

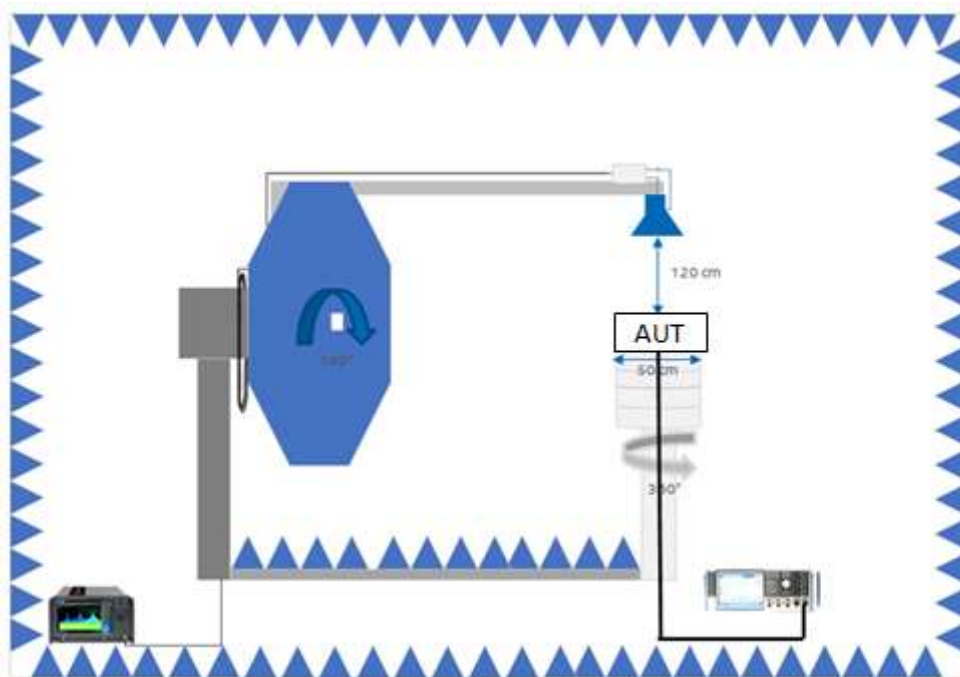
WiFi-5G Reference Antenna Datasheet

1. Measurement Method and System

3D spherical measurement using distributed axis system

2. Test Setup & Equipment List

2.1. Test Setup



2.2. Equipment List

ID#	Device	Type/Model	Serial #	Manufacturer
009-000	Spherical full anechoic chamber	WPTC	P28765-00651-001-PRB	Rohde & Schwarz
009-001	Measurement software (v11.30)	AMS32	100084	Rohde & Schwarz
152-000	Cross-polarized vivaldi antenna	TC-TA85CP	101018	Rohde & Schwarz
345-000	Switch unit + LNA	TC-ELAMP-D	1533.6350.02	Rohde & Schwarz
335-000	Positionner	NCD	173167577	Maturo
143-000	Spectrum analyser	UXA N9040B	US57212210	Keysight
130-000	Signal generator	SMB 100A	178217	Rohde & Schwarz

3. Antenna Specification

3.1. Antenna information

Manufacturer	Type	Antenna Part number	Band	Peak Gain (dBi)	Target Peak Gain (dBi)
Intel WRF Lab	PIFA	WRF-8dBi-PIFA-5G	5.2GHz 5.150-5.250MHz	8	8
			5.4GHz 5250-5470MHz	8.07	
			5.6GHz 5470-5725MHz	8.19	
			5.8GHz 5725-5925MHz	8.39	

3.2. Antenna Peak Gain Table

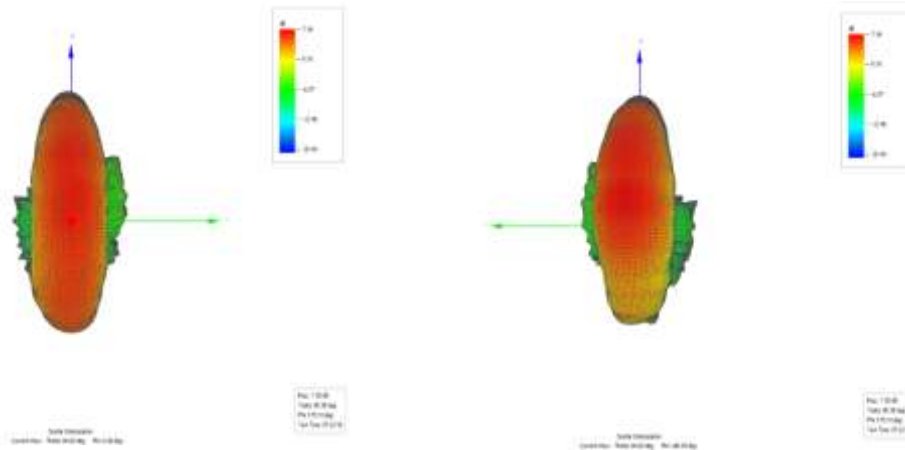
Frequency (MHz)	Peak Gain		
	Horizontal (Theta)	Vertical (Phi)	Total
	(dBi)	(dBi)	(dBi)
5150	5.26	2.93	7.26
5175	5.87	3.89	8
5350	4.7	5.4	8.07
5470	4.88	5.46	8.19
5725	5.32	5.43	8.39

4. Antenna Radiation Patterns 5150 - 5925 MHz

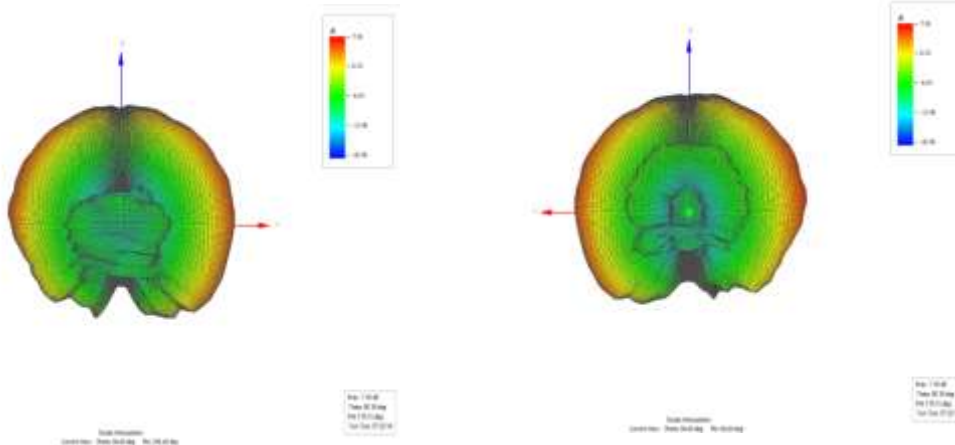
4.1. Pattern @5150MHz

Frequency (MHz)	Peak Gain		
	Horizontal (Theta)	Vertical (Phi)	Total
	(dBi)	(dBi)	(dBi)
5150	5.26	2.93	7.26

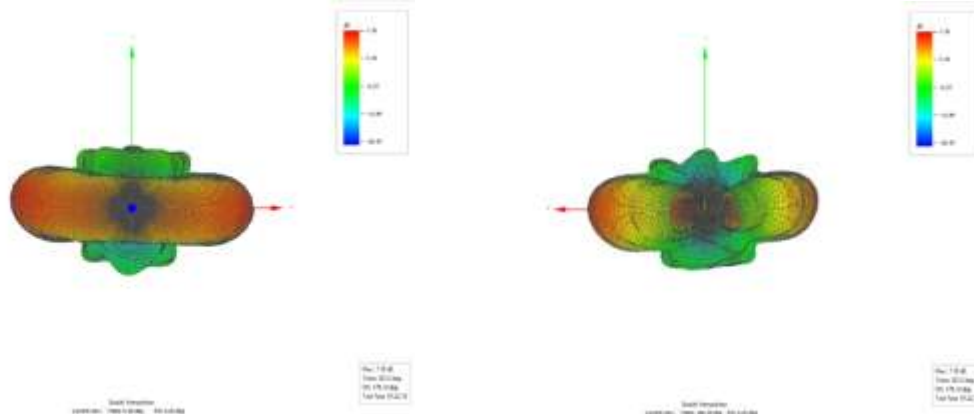
Front **Back**



Left **Right**



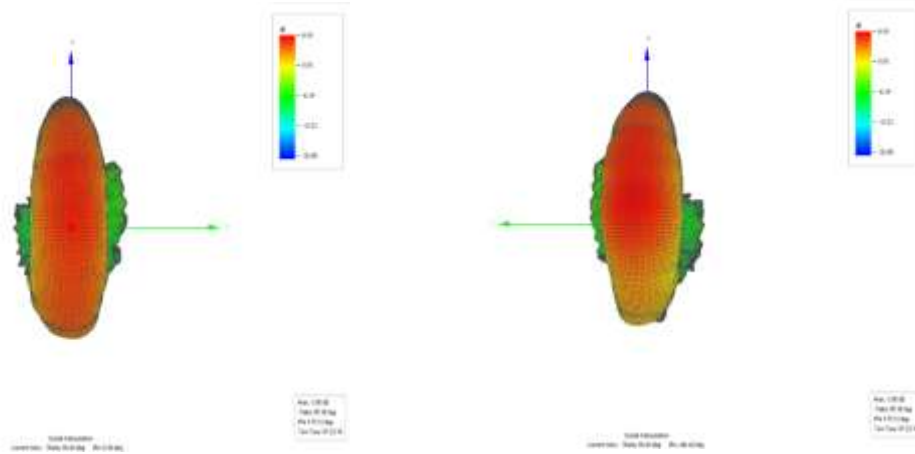
Top **Bottom**



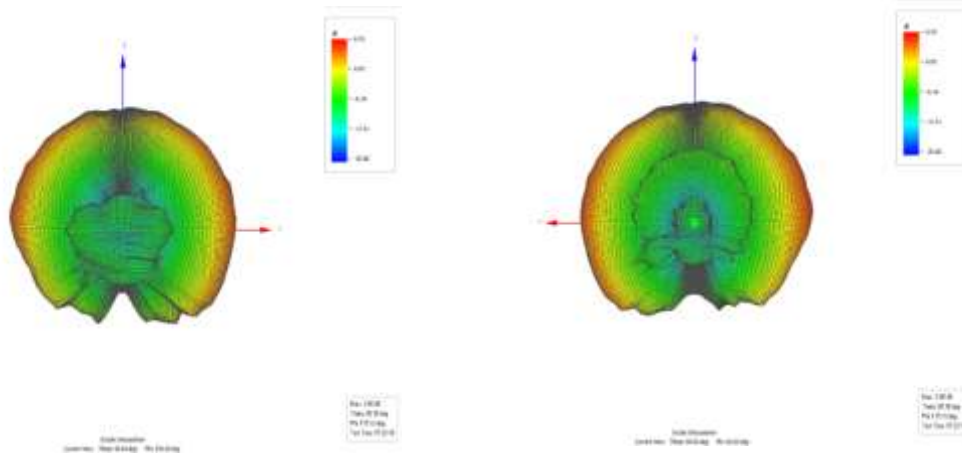
4.2. Pattern @5175MHz

Frequency (MHz)	Peak Gain		
	Horizontal (Theta)	Vertical (Phi)	Total
	(dBi)	(dBi)	(dBi)
5175	5.87	3.89	8

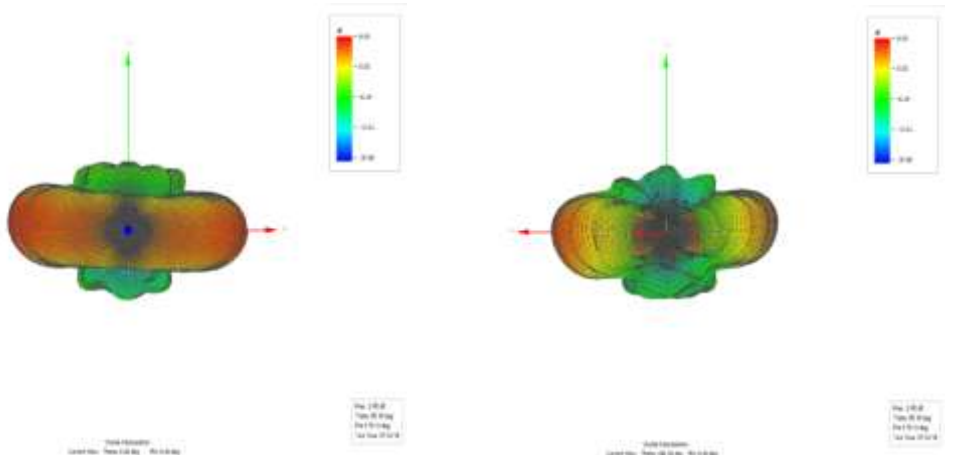
Front **Back**



Left **Right**

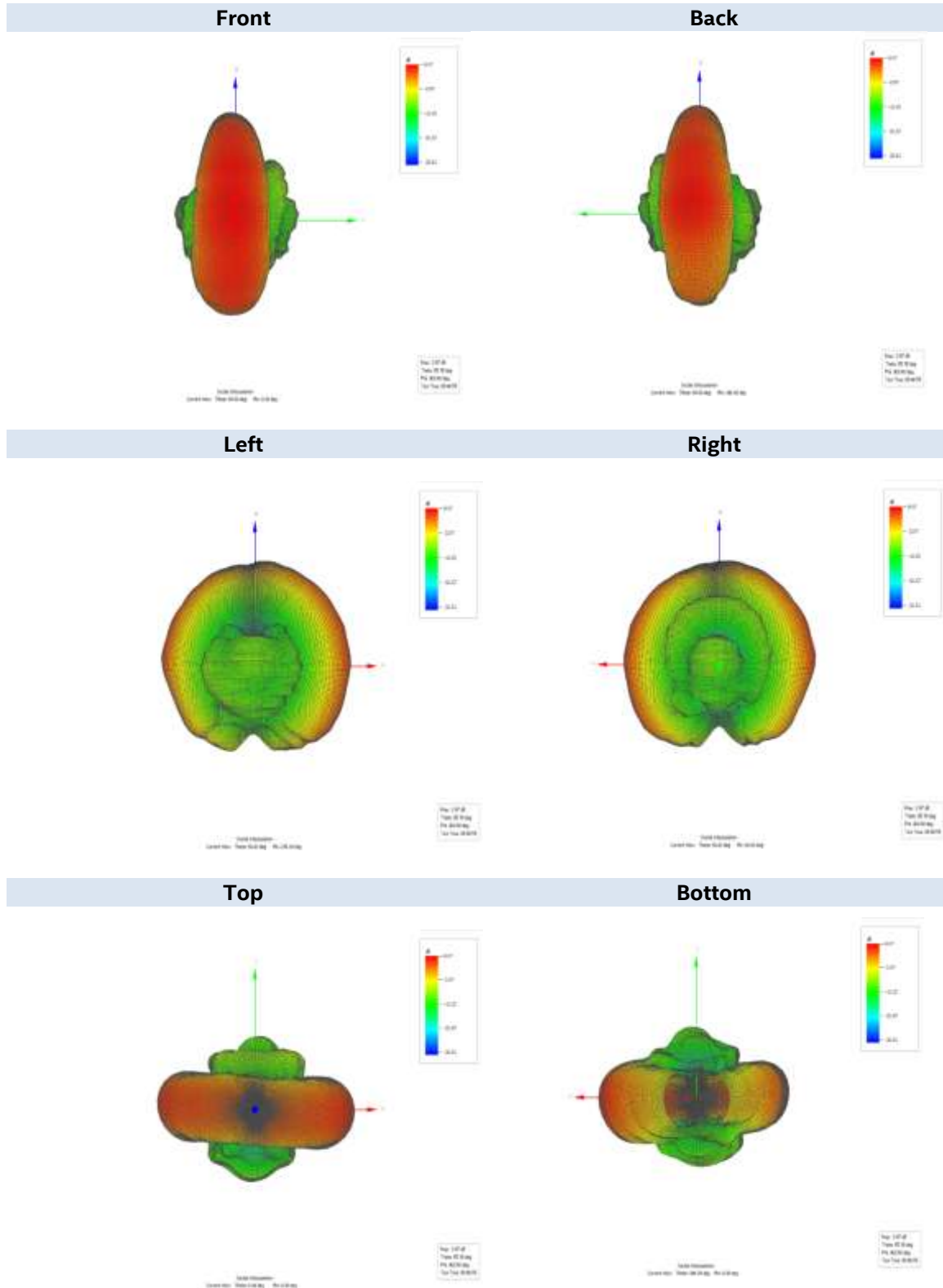


Top **Bottom**



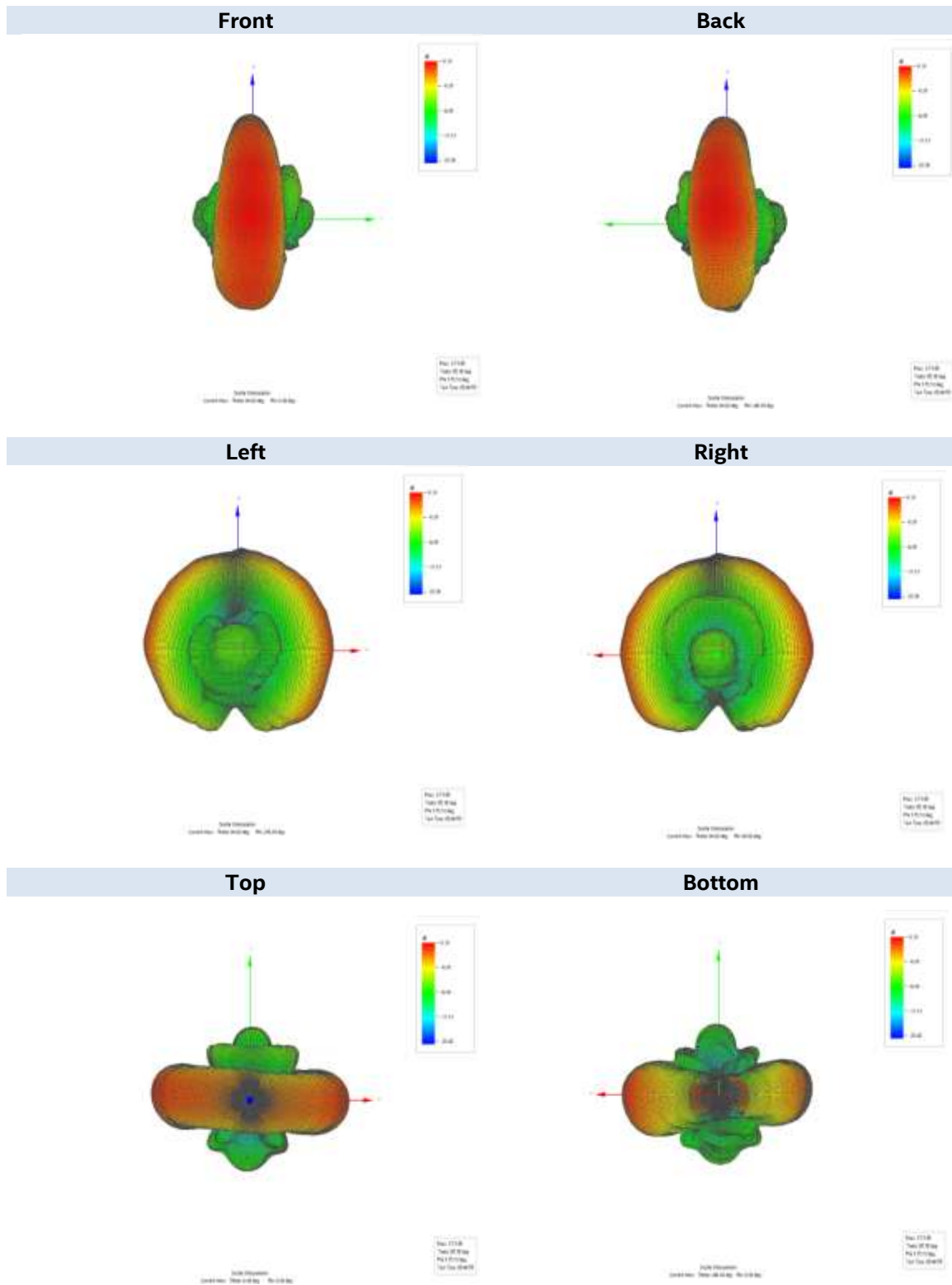
4.3. Pattern @5350MHz

Frequency (MHz)	Peak Gain		
	Horizontal (Theta)	Vertical (Phi)	Total
	(dBi)	(dBi)	(dBi)
5350	4.7	5.4	8.07



4.4. Pattern @5470MHz

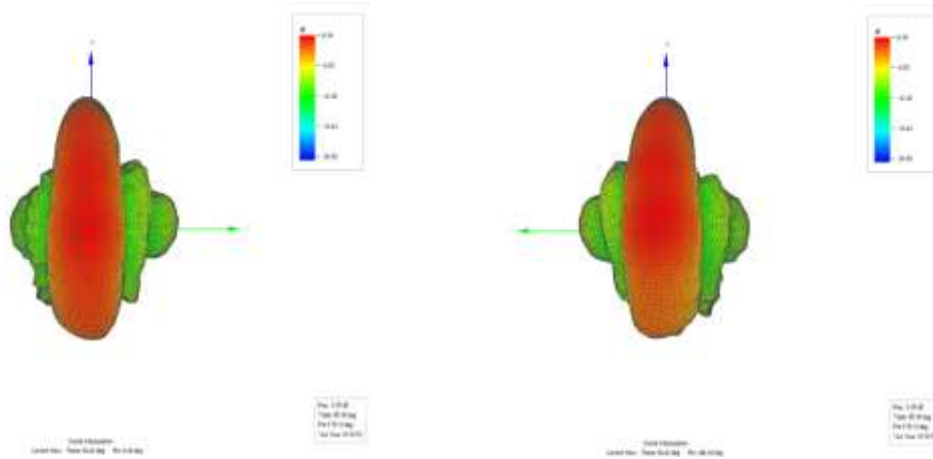
Frequency (MHz)	Peak Gain		
	Horizontal (Theta)	Vertical (Phi)	Total
	(dBi)	(dBi)	(dBi)
5470	4.88	5.46	8.19



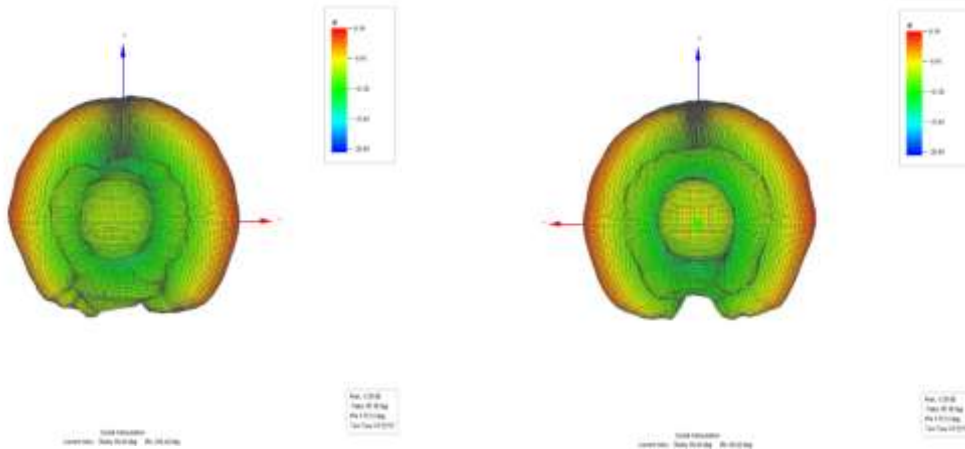
4.5. Pattern @5725MHz

Frequency (MHz)	Peak Gain		
	Horizontal (Theta)	Vertical (Phi)	Total
	(dBi)	(dBi)	(dBi)
5725	5.32	5.43	8.39

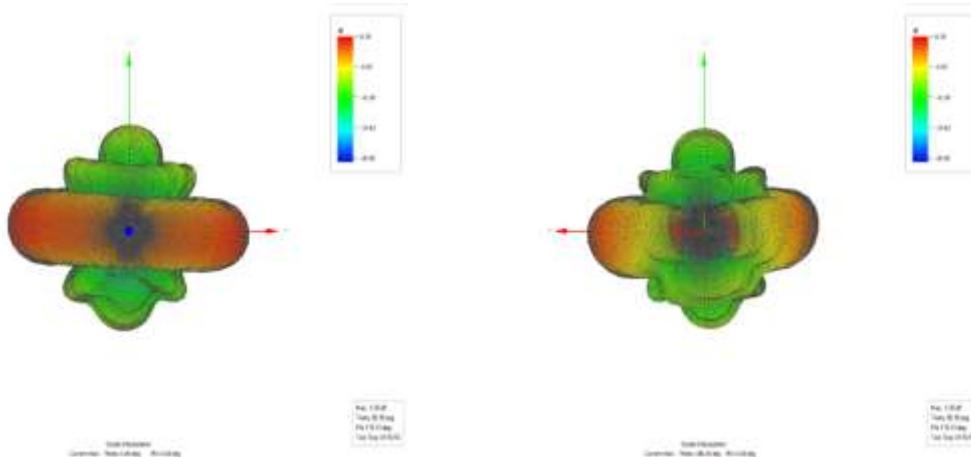
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5. VSWR

