

41 dB Gain Medium Power High Gain Amplifier at 1 Watt Operating From 8 GHz to 12 GHz with SMA

SPA-120-41-01-SMA is a 1 W X-band high gain coaxial power amplifier in the 8 to 12 GHz frequency range. The amplifier offers 30 dBm of P1db (min) and 41 dB (min) small signal gain with the excellent gain flatness of ± 1.0 dB. This performance is achieved through using 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 -30°C and +70°C.

Electrical Specifications (TA = +25°C , DC Voltage = 12Volts , DC Current = 1,200mA)

Description	Min	Typ	Max	Unit
Frequency Range	8		12	GHz
Small Signal Gain	41			dB
Gain Flatness		± 1	± 1.5	dB
Psat	+31			dBm
P1dB	+30			dBm
Noise Figure		3.5	4	dB
Input VSWR			2:1	
Output VSWR			2:1	
Operating DC Voltage		12		Volts
Operating DC Current		1,200	1,300	mA
Operating Temperature Range	-30		+70	°C

Absolute Maximum Rating

Parameter	Rating	Units
Source Voltage	+15	Volts
RF input Power	+17	dBm
Operating Temperature (base-plate)	-30 to +70	°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

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

RoHS Compliant Yes



Features:

- 8.0 GHz to 12 GHz Frequency Range
- High P1dB Output Power: 30 dBm
- Small Signal Gain: 41 dB min
- Gain Flatness: ± 1 dB
- Noise Figure: 3.5 dB
- 50 Ohm input and output matched
- -30 to +70°C Operating Temperature
- Unconditionally Stable
- Regulated Supply & Bias Sequencing
- Hermetically Sealed Module
- Overvoltage External Protection for Easy Repair

Applications:

- Telecom Infrastructure
- Test Instrumentation
- Fixed Microwave Backhaul
- Military & Space
- Radar Systems
- Communication Systems
- Microwave Radio Systems
- Satellite Communication
- Commercial Avionics
- Driver Amplifier
- High Power Output Amplifier

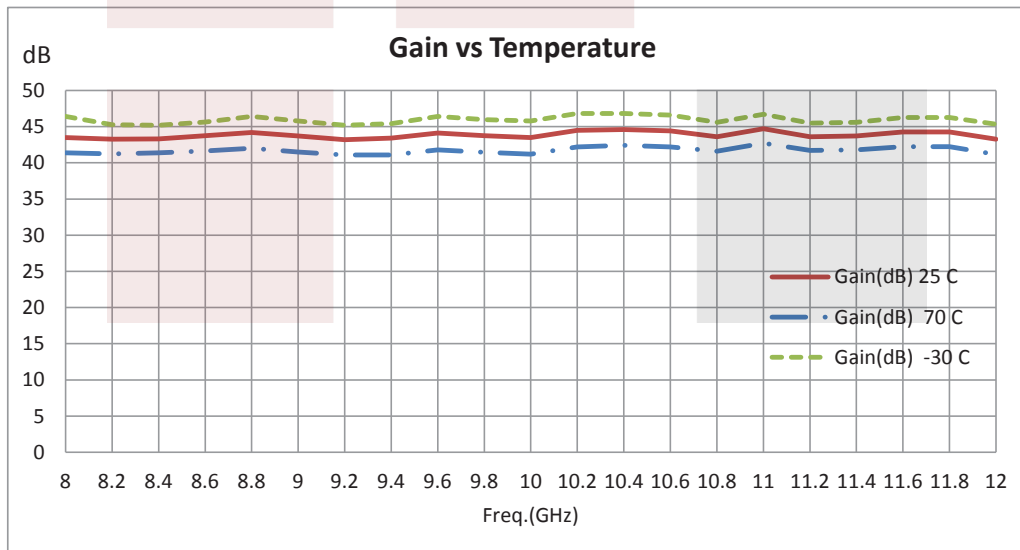
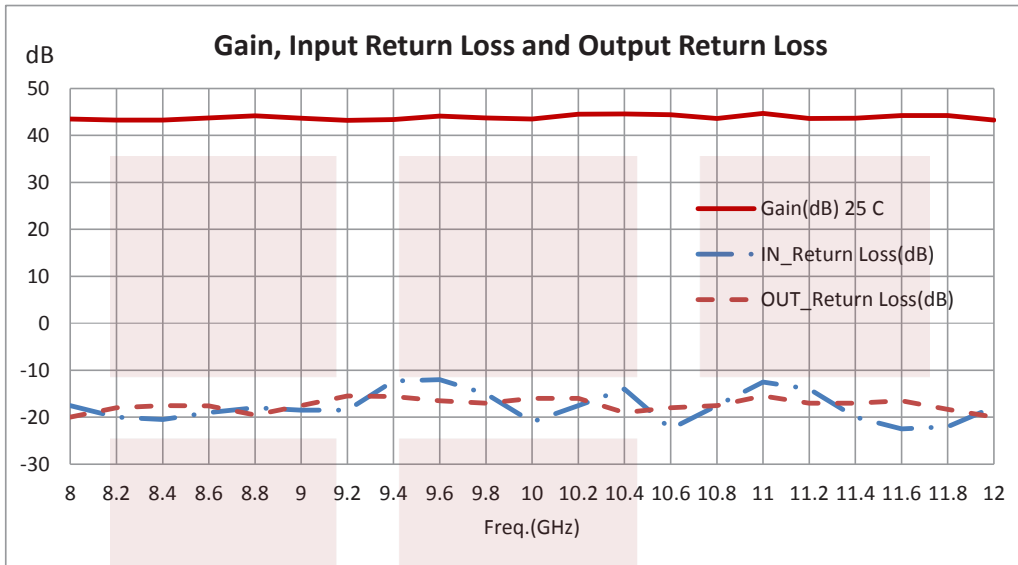
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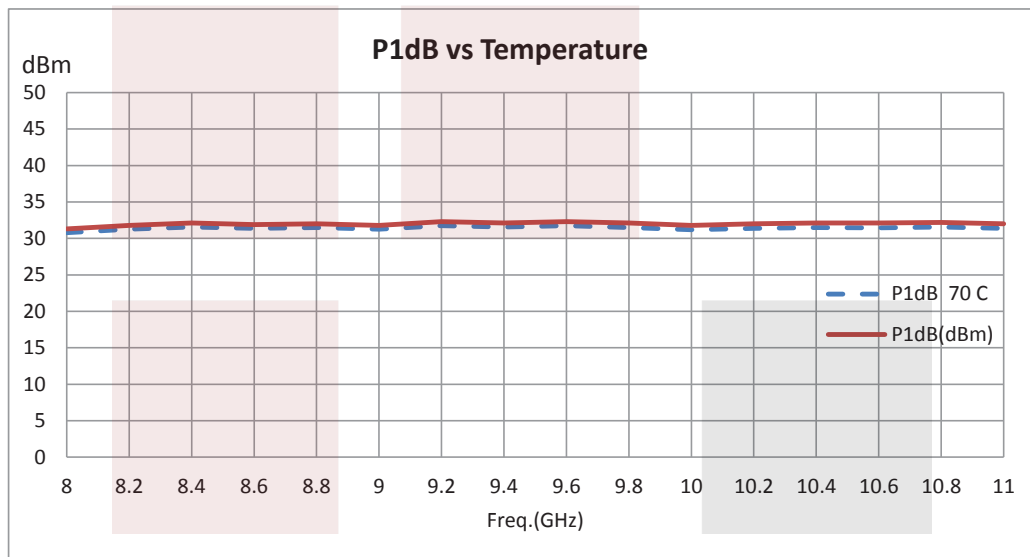
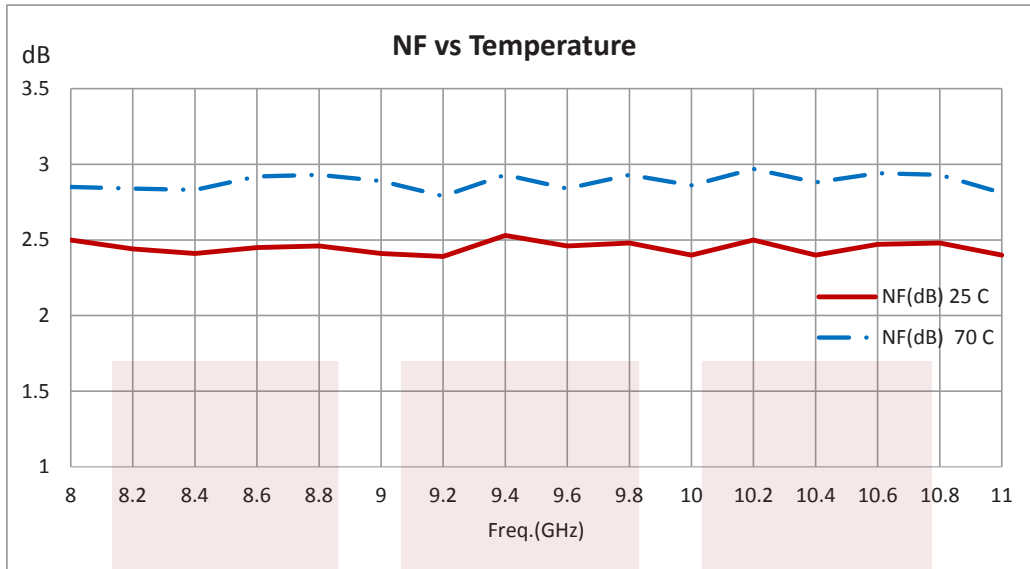
Plotted and Other Data

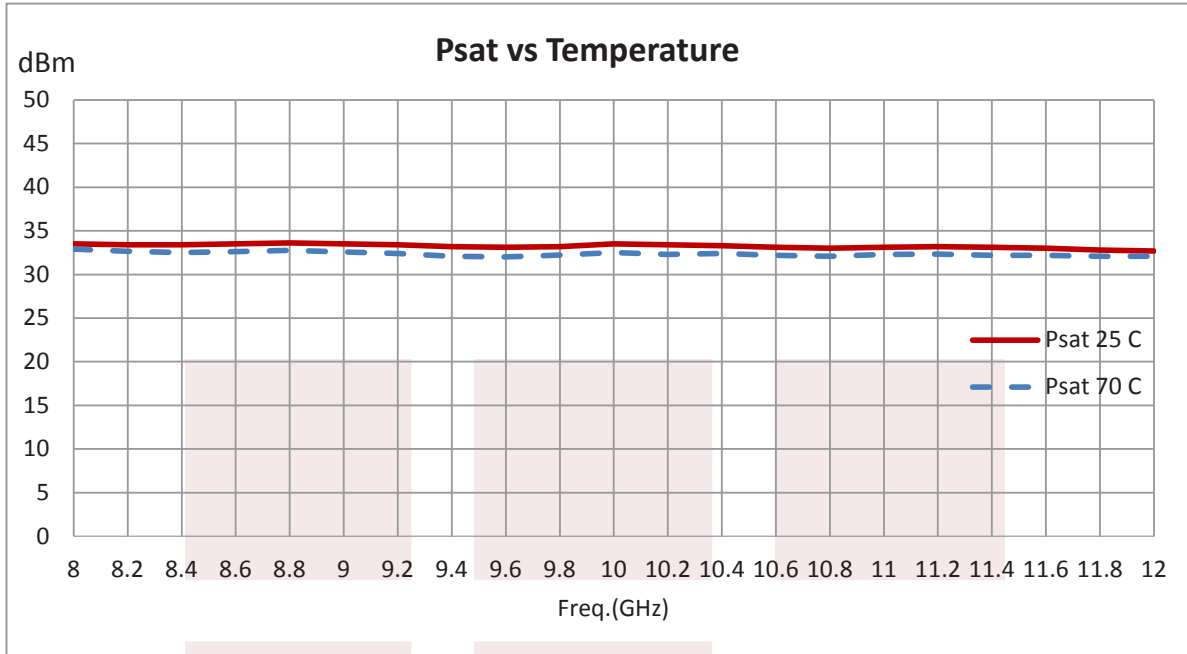
Notes:

- 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





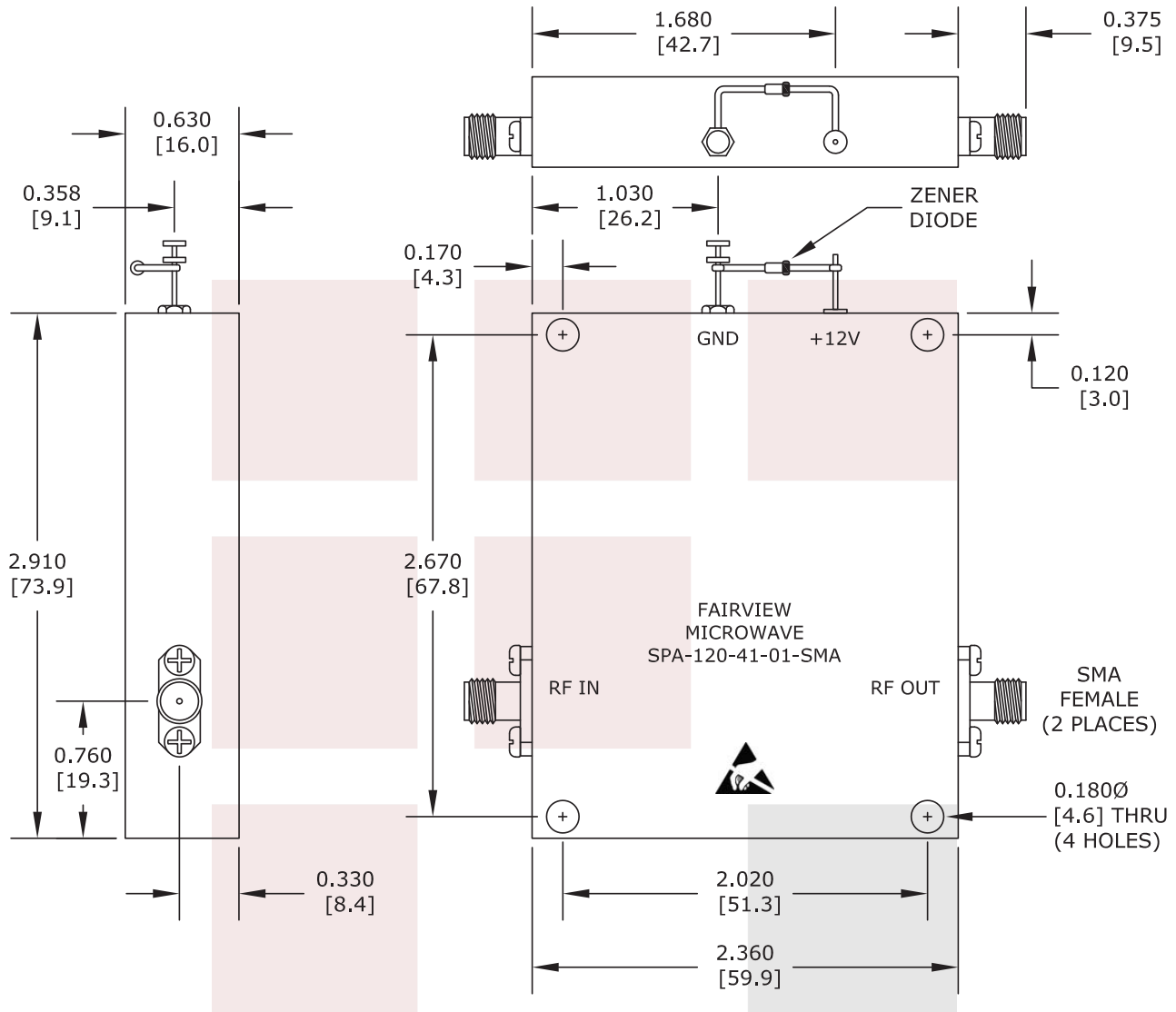


41 dB Gain Medium Power High Gain Amplifier at 1 Watt Operating From 8 GHz to 12 GHz with SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [41 dB Gain Medium Power High Gain Amplifier at 1 Watt Operating From 8 GHz to 12 GHz with SMA SPA-120-41-01-SMA](#)

URL: <http://www.fairviewmicrowave.com/41db-medium-power-high-gain-amplifier-1watt-spa-120-41-01-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 41 dB Gain Medium Power High Gain Amplifier at 1 Watt Operating From 8 GHz to 12 GHz with SMA		DWG NO SPA-120-41-01-SMA	CAGE CODE 3FKR5		
CAD FILE 050914	SHEET	SCALE N/A	SIZE A	2233	