





Narrowband High Power Amplifier Module (SSPA)

850-930MHz/50Watt/Module

Model Number: MCW0890M47A

The model MCW0890M47A is a high power amplifier operating between 850MHz and 930MHz and offering a wide dynamic Range with 50 Watts typical saturated power. The employment of LDMOS and chip-and-wire technology in manufacturing ensures this module state-of-the-art power performance with excellent power-to-volume ratio. It is ideal for jamming, EMC, test and measurement applications.

FEATURES:

-  Small Size and Light Weight
-  50 Ohms Input and Output Matched
-  Built-In Control and Protection Circuits
-  Class AB

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

Parameter	Symbol	Minimu	Typ	Maximum	Units
Operating Frequency	BW	850		930	MHz
RF Output Power	P _{out}		50		Watt
Power Gain	G		47		dB
Small Signal Gain Flatness	Δ G _{SS}		±1		dB
Input Return Loss	S ₁₁			-10	dB
Harmonics @20W	H		-10		dBc
Spurious Signals	Spur		-60		dBc
In/Output Impedance			50		Ω
Operating Voltage	V _{DC}	24	28	32	Volt
DC Current @40W	I _{DD}		5		Amp

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	180x80x25 [7.09x3.15x0.98]	mm [inch]	Maximum
Weight	2 [4.4]	kg [lbs]	Maximum
RF Connectors Input	SMA, Female		
RF Connectors Output	SMA, Female		
DC Interface Connector	D-Sub 9-Pin, Male		
Cooling	External Heatsink (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	Maximum
Load VSWR @ P _{OUT} =50W	∞ @ all load phase & amplitude for duration of 1 minute; 3:1 @ all load phase & amplitude continuous	
Thermal Overload	85°C ±5°C shutdown	Maximum

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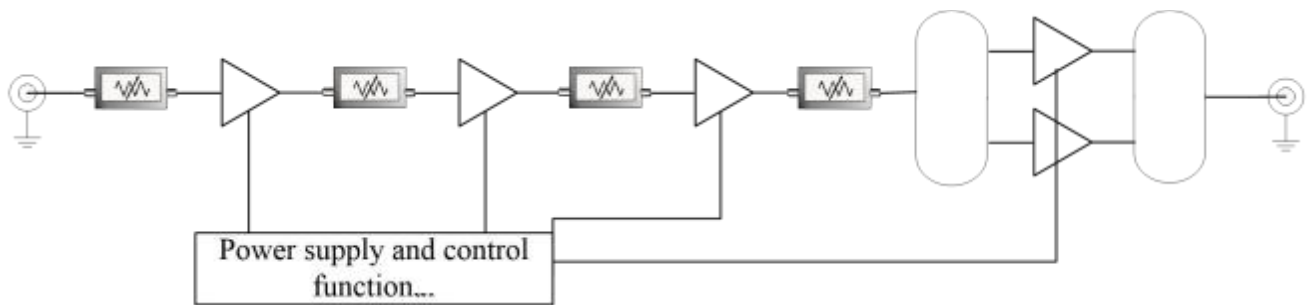
850-930MHz/50Watt/Module

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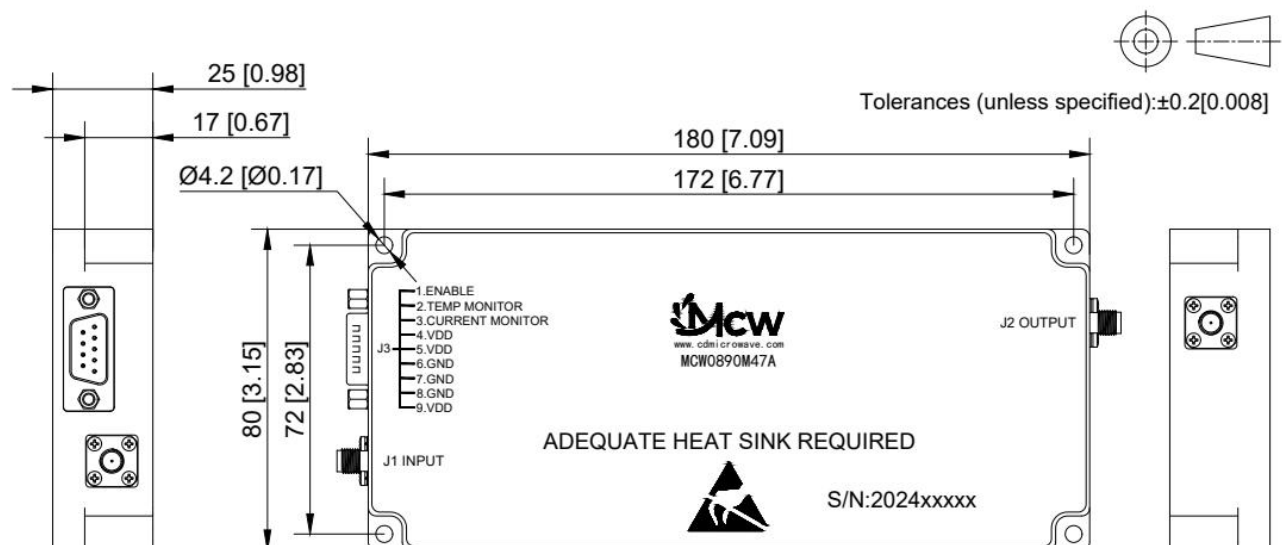
DC INTERFACE CONNECTOR

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

Functional Diagram



OUTLINE DRAWING (All dimensions in mm [inch])



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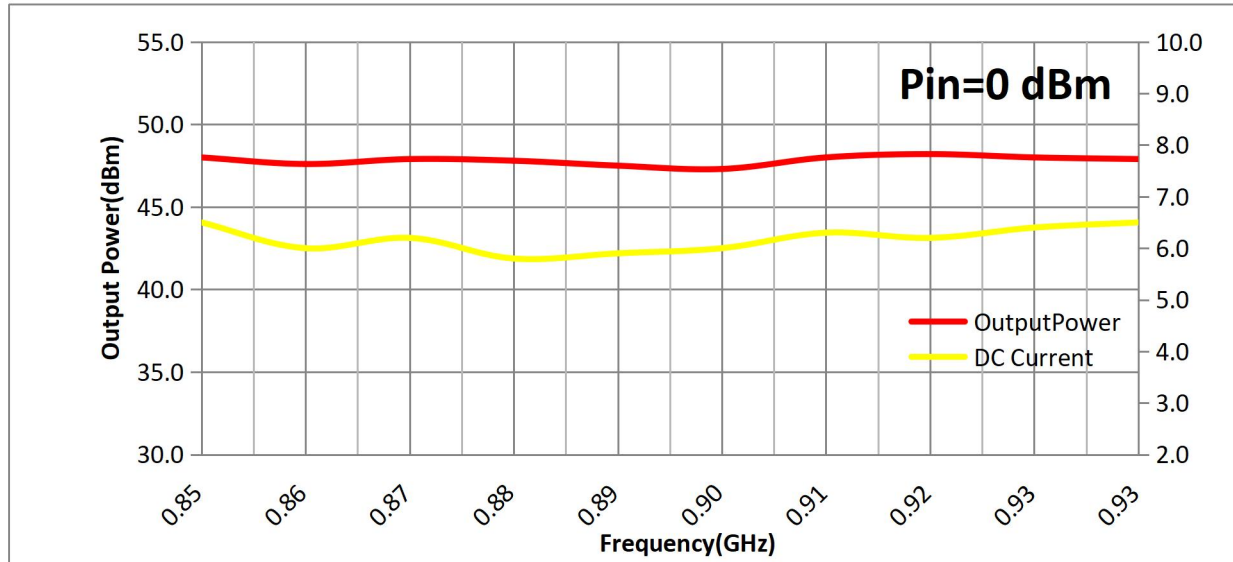
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Graph3: Output Power (Normal temp.+25±3℃)



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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