

The MB6.0018G475228 is a 50W 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

6GHz-18GHz frequency range	Solid-state Class AB Broadband design
Psat 47dBm typ.	Instantaneous ultra-broadband
Power gain 52dB	Suitable for CW and Pulse
50 ohm input/output impedance	Small and lightweight
Built-in control, monitoring and protection circuits	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	6		18	GHz
Output Power CW	Psat	35	50		W
Power Gain @ Pin=-5dBm	Gp		52		dB
Power Gain Flatness @ Rated PSAT	ΔGp		±1.5	±2.5	dB
Input Power for Rated PSAT	P <sub>IN</sub>	-10	0	2	dBm
Harmonics @ Pin=-10dBm	2 <sup>nd</sup>		-15		dBc
Noise Figure	NF			12	dB
Spurious Signals@ Pout =20W	Spur			-60	dBc
Input Return Loss	S11			-10	dB
Operating Voltage	VDC	26	28	30	V
Current Consumption @ Pout= 35~50W	IDD		10	13	A
Switching Time @ 1kHz TTL, PIN = 0dBm	TON/TOFF		1	2	µs

## MECHANICAL SPECIFICATIONS

Cooling: Heat Sink Needed  
 Length\* Width\*Height: 160\*120\*22 mm  
 Weight: 2 lbs  
 RF Connector Input: SMA Female  
 RF Connector Output: SMA Female

## ENVIRONMENTAL SPECIFICATIONS

Module Operation Temperature* <sup>1</sup>	-20	65* <sup>2</sup>	°C
Storage Temperature Range	-45	85	°C
Relative-Humidity		95	%
Altitude * <sup>2</sup>	N/A		
Vibration/Shock * <sup>2</sup>	N/A		

**Notes** \*<sup>1</sup>: Module Operation Temperature can be extended to -45~80°C, Contact Sales for update.

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

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

## LIMITS

Input RF drive level without damage	Pin ≤ 10	dBm
Load VSWR @ POUT = 20W	VSWR ≤ 5:1 [Design To Meet]	N/A
Load VSWR @ POUT = 50W	VSWR ≤ 3:1 [Design To Meet]	N/A
Thermal Degradation	90°C @ heatsink [recovery @ 60°C]	°C

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

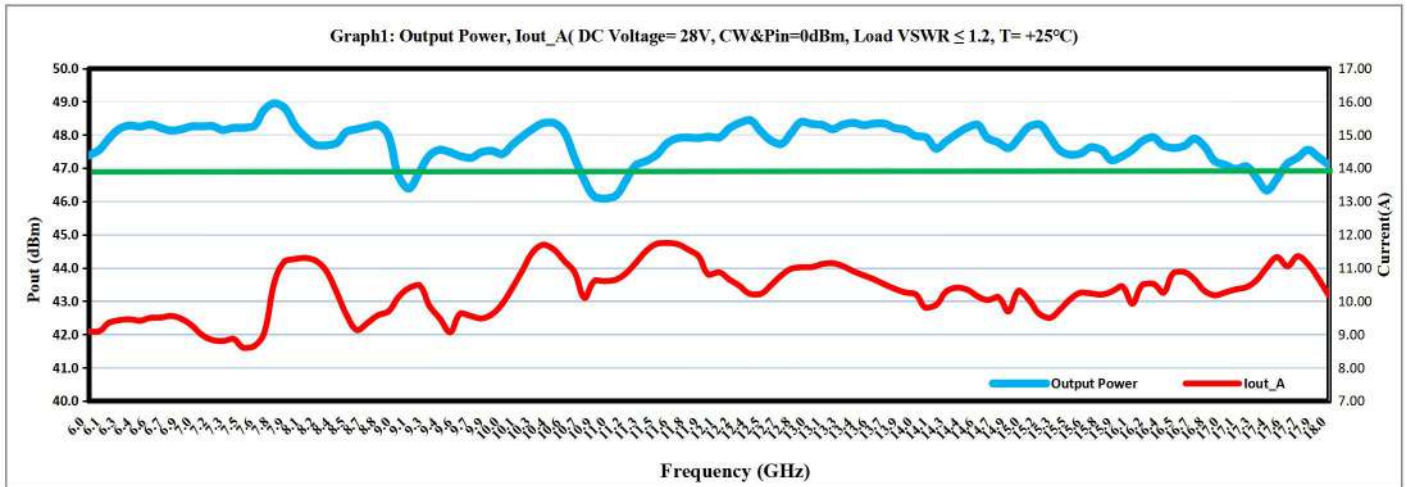
Pin #	Description	Specifications
A1	GND	Ground
A2	VDD	28VDC
1	CURRENT SENSE	Analog voltage relative to IDD @ 100mV per Ampere
2	TEMP SENSE	Analog voltage relative to Module's Temperature @ 10 mV/°C
3	ENABLE	Amplifier Enable: TTL Logic High (3.3V) (Internally Pulled-Low)
4	GND	Ground
5	N/C	No Connection

## PLOTTED AND OTHER DATA

Notes:

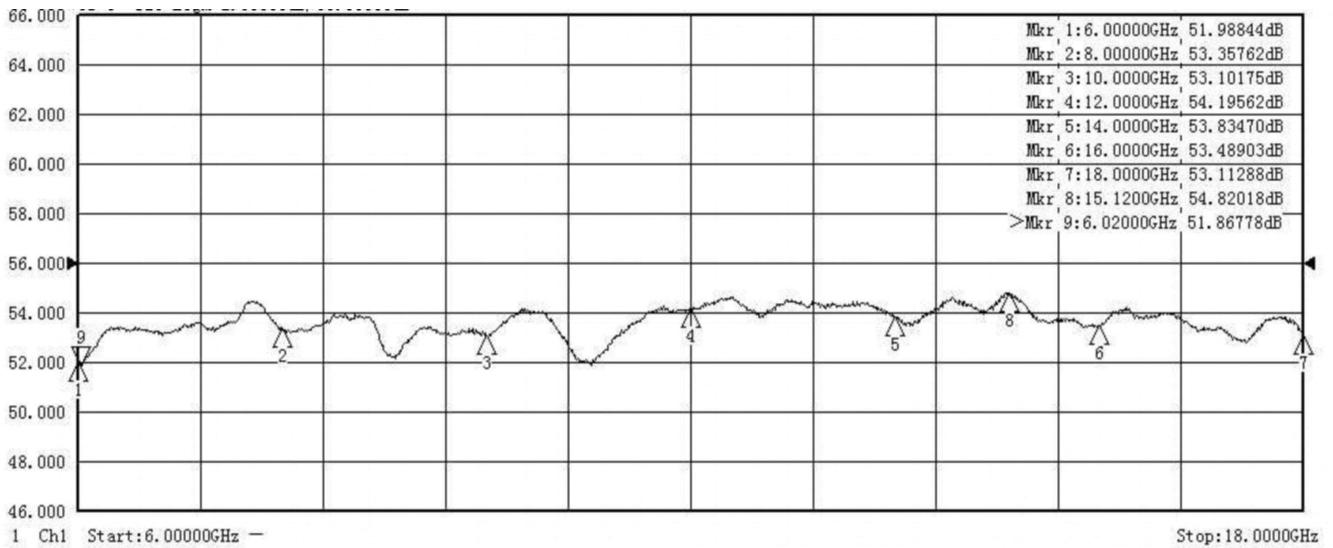
1. Values at +25°C, sea level.
2. ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.
3. Heat Sink required for Proper Operation, Unit is cooled by conduction to heat sink.

**TYPICAL PERFORMANCE DATA [Load VSWR ≤ 1.2]**

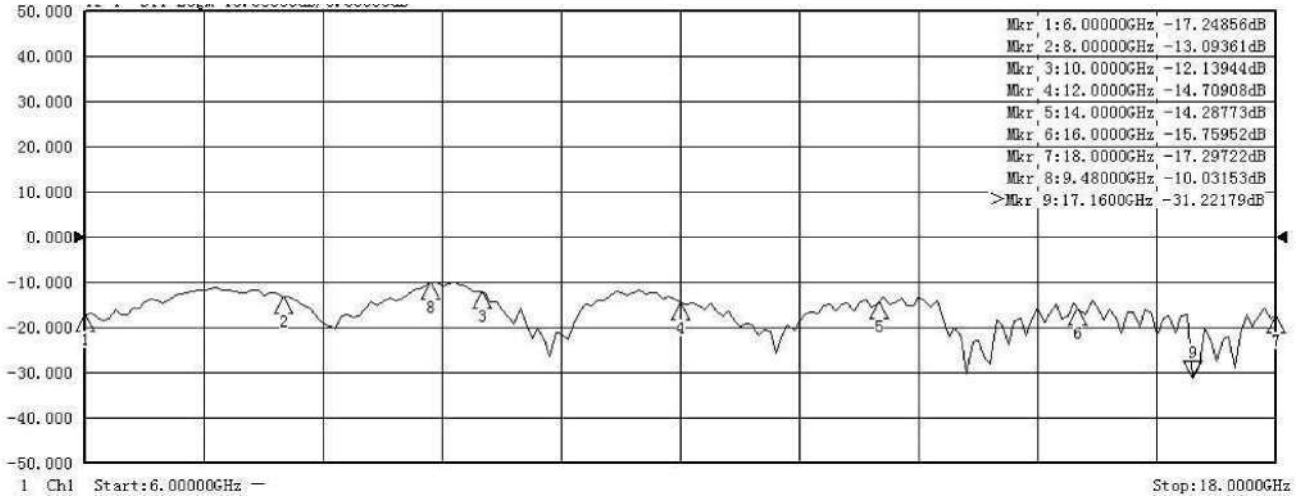


**Output Power (CW, Normal temp. +25±3°C)**

**Power Gain @ Pin=-5 dBm (Ambient temp. +25±3°C, DC Voltage= 28V, Load VSWR ≤ 1.2)**



**Input Return Loss (DC Voltage= 28V, Pin=-30dBm, Load VSWR ≤ 1.2, T= +25°C)**



**OUTLINE DRAWING [mm]**

