

8000-12000MHz/100Watt/Module

Model Number: KB80120M50A

The model KB80120M50A is a multi-octave high power amplifier 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 multi-octave high power X band applications.

FEATURES:

- Broadband & High Power
- High Efficiency
- Small Size & Light Weight
- Built-in Control and Protection Circuits

ELECTRICAL SPECIFICATIONS @ +30.0VDC, 25°C, 50Ω

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	8000		12000	MHz
RF Output Power	PSAT		100		Watt
Power Gain	Gp		50		dB
Power Gain Flatness	ΔGp		±2		dB
Input Return Loss	S11			-10	dB
Harmonics @100W	H		-30		dBc
Spurious Signals	Spur		-55		dBc
Switch On/Off@10-90% Time ,1kHz	TON/OFF		2	5	μS
In/Output Impedance	Impedance		50		Ω
Operating Voltage	VDC	28	30	32	Volt
DC Current @100W	IDD		14		Amp

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	180x125x25 [7.09x4.92x0.98]	mm [inch]	Maximum
Weight	2.0[4.4]	kg [lbs]	Maximum
RF Connector Input	SMA, Female		
RF Connector Output	Type-N, Female		
DC Interface Connector	Hybrid,D-Sub 17-Pin, Male		
Cooling	External Heatsink Required (Not Supplied)		

ENVIRONMENTAL CHARACTERISTICS (Design to Meet)

Parameter	Minimum	Typical	Maximum	Units	Notes
Operating Temperature	-20		60	°C	
Non-operating Temperature	-25		65	°C	Storage
Relative Humidity (non-condensing)			95	%	

ABSOLUTE MAXIMUM RATING

Input RF drive level without damage	+10 dBm (Max)
Load VSWR @ POUT =100W	∞ @ all load phase & amplitude for duration of 1 minute; 3:1 @ all load phase & amplitude continuous
Over Temperature	85°C @ heatsink [restored @ 60°C]

Focus on Your Application***Chengdu KeyLink Wireless Technology Co., Ltd.***

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Specifications subject to change without notice

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DC INTERFACE CONNECTOR

Pin #	Description	Specifications
A1	GND	Ground
A2	VDD	30VDC
1	RS232(-)	Transmit data-R x D
2	GND	Ground
3	N/C	No electrical connection
4	CURRENT SENSE	Analog voltage relative to IDD @ 100mV per Ampere
5	TEMP SENSE	Analog voltage relative to Module's Temperature @ 10 mV/°C
6	ENABLE	Amplifier Enable: TTL Logic High (3.3V~5V) (Internally Pulled-Low)
7	N/C	No electrical connection
8	RS232(+)	Transmit data-TxD
9	FORWARD MONITOR	Analog voltage relative to forward power level
10	N/C	No electrical connection
11	REFLECTED POWER	Analog voltage relative to reflected power level
12	VOLTAGE MONITOR	Analog voltage relative to voltage level
13	ALARM	Alarm on @ Low output power.: TTL Logic High (2.8-5.5V)
14	GND	Ground
15	N/C	No electrical connection

MONITORING PARAMETERS FUNCTION VIA RS232

Forward power

Reflection power

Current of power supply

Temperature

PROTECTION AND WARNING FUNCTION

Over threshold of VSWR (High VSWR)

Over threshold of current

Over threshold of temperature

Warning low RF output power

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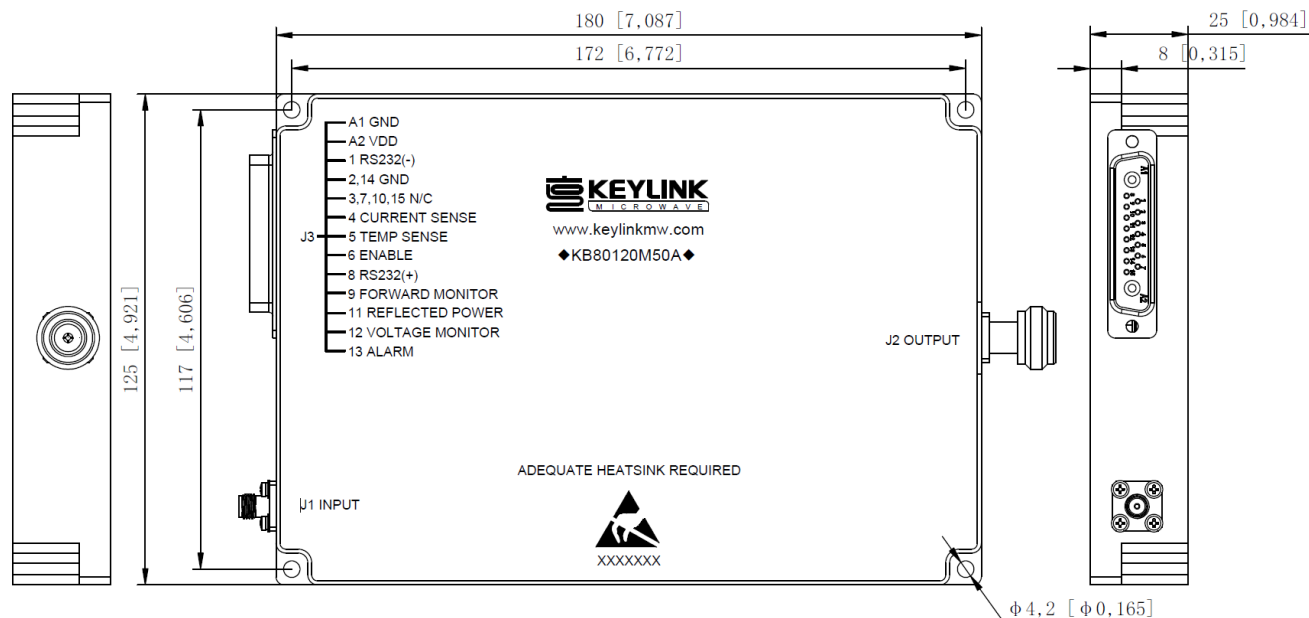
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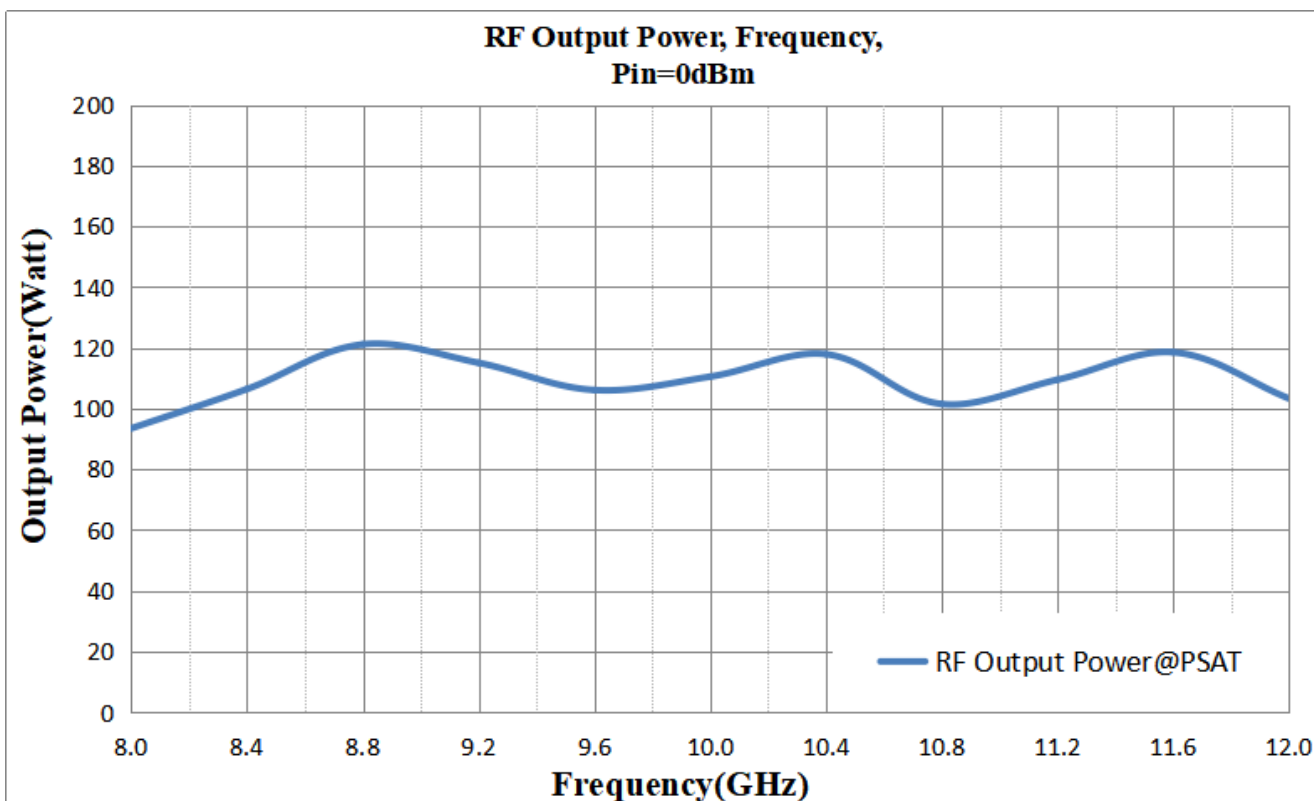
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OUTLINE DRAWING (All dimensions in mm [inch])



TYPICAL PERFORMANCE PLOTS(for reference only)



Note: Adequate heatsink required.

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