



The MP270/500/10SK-A is suitable for VHF and UHF linear amplification. The amplifier employs linear GaN power devices that provide high efficiency, ample output power, wide dynamic range, and high gain. The product integrates a bi-directional coupler for monitoring Forward and Reverse Power.



## Model: MP270/500/10SK-A

### 1. Electrical Characteristics

Item	Value	Note
Frequency Range	20 ~ 530 MHz	
Power Gain	38 (Min.)	Pout @ +40 dBm
Gain Flatness	± 2.0 dB (Max.)	Over Frequency Range
Gain Variation	± 1.0 dB	Over Temperature Range
Output Psat	+40 dBm (Min.)	
Input VSWR	1.3:1 (Max.)	
HPA Enable/Disable	TTL “Low or Open” ⇒ Enable TTL “High” ⇒ Disable	Pin 5
VVA Control	0-5V: 0V: Gain Max 5V: Gain Min	Pin 4
VVA Range	>25 dB	
Harmonics	-10 dBc (Max.) / -20 dBc (Typ.)	Pout @ +40 dBm
Forward Power Monitor	4.0 ± 0.2 V @ 10 Watts	RMS Detection
Reverse Power Monitor	4.0 ± 0.2 V @ 10 Watts	RMS Detection
Temperature Sensor	Vt +500mV, 10mV/°C	Pin 3
DC Input Voltage / Current	+28 VDC ± 1V / 0.8 A (Max.)	DC Input Voltage / Current Pout @ +40 dBm CW
Efficiency	44% (Min.)	Pout @ +40 dBm
Input /Output Impedance	50 Ω	
Capable of Handling VSWR	6:1	
Input Max. Signal (without Damage)	+4 dBm	

### 2. Mechanical Characteristics

Monitoring Connectors	DB9-Male	4 – 40 screw
RF IN/OUT Connector	SMA 4 Hole –Female	
Dimensions	3.9” x 2.9” x 0.79”	
Weight	0.34 lb	

### 3. Environment Characteristics

Operating Temperature	-20°C ~ +80°C	Base Plate
Storage Temperature	-40°C ~ +85°C	
Cooling	External Heatsink	
Humidity (Non-condensing)	95% (Max.)	Designed to meet: IAW MIL-STD-810F

### Revision History

REV	Reason to Change	Date	Initialed by
	Production Approved	05/15/15	Y.Z.

### 4. DB9-Male Pin Description

1	Forward Power Monitor	
2	Reverse Power Monitor	
3	Temperature Sensor	
4	VVA Control	
5	Enable / Disable	Enable: TTL “Low or Open” Disable: TTL “High”
6, 7	+28 VDC	
8, 9	GND	

### 5. Outline Drawing

