



The MP385/40/48MK-A is a broadband and high power amplifier for 370-400 MHz frequency band. It is suitable for Jamming or communication operation. The amplifier employs advance LDMOS power devices that provide ample output power, wide dynamic range, broad band, and high efficiency. It integrates a Bi-directional power coupler for forward and VSWR protection.

Model: MP385/40/48MK-A

1. Electrical Characteristics

Item	Value	Note
Frequency Range	370 ~ 400 MHz	
Power Gain	50 dB (Min.)	
Gain Flatness	ALC On ± 0.5 dB (Max.)	Over Freq. Range @ ALC Set Point
	ALC Off ± 1.0 dB (Max.)	
Output Power P1	+48 dBm (Typ.)	
Output Power Psat	+49 dBm (Min.)	
Input VSWR	1.5:1 (Max.)	
IP3	+59 dBm (Min.)	
Harmonics	-30 dBc (Max.)	@ +48 dBm P. Output
Spurious	-70 dBc (Max.)	@ +48 dBm P. Output
Enable/Disable	TTL "0V or Open" ⇒ Enable TTL "5V" ⇒ Disable	
Thermal Shutdown	+85°C ±5°C	Auto Recover at +70°C ±5°C
Forward Power Monitor	4.0 ± 0.2 V @ +48 dBm	RMS Detection Range > 20 dB
Reflect Power Monitor	4.0 ± 0.2 V @ +48 dBm	RMS Detection Range > 20 dB
VSWR Protection	Shutdown if Output Reflect Power ≥ 43 dBm ±1 dBm	
ALC On/Off	TTL "0V or Open" ⇒ Enable TTL "5V" ⇒ Disable	Via Pin 3
ALC Level	ALC Setting Range : 15 dB	Adjustable via Pin 4, 0-5V
DC Input	+28 VDC ± 2 V	
DC Current	9 A (Typ.)	@ +48 dBm Power
In/Output Impedance	50 Ω	
Max. Input Power without Damage	+5 dBm	With ALC On

2. Mechanical Characteristics

Monitoring Connector	DB-9-Male	4 – 40 screw
RF IN/OUT Connector	SMA 4 Holes –Female	
DC Input	Pin 6,7 on DB-9	
Dimensions	8.4" x 3.48" x 1.06"	
Weight	1.5 lb.	

Revision History

REV	Reason to Change	Date	Initialed by

3. Environment Characteristics

Operating Temperature	-20°C ~ +85°C	Base Plate
Cooling	External Heatsink	
Humidity (Non-condensing)	95% (Max.)	

4. DB9 Pin Description

1	Forward Power Monitor	
2	Reverse Power Monitor	
3	ALC On/Off	Enable: TTL Low or Open Disable: TTL High
4	ALC Level Input	
5	Enable / Disable	Enable: TTL Low or Open Disable: TTL High
6, 7	+ 28 V	
8, 9	Ground	

5. Outline Drawing

