



# 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

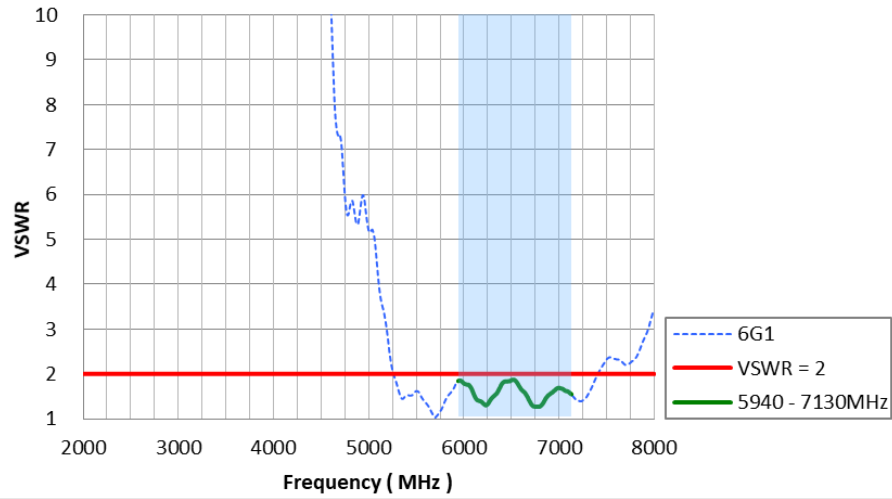
	Frequency	2400	2450	2500	Avg.	5150	5350	5550	5750	5850	Avg.
Scanning	Efficiency	63%	64%	64%	63%	69%	68%	70%	71%	70%	70%
	Average Gain	-2.04	-1.95	-1.93		-1.62	-1.68	-1.55	-1.46	-1.55	
	w/o cable loss	70%	70%	71%	70%	81%	80%	82%	84%	82%	82%
	Peak Gain	3.63	3.75	3.80		5.54	5.52	5.18	5.26	5.35	

	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	

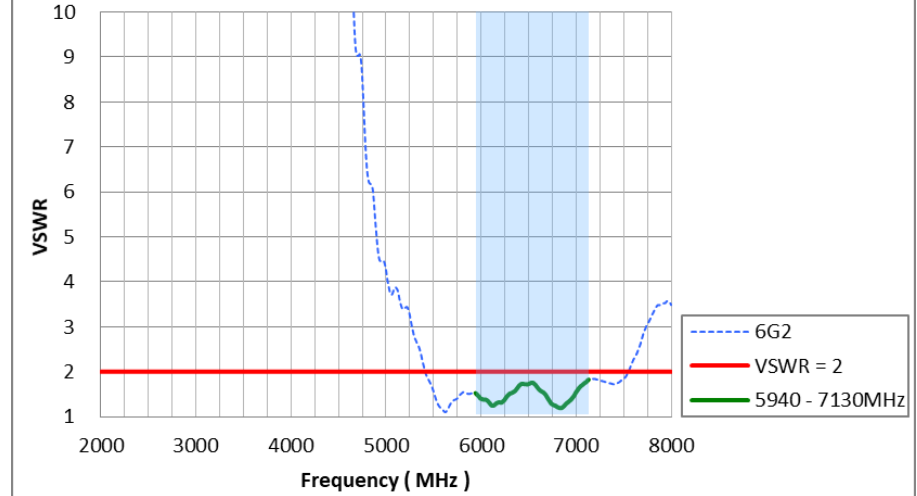
	Frequency	2400	2450	2500	Avg.
BLE	Efficiency	66%	67%	66%	67%
	Average Gain	-1.78	-1.74	-1.78	
	w/o cable loss	70%	71%	70%	70%
	Peak Gain	3.69	3.85	3.60	

# VSWR for 6G

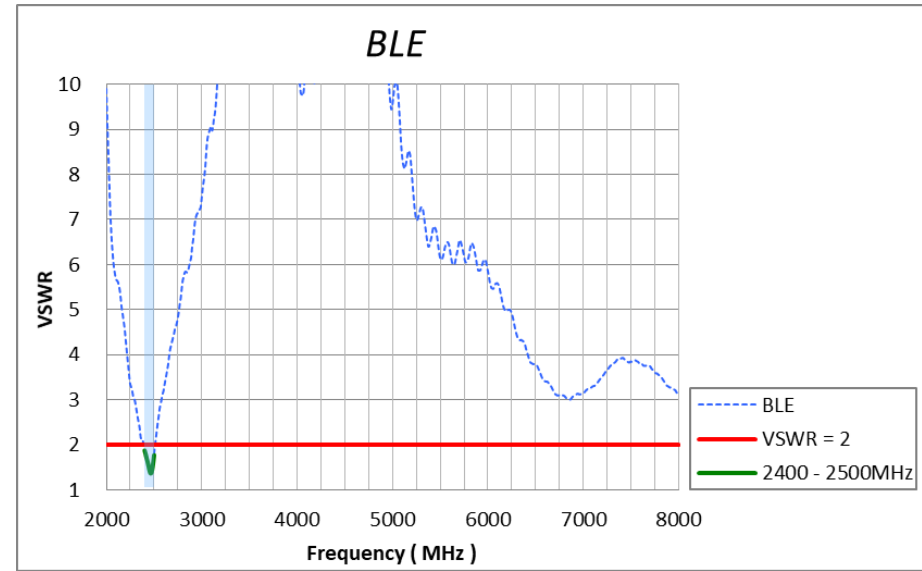
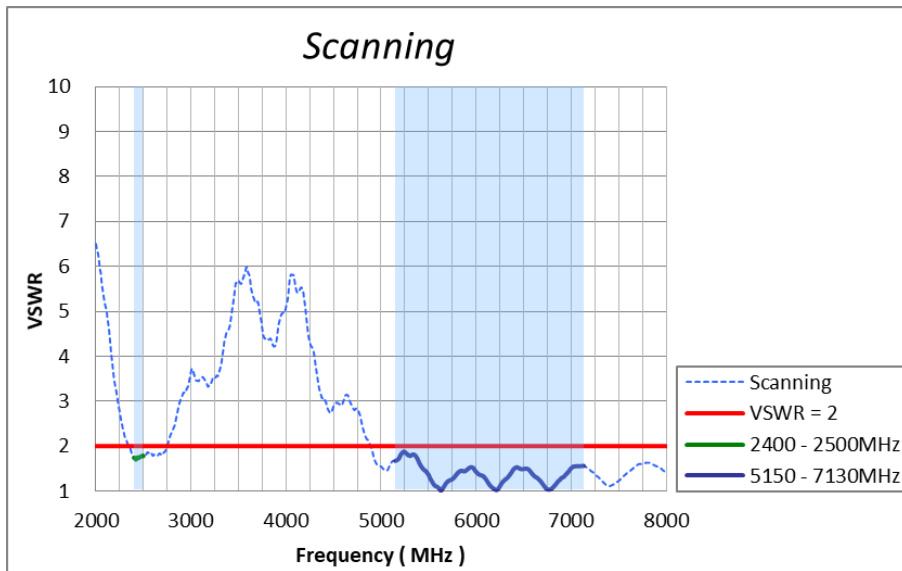
## 6G1



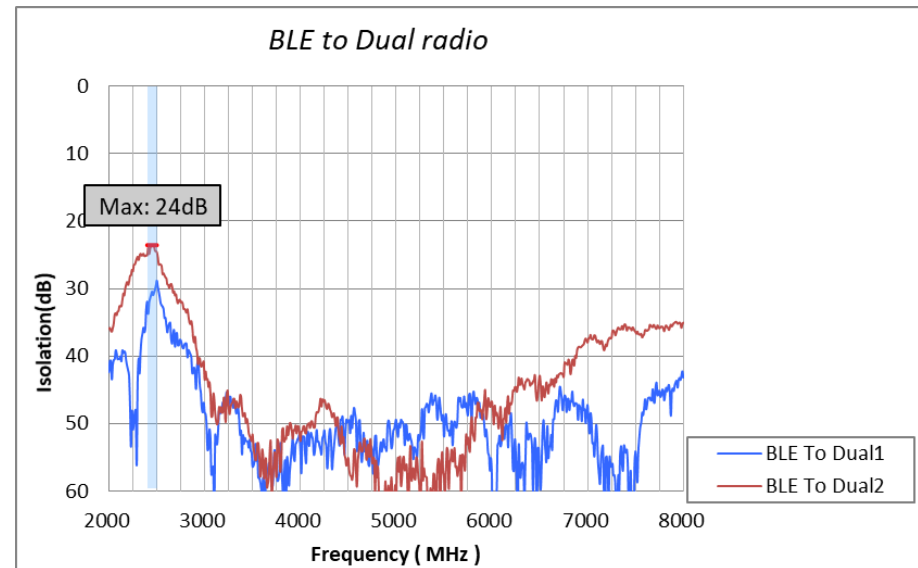
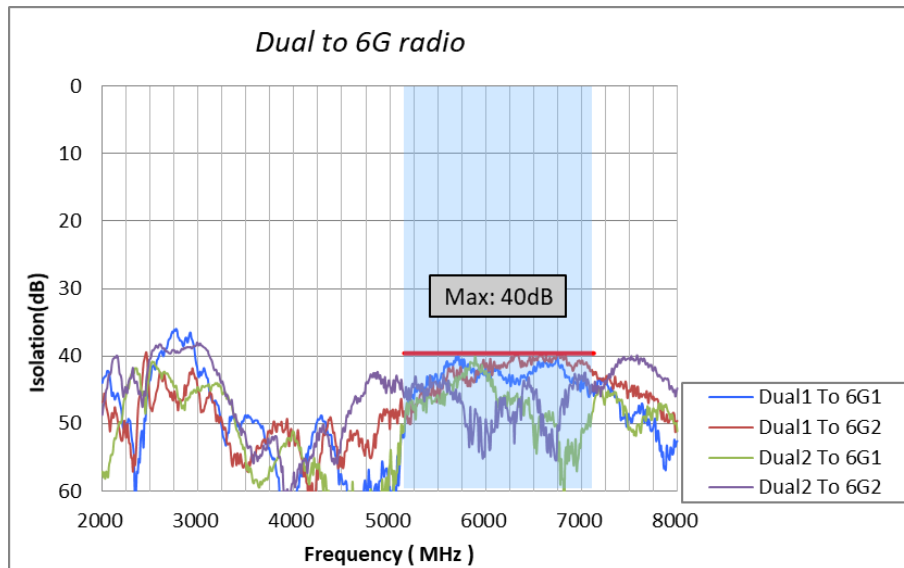
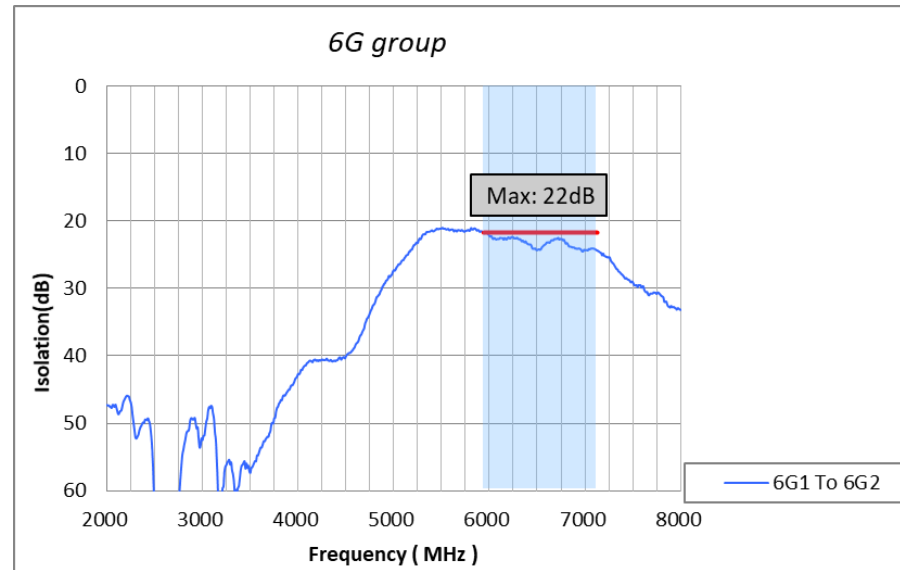
## 6G2



# VSWR for Scanning and BLE



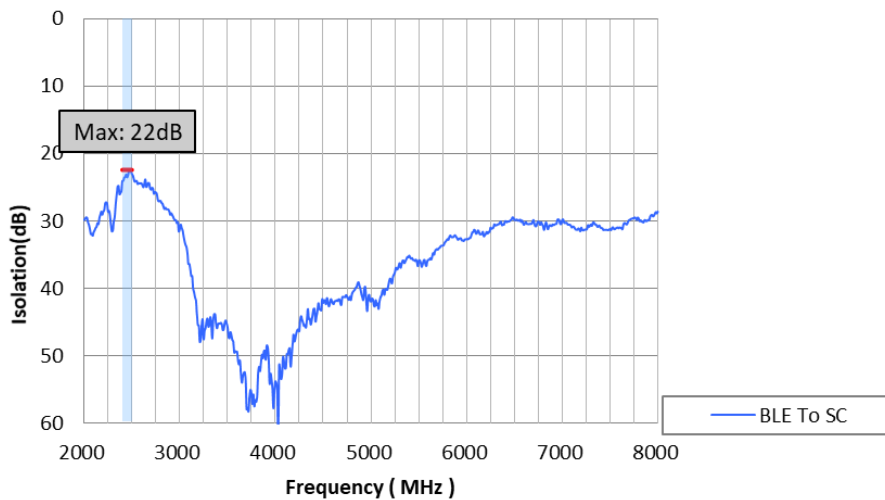
# Isolation



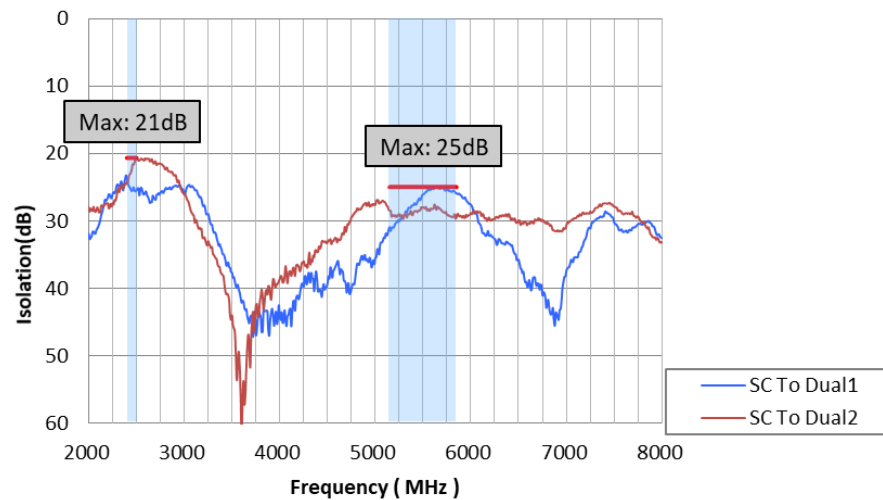


# Isolation

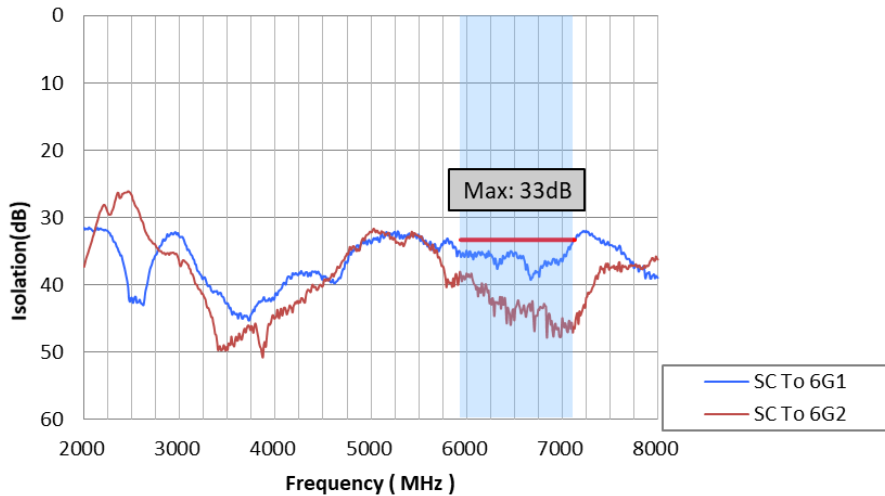
BLE to Scanning



Scanning to Dual radio



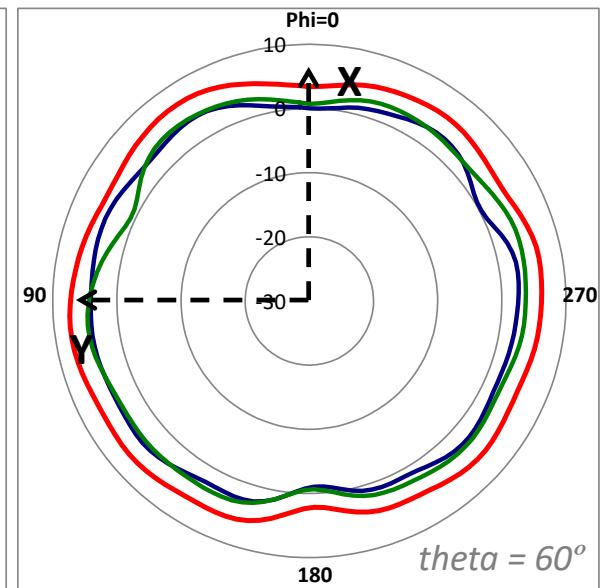
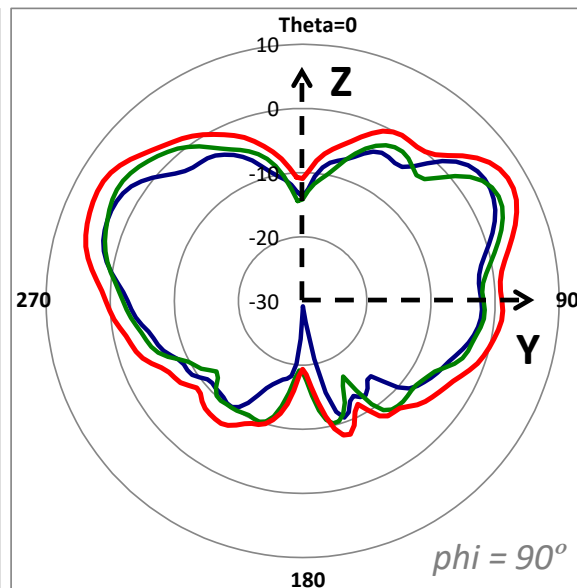
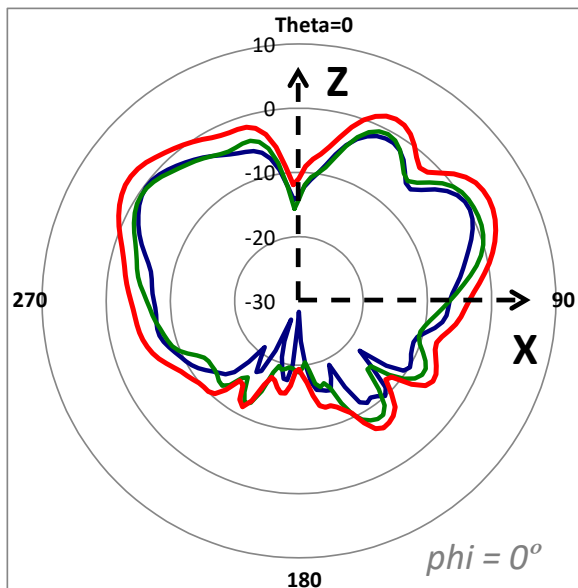
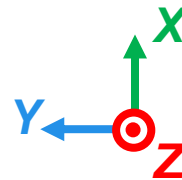
Scanning to 6G radio



# Radiation Pattern for Dual band 6G

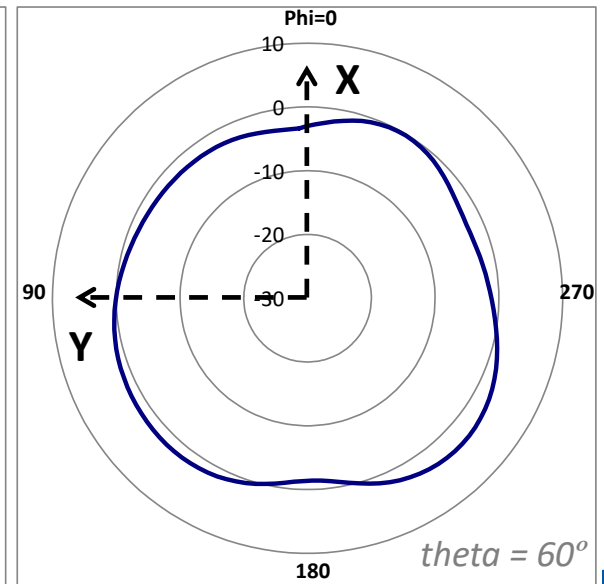
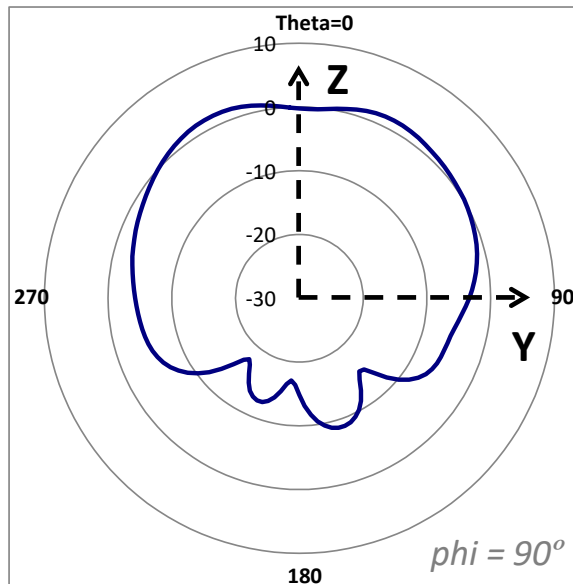
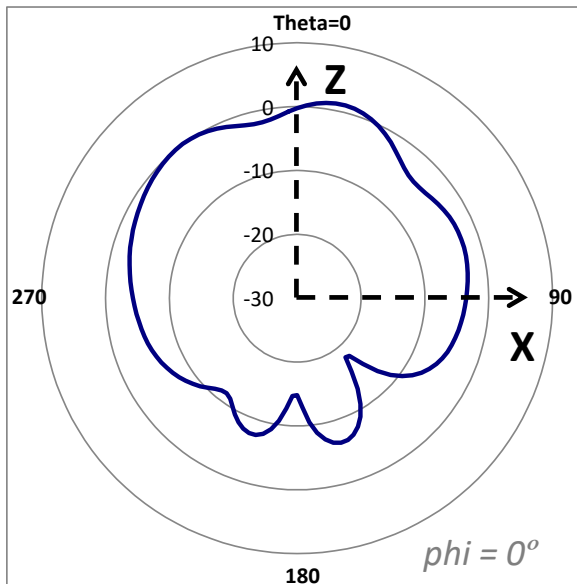
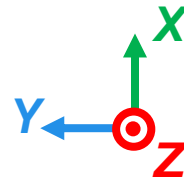
- Directional Gain
- 6G1
- 6G2

X-Y plane Ripple	
Dual1	5.37dB
Dual2	5.36dB



# Radiation Pattern for Scanning 2.4G

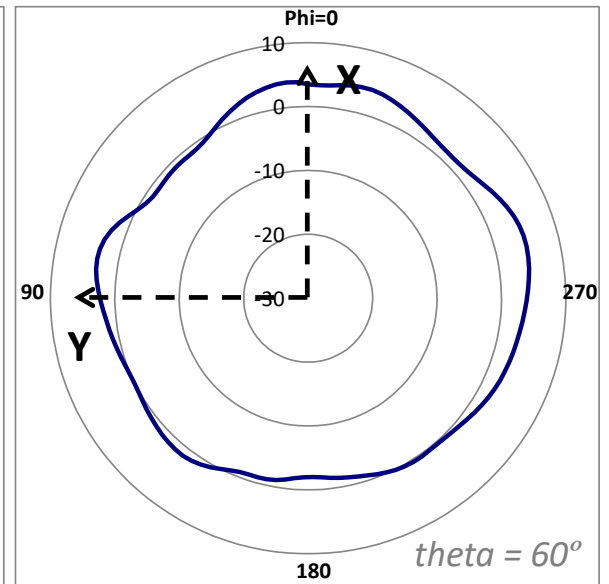
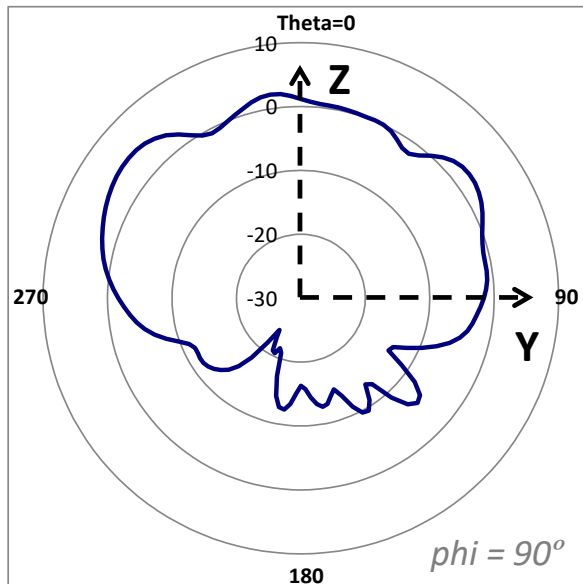
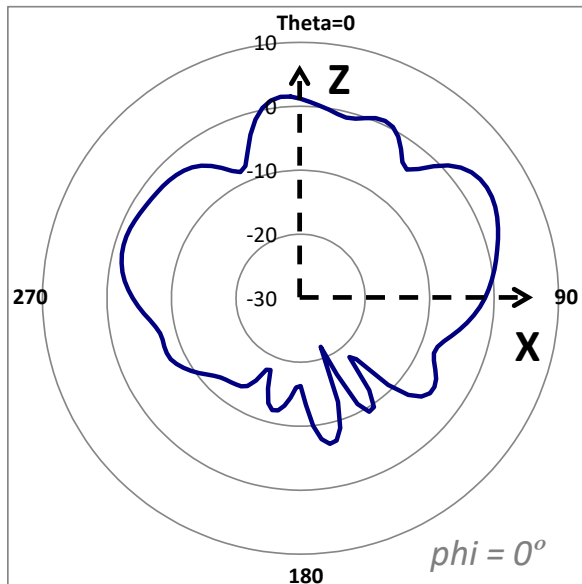
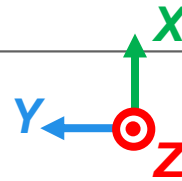
— Scanning



# Radiation Pattern for Scanning 5G

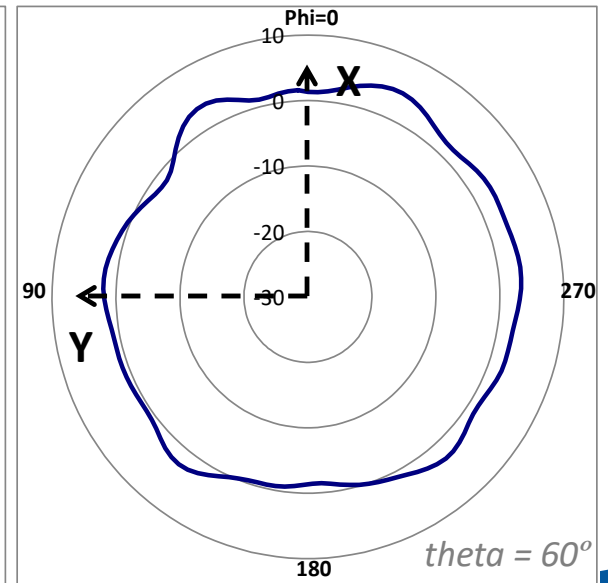
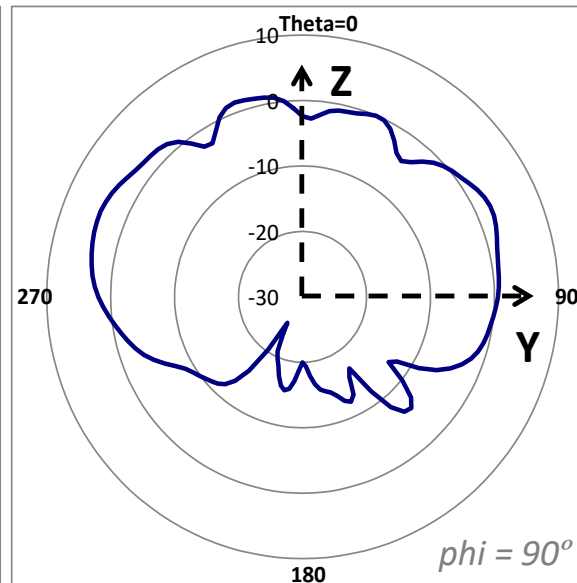
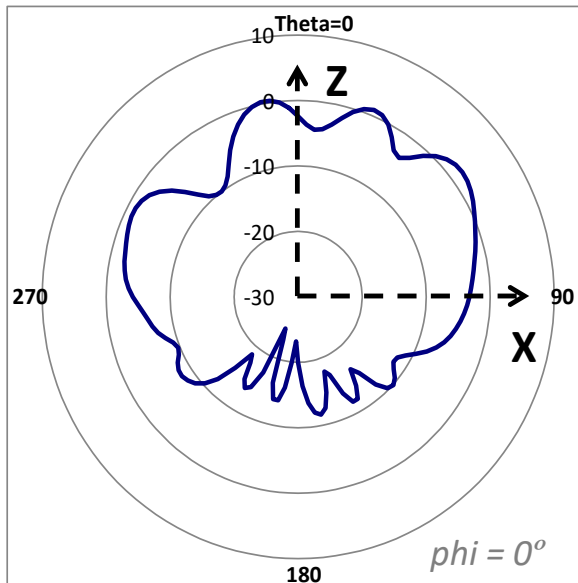
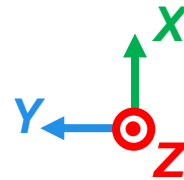
— Scanning

## 5350 MHz Radiation Pattern



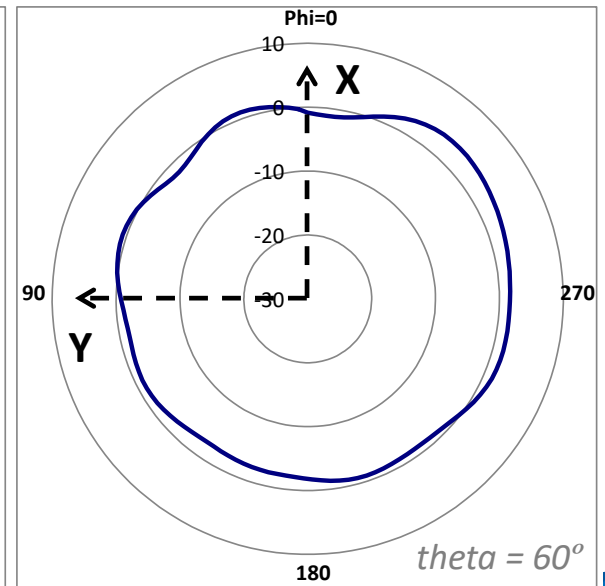
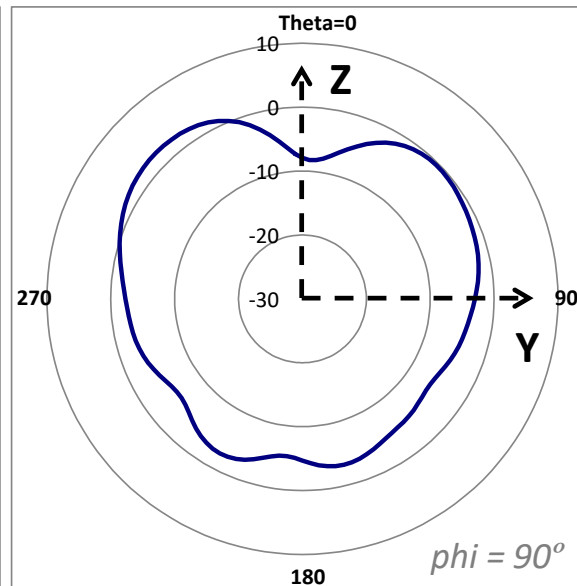
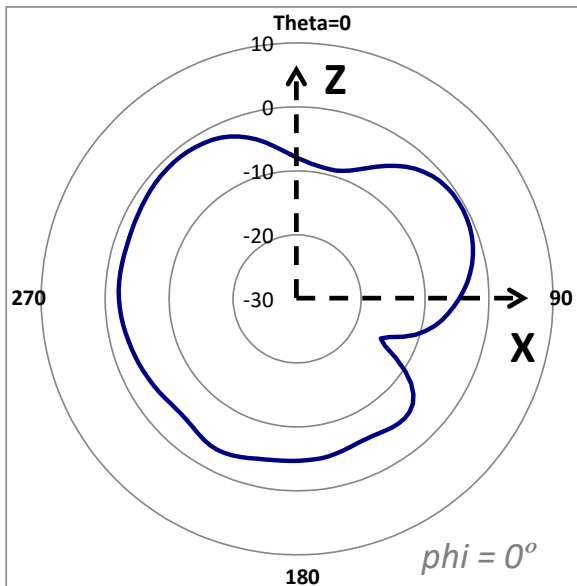
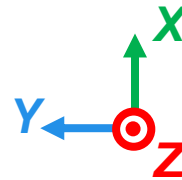
# Radiation Pattern for Scanning 6G

— Scanning



# Radiation Pattern for BLE

— BLE



The logo consists of the letters 'WNC' in a bold, blue, italicized sans-serif font. The 'W' and 'C' are connected at the top, and the 'N' is positioned between them. The letters have a slight shadow effect, giving them a three-dimensional appearance.

**WNC**

***Wistron NeWeb Corp.***

