HD31943
SOLID STATE HIGH POWER AMPLIFIER

FEATURES

Class AB linear GaAsFET hybrid design
Instantaneous bandwidth
Suitable for all single channel modulation standards
Built-in protection circuits
High reliability and ruggedness



ELECTRICAL SPECIFICATIONS

Parameter	Specification	Notes
Operating Frequency Range	17.0 - 21.0 GHz	
Power Output Psat	2.5 Watt Typ	
Power Output @ P1dB	2.0 Watt Min	P1dB Variation - 1.3dBm Max
Power Gain	33 dB Min	
Power Gain Flatness	1.5 dB p-p Max	Constant input power
Input / Output Return Loss	10 dB Min	Relative to 50 Ohm
2-Tone Intermodulation (IMD)	-30 dBc Max (IP3 = +42 dBm)	27dBm/Tone, Δ = 1 MHz
Noise Figure	12 dB Max	
Harmonics	-20 dBc Max	At rated Pout
Spurious	-60 dBc Max	Non-harmonics
Operating Voltage	9 VDC Nom	
Current Consumption	4 Amp Max	At rated Pout
Input Power Protection	+3 dBm Max	<10 Sec without damage
Load VSWR Protection	5 : 1	<1 minute at rated Pout

ENVIRONMENTAL CHARACTERISTICS

Parameter	Specification	Notes
Operating Case Temperature	-20 to +65 °C	
Storage Temperature	-40 to +85 °C	
Relative Humidity	5 to 95 %	Non-condensation

MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions	80 x 80 x 20 mm	Excluding connectors
Weight	TBD	
RF Connectors In/Out	SMA K Type female	
DC Power / Interface Connector	9-Pin D-Sub	
Cooling	External Heatsink	Forced air required

D-SUB CONNECTOR PIN ASSIGNMENT

Pin	Function	Description
1	N/C	Reserved
2	N/C	Reserved
3	CURRENT SENSOR	I_D@20mV/100mA Typ
4	TEMP SENSOR	V_T@10mV/°C + 500mV Typ
5	SHUTDOWN	TTL
6,7	VDD	9VDC
8,9	GND	Ground

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