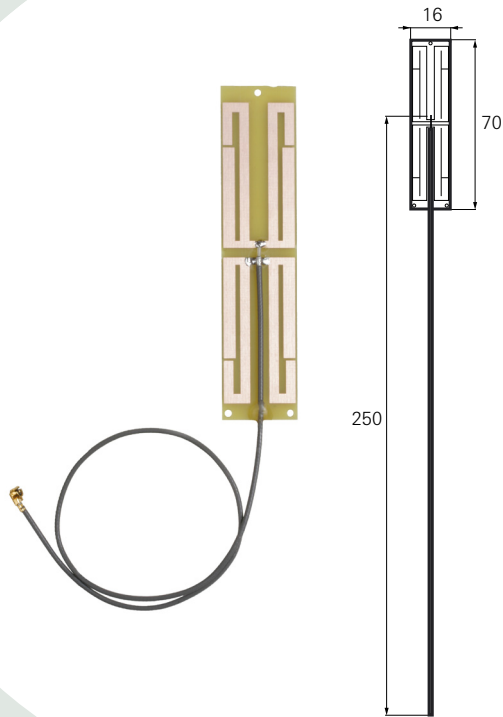


# Access Point Router 802.11n Antenna

PWB Antenna with feed cable. Pulse Part Number: W3513



## Features

- Low profile
- Omni directional gain in XY-plane
- Size W x L x H (16 x 70 x 0.9 mm)
- Antenna feed cable length: 250mm (total) / 212mm (from radiator edge)
- Antenna feed cable: 1.13mm OD with U.FL compatible connector
- Lead free materials
- RoHS Compliant Product

## Applications

- Access point routers 802.11n
- WLAN/WiFi 802.11a/b/g/n

## Electrical specifications @ +25 °C

*Note: Electrical characteristics are measured on free space.*

### 2.4 – 2.5 GHz

Typical free space performance

|                                |                                            |
|--------------------------------|--------------------------------------------|
| Frequency Range [GHz]          | 2.4 – 2.5                                  |
| Linear Average Gain [dBi]      | -3,5                                       |
| 3D Peak Gain [dBi]             | 2,0                                        |
| Total 3D Efficiency [%] / [dB] | 72 / -1,4 (peak)<br>69 / -1,6 (band edges) |
| Return loss min. [dB]          | -10                                        |
| Impedance [Ω]                  | 50                                         |
| Operating Temperature [°C]     | -40 to +85                                 |

### 4.9 – 5.85 GHz

Typical free space performance

|                                |                                            |
|--------------------------------|--------------------------------------------|
| Frequency Range [GHz]          | 4.9 – 5.85                                 |
| Linear Average Gain [dBi]      | -4,5                                       |
| 3D Peak Gain [dBi]             | 2,0                                        |
| Total 3D Efficiency [%] / [dB] | 65 / -1,9 (peak)<br>50 / -3.0 (band edges) |
| Return loss min. [dB]          | -10                                        |
| Impedance [Ω]                  | 50                                         |
| Operating Temperature [°C]     | -40 to +85                                 |

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# Access Point Router 802.11n Antenna

PWB Antenna with feed cable. Pulse Part Number: W3513

## Typical Electrical Characteristics (T=25 °C)

2,4 GHz typical Return Loss S11/ impedance

### 2.4 GHz

19 Dec 2007 11:31:10

CH1Markers

1. -13.569 dB 2.4 GHz  
2. -16.484 dB 2.5 GHz

CH1 S11 &M log MAG 5 dB/REF 0 dB

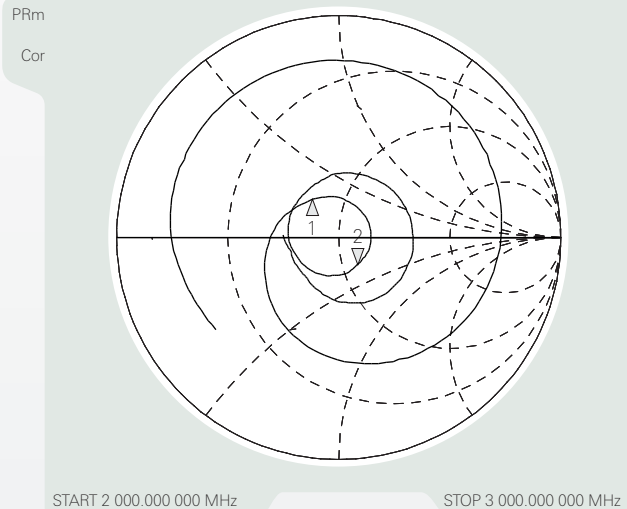


### 2.4 GHz

19 Dec 2007 11:31:19

1. 37.51  $\Omega$  13.486  $\Omega$  2. 4 GHz  
2. 57.486  $\Omega$  -14.463  $\Omega$  4.4017 pF  
2 500.000 000 MHz

CH1 S11&M 1 U FS



5 GHz typical Return Loss S11/ impedance

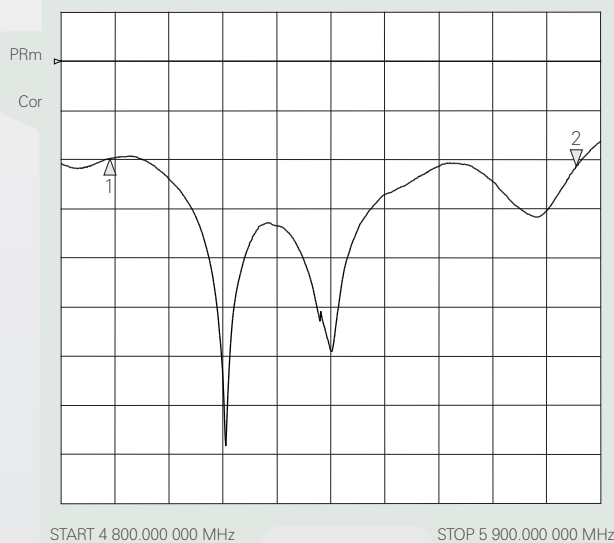
### 5 GHz

19 Dec 2007 11:29:22

CH1Markers

1. -10.919 dB 4.9 GHz  
2. -11.725 dB 5 850.0 MHz

CH1 S11 &M log MAG 5 dB/REF 0 dB

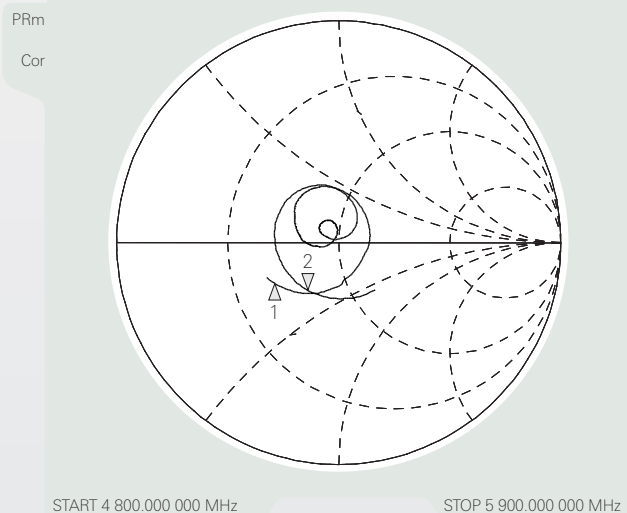


### 5 GHz

19 Dec 2007 11:29:30

1. 27.604  $\Omega$  2.0156  $\Omega$  4.9 GHz  
2. 34.602  $\Omega$  -17.129  $\Omega$  1.5883 pF  
5 850.000 000 MHz

CH1 S11&M 1 U FS



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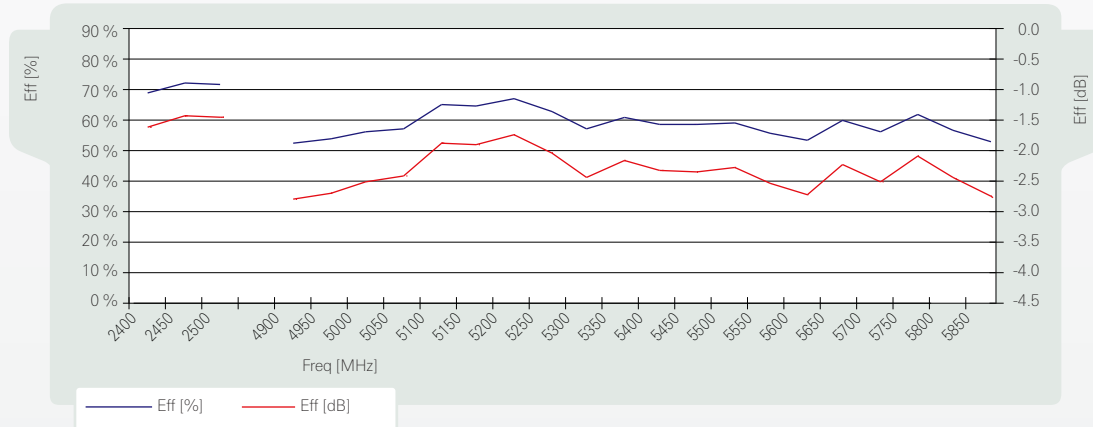
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# Access Point Router 802.11n Antenna

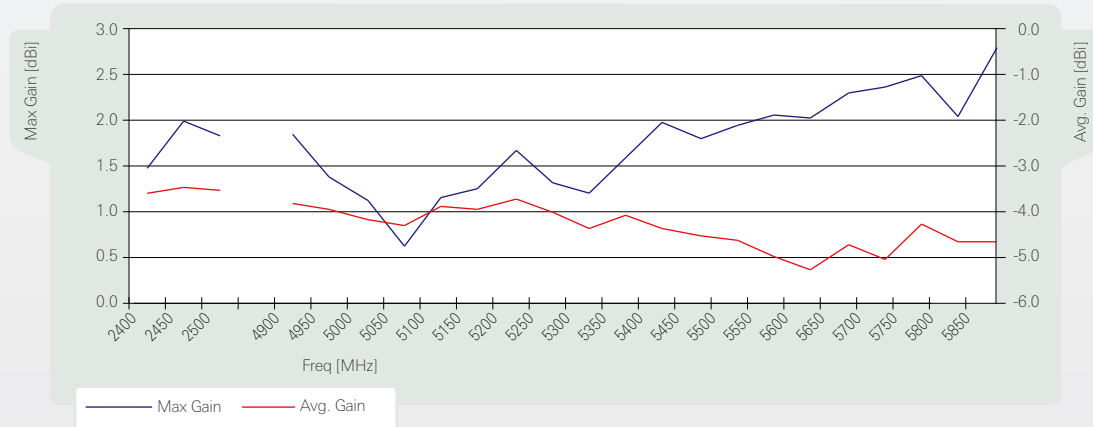
PWB Antenna with feed cable. Pulse Part Number: W3513

## Free Space Efficiency, Average and Maximum Gain

### Total 3D Efficiency



### Average and Max Gain



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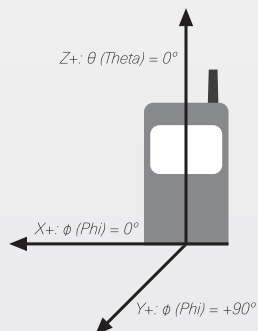
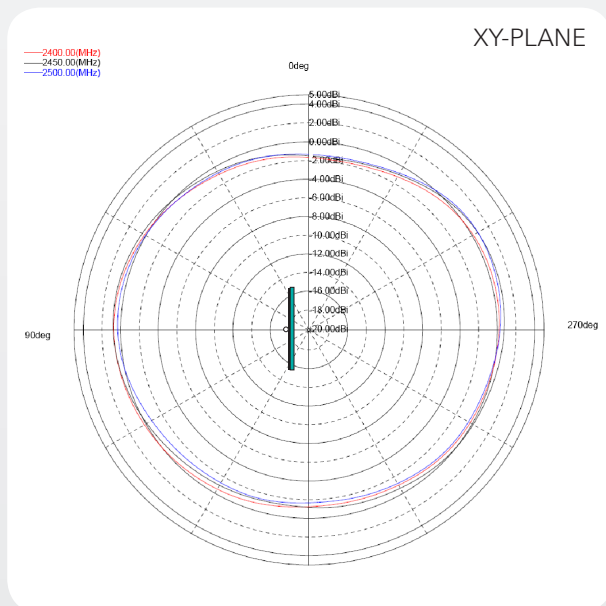
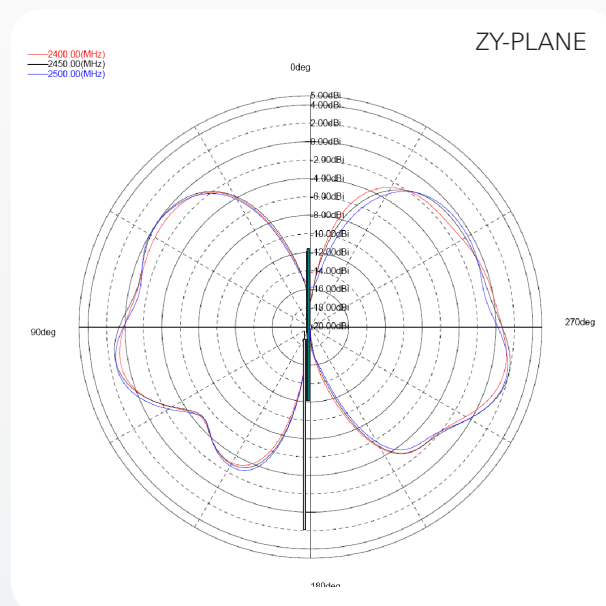
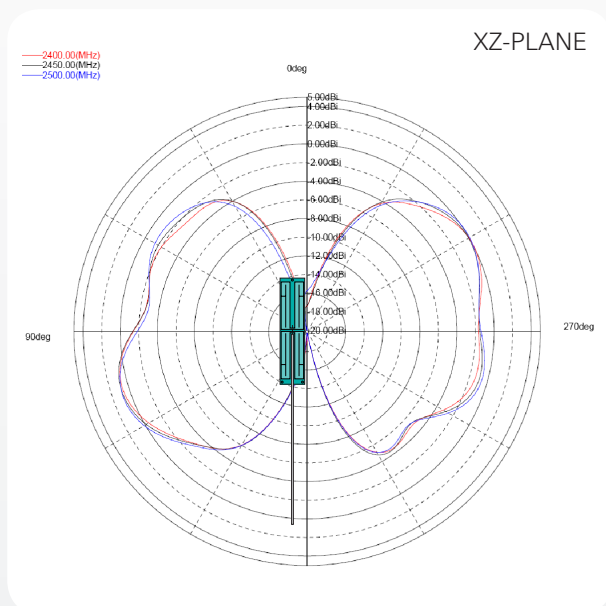
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# Access Point Router 802.11n Antenna

PWB Antenna with feed cable. Pulse Part Number: W3513

824 – 894 MHz Typical Free Space Radiation Patterns



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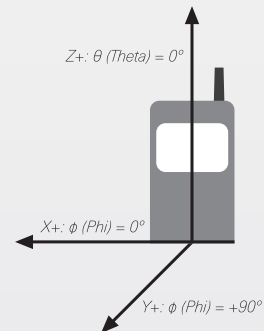
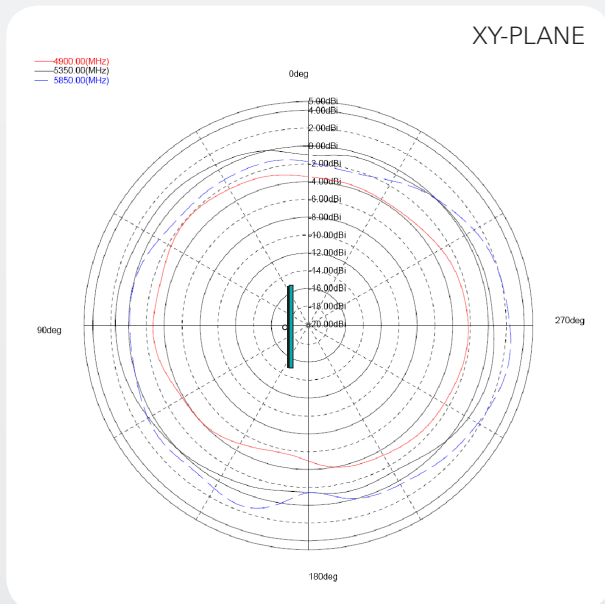
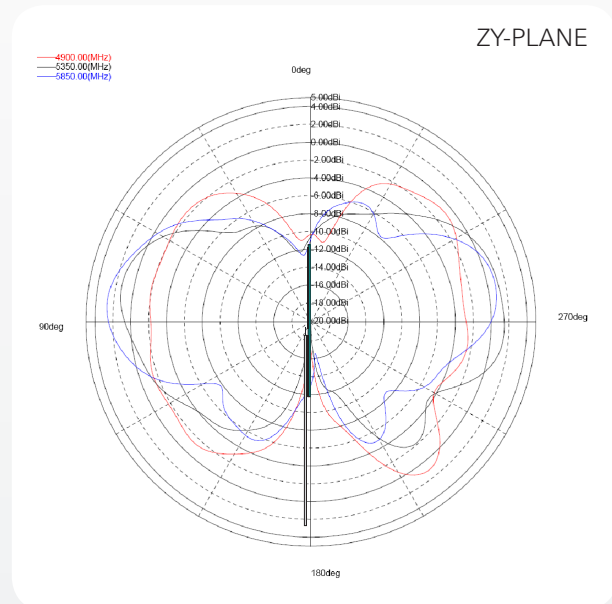
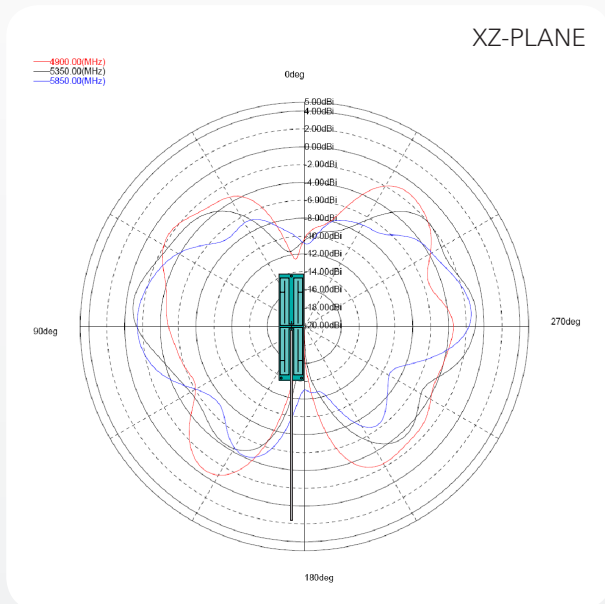


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# Access Point Router 802.11n Antenna

PWB Antenna with feed cable. Pulse Part Number: W3513

880 – 960 MHz Typical Free Space Radiation Patterns



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