

The AVBR60180U50 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.

## Features

6GHz-18GHz frequency range	Solid-state Class AB Broadband design
Psat 50dBm type	Instantaneous ultra-broadband
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, VAC =220V, CW, Load VSWR<1.2)

Description	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	6		18	GHz
Output Power-CW	Psat	80	100		W
Power Gain@ Rated Psat	Gp		50		
Power Gain Flatness@ Rated Psat	ΔGp		± 1.5	± 2	dB
Input Power for Rated PSAT	P <sub>IN</sub>		0		dBm
RF Input Range	P <sub>IN</sub>	-10		5	dBm
Harmonics @ Pout =50W	2 <sup>nd</sup> /3 <sup>rd</sup>		-12		dBc
Spurious Signals@ Pout =50W	Spur		-60		dBc
Input Return Loss	S11			-10	dB
Supply Voltage (47~61Hz) /Single-Phase	VAC	180	220/50Hz	260	V
Peak Power Consumption @ Pout =80~100W-CW	PPC		2000	2400	W
System Turn-On Time	Ton		5		S

## MECHANICAL SPECIFICATIONS

Cooling	Built-in internal forced air cooling system
Length*Width*Height[ mm ]	483 x 221 x 560 ( 5U )
Weight[ Kg ]	40
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

## ENVIRONMENTAL SPECIFICATIONS (Design to Meet)

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

## LIMITS

Input RF drive level without damage	$\text{Pin} \leq 10$	dBm
Load VSWR @ POUT =80W	$\text{VSWR} \leq 5:1$	N/A
Thermal Degradation	50	°C

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

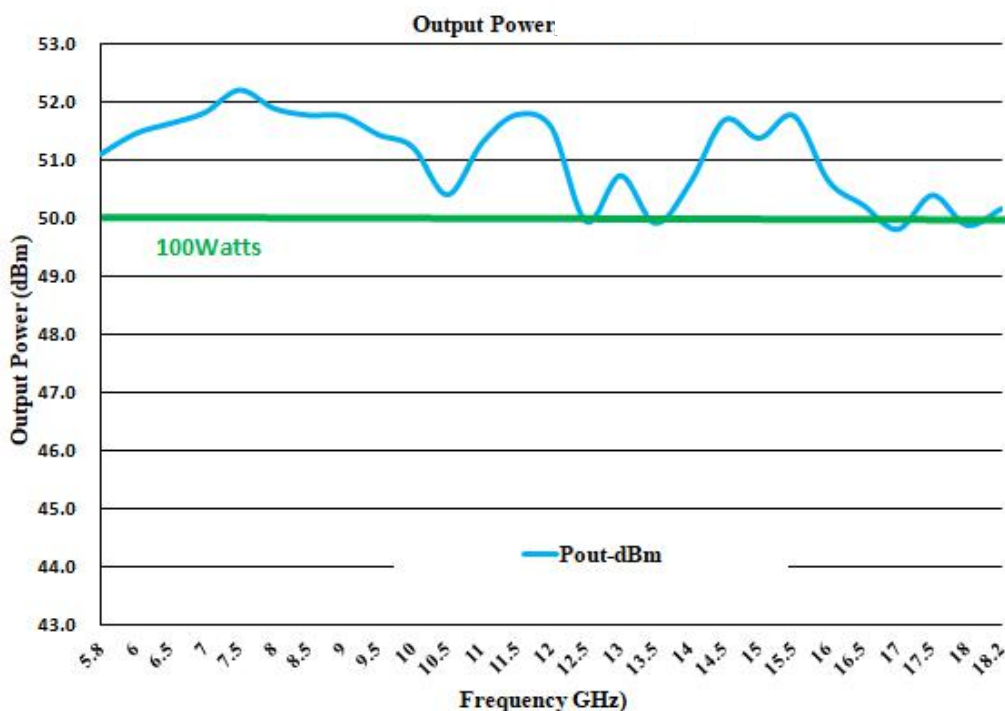
Pin #	Description	Specifications
1	GND	Ground
2	ENABLE	Amplifier Enable: TTL Logic High (3.3V) (Internally Pulled-Low)
3	Alarm	Abnormal: Logic High (3.3V) (Internally Pulled-Low)
4~7	N/C	No electrical connected, Reserved

## PLOTTED AND OTHER DATA

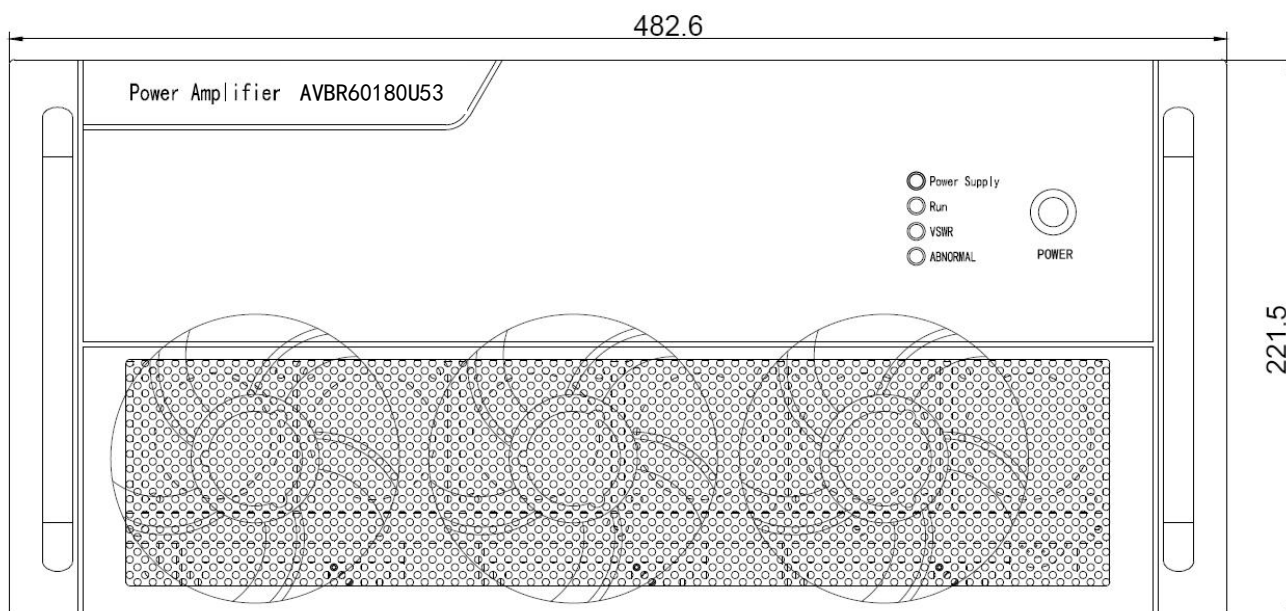
Notes:

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]**



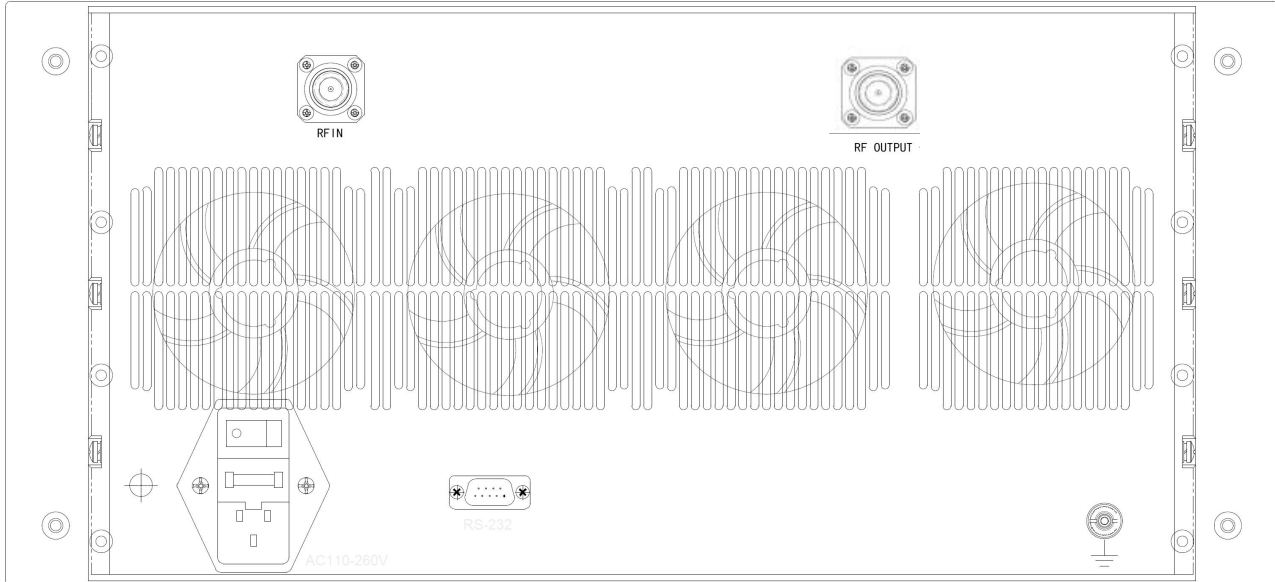
**Rack Mounted System -OUTLINE DRAWING (mm)-Standard Case Style-A5U1**



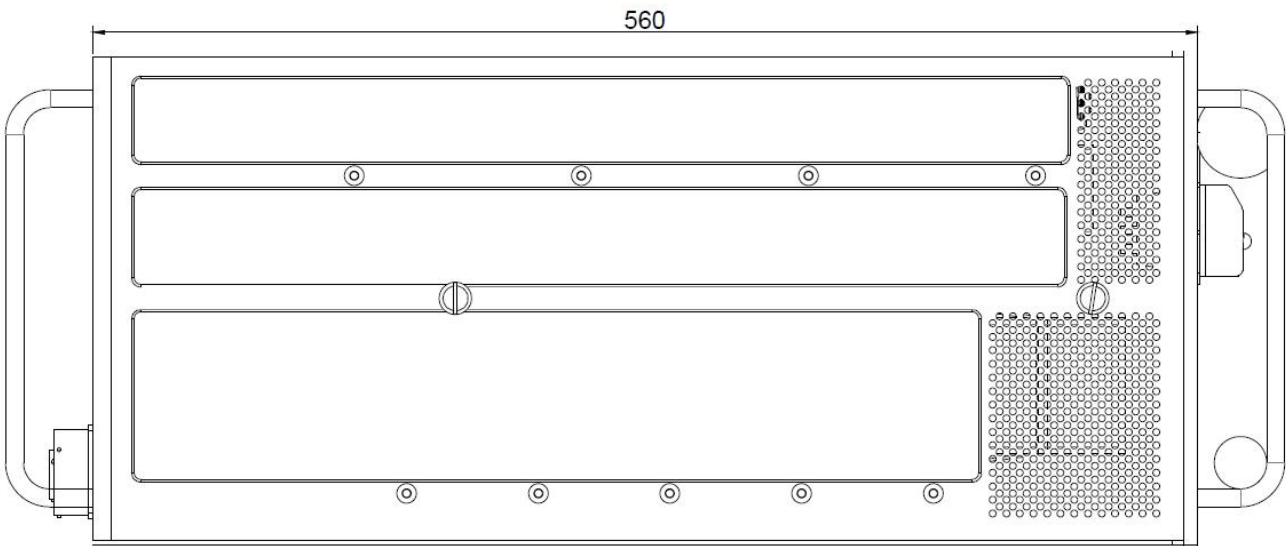
Datasheet: REVA.2/06.04.2020

*Unique Amplifier With Innovation*

Front View



Rear View



Side View

Datasheet: REVA.2/06.04.2020

Unique Amplifier With Innovation