

## TECHNICAL DATASHEET

AVBR0830U57

The AVBR0830U57 is a 500W 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

0.8GHz-3GHz frequency range	Solid-state Class AB Broadband design
Psat 57dBm Min	Instantaneous ultra-broadband
Power gain 57 dB	Suitable for pulse or CW ,Modulated Signal
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	0.8		3	GHz
Output Power-CW	Psat	500	600		W
Output Power-P1dB	P1dB		200		W
Power Gain Flatness	Gp		±1	±2	dB
Input Power for Rated PSAT	PIN		0		dBm
RF Input Range	PIN	-20		5	dBm
Harmonics @ Pout =500W	2 <sup>nd</sup> /3 <sup>rd</sup>		-15		dBc
Spurious Signals@ Pout =500W	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 =500~600W-CW	PPC		4000	4800	W
System Turn-On Time	Ton		5		S

## MECHANICAL SPECIFICATIONS

Cooling External Heat-Sink Needed (Not Supplied)

Length*Width*Height[ mm ]	483 x 221 x 560 ( 5U )
Weight[ Kg ]	45
RF Connector Input	Type N, Female
RF Connector Output	Type -7/16-DIN, Female
DC Connector RS-232	Dsub-9, Male
AC Connector	3 WIRE A/C Power Entry

Datasheet: REV A.1/03.04.2020

Unique Amplifier With Innovation

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### 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		

**\*note: Environmental reliability is considered during design procedures, if you need the tests and measurements, please contact our sales for information.**

### LIMITS

Input RF drive level without damage	$Pin \leq 5$	dBm
Load VSWR @ POUT =300W	$VSWR \leq 3:1$	N/A
Thermal Degradation	45	°C

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

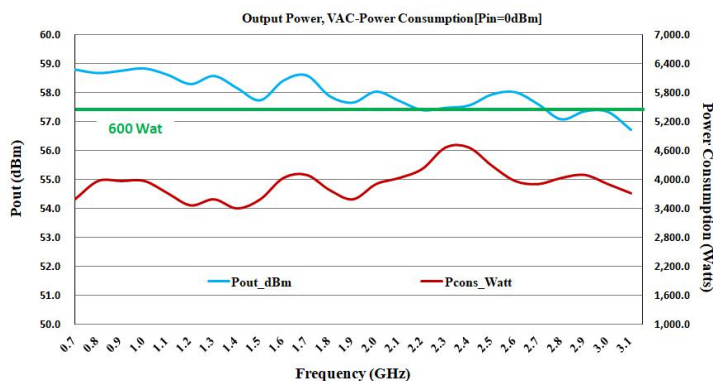
Pin #	Description	Specifications
1	GND	Ground
2	ENABLE	Amplifier Enable: TTL Logic High (3.3V) (Internally Pulled-Low)
3	Alarm	Abnormal: Logic High (3.3V) (Internally Pulled-Low)
4~7	N/C	No electrical connected, Reserved

### PLOTTED AND OTHER DATA

Notes:

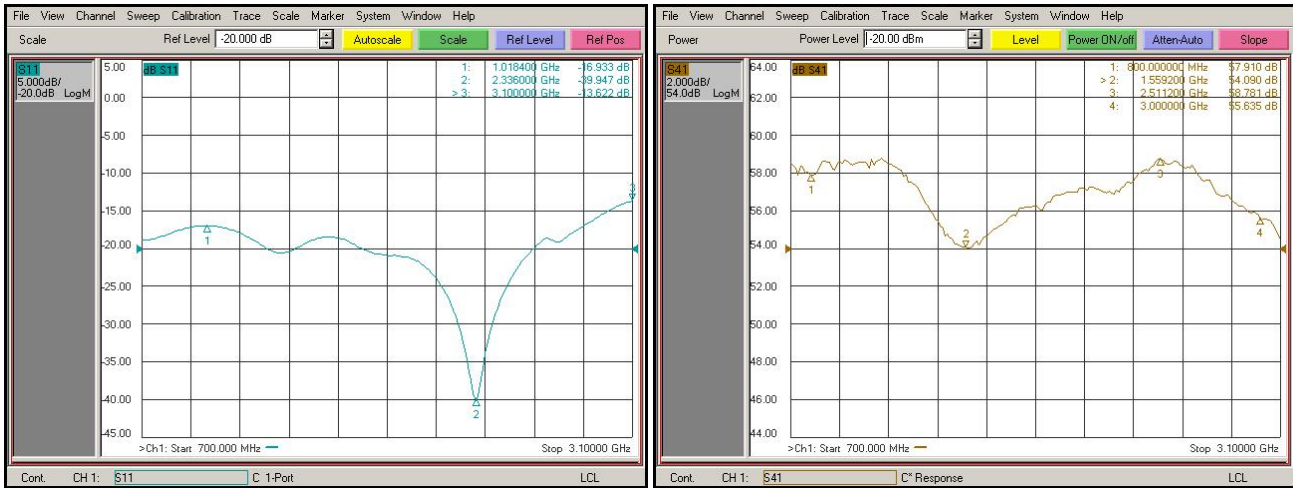
1. Values at +25°C, sea level.
2. ESD Sensitive Material, Handle only in approved ESD Workstation.

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

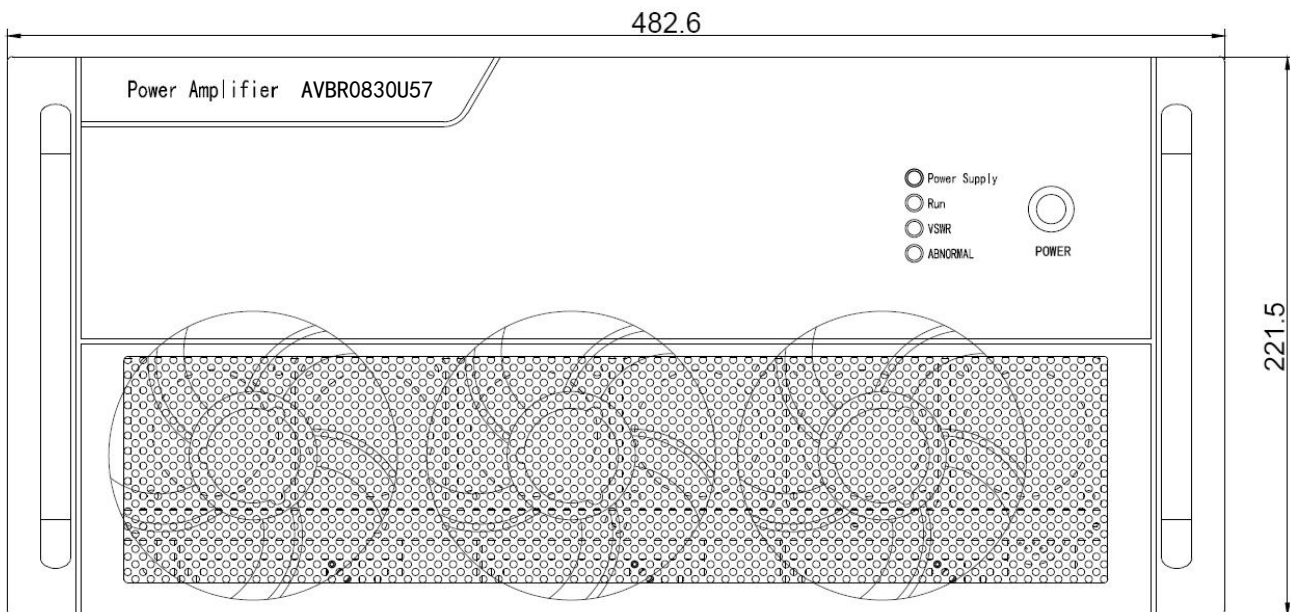


**TECHNICAL DATASHEET** **AVBR0830U57**

**Small Signal Data Curve:S11, S21 ( For reference only ) :**



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



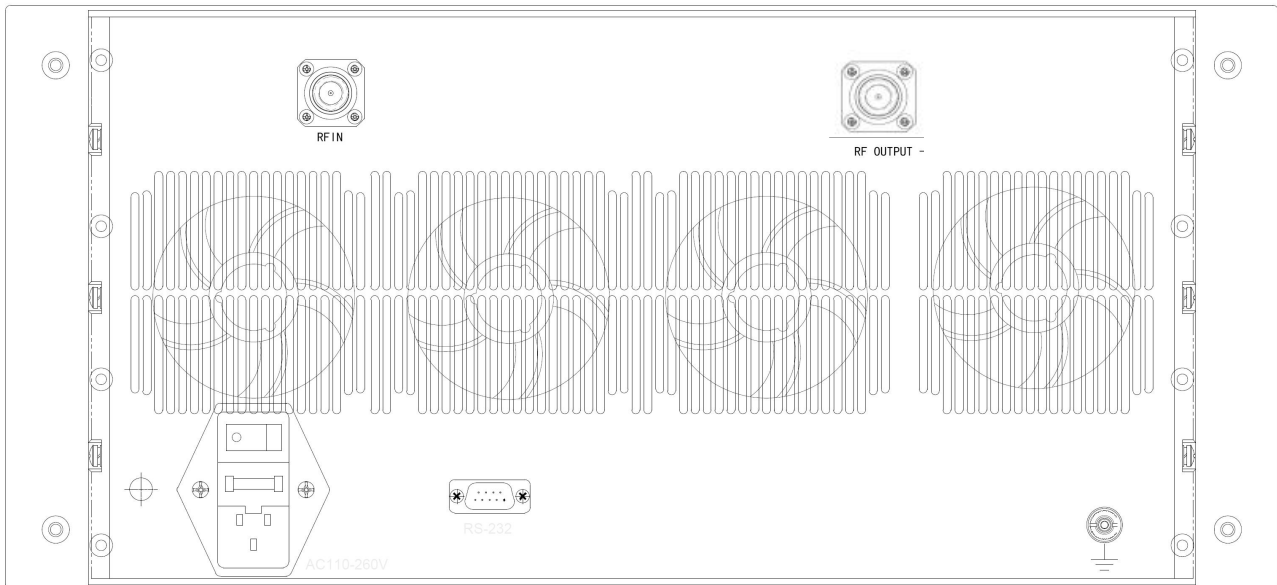
**Front View**

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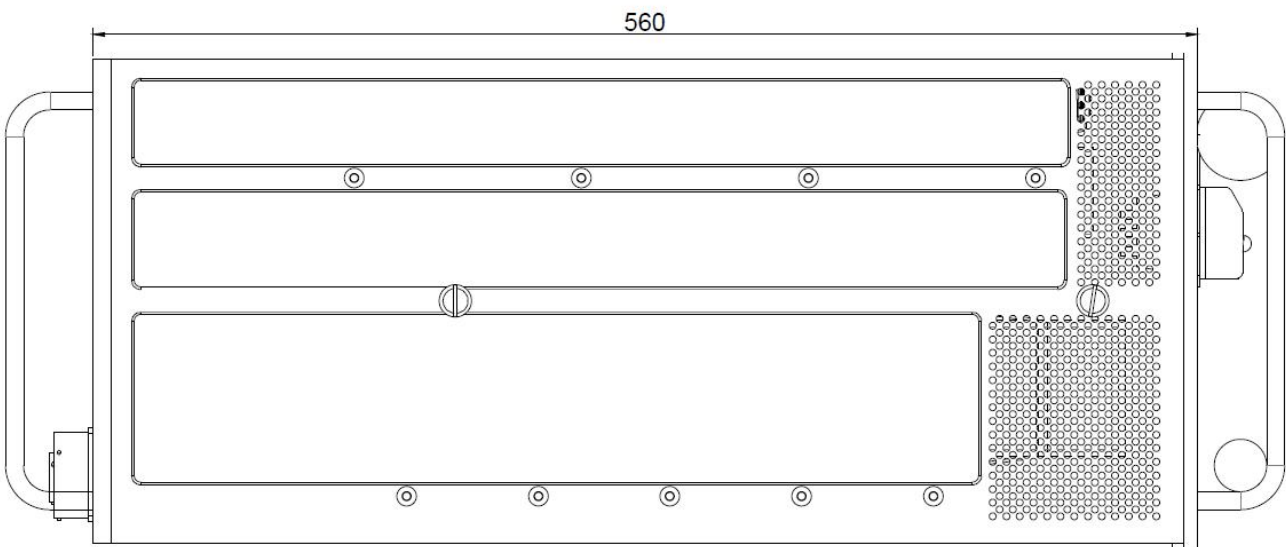
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Rear  
View



Side View