

Solid State Matched Band High Power Amplifier

5001 - MBM232579
2.3 – 2.5 GHz / 5 Watts

The MBM232579 (SKU# 5001) is suitable for high power linear applications in the WLL frequency range. This amplifier utilizes linear GaAsFET power devices that provide excellent linearity, high gain, and wide dynamic range. Exceptional performance, long term reliability, and high efficiency are achieved by employing advanced broadband matching networks and combining techniques, built-in sequence regulators, EMI/RFI filters, machined housing, and qualified components. Empower RF's ISO9001 Quality Assurance Program assures consistent performance and the highest reliability.



- Solid-state Class A linear design
- Instantaneous broadband
- Small and lightweight
- Suitable for all modulation types
- 50 Ohm Input/Output impedance
- High reliability and ruggedness
- Built in output detector.

ELECTRICAL SPECIFICATIONS @ T=25°C, VDD=+12VDC; 50Ω System

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	2.3		2.5	GHz
Power Output CW	P _{sat}		5		Watt
Power Output @ 1dB G.C.P	P _{1dB}	4			Watt
Power Output, Meeting ETSI Mask (16-QAM)		29	33		dBm
Third Order Intercept Point 2 – Tones, Pout=0.5W Avg., 100KHz spacing	IP3		+49		dBm
Small Signal Gain	SSG	18	20	23	dB
Small Signal Gain Flatness @ any 7MHz	ΔG			±0.5	dB
Gain Changes with Temperature				±1.0	dB
Return Loss Input/Output	S11/S22	12/10	14	-	dB
Harmonics @ 1dB G.C.P	H			-30	dBc
Noise Figure	NF		7	10	dB
RF Input Overdrive	OD			+23	dBm
Load VSWR @ P1dB	Ψ			Infinite	-
Spurious Signals	Spur		-70	-60	dBc
Operating Voltage	VDC	11.0	12	13	Volt
Supply Current	IDD			1.5	Amp

PROTECTIONS

Parameter	Symbol	Value	Unit
RF Input Overdrive	P _{OD}	+3- dBm	Max
Load VSWR @ rated P _{1dB}	Ψ	∞ @ all load phase & amplitude for duration Of 1 minute 3:1 @ all load phase & amplitude continuous	Nom
Thermal Overload	T _{OL}		Max

ENVIRONMENTAL CHARACTERISTICS (Design to Meet)

Parameter	Symbol	Min	Typ	Max	Unit
Operating Case Temperature	T _c	-35		+70	°C
Storage Temperature	T _{stg}	-40		+85	°C
Relative humidity w/o condensation	RH	95			%
Altitude	ALT	13,000	30,000		Feet
Shock / Vibration	SH / VI		Airborne		

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MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	3.9 x 3.0 x 0.8	Inch	Max
Weight	0.5	lb.	Max
RF Connectors In/Out	SMA female		
DC Connectors	DB9		
Power Monitor 0 to +5VDC, 1kohm load	DB9		
Cooling	External Heatsink		

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OUTLINE DRAWING

