

TECHNICAL DATASHEET

AVBR00205H53

The AVBR00205H53 is a 200W high gain Solid State Broadband 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 broadband jamming and EMC testing.

Features

20MHz-520MHz frequency range	Solid-state Class AB Broadband design
Psat 53dBm type	Instantaneous ultra-broadband
Power gain 53dB	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	20		520	MHz
Output Power CW Psat	Psat	150	200		W
Power Gain @ Psat	Gp		53		dB
Power Gain Flatness @ Rated Psat	ΔGp		± 1.5	± 2	dB
Input Power for Rated Psat	P _{IN}		0		dBm
Harmonics @ Pout = 100W	2 nd /3 rd		15/12		dBc
Noise Figure*	NF		N/A		dB
Spurious Signals@ Pin=0 dBm	Spur		-70	-60	dBc
Input Return Loss	S11		-20	-15	dB
Third Order Intercept Point**					
2-Tone @ 40dBm/Tone, 100kHz Spacing	IP3		N/A		dBc
Operating Voltage	VDC	26	28	30	V
Current Consumption @ Pout=150~250W	IDD		18	23	A
Switching Time @ 1kHz TTL, PIN = 0 dBm	TON/TOFF		3	5	μs

Note*: Noise Figure data, please contact sales engineer.

Note**: OIP3 data, please contact sales engineer.

MECHANICAL SPECIFICATIONS

Cooling External Heat Sink Needed (Not Supplied)	
Length* Width*Height[mm]	180*140*26
Weight[Kg]	1.3
RF Connector Input	SMA, Female
RF Connector Output	Type-N,, Female

Datasheet: REV A.2/ 04.21.2021

Unique Amplifier With Innovation

ENVIRONMENTAL SPECIFICATIONS (Design to Meet)

Module Operation Temperature	-20	65	°C
Storage Temperature Range	-25	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 =150W	VSWR ≤ 5:1 [Design To Meet]	N/A
Load VSWR @ POUT =200W	VSWR ≤ 3:1 [Design To Meet]	N/A
Thermal Degradation	85°C Graceful Degradation	°C

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)
4	GND	Ground
5	N/C	No Connection

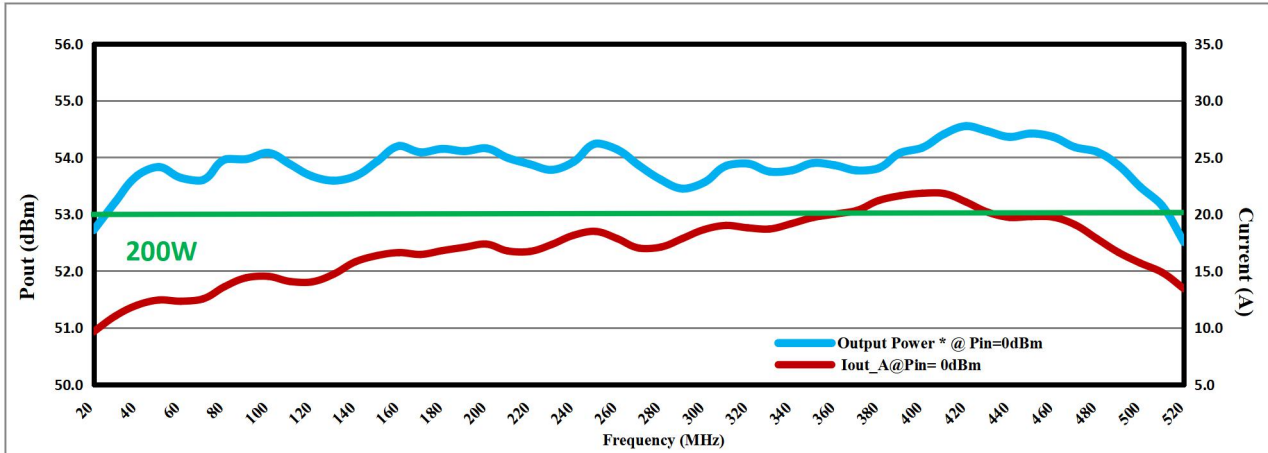
PLOTTED AND OTHER DATA

Notes:

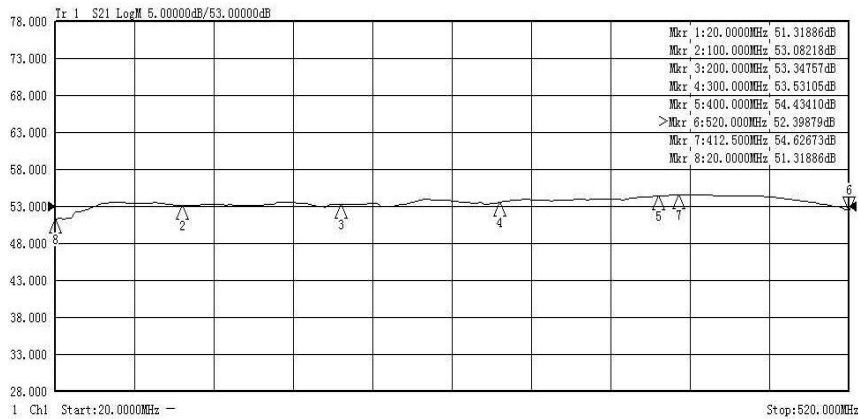
1. Values at +28°C, sea level.
2. ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.
3. Heat Sink required for Proper Operation, Unit is cooled by conduction to heat sink.

TYPICAL PERFORMANCE DATA [VSWR<1.2:1,Pin=0dBm]

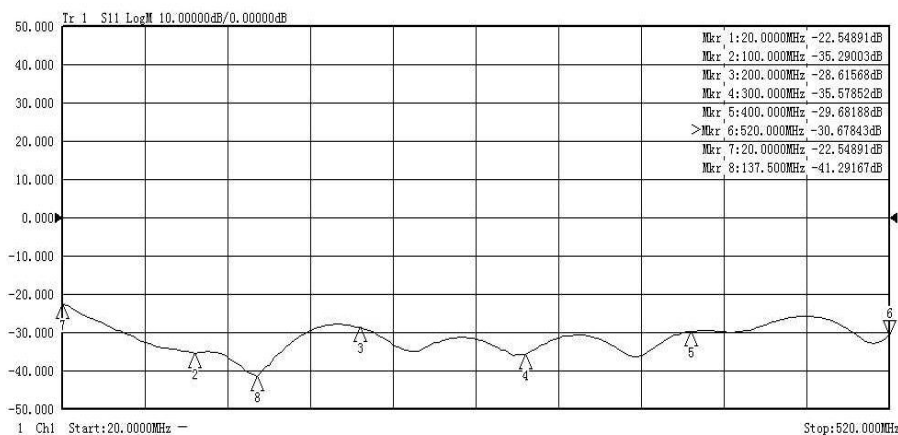
Output Power,Iout_A(DC Voltage= 28V,Pin= 0dBm, Load VSWR ≤ 1.2, T= +25°C)



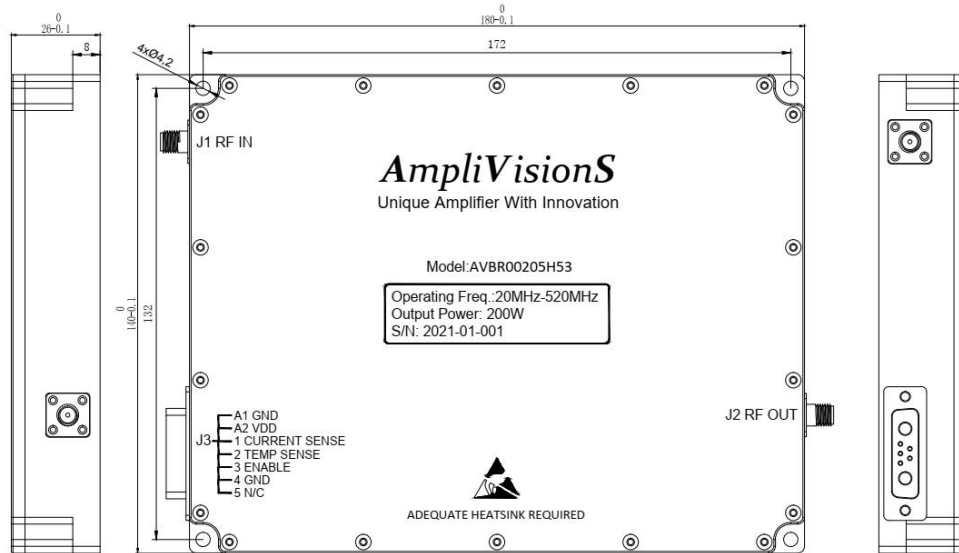
Power Gain (DC Voltage= 28V,Pin= 0dBm, Load VSWR ≤ 1.2, T= +25°C)



Input Return Loss (DC Voltage= 28V,Pin=-25dBm, Load VSWR ≤ 1.2, T= +25°C)



OUTLINE DRAWING(mm)



Product View

