



820- 980 MHz SUPER LOW NOISE POWER AMPLIFIER WLA08-3045A¹

WLA08-3045A is a super low noise figure, medium power, and high linearity amplifier with unconditional stable. The amplifier offers the exceptional noise figure of 0.65 dB, 35.0 dB gain, 29.0 dBm P_{1dB} and 45.0 dBm output IP₃ at the frequency range from 820 MHz to 980 MHz.

WLA08-3045A is most suitable for cellular base stations, wireless data communications, tower top receiver amplifiers, cellular micro-cells, last-mile wireless communication systems, and wireless measurement applications of Cellular and GSM bands.



Key Features:

Additional heat sink required!

MTBF ² :	>300,000 hrs (34 Years)
Impedance:	50 Ohm
Unconditional Stable:	k > 1
Exceptional Low Noise:	0.65 dB
Output IP₃:	45.0 dBm
Gain:	35.0
Gain Flatness:	+/-0.50 dB
Input VSWR:	1.25:1
Output VSWR:	1.25:1
P_{1dB}:	29.0 dBm
Single Power Supply:	280 mA, @ +9.0 V
Frequency Range:	820 ~ 980 MHz
Operating Temperature:	-40 ~ +85 °C
Miniature Size:	1.08" x 1.00" x 0.41", SMA F.

Absolute Maximum Ratings³:

Symbol	Parameters	Units	Absolute Maximum
V _{dd}	DC Power Supply Voltage	V	11.0
I _{dd}	Drain Current	mA	320
P _{diss}	Total Power Dissipation	W	3.5
P _{In,Max}	RF Input Power	dBm	10
T _{ch}	Channel Temperature	°C	150
T _{STG}	Storage Temperature	°C	-65 ~ 150
T _{O,MAX}	Maximum Operating Temperature	°C	-40 ~ +85
R _{th,c}	Thermal Resistance	°C/W	35

¹ Specifications are subject to change without notice.

² MTBF: Mean Time Between Failure, Per TR-NWT-000332, ISSUE 3, SEPTEMBER, 1990, T=40°C

³ Operation of this device above any one of these parameters may cause permanent damage.



Specifications:

a) **Table 1** Summary of the electrical specifications of WLA08-3045A at room temperature

Index	Testing Item	Symbol	Test Constraints	Nom (RT)	Min	Max	Unit
1	Gain	S_{21}	820 - 980 MHz	35	33	37	dB
2	Gain Variation	ΔG	820 - 980 MHz	+/- 0.50		+/- 1.0	dB
3	Input Return Loss	S_{11}	820 - 980 MHz	20	16		dB
4	Output Return Loss	S_{22}	820 - 980 MHz	20	16		dB
5	Reverse Isolation	S_{12}	820 - 980 MHz	38	35		dB
6	Noise figure	NF	820 - 980 MHz	0.65		0.80	dB
7	Output P _{1dB} compression	P _{1dB}	820 - 980 MHz	29.0	27.0	31.0	dBm
8	Output-Third-Order Interception point	IP ₃	Two-Tone, Pout 0 dBm each, 1 MHz separation	45.0	42.0		dBm
9	Current Consumption	I _{dd}	V _{dd} = +9 V	280			mA
10	Power Supply Voltage	V _{dd}		9.0	8.0	10.0	V
11	Operating Temperature	T _o			-40	+85	°C
12	Maximum Average RF Input Power	P _{IN, MAX}	820 - 980 MHz			10	dBm

WLA08-3045A MECHANICAL OUTLINE: WP-5

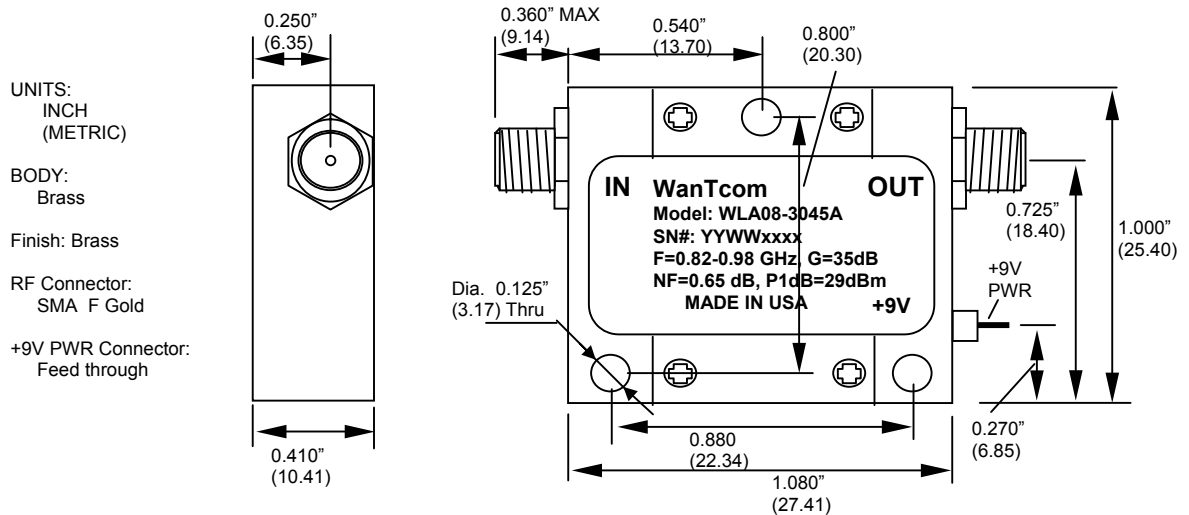


FIG. 1 WP-5 Outline

ORDERING INFORMATION

Function	Normal
Model Number:	WLA08-3045A
