



Wideband Amp Pallet

AMPB25004000-100W-GaN-Wideband-Amplifier

Product Features

- Frequency from 2500 ~4000MHz
- Class AB GaN design
- Instantaneous wide bandwidth
- 50 Ohm Input/Output impedance
- Small size and Light weight
- High reliability and Ruggedness

Description

The AMPB25004000-100W GaN Wideband Amplifier is designed for general purpose.

Operating frequency range is from 2500~4000MHz.

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	2500	-	4000	F_O
Operating Bandwidth	MHz	-	1500	-	BW
Peak Output Power @CW Signal	W	-	100	-	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	-	48	-	G_P
Gain Flatness @Input Power 0dBm	dB	-	-	±3	ΔG_P
Efficiency	%	-	32	-	E_{FF}
Harmonics 1 to N @Output Power 100W	dBc	10	-	-	H_N
Spurious Level	dBc	60	-	-	Spur
Input VSWR	dB	-	-	2:1	VSWR
Output VSWR	dB	-	-	2:1	VSWR
Operating Voltage	V	-	28	-	V_{DC}
Current Consumption @Output Power 100W	A	-	11	-	I_{DC}

Environmental Specifications

PARAMETER	UNIT	RATING	SYMBOL
Operating Case Temperature	$^{\circ}C$	-20 ~ 85	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	28	± 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	0.75
Dimension	mm	170 x 90x 25(Without Connectors)
RF Connector	-	SMA Female : RF Input
		N Female : RF Output
DC Connector	-	Through core capacitor, Male : Supply
Cooling		External Heat-sink Required

Measurements Report:

TYPICALPERFORMANCEDATA[LoadVSWR 1.2],(Normaltemp.+25±3)



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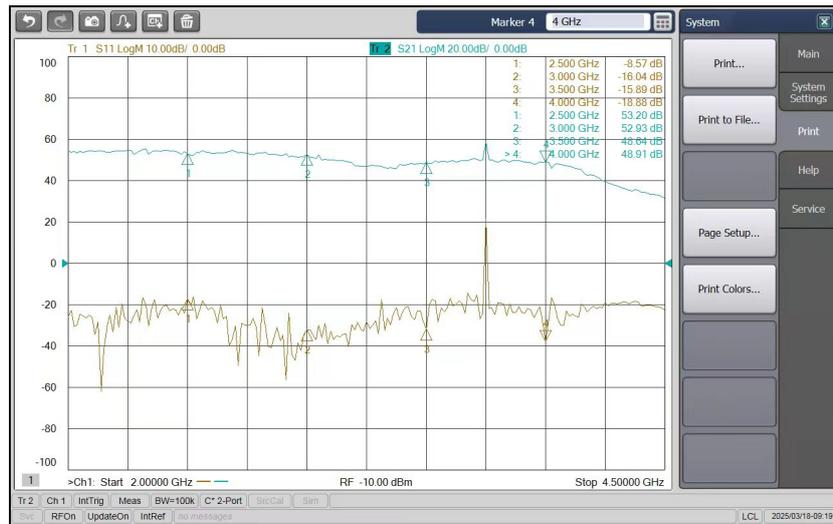
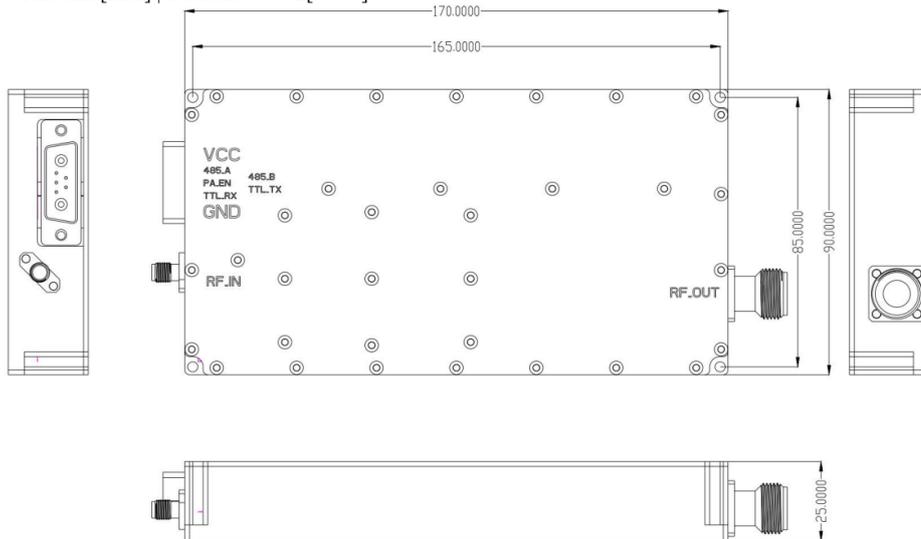


Figure: Input Return Loss @ Pin = -20dBm (Ambient temp. +25±3, DC Voltage = 28V, Load VSWR 1.2)
Outline Drawing

* Unit: mm[inch] | Tolerance ±0.2[.0078]



Side View[3D]





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Pin Description

Pin No	Description	Pin No	Description
A1	-	1	RS485
A2	-	2	PA_EN
A3	-	3	TTL_RX
A4	-	4	GND
A5	-	5	RS485
A6	-	6	TTL_TX
A7	-	7	GND
A8	-	8	NC

Pin view

[REDACTED]			
1	2	3	4
5	6	7	

Revision History

Part Number	Release Date	Version	Modification	Data Sheet Status
AMPB25004000-100W	2025.03.01	2.5.3.1	-	Preliminary