



MP3000/1200/46MK-A4 is a broadband power amplifier for 2400 ~ 3600 MHz frequency band. It is suitable for communication operation. The amplifier employs advance GaN power devices that provide ample output power, a wide dynamic range, broadband, and high efficiency. It integrates a bidirectional coupler for ALC control and VSWR monitoring.

Model: MP3000/1200/46MK-A4

1. Electrical Characteristics		
Item	Value	Note
Frequency Range	2400 ~ 3600 MHz	
Power Gain	46 dB \pm 2 dB	@ Rated Power
Gain Flatness	ALC OFF	@ ALC set point
	ALC ON	
	\pm 2.0 dB (Typ.) \pm 1.0 dB (Max.)	
Output Power Psat	+46.0 dBm (Typ.)	
Input VSWR	1.8:1 (Max.)	
Enable/Disable	TTL "Low or Open": Enable TTL "High": Disable	Pin 5 on DB-9
Switch On/Off @ 10-90% Time	< 2 μ s (Typ.)	
FWD. Power Monitor	4.0 \pm 0.2 V @ +45 dBm	RMS Detection, Pin 8
REV. Power Monitor	4.0 \pm 0.2 V @ +45 dBm	RMS Detection, Pin 9
ALC ON/OFF	ON: TTL Low or Open OFF: TTL High	Pin 1 on DB-9
ALC Level	ALC Setting Range > 15 dB	Pin 4 on DB-9
ALC Accuracy	\pm 1.0 dBm	
Thermal Shutdown	+80°C \pm 5°C	Auto Recover @ +70°C \pm 5°C
Harmonics	-20 dBc (Max.)	@ Rated Power
Spurious	-70 dBc (Max.)	@ Rated Power
Current Sensor	100 mV/Amp	Pin 2 on DB-9
Temp. Sensor	V _t + 500 mV, 10 mV / °C	Pin 3 on DB-9
DC Input	+28 VDC	
DC Current	4.5 A (Max.)	P Out @ +46 dBm
Standby Current	0.1 A (Max.)	Shutdown Status
Efficiency	30 % (Min.)	P Out @ +46 dBm
In/Output Impedance	50 Ω	
Max. Input Signal (Without Damage)	+15 dBm	With ALC ON

2. Mechanical Characteristics		
RF IN/OUT Connector	SMA – Female	
DC Input	Pin 6,7 on DB-9	
Dimensions	6.8" x 3.48" x 1.07"	
Weight	1.2 lb	

3. Environment Characteristics		
Operating Temperature	-20°C ~ +75°C	Base Plate
Cooling	External Heatsink	
Humidity (Non-condensing)	95% (Max.)	

Revision History			
REV	Reason to Change	Date	Initialed by
A	Outline changed to smaller Form Factor.	05/15/17	Y.Z.

4. DB9-Male Pin Description		
1	ALC ON/OFF	
2	Current Sensor	100 mV/Amp
3	Temperature Monitor	V _t + 500 mV, 10 mV / °C
4	ALC Level Input	0-5V Input
5	Enable/Disable	Enable: TTL Low or Open Disable: TTL High
6, 7	+28VDC	
8	Forward Power Monitor	
9	Reverse Power Monitor	

5. Outline Drawing

