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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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2015 Product Selection Guide

MACOMTM
Partners from RF to Light

Optoelectronics

RF Power Products

Diodes

Photonic Solutions

Amplifiers

MACOM's [2015 Product Selection Guide](#) features our catalog of 3,000+ products. Inside are detailed product specifications designed to help engineers quickly evaluate and select the right products to differentiate their designs. We've expanded our selection guide to include our key technologies to further assist you in your selection process.

We have more than sixty years of hands-on experience designing and building analog semiconductor technology across the RF, microwave, millimeterwave, and photonic spectrum. Our team works with you, engineer-to-engineer, to identify solutions and inspire success in markets from Aerospace to Automotive, Infrastructure to Industrial, and Military to Medical.

Additional product information can be found on our website at 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: <http://www.macom.com/contact>

MACOM's broad portfolio of products, combined with our global organization of expert engineers, can help you solve the world's most demanding wireless and wireline application challenges.

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RF Power Products.....8-14

- > RF Power Transistors
 - GaN on SiC: Pulsed and CW
 - GaN on Si: CW and Pulsed
- > RF Power Hybrid Amplifiers: GaN
- > RF Power Transistors
 - Silicon Bipolar
 - Silicon MOSFET
- > RF Power Hybrid Pallets: GaN
- > GaN and GaAs Device Bias Sequencer
- > RF Power Silicon Bipolar Pallets and Modules

Optoelectronics.....15-18

- > Clock and Data Recovery
- > Client Side EML Drivers
- > Client Side DML Drivers
- > Line Side Modulator Drivers
- > Lasers and Modulator Drivers: FTTx
- > Optical Post Amplifiers
- > Transimpedance Amplifiers
- > LED/Laser Drivers for Display

Photonics.....19-22

- > Distributed Feedback Lasers
- > Fabry-Perot Lasers
- > APD and PIN

Amplifiers.....23-34

- > Active Splitters
- > Amplifier Gain Blocks
- > Power Amplifiers
- > Linear Amplifiers
- > Low Noise Amplifiers
- > CATV Amplifiers
- > Distributed Amplifiers
- > FTTx Amplifiers
- > Variable Gain Amplifiers
- > Hybrid Amplifiers
 - Gain Block
 - Low Noise
 - Limiting

Diodes.....35-46

- > Varactor Tuning Diodes
- > Varactor Multiplier Diodes
- > PIN Switch and Attenuator Diodes
- > PIN Limiter Diodes
- > Schottky Mixer and Detector Diodes

Control Products.....47-53

- > Limiters
- > Power Detectors
- > IQ Modulators / Demodulators
- > Digital Phase Shifters
- > Digital Attenuators
- > CMOS Switch Drivers
- > Voltage Variable Attenuators
- > Multi-Function MMICs
- > Switches

Frequency Conversion.....54-60

- > Frequency Multipliers
- > Active Frequency Multipliers
- > Hybrid Mixers
- > Receivers / Down Converters
- > Transceivers
- > Up Converters
- > Mixers

Passives.....61-71

- > Bias Networks
- > Couplers
- > Power Dividers / Combiners
- > Transformers / Baluns
- > Filters / Diplexers
- > Capacitors

Frequency Generation.....72-73

- > Voltage Controlled Oscillators

Crosspoints Switches.....74-75 and Signal Conditioners

- > Crosspoint Switches, Signal Conditioners / Redrivers

SDI Video Products.....76-77

- > SDI Cable Equalizers
- > SDI Reclockers
- > SDI Cable Drivers

HDcctv Devices.....78-79

- > HDcctv Cable Equalizers
- > HDcctv Reclockers
- > HDcctv Cable Drivers

Communications.....80-81 Processors

- > VoIP Processors
- > Enterprise Voice and Data
- > Carrier Convergence Processors

Appendix and Index.....82-102

- > Package Selection Guide
- > GaN Product Part Number Nomenclature Reference
- > Decibels-Volts-Watts Conversions
- > Wavelength and Frequency
- > Part Number Index
- > Notes

Why MACOM?



Partners from RF to Light

MACOM (www.macom.com) is a leading supplier of high performance analog RF, microwave, millimeterwave and photonic semiconductor products that enable next-generation Internet and modern battlefield applications. Recognized for its broad catalog portfolio of technologies (GaN, GaAs, InP, SiGe, HMIC™, and Silicon) and products, MACOM serves diverse markets, including high speed optical, satellite, radar, wired and wireless networks, industrial, medical, and mobile devices. A pillar of the semiconductor industry, we thrive on more than 60 years of solving our customers' most complex problems, serving as a true partner for applications ranging from RF to Light.

Headquartered in Lowell, Massachusetts, MACOM is certified to the ISO9001 international quality standard and ISO14001 environmental management standard. MACOM has 26 design centers and sales offices throughout North America, Europe, Asia and Australia.

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 multi-function 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, SiPh, SiGe, 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 from RF to 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 3,000+ 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 is available to support all product and management 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, GaAS, and InP fabrication, manufacturing, assembly and test, and operational facilities throughout North America, Europe, Asia, and Australia.

How to Purchase

Sales Representatives and Distribution Partners

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

Visit our website at <http://www.macom.com/purchases> 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 click on the Order tab on your selected product page at www.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 www.macom.com for more information.

MACOM Markets and Applications



Aerospace & Defense

- > Avionics and Air Traffic Control
- > Communication
- > Electronic Warfare
- > Hi-Rel and Space
- > Radar



Wireless Networking and Communication

- > Global Positioning Systems
- > Wireless Backhaul
- > Wireless LAN (WiFi)
- > Wireless Infrastructure



Industrial, Scientific and Medical

- > Healthcare
- > Industrial
- > Test and Measurement



Optical Networking

- > Client Side
- > Datacenter
- > FTTx
- > Line Side
- > Metro



Broadcast Video

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



Enterprise Solutions

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



Surveillance

- > Cameras
- > DRVs



Wired Broadband

- > CATV Head-End
- > CATV HFC Infrastructure
- > CATV/Satellite Set Top Box
- > FTTx Infrastructure

Recognized for our broad portfolio of technologies and products, MACOM serves a range of diverse markets and thrives on more than 60 years of solving our customers' most complex problems. MACOM as a true partner for applications ranging from RF to Light.

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

MACOM™
Partners from RF to Light

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 & medical, test and measurement, CATV and wired broadband, and wireless networking.*

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, global positioning system, CATV and wired broadband, wireless backhaul, aerospace and defense, and satellite communication.*

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, and aerospace and defense.*

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 centers; mobile backhaul; access networks and metro markets; and modulator drivers for 100G and 400G coherent networks, metro networks, and data centers.*

Gallium Nitride (GaN)

Having taken a leadership role, MACOM is driving the commercialization of GaN into mainstream applications. Offering the RF and microwave industry's only portfolio of both GaN on Si and GaN on SiC products, and spanning a wide range of package options for pulsed and continuous wave applications, we have firmly established ourselves as leaders across all GaN variants and all end market applications. *Key applications include industrial, scientific and medical, civil and military radar, and communications.*

Silicon Photonics (SiPh)

MACOM is focused on integrated silicon microphotronics. These technologies enable high performance optics with low power in small form factors. Silicon microphotronics 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.*

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, and global positioning systems.*

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, and chip and wire high frequency microwave applications.*

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

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

MACOM RF Power Products

Next generation high power semiconductor technology

MACOM offers a broad range of RF power transistor products—bare die/discrete devices, modules, and pallets designed to operate from 1 MHz to 3.5 GHz. Our high power transistors are ideal for communications, avionics, radar, and industrial, scientific, and medical applications. MACOM's product portfolio provides both standard and custom solutions using bipolar, MOSFET, and Gallium Nitride (GaN) technologies.



GaN on SiC

- > Discrete devices, modules, and pallets designed to operate from 1 MHz to 3.5 GHz
- > Excellent RF performance, power, gain, gain flatness, efficiency, and ruggedness, utilizing a 0.5 micron HEMT process

GaN on Si

- > Discrete transistors and integrated amplifiers utilizing a 0.5 micron HEMT process
- > Includes a broad range of RF power transistor products as discrete devices and modules
- > Designed to operate from 1 MHz to 6 GHz
- > Excellent RF performance, power, gain, gain flatness, efficiency, and ruggedness

Hybrid Amplifiers

- > Optimized for commercial air traffic control and military radar applications
- > New surface mount technology (SMT) laminate packaged modules
- > Supports standard surface mount assembly for high-volume manufacturing
- > Improves assembly yield and lowers component count
- > Available for the S-, L- and avionics bands

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 ensures high performance and long term reliability

MOSFET

- > TMOS and DMOS RF power MOSFET transistor products as discrete devices from 1 MHz to 1.0 GHz
- > All gold metallization fabrication processes ensures high performance and long term reliability

GaN Pallets

- > Optimized for commercial air traffic control and military radar applications
- > Support 50 ohm in and out impedances
- > Benefits include improved assembly yield, lower component count, and reduced touch labor
- > Available for the S-band

RF Power Transistors GaN on SiC: Pulsed

Part Number	Min Freq (MHz)	Max Freq (MHz)	Operating Voltage (V)	Output Power (W)	Min. Gain (dB)	Pulse Width (µs)	Duty Cycle (%)	Test Freq (MHz)	Package Type and/or Size
MATR-GCHJ04-022050	1	4000	50	15	15	3000	10	1200-1400	Die (0.75 x 0.90 x 0.10)
MATR-GCHJ04-066050	1	4000	50	50 60	11.3 18	1000	10	2700 - 3500 1030 - 1090	Die (0.75 x 1.70 x 0.10)
MAGX-000025-150000	1	2500	50	150	18	300	20	1200-1400	P-256
MAGX-000040-00500P	1	4000	50	5	13 11	1000 3000	10 20	1600	SOT-89
MAGX-000035-01000P	1	3500	50	10	14.8 14	1000 3000	10 20	1600	3 x 6 mm DFN-14
MAGX-000035-01500P	1	3500	50	15	19.5 14.2	1000 3000	10 20	1600 2600	3 x 6 mm DFN-14
MAGX-000035-05000P	1	3500	50	50	18 17	1000 3000	10	1600	3 x 6 mm DFN-14
MAGX-000035-09000P	1	3500	50	90	17.5 16.6	1000 3000	10	1600 1300	3 x 6 mm DFN-14
MAGX-000035-015000	1	3500	50	15	15.5 15	1000 3000	10 20	1200 - 1400	P-260
MAGX-000035-01500S	1	3500	50	15	15.5 15	1000 3000	10 20	1200 - 1400	P-254A
MAGX-000035-045000	1	3500	50	50 60	11.3 18	1000	10	2700 - 3500 1030 - 1090	P-253
MAGX-000912-125L00	960	1215	50	125	20	128	10		P-237
MAGX-000912-250L00	960	1215	50	250	19	128	10		P-237
MAGX-000912-500L00	960	1215	50	500	19.8	128	10		P-238
MAGX-000912-500L0S	960	1215	50	500	19.8	128	10		P-261
MAGX-000912-650L00	960	1215	50	650	20.5	128	10		P-238
MAGX-000912-650L0S	960	1215	50	650	20.5	128	10		P-261
MAGX-001090-600L00	1030	1090	50	600	21.4	32	2		P-238
MAGX-001090-600L0S	1030	1090	50	600	21.4	32	2		P-261
MAGX-001090-700L00	1030	1090	50	700	20.5	32	6.4		P-238
MAGX-001090-700L0S	1030	1090	50	700	20.5	32	6.4		P-261
MAGX-001214-125L00	1200	1400	50	125	19	300	10		P-237
MAGX-001214-250L00	1200	1400	50	250	19	300	10		P-237
MAGX-001214-500L00	1200	1400	50	500	19.2	300	10		P-238
MAGX-001214-500L0S	1200	1400	50	500	19.2	300	10		P-261
MAGX-001214-650L00	1200	1400	50	650	19	300	10		P-238
MAGX-001220-100L00	1200	2000	50	100	14	300	10		P-258
MAGX-002731-100L00	2700	3100	50	100	12	500	10		P-258
MAGX-002731-180L00	2700	3100	50	180	11	300	10		P-253
MAGX-002731-180L0S	2700	3100	50	180	11	300	10		P-259
MAGX-003135-120L00	3100	3500	50	120	11.8	300	10		P-258

RF Power Transistors GaN on SiC: CW

Part Number	Min Freq (MHz)	Max Freq (MHz)	Operating Voltage (V)	Output Power (W)	Min. Gain (dB)	Duty Cycle (%)	Package Type
MAGX-000245-014000	1	2500	50	14	15.2	100	P-260
MAGX-000245-025000	1	2500	28	25	12	100	P-253
MAGX-000035-01000P	1	3500	50	10	14.5	10	3 x 6 mm DFN-14
MAGX-000035-010000	30	3500	50	10	19	100	P-260
MAGX-000035-01000S	30	3500	50	10	19	100	P-254A
MAGX-000040-00500P	1	4000	50	4	10	10	SOT-89

RF Power Transistors GaN on Si: CW

Part Number	Min Freq (MHz)	Max Freq (MHz)	Supply Voltage (V)	Output Power P _{SAT} (W)	Gain (dB)	Test Freq (MHz)	Package
NPA1006	20	1000	28	12.5	14	900	6 x 5 mm DFN-8
NPA1003QA	20	1500	28	5	18	1000	4 mm PQFN-16
NPT1010B	1	2000	28	100	20	900	Flange Ceramic
NPT1010P	1	2000	28	100	20	900	Flange Ceramic
NPT2022	1	2000	48	100	20	900	TO272
NPT2010	1	2200	48	100	17	2100	Flange Ceramic
NPT2021	1	2500	48	45	12.8	2500	TO272
NPA1007	30	2500	28	10	11	2000	6 x 5 mm DFN-8
NPT1007B	1	2500	28	10	11	2000	Flange Ceramic
NPT25100B	1	2700	28	90	16	2500	Flange Ceramic
NPT25100P	1	2700	28	90	16	2500	Flange Ceramic
NPA1008	20	2700	28	5	12	1900	4 x 4 mm PQFN-24
NPT2020	1	3500	48	50	17	2100	Flange Ceramic
NPT1015B	1	3500	28	45	14	2500	Flange Ceramic
NPT35050AB	3300	3800	28	50	13	3500	Flange Ceramic
NPT1012B	1	4000	28	25	13	3000	Flange Ceramic
NPTB00025AB	1	4000	28	25	13	3000	Flange Ceramic
NPTB00025B	1	4000	28	25	13	3000	Flange Ceramic
NPTB00050B	1	4000	28	—	—	—	Flange Ceramic
MAGX-011086	1	6000	28	4	9	5800	4 mm PQFN-24
NPT2018	1	6000	48	12.5	17.5	2500	6 x 3 mm PDFN-14
NPTB00004A	1	6000	28	5	17	2500	SOIC-8NE
NPTB00004D	1	6000	28	5	17	2500	SOIC-8NE

RF Power Transistors GaN on Si: Pulsed

Part Number	Min Freq (MHz)	Max Freq (MHz)	Supply Voltage (V)	Output Power P _{SAT} (W)	Gain (dB)	Test Freq (MHz)	Package
NPT1004D	1	3000	28	45	11	2500	SOIC-8
NPT25015D	1	3000	28	23	14	2500	SOIC-8
NPT2019	1	6000	48	25	16	2500	3 x 6 mm DFN-14
NPT35015D	3000	4000	28	18	11	3500	SOIC-8

RF Power Hybrid Amplifiers: GaN Amplifiers

Part Number	Min Freq (MHz)	Max Freq (MHz)	Operating Voltage (V)	Output Power (W)	Gain (dB)	Pulse Width (µs)	Duty Cycle (%)	Package Type
MAMG-000305-050L0L	380	480	50	50	28	300	10	LGA2414
MAMG-000305-050L0M	380	480	50	50	28	300	10	LGA2414
MAMG-000912-090PSM	960	1215	50	90	30	300	10	LGA2414
MAMG-001214-090PSM	1200	1400	45	90	30.5	1000	10	LGA2414
MAMG-001215-090L0L	1200	1450	45	90	30.5	1000	10	LGA2414
MAMG-001215-090L0M	1200	1450	45	90	30.5	1000	10	LGA2414
MAMG-002735-085L0L	2700	3500	50	85	23	1000	10	LGA2414
					23	750	20	
MAMG-002735-030L0L	2700	3500	50	30	25.5	1000	10	7 x 7 mm PQFN-28
					20	750	20	

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.

RF Power Transistors: Silicon Bipolar

Part Number	Min Freq (MHz)	Max Freq (MHz)	Pout (W)	Gain (dB)	Efficiency (%)	Package Type
MRF421	1	30	100	10	40	Flange Ceramic
MRF428	2	30	150	13	45	Flange Ceramic
MRF429	2	60	150	13	45	Flange Ceramic
MRF422	2	30	150	10	40	Flange Ceramic
MRF426	2	30	25	22	35	Flange Ceramic
MRF454	2	30	80	12	50	Flange Ceramic
MRF455	2	30	60	13	55	Flange Ceramic
MRF448	2	30	250	12	45	Flange Ceramic
MRF141G	5	175	300	12	50	Flange Ceramic
MRF316	30	200	80	10	55	Flange Ceramic
MRF314	30	200	30	10	50	Flange Ceramic
MRF317	30	200	100	9	55	Flange Ceramic
MRF313	100	400	1	15	45	Flange Ceramic
MRF393	100	500	100	9.5	55	Flange Ceramic
MRF392	100	400	125	10	55	Flange Ceramic
MRF587	100	500	—	13	—	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
MAPR-000912-500S00	960	1215	500	9	45	Flange Ceramic
MAPRST0912-50	960	1215	50	9.1	40	Flange Ceramic
MAPRST0912-350	960	1215	350	9.4	45	Flange Ceramic
MRF1004MB	960	1215	4	10	40	Flange Ceramic
MRF10031	960	1215	30	9	40	Flange Ceramic
MRF10005	960	1215	5	8.5	45	Flange Ceramic
MRF10120	960	1215	120	8	50	Flange Ceramic
MRF1000MB	960	1215	0.7	10	—	Flange Ceramic
MRF1150MB	960	1215	150	7.8	35	Flange Ceramic
MRF1090MB	960	1215	90	8.4	35	Flange Ceramic
MAPR-001090-350S00	1025	1150	350	9	45	Flange Ceramic
MAPR-001011-850S00	1025	1150	850	7.8	42	Flange Ceramic
MRF10150	1025	1150	150	9.5	40	Flange Ceramic
MRF10350	1025	1150	350	8.5	40	Flange Ceramic
MRF10502	1025	1150	500	8.5	40	Flange Ceramic
MAPRST1030-1KS	1030	1030	1000	8	45	Flange Ceramic
PH1090-700B	1030	1090	700	7.5	50	Flange Ceramic
PH1090-15L	1030	1090	15	9	40	Flange Ceramic
PH1090-550S	1030	1090	550	7.4	55	Flange Ceramic
PH1090-175L	1030	1090	175	8.3	55	Flange Ceramic
PH1090-350L	1030	1090	350	8	55	Flange Ceramic
PH1090-75L	1030	1090	75	9	45	Flange Ceramic
PH1113-100	1100	1300	100	8	52	Flange Ceramic
MAPR-001214-380M00	1200	1400	380	8.8	45	Flange Ceramic
PH1214-3L	1200	1400	3	5.7	40	Flange Ceramic
PH1214-300M	1200	1400	300	8.75	50	Flange Ceramic

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.

RF Power Transistors: Silicon Bipolar (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Pout (W)	Gain (dB)	Efficiency (%)	Package Type
PH1214-25L	1200	1400	25	9.5	50	Flange Ceramic
PH1214-55EL	1200	1400	55	6.6	50	Flange Ceramic
PH1214-0.85L	1200	1400	0.85	9.3	30	Flange Ceramic
PH1214-12M	1200	1400	12	9	45	Flange Ceramic
PH1214-30EL	1200	1400	30	7.8	50	Flange Ceramic
PH1214-25M	1200	1400	25	9.5	50	Flange Ceramic
PH1214-110M	1200	1400	110	7.4	50	Flange Ceramic
PH1214-2M	1200	1400	2	7	45	Flange Ceramic
PH1214-80M	1200	1400	80	7.5	50	Flange Ceramic
PH1214-100EL	1200	1400	100	6	52	Flange Ceramic
PH1214-6M	1200	1400	6	7	45	Flange Ceramic
PH1214-220M	1200	1400	220	7.4	50	Flange Ceramic
PH1214-40M	1200	1400	40	8.5	50	Flange Ceramic
MRF16006	1600	1640	6	7.4	40	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	8	40	Flange Ceramic
MAPR-002731-115M00	2700	3100	115	7.6	38	Flange Ceramic
MAPR-002729-170M00	2700	2900	170	9	45	Flange Ceramic
PH2729-65M	2700	2900	65	8.5	40	Flange Ceramic
PH2729-130M	2700	2900	130	7.5	40	Flange Ceramic
PH2729-8.5M	2700	2900	8.5	8.1	35	Flange Ceramic
PH2729-25M	2700	2900	25	9.2	45	Flange Ceramic
PH2731-5M	2700	3100	5	7	30	Flange Ceramic
PH2729-110M	2700	2900	110	6.8	35	Flange Ceramic
PH2731-20M	2700	3100	20	8.2	45	Flange Ceramic
PH2731-75L	2700	3100	75	7	40	Flange Ceramic
PH2856-160	2856	2856	160	7.5	40	Flange Ceramic
PH2931-20M	2900	3100	20	8.2	45	Flange Ceramic
PH3134-30S	3100	3400	30	7.5	35	Flange Ceramic
PH3134-55L	3100	3400	55	7.5	35	Flange Ceramic
PH3134-20L	3100	3400	20	7.5	35	Flange Ceramic
PH3134-25M	3100	3400	25	7.5	35	Flange Ceramic
PH3135-65M	3100	3500	65	7.5	35	Flange Ceramic
PH3134-10M	3100	3400	10	8	35	Flange Ceramic
PH3135-25S	3100	3500	25	7.5	35	Flange Ceramic
PH3135-5M	3100	3500	5	8.5	30	Flange Ceramic
PH3135-90S	3100	3500	90	7.5	35	Flange Ceramic
PH3134-65M	3100	3400	65	7.5	35	Flange Ceramic
PH3135-20M	3100	3500	20	7.5	35	Flange Ceramic

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.

RF Power Transistors: MOSFET

Part Number	Min Freq (MHz)	Max Freq (MHz)	Pout (W)	Gain (dB)	Efficiency (%)	Package Type
MRF176GU	5	400	150	14	50	Flange Ceramic
MRF151A	5	175	150	13	40	Flange Ceramic
MRF176GV	5	225	200	17	55	Flange Ceramic
MRF175LU	5	400	100	10	55	Flange Ceramic
MRF140	5	150	150	15	40	Flange Ceramic
MRF175GU	5	400	150	12	55	Flange Ceramic
MRF141	5	175	150	18	40	Flange Ceramic
MRF173CQ	5	175	80	13	60	Flange Ceramic
MRF136Y	5	400	30	14	54	Flange Ceramic
MRF148A	5	175	30	18	40	Flange Ceramic
MRF158	5	500	2	16	55	Flange Ceramic
MRF174	5	200	125	9	50	Flange Ceramic
MRF175GV	5	225	200	14	65	Flange Ceramic
MRF177	5	400	100	12	60	Flange Ceramic
MRF173	5	175	80	11	60	Flange Ceramic
MRF166C	5	500	20	13.5	50	Flange Ceramic
MRF166W	5	500	40	14	50	Flange Ceramic
MRF134	5	400	5	11	50	Flange Ceramic
MRF151	5	175	150	13	40	Flange Ceramic
MRF137	5	400	30	13	60	Flange Ceramic
MRF150	5	150	150	17	45	Flange Ceramic
MRF275G	5	500	150	10	50	Flange Ceramic
MRF160	5	500	4	16	55	Flange Ceramic
MRF154	5	80	600	17	45	Flange Ceramic
MRF275L	5	500	100	8.8	55	Flange Ceramic
MRF151G	5	175	300	14	50	Flange Ceramic
MRF157	5	80	600	21	45	Flange Ceramic
MRF136	5	400	15	16	60	Flange Ceramic
DU2880V	30	175	80	13	60	Flange Ceramic
DU2860T	30	175	60	13	60	Flange Ceramic
DU28120T	30	175	120	13	60	Flange Ceramic
DU2880U	30	175	80	13	60	Flange Ceramic
DU1215S	30	175	15	9.5	60	Flange Ceramic
DU2810S	30	175	10	13	55	Flange Ceramic
DU2880T	30	175	80	13	60	Flange Ceramic
DU28120V	30	175	120	13	60	Flange Ceramic
DU2805S	30	175	5	11	55	Flange Ceramic
DU2820S	30	175	20	13	60	Flange Ceramic
DU28200M	30	175	200	13	55	Flange Ceramic
DU2860U	30	175	60	13	60	Flange Ceramic
DU2840S	30	175	40	13	60	Flange Ceramic
MRF171A	100	200	45	17	60	Flange Ceramic
UF28100H	100	500	100	10	50	Flange Ceramic
UF2820R	100	500	20	10	50	Flange Ceramic
UF2815B	100	500	15	10	50	Flange Ceramic
UF2805B	100	500	5	10	50	Flange Ceramic
UF2840P	100	500	40	10	50	Flange Ceramic
UF2820P	100	500	20	10	50	Flange Ceramic
UF2810P	100	500	10	10	50	Flange Ceramic

Note: Part numbers are RoHS compliant ♦ indicates non-RoHS compliant
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RF Power Transistors: MOSFET (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Pout (W)	Gain (dB)	Efficiency (%)	Package Type
UF28100V	100	500	100	10	50	Flange Ceramic
UF28100M	100	500	100	10	50	Flange Ceramic
UF2840G	100	500	40	10	50	Flange Ceramic
UF28150J	100	500	150	8	55	Flange Ceramic
LF2802A	500	1000	2	10	40	Flange Ceramic
LF2805A	500	1000	5	10	50	Flange Ceramic

RF Power Hybrid Pallets: GaN Pallets

Part Number	Min Freq (MHz)	Max Freq (MHz)	Operating Voltage (V)	Output Power (W)	Min. Gain (dB)	Pulse Width (µs)	Duty Cycle (%)	Package Size (mm)
MAPG-002729-350L00	2700	2900	50	400	11.5	300	10	50.8 x 22.9 x 5.8

GaN and GaAs Device Bias Sequencer

Supply Number	Positive Supply Voltage (V)	Positive Supply Current (mA)	Negative Supply Voltage (V)	Negative Supply Current (mA)	Output Gate Voltage (V)	Output Gate Current (mA)	Pulse Enable TTL Voltage (V)	Package
MABC-001000-DP000L	50	14	-6	-3	2.3	-8 to 0	50	SMJ2307
MABC-001000-DPS00L	50	14	-6	-3	0	-8 to 0	50	SMJ2307

RF Power: Silicon Bipolar Pallets and Modules

Part Number	Min Freq (MHz)	Max Freq (MHz)	Pout (W)	Gain (dB)	Efficiency (%)	Package Type
MAPM-020512-010C00	20	512	10	25	17	Nickel Plated Aluminum Housing
PHA2729-300M	2700	2900	300	7.5	36	Pallet
PHA2731-140L	2700	3100	140	7	35	Pallet
MAPPST2933-190M	2900	3300	190	7	35	Pallet
MAPP-003134-150L00	3100	3400	150	8	36	Pallet
MAPP-003134-180M00	3100	3400	180	7.5	36	Pallet
PHA3135-130M	3100	3500	130	7.4	35	Pallet

**See Appendix — page 90 for
GaN Product Part Number Nomenclature Reference**

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.
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MACOM Optoelectronics

Products to meet the growing demand for data capacity

MACOM supports a large portfolio of components and lasers for optical communications, from long haul core networks to FTTx access networks. The portfolio addresses the high performance analog interfaces between electrical and optical domains, and provides solutions to meet the demanding size, power, and signal integrity requirements of today's high speed networks — which are expanding to meet the continuously growing demand for data capacity. Ideal data center solutions — both short reach multi-mode applications and long reach single-mode fiber applications. These products include high performance modulator drivers, transimpedance amplifiers, clock/data recovery circuits, and FP & DFB lasers for enterprise and optical systems operating up to 100 Gbps and beyond. For FTTx, MACOM has the broadest portfolio of lasers, laser drivers, limiting amplifiers, and TIAs covering systems from EPON to XGPON.



Clock and Data Recovery

- > Removes jitter from signals in high data rate systems
- > Offers design flexibility and cost-reduction features
- > Uses Mindspeed signal conditioning technology for lower cost board materials and components with increased design margins
- > Ideal for Ethernet, Fiber Channel, InfiniBand, SONET, PCIe, telecom, datacom, and enterprise applications

Optical Modulator Drivers

- > From 1 Gbps up to more than 100 Gbps,
- > For high performance Mach-Zehnder modulators, externally modulated lasers (EML) and directly modulated lasers (DML)
- > Solutions for FTTx and short range pluggable transceivers to ultra-long haul transponders for submarine applications
- > Solutions for Data Center VCSEL based, multimode-fiber applications
- > Die and surface mount packages

Laser and Modulator Drivers: FTTx

- > Maximum signal integrity with minimum power dissipation in the smallest form factor
- > Single, dual and quad channel models
- > Applications from FTTx and short range pluggable transceivers to ultra-long haul transponders for submarines
- > Packaging solutions include: GPPO modules, surface mount package, and bare die for integration in a TOSA

Optical Post Amplifiers

- > Convert differential or single-ended analog signals to high-speed digital outputs
- > Available in a number of speeds, covering 155 Mbps to 12.5 Gbps applications

Transimpedance Amplifiers (TIAs)

- > For line and client side 10G, 40G and 100G fiber optic receivers
- > Includes linear TIAs for long haul coherent receivers and limiting TIAs for shorter range NRZ based receivers
- > Solutions for data center short wavelength, multimode-fiber applications
- > Available in die form for integration with photo-detectors in an optical sub-assembly

Clock and Data Recovery

Part Number	Description	Max Data Rate (Gbps)	Supply Voltage	Channels (#)	Switch Matrix Size	Package Type and Size (mm)
MATA-37044	Four Channel 25G / 28G CDR with Integrated TIA	28.05	1.8 & 3.3	4	—	Die
MALD-37045	Four Channel 25G / 28G CDR with Integrated VCSEL Driver	28.05	1.8 & 3.3	4	—	Die
M21012	42 Mbps to 3.2 Gbps Quad Multi-Rate CDR	3.2	1.8-3.3	4 x 4	4 x 4	10 x 10 72-pin QFN
M21050	3.2 Gbps Quad Duplex Multi-rate CDR	3.2	1.8-2.5	8 x 8	8 x 8	10 x 10 72-pin QFN
M37040	Four Channel 25G / 28G CDR with Integrated Limiting Amplifier	28.05	2.5-1.8	4	1 x 2	7 x 7 48-pin LFGA
M37041	Four Channel 25G / 28G CDR with Integrated Input Equalizer	28.05	2.5-1.8	4	1 x 2	7 x 7 48-pin LFGA
M37046	Four Channel 25G / 28G CDR Limiting Amplifier	28.05	1.8	4	—	4 x 4.5 CSP
M37047	Four Channel 25G / 28G CDR with Integrated EML Driver	28.05	1.8	4	—	4 x 4.5 CSP
M37049	Four Channel 25G / 28G CDR with Input Equalizer	28.05	1.8 & 3.3	4	—	4 x 4.5 CSP

Client Side EML Drivers

Part Number	Description	Application Data Rate (Gbps)	Channels (#)	Max Output Voltage (Vpp)	Rise/Fall Times (pS)	Package Type and Size (mm)
MAOM-002207	28 Gbps EML Driver	100	1	2.5	12	Die 1.045 x 0.945
MAOM-003401	Low Power, Quad Channel 28 Gbps EML Driver	100	4	1.6	12	SMD 10 x 10 x 1.4
MAOM-37051A	Quad Channel 28 Gbps CDR with EML Driver	100	4	2.5	12	SMD 11 x 7
MAOM-002203	28 Gbps EML Driver	100	1	2.5	12	SMD 4 x 4 x 2.3
MAOM-02204A	Quad Channel 28 Gbps EML Driver	100	4	2.5	12	SMD 14 x 8 x 2.3
MAOM-002200	28 Gbps EML Driver	100	1	2.5	12	SMD 4 x 4 x 2.3
M37047	Four Channel 25G / 28G CDR with EML Driver	100	4	—	—	CSP 4 x 4.5
MAOM-003115	28 Gbps Linear EML Driver	400	1	2	—	SMD 4 x 4 x 2.3
MAOM-004115	Quad Channel 28 Gbps Linear EML Driver	400	4	2	—	SMD 14 x 8 x 2.3
MAOM-001200	11.3 Gbps EML Driver	11.3	1	3	27	SMD 4 x 4
MAOM-001201	11.3 Gbps EML Driver	11.3	1	2.3	27	SMD 3 x 3

Client Side DML Drivers

Part Number	Description	Max Data Rate (Gbps)	Channels (#)	Max Output Current (mApp)	Package
MAOM-002301	28 Gbps DML Driver	28	1	70	Die
MAOM-002304	Quad Channel 28 Gbps DML Driver	28	4	70	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.

Line Side Modulator Drivers

Part Number	Description	Max Data Rate (Gbps)	Channels (#)	Max Output Voltage (Vpp)	Rise/Fall Times (pS)	Package Type and Size (mm)
MAOM-003105	Quad Channel 32 Gbps MZ Modulator Driver	32	4	8	12	Module 24.5 x 34.6 x 5.43
MAOM-003104	Quad Channel 32 Gbps MZ Modulator Driver	32	4	8	11	Module 25 x 40 x 6.5
MAOM-002105	32 Gbps MZ Modulator Driver		32	1	8 12	SMD 14.4 x 7 x 2.3
MAOM-002103	32 Gbps MZ Modulator Driver		32	1	8 12	SMD 14.4 x 7 x 2.3
MAOM-003106	Dual Channel 32 Gbps MZ Modulator Driver	32	2	7.5	12	SMD 10 x 10 x 2.3
MAOM-003108	Dual Channel 32 Gbps Linear MZ Modulator Driver	32	2	6	12	SMD 10 x 10 x 2.3
MAOM-03404A	Quad Channel 32 Gbps Limiting Differential MZ Modulator Driver	32	4	5	12.5	SMD 14 x 9.1 x 2.3
MAOM-003405	Quad Channel 32 Gbps MZ Modulator Driver	32	4	6.5	12.5	SMD 13 x 19 x 2.3
MAOM-003407	Quad Channel 32 Gbps Linear MZ Modulator Driver	32	4	6	12.5	SMD 13 x 19 x 2.3
MAOM-03409B	Quad Channel 32 Gbps Linear Differential Modulator Driver	32	4	4	12.5	SMD 14 x 9.1 x 2.3
MAOM-003414	Quad Channel 32 Gbps Linear MZ Modulator Driver	32	4	6	12.5	GPPO 41 x 29 x 6.4
MAOM-003415	Quad Channel 32 Gbps Limiting MZ Modulator Driver	32	4	5	12.5	SMD 14 x 9.1 x 2.5
MAOM-003417	Quad Channel 32 Gbps Linear MZ Modulator Driver	32	4	4.5	12.5	SMD 14 x 9.1 x 2.5
MAOM-002108	28 Gbps Differential MZ Modulator Driver IC	28	1	6.5	12	SMD 4.7 x 6.5 x 2.3

Lasers and Modulator Drivers: FTTx

Part Number	Description	Max Data Rate (Gbps)	Supply Voltage (V)	Channels (#)	Max Output Mod Current (mA)	Package
M02097	LED Driver/Limiting Amplifier	0.5	3.3, 5	1	120	5 mm QFN
M02068	622 Mbps, Laser Driver	1	3.3	1	85	4 mm BCC+24L
M02094	VCSEL/FP Laser Driver	2	3.3, 5	1	45	4 mm QFN
M02067	Laser Driver	2.1	3.3	1	85	4 mm QFN
M02066	Laser Driver	2.5	3.3	1	85	4 mm BCC+24L
M02090	Burst Mode Laser Driver/Limiting Amplifier	2.5	3.3	1	100	5 mm QFN
M02098	Burst Mode Laser Driver/Limiting Amplifier	2.5	3.3	1	100	5 mm QFN
M02077	Laser Driver/Limiting Amplifier	3.1	3.3	1	100	4 mm QFN
M02099	Burst Mode Laser Driver/Limiting Amplifier + DDMI controller & APD DC-DC Controller	3.1	3.3	1	100	4 mm QFN
M02100	Burst Mode Laser Driver/Limiting Amplifier + DDMI controller & EEPROM	3.1	3.3	1	100	4 mm QFN
M02069	VCSEL Driver	4.3	3.3, 5	1	45	4 mm QFN
M02061	Laser Driver	4.3	3.3, 5	1	2.5	4 mm QFN
M02170	Laser Driver	11.3	3.3	1	100	5 mm QFN
M02171	Dual Loop VCSEL Driver	11.3	3.3	1	25	5 mm QFN
M02172	EML Driver	11.3	3.3	1	2.5	5 mm QFN
M02076	Laser Driver/Limiting Amplifier + DDMI controller & APD DC-DC Controller	3.1	3.3	1	100	4 mm QFN
M02190	DML Laser Driver/Limiting Amplifier with Integrated Tx/Rx CDR	12.5	CONTACT MACOM			
M02193	DDMI Controller + EEPROM & APD DC-DC Controller	12.5	CONTACT MACOM			
M02180	Burst Mode Laser Driver/Limiting Amplifier + Rx CDR + DDMI Controller + APD DC-DC Controller & EEPROM	12.5	CONTACT MACOM			
M02095	2.5 Gbps, 3.3/5 V Laser Driver/Limiting Amplifier	1.25	3.3, 5	1	85	5 mm QFN
M02096	2.5 Gbps, 3.3/5 V Laser Driver/Limiting Amplifier	4.3	3.3, 5	1	85	5 mm QFN

Optical Post Amplifiers

Part Number	Description	Max Data Rate (Gbps)	Supply Voltage (V)	Channels (#)	Input Sensitivity	Package
M02046	1.25 Gbps, 3.3 or 5V Post-Amplifier	1.25	3.3, 5	1	12.8	5 x 6.2 mm QSOP
M02040	2.1 Gbps, 3.3 or 5V Post-Amplifier	2.1	3.3, 5	1	2	3 mm QFN
M02050	3.2 Gbps, 3.3 or 5V Post-Amplifier	2.5	3.3	1	13.5	3 mm QFN
M02142	11.3 Gbps Limiting Amplifier	11.3	3.3	1	13	3 mm QFN
M02140	12.5 Gbps, Low Power Post-Amplifier	12.5	3.3	1	8	4 mm QFN
M02044	622 Mbps Post-Amplifier	0.622	3.3, 5	1	2.5	5 x 6.2 mm QSOP

Transimpedance Amplifiers: Communications

Part Number	Description	Data Rate Max (Gbps)	Differential Transimpedance Gain (kohm)	Small Signal Bandwidth (GHz)	Input Overload Current (mA)	Input Referred Noise (IRN, RMS nA)	Optical Sensitivity with PIN (dBm)	Optical Sensitivity with APD (dBm)
M02006	AGC Pre-Amplifier	0.155	260	0.1	2.2	8	-39	—
M02007	AGC Pre-Amplifier	0.156	62	0.14	2.8	8	-39	—
M02009	AGC Pre-Amplifier	0.622	36	0.4	4.5	70	-32	—
M02011	AGC Pre-Amplifier	0.622	65	0.6	4	50	-34	—
M02016	AGC Pre-Amplifier	1.25	24	1	4	130	-29	—
M02026	CMOS TIA with AGC	1.25	112	1.05	4	120	-31	—
M02028	CMOS TIA with AGC	1.25	24	1.3	4	80	-31	—
M02036	Burst Mode GPON OLT TIA	1.25	3.8	0.8	2.5	170	—	-35
M02038	Burst Mode GEAPON OLT TIA	1.25	8.5	0.85	4	350	—	-34
M02014	AGC Pre-Amplifier	2.488	11	1.4	4	250	-26.5	—
M02015	AGC Pre-Amplifier	2.488	9	1.4	4	290	-26	—
M02024	AGC Pre-Amplifier	2.488	51	1.27	4	180	-28	—
M02035	Burst Mode OLT TIA	2.488	3.6	1.7	1.5	250	—	-33
M02013	AGC Pre-Amplifier	3.125	10	2.4	4	475	-23	—
M02025	CMOS TIA with AGC	3.2	20	1.45	4	120	-30	—
M02020	CMOS TIA with AGC	4.25	3.6	3.4	4	550	-23	-29
M02139	TIA with AGC	10.312	2.5	7.5	2.5	1500	-20	-27
M02129	TIA with AGC	8.5	2	7.8	3	1200	-18	-25
M02027	Ultra High Sensitivity TIA with AGC	3.125			CONTACT MACOM			
M02029	CMOS TIA with AGC	3.125	10	1.85	4	130	-35	—
M02131	TIA with AGC	11.3			CONTACT MACOM			
M03002	Low Power Single Channel TIA	28			CONTACT MACOM			
M03100	Low Power 4x TIA in 250µm space	28			CONTACT MACOM			
M03101	Low Power 4x TIA in 500µm space	28			CONTACT MACOM			
M03102	Low Power 4x TIA in 750µm space	28			CONTACT MACOM			
MATA-37044	Four Channel 25G / 28G CDR with Integrated TIA	28.05			CONTACT MACOM			
MATA-03806	Dual Channel Linear TIA	32	10	25	3	17	—	—

LED/Laser Drivers for Displays

Part Number	Description	Current per Channel (mA)	Maximum Current (mA)	Channels (#)	Programmable Internal PWM Generator	Integrated PMIC Control	Automatic Power Despeckle	Electronic Laser
M08886	High Performance for Projection Displays	up to 2A	up to 4A	3	Yes	No	Yes	Yes
M08888	High Performance for Projection Displays	2A	up to 6A	3	Yes	No	Yes	No
M08889	High Performance for Projection Displays	2A	2A	3	Yes	Yes	Yes	No
M08898	For Panel-Based Projectors	2A	up to 8A	4	Yes	No	No	No
M08890	For Panel-Based Projectors	2A	up to 6A	3	Yes	No	No	No
M09000	For DLP/LCoS Displays	1.2A	1.2A	3	No	Yes	No	No
M09001	For DLP/LCoS Displays	1.2A	1.2A	3	No	Yes	No	No
M08980	For DLP/LCoS Displays	1.2A	1.2A	3	No	Yes	No	No

MACOM Silicon Photonics Technology

Photonic chipset solutions for optimized power, size and cost

Silicon Photonics (SiPh) is an emerging technology that uses semiconductor-grade silicon as the platform for the integration of active and passive integrated photonic circuits along with electronic components on a single micro-chip. With the necessary expertise, the technology enables innovative solutions utilizing silicon optical circuits and micro-optics, while allowing the optimal integration of control electronics and system packaging.

MACOM is focused on integrated silicon microphotronics. These technologies combine high performance optics with low power and small size attributes. Silicon microphotronics in particular brings the benefits of high-density, low-cost and performance scalability, similar to silicon CMOS chip manufacturing.

Key advantages

- > High-index contrast for compact optical circuitry
- > Strong optical effects due to the plasma dispersion effect
- > High functionality covering a variety of devices, including switches, modulators, integrated photodetectors, couplers, and biosensors
- > High-speed silicon (>50 Gbps) modulation
- > Nanophotonic components: ring resonators, filters
- > Integrated photodetectors
- > Operation in the important telecom and datacom wavelength ranges (O- and C-Bands)

Key applications

- > 100G/400G Datacom: data centers and campus applications
- > Telecom: metro and long-haul applications
- > Functional passive optical elements including AWGs, optical filters, couplers, and splitters
- > High performance active elements including VOAs and phase, amplitude and frequency modulators for advanced modulation formats
- > Optical engines combining optics and electronics
- > Radio over fiber transport and backhaul
- > Transceiver products including embedded optical modules, transmitters/receivers, and active optical cables
- > Optical switch fabrics
- > Metrology and sensor applications
- > Medical applications like DNA, glucose, molecular and cellular analysis sensors
- > Military/aerospace/scientific sensor applications
- > Emerging products like 3DICs/integrated optoelectronic chips
- > Consumer: easy-to-use compact cabling for desktop PC, peripherals, home media servers and networked HDTVs
- > High-performance computing and data center applications
- > Professional video, digital signage, digital cinemas, and video recording

Distributed Feedback Lasers

Part Number	Description	Max Data Rate (Gbps)	Wavelength (nm)	Temp Options (°)	Package Type and Size
131D-02E-KCT11-08	2.5G 1310 nm DFB NFF LD, 8 mW, Chip on Tape	2.5	1310	-20 to 85C	Die 300x265x100
131D-02E-KCT11	2.5G 1310 nm DFB NFF LD, Chip on Tape	2.5	1310	-20 to 85C	Die 300 x 265 x 100
131D-02E-LCT11	2.5G 1310 nm DFB Std LD, Chip on Tape	2.5	1310	-20 to 85C	Die 300 x 250 x 100
131D-02E-LCT11-07	2.5G 1310 nm DFB Std LD, 7 mW, Chip on Tape	2.5	1310	-20 to 85C	Die 300 x 250 x 100
131D-02E-LCT11-09	2.5G 1310 nm DFB Std LD, 9 mW, Chip on Tape	2.5	1310	-20 to 85C	Die 300 x 250 x 100
131D-02E-LCT11-10	2.5G 1310 nm DFB Std LD, 10 mW, Chip on Tape	2.5	1310	-20 to 85C	Die 300 x 250 x 100
131D-02I-KCT11	2.5G 1310 nm DFB NFF LD, Chip on Tape	2.5	1310	-40 to 85C	Die 300 x 265 x 100
131D-02I-LCT11	2.5G 1310 nm DFB Std LD, Chip on Tape	2.5	1310	-40 to 85C	Die 300 x 250 x 100
131D-02I-LCT11-07	2.5G 1310 nm DFB Std LD, 7 mW, Chip on Tape	2.5	1310	-40 to 85C	Die 300 x 250 x 100
131D-02J-LCT11-07	2.5G 1310 nm DFB Std LD, 7 mW, Chip on Tape	2.5	1310	-10 to 85C	Die 300 x 250 x 100
131D-02C-LCT11-20	2.5G 1310 nm DFB Std LD, 20 mW, Chip on Tape	2.5	1310	0 to 70C	Die 300 x 250 x 100
131D-00G-LCG11-20CW	1310 nm DFB LD 20 mW, Chip in Gel Pak	10	1310	-5 to 85C	Die 300 x 250 x 100
129D-10G-LCT11	10G CWDM DFB LD (WL -3.5/+2.5 nm), Chip on Tape	10	1290	-5 to 85C	Die 250 x 300 x 100
129D-10G-LCT11-S	10G Hi-BW CWDM DFB LD, WL -3.5/+2.5 nm, Chip on Tape	10	1290	-5 to 85C	Die 250 x 300 x 100
127D-10G-LCT11	10G CWDM DFB LD (WL -3.5/+2.5 nm), Chip on Tape	10	1270	-5 to 85C	Die 250 x 300 x 100
127D-10G-LCG11-S	Hi-BW CWDM DFB LD, WL-3.5/+2.5 nm, Chip in Gel Pak	10	1270	-5 to 85C	Die 250 x 300 x 100
131D-10G-LCG11	10G CWDM DFB LD (WL -3.5/+2.5 nm), Chip in Gel Pak	10	1310	-5 to 85C	Die 250 x 300 x 100
131D-10G-LCG11-S	Hi-BW CWDM DFB LD, WL -3.5/+2.5 nm, Chip in Gel Pak	10	1310	-5 to 85C	Die 250 x 300 x 100
131D-10G-LCT11	10G CWDM DFB LD (WL -3.5/+2.5 nm), Chip on Tape	10	1310	-5 to 85C	Die 250 x 300 x 100
131D-10G-LCT11-S	10G Hi-BW CWDM DFB LD, WL -3.5/+2.5 nm, Chip on Tape	10	1310	-5 to 85C	Die 250 x 300 x 100
127D-10G-LCT11-S	10G Hi-BW CWDM DFB LD, WL-3.5/+2.5 nm, Chip on Tape	10	1270	-5 to 85C	Die 250 x 300 x 100
127D-10G-LCG11	10G CWDM DFB LD (WL -3.5/+2.5 nm), Chip in Gel Pak	10	1270	-5 to 85C	Die 250 x 300 x 100
133D-10G-LCG11	10G CWDM DFB LD (WL -3.5/+2.5 nm), Chip in Gel Pak	10	1330	-5 to 85C	Die 250 x 300 x 100
133D-10G-LCG11-S	Hi-BW CWDM DFB LD, WL-3.5/+2.5 nm, Chip in Gel Pak	10	1330	-5 to 85C	Die 250 x 300 x 100
133D-10G-LCT11	10G CWDM DFB LD (WL -3.5/+2.5 nm), Chip on Tape	10	1330	-5 to 85C	Die 250 x 300 x 100
133D-10G-LCT11-S	10G Hi-BW CWDM DFB LD, WL-3.5/+2.5 nm, Chip on Tape	10	1330	-5 to 85C	Die 250 x 300 x 100
129D-10G-LCG11	10G CWDM DFB LD (WL -3.5/+2.5 nm), Chip in Gel Pak	10	1290	-5 to 85C	Die 250 x 300 x 100
129D-10G-LCG11-S	Hi-BW CWDM DFB LD, WL-3.5/+2.5 nm, Chip in Gel Pak	10	1290	-5 to 85C	Die 250 x 300 x 100
133D-25C-LCG11-S	25G Hi-BW 1330 nm CWDM DFB LD, Chip in Gel Pak	25	1330	0 to 70C	Die 250 x 250 x 100
127D-25B-LCG11-S	25G Hi-BW 1270 nm CWDM DFB LD, Chip in Gel Pak	25	1270	0 to 50C	Die 250 x 250 x 100
127D-25B-LCT11	25G 1270 nm CWDM DFB LD, Chip on Tape	25	1270	0 to 50C	Die 250 x 250 x 100
127D-25B-LCT11-S	25G Hi-BW 1270 nm CWDM DFB LD, Chip on Tape	25	1270	0 to 50C	Die 250 x 250 x 100
127D-25C-LCG11	25G 1270 nm CWDM DFB LD, Chip in Gel Pak	25	1270	0 to 70C	Die 250 x 250 x 100
129D-25B-LCG11-S	25G Hi-BW 1290 nm CWDM DFB LD, Chip in Gel Pak	25	1290	0 to 50C	Die 250 x 250 x 100
129D-25B-LCT11-S	25G Hi-BW 1310 nm CWDM DFB LD, Chip on Tape	25	1290	0 to 50C	Die 250 x 250 x 100
129D-25C-LCG11	25G 1290 nm CWDM DFB LD, Chip in Gel Pak	25	1290	0 to 70C	Die 250 x 250 x 100
129D-25C-LCT11	25G 1290 nm CWDM DFB LD, Chip on Tape	25	1290	0 to 70C	Die 250 x 250 x 100
131D-25B-LCG11-S	25G Hi-BW 1310 nm CWDM DFB LD, Chip in Gel Pak	25	1310	0 to 50C	Die 250 x 250 x 100
131D-25B-LCT11-S	25G Hi-BW 1310 nm CWDM DFB LD, Chip on Tape	25	1310	0 to 50C	Die 250 x 250 x 100
133D-25B-LCG11-S	25G Hi-BW 1330 nm CWDM DFB LD, Chip in Gel Pak	25	1330	0 to 50C	Die 250 x 250 x 100
133D-25B-LCT11	25G 1330 nm CWDM DFB LD, Chip on Tape	25	1330	0 to 50C	Die 250 x 250 x 100
133D-25B-LCT11-S	25G Hi-BW 1330 nm CWDM DFB LD, Chip on Tape	25	1330	0 to 50C	Die 250 x 250 x 100
133D-25C-LCG11	25G 1330 nm CWDM DFB LD, Chip in Gel Pak	25	1330	0 to 70C	Die 250 x 250 x 100
129D-25B-LCG11	25G 1290 nm CWDM DFB LD, Chip in Gel Pak	25	1290	0 to 50C	Die 250 x 250 x 100
131D-25B-LCG11	25G 1310 nm CWDM DFB LD, Chip in Gel Pak	25	1310	0 to 50C	Die 250 x 250 x 100

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 Feedback Lasers (continued)

Part Number	Description	Max Data Rate (Gbps)	Wavelength (nm)	Temp Options (°)	Package Type and Size
131D-25C-LBFA1	25G 1310 nm CWDM DFB LD	25	1310	0 to 70C	Die 250 x 250 x 100
131D-25C-LCG11	25G 1310 nm CWDM DFB LD, Chip in Gel Pak	25	1310	0 to 70C	Die 250 x 250 x 100
131D-25C-LCG11-S	25G Hi-BW 1310 nm CWDM DFB LD, Chip in Gel Pak	25	1310	0 to 70C	Die 250 x 250 x 100
133D-25B-LCG11	25G 1330 nm CWDM DFB LD, Chip in Gel Pak	25	1330	0 to 50C	Die 250 x 250 x 100
127D-25B-LCG11	25G 1270 nm CWDM DFB LD, Chip in Gel Pak	25	1270	0 to 50C	Die 250 x 250 x 100
1295-25B-LCT11-S	LAN WDM, 25G, Hi-BW, DFB LD, Chip on Tape	25	1295.56	0 to 50C	Die 250 x 250 x 100
1300-25B-LCT11-S	LAN WDM, 25G, Hi-BW, DFB LD, Chip on Tape	25	1300.05	0 to 50C	Die 250 x 250 x 100
1301-25B-LCT11-S	LAN WDM, 25G, Hi-BW, DFB LD, Chip on Tape	25	1304.58	0 to 50C	Die 250 x 250 x 100
1309-25B-LCT11-S	LAN WDM, 25G, Hi-BW, DFB LD, Chip on Tape	25	1309.14	0 to 50C	Die 250 x 250 x 100
1295-25B-LCG11-S	LAN WDM, 25G, Hi-BW, DFB LD, Chip in Gel Pak	25	1295.56	0 to 50C	Die 250 x 250 x 100
1300-25B-LCG11-S	LAN WDM, 25G, Hi-BW, DFB LD, Chip in Gel Pak	25	1300.05	0 to 50C	Die 250 x 250 x 100
1301-25B-LCG11-S	LAN WDM, 25G, Hi-BW, DFB LD, Chip in Gel Pak	25	1304.58	0 to 50C	Die 250 x 250 x 100
1309-25B-LCG11-S	LAN WDM, 25G, Hi-BW, DFB LD, Chip in Gel Pak	25	1309.14	0 to 50C	Die 250 x 250 x 100
131D-02E-KT5PB	DFB NFF, 2 mm Ball Lens 6.6 mm FL w/offset, Pinout B	2.5	1310	-20 to 85C	TO-Can TO56
131D-02E-KT5UB	DFB NFF, 2 mm Ball Lens Hi-Index 6.6 mm FL, Pinout B	2.5	1310	-20 to 85C	TO-Can TO56
131D-02E-KT5TB	2.5G DFB NFF, 2 mm Ball Lens 6.6 mm FL, Pinout B	2.5	1310	-20 to 85C	TO-Can TO56
T131D-02E-LT5AB-07	2.5G DFB Std, 7 mW, Asph Lens 7.5 mm FL, Pinout B	2.5	1310	-20 to 85C	TO-Can TO56
31D-02I-KT5TB	DFB NFF TO-Can, 2 mm Ball Lens 6.6 mm FL, Pinout B	2.5	1310	-40 to 85C	TO-Can TO56
131D-02I-LT5AB	2.5G DFB Std TO-Can, Asph Lens 7.5 mm FL, Pinout B	2.5	1310	-40 to 85C	TO-Can TO56
131D-02I-LT5AB-07	DFB Std TO-Can, 7 mW, Asph Lens 7.5 mm FL, Pinout B	2.5	1310	-40 to 85C	TO-Can TO56
131D-02I-LT5CB	2.5G DFB Std TO-Can, Asph Lens 8.6 mm FL, Pinout B	2.5	1310	-40 to 85C	TO-Can TO56
131D-02I-KT5PB	2.5G DFB NFF TO-Can, 2 mm Ball Lens, Pinout B	2.5	1310	-40 to 85C	TO-Can TO56
131D-02I-LT5MB	DFB Std TO-Can, 2 mm Ball Lens 6.7 mm FL, Pinout B	2.5	1310	-40 to 85C	TO-Can TO56
131D-02I-LT5MB-07	DFB Std TO-Can, 7 mW, 2 mm Ball Lens 6.7 mm FL, Pinout B	2.5	1310	-40 to 85C	TO-Can TO56
131D-02I-LT5UB	DFB Std TO, 2 mm Ball Lens Hi-Index 6.6 mm FL, Pinout B	2.5	1310	-40 to 85C	TO-Can TO56
131D-02E-LT5DB	DFB Std TO, Asph Lens 7.5 mm FL w/offset, Pinout B	2.5	1310	-20 to 85C	TO-Can TO56
131D-10G-LT5CC	DFB TO-Can, WL +/-10 nm, Asph Lens 10.1 mm FL, Pinout C	10	1310	-5 to 85C	TO-Can TO56
131D-10G-LT5RC	DFB TO-Can, WL +/-10 nm, 2 mm Ball Lens 6 mm FL, Pinout C	10	1310	-5 to 85C	TO-Can TO56
131D-10G-LT5RC-S	Hi-BW DFB TO, WL +/-10 nm, 2 mm Ball Lens 6 mm FL, Pinout C	10	1310	-5 to 85C	TO-Can TO56
131D-10I-LT5RC-S	Hi-BW DFB TO, WL +/-10 nm, 2 mm Ball Lens 6 mm FL, Pinout C	10	1310	-40 to 85C	TO-Can TO56
127D-10G-LT5AC-S	10G Hi-BW DFB TO-Can, Asph Lens 7.5 mm FL, Pinout C	10	1270	-5 to 85C	TO-Can TO56

* NFF = Narrow Far Field

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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Fabry-Perot Lasers

Part Number	Description	Max Data Rate (Gbps)	Wavelength (nm)	Temp Options (°)	Package Type and Size
131F-02I-LCT11	2.5G 1310 nm FP Std LD, Chip on Tape	2.5	1310	-40 to 85C	Die 250 x 300 x 100
155F-02I-LCT11	2.5G 1550 nm FP Std LD, Chip on Tape	2.5	1550	-40 to 85C	Die 300 x 250 x 100
131F-02I-LCT11-07	2.5G 1310 nm FP Std LD, 7 mW, Chip on Tape	2.5	1310	-40 to 85C	Die 250 x 300 x 100
131F-02I-LCT11-10	2.5G 1310 nm FP Std LD, Chip on Tape, 10 mW	2.5	1310	-40 to 85C	Die 250 x 300 x 100
131F-02I-KCT11	2.5G 1310 nm FP NFF LD, Chip on Tape	2.5	1310	-40 to 85C	Die 250 x 300 x 100
131F-02I-LCT11	2.5G 1310 nm FP Std LD, Chip on Tape	2.5	1310	-40 to 85C	Die 250 x 300 x 100
131F-10G-LCG11	10G 1310 nm FP Std LD, Chip in Gel Pack	10	1310	-5 to 85C	Die 250 x 250 x 100
131F-10G-LCT11	10G 1310 nm FP Std LD, Chip in Chip on Tape	10	1310	-5 to 85C	Die 250 x 250 x 100
131F-10I-LCT11-S	10G Hi-BW 1310 nm FP LD, Chip on Tape	10	1310	-40 to 85C	Die 250 x 250 x 100
131F-10I-LCT11	10G 1310 nm FP LD, Chip on Tape	10	1310	-40 to 85C	Die 250 x 250 x 100
131F-02I-LT5LB	FP Std TO-Can, 1.5 mm Ball Lens, 6.35 FL, Pinout B	2.5	1310	-40 to 85C	TO-Can TO56
131F-02I-LT5MB-09	2.5G FP Std TO, 9 mW, 2 mm Ball Lens 6.7 mm FL, Pinout B	2.5	1310	-40 to 85C	TO-Can TO56
152F-02I-LT5FB	2.5G FP TO-Can, Std, 1520 nm, Flat Window, Pinout B	2.5	1520	-40 to 85C	TO-Can TO56
152F-02I-LT5KB	FP TO-Can, Std, 1.5 mm Ball Lens 5.8 mm FL, Pinout B	2.5	1520	-40 to 85C	TO-Can TO56
152F-02I-LT5LB	FP TO-Can, Std, 1.5 mm Ball Lens 6.35 mm FL, Pinout B	2.5	1520	-40 to 85C	TO-Can TO56
152F-02I-LT5MB	FP TO-Can, Std, 2 mm Ball Lens 6.7 mm FL, Pinout B	2.5	1520	-40 to 85C	TO-Can TO56
131F-02I-LT5SB	FP TO-Can, Std, 1.5 mm Ball Lens 6.6 mm FL, Pinout B	2.5	1310	-40 to 85C	TO-Can TO56
155F-02I-LT5LB	FP TO-Can, Std, 1.5 mm Ball Lens 6.35 mm FL, Pinout B	2.5	1550	-40 to 85C	TO-Can TO56
155F-02I-LT5MB	FP TO-Can, Std, 2 mm Ball Lens 6.7 mm FL, Pinout B	2.5	1550	-40 to 85C	TO-Can TO56
143F-02I-LT5LB	FP Std TO-Can, 1.5 mm Ball Lens 6.35 mm FL, Pinout B	2.5	1430	-40 to 85C	TO-Can TO56
131F-02I-LT5FB	2.5G 1310 nm FP Std TO-Can, Flat Window, Pinout B	2.5	1310	-40 to 85C	TO-Can TO56
131F-06I-LT5KC	6G FP Std TO-Can, 1.5 mm Ball Lens 5.8 FL, Pinout B	6	1310	-40 to 85C	TO-Can TO56
131F-10I-LT5RC-S	10G Hi-BW FP TO, 2 mm Ball Lens 6 mm FL, Pinout C	10	1310	-40 to 85C	TO-Can TO56
131F-10I-LT5RC	10G FP Std TO-Can, 2 mm Ball Lens 6 mm FL, Pinout C	10	1310	-40 to 85C	TO-Can TO56
131F-10I-LT5K1C-S	Hi-BW FP TO, 1.5 mm Ball Lens 5.8 mm FL offset, Pinout C	10	1310	-40 to 85C	TO-Can TO56
131F-10I-LT5KC	10G FP TO-Can, 1.5 mm Ball Lens 5.8 mm FL, Pinout C	10	1310	-40 to 85C	TO-Can TO56
131F-10I-LT5KC-S	10G Hi-BW FP TO, 1.5 mm Ball Lens 5.8 mm FL, Pinout C	10	1310	-40 to 85C	TO-Can TO56

APD and PIN

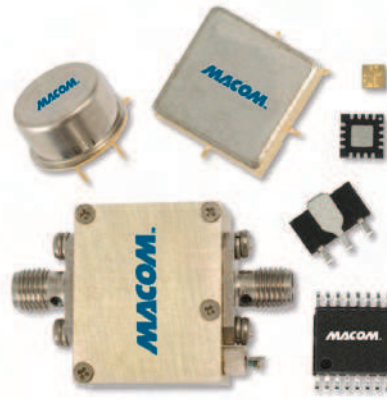
Part Number	Description	Max Data Rate (Gbps)	Wavelength (nm)	Temp Options (°)	Package Type and Size
131A-02I-ACT11	APD Die, 2.5G, Chip on Tape	2.5	1310 / 1550	-40 to 85C	Die 300 x 300 x 150
131A-02I-ACG11	APD Die, 2.5G, Chip in Gel Pak	2.5	1310 / 1550	-40 to 85C	Die 300 x 300 x 150
131P-10I-SCT11	PIN Die, 10G, for S-TIA, Chip on Tape	2.5	1310 / 1550	-40 to 85C	Die 315 x 315 x 150
131P-10I-SCG11	PIN Die, 10G, for S-TIA, Chip in Gel Pak	2.5	1310 / 1550	-40 to 85C	Die 315 x 315 x 150
131P-10I-QCT11	PIN Die, 10G, Chip on Tape	10	1310 / 1550	-40 to 85C	Die 315 x 300 x 150
131P-10I-QCG11	PIN Die, 10G, Chip in Gel Pak	10	1310 / 1550	-40 to 85C	Die 315 x 300 x 150

Note: Part numbers are RoHS compliant
 Detailed specifications can be found quickly on our website at macom.com by typing

MACOM 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 millimeter-wave 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, FTTH, 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
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- > 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 capability
- > Designed using thin film technology
- > Hermetically sealed and screened up to space level, these amplifiers are perfect for military applications

