

M0525BP100 500 – 2500 MHz / 100 Watts

The M0525BP100 is suitable for broadband mobile Jamming and band specific high power linear applications in the P/L/S frequency bands. This compact module utilizes high power advanced GaN devices that provide excellent power density, high efficiency, wide dynamic range and low distortions. Exceptional performance, long term reliability and high efficiency are achieved by employing advanced broadband RF matching networks and combining techniques, EMI/RFI filters, machined housings and qualified components. Sungsan's ISO9001 Quality Assurance Program assures consistent performance and the highest reliability.

- Solid-state Class AB linear design
- Instantaneous ultra broadband
- Suitable for most modulation types
- Small and lightweight
- 50 ohm input/output impedance
- High reliability and ruggedness
- Built-in control, monitoring and protection circuits

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

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	500		2500	MHz
Output Power CW	P _{SAT}	100	125		W
Output Power @ 1dB Gain Compression	P _{1dB}		50		W
Input power for rated P _{SAT}	P _{IN}		0		dBm
Power Gain @ P _{1dB}	G _p	50			dB
Gain Flatness @ Rated P _{SAT}	ΔG _p			±1.0	dB
Input Return loss	S ₁₁			-10	dB
Noise Figure	NF			10	dB
Harmonics @ Rated P _{SAT} = 100W	H		-20		dBc
Third Order Intercept Point 2-Tones @ 37dBm/Tone, Δ = 1MHz	IP3		+50		dBm
Current Consumption @ Rated P _{SAT} = 100W	I _{DD}		10	12	Amp
Current Consumption @ Shutdown	I _{SD}			300	mA
Quiescent Current	I _{DQ}		1.5	2.0	Amp
Spurious Signals	Spur		-70	-60	dBc
Operating Voltage	V _{DC}	26	28	30	Volt
Switching Time @ 1kHz TTL, = P _{IN} 0dBm	T _{ON} / T _{OFF}		2.0	5.0	uSec

ENVIRONMENTAL CHARACTERISTICS

Parameter	Symbol	Min	Typ	Max	Unit	Limits
Operating Case Temperature	T _c	-40		+85	°C	
Storage Temperature	T _{stg}	-40		+95	°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	+10dBm	Max
Load VSWR @ Rated P _{SAT} = 100W	∞ @ all load phase & amplitude for duration of 1 minute 3:1 @ all load phase & amplitude continuous	
Thermal Overload	85°C Graceful Degradation	Max

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MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	187.96 x 91.44 x 26.924 [7.4 x 3.6 x 1.06]	Mm [Inch]	Max
Weight	2	lb	Max
RF Connectors Input/Output	Type-SMA, Female		
DC Interface Connector	D-Sub 9-Pin, Male		
Cooling	External Heatsink		

DC CONNECTOR- D-Sub, 9Pin, Male

Pin #	Description	Specifications
2	Current Monitor	Analog voltage relative to I _{DD} @ 25mV/100mA
3	Temp Sense	Analog voltage relative to Unit's Temperature @ 10 mV/°C + 500mV
5	Shutdown	Amplifier Disable: TTL Logic High (5V) (Internally Pulled-Low)
1, 6, 7	VDD	+28.0 V _{DC} ±2V
4, 8, 9	GND	Ground

Outline Drawing

