This model MCW2450M47A is a multioctave high power amplifier operating between 2.2GHz and 2.7GHz and offering a wide dynamic range with 50W Typ 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	2.2		2.7	GHz
RF Output Power @PSAT	PSAT	45	50		Watt
Power Gain @PSAT	Gp		47		dB
Power Gain Flatness	Gss		±1.5		dB
Input Return Loss	S11			-10	dB
Harmonics @30W	H		-20		dBc
Spurious Signals @PSAT	Spur		-55		dBc
Switch On/Off@10-90% Time	TON/OFF		2		μs
In/Output Impedance	Impedance		50		Ω
Operating Voltage	VDC	24	28	32	Volt
DC Current @50W	IDD		6		Amp

Absolute Maximum Rating

Parameter	Rating	
Input RF drive level without damage	+5 dBm (Max)	Maximum
Load VSWR @ POUT =20W	3:1 @ all load phase & amplitude continuous	
Over Temperature	85°C @ heatsink [restored @ 60°C]	

Environmental Specifications (Design to Meet)

Parameter	Minimum	Typical	Maximum	Units	Notes
Operating Temperature	-20		60	°C	
Storage Temperature	-40		65	°C	
Relative Humidity（non-condensing）			95	%	

Mechanical Specifications

Parameter	Value	Units	Notes
Dimensions	150x90x25 [5.91x3.54x0.98]	mm [inch]	Maximum
Weight	1.5 [3.3]	kg [lbs]	Maximum
RF Connectors Input	SMA, Female		
RF Connectors Output	SMA, Female		
DC Interface Connector	D-Sub 9-Pin, Male		
Cooling	Extemal Heatsink(Not Supplied)		

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	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])

