

**43 dB Gain High Power High Gain Amplifier at  
 25 Watt Psat Operating From 0.15 MHz to 230 MHz  
 with 48 dBm IP3 and SMA**

The FMAM5028 is a Class A/AB RF power amplifier module that uses LD MOS semiconductor technology and operates in the 0.15 MHz to 230 MHz frequency range. The highly linear design supports a variety of input signal formats which includes CW, AM, FM, PM, and Pulse. The amplifier offers 25 watts typical saturated output power, 43 dB min small signal gain with +/- 1.5 dB max gain flatness, and +48 dBm typ OIP3. Additional performance features include -15 dBc harmonics at 15 watts, < -60 dBc spurious at 15 watts, and a max RF input power of +1 dBm. The DC supply requires +28 Vdc nominal with 5 amps max of DC current. The connectorized SMA module also supports a shutdown pin that's TTL enabled with +5 Vdc applied and disabled with 0 Vdc applied. The rugged package design meets a series of environmental conditions which includes Humidity, Altitude, Shock, and Vibration. A heat sink is required for adequate cooling.



**Electrical Specifications** (TA = +25°C, DC Voltage = 28Volts , DC Current = 5,000mA)

Description	Min	Typ	Max	Unit
Frequency Range	0.15		230	MHz
Small Signal Gain	43			dB
Gain Flatness			±1.5	dB
Input Power (CW)			+1	dBm
Psat		+44		dBm
P1dB	+41.8			dBm
Output 3rd Order Intercept Point		+48		dBm
Harmonics		-15		dBc
Spurious		-60		dBc
Input VSWR			2:1	
Load VSWR			3.5:1	
Operating DC Voltage		28		Volts
Operating DC Current			5,000	mA
Operating Temperature Range	0		+50	°C

**Features:**

- 0.15 MHz to 230 MHz Frequency Range
- Psat 25 Watts typ
- Small Signal Gain: 43 dB min
- Gain Flatness ±1.5 dB max
- IP3 48 dBm typ
- 50 Ohms Input and Output Matched
- Unconditionally Stable
- Regulated Supply

**Applications:**

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

**Mechanical Specifications**

<b>Size</b>	
Length	6 in [152.4 mm]
Width	3 in [76.2 mm]
Height	1.1 in [27.94 mm]
Weight	1.5 lbs [680.39 g]
Input Connector	SMA Female
Output Connector	SMA Female
Cooling	Adequate Heatsink Required

**Environmental Specifications**

<b>Temperature</b>	
Operating Range	0 to +50 deg C
Humidity	95% Non-Condensing
Shock	Normal Truck Transport
Vibration	Normal Truck Transport

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Altitude 10000 feet Above Sea Level

**Compliance Certifications** (see [product page](#) for current document)

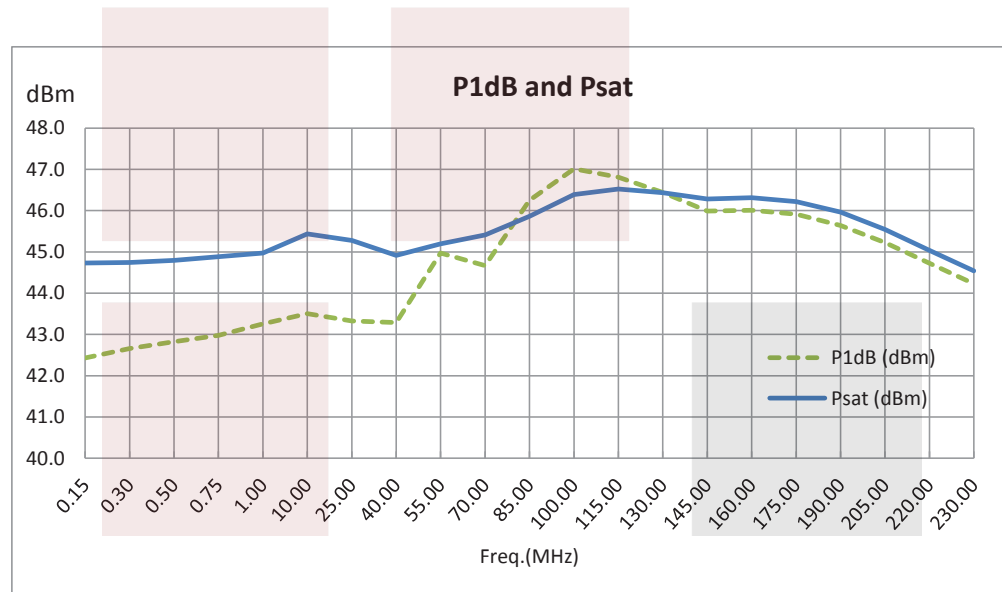
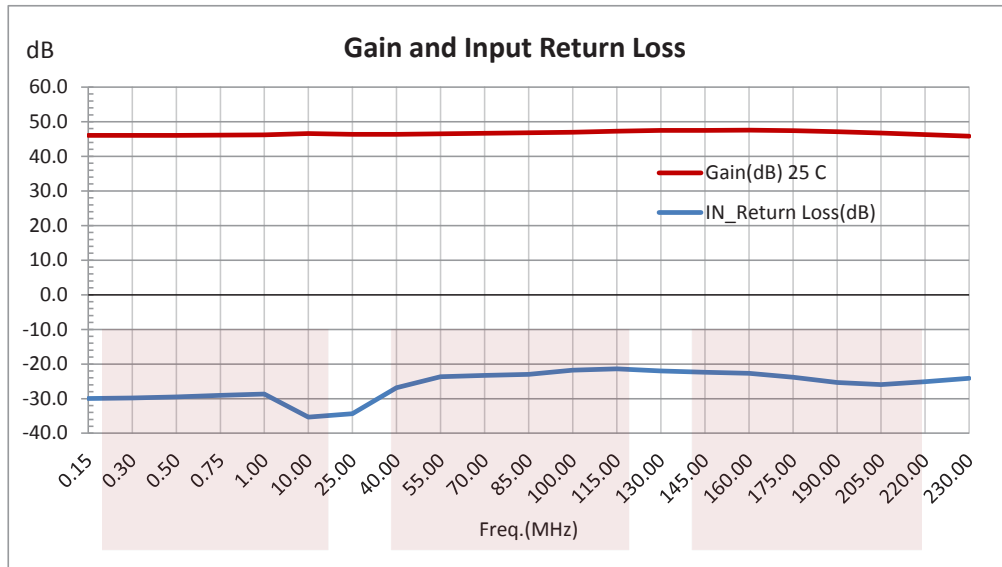
**Plotted and Other Data**

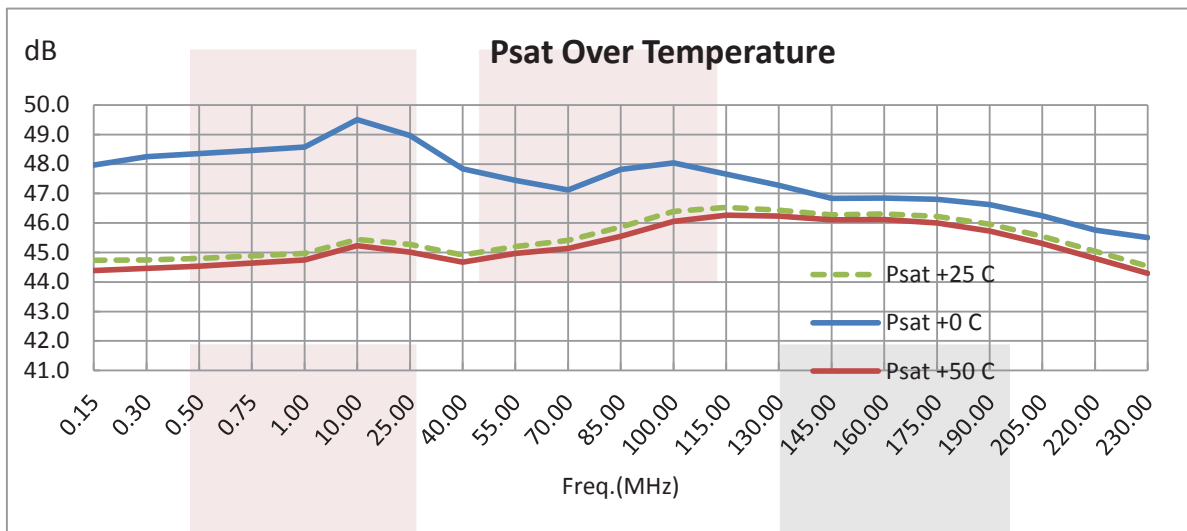
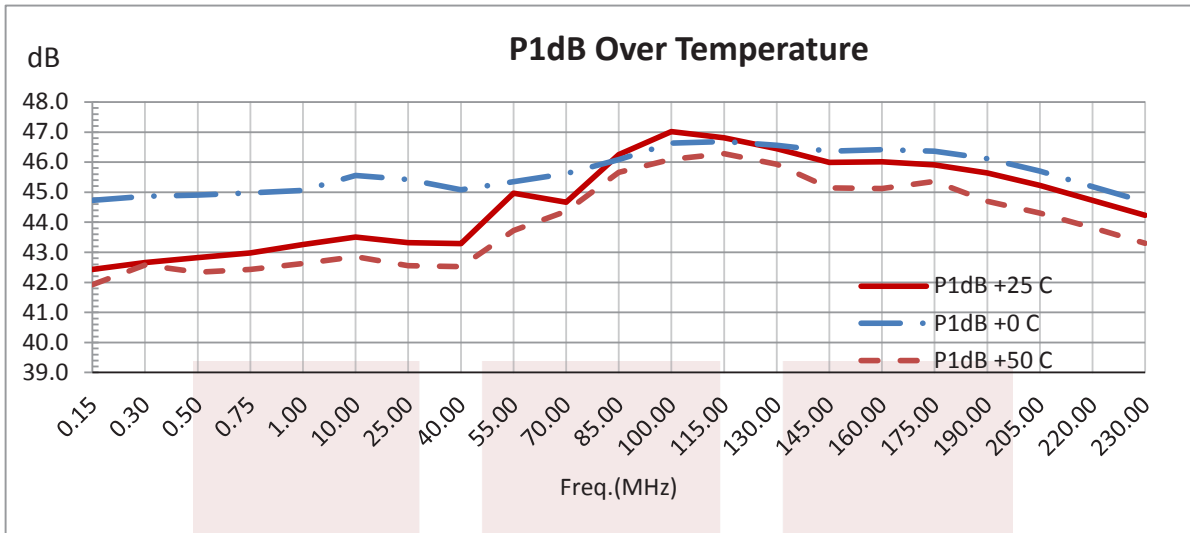
Notes:

- 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.
- Excessive reflected power beyond a 3.5:1 VSWR match will damage the amplifier. For safe operation, it's highly recommended a high power isolator or attenuator be used at the output of the power amplifier.



**Typical Performance Data**



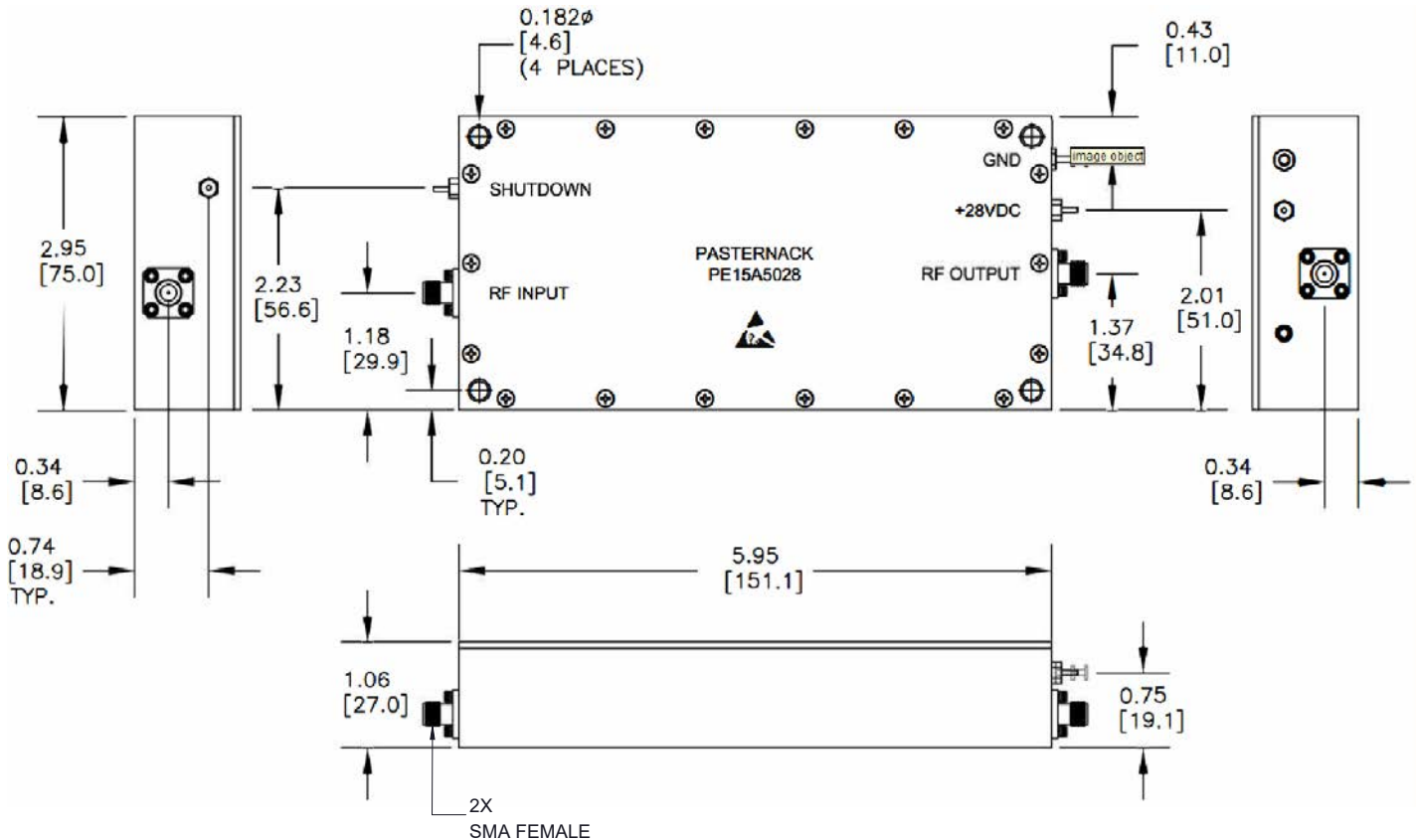


43 dB Gain High Power High Gain Amplifier at 25 Watt Psat Operating From 0.15 MHz to 230 MHz with 48 dBm IP3 and SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [43 dB Gain High Power High Gain Amplifier at 25 Watt Psat Operating From 0.15 MHz to 230 MHz with 48 dBm IP3 and SMA FMAM5028](https://www.fairviewmicrowave.com/43db-high-power-high-gain-amplifier-25watt-fmam5028-p.aspx)

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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.



**NOTES:**

- HEAT SINK REQUIRED FOR PROPER OPERATION, UNIT IS COOLED BY CONDUCTING TO HEAT SINK.
- USE A MANUAL TOGGLE SWITCH WITH AN OPEN ON ONE END AND SHORT ON THE OTHER END. ONCE THE PIN IS SHORTED OUT, THE AMPLIFIER WILL SHUT DOWN.
- TTL METHOD: USE A DARLINGTON TRANSISTOR (DARLINGTON PAIR) THAT IS CONNECTED TO A TTL OF YOUR CHOICE WITH AN OPEN AND SHORT PORT. WHEN TTL GOES HIGH (5V), THE UNIT WILL SHUT DOWN.

**STANDARD TOLERANCES**

.X  $\pm 0.2$   
 .XX  $\pm 0.01$   
 .XXX  $\pm 0.005$

\*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

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TITLE 43 dB Gain High Power High Gain Amplifier at 25 Watt Psat Operating From 0.15 MHz to 230 MHz with 48 dBm IP3 and SMA		DWG NO FMAM5028		CAGE CODE 3FKR5		
CAD FILE	120517	SHEET	1 OF 1	SCALE	N/A	SIZE A 7361