



The **MP60/80/50MK-CP-A4** is a broadband high power amplifier for VHF-UHF applications. The amplifier supports signal amplification in the 20-100 MHz frequency band. It is protected against over-temperature, excessive current draw. This amplifier integrates a Bi-directional power coupler for forward and reverse power monitoring.



### Model: MP60/80/50MK-CP-A4

#### 1. Electrical Characteristics

Item	Value	Note
Frequency Range	20 ~ 100 MHz	
Gain	51 dB (Min.)	@ 120 Watts P Out
Gain Flatness	± 0.5 dB	Over Freq. Range
Output Psat	+51 dBm (Min.)	
Output 3 <sup>rd</sup> Intercept Point	+55 dBm (Typ.)	2 CW Tones @ +37 dBm per tone 100 kHz spacing
IMD @ 3 Tones	-10 dBc (Max.)	3 Tones @ +49 dBm 100 kHz Spacing
Input / Output VSWR	2:1 (Max.)	
Spurious	-70 dBc (Max.)	
2 <sup>nd</sup> / 3 <sup>rd</sup> Harmonics	-30 / -10 dBc (Typ.)	Pout @ +49 dBm
Efficiency	> 40%	@ 120 Watts Power Output over full Frequency Range
HPA Enable/Disable	TTL "0 V or Open" ⇒ Enable TTL "5 V" ⇒ Disable	
Temperature Sensor	10 mV/°C	
Forward Power Monitor	4.0 ± 0.3 V @ +50 dBm, 270MHz Power Monitor Flatness: ±1dBm	RMS Detection
Reverse Power Monitor	4.0 ± 0.3 V @ +50 dBm, 270MHz Power Monitor Flatness: ±1dBm	RMS Detection
HPA Switching ON/OFF Speed	2 μSec	
ALC ON/OFF	TTL "Low or Open" : Enable TTL "High " : Disable	Pin 1 On DB9
ALC Level	0-5V	Pin 4 On DB9
DC Input Voltage	+ 28 V ± 2V	Operating Voltage Range: +24-30V
Current Consumption	10 A (Max.)	@ 120 Watts P Out
Input / Output Impedance	50 Ω	
Max. Input Signal (Without Damage)	+5 dBm	

#### 2. Mechanical Characteristics

Monitoring Connector	DB-9 Male	4 – 40 screw
RF IN/OUT Connector	SMA 4 Holes Female	
DC Input	Pin6 and Pin7 at DB-9	
Dimensions	8.4" x 3.48" x 1.06"	

#### 3. Environment Characteristic

Operating Temperature	-40°C ~ +80°C	Base Plate
-----------------------	---------------	------------

#### Revision History

REV	Reason to Change	Date	Initialed by
	Production Released	11/5/12	Y.Z.

#### 4. DB9 Pin Description

1	ALC ON/OFF	TTL "Low or Open" : Enable TTL "High " : Disable
2	Current Monitor	275 mV/Amp
3	Temperature Monitor	10 mV/°C
4	ALC Level Input	0-5V
5	Enable/Disable	0V or Open: Enable 5V: Disable
6, 7	+28 V	
8	Fwd. Monitor Output	
9	Rev. Monitor Output	

#### 5. Outline Drawing

