

## 1000-2000MHz/50Watt/Module

Model Number: KB1020M47A

The model KB1020M47A is a multi-octave high power amplifier operating between 1000MHz and 2000 MHz and offering a wide dynamic Range with 50 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 RF applications.

### FEATURES:

- Broadband and High Power
- Small Size and Light Weight
- 50 Ohms Input and Output Matched
- 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 <sub>out</sub>	50			Watt
Power Gain	G <sub>p</sub>		48		dB
Power Gain Flatness	Δ G <sub>p</sub>		±1.5		dB
Input Return Loss	S <sub>11</sub>			-10	dB
Harmonics @40W	H		-15		dBc
Spurious Signals	Spur		-60		dBc
Switching Speed	T <sub>ON/OFF</sub>		2	5	μS
In/Output Impedance	Impedance		50		Ω
Operating Voltage	V <sub>DC</sub>	24	28	32	Volt
Current Consumption @ P <sub>OUT</sub> = 50W	I <sub>DD</sub>			7	Amp
Current Consumption @ Shutdown	I <sub>SD</sub>		0.2		Amp
RF Input to Output Isolation(During OFF State)	Isolation		85		dBc

### MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	140x85x20.5 [5.5x3.3x0.8]	mm [inch]	Maximum
Weight	0.65 [1.43]	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	-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 @ P <sub>OUT</sub> =30W	∞ @ all load phase & amplitude for duration of 1 minutes; 3:1 @ all load phase & amplitude continuous

*Focus on Your Application*

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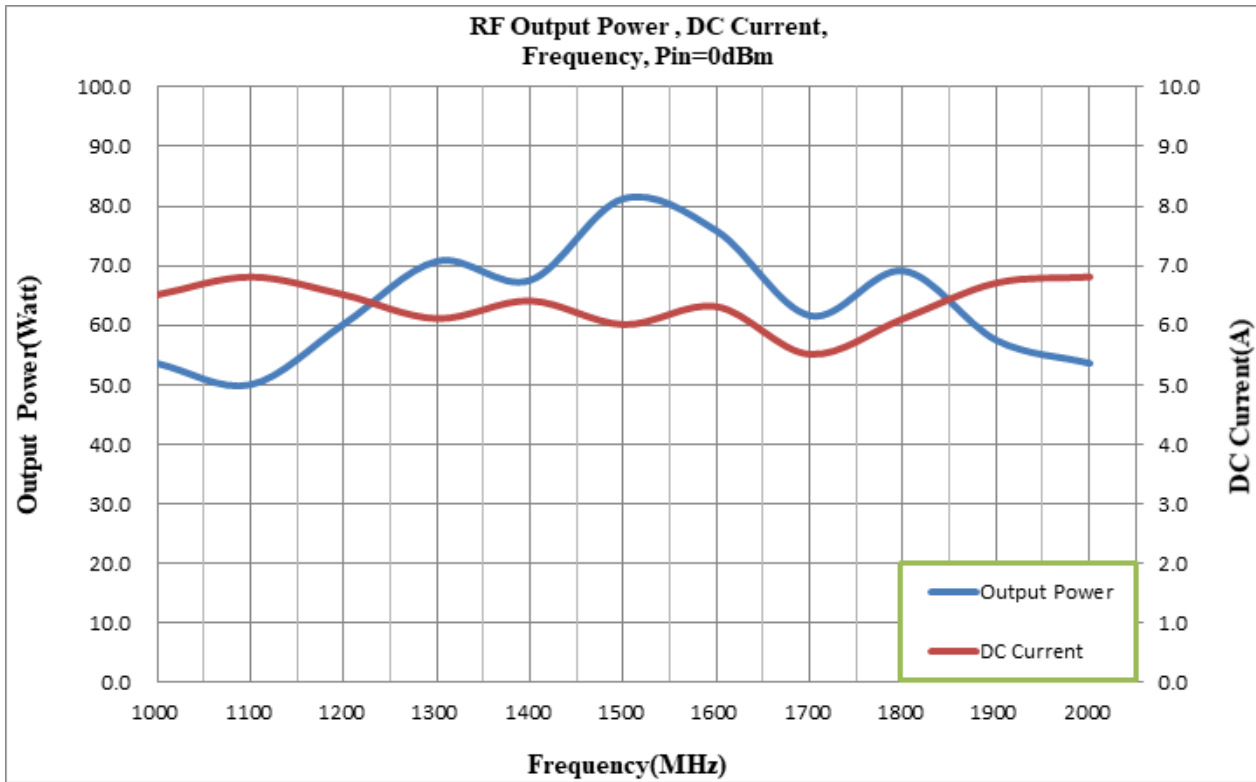
Specifications subject to change without notice



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TYPICAL PERFORMANCE PLOTS (for reference only)



Note: Adequate heatsink required.

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