

M0527BP50 500 – 2700 MHz / 50 Watts

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

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	500		2700	MHz
Output Power CW	P _{1dB}	50			W
Output Power @ P _{1dB} Gain compression	P _{1dB}		20		W
Small Signal Gain	G _{SS}	46	48		dB
Input power for rated P _{SAT}	P _{in}		0		dBm
Small Gain Flatness	ΔG			±1.5	dB
Input Return loss	S ₁₁			-10	dB
Noise Figure	NF			11.5	dB
Third Order Intercept Point 2-Tones @ 33dBm/Tone, Δ = 100kHz	IP3	+48	+53		dBm
Harmonics @ Pout = 20W	2 nd , 3 rd		-20	-13	dBc
Spurious Signals	Spur		-70	-60	dBc
Operating Voltage	V _{DC}	26	28	30	Volt
Current Consumption @ 50W	I _{DD}			6.0	Amp
Quiescent Current	I _{DQ}		2.0		Amp
Current Consumption @ Shutdown	I _{SD}			400	mA
Switching Time @ 1kHz TTL, P _{IN} = 0 dBm	T _{ON} /T _{OFF}		2	5	uSec

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	7.4 x 3.6 x 1.1	inch	Max
Weight	1.0	lb.	Max
RF Connectors Input/Output	Input : SMA (Female) / Output : SMA (Female)		
DC interface Connector	D-Sub 9Pin, Male		
Cooling	External Heatsink (Not supplied)		

ENVIRONMENTAL CHARACTERISTICS

Parameter	Symbol	Min	Typ	Max	Unit
Operating Case Temperature	T _c	-40		+80	°C
Storage Temperature	T _{stg}	-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

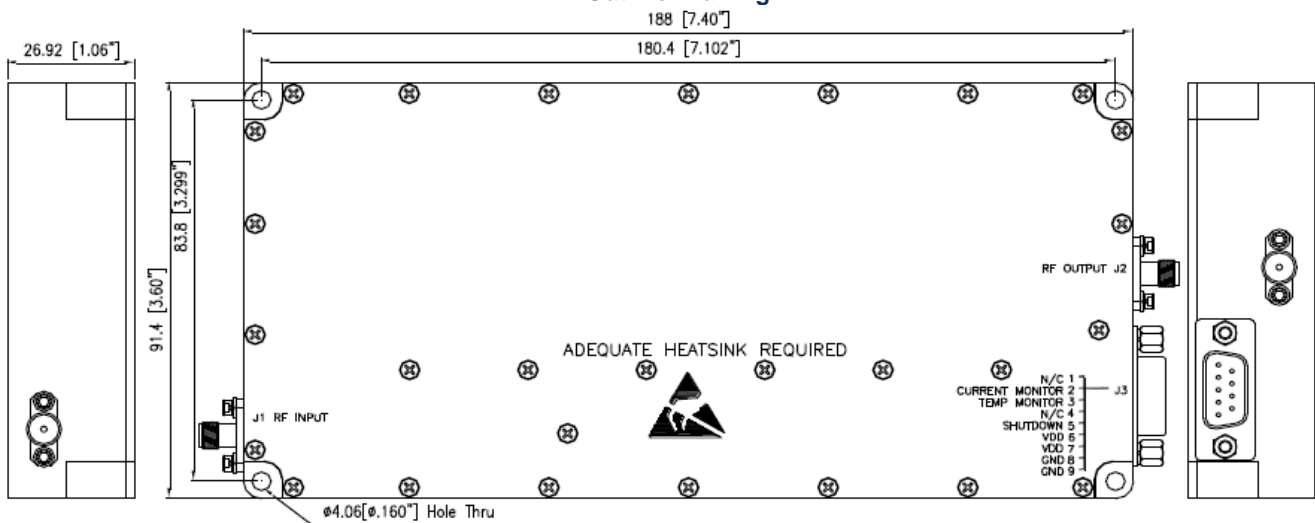
Parameter	Value	Limits
Input RF drive level without damage	+10dBm	Max
Load VSWR @ Pout = 50W	∞ @ All load phase & amplitude for duration of 1 minute 3:1 @ all load phase & amplitude continuous	-
Thermal Degradation	Shutdown 85°C	Max

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DC INTERFACE CONNECTOR – D-Sub 9-Pin, Male

Pin #	Description	Specifications
1	N/C	No Connection
2	Current Monitor	Analog voltage relative to I _{DD} @ 50mV/100mA
3	Temp Monitor	Analog voltage relative to Module's Temperature @ 10mV/°C
4	N/C	No Connection
5	Mute (Enable/ Disable)	Enable : TTL "Low" (Logic 0) or Open
		Disable : TTL "High" (Logic 1)
6,7	V _{DD}	+28V _{DC} ±1VDC
8,9	GND	Ground

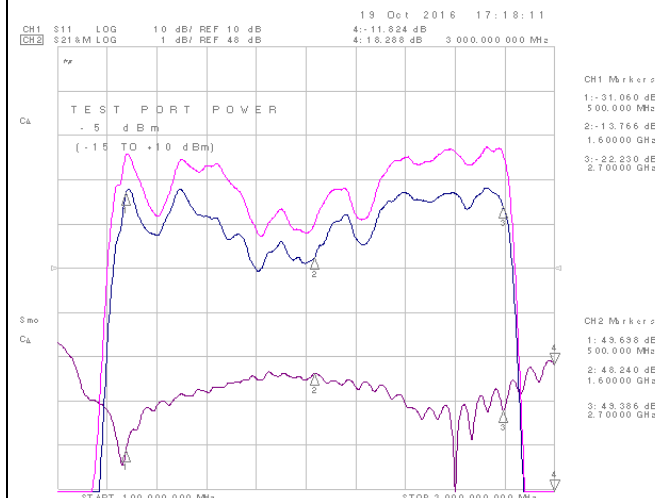
Outline Drawing



PERFORMANCE PLOTS

Plot 1 – Small Signal Gain and P_{1dB}

Top Curve: Small Signal Gain @ P_{IN} = -20dBm
 Middle Curve: Power Gain @ P_{1dB}, P_{IN} = -5.0dBm (Note 2)
 Reference: 48dB, 1dB/div.
 Bottom Curve: Input Return Loss
 Reference: 10dB, 10dB/div.



Plot 2 – Small Signal Gain and P_{SAT}

Top Curve: Small Signal Gain @ P_{IN} = -20dBm
 Middle Curve: Power Gain @ P_{SAT}, P_{IN} = +2.0dBm (Note 2)
 Reference: 48dB, 1dB/div.
 Bottom Curve: Input Return Loss
 Reference: 10dB, 10dB/div.

