

# Part No. X9003362-4GDSMB

## External 4G Antenna

700 – 960 MHz, 1710 – 2170 MHz, 2500 – 2700 MHz

Supports: Cellular, 4G, 3G, 2G, LTE, LTE-M, NB-IoT, LoRa, ISM



KYOCERA AVX series of External Antennas deliver on the key needs of device designers for higher functionality and performance.

This external 90-degree blade antenna provides compelling advantages for 4G applications by its capability of covering frequencies from 700 to 2700 MHz. With its IP66 rating this antenna can be used for outdoor applications.

### External 4G Antenna

700 – 960 MHz

1710 - 2170 MHz

2500 - 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.

#### 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

- Telematics
- Tracking
- Smart metering
- IoT, Industrial devices
- Gateways
- Smart Agriculture

### Electrical Specifications

Typical Characteristics in Free Space

Frequency (MHz)	700 – 960	1710 – 2170	2500 – 2700
Peak Gain	1.1 dBi	3.1 dBi	2.8 dBi
Average Efficiency	38%	50%	70%
RL Match	- 6.8 dB	< - 9.7 dB	< - 10 dB
Power Handling	2W		
Feed Point Impedance	50 ohm		
Polarization	Linear		
Radiation Pattern	Omnidirectional		

### Mechanical Specifications & Ordering Part Number

Ordering Part Number	X9003362-4GDSMB
Size (mm)	119.2 x 30.1 x 16.6
Mounting (mm)	Connector Thread
Connector(s) / Cable length	SMA (Male)
Weight (grams)	16 g
Housing Material	TPE
Packaging	PE Bag + Box
Operating Temperature	[- 40°C ; + 70 °C]
Storage Temperature/ Humidity	[- 40°C ; + 70 °C]
IP Rating	IP66

External 4G KYOCERA AVX Antenna Specifications.  
 KYOCERA AVX produces a wide variety of standard and custom antennas to meet user needs.

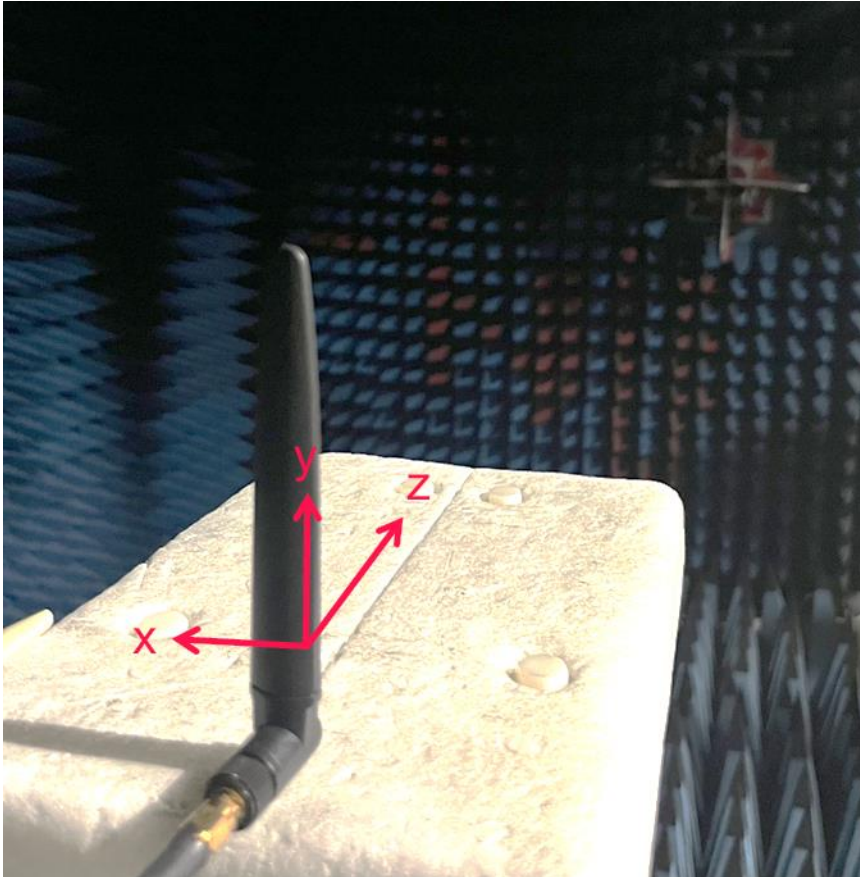
**LTE Bands covered by (X9003362-4GDSMB)**

LTE Band	Frequency Band (MHz)	Uplink (UL) (MHz)	Downlink (DL) (MHz)	Region	Covered
1	2100	1920 - 1980	2110 - 2170	Global	Yes
2	1900	1850 - 1910	1930 - 1990	NAM	
3	1800	1710 - 1785	1805 - 1880	Global	
4	1700	1710 - 1755	2110 - 2155	NAM	
5	850	824 - 849	869 - 894	NAM	
6	850	830 - 840	875 - 885	APAC	
7	2600	2500 - 2570	2620 - 2690	EMEA	
8	900	880 - 915	925 - 960	Global	
9	1800	1749.9 - 1784.9	1844.9 - 1879.9	APAC	
11	1500	1427.9 - 1447.9	1475.9 - 1495.9	Japan	No
12	700	699 - 716	729 - 746	NAM	Yes
13	700	777 - 787	746 - 756	NAM	
14	700	788 - 798	758 - 768	NAM	
17	700	704 - 716	734 - 746	NAM	
18	850	815 - 830	860 - 875	Japan	
19	850	830 - 845	875 - 890	Japan	
20	800	832 - 862	791 - 821	EMEA	
21	1500	1447.9 - 1462.9	1495.9 - 1510.9	Japan	No
22	3500	3410 - 3490	3510 - 3590	EMEA	Yes
23	2000	2000 - 2020	2180 - 2200	NAM	No
24	1600	1626.5 - 1660.5	1525 - 1559	NAM	Yes
25	1900	1850 - 1915	1930 - 1995	NAM	
26	850	814 - 849	859 - 894	NAM	
27	850	807 - 824	852 - 869	NAM	
28	700	703 - 748	758 - 803	APAC,EU	
29	700	N/A	717 - 728	NAM	
30	2300	2305 - 23151	2350 - 2360	NAM	No
31	450	452.5 - 457.5	462.5 - 467.5	Global	
32	1500	N/A	1452 - 1496	EMEA	
34	2000		2010 - 2025	EMEA	Yes
35	1850		1850 - 1910	NAM	
38	2600		2570 - 2620	EMEA	
39	1900		1880 - 1920	China	
40	2300		2300 - 2400	China	No
41	2500		2496 - 2690	Global	Yes
42	3500		3400 - 3600	EU, Japan	No
43	3700		3600 - 3800	-	
48	3500		3550 - 3700	Global	
65	2100	1920 - 2010	2110 - 2200	Global	Yes
66	1700	1710 - 1780	2110 - 2200	NAM	
70	1700	1695 - 1710	1995 - 2020	NAM	
71	600		617 - 698	NAM	No
74/75/76	1500		1427 - 1518	NAM	
85	700	698 - 716	728 - 746	NAM	Yes

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**Test setup**

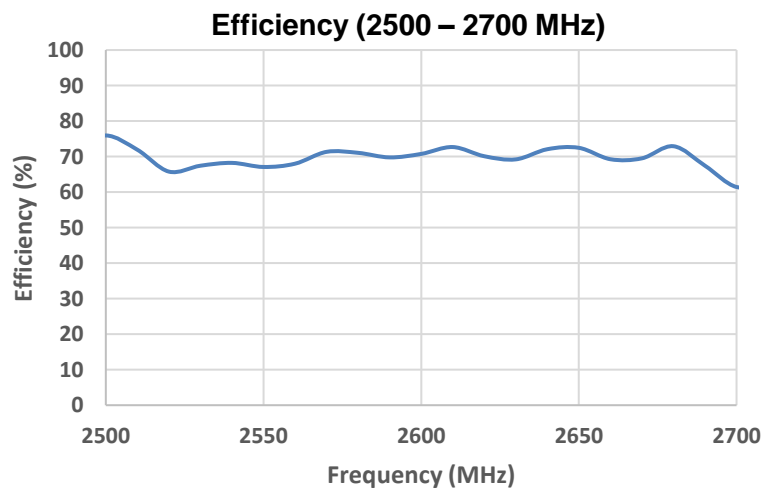
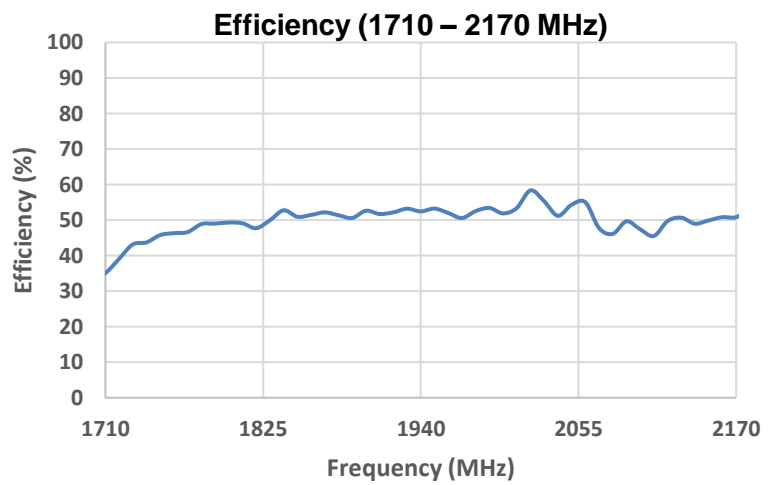
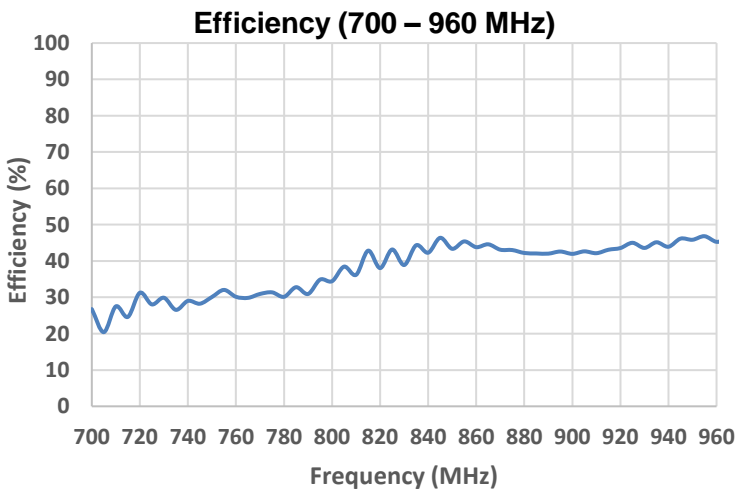
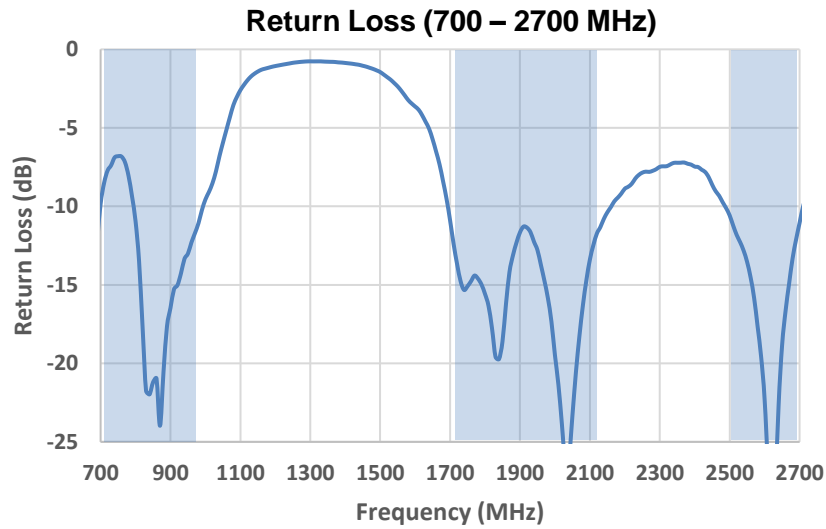
Typical Characteristics, in Free Space



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### Return Loss and Efficiency plots

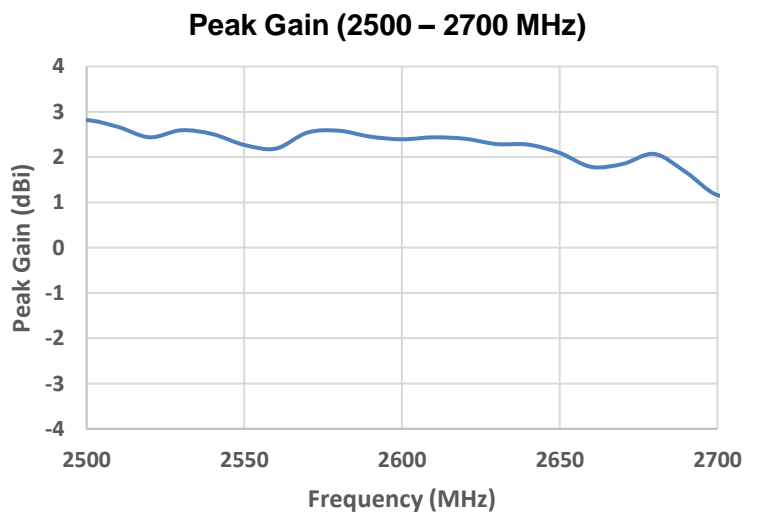
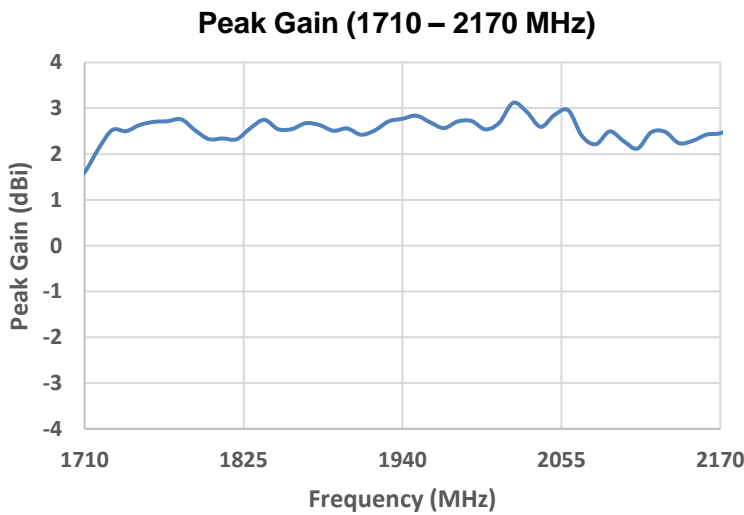
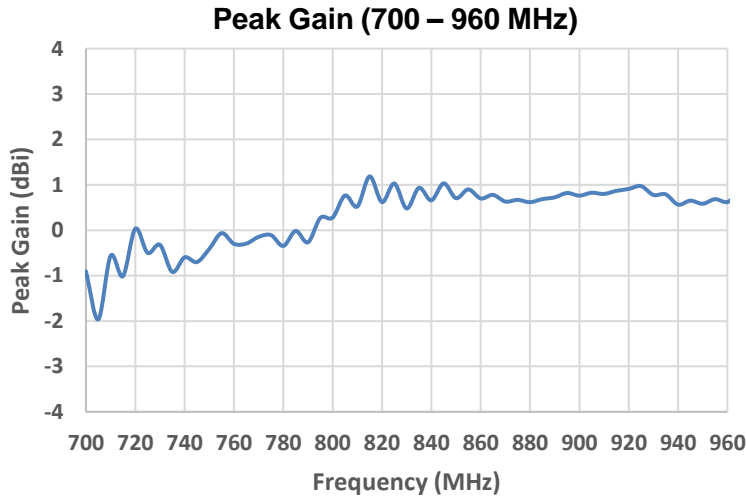
Typical Characteristics in Free Space



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### Peak Gain plots

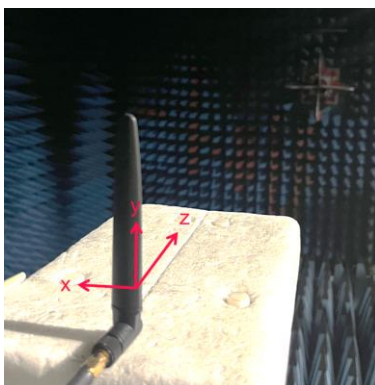
Typical Characteristics in Free Space



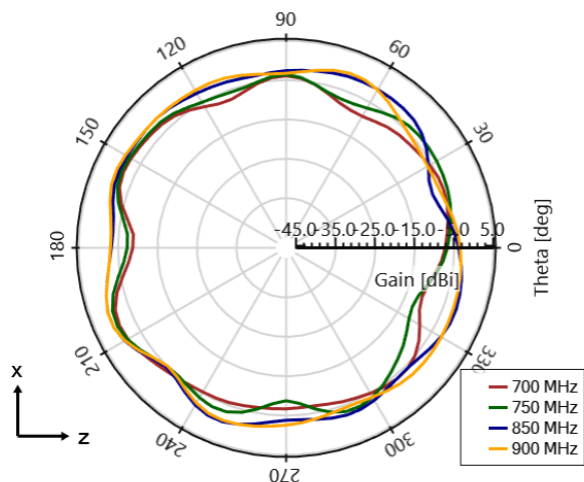
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### Antenna Radiation Patterns

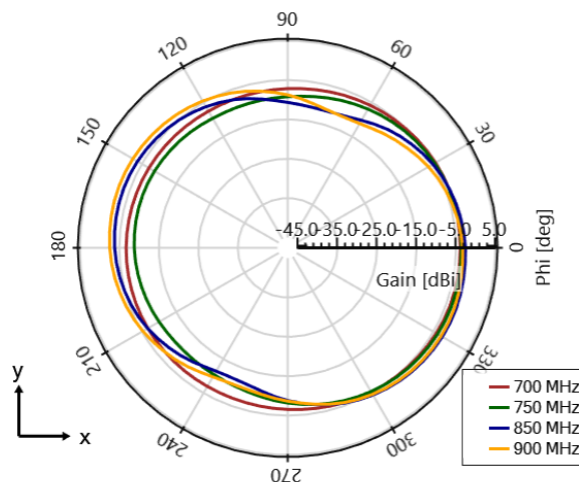
Measured at 700 MHz, 750 MHz, 850 MHz and 900 MHz



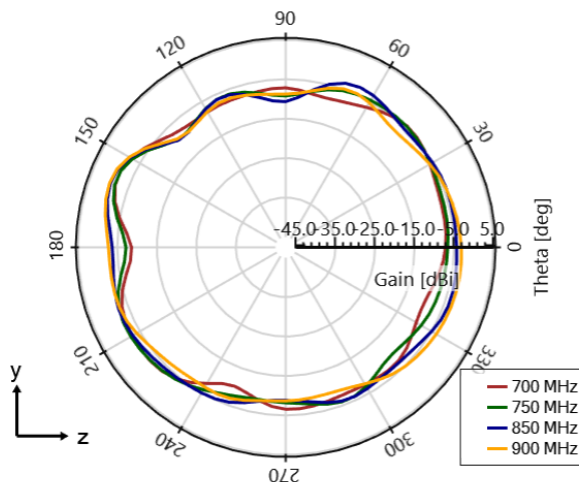
X9003362-4GDSMB - Gain -  $\phi = 0$  deg [Plane XZ]



X9003362-4GDSMB - Gain -  $\theta = 90$  deg [Plane XY]



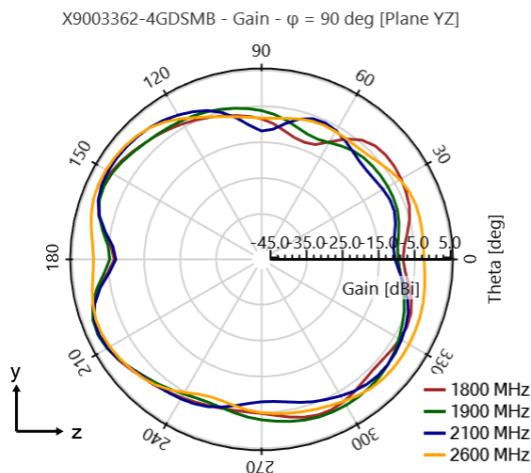
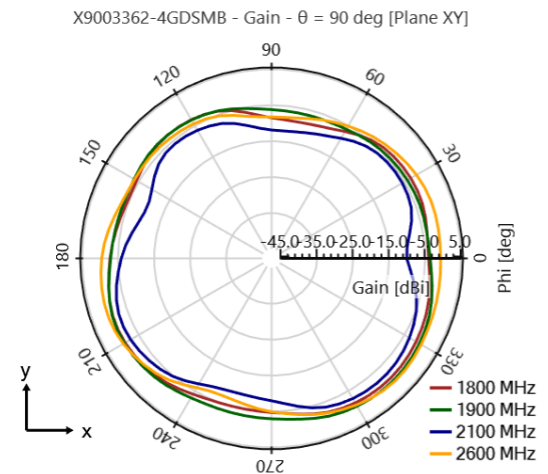
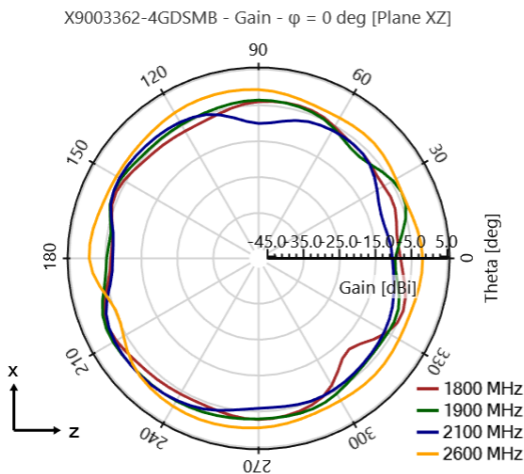
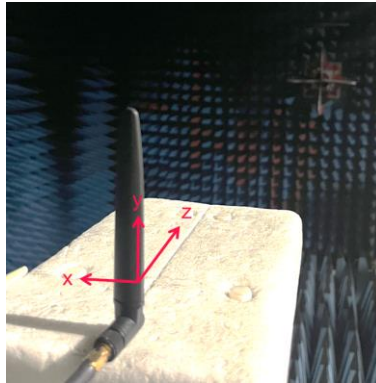
X9003362-4GDSMB - Gain -  $\phi = 90$  deg [Plane YZ]



External 4G KYOCERA AVX Antenna Specifications.  
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### Antenna Radiation Patterns

Measured at 1800 MHz, 1900 MHz, 2100 MHz and 2600 MHz



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### Mechanical Dimensions

Typical antenna dimensions, in mm.

Part Number	A	B	C	D
X9003362-4GDSMB	119.2 ± 3.0	30.1 ± 0.2	13.0 ± 0.1	16.6 ± 0.1

