The **MP4750/700/43MK-A4** is suitable for 4400 ~ 5100 MHz applications. The amplifier employs linear GaN power devices that provide sufficient output power, wide dynamic range, and high gain. It integrates high power switch for TDD application.

Model: MP4750/700/43MK-A4

1. Electrical Characteristics

Item	Value		Note
Frequency Range	4400 ~ 5100 MHz		
Tx Power Gain	40 dB (Min.)		@ +43 dBm
Tx Gain Flatness	± 0.5 dB (Typ.)	± 1.0 dB (Max.)	Over Freq. Range
Tx Gain Variation	± 1 dB (Max.)		Over Temp. Range
Tx Output Power P3	+44 dBm (Min.)		
Tx Output Power Psat	+45 dBm (Min.)		
Mode Control	TTL Low: High Mode TTL High: Low Mode		DB-9 Pin 6
Operating Mode @ +4 dBm Input	High Mode: +44 ± 0.5 dBm		TTL Low: High Mode
	Low Mode: +37 ± 0.5 dBm		TTL High: Low Mode
Insertion Loss of Rx Path	< 1.5 dB		
Input / Output VSWR	≤ 1.5		
Tx 2nd Harmonics	-30 dBc (Max.)		@ + 44 dBm Output
Spurious	-70 dBc (Max.)		@ +44 dBm Output
Standby Mode	**Rx**		
Tx/Rx Switch Control	TTL "0" ⇒ Tx ON TTL "1" ⇒ Rx ON		Pull Up in TTL High Pin 4
Tx/Rx Switching Time	5 µs (Max.)		TTL Control Signal: F = 1 KHz, 50% DC
Tx to Rx Leakage Power	+7 dBm (Max.)		
DC Input Voltage	+28 VDC		
DC Current @ +28V	3.0 A (Max.)		@ + 44 dBm Output
Enable/Disable	Enable: TTL Low or Open Disable: TTL High		Pin 7
FWD Power Monitor	2.5 ± 0.2 V		@ +43 dBm, RMS
FWD Power Monitor Range	> 25 dB		
Temperature Sensor	Vt + 500mV, 10mV/C°		Pin 3
Input / Output Impedance	50 Ω		
Input Max without Damage	+15 dBm		
Reverse DC Voltage Protection	With TVS Diode 30V		Up to 600 Watts

2. Mechanical Characteristics

Monitoring Connector	DB-9-Male	4 – 40 screw
RF IN/OUT Connector	SMA 4 Holes – Female	
DC Input	Pin 1,2 on DB-9	
Dimensions	4.92" x 2.95" x 0.93"	
Weight	1.0 lb	

3. Environment Characteristics

Operating Temperature	-40°C ~ +80°C	**Base Plate**
Storage Temperature	-55°C ~ +125°C	
Cooling	External Heat-Sink	
Humidity (Non-condensing)	95% (Max.)	Designed to meet: IAW MIL-STD-810F
Operating Altitude	30,000 Feet (Min.)	
Vibration and Shock	Vibration 6.06 gRMS	Designed to meet: IAW MIL-STD-810F

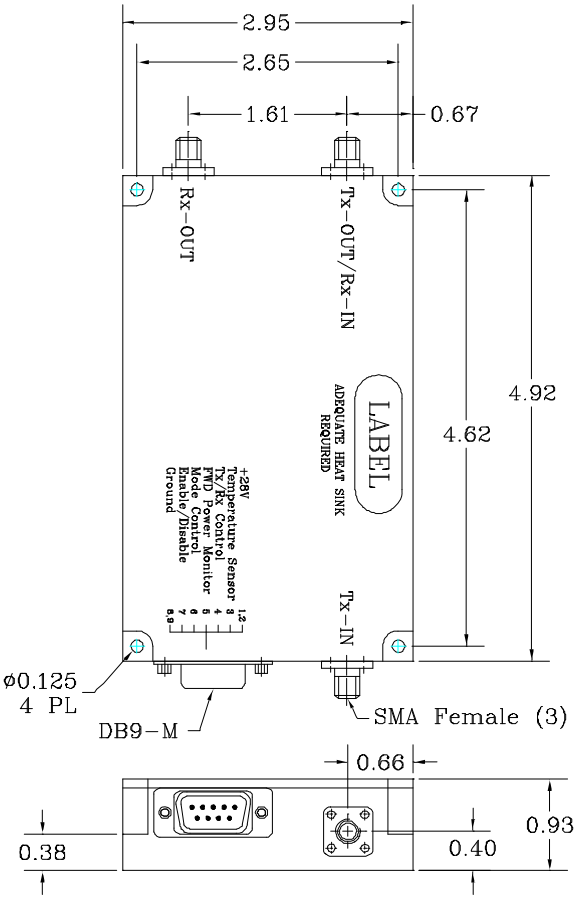
4. DB9 Pin Description

1, 2	+ VDC	
3	Temperature Sensor	
4	Tx/Rx Control	Tx On: TTL Low Rx On: TTL High
5	FWD Power Monitor	
6	Mode Control	
7	Enable/Disable	Enable: TTL Low or Open Disable: TTL High
8, 9	Ground	

Enable: TTL High

Disable: TTL Low or Open

5. Outline Drawing



Revision History			
REV	**Reason to Change**	**Date**	**Initialed by**
	Initial Release	*03/06/17*	*Y.Z.*

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