

# Part No. 1002292

## LTE / Cellular FPC Embedded Antenna

700 / 750 / 850 / 1800 / 1900 / 2100 / 2700 MHz

Supports: Broadband LTE (OCTA-BAND), LTE CAT-M, NB-IoT, SigFox, LoRa, Cellular LPWA, RPMA, Firstnet



KYOCERA AVX 1002292 Balanced LTE/Cellular embedded antenna addresses the challenges facing today's product designers. Designed to increase the independence between the cellular antenna and the ground plane; 1002292 also supports the LTE frequency bands.

### Electrical Specifications

Typical Performance on 105 x 110 mm PCB using 86 mm cable on PC-ABS

Frequency	698 - 894 MHz	1710 - 2690 MHz
Efficiency	50%	64%
VSWR	3.0:1 max	2.8:1 max
Peak Gain	1.2 dBi	5.0 dBi
Polarization	Linear	
Power Handling	2 Watts CW	
Radiation Pattern	Omni-directional	
Feed Point Impedance	50 ohms unbalanced	

### LTE Cellular FPC Embedded Antenna

Low Band : 698-894 MHz  
High Band: 1710-2690 MHz

#### KEY BENEFITS

##### Reduced Costs and Time-to-Market

Standard antenna eliminates design fees and cycle time associated with a custom solution; getting products to market faster.

##### Greater Flexibility with Unique Form Factors

KYOCERA AVX technology helps you deliver more advanced ergonomic designs without adverse impact on product performance.

##### Reliability

Comply with latest RoHS requirements

#### APPLICATIONS

- Medical applications
- Home automation
- Smart metering
- M2M, Industrial devices
- IoT
- Firstnet
- Automotive
- Healthcare
- Point of Sale
- Tracking
- NB-IoT
- Sigfox
- LoRa
- Cellular LPWA
- RPMA
- LTE CAT-M

### Mechanical Specifications & Ordering Part Number

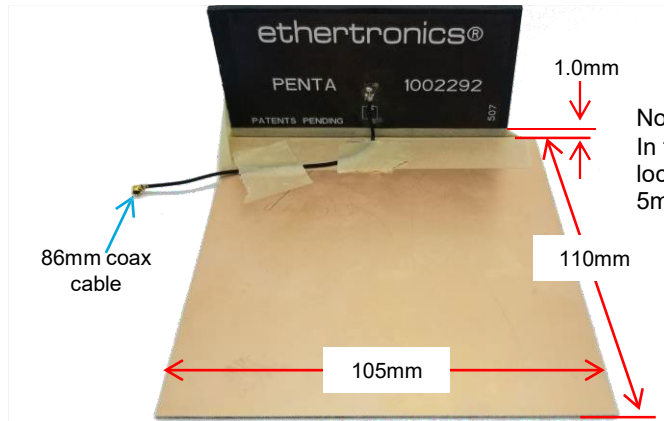
Ordering Part #	1002292	1002292F0-AA10L0086
Dimensions (mm)	85.2 x 42.1 x 0.2 (1.6 high at cable solder connection)	
Connector / Cable (mm)	Connector: U.FL compatible Length: 28.5, Cable diameter: 1.13, Color: Black	Connector: U.FL compatible Length: 86.0, Cable diameter: 1.13, Color: Black
Weight (grams)	1.8	2.2
Mounting	using 3M468 Adhesive	
Packaging	PE bags 1,800 units/box	

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

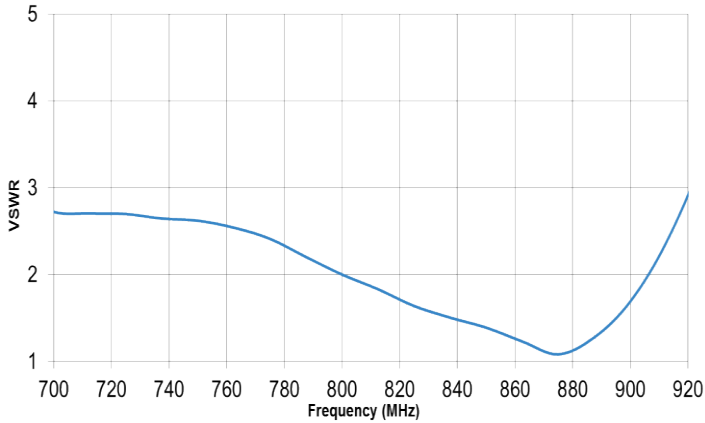
LTE / Cellular FPC KYOCERA AVX Embedded Antenna Specifications.  
 KYOCERA AVX produces a wide variety of standard and custom antennas to meet user needs.

### VSWR and Efficiency Plots (Off-Ground)

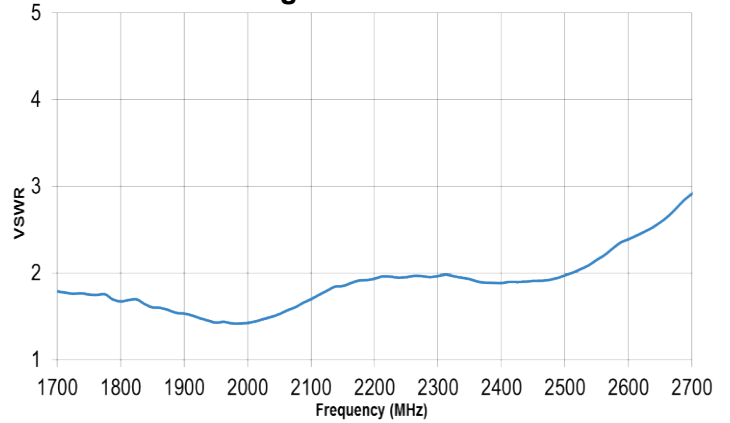
Typical Performance on 105 x 110 mm PCB using 86 mm cable, tested on PC-ABS



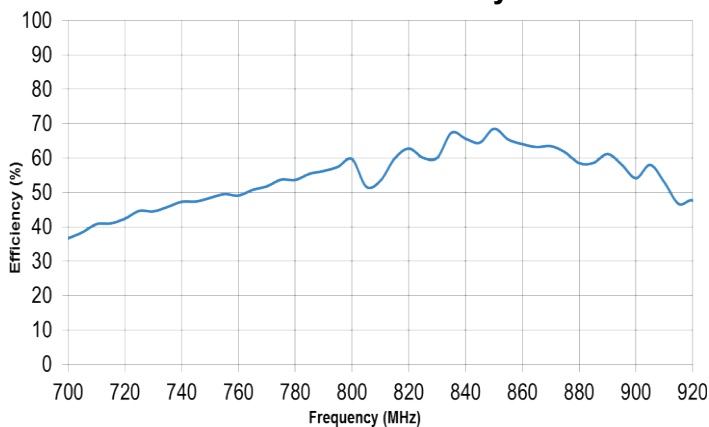
**Low Band VSWR**



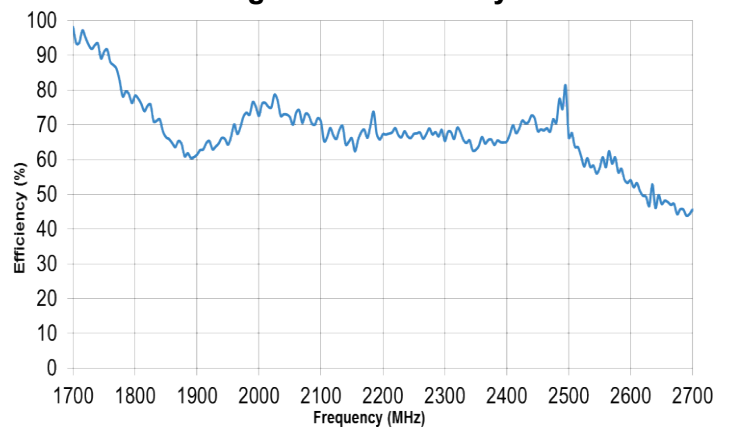
**High Band VSWR**



**Low Band Efficiency**



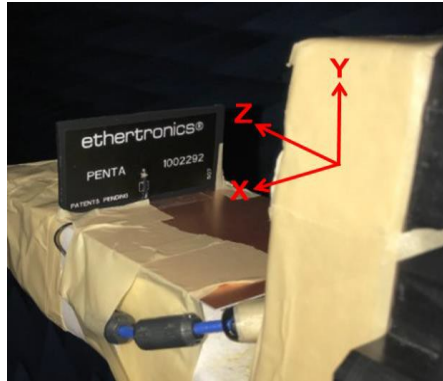
**High Band Efficiency**



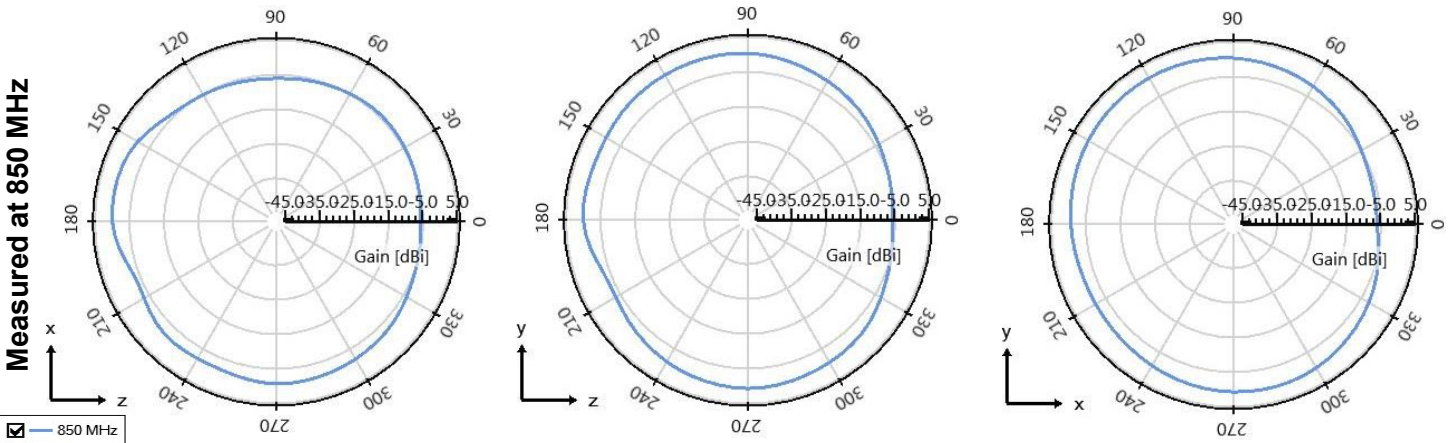
**LTE / Cellular FPC KYOCERA AVX Embedded Antenna Specifications.**  
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**Antenna Radiation Patterns**

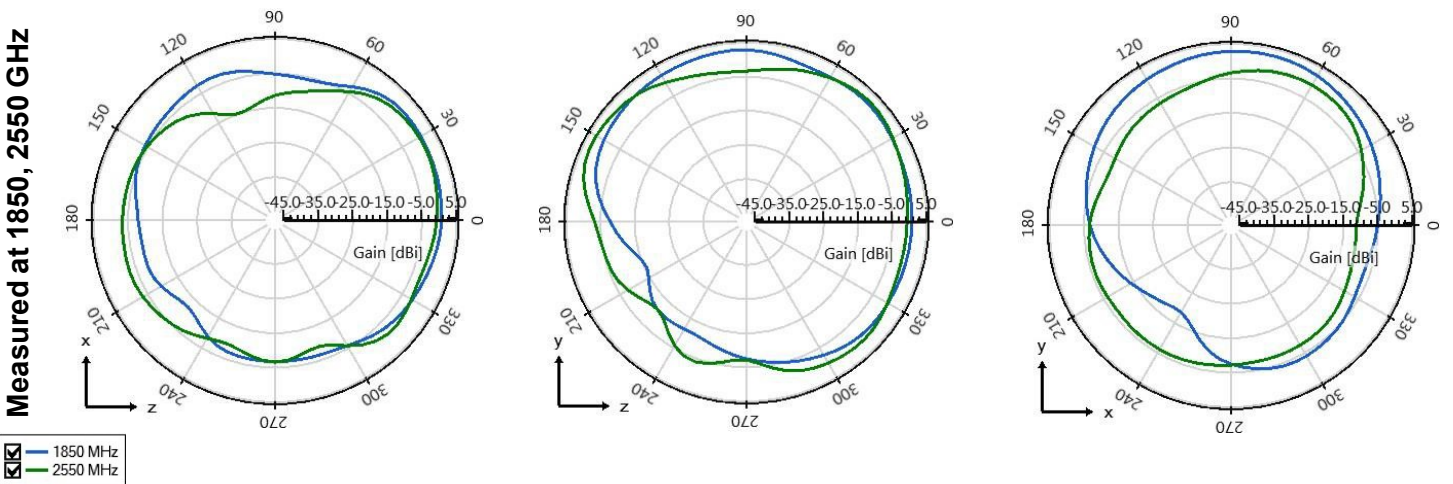
Typical Performance on 105 x 110 mm PCB using 86 mm cable, tested on PC-ABS  
 Measured @ 850, 1850, 2550 MHz



**Measured at 850 MHz**



**Measured at 1850, 2550 GHz**



LTE / Cellular FPC KYOCERA AVX Embedded Antenna Specifications.  
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### Mechanical Dimensions

Typical antenna dimensions (mm)

Part Number	A (mm)	B (mm)	C (mm)	D (mm)
1002292	85.2 ± 0.3	42.1 ± 0.3	1.6 (max)	28.5 ± 3.0
1002292F0-AA10L0086	85.2 ± 0.3	42.1 ± 0.3	1.6 (max)	86.0 ± 3.0
1002292F0-AA10L0100	85.2 ± 0.3	42.1 ± 0.3	1.6 (max)	100.0 ± 3.0

\*Total Height of 1.6 mm includes the cable solder connection

\*Height "C" of 0.2 mm includes FPC + adhesive thicknesses

