

5600-5900MHz/50Watt/Module

Model Number: MCW5659M47A

The model MCW5659M47A is a high power amplifier operating between 5600MHz and 5900MHz 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.

FEATURES:

- Suitable for RF, L&S linear applications
- Small size and light weight
- Unconditional stability and ruggedness
- Built-in control, and protection circuits
- Class AB

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

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	5600		5900	MHz
RF Output Power	Pout		50		Watt
Power Gain	Gp		47		dB
Power Gain Flatness	Δ Gp		±2		dB
Input Return Loss	S11			-10	dB
Harmonics @20W	H		-15		dBc
Spurious Signals	Spur		-60		dBc
Switching Speed	TON/OFF		2	5	μS
In/Output Impedance	Impedance		50		Ω
Operating Voltage	VDC	24	28	32	Volt
Power add efficiency	Eff		23		%
Current Consumption @ POUT = 40W	Ibd			10	Amp

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	180x110x25[7.08x4.33x0.98]	mm [inch]	Maximum
Weight	1.5[3.3]	kg [lbs]	Maximum
RF Connectors Input	SMA, Female		
RF Connectors Output	SMA, Female		
DC Interface Connector	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 @ POUT =30W	∞ @ all load phase & amplitude for duration of 1 minutes; 3:1 @ all load phase & amplitude continuous

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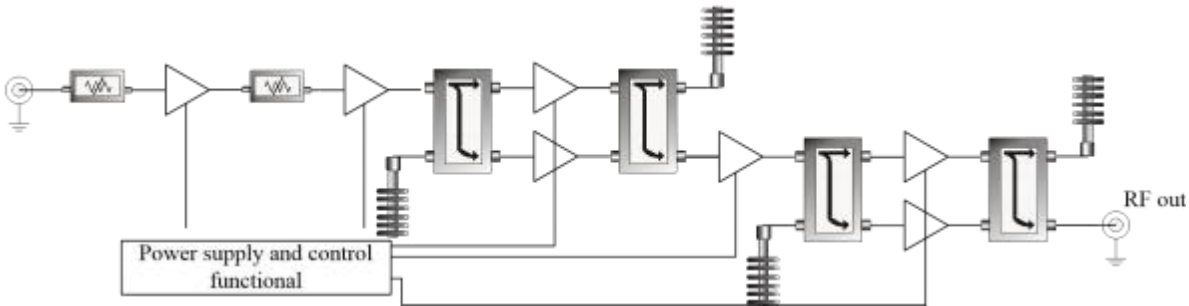
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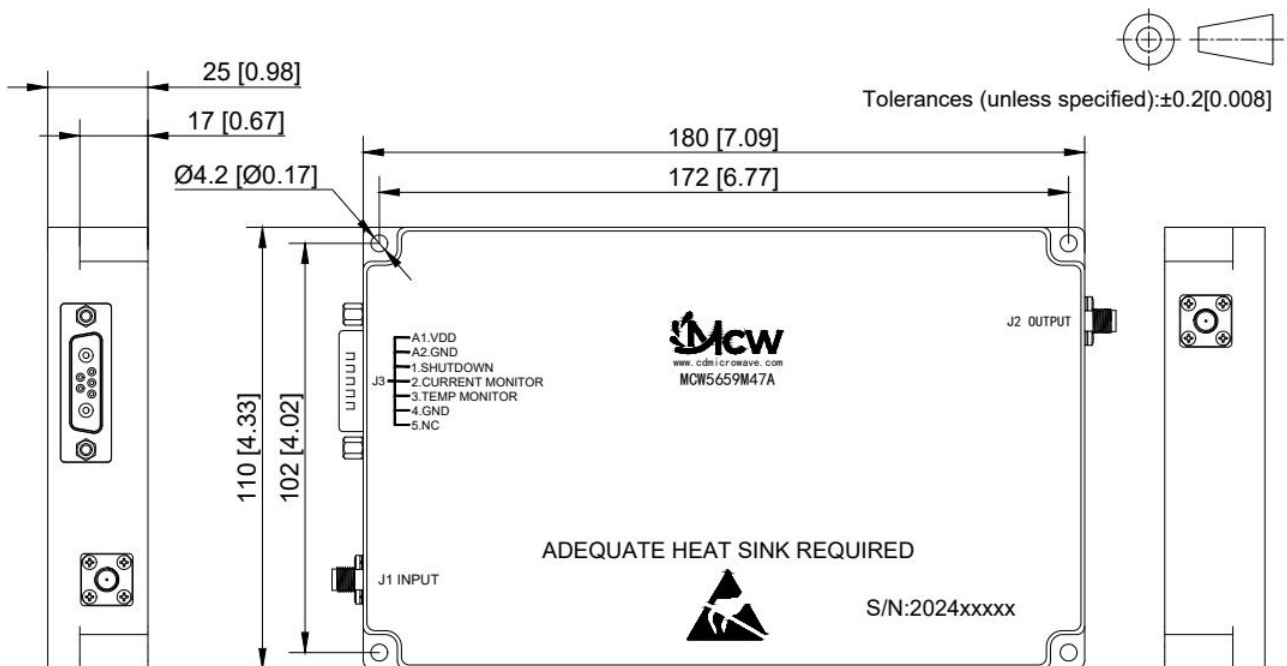
DC INTERFACE CONNECTOR

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 _{DD} @ 100mV per Ampere
3	TEMP MONITOR	Analog voltage relative to Module's Temperature @ 10 mV/°C
4	GND	Ground
5	NC	No electrical connection

Functional Diagram



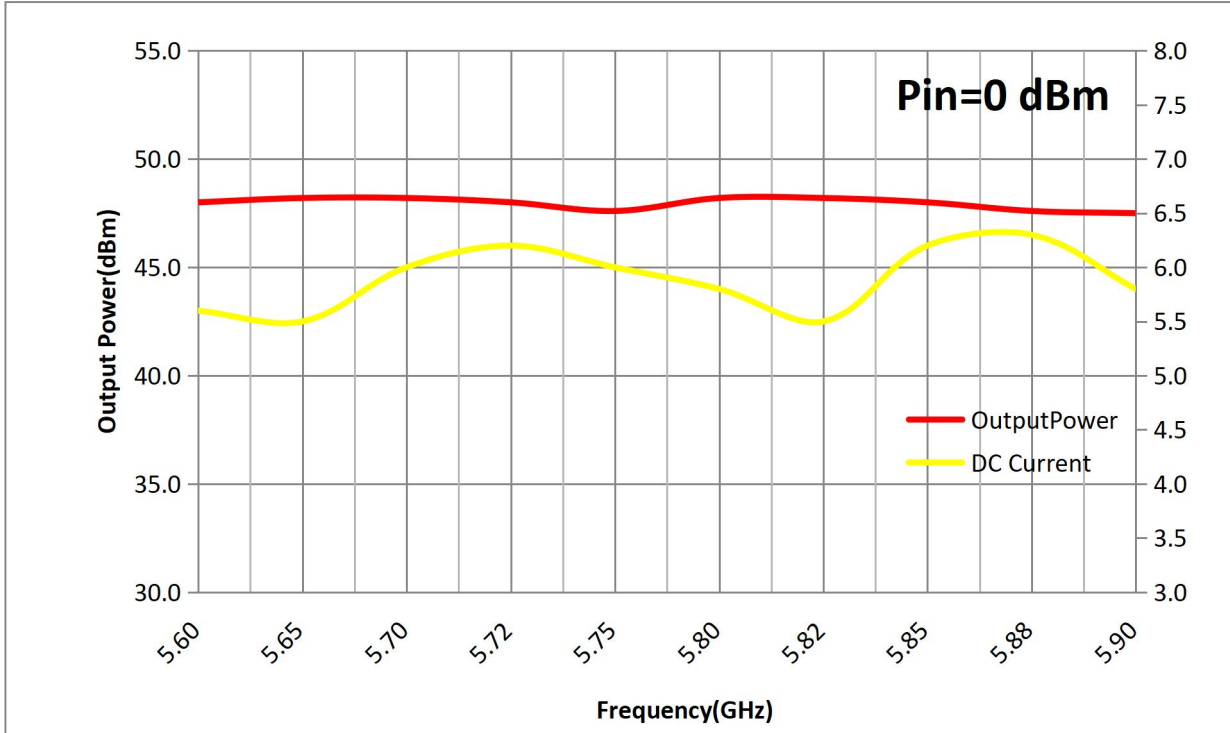
OUTLINE DRAWING (All dimensions in mm[inch])



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TYPICAL PERFORMANCE PLOTS (for reference only)



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](mailto:info@cdmicrowave.com) sales team or E-mail to info@cdmicrowave.com if you have any more questions.

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