

TECHNICAL DATASHEET

AVBR1060U50

The AVBR1060U50 is a 100W high gain Solid State Broadband High Power Amplifier System. This amplifier 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 high power CW or Pulse Radar system applications, or EMC testing situation.

Features

- 1GHz-6GHz frequency range
- Psat 50dBm Min
- Power gain 51 dB
- 50 ohm input/output impedance
- Built-in control, monitoring and protection circuits
- Solid-state Class AB Broadband design
- Instantaneous ultra-broadband
- Suitable for pulse or CW applications
- Flat Power Gain
- High reliability and ruggedness

ELECTRICAL SPECIFICATIONS (T=25°C, VAC =220V, CW, Load VSWR<1.2)

Description	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	1		6	GHz
Output Power-CW	Psat	50	50.5		dBm
Output P1dB* CW	P1dB	47	47.5		dBm
Power Gain @ Rated PSAT	Gp		51		dB
Power Gain Flatness @ Rated PSAT	ΔGp		± 1.5	± 2	dB
Input Power for Rated PSAT	PIN		0		dBm
RF Input Range	PIN_R	-50		10	dBm
Harmonics @ Pout =100W	2 nd /3 rd		-15		dBc
Spurious Signals@ Pout =100W	Spur		-60		dBc
Input Return Loss	S11			-10	dB
Supply Voltage (47~61Hz) /Single-Phase	VAC	180	220/50Hz	260	V
Power Consumption @ Pout =100~120W-CW	PPC		1300	1500	W

MECHANICAL SPECIFICATIONS

- Cooling External Heat-Sink Needed (Not Supplied)
- Length*Width*Height[mm] 483 x 221 x 560 (5U)
- Weight[Kg] 35
- RF Connector Input Type N, Female
- RF Connector Output Type N, Female
- DC Connector RS-232 Dsub-9, Male
- AC Connector 3 WIRE A/C Power Entry

Datasheet: REVA.2/06.04.2020

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ENVIRONMENTAL SPECIFICATIONS (Design to Meet)

Module Operation Temperature	-10	45	°C
Storage Temperature Range	-20	55	°C
Relative-Humidity		95	%
Altitude*	N/A		
Vibration/Shock*	N/A		

***note: With better design Considerations, if the experiment is needed, Please contact our sales for further information**

LIMITS

Input RF drive level without damage	Pin \leq 10	dBm
Load VSWR @ POUT =100W	VSWR \leq 3:1	N/A
Thermal Degradation	55	°C

DC INTERFACE CONNECTOR –RS-232 [D-Sub 9-Pin, Male]

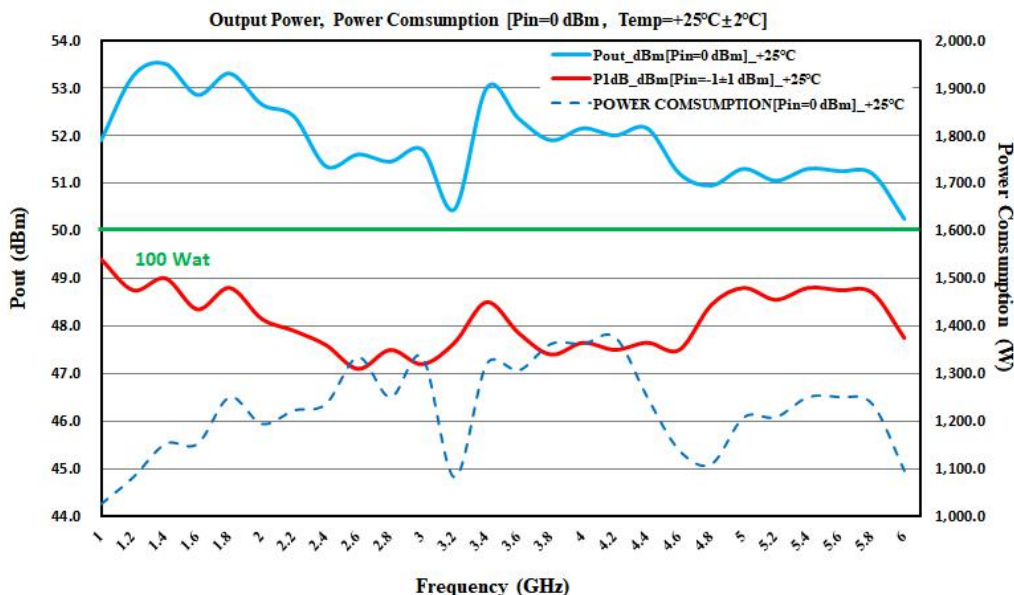
Pin #	Description	Specifications
1	GND	Ground
2	ENABLE	Amplifier Enable: TTL Logic High (3.3V) (Internally Pulled-Low)
3	Alarm	Abnormal: Logic High (3.3V) (Internally Pulled-Low)
4~7	N/C	No electrical connected, Reserved

PLOTTED AND OTHER DATA

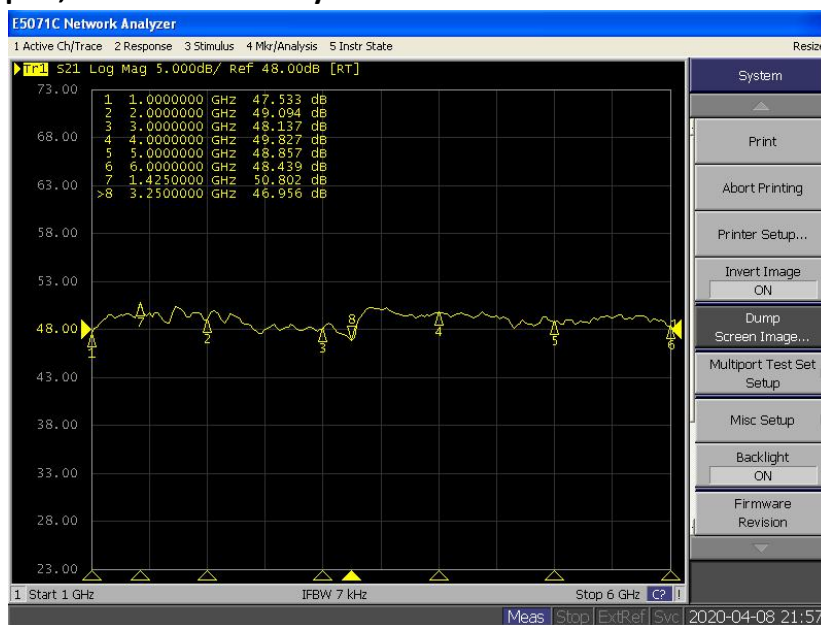
Notes:

1. Values at +25°C, sea level.
2. ESD Sensitive Material, Handle only in approved ESD Workstation.

TYPICAL PERFORMANCE DATA [Ambient Temp:25°C, Load VSWR<1.2, Pin=0dBm]

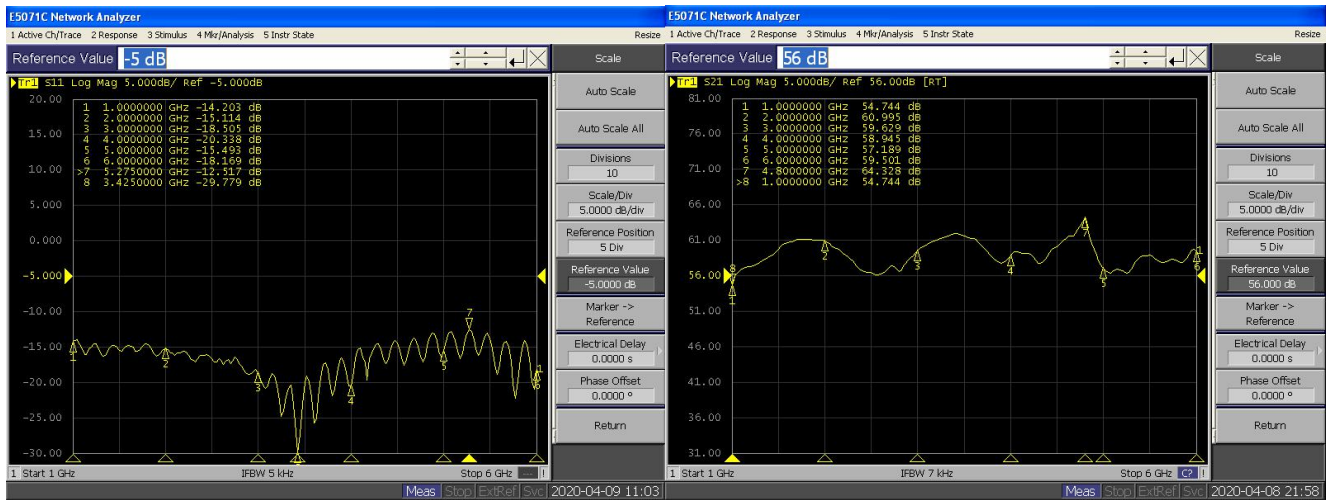


Graph 1: Power Gain @ Pin=0 dBm (Ambient temp. +25±3°C, AC Voltage= 220V, Load VSWR ≤ 1.2), Similar Products Test plot, For Reference Only.

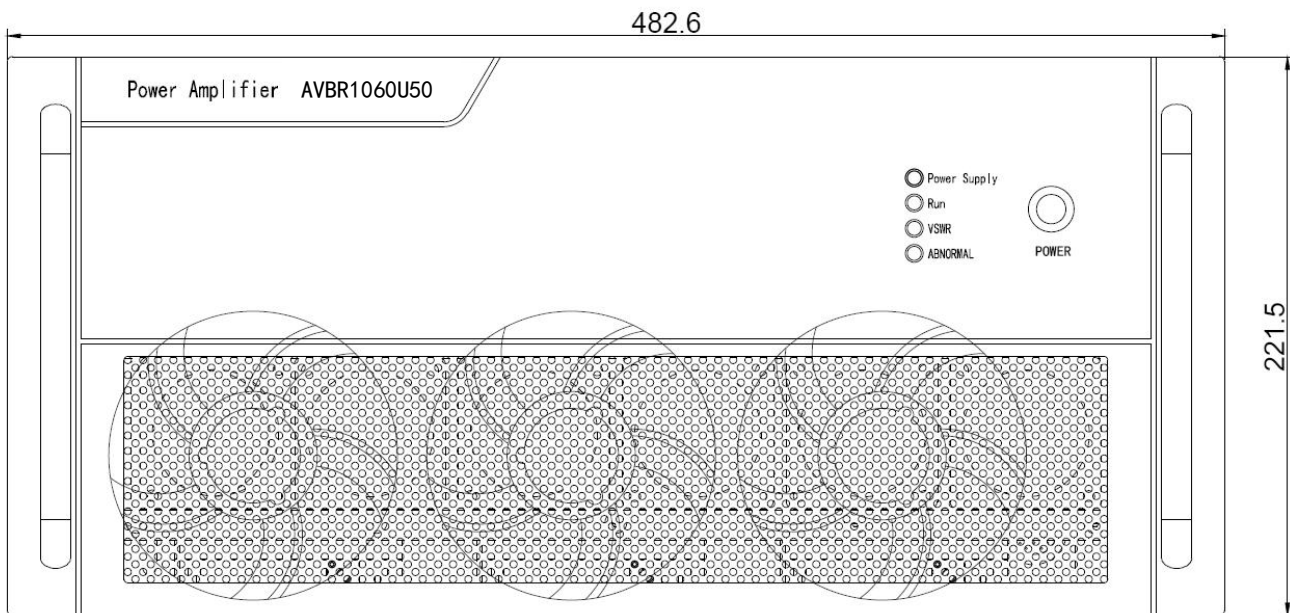


Graph 2: Small signal gain, Input Return Loss @Pin=-30dBm (Ambient temp. +25±3°C, AC Voltage= 220V), Datasheet: REVA.2/06.04.2020 Unique Amplifier With Innovation

220V, Load VSWR ≤ 1.2) , Similar Products Test plot, For Reference Only.



Rack Mounted System -OUTLINE DRAWING (mm)-Standard Case Style-A5U1



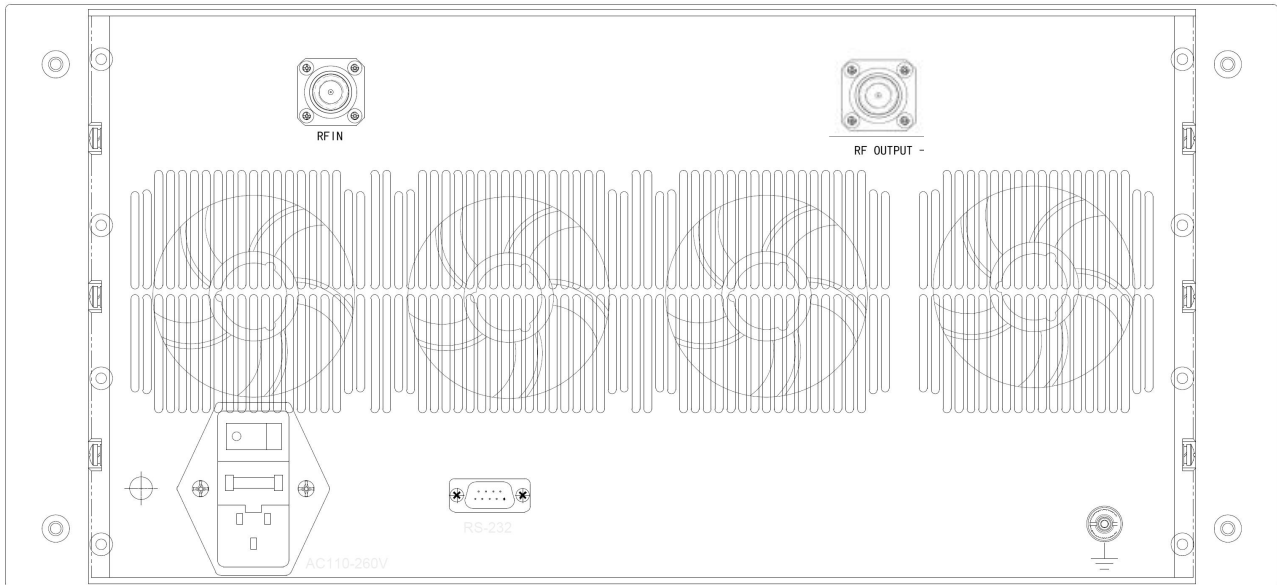
Front View

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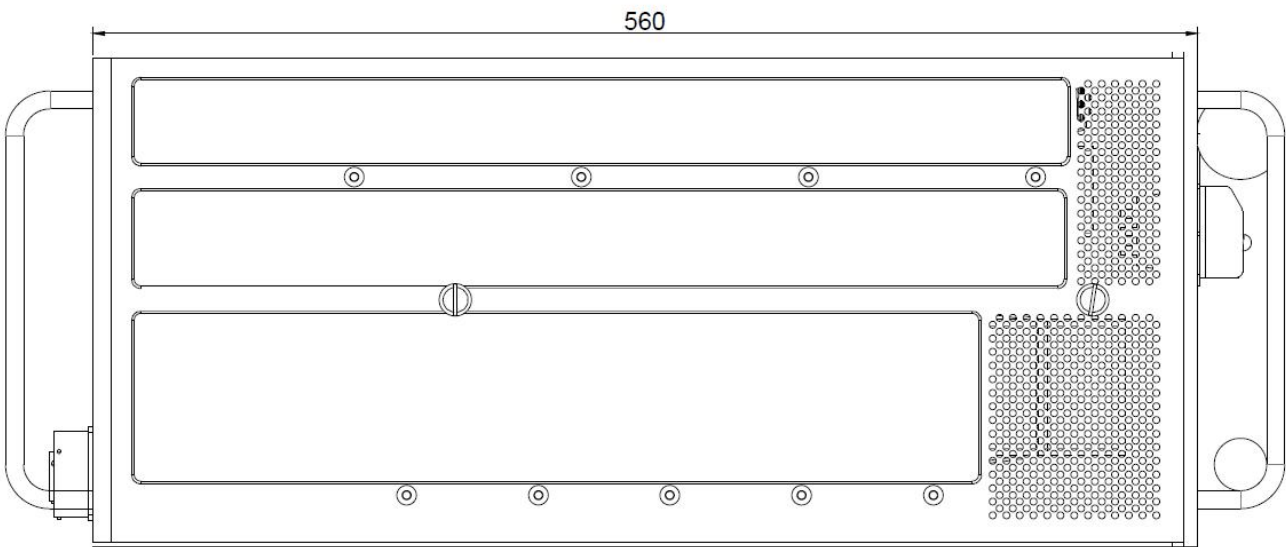
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Rear
View



Side View

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