

AMP1129-1 SOLID STATE HIGH POWER AMPLIFIER

FEATURES

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



ELECTRICAL SPECIFICATIONS

Parameter	Specification	Notes
Operating Frequency Range	800 - 2500 MHz	
Power Output	150 Watt Min	CW
Power Output @ P1dB GCP	50 Watt Typ	
Power Gain	52 dB Min	
Power Gain Flatness	3.0 dB p-p Max	Constant input power
Input / Output Return Loss	10 dB Min	Relative to 50 Ohm
2-Tone Intermodulation (IMD)	-30 dBc Typ	42 dBm/Tone, $\Delta = 1\text{MHz}$
Harmonics 2 nd / 3 rd	-20 dBc Typ	At rated Pout
Spurious	-60 dBc Max	Non-harmonics
Operating Voltage	28 VDC Nom	
Current Consumption	20 Amp Typ / 23 Amp Max	At rated Pout
Max Input Power Protection	+8 dBm	<10 Sec without damage
Load VSWR Protection	5 : 1	<1 minute at rated Pout

ENVIRONMENTAL CHARACTERISTICS

Parameter	Specification	Notes
Operating Case Temperature	-20 to +75 °C	
Storage Temperature	-40 to +85 °C	
Relative Humidity	5 to 95 %	Non-condensing

MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions	350 x 125 x 30 mm	Excluding connectors
Weight	2 Kg.	
RF Connectors In/Out	SMA female / Type-N Female	
DC Power / Interface Connector	2 x 9W4 - 9 Pin Hybrid D-Sub	
Cooling	External Heatsink	Forced air required

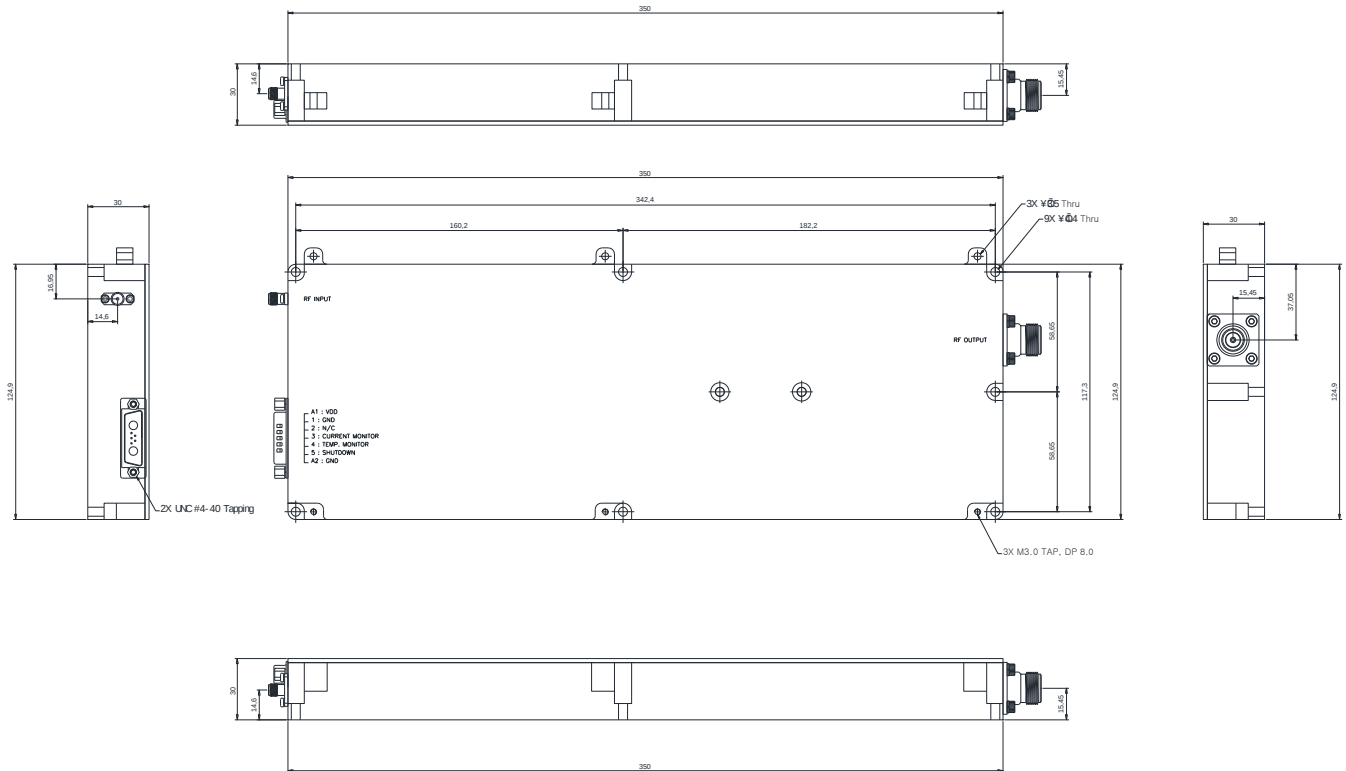
D-SUB CONNECTOR PIN ASSIGNMENT

Pin	Function	Description
1	FWD	N/C
2	VVA	N/C
3	CURRENT SENSOR	$I_D @ 10\text{mV}/100\text{mA Typ}$
4	TEMP SENSOR	$V_T @ 10\text{mV}/^\circ\text{C} + 500\text{mV Typ}$
5	SHUTDOWN	TTL
A1, A2	VDD	28VDC
A3, A4	GND	Ground



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OUTLINE DRAWING



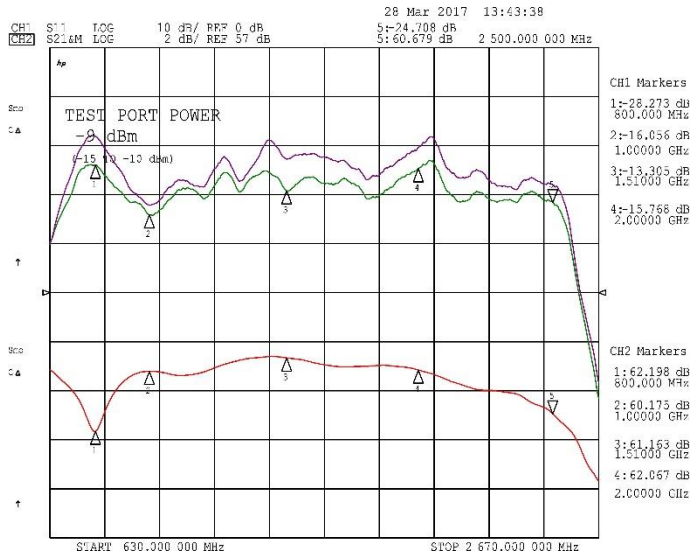


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TYPICAL DATA PLOTS

Plots 1 - Small Signal and P_{1dB} Gain

Purple Curve: Small Signal Gain @ Pin = -20dBm
Green Curve: P_{1dB} @ Pin = -9dBm
Reference: 57dB, 2dB/Div.
Orange Curve: Input Return Loss
Reference: 0dB, 10dB/Div.



Plot 2 - Small Signal and Psat

Purple Curve: Small Signal Gain @ Pin = -20dBm
Green Curve: Psat @ Pin = 0dBm
Reference: 57dB, 2dB/Div.
Orange Curve: Input Return Loss
Reference: 0dB, 10dB/Div.

