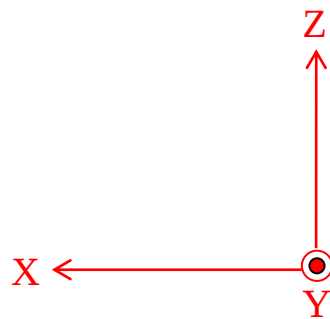


Report for Broadcom

Tested Products.

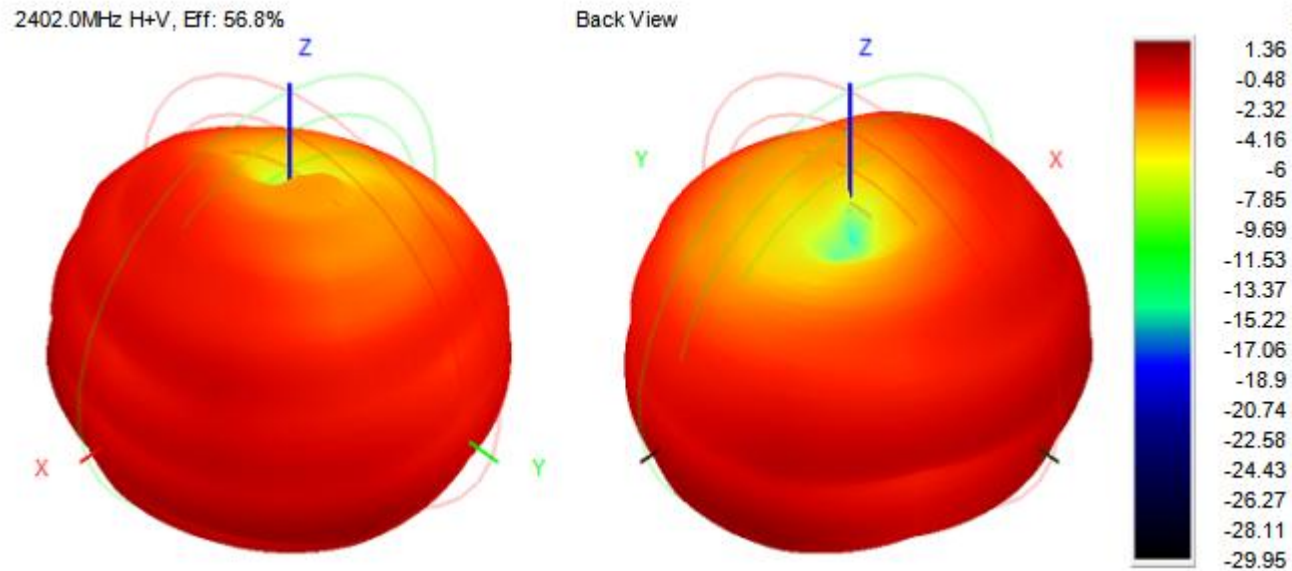
- Antenna 1: external antenna.
 - Frequency =2402MHz
 - Frequency =2404MHz
 - Frequency =2440MHz
 - Frequency =2441MHz
 - Frequency =2472MHz
 - Frequency =2480MHz

Coordinate System Reference: Antenna-TX

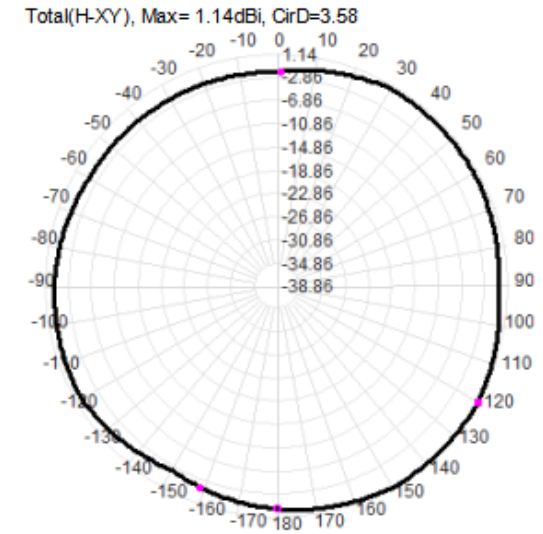
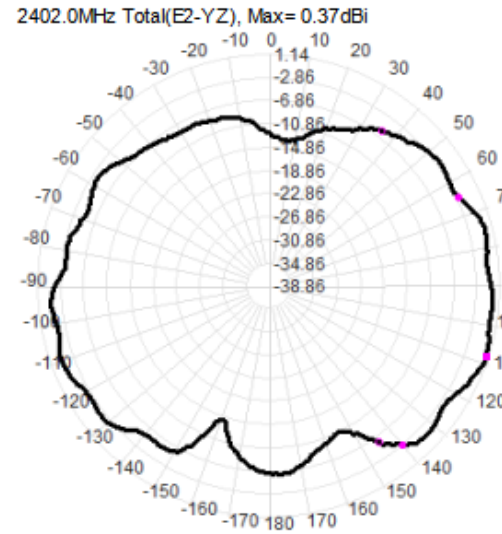
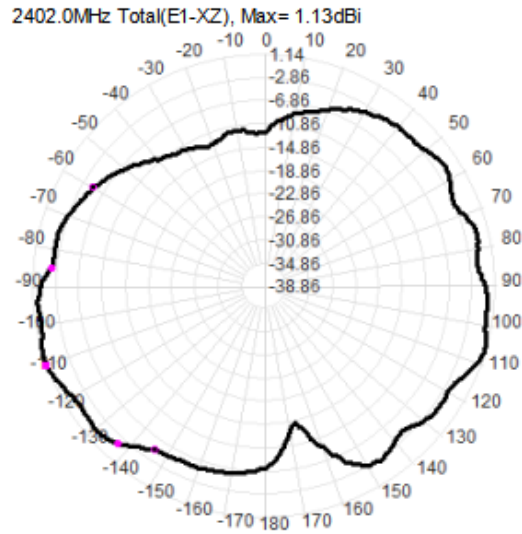


Radiation pattern: Antenna-TX 3D Pattern at $f = 2402\text{MHz}$

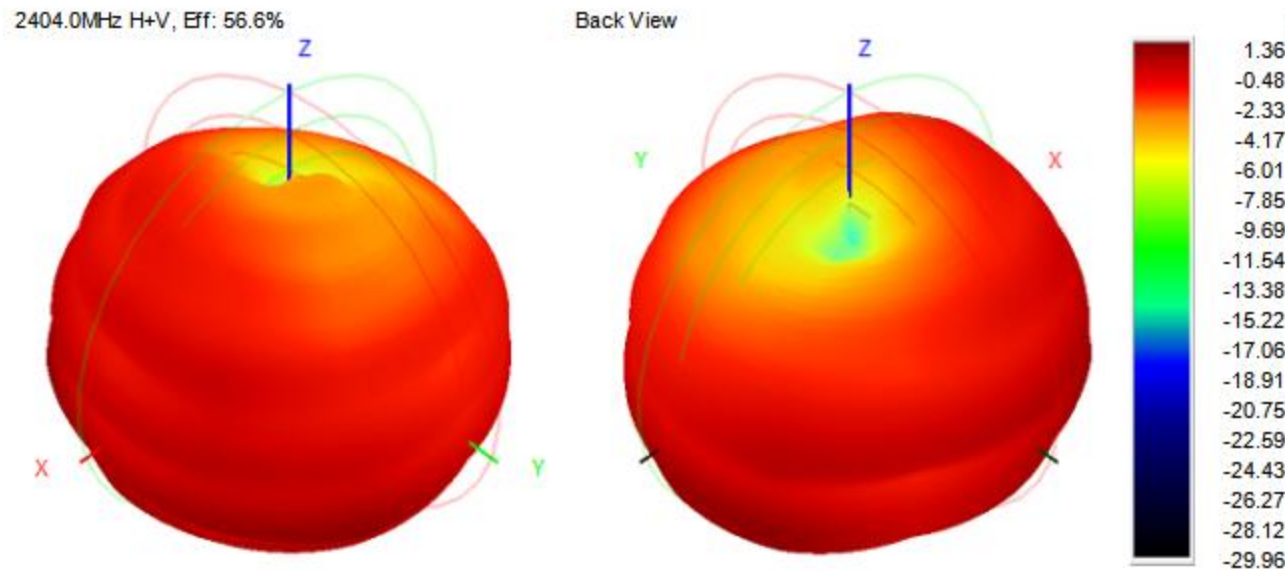
Coordinate System Reference: Antenna-TX



Radiation pattern: Antenna-TX 2D Pattern at $f = 2402\text{MHz}$

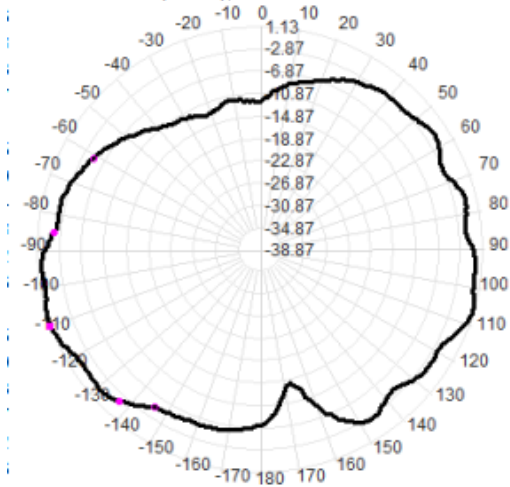


Radiation pattern: Antenna-TX 3D Pattern at $f = 2404\text{MHz}$

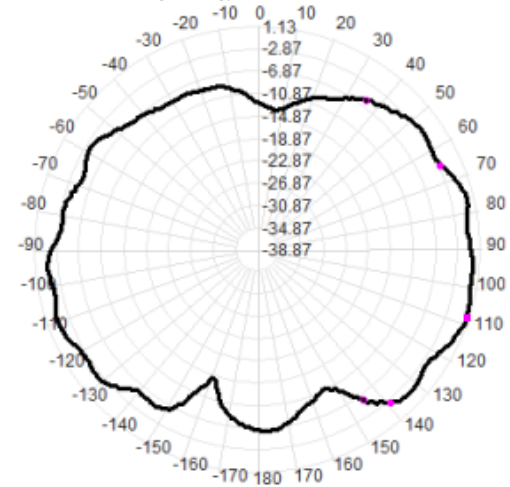


Radiation pattern: Antenna-TX 2D Pattern at $f = 2404\text{MHz}$

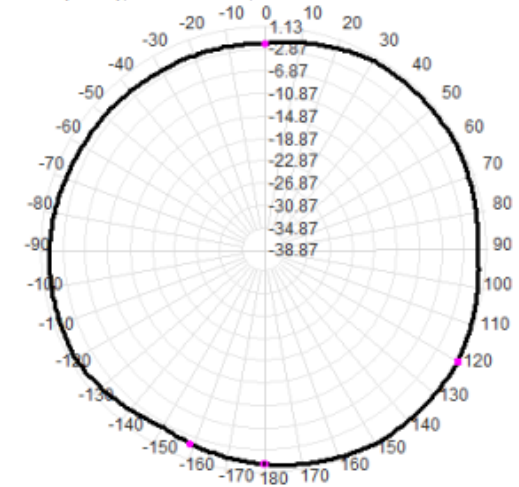
2404.0MHz Total(E1-XZ), Max= 1.10dBi



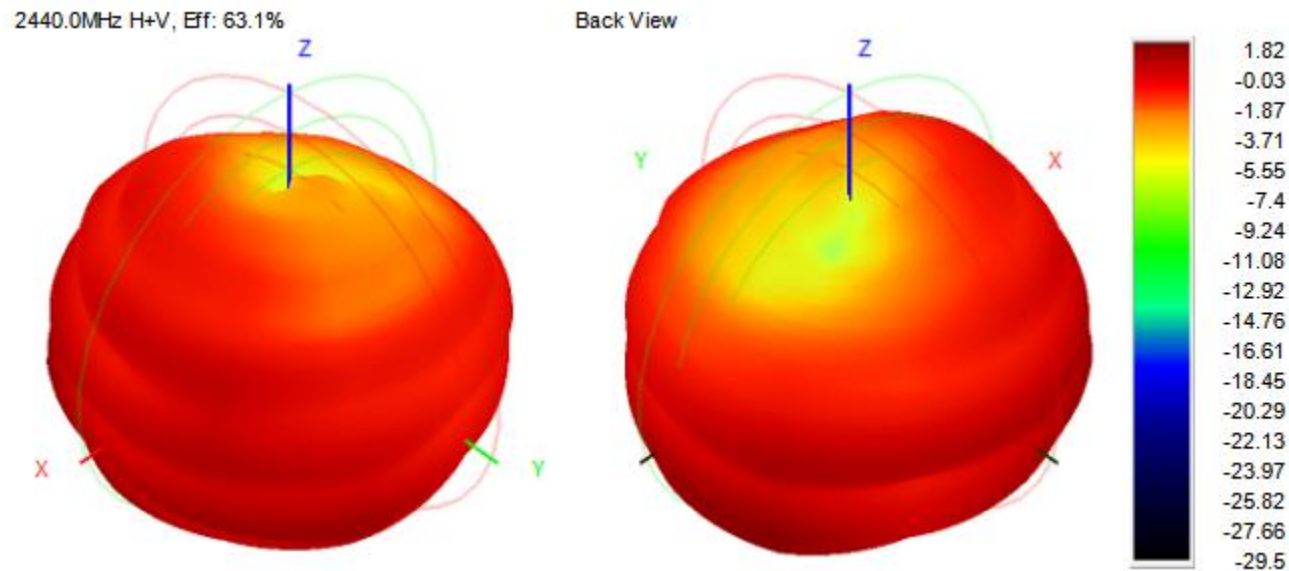
2404.0MHz Total(E2-YZ), Max= 0.37dBi



Total(H-XY), Max= 1.13dBi, CirD=3.61

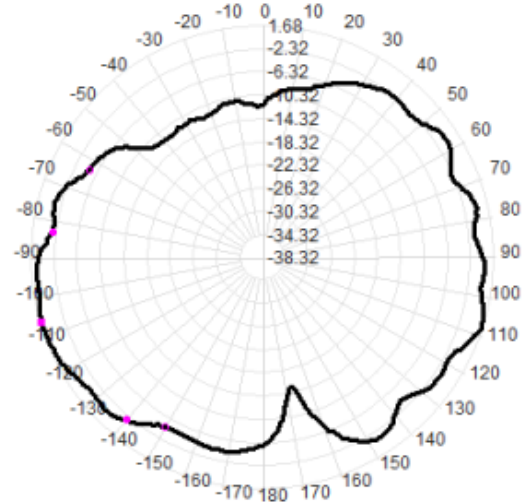


Radiation pattern: Antenna-TX 3D Pattern at $f = 2440\text{MHz}$

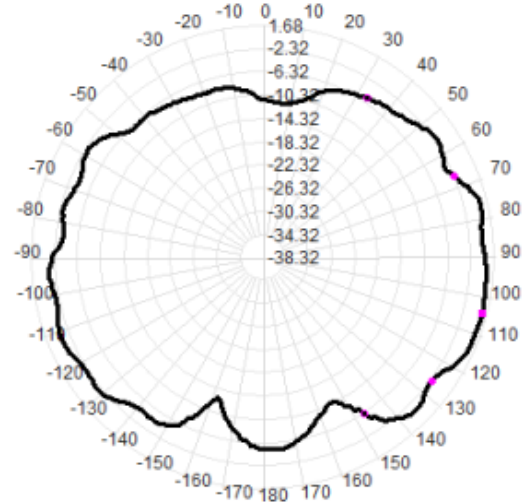


Radiation pattern: Antenna-TX 2D Pattern at $f = 2440\text{MHz}$

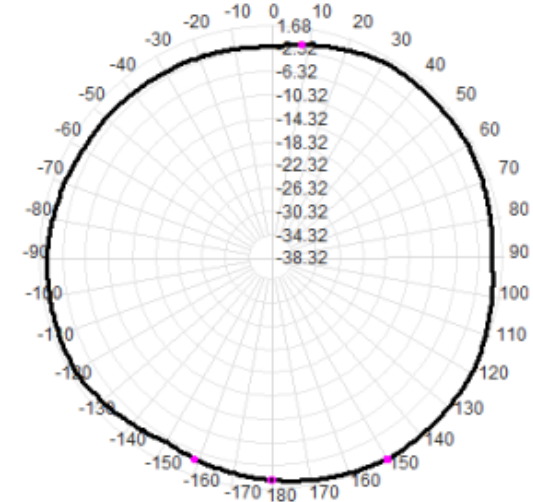
2440.0MHz Total(E1-XZ), Max= 1.25dBi



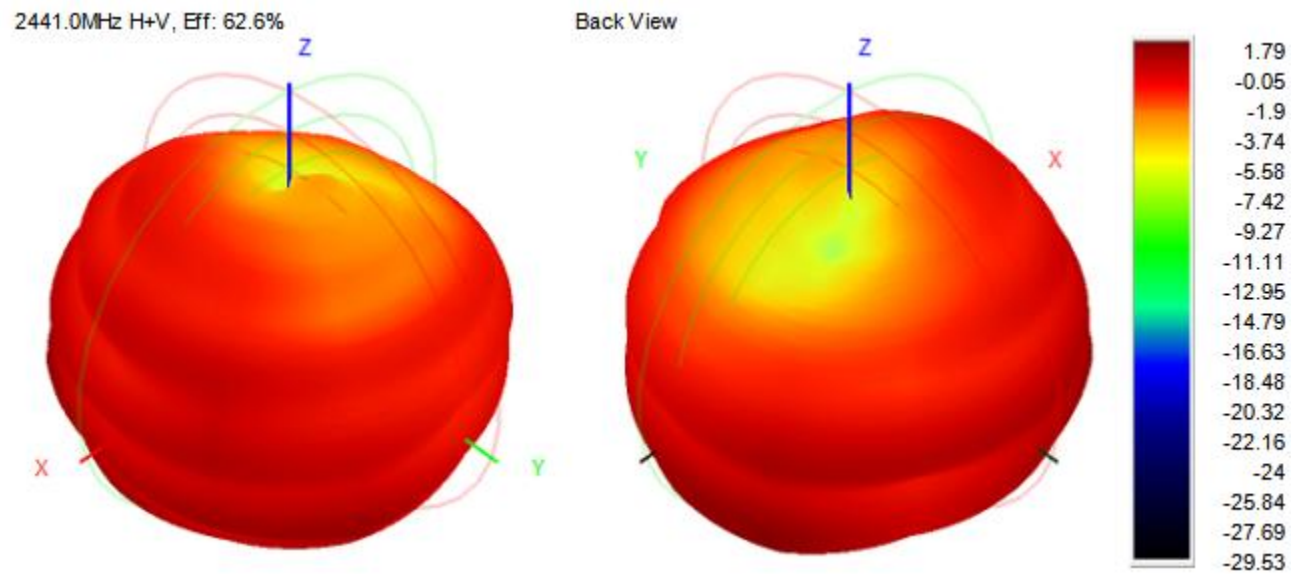
2440.0MHz Total(E2-YZ), Max= 0.57dBi



Total(H-XY), Max= 1.68dBi, CirD=3.72

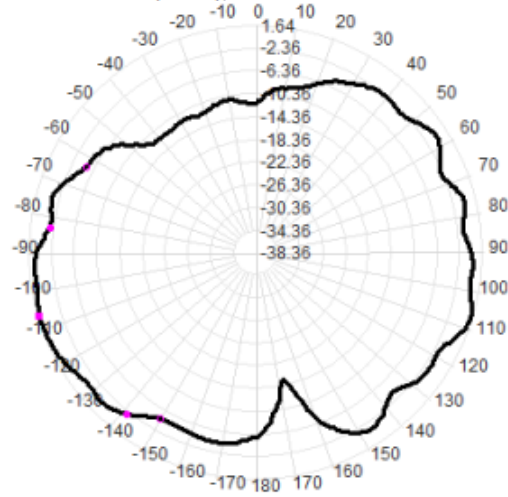


Radiation pattern: Antenna-TX 3D Pattern at $f = 2441\text{MHz}$

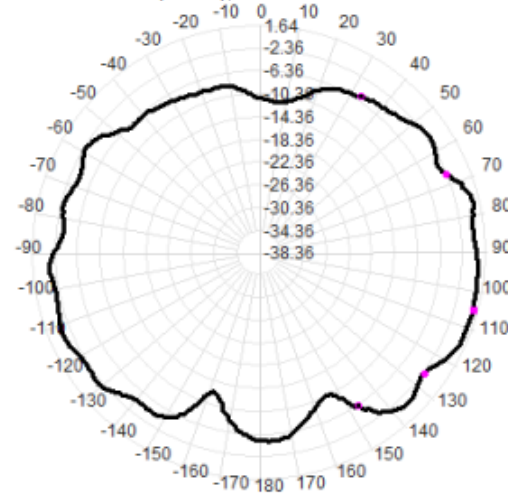


Radiation pattern: Antenna-TX 2D Pattern at $f = 2441\text{MHz}$

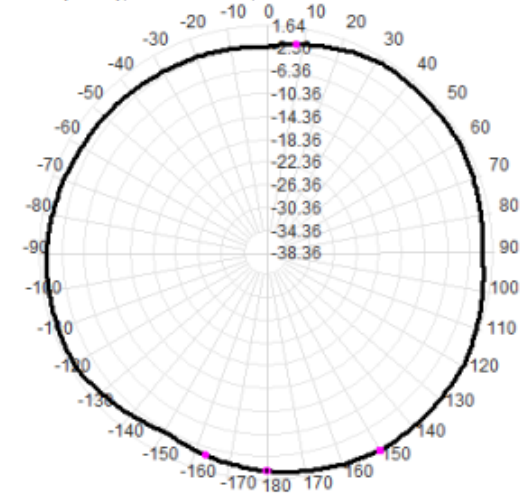
2441.0MHz Total(E1-XZ), Max= 1.22dBi



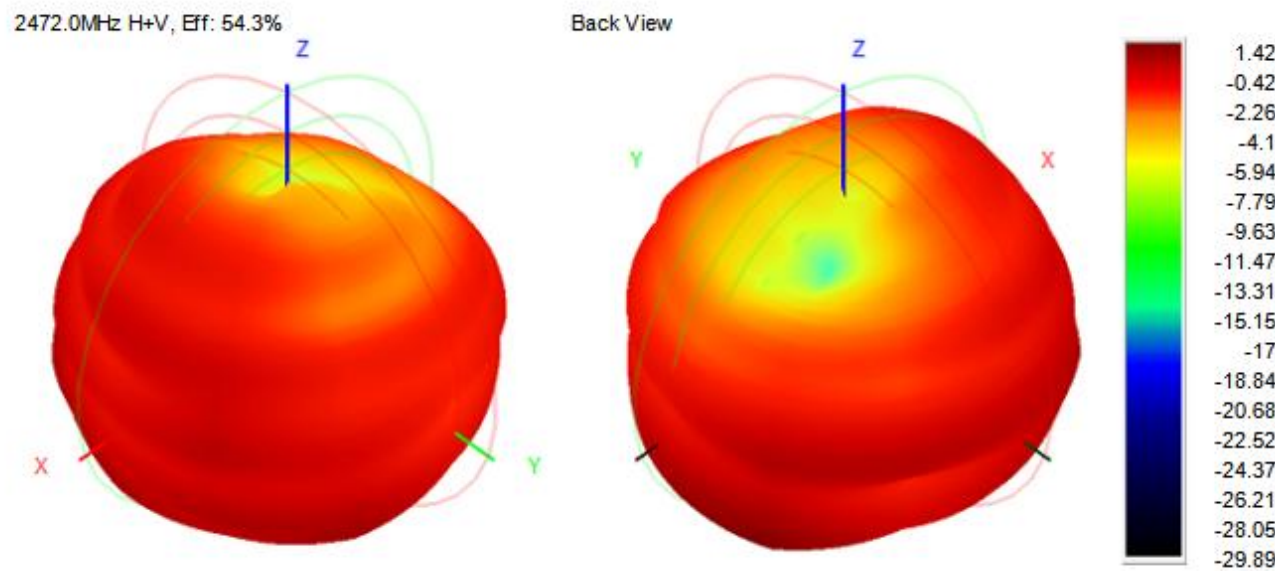
2441.0MHz Total(E2-YZ), Max= 0.53dBi



Total(H-XY), Max= 1.64dBi, CirD=3.96

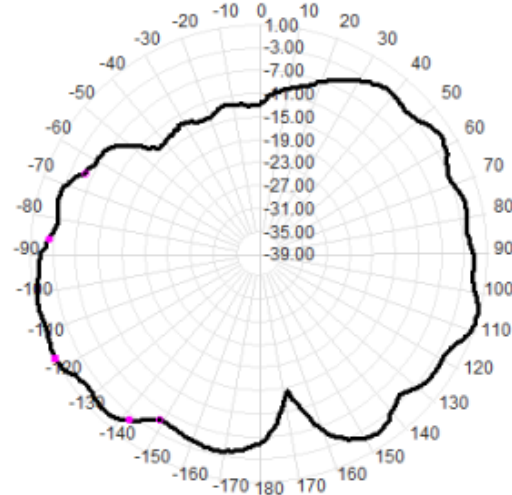


Radiation pattern: Antenna-TX 3D Pattern at $f = 2472\text{MHz}$

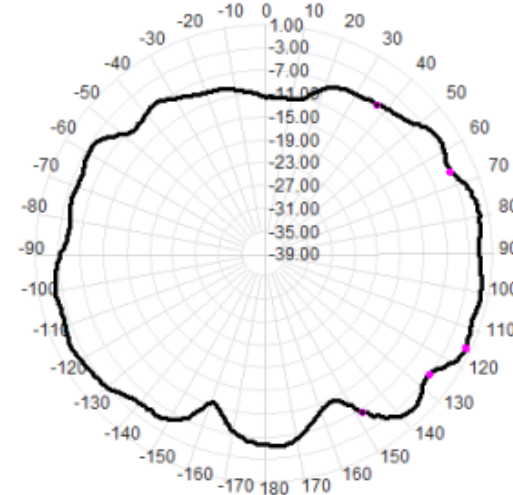


Radiation pattern: Antenna-TX 2D Pattern at $f = 2472\text{MHz}$

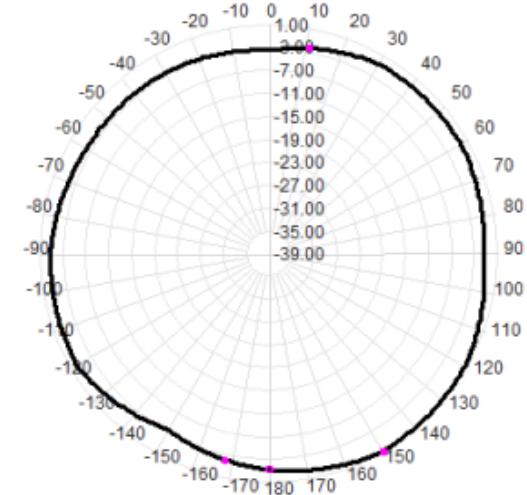
2472.0MHz Total(E1-XZ), Max= 1.00dBi



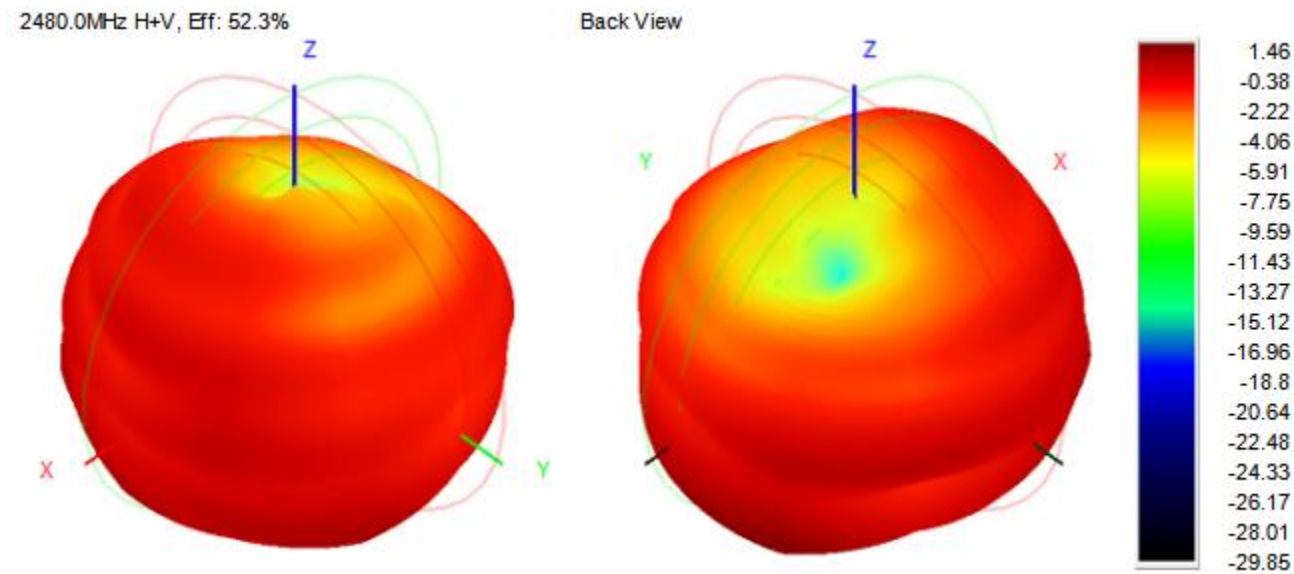
2472.0MHz Total(E2-YZ), Max= -0.29dBi



Total(H-XY), Max= 0.63dBi, CirD=4.38

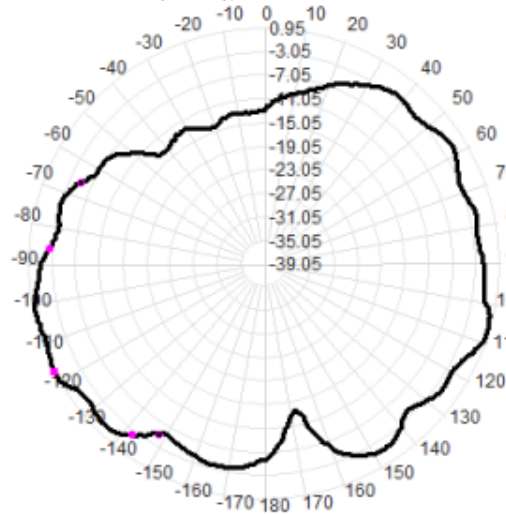


Radiation pattern: Antenna-TX 3D Pattern at $f = 2480\text{MHz}$

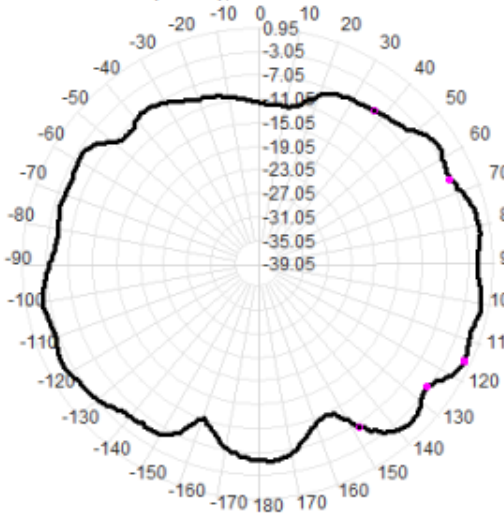


Radiation pattern: Antenna-TX 2D Pattern at $f = 2480\text{MHz}$

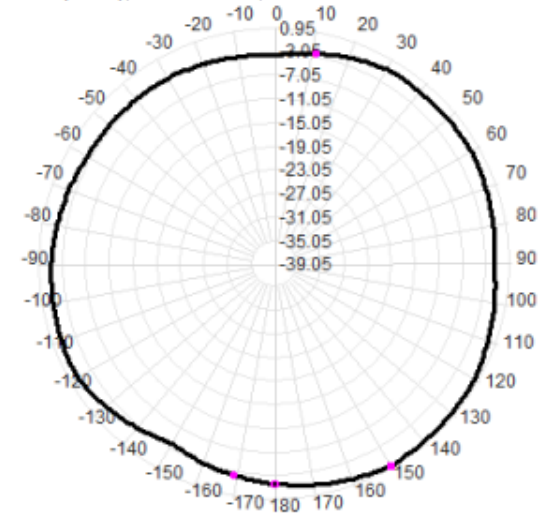
2480.0MHz Total(E1-XZ), Max= 0.95dBi



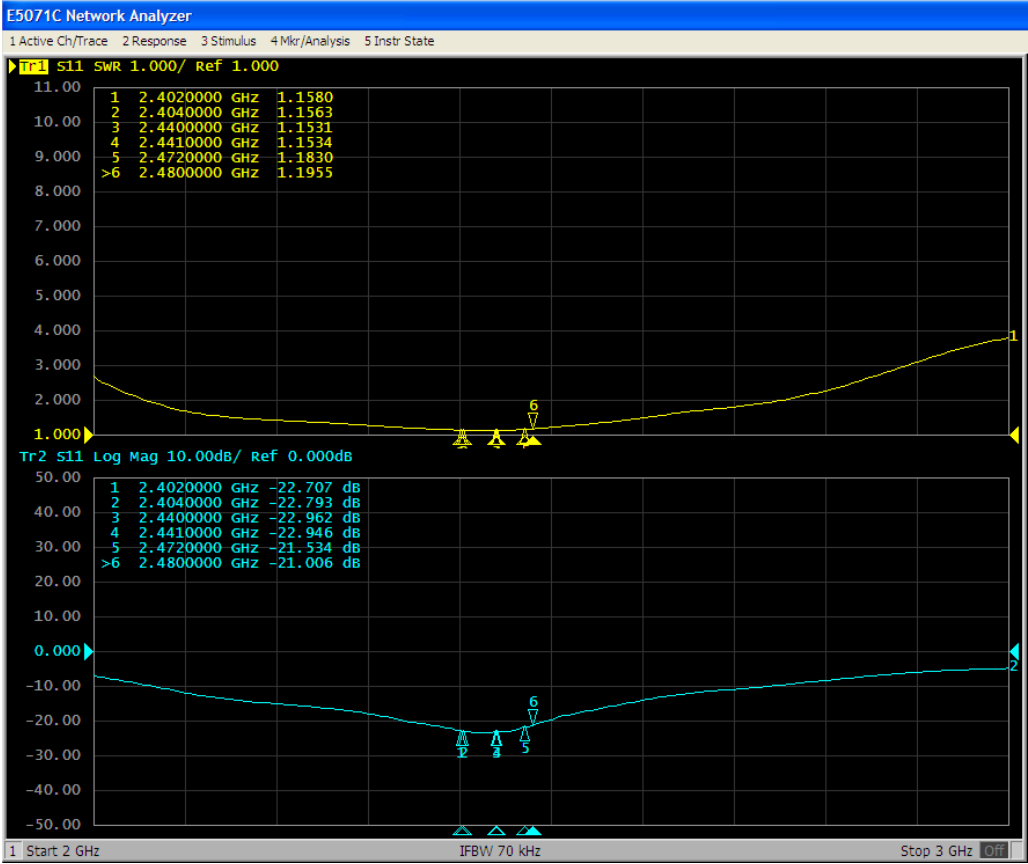
2480.0MHz Total(E2-YZ), Max= -0.48dBi



Total(H-XY), Max= 0.32dBi, CirD=4.43



Rturn Loss: Antenna1



Measurements summary

Frequency ID	1	2	3	4	5	6
Frequency (MHz)	2402.0	2404.0	2440.0	2441.0	2472.0	2480.0
Gain (dBi)	1.36	1.36	1.82	1.79	1.42	1.46
Efficiency (%)	56.84	56.58	63.14	62.60	54.30	52.26
Directivity (dB)	3.82	3.83	3.81	3.82	4.08	4.28
Peak Gain Position (Theta)	87.00	87.00	87.00	87.00	78.00	78.00
Peak Gain Position (Phi)	30.00	30.00	30.00	30.00	150.00	150.00
Efficiency ThetaPol (%)	52.65	52.36	57.70	57.23	48.94	46.91
Efficiency PhiPol (%)	4.19	4.22	5.44	5.38	5.36	5.35
Upper Hem. Efficiency (%)	23.64	23.51	26.29	26.04	21.89	21.00
Lower Hem. Efficiency (%)	33.20	33.07	36.84	36.56	32.41	31.26



Size: 5.3mm*2mm*1mm