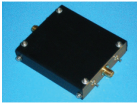


Module, 2 RF Connectors, 1 DC Pin, 3 GND Pins  
61.47 mm x 55.12 mm x 13.46 mm

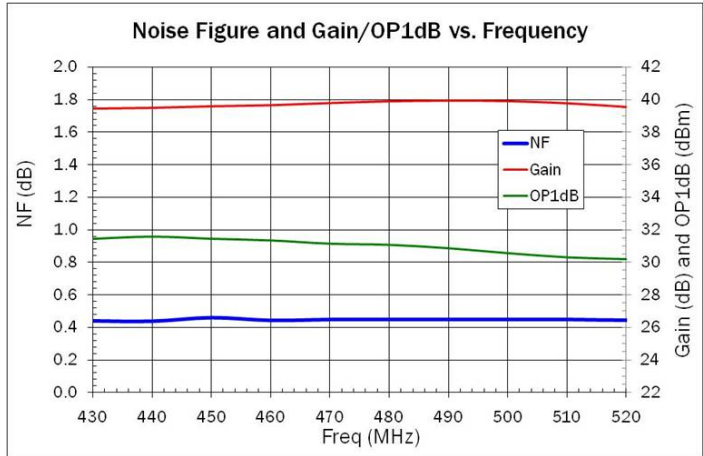


**Features**

- 5V Operation, 630mA
- High Output P1dB > +31dBm
- Low Noise Figure < 0.5dB
- High Gain > 40dB
- High Output IP3 > 45dBm
- 50Ω I/O
- Operating Temperature -40°C to 85°C

**Applications**

- Communication Systems
- Low Noise, High Linearity Gain Block Applications
- Test & Measurement
- Industrial/Scientific/Medical



**Product Description**

RFMD's RFAM9011 is a dual stage low noise, high linearity amplifier operating between 450MHz and 500MHz. This connectORIZED module integrates a low noise amplifier with two power amplifiers to provide 40dB of gain, +30dBm P1dB output power, 0.5dB noise figure and 47 dBm output IP3. This family is assembled in ruggedized SMA housing and use RFMD's highly reliable GaAs HBT and pHEMT fabrication processes. Its single supply operation makes integration into a system or on the bench simple.

**Ordering Information**

Part Number	Description
RFAM9011	ConnectORIZED Low Noise, High Linearity Power Amplifier

**Optimum Technology Matching® Applied**

- |  |                                      |  |                                    |
|--|--------------------------------------|--|------------------------------------|
| <input checked="" type="checkbox"/> GaAs HBT | <input type="checkbox"/> SiGe BiCMOS | <input checked="" type="checkbox"/> GaAs pHEMT | <input type="checkbox"/> GaN HEMT  |
| <input type="checkbox"/> GaAs MESFET         | <input type="checkbox"/> Si BiCMOS   | <input type="checkbox"/> Si CMOS               | <input type="checkbox"/> BiFET HBT |
| <input type="checkbox"/> InGaP HBT           | <input type="checkbox"/> SiGe HBT    | <input type="checkbox"/> Si BJT                | <input type="checkbox"/> LDMOS     |

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## Absolute Maximum Ratings

Parameter	Rating	Unit
Supply Voltage (Vcc)	6.5	V
Maximum Output Power	2	W
Maximum Current	1.2	A
Maximum VSWR	5:1	
Storage Temperature	-55 to +125	°C
Operating Temperature	-40 to +85	°C
ESD Rating - Human Body Model (HBM)	Class 1C	



**Caution!** ESD sensitive device.

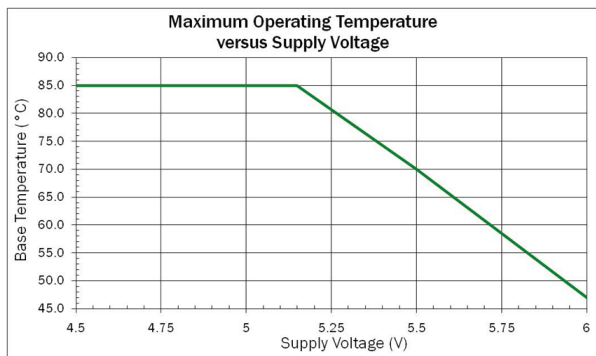
Exceeding any one or a combination of the Absolute Maximum Rating conditions may cause permanent damage to the device. Extended application of Absolute Maximum Rating conditions to the device may reduce device reliability. Specified typical performance or functional operation of the device under Absolute Maximum Rating conditions is not implied.

RoHS status based on EUDirective2002/95/EC (at time of this document revision).

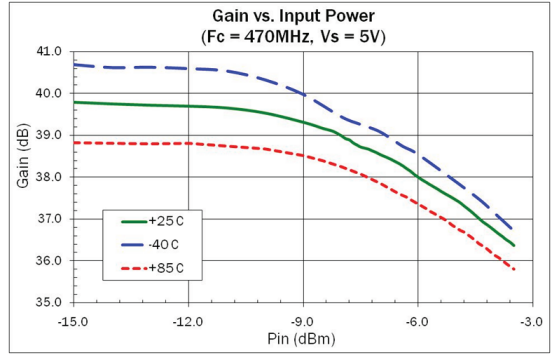
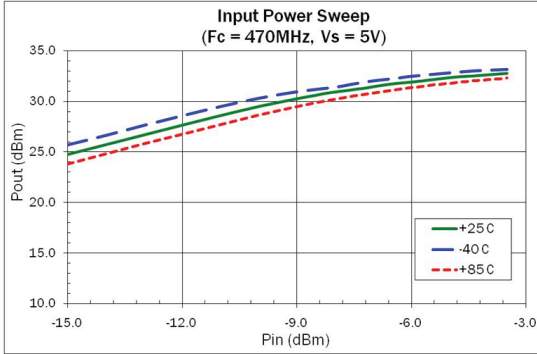
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Parameter	Specification			Unit	Condition
	Min.	Typ.	Max.		
Frequency Range	450		500	MHz	
Supply Voltage (V <sub>S</sub> )	4.50	5.00		V	Recommended operating range for maximum temperature range. See table below for higher voltage operation.
Supply Current		630		mA	Quiescent
Gain (S <sub>21</sub> )	39	40		dB	
P1dB	30	31.1		dBm	
P3dB		32.5		dBm	
OIP3		46.5		dBm	
Input Return Loss		-15		dB	
Output Return Loss		-25		dB	
Noise Figure		0.45		dB	
Spurious Response		-72		dBc	
Maximum Input Power		27		dBm	450MHz to 500MHz

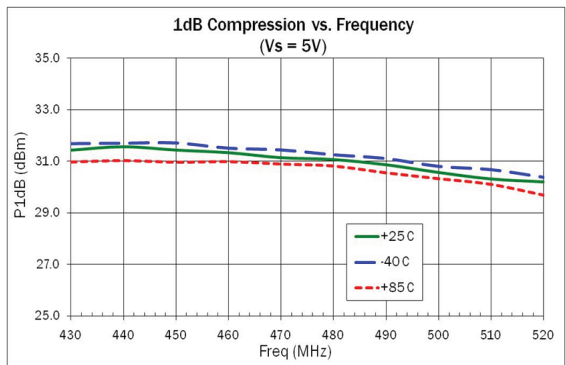
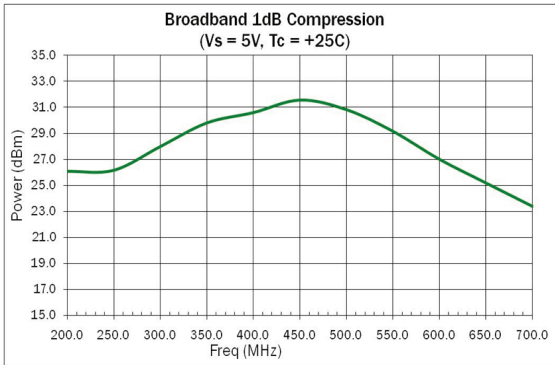
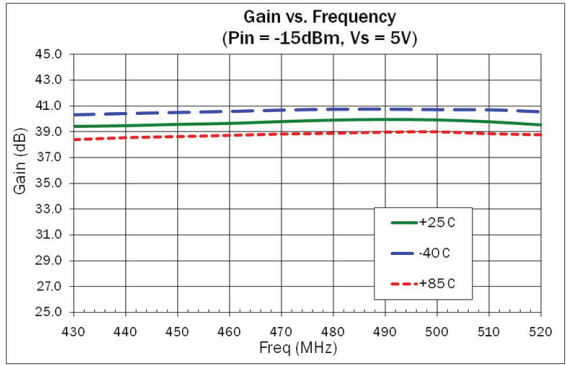
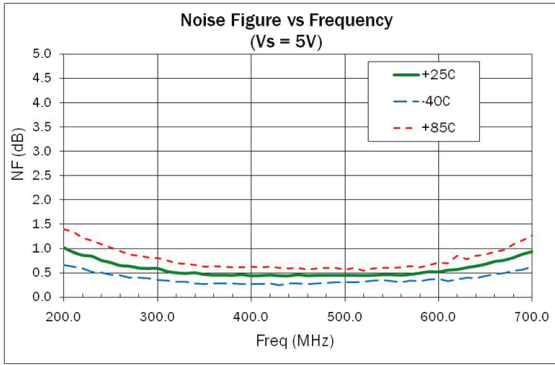
Test Conditions: V<sub>S</sub>=5V, Freq=450MHz to 500MHz, T=25 °C unless noted otherwise.

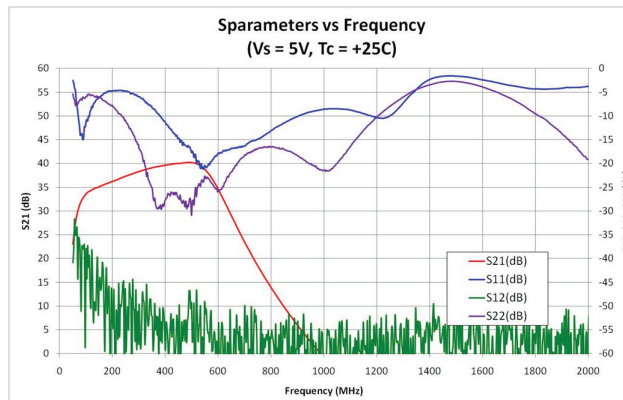
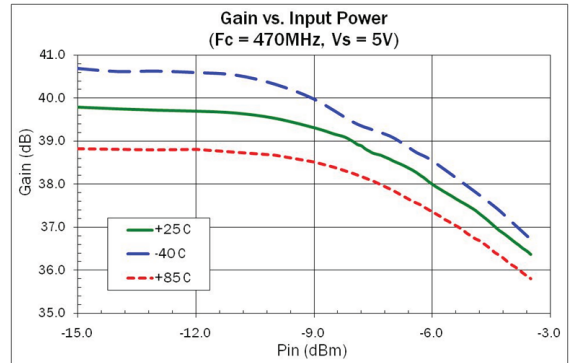
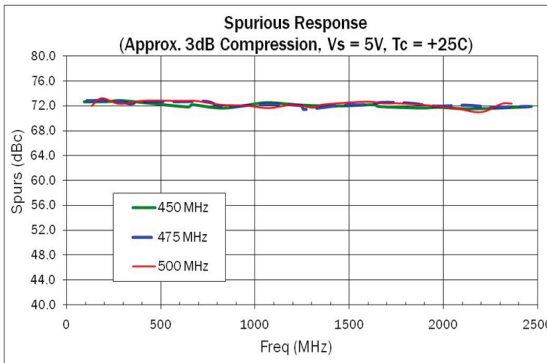
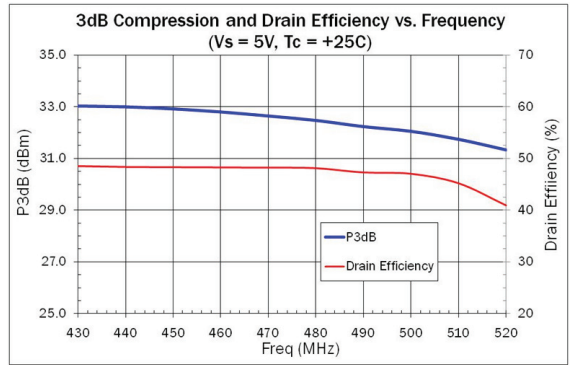
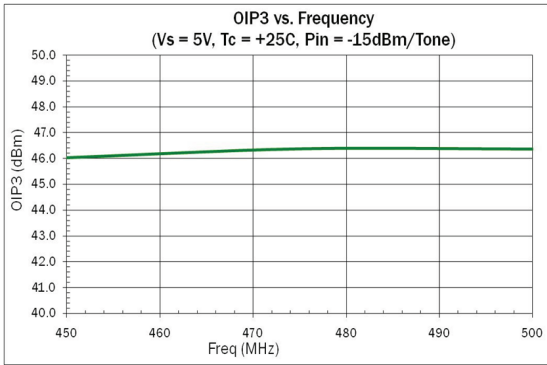


**Performance vs Input Power**

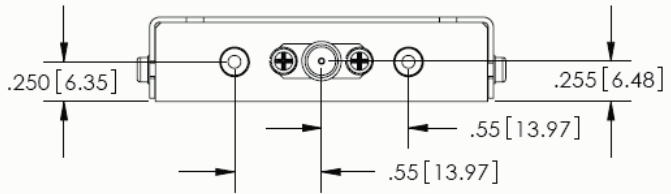
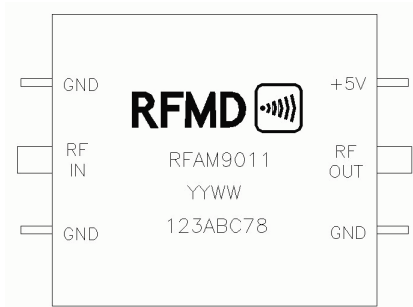


## Performance vs Frequency

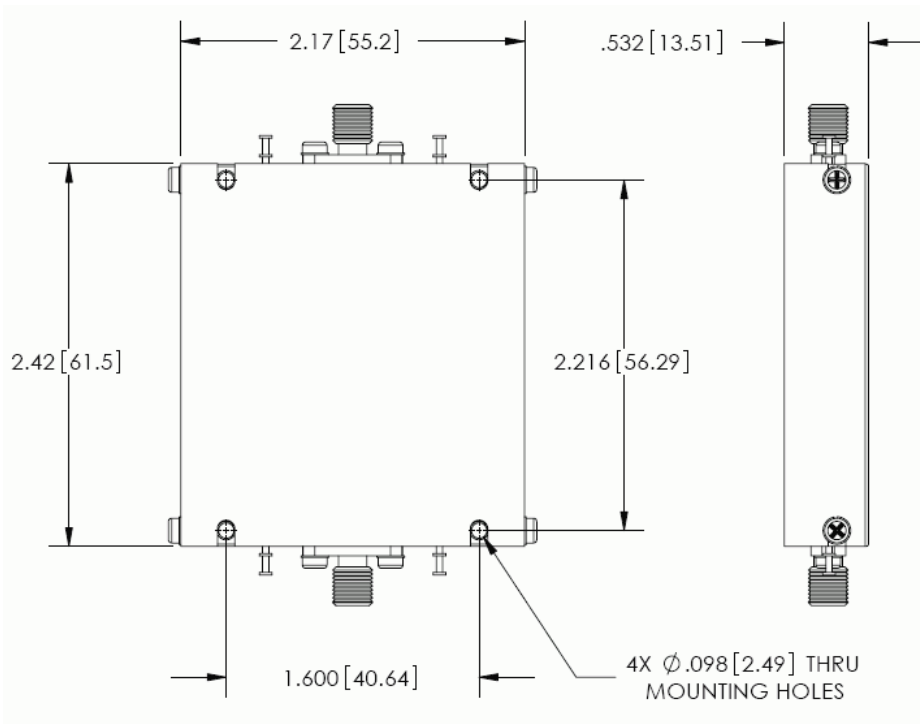




## Package Drawing



NOTE: ALL DIMENSIONS IN INCHES (±.005) AND MILLIMETERS (±.13) UNLESS OTHERWISE SPECIFIED.



Date Code - YYWW (Year and Week)

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