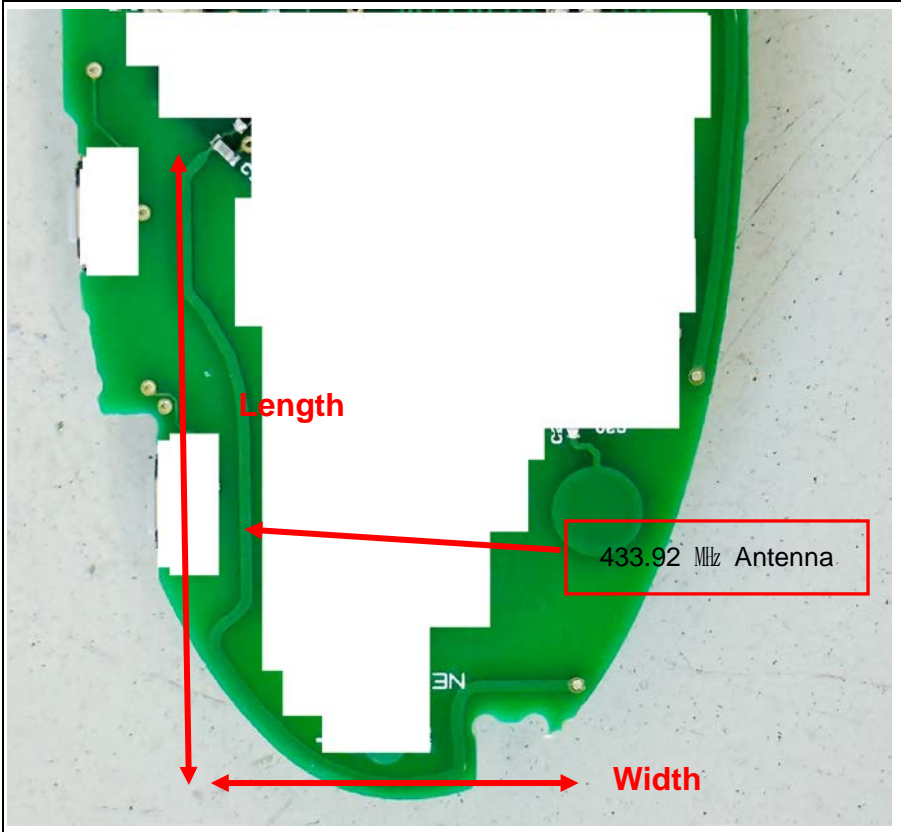
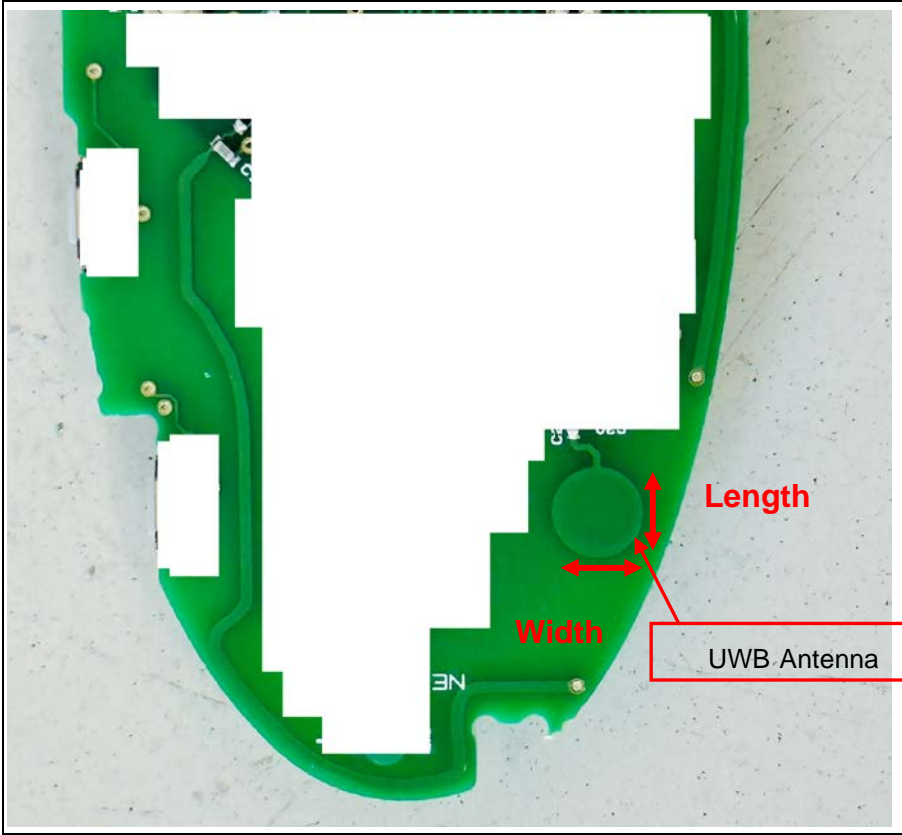


Antenna Information

Item	Contents	
Frequency	433.92 MHz	7 987.2 MHz
Antenna Type	PCB Pattern Antenna	
Antenna peak gain	-11.48 dBi	-5.56 dBi
Manufacturer / Model name	Hyundai Mobis Co., Ltd. / -	
Address of manufacturer	203, Teheran-ro, Gangnam-gu, Seoul, South Korea, 135-977	
Test Laboratory	RadiAnt Co., Ltd	EMTI
Antenna Length	30 mm	5 mm
Antenna Width	16 mm	5 mm



Model name: FOB-4FA2U44



Model name: FOB-4FA2U44

Summary

Multiple Frequency

Multiple Cut

3D-View

Reserved

No.	Freq.	PwrSum				H($\theta=90$)				E1($\phi=0$)				E2($\phi=90$)				
		Eff. [%]	Avg. [dBi]	Peak [dBi]	θ [deg]	ϕ [deg]	Avg. [dBi]	Peak [dBi]	ϕ [deg]	BW [deg]	Avg. [dBi]	Peak [dBi]	θ [deg]	BW [deg]	Avg. [dBi]	Peak [dBi]	θ [deg]	BW [deg]
1	432.920	2.44	-16.12	-11.46	75.00	170.00	-13.33	-12.28	175.00	999.00	-16.59	-11.50	-75.00	53.76	-17.34	-13.06	80.00	66.43
2	433.920	2.42	-16.16	-11.48	75.00	165.00	-13.35	-12.27	180.00	999.00	-16.62	-11.50	-75.00	53.50	-17.37	-13.08	80.00	65.55
3	434.920	2.42	-16.17	-11.45	75.00	175.00	-13.36	-12.23	170.00	999.00	-16.63	-11.47	-75.00	53.07	-17.40	-13.09	80.00	64.99

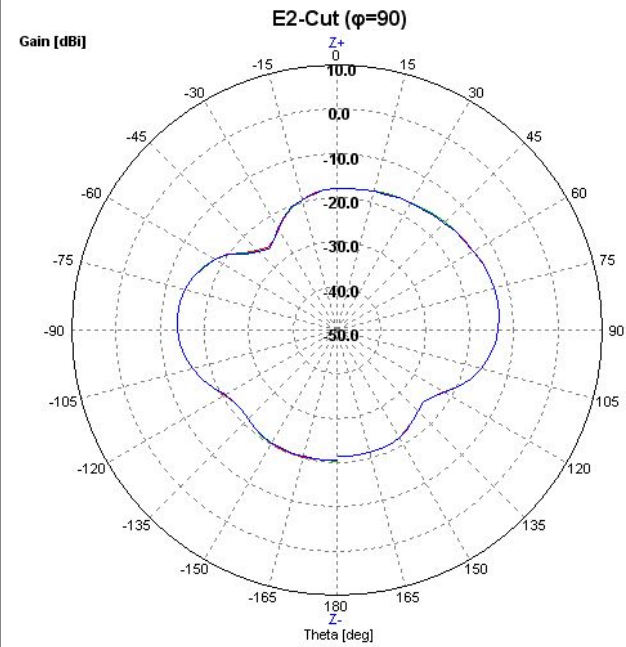
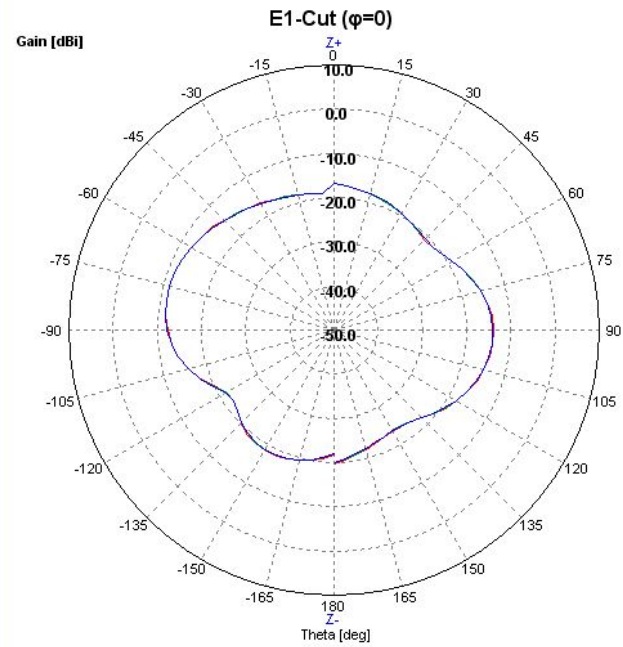
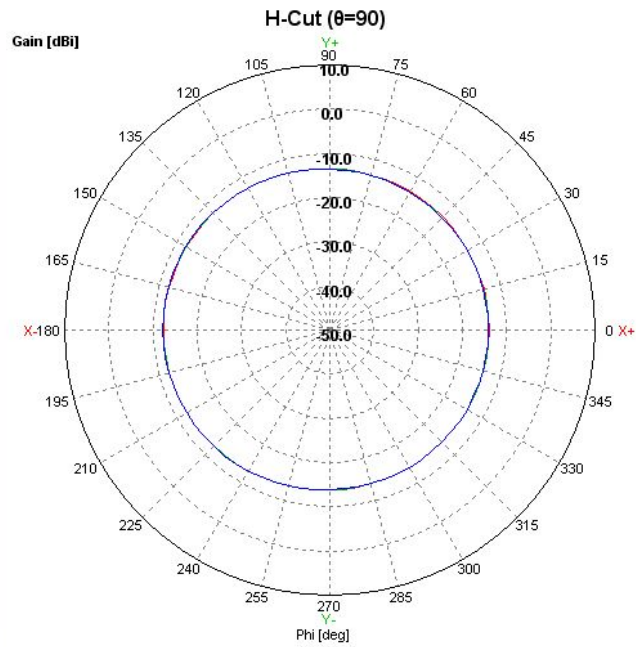
Plot Data

Polarization :

Powr-Sum

Frequency :

432.920 [MHz]
 433.920
 434.920



Graph Option

Style

 Polar
 Rectangular

Zoom

Scale

Max : 10

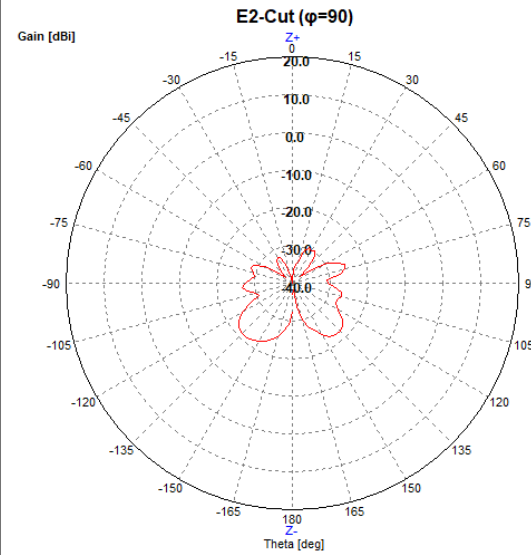
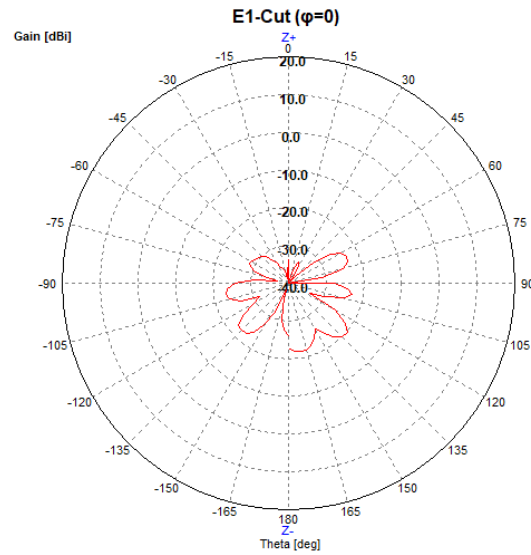
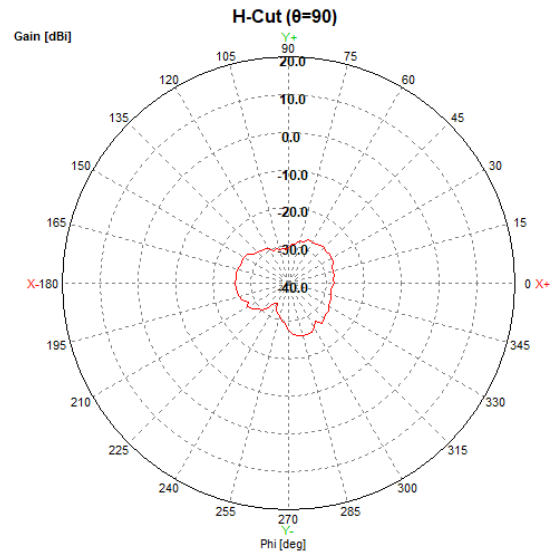
Min : -50

Apply



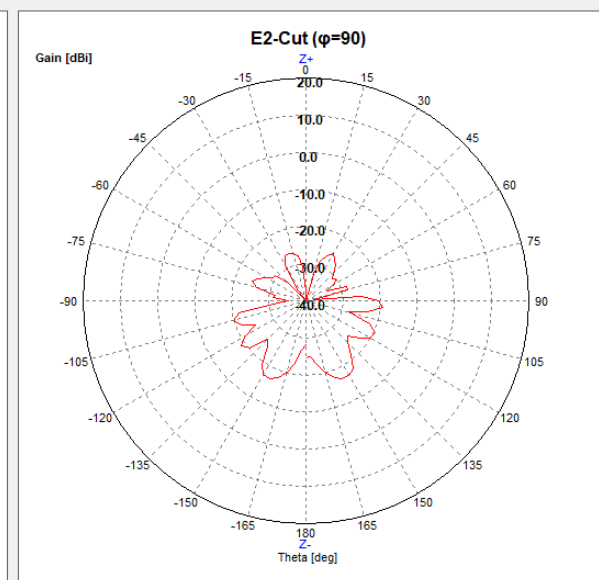
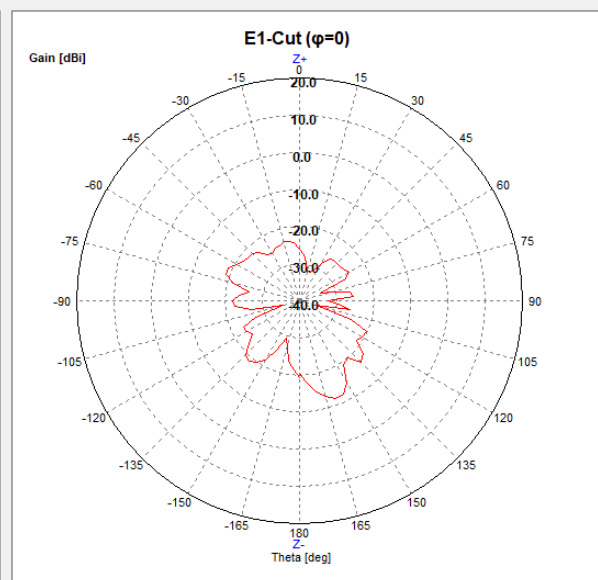
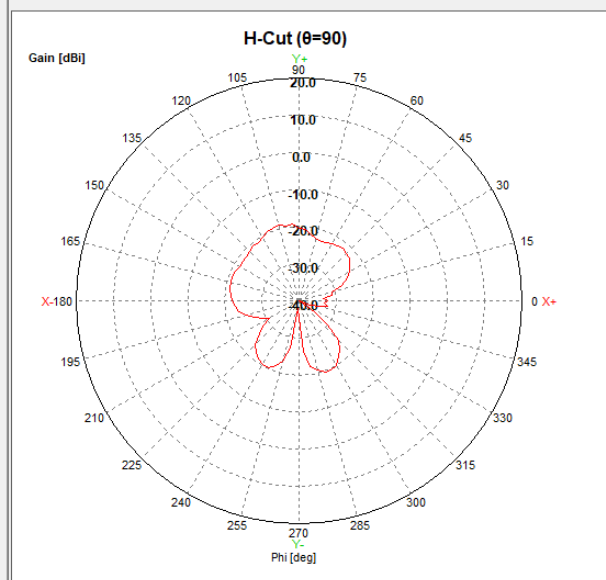
No.	Freq.[GHz]	Eff.[%]	Avg.[dBi]	Peak[dBi]	
1	0.8	0.24	-26.24	-19.70	

No.	Freq.	θ-Pol(H)					H(θ=90)				E1(φ=0)				E2(φ=90)			
		Eff.[%]	Avg.[dBi]	Peak[dBi]	θ[deg]	φ[deg]	Avg.[dBi]	Peak[dBi]	φ[deg]	BW[deg]	Avg.[dBi]	Peak[dBi]	θ[deg]	BW[deg]	Avg.[dBi]	Peak[dBi]	θ[deg]	BW[deg]
1	0.800	0.24	-26.24	-19.70	130.00	0.00	-27.74	-25.54	290.00	81.07	-26.10	-19.70	130.00	19.27	-26.90	-21.08	-140.00	37.90



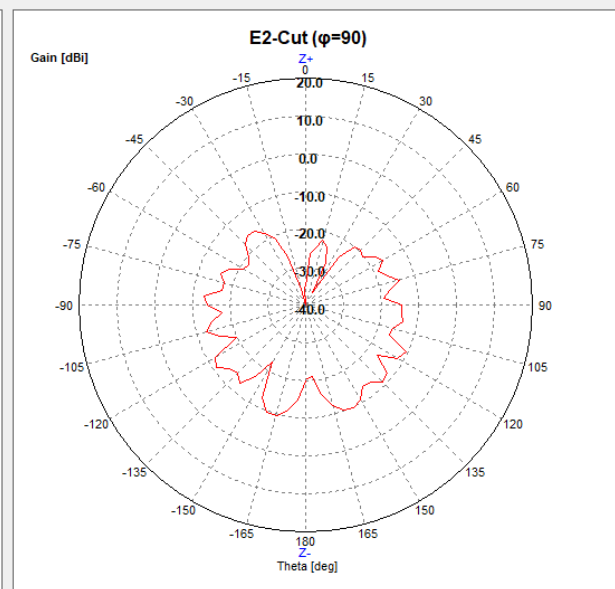
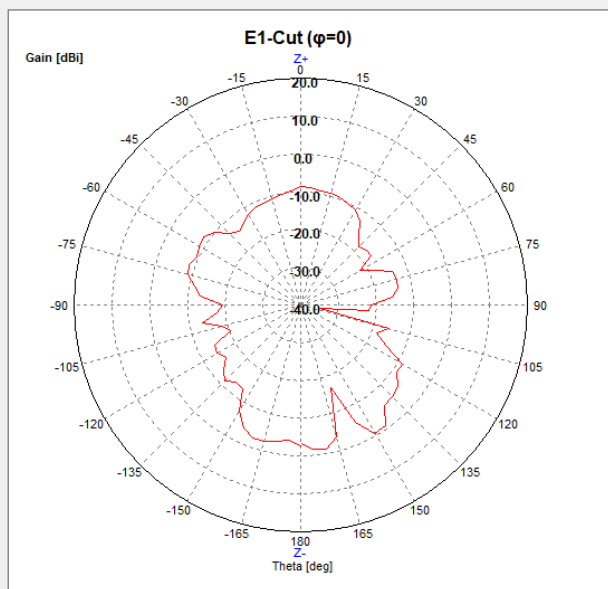
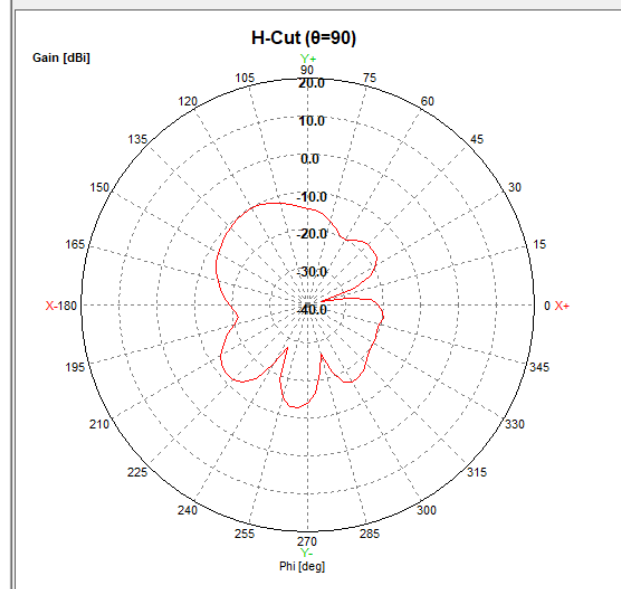
No.	Freq.[GHz]	Eff.[%]	Avg.[dBi]	Peak[dBi]	
2	1.6	0.65	-21.89	-11.87	

No.	Freq.	θ-Pol(H)					H(θ=90)					E1(φ=0)					E2(φ=90)				
		Eff.[%]	Avg.[dBi]	Peak[dBi]	θ[deg]	φ[deg]	Avg.[dBi]	Peak[dBi]	φ[deg]	BW[deg]	Avg.[dBi]	Peak[dBi]	θ[deg]	BW[deg]	Avg.[dBi]	Peak[dBi]	θ[deg]	BW[deg]			
2	1.600	0.65	-21.89	-11.87	160.00	350.00	-22.69	-19.00	105.00	101.12	-20.91	-11.91	160.00	19.06	-22.91	-16.82	150.00	22.50			



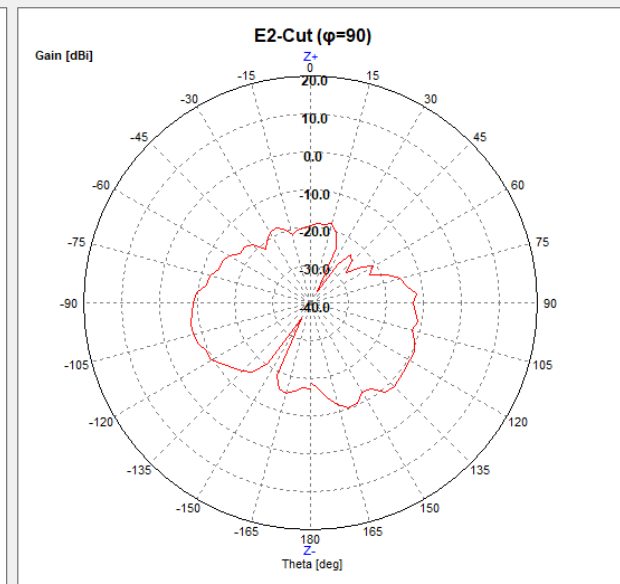
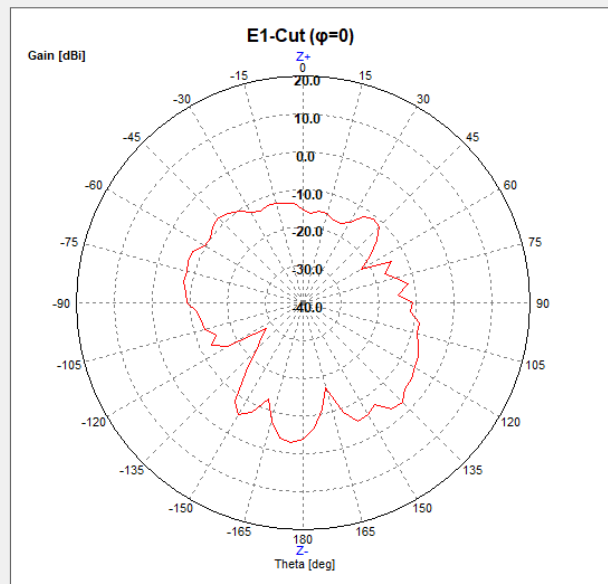
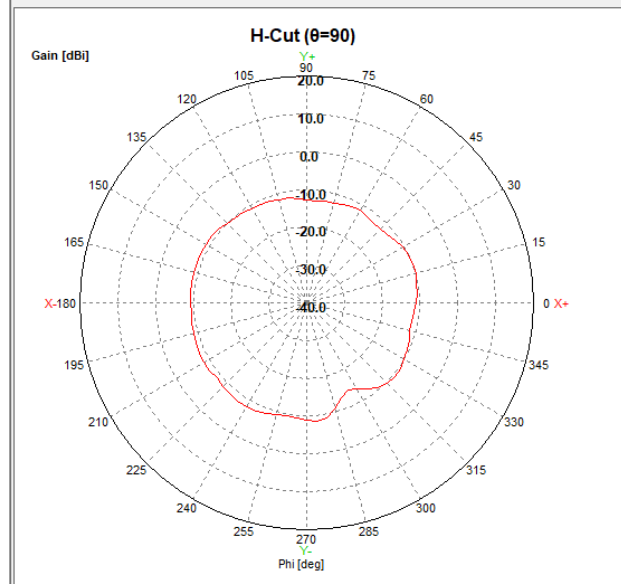
No.	Freq.[GHz]	Eff.[%]	Avg.[dBi]	Peak[dBi]	
3	2.15	6.99	-11.55	-0.58	

No.	Freq.	θ-Pol(H)					H(θ=90)					E1(φ=0)					E2(φ=90)				
		Eff.[%]	Avg.[dBi]	Peak[dBi]	θ[deg]	φ[deg]	Avg.[dBi]	Peak[dBi]	φ[deg]	BW[deg]	Avg.[dBi]	Peak[dBi]	θ[deg]	BW[deg]	Avg.[dBi]	Peak[dBi]	θ[deg]	BW[deg]			
3	2.150	6.99	-11.55	-0.56	150.00	5.00	-15.44	-10.44	120.00	58.96	-8.23	-0.87	150.00	11.39	-15.15	-9.75	-165.00	16.63			



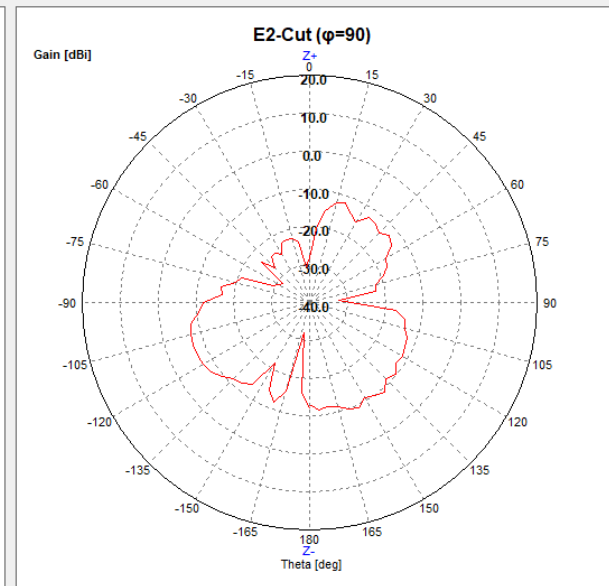
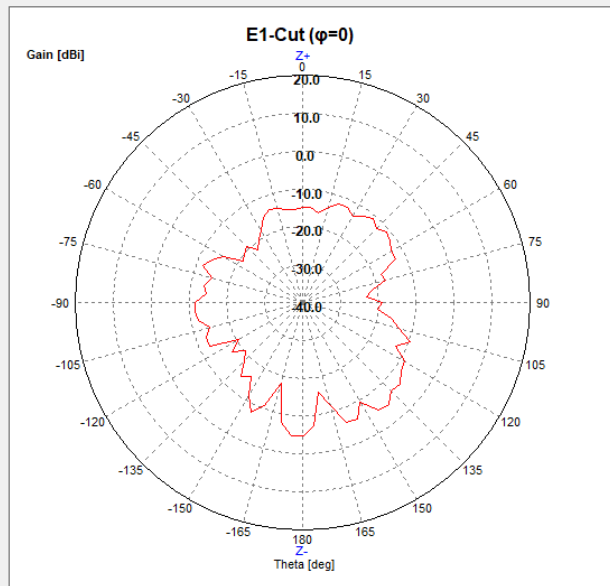
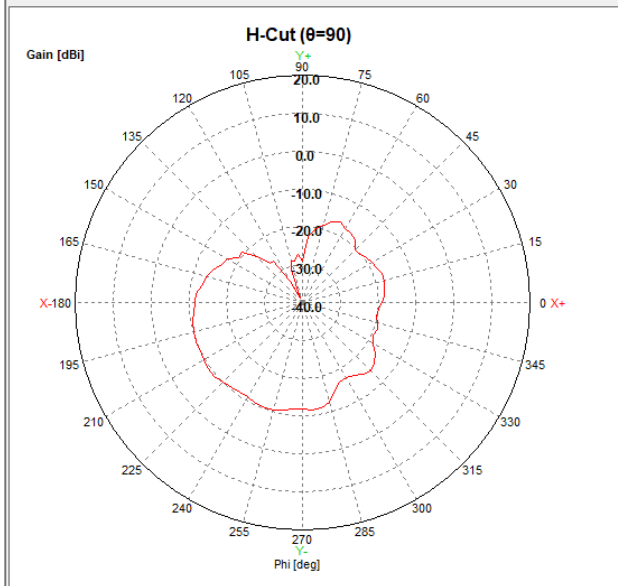
No.	Freq.[GHz]	Eff.[%]	Avg.[dBi]	Peak[dBi]	
4	2.7	8.4	-10.76	-2.66	

No.	Freq.	θ-Pol(H)					H(θ=90)					E1(φ=0)				E2(φ=90)			
		Eff.[%]	Avg.[dBi]	Peak[dBi]	θ[deg]	φ[deg]	Avg.[dBi]	Peak[dBi]	φ[deg]	BW[deg]	Avg.[dBi]	Peak[dBi]	θ[deg]	BW[deg]	Avg.[dBi]	Peak[dBi]	θ[deg]	BW[deg]	
4	2.700	8.40	-10.76	-2.66	135.00	0.00	-10.24	-8.10	240.00	162.85	-9.13	-2.66	135.00	20.93	-13.20	-7.94	-100.00	40.59	



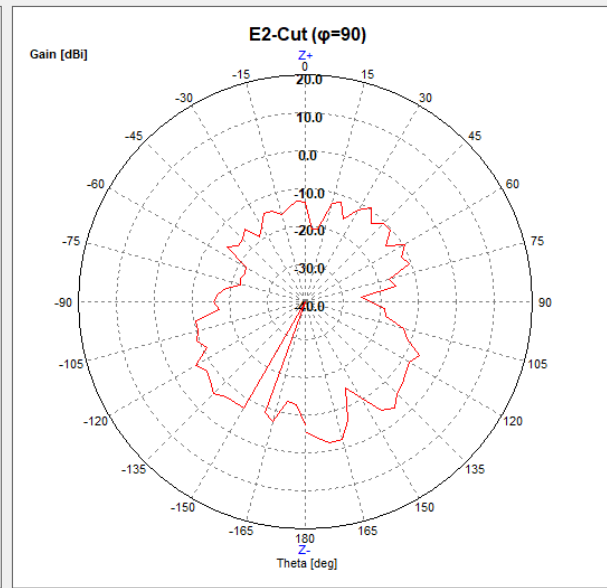
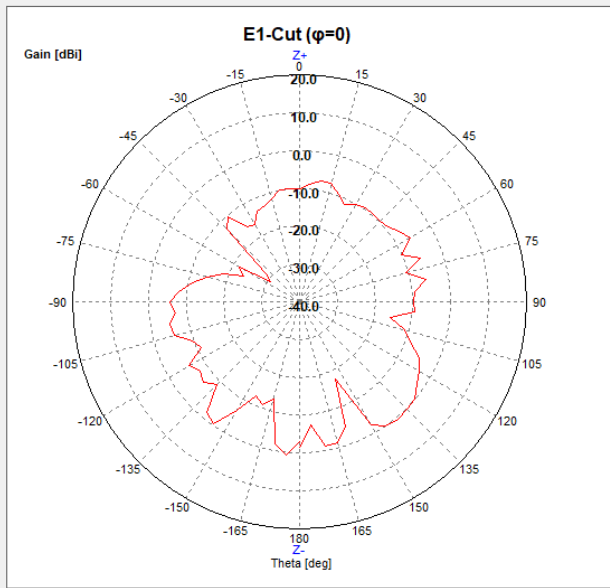
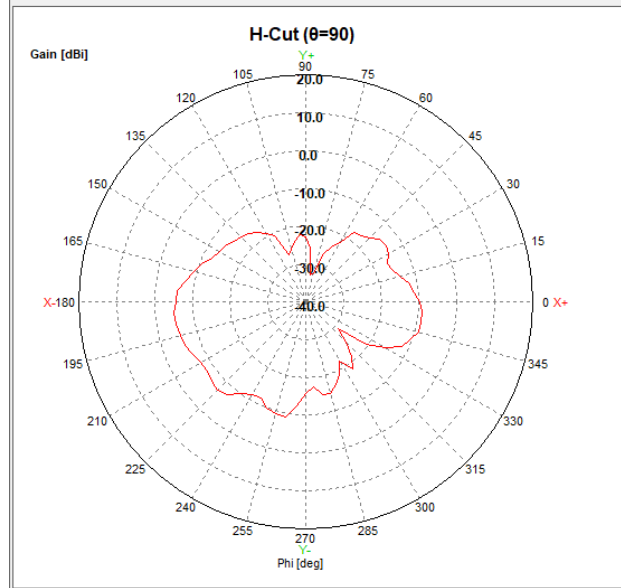
No.	Freq.[GHz]	Eff.[%]	Avg.[dBi]	Peak[dBi]	
5	3.22	5.37	-12.7	-4.16	

No.	Freq.	θ-Pol(H)					H(θ=90)				E1(φ=0)				E2(φ=90)			
		Eff.[%]	Avg.[dBi]	Peak[dBi]	θ[deg]	φ[deg]	Avg.[dBi]	Peak[dBi]	φ[deg]	BW[deg]	Avg.[dBi]	Peak[dBi]	θ[deg]	BW[deg]	Avg.[dBi]	Peak[dBi]	θ[deg]	BW[deg]
5	3.220	5.37	-12.70	-4.16	130.00	30.00	-14.39	-9.66	220.00	111.55	-11.33	-4.49	180.00	999.00	-13.08	-7.13	-110.00	35.27



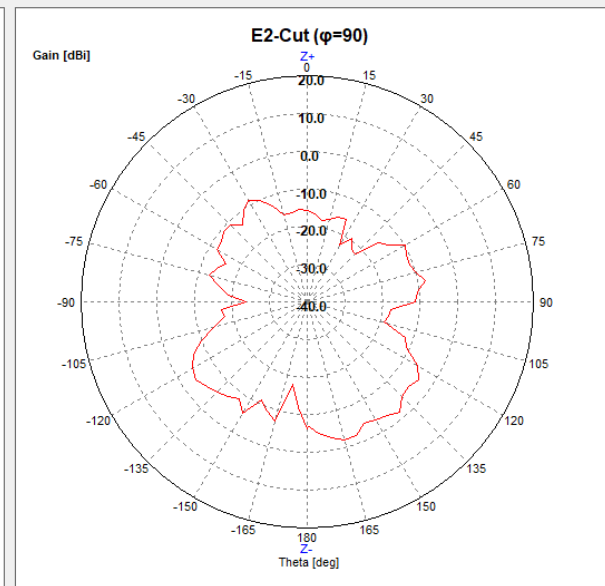
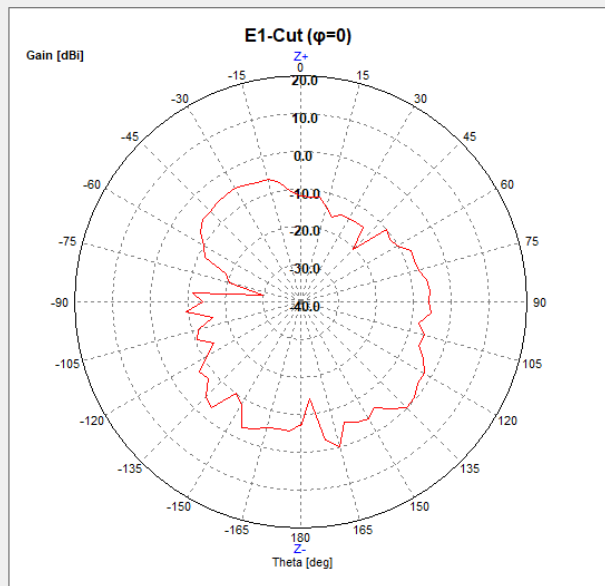
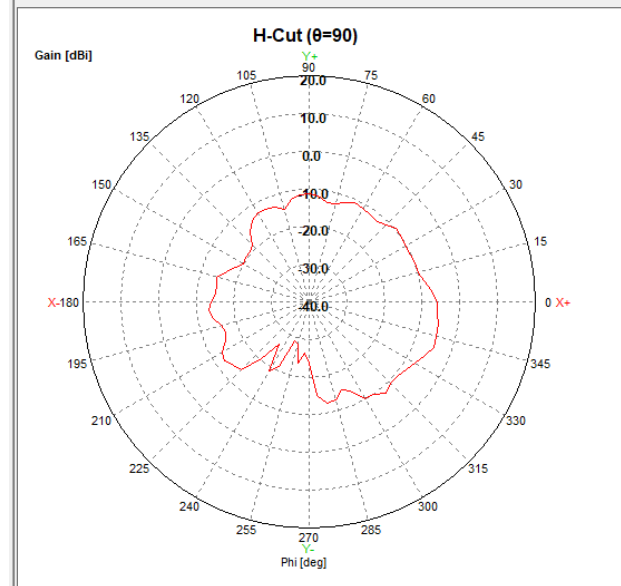
No.	Freq.[GHz]		Eff.[%]	Avg.[dBi]	Peak[dBi]	
6	3.735		13.67	-8.64	0.99	

No.	Freq.	θ -Pol(H)					H($\theta=90$)					E1($\varphi=0$)				E2($\varphi=90$)			
		Eff.[%]	Avg.[dBi]	Peak[dBi]	θ [deg]	φ [deg]	Avg.[dBi]	Peak[dBi]	φ [deg]	BW[deg]	Avg.[dBi]	Peak[dBi]	θ [deg]	BW[deg]	Avg.[dBi]	Peak[dBi]	θ [deg]	BW[deg]	
6	3.735	13.67	-8.64	0.99	140.00	350.00	-11.42	-4.99	185.00	39.74	-5.99	0.79	-175.00	9.14	-9.75	-2.06	170.00	16.32	



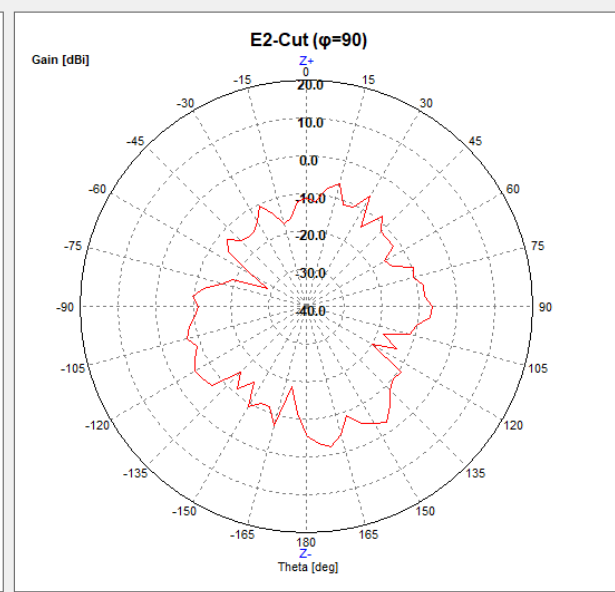
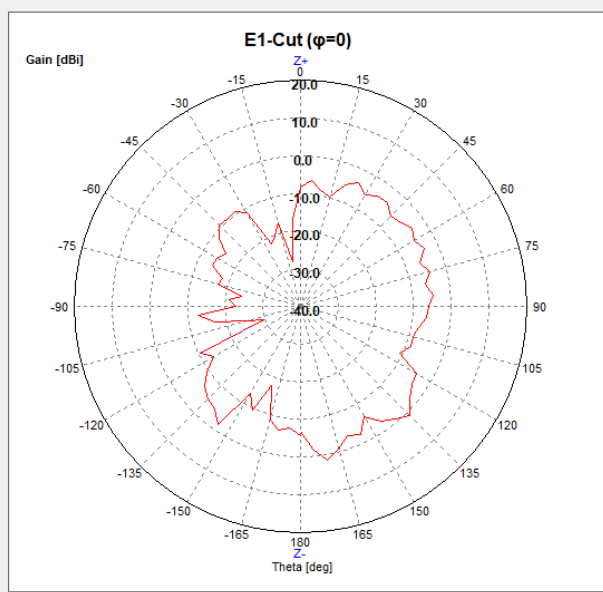
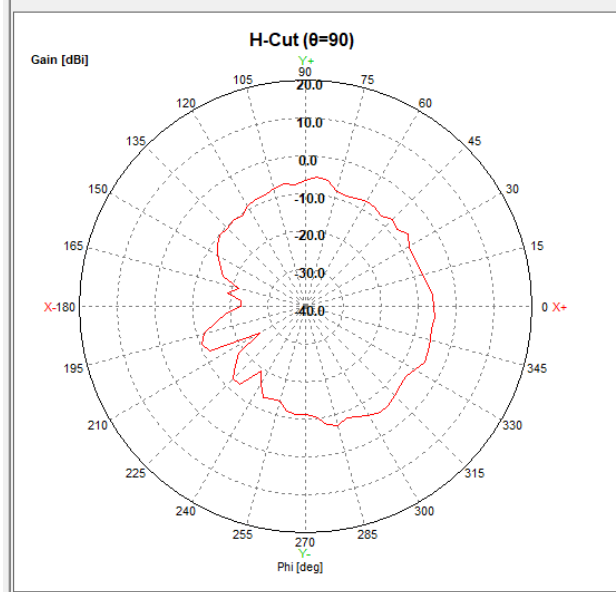
No.	Freq.[GHz]	Eff.[%]	Avg.[dBi]	Peak[dBi]	
7	4.27	15.78	-8.02	0.34	

No.	Freq.	Eff.[%]	Avg.[dBi]	Peak[dBi]	θ [deg]	φ [deg]	H($\theta=90$) Avg.[dBi]	Peak[dBi]	φ [deg]	BW[deg]	E1($\varphi=0$) Avg.[dBi]	Peak[dBi]	θ [deg]	BW[deg]	E2($\varphi=90$) Avg.[dBi]	Peak[dBi]	θ [deg]	BW[deg]
7	4.270	15.78	-8.02	0.34	165.00	20.00	-11.30	-4.84	340.00	999.00	-6.55	-0.31	165.00	7.78	-8.47	-1.65	140.00	40.71



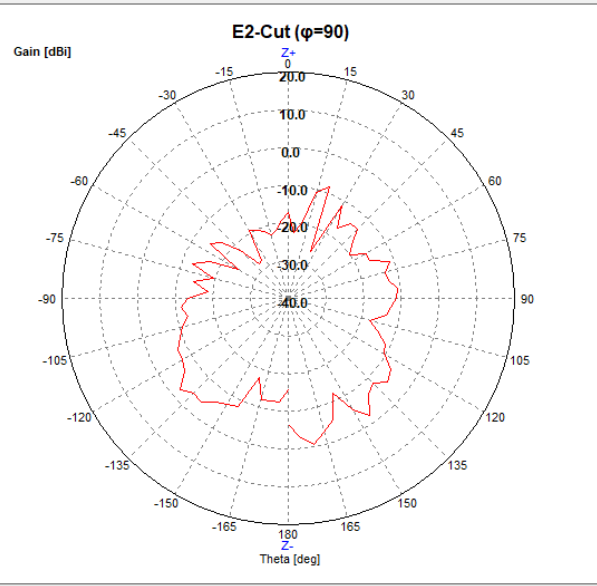
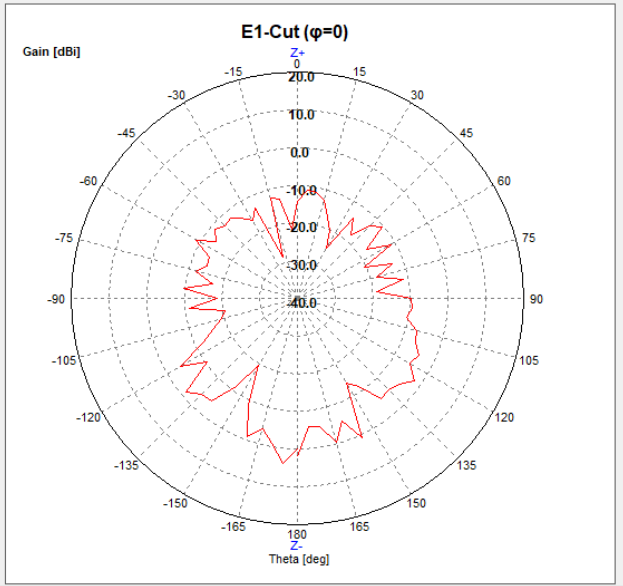
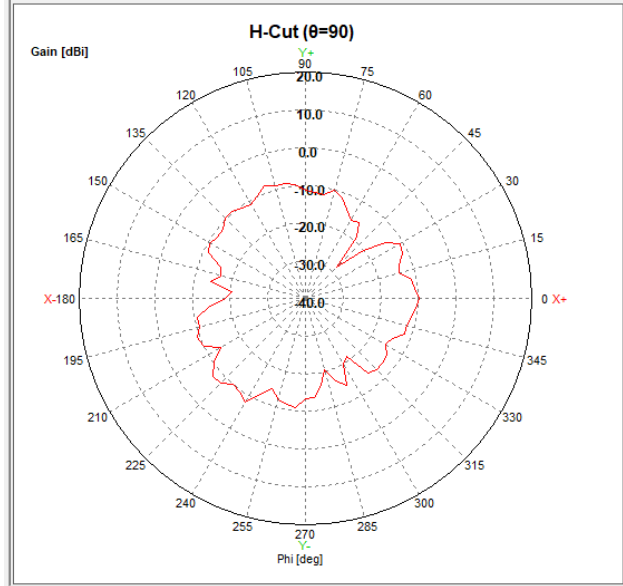
No.	Freq.[GHz]	Eff.[%]	Avg.[dBi]	Peak[dBi]	
8	4.800	14.88	-8.28	1.57	

No.	Freq.	θ-Pol(H)					H(θ=90)				E1(φ=0)				E2(φ=90)				
		Eff.[%]	Avg.[dBi]	Peak[dBi]	θ[deg]	φ[deg]	Avg.[dBi]	Peak[dBi]	φ[deg]	BW[deg]	Avg.[dBi]	Peak[dBi]	θ[deg]	BW[deg]	Avg.[dBi]	Peak[dBi]	θ[deg]	BW[deg]	
8	4.800	14.88	-8.28	1.57	170.00	5.00	-8.83	-5.08	335.00	999.00	-6.13	1.38	170.00	10.90	-9.14	-2.13	170.00	14.15	



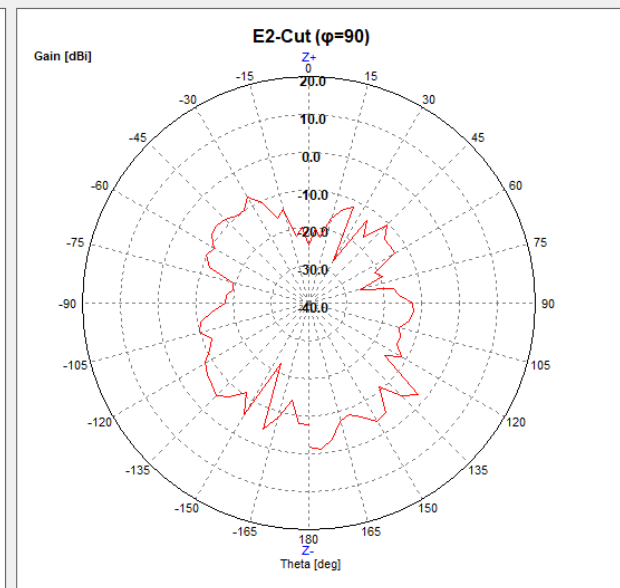
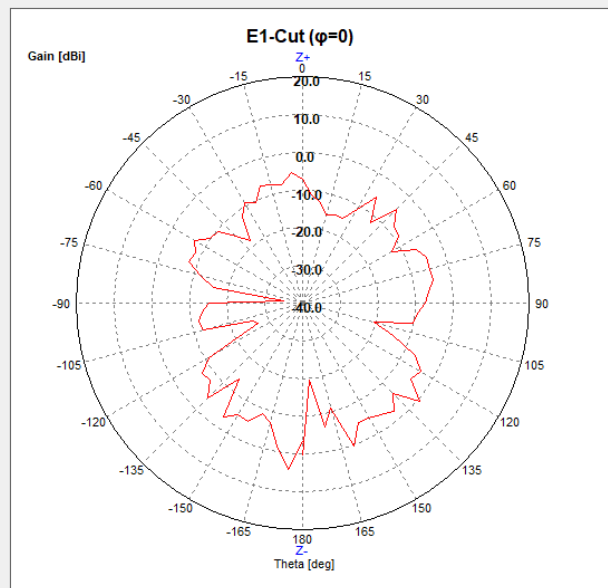
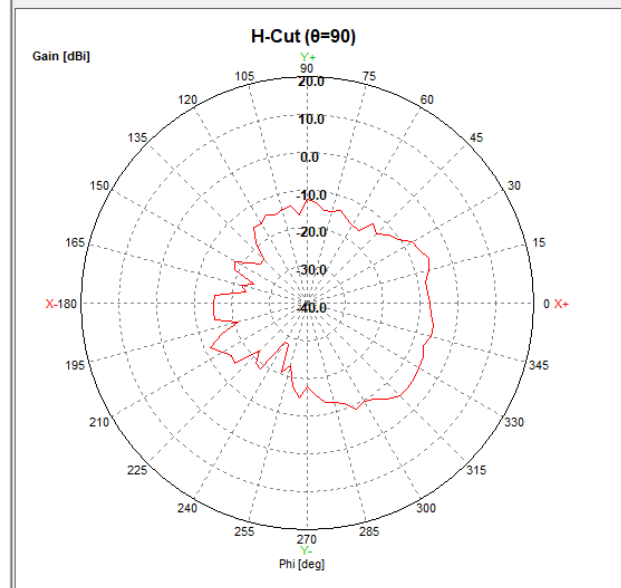
No.	Freq.[GHz]		Eff.[%]	Avg.[dBi]	Peak[dBi]		
9	5.400		10.23	-9.90	3.91		

No.	Freq.	θ -Pol(H)					H($\theta=90$)				E1($\phi=0$)				E2($\phi=90$)			
		Eff.[%]	Avg.[dBi]	Peak[dBi]	θ [deg]	ϕ [deg]	Avg.[dBi]	Peak[dBi]	ϕ [deg]	BW[deg]	Avg.[dBi]	Peak[dBi]	θ [deg]	BW[deg]	Avg.[dBi]	Peak[dBi]	θ [deg]	BW[deg]
9	5.400	10.23	-9.90	3.91	175.00	185.00	-11.93	-7.82	220.00	29.12	-6.81	3.82	-175.00	6.90	-9.41	-0.69	170.00	12.00



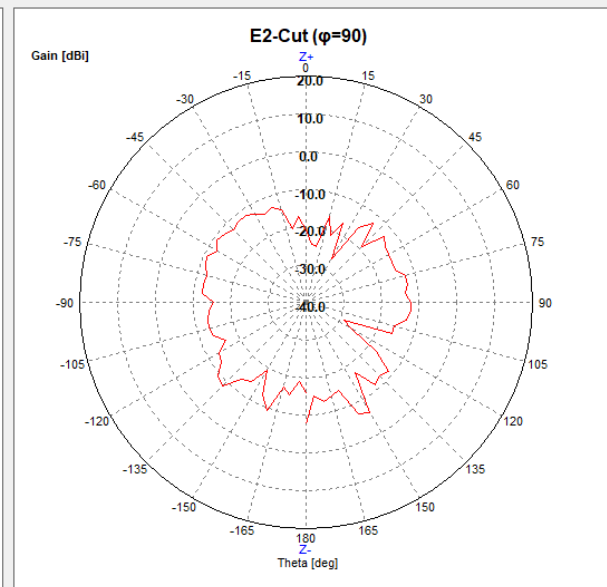
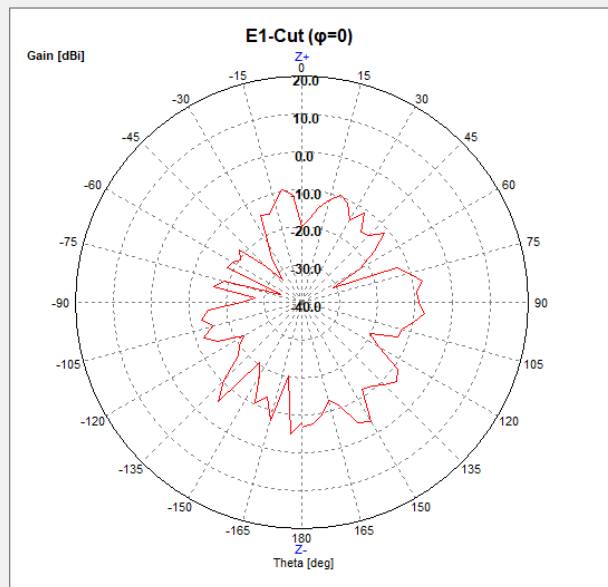
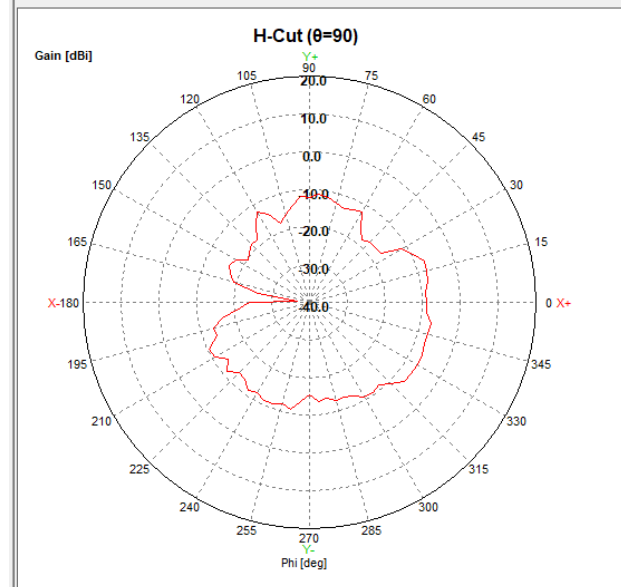
No.	Freq.[GHz]	Eff.[%]	Avg.[dBi]	Peak[dBi]	
10	6.000	12.28	-9.11	4.29	

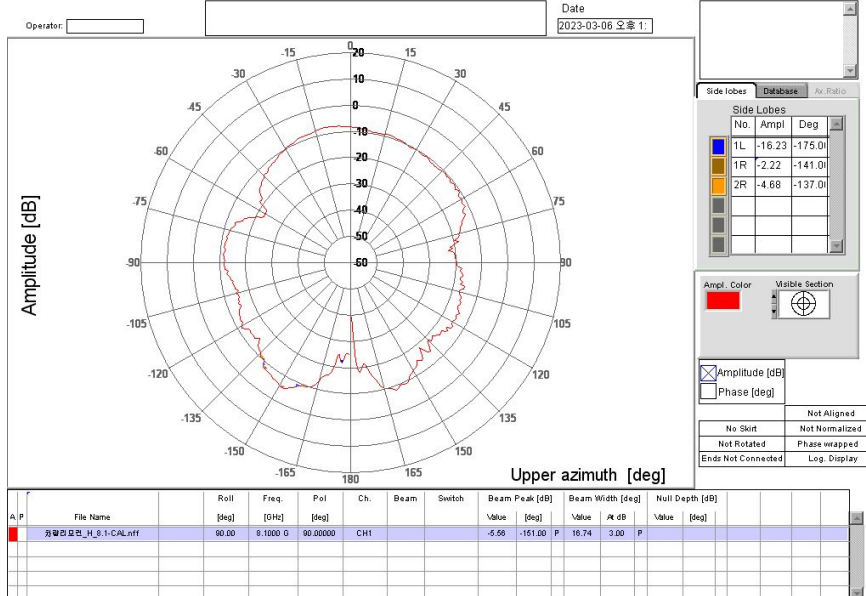
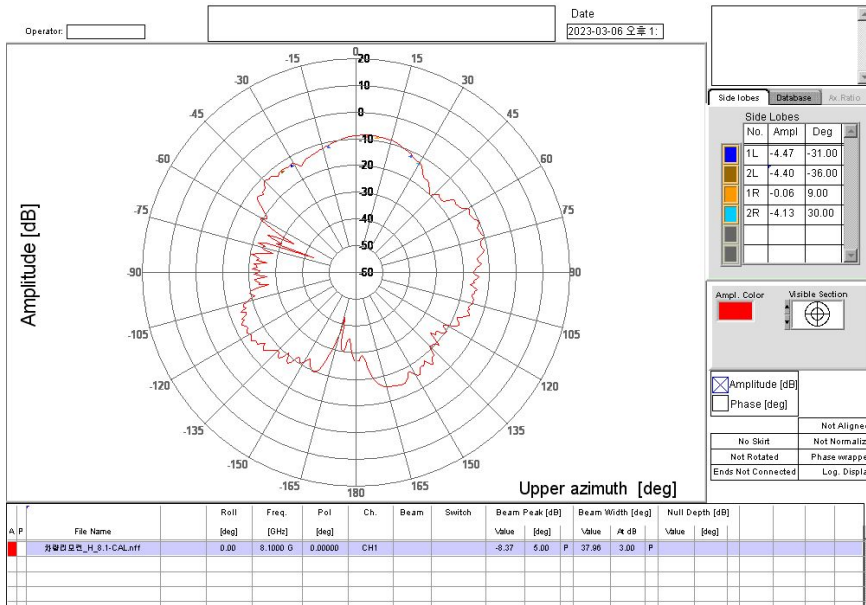
No.	Freq.	θ -Pol(H)					H($\theta=90$)					E1($\phi=0$)					E2($\phi=90$)				
		Eff.[%]	Avg.[dBi]	Peak[dBi]	θ [deg]	ϕ [deg]	Avg.[dBi]	Peak[dBi]	ϕ [deg]	BW[deg]	Avg.[dBi]	Peak[dBi]	θ [deg]	BW[deg]	Avg.[dBi]	Peak[dBi]	θ [deg]	BW[deg]			
10	6.000	12.28	-9.11	4.29	175.00	170.00	-11.08	-5.22	320.00	999.00	-6.40	4.20	-175.00	4.57	-9.44	-1.12	175.00	999.00			



No.	Freq.[GHz]	Eff.[%]	Avg.[dBi]	Peak[dBi]	
11	6.500	5.83	-12.49	-3.13	

No.	Freq.	θ-Pol(H)					H(θ=90)					E1(φ=0)					E2(φ=90)				
		Eff.[%]	Avg.[dBi]	Peak[dBi]	θ[deg]	φ[deg]	Avg.[dBi]	Peak[dBi]	φ[deg]	BW[deg]	Avg.[dBi]	Peak[dBi]	θ[deg]	BW[deg]	Avg.[dBi]	Peak[dBi]	θ[deg]	BW[deg]			
11	6.500	5.83	-12.49	-3.13	150.00	345.00	-11.74	-6.84	330.00	999.00	-11.46	-3.46	150.00	8.19	-13.33	-6.17	150.00	7.55			



No.	Req. [GHz]	Peak [dBi]																																				
12	8.1_E	-5.56	 <p>Operator: [] Date: 2023-03-06 오후 1:</p> <p>Amplitude [dB]</p> <p>Upper azimuth [deg]</p> <table border="1"> <thead> <tr> <th>File Name</th> <th>Roll [deg]</th> <th>Freq. [GHz]</th> <th>Pol. [deg]</th> <th>Ch.</th> <th>Beam</th> <th>Switch</th> <th>Beam Peak [dB] Value</th> <th>Beam Width [deg] Value</th> <th>Null Depth [dB] Value</th> </tr> </thead> <tbody> <tr> <td>차별도모형_H_8.1-CAL.rtf</td> <td>00.00</td> <td>8.10000</td> <td>90.00000</td> <td>CH1</td> <td></td> <td></td> <td>-5.56</td> <td>16.74</td> <td>3.00</td> </tr> </tbody> </table> <p>Side Lobes Database Ax Ratio</p> <table border="1"> <thead> <tr> <th>No.</th> <th>Ampl</th> <th>Deg</th> </tr> </thead> <tbody> <tr> <td>1L</td> <td>-16.23</td> <td>-175.01</td> </tr> <tr> <td>1R</td> <td>-2.22</td> <td>-141.01</td> </tr> <tr> <td>2R</td> <td>-4.68</td> <td>-137.01</td> </tr> </tbody> </table> <p>Ampl. Color Visible Section</p> <p><input checked="" type="checkbox"/> Amplitude [dB] <input type="checkbox"/> Phase [deg]</p> <p><input type="checkbox"/> No Skirt <input type="checkbox"/> Not Aligned <input type="checkbox"/> Not Rotated <input type="checkbox"/> Not Normalized <input type="checkbox"/> Ends Not Connected <input type="checkbox"/> Phase wrapped <input type="checkbox"/> Log Display</p>	File Name	Roll [deg]	Freq. [GHz]	Pol. [deg]	Ch.	Beam	Switch	Beam Peak [dB] Value	Beam Width [deg] Value	Null Depth [dB] Value	차별도모형_H_8.1-CAL.rtf	00.00	8.10000	90.00000	CH1			-5.56	16.74	3.00	No.	Ampl	Deg	1L	-16.23	-175.01	1R	-2.22	-141.01	2R	-4.68	-137.01			
File Name	Roll [deg]	Freq. [GHz]	Pol. [deg]	Ch.	Beam	Switch	Beam Peak [dB] Value	Beam Width [deg] Value	Null Depth [dB] Value																													
차별도모형_H_8.1-CAL.rtf	00.00	8.10000	90.00000	CH1			-5.56	16.74	3.00																													
No.	Ampl	Deg																																				
1L	-16.23	-175.01																																				
1R	-2.22	-141.01																																				
2R	-4.68	-137.01																																				
13	8.1_H	-8.37	 <p>Operator: [] Date: 2023-03-06 오후 1:</p> <p>Amplitude [dB]</p> <p>Upper azimuth [deg]</p> <table border="1"> <thead> <tr> <th>File Name</th> <th>Roll [deg]</th> <th>Freq. [GHz]</th> <th>Pol. [deg]</th> <th>Ch.</th> <th>Beam</th> <th>Switch</th> <th>Beam Peak [dB] Value</th> <th>Beam Width [deg] Value</th> <th>Null Depth [dB] Value</th> </tr> </thead> <tbody> <tr> <td>차별도모형_H_8.1-CAL.rtf</td> <td>0.00</td> <td>8.10000</td> <td>0.00000</td> <td>CH1</td> <td></td> <td></td> <td>-8.37</td> <td>37.96</td> <td>3.00</td> </tr> </tbody> </table> <p>Side Lobes Database Ax Ratio</p> <table border="1"> <thead> <tr> <th>No.</th> <th>Ampl</th> <th>Deg</th> </tr> </thead> <tbody> <tr> <td>1L</td> <td>-4.47</td> <td>-31.00</td> </tr> <tr> <td>2L</td> <td>-4.40</td> <td>-36.00</td> </tr> <tr> <td>1R</td> <td>-0.06</td> <td>9.00</td> </tr> <tr> <td>2R</td> <td>-4.13</td> <td>30.00</td> </tr> </tbody> </table> <p>Ampl. Color Visible Section</p> <p><input checked="" type="checkbox"/> Amplitude [dB] <input type="checkbox"/> Phase [deg]</p> <p><input type="checkbox"/> No Skirt <input type="checkbox"/> Not Aligned <input type="checkbox"/> Not Rotated <input type="checkbox"/> Not Normalized <input type="checkbox"/> Ends Not Connected <input type="checkbox"/> Phase wrapped <input type="checkbox"/> Log Display</p>	File Name	Roll [deg]	Freq. [GHz]	Pol. [deg]	Ch.	Beam	Switch	Beam Peak [dB] Value	Beam Width [deg] Value	Null Depth [dB] Value	차별도모형_H_8.1-CAL.rtf	0.00	8.10000	0.00000	CH1			-8.37	37.96	3.00	No.	Ampl	Deg	1L	-4.47	-31.00	2L	-4.40	-36.00	1R	-0.06	9.00	2R	-4.13	30.00
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