

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

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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

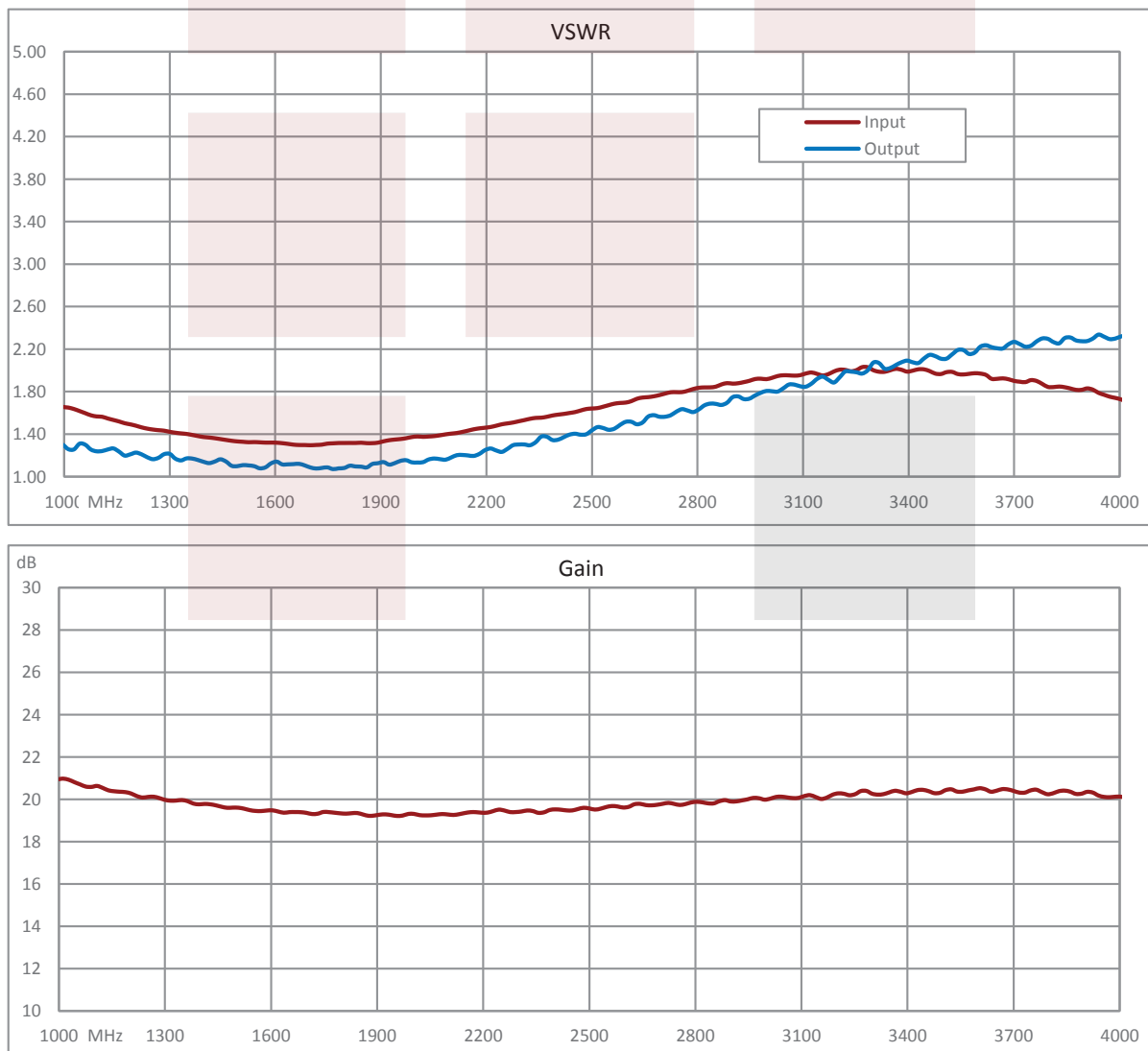
Compliance Certifications (see [product page](#) for current document)

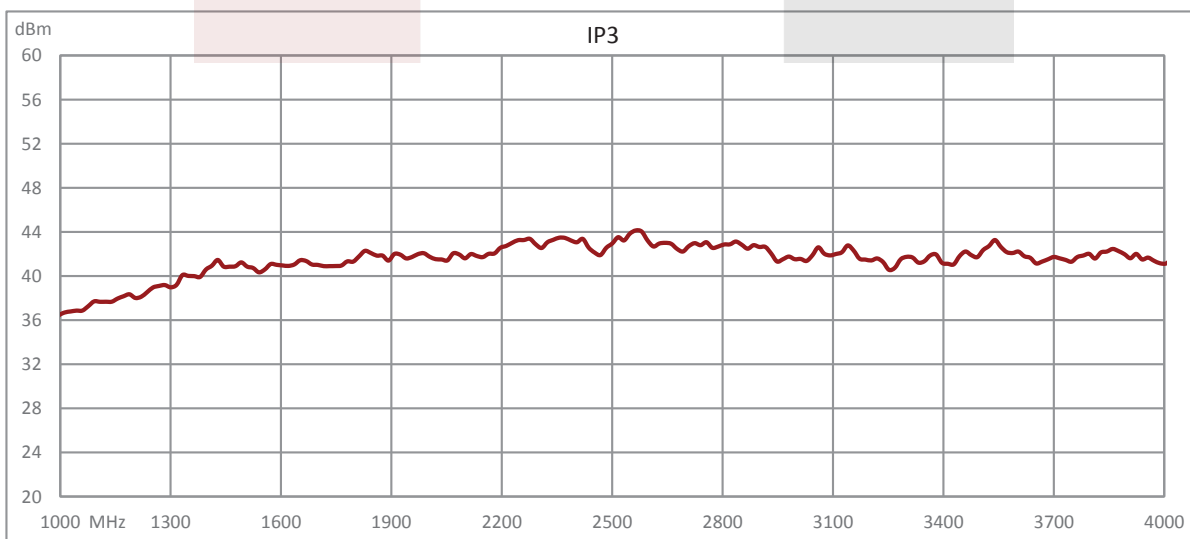
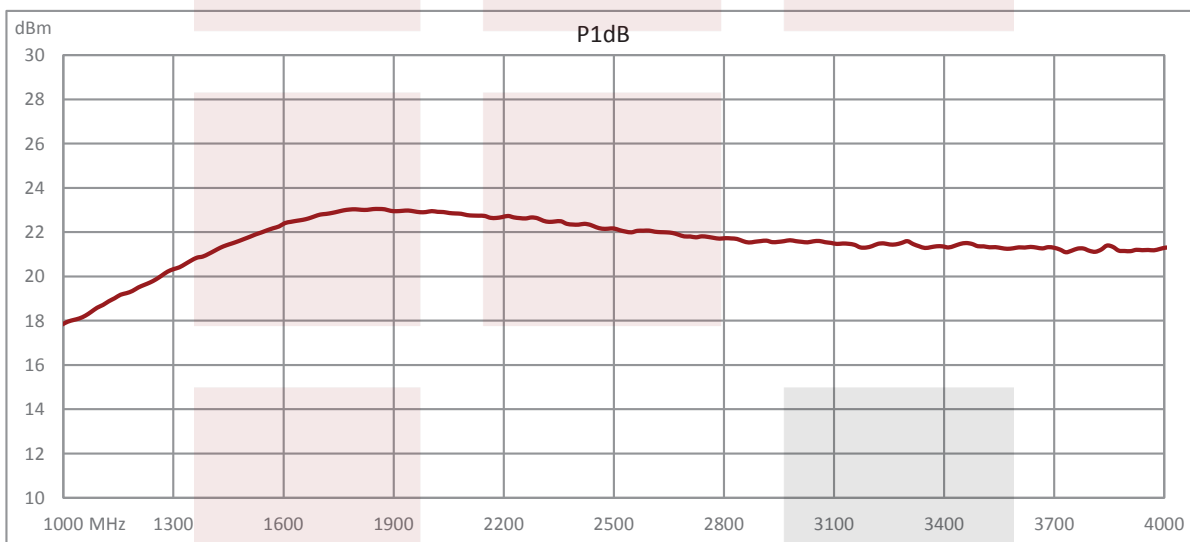
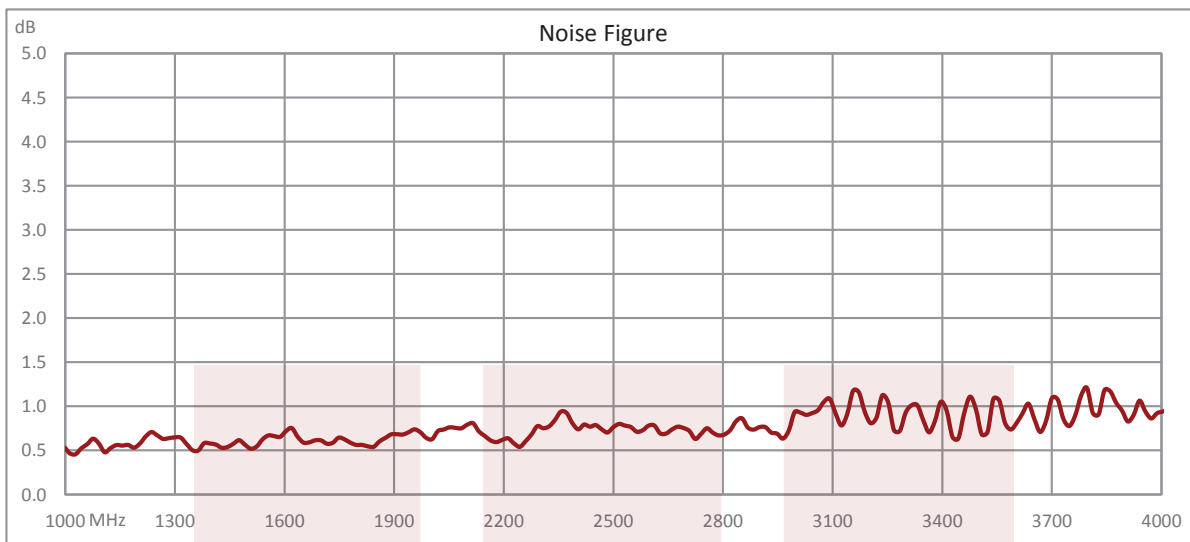
Plotted and Other Data

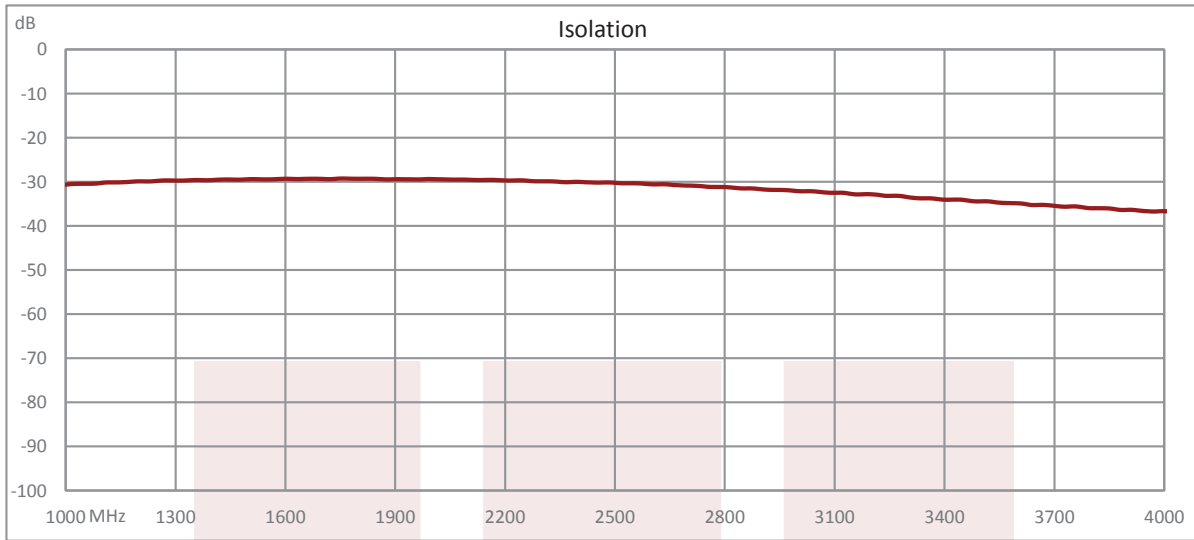
Notes:

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

Typical Performance Data





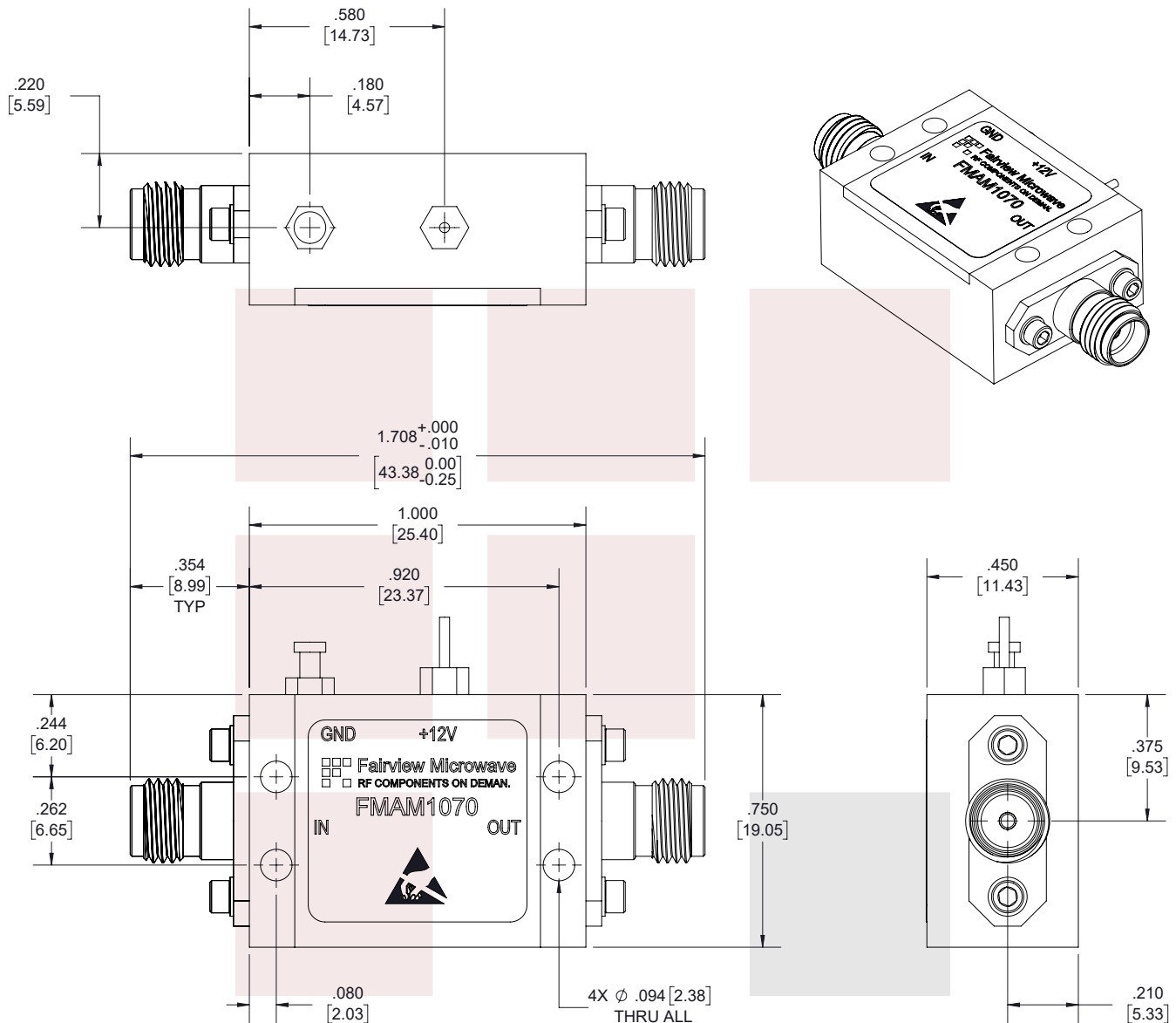


0.8 dB NF Low Noise Amplifier, Operating from 1 GHz to 4 GHz with 20 dB Gain, 22 dBm Psat and SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave 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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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Fairview Microwave reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Fairview Microwave does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Fairview Microwave does not assume any liability arising out of the use of any part or documentation.



STANDARD TOLERANCES

.X	±0.2
.XX	±0.01
.XXX	±0.005

*STANDARD TOLERANCES APPLY
ONLY TO DIMENSIONS IN INCHES

NOTES:

1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.
3. DIMENSIONS ARE IN INCHES [mm].

TITLE

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to 4 GHz with 20 dB Gain, 22 dBm Psat and SMA

DWG NO

FMAM1070

CAGE CODE

3FKR5

CAD FILE

04/23/18

SHEET

1 OF 1

SCALE N/A

SIZE A

7361