



Antenna Test Report for Zelda - DVT build

Mar. 01, 2022

Summary

- ***VSWR under 2.0***
- ***Isolation***
 - *Above 40dB for dual band to 6G*
 - *Above 24dB for BLE to dual band ; Above 22dB for BLE to Scanning*
 - *Above 21dB / 25dB for dual band 2.4GHz / 5GHz to Scanning ; Above 33dB for 6G to Scanning*
- ***Average Radiation Efficiency (excluding cable length loss)***
 - *70% for 6G radio*
 - *70% / 82% / 73% for Scanning 2.4GHz / 5GHz / 6GHz*
 - *70% for BLE*
- ***Peak Gain***
 - *4.38dBi for 6G radio*
 - *3.80dBi / 5.54dBi / 5.50dBi for Scanning 2.4GHz / 5GHz / 6GHz*
 - *3.85dBi for BLE*

Antenna Information

Antenna	P/N	Antenna Type
6G1	95XEAJ15.G21	Dipole
6G2	95XEAJ15.G22	Dipole
BLE	95XEAJ15.G23	PIFA
Scanning	95XEAJ15.G24	PIFA

Antenna Efficiency and Gain

	Frequency	5950	6000	6250	6450	6650	6850	7050	7125	Avg.
6G1	Efficiency	61%	63%	62%	61%	61%	63%	62%	61%	62%
	Average Gain	-2.11	-2.03	-2.04	-2.14	-2.14	-2.03	-2.10	-2.14	
	w/o cable loss	70%	71%	71%	70%	70%	71%	70%	70%	70%
	Peak Gain	4.27	4.38	3.52	3.62	3.70	3.78	4.08	3.67	
6G2	Efficiency	63%	64%	63%	65%	64%	63%	64%	62%	63%
	Average Gain	-2.01	-1.92	-2.00	-1.90	-1.96	-2.03	-1.94	-2.05	
	w/o cable loss	70%	71%	70%	71%	70%	70%	71%	70%	70%
	Peak Gain	4.33	4.29	3.91	3.72	3.91	3.95	4.06	4.11	

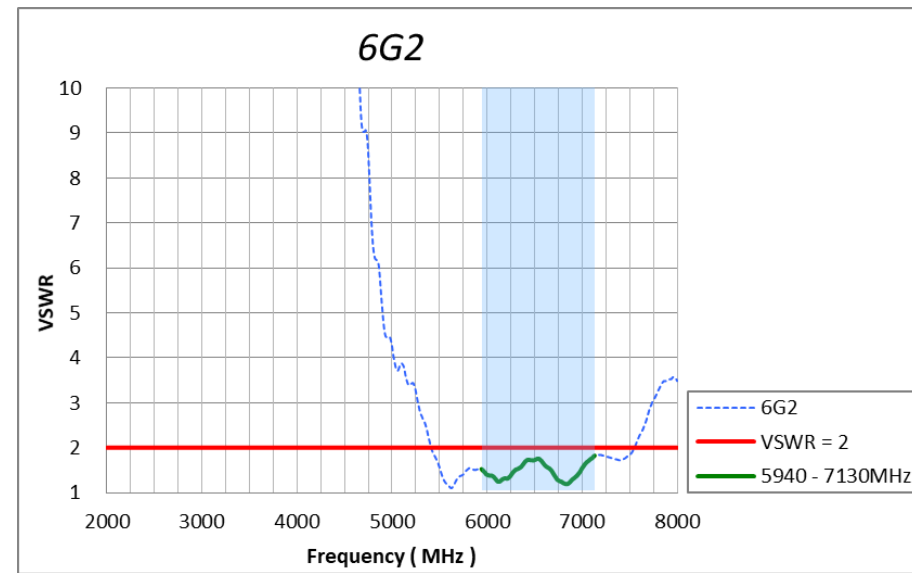
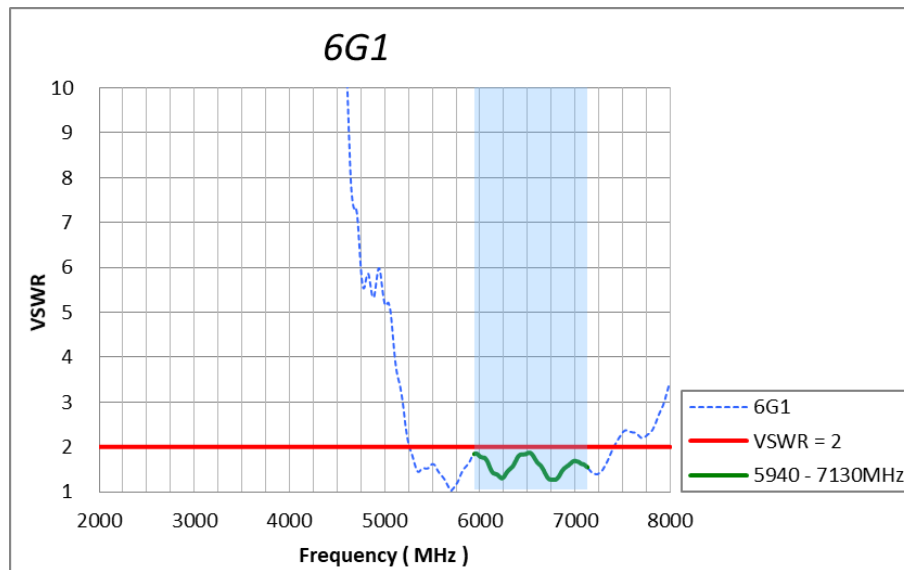
Antenna Efficiency and Gain

	Frequency	2400	2450	2500	Avg.	5150	5350	5550	5750	5850	Avg.
Scanning	Efficiency	63%	64%	64%	63%	69%	68%	70%	71%	70%	70%
	Average Gain	-2.04	-1.95	-1.93		-1.62	-1.68	-1.55	-1.46	-1.55	
	w/o cable loss	70%	70%	71%	70%	81%	80%	82%	84%	82%	82%
	Peak Gain	3.63	3.75	3.80		5.54	5.52	5.18	5.26	5.35	

	Frequency	5950	6000	6250	6450	6650	6850	7050	7125	Avg.
Scanning	Efficiency	62%	62%	65%	64%	62%	61%	61%	60%	62%
	Average Gain	-2.05	-2.06	-1.89	-1.92	-2.11	-2.12	-2.13	-2.25	
	w/o cable loss	73%	73%	76%	75%	72%	72%	72%	70%	73%
	Peak Gain	5.26	5.43	5.32	5.23	5.50	5.32	5.40	5.19	

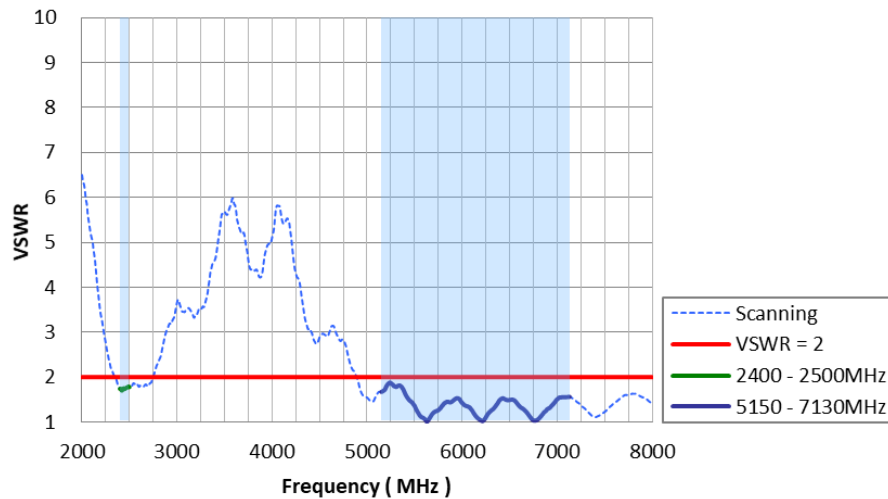
	Frequency	2400	2450	2500	Avg.
BLE	Efficiency	66%	67%	66%	67%
	Average Gain	-1.78	-1.74	-1.78	
	w/o cable loss	70%	71%	70%	70%
	Peak Gain	3.69	3.85	3.60	

VSWR for 6G

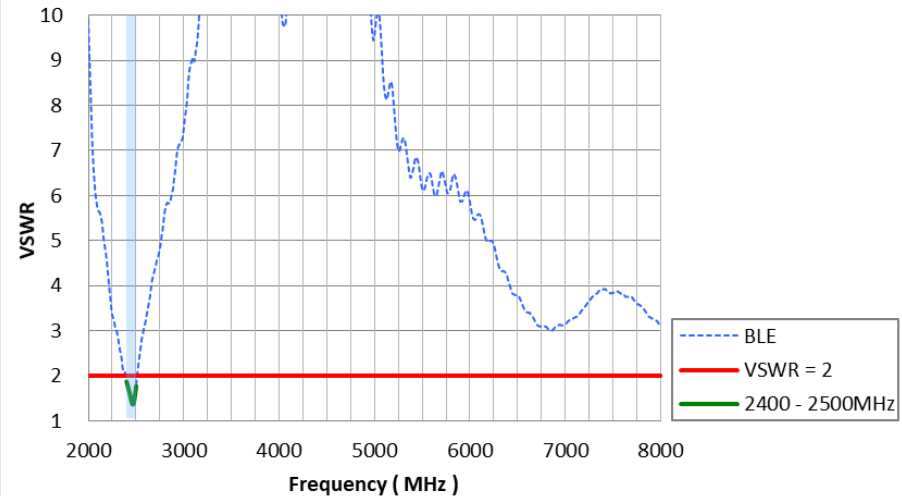


VSWR for Scanning and BLE

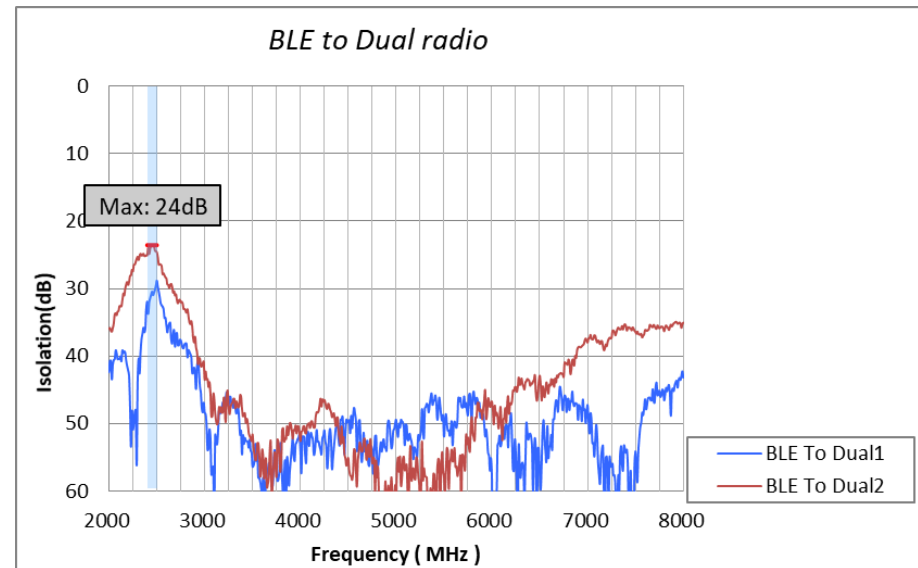
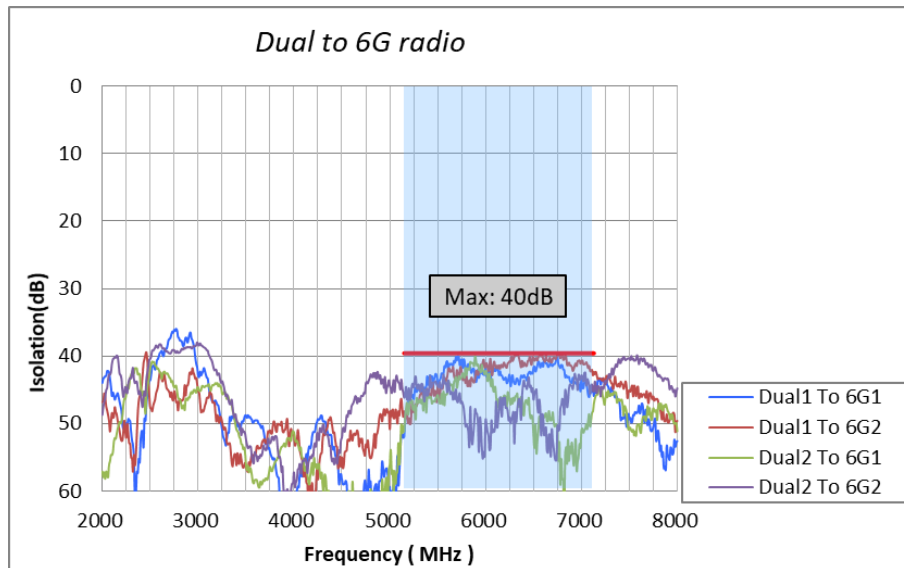
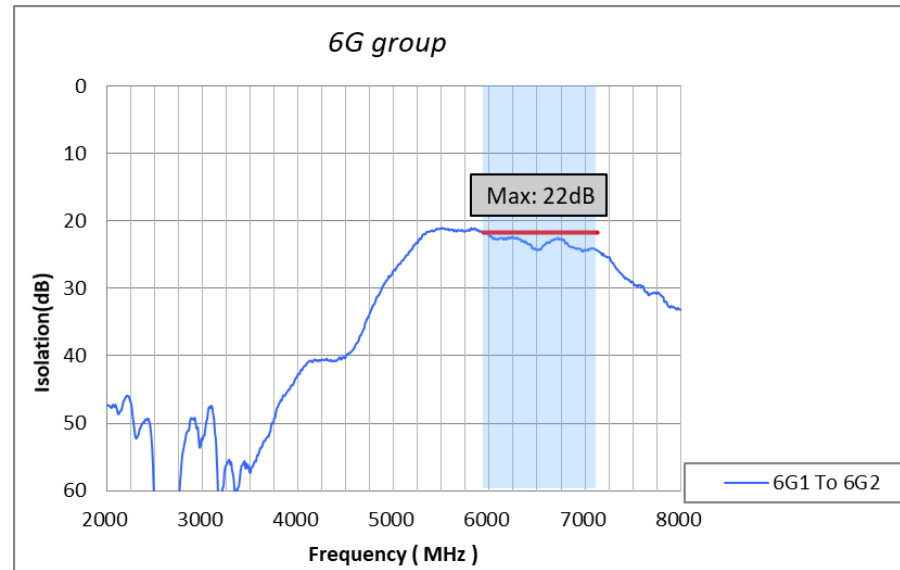
Scanning



BLE

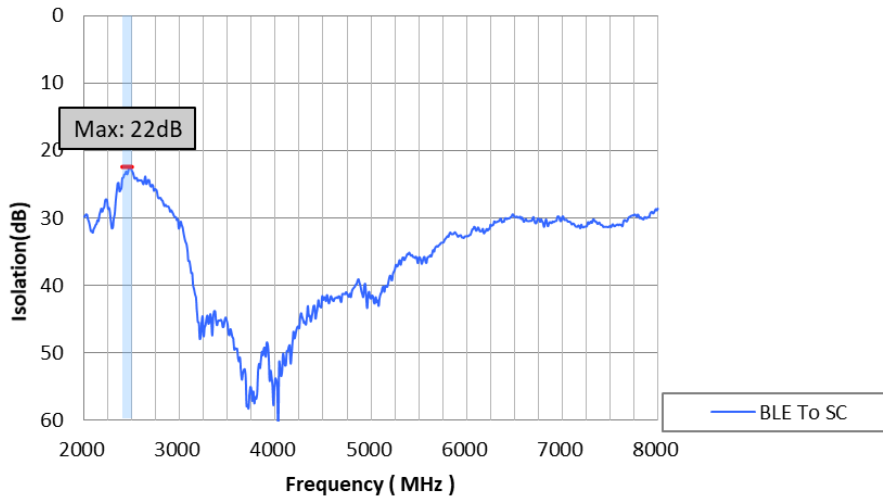


Isolation

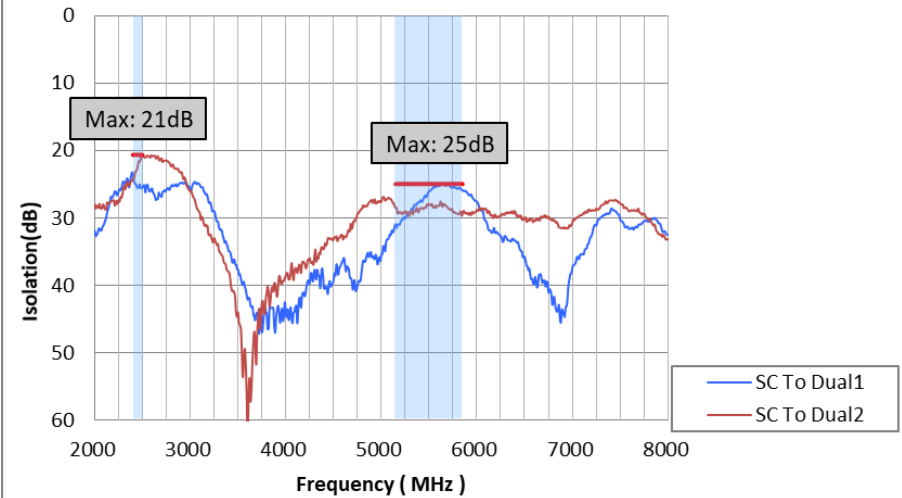


Isolation

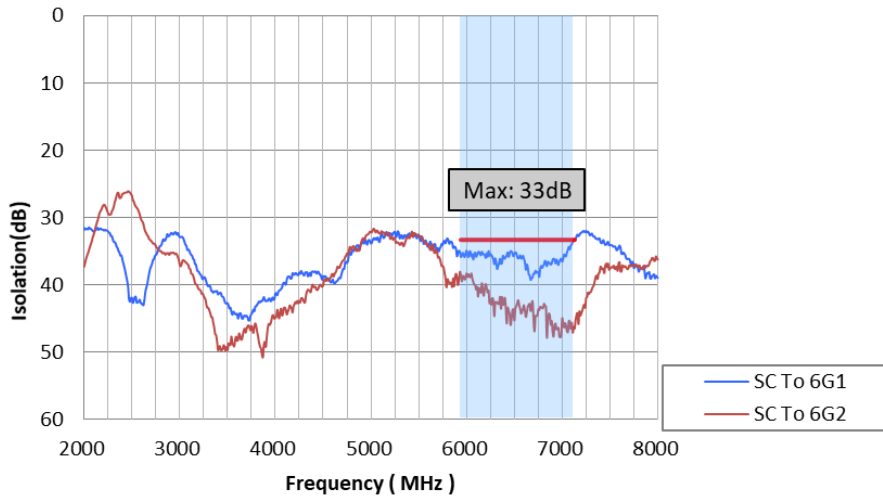
BLE to Scanning



Scanning to Dual radio



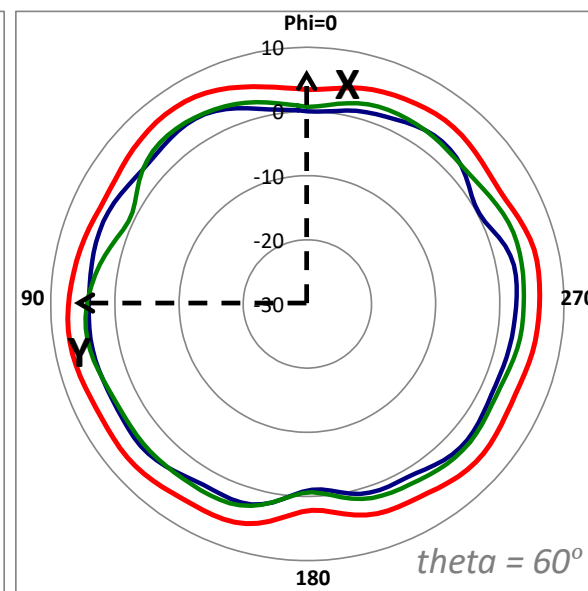
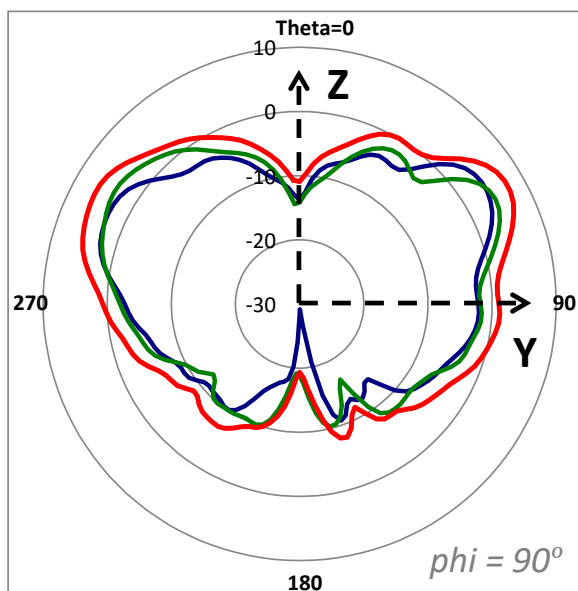
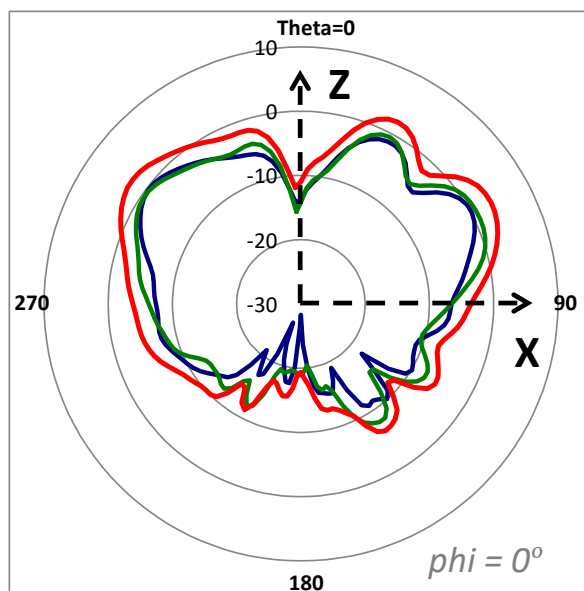
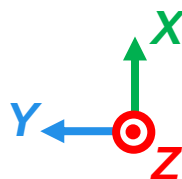
Scanning to 6G radio



Radiation Pattern for Dual band 6G

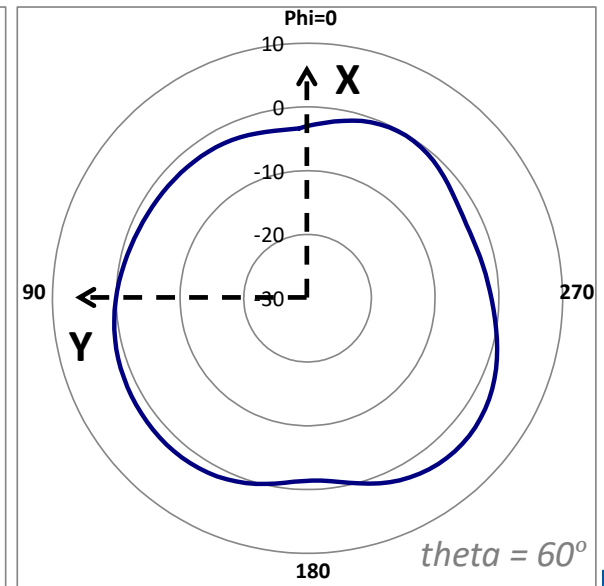
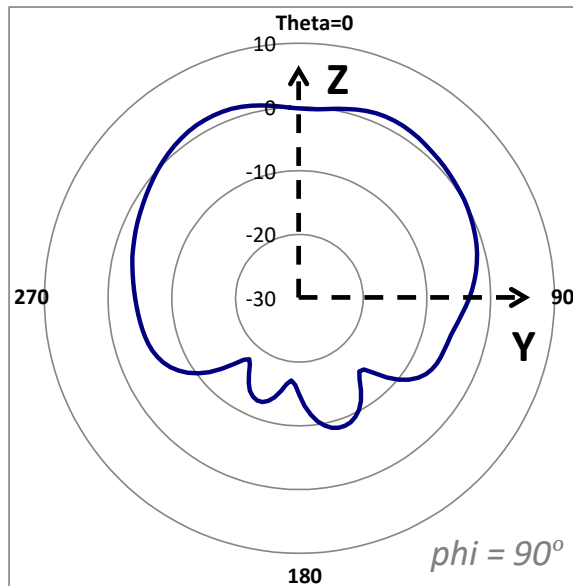
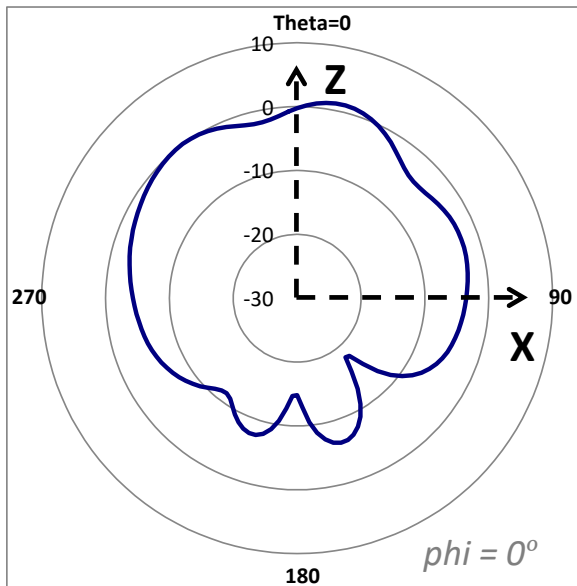
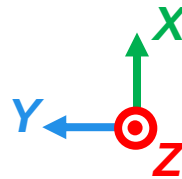
— Directional Gain
— 6G1
— 6G2

X-Y plane Ripple	
Dual1	5.37dB
Dual2	5.36dB



Radiation Pattern for Scanning 2.4G

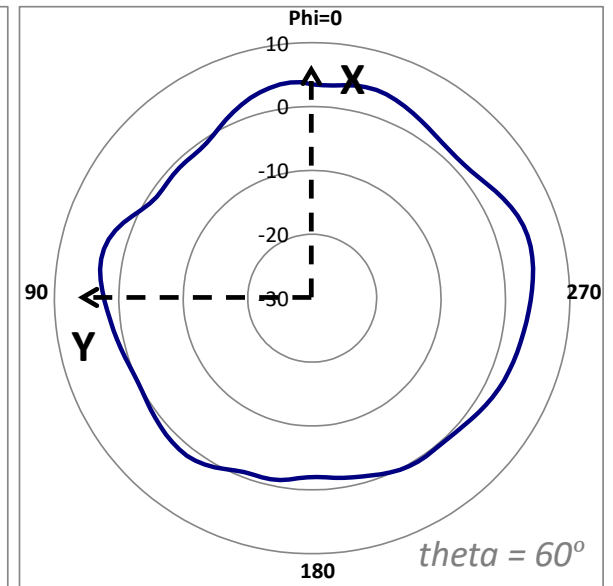
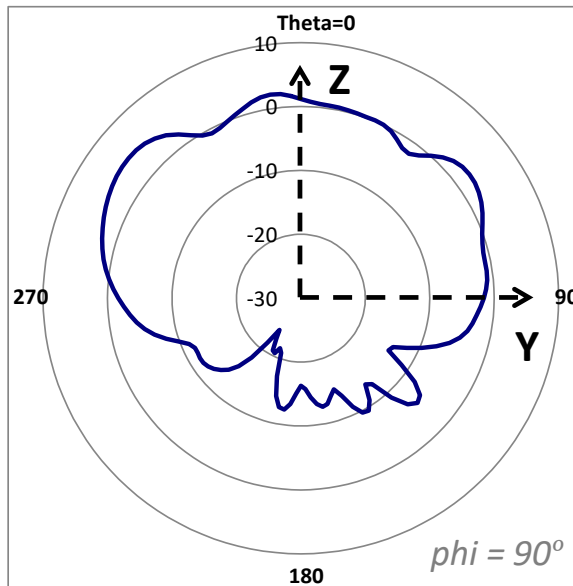
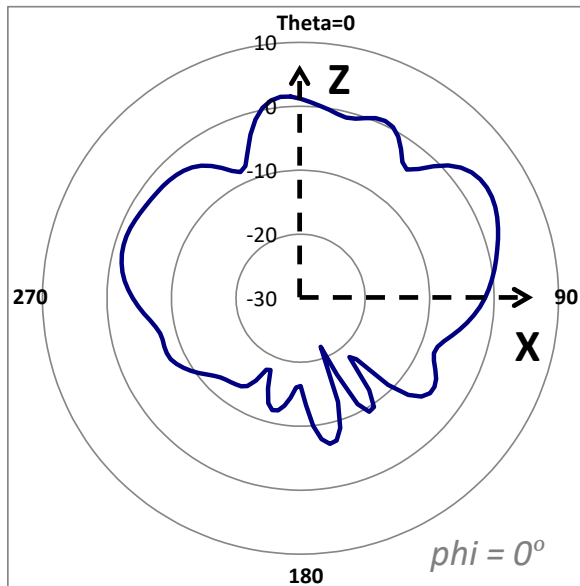
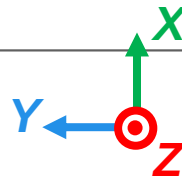
— Scanning



Radiation Pattern for Scanning 5G

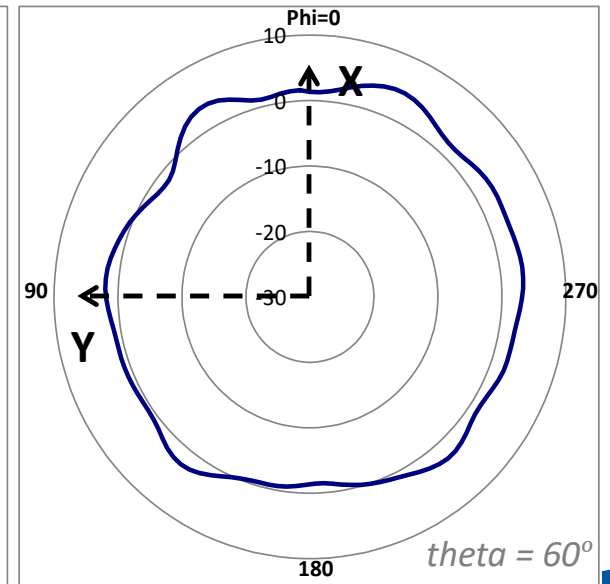
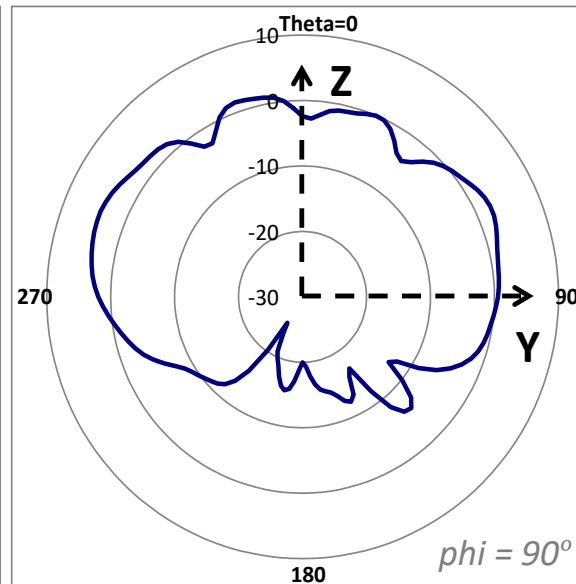
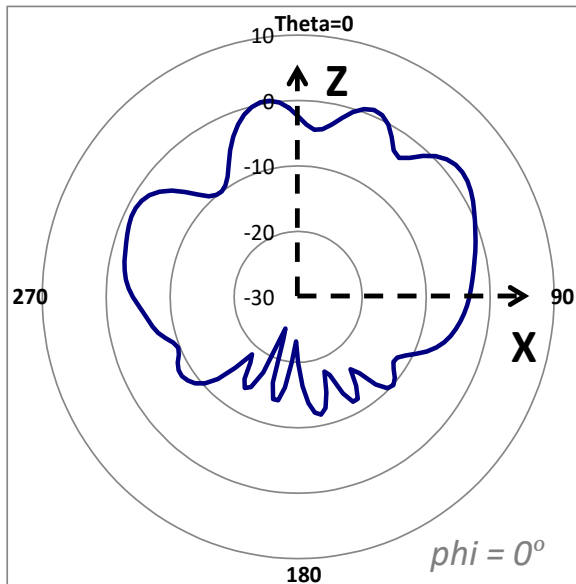
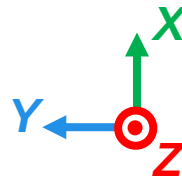
— Scanning

5350 MHz Radiation Pattern



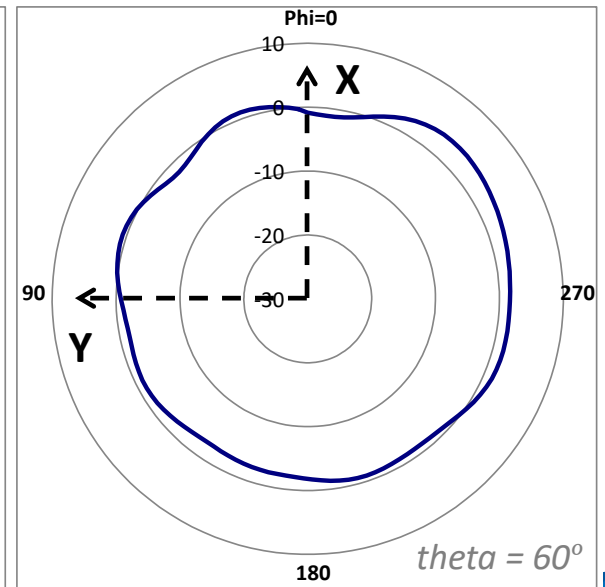
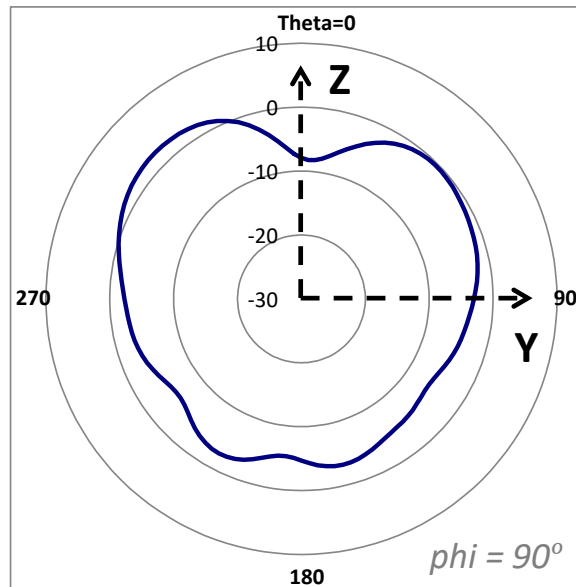
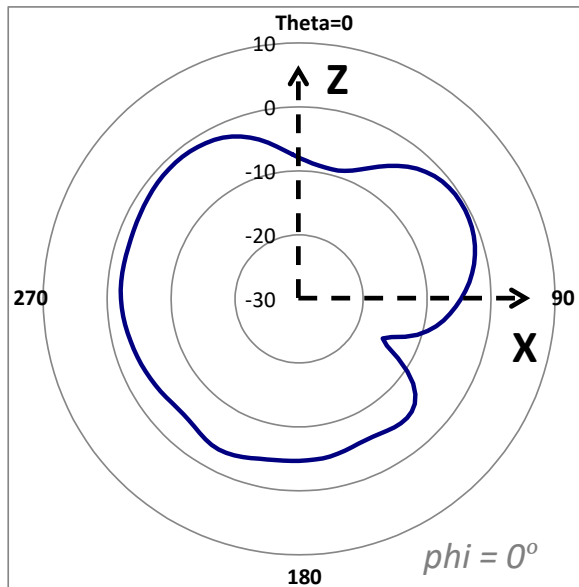
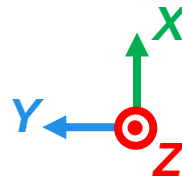
Radiation Pattern for Scanning 6G

— Scanning



Radiation Pattern for BLE

— BLE



WNC

Wistron NeWeb Corp.

