

## 2.4-2.5GHz/200Watt/Module

Model Number: KN2450M53A

The model KN2450M53A is a narrowband high power amplifier operating between 2.4GHz and 2.5GHz and offering a dynamic range with 200Watts 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	160	200		Watt
Power Gain	Gp		53		dB
Power Gain Flatness	Δ Gp		±1.0		dB
Input Return Loss	S11		-15	-10	dB
Harmonics @160W	H		-30		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 @160W	IDD		14		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*

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*Specifications subject to change without notice*

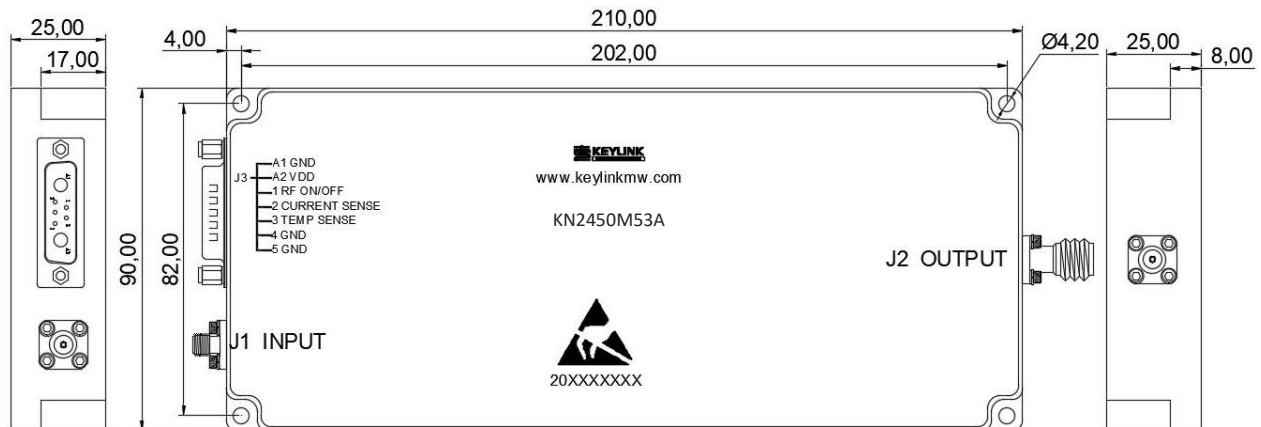
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### DC INTERFACE CONNECTOR

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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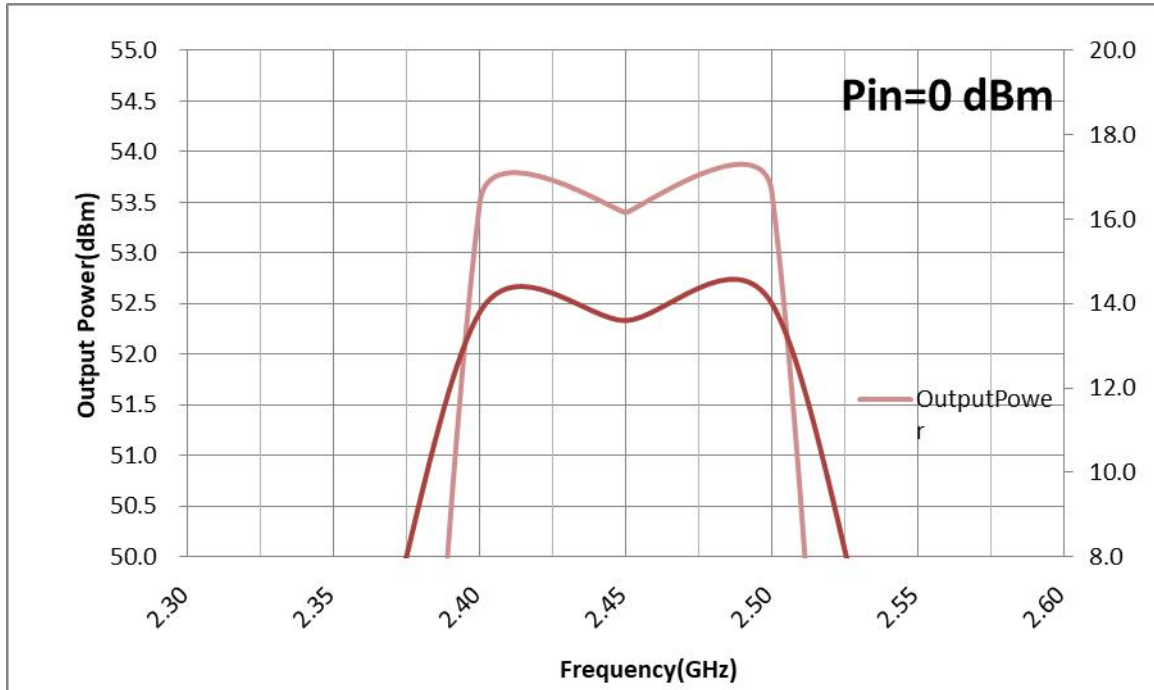
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### TYPICAL PERFORMANCE PLOTS

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



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