KEYLINK MICROWAVE

Broadband High Power Amplifier Module (SSPA)

REV. 3.0_2024.09.27

2000-6000MHz/30Watt/Module

Model Number: KB2060M45A

The model KB2060M43A is a multi-octave high power amplifier operating between 2000 MHz and 6000 MHz and offering a wide dynamic Range with 30 Watts 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 broadband high power S/C Band 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	2000		6000	MHz
RF Output Power	P_{out}	30	45		Watt
Power Gain	Gp	45			dB
Power Gain Flatness	Δ Gp		±3		dB
Input Return Loss	S_{11}			-10	dB
Harmonics @30W	H		-15		dBc
Spurious Signals	Spur		-55		dBc
Switch On/Off@10-90% Time	TON/OFF		2	5	μS
In/Output Impedance	Impedance		50		Ω
Operating Voltage	V_{DC}	24	28	30	Volt
DC Current @30W	I_{DD}		5		Amp

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	150x69x25 [5.9x2.7x0.98]	mm [inch]	Maximum
Weight	1.5[3.3]	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	+10 dBm (Max)
Load VSWR @ P_{OUT} =30W	∞ @ all load phase & amplitude for duration of 1 minutes; 10:1 @ 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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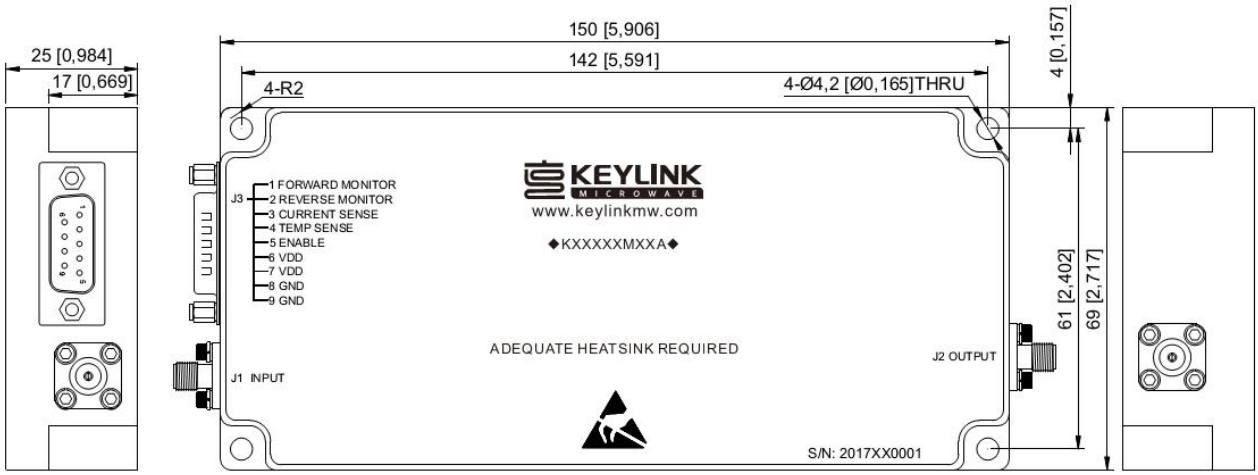
DC INTERFACE CONNECTOR

Pin #	Description	Specifications
1	FWD	RMS Forward power detector
2	REV	RMS Reverse power detector
3	CURRENT SENSE	Analog voltage relative to I_{DD} @ 100mV per Ampere
4	TEMP SENSE	Analog voltage relative to Module's Temperature @ 10 mV/°C
5	ENABLE	Amplifier Enable: TTL Logic High (3.3V) (Internally Pulled-Low)
6	VDD	$28V_{DC}$
7	VDD	$28V_{DC}$
8	GND	Ground
9	GND	Ground

OUTLINE DRAWING (All dimensions in mm [inch])



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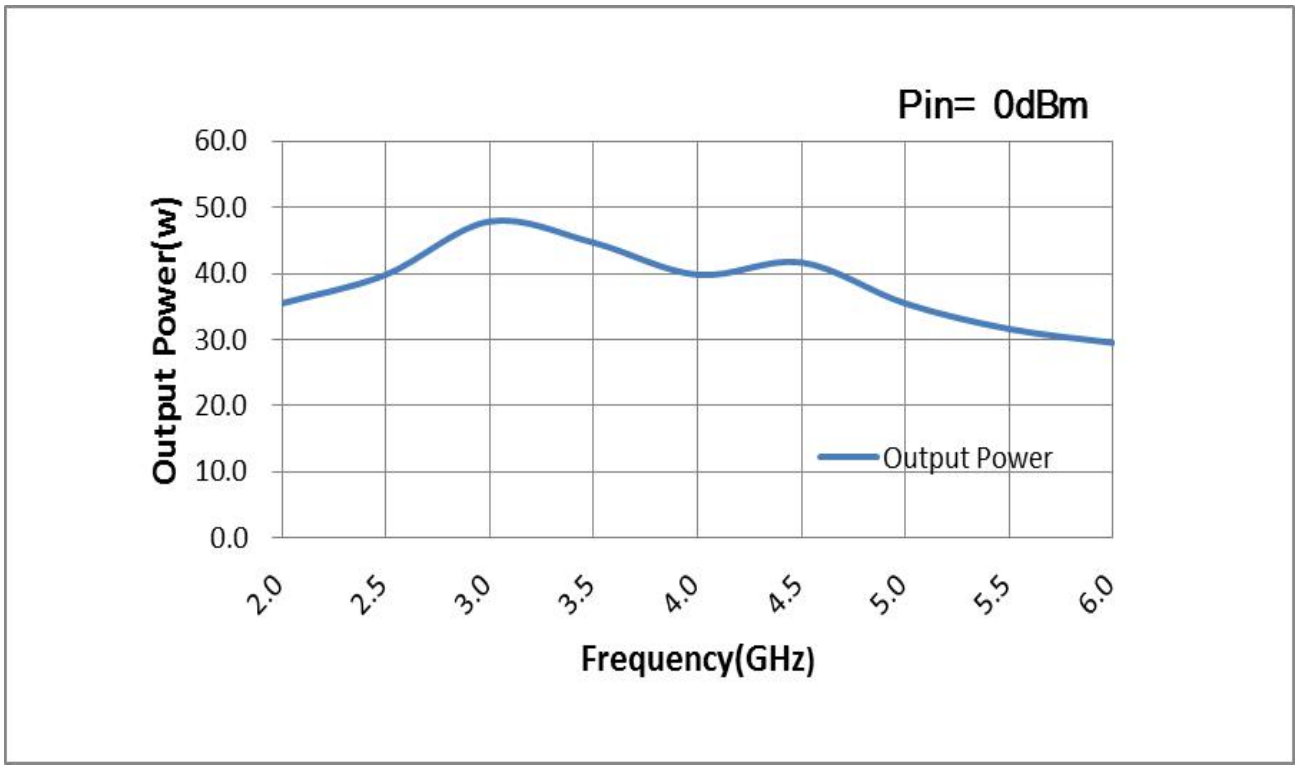
TYPICAL PERFORMANCE PLOTS(For reference only)



Note:

1. Adequate heatsink required.
2. This product will be developed upon contract/order. All the above specs are for reference only. Actual product may be different. Please check with KeyLink sales team if you have any question.

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