

# Part No. 9003383

## ISM FPC Antenna

865 MHz – 925 MHz  
Supports: ISM, LoRa



KYOCERA AVX's 9003383 antenna is an embedded ISM Antenna designed 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.

### 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

Frequency Band (MHz)	865 - 925	
Mounting	Free Space	With Ground Plane (110x43mm)
Max Peak Gain	-0.1 dBi	1 dBi
Average Efficiency	22 %	48%
Return Loss Match	-5.7 dB	-5.7 dB
Power handling	2 W	
Free Point Impedance	50	
Polarization	Linear	
Radiation Pattern	Omni-directional	

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#### 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

- Gateways
- Embedded design
- M2M Industrial devices
- Smart Home / Cities

### Mechanical Specifications

Part Number	9003383
Overall Size (mm)	38 x 10 x 0.14
Adhesive	3M 467
Connector(s) / Length	IPEX MHFI / 93 mm
Weight (grams)	0.7
Packaging	PE BAG
Operating Temperature	[ - 40 °C ; +85 °C ]
Storage Temperature / Humidity	[ - 40 °C ; +85 °C ]
Color	Black

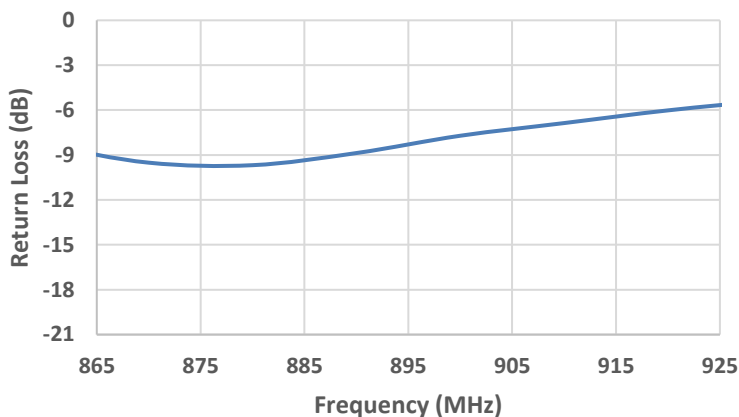
\*Additional variations available in different cable lengths, colors and connectors.

ISM FPC KYOCERA AVX Antenna Specifications  
 KYOCERA AVX produces a wide variety of standard and custom antennas to meet user needs

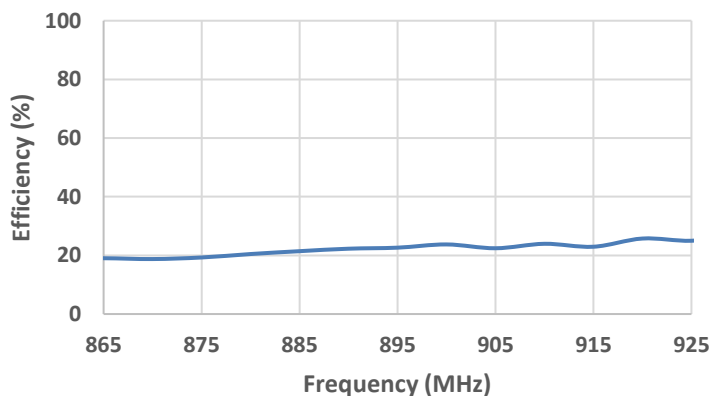
Return Loss, Efficiency and Peak Gain Plots (Free Space)

Typical performance with 93mm cable.

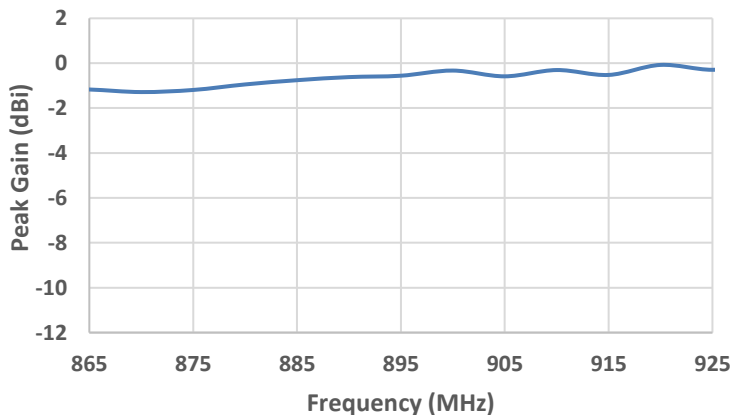
Return Loss (865 MHz – 925 MHz)



Efficiency (865 MHz – 925 MHz)



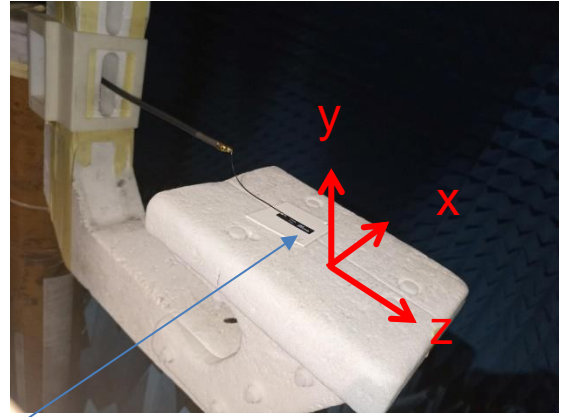
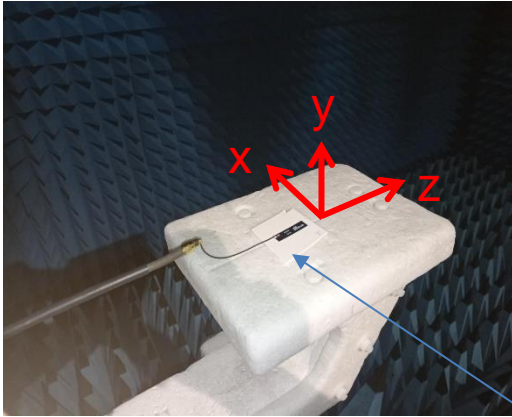
Peak Gain (865 MHz – 925 MHz)



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Antenna Radiation Patterns (Free Space)

Typical performance with 93mm cable.



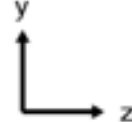
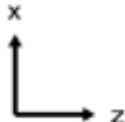
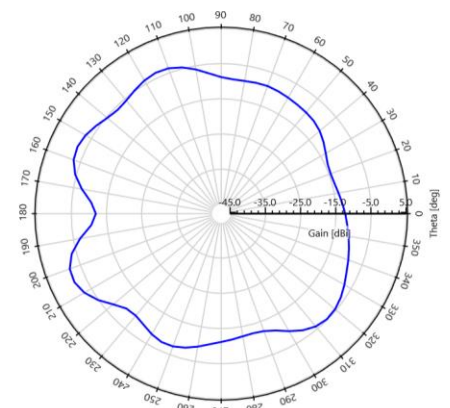
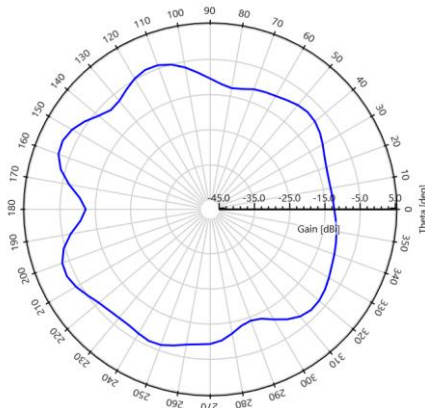
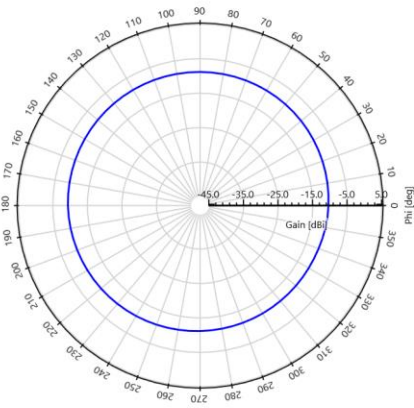
ABS

Gain (Total) -  $\theta = 90$  deg - 870 MHz [Plane XY]

Gain (Total) -  $\phi = 0$  deg - 870 MHz [Plane XZ]

Gain (Total) -  $\phi = 90$  deg - 870 MHz [Plane YZ]

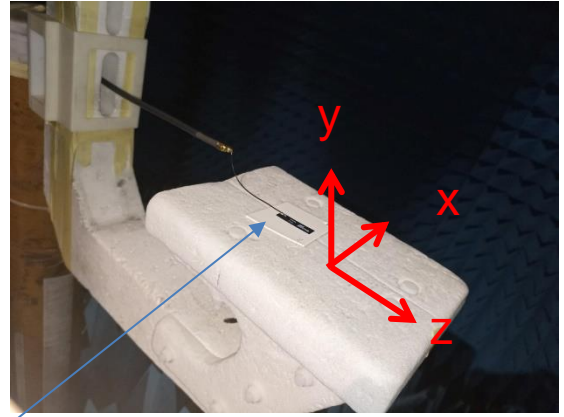
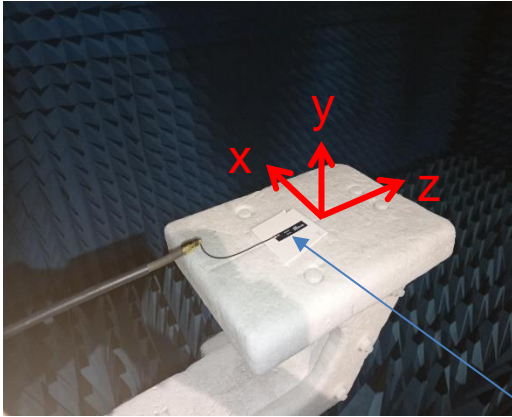
Measured at 870 MHz



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Antenna Radiation Patterns (Free Space)

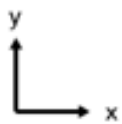
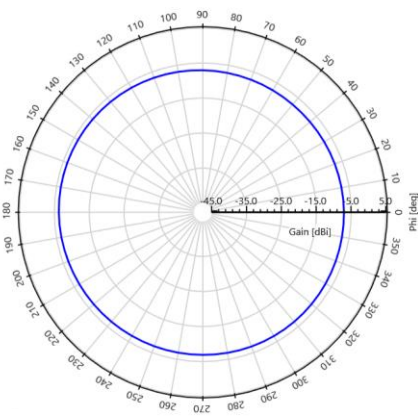
Typical performance with 93mm cable.



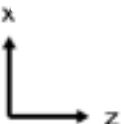
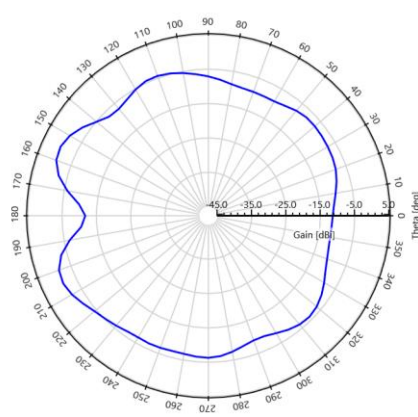
ABS

Measured at 920 MHz

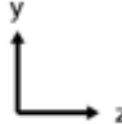
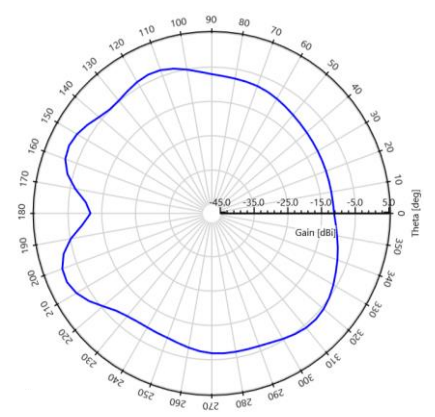
Gain (Total) -  $\theta = 90$  deg - 920 MHz [Plane XY]



Gain (Total) -  $\phi = 0$  deg - 920 MHz [Plane XZ]



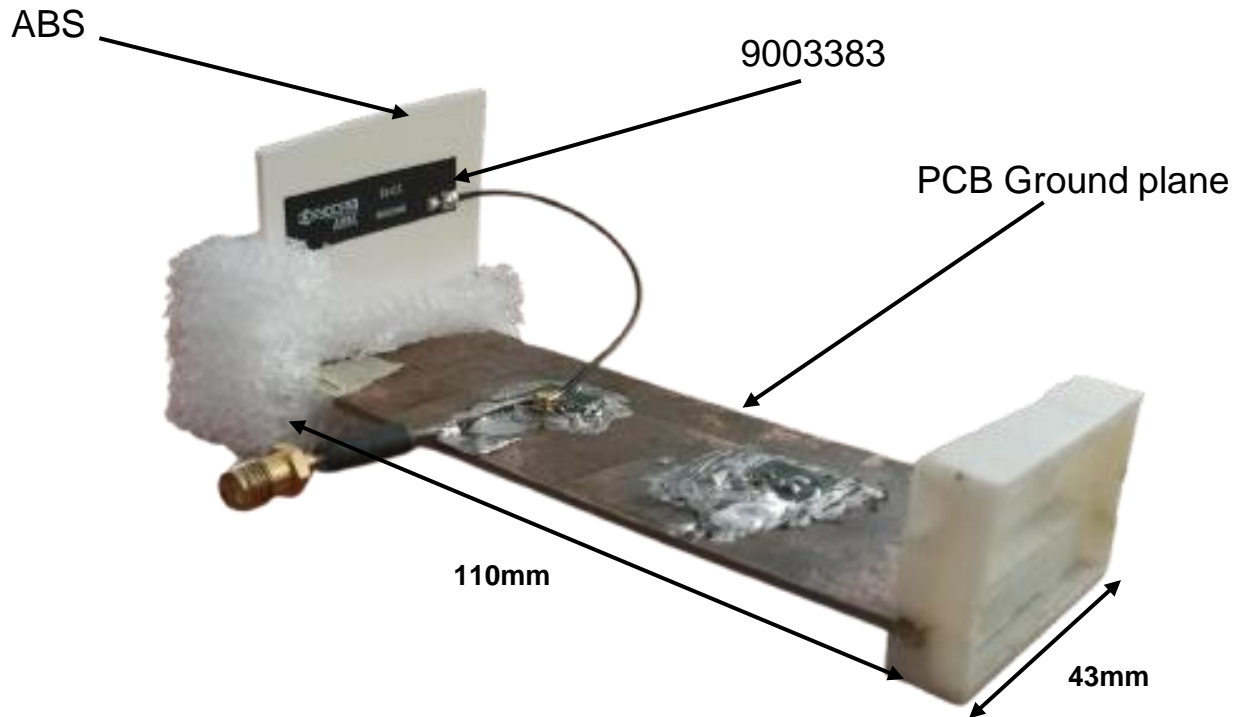
Gain (Total) -  $\phi = 90$  deg - 920 MHz [Plane YZ]



ISM FPC KYOCERA AVX Antenna Specifications

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Test Environment (With Ground Plane)



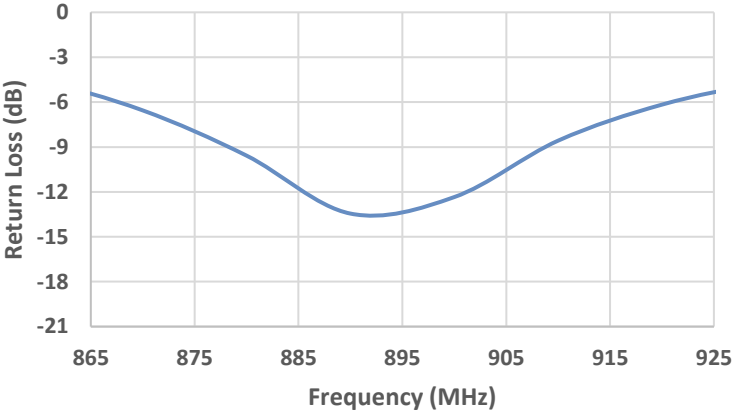
\*All dimensions provided in this document are for informational purposes only

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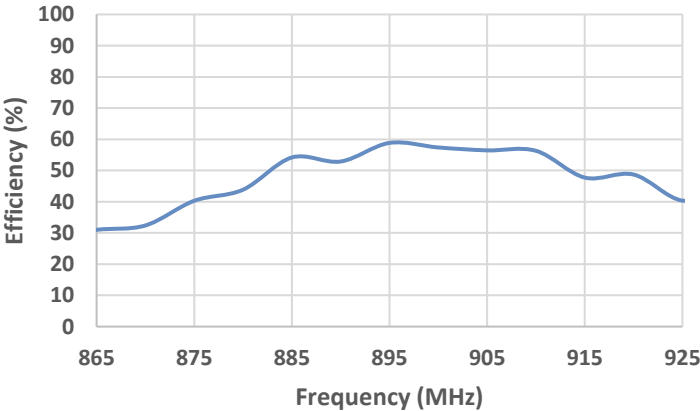
**Return Loss, Efficiency and Peak Gain Plots (With Ground Plane)**

Typical performance on 43 x 110 mm ground plane with 93mm cable.

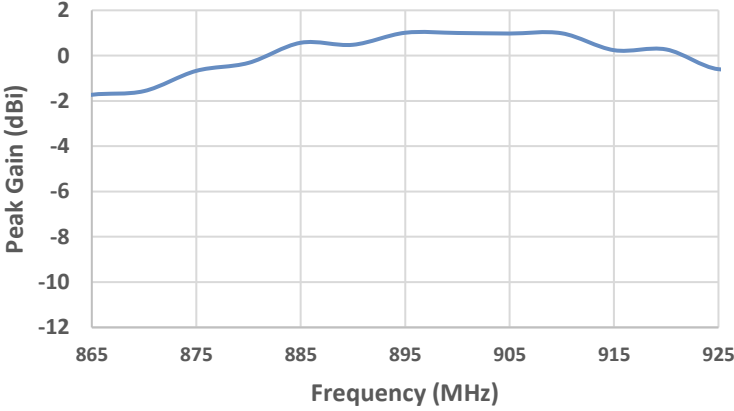
**Return Loss (865 MHz – 925 MHz)**



**Efficiency (865 MHz – 925 MHz)**



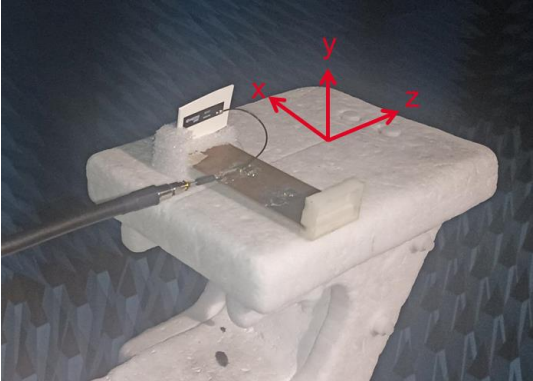
**Peak Gain (865 MHz – 925 MHz)**



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**Antenna Radiation Patterns (With Ground Plane)**

Typical performance on 43 x 110 mm ground plane with 93mm cable.

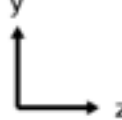
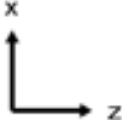
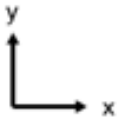
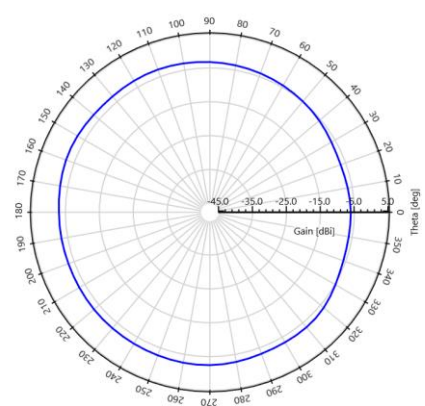
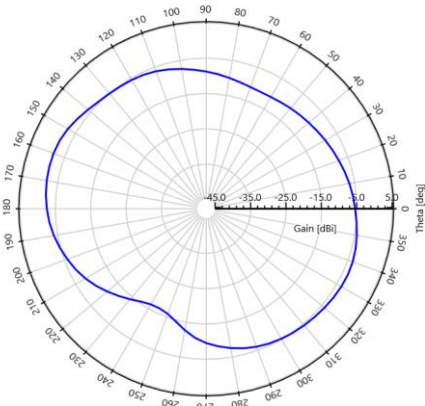
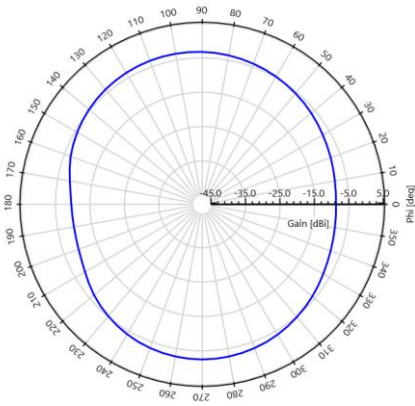


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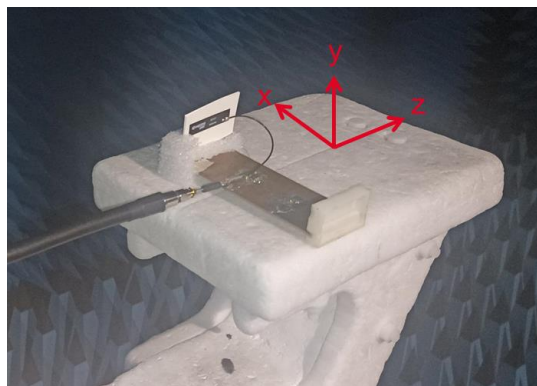
Measured at 870 MHz



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**Antenna Radiation Patterns (With Ground Plane)**

Typical performance on 43 x 110 mm ground plane with 93mm cable.

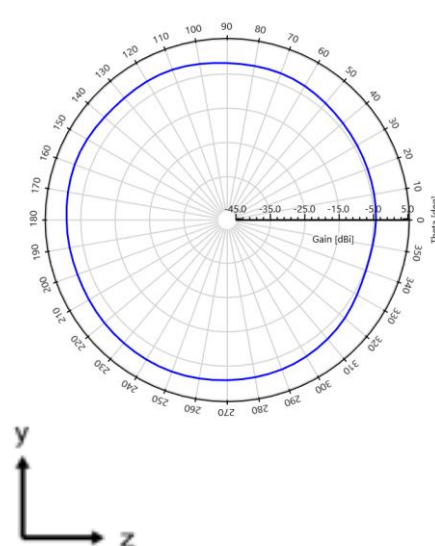
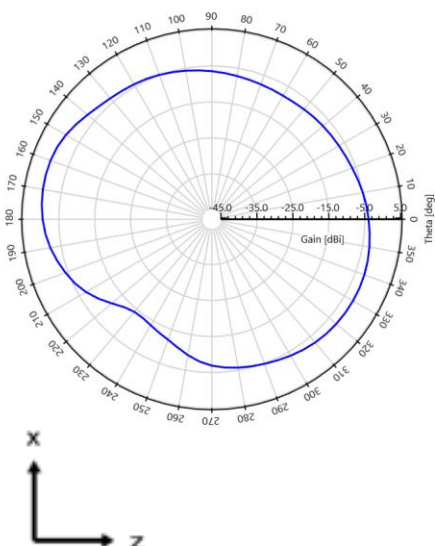
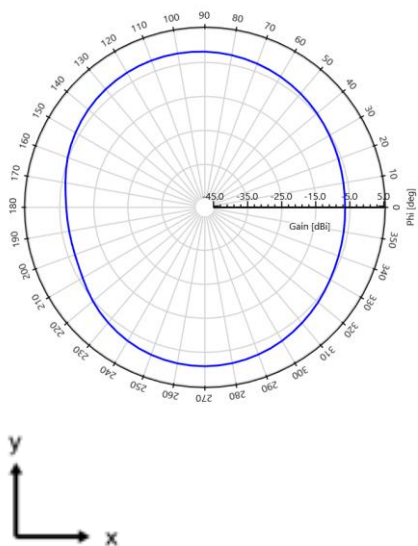


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Measured at 920 MHz



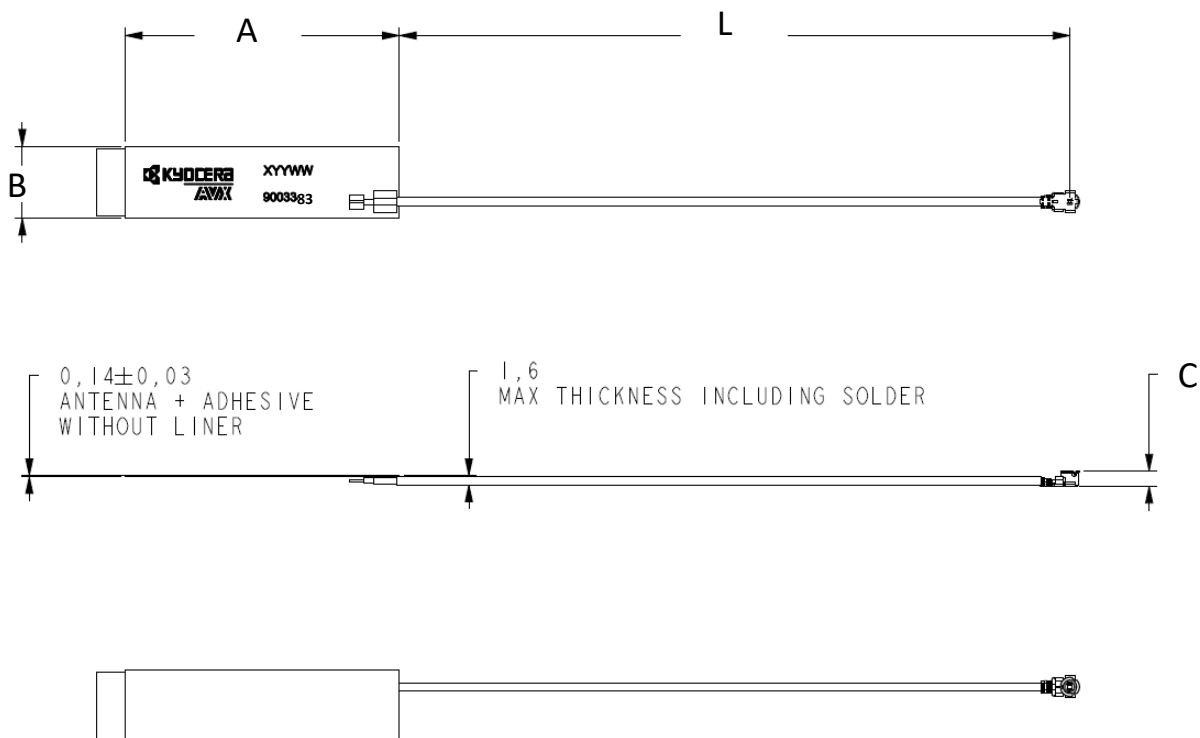


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**Mechanical Dimensions (mm)**

Part Number	A (mm)	B (mm)	C (mm)	L(mm)	Connector
9003383	$38 \pm 0.2$	$10 \pm 0.2$	$2.1 \pm 0.0$	$93 \pm 2.0$	MHFI (U.FL Compatible)



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