Part No. 1001932PT

WLAN / BT / Zigbee / Wi-Fi 6E Tunable Embedded PCB Antenna

2.4 GHz, 5 GHz, 6 GHz, 7 GHz

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



PCB Wi-Fi Tunable Embedded Antenna with Cable

2400 MHz - 2485 MHz,
4900 MHz – 5825 MHz,
5925 MHz – 7125 MHz

KEY BENEFITS

Stay-in-Tune

KYOCERA AVX 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.

Environmental Compliance

Products are the latest RoHS version compliant.

APPLICATIONS

- Embedded design
- Gateway, Access Point
- Handheld
- Smart Grid
- OBD-II
- Telematics
- Tracking
- Healthcare Applications (FDA Class I)
- M2M, Industrial devices

KYOCERA AVX 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, 5.0 GHz, 6.0 GHz, and 7.0 GHz enabled 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. KYOCERA AVX antennas utilize patented Isolated Magnetic Dipole (IMD) technology to deliver a unique size and performance combination.

The 1001932PT is offered in many standard cable lengths ranging from 25 mm up to 500 mm. Standard connector options offered in MHF and MHF4L compatibility. Ordering part number guide is located at end of document for selection ease.

Electrical Specifications

Typical Performance using 100 mm cable tested on PC-ABS

Frequency (GHz)	2.400 – 2.485	4.900 – 5.825	5.925 – 7.125
Peak Gain	2.03 dBi	4.45 dBi	6.11 dBi
Average Efficiency	61%	82%	63%
VSWR Match	2:1 max	2:1 max	2:1 max
Feed Point Impedance	50 ohms unbalanced		
Polarization	Linear		
Power Handling	2.0 Watt CW		
Additional Resources	Download Simulation Files		

Mechanical Specifications

Ordering Part #	1001932PT-AA10L0100
Dimensions (mm)	35.2 x 8.5 x 0.4
Weight (grams)	0.8
Cable/Connector (mm)	Length: 100, Diameter: 1.13, Color: Black; MHF (U.FL compatible) connector
Mounting	Adhesive on bottom side of antenna
Packaging	PE bags
Additional Resources	Download 3D FIT File

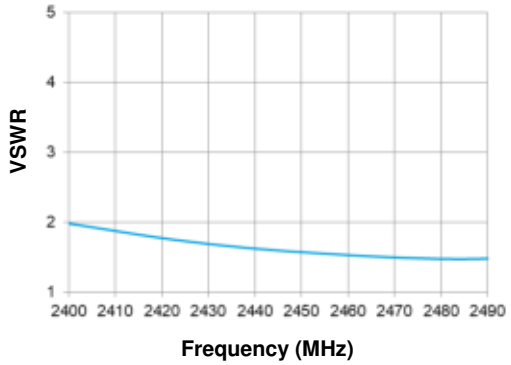
*Additional variations with different cable lengths, colors and connectors are available.

WLAN / BT / Zigbee / Wi-Fi 6E Tunable Embedded PCB Antenna Specifications.
KYOCERA AVX produces a wide variety of standard and custom antennas to meet user needs.

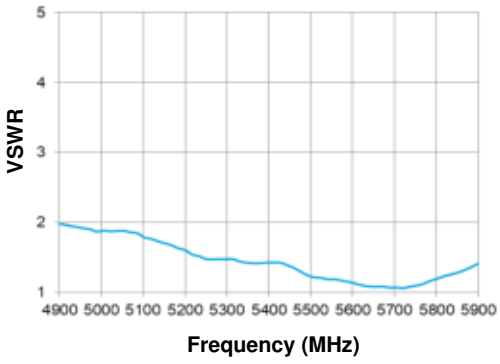
VSWR, Efficiency and Peak Gain Plots

Typical Performance using 100 mm cable tested on PC-ABS

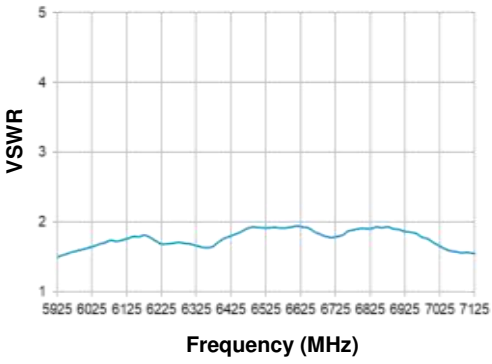
2.4 GHz VSWR



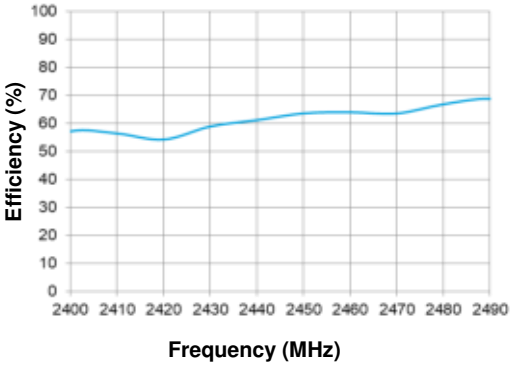
5 GHz VSWR



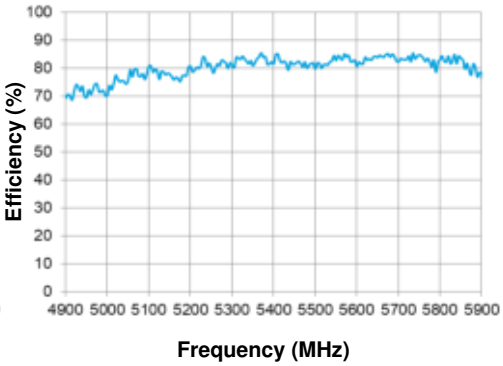
6 / 7 GHz VSWR



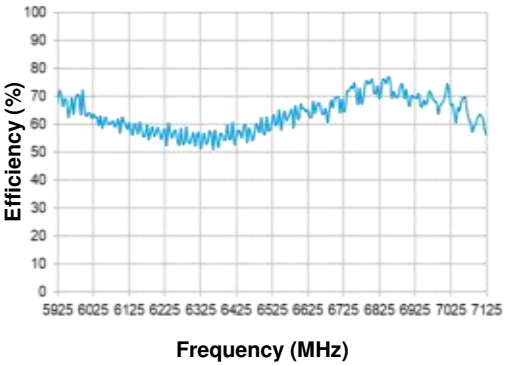
2.4 GHz Efficiency



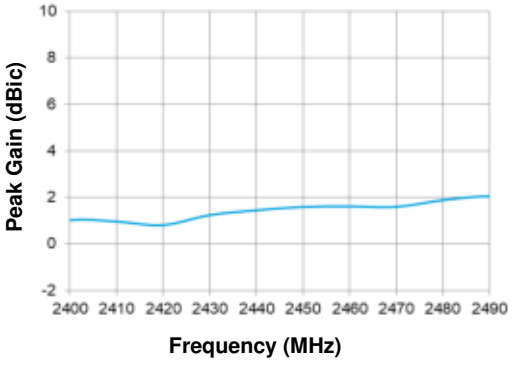
5 GHz Efficiency



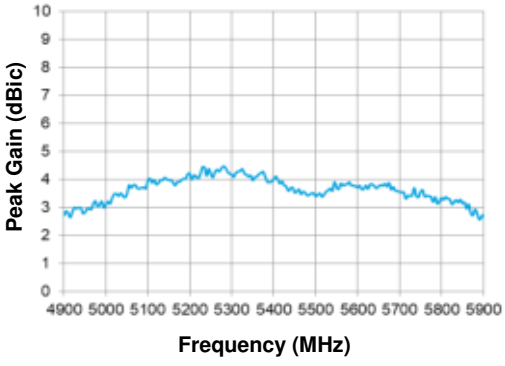
6 / 7 GHz Efficiency



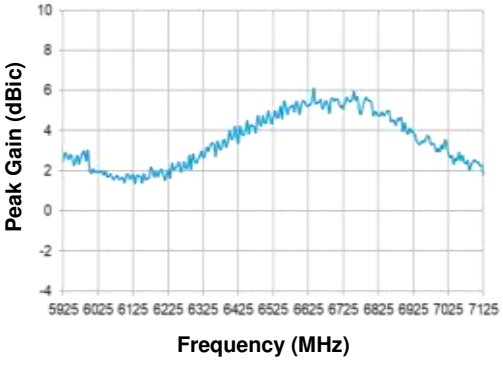
2.4 GHz Peak Gain



5 GHz Peak Gain



6 / 7 GHz Peak Gain



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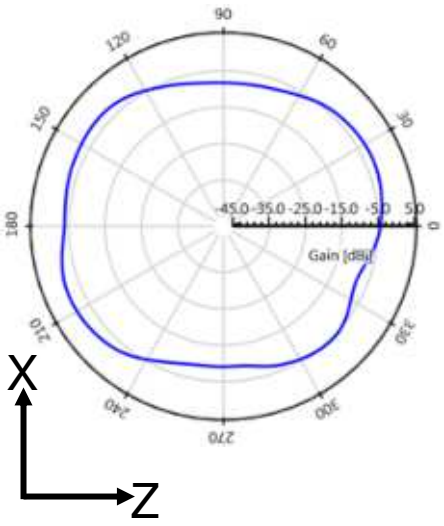
KYOCERA AVX produces a wide variety of standard and custom antennas to meet user needs.

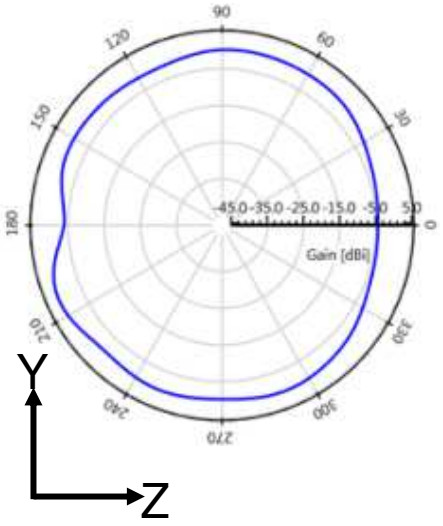
Antenna Radiation Patterns

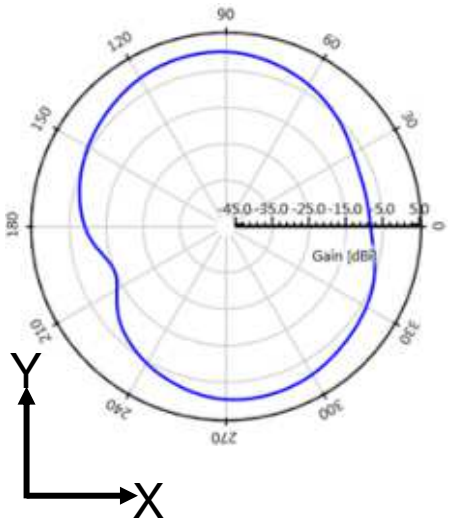
Typical Performance using 100 mm cable tested on PC-ABS
Measured @ 2440, 5550 MHz



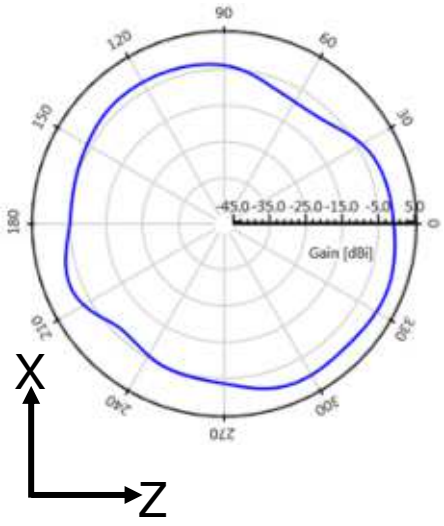
Measured at 2440 MHz

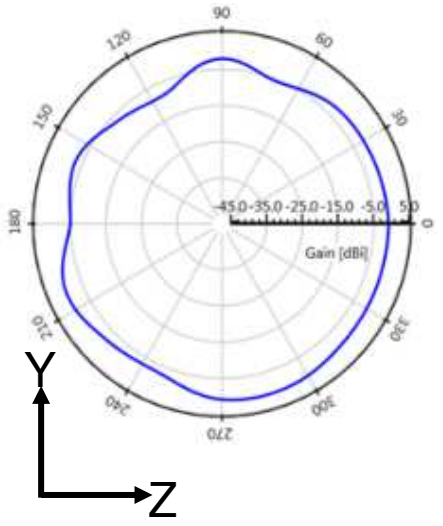


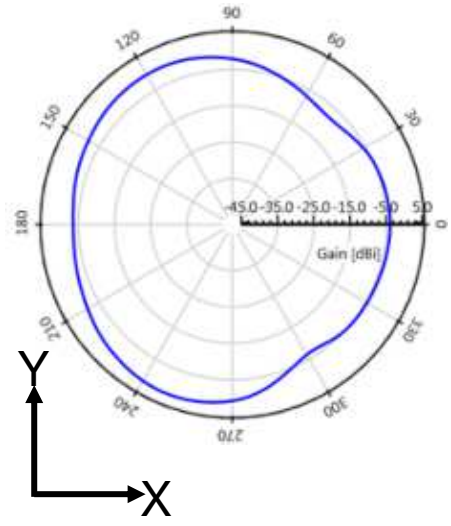




Measured at 5550 MHz







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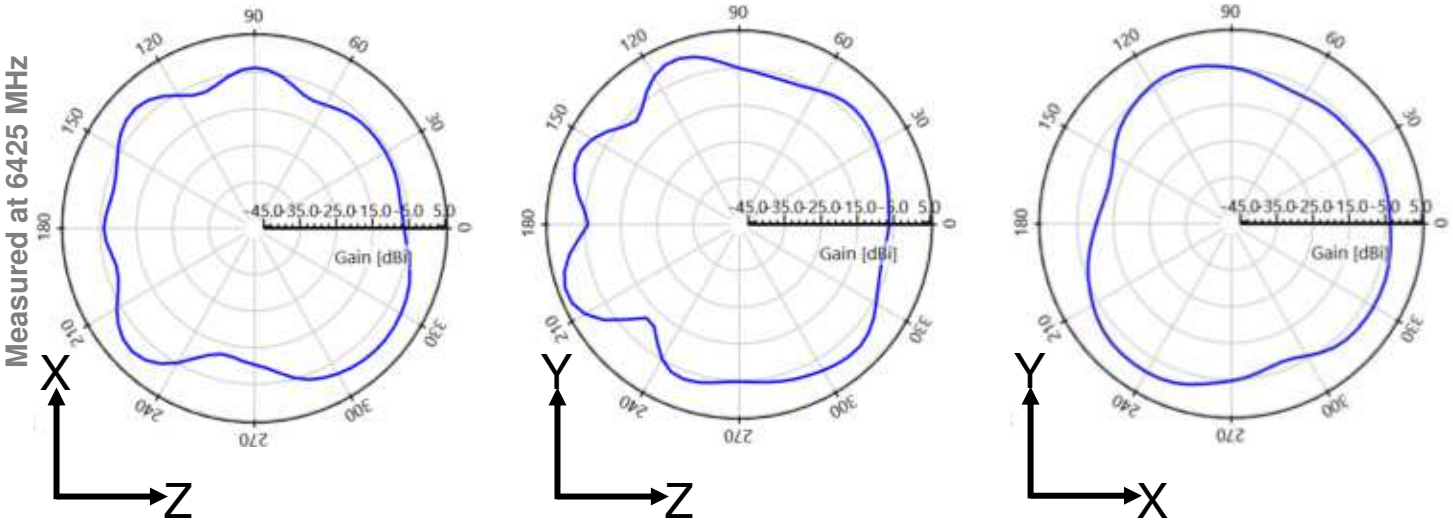
Antenna Radiation Patterns

Typical Performance using 100 mm cable tested on PC-ABS
Measured @ 6425 MHz



Measured at 6425 MHz



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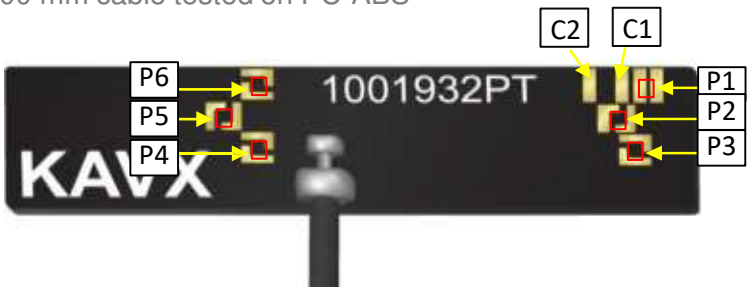
Antenna Tuning Options

Typical Performance using 100 mm cable tested on PC-ABS



*This antenna has unique features enabling limited range RF tuning by leaving P1 - P6 and C1 - C2 connected by “solder bridge” or disconnected with a “cut” to the trace. Refer to detailed tuning options below.

Ref: Baseline = Typical Performance using 100 mm cable tested on PC-ABS

Options for Tuning: "2.4GHz (Lower)"

MODE	T1	T2	T3	T4
PADS	Connect: P2	Connect: P1	Connect: P2+P3	Connect: P1+P3
Outcome: (Ref: Baseline)	~200 MHz shift low	~250 MHz shift low	~350 MHz shift low	~370 MHz shift low

Options for Tuning: "2.4GHz (Higher)"

MODE	C1	C2
PADS	Cut: C1	Cut: C2
Outcome: (Ref: Baseline)	~170 MHz shift high	~300 MHz shift high

Options for Tuning: "5GHz (Lower)"

MODE	T5	T6	T7	T8
PADS	Connect: P4	Connect: P4+P5	Connect: P6	Connect: P5+P6
Outcome: (Ref: Baseline)	~200 MHz shift low	~1500 MHz shift low	~500 MHz shift low	~1900 MHz shift low

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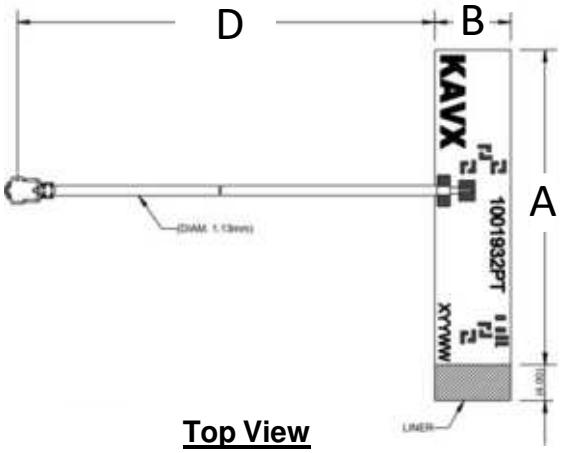
Mechanical Dimensions & Ordering Part Numbers

Typical antenna dimensions in mm MHF (U.FL compatible) connector

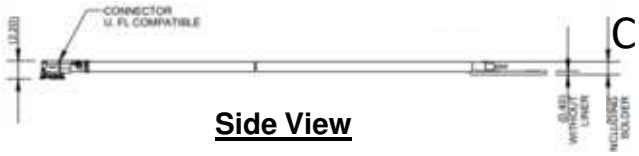
Part Number	A	B	C	D
1001932PT-AA10L0025	(35.2)	(8.5)	(1.9)	25.0 ± 3.0
1001932PT-AA10L0050	(35.2)	(8.5)	(1.9)	50.0 ± 3.0
1001932PT-AA10L0075	(35.2)	(8.5)	(1.9)	75.0 ± 3.0
1001932PT-AA10L0100	(35.2)	(8.5)	(1.9)	100.0 ± 3.0
1001932PT-AA10L0150	(35.2)	(8.5)	(1.9)	150.0 ± 4.0
1001932PT-AA10L0200	(35.2)	(8.5)	(1.9)	200.0 ± 4.0

*"()" Indicated the dimension is for reference only.

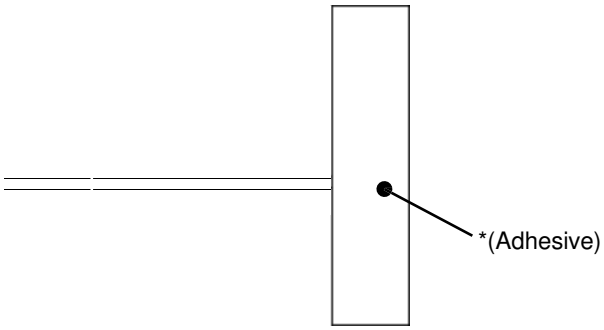
Part Number	Cable Length	Cable Tolerance
1001932PT-AA10L0XXX	25.0 ≤ XXX < 149.0	± 3.0
1001932PT-AA10L0XXX	149.0 ≤ XXX < 299.0	± 4.0
1001932PT-AA10L0XXX	299.0 ≤ XXX ≤ 500.0	± 5.0



Top View



Side View



Bottom View

***Total Height "C" of 1.9 mm includes the cable solder connection**
***Height of 0.4 mm includes PCB + adhesive thicknesses**
***Dimensions in () parenthesis are Reference Only.**

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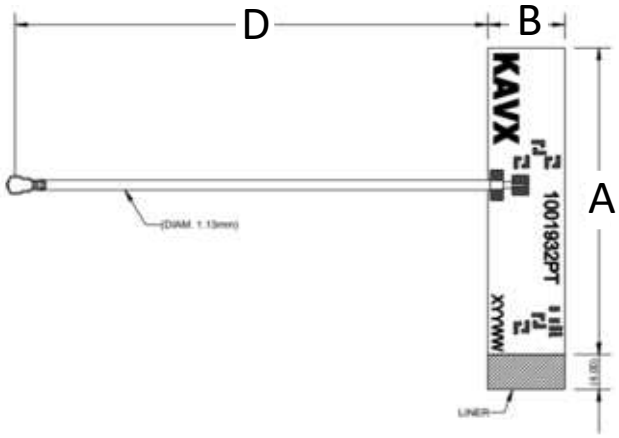
Mechanical Dimensions & Ordering Part Numbers

Typical antenna dimensions in mm MHF4L connector.

Part Number	A	B	C	D
1001932PT-AC10L0025	(35.2)	(8.5)	(1.9)	25.0 ± 3.0
1001932PT-AC10L0050	(35.2)	(8.5)	(1.9)	50.0 ± 3.0
1001932PT-AC10L0075	(35.2)	(8.5)	(1.9)	75.0 ± 3.0
1001932PT-AC10L0100	(35.2)	(8.5)	(1.9)	100.0 ± 3.0
1001932PT-AC10L0150	(35.2)	(8.5)	(1.9)	150.0 ± 4.0
1001932PT-AC10L0200	(35.2)	(8.5)	(1.9)	200.0 ± 4.0

*"()" Indicated the dimension is for reference only.

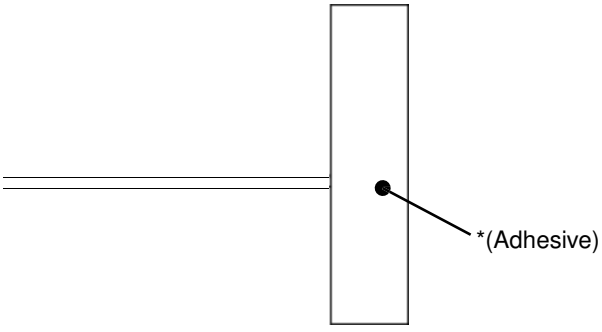
Part Number	Cable Length	Cable Tolerance
1001932PT-AC10L0XXX	25.0 ≤ XXX < 149.0	± 3.0
1001932PT-AC10L0XXX	149.0 ≤ XXX < 299.0	± 4.0
1001932PT-AC10L0XXX	299.0 ≤ XXX ≤ 500.0	± 5.0



Top View



Side View



Bottom View

***Total Height "C" of 1.9 mm includes the cable solder connection**
***Height of 0.4 mm includes PCB + adhesive thicknesses**
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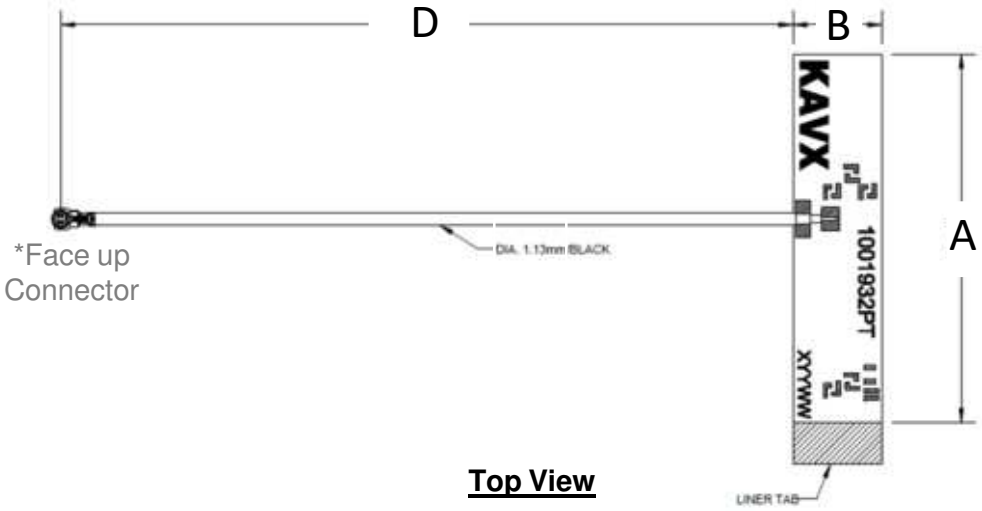
Mechanical Dimensions & Ordering Part Numbers

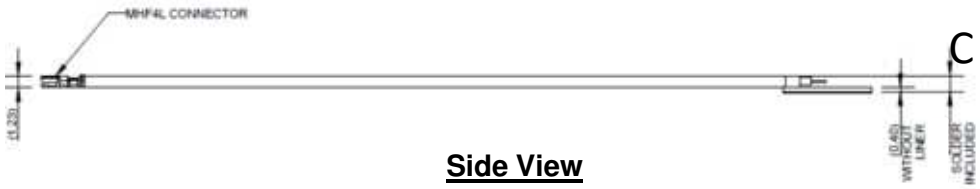
Typical antenna dimensions in mm MHF4L connector. Face up connector orientation

Part Number	A	B	C	D Cable Length	Cable Tolerance
1001932PT-AC10L0070U	(35.2)	(8.5)	(1.9)	70.00	± 3.0

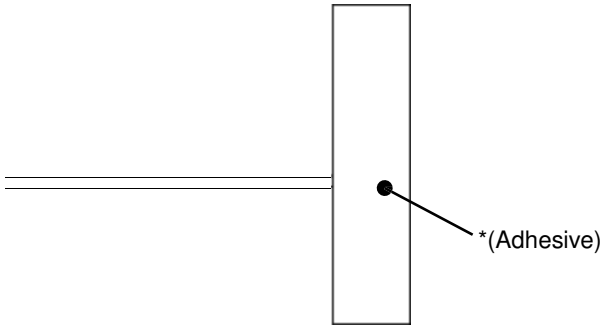
*"()" Indicated the dimension is for reference only.



Top View



Side View



Bottom View

***Total Height "C" of 1.9 mm includes the cable solder connection**
***Height of 0.4 mm includes PCB + adhesive thicknesses**
***Dimensions in () parenthesis are Reference Only.**

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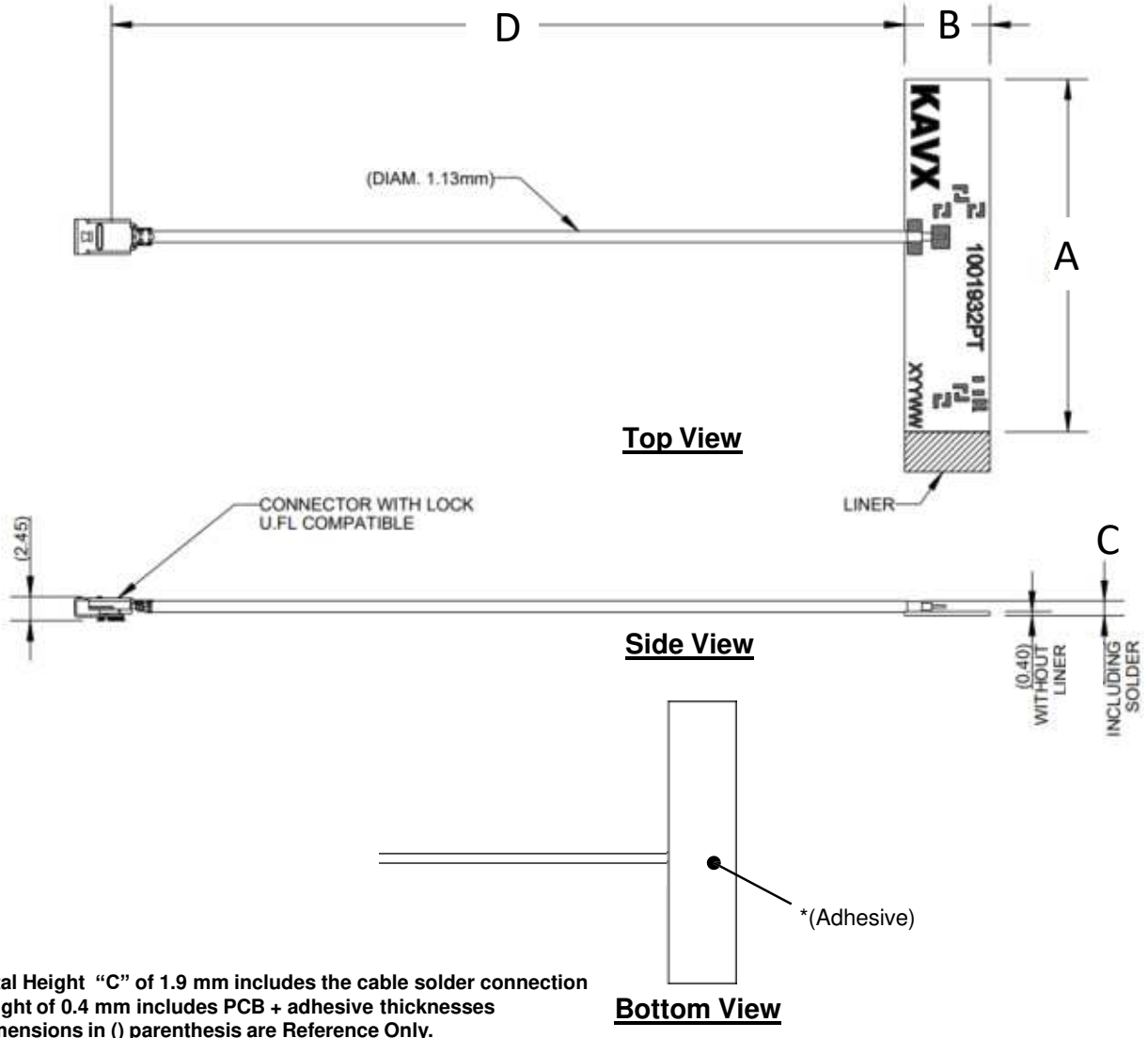
Mechanical Dimensions & Ordering Part Numbers

Typical antenna dimensions in mm LOCK MHF (U.FL compatible) connector.

Part Number	A	B	C	D Cable Length
1001932PT-AD10L0050	(35.2)	(8.5)	(1.9)	50.0 ± 3.0
1001932PT-AD10L0075	(35.2)	(8.5)	(1.9)	75.0 ± 3.0
1001932PT-AD10L0100	(35.2)	(8.5)	(1.9)	100.0 ± 3.0
1001932PT-AD10L0150	(35.2)	(8.5)	(1.9)	150.0 ± 4.0
1001932PT-AD10L0200	(35.2)	(8.5)	(1.9)	200.0 ± 4.0

Cable Length	Cable Tolerance
25.0 ≤ XXX < 149.0	± 3.0
149.0 ≤ XXX < 299.0	± 4.0
299.0 ≤ XXX ≤ 500.0	± 5.0

*"()" Indicated the dimension is for reference only.



***Total Height "C" of 1.9 mm includes the cable solder connection**
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Additional Resources – 1001932PT

3D FIT File:
https://www.kyocera-avx.com/download/antennas/ME-FIT/1001932PT_ME_fit.zip

Simulation Files:
CST :https://www.kyocera-avx.com/download/antennas/CST/1001932FT_061224_CST-23r1.zip

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