

2000-4000MHz/20Watt/Module

Model Number: MCW2040M43A

The model MCW2040M43A is a multi-octave high power amplifier operating between 2000 MHz and 4000 MHz and offering a wide dynamic Range with 20Watts 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 RF, linear 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	2000		4000	MHz
RF Output Power	P _{out}		20		Watt
Power Gain	G _p		43		dB
Power Gain Flatness	Δ G _p		±2.5		dB
Input Return Loss	S ₁₁			-10	dB
Harmonics @15W	H		-15		dBc
Spurious Signals	Spur		-55		dBc
Switch On/Off@10-90% Time	T _{ON/OFF}		2	5	μs
In/Output Impedance	Impedance		50		Ω
Operating Voltage	VDC	26	28	30	Volt
DC Current @20W	IDD		5		Amp

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	150x90x25 [5.91x3.54x0.98]	mm [inch]	Maximum
Weight	1.2 [2.6]	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		55	°C	
Non-operating Temperature	-25		60	°C	Storage
Relative Humidity (non-condensing)			95	%	

ABSOLUTE MAXIMUM RATING

Input RF drive level without damage	+10 dBm (Max)
Load VSWR @ POUT =20W	∞ @ all load phase & amplitude for duration of 1 minutes; 3:1 @ all load phase & amplitude continuous
Over Temperature	85°C @ heatsink [restored @ 60°C]

Chengdu Microwave Technology Co., Ltd

>>1st Floor, Building 3#, Huidu Science Park, No.5 Xixin Avenue, High-tech West District, Chengdu, China 611731

>>Tel:+86(28)87872669*0

>>Fax:+86(28)87882925

>>Mobile/WhatsApp:+86-181 8078 9271

>>E-mail: info@cdmicrowave.com

>>www.cdmicrowave.com

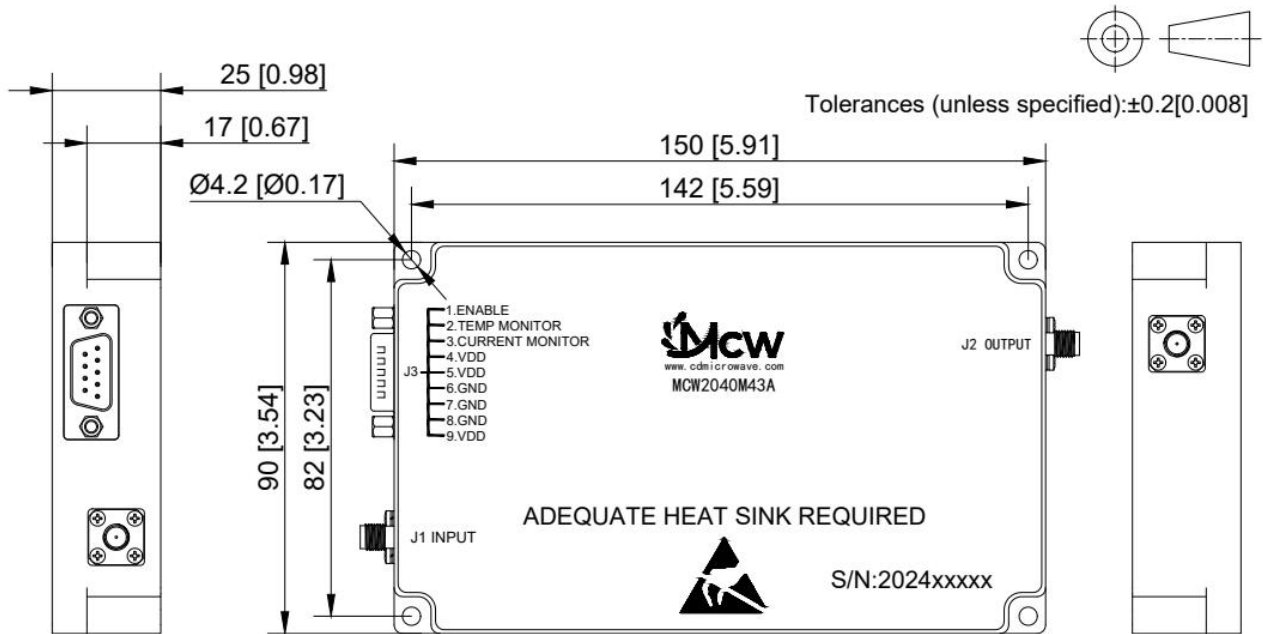
2000-4000MHz/20Watt/Module

Model Number: MCW2040M43A

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])



Chengdu Microwave Technology Co., Ltd

>>1st Floor, Building 3#, Huidu Science Park, No.5 Xixin Avenue, High-tech West District, Chengdu, China 611731

>>Tel:+86(28)87872669*0

>>Fax:+86(28)87882925

>>Mobile/WhatsApp:+86-181 8078 9271

>>E-mail: info@cdmicrowave.com

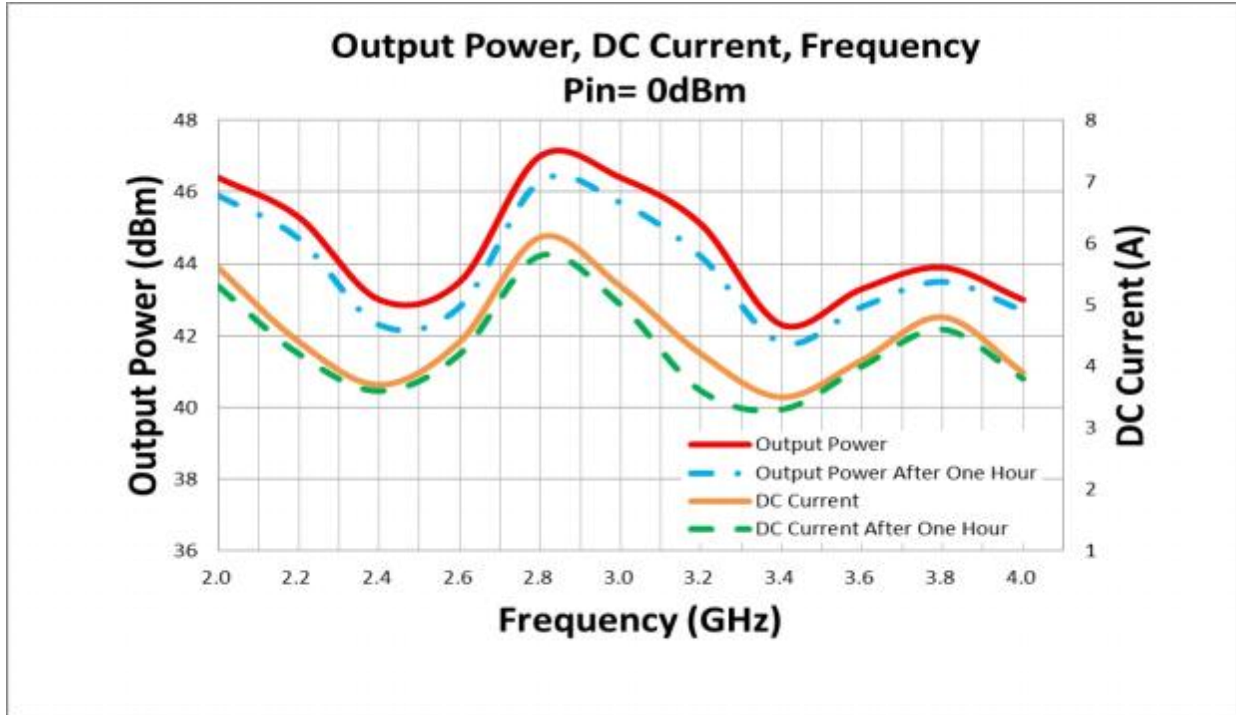
>>www.cdmicrowave.com

2000-4000MHz/20Watt/Module

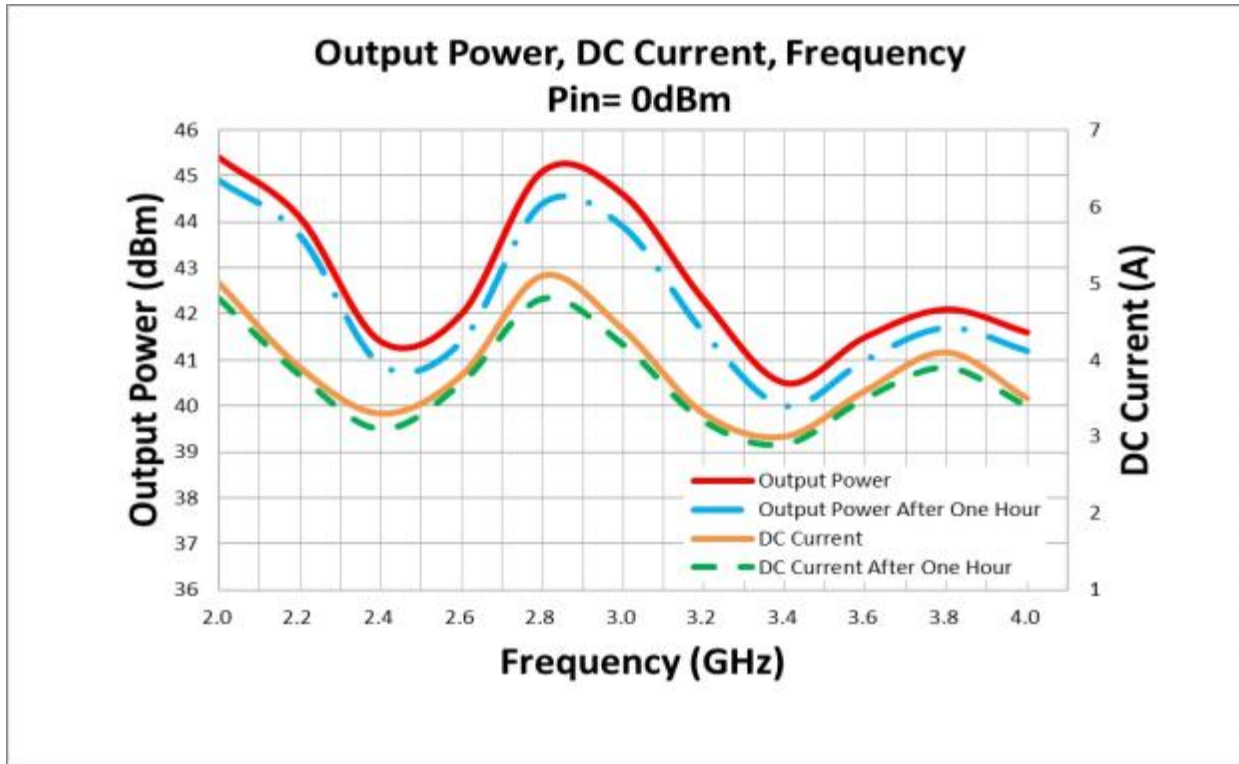
Model Number: MCW2040M43A

TYPICAL PERFORMANCE PLOTS(For reference only)

Graph 1: Output Power (Low temp. $-20\pm 3^{\circ}\text{C}$)



Graph 2: Output Power (High temp. $+55\pm 3^{\circ}\text{C}$)



Chengdu Microwave Technology Co., Ltd

>>1st Floor, Building 3#, Huidu Science Park, No.5 Xixin Avenue, High-tech West District, Chengdu, China 611731

>>Tel:+86(28)87872669*0

>>Fax:+86(28)87882925

>>Mobile/WhatsApp:+86-181 8078 9271

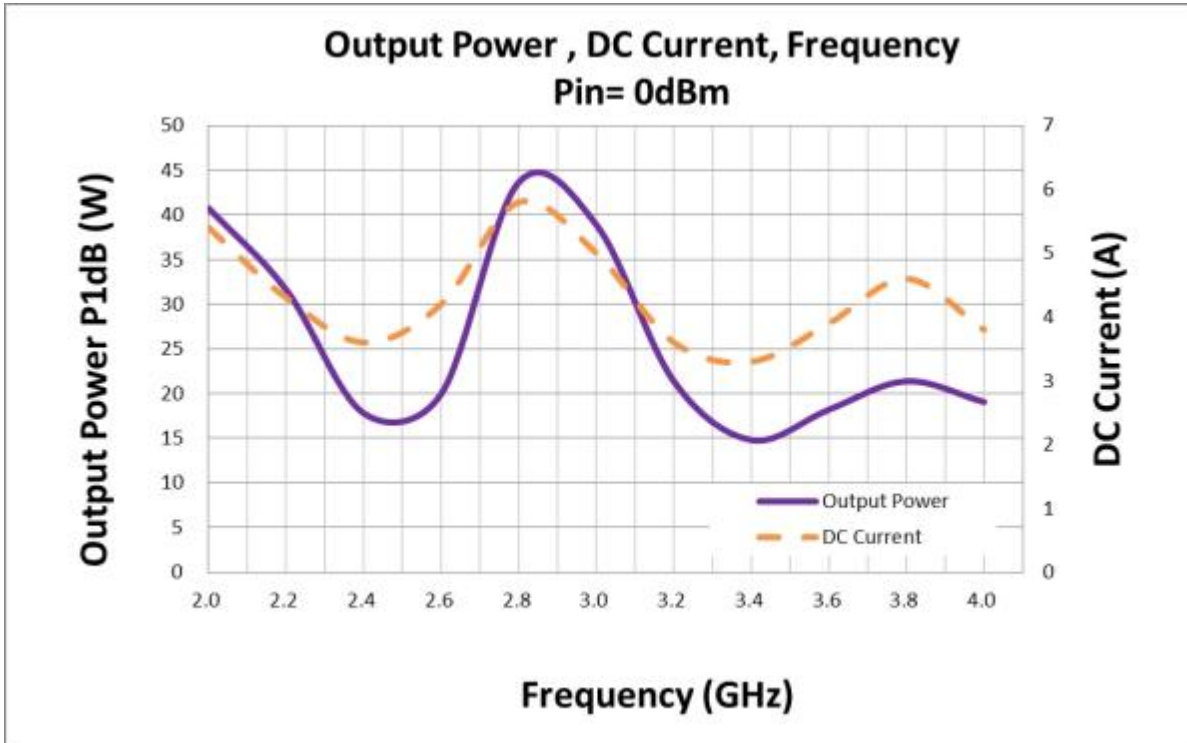
>>E-mail: info@cdmicrowave.com

>>www.cdmicrowave.com

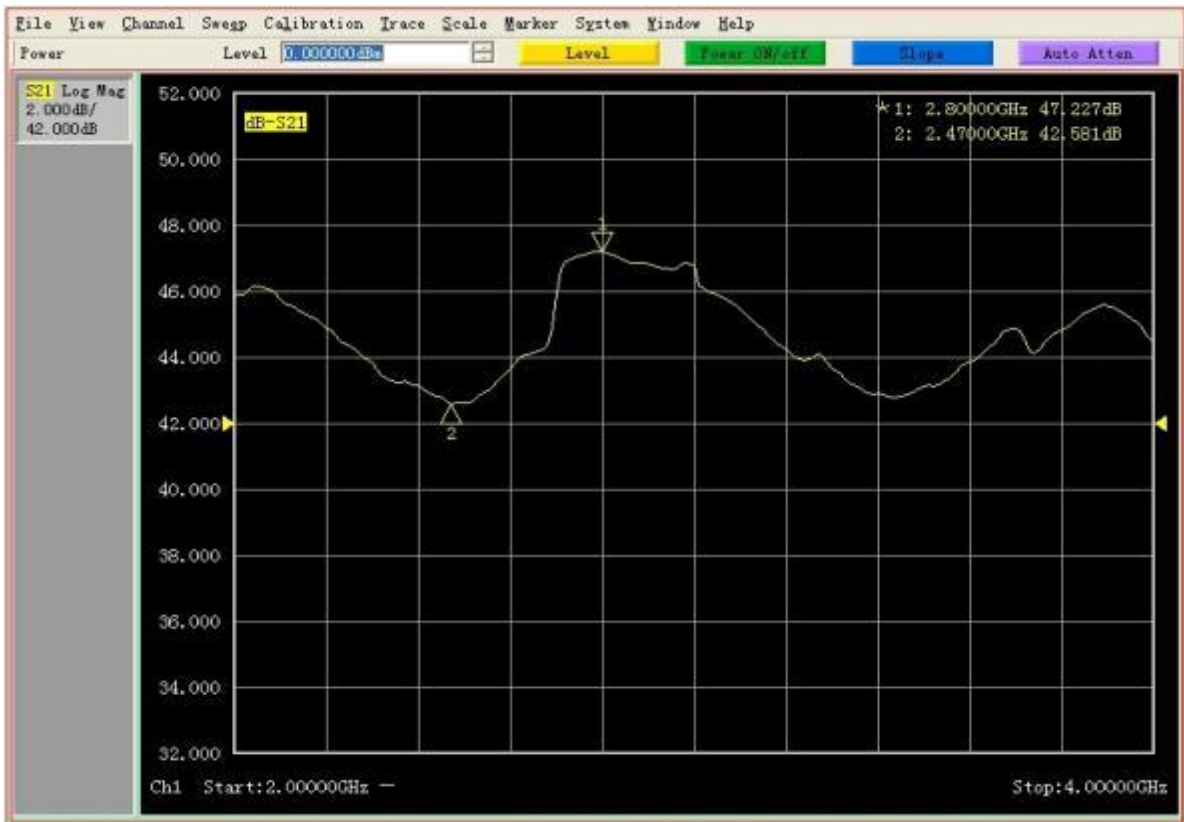
2000-4000MHz/20Watt/Module

Model Number: MCW2040M43A

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



Power Gain:



2000-4000MHz/20Watt/Module

Model Number: MCW2040M43A

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.

Chengdu Microwave Technology Co., Ltd

>>1st Floor, Building 3#, Huidu Science Park, No.5 Xixin Avenue, High-tech West District, Chengdu, China 611731

>>Tel: +86(28)87872669*0

>>Fax: +86(28)87882925

>>Mobile/WhatsApp: +86-181 8078 9271

>>E-mail: info@cdmicrowave.com

>>www.cdmicrowave.com