Part No. W3P35X8W04
Embedded Dual-Band Wi-Fi Antenna
2.4 / 5.0 GHz
Supports: Wi-Fi applications, Bluetooth, Zigbee, WLAN

Embedded Dual-Band Wi-Fi Antenna

2.4 / 5.0 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
- Industrial devices
- Smart Home

KYOCERA AVX's W3 Family antennas include an Embedded Dual-Band Wi-Fi Antenna design in PCB and FPC solutions. Alternatively, a PCB with foam on the back side is also offered 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.

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
Return Loss	< -15 dB	< -10 dB
Average Efficiency	70 %	60 %
Peak Gain	< 2.3 dBi	< 5 dBi
Feed Point Impedance	50 ohms unbalanced	

Mechanical Specifications

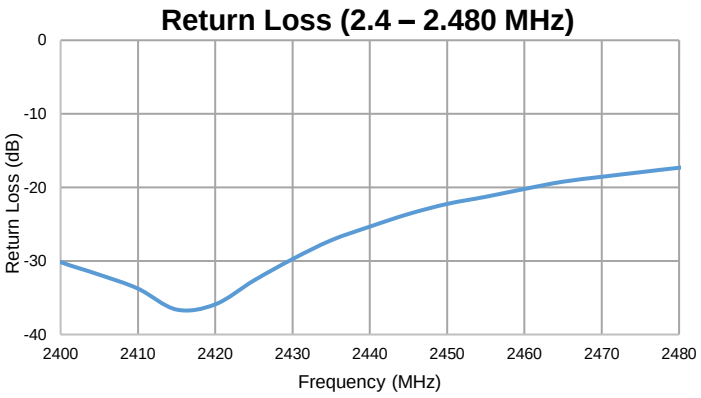
Part Number	W3P35x8W04-U100D3B0A
Size (mm)	35.20 ± 0.15 length 8.50 ± 0.15 width 0.40 thickness
*Connector	MHFI (U.FL Compatible)
*Cable length (mm)	100
Weight (grams)	0.3
Adhesive	3M468MP
Operating Temperature (°C)	- 40 to 85
Storage Temperature (°C)	- 40 to 85
Packing	Individual PE bags (default) or tray (per request)

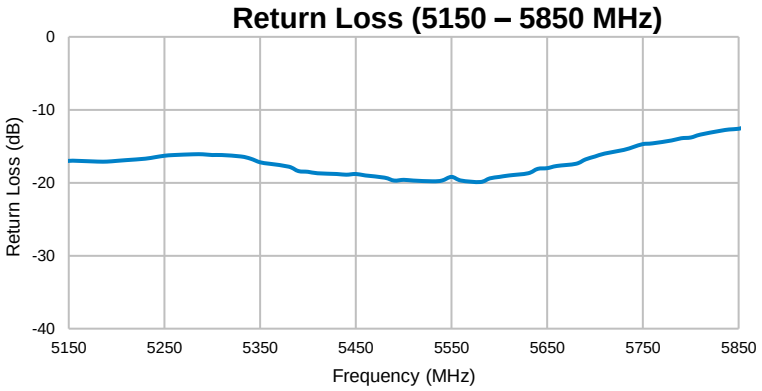
*Additional variations available in different cable lengths, colors and connectors, refer to Appendix on page 4.

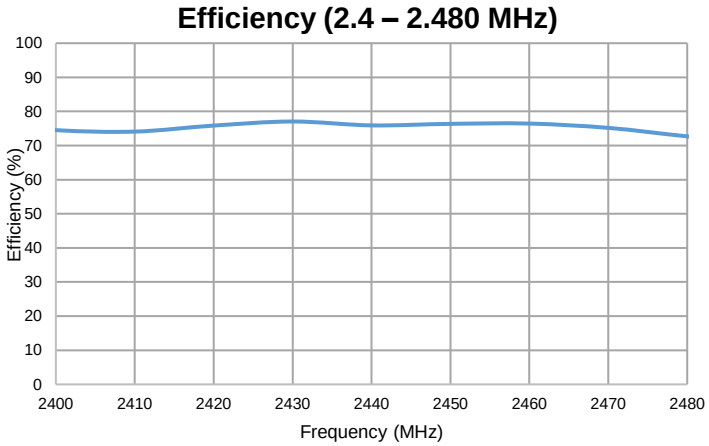
Embedded Dual-Band Wi-Fi KYOCERA AVX Antenna Specifications
KYOCERA AVX produces a wide variety of standard and custom antennas to meet user needs

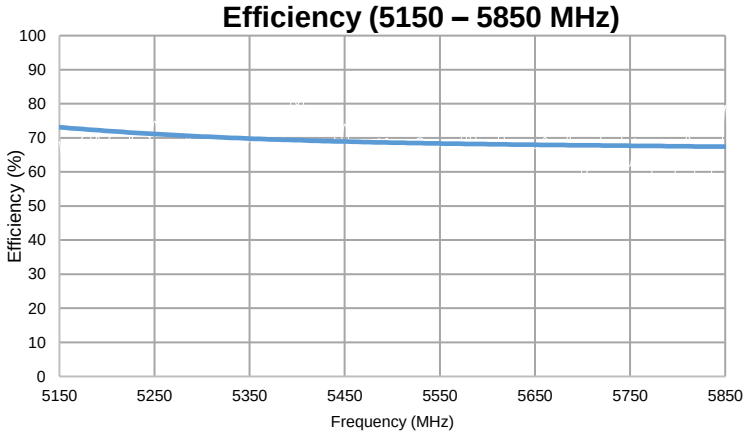
Typical Return Loss & Efficiency Plots

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









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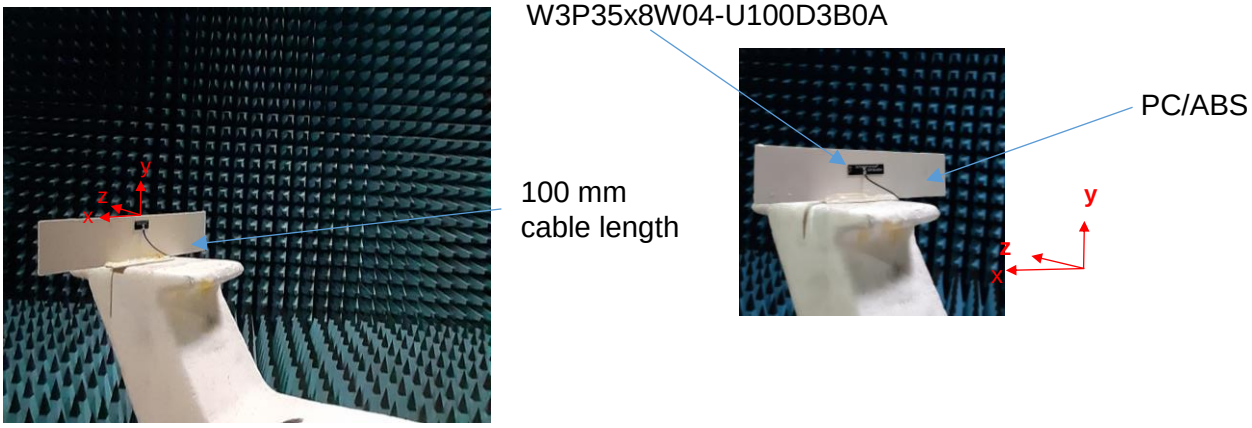
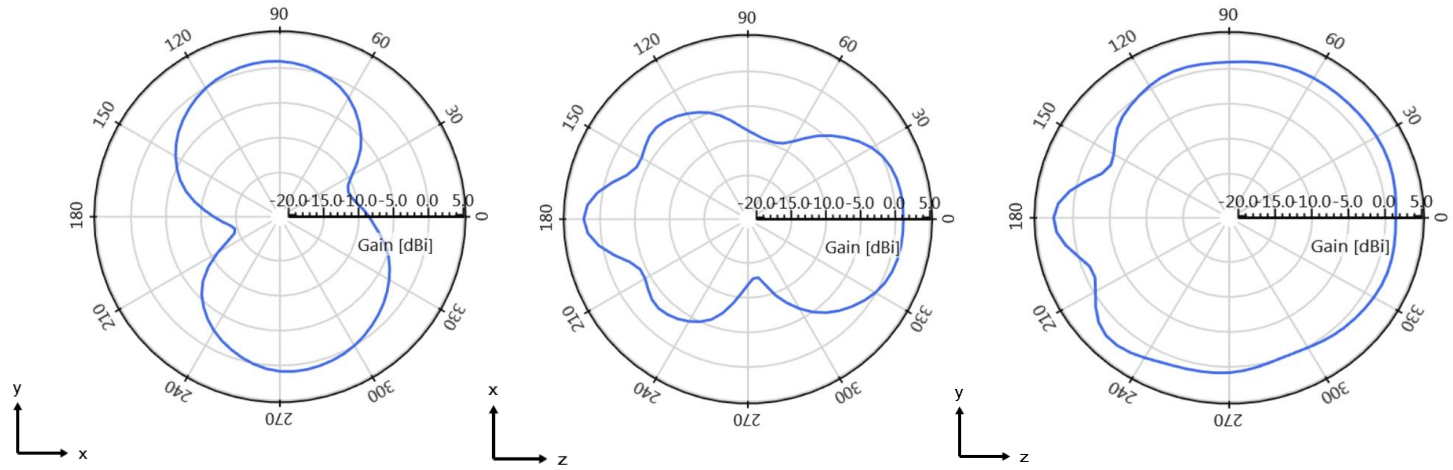
Antenna Radiation Patterns

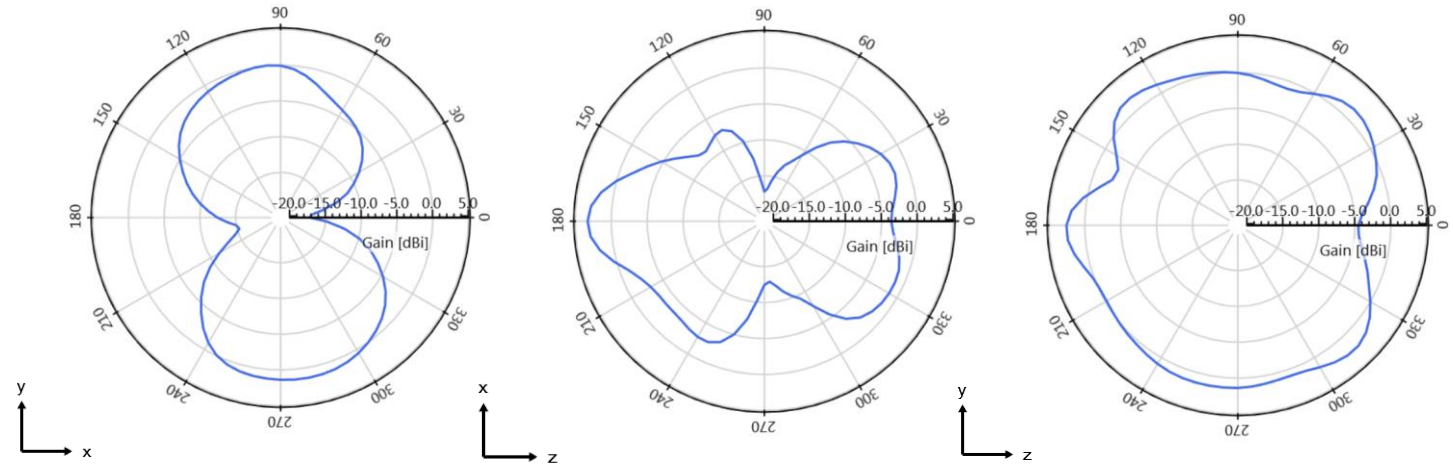
Typical Performances in reference device housing made in PC/ABS plastic and 100mm cable length



Measured at 2450 MHz



Measured at 5550 MHz



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Generic Antenna Part Numbers

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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 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 = MHFI (u.fl compatible*) W = MHFIII (w.fl compatible) H = MHF4L L = MHFI LK 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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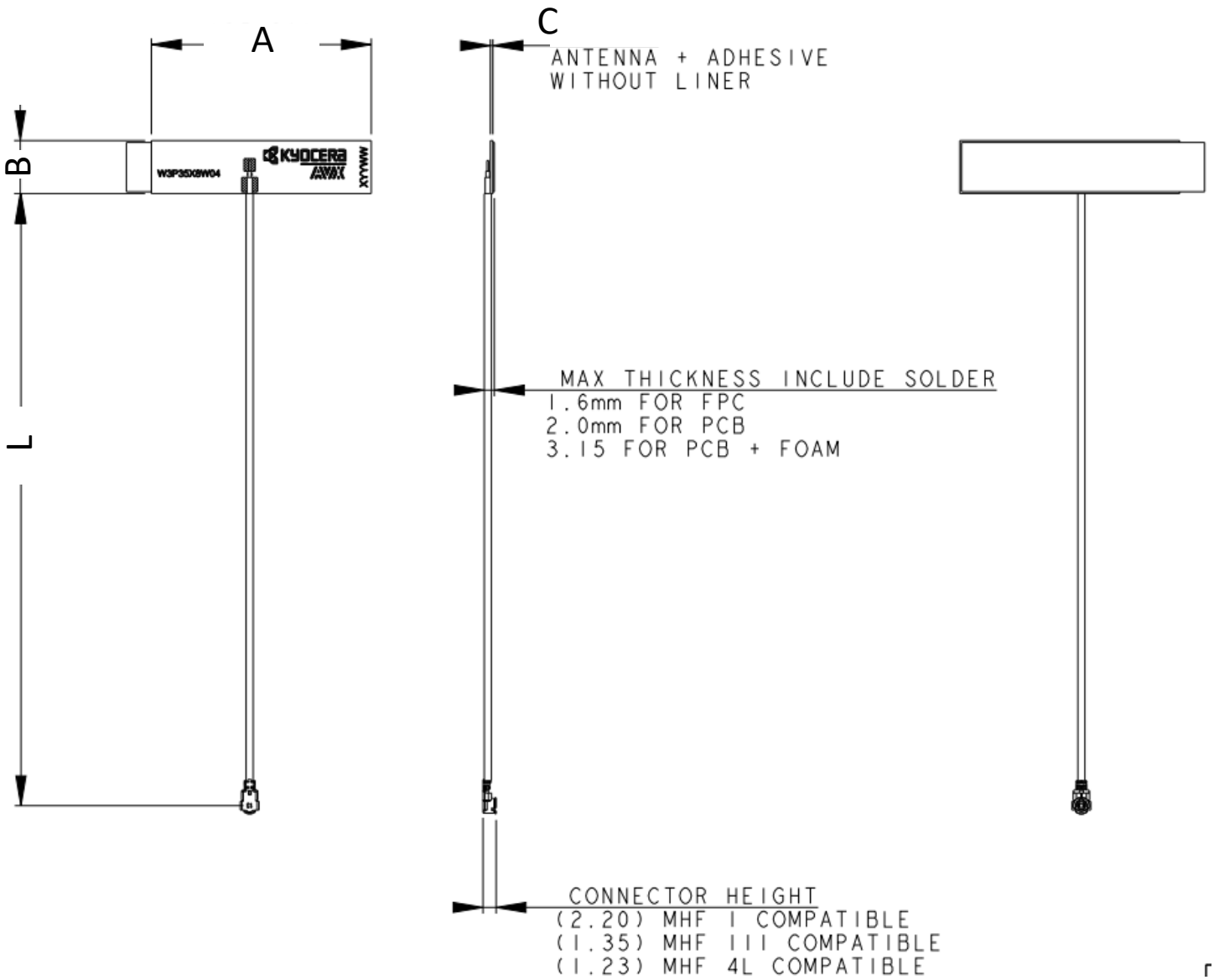
Mechanical Dimensions

Part Number	A (mm)	B (mm)	C (mm)	L (mm)	Connector
W3P35X8W04- U100D3B0A	35.20 ± 0.15	8.50 ± 0.15	0.4	100	MHFI (U.FL compatible)



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

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Generic Antenna Part Numbers

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Typical Ordering Part Numbers

PN	TYPE	ADHESIVE / TUNING VERSION	A (mm)	B (mm)	C (mm)	COMPATIBLE CONNECTOR TYPE	L CABLE (mm)
W3P35X8W04-UXXXD3B0A	PCB	3M 468MP / PLASTIC WALL	35.2	8.5	0.53	MHF I (U.FL compatible)	XXX
W3P35X8W04-HXXXD3B0A						MHF 4L	
W3P35X8W04-WXXXD1B0A						MHF III (W.FL compatible)	
W3P35X8F04-UXXXD3B0T		3M 9448A / FOAM ON PLASTIC WALL			1.69	MHF I (U.FL compatible)	
W3P35X8F04-HXXXD3B0T						MHF 4L	
W3P35X8F04-WXXXD1B0T						MHF III (W.FL compatible)	
W3F35X8W01-UXXXD3B0C	FPC	3M 467 / PLASTIC WALL			0.14	MHF I (U.FL compatible)	
W3F35X8W01-HXXXD3B0C						MHF 4L	
W3F35X8W01-WXXXD1B0C						MHF III (W.FL compatible)	

XXX ➔ Cable length on customer request

XXX (mm)	Condition	Tolerance Z
050	XXX< 150	± 3.0
100	XXX< 150	± 3.0
150	150 ≤ XXX < 300	± 4.0
200	150 ≤ XXX < 300	± 4.0
250	150 ≤ XXX < 300	± 4.0
300	300 ≤ XXX ≤ 500	± 5.0
400	300 ≤ XXX ≤ 500	± 5.0
500	500 ≤ XXX ≤ 1000	± 7.0
600	500 ≤ XXX ≤ 1000	± 7.0

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