

The HD20310 is suitable for high power ultra broadband and band specific linear applications. This amplifier utilizes Silicon push-pull 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 ultra broadband
- Small and lightweight
- Built in Voltage Variable Attenuator (VVA)
- 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	1		250	MHz
Power Output CW	P _{sat}	25	30		Watts
Output Power @ 1dB G.C.P	P _{1dB}	20			Watts
Power Gain @ 1dB G.C.P	G _{1dB}	44			dB
Input Power for Rated Pout	P _{in}		0		dBm
Small Signal Gain Flatness	G		±1.0	±1.5	dB
Gain Adjustment Range (analog 0-5V)	GA	25	30		dB
Input/Output VSWR	S11/S22			2:1	-
Noise Figure	NF		7	10	dB
Third Order Intercept Point	IP3		+53		dBm
Harmonics @ P1dB G.C.P.	H		-20		dBc
Spurious Signals	Spur		-70	-60	dBc
Operating Voltage	VDD	24	28	32	VDC
Current Consumption	IDD		3.0		Amp

ENVIRONMENTAL CHARACTERISTICS

Parameter	Symbol	Min	Typ	Max	Unit
Operating Case Temperature	T _c	0		+50	°C
Storage Temperature	T _{stg}	-40		+85	°C
Relative humidity w/o condensation	RH	95			%
Altitude	ALT	10,000	30,000		Feet
Shock & Vibration	SH / VI		Airborne		

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions (excluding heatsink)	6.4 x 3.4 x 1.1	Inch	Max
Weight without HS	1.0	lb.	Max
RF Connectors In/Out	SMA female		
DC Connectors	Feed Thru		
Cooling	External Heatsink		

PROTECTIONS

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