

High Power Amplifier at 5 Watt P1dB Operating From 1.7 GHz to 2.5 GHz with 11 dB Gain and SMA

SPA-025-11-01-SMA is a GaAs amplifier module designed for linear applications including COFDM video and UAV/UGV data links. The SPA-025-11-01-SMA can provide over 5 Watts of analog FM power and operates in the 1.7 to 2.5 GHz frequency range. The amplifier offers 1 Watt of Linear COFDM of output power and 11 dB typical small signal gain with the gain flatness of ± 0.5 dB typical. This excellent technical performance is achieved through the use of hybrid MIC design and advanced GaAs PHEMT devices. The driver amplifier requires typically a +12V DC power supply, is unconditionally stable and includes built-in voltage regulation, bias sequencing, and reverse bias protection, and thermal protection for added reliability. The amplifier operates over the temperature range of -10°C and $+80^{\circ}\text{C}$.



Electrical Specifications (TA = $+25^{\circ}\text{C}$, DC Voltage = 12Volts , DC Current = 800mA)

Description	Min	Typ	Max	Unit
Frequency Range	1.7		2.5	GHz
Small Signal Gain		11		dB
Gain Flatness		± 0.5		dB
P1dB		+37		dBm
Input Return Loss		-15	-14	dB
Operating DC Voltage	9	12	14	Volts
Operating DC Current			800	mA
Operating Temperature Range	-10		+80	$^{\circ}\text{C}$

Configuration

- Connector 1
- Connector 2

SMA Female
 SMA Female

Environmental Specifications

Temperature

Operating Range
 Storage Range

-10 to $+80$ deg C
 -65 to $+150$ deg C

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.

Features:

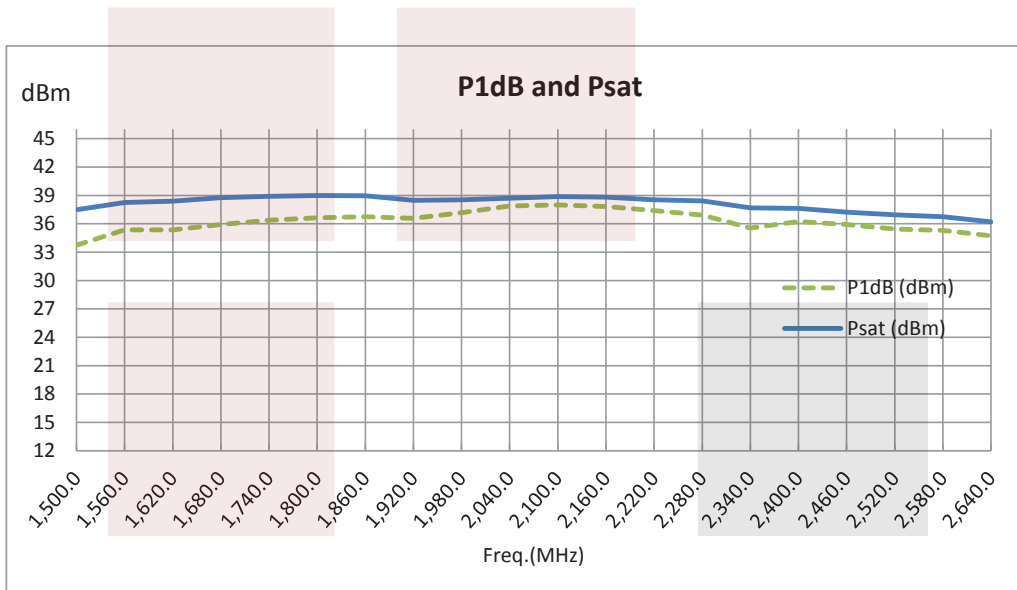
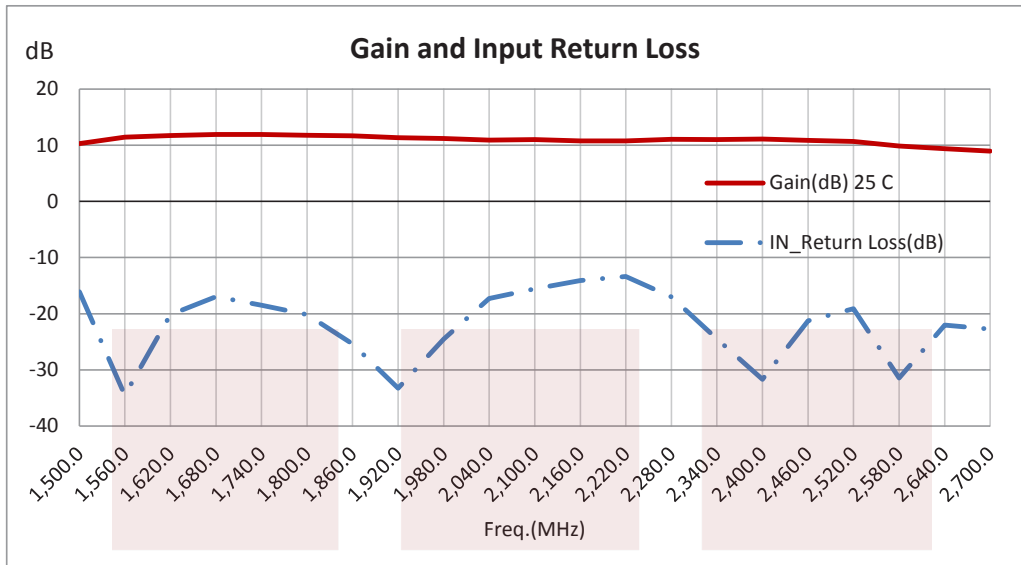
- 1.7 GHz to 2.5 GHz Frequency Range
- P1dB 5 Watts typ
- 1 Watt Linear COFDM Power Output
- Small Signal Gain: 11 dB typ
- Gain Flatness: ± 0.5 typical
- 50 Ohms Input and Output Matched
- Unconditionally Stable
- Regulated Supply & Bias Sequencing
- Overvoltage Protection
- Thermal Protection

Applications:

- L-band Military Radar
- Commercial Air Traffic Control
- Weather & Earth Observation Satellites
- Radar & Communication Systems
- High Gain Driver Power Amplifier
- High Gain Output Power Amplifier

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Typical Performance Data

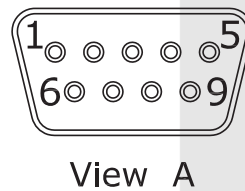
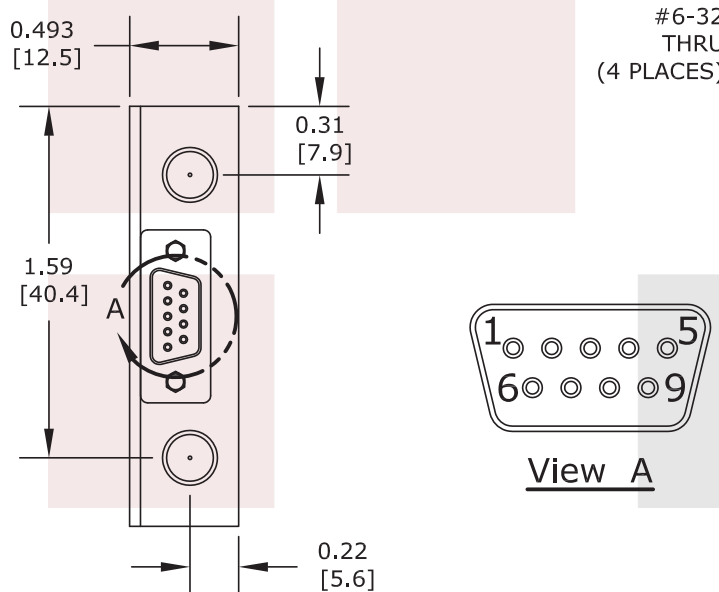
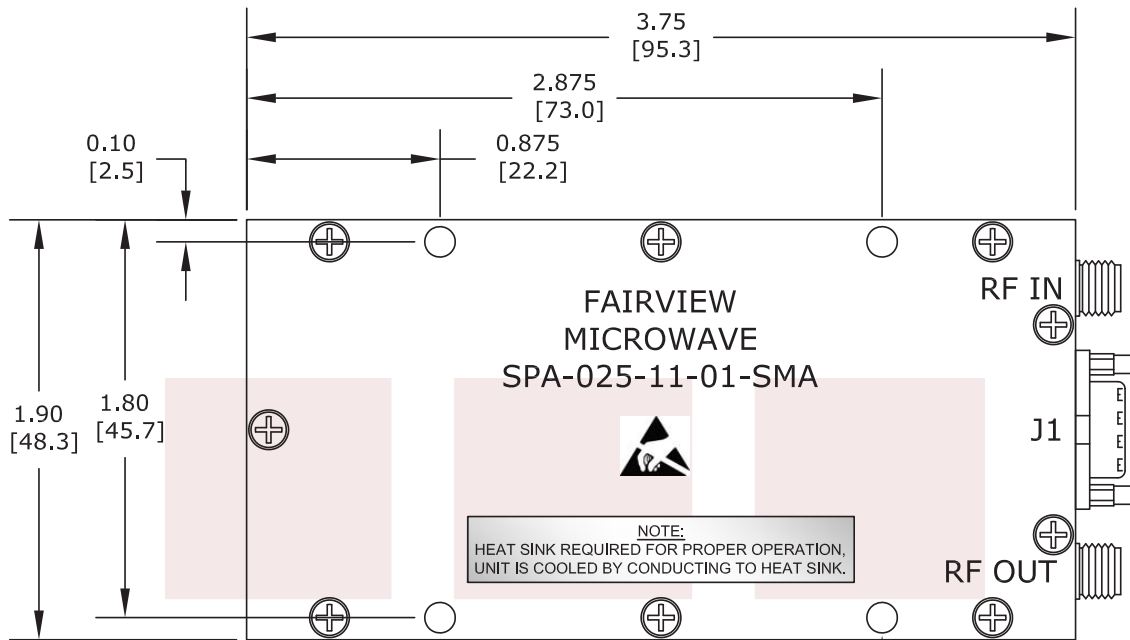


High Power Amplifier at 5 Watt P1dB Operating From 1.7 GHz to 2.5 GHz with 11 dB Gain and SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [High Power Amplifier at 5 Watt P1dB Operating From 1.7 GHz to 2.5 GHz with 11 dB Gain and SMA SPA-025-11-01-SMA](http://www.fairviewmicrowave.com/high-power-amplifier-5watt-11db-spa-025-11-01-sma-p.aspx)

URL: <http://www.fairviewmicrowave.com/high-power-amplifier-5watt-11db-spa-025-11-01-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.



J1 - Male Micro-D Conn.	
PIN	FUNCTION
1	GND
2	GND
3	+VDC
4	+VDC
5	Amp Enable
6	GND
7	+VDC
8	+VDC
9	GND

PIN	DESCRIPTION	SPECIFICATION
+VDC	DC Supply	+9 to +14 VDC
AMP Enable	TTL On/Off	Low=Enable, High=Disable
GND	---	---
RF Input	---	+27 dBm Max.

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

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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
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DWG NO	SPA-025-11-01-SMA	CAGE CODE	3FKR5				
CAD FILE	091814	SHEET	SCALE	N/A	SIZE	A	2233