

18-40GHz/100Watt/Module

Model Number: KB180400M50A

The model KB180400M50A is a broadband high power amplifier operating between 18GHz and 40GHz and offering a wide dynamic range with 100 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 mobile Jamming and band specific high power applications in the frequency bands.

FEATURES:

- Broadband & High Power
- Small Size & Light Weight
- 50 Ohms Input and Output Matched
- Built-In Control and Protection Circuits

ELECTRICAL SPECIFICATIONS @ +18VDC, $\pm 25^{\circ}\text{C}$, 50 Ω

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	18		40	GHz
RF Output Power @Pin=0dBm	Psat	100			Watt
Power Gain	Gp	50			dB
Power Gain Flatness	Δ Gp			± 5	dB
Input Return Loss	S11			-10	dB
Harmonics @Psat	H	-10			dBc
Spurious Signals	Spur			-60	dBc
In/Output Impedance	Impedance		50		Ω
Operating Voltage	V _{DC}		18	19	Volt
Average Power Consumption @ Psat	P _D			1500	Watt

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	280x200x180 [11.0x7.87x7.08]	mm [inch]	Maximum
Weight	20 [44]	kg [lbs]	Maximum
RF Connector Input	2.92, Female		
RF Connector Output	WRD180		
DC Interface Connector	DX1204*2		Circular
Control Interface Connector	J30J-9ZKP, Male		
Cooling	Built in Fan Cooling		

ENVIRONMENTAL CHARACTERISTICS (Design to Meet)

Parameter	Minimum	Typical	Maximum	Units	Notes
Operating Temperature	-40		60	$^{\circ}\text{C}$	
Non-operating Temperature	-45		85	$^{\circ}\text{C}$	Storage
Relative Humidity (non-condensing)	5		95	%	

ABSOLUTE MAXIMUM RATING

Input RF drive level without damage	+10 dBm (Max)
Load VSWR @ POUT =50W	3:1 @ all load phase & amplitude continuous More than 4:1 may cause PA damage
Over Temperature	85 $^{\circ}\text{C}$ @ heatsink [restored @ 60 $^{\circ}\text{C}$]

Focus on Your Application

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Specifications subject to change without notice

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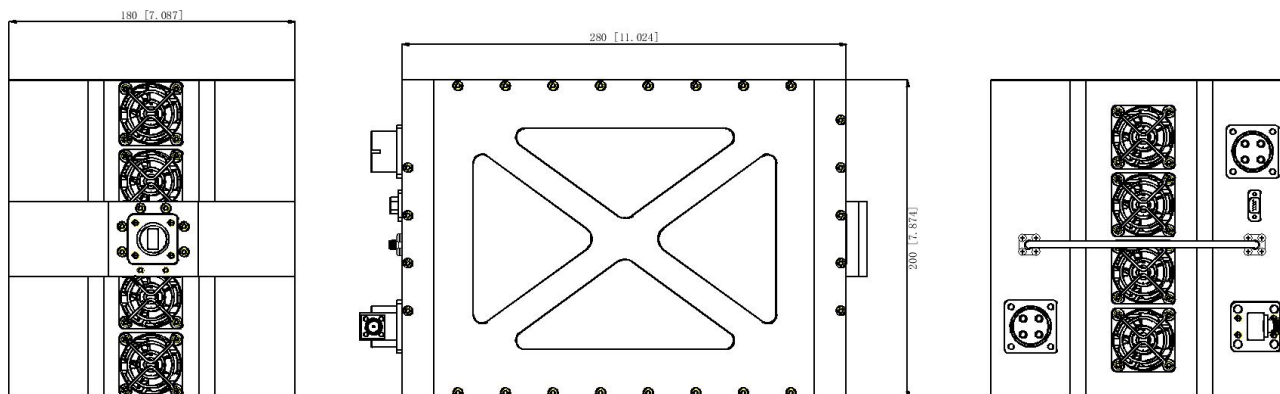
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POWER & CONTROL INTERFACE CONNECTOR

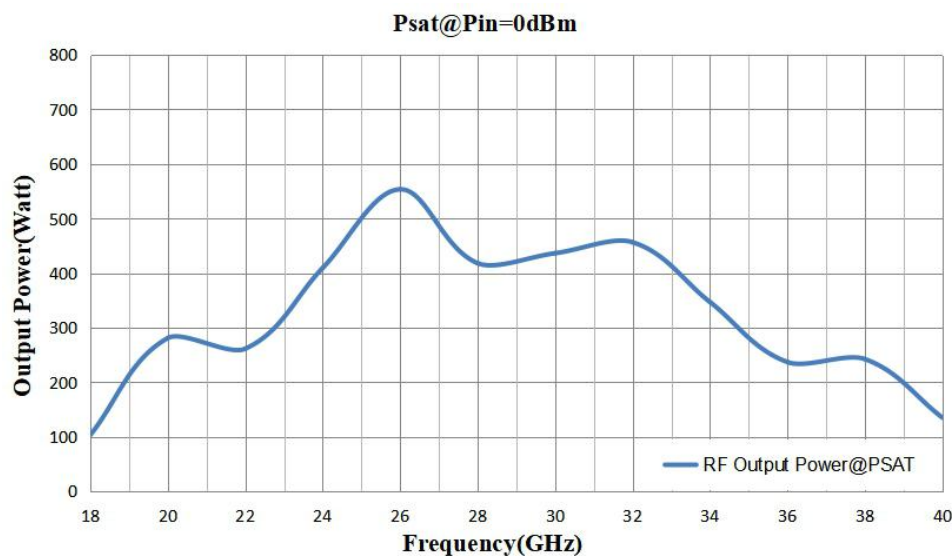
Pin #	Description	Specifications
1,2	VDD	+18VDC
3,4	GND	Ground

Pin #	Description	Specifications
1	ENABLE	Amplifier Enable:TTL Logic High (3.3V~5V)
2	TEMP SENSE	Analog voltage relative to Module's Temperature @ 0.5V+10 mV/°C
3	TEMP ALARM	Amplifier alarm indicator: Normally TTL Low
4	CURRENT SENSE	Analog voltage relative to IDD @ 50mV per Ampere
5	CURRENT ALARM	Amplifier alarm indicator: Normally TTL Low
6	GND	Ground
7,8,9	NC	Non-electrical Properties

OUTLINE DRAWING (All dimensions in mm [inch], dimensional tolerance: ±0.2mm)



TYPICAL PERFORMANCE PLOTS (FOR REFERENCE ONLY)



Note: Adequate heatsink required.

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