

## 8000-12000MHz/100Watt/Module

## Model Number: KB80120M50A

The model KB80120M50A is a multi-octave high power amplifier based on GaN technology and operating between 8000 MHz and 12000 MHz and offering a wide dynamic range with 100 watts typical saturated power. The employment of advanced high power devices in manufacturing ensures this module exceptional power performance, long term reliability and high efficiency. It is ideal for broadband high power X Band linear applications.

### FEATURES:

- Broadband & High power
- High Efficiency
- Class AB
- Small Size & Light Weight
- Low Distortion

### ELECTRICAL SPECIFICATIONS @ +28.0VDC, 25°C, 50Ω

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	8000		12000	MHz
RF Output Power	P <sub>out</sub>		100		Watt
Power Gain	G <sub>p</sub>		50		dB
Power Gain Flatness	Δ G <sub>p</sub>		±3		dB
Input Return Loss	S <sub>11</sub>			-10	dB
Harmonics @80W	H		-25		dBc
Spurious Signals @100W	Spur		-55		dBc
Switch On/Off@10-90% Time @Pin=0dBm	T <sub>ON/OFF</sub>		2	5	μS
In/Output Impedance	Impedance		50		Ω
Operating Voltage	VDC	26	28	32	Volt
Power add efficiency	Eff		11		%
DC Current @100W	IDD		32		Amp

### MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	180x150x25 [7x5.9x1]	mm [inch]	Maximum
Weight	3.5 [7.7]	kg [lbs]	Maximum
RF Connectors Input	SMA, Female		
RF Connectors Output	N-Typ, Female		
DC Interface Connector	Hybrid,D-Sub 7-Pin, Male		
Cooling	External Heatsink Required (Not Supplied)		

### ENVIRONMENTAL CHARACTERISTICS (Design to Meet)

Parameter	Minimum	Typical	Maximum	Units	Notes
Operating Temperature	-20		50	°C	
Non-operating Temperature	-25		55	°C	Storage
Relative Humidity (non-condensing)			95	%	

### ABSOLUTE MAXIMUM RATING

Input RF drive level without damage	+10 dBm (Max)
Load VSWR @ P <sub>OUT</sub> =50W	∞ @ all load phase & amplitude for duration of 1 minutes; 3:1 @ all load phase & amplitude continuous
Over Temperature	85°C @ heat sink [restored @ 60°C]

*Focus on Your Application*

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Specifications subject to change without notice

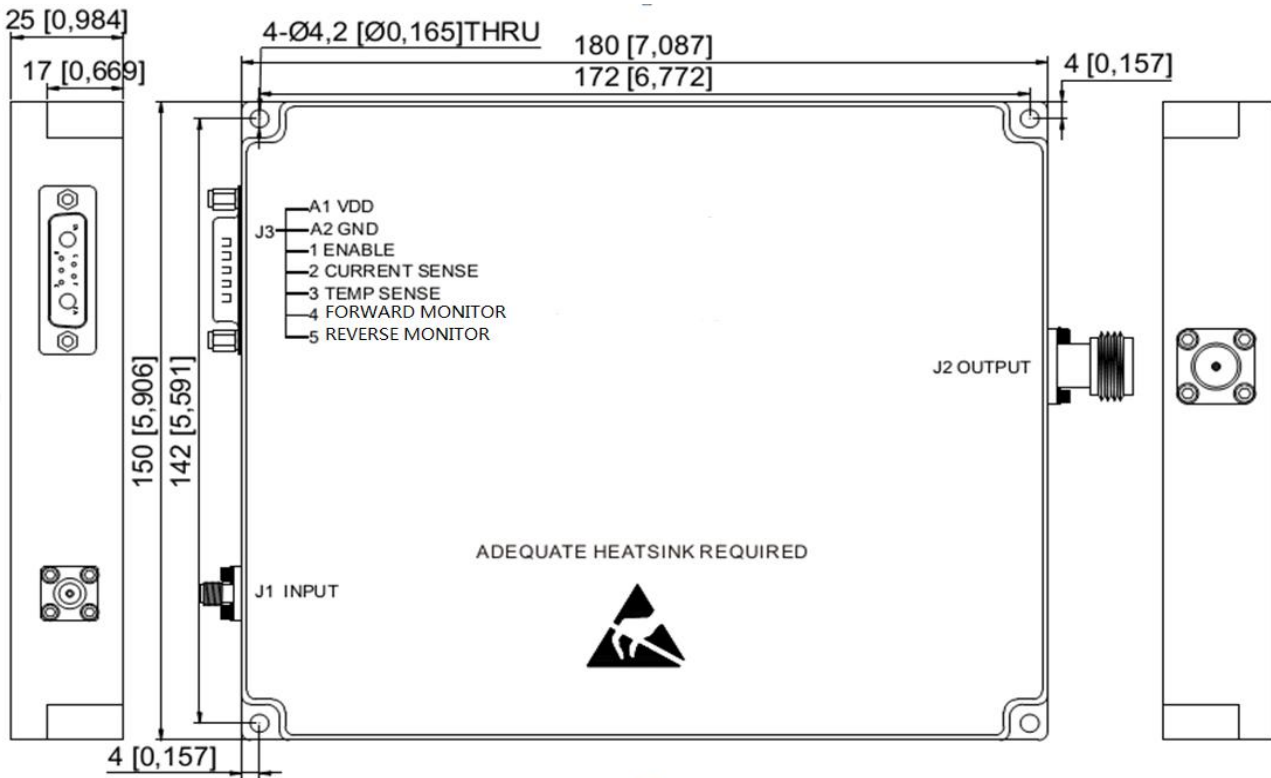
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**DC INTERFACE CONNECTOR**

Pin #	Description	Specifications
A1	VDD	28Vdc
A2	GND	Ground
1	ENABLE	Amplifier Enable: TTL Logic High (3.3V) (Internally Pulled-Low)
2	TEMP SENSE	Analog voltage relative to Module's Temperature @ 10 mV/°C
3	CURRENT SENSE	Analog voltage relative to I <sub>DD</sub> @ 100mV per Ampere
4	NC	No electrical connection
5	GND	Ground

**OUTLINE DRAWING (All dimensions in mm [inch])**



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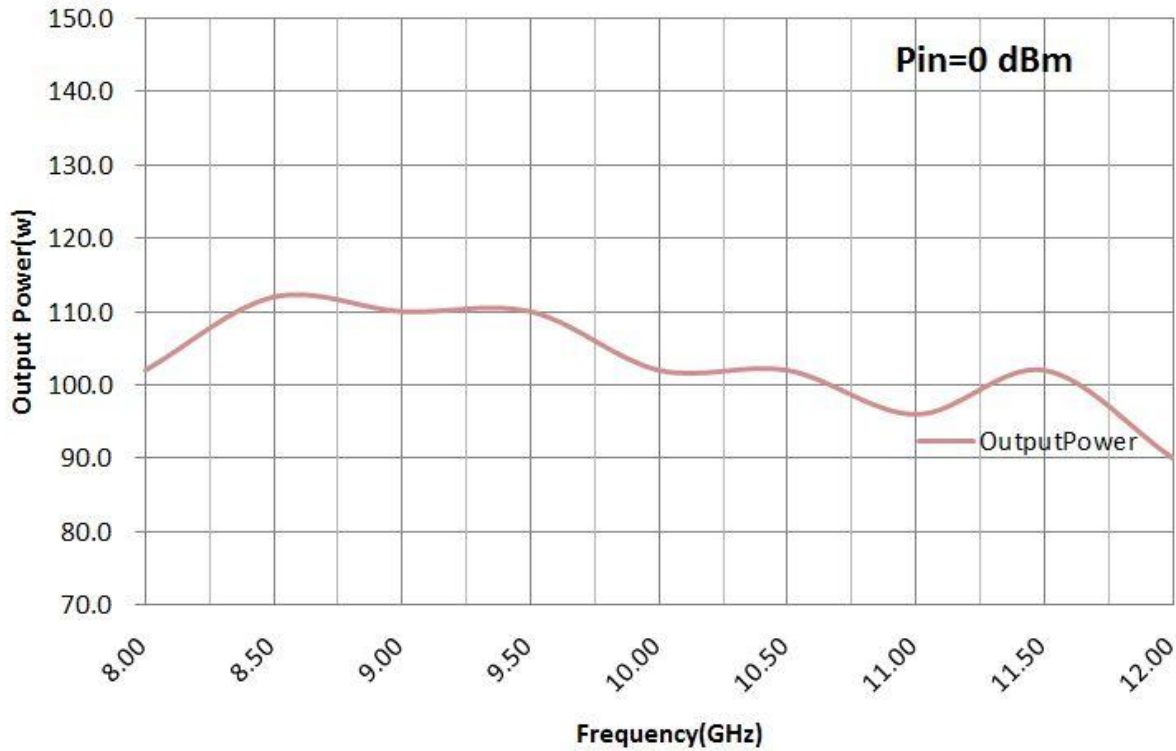
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**TYPICAL PERFORMANCE PLOTS**

Graph3: Output Power(Normal temp.+25±3°C)



Note: Adequate heatsink required.

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