

# Part No. 9003069F0

## 5G/4G FPC Antenna

617 – 960 MHz / 1400 – 2690 MHz / 3300 – 5000 MHz

Supports: Broadband LTE, 5G Sub-6GHz, CAT-M, NB-IoT, SigFox, LoRa, Cellular LPWA



The KYOCERA AVX 9003069F0 antenna is a flexible embedded antenna optimized to cover the high band MIMO bands for 5G NR modules. It delivers on the key needs of device designers for higher functionality and better performance in a small form factor, helping optimize the 4x4 MIMO system for 5G sub-6GHz applications.

It is designed for flexible mounting on the underside of any non-metallic housing with a cable and connector for easy installation. The flexibility and adhesive backing make it easy to mount in unique and custom enclosures, while enabling an environmentally sealed enclosure and protection from tampering or accidental antenna damage.

These innovative antenna provides compelling advantages for 5G NR enabled devices such as having a cable connection to the PCB allowing for a flexible placement offered with MHF or MHF4 compatible connectors.

### LTE 5G Antenna

617 – 960 MHz  
 1400 – 2690 MHz,  
 3300 – 5000 MHz

#### KEY BENEFITS

##### Reduced Costs & Time-to-Market

Standard antennas eliminate design fees, redesign cycle time and minimize risk associated with customer solution. Quicker time to market.

##### Quicker Time-to-Market

By optimizing antenna size, performance and emissions, customer and regulatory specifications are more easily met.

##### Reliability

Products are the latest RoHS version compliant.

#### APPLICATIONS

- Embedded design
- Wireless nodes
- Gateway / Routers
- Access Points
- Smart meters
- Home automation
- Healthcare
- M2M. Industrial IoT devices
- Monitoring equipment
- Smart Grids
- Remote sensors/ Tracking

### Electrical Specifications

Typical characteristics measured with 300 mm cable.

Frequency (MHz)	617 - 960	1400 - 2690	3300 – 5000
VSWR	< 5.0:1	< 3.0:1	< 3.7:1
Peak Gain	2.5 dBi	6 dBi	5.5 dBi
Average Efficiency	35%	61%	50%
Feed Point Impedance	50 $\Omega$ unbalanced		
Polarization	Linear		
Radiation Pattern	Omnidirectional		

### Mechanical Specifications & Ordering Part Number

Ordering Part #	9003069F0-AA10L0300
Dimensions (mm)	102.0 x 14.5 x 0.14
Mounting Type	Adhesive Tape 3M467MP
Weight (g)	1.3
Connector/Cable (mm)	MHF (U.FL compatible) Length: 300, Cable 1.13, Color: Black
Packaging	PE Bag

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



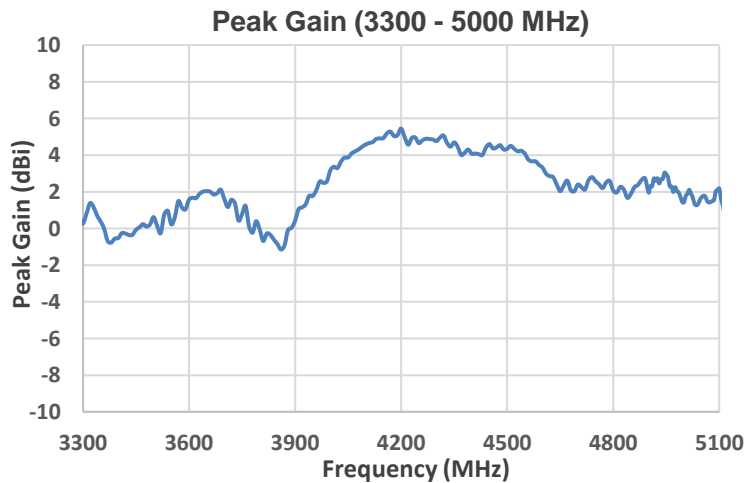
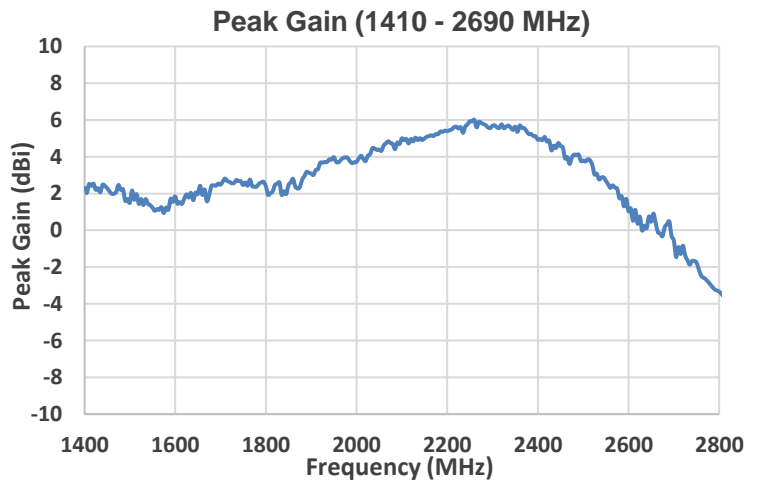
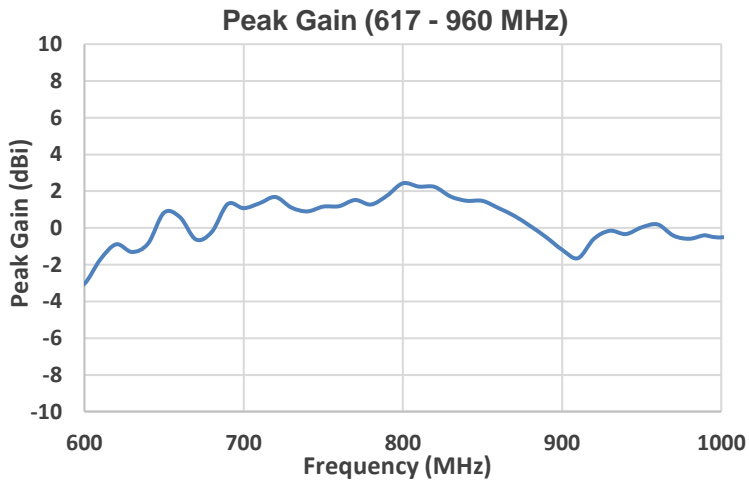
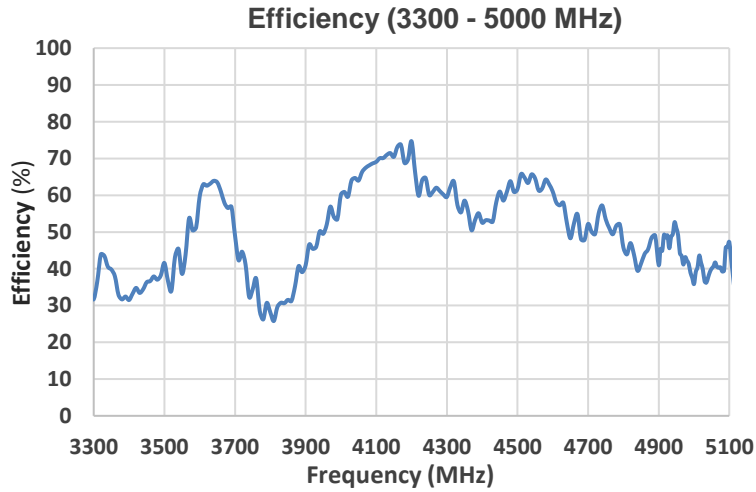




**5G/4G KYOCERA AVX FPC Cable Antenna Specifications**  
 KYOCERA AVX produces a wide variety of standard and custom antennas to meet user needs.

**Return Loss, Efficiency, and Peak Gain Plots**

Typical characteristics measured with 300 mm cable.



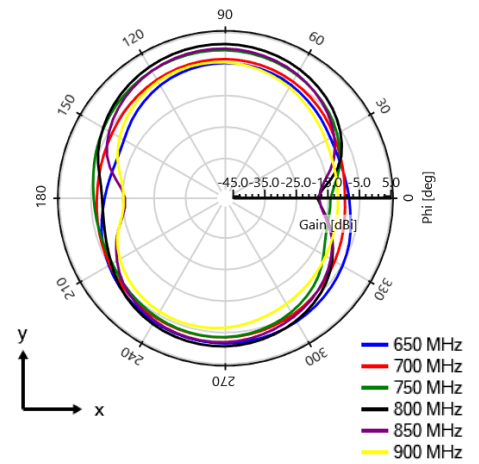
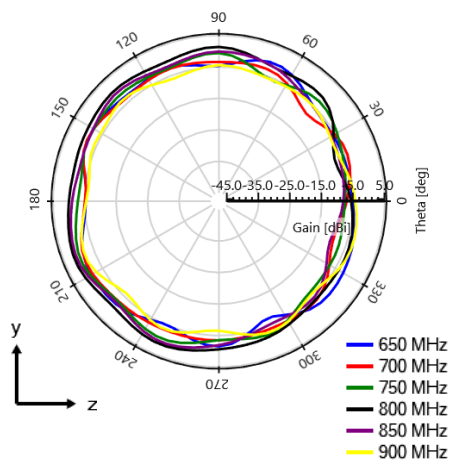
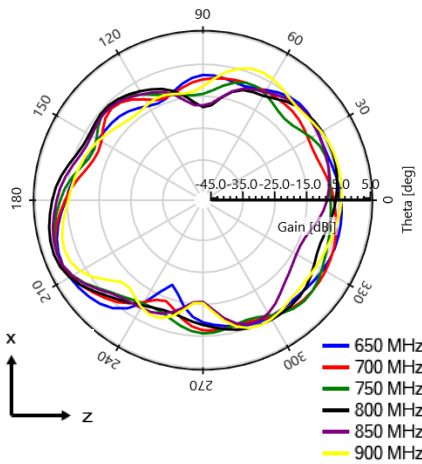
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**Antenna Radiation Patterns**

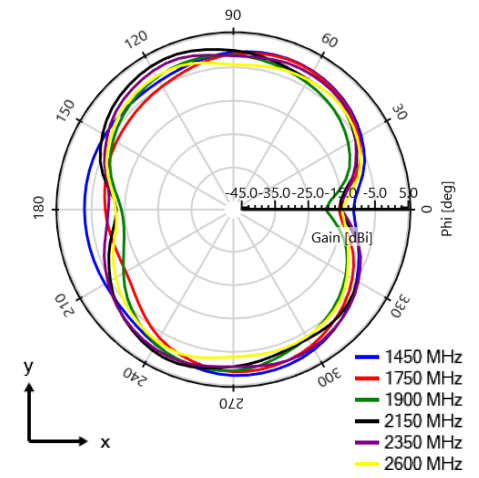
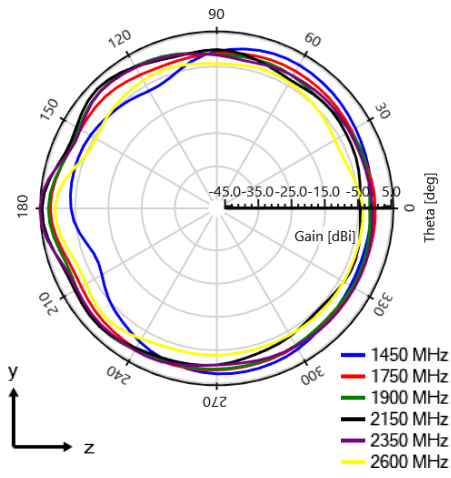
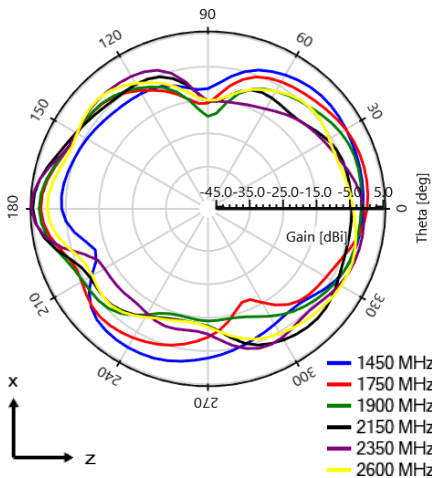
Typical characteristics measured with 300 mm cable.



**Measured (700 - 960 MHz)**



**Measured (1450 - 2600 MHz)**



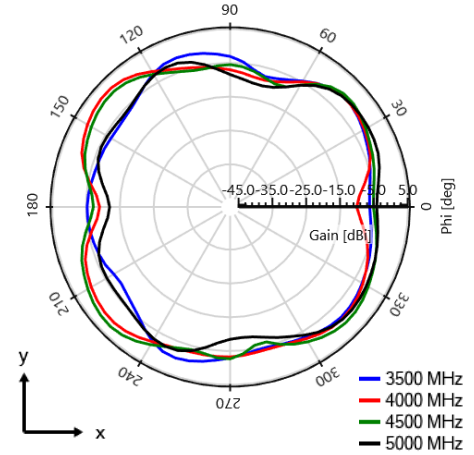
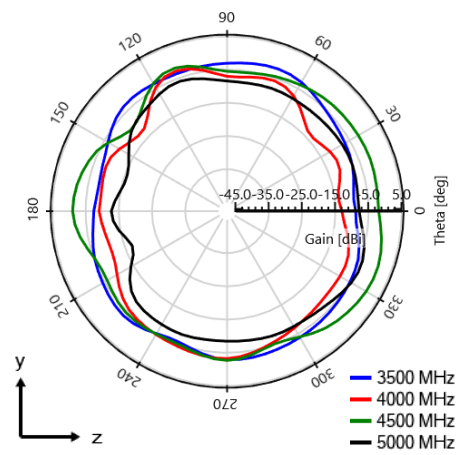
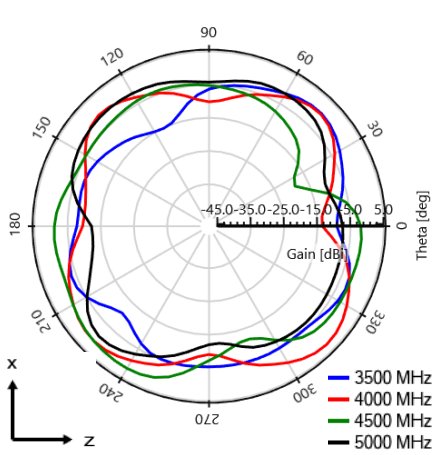
**5G/4G KYOCERA AVX FPC Cable Antenna Specifications**  
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**Antenna Radiation Patterns**

Typical characteristics measured with 300 mm cable.



**Measured (3300 – 5000 MHz)**



**5G/4G KYOCERA AVX FPC Cable Antenna Specifications**  
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**Typical Ordering Part Numbers**

Below are the generic standard antenna part numbers

Part Number	Connector	D (Cable Length XXXX)
9003069F0-AA10LXXXX	MHF (U.FL compatible)	XXXX
9003069F0-AC10LXXXX	MHF4L	XXXX
9003069F0-AA10L0100	MHF (U.FL compatible)	0100
9003069F0-AA10L0150	MHF (U.FL compatible)	0150
9003069F0-AA10L0200	MHF (U.FL compatible)	0200
9003069F0-AA10L0250	MHF (U.FL compatible)	0250
9003069F0-AA10L0300	MHF (U.FL compatible)	0300
9003069F0-AA10L0400	MHF (U.FL compatible)	0400
9003069F0-AC10L0100	MHF4L	0100
9003069F0-AC10L0150	MHF4L	0150
9003069F0-AC10L0200	MHF4L	0200
9003069F0-AC10L0250	MHF4L	0250
9003069F0-AC10L0300	MHF4L	0300
9003069F0-AC10L0400	MHF4L	0400

**Cable Lengths**

XXX (mm)	Condition	Tolerance Z
100	$XXX < 150$	$100 \pm 3.0$
150	$150 \leq XXX \leq 300$	$150 \pm 4.0$
200	$150 \leq XXX \leq 300$	$200 \pm 4.0$
250	$150 \leq XXX \leq 300$	$250 \pm 4.0$
300	$300 \leq XXX \leq 500$	$300 \pm 5.0$
400	$300 \leq XXX \leq 500$	$400 \pm 5.0$

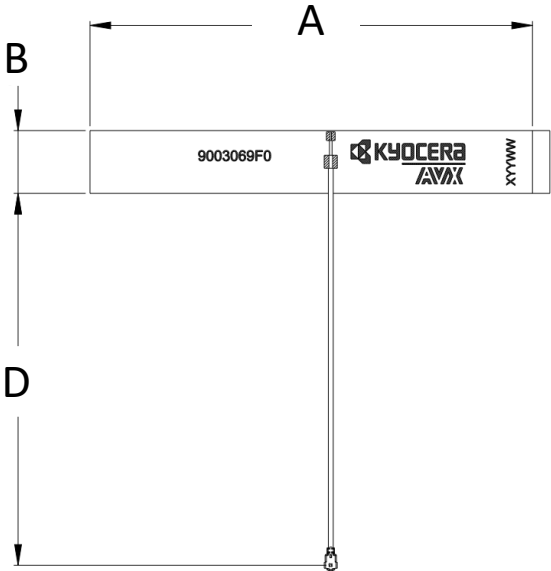


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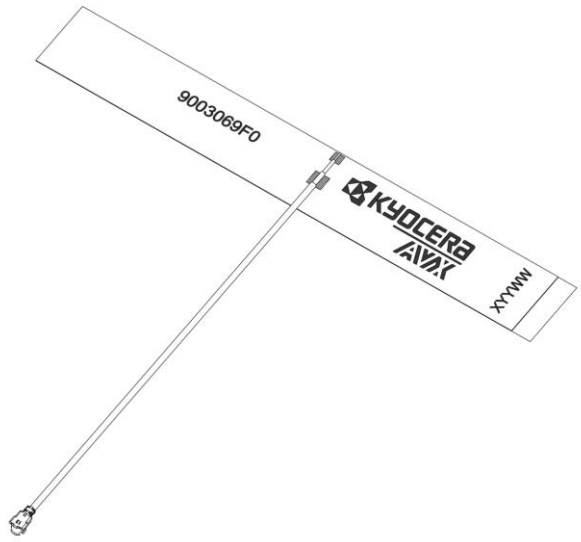
**Mechanical Dimensions**

Part Number	A (mm)	B (mm)	C (mm)	D (mm)	Connector
9003069F0-AA10L0300*	102.0	14.50	0.14	300	MHF (U.FL compatible)

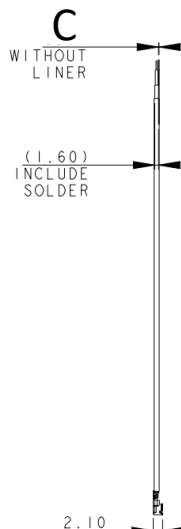
(\*) Reference design



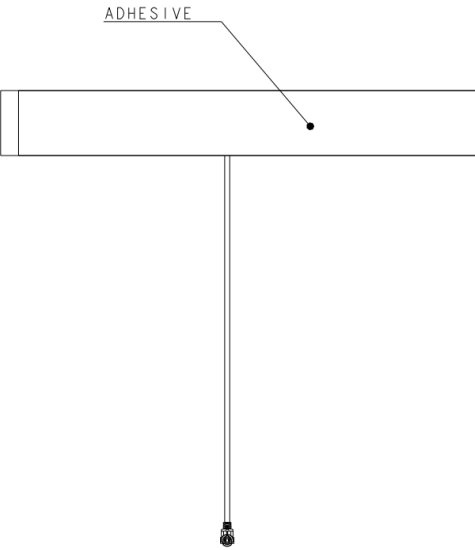
**Front View**



**Side View**



**Cable Side View**



**Back View**