

TECHNICAL DATA SHEET

Description: 902-928MHz Ceramic Directional

5dBi Antenna

PART NUMBER: W3215



Features:

- Frequency 902-928MHz
- Peak Gain +5dBi
- Polarization Linear
- Size 40 x 40 x 6 mm
- Pin feed
- Adhesive tape mount
- RoHS Compliant

Applications:

- ISM 915MHz radios
- IoT Devices
- Smart traffic signs
- Lighting controls
- Monitoring

All dimensions are in mm / inches

Issue: 1850

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Pulse Worldwide Headquarters 15255 Innovation Drive #100 San Diego, CA 92128 USA Tel:1-858-674-8100 Pulse/Larsen Antennas 18110 SE 34th 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,4th Phase Suzhou New District Jiangsu Province, Suzhou 215009 PR China Tel: 86 512 6807 9998



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ELECTRICAL SPECIFICATIONS

Antenna Type Patch Antenna Frequency 902-928MHz

 Nominal Impedance
 50 Ω

 Peak Return Loss
 -20dB

 Return Loss (902M~928M)
 <-4dB</td>

 Peak Gain
 4.5 dBi

 Gain (902M~928M)
 >1.4dBi

 Peak Efficiency
 700%

Peak Efficiency 70% Efficiency (902M~928M) >37%

Polarization Linear – Vertical

Radiation Pattern – Vertical plane Omni

Radiation Pattern – Horizontal plane Directional

MECHANICAL SPECIFICATIONS

Overall size 40 x 40 x 6.0 mm

Weight 37g

Connection type Pin soldering, adhesive tape

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature $-40\sim+85$ °C Storage Temperature $-40\sim+85$ °C RoHS Compliant Yes

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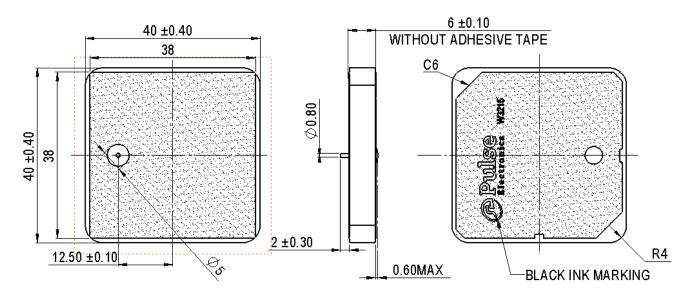
TECHNICAL DATA SHEET

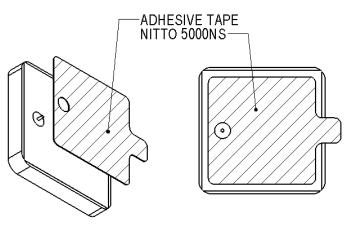
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MECHANICAL DRAWING





| NO. | Description | Structure and material |
|-----|-------------------|------------------------|
| 1 | Antenna Substrate | Dielectric Ceramics |
| 2 | Pin | Copper and tinplated |
| 3 | Electrode | Ag Plated |
| 4 | Ground Base | Ag Plated |
| 5 | Adhesive type | NITTO 5000NS |

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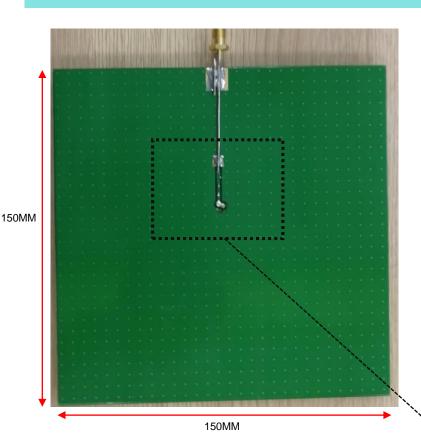
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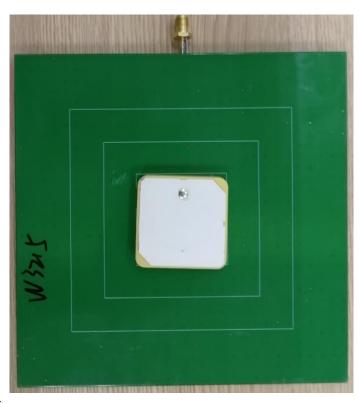
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TEST SETUP FOR RF MEASUREMENTS

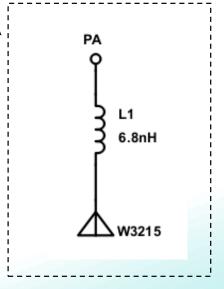




Test PCB 150 x 150mm

Matching circuit: 6.8nH series inductor

Series inductor can be used to optimize center frequecy on custom implementation.



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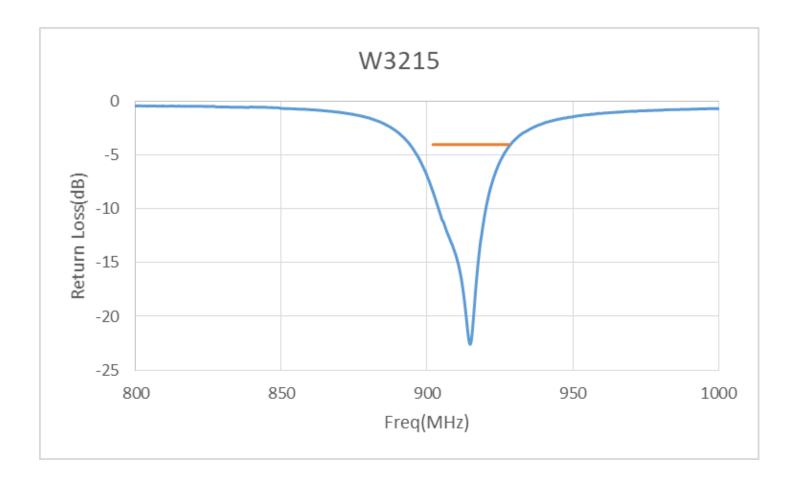
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CHARTS

Return Loss









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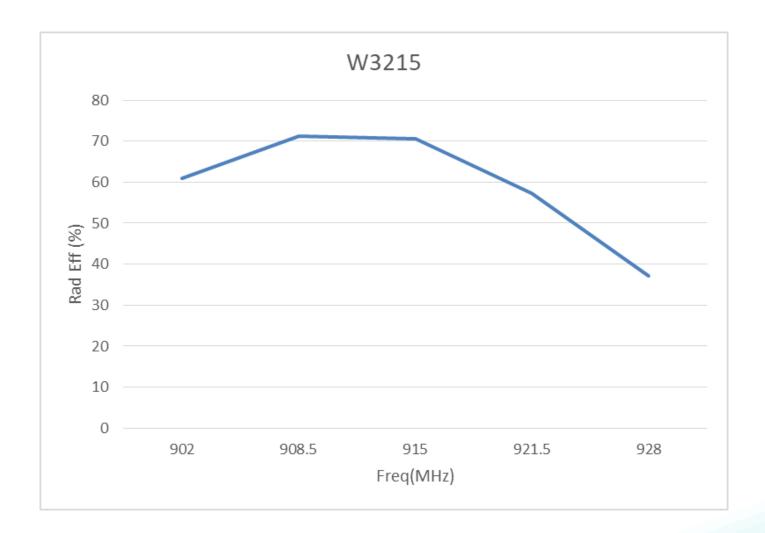
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CHARTS

Radiation Efficiency







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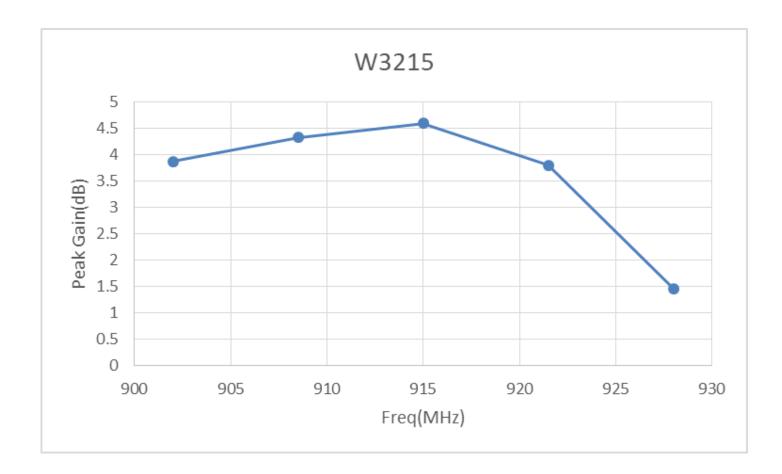
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CHARTS

Peak Gain







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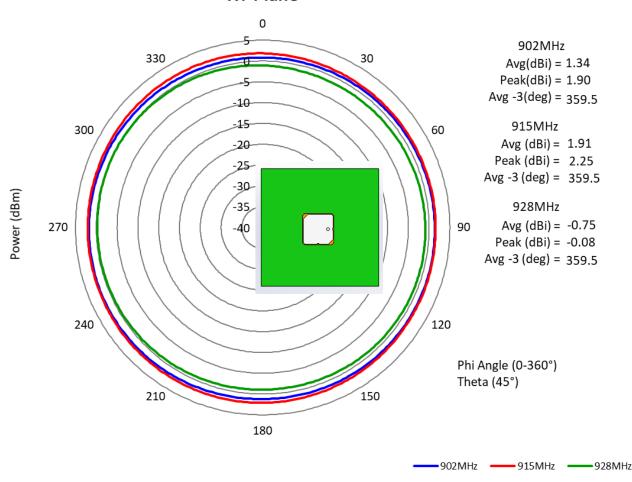
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CHARTS

Radiation pattern(2D) XY Plane

XY Plane







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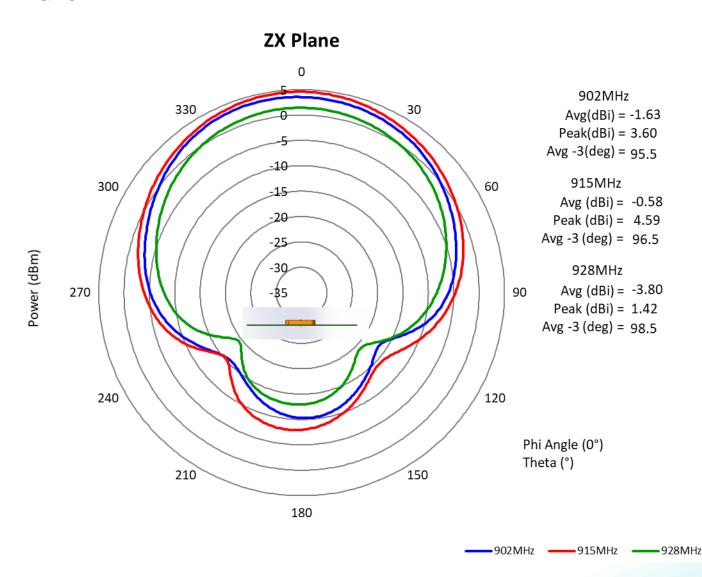
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CHARTS

Radiation pattern(2D) ZX Plane







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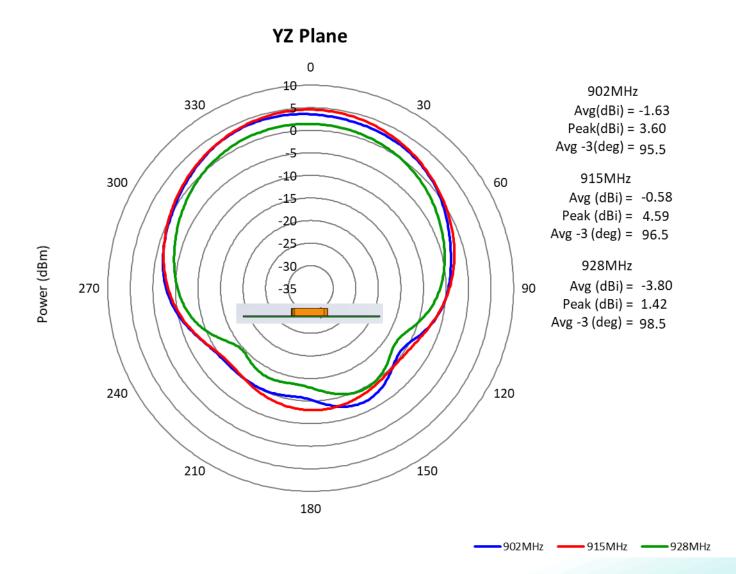
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CHARTS

Radiation pattern(2D) YZ Plane





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PACKAGING

Per package tray 21 elements

Per vacuum bag 4 package bases

Per inner box 1 vacuum bag

Per package 4 inner boxes

Total: 336 pcs

Big box dimensions (MM): 365X365X160MM

Mouser Electronics

Authorized Distributor

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