA-008965-CF1160	Flux Coupled Balun	5	120	1:1	0.2	75	Ceramic	
MABA-009005-CF1A40	Flux Coupled Balun	5	120	1:1	0.2	75	FR4	
MABA-009650-CF1160	Flux Coupled Balun	5	120	1:1	0.4	75	Ceramic	
ETC1-1T-2TR	Flux Coupled Balun	0	200	1:1	0.3	50	Ceramic	
MABA-009274-TC11T2	Flux Coupled Balun	0	200	1:1	0.5	50	Ceramic	
MABAES0060	Flux Coupled Balun	0	200	1:1	1	50	Ceramic	
MABACT0062	Flux Coupled Balun	3	200	1:1	0.5	75	Ceramic	
MABACT0071	Flux Coupled Balun	3	200	1:1	0.5	75	FR4	
MABACT0012	Flux Coupled Balun	3	200	1:1	0.8	75	Ceramic	
MABA-007532-CF18A0	Flux Coupled Balun	5	200	1:1	0.4	75	SOT	
MABA-009594-CF18A0	Flux Coupled Balun	5	200	1:1	0.4	75	SOT	
MABA-009572-CF18A0	Flux Coupled Balun	5	200	1:1	0.5	75	SOT	
MABA-011026	Flux Coupled Balun	5	200	1:1	0.5	75	SOT	
MABA-008482-CF1A40	Flux Coupled Balun	5	200	1:1.78	0.4	75	FR4	
MABACT0048	Flux Coupled Balun	5	200	1:2	0.4	75	FR4	
MABACT0068	Flux Coupled Balun	5	200	1:2	0.4	75	FR4	

Note: Part numbers are RoHS compliant.
 Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box.
 All specifications are subject to change.

Transformers/Baluns (continued)							
Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Impedance Ratio	Insertion Loss (dB)	Impedance (Ω)	Package
MABA-009836-CF48A0	Flux Coupled Balun	5	200	1:4	0.5	50	SOT
MABACT0018	Flux Coupled Balun	5	200	1:4	0.7	50	SOT
MABA-008260-CF4A40	Flux Coupled Balun	5	200	1:4	0.8	75	FR4
MABA-011002	Flux Coupled Balun, Step Down	5	200	4:1	1	75	FR4
MABA-008354	Flux Coupled Balun, Step Down	5	200	4:1	1.1	75	FR4
MABA-010400-CT18A0	Transmission Line Balun, with Tertiary Winding	40	200	1:1	0.4	75	SOT
MABA-007488-CT9550	Transmission Line Balun	5	220	1:9	0.8	75	FR4
MABAES0008	Flux Coupled Balun	3	250	1:4	0.6	50	Ceramic
MABA-011062	Flux Coupled Balun	1	300	1:2	0.6	75	SOT
MABA-011038	Flux Coupled Balun	1	300	1:3	0.6	50	SOT
MABA-011039	Flux Coupled Balun	1	300	1:4	0.7	75	SOT
MABA-011040	Flux Coupled Balun	1	300	1:6	0.6	50	SOT
MABA-009250-CT0068	Flux Coupled Balun	3	300	1:2	0.7	50	Ceramic
MABA-009852-CF1A40	Flux Coupled Balun	5	300	1:1	0.2	75	FR4
MABA-011050	Flux Coupled Balun	5	300	1:2	0.6	75	FR4
MABA-011056	Flux Coupled Balun, Step Down	5	300	2:1	0.8	75	SOT
MABA-011063	Flux Coupled Balun, Step Down	5	300	2:1	0.8	75	SOT
MABA-011064	Flux Coupled Balun, Step Down	5	300	4:1	1.5	75	SOT
MABA-009387-ES0040	Flux Coupled Balun	1	350	1:2	1.6	50	SOT
MABA-011020	Flux Coupled Balun	1	350	1:4	0.8	50	Ceramic
MABA-007237-ETC410	Flux Coupled Balun	1	350	1:4	1.2	50	Ceramic
MABACT0067	Flux Coupled Balun	1	350	1:4	1.3	50	FR4
MABA-007493-CF4160	Flux Coupled Balun	1	350	1:4	1.6	50	Ceramic
MABA-007766-CF28A0	Flux Coupled Balun	5	350	1:1.5	1.4	50	SOT
MABA-009126-ET11SM	Flux Coupled Unun, Sealed Cover	0	400	1:1	1	50	Ceramic
TP-104-PIN ♦	Pulse	1	400	4:01	0.4	50	FP-1
MABA-010721-CF1670	Transmission Line Balun, with Center Tap	5	400	1:1	0.5	75	FR4
ETC36-1T-2TR	Flux Coupled Balun	5	400	1:36	12	50	Ceramic
MABA-009180-500MHZ	Flux Coupled Balun	0	500	1:1	1	50	Ceramic
MABA-009947-CF3160	Flux Coupled Balun	0	500	1:3	0.7	50	Ceramic
TP-102-PIN	Pulse Transformer	1	500	4:01	0.4	50	FP-1
ETC1-1T-5	Transmission Line Balun, with Tertiary Winding	2	500	1:1	2	50	Ceramic
MABA-009484-ETC31T	Flux Coupled Balun	2	500	1:3	0.7	50	Ceramic
MABA-010143-FLUX18	Flux Coupled Balun	2	500	1:8	1	50	Ceramic
MABAES0031	Flux Coupled Balun, Wide Bandwidth	1	650	1:4	1	50	SOT
MABACT0064	Flux Coupled Balun	1	650	1:4	1.5	50	SOT
MABA-009298-CT48A0	Flux Coupled Balun, Wide Bandwidth	1	650	1:4	1.5	50	SOT
ETC4-1-2TR	Flux Coupled Balun, Wide Bandwidth	2	800	1:4	1.2	50	Ceramic
MABAES0061	Flux Coupled Balun, Wide Bandwidth	2	800	1:4	1.2	50	Ceramic
MABA-009488-61HWCA	Flux Coupled Balun	3	800	1:4	1	50	FR4
ETC1-1-6	Transmission Line Balun, with Tertiary Winding	760	960	1:1	0.2	50	Ceramic
TP-105-PIN ♦	Pulse Transformer	0.5	1000	1.4:1	0.4	50	FP-1
TP-103-PIN ♦	Pulse Transformer	0.5	1000	4:01	0.4	50	FP-1
MABA-011037	Transmission Line Balun, Low Profile	2	1000	1:4	0.7	50	FR4
MABA-009711-ETK2MM	Transmission Line Balun, Low Profile	2	1000	1:4	0.7	50	FR4
MABA-008752-TC1P57	Auto Transformer	2	1000	1:1.5	0.4	50	Ceramic
MABA-007569-ETK42T	Transmission Line Balun	2	1000	1:4	0.3	50	Ceramic

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Transformers/Baluns (continued)							
Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Impedance Ratio	Insertion Loss (dB)	Impedance (Ω)	Package
MABA-011016	Transmission Line Balun, with Center Tap	5	1000	1:1	0.8	50	Ceramic
MABA-009092-CT1A40	Transmission Line Balun	5	1000	1:1.33	0.7	75	FR4
MABACT0063	Auto Transformer	5	1000	1:1.5	0.5	75	Ceramic
ETC1.5-4	Auto Transformer	5	1000	1:1.5	1	75	Ceramic
MABA-010449-CA2A40	Auto Transformer	5	1000	1:2	0.8	75	FR4
MABACT0066	Transmission Line Balun	5	1000	1:4	1.3	50	SOT
MABA-008639-TC41T7	Transmission Line Balun	6	1000	1:4	3	50	Ceramic
MABA-010463-CA2A40	Auto Transformer	20	1000	1:1.77	1.2	75	Ceramic
MABA-011032	Transmission Line Balun	40	1000	1:3	1	75	SOT
MABA-010245-CT1160	Transmission Line Balun	46	1002	1:1	0.4	75	Ceramic
TP-108-PIN ♦	Flux Coupled Balun	350	1125	2.5:1	0.8	50	FP-1
MABA-011031	Transmission Line Balun	5	1200	1:1	0.2	75	FR4
MABA-009691-CT1881	Transmission Line Balun	5	1200	1:1	0.2	75	FR4
MABACT0043	Transmission Line Balun	5	1200	1:1	0.5	75	SOT
MABA-007748-CT1160	Transmission Line Balun, with Tertiary Winding	5	1200	1:1	0.6	75	Ceramic
MABA-011086	Transmission Line Balun	5	1200	1:1	1.3	75	FR4
MABA-011010	Transmission Line Balun, with Tertiary Winding	5	1200	1:1.33	0.95	75	FR4
MABA-011051	Transmission Line Balun, with Tertiary Winding	5	1200	1:1.33	2.9	75	FR4
MABA-011029	Transmission Line Balun	5	1200	1:2	1.5	75	FR4
MABA-010441-CT38A0	Transmission Line Balun	5	1200	1:3	1.1	75	FR4
MABA-011027	Transmission Line Balun	5	1200	1:3	2.1	75	FR4
MABA-011014	Transmission Line Balun	45	1200	1:1	0.9	75	FR4
MABA-011015	Transmission Line Balun	45	1200	1:2.78	1.7	75	FR4
MABA-011058	Transmission Line Balun, with Tertiary Winding	50	1200	1:1	0.6	75	FR4
MABA-009231-CT1A4B	Transmission Line Balun	5	1200	1:1	0.7	50	FR4
MABA-010392-CT18A0	Transmission Line Balun	5	1200	1:1	0.7	50	SOT
MABACT0060	Transmission Line Balun, with Tertiary Winding	5	1200	1:1	0.7	50	FR4
MABA-010314-CT1370	Transmission Line Balun	5	1200	1:1	0.9	75	FR4
MABA-007681-CT2010	Transmission Line Balun	5	1200	1:2	0.6	75	FR4
MABA-010238-CT4A80	Transmission Line Balun	5	1200	1:2	1.3	75	FR4
MABA-010129-CT4A40	Transmission Line Balun	5	1200	1:4	0.7	50	SOT
MABA-010268-CT4160	Transmission Line Balun	5	1200	1:4	0.7	50	Ceramic
MABA-009232-CT4A4B	Transmission Line Balun	5	1200	1:4	1	50	FR4
MABACT0061	Auto Transformer	5	1200	1:4	1.6	50	Ceramic
MABA-009210-CT1760	Transmission Line Balun, with Tertiary Winding	50	1200	1:1	0.6	75	FR4
MABA-008483-CT1760	Transmission Line Balun, with Tertiary Winding	50	1200	1:1	0.63	75	FR4
MABA-008979-CF0290	Transmission Line Balun, with Tertiary Winding	50	1200	1:1	0.7	75	SOT
MABA-010321-CT1A42	Transmission Line Balun, with Tertiary Winding	50	1200	1:1	0.7	75	FR4
MABA-010321-CT1A43	Transmission Line Balun, with Tertiary Winding	50	1200	1:1	0.7	75	FR4
MABA-009602-ES2922	Transmission Line Balun, with Tertiary Winding	50	1200	1:1	0.8	50	Ceramic
MABACT0069	Transmission Line Balun, with Tertiary Winding	50	1200	1:1	0.8	75	SOT
MABAES0029	Transmission Line Balun, with Tertiary Winding	50	1200	1:1	1	75	SOT
MABA-011103	Auto Transformer	40	1215	1:1.77	2.8	75	Ceramic
MABACT0040	Transmission Line Balun, with Center Tap	5	1218	1:1	1.1	75	FR4
MABA-011104	Auto Transformer	5	1218	1:1.5	0.4	75	Ceramic
MABA-011085	Transmission Line Balun, with Tertiary Winding	5	1225	1:1	0.4	75	FR4
MABA-011094	Transmission Line Balun	5	1225	1:1	0.9	75	Ceramic

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Transformers/Baluns (continued)

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Impedance Ratio	Insertion Loss (dB)	Impedance (Ω)	Package
TP-101-PIN ♦	Pulse Transformer	0	1500	1.6:1	0.4	50	FP-1
TPX-75-4N ♦	50/75 Ω	10	1500	1.5:1	0.3	50/75	Conn
MABA-010247-2R1250	Transmission Line Balun	1	1600	1:2	1.5	50	FR4
MABA-011112	Transmission Line Balun	5	1800	1:1	0.9	75	FR4
MABA-011113	Transmission Line Balun	5	1800	1:2	0.7	75	FR4
MABA-010374-CT4A40	Transmission Line Balun	10	1900	1:4	1.8	75	FR4
MABA-010386-CA3A40	Auto Transformer	5	2400	1:3	3	75	FR4
MABA-010012-ES4302	Transmission Line Balun	30	2500	1:4	1.8	50	Ceramic
ETC1-1-13	Transmission Line Balun	5	3000	1:1	0.3	50	Ceramic
MABA-007159-000000	Transmission Line Balun	5	3000	1:1	0.3	50	Ceramic
MABA-009822-715254	Transmission Line Balun	5	3000	1:1	0.3	50	Ceramic
MABA-007871-CT1A40	Transmission Line Balun	5	3000	1:1	0.6	50	FR4
MABA-011047	Transmission Line Balun	5	3000	1:1	0.7	50	Ceramic
MABACT0039	Transmission Line Balun	5	3000	1:1	1.3	75	SOT
MABA-010125-TC1113	Transmission Line Balun	5	3000	1:1	1.5	50	Ceramic
MABA-007327-CT1A40	Transmission Line Balun	5	3000	1:1	1.6	75	FR4
MABA-008757-CT1160	Transmission Line Balun	5	3000	1:1	2	75	Ceramic
MABACT0059	Transmission Line Balun	5	3000	1:1	2	75	Ceramic
ETC1.6-4-2-3	Transmission Line Balun	500	3000	1:4	0.2	50	Ceramic
MABACT0065	Transmission Line Balun	500	3000	1:4	0.2	50	Ceramic
MABA-007236-C16423	Transmission Line Balun	500	3000	1:4	3	50	Ceramic
MABA-011042	Transmission Line Balun	2500	3200	1:1	0.9	50	Ceramic
MABA-011100	Transformer Balun	20	4000	1:2	1.5	50	SMT
MABA-011082	Transmission Line Balun, with Tertiary Winding	5	8000	1:1	1.4	50	SMT
MABA-011108	Transmission Line Balun, with Tertiary Winding	5	10000	1:1	1.4	50	SMT
MABA-011118	Transmission Line Balun	10	10000	1:2	1.9	50	SMT

MNS Chip Capacitors

Part Number	Capacitance (pF)	Standoff Voltage (V)	Chip Style	Package
MA4M3010 S	10	200	350	DIE
MA4M2020 S	20	200	132	DIE
MA4M3030 S	30	200	352	DIE
MA4M1050 S	50	100	132	DIE
MA4M3050 S	50	200	354	DIE
MA4M3100 S	100	50	358	DIE
MA4M1100 S	100	100	199	DIE
MA4M3150 S	150	50	359	DIE

High Q MNOS Series Chip Capacitors: 9000 Series VB >50 V & 9100 Series VB >100 V

Part Number	Capacitance (pF)	Working Voltage (V)	Chip Size + .002"	Package
910R1 thru 911R9 S	0.1 to 1.9	100	0.010" x 0.010" x 0.005"	DIE
912R0 thru 919R9 S	2 to 9.9	100	0.015" x 0.015" x 0.005"	DIE
902R0 thru 9010R S	2 to 10	50	0.010" x 0.010" x 0.005"	DIE
9110R thru 9129R S	10 to 29	100	0.020" x 0.020" x 0.006"	DIE
9011R thru 9029R S	11 to 29	50	0.015" x 0.015" x 0.005"	DIE
9030R thru 9049R S	30 to 49	50	0.020" x 0.020" x 0.006"	DIE
9130R thru 9149R S	30 to 49	100	0.030" x 0.030" x 0.006"	DIE

Note: Part numbers are RoHS compliant. **S** indicates these parts are also available with Space and Hi-Rel Screening & Qualification. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

High Q MNOS Series Chip Capacitors: 9000 Series VB >50 V & 9100 Series VB >100 V (continued)

Part Number	Capacitance (pF)	Working Voltage (V)	Chip Size + .002"	Package
9050R thru 9099R S	50 to 99	50	0.030" x 0.030" x 0.006"	DIE
9150R thru 9199R S	50 to 99	100	0.040" x 0.040" x 0.008"	DIE
90100 thru 90199R S	100 to 199	50	0.040" x 0.040" x 0.008"	DIE
91100 thru 91199 S	100 to 199	100	0.050" x 0.050" x 0.008"	DIE
91200 thru 91399 S	200 to 399	100	0.070" x 0.070" x 0.008"	DIE
90200 thru 90399R S	200 to 399	50	0.050" x 0.050" x 0.008"	DIE
90400 thru 90600R S	400 to 600	50	0.070" x 0.070" x 0.008"	DIE

Beam Lead Capacitors: 9000 Series VB >50 V

Part Number	Capacitance Range (pF)	Package
90R1 thru 90R9 S	0.1 to 0.9	14-1
90R5 thru 901R0 S	0.5 to 1.0	14-2
901R0 thru 901R5 S	1 to 1.5	14-1
901R0 thru 902R2 S	1 to 2.2	14-2
902R2 thru 904R7 S	2.2 to 4.7	14-2
905R6M S	5.6 + 20%	14-2
906R8M S	6.8 + 20%	14-2
908R2M S	8.2 + 20%	14-2
9010ROM S	10 + 20%	14-3
9015ROM S	15 + 20%	14-3
9022ROM S	22 + 20%	14-3
9033ROM S	33 + 20%	14-3
9047ROM S	47 + 20%	14-4
9068ROM S	68 + 20%	14-4
9082ROM S	82 + 20%	14-4
90100ROM S	100 + 20%	14-4

Binary Chip Capacitors

Part Number	PAD 1 (pF)	PAD 2 (pF)	PAD 3 (pF)	PAD 4 (pF)	Total (pF)	Chip Size
9115R0K-BOO	1	2	4	8	15	0.020 x 0.020
9115R0K-BSP-1	1	2	4	8	15	0.030 x 0.020
911R5K-BSP-3	0.1	0.2	0.4	0.8	1.5	0.015 x 0.015
9122R5K-BOO	1.5	3	6	12	22.5	0.020 x 0.020
9122R5K-BSP-1	1.5	3	6	12	22.5	0.030 x 0.020
913R0K-BSP-3	0.2	0.4	0.8	1.6	3	0.015 x 0.015
913R7K-BOO	0.25	0.5	1	2	3.75	0.020 x 0.020
913R7K-BSP-1	0.25	0.5	1	2	3.75	0.030 x 0.020
913R7K-BSP-3	0.25	0.5	1	2	3.75	0.015 x 0.015
915R6K-BSP-3	0.35	0.75	1.5	3	5.6	0.015 x 0.015
917R5K-BOO	0.5	1	2	4	7.5	0.020 x 0.020
917R5K-BSP-1	0.5	1	2	4	7.5	0.030 x 0.020

DC Floating/RF Bypass Mounting Capacitors: 9100 & 9000 Series

Part Number	Capacitance Range (pF)	Chip Size A	Chip Size B	Pad Size D	Pad Size E	Customer Specified Field D
SP49 S	5 – 50	0.014	0.034	0.011	0.031	0.005 – 0.020
SP84 S	7 – 70	0.02	0.04	0.016	0.03	0.005 – 0.020
SP51 S	8 – 80	0.015	0.045	0.013	0.043	0.005 – 0.020

Note: Part numbers are RoHS compliant. **S** indicates these parts are also available with Space and Hi-Rel Screening & Qualification. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

DC Floating/RF Bypass Mounting Capacitors: 9100 & 9000 Series (continued)

Part Number	Capacitance Range (pF)	Chip Size A	Chip Size B	Pad Size D	Pad Size E	Customer Specified Field D
SP14 S	9 – 90	0.02	0.04	0.016	0.036	0.005 – 0.020
SP34 S	9 – 90	0.024	0.034	0.02	0.03	0.005 – 0.020
SP6 S	10 – 100	0.014	0.055	0.012	0.053	0.005 – 0.020
SP89 S	12 – 120	0.02	0.06	0.014	0.055	0.005 – 0.020
SP80 S	13 – 130	0.016	0.065	0.014	0.063	0.005 – 0.020
SP12 S	14 – 140	0.02	0.055	0.018	0.053	0.005 – 0.020
SP87 S	15 – 150	0.013	0.12	0.009	0.16	0.005 – 0.020
SP81 S	17 – 170	0.015	0.09	0.013	0.088	0.005 – 0.020
SP22 S	24 – 240	0.025	0.08	0.021	0.075	0.005 – 0.020
SP88 S	25 – 250	0.021	0.121	0.015	0.115	0.005 – 0.020
SP48 S	29 – 290	0.035	0.065	0.031	0.061	0.005 – 0.020
SP64 S	75 – 750	0.055	0.102	0.051	0.098	0.005 – 0.020
SP120 S	90 – 900	0.055	0.12	0.05	0.115	0.005 – 0.020
SP7 S	100 – 1000	0.085	0.085	0.081	0.081	0.005 – 0.020
SP2 S	150 – 1500	0.11	0.11	0.1	0.1	0.005 – 0.020
SP68 S	175 – 1750	0.101	0.124	0.097	0.12	0.005 – 0.020
SP1 S	200 – 2000	0.11	0.14	0.1	0.13	0.005 – 0.020
SP5 S	200 – 1000	0.1	0.1	0.095	0.095	0.005 – 0.020
SP20 S	200 – 2000	0.12	0.14	0.11	0.13	0.005 – 0.020
SP29 S	200 – 2000	0.121	0.121	0.115	0.115	0.005 – 0.020
SP38 S	200 – 2000	0.094	0.152	0.091	0.148	0.005 – 0.020
SP40 S	200 – 2000	0.107	0.134	0.103	0.13	0.005 – 0.020
SP39 S	200 – 2000	0.12	0.134	0.11	0.13	0.005 – 0.020
SP77 S	300 – 3000	0.118	0.175	0.114	0.171	0.005 – 0.020
SP52 S	300 – 3000	0.13	0.17	0.124	0.164	0.005 – 0.020
SP104 S	350 – 3500	0.142	0.171	0.138	0.167	0.005 – 0.020
SP111 S	350 – 3500	0.143	0.18	0.138	0.167	0.005 – 0.020
SP37 S	350 – 3500	0.151	0.168	0.147	0.164	0.005 – 0.020
SP44 S	350 – 3500	0.14	0.17	0.135	0.165	0.005 – 0.020
SP55 S	360 – 3600	0.117	0.22	0.113	0.216	0.005 – 0.020

MNOS Series Capacitors

Part Number	Type	Capacitance Range Min (pF)	Range (pF)	Capacitance Dvw Min (V)	R Min (Ω)	TCC Typ (ppm/+°C)	Package
MBC50-0.2B14 S	Beam Lead	0.16	0.24	50	1000	55	B14
MBC50-1B12 S	Beam Lead	0.8	1.2	50	1000	55	B12
MBC50-1.0B14 S	Beam Lead	0.8	1.2	50	1000	55	B14
MBC50-1.5B14 S	Beam Lead	1.2	1.8	50	1000	55	B14
MBC50-2B12 S	Beam Lead	1.6	2.4	50	1000	55	B12
MBC50-2.0B14 S	Beam Lead	1.6	2.4	50	1000	55	B14
MBC50-3B12 S	Beam Lead	2.4	3.6	50	1000	55	B12
MBC50-4B12 S	Beam Lead	3.2	4.8	50	1000	55	B12
MBC50-6B12 S	Beam Lead	4.8	7.2	50	1000	55	B12
MBC50-8B12 S	Beam Lead	6.4	9.6	50	1000	55	B12
MBC50-10B12 S	Beam Lead	8	12	50	1000	55	B12
MBC50-15B12 S	Beam Lead	12	18	50	1000	55	B12
MBC50-20B12 S	Beam Lead	16	24	50	1000	55	B12
MBC50-33B13 S	Beam Lead	26.4	39.6	50	1000	55	B13

Note: Part numbers are RoHS compliant. **S** indicates these parts are also available with Space and Hi-Rel Screening & Qualification. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

MNOS Series Capacitors (continued)							
Part Number	Type	Capacitance Range Min (pF)	Range (pF)	Capacitance Dvw Min (V)	R Min (Ω)	TCC Typ (ppm/+°C)	Package
MBC50-47B13 S	Beam Lead	37.6	56.4	50	1000	55	B13
MBC50-68B13 S	Beam Lead	54.4	81.6	50	1000	55	B13
MBC50-82B13 S	Beam Lead	65.6	96	50	1000	55	B13
MBC50-100B13 S	Beam Lead	80	120	50	1000	55	B13
MC2DXXX010-010 S	Chips	0.1	5	50	1000	55	DIE
MC2SXXX010-010 S	Chips	0.25	8	50	1000	55	DIE
MC2SXXX011-011 S	Chips	1	12	50	1000	55	B12
MC2DXXX015-015 S	Chips	1.5	15	50	1000	55	DIE
MC2RXXX010-015 S	Chips	2	20	50	1000	55	DIE
MC2SXXX015-015 S	Chips	3	30	50	1000	55	DIE
MC2SXXX016-016 S	Chips	3	35	50	1000	55	DIE
MC2RXXX015-020 S	Chips	5	42	50	1000	55	DIE
MC2DXXX020-020 S	Chips	5	50	50	1000	55	DIE
MC2SXXX020-020 S	Chips	5	55	50	1000	55	DIE
MC2SXXX022-022 S	Chips	5	60	50	1000	55	DIE
MC2RXXX015-032 S	Chips	5	62	50	1000	55	DIE
MC2SXXX025-025 S	Chips	10	100	50	1000	55	DIE
MC2RXXX022-042 S	Chips	15	120	50	1000	55	DIE
MC2SXXX030-030 S	Chips	10	120	50	1000	55	DIE
MC2SXXX035-035 S	Chips	15	150	50	1000	55	DIE
MC2SXXX040-040 S	Chips	20	200	50	1000	55	DIE
MC2SXXX050-050 S	Chips	25	250	50	1000	55	DIE
MC2SXXX055-055 S	Chips	25	300	50	1000	55	DIE
MC2SXXX060-060 S	Chips	35	375	50	1000	55	DIE
MC2SXXX070-070 S	Chips	50	550	50	1000	55	DIE
MC2SXXX080-080 S	Chips	70	700	50	1000	55	DIE
MC2RXXX097-107 S	Chips	100	999	50	1000	55	DIE
MC2RXXX099-138 S	Chips	100	999	50	1000	55	DIE
MC2SXXX100-100 S	Chips	100	999	50	1000	55	DIE
MC2RXXX127-145 S	Chips	200	1800	50	1000	55	DIE
MC2RXXX142-160 S	Chips	200	2200	50	1000	55	DIE
MC2B0.8020-020 S	Binary Chip	1.2	1.8	50	1000	55	C20
MC2B002020-020 S	Binary Chip	3	4.5	50	1000	55	C20
MC2B004020-020 S	Binary Chip	6.4	9.6	50	1000	55	C20
MC2B008020-020 S	Binary Chip	12	18	50	1000	55	C20
MC2B016020-020 S	Binary Chip	24	36	50	1000	55	C20

Filters/Diplexers							
Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Rejection (dB)	Crossover Freq (dB)	Package
MAFL-011082	Reflectionless Low Pass Filter	5	684	0.75	0.75	24	Surface Mount
MAFLCT0083	CATV Diplex Filter	5	860	0.9	59	65/94	—
MAFLCT0066	CATV Diplex Filter	5	870	0.8	46	30/46	SMT
MAFLES0102	CATV Diplex Filter	5	870	1	45	42/54	—
MAFL-007529-CD0550	CATV Diplex Filter	5	1000	0.5	—	36/48	30 x 30 mm
MAFL-011013	Broadband CATV Diplexer 5 – 42/54 – 1000 MHz	5	1000	0.5	50	42/54	SMT
MAFL-007988-CD0550	CATV Diplex Filter 5 – 65/88 – 1000 MHz	5	1000	0.5	50	65/88	SM-85
MAFL-009511-CD0A10	CATV Diplex Filter 5 – 42/52 – 1000 MHz	5	1000	0.5	55	42/52	SM-161

Note: Part numbers are RoHS compliant. **S** indicates these parts are also available with Space and Hi-Rel Screening & Qualification. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

Filters/Diplexers (continued)							
Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Rejection (dB)	Crossover Freq (dB)	Package
MAFL-009055-CD4254	Broadband CATV Diplexer	5	1000	0.5	55	42/54	SMT
MAFL-009593-CDOA10	CATV Diplex Filter	5	1000	1	57	65/86	SMT
MAFL-011015	CATV Diplex Filter 5 – 42/54 – 1002 MHz	5	1002	0.5	—	42/54	SMT
MAFL-011024	Broadband CATV Diplexer	5	1002	0.5	50	85/108	SMT
MAFL-011025	Broadband CATV Diplexer 5 – 65/108 – 1002 MHz	5	1002	0.5	50	65/108	SMT
MAFL-011014	CATV Diplex Filter 5 – 65/88 – 1002 MHz	5	1002	0.5	55	65/88	SMT
MAFL-011027	Vertical Plug-in	5	1002	1.2	45	85/102	—
MAFL-010467-CDOB20	CATV Diplexer	5	1002	1.5	60	65/108	SMT
MAFL-008098-CD0550	CATV Diplex Filter 5 – 42/54 – 1100 MHz	5	1100	0.5	50	42/54	SM-85
MAFLCT0068	CATV Diplex Filter 5 – 42/54 – 1100 MHz	5	1100	1.2	50	42/54	SMT
MAFL-011055	Surface Mount DOCSIS 3.1 Diplex Filter, 5 – 42/54 – 1218 MHz	5	1218	0.5	50	42/54	30 x 30 mm
MAFL-011078	CATV Diplex Filter 5 – 42/54 – 1218 MHz	5	1218	0.5	50	42/54	30 x 30 mm
MAFL-011057	Surface Mount DOCSIS 3.1 Diplex Filter, 5 – 85/102 – 1218 MHz	5	1218	0.5	50	85/102	30 x 30 mm
MAFL-011081	Surface Mount DOCSIS 3.1 Diplex Filter, 5 – 204/208 MHz	5	1218	0.5	50	204/208	SMT
MAFL-011047	Plug-and-Play Horizontal Filter, 5 – 42/54 – 1218 MHz	5	1218	1	—	42/54	31 x 27.8 mm
MAFL-011048	Plug-and-Play Horizontal Filter	5	1218	1	—	42/54	31 x 27.8 mm
MAFL-011059	Plug-and-Play Vertical Filter	5	1218	1	—	42/54	50.8 x 19.05 mm
MAFL-011049	Plug-and-Play Horizontal Filter, 5 – 65/86 – 1218 MHz	5	1218	1	—	65/85	31 x 27.8 mm
MAFL-011050	Plug-and-Play Horizontal Filter, 5 – 65/86 – 1218 MHz	5	1218	1	—	65/85	31 x 27.8 mm
MAFL-011060	Plug-and-Play Vertical Filter	5	1218	1	—	65/85	50.8 x 19.05 mm
MAFL-011061	Plug-and-Play Vertical Filter	5	1218	1	—	85/102	50.8 x 19.05 mm
MAFL-011053	Plug-and-Play Horizontal Filter, 5 – 204/258 – 1218 MHz	5	1218	1	—	204/258	31 x 27.8 mm
MAFL-011054	Plug-and-Play Horizontal Filter	5	1218	1	—	204/258	31 x 27.8 mm
MAFL-011062	Plug-and-Play Vertical Filter	5	1218	1	—	204/258	50.8 x 19.05 mm
MAFL-011051	Plug-and-Play Horizontal Filter, 5 – 85/102 – 1218 MHz	5	1218	1.4	—	85/102	31 x 27.8 mm
MAFL-011052	Plug-and-Play Horizontal Filter	5	1218	1.4	—	85/102	31 x 27.8 mm
MAFL-011077	CATV Diplex Filter	5	1218	1.4	50	85/102	SMT
MAFLCT0081	CATV Bandpass Filter 50 – 870/975 – 1025/1125 – 1425 MHz	50	1425	1.1	56	870/1125	SMT
MAFL-009217-CDOACO	CATV Diplex Filter 5 – 864/1128 – 1525 MHz	5	1525	1	44	864/1128	SMT
MAFL-010464-CDOB20	CATV Diplexer 35 x 25 mm, SMT	5	1525	1.8	60	42/88	SMT
MAFL-008070-CLOADO	CATV MoCA Low Pass Filter 50 – 870/975 – 1525 MHz	50	1525	1.8	30	—	SMT
MAFL-009906-CLOADO	MoCA Low Pass Filter 5 – 1550 MHz	5	1550	1	32	—	SMT
MAFL-010412-CLOADO	MoCA Low Pass Filter	5	1550	1.5	37	5 - 1002	15 x 15 mm
MAFL-008290-CDOACO	CATV Diplex Filter 5 – 1002/1125 – 1550 MHz	5	1550	1.7	40	1002/1125	SMT
MAFL-010101-CBOADO	MoCA Band Pass Filter 1125 – 1550 MHz	1125	1550	1.7	40	1125/1550	SMT
MAFL-010256-CBOADO	MoCA Band Pass Filter 1125 – 1550 MHz	1125	1550	1.7	38	1125/1550	SMT
MAFL-011023	MoCA Triplex Filter 5 – 65/88 – 1002/1125 – 1675 MHz	5	1675	1.2	50	65/88 & 1002/1125	SMT
MAFL-011018	MoCA Triplex Filter 5 – 42/54 – 1002/1125 – 1675 MHz	5	1675	1.2	70	42/54 & 1002/1125	SMT
MAFL-011026	MoCA Triplex Filter 5 – 85/105 – 1002/1125 – 1675 MHz	5	1675	1.2	70	85/105 & 1002/1125	SMT
MAFL-009272-CDOACO	Diplexer	5	1675	1.7	40	1002/1125	SM-172
MAFL-010140-CTOC60	MoCA Triplex Filter 5 – 2000 MHz	5	2000	1.5	62	42/52 & 1002/1125	SMT
MAFL-009478-CDOACO	MoCA Diplex Filter	50	3000	1.5	40	870/950	SMT
MAFL-010670-CBOADO	MoCA Band Pass Filter 500 – 3000 MHz	350	3000	2	50	650/875	SMT
MAFL-010608	SAT Diplexer	350	3000	2.5	35	875/950	Tape & Reel

Note: Part numbers are RoHS compliant.
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Filters/Diplexers (continued)

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Rejection (dB)	Crossover Freq (dB)	Package
MAFL-010639-CBOADO	MoCA Band Pass Filter 500 – 3000 MHz	500	3000	2	40	650/875	SM-173
MAFL-010609	SAT Triplexer	500	4500	2.5	40	1450/1650 & 2150/2500	SMT

Equalizers

Product	Min Freq (GHz)	Max Freq (GHz)	Insertion Loss @ 20 GHz (dB)	Insertion Loss @ DC (dB)	Package
MAFL-011156	0.5	20	0.5	0	3 mm PQFN
MAFL-011156-DIE	0.5	20	0.5	0	DIE
MAFL-011124	0.5	20	0.5	3	3 mm PQFN
MAFL-011124-DIE	0.5	20	0.5	3	DIE
MAFL-011125	0.5	20	0.5	4.5	3 mm PQFN
MAFL-011125-DIE	0.5	20	0.5	4.5	DIE
MAFL-011126	0	20	1	6	3 mm PQFN
MAFL-011126-DIE	0	20	1	6	DIE
MAFL-011127	0	20	1	9	3 mm PQFN
MAFL-011127-DIE	0	20	1	9	DIE
MAFL-011128	0	20	1	12	3 mm PQFN
MAFL-011128-DIE	0	20	1	12	DIE

SMALL SIGNAL TRANSISTORS

Small signal transistors are essential components in electronic circuits that amplify small signals with low power. They are commonly used in applications such as amplifiers, oscillators, mixers, and filters. MACOM offers a wide selection of small signal transistors all in DIE form with a wide range of specifications.

Silicon Bipolar

Part Number	Description	Gain BW FT (GHz)	Gain SS @ 1 GHz (dB)	Gain SS @ 2 GHz (dB)	Noise Figure @ 1 GHz (dB)	Noise Figure @ 2 GHz (dB)	Current Gain (hFE)	Maximum Power Dissipation (mW)	Package
MATB-056800-ODIEWO	NPN Silicon Medium Power Oscillator Die	4.2	TBD	6	—	—	60	1500	DIE
MATB-046100-ODIEWO	NPN Silicon Medium Power Microwave BJT	5.5	10	9	2	—	120	3750	DIE
MATB-085600	NPN Silicon High Frequency Die	7	—	7	1.1	2.1	120	700	DIE
MATB-004200-ODIEWO	NPN Silicon Medium Power Microwave BJT	9	—	11.5	—	3	150	600	DIE
MATB-068100-ODIEWO	NPN Silicon High Frequency Die	9	15	12	1.2	1.6	100	200	DIE
MATB-024300-ODIEWO	NPN Silicon Medium Power Oscillator Die	10	4.3	TBD	—	—	100	2750	DIE
MATB-006305-ODIEWO	NPN Silicon 3 V Low Current Low Noise Die	11	11	7	1.5	2.2	100	30	DIE
MATB-006325-ODIEWO	NPN Silicon 3 V Low Current Low Noise Die	11	12	7	1.5	—	100	150	DIE
MATB-006310-ODIEWO	NPN Silicon 3 V Low Current Low Noise Die	14	12	7	1.5	—	100	60	DIE

Silicon MMIC Gain Blocks

Part Number	Description	Noise Figure @ 1 GHz (dB)	Power Gain @ 0.1 GHz (dB)	3 dB Bandwidth (GHz)	1 dB Gain Compression @ 1 GHz (dBm)	IP3 (dBm)	ABS Max Current (mA)	Typical Operating Voltage (V)	Typical Operating Current (mA)	Package
MAAM-011006-ODIEWO	MMIC Silicon Gain Block	3	20.5	1	3	14.5	50	3.5	16	DIE
MAAM-011008-ODIEWO	MMIC Silicon Gain Block	3	32.5	—	12.5	27	80	7.8	36	DIE
MAAM-011011-ODIEWO	MMIC Silicon Gain Block	3.5	12.5	1	17.5	30	80	5.5	60	DIE
MAAM-011007-ODIEWO	MMIC Silicon Gain Block	4.5	13.5	2	5.5	19	60	4	22	DIE
MAAM-011041-ODIEWO	MMIC Silicon Gain Block	5.5	15.5	1.6	10	23	80	3.3	35	DIE
MAAM-011009-ODIEWO	MMIC Silicon Gain Block	6	8	4.5	11.5	23	80	7.8	35	DIE
MAAM-011003-ODIEWO	MMIC Silicon Gain Block	6	12.5	2	10	23	80	5	35	DIE
MAAM-011004-ODIEWO	MMIC Silicon Gain Block	6.5	8.5	2.8	12.5	25.5	100	5.25	50	DIE

Note: Part numbers are RoHS compliant.
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SPACE & HIGH-RELIABILITY

Discrete Components, MMICs and Integrated Modules

MACOM continues to build upon our legacy of providing high-reliability semiconductor products to the Aerospace and Defense industry by adding to our product portfolio and capabilities. MACOM's standard line of RF and microwave components provides solutions to meet the requirements commonly found on airborne applications, high MTBF ground-based equipment and space applications.

From our US Trusted Foundry in Lowell, Massachusetts, we continue to improve our ability to provide the highest quality aerospace and defense products.

When program screening requirements call for more than MACOM's standard catalog screening, custom screening programs can be created by adding screening options or by generating a program-specific sequence.

MACOM's Space & High-Reliability Evolution

Watkins Johnson Company/Stellex Microwave Systems/Tyco Electronics/Anzac/RHG/Phoenix Microwave/Metelics/Micrometrics/Hi-Rel Components & MACOM

1960s

- > Pioneered production of TWT's for Pioneer, Voyager and DSCS satellites

1970s

- > First solid state flight qualified production amplifiers and mixers

1980s/1990s/through Today

- > Participated in more than 85 programs (USA & International)
- > Provided hundreds of space qualified solid state space component models

High-Reliability Catalog Screened Products

- > 40+ year history of proven Hi-Rel manufacturing processes supporting both thin film & solder circuit assemblies
- > Same proven manufacturing processes as used in equivalent component designs for custom military and space programs
- > Long established cost effective standardized screening programs for catalog products available in a variety of hermetically sealed metal package styles
- > Available for screening: hybrid amplifiers, hybrid mixers, switches, diodes
- > MACOM has an extensive "in-house" environmental screening capability
- > US Screening Lab to perform specific environmental test requirements
- > Working to expand our partner network
- > Custom environmental screening plans available for hermetically-sealed, packaged products (MIL-PRF-19500, MIL-PRF-38534, MIL-DTL- 28837B, MIL-STD-202, etc.)

Please contact your local sales representative to discuss any environmental screening options.



General Purpose Gain Block Hybrid Amplifiers					
Part Number	Min Frequency (MHz)	Max Frequency (MHz)	Gain (dB)	OIP3 (dBm)	Package
A75-2	5	250	21	19	TO-8
EA54	5	250	27	16	TO-5
A181	10	250	16.5	35	TO-8
CA181	10	250	16.5	35	Connectorized-SMA
SMA181	10	250	16.5	35	SMT
A79	5	300	14	38	TO-8
CA79	5	300	14	38	Connectorized-SMA
SMA79	5	300	14	38	SMT
A56	5	400	26	27	TO-8
EA2	5	400	13.5	21	TO-5
A87	10	400	14	33	TO-8
CA87	10	400	14	33	Connectorized-SMA
SMA87	10	400	14	33	SMT
AMC-151-SMA	5	500	12	36	Connectorized-SMA
A5	5	500	14.8	22	TO-8
A72	5	500	15	26	TO-8
SMA72	5	500	15	26	SMT
A54	5	500	15.5	21	TO-8
A77	5	500	16.5	30	TO-8
CA77	5	500	16.5	30	Connectorized-SMA
SMA77	5	500	16.5	30	SMT
A88	5	500	18.7	30	TO-8
SMA88	5	500	18.7	30	SMT
A74-2	5	500	26	10	TO-8
SMA74-2	5	500	26	10	SMT
SMRA89	5	500	26.5	35	SMT
RA89	5	500	26.5	35	TO-8
CRA89	5	500	26.5	35	Connectorized-SMA
EA54-2	5	500	29.5	20	TO-5
PA511	10	500	12.7	40	TO-8
SMPA511	10	500	12.7	40	SMT
A55	10	500	14.7	24	TO-8
A57	10	500	14.7	28	TO-8
SMA57	10	500	14.7	28	SMT
PA512	10	500	18	40	TO-8
MAAM-007502-CPA512	10	500	18	40	Connectorized-SMA
MAAM-007502-SPA512	10	500	18	40	SMT-8
SMA513	10	500	20	30	SMT
AMC-146-SMA	10	500	21	35	Connectorized-SMA
RA89-1	10	500	30	36	TO-8
CRA89-1	10	500	30	36	Connectorized-SMA
SMRA89-1	10	500	30	36	SMT
MAAM-008200-000A83	10	500	30	10	TO-8
A77-1	5	600	16	30	TO-8
CA77-1	5	600	16	30	Connectorized-SMA
SMA77-1	5	600	16	30	SMT
A5-6	6	600	15.5	21	TO-8

Note: Part numbers are RoHS compliant.
Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box.
All specifications are subject to change.

General Purpose Gain Block Hybrid Amplifiers (continued)

Part Number	Min Frequency (MHz)	Max Frequency (MHz)	Gain (dB)	OIP3 (dBm)	Package
SMA5-6	6	600	16	21	SMT
A59-1	10	700	10.5	36	TO-8
SMA59-1	10	700	10.5	36	SMT
A89	50	800	22	30	TO-8
SMA89	100	800	22	30	SMT
AMC-184-SMA	5	1000	20	20	Connectorized-SMA
AMC-145-SMA	10	1000	10.7	32	Connectorized-SMA
A19-1	10	1000	11.5	35	TO-8
CA19-1	10	1000	11.5	35	Connectorized-SMA
A17	10	1000	12	27	TO-8
CA17	10	1000	12	27	Connectorized-SMA
SMA17	10	1000	12	27	SMT
CA1021	10	1000	26	26	Connectorized-SMA
RA69	10	1000	25	34	TO-8
CRA69	10	1000	25	34	Connectorized-SMA
SMRA69	10	1000	25	34	SMT
A1021	10	1000	26	26	TO-8
SMA1021	10	1000	26	26	SMT
A66-1	10	1000	27.5	28	TO-8
CA66-1	10	1000	27.5	28	Connectorized-SMA
SMA66-1	10	1000	27.5	28	SMT
RA66	10	1000	37	30	TO-8
CRA66	10	1000	37	30	Connectorized-SMA
SMRA66	10	1000	37	30	SMT
AMC-155-SMA	300	1000	12.3	30	Connectorized-SMA
A66	10	1200	23.5	28	TO-8
CA66	10	1200	23.5	28	Connectorized-SMA
SMA66	10	1200	23.5	28	SMT
A64	10	1200	26	20	TO-8
CA64	10	1200	26	20	Connectorized-SMA
SMA64	10	1200	26	20	SMT
A27	5	1500	8.5	28	TO-8
CA24	5	1500	10	21	TO-8
A24	5	1500	20	21	TO-8
SMA24	5	1500	20	21	SMT
A29-1	10	1500	9	32	TO-8
CA29-1	10	1500	9	32	Connectorized-SMA
SMA29-1	10	1500	9	32	SMT
A28	10	1500	11	29	TO-8
CA28	10	1500	11	29	Connectorized-SMA
SMA28	10	1500	11	29	SMT
A26	10	1500	20.5	27	TO-8
CA26	10	1500	20.5	27	Connectorized-SMA
SMA26	10	1500	20.5	27	SMT
A39	10	2000	7.5	34	TO-8
SMA39	10	2000	7.5	34	SMT
A38	10	2000	9.5	30	TO-8

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General Purpose Gain Block Hybrid Amplifiers (continued)

Part Number	Min Frequency (MHz)	Max Frequency (MHz)	Gain (dB)	OIP3 (dBm)	Package
CA38	10	2000	9.5	30	Connectorized-SMA
SMA38	10	2000	9.5	30	SMT
A35	10	2000	10	21	TO-8
CA35	10	2000	10	21	Connectorized-SMA
SMA35	10	2000	10	21	SMT
A37	10	2000	10	28	TO-8
SMA37	10	2000	10	28	SMT
A34	100	2000	16	18	TO-8
SMA34	100	2000	16	18	SMT
A36	100	2000	16.5	23	TO-8
SMA36	100	2000	16.5	23	SMT
CRA36	100	2000	24	22	Connectorized-SMA
RA36	100	2000	24	22	TO-8
SMRA36	100	2000	24	22	SMT
SMPA2010	200	2000	10	33	SMT
A36-1	100	2300	16.2	23	TO-8
CA36-1	100	2300	16.2	23	Connectorized-SMA
SMA36-1	100	2300	16.2	23	SMT
A33-1	2	2400	9	19	TO-8
CA33-1	2	2400	9	19	Connectorized-SMA
SMA33-1	2	2400	9	19	SMT
CA3010	0	2500	9.5	35	Connectorized-SMA
A36-2	100	2600	15	30	TO-8
SMA36-2	100	2600	15	30	SMT
MAAM-007947-CA3602	100	2600	15	30	Connectorized-SMA
PA38-2	200	2600	8.5	33	TO-8
SMPA38-2	200	2600	8.5	33	SMT
A43	100	3200	11.5	21	TO-8
SMA43	100	3200	11.5	21	SMT
PA48	1000	4000	16	34	TO-8
CPA48	1000	4000	16	34	Connectorized-SMA
SMPA48	1000	4000	16	34	SMT
RA46	0	4000	25.5	30	TO-8
SMRA46	1000	4000	25.5	30	SMT
SMRA62	2000	6000	16	28	SMT
AM42-0039	5900	7100	33	45	CR-15
AM42-0002	14000	14500	22	39	R380/CR15
AM42-0007	14000	14500	22	41	R380/CR15

Low Noise Hybrid Amplifiers

Part Number	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Noise Figure (mA)	OIP3 (dBm)	Package
A101	5	100	17	3	36	TO-8
SMA101	5	100	17	3	36	SMT
AM-162-PIN	10	100	12.5	1.1	32	TO-8
AMC-162-SMA	10	100	12.5	1.5	30	Connectorized-SMA
AMS-162-PIN	10	100	12.5	1.5	30	SF-1
MAAM-007844-OCA801	10	200	27.3	2	28	Connectorized-SMA

Note: Part numbers are RoHS compliant.
Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box.
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Low Noise Hybrid Amplifiers (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Noise Figure (mA)	OIP3 (dBm)	Package
A80-1	10	200	27.3	2	28	TO-8
SMA80-1	10	200	27.3	2	28	SMT
A74-1	5	250	31	4.5	21	TO-8
A70	10	250	8	1.6	24	TO-8
SMA70	10	250	8	1.6	24	SMT
A70-1	10	250	8	1.8	28	TO-8
SMA70-1	10	250	8	1.8	28	SMT
A70-2	10	250	8	2.2	38	TO-8
CA70-2	10	250	8	2.2	38	Connectorized-SMA
A231	10	250	26	1.7	22	TO-8
CA231	10	250	26	1.7	22	Connectorized-SMA
SMA231	10	250	26	1.7	22	SMT
A83-1	10	250	35.5	2.5	9	TO-8
CA83-1	10	250	35.5	2.5	9	Connectorized-SMA
SMA83-1	10	250	35.5	2.5	9	SMT
A70-3	20	250	8	2.8	40	TO-8
A82-1	20	250	19	2.8	26	TO-8
SMA82-1	20	250	19	2.8	26	SMT
SMA81	20	250	24.5	2.6	28	SMT0-8
A81-1	20	250	25	2.5	27	TO-8
SMA81-1	20	250	25	2.5	27	SMT
A82	20	250	25	2.8	31	TO-8
CA82	20	250	25	2.8	31	Connectorized-SMA
SMA82	20	250	25	2.8	31	SMT
A81	20	250	25.5	3	28	TO-8
A78	5	300	14	3.5	35	TO-8
CA78	5	300	14	3.5	35	Connectorized-SMA
SMA78	5	300	14	3.5	35	SMT
SMA70-2	10	300	8	2.2	38	SMT0-8
A87-2	10	300	16	2.9	24	TO-8
SMA87-2	10	300	16	2.9	24	SMT
SMA70-3	15	300	8	2.8	40	SMT0-8
PAW1027	35	350	38.5	3.7	43	SOT115J
EA1	5	400	14	4.3	13	TO-5
MAAM-008199-000A51	10	400	15	2.7	10	TO-8
A411	10	400	15.8	3	24	TO-8
SMA411	10	400	15.8	3	24	SMT
A87-1	10	400	16	3.4	31	TO-8
CA87-1	10	400	16	3.4	31	Connectorized-SMA
SMA87-1	10	400	16	3.4	31	SMT
AMC-123-SMA	5	500	10	5.5	30	Connectorized-SMA
A58	5	500	11.5	4	34	TO-8
SMA58	5	500	11.5	4	34	SMT
AM-131-PIN	5	500	11.5	4	34	TO-8
A59	5	500	11.5	4.3	36	TO-8
SMA59	5	500	11.5	4.3	36	SMT
AMC-143-SMA	5	500	15.8	2.5	20	Connectorized-SMA

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Low Noise Hybrid Amplifiers (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Noise Figure (mA)	OIP3 (dBm)	Package
A1	5	500	16	2.4	11	TO-8
SMA1	5	500	16	2.4	11	SMT
AMC-147-SMA	5	500	17	3.4	33	Connectorized-SMA
EA53-2	5	500	19	3.6	24	TO-5
A75	5	500	21	2.1	21	TO-8
CA75	5	500	21	2.1	21	Connectorized-SMA
SMA75	5	500	21	2.1	21	SMT
A76-1	5	500	27.5	3	26	TO-8
SMA76-1	5	500	27.5	3	26	SMT
A515	5	500	27.5	3.5	33	TO-8
MAAM-007272-OCA515	5	500	27.5	3.5	33	Connectorized-SMA
MAAM-007272-SMA515	5	500	27.5	3.5	33	SMT
A76	5	500	28	3	28	TO-8
CA76	5	500	28	3	28	Connectorized-SMA
SMA76	5	500	28	3	28	SMT
A514	5	500	28	4	32	TO-8
MAAM-007272-OCA514	5	500	28	4	32	Connectorized-SMA
MAAM-007272-SMA514	5	500	28	4	32	SMT
A74	5	500	30	3	20	TO-8
CA74	5	500	30	3	20	Connectorized-SMA
SMA74	5	500	30	3	20	SMT
A73	5	500	32	3.5	15	TO-8
SMA73	5	500	32	3.5	15	SMT
A180	10	500	16.5	3.4	33	TO-8
CA180	10	500	16.5	3.4	33	Connectorized-SMA
SMA180	10	500	16.5	3.4	33	SMT
A511	10	500	17	3.4	33	TO-8
CA511	10	500	17	3.4	33	Connectorized-SMA
A75-3	10	500	20.5	1.7	16	TO-8
SMA75-3	10	500	20.5	1.7	16	SMT
SMA80	10	550	29	2.3	27	SMT
A531	10	500	31.7	2	14	TO-8
CA531	10	500	31.7	2	14	Connectorized-SMA
A81-3	20	500	17	4	20	TO-8
A81-2	20	500	24.5	3	28	TO-8
CA81-2	20	500	24.5	3	28	Connectorized-SMA
SMA81-2	20	500	24.5	3	28	SMT
A80	20	500	29	2.3	27	TO-8
A67-1	10	600	15	3.7	30	TO-8
CA67-1	10	600	15	3.7	30	Connectorized-SMA
SMA67-1	10	600	15	3.7	30	SMT
A611	5	700	15	3.2	24	TO-8
SMA611	5	700	15	3.2	24	SMT
A67	10	800	14	4	30	TO-8
AMC-176-SMA	5	1000	13.2	4	27	Connectorized-SMA
A11	5	1000	14.7	3.1	10	TO-8
SMA11-2	5	1000	16	2.5	10	SMT

Note: Part numbers are RoHS compliant.

Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

Low Noise Hybrid Amplifiers (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Noise Figure (mA)	OIP3 (dBm)	Package
A63	5	1000	16	3	15	TO-8
SMA63	5	1000	16	3	15	SMT
AMC-182-SMA	5	1000	28.2	3.5	20	Connectorized-SMA
A18-1	10	1000	14.7	3.8	30	TO-8
CA18-1	10	1000	14.7	3.8	30	Connectorized-SMA
SMA18-1	10	1000	14.7	3.8	30	SM
A12	10	1000	16	2.8	22	TO-8
A66-3	10	1000	26	3	13	TO-8
CA66-3	10	1000	26	3	13	Connectorized-SMA
SMA66-3	10	1000	26	3	13	SMT
A1031	10	1000	28.5	2.7	22	TO-8
SMA1031	10	1000	28.5	2.7	22	SMT
MAAM-008198-OCA162	10	1200	13	3.5	18	Connectorized-SMA
MAAM-008198-SMA162	10	1200	13	3.5	18	SMT0-8
CA12	10	1200	14	2.8	20	Connectorized-SMA
A1211	10	1200	14	2.8	20	TO-8
SMA1211	10	1200	14	2.8	20	SMT
A1212	100	1200	14	1.8	29	TO-8
CA1212	100	1200	14	1.8	29	Connectorized-SMA
SMA1212	100	1200	14	1.8	29	SMT
A25-1	2	1500	13.5	3	22	TO-8
A28-2	10	1500	14	3.5	24	TO-8
CA28-2	10	1500	14	3.5	24	Connectorized-SMA
SMA28-2	10	1500	14	3.5	24	SMT
A31-1	10	2000	11.5	3.5	9	TO-8
A32-1	100	2000	11.5	2.5	25	TO-8
CA32-1	100	2000	11.5	2.5	25	Connectorized-SMA
SMA32-1	100	2000	11.5	2.5	25	SMT
A32	100	2000	13	2.1	32	TO-8
CA32	100	2000	13	2.1	32	Connectorized-SMA
SMA32	100	2000	13	2.1	32	SMT
PA38	200	2000	10	4	34	TO-8
CPA38	200	2000	10	4	34	Connectorized-SMA
SMPA38	200	2000	10	4	34	SMT
MAAM-007501-OA2002	20	2700	11.5	2.5	40	TO-8
MAAM-007501-CA2002	20	2700	11.5	2.5	40	Connectorized-SMA
MAAM-007501-SA2002	20	2700	11.5	2.5	40	SMT0-8
A4011	1000	4000	15.5	2	29	TO-8
SMA4011	1000	4000	15.5	2	29	SMT
A45-1	1000	4000	17.5	4	26	TO-8
SMA45-1	1000	4000	17.5	4	26	SMT
A45	1000	4000	17.5	4	29	TO-8
CA45	1000	4000	17.5	4	29	Connectorized-SMA
SMA45	1000	4000	17.5	4	29	SMT
A4012	1000	4000	18	3.5	26	TO-8
SMA4012	1000	4000	18	3.5	26	SMT
SMA6011	1500	6000	14.8	1.5	30	SMT0-8

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Low Noise Hybrid Amplifiers (continued)						
Part Number	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Noise Figure (mA)	OIP3 (dBm)	Package
A61	2000	6000	7.5	3.2	25	TO-8
SMA61	2000	6000	7.5	3.2	25	SMT
A6011	2000	6000	14.8	1.5	30	TO-8
CA6011	2000	6000	14.8	1.5	30	Connectorized-SMA

Mixers					
Part Number	Min Freq RF/RO (MHz)	Max Freq RF/RO (MHz)	Min Freq IF (MHz)	Max Freq IF (MHz)	Package
SM6D	0.05	200	0	200	SMT
M6D-50	0.05	200	0	200	Relay Header
MAC-50-PIN	0.2	200	0	200	TO-5
MDS-222-PIN	0.2	200	0.2	200	SF-1
SM6V	0.4	500	0	500	SMT
M9BC	0.5	500	0	500	Relay Header
MD-161-PIN	1	500	0	500	FP-2
M6E-50	5	500	0	500	Relay Header
MAC-51-PIN	5	500	0	500	TO-5
MDS-223-PIN	10	500	10	500	SF-1
M1H	180	620	0	200	SMA
M6EH	5	750	0	500	Relay Header
SM6EH	5	750	0	500	SMT
M2E	10	1000	0	600	TO-8
M2EC	10	1000	0	600	SMA
SM2E	10	1000	0	600	SMT
MD-160-PIN	1	1500	1	1000	RH-3
MDS-158-PIN	5	1500	—	—	SF-1
M9H	10	1500	0	600	TO-8
M9HC	10	1500	0	600	SMA
M2AC	10	1500	0	800	SMA
M4A	10	1500	0	1000	Flatpack-SMT
SM4A	10	1500	0	1000	SMT
SM4B	10	1500	0	1000	SMT
MD-148-PIN	10	1500	10	1500	FP-2
MDS-148-PIN	10	1500	10	1500	SF-1
MD-149-PIN	10	1500	10	1500	FP-2
MDS-149-PIN	10	1500	10	1500	SF-1
M2B	10	1600	0	800	TO-8
M2BC	10	1600	0	800	SMA
M2TC	10	2400	1	1000	SMA
SM4G	800	2400	0	1500	SMT
MD-123-PIN	10	3000	10	3000	FP-2
M4TH	1	3400	1	2000	Flatpack-SMT
SM4T	1	3400	1	2000	SMT
SM4T17	1	3400	1	2000	SMT
SM4TH	1	3400	1	2000	SMT
M8T	1	3400	1	2000	TO-8
M8TC	1	3400	1	2000	SMA
M8TH	1	3400	1	2000	TO-8

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Mixers (continued)					
Part Number	Min Freq RF/RO (MHz)	Max Freq RF/RO (MHz)	Min Freq IF (MHz)	Max Freq IF (MHz)	Package
M8THC	1	3400	1	2000	SMA
MD-169-PIN	1	3500	1	3500	FP-2
MDC-169-SMA	1	3500	1	3500	C-7
MD-189-PIN	1	3500	1	3500	FP-2
MDS-189-PIN	1	3500	1	3500	SF-1
MDS-169-PIN	1	3500	5	1500	SF-1
M2G	800	3500	0	1500	TO-8
M2GC	800	3500	0	1500	SMA
MD-179-PIN	1	4000	5	1500	FP-2
MDC-179-SMA	1	4000	5	1500	C-7
M8H-3	3700	4200	0	2000	TO-8
SM5T	50	5000	50	3000	SMT
SM5T17	50	5000	50	3000	SMT
SM5TH	50	5000	50	3000	SMT
MZ6310C	250	5500	0	1500	SMA
M63C	2500	5500	0	1500	SMA
M8H-7	2400	6000	0	2000	TO-8
M8HC-7	2400	6000	0	2000	SMA
MDC-162-SMA	1000	7000	10	2000	C-2
MY63	2500	7000	0	15000	Versapac
MY63C	2500	7000	0	15000	SMA
M63H	2500	7500	0	1500	Minpac
M63HC	2500	7500	0	1500	SMA
MY63H	2500	7500	0	1500	Versapac
MY63HC	2500	7500	0	1500	SMA
M76H	4500	8500	0	2000	Minpac
M76HC	4500	8500	0	2000	SMA
MY76H	4500	8500	0	2000	Versapac
MY76HC	4500	8500	0	2000	SMA
M76	4500	9500	0	2000	Minpac
M76C	4500	9500	0	2000	SMA
MY76	4500	9500	0	2000	Versapac
MY76C	4500	9500	0	2000	SMA
MY84	1800	10000	0	1000	Versapac
MY84C	1800	10000	0	1000	SMA
M77C	8000	12500	0	2500	SMA
MY77	8000	12500	0	2500	Versapac
MY77C	8000	12500	0	2500	SMA
M14A	6000	14000	0	2000	SMA
M67C	9000	15000	0	2500	SMA
MY83H	2	18000	30	5000	Versapac
MY83HC	2	18000	30	5000	SMA
M83	1000	18000	30	5000	Minpac
M83C	1000	18000	30	5000	SMA
MY88HC	1000	18000	1000	8000	SMA
M89C	1000	18000	1000	8000	SMA
M85	2000	18000	0	1000	Minpac

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Mixers (continued)					
Part Number	Min Freq RF/RO (MHz)	Max Freq RF/RO (MHz)	Min Freq IF (MHz)	Max Freq IF (MHz)	Package
M85C	2000	18000	0	1000	SMA
MY85	2000	18000	0	1000	Versapac
MY85C	2000	18000	0	1000	SMA
M93C	2000	18000	30	4000	SMA
MY93	2000	18000	30	4000	Versapac
MY93C	2000	18000	30	4000	SMA
MY82	2000	18000	30	5000	Versapac
MY82C	2000	18000	30	5000	SMA
MZ9310	2000	18000	30	5000	Versapac
MZ9310C	2000	18000	30	5000	SMA
MZ9313	2000	18000	30	5000	Versapac
MZ9313C	2000	18000	30	5000	SMA
MZ8810C	2000	18000	1000	8000	SMA
MZ8813	2000	18000	1000	8000	Versapac
M88C	2000	18000	1000	8000	SMA
MY88	2000	18000	1000	8000	Versapac
MY88C	2000	18000	1000	8000	SMA
M50A	2000	18000	2000	18000	Minpac
M50AC	2000	18000	2000	18000	SMA
M88H	2000	18000	2000	8000	Minpac
M88HC	2000	18000	2000	8000	SMA
MY89	2000	18000	2000	8000	Versapac
MY89C	2000	18000	2000	8000	SMA
M86C	3500	18000	0	3000	SMA
M80C	4000	18000	0	3000	SMA
M79C	5000	18000	0	3000	SMA
M79H	5000	18000	0	3000	Minpac
M79HC	5000	18000	0	3000	SMA
MZ7407	6000	18000	0	3000	Versapac
MZ7407C	6000	18000	0	3000	SMA
MZ7410	6000	18000	0	3000	Versapac
MZ7410C	6000	18000	0	3000	SMA
MZ7420	6000	18000	0	3000	Versapac
MZ7420C	6000	18000	0	3000	SMA
M74	7000	18000	0	3000	Minpac
M74C	7000	18000	0	3000	SMA
M87C	500	19000	30	5000	SMA
MY87	500	19000	30	5000	Versapac
MY87C	500	19000	30	5000	SMA
M52C	2000	24000	100	5000	SMA
MY52	2000	24000	100	5000	Versapac
MY52C	2000	24000	100	5000	SMA
M51C	2000	24000	1000	15000	SMA
MY51	2000	24000	1000	15000	Versapac
MY51C	2000	24000	1000	15000	SMA
MZ5010	2000	26000	1	15000	Versapac
MZ5010C	2000	26000	1	15000	SMA

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Mixers (continued)

Part Number	Min Freq RF/RO (MHz)	Max Freq RF/RO (MHz)	Min Freq IF (MHz)	Max Freq IF (MHz)	Package
M53C	2000	26000	100	6000	SMA
MY50A	2000	26000	1000	12000	Versapac
MY50AC	2000	26000	1000	12000	SMA
M50C	2000	26000	1000	15000	SMA
MY50	2000	26000	1000	15000	Versapac
MY50C	2000	26000	1000	15000	SMA

Power Dividers

Part Number	Min Freq (MHz)	Max Freq (MHz)	Channels (#)	Amplitude Balance (dB)	Phase Balance (°)	Isolation (dB)	Max Input Power (dBm)	Package
M3H-50-PIN	1	100	3	0.2	1	30	30	TO-5
DS-310-PIN	0	300	4	0.2	4	25	30	FP-5
M3V-50-PIN	50	300	3	0.2	2	25	30	TO-5
DS-113-PIN	0	400	2	0.2	1	25	30	FP-2
DSS-113-PIN	0	400	2	0.2	1	25	30	SF-1
DS-318-PIN	5	500	2	0.2	1	18	30	RH-1
DS-109-PIN	10	500	2	0.2	1	25	30	FP-2
DS-319-PIN	10	500	2	0.2	1	25	30	TO-8
DSS-333-PIN	10	500	2	0.2	2	25	30	SF-1
DS-112-PIN	10	500	3	0.2	2	25	30	TO-5
DS-328-PIN	3	700	3	0.3	3	20	30	TO-8
DSS-327-PIN	5	1000	2	0.2	3	20	30	FP-2
DSS-333-PIN	5	1000	2	0.2	3	20	30	FP-2
DS-323-PIN	25	1000	3	0.4	4	24	30	FP-3
DS-324-PIN	25	1000	4	0.3	6	20	30	FP-5
DS-331-PIN	750	1500	2	0.2	6	10	30	TO-8
DS-313-PIN	10	2000	2	0.3	4	23	24	FP-2
DSS-313-PIN	10	2000	2	0.3	4	23	24	SF-1

Varactor Tuning Diodes

Part Number	Total Capacitance (pF)	Gamma	Quality Factor @ 50 MHz, Min	Breakdown Voltage (V)	Package
MA46600-134	0.3	0.5	8000	30	ODS-134 DIE
MA46603-134	0.6	0.5	6500	30	ODS-134 DIE
MA46H070-1056	0.6	0.75	4500	20	ODS-1056
MA46H071-1056	1	0.75	4500	20	ODS-1056
MA46416-134	1.8	1.5	2500	18	ODS-134 DIE
MA46H072-1056	3	0.75	3000	20	ODS-105
MA46H073-1056	5	0.75	2200	20	ODS-1056

Multiplier Step Recovery Diodes

Part Number	Total Capacitance Min (pF)	Total Capacitance Max (pF)	Reverse Voltage (V)	Lifetime (Typ vs Min) (ns)	Tt (Typ vs Max) (ps)	Package
MMDB45-B11	0.11	0.2	25	8	40	B11
MMDB35-B11	0.13	0.2	16	4	35	B11
MMDB30-B11	0.15	0.25	14	4	30	B11
MSD700	0.2	0.4	15	8	60	DIE/Various
MSD710	0.2	0.4	20	11	70	DIE/Various
MSD720	0.2	0.4	30	17	100	DIE/Various
MMDB37-C11	0.2	0.4	20	5	70	DIE

Note: Part numbers are RoHS compliant.
Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box.
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Multiplier Step Recovery Diodes (continued)

Part Number	Total Capacitance Min (pF)	Total Capacitance Max (pF)	Reverse Voltage (V)	Lifetime (Typ vs Min) (ns)	Tt (Typ vs Max) (ps)	Package
MMD840-C11	0.2	0.4	15	7	70	DIE
MMD840-H27	0.32	0.52	15	7	70	H27
MMD837-H27	0.32	0.52	20	5	70	H27
MMD840-T86	0.38	0.58	15	7	70	T86
MMD837-T86	0.38	0.58	20	5	70	T86
MSD701	0.4	0.6	15	8	60	DIE/Various
MSD711	0.4	0.6	20	11	70	DIE/Various
MSD731	0.4	0.6	40	21	150	DIE/Various
MMD835-C11	0.3	0.7	15	10	70	DIE
MMD0840-A15	0.6	0.75	15	20	75	A15
MMD0151-A15	0.7	0.8	15	15	100	A15
MMD832-C11	0.4	0.8	20	10	80	DIE
MSD722	0.6	0.8	30	17	100	DIE/Various
MMD835-H20	0.42	0.92	15	10	70	H20
MMD835-T86	0.48	0.98	15	10	70	T86
MMD832-H20	0.58	0.98	20	10	60	H20
MMD832-T86	0.58	0.98	20	10	60	T86
MSD703	0.8	1	15	8	60	DIE/Various
MSD723	0.8	1	30	17	100	DIE/Various
MSD733	0.8	1	40	21	150	DIE/Various
MMD830-T86	0.68	1.18	25	10	80	T86
MMD830-H20	0.68	1.18	25	15	80	H20
MSD724	1	1.4	30	17	100	DIE/Various
MMD820-C12	1	1.7	40	30	100	DIE
MMD820-H20	1.18	1.88	40	30	100	H20
MMD820-T86	1.18	1.88	40	30	100	T86
MMD810-T86	1.68	2.68	50	40	250	T86
MSD726	2	3	30	17	100	DIE/Various
MSD736	2	3	40	21	150	DIE/Various
MMD0815-A15	3.15	4.15	50	135	320	A15

PIN Switch and Attenuator Diodes

Part Number	Min Freq (MHz)	Max Freq (MHz)	CW Power Dissipation (W)	Total Capacitance (pF)	Resistance (Ω)	T _L (ns)	Breakdown Voltage Min (V)	Package
MMP7078	0.1	100	—	1	0.5	2500	400	DIE/Various
MA4P504-30	1	500	7.5	0.4	0.6	1000	500	ODS-30
MA4P504-186	1	500	7.5	0.4	0.6	1000	500	ODS-186
MA4P504-255	1	500	7.5	0.4	0.6	1000	500	ODS-255
MA4P505-255	1	500	10.7	0.55	0.5	2000	500	ODS-255
MA4P506-30	1	500	13.6	0.95	0.3	3000	500	ODS-30
MA4P506-31	1	500	13.6	0.95	0.3	3000	500	ODS-31
MADP-000015-000030	1	500	15	0.55	0.4	2000	500	ODS-30
MA4P604-255	1	500	15	0.6	1	3000	1000	ODS-255
MA4P606-30	1	500	15	0.8	0.7	4000	1000	ODS-30
MA4P606-36	1	500	20	0.99	0.7	4000	1000	ODS-36
MA4P607-296	1	500	25	2.35	0.4	5000	1000	ODS-296
MA47047-54	1	1000	0.3	0.3	1.5	1000	200	ODS-54
MA47266-146	1	1000	0.5	1.5	0.6	4000	200	ODS-146

Note: Part numbers are RoHS compliant.
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PIN Switch and Attenuator Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	CW Power Dissipation (W)	Total Capacitance (pF)	Resistance (Ω)	T _L (ns)	Breakdown Voltage Min (V)	Package
MA4P606-4	1	1000	1	0.7	0.7	4000	1000	ODS-4
MA4P606-131	1	1000	15	0.6	0.7	4000	1000	ODS-131 DIE
MADP-000488-13740W	100	1500	15	0.16	1.6	4000	900	ODS-1374 DIE
MADP-000135-01340W	100	1500	50	0.15	1.2	440	200	ODS-134 DIE
MPN3001	—	2000	—	0.25	1	—	200	A15
MA4P404-30	5	2000	7.5	0.4	0.6	1000	250	ODS-30
MADP-042505-130600	50	2000	1.3	0.6	0.8	210	80	ODS-1306 DIE
MADP-042508-130600	50	2000	1.3	0.6	0.9	310	100	ODS-1306 DIE
MADP-000165-01340W	100	2000	50	0.06	2.5	200	200	ODS-134 DIE
MA4P604-30	1	2500	15	0.5	1	3000	1000	ODS-30
MADP-000506-014400	1	4000	10	0.7	0.3	100	500	ODS-144
MA4P506-131	1	4000	13.6	0.7	0.3	3000	500	ODS-131 DIE
MA4P505-36	1	4000	15	0.55	0.5	2000	500	ODS-36
MA4P303-186	20	4000	0.3	0.35	1.5	200	200	ODS-186
MA4P303-120	20	4000	5	0.35	1.5	200	200	ODS-120
MA4P203-1056	30	4000	0.3	0.35	1.5	100	100	ODS-1056
MA4P203-30	30	4000	5	0.35	1.5	100	100	ODS-30
MA4P202-120	50	4000	0.3	0.25	2.5	60	100	ODS-120
MADP-042405-130600	50	4000	1.3	0.27	0.8	210	80	ODS-1306 DIE
MMP7092	1	6000	—	0.2	0.6	1000	500	DIE/Various
MMP7024	1	6000	—	0.25	0.5	60	70	DIE/Various
MPN7420	1	6000	2.5	0.06	1	1000	400	C12
MPN7453A	1	6000	3	0.1	0.7	700	300	C22
MPN7453B	1	6000	3	0.15	0.6	2500	400	C22
MPN7453C	1	6000	3	0.18	0.4	1000	300	C22
MADP-017025-1314	1	6000	5	0.23	1	2300	1335	ODS-1314 DIE
MADP-017015-1314	1	6000	5	0.32	0.7	1300	115	ODS-1314 DIE
MPN7380	1	6000	10	0.4	0.3	2500	800	C38
MPN7360	1	6000	10	0.8	0.2	2500	600	C37
MPN7370	1	6000	10	2	0.2	5000	700	C39
MA4P505-131	1	6000	10.7	0.35	0.5	2000	500	ODS-131 DIE
MADP-030025-1314	1	6000	11.5	0.5	0.7	2800	135	ODS-1314 DIE
MADP-030015-13140P	1	6000	11.5	0.78	0.5	1600	115	ODS-1314 DIE
MPN7320-H20	5	6000	1	0.2	3	120	150	H20
MPN7345	5	6000	4	0.3	0.3	500	300	C40
MPN7315-H20	10	6000	1	0.26	1.2	180	150	H20
MPN7312A-H20	20	6000	1	0.26	1.2	150	120	H20
MPN7312B-H20	20	6000	1	0.36	0.8	250	120	H20
MADP-042305-130600	50	6000	1	0.14	1.3	180	80	ODS-1306 DIE
MADP-042308-130600	50	6000	1	0.14	1.3	280	100	ODS-1306 DIE
MPN7306-H20	100	6000	1	0.26	1.2	50	70	H20
MPN7302-H20	500	6000	1	0.26	1.2	8	20	H20
MMP7023	1	8000	—	0.2	0.7	60	70	DIE/Various
MA47222	1	8000	3.8	0.4	1.6	160	150	ODS-144
MA47223	1	8000	7.5	0.4	0.6	1000	500	ODS-144
MA4P504-144	1	8000	7.5	0.4	0.6	1000	500	ODS-144
MA4P604-131	1	8000	15	0.3	1	3000	1000	ODS-131 DIE

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PIN Switch and Attenuator Diodes (continued)								
Part Number	Min Freq (MHz)	Max Freq (MHz)	CW Power Dissipation (W)	Total Capacitance (pF)	Resistance (Ω)	T _L (ns)	Breakdown Voltage Min (V)	Package
MNP0012A-T54P	5	8000	0.25	0.36	0.6	650	350	T54p
MNP0012A-T55P	5	8000	0.25	0.31	0.6	650	350	T55p
MNP0012A-T89P	5	8000	0.25	0.43	0.6	650	350	T89p
MNP0012A	5	8000	1	0.18	0.6	650	350	C22p
MA47416-132	DC	10000	5	0.15	6	2000	200	ODS-132 DIE
MMP7022	1	10000	—	0.15	0.9	60	70	DIE/Various
MNP0014-T55P	1	10000	0.1	0.25	0.8	750	450	T55p
MNP0014-T54P	1	10000	0.1	0.32	0.8	750	450	T54p
MNP0014-T89P	1	10000	0.1	0.37	0.8	750	450	T89p
MNP0014	1	10000	1.5	0.12	1.3	750	500	C22p
MA47418-134	5	10000	6	0.15	3	1000	200	ODS-134 DIE
MA4P504-132	1	10000	7.5	0.2	0.6	1000	500	ODS-132 DIE
MA4P404-132	5	10000	7.5	0.2	0.7	600	250	ODS-132 DIE
MNP0012-T55P	5	12000	0.25	0.21	3.5	350	300	T55p
MNP0012-T54P	5	12000	0.25	0.28	3.5	350	300	T54p
MNP0012-T89P	5	12000	0.25	0.33	3.5	350	300	T89p
MPN7320	5	12000	1	0.02	3	120	150	C01
MNP0012	5	12000	1	0.08	3.5	350	300	C12p
MNP0010-T55P	10	12000	0.25	0.21	2	300	150	T55p
MNP0010-T54P	10	12000	0.25	0.28	2	300	150	T54p
MNP0010-T89P	10	12000	0.25	0.33	2	300	150	T89p
MPN7312B	20	12000	1	0.18	0.8	250	120	C12
MNP0008-T55P	100	12000	0.25	0.21	2	150	100	T55p
MNP0008-T54P	100	12000	0.25	0.28	2	150	100	T54p
MNP0008-T89P	100	12000	0.25	0.33	2	150	100	T89p
MPN7306	100	12000	1	0.08	1.2	50	70	C12
MMP7011	200	12000	—	0.15	0.8	10	25	DIE/Various
MPN7302	500	12000	1	0.08	1.2	8	20	C11
MMP7021	1	14000	—	0.1	1	60	70	DIE/Various
MADP-042905-130600	50	16000	0.8	0.06	3.1	140	80	ODS-1306 DIE
MADP-042908-130600	50	16000	0.8	0.06	3.1	230	100	ODS-1306 DIE
MMP7025	1	18000	—	0.03	1.9	100	100	DIE/Various
MMP7020	1	18000	—	0.05	1.2	60	70	DIE/Various
MA4P203-134	30	18000	5	0.15	1.5	100	100	ODS-134 DIE
MA4P303-134	20	18000	5	0.15	1.5	200	200	ODS-134 DIE
MADP-000402-12530P	50	18000	1	0.04	4.5	200	70	ODS-1253 DIE
MA4SPS402	50	18000	1	0.04	5	200	100	ODS-1253 DIE
MADP-000402-12530G	50	18000	1	0.04	5	200	1000	ODS-1253 DIE
MADP-064908-131000	50	18000	1	0.05	5	200	100	ODS-1310 DIE
MA4P7493-134	50	18000	2.5	0.05	1.8	80	150	ODS-134 DIE
MA4PBL027	100	18000	0.2	0.03	4	150	90	Beam Lead DIE
MA4P161-134	100	18000	2.3	0.1	1.5	150	100	ODS-134 DIE
MMPN080045	2000	20000	—	—	—	—	200	C50
MA4SPS302	1	26000	0.8	0.4	1.3	460	100	SURMOUNT™ DIE
MA4SPS502	1	26000	35	0.14	2.4	2800	275	ODS-1270
MA4SPS552	50	26000	1	0.06	1.7	2500	200	ODS-1270
MMPN080150	2000	35000	—	—	—	—	200	C51

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PIN Switch and Attenuator Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	CW Power Dissipation (W)	Total Capacitance (pF)	Resistance (Ω)	T _L (ns)	Breakdown Voltage Min (V)	Package
MA4AGBLP912	100	40000	0.1	0.02	4	5	50	Beam Lead DIE
MA4GP022	100	40000	0.3	0.15	1	20	50	ODS-277
MA4GP030	100	40000	0.3	0.06	2	25	100	ODS-277
MMSPN050-C53	1000	40000	40	—	0.6	4000	200	C53
MMSPN050-C54	1000	40000	40	—	0.6	4000	200	C54

PIN Limiter Diodes

Part Number	Incident Power, Max (W)	Thermal Resistance	Junction Capacitance (pF)	Resistance (Ω)	Lifetime (ns)	V _B (V)	Package
MADL-04L401-0113W0	—	25	0.3	1.2	800	—	ODS-134 DIE
MLP7140	50	100	0.12	2	7	30 – 40	DIE/Various
MLP7100	50	100	0.2	1.5	5	20 – 45	DIE/Various
MLP7130	50	120	0.12	2	5	15 – 30	DIE/Various
MA4L011-134	80	175	0.18	2.1	10	—	ODS-134 DIE
MADL-000011-13880G	80	175	0.18	2.1	10	—	ODS-13880G DIE
MA4L011-186	80	175	0.33	2.1	10	—	ODS-186
MA4L011-30	80	175	0.36	2.1	10	—	ODS-30
MA4L011-31	80	175	0.36	2.1	10	—	ODS-31
MA4L011-1056	80	175	0.38	2.1	10	—	ODS-1056
MA4L011-32	80	175	0.48	2.1	10	—	ODS-32
MA4L022-134	90	175	0.19	2	10	—	ODS-134 DIE
MA4L021-134	90	175	0.2	2.1	10	—	ODS-134 DIE
MADL-011021-14210G	90	175	0.2	2.1	10	—	ODS-1056
MA4L022-120	90	175	0.32	2	10	—	ODS-120
MA4L021-120	90	175	0.33	2.1	10	—	ODS-120
MA4L022-186	90	175	0.34	2	10	—	ODS-186
MA4L022-30	90	175	0.37	2	10	—	ODS-30
MA4L021-31	90	175	0.38	2.1	10	—	ODS-31
MADL-000021-003000	90	175	0.38	21	10	—	ODS-30
MA4L022-1056	90	175	0.39	2	10	—	ODS-1056
MA4L021-1056	90	175	0.4	2.1	10	—	ODS-1056
MA4L022-32	90	175	0.49	2	10	—	ODS-32
MLP7102	100	55	0.7	1	10	20 – 45	DIE/Various
MLP7141	100	70	0.2	1.5	7	30 – 60	DIE/Various
MLP7131	100	80	0.2	1.5	5	15 – 30	DIE/Various
MLP7101	100	80	0.5	1.2	10	20 – 45	DIE/Various
MA4L032-134	125	150	0.2	2.5	15	—	ODS-134 DIE
MA4L031-134	125	150	0.21	2	20	—	ODS-134 DIE
MADL-000031-13880G	125	150	0.21	2.1	20	—	ODS-1388
MADL-000032-003000	125	150	0.21	2.1	20	—	ODS-3000
MADL-011010-01340W	125	150	0.24	1.5	15	—	ODS-134
MA4L032-186	125	150	0.35	2.5	15	—	ODS-186
MA4L031-186	125	150	0.36	2	20	—	ODS-186
MA4L032-31	125	150	0.38	2.5	15	—	ODS-31
MA4L031-31	125	150	0.39	2	20	—	ODS-31
MA4L032-1056	125	150	0.4	2.5	15	—	ODS-1056
MA4L031-1056	125	150	0.41	2	20	—	ODS-1056
MA4L032-32	125	150	0.5	2.5	15	—	ODS-32

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PIN Limiter Diodes (continued)

Part Number	Incident Power, Max (W)	Thermal Resistance	Junction Capacitance (pF)	Resistance (Ω)	Lifetime (ns)	V_B (V)	Package
MLP7110	200	80	0.2	1.5	10	45 – 75	DIE/Variou
MA4L062-134	200	150	0.15	2.5	10	—	ODS-134 DIE
MADL-000062-13880G	200	150	0.15	2.5	10	—	ODS-13880G DIE
MADL-011011-01340W	200	150	0.17	2.3	10	—	ODS-134
MADL-000062-105600	200	150	0.35	2.5	10	—	ODS-1056
MA4L101-134	250	30	0.15	2	90	—	ODS-134 DIE
MADL-000101-13880G	250	30	0.15	2	90	—	ODS-13880G DIE
MA4L101-186	250	30	0.3	2	90	—	ODS-186
MA4L101-30	250	30	0.33	2	90	—	ODS-30
MLP7111	400	60	0.5	1.2	15	45 – 75	DIE/Variou
MADL-000301-01340W	500	30	0.2	1.5	200	—	ODS-134 DIE
MADL-000301-13870G	500	30	0.2	1.5	200	—	ODS-1370
MA4L301-31	500	30	0.38	1.5	200	—	ODS-31
MA4L301-1056	500	30	0.4	1.5	200	—	ODS-1056
MADL-011052-14280W	500	36	0.19	2	222	—	ODS-134 DIE
MLP7112	795	40	0.7	1	20	45 – 75	DIE/Variou
MA4L401-134	1000	25	0.3	1.2	800	—	ODS-134 DIE
MADL-000401-13870G	1000	25	0.3	1.2	800	—	ODS-13870G DIE
MA4L401-120	1000	25	0.43	1.2	800	—	ODS-32
MA4L401-30	1000	25	0.48	1.2	800	—	ODS-30
MA4L401-31	1000	25	0.48	1.2	800	—	ODS-31
MA4L401-1056	1000	25	0.5	1.2	800	—	ODS-1056
MLP7120	1000	40	0.2	1.5	50	120 – 180	DIE/Variou
MLP7121	2000	20	0.6	1	50	120 – 180	DIE/Variou
MLP7122	4000	15	0.8	0.5	100	120 – 180	DIE/Variou

Schottky Mixer and Detector Diodes

Part Number	Min Freq (MHz)	Max Freq (MHz)	Total Capacitance (pF)	Dynamic Resistance (Ω)	V_F (mV)	V_B (V)	Package
MA4E929A-119	DC	18	0.25	40	0.41	1	ODS-119
MA4E929B-119	DC	18	0.25	40	—	1	ODS-119
MA4E932A-186	DC	18	0.25	40	—	1	ODS-186
MA4E932B-186	DC	18	0.25	40	—	1	ODS-186
MGR703	DC	1000	1	—	0.41	20	DIE/Variou
MGR700	DC	1000	1.2	—	0.34	8	DIE/Variou
MGR705	DC	1000	1.2	—	0.41	70	DIE/Variou
MNM207	DC	2600	0.14	20	0.425	4	DIE/Variou
MNM201	DC	2600	0.2	20	0.4	3	DIE/Variou
MNM212	DC	2600	0.21	20	0.475	5	DIE/Variou
MA40261	DC	3000	0.32	0.32	0.41	70	ODS-186
MA4E2811	DC	3000	1.2	—	0.41	15	ODS-56
MA4E2812-54	DC	3000	1.2	—	0.55	20	ODS-57
1N5711	DC	3000	1.2	2	-1.45	70	ODS-54
MSS20-054-C15	DC	8000	0.2	80	—	0.8	C15P
MSS20-055-C15	DC	8000	0.2	80	—	0.8	C15P
MZB600-32	DC	8000	0.2	3500	0.3	3	CS32
MZB604-B11	DC	8000	0.2	5000	0.3	4	B11
MSS20-054-H27	DC	8000	0.35	80	—	0.8	H27

Note: Part numbers are RoHS compliant.
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Schottky Mixer and Detector Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Total Capacitance (pF)	Dynamic Resistance (Ω)	V_F (mV)	V_B (V)	Package
MSS20-055-H27	DC	8000	0.35	80	—	0.8	H27
MSS20-054-T86	DC	8000	0.41	80	—	0.8	T86p
MSS20-055-T86	DC	8000	0.41	80	—	0.8	T86p
MA4E931Z2-1261A	DC	10000	—	—	.015	3.0	DIE
MA40205-119	DC	10000	—	—	0.32	3.0	ODS-119
MA40201-119	DC	10000	0.32	—	—	—	ODS-119
MA40264	DC	10000	0.32	—	0.15	3	ODS-186
MSS20-050-C15	DC	12000	0.15	80	—	0.8	C15P
MSS20-051-C15	DC	12000	0.15	80	—	0.8	C15P
MSS39-152-B10B	DC	12000	0.18	—	0.38	3.5	B10Bp
MSS39-048-P55	DC	12000	0.3	—	0.4	5	P55p
MSS20-047-T86	DC	12000	0.31	80	—	0.8	T86p
MSS20-050-H27	DC	12000	0.3	80	—	0.8	H27
MSS20-051-H27	DC	12000	0.3	80	—	0.8	H27
MSS20-054-0805-2	DC	12000	0.3	80	—	0.8	0805-2
MSS39-048-P86	DC	12000	0.32	—	0.4	5	P86p
MSS39-148-H20	DC	12000	0.33	—	0.38	3.5	H20
MSS20-050-T86	DC	12000	0.36	80	—	0.8	T86p
MSS20-051-T86	DC	12000	0.36	80	—	0.8	T86p
MA40215-120	DC	16000	0.32	—	0.39	5	ODS-1200
MADS-011030-14280W	DC	16000	0.33	6.5	100	3.5	DIE
MSS39-045-C15	DC	18000	0.1	—	0.4	5	C15p
MSS30-142-B10B	DC	18000	0.1	22	0.29	2	B10B
MSS30-242-B20	DC	18000	0.1	22	0.29	2	B20
MSS30-442-B42	DC	18000	0.1	22	0.29	2	B42
MSS30-442-H40	DC	18000	0.1	22	0.29	2	H40
MSS30-442-B41	DC	18000	0.1	22	0.4	4	B41
MSS40-141-B10B	DC	18000	0.1	22	0.42	3	B10B
MSS20-046-C15	DC	18000	0.1	80	—	0.8	C15P
MSS20-047-C15	DC	18000	0.1	80	—	0.8	C15P
MSS39-148-B10B	DC	18000	0.12	—	0.38	3.5	B10Bp
MSS40-045-C15	DC	18000	0.12	15	0.42	3	C15
MSS30-046-C15	DC	18000	0.12	18	0.29	2	C15
MSS50-146-B10B	DC	18000	0.12	18	0.5	4	B10B
MSS30-PCB46-B48	DC	18000	0.12	20	0.3	2	B48
MSS40-PCB46-B48	DC	18000	0.12	20	0.47	3	B48
MSS40-244-B20	DC	18000	0.12	22	0.44	3	B20
MSS40-CR46-B49	DC	18000	0.125	22	0.47	3	B49
MSS30-B46-B45	DC	18000	0.125	25	0.3	2	B45
MSS50-B46-B45	DC	18000	0.13	20	0.5	4	B45
MSS30 PCR46-B47	DC	18000	0.13	22	0.3	2	B47
MSS40-PCR46-B47	DC	18000	0.13	22	0.47	3	B47
MSS40-B46-B45	DC	18000	0.13	25	0.47	3	B45
MSS30-148-B10B	DC	18000	0.15	15	0.27	2	B10B
MSS30-248-B20	DC	18000	0.15	15	0.27	2	B20
MSS30-448-B41	DC	18000	0.15	15	0.4	2	B41
MSS30-448-B42	DC	18000	0.15	15	0.3	2	B42

Note: Part numbers are RoHS compliant.
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Schottky Mixer and Detector Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Total Capacitance (pF)	Dynamic Resistance (Ω)	V_F (mV)	V_B (V)	Package
MSS40-048-C15	DC	18000	0.15	15	0.42	3	C15
MSS40-148-B10B	DC	18000	0.15	17	0.4	3	B10B
MSS40-448-B42	DC	18000	0.15	17	0.4	3	B42
MSS40-248-B20	DC	18000	0.15	17	0.44	3	B20
MSS30-050-C15	DC	18000	0.18	15	0.27	2	C15
MSS39-144-H27	DC	18000	0.24	—	0.38	3.5	H27
MSS39-146-H27	DC	18000	0.25	—	0.38	3.5	H27
MSS30-154-B10B	DC	18000	0.25	12	0.25	2	B10B
MSS30-454-B40	DC	18000	0.25	12	0.3	2	B40
MSS50-448-B40	DC	18000	0.25	14	0.5	4	B40
MSS30-B53-B45	DC	18000	0.25	15	0.3	2	B45
MSS30-CR53-B49	DC	18000	0.25	15	0.3	2	B49
MSS30-PCR53-B47	DC	18000	0.25	15	0.29	2	B47
MSS40-B53-B45	DC	18000	0.25	15	0.43	3	B45
MSS50-B53-B45	DC	18000	0.25	15	0.5	4	B45
MSS50-CR53-B49	DC	18000	0.25	15	0.5	4	B49
MSS50-PCR53-B48	DC	18000	0.25	15	0.5	4	B47
MSS20-046-H27	DC	18000	0.25	80	—	0.8	H27
MSS20-047-H27	DC	18000	0.25	80	—	0.8	H27
MSS39-045-P86	DC	18000	0.27	—	0.4	5	P86p
MSS40-045-P55	DC	18000	0.28	15	0.42	3	P55
MSS50-046-P55	DC	18000	0.28	20	—	4	P55
MSS40-045-P86	DC	18000	0.3	15	0.42	3	P86
MSS30-346-B21	DC	18000	0.3	16	0.27	2	B21
MSS40-455-B40	DC	18000	0.3	17	0.38	3	B40
MSS30-046-P55	DC	18000	0.3	18	0.29	2	P55
MSS40-141-H20	DC	18000	0.3	18	0.42	3	H20
MSS30-142-H20	DC	18000	0.31	22	0.29	2	H20
MSS30-242-H30	DC	18000	0.31	22	0.29	2	H30
MSS40-455-H40	DC	18000	0.32	14	0.38	3	H40
MSS40-048-P86	DC	18000	0.33	15	0.4	3	P86
MSS30-046-P86	DC	18000	0.33	18	0.29	2	P86
MSS30-CR46-H40	DC	18000	0.33	22	0.3	2	H40
MSS50-146-H20	DC	18000	0.34	18	0.5	4	H20
MSS30-050-P55	DC	18000	0.35	15	0.27	2	P55
MSS30-448-H40	DC	18000	0.35	15	0.3	2	H40
MSS40-CR46-H40	DC	18000	0.35	15	—	3	H40
MSS50-B46-H40	DC	18000	0.35	20	—	4	H40
MSS30-B46-H40	DC	18000	0.35	25	0.3	2	H40
MSS39-152-H20	DC	18000	0.36	—	0.38	3.5	H20
MSS50-448-E45	DC	18000	0.36	10	0.5	4	E45
MSS30-148-H20	DC	18000	0.36	15	0.27	2	H20
MSS30-248-H30	DC	18000	0.36	15	0.27	2	H30
MSS40-448-H40	DC	18000	0.36	15	0.4	3	H40
MSS50-B53-E45	DC	18000	0.36	15	0.5	4	E45
MSS40-155-0402	DC	18000	0.38	14	0.38	3	0402
MSS30-050-P86	DC	18000	0.38	15	0.27	2	P86

Note: Part numbers are RoHS compliant.
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Schottky Mixer and Detector Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Total Capacitance (pF)	Dynamic Resistance (Ω)	V_F (mV)	V_B (V)	Package
MSS30-154-H20	DC	18000	0.46	12	0.25	2	H20
MSS30-254-H30	DC	18000	0.46	12	0.25	2	H30
MSS30-454-H40	DC	18000	0.46	12	0.3	2	H40
MSS30-B53-H40	DC	18000	0.46	15	0.3	2	H40
MSS50-CR53-H40	DC	18000	0.46	15	0.5	4	H40
MSS50-448-H40	DC	18000	0.48	10	0.5	4	H40
MSS50-B53-H40	DC	18000	0.48	15	—	4	H40
MSS30-346-H20	DC	18000	0.5	16	0.29	2	H20
MSS40-155-H20	DC	18000	0.51	14	0.38	3	H20
MSS39-146-B10B	DC	26000	0.1	—	0.38	3.5	B10Bp
MA4E2513L-1289	DC	26000	0.12	10	-0.7	3	ODS-1289
MA4E2501L-1290	DC	26000	0.12	10	0.33	5	ODS-1290
MA4E2502H-1246	DC	26000	0.12	11	0.65	3	ODS-1246
MA4E2502M-1246	DC	26000	0.12	12	-1.58	3	ODS-1246
MA4E2514M-1116	DC	26000	0.12	12	0.47	3	ODS-1116
MA4E2502L-1246	DC	26000	0.12	16	0.33	3	ODS-1246
MA4E2514L-1116	DC	26000	0.12	16	0.33	3	ODS-1116
MA4E2532M-1113	DC	26000	0.16	10	0.47	5	ODS-1113
MA4E2508H-1112	DC	26000	0.24	6	0.7	5	ODS-1112
MA4E2508M-1112	DC	26000	0.24	12	0.42	5	ODS-1112
MA4E2508L-1112	DC	26000	16	0.24	-1.7	5	ODS-1112
MSS39-144-B10B	DC	40000	0.08	—	—	3.5	B10Bp
MSS25-141-B10D	DC	40000	0.08	65	0.28	3	B10D
MSS20-140-B10D	DC	40000	0.08	80	—	0.8	B10D
MSS20-141-B10D	DC	40000	0.08	80	—	0.8	B10D
MSS25-143-B10D	DC	40000	0.1	60	0.26	3	B10D
MSS25-047-C15c	DC	40000	0.1	65	0.26	3	C15c
MSS20-142-0402	DC	40000	0.1	80	—	0.8	0402
MSS20-142-B10D	DC	40000	0.1	80	—	0.8	B10D
MSS20-143-B10D	DC	40000	0.1	80	—	0.8	B10D
MSS25-049-C15c	DC	40000	0.12	52	—	3	C15c
MSS25-145-B10D	DC	40000	0.12	52	0.22	3	B10D
MSS20-145-B10D	DC	40000	0.12	80	—	0.8	B10D
MSS20-146-B10D	DC	40000	0.12	80	—	0.8	B10D
MGS912	DC	60000	0.03	28	2.9	20	B89
MGS906	DC	60000	0.04	14	1.5	10	B90
MGS907	DC	60000	0.04	14	1.5	10	B85
MGS908	DC	60000	0.04	14	—	10	B86
MA4E2037	DC	60000	0.05	4	—	4.5	Beam Lead
MA4E2039	DC	60000	0.05	4	—	4.5	Beam Lead
MA4E2040	DC	60000	0.05	4	0.8	4.5	Beam Lead
MGS904	DC	60000	0.06	7	0.75	5	B85
MGS901	DC	60000	0.06	7	0.75	5	Beam Lead
MGS903	DC	60000	0.06	7	0.75	5	Beam Lead
MGS905	DC	60000	0.06	7	0.75	5	B86
MGS907A	DC	60000	0.06	12	1.5	10	B85
MGS904A	DC	60000	0.08	5	0.75	5	B85

Note: Part numbers are RoHS compliant.
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Schottky Mixer and Detector Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Total Capacitance (pF)	Dynamic Resistance (Ω)	V_F (mV)	V_B (V)	Package
MGS902	DC	60000	0.1	7	0.75	5	Beam Lead
MGS910	DC	60000	0.1	21	2.1	15	B87
MGS909	DC	60000	0.1	21	2.1	15	B90

Switches

Part Number	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Isolation (dB)	Input IP3 (dBm)	Package
SPST						
MASW-001150-1316	45	2500	0.3	65	40	DIE
MA4SW110	50	26500	0.6	48	40	HMIC DIE
MA4AGSW1	50	50000	0.2	43	40	DIE
MA4AGSW1A	50	50000	1.2	48	40	DIE
SPDT						
SW-313-PIN	50	3000	0.8	52	46	CR-2
SW-228-PIN	0	4000	0.7	42	46	CR-2
SW-226-PIN	0	4000	1	48	46	CR-2
MASW-010647	8000	10500	0.8	37	60	DIE
MASW-011021	6000	14000	0.7	34	60	SURMOUNT™ DIE
MASW-002102-13580	2	18000	1.8	55	40	DIE
MASW-011108-DIE	6000	18000	0.6	44	—	DIE
MASW-002103-1363	50	20000	0.8	38	40	SURMOUNT™ DIE
MASW-011052	2000	26000	0.8	50	43	DIE
MA4SW210B-1	2000	26000	1.2	48	40	DIE
MASW-002100-1191	50	26500	0.3	65	40	DIE
MA4SW210	50	26500	0.6	52	40	HMIC DIE
MASW-011144-DIE	20000	40000	65	30	—	DIE
MASW-010646	26000	40000	0.6	39	60	DIE
MASW-011036	26000	40000	0.7	40	60	DIE
MA4AGSW2	50	50000	0.6	46	—	DIE
MASW-011111-DIE	80000	100000	0.8	25	—	DIE
SP3T						
MASW-003102-13590	2000	18000	0.8	50	40	DIE
MASW-011053	2000	18000	0.8	50	48	DIE
MASW-003103-1364	50	20000	0.8	40	40	SURMOUNT™ DIE
MA4SW310B-1	2000	26000	1.2	47	40	DIE
MASW-003100-1192	50	26500	0.3	65	40	DIE
MA4SW310	50	26500	0.8	48	40	DIE
MA4AGSW3	50	50000	0.6	48	40	DIE
MASW-011029	75000	100000	1.3	33	—	DIE
SP4T						
MASW-004102-12760	2	18000	1.5	50	40	DIE
MA4SW410B-1	2000	18000	0.8	48	40	DIE
MASW-004103-1365	50	20000	0.8	50	63	SURMOUNT™ DIE
MASW-004240-13170	10	24000	2.5	50	—	DIE
MASW-004100-1193	50	26500	0.3	65	40	DIE
MA4SW410	50	26500	0.7	48	40	DIE
MASW-011087	27000	30000	0.85	50	55	DIE
MA4AGSW4	50	50000	0.8	42	40	DIE

Note: Part numbers are RoHS compliant.

Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

Switches (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Isolation (dB)	Input IP3 (dBm)	Package
SP5T						
MASW-010351	10	4000	1.4	57	50	PQFN-24, 4 mm
MA4SW510B-1	2000	18000	0.9	40	40	DIE
MASW-005102-13600	2000	18000	0.9	40	40	DIE
MA4SW510	50	26500	0.9	38	40	DIE
MASW-005100-1194	50	26500	0.9	38	40	DIE
MASW-006102-13610	50	26500	0.3	65	40	DIE
MA4AGSW5	50	50000	1.1	47	40	DIE
SP6T						
MA4SW610B-1	2000	18000	1.3	45	40	DIE
MASW-006102-13610	50	26500	1.3	45	40	DIE
SP8T						
MA4AGSW8-1	50	50000	1.5	37	40	DIE

Phase Detectors

Part Number	SRD VBR Min (V)	SRD CJ Typ (pF)	SRD TL Typ (ns)	SRD TT Max (ps)	Cap CT Typ (pF)	SD CJ Typ (pF)	SD VF Typ	SD RD Typ (mV)	FMW Typ (GHz)	Package
MSPD2018-H50	15	0.35	5	55	0.6	0.1	430	16	22	H50
MSPD1012-H50	15	0.5	10	70	2.5	0.18	270	9	12	H50
MSPD1000-H50	15	1	35	95	20	0.4	270	7	0.5	H50

MNS Chip Capacitors

Part Number	Capacitance (pF)	Standoff Voltage (V)	Chip Style	Package
MA4M3010	10	200	350	DIE
MA4M2020	20	200	132	DIE
MA4M3030	30	200	352	DIE
MA4M1050	50	100	132	DIE
MA4M3050	50	200	354	DIE
MA4M3100	100	50	358	DIE
MA4M1100	100	100	199	DIE
MA4M3150	150	50	359	DIE

High Q MNOS Series Chip Capacitors: 9000 Series VB >50 V & 9100 Series VB >100 V

Part Number	Capacitance (pF)	Working Voltage	Chip Size + .002"	Package
910R1 thru 911R9	0.1 - 1.9	100	0.010" x 0.010" x 0.005"	DIE
912R0 thru 919R9	2 - 9.9	100	0.015" x 0.015" x 0.005"	DIE
902R0 thru 9010R	2 - 10	50	0.010" x 0.010" x 0.005"	DIE
9110R thru 9129R	10 - 29	100	0.020" x 0.020" x 0.006"	DIE
9011R thru 9029R	11 - 29	50	0.015" x 0.015" x 0.005"	DIE
9030R thru 9049R	30 - 49	50	0.020" x 0.020" x 0.006"	DIE
9130R thru 9149R	30 - 49	100	0.030" x 0.030" x 0.006"	DIE
9050R thru 9099R	50 - 99	50	0.030" x 0.030" x 0.006"	DIE
9150R thru 9199R	50 - 99	100	0.040" x 0.040" x 0.008"	DIE
0100 thru 0199R	100 - 199	50	0.040" x 0.040" x 0.008"	DIE
91100 thru 91199	100 - 199	100	0.050" x 0.050" x 0.008"	DIE
91200 thru 91399	200 - 399	100	0.070" x 0.070" x 0.008"	DIE
90200 thru 90399R	200 - 399	50	0.050" x 0.050" x 0.008"	DIE
90400 thru 90600R	400 - 600	50	0.070" x 0.070" x 0.008"	DIE

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Beam Lead Capacitors: 9000 Series VB >50 V

Part Number	Capacitance Range (pF)	Package
90R1 thru 90R9	0.1 – 0.9	14-1
90R5 thru 901R0	0.5 – 1	14-2
901R0 thru 901R5	1 – 1.5	14-1
901R0 thru 902R2	1 – 2.2	14-2
902R2 thru 904R7	2.2 – 4.7	14-2
905R6M	5.6 + 20%	14-2
906R8M	6.8 + 20%	14-2
908R2M	8.2 + 20%	14-2
9010ROM	10 + 20%	14-3
9015ROM	15 + 20%	14-3
9022ROM	22 + 20%	14-3
9033ROM	33 + 20%	14-3
9047ROM	47 + 20%	14-4
9068ROM	68 + 20%	14-4
9082ROM	82 + 20%	14-4
90100ROM	100 + 20%	14-4

DC Floating/RF Bypass Mounting Capacitors: 9100 & 9000 Series

Part Number	Capacitance Range (pF)	Chip Size A	Chip Size B	Pad Size D	Pad Size E	Customer Specified Field D
SP49	5 – 50	0.014	0.034	0.011	0.031	0.005 – 0.020
SP84	7 – 70	0.02	0.04	0.016	0.03	0.005 – 0.020
SP51	8 – 80	0.015	0.045	0.013	0.043	0.005 – 0.020
SP14	9 – 90	0.02	0.04	0.016	0.036	0.005 – 0.020
SP34	9 – 90	0.024	0.034	0.02	0.03	0.005 – 0.020
SP6	10 – 100	0.014	0.055	0.012	0.053	0.005 – 0.020
SP89	12 – 120	0.02	0.06	0.014	0.055	0.005 – 0.020
SP80	13 – 130	0.016	0.065	0.014	0.063	0.005 – 0.020
SP12	14 – 140	0.02	0.055	0.018	0.053	0.005 – 0.020
SP87	15 – 150	0.013	0.12	0.009	16	0.005 – 0.020
SP81	17 – 170	0.015	0.09	0.013	0.088	0.005 – 0.020
SP22	24 – 240	0.025	0.08	0.021	0.075	0.005 – 0.020
SP88	25 – 250	0.021	0.121	0.015	0.115	0.005 – 0.020
SP48	29 – 290	0.035	0.065	0.031	0.061	0.005 – 0.020
SP64	75 – 750	0.055	0.102	0.051	0.098	0.005 – 0.020
SP120	90 – 900	0.055	0.12	0.05	0.115	0.005 – 0.020
SP7	100 – 1000	0.085	0.085	0.081	0.081	0.005 – 0.020
SP2	150 – 1500	0.11	0.11	0.1	0.1	0.005 – 0.020
SP68	175 – 1750	0.101	0.124	0.097	0.12	0.005 – 0.020
SP1	200 – 2000	0.11	0.14	0.1	0.13	0.005 – 0.020
SP5	200 – 1000	0.1	0.1	0.095	0.095	0.005 – 0.020
SP20	200 – 2000	0.12	0.14	0.11	0.13	0.005 – 0.020
SP29	200 – 2000	0.121	0.121	0.115	0.115	0.005 – 0.020
SP38	200 – 2000	0.094	0.152	0.091	0.148	0.005 – 0.020
SP39	200 – 2000	0.12	0.134	0.11	0.13	0.005 – 0.020
SP40	200 – 2000	0.107	0.134	0.103	0.13	0.005 – 0.020
SP77	300 – 3000	0.118	0.175	0.114	0.171	0.005 – 0.020

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DC Floating/RF Bypass Mounting Capacitors: 9100 & 9000 Series (continued)

Part Number	Capacitance Range (pF)	Chip Size A	Chip Size B	Pad Size D	Pad Size E	Customer Specified Field D
SP52	300 – 3000	0.13	0.17	0.124	0.164	0.005 – 0.020
SP104	350 – 3500	0.142	0.171	0.138	0.167	0.005 – 0.020
SP111	350 – 3500	0.143	0.18	0.138	0.167	0.005 – 0.020
SP37	350 – 3500	0.151	0.168	0.147	0.164	0.005 – 0.020
SP44	350 – 3500	0.14	0.17	0.135	0.165	0.005 – 0.020
SP55	360 – 3600	0.117	0.22	0.113	0.216	0.005 – 0.020

MNOS Series Capacitors

Part Number	Type	Range (pF)	Capacitance Range Min (pF)	Capacitance DWV Min (V)	R Min (Ω)	T _{CC} Typ (ppm/+°C)	Package
MBC50-0.2B14	Beam Lead	0.24	0.16	50	1000	55	B14
MBC50-1.0B14	Beam Lead	1.2	0.8	50	1000	55	B14
MBC50-1B12	Beam Lead	1.2	0.8	50	1000	55	B12
MBC50-1.5B14	Beam Lead	1.8	1.2	50	1000	55	B14
MBC50-2B12	Beam Lead	2.4	1.6	50	1000	55	B12
MBC50-2.0B14	Beam Lead	2.4	1.6	50	1000	55	B14
MBC50-3B12	Beam Lead	3.6	2.4	50	1000	55	B12
MBC50-4B12	Beam Lead	4.8	3.2	50	1000	55	B12
MBC50-6B12	Beam Lead	7.2	4.8	50	1000	55	B12
MBC50-8B12	Beam Lead	9.6	6.4	50	1000	55	B12
MBC50-10B12	Beam Lead	12	8	50	1000	55	B12
MBC50-15B12	Beam Lead	18	12	50	1000	55	B12
MBC50-20B12	Beam Lead	24	16	50	1000	55	B12
MBC50-33B13	Beam Lead	39.6	26.4	50	1000	55	B13
MBC50-47B13	Beam Lead	56.4	37.6	50	1000	55	B13
MBC50-68B13	Beam Lead	81.6	54.4	50	1000	55	B13
MBC50-82B13	Beam Lead	96	65.6	50	1000	55	B13
MBC50-100B13	Beam Lead	120	80	50	1000	55	B13
MC2DXXX010-010	Chips	5	0.1	50	1000	55	DIE
MC2SXXX010-010	Chips	8	0.25	50	1000	55	DIE
MC2SXXX011-011	Chips	12	1	50	1000	55	B12
MC2DXXX015-015	Chips	15	1.5	50	1000	55	DIE
MC2RXXX010-015	Chips	20	2	50	1000	55	DIE
MC2SXXX015-015	Chips	30	3	50	1000	55	DIE
MC2SXXX016-016	Chips	35	3	50	1000	55	DIE
MC2RXXX015-020	Chips	42	5	50	1000	55	DIE
MC2DXXX020-020	Chips	50	5	50	1000	55	DIE
MC2SXXX020-020	Chips	55	5	50	1000	55	DIE
MC2SXXX022-022	Chips	60	5	50	1000	55	DIE
MC2RXXX015-032	Chips	62	5	50	1000	55	DIE
MC2SXXX025-025	Chips	100	10	50	1000	55	DIE
MC2SXXX030-030	Chips	120	10	50	1000	55	DIE
MC2RXXX022-042	Chips	120	15	50	1000	55	DIE
MC2SXXX035-035	Chips	150	15	50	1000	55	DIE
MC2SXXX040-040	Chips	200	20	50	1000	55	DIE
MC2SXXX050-050	Chips	250	25	50	1000	55	DIE
MC2SXXX055-055	Chips	300	25	50	1000	55	DIE
MC2SXXX060-060	Chips	375	35	50	1000	55	DIE

Note: Part numbers are RoHS compliant. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

MNOS Series Capacitors (continued)

Part Number	Type	Range (pF)	Capacitance Range Min (pF)	Capacitance DWV Min (V)	R Min (Ω)	T _{cc} Typ (ppm/+°C)	Package
MC2SXXX070-070	Chips	550	50	50	1000	55	DIE
MC2SXXX080-080	Chips	700	70	50	1000	55	DIE
MC2RXXX097-107	Chips	999	100	50	1000	55	DIE
MC2RXXX099-138	Chips	999	100	50	1000	55	DIE
MC2SXXX100-100	Chips	999	100	50	1000	55	DIE
MC2RXXX127-145	Chips	1800	200	50	1000	55	DIE
MC2RXXX142-160	Chips	2200	200	50	1000	55	DIE
MC2B0.8020-020	Binary Chip	1.8	1.2	50	1000	55	C20
MC2B002020-020	Binary Chip	4.5	3	50	1000	55	C20
MC2B004020-020	Binary Chip	9.6	6.4	50	1000	55	C20
MC2B008020-020	Binary Chip	18	12	50	1000	55	C20
MC2B016020-020	Binary Chip	36	24	50	1000	55	C20

NLTL GaAs Comb Generators

Part Number	Power Min (dBm)	Power Max (dBm)	Output Harmonics 1	Output Harmonics 2	Output Harmonics 3	Package
MLPNC-7100S1-SMA800	18 @ 75 MHz	24 @ 250 MHz	-15 @ 1 GHz	-18 @ 2 GHz	-24 @ 4 GHz	SMA800
MLPNC-7100-SMA850	18 @ 100 MHz	24 @ 400 MHz	-8 @ 4 GHz	-18 @ 12 GHz	-35 @ 20 GHz	SMA850
MLPNC-7102-SMA800	19 @ 300 MHz	24 @ 700 MHz	-8 @ 4 GHz	-16 @ 12 GHz	-20 @ 20 GHz	SMA800
MLPNC-7102S1-SMA800	18 @ 300 MHz	24 @ 700 MHz	-10 @ 4 GHz	-15 @ 8 GHz	-22 @ 12 GHz	SMA800
MLPNC-7103-SMA800	19 @ 600 MHz	24 @ 1500 MHz	-5 @ 6 GHz	-15 @ 18 GHz	-20 @ 30 GHz	SMA800
MLPNC-7103S1-SMA800	18 @ 600 MHz	24 @ 1500 MHz	-10 @ 4 GHz	-8 @ 8 GHz	-20 @ 15 GHz	SMA800

True Time Delay

Part Number	Description	Min Frequency (MHZ)	Max Frequency (MHZ)	Bit Count	Min Delay (ns)	Full Delay (ns)	Insertion Loss (dB)	CTRL Interface	Package
CGY2394SUH	6 – 18 GHz 1 Bit	6000	18000	1	330	330	6	0/+4	DIE
CGY2393SUH	6 – 18 GHz 5 Bit	6000	18000	5	10	310	6	0/+4	DIE

Note: Part numbers are RoHS compliant.
 Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box.
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LINEAR MODULE SUBSYSTEMS SPACE PRODUCTS

Space-Qualified Linearizers, SSPAs and Related Hardware for the LEO, MEO and GEO Space Industries

MACOM's high-reliability linearization technology reduces amplifier distortion and allows an amplifier to operate at reduced OPBO thus operating at higher

efficiency for a given level of linearity. MACOM provides Space Qualified Products for all downlink frequencies including UHF, Ku, Ka, Q, V, and E-Bands.

Versatile Linearized Front-End Modules

Linearizers that enable HPAs to operate efficiently at different power levels over wide bandwidths, provide system gain, and the required RF drive power to the HPA. The versatile linearizer can be temperature compensated to maintain optimum RF performance. They can be configured to correct either a TWTA or an SSPA's nonlinear transfer characteristics over multi-gigahertz and a wide dynamic range.

UHF Linearized GaAs SSPA

Highest efficiency UHF SSPA with built-in linearizer. SSPAs for power levels of 50 W to over 300 W with multiple EPC options available.

Linearizer Modules for UHF, L, S, C, X and Ku-Band SSPAs

Drop-in, connectorized or pin connected linearizers for GaAs or GaN SSPAs. These modules provide the correction characteristic for SSPA transfer curves over wide frequency and temperature ranges.

GPS Linearized GaN SSPA

Drop-in, connectorized or pin connected linearizers for Highest efficiency SSPA with built-in linearizer. Wideband option including full GPS band available. SSPAs for power levels of 35 W to >400 W. Commandable over 5 dB power range at high efficiency. Multiple EPC options available.

UHF Linearized GaN SSPA

Highest efficiency (>78%) UHF SSPA with built in linearizer. SSPAs for power levels of 50 W to over 300 W. Multiple EPC options available.



LINEARIZER PRODUCTS



Linearizers decrease non-linear distortion which allows a high-power amplifier (HPA) to significantly increase its effective output power and efficiency. A linearizer must be carefully matched to cancel the distortion of a particular non-linear amplifier. This requires the linearizer to operate over a wide range of frequencies,

bandwidths and power levels, in addition to operating under various modulations, across many different applications. MACOM's linearizers can therefore reduce the initial cost of HPAs as well as ongoing operating costs related to power consumption and thermal management.

OEM Predistortion Linearizer Modules and Front Ends											
Product	Description	C	X	Ku	K	Ka	Q	V	Input Gain Attenuator	O/P Power Detector	Multi-Band
S-Series	Compact Digitally Controlled Linearizer Modules for Power Amplifiers	X	X	X	X	X	X		X	X	
X-Series	Predistortion Linearizer Modules for GaN Solid State Power Amplifiers	X		X		X			X		
LBUC-Series	Linearizer and Block Up Converter in One Package		X	X		X			X		
N-Series	Economical Solution for Multi-Band HPAs	X	X	X							X
MPM Linearizers	Custom linearizers for Microwave Power Modules	X	X	X	X	X	X			X	
H-Series	Compact Digitally Controlled Linearizer for V-Band Amplifiers							X	X		
L-Series	Compact Analog Controlled Linearizer for V-Band Amplifiers							X	X		

After Market Distortion Correction Solutions						
Product	Description	L/S	C	X	Ku	K (DBS)
WAFL-Series	Provide HPAs with up to an effective 4x power increase with digital and multicarrier traffic	X	X	X	X	X
TEQ-Series	Module Equalizers		X	X	X	

NPR & Test Equipment			
Product	Description	RF Bandwidth	Operating Temp
Test Systems	Custom Distortion	DC to >20 GHz	-20 – 85 °C

Custom Solutions			
Product	Description	RF Bandwidth	Operating Temp
Modules	Custom MIC/Hybrid Linearizer Modules	DC to >20 GHz	-20 – 85 °C
AM-Series	Airborne Linearizers & SSAs Ku, Ka & Q-Band	.5 – >60 GHz	-20 – 85 °C

Appendix and Part Number Index

Package Selection Guide

Decibels-Volts-Watts Conversion Table

Wavelength and Frequency

Part Number Index

Plastic Leadless Packages		
Package	Approx Outline Dimensions (mm)	
1 mm X1-DFN-6LD	1 x 1 x 0.45	
1.2 x 1.5 TDFN-6LD	1.2 x 1.5 x 0.75	
1.5 x 1.2 TDFN-6LD	1.5 x 1.2 x 0.75	
2 mm STDFN-8LD	2 x 2 x 0.55	
2 mm STQFN-12LD	2 x 2 x 0.55	
2 x 2.5 mm STQFN-14LD	2 x 2.5 x 0.55	
3 mm PQFN-12LD/16LD	3 x 3 x 0.9	
3 mm TQFN-12LD/16LD	3 x 3 x 0.75	
3 mm HQFN-16LD	3 x 3 x 1.5	
4 mm PQFN-16LD/20LD/24LD	4 x 4 x 0.9	
4 mm TQFN-16LD/20LD	4 x 4 x 0.75	
4 mm HQFN-8LD/16LD/20LD	4 x 4 x 1.5	
4 x 5 mm PQFN-28LD	4 x 5 x 0.9	
4 x 6 mm PQFN-32LD	4 x 6 x 0.9	
4 x 7 mm PQFN-36LD	4 x 7 x 0.9	
5 mm PQFN-20LD/24LD/28LD/32LD/40LD	5 x 5 x 0.9	
5 mm HQFN-32LD	5 x 5 x 1.5	
5 x 7 mm PQFN-40LD	5 x 7 x 0.9	
5 x 8 mm PQFN-52LD	5 x 8 x 0.9	
6 mm PQFN-28LD/40LD/48LD	6 x 6 x 0.9	
7 mm PQFN-13LD/16L/32LD/44LD	7 x 7 x 0.9	
7 mm HQFN-16LD/32LD	7 x 7 x 1.5	

Plastic Leadless Packages		
Package	Approx Outline Dimensions (mm)	
SC-79	0.8 x 1.6 x 0.6	
SOD-323	1.3 x 2.5 x 1.1	
SOD-23	2.9 x 2.4 x 1	
SOD-25	2.9 x 2.8 x 1.3	
SOD-26	2.9 x 2.8 x 1.3	

Plastic Leadless Packages (continued)		
Package	Approx Outline Dimensions (mm)	
SOT-89	4.5 x 4 x 1.5	
SOT-143	2.9 x 2.4 x 1	
SC70 3LD (SOT-323)	2 x 2.1 x 1	
SC70 6LD (SOT-363)	2 x 2.1 x 1	
SOIC-8/SOIC-8EP	4.9 x 6 x 1.6	
SOIC-14	8.7 x 6 x 1.6	
SOIC-16	9.9 x 6 x 1.6	
SOW-16	10.3 x 10.3 x 2.5	
SOW-24	15.4 x 10.3 x 2.5	
TSSOP-16	5 x 6.4 x 1.1	
SSOP-20	7.2 x 7.8 x 1.9	
MSOP-8	3 x 4.9 x 1	
MSOP-8EP	3 x 4.9 x 1	
MSOP-10/MSOP-10EP	3 x 4.9 x 1	
QSOP-16	4.9 x 6 x 1.6	
QSOP-24	8.7 x 6 x 1.6	
QSOP-28	9.9 x 6 x 1.6	

Ceramic		
Package	Approx Outline Dimensions (mm)	
CQFN-12	3.0 x 3.0 x 1.55	

Note: Part numbers are RoHS compliant.
 Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box.
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PACKAGE SELECTION GUIDE

Ceramic/Chip Diode Packages

Package	Approx Outline Dimensions (mm)	
30 Ceramic	3.2 diameter x 5.7	
134 Die O.	4 x 0.4 x 0.2	
186 Ceramic	11.2 x 2.5 x 1.1	
401 Axial Lead	2.3 diameter x 55	
1027 Ceramic	8 diameter x 6.9	
1056 Ceramic	1.9 x 1.9 x 1	
1072 Ceramic	2.4 x 2.4 x 3.4	
1073 Ceramic	12.3 diameter x 10	
1038 Ceramic	8 diameter x 17	
1080 Ceramic	8 diameter x 22.2	
1082 Ceramic	8 diameter x 19.8	
1088 Ceramic	2.4 x 1.3 x 1	
1246 SURMOUNT™	1.2 x 0.5 x 0.2	

Metal/Ceramic Packages











Package	Approx Outline Dimensions (mm)	
CR2-6LD	18.3 x 11.3 x 1.3	
CR2	18.3 x 17.1 x 1.3	
CR3	16.2 x 4.6 x 1.6	
CR4	12.4 x 12.4 x 1.6	
CR5	8.9 x 8.0 x 1.6	
CR6	11.4 x 8.9 x 1.6	
CR12	11.4 x 11.4 x 2.0	
CR13	16.5 x 11.4 x 2.0	
CR15	17.8 x 11.4 x 2	
CR16	9.8 x 8.3 x 1.5	
1000017733	23.5 x 13.8 x 2	

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PACKAGE SELECTION GUIDE



Metal/Ceramic Packages (continued)

Package	Approx Outline Dimensions (mm)	
MOD2	20.3 x 15 x 6.6	
MOD3	20.3 x 15 x 4.8	
SMA-AMP	23.4 x 27.9 x 13.3	
SMA-MXR	22.9 x 22.9 x 14	
SMT-01	11.4 x 11.4 x 4.3	
SMT-02	10 x 13 x 4	
SMT-88	13.4 x 13.4 x 4.3	
SMT-88F	11.4 x 11.4 x 4.3	
TO-8-01	12.7 diameter x 11	
TO-8-02	12.7 diameter x 9.7	

Metal/Ceramic Packages (continued)

Package	Approx Outline Dimensions (mm)	
TO-8-03	15.2 diameter x 9.7	
CSM	12.5 x 9.4 x 4.8	
FP	13 x 9.8 x 3.6	
MOD1	14.2 x 13.2 x 4.8	

Passives Packages

Package	Approx Outline Dimensions (mm)	
SM-2	12.5 x 9.4 x 6.4	
SM-4	12.4 x 9.4 x 5.8	
SM-22	3.8 x 3.8 x 3.8	
SM-55	7.1 x 6.4 x 3.6	
SM-85	30 x 30 x 9	
SM-89	8 x 6.4 x 0.15	
SM-138	4.2 x 5.3 x 3.9	
SM-152	4.2 x 5.3 x 4.3	

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PACKAGE SELECTION GUIDE

Transistor Packages

Package	Approx Outline Dimensions (mm)	
P-237 Ceramic	20 x 15 x 4	
P-238 Ceramic	34 x 19.6 x 4	
P-239 Ceramic	21 x 1 x 4	
355E-01, Style 1 Ceramic	23 x 21 x 5	
368-03, Style 2 Ceramic	38 x 50 x 9	
PHI214-M Series Ceramic	23 x 10 x 4.5	
P-8TF	20.8 x 6.4 x 3.5	
P-51H	22.9 x 10.2 x 5.5	
P-94C	22.9 x 10.2 x 5.5	

Transistor Packages (continued)

Package	Approx Outline Dimensions (mm)	
P-94D	22.9 x 10.2 x 4.2	
P-94I	22.9 x 10.2 x 4.2	
P-154C	25.4 x 15.2 x 5.1	
Pallet	50.8 x 35.8 x 7	

GaN Packages

Package	Approx Outline Dimensions (mm)	
Ceramic		
AC-200B-2	13.97 x 8.13 x 3.1	
AC-200S-2	5.18 x 8.13 x 3.1	
AC-360B-2	20.32 x 10.92 x 3.86	
AC-360S-2	9.65 x 10.92 x 3.86	

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PACKAGE SELECTION GUIDE





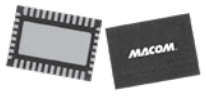





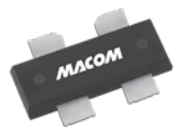
GaN Packages (continued)

Package	Approx Outline Dimensions (mm)	
AC-400S-2	10.16 x 14.96 x 4.11	
AC-780B-2	34.04 x 19.43 x 3.6	
AC-780S-2	20.57 x 19.43 x 3.6	
AC-780B-4	34.04 x 19.43 x 3.36	
AC-780S-4	20.57 x 19.43 x 3.62	
AC-1230B-4	41.28 x 19.61 x 4.42	
AC-1230S-4	32.26 x 19.61 x 4.42	

Plastic

3 x 6 mm PDFN-14	6.0 x 3.0 x 1.0	
SOIC-EP	4.9 x 6.1 x 1.47	

GaN Packages (continued)

Package	Approx Outline Dimensions (mm)	
4 mm PQFN-24	4.0 x 4.0	
5 x 6 mm PDFN-8	6.0 x 5.0	
5 x 7 mm PDFN-40	4.0 x 4.0	
TO-272-2	23.62 x 11.18 x 2.59	
TO-272-4	23.62 x 14.1 x 2.59	
TO-272S-2	17.25 x 11.18 x 2.59	
TO-272S-2B	17.25 x 11.18 x 2.59	
TO-272S-4	17.25 x 11.18 x 2.59	
TO-272S-4I	17.25 x 11.18 x 2.59	

Note: Part numbers are RoHS compliant.
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DECIBELS – VOLTS – WATTS CONVERSION TABLE



50-Ω System Terminated

dBm	V	Po	dBm	V	Po	dBm	mV	Po	dBm	V	Po
53	100	200 W	—	—	—						
50	70.7	100 W	0	0.225	1 mW	-49	0.8	—	-97	3.2	—
49	64	80 W	-1	0.2	0.8 mW	-50	0.71	.01 μW	-98	2.9	—
48	58	64 W	-2	0.18	0.64 mW	-51	0.64	—	-99	2.51	—
47	50	50 W	-3	0.16	0.5 mW	-52	0.57	—	-100	2.25	0.1 pW
46	44.5	40 W	-4	0.141	0.4 mW	-53	0.5	—	-101	2	—
45	40	32 W	-5	0.125	0.32 mW	-54	0.45	—	-102	1.8	—
44	32.5	25 W	-6	0.115	0.25 mW	-55	0.4	—	-103	1.6	—
43	32	20 W	-7	0.1	0.2 mW	-56	0.351	—	-104	1.41	—
42	28	16 W	-8	0.09	0.16 mW	-57	0.32	—	-105	1.27	—
41	26.2	12.5 W	-9	0.08	0.125 mW	-58	0.286	—	-106	1.18	—
40	22.5	10 W	-10	0.071	0.1 mW	-59	0.251	—	—	—	—
39	20	8 W	-11	0.064	—	-60	0.225	0.001 μW	dBm	nV	—
38	18	6.4 W	-12	0.058	—	-61	0.2	—	-107	1000	—
37	16	5 W	-13	0.05	—	-62	0.18	—	-108	900	—
36	14.1	4 W	-14	0.045	—	-63	0.16	—	-109	800	—
35	12.5	3.2 W	-15	0.04	—	-64	0.141	—	-110	710	0.01 pW
34	11.5	2.5 W	-16	0.0355	—	—	-111	640	—	—	—
33	10	2 W	—	dBm	μV	—	-112	580	—	—	—
32	9	1.6 W	dBm	mV	—	-65	128	—	-113	500	—
31	8	1.25 W	-17	31.5	—	-66	115	—	-114	450	—
30	7.1	1 W	-18	28.5	—	-67	100	—	-115	400	—
29	6.4	800 mW	-19	25.1	—	-68	90	—	-116	355	—
28	5.8	640 mW	-20	22.5	.01 mW	-69	80	—	-117	825	—
27	5	500 mW	-21	20	—	-70	71	0.1 nW	-118	285	—
26	4.45	400 mW	-22	17.9	—	-71	65	—	-119	251	—
25	4	320 mW	-23	15.9	—	-72	58	—	-120	225	0.001 pW
24	3.55	250 mW	-24	14.1	—	-73	50	—	-121	200	—
23	3.2	200 mW	-25	12.8	—	-74	45	—	-122	180	—
22	2.8	160 mW	-26	11.5	—	-75	40	—	-123	160	—
21	2.52	125 mW	-27	10	—	-76	35	—	-124	141	—
20	2.25	100 mW	-28	8.9	—	-77	32	—	-125	128	—
19	2	80 mW	-29	8	—	-78	29	—	-126	117	—
18	1.8	64 mW	-30	7.1	.001 mW	-79	25	—	-127	100	—
17	1.6	50 mW	-31	6.25	—	-80	22.5	0.01 nW	-128	90	—
16	1.41	40 mW	-32	5.8	—	-81	20	—	-129	80	0.1 fW
15	1.25	32 mW	-33	5	—	-82	18	—	-130	71	—
14	1.15	25 mW	-34	4.5	—	-83	16	—	-131	61	—
13	1	20 mW	-35	4	—	-84	11.1	—	-132	58	—
12	0.9	16 mW	-36	3.5	—	-85	12.9	—	-133	50	—
11	0.8	12.5 mW	-37	3.2	—	-86	11.5	—	-134	45	—
10	0.71	10 mW	-38	2.85	—	-87	10	—	-135	40	—
9	0.64	8 mW	-39	2.5	—	-88	9	—	-136	35	—
8	0.58	6.4 mW	-40	2.25	1 μW	-89	8	—	-137	33	—
7	0.5	5 mW	-41	2	—	-90	7.1	0.001 nW	-138	29	—
6	0.445	4 mW	-42	1.8	—	-91	6.1	—	-139	25	—
5	0.4	3.2 mW	-43	1.6	—	-92	5.75	—	-140	23	0.01 fW
4	0.355	2.5 mW	-44	1.4	—	-93	5	—	—	—	—
3	0.32	2 mW	-45	1.25	—	-94	4.5	—	—	—	—
2	0.28	1.6 mW	-46	1.18	—	-95	4	—	—	—	—
1	0.252	1.25 mW	-47	1	—	-96	3.51	—	—	—	—
—	—	—	-48	0.9	—	—	—	—	—	—	—

Note: Part numbers are RoHS compliant.
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Frequency Band Designations

Previous Frequency Designations	P	L	S	C	X	Ku	K	Ka					
Current Frequency Designations	C	D	E	F	G	H	I	J	K				
	0.5	1.0	2.0	3.0	4.0	6.0	8.0	10.0	12.4	18.0	20.0	26.5	40.0
	Frequency (GHz)												

Wavelength and Frequency

For all forms of wave, the velocity, wavelength and frequency are related such that

$$\lambda F \sqrt{\epsilon_r \mu_r} = c$$

λ = Wavelength in Meters (m)

F = Frequency in Hertz (Hz)

ϵ_r = Relative Rielectric Constant of Propagation Medium

c = Velocity of Light (300,000,000 m/s)

μ_r = Relative Permeability of Propagation Medium

The dielectric constant (ϵ) is a property of the medium in which the wave propagates. The value of ϵ is defined as 1.000 for a perfect vacuum and very nearly 1.0 for dry air (typically 1.006). In most practical applications, the value of ϵ in dry air is taken to be 1.000.

For mediums other than air or vacuum, however, the velocity of propagation is slower and the value of ϵ relative to a vacuum is higher. Teflon®, for example, can be made with dielectric constant values (e) from about 2 to 11.

Frequency vs Wavelength

Frequency	Wavelength
1 MHz	300 meters (m)
10 MHz	30 m
100 MHz	3 m
300 MHz	1 m - 100 centimeters (cm)
1 GHz	30 cm
10 GHz	3 cm
100 GHz	3 millimeters (mm)
300 GHz	1 mm - 10 ⁻³ m
3 x 10 ¹⁴	1 micron - 10 ⁻⁶ m

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Part Number	Page No.	Part Number	Page No.	Part Number	Page No.	Part Number	Page No.
1N5711	110	2032-6374-00 ♦	82	A		A611	32, 100
1N5819	48	2035-6364-00 ♦	81	A1	31, 100	A1021	29, 97
2N6439	18	2089-6201-00 ♦	84	A5	28, 96	A1031	32, 101
90R1 thru 90R9	89, 116	2089-6202-00 ♦	84	A5-6	28, 96	A1211	32, 101
90R1 thru 90R9 S	89	2089-6203-00 ♦	84	A11	32, 100	A1212	32, 101
90R5 thru 901R0	89, 116	2089-6204-00 ♦	84	A12	32, 101	A4011	33, 101
90R5 thru 901R0 S	89	2089-6206-00 ♦	84	A17	29, 97	A4012	33, 101
0100 thru 90199R	89, 115	2089-6207-00 ♦	84	A18-1	32, 101	A6011	33, 102
0100 thru 90199R S	89	2089-6208-00 ♦	85	A19-1	29, 97	AFL-011124	93
901R0 thru 901R5	89, 116	2089-6209-00 ♦	85	A24	29, 97	AFL-011125	93
901R0 thru 901R5 S	89	2089-6401-00 ♦	84	A25	29, 32, 101	AL7	33
901R0 thru 902R2	89, 116	2089-6402-00 ♦	84	A26	29, 97	AM42-0002	98
901R0 thru 902R2 S	89	2089-6403-00 ♦	84	A27	29, 97	AM42-0007	98
902R0 thru 9010R	88, 115	2089-6405-00 ♦	85	A28	29, 32, 97, 101	AM42-0039	98
902R0 thru 9010R S	88	2089-6406-00 ♦	84	A29-1	29, 97	AM-131-PIN	31, 99
902R2 thru 904R7	89, 116	2089-6408-00 ♦	85	A31-1	33, 101	AM-153-PIN ♦	32
902R2 thru 904R7 S	89	2089-6409-00 ♦	85	A32	33, 101	AM-162-PIN	30, 98
905R6M	89, 116	2089-6410-00 ♦	85	A32-1	33, 101	AM-162-PIN ♦	30
905R6M S	89	2089-6801-00 ♦	84	A33-1	98	AMC-123-SMA	31, 99
906R8M	89, 116	2089-6805-00 ♦	85	A34	30, 98	AMC-123-SMA ♦	31
906R8M S	89	2089-6807-00 ♦	84	A35	29, 98	AMC-143-SMA	31, 99
908R2M	89, 116	2089-6808-00 ♦	85	A36	30, 98	AMC-143-SMA ♦	31
908R2M S	89	2090-6205-00 ♦	85	A37	30, 98	AMC-145-SMA	29, 97
910R1 thru 911R9	88, 115	2090-6214-00 ♦	85	A38	29, 97	AMC-145-SMA ♦	29
910R1 thru 911R9 S	88	2090-6304-00 ♦	84	A39	29, 97	AMC-146-SMA	96
911R5K-BSP-3	89	2090-6414-00 ♦	85	A43	98	AMC-147-SMA	31, 100
912R0 thru 919R9	88, 115	2690-1001 ♦	56	A45	33, 101	AMC-147-SMA ♦	31
912R0 thru 919R9 S	88	2690-1003 ♦	56	A45-1	33, 101	AMC-151-SMA	96
913R0K-BSP-3	89	2690-1005 ♦	56	A54	28, 96	AMC-155-SMA	29, 97
913R7K-BOO	89	2690-1007 ♦	56	A55	28, 96	AMC-155-SMA ♦	29
913R7K-BSP-1	89	2690-1009 ♦	56	A56	96	AMC-162-SMA	30, 98
913R7K-BSP-3	89	2690-1011 ♦	56	A57	28, 96	AMC-162-SMA ♦	30
915R6K-BSP-3	89	2690-1014 ♦	56	A58	31, 99	AMC-176-SMA	32, 100
917R5K-BOO	89	2690-1015 ♦	56	A59	28, 31, 97, 99	AMC-176-SMA ♦	32
917R5K-BSP-1	89	9010R0M	89, 116	A59-1	28, 97	AMC-182-SMA	32, 101
2020-4018-20 ♦	82	9010R0M S	89	A61	33, 102	AMC-182-SMA ♦	32
2020-6605-10 ♦	81	9011R thru 9029R	88, 115	A63	32, 101	AMC-184-SMA	28, 97
2020-6606-20 ♦	81	9011R thru 9029R S	88	A64	29, 97	AMC-184-SMA ♦	28
2020-6607-30 ♦	81	9015R0M	89, 116	A66	29, 32, 97, 101	AMS-162-PIN	30, 98
2020-6609-10 ♦	81	9015R0M S	89	A66-1	29, 97	AMS-162-PIN ♦	30
2020-6614-20 ♦	81	9022R0M	89, 116	A67	32, 100		
2020-6615-30 ♦	81	9022R0M S	89	A67-1	32, 100	C	
2020-6616-06 ♦	81	9030R thru 9049R	88, 115	A70	30, 99	CA12	32, 101
2020-6617-10 ♦	81	9030R thru 9049R S	88	A70-1	30, 99	CA12 ♦	32
2020-6618-20 ♦	81	9033R0M	89, 116	A72	28, 96	CA17	29, 97
2020-6619-30 ♦	81	9033R0M S	89	A73	31, 100	CA17 ♦	29
2020-6622-20 ♦	82	9047R0M	89, 116	A74	28, 30, 31, 96, 99, 100	CA18-1	32, 101
2020-6623-30 ♦	82	9047R0M S	89	A74-1	30, 99	CA18-1 ♦	32
2020-6624-06 ♦	82	9050R thru 9099R	89, 115	A74-2	28, 96	CA19-1	29, 97
2020-6626-20 ♦	82	9050R thru 9099R S	89	A75	31, 32, 96, 100	CA19-1 ♦	29
2020-6627-30 ♦	82	9068R0M	89, 116	A75-3	32, 100	CA24	29, 97
2020-6628-06 ♦	82	9068R0M S	89	A76	31, 100	CA24 ♦	29
2025-6002-10 ♦	81	9082R0M	89, 116	A77	28, 96	CA25-1 ♦	32
2025-6004-20 ♦	81	9082R0M S	89	A78	30, 99	CA26	29, 97
2025-6009-06 ♦	81	9110R thru 9129R	88, 115	A79	96	CA26 ♦	29
2025-6010-10 ♦	81	9110R thru 9129R S	88	A80	30, 32, 99, 100	CA28	29, 32, 97, 101
2025-6012-20 ♦	81	9115R0K-BOO	89	A80-1	30, 99	CA28 ♦	29
2025-6014-10 ♦	81	9115R0K-BSP-1	89	A81	30, 32, 99, 100	CA28-2 ♦	32
2025-6016-20 ♦	82	9122R5K-BOO	89	A81-1	30, 99	CA29-1	29, 97
2025-6017-06 ♦	82	9122R5K-BSP-1	89	A82	30, 99	CA29-1 ♦	29
2025-6018-10 ♦	82	9130R thru 9149R	88, 115	A82-1	30, 99	CA32	33, 101
2025-6019-16 ♦	82	9130R thru 9149R S	88	A83-1	30, 99	CA32 ♦	33
2026-6001-10 ♦	81	9150R thru 9199R	89, 115	A87	31, 96, 99	CA32-1 ♦	33
2026-6004-10 ♦	82	9150R thru 9199R S	89	A87-1	31, 99	CA33-1	98
2026-6007-10 ♦	82	90100R0M	89, 116	A87-2	31, 99	CA35	29, 98
2026-6009-20 ♦	82	90100R0M S	89	A88	28, 96	CA35 ♦	29
2026-6010-10 ♦	82	90200 thru 90399R	89, 115	A89	28, 97	CA36-1	30, 98
2031-6330-00 ♦	80	90200 thru 90399R S	89	A101	30, 98	CA36-1 ♦	30
2031-6331-00 ♦	81	90400 thru 90600R	89, 115	A180	31, 100	CA38	29, 98
2031-6334-00 ♦	81	90400 thru 90600R S	89	A181	96	CA38 ♦	29
2031-6335-00 ♦	82	91100 thru 91199	89, 115	A231	30, 99	CA45	33, 101
2031-6339-00 ♦	82	91100 thru 91199 S	89	A411	31, 99	CA45 ♦	33
2032-6344-00 ♦	81	91200 thru 91399	89, 115	A511	31, 100	CA64	29, 97
2032-6345-00 ♦	81	91200 thru 91399 S	89	A514	31, 100	CA64 ♦	29
2032-6347-00 ♦	81			A515	31, 100	CA66	29, 32, 97, 101
2032-6371-00 ♦	82			A531	32, 100	CA66 ♦	29
						CA66-1	29, 97

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Part Number	Page No.	Part Number	Page No.	Part Number	Page No.	Part Number	Page No.
CA66-3 ♦	32	CGH60030D	15	CGY2221UH	26	CRA89 ♦	28
CA67-1	32, 100	CGH60060D	15	CGY2230UH	26	CRA89-1 ♦	28
CA67-1 ♦	32	CGH60120D	15	CGY2232UH	26	CSFD25 ♦	64
CA70-2	30, 99	CGHV1A250F	15	CGY2260UH	26	CSFD25H ♦	64
CA70-2 ♦	30	CGHV1F006	14	CGY2272UH	26	CSFD26 ♦	64
CA74	31, 100	CGHV1F025	14	CGY2290SUH	26	CSM1-10	65
CA74 ♦	31	CGHV1J006D	15	CGY2330UH	73	CSM1-13	65
CA75	31, 100	CGHV1J025D	15	CGY2350UH	73	CSM1-17	65
CA75 ♦	31	CGHV1J070D	15	CGY2351UH	73	CSM2-10	65
CA76	31, 100	CGHV14250	15	CGY2390SUH	57	CSM2-13	65
CA76 ♦	31	CGHV14500	15	CGY2392SHV	57	CSM2-17	65
CA77	28, 96	CGHV14800	15	CGY2392SUH	57	CSM4T	65
CA77 ♦	28	CGHV27015S	14	CGY2393SUH	118	CSM4T17	65
CA77-1 ♦	28	CGHV27030	14	CGY2394SUH	118	CSM4TH	65
CA78	30, 99	CGHV27060	14	CGY2460UH	69	CSM5T	66
CA78 ♦	30	CGHV31500	14	CGY2470UH	69	CSM5T17	66
CA79	96	CGHV35120F	15	CGY2471UH	69	CSM5TH	66
CA81-2	32, 100	CGHV35150	15	CGY2731UH	22		
CA81-2 ♦	32	CGHV35400	14	CGY2890SUH	60	D	
CA82	30, 99	CGHV37400F	14	CH-132-BNC ♦	79	DS-4-4-BNC ♦	84
CA82 ♦	30	CGHV38375F	14	CH-134-PIN ♦	79	DS-4-4-N ♦	84
CA83-1	30, 99	CGHV40030	14	CH-140-PIN ♦	80	DS-4-4-SMA ♦	84
CA83-1 ♦	30	CGHV40050	14	CHS-134-PIN ♦	79	DS-109-PIN	82, 105
CA87	31, 96, 99	CGHV40100	14	CHS-137-PIN ♦	79	DS-109-PIN ♦	82
CA87-1 ♦	31	CGHV40180	14	CL42 ♦	33	DS-112-PIN	83, 105
CA180	31, 100	CGHV40200	14	CLA7 ♦	33	DS-112-PIN ♦	83
CA180 ♦	31	CGHV40320D	15	CLA17 ♦	33	DS-113-PIN	82, 105
CA181	96	CGHV50200F	14	CLG1	58	DS-113-PIN ♦	82
CA231	30, 99	CGHV59070	15	CMM0511-QT	22	DS-117-PIN ♦	82
CA231 ♦	30	CGHV59350	14	CMPA1C1D080F	13	DS-308-BNC ♦	82
CA511	32, 100	CGHV60040D	15	CMPA1D1E025F	13	DS-309-BNC ♦	82
CA511 ♦	32	CGHV60075D5	15	CMPA1D1J001S	13	DS-310-PIN	82, 105
CA531	32, 100	CGHV60170D	15	CMPA1E1F060F	13	DS-310-PIN ♦	82
CA531 ♦	32	CGHV96050F1	14	CMPA1F1H060	13	DS-312-BNC ♦	83
CA1021	29, 97	CGHV96050F2	14	CMPA1H1J050F	13	DS-313-PIN	84, 105
CA1021 ♦	29	CGHV96100	15	CMPA601C025F	13	DS-313-PIN ♦	84
CA1212	32, 101	CGHV96130F	15	CMPA601J025S	13	DS-318-PIN	82, 105
CA1212 ♦	32	CGY2105XHV	25	CMPA801B030S	13	DS-318-PIN ♦	82
CA3010	98	CGY2106XHV	25	CMPA851A005S	13	DS-319-PIN	82, 105
CA6011	33, 102	CGY2107HV	25	CMPA851A012S	13	DS-319-PIN ♦	82
CA6011 ♦	33	CGY2108GS	25	CMPA851A025S	13	DS-323-PIN	83, 105
CAL7 ♦	33	CGY2108HV	25	CMPA851A050S	13	DS-323-PIN ♦	83
CG2H30070	15	CGY2120XUH	25	CMPA901A020	13	DS-324-PIN	83, 105
CG2H40010	14	CGY2121XUH	26	CMPA901A035F1	13	DS-324-PIN ♦	83
CG2H40025	14	CGY2122XUH	26	CMPA0060002F1	13	DS-327-PIN ♦	83
CG2H40035	14	CGY2124UH	26	CMPA0060025F1	13	DS-328-PIN	83, 105
CG2H40045	14	CGY2125AUH	26	CMPA0527005F	13	DS-328-PIN ♦	83
CG2H40120	14	CGY2128UH	26	CMPA0530002S	13	DS-331-PIN	84, 105
CG2H80030D	15	CGY2135UH	13	CMPA0560008S	13	DS-331-PIN ♦	84
CG2H80045D	15	CGY2141UH	28	CMPA0760020F	13	DS-409-4BNC ♦	84
CG2H80060D	15	CGY2144UH	28	CMPA1842040F	13	DS-409-4SMA ♦	84
CG2H80120D	15	CGY2145UH	27	CMPA2060035F1	13	DS-409-4TNC ♦	84
CG30	58	CGY2160UH	28	CMPA2560025F	13	DS-808-4BNC ♦	84
CG40	58	CGY2169UH	57	CMPA2735015S	13	DS-808-4N ♦	84
CGH4018	14	CGY2170YHV	73	CMPA2735030S	13	DS-808-4SMA ♦	84
CGH21240F	15	CGY2170YUH	73	CMPA2735075F1	13	DS-808-4TNC ♦	84
CGH25120F	15	CGY2171XBUH	57	CMPA2738060F	13	DSS-113-PIN	82, 105
CGH27015	14	CGY2172XAUH	57	CMPA2935150S	13	DSS-113-PIN ♦	82
CGH27030	14	CGY2172XBUH	57	CMPA2935250S	13	DSS-313-PIN	84, 105
CGH27060F	14	CGY2173UH	57	CMPA3135060S	13	DSS-313-PIN ♦	84
CGH31240F	14	CGY2174UH	57	CMPA5259025S	13	DSS-327-PIN	83, 105
CGH35015	14	CGY2175AHV	73	CMPA5259050S	13	DSS-327-PIN ♦	83
CGH35060P1	14	CGY2175AUH	73	CMPA5259080S	13	DSS-333-PIN	83, 105
CGH35060P2	14	CGY2176AUH	57	CMPA5259100S	13	DSS-333-PIN ♦	83
CGH35240	14	CGY2177AUH	56	CMPA5585030F	13	DU1215S	18
CGH40006	14	CGY2178UH	25	CMPA9396025S	13	DU2805S	17
CGH40010	14	CGY2179HV	73	CPA38	33, 101	DU2810S	17
CGH40025	14	CGY2179UH	73	CPA38 ♦	33	DU2820S	18
CGH40035	14	CGY2180UH	68	CPA48	98	DU2840S	18
CGH40045	14	CGY2181UH	68	CRA36	98	DU2860U	18
CGH40090	14	CGY2182UH	68	CRA36 ♦	30	DU2880T	18
CGH40120	14	CGY2183UH	68	CRA66	29, 97	DU2880U	18
CGH55015	14	CGY2184UH	68	CRA66 ♦	29	DU28120T	18
CGH55030	14	CGY2190UH	26	CRA69	29, 97	DU28120V	18
CGH60008D	15	CGY2220UH	25	CRA69 ♦	29	DU28200M	18
CGH60015D	15	CGY2221HV	26	CRA89	28, 96		

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Part Number	Page No.	Part Number	Page No.	Part Number	Page No.	Part Number	Page No.
E		L		M			
EA1	31, 99	L1	33	M63H	66, 103	MA4E1319-1	53
EA2	96	L42	33	M63H ♦	66	MA4E2037	53, 113
EA53-2	31, 100	LA7	33	M63HC	66, 103	MA4E2039	53, 113
EA54	96	LA17	33	M63HC ♦	66	MA4E2040	53, 113
ELDC-10	79	LF2805A	18	M67C	66, 103	MA4E2160	53
ELPD-20-1	83	LG1**	58	M67C ♦	66	MA4E2501L-1290	52, 113
ETC1-1-6	86	LM202602-H-A-300	56	M74	67, 104	MA4E2502H-1246	52, 113
ETC1-1-13	88	LM202802-L-C-300	56	M74 ♦	67	MA4E2502L-1246	52, 113
ETC1-1T-2TR	85	LM202802-Q-B-301	56	M74C	67, 104	MA4E2502M-1246	52, 113
ETC1-1T-5	86	LM202802-Q-C-301	56	M74C ♦	67	MA4E2508H-1112	52, 113
ETC1.5-4	87			M76	66, 103	MA4E2508L-1112	52, 113
ETC1.6-4-2-3	88			M76 ♦	66	MA4E2508M-1112	52, 113
ETC4-1-2TR	86			M76C	66, 103	MA4E2513L-1289	52, 113
ETC36-1T-2TR	86			M76C ♦	66	MA4E2514L-1116	52, 113
				M76H	66, 103	MA4E2514M-1116	52, 113
F				M76H ♦	66	MA4E2532L-1113	48
FD25 ♦	64			M76HC	103	MA4E2532M-1113	52, 113
FD25C ♦	64			M77C	66, 103	MA4E2811	110
FD25E ♦	64			M77C ♦	66	MA4E2812-54	110
FD25H ♦	64			M79C	67, 104	MA4FCP200	46
FD25HC ♦	64			M79C ♦	67	MA4FCP300	46
FD26	64			M79H	67, 104	MA4FCP305	46
FD26C ♦	64			M79H ♦	67	MA4GP022	46, 109
FD93 ♦	64			M79HC	67, 104	MA4GP022 S	46
FD93C ♦	64			M79HC ♦	67	MA4GP030	46, 109
FD93H	64			M80C	67, 104	MA4GP030 S	46
FD93HC ♦	64			M80C ♦	67	MA4GP905	46
FDC2310 ♦	64			M83	66, 103	MA4GP907	46
FDC2710 ♦	64			M83C	66, 103	MA4L011-30	46, 109
FDZ5013 ♦	64			M83C ♦	66	MA4L011-30 S	46
FDZ5013C ♦	64			M85	67, 103	MA4L011-31	46, 109
FM-104-PIN ♦	64			M85 ♦	67	MA4L011-31 S	46
FM-105-PIN ♦	64			M85C	67, 104	MA4L011-32	46, 109
FM-107-PIN ♦	64			M85C ♦	67	MA4L011-32 S	46
FMS-109-PIN ♦	64			M86C	67, 104	MA4L011-134	46, 109
				M86C ♦	67	MA4L011-134 S	46
				M87C	67, 104	MA4L011-137	46
G				M87C ♦	67	MA4L011-186	46, 109
G1	58			M88C	67, 104	MA4L011-186 S	46
G2	58			M88C ♦	67	MA4L011-1056	46, 109
G30	58			M88H	67, 104	MA4L011-1056 S	46
G40	58			M88H ♦	67	MA4L011-1088	46
GTVA101K4	14			M88HC	67, 104	MA4L021-31	47, 109
GTVA10700	14			M88HC ♦	67	MA4L021-31 S	47
GTVA12600	14			M89C	66, 103	MA4L021-120	46, 109
				M89C ♦	66	MA4L021-120 S	46
H				M93C	67, 104	MA4L021-134	46, 109
H-8-4-SMA ♦	84			M93C ♦	67	MA4L021-134 S	46
H-9-N	81			MA4AGBLP912	46, 109	MA4L021-1056	47, 109
H-81-4-N ♦	83			MA4AGBLP912 S	46	MA4L021-1056 S	47
H-81-4-SMA ♦	83			MA4AGFCP910	46	MA4L022-30	47, 109
H-183-4-N ♦	81			MA4AGP907	46	MA4L022-30 S	47
HH-106-PIN ♦	79			MA4AGSW1	59, 114	MA4L022-32	47, 109
HH-109-PIN ♦	79			MA4AGSW1A	59, 114	MA4L022-32 S	47
HH-110-PIN ♦	79			MA4AGSW1A S	59	MA4L022-120	46, 109
HH-128-PIN ♦	81			MA4AGSW1 S	59	MA4L022-120 S	46
HHS-109-PIN	79			MA4AGSW2	61, 114	MA4L022-134	46, 109
HHS-110-PIN	79			MA4AGSW2 S	61	MA4L022-134 S	46
				MA4AGSW3	61, 114	MA4L022-137	46
J				MA4AGSW3 S	61	MA4L022-186	47, 109
JH-114-PIN ♦	79			MA4AGSW4	62, 114	MA4L022-186 S	47
JH-115-PIN ♦	79			MA4AGSW4 S	62	MA4L022-1056	47, 109
JH-119-PIN ♦	79			MA4AGSW5	62, 115	MA4L022-1056 S	47
JH-121-PIN ♦	79			MA4AGSW5 S	62	MA4L031-31	47, 109
JH-133-PIN ♦	79			MA4AGSW8-1	62, 115	MA4L031-31 S	47
JH-136-PIN ♦	79			MA4BN1840-1	79	MA4L031-134	47, 109
JH-139-PIN ♦	79			MA4BN1840-2	79	MA4L031-134 S	47
JH-141-PIN ♦	81			MA4E929A-119	110	MA4L031-186	47, 109
JHS-113-PIN ♦	79			MA4E929B-119	110	MA4L031-186 S	47
JHS-114-PIN ♦	79			MA4E931Z2-1261A	111	MA4L031-1056	47, 109
JHS-115-PIN ♦	79			MA4E932A-186	110	MA4L031-1056 S	47
JHS-119-PIN ♦	79			MA4E932B-186	110	MA4L032-31	47, 109
JHS-121-PIN	79			MA4E1310	53	MA4L032-31 S	47
JHS-139-PIN ♦	79			MA4E1317	53	MA4L032-32	47, 109
JHS-142-PIN ♦	79			MA4E1318	53	MA4L032-32 S	47

Note: Part numbers are RoHS compliant. ♦ indicates non-RoHS compliant. S indicates these parts are also available with Space and Hi-Rel Screening & Qualification. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

Part Number	Page No.	Part Number	Page No.	Part Number	Page No.	Part Number	Page No.
MA4L032-134	47, 109	MA4P504-186 S	40	MA4P7436-287T	42	MA4SW310	61, 114
MA4L032-134 S	47	MA4P504-255	40, 106	MA4P7436-1141T	42	MA4SW310B-1	61, 114
MA4L032-186	47, 109	MA4P504-255 S	40	MA4P7436-1146T	42	MA4SW310B-1 S	61
MA4L032-186 S	47	MA4P505-36	43, 107	MA4P7436CA-287T	42	MA4SW310 S	61
MA4L032-1056	47, 109	MA4P505-36 S	43	MA4P7436CA-1146T	42	MA4SW410	61, 114
MA4L032-1056 S	47	MA4P505-131	43, 107	MA4P7436CK-287T	42	MA4SW410B-1	61, 114
MA4L062-134	47, 110	MA4P505-131 S	43	MA4P7436CK-1146T	42	MA4SW410B-1 S	61
MA4L062-134 S	47	MA4P505-255	40, 106	MA4P7436ST-287T	42	MA4SW410 S	61
MA4L101-30	47, 110	MA4P505-255 S	40	MA4P7436ST-1146T	42	MA4SW510	62, 115
MA4L101-30 S	47	MA4P505-1072T	41	MA4P7437-287T	43	MA4SW510B-1	62, 115
MA4L101-134	47, 110	MA4P506-4	41	MA4P7437-1141T	43	MA4SW510B-1 S	62
MA4L101-134 S	47	MA4P506-30	40, 106	MA4P7437CA-287T	43	MA4SW510 S	62
MA4L101-186	47, 110	MA4P506-30 S	40	MA4P7438-287T	43	MA4SW610B-1	62, 115
MA4L101-186 S	47	MA4P506-31	40, 106	MA4P7438-1141T	43	MA4SW610B-1 S	62
MA4L301-31	47, 110	MA4P506-31 S	40	MA4P7438CA-287T	43	MA4VAT900-1277T	58
MA4L301-31 S	47	MA4P506-131	43, 107	MA4P7441F-1091T	54	MA4VAT904-1061T	58
MA4L301-1056	47, 110	MA4P506-131 S	43	MA4P7446F-1091T	54	MA4VAT907-1061T	58
MA4L301-1056 S	47	MA4P506-255	40	MA4P7447-287T	42	MA4VAT2000-1277T	58
MA4L401-30	47, 110	MA4P506-258	40	MA4P7447-1141T	42	MA4VAT2004-1061T	58
MA4L401-30 S	47	MA4P506-1072T	41	MA4P7447CA-287T	42	MA4VAT2007-1061T	58
MA4L401-31	47, 110	MA4P604-30	41, 107	MA4P7447CK-287T	42	MA46H070-1056	35, 105
MA4L401-31 S	47	MA4P604-30 S	41	MA4P7447ST-287T	42	MA46H070-1056 S	35
MA4L401-120	47, 110	MA4P604-131	44, 107	MA4P7452F-1072T	54	MA46H071-1056	35, 105
MA4L401-120 S	47	MA4P604-131 S	44	MA4P7455-287T	41	MA46H071-1056 S	35
MA4L401-134	47, 110	MA4P604-255	40, 106	MA4P7455-1141T	43	MA46H071-1088	35
MA4L401-134 S	47	MA4P604-255 S	40	MA4P7455-1225	43	MA46H072-1056	36, 105
MA4L401-1056	47, 110	MA4P604-258	41	MA4P7455-1225T	58	MA46H072-1056 S	36
MA4L401-1056 S	47	MA4P606-4	40, 107	MA4P7455CA-287T	41	MA46H073-1056	36, 105
MA4M1050	88, 115	MA4P606-4 S	40	MA4P7455CA-1146T	41	MA46H073-1056 S	36
MA4M1050 S	88	MA4P606-30	40, 106	MA4P7455CK-287T	41	MA46H200-1056	35
MA4M1100	88, 115	MA4P606-30 S	40	MA4P7455CK-1146T	41	MA46H201-1056	35
MA4M1100 S	88	MA4P606-36	40, 106	MA4P7455ST-287T	41	MA46H202-1056	36
MA4M2020	88, 115	MA4P606-36 S	40	MA4P7455ST-1146T	41	MA46H202-1088	36
MA4M2020 S	88	MA4P606-131	40, 107	MA4P7464F-1072T	54	MA46H203-1056	36
MA4M3010	88, 115	MA4P606-131 S	40	MA4P7470F-1072T	54	MA46H203-1088	36
MA4M3010 S	88	MA4P606-258	40	MA4P7493-134	45, 108	MA46H204-1056	36
MA4M3030	88, 115	MA4P607-43	40	MA4P7493-134 S	45	MA46H204-1088	37
MA4M3030 S	88	MA4P607-212	40	MA4PBL027	46, 108	MA46H501-1056	35
MA4M3050	88, 115	MA4P607-296	40, 106	MA4PBL027 S	46	MA46H503	36
MA4M3050 S	88	MA4P607-296 S	40	MA4PH151-139T	41	MA8334-001	59
MA4M3100	88, 115	MA4P709-150	39	MA4PH235-1072T	41	MA8334-004	59
MA4M3100 S	88	MA4P1200-401T	40	MA4PH236-1072T	41	MA40147-213	48
MA4M3150	88, 115	MA4P1200NM-401T	40, 54	MA4PH237-1079T	40	MA40201-119	111
MA4M3150 S	88	MA4P1250-1072T	41	MA4PH238-1072T	40	MA40205-119	111
MA4P161-134	46, 108	MA4P1250NM-1072T	40, 54	MA4PH239-1079T	40	MA40215-120	49, 111
MA4P161-134 S	46	MA4P1450-1091T	40	MA4PH301	41	MA40261	110
MA4P202-120	43, 107	MA4P1450NM-1091T	39	MA4PH401-54T	41	MA40264	48, 111
MA4P202-120 S	43	MA4P4001B-402	39	MA4PH611	40	MA44781	54
MA4P202-276	43	MA4P4001BNM-402	54	MA4PK2000	39	MA45471	54
MA4P203-30	43, 107	MA4P4001F-1091T	40	MA4PK2001	39	MA46413-120	35
MA4P203-30 S	43	MA4P4002B-402	39	MA4PK2002	39	MA46416-134	35, 105
MA4P203-54	41	MA4P4002F-1091T	40	MA4PK2003	39	MA46416-134 S	35
MA4P203-134	45, 108	MA4P4006B-402	39	MA4PK2004	39	MA46452-134	35
MA4P203-134 S	45	MA4P4006F-1091T	40	MA4PK3000	39	MA46461-186	36
MA4P203-1056	43, 107	MA4P4301B-402	39	MA4PK3001	39	MA46470-120	35
MA4P203-1056 S	43	MA4P4301F-1091T	40	MA4PK3002	39	MA46470-134	35
MA4P303-120	43, 107	MA4P7001F-1072T	40	MA4PK3003	39	MA46471-134	35
MA4P303-120 S	43	MA4P7002B-401T	40	MA4PK3004	39	MA46472-94	35
MA4P303-134	45, 108	MA4P7002F-1072T	40	MA4SPS302	46, 108	MA46472-134	35
MA4P303-134 S	45	MA4P7006B-401T	40	MA4SPS302 S	46	MA46473-134	35
MA4P303-186	43, 107	MA4P7006F-1072T	41	MA4SPS402	45, 108	MA46473-186	35
MA4P303-186 S	43	MA4P7101F-1072T	40	MA4SPS402 S	45	MA46474-94	35
MA4P303-1088	43	MA4P7102B-401T	40	MA4SPS421	44	MA46474-95	35
MA4P404-30	41, 107	MA4P7102F-1072T	41	MA4SPS422	42	MA46474-120	35
MA4P404-30 S	41	MA4P7104B-401T	40	MA4SPS502	46, 108	MA46474-134	35
MA4P404-54	41	MA4P7104F-1072T	41	MA4SPS502 S	46	MA46477-134	35
MA4P404-132	44, 108	MA4P7418-1072T	41	MA4SPS552	46, 108	MA46477-186	36
MA4P404-132 S	44	MA4P7433-287T	42	MA4SPS552 S	46	MA46480-134	36
MA4P404-258	41	MA4P7433-1141T	42	MA4ST1231-1141T	36	MA46483-186	36
MA4P504-30	40, 106	MA4P7433CA-287T	42	MA4ST1241-1141T	36	MA46485-120	36
MA4P504-30 S	40	MA4P7433CA-1146T	42	MA4SW110	59, 114	MA46580-1209	35
MA4P504-132	44, 108	MA4P7433CK-287T	42	MA4SW110 S	59	MA46585-1209	35
MA4P504-132 S	44	MA4P7433CK-1146T	42	MA4SW210	60, 114	MA46600-134	35, 105
MA4P504-144	44, 107	MA4P7433ST-287T	42	MA4SW210B-1	60, 114	MA46600-134 S	35
MA4P504-144 S	44	MA4P7433ST-1146T	42	MA4SW210B-1 S	60	MA46603-134	35, 105
MA4P504-186	40, 106	MA4P7435NM-1091T	54	MA4SW210 S	60	MA46603-134 S	35

Note: Part numbers are RoHS compliant. ♦ indicates non-RoHS compliant. S indicates these parts are also available with Space and Hi-Rel Screening & Qualification. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box.

PART NUMBER INDEX



Part Number	Page No.	Part Number	Page No.	Part Number	Page No.	Part Number	Page No.
MA46603-276	35	MAAM-009100	27	MAAM71100	23	MABA-007159-000000	88
MA47047-54	40, 106	MAAM-009450	22	MAAM71200	26	MABA-007236-C16423	88
MA47047-54 S	40	MAAM-009451	22	MAAMSS0041	27	MABA-007237-ETC410	86
MA47120-54T	41	MAAM-009452	22	MAAMSS0042	27	MABA-007327-CT1A40	88
MA47123-139	41	MAAM-009633	27	MAAMSS0044	27	MABA-007488-CT9550	86
MA47208	40	MAAM-009778	22	MAAMSS0060	27	MABA-007493-CF4160	86
MA47222	44, 107	MAAM-009779	22	MAAMSS0067	27	MABA-007532-CF18A0	85
MA47222 S	44	MAAM-009811	22	MAAP-008924	23	MABA-007569-ETK42T	86
MA47223	44, 107	MAAM-009879	22	MAAP-010150	23	MABA-007681-CT2010	87
MA47223 S	44	MAAM-010237	22	MAAP-010168	23	MABA-007748-CT1160	87
MA47266-146	40, 106	MAAM-010333	28	MAAP-010169	23	MABA-007766-CF28A0	86
MA47266-146 S	40	MAAM-010373	27	MAAP-010171	23	MABA-007871-CT1A40	88
MA47416-132	44, 108	MAAM-010399	27	MAAP-010512	24	MABA-008124-CF1FA0	85
MA47418-134	44, 108	MAAM-010651	23, 27	MAAP-010517	23	MABA-008260-CF4A40	86
MA47418-134 S	44	MAAM-011003-ODIEWO	94	MAAP-011022	23	MABA-008282-CFGA40	85
MA47600-54	41	MAAM-011004-ODIEWO	94	MAAP-011027	23	MABA-008354	86
MA144769-287T	39	MAAM-011006-ODIEWO	94	MAAP-011106	24, 25	MABA-008482-CF1A40	85
MAAL	25, 26, 27	MAAM-011007-ODIEWO	94	MAAP-011139	24	MABA-008483-CT1760	87
MAAL-007304	25	MAAM-011008-ODIEWO	94	MAAP-011139-DIE	24	MABA-008570-ETC414	85
MAAL-009053	25, 27	MAAM-011009-ODIEWO	94	MAAP-011145-STD	23	MABA-008639-TC41T7	87
MAAL-009120	25	MAAM-011011-ODIEWO	94	MAAP-011146-STD	23	MABA-008752-TC1P57	86
MAAL-010200	25	MAAM-011041-ODIEWO	94	MAAP-011161	23	MABA-008757-CT1160	88
MAAL-010570	25	MAAM-011100	27	MAAP-011170	24	MABA-008965-CF1160	85
MAAL-010704	25	MAAM-011101	22	MAAP-011193	23	MABA-008979-CF0290	87
MAAL-010705	25	MAAM-011106	24	MAAP-011199	24	MABA-009005-CF1A40	85
MAAL-010706	25	MAAM-011109	23, 27	MAAP-011199-DIE	25	MABA-009092-CT1A40	87
MAAL-011027-Q	25	MAAM-011112	23	MAAP-011202	23	MABA-009126-ET11SM	86
MAAL-011134-CQ3	25	MAAM-011117	24	MAAP-011205	24	MABA-009180-500MHZ	86
MAAL-011136	25	MAAM-011132	23	MAAP-011215-DIE	24	MABA-009210-CT1760	87
MAAL-011138	25, 26	MAAM-011139	24	MAAP-011218-DIE	24, 25	MABA-009231-CT1A4B	87
MAAL-011141	26	MAAM-011156	27	MAAP-011232	23	MABA-009232-CT4A4B	87
MAAL-011141-DIE	26	MAAM-011163	27	MAAP-011233	24	MABA-009250-CT0068	86
MAAL-011146	26	MAAM-011167	24	MAAP-011246	24	MABA-009274-TC11T2	85
MAAL-011151	26	MAAM-011168	27	MAAP-011250	23	MABA-009298-CT48A0	86
MAAL-011158-DIE	26	MAAM-011169	27	MAAP-011289	23	MABA-009387-ES0040	86
MAAL-011159-DIE	26	MAAM-011182	27	MAAP-011298	24	MABA-009412-CF1BC0	85
MAAL-011182	26	MAAM-011184	27	MAAP-011313	23	MABA-009484-ETC31T	86
MAAL-011186	26	MAAM-011185	27	MAAP-011316	23	MABA-009488-61HWCA	86
MAAL-011186-DIE	26	MAAM-011186	27	MAAP-011317	23	MABA-009572-CF18A0	85
MAAL-011188	25	MAAM-011206	22	MAAP-011319	23	MABA-009573-CF1A40	85
MAAL-011198	26	MAAM-011229	22, 25	MAAP-011324	23, 27	MABA-009594-CF18A0	85
MAAL-011204	25	MAAM-011229-CQ3	22, 25, 71	MAAP-011325-DIE	24, 27	MABA-009602-ES2922	87
MAALSS0042	25	MAAM-011231-DIE	28	MAAP-011327	23, 27	MABA-009650-CF1160	85
MAALSS0048	25	MAAM-011238	28	MAAP-011327-DIE	23, 27	MABA-009691-CT1881	87
MAAM02350	22	MAAM-011238-DIE	28	MAAP-011333-DIE	23	MABA-009711-ETK2MM	86
MAAM-007239	22	MAAM-011240	27	MAAP-011340	24	MABA-009776-CF28A0	85
MAAM-007272-OCA514	31, 100	MAAM-011251	27	MAAP-011340-DIE	24	MABA-009807-CF4010	85
MAAM-007272-OCA515	31, 100	MAAM-011252	22, 25	MAAP-011341	24	MABA-009822-715254	88
MAAM-007272-OCA515 ♦	31	MAAM-011252-CQ3	22, 25, 71	MAAP-011358-DIE	23	MABA-009836-CF48A0	86
MAAM-007272-SMA514	31, 100	MAAM-011252-DIE	22, 25	MAAP-011388-DIE	24	MABA-009852-CF1A40	86
MAAM-007272-SMA515	31, 100	MAAM-011258	27	MAAP-015016-DIE	24	MABA-009947-CF3160	86
MAAM-007501-OA2002	33, 101	MAAM-011275	27, 28	MAAP-015024-DIE	24	MABA-010012-ES4302	88
MAAM-007501-CA2002	33, 101	MAAM-011275-DIE	27	MAAP-015030-DIE	23	MABA-010061-CF4FA0	85
MAAM-007501-SA2002	33, 101	MAAM-011277-DIE	27	MAAP-015035-DIE	23, 24	MABA-010125-TC1113	88
MAAM-007502-CPA512	28, 96	MAAM-011286-DIE	27	MAAP-118260	23	MABA-010129-CT4A40	87
MAAM-007502-CPA512 ♦	28	MAAM-011289	22, 27	MAAT-010521	58	MABA-010143-FLUX18	86
MAAM-007502-SPA512	96	MAAM-011289-DIE	22	MAAT-010521-L2	58	MABA-010181-CF9A40	85
MAAM-007724	27	MAAM-011290	22, 27	MAAT-011022-DIE	57	MABA-010238-CT4A80	87
MAAM-007805	22	MAAM-011290-DIE	22	MAAT-011023-DIE	57	MABA-010245-CT1160	87
MAAM-007807	28	MAAM-011291-DIE	27	MAAT-011024-DIE	57	MABA-010247-2R1250	88
MAAM-007844-OCA801	30, 98	MAAM-011297	25, 27	MAAT-011025-DIE	57	MABA-010268-CT4160	87
MAAM-007844-OCA801 ♦	30	MAAM-011299	25, 27	MAAT-011026-DIE	57	MABA-010314-CT1370	87
MAAM-007947-CA3602	98	MAAM-011302	24	MAAT-011027-DIE	57	MABA-010321-CT1A42	87
MAAM-007987-000CG2	58	MAAM-011305	22, 25	MAAT-011028-DIE	57	MABA-010321-CT1A43	87
MAAM-008198-00A162	22	MAAM-011305-DIE	22, 25	MAAT-011029-DIE	57	MABA-010374-CT4A40	88
MAAM-008198-OCA162	32, 101	MAAM-011322	24	MAAT-011030-DIE	57	MABA-010386-CA3A40	88
MAAM-008198-SMA162	32, 101	MAAM-011323	24	MAATCC0013	58	MABA-010392-CT18A0	87
MAAM-008199-000A51	31, 99	MAAM-011324	24	MAAV-007088-000100	58	MABA-010400-CT18A0	86
MAAM-008200-000A83	28, 96	MAAM-011326	22, 24, 25	MAAV-007090-000100	58	MABA-010411-CT1160	85
MAAM-008317-CA7503 ♦	32	MAAM-011326-DIE	22	MAAV-007092-000100	58	MABA-010441-CT38A0	87
MAAM-008818	22	MAAM-011357	22	MAAV-007941	58	MABA-010449-CA2A40	87
MAAM-008819	22	MAAM-011361	24	MAAV-008022	58	MABA-010463-CA2A40	87
MAAM-008820	22	MAAM-015023-DIE	27	MAAV-011013	58	MABA-010655-CF1A40	85
MAAM-008821	22	MAAM26100	23	MAAVSS0001	58	MABA-010721-CF1670	86
MAAM-008863	28	MAAM28000	22	MAAVSS0006	58	MABA-011002	86
MAAM-008970	22	MAAM37000	25	MAAVSS0008	58	MABA-011006	85

Note: Part numbers are RoHS compliant. ♦ indicates non-RoHS compliant. S indicates these parts are also available with Space and Hi-Rel Screening & Qualification. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

Part Number	Page No.	Part Number	Page No.	Part Number	Page No.	Part Number	Page No.
MABA-011010	87	MACP-007741-CG09E0	80	MADC-011021	24, 68	MADP-007417-10720T	40
MABA-011014	87	MACP-007984-MDC201	79	MADL-04L401-0113W0	109	MADP-007433-0287DT	42
MABA-011015	87	MACP-008125-CK07F0	80	MADL-000011-13880G	46, 109	MADP-007433-0287HT	43
MABA-011016	87	MACP-008311-CE0370	80	MADL-000011-13880G S	46	MADP-007433-1146DT	42
MABA-011017	85	MACP-008764-CH0370	80	MADL-000021-003000	47, 109	MADP-007433-12790T	43
MABA-011020	86	MACP-009011-C80370	80	MADL-000021-003000 S	47	MADP-007436-0287DT	42
MABA-011026	85	MACP-009404-C80370	79	MADL-000031-13880G	47, 109	MADP-007436-1146DT	42
MABA-011027	87	MACP-009596-CA0160	80	MADL-000031-13880G S	47	MADP-007436-12790T	43
MABA-011029	87	MACP-009598-C80160	79	MADL-000032-003000	47, 109	MADP-007437-0287BT	43
MABA-011031	87	MACP-009730-C60370	80	MADL-000032-003000 S	47	MADP-007437-0287DT	43
MABA-011032	87	MACP-009736-CD0160	80	MADL-000062-13880G	47, 110	MADP-007437-0287FT	43
MABA-011037	86	MACP-009821-CG0650	79	MADL-000062-13880G S	47	MADP-007438-0287BT	43
MABA-011038	86	MACP-009943-CH07F0	80	MADL-000062-105600	47, 110	MADP-007438-0287DT	43
MABA-011039	86	MACP-009944-CK07F0	80	MADL-000062-105600 S	47	MADP-007438-0287FT	43
MABA-011040	86	MACP-009945-CH0670	80	MADL-000101-13880G	47, 110	MADP-007448-0287AT	42
MABA-011042	88	MACP-010249-CI08A0	80	MADL-000101-13880G S	47	MADP-007448-0287BT	42
MABA-011047	88	MACP-010250-C808A0	80	MADL-000301-01340W	47, 110	MADP-007448-0287DT	42
MABA-011050	86	MACP-010381-C70880	81	MADL-000301-01340W S	47	MADP-007448-0287FT	42
MABA-011051	87	MACP-010382-CF0A40	79	MADL-000301-13870G	47, 110	MADP-007448-0287GT	42
MABA-011056	86	MACP-010383-CH0A40	79	MADL-000301-13870G S	47	MADP-007448-1146BT	42
MABA-011058	87	MACP-010389-CE0880	79	MADL-000401-13870G	47, 110	MADP-007448-1146DT	42
MABA-011062	86	MACP-010414-CA0370	80	MADL-000401-13870G S	47	MADP-007448-1146GT	42
MABA-011063	86	MACP-010446-C80370	80	MADL-011008	46	MADP-007448-11410T	42
MABA-011064	86	MACP-010507-CH0160	79	MADL-011010-01340W	47, 109	MADP-007448-12790T	42
MABA-011073	85	MACP-010571	56	MADL-011010-01340W S	47	MADP-007455-0287DT	41
MABA-011082	88	MACP-010572	56	MADL-011011-01340W	47, 110	MADP-007455-1146DT	41
MABA-011085	87	MACP-010573	56	MADL-011011-01340W S	47	MADP-007455-12790T	43
MABA-011086	87	MACP-010718-CG09E0	80	MADL-011012	56	MADP-008120-12790T	44
MABA-011094	87	MACP-011010	80	MADL-011014	56	MADP-009989-14320T	54
MABA-011100	88	MACP-011013	80	MADL-011015	56	MADP-009989-14340T	54
MABA-011103	87	MACP-011014	80	MADL-011021-14150T	46	MADP-009989-14420T	54
MABA-011104	87	MACP-011015	80	MADL-011021-14210G	46, 109	MADP-010015-14320T	54
MABA-011108	88	MACP-011029	80	MADL-011021-14210G S	46	MADP-010015-14340T	54
MABA-011112	88	MACP-011031	81	MADL-011023-14150T	47	MADP-010015-14420T	54
MABA-011113	88	MACP-011032	80	MADL-011052-14280W	47, 110	MADP-010630-13920T	42
MABA-011118	88	MACP-011033	80	MADL-011052-14280W S	47	MADP-010631-13920T	42
MABA-011125	85	MACP-011034	80	MADL-011074-DIE	56	MADP-010633-13920T	42
MABACT0012	85	MACP-011035	80	MADL-011078-DIE	56	MADP-011027-14150T	45
MABACT0018	86	MACP-011036	80	MADL-011087-DIE	56	MADP-011028-14150T	45
MABACT0039	88	MACP-011037	80	MADL-011088-DIE	56	MADP-011029-14150T	45
MABACT0040	87	MACP-011038	80	MADL-011092	56	MADP-011034-10720T	54
MABACT0043	87	MACP-011045	80	MADL-011100	56	MADP-011048	39
MABACT0048	85	MACP-011047	79	MADL-011173-DIE	56	MADP-011084-1134B0	54
MABACT0059	88	MACP-011050	80	MADP-000015-000030	40, 106	MADP-011084-TR0500	54
MABACT0060	87	MACP-011051	80	MADP-000015-000030 S	40	MADP-011127-11410T	54
MABACT0061	87	MACP-011054	80	MADP-000135-01340W	41, 107	MADP-011128-11410T	54
MABACT0062	85	MACP-011055	80	MADP-000135-01340W S	41	MADP-011136-11410T	54
MABACT0063	87	MACP-011056	80	MADP-000165-01340W	41, 107	MADP-011136-N287BT	54
MABACT0064	86	MACP-011058	80	MADP-000165-01340W S	41	MADP-011136-N287T0	54
MABACT0065	88	MACP-011059	80	MADP-000208-13180W	41	MADP-011143-10720T	54
MABACT0066	87	MACP-011062	80	MADP-000234-10720T	40	MADP-017015-1314	43, 107
MABACT0067	86	MACP-011068	81	MADP-000235-10720T	54	MADP-017015-1314 S	43
MABACT0068	85	MACP-011074	81	MADP-000402-12530G	45, 108	MADP-017025-1314	43, 107
MABACT0069	87	MACP-011079	80	MADP-000402-12530G S	45	MADP-017025-1314 S	43
MABACT0071	85	MACP-011081	81	MADP-000402-12530P	45, 108	MADP-030015-13140P	43, 107
MABAES0008	86	MACP-011086	81	MADP-000402-12530P S	45	MADP-030015-13140P S	43
MABAES0029	87	MACP-011088	79	MADP-000404-10720T	54	MADP-030025-1314	43, 107
MABAES0031	86	MACP-011090	80	MADP-000488-13740W	41, 107	MADP-030025-1314 S	43
MABAES0060	85	MACP-011095	80	MADP-000488-13740W S	41	MADP-042305-130600	44, 107
MABAES0061	86	MACP-011097	81	MADP-000504-10720T	40, 54	MADP-042305-130600 S	44
MABC-11040	74	MACP-011098	81	MADP-000506-014400	43, 107	MADP-042308-130600	44, 107
MABC-11050	74	MACP-011099	81	MADP-000506-014400 S	43	MADP-042308-130600 S	44
MABT-011000-14230G	79	MACP-011102	81	MADP-000907-14020P	46	MADP-042405-130600	43, 107
MABT-011000-14230P	79	MACP-011108	81	MADP-000907-14020W	46	MADP-042405-130600 S	43
MABT-011000-14230W	79	MACP-011109	80	MADP-001907-13050P	46	MADP-042408-130600	43
MABT-011000-14235P	79	MACP-011117	80	MADP-04002B-NM402T	54	MADP-042505-130600	41, 107
MABT-011001	79	MACP-011118	81	MADP-07006B-NM401T	54	MADP-042505-130600 S	41
MABT-011011	79	MACPCC0001	81	MADP-007155-0287DT	42	MADP-042508-130600	41, 107
MAC-50-PIN	64, 102	MACPCC0002	79	MADP-007167-0287AT	41	MADP-042508-130600 S	41
MAC-50-PIN ♦	64	MACS-007800-0M1R00	68	MADP-007167-0287BT	41	MADP-042905-130600	45, 108
MAC-51-PIN	64, 102	MACS-007801-0M1R10	68	MADP-007167-0287DT	41	MADP-042905-130600 S	45
MAC-51-PIN ♦	64	MACS-007801-0M1RM0	68	MADP-007167-0287FT	41	MADP-042908-130600	45, 108
MACP-01106	81	MACS-007802-0M1R10	68	MADP-007167-0287GT	41	MADP-042908-130600 S	45
MACP-007486-CH0010	80	MACS-007802-0M1RS0	68	MADP-007167-0287HT	42	MADP-047668-1134B0	54
MACP-007490-CA0010	80	MADC-010736	68	MADP-007167-11410T	41	MADP-047668-1441BN	54
MACP-007727-CI07B0	80	MADC-011010	68	MADP-007167-12250T	58	MADP-064908-131000	45, 108

Note: Part numbers are RoHS compliant. ♦ indicates non-RoHS compliant. S indicates these parts are also available with Space and Hi-Rel Screening & Qualification. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box.

Part Number	Page No.	Part Number	Page No.	Part Number	Page No.	Part Number	Page No.
MADP-064908-131000 S	45	MAFL-011050	92	MAMX-011036	69	MAPD-008108-C202C0	83
MADR-007097-000100	57	MAFL-011051	92	MAMX-011036-DIE	69	MAPD-008109-C30040	82
MADR-007131-000100	57	MAFL-011052	92	MAMX-011037-DIE	69	MAPD-008762-ES0001	82
MADR-009150	57	MAFL-011053	92	MAMX-011040	68	MAPD-008812-0003HW	83
MADR-009151-000DIE	57	MAFL-011054	92	MAMX-0011040-DIE	68	MAPD-008957-CT0012	84
MADR-009190-000100	57	MAFL-011055	92	MAMX-011043	69	MAPD-009278-5T1000	83
MADR-009269-000100	57	MAFL-011057	92	MAMX-011043-DIE	69	MAPD-009492-C2W180	83
MADR-009443-000100	57	MAFL-011059	92	MAMX-011044	68	MAPD-009850-HW1268	82
MADR-010269-DIE	57	MAFL-011060	92	MAMX-011044-DIE	68	MAPD-009918-C209C0	83
MADR-010410	57	MAFL-011061	92	MAMX-011054	69	MAPD-010038-C209C0	83
MADR-010574	57	MAFL-011062	92	MAMX-011066	69	MAPD-010047-C2W24M	83
MADR-011007	57	MAFL-011077	92	MAMX-011067	68	MAPD-010274-C209C0	83
MADR-011020	57	MAFL-011078	92	MAMX-011071	69	MAPD-010281-C2W024	83
MADR-011021	57	MAFL-011081	92	MAMX-011074	69	MAPD-010362-C20FA0	83
MADR-011022	57	MAFL-011082	91	MAMX-011075	69	MAPD-010424-C20C80	84
MADRCC0002	58	MAFL-011124-DIE	93	MAMX-011088	69	MAPD-010638-C2WSOT	84
MADRCC0004	57	MAFL-011125-DIE	93	MAMX-011088-DIE	69	MAPD-011002	84
MADRCC0005	57	MAFL-011126	93	MAMX-011097	69	MAPD-011007	84
MADRCC0006	57	MAFL-011126-DIE	93	MAMX-011116	69	MAPD-011020	83
MADRCC0007	58	MAFL-011127-DIE	93	MAMX-011122	69	MAPD-011026	82
MADS-001317-1500AG	53	MAFL-011128	93	MAOC-009259	71	MAPD-011027	84
MADS-001317-1500AP	53	MAFL-011128-DIE	93	MAOC-009260	71	MAPD-011032	84
MADS-001318-1197HP	53	MAFL-011156	93	MAOC-009261	71	MAPD-011035	84
MADS-002501-1290LP	52	MAFL-011156-DIE	93	MAOC-009262	71	MAPD-011039	83
MADS-002502-1246HP	52	MAFLCT0066	91	MAOC-009263	71	MAPD-011040	83
MADS-002502-1246LP	52	MAFLCT0068	92	MAOC-009264	71	MAPD-011050	83
MADS-002502-1246MP	52	MAFLCT0081	92	MAOC-009265	71	MAPD-011051	84
MADS-002545-1307HG	49	MAFLCT0083	91	MAOC-009266	71	MAPD-011052	84
MADS-002545-1307LG	49	MAFLES0102	91	MAOC-009267	71	MAPD-011053	83
MADS-002545-1307MG	49	MAGB-101836-025B0P	16	MAOC-009268	71	MAPD-011062	85
MADS-011010-1419	48	MAGB-102327-010B0P	16	MAOC-009269	71	MAPD-011062-DIE	85
MADS-011030-14280W	49, 111	MAGB-102327-012B0P	16	MAOC-009270	71	MAPD-011078	83
MADT-011000	56	MAGB-103338-050S0P	16	MAOC-009871	71	MAPDCC0001	83
MADT-011000-DIE	56	MAGB-103340-015B0P	17	MAOC-009872	71	MAPDCC0002	84
MADZ-011001	53	MAGB-103438-020S0P	16	MAOC-010334	71	MAPDCC0003	84
MADZ-011002	53	MAGB-103440-005B0P	16	MAOC-011027	71	MAPDCC0004	84
MADZ-011003	53	MAGB-103440-010B0P	16	MAOC-011030	71	MAPDCC0005	83
MADZ-011004	53	MAGB-103740-008B0P	17	MAPC-A1000	16	MAPDCC0006	84
MADZ-011005	53	MAGE-100809-500G00	16	MAPC-A1100	16	MAPDCC0009	83
MAFC-004403	64	MAGE-102425-300S00	16	MAPC-A1101	16	MAPDCC0010	84
MAFC-010511	64	MAGX-011086	17	MAPC-A1102	16	MAPDCC0011	83
MAFL-011112	93	MAGX-100027-002S0P	16	MAPC-A1103	16	MAPDCC0014	84
MAFL-007529-CD0550	91	MAGX-100027-015S0P	16	MAPC-A1500	15	MAPDCC0017	83
MAFL-007988-CD0550	91	MAGX-100027-050C0P	16	MAPC-A1501	15	MAPDCC0018	84
MAFL-008070-CLOAD0	92	MAGX-100027-100C0P	16	MAPC-A1502	15	MAPDCC0021	83
MAFL-008098-CD0550	92	MAGX-100027-300C0P	16	MAPC-A1504	15	MAPDCT0017	83
MAFL-008290-CD0AC0	92	MAGX-101011-700E00	16	MAPC-A1505	16	MAPDCT0024	83
MAFL-009055-CD4254	92	MAGX-101050-002S0P	17	MAPC-A1506	16	MAPDCT0026	84
MAFL-009217-CD0AC0	92	MAGX-101214-500L00	16	MAPC-A1507	15	MAPDCT0027	83
MAFL-009272-CD0AC0	92	MAIA-011002	73	MAPC-A1508	15	MAPDCT0028	83
MAFL-009478-CD0AC0	92	MAIA-011004	73	MAPC-A1511	15	MAPDCT0029	83
MAFL-009511-CD0A10	91	MAMF-011015	73	MAPC-A1513	16	MAPDCT0030	83
MAFL-009593-CD0A10	92	MAMF-011038	73	MAPC-A1516	16	MAPDCT0032	83
MAFL-009906-CLOAD0	92	MAMF-011069	73	MAPC-A1522	16	MAPDCT0033	83
MAFL-010101-CB0AD0	92	MAMF-011070	74	MAPC-A1602	13	MAPDCT003030	19
MAFL-010140-CT0C60	92	MAMF-011099	73, 74	MAPC-A1604	13	MAPR-000912-500S00	19
MAFL-010256-CB0AD0	92	MAMF-011119	73	MAPC-A1605	13	MAPR-001011-850S00	19
MAFL-010412-CLOAD0	92	MAMF-011126	73	MAPC-A1605	13	MAPR-001090-350S00	19
MAFL-010464-CD0B20	92	MAMF-011133	73	MAPC-A2001	16	MAPR-002729-170M00	19
MAFL-010467-CD0B20	92	MAMF-011138	73	MAPC-A2002	16	MAPRST0912-50	19
MAFL-010608	92	MAMF-011139	73	MAPC-A2004	16	MAPRST0912-350	19
MAFL-010609	93	MAMF-011142	25, 68	MAPC-A2011	16	MAPRST1030-1KS	19
MAFL-010639-CB0AD0	93	MAMF-011144	73	MAPC-A2021	16	MAPS-010143	56
MAFL-010670-CB0AD0	92	MAMF-011145	73	MAPC-A2500	16	MAPS-010144	56
MAFL-011013	91	MAMF-011149	73	MAPC-A2506	16	MAPS-010145	56
MAFL-011014	92	MAMF-011150	73	MAPC-A2517	16	MAPS-010146	57
MAFL-011015	92	MAMF-011152	73	MAPC-P1008	20	MAPS-010163	56
MAFL-011018	92	MAMF-011153	73	MAPC-P1009	20	MAPS-010163-DIE	56
MAFL-011023	92	MAMF-011156	73	MAPC-P1010	20	MAPS-010164	56
MAFL-011024	92	MAMF-011164	73	MAPC-P1012	20	MAPS-010164-DIE	56
MAFL-011025	92	MAMF-011170	73	MAPC-P1015	20	MAPS-010165	56
MAFL-011026	92	MAMG-100227-010C0L	16	MAPC-P1017	20	MAPS-010165-DIE	56
MAFL-011027	92	MAMX-011009	69	MAPC-P1026	20	MAPS-010166	57
MAFL-011047	92	MAMX-011021	69	MAPD-007246-ES4700	83	MAPS-011007	56
MAFL-011048	92	MAMX-011023	68	MAPD-007249-ESML21	82	MAPS-011008	56
MAFL-011049	92	MAMX-011035	68	MAPD-007530-000100	84	MAPS-011019	56
				MAPD-008072-ESSM26	83	MAPS-011021	56

Note: Part numbers are RoHS compliant. **S** indicates these parts are also available with Space and Hi-Rel Screening & Qualification. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

Part Number	Page No.	Part Number	Page No.	Part Number	Page No.	Part Number	Page No.
MASW-000822-12770T	60	MASW-011029	61, 114	MASWSS0184	62	MAVR-045441-0287FT	37
MASW-000825-12770T	60	MASW-011029 S	61	MASWSS0190	62	MAVR-045446-0287AT	37
MASW-000834-13560T	60	MASW-011030	61	MASWSS0191	61	MBC50-0.2B14	90, 117
MASW-000932	59	MASW-011036	60, 114	MASWSS0192	59	MBC50-0.2B14 S	90
MASW-000936	60	MASW-011036 S	60	MASWSS0199	61	MBC50-1.0B14	90, 117
MASW-001150-1316	58, 114	MASW-011040	61	MASWSS0200	61	MBC50-1.0B14 S	90
MASW-001150-1316 S	58	MASW-011041	61	MASWSS0201	59	MBC50-1.5B14	90, 117
MASW2000	59	MASW-011052	60, 114	MASWSS0202	59	MBC50-1.5B14 S	90
MASW2040	62	MASW-011052 S	60	MASWSS0204	60	MBC50-1B12	90, 117
MASW-002100-1191	60, 114	MASW-011053	61, 114	MATB-004200-0DIEW0	94	MBC50-1B12 S	90
MASW-002100-1191 S	60	MASW-011053 S	61	MATB-006305-0DIEW0	94	MBC50-2.0B14	90, 117
MASW-002102-13580	60, 114	MASW-011057	60	MATB-006310-0DIEW0	94	MBC50-2.0B14 S	90
MASW-002102-13580 S	60	MASW-011057* Reflective	60	MATB-006325-0DIEW0	94	MBC50-2B12	90, 117
MASW-002103-1363	60, 114	MASW-011071	60	MATB-024300-0DIEW0	94	MBC50-2B12 S	90
MASW-002103-1363 S	60	MASW-011077	61	MATB-046100-0DIEW0	94	MBC50-3B12	90, 117
MASW-003100-1192	61, 114	MASW-011087	61, 114	MATB-056800-0DIEW0	94	MBC50-3B12 S	90
MASW-003100-1192 S	61	MASW-011087 S	61	MATB-068100-0DIEW0	94	MBC50-4B12	90, 117
MASW-003102-13590	61, 114	MASW-011098	60	MATB-085600	94	MBC50-4B12 S	90
MASW-003102-13590 S	61	MASW-011102	60	MAUC-010506	68	MBC50-6B12	90, 117
MASW-003103-1363	61, 114	MASW-011105	60	MAUC-011003	68	MBC50-6B12 S	90
MASW-003103-1364	61, 114	MASW-011107-DIE	60	MAVR-000079-0287FT	37	MBC50-8B12	90, 117
MASW-003103-1364 S	61	MASW-011108-DIE	60, 114	MAVR-000080-0287AT	37	MBC50-8B12 S	90
MASW4030G	60	MASW-011108-DIE S	60	MAVR-000080-0287FT	37	MBC50-10B12	90, 117
MASW4060G	61	MASW-011111	61, 114	MAVR-000081-0287AT	37	MBC50-10B12 S	90
MASW-004100-1193	61, 114	MASW-011111 S	61	MAVR-000082-0287AT	36	MBC50-15B12	90, 117
MASW-004100-1193 S	61	MASW-011120	60	MAVR-000082-0287AT	36	MBC50-15B12 S	90
MASW-004102-12760	61, 114	MASW-011127	61	MAVR-000083-0287AT	36	MBC50-20B12	90, 117
MASW-004102-12760 S	61	MASW-011128-DIE	60	MAVR-000083-0287FT	36	MBC50-20B12 S	90
MASW-004103-1365	61, 114	MASW-011129-DIE	60	MAVR-000120-12030W	35	MBC50-33B13	90, 117
MASW-004103-1365 S	61	MASW-011130-DIE	61	MAVR-000120-14110G	35	MBC50-33B13 S	90
MASW-004240-13170	61, 114	MASW-011131-CS0240	61	MAVR-000120-14110P	35	MBC50-47B13	91, 117
MASW-004240-13170 S	61	MASW-011135-CS0240	60	MAVR-000202-12790T	36	MBC50-47B13 S	91
MASW-005100-1194	62, 115	MASW-011135-CS0292	60	MAVR-000240-0287AT	36	MBC50-68B13	91, 117
MASW-005100-1194 S	62	MASW-011137-CS0240	61	MAVR-000240-1146FT	36	MBC50-68B13 S	91
MASW-005102-13600	62, 115	MASW-011138-CS0240	59	MAVR-000240-11410T	36	MBC50-82B13	91, 117
MASW-005102-13600 S	62	MASW-011138-CS0292	59	MAVR-000250-0287AT	36	MBC50-82B13 S	91
MASW6010	60	MASW-011144-DIE	60, 114	MAVR-000250-0287FT	36	MBC50-100B13	91, 117
MASW6010G	60	MASW-011144-DIE S	60	MAVR-000250-1146AT	36	MC2B0.8020-020	91, 118
MASW6020G	59	MASW-011145	60	MAVR-000250-11410T	36	MC2B0.8020-020 S	91
MASW6030G	62	MASW-011151	61	MAVR-000250-12790T	36	MC2B002020-020	91, 118
MASW-006102-13610	62, 115	MASW-011152	61	MAVR-000320-11410T	37	MC2B002020-020 S	91
MASW-006102-13610 S	62	MASW-011153	62	MAVR-000350-11410T	36	MC2B004020-020	91, 118
MASW-007071-000100	59	MASW-011154	62	MAVR-000401-0287AT	36	MC2B004020-020 S	91
MASW-007074-000100	61	MASW-011170	62	MAVR-000401-0287FT	36	MC2B008020-020	91, 118
MASW-007075-000100	59	MASW-011173	61	MAVR-000403-0287AT	37	MC2B008020-020 S	91
MASW-007107	60	MASW-011184	60	MAVR-000403-0287FT	37	MC2B016020-020	91, 118
MASW-007221	59	MASW-011185	61	MAVR-000404-0287AT	37	MC2B016020-020 S	91
MASW-007587-000000	62	MASW-011197	60	MAVR-000405-0287FT	37	MC2DXXX010-010	91, 117
MASW-007588	60	MASW-011198	60	MAVR-000407-0287AT	37	MC2DXXX010-010 S	91
MASW-007813-000000	61	MASW-011199	62	MAVR-000407-0287FT	37	MC2DXXX015-015	91, 117
MASW-007921	60	MASW-011200	62	MAVR-000409-0287FT	37	MC2DXXX015-015 S	91
MASW-007935	59	MASW-011207	59	MAVR-001230-12790T	36	MC2DXXX020-020	91, 117
MASW-008177	58	MASW-011226	61	MAVR-001240-12790T	36	MC2DXXX020-020 S	91
MASW-008206-000DIE	60	MASW20000	60	MAVR-001320-1146FT	37	MC2RXXX010-015	91, 117
MASW-008322	60	MASWCC0006	62	MAVR-001320-11410T	37	MC2RXXX010-015 S	91
MASW-008330	61	MASWCC0009	61	MAVR-001330-1146FT	37	MC2RXXX015-020	91, 117
MASW-008543	59	MASWCC0010	61	MAVR-001330-11410T	37	MC2RXXX015-020 S	91
MASW-008566	61	MASWSS0103	59	MAVR-001330-12790T	37	MC2RXXX015-032 S	91
MASW-008801	59	MASWSS0115	59	MAVR-001340-1146FT	36	MC2RXXX022-042	91, 117
MASW-008853	60	MASWSS0121	59	MAVR-001340-12790T	36	MC2RXXX022-042 S	91
MASW-008899	59	MASWSS0130	62	MAVR-001350-1146FT	36	MC2RXXX097-107	91, 118
MASW-008955	61	MASWSS0136	59	MAVR-001350-12790T	36	MC2RXXX097-107 S	91
MASW-009101	59	MASWSS0143	59	MAVR-011005-12790T	35	MC2RXXX099-138	91, 118
MASW-009444	60	MASWSS0144	61	MAVR-011020-1411	35	MC2RXXX099-138 S	91
MASW-009460	62	MASWSS0148	59	MAVR-044769-0287FT	39	MC2RXXX127-145	91, 118
MASW-009482	61	MASWSS0151	59	MAVR-044769-12790T	39	MC2RXXX127-145 S	91
MASW-009588	60	MASWSS0157	59	MAVR-045436-0287AT	36	MC2RXXX142-160	91, 118
MASW-010350	61	MASWSS0161	59	MAVR-045436-0287FT	36	MC2RXXX142-160 S	91
MASW-010351	62, 115	MASWSS0162	59	MAVR-045436-12790T	36	MC2SXXX010-010	91, 117
MASW-010370	60	MASWSS0166	59	MAVR-045438-0287AT	36	MC2SXXX010-010 S	91
MASW-010612	61	MASWSS0167	59	MAVR-045438-0287FT	36	MC2SXXX011-011	91, 117
MASW-010646	60, 114	MASWSS0169	59	MAVR-045440-0287AT	36	MC2SXXX011-011 S	91
MASW-010646 S	60	MASWSS0176	59	MAVR-045440-0287FT	36	MC2SXXX015-015	91, 117
MASW-010647	60, 114	MASWSS0178	59	MAVR-045441-0287AT	37	MC2SXXX015-015 S	91
MASW-010647 S	60	MASWSS0179	59				
MASW-011021	60, 114	MASWSS0180	59				
MASW-011021 S	60	MASWSS0181	59				

Note: Part numbers are RoHS compliant. ♦ indicates non-RoHS compliant. S indicates these parts are also available with Space and Hi-Rel Screening & Qualification. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box.

Part Number	Page No.	Part Number	Page No.	Part Number	Page No.	Part Number	Page No.
MC2SXXX016-016	.91, 117	MGR703 S	.48	MKVC-2A10R0	.76	MKVC-5A27R0	.78
MC2SXXX016-016 S	.91	MGR705	.48, 110	MKVC-2A11R0	.76	MKVC-5A30R0	.78
MC2SXXX020-020	.91, 117	MGR705 S	.48	MKVC-2A12R0	.76	MKVC-5A33R0	.78
MC2SXXX020-020 S	.91	MG802	.53	MKVC-2A13R0	.76	MKVC-5A36R0	.78
MC2SXXX022-022	.91, 117	MG802A	.53	MKVC-2A15R0	.76	MKVC-5A39R0	.78
MC2SXXX022-022 S	.91	MG803	.53	MKVC-2A16R0	.76	MKVC-5A43R0	.78
MC2SXXX025-025	.91, 117	MG803 S	.53, 113	MKVC-2A18R0	.76	MKVC-5A47R0	.78
MC2SXXX025-025 S	.91	MG804	.53	MKVC-2A20R0	.76	MKVC-5A51R0	.78
MC2SXXX030-030	.91, 117	MG804 S	.53, 114	MKVC-2A22R0	.76	MKVC-5A56R0	.78
MC2SXXX030-030 S	.91	MG805	.53	MKVC-2A24R0	.76	MKVC-5A62R0	.78
MC2SXXX035-035	.91, 117	MG805 S	.53, 113	MKVC-2A27R0	.76	MKVC-5A68R0	.78
MC2SXXX035-035 S	.91	MG806	.53	MKVC-2A30R0	.76	MKVC-5A75R0	.78
MC2SXXX040-040	.91, 117	MG806 S	.53, 113	MKVC-2A33R0	.76	MKVC-5A82R0	.78
MC2SXXX040-040 S	.91	MG807	.53, 113	MKVC-2A36R0	.76	MKVC-5A91R0	.78
MC2SXXX050-050	.91, 117	MG807A	.53, 113	MKVC-2A39R0	.76	MKVC-0547R0-1453	.76
MC2SXXX050-050 S	.91	MG807A S	.53	MKVC-2A43R0	.76	MKVC-050100-1453	.76
MC2SXXX055-055	.91, 117	MG808	.53, 113	MKVC-2A47R0	.76	MKVC-050100-1454	.76
MC2SXXX055-055 S	.91	MG808 S	.53, 113	MKVC-2A51R0	.76	MLP7100	.46, 109
MC2SXXX060-060	.91, 117	MG809	.53, 113	MKVC-2A56R0	.76	MLP7100 S	.46
MC2SXXX060-060 S	.91	MG809 S	.53	MKVC-2A62R0	.76	MLP7101	.47, 109
MC2SXXX070-070	.91, 118	MG810	.53, 113	MKVC-2A68R0	.76	MLP7101 S	.47
MC2SXXX070-070 S	.91	MG810 S	.53, 113	MKVC-2A75R0	.76	MLP7102	.47, 109
MC2SXXX080-080	.91, 118	MG811	.53	MKVC-2A82R0	.76	MLP7102 S	.47
MC2SXXX080-080 S	.91	MG811 S	.53	MKVC-2A91R0	.76	MLP7110	.47, 110
MC2SXXX100-100	.91, 118	MG812	.53, 113	MKVC-2A100	.76	MLP7110 S	.47
MC2SXXX100-100 S	.91	MG812 S	.53, 114	MKVC-2A0110	.76	MLP7111	.47, 110
MC2110 ♦	.66	MG813	.53, 114	MKVC-2A0120	.76	MLP7111 S	.47
MC2307 ♦	.66	MG814	.53	MKVC-2A0130	.77	MLP7112	.47, 110
MC2707 ♦	.66	MG815	.53, 114	MKVC-2A0150	.77	MLP7112 S	.47
MC2710 ♦	.66	MG816	.53	MKVC-2A0160	.77	MLP7120	.47, 48, 110
MC2720 ♦	.66	MG817	.53, 113	MKVC-2A0180	.77	MLP7120-2012	.48
MC3013 ♦	.66	MG818	.53	MKVC-2A0200	.77	MLP7120 S	.47
MC4107 ♦	.66	MG819	.35	MKVC-2A0220	.77	MLP7121	.48, 110
MC4113 ♦	.66	MG820	.35	MKVC-2A0240	.77	MLP7121 S	.48
MC4120 ♦	.66	MG821	.35	MKVC-2A0270	.77	MLP7122	.48, 110
MC4507 ♦	.67	MG822	.35	MKVC-2A0300	.77	MLP7122 S	.48
MC4510 ♦	.67	MG823	.35	MKVC-2A0330	.77	MLP7130	.46, 109
MC4513 ♦	.67	MG824	.35	MKVC-2A0360	.77	MLP7130-0805-2	.46
MD-123-PIN	.65, 102	MG825	.35	MKVC-2A0390	.77	MLP7130 S	.46
MD-123-PIN ♦	.65	MG826	.78	MKVC-2A0430	.77	MLP7131	.47, 109
MD-148-PIN	.65, 102	MG827	.78	MKVC-2A0470	.77	MLP7131 S	.47
MD-148-PIN ♦	.65	MG828	.78	MKVC-2A0510	.77	MLP7140	.46, 109
MD-149-PIN	.65, 102	MG829	.78	MKVC-2A0560	.77	MLP7140 S	.46
MD-149-PIN ♦	.65	MG830	.78	MKVC-2A0620	.77	MLP7141	.47, 109
MD-158-PIN	.65	MG831	.78	MKVC-2A0680	.77	MLP7141 S	.47
MD-160-PIN	.65, 102	MG832	.78	MKVC-2A0750	.77	MLPNC-7100S1-SMA800	.71, 118
MD-160-PIN ♦	.65	MG833	.78	MKVC-2A0820	.77	MLPNC-7100S1-SMA800 S	.71
MD-161-PIN	.64, 102	MG834	.78	MKVC-2A0910	.77	MLPNC-7100S1-SMT580	.71
MD-161-PIN ♦	.64	MG835	.78	MKVC-2A1000	.77	MLPNC-7100-SMA850	.71, 118
MD-169-PIN	.65, 103	MG836	.78	MKVC-2A1100	.77	MLPNC-7100-SMA850 S	.71
MD-169-PIN ♦	.65	MG837	.78	MKVC-2A1200	.77	MLPNC-7102S1-SMA800	.71, 118
MD-179-PIN	.65, 103	MG838	.78	MKVC-2A1300	.77	MLPNC-7102S1-SMA800 S	.71
MD-179-PIN ♦	.65	MG839	.78	MKVC-2A1500	.77	MLPNC-7102S1-SMT580	.71
MD-189-PIN	.65, 103	MG840	.78	MKVC-2A1600	.77	MLPNC-7102-SMA800	.71, 118
MD-189-PIN ♦	.65	MG841	.78	MKVC-2A1800	.77	MLPNC-7102-SMA800 S	.71
MDC-162-SMA	.66, 103	MG842	.78	MKVC-2A2000	.77	MLPNC-7102-SMT680	.71
MDC-162-SMA ♦	.66	MG843	.78	MKVC-2A2200	.77	MLPNC-7103S1-SMA800	.71, 118
MDC-169-SMA	.65, 103	MG844	.78	MKVC-2A2400	.77	MLPNC-7103S1-SMA800 S	.71
MDC-169-SMA ♦	.65	MG845	.78	MKVC-2A2700	.77	MLPNC-7103S1-SMT580	.71
MDC-179-SMA	.65, 103	MG846	.78	MKVC-5A05R1	.77	MLPNC-7103-SMA800	.71, 118
MDC-179-SMA ♦	.65	MG847	.78	MKVC-5A05R6	.77	MLPNC-7103-SMA800 S	.71
MDS-148-PIN	.65, 102	MG848	.78	MKVC-5A06R2	.77	MLPNC-7103-SMT680	.71
MDS-149-PIN	.65, 102	MG849	.76	MKVC-5A06R8	.77	MMD0151-A15	.38, 106
MDS-149-PIN ♦	.65	MG850	.76	MKVC-5A07R5	.77	MMD0151-A15 S	.38
MDS-158-PIN	.65, 102	MG851	.76	MKVC-5A08R2	.77	MMD805-0805	.39
MDS-158-PIN ♦	.65	MG852	.76	MKVC-5A09R1	.77	MMD810-T86	.39, 106
MDS-169-PIN	.65, 103	MG853	.76	MKVC-5A10R0	.77	MMD810-T86 S	.39
MDS-169-PIN ♦	.65	MG854	.76	MKVC-5A11R0	.77	MMD0815-A15	.39, 106
MDS-189-PIN	.65, 103	MG855	.76	MKVC-5A12R0	.77	MMD0815-A15 S	.39
MDS-189-PIN ♦	.65	MG856	.76	MKVC-5A13R0	.77	MMD820-0805	.39
MDS-222-PIN	.64, 102	MG857	.76	MKVC-5A15R0	.77	MMD820-C12	.39, 106
MDS-222-PIN ♦	.64	MG858	.76	MKVC-5A16R0	.78	MMD820-C12 S	.39
MDS-223-PIN	.64, 102	MG859	.76	MKVC-5A18R0	.78	MMD820-E28	.39
MDS-223-PIN ♦	.64	MG860	.76	MKVC-5A20R0	.78	MMD820-E28X	.39
MGR700	.48, 110	MG861	.76	MKVC-5A22R0	.78	MMD820-H20	.39, 106
MGR703	.48, 110	MG862	.76	MKVC-5A24R0	.78	MMD820-H20 S	.39

Note: Part numbers are RoHS compliant. **S** indicates these parts are also available with Space and Hi-Rel Screening & Qualification. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

Part Number	Page No.	Part Number	Page No.	Part Number	Page No.	Part Number	Page No.
MMD820-T86	39, 106	MMP7026	45	MPN7302-0805	45	MRF422	17
MMD820-T86 S	39	MMP7027	45	MPN7302 S	45	MRF426	17
MMD830-0805	38	MMP7028	44	MPN7306	44, 45, 107, 108	MRF428	17
MMD830-C11 S	38	MMP7031	45	MPN7306-0805	44	MRF429	17
MMD830-E28	38	MMP7033	45	MPN7306-H20 S	44	MRF448	17
MMD830-E28X	38	MMP7034	44	MPN7306 S	45	MRF448A	17
MMD830-H20	39, 106	MMP7035	44	MPN7312A	44, 107	MRF454	17
MMD830-H20 S	39	MMP7036	43	MPN7312A-0805	44	MRF455	17
MMD830-T86	38, 106	MMP7040	45	MPN7312A-H20 S	44	MRF587	18
MMD830-T86 S	38	MMP7041	45	MPN7312B	44, 45, 107, 108	MRF1000MB	19
MMD832-0805	38	MMP7060	45	MPN7312B-0805	44	MRF1004MB	19
MMD832-C11	38, 106	MMP7061	45	MPN7312B-H20 S	44	MRF1090MB	19
MMD832-C11 S	38	MMP7062	45	MPN7312B S	45	MRF1150MB	19
MMD832-E28	38	MMP7063	44	MPN7315	44, 107	MRF10005	19
MMD832-H20	38, 106	MMP7064	43	MPN7315-0805-2	44	MRF10031	19
MMD832-H20 S	38	MMP7065	45	MPN7315-H20 S	44	MRF10120	19
MMD832-T86	38, 106	MMP7066	45	MPN7320	43, 44, 45, 107, 108	MRF10150	19
MMD832-T86 S	38	MMP7067	44	MPN7320-0805-2	44	MRF10350	19
MMD835-0805	38	MMP7068	42	MPN7320-H20 S	43	MRF10502	19
MMD835-C11	38, 106	MMP7078	39, 106	MPN7320 S	45	MSAT-N25	44
MMD835-C11 S	38	MMP7078-127-1	39	MPN7345	44, 107	MSAT-P25	45
MMD835-E28	38	MMP7078-128-1	54	MPN7345 S	44	MSD700	37, 105
MMD835-E28X	38	MMP7078 S	39	MPN7360	43, 107	MSD700-12	37
MMD835-H20	38, 106	MMP7080-128-1	54	MPN7360 S	43	MSD700 S	37
MMD835-H20 S	38	MMP7089-127-1	40	MPN7370	43, 107	MSD701	38, 106
MMD835-T86	38, 106	MMP7089-128-1	54	MPN7370 S	43	MSD701 S	38
MMD835-T86 S	38	MMP7092	43, 107	MPN7380	43, 107	MSD703	38, 106
MMD837-0805	38	MMP7092 S	43	MPN7380 S	43	MSD703 S	38
MMD837-C11	38, 105	MMPN080045	46, 108	MPN7420	43, 107	MSD710	38, 105
MMD837-C11 S	38	MMPN080045 S	46	MPN7420 S	43	MSD710 S	38
MMD837-E28	38	MMPN080150	46, 108	MPN7453A	43, 107	MSD711	38, 106
MMD837-E28X	38	MMPN080150 S	46	MPN7453A S	43	MSD711 S	38
MMD837-H27	38, 106	MMRF321	18	MPN7453B	43, 107	MSD720	38, 105
MMD837-H27 S	38	MMSPN050-C53	46, 109	MPN7453B S	43	MSD720 S	38
MMD837-T86	38, 106	MMSPN050-C53 S	46	MPN7453C	43, 107	MSD722	38, 106
MMD837-T86 S	38	MMSPN050-C54	46, 109	MPN7453C S	43	MSD722 S	38
MMD840-0805	38	MMSPN050-C54 S	46	MRF134	18	MSD723	38, 106
MMD840-A15	38, 106	MNM201	48, 110	MRF136	18	MSD723 S	38
MMD840-A15 S	38	MNM201 S	48	MRF136Y	18	MSD724	39, 106
MMD840-C11	37, 106	MNM207	48, 110	MRF137	18	MSD724 S	39
MMD840-C11 S	37	MNM207 S	48	MRF140	17	MSD726	39, 106
MMD840-E28	38	MNM211	48	MRF141	17	MSD726 S	39
MMD840-E28X	38	MNM212	48, 110	MRF141G	17	MSD731	38, 106
MMD840-H27	38, 106	MNM212 S	48	MRF148A	17	MSD731 S	38
MMD840-H27 S	38	MNP0008	45, 108	MRF150	17	MSD733	38, 106
MMD840-T86	38, 106	MNP0008-ET47P	45	MRF151	17	MSD733 S	38
MMD840-T86 S	38	MNP0008-T54P S	45	MRF151A	17	MSD736	39, 106
MMDB30-0402	37	MNP0008-T55P S	45	MRF151G	17	MSD736 S	39
MMDB30-0805-2	37	MNP0008-T89P S	45	MRF154	17	MSPD1000-E50/E50SM	62
MMDB30-B11	37, 105	MNP0010	45, 108	MRF157	17	MSPD1000-H50	62, 115
MMDB30-B11 S	37	MNP0010-ET47P	45	MRF157H	17	MSPD1002-E50/E50SM	62
MMDB30-E28/28X	37	MNP0010-T54P S	45	MRF158	18	MSPD1011-122/121	62
MMDB35-0402	37	MNP0010-T55P S	45	MRF160	18	MSPD1012-121	62
MMDB35-0805-2	37	MNP0010-T89P S	45	MRF166C	18	MSPD1012-122	62
MMDB35-B11	37, 105	MNP0012	45, 108	MRF166W	18	MSPD1012-E50/E50SM	62
MMDB35-B11 S	37	MNP0012A	44, 108	MRF171A	18	MSPD1012-H50	62, 115
MMDB35-E28/28X	37	MNP0012A-ET47P	44	MRF173	17	MSPD1012-H50 S	62
MMDB45-0402	37	MNP0012A S	44	MRF173CQ	17	MSPD1013-121	62
MMDB45-0805-2	37	MNP0012A-T54P S	44	MRF174	18	MSPD1013-122	62
MMDB45-B11	37, 105	MNP0012A-T55P S	44	MRF175GU	18	MSPD2018-E50/E50SM	62
MMDB45-B11 S	37	MNP0012A-T89P S	44	MRF175GV	18	MSPD2018-H50	62, 115
MMDB45-E28/28X	37	MNP0012-ET47P	45	MRF175LU	18	MSPD2018-H50 S	62
MMP7011	45, 108	MNP0012 S	45	MRF176GU	18	MSS20-046-0805	52
MMP7011 S	45	MNP0012-T54P S	45	MRF176GV	18	MSS20-046-C15	49, 111
MMP7020	45, 108	MNP0012-T55P S	45	MRF177	18	MSS20-046-C15 S	49
MMP7020 S	45	MNP0012-T89P S	45	MRF275G	18	MSS20-046-E25	50
MMP7021	45, 108	MNP0014	44, 108	MRF275L	18	MSS20-046-H27	50, 112
MMP7021 S	45	MNP0014-ET47P	44	MRF313	18	MSS20-046-H27 S	50
MMP7022	44, 108	MNP0014 S	44	MRF314	18	MSS20-046-T86	48
MMP7022 S	44	MNP0014-T54P S	44	MRF316	18	MSS20-046-T86 S	48
MMP7023	44, 107	MNP0014-T55P S	44	MRF317	18	MSS20-047-0805	52
MMP7023 S	44	MNP0014-T89P S	44	MRF323	18	MSS20-047-C15	49, 111
MMP7024	43, 107	MPN1103-12	45	MRF327	18	MSS20-047-C15 S	49
MMP7024 S	43	MPN3001	41, 107	MRF392	18	MSS20-047-E25	50
MMP7025	45, 108	MPN3001 S	41	MRF393	18	MSS20-047-H27	50, 112
MMP7025 S	45	MPN7302	45, 107, 108	MRF421	17	MSS20-047-H27 S	50

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Part Number	Page No.	Part Number	Page No.	Part Number	Page No.	Part Number	Page No.
MSS20-047-T86	49, 111	MSS30-142-B10B	49, 111	MSS39-045-C15	49, 111	MSS40-448-E45	50
MSS20-047-T86 S	49	MSS30-142-B10B S	49	MSS39-045-C15 S	49	MSS40-448-H40	51, 112
MSS20-050-0805	50	MSS30-142-E25	50	MSS39-045-P55	50	MSS40-448-H40 S	51
MSS20-050-C15	48, 111	MSS30-142-H20	51, 112	MSS39-045-P86	50, 112	MSS40-455-B40	51, 112
MSS20-050-C15 S	48	MSS30-142-H20 S	51	MSS39-045-P86 S	50	MSS40-455-B40 S	51
MSS20-050-E25	48	MSS30-148-B10B	49, 111	MSS39-048-C15	48	MSS40-455-E45	51
MSS20-050-H27	48, 111	MSS30-148-B10B S	49	MSS39-048-P55	48, 111	MSS40-455-H40	51, 112
MSS20-050-H27 S	48	MSS30-148-E25	51	MSS39-048-P55 S	48	MSS40-455-H40 S	51
MSS20-050-T86	49, 111	MSS30-148-H20	51, 112	MSS39-048-P86	49, 111	MSS40-B46-B45	49, 111
MSS20-050-T86 S	49	MSS30-148-H20 S	51	MSS39-048-P86 S	49	MSS40-B46-B45 S	49
MSS20-051-0805	50	MSS30-154-B10B	50, 112	MSS39-144-0402	49	MSS40-B46-E45	50
MSS20-051-C15	48, 111	MSS30-154-B10B S	50	MSS39-144-0805	49	MSS40-B53-B45	50, 112
MSS20-051-C15 S	48	MSS30-154-E25	52	MSS39-144-B10B	52, 113	MSS40-B53-B45 S	50
MSS20-051-E25	48	MSS30-154-H20	52, 113	MSS39-144-B10B S	52	MSS40-B53-E45	51
MSS20-051-H27	48, 111	MSS30-154-H20 S	52	MSS39-144-H27	50, 112	MSS40-CR46-B49	111
MSS20-051-H27 S	48	MSS30-242-B20	49, 111	MSS39-144-H27 S	50	MSS40-CR46-E45	50
MSS20-051-T86	49, 111	MSS30-242-B20 S	49	MSS39-146-0402	49	MSS40-CR46-H40	51, 112
MSS20-051-T86 S	49	MSS30-242-E35	50	MSS39-146-0805	50	MSS40-CR46-H40 S	51
MSS20-054-0805	48, 111	MSS30-242-H30	51, 112	MSS39-146-B10B	52, 113	MSS40-PCB46-B48	49, 111
MSS20-054-0805 S	48	MSS30-242-H30 S	51	MSS39-146-B10B S	52	MSS40-PCB46-B48 S	49
MSS20-054-C15	48, 110	MSS30-248-B20	49, 111	MSS39-146-H27	50, 112	MSS40-PCR46-B47	49, 111
MSS20-054-C15 S	48	MSS30-248-B20 S	49	MSS39-146-H27 S	50	MSS40-PCR46-B47 S	49
MSS20-054-E25	48	MSS30-248-E35	50	MSS39-148-0402	50	MSS50-046-C26	49
MSS20-054-H27	48, 110	MSS30-248-H30	51, 112	MSS39-148-0805	50	MSS50-046-P55	51, 112
MSS20-054-H27 S	48	MSS30-248-H30 S	51	MSS39-148-B10B	49, 111	MSS50-046-P55 S	51
MSS20-054-T86	48, 111	MSS30-254-B20 S	50	MSS39-148-B10B S	49	MSS50-046-P86	51
MSS20-054-T86 S	48	MSS30-254-E35	51	MSS39-148-E25	50	MSS50-048-C15	49
MSS20-055-0805	48	MSS30-254-H30	52, 113	MSS39-148-H20	49, 111	MSS50-146-0402	50
MSS20-055-C15	48, 110	MSS30-254-H30 S	52	MSS39-148-H20 S	49	MSS50-146-0805	50
MSS20-055-C15 S	48	MSS30-346-B21	51, 112	MSS39-152-0402	50	MSS50-146-B10B	49, 111
MSS20-055-E25	48	MSS30-346-B21 S	51	MSS39-152-0805	50	MSS50-146-B10B S	49
MSS20-055-H27	48, 111	MSS30-346-E25	51	MSS39-152-B10B	48, 111	MSS50-146-E25	50
MSS20-055-H27 S	48	MSS30-346-H20	52, 113	MSS39-152-B10B S	48	MSS50-146-H20	51, 112
MSS20-055-T86	48, 111	MSS30-346-H20 S	52	MSS39-152-E25	48	MSS50-146-H20 S	51
MSS20-055-T86 S	48	MSS30-442-B41	49, 111	MSS39-152-H20	51, 112	MSS50-155-0805-2	51
MSS20-140-0402	52	MSS30-442-B41 S	49	MSS39-152-H20 S	51	MSS50-244-0805	52
MSS20-140-B10D	52, 113	MSS30-442-B42	49, 111	MSS40-045-C15	49, 111	MSS50-244-B20	50
MSS20-140-B10D S	52	MSS30-442-B42 S	49	MSS40-045-C15 S	49	MSS50-244-E35	51
MSS20-141-0402	52	MSS30-442-E45	49	MSS40-045-P55	51, 112	MSS50-244-H30	52
MSS20-141-B10D	52, 113	MSS30-442-H40	49, 111	MSS40-045-P55 S	51	MSS50-448-0805	51
MSS20-141-B10D S	52	MSS30-442-H40 S	49	MSS40-045-P86	51, 112	MSS50-448-B40	50, 112
MSS20-142-0402	52, 113	MSS30-448-B41	49, 111	MSS40-045-P86 S	51	MSS50-448-B40 S	50
MSS20-142-0402 S	52	MSS30-448-B41 S	49	MSS40-048-C15	49, 112	MSS50-448-E45	51, 112
MSS20-142-B10D	52, 113	MSS30-448-B42	49, 111	MSS40-048-C15 S	49	MSS50-448-E45 S	51
MSS20-142-B10D S	52	MSS30-448-B42 S	49	MSS40-048-P55	51	MSS50-448-H40	52, 113
MSS20-143-0402	52	MSS30-448-E45	50	MSS40-048-P86	51, 112	MSS50-448-H40 S	52
MSS20-143-B10D	52, 113	MSS30-448-H40	51, 112	MSS40-048-P86 S	51	MSS50-B46-B45	49, 111
MSS20-143-B10D S	52	MSS30-448-H40 S	51	MSS40-141-0402	50	MSS50-B46-B45 S	49
MSS20-145-0402	53	MSS30-454-B40	50, 112	MSS40-141-B10B	49, 111	MSS50-B46-E45	50
MSS20-145-B10D	53, 113	MSS30-454-B40 S	50	MSS40-141-B10B S	49	MSS50-B46-H40	51, 112
MSS20-145-B10D S	53	MSS30-454-E45	51	MSS40-141-E25	50	MSS50-B46-H40 S	51
MSS20-146-0402	53	MSS30-454-H40	52, 113	MSS40-141-H20	51, 112	MSS50-B53-B45	50, 112
MSS20-146-B10D	53, 113	MSS30-454-H40 S	52	MSS40-141-H20 S	51	MSS50-B53-B45 S	50
MSS20-146-B10D S	53	MSS30-B46-B45	49, 111	MSS40-148-0402	50	MSS50-B53-E45	51, 112
MSS25-047-C15c	52, 113	MSS30-B46-B45 S	49	MSS40-148-B10B	49, 112	MSS50-B53-E45 S	51
MSS25-047-C15c S	52	MSS30-B46-E45	50	MSS40-148-B10B S	49	MSS50-B53-H40	52, 113
MSS25-049-C15c	53, 113	MSS30-B46-H40	51, 112	MSS40-148-E25	51	MSS50-B53-H40 S	52
MSS25-049-C15c S	53	MSS30-B46-H40 S	51	MSS40-148-H20	51	MSS50-CR53-B49	50, 112
MSS25-141-B10D	52, 113	MSS30-B53-B45	50, 112	MSS40-155-0402	51, 112	MSS50-CR53-B49 S	50
MSS25-141-B10D S	52	MSS30-B53-B45 S	50	MSS40-155-0402 S	51	MSS50-CR53-E45	51
MSS25-143-B10D	52, 113	MSS30-B53-E45	51	MSS40-155-B10B	51	MSS50-CR53-H40	52, 113
MSS25-143-B10D S	52	MSS30-B53-H40	52, 113	MSS40-155-E25	52	MSS50-CR53-H40 S	52
MSS25-145-B10D	53, 113	MSS30-B53-H40 S	52	MSS40-155-H20	52, 113	MSS50-PCR53-B48	50, 112
MSS25-145-B10D S	53	MSS30-CR46-B49	49	MSS40-155-H20 S	52	MSS50-PCR53-B48 S	50
MSS30-046-C15	49, 111	MSS30-CR46-E45	50	MSS40-244-0805	51	MSSWSE-005-10S	44
MSS30-046-C15 S	49	MSS30-CR46-H40	51, 112	MSS40-244-B20	49, 111	MSWSE-005-15	44
MSS30-046-P55	51, 112	MSS30-CR46-H40 S	51	MSS40-244-B20 S	49	MSWSE-010-16S	42
MSS30-046-P55 S	51	MSS30-CR53-B49	50, 112	MSS40-244-E35	50	MSWSE-020-05	40
MSS30-046-P86	51, 112	MSS30-CR53-B49 S	50	MSS40-248-0805	50	MSWSE-020-10	40
MSS30-046-P86 S	51	MSS30-CR53-E45	51	MSS40-248-B20	49, 112	MSWSE-040-10	42
MSS30-050-C15	49, 112	MSS30-CR53-H40	52	MSS40-248-B20 S	49	MSWSE-044-10	41
MSS30-050-C15 S	49	MSS30-PCB46-B48	111	MSS40-248-E35	51	MSWSE-050-10	42
MSS30-050-P55	51, 112	MSS30 PCR46-B47	49, 111	MSS40-255-0805-4	51	MSWSE-050-17	42
MSS30-050-P55 S	51	MSS30 PCR46-B47 S	49	MSS40-255-E35	52	MSWSH-020-24	46
MSS30-050-P86	51, 112	MSS30 PCR53-B47	50, 112	MSS40-448-B42	49, 112	MSWSH-020-30	44
MSS30-050-P86 S	51	MSS30 PCR53-B47 S	50	MSS40-448-B42 S	49	MSWSH-040-30	44

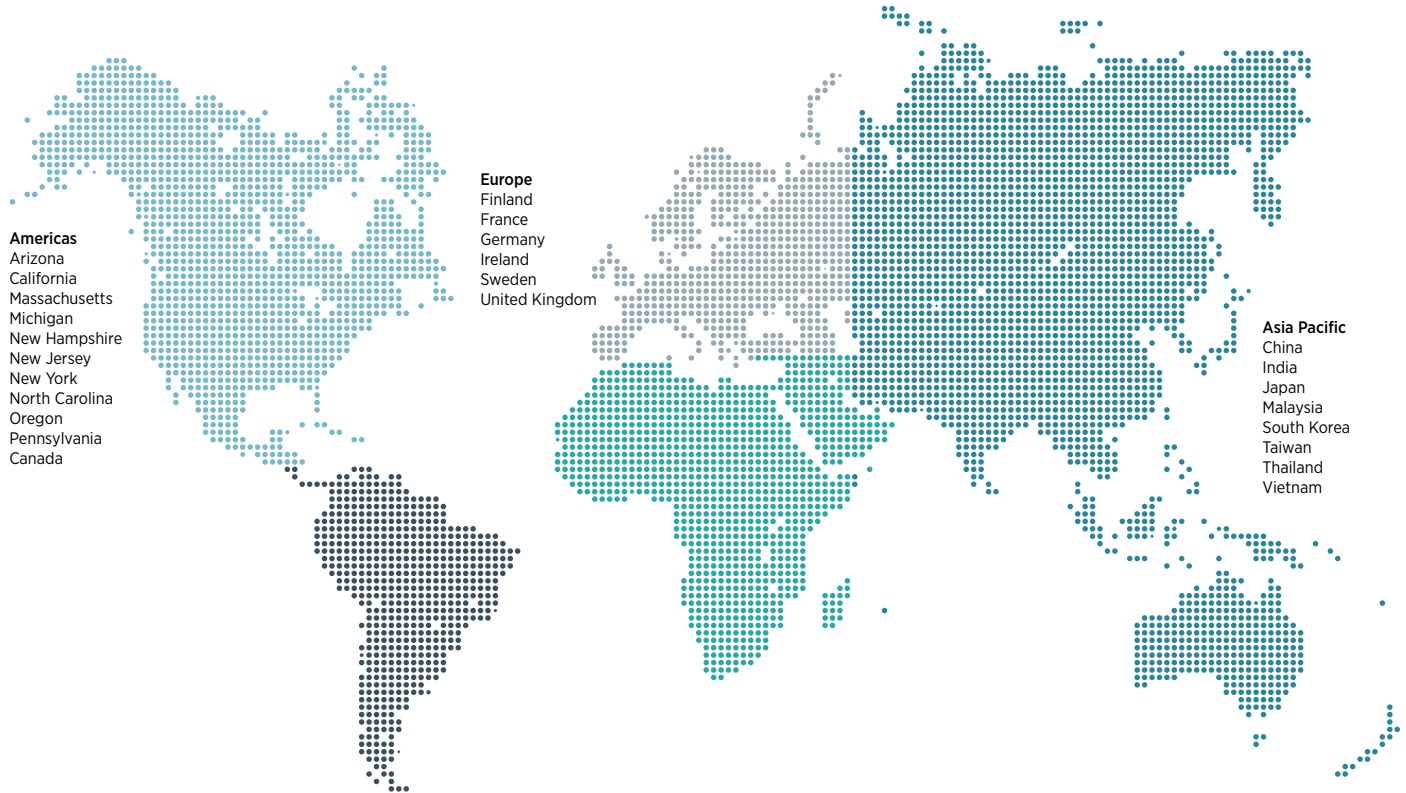
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Part Number	Page No.	Part Number	Page No.	Part Number	Page No.	Part Number	Page No.
MSWSH-100-30	44	MY88C	67, 104	PH1214-12M	19	SMA28	29, 32, 97, 101
MSWSHB-020-30	44	MY88C ♦	67	PH1214-25M	19	SMA29-1	29, 97
MSWSHC-040-40	44	MY88HC	66, 103	PH1214-40M	19	SMA32	33, 101
MTH-50-PIN	82	MY88HC ♦	66	PH1214-55EL	19	SMA32-1	33, 101
MTV-50-PIN ♦	82	MY89	67, 104	PH1214-80M	19	SMA33-1	98
MTV4030-01	35	MY89 ♦	67	PH1214-100EL	19	SMA34	30, 98
MTV4030-02	35	MY89C	67, 104	PH1214-110M	19	SMA35	29, 98
MTV4030-03	35	MY89C ♦	67	PH1214-220M	19	SMA36	30, 98
MTV4030-04	35	MY93	67, 104	PH1214-300M	19	SMA37	30, 98
MTV4030-05	35	MY93 ♦	67	PH1617-2	19	SMA38	29, 98
MTV4030-08	35	MY93C	67, 104	PH2226-50M	19	SMA39	29, 97
MTV4030-09	35	MY93C ♦	67	PH2226-110M	19	SMA43	98
MTV4030-10	36	MZ5010	67, 104	PH2729-25M	19	SMA45	33, 101
MTV4030-15	36	MZ5010 ♦	67	PH2729-65M	19	SMA57	28, 96
MTV4030-20	37	MZ5010C	68, 104	PH2729-110M	19	SMA58	31, 99
MTV4030-21	37	MZ5010C ♦	68	PH2729-130M	19	SMA59	28, 31, 97, 99
MTV4030-22	37	MZ6310C	66, 103	PH2731-5M	19	SMA59-1	28, 97
MTV4030-24	37	MZ6310C ♦	66	PH2731-20M	19	SMA61	33, 102
MTV4030-26	37	MZ7407	67, 104	PH2731-75L	19	SMA63	32, 101
MY50	68, 105	MZ7407 ♦	67	PH3134-10M	19	SMA64	29, 97
MY50 ♦	68	MZ7407C	67, 104	PH3134-20L	19	SMA66	29, 32, 97, 101
MY50A	68, 105	MZ7407C ♦	67	PH3134-55L	19	SMA66-1	29, 97
MY50A ♦	68	MZ7410	67, 104	PH3135-5M	20	SMA67-1	32, 100
MY50AC	68, 105	MZ7410 ♦	67	PH3135-20M	20	SMA70	30, 31, 99
MY50AC ♦	68	MZ7410C	67, 104	PH3135-25S	20	SMA70-1	30, 99
MY50C	68, 105	MZ7410C ♦	67	PH3135-65M	20	SMA72	28, 96
MY50C ♦	68	MZ7420	67, 104	PH3135-90S	20	SMA73	31, 100
MY51	67, 104	MZ7420 ♦	67	PHA2729-300M	20	SMA74	31, 96, 100
MY51 ♦	67	MZ7420C	67, 104	PHA2731-190M	20	SMA75	31, 32, 100
MY51C	67, 104	MZ7420C ♦	67	PHA3135-130M	20	SMA75-3	32, 100
MY51C ♦	67	MZ8810C	67, 104	PTVA101K0	17	SMA76	31, 100
MY52	67, 104	MZ8810C ♦	67	PTVA03012	17	SMA77	28, 96
MY52 ♦	67	MZ8813	67, 104	PTVA03500	17	SMA78	31, 99
MY52C	67, 104	MZ8813 ♦	67	PTVA04250	17	SMA79	96
MY52C ♦	67	MZ9310	67, 104	PTVA04350	17	SMA80	30, 32, 99, 100
MY63	66, 103	MZ9310 ♦	67	PTVA04700	17	SMA80-1	30, 99
MY63 ♦	66	MZ9310C	67, 104	PTVA10200	17	SMA81	30, 32, 99, 100
MY63C	66, 103	MZ9313	67, 104	PTVA10450	17	SMA81-1	30, 99
MY63C ♦	66	MZ9313 ♦	67	PTVA12025	17	SMA82	30, 99
MY63H	66, 103	MZ9313C	67, 104	PTVA12050	17	SMA82-1	30, 99
MY63H ♦	66	MZ9313C ♦	67	PTVA12350	17	SMA83-1	30, 99
MY63HC	66, 103	MZB600-19-6	48	PTVA12700	17	SMA87	31, 96, 99
MY63HC ♦	66	MZB600-32	48, 110	R		SMA87-1	31, 99
MY76	66, 103	MZB600-32 S	48	RA36	30, 98	SMA87-2	31, 99
MY76 ♦	66	MZB600-B11	48	RA46	98	SMA88	28, 96
MY76C	66, 103	MZB600-C15P	48	RA66	29, 97	SMA89	28, 97
MY76C ♦	66	MZB604-B11	48, 110	RA69	29, 97	SMA101	30, 98
MY76H	66, 103	MZB604-B11 S	48	RA89	28, 96	SMA180	31, 100
MY76H ♦	66	MZB604-C15P	48	RA89-1	28, 96	SMA181	96
MY76HC	66, 103	N		S		SMA231	30, 99
MY76HC ♦	66	NPA1003QA	16	SFD25H	64	SMA411	31, 99
MY77	66, 103	NPA1006	16	SFD26	64	SMA513	28, 96
MY77 ♦	66	NPA1007	16	SM2E	65, 102	SMA611	32, 100
MY77C	66, 103	NPA1008	16	SM4A	65, 102	SMA1021	29, 97
MY77C ♦	66	NPT2018	16	SM4B	65, 102	SMA1031	32, 101
MY82	67, 104	NPT25015	16	SM4B ♦	65	SMA1211	32, 101
MY82 ♦	67	NPT25100B	16	SM4G	65, 102	SMA1212	32, 101
MY82C	67, 104	NPT35015	16	SM4G ♦	65	SMA4011	33, 101
MY82C ♦	67	NPTB00004A	17	SM4T	65, 102	SMA4012	33, 101
MY83H	66, 103	NPTB00025B	16	SM4T17	65, 102	SMA6011	33, 101
MY83H ♦	66	P		SM4TH	65, 102	SMAL7	33
MY83HC	66, 103	PA38	33, 98, 101	SM5T	66, 103	SMG1	58
MY83HC ♦	66	PA48	98	SM5T17	66, 103	SMG2	58
MY84	66, 103	PA511	96	SM5TH	66, 103	SMG30	58
MY84 ♦	66	PA512	28, 96	SM6D	64, 102	SMG40	58
MY84C	66, 103	PAW1027	31, 99	SM6EH	64, 102	SMGS11	52
MY84C ♦	66	PAW1027 ♦	31	SM6V	64, 102	SML1	33
MY85	67, 104	PH1090-15L	19	SMA1	31, 100	SML42	33
MY85 ♦	67	PH1090-75L	19	SMA5-6	28, 97	SMLA7	33
MY85C	66, 104	PH1090-175L	19	SMA11-2	32, 100	SMLA17	33
MY85C ♦	66	PH1090-350L	19	SMA17	29, 97	SMMD805-SOD323	39
MY87	67, 104	PH1090-550S	19	SMA18-1	32, 101	SMMD805-SOT23-0S	39
MY87 ♦	67	PH1090-700B	19	SMA19-1	29	SMMD805-SOT23-1S	39
MY87C	67, 104	PH1214-2M	19	SMA24	29, 97	SMMD810-SOD323	39
MY87C ♦	67	PH1214-6M	19	SMA26	29, 97	SMMD810-SOT23-0S	39
MY88	67, 104					SMMD810-SOT23-1S	39

Note: Part numbers are RoHS compliant. ♦ indicates non-RoHS compliant. S indicates these parts are also available with Space and Hi-Rel Screening & Qualification. Detailed specifications can be found quickly on our website at macom.com by typing the part number into the search box.

Part Number	Page No.	Part Number	Page No.	Part Number	Page No.	Part Number	Page No.
SMMD820-SOD323	.39	SP14	.90, 116	SP88	.90, 116	UF28100M	.18
SMMD820-SOT23-0S	.39	SP14 S	.90	SP88 S	.90	UF28100V	.18
SMMD820-SOT23-1S	.39	SP20	.90, 116	SP89	.90, 116	UF28150J	.18
SMMD830-SOD323	.38	SP20 S	.90	SP89 S	.90	W	
SMMD830-SOT23-0S	.38	SP22	.90, 116	SP104	.90, 117	WST33H0NC	.15
SMMD830-SOT23-1S	.38	SP22 S	.90	SP104 S	.90	X	
SMMD832-SOD323	.38	SP29	.90, 116	SP111	.90, 117	XB1004-BD	.23
SMMD832-SOT23-0S	.38	SP29 S	.90	SP111 S	.90	XB1005-BD	.23
SMMD832-SOT23-1S	.38	SP34	.90, 116	SP120	.90, 116	XB1006-BD	.23
SMMD837-SOD323	.38	SP34 S	.90	SP120 S	.90	XB1007-BD	.22
SMMD837-SOT23-0S	.38	SP37	.90, 117	SS30-PCB46-B48 S	.49	XB1007-QT	.22
SMMD837-SOT23-1S	.38	SP37 S	.90	SW05-0311	.59	XB1008-BD	.22
SMMD840-SOD323	.37	SP38	.90, 116	SW-209-PIN	.59	XB1008-QT	.22
SMMD840-SOT23-0S	.37	SP38 S	.90	SW-226-PIN	.59, 114	XD1001-BD	.28
SMPA38	.33, 98, 101	SP39	.90, 116	SW-228-PIN	.59, 114	XF1001-SC	.22, 24
SMPA48	.98	SP39 S	.90	SW-231-PIN	.59	XL1000-BD	.26
SMPA511	.96	SP40	.90, 116	SW-313-PIN	.59, 114	XL1002-BD	.26
SMPA2010	.30, 98	SP40 S	.90	T		XL1002-BD	.26
SMPN7316-SOD323	.41	SP44	.90, 117	T-1000-BNC ♦	.83	XL1010-BD	.26
SMPN7316-SOT23	.41	SP44 S	.90	T-1000-N ♦	.83	XL1010-QT	.26
SMPN7335-SOD323	.40	SP48	.90, 116	T-1000-SMA ♦	.83	XM1001-BD	.69
SMRA36	.30, 98	SP48 S	.90	T-1000-TNC ♦	.83	XM1002-BD	.69
SMRA46	.98	SP49	.89, 116	THV-50-BNC ♦	.82	XM1003-BD	.69
SMRA62	.98	SP49 S	.89	THV-50-N ♦	.82	XP1017-BD	.24
SMRA66	.29, 97	SP51	.89, 116	THV-50-SMA ♦	.82	XP1026-BD	.24
SMRA69	.29, 97	SP51 S	.89	THV-50-TNC ♦	.82	XP1027-BD	.24
SMRA89	.28, 96	SP52	.90, 117	TP-101-PIN ♦	.88	XP1035-QH	.23
SMRA89-1	.28, 96	SP52 S	.90	TP-102-PIN	.86	XP1039-QJ	.23
SMS201	.52	SP55	.90, 117	TP-103-PIN ♦	.86	XP1042-QT	.23
SMS202	.50	SP55 S	.90	TP-104-PIN ♦	.86	XP1043-QH	.23
SMSD6012-SOD323	.48	SP64	.90, 116	TP-105-PIN ♦	.86	XP1044-QL	.24
SMST6004-SOT23	.48	SP64 S	.90	TP-108-PIN ♦	.87	XP1050-QJ	.24
SP1	.90, 116	SP68	.90, 116	TPX-75-4N ♦	.88	XP1080-QU	.24
SP1 S	.90	SP68 S	.90	TU-50-BNC ♦	.82	XR1008-QB	.68
SP2	.90, 116	SP77	.90, 116	TU-50-N ♦	.82	XR1011-QH	.68
SP2 S	.90	SP77 S	.90	TU-50-SMA ♦	.82	XR1015-QH	.68
SP5	.90, 116	SP80	.90, 116	U		XR1019-QH	.68
SP5 S	.90	SP80 S	.90	UF2805B	.18	XU1019-QH	.68
SP6	.90, 116	SP81	.90, 116	UF2810P	.18	XX1000-BD	.64
SP6 S	.90	SP81 S	.90	UF2815B	.18	XX1000-QT	.64
SP7	.90, 116	SP84	.89, 116	UF2820P	.18	XX1002-QH	.64
SP7 S	.90	SP84 S	.89	UF2820P	.18	XX1007-BD	.64
SP12	.90, 116	SP87	.90, 116	UF2840G	.18	XX1007-QT	.64
SP12 S	.90	SP87 S	.90	UF2840P	.18	XX1010-QT	.64

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