

M2040BP15 2000 – 4000 MHz / 15 Watts

The M2040BP15 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
- Standard Digital Control front panel manual gain adjust
- Suitable for CW, AM, and FM
- 50 ohm input/output impedance
- High reliability and ruggedness

ELECTRICAL SPECIFICATIONS @ +13 V_{DD}, 25°C, 50 Ω System

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	2000		4000	MHz
Power Output CW	P _{sat}	15			Watt
Output Power @ 1dB G.C.P	P _{1dB}	12			Watt
Power Gain @ 1dB G.C.P	G _{1dB}	42			dB
Input Power for Rated Pout	P _{in}		0		dBm
Small Signal Gain Flatness	ΔG			±1.5	dB
Input/Output VSWR @ 50Ω	S ₁₁ /S ₂₂			2:1	
Noise Figure	NF		7	10	dB
Third Order Intercept Point	IP3		+52		dBm
Harmonics @ P1dB G.C.P	H		-30	-20	dBc
Spurious Signals	Spur		-70	-60	dBc
Operating Voltage	V _{DD}	12	13	14	Volt
Current Consumption	I _{DD}		7	8	Amp

ENVIRONMENTAL CHARACTERISTICS

Parameter	Symbol	Min	Typ	Max	Unit	Limits
Operating Case Temperature	T _c	0		+50	°C	
Storage Temperature	T _{stg}	-40		+85	°C	
Relative humidity (non-condensing)	RH			95	%	
Altitude	ALT	10,000	30,000		Feet	
Shock & Vibration	SH / VI		Airborne			

LIMITS

Parameter	Value	Limits
Input RF drive level without damage	+10dBm	Max
Load VSWR @ Pout	Infinite @ all load phase and amplitude	Nom
Thermal Overload	Graceful degradation @ Shutdown 85°C	Max

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MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	11 x 5.0 x 1.0	Inch	Max
Weight	3.5	lb.	Max
RF Connectors In/Out	Input : SMA (Female) / Output : SMA (Female)		
DC / Shutdown	D-Sub, 15Pin		
Cooling	External Heatsink		

DC CONNECTOR- D-Sub, 9Pin, Male

Pin #	Description	Specifications
1	N.C	Reserved
2	Current Monitor	Analog voltage relative to ID @ 50mV/100mA
3	Temp Monitor	Analog voltage relative to Module's Temperature @ 10mV/°C
4	N.C	Reserved
5	Mute (Enable/ Disable)	Amplifier Enable: TTL "Low" (Logic 0) or Open Amplifier Disable: TTL "High" (Logic 1)
6,7	VDD	+13VDC to ±1VDC
8,9	GND	Ground

OUTLINE DRAWING

