

M0830BP50 800 – 3000 MHz / 50 Watts

The M0830BP50 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 distortion. 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
- Extremely wide instantaneous bandwidth
- Compact and lightweight
- Built-in control, monitoring and protection circuits
- Suitable for most modulation standards
- 50 ohm input/output impedance
- Highly rugged and reliable

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

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	800		3000	MHz
Power Output (CW)	P _{SAT}	50			Watt
Output Power @ 1dB Gain Compression Point	P _{1dB}	20			Watt
Small Signal Gain	G _{1dB}	47	50	53	dB
Input Power for Rated P _{out}	P _{IN}		0		dBm
Small Signal Gain Flatness	ΔG			±2.0	dB
Input Return Loss	S ₁₁			-10	dB
Noise Figure @ Max Gain	NF			10	dB
Third Order Intercept Point 2-Tones @ 34 dBm/Tone, Δ = 1 MHz	IP3	+50			dBm
Harmonics @ P _{1dB} Gain Compression Point	2 nd / 3 rd			-17 / -20	dBc
Spurious Signals	Spur			60	dBc
Operating Voltage	V _{DC}	27.4	28	28.6	Volt
Current Consumption @ Nominal Output Power	I _{DD}		6.3		Amp
Quiescent Current	I _{DQ}		2.0		Amp
Switching Speed (10% to 90%)	T _{SW}		2.0		μs

ENVIRONMENTAL CHARACTERISTICS

Parameter	Symbol	Min	Typ	Max	Unit	Limits
Operating Case Temperature	T _c	-30		+70	°C	
Storage Temperature	T _{stg}	-40		+85	°C	
Relative humidity (non-condensing)	RH			95	%	
Altitude (MIL-STD-810F Method 500.4)	ALT		40,000		Feet	
Shock / Vibration (MIL-STD-810F Method 516.5)	SH / VI		MIL-STD-810F			

LIMITS

Parameter	Value	Limits
Input RF drive level without damage	+10 dBm	Max
Load VSWR @ P _{out}	∞:1 @ all load phase & amplitude	
Thermal Overload	N/A	Max

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MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	6.4 x 3.4 x 1.1	Inch	Max
Weight	1.0	lb.	Max
RF Connectors Input/Output	SMA female/SMA female		
DC Connectors	Dsub, 9 Pins, Male		
Cooling	External Heatsink		

DC CONNECTOR- D-Sub, 9Pin, Male

Pin #	Description	Specifications
1	N/C	Reserved
2	Current Consumption Monitor	Analog voltage relative to I _D @ 50 mV/100 mA
3	Temperature Monitor	Analog voltage relative to module temperature @ 10 mV/°C
4	N/C	Reserved
5	Shutdown	Enable: TTL "Low" (Logic 0) or Open Disable: TTL "High" (Logic 1)
6	VDD	+28 V _{DC} ± 0.6 V
7	VDD	+28 V _{DC} ± 0.6 V
8	GND	Ground
9	GND	Ground

Outline Drawing

