

TECHNICAL DATASHEET

AVBR0810H47

The AVBR0810H47 is a 50W 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

800MHz-1000MHz frequency range	Solid-state Class AB Broadband design
Psat 47dBm Min	Instantaneous ultra-broadband
Power gain 48dB	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,Load VSWR ≤ 1.2)

Description	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	800		1000	MHz
Output Power CW [Pin= 0 dBm]	Psat	50			W
Power Gain @ Psat	Gp		48		dB
Power Gain Flatness @ Rated PSAT	ΔGp		± 0.8	± 1	dB
Input Power for Rated PSAT	P _{IN}		0		dBm
Harmonics @ Pin =-5dBm	2 nd		-30		dBc
Noise Figure[if needed, Please contact sales]	NF		12		dB
Spurious Signals@ @ Pin =-2dBm	Spur		-70	-65	dBc
Input Return Loss	S ₁₁		-25	-15	dB
Operating Voltage	V _{DC}	26	28	30	V
Current Consumption @ Pout= 50~80W	I _{DD}		6.5	9	A
Switching Time @ 1kHz TTL, @ Pin =-2dBm	TON/TOFF		2	5	μs

MECHANICAL SPECIFICATIONS

Cooling External Heat-Sink Needed (Not Supplied)	
Length* Width*Height[mm]	150*90*25
Weight[Kg]	0.8
RF Connector Input	SMA, Female
RF Connector Output	SMA, Female

ENVIRONMENTAL SPECIFICATIONS (Design to Meet)

Module Operation Temperature*	-20	65	°C
Storage Temperature Range	-45	90	°C
Relative-Humidity		95	%
Altitude	N/A		
Vibration/Shock	N/A		

Notes: Altitude /Vibration are designed with considerations, Please contact our sales for update the tests and experiments.

Notes: Operation Temperature can be extended to -40~+85°C ,Please contact our sales for update

LIMITS

Input RF drive level without damage	$P_{in} \leq 10$	dBm
Load VSWR @ POUT = 50W	$VSWR \leq 3:1$ [Design To Meet]	N/A
Thermal Degradation	90°C @ heatsink [recovery@ 60°C]	°C

DC INTERFACE CONNECTOR – [Hybrid D-Sub 7W2, 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	Shutdown	Amplifier Disable: TTL Logic High (3.3 V), Internally Pull down
4	GND	Ground
5	N/C	No Connection

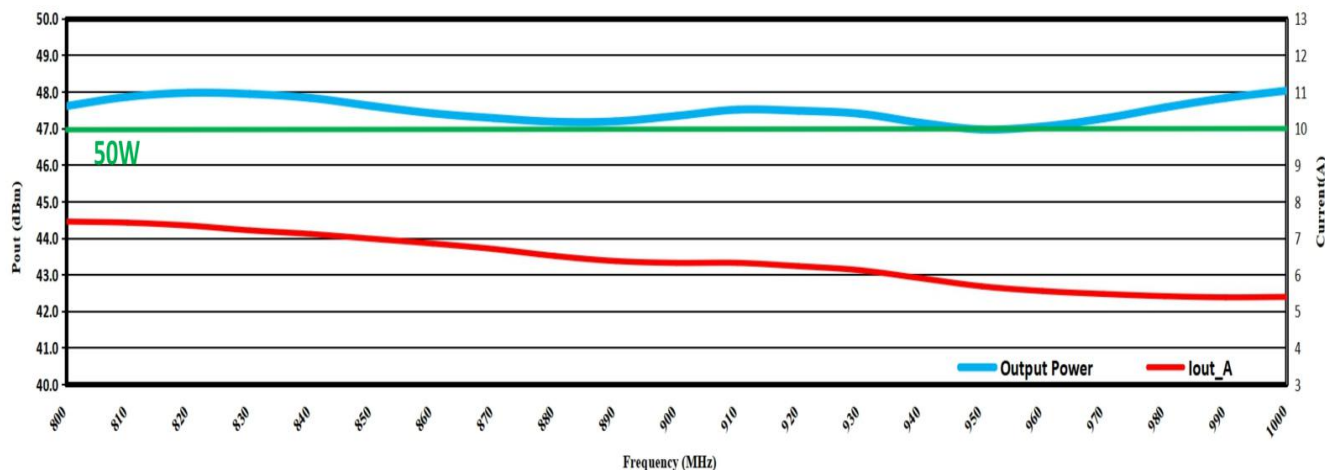
PLOTTED AND OTHER DATA

Notes:

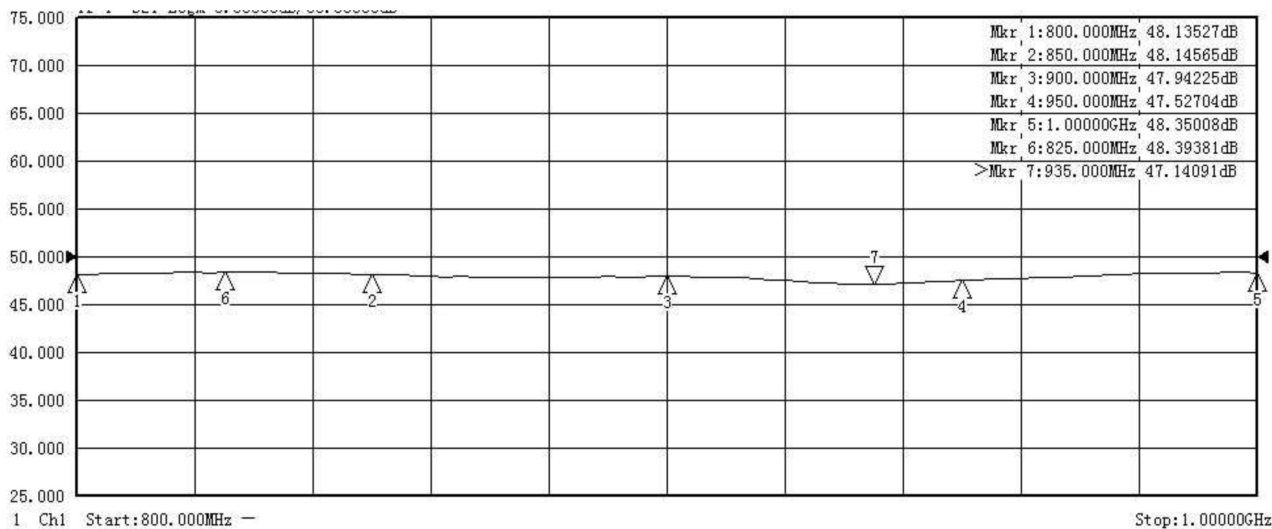
1. Values at +25°C, sea level.
2. ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.
3. Heat Sink required for Proper Operation, Unit is cooled by conduction to heat sink.

TYPICAL PERFORMANCE DATA

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



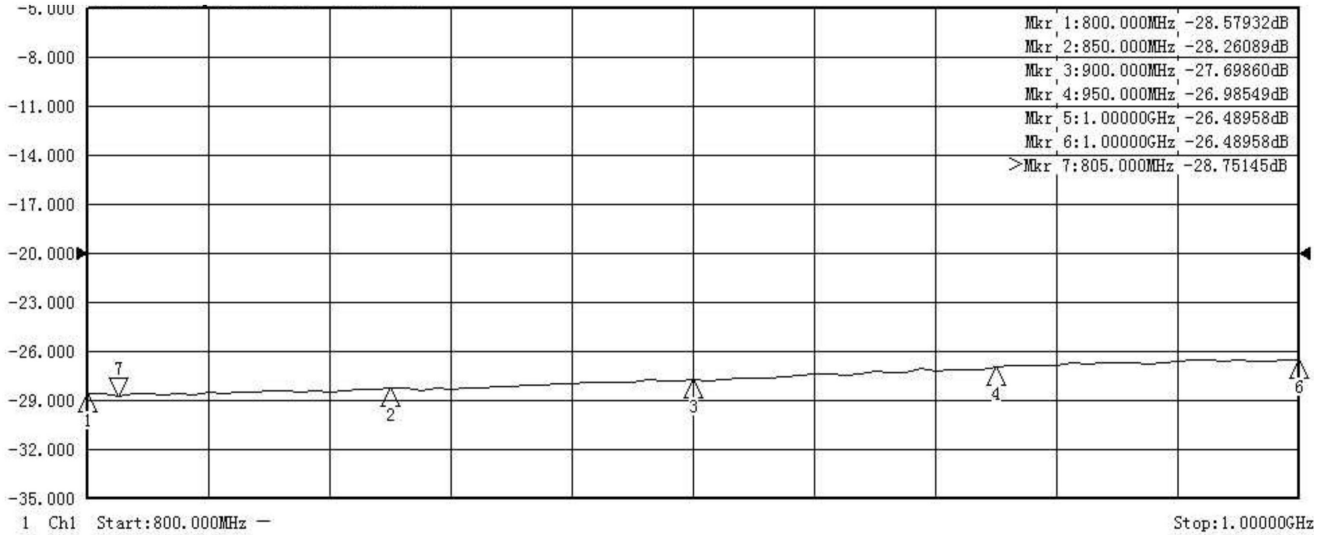
Power Gain (DC Voltage= 28V,Pin=0dBm, Load VSWR \leq 1.2, T= +25°C)



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Input Return Loss (DC Voltage= 28V, Pin=-30dBm, Load VSWR ≤ 1.2, T= +25°C)



OUTLINE DRAWING [mm]

