

M0930BP160 960 – 3000 MHz / 160 Watts

The M0930BP160 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	960		3000	MHz
Power Output CW	P _{SAT}	165	180		Watt
Output Power @ 1dB G.C.P	P _{1dB}	80			Watt
Small Signal Gain	G _{SS}	54	56		dB
Small Signal Gain Flatness	ΔG _{SS}			±2.0	dB
Input Power for Rated Pout	P _{IN}		0	4.0	dBm
Gain Flatness @ rated output power	ΔG _P		±1.0	±2.0	dB
Input Return Loss	S ₁₁			-10	dB
Noise Figure	NF			10	dB
Third Order Intercept Point	IP3		+60		dBm
Harmonics @ rated 1dB G.C.P	H		-20		dBc
Spurious Signals	Spur		-70	-60	dBc
Operating Voltage	V _{DD}	26	28	30	Volt
Current Consumption @ 160Watts	I _{DD}		20	25	Amp
Current Consumption @ Shutdown	I _{SD}			350	mA
Shutdown Time (Pin 5)	T _{ON/OFF}			10	μSec

ENVIRONMENTAL CHARACTERISTICS

Parameter	Symbol	Min	Typ	Max	Unit	Limits
Operating Case Temperature	T _c	-20		+75	°C	
Storage Temperature	T _{stg}	-40		+85	°C	
Relative humidity w/o condensation	RH			95	%	
Altitude	ALT		20,000	30,000	Feet	
Shock & Vibration	SH / VI		Airborne			

LIMITS

Parameter	Value	Limits
Input RF drive level without damage	+10dBm	Max
Load VSWR @ Pout = 160W	Infinite @ all load phase & amplitude	
Thermal Overload	Graceful Degradation (optional)	Typ

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	12 x 10 x 1.1	Inch	Max
Weight	6.0	lb.	Max
RF Connectors In/Out	SMA female		
DC Connectors	Hybrid D-Sub, 717TWB17W2P		
Cooling	External Heatsink		

DC CONNECTOR- D-Sub, 9Pin, Male

Pin #	Description	Specifications
A1	VDD	+28 ±2 V _{DC}
A2	GND	Ground
1	N/C	Reserved
2	Current Sensor	Analog voltage relative to I _D @ 10 mV/100mA
3	Temp Sensor	Analog voltage relative to Module's Temperature @ 10 mV/°C
4	N/C	Reserved
5	Fast Shutdown	Amplifier Enable: TTL "Low" (Logic 0) or Open Amplifier Disable: TTL "High" (Logic 1)
6	External Shutdown	Not Connected
7	Mute	Not Connected
8	N/C	Reserved
9	VSWR	Not Connected
10	VSWR_F	Not Connected
11-15	N/C	Reserved

Outline Drawing

