



## Solid State Broadband High Power Amplifier

HD30291

10 – 250 MHz / 25 Watts

- Instantaneous ultra broadband
- Small form factor and light weight
- Suitable for most modulation standards
- 50 ohm input/output impedance
- High reliability and ruggedness

### ELECTRICAL SPECIFICATIONS @ +28 VDC, 25°C, 50 Ω System

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	(10)		250	MHz
Operating Output Power	P <sub>OUT</sub>		25		Watt
Power Gain @ Rated P <sub>OUT</sub>	G <sub>P</sub>	44	45		dB
Input Power for Rated P <sub>OUT</sub>	P <sub>IN</sub>		0		dBm
Small Signal Gain Flatness	ΔG		±1.0	±1.5	dB
Input Return Loss	S <sub>11</sub>			-10	dB
Noise Figure	NF			10	dB
Third Order Intercept Point (33 dBm Per Tone, Δ = 100KHz)	IP3		+52		dBm
Harmonics @ Rated P <sub>1dB</sub>	H		-20		dBc
Spurious Signals	Spur		-70	-60	dBc
Operating Voltage	V <sub>DC</sub>	26	28	30	Volt
Current Consumption @ 25 Watts	I <sub>DD</sub>			3.5(TBD)	Amp

### MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	(TBD) 6.4 x 3.4 x 1.1	Inch	Max
Weight	(TBD)	lb.	Max
RF Connectors In/Out	SMA Female		
DC / Shutdown Connectors	Dsub, 9-Pins, Male		
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 (non-condensing)	RH			95	%

## Solid State Broadband High Power Amplifier

HD30291

10 – 250 MHz / 25 Watts

### PROTECTIONS

Input Overdrive	+5 dBm	Max
Load VSWR @ rated output power	$\infty$ @ all load phase & amplitude for duration of 1 minute 3:1 all load phase & amplitude continuous	-
Thermal Overload	85°C shutdown	Max

### INTERFACE CONNECTOR - D-Sub, 9 Pin(male)

Pin #	Description	Specifications
1	N/C	Reserved
2	Current Monitor	Analog voltage relative to I <sub>DD</sub> @ 100mA / 50mV
3	Temp Sense	Analog voltage relative to Module's Temperature @ 10mV/°C
4	VVA	VVA Control Voltage: Max. Gain = 0V <sub>DC</sub> , Min. Gain = 5.0V <sub>DC</sub>
5	Shutdown	Amplifier Enable: TTL "Low" (Logic 0) or Open Amplifier Disable: TTL "High" (Logic 1)
6	VDD	+28 V <sub>DC</sub> to ±2 V
7	VDD	+28 V <sub>DC</sub> to ±2 V
8	GND	Ground
9	GND	Ground

### OUTLINE DRAWING

