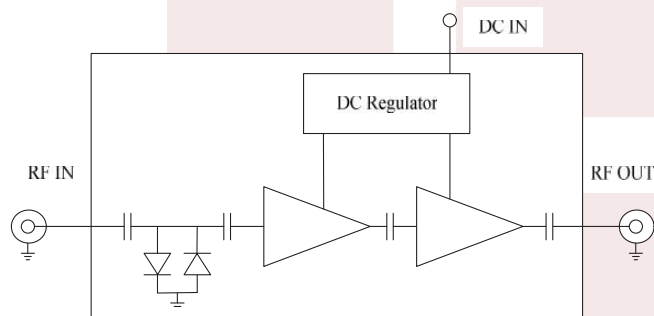


1.5 dB NF Low Noise Amplifier Operating From 10 MHz to 1,000 MHz with 40 dB Gain, 17 dBm P1dB and SMA

FMAM63001 is a Input Protected Low Noise RF coaxial amplifier operating in the 10 MHz to 1 GHz frequency range. The amplifier offers 1 Watt input protection, 1.5 dB typical noise figure, 17 dBm typical P1dB and high 40 dB small signal gain with gain flatness of ± 1 dB typical. 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 75°C .



Functional Block Diagram



Features:

- 10 MHz to 1 GHz Frequency Range
- 1 Watt input protection
- P1dB: 17 dBm
- High Small Signal Gain: 40 dB typical
- Gain Flatness: ± 1 dB
- Gain Variance: ± 1.25 dB
- Noise Figure: 1.5 dB typ
- 50 Ohm Input and Output Matched
- -40 to 75°C Operating Temperature
- Unconditionally Stable
- Single DC Positive Supply
- Built-in Voltage Regulator

Applications:

- Laboratory Applications
- R&D Labs
- Radar Systems
- Test Instrumentation
- Communication Systems
- Low Noise Amplifier
- General Purpose Amplification
- Wideband Gain Block
- IF Amplifier/RF Driver Amplifier
- RF Wideband Front Ends
- Fixed and Land Mobile

Electrical Specifications (TA = $+25^{\circ}\text{C}$, DC Voltage = 12Vdc , DC Current = 110mA)

Description	Min	Typ	Max	Unit
Frequency Range	10		1,000	MHz
Small Signal Gain	37	40		dB
Gain Flatness		± 1	± 1.25	dB
Gain Variance at OTR*		1.25		dB
Output at 1 dB Compression Point	+16	+17		dBm
Output 3rd Intercept Point	+28	+31.5		dBm
Noise Figure		1.5	3	dB
Input VSWR		1.3:1	1.5:1	
Output VSWR		1.3:1	1.5:1	
Reverse Isolation	50	55		dB
Spurious			-70	dBc
Input Power (CW)			+30	dBm
Operating DC Voltage	10	12	15	Volts
Operating DC Current	100	110	125	mA
Operating Temperature Range	-40		+75	$^{\circ}\text{C}$

*OTR= Base Plate Operating Temperature Range

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RF Characteristic

Description	F1	F2	F3	Units
Frequency Range	0.01 to 0.05	0.05 to 1		GHz
Noise Figure	1.5	1		dB

Absolute Maximum Rating

Parameter	Rating	Units
Source Voltage	+15	Volts
RF input Power	+30	dBm
Operating Temperature	-40 - +75	°C
Storage Temperature	-55 - +125	°C



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

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	0.0535 lbs [24.27 g]
Input Connector	SMA Female
Output Connector	SMA Female

Environmental Specifications

Temperature

Operating Range	-40 to +75 deg C
Storage Range	-55 to +125 deg C

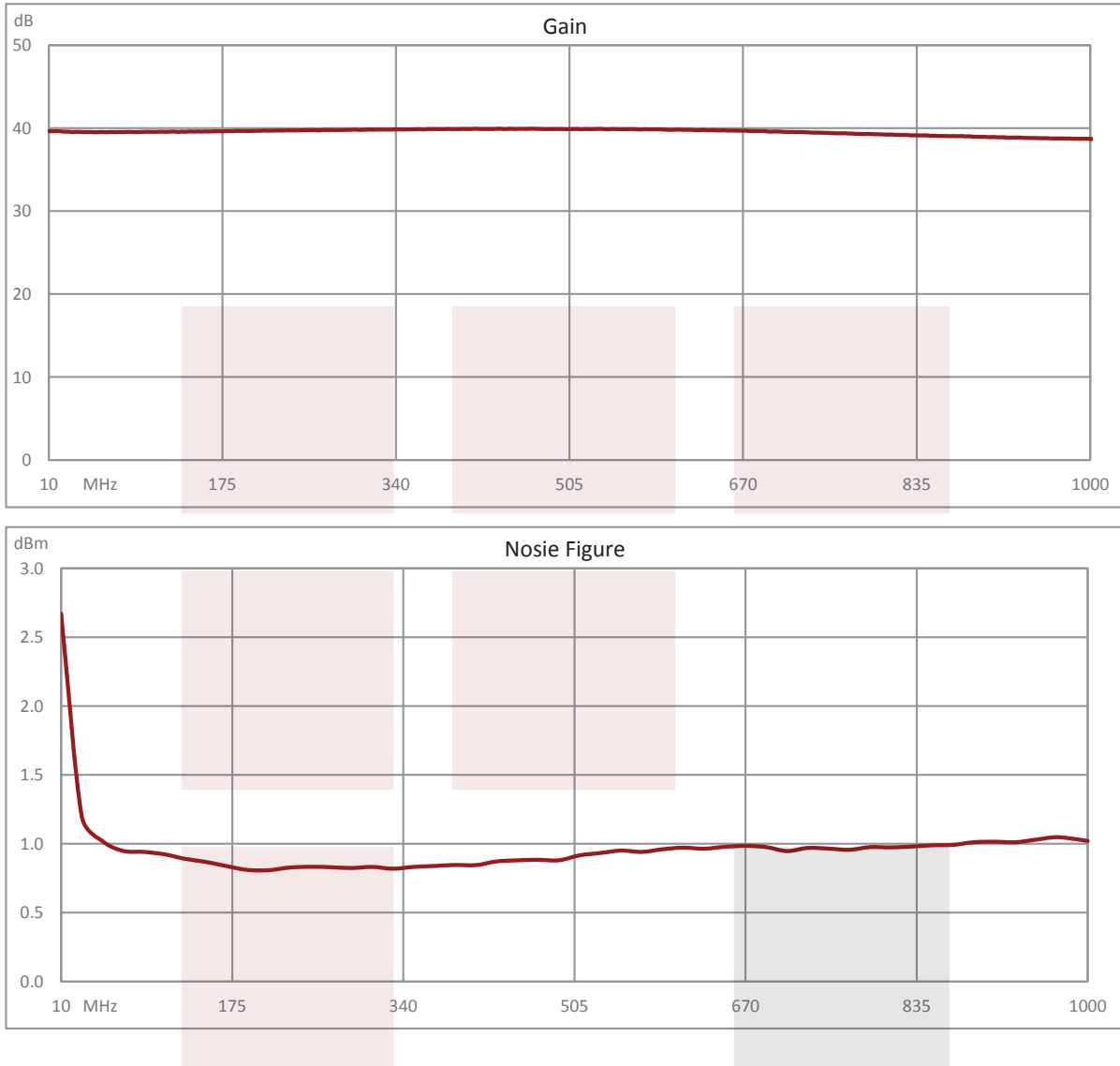
Compliance Certifications (see [product page](#) for current document)

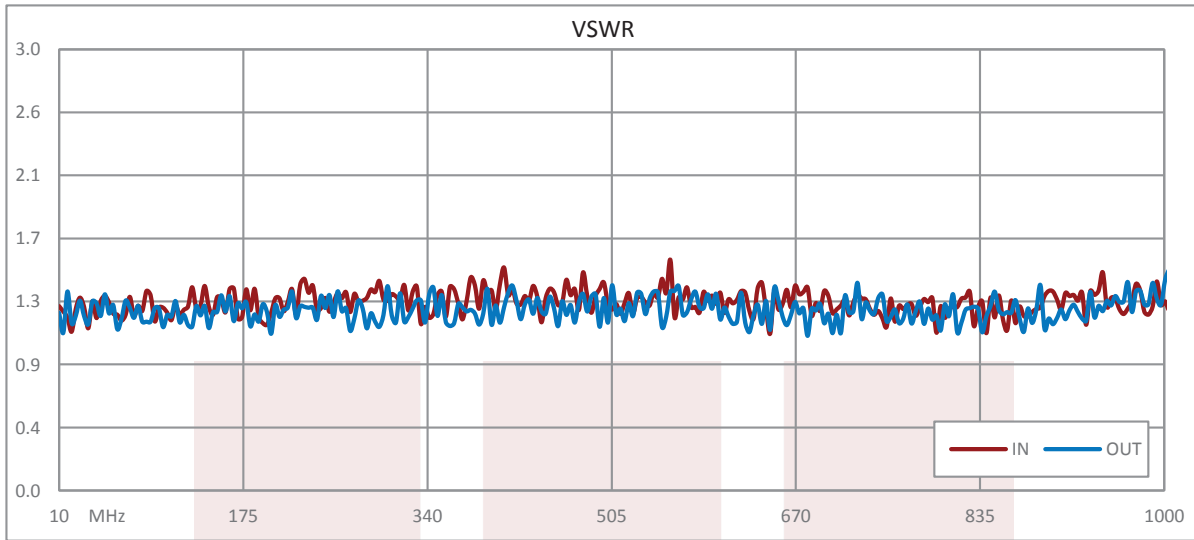
Plotted and Other Data

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



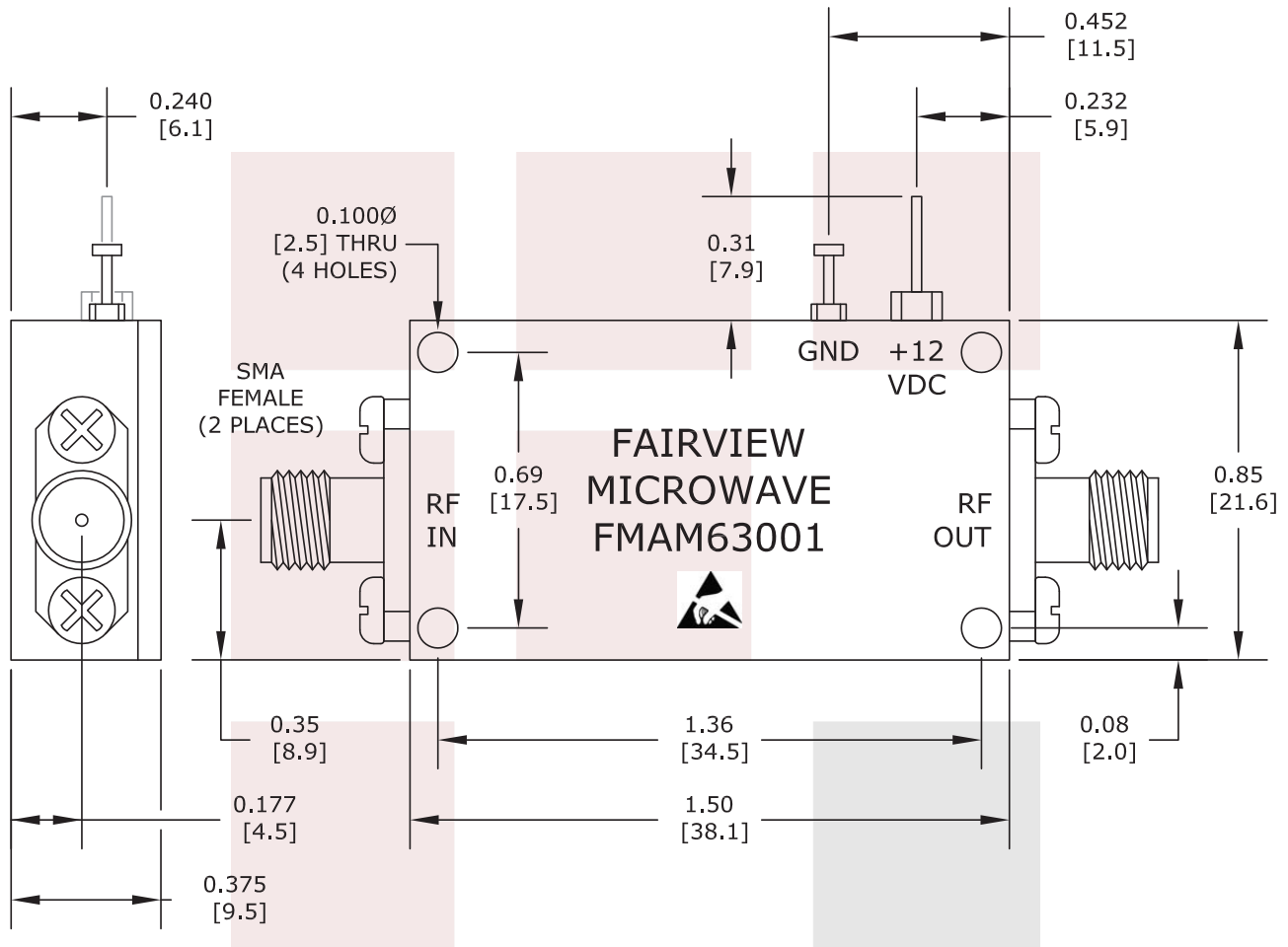


1.5 dB NF Low Noise Amplifier Operating From 10 MHz to 1,000 MHz with 40 dB Gain, 17 dBm P1dB and SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [1.5 dB NF Low Noise Amplifier Operating From 10 MHz to 1,000 MHz with 40 dB Gain, 17 dBm P1dB and SMA FMAM63001](https://www.fairviewmicrowave.com/1.5db-nf-low-noise-amplifier-40db-fmam63001-p.aspx)

URL: <https://www.fairviewmicrowave.com/1.5db-nf-low-noise-amplifier-40db-fmam63001-p.aspx>

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 ±0.1
.XXX ±0.05

*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

FAIRVIEW MICROWAVE INC.
ALLEN, TX 75013 WWW.FAIRVIEWMICROWAVE.COM

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
1.5 dB NF Low Noise Amplifier Operating From 10 MHz to 1,000 MHz with 40 dB Gain, 17 dBm P1dB and SMA

DWG NO FMAM63001 CAGE CODE 3FKR5

CAD FILE 101716 SHEET SCALE N/A SIZE A 2233