

0.8 dB NF Low Noise Amplifier, Operating from 1 GHz to 4 GHz with 20 dB Gain, 22 dBm Psat and SMA

The FMAM1070 is a low noise coaxial amplifier operating in the 1000 MHz to 4000 MHz frequency range. Impressive typical performance includes 0.8 dB noise figure, 20 dB small signal gain, +20 dBm P1dB, and an output 3rd order intercept point of +41 dBm. This exceptional technical performance is achieved through the use of a hybrid MIC design and advanced GaAs pHEMT devices. The low noise amplifier requires a +12V DC power supply, and operates over a temperature range of -40°C to +85°C. The rugged and compact package supports SMA Female connectors and RFI and Ground pins. And for highly reliable operation, the model is guaranteed to meet MIL-STD-202 environmental test conditions for Humidity, Shock, Vibration, and Altitude.

Electrical Specifications (TA = +25°C , DC Voltage = 12Vdc , DC Current = 120mA)

Description	Min	Typ	Max	Unit
Frequency Range	1		4	GHz
Small Signal Gain	16.5	20		dB
Gain Flatness		±1.2	±1.5	dB
Gain Variation Over Temperature		0.02		dB/°C
Output at 1 dB Compression Point	+20	+20		dBm
Saturated Output Power (Psat)	+20	+22		dBm
Output 3rd Intercept Point	+39	+41		dBm
Noise Figure		0.8	1	dB
Input VSWR		1.6:1	2:1	
Output VSWR		1.5:1	2:1	
Reverse Isolation		-30		dB
Operating DC Voltage	9	12	15	Volts
Operating DC Current		120	140	mA
Operating Temperature Range	-40		+85	°C

Absolute Maximum Rating

Parameter	Rating	Units
Supply Voltage	+18	V
RF Input Power	+20	dBm
Operating Temperature	-40 to +85	°C
Storage Temperature	-55 to +125	°C



ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.

Mechanical Specifications

Size

Weight	0.049 lbs [22.23 g]
Input Connector	SMA Female
Output Connector	SMA Female



Features:

- 1000 MHz to 4000 MHz Frequency Range
- Low Noise Figure: 0.8 dB
- High Dynamic Range
- Efficient GaAs pHEMT Design
- Small Signal Gain: 20 dB
- Output P1dB: +20 dBm
- Output IP3: +41 dBm
- Operating Temperature: -40°C to +85°C
- 50 Ohm Input and Output Matched
- DC Power Supply: +12V / 120 mA
- SMA Female Connectors
- Designed to meet MIL-STD-202 Test Conditions

Applications:

- Test & Measurement
- R&D Labs
- General Purpose Amplification
- Aerospace & Defense
- Wireless Infrastructure
- Communication Systems

Fairview Microwave
301 Leora Ln., Suite 100
Lewisville, TX 75056
Tel: 1-800-715-4396 / (972) 649-6678
Fax: (972) 649-6689
www.fairviewmicrowave.com
sales@fairviewmicrowave.com

Environmental Specifications

Temperature

Operating Range -40 to +85 deg C
Storage Range -55 to +125 deg C

Humidity MIL-STD-202F, Method 103B, Condition B
Shock MIL-STD-202F, Method 213B, Condition B
Vibration MIL-STD-202F, Method 204D, Condition B
Altitude MIL-STD-202F, Method 105C, Condition B

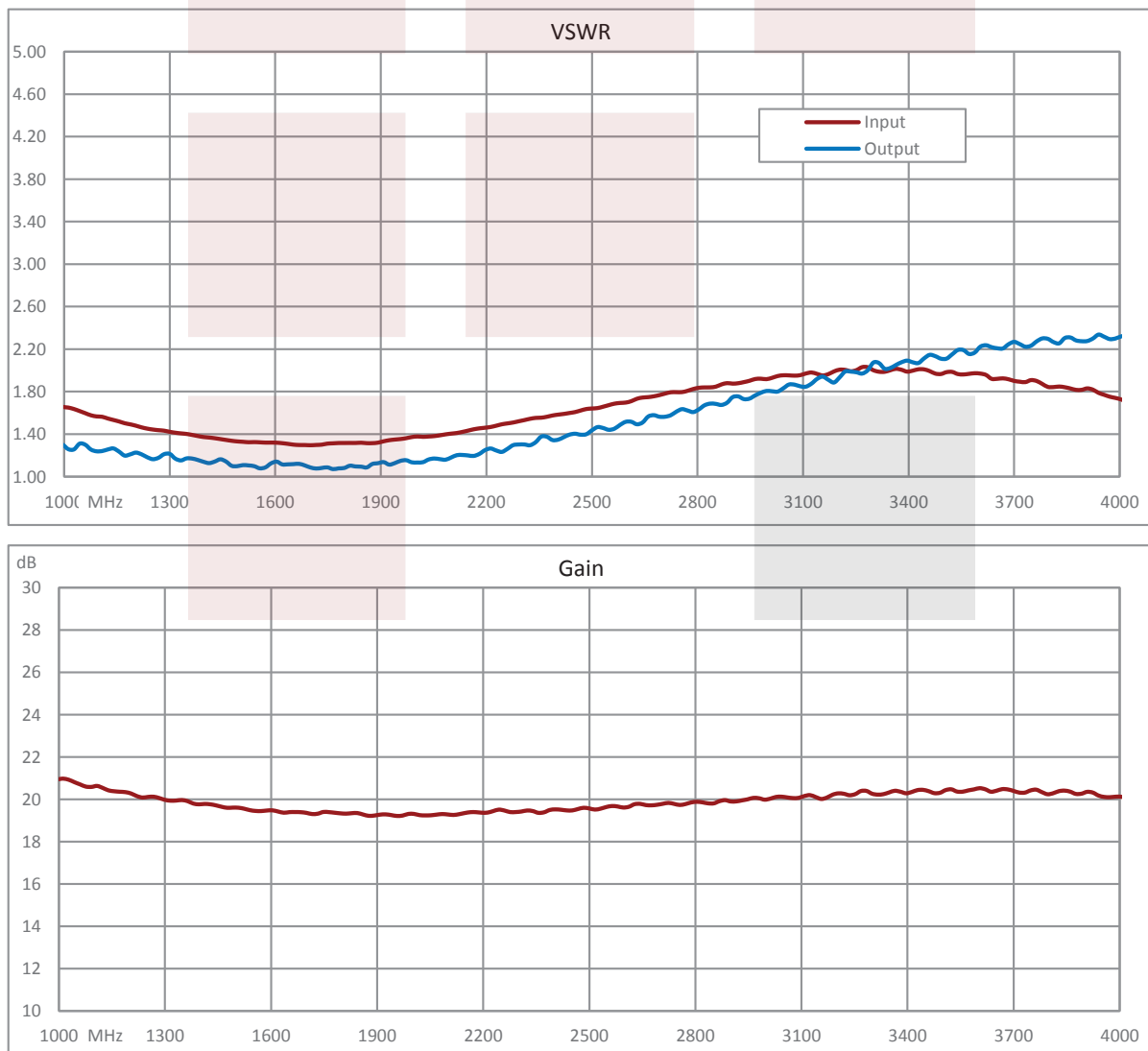
Compliance Certifications (see [product page](#) for current document)

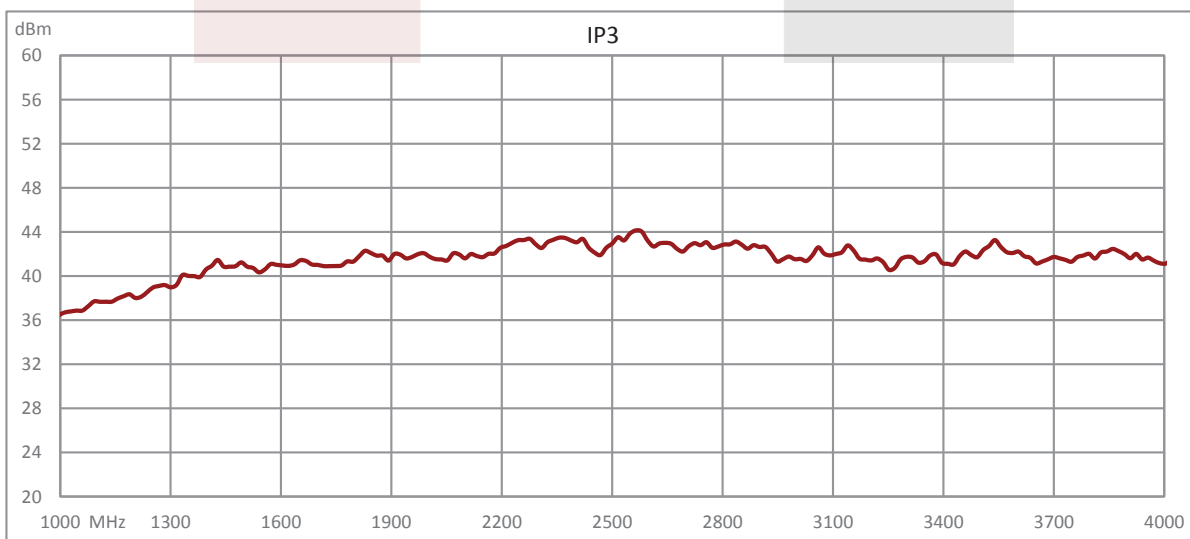
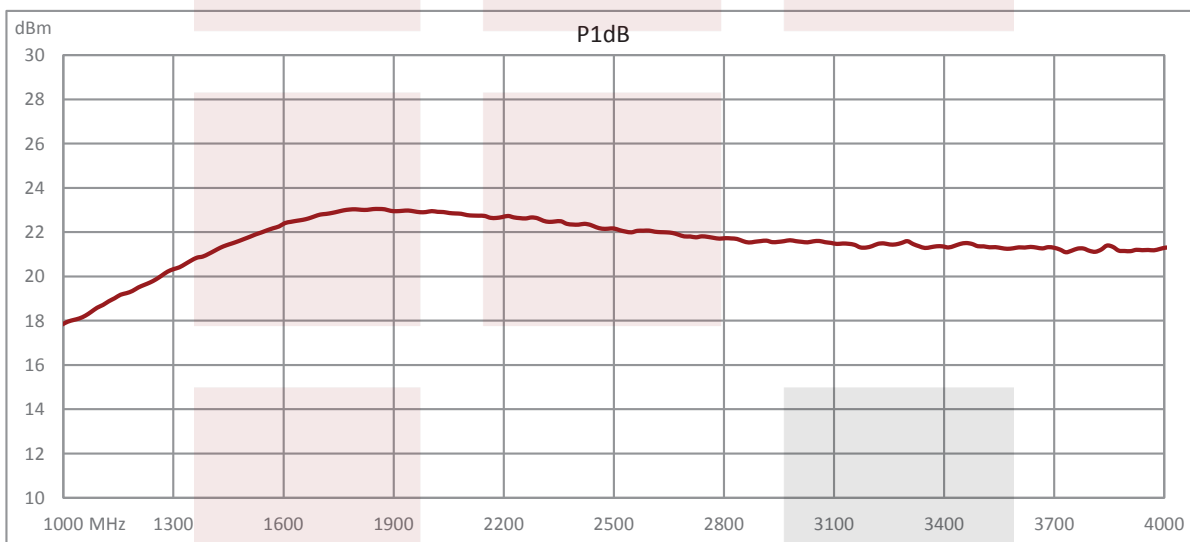
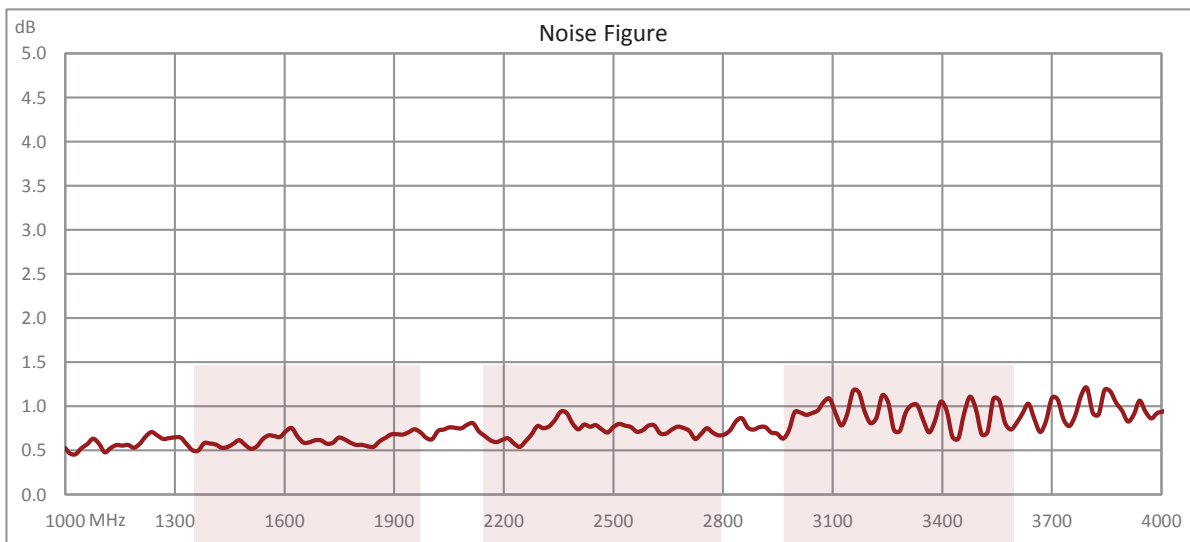
Plotted and Other Data

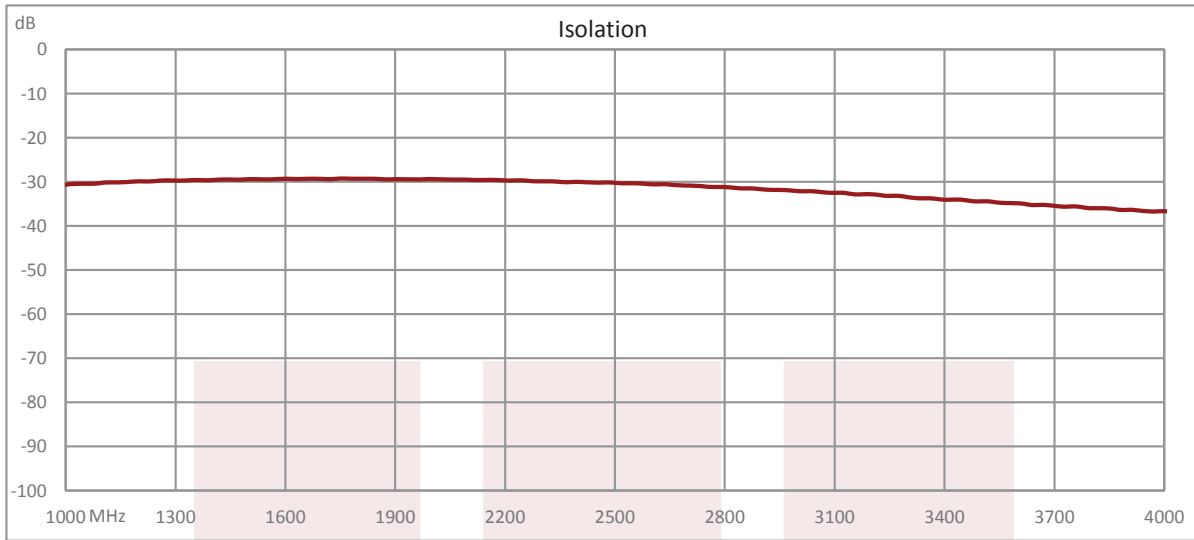
Notes:

- Values at 25 °C, sea level
- ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.

Typical Performance Data







0.8 dB NF Low Noise Amplifier, Operating from 1 GHz to 4 GHz with 20 dB Gain, 22 dBm Psat and SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [0.8 dB NF Low Noise Amplifier, Operating from 1 GHz to 4 GHz with 20 dB Gain, 22 dBm Psat and SMA FMAM1070](https://www.fairviewmicrowave.com/0.8db-nf-low-noise-amplifier-20db-fmam1070-p.aspx)

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