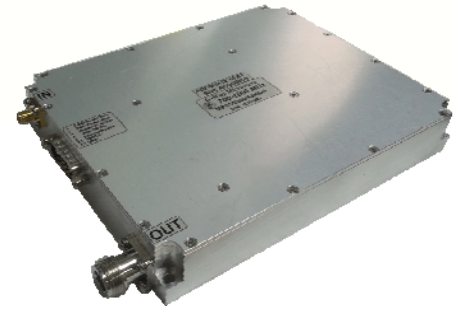




The MP850/300/53HK-A2 is suitable for single and multi carrier applications in 700-1000 MHz band high power linear applications. The amplifier employs linear LDMOS power devices that provide significant linear output power, wide dynamic range, and high gain.



Model: MP850/300/53HK-A2

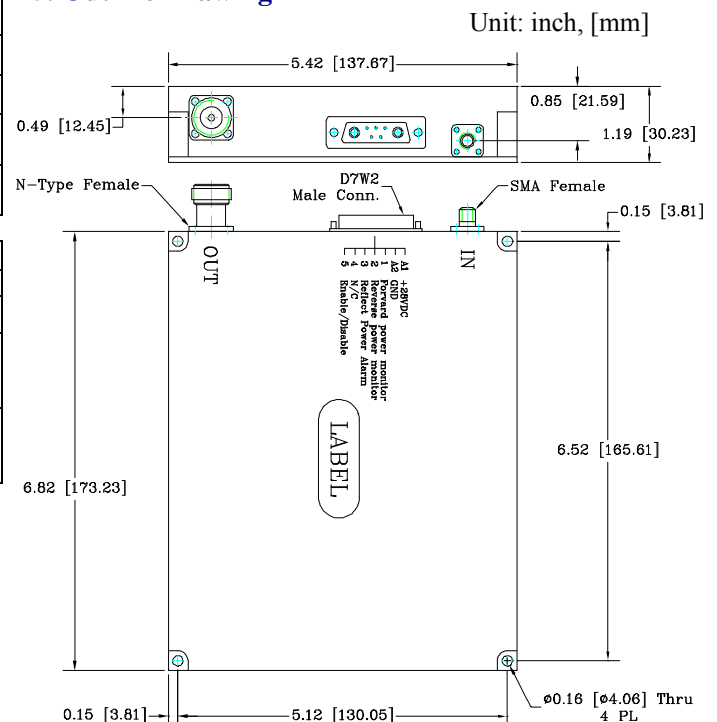
1. Electrical Characteristics		
Item	Value	Note
Frequency range	700 ~ 1000 MHz	
Gain	47 ± 1 dB	
Gain Flatness	± 2.0 dB	Over Freq. Range
Gain Variation	± 1.0 dB	Over Temp. Range
Power Output P1	+52 dBm (Typ.)	
Power Output Psat	+53 dBm (Min.)	
Output IP3	+60 dBm (Min.)	2 Tones @ +44 dBm/tone, 100 KHz spacing
Input / Output VSWR	≤ 1.3	
Over Temperature Protection	Shutdown @ +90°C ± 5°C	Auto Recover @ +75°C ± 5°C
HPA Enable/Disable	TTL "High or Open" ⇒ Enable TTL "0V" ⇒ Disable	
Reflect Power Alarm and Shutdown	Alarm and Shutdown if reflect power ≥ +47 ± 1.0 dBm	Alarm Via Pin3 on D7W2, TTL Low : Normal TTL High: Alarm
Forward Power Monitor	4.0 ± 0.1V @ +52 dBm	RMS Detection
Reverse Power Monitor	4.0 ± 0.1V @ +52 dBm	RMS Detection
Flatness over Freq. of Power Monitor	± 1.0 dBm (Typ.)	
Spurious	-70 dBc (Max.)	
Harmonics @ +52 dBm	-40 dBc (Max.)	
DC Input Voltage / Current	28 VDC ± 1V / 14A (Max.)	DC Input Voltage / Current @ +52 dBm
Input / Output Impedance	50 Ω	

2. Mechanical Characteristics		
Monitoring Connector	D7W2 Male	4 – 40 screw
RF IN Connector	SMA 4 Holes Female	
RF OUT Connector	N Type Female	
DC Input	D7W2 Male	
Dimensions	6.82" x 5.42" x 1.19" [173.2x137.67x30.23]	Unit: inch [mm]

3. Environment Characteristics		
Operating Temperature	-20°C ~ +85°C	Base Plate

4. D7W2 Male Pin Description		
1	Forward Power Monitor	
2	Reverse Power Monitor	
3	Reflect Power Alarm	≥ +47 ± 1.0 dBm
4	NC	
5	Enable / Disable	Enable: TTL Low or Open Disable: TTL High
A1	+28VDC	
A2	GND	

5. Outline Drawing



Revision History			
REV	Reason to Change	Date	Initialed by
A	Initial, Preliminary Design	12/03/13	YZ
A1	1. Eliminate VVA Control 2. Increase the height of the housing by 120mils.	12/10/13	YZ
A2	1. Change Power Detector from ADL5902 to ADL5511 for better temperature stability.	01/12/14	YZ