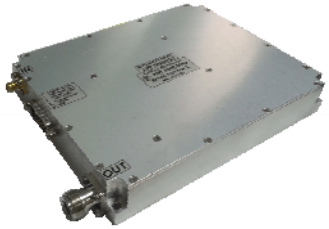
The **MP738/17/53HK-A4** is suitable for single and multi carrier applications in 729-746 MHz band high power linear applications. The amplifier employs linear LDMOS power devices that provide significant linear output power, wide dynamic range, and high gain.



Model: MP738/17/53HK-A4

1. Electrical Characteristics

Item	Value	Note
Frequency Range	729~ 746 MHz	
Gain	54 ± 1 dB	
Gain Flatness	± 0.5 dB	Over Freq. Range
Gain Variation	± 1.0 dB	Over Temp. Range
Power Output P1	+52 dBm (Typ.)	
Power Output Psat	+54 dBm (Min.)	
Output IP3	+63.5 dBm (Min.)	2 Tones @ +47.0 dBm/tone, 1 MHz spacing
ACLR @ +53.0 dBm	- 30 dBc @ ± 200 KHz offset from F0 (Max.) (RBW = 30 kHz) -55 dBc @ ± 400 KHz offset from the F0 (Max.) (RBW = 30 kHz)	Signal Source: 1 GSM
ACLR @ +50.0 dBm	- 33 dBc @ ±5 MHz offset from F0 (Max.) (RBW=30 kHz) -45dBc @ ±10 MHz offset from the F0 (Max.) (RBW = 30 kHz)	Signal Source: 1 WCDMA 1 DPCH PAR=5.6 dB @ 0.01% Probability on CCDF
ACLR @ +47.0 dBm	- 45 dBc @ ±5 MHz offset from F0 (Max.) (RBW=30 kHz) -55dBc @ ±10 MHz offset from the F0 (Max.) (RBW = 30 kHz)	Signal Source: 1FA 5MHz LTE PAR=6.0 dB @ 0.01% Probability on CCDF
Input / Output VSWR	≤ 1.3	
VVA Control Range	> 25 dB	Voltage Input 0-5V
VVA Control Voltage	+5V: Maxim Gain 0V: Minimum Gain	
Over Temperature Protection	Shutdown @ +85°C ± 5°C	Auto Recover @ +75°C ± 5°C
HPA Enable/Disable	TTL "Low or Open" ⇒Enable TTL "High" ⇒Disable	
Input Power Monitor	2.4 ± 0.1V @ +20.0 dBm	RMS Detection
Forward Power Monitor	2.4 ± 0.1V @ +53.0 dBm	RMS Detection
Reverse Power Monitor	2.4 ± 0.1V @ +53.0 dBm	RMS Detection
Power Monitor Flatness over frequency range	±0.5 dBm (Max.)	
Spurious	-70 dBc (Max.)	
Harmonics @ +53 dBm	-40 dBc (Max.)	
DC Input Voltage / Current	+28 VDC ± 1V / 20.0A (Max.)	DC Input Voltage / Current @ +53.0 dBm
Input / Output Impedance	50 Ω	
Input Max	+20 dBm	
Reverse Power Max.	+49 dBm	

2. Mechanical Characteristics

Monitoring Connector	D7W2 Male	4 – 40 screw
RF IN/OUT Connector	SMA/N-Type 4 Holes Female	
DC Input	Pin 6,7 on DB-9	
Dimensions	6.82" x 5.42" x 1.07"	
Weight	2.3 lb	

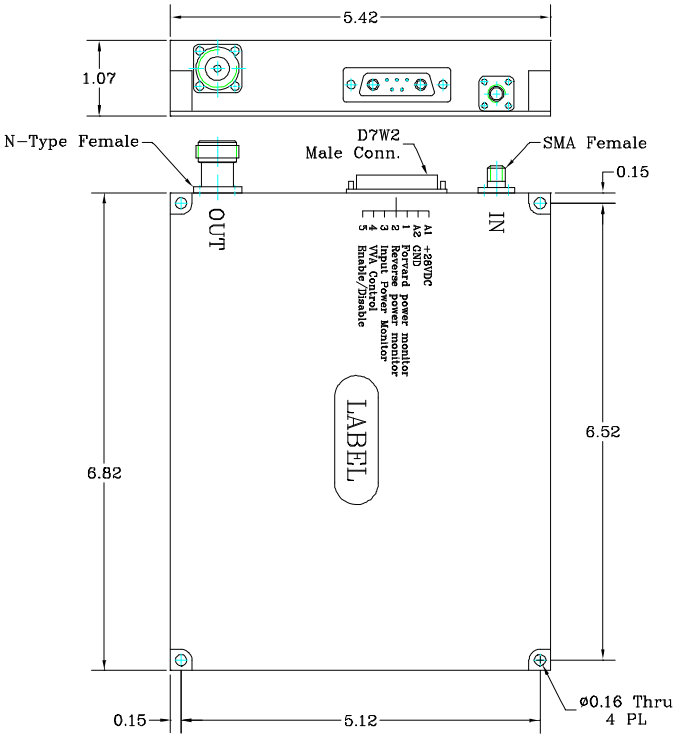
3. Environment Characteristics

Operating Temperature	-20°C ~ +75°C	Base Plate
Storage Temperature	-40°C ~ +95°C	
Cooling	External Heatsink	
Humidity (Non-condensing)	95% (Max.)	Designed to meet: IAW MIL-STD-810F

4. D7W2 Male Pin Description

1	Forward Power Monitor	
2	Reverse Power Monitor	
3	Input Power Monitor	
4	VVA Control	0-5V
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**

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