

## Description: 1608 UWB 6.5-8GHz Chip Antenna

**PART NUMBER: ANT1608LL00R6580A**

### Features:

- Size : 1.6x0.8x0.6 mm
- Omni-directional Radiation
- Tape & reel automatic mounting
- Reflow process compatible
- RoHS compliant

### Applications:

- Smart tag
- Indoor navigation
- Access management
- RTLS B2B
- UWB group Channel 5 (6.5GHz) to Channel 9 (8GHz)



Netweigh/pcs(g) : 0.006

## ELECTRICAL SPECIFICATIONS

<b>Working Frequency</b>	6200 ~ 8200MHz
<b>Bandwidth</b>	2000 MHz
<b>Return Loss</b>	10 dB (Min.)
<b>Polarization</b>	Linear
<b>Peak Gain</b>	2 dBi (Min.)
<b>Impedance</b>	50 $\Omega$
<b>Operating Temperature</b>	-40 ~ 125 $^{\circ}\text{C}$
<b>Maximum Power</b>	1 W
<b>Termination</b>	Ni / Sn (Environmentally-Friendly Leadless)
<b>Resistance to Soldering Heats</b>	260 $^{\circ}\text{C}$ , 10sec.

#### NOTE

1. The specification is defined on Pulse evaluation board

In the effort to improve our products, we reserve the right to make changes judged to be necessary.

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For more information:



Pulse Worldwide Headquarters  
 15255 Innovation Drive #100  
 San Diego, CA 92128  
 USA  
 Tel: 1-858-674-8100

Pulse/Larsen Antennas  
 18110 SE 34<sup>th</sup> St Bldg 2 Suite 250  
 Vancouver, WA 98683  
 USA  
 Tel: 1-360-944-7551

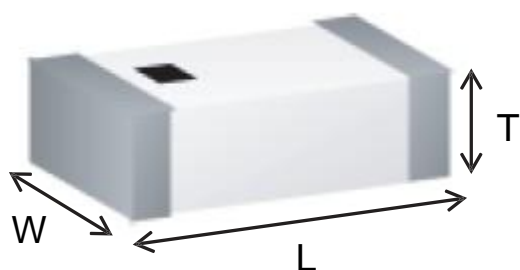
Europe Headquarters  
 Pulse GmbH & Do, KG  
 Zeppelinstrasse 15  
 Herrenberg, Germany  
 Tel: 49 7032 7806 0

Pulse (Suzhou) Wireless Products Co, Inc.  
 99 Huo Ju Road(#29 Bldg, 4<sup>th</sup> Phase  
 Suzhou New District  
 Jiangsu Province, Suzhou 215009 PR China  
 Tel: 86 512 6807 9998

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## MECHANICAL DRAWING



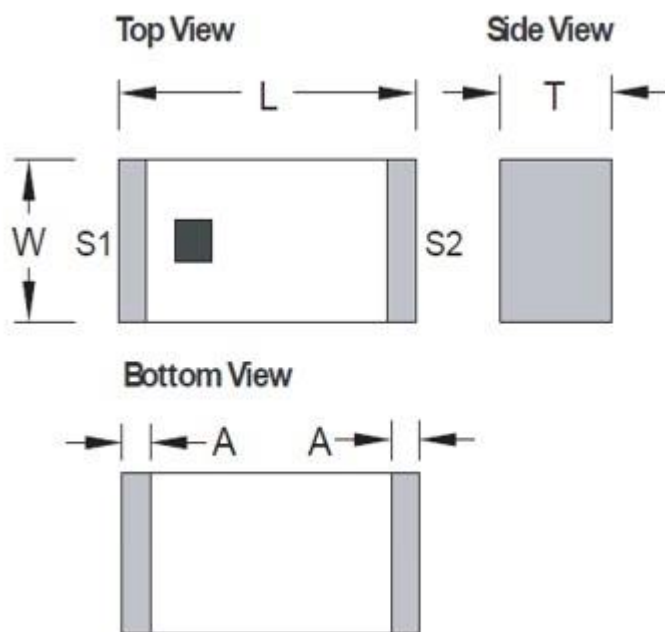
	Dimension
L (mm)	$1.60 \pm 0.15$
W (mm)	$0.80 \pm 0.15$
T (mm)	$0.60 \pm 0.15$
A (mm)	$0.25 \pm 0.15$

### Terminal name

S1  
S2

### Function

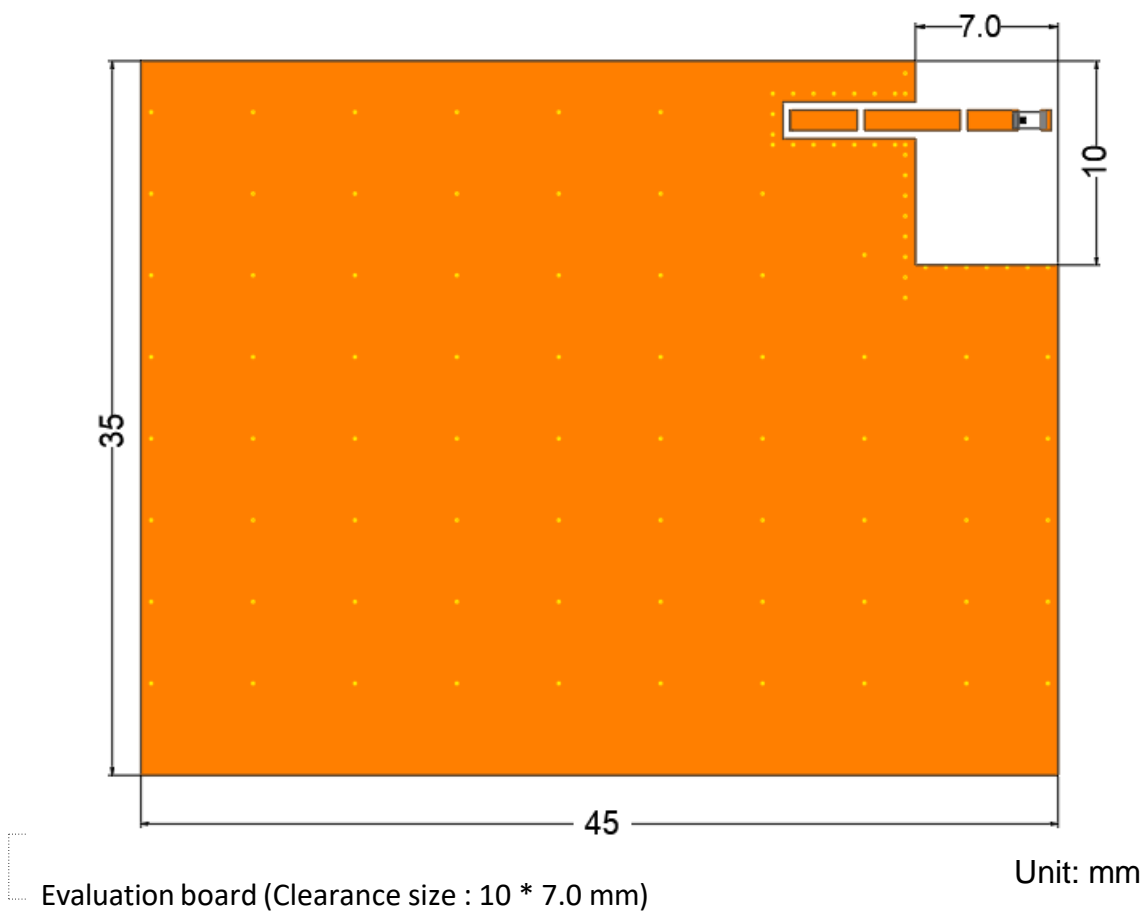
Feeding Pc  
Soldering Pc



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## LAYOUT OF EVALUATION BOARD



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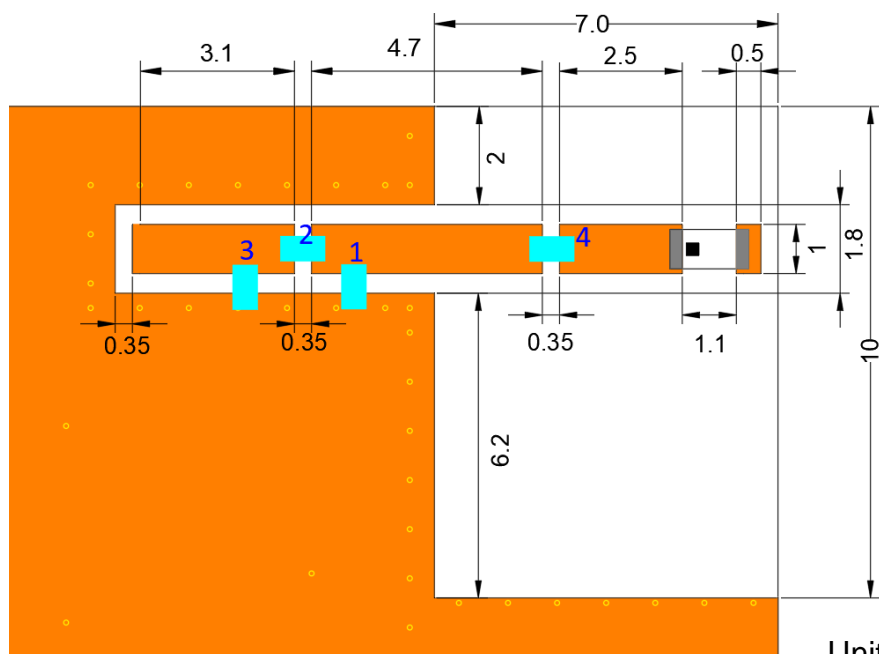
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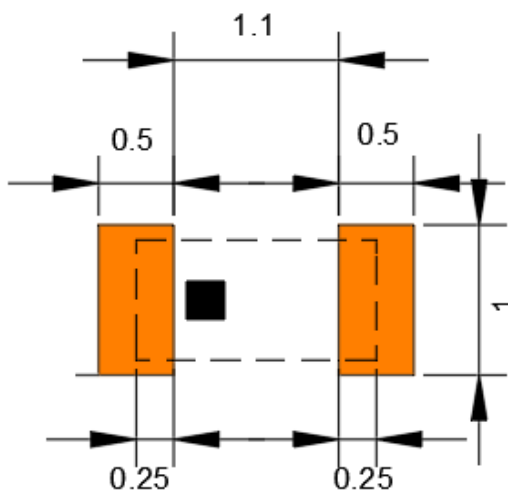
### LAYOUT OF EVALUATION BOARD



Unit : mm

■ : Matching component

Reference design of Matching circuit



■ : footprint

□ : Antenna Outline

Unit : mm

Footprint

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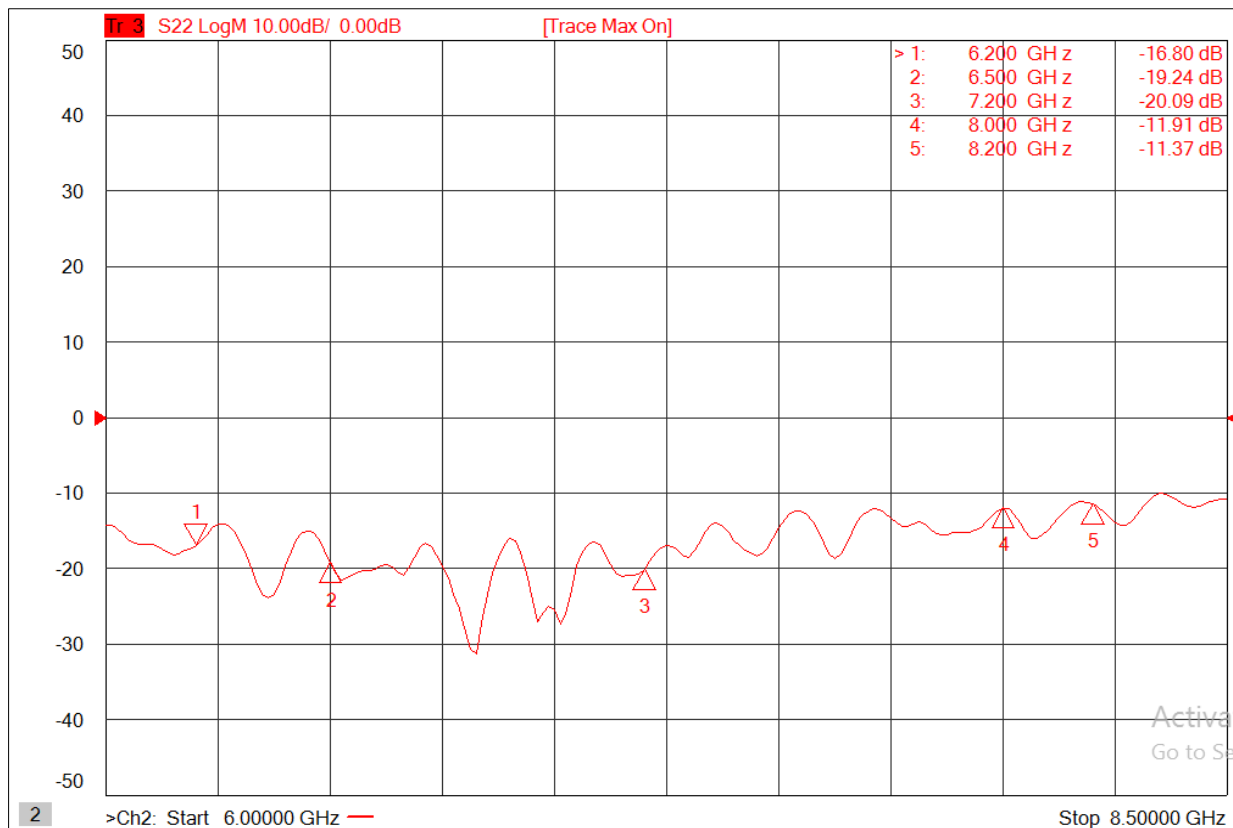
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## RETURN LOSS



### Maker data

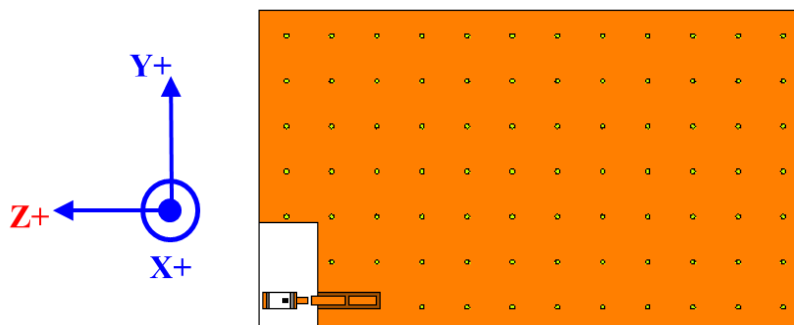
- 1. 6.2GHz, -16.80 dB
- 2. 6.5GHz, -19.24 dB
- 3. 7.2GHz, -20.09 dB
- 4. 8.0GHz, -11.91 dB
- 5. 8.2GHz, -11.37 dB

Return loss

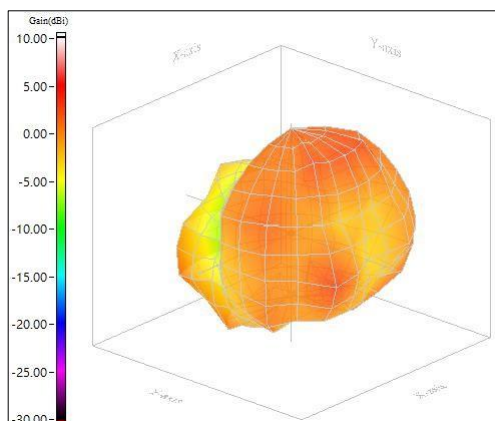
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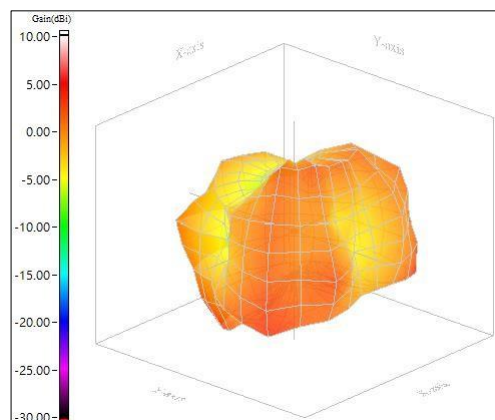
### RADIATION PATTERN



Evaluation board and XYZ direction



Frequency = 6200 MHz  
Max. Gain = 2.81 dBi  
Efficiency = 75.5 %



Frequency = 6500 MHz  
Max. Gain = 3.98 dBi  
Efficiency = 84.8 %

Radiation pattern

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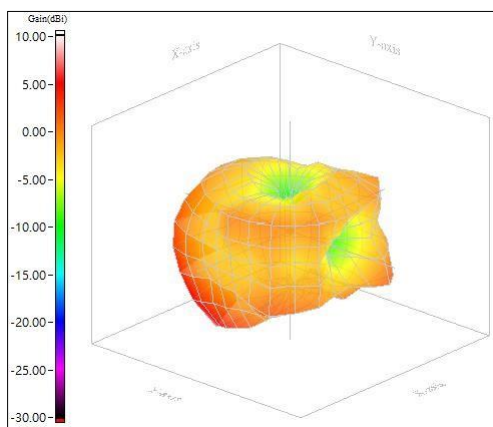
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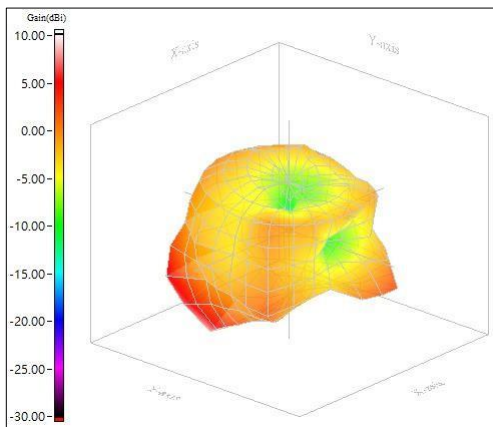
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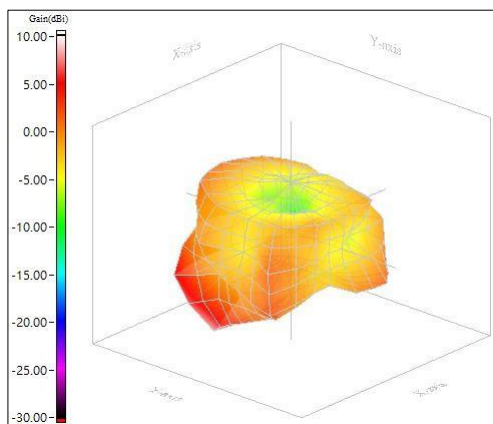
### RADIATION PATTERN



Frequency = 7200 MHz  
Max. Gain = 7.18 dBi  
Efficiency = 86.6 %



Frequency = 8000 MHz  
Max. Gain = 8.14 dBi  
Efficiency = 83.0 %



Frequency = 8200 MHz  
Max. Gain = 8.24 dBi  
Efficiency = 84.92 %

Radiation pattern

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### REVISION HISTORY

Revision	Date	Description
Version 1	Jan. 2023	- New issue.

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