

# M0810GP120 0.8-1GHz 120W

## ELECTRICAL SPECIFICATIONS @ +28 VDC, 25°C, 50 Ω System

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	800		1000	MHz
Output Power P <sub>SAT</sub>	P <sub>SAT</sub>	120			Watt
Output Power P <sub>1dB</sub>	P <sub>1dB</sub>	50			Watt
Power Gain P <sub>1dB</sub>	G <sub>1dB</sub>	48			dB
Input Power for Rated P <sub>out</sub>			±2.0		dBm
Small Signal Gain Flatness	ΔG		±0.75	±1.0	dB
Input/Output Return Loss	S <sub>11</sub> / S <sub>22</sub>			-14	dB
Third Order intercept Point 2-Tone @37dBm/Tone, Δ=100kHz	IP3		+57		dBm
Harmonics @ Rated P <sub>1dB</sub> = 50W	H			-45	dBc
Spurious Signals	Spur		-70	-60	dBc
Operating Voltage	V <sub>DC</sub>	26	28	30	Volt
Current Consumption @ Rated P <sub>out</sub> = 120W	I <sub>DD</sub>			15	Amp

## ENVIRONMENTAL CHARACTERISTICS

Parameter	Symbol	Min	Typ	Max	Unit	Limits
Operating Case Temperature	T <sub>c</sub>	0		+50	°C	
Storage Temperature	T <sub>stg</sub>	-40		+85	°C	
Relative humidity (non-condensing)	RH			95	%	
Altitude (MIL-STD-810F Method 500.4)	ALT			30,000	Feet	
Vibration/Shock MIL-STD-810F – Method 514.5/516.5 – Proc I	VI/SH		Airborne			

## LIMITS

Parameter	Value	Limits
Input Overdrive	+6 dBm	Max
Load VSWR @ Rated P <sub>1dB</sub> = 50W	∞ @ all load phase & amplitude	
Thermal Overload	85°C shutdown	Max

## MECHANICAL SPECIFICATIONS

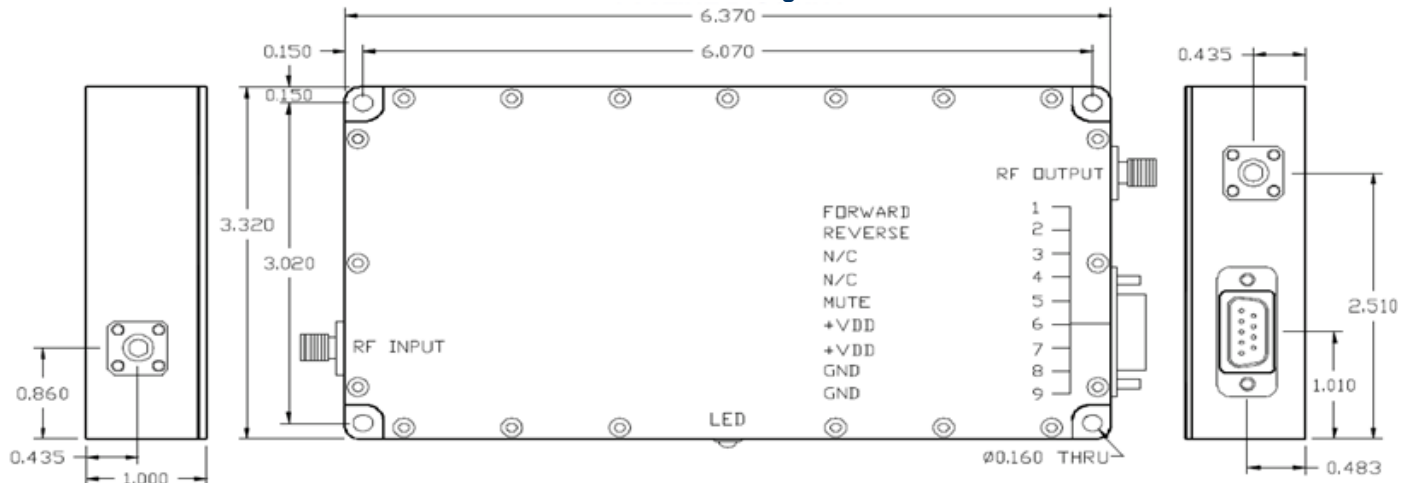
Parameter	Value	Units	Limits
Dimensions	6.4 x 3.4 x 1.1	Inch	Max
Weight	1.0	lb	Max
RF Connectors In/Out	Type-SMA, Female		
DC Interface Connector	D-sub 9-Pin, Male		
Cooling	External Heatsink		

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## DC CONNECTOR- D-Sub, 9Pin, Male

Pin #	Description	Specifications
1	Forward Power	Continuous Analog voltage 0-5VDC relative to forward power level
2	Reverse Power	Continuous Analog voltage 0-5VDC relative to reflected power level
3	N/C	No Connection
4	N/C	No Connection
5	Mute	Amplifier Disable: TTL Logic High (5V) <i>(Internally Pulled-Low)</i>
6,7	+VDD	+28.0VDC $\pm$ 2V
8,9	GND	Ground

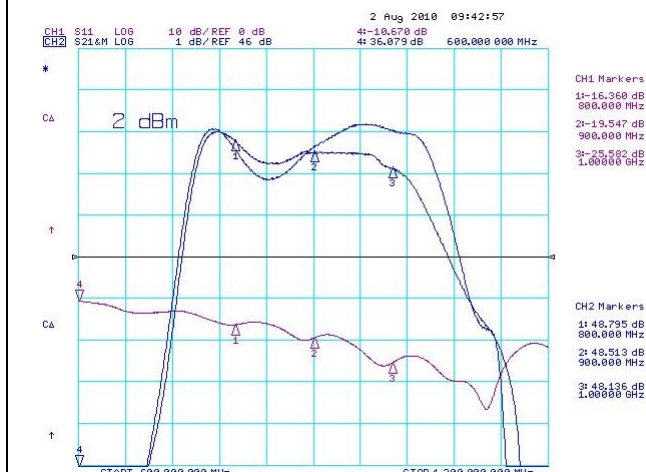
### Outline Drawing



### TYPICAL PERFORMANCE PLOTS

#### Plot 1-Power @ P1dB

Top Curve: Small Signal Gain @ PIN = -20dBm  
 Middle Curve: Power Gain @ P1dB, PIN= +2dBm  
 Reference = 46dB, Scale = 1dB/div  
 Bottom Curve: Input VSWR  
 Reference = 0dB, Scale = 10dB/div



#### Plot 2-Power @ Psat

Top Curve: Small Signal Gain @ PIN = -20dBm  
 Middle Curve: Power Gain @ Psat, PIN=+5dBm  
 Reference = 46dB, Scale = 1dB/div  
 Bottom Curve: Input VSWR  
 Reference = 0dB, Scale = 10dB/div

