

M6080BP30 6000– 8000 MHz / 30 Watts



The M6080BP30 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	6000		8000	MHz
Power Output CW	P _{SAT}	30	40		W
Output Power @ P _{1dB}	P _{1dB}		10		W
Input power for rated P _{SAT}	P _{IN}		0		dBm
Power Gain	G	44	48		dB
Small Gain Flatness	ΔG		±1.0	±2.0	dB
Input Return loss	S ₁₁			-10	dB
Noise Figure @ Full gain	NF			14	dB
Harmonics @ P _{out} = 20W	2 nd , 3 rd		-25		dBc
Third Order Intercept Point 2-Tones @ 34dBm/Tone, Δ = 1MHz	IP3		+50		dBm
Quiescent Current	I _{DQ}		TBD		Amp
Current Consumption @ Shutdown	I _{DS}		TBD		Amp
Current Consumption @ P _{OUT} 30W	I _{DD}		6.5	8	Amp
Spurious Signals	Spur		-70	-60	dBc
Operating Voltage	V _{DC}	27	28	29	Volt
Switching Time @ 1kHz TTL, P _{IN} = 0dBm	T _{ON/OFF}			5.0	uSec

ENVIRONMENTAL CHARACTERISTICS

Parameter	Symbol	Min	Typ	Max	Unit	Limits
Operating Case Temperature	T _C	-20		+70	°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/SHI		Airborne			

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LIMITS

Parameter	Value	Limits
Input RF drive level without damage	+5dBm	Max
Load VSWR @ Pout = 30W	∞ :1 @ all load phase & amplitude for duration of 1 minute 3:1 @ all load phase & amplitude continuous	-
Thermal Overload	85°C (Graceful degradation)	Typ

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	TBD(150 X 100X 25.4)	mm	Max
Weight	2.0	lb	Max
RF Connectors In/Out	Type-SMA, Female		
DC / Shutdown	D-Sub, 9Pin, Male		
Cooling	External Heatsink(not included)		

DC CONNECTOR- D-Sub, 9Pin, 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	Shutdown	Amplifier Disable : TTL Logic High(5V) (Internally Pulled-Low)
6,7	VDD	+28.0V _{DC} ± 1V _{DC}
8,9	GND	Ground