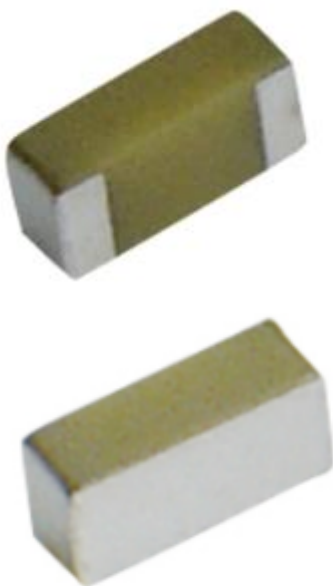


Description: **5150-5950 3.2x1.6x1.1mm**  
**SMT Ceramic Antenna**

Series: **Chip Antenna**

**PART NUMBER: W3004**



### Features:

- Frequency 5150-5950MHz
- Size 3.2 x 1.6 x 1.1 mm
- Efficiency 71 %
- Gain 3.2 dBi
- SMD compatible
- RoHS compliant
- Moisture Sensitivity level: MSL1

### Applications:

- WiFi 5GHz
- 5GHz ISM band Radios
- LAA
- DSRC

All dimensions are in mm / inches

Issue: 1919

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Pulse/Larsen Antennas  
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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: **5150-5950 3.2x1.6x1.1mm**  
**SMT Ceramic Antenna**

Series: **Chip Antenna**

**PART NUMBER: W3004**

### ELECTRICAL SPECIFICATIONS

Frequency	5150-5950MHz
Nominal Impedance	50 $\Omega$
Return Loss	-10dB
Radiation Pattern	Omni
Gain	3.2dBi
Efficiency	71%
Polarization	linear
Power Withstanding	5W

### MECHANICAL SPECIFICATIONS

Overall Length	3.2x1.6x1.1mm
Weight	33mg
Antenna Material	Ceramic / Silver plating

### ENVIRONMENTAL SPECIFICATIONS

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

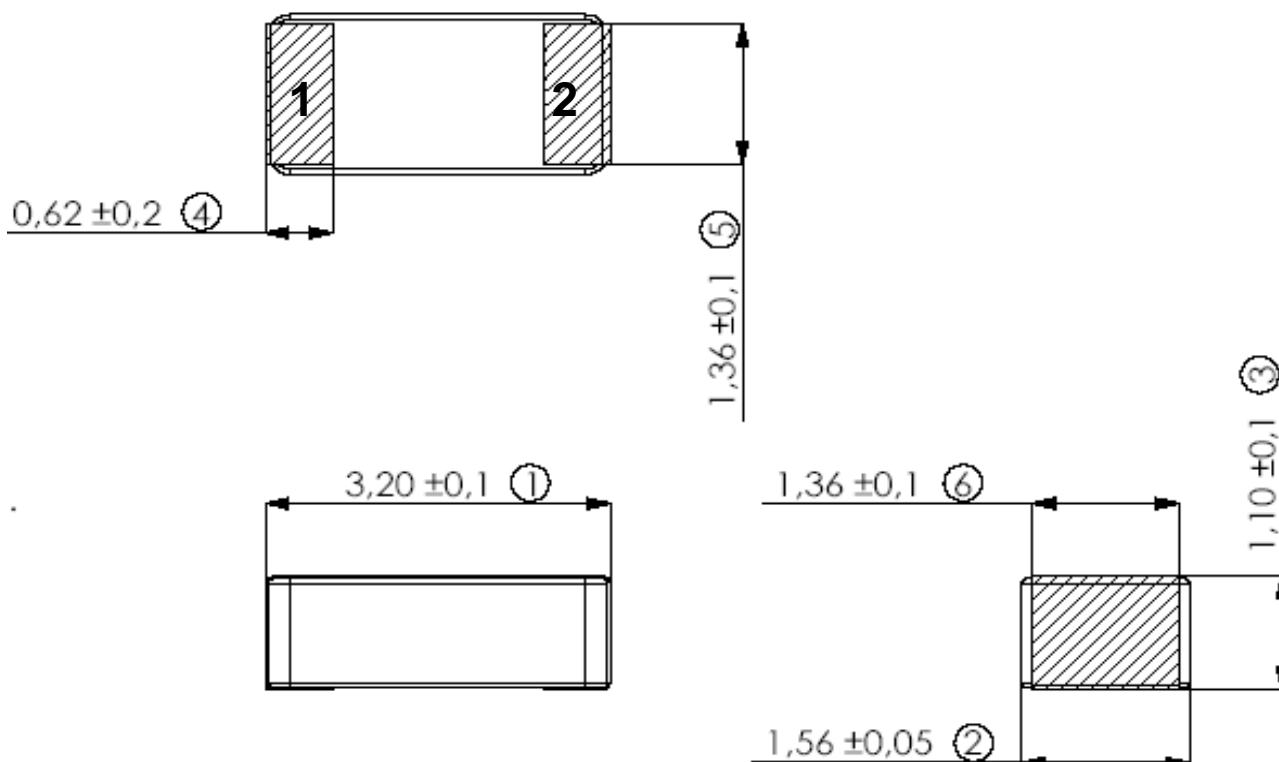
***Typical free space performance measured on 80\*37mm test board, Ground clearance area 5.25\*4.25mm***

Description: 5150-5950 3.2x1.6x1.1mm  
SMT Ceramic Antenna

Series: Chip Antenna

PART NUMBER: W3004

## MECHANICAL DRAWING AND TERMINAL CONFIGURATION



Antenna features		
No.	Terminal Name	Terminal Dimensions
1	Feed / Support	0.62 x 1.36mm
2	Feed / Support	0.62 x 1.36 mm
Antenna is symmetrical.		
Either of terminals 1 or 2 can be Feed / Support		

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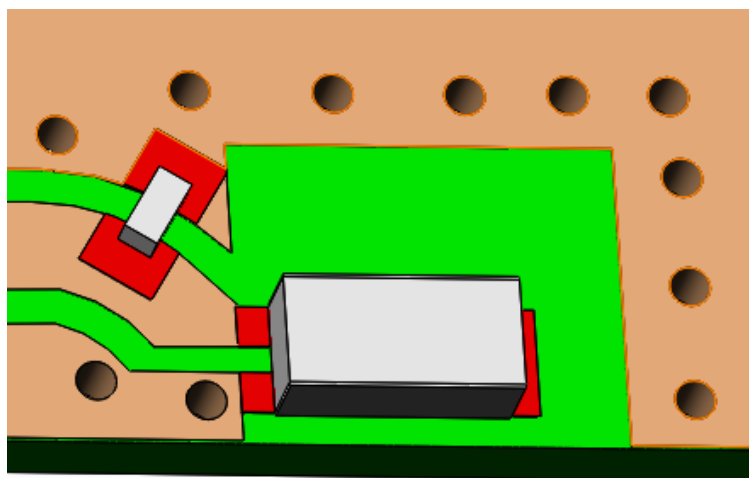
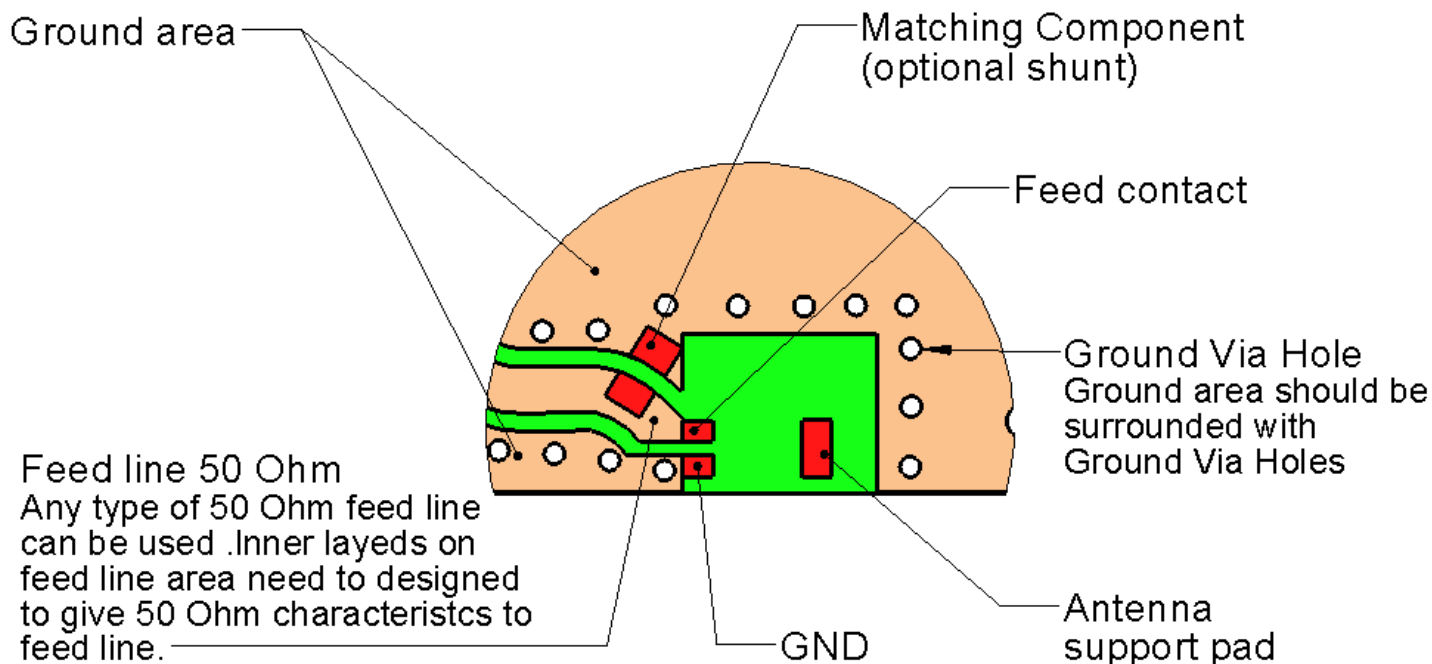
Description: 5150-5950 3.2x1.6x1.1mm  
SMT Ceramic Antenna

Series: Chip Antenna

PART NUMBER: W3004

## MECHANICAL DRAWING AND TERMINAL CONFIGURATION

**Ground cleared under antenna, clearance area 5.25 mm x 4.25 mm**



Shunt matching capacitance, 0.3 pF with presented setup.

Exact capacitance value depends on specific application.

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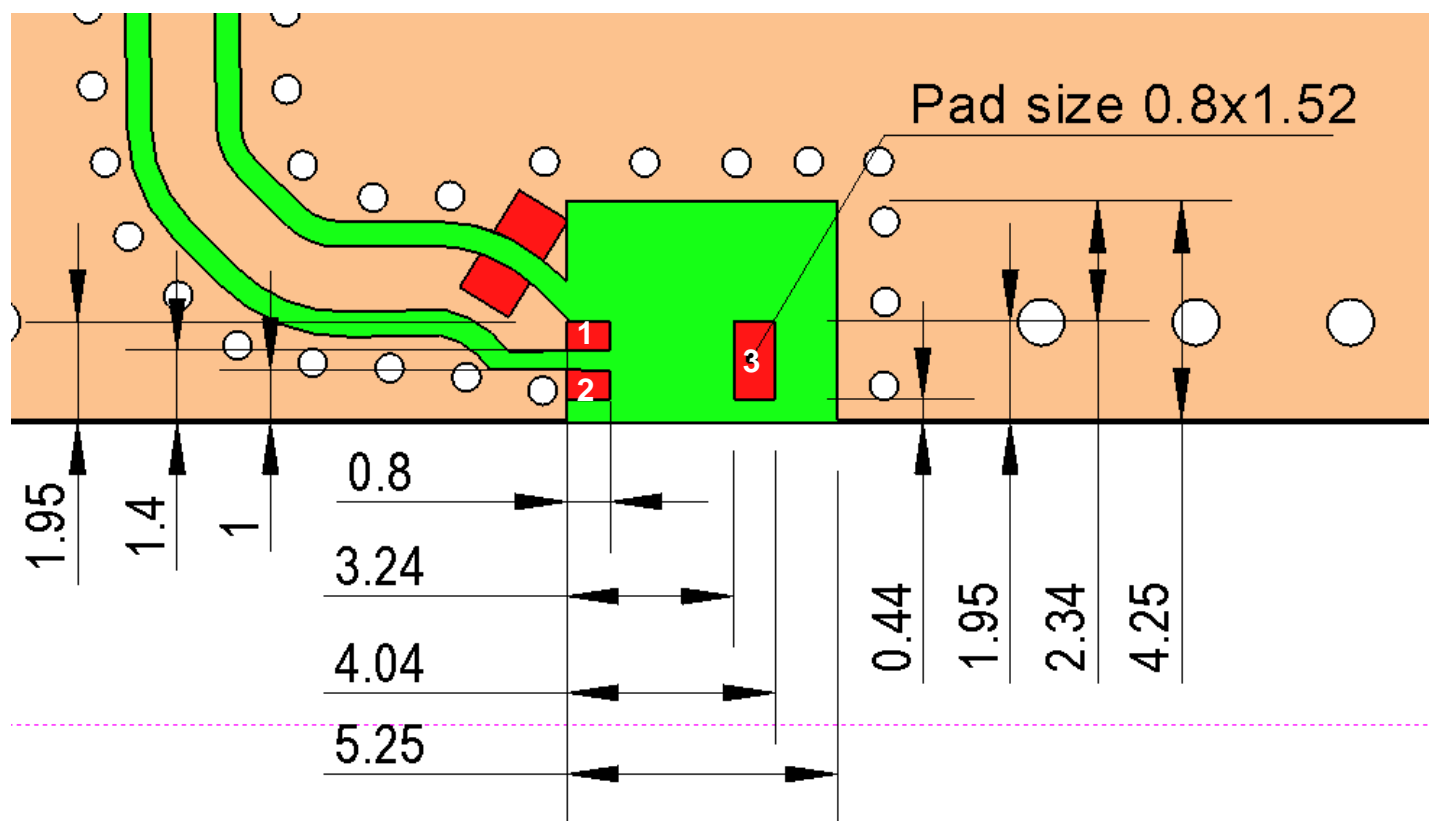
Description: 5150-5950 3.2x1.6x1.1mm  
SMT Ceramic Antenna

Series: Chip Antenna

PART NUMBER: W3004

## MECHANICAL DRAWING AND TERMINAL CONFIGURATION

**Recommended Antenna Pad Dimensions on PCB Layout (top surface)**  
**Ground cleared under antenna, clearance area 5.25 mm x 4.25 mm**



PCB contact pads		
No.	Terminal Name	Terminal Dimensions
1	Feed	0,80 x 0,60 mm
2	GND	0,80 x 0,60 mm
3	support pad	0,80 x 1,52 mm

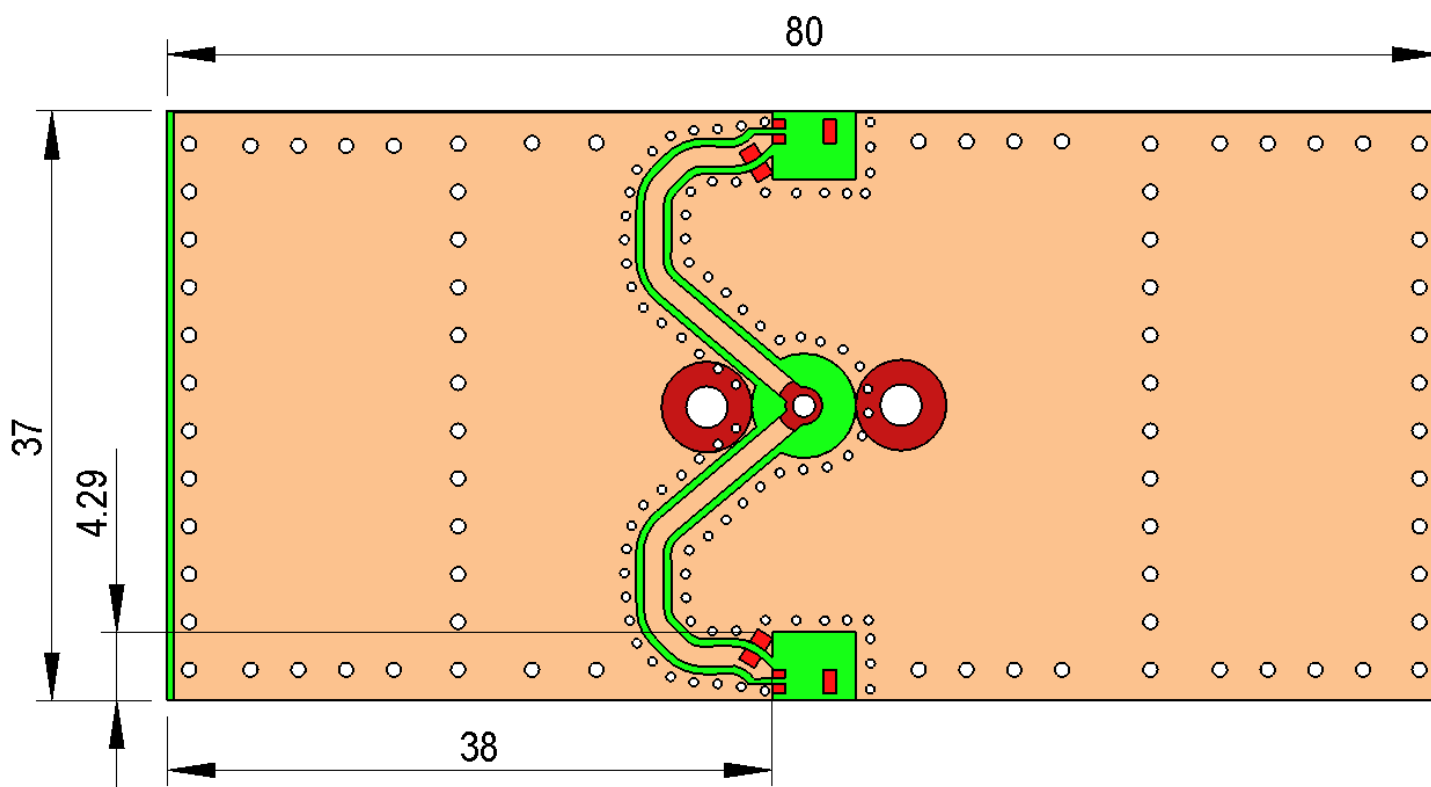
Description: 5150-5950 3.2x1.6x1.1mm  
SMT Ceramic Antenna

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PART NUMBER: W3004

## MECHANICAL DRAWING AND TERMINAL CONFIGURATION

*Recommended test board layout for electrical characteristic measurement, test board outline size 80 x 37mm*



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SMT Ceramic Antenna

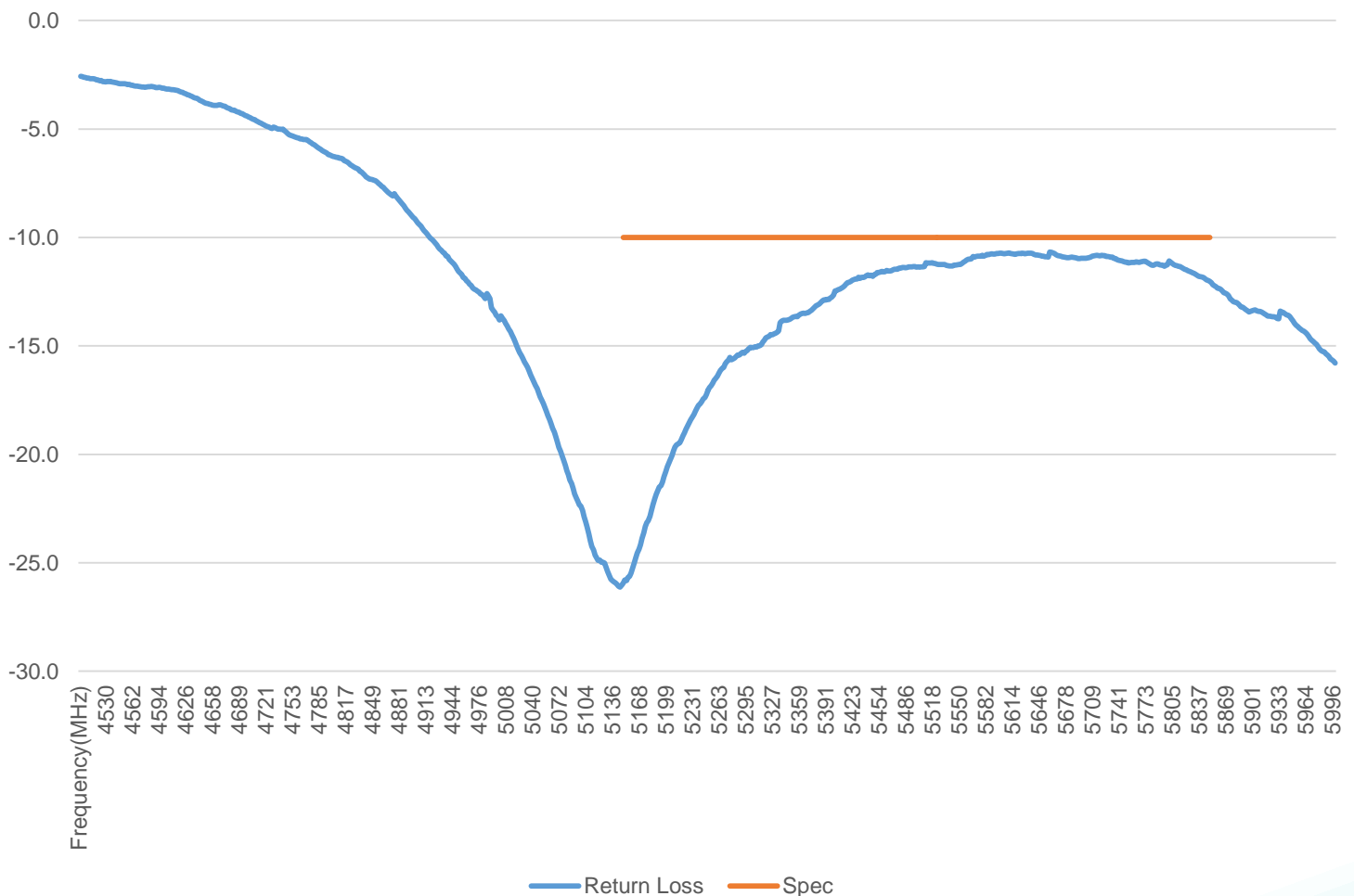
Series: Chip Antenna

PART NUMBER: W3004

## CHARTS

### Return Loss

Return Loss



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**SMT Ceramic Antenna**

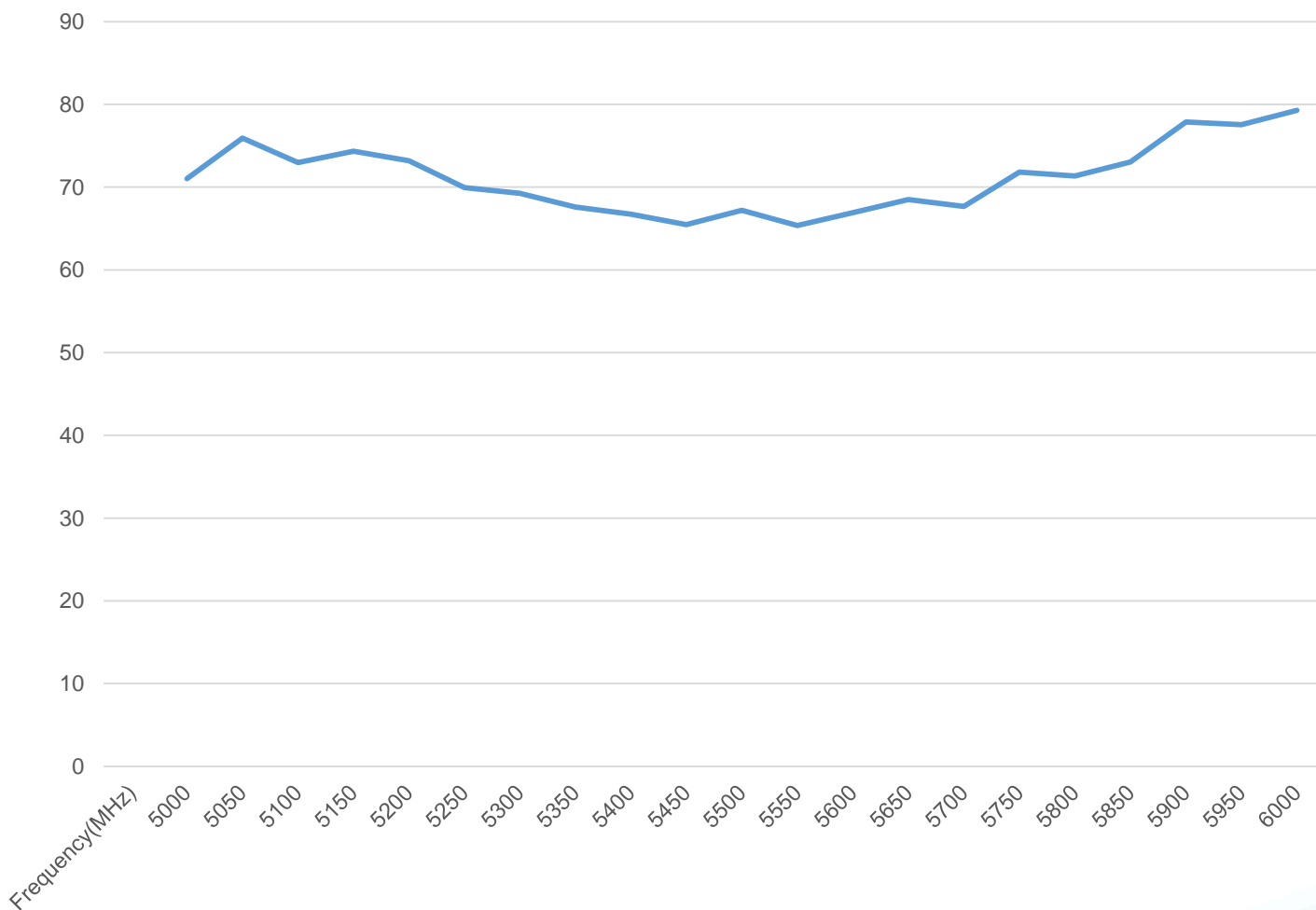
Series: **Chip Antenna**

PART NUMBER: **W3004**

## CHARTS

### Efficiency

Efficiency(%)



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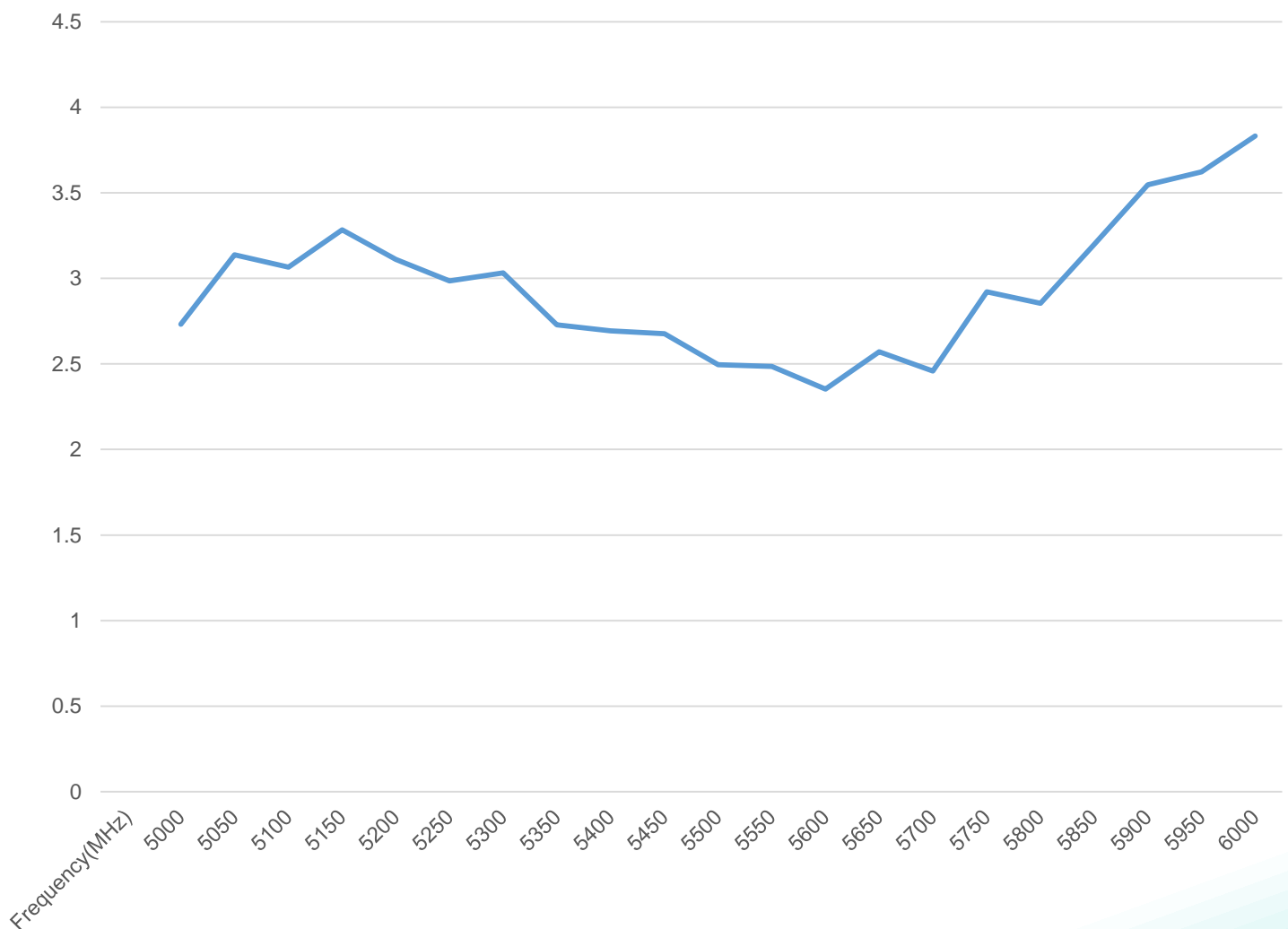
Series: **Chip Antenna**

**PART NUMBER: W3004**

## CHARTS

### Peak Gain

Peak Gain(dBi)



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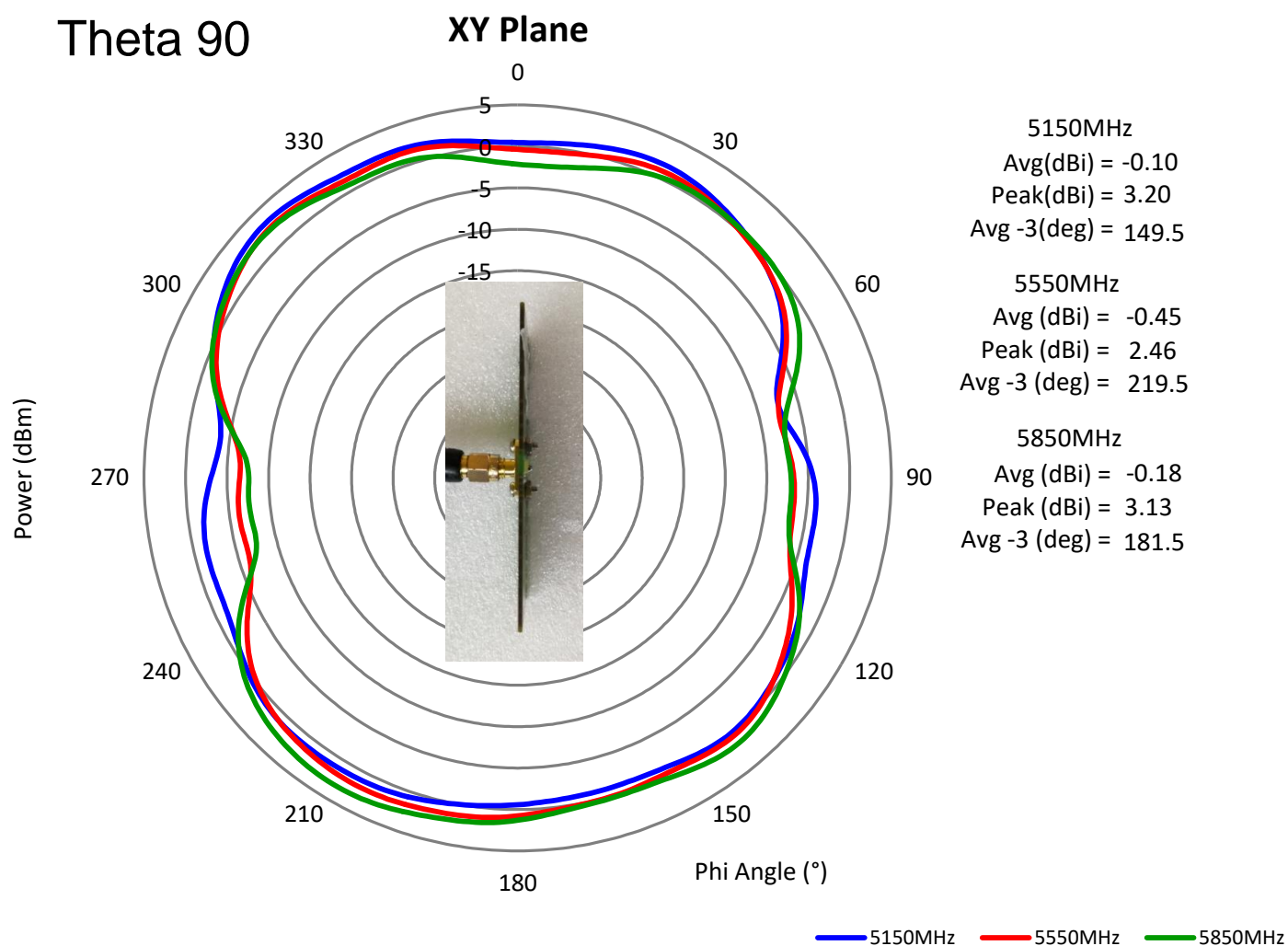
Description: 5150-5950 3.2x1.6x1.1mm  
SMT Ceramic Antenna

Series: Chip Antenna

PART NUMBER: W3004

## CHARTS

### Free Space Radiation Pattern



Issue: 1919

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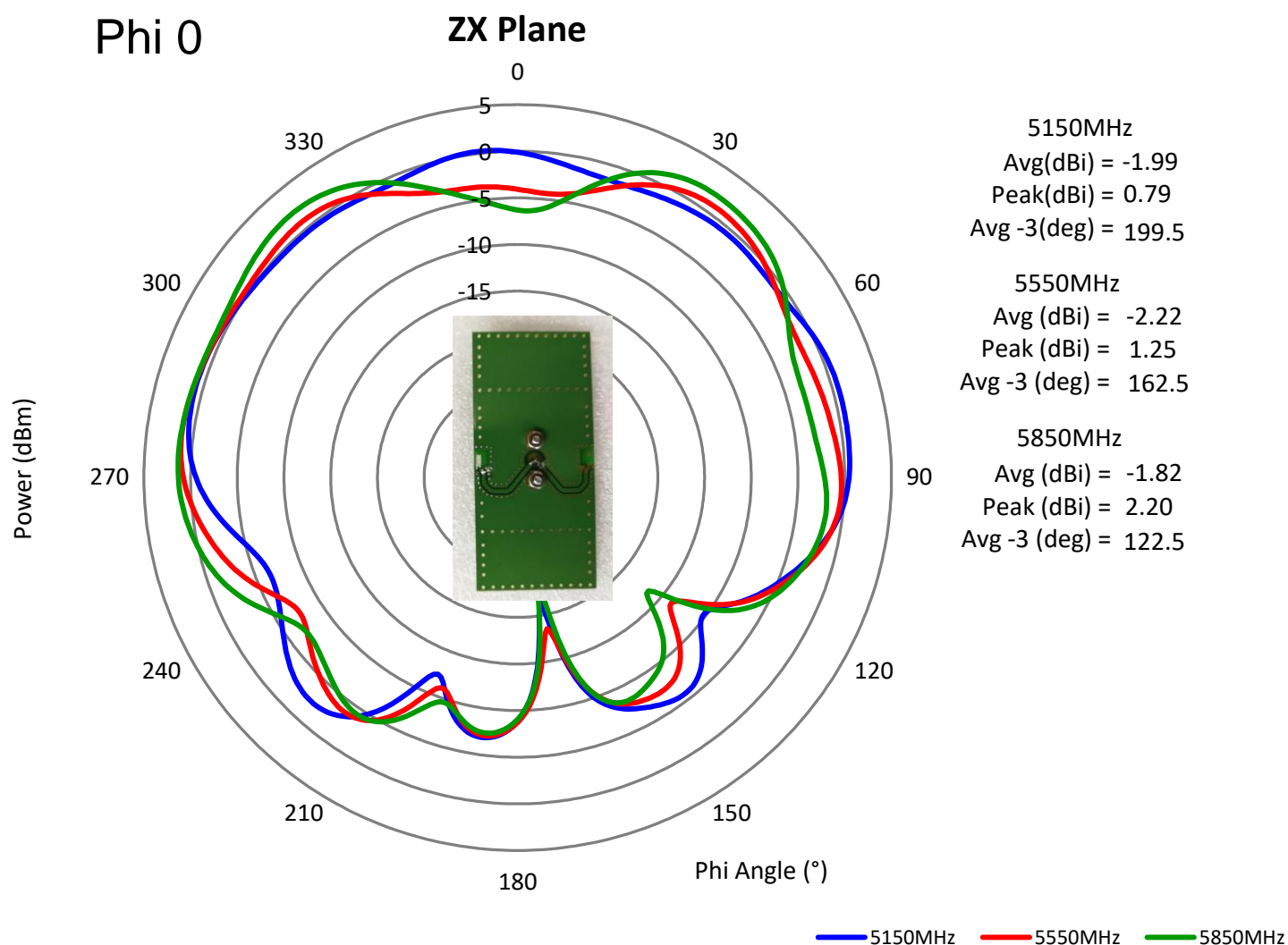
Description: 5150-5950 3.2x1.6x1.1mm  
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## CHARTS

### Free Space Radiation Pattern



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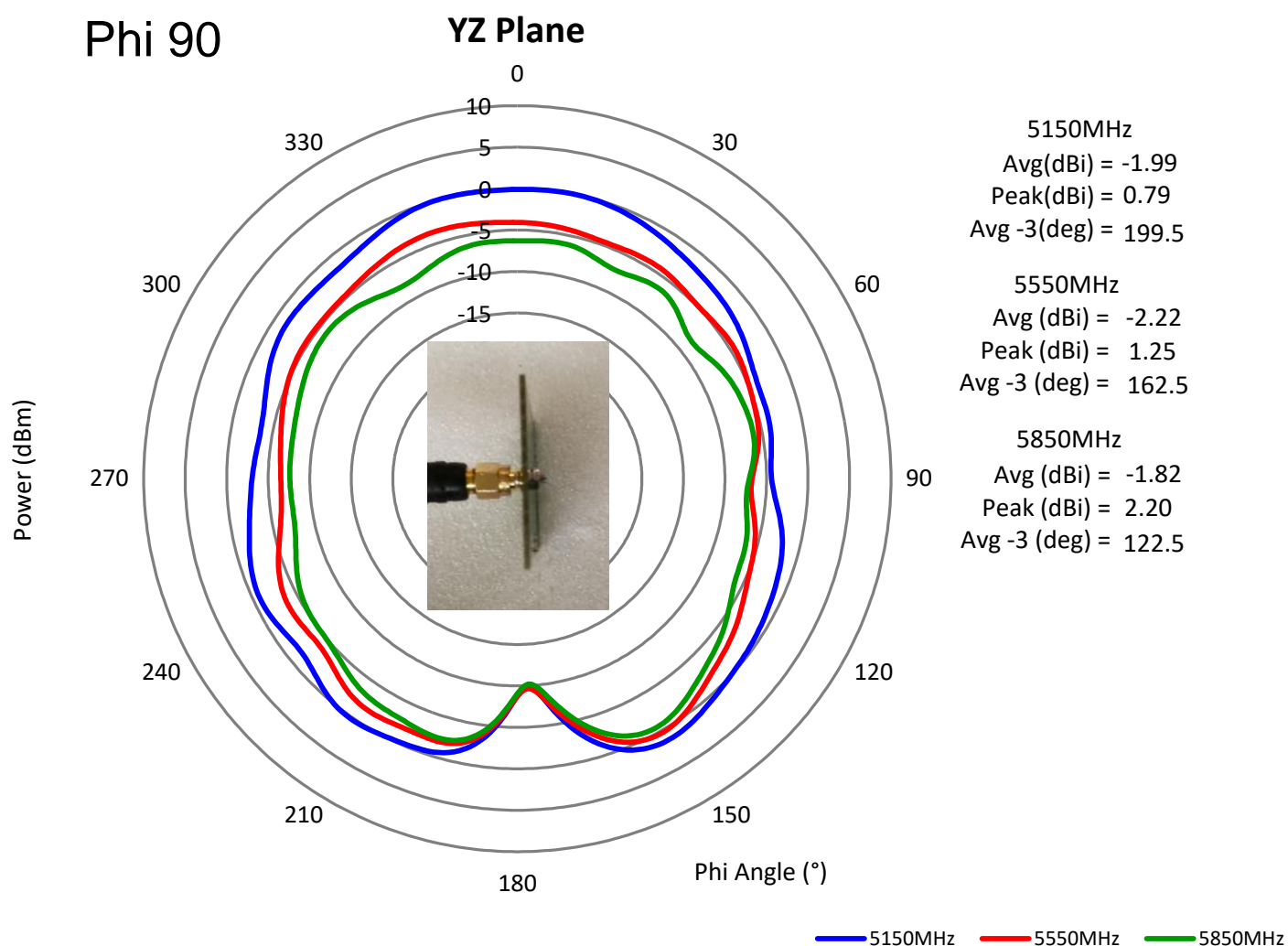
Description: **5150-5950 3.2x1.6x1.1mm**  
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## CHARTS

### Free Space Radiation Pattern



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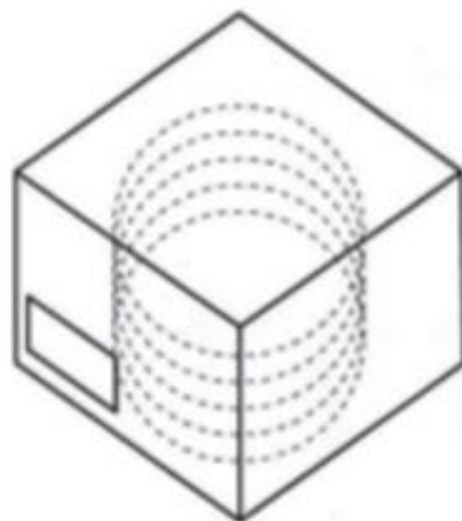
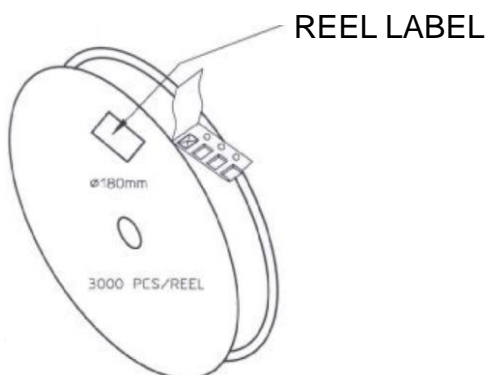
Description: 5150-5950 3.2x1.6x1.1mm  
SMT Ceramic Antenna

Series: Chip Antenna

PART NUMBER: W3004

## PACKAGING

3000pcs antennas per 7" reel  
5pcs 7" reel per inner package box  
2pcs inner box per out box  
Total 30000pcs antenna per out box  
Out box size: 390mmx215mmx165mm



LEVEL

NOT MOISTURE SENSITIVE

1

These Devices do not require special storage conditions provided:

1. They are maintained at conditions equal to or less than 30°C and 85% RH.
2. They are solder reflowed at a peak body temperature which does not exceed 260°C.

Note: Level and body temperature defined by IPC/JEDEC J-STD-020

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