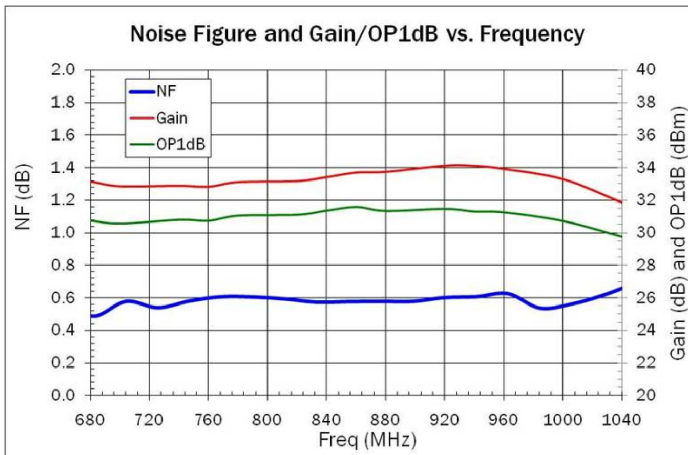


Features

- 5V Operation, 630mA
- High Output P1dB > +30dBm
- Low Noise Figure < 0.7 dB
- High Gain > 32 dB
- 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 RFAM9010 is a dual stage low noise, high linearity amplifier operating between 700MHz and 1000MHz. This connectorized module integrates a low noise amplifier with two power amplifiers to provide 32dB of gain, +30dBm P1dB output power, 0.7dB noise figure and 48dBm 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
RFAM9010	Connectorized Low Noise, High Linearity Power Amplifier

Optimum Technology Matching® Applied

- | | | | |
|--|--------------------------------------|--|------------------------------------|
| ☒ GaAs HBT | ☐ SiGe BiCMOS | ☒ GaAs pHEMT | ☐ GaN HEMT |
| ☐ GaAs MESFET | ☐ Si BiCMOS | ☐ Si CMOS | ☐ BiFET HBT |
| ☐ InGaP HBT | ☐ SiGe HBT | ☐ Si BJT | ☐ LDMOS |

Absolute Maximum Ratings

Parameter	Rating	Unit
Supply Voltage (Vcc)	6.5	V
Maximum Output Power	2	W
Maximum Current	1.1	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.

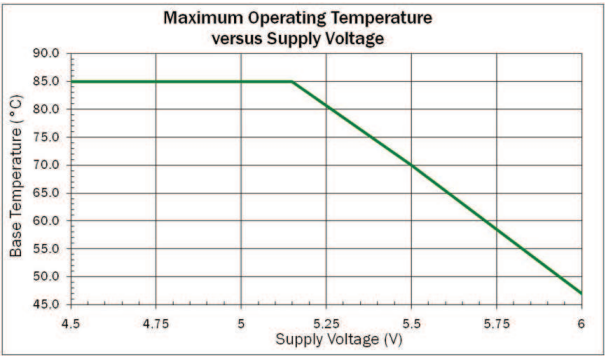
Exceeding any one or a combination of the Absolute Maximum Rating conditions may cause permanent damage to the device. Extended application of Absolute Maximum Rating conditions to the device may reduce device reliability. Specified typical performance or functional operation of the device under Absolute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

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

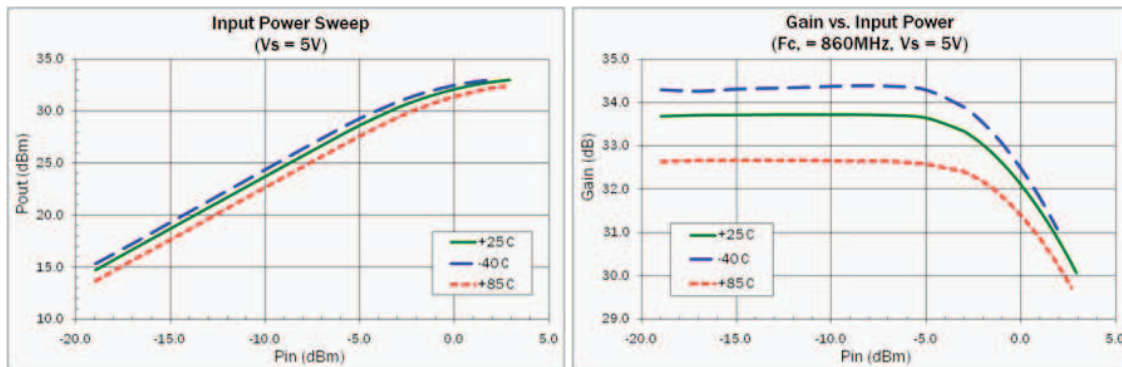
The information in this publication is believed to be accurate and reliable. However, no responsibility is assumed by RF Micro Devices, Inc. ("RFMD") for its use, nor for any infringement of patents, or other rights of third parties, resulting from its use. No license is granted by implication or otherwise under any patent or patent rights of RFMD. RFMD reserves the right to change component circuitry, recommended application circuitry and specifications at any time without prior notice.

Parameter	Specification			Unit	Condition
	Min.	Typ.	Max.		
Frequency Range	700		1000	MHz	
Supply Voltage (V _S)	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 ₂₁)	30	32		dB	
P1dB	29	31		dBm	
P3dB		32		dBm	
OIP3	45	48		dBm	
Input Return Loss		-18	-12	dB	
Output Return Loss		-25		dB	
Noise Figure		0.7		dB	
Spurious Response		-60	-50	dBc	
Maximum Input Power		27		dBm	700MHz to 1000MHz

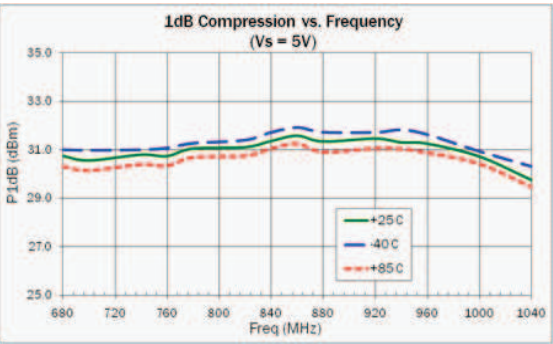
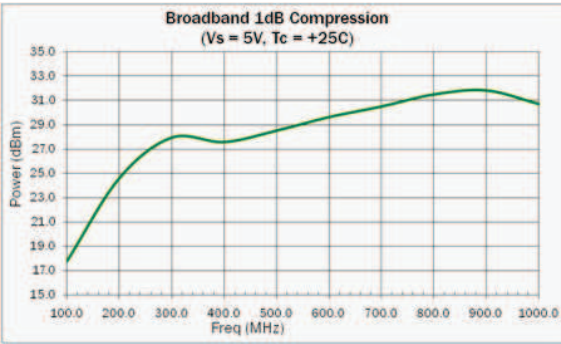
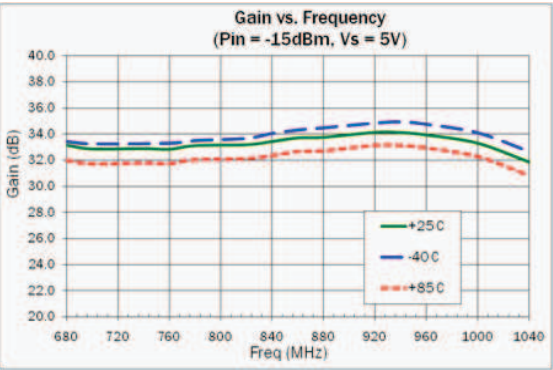
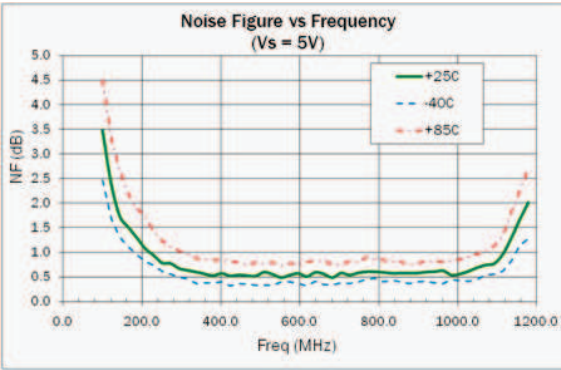
Test Conditions: V_S=5V, Freq=700MHz to 1000MHz, T=25 °C unless noted otherwise.

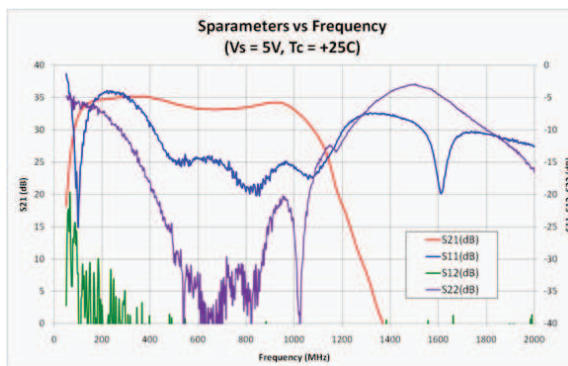
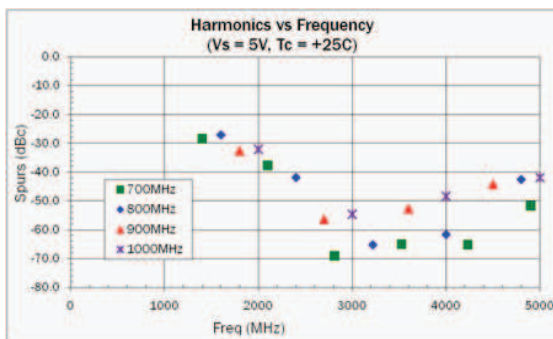
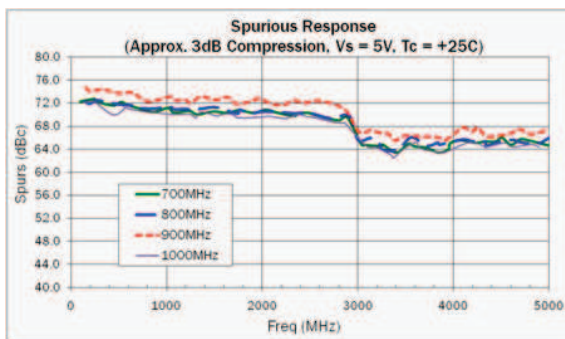
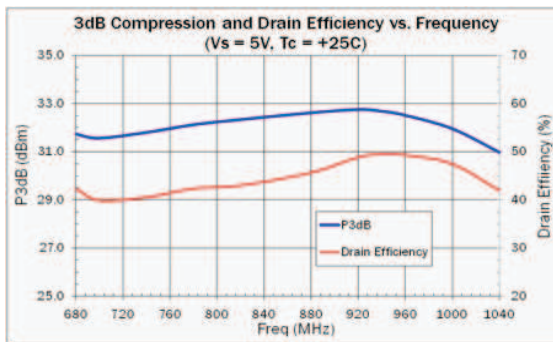
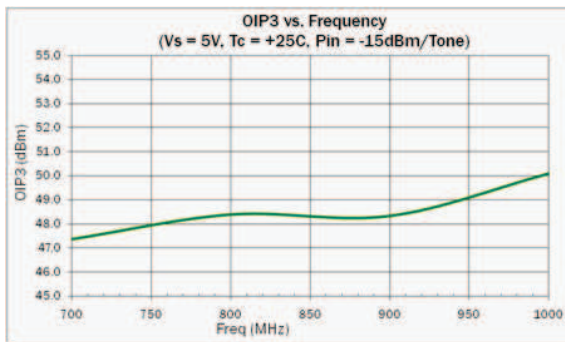


Performance vs Input Power

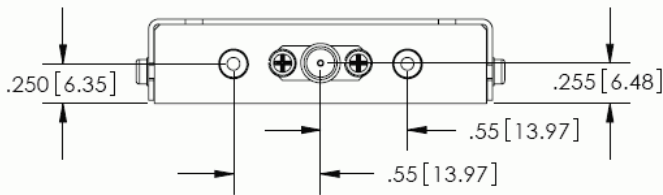
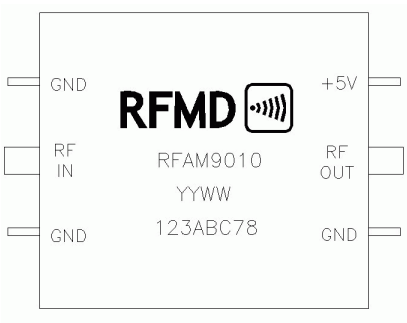


Performance vs Frequency

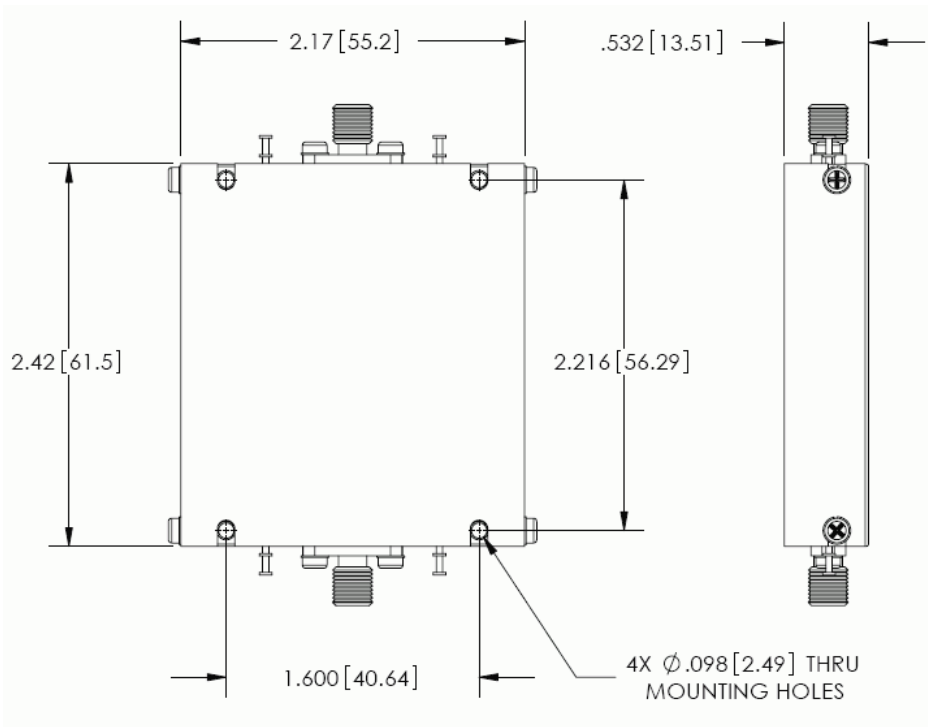




Package Drawing



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



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