



The MP440/20/46MK-A is a broadband and high power amplifier for 430-450 MHz frequency band. It is suitable for Jamming or communication operation. The amplifier employs advance LD MOS 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: MP440/20/46MK-A

1. Electrical Characteristics		
Item	Value	Note
Frequency Range	430 ~ 450 MHz	
Power Gain	45 dB ± 1.0 dB	
Gain Flatness	ALC On	Over Freq. Range @ ALC Set Point
	ALC Off	
	± 0.5 dB (Max.)	± 1.0 dB (Max.)
Output Power P1	+46 dBm (Min.)	
Output Power Psat	+47 dBm (Min.)	
Input / Output VSWR	1.5:1 (Max.)	Isolator Included
IP3	+61 dBm (Min.)	2 Tones @ +37 dBm/Tone, 100 KHz Spacing
Harmonics	-45 dBc (Max.)	@ +46 dBm
Spurious	-70 dBc (Max.)	@ +46 dBm
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 @ +46 dBm	RMS Detection Range > 20 dB
Reflect Power Monitor	4.0 ± 0.2 V @ +46 dBm	RMS Detection Range > 20 dB
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	3.0 A (Typ.)	@ +46 dBm
In/Output Impedance	50 Ω	
Max. Input Power without Damage	+10 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 1.00"	
Weight	2.0 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	0 - 5 V
5	Enable / Disable	Enable: TTL Low or Open Disable: TTL High
6, 7	+ 28V	
8, 9	Ground	

**Not applicable to G-Wave Products

5. Outline Drawing

