

The MB018026G465022 is a 40W 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 availability. This amplifier is suitable for broadband jamming and EMC testing. The amplifier comes with an industry leading warranty.

Features

18GHz-26.5GHz frequency range	Solid-state Class AB Broadband design
P _{sat} 46dBm type	Instantaneous ultra-broadband
Output port: built-inside Isolator to protect	Small and lightweight
Built-in control, monitoring and protection circuits	High reliability and ruggedness

ELECTRICAL SPECIFICATIONS(T=25°C, DC Voltage= 22V, Load VSWR ≤ 1.2)

Description	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	18		26.5	GHz
Output Power CW* @Pin= -5dBm	P _{sat}	44.8	46		dBm
Power Gain @ Pin=-5dBm	G _p		51		dB
Power Gain Flatness @ Pin=-5dBm	ΔG _p		±1.5	±2	dB
Input Power for Rated PSAT	P _{IN}	-5	-3	0	dBm
Harmonics @ Pin=-5dBm	2 nd			-20	dBc
Noise Figure*	NF		N/A		dB
Spurious Signals@ Pin=-5dBm	Spur			-60	dBc
Input Return Loss	S ₁₁			-10	dB
Operating Voltage	V _{DC}	20	22	24	V
Current Consumption @ P _{out} =30~40W	I _{DD}		10	11	A
Switching Time @ 1kHz TTL**	T _{ON} /T _{OFF}		1	2	μs

Note*: Contact our sales for further information.

Note:** Switching Time can be customized for less than 500nS, please contact our sales.

MECHANICAL SPECIFICATIONS

Cooling External: Heat Sink Needed

Length* Width*Height: 150*110*45 mm

Weight: 3 lb

RF Connector Input: 2.92, Female

RF Connector Output: WR42

ENVIRONMENTAL SPECIFICATIONS

Module Operation Temperature* ¹	-20	60* ²	°C
Storage Temperature Range	-45	85	°C
Relative-Humidity		95	%
Altitude * ²	N/A		
Vibration/Shock * ²	N/A		

Notes *1: Module Operation Temperature can be extended to -45~65°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≤3	dBm
Load VSWR @ POUT = 20W	VSWR≤10:1[Design To Meet]	N/A
Load VSWR @ POUT = 40W	VSWR≤5:1[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	22VDC
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

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

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

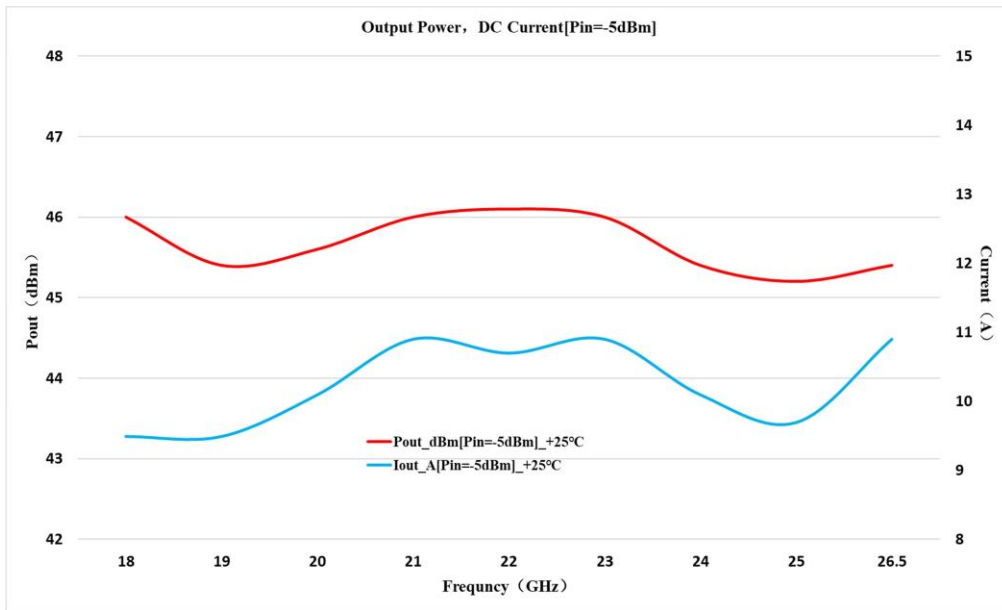
PLOTTED AND OTHER DATA

Notes:

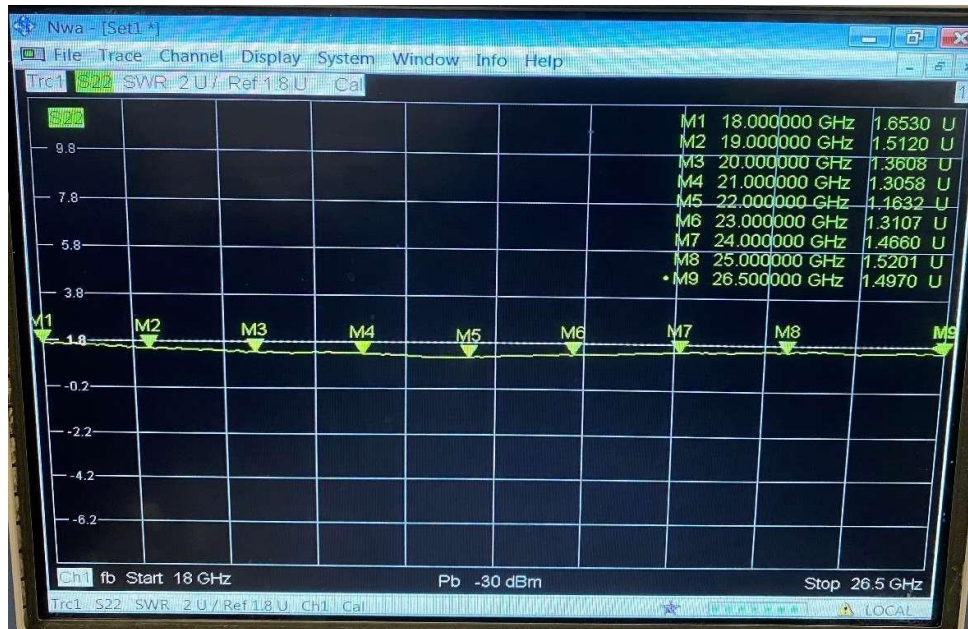
1. Values at +25°C, sea level.
2. ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.
3. Heat Sink required for Proper Operation, Unit is cooled by conduction to heat sink.

TYPICAL PERFORMANCE DATA

[Volume Shipment product data for Reference] [DC Voltage= 22V, Load VSWR ≤1.2, Ambient temp. +25±3°C]

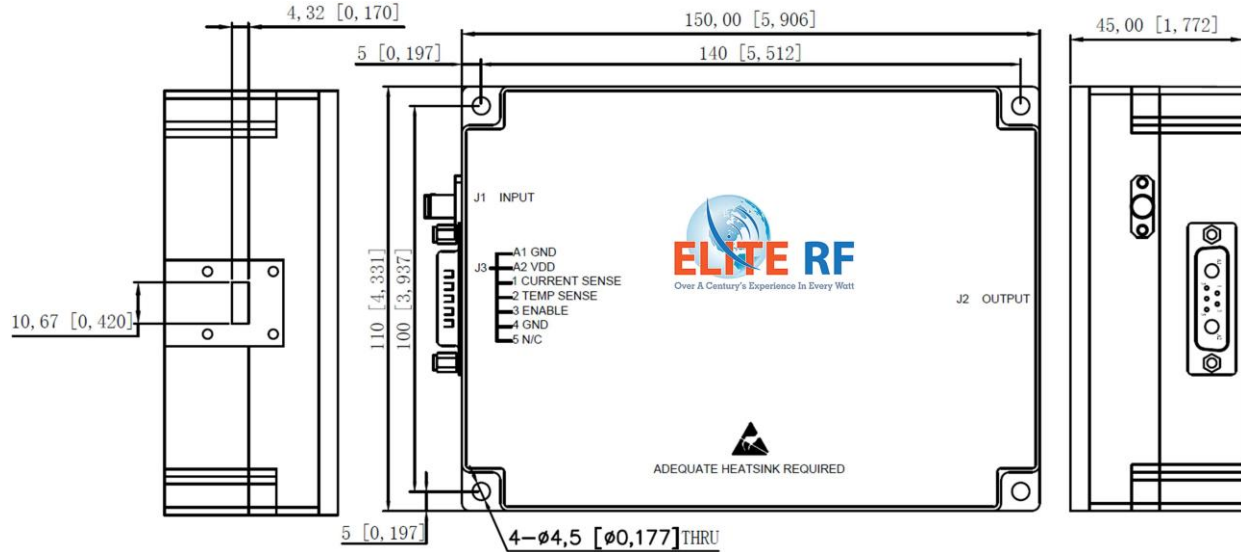


Output Power (CW, Normal temp. +25±3°C)

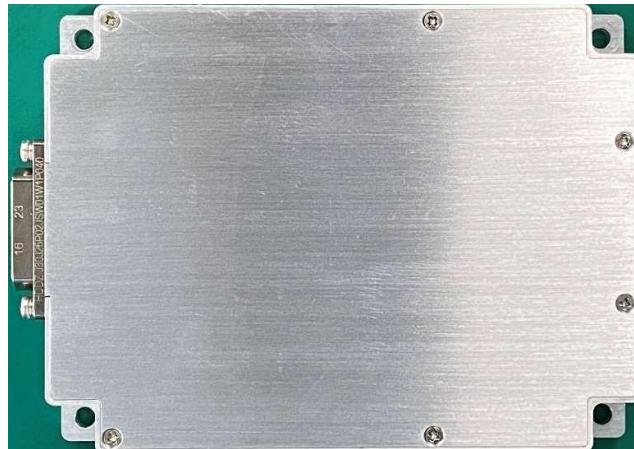


Output VSWR @ Pin=-30 dBm (Ambient temp. +25±3°C, DC Voltage= 24V)

OUTLINE DRAWING Surface: Nickel plating. Laser sealed welding.



Product Reference View



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

Note*: The Outline and Functions can be customized, please contact our sales for further information.