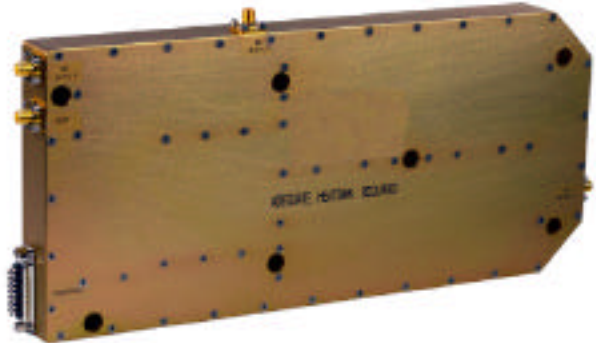


The HD20312 is suitable for broadband linear power applications in the L & S-Band frequency range. This amplifier utilizes GaAsFET power devices that provide high gain, wide dynamic range, low distortions, and excellent linearity. Exceptional performance, long term reliability and high efficiency are achieved by employing advanced broadband RF matching networks and combining techniques, EMI/RFI filters, machined housings and qualified components.



- Solid-state Class A design
- Instantaneous ultra broadband
- Small and lightweight
- Suitable for all modulations CW/FM/PM/AM/Pulse/Digital
- 50 Ohm Input/Output impedance
- High reliability and ruggedness

**ELECTRICAL SPECIFICATIONS @ T=25°C, VDD=+13VDC, 50 System**

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	1000		3000	MHz
Power Output CW	P <sub>sat</sub>	25	30		Watts
Output Power @ 1dB G.C.P	P <sub>1dB</sub>	20	25		Watts
Power Gain @ 1dB G.C.P	G <sub>1dB</sub>	44			dB
Input Power for Rated Pout	P <sub>in</sub>		0		dBm
Small Signal Gain Flatness	G			±1.5	dB
Input/Output VSWR @ 50	S11/S22			2:1	
Noise Figure	NF		7	10	dB
Third Order Intercept Point	IP3		+53		dBm
Harmonics @ P1dB G.C.P	H		-30	-20	dBc
Spurious Signals	Spur		-70	-60	dBc
Operating Voltage	VDD	12	13	15	VDC
Current Consumption	ID			12	Amp

**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	SMA female		
DC / Shutdown Connectors	D-Sub, 15 pin		
Cooling	External Heatsink		

**ENVIRONMENTAL CHARACTERISTICS**

Parameter	Symbol	Min	Typ	Max	Unit
Operating Temperature	T <sub>c</sub>	0		+50	°C
Non-operating Temperature	T <sub>stg</sub>	-40		+85	°C
Relative humidity w/o condensation	RH	95			%
Altitude	ALT	10,000	30,000		Feet
Shock & Vibration	SH / VI		Airborne		

**PROTECTIONS**

Input Overdrive	+10 dBm	Max
Load VSWR @ nominal output	Infinite @ all load phase and amplitude	Nom
Thermal Overload	85°C shutdown	Max

OUTLINE DRAWING

