



JPN Sony TV FY24 RCU Premium 2023 Antenna Measurement T1/P2_20230925

Universal Electronic Inc.

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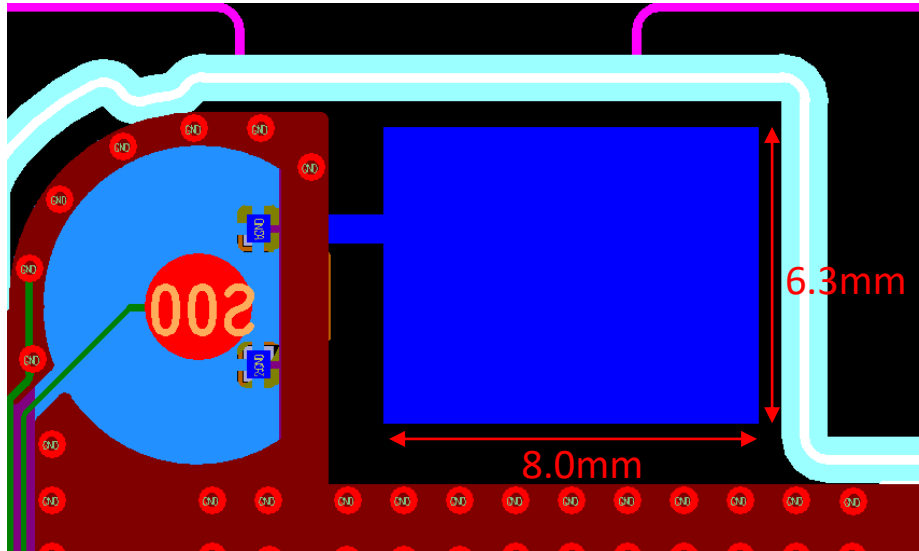
A close-up, angled view of a black remote control. The top part of the remote is visible, showing a circular navigation pad and several buttons. A glowing, white circuit board pattern is overlaid on the remote, highlighting its internal electronic components. The background is dark with a faint world map.

REDEFINING **CONTROL**

Antenna Dimension



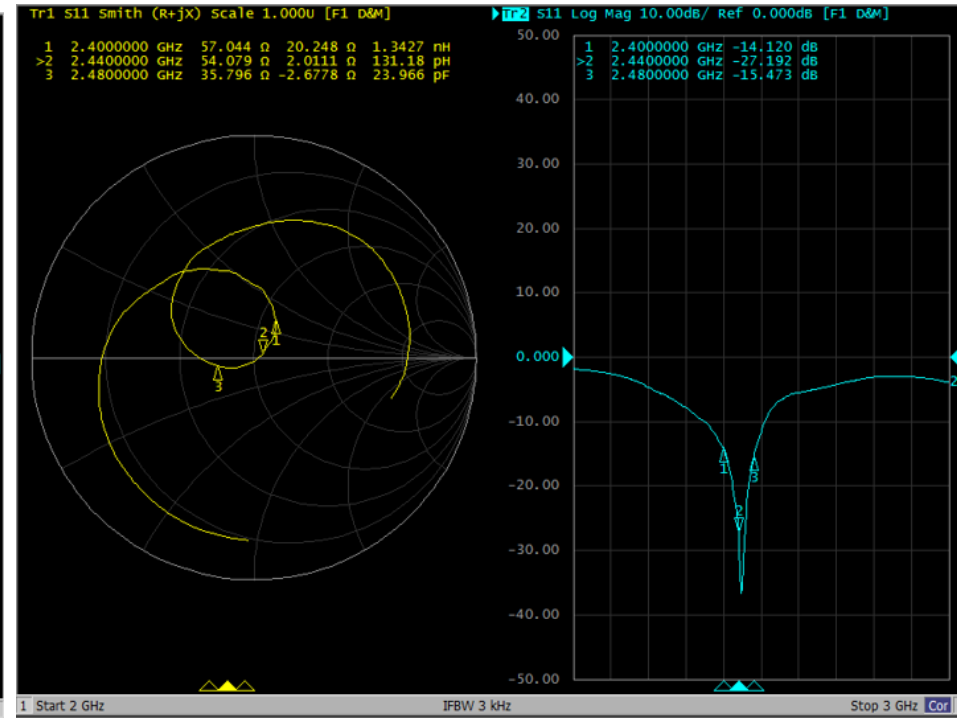
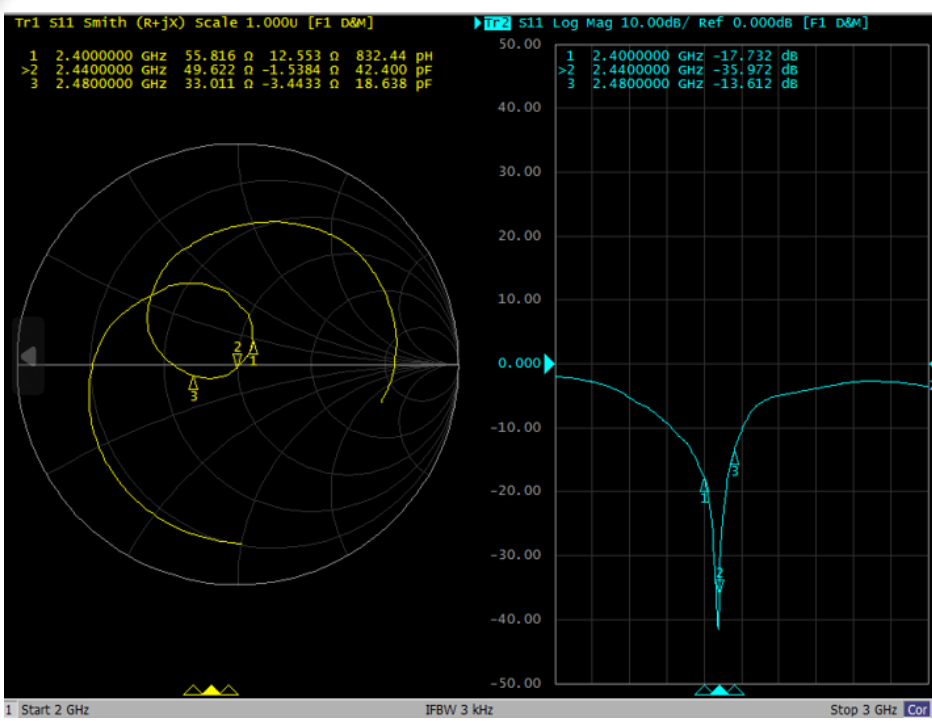
REDEFINING CONTROL



Return Loss and Smith Chart

#1_ R11=2.0nH, L3=1.3Pf, C14=DNF

2_ R11=2.0nH, L3=1.3Pf, C14=DNF



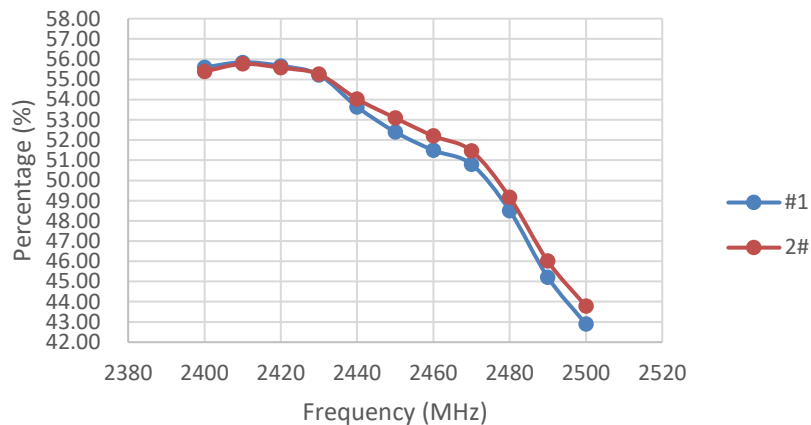
Frequency (MHz)	S11 (dB)		
	2400	2440	2480
# 1	-17.732	-35.972	-13.612

Frequency (MHz)	S11 (dB)		
	2400	2440	2480
# 2	-14.120	-27.192	-15.473

Efficiency and Gain table

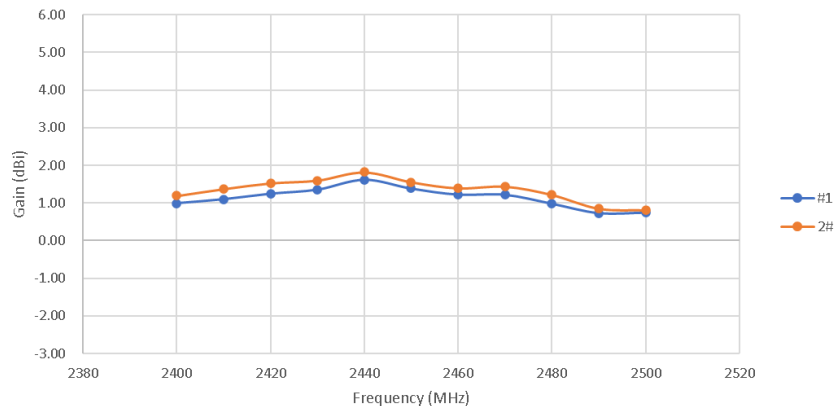
REDEFINING CONTROL

Efficiency (%)



Frequency (MHz)	#1 Efficiency (%)	#2 Efficiency (%)
2400	55.59%	55.40%
2410	55.84%	55.77%
2420	55.66%	55.58%
2430	55.22%	55.26%
2440	53.64%	54.03%
2450	52.40%	53.10%
2460	51.49%	52.20%
2470	50.80%	51.47%
2480	48.51%	49.17%
2490	45.22%	46.01%
2500	42.90%	43.78%

Gain (dBi)



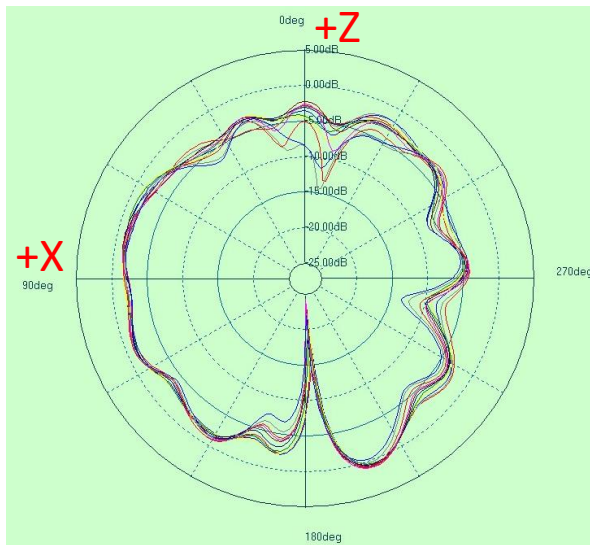
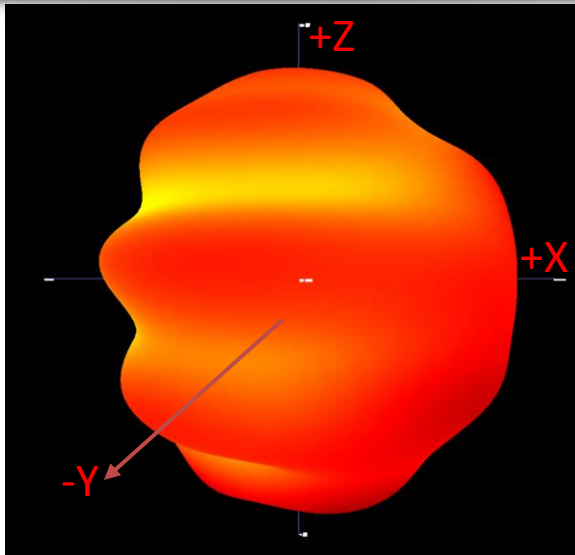
Frequency (MHz)	#1 Gain (dBi)	#2 Gain (dBi)
2400	0.99	1.19
2410	1.10	1.37
2420	1.25	1.53
2430	1.36	1.60
2440	1.62	1.82
2450	1.38	1.56
2460	1.22	1.39
2470	1.22	1.44
2480	0.98	1.22
2490	0.72	0.85
2500	0.74	0.81

Radiation Pattern - Unit 1

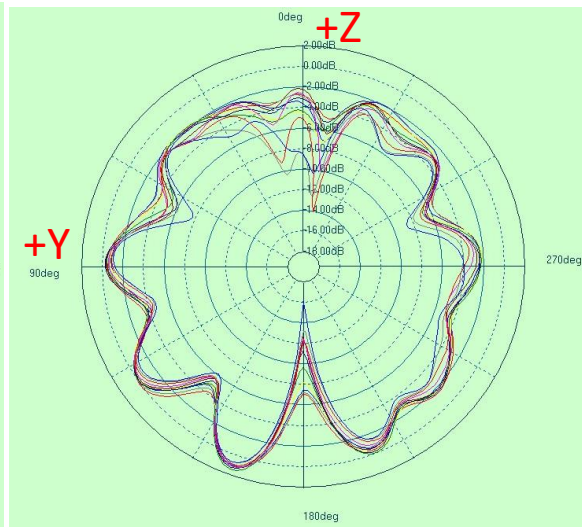


REDEFINING CONTROL

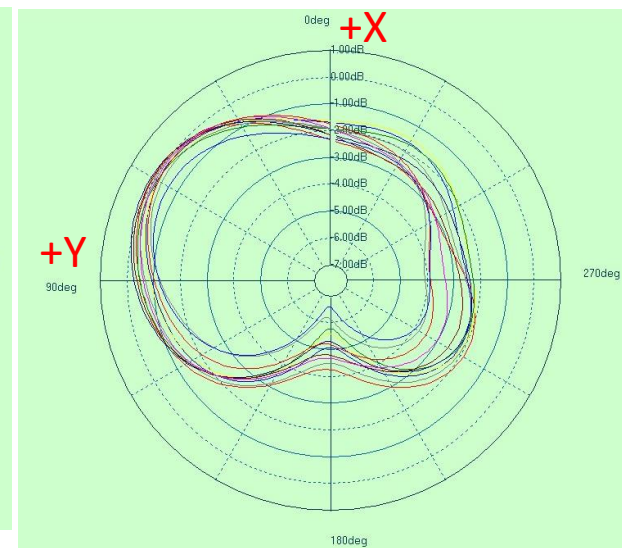
Unit 1_2.440 GHz



Phi=0°



Phi=90°

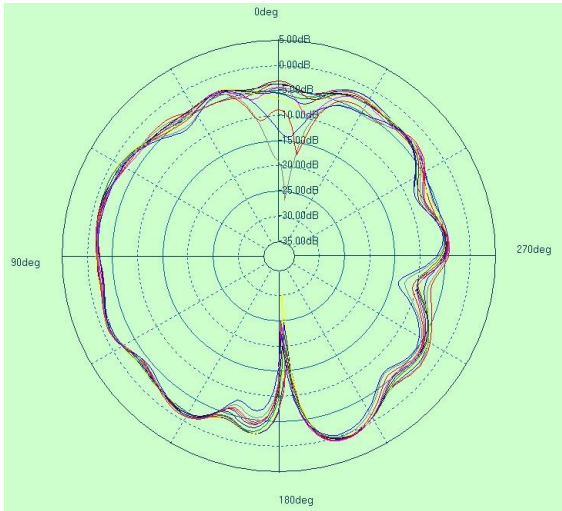


Theta=90°

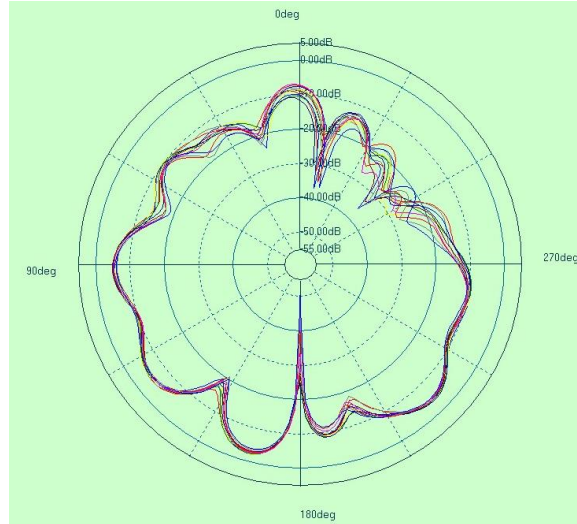
Radiation Pattern - Unit 1

REDEFINING CONTROL

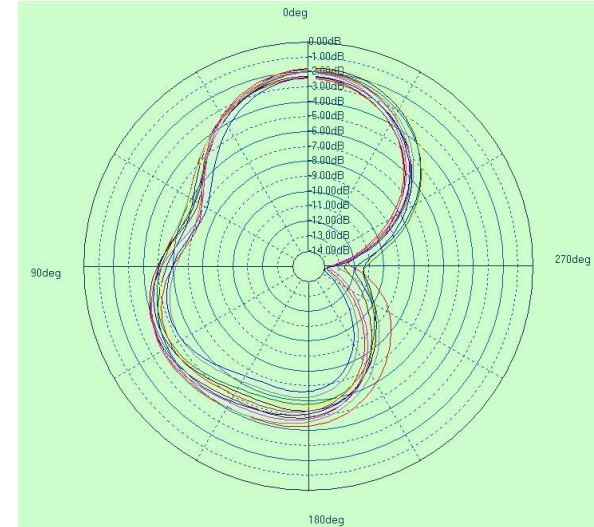
Phi=0° - H



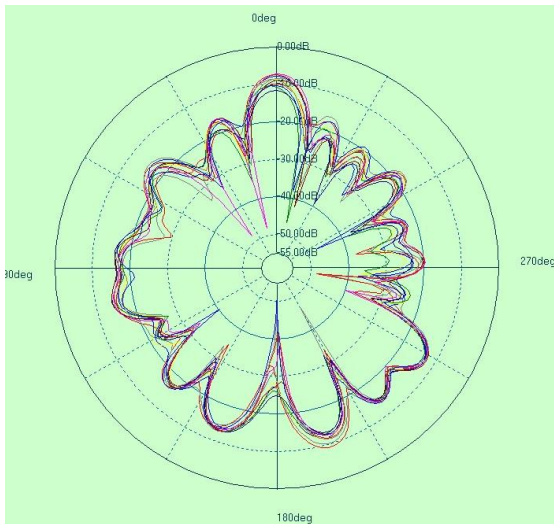
Phi=90° - H



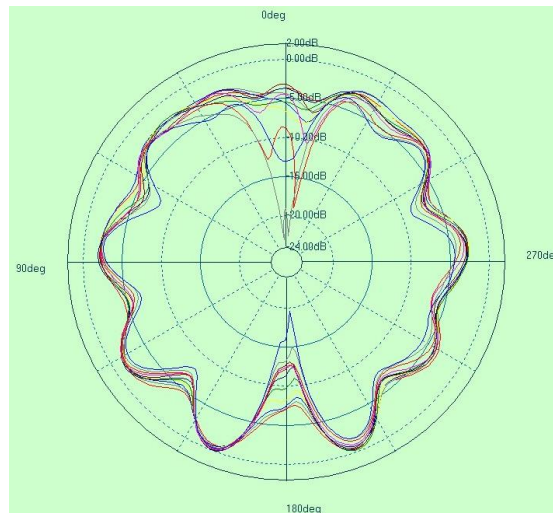
Theta=90° - H



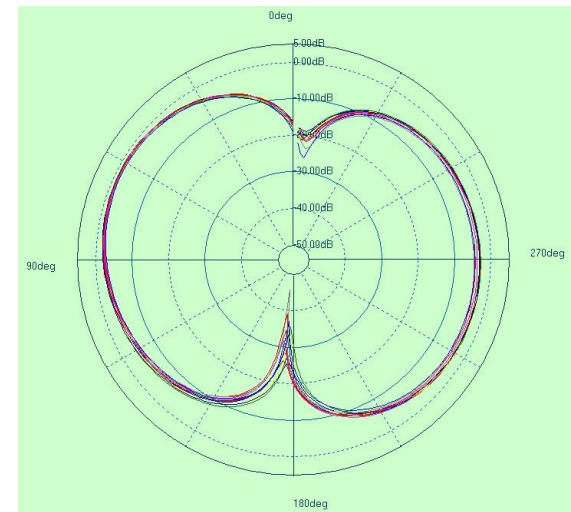
Phi=0° - V



Phi=90° - V



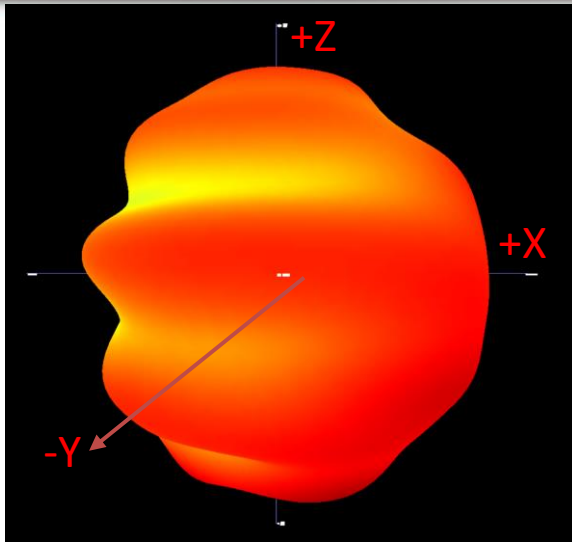
Theta=90° - V



Radiation Pattern - Unit 2

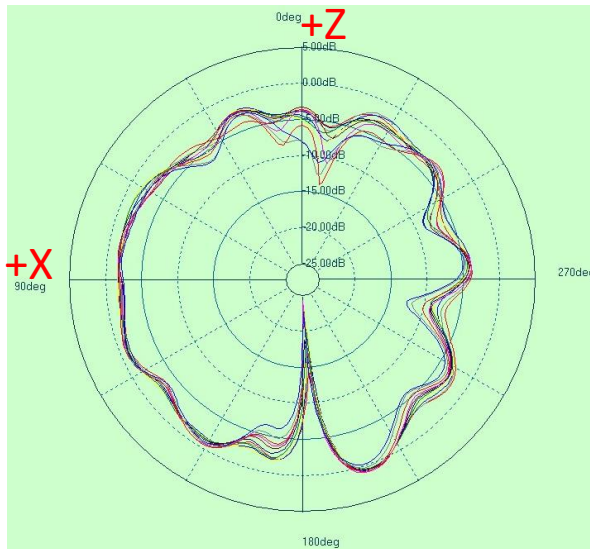
REDEFINING CONTROL

Unit 2_2.440 GHz

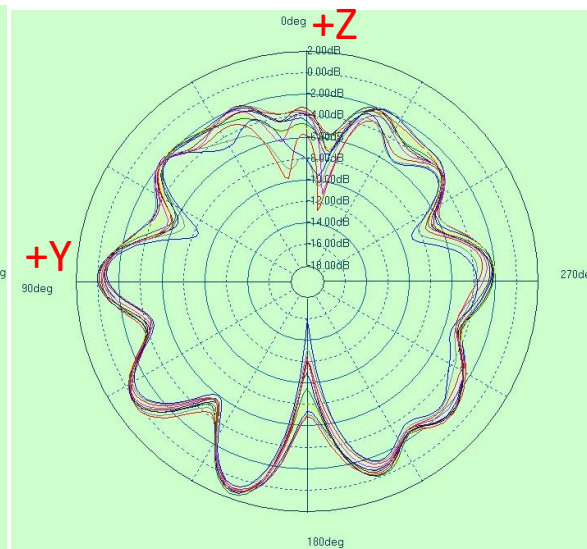


Legend

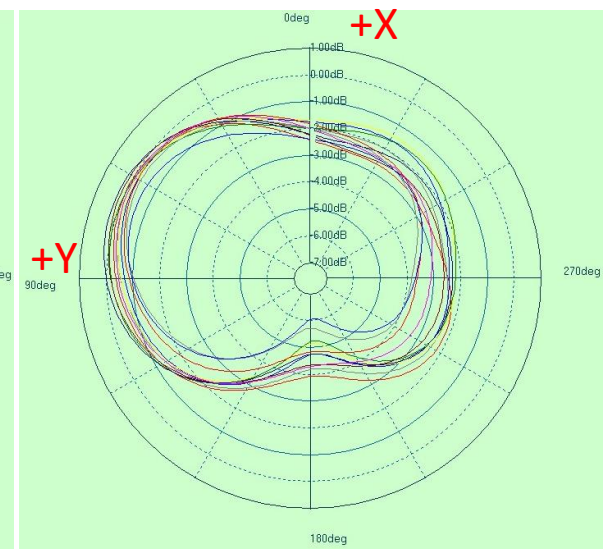
- 2400.00(MHz)
- 2410.00(MHz)
- 2420.00(MHz)
- 2430.00(MHz)
- 2440.00(MHz)
- 2450.00(MHz)
- 2460.00(MHz)
- 2470.00(MHz)
- 2480.00(MHz)
- 2490.00(MHz)
- 2500.00(MHz)



$\Phi=0^\circ$



$\Phi=90^\circ$

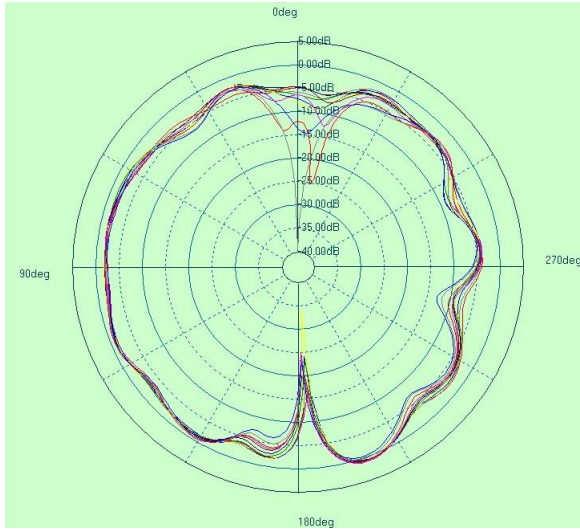


$\Theta=90^\circ$

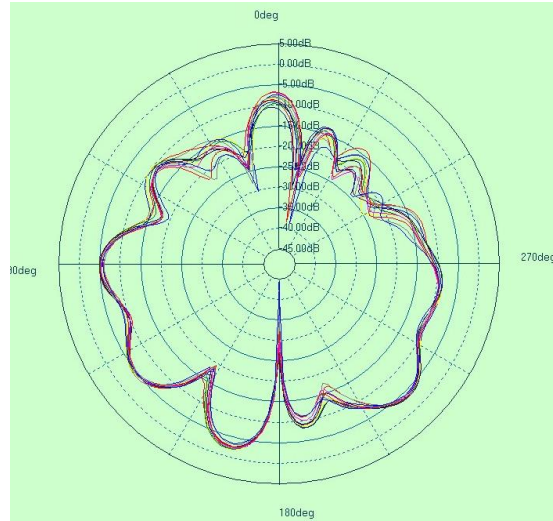
Radiation Pattern - Unit 2

REDEFINING CONTROL

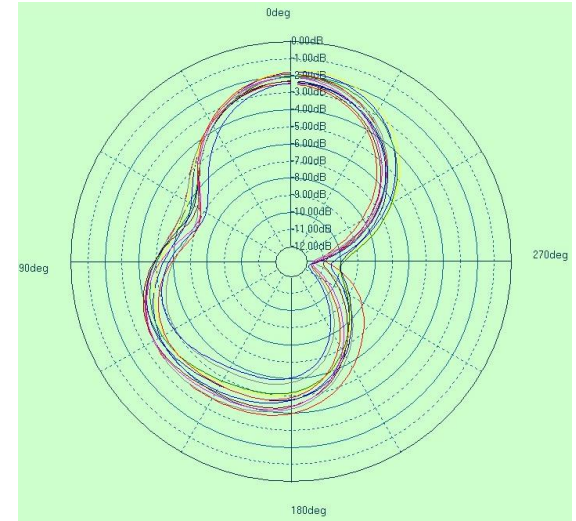
Phi=0° - H



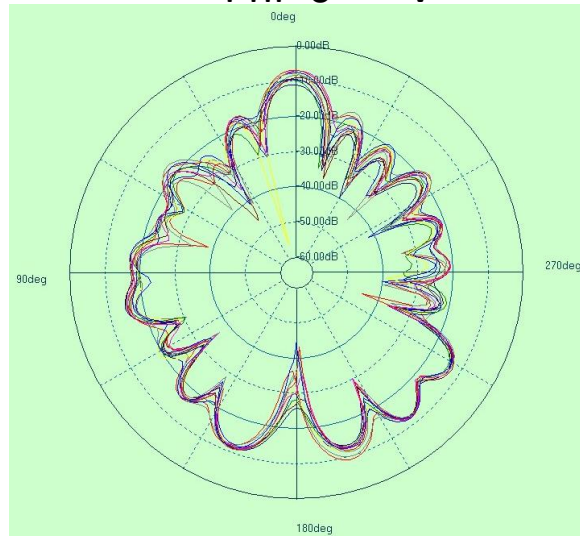
Phi=90° - H



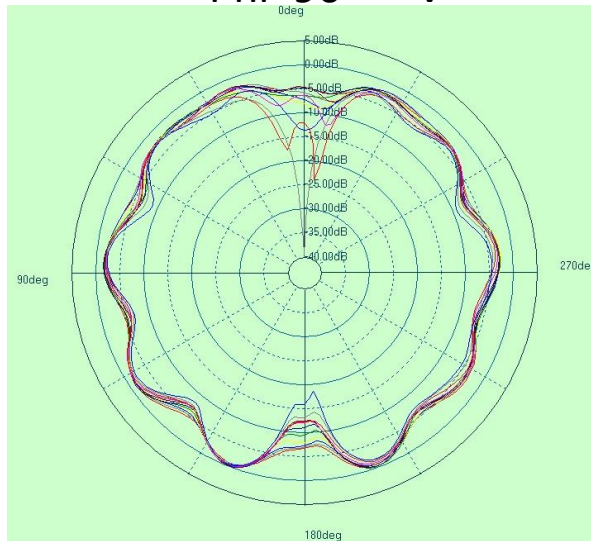
Theta=90° - H



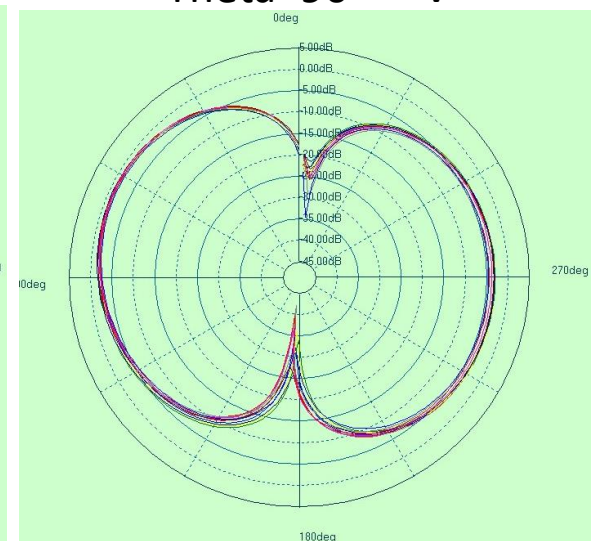
Phi=0° - V



Phi=90° - V



Theta=90° - V



Measured Gain Table

SONY FY24				Average Gain +/- 90 deg		Minimum gain +/- 45 deg	
Premium				(Averaged for 3 frequencies)		(Averaged every 10 deg, min value picked among all the values and all 3 frequencies)	
Coordinate System	Sony	UEI	H (phi)	V (theta)	H (phi)	V (theta)	
	Remote 1	XY	XZ	-18.2	-3.9	-26.7	-13.5
YZ		YZ	-4.0	-13.3	-11.7	-23.1	
ZX		XY	-5.6	-6.2	-5.7	-13.7	

SONY FY24				Average Gain +/- 90 deg		Minimum gain +/- 45 deg	
Premium				(Averaged for 3 frequencies)		(Averaged every 10 deg, min value picked among all the values and all 3 frequencies)	
Coordinate System	Sony	UEI	H (phi)	V (theta)	H (phi)	V (theta)	
	Remote 2	XY	XZ	-18.2	-4.1	-28.4	-15.6
YZ		YZ	-4.1	-13.0	-13.6	-21.0	
ZX		XY	-5.9	-5.9	-5.5	-11.7	