

20-520MHz/20Watt/Module

Model Number: KB002052M43A

The model KB002052M43A is a multi-octave high power amplifier operating between 20MHz and 520MHz and offering a wide dynamic Range with 20 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	20		520	MHz
RF Output Power	PSAT	12	20		Watt
Power Gain	G		43		dB
Power Gain Flatness	Δ G		±2		dB
Third Order Intercept Point2 - Tone @ 27dBm/Tone, Δ = 500Hz	IP3		40		dBm
Input Return Loss	S ₁₁			-10	dB
Harmonics @10W	H		-15		dBc
Spurious Signals	Spur		-60		dBc
In/Output Impedance			50		Ω
Operating Voltage	V _{DC}	24	28	32	Volt
DC Current @20W	I _{DD}		2.5		Amp

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	120x80x27 [4.7x3.1x1.1]	mm [inch]	Maximum
Weight	1[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	-40		60	°C	
Non-operating Temperature	-45		85	°C	Storage
Relative Humidity (non-condensing)			95	%	

Absolute Maximum Rating

Input RF drive level without damage	+10 dBm	Maximum
Load VSWR @ POUT =10W	∞ @ all load phase & amplitude for duration of 30 minute; 4:1 @ all load phase & amplitude continuous	
Thermal Overload	85°C shutdown	Maximum

Focus on Your Application

Chengdu KeyLink Wireless Technology Co., Ltd.

>> 5-2, Huidu Headquarters Park, High-Tech(West) Zone, Chengdu, 611731, P. R. China

>> Phone: +86(28)87870761*8708 >> Fax: +86(28)87883266

>> Email: sales@keylinkmw.com >> www.keylinkmw.com

Specifications subject to change without notice

Broadband High Power Amplifier Module (SSPA)

REV.3.0_2025.06.04

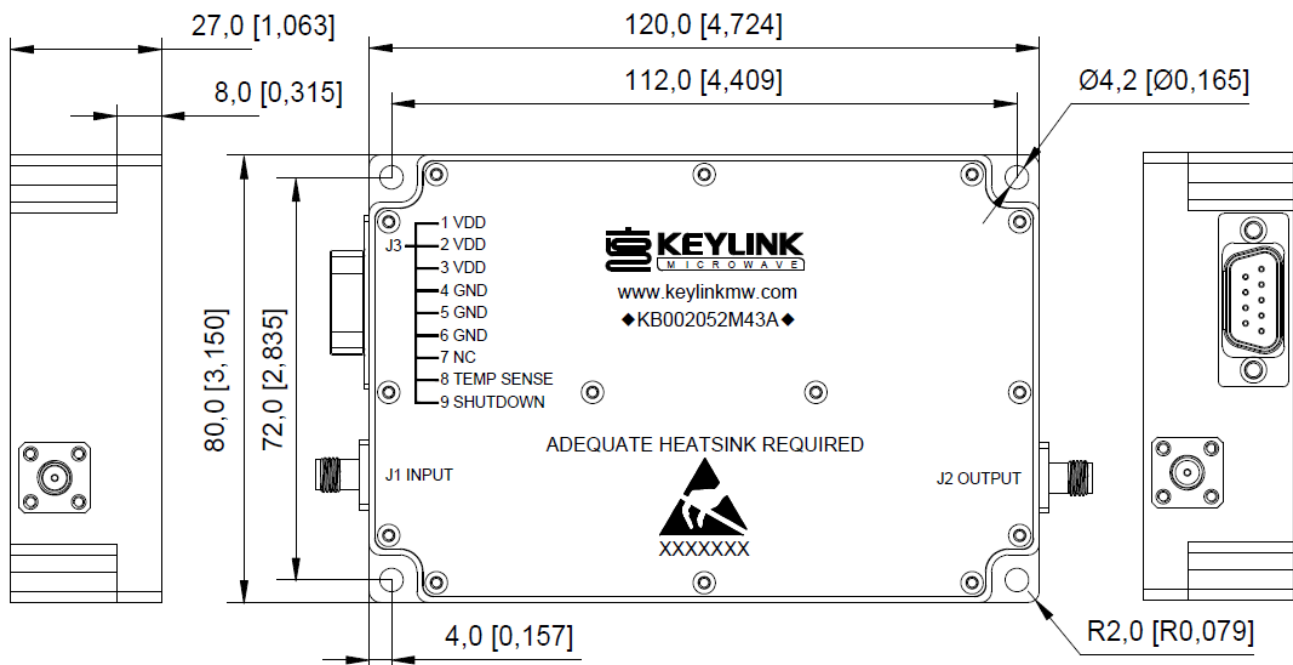
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DC INTERFACE CONNECTOR

Pin #	Description	Specifications
1.2.3	VDD	28VDC
4.5.6	GND	Ground
7	NC	No electrical connection
8	TEMP SENSE	Analog voltage relative to Module's Temperature @ 10 mV/°C
9	Shutdown	Amplifier Disable: TTL Logic High (3.3V) (Internally Pulled-Low)

OUTLINE DRAWING(All dimensions in mm [inch])



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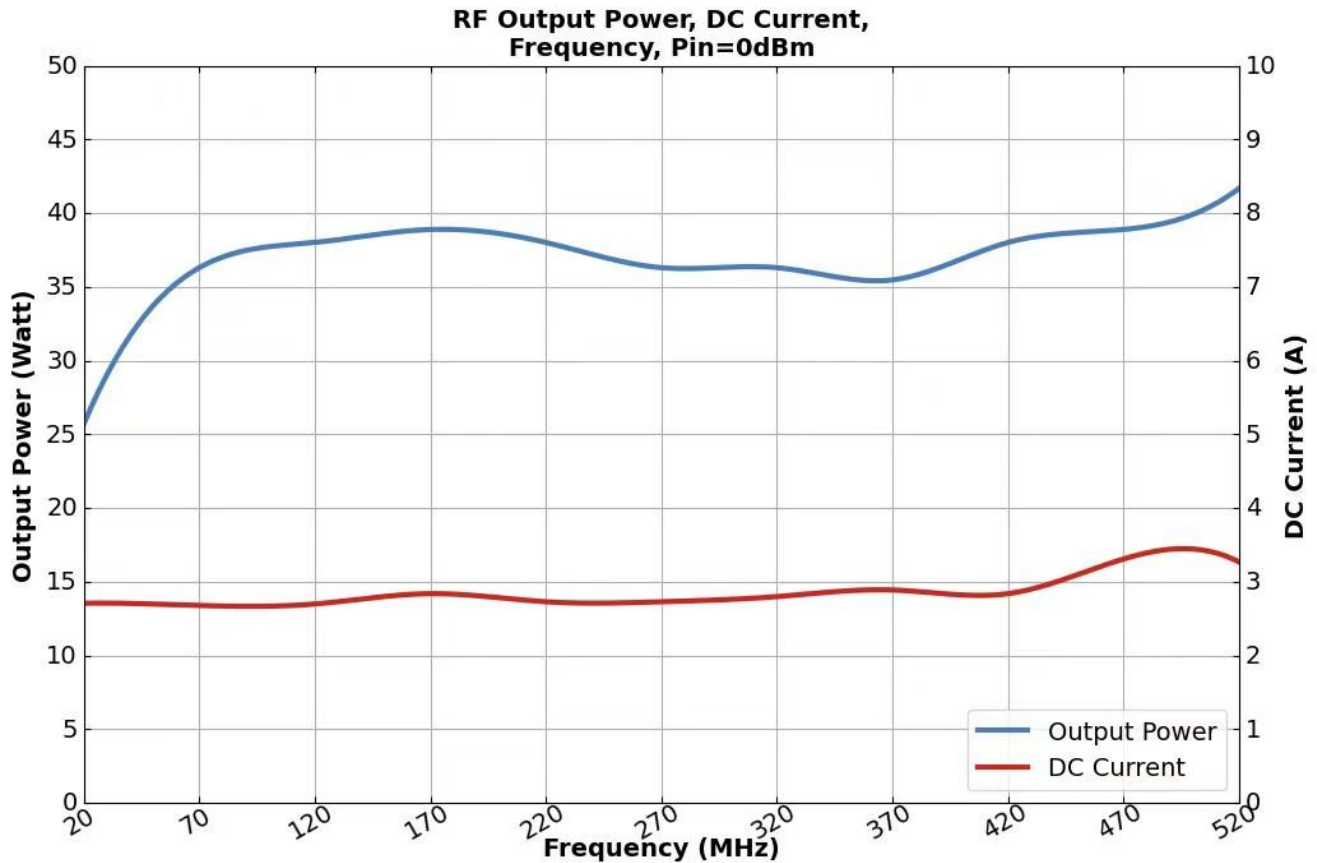
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TYPICAL PERFORMANCE PLOTS (FOR REFERENCE ONLY)



Note: Adequate heatsink required.

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