

TECHNICAL DATASHEET

AVBR2060U50

The AVBR2060U50 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 system applications, Communication Modulated Signal Test (LTE && 5G), or EMC testing situation.

Features

2GHz-6GHz frequency range	Solid-state Class AB Broadband design
Psat 50dBm Typ,49dBm Min	Ultra-broadband Instantaneous Bandwidth
Power gain 50 dB	Suitable for pulse or CW applications
50 ohm input/output impedance	Small and light weight
Built-in control, monitoring and protection circuits	High reliability and ruggedness

ELECTRICAL SPECIFICATIONS (T=25°C ± 3°C, VAC =220V, CW, Load VSWR<1.2)

Description	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	2		6	GHz
Output Power CW* @ Pin= 0 dBm	Psat	49	50		dBm
Output P1dB* CW	P1dB	46	47.5		dBm
Power Gain @ Pin= 0 dBm	Gp		50		dB
Power Gain Flatness @ Pin=0 dBm	ΔGp		± 1.3	± 1.8	dB
Harmonics @ Pin=0 dBm	2 nd /3 rd		-20/-25	-15/-20	dBc
Noise Figure(Optional)	NF		12		dB
Spurious Signals @ Pin= 0 dBm	Spur		-70	-60	dBc
Small Signal Gain @ Pin= -30 dBm	Gss		55		dB
Small Signal Flatness @ Pin= -30 dBm	ΔGs		± 2	± 2.5	dB
Isolation[Disable Status]	Iso		90		dB
Input VSWR	VSWR_IN		1.5	1.8	/
Output VSWR	VSWR_OUT		1.8		/
Third Intermodulation Third Order 2-Tone @ 34dBm/Tone, 10MHz**	IMD3		-27	-25	dBc
Group Delay	G _D			20	nS
Supply Voltage (47~61Hz) /Single-Phase	VAC	180	220/50Hz	260	V
Power Consumption @ Pout =49~50dBm	PC		450	600	W

Note*: Fundamental Power, Harmonics are excluded.

Note:** 100MHz Data is Available, please contact sales for further information.

MECHANICAL SPECIFICATIONS

Length*Width*Height[mm]	482.6 x 132 x 500 (3U)
Weight[Kg]	22

Datasheet: REVA.2/07.20.2021

Unique Amplifier With Innovation

Chengdu AmpliVisionS Technology Co., Ltd.*

Advanced Wireless Communication Crowd-Innovation Space
High-Tech(West) Zone, Chengdu, P. R. China

Phone: +86(28)61892455
Email: sales@amplivisions.com
www.amplivisions.com

TECHNICAL DATASHEET

AVBR2060U50

RF Connector Input	Type N, Female
RF Connector Output	Type N, Female
RF Connector Forward Coupler (Optional)	Type N, Female
DC Connector RS-232	Dsub-9, Male
AC Connector	3 WIRE A/C Power Entry

ENVIRONMENTAL SPECIFICATIONS (Design to Meet)

System Operation Temperature* ¹	-10	45	°C
Storage Temperature Range	-25	75	°C
Relative-Humidity		95	%
Altitude* ²	N/A		
Vibration/Shock* ²	N/A		

Notes *¹: System Operation Temperature can be extended to -40~65°C, Contact Sales for update.

Notes *²: Altitude/Vibration is designed with experienced considerations, but without tests and experiments, Contact Sales for experimentally verified.

LIMITS

Pin<10 dBm (Input RF level without damage)	Load VSWR<1.5:1 (50 Ohm)
Pin=-5 dBm	Load open or short for up to 10 minutes.
Pin=0 dBm	Load VSWR<3:1 for continuous operation
Thermal Degradation	55 °C

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

Pin #	Description	Specifications
1	GND	Ground
2	SHUTDOWN	Amplifier Disable: TTL Logic High (3.3V) (Internally Pulled-Low)
3	Temperature Alarm	Abnormal: Logic High (3.3V) (Internally Pulled-Low)
4	Fan Alarm	Abnormal: Logic High (3.3V) (Internally Pulled-Low)
5	Power Amplifier Alarm	Abnormal: Logic High (3.3V) (Internally Pulled-Low)
6~9	N/C	No electrical connected, Reserved

Front Panel LED Indicators

Description	Specifications
RUN	GREEN: AC-220V is POWER ON status
TEMP	RED: Temperature is over-limited, Amplifier shutdown
FAN	RED: Fan is abnormal, Amplifier shutdown
ABNORMAL	RED: Amplifier is abnormal, Amplifier shutdown, Connect

PLOTTED AND OTHER DATA

Notes:

1. Values at +25°C, sea level.
2. Handle only in approved ESD Workstation.
3. Unit is cooled by air-forced condition.

Pout@ Pin=0dBm && P1dB [CW, Load VSWR≤1.2, 25°C], For Reference Only (Shipped Products)

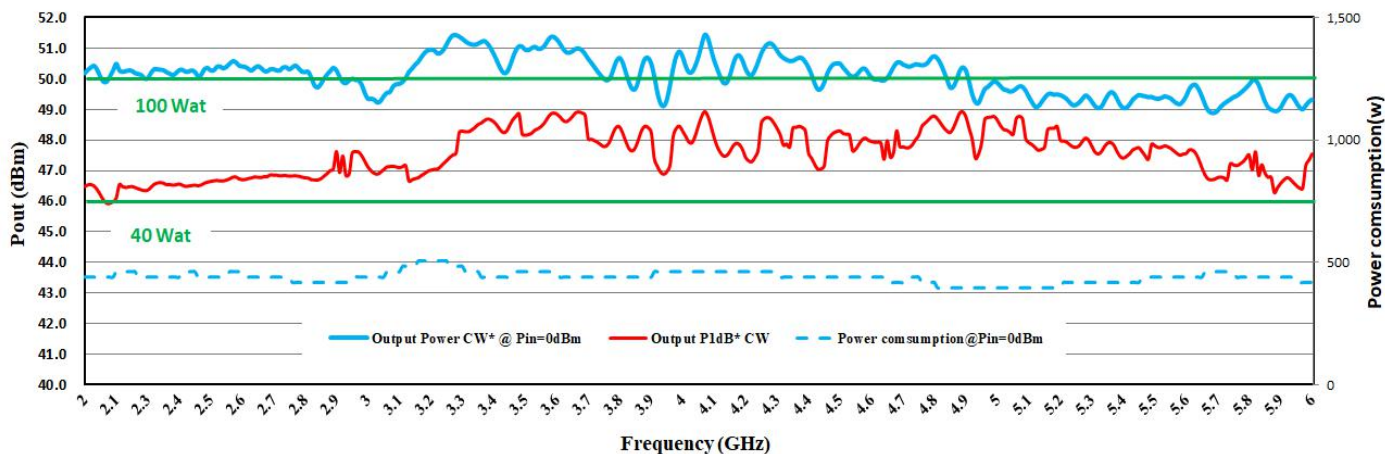
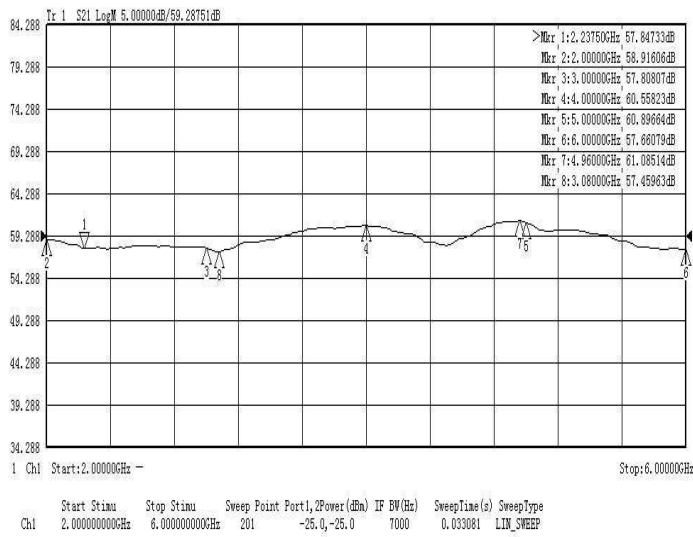
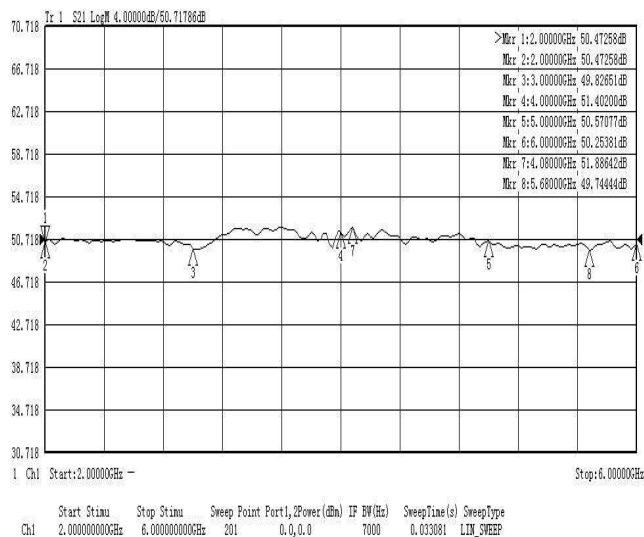


Figure left: Power Gain S21@ Pin=0 dBm (Ambient temp. +25±2°C, Load VSWR ≤ 1.2), For Reference Only(Shipped Products)

Figure right: Small signal gain @Pin=-30dBm (Ambient temp. +25±2°C, Load VSWR ≤ 1.2), For Reference Only(Shipped Products)



Datasheet: REVA.2/07.20.2021

Unique Amplifier With Innovation

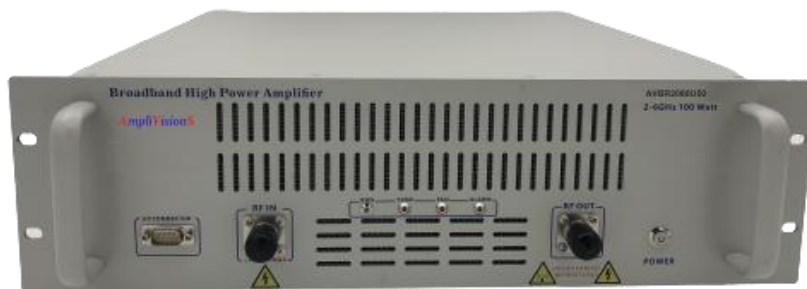
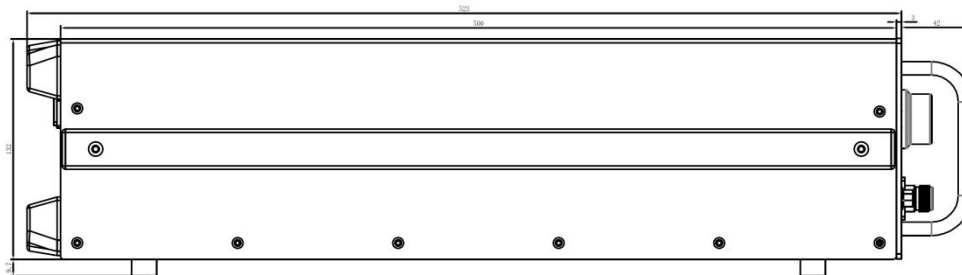
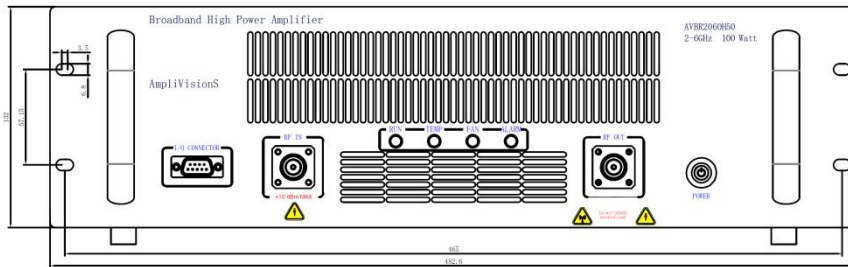
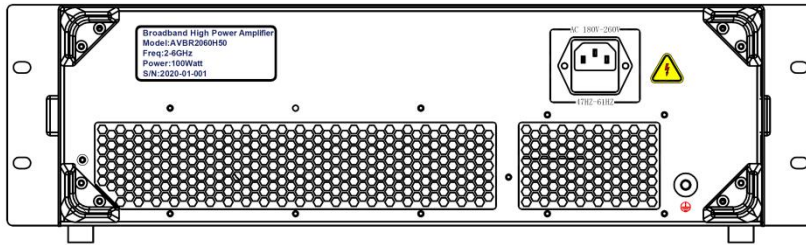
50dB Gain, 100W Psat, 2-6GHz
Solid State Broadband High Power Amplifier(CW&&Pulse)

AmpliVisionS

TECHNICAL DATASHEET

AVBR2060U50

Rack Mounted System - Detailed Outline Dimensions (mm)-Standard Case Style-A3U2
Dimensions in mm:



Datasheet: REVA.2/07.20.2021

Unique Amplifier With Innovation

Chengdu **AmpliVisionS** Technology Co., Ltd.*
Advanced Wireless Communication Crowd-Innovation Space
High-Tech(West) Zone, Chengdu, P. R. China

Phone: +86(28)61892455
Email: sales@amplivisions.com
www.amplivisions.com