

2 GHz to 6 GHz, Medium Power Broadband Amplifier with 500 mW, 22 dB Gain and SMA



FMAM4041

Features

- 2.0 to 6.0 GHz Frequency Range
- P1dB: 27 dBm min
- Small Signal Gain: 22 dB typ
- Gain Flatness: ± 0.6 dB typ
- 50 Ohm Input and Output Matched
- -30 to +70°C Operating Temperature
- Unconditionally Stable
- Single DC Positive Supply
- Built-in DC Voltage Regulator

Applications

- Laboratory Applications
- R&D Labs
- Test Instrumentation
- Military & Space
- Communication Systems
- Satellite Communications
- Wireless Communications
- Unmanned Systems
- Microwave Radio Systems
- Low Noise Amplifier
- General Purpose Amplification
- RF Front Ends

Description

FMAM4041 is a broadband coaxial power amplifier, operating in the 2.0 to 6.0 GHz frequency range. The amplifier offers 27 dBm of P1dB min and 22 dB small signal gain typ, with the gain flatness of ± 0.6 dB typ. This power amplifier requires only a single positive DC supply, is unconditionally stable, operates over the temperature range of -30°C to 70°C, and is Hermetically sealed.

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

Description	Min	Typ	Max	Unit
Frequency Range	2		6	GHz
Gain	20	22		dB
Gain Flatness		± 0.6		dB
P1dB	+27			dBm
Input Power			+17	dBm
IP3		+37		dBm
Noise Figure		5.4		dB
Input VSWR			2:1	
Output VSWR			2:1	
Operating DC Voltage	11	12	15	Vdc
Operating DC Current		420		mA
Operating DC Current at Quiescent		504		mA
Operating Temperature Range (OTR)	-30		+70	°C

Electrical Specification Notes:

Start-Up DC Current: 10% to 20%

*OTR= Base Plate Operating Temperature Range

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Absolute Maximum Rating

Parameter	Rating	Units
Source Voltage	+15	Volts
RF input Power	+17	dBm
Operating Temperature (base-plate)	-30 to +70	°C
Storage Temperature	-55 to +85	°C



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

Mechanical Specifications

Size

Length	1.083 in [27.51 mm]
Width	1.093 in [27.76 mm]
Height	0.382 in [9.7 mm]
Weight	0.0841 lbs [38.15 g]
Input Connector	SMA Female
Output Connector	SMA Female
Cooling	ADEQUATE HEATSINK REQUIRED

Environmental Specifications

Temperature

Operating Range	-30 to +70 deg C
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Compliance Certifications (see [product page](#) for current document)

CE Certification

Plotted and Other Data

Notes:

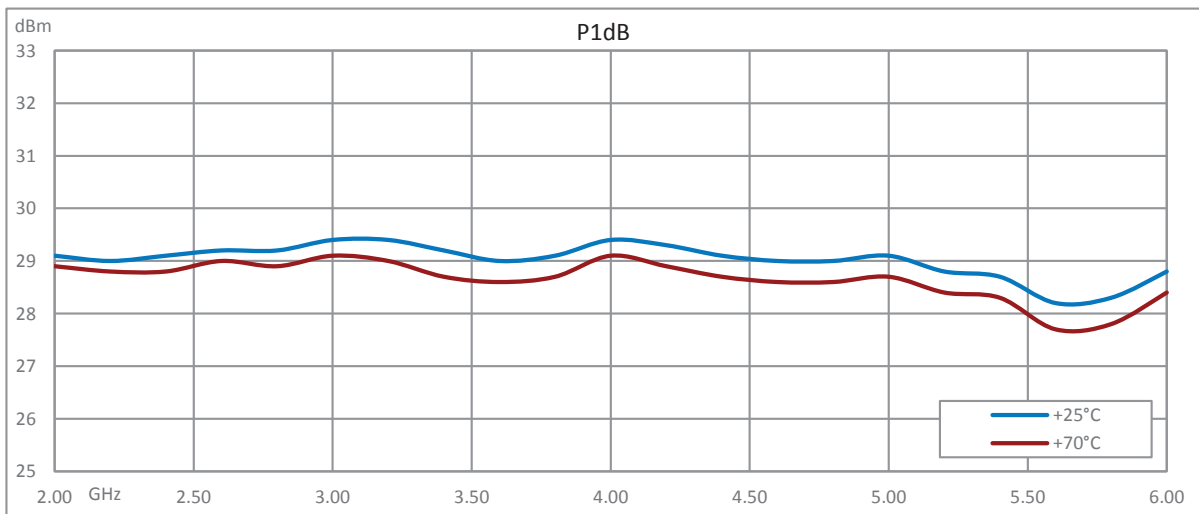
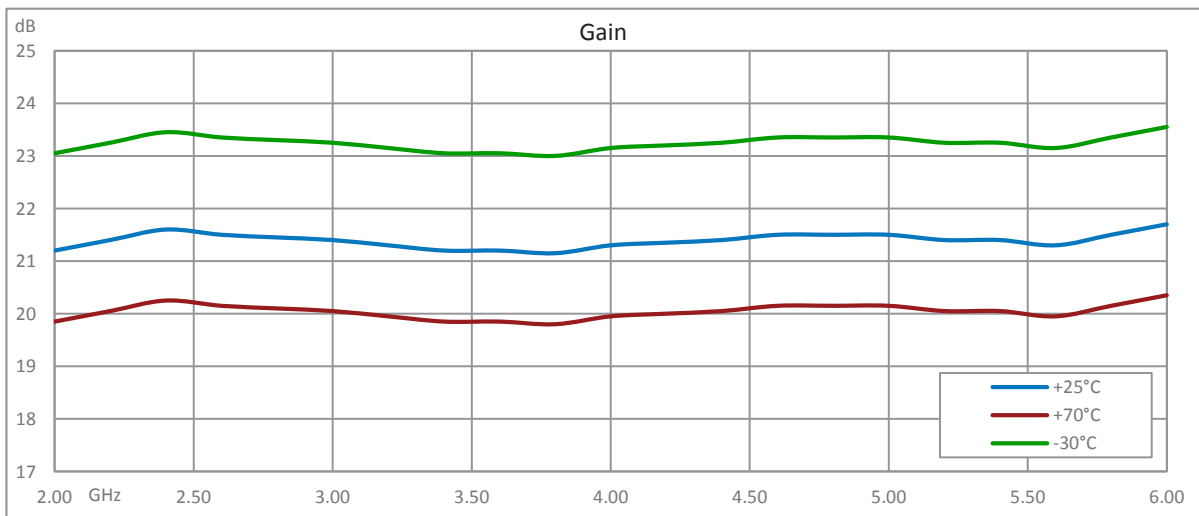
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Functional Block Diagram

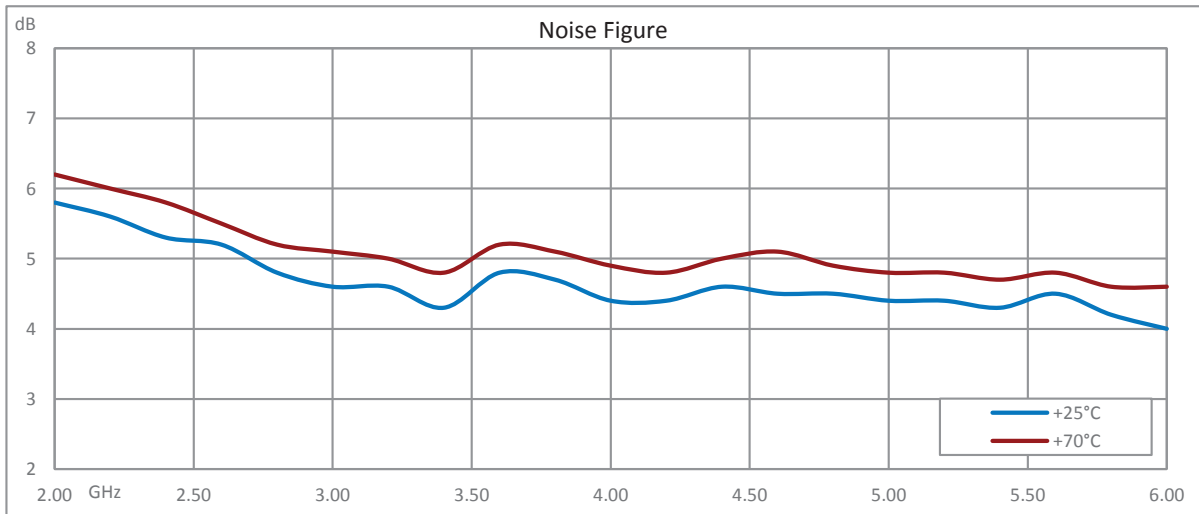
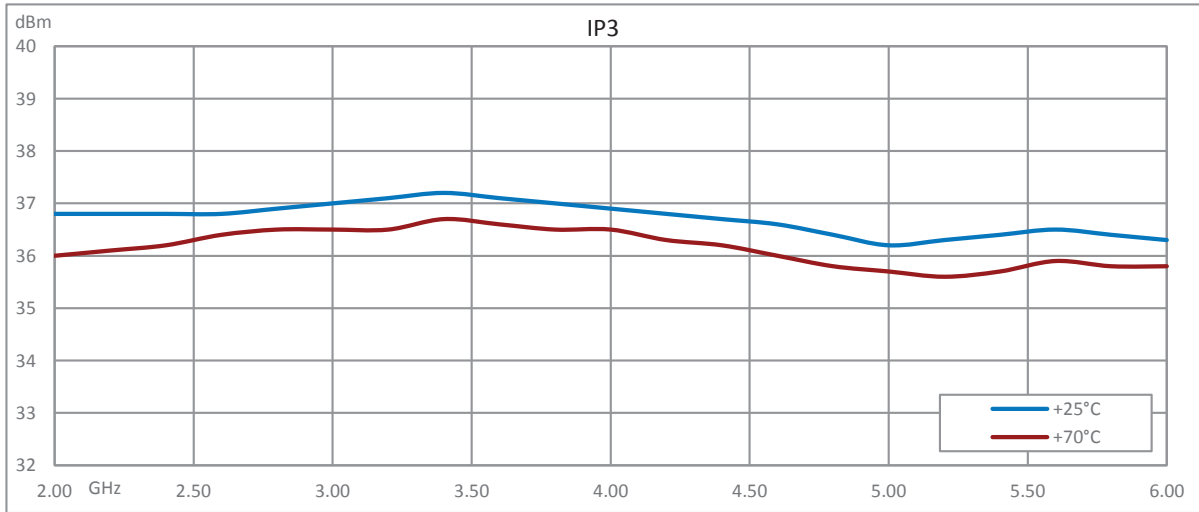
Typical Performance Data Parameter, Typ Performance



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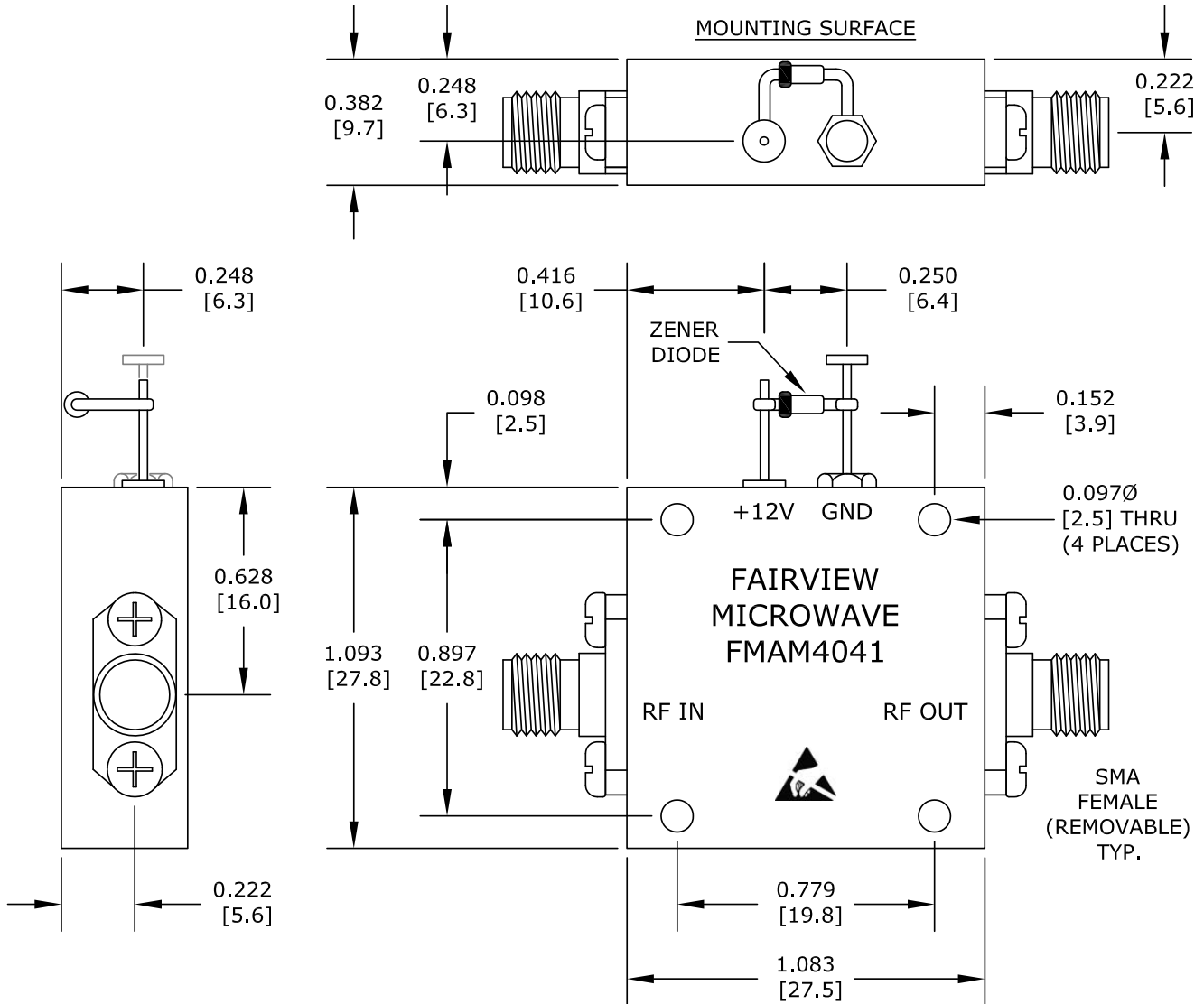
For additional information on this product, please click the following link: [2 GHz to 6 GHz, Medium Power Broadband Amplifier with 500 mW, 22 dB Gain and SMA FMAM4041](https://www.fairviewmicrowave.com/2-6-ghz-broadband-amplifier-fmam4041-p.aspx)

URL: <https://www.fairviewmicrowave.com/2-6-ghz-broadband-amplifier-fmam4041-p.aspx>

The information contained within 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 liability arising out of the use of any part or document.

FMAM4041 CAD Drawing

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NOTE:
HEAT SINK REQUIRED FOR PROPER OPERATION,
UNIT IS COOLED BY CONDUCTING TO HEAT SINK.

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TITLE		DWG NO FMAM4041		CAGE CODE 3FKR5	
		CAD FILE 031616	SHEET	SCALE N/A	SIZE A 2233