This model MCW5659M47A is a multioctave high power amplifier operating between 5.6GHz and 5.9GHz 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	5.6		5.9	GHz
RF Output Power @PSAT	PSAT		50		Watt
Power Gain @PSAT	Gp		47		dB
Power Gain Flatness	Gss		±2		dB
Input Return Loss	S11			-10	dB
Harmonics @20W	H		-15		dBc
Spurious Signals @PSAT	Spur		-60		dBc
Switching Speed	TON/OFF		2	5	μS
In/Output Impedance	Impedance		50		Ω
Operating Voltage	VDC	24	28	32	Volt
DC Current @40W	IDD			10	Amp
Power add efficiency	Eff		23		%

Absolute Maximum Rating

Parameter	Rating	
Input RF drive level without damage	+10 dBm (Max)	Maximum
Load VSWR @ POUT =30W	3:1 @ all load phase & amplitude continuous	

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	180x110x25[7.08x4.33x0.98]	mm [inch]	Maximum
Weight	1.5[3.3]	kg [lbs]	Maximum
RF Connectors Input	SMA, Female		
RF Connectors Output	SMA, Female		
DC Interface Connector	Hybrid,D-sub 7 Pin, Male		
Cooling	Extemal Heatsink(Not Supplied)		

DC Interface Connector

Pin #	Description	Specifications
A1	VDD	28VCC
A2	GND	Ground
1	ENABLE	Amplifier ENable: 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])

