

**2 GHz to 6 GHz, Medium Power Broadband Amplifier with 1 Watt, 33 dB Gain and SMA**

SPA-060-30-01-SMA is a 1W wideband coaxial power amplifier operating in the 2 to 6 GHz frequency range. The amplifier offers 30 dBm min of P1dB and 33 dB small signal gain with the excellent gain flatness of  $\pm 1.0$  dB max and an outstanding output IP3 performance of 39 dBm. This performance is achieved through the use of hybrid MIC design and advanced GaAs PHEMT devices. The amplifier requires typically a +12V DC power supply. The connectorized SMA module is unconditionally stable and includes built-in voltage regulation, bias sequencing, and reverse bias protection for added reliability. The amplifier operates over the temperature range of -55°C and +85°C.



**Features:**

- 2 GHz to 6 GHz Frequency Range
- P1dB: 30 dBm min
- Small Signal Gain: 33 dB Typical
- Excellent Gain Flatness:  $\pm 1.0$  dB max
- High output IP3: 39 dBm
- Noise Figure: 5 dB
- Reverse Isolation: 50 dB
- 50 Ohms Input and Output Matched
- -55 to +85°C Operating Temperature
- Unconditionally Stable
- Regulated Supply & Bias Sequencing
- Hermetically Sealed Module
- Overvoltage External Protection for Easy Repair

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

Description	Min	Typ	Max	Unit
Frequency Range	2		6	GHz
Gain	31	33		dB
Small Signal Gain at OTR*	30			dB
Gain Flatness			$\pm 1$	dB
P1dB	+30			dBm
IP3		+39		dBm
Reverse Isolation		50		dB
Noise Figure		5	5.5	dB
Noise Figure at OTR*			6	dB
Input VSWR			2:1	
Output VSWR			2:1	
Operating DC Voltage 1	11	12	15	Volts
Operating DC Current		1,000		mA
Operating Temperature Range (OTR)	-55		+85	°C

\*OTR= Base Plate Operating Temperature Range

**Absolute Maximum Rating**

Parameter	Rating	Units
Source Voltage	+15	Volts
RF input Power	+17	dBm
Operating Temperature (base-plate)	-55 to +85	°C
Storage Temperature	-65 to +95	°C



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

**Mechanical Specifications**

Weight	0.1385 lbs [62.82 g]
Input Connector	SMA Female
Output Connector	SMA Female

**Applications:**

- Electronic Warfare
- Electronic Countermeasures
- Radar Systems
- Telecom Infrastructure
- Test Instrumentation
- Military & Space
- Communication Systems
- Satellite Communications
- Microwave Radio Systems
- Driver Amplifier
- High Power Output Amplifier

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

**Environmental Specifications**

**Temperature**

Operating Range -55 to +85 deg C

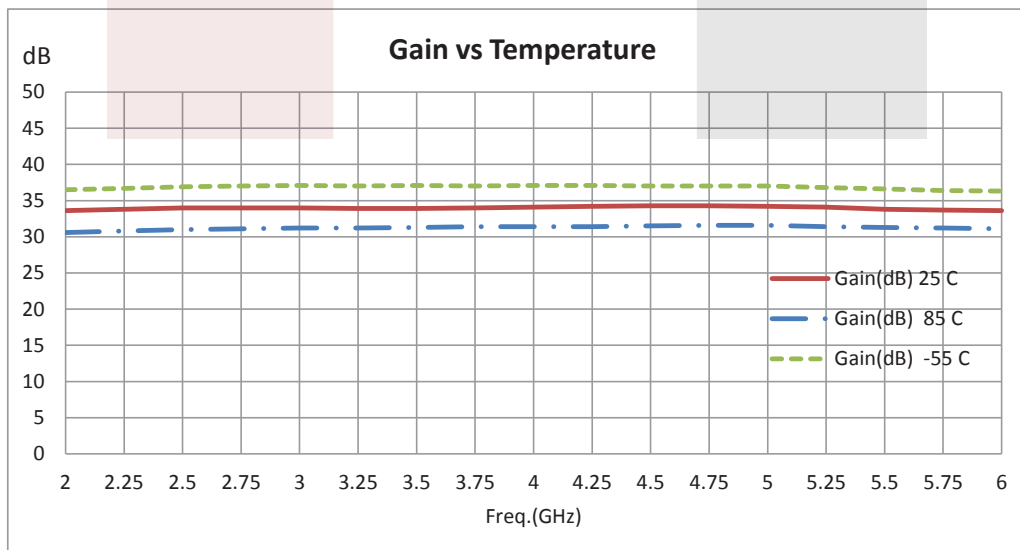
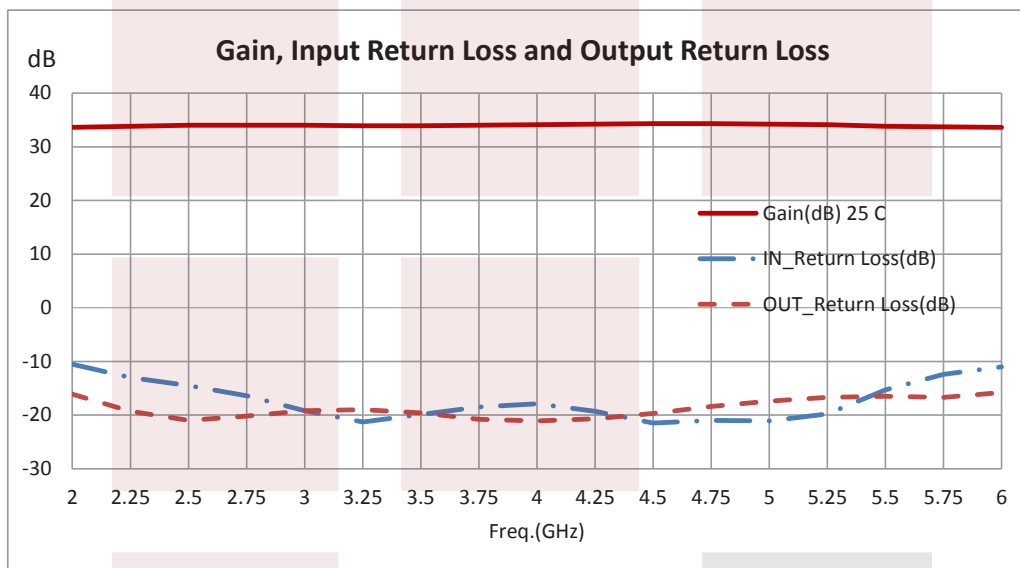
**Compliance Certifications** (see [product page](#) for current document)

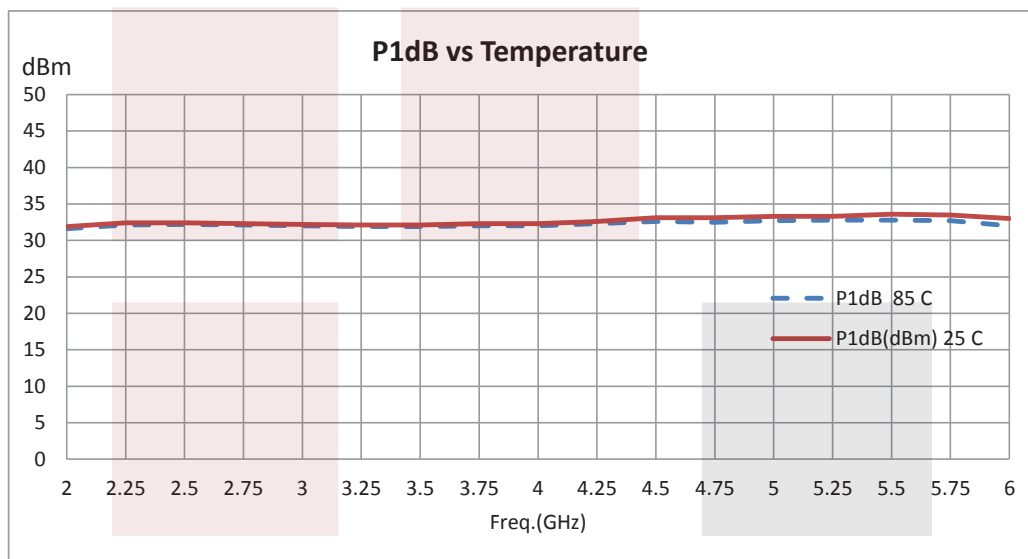
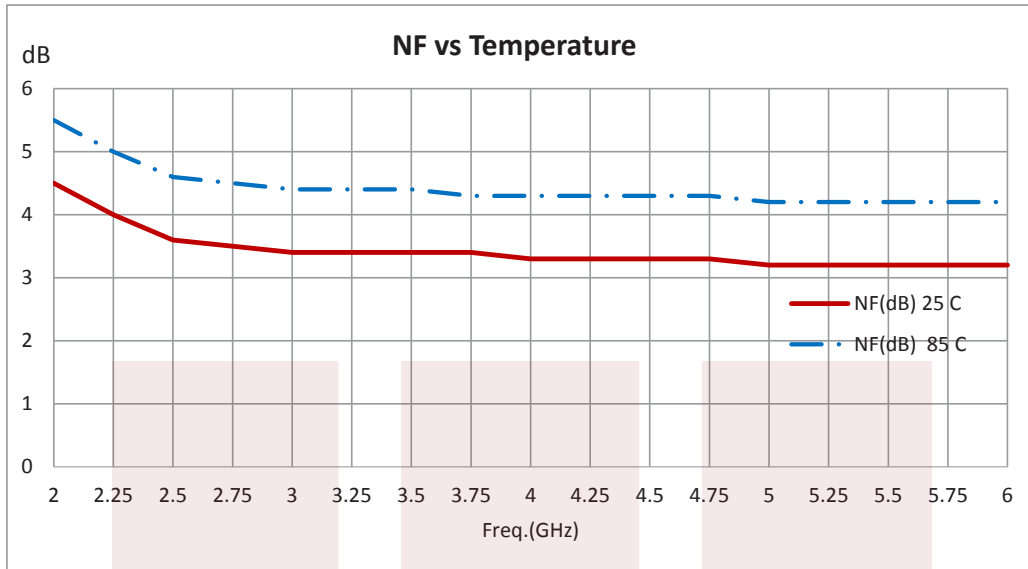
**Plotted and Other Data**

Notes:

- Values at 25 °C, sea level
- ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.
- Heat Sink Required for Proper Operation, Unit is cooled by conduction to heat sink.

**Typical Performance Data**



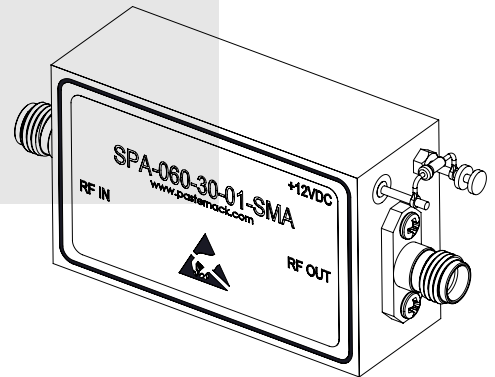
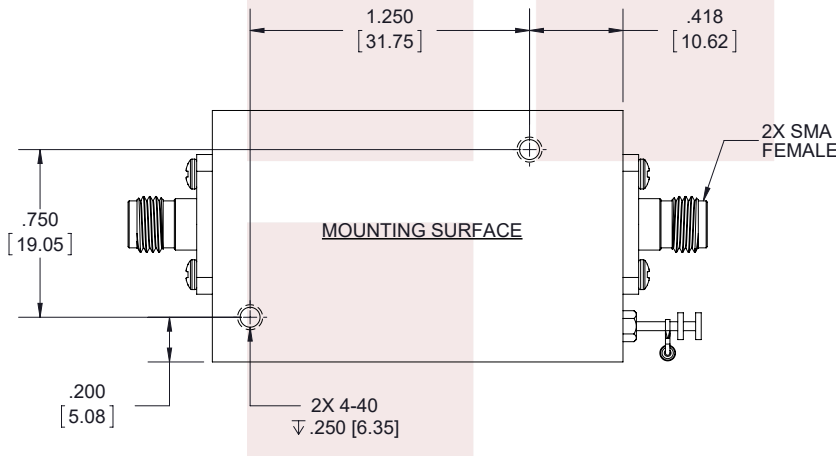
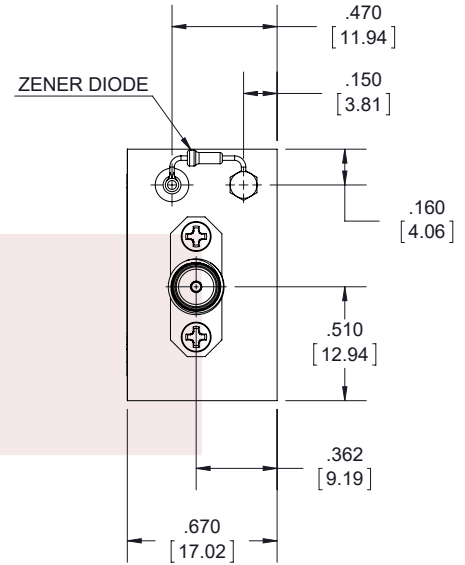
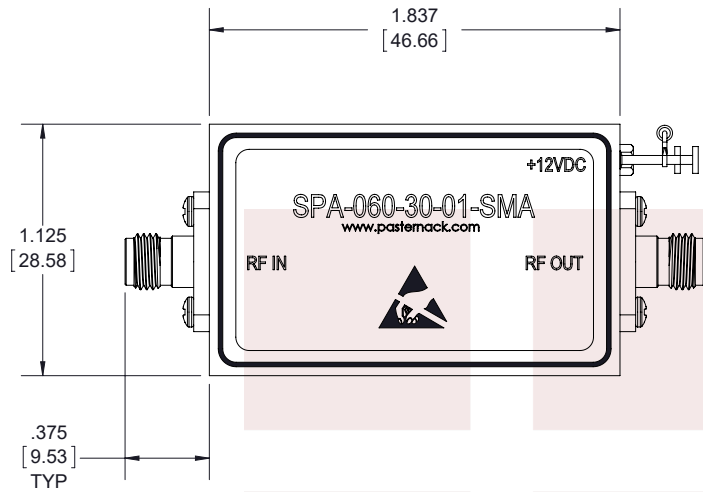


2 GHz to 6 GHz, Medium Power Broadband Amplifier with 1 Watt, 33 dB Gain and SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [2 GHz to 6 GHz, Medium Power Broadband Amplifier with 1 Watt, 33 dB Gain and SMA SPA-060-30-01-SMA](https://www.fairviewmicrowave.com/2-6-ghz-medium-power-broadband-amplifier-spa-060-30-01-sma-p.aspx)

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STANDARD TOLERANCES	
.X	±0.2
.XX	±0.01
.XXX	±0.005

\*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

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TITLE 2 GHz to 6 GHz, Medium Power Broadband Amplifier with 1 Watt, 33 dB Gain and SMA		DWG NO SPA-060-30-01-SMA		CAGE CODE 3FKR5	
CAD FILE	072617	SHEET	1 OF 1	SCALE	N/A
SIZE	A	9999			