

TECHNICAL DATESHEET

AVBR040190H40

The AVBR040190H40 is a 10W high gain Solid State Linear 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 Linear System and high power combination.

Features

4GHz-19GHz frequency range	Solid-state Class AB Broadband design
Psat 40dBm type	Instantaneous ultra broadband
Power gain 41 dB	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,50 Ohm,Load VSWR≤1.2)

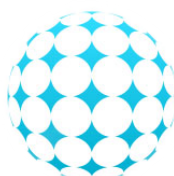
Description	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	4		19	GHz
Output Power CW PSAT	PSAT		10		W
Power Gain @ Psat	Gp		41		dB
Power Gain Flatness @ Rated PSAT	ΔGp		±3.5		dB
Input Power for Rated PSAT	P _{IN}		0		dBm
Harmonics @ Pout =5W	2 nd		-10		dBc
Noise Figure(If Needed, Please Contact)	NF		N/A		dB
Spurious Signals@ Pout =5W	Spur		-60		dBc
Input Return Loss	S11			-10	dB
Third Order Intercept Point					
2-Tone @ 40dBm/Tone, 100kHz	IP3		N/A		dBc
Spacing(If Needed, Please Contact)					
Operating Voltage	VDC	24	28	30	V
Current Consumption @ Pout= 10W	IDD		4.8		A
Switching Time @ 1kHz TTL, P _{IN} = -2dBm	TON/TOFF		10		μs

MECHANICAL SPECIFICATIONS

Cooling External Heat Sink Needed (Not Supplied)	
Length*Width*Height[mm]	160*140*25
Weight[Kg]	1.5
RF Connector Input	SMA, Female
RF Connector Output	SMA, Female

Datasheet: REVA.1/08.01.2018

Unique Amplifier With Innovation



ENVIRONMENTAL SPECIFICATIONS (Design to Meet)

Module Operation Temperature	-20	65	°C
Storage Temperature Range	-25	70	°C
Relative-Humidity	N/A		
Altitude	N/A		
Vibration/Shock	N/A		

LIMITS

Input RF drive level without damage	$P_{in} \leq 10$	dBm
Load VSWR @ POUT =5W	VSWR ≤ 5:1 (Design to Meet)	N/A
Thermal Degradation	90	°C

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

Pin #	Description	Specifications
6,7	GND	Ground along with 28V _{DC}
8,9	VDD	28V _{DC}
1	CURRENT SENSE	Analog voltage relative to I _{DD} @ 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

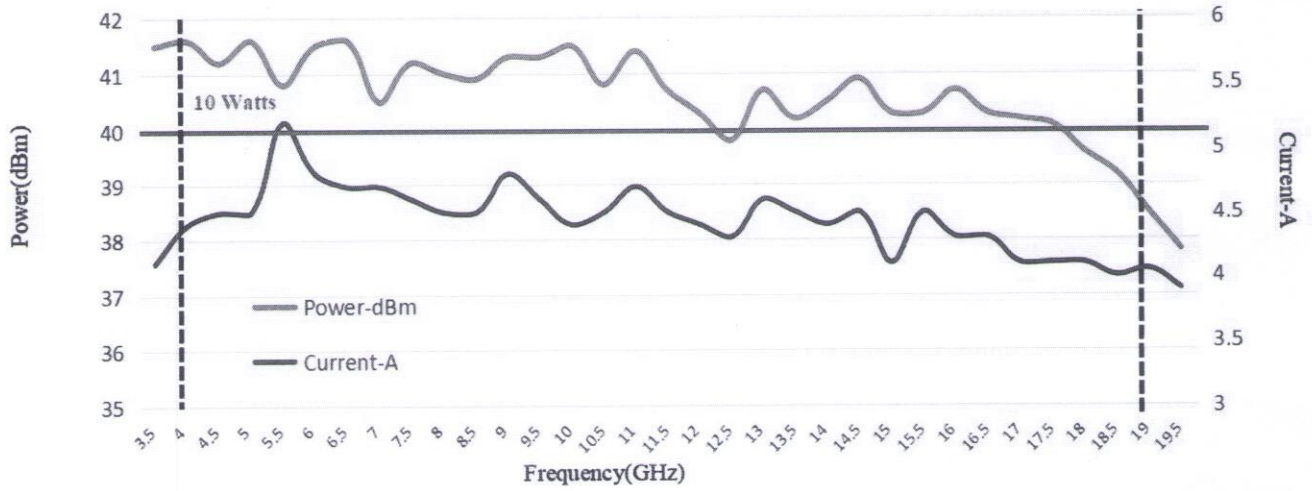
PLOTTED AND OTHER DATA

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



OUTLINE DRAWING(mm)

