



The MA270/10/48MK-A4 is a broadband high power amplifier for VHF-UHF applications. The amplifier supports signal amplification in the 30-520 MHz frequency band. It is protected against over-temperature, excessive current draw, and ALC loop for over power protection. This amplifier integrates a Bi-directional power coupler for forward and reverse power monitoring and VSWR Alarm indication.



Model: MA270/10/48MK-A4

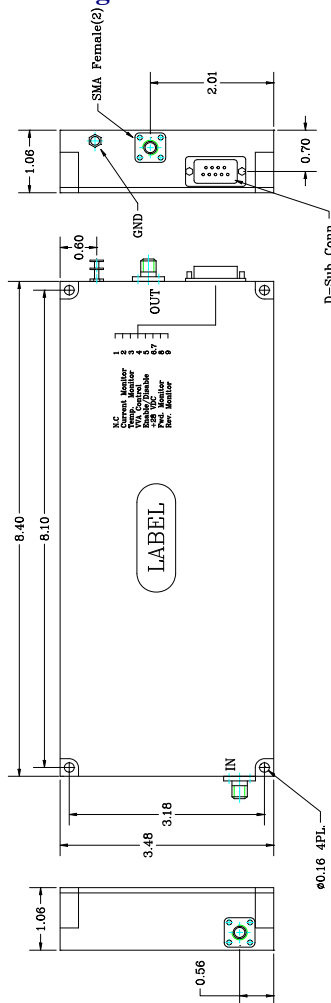
1. Electrical Characteristics

Item	Value	Note
Frequency Range	30 ~ 520 MHz	
Gain	50 dB (Min.)	
Gain Flatness	± 1.5 dB	Over Freq. Range
VVA Range	25 dB (Min.)	
Output P1	+46 dBm (Min.)	
Output Psat	+49 dBm (Min.)	
Input / Output VSWR	2:1 (Max.)	
Spurious	-70 dBc (Max.)	
HPA Enable/Disable	TTL "0 V or Open" ⇒ Enable TTL "5 V" ⇒ Disable	
Temperature Sensor	10 mV/°C	
Forward Power Monitor	4.0 ± 0.2 V @ +46 dBm, 270 MHz Power Monitor Flatness: ±1 dBm	RMS Detection
Reverse Power Monitor	4.0 ± 0.2 V @ +46 dBm, 270 MHz Power Monitor Flatness: ±1 dBm	RMS Detection
ALC ON/OFF	TTL "High or Open" : Disable TTL "Low " : Enable	Pin 4 On DB9 Default: Off
ALC Default Level	+50 dBm ± 0.5 dBm	
ALC Accuracy	± 0.5 dBm	
HPA Switching ON/OFF Speed	1 μSec	
VSWR Alarm	If reverse power ≥ +45 ± 1dBm Alarm: TTL High	Pin 1 on DB9
DC Input Voltage	+ 26 V to + 28 V	
Current Consumption	8 A (Max.)	Pout @ 40 Watts
Input / Output Impedance	50 Ω	
Max. Input Without Damage	+5 dBm	

4. DB9 Pin Description

Pin	Description	Signal
1	VSWR Alarm	Alarm: TTL High, Normal: TTL Low
2	Current Monitor	275 mV/Amp
3	Temperature Monitor	10 mV/°C
4	ALC ON/OFF	TTL High or Open: OFF TTL Low: ON
5	Enable/Disable	0V or Open: Enable 5V: Disable
6,7	+28 V	
8	Fwd. Monitor Output	
9	Rev. Monitor Output	

5. Outline Drawing



2. Mechanical Characteristics

Monitoring Connector	DB-9 Male	4 - 40 screw
RF IN/OUT Connector	SMA 4 Holes Female	
DC Input	Pin 6 and Pin 7 at DB-9	
Dimensions	8.4" x 3.48" x 1.06"	

3. Environment Characteristics

Operating Temperature	-40°C ~ +80°C	Base Plate
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Revision History

REV	Reason to Change	Date	Initialed by
A	Production approved	09/11	G. David