

20-520MHz/100Watt/Module

Model Number: KB002052M50B

The model KB002052M50B is a high power amplifier operating between 20MHz and 520MHz and offering a wide dynamic Range with 100 Watts typical saturated power. The employment of LD MOS 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
- Class AB

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

Parameter	Symbol	Minimu	Typ	Maximum	Units
Operating Frequency	BW	20		520	MHz
RF Output Power	P _{out}		100		Watt
Power Gain	G		50		dB
Small Signal Gain Flatness	Δ G _{SS}		±2		dB
Input Return Loss	S ₁₁			-10	dB
Harmonics @50W	H		-10		dBc
Spurious Signals	Spur		-60		dBc
In/Output Impedance			50		Ω
Operating Voltage	V _{DC}	24	28	32	Volt
DC Current @100W	I _{DD}		9		Amp

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	150x90x25 [5.91x3.54x0.98]	mm [inch]	Maximum
Weight	1.2 [2.6]	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	-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	Maximum
Load VSWR @ P _{OUT} =50W	∞ @ all load phase & amplitude for duration of 1 minute; 3:1 @ all load phase & amplitude continuous	
Thermal Overload	85°C ±5°C shutdown	Maximum

Focus on Your Application

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Specifications subject to change without notice

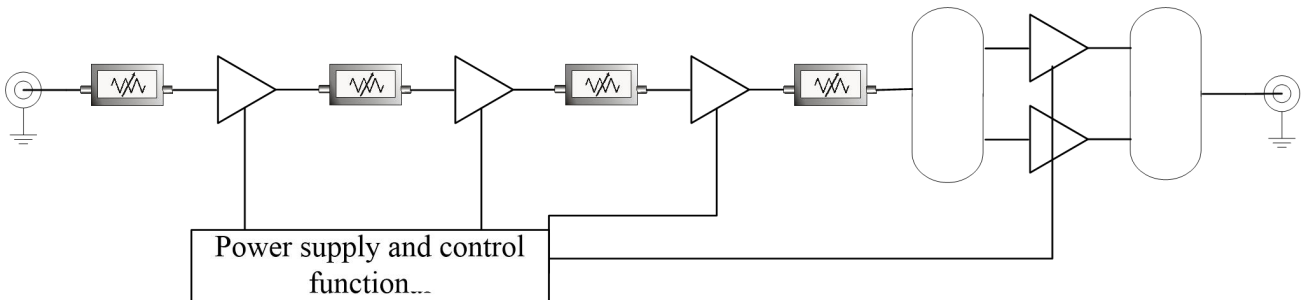
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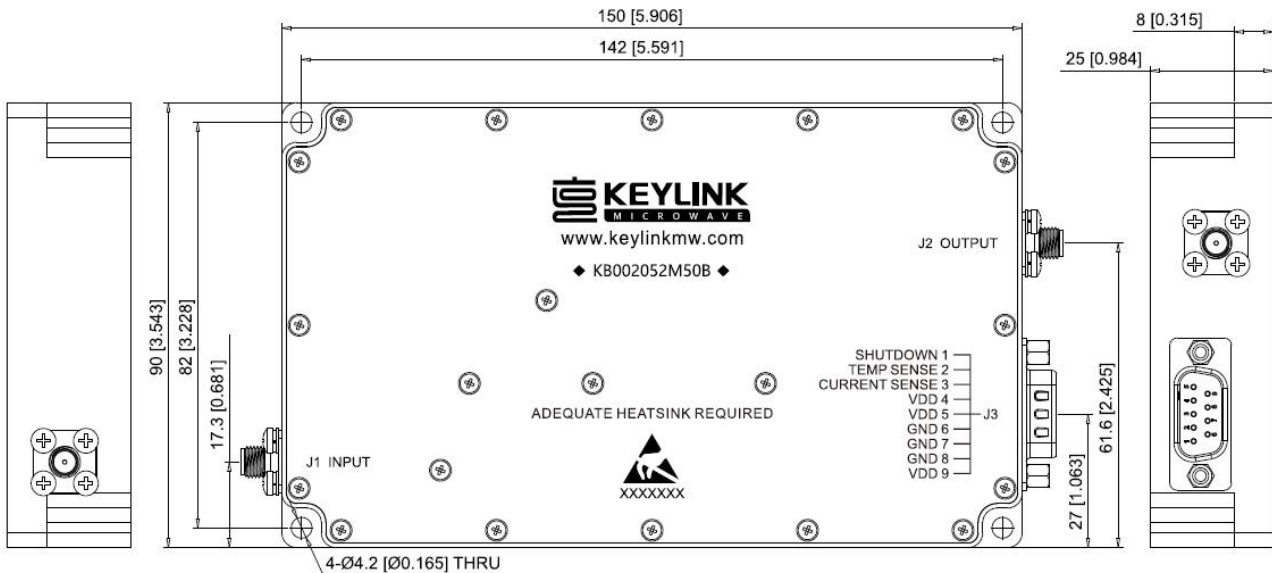
DC INTERFACE CONNECTOR

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 _{DD} @ 100mV per Ampere
4,5,9	VDD	28V _{Dc}
6,7,8	GND	Ground

Functional Diagram



OUTLINE DRAWING (All dimensions in mm [inch])



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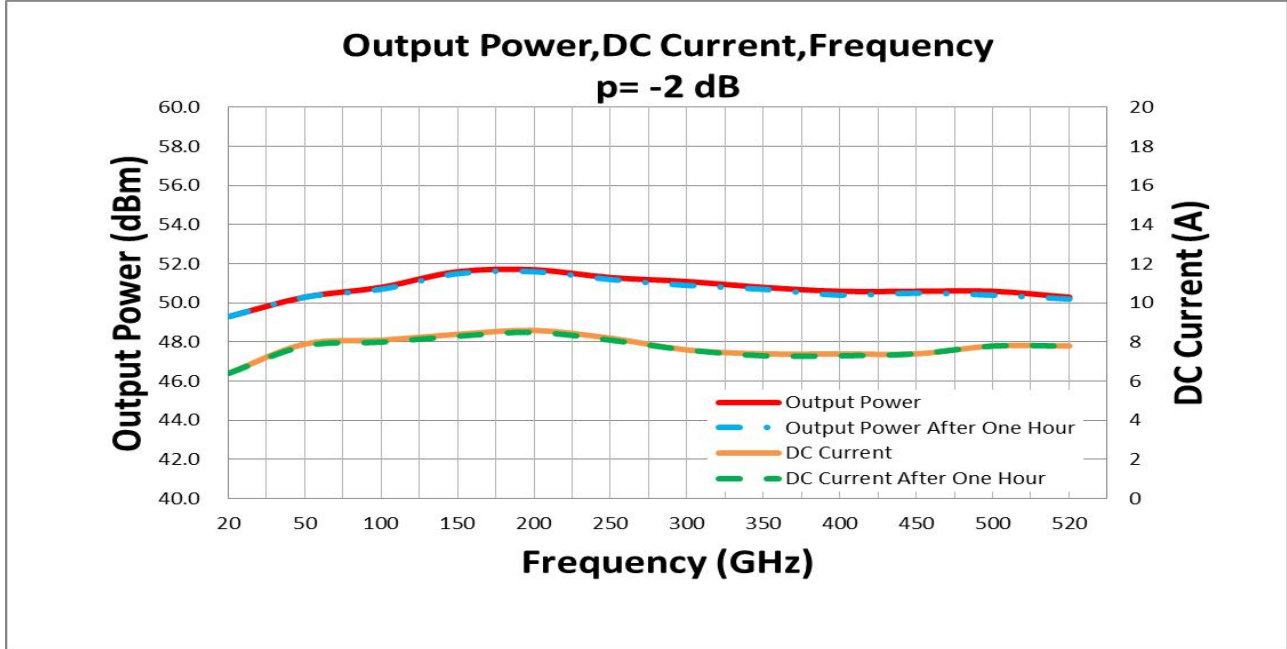
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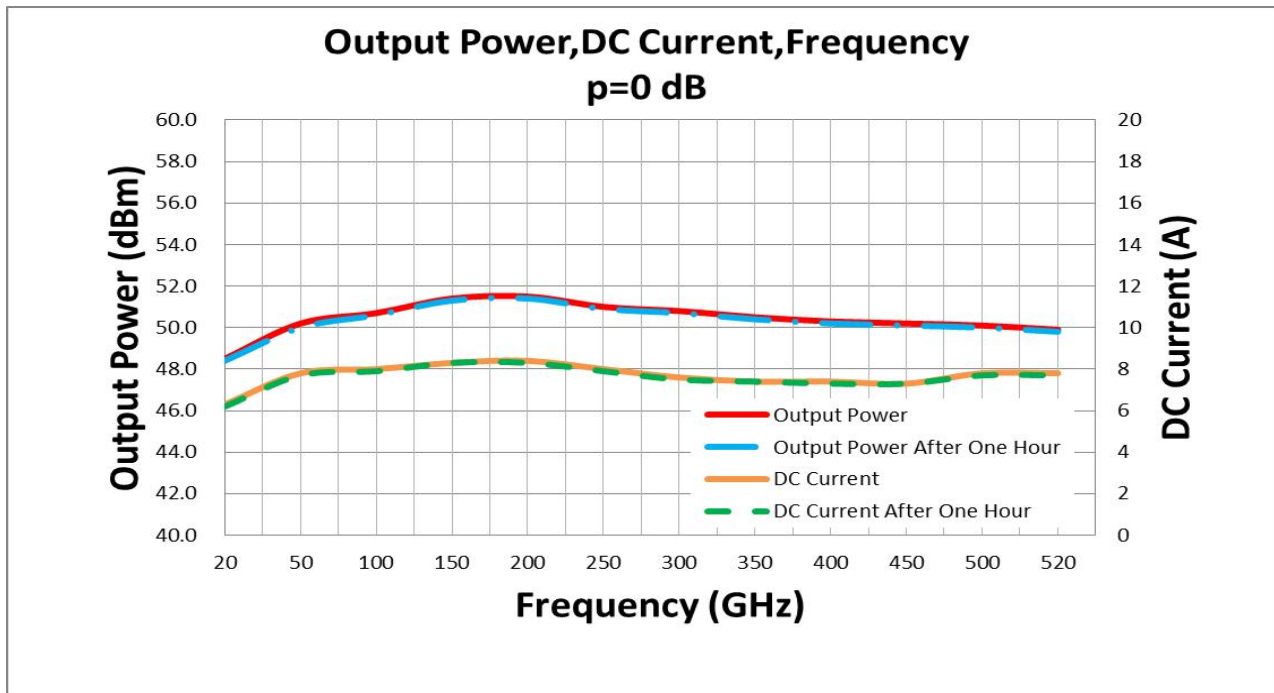
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TYPICAL PERFORMANCE PLOTS (for reference)

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



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



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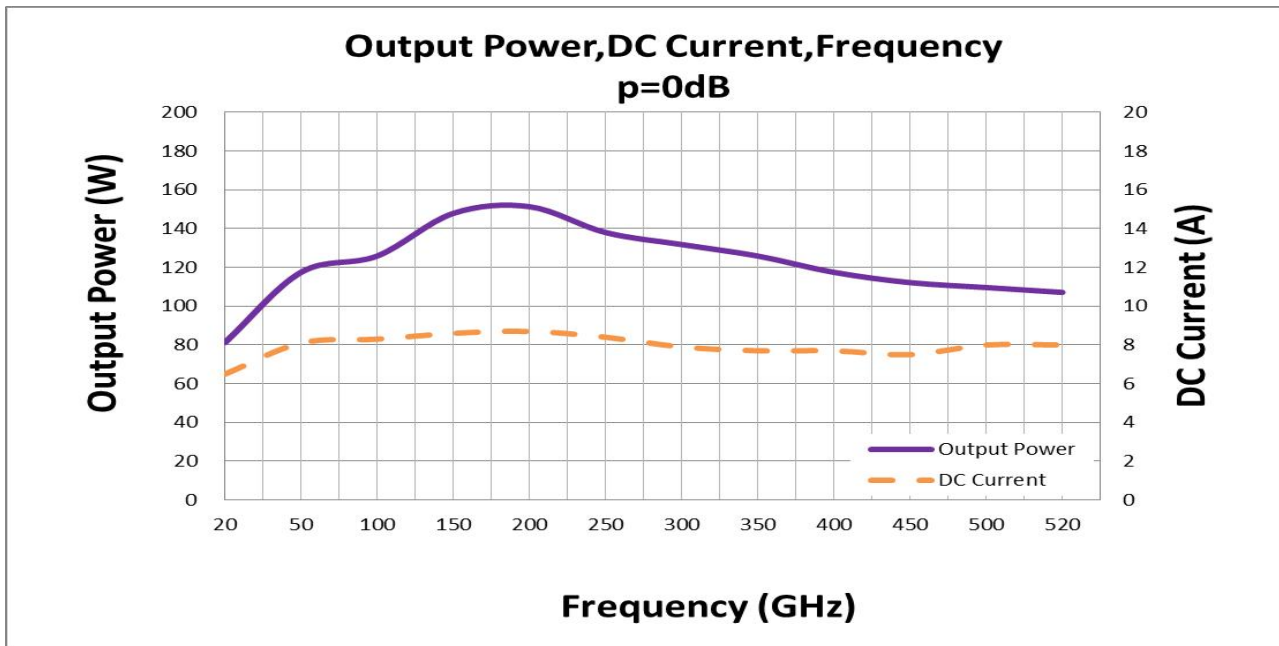
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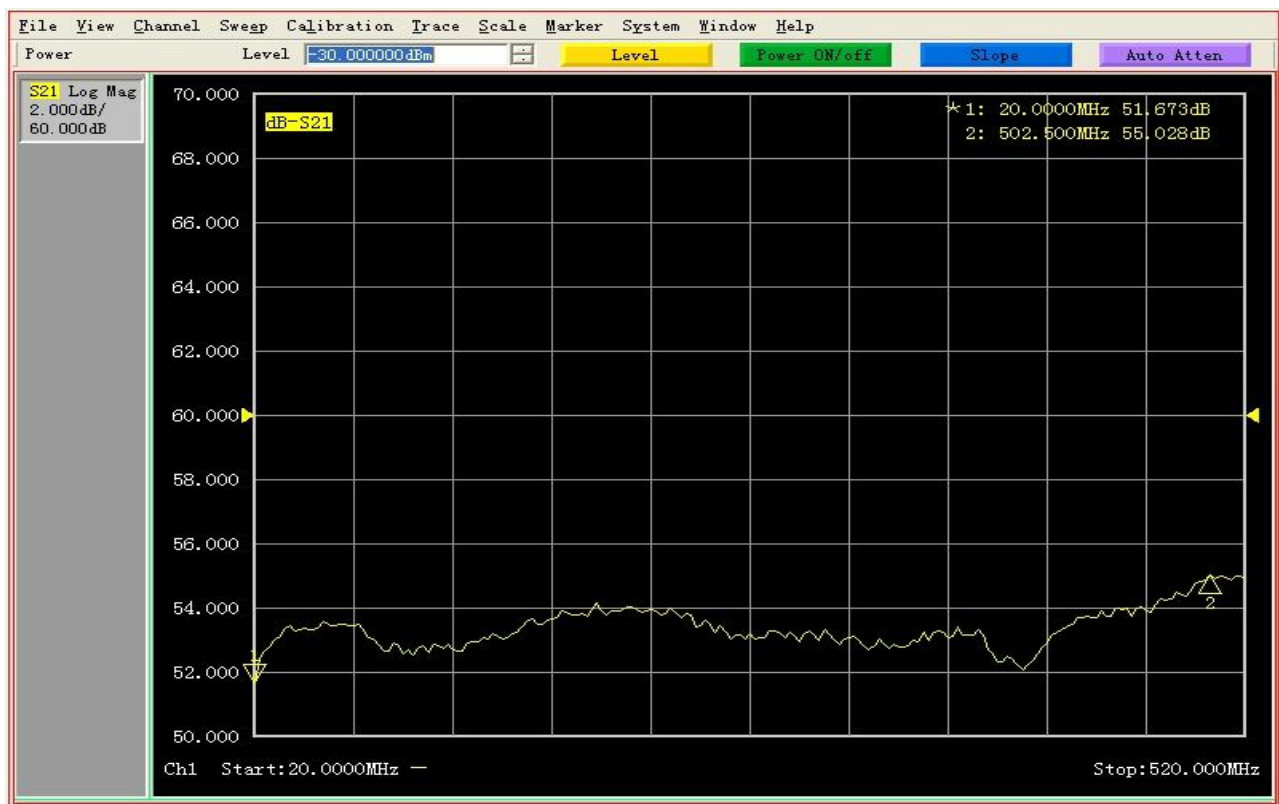
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Graph3: Output Power (Normal temp.+25±3°C)



Power Gain:



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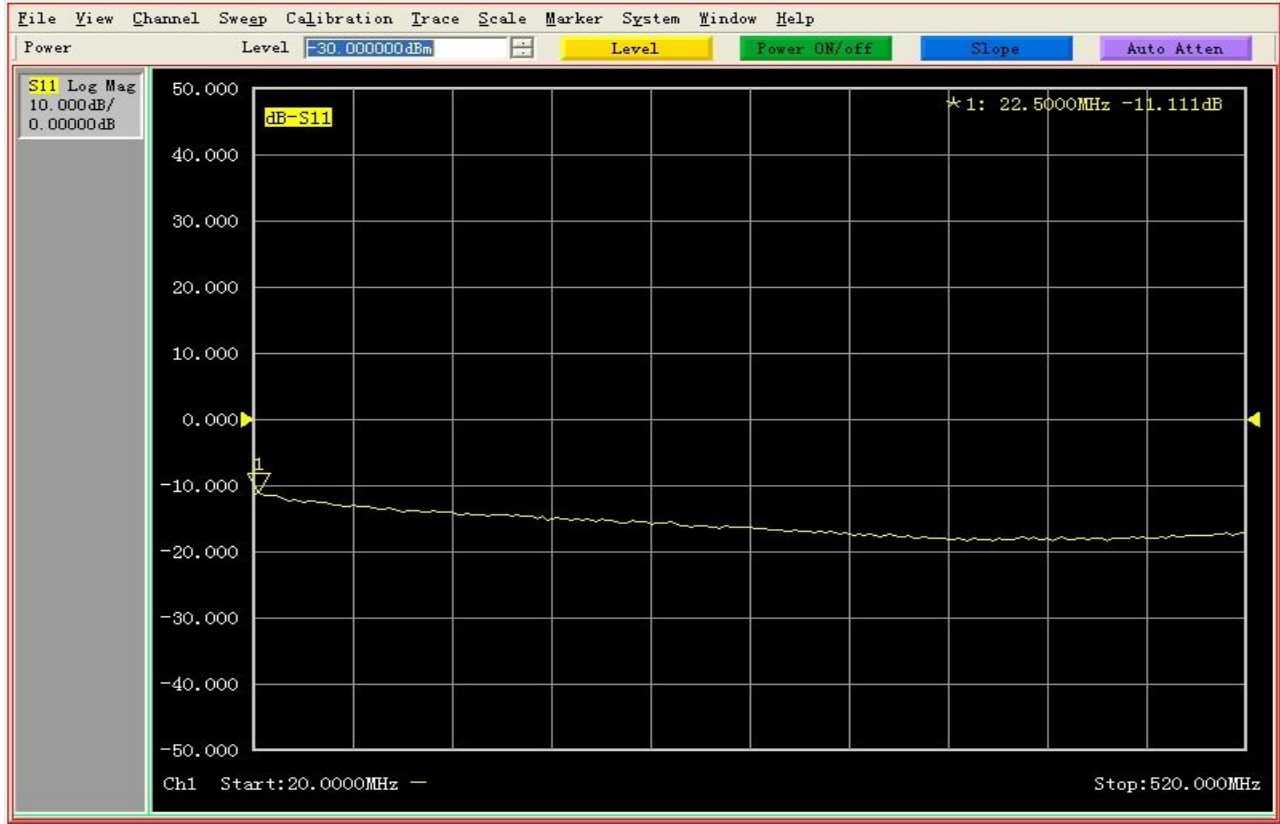
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Input Return Loss:



Note: Adequate heatsink required.

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