

Part No. W1P35x8F04-U150D3B0A

Embedded 2.4 GHz Wi-Fi Antenna

2.4 GHz

Supports: Wi-Fi applications, Bluetooth, Zigbee, WLAN



KYOCERA AVX's W1P35x8F04 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.

Extensive RF Experience

KYOCERA AVX 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

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

Embedded Wi-Fi Antenna

2.4 – 2.48 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.

Environmental Compliance

Products are the latest RoHS version compliant.

APPLICATIONS

- Access Points and Routers
- Gateways
- Wi-Fi applications
- Embedded design
- M2M Industrial devices
- Smart Home/Cities

Electrical Specifications

Typical Characteristics (in reference device housing made in PC/ABS plastic with foam on the back and 150 mm cable length)

Frequency Band (GHz)	2.40 – 2.48
Return Loss	< -15 dB
Average Efficiency	70%
Peak Gain	< 2.8 dBi
Feed Point Impedance	50 ohms unbalanced

Mechanical Specifications

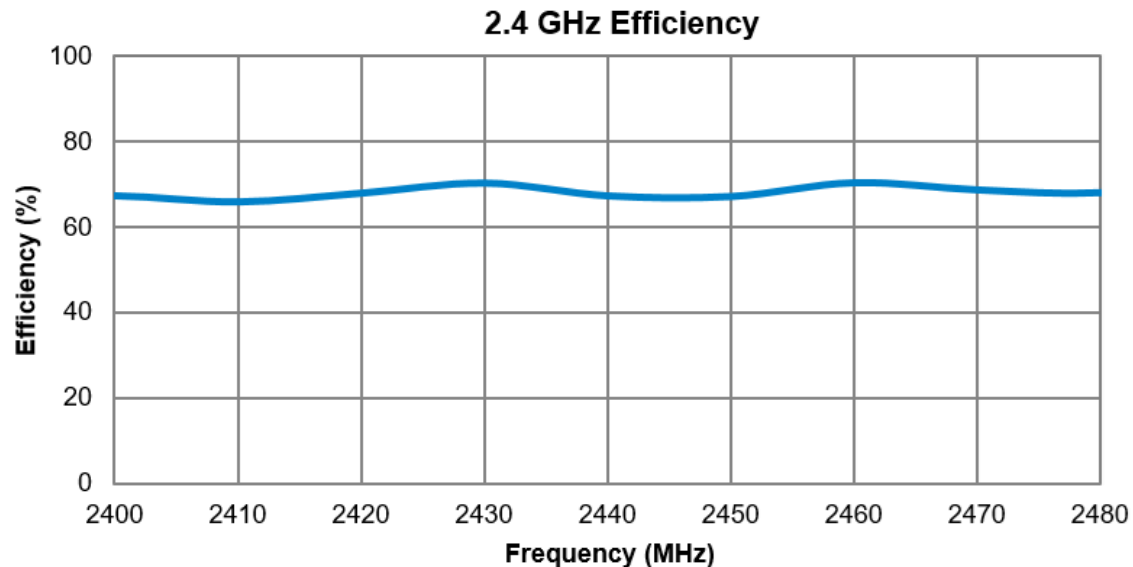
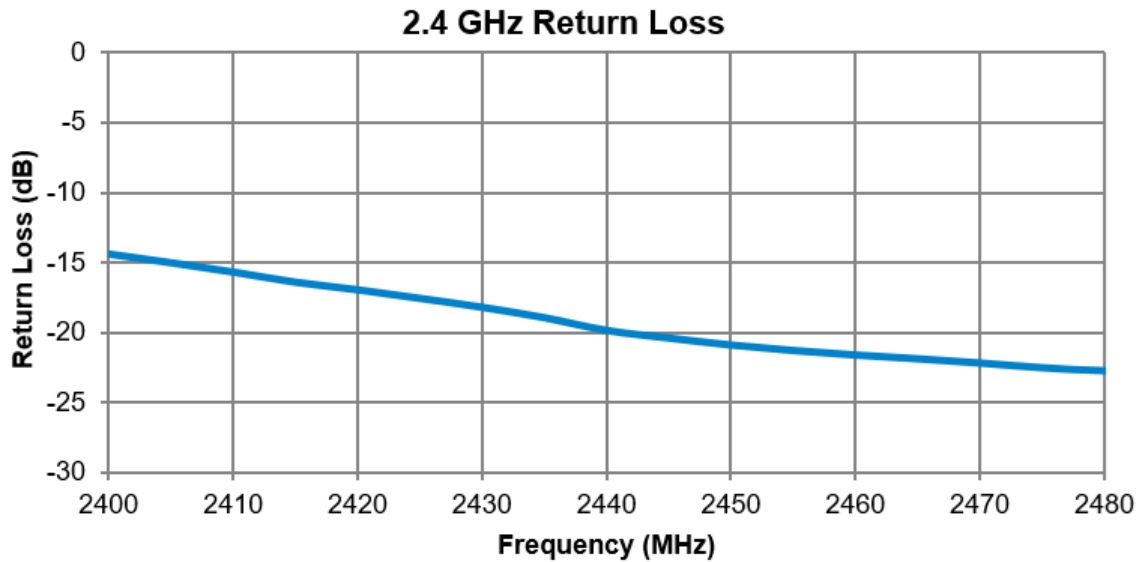
Part Number	W1P35x8F04-U150D3B0A
Size (mm)	35.20 ± 0.15 length 8.50 ± 0.15 width 0.40 thickness
*Connector	MHFI (U.FL compatible)
*Cable length	150 mm
Weight (grams)	0.3
Adhesive	3M 468MP
Operating Temperature (°C)	- 40 to 85
Storage Temperature (°C)	- 40 to 85
Packing	Individual PE bags (default) or tray (per request)

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

2.4 GHz embedded antenna specifications
KYOCERA AVX produces a wide variety of standard and custom antennas to meet user needs

Typical Return Loss & Efficiency Plots

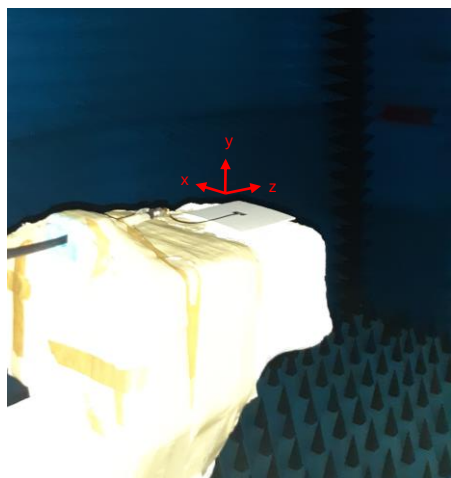
Measured in reference device housing made in PC/ABS plastic with foam on the back and 150 mm cable length



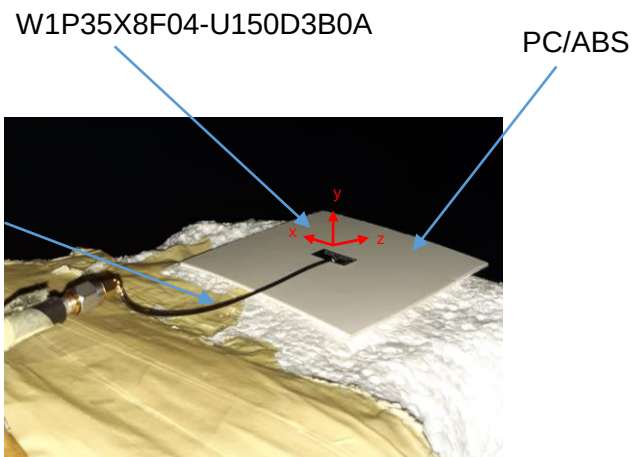
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Antenna Radiation Patterns

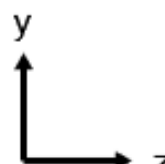
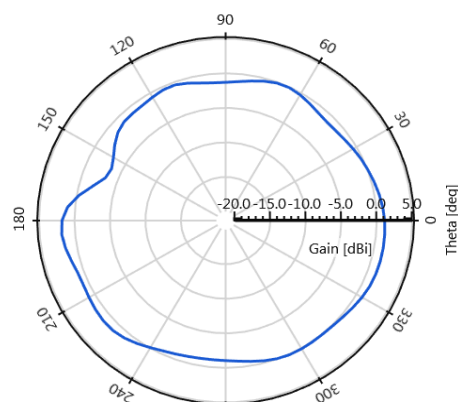
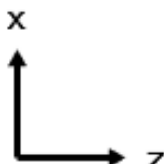
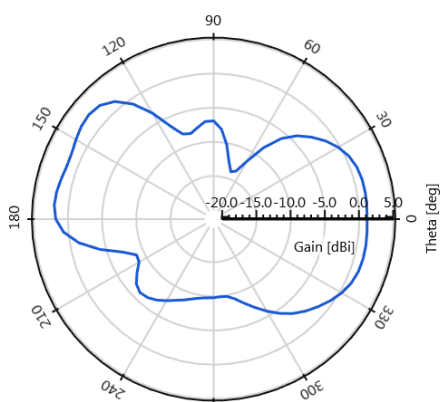
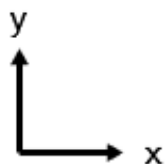
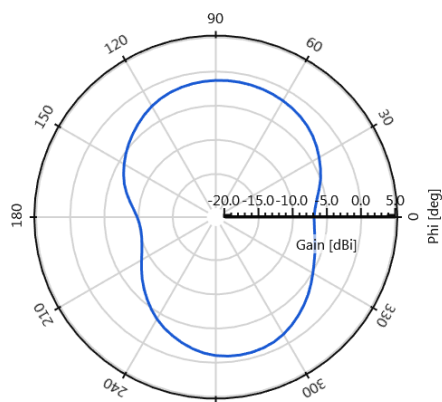
Typical Performances in reference device housing made in PC/ABS plastic with foam on the back and 150 mm cable length



150 mm
cable length



Measured at 2440 MHz



Generic Antenna Part Numbers

generic standard antenna part numbers for W1- Family

Example of generic Wi-Fi PN: **W1P35x8F04-U100D3B0A**

PN Nomenclature

PCB silk screen number

W	1	P	35X8	F	04
T	T	T	T	T	T
Series	Freq. of operation	Type	Size	Tuning version	PCB thickness
W = Wi-Fi Family	1 = 2.4 GHz	F = FPC P = PCB	35x8 mm 35.2x8.5mm*	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	T
T	T	T	T	T	T	T
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 = MHF4L 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

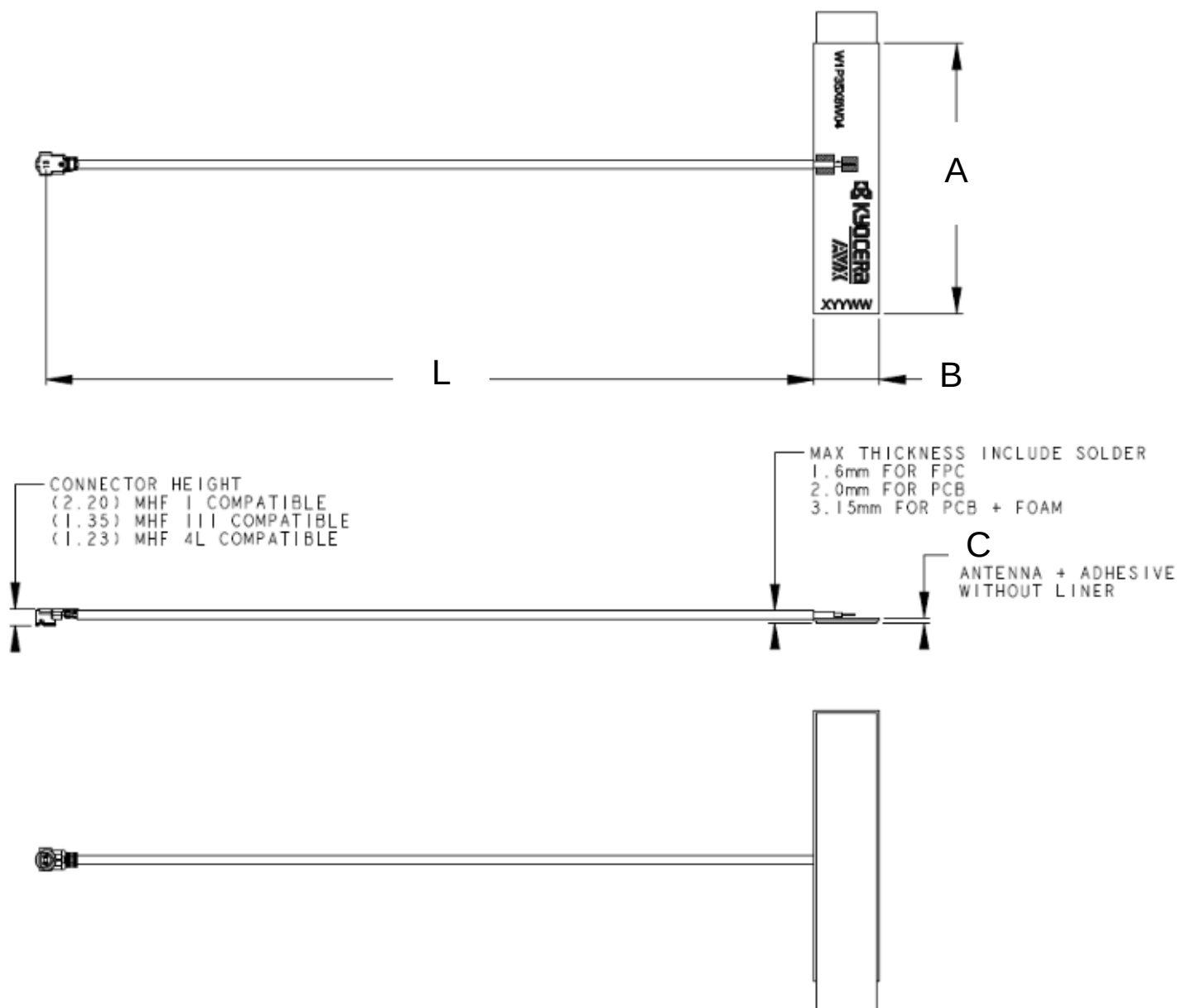
*Default configuration

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

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Mechanical Dimensions (mm)

Part Number	A (mm)	B (mm)	C (mm)	L(mm)	Connector
W1P35X8F04-U150D3B0A	35.20 ± 0.2	8.50 ± 0.2	0.40	150	MHFI (U.FL Compatible)



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

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Typical Ordering Part Numbers

Part Number	Type	Tuning version	Connector	Cable length (mm)	Mounting Options
W1P35X8W04-U050D3B0A	PCB	Tuning on Plastic Wall	MHFI (U.FL Compatible)	50	Using Adhesive 3M 468MP
W1P35X8W04-U100D3B0A				100	
W1P35X8W04-U150D3B0A				150	
W1P35X8W04-H100D3B0A		Tuning for foam on plastic wall	MHF4L	100	Using Adhesive 3M 9448A
W1P35X8F04-U050D3B0T			MHFI (U.FL Compatible)	50	
W1P35X8F04-U100D3B0T				100	
W1P35X8F04-U150D3B0T				150	
W1F35X8W01-U100D3B0C	FPC	Tuning on Plastic Wall	MHFI (U.FL Compatible)	100	Using Adhesive 3M 467

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