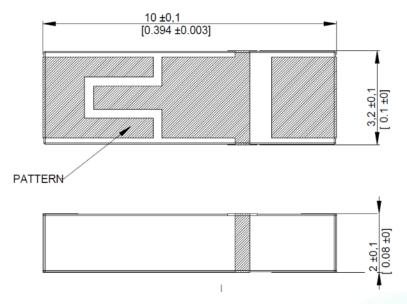


Description: ISM868/915, ISM2.4G

**PART NUMBER: W3320** 

Series: Ceramic antenna





### **Features:**

- 3 in1 –combo antenna
  - Port 1: 868/915MHz
  - Port 2: 2.4GHz
- Compact size 3.2x10x2mm
- SMT mounting on PCB
- Tape & Reel packing
- High isolation between ports >20dB

## **Applications:**

- ISM band radios
- 868MHz, 915MHz, 2.4GHz
- IoT, M2M, set top boxes, devices requiring small embedded multiband ISM antenna

All dimensions are in mm / inches

Issue: 2049

In the effort to improve our products, we reserve the right to make changes judged to be necessary. CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse Electronics, Inc. (Pulse) and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse is strictly forbidden. For more information:

Pulse Worldwide Headquarters 12220 World Trade Drive 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 & Do, 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



Description: ISM868/915, ISM2.4G

Series: Ceramic antenna

**PART NUMBER: W3320** 

### **ELECTRICAL SPECIFICATIONS**

Frequency ISM868/915MHz, ISM2.4GHz

Nominal Impedance  $50\Omega$ 

Return Loss <-7dB @868/915MHz

<-5dB@2.4

Gain 1dBi +/- 1 dB@868/915MHz

3dBi +/- 1 dB@2.4GHz

Radiation Pattern Omni

Polarization: Vertical

Power withstanding 2W





Description: ISM868/915, ISM2.4G

Series: Ceramic antenna

**PART NUMBER: W3320** 

| WECHANICAL SPECIFICATIONS | MECHAN | ICAL SPECIFICATIONS |  |
|---------------------------|--------|---------------------|--|
|---------------------------|--------|---------------------|--|

Weight 0.3 g

Overall Length 10[0.39] MM[INCHES]

Over all width 3.2[0.12] MM[INCHES]

Over all thickness 2[0.08] MM[INCHES]

MSL Level 1

### **ENVIRONMENTAL SPECIFICATIONS**

Operating temperature

-40/+85° C

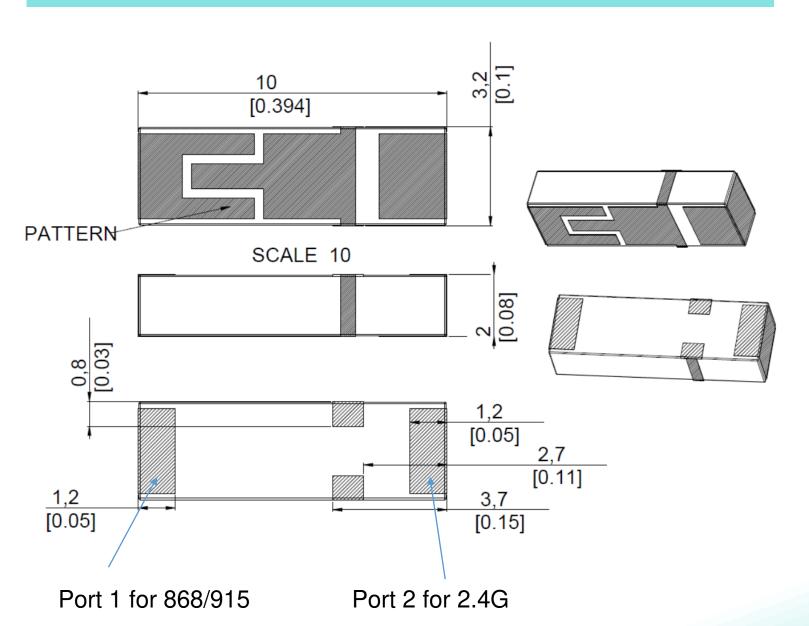


Description: ISM868/915, ISM2.4G

Series: Ceramic antenna

**PART NUMBER: W3320** 

### **MECHANICAL DRAWING**







Description: ISM868/915, ISM2.4G

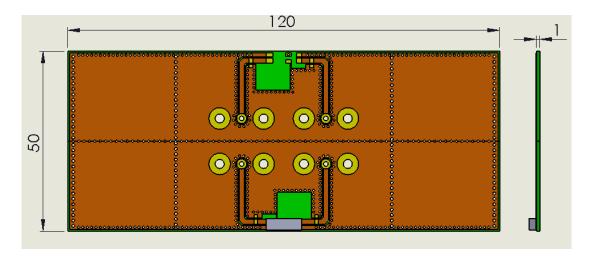
**PART NUMBER: W3320** 

Series: Ceramic antenna

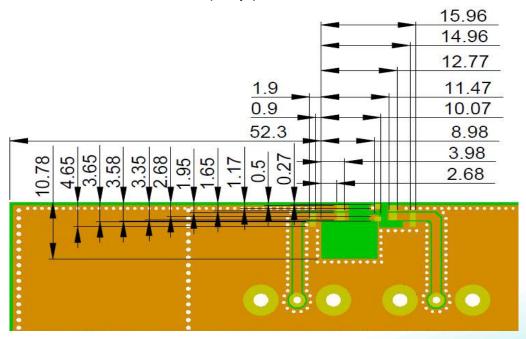
### **OTHER SPECIFICATIONS**

## **PCB LAYOUT**

1, PCB material, FR4, size, 120X50X1mm



## 2, Clearance area (Top)





Description: ISM868/915, ISM2.4G

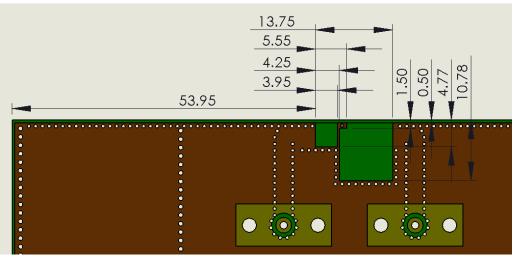
Series: Ceramic antenna

**PART NUMBER: W3320** 

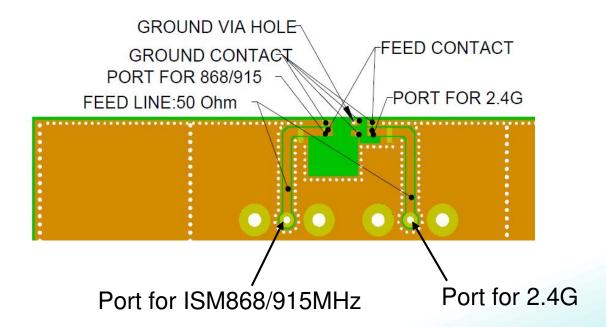
### **OTHER SPECIFICATIONS**

## **PCB LAYOUT**

3, Clearance area (Bottom)



## 4, PCB Features





Description: ISM868/915, ISM2.4G

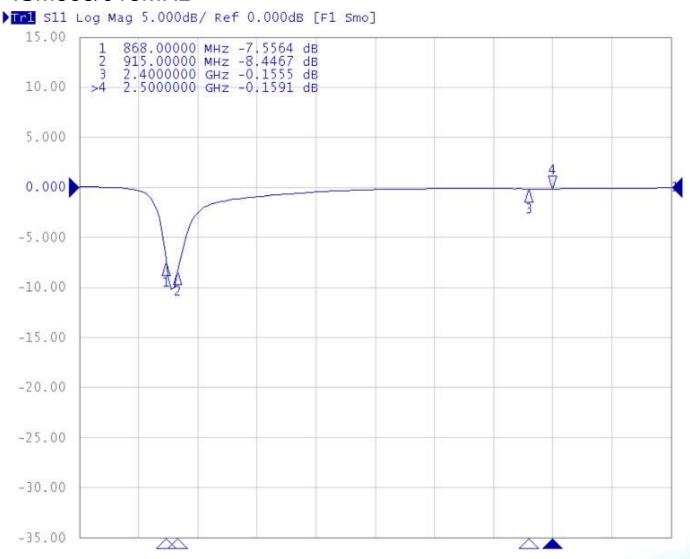
**PART NUMBER: W3320** 

Series: Ceramic antenna

### **CHARTS**

### Return Loss

### ISM868/915MHz





Description: ISM868/915, ISM2.4G

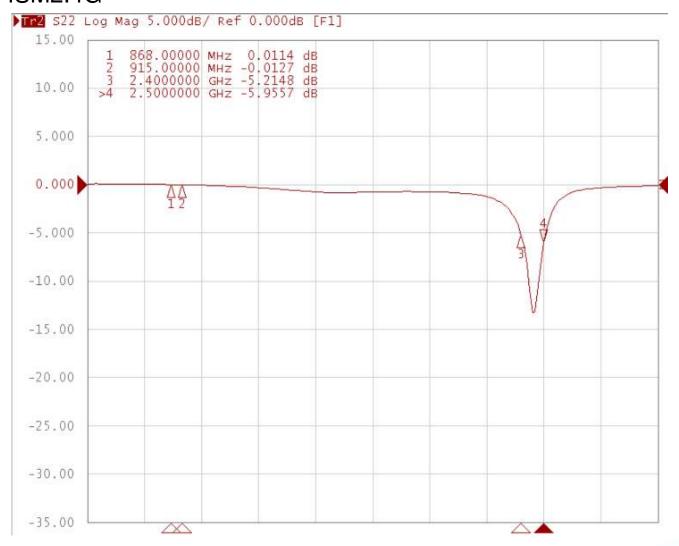
**PART NUMBER: W3320** 

Series: Ceramic antenna

### **CHARTS**

### Return Loss

## ISM2.4G









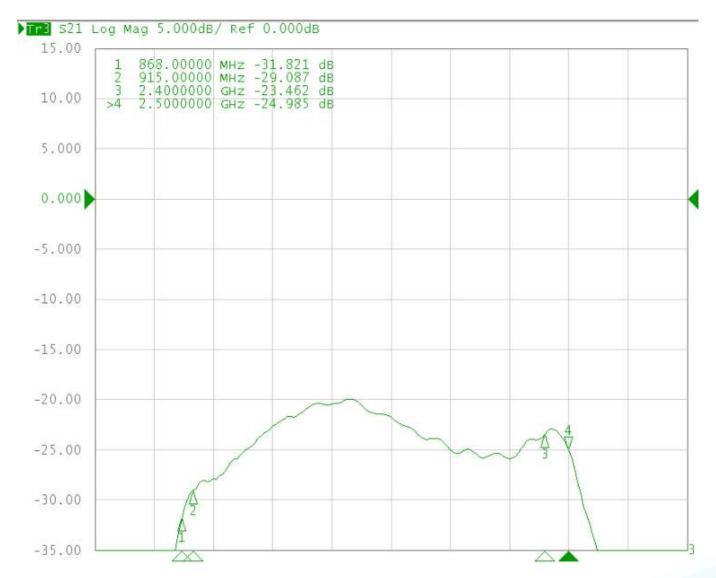
Description: ISM868/915, ISM2.4G

**PART NUMBER: W3320** 

## Series: Ceramic antenna

### **CHARTS**

## Isolation







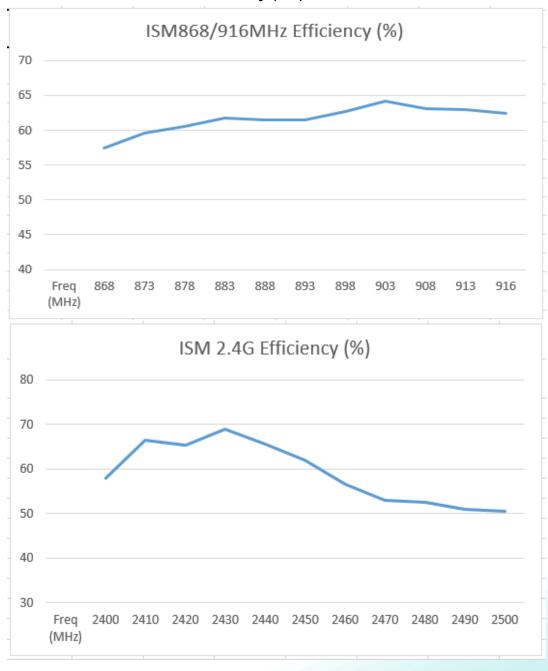
### TECHNICAL DATA SHEET

Description: ISM868/915, ISM2.4G

**PART NUMBER: W3320** 

### **CHARTS**

## Efficiency(%)





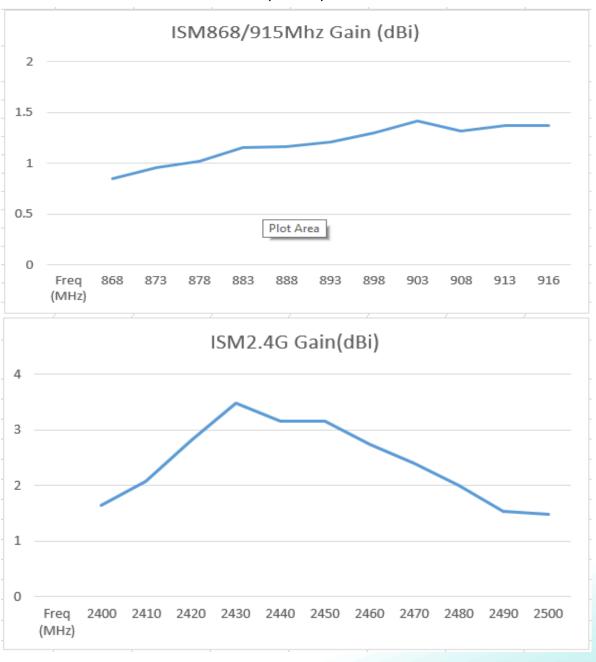
Description: ISM868/915, ISM2.4G

Series: Ceramic antenna

**PART NUMBER: W3320** 

### **CHARTS**

## Gain (dBi)









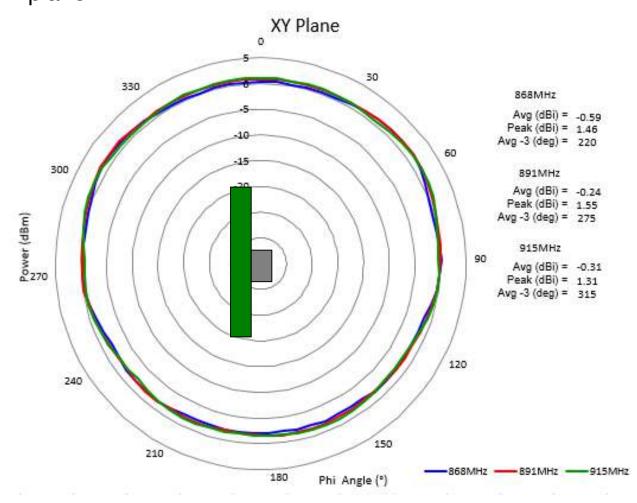
Description: ISM868/915, ISM2.4G

Series: Ceramic antenna

**PART NUMBER: W3320** 

### **CHARTS**

Typical free space radiation pattern ISM868/915MHz X-Y plane





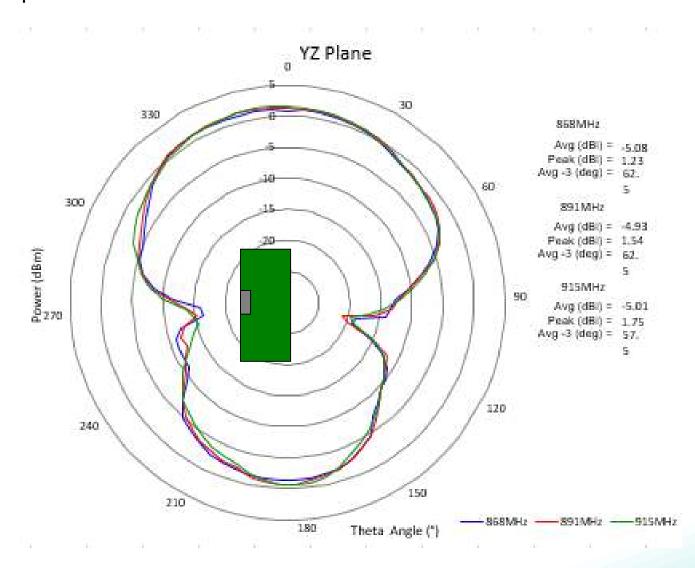
Description: ISM868/915, ISM2.4G

**PART NUMBER: W3320** 

## Series: Ceramic antenna

## **CHARTS**

## ISM868/915MHz Y-Z plane





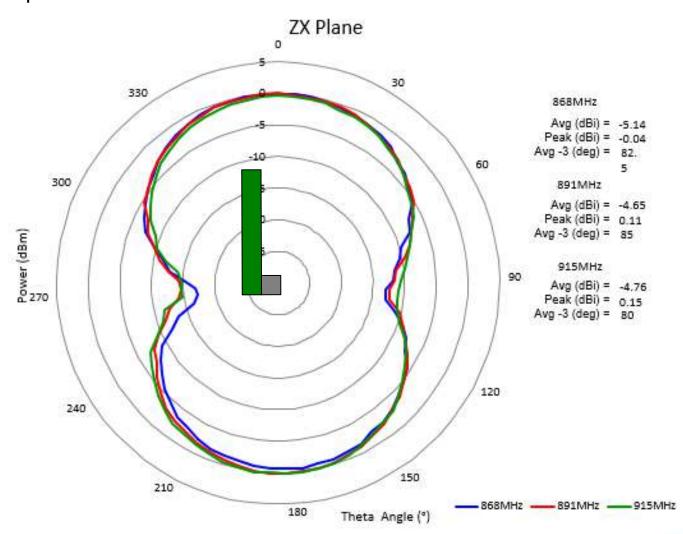
Description: ISM868/915, ISM2.4G

**PART NUMBER: W3320** 

## Series: Ceramic antenna

### **CHARTS**

## ISM868/915MHz X-Z plane









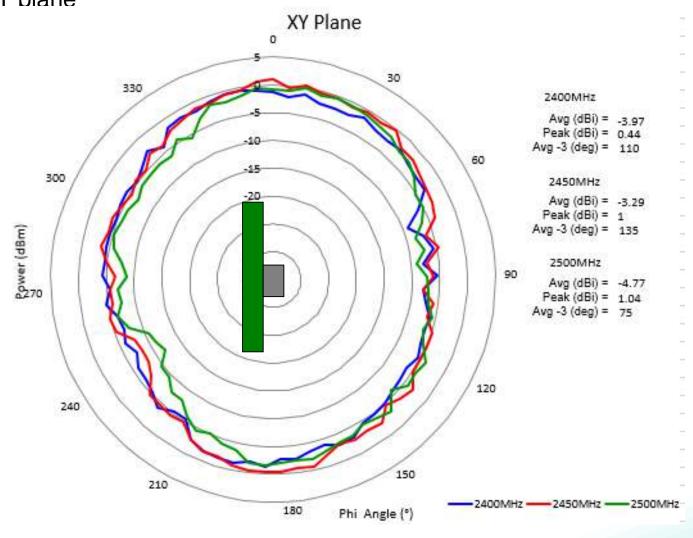
Description: ISM868/915, ISM2.4G

Series: Ceramic antenna

**PART NUMBER: W3320** 

### **CHARTS**

Typical free space radiation pattern ISM2.4GHz X-Y plane





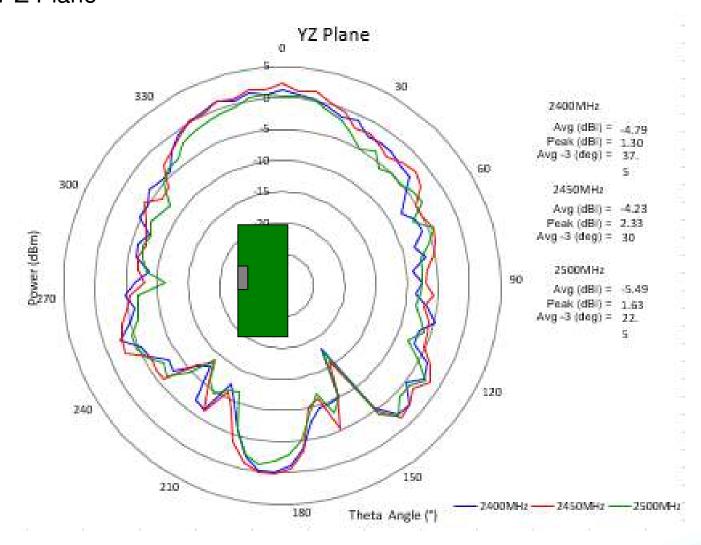
### **TECHNICAL DATA SHEET**

Description: ISM868/915, ISM2.4G

**PART NUMBER: W3320** 

### **CHARTS**

ISM 2.4GHz Y-Z Plane





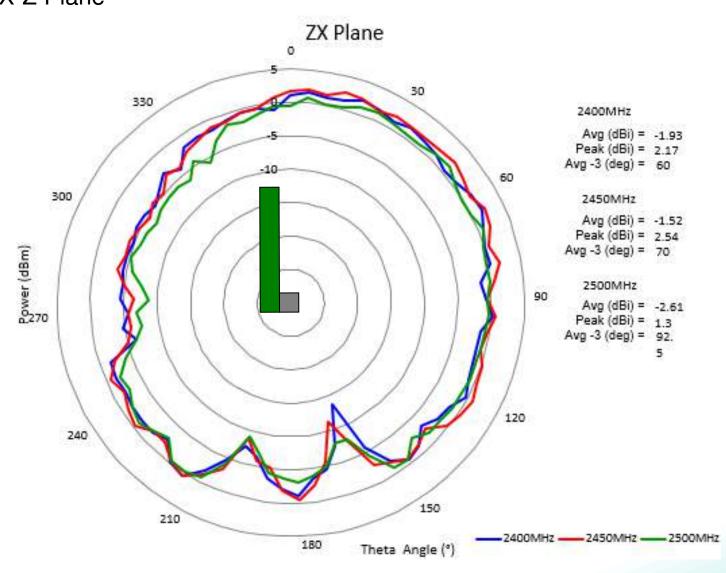
### **TECHNICAL DATA SHEET**

Description: ISM868/915, ISM2.4G

**PART NUMBER: W3320** 

# CHARTS

ISM 2.4GHz X-Z Plane





### **TECHNICAL DATA SHEET**

Description: ISM868/915, ISM2.4G

**PART NUMBER: W3320** 

### **PACKAGING**

Taping package 1000PCS/Reel 3000PCS/Small box 6000PCS/Carton box







