

Part No. W3P35x8W04-U100D3B0A

Embedded Wi-Fi Antenna

2.4 / 5.0 / 6.0 GHz

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



Embedded Wi-Fi Antenna AP, Routers, Gateways

2.4 / 5.0 / 6.0 GHz

KEY BENEFITS

Quicker Time-to-Market

Standard part means fewer design changes, and Simple implementation

Superior Network Coverage

Better network coverage means more reliable wireless connections

Faster Data Rates

Improved performance also means faster data rates for downloading e-mail, surfing the internet and watching mobile video

RoHS Compliant

Products are the latest RoHS version compliant

APPLICATIONS

- Access Points and Routers
- Gateways
- Wi-Fi applications
- M2M industrial devices

Ethertronics' W3P35x8W04 Family PCB antennas include an embedded Wi-Fi Antenna design with foam on the back side to minimize the detuning of the antenna on different surfaces that delivers on the key needs of today's wireless product designers: miniaturized design and superior signal sensitivity.

Excels in Real-Life Conditions

Meets the ever-growing demand for smaller, thinner product designs by eliminating whip and stub antennas.

Extensive RF Experience

Ethertronics antennas are supported by documentation, and when needed, by the expertise of RF engineers who have integrated hundreds of antenna designs into wireless devices.

Global Operations & Design Support

Ethertronics' global operations support an integrated network of design centers that can take projects from concept to production.

Electrical Specifications

Typical Characteristics (in reference device housing made in PC/ABS plastic and 100mm cable length)

Frequency Band (GHz)	2.40 – 2.48	5.15 – 5.85	5.925 - 7.125
Return Loss	< -15 dB	< -10 dB	< -6 dB
Average Efficiency	70 %	60 %	65 %
Peak Gain	< 2.3 dBi	< 5 dBi	< 2.5 dBi
Feed Point Impedance	50 ohms unbalanced		

Mechanical Specifications

Part Number	W3P35x8W04-U100D3B0A
Size (mm)	35.20 ± 0.15 length 8.50 ± 0.15 width 0.40 thickness
*Connector	u.fl Compatible
*Cable length (mm)	100
Weight (grams)	0.3
Adhesive	3M468MP
Packing	Individual PE bags (default) or tray (per request)

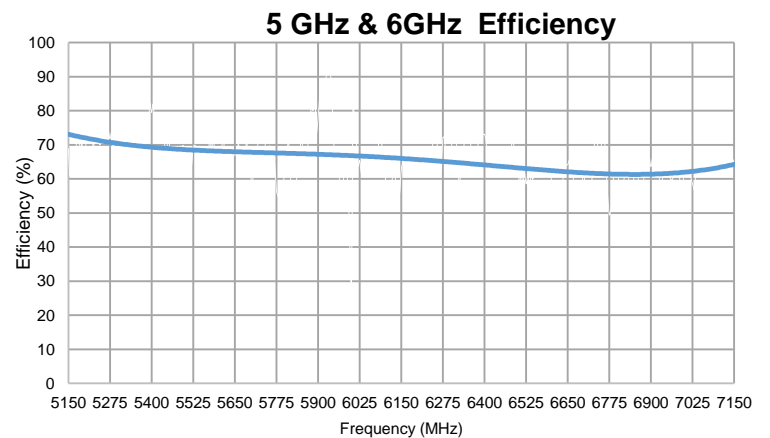
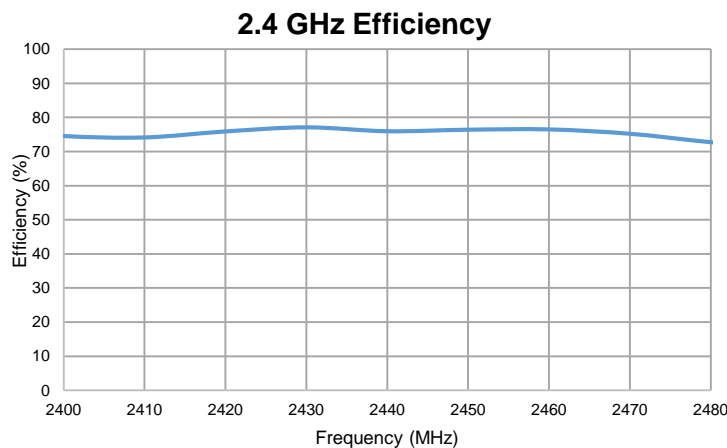
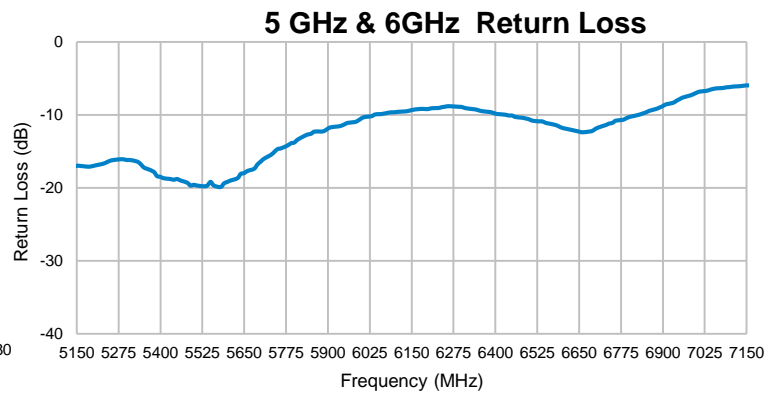
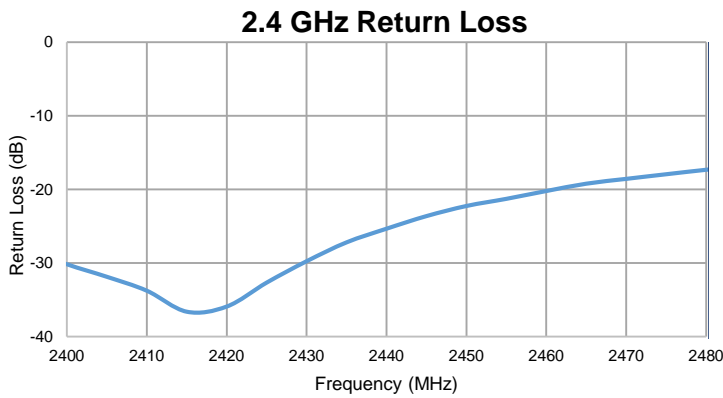
*Additional variations available in different cable lengths, colors and connectors, refer to Appendix on page 4.



Wi-Fi 2.4 / 5.0 / 6.0 GHz Embedded antenna specifications
Ethertronics produces a wide variety of standard and custom antennas to meet user needs

Typical Return Loss & Efficiency Plots

Measured in reference device housing made in PC/ABS plastic and 100mm cable length

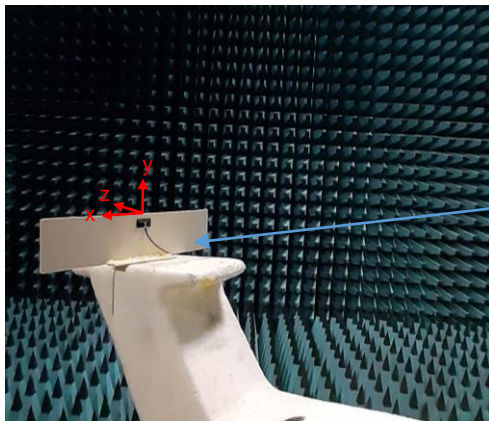




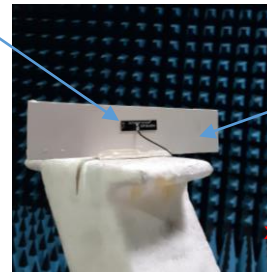
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Antenna Radiation Patterns

Typical Performances in reference device housing made in PC/ABS plastic and 100mm cable length

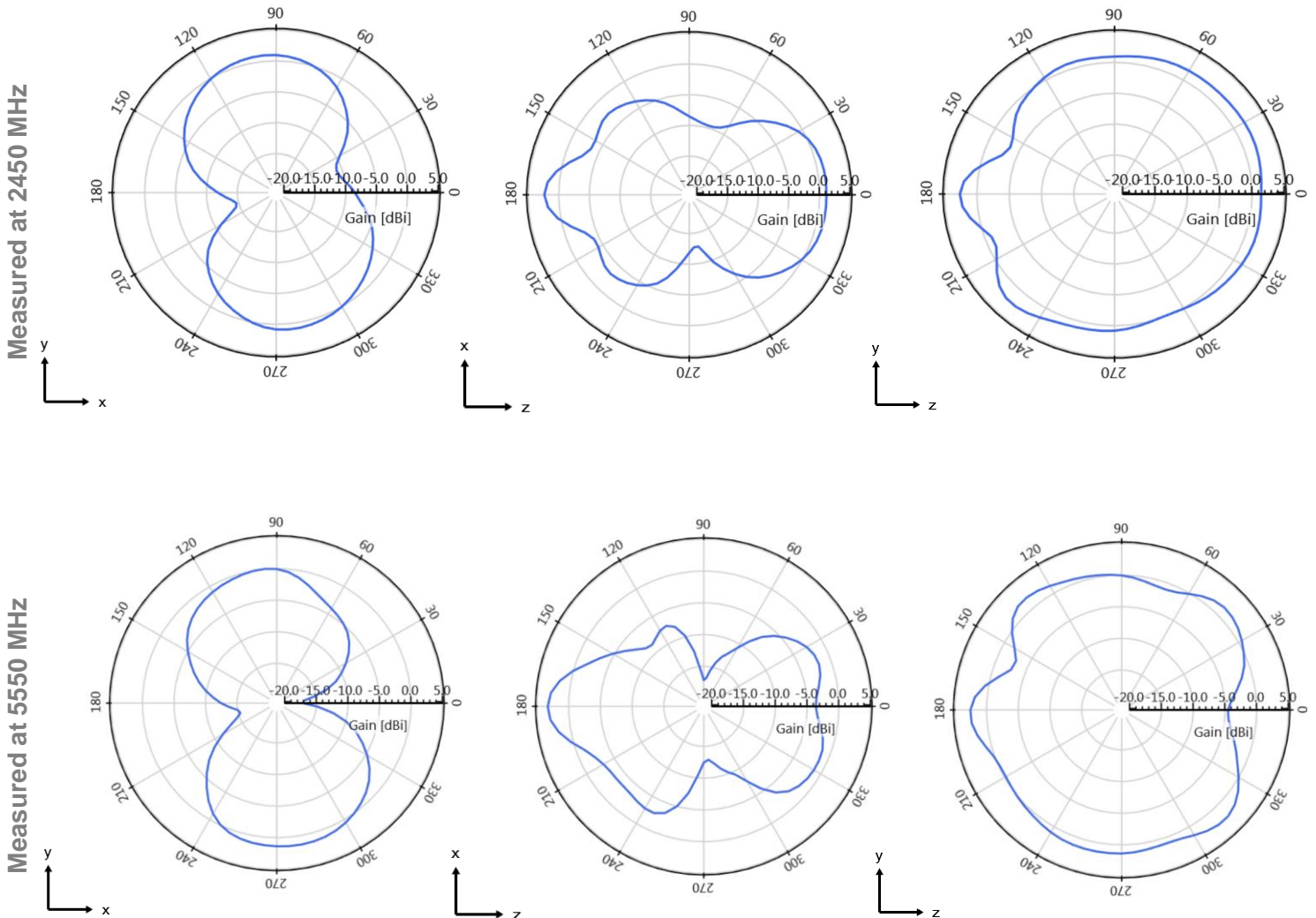


W3P35x8W04-U100D3B0A



PC/ABS

100 mm
cable length

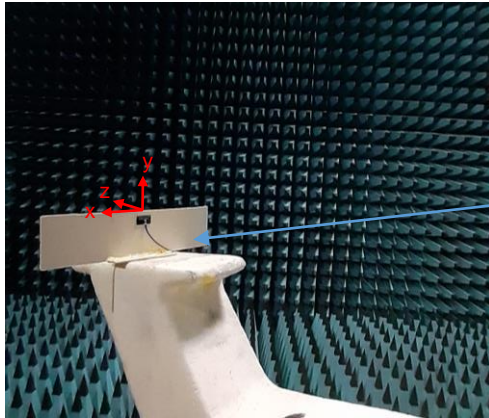




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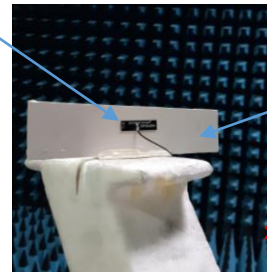
Antenna Radiation Patterns

Typical Performances in reference device housing made in PC/ABS plastic and 100mm cable length

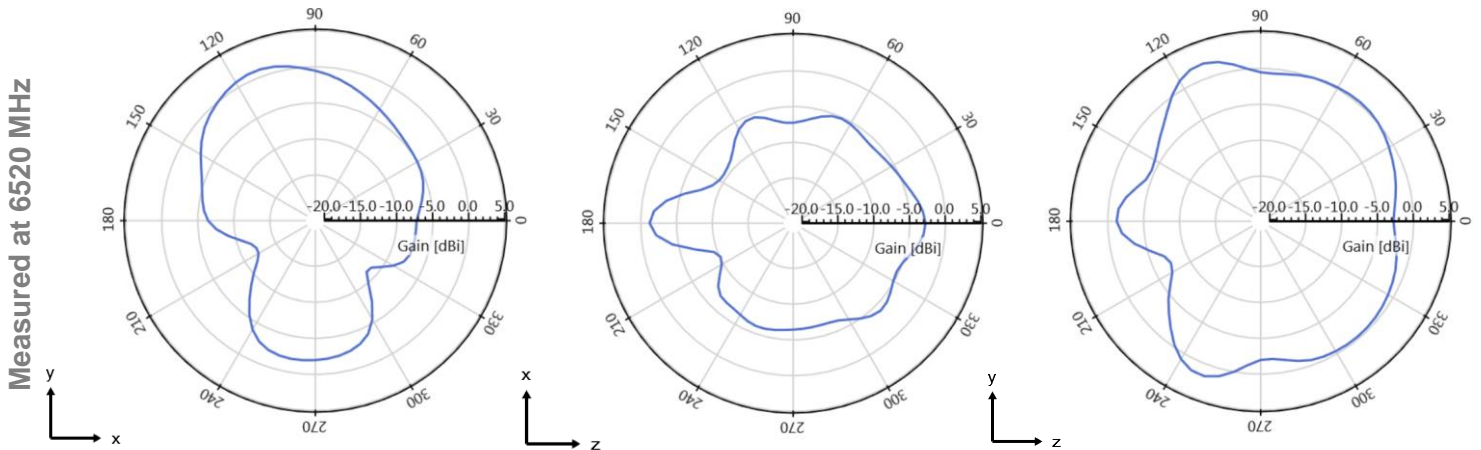


W3P35x8W04-U100D3B0A

100 mm
cable length



PC/ABS





Generic Antenna Part Numbers

Ethertronics produces a wide variety of standard and custom antennas to meet user needs. Below are the generic standard antenna part numbers for Wi-Fi

Example of generic Wi-Fi PN: **W3P35x8W04-U100D3B0A**

PN Nomenclature

PCB silk screen number

W	3	P	35x8	W	04
Series	Freq. of operation	Type	Size	Tuning version	PCB thickness
W = Wi-Fi Family	3 = 2.4 / 5.0 / 6.0 GHz	F = FPC P = PCB	35x8 = 35.2x8.5 mm*	W = Tuning on plastic wall F = Tuning for foam on plastic wall R = Tuning with ribs	01 = 0.1mm** 04 = 0.4 mm* 08 = 0.8 mm***

*Typical thickness for PCB

** Thickness for FPC

***Recommended for assembly with ribs

PN Nomenclature

Second part of the PN

U	100	D	3	B	0	A
Connector type	Cable from connector to PCB edge	Connector orientation compared to PCB silkscreen printing	Cable diameter	Cable color	Ferrite beads	Mounting options
U = u.fl compatible* W = w.fl compatible H = MHF4 N = No connector	050 = 50mm 100 = 100mm* 150 = 150mm	D = Connector down* U = Connector Up L = Left Side R = Right Side N = No connector	1 = 0.81 mm 3 = 1.13mm* 7 = 1.37 mm	B = Black* G = Gray	0 = No* 1 = Yes	N = No adhesive A = using adhesive 3M468MP* C = using adhesive 3M467** T = using adhesive 3M9448A***

*Typical connector

*Typical length

*Typical orientation

*Typical diameter for u.fl

*Typical color

*Default configuration

*Adhesive for PCB
**Adhesive for FPC
***Adhesive for PCB + foam



Generic Antenna Part Numbers

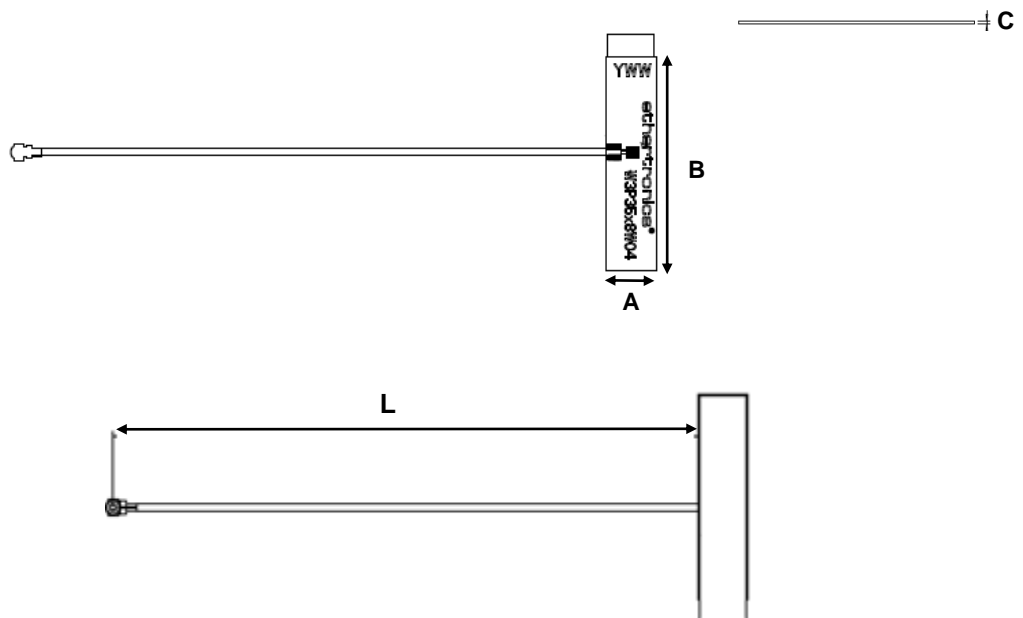
Ethertronics produces a wide variety of standard and custom antennas to meet user needs. Below are the generic standard antenna part numbers for Wi-Fi

Typical Ordering Part Numbers

Part Number	Type	Tuning version	Connector	Cable length (mm)	Mounting Options	
W3P35X8W04-U050D3B0A	PCB	Tuning on Plastic Wall	u.fl compatible	50	Using Adhesive 3M468MP	
W3P35X8W04-U100D3B0A				100		
W3P35X8W04-U150D3B0A				150		
W3P35X8W04-H100D3B0A		Tuning for foam on plastic wall	MHF4	u.fl compatible	100	Using Adhesive 3M9448A
W3P35X8F04-U050D3B0T					50	
W3P35X8F04-U100D3B0T					100	
W3P35X8F04-U150D3B0T					150	
W3F35X8W01-U100D3B0C	FPC	Tuning on Plastic Wall	u.fl compatible	100	Using Adhesive 3M467	

Mechanical Dimensions

Part Number	A (mm)	B (mm)	C (mm)	L (mm)	Connector
W3P35X8w04- U100D3B0A	8.50 ± 0.15	35.20 ± 0.15	0.4	100	u.fl compatible



*All dimensions provided in this document are for informational purposes only