

1.8 dB NF Low Noise Amplifier Operating From 50 MHz to 2 GHz with 27 dB Gain, 22 dBm P1dB and SMA

FMAM1042 is a low noise RF coaxial amplifier operating in the 50 MHz to 2 GHz frequency range. The amplifier offers 1.8 dB typical noise figure, 22 dBm typical P1dB and 27 dB typ small signal gain. This performance is achieved through the use of hybrid MIC design and advanced SiGe Bipolar devices.

The amplifier desing input/output ports are internally matched to 50 ohms and are DC blocked. The low noise amplifier requires typically a +12V DC power supply. The connectorized SMA module is unconditionally stable and includes built-in voltage regulation. This low noise amplifier requires only a single positive supply, is unconditionally stable and operates over the temperature range of -40°C and +85°C.

Electrical Specifications (TA = +25°C , DC Voltage = 12Vdc , DC Current = 160mA)

Description	Min	Typ	Max	Unit
Frequency Range	0.05		2	GHz
Small Signal Gain	25	27		dB
Gain Flatness		±0.75	±1	dB
Gain Variance at OTR*		1		dB
Output at 1 dB Compression Point	+20	+22		dBm
Output 3rd Intercept Point	+34	+37		dBm
Noise Figure		1.8	2	dB
Input VSWR		1.5:1	1.8:1	
Output VSWR		1.5:1	1.8:1	
Spurious			-60	dBc
Input Power (CW)			+20	dBm
Operating DC Voltage	10.5	12	13.5	Volts
Operating DC Current	140	160	190	mA
Operating Temperature Range	-40		+85	°C

*OTR= Base Plate Operating Temperature Range

Absolute Maximum Rating

Parameter	Rating	Units
Source Voltage	+15	Volts
RF input Power	+20	dBm
Operating Temperature	-55 to +125	°C
Storage Temperature	-40 to +85	°C



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



Features:

- 50 MHz to 2 GHz Frequency Range
- P1dB: 22 dBm
- Small Signal Gain: 27 dB typical
- Noise Figure: 1.8 dB typ
- 50 Ohm Input and Output Matched
- -40 to 85°C Operating Temperature
- Unconditionally Stable
- Single DC Positive Supply
- Built-in Voltage Regulator

Applications:

- Laboratory Applications
- R&D Labs
- Radar Systems
- Telecom Infrastructure
- Test Instrumentation
- Communication Systems
- Wireless Communication
- Microwave Radio Systems
- Cellular Base Stations
- Low Noise Amplifier
- General Purpose Amplification
- General Purpose Wireless
- Wideband Gain Block
- IF Amplifier/RF Driver Amplifier
- RF Wideband Front Ends
- RF Pre-amplification
- Fixed and Land Mobile

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Mechanical Specifications

Size

Length	1.2 in [30.48 mm]
Width	0.85 in [21.59 mm]
Height	0.375 in [9.53 mm]
Weight	0.045 lbs [20.41 g]
Input Connector	SMA Female
Output Connector	SMA Female

Environmental Specifications

Temperature

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

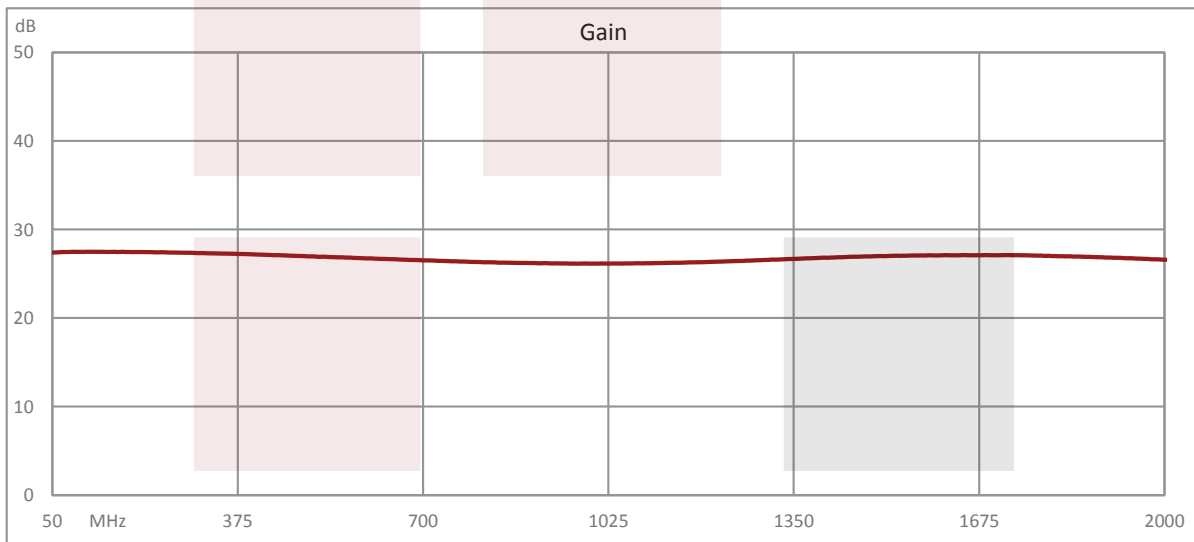
Compliance Certifications (see [product page](#) for current document)

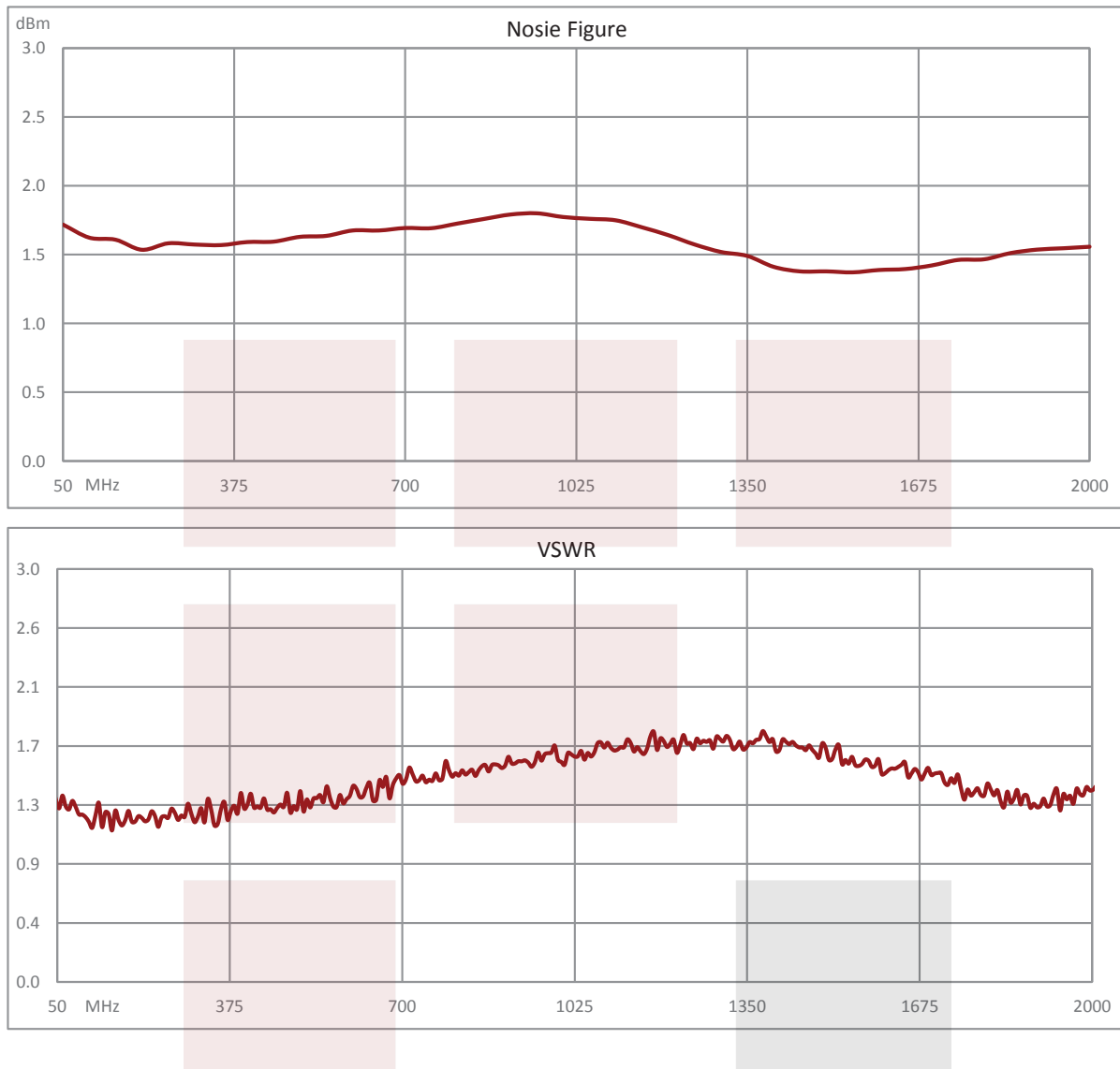
Plotted and Other Data

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



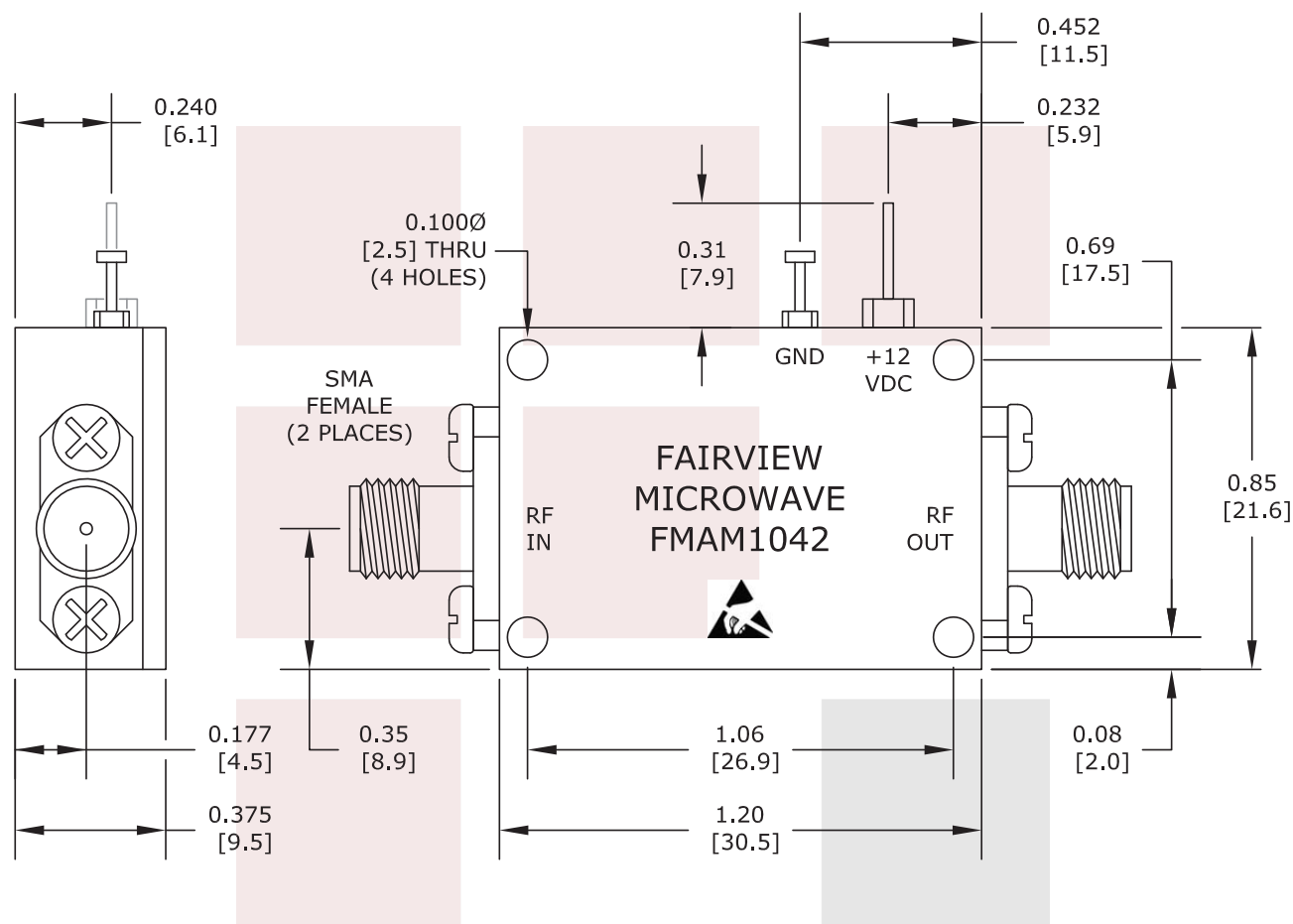


1.8 dB NF Low Noise Amplifier Operating From 50 MHz to 2 GHz with 27 dB Gain, 22 dBm P1dB and SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [1.8 dB NF Low Noise Amplifier Operating From 50 MHz to 2 GHz with 27 dB Gain, 22 dBm P1dB and SMA FMAM1042](https://www.fairviewmicrowave.com/1.8db-nf-low-noise-amplifier-27db-fmam1042-p.aspx)

URL: <https://www.fairviewmicrowave.com/1.8db-nf-low-noise-amplifier-27db-fmam1042-p.aspx>

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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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DWG NO

FMAM1042

CAGE CODE

3FKR5

CAD FILE

071816

SHEET

SCALE

N/A

SIZE

A 2233