



MP270/500/5SK-A3 Amplifier module 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: MP270/500/5SK-A3

1. Electrical Characteristics

Item	Value	Note
Frequency Range	20 ~ 520 MHz	
Power Gain	37 (Min.)	Pout @ +37 dBm
Gain Flatness	± 2.0 dB (Max.)	Over Frequency Range
Gain Variation	± 1.0 dB	Over Temperature Range
Output Psat	+37.5 dBm (Min.) +38.0 dBm (Typ.)	
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 @ +37 dBm
Forward Power Monitor	4.0 ± 0.2 V @ 5 Watts	RMS Detection
Reverse Power Monitor	4.0 ± 0.2 V @ 5 Watts	RMS Detection
Temperature Sensor	Vt +500mV, 10mV/°C	Pin 3
DC Input Voltage / Current	+28 VDC ± 1V / 0.4 A (Max.)	DC Voltage / Current Pout @ +37 dBm CW
Efficiency	44% (Min.)	Pout @ +37 dBm
Input /Output Impedance	50 Ω	
Capable of Handling VSWR	6:1	
Max. Input 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	06/06/19	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

