

## 900-1170MHz/200Watt/Module

Model Number: KN1050M53A

The model KN1050M53A is a narrowband high power amplifier operating between 900MHz and 1170MHz and offering a wide dynamic Range with 100 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 narrowband high power RF, L linear applications.

### 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	900		1170	MHz
RF Output Power P1	P1	150	200		Watt
Power Gain	Gp		53		dB
Power Gain Flatness	Δ Gp		±2		dB
Input Return Loss	S <sub>11</sub>			-10	dB
Harmonics @80W	H		-10		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 @100W	IDD		26		Amp

### MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
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 damage	+5 dBm (Max)
Load VSWR @ POUT =100W	∞ @ 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

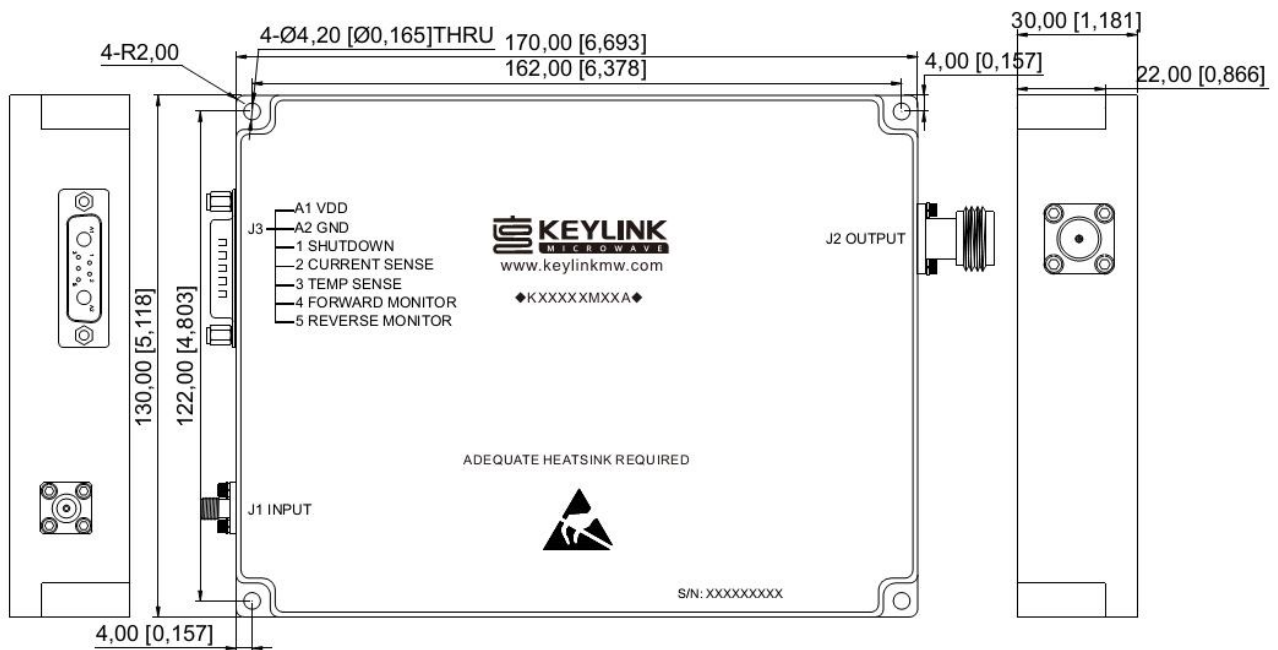
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DC INTERFACE CONNECTOR

Pin #	Description	Specifications
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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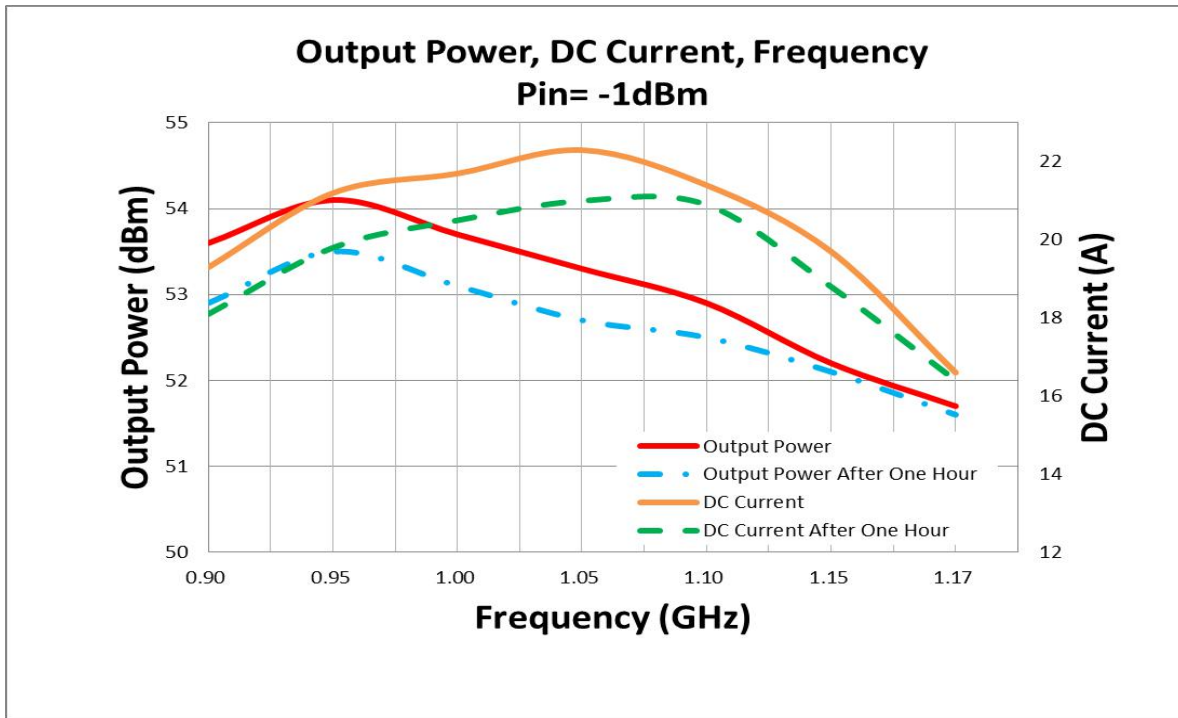
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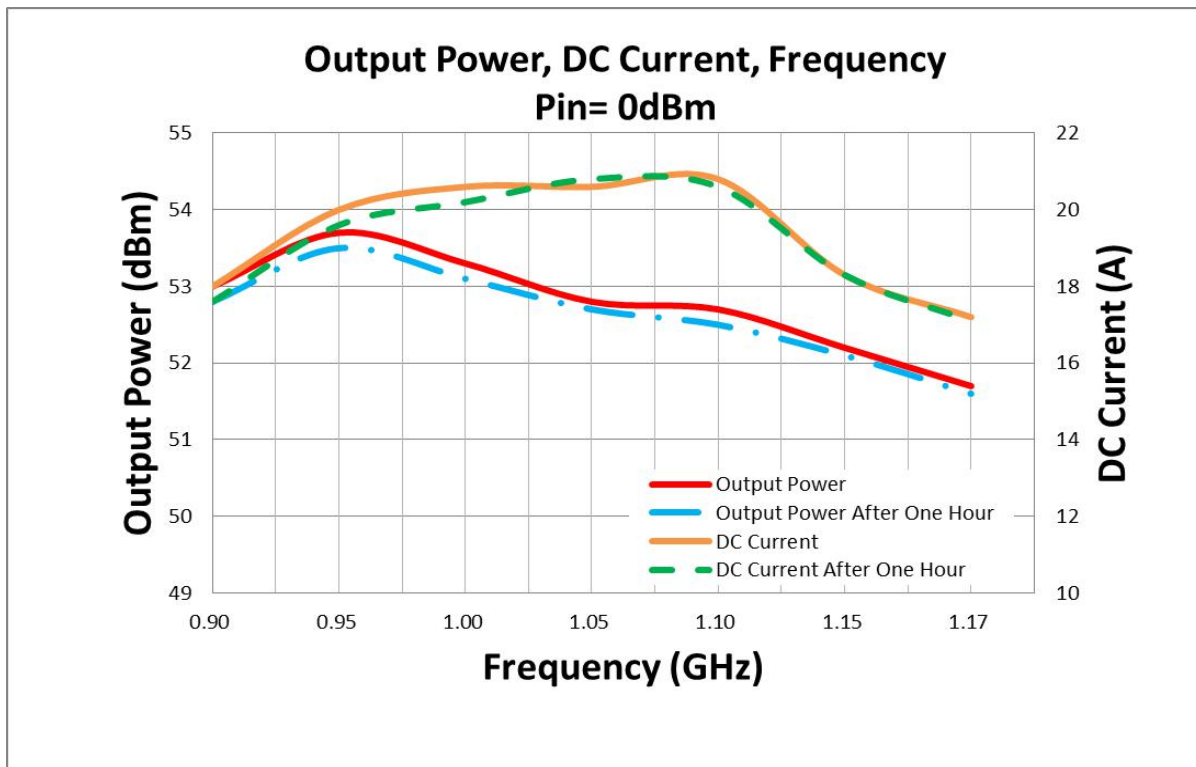
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TYPICAL PERFORMANCE PLOTS (For reference only)

Graph 1: Output Power (Low temp.  $-20\pm 3^{\circ}\text{C}$ )



Graph 2: Output Power (High temp.  $+60\pm 3^{\circ}\text{C}$ )



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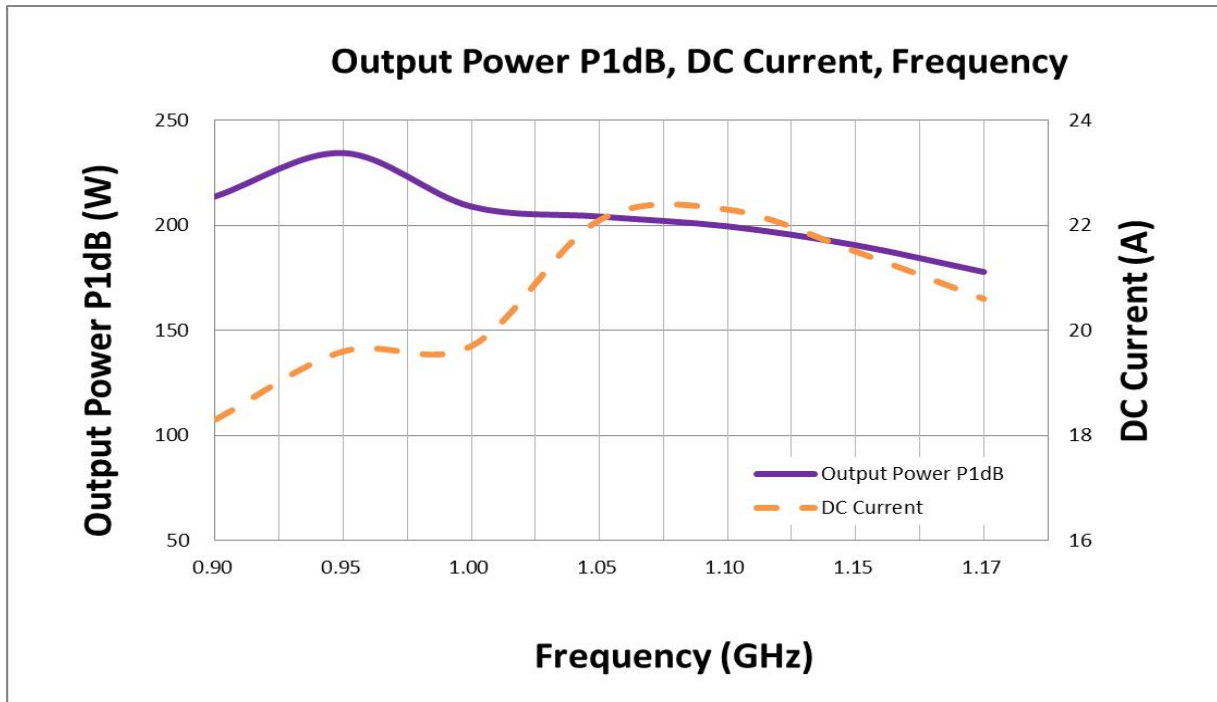
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Graph 3: Output Power (Normal temp. +25±3°C)



Power Gain:



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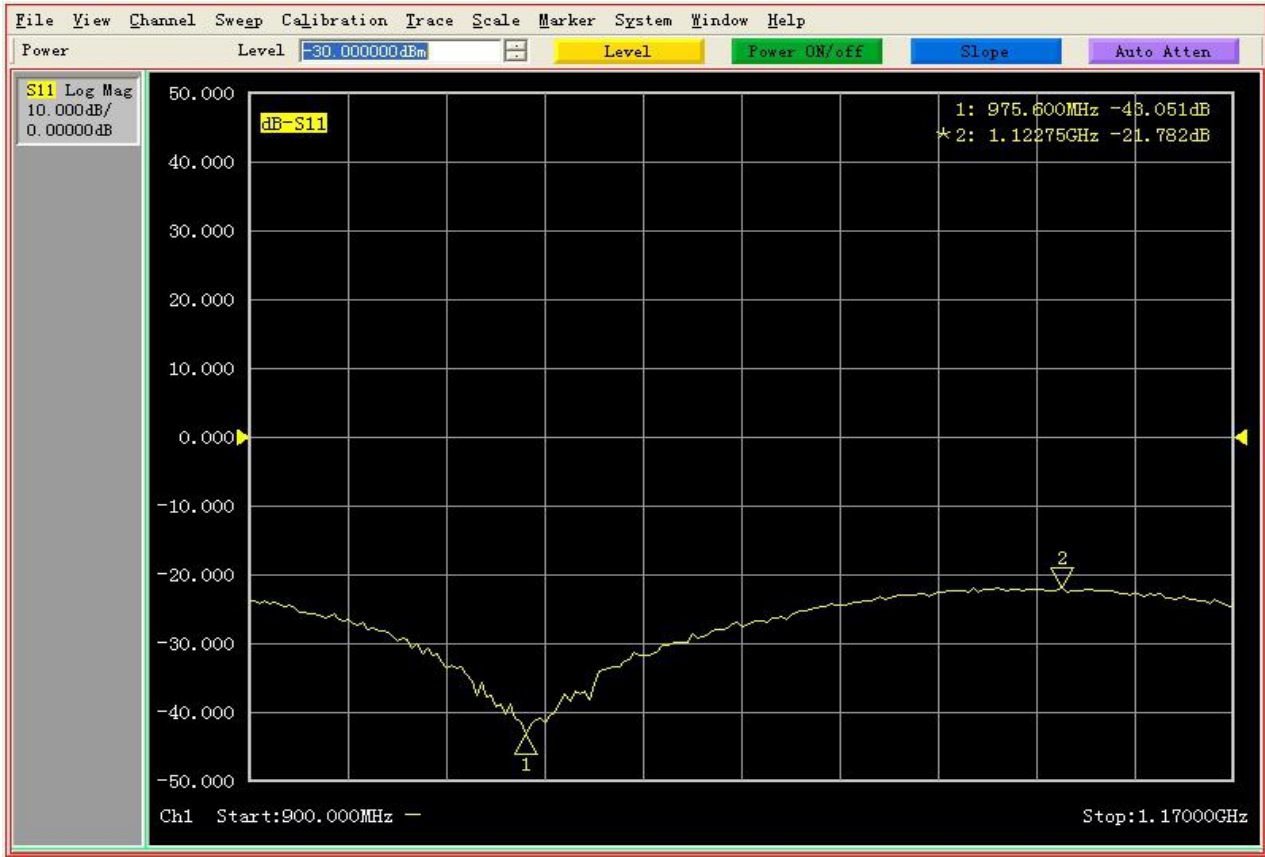
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Input Return Loss:



**Note:** Adequate heatsink required.

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