ELITE RF
Over A Century's Experience In Every Watt

Model – MB018026G404424

The MB018026G404424 is a 10W 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
- Psat 40dBm type, 39 dBm min
- Power gain 44dB Type.
- Built-in control, monitoring and protection circuits
- Solid-state Class AB Broadband design
- Ultra-broadband
- Lightweight and portable
- High reliability and efficiency

ELECTRICAL SPECIFICATIONS(T=25℃,DC Voltage= 24V,Load VSWR ≤ 1.2)

Description	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	18		26.5	GHz
Output Power CW@ Pin=-4 dBm	Psat	39	40		dBm
Power Gain @ Pin=-4dBm	Gp		44		dB
Power Gain Flatness @ Rated Pin=-4dBm	ΔGp		±0.5		dB
Small signal Gain @ Pin=-30dBm	G_{SS}		55		dB
Small signal Flatness@1GHz	ΔG_{SS}		±1.5		dB
Small signal Flatness@K-band	ΔG_{SS}		±2.5		dB
Input Power for Rated Psat	P_{IN}		-4	0	dBm
Harmonics @ Pin=-4dBm	2^{nd}			-20	dBc
Spurious Signals@ Pin=-4dBm	Spur			-55	dBc
Operating noise*	NF		N/A		dB
Input VSWR	VSWR_i			2	N/A
Input VSWR	VSWR_o			2	N/A
Operating Voltage	VDC	23	24	26	V
Current Consumption @ Pout= 8-10W	IDD		2.2		A
Switching Time** @ 1kHz TTL, PIN = -5dBm	TON/TOFF		1	2	μs

Note*: contact sales@eliterf.com for further information.

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

PROTECTION AND WARNING FUNCTION

Over-current protection
Over-temperature protection
Over-voltage protection

Elite RF LLC
1700 Tower Dr, 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 1: 03/14/2024
Specifications subject to change, consult sales for latest information

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MECHANICAL SPECIFICATIONS

Cooling External: Heat Sink Needed
Length* Width*Height: 200*150*42 mm
Weight: 5.5 lbs
RF Connector Input: 2.92,Female
RF Connector Output: WR42

ENVIRONMENTAL SPECIFICATIONS (Design to Meet)

Module Operation Temperature*1	-20*1	+55	℃
Storage Temperature Range	-50	+70	℃
Relative-Humidity		95	%
Altitude*2	N/A		
Vibration/Shock*2	N/A		

Notes *1: Module Operation Temperature can be extended to -40 ~+60℃, 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≤0	dBm
Load VSWR @ POUT = 10W	VSWR≤5:1[Design To Meet]	N/A
Thermal Degradation	85℃@ heatsink	℃

DC INTERFACE CONNECTOR – [Hybrid D-Sub-9 pin, Male]

PANEL CONNECTOR

Pin #	Description	Specifications
1	Reserved	No Connection
2	Current	Analog voltage relative to IDD @ 100mV per Ampere
3	Temp Monitor	Analog voltage relative to module temperature @ 10 mV/℃*
4	Reserved	No Connection
5	Enable	Amplifier Enable: TTL Logic High(3.3~5V)(Internally Pulled-Low)
6,7	VDD	+24.0VDC
8,9	GND	Ground

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

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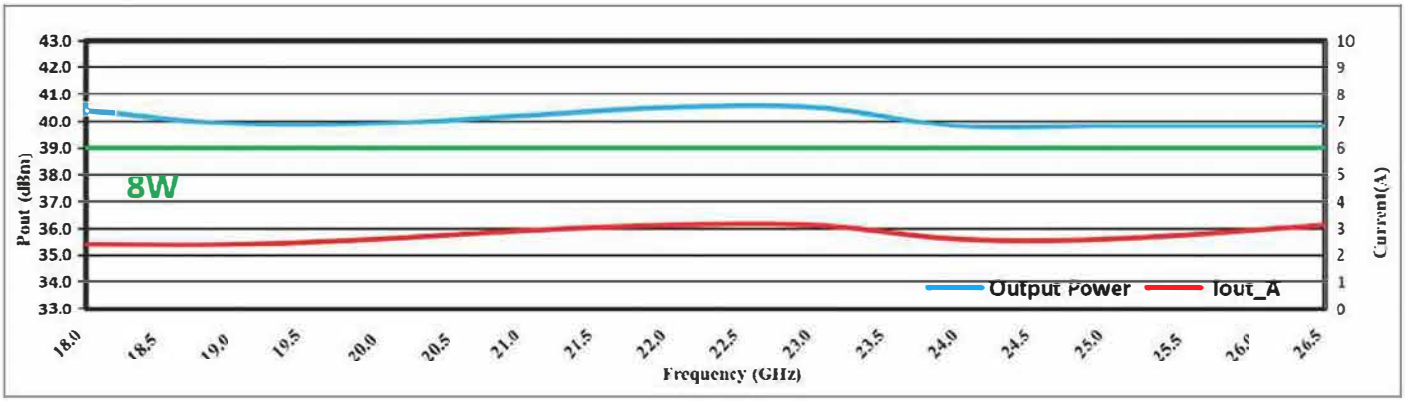
PLOTTED AND OTHER DATA

Notes:

1. Values at +25℃， sea level.

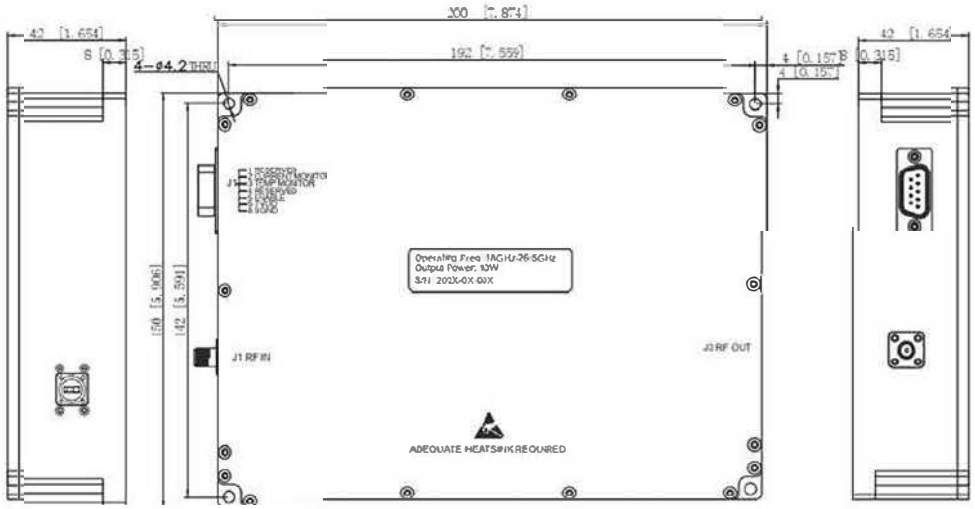
2.ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.

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



Output power &Iout（Pin=-4 dBm）

OUTLINE DRAWING. Surface: Natural color conductive oxidation.



Unit： mm[inch]Tolerance： ±0.2[0.008]

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

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