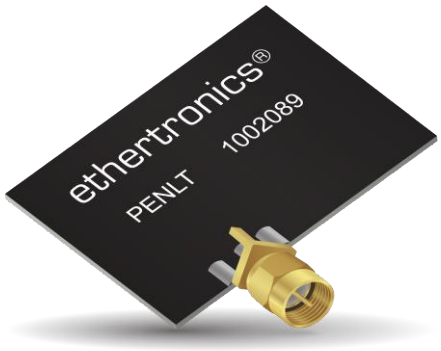
Part No. 1002089
LTE PCB Antenna with SMA Connector

700 / 750 / 850 / 900 / 1800 / 1900 / 2100 / 2700 MHz

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



LTE PCB Antenna with SMA connector

Low Band : 698-960 MHz
High Band: 1710-2700 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

Stays in Tune

KYOCERA AVX LTE antennas use patented IMD technology in a trace configuration to provide high performance. IMD antennas requires a smaller design keep-out area, carry lower program development risk which yields a quicker time-to-market, without sacrificing RF performance.

IMD antenna technology provides superior RF field containment, resulting in less interaction with surrounding components. KYOCERA AVX IMD antennas resist detuning; providing a robust radio link regardless of the usage position.

Electrical Specifications

Typical characteristics in housing using a 135 x 200 mm ground plane

Frequency	698-960 MHz	1710-2700 MHz
Efficiency	> 50 %	> 50%
VSWR	< 3.0:1	< 3.0:1
Peak Gain	5.1 dBi	4.9 dBi
Polarization	Linear	
Power Handling	2 Watts CW	
Feed Point Impedance	50 ohms unbalanced	

Mechanical Specifications & Ordering Part Number

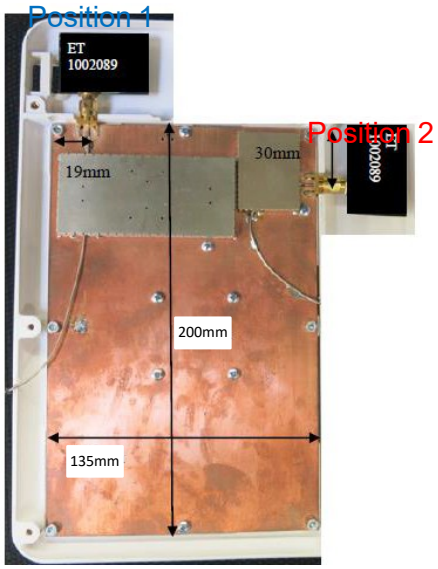
Ordering Part Number	1002089
Dimensions (mm)	45.0 x 43.8 x 8.0
Weight (grams)	5.6
Antenna Assembly on the PCBA	Using SMA (Male) connector

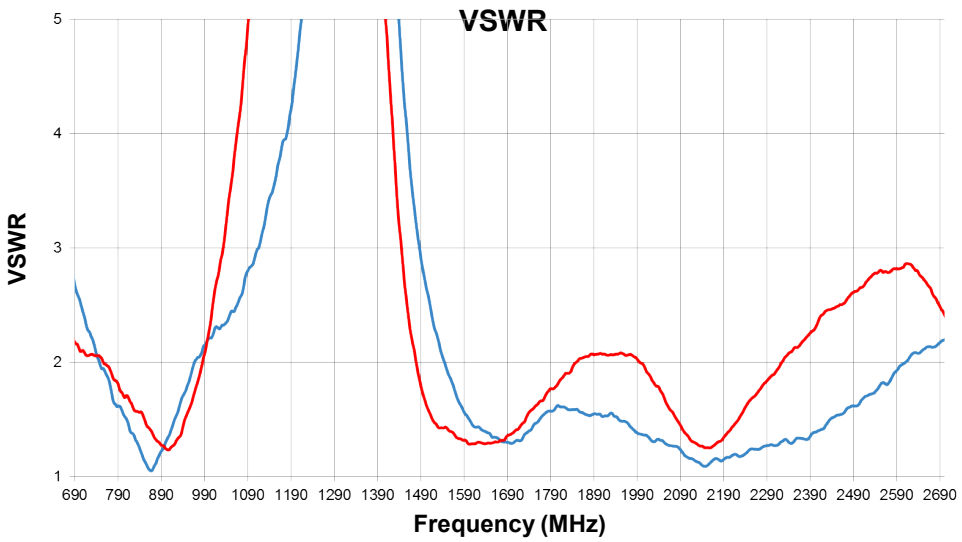
1002089 PCB LTE/Cellular performances

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

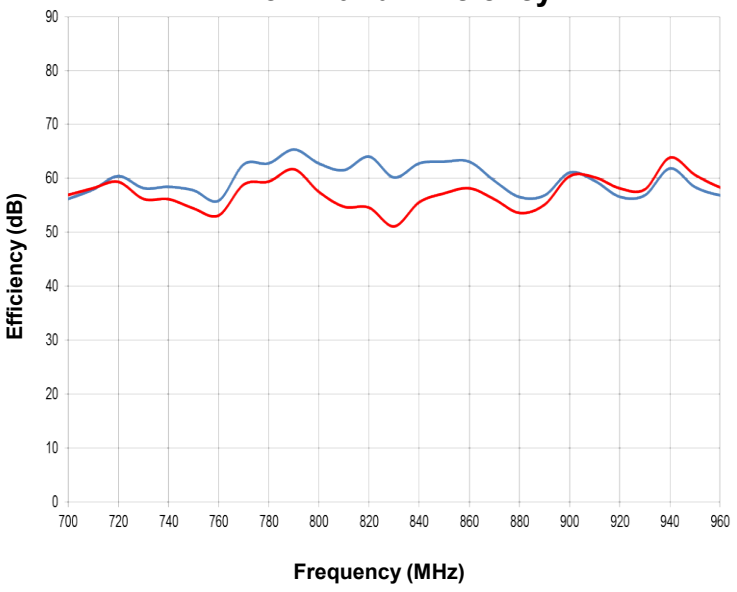
VSWR and Efficiency Plots

Typical performances on 135 x 200 mm PCB

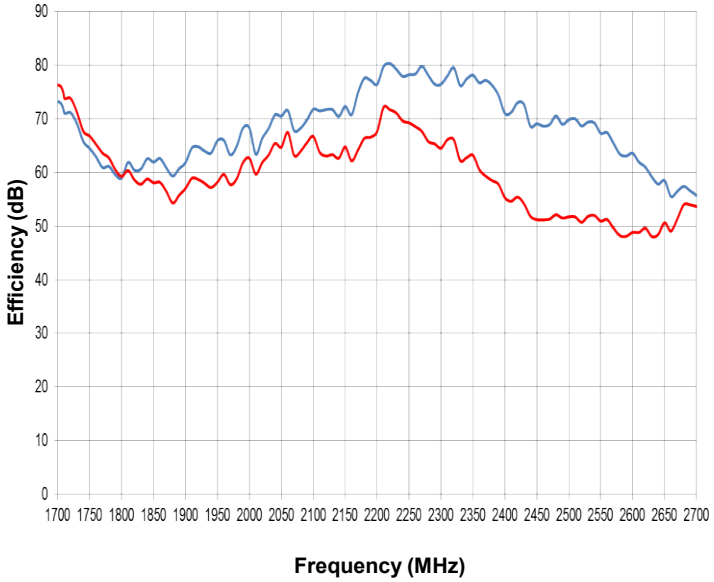




Low Band Efficiency



High Band Efficiency



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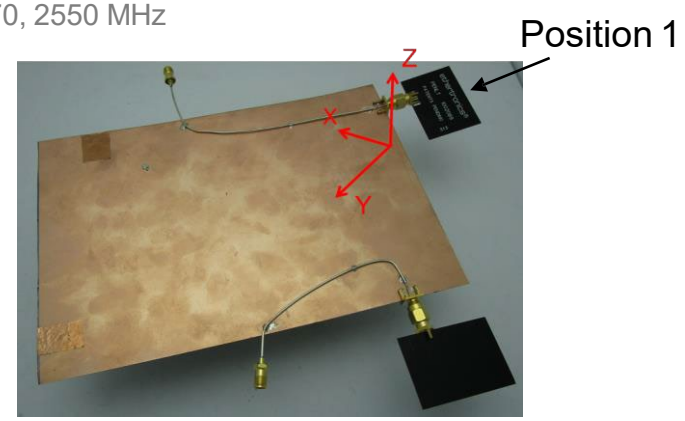
1002089 PCB LTE/Cellular performances

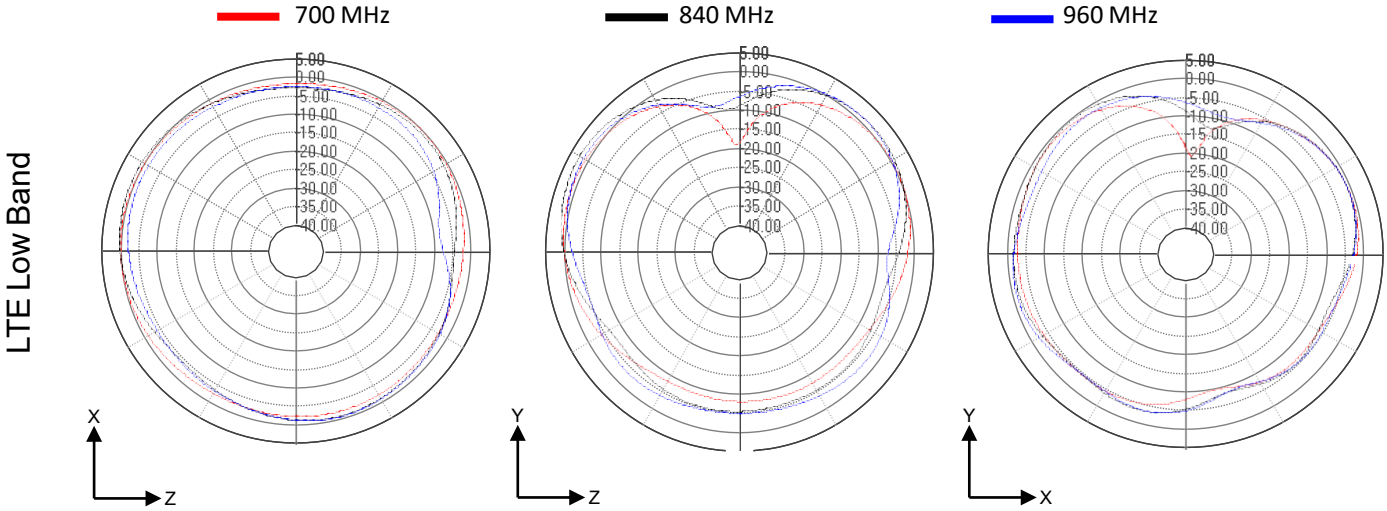
KYOCERA AVX produces a wide variety of standard and custom antennas to meet user needs.

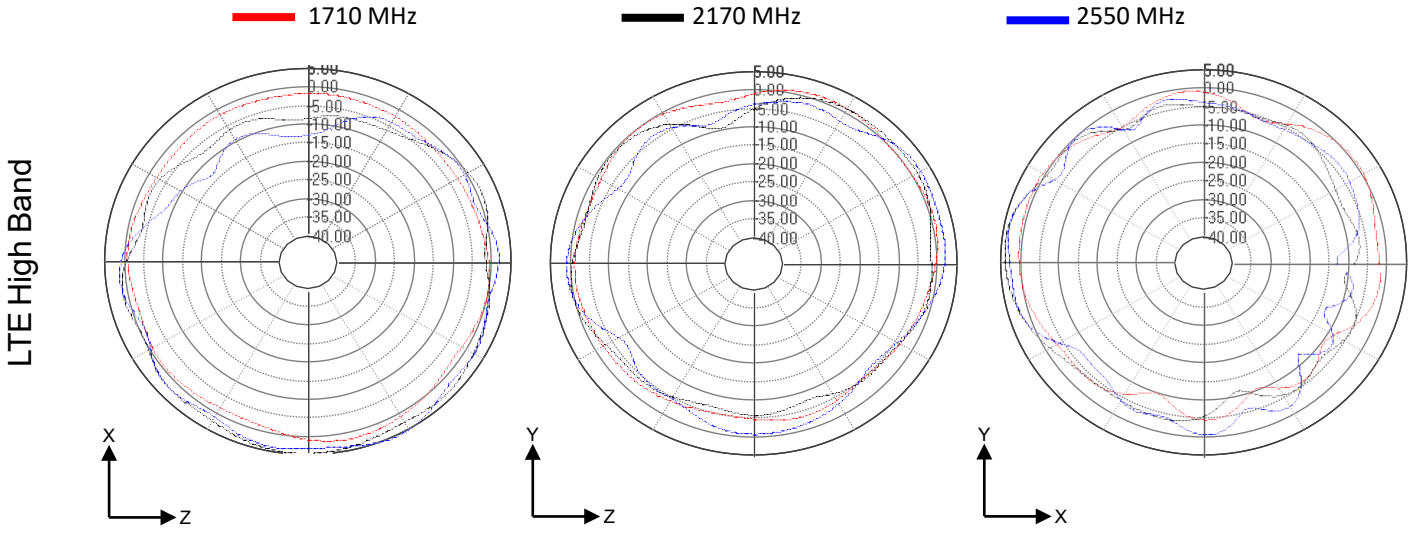
Antenna Radiation Patterns (Position 1)

Typical performances measured on 135 x 200 mm PCB

Measured @ 700, 840, 960, 1710, 2170, 2550 MHz







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1002089 PCB LTE/Cellular performances

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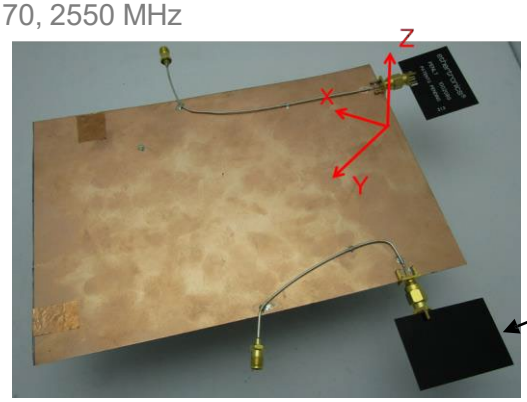
Antenna Radiation Patterns (Position 2)

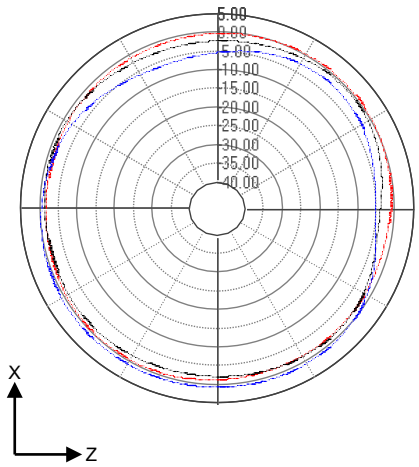
Typical performances measured on 135 x 200 mm PCB

Measured @ 700, 840, 960, 1710, 2170, 2550 MHz

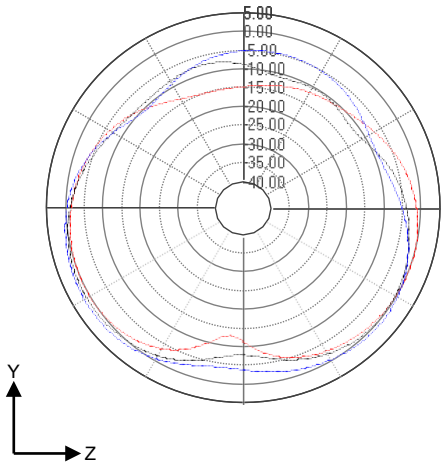


LTE Low Band

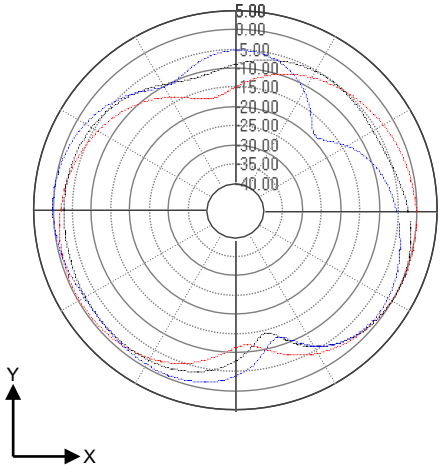
700 MHz



840 MHz

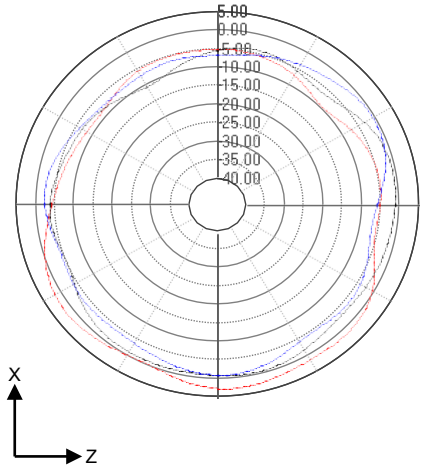


960 MHz

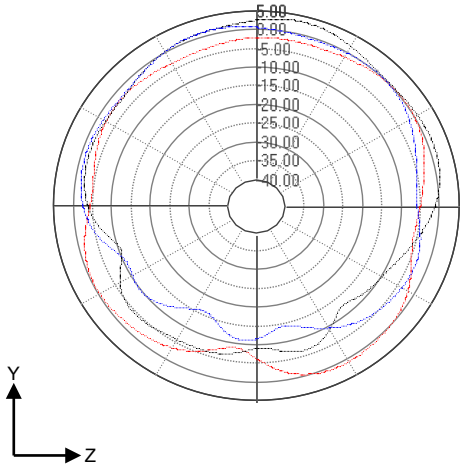


LTE High Band

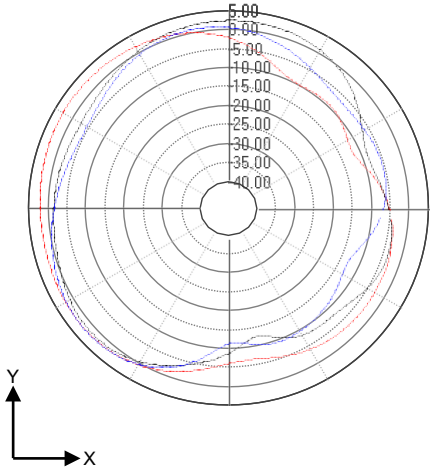
1710 MHz



2170 MHz



2550 MHz



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1002089 PCB LTE/Cellular performances

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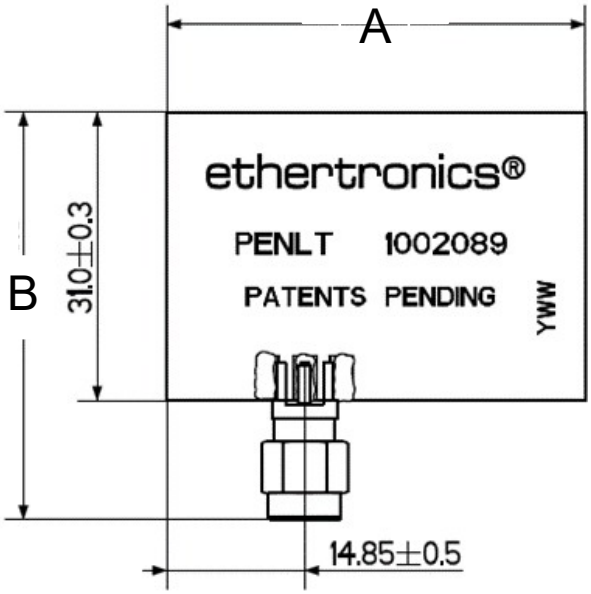
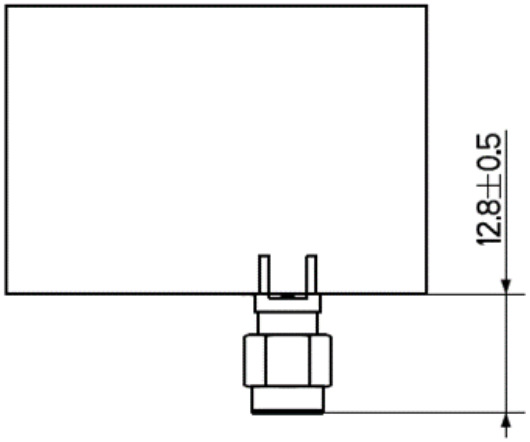
Mechanical Dimensions

Typical antenna dimensions (mm)

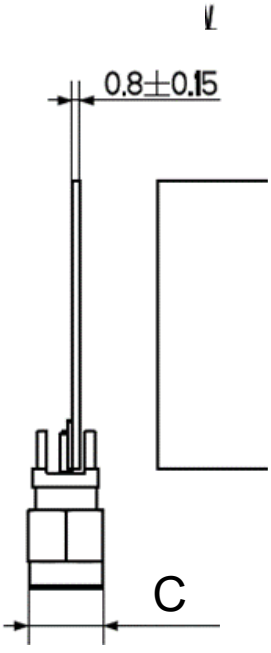
Part Number	A (mm)	B (mm)	C (mm)	Connector
1002089	45.0 ± 0.3	43.8 ± 0.8	8.0 ± 0.3	SMA (Male)



Top View



Bottom View



Side View

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