

TECHNICAL DATASHEET

AVBR180270H37

The AVBR180270H37 is a 5W high gain Solid State Broadband High Power Amplifier. This amplifier module 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 broadband jamming and EMC testing.

Features

- 18GHz-26.5GHz frequency range
- Psat 37dBm type
- Power gain 37dB
- 50 ohm input/output impedance
- Built-in control, monitoring and protection circuits
- Solid-state Class AB Broadband design
- Instantaneous ultra-broadband
- Suitable for CW and Pulse
- Small and lightweight
- High reliability and ruggedness

ELECTRICAL SPECIFICATIONS(T=25°C,DC Voltage= 20V, Load VSWR<1.2)

Description	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	18		26.5	GHz
Output Power CW@Pin= 0dBm	Psat	36	37		dBm
Power Gain @Pin= 0dBm	Gp		37		dB
Power Gain Flatness @Pin= 0dBm	ΔGp		± 1.5	± 2.5	dB
Input Power for Rated PSAT	PIN	-3	0	3	dBm
Harmonics @Pin=0dBm	2 <sup>nd</sup>		N/A		dBc
Spurious Signals @Pin= 0dBm	Spur		-60		dBc
Input Return Loss	S11			-10	dB
Operating Voltage	VDC	16	20	22	V
Current Consumption @ Pout= 36~37 dBm	IDD		2.2	2.6	A
Switching Time @ 1kHz TTL, PIN = -2dBm	TON/TOFF			5	μs

MECHANICAL SPECIFICATIONS

- Cooling External Heat-Sink Needed (Not Supplied)
- Length\* Width\*Height[ mm ] 160\*120\*27
- Weight[ Kg ] 1.2
- RF Connector Input 2.92mm(K), Female
- RF Connector Output 2.92mm(K), Female

## ENVIRONMENTAL SPECIFICATIONS (Design to Meet)

Module Operation Temperature	-20	60	°C
Storage Temperature Range	-25	65	°C
Relative-Humidity	N/A		
Altitude	N/A		
Vibration/Shock	N/A		

## LIMITS

Input RF drive level without damage	$P_{in} \leq 5$	dBm
Load VSWR @ POUT = 3W	VSWR $\leq 5:1$ (Design to Meet)	N/A
Thermal Degradation	90	°C

## DC INTERFACE CONNECTOR – [ Hybrid D-sub 7-Pin, Male]

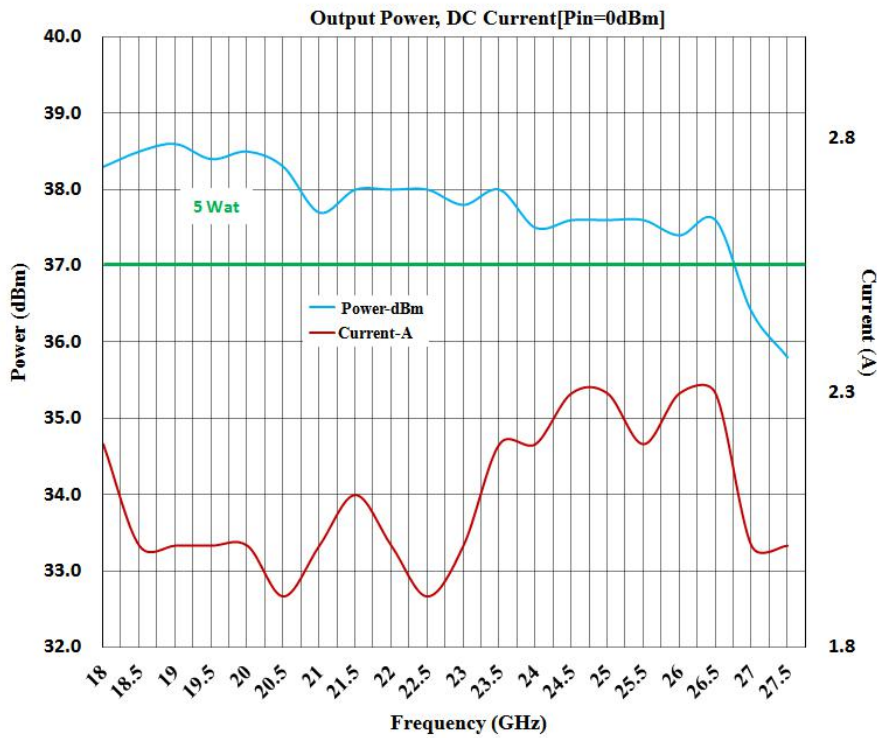
Pin #	Description	Specifications
A1	GND	Ground
A2	VDD	+20V
1	CURRENT SENSE	Analog voltage relative to IDD @ 100mV per Ampere
2	TEMP SENSE	Analog voltage relative to Module's Temperature @ 10 mV/°C
3	ENABLE	Amplifier Enable: TTL Logic High (3.3V) (Internally Pulled-Low)
4	GND	Ground
5	N/C	No Connection

## PLOTTED AND OTHER DATA

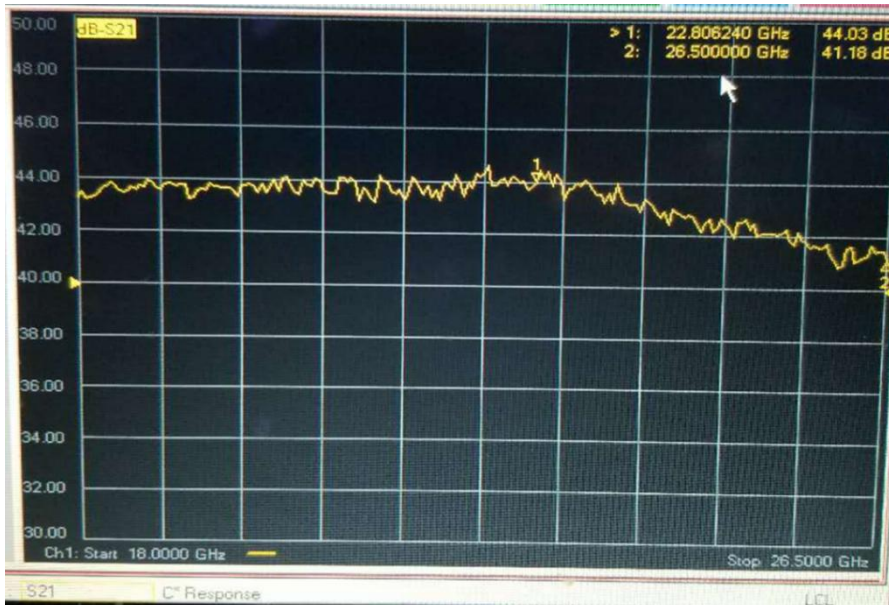
Notes:

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.

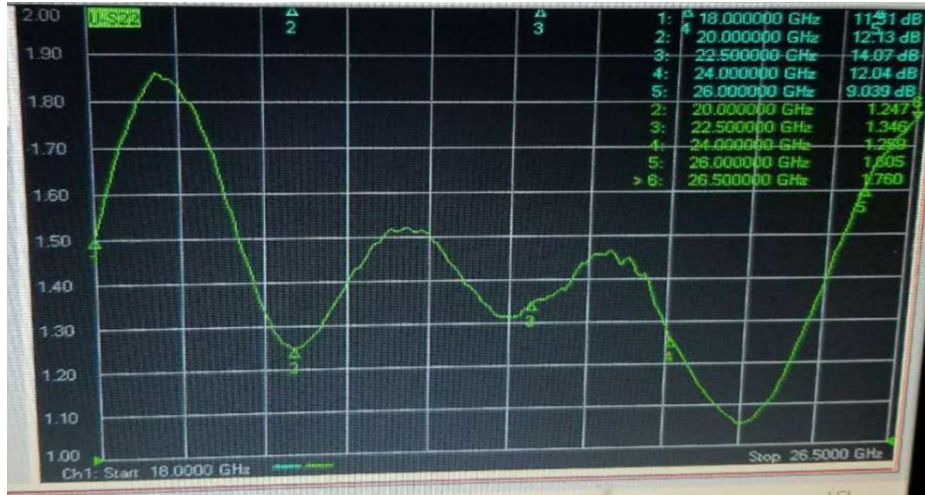
TYPICAL PERFORMANCE DATA [LOAD VSWR<1.2]



Graph: Power Gain Flatness@Psat, @Pin=0dBm(Ambient Temp. +25±3°C)



Graph: Input Return Loss@ Pin=-15 dBm(Ambient Temp. +25±3°C)



OUTLINE DRAWING

