The **MP2140/60/47MK-A8** is suitable for broadband high power linear applications. The amplifier employs linear LDMOS power devices that provide sufficient output power, wide dynamic range, and high gain.

Model: MP2140/60/47MK-A8

1. Electrical Characteristics

Item	Value	Note
Frequency Range	2110 ~ 2170 MHz	
Gain	47 ± 1dB	
Gain Flatness	± 1.0dB	Over Freq. Range
Gain Variation	± 1dB	Over Temp. Range
Output Power P1	+47 dBm (Min.)	
Output Power Psat	+ 48 dBm (Min.)	
Output 3rd Intercept Point	+ 59 dBm	2 tones @ +40 dBm output power, 1 MHz Spacing
ACLR @ +47 dBm	- 26 dBc @ ±5 MHz offset from F0 (Max.) (RBW=30 kHz) 50 dBc @ ±10 MHz offset from the F0 (Max.) (RBW= 30 kHz)	**Signal Source:** 1 WCDMA 1 DPCH PAV=5.4 dB
ACLR @ +41 dBm	- 45 dBc @ ±5 MHz offset from F0 (Max.) (RBW=30 kHz) -53dBc @ ±10 MHz offset from the F0 (Max.) (RBW= 30 kHz)	**Signal Source:** 1 WCDMA 1 DPCH PAV=5.4 dB
Input / Output VSWR	≤ 1.2	Output Isolator Included
Harmonics	-45 dBc (Max.)	
Spurious	-70 dBc (Max.)	
HPA Enable/Disable	TTL "0V or Open" : Enable TTL "5V" : Disable	
VVA Control	+5V: Maxim Gain 0V: Maxim Attenuation	
VVA Range	>25 dB	
Forward Power Monitor	2.4 ± 0.1 V @ +47 dBm	RMS Detection
Reverse Power Monitor	2.4 ± 0.1 V @ +47 dBm	RMS Detection
Input Power Monitor	2.4 ± 0.1 V @ +20 dBm	RMS Detection
Current Sensor	10mV/100mA	
DC Input Voltage / Current	+28 VDC ± 1V / 5.2A	DC Input Voltage / Current @ +47 dBm
Thermal Shutdown	+85℃ ± 5℃	Auto Recover @ +70℃ ± 5℃
Input / Output Impedance	50 Ω	
Input Max	+25 dBm	**With ALC on**

2. Mechanical Characteristics

Monitoring Connector	DB-9 Male	4 – 40 screw
RF IN/OUT Connector	SMA 4 Holes – Female	
DC Input	Pin 6,7 on DB-9	
Dimensions	6.4" x 3.4" x 1"	

Revision History

REV	Reason to Change	Date	Initialed by

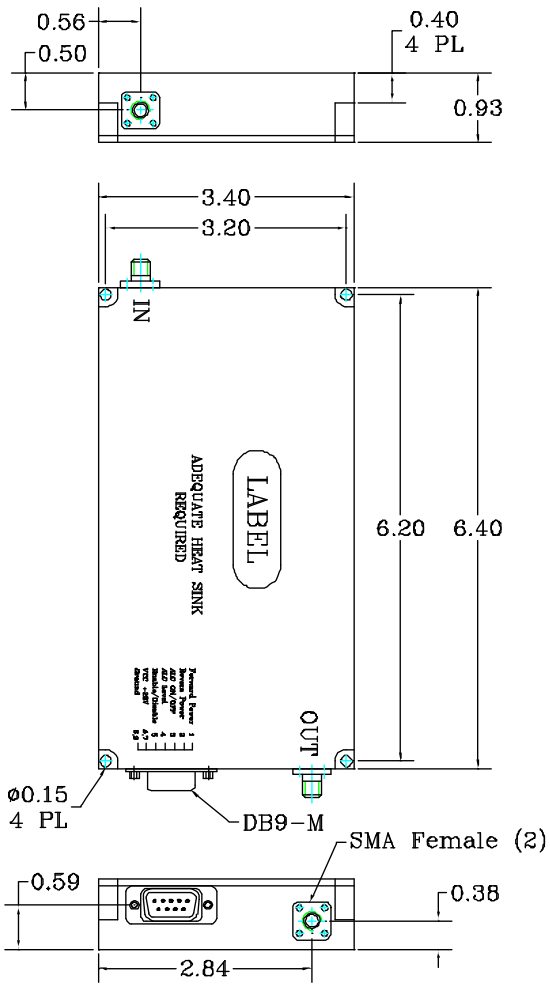
3. Environment Characteristics

Operating Temperature	-20℃ ~ +70℃	Base Plate

4. DB9 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
6, 7	+28V	
8	Current Senor	10mV/100mA
9	Ground	

5. Outline Drawing



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