

Medium Power Amplifier at 1 Watt Operating From 8.5 GHz to 11 GHz with 30 dB Gain, 38 dBm IP3 and SMA

SPA-110-30-01-SMA is a 1 W X-band coaxial power amplifier designed for high linearity applications in the 8.5 to 11 GHz frequency range. The amplifier offers 26 dB small signal gain with the excellent gain flatness of ± 0.75 dB and the IP3 performance of 36 dBm. High power devices utilized in the amplifier provide excellent linearity, high gain and wide dynamic range. High efficiency is achieved through using hybrid MIC design and advanced GaAs PHEMT devices. The amplifier requires a +15V 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 +60°C.

Electrical Specifications (TA = +25°C , DC Voltage = 15Volts , DC Current = 900mA)

Description	Min	Typ	Max	Unit
Frequency Range	8.5		11	GHz
Small Signal Gain	30			dB
Gain Flatness		± 0.5	± 1	dB
P1dB	+29	+30		dBm
Output 3rd Intercept Point	+37	+38		dBm
Noise Figure		3	4	dB
Input VSWR		1.7:1	2:1	
Output VSWR		1.7:1	2:1	
Operating DC Voltage		15		Volts
Operating DC Current		900	1,100	mA
Operating Temperature Range	-30		+60	°C

Absolute Maximum Rating

Parameter	Rating	Units
Source Voltage	+15	Volts
RF input Power	+17	dBm
Operating Temperature (base-plate)	-30 to +60	°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:

- 8.5 GHz to 11 GHz Frequency Range
- High P1dB Output Power: 30 dBm
- Small Signal Gain: 30 dB min
- Gain Flatness: ± 0.5 dB
- High Output IP3: 38 dBm
- Noise Figure: 3 dB
- 50 Ohm Input and Output Matched
- -30 to +60°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

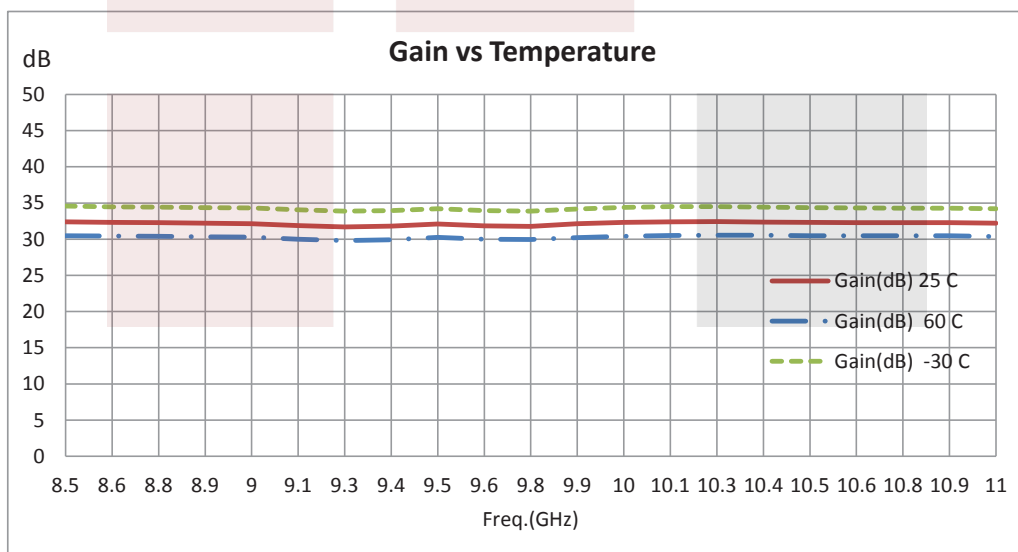
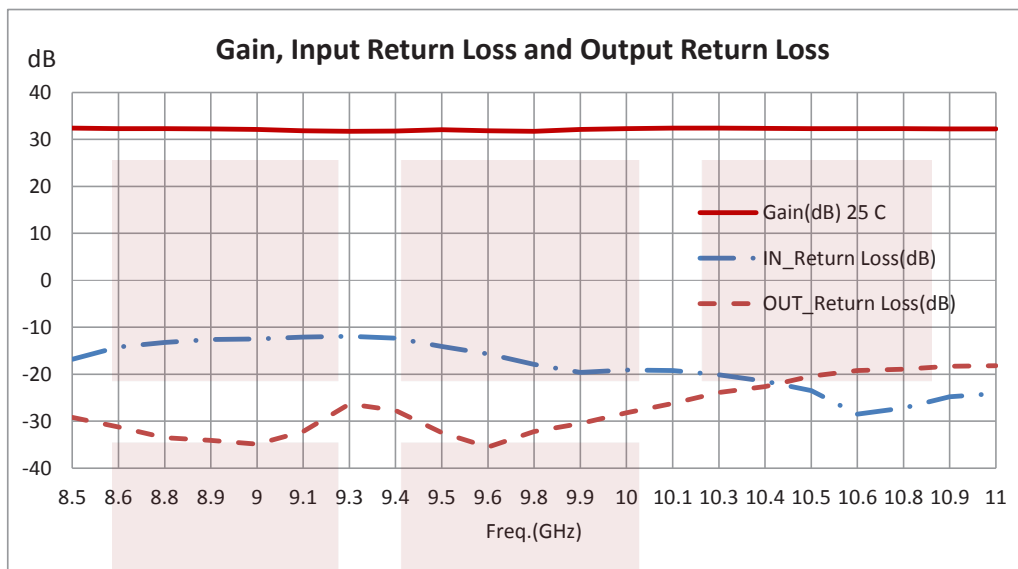
Fairview Microwave
1130 Junction Dr. #100
Allen, TX 75013
Tel: 1-800-715-4396 / (972) 649-6678
Fax: (972) 649-6689
www.fairviewmicrowave.com
sales@fairviewmicrowave.com

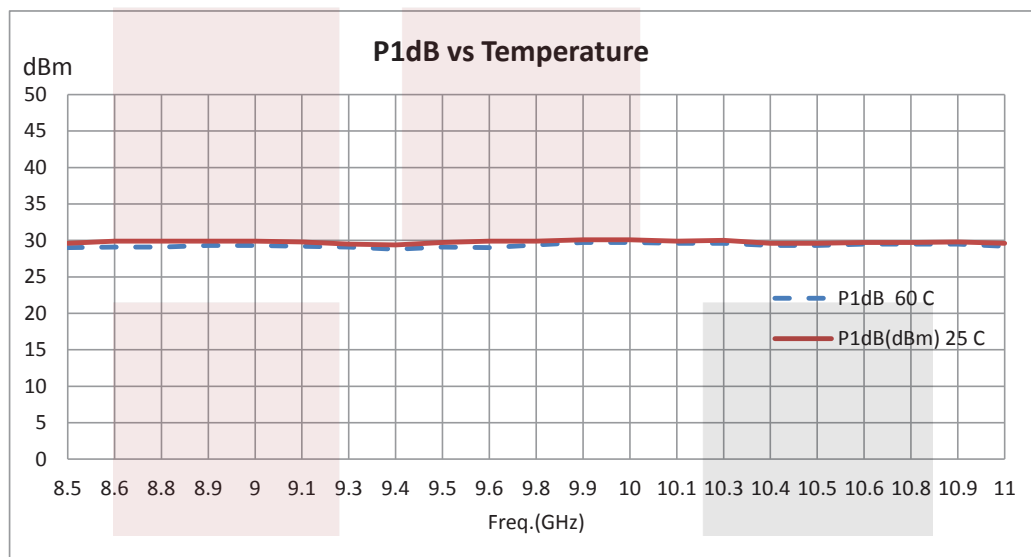
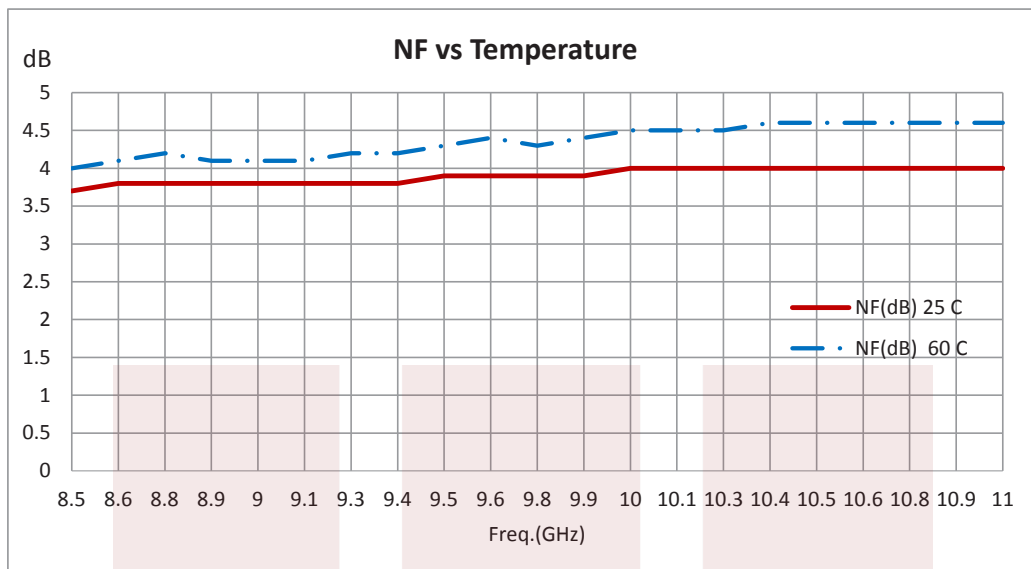
Plotted and Other Data

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



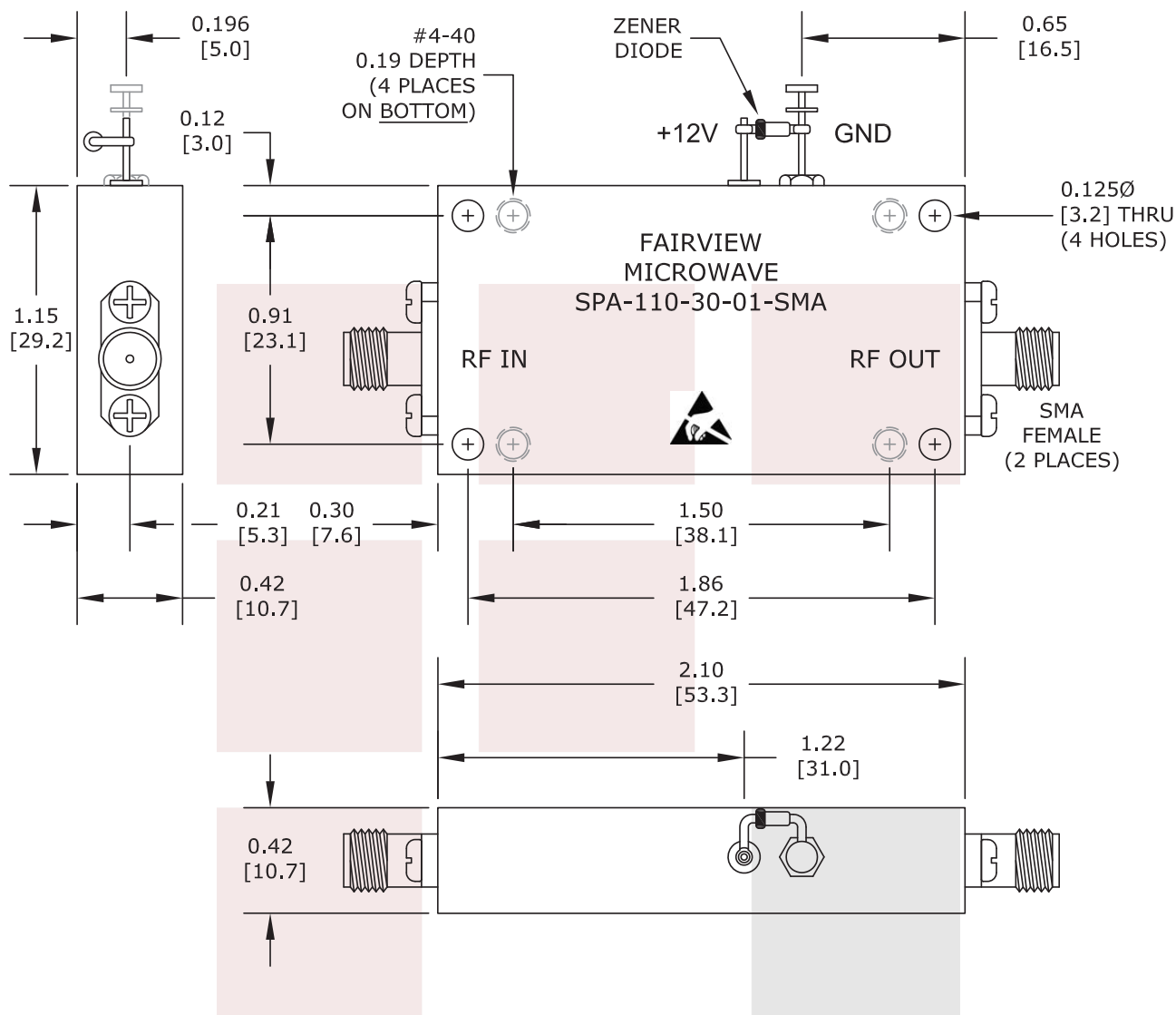


Medium Power Amplifier at 1 Watt Operating From 8.5 GHz to 11 GHz with 30 dB Gain, 38 dBm IP3 and SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Medium Power Amplifier at 1 Watt Operating From 8.5 GHz to 11 GHz with 30 dB Gain, 38 dBm IP3 and SMA SPA-110-30-01-SMA](http://www.fairviewmicrowave.com/medium-power-amplifier-1watt-30db-spa-110-30-01-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 Medium Power Amplifier at 1 Watt Operating From 8.5 GHz to 11 GHz with 30 dB Gain, 38 dBm IP3 and SMA		DWG NO SPA-110-30-01-SMA		CAGE CODE 3FKR5	
CAD FILE	050914	SHEET	SCALE	N/A	SIZE A 2233