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Fairview Microwave
RF COMPONENTS ON DEMAND. Done!

SPA-030-27-01-SMA DATA SHEET

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, uncdionally stable,and operates over the temperature range of -40°C to 75°C.



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°C Operating Temperature
- Unconditionally Stable
- Single DC Positive Suppy
- 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

Electrical Specifications (TA = +25°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	°C

Absolute Maximum Rating

Parameter	Rating	Units
Source Voltage	+13	Volts
RF input Power	+17	dBm
Operating Temperature (base-plate)	-40 to +75	°C
Storage Temperature	-55 to +125	°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.

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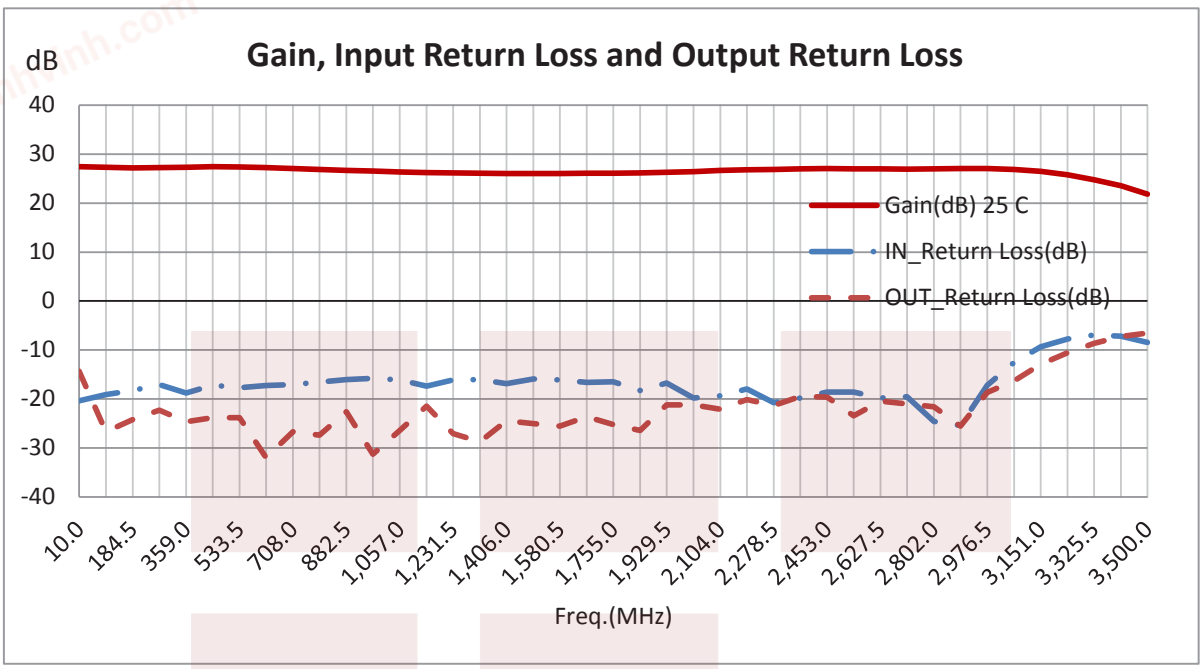
Power Data



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

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.

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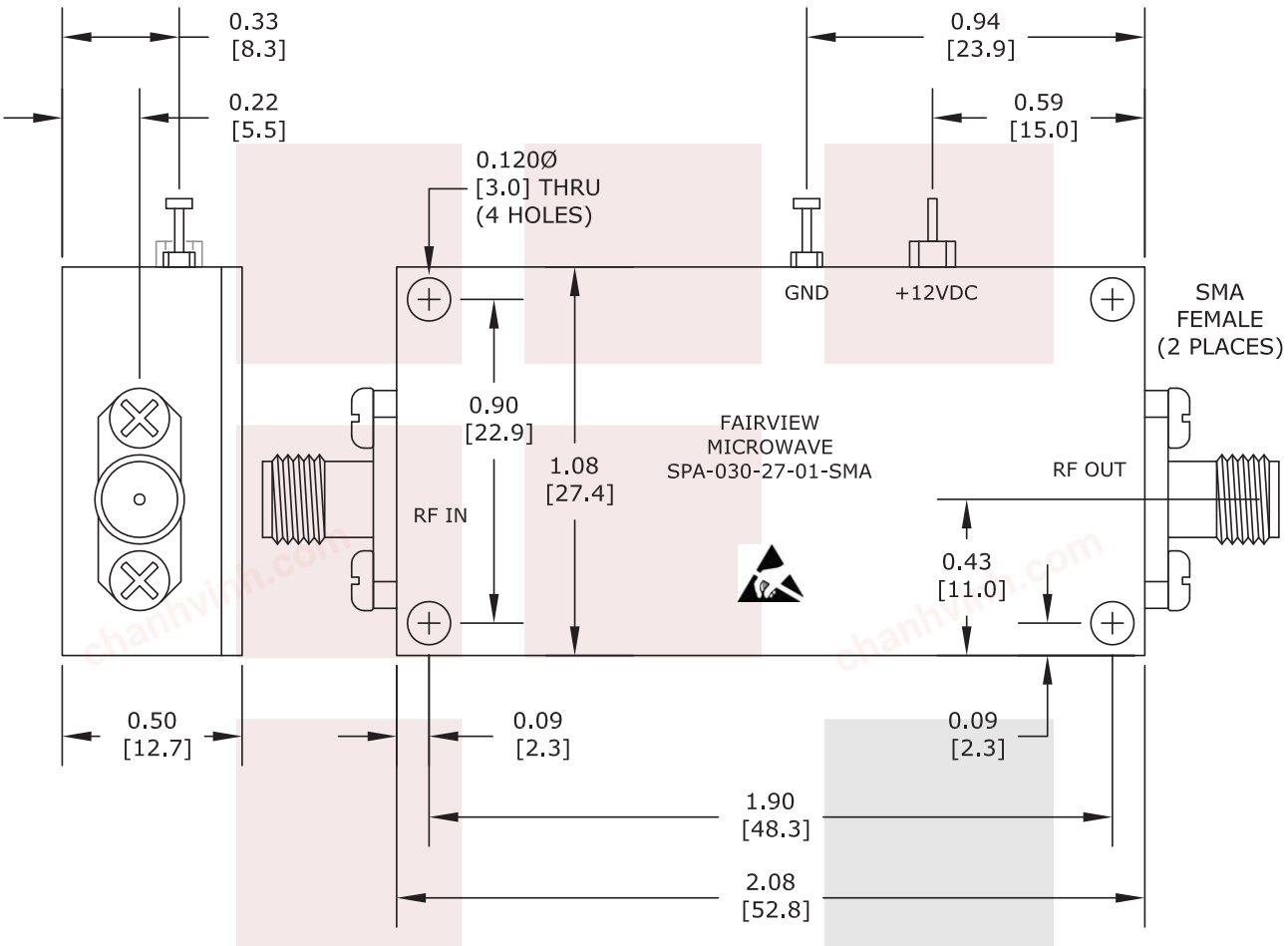
SPA-030-27-01-SMA
DATA SHEET



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

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