



The MP270/500/52HK-A4 is suitable for 20 ~ 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: MP270/500/52HK-A4

### 1. Electrical Characteristics

Item	Value	Note
Frequency Range	20 ~ 520 MHz	
Gain	42 dB (Min.)	@ +51 dBm Pout
Gain Flatness	± 2.0 dB (Typ.), ± 2.4 (Max.)	Over Freq. Range
Gain Variation	± 1 dB	Over Freq. Range
Output Power Psat	+52.0 dBm (Min.)	@ +28 to +30VDC
	+51.3 dBm (Min.)	@ +26 to +28VDC
IP3	+54 dBm (Min.)	Two Tones @ +40 dBm per tone 100 KHz Spacing
Input / Output VSWR	≤ 1.5	
Harmonics 2 <sup>nd</sup> /3 <sup>rd</sup>	-20 dBc / -10 dBc(Max.)	@ + 51 dBm Output
Spurious	-70 dBc (Max.)	@ +51 dBm Output
HPA Enable/Disable	TTL "Low or Open" ⇒ Enable TTL "High" ⇒ Disable	Pin 5
Switching Time ON/OFF @ 90% Pout	3 μs (Max.)	TTL Control Signal: 1 KHz, 50% Duty Cycle
DC Input Voltage/Current	+28 VDC/11.0 A (Max.), <10 A (Typ.)	@ + 52 dBm Output
Efficiency	> 50%	@ + 52 dBm Output
Input / Output Impedance	50 Ω	
Maximum Input Signal (No Damage)	+15 dBm	
Load Conditions (No Damage)	3 : 1	

### 2. Mechanical Characteristics

RF IN/OUT Connector	SMA 4 Holes – Female	
DC Input	SMW420-06P	
Dimensions	4.72" x 2.56" x 0.86"	
Weight	1.0 lb	

### 3. Environment Characteristics (Designed to meet)

Operating Temperature	-30°C ~ +80°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
A	DC Op. Voltage corrected, performance @ +26VDC added.	05/28/17	Y.Z
B	Gain flatness changed, Typical Current info added	06/07/17	Y.Z

### 4. SMW420-06P Pin Description

1, 2	+ 28V	
3, 4	Enable/Disable	TTL "Low or Open" ⇒ Enable TTL "High" ⇒ Disable
5, 6	Ground	

### 5. Outline Drawing

