



Wideband Amp Pallet

AMPB20300-50W-GaN-Wideband-Amplifier

Product Features

- Frequency from 20 ~300MHz
- Class AB GaN design
- Instantaneous wide bandwidth
- 50 Ohm Input/Output impedance
- Small size and Light weight
- High reliability and Ruggedness

Description

The AMPB20300-50W GaN Wideband Amplifier is designed for general purpose. Operating frequency range is from 20 ~300MHz. Gallium Nitride on SiC Technology is used and attached on a copper sub carrier. Improved thermal handling by patented technology.

Electrical Specifications @ $V_{DC}=32V$, $T_C=50^{\circ}C$, 50Ω System

PARAMETER	UNIT	MIN	TYP	MAX	SYMBOL
Operating Frequency	MHz	20	-	300	F_O
Operating Bandwidth	MHz	-	280	-	BW
Peak Output Power @CW Signal	W	-	50	-	P_{SAT}
Input Power	dBm	-	0±3	-	P_{IN}
Maximum Input Power @Without Damage	dBm	-	-	5	$P_{IN,MAX}$
Power Gain @Input Power 0dBm	dB	-	45	-	G_P
Gain Flatness @Input Power 0dBm	dB	-	-	±3	ΔG_P
Efficiency	%	-	30	-	E_{FF}
Harmonics 1 to N @Output Power 50W	dBc	10	-	-	H_N
Spurious Level	dBc	60	-	-	Spur
Input VSWR	dB	-	-	2:1	VSWR
Output VSWR	dB	-	-	2:1	VSWR
Operating Voltage	V	-	32	-	V_{DC}
Current Consumption @Output Power 50W	A	-	6.0	-	I_{DC}

Environmental Specifications

PARAMETER	UNIT	RATING	SYMBOL
Operating Case Temperature	$^{\circ}C$	-40 ~ 65	T_C
Storage Temperature	$^{\circ}C$	-40 ~ 105	T_{STG}
Relative Humidity(Non-condensing)	RH	95	%



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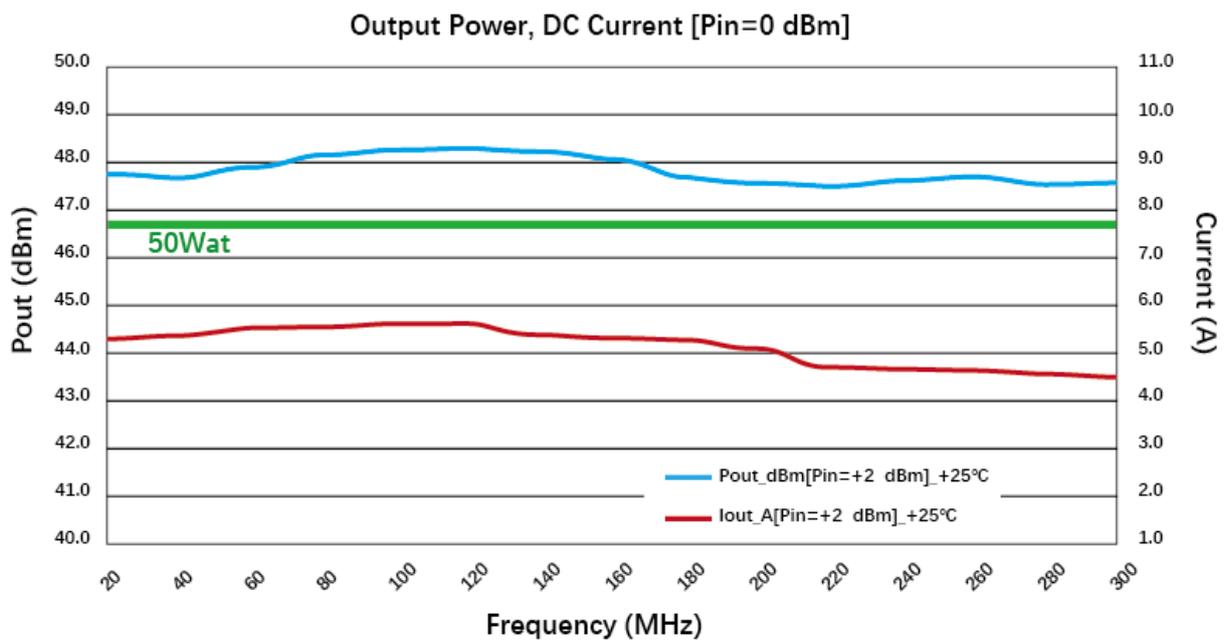
Operating Voltages

PARAMETER	UNIT	NOMINAL VOLTAGE	VOLTAGE ACCURACY	SYMBOL
Operating Voltage	V	32	± 2%	V _{DC}
HPA Enable Voltage	V	-		
Current Monitor Voltage	V	Output Voltage 1V@10A(0.1V/1A)		
Temp Monitor Voltage	V	Output Voltage 0.75V@25°C (1°C/0.01V)		

Mechanical Specifications

PARAMETER	UNIT	TYP
Mass	kg	0.5
Dimension	mm	120 x 70x 22(Without Connectors)
RF Connector	-	SMA Female : RF Input
		SMA Female : RF Output
DC Connector	-	Through core capacitor, Male : Supply
Cooling		External Heat-sink Required

Measurements Report:





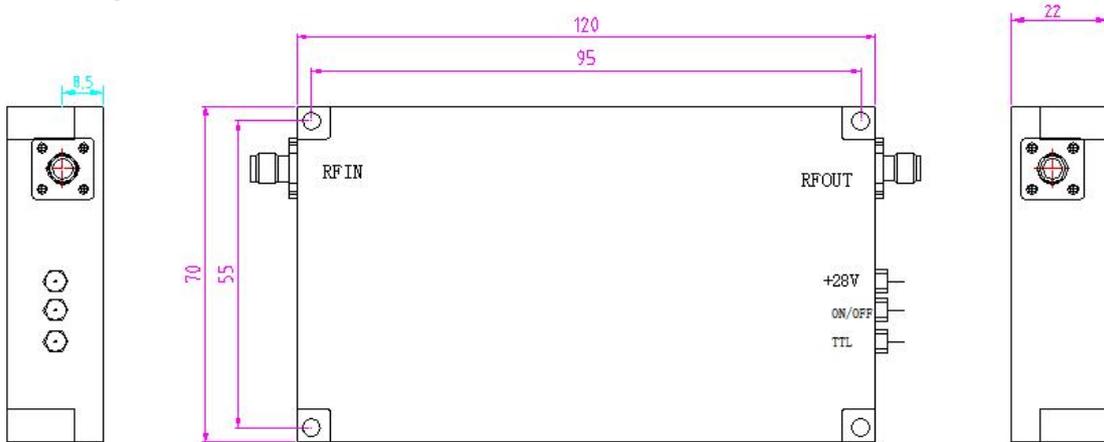
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Figure: Input Return Loss @ Pin = -20dBm (Ambient temp. +25±3, DC Voltage = 28V, Load VSWR 2.0)

Outline Drawing



Side View[3D]





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Pin Description

Pin No	Description	Name	Description
1	-	4	+28V
2	-	5	ON/OFF
3	-	6	TTL

Other Specification

Name	Description	Name	Description
ALC Control Range	None	Alarm	Overcurrent (abnormal transmission power) alarm function
In-band fluctuation	4.0		
Input standing wave	2.0		