TECHNICAL DATASHEET **AVNR875H52**

The AVNR875H52 is a 150W high gain Solid State Narrowband High Power Amplifier. This amplifier module utilizes the latest high power RF LDMOS transistors and also features built in control and monitoring, with protection functions to ensure high availability. This amplifier is suitable for jamming and Modulated Signals testing.

Features

- 0.79GHz-0.96GHz frequency range
- Psat 52 dBm type
- Power gain 52dB
- 50 ohm input/output impedance
- Built-in control, monitoring and protection circuits
- Solid-state Class AB design
- Instantaneous ultra-broadband
- Suitable for CW, and Pulse
- Small and lightweight
- High reliability and ruggedness

ELECTRICAL SPECIFICATIONS(T=25℃,DC Voltage=28V, Load VSWR ≤1.2)

Description	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	0.79		0.96	GHz
Output Power CW@ Pin=0 dBm	Psat	150	180		W
Power Gain @ Pin=0 dBm	Gp		52		dB
Power Gain Flatness @ Pin=0 dBm	ΔGp		±0.5	±1	dB
Input Power for Rated Power	P_{IN}	-1	0	1	dBm
Harmonics @ Pin=0 dBm	2^{nd}		-35		dBc
Noise Figure	NF		N/A		dB
Spurious Signals@ Pin=0 dBm	Spur			-60	dBc
Input Return Loss	S11		-15	-10	dB
Third Order Intercept Point 2-Tone @ 40dBm/Tone, 100kHz Spacing	IP3		N/A		dBc
Operating Voltage	V_{DC}	26	28	30	V
Current Consumption @ Pout= 150W	I_{DD}		12	15	A
Switching Time @ 1kHz TTL, P_{IN} = 0 dBm	T_{ON}/T_{OFF}		2	5	μs

MECHANICAL SPECIFICATIONS

Cooling External Heat Sink Needed (Not Supplied)	
Length*Width*Height[mm]	180*140*27
Weight[Kg]	1.4
RF Connector Input	SMA-K, Female
RF Connector Output	N-K, Female

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ENVIRONMENTAL SPECIFICATIONS (Design to Meet)

Module Operation Temperature	-20	65	℃
Storage Temperature Range	-25	70	℃
Relative-Humidity	N/A		
Altitude	N/A		
Vibration/Shock	N/A		

LIMITS

Input RF drive level without damage	Pin≤10	dBm
Load VSWR @ POUT =100W	VSWR≤5:1[Design To Meet]	N/A
Load VSWR @ POUT =150W	VSWR≤3:1[Design To Meet]	N/A
Thermal Degradation	85°C Graceful Degradation	℃

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

Pin #	Description	Specifications
A1	GND	Ground
A2	VDD	28VDC
1	CURRENT SENSE	Analog voltage relative to IDD @ 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℃， 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.

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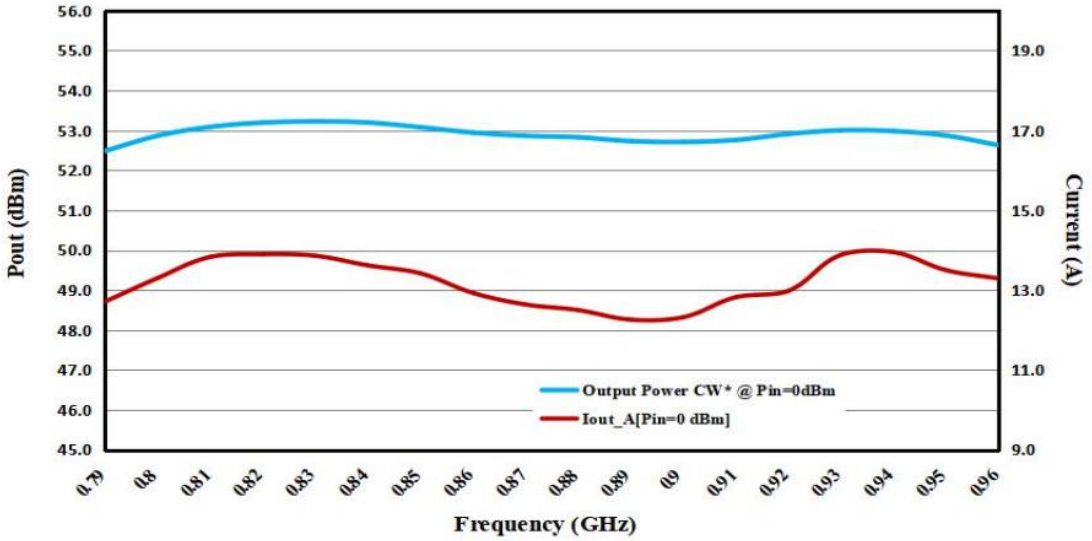
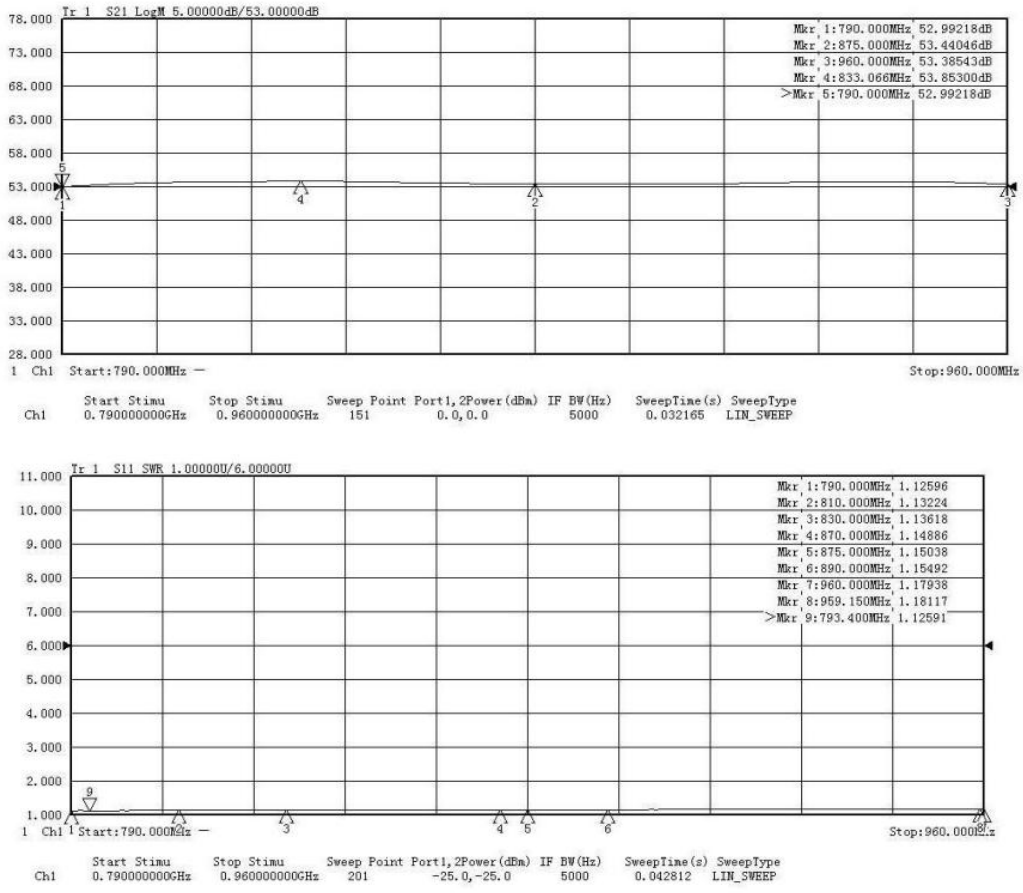
TYPICAL PERFORMANCE DATA [Load VSWR ≤1.2], (Normal temp. +25±3℃)

Graph 1: Psat, Isat (Votage=28V, Load VSWR=1.2, 25℃)



Graph 2: Power Gain & S11 (Votage=28V, Load VSWR=1.2, 25℃)



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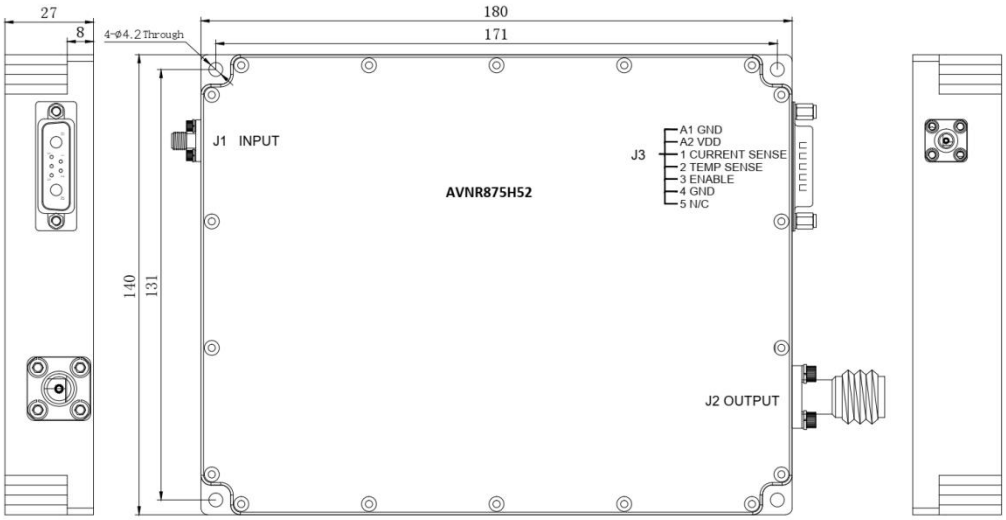
OUTLINE DRAWING [mm]



Product view

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