



The **MP1450/1500/50MK-CP-A** is a broadband high power amplifier that supports signal amplification in the 700 ~ 2200 MHz frequency range. It is protected against over-temperature and high VSWR. It is suitable for Jamming or communication operation. The amplifier employs advance GaN power devices that provide ample output power, a wide dynamic range, and high efficiency.



Model: MP1450/1500/50MK-CP-A

1. Electrical Characteristics		
Item	Value	Note
Frequency Range	700 ~ 2200 MHz	
Power Gain	49 dB (Min.), 50 (Typ.)	@ 100 Watts, over entire Temp. & Frequency Range
Power Gain Flatness	± 2.5 dB (Max.)	@ 100 Watts, over entire Temp. & Frequency Range
Output Power P _{sat}	100 Watts (Min.)	
Input Return Loss	-15 dB (Typ.)	
Enable/Disable	TTL "Low or Open": Enable TTL "High": Disable	Pin 5 on D7W2
Thermal Shutdown	+85°C ± 5°C	Auto Recover at +70°C ± 5°C
Temperature Monitor	V _i + 500 mV, 10 mV / °C	Pin 3 on D7W2
VVA Control	+5V: Maxim Gain 0V: Maxim Attenuation	Pin 4 on D7W2
VVA Range	> 30 dB	
Forward Power Monitor	2.4 ± 0.2 V @ +50 dBm	RMS Detection at Pin 1
Forward Power Monitor Flatness	± 1.0 dBm (Typ.)	Over Frequency Band
Reflect Power Monitor	2.4 ± 0.2 V @ +50 dBm	RMS Detection at Pin 2
Reflect Power Monitor Flatness	± 1.0 dBm (Typ.)	Over Frequency Band
Harmonics	-15dBc (Max.)	Pout @ 100 Watts
Spurious	-70 dBc (Max.)	Pout @ 100 Watts
Efficiency	> 25%	Pout @ 100 Watts
DC Input	+28 VDC	
DC Current	13.0 A (Max.)	Pout @ 100 Watts
Standby Current	0.08 A (Max.)	Shutdown Status
In/Output Impedance	50 Ω	
Max. Input without Damage	+10 dBm	

2. Mechanical Characteristics		
RF In/Out Connector	SMA Female	
DC Input	Pin A1, A2 on D7W2 Male	
Dimensions	8.50" x 4.50" x 1.07"	Unit: inch [mm]
Weight	2.5 lb	

Revision History			
REV	Reason to Change	Date	Initialed by

3. Environment Characteristics		
Operating Temperature	-10°C ~ +70°C	**Base Plate
Cooling	External Heat-sink	
Humidity (Non-condensing)	95% (Max.)	

4. D7W2-Male Pin Description		
1	FWD Monitor	
2	REV Monitor	
3	Temperature Sensor	V _i + 500 mV, 10 mV / °C
4	VVA	0-5V
5	Enable/Disable	Enable: TTL Low or Open Disable: TTL High
A1	+28VDC	
A2	GND	

5. Outline Drawing

