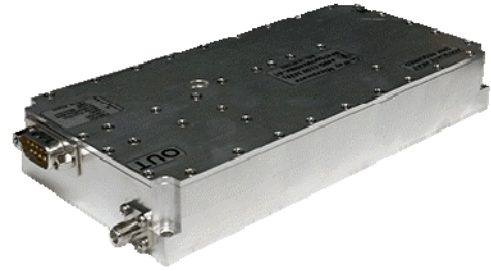




The MP4750/700/45MK-A1 is suitable for 4.4 - 5.1 GHz frequency band high power applications. The amplifier is designed for high and low power mode operation with ALC control. This amplifier employs GaN power devices that provide ample output power, wide dynamic range, and excellent efficiency.



Model: MP4750/700/45MK-A1

1. Electrical Characteristics

Item	Value	Note	
Frequency Range	4400 ~ 5100 MHz		
Gain	42 dB (Min.)	@ 30 Watts Output	
Gain Flatness	ALC Off ± 1.0 dB (Max.)	ALC On ± 0.5 dB (Typ.)	ALC ON: High and Low Mode
Output Psat	+45 dBm (Min.)		
Reverse Power Handling	+45 dBm (Min.)		
Mode Control	TTL Low: High Mode TTL High: Low Mode	DB-9 Pin 5	
Operating Mode	High Mode: 45.3 ± 0.5 dBm	TTL Low: High Mode	
	Low Mode: 27.5 ± 0.5 dBm	TTL High: Low Mode	
Input / Output VSWR	1.5:1 dB (Max.)		
Output VSWR	Isolator Included		
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	-30 dBc (Max.)	@ 30 Watts Output	
Temperature Monitor	Vt + 2.98V, 10mV/°C	DB-9 Pin 7	
Temperature Alarm	+80°C ± 5°C	Pin 9: TTL High: Normal TTL Low: Alarm	
DC Input Voltage / Current	+28VDC ± 2V / 5.6A (Max.)	DC Input Voltage / Current @ Pout +30 Watts	
MAX CW Input Without Damage	+20 dBm		
Input / Output Impedance	50 Ω		
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 3.32" x 1.07"	
Weight	1.43 lb	

Revision History

REV	Reason to Change	Date	Initialed by
A	Moved Input and Output connectors , Updated the Current and Harmonics Spec.	09/22/14	YZ

3. DB9 Pin Description

1,2	+28VDC	
3,4	GND	
5	Mode Control	TTL Low: High Mode TTL High: Low Mode
6	Enable / Disable	Enable: TTL Low or Open Disable: TTL High
7	Temperature Monitor	Vt + 2.98V, 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

