

**Description: 3216 UWB 6.5-8GHz Chip Antenna****PART NUMBER: ANT3216LL00R6580A****Features:**

- Size : 3.2x1.6x1.2 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)

**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>Azimuth Beamwidth</b>	Omni-directional
<b>Peak Gain</b>	2 dBi (Min.)
<b>Impedance</b>	50 $\Omega$
<b>Operating Temperature</b>	- 30 ~ 85 °C
<b>Maximum Power</b>	1 W
<b>Termination</b>	Ni / Sn (Environmentally-Friendly Leadless)
<b>Resistance to Soldering Heats</b>	260°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

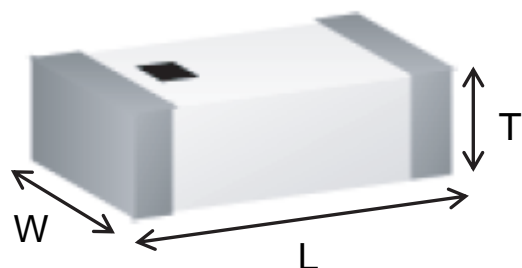
Europe Headquarters  
Pulse GmbH & Co, KG  
Zeppelinstrasse 15  
Herrenberg, Germany  
Tel: 49 7032 7806 0

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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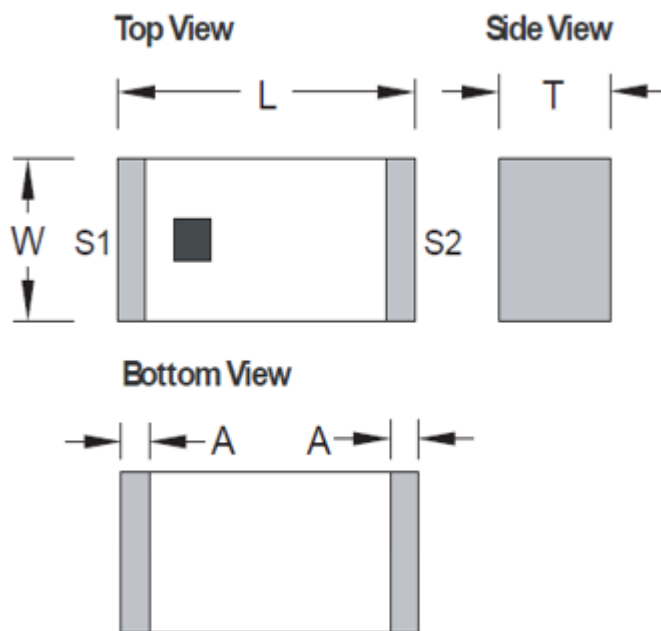
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### MECHANICAL DRAWING



	Dimension
L (mm)	$3.20 \pm 0.20$
W (mm)	$1.60 \pm 0.15$
T (mm)	$1.20 \pm 0.15$
A (mm)	$0.40 \pm 0.25$

Terminal name	Function
S1	Feeding Point
S2	Soldering Point

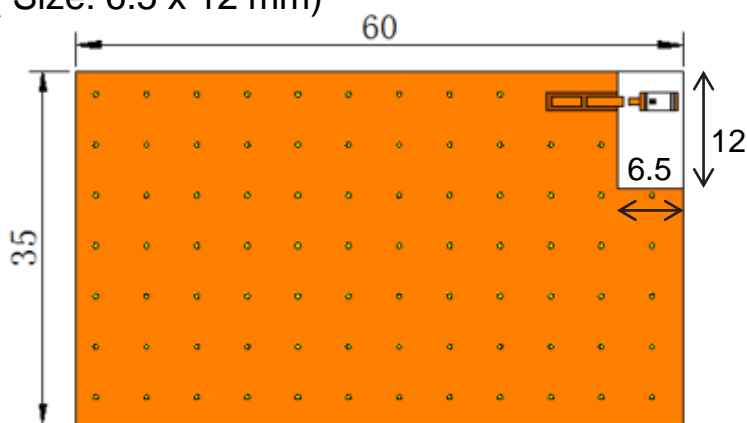


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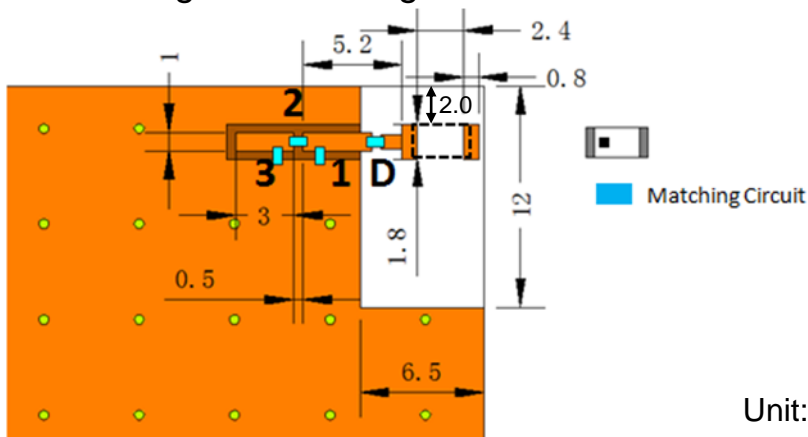
### LAYOUT OF EVALUATION BOARD

- Clearance Definition:  
( Size: 6.5 x 12 mm)



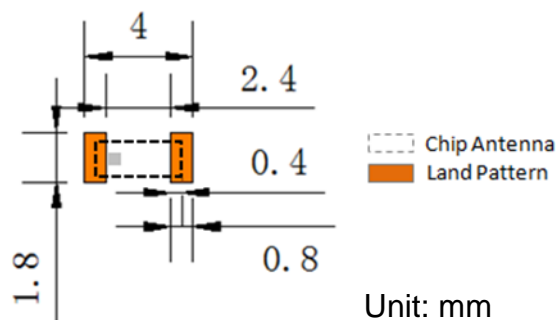
Unit: mm

- Reference design of Matching circuit



Unit: mm

- Soldering Pads Dimension and Footprint



Unit: mm

Outlook and dimension of evaluation board

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### ELECTRICAL PERFORMANCES



Maker data

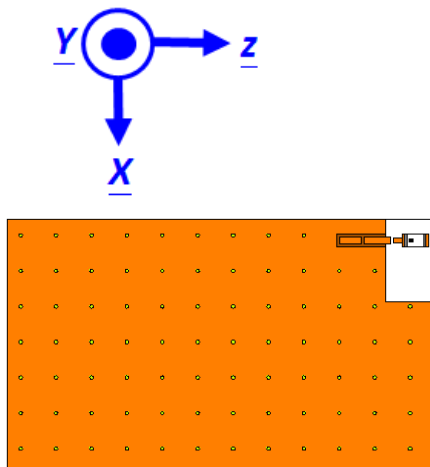
1. 6.2GHz, -14.87dB
2. 6.5GHz, -18.72dB
3. 7.2GHz, -13.38dB
4. 8.0GHz, -15.99dB
5. 8.2GHz, -18.39dB

Return loss

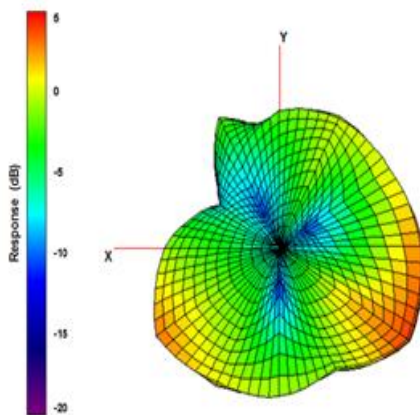
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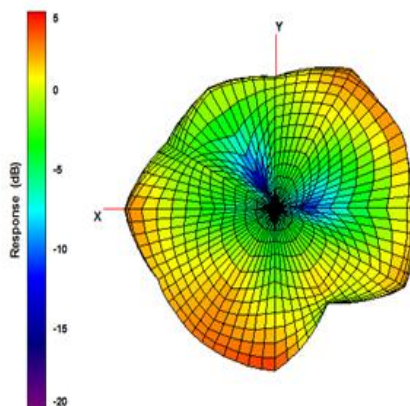
### ELECTRICAL PERFORMANCES



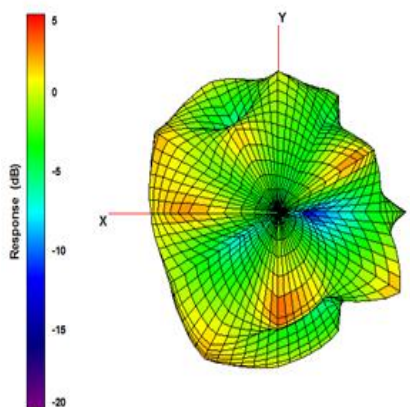
Evaluation board and XYZ direction



Frequency = 6500MHz  
Max. Gain = 3.0 dBi  
MEG (mean effective gain)  
= -1.7 dBi  
Efficiency = 67.9%



Frequency = 7200MHz  
Max. Gain = 5.2 dBi  
MEG (mean effective gain)  
= -1.3 dBi  
Efficiency = 74.9%



Frequency = 8000MHz  
Max. Gain = 1.7 dBi  
MEG (mean effective gain)  
= -3.1 dBi  
Efficiency = 48.7%

[ ] Radiation pattern

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## REVISION HISTORY

Revision	Date	Description
Version 1	Aug. 5, 2021	- New issue.