

PRELIMINARY DATA

The HD20327 is suitable for high power broadband or band specific VHF & UHF linear applications. This amplifier utilizes silicon MOSFET power devices that provide high gain, wide dynamic range, low distortions 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.

- 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

ELECTRICAL SPECIFICATIONS @ T=25°C, VDD=+28VDC; 50 System

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	100		520	MHz
Power Output CW	P _{sat}	5			Watts
Output Power @ 1dB G.C.P	P _{1dB}	4			Watts
Power Gain @ 1dB G.C.P	G _{1dB}	36		38	dB
Input Power for Rated Pout	P _{in}		0		dBm
Small Signal Gain Flatness	G		TBD	+/-0.5	dB
Input/Output VSWR	S11/S22		-14/-10	-10/-9.8	dB
Noise Figure	NF			3.5	dB
Isolation output/Input	S12	TBD	50		dB
Third Order Intercept Point	IP3	+44	+46		dBm
Second Order Intercept Point	IP2	+70			dBm
Harmonics @ P1dB G.C.P.	H		-20		dBc
Spurious Signals	Spur		-70	-60	dBc
Operating Voltage	VDD	24	28	32	VDC
Supply Current	IDD		1.0		Amp

ENVIRONMENTAL CHARACTERISTICS

Parameter	Symbol	Min	Typ	Max	Unit
Operating Case Temperature	Tc	-35		+71	°C
Storage Temperature	Tstg	-40		+85	°C
Relative humidity w/o condensation	RH	95			%
Altitude	ALT	25,000	30,000		Feet
Shock - Designed to meet	SH	Operating Per MIL-STD-810C, Method 516.2 PROC. I FIG. 516-2-1 WITH PEAK VALUE OF 3G. TRANSIENT-PER MIL-STD-810C, METHOD 516. PROC II			
Vibration - Designed to meet	VI	Operating – 1-200Hz, 0.32G RMS Non Operating – MIL-STD-810C, PROCX FOG. 514-7 CURVE AW			

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	3.2 x 2.5 x 0.82	Inch	Max
Weight without HS	0.5	lb.	Max
RF Connectors In/Out	SMA female		
DC Connectors	Feed Thru		
Cooling	External Heatsink		

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Home of RFamplifiers.com

Solid State Broadband High Power Amplifier

HD20327

100 – 520 MHz / 5 Watt

PROTECTIONS

Input Overdrive	+6dBm	Max
Load VSWR	Infinite @ all load phase & amplitude	Nom
Thermal Overload	85°C shutdown	Max