

**500 MHz to 2 GHz, with 24 dBm, 30 dB Gain and SMA**

SPA-020-27-003-SMA is a 24 dBm power amplifier designed for operation in the 0.5 GHz to 2 GHz frequency range. The amplifier provides an IP3 of 34 dBm Typ and 27 dB of Gain Min over the operating frequency range. High efficiency operation is achieved by using hybrid MIC designs and advanced GaAs PHEMT devices. The amplifier requires only +12 VDC power supply.

**Electrical Specifications** (TA = +25°C, DC Voltage = 12Volts, DC Current = 240mA)

Description	Min	Typ	Max	Unit
Frequency Range	0.5		2	GHz
Gain	27	30		dB
Gain Flatness		±0.6		dB
P1dB	+24			dBm
IP3		+34		dBm
Noise Figure		2.7		dB
Input VSWR			2:1	
Output VSWR			2:1	
Operating DC Voltage	11	12	15	Volts
Operating DC Current		240		mA
Operating Temperature Range (OTR)	-30		+70	°C

**Mechanical Specifications**

<b>Size</b>	
Length	0.9 in [22.86 mm]
Width	1.1 in [27.94 mm]
Height	0.5 in [12.7 mm]
Input Connector	SMA
Output Connector	SMA
Cooling	ADEQUATE HEAT-SINK REQUIRED

**Environmental Specifications**

<b>Temperature</b>	
Operating Range	-30 to +70 deg C
Shock	RTCA, DO-160C
Vibration	RTCA, DO-160C
Temperature Cycle	MIL-STD-883, METH-OD 1010

**Compliance Certifications** (visit [www.FairviewMicrowave.com](http://www.FairviewMicrowave.com) 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.
  - Heat Sink Required for Proper Operation, Unit is cooled by conduction to heat sink.



**Features:**

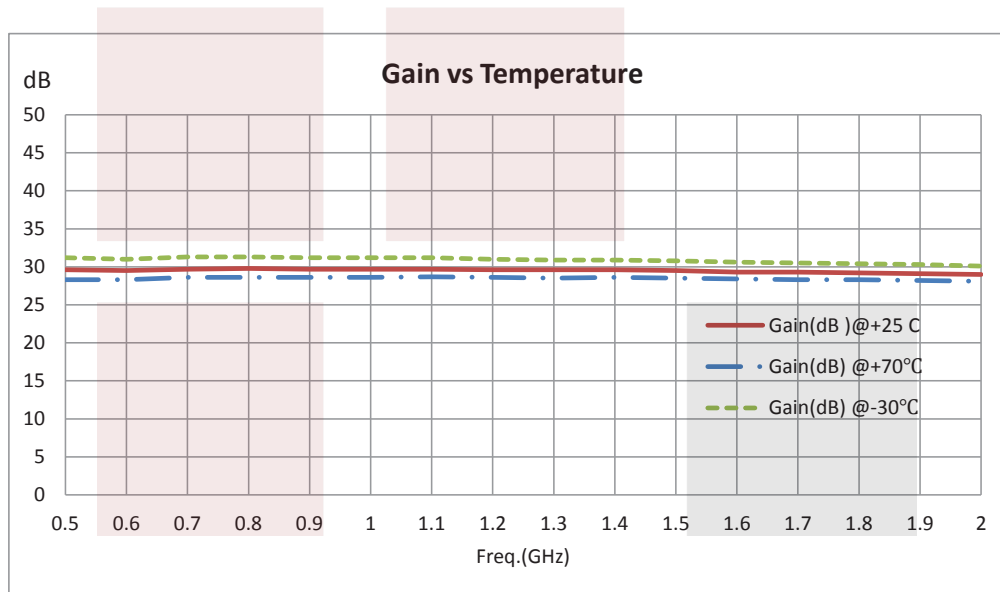
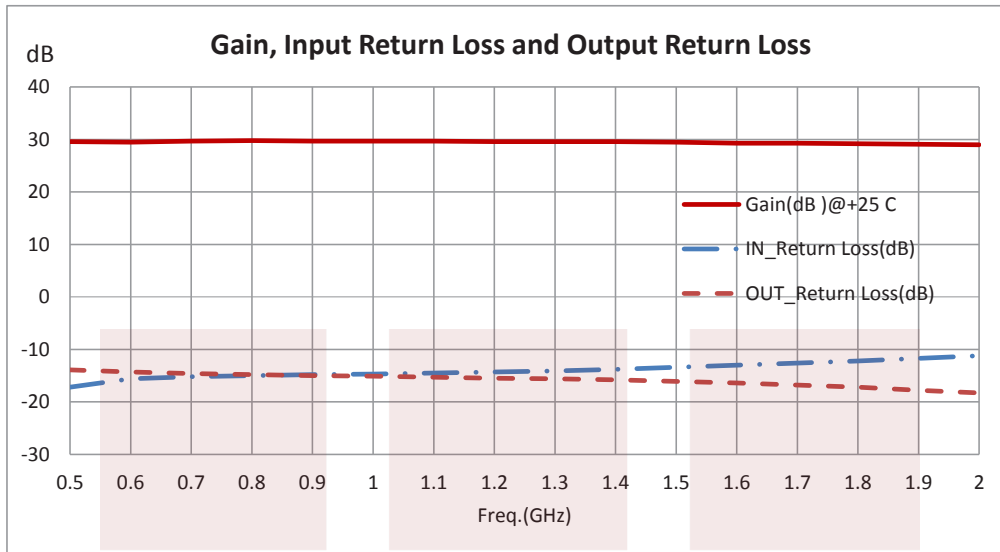
- 0.5 GHz to 2.0 GHz Frequency Range
- P1dB 24 dBm min.
- IP3 34 dBm typ.
- Gain 27 dB min.
- Gain Flatness +/-0.6 dB

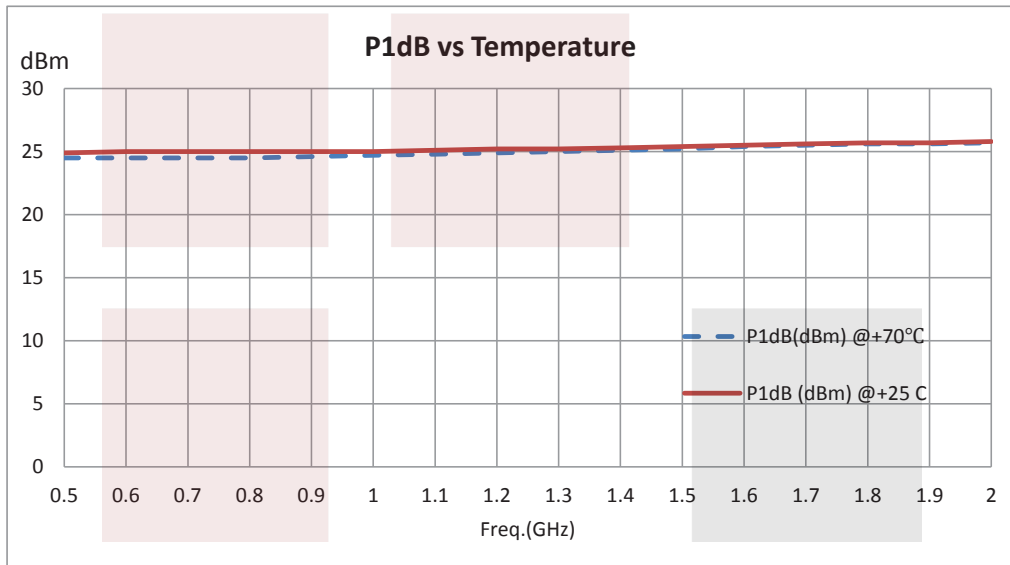
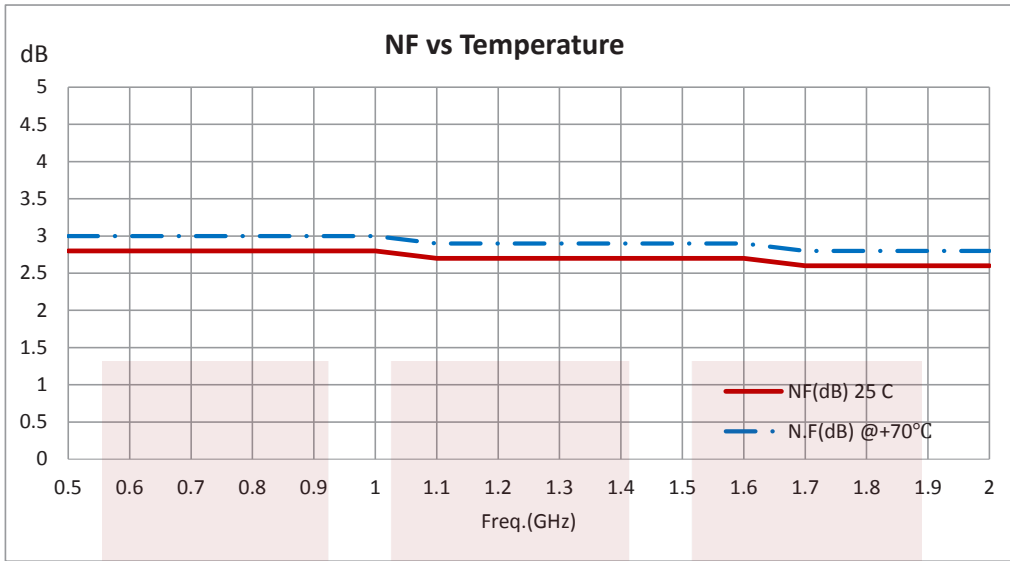
**Applications:**

- Medium Power Amplifier
- Driver Amp
- Military Communications
- Radar Driver Stage
- Test & Measurement

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**Typical Performance Data**





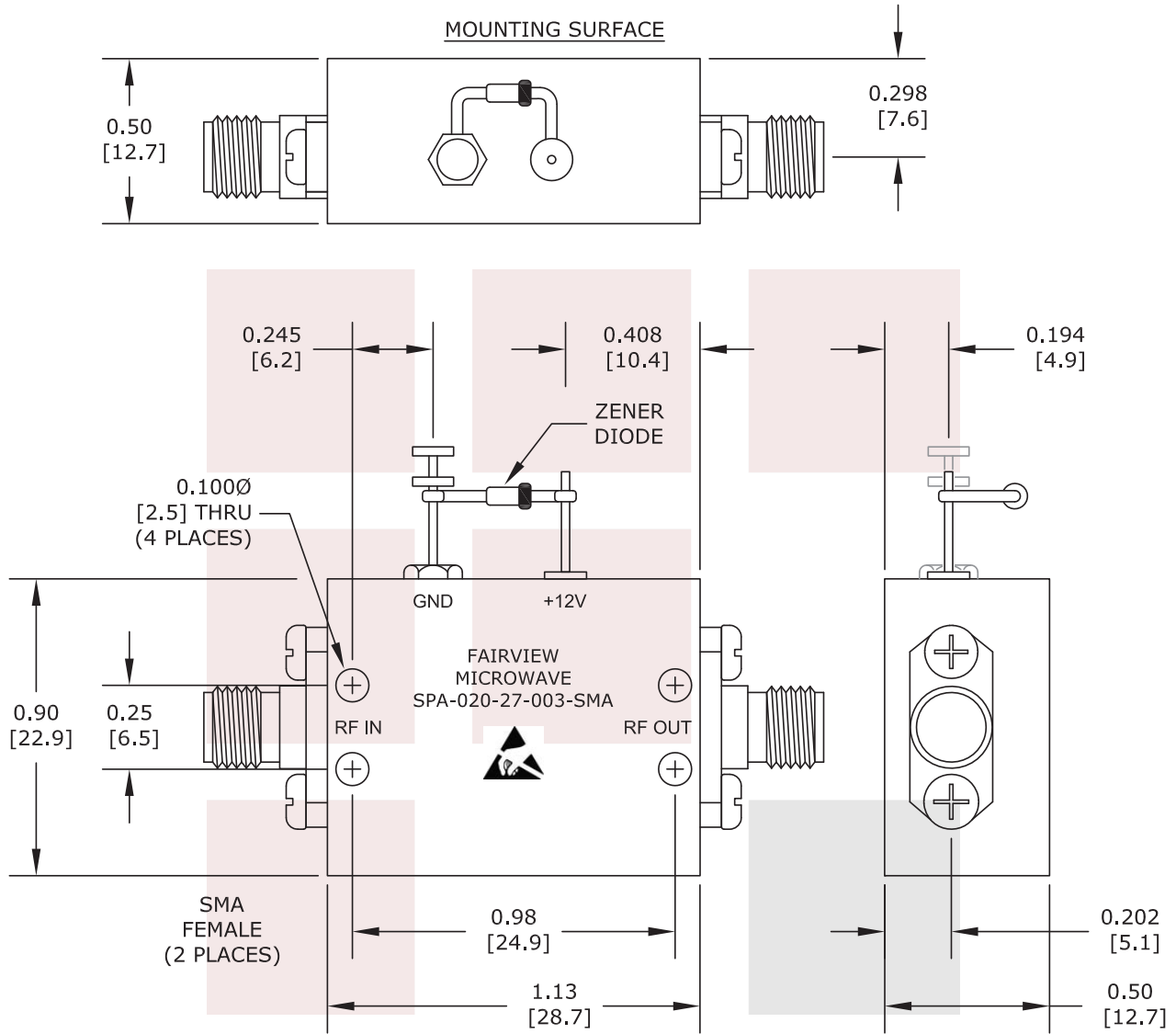
500 MHz to 2 GHz, with 24 dBm, 30 dB Gain and SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [500 MHz to 2 GHz, with 24 dBm, 30 dB Gain and SMA SPA-020-27-003-SMA](#)

URL: <http://www.fairviewmicrowave.com/500-mhz-2-ghz-medium-power-broadband-amplifier-spa-020-27-003-sma-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.





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

<b>FAIRVIEW MICROWAVE INC.</b> 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 500 MHz to 2 GHz, with 24 dBm, 30 dB Gain and SMA		DWG NO SPA-020-27-003-SMA		CAGE CODE 3FKR5	
CAD FILE	121214	SHEET	SCALE	N/A	SIZE A 2233