HD Communications Corp.

HD31834
SOLID STATE HIGH POWER AMPLIFIER

FEATURES

Class AB linear GaN hybrid design
Instantaneous ultra-wide bandwidth
Suitable for all single channel modulation standards
Suitable for S, X and Ku band applications
Built-in protection circuits
High efficiency, reliability, and ruggedness

ELECTRICAL SPECIFICATIONS

Parameter	Specification	Notes
Operating Frequency Range	6.0 - 18.0 GHz	
Power Output Psat	≥50 Watt Typ	CW
Nominal Input Power for Rated Pout	0 dBm	
Power Gain	47 dB Min	
Power Gain Flatness	8.0 dB p-p Max	At rated Pout
Input Return Loss	10 dB Min	
Harmonics 2^{nd} / 3^{rd}	-15 dBc / -25 dBc Max	At rated Pout
Spurious	-60 dBc Max	Non-harmonics
Noise Figure	10 dB Max	
Operating Voltage	32 VDC ±5% Nom	
Current Consumption	12 Amp Typ	At rated Pout
Standby Consumption	15 Watt Typ	
Max Input Power Protection	+3 dBm Max	<10 Sec without damage
Load VSWR Protection	5 : 1	<1 minute @ rated Pout

ENVIRONMENTAL CHARACTERISTICS

Parameter	Specification	Notes
Operating Case Temperature	-20 to +55°C	External heatsink required
Storage Temperature	-40 to +85°C	
Relative Humidity	5 to 95 %	Non-condensation
Shock / Vibration	MIL-STD-810F	

MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions	6.13” x 3.5” x 1.5”	Excluding connectors
Weight	3 lb.	
RF Connectors In/Out	SMA female / TNC female	
DC Power / Interface Connector	7-Pin Hybrid D-Sub	
Cooling	External Heatsink	Forced air required

D-SUB CONNECTOR PIN ASSIGNMENT

Pin	Function	Description
1	N/C	N/C
2	Composite Fault Indication	Fault = TTL “Hi”
3	Current Sensor	I_D@20mV/100mA Typ
4	Temp. Sensor	V_T@10mV/°C + 500mV Typ
5	Shutdown	Enable = TTL “Hi” or Open / Disable = TTL “Lo” or Short (<5 µS)
A1	VDD	32VDC
A2	GND	Ground

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