

Medium Power Amplifier at 1 Watt P1dB Operating From 20 MHz to 3 GHz with 27 dB Gain, 39 dBm IP3 and SMA

SPA-030-27-01-SMA is a broadband multi-octave RF 1W power amplifier, operating in the 20 MHz to 3 GHz frequency range. The amplifier offers 30 dBm of P1dB and 27 dB small signal gain, with the excellent gain flatness of ± 1.0 dB max, along with an outstanding IP3 performance of 39 dBm. This performance is achieved through using hybrid MIC design and advanced GaAs PHEMT devices. This power amplifier requires only a single positive DC supply, unconditionally stable, and operates over the temperature range of -40°C to 75°C .

Electrical Specifications (TA = $+25^{\circ}\text{C}$, DC Voltage = 12Volts, DC Current = 220mA)

Description	Min	Typ	Max	Unit
Frequency Range	0.02		3	GHz
Small Signal Gain	25	27		dB
Gain Flatness		± 0.75	± 1	dB
P1dB	+29	+30		dBm
Output 3rd Intercept Point	+37	+39		dBm
Reverse Isolation		55		dB
Input VSWR		1.5:1	1.7:1	
Output VSWR		1.6:1	1.8:1	
Operating DC Voltage	11.5	12	13	Volts
Operating DC Current		220	380	mA
Operating Temperature Range	-40		+75	$^{\circ}\text{C}$

Absolute Maximum Rating

Parameter	Rating	Units
Source Voltage	+13	Volts
RF input Power	+17	dBm
Operating Temperature (base-plate)	-40 to +75	$^{\circ}\text{C}$
Storage Temperature	-55 to +125	$^{\circ}\text{C}$



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

Configuration

- Connector 1 SMA Female
- Connector 2 SMA Female

Compliance Certifications (visit 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:

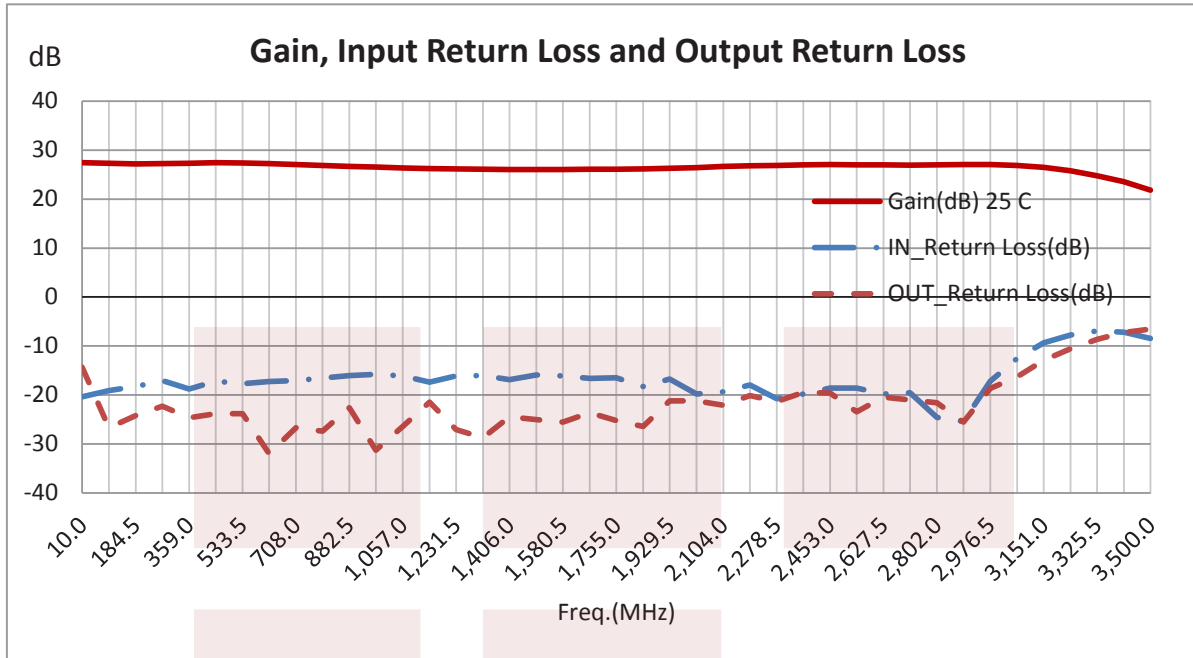
- 20 MHz to 3 GHz Frequency Range
- P1dB: 30 dBm
- Small Signal Gain: 27 dB
- Gain Flatness: ± 0.75 dB
- Gain Variation: ± 0.75 dB
- Output IP3: 39 dBm
- Reverse Isolation: 55 dB
- 50 Ohm Input and Output Matched
- -40 to $+75^{\circ}\text{C}$ Operating Temperature
- Unconditionally Stable
- Single DC Positive Supply
- Built-in DC Voltage Regulator

Applications:

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

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Power Data

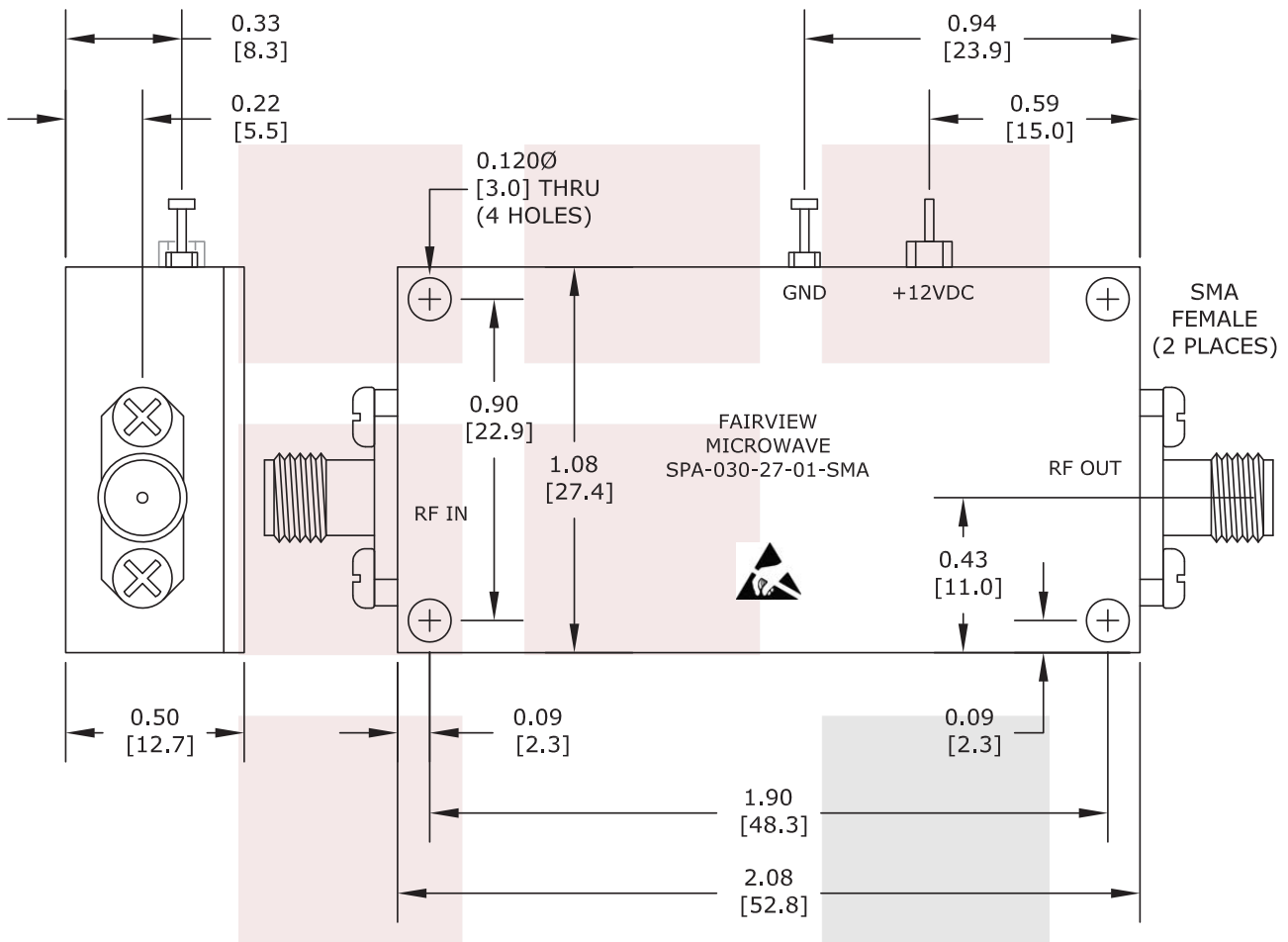


Medium Power Amplifier at 1 Watt P1dB Operating From 20 MHz to 3 GHz with 27 dB Gain, 39 dBm IP3 and SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Medium Power Amplifier at 1 Watt P1dB Operating From 20 MHz to 3 GHz with 27 dB Gain, 39 dBm IP3 and SMA SPA-030-27-01-SMA](#)

URL: <http://www.fairviewmicrowave.com/medium-power-amplifier-1watt-27db-spa-030-27-01-sma-p.aspx>

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

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 Medium Power Amplifier at 1 Watt P1dB Operating From 20 MHz to 3 GHz with 27 dB Gain, 39 dBm IP3 and SMA		DWG NO SPA-030-27-01-SMA		CAGE CODE 3FKR5	
CAD FILE	071414	SHEET	SCALE	N/A	SIZE A 2233