

The MB026040G505022 is a 100W Solid State Broadband High Power Amplifier. This amplifier module utilizes the latest high power RF GaN transistors and also features high efficiency and linearity, with protection functions to ensure high reliability. This amplifier is suitable for Linear System and high power combination. The amplifier comes with an industry leading warranty.

## Features

26.5 GHz-40 GHz frequency range	Solid-state Class AB Broadband design
Psat 50 dBm Typ	Instantaneous ultra-broadband
Power gain 50 dB	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=25C,DC Voltage= 22 V, Load VSWR ≤ 1.2)

Description	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	26.5		40.0	GHz
Output Power CW [ Pin= 0 dBm]	Psat	80	100		W
Power Gain @ PsAT	Gp		50		dB
Power Gain Flatness @ [ Pin= 0 dBm]	ΔGp		± 4		dB
Input Power for Rated PsAT	PIN		0		dBm
Harmonics @ Pout =50W [Design To Meet]	2 <sup>nd</sup>		-15		dBc
Noise Figure(If Needed, Please Contact)	NF		N/A		dB
Spurious Signals@ [ Pin= 0 dBm]	Spur			-60	dBc
Input Return Loss	S11			-10	dB
Third Order Intercept Point					
2-Tone @ 43dBm/Tone, 1MHz Space(If Needed, Please Contact)	IP3		N/A		dBm
Operating Voltage	VDC	20	22	23	V
Current Consumption @ Pout=80-100 W	IDD		55	65	Amp
Switching Time @ 1kHz TTL, PIN = -2dBm	TON/TOFF		1	2	μs

## MECHANICAL SPECIFICATIONS

Cooling: Heat Sink Needed  
 Length\*Width\*Height: 300 x 280 x 30 mm  
 Weight: 14.5 lbs  
 RF Connector Input: 2.4 mm(K), Female  
 RF Connector Output: WR-28, Waveguide

## ENVIRONMENTAL SPECIFICATIONS(Design to meet)

Module Operation Temperature* <sup>1</sup>	-20	65	°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 -45~85°C, Contact Sales for update.

**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=60W [Design To Meet]	∞ @ all load phase & amplitude for duration of 1 minutes;	
Load VSWR @ POUT=80W [Design To Meet]	3:1 @ all load phase & amplitude continuous	
Thermal Degradation	85°C @ heatsink [recovery@ 75°C]	°C

## DC INTERFACE CONNECTOR – [Hybrid D-Sub 12W6, Male]

Pin #	Description	Specifications
A1,A2,A3	GND	Ground
A4,A5,A6	VDD	22VDC
1	CURRENT SENSE	Analog voltage relative to IDD @ 25mV 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
6	N/C	No Connection

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

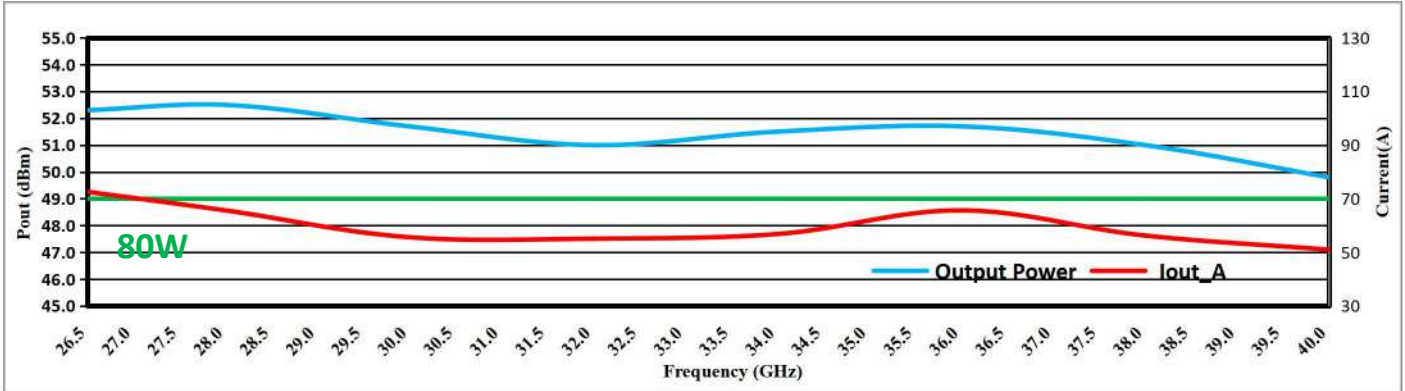
The Temp sense voltage can be calculated using the equation:  $V_T(mV) = 0.5 + 10mV * Temp$

## PLOTTED AND OTHER DATA

Notes:

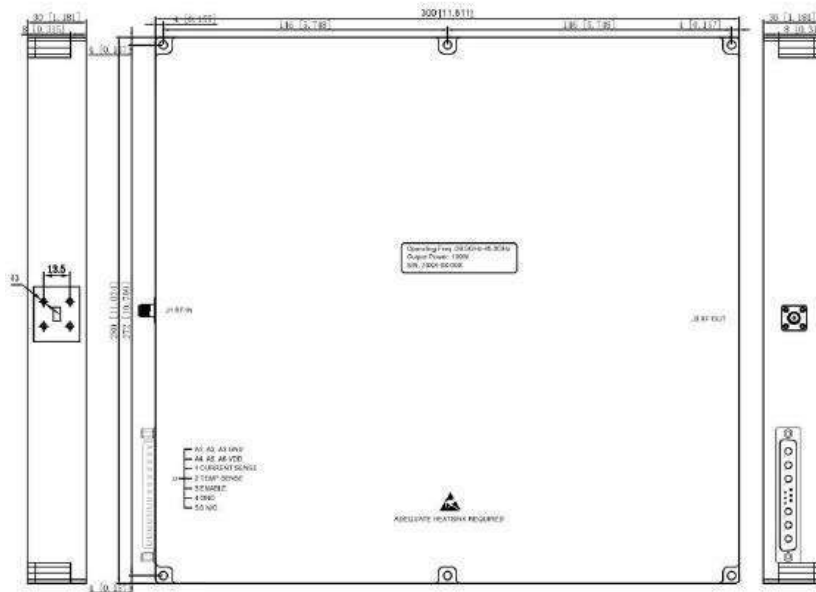
1. Values at +25°C, sea level.
2. ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.
3. Heat Sink required for proper operation, Unit is cooled by conduction to heat sink.

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



**Output power & Iout (Pin=0 dBm)**

**OUTLINE DRAWING (mm) Surface: Natural color conductive oxidation.**



Unit: mm[inch]Tolerance: ±1[0.0393]

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