Part No. X9003334-5GDRMB
External 5G Antenna

500 – 960 MHz, 1400 – 1500 MHz, 1700 – 2200 MHz, 2400 – 2700 MHz, 3300 – 6000 MHz
Supports: Cellular, 5G, 4G, 3G, 2G, LTE, LTE-M, NB-IoT, NTN, Sub-6GHz

KYOCERA AVX series of External Antennas deliver on the key needs of device designers for higher functionality and performance.
This external hinge antenna provides compelling advantages for 5G applications by its capability of covering frequencies from 500 to 6000 MHz.

External 5G Antenna
500 – 960 MHz
1400 -1500 MHz
1700 - 2200 MHz
2400 - 2700 MHz
3300 - 6000 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
- M2M, Industrial devices
- Smart Grid
- Gateways

Electrical Specifications
Typical Characteristics, on 292 x 127 mm ground plane (position at 90°)

Frequency (MHz)	500 – 960	1400 – 1500	1700 – 2400	2400 – 2700	3300 – 6000
Peak Gain	4 dBi	2.9 dBi	3.57 dBi	3.3 dBi	3.59 dBi
Average Efficiency	50%	59%	62%	60%	44%
RL Match	- 3.5 dB	-6 dB	< -6 dB	-10 dB	< -4.9 dB

Mechanical Specifications & Ordering Part Number

Ordering Part Number	X9003334-5GDRMB
Size (mm)	135.0 x 19.4 x 6.0
Mounting (mm)	Connector
Connector(s) / Cable length	RP- SMA (Male)
Weight (grams)	17.6 g
Housing Material	ABS
Packaging	PE Bag + Box
Operating Temperature	[- 40˚C ; + 80 ˚C]
Storage Temperature/ Humidity	[- 25˚C ; + 55 ˚C]

External 5G KYOCERA AVX Antenna Specifications.
KYOCERA AVX produces a wide variety of standard and custom antennas to meet user needs.

LTE Bands covered by (X9003334-5GDRMB)

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	
12	700	699 - 716	729 - 746	NAM	
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	
22	3500	3410 - 3490	3510 - 3590	EMEA	
23	2000	2000 - 2020	2180 - 2200	NAM	
24	1600	1626.5 - 1660.5	1525 - 1559	NAM	No
25	1900	1850 - 1915	1930 - 1995	NAM	Yes
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	
31	450	452.5 - 457.5	462.5 - 467.5	Global	No
32	1500	N/A	1452 - 1496	EMEA	Yes
34	2000	2010 - 2025		EMEA	
35	1850	1850 - 1910		NAM	
38	2600	2570 - 2620		EMEA	
39	1900	1880 - 1920		China	
40	2300	2300 - 2400		China	
41	2500	2496 - 2690		Global	
42	3500	3400 - 3600		EU, Japan	
43	3700	3600 - 3800		-	
48	3500	3550 – 3700		Global	
65	2100	1920 – 2010	2110 - 2200	Global	
66	1700	1710 – 1780	2110 - 2200	NAM	
70	1700	1695 - 1710	1995 - 2020	NAM	
71	600	617 – 698		NAM	
74/75/76	1500	1427 - 1518		NAM	
85	700	698 – 716	728 – 746	NAM	

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External 5G KYOCERA AVX Antenna Specifications.
KYOCERA AVX produces a wide variety of standard and custom antennas to meet user needs.

5G Bands covered by (X9003334-5GDRMB)

5G 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	
5	850	824 – 849	869 – 894	NAM	
7	2600	2500 – 2570	2620 – 2690	EMEA	
8	900	880 – 915	925 – 960	Global	
12	700	699 – 716	729 – 746	NAM	
13	700	777 – 787	746 – 756	-	
14	700	788 – 798	758 – 768	-	
18	850	815 – 830	860 – 875	Japan	
20	800	832 – 862	791 – 821	EMEA	
23	2100	2000 – 2020	2180 – 2200	-	
25	1900	1850 – 1915	1930 – 1995	NAM	
26	850	814 – 849	859 – 894	-	
28	700	703 – 748	758 – 803	APAC, EU	
29	700	N/A	717 – 728	-	
30	2300	2305 – 2315	2350 – 2360	-	
38	2600	2570 – 2620	N/A	EMEA	
40	2300	2300 – 2400	N/A	China	
41	2500	2496 – 2690	N/A	Global	
48	3500	3550 – 3700	N/A	NAM	
53	2400	2483.5 – 2495		-	
66	1700	1710 – 1780	2110 – 2200	NAM	
70	2000	1695 – 1710	1995 – 2020	NAM	
71	600	663 – 698	617 – 652	NAM	
75	1500	N/A	1432 – 1517	NAM	
76	1500	N/A	1427 – 1432	NAM	
77	3700	3300 – 4200	N/A	-	
78	3500	3300 – 3800	N/A	-	
79	4700	4400 – 5000	N/A	-	
255	1600	1626.5 – 1660.5	1525 – 1559	-	No
256	2100	1980 – 2010	2170 – 2200	-	Yes
257	28000	26500 – 29500		Global	No
258	26000	24250 – 27500		Global	
260	39000	37000 – 40000		Global	
261	28000	27500 - 28550		NAM	

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Test setup

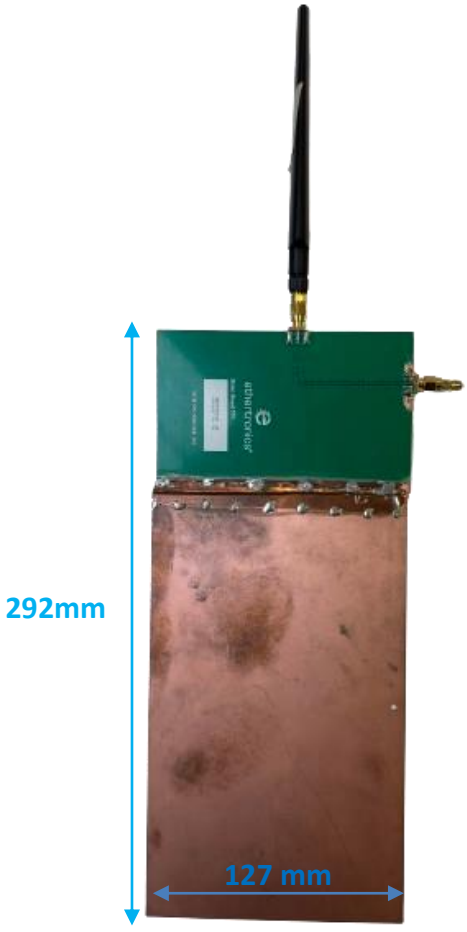
Typical Characteristics, in Free Space (FS)

X9003334 Straight

X9003334 90 degree

Typical Characteristics, on 292 x 127 mm ground plane

X9003334 PCB Straight:



X9003334 PCB 90 degree:

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Test setup

X9003334-5GDRMB FS Straight

X9003334-5GDRMB PCB 90°

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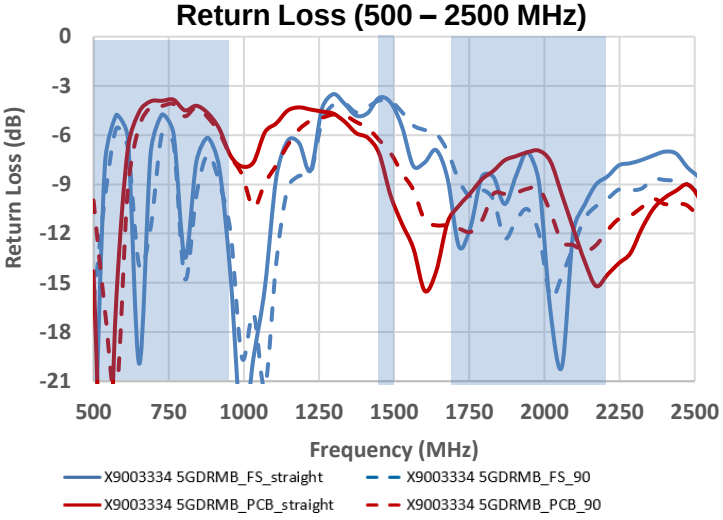
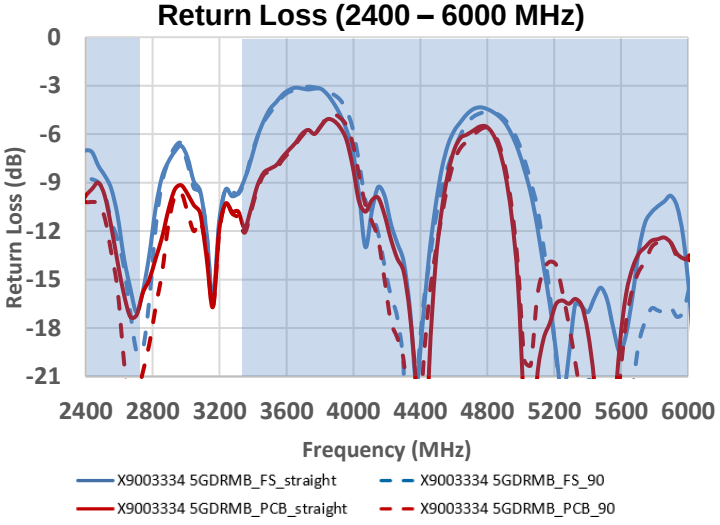
Return Loss and Efficiency

Typical Characteristics, on 292 x 127 mm ground plane

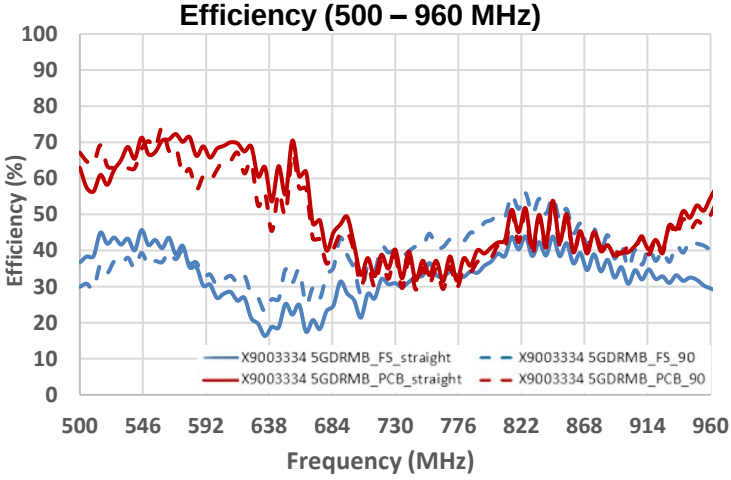
Return Loss (500 – 2500 MHz)



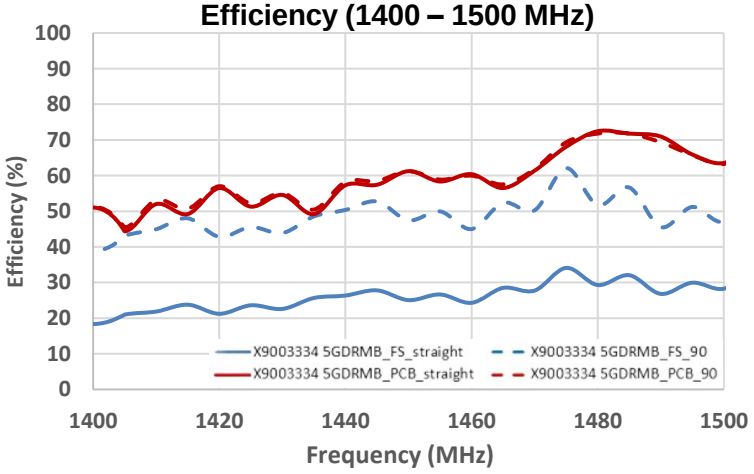
Return Loss (2400 – 6000 MHz)



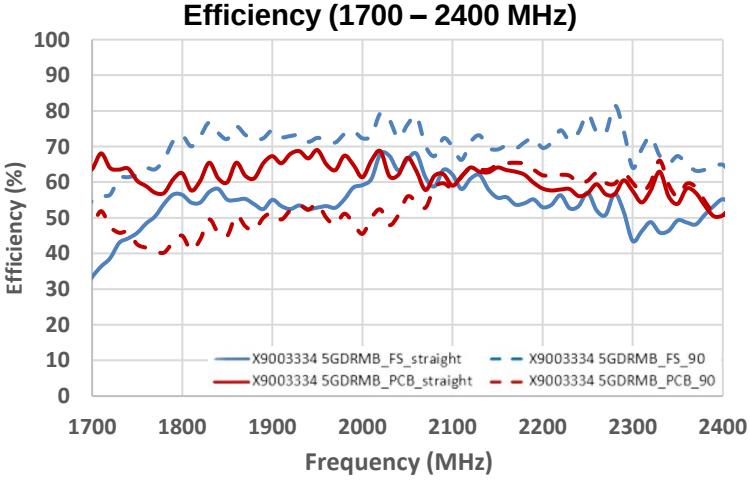
Efficiency (500 – 960 MHz)



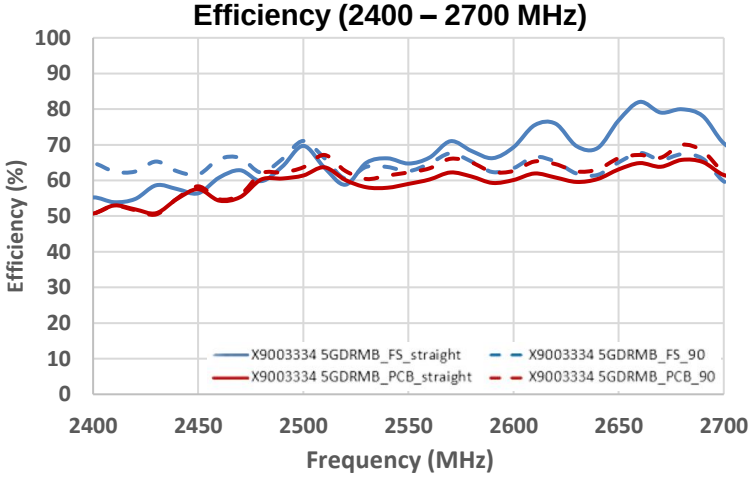
Efficiency (1400 – 1500 MHz)



Efficiency (1700 – 2400 MHz)



Efficiency (2400 – 2700 MHz)



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External 5G KYOCERA AVX Antenna Specifications.
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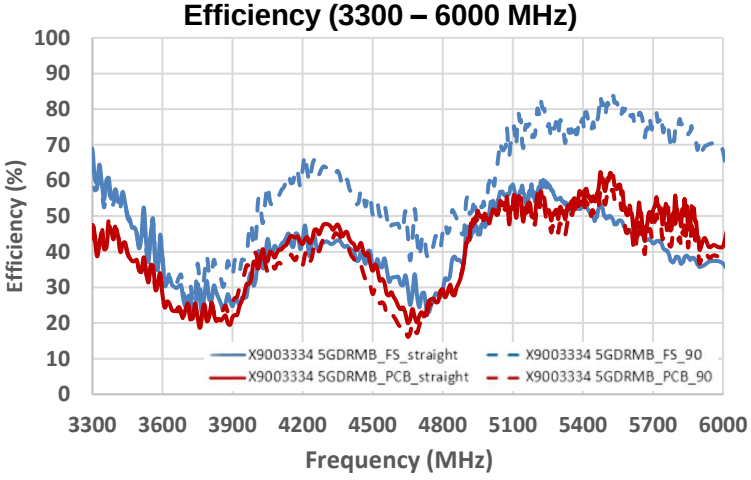
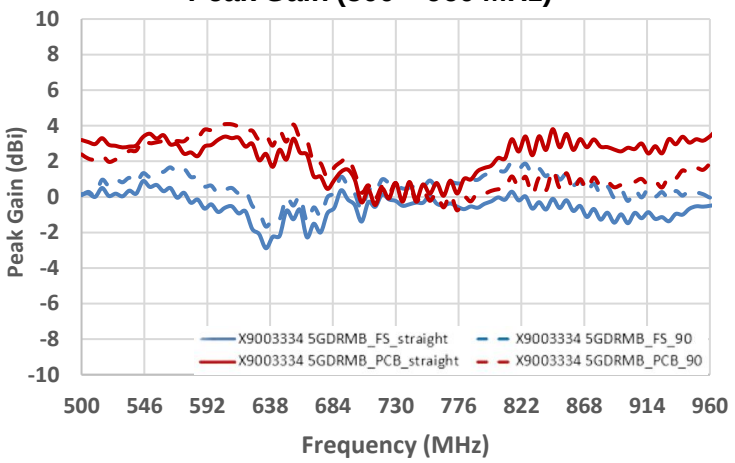
Efficiency and Peak Gain

Typical Characteristics, on 292 x 127 mm ground plane

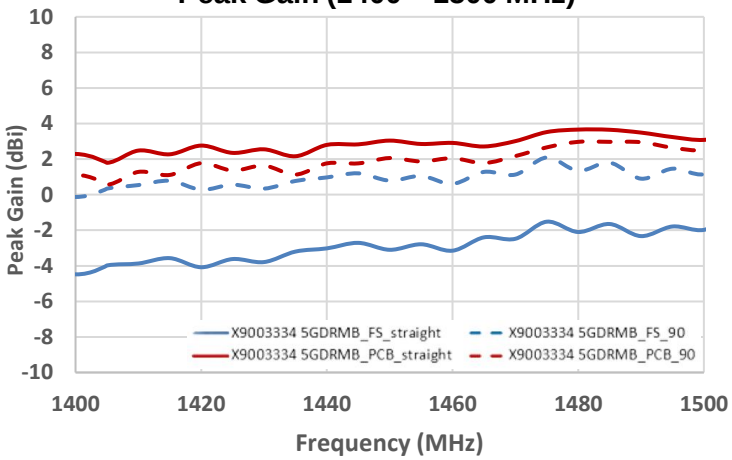
Efficiency (3300 – 6000 MHz)



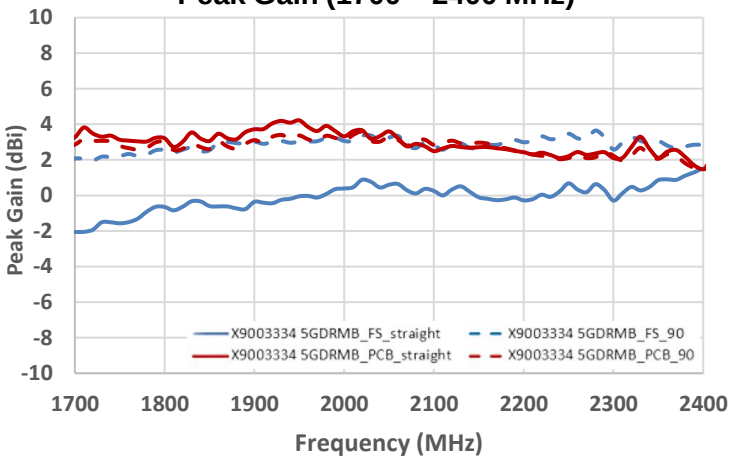
Peak Gain (500 – 960 MHz)



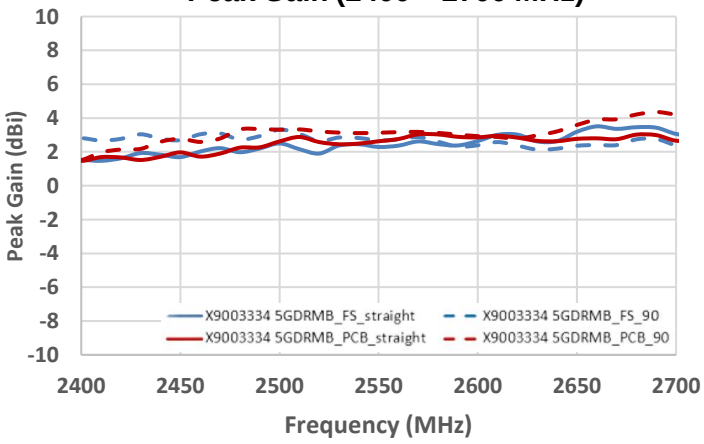
Peak Gain (1400 – 1500 MHz)



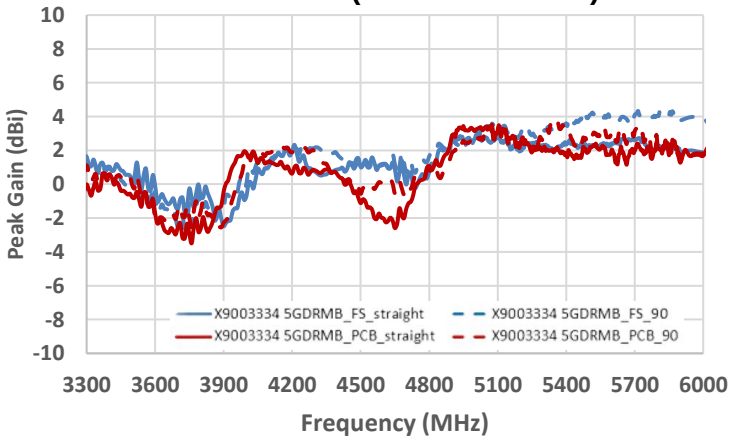
Peak Gain (1700 – 2400 MHz)



Peak Gain (2400 – 2700 MHz)



Peak Gain (3300 – 6000 MHz)



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External 5G KYOCERA AVX Antenna Specifications.
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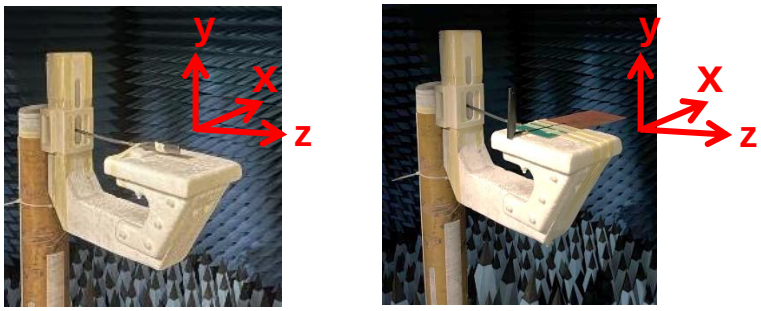
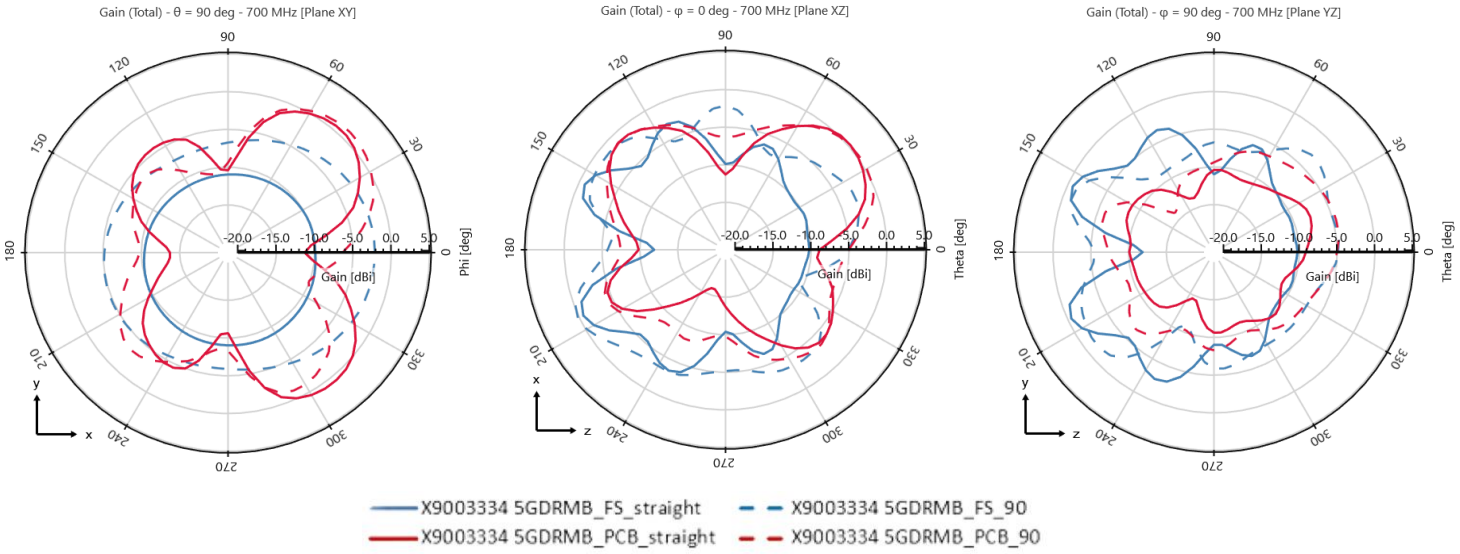
Antenna Radiation Patterns

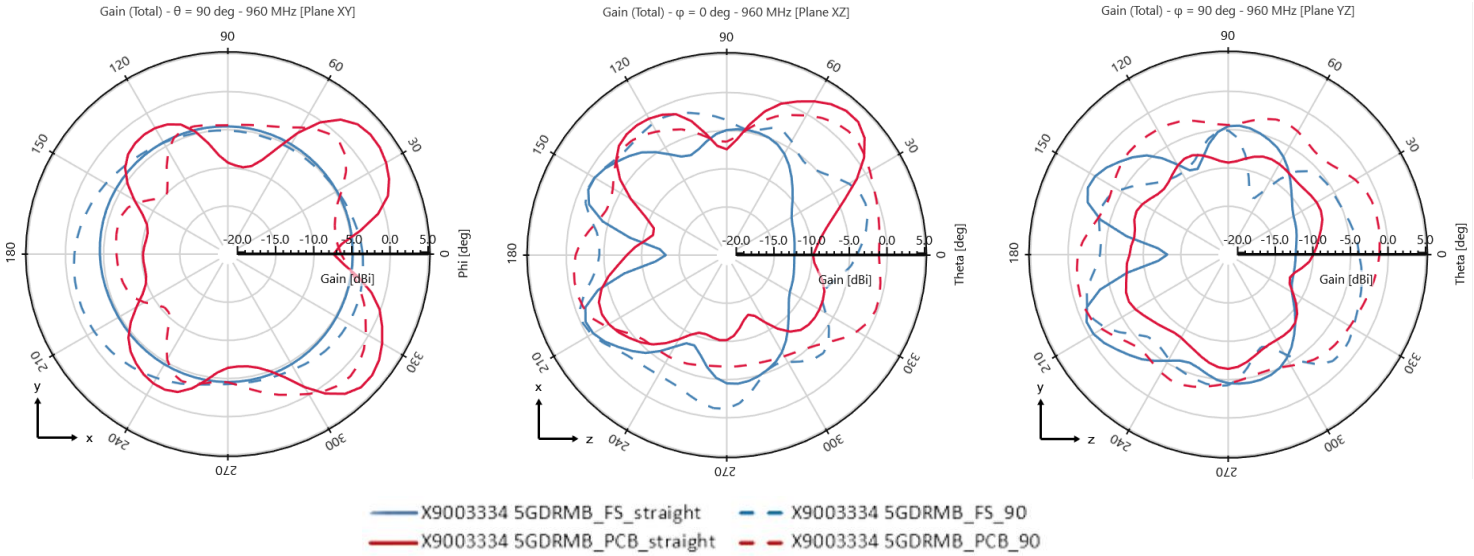
Measured at 700 and 960 MHz



Measured at 700 MHz



Measured at 960 MHz



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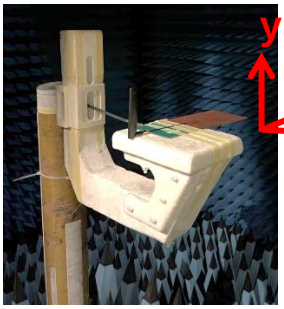
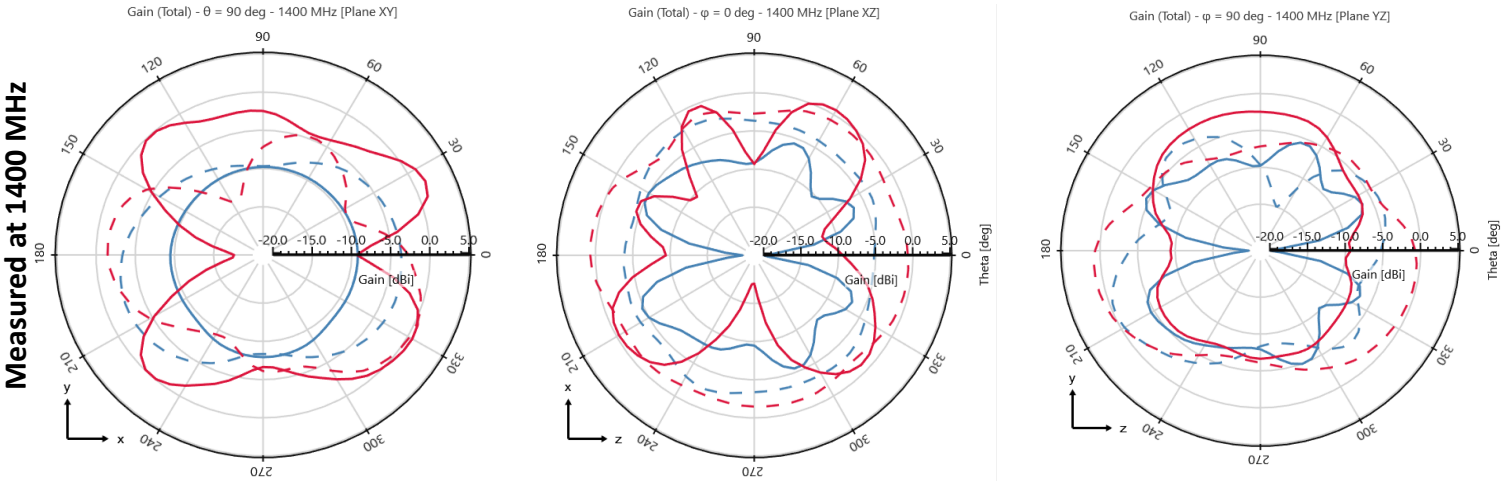
Antenna Radiation Patterns

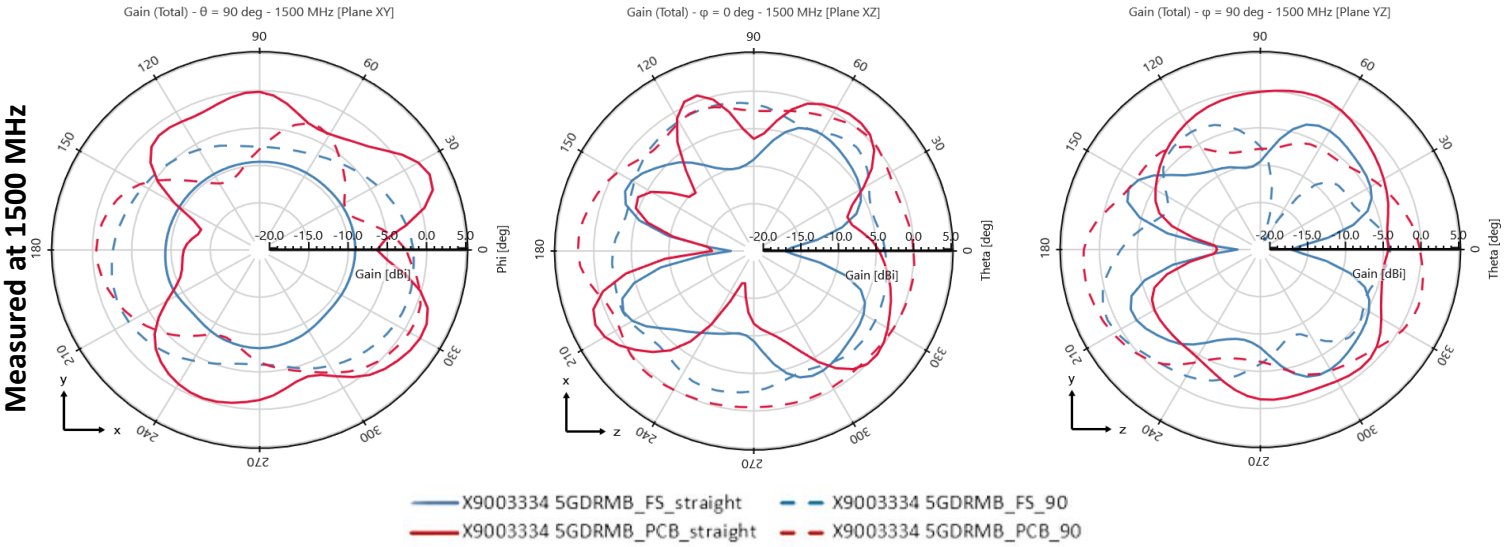
Measured at 1400 and 1500 MHz



Measured at 1400 MHz



Measured at 1500 MHz



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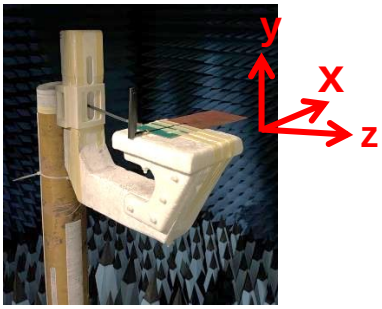
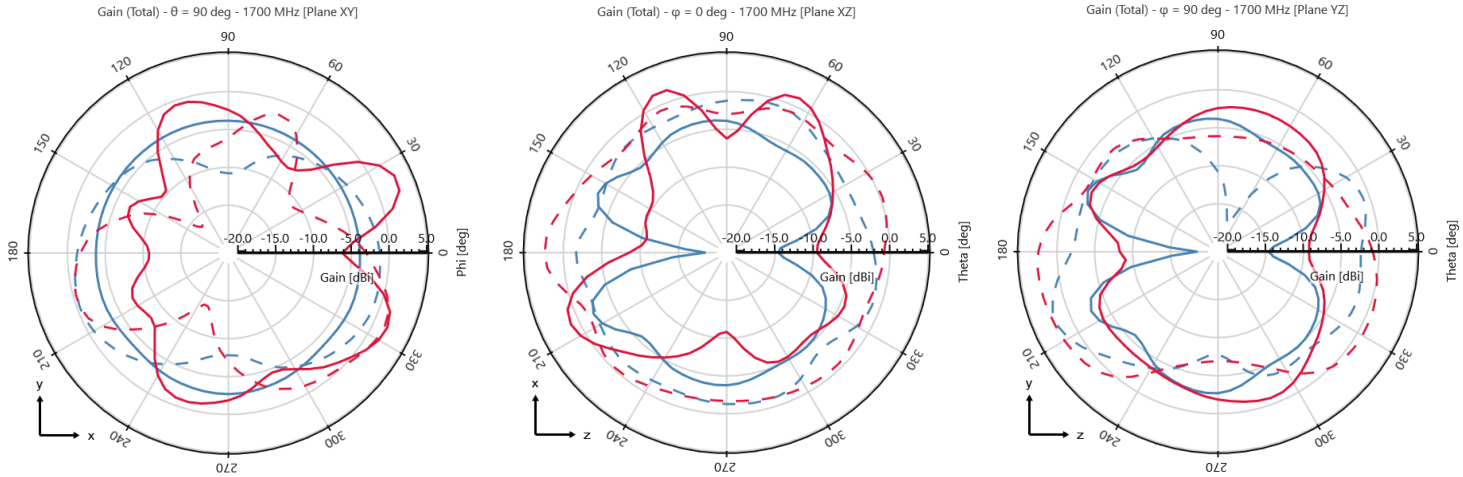
Antenna Radiation Patterns

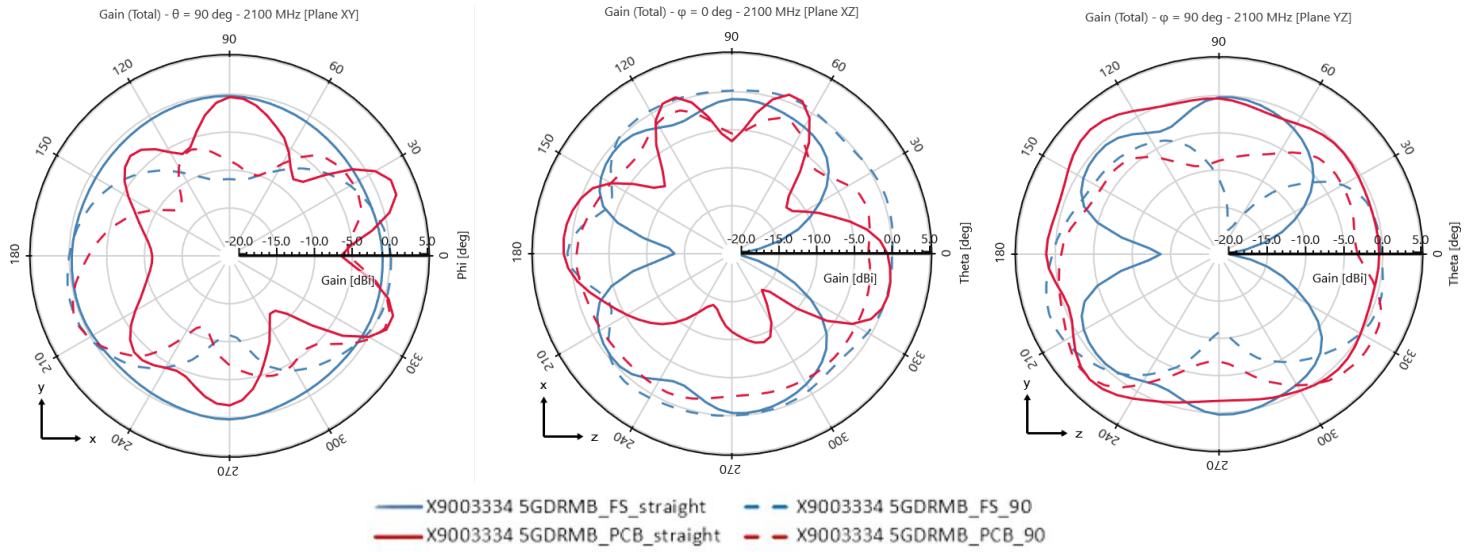
Measured at 1700 and 2100 MHz



Measured at 1700 MHz



Measured at 2100 MHz



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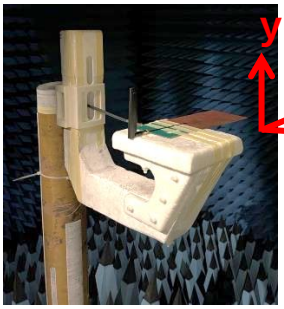
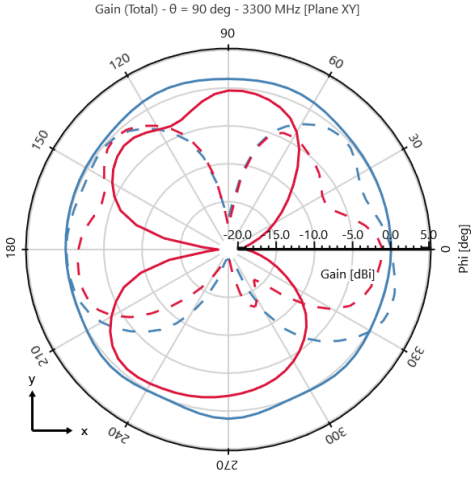
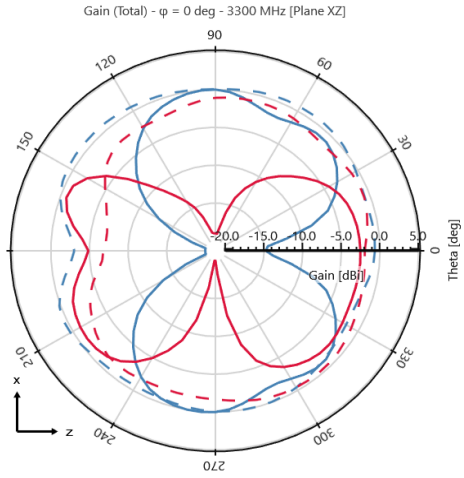
Antenna Radiation Patterns

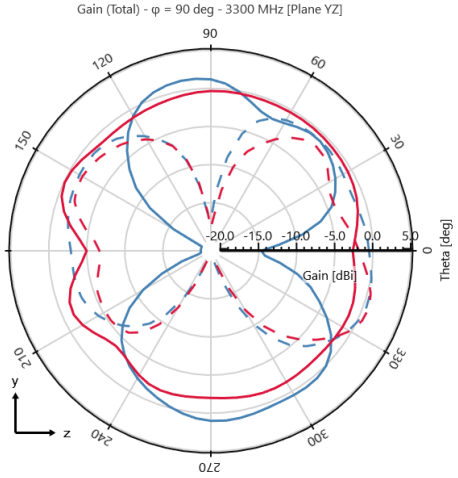
Measured at 3300 and 5000 MHz



Measured at 3300 MHz

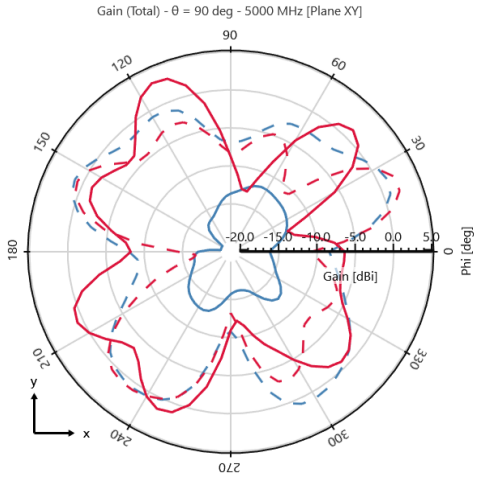


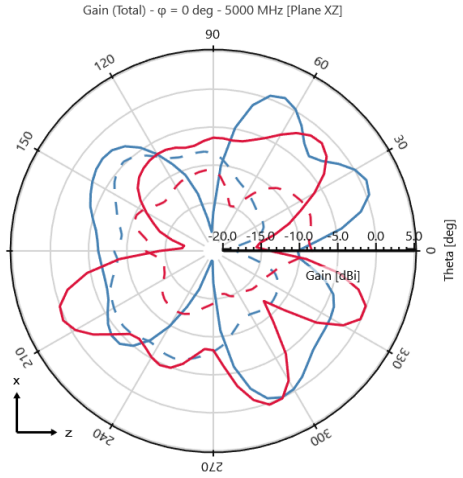


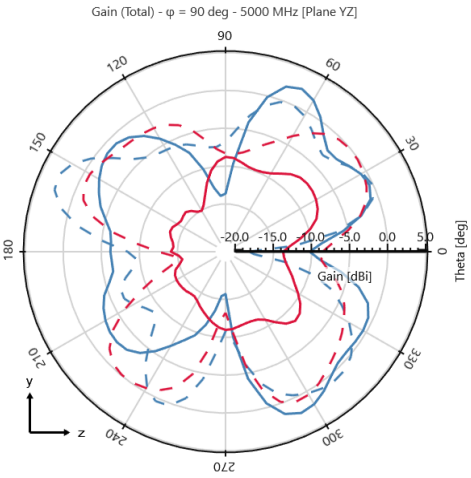


X9003334 5GDRMB_FS_straight — X9003334 5GDRMB_FS_90
X9003334 5GDRMB_PCB_straight — X9003334 5GDRMB_PCB_90

Measured at 5000 MHz







X9003334 5GDRMB_FS_straight — X9003334 5GDRMB_FS_90
X9003334 5GDRMB_PCB_straight — X9003334 5GDRMB_PCB_90

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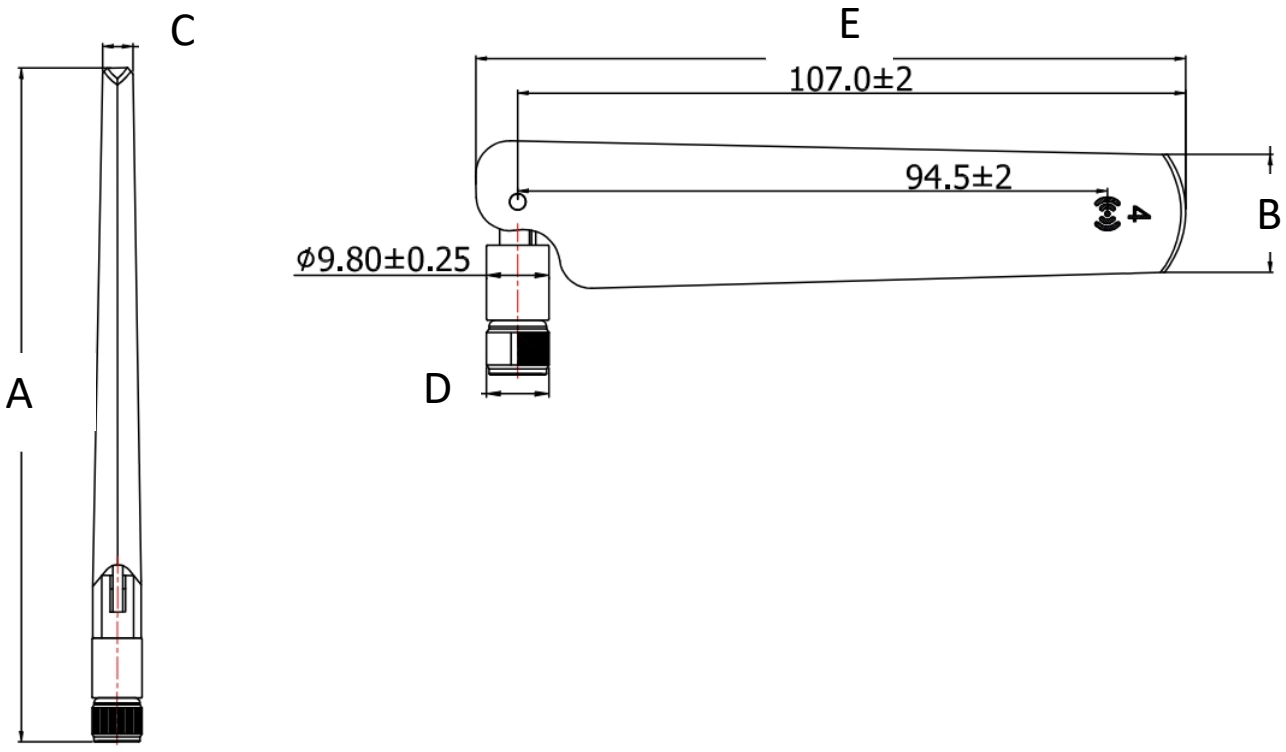
Mechanical Dimensions

Typical antenna dimensions, in mm.

Part Number	A	B	C	D	E
X9003334-5GDRMB	135.3 ± 0.2	19.4 ± 0.3	6.0 ± 0.3	10.0 ± 0.25	114.0 ± 2



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