Percsson Communication Equipment Co., Ltd

Antenna OTA Test Report

For

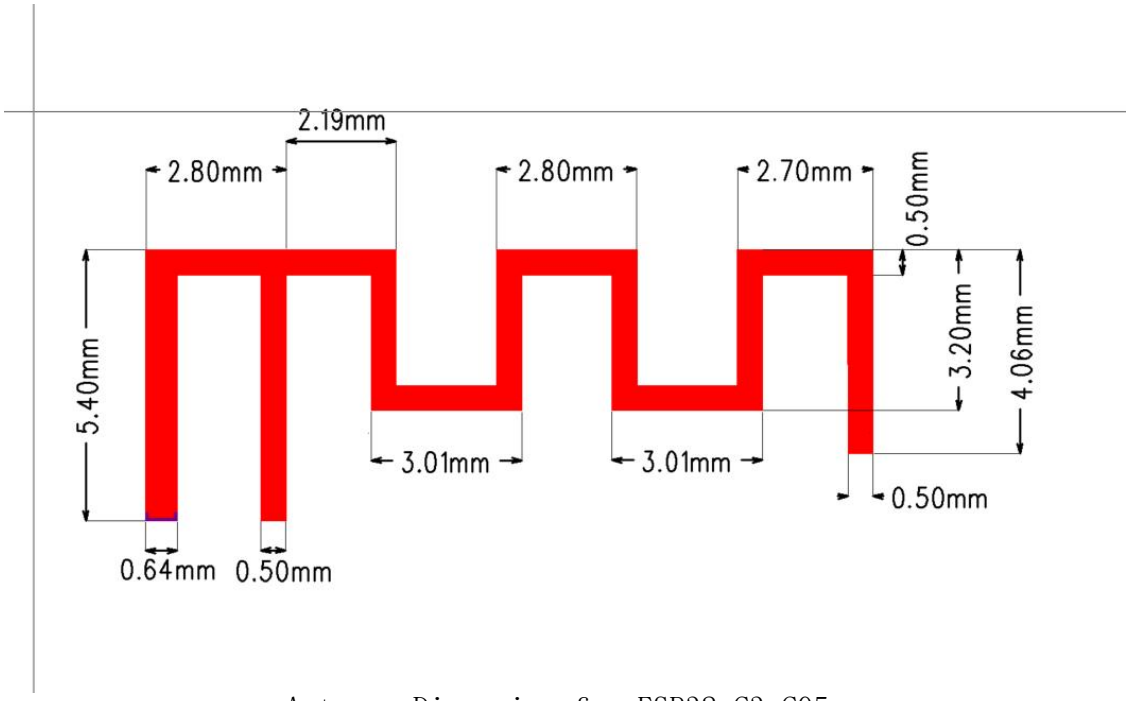
ESP-ANT-A

Customer		**Demo**	**ESP-C05**
Band	**2.4G**	**Color**	black
PRS PN		**Version**	**V1.0**
Issued by	**Jason**	**Checked by**	**Mem**
Confirmed by	**Zhang**	**Date**	**2022.03.18**

一. TEST INSTRUMENTATION

CHAMBER	**SATIMO Chamber**
Wireless Networking Test Set	**Agilent E5071C**
NETWORK ANALYZER	**Agilent 8753D**
TEMPERATURE	**20±3℃**
HUMIDITY	**50±20%rh**
GROUND RESISTANCE	**<0.5R**

Address: Unit 1, Building 6, Zhonghang Yangguan Xinyuan, Meiji Street, Baoan District, Shenzhen, Guangdong



Antenna Dimension for ESP32-C3-C05

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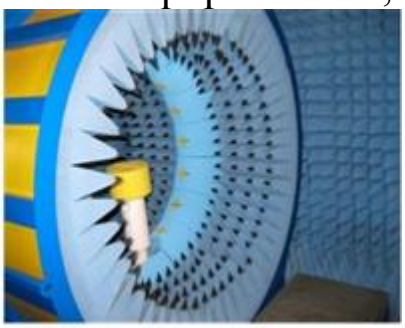

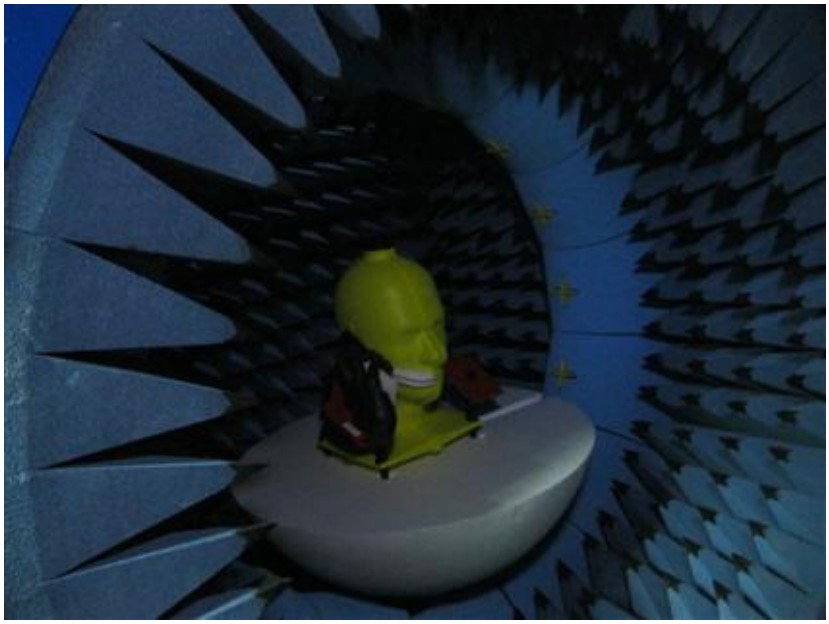

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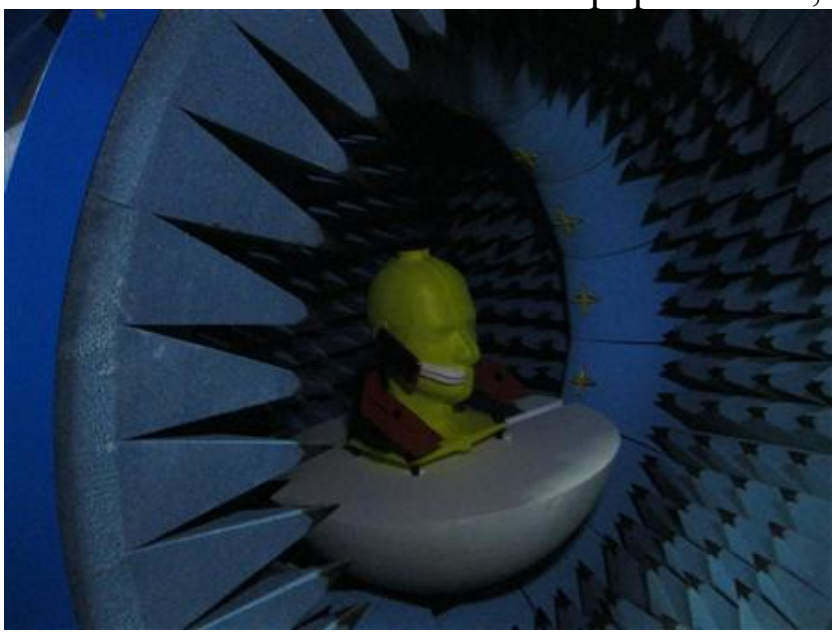
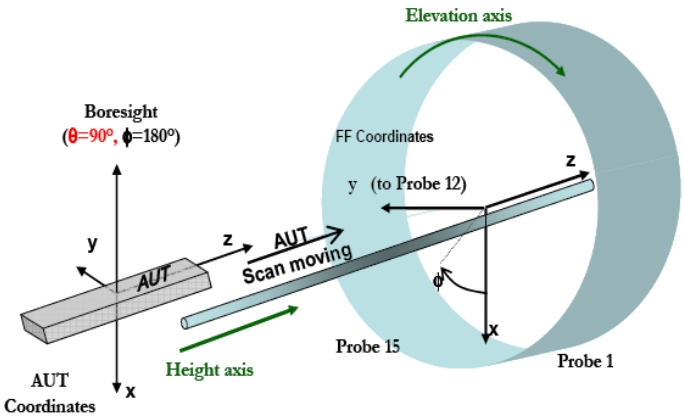
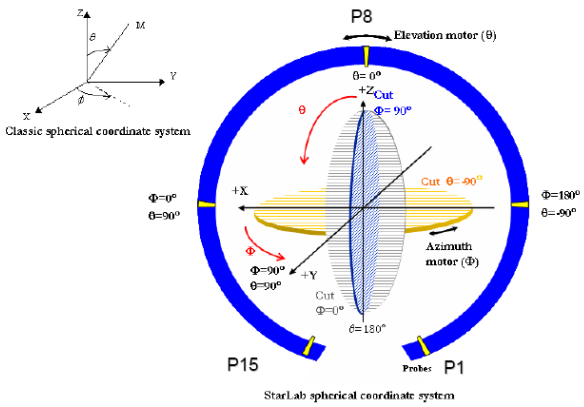


Coordinate system – Cylindrical geometry



Coordinate system – Spherical geometry



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二. Test Results

2.1 Gain and Efficiency

Test Item	Freq (MHz)	Efficiency (%)	Gain (dBi)	Note
Gain	2400	71.32	2.72	Vertical 30°
	2412	70.68	3.21	
	2417	76.51	2.88	
	2422	77.78	2.67	
	2427	80.76	2.89	
	2432	80.11	2.80	
	2437	75.32	2.64	
	2442	75.23	2.93	
	2447	72.99	2.78	
	2452	70.01	3.12	
	2457	72.34	3.13	
	2462	71.32	3.28	
	2467	72.33	3.24	
	2472	75.67	3.33	
	2477	72.12	3.42	
	2482	80.23	3.57	
	2500	79.65	3.22	

2.2 VSWR (Voltage Standing Wave Ration)

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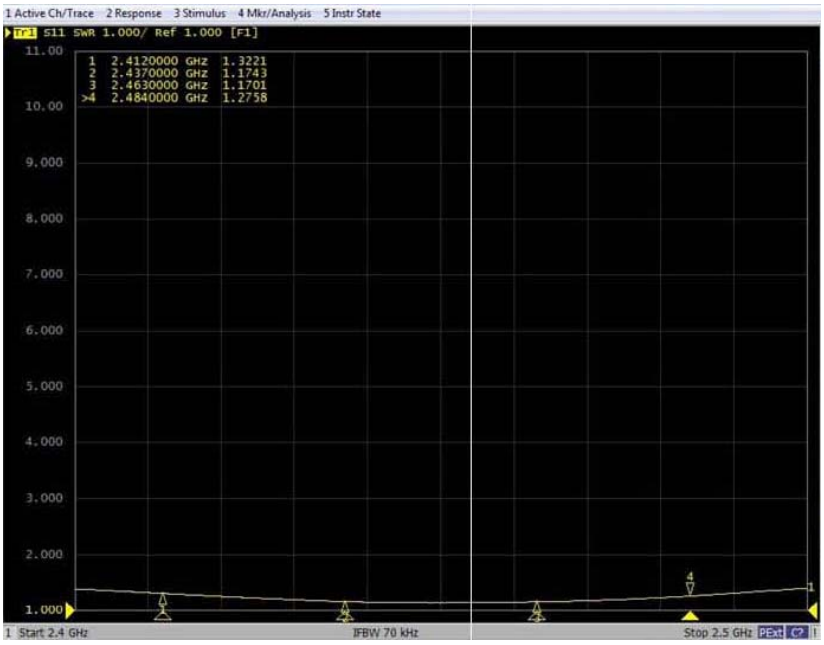
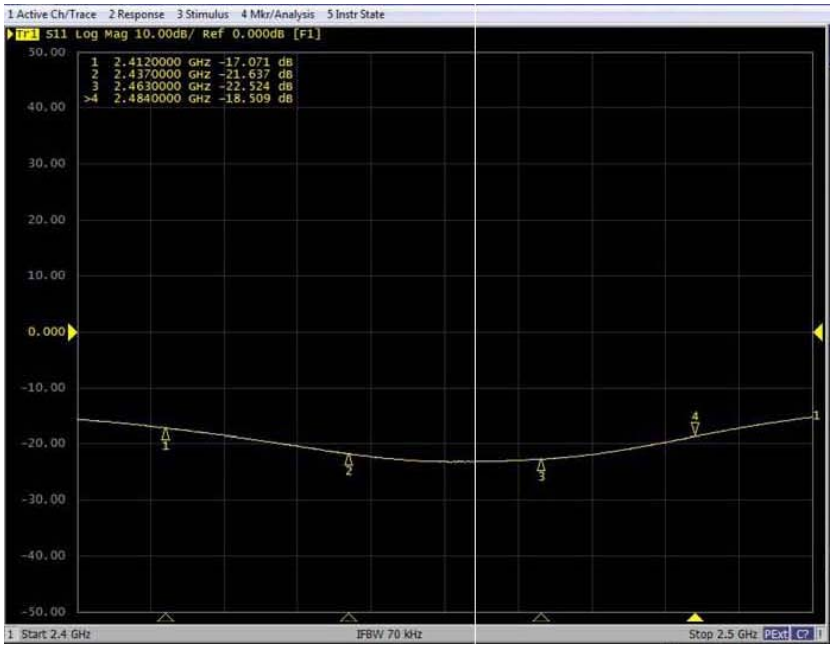


Frequency(MHz)	2412	2437	2463	2484
VSWR	1.31	1.17	1.16	1.29

2.3 Antenna S11



Frequency(MHz)	2412	2437	2463	2484
S11 (dB)	-17.01	-21.65	-22.52	-18.51

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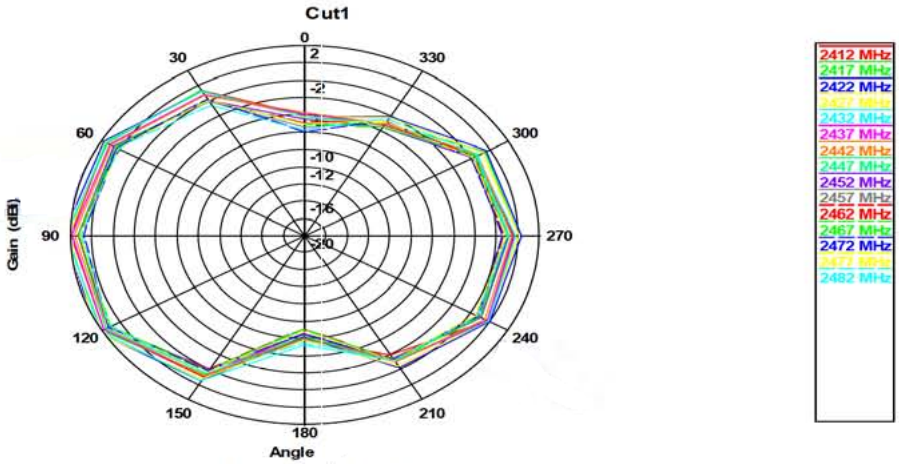
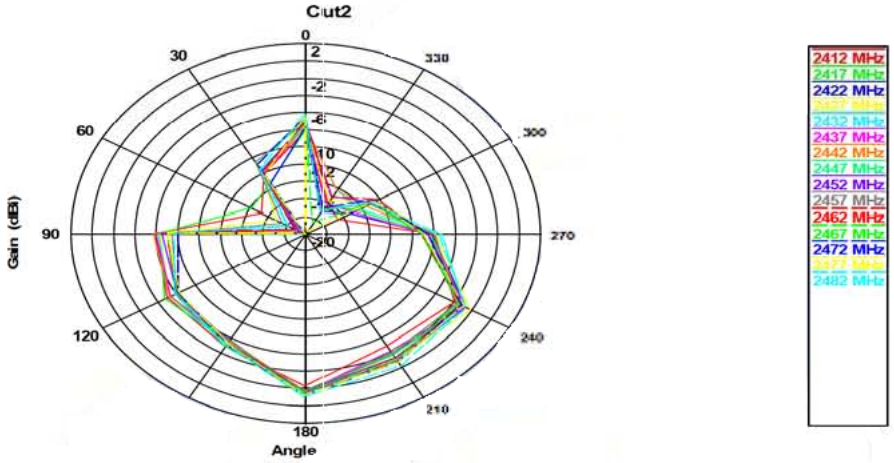
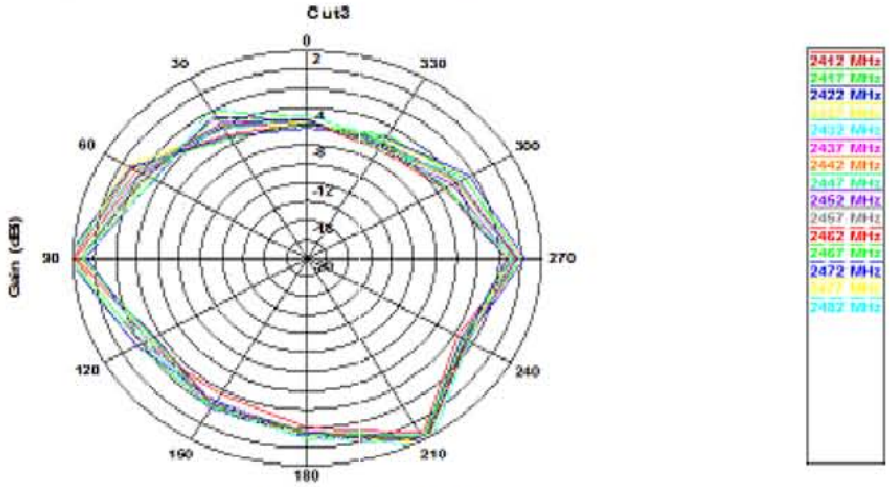
三. 2-D pattern Plots



Horizontal X-Y



Horizontal X-Z



Horizontal Y-Z

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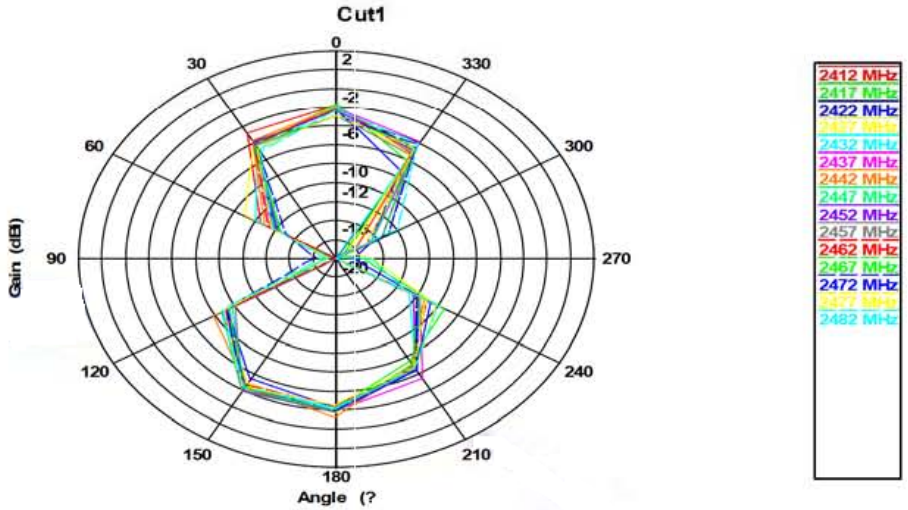
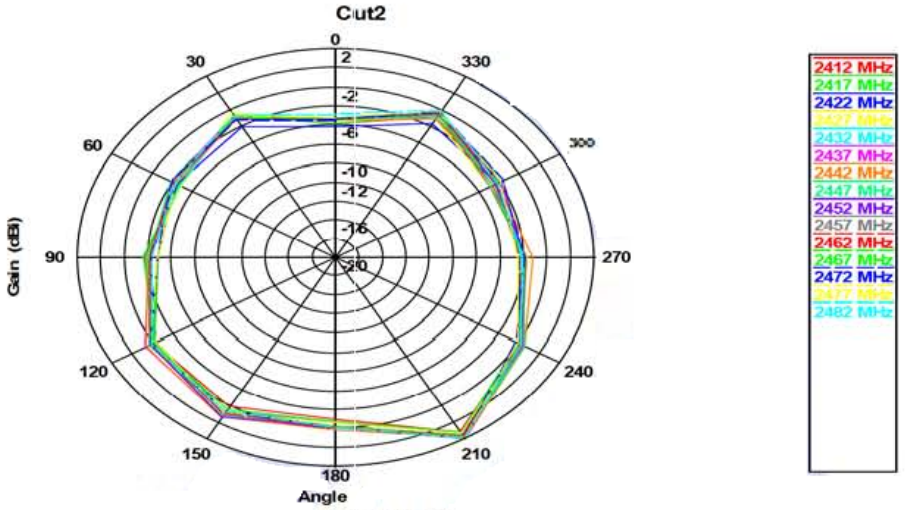
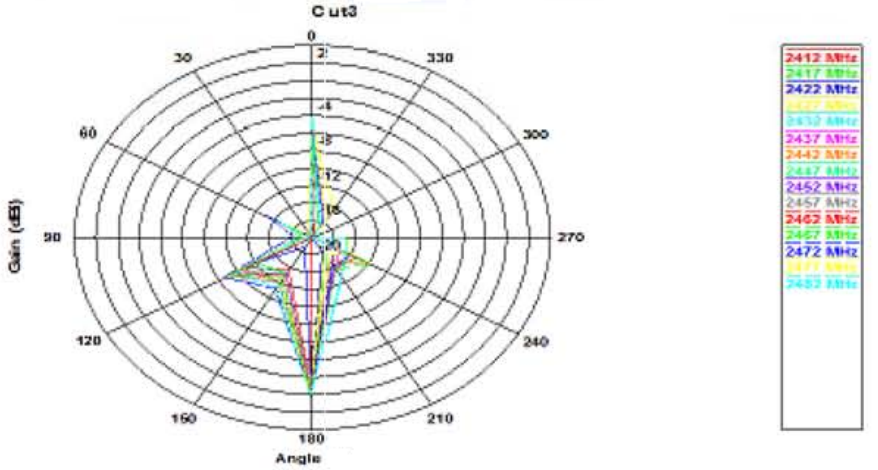


Vertical X-Y



Vertical X-Z



Vertical Y-Z

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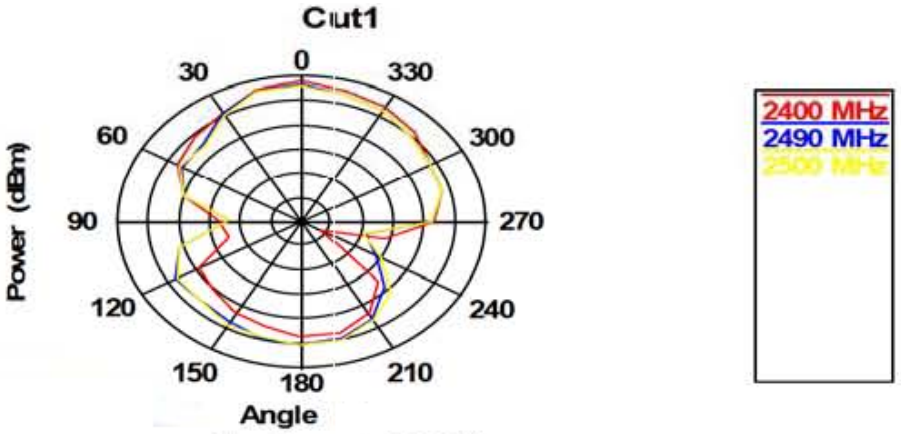

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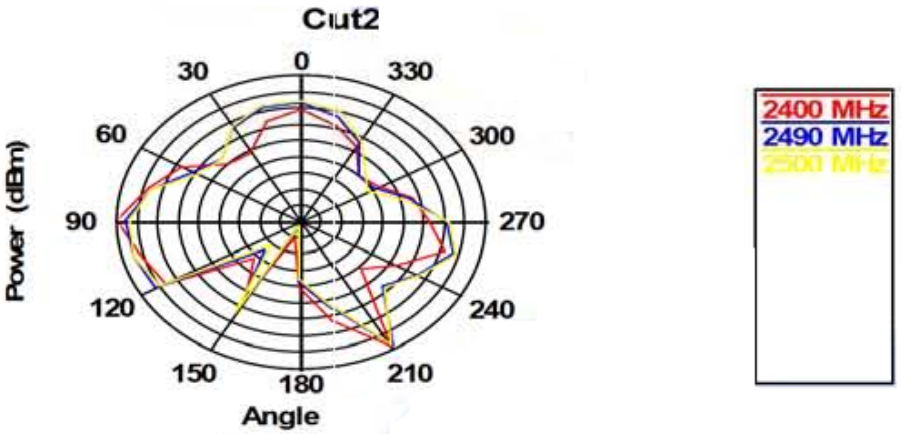

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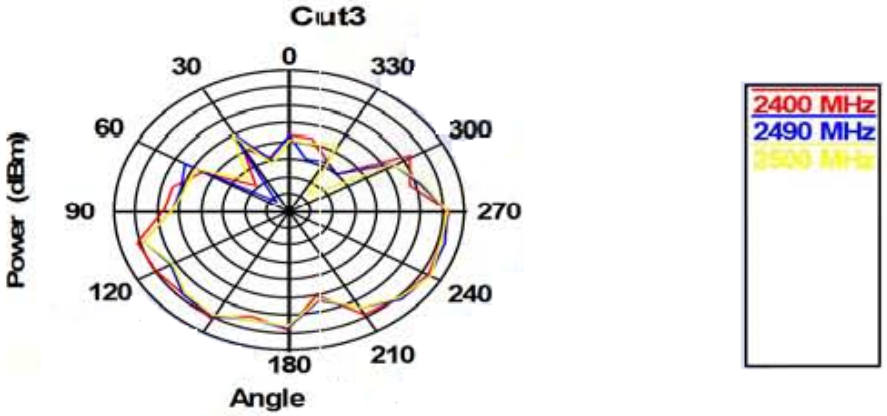

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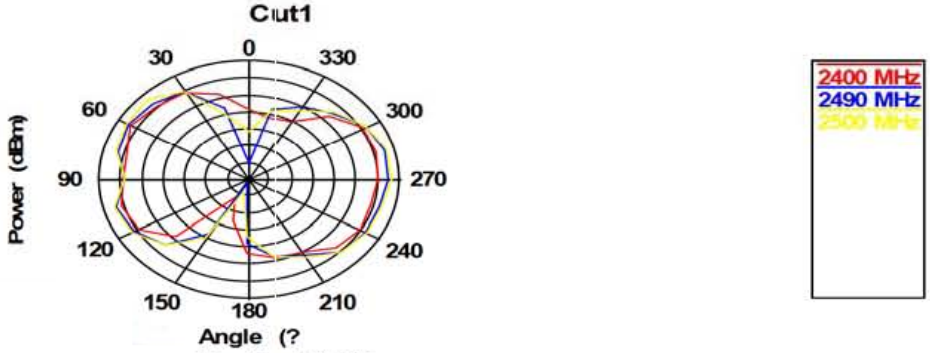
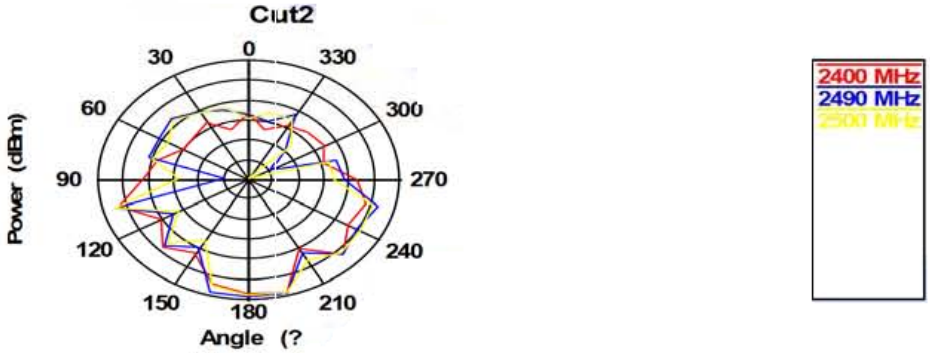


Vertical X-Y



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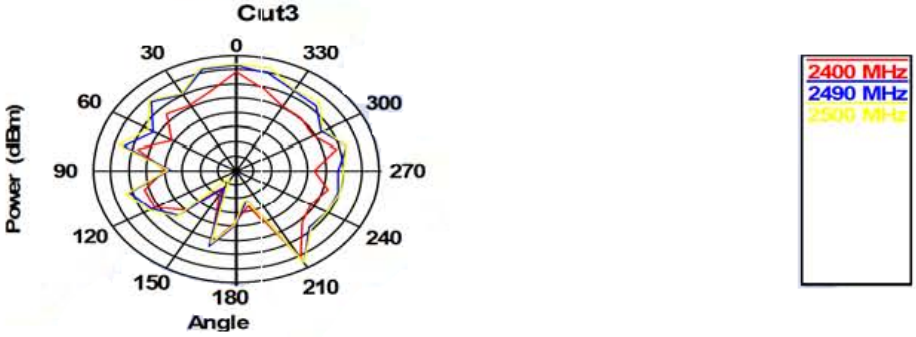

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