



8.0 – 13.0 GHz LOW NOISE AMPLIFIER WBA0812A¹

WBA0812A LNA is a low noise figure, wideband, and excellent gain flatness amplifier with very compact design. The amplifier offers 4.5 dB noise figure, 28.0 dB gain, and 20.0 dBm P_{1dB} at the frequency range from 8.0 GHz to 13.0 GHz.

WBA0812A is designed to meet the rugged standards of MIL-STD-202 and RoHS compliant.

Key Features:

Impedance:	50 Ohm
Low Noise:	4.5 dB
Gain:	28.0 dB
Gain Flatness:	+/-1.0 dB
Input VSWR:	2:1 Max
Output VSW:	2:1 Max
P _{1dB} :	20.0 dBm
Unconditional Stable:	k>1
Single Power Supply:	220 mA, @ +5.0 V
Frequency Range:	8 ~ 13 GHz
Operating Temperature:	-40 ~ +85 °C
Input & output Connector:	SMA Female
+5.0V DC PWR:	Feed Thru

Preliminary

Absolute Maximum Ratings²:

Symbol	Parameters	Units	Absolute Maximum
V _{dd}	DC Power Supply Voltage	V	6.0
I _{dd}	Drain Current	mA	250
P _{diss}	Total Power Dissipation	mW	1200
P _{In,Max}	RF Input Power	dBm	10
T _{ch}	Channel Temperature	°C	150
T _{STG}	Storage Temperature	°C	-55 ~ 125
T _{O,MAX}	Maximum Operating Temperature	°C	-40 ~ +85C

¹ Specifications are subject to change without notice.

² Operation of this device above any one of these parameters may cause permanent damage.

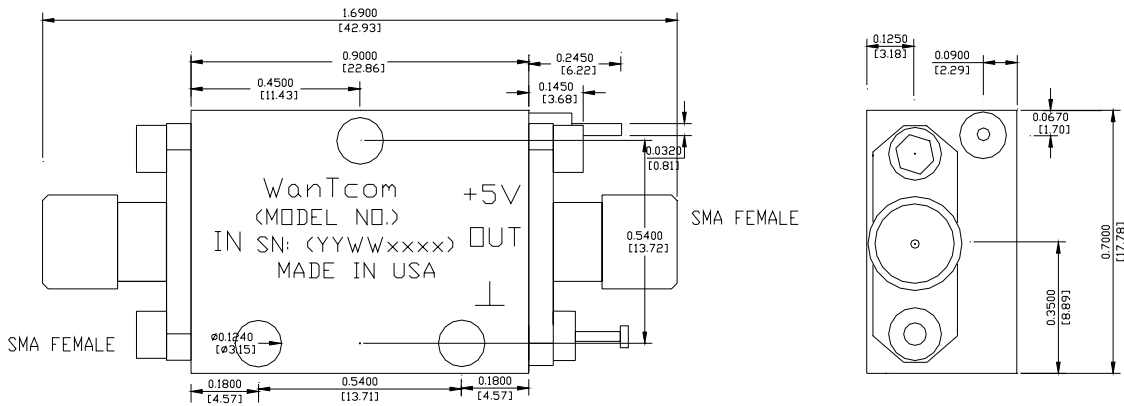


Specifications:

a) **Table 1** Summary of the electrical specifications of WBA0812A at room temperature

Index	Testing Item	Symbol	Test Constraints	Nom (RT)	Min	Max	Unit
1	Gain	S_{21}	8 - 13 GHz	28			dB
2	Gain Variation	ΔG	8 - 13 GHz	+/- 1.0			dB
3	Input VSWR	SWR_1	8 - 13 GHz			2:1	Ratio
4	Output VSWR	SWR_2	8 - 13 GHz			2:1	dB
5	Reverse Isolation	S_{12}	8 - 13 GHz		40		dB
6	Noise figure	NF	8 - 13 GHz	4.5		5.0	dB
7	Output P_{1dB} compression	P_{1dB}	8 - 13 GHz	20.0	18		dBm
8	Current Consumption	I_{dd}	$V_{dd} = +5 V$	220			mA
9	Power Supply Voltage	V_{dd}		5.0	4.80	5.20	V
10	Operating Temperature	T_o			-40	+85	°C
11	Maximum Average RF Input Power	$P_{IN, MAX}$	8 - 13 GHz			10	dBm
12	Weight			20		25	Gram

WBA0812A MECHANICAL OUTLINE: WP-10



BODY MATERIAL: BRASS
FINISH: GOLD PLATING

FIG. 1 WP-10 Outline

ORDERING INFORMATION

Model Number:	WBA0812A
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