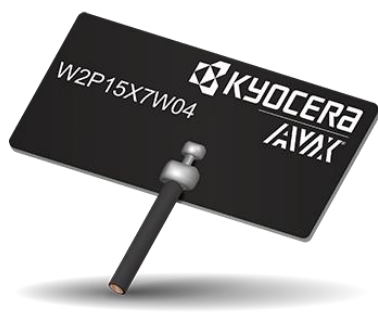


# Part No. W2P15X7F04-U100D3B0T

## Embedded 5 GHz Wi-Fi Antenna

**5 GHz**

Supports: Wi-Fi applications, Wi-Fi 6



KYOCERA AVX's W2P15X7F04 Family PCB antennas include an embedded Wi-Fi Antenna 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

5.150 – 5.850 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 Application
- M2M industrial devices
- Smart Home/Cities

### Electrical Specifications

Typical Characteristics (on PC/ABS plastic and 100mm cable length)

Frequency Band (GHz)	5.150 – 5.850
Return Loss	< -9 .0dB
Average Efficiency	70%
Peak Gain	< 4.3 dBi
Feed Point Impedance	50 ohms unbalanced

### Mechanical Specifications

Part Number	W2P15X7F04-U100D3B0T
Size (mm)	15.90 ± 0.15 length 7.60 ± 0.15 width 0.4 thickness
*Connector	U.FL compatible
*Cable length (mm)	100
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)

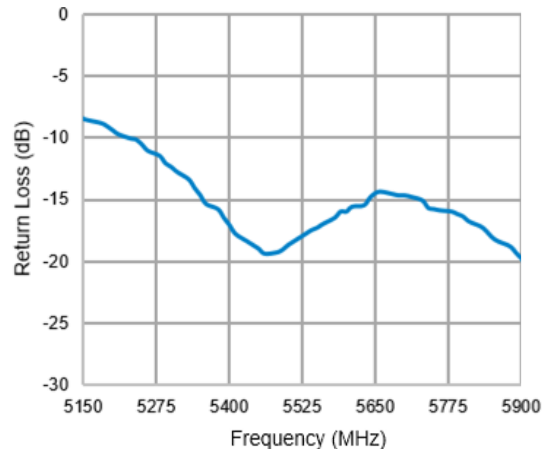
\*Additional variations available in different cable lengths, colors and connectors, refer to Appendix on page 4.

Wi-Fi 5 GHz Embedded antenna specifications  
KYOCERA AVX produces a wide variety of standard and custom antennas to meet user needs

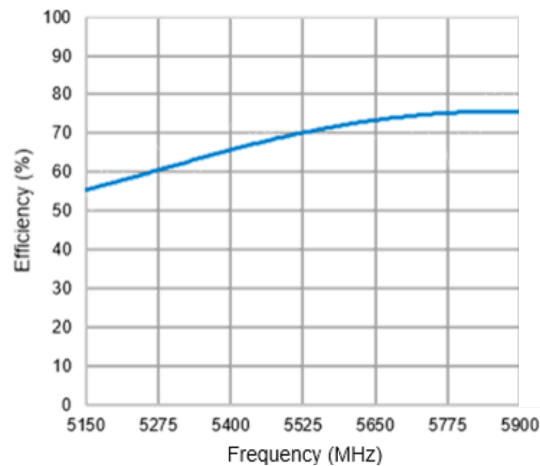
### Typical Return Loss & Efficiency Plots

Measured in Free Space on ABS plastic and 100mm cable length

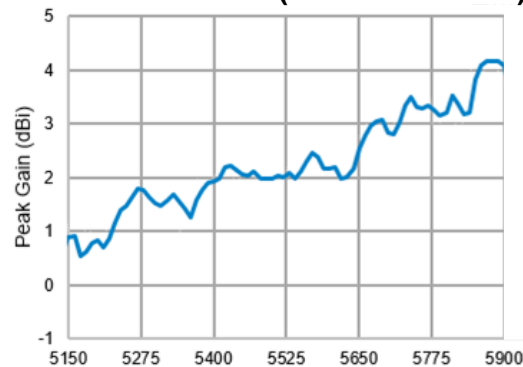
#### Return Loss Wi-Fi (5.150 – 5.900 GHz)



#### Efficiency Wi-Fi (5.150 – 5.900 GHz)



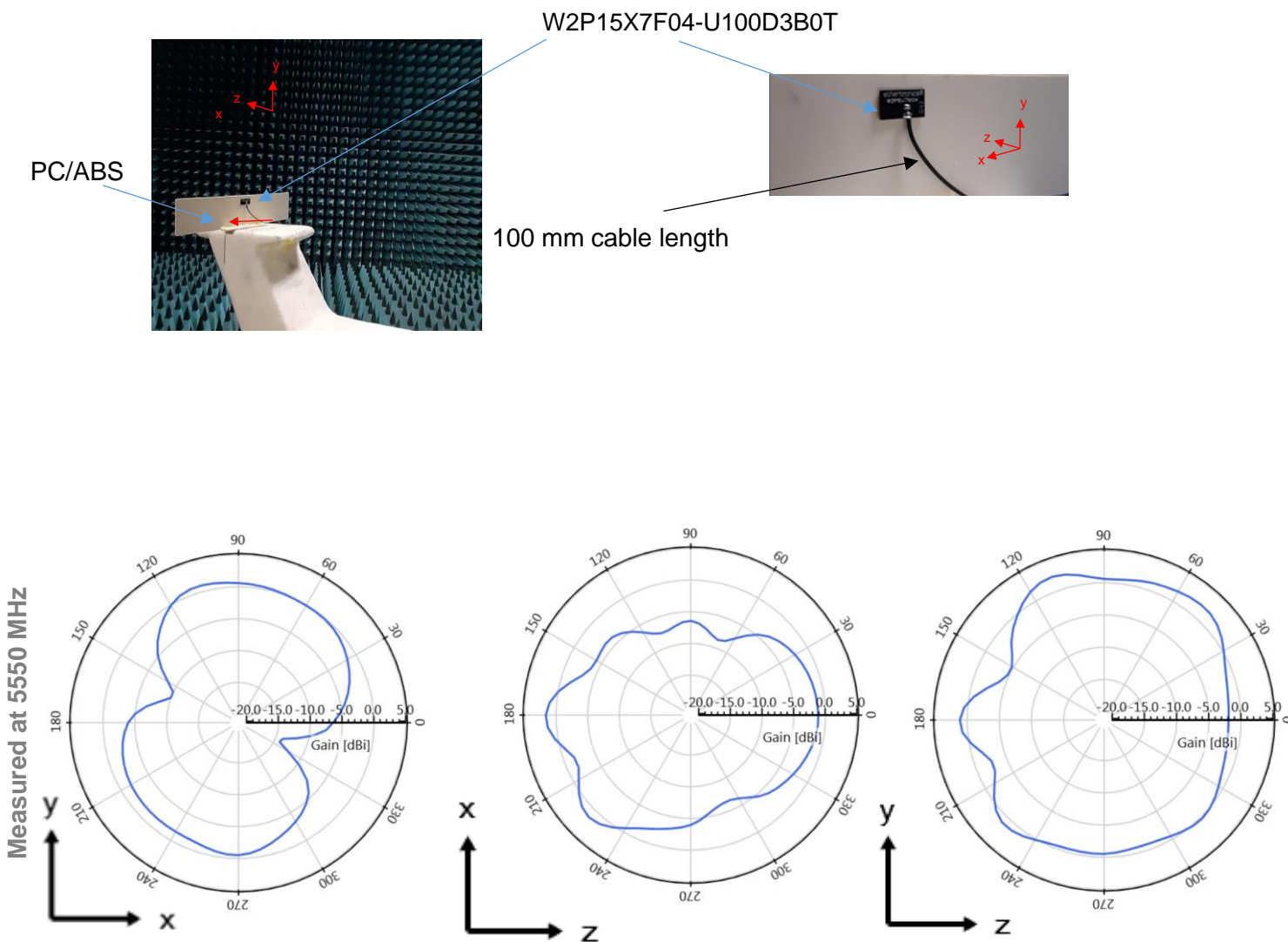
#### Peak Gain Wi-Fi (5.150 – 5.90 GHz)



Wi-Fi 5 GHz embedded antenna specifications  
KYOCERA AVX produces a wide variety of standard and custom antennas to meet user needs

## Radiation Patterns

Typical Performances in Free Space on ABS plastic and 100mm cable length



## Generic Antenna Part Numbers

KYOCERA AVX 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: W2P15X7F04-U100D3B0T

#### PN Nomenclature

PCB silk screen number

W	2	P	15x7	F	04
T	T	T	T	T	T
Series	Freq. of operation	Type	Size	Tuning version	PCB thickness
W = Wi-Fi Family	2 = 5 GHz	F = FPC P = PCB	15x7 mm 15.9x7.6mm*	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
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 = MHFI (w.fl compatible)* W = MHFIII (w.fl compatible)** H = MHF4L L = MHFI LK N = No connector	050 = 50mm 100 = 100mm* 150 = 150mm 200 = 200mm 250 = 250mm 300 = 300mm	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  
\*\*W.FL is NRND

\*Typical length

\*Typical orientation

\*Typical diameter for w.fl

\*Typical color

\*Default configuration

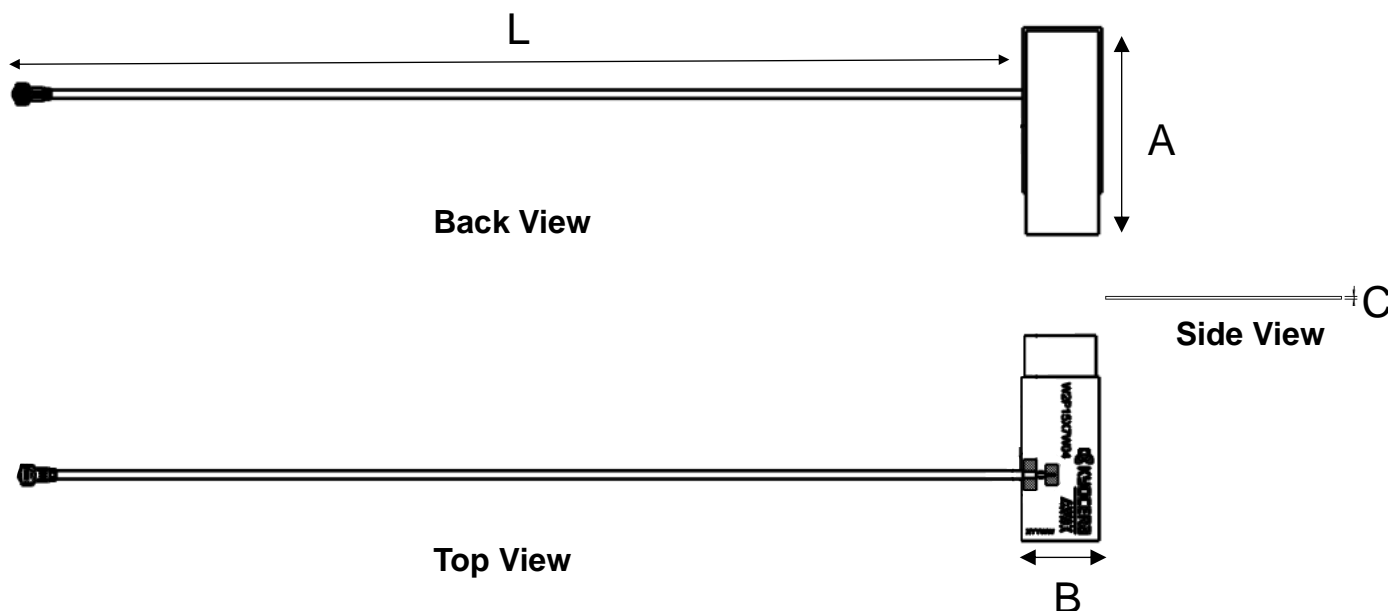
\*Adhesive for PCB  
\*\*Adhesive for FPC  
\*\*\*Adhesive for PCB + foam

## Generic Antenna Part Numbers

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

## Mechanical Dimensions

Part Number	A (mm)	B (mm)	C (mm)	L (mm)	Connector
W2P15X7F04-U1003B0T	15.90 ± 0.15	7.60 ± 0.15	0.4	100	MHFI (U.FL compatible)



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

## Generic Antenna Part Numbers

KYOCERA AVX 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

PN	TYPE	ADHESIVE / TUNING VERSION	A (mm)	B (mm)	C (mm)	COMPATIBLE CONNECTOR TYPE	L CABLE (mm)		
W2P15X7W04-UXXXD3B0A	PCB	3M 468MP / PLASTIC WALL	15.9	7.6	0.53	MHF I (U.FL compatible)	XXX		
W2P15X7W04-HXXXD3B0A						MHF 4L			
W2P15X7W04-LXXXD1B0A						MHF I LK			
W2P15X7F04-UXXXD3B0T		3M 9448A / FOAM ON PLASTIC WALL			1.69	MHF I (U.FL compatible)			
W2P15X7F04-HXXXD3B0T						MHF 4L			
W2P15X7F04-LXXXD1B0T						MHF I LK			
W2F15X7W01-UXXXD3B0C	FPC	3M 467 / PLASTIC WALL						0.14	MHF I (U.FL compatible)
W2F15X7W01-HXXXD3B0C									MHF 4L
W2F15X7W01-LXXXD1B0C									MHF I LK

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

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

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[W2P15X7F04-U100D3B0T](#) [W2P15X7W04-U100D3B0A](#) [W2P15X7W04-U050D3B0A](#) [W2F15X7W01-U100D3B0C](#)  
[W2P15X7W04-H100D3B0A](#) [W2F15X7W01-H050D3B0C](#) [W2P15X7W04-U200D3B0A](#)