

58 dB Gain High Power High Gain Amplifier at 15 Watt Psat Operating From 7.2 GHz to 7.5 GHz with SMA

SPA-075-58-10-SMA is a wideband GaN amplifier operating in the 7.2 GHz to 7.5 GHz Frequency Range, the module is ideal for linear applications including COFDM video and UAV/UGV data links. The module can also provide over 20 Watts typical of analog FM power. This amplifier has several proprietary protection circuits including Load VSWR protection, low or high bias protection, 1 reverse bias protection and thermal protection. One of the smallest in the industry, its rugged construction guarantees fault-free operation in the most extreme environments. The connectorized SMA module is unconditionally stable.



Electrical Specifications (TA = +25°C, DC Voltage = 33Volts)

Description	Min	Typ	Max	Unit
Frequency Range	7.2		7.5	GHz
Small Signal Gain		58		dB
Gain Flatness		±2		dB
Psat		+41.76		dBm
Linear COFDM Power Output		+37		dBm
Input Return Loss		-15	-14	dB
TTL Control	"1": On, "0": Off, Enable: 5V, Disable: 0V			
Rise/Fall Time		<0.2		usec
Operating DC Voltage	9		33	Volts
Quiescent Current		750		mA
Operating Current at		2,300	mA	
Operating Temperature Range	-10		+85	°C

Features:

- 7.2 GHz to 7.5 GHz Frequency Range
- Psat 15 Watt Typical
- Linear COFDM Power Output 5 Watt Typical
- Small Signal Gain: 58 dB typical
- Gain Flatness: ±2.0 typical
- 50 Ohms Input and Output Matched
- Unconditionally Stable
- Regulated Supply & Bias Sequencing
- Overvoltage Protection

Applications:

- COFDM video
- UAV/UGV data links
- High Gain Linear Driver Power Amplifier
- High Gain Linear Output Power Amplifier

Protections

Protections	
Description	Value
Max RF Input	+10 dBm
Load VSWR @ 20 Watts	∞ at all amplitudes / phase angles
Thermal Shutdown	Unit will shut down if case temperature exceeds +85°C, will automatically turn back on when case temperature falls ~ 10°C from shutdown.
Over Voltage	Unit will shut down if input voltage exceeds +33 VDC
Under Voltage	Unit requires a minimum of +9 VDC to enable. Unit will also shut down if VDC falls below +9 V during operation.
True Reverse	Unit will not enable and the unit will not draw current if +VDC and Ground are reversed ³

Mechanical Specifications

Size	
Length	6 in [152.4 mm]
Width	2.5 in [63.5 mm]
Height	1.06 in [26.92 mm]
Weight	1 lbs [453.59 g]
Input Connector	SMA Female
Output Connector	SMA Female
Cooling	HEATSINK REQUIRED use FMAMC5013 OR FMAMC5011F

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

Environmental Specifications

Temperature

Operating Range -10 to +85 deg C
 Storage Range -55 to +100 deg C

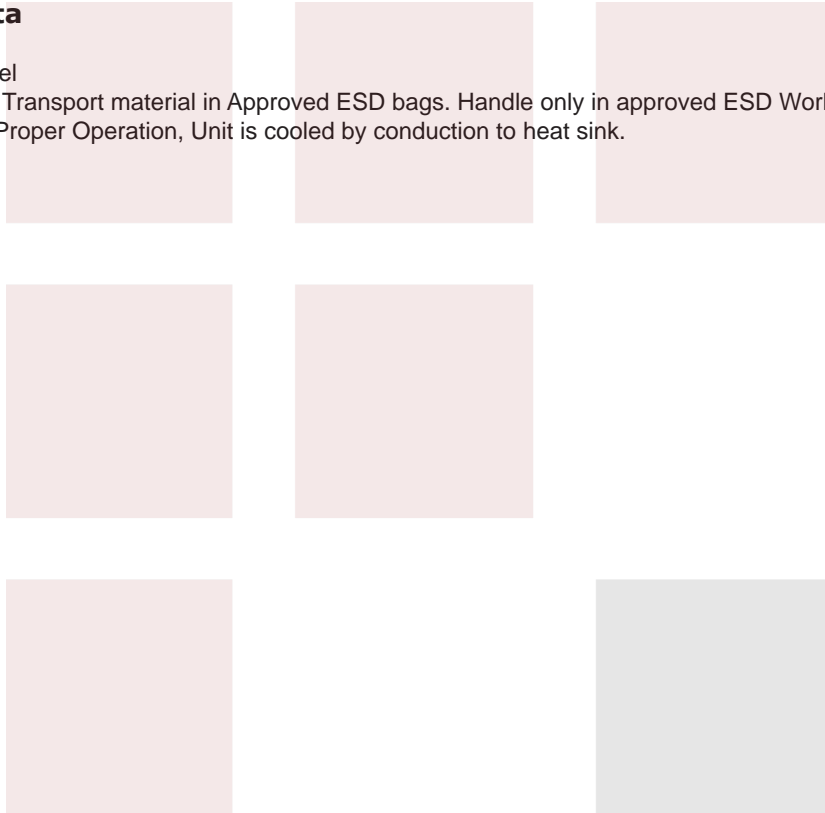
Humidity 95% Non-Condensing
 Shock MIL-STD-810F Method 516.5
 Vibration MIL-STD-810F Method 516.5
 Altitude MIL-STD-810F Method 500.4 feet Above Sea Level

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

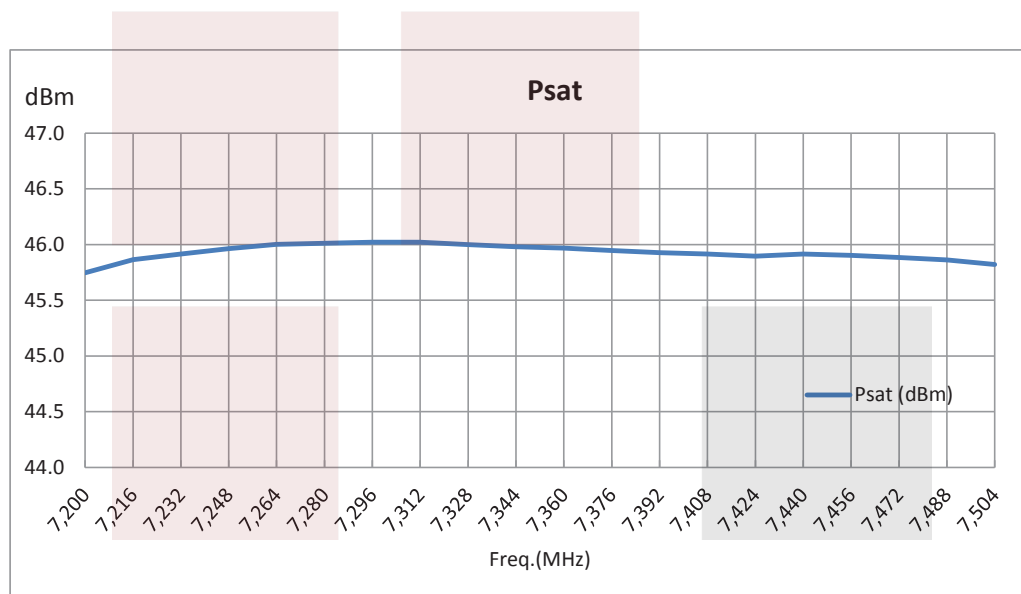
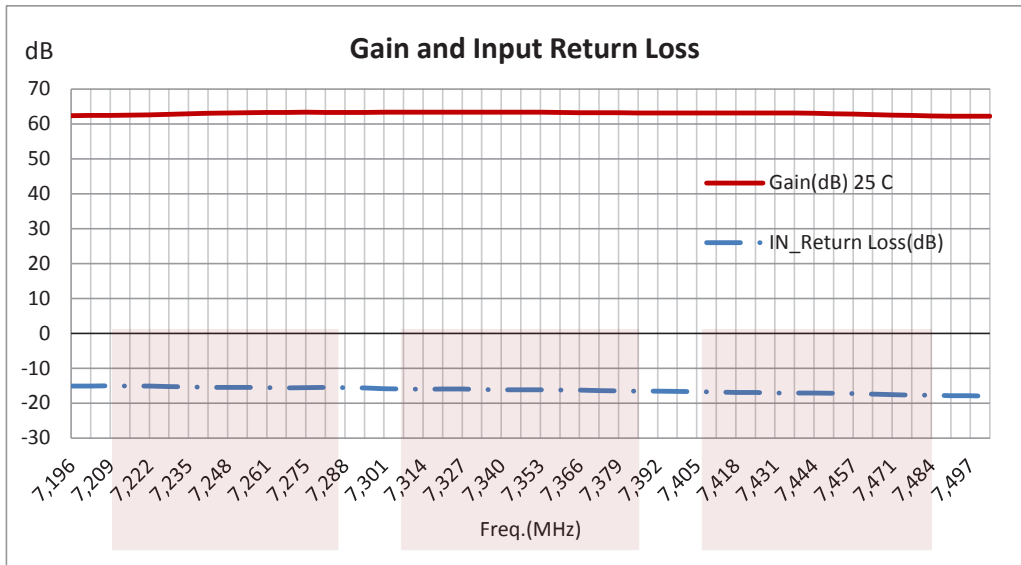
Plotted and Other Data

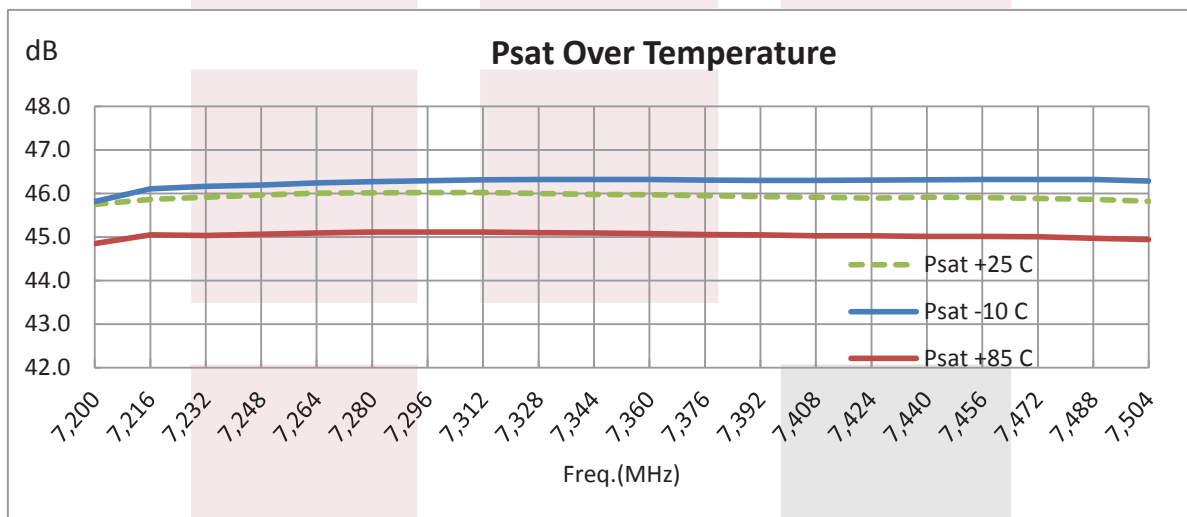
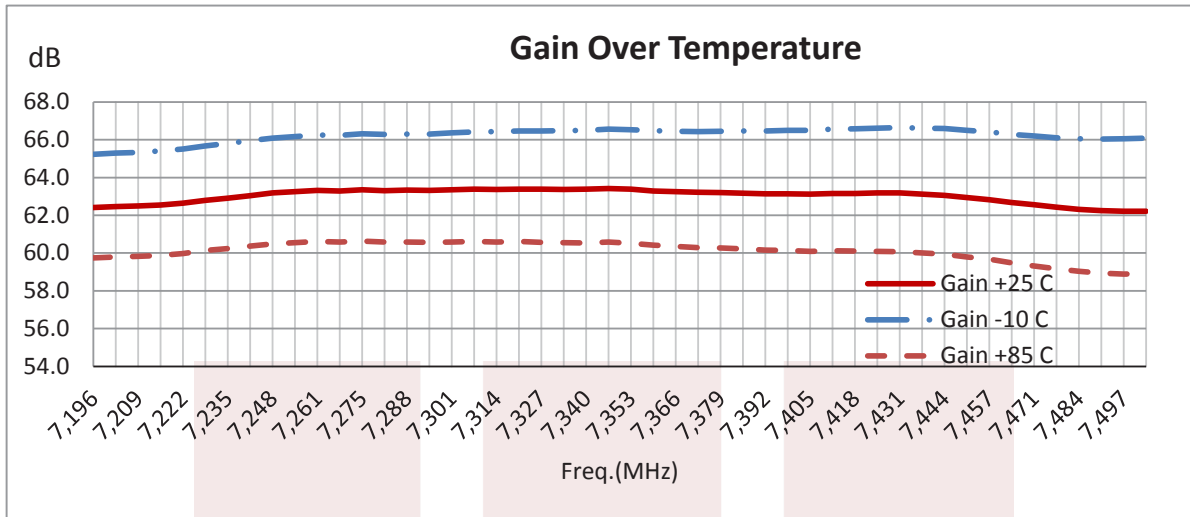
Notes:

- 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.



Typical Performance Data



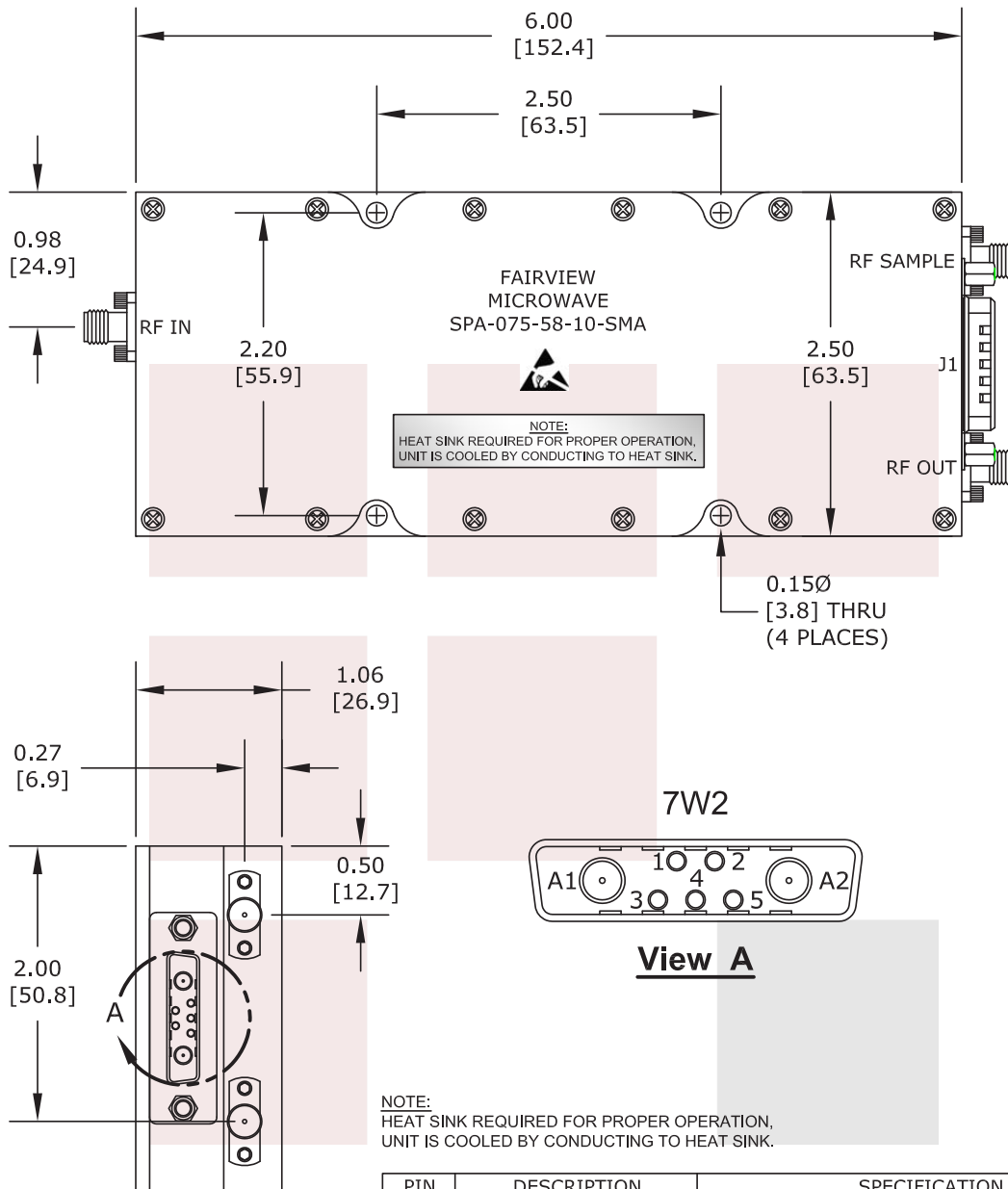


58 dB Gain High Power High Gain Amplifier at 15 Watt Psat Operating From 7.2 GHz to 7.5 GHz with SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [58 dB Gain High Power High Gain Amplifier at 15 Watt Psat Operating From 7.2 GHz to 7.5 GHz with SMA SPA-075-58-10-SMA](http://www.fairviewmicrowave.com/58db-high-power-high-gain-amplifier-15watt-spa-075-58-10-sma)

URL: <http://www.fairviewmicrowave.com/58db-high-power-high-gain-amplifier-15watt-spa-075-58-10-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.



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

PIN	DESCRIPTION	SPECIFICATION
A1	Ground	VDC Ground
A2	+VDC	+9 to +33VDC
1	Temperature Sensor	.75V at +25°C, 1V at +50°C, 1.25V at +75°C (±0.05V)
2	Amplifier Enable	Enable: +5V TTL High, Disable: 0V TTL Low (+5,5V Max.)
3	Reverse Power Detention	+2.5V @ +35 dBm in Open Condition
4	Ground	VDC Ground
5	Forward Power Detention	+2.5V @ +35 dBm

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 58 dB Gain High Power High Gain Amplifier at 15 Watt Psat Operating From 7.2 GHz to 7.5 GHz with SMA	DWG NO SPA-075-58-10-SMA		CAGE CODE 3FKR5		
	CAD FILE 102014	SHEET	SCALE N/A	SIZE A	2233