This model MCW1020M53A is a multioctave high power amplifier operating between 1GHz and 2GHz and offering a wide dynamic range with 200W 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. It is ideal for RF systems, Communication, EMC, Test and Measurement applications.This module is equipped with alarmfunctions for over-temperature, over-voltage, over-current, which will shut down automatically under these conditions.

Features:

- Small Size and light weight
- Instantaneous ultra broadband
- 50 Ohms Input and Output matched
- Built-In control and protection circuits

Electrical Specifications (@+28VDC, 25°C, 50Ω)

Parameter	Symbol	Minimum	Typ	Maximum	Units
Operating Frequency	BW	1		2	GHz
RF Output Power @PSAT	PSAT		200		Watt
Small Signal Gain Flatness	Δ Gss		±2.5		dB
Power Gain @PSAT	Gp		53		dB
Power Gain Flatness	Δ Gp		±1 .5		dB
Input Return Loss	S11			-10	dB
Harmonics @150W	H		-20		dBc
Spurious Signals @PSAT	Spur		-60		dBc
In/Output Impedance	Impedance		50		Ω
Operating Voltage	VDC	24	28	32	Volt
Power add efficiency	Eff		35		%
DC Current @200W	IDD		20		Amp
Switch On/ Off@10- 90% Time	TON/ OFF		2	4	μs

Absolute Maximum Rating

Parameter	Rating	
Input RF drive level without damage	+10 dBm	Maximum
Load VSWR @ POUT =150W	3:1 @ all load phase & amplitude continuous	
Thermal Overload	85°C@ heatsink [restored @ 60° C]	Maximum

Environmental Specifications (Design to Meet)

Parameter	Minimum	Typical	Maximum	Units	Notes
Operating Temperature	-20		60	°C	
Storage Temperature	-25		65	°C	
Relative Humidity（non-condensing）			95	%	

Mechanical Specifications

Parameter	Value	Units	Notes
Dimensions	200x150x30 [7.87x5.90x1.18]	mm [inch]	Maximum
Weight	2 [4.4]	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 Required (Not Supplied)		

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 IDD @ 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])

