

## 20-520MHz/50Watt/Module

Model Number: KB002052M47A

The model KB002052M47A is a high power amplifier operating between 20MHz and 520MHz and offering a wide dynamic Range with 50 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.
- Class AB

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

Parameter	Symbol	Minimum	Typical	Maximum	Units
Operating Frequency	BW	20		520	MHz
RF Output Power	P <sub>out</sub>	50			Watt
RF Output Power@1dB	P <sub>1dB</sub>	30			Watt
Power Gain	G		47		dB
Small Gain Flatness	Δ G		±1.5		dB
Input Return Loss	S <sub>11</sub>			-10	dB
Harmonics @30W	H		-10		dBc
Spurious Signals	Spur		-60		dBc
In/Output Impedance			50		Ω
Operating Voltage	V <sub>DC</sub>	24	28	32	Volt
DC Current @50W	I <sub>DD</sub>		7		Amp

### MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	150x90x25 [5.9x3.5x1]	mm [inch]	Maximum
Weight	1.2 [2.2]	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 <sub>OUT</sub> =25W	∞ @ 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

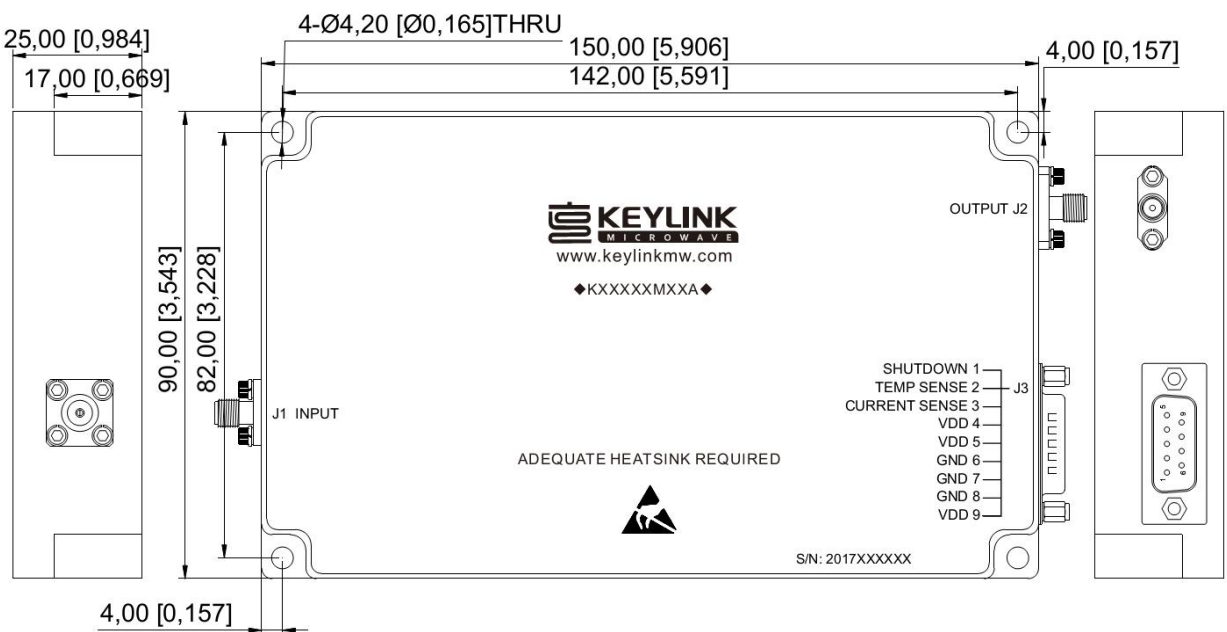
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DC INTERFACE CONNECTOR

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 <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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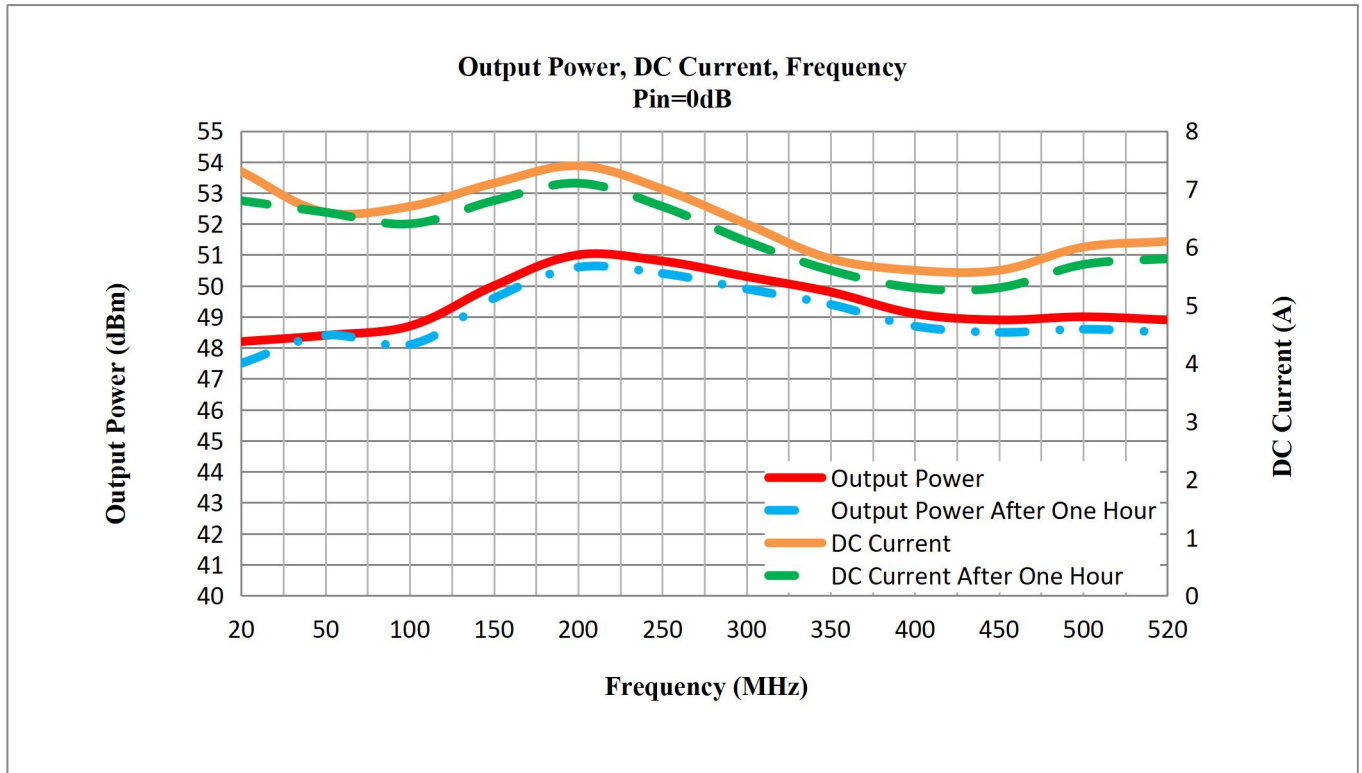
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TYPICAL PERFORMANCE PLOTS (for reference)

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



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

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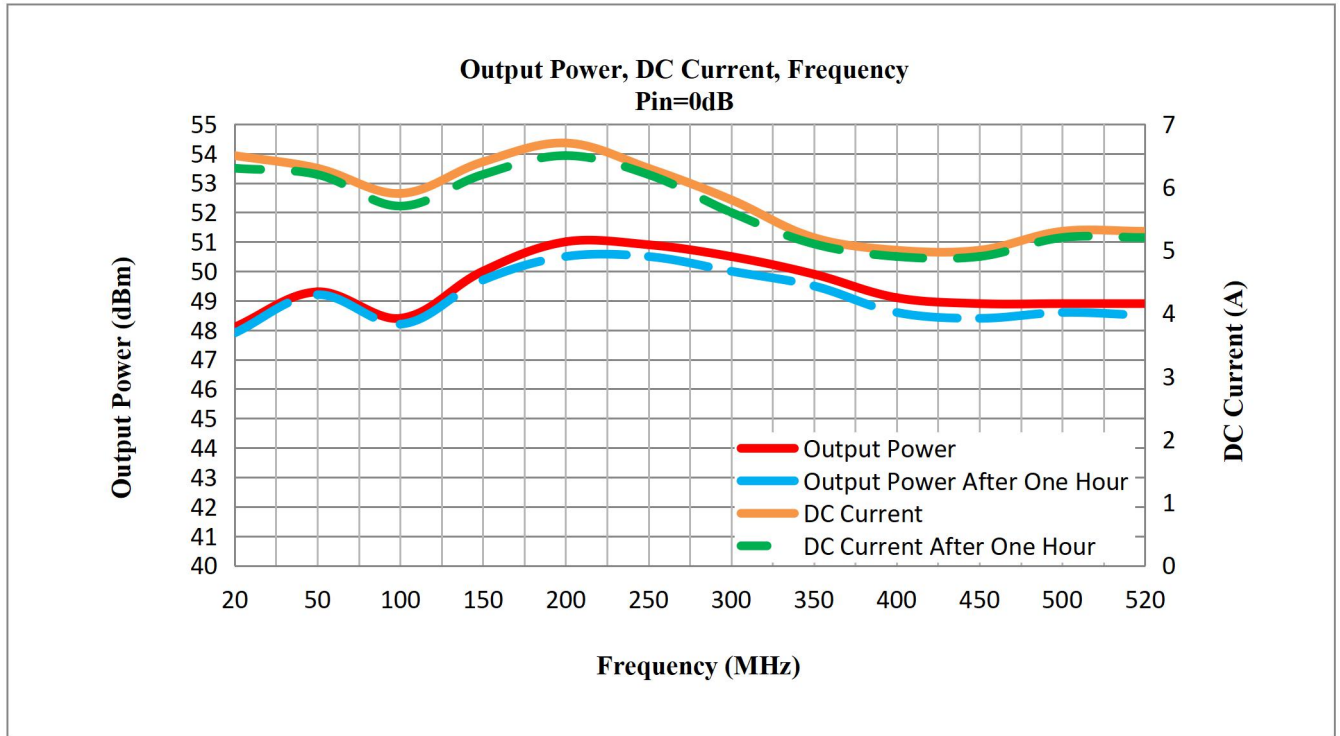
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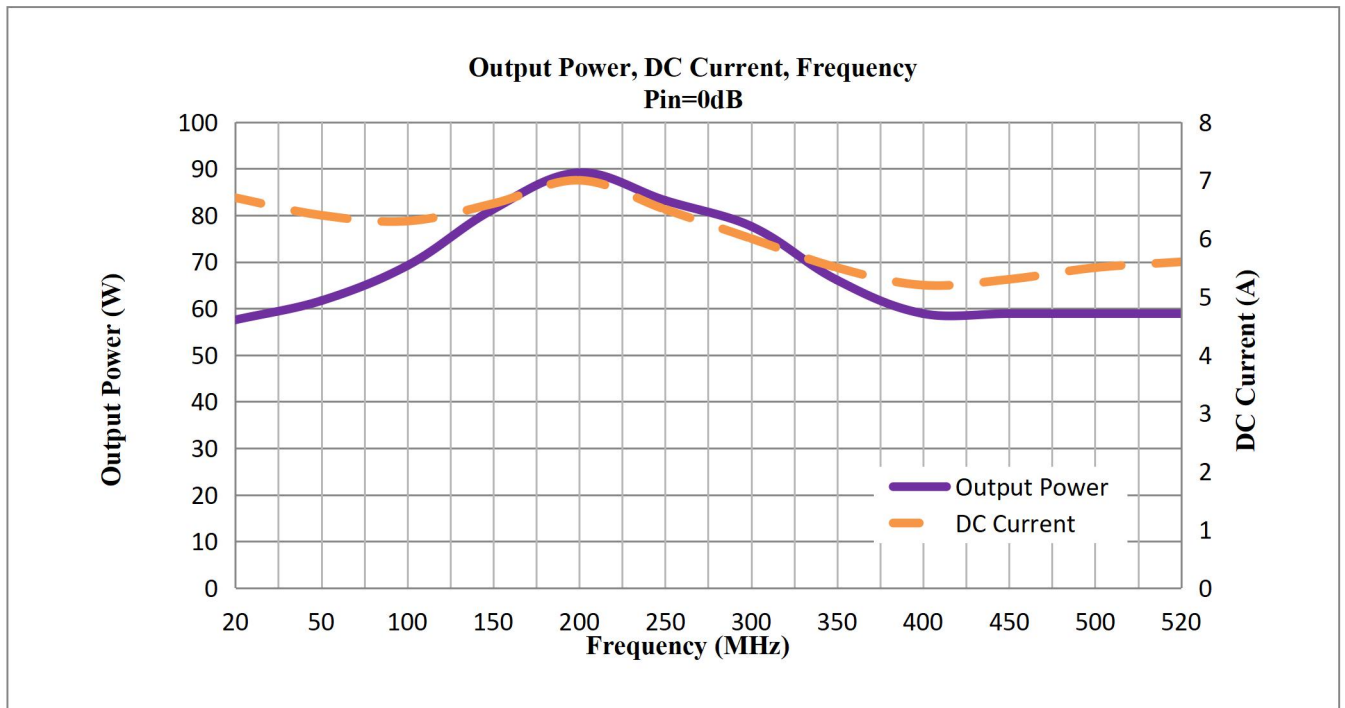
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Graph3: Output Power(Normal temp.+25±3℃)



Power Gain:

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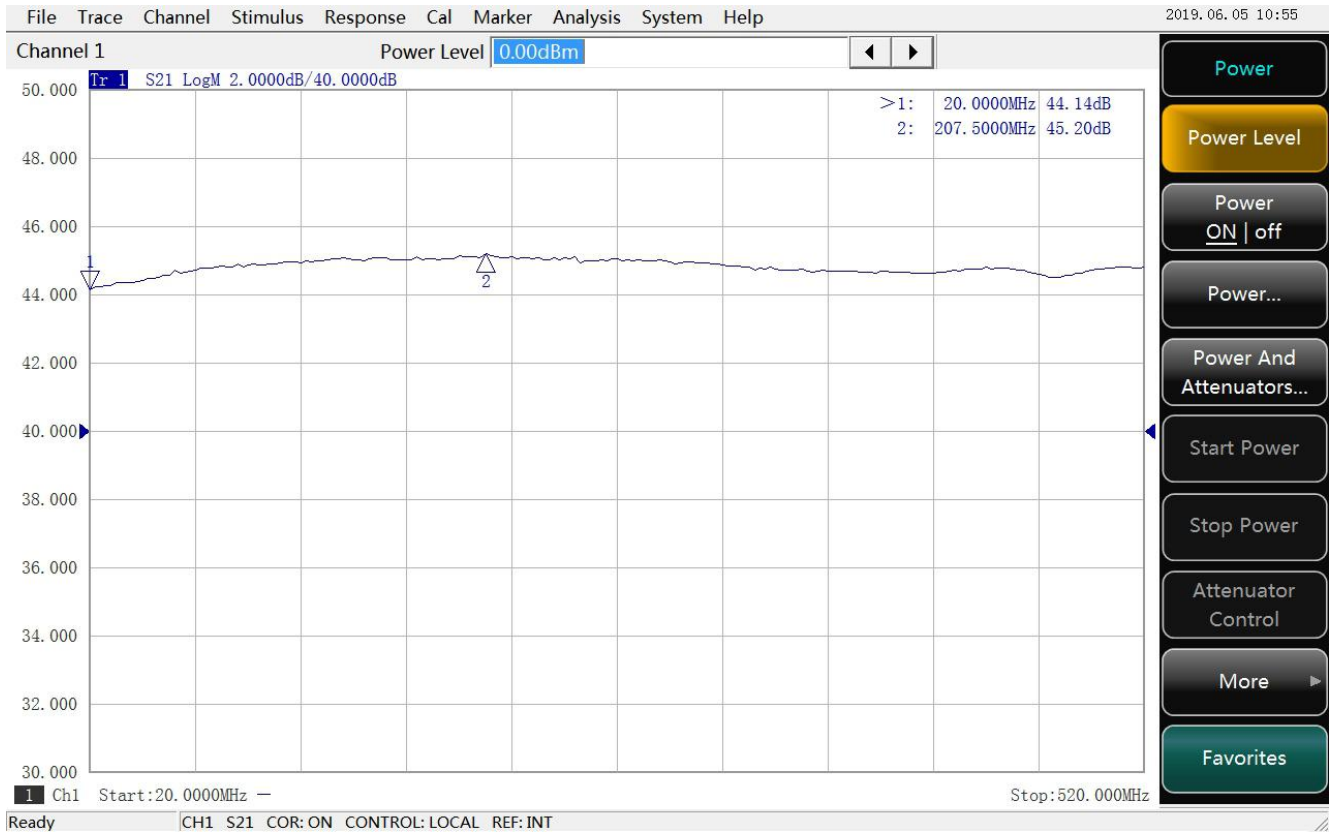
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Small Gain Flatness:



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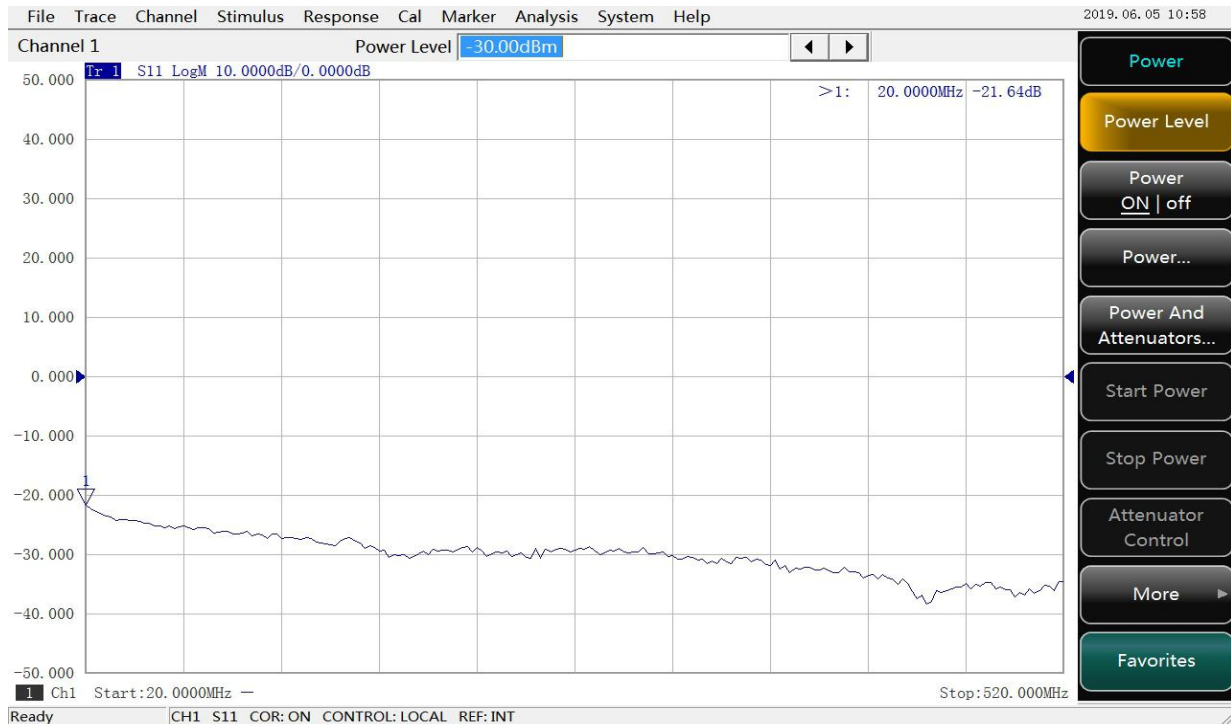
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Input Return Loss:



**Note:** Adequate heatsink required.

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