Model – MB6.0012G474724

The MB6.0012G474724 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-12GHz frequency range
- Psat 47dBm Typ.,46dBm Min.
- Power gain 47dB
- 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
- Small and lightweight
- High reliability and ruggedness

ELECTRICAL SPECIFICATIONS(T=25℃,DC Voltage= 24V)

Description	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	6		12	GHz
Output Power CW	Psat	40	50		W
Power Gain @ P_{IN} =0dBm	Gp		47		dB
Power Gain Flatness @ P_{IN} =0dBm	ΔGp		±1.5	±2	dB
Input Power for Rated PSAT	P_{IN}		0		dBm
Harmonics @ @ P_{IN} =0dBm	2^{nd}		-15		dBc
Spurious Signals@ P_{IN} =0dBm	Spur			-60	dBc
Input Return Loss	S11			-10	dB
Third Order Intercept Point[*1] 2-Tone @ 40dBm/Tone, 100kHz Spacing	IP3		N/A		dBc
Operating Voltage	VDC	22	24	25	V
Current Consumption @ P_{IN} =0dBm	IDD		14	16	A
Switching Time @ 1kHz TTL, PIN = -2dBm	TON/TOFF		2	5	µs

Notes [*1]**:** Usually this parameter is not tested, Please contact sales@eliterf.com

MECHANICAL SPECIFICATIONS

Cooling External Heatsink Needed (Not Supplied)
Length*Width*Height: 160*100*20mm
Weight: 5.5 lbs
RF Connector Input: SMA Female
RF Connector Output: SMA Female

ENVIRONMENTAL SPECIFICATIONS (Design to Meet)

Elite RF LLC

1700 Tower Drive, Hanover Park, IL 60133, USA
Call us for customer service/technical support at: 847-592-6350
Email: sales@eliterf.com Web: www.eliterfllc.com

Rev A1: 03/14/2024
Specifications subject to change, consult sales for latest information

Module Operation Temperature*[1]	-20	60	℃
Storage Temperature Range	-25	65	℃
Relative-Humidity	N/A		
Altitude *[2]	N/A		
Vibration/Shock *[2]	N/A		

Notes *1: Module Operation Temperature can be extended to -45~80℃, 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 =50W	VSWR≤3:1[Design To Meet]	N/A
Over Temp Protection	Module Surface=90℃ [recovery@<70℃]	℃

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

Pin #	Description	Specifications
A1	GND	Ground
A2	VDD	+24.0VDC
1	CURRENT SENSE	Analog voltage relative to IDD @ 100mV per Ampere
2	TEMP SENSE	Analog voltage relative to module temperature @ 10mV/°C
3	ENABLE	Amplifier Enable: TTL Logic High (3.3~5V) , Disable: TTL Logic (0~0.5V) (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: VT(mV)=0.5+10mV*Temp

PLOTTED AND OTHER DATA

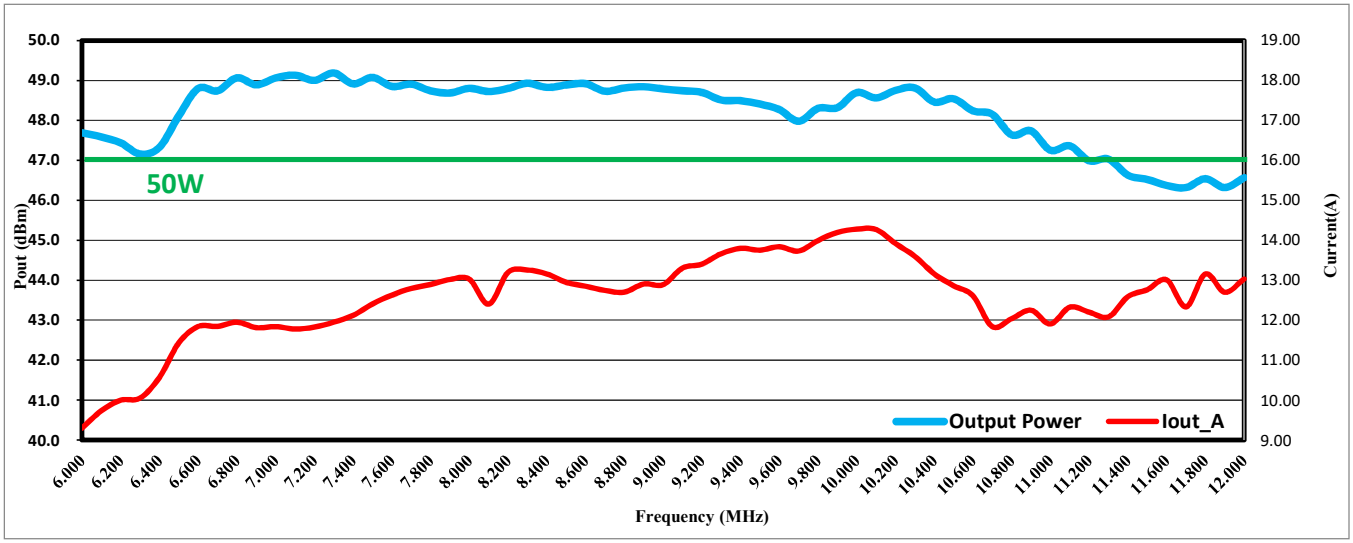
Notes:

1. Values at +25℃， 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.

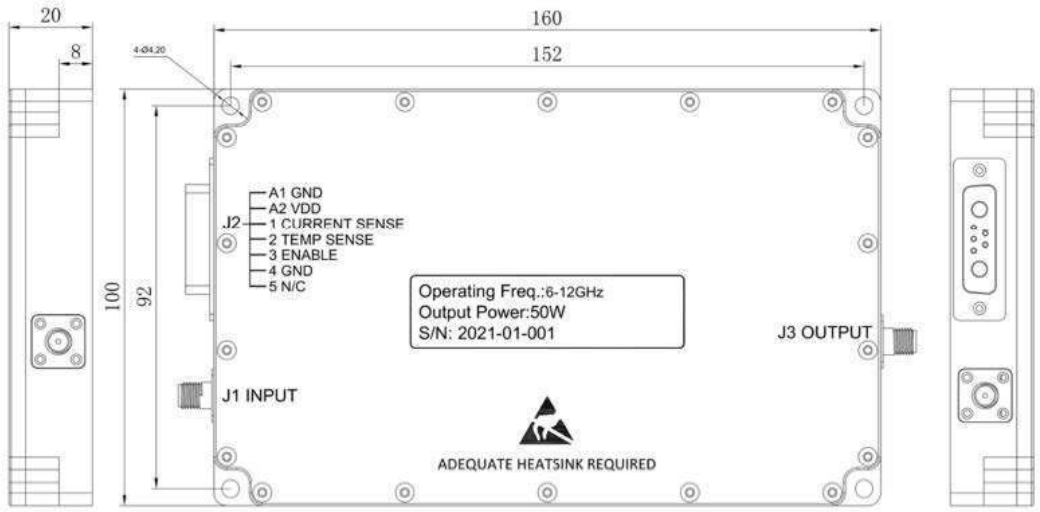
Model – MB6.0012G474724

TYPICAL PERFORMANCE DATA[CW, Load VSWR≤1.2， 25℃], Based on Shipped Product

Output Power, Iout_A(DC Voltage= 24V, CW&Pin=0dBm, Load VSWR ≤ 1.2, T= +25℃)



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



Unit：mm[inch]Tolerance：±0.2[0.008]

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

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