

The MB033037G474722 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

33.0GHz-37.0GHz frequency range	Solid-state Class AB Broadband design
Psat 47dBm 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	33.0		37.0	GHz
Output Power CW* @Pin=0dBm	Psat	46.0	47.0		dBm
Power Gain @ Pin=0dBm	Gp		47		dB
Power Gain Flatness @ Pin=0dBm	ΔGp		±1.0	±1.5	dB
Input Power for Rated PSAT	P _{IN}	-3	0	3	dBm
Harmonics @ Pin=0dBm	2 nd		N/A		dBc
Noise Figure*	NF		N/A		dB
Spurious Signals@ Pin=0dBm	Spur			-60	dBc
Input Return Loss	S ₁₁			-10	dB
Operating Voltage	V _{DC}	20	22	24	V
Current Consumption @ Pout=40~50W	I _{DD}		12	14.5	A
Switching Time @ 1kHz TTL, Pin=0dBm **	TON/TOFF		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: Heat Sink Needed
 Length* Width*Height: 150*110*40mm
 Weight: 3.3 lbs
 RF Connector Input: 2.92mm, Female
 RF Connector Output: WR28

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	$Pin \leq 0$	dBm
Load VSWR @ POUT = 40W	$VSWR \leq 6:1$ [Design To Meet]	N/A
Load VSWR @ POUT = 50W	$VSWR \leq 3:1$ [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	+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.

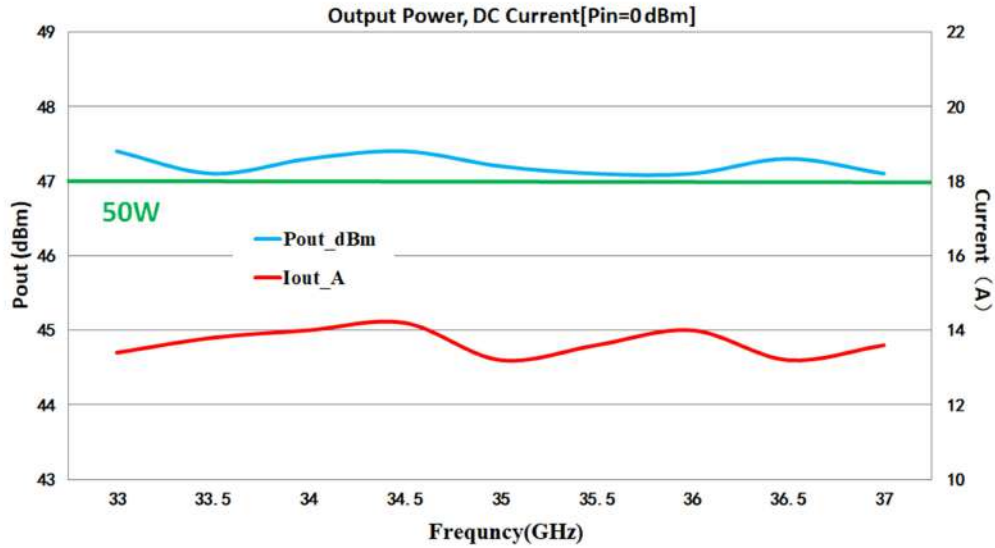
The Temp sense voltage can be calculated using the equation: $V_T(mV) = 0.5 + 10mV * Temp$

PLOTS AND OTHER DATA

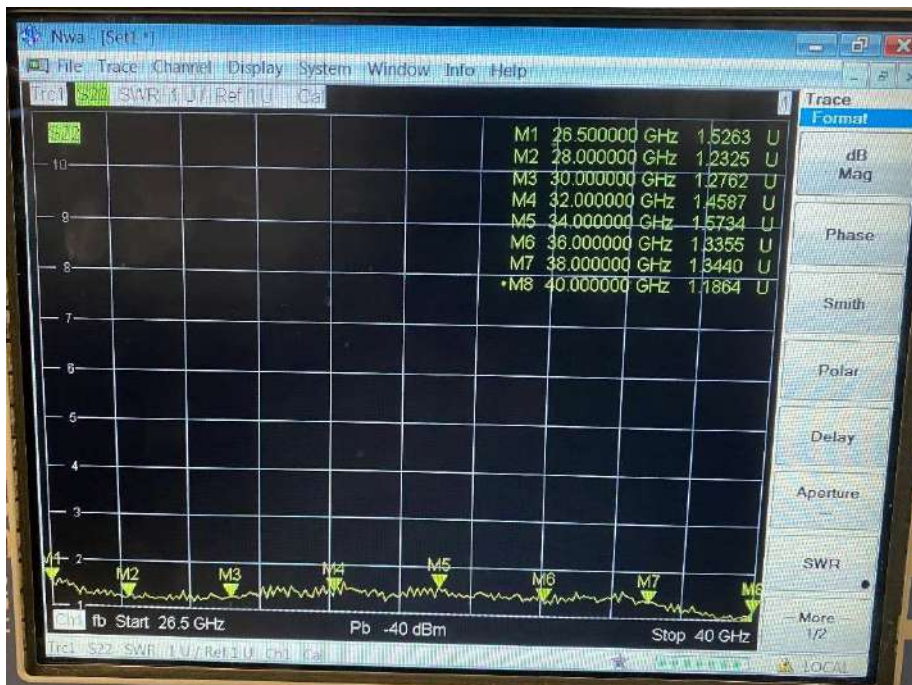
Notes:

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.

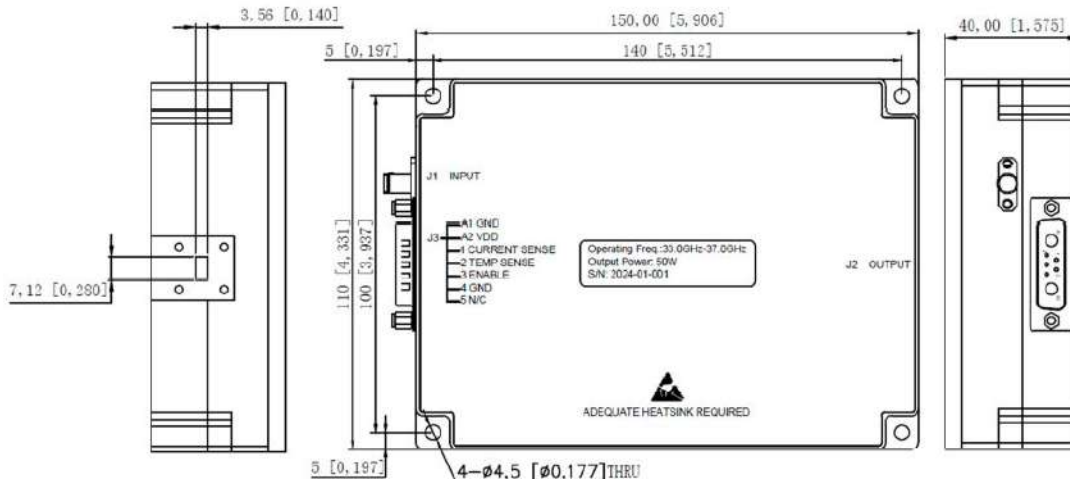
TYPICAL PERFORMANCE DATA [Volume Shipment product data for Reference] [DC Voltage= 24V, Load VSWR ≤ 1.2, Ambient temp. +25±3°C]



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



Output VSWR @ Pin=-40 dBm (Ambient temp. +25±3°C, DC Voltage= 22V)



Product Reference View



Unit: mm[inch]Tolerance: ±0.2[0.008]

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