

Gimli GTK (Antenna) test report

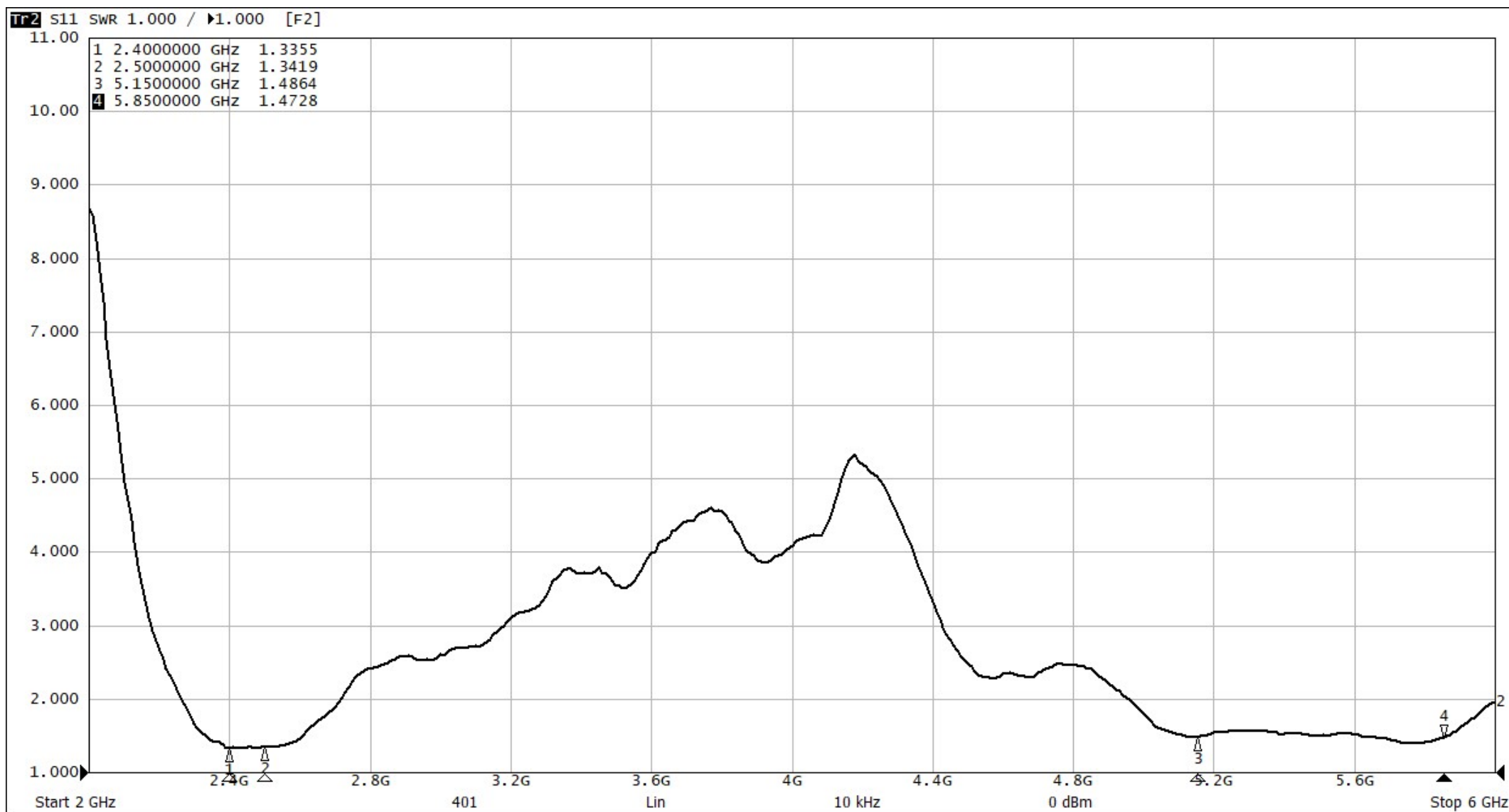
2024/09/19

Antenna Information

Antenna Brand: WNC / 啟碁科技股份有限公司
Antenna model: 81EAB815.G25 / 81EAB815.G26
Antenna type : PCB
Antenna Connector: i-pex(MHF)
Antenna company address : No. 20, Yuanqu 2nd Rd., Baoshan Township,
Hsinchu County 300092, Taiwan (R.O.C.) / 308新竹縣寶山鄉園區二路20號

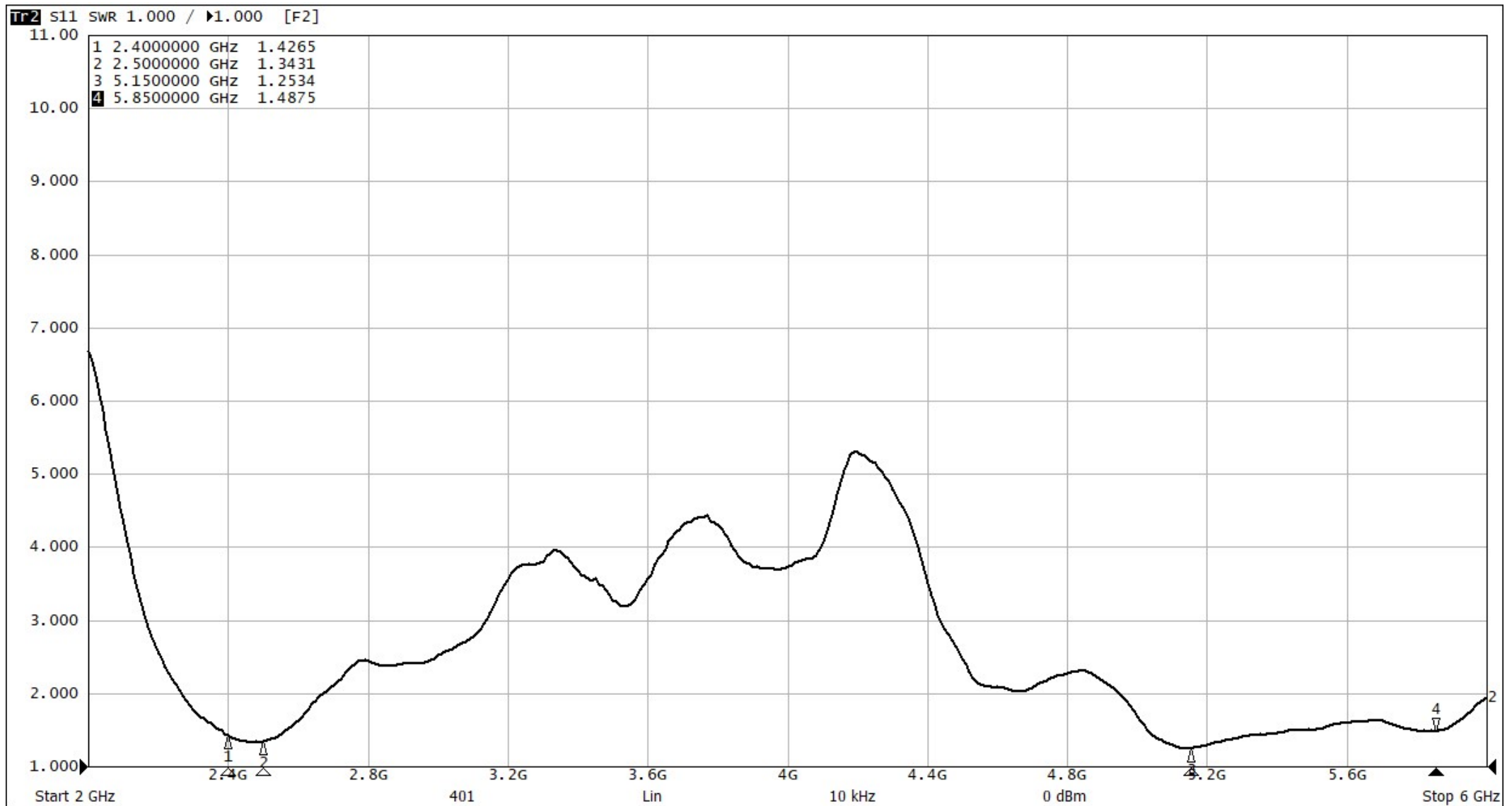
SWR MAIN_Cloth cover

20240919
update



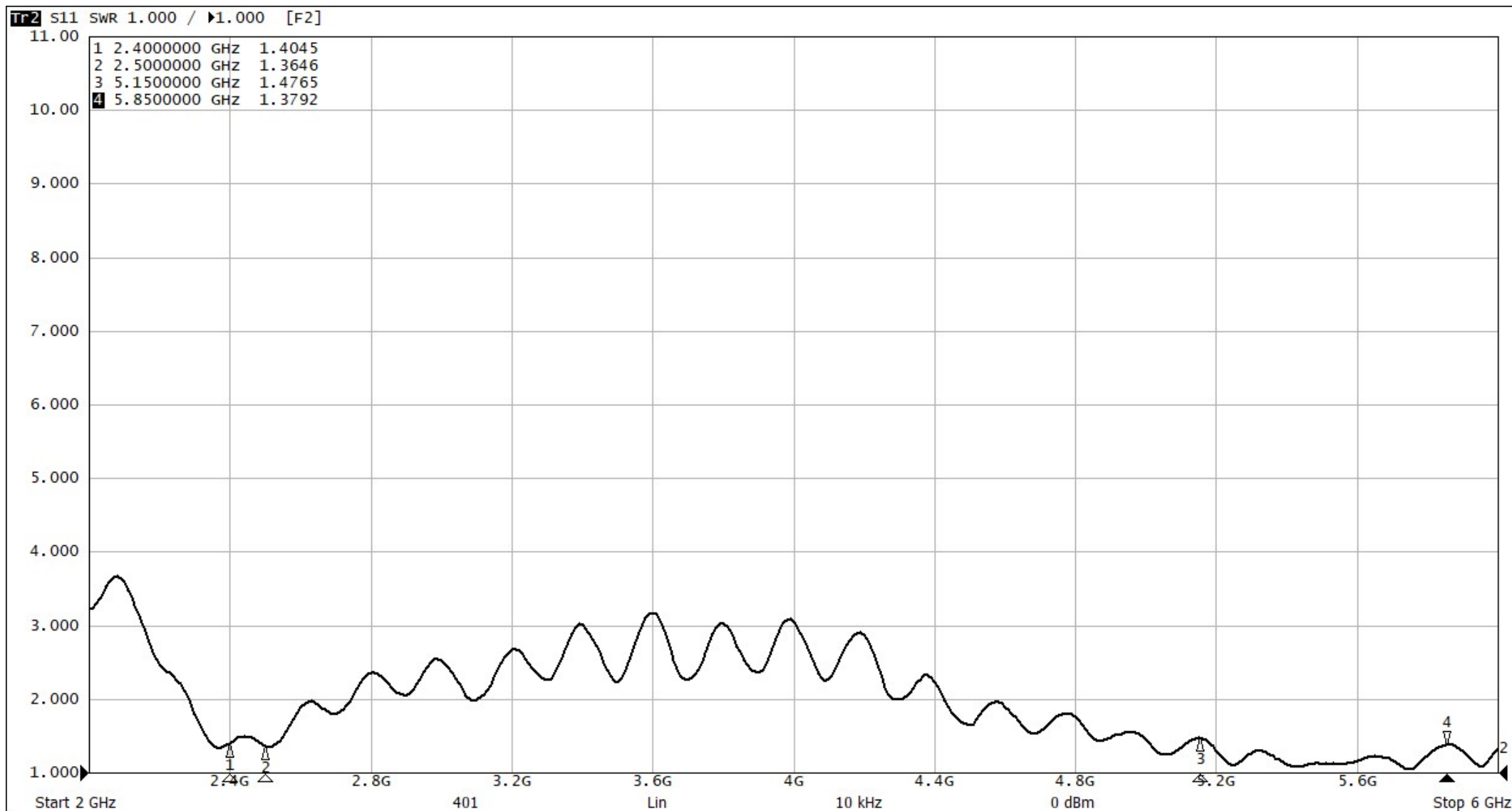
SWR MAIN_Metal Cover

20240919
update



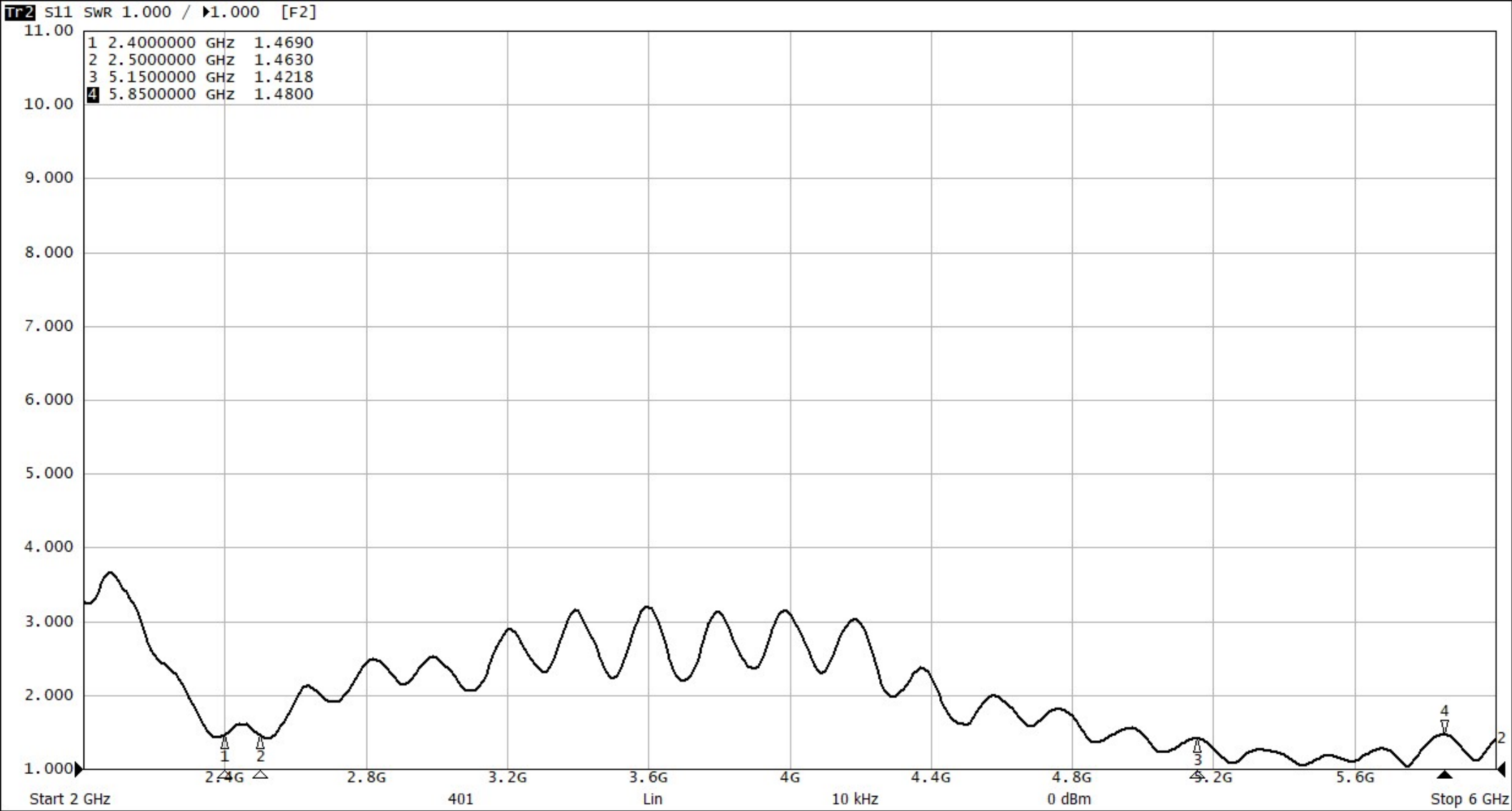
SWR AUX_Cloth cover

20240919
update



SWR AUX_Metal Cover

20240919
update



Average Gain(dB)

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update

Frequency (MHz)	Average Gain (dB)	
	MAIN	AUX
2400	-1.63	-2.45
2450	-1.5	-2.35
2500	-1.65	-2.51
5150	-1.68	-3.02
5250	-1.84	-3.1
5350	-1.7	-3.03
5470	-1.65	-3.05
5600	-1.78	-3.06
5725	-1.78	-3.32
5785	-1.81	-3.07
5875	-1.76	-3.17

Efficiency (%)

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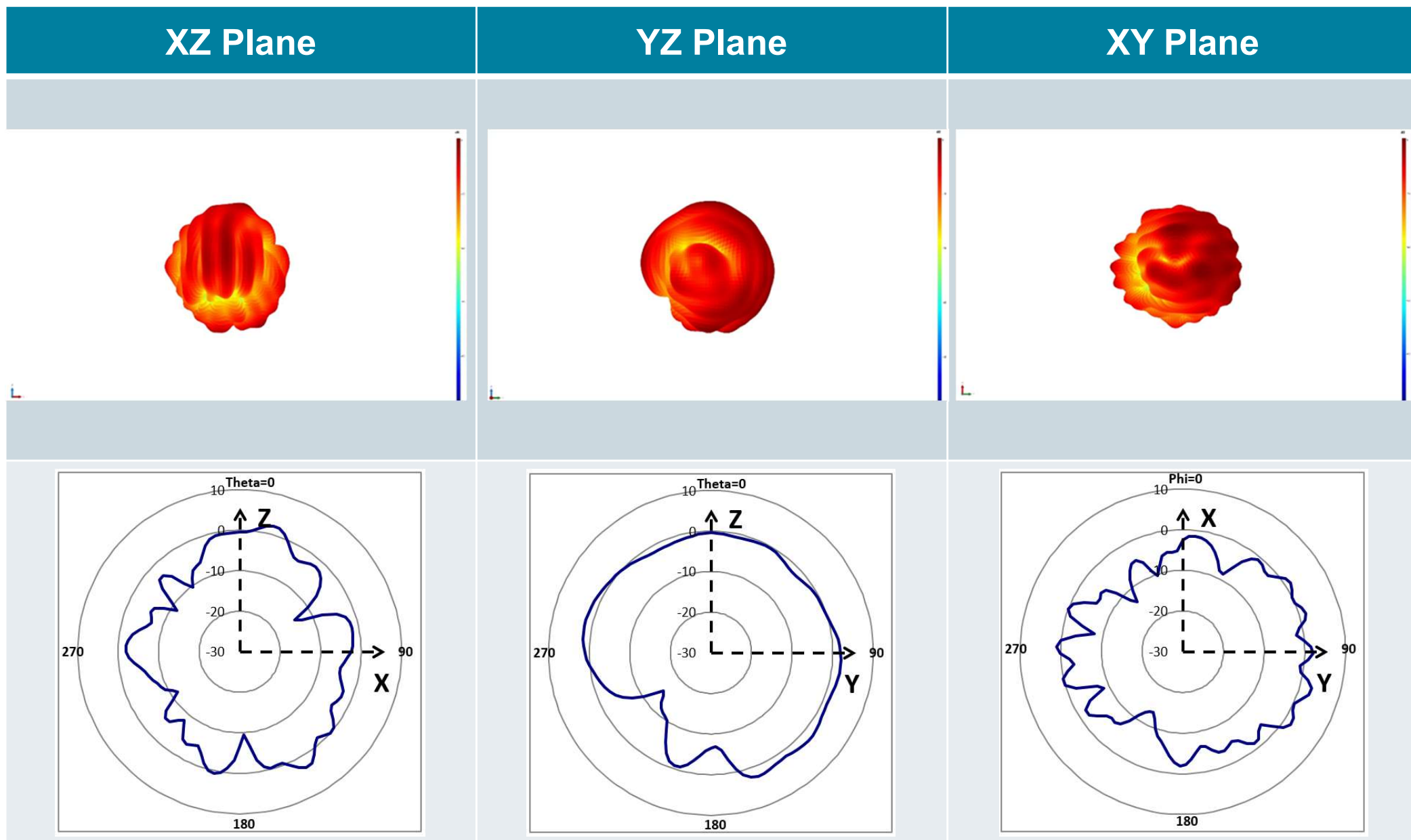
Frequency (MHz)	Efficiency (%)	
	MAIN	AUX
2400	68.71	56.89
2450	70.79	58.21
2500	68.39	56.10
5150	67.92	49.89
5250	65.46	48.98
5350	67.61	49.77
5470	68.39	49.55
5600	66.37	49.43
5725	66.37	46.56
5785	65.92	49.32
5875	66.68	48.19

Peak Gain (dBi)

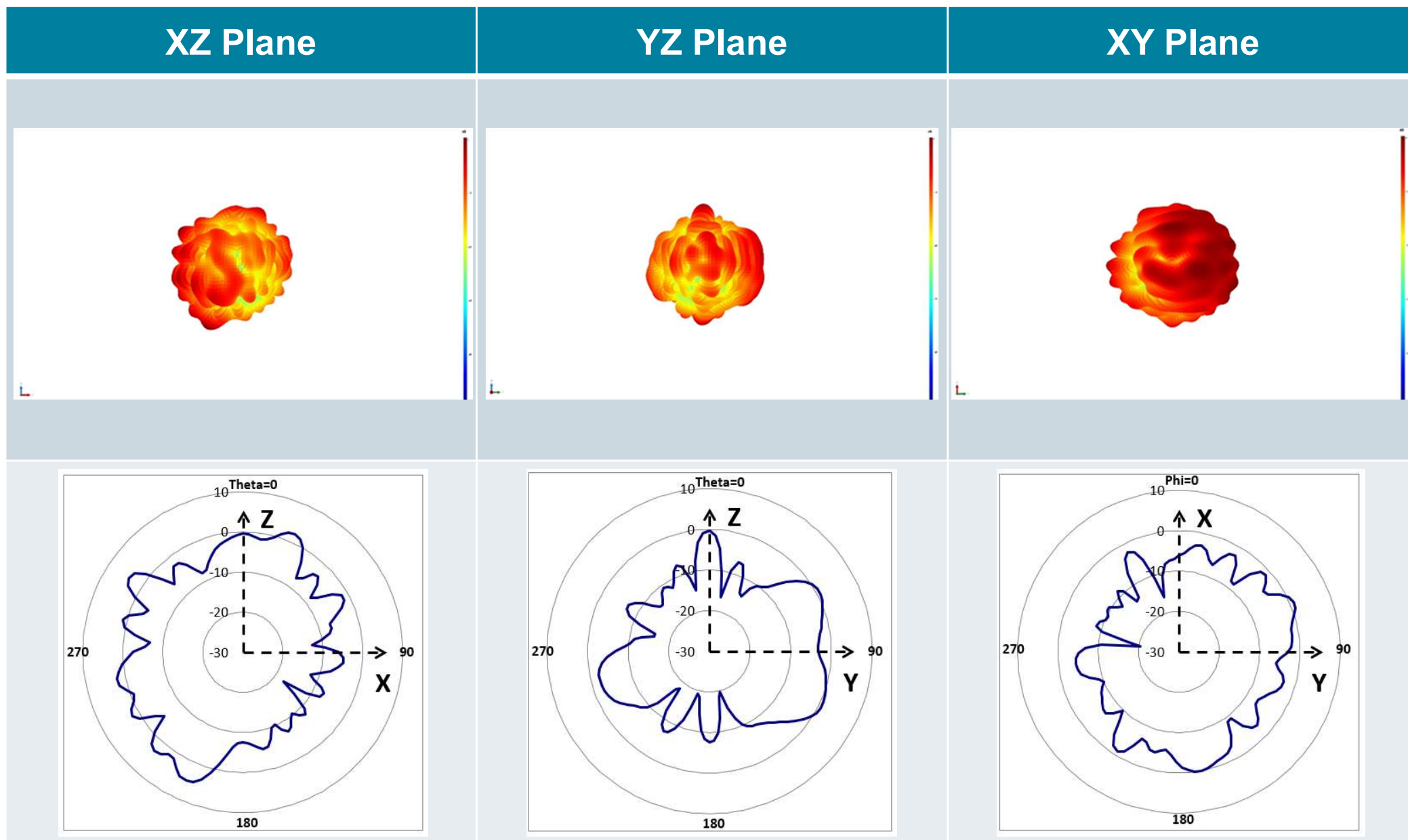
20240919
update

Frequency (MHz)	Peak Gain (dBi)	
	MAIN	AUX
2400	2.39	2.51
2450	2.84	2.62
2500	2.51	2.44
5150	4.42	4.23
5250	4.32	4.78
5350	4.39	4.27
5470	4.08	4.78
5600	4.46	4.67
5725	4.80	4.79
5785	4.39	4.13
5875	4.34	4.39

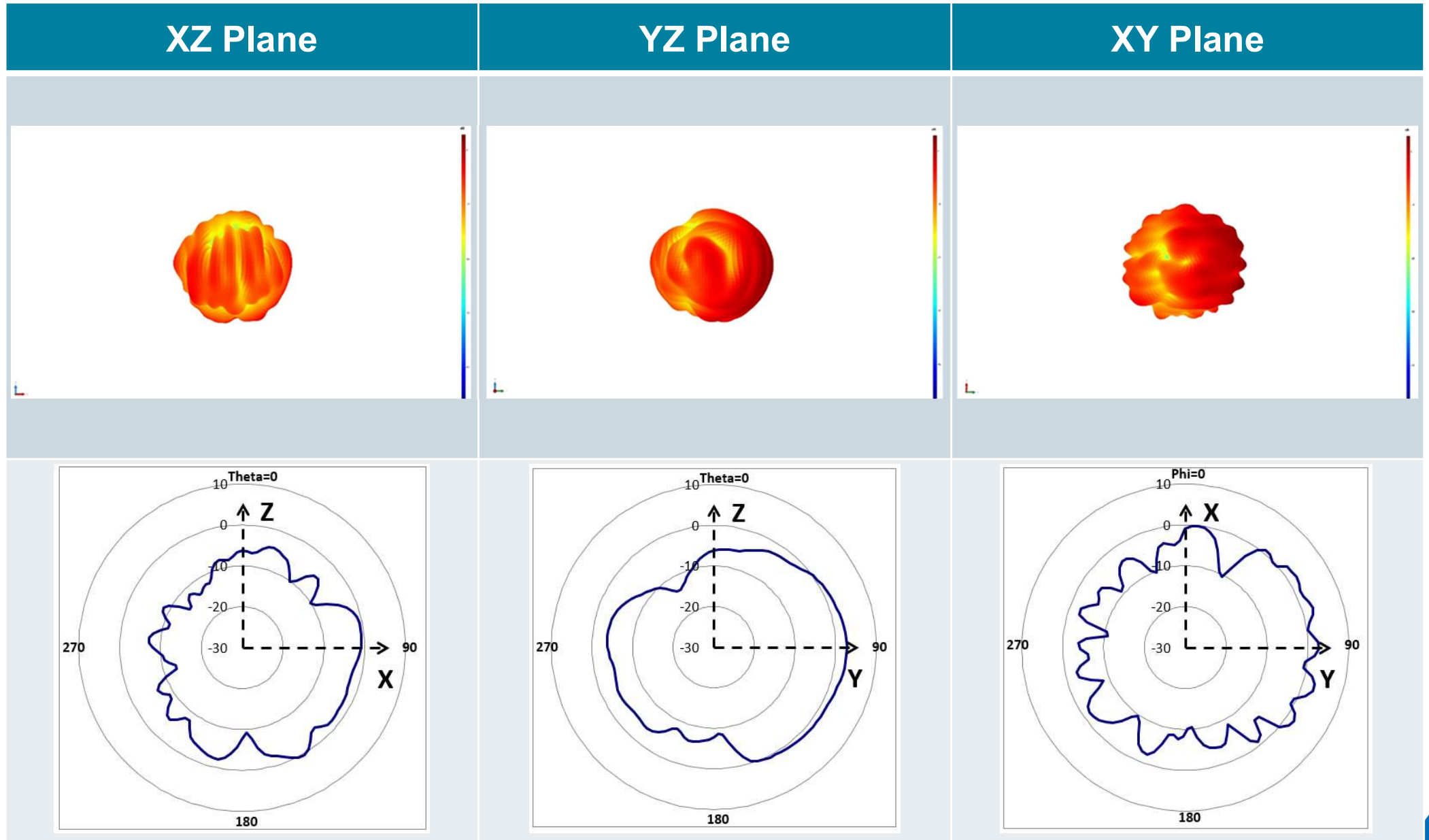
Main Radiation pattern (2450 MHz)_Cloth cover



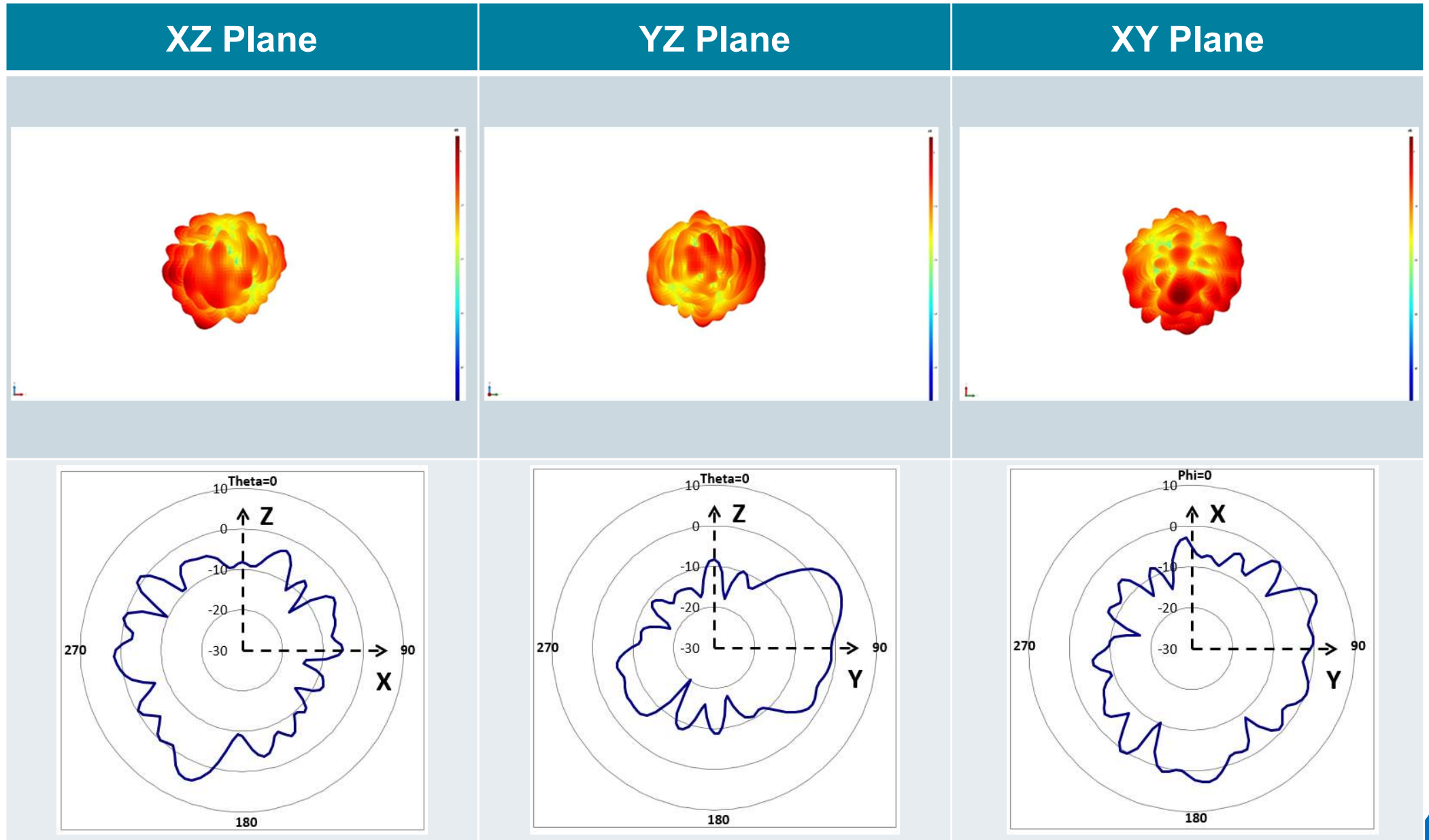
Main Radiation pattern (5470 MHz)_Cloth cover



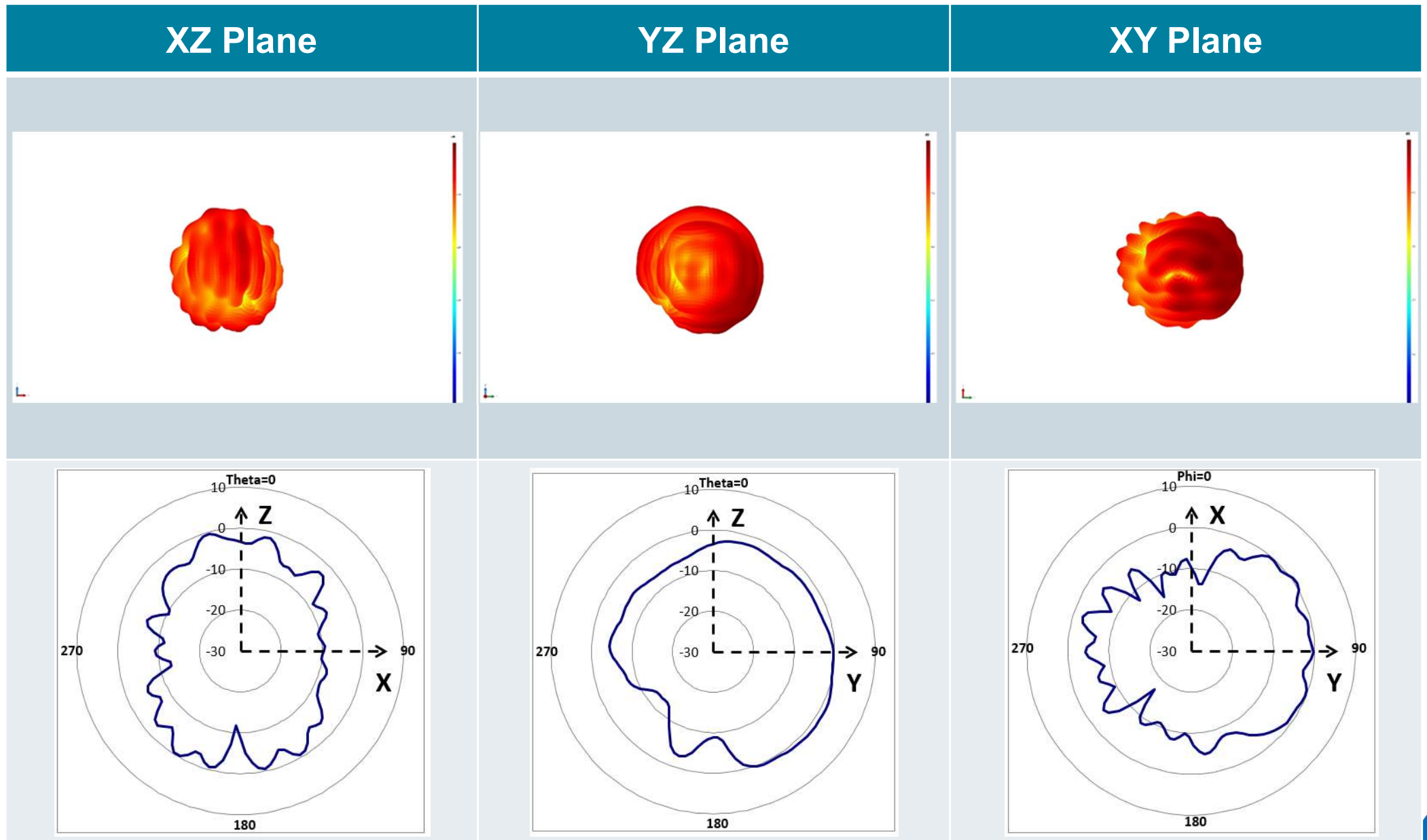
Main Radiation pattern (2450 MHz)_Metal Cover



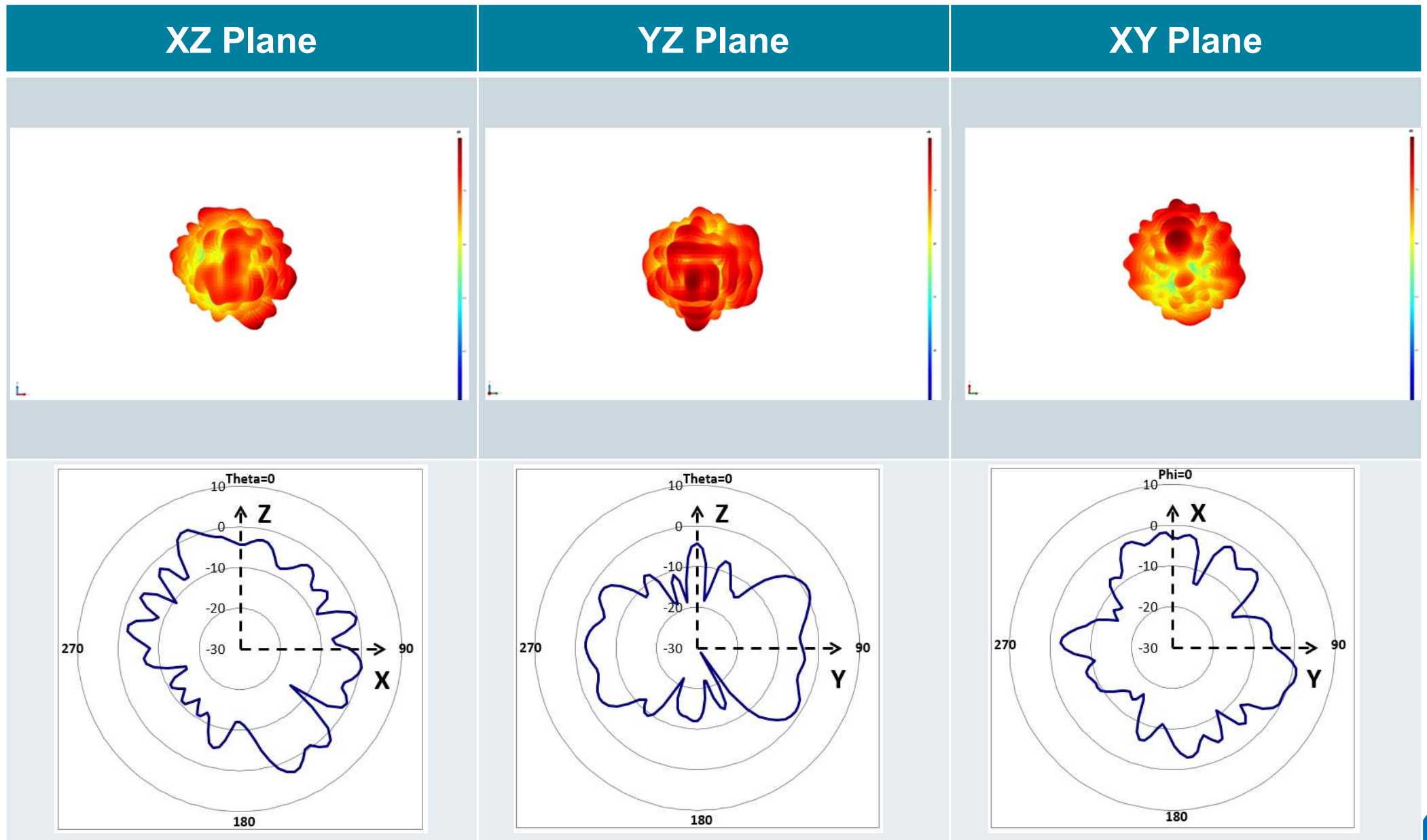
Main Radiation pattern (5470 MHz)_Metal Cover



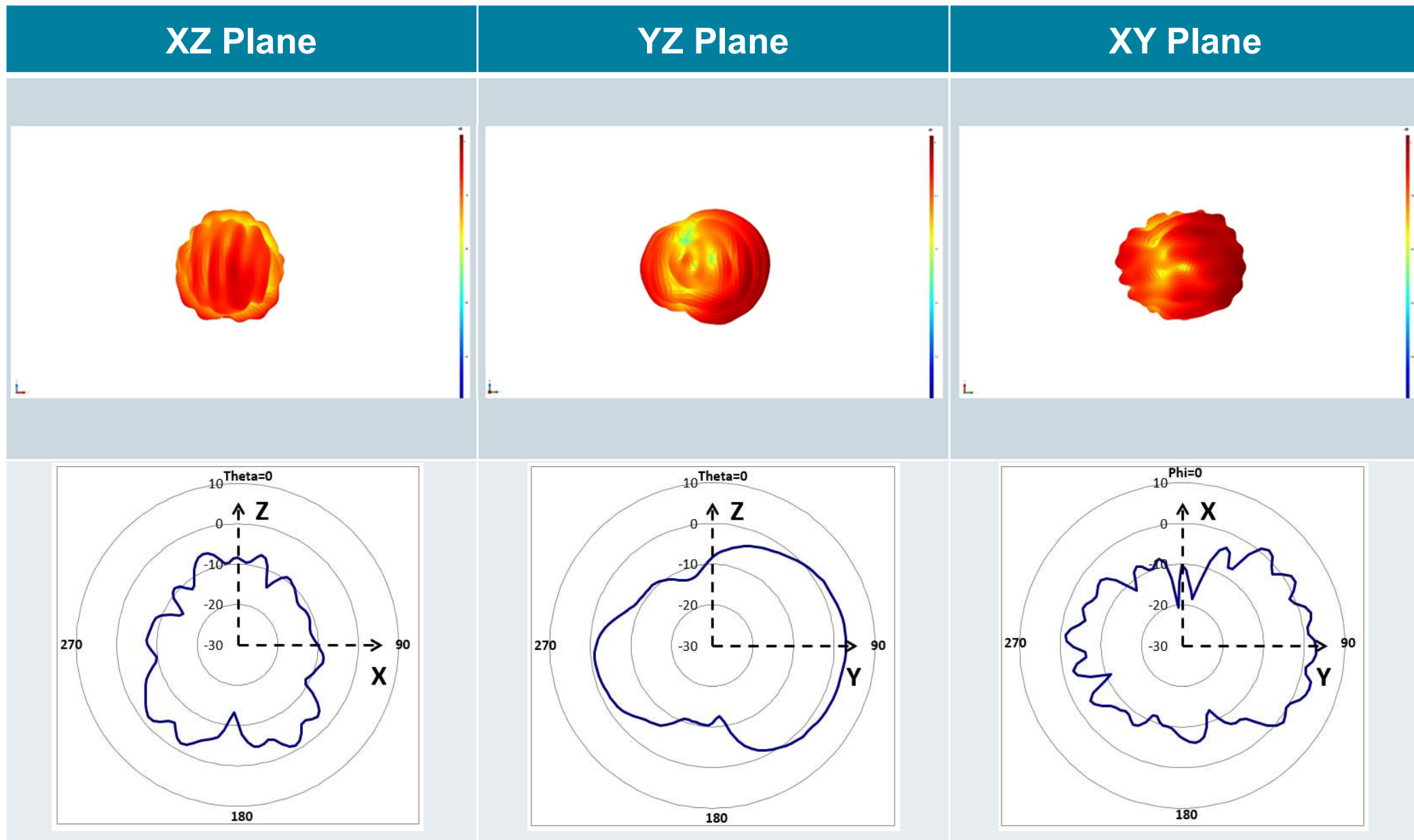
Aux Radiation pattern (2450 MHz)_Cloth cover



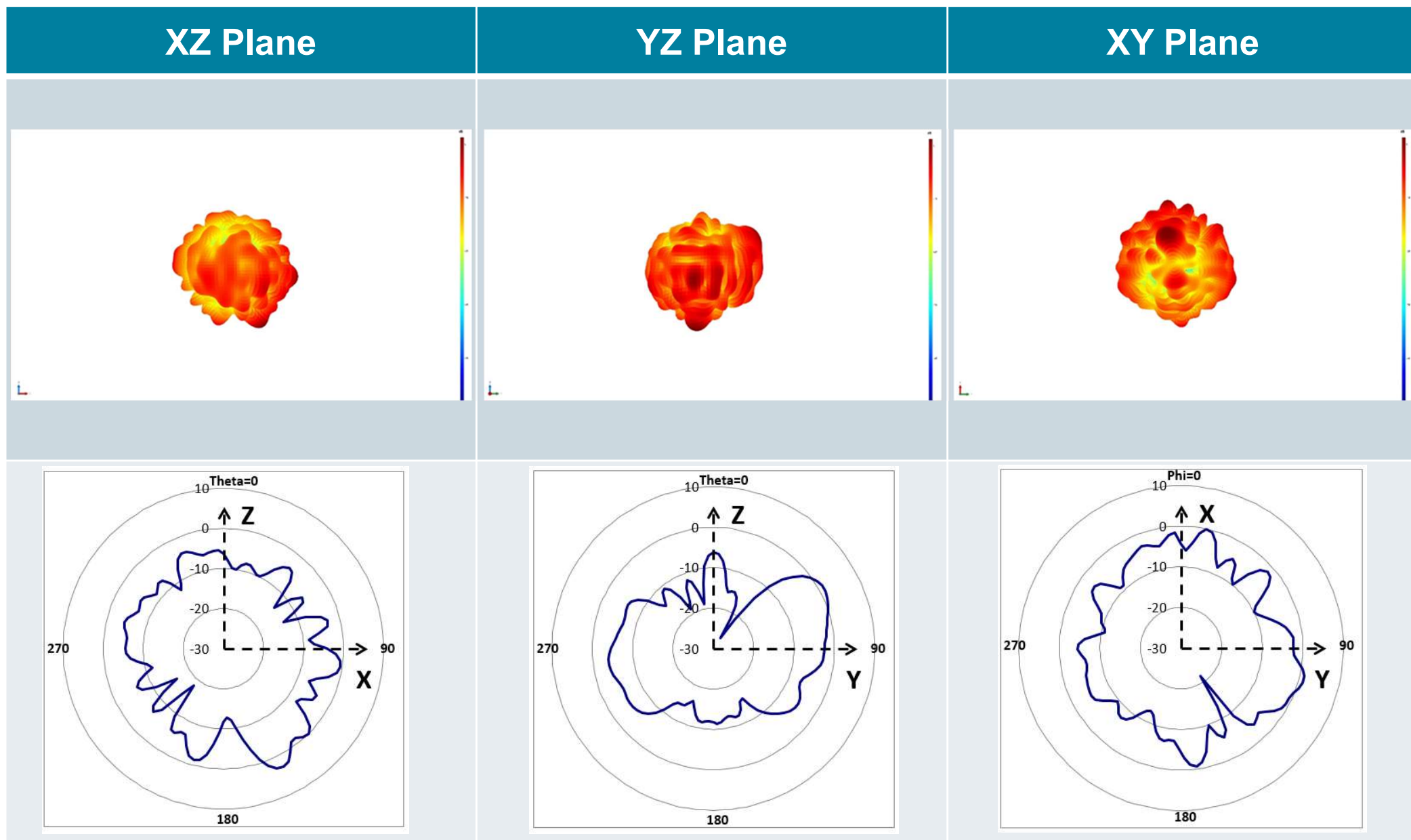
Aux Radiation pattern (5470 MHz)_Cloth cover



Aux Radiation pattern (2450 MHz)_Metal Cover



Aux Radiation pattern (5470 MHz)_Metal Cover



WNC

Wistron NeWeb Corp.

~Thank You~



Appendix A

Test Engineer: Nandi Chen

Test date: 2024/9/19

Measurement System Information

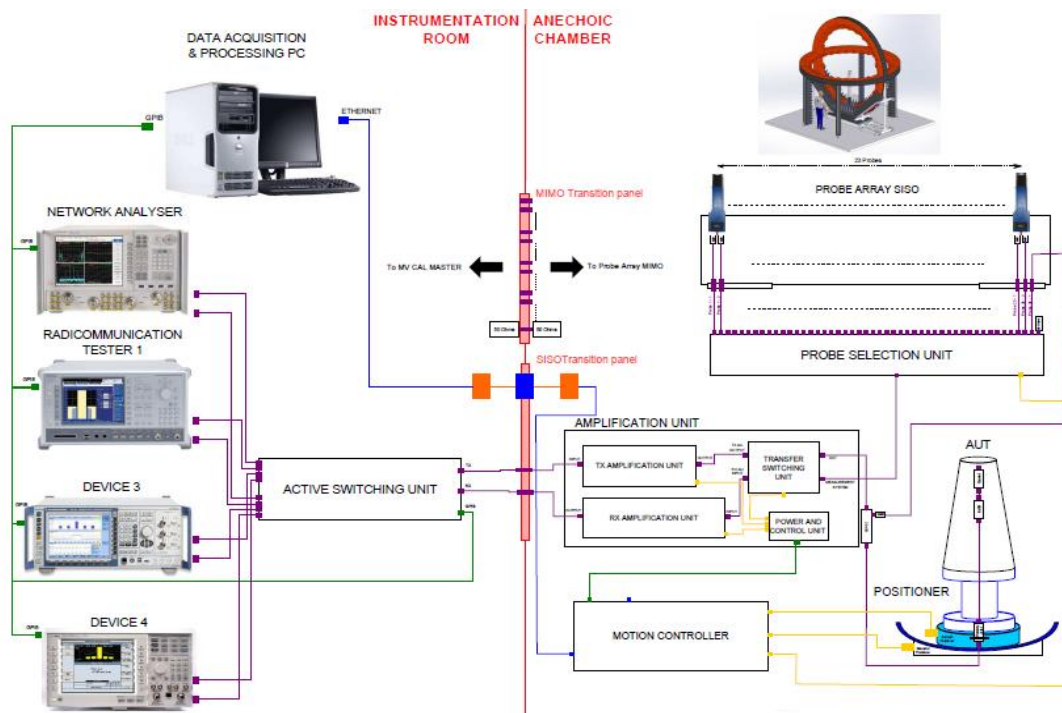
General Information

Testing Condition:

- Temperature: $22 \pm 3^\circ\text{C}$
- Humidity: $< 80\%$

Measurement Facility:

- Measurement Chamber: MVG 3D fully anechoic chamber and its measuring system (Stargate-24-L)
- Network Analyzer: Agilent E5071C



Measurements are performed in a MVG **Stargate-24-L** with the StarAct interface for a base station simulator. The **Stargate-24-L** has 23 probe antennas mounted with equal spacing on a circular arch. Electronic switching of the probe antennas provides outstanding measurement speed. The geometry of the setup, with only a Styrofoam column within 1.6 meters of the EUT, ensures minimum interference and low ripple on the measured radiation patterns. The DUT is placed on top of the pedestal, in the center of the system.

The diagram illustrates a measurement setup within a **Shielded Anechoic Chamber**. A **Low Reflectivity Support Structure for θ -axis Mechanical Scanner and/or Multiple Measurement Antennas** is positioned at the center. This structure consists of a vertical support with a rotating platform. A **Dual Polarized Measurement Antenna(s)** is mounted on the platform, with its orientation defined by the θ -axis (polar angle) and ϕ -axis (azimuthal angle). The distance from the center of rotation to the antenna is labeled $\geq R$. The ϕ -axis is also labeled as the **Pos. Direction of Rotation**. The entire setup is enclosed within the **Shielded Anechoic Chamber**, which is represented by a large, curved, light-blue structure.

Equipment Description	Manufacturer	Identification no.	Current calibration date	Next calibration date
Network Analyzer	Agilent	E5071C	2024/07/05	2025/07/04
Sleeve Dipole	MVG	SD740	2022/01/07	2025/01/06
Dual Ridge Horn	MVG	SH800	2023/12/14	2024/12/13
Stargate-24-L probe array	MVG	Stargate-24-L	2024/08/14	2025/08/13
Measurement software	MVG	SPM V1.9	N/A	N/A