

MU210BP80 20 – 1000 MHz / 80 Watts

The MU210BP80 is suitable for ultra broadband or band specific high power linear applications. This amplifier utilizes silicon LDMOS power devices that provide high gain, wide dynamic range, low distortion and good linearity. 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 all modulation schemes
- 50 ohm input and output impedance
- Highly rugged and reliable

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

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	20		1000	MHz
Power Output (CW)	P _{SAT}	80			W
Output Power @ P _{1dB}	P _{1dB}	40	50		W
Small Signal Gain	G _{1dB}	49	52	55	dB
Input power for rated P _{SAT}	P _{in}		0		dBm
Small Signal Gain Flatness	ΔG			±1.5	dB
Gain Adjustment Range	VVA	25	30		dB
Input Return loss	S ₁₁			-10	dB
Noise Figure @ Max Gain	NF			10	dB
Harmonics @ rated P _{1dB}	2 nd / 3 rd		-40 / -20		dBc
Third Order Intercept Point 2-Tones @ 43 dBm/Tone, Δ = 0.1 – 30MHz	IP3		+53		dBm
Current Consumption @80W	I _{DD}			9.5	Amp
Spurious Signals	Spur			-60	dBc
Operating Voltage	VDC	26	28	30	Volt
Supply Current @ 80 Watts RF Output	I _{DD}			9.5	Amp
Quiescent Current	I _{DQ}		6.2		Amp
Switching Speed (10% to 90%)	T _{sw}		2	5	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	10,000		40,000	Feet	
Shock / Vibration (MIL-STD-810F Method 516.5)	SH / VI		Airborne			

PROTECTIONS

Parameter	Value	Limits
Input Overdrive	+10dBm	Max
Load VSWR @ P _{out} = 80 W	∞ @ any angle & amplitude for duration of 1 minute 3:1 @ any angle & amplitude continuous	Nom

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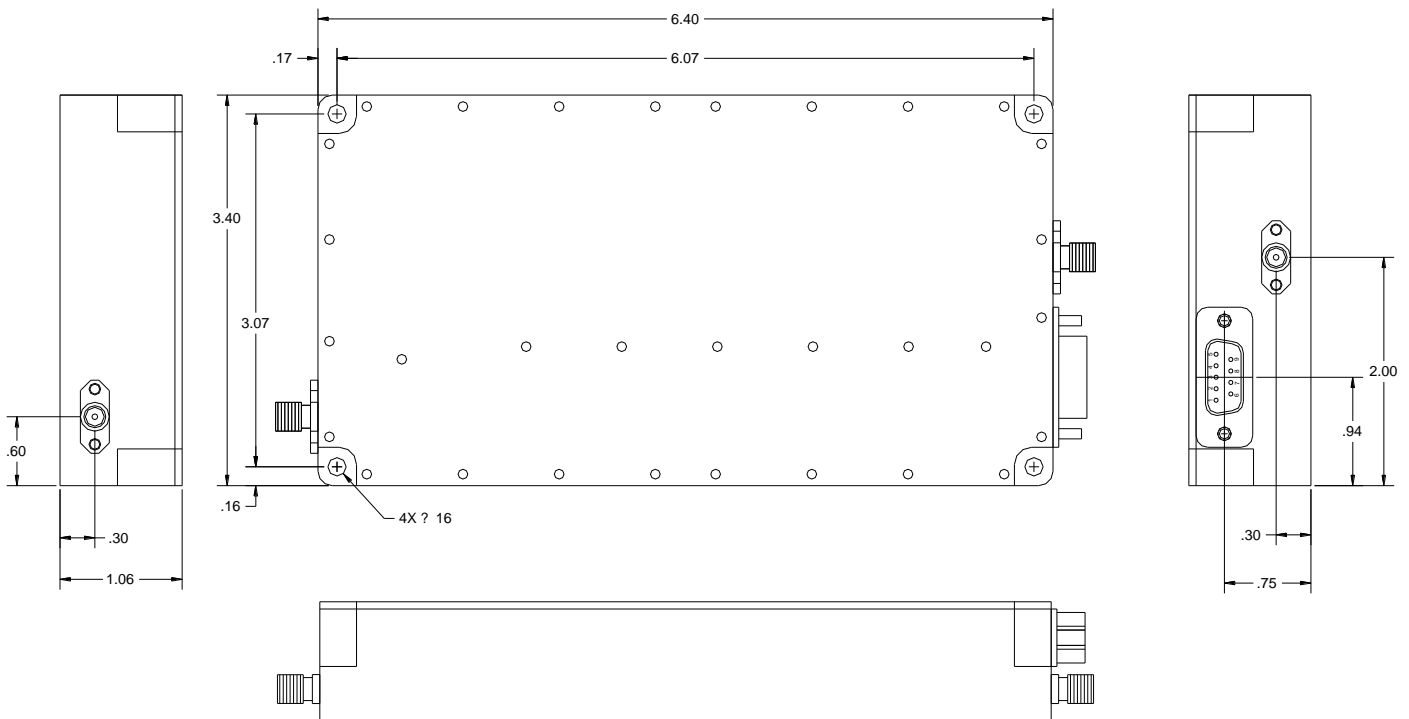
MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	6.4 X 3.4 X 1.1	Inch	Max
Weight	1.0	lb.	Max
RF Connectors In/Out	SMA female		
DC Connectors	D-Sub, 9-Pin, Male		
Cooling	External Heatsink		

DC CONNECTOR- D-Sub, 9Pin, Male

Pin #	Description	Specifications
1	Reserved	N/C
2	Current Consumption Monitor	Analog voltage relative to I _D @ 50 mV/100 mA
3	Temperature Monitor	Analog voltage relative to module's temperature @ 10 mV/°C
4	VVA	Continuous Analog 0-5 VDC levels Minimum Gain: 5 VDC Maximum Gain: 0 VDC
5	Shutdown	Amplifier Enable: TTL "Low" (Logic 0) or Open Amplifier Disable: TTL "High" (Logic 1)
6,7	VDD	+28 VDC ± 2 VDC
8,9	GND	Ground

Outline Drawing



Features:

- Fast-switching mute function
- Reverse polarity protection
- Over-temperature protection
- Temperature indication
- Graceful degradation
- Current limit protection
- Current consumption indicator