RF Amplifiers

Power Amplifiers (PA), Low Noise Amplifiers (LNA), Driver Amplifiers (DA)

v03.20

Features

- ✓ High Power Amplifiers up to 25W
- ✓ Low Noise Amplifiers, Noise Figure as low as 0.6 dB
- ✓ Driver Amplifiers include output powers from 7.8 dBm up to 0.16 watt
- ✓ Low-Cost Custom Solutions Available
- ✓ Over 20 Models In Stock

General Description

Microwave IC RF amplifiers are designed using the company's leading amplifier and RF IC expertise. The company's extensive family of single-ended, input/output, fixed-gain amplifiers can be used from low frequencies up to microwave and include low noise amplifiers, driver amplifiers, and power amplifiers. In addition to bare die, our portfolio also includes GaAs & GaN-based power amplifier modules with output power exceeding 25 W.

We also offer devices in a simple, waterproof and sealed design. These devices offer high linearity, low noise figures, various fixed-gain options, and low power consumption. They are all fully specified over frequency, temperature, and supply voltage for using in a variety of applications.

Applications

- ✓ Telecom & Mobile cells
- ✓ Satellite communication
- ✓ Instrumentation
- ✓ Military & Defense
- ✓ Aerospace

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Low Noise Amplifiers

Model	ΔF, GHz	Gain, dB	NF, dB	VSWR in/out	P1dB, dBm	Vss, V	I, mA	Options
MWM0102LNA	0.1-4.0	19.5	2.0@3GHz	1.5/1.5	17.5	5	100	S/W/H, R, P
MWM0401LNA	8.0-12.0	18.9	1.4@10GHz	1.66/1.4	14.5	5	80	S/W/H, R, P
MWM0810LNA	2.0-4.0	23.5	0.8@3.5GHz	2.0/2.0	15.5	5	50	S/W/H, R, P
MWM1103LNA	1.0-18.0	12.5	2.6@10GHz	2.29/2.36	13.5	6	60	S/W/H, R, P
MWM1104LNA	8.0-12.0	23.5	1.6@10GHz	1.6/1.6	14.5	5	65	S/W/H, R, P
MWM1514LNA	7.0-12.0	18.2	2.2@10GHz	1.81/1.66	13.5	5	50	S/W/H, R, P
MWM1405LNA	8.0-12.0	12.8	3.3@[tbd]GHz	2.86/1.47	11.5	12/-2	90	S/W/H, R, P
MWMxx03LNA*	32.0-42.0	20.8	2.2@[tbd]GHz	1.7/1.7	24.5	12/-1.6	40	S/W/H, R, P

Driver Amplifiers

Model	ΔF, GHz	Gain, dB	NF, dB	VSWR in/out	P1dB, dBm	Vss, V	I, mA	Options
MWM0303DA	0.1-3.0	15.6	1.4@1.5GHz	1.83/1.87	7.2@1.5GHz	5	100	S/W/H, R
MWM0506DA*	0.1-7.0	10.0	[tbd]	2.0/2.0	3.0@[tbd]GHz	6	22	S/W/H, R
MWM0814DA	2.0-18.0	8.5	2.8@10GHz	1.77/2.43	19.5@10GHz	5	85	S/W/H, R
MWM1601DA	0.5-4.0	20.0	[tbd]	1.46/1.51	14.0@1GHz	5	43.5	S/W/H, R

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Power Amplifiers

Model	ΔF, GHz	Gain, dB	Psat, dBm	VSWR in	PAE,%	Vss, V	I, mA	Options
MWM0204PA	0.85-3.75	20.5	22.5	1.88	56	8/-4	200	S/W/H, R
MWM1003PA	8.0-11.0	16÷19	30.0	2.5	30	5÷8/-5	200÷400	S/W/H, R
MWM1202PA	8.0-10.5	17.5	40.0	1.7	30	8/-0.9	2700	S/W/H, R, D
MWM1205PA	2.0-18.0	16.5	29.5	2.54	20	8/-0.9	500	S/W/H, R
MWMx301PA*	32.0-36.0	14.5	36.5	2.2	24	6/-0.9	1800	S/W/H, R
MWMx303PA*	29.0-36.0	14.5	29.5	1.8	25	6/-0.9	450	S/W/H, R
MWM1401PA	8.0-10.5	19.0	44.5	2.5	37	28/-2.0	850	S/W/H, R, D
MWM1402PA*	2.0-18.0	7.5	39.5	1.97	19	28/-1.7	850	S/W/H, R
MWM1404PA	8.0-12.0	6.8	36.5	1.15	30	28/-2.2	100	S/W/H, R
MWMx361PA*	13.0-17.0	13.9	44.0	1.7	32	28/-2.5	3500	S/W/H, R
MWMxx01PA*	31.0-37.0	19.5	40.0	1.5	30	12/-1.1	3000	S/W/H, R
MWMxx02PA*	36.0-43.0	14.9	39.5	1.8	30	12/-1.1	3000	S/W/H, R

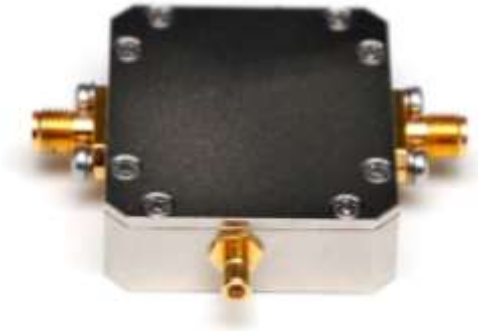
*- Preliminary

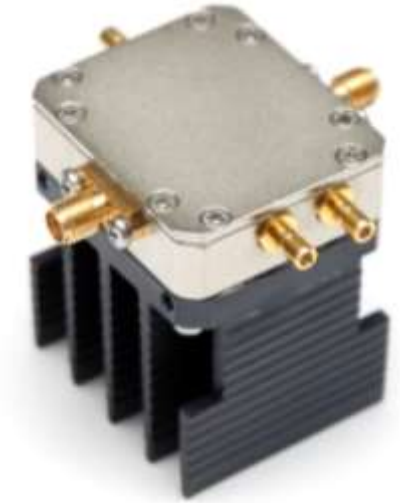
Up to 4 DC power supply connectors could be installed on a package.

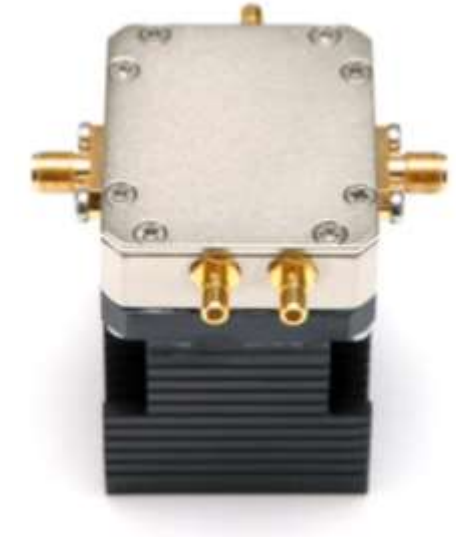
Options:

- S Standard package
- W Waterproof package
- H Hermetic package
- R Radiator
- D Output power detector
- P Input protection

RF Amplifiers Package







Handling and Assembly Information

CAUTION! - This RF Amplifiers contain semiconductors and components which can be hazardous to the human body and the environment. For safety, observe the following procedures:

- *Do not ingest.*
- *Do not alter the form of this product into a gas, powder, or liquid through burning, crushing, or chemical processing as these by-products are dangerous to the human body if inhaled, ingested, or swallowed.*
- *Observe government laws and company regulations when discarding this product. This product must be discarded in accordance with methods specified by applicable hazardous waste procedures.*

Life Support Policy - This product is not authorized for use as critical components in life support devices or systems. As used herein: (1) Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury to the user. (2) A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

ESD - RF Amplifiers are susceptible to electrostatic and mechanical damage. Die are supplied in antistatic containers, which should be opened in cleanroom conditions at an appropriately grounded antistatic workstation. Devices need careful handling using correctly designed collets, vacuum pickups or, with care, sharp tweezers.