

800-3000MHz/50Watt/Module

Model Number: MCW0830M47A

The model MCW0830M47A is a multi-octave high power amplifier operating between 800 MHz and 3000 MHz and offering a wide dynamic Range with 50 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 broadband high power RF, P&L&S applications.

FEATURES:

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

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

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	800		3000	MHz
RF Output Power	Pout		50		Watt
Power Gain @ PSAT	Gp		47		dB
Input Power for Rated PSAT	PIN		0		dBm
Power Gain Flatness	Δ Gp		±1.5		dB
Input Return Loss	S11			-10	dB
Noise Figure @ Max Gain	NF		11		dB
Third Order Intercept Point2-Tone @ 41dBm/Tone, 1MHz Spacing	IP3		+50		dBm
Harmonics @20W	H		-15		dBc
Spurious Signals	Spur		-60		dBc
Switch On/Off@10-90% Time	TON/OFF		2	5	μs
In/Output Impedance	Impedance		50		Ω
Operating Voltage	VDC	24	28	32	Volt
Current Consumption @ Shutdown	ISD			0.3	Amp
DC Current @40W	IDD		6		Amp

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	160x90x25 [6.30x3.54x0.98]	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	-20		60	°C	
Non-operating Temperature	-25		65	°C	Storage
Relative Humidity (non-condensing)			95	%	

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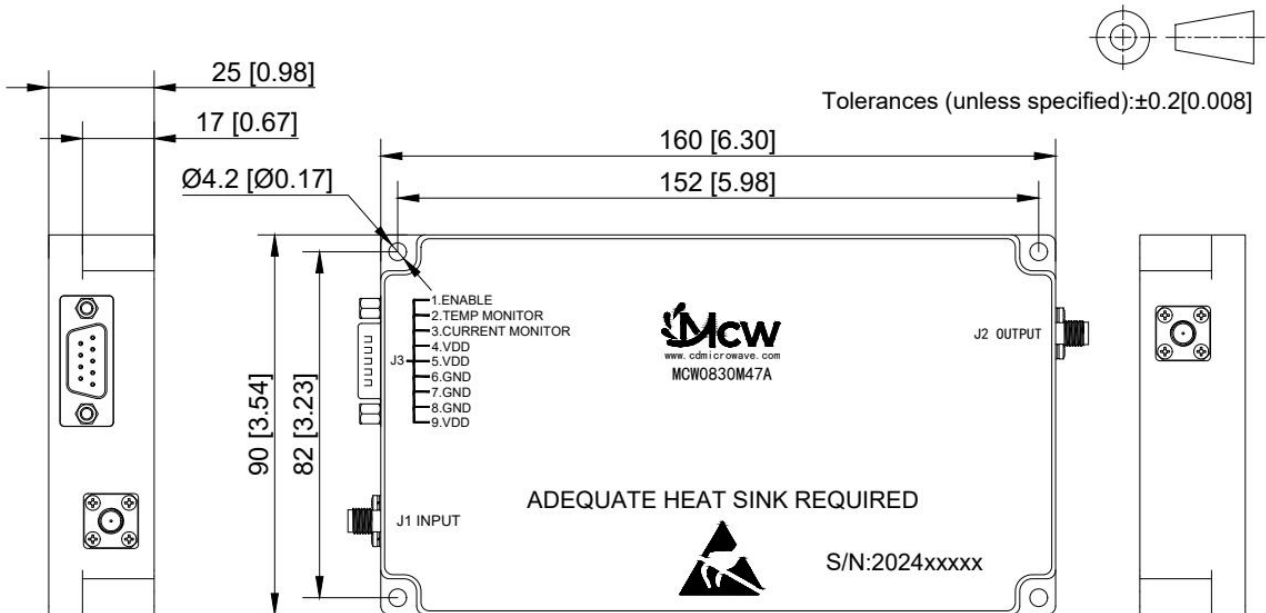
ABSOLUTE MAXIMUM RATING

Input RF drive level without damage	+10 dBm (Max)
Load VSWR @ POUT =40W	∞ @ all load phase & amplitude for duration of 1 minutes; 3:1 @ all load phase & amplitude continuous
Over Temperature	85°C Graceful Degradation

DC INTERFACE CONNECTOR

Pin #	Description	Specifications
1	ENABLE	Amplifier ENABLE: TTL Logic High (3.3V) (Internally Pulled-Low)
2	TEMP MONITOR	Analog voltage relative to Module's Temperature @ 10 mV/°C
3	CURRENT MONITOR	Analog voltage relative to IDD @ 100 mV per Ampere
4	VDD	28VDC
5	VDD	28VDC
6	GND	Ground
7	GND	Ground
8	GND	Ground
9	VDD	28VDC

OUTLINE DRAWING (All dimensions in mm [inch])

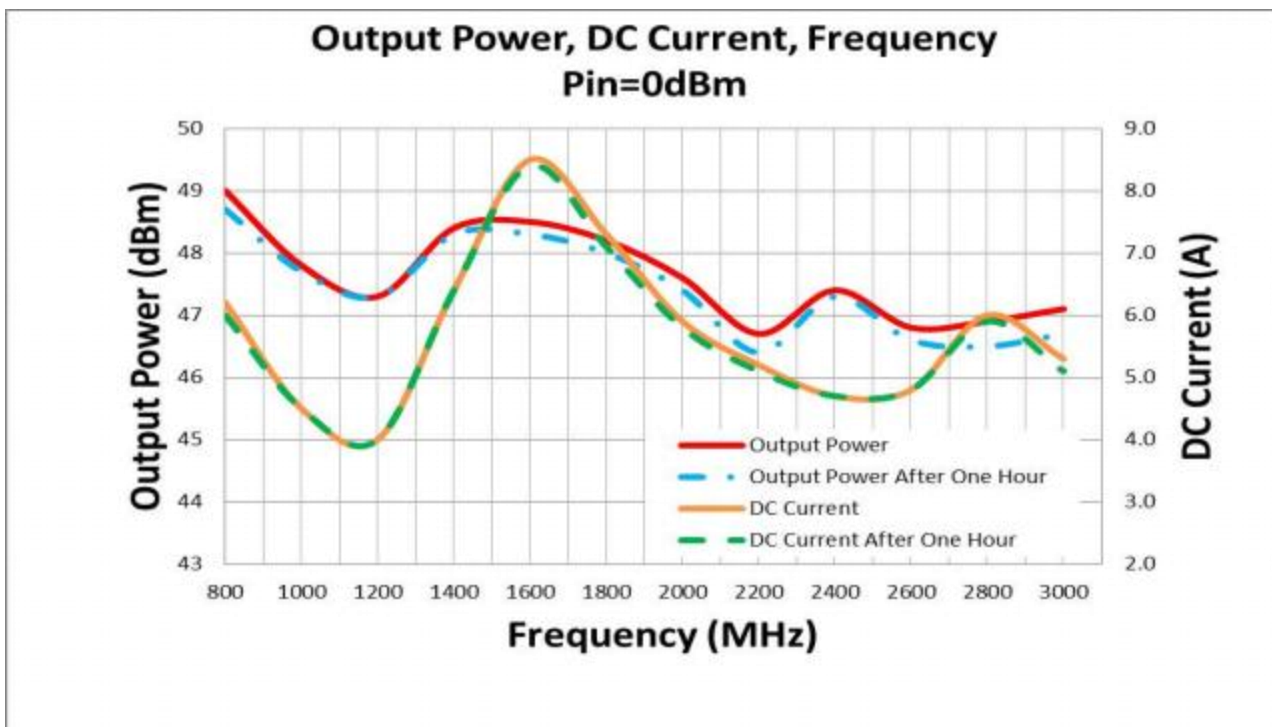


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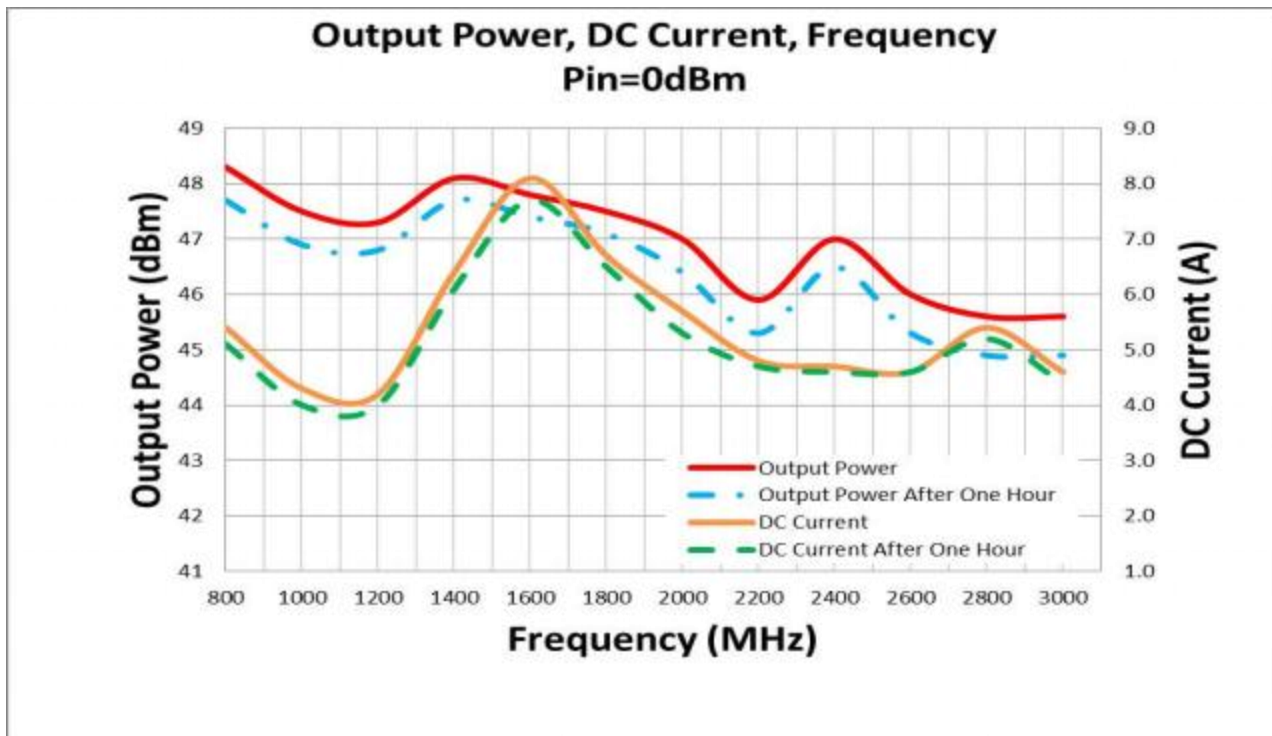
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TYPICAL PERFORMANCE PLOTS(For reference only)

Graph 1: Output Power (Low temp. -20±3°C)



Graph2: Output Power (High temp. +65±3°C)



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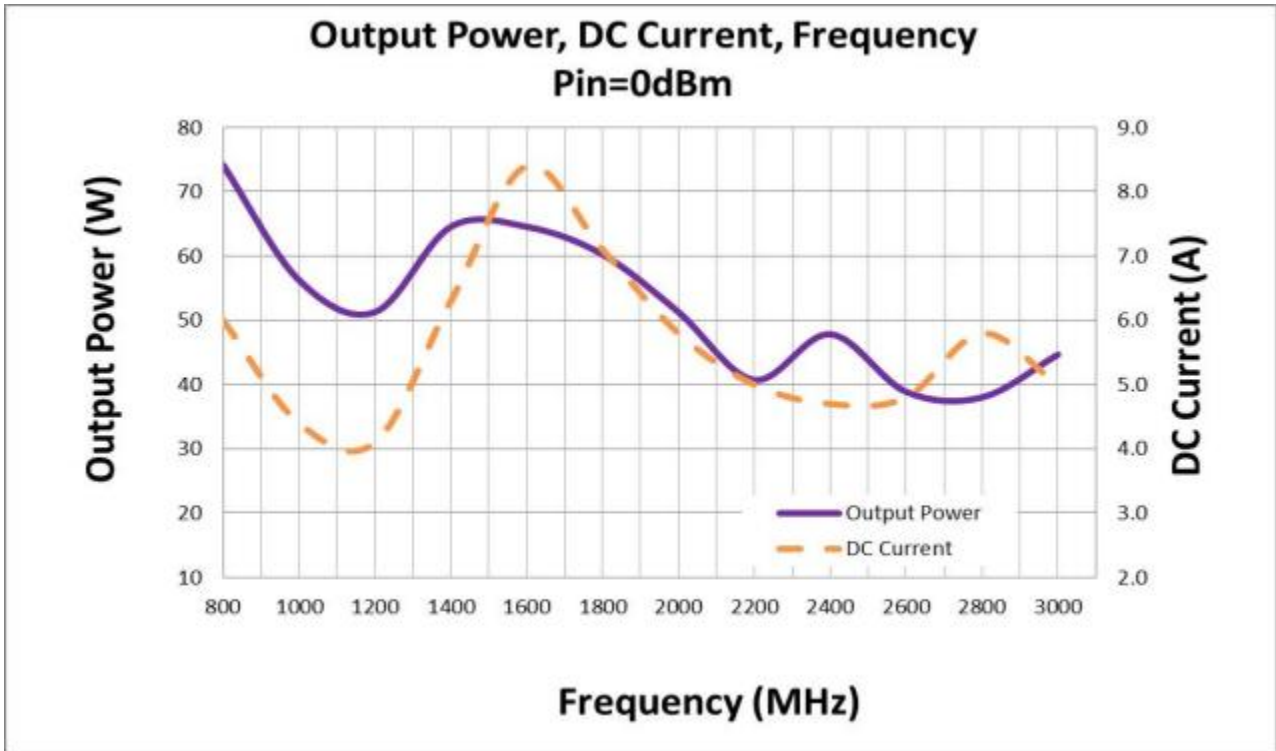
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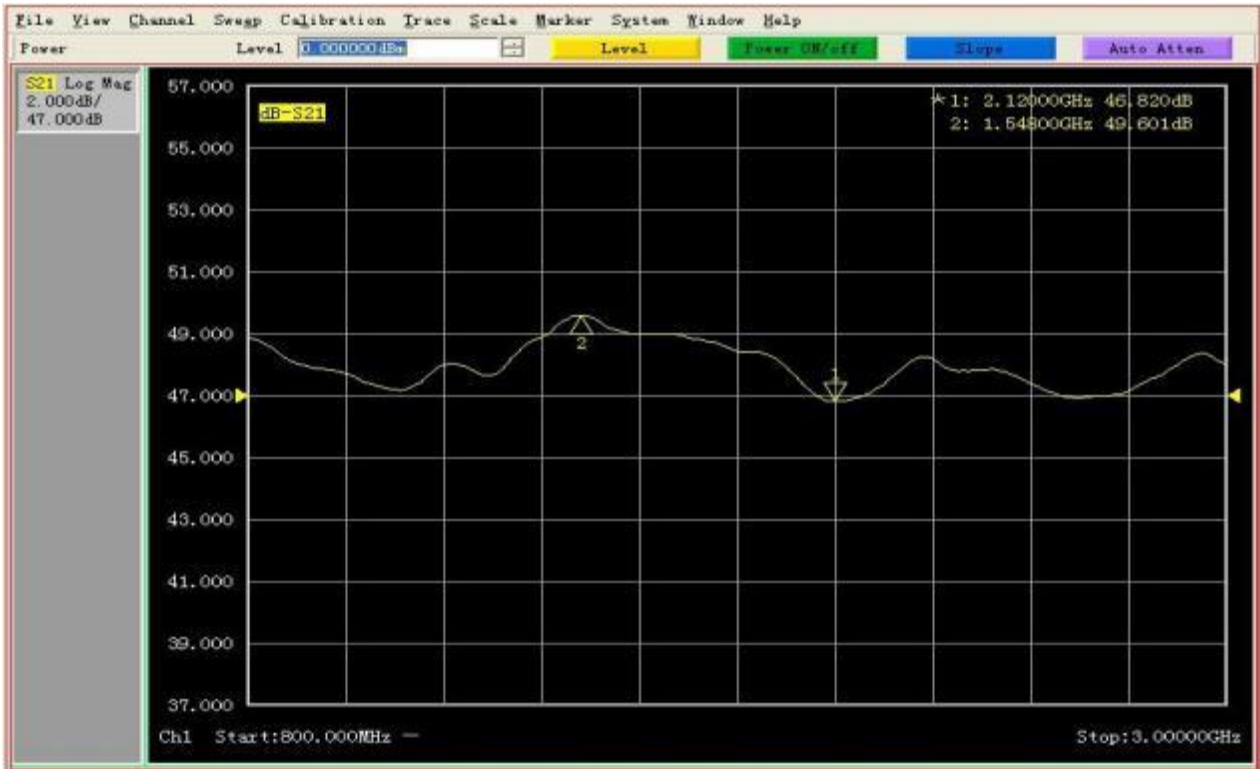
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Graph3: Output Power (Normal temp. +25±3°C)



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 sales team or E-mail to info@cdmicrowave.com if you have any more questions.

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