

TECHNICAL DATA SHEET Description: 868MHz Monopole SMD Antenna

PART NUMBER: W3016

Features:

- 863-870MHz
- Monopole radiator
- Gain -3dBi
- Size 10 x 3.2 x 4 mm
- Optimized for small PCB
- Easy tuning with matching circuit





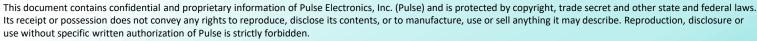
Applications:

- ISM 868MHz radios
- Sigfox
- LoRa
- IoT, M2M
- Sensors, monitors

All dimensions are in mm

Issue: 1918

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ELECTRICAL SPECIFICATIONS

| Antenna Type | Ceramic HTC |
|--------------------|-------------|
| Frequency | 863-870 MHz |
| Nominal Impedance | 50 Ω |
| Return Loss | <-15 dB |
| Radiation Pattern | Omni |
| Gain | >-3 dBi |
| Efficiency | >20% |
| Polarization | Vertical |
| Power Withstanding | 2 W |
| | |

| MECHANICAL SPECIFICATIONS |
|---------------------------|
|---------------------------|

| Overall Length | 10x3.2x4mm |
|----------------------------|-----------------------|
| Weight | 0.6g |
| Antenna Color / Material | Ceramic Grey / Silver |
| Moisture Sensitivity Level | MSL1 |
| | |

ENVIRONMENTAL SPECIFICATIONS

| Operating Temperature | |
|-----------------------|--|
| Storage Temperature | |
| RoHS Compliant | |

-40 to +85 ° C -40 to +85° Yes

Above electrical specification tested on 25x25mm sized PCB

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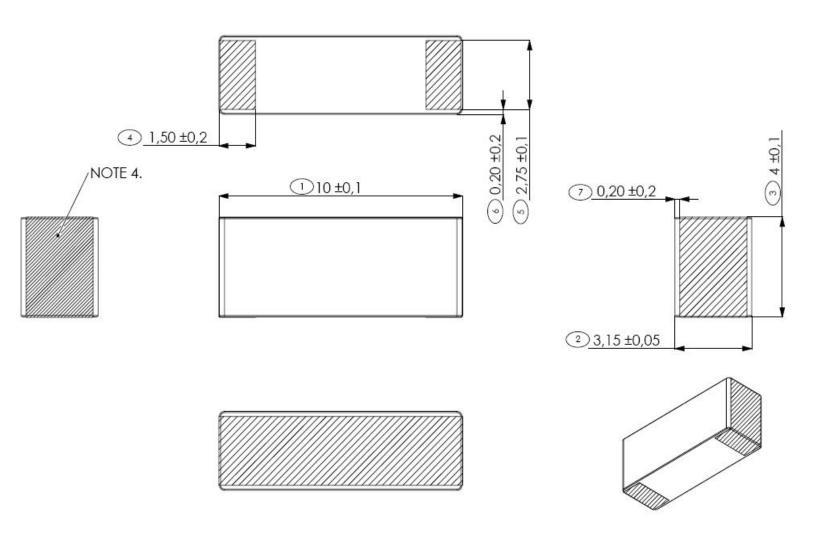
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MECHANICAL DRAWING



| с | Terminal Name | Terminal Dimensions |
|--|---------------|---------------------|
| 1 | Feed | 1.5 x 2.75 mm |
| 2 | Support pad | 1.5 x 2.75 mm |
| Antenna is symmetrical and orientation on footprint can be rotated 180 degrees without change in performance | | |

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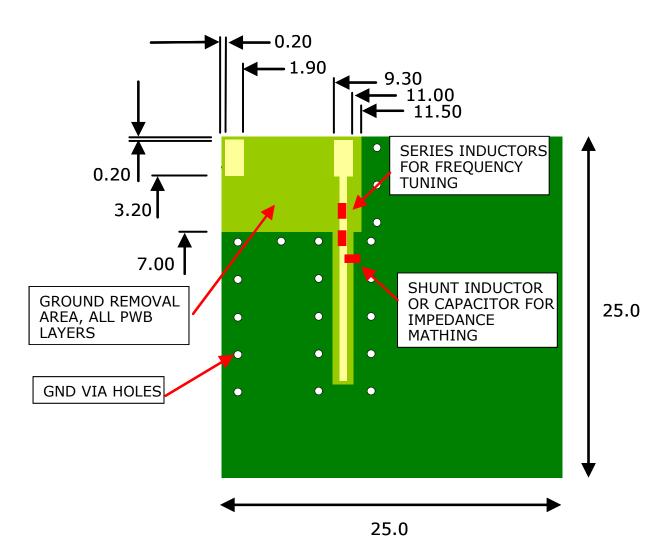
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MECHANICAL DRAWING

Test Board Layout



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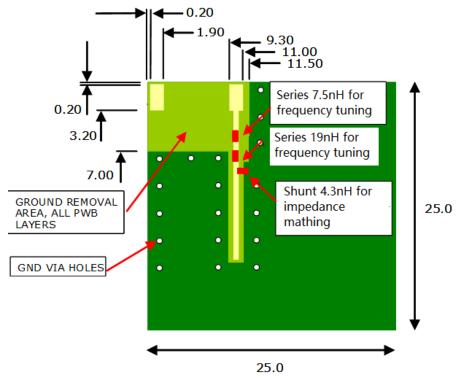
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TEST SETUP



Test on Pulse test board with ferrite bead test cable.



Matching circuit for reference

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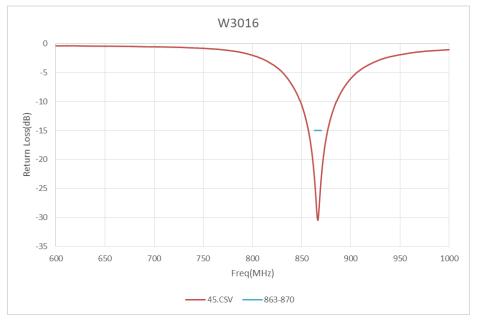
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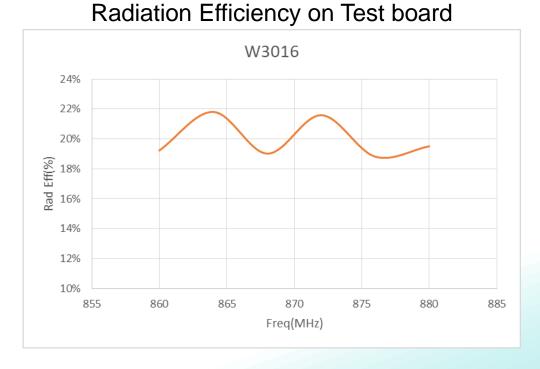
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CHARTS



Return loss on Test board



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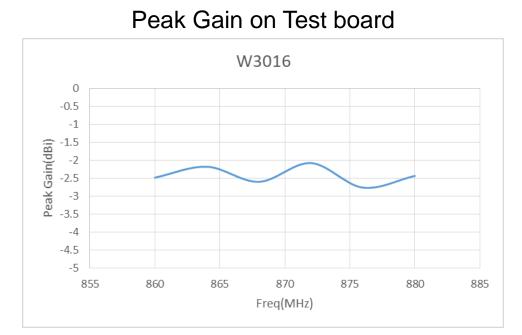
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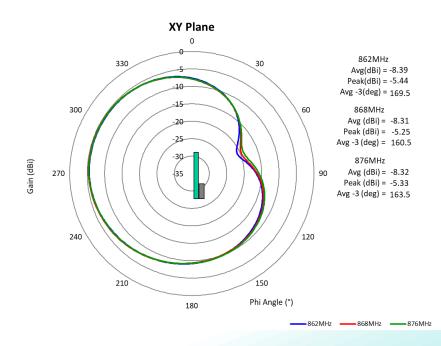
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CHARTS



Radiation pattern at XY plane



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Series: Ceramic Chip Antenna



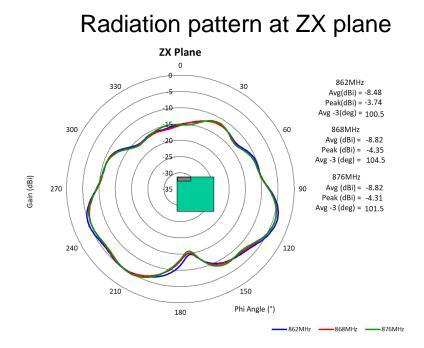
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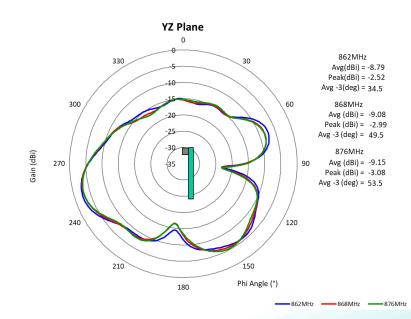
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CHARTS



Radiation pattern at YZ plane



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Series: Ceramic Chip Antenna



TECHNICAL DATA SHEET

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PACKAGING

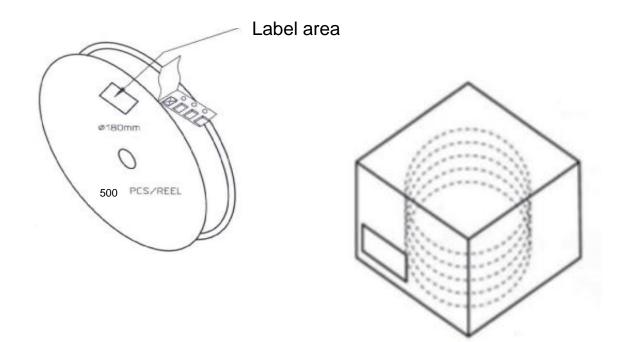
500pcs antennas per 7" reel

3pcs reel per inner box

2pcs inner box per outer box

Total 3000pcs antenna per package box

Package box: 390mm*215mm*165mm



According to MSL1 packing requirement, MBB-Moisture Barrel Bag, Desiccant, HIC-Humidity Indicator Card, MSID Label, Caution Label are required.

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