

**47 dB Gain High Power High Gain Amplifier at
20 Watt P1dB Operating From 3.1 GHz to 3.5 GHz
with SMA**

SPA-035-43-20-SMA is a 20W S-band high gain, high power coaxial amplifier operating in the 3.1 to 3.5 GHz frequency range. The amplifier offers 42 dB minimum of saturated output power and high 47 dB typical small signal gain with the gain flatness of ± 1.5 dB. This excellent technical performance is achieved through the use of hybrid MIC design and advanced GaAs PHEMT devices. The high power amplifier 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 -10°C and +50°C.

Electrical Specifications (TA = +25°C , DC Voltage = 12Volts , DC Current = 9,000mA)

Description	Min	Typ	Max	Unit
Frequency Range	3.1		3.5	GHz
Small Signal Gain	43	47		dB
Gain Flatness			± 1.5	dB
Output Power @ Pin = -3dBm	42			dBm
P1dB	+42	+43		dBm
Noise Figure			3.5	dB
Input VSWR		1.7:1	2:1	
Output VSWR		1.7:1	2:1	
Operating DC Voltage		12		Volts
Operating DC Current		9,000		mA
Operating Temperature Range	-10		+50	°C
Fault Indication	RF Input > -3dBm; RF Output < 40dBm			

Absolute Maximum Rating

Parameter	Rating	Units
Source Voltage	+15	Volts
RF input Power	+17	dBm
Operating Temperature (base-plate)	-10 to +50	°C
Storage Temperature	-55 to +85	°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



Features:

- 3.1 GHz to 3.5 GHz Frequency Range
- Saturated Output Power: 40 dBm min
- Small Signal Gain: 45 dB typical
- Gain Flatness: ± 1.5 dB max
- Noise Figure: 3.5 dB
- 50 Ohms Input and Output Matched
- Unconditionally Stable
- Regulated Supply & Bias Sequencing
- Hermetically Sealed Module
- Overvoltage External Protection for Easy Repair

Applications:

- S-band Military Radar
- Commercial Air Traffic Control
- Radar & Communication Systems
- High Gain Driver Power Amplifier
- High Gain Output Power Amplifier

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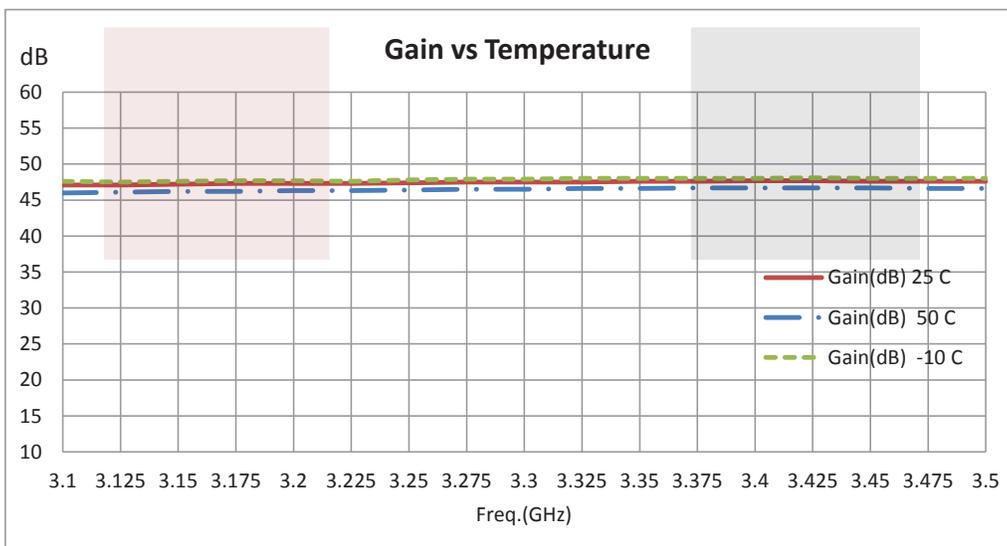
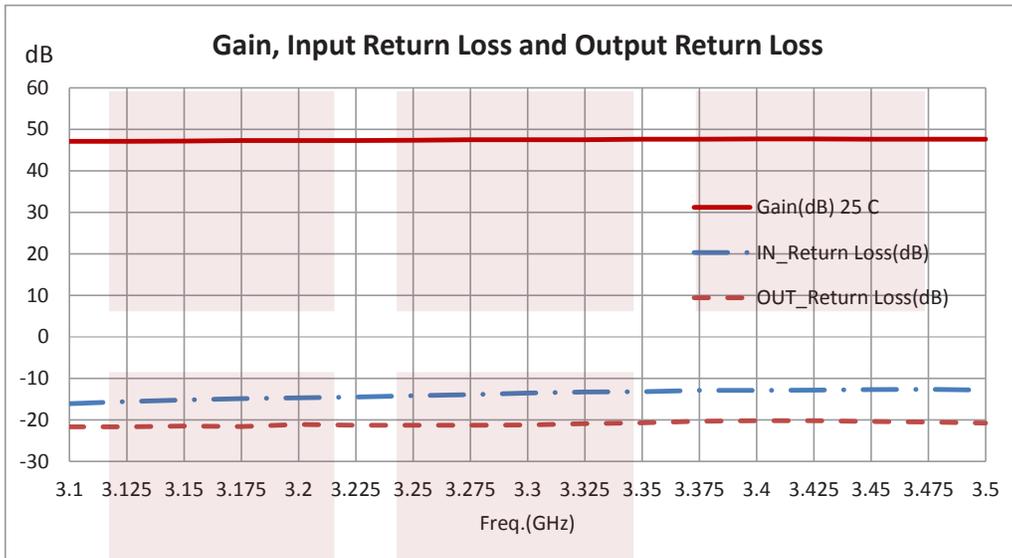
Compliance Certifications (visit www.FairviewMicrowave.com for current document)

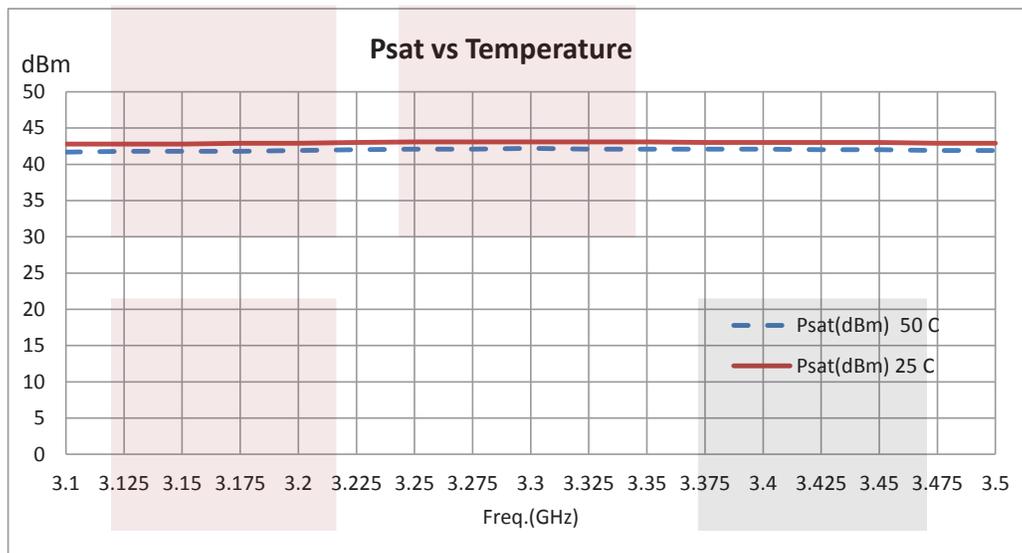
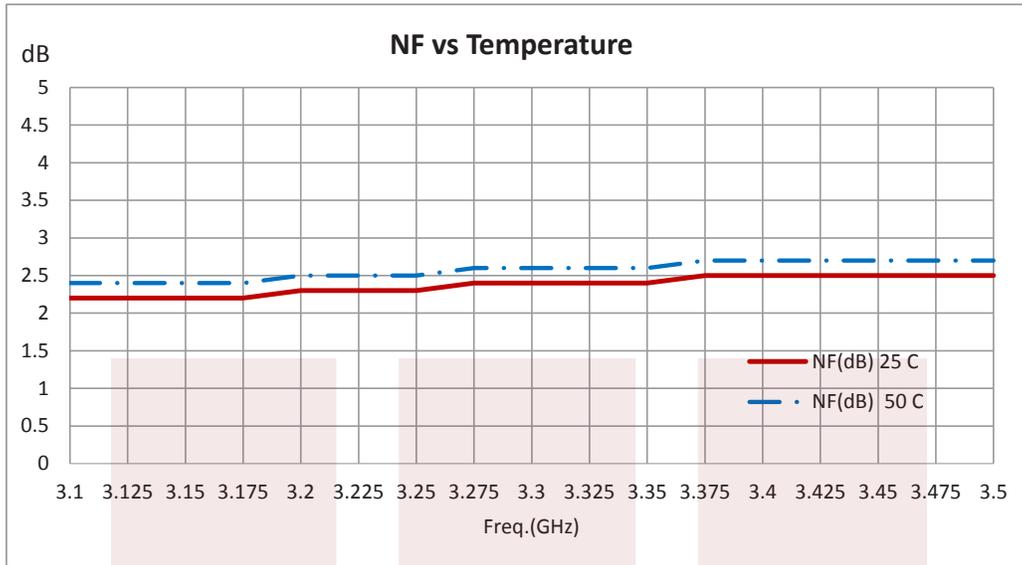
Plotted and Other Data

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.

Power Data



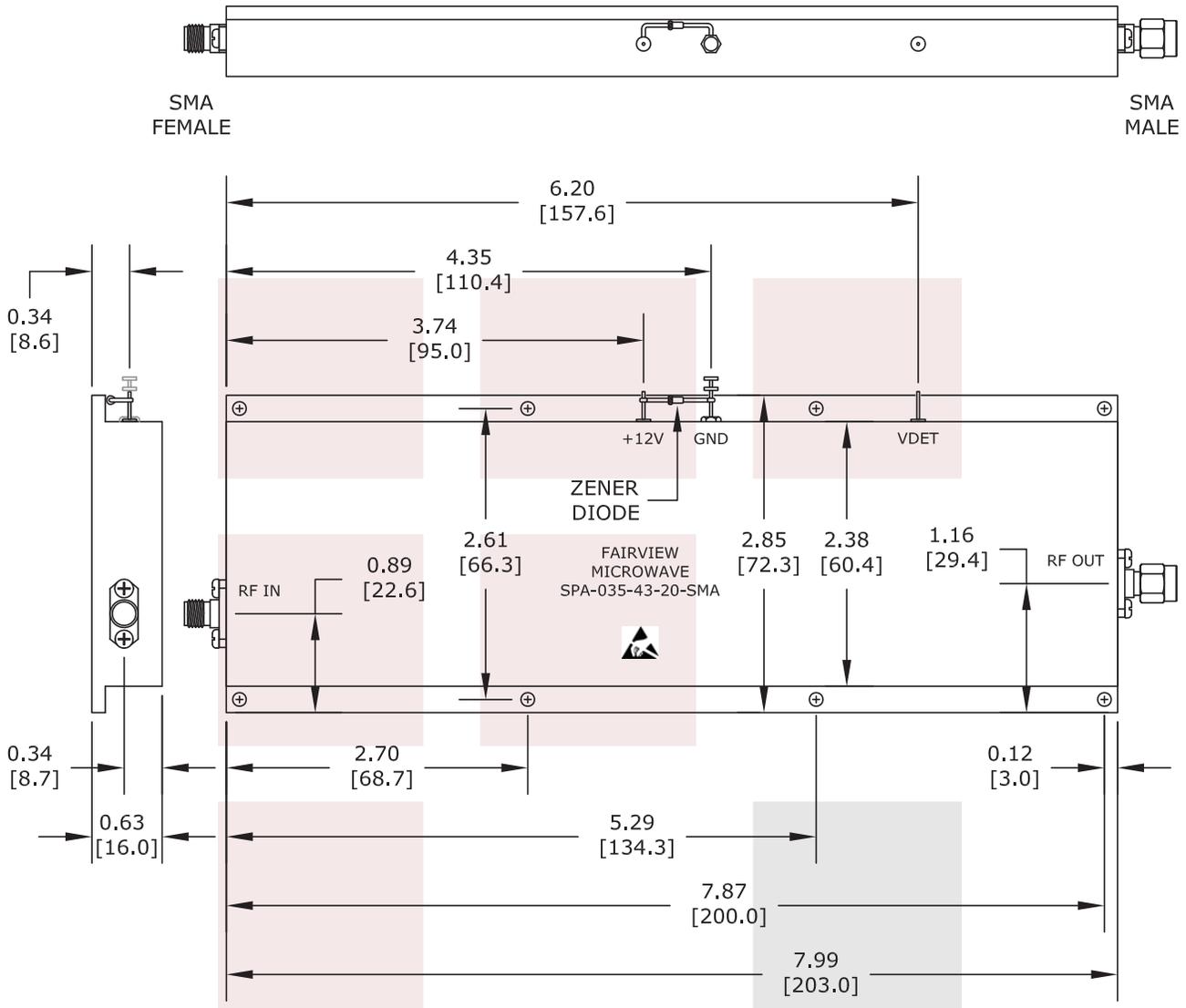


47 dB Gain High Power High Gain Amplifier at 20 Watt P1dB Operating From 3.1 GHz to 3.5 GHz with SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [47 dB Gain High Power High Gain Amplifier at 20 Watt P1dB Operating From 3.1 GHz to 3.5 GHz with SMA SPA-035-43-20-SMA](#)

URL: <http://www.fairviewmicrowave.com/47db-high-power-high-gain-amplifier-20watt-spa-035-43-20-sma-p.asp>

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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 47 dB Gain High Power High Gain Amplifier at 20 Watt P1dB Operating From 3.1 GHz to 3.5 GHz with SMA		DWG NO SPA-035-43-20-SMA		CAGE CODE 3FKR5	
CAD FILE	050914	SHEET	SCALE	N/A	SIZE A 2233