

TECHNICAL DATESHEET

AVNR1650H52

The AVNR1650H52 is a 150W high gain Solid State Linear High Power Amplifier. This amplifier module utilizes the latest high power RF GaN transistors and also features built in control and monitoring, with protection functions to ensure high availability. This amplifier is suitable for Linear System and high power combination.

Features

- | | |
|--|---------------------------------------|
| 1.4GHz-1.9GHz frequency range | Solid-state Class AB Broadband design |
| Psat 52dBm typ | Instantaneous ultra broadband |
| Power gain 51dB | Suitable for AM, and FM |
| 50 ohm input/output impedance | Small and lightweight |
| Built-in control, monitoring and protection circuits | High reliability and ruggedness |

ELECTRICAL SPECIFICATIONS(T=25°C,DC Voltage= 28V)

Description	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	1.4		1.9	GHz
Output Power CW P1dB	P1	125	150		W
Power Gain @ Psat	Gp	51	52		dB
Power Gain Flatness @ Rated PSAT	ΔGp		± 1		dB
Input Power for Rated PSAT	PIN		0		dBm
Harmonics @ Pout =60W	2 nd		-20		dBc
Noise Figure(If Needed, Please Contact)	NF		N/A		dB
Spurious Signals@ Pout =60W	Spur		-60		dBc
Input Return Loss	S11			-10	dB
Third Order Intercept Point					
2-Tone @ 40dBm/Tone, 100kHz Spacing(If Needed, Please Contact)	IP3		N/A		dBc
Operating Voltage	VDC	26	28	30	V
Current Consumption @ Pout= 125W	IDD		15		A
Switching Time @ 1kHz TTL, PIN = -2dBm	TON/TOFF		2	5	μs

MECHANICAL SPECIFICATIONS

- | | |
|--|----------------|
| Cooling External Heat Sink Needed (Not Supplied) | |
| Length*Width*Height[mm] | 250*200*25 |
| Weight[Kg] | 2.8 |
| RF Connector Input | SMA, Female |
| RF Connector Output | Type-N, Female |



ENVIRONMENTAL SPECIFICATIONS (Design to Meet)

Module Operation Temperature	-40	65	°C
Storage Temperature Range	-45	70	°C
Relative-Humidity	N/A		
Altitude	N/A		
Vibration/Shock	N/A		

LIMITS

Input RF drive level without damage	Pin ≤ 10	dBm
Load VSWR @ POUT =60W	VSWR ≤ 5:1 (Test Under Mismatch Terminator)	N/A
Thermal Degradation	90	°C

DC INTERFACE CONNECTOR – [Hybrid D-sub,7 Pin, Male]

Pin #	Description	Specifications
A1	GND	Ground along with 28Vdc
A2	VDD	28Vdc
1	CURRENT SENSE	Analog voltage relative to I _{DD} @ 100mV per Ampere
2	TEMP SENSE	Analog voltage relative to Module's Temperature @ 10 mV/°C
3	ENABLE	Amplifier Enable: TTL Logic High (3.3V) (Internally Pulled-Low)
4	GND	Ground
5	N/C	No Connection

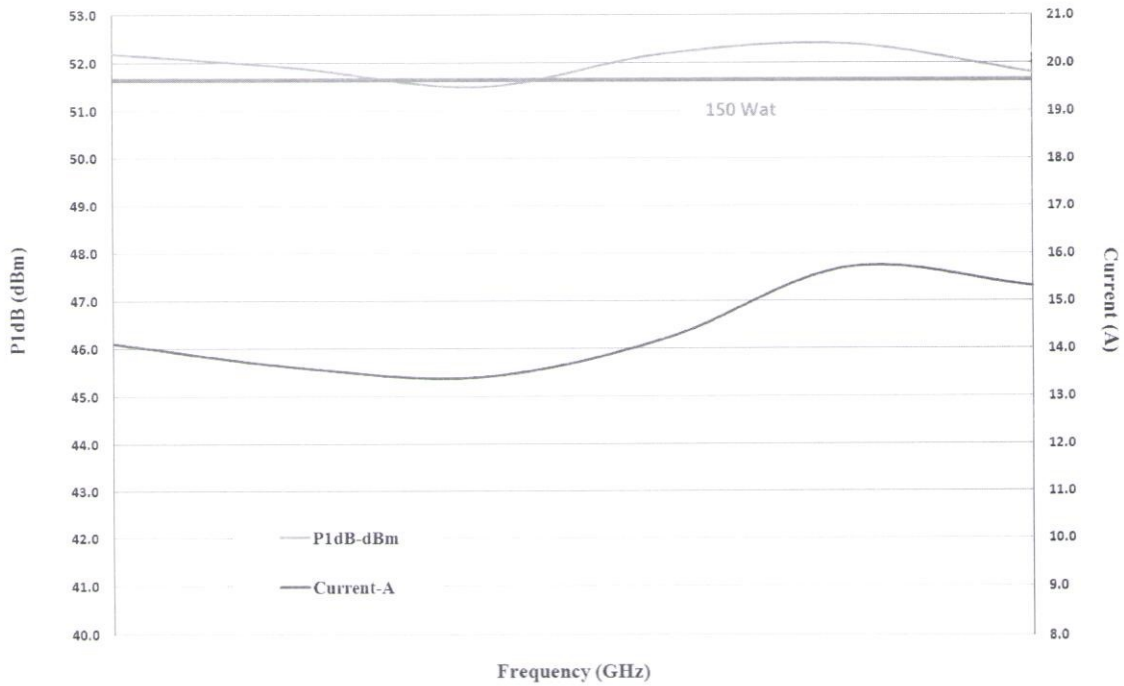
PLOTTED AND OTHER DATA

Notes:

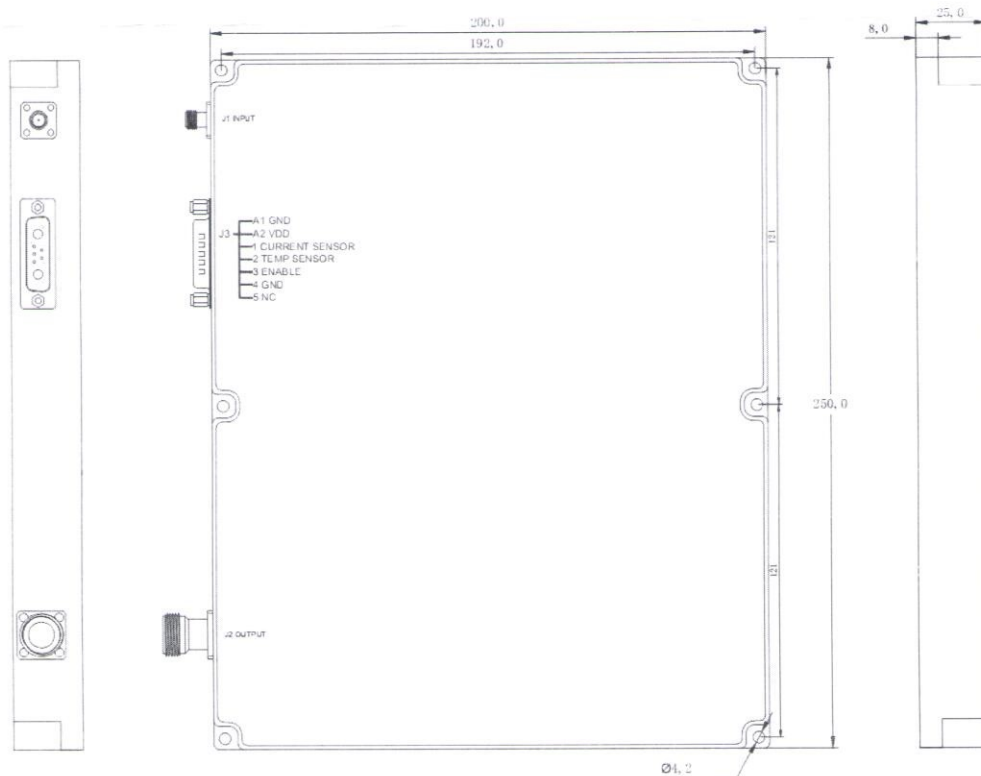
1. Values at +25°C, sea level.
2. ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.
3. Heat Sink required for Proper Operation, Unit is cooled by conduction to heat sink.



TYPICAL PERFORMANCE DATA



OUTLINE DRAWING(mm)



Datasheet: REVA.2/05.06.2018

Unique Amplifier With Innovation