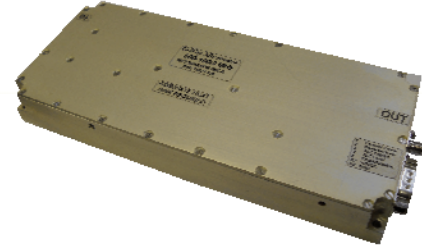




The **MP440/80/48MK-A** is a broadband and high power amplifier for 400-480 MHz frequency band. It is suitable for Jamming or communication operation. The amplifier employs advance LDMOS power devices that provide ample output power, wide dynamic range, broad band, and high efficiency. It integrates a Bi-directional power coupler for forward and VSWR protection.

## Model: MP440/80/48MK-A



1. Electrical Characteristics		
Item	Value	Note
Frequency Range	400 ~ 480 MHz	
Power Gain	50 dB (Min.)	
Gain Flatness	ALC On	Over Freq. Range @ ALC Set Point
	ALC Off	
	± 0.5 dB (Max.)	± 1.5 dB (Max.)
Output Power P1	+48 dBm (Typ.)	
Output Power Psat	+49 dBm (Min.)	
Input /Output VSWR	1.5:1 (Max.)	Isolator Included
IP3	+58 dBm (Min.)	Two Tones @ +40 dBm, 500 KHz Spacing
Harmonics	-30 dBc (Max.)	@ +48 dBm
Spurious	-70 dBc (Max.)	@ +48 dBm
Enable/Disable	TTL "0V or Open" ⇒ Enable TTL "5V" ⇒ Disable	
Thermal Shutdown	+85°C ±5°C	Auto Recover @ +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 ±1dBm	
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	28VDC ± 2V	
DC Current	10 A (Typ.)	@ +48 dBm
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 Female 4 Hole Flange	
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
	Initial Release	09/20/16	YZ

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	+ 28V	
8, 9	Ground	

## 5. Outline Drawing

