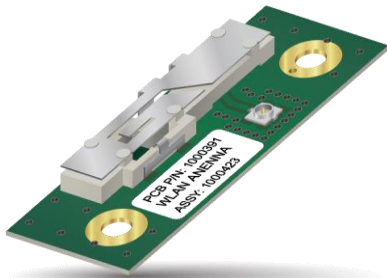


# Part No. 1000423

## WLAN / BT / Zigbee Stamped Metal Antenna

2.4 / 4.9 / 5.2 / 5.8 GHz (802.11 a/b/g/n/c + Japan)

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



Ethertronics' WLAN antennas deliver on the key needs of device designers for higher functionality and performance in smaller/thinner designs. These innovative antennas provide compelling advantages for a 2.4 GHz and 5.0 GHz enabled handheld devices, media players and other mobile devices.

### Real-World Performance and Implementation

Antennas may look alike on the outside, but the important difference is inside. Other antennas may contain simple PIFA or monopole designs that interact with their surroundings, complicating layout or changing performance with use position. Ethertronics' antennas utilize patented Isolated Magnetic Dipole (IMD) combined with a PIFA structure to deliver a unique size and performance combination.

### Wi-Fi Dual Band Stamped Metal Embedded Antenna

2.4 GHz; 5 GHz

#### 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

### Electrical Specifications

Typical Performance using 100 mm cable tested in Free-space

Frequency	2400 – 2485 MHz	4900 – 5825 MHz
Peak Gain	0.6 dBi	4.5 dBi
Average Efficiency	57%	75%
VSWR Match	2.5:1 max	
Feed Point Impedance	50 ohms unbalanced	
Polarization	Linear	
Operation Temperature	-40 to +85 °C	
Power Handling	2 Watt CW	

### Mechanical Specifications & Ordering Part Number

Ordering Part Number	1000423
Size (mm)	40.0 x 15.0 x 6.4
Weight (grams)	1.6
Mounting	Antenna can be mounted directly onto metal surface using two 3 mm screw holes
Connectors	U.F.I compatible receptacle on the PCB
Storage Temperature (°C)	-40 to +85
Cable Length	Cables sold separately, please contact Ethertronics

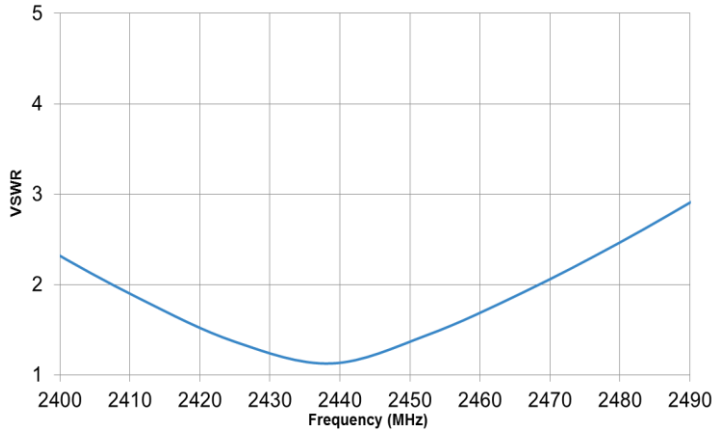


2.4 / 5 GHz Ethertronics' Embedded Antenna Specifications  
Ethertronics produces a wide variety of standard and custom antennas to meet user needs.

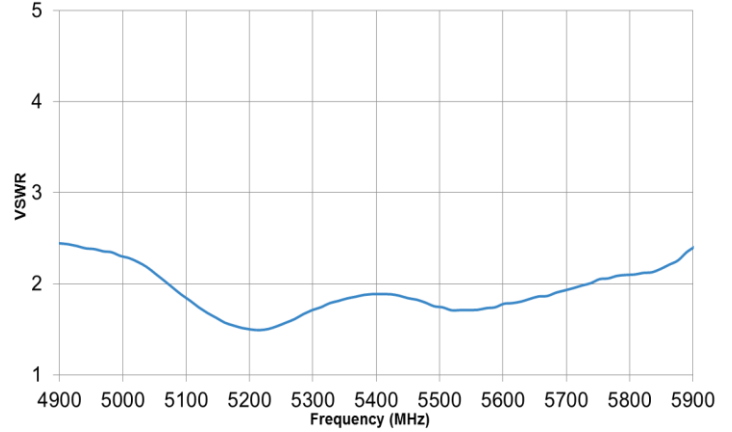
**VSWR, Efficiency and Peak Gain Plots**

Typical Performance using 100 mm cable tested in Free-space

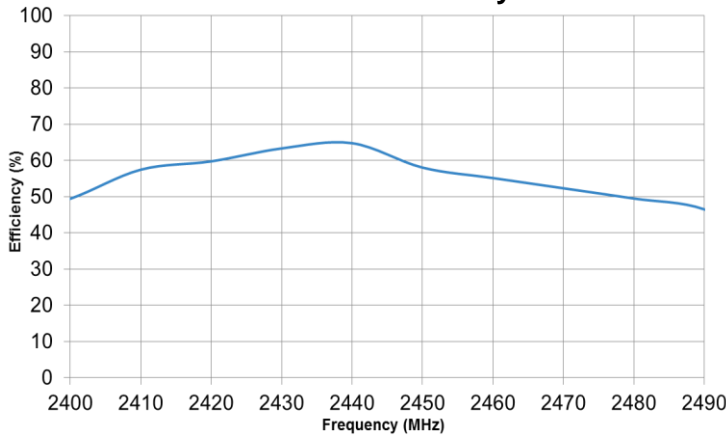
**2.4 GHz VSWR**



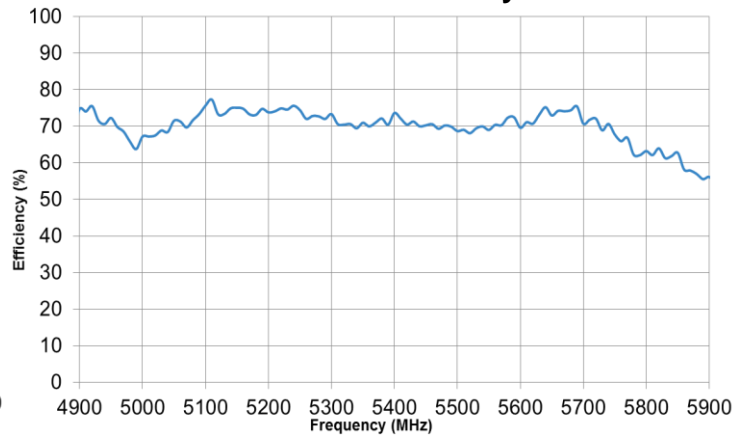
**5 GHz VSWR**



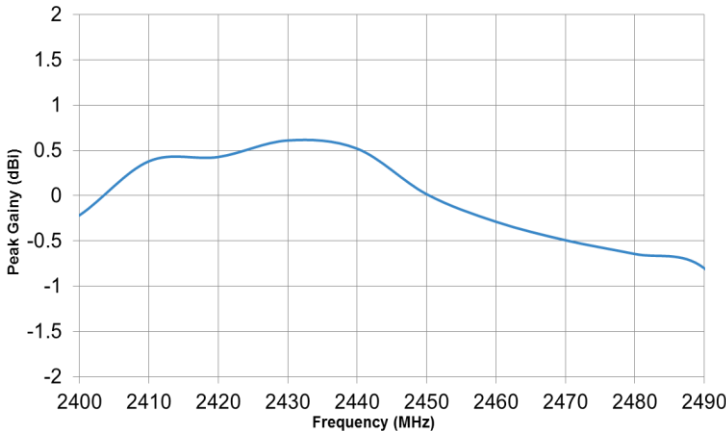
**2.4 GHz Efficiency**



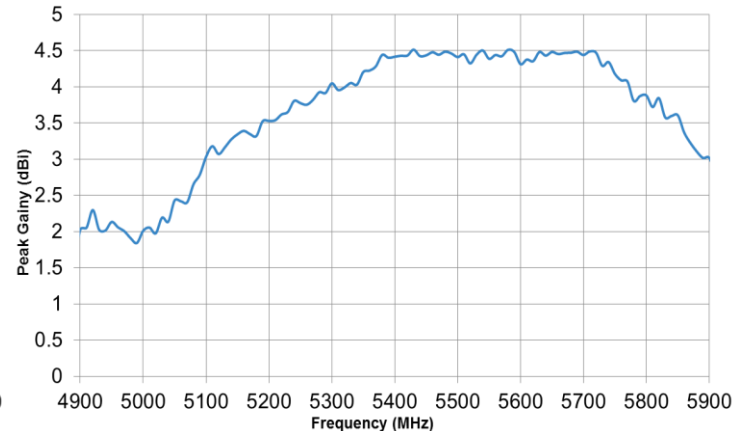
**5 GHz Efficiency**



**2.4 GHz Peak Gain**



**5 GHz Peak Gain**

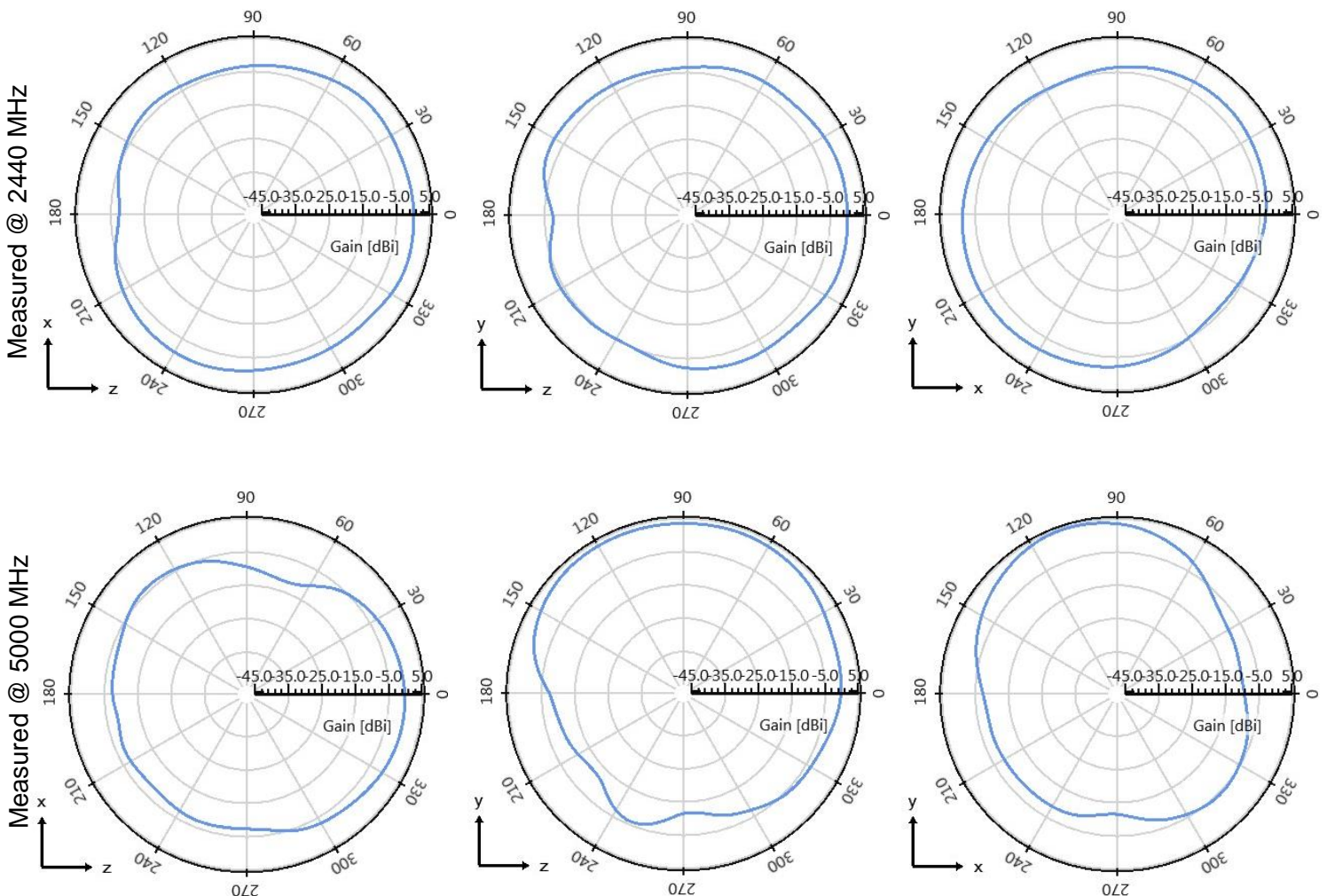
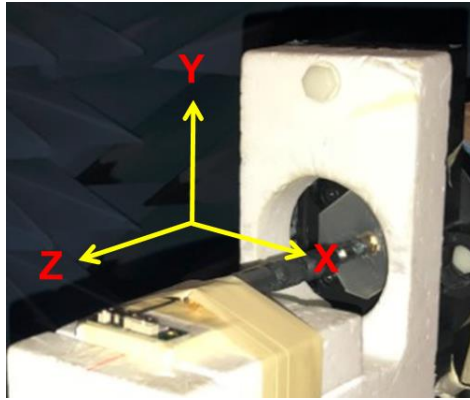




2.4 / 5 GHz Ethertronics' Embedded Antenna Specifications  
Ethertronics produces a wide variety of standard and custom antennas to meet user needs.

Antenna Radiation Patterns

Typical performance using 100 mm cable tested in Free-space  
Measured @ 2440, 5000 MHz





**2.4 / 5 GHz Ethertronics' Embedded Antenna Specifications**  
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**Peak Gain Data (2.4 & 5GHz)**

Typical performance using 100 mm cable tested in Free-space

Frequency (MHz)	Peak Gain (2400 - 2485 MHz)
2400	-0.216881401
2410	0.379225568
2420	0.426625926
2430	0.609200053
2440	0.518253236
2450	0.015778613
2460	-0.288999523
2470	-0.492501086
2480	-0.644476279
2490	-0.802073729

Frequency (MHz)	Peak Gain (4900 - 5825 MHz)
4900	2.026889415
4910	2.052869239
4920	2.297410665
4930	2.026052559
4940	2.015495394
4950	2.133464749
4960	2.059126015
4970	2.004691122
4980	1.909319887
4990	1.842342736
5000	2.009193148
5010	2.055427488
5020	1.975665839
5030	2.19190427
5040	2.137972795
5050	2.43065023
5060	2.418750072
5070	2.405186455
5080	2.654227918
5090	2.784781508
5100	3.032284913
5110	3.179591947
5120	3.071104319
5130	3.164906547
5140	3.274098013
5150	3.344801762
5160	3.392270861
5170	3.346795486
5180	3.321070412
5190	3.524740428
5200	3.529587771
5210	3.539375239
5220	3.619021104
5230	3.65334765
5240	3.806128393
5250	3.775176381
5260	3.75296785
5270	3.821044541
5280	3.92644379
5290	3.916222552
5300	4.04911316
5310	3.956828811
5320	3.992502068
5330	4.053946453
5340	4.032265804
5350	4.206101274
5360	4.22645108
5370	4.285563871
5380	4.44282844
5390	4.402828674
5400	4.416813832

5410	4.430367561
5420	4.432564423
5430	4.514615307
5440	4.426340728
5450	4.43649872
5460	4.479079678
5470	4.444790233
5480	4.487185247
5490	4.462317851
5500	4.412593093
5510	4.450596467
5520	4.32503557
5530	4.443827081
5540	4.503414861
5550	4.388159213
5560	4.441143159
5570	4.423576137
5580	4.511690605
5590	4.482948152
5600	4.314066614
5610	4.378100291
5620	4.355424139
5630	4.482305401
5640	4.432848576
5650	4.483063475
5660	4.453902502
5670	4.46945411
5680	4.472194556
5690	4.486841666
5700	4.441216303
5710	4.490023313
5720	4.473085385
5730	4.290837561
5740	4.343336312
5750	4.179666899
5760	4.090898468
5770	4.07507582
5780	3.805734575
5790	3.873365002
5800	3.882433096
5810	3.721868119
5820	3.844102561
5830	3.577855

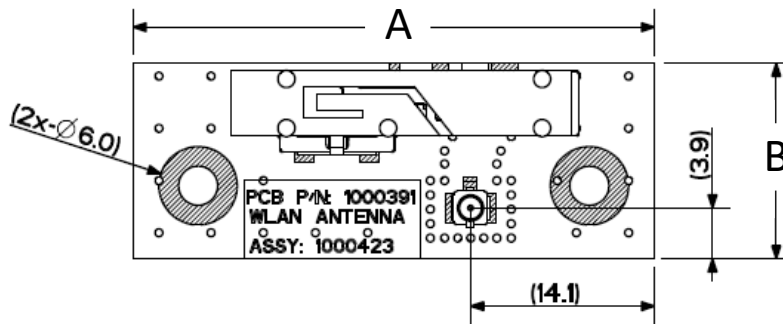


2.4 / 5 GHz Ethertronics' Embedded Antenna Specifications  
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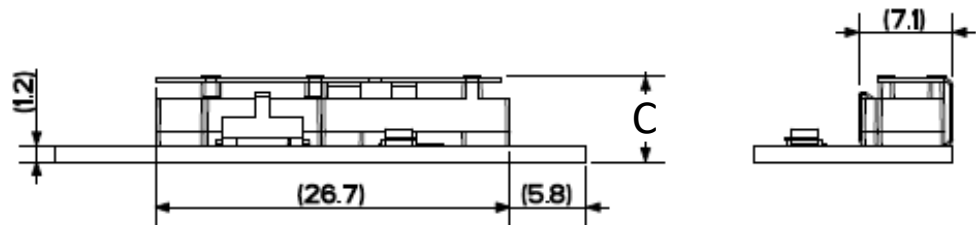
**Mechanical Dimensions**

Typical antenna dimensions measured in mm.  
Dimensions in ( ) parenthesis are Reference Only.

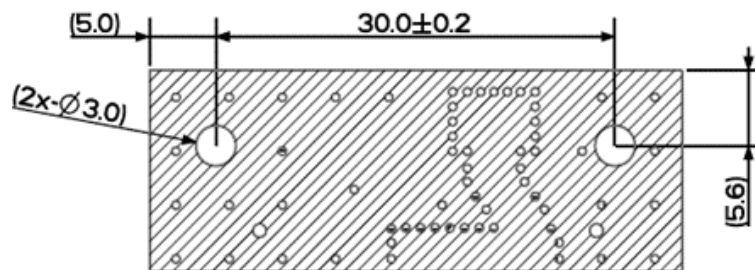
Part Number	A	B	C
1000423	(40.0)	(15.0)	(6.4)



**Top View**



**Side View**



**Bottom View**