

## Description: 7020 870MHz Chip Antenna

**PART NUMBER: ANT7020LL05R0870A**

### Features:

- Size : 7.00x2.05x0.78 mm
- Omni-directional radiation
- Tape & reel automatic mounting
- Reflow process compatible
- RoHS compliant



### Applications:

- Smart meter
- Industrial remote control
- ISM band equipment

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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### ELECTRICAL SPECIFICATIONS

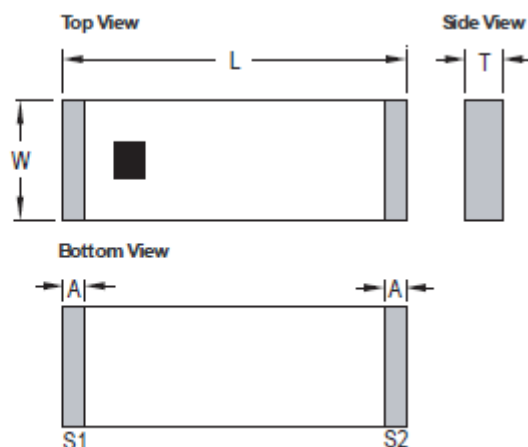
|                               |                                             |
|-------------------------------|---------------------------------------------|
| Working Frequency             | 870 MHz                                     |
| Bandwidth                     | 37 MHz(Typ.)                                |
| Return Loss                   | 10 dB Min.                                  |
| Polarization                  | Linear                                      |
| Azimuth Beamwidth             | Omni-directional                            |
| Peak Gain                     | 1.83 dBi(Typ.)                              |
| Impedance                     | 50 Ω                                        |
| Operating Temperature         | - 40~105 °C                                 |
| Maximum Power                 | 1 W                                         |
| Termination                   | Ni / Sn (Environmentally-Friendly Leadless) |
| Resistance to Soldering Heats | 260°C , 10sec.                              |

#### NOTE

1. The specification is defined on Pulse evaluation board

### MECHANICAL DRAWING

|        | Dimension       |
|--------|-----------------|
| L (mm) | $7.00 \pm 0.20$ |
| W (mm) | $2.05 \pm 0.20$ |
| T (mm) | $0.78 \pm 0.20$ |
| A (mm) | $0.45 \pm 0.20$ |



| Terminal name | Function        |
|---------------|-----------------|
| S1            | Feeding Point   |
| S2            | Soldering Point |

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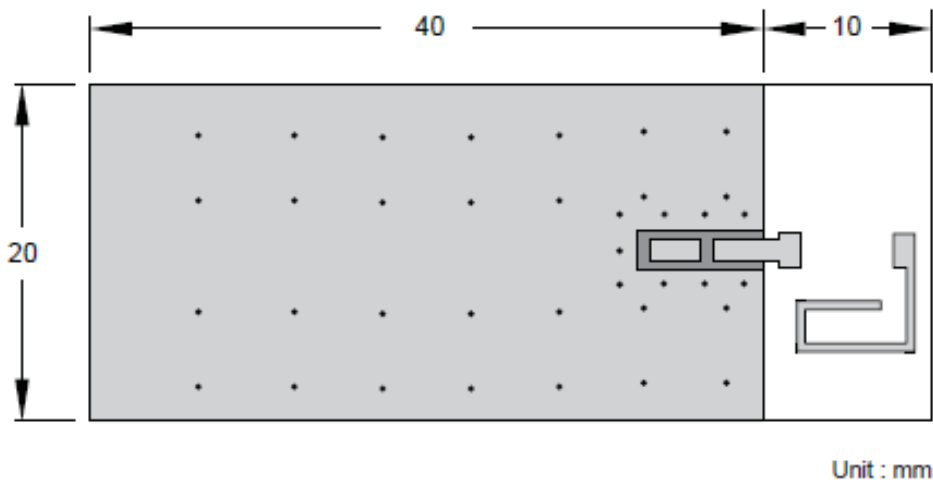
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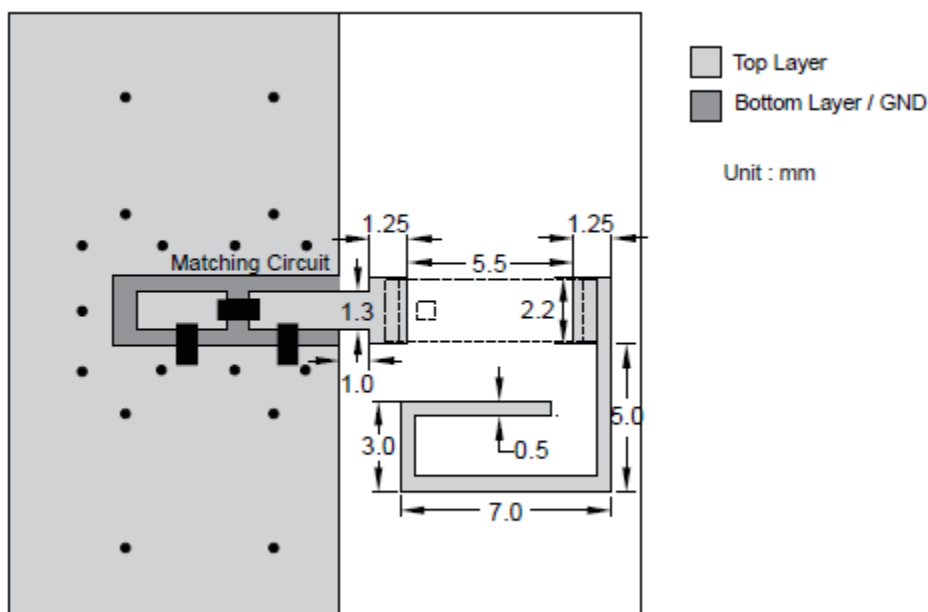
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## REFERENCE DESIGN OF EVALUATION BOARD



Outlook and dimension of evaluation board



Details of soldering Pad

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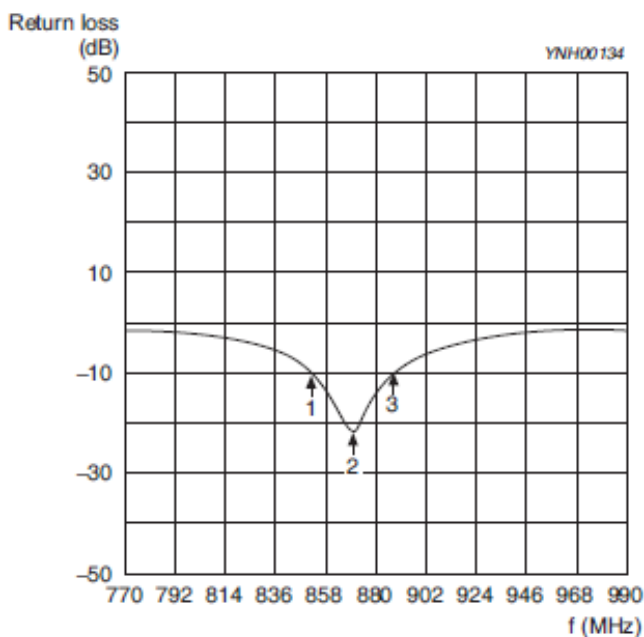
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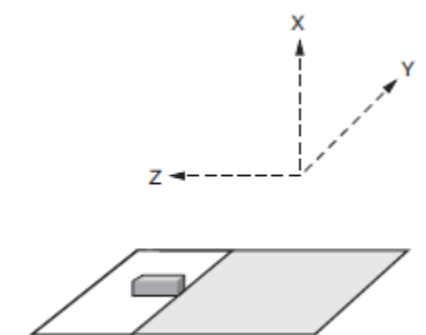
### ELECTRICAL PERFORMANCES



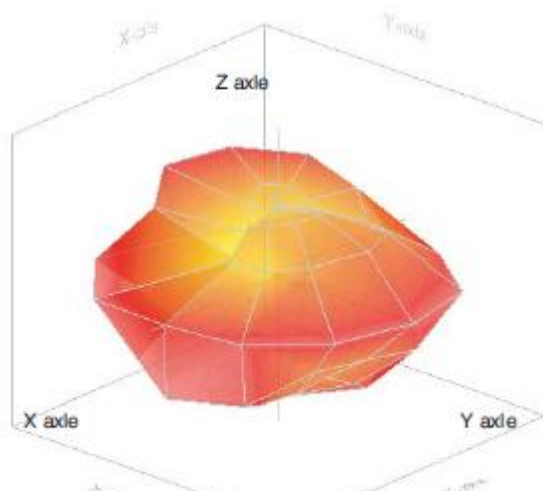
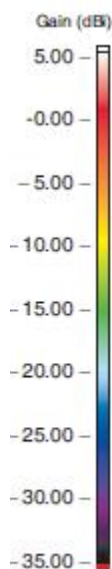
Maker data

1. 852MHz, -10dB
2. 870MHz, -22dB
3. 889MHz, -10dB

Return loss



Evaluation board and XYZ direction



Frequency= 870 MHz

Max gain = 1.83 dBi, at (90,330)

MEG (mean effective gain)= -2.51dBi

Directivity (dB) = 3.75

Efficiency = -1.92dB, 64.20%

Radiation pattern

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### REVISION HISTORY

| Revision  | Date          | Description |
|-----------|---------------|-------------|
| Version 1 | Oct. 14, 2020 | - New issue |

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