

M0527BP25 500 – 2700 MHz / 25 Watts

The M0527BP25 is suitable for multi-octave bandwidth high power CW, modulated, and pulse applications. This amplifier utilizes high power GaN devices that provide wide frequency response and dynamic range, high gain, high efficiency, and good linearity. Exceptional performance, long-term reliability, and high efficiency are achieved by employing advanced broadband RF matching networks and combining techniques, built in high quality power supply, EMI/RFI filters, machined housing, and qualified components. Sungsan's ISO9001 Quality Assurance Program assures consistent performance and the highest reliability.

- Solid-state Class AB design
- Instantaneous ultra broadband
- Suitable for CW, AM, and FM
- 50 ohm input/output impedance
- High reliability and ruggedness

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

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	500		2700	MHz
Output Power @ 1dB Gain Compression	P _{1dB}		20		W
Output Power CW	P _{SAT}	25	30		W
Input power for rated P _{SAT}	P _{in}		0		dBm
Small Signal Gain	G	44	46	52	dB
Gain Flatness @ Rated P _{SAT}	ΔG _p		±1.0	±1.5	dB
Input Return loss	S ₁₁			-10	dB
Noise Figure	NF			10	dB
Harmonics @ P _{out} = 20W	H		-25	-15	dBc
Third Order Intercept Point 2-Tones @ 34dBm/Tone, Δ = 1MHz	IP3	+45			dBm
Current Consumption @ P _{OUT} = 25W	I _{DD}			3.3	Amp
Current Consumption @ Shutdown	I _{SD}		100		Amp
Quiescent Current	I _{DQ}		1.5		Amp
Spurious Signals	Spur		-70	-60	dBc
Switching Time @ 1kHz TTL, P _{IN} = 0dBm	T _{ON} /T _{OFF}		2.0	5.0	uSec
Operating Voltage	V _{DC}	26	28	30	Volt

ENVIRONMENTAL CHARACTERISTICS

Parameter	Symbol	Min	Typ	Max	Unit	Limits
Operating Case Temperature	T _c	-40		+85	°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			

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LIMITS

Parameter	Value	Limits
Input RF drive level without damage	+10dBm	Max
Load VSWR @ Pout = 25W	∞ @ all load phase & amplitude for duration of 1 minute 3:1 @ all load phase & amplitude continuous	-
Thermal Overload	Graceful degradation	Max

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	6.0 x 3.0 x 1.0	Inch	Max
Weight	1.0	lb.	Max
RF Connectors Input/Output	Type-SMA, Female		
DC Interface Connector	D-Sub 9-Pin, Male		
Cooling	External Heatsink (Not Supplied)		

DC CONNECTOR- D-Sub, 9Pin, Male

Pin #	Description	Specifications
1	N/C	No Connection
2	Current Monitor	Analog voltage relative to IDD @ 100mV/100mA
3	Temp Sense	Analog voltage relative to Module's Temperature @ 10mV/°C (- 500mV)
4	N/C	No Connection
5	Shutdown	Amplifier Disable: TTL Logic High (5V) (Internally Pulled-Low)
6,7	VDD	+26.0 - 30.0VDC
8,9	GND	Ground

Outline Drawing

