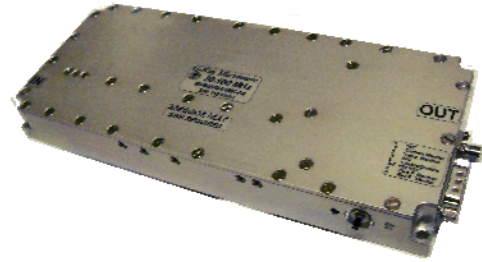




The MP60/80/49MK-A4 is a broadband high power amplifier for VHF applications. The amplifier supports signal amplification in the 20-100 MHz frequency band. It is protected against over-temperature, excessive current draw. This amplifier integrates a Bi-directional power coupler for forward and reverse VSWR protection.



**Model: MP60/80/49MK-A4**

1. Electrical Characteristics		
Item	Value	Note
Frequency Range	20 ~ 100 MHz	
Gain	52 dB (Min.)	
Gain Flatness	ALC Off	Over Freq. Range @ ALC Set Point
	ALC On	
	± 0.75 dB	± 0.5 dB
Output P1	+49 dBm (Min.)	
Output Psat	+50 dBm (Typ.)	
Output IP3	55 dBm (Min.)	2 Tones @ 40 dBm, 100 KHz Spacing
IMD @ 3 Tones	-5 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	-35 / -20 dBc (Typ.)	Pout @ +48 dBm
HPA Enable/Disable	TTL "0 V or Open" ⇒ Enable TTL "5 V" ⇒ Disable	
VSWR Protection	Shutdown if Output Reflect Power ≥ 45dBm ± 1dBm	
Temp. Sensor Output	10 mV/°C	
Forward Power Monitor	4.0 ± 0.2 V @ +49 dBm @ 60 MHz Power Monitor Flatness: ± 0.5 dBm	RMS Detection Range >20 dB
Reverse Power Monitor	4.0 ± 0.2 V @ +49 dBm @ 60 MHz Power Monitor Flatness: ± 0.5 dBm	RMS Detection Range >20 dB
ALC ON/OFF	Local Switch	
ALC Level	ALC Setting Range >15 dB	Continuous Adjust via Local Potentiometer
DC Input Voltage	+ 28 V ± 2V	Operating Voltage Range: +24-30V
Current Consumption	9.0 A (Max.)	Pout @ +48 dBm
Input / Output Impedance	50 Ω	
Switching Speed	2 μsec (Max.)	Enable/Disable
Input Max 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	Pin6 and Pin7 at DB-9	
LED	LED Indicator	ALC On
ALC Level Adjust	Potentiometer	
ALC On/Off	Momentary Switch	Default: ALC On Push: ALC Off
Dimensions	8.4" x 3.48" x 1.06"	

Revision History			
REV	Reason to Change	Date	Initialed by

3. Environment Characteristics		
Operating Temperature	-40°C ~ +80°C	Base Plate
Cooling	External Heatsink	
Humidity (Non-condensing)	95% (Max.)	

4. DB9-Female Pin Description		
1	N/C	
2	Current Monitor	275 mV/Amp
3	Temperature Monitor	10 mV/°C
4	N/C	
5	Enable/Disable	0V or Open: Enable 5V: Disable
6,7	+28 V	
8	Fwd. Monitor Output	
9	Rev. Monitor Output	

**5. Outline Drawing**

