Fairview Microwave
RF COMPONENTS ON DEMAND. Done!

FMAM3270
DATA SHEET

2.5 dB NF, 2 GHz to 20 GHz, Low Noise Broadband Amplifier with 13 dBm, 14.5 dB Gain and SMA

FMAM3270 low noise amplifier operates across a wide frequency range from 2 GHz to 20 GHz. The design utilizes GaAs PHEMT MMIC technology for high efficiency and high linearity. Typical performance includes 14.5 dB small signal gain, 2.5 dB noise figure, up to +13 dBm of output power at P1dB and +23 dBm output IP3, while using a +9V to +15V single DC supply. The design exhibits a very flat gain response across a wide frequency band. Input/output ports are matched for 50 ohms and are DC blocked.

The design also incorporates integrated bias sequencing circuitry and voltage regulators to allow for flexible biasing positive voltage supply. The drop-in package is hermetically sealed with field replaceable SMA connectors and has an operating temperature range of -55°C to +85°C. And for added confidence, this rugged package assembly is designed to meet MIL-STD-883 test conditions for Hermeticity and Temperature Cycle.

This broadband low noise amplifier module is part of Fairview Microwave's expanding line of amplifier offerings. These modules offer very wide frequency range coverage and outstanding electrical performance in the band.

Features:

- LNA Module
- Extremely wide frequency band
- GaAs PHEMT MMIC Technology
- Flat Gain 14.5 dB +/- 0.5 dB
- High Output IP3 +23 dBm
- Output P1dB up to +13 dBm typical
- Regulated Supply and Bias Sequencing
- Hermetically Sealed Module
- Mil Spec Compliant
- Field Replaceable SMA Connectors
- -55°C to +85°C Operating Temperature

Applications:

- Electronic Warfare
- Electronic Countermeasures
- Microwave Radio
- VSAT
- Radar
- Fiber Optic
- Space Systems
- Test Instrumentation
- Telecom Infrastructure

Electrical Specifications (TA= 25°C, VDC1 = 12 Vdc)

Description	Min	Typ	Max	Unit
Frequency Range	2		20	GHz
Gain		14.5		dB
P1dB		+13		dBm
Noise Figure		2.5		dB
Operating DC Voltage 1		12		Volts
Operating Temperature Range (OTR)	-55		+85	°C

Fairview Microwave
1130 Junction Dr. #100
Allen, TX 75013
Tel: 1-800-715-4396 / (972) 649-6678
Fax: (972) 649-6689
www.fairviewmicrowave.com
sales@fairviewmicrowave.com

Performance by Frequency

Description	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range		2.0 - 6.0			6.0 - 16.0			16.0 - 20.0		GHz
Gain	13	15		12	14.5		11	13		dB
Gain Flatness		±.025			±0.5			±0.5		dB
Gain Variation Over Temperature		0.015	0.025		0.015	0.025		0.015	0.025	dB/ °C
Noise Figure		3.5	4.5		2.5	3.5		4	5	dB
Input Return Loss		15			20			10		dB
Output Return Loss		13			15			8		dB
Output Power For 1 dB Compression (P1dB)	11	14		10	13		8.5	11.5		dBm
Saturated Output Power (Psat)		17			15.5			14		dBm
Output Third Order Intercept (IP3)		25			23			21		dBm
Supply Current		78			78			78		mA

Mechanical Specifications

Size

Length	0.64 in [16.26 mm]
Width	0.59 in [14.99 mm]
Height	0.29 in [7.37 mm]
Weight	0.055 lbs [24.95 g]
Connector Option	Field Replaceable
Input Connector	SMA Female
Output Connector	SMA Female

Environmental Specifications

Temperature

Operating Range	-55 to +85 deg C
Storage Range	-65 to +150 deg C
Temperature Cycling	MIL-STD-883, Method 101C, Cond B
Hermetic Seal	Gross Leak MIL-STD-883 Method 1014C1/Fine Leak MIL-STD-883, Method 1014A2, 5 x 10-8 atm cc
ESD Sensitivity	ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in ESD Workstation.

Compliance Certifications (visit www.FairviewMicrowave.com for current document)

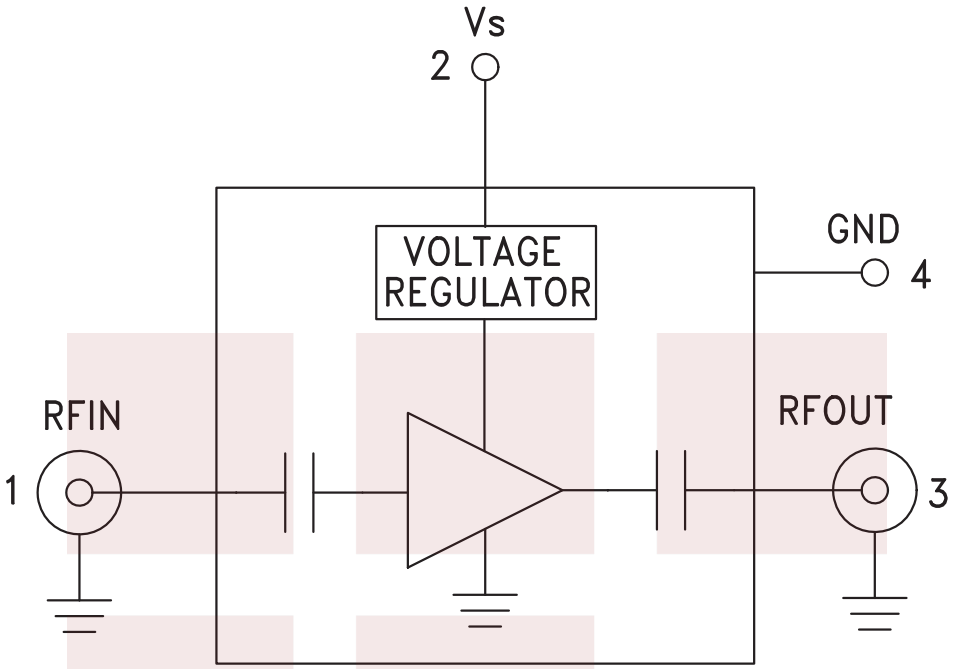
RoHS Compliant	Yes

Plotted and Other Data

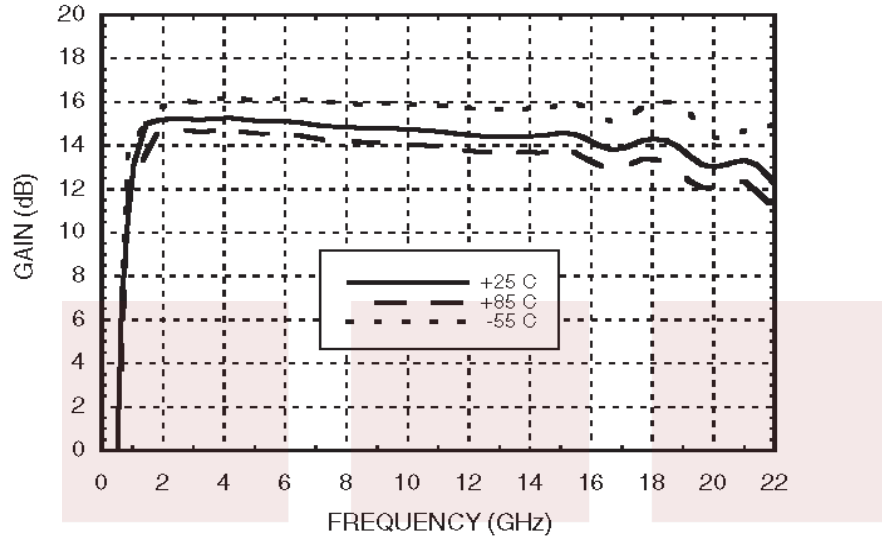
Notes:

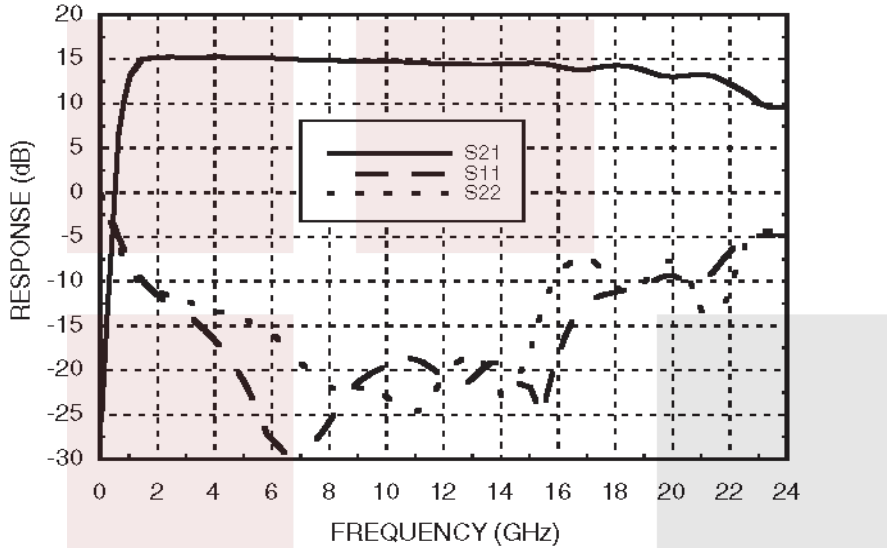
- Values at 25 °C, sea level

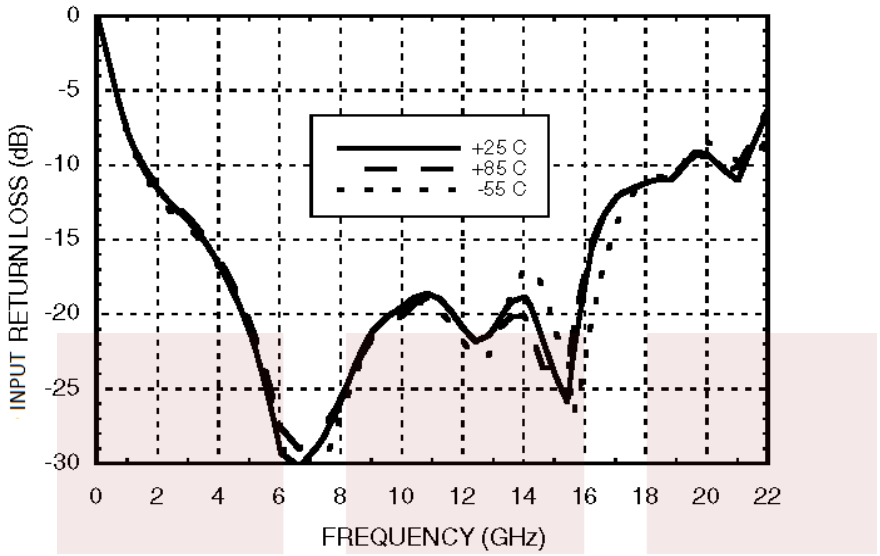
Functional Block Diagram

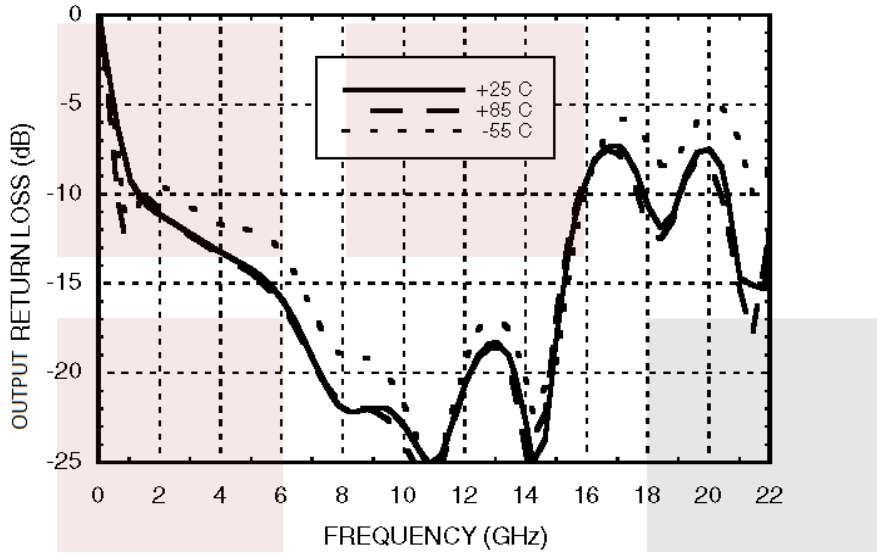


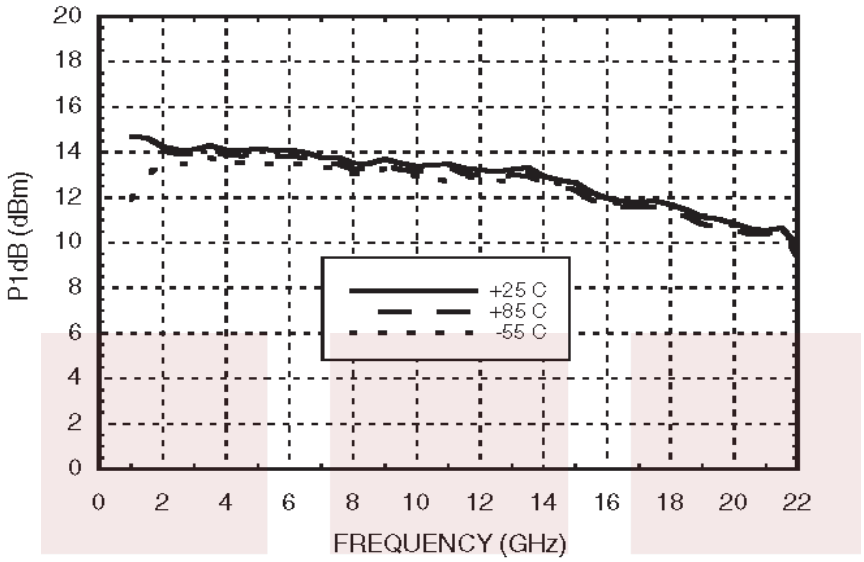
Typical Performance Data

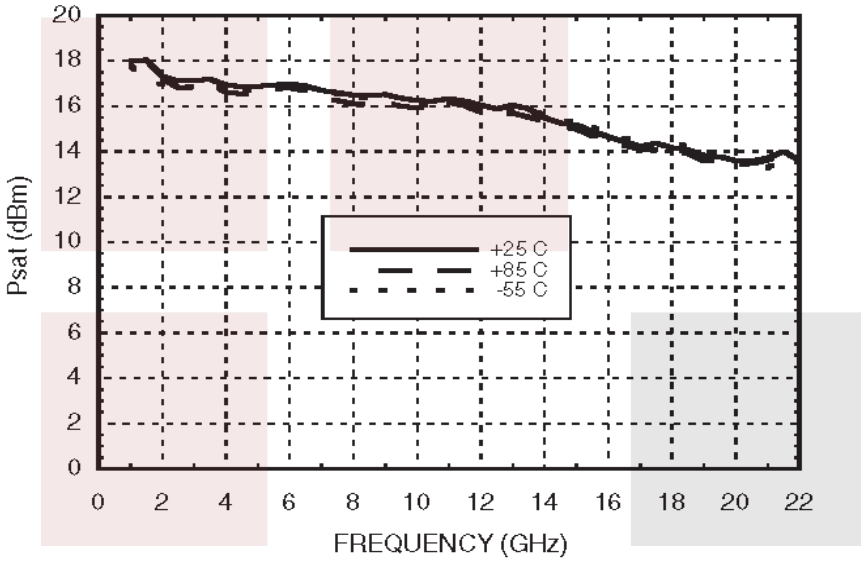


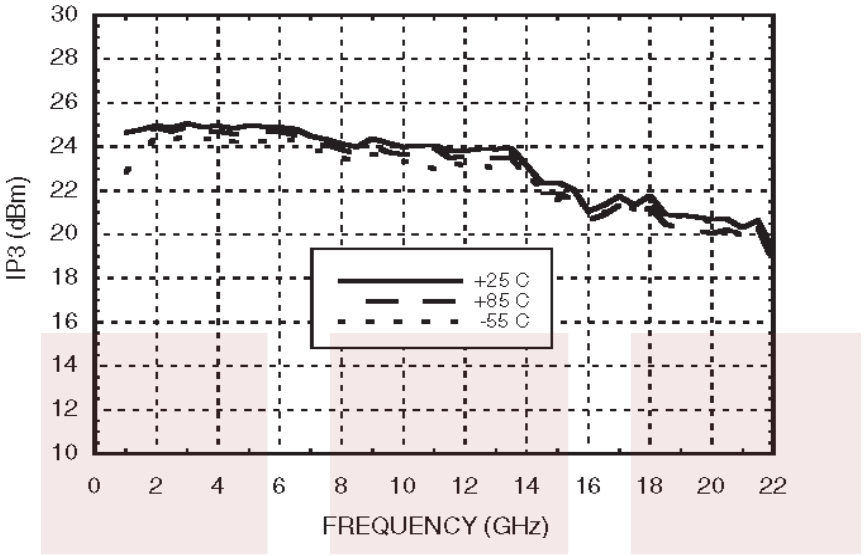


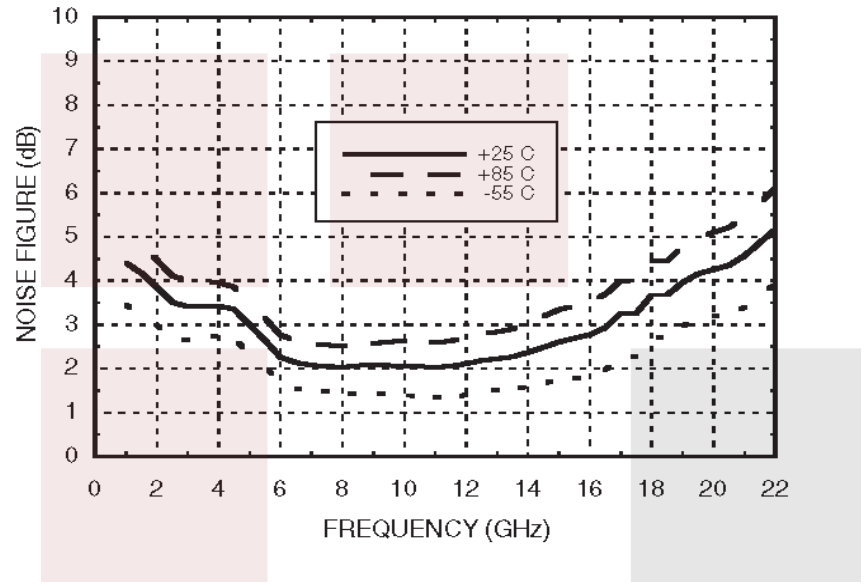








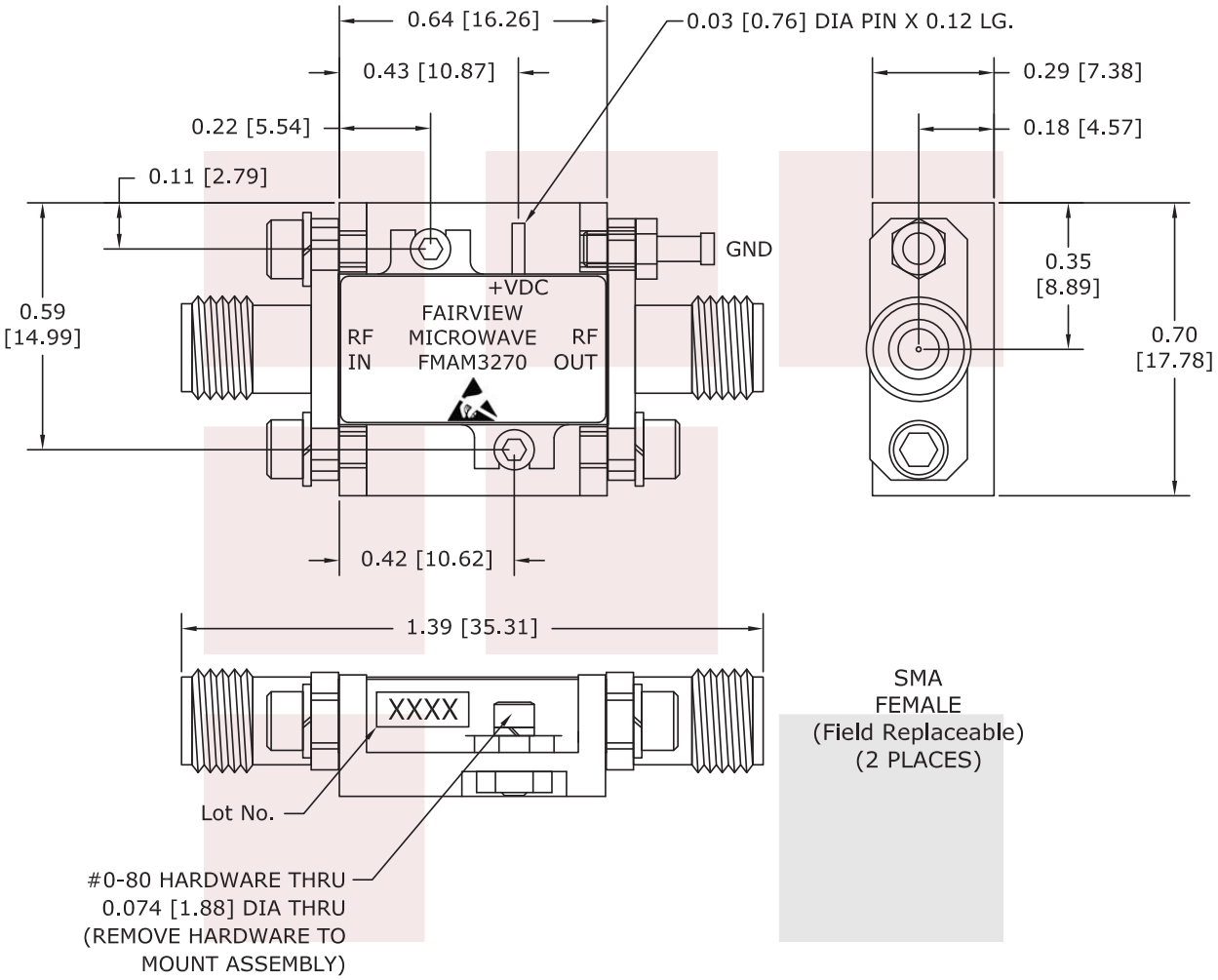




2.5 dB NF, 2 GHz to 20 GHz, Low Noise Broadband Amplifier with 13 dBm, 14.5 dB Gain and SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: 2.5 dB NF, 2 GHz to 20 GHz, Low Noise Broadband Amplifier with 13 dBm, 14.5 dB Gain and SMA FMAM3270

URL: https://www.fairviewmicrowave.com/2-20-ghz-low-noise-broadband-amplifier-fmam3270-p.aspx



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TITLE 2.5 dB NF, 2 GHz to 20 GHz, Low Noise Broadband Amplifier with 13 dBm, 14.5 dB Gain and SMA	DWG NO FMAM3270	CAGE CODE 3FKR5			
	CAD FILE 072916	SHEET	SCALE N/A	SIZE A	2233