



W3100



W3100A



W3100B



W3100C



W3100D

Features:

- Helix coil with shrink tube
- Antenna type Monopole
- Diameter 9.8 mm
- Coil cut to operating freq:
 - 169MHz 80mm, P/N W3100
 - 433MHz 30mm, P/N W3100A
 - 868MHz 11mm, P/N W3100B
 - 915MHz 10mm, P/N W3100C
 - 2450MHz 2.5mm, P/N W3100D

Applications:

- ISM band radios
- IoT
- Smart Meters
- Easy to cut for optimal length in variety of applications
- Fine tuning and impedance matching with PCB SMT components

All dimensions are in mm / inches

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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 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



Series: Helix Coil

Description: ISM 169/433/868/915/2450MHz
Helical Antenna

PART NUMBER: W3100X

ELECTRICAL SPECIFICATIONS

Antenna Type	Helix monopole coil
Frequency	169, 433, 868, 915, 2450MHz
Nominal Impedance	50 Ω
VSWR	2:1
Radiation Pattern	Omn
Gain	-4dBi @ 169MHz -2.9dBi @ 433MHz 0dBi @ 868MHz -0.5dBi @ 915MHz 3.5dBi @ 2450MHz
Efficiency	20% @ 169MHz 25% @ 433MHz 35% @ 868MHz 35% @ 915MHz 80% @ 2450MHz
Polarization	Vertical
Power Withstanding	2W

MECHANICAL SPECIFICATIONS

Coil Length	See table
Antenna Color	Black radome
Mounting method	Mechanical lock on PCB, soldering
Weight	10.2g/2.0g/0.5g/0.45g/0.2g

ENVIRONMENTAL SPECIFICATIONS

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

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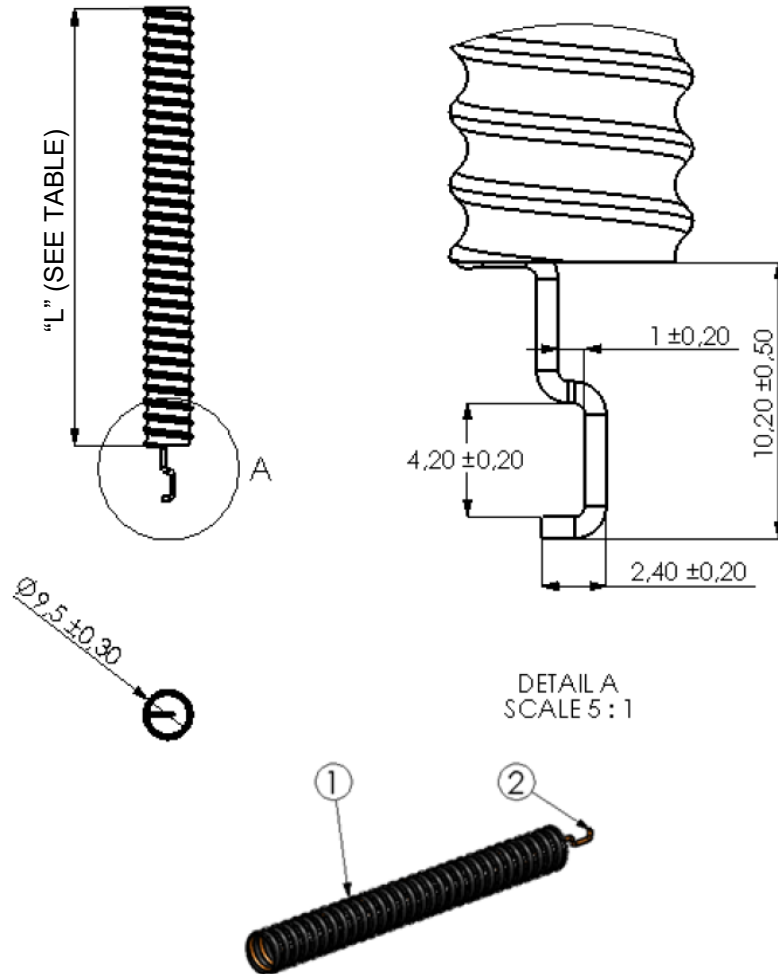
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MECHANICAL DRAWING

W3100/W3100A/W3100B/W3100C



DETAIL A
SCALE 5 : 1

W3100D

1. Heat shrink protective tube
2. Helix wire coil

Note: W3100D W/O shrink tube

PN	"L"	Frequency
W3100	80 ± 2	169MHz
W3100A	30 ± 0.5	433MHZ
W3100B	11 ± 0.5	868MHz
W3100C	10 ± 0.5	915MHz
W3100D	2.5 ± 0.2	2450MHz

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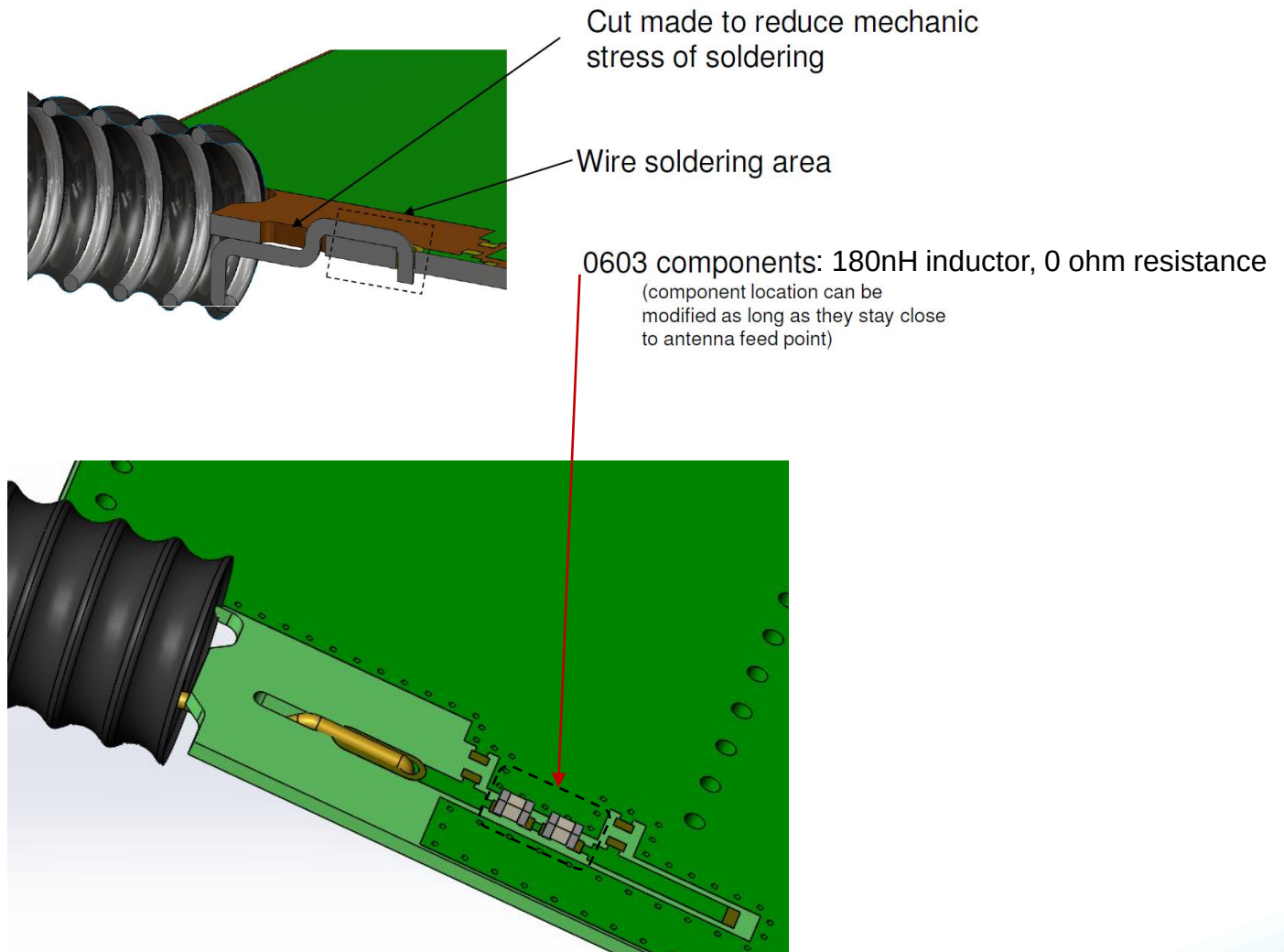
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MECHANICAL DRAWING AND TERMINAL CONFIGURATION

W3100



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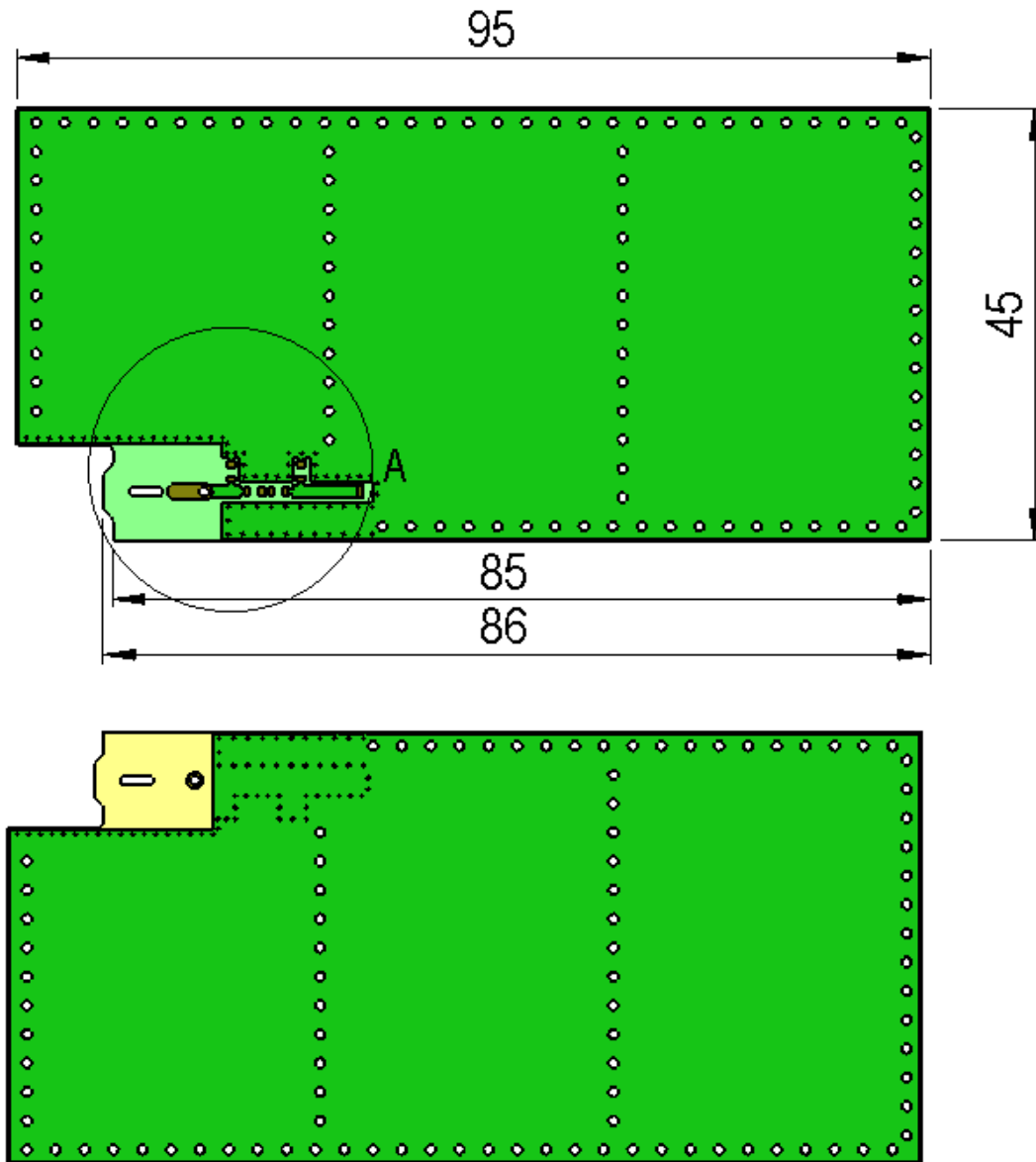
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MECHANICAL DRAWING AND TERMINAL CONFIGURATION

W3100 TEST BOARD



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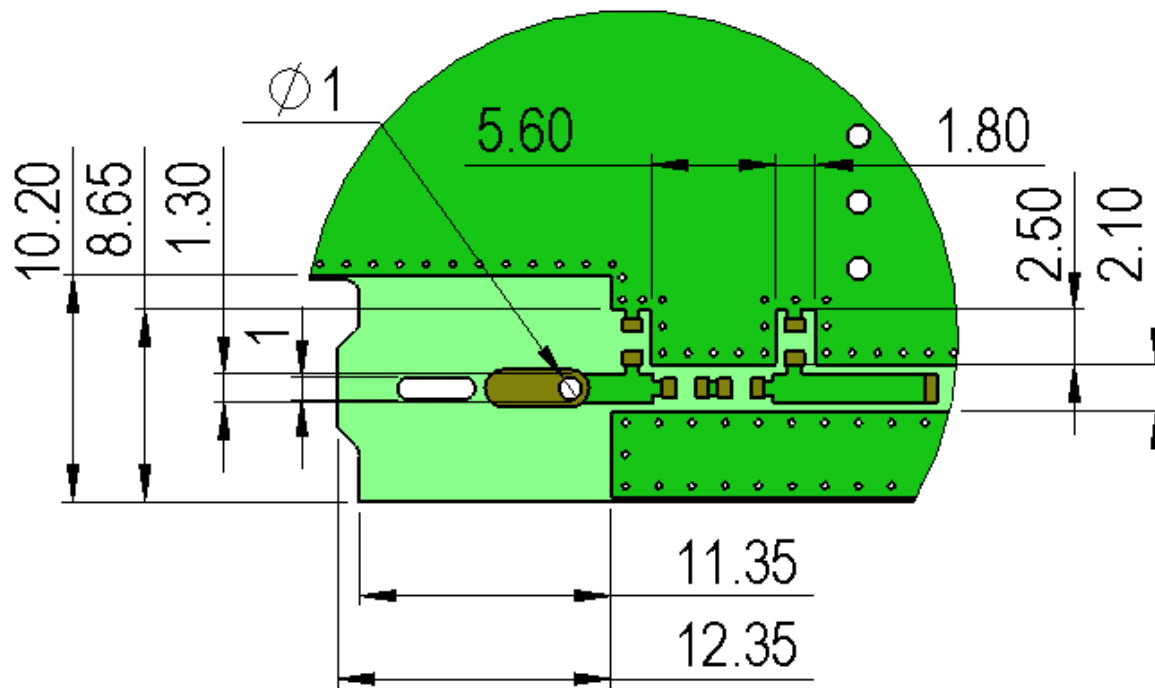
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DETAIL A

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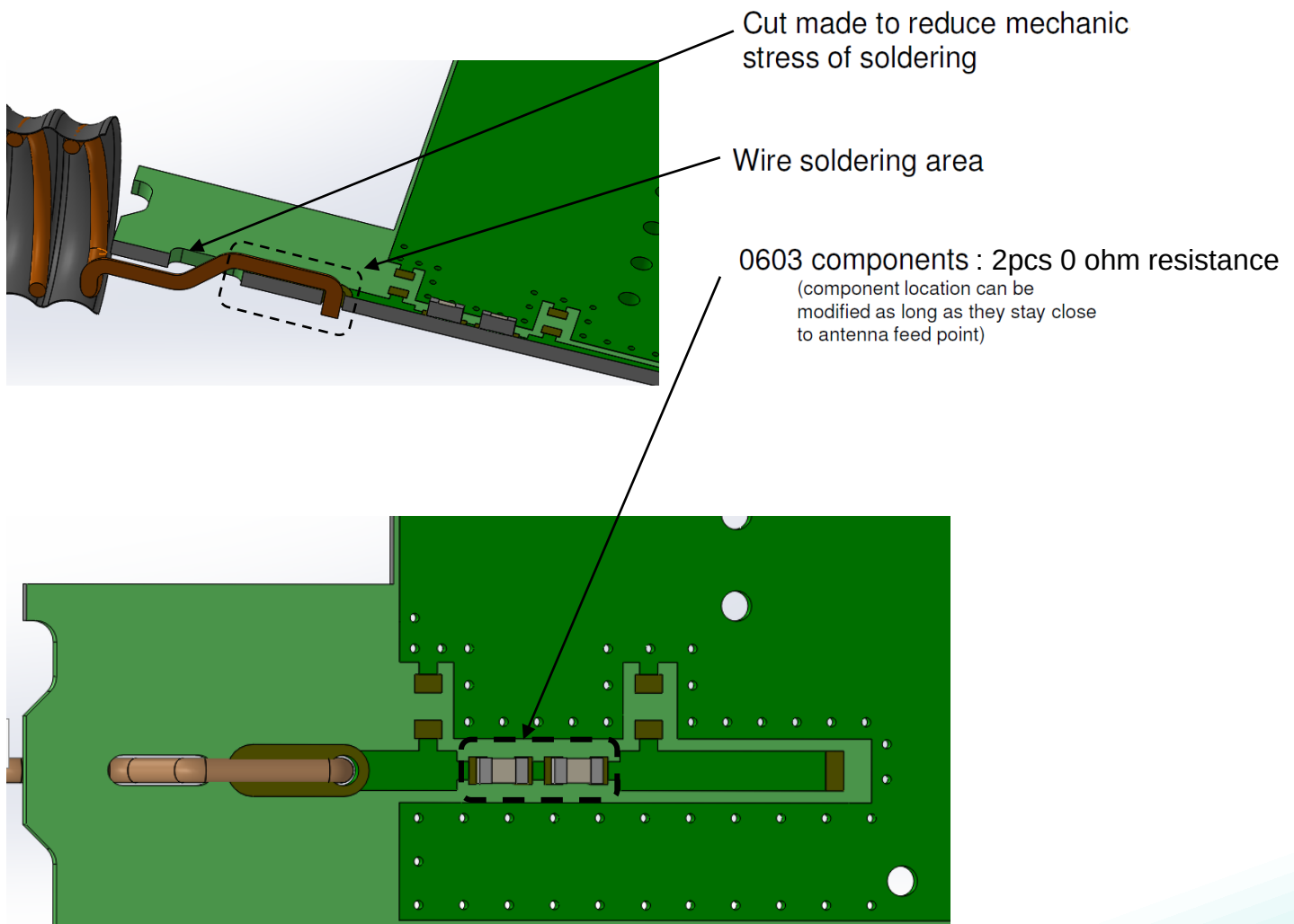
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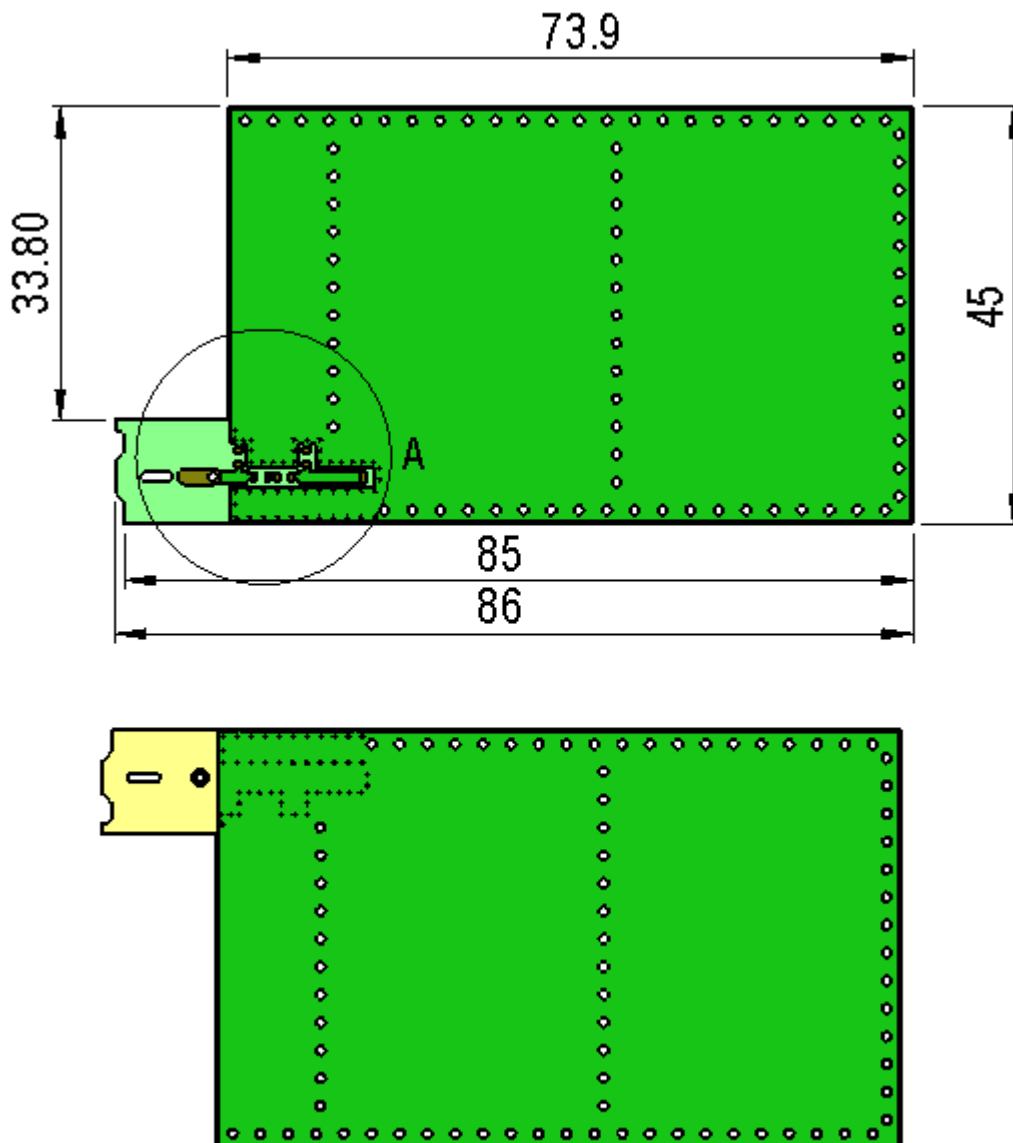
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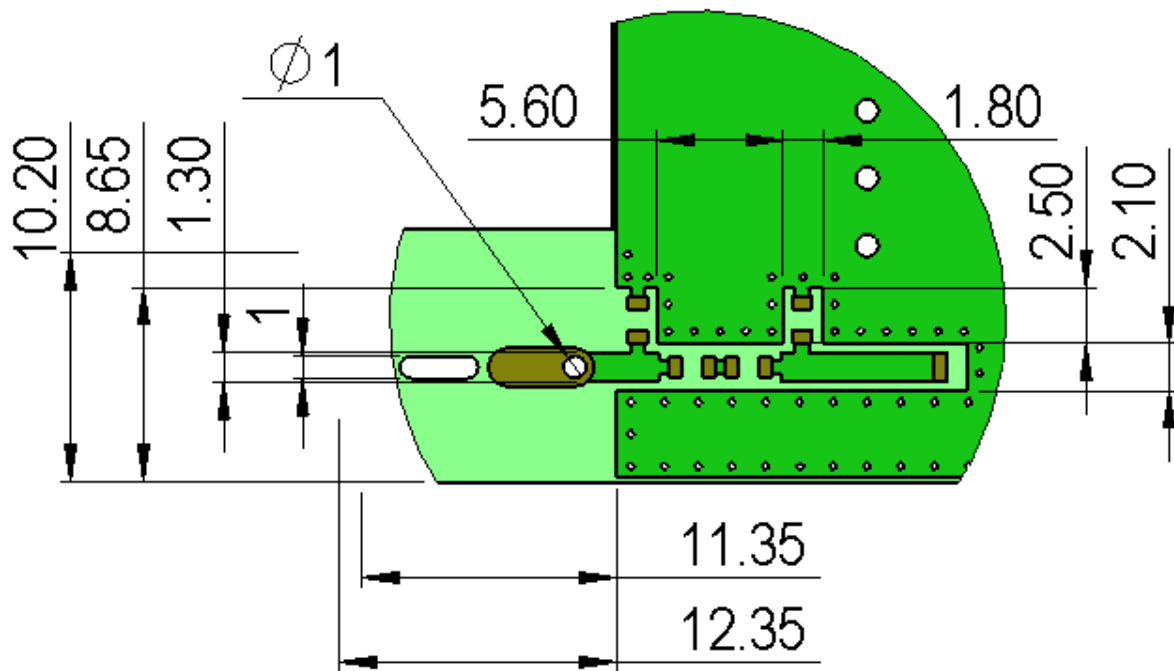
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DETAIL A

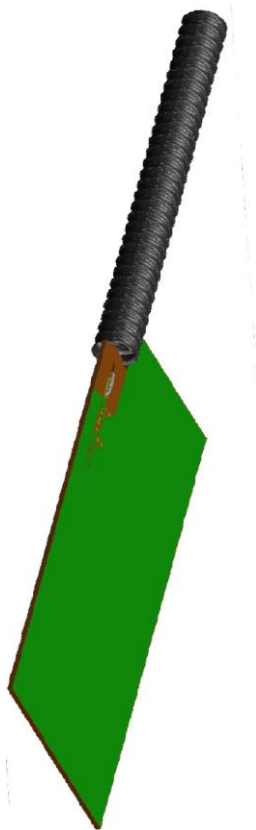
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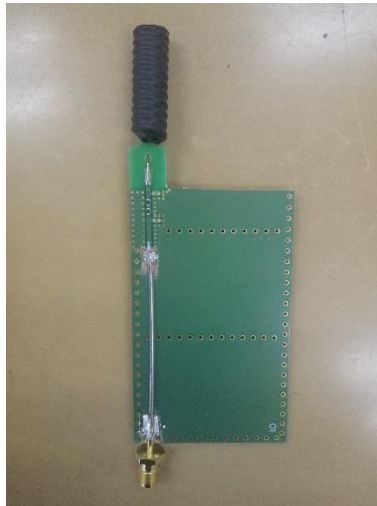
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TEST SETUP



169MHz



433MHz



868MHz



915MHz



2400MHz

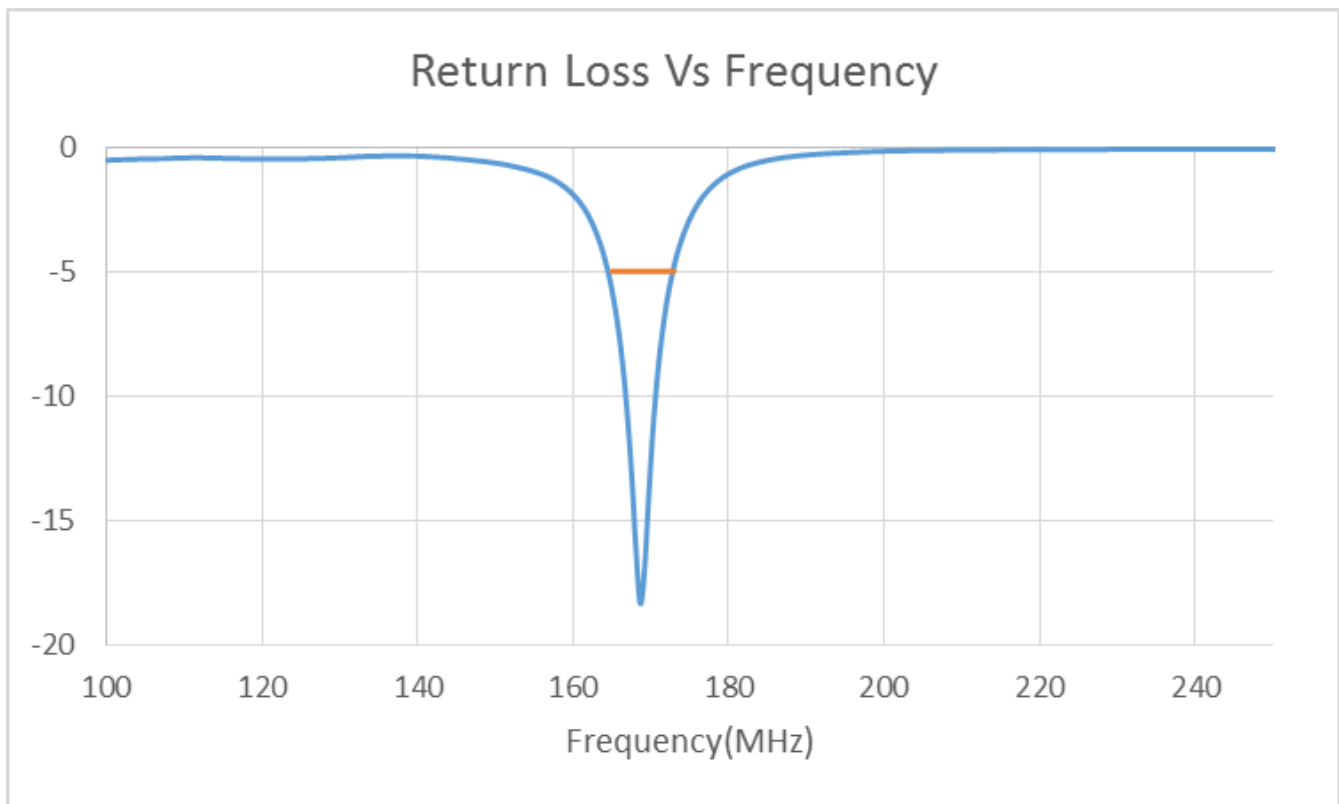
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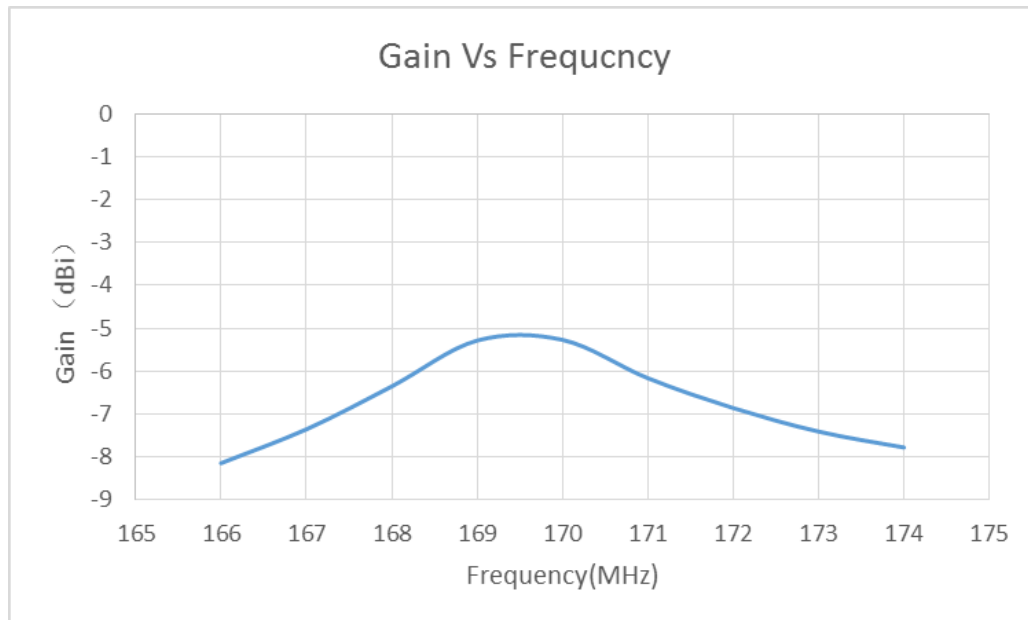
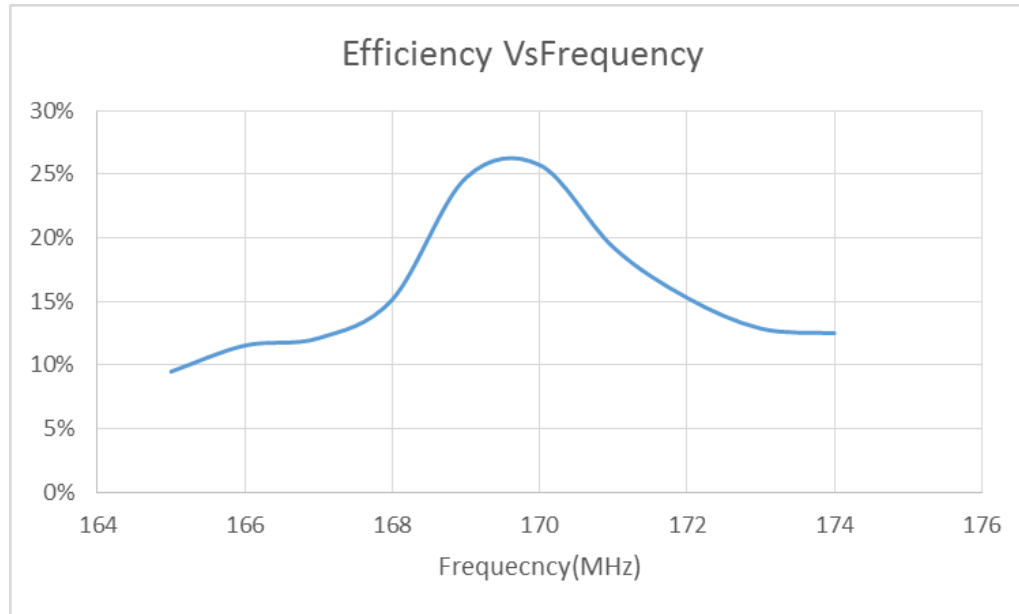
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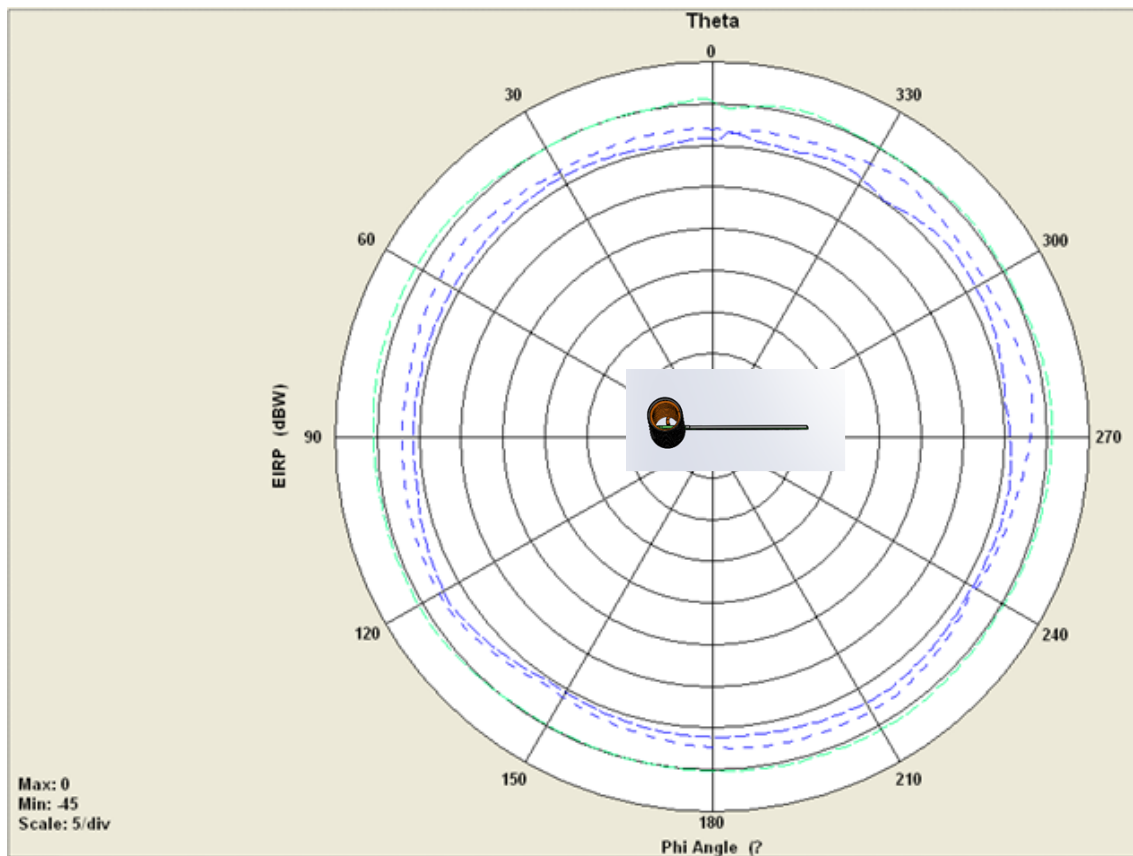
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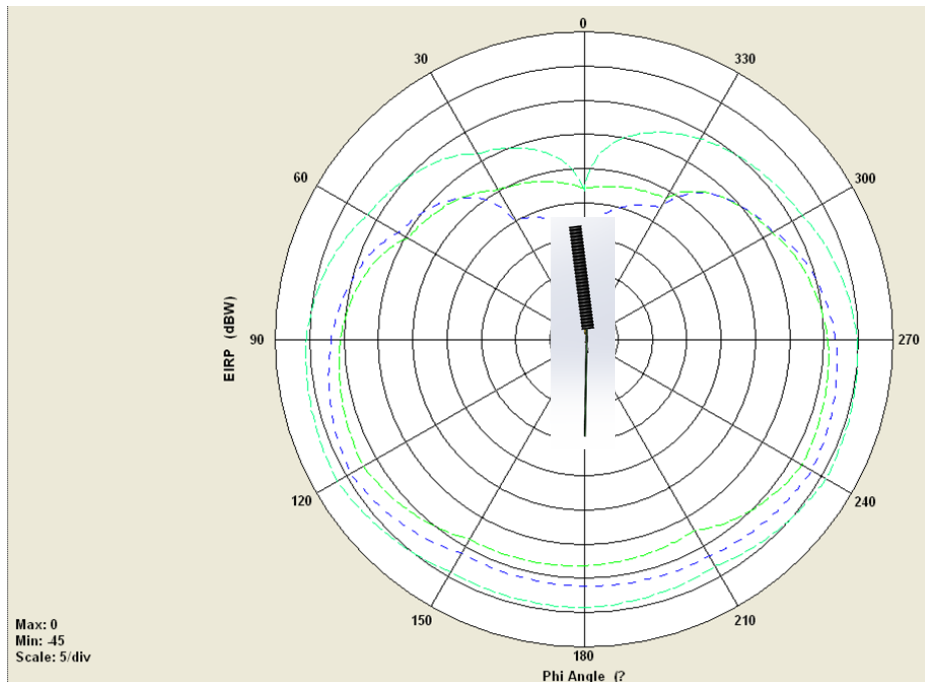
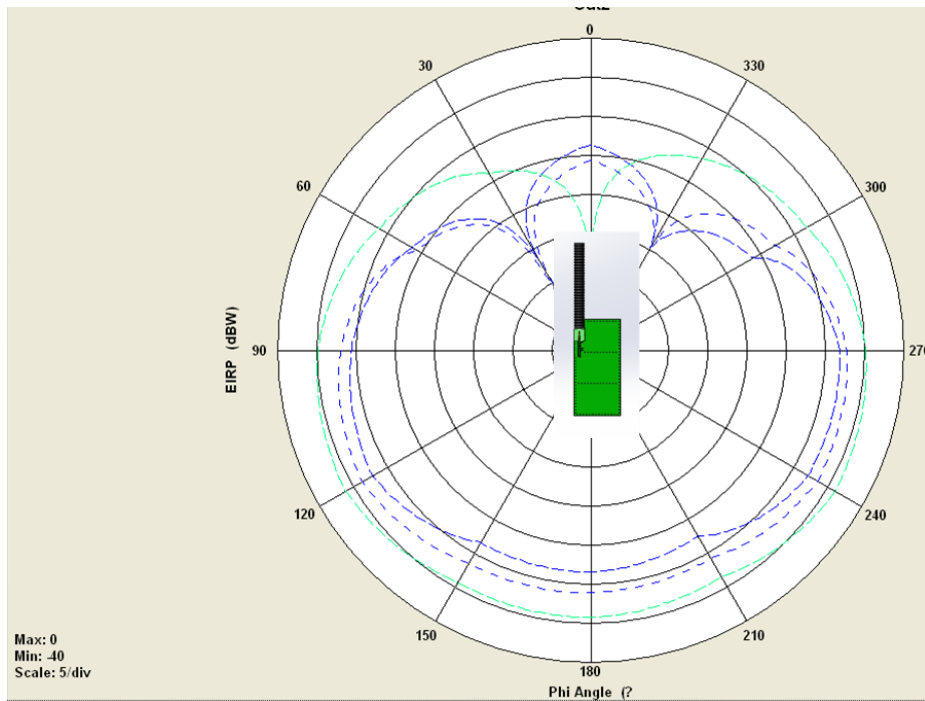
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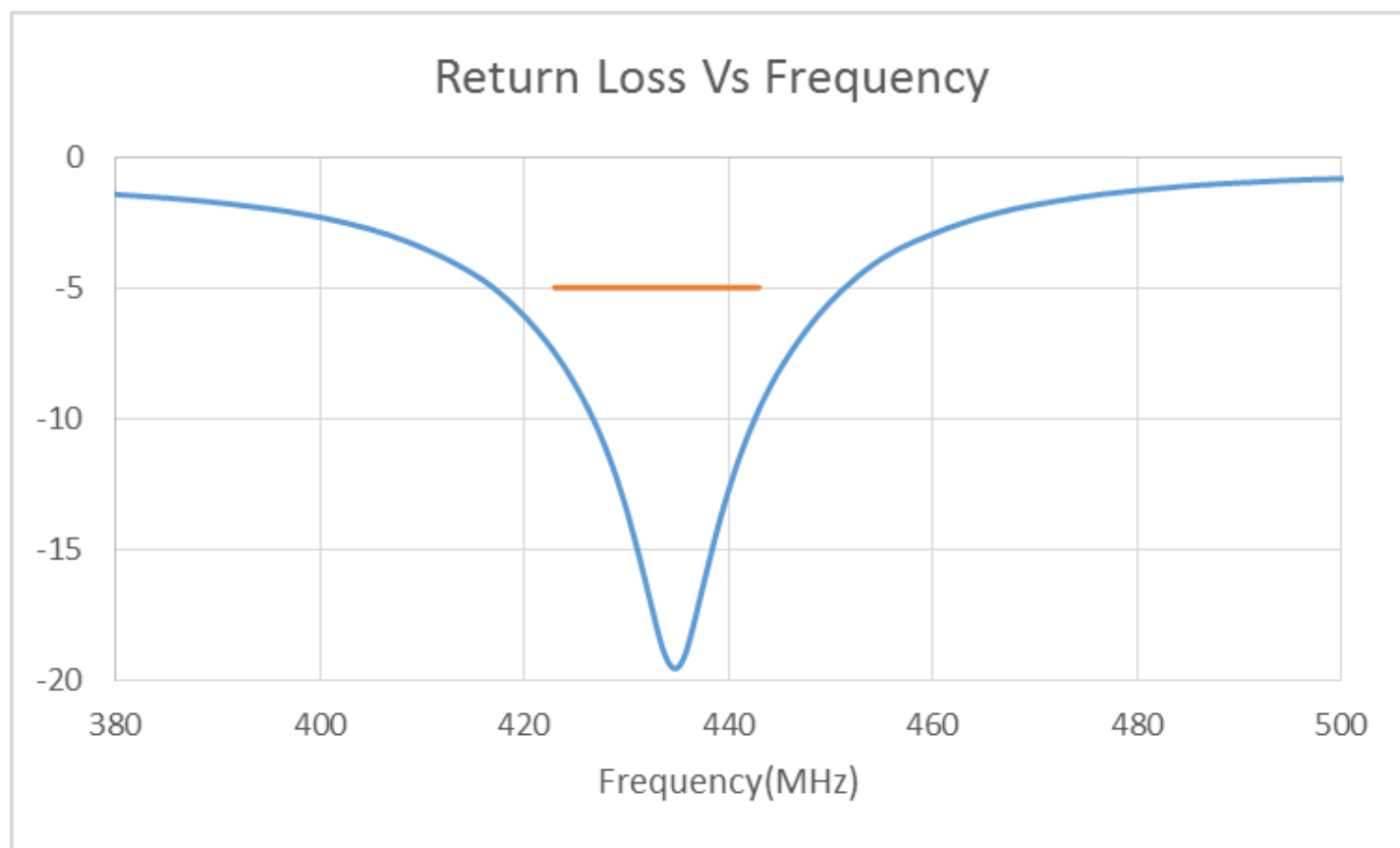
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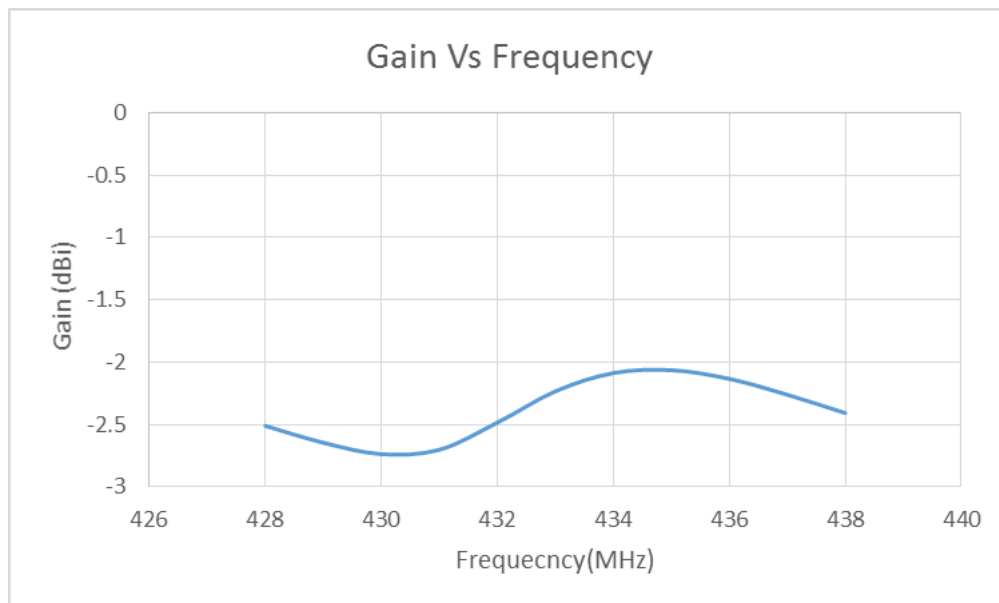
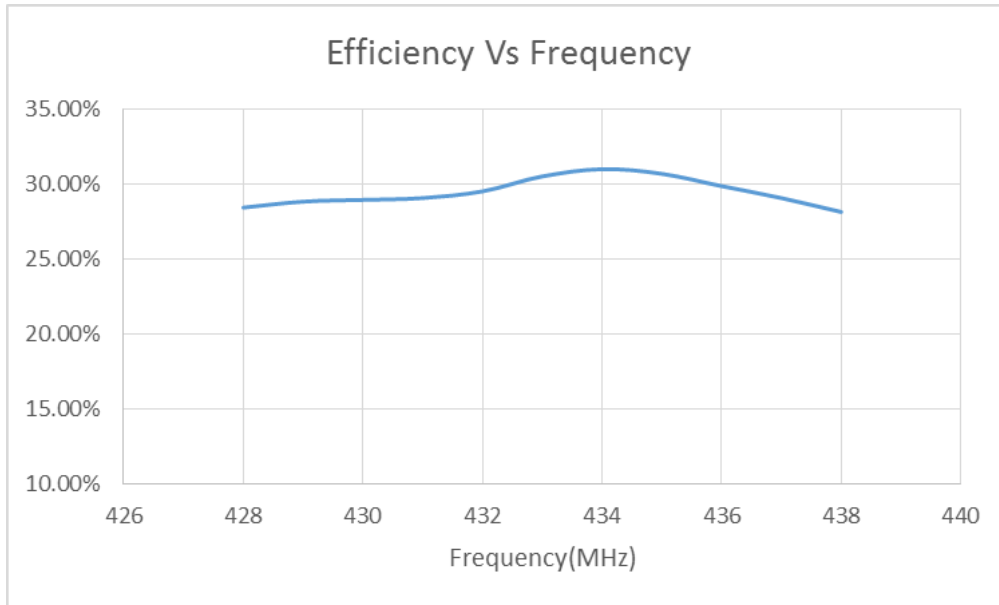
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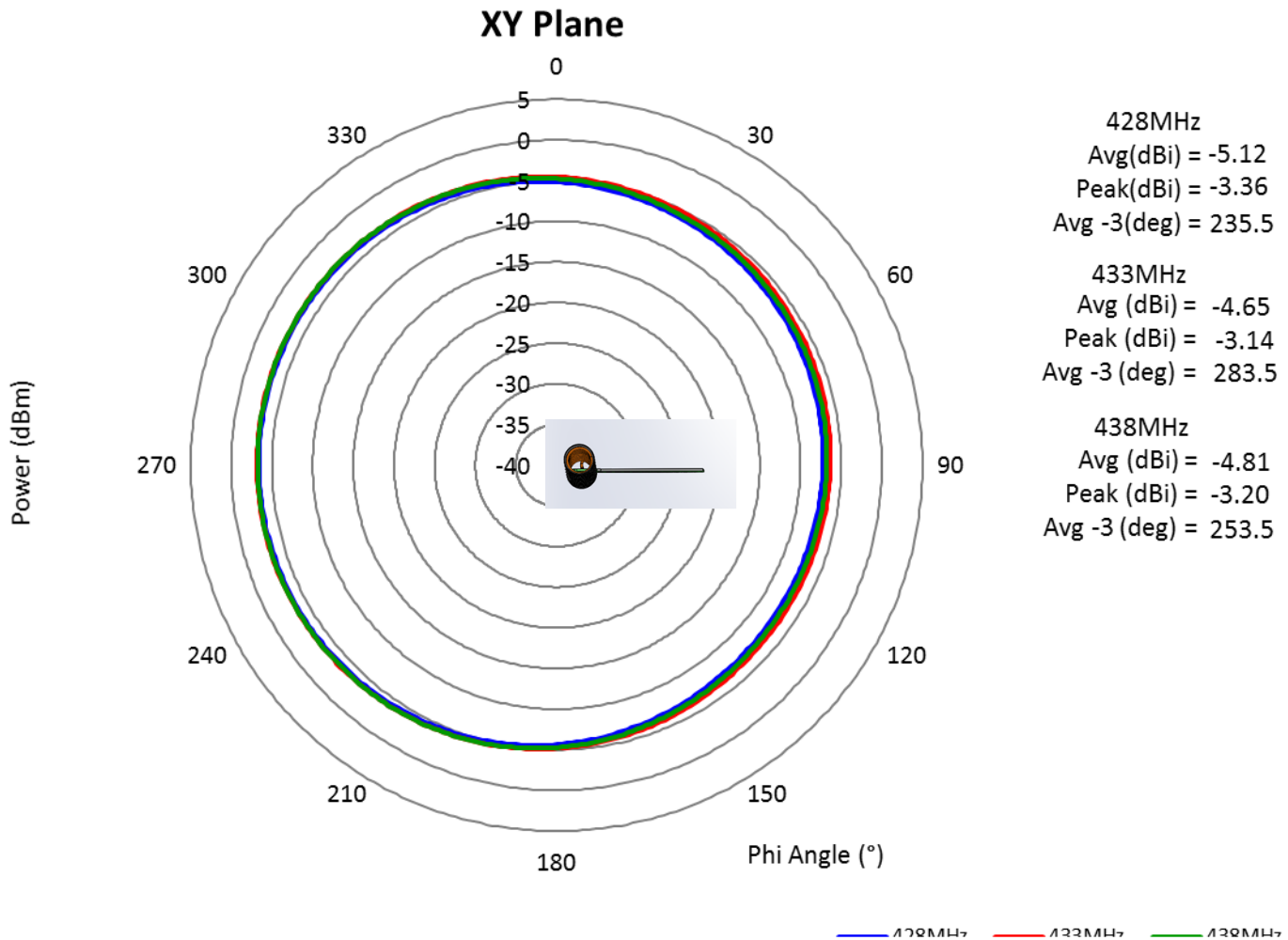
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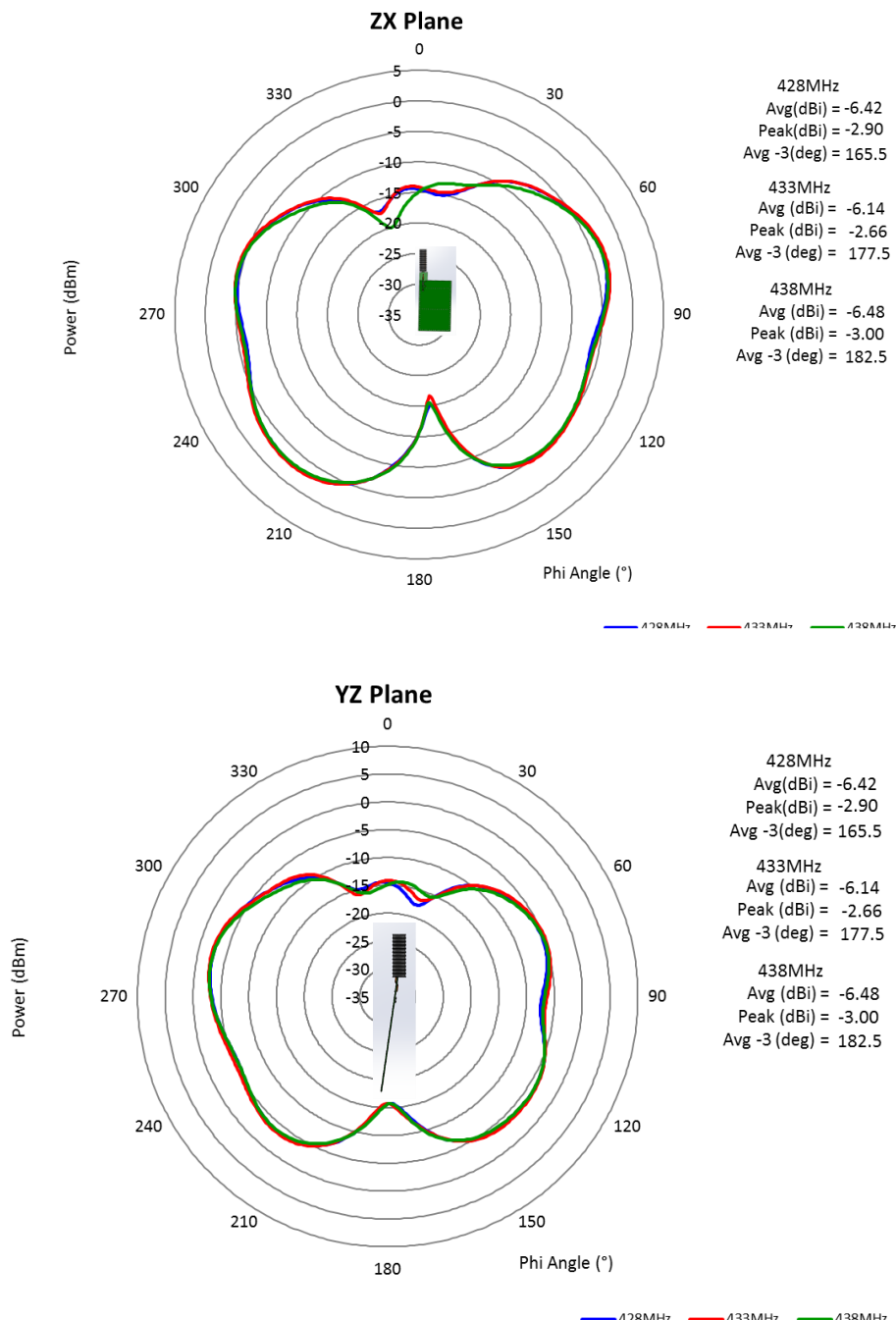
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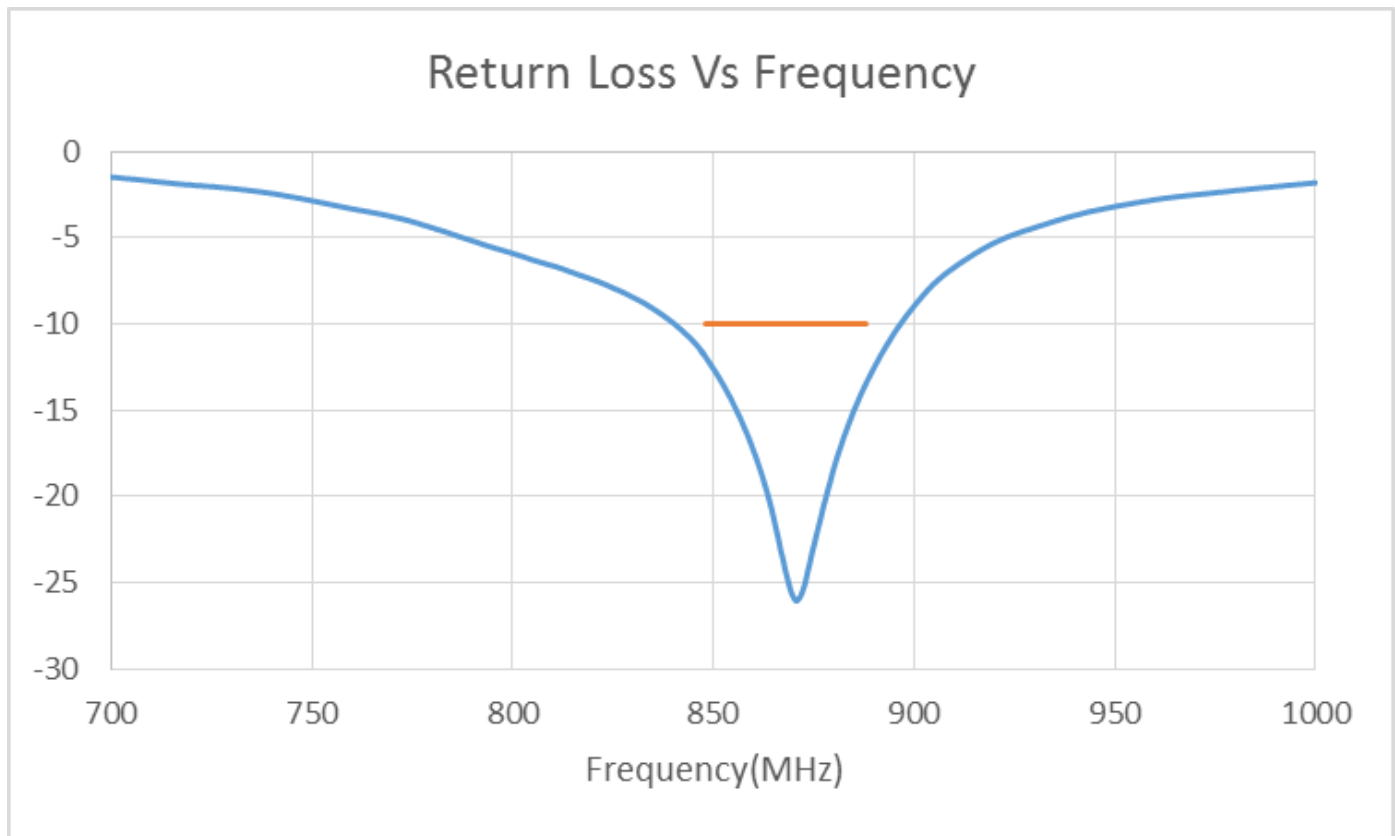
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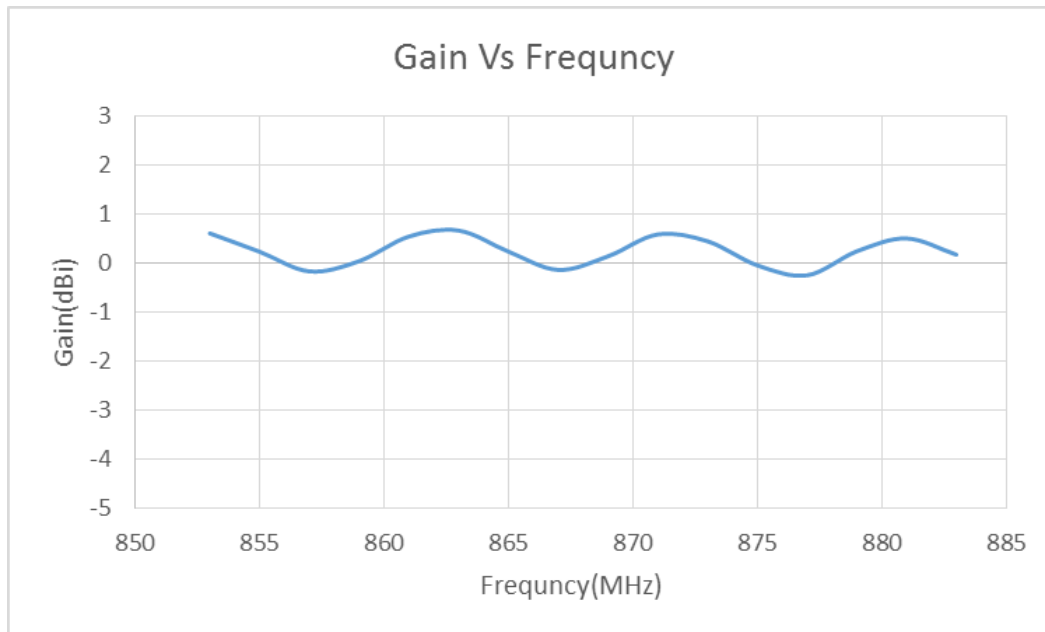
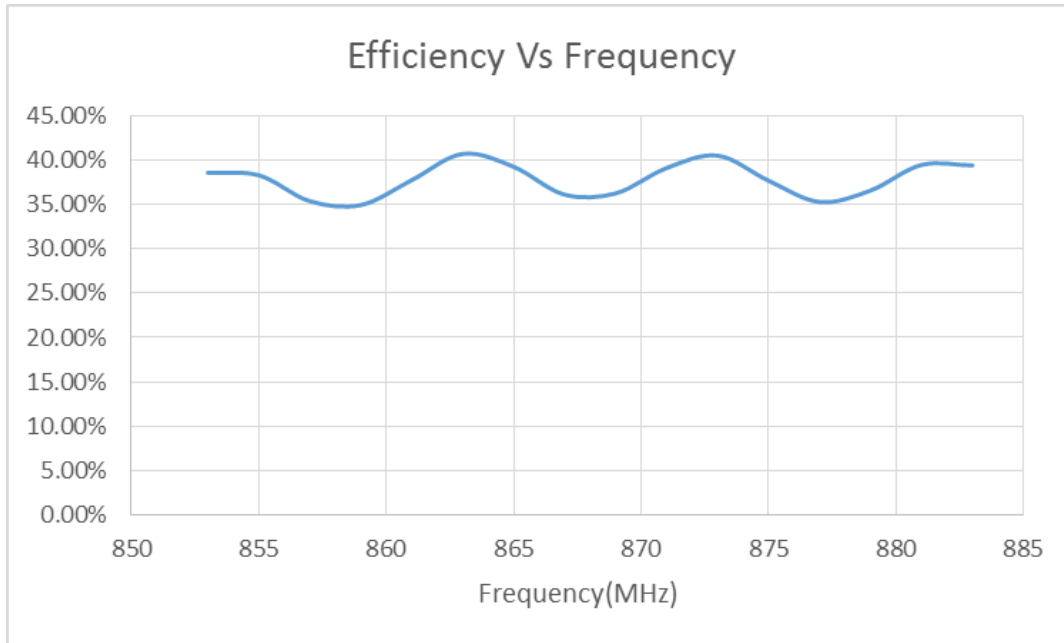
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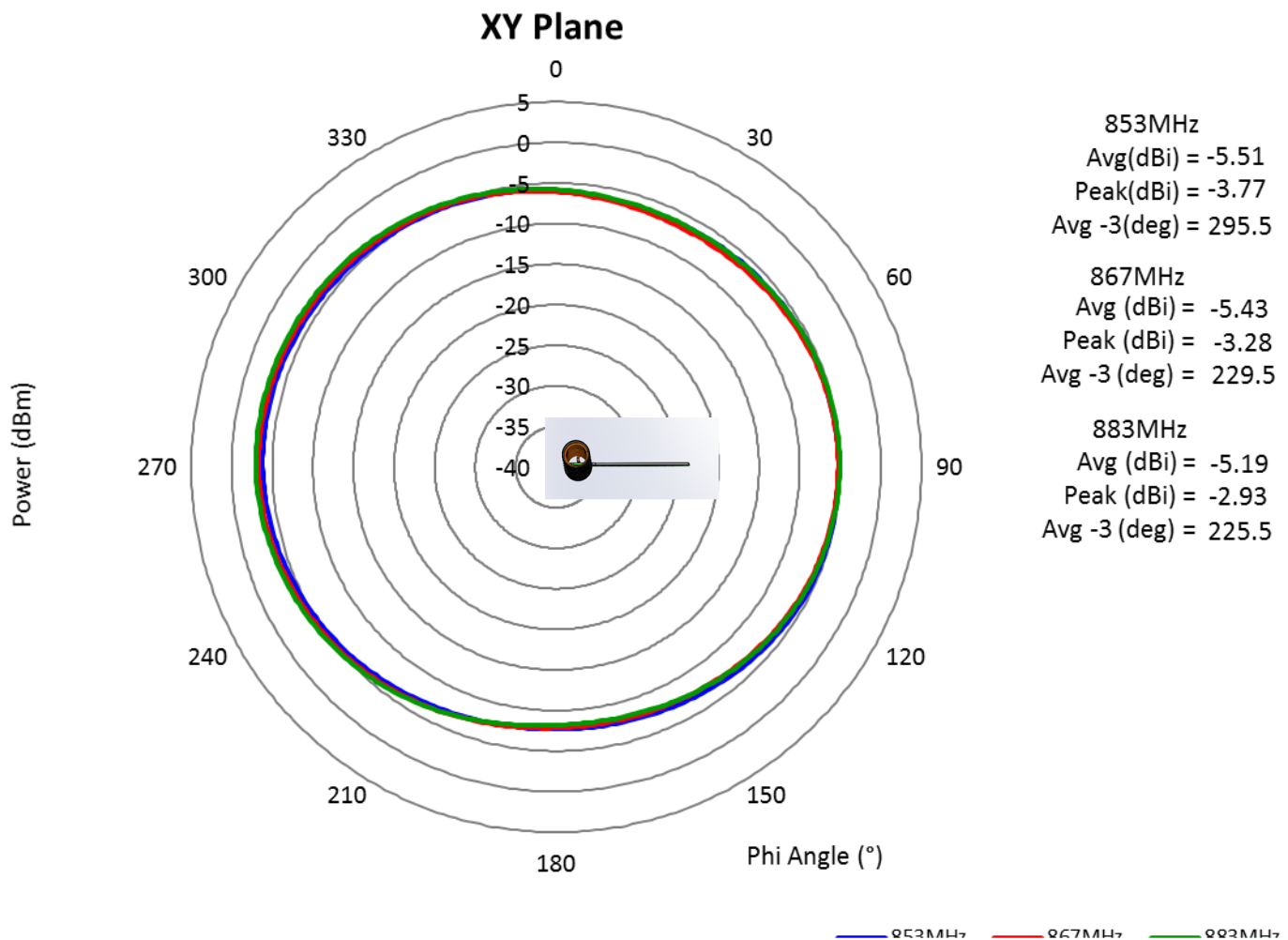
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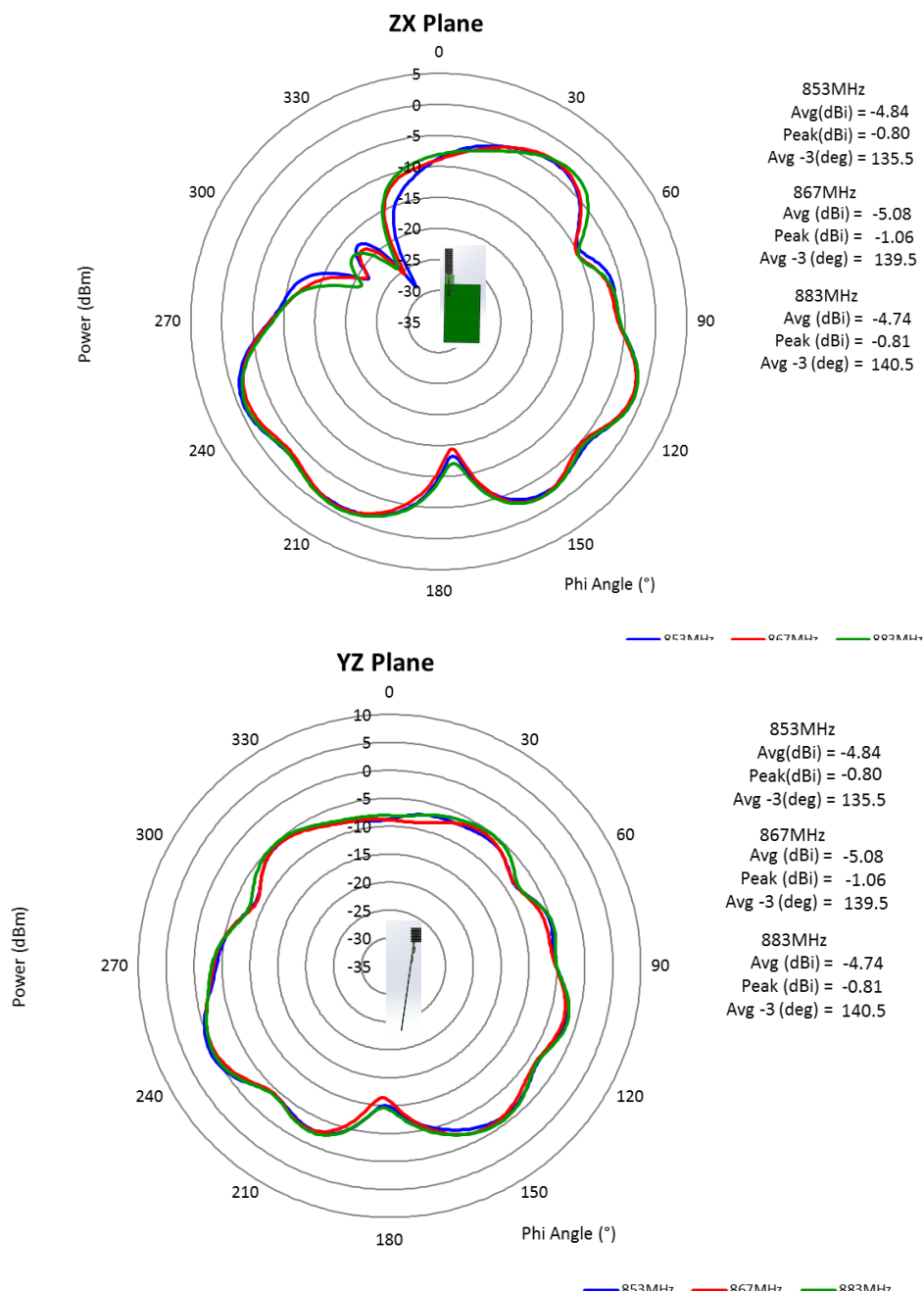
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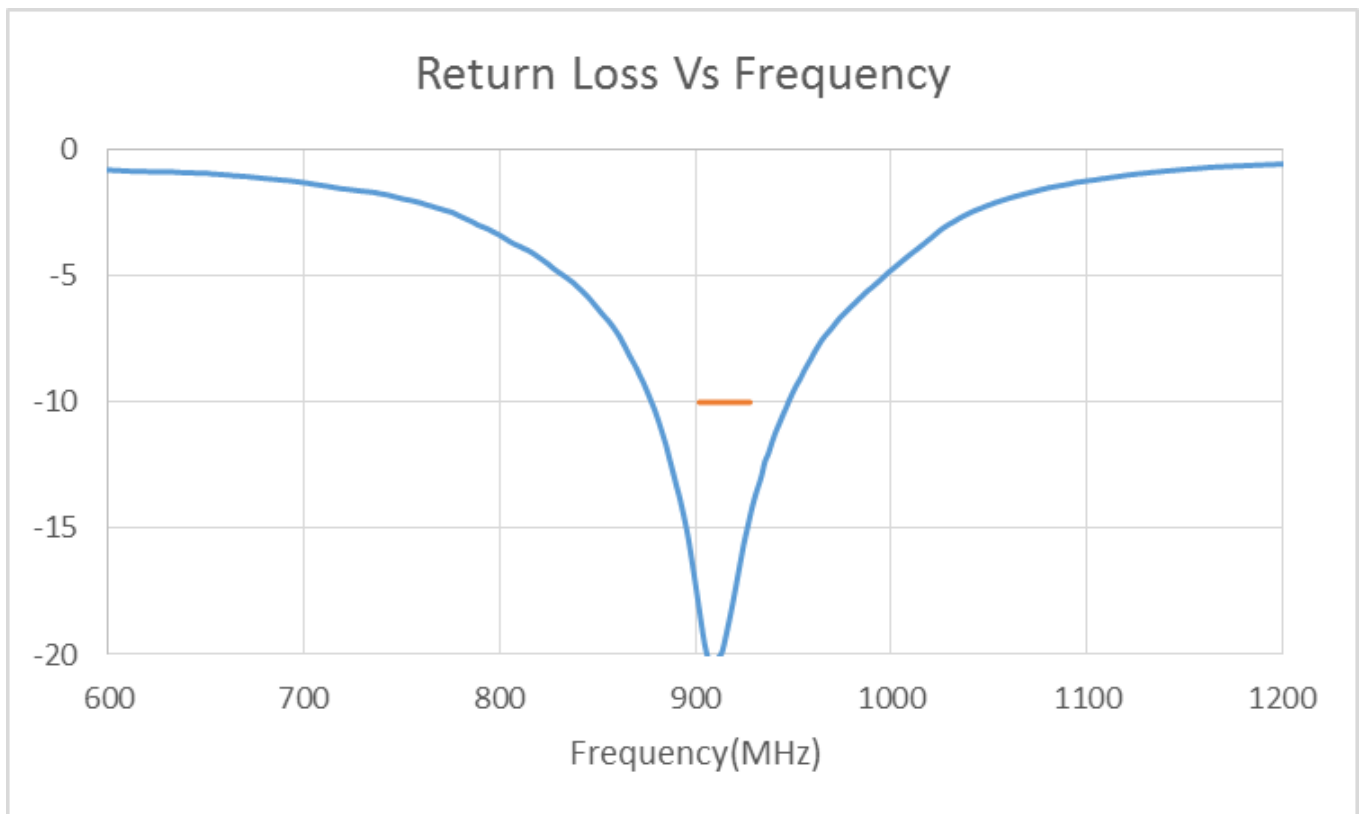
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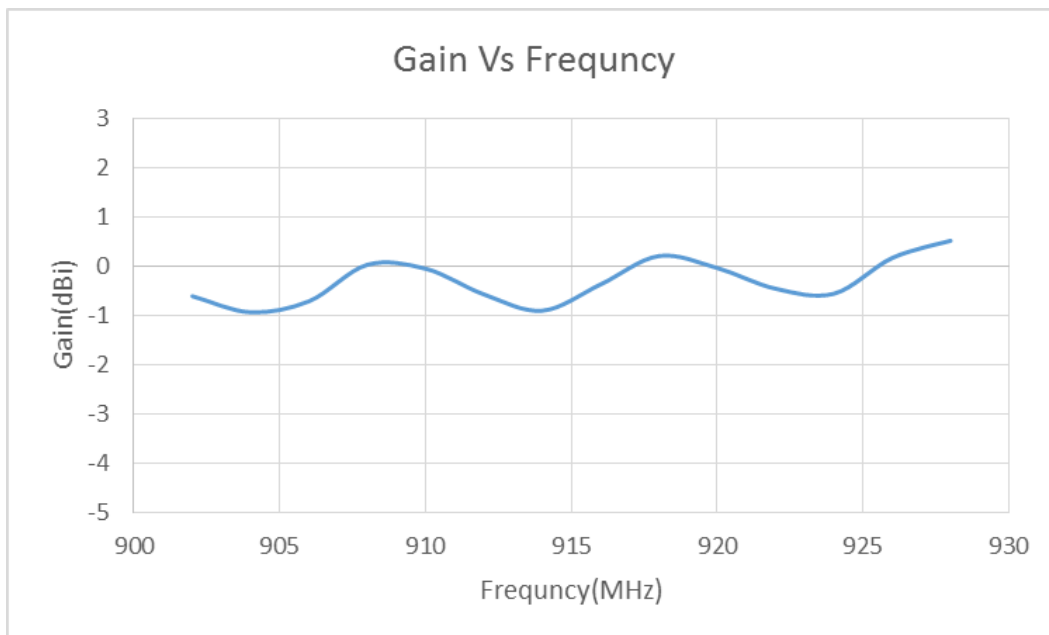
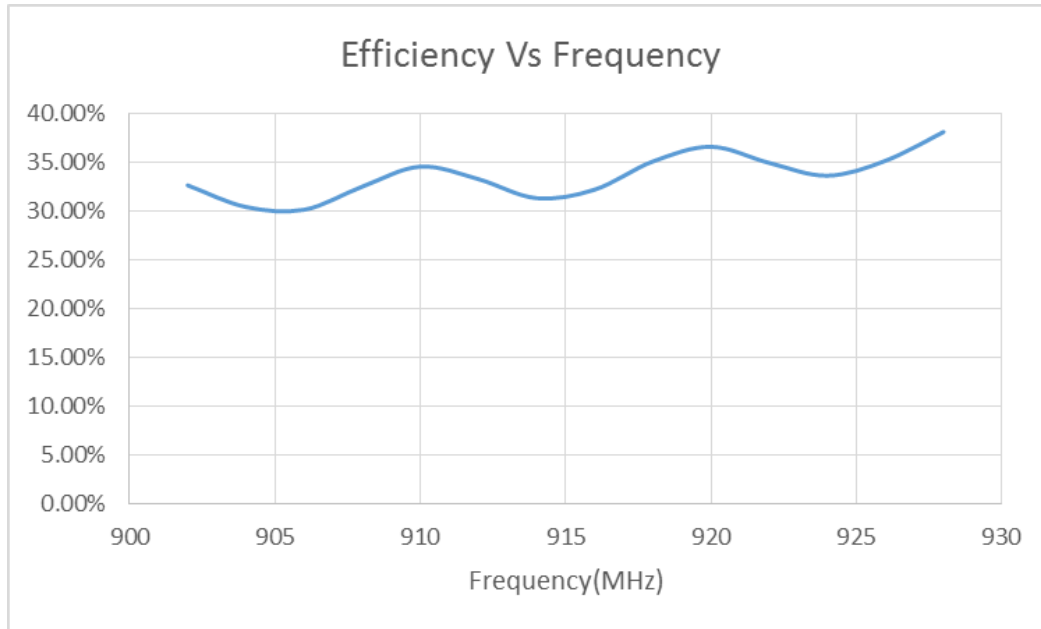
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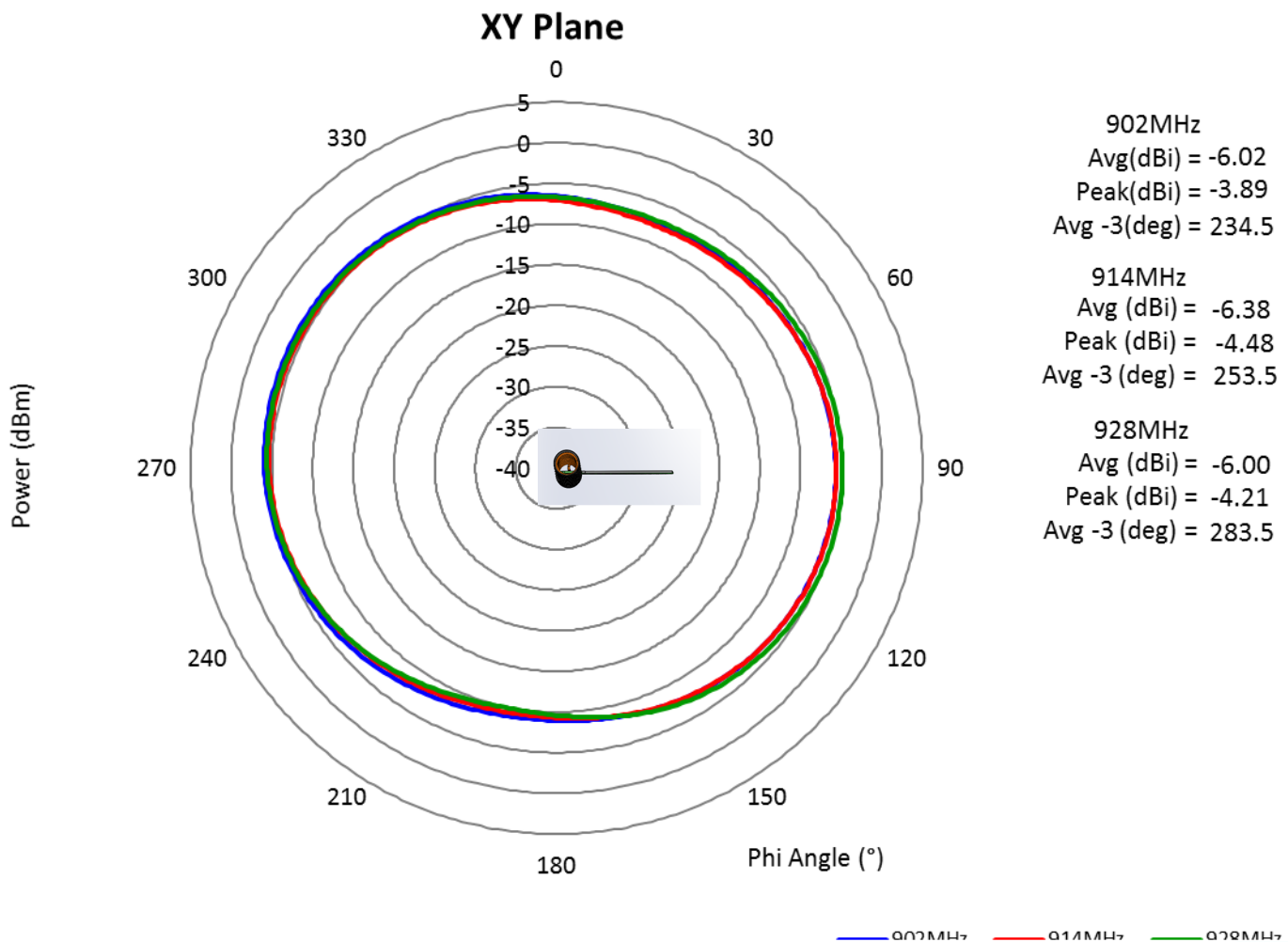
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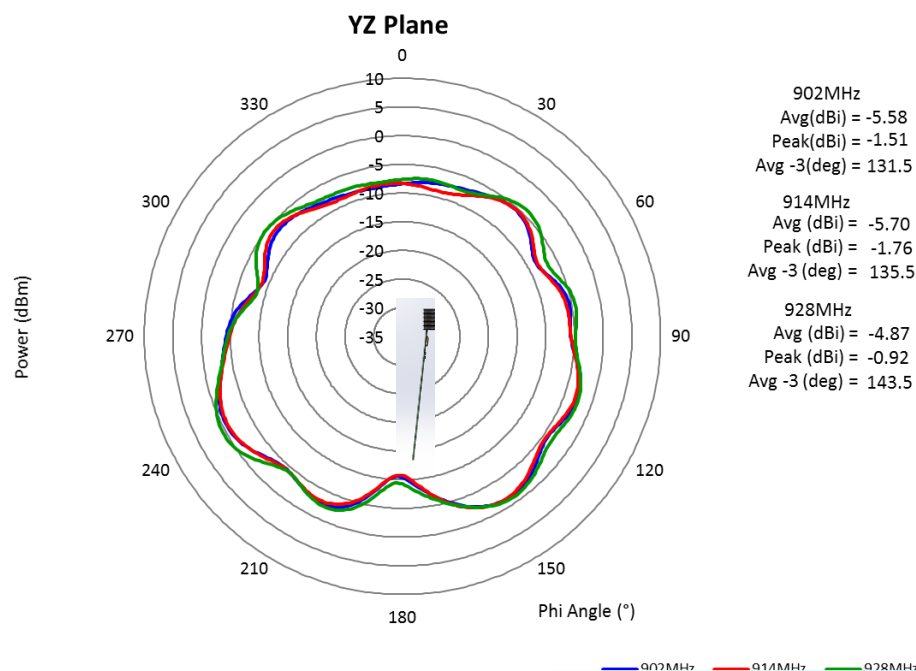
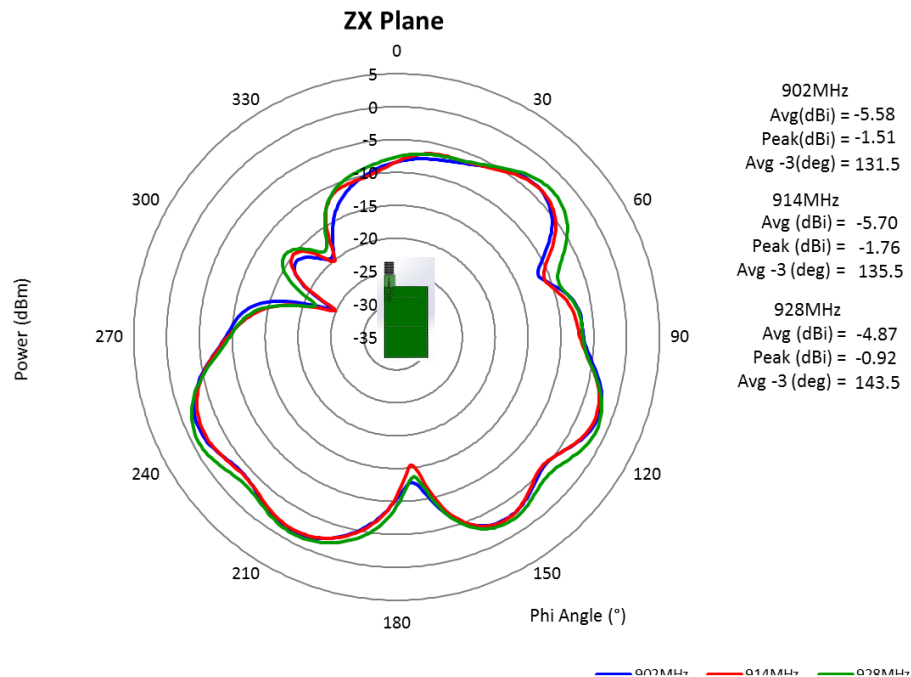
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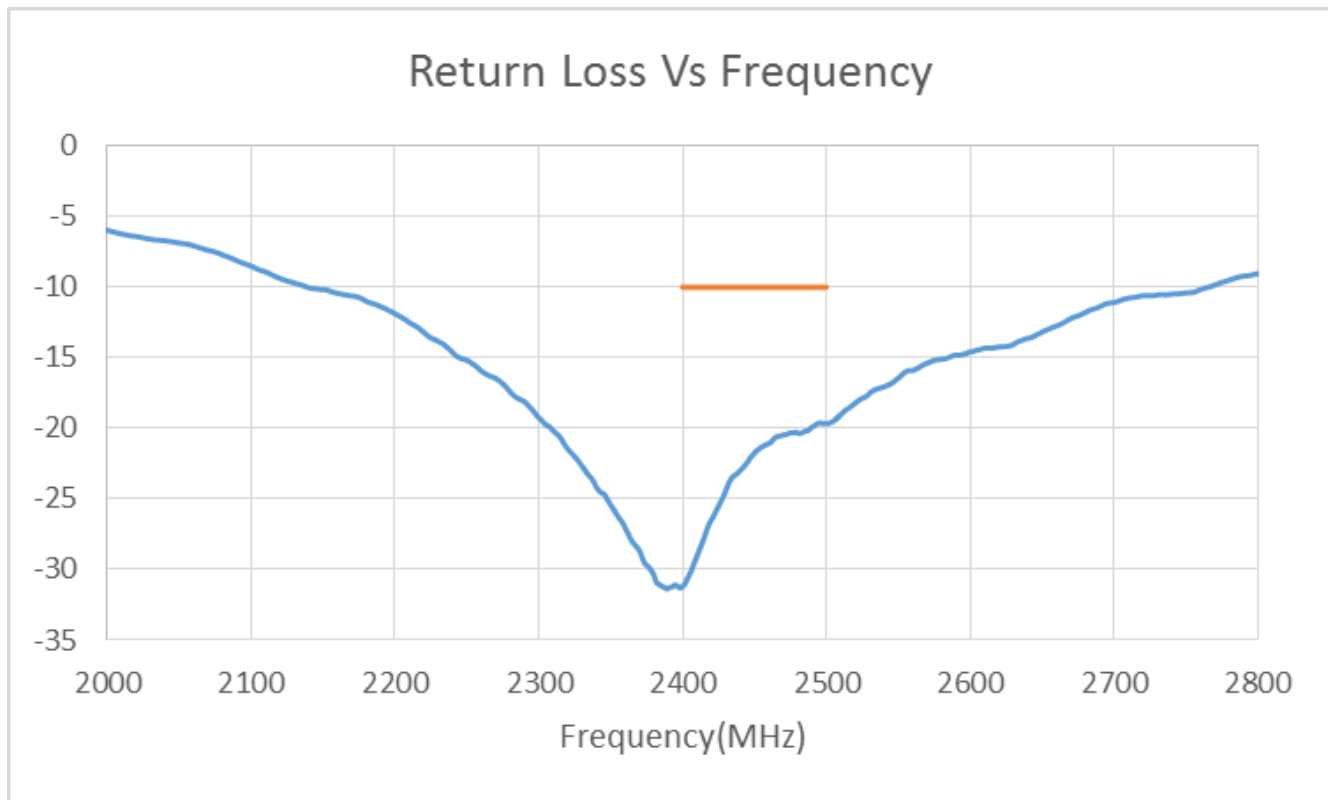
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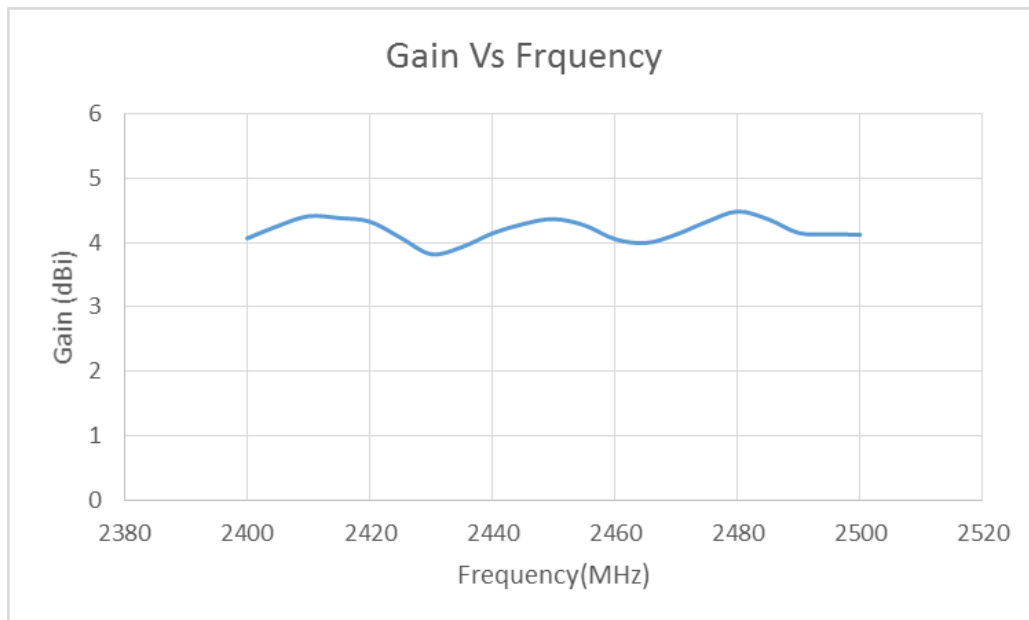
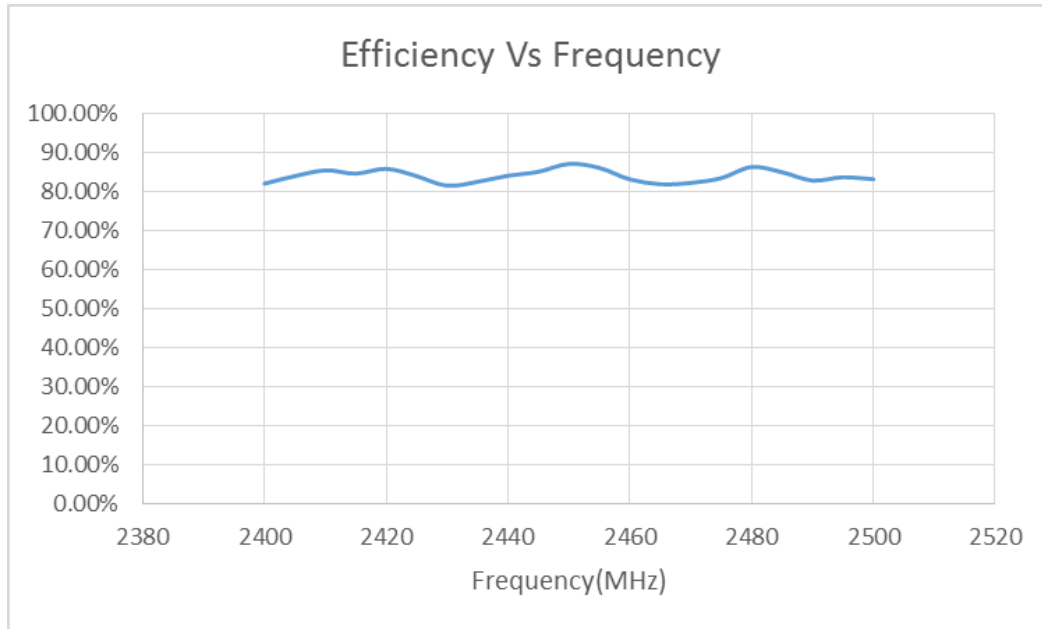
Series: Helix Coil

Description: ISM 169/433/868/915/2450MHz
Helical Antenna

PART NUMBER: W3100X

CHARTS

W3100D



Issue: 1851

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

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Series: Helix Coil

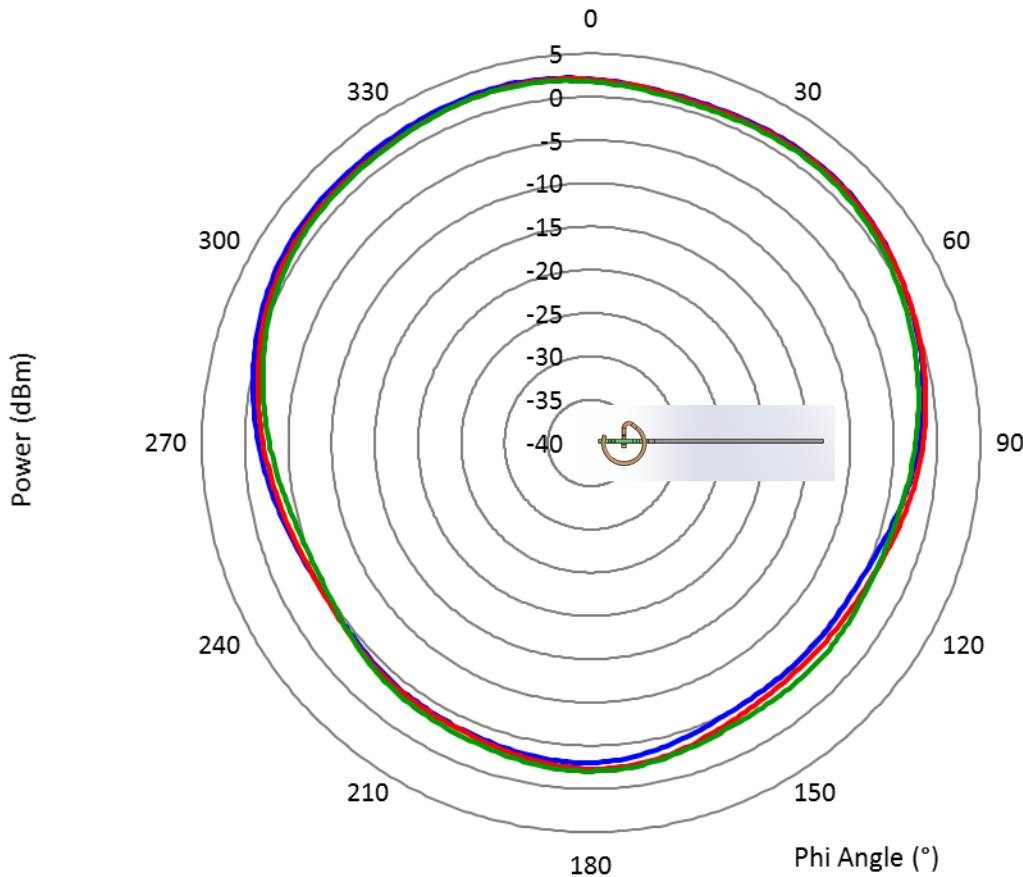
Description: ISM 169/433/868/915/2450MHz
Helical Antenna

PART NUMBER: W3100X

CHARTS

W3100D

XY Plane



2400MHz
Avg(dBi) = -0.56
Peak(dBi) = 2.54
Avg -3(deg) = 155.5

2450MHz
Avg (dBi) = -0.63
Peak (dBi) = 2.29
Avg -3 (deg) = 157.5

2500MHz
Avg (dBi) = -0.84
Peak (dBi) = 2.21
Avg -3 (deg) = 144.5

— 2400MHz — 2450MHz — 2500MHz

Issue: 1851

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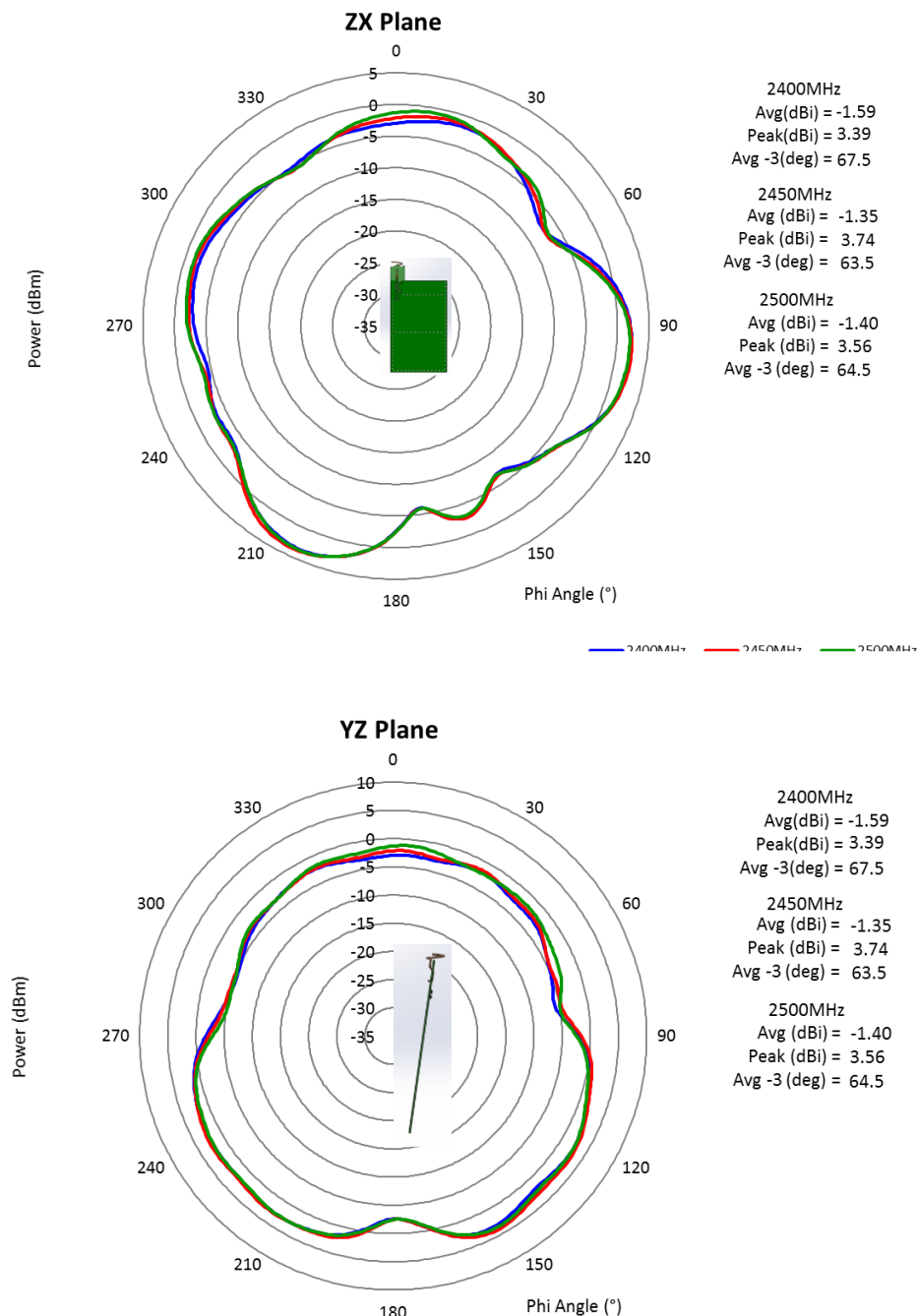
Series: Helix Coil

Description: ISM 169/433/868/915/2450MHz
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Series: Helix Coil

Description: ISM 169/433/868/915/2450MHz
Helical Antenna

PART NUMBER: W3100X

PACKAGING

W3100

39pcs antennas per tray

20pcs tray package box

1pcs empty tray

Total 780 pcs antenna per out box

Out box size: 375mmx285mmx200mm

W3100B/W3100C

99pcs antennas per tray

20pcs tray package box

1pcs empty tray

Total 1980 pcs antenna per out box

Out box size: 375mmx285mmx200mm

W3100A

72pcs antennas per tray

20pcs reel tray package box

1pcs empty tray

Total 1440 pcs antenna per out box

Out box size: 375mmx285mmx200mm

W3100D

117pcs antennas per tray

20pcs reel tray package box

1pcs empty tray

Total 2340 pcs antenna per out box

Out box size: 375mmx285mmx200mm