



The MP600/400/45MK-A is a broadband high power amplifier for VHF-UHF applications. The amplifier supports signal amplification in the 400-800 MHz frequency band. It is protected against over-temperature and ALC loop for over power protection. This amplifier integrates a Bi-directional power coupler for forward and reverse power monitoring and VSWR Alarm indication.



Model: MP600/400/45MK-A

1. Electrical Characteristics		
Item	Value	Note
Frequency Range	400 ~ 800 MHz	
Gain	45 dB (Min.)	
Gain Flatness	± 0.5 dB	Over Freq. Range
Output P1	+44.8 dBm (Min.)	
Output Psat	+45 dBm (Min.)	
Input / Output VSWR	2:1 (Max.)	
Spurious	-60 dBc (Max.)	
Efficiency	20% (Min.)	Pout @ 30 W 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 ± 0.2 V @ +44.8 dBm	RMS Detection
Reverse Power Monitor	4.0 ± 0.2 V @ +44.8 dBm,	RMS Detection
ALC ON/OFF	TTL "High or Open" : Disable TTL "Low " : Enable	Pin 4 On DB9 Default: Off
ALC Default Level	+45.5 dBm ± 0.5 dBm	
ALC Accuracy	± 0.5 dBm	
HPA Switching ON/OFF Speed	1 μSec	
VSWR Alarm	If reverse power ≥ +40 ± 1dBm Alarm: TTL High	Pin 1 on DB9
DC Input Voltage	+ 28 V	
Current Consumption	5.6 A Max.)	Psat @ 30 Watts Power Output
Input / Output Impedance	50 Ω	
Max. Input Without Damage	+5 dBm	

2. Mechanical Characteristics		
Monitoring Connector	DB9-Male	4 – 40 screw
RF IN/OUT Connector	SMA 4 Holes - Female	
DC Input	Pin 6 and Pin 7 at DB9	
Dimensions	8.4" x 3.48" x 1.06"	

3. Environment Characteristics		
Operating Temperature	-40° C ~ +80° C	Base Plate

4. DB9 Pin Description		
1	VSWR Alarm	Alarm: TTL High, Normal: TTL Low
2	Current Monitor	275 mV/Amp
3	Temperature Monitor	10 mV/°C
4	ALC ON/OFF	TTL High : OFF TTL Low or "Open": ON
5	Enable/Disable	0V or Open: Enable 5V: Disable
6,7	+28 V	
8	Fwd. Monitor Output	
9	Rev. Monitor Output	

5. Outline Drawing

