





Broadband High Power Amplifier Module (SSPA)

20-520MHz/200Watt/Module

Model Number: MCW002052M53A

The model MCW002052M53A is a high power amplifier operating between 20MHz and 520MHz and offering a wide dynamic Range with 200 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
-  Instantaneous ultra-broadband
-  50 Ohms input and Output matched
-  Built-in control and protection circuits.

ELECTRICAL SPECIFICATIONS @ +32.0VDC, 25°C, 50Ω

Parameter	Symbol	Minimum	Typical	Maximum	Units
Operating Frequency	BW	1.5		30	MHz
RF Output Power	Pout	200			Watt
Power Gain	G		53		dB
Input Return Loss	S ₁₁			-10	dB
Harmonics @150W	H		-10		dBc
Spurious Signals	Spur		-60		dBc
In/Output Impedance			50		Ω
Operating Voltage	V _{DC}	30	32	34	Volt
DC Current @200W	I _{DD}		18		Amp

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	200x150x30 [7.5x5.9x1.2]	mm [inch]	Maximum
Weight	2 [4]	kg [lbs]	Maximum
RF Connectors Input	SMA, Female		
RF Connectors Output	N-Typ, Female		
DC Interface Connector	Hybrid,D-Sub 7-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	+10dBm	Maximum
Load VSWR @ POUT =100W	∞ @ all load phase & amplitude for duration of 1 minute; 3:1 @ all load phase & amplitude continuous	
Thermal Overload	85°C shutdown	Maximum

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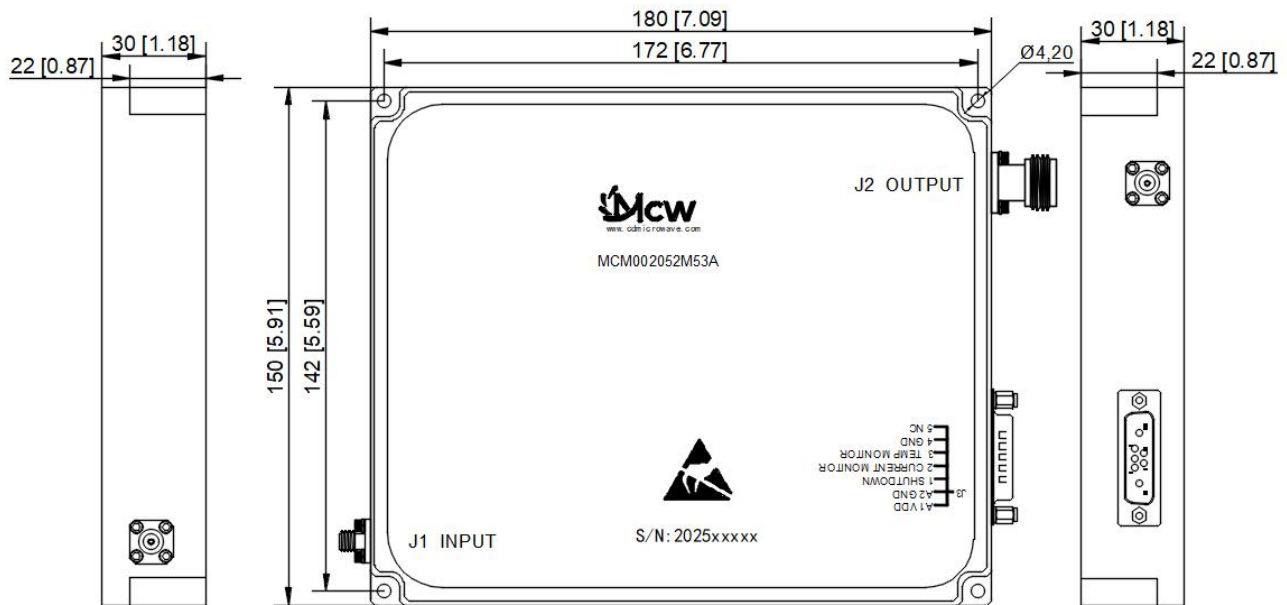
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DC INTERFACE CONNECTOR

Pin #	Description	Specifications
A1	VDD	32VCC
A2	GND	Ground
1	ENABLE	Amplifier EN able: 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

OUTLINE DRAWING (All dimensions in mm)



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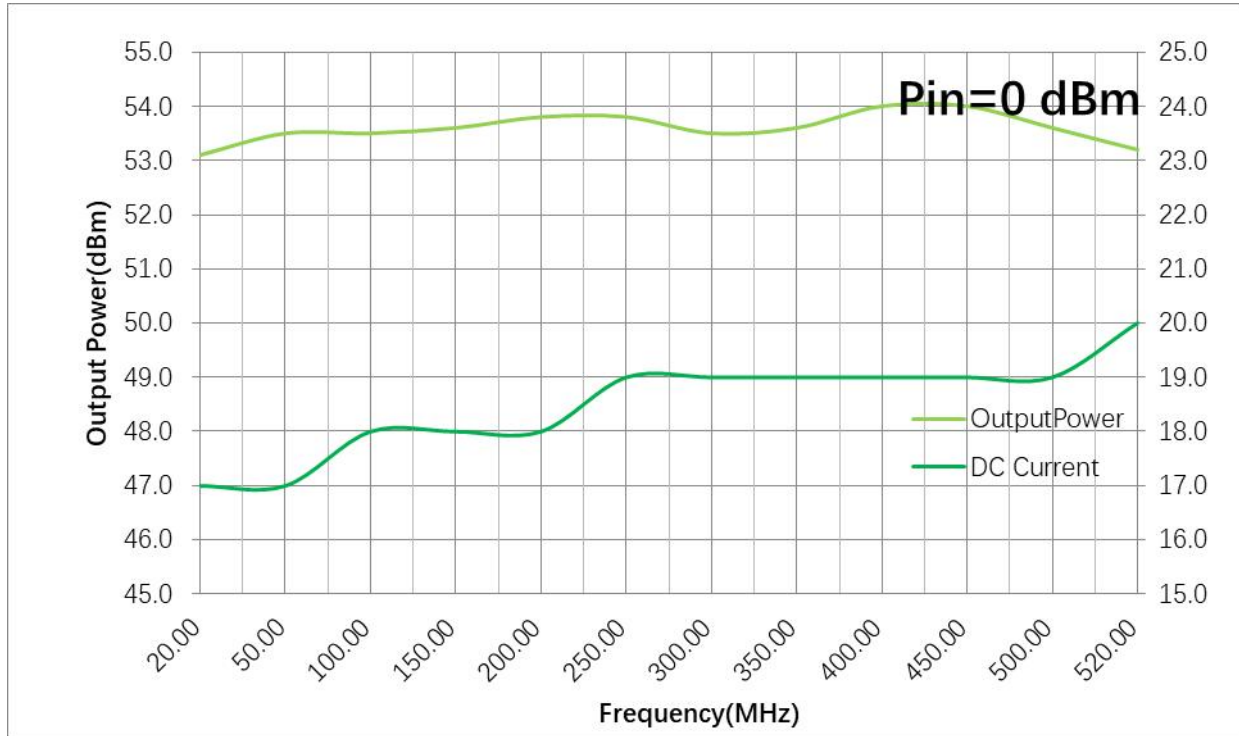
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TYPICAL PERFORMANCE PLOTS

Graph1: Output Power (Normal temp.+25±3 °C)



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