

The MU205BP1000 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	20		520	MHz
Output Power CW	P _{SAT}	100			W
Output Power @ 1dB Gain Compression	P _{1dB}	50			W
Input power for rated P _{SAT}	P _{IN}			3	dBm
Power Gain @ 1dB Gain Compression	G _{1dB}	50			dB
Small Signal Gain Flatness	ΔG			±1.5	dB
Gain Adjustment Range (V _{VACTRL} : 0-5 V _{DC})	VVA	25			dB
Input Return loss	S ₁₁			-10	dB
Noise Figure @ Minimum attenuation	NF			10	dB
Harmonics @ P _{OUT} = 100W	2 nd / 3 rd			-29	dBc
	3 rd			(20MHz) -10	
				(250MHz) -10	
				(520MHz) -25	
4 th			-35		
Third Order Intercept Point 2-Tone @ 37 dBm/Tone, 100kHz Spacing	IP3	+51			dBm
Spurious Signals	Spur			-68	dBc
Operating Voltage	V _{DC}	26	28	30	Volt
Current Consumption @ P _{OUT} = 100W	I _{DD}			8.5	Amp
Switching Speed @ 1kHz TTL, 50% Duty Cycle	T _{ON} / T _{OFF}		1.0	3.0	μs

ENVIRONMENTAL CHARACTERISTICS

Parameter	Symbol	Min	Typ	Max	Unit	Limits
Operating Case Temperature	T _c	-40		+85	°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			

PROTECTIONS

Parameter	Value	Limits
Input Overdrive	+10dBm	Max
Load VSWR @ Rated P _{1dB} = 50 W	∞ @ all load phase & amplitude for duration of 1 minute 3:1 load @ all phase and amplitude continuous	-

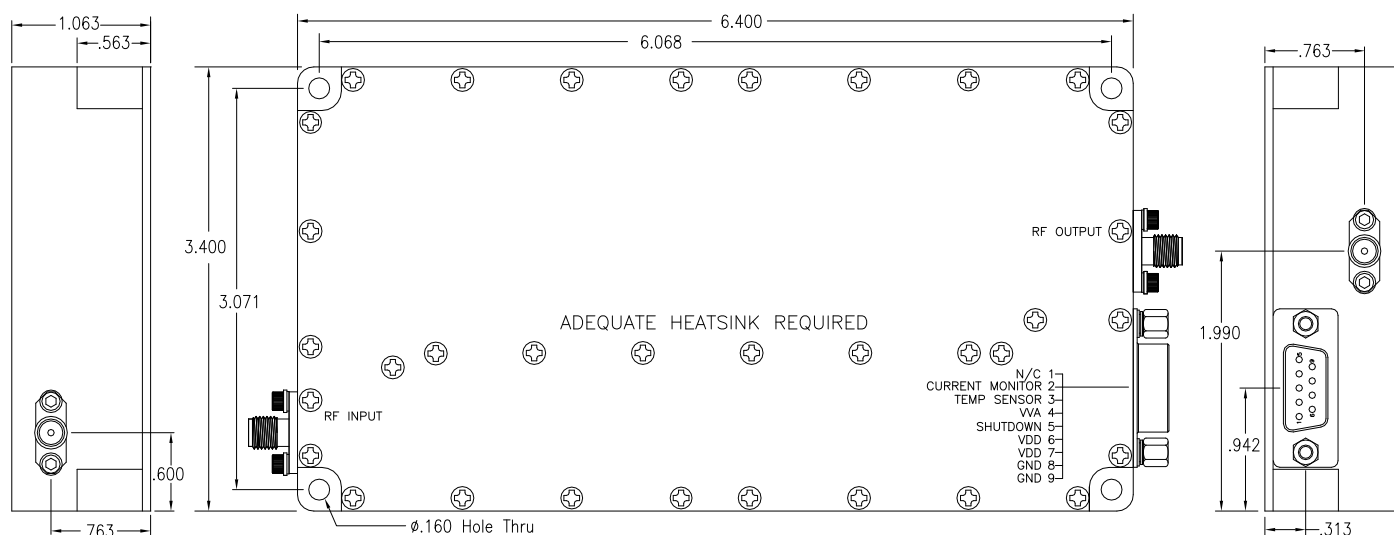
MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	6.4 x 3.4 x 1.1	Inch	Max
Weight	1.0	lb.	Max
RF Connectors Input/Output	Type-SMA, Female		
DC Interface Connectors	D-Sub, 9-Pin, Male		
Cooling	External Heatsink (Not Supplied)		

DC CONNECTOR- D-Sub, 9Pin, Male

Pin #	Description	Specifications
1	N/C	No Connection
2	Current Monitor	Analog voltage relative to IDD @ 50mV/100 mA
3	Temp Sense	Analog voltage relative to Module's Temperature @ 10mV/ °C
4	VVA	Continuous analog control voltage range: 0-5VDC Maximum Gain = 0VDC, Minimum Gain = 5VDC
5	Shutdown	Amplifier Disable: TTL Logic High (5V) (Internally Pulled-Low)
6, 7	VDD	+28.0VDC ±2.0V
8, 9	GND	Ground

Outline Drawing



Features:

- Built in gain adjust VVA
- Fast switching - Mute function
- Reverse polarity protection
- Temperature protection
- Temperature indication
- Current limit protection
- Current consumption indicator