



The MP275/500/46MK-A10T is suitable for 30 ~ 520 MHz high power linear applications. The amplifier employs linear LDMOS power devices that provide sufficient output power, wide dynamic range, and high gain.

Model: MP275/500/46MK-A10T

1. Electrical Characteristics

Item	Value		Note
Frequency Range	30 ~ 520 MHz		
Gain	43 dB (Min.)	46 dB (Max.)	
Gain Flatness	± 1.2 dB (Typ.)	± 1.5 dB (Max.)	Over Freq. Range
Gain Flatness in Load Condition 3:1	± 3.0 dB (Typ.), ± 3.5 dB (Max.)		Tested with 3dB attenuator, open port
Gain Variation	± 1 dB		Over Temp. Range
Output Power Psat	+46 dBm (Min.)		
IP3	+52 dBm (Min.)		Two Tones @ +40 dBm per tone 12.5 KHz Spacing
Input / Output VSWR	≤ 1.5		
Harmonics	-15 dBc (Max.)		@ +43 dBm Output
Spurious	-70 dBc (Max.)		@ +43 dBm Output
HPA Enable/Disable	TTL "Low or Open" ⇒ Enable TTL "High" ⇒ Disable		Pin 5
Switching On/Off Time @ 90% Power Output	3 μs (Max.)		TTL Control Signal: 1 KHz, 50% Duty Cycle
DC Input Voltage/Current	+28 VDC ± 2V / 3.6 A (Max.)		@ +43 dBm Output
Efficiency	> 20%		@ +43 dBm Output
Temperature Sensor	Vt +500mV, 10mV/C°		Pin 3
Input / Output Impedance	50 Ω		
Max. Input Signal (Without Damage)	+15 dBm		
Load Conditions (No Damage)	6 : 1		

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	6.4" x 3.40" x 1.07"	
Weight	1.2 lb	

3. Environment Characteristics (Designed to meet)

Operating Temperature	-30°C ~ +75°C	Base Plate
Storage Temperature	-40°C ~ +95°C	
Cooling	External Heat-Sink	
Humidity (Non-condensing)	95% (Max.)	Designed to meet: IAW MIL-STD-810F
Operating Altitude	10,000 Feet	
Vibration and Shock	Vibration 6.06 gRMS	Designed to meet: IAW MIL-STD-810F

Revision History

REV	Reason to Change	Date	Initialed by
	Production approved	01/19/16	Y.Z

4. DB9 Pin Description

1, 2	NC	
3	Temperature Sensor	
4	NC	
5	Enable/Disable	Enable: TTL Low or Open Disable: TTL High
6, 7	+ 28V	
8, 9	Ground	

5. Outline Drawing

