TECHNICAL DATASHEET ***AVBR60180H40***

The AVBR60180H40 is a 10W 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

6GHz-18GHz frequency Range
Psat 40dBm type, 39dBm Min.
Power gain 40dB Typ.
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 light weight
High reliability and ruggedness

ELECTRICAL SPECIFICATIONS(T=25℃,DC Voltage= 28V,Load VSWR ≤ 1.2)

Description	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	6		18	GHz
Output Power CW@ Pin=0 dBm	Psat	39	40		dBm
Power Gain @ Pin=0 dBm	Gp		40		dB
Power Gain Flatness @ Pin=0 dBm	ΔGp		±2	±2.5	dB
Harmonics @ Pin=0 dBm	2^{nd}		-15		dBc
Noise Figure[Contact Sales If needed]	NF		14		dB
Spurious Signals@ Pout =10W	Spur		-65	-60	dBc
Input Return Loss	S_{11}			-10	dB
Operating Voltage	V_{DC}	26	28	30	V
Current Consumption @ Pout= 39~40 dBm	I_{DD}		2.7	3.1	A
Switching Time @ 1kHz TTL, P_{IN} = 0dBm	T_{ON}/T_{OFF}		1	2	μs

MECHANICAL SPECIFICATIONS

Cooling External Heat Sink Needed (Not Supplied)

Length* Width*Height[mm]	120*80*25
Weight[Kg]	0.5
RF Connector Input	SMA, Female
RF Connector Output	SMA, Female
RF Connector Coupler[Contact Sales If needed]	SMA, Female

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ENVIRONMENTAL SPECIFICATIONS

Module Operation Temperature*	-20	65	℃
Storage Temperature Range	-25	70	℃
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℃ ,Please contact our sales for update

LIMITS

Input RF drive level without damage	Pin≤10	dBm
Load VSWR @ POUT = 37 dBm	VSWR≤5:1[Design To Meet]	N/A
Load VSWR @ POUT = 39~40dBm	VSWR≤3:1[Design To Meet]	N/A
Thermal Degradation	90℃@ heatsink [recovery@ 60℃]	℃

DC INTERFACE CONNECTOR – [D-sub, 9 Pin, Male]

Pin #	Description	Specifications
1	Reserved	No Connection
2	Current Monitor	Analog voltage relative to IDD @ 50mV/100mA
3	Temp Monitor	Analog voltage relative to module temperature @ 10mV/°C
4	Reserved	No Connection
5	Enable	Amplifier Disable: TTL Logic High (3.3V), Internally Pull down
6,7	VDD	+28.0VDC
8,9	GND	Ground

PLOTTED AND OTHER DATA

Notes:

1. Values at +25℃， 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.

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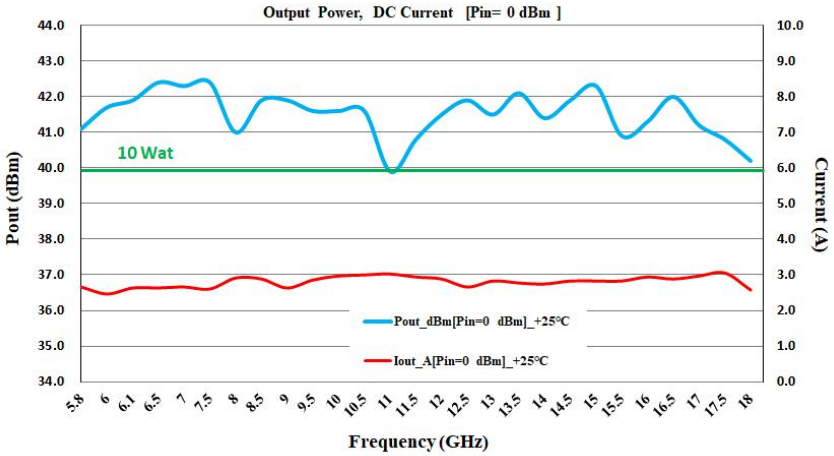
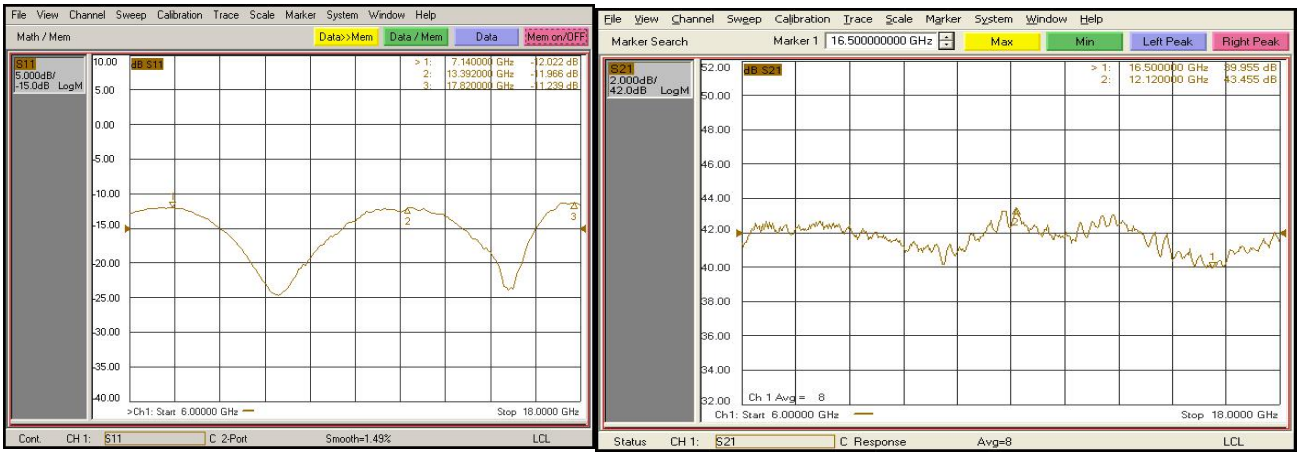
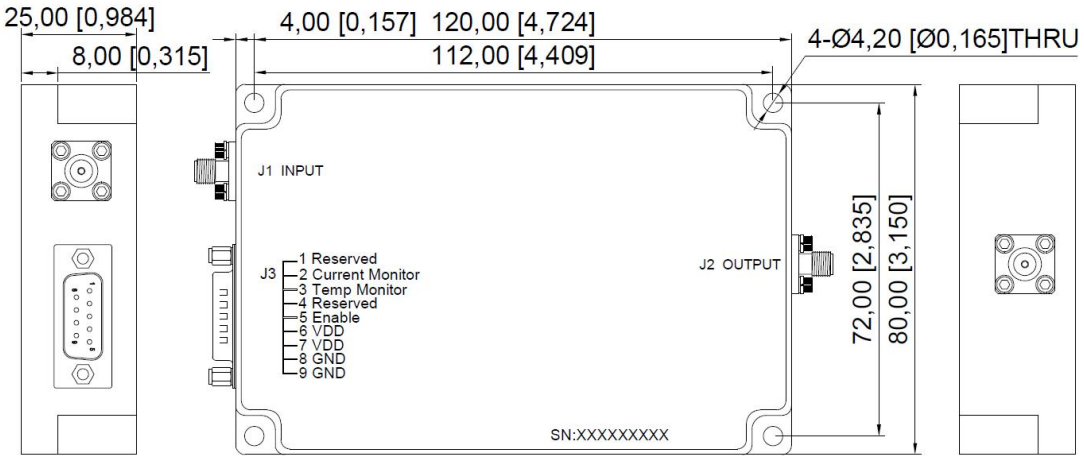
TYPICAL PERFORMANCE DATA [Load VSWR ≤ 1.2],(Normal temp. +25±3℃)



Input Return Loss(S11) /Power Gain(S21), Pin=0dBm [Load VSWR ≤ 1.2]-For Reference Only



OUTLINE DRAWING [unit: mm]



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