



The MP4500/1000/47MK-A1 is suitable for 4.0 - 5.0 GHz frequency band high power applications. The amplifier is designed for high and low power mode operation with ALC control. This amplifier employs GaN power devices that provide ample output power, wide dynamic range, and excellent efficiency.

### Model: MP4500/1000/47MK-A1

1. Electrical Characteristics		
Item	Value	Note
Frequency Range	4000 ~ 5000 MHz	
Gain	45 dB (Min.)	@ 50 Watts Output
Gain Flatness	± 1.0 dB (Typ.)	
Output Psat	+47 dBm (Min.)	
Reverse Power Handling	+47 dBm (Min.)	
Input / Output VSWR	1.5:1 dB (Max.)	
HPA Enable / Disable	TTL "0V" or "Open" ⇒ Enable TTL "5V" ⇒ Disable	DB-9 Pin 6
Switching On/Off Time	≤ 5µs	
Spurious	-50 dBc (Max.) @ ± 2 KHz ~ ±10 MHz Offset -70 dBc @ ±10 MHz ~ ∞	
Harmonics	- 40 dBc (Max.)	@ 50 Watts Output
Temperature Monitor	Vt + 0.5V, 10mV/°C	DB-9 Pin 7
ALC Level Input	0-5V	DB-9 Pin 5
ALC Range	> 15 dB	
ALC Accuracy	± 0.5 dB (Typ.)	
Temperature Alarm	+80°C ± 5°C	Pin 9: TTL High: Normal TTL Low: Alarm
DC Input Voltage / Current	+28VDC ± 2V / 8.0A (Max.)	DC Input Voltage / Current @ Pout 50 Watts
MAX CW Input Without Damage	+20 dBm	
Input / Output Impedance	50 Ω	
Load Mismatch	0: ∞	Isolator Included
DC Input Protection	With Voltage Limit Diode	

2. Mechanical Characteristics		
Monitoring Connector	DB-9 Male	4 – 40 screw
RF IN/OUT Connector	SMA Female	
DC Input	DB-9 Female	Pin 1,2
Dimensions	6.80" x 4.50" x 1.07"	
Weight	1.8 lb	

Revision History			
REV	Reason to Change	Date	Initialed by

3. DB9 Pin Description		
1,2	+28VDC	
3,4	GND	
5	ALC Level Input	0-5V
6	Enable / Disable	Enable: TTL Low or Open Disable: TTL High
7	Temperature Monitor	Vt + 0.5V, 10mV/°C
8	GND	
9	Temperature Alarm	TTL High: Normal TTL Low: Alarm

4. Environment Characteristics		
Operating Temperature	-40°C ~ +80°C	Base Plate
Storage Temperature	-40°C ~ +95°C	
Cooling	External Heatsink	
Humidity (Non-condensing)	95% (Max.)	Designed to meet: IAW MIL-STD-810E
Operating Altitude	30,000 Feet (Min.)	
Vibration and Shock	Vibration 6.06 gRMS	Designed to meet: IAW MIL-STD-202F method 214

### 5. Outline Drawing

