






20-520MHz/200Watt/Module

Model Number: MCW002052M53A

The model MCW002052M53A is a multi-octave high power amplifier operating between 20MHz and 520MHz and offering a wide dynamic Range with 200 Watts 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 broadband high power RF, UHF linear applications.

FEATURES:

-  Broadband & High power
-  High Efficiency
-  Great Linearity
-  Small Size & Light Weight
-  Low Distortion

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

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	20		520	MHz
RF Output Power	Pout		200		Watt
Power Gain	Gp		53		dB
Power Gain Flatness	ΔGp		±2		dB
Small Signal Flatness	ΔG _{ss}		±1.5		dB
Input Return Loss	S11			-10	dB
Harmonics @100W	H		-10		dBc
Spurious Signals	Spur		-50		dBc
Switch On/Off@10-90% Time	TON/OFF		2	5	μs
In/Output Impedance	Impedance		50		Ω
Operating Voltage	VDC	26	32	34	Volt
DC Current @200W	IDD		20		Amp

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	180x150x25[7.1x5.9x1]	mm [inch]	Maximum
Weight	1.5[3.3]	kg [lbs]	Maximum
RF Connectors Input	SMA, Female		
RF Connectors Output	N, Female		
DC Interface Connector	Hybrid, D-Sub 7-Pin, Male		
Cooling	External Heat sink 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 =100W	∞ @ all load phase & amplitude for duration of 1 minutes; 3:1 @ all load phase & amplitude continuous
Over Temperature	85°C @ heatsink [restored @ 60°C]

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Broadband High Power Amplifier Module (SSPA)

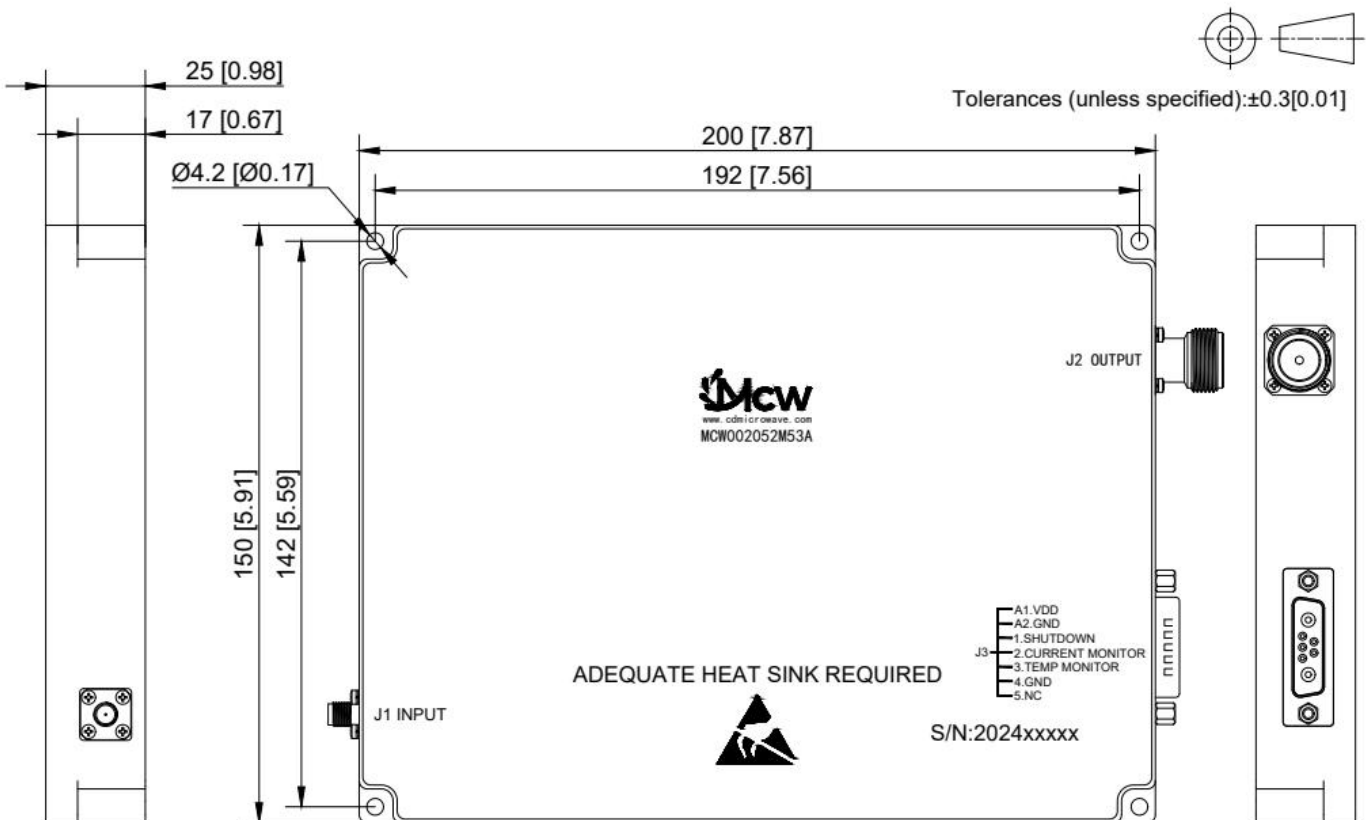
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DC INTERFACE CONNECTOR

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

OUTLINE DRAWING (All dimensions in mm [inch])



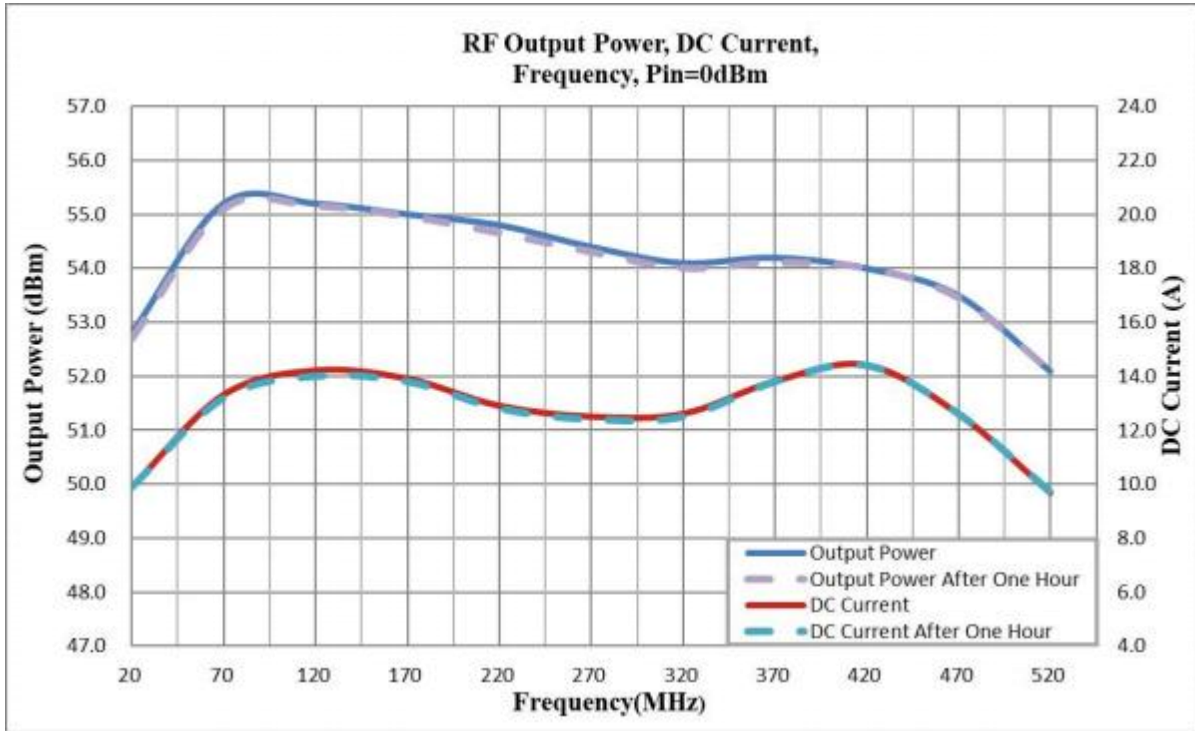
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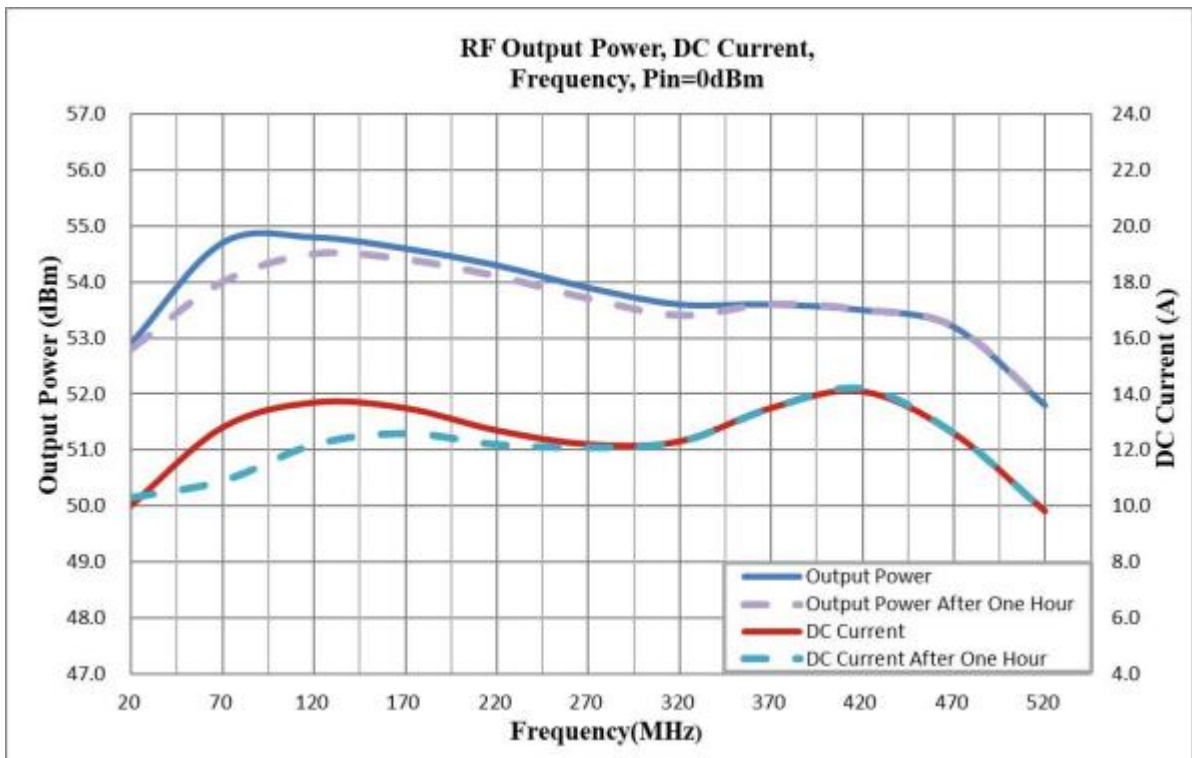
TYPICAL PERFORMANCE PLOTS (for reference)

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Graph1: Output Power (Low temp. $-10\pm 3^{\circ}\text{C}$)



Graph2: Output Power (High temp. $+40\pm 3^{\circ}\text{C}$)



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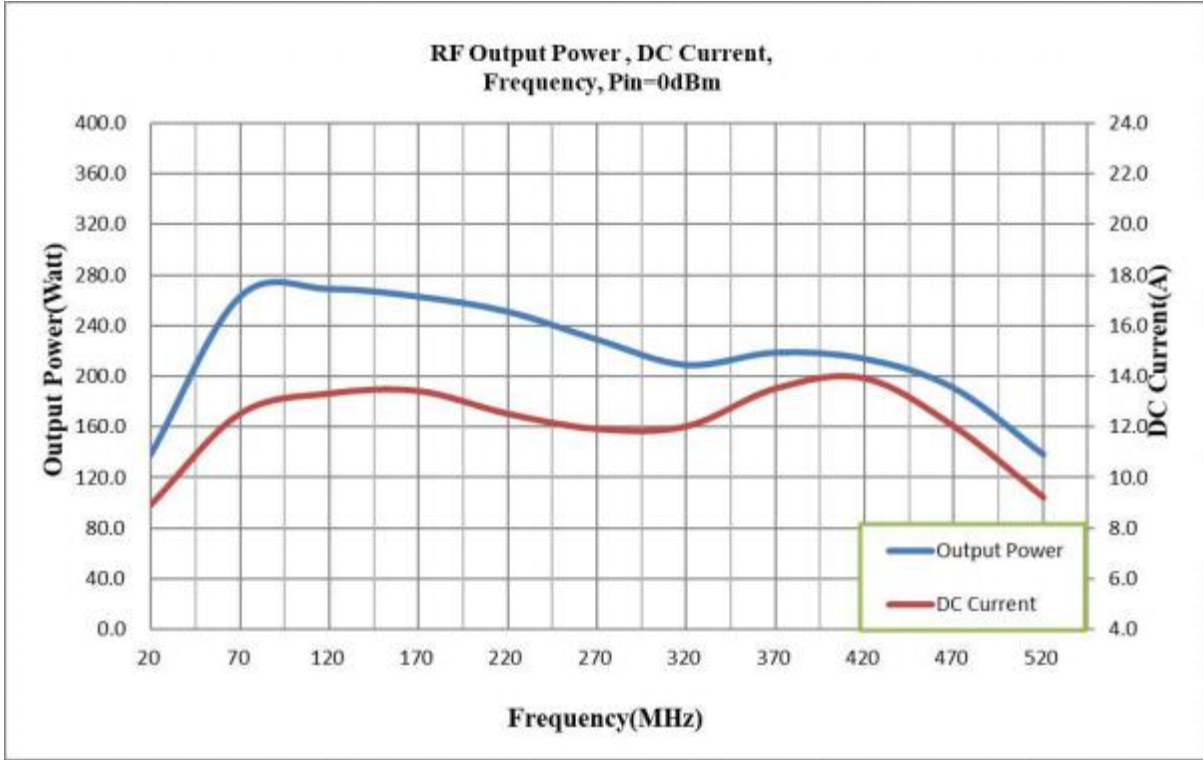
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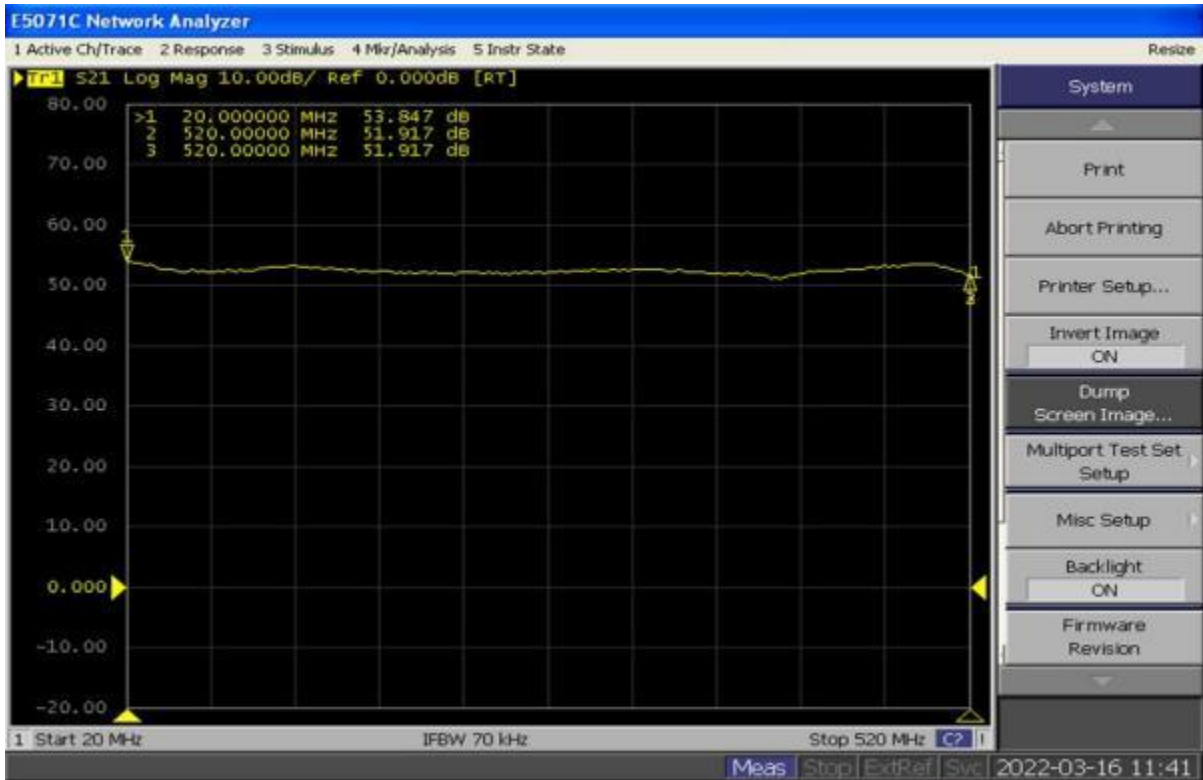
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Graph3: Output Power (Normal temp. +25±3°C)



Power Gain:



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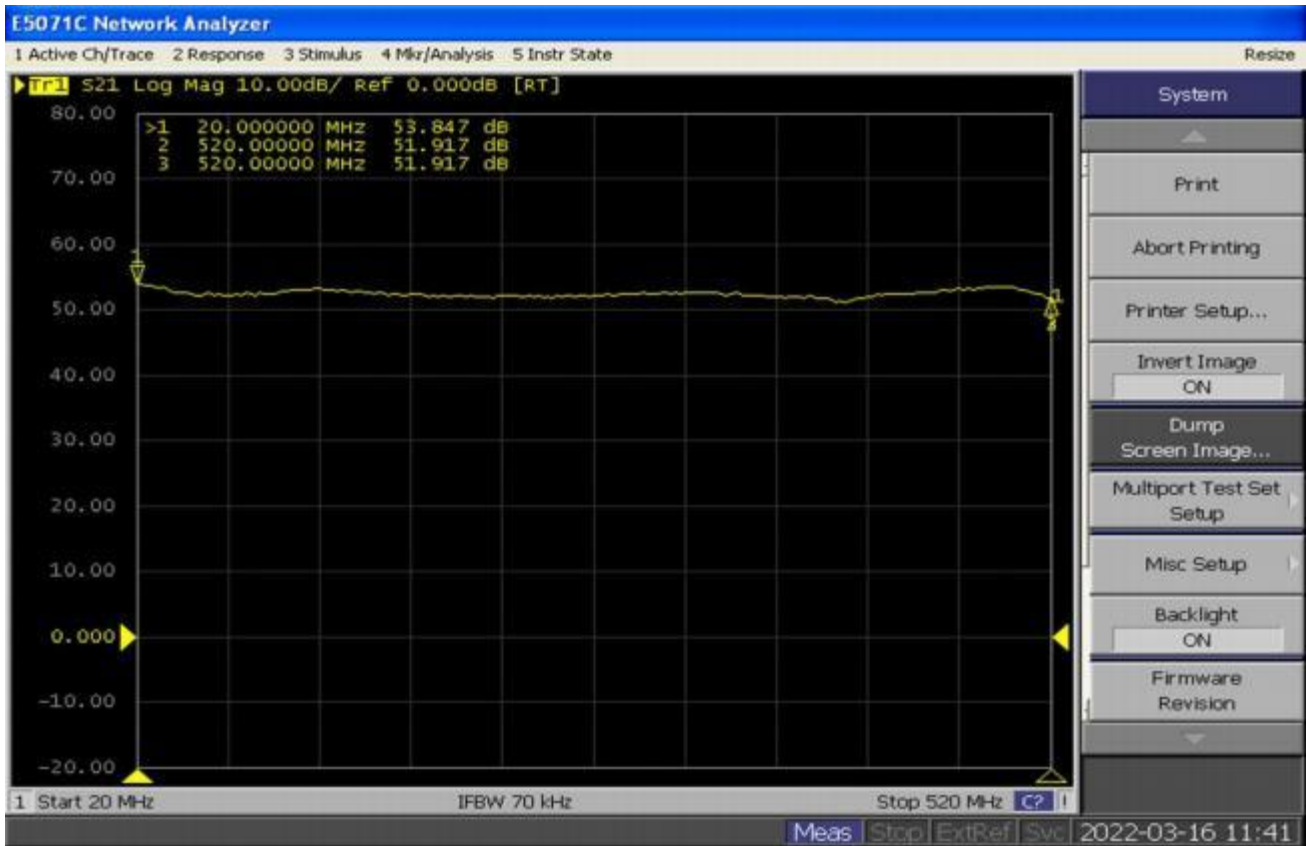
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Input Return Loss:



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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