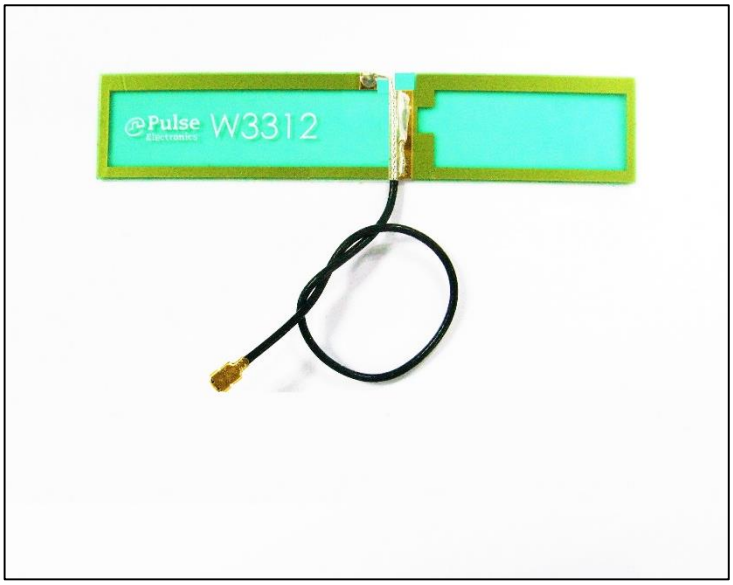
Pulse | LARSEN Antennas
A YAGEO Company

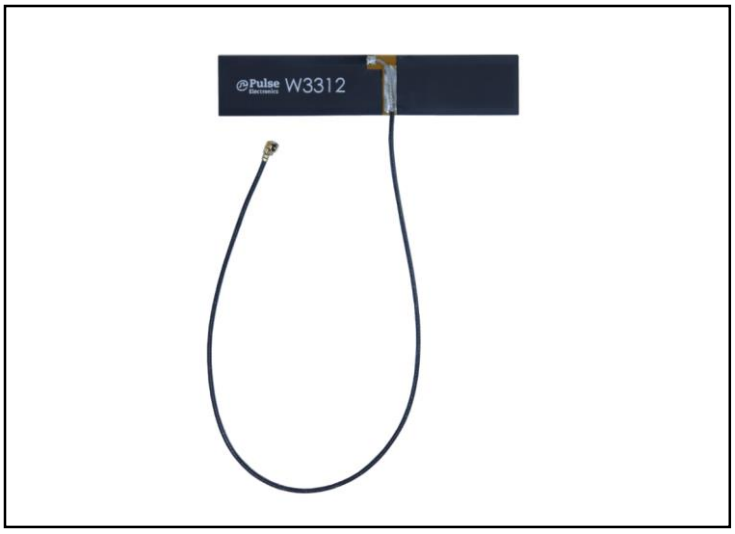
TECHNICAL DATA SHEET

**Description**: ISM 868/915MHz PCB Antenna with coax feed

## Series: Internal Antenna

**PART NUMBER: W3312XXXXXX**




## Features:

- 863-928MHz
- Size 75x15 mm
- Flexible PCB thickness 0.1 mm with adhesive tape
- Mounting with 3M467 adhesive tape on back side
- 100mm 1.13mm OD coax cable with U.FL connector

## Applications:

- Devices with ISM 868MHz / 915MHz radios
- M2M, IoT
- Metering, Industry automation
- Instrumentation

All dimensions are in mm / inches

Issue: 1912

RoHS COMPLIANT



For more information:

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Jiangsu Province, Suzhou 215009 PR China
Tel: 86 512 6807 9998

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## ELECTRINIC SPECIFICATIONS

| | | |
|---|---|---|
| Frequency | 863-928 | MHz |
| Nominal Impedance | 50 | Ω |
| Return loss | -8 | dB |
| Efficiency | 45 | % |
| Peak Gain | 0.8 | dBi +/- 1 dB |
| Polarization: | linear | |
| Power withstanding | 2 | W |

Note: All RF data measured with 1.5mm polycarbonate plate to simulate loading effect of real device housing.





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**This document covers all product variants of the following product family**

| Antennas | Color | Connector |
|---|---|---|
| W3312B0100 | Green | 1.13mm OD coax cable with U.FL connector |
| W3312BB0100 | BLACK | |





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## MECHANICAL SPECIFICATIONS

| | |
|---|---|
| PCB type | Flexible |
| Radiator size | 15[0.59] x 75[2.95] mm[inch] |
| Adhesive | 3M467 |
| Total thickness (Radiator+adhesive) | 0.1[0.004] mm[inch] |
| Weight | 0.74g |
| Cable type | OD 1.13mm coax |
| Cable length | 100[3.94] mm[inch] |
| Connector | U.FL compatible |

## ENVIRONMENTAL SPECIFICATIONS

| | |
|---|---|
| Operating temperature | -40/+85 ° C |





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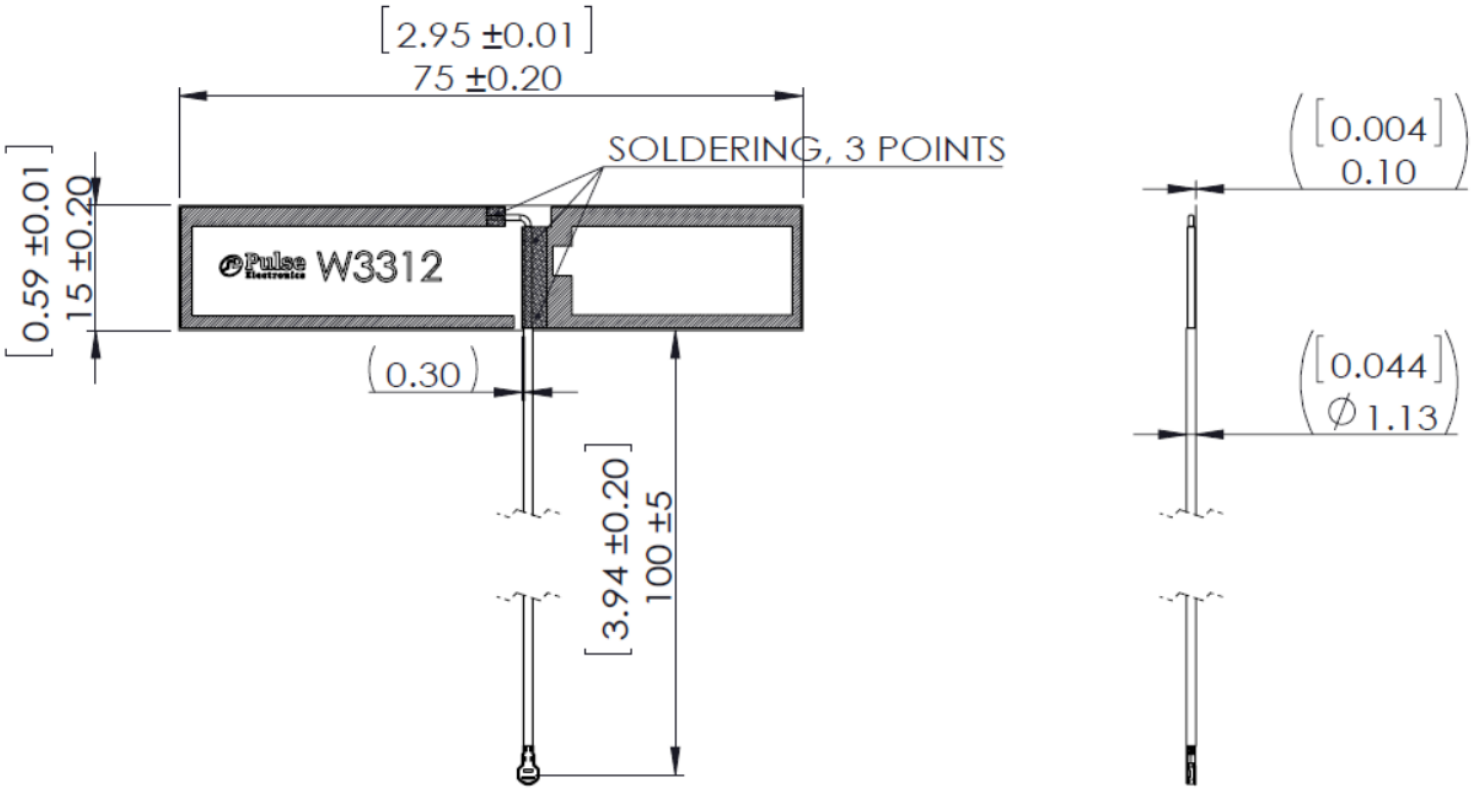
## MECHANICAL DRAWING





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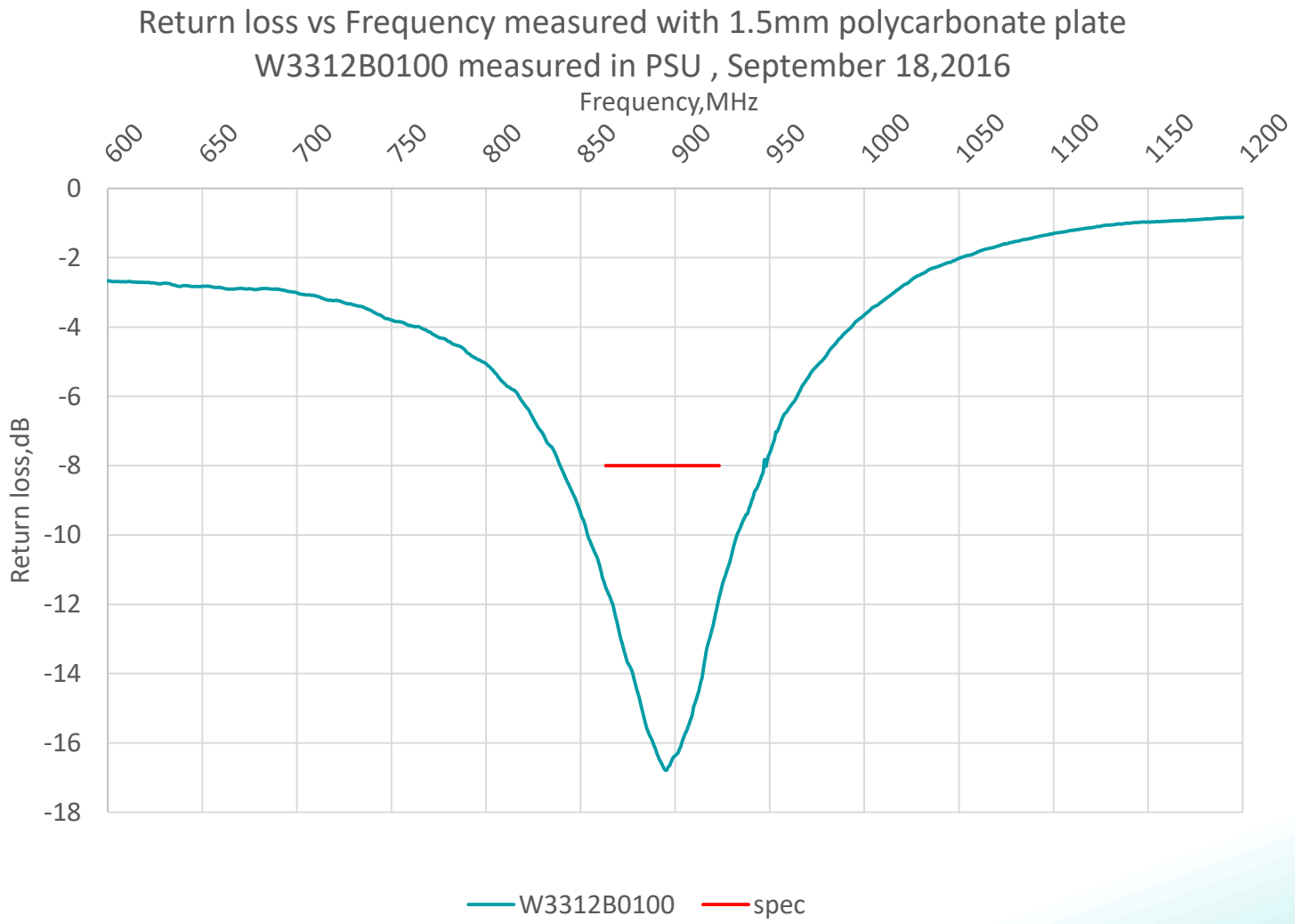
## CHARTS

### Return loss





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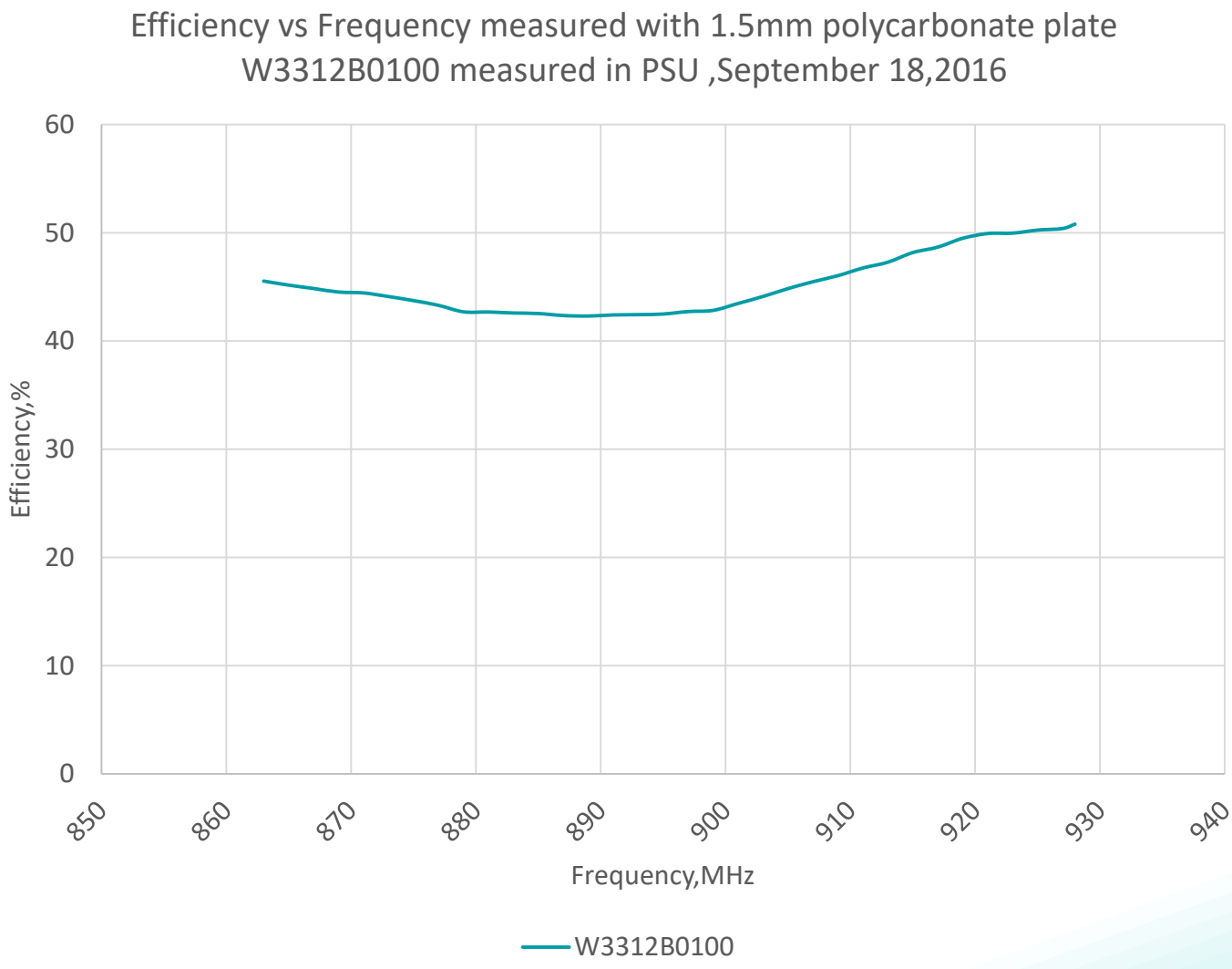
## CHARTS

### Efficiency





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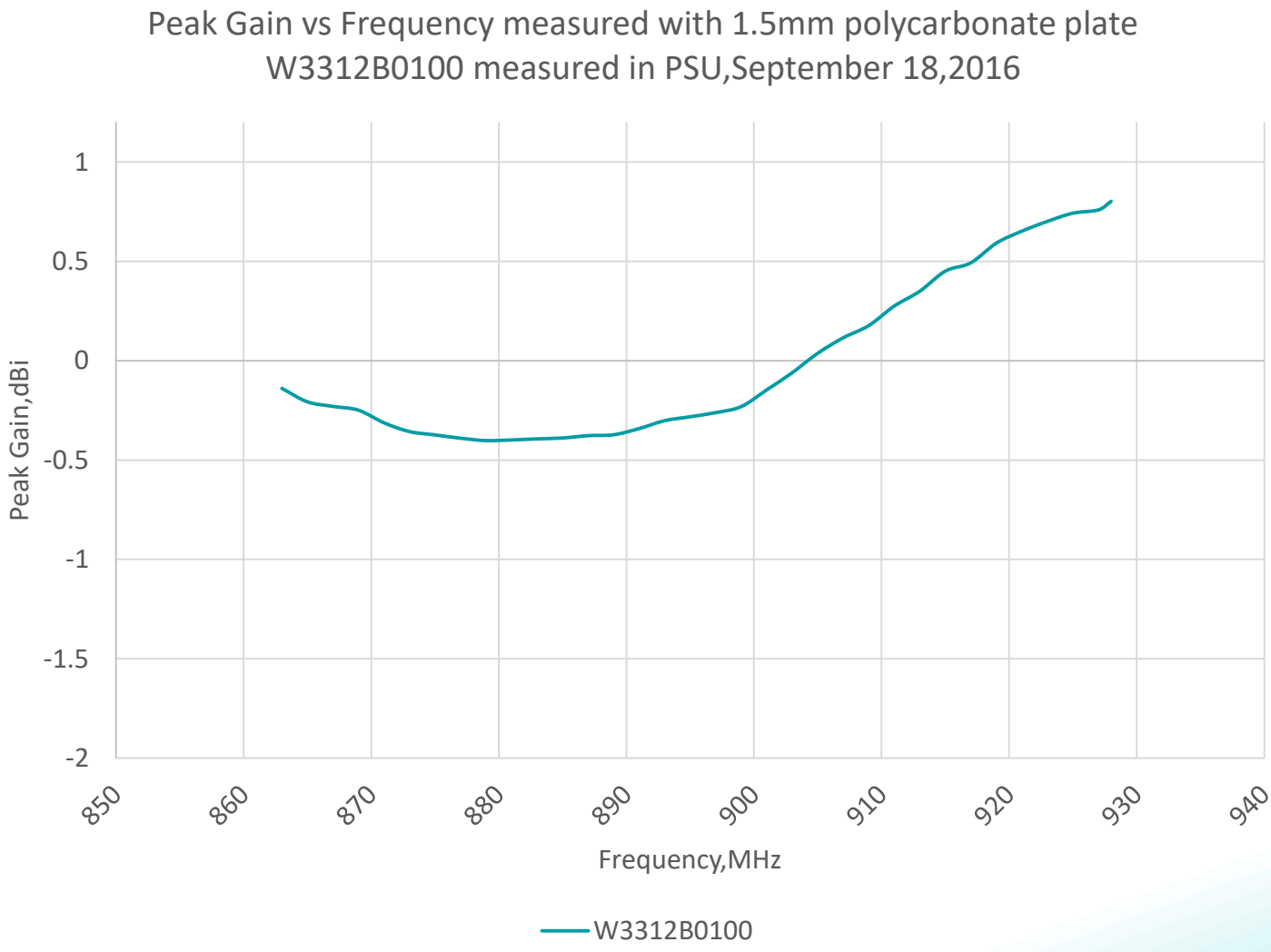
## CHARTS

### Peak Gain





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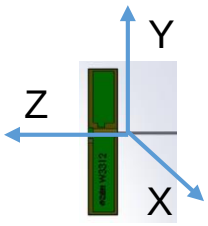
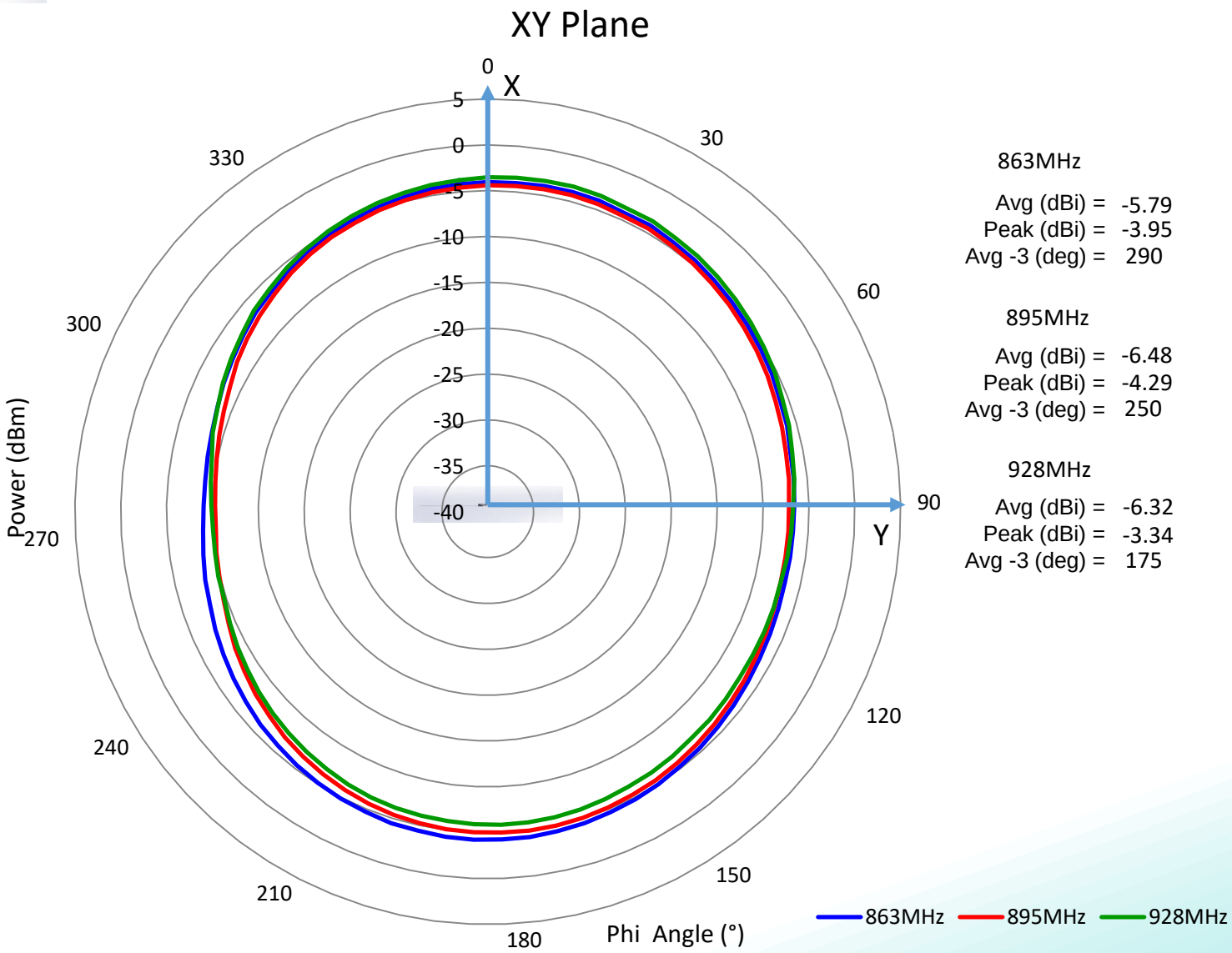



### Gain Plots





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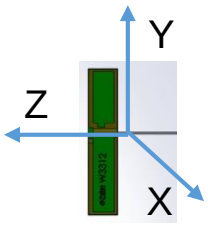


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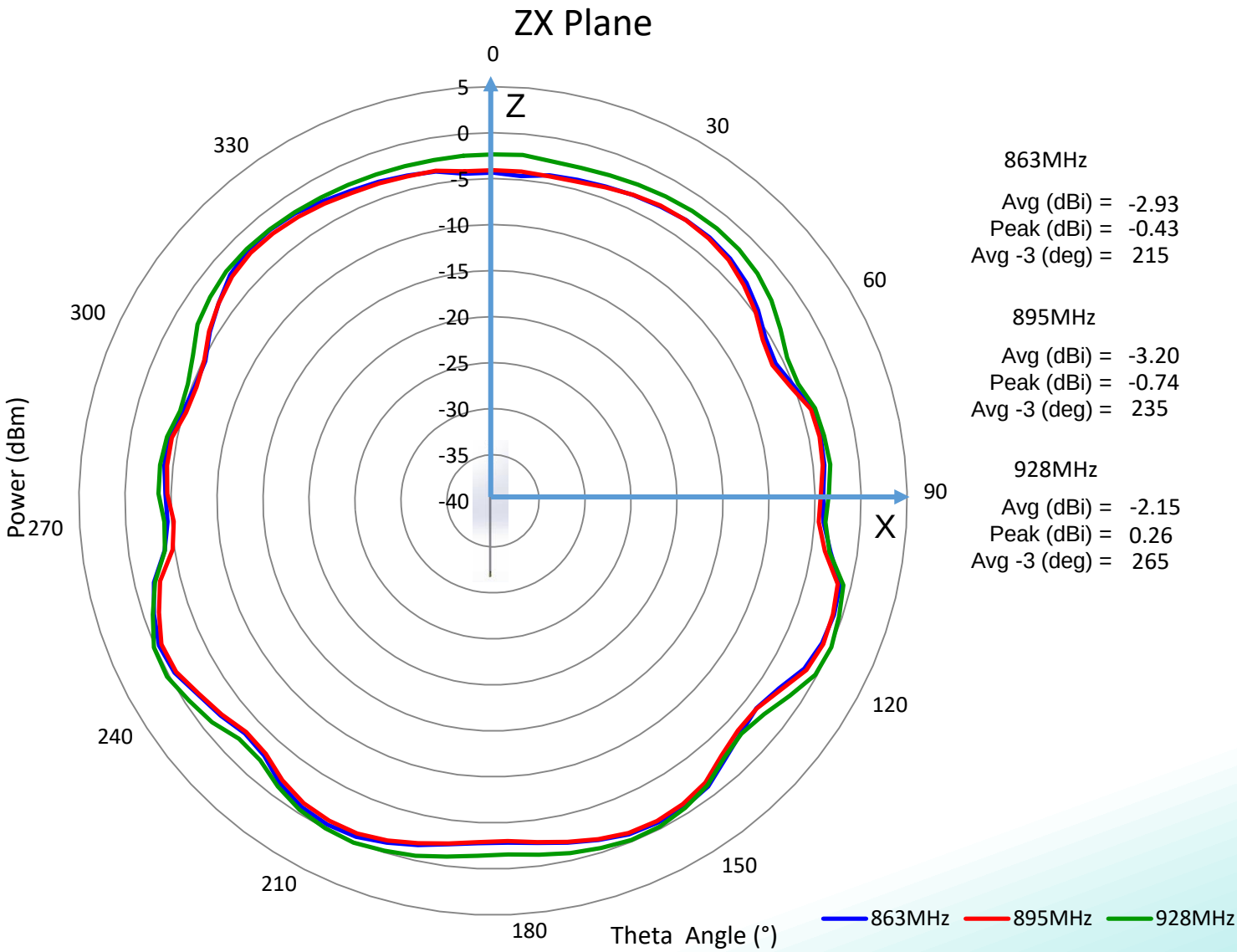


863MHz

Avg (dBi) = -2.93
Peak (dBi) = -0.43
Avg -3 (deg) = 215

895MHz

Avg (dBi) = -3.20
Peak (dBi) = -0.74
Avg -3 (deg) = 235

928MHz

Avg (dBi) = -2.15
Peak (dBi) = 0.26
Avg -3 (deg) = 265

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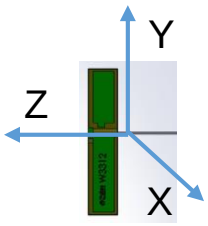
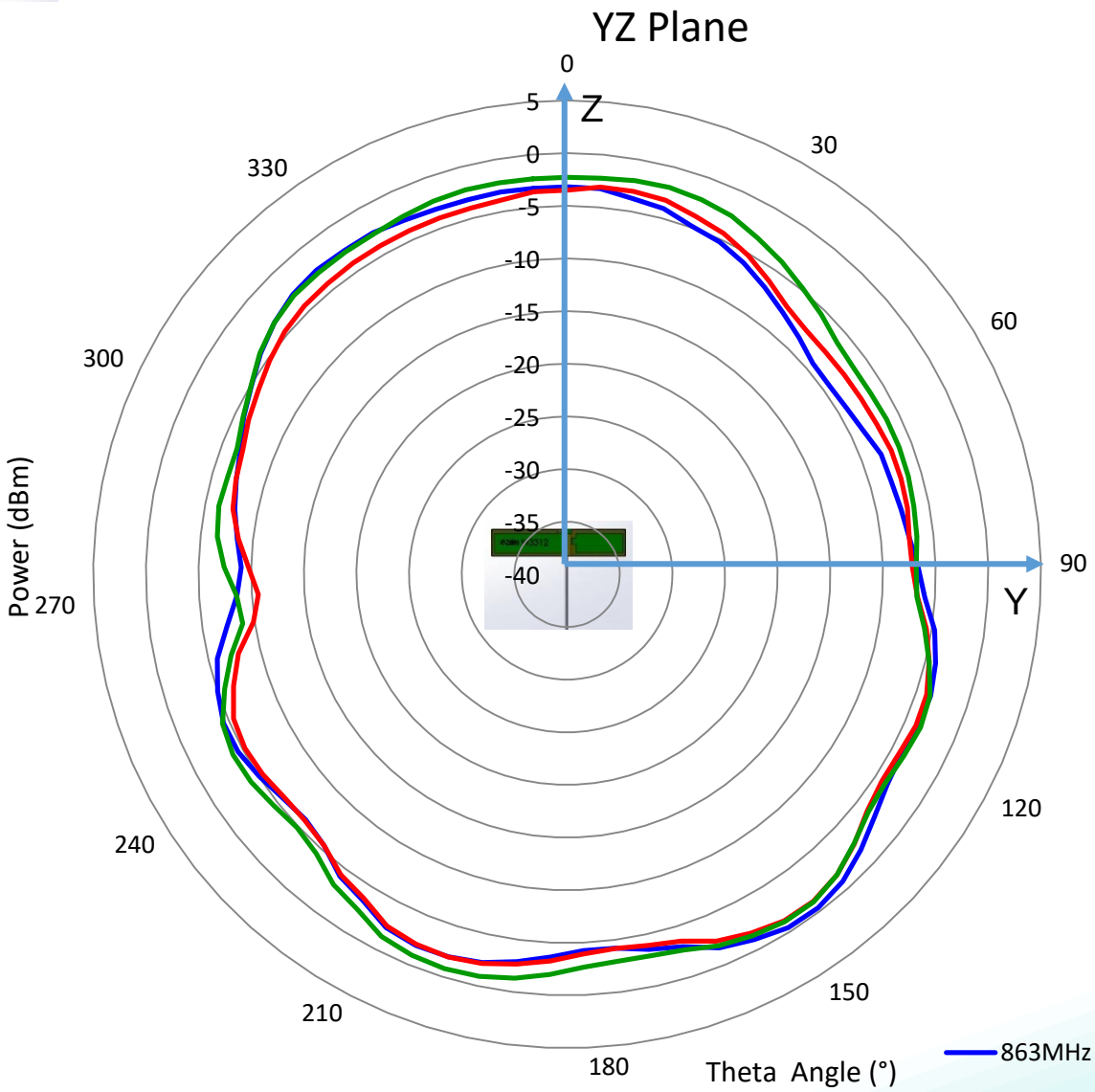



### Gain Plots




863MHz

Avg (dBi) = -4.76
Peak (dBi) = -0.36
Avg -3 (deg) = 120

895MHz

Avg (dBi) = -5.11
Peak (dBi) = -1.14
Avg -3 (deg) = 150

928MHz

Avg (dBi) = -4.07
Peak (dBi) = -0.77
Avg -3 (deg) = 190