





Narrowband High Power Amplifier Module (SSPA)

80-1000MHz/80Watt/Module

Model Number: MCW00810M49A

The model MCW00810M49A is a multi-octave high power amplifier operating between 80MHz and 1000MHz and offering a wide dynamic range with 80Watts typical saturated power. The employment of advanced high-power devices in manufacturing ensures this module exceptional power performance, long term reliability and high efficiency.

FEATURES:

-  Small Size and Light Weight
-  Narrowband & High Power
-  50 Ohms Input and Output Matched
-  Built-In Control and Protection Circuits

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

Parameter	Symbol	Min	Typical	Max	Units
Operating Frequency	BW	80		1000	MHz
RF Output Power	P _{out}		80		Watt
Power Gain	G _p		49		dB
Small Signal Gain Flatness	Δ G _{ss}		±3		dB
Input Return Loss	S ₁₁			-10	dB
Harmonics @ 50W	H		-10		dBc
Spurious Signals	Spur		-55		dBc
In/Output Impedance	Impedance		50		Ω
Operating Voltage	V _{DC}	24	28	32	Volt
DC Current @ 80W	I _{DD}		11	12.5	Amp

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	150x90x25 [5.91x3.54x0.98]	mm [inch]	Maximum
Weight	0.8 [1.8]	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	-40		60	°C	
Non-operating Temperature	-45		85	°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 minute; 3 : 1 @ all load phase & amplitude continuous
Over Temperature	85°C @ heatsink [restored @ 60°C]

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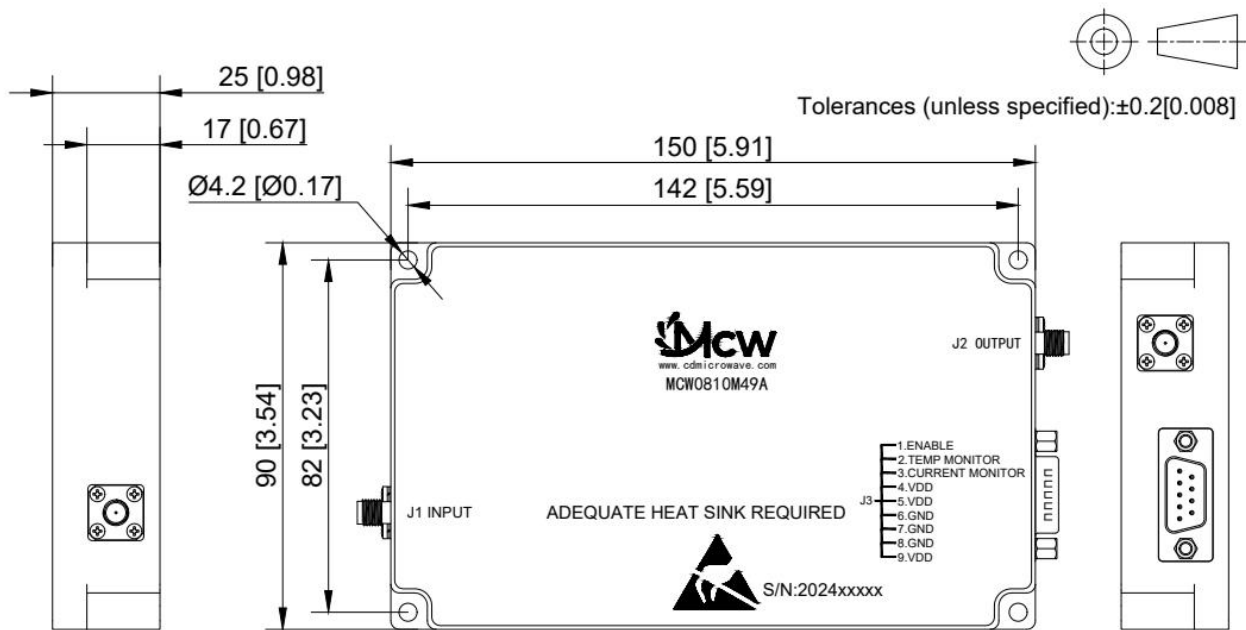
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DC INTERFACE CONNECTOR

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

OUTLINE DRAWING (All dimensions in mm [inch])



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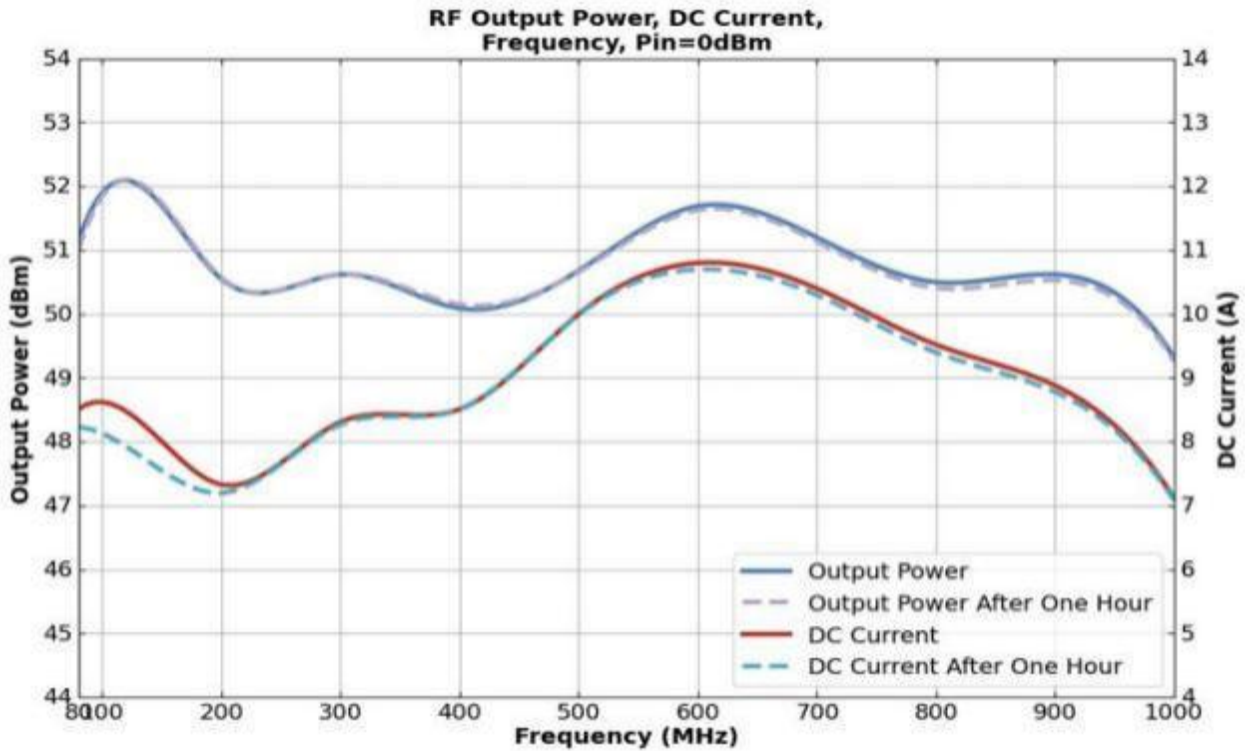
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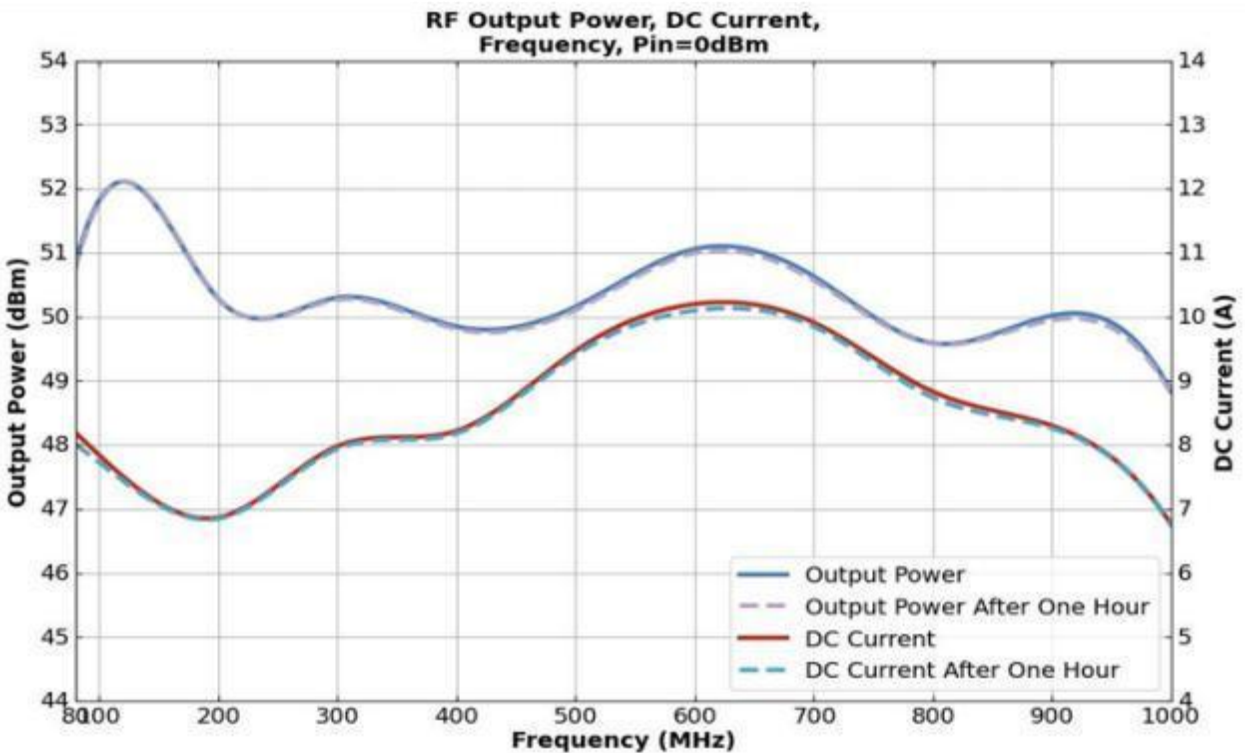
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TYPICAL PERFORMANCE PLOTS (FOR REFERENCE ONLY)

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



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



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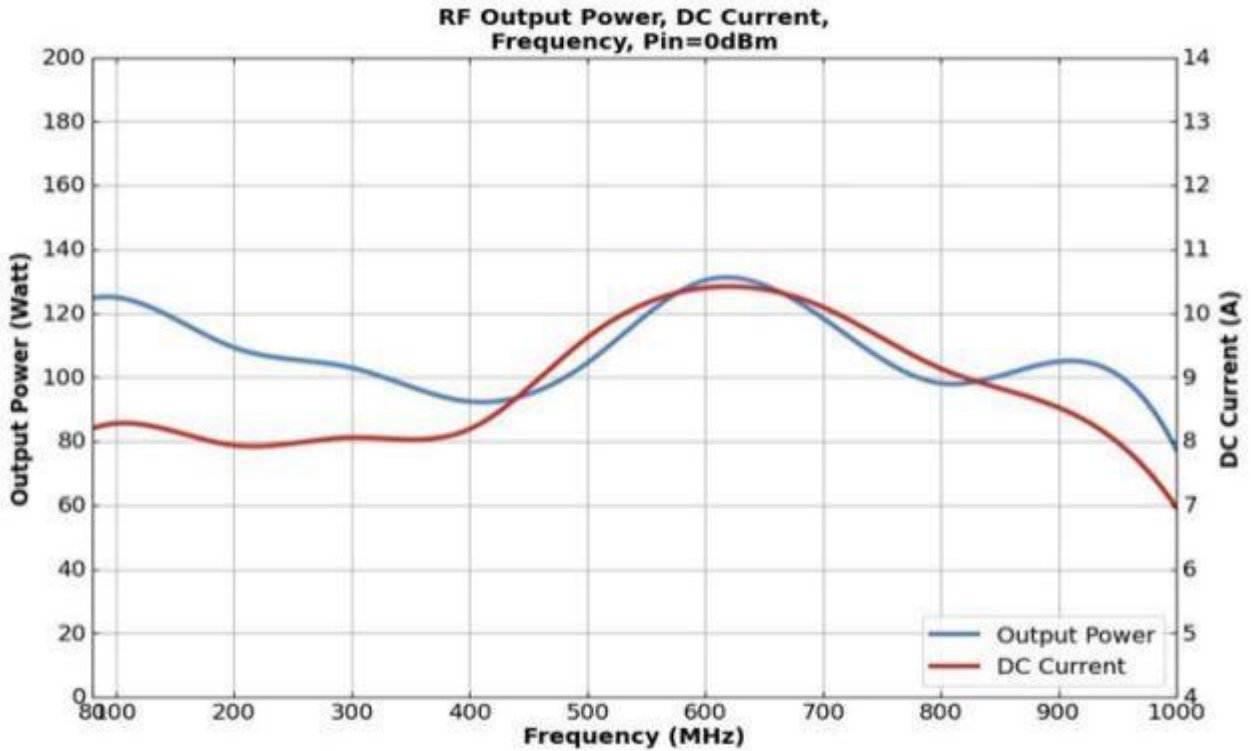
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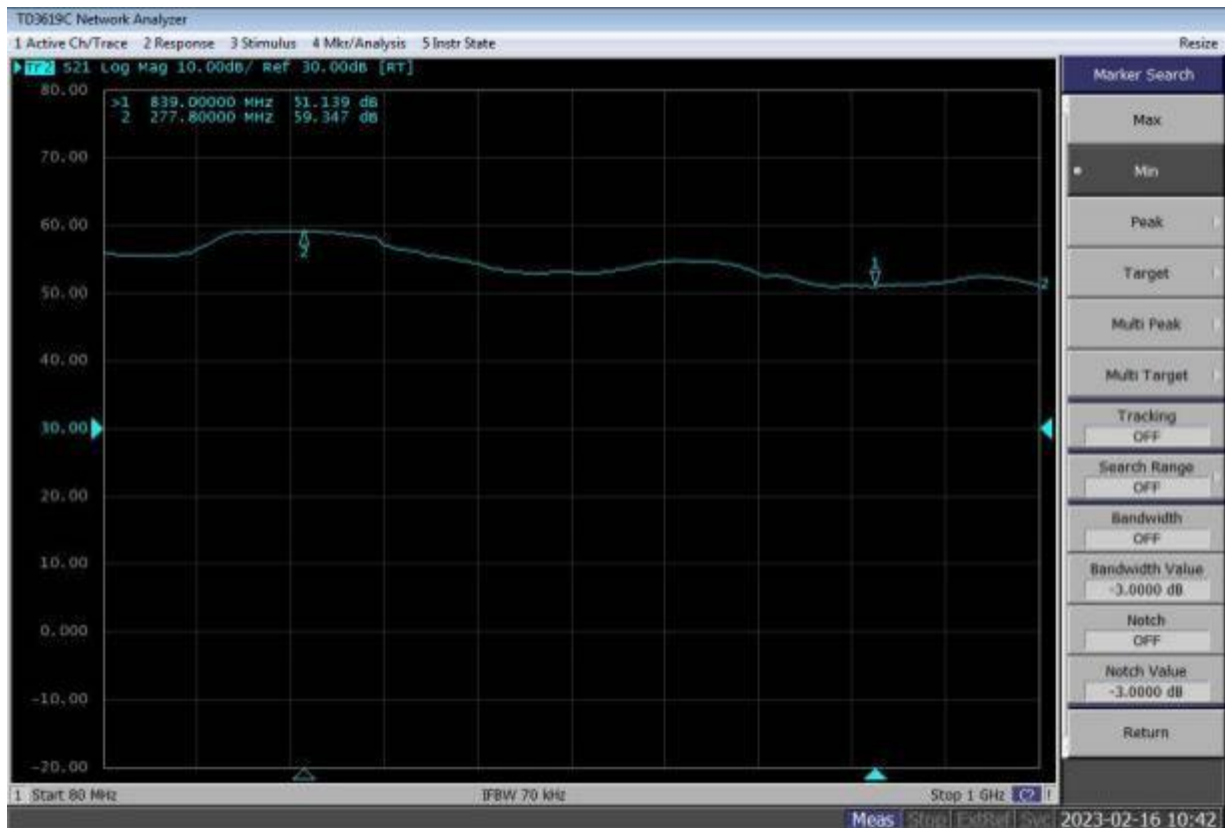
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RF Output Power (Normal temp. +25±3 °C)



Small Signal Flatness



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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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