

6 GHz to 12 GHz, Medium Power Broadband Amplifier with 1 Watt, 38 dB Gain and SMA

SPA-120-30-01-SMA is a 1W wideband coaxial power amplifier operating in the 6 to 12 GHz frequency range. The amplifier offers 30 dBm min of P1db and high 34 dB minimal small signal gain with the excellent gain flatness of ± 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.

Electrical Specifications (TA = +25°C, DC Voltage = 15Volts, DC Current = 1,300mA)

Description	Min	Typ	Max	Unit
Frequency Range	6		12	GHz
Gain	36	38		dB
Small Signal Gain at OTR*	34			dB
Gain Flatness			± 1	dB
P1dB	+30			dBm
Output at 1 dB Compression Point at OTR*	+29			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	11		15	Volts
Operating DC Current		1,300		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.



Features:

- 6 GHz to 12 GHz Frequency Range
- P1dB: 30 dBm min
- High Small Signal Gain: 38 dB typical
- Gain Flatness: ± 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

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

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Configuration

- Connector 1 SMA Female
- Connector 2 SMA Female

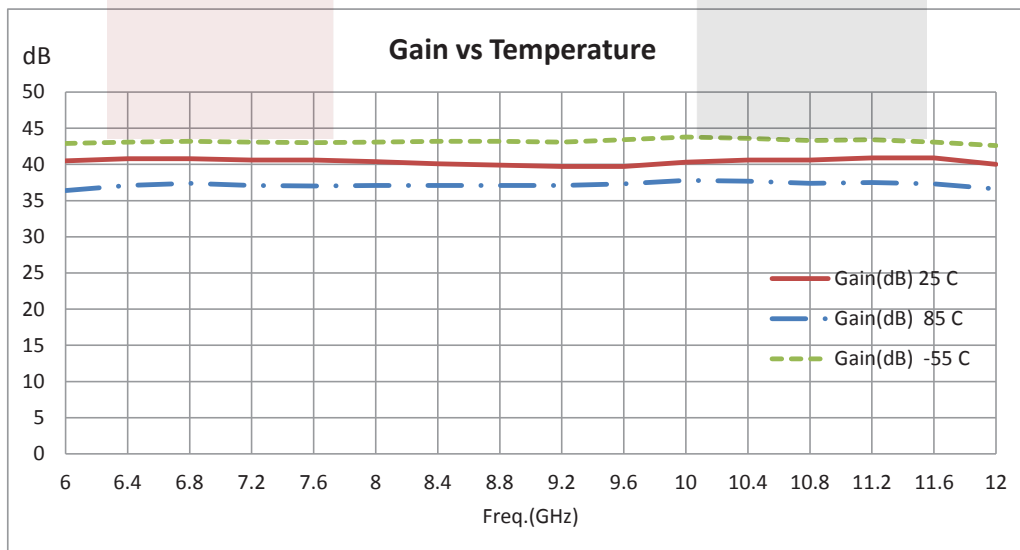
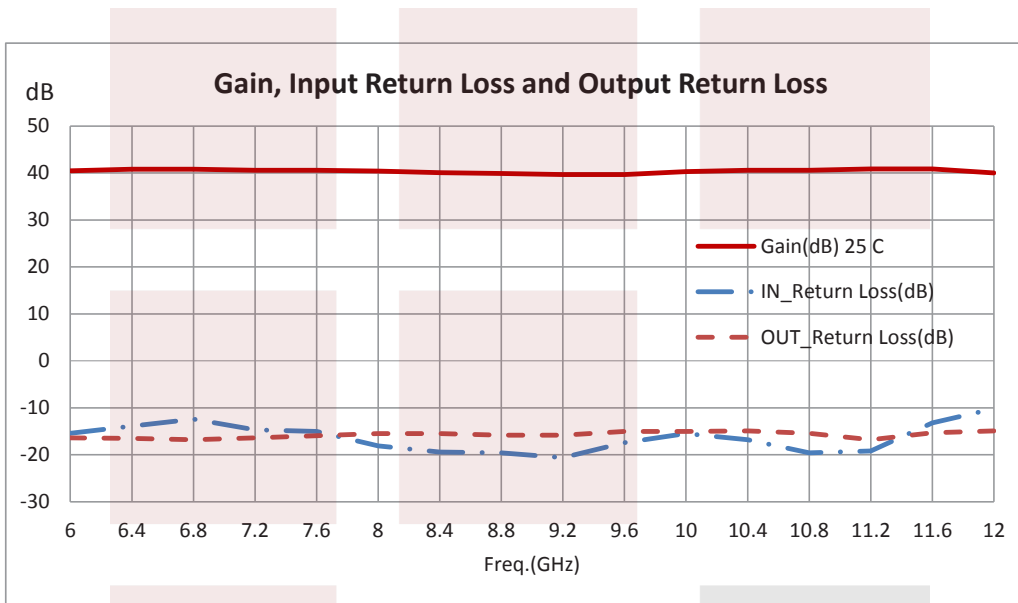
Compliance Certifications (visit www.FairviewMicrowave.com for current document)

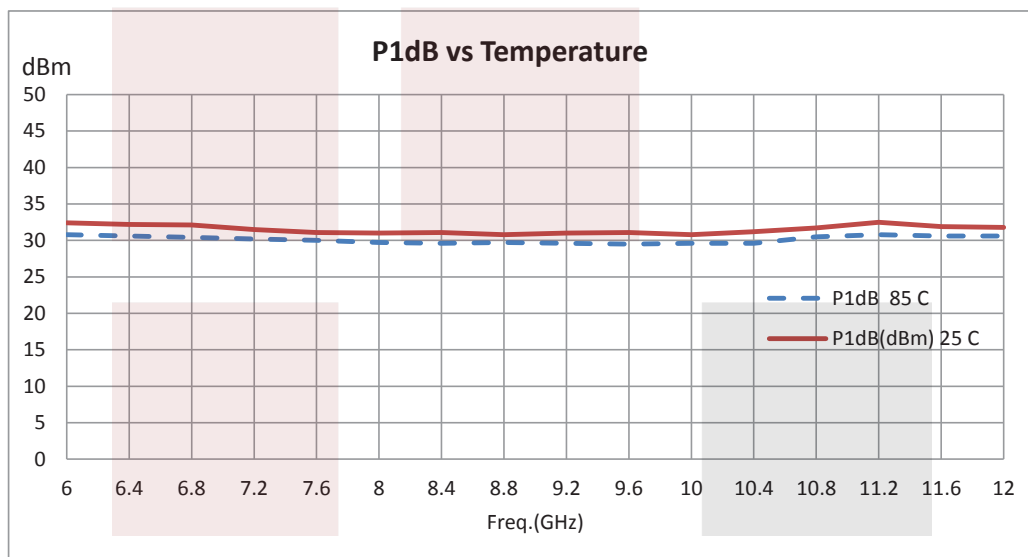
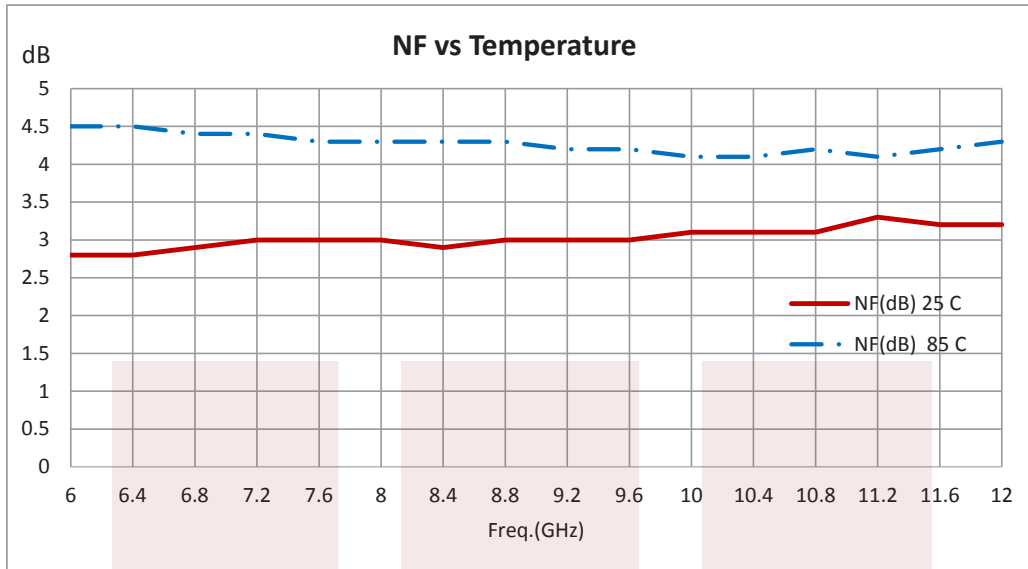
Plotted and Other Data

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.

Power Data



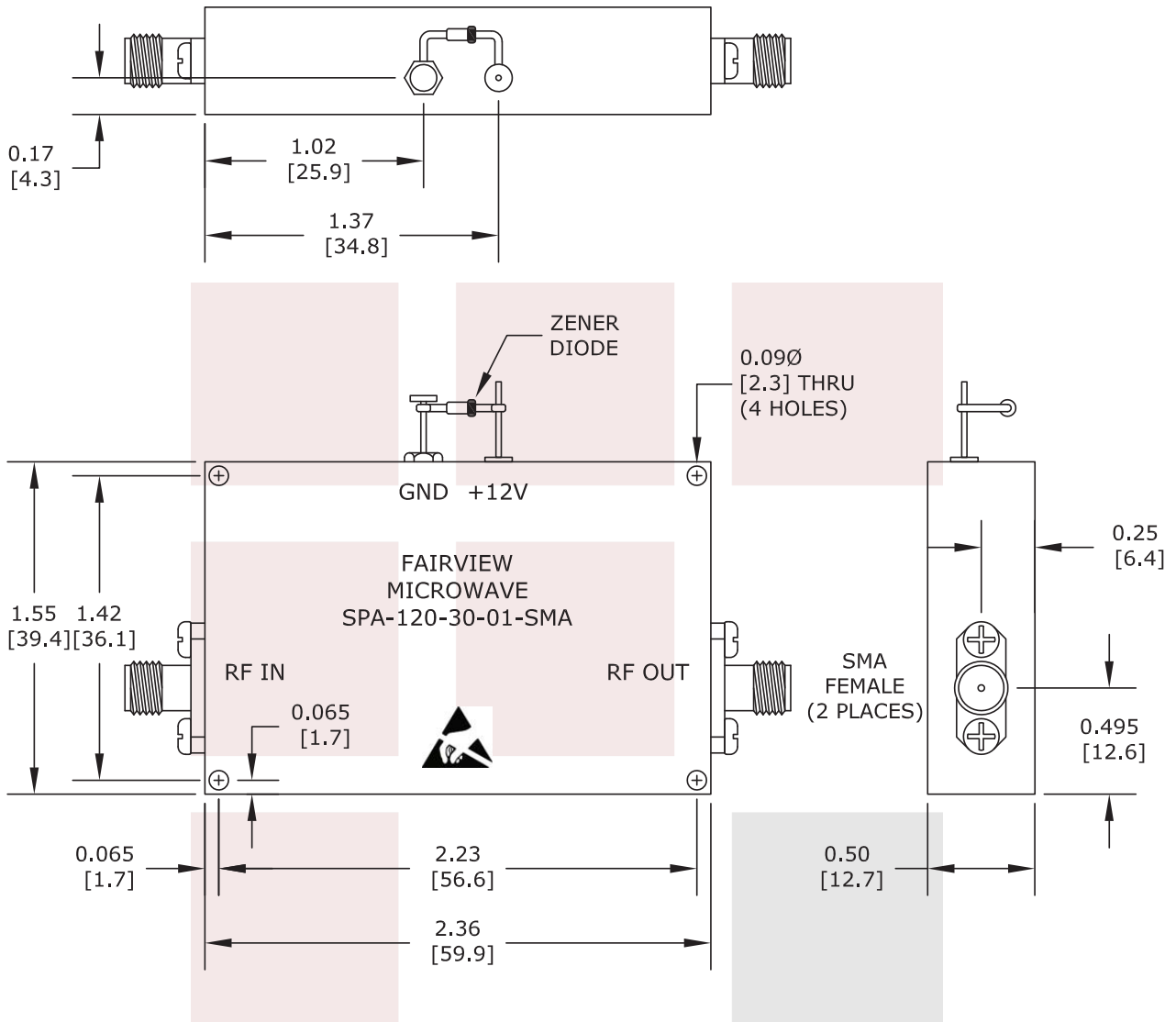


6 GHz to 12 GHz, Medium Power Broadband Amplifier with 1 Watt, 38 dB Gain and SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [6 GHz to 12 GHz, Medium Power Broadband Amplifier with 1 Watt, 38 dB Gain and SMA SPA-120-30-01-SMA](http://www.fairviewmicrowave.com/6-12-ghz-medium-power-broadband-amplifier-spa-120-30-01-sma-p.aspx)

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

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TITLE 6 GHz to 12 GHz, Medium Power Broadband Amplifier with 1 Watt, 38 dB Gain and SMA		DWG NO SPA-120-30-01-SMA		CAGE CODE 3FKR5	
CAD FILE	050914	SHEET	SCALE	N/A	SIZE A 2233