The **MA270/10/15HK-D** is a broadband high power amplifier for VHF-UHF applications. The amplifier supports signal amplification in the 20-520 MHz frequency band, and is protected against over-temperature and excessive current draw. It will "gracefully" reduce output power above +70˚C (Base Plate) and will shut down at +85˚C (Base Plate) to protect the device. This amplifier does NOT have integrated Automatic Level Control options.

Model: MA270/10/15HK-D

1. Electrical Characteristics

Item	Value	Note
Frequency Range	20 ~ 520 MHz	
Power Gain @ Rated Power	20-100 MHz: 17.5 dB (Typ.) 100-400 MHz: 17.5 dB (Typ.) 400-520 MHz: 17 dB (Typ.)	See Power Gain Flatness
Power Gain Flatness (per band)	20-100 MHz: ± 1.5 dB (Max.) 100-400 MHz: ± 1.5 dB (Max.) 400-520 MHz: ± 1.5 dB (Max.)	Reference each band to Fc
Output P1	20-400 MHz: +52 dBm (Min.) 400-520 MHz: +51 dBm (Min.)	
Output P_{sat}	+53 dBm (Min.)	
Output 3rd Intercept Point	+59 dBm (Typ.)	2 CW tones; +40 dBm per tone and 100 kHz spacing @ 270MHz
Input / Output VSWR	1.5:1 (Max.)	
Spurious	-60 dBc (Max.)	@ 200 watts
Efficiency	20 - 100 MHz: 40% 100 - 400 MHz: 33% 400 - 520 MHz: 30%	Typical value @ P1 dBm
2nd Harmonics	20 - 100 MHz: -30 dBc 100 - 400 MHz: -40 dBc 400 - 520 MHz: -40 dBc	Typical value @ P1 dBm
HPA Enable/Disable	TTL "0 V or Open" ⇒ Enable TTL "5 V" ⇒ Disable	
Temperature Sensor Output	10 mV/ºC	
Over Temperature Shutdown	+85ºC ± 5ºC	Auto Recover @ +70ºC ± 5˚C
Current Sensor Output	275 mV/A	
HPA Switching ON/OFF Speed	1 µSec	
DC Input Voltage	28-30 V	
Current Consumption	26 A (Max.)	@ 200 watts
Input / Output Impedance	50 Ω	
Max RF Input	+40 dBm	
Output Load Mismatch	6:1 @ all load phase & amplitude continuous	@ 200 watts

2. Mechanical Characteristics

Monitoring Connector	D7W2 Male	4 – 40 screw
RF Input C nnector	*SMA 4 Holes Female	
RF Output Connector	*TNC Female	
DC Input	A1 @ D7W2	
Dimensions	8.55" x 6.98" x 1.11"	

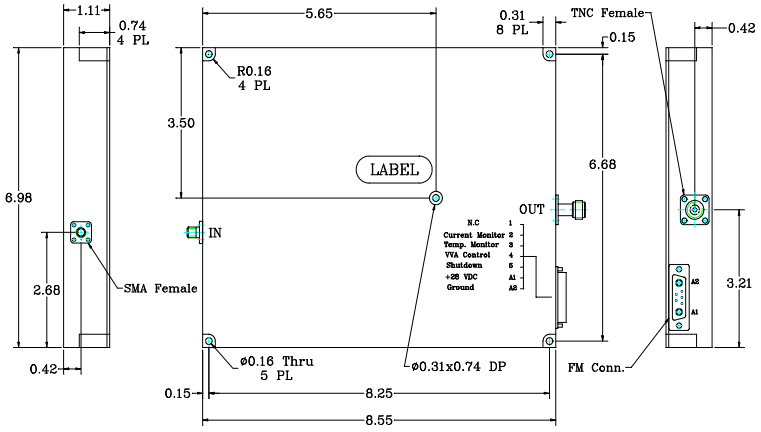
3. Environment Characteristics

Operating Temperature	-40℃ ~ +70℃	Base Plate

4. D7W2 Pin Description

1	N/C	
2	Current Monitor	27 mV/Amp
3	Temperature Monitor	10 mV/ºC
4	N/C	
5	Enable/Disable	0V or Open: Enable 5V: Disable
A1	+28 V	
A2	GND	

5. Outline Drawing



Revision History			
REV	**Reason to Change**	**Date**	**Initialed by**
A	Production approved	03/09	G. David

38 LEUNING STREET | SOUTH HACKENSACK, NJ | USA 07606
TEL: (201) 343-6388 | FAX: (201) 343-6390 | E-MAIL: INFO@GWAYMICROWAVE.COM
WWW.GWAYMICROWAVE.COM