Fairview Microwave
RF COMPONENTS ON DEMAND. Done!

SPA-060-50-SMA DATA SHEET

50 dB Gain High Power High Gain Amplifier at 50 Watt Psat Operating From 2 GHz to 6 GHz with SMA

SPA-060-50-SMA is a 50W high gain power GaN amplifier operating in the 2 to 6 GHz frequency range. The amplifier offers 46 dBm min of saturated power and a high 50 dB typical small signal gain with the gain flatness of ±1.25 dB typical. This excellent technical performance is achieved through the use of advanced GaN devices. The amplifier requires typically a +28V DC power supply. The connectorized SMA module is unconditionally stable and includes built-in voltage regulation, bias sequencing, DC On/Off TTL Logic control, current monitoring and over temp shutdown at +90°C for added reliability. The amplifier operates over the temperature range of -40°C and +85°C. The RF Input/Output Connectors are SMA Female. Along with a 15 Pin Micro-D Female Control Socket.

Features:

- 2 GHz to 6 GHz Frequency Range
- Psat 46 dBm min
- Small Signal Gain: 50 dB min
- Gain Flatness ± 1.25 dB typical
- 50 Ohms Input and Output Matched
- Unconditionally Stable
- Regulated Supply & Bias Sequencing
- Hermetically Sealed Module
- Current Monitoring
- Mismatch Handling 5.0:1 max
- Over Temp Shutdown

Applications:

- Military Radio
- Communication Systems
- High Gain Driver Power Amplifier
- High Gain Output Power Amplifier

Electrical Specifications (TA = +25°C, DC Voltage = 28Volts , DC Current = 6,000mA)

Description	Min	Typ	Max	Unit
Frequency Range	2		6	GHz
Small Signal Gain	50			dB
Gain Flatness		±1.25		dB
Input Power (CW)			+15	dBm
Psat	+46	+47		dBm
Efficiency (PAE)		30		%
Harmonics @50 Watts		-15		dBc
Noise Figure			7	dB
Spurious @50 Watts		-70		dBc
Input VSWR		2:1		
Output VSWR		2:1		
TTL Control	"1": Off, "0": On (Blanking), Enable: 0V, Disable: 5V			
Operating DC Voltage		28		Volts
Operating DC Current		6,000		mA
Operating Temperature Range	-40		+85	°C

Mechanical Specifications

Size	
Length	2.5 in [63.5 mm]
Width	2.75 in [69.85 mm]
Height	0.45 in [11.43 mm]
Weight	0.263 lbs [119.29 g]
Input Connector	SMA Female
Output Connector	SMA Female
Cooling	HEATSINK REQUIRED use SPA-00-00-KIT

Environmental Specifications

Temperature	
Operating Range	-40 to +85 deg C
Storage Range	-54 to +85 deg C

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Humidity	IAW MIL-STD-810F, up to 95% Non-Condensing
Shock	IAW MIL-STD-202G method 214, condition C
Vibration	IAW MIL-STD-810F, Method 514.5, Table
Altitude	up to 30,000 ft feet Above Sea Level
Salt Fog	5%, +35°C 96 hrs IAW MIL-STD- 810G method
Fungus	IAW MIL-STD-810G method 508.6

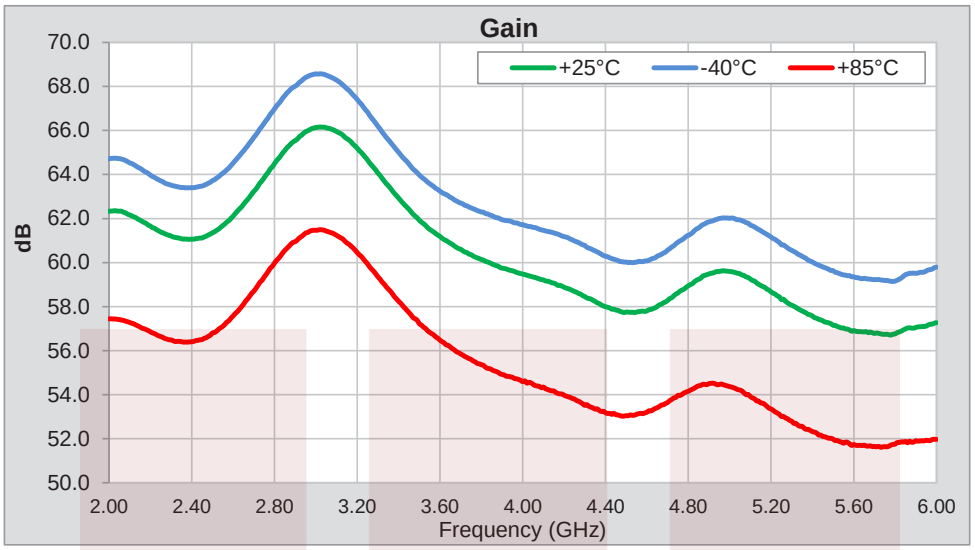
Compliance Certifications (see product page for current document)

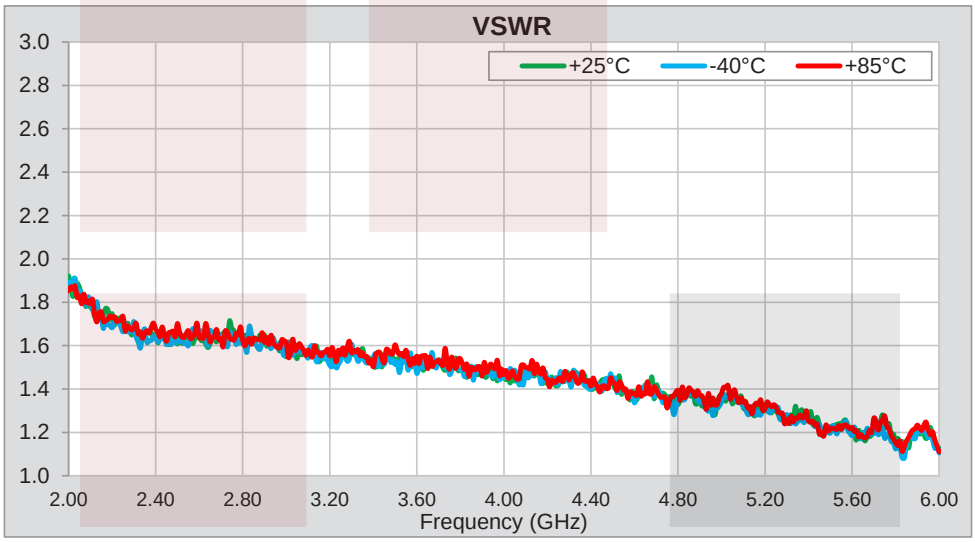
Plotted and Other Data

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.

Typical Performance Data



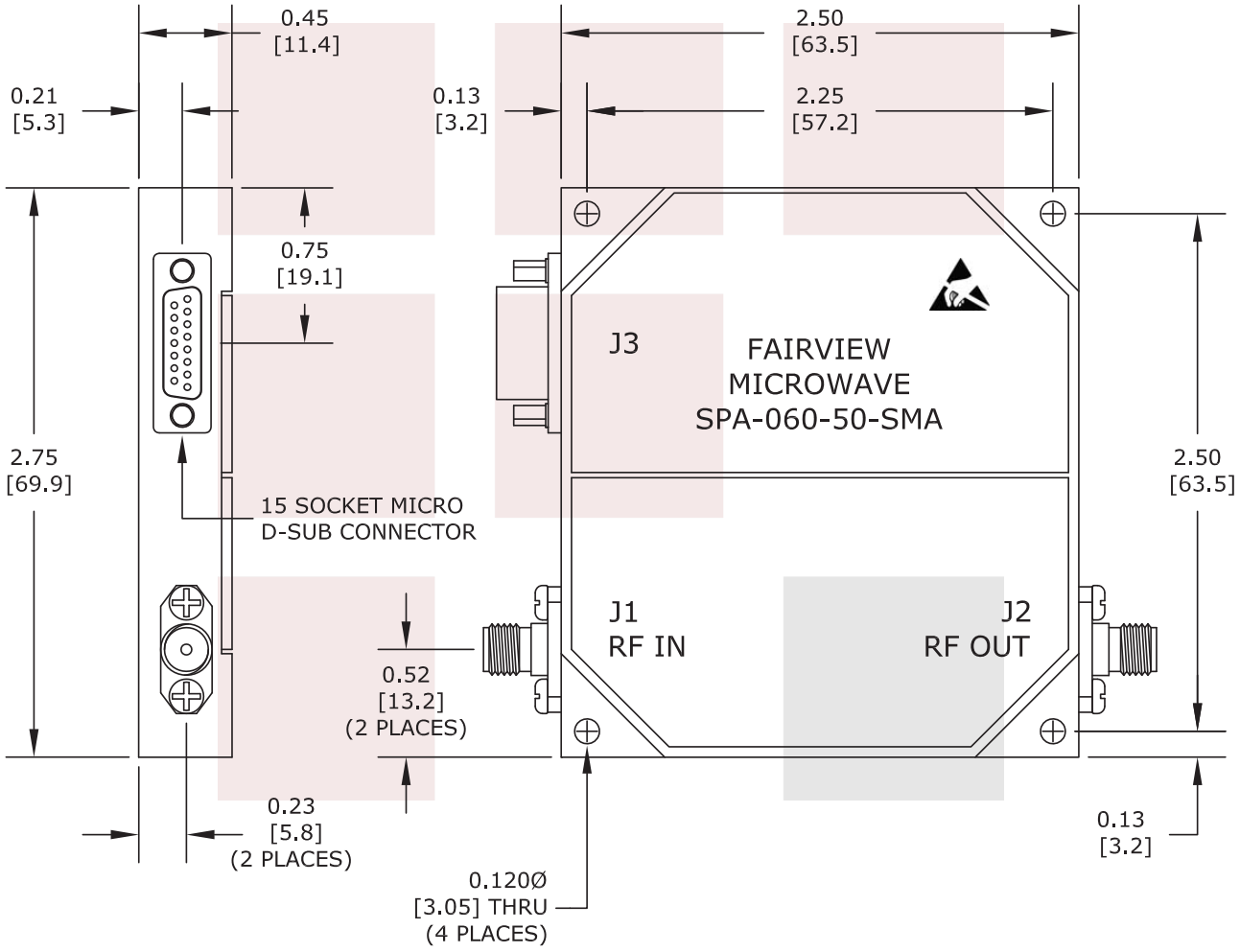


50 dB Gain High Power High Gain Amplifier at 50 Watt Psat Operating From 2 GHz to 6 GHz with SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: 50 dB Gain High Power High Gain Amplifier at 50 Watt Psat Operating From 2 GHz to 6 GHz with SMA SPA-060-50-SMA

URL: https://www.fairviewmicrowave.com/50db-high-power-high-gain-amplifier-50watt-spa-060-50-sma-p.aspx

PIN	DESC.	PIN	DESC.	PIN	DESC.
1	+28V	6	N/C	11	GND
2	+28V	7	OVER-CURRENT BIT	12	GND
3	GND	8	BLANKING TTL	13	N/C
4	GND	9	+28V	14	N/C
5	N/C	10	+28V	15	OVER-TEMP BIT



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 50 dB Gain High Power High Gain Amplifier at 50 Watt Psat Operating From 2 GHz to 6 GHz with SMA	DWG NO SPA-060-50-SMA CAGE CODE 3FKR5 CAD FILE 080614 | SHEET | SCALE N/A | SIZE A | 150