

M0825BP50 800– 2500 MHz / 50 Watts

The M0825BP50 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	800		2500	MHz
Power Output CW	P _{SAT}	50			Watt
Output Power @ 1dB Gain Compression	P _{1dB}	20			Watt
Small Signal Gain	G _{SS}	45	48		dB
Input Power for Rated P _{SAT}	P _{IN}		0	4	dBm
Small Signal Gain Flatness	ΔG _{SS}			±2.0	dB
Input Return Loss	S ₁₁			-10	dB
Noise Figure	NF			10	dB
Third Order Intercept Point 2-Tone @ 34dBm/Tone, 1.0MHz Spacing	IP3	+50			dBm
Harmonics @ P _{OUT} = 20W	2 nd			-13	dBc
	3 rd			-20	dBc
Spurious Signals	Spur			-60	dBc
Operating Voltage	V _{DC}	26	28	30	Volt
Quiescent Current	I _{DQ}		2.0	2.3	Amp
Current Consumption @ P _{OUT} = 50W	I _{DD}			6.3	Amp
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		+75	°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	+15dBm	Max
Load VSWR @ Pout = 50W	∞ @ phase & amplitude for duration of 1 minute 3:1 @ all load phase and amplitude continuous	-
Thermal Overload	Graceful degradation	Typ

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	5.57 X 3.16 X 1.0	Inch	Max
Weight	1.0	Kg	Typ
RF Connectors In/Out	Type-SMA, Female		
DC / Shutdown	D-Sub, 9Pin, Male		
Cooling	External Heatsink(not supplied)		

DC CONNECTOR- D-Sub, 9Pin, Male

Pin #	Description	Specifications
1	Spare	No Connection
2	Current Monitor	Analog voltage relative to module's current @ 50mV/100mA (e.g. 0.5V= 1.0A)
3	Temp Sense	Analog voltage relative to module's temperature @ 10mV/°C Equation: $V_{MEASURED}/0.01 = °C$ or $0.5V/0.01 = 50°C$
4	Spare	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

