

## 500-1000MHz/100Watt/Module

Model Number: KB0510M50B

The model KB0510M50B is a high power amplifier operating between 500MHz and 1000MHz and offering a wide dynamic Range with 100 Watts typical saturated power. The employment of LDMOS and chip-and-wire technology in manufacturing ensures this module state-of-the-art power performance with excellent power-to-volume ratio. It is ideal for jamming, EMC, test and measurement applications.

### FEATURES:

- Small Size and light weight;
- Instantaneous ultra-broadband;
- 50 Ohms input and Output matched;
- Built-in control and protection circuits.

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

Parameter	Symbol	Minimum	Typical	Maximum	Units
Operating Frequency	BW	500		1000	MHz
RF Output Power	P <sub>out</sub>		100		Watt
Power Gain	G		50		dB
Power Gain Flatness	Δ G		±2		dB
Input Return Loss	S <sub>11</sub>			-10	dB
Harmonics @50W	H		-15		dBc
Spurious Signals	Spur		-60		dBc
In/Output Impedance			50		Ω
Operating Voltage	V <sub>DC</sub>	24	28	32	Volt
DC Current @100W	I <sub>DD</sub>		10		Amp
Efficiency @100W	η		35		%
Switch On/Off@10-90%Time	TON/OFF		2	5	μs

### MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	150x90x25 [5.9x3.5x1]	mm [inch]	Maximum
Weight	0.6[1.3]	kg [lbs]	Maximum
RF Connectors Input	SMA, Female		
RF Connectors Output	SMA, Female		
DC Interface Connector	D-Sub 9-Pin, Male		
Cooling	External Heatsink (Not Supplied)		

### ENVIRONMENTAL CHARACTERISTICS (Design to Meet)

Parameter	Minimum	Typical	Maximum	Units	Notes
Operating Temperature	-40		60	°C	
Non-operating Temperature	-40		65	°C	Storage
Relative Humidity (non-condensing)			95	%	

### Absolute Maximum Rating

Input RF drive level without	+10 dBm	Maximum
Load VSWR @ P <sub>OUT</sub> =50W	∞ @ all load phase & amplitude for duration of 1minute; 3:1 @ all load phase & amplitude continuous	
Thermal Overload	85°C ±5°C shutdown	Maximum

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Specifications subject to change without notice

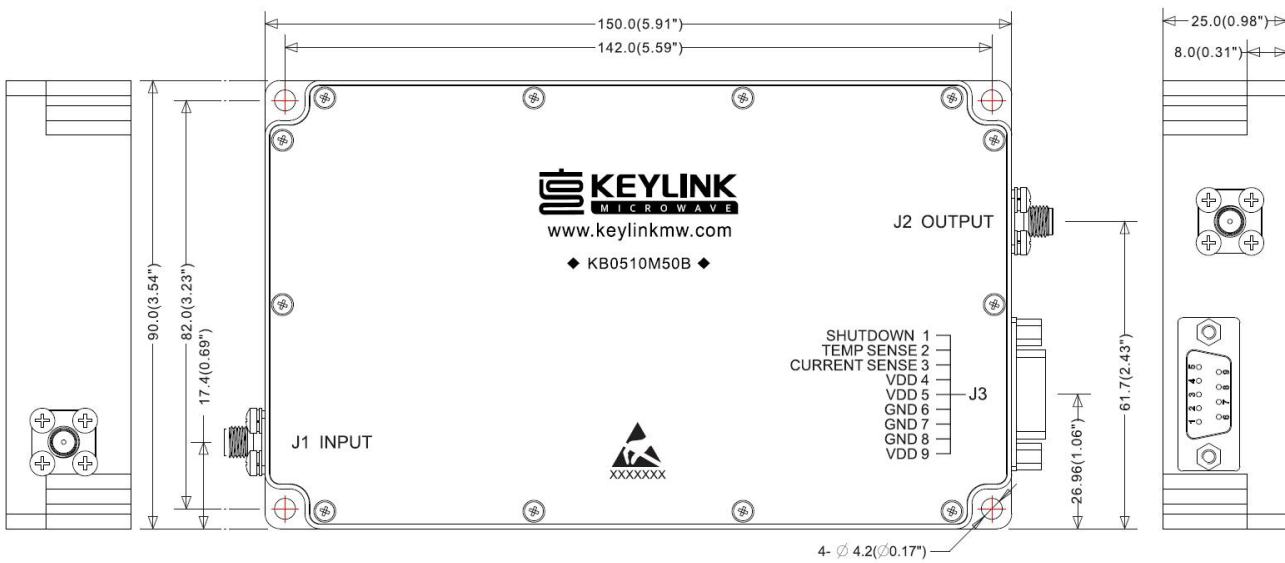
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DC INTERFACE CONNECTOR

Pin #	Description	Specifications
1	SHUTDOWN	Amplifier Disable: 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
4,5,9	VDD	28V <sub>DC</sub>
6,7,8	GND	Ground

OUTLINE DRAWING (All dimensions in mm [inch])



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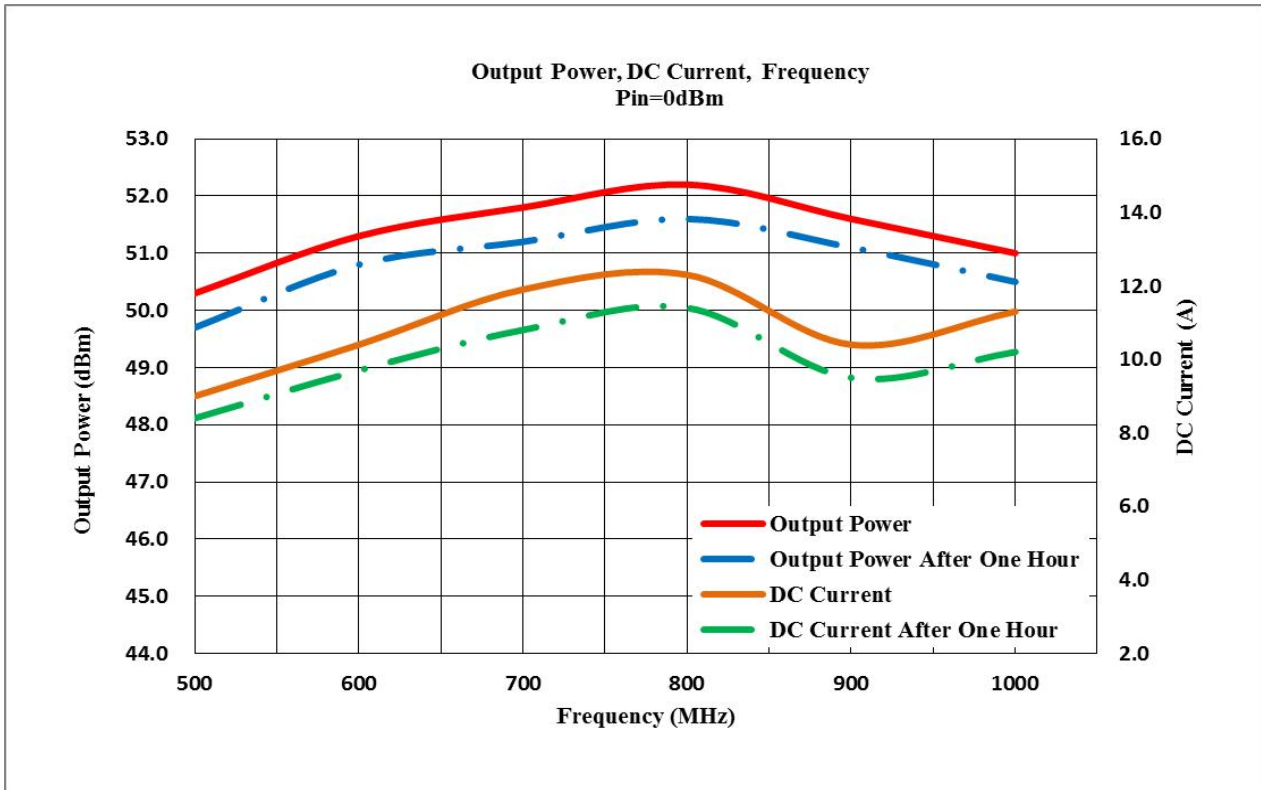
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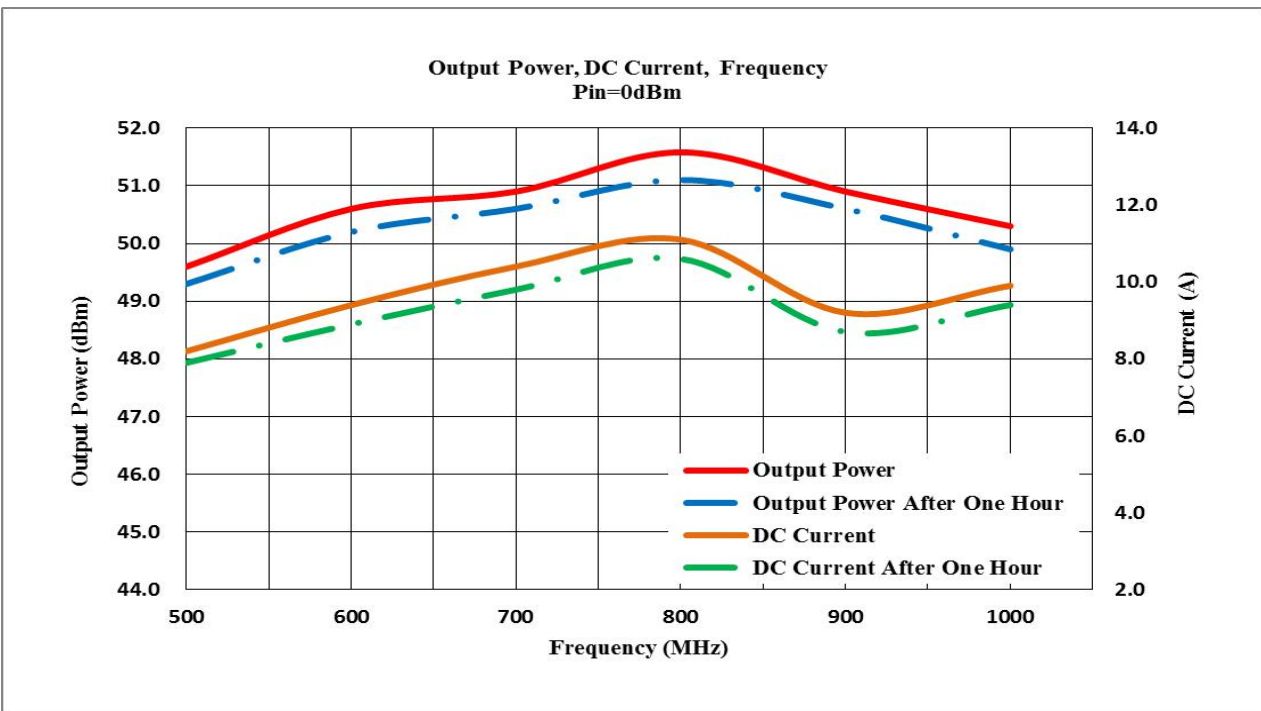
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TYPICAL PERFORMANCE PLOTS

Graph1: Output Power(Low temp.-20±3°C)



Graph2: Output Power(High temp.+60±3°C)



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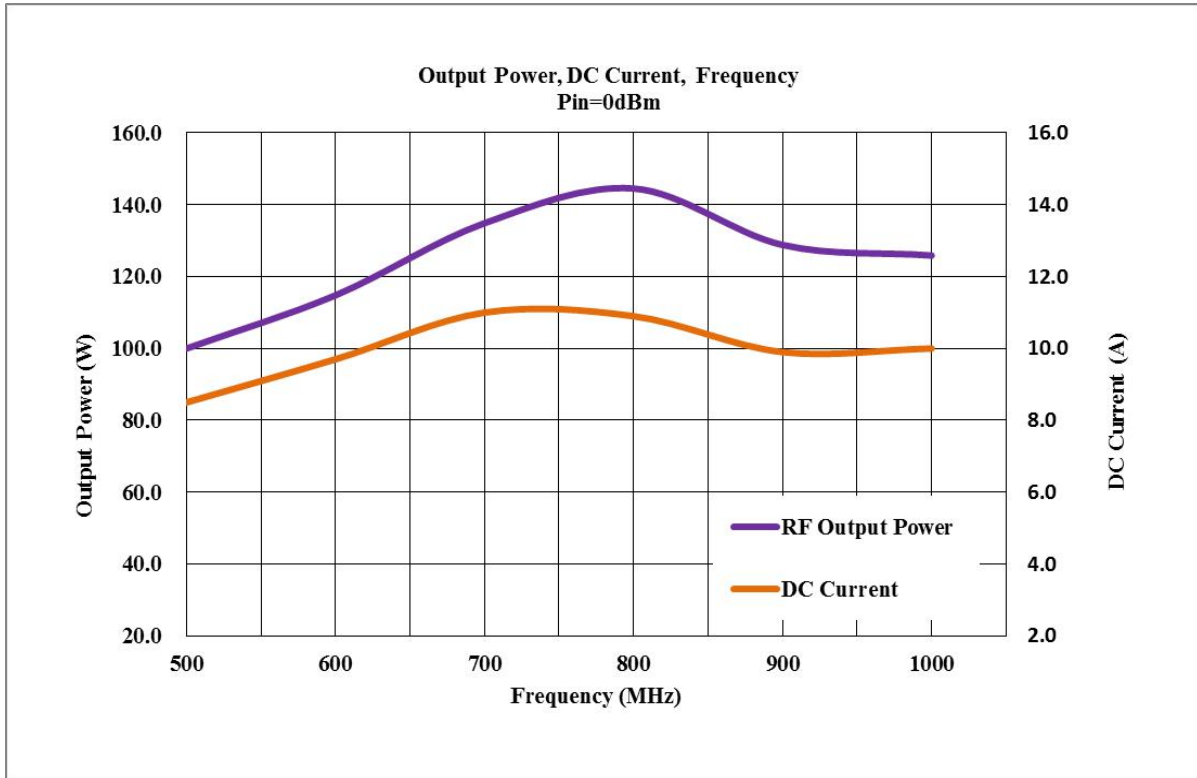
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Graph3: Output Power(Normal temp.+25±3°C)



Power Gain:



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Input Return Loss:



**Note:** Adequate heatsink required.

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