






## 2000-6000MHz/50Watt/Module

Model Number: MCW2060M47A

The model MCW2060M47A is a multi-octave high power amplifier operating between 2000MHz and 6000MHz and offering a wide dynamic Range with 50Watts 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. Long term reliability and high efficiency. It is ideal for broadband high power S/C Band applications.

### FEATURES:

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

### ELECTRICAL SPECIFICATIONS @ +30.0VDC, 25°C, 50Ω

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	2000		6000	MHz
RF Output Power	P <sub>out</sub>		50		Watt
Power Gain	G <sub>p</sub>		47		dB
Power Gain Flatness	Δ G <sub>p</sub>		±3		dB
Input Return Loss	S <sub>11</sub>			-10	dB
Harmonics @40W	H		-15		dBc
Spurious Signals	Spur		-60		dBc
Switch On/Off@10-90% Time	T <sub>ON/OFF</sub>		2	5	μs
In/Output Impedance	Impedance		50		Ω
Operating Voltage	VDC	28	30	32	Volt
DC Current @40W	IDD		9		Amp

### MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	160x100x25 [6.30x3.94x0.98]	mm [inch]	Maximum
Weight	2 [4.4]	kg [lbs]	Maximum
RF Connectors Input	SMA, Female		
RF Connectors Output	SMA, 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 @ P <sub>OUT</sub> =30W	∞ @ all load phase & amplitude for duration of 1 minutes; 3:1 @ all load phase & amplitude continuous
Over Temperature	85°C @ heatsink [restored @ 60°C]

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# Broadband High Power Amplifier Module (SSPA)

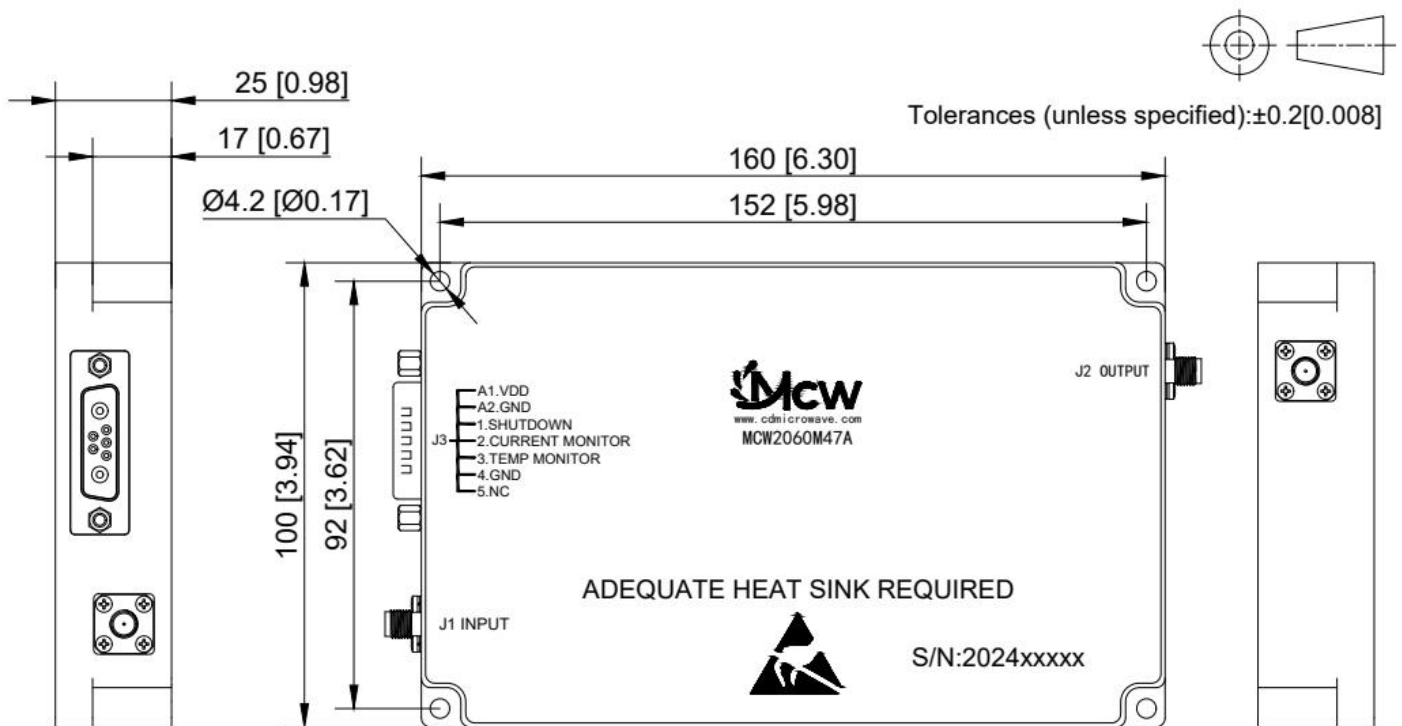
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### DC INTERFACE CONNECTOR

Pin #	Description	Specifications
A1	VDD	28VCC
A2	GND	Ground
1	SHUTDOWN	Amplifier Disable: TTL Logic High (3.3V) (Internally Pulled-Low)
2	CURRENT MONITOR	Analog voltage relative to I <sub>DD</sub> @ 100mV per Ampere
3	TEMP MONITOR	Analog voltage relative to Module's Temperature @ 10 mV/°C
4	GND	Ground
5	NC	No electrical connection

### OUTLINE DRAWING (All dimensions in mm [inch])



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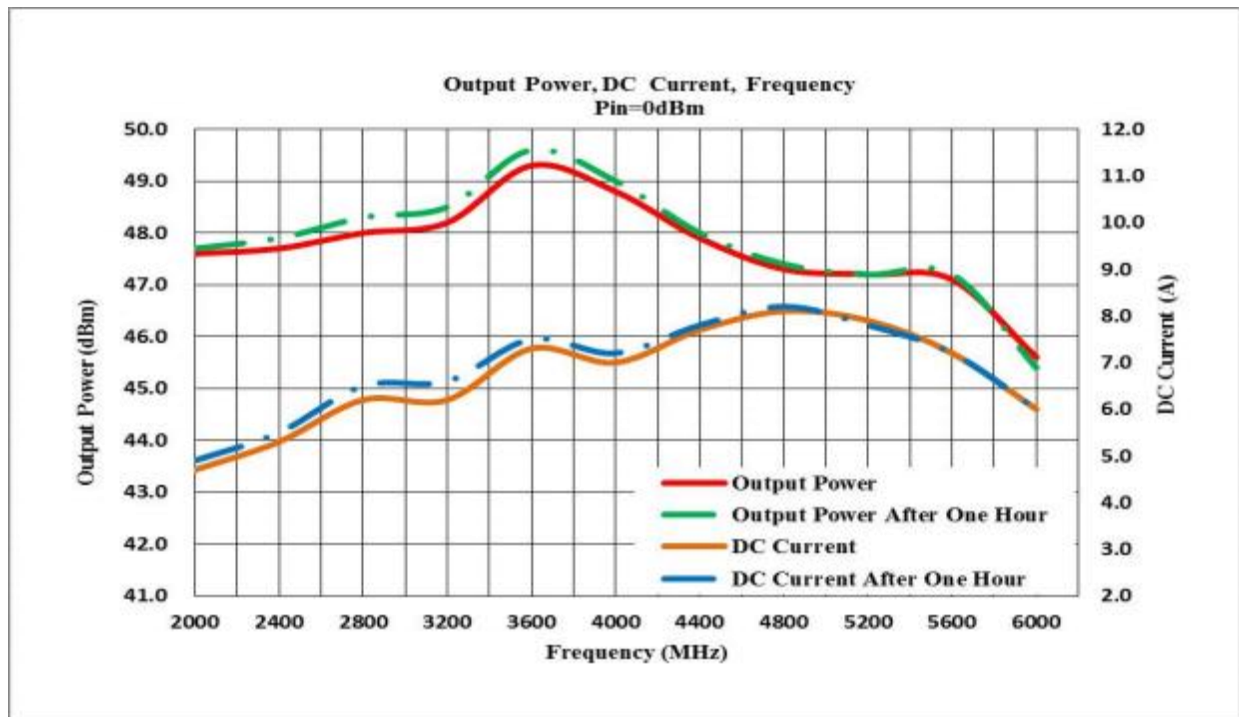
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### 2000-6000MHz/50Watt/Module

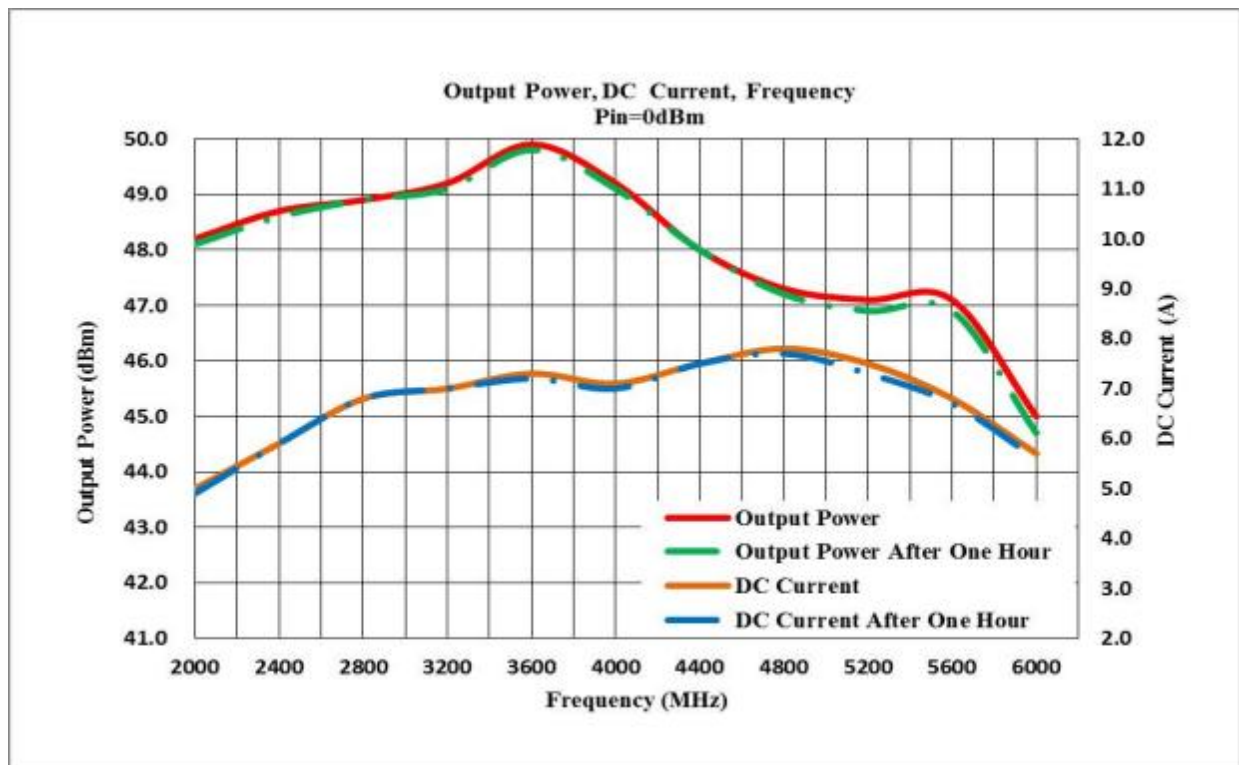
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TYPICAL PERFORMANCE PLOTS(For reference only)

Graph1: Output Power (Low temp.  $-20\pm 3^{\circ}\text{C}$ )



Graph2: Output Power (High temp.  $+60\pm 3^{\circ}\text{C}$ )



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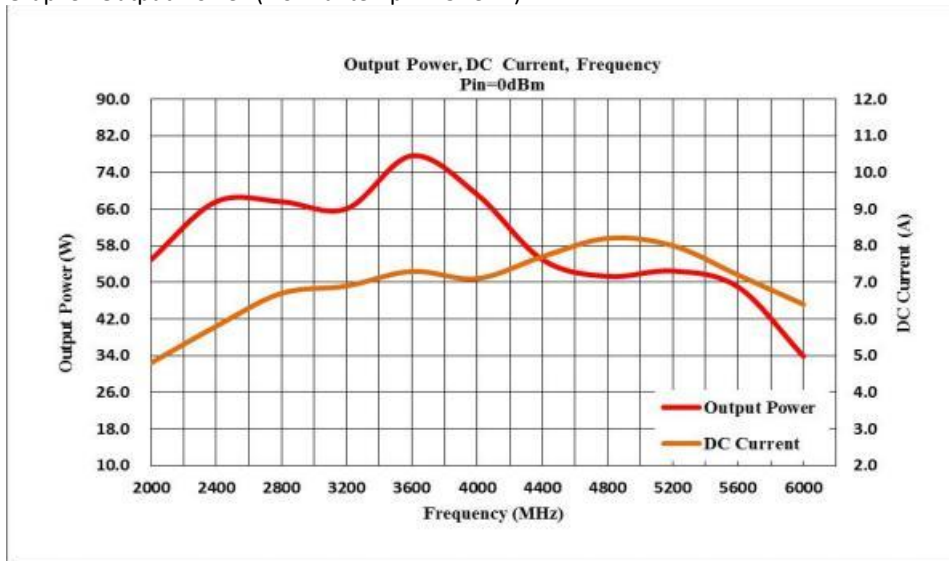
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Graph3: Output Power (Normal temp. +25±3°C)



#### Power Gain:



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Input Return Loss:



#### Important 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 [Chengdu Microwave Technology Co., Ltd](http://ChengduMicrowaveTechnologyCo.,Ltd) sales team or E-mail to [info@cdmicrowave.com](mailto:info@cdmicrowave.com) if you have any more questions.

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