

**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 Ω
<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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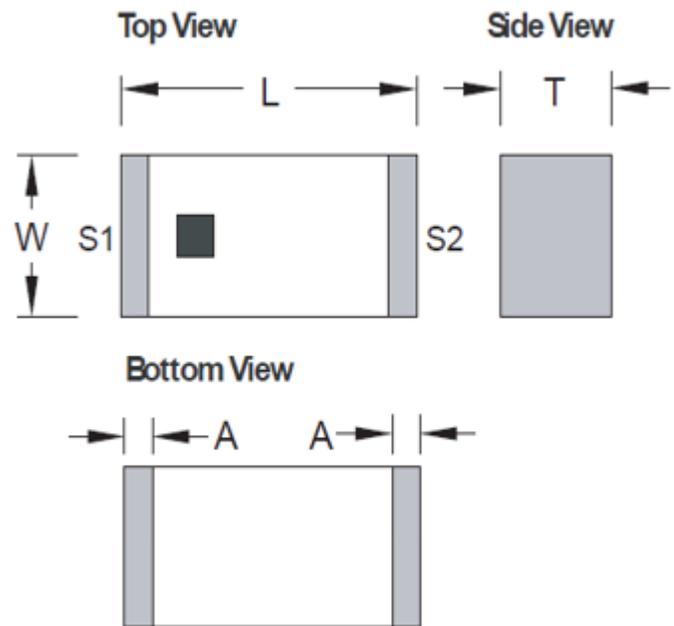
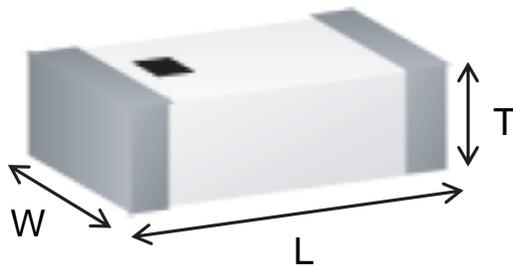
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**MECHANICAL DRAWING**



	<b>Dimension</b>
L (mm)	3.20 ±0.20
W (mm)	1.60 ±0.15
T (mm)	1.20 ±0.15
A (mm)	0.40 ±0.25

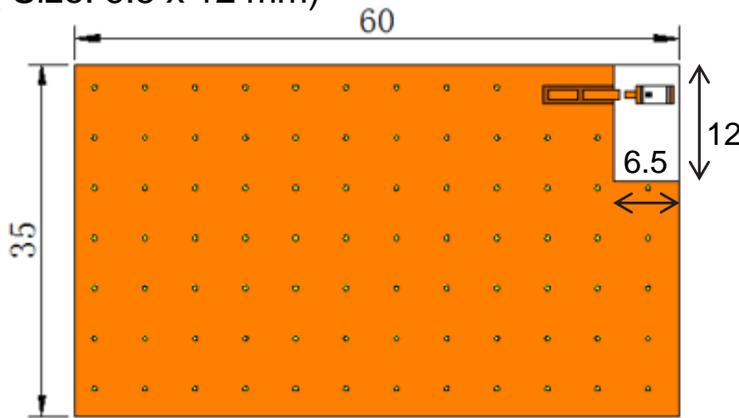
<b>Terminal name</b>	<b>Function</b>
S1	Feeding Point
S2	Soldering Point

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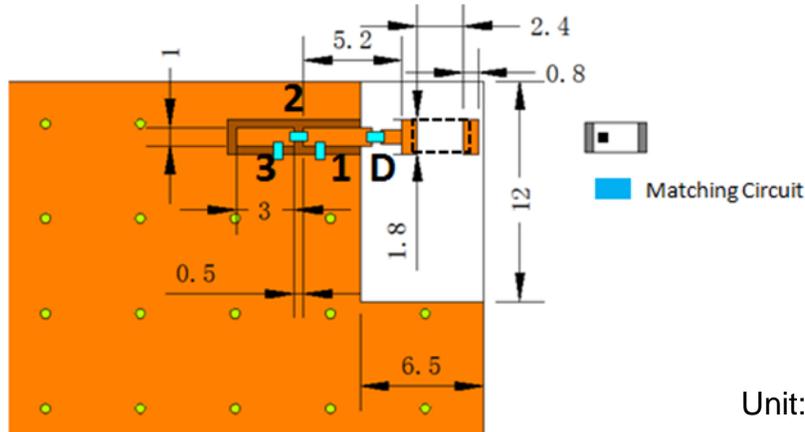
**LAYOUT OF EVALUATION BOARD**

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



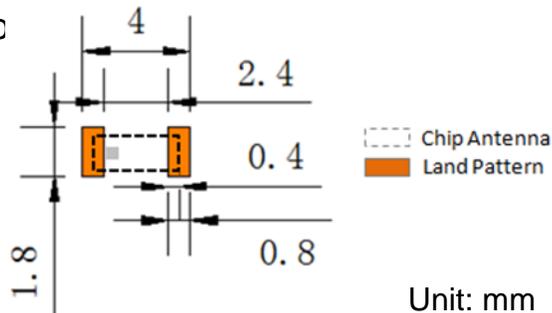
Unit: mm

- 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

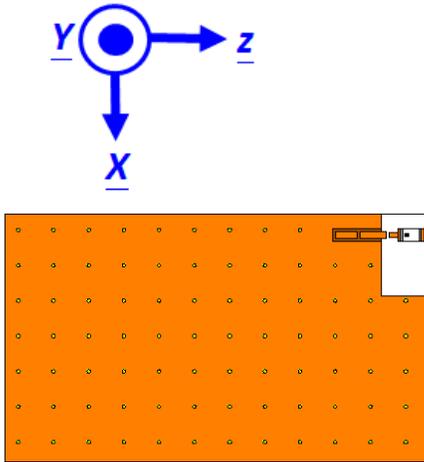
- 1. 6.2GHz, -14.87dB
- 2. 6.5GHz, -18.72dB
- 3. 7.2GHz, -13.38dB
- 4. 8.0GHz, -15.99dB
- 5. 8.2GHz, -18.39dB

Return loss

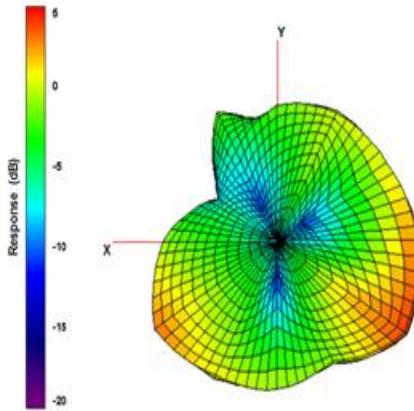
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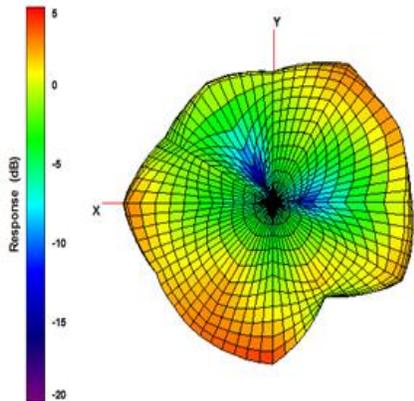
**ELECTRICAL PERFORMANCES**



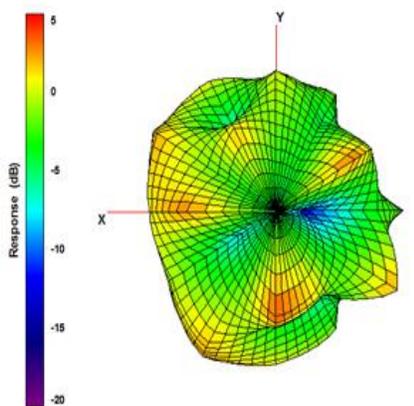
Evaluation board and XYZ direction



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.

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