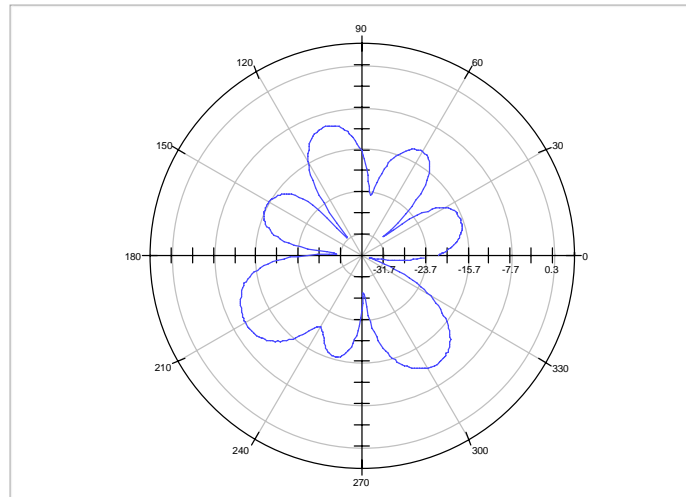


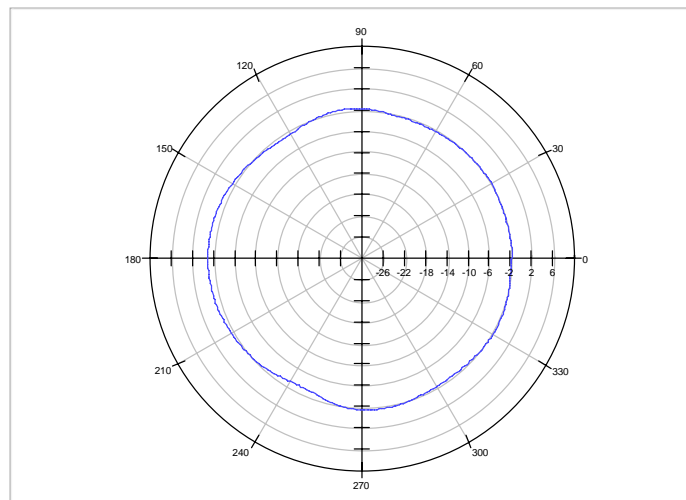
Annex D Antenna measurements

ANT-ROD-30 on a 10 cm x 10 cm Groundplane with ANT-BASE-06 @ 1710.0 MHz

Azimuth Chart: 0deg, Horizontal



Azimuth Chart: 0deg, Vertical

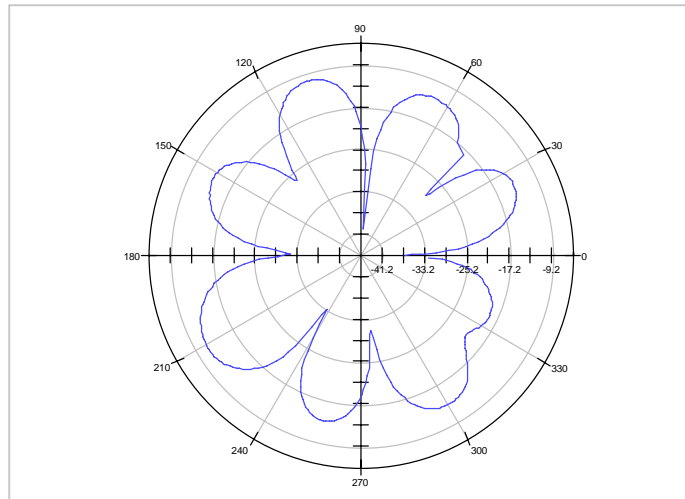


Frequency (MHz)	Max. Value (dBm)	Azimuth max. (deg)	Elev max. (deg)	Pol max.	Min. Value (dBm)	Azimuth min. (deg)	Elev min. (deg)	Pol min.
1710	-0.92	179	0	V	-34.19	344	0	H

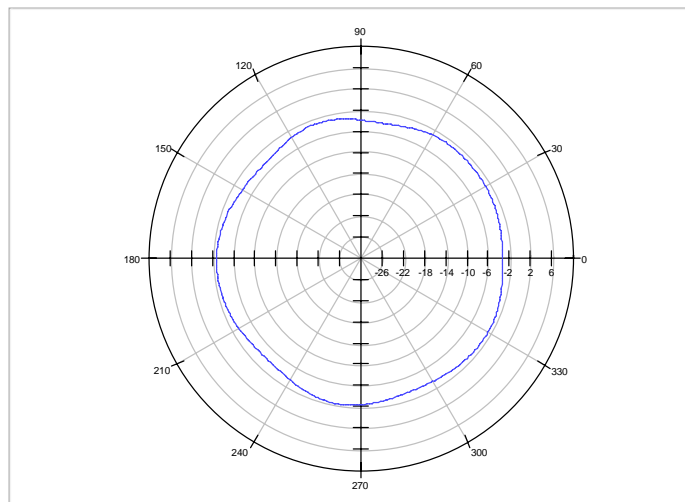
Annex D Antenna measurements

ANT-ROD-30 on a 10 cm x 10 cm Groundplane with ANT-BASE-06 @ 1845.0 MHz

Azimuth Chart: 0deg, Horizontal



Azimuth Chart: 0deg, Vertical

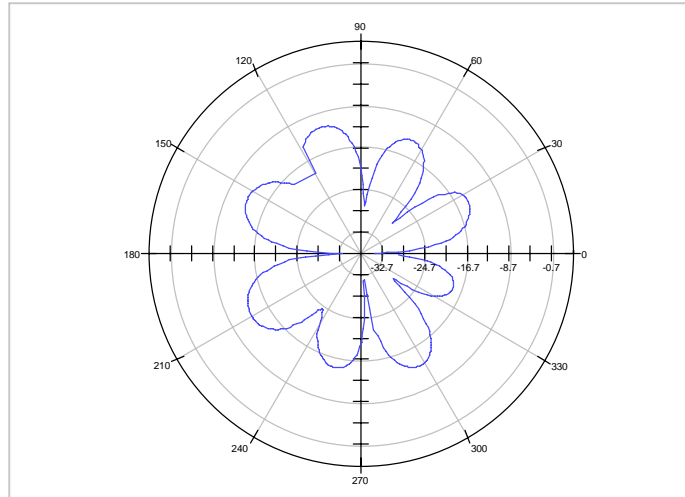


Frequency (MHz)	Max. Value (dBm)	Azimuth max. (deg)	Elev max. (deg)	Pol max.	Min. Value (dBm)	Azimuth min. (deg)	Elev min. (deg)	Pol min.
1845	-2.14	263	0	V	-40.20	86	0	H

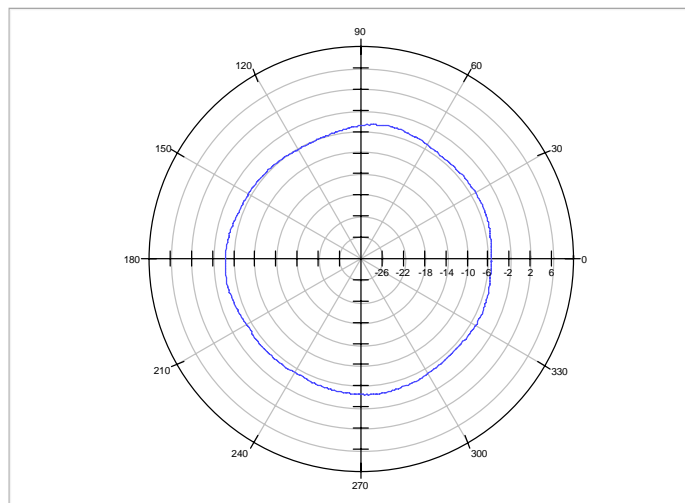
Annex D Antenna measurements

ANT-ROD-30 on a 10 cm x 10 cm Groundplane with ANT-BASE-06 @ 1980.0 MHz

Azimuth Chart: 0deg, Horizontal



Azimuth Chart: 0deg, Vertical

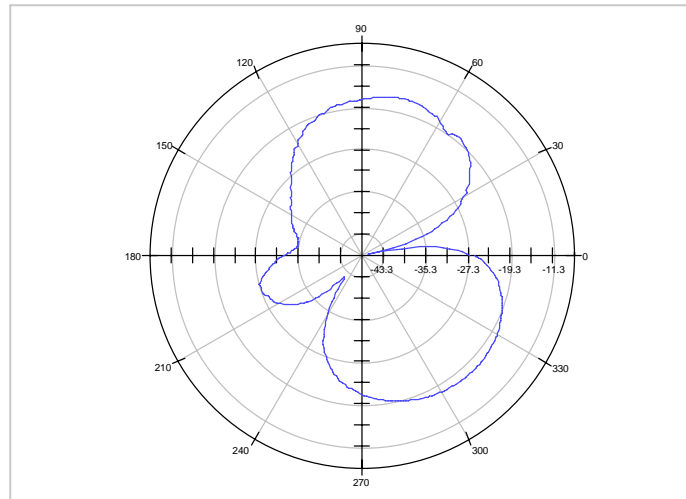


Frequency (MHz)	Max. Value (dBm)	Azimuth max. (deg)	Elev max. (deg)	Pol max.	Min. Value (dBm)	Azimuth min. (deg)	Elev min. (deg)	Pol min.
1980	-4.21	276	0	V	-34.08	1	0	H

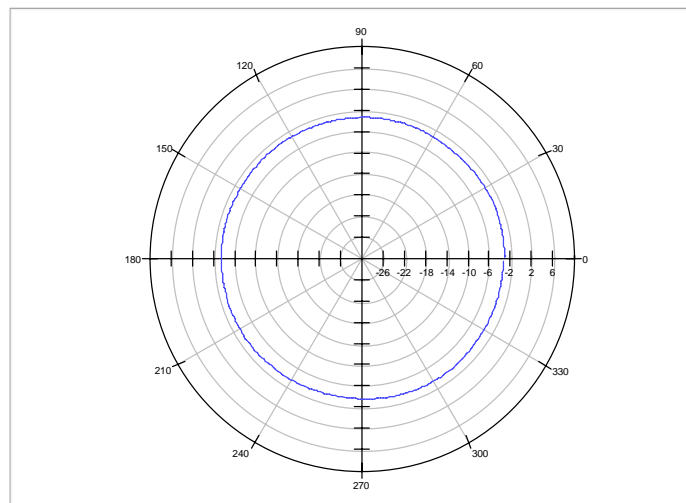
Annex D Antenna measurements

ANT-ROD-76 on a 10 cm x 10 cm Groundplane with ANT-BASE-06 @ 814.0 MHz

Azimuth Chart: 0deg, Horizontal



Azimuth Chart: 0deg, Vertical

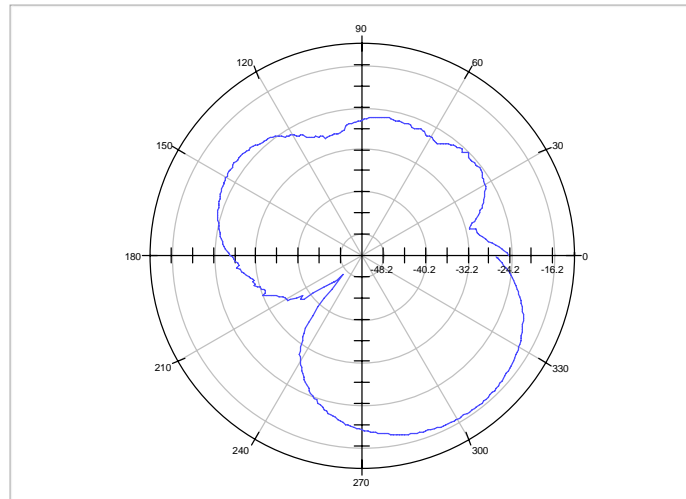


Frequency (MHz)	Max. Value (dBm)	Azimuth max. (deg)	Elev max. (deg)	Pol max.	Min. Value (dBm)	Azimuth min. (deg)	Elev min. (deg)	Pol min.
814.0	-3.00	17	0	V	-46.15	13	0	H

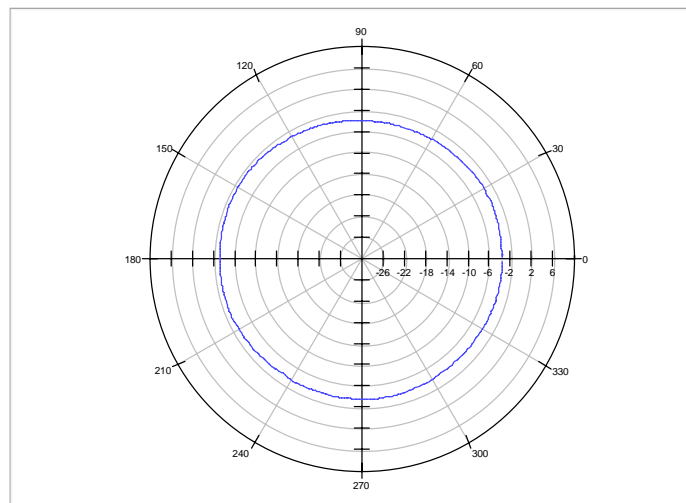
Annex D Antenna measurements

ANT-ROD-76 on a 10 cm x 10 cm Groundplane with ANT-BASE-06 @ 838.0 MHz

Azimuth Chart: 0deg, Horizontal



Azimuth Chart: 0deg, Vertical

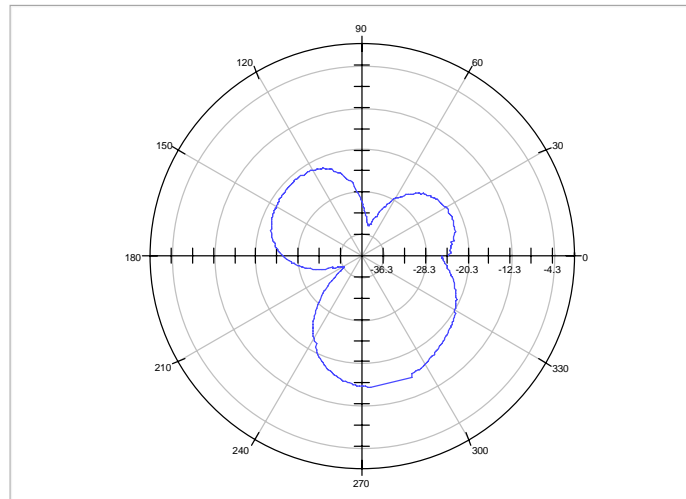


Frequency (MHz)	Max. Value (dBm)	Azimuth max. (deg)	Elev max. (deg)	Pol max.	Min. Value (dBm)	Azimuth min. (deg)	Elev min. (deg)	Pol min.
838.0	-3.02	150	0	V	-47.19	226	0	H

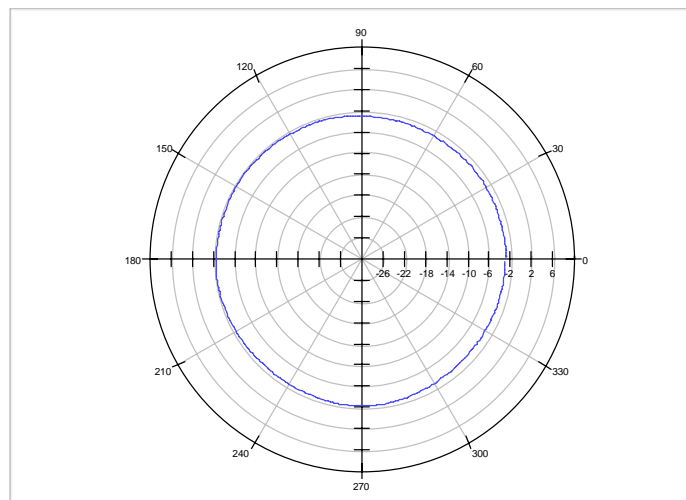
Annex D Antenna measurements

ANT-ROD-76 on a 10 cm x 10 cm Groundplane with ANT-BASE-06 @ 862.0 MHz

Azimuth Chart: 0deg, Horizontal



Azimuth Chart: 0deg, Vertical

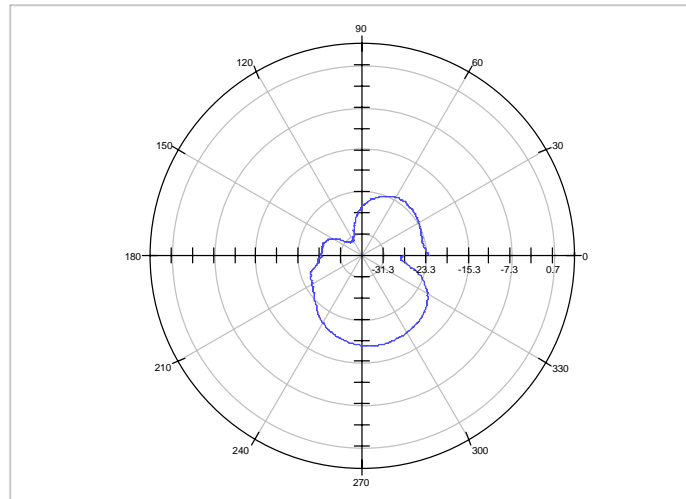


Frequency (MHz)	Max. Value (dBm)	Azimuth max. (deg)	Elev max. (deg)	Pol max.	Min. Value (dBm)	Azimuth min. (deg)	Elev min. (deg)	Pol min.
862.0	-2.25	272	0	V	-36.31	211	0	H

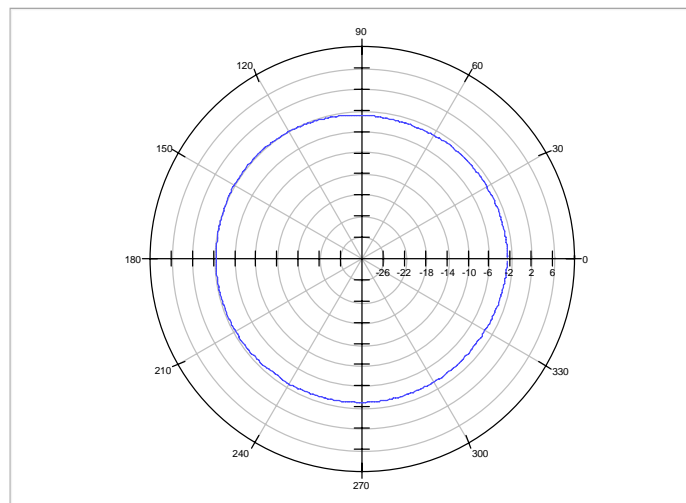
Annex D Antenna measurements

ANT-ROD-90 on a 10 cm x 10 cm Groundplane with ANT-BASE-06 @ 699.0 MHz

Azimuth Chart: 0deg, Horizontal



Azimuth Chart: 0deg, Vertical

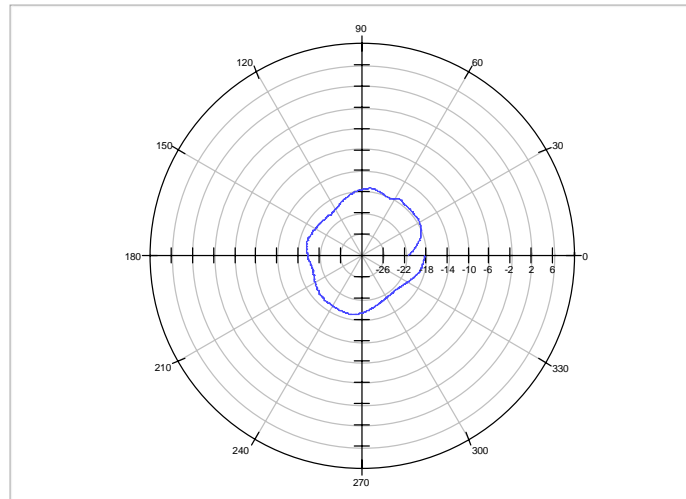


Frequency (MHz)	Max. Value (dBm)	Azimuth max. (deg)	Elev max. (deg)	Pol max.	Min. Value (dBm)	Azimuth min. (deg)	Elev min. (deg)	Pol min.
699.0	-2.19	139	0	V	-32.21	121	0	H

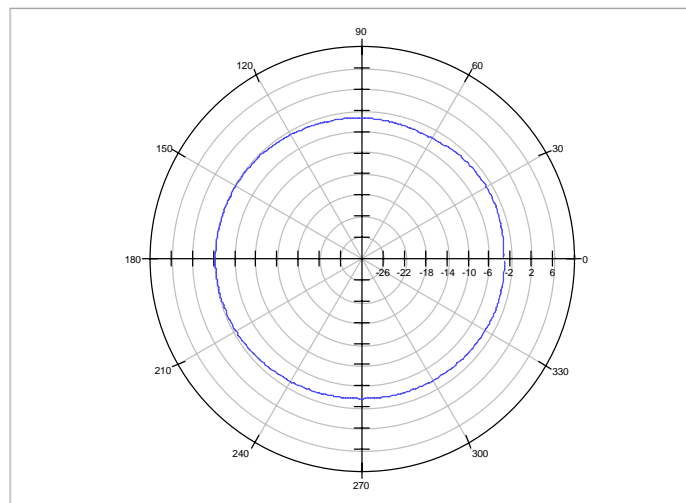
Annex D Antenna measurements

ANT-ROD-90 on a 10 cm x 10 cm Groundplane with ANT-BASE-06 @ 743.0 MHz

Azimuth Chart: 0deg, Horizontal



Azimuth Chart: 0deg, Vertical

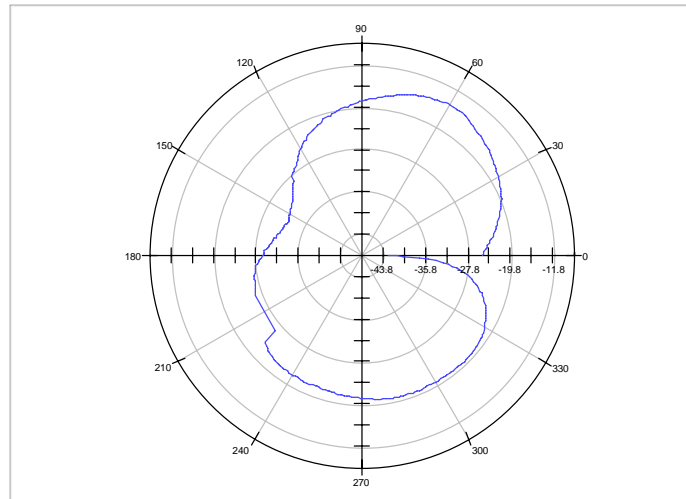


Frequency (MHz)	Max. Value (dBm)	Azimuth max. (deg)	Elev max. (deg)	Pol max.	Min. Value (dBm)	Azimuth min. (deg)	Elev min. (deg)	Pol min.
743.0	-2.36	186	0	V	-21.16	0	0	H

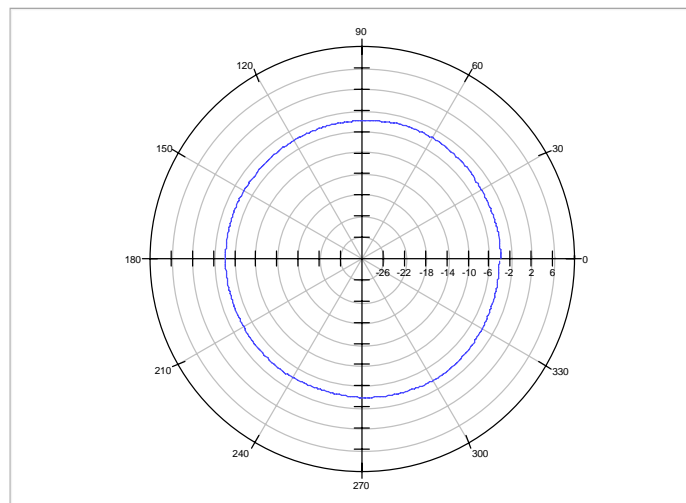
Annex D Antenna measurements

ANT-ROD-90 on a 10 cm x 10 cm Groundplane with ANT-BASE-06 @ 787.0 MHz

Azimuth Chart: 0deg, Horizontal



Azimuth Chart: 0deg, Vertical

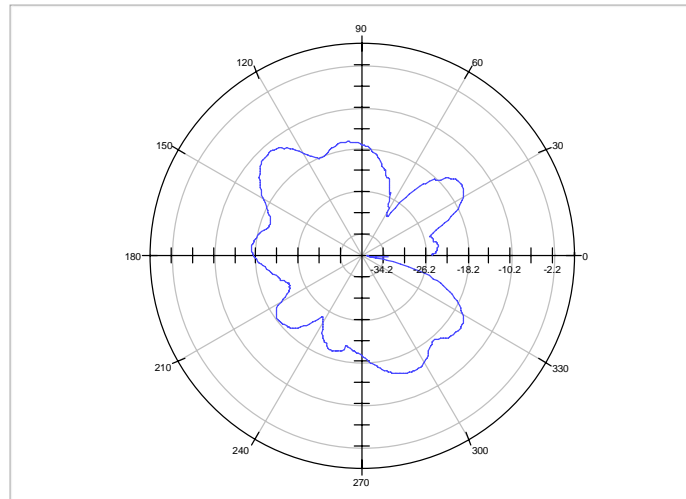


Frequency (MHz)	Max. Value (dBm)	Azimuth max. (deg)	Elev max. (deg)	Pol max.	Min. Value (dBm)	Azimuth min. (deg)	Elev min. (deg)	Pol min.
787.0	-3.33	307	0	V	-42.79	360	0	H

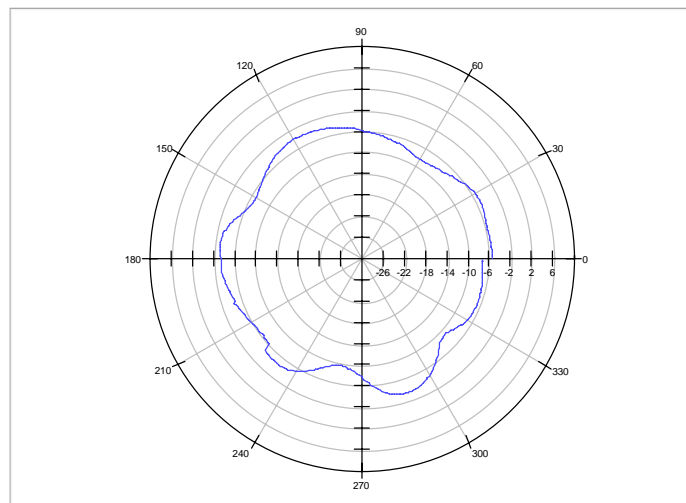
Annex D Antenna measurements

ANT-ZS-NBIOT-30 @ 1710.0 MHz

Azimuth Chart: 0deg, Horizontal



Azimuth Chart: 0deg, Vertical

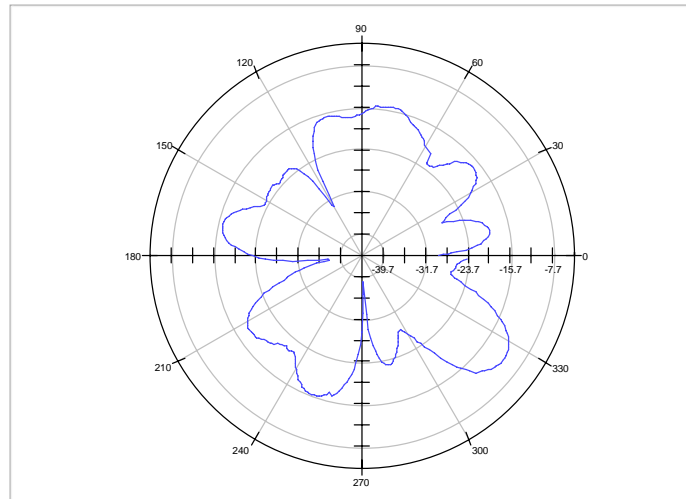


Frequency (MHz)	Max. Value (dBm)	Azimuth max. (deg)	Elev max. (deg)	Pol max.	Min. Value (dBm)	Azimuth min. (deg)	Elev min. (deg)	Pol min.
1710	-3.08	174	0	V	-37.30	353	0	H

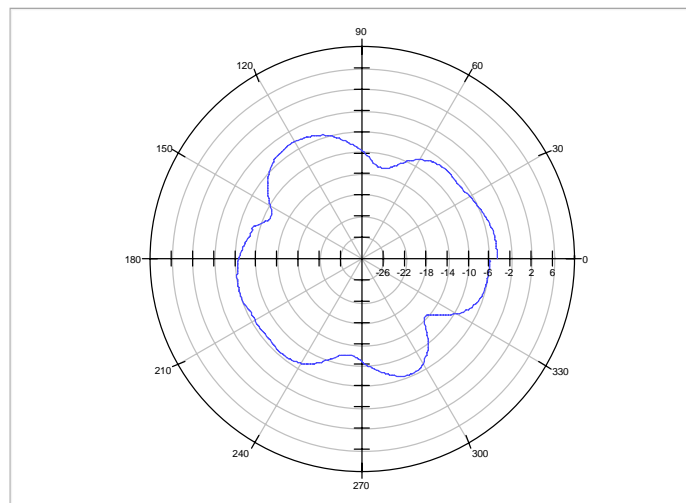
Annex D Antenna measurements

ANT-ZS-NBIOT-30 @ 1845.0 MHz

Azimuth Chart: 0deg, Horizontal



Azimuth Chart: 0deg, Vertical

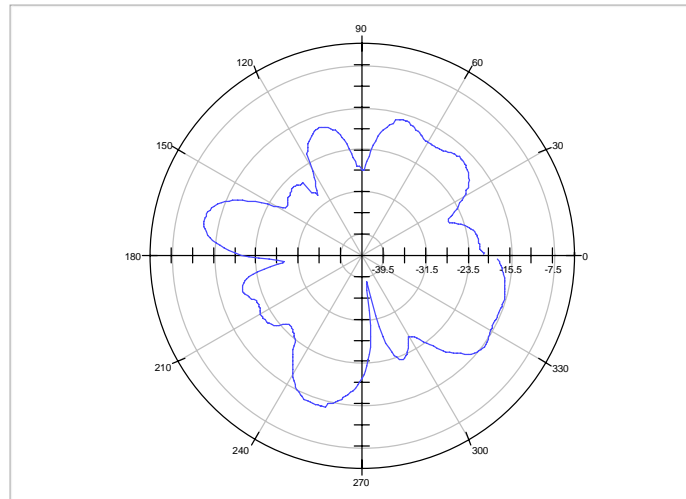


Frequency (MHz)	Max. Value (dBm)	Azimuth max. (deg)	Elev max. (deg)	Pol max.	Min. Value (dBm)	Azimuth min. (deg)	Elev min. (deg)	Pol min.
1845	-4.47	2	0	V	-38.72	273	0	H

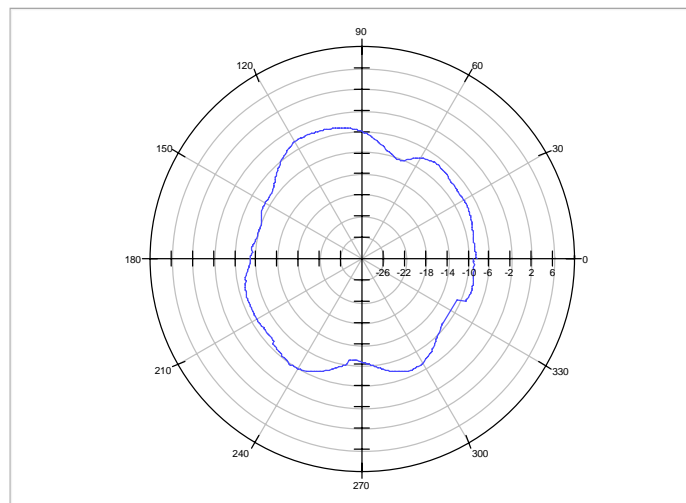
Annex D Antenna measurements

ANT-ZS-NBIOT-30 @ 1980.0 MHz

Azimuth Chart: 0deg, Horizontal



Azimuth Chart: 0deg, Vertical

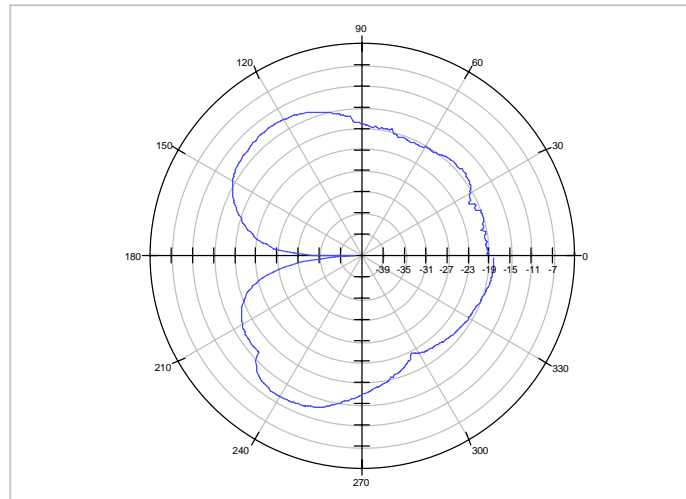


Frequency (MHz)	Max. Value (dBm)	Azimuth max. (deg)	Elev max. (deg)	Pol max.	Min. Value (dBm)	Azimuth min. (deg)	Elev min. (deg)	Pol min.
1980	-4.50	115	0	V	-38.52	280	0	H

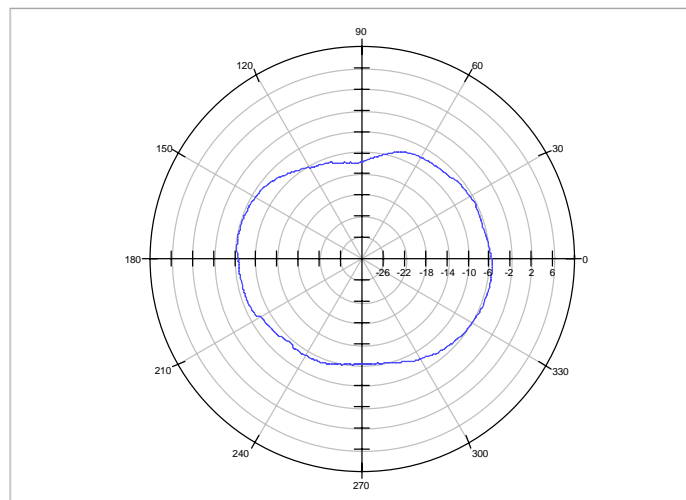
Annex D Antenna measurements

ANT-ZS-NBIOT-76 @ 814.0 MHz

Azimuth Chart: 0deg, Horizontal



Azimuth Chart: 0deg, Vertical

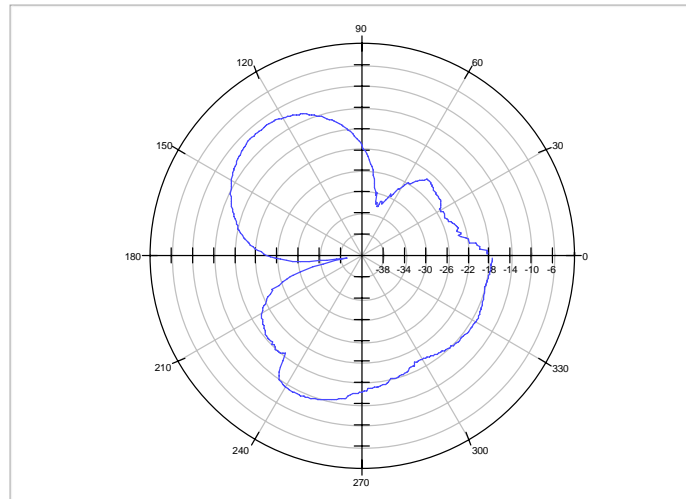


Frequency (MHz)	Max. Value (dBm)	Azimuth max. (deg)	Elev max. (deg)	Pol max.	Min. Value (dBm)	Azimuth min. (deg)	Elev min. (deg)	Pol min.
814.0	-5.28	348	0	V	-41.77	183	0	H

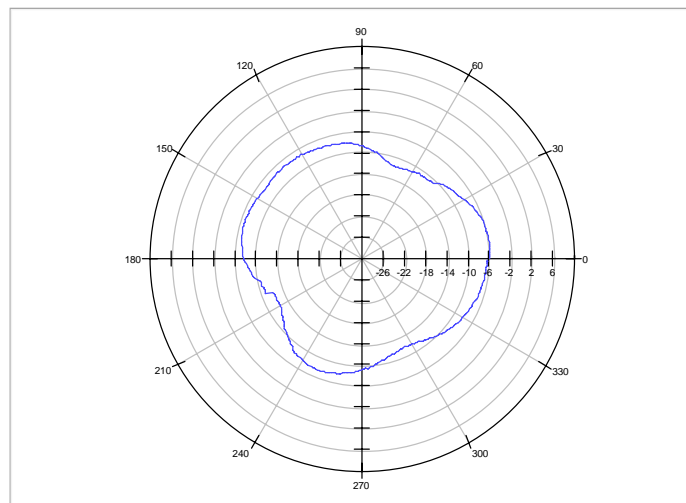
Annex D Antenna measurements

ANT-ZS-NBIOT-76 @ 838.0 MHz

Azimuth Chart: 0deg, Horizontal



Azimuth Chart: 0deg, Vertical

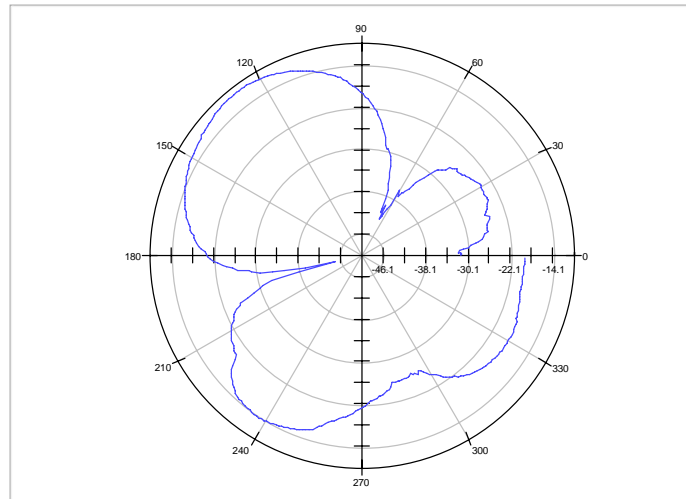


Frequency (MHz)	Max. Value (dBm)	Azimuth max. (deg)	Elev max. (deg)	Pol max.	Min. Value (dBm)	Azimuth min. (deg)	Elev min. (deg)	Pol min.
838.0	-5.75	7	0	V	-39.12	190	0	H

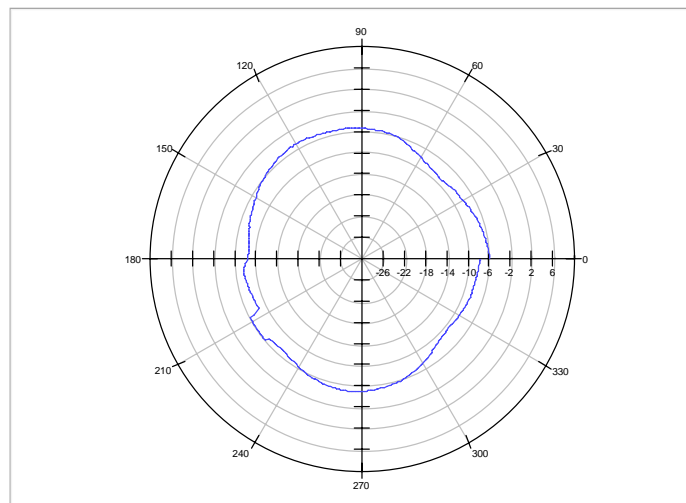
Annex D Antenna measurements

ANT-ZS-NBIOT-76 @ 862.0 MHz

Azimuth Chart: 0deg, Horizontal



Azimuth Chart: 0deg, Vertical

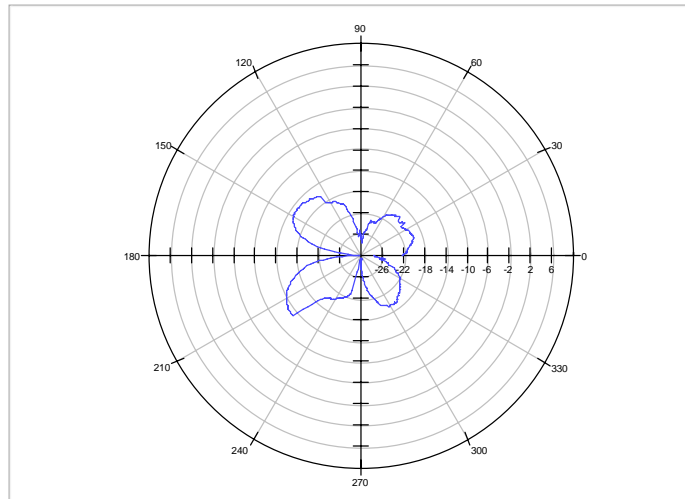


Frequency (MHz)	Max. Value (dBm)	Azimuth max. (deg)	Elev max. (deg)	Pol max.	Min. Value (dBm)	Azimuth min. (deg)	Elev min. (deg)	Pol min.
862.0	-4.82	266	0	V	-45.14	193	0	H

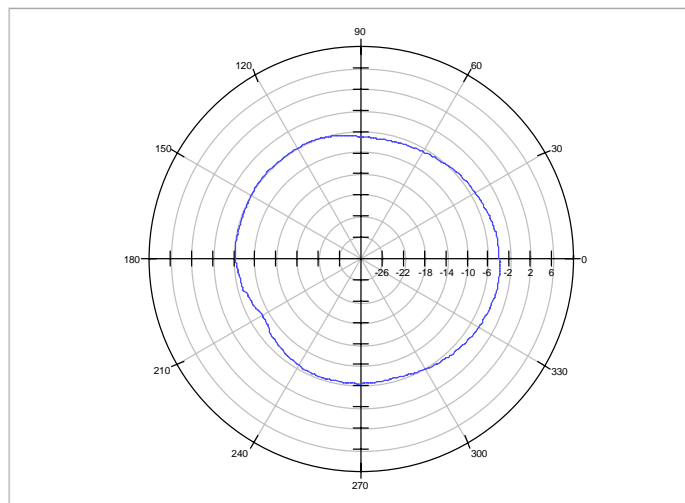
Annex D Antenna measurements

ANT-ZS-NBIOT-90 @ 699.0 MHz

Azimuth Chart: 0deg, Horizontal



Azimuth Chart: 0deg, Vertical

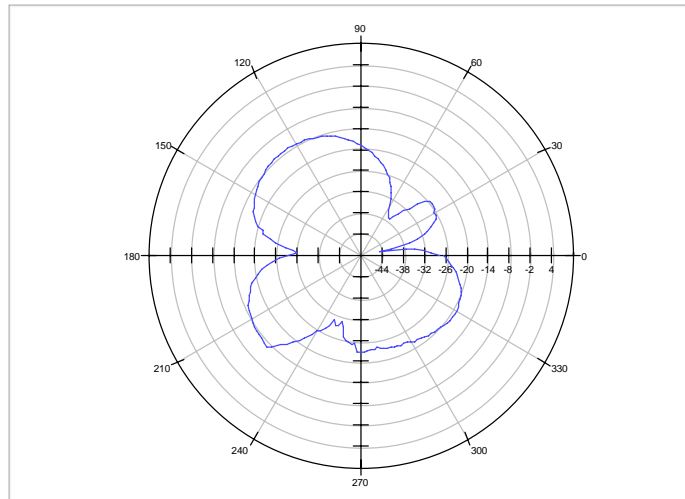


Frequency (MHz)	Max. Value (dBm)	Azimuth max. (deg)	Elev max. (deg)	Pol max.	Min. Value (dBm)	Azimuth min. (deg)	Elev min. (deg)	Pol min.
699.0	-3.62	353	0	V	-29.76	178	0	H

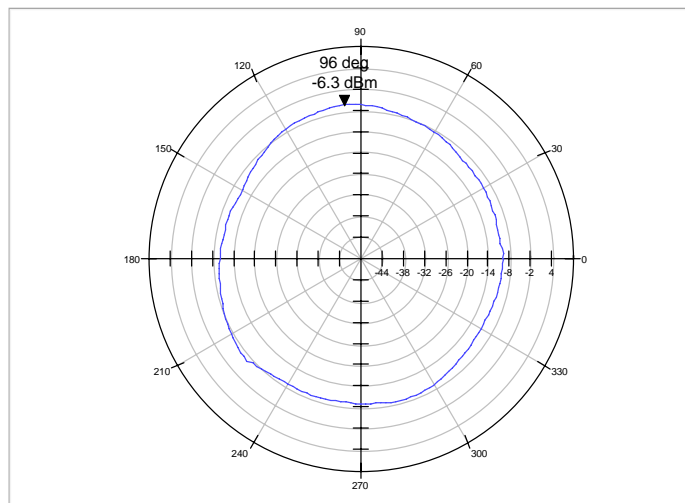
Annex D Antenna measurements

ANT-ZS-NBIOT-90 @ 743.0 MHz

Azimuth Chart: 0deg, Horizontal



Azimuth Chart: 0deg, Vertical

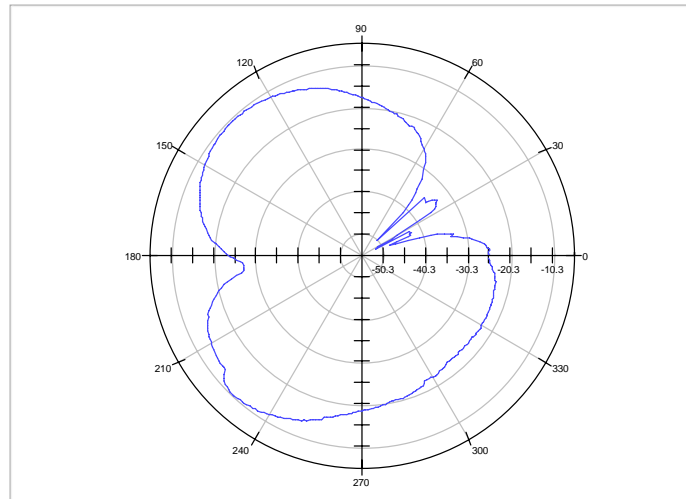


Frequency (MHz)	Max. Value (dBm)	Azimuth max. (deg)	Elev max. (deg)	Pol max.	Min. Value (dBm)	Azimuth min. (deg)	Elev min. (deg)	Pol min.
743.0	-6.26	96	0	V	-44.60	10	0	H

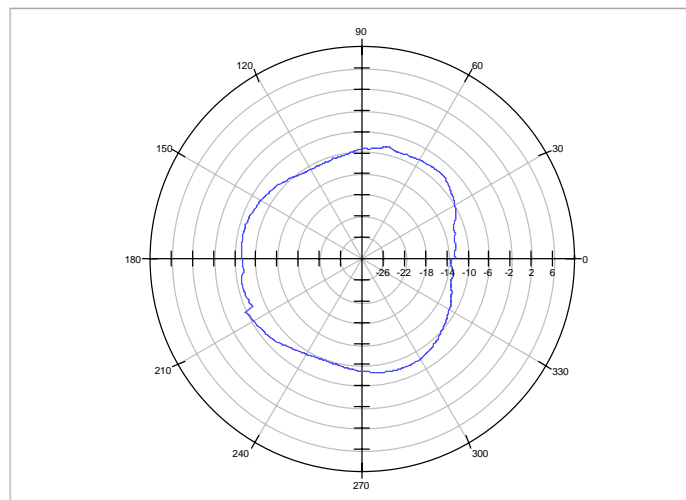
Annex D Antenna measurements

ANT-ZS-NBIOT-90 @ 787.0 MHz

Azimuth Chart: 0deg, Horizontal



Azimuth Chart: 0deg, Vertical



Frequency (MHz)	Max. Value (dBm)	Azimuth max. (deg)	Elev max. (deg)	Pol max.	Min. Value (dBm)	Azimuth min. (deg)	Elev min. (deg)	Pol min.
787.0	-5.84	205	0	V	-51.73	27	0	H