

1000-2000MHz/200Watt/Module**Model Number: KB1020M53A**

The model KB1020M53A is a high-power amplifier operating between 1000 MHz and 2000 MHz and offering a wide dynamic Range with 200 Watts typical saturated power. The employment of gallium nitride (GaN) in manufacturing ensures this module state-of-the-art power performance with excellent power-to-volume ratio. It is ideal for broadband high power applications.

FEATURES:

- Broadband & High power
- High Efficiency
- Small Size & Light Weight
- Built-In Control and Protection Circuits

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

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	1000		2000	MHz
RF Output Power@P _{IN} =0dBm	P _{sat}		200		Watt
Small Signal Gain Flatness	Δ G _{ss}		±2.5		dB
Power Gain	G _p		53		dB
Power Gain Flatness	Δ G _p		±1.5		dB
Input Return Loss	S ₁₁			-10	dB
Harmonics @150W	H		-20		dBc
Spurious Signals	Spur		-60		dBc
Switch On/Off@10-90% Time	TON/OFF		2	4	μS
In/Output Impedance	Impedance		50		Ω
Operating Voltage	VDC	24	28	32	Volt
Power add efficiency	Eff		35		%
DC Current @200W	IDD		20		Amp

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	200x150x25 [7.87x5.9x0.98]	mm [inch]	Maximum
Weight	1.95[4.30]	kg [lbs]	Maximum
RF Connectors Input	SMA, Female		
RF Connectors Output	N-Type, 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	-40		60	°C	
Non-operating Temperature	-45		85	°C	Storage
Relative Humidity (non-condensing)	5		95	%	

ABSOLUTE MAXIMUM RATING

Input RF drive level without damage	+10 dBm (Max)
Load VSWR @ P _{OUT} =150W	∞ @ 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

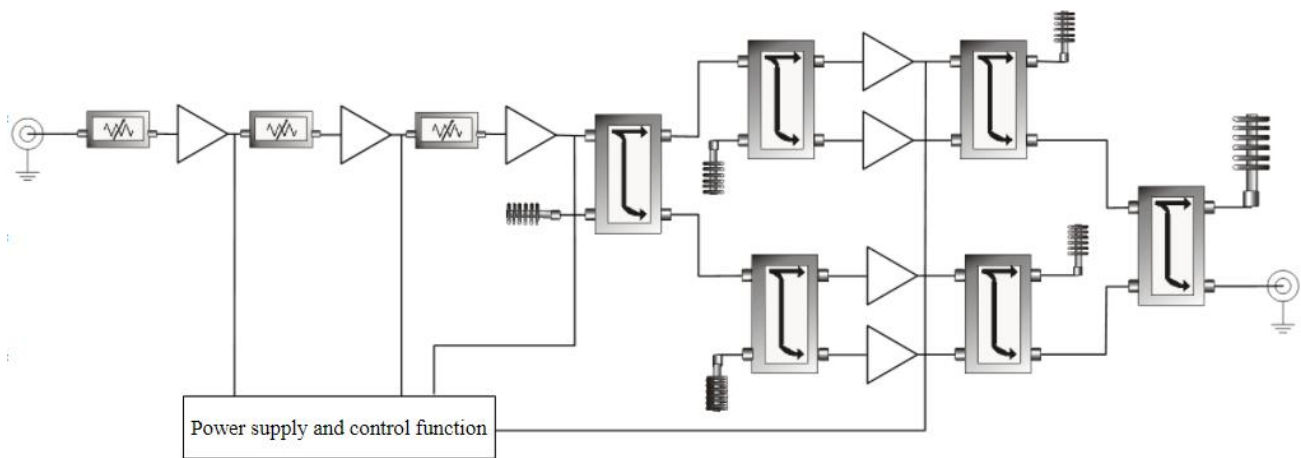
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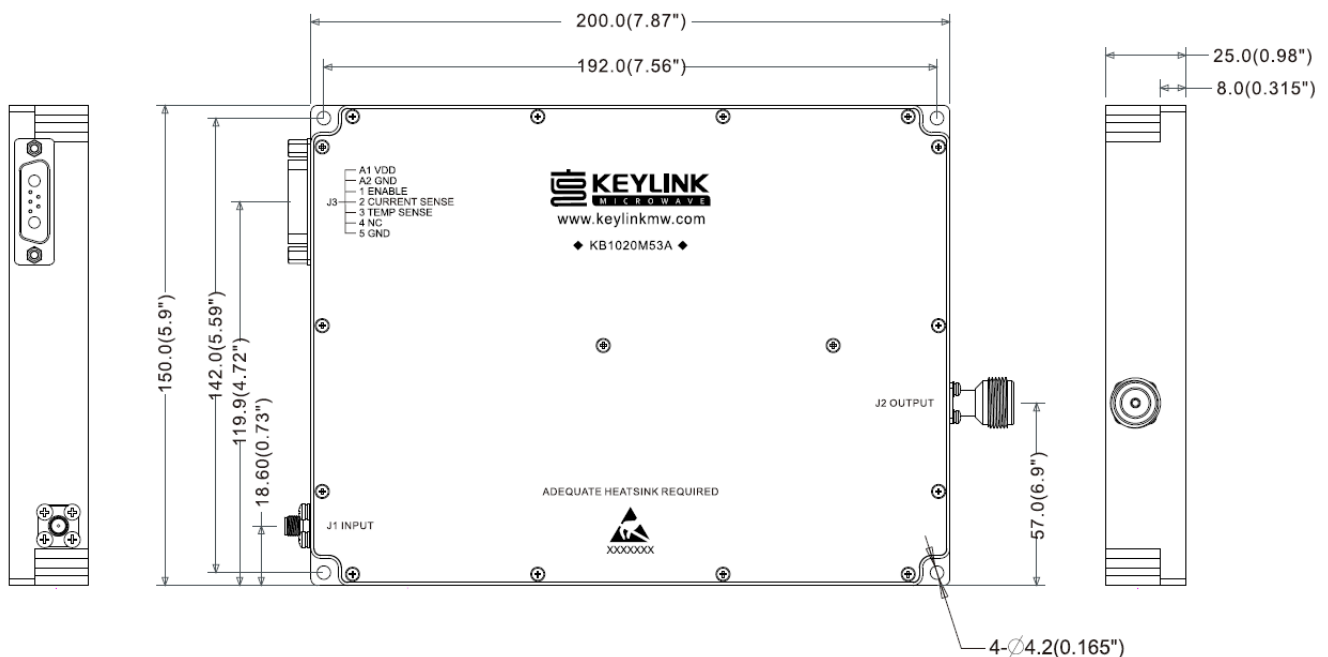
DC INTERFACE CONNECTOR

Pin #	Description	Specifications
A1	VDD	28V _{DC}
A2	GND	Ground
1	ENABLE	Amplifier Enable: TTL Logic High (3.3V) (Internally Pulled-Low)
2	CURRENT SENSE	Analog voltage relative to I _{DD} @ 100mV per Ampere
3	TEMP SENSE	Analog voltage relative to Module's Temperature @ 10 mV/°C
4	NC	No electrical connection
5	GND	Ground

Functional Diagram



OUTLINE DRAWING (All dimensions in mm [inch])



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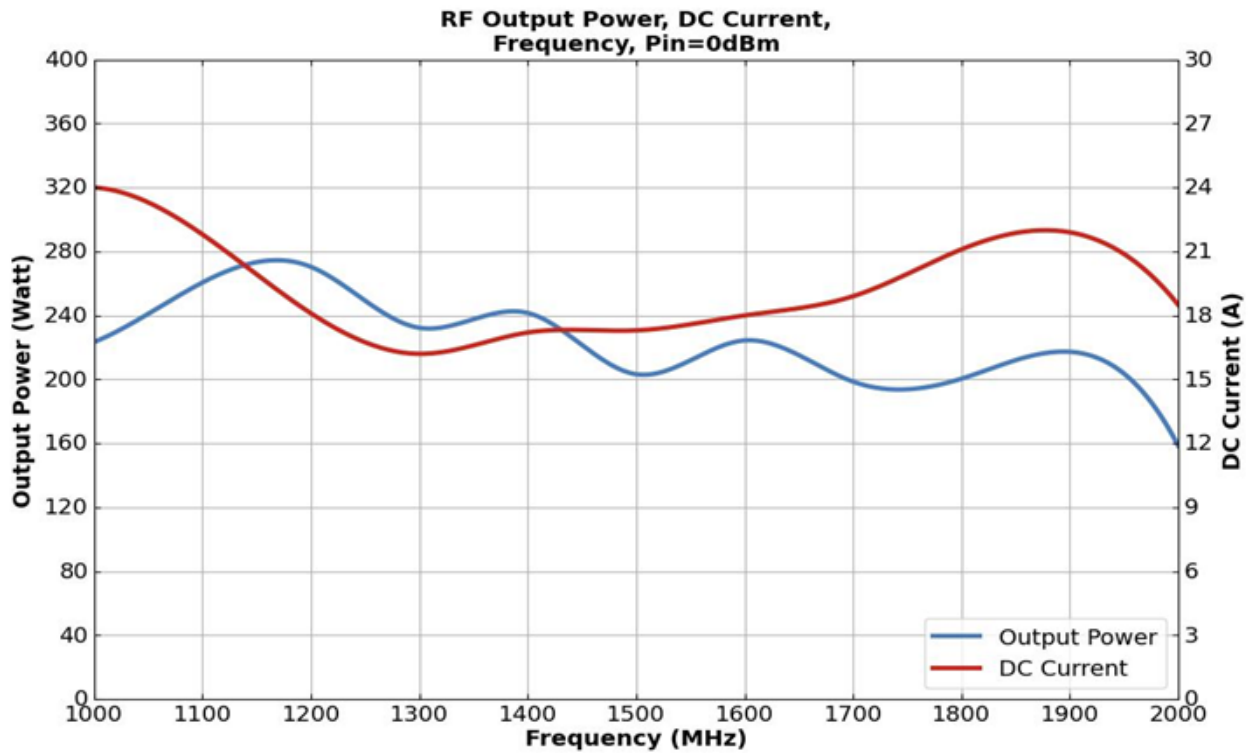
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TYPICAL PERFORMANCE PLOTS (FOR REFERENCE ONLY)

**Note:** Adequate heatsink required.*Focus on Your Application****Chengdu KeyLink Wireless Technology Co., Ltd.***

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