

1.2-1.4GHz/50Watt/Module

Model Number: KNTR1300M47B

The model KNTR1300M47B is a narrowband high power amplifier operating between 1.2GHz and 1.4GHz and offering a wide dynamic Range with 50Watts 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 multi octave 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	1.2		1.4	GHz
TX	RF Output Power P1	P ₁	30	50		Watt
	Small Gain	G		35		dB
	Small Signal Gain Flatness	Δ G _{ss}		±2		dB
	Input Return Loss	S ₁₁			-10	dB
	Harmonics @30W	H		-10		dBc
RX	RF Output Power P1	P ₁		20		dBm
	Small Gain	G		22		dB
	Small Signal Gain Flatness	Δ G _{ss}		±2		dB
	Noise Figure	N		2.5		dB
	Spurious Signals	Spur		-55		dBc
	Switch On/Off@10-90% Time	TON/OFF		2		μs
	In/Output Impedance	Impedance		50		Ω
	Operating Voltage	VDC		28		Volt
	DC Current @50W	IDD		7		Amp

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	160x120x25 [6.3x4.72x0.87]	mm [inch]	Maximum
Weight	2 [4.4]	kg [lbs]	Maximum
RF Connectors Input	SMA, Female		
RF Connectors Output	SMA, Female		
DC Interface Connector	D-Sub 9-Pin, Male		
Cooling	External Heatsink Required (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	+20 dBm (Max)
Load VSWR @ Pout =20W	∞ @ 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

Chengdu KeyLink Wireless Technology Co., Ltd.

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Specifications subject to change without notice

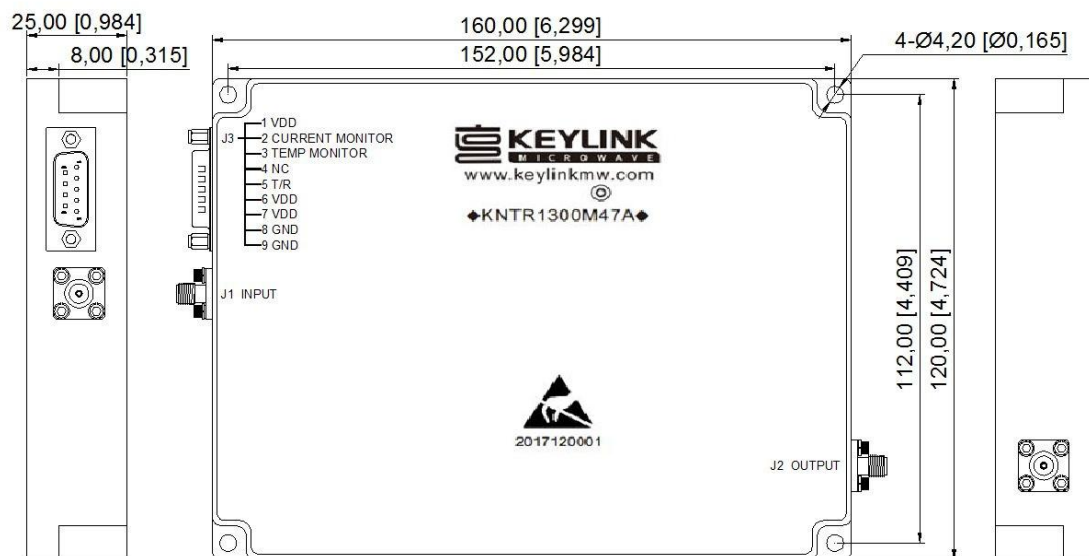
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DC INTERFACE CONNECTOR

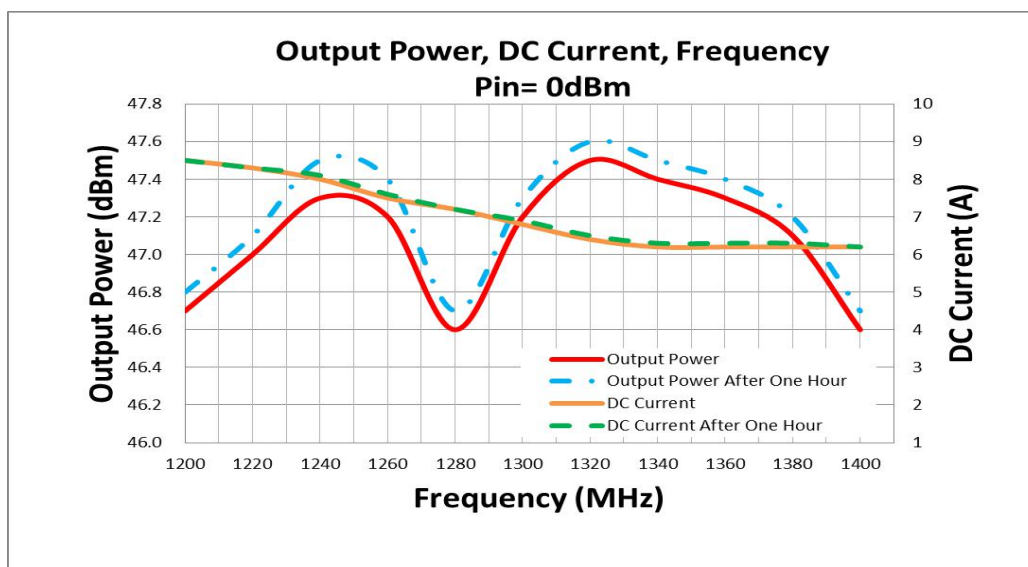
Pin #	Description	Specifications
1,6,7	VDD	28V _{DC}
8,9	GND	Ground
5	T/R	Tx Amplifier Enable: TTL Logic High Tx(3.3V) (Internally Pulled-Low)
2	CURRENT MONITOR	Analog voltage relative to I _{DD} @ 100mV per Ampere
3	TEMP MONITOR	Analog voltage relative to Module's Temperature @ 10 mV/°C
4	NC	No electrical connection

OUTLINE DRAWING (All dimensions in mm [inch])



TYPICAL PERFORMANCE PLOTS (For reference only)

Graph 1: Output Power (Low temp. -20±3°C)



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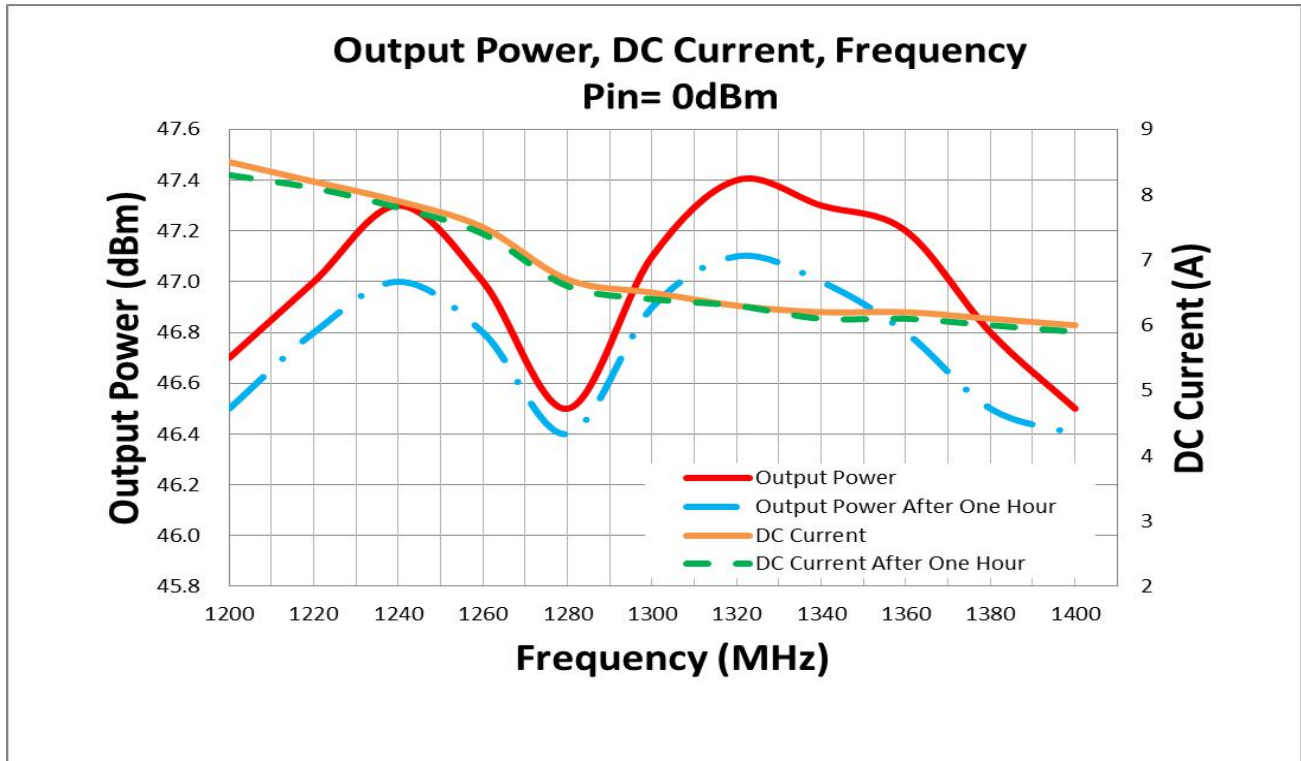
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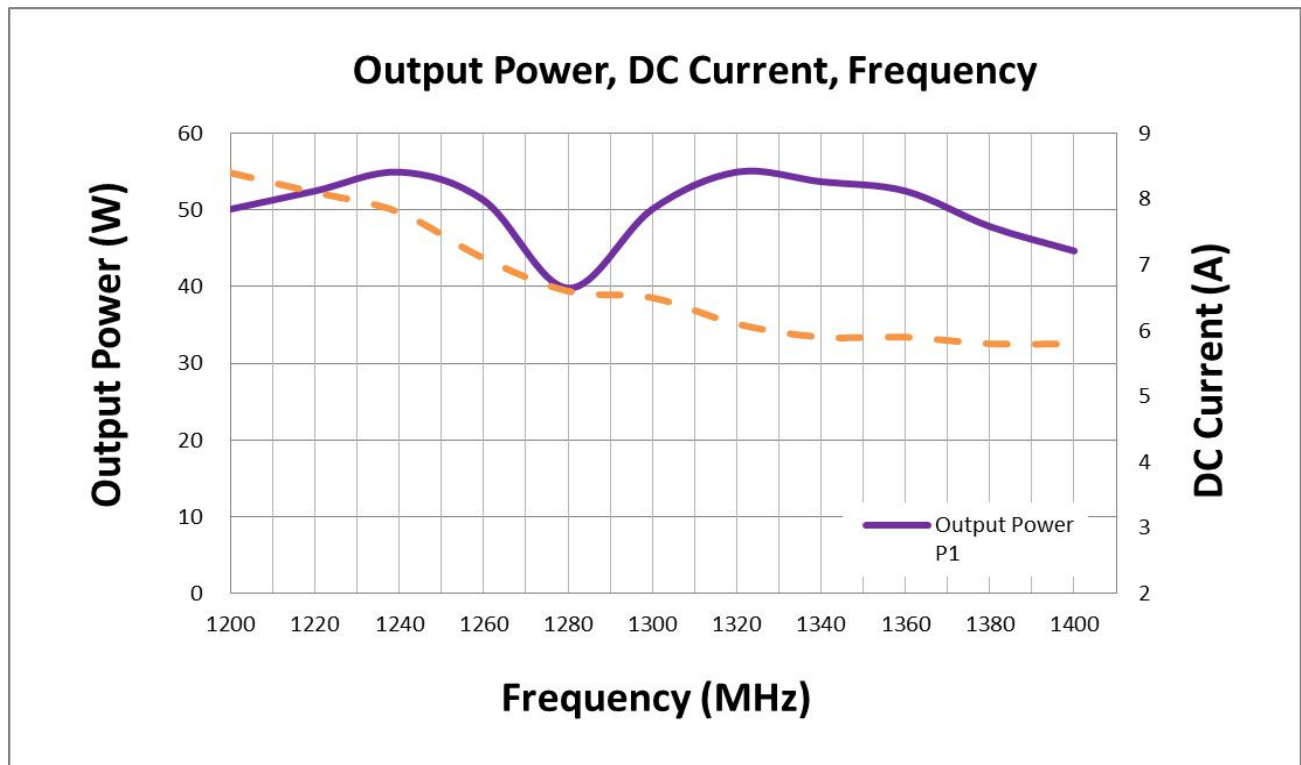
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Graph 2: Output Power (High temp. $+60\pm 3^{\circ}\text{C}$)



Graph 3: Output Power (Normal temp. $+25\pm 3^{\circ}\text{C}$)



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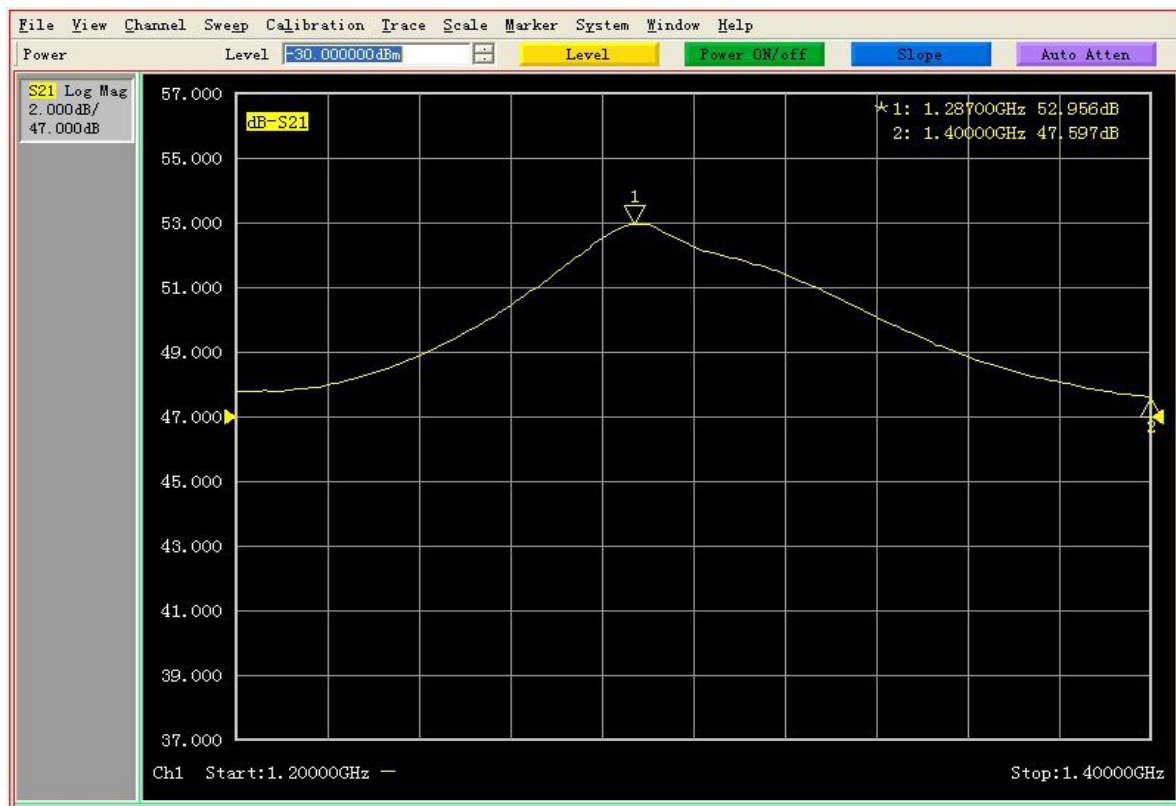
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TX Small Gain:



RX Small Gain:



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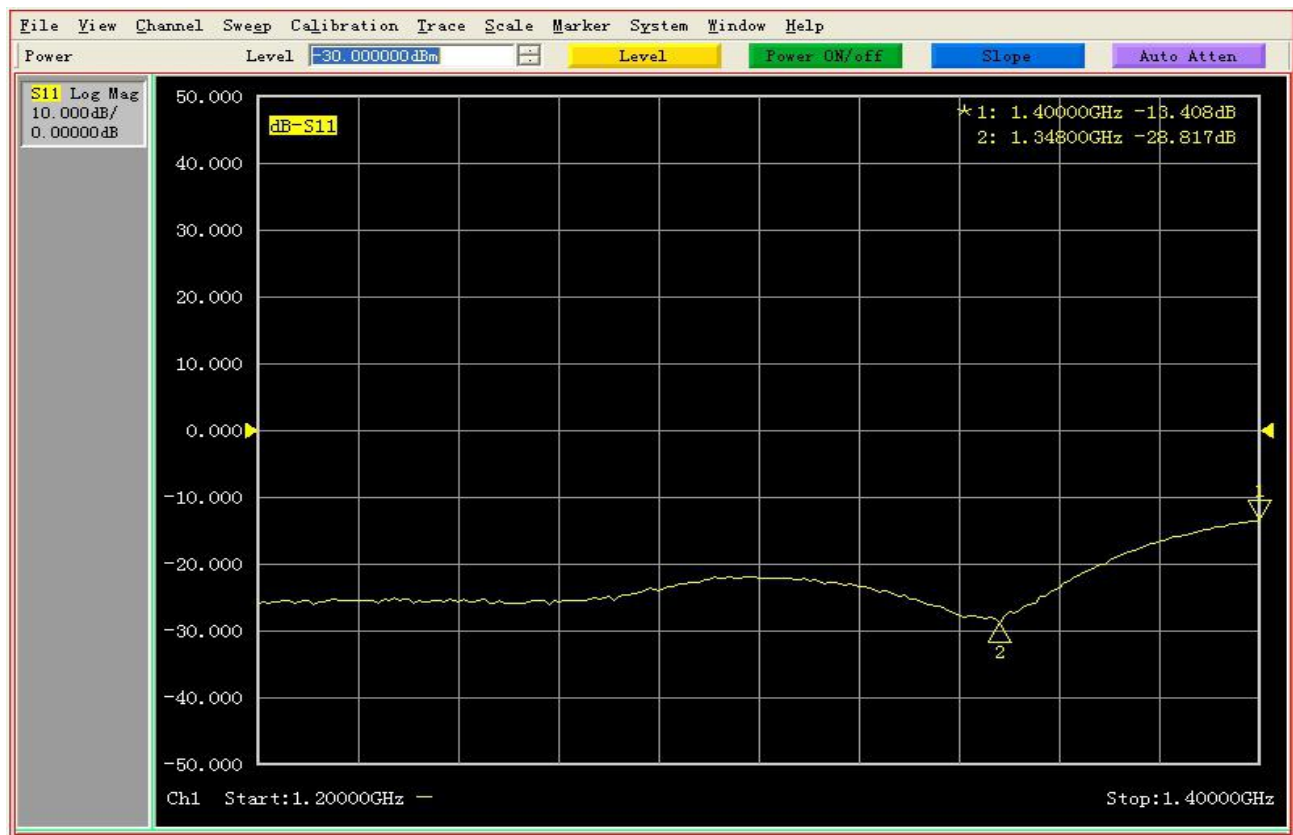
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Input Return Loss:



Note:

1. Adequate heatsink required.

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