

## Part No. 1004391

### WLAN Dual Band FPC Custom Antenna with Cable

**2.4 GHz, 5 GHz**

Supports: Wi-Fi applications, Agriculture, Automotive, Bluetooth, Zigbee, WLAN, Smart Home, Healthcare, Digital Signage



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#### KEY BENEFITS

##### Stay-in-Tune

Ethertronics antenna technology provides superior RF field containment, resulting in less interaction with surrounding components.

##### Quicker Time-to-Market

By optimizing antenna size, performance and emissions, customer and regulatory specifications are more easily met.

##### Reliability

Products are the latest RoHS version compliant.

#### APPLICATIONS

- Embedded design
- Cellular, Headsets, Tablets
- Gateway, Access Point
- Handheld
- Telematics Tracking
- Healthcare M2M, Industrial devices
- Smart Grid
- OBD-II

Ethertronics' custom WLAN antenna delivers on the key needs of device designers for higher functionality and performance in smaller/thinner design. This innovative custom antenna provides compelling advantages for a 2.4 GHz and 5.0 GHz enabled devices in a custom environment.

#### Electrical Specifications

Typical Performance in customer's unit on housing.

Frequency	2.400 – 2.485 GHz	5.150 – 5.825 GHz
Peak Gain	4.5dBi	5.2dBi
VSWR Match	< 2.5:1	< 2.5:1
Average Efficiency	58%	55%
Feed Point Impedance	50 ohms unbalanced	
Polarization	Linear	
Power Handling	0.5 Watt CW	

#### Mechanical Specifications & Ordering Part Number

Ordering Part #	1004391
Dimensions (mm)	40.5 x 26.0 x 1.6
Weight (grams)	0.73
Cable/Connector (mm)	Length: 115 Diameter: 1.13 Color: Black Connector: U.FI compatible Ground clips on cable
Mounting	Adhesive on bottom side of antenna
Packaging	PE bags

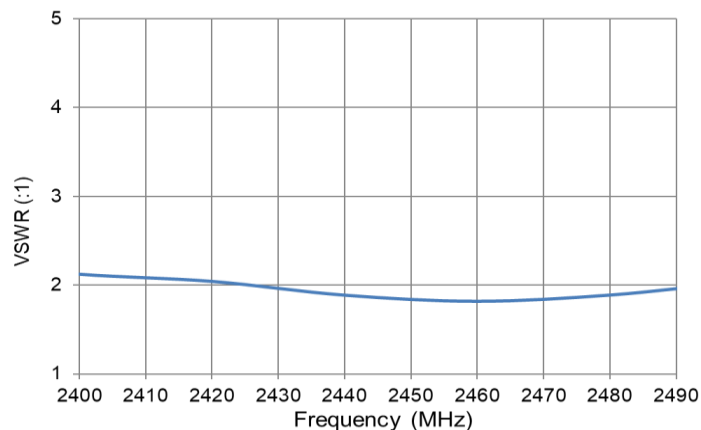


**2.4 / 5 GHz Custom Ethertronics' FPC Embedded Antenna Specifications**  
Ethertronics produces a wide variety of standard and custom antennas to meet user needs.

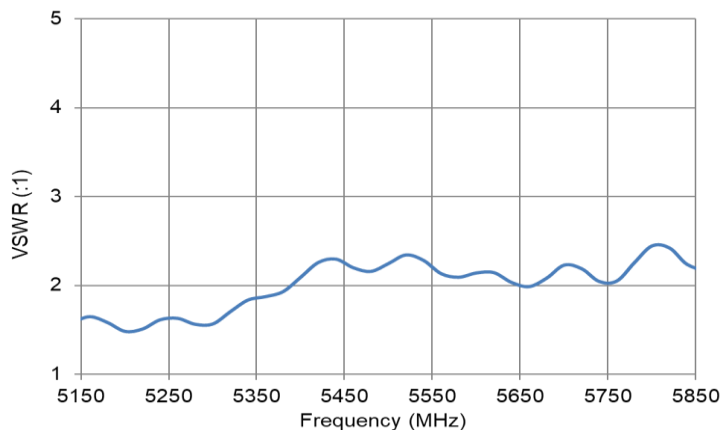
### VSWR and Efficiency Plots

Typical Performance in customer's unit on housing.

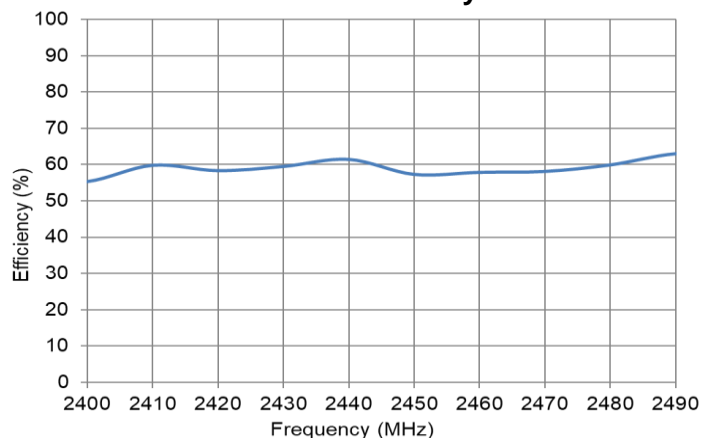
**2.4 GHz VSWR**



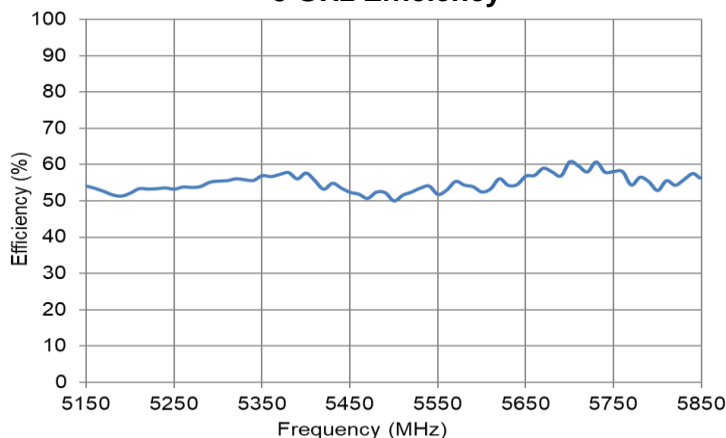
**5 GHz VSWR**



**2.4 GHz Efficiency**



**5 GHz Efficiency**



### Efficiency and Peak Gain Table

Typical Performance in customer's unit on housing.

Frequency (GHz)	Efficiency (%)	Peak Gain (dBi)
2.400	55%	4.0
5.200	52%	3.0
5.300	55%	4.2
5.600	52%	3.5
5.800	52%	4.5

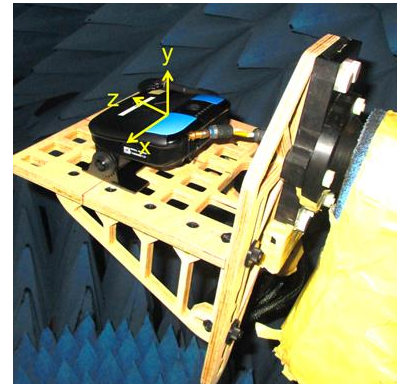


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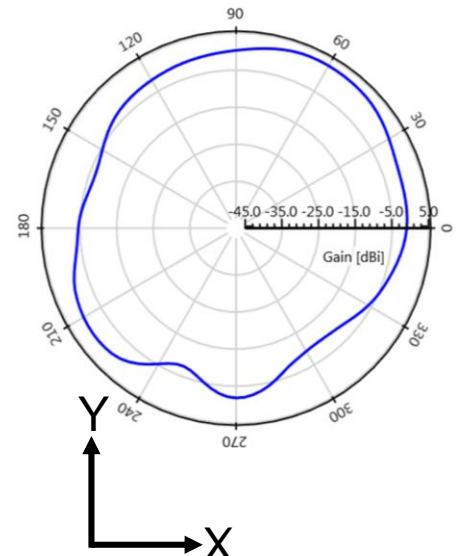
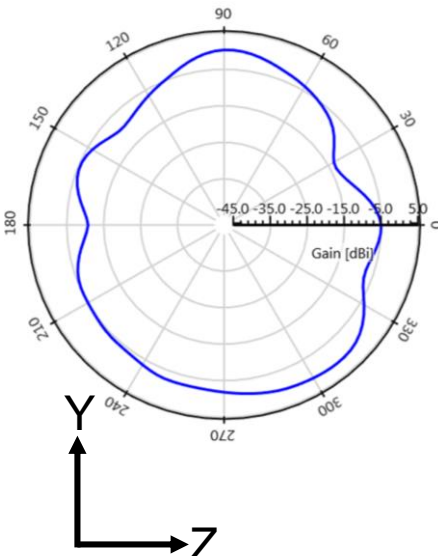
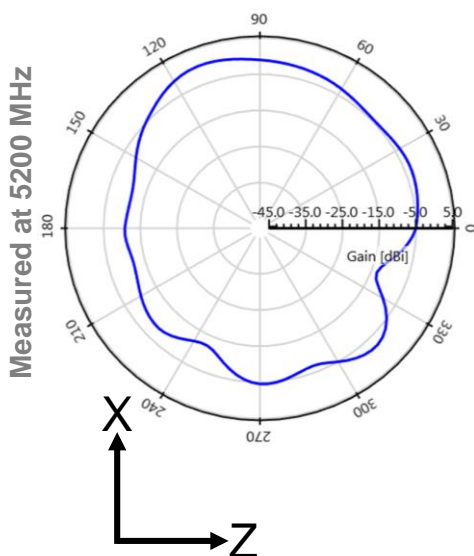
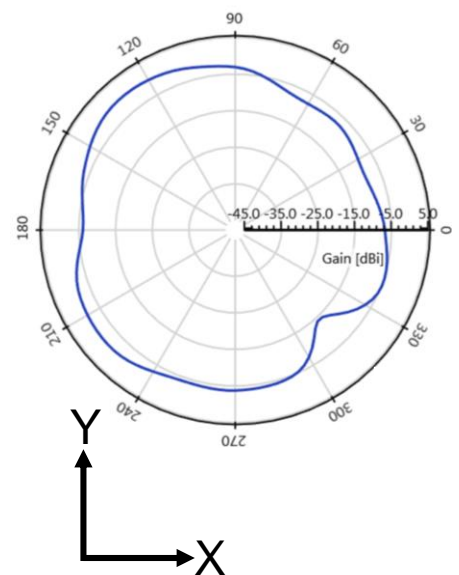
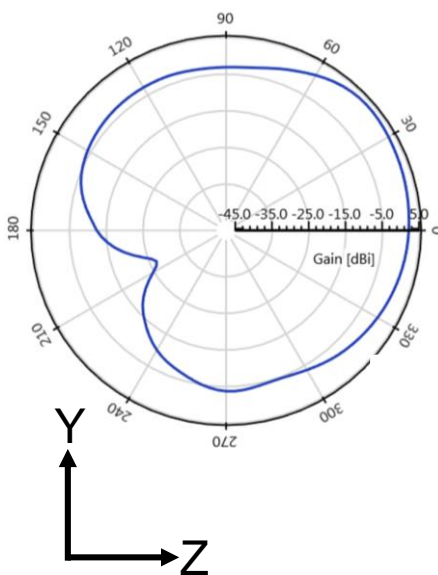
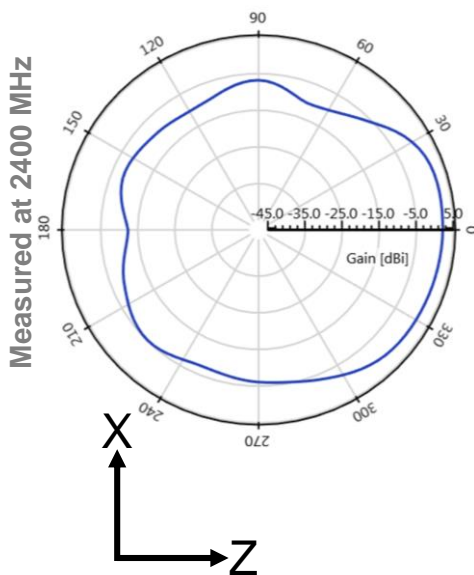
**Antenna Radiation Patterns**

Typical Performance in customer's unit on housing.

Measured @ 2400, 5200 MHz



1004391



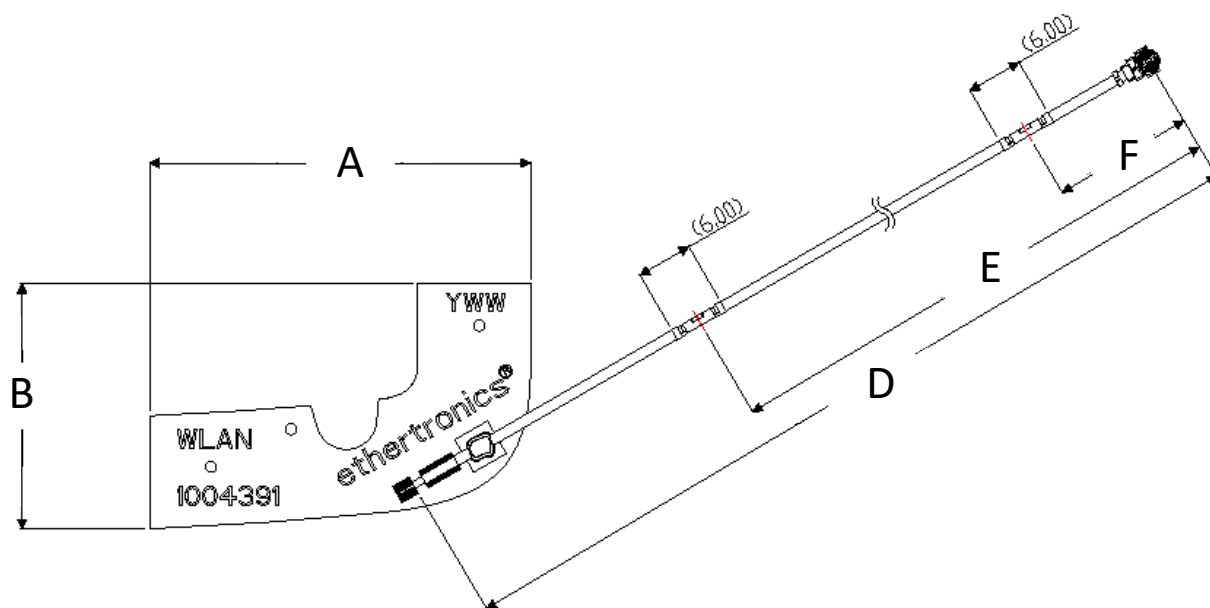


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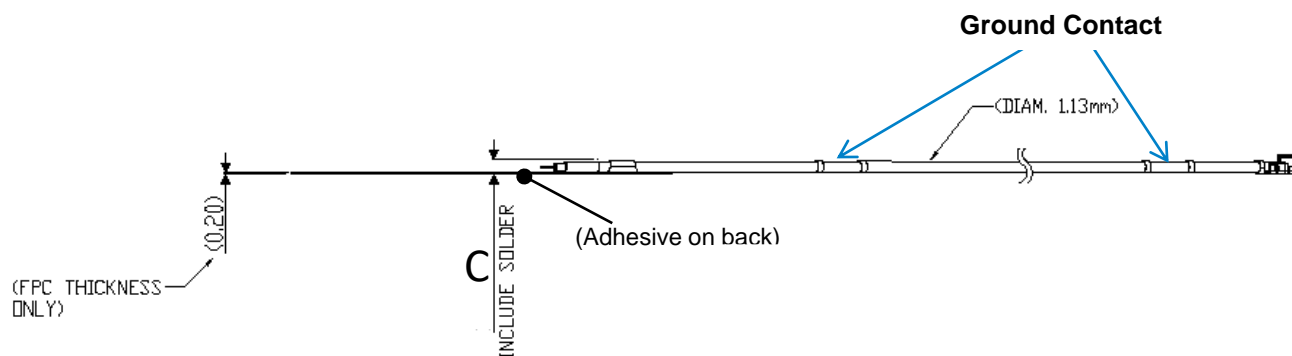
### Mechanical Dimensions

Typical antenna dimensions (mm)

Part Number	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	Connector
1004391	$40.53 \pm 0.25$	$26.06 \pm 0.20$	1.6 (max)	$115 \pm 2.0$	$80.0 \pm 1.0$	$15.0 \pm 1.0$	U.FL compatible



Top View



Side View