

## 2110-2170MHz/200Watt/Module

Model Number: KN2150M53A

The model KN2150M53A is a narrowband high power amplifier operating between 2110MHz and 2170MHz and offering a wide dynamic Range with 200 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;
- 50 Ohms input and Output matched;
- Built-in control and protection circuits.
- low distortions

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

Parameter	Symbol	Minimum	Typical	Maximum	Units
Operating Frequency	BW	2110		2170	MHz
RF Output Power	Psat		200		Watt
Power Gain	Gp		53		dB
Power Gain Flatness	Δ Gp		±1.5		dB
Input Return Loss	S <sub>11</sub>			-10	dB
Harmonics @150W	H		-15		dBc
Spurious Signals	Spur		-55		dBc
In/Output Impedance			50		Ω
Operating Voltage	V <sub>DC</sub>	24	28	32	Volt
DC Current @200W	I <sub>DD</sub>		26		Amp
Switching Time @1kHz TTL	T <sub>on/off</sub>		2		uSec

### MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	170x130x30 [6.69x5.12x1.18]	mm [inch]	Maximum
Weight	2 [4.4]	kg [lbs]	Maximum
RF Connectors Input	SMA, Female		
RF Connectors Output	Type-N, Female		
DC Interface Connector	Hybrid,D-sub 7 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	+10 dBm (Max)
Load VSWR @ P <sub>OUT</sub> =100W	∞ @ all load phase & amplitude for duration of 1 minute; 3:1 @ all load phase & amplitude continuous
Thermal Overload	85°C @ heatsink [restored @ 60°C]

*Focus on Your Application*

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*Specifications subject to change without notice*

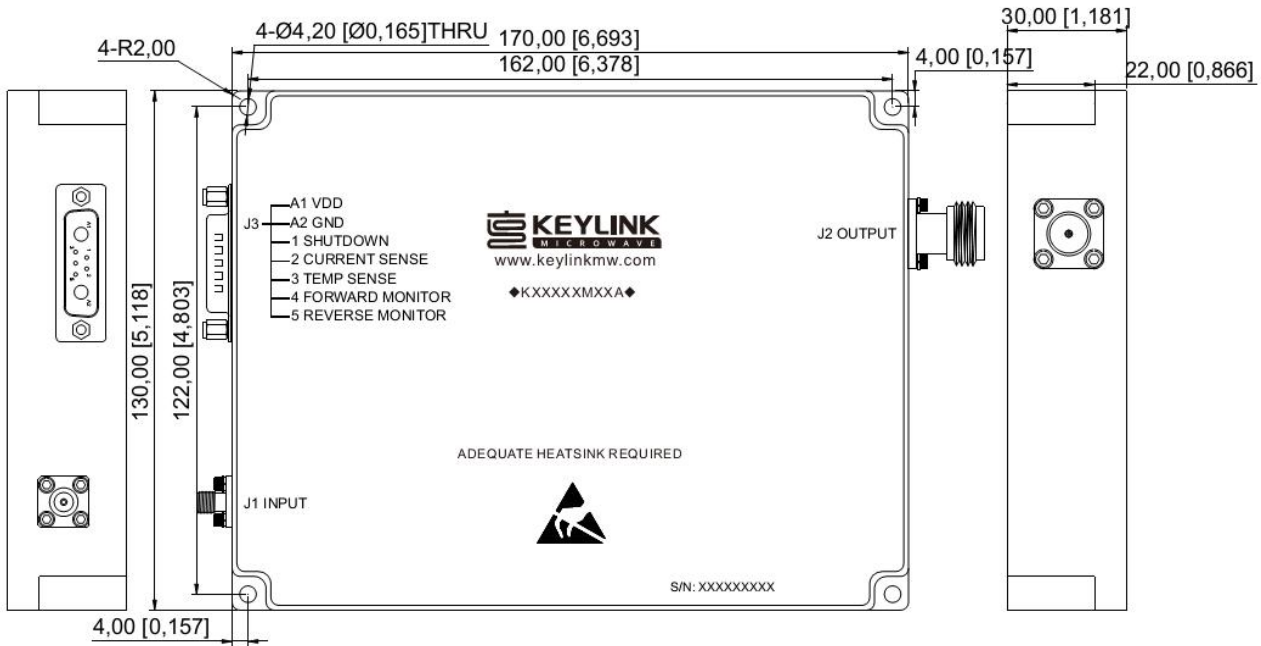
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DC INTERFACE CONNECTOR

Pin #	Description	Specifications
A1	VDD	28V <sub>DC</sub>
A2	GND	Ground
1	SHUTDOWN	Amplifier Disable: TTL Logic High (3.3V) (Internally Pulled-Low)
2	CURRENT SENSE	Analog voltage relative to I <sub>DD</sub> @ 100mV per Ampere
3	TEMP SENSE	Analog voltage relative to Module's Temperature @ 10 mV/°C
4	FORWARD MONITOR	Analog voltage relative to forward power level
5	REVERSE MONITOR	Analog voltage relative to reflected power level

OUTLINE DRAWING All dimensions in mm [inch]



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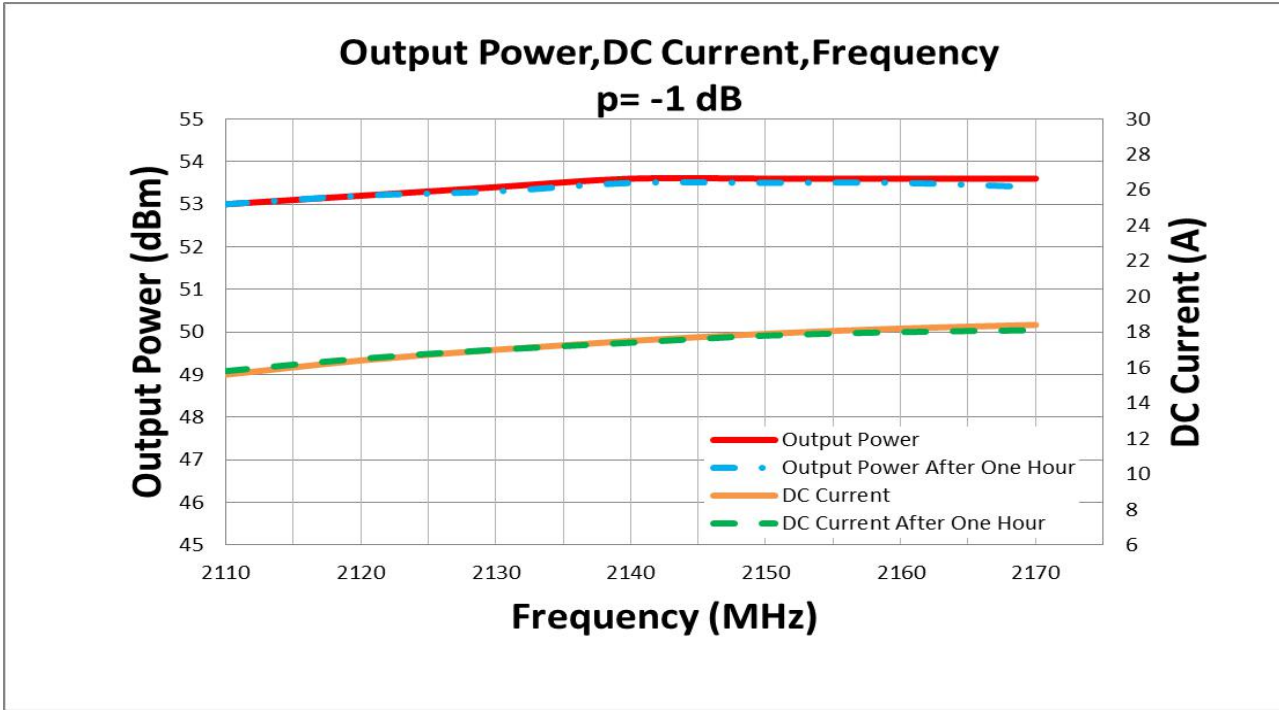
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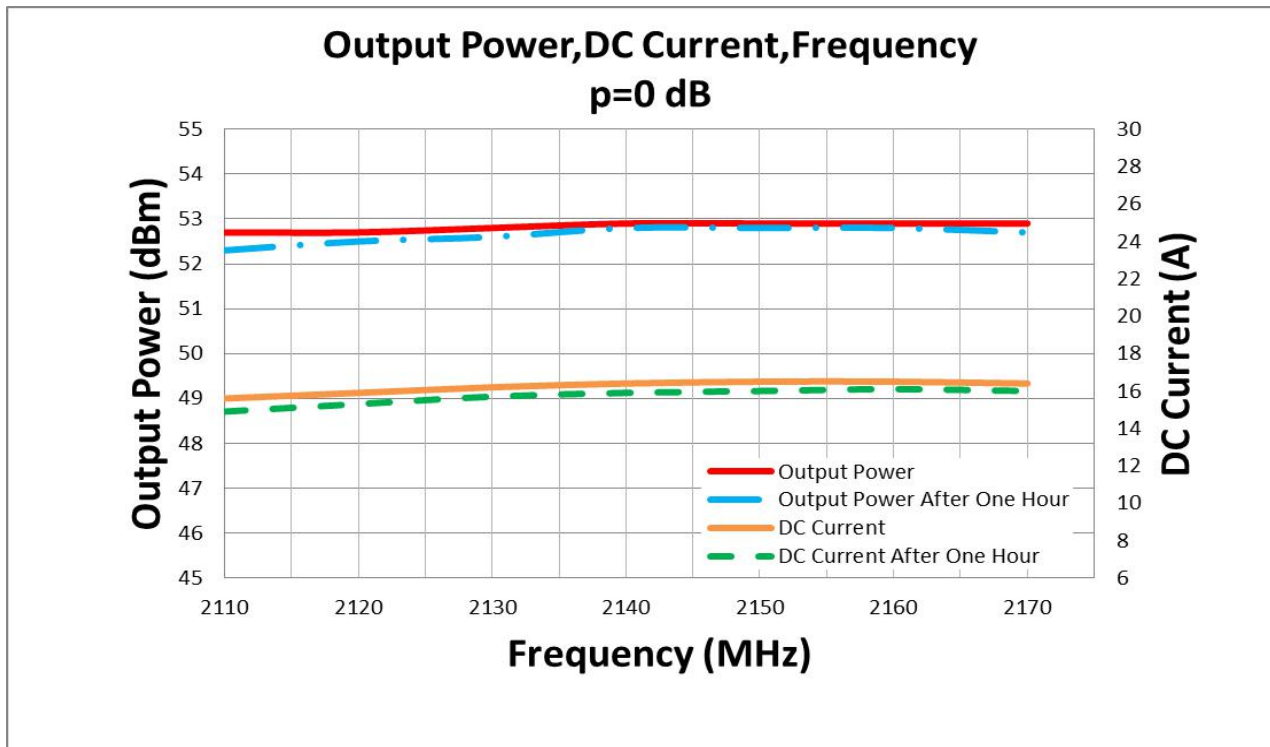
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TYPICAL PERFORMANCE PLOTS

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



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



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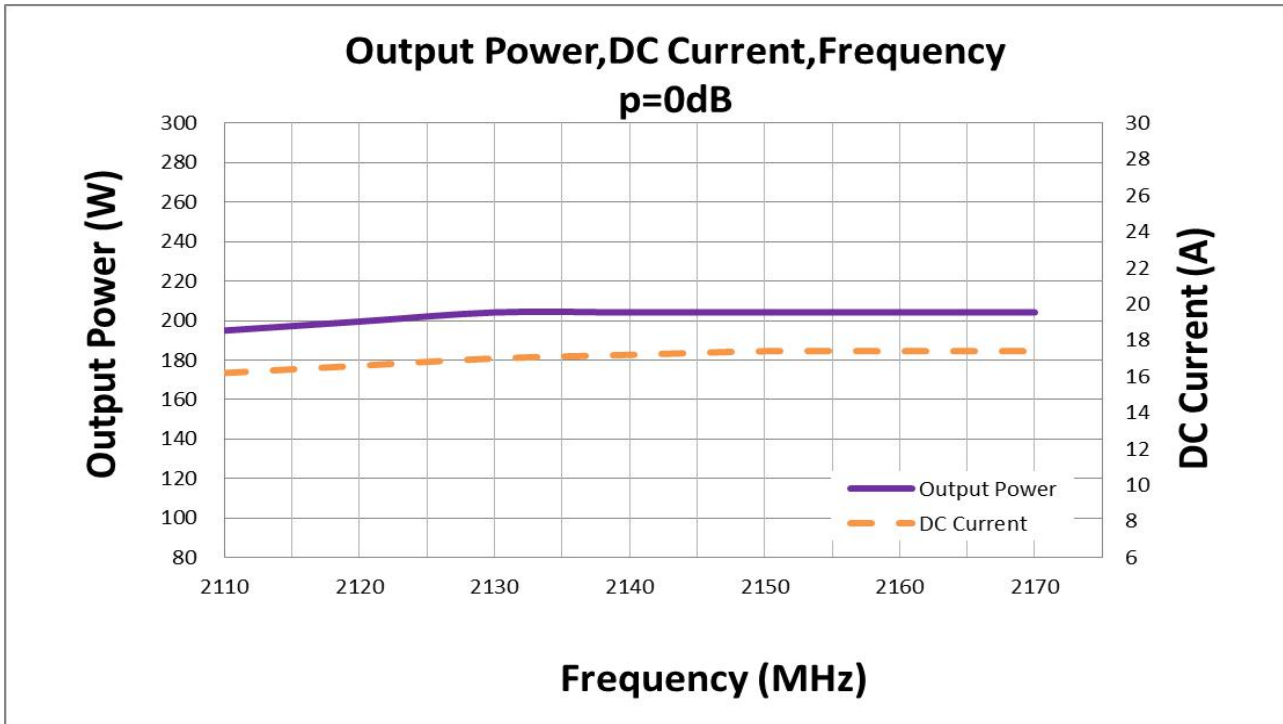
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Graph3: Output Power (Normal temp. +25±3°C)



Note: Adequate heatsink required.

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