

The MB2.08.0G494928 is a 80W high gain Solid State Broadband High Power Amplifier. This amplifier module utilizes the latest high power RF GaN transistors and also features built in control and monitoring, with protection functions to ensure high reliability. This amplifier is suitable for broadband jamming and EMC testing. The amplifier comes with an industry leading warranty.

**FEATURES**

- 2GHz-8GHz frequency range
- Psat 49dBm type, 48.2dBm min
- Power gain 49 dB
- 50 ohm input/output impedance
- Built-in control, monitoring and protection circuits
- Solid-state Class AB Broadband design
- Instantaneous ultra broadband
- Suitable for CW, and Pulse Application
- Small and lightweight
- High reliability and ruggedness

**ELECTRICAL SPECIFICATIONS(T=25°C,DC Voltage= 28V,Load VSWR ≤ 1.2)**

Description	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	2		8	GHz
Output Power CW*	Psat	65	80		W
Power Gain @ Psat	Gp		49		dB
Power Gain Flatness @ Rated Psat	ΔGp		± 1.5	± 2.5	dB
Input Power for Rated Psat	P <sub>IN</sub>		0		dBm
Harmonics @ Pin =-10dBm	2 <sup>nd</sup> /3 <sup>rd</sup>		-10/-15		dBc
Noise Figure**	NF		12	15	dB
Spurious Signals@ Pin =0dBm	Spur		-70	-60	dBc
Input Return Loss	S11		-15	-10	dB
Intermodulation(IMD)*					
2-Tone @ 37dBm/Tone, 1MHz Spacing	IM3		25	20	dBc
Operating Voltage	VDC	26	28	30	V
Current Consumption @ Pout=70-80W	IDD		15	19	A
Switching Time @ 1kHz TTL, Pin =0dBm	TON/TOFF		2	5	µs

**Note:** \*harmonics power included

\*\*Usually this parameter is not tested, Please contact our sales for further information.

**MECHANICAL SPECIFICATIONS**

- Cooling: Heat Sink Needed
- Length\* Width\*Height: 200\*160\*25mm
- Weight: 5.3 lbs
- RF Connector Input: SMA Female
- RF Connector Output: N-Type Female

## ENVIRONMENTAL SPECIFICATIONS (Design to Meet)

Module Operation Temperature* <sup>1</sup>	-20* <sup>1</sup>	80	°C
Storage Temperature Range	-45	85	°C
Relative-Humidity	5	95%	
Altitude* <sup>2</sup>	N/A		
Vibration/Shock* <sup>2</sup>	N/A		

**Notes** \*1: Module Operation Temperature can be extended to -40~80°C, Contact Sales for update.

**Notes** \*1: Should Supply Adequate Heat Dissipation, Enough Fan and Heat-Sink is necessary during the Temp Test.

**Notes** \*2: Altitude /Vibration are designed with considerations, but without tests and experiments.

## LIMITS

Input RF drive level without damage	Pin ≤ 10	dBm
Load VSWR @ POUT = 40W	VSWR ≤ 5:1 [Design To Meet]	N/A
Load VSWR @ POUT = 80W	VSWR ≤ 3:1 [Design To Meet]	N/A
Thermal Degradation	85°C [recovery@ 75°C]	°C

## DC INTERFACE CONNECTOR – [Hybrid D-Sub 7W2, Male]

Pin #	Description	Specifications
A1	GND	Ground
A2	VDD	28VDC
1	CURRENT SENSE	Analog voltage relative to IDD @ 100mV per Ampere
2	TEMP SENSE	Analog voltage relative to Module's Temperature @ 10 mV/°C *
3	ENABLE	Amplifier Enable: TTL Logic High (3.3~5V) (Internally Pulled-Low)
4	GND	Ground
5	N/C	No Connection

**Note**\*: Temp sense has a positive temperature coefficient of approximately 10mV/°C by design.

The Temp sense voltage can be calculated using the equation:  $V_T(mV) = 0.5 + 10mV * Temp$ .

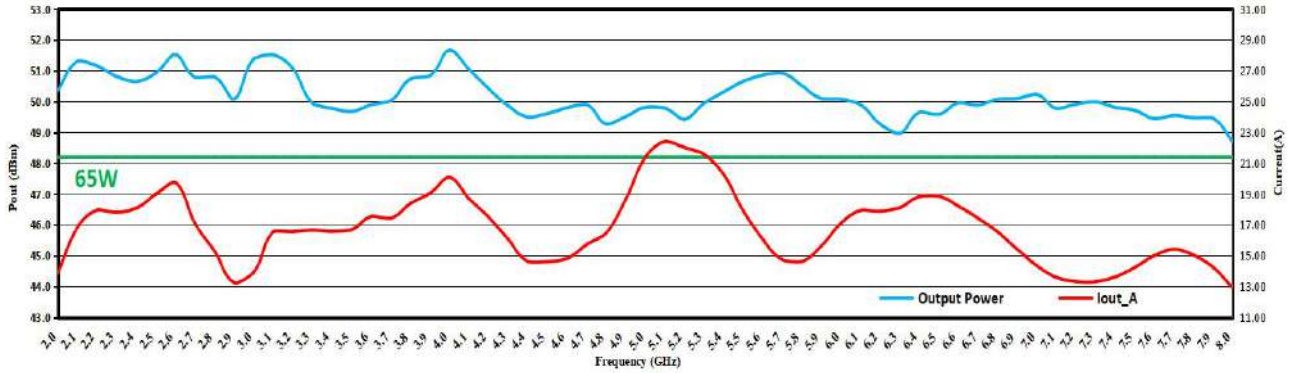
## PLOTTED AND OTHER DATA

Notes:

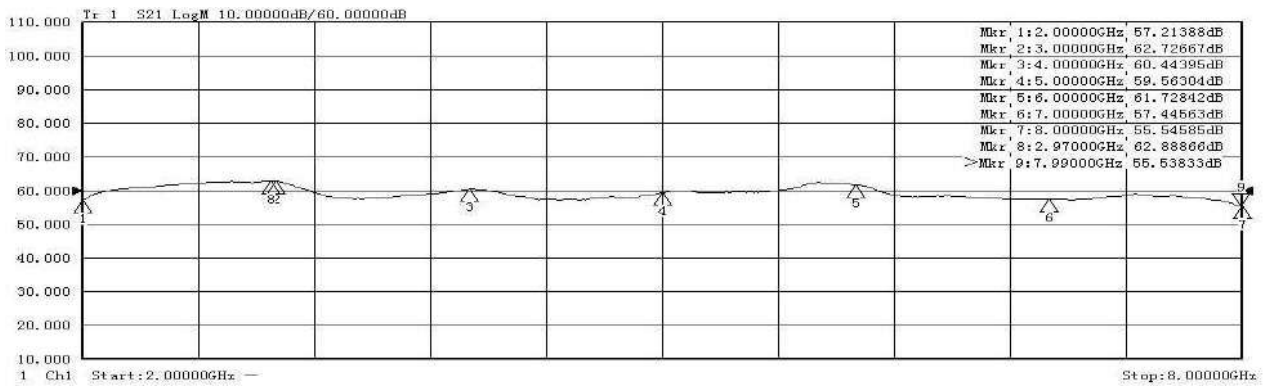
1. Values at +25°C, sea level.
2. ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.
3. Heat Sink required for Proper Operation, Unit is cooled by conduction to heat sink.

**TYPICAL PERFORMANCE DATA**[Volume Shipment product data for Reference] [ DC Voltage= 28V,Load VSWR ≤

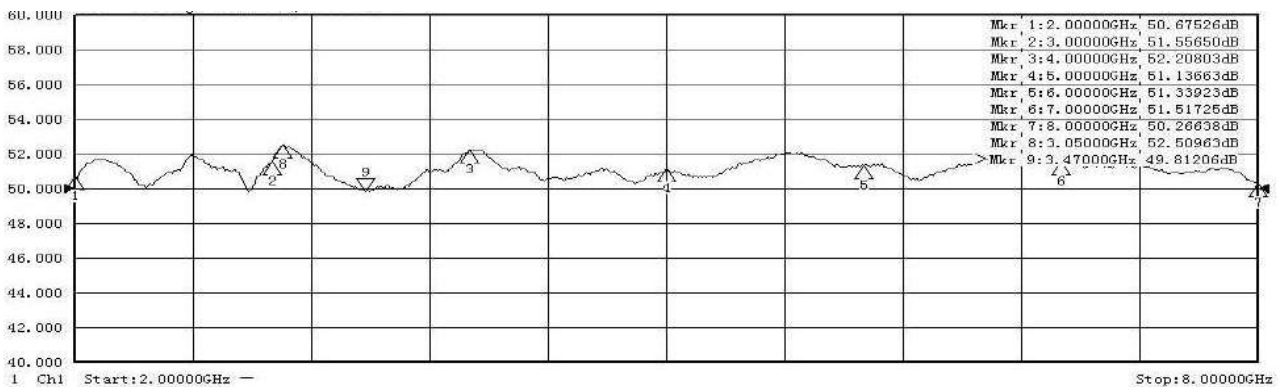
1.2,Ambient temp. +25±3°C]



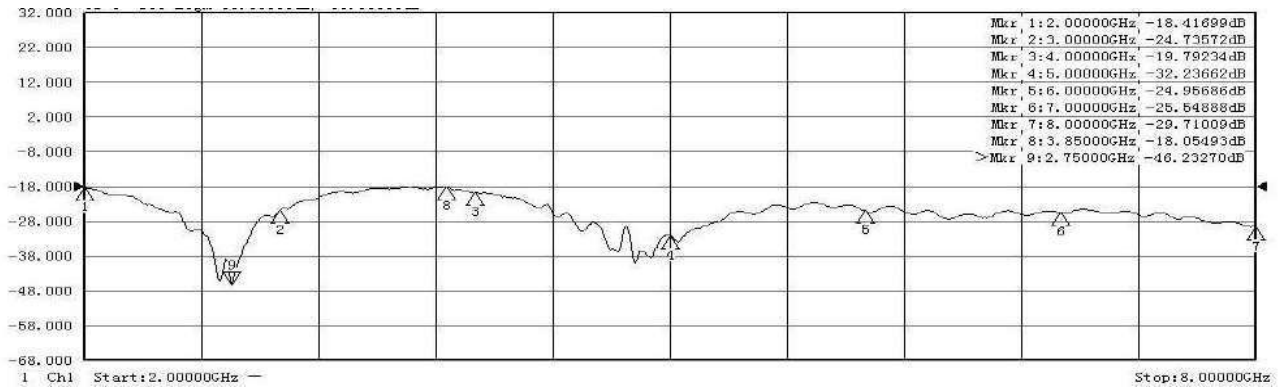
**Output Power&Current (Pin=0 dBm, )**



**Small Signal Gain(S21), Pin=-25dBm**

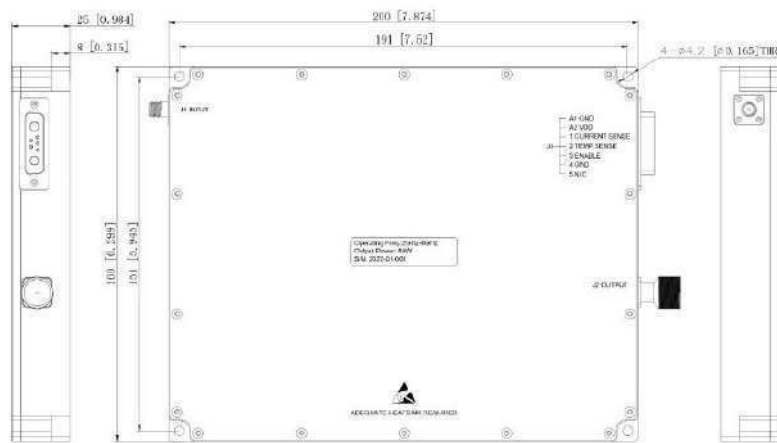


**Power Gain(S21), Pin=0dBm**



**Input Return Loss(S11), Pin=-25dBm**

**OUTLINE DRAWING. Surface: Nickel plating.**



Unit: mm[inch] Tolerance:  $\pm 0.2[0.008]$

\*Note: The Outline and Functions can be customized, please contact sales@eliterf.com

**OUTLINE - Fabricated**

