The **MP270/500/50HK-A** is a broadband high power amplifier for VHF-UHF applications. The amplifier supports signal amplification in the 20-520 MHz frequency band. This amplifier integrates a Bi-directional power coupler for forward and reverse power monitoring and VSWR Alarm indication.

Model: MP270/500/50HK-A

1. Electrical Characteristics

Item	Value	Note
Frequency Range	20 ~ 520 MHz	
Gain	50 dB (Min.)	
Gain Flatness	± 2.0 dB	Over Freq. Range
Output P1	+50 dBm (Typ.)	
Output Psat	+51 dBm (Min.)	
Input / Output VSWR	2:1 (Max.)	
Spurious	-70 dBc (Max.)	
Harmonics	-14 dBc (Max.) / -20 dBc (Typ.)	Pout @ 100 W
Efficiency	≥ 40 %	Pout @ 100 W
HPA Enable/Disable	TTL "0 V or Open" ⇒ Enable TTL "5 V" ⇒ Disable	
VVA Control	0-5V: 0V: Gain Max 5V: Gain Min	Pin 4
VVA Range	>25 dB	
Temperature Sensor	Vt + 500mV, 10 mV/ºC	Pin 3
Current Sensor	100mV/A	
Forward Power Monitor	4.0 ± 0.2 V @ +50 dBm, 270 MHz Power Monitor Flatness: ±1 dBm	RMS Detection
Reverse Power Monitor	4.0 ± 0.2 V @ +50 dBm, 270 MHz Power Monitor Flatness: ±1 dBm	RMS Detection
HPA Switching ON/OFF Speed	2 µSec	
DC Input Voltage	+ 26 to + 28 V	
Current Consumption	8.7 A (Max.)	Pout @ 100 W
Input / Output Impedance	50 Ω	
Max. Input ***(without Damage)***	+5 dBm	

2. Mechanical Characteristics

Monitoring Connector	DB9-Male	4 – 40 screw
RF IN/OUT Connector	SMA 4 Holes - Female	
DC Input	Pin 6 and Pin 7 at DB9	
Dimensions	8.4" x 3.48" x 1.06"	

3. Environment Characteristics

Operating Temperature	-30ºC ~ +75ºC	**Base Plate**
Storage Temperature	-40°C ~ +95°C	
Cooling	External Heatsink	
Humidity **(Non-condensing)**	95% (Max.)	**Designed to meet: IAW MIL-STD-810F**

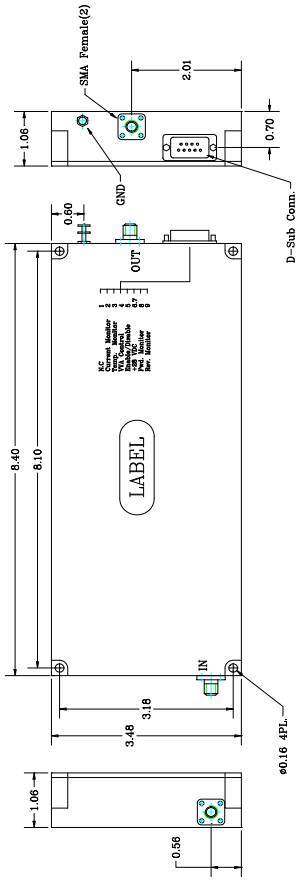
Revision History

REV	Reason to Change	Date	Initialed by
	Production Approved	03/13/15	Y.Z.

4. DB9 Pin Description

1	NC	
2	Current Monitor	100 mV/Amp
3	Temperature Monitor	10 mV/ºC
4	VVA Control	
5	Enable/Disable	0V or Open: Enable 5V: Disable
6, 7	+28 V	
8	Fwd. Monitor Output	
9	Rev. Monitor Output	

5. Outline Drawing



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