

2.4-2.5GHz/100Watt/Module

Model Number: KN2450M50A

The model KN2450M50A is a narrowband high power amplifier operating between 2.4GHz and 2.5GHz and offering a dynamic range with 100Watts typical saturated power. The employment of advanced high power devices in manufacturing ensures this module exceptional power performance, long term reliability and high efficiency.

FEATURES:

- Narrowband & 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	2.4		2.5	GHz
RF Output Power @P-1	P-1	80	100		Watt
Power Gain	Gp		50		dB
Power Gain Flatness	Δ Gp		±1.0		dB
Input Return Loss	S11		-15	-10	dB
Harmonics @80W	H		-35		dBc
Spurious Signals	Spur		-60		dBc
Switch On/Off@10-90% Time	TON/OFF		2		μs
In/Output Impedance	Impedance		50		Ω
Operating Voltage	VDC		28		Volt
DC Current @100W	IDD		10		Amp

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	210x90x25[8.26x3.54x0.98]	mm [inch]	Maximum
Weight	1.2 [2.6]	kg [lbs]	Maximum
RF Connector Input	SMA, Female		
RF Connector Output	N-KFD, Female		
DC Interface Connector	Hybrid, D-Sub 7-Pin, Male		
Cooling	External Heatsink Required (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	+5 dBm (Max)
Load VSWR @ POUT =10W	∞ @ all load phase & amplitude for duration of 1 minute; 3:1 @ all load phase & amplitude continuous
Over Temperature	85°C @ heatsink [restored @ 60°C]

Focus on Your Application

Chengdu KeyLink Microwave 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

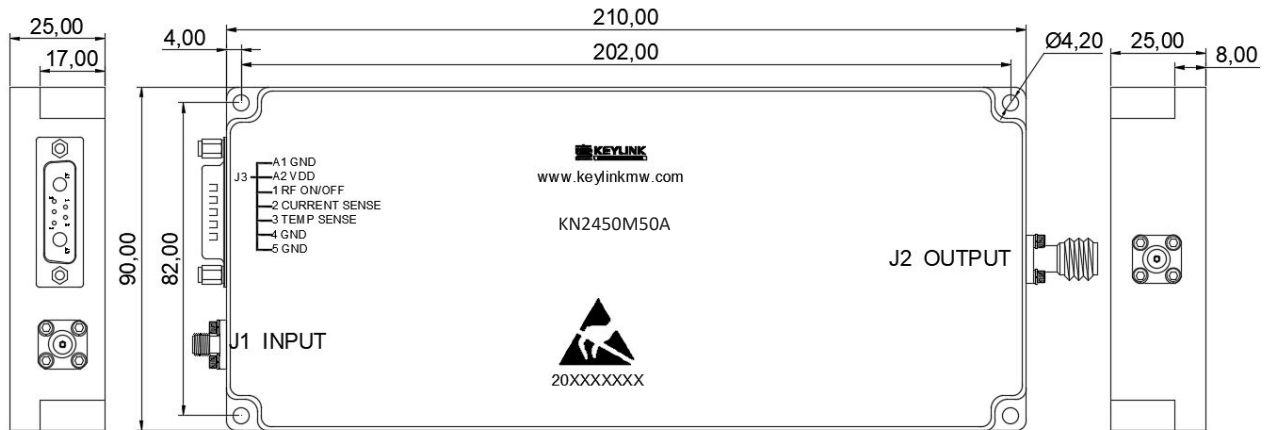
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DC INTERFACE CONNECTOR

Pin #	Description	Specifications
A1	VDD	28VDC
A2	GND	Ground
1	SHUTDOWN	Amplifier Disable: TTL Logic High (3.3V) (Internally Pulled-Low)
2	CURRENT SENSE	Analog voltage relative to IDD @ 100mV per Ampere
3	TEMP SENSE	Analog voltage relative to Module's Temperature @ 10 mV/°C
4	GND	Ground
5	GND	Ground

OUTLINE DRAWING (All dimensions in mm [inch])



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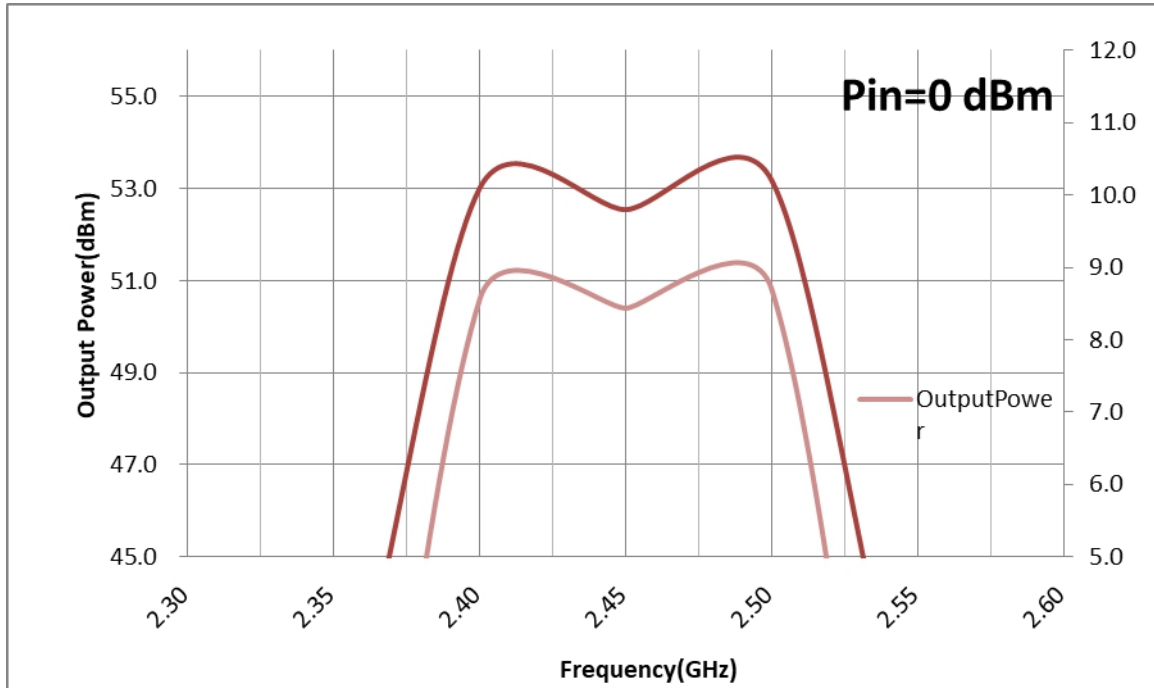
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TYPICAL PERFORMANCE PLOTS

Graph1: Output Power (Low temp. $-20\pm 3^{\circ}\text{C}$)



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