

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) 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 broadband high power ,linear applications.

FEATURES:

- Broadband & High power
- High Efficiency
- Great Linearity
- Small Size & Light Weight
- Low Distortion
- CLASS AB

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

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	1000		2000	MHz
RF Output Power	P _{out}		200		Watt
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		30		%
DC Current @200W	IDD		20		Amp

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	200x150x25 [7.87x5.9x0.98]	mm [inch]	Maximum
Weight	2.5[5.5]	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	-20		60	°C	
Non-operating Temperature	-25		65	°C	Storage
Relative Humidity (non-condensing)			95	%	

ABSOLUTE MAXIMUM RATING

Input RF drive level without damage	+10 dBm (Max)
Load VSWR @ POUT =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 Microwave Technology Co., Ltd.

>> 5-2, Huidu Headquarters Park, High-Tech(West) Zone, Chengdu, 611731, P. R. China

>> Phone: +86(28)87870761

>> Fax: +86(28)87883266

>> Email: sales@keylinkmw.com

>> www.keylinkmw.com

Specifications subject to change without notice

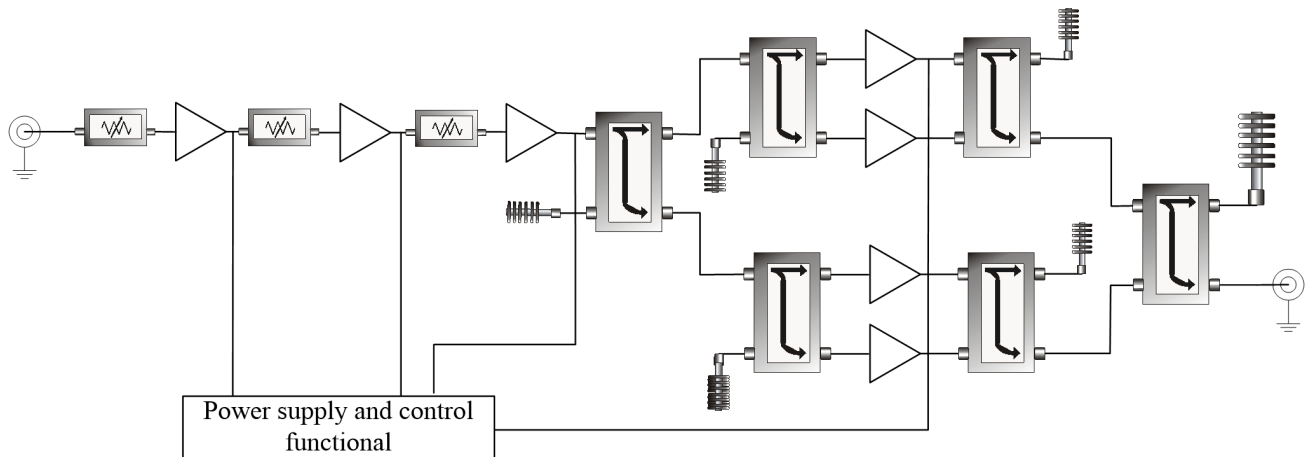
1000-2000MHz/200Watt/Module

Model Number: KB1020M53A

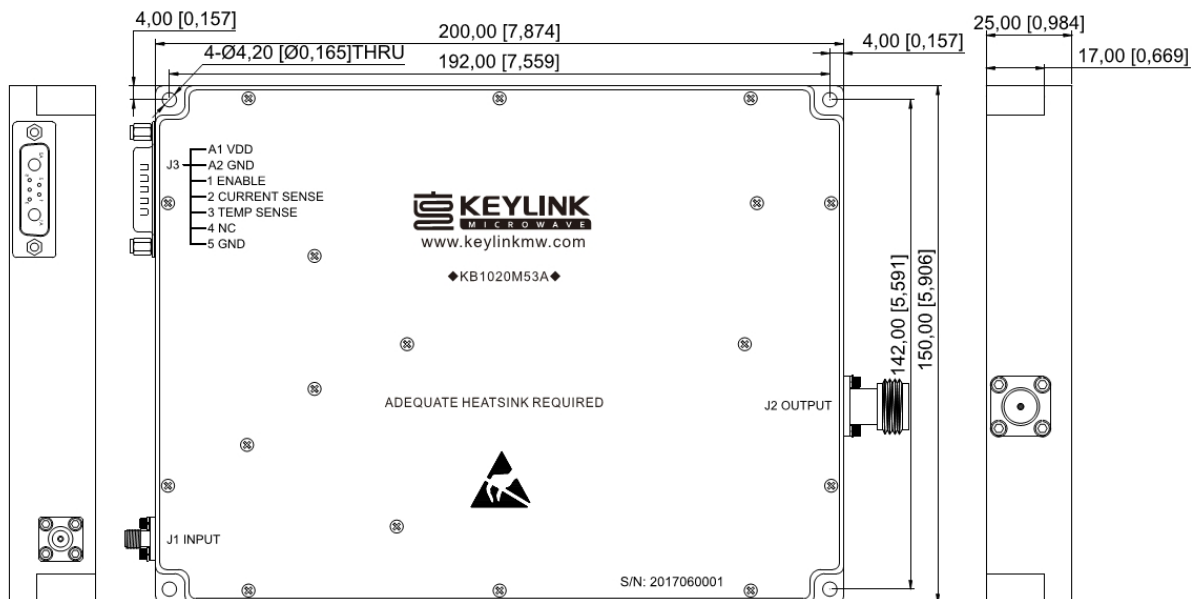
DC INTERFACE CONNECTOR

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])



Focus on Your Application

Chengdu KeyLink Microwave Technology Co., Ltd.

>> 5-2, Huidu Headquarters Park, High-Tech(West) Zone, Chengdu, 611731, P. R. China

>> Phone: +86(28)87870761

>> Fax: +86(28)87883266

>> Email: sales@keylinkmw.com

>> www.keylinkmw.com

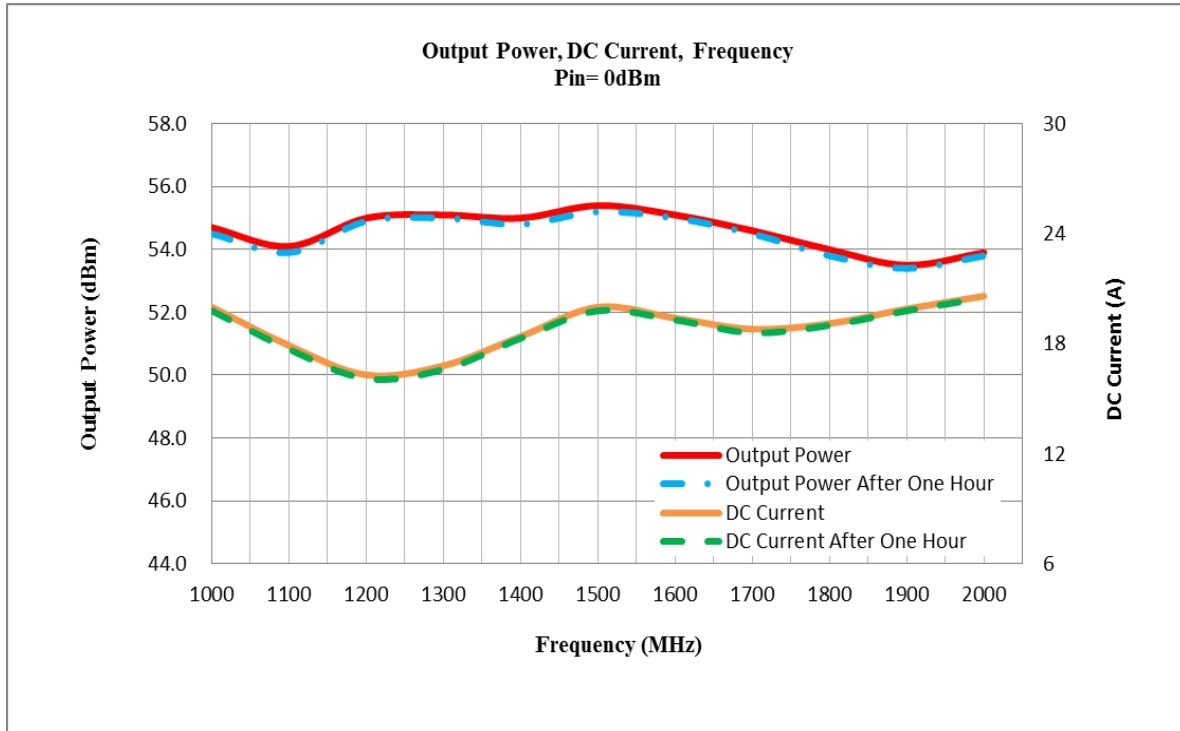
Specifications subject to change without notice

1000-2000MHz/200Watt/Module

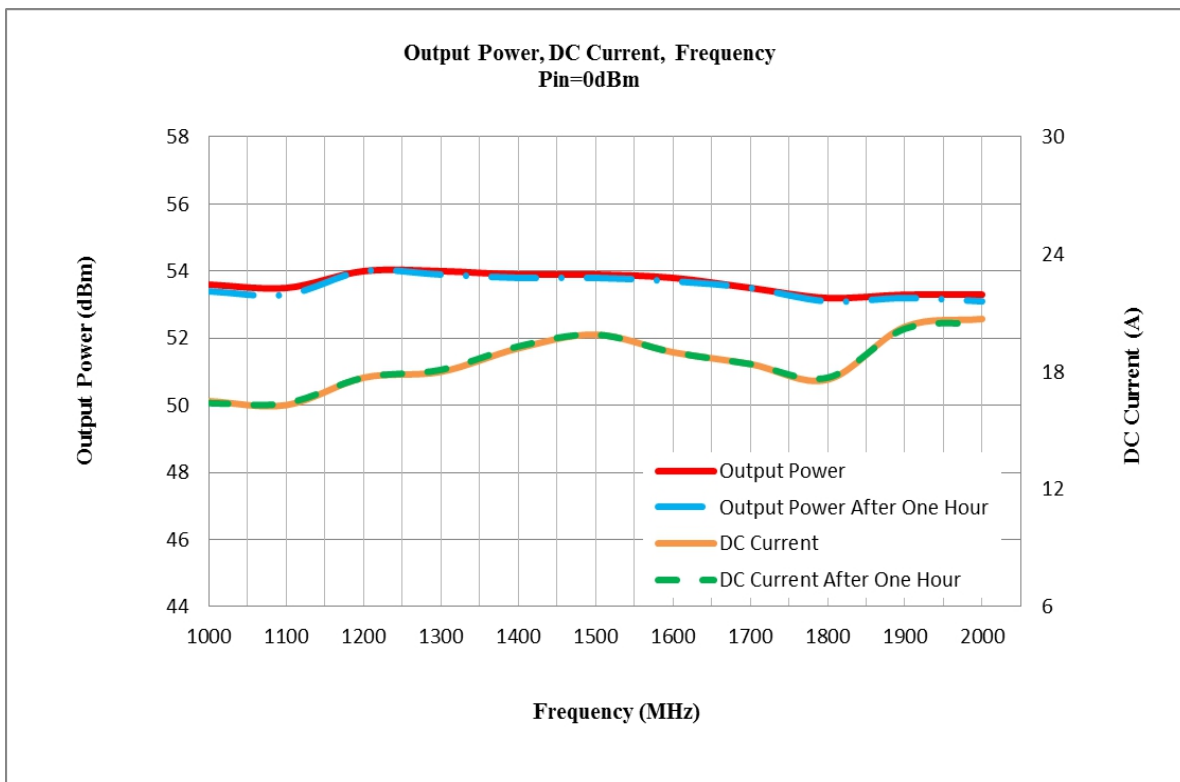
Model Number: KB1020M53A

TYPICAL PERFORMANCE PLOTS(FOR REFERENCE ONLY)

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



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



Focus on Your Application

Chengdu KeyLink Microwave Technology Co., Ltd.

>> 5-2, Huidu Headquarters Park, High-Tech(West) Zone, Chengdu, 611731, P. R. China

>> Phone: +86(28)87870761

>> Fax: +86(28)87883266

>> Email: sales@keylinkmw.com

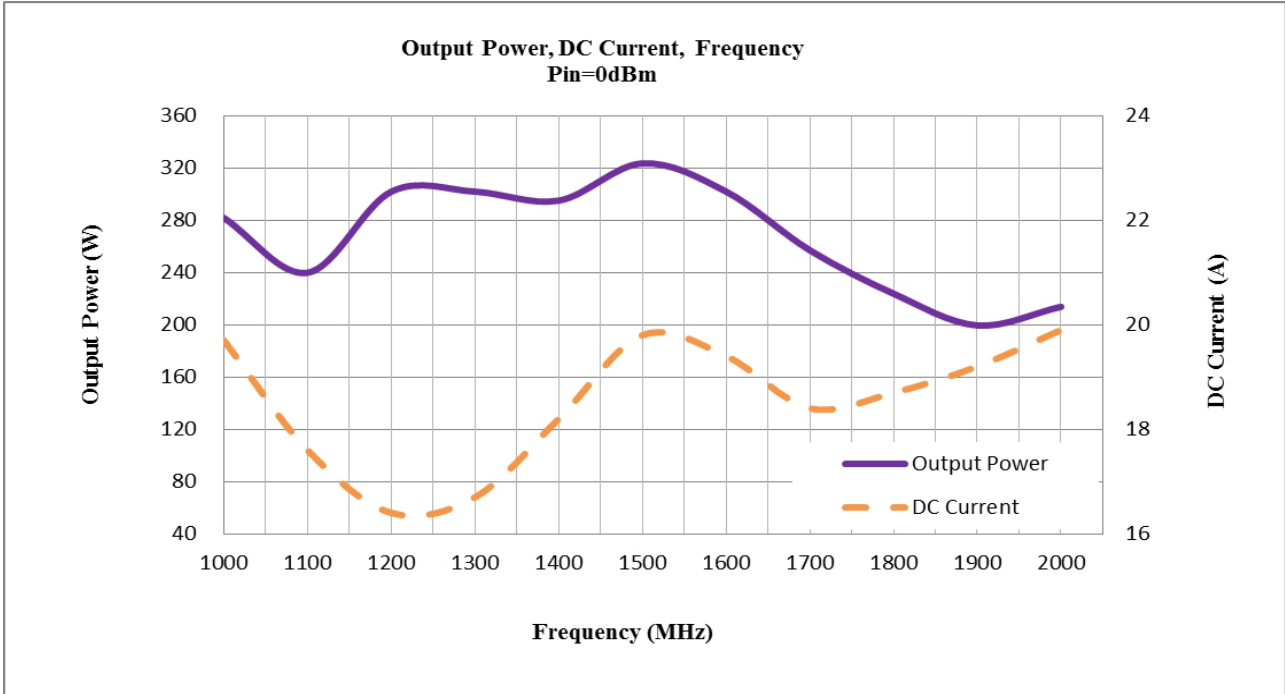
>> www.keylinkmw.com

Specifications subject to change without notice

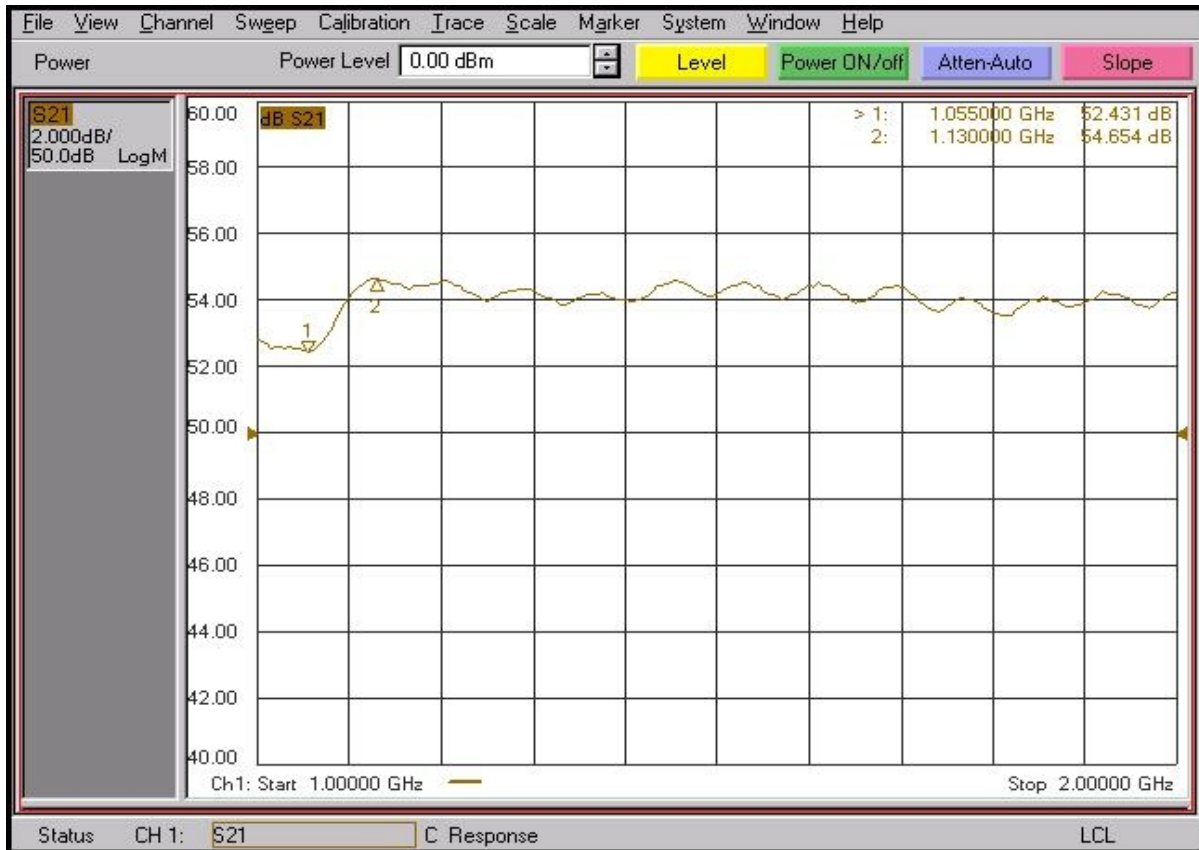
1000-2000MHz/200Watt/Module

Model Number: KB1020M53A

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



Power Gain:



Focus on Your Application

Chengdu KeyLink Microwave Technology Co., Ltd.

>> 5-2, Huidu Headquarters Park, High-Tech(West) Zone, Chengdu, 611731, P. R. China

>> Phone: +86(28)87870761

>> Fax: +86(28)87883266

>> Email: sales@keylinkmw.com

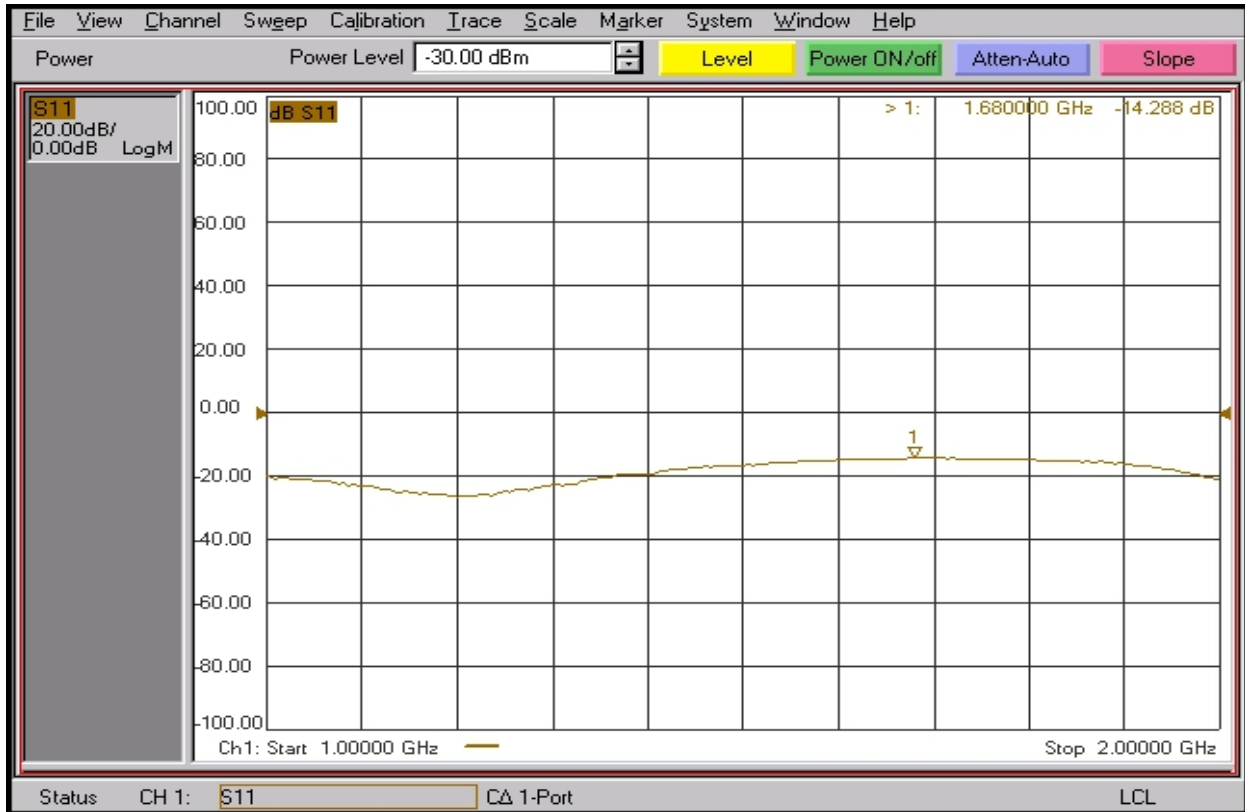
>> www.keylinkmw.com

Specifications subject to change without notice

1000-2000MHz/200Watt/Module

Model Number: KB1020M53A

Input Return Loss:



Note: Adequate heatsink required.

Focus on Your Application

Chengdu KeyLink Microwave Technology Co., Ltd.

>> 5-2, Huidu Headquarters Park, High-Tech(West) Zone, Chengdu, 611731, P. R. China

>> Phone: +86(28)87870761

>> Fax: +86(28)87883266

>> Email: sales@keylinkmw.com

>> www.keylinkmw.com

Specifications subject to change without notice