

## 2000-4000MHz/20Watt/Module

Model Number: KB2040M43A

The model KB2040M43A is a multi-octave high power amplifier operating between 2000 MHz and 4000 MHz and offering a wide dynamic Range with 20 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 broadband high power RF, linear applications.

### FEATURES:

- Broadband & High power;
- High Efficiency;
- Great Linearity;
- Small Size & Light Weight;
- Low Distortion

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

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	2000		4000	MHz
RF Output Power	P <sub>out</sub>		20		Watt
Power Gain	G <sub>p</sub>		43		dB
Power Gain Flatness	Δ G <sub>p</sub>		±2.5		dB
Input Return Loss	S <sub>11</sub>			-10	dB
Harmonics @15W	H		-15		dBc
Spurious Signals	Spur		-55		dBc
Switch On/Off@10-90% Time	TON/OFF		2	5	μS
In/Output Impedance	Impedance		50		Ω
Operating Voltage	VDC	26	28	30	Volt
DC Current @20W	IDD		5		Amp

### MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	150x90x25 [5.9x3.5x0.98]	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 Required (Not Supplied)		

### ENVIRONMENTAL CHARACTERISTICS (Design to Meet)

Parameter	Minimum	Typical	Maximum	Units	Notes
Operating Temperature	-20		55	°C	
Non-operating Temperature	-25		60	°C	Storage
Relative Humidity (non-condensing)			95	%	

### ABSOLUTE MAXIMUM RATING

Input RF drive level without damage	+10 dBm (Max)
Load VSWR @ POUT =20W	∞ @ all load phase & amplitude for duration of 1 minutes; 3:1 @ all load phase & amplitude continuous
Over Temperature	85°C @ heatsink [restored @ 60°C]

*Focus on Your Application*

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Specifications subject to change without notice

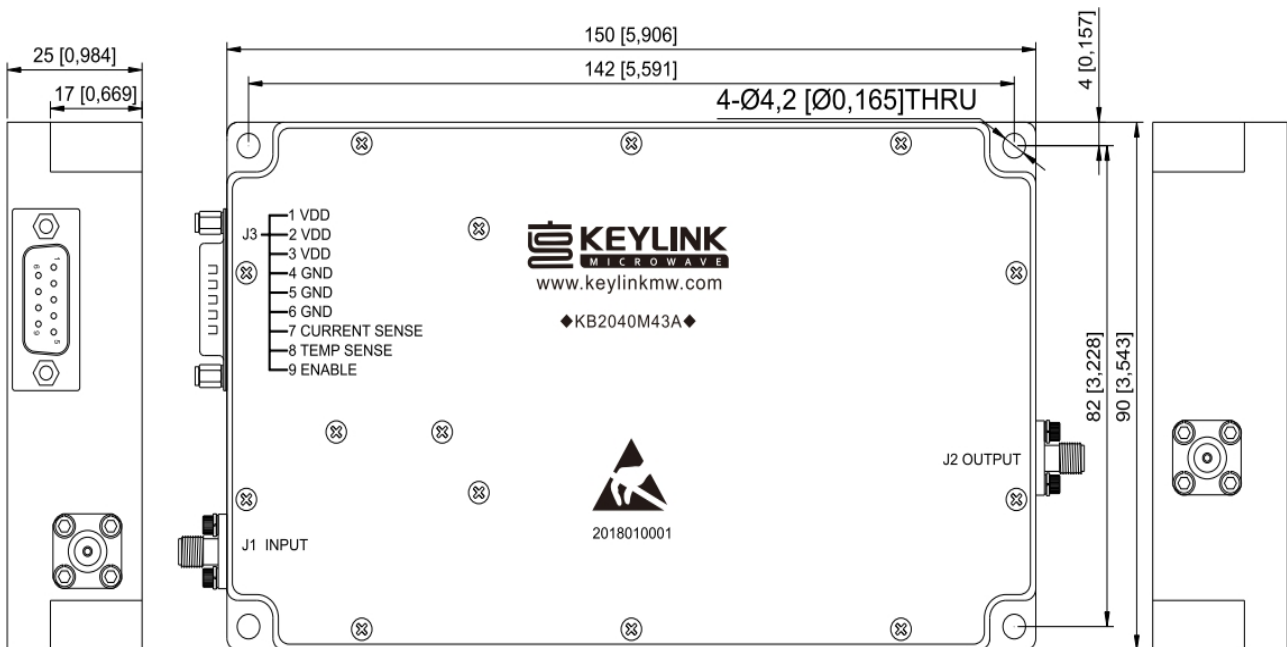
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DC INTERFACE CONNECTOR

Pin #	Description	Specifications
1	VDD	28V <sub>DC</sub>
2	VDD	28V <sub>DC</sub>
3	VDD	28V <sub>DC</sub>
4	GND	Ground
5	GND	Ground
6	GND	Ground
7	CURRENT SENSE	Analog voltage relative to I <sub>DD</sub> @ 100mV per Ampere
8	TEMP SENSE	Analog voltage relative to Module's Temperature @ 10 mV/°C
9	ENABLE	Amplifier Enable: TTL Logic High (3.3V) (Internally Pulled-Low)

OUTLINE DRAWING (All dimensions in mm [inch])



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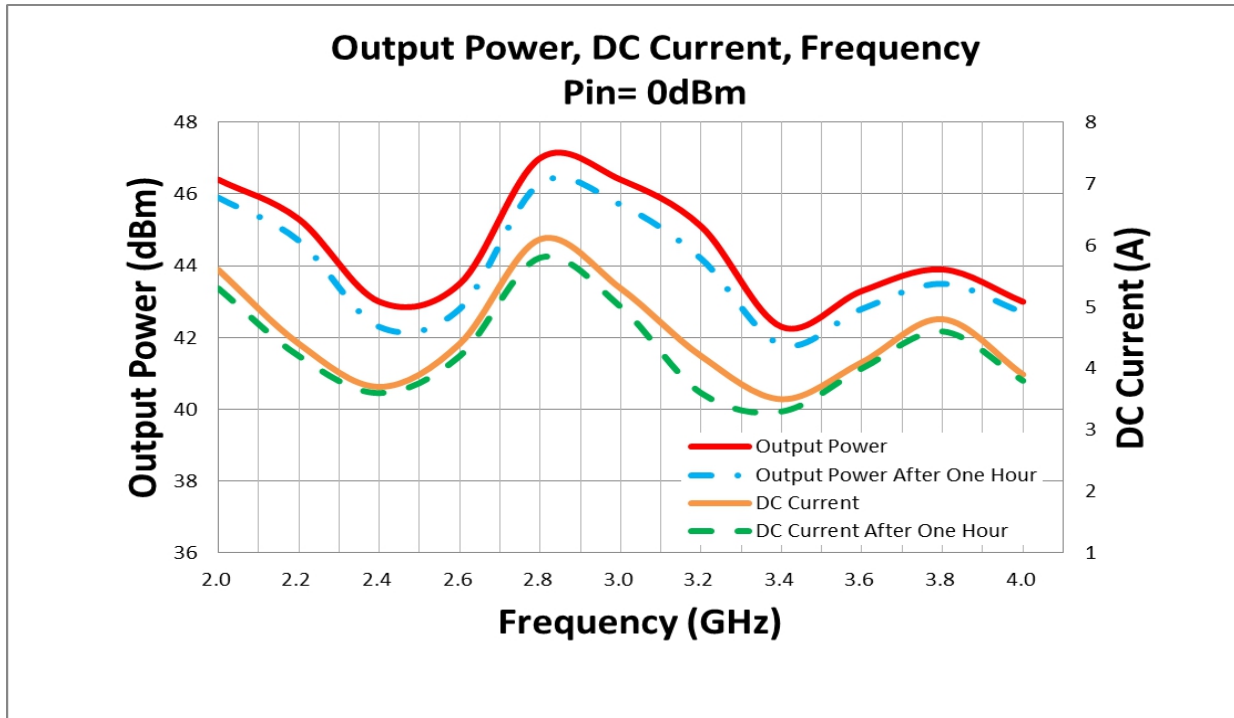
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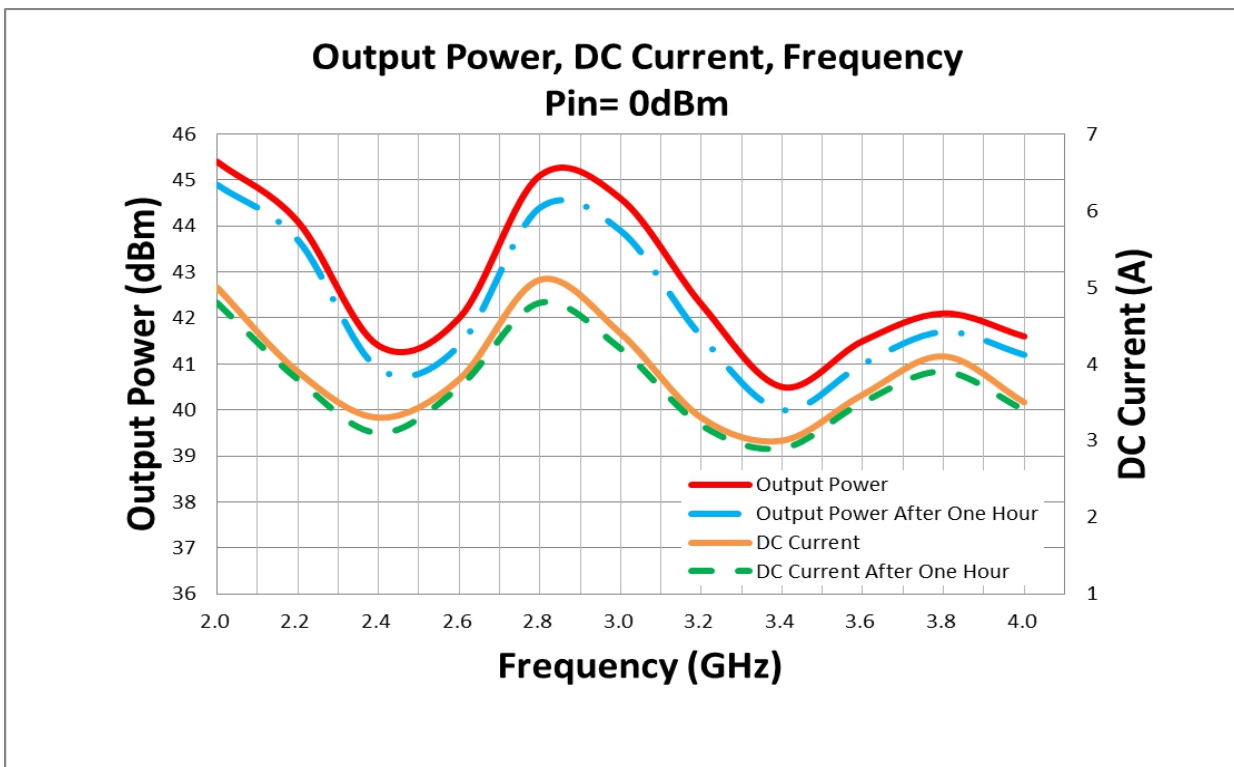
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TYPICAL PERFORMANCE PLOTS(For reference only)

Graph 1: Output Power (Low temp. -20±3°C)



Graph 2: Output Power (High temp. +55±3°C)



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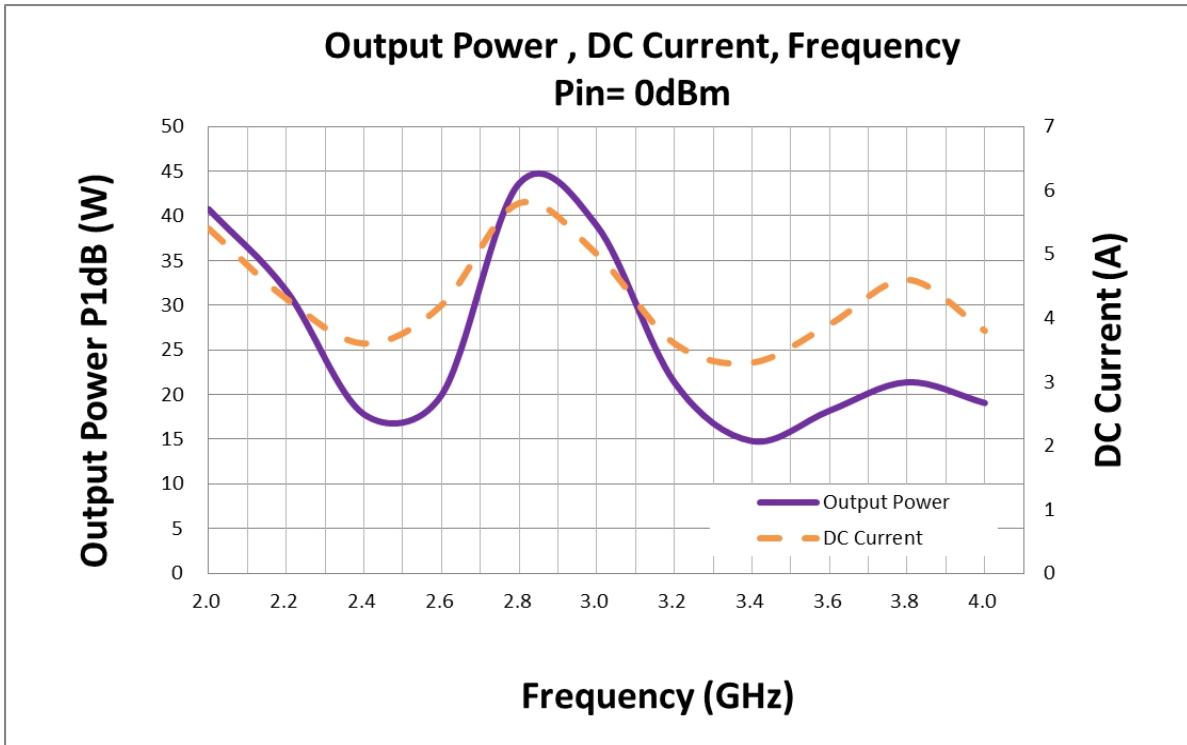
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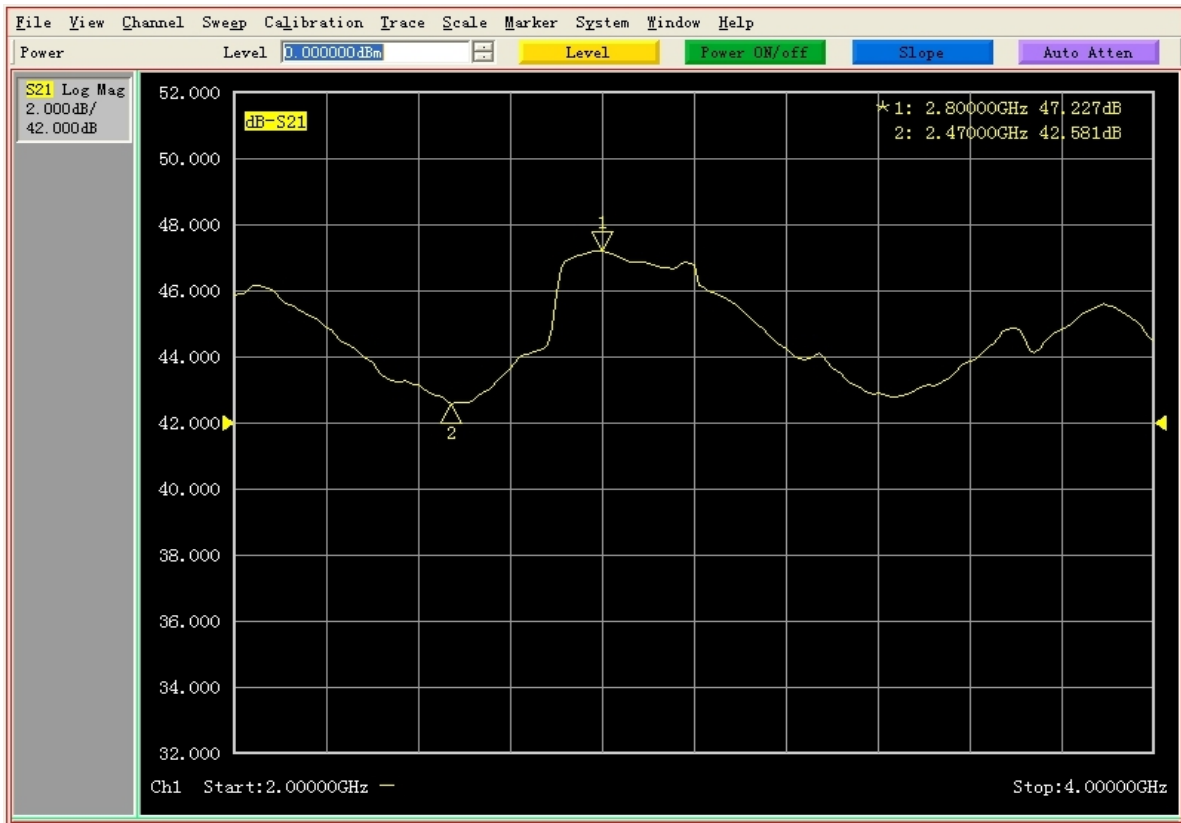
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Graph 3: Output Power (Normal temp. +25±3°C)



Power Gain:



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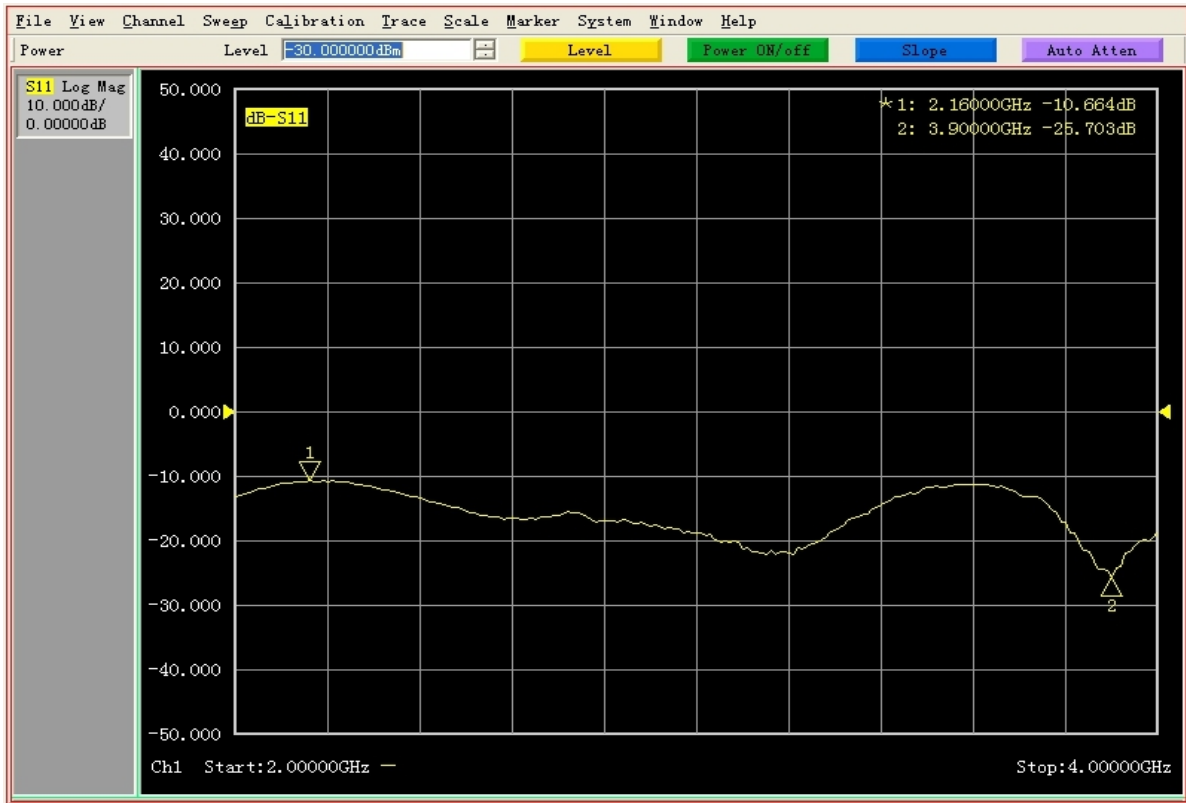
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Input Return Loss:



**Note:** Adequate heatsink required.

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