PSA

PASSIVE SYSTEM ALLIANCE
WALSIN TECHNOLOGY CORPORATION

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四川愛聯

Presented by

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2021/03/26

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PSA

Version	Date	Description	Author
V01	2021/03/26	New Release	楊壽坤

OUTLINE

1. Antenna Characteristics

1.1 Return Loss & Isolation

1.2 Antenna Efficiency & Peak Gain

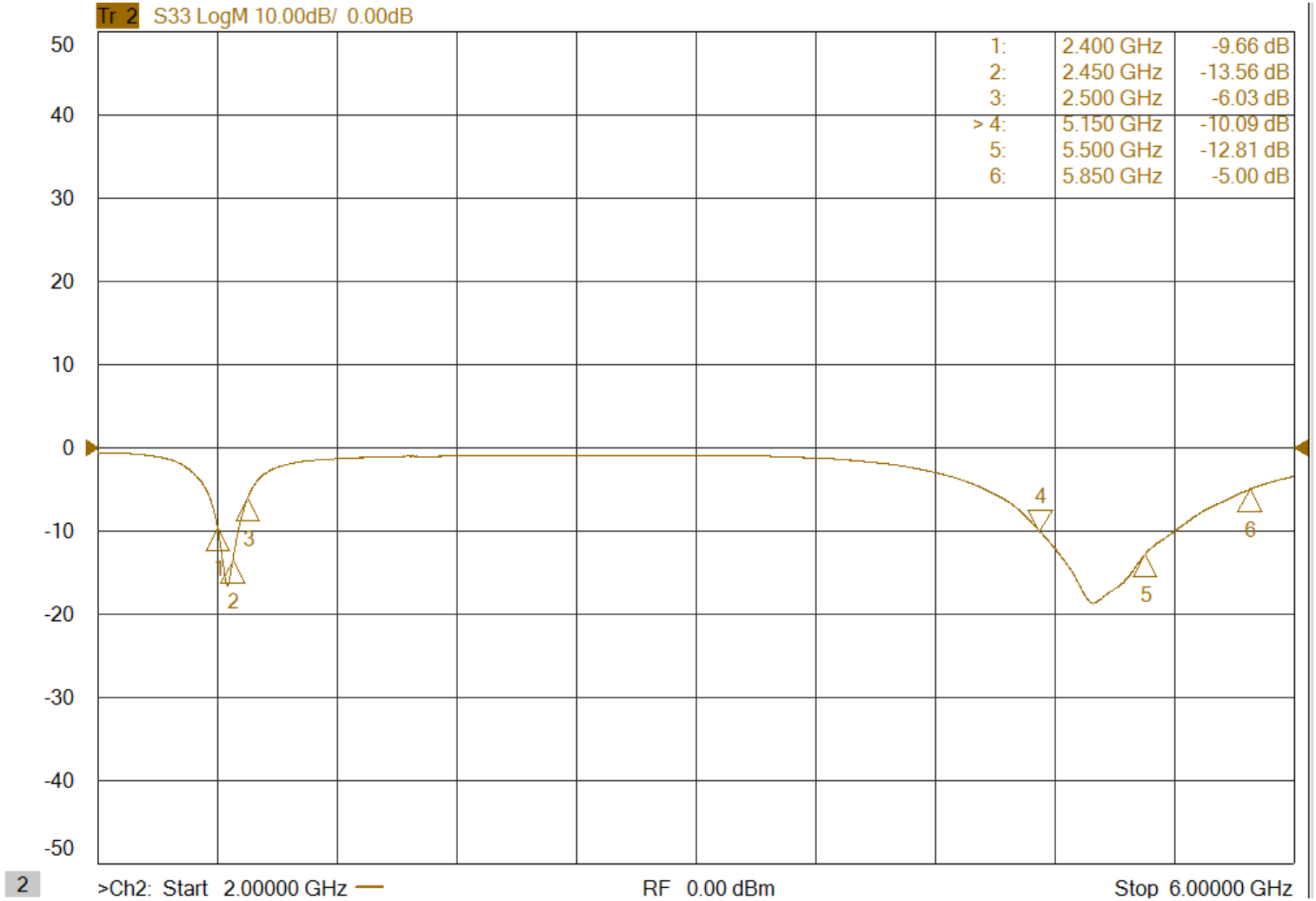
1.3 3D Pattern & 2D Radiation Patterns

1.4 Summary Table

1. Antenna Characteristics

WiFi_ANT 1

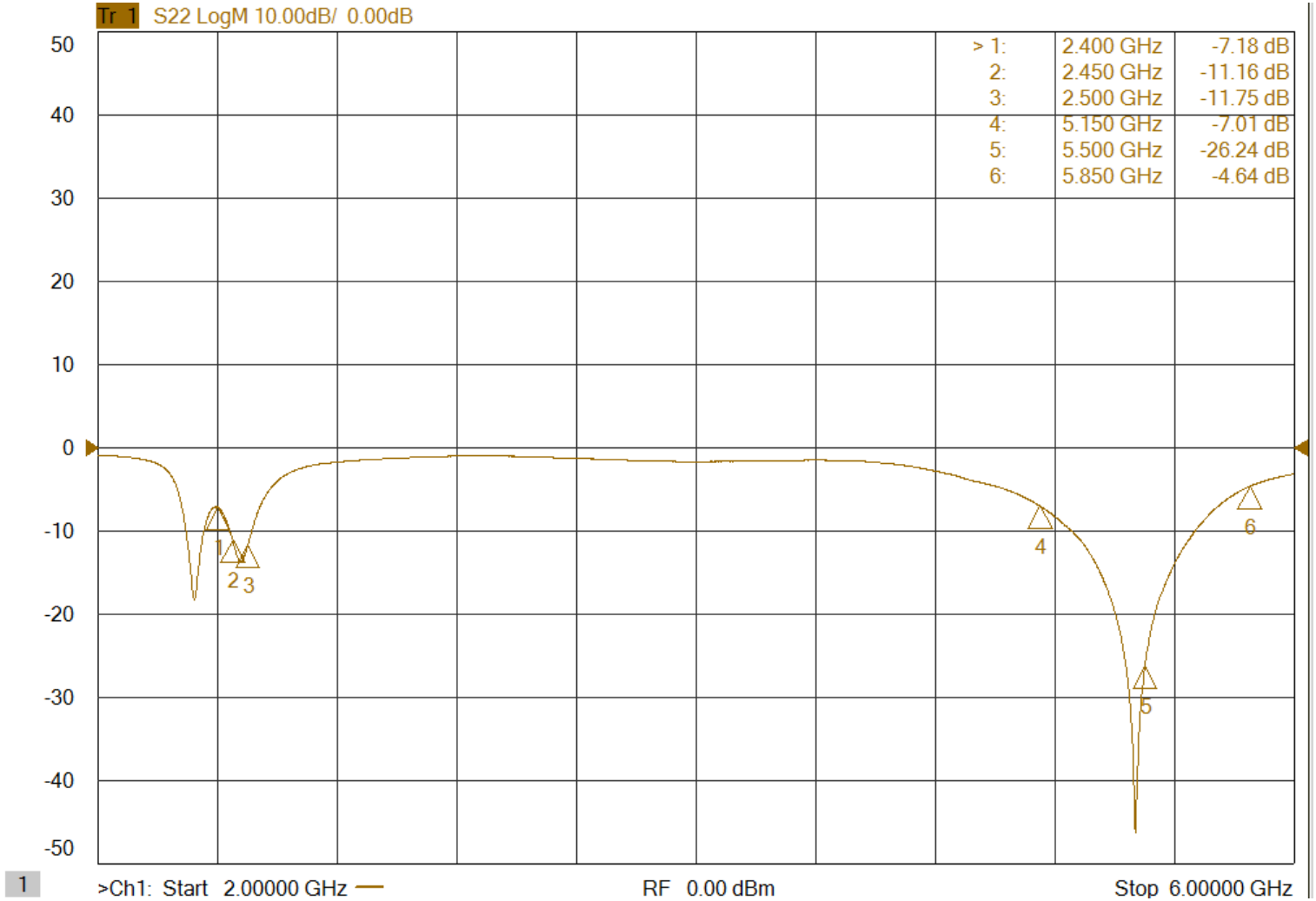
1.1 Return Loss



1. Antenna Characteristics

WiFi_ANT 2

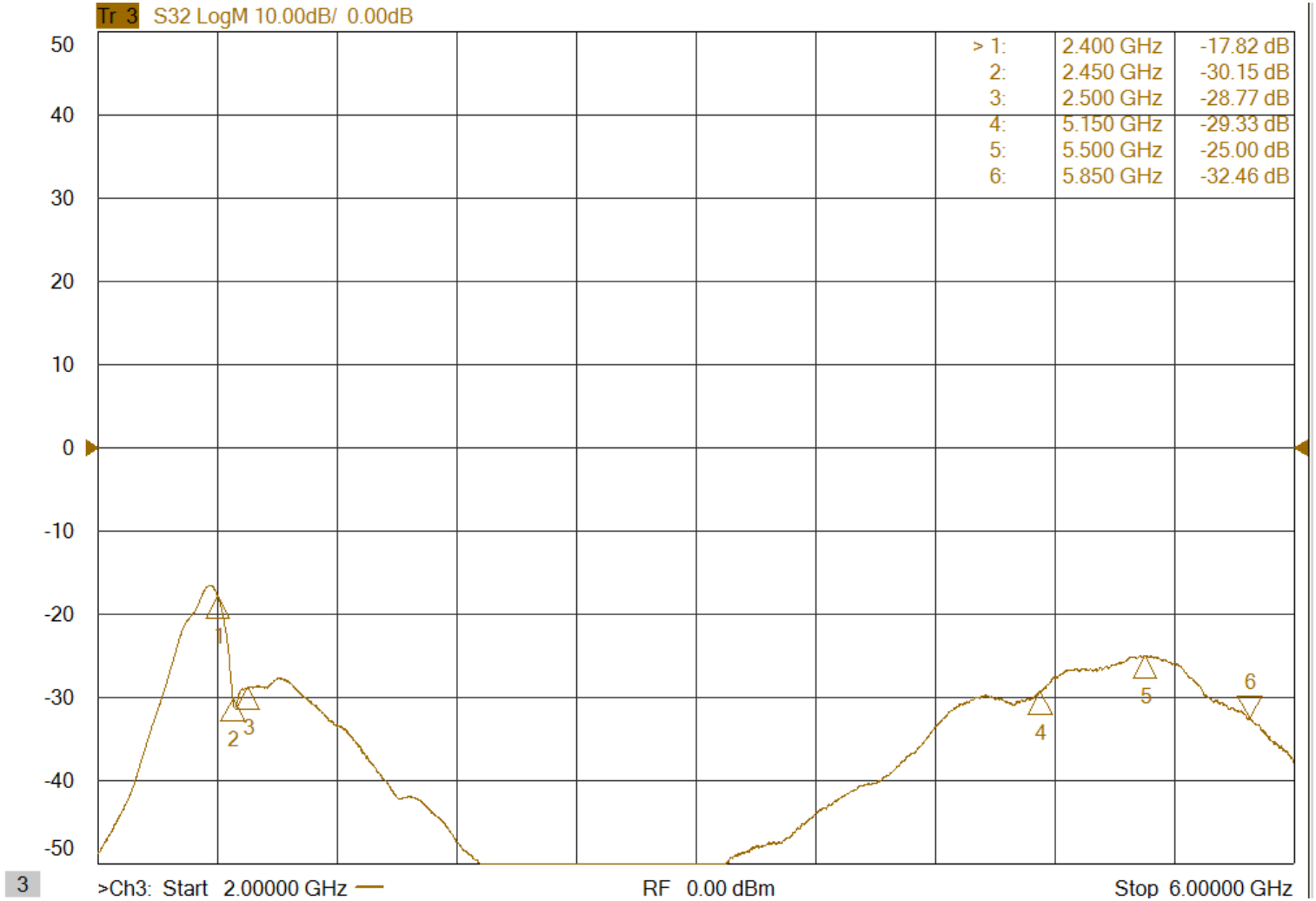
1.1 Return Loss



1. Antenna Characteristics

WiFi_ANT 1 vs. WiFi_ANT 2

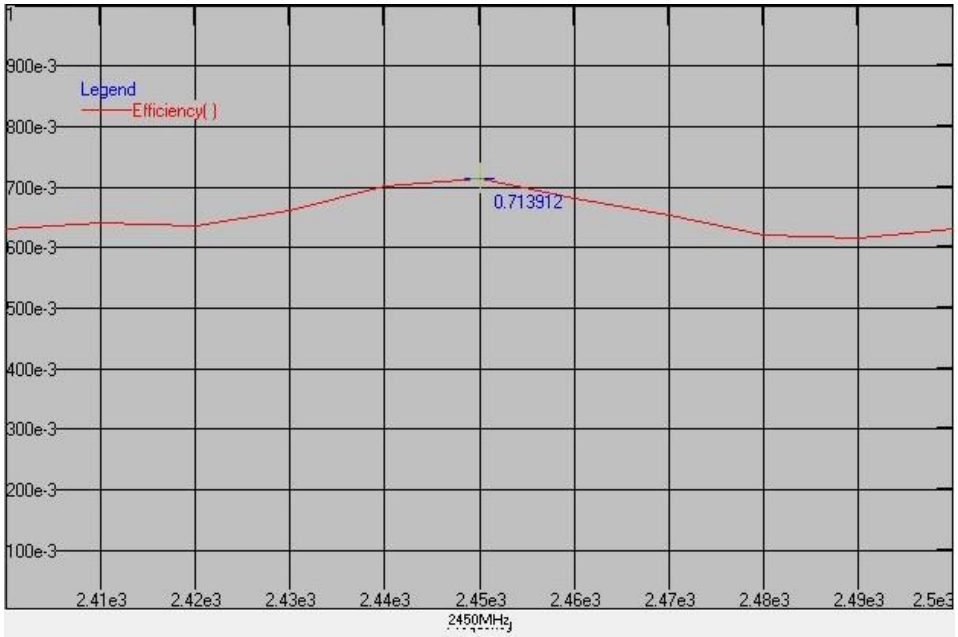
1.1 Isolation



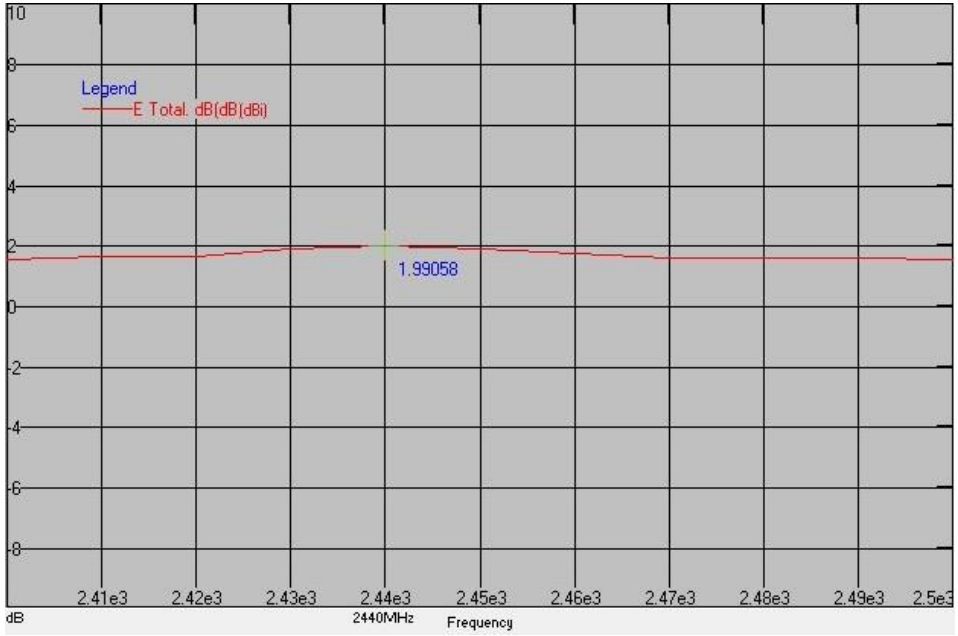
1. Antenna Characteristics

WiFi_ANT 1 (2G)

1.2 Antenna Efficiency and Peak Gain



Maximum Efficiency at 2450 MHz 71.39%

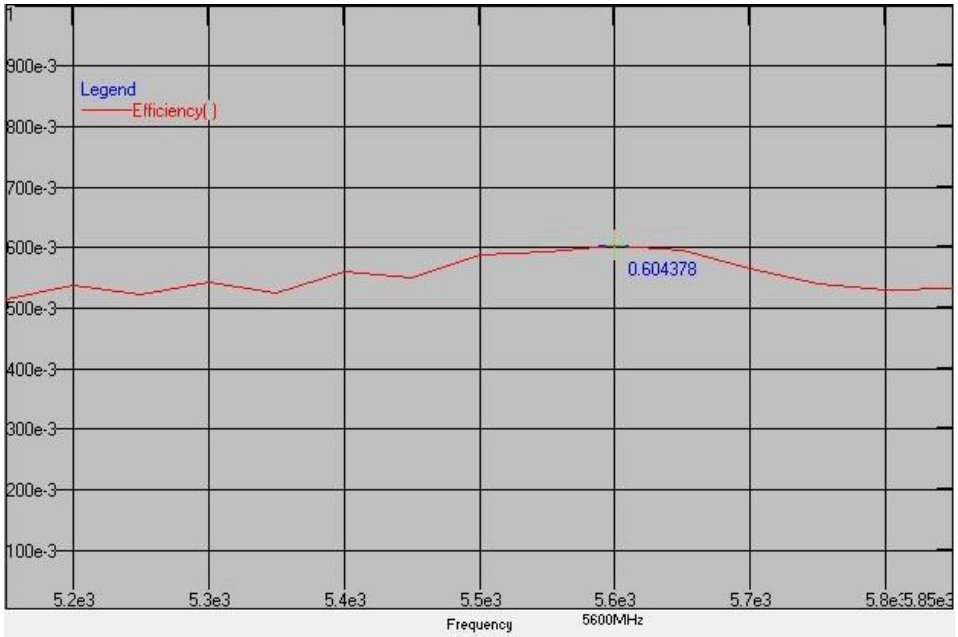


Maximum Peak Gain at 2440 MHz : 1.99 dBi

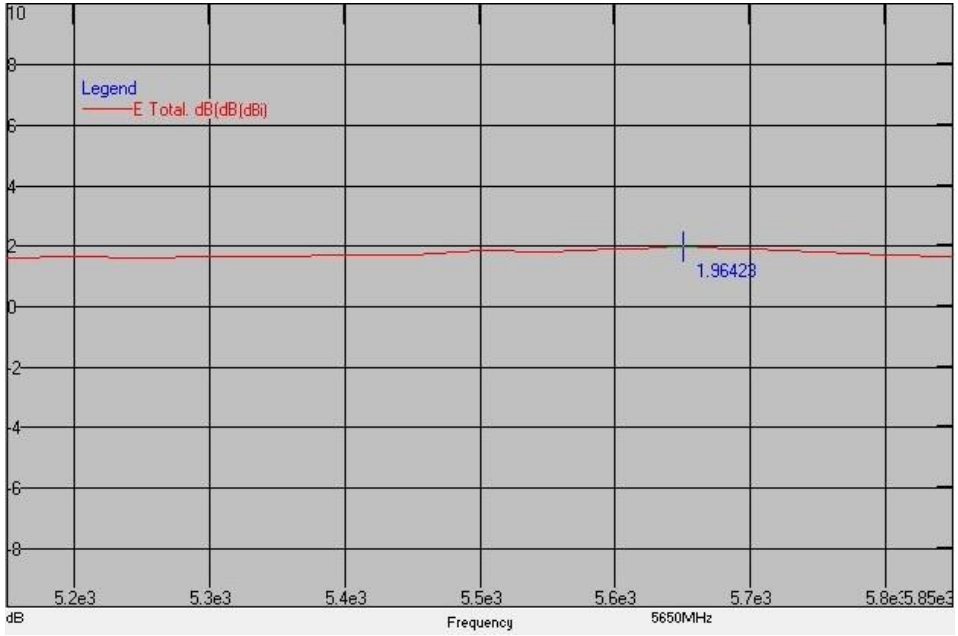
1. Antenna Characteristics

WiFi_ANT 1 (5G)

1.2 Antenna Efficiency and Peak Gain



Maximum Efficiency at 5600 MHz : 60.44 %

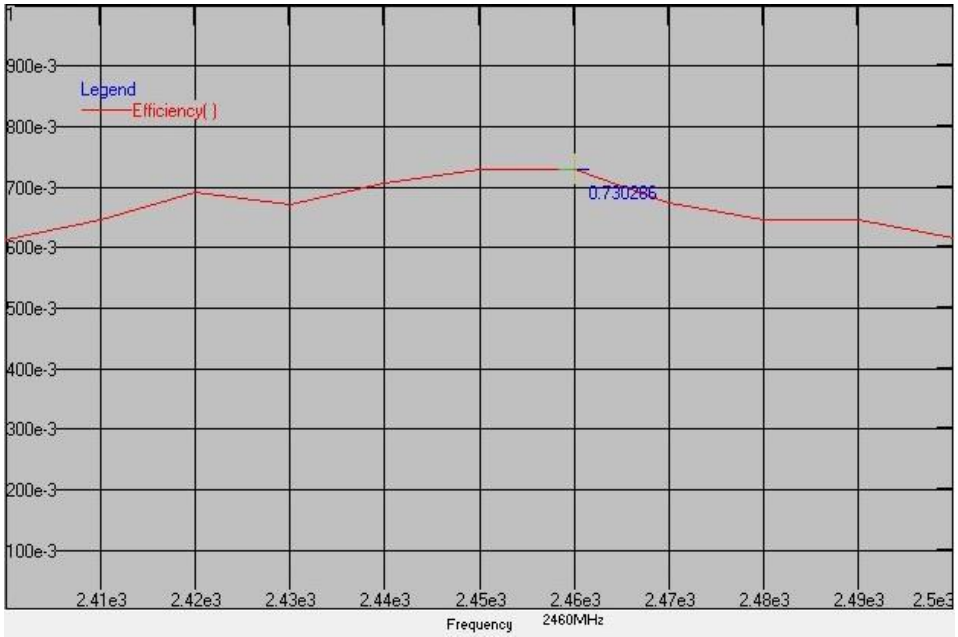


Maximum Peak Gain at 5650 MHz : 1.96 dBi

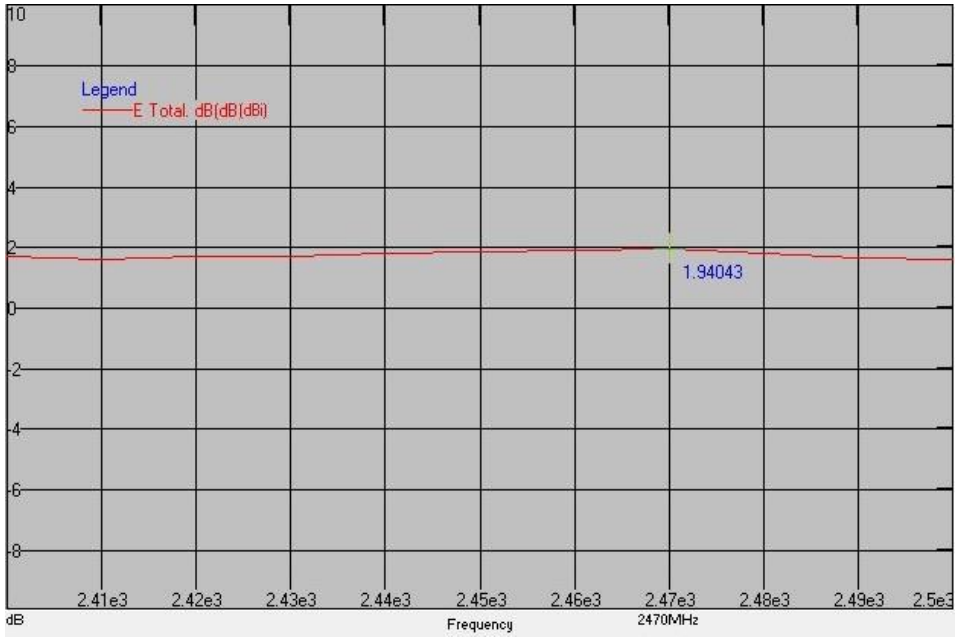
1. Antenna Characteristics

WiFi_ANT 2 (2G)

1.2 Antenna Efficiency and Peak Gain



Maximum Efficiency at 2460 MHz : 73.03 %

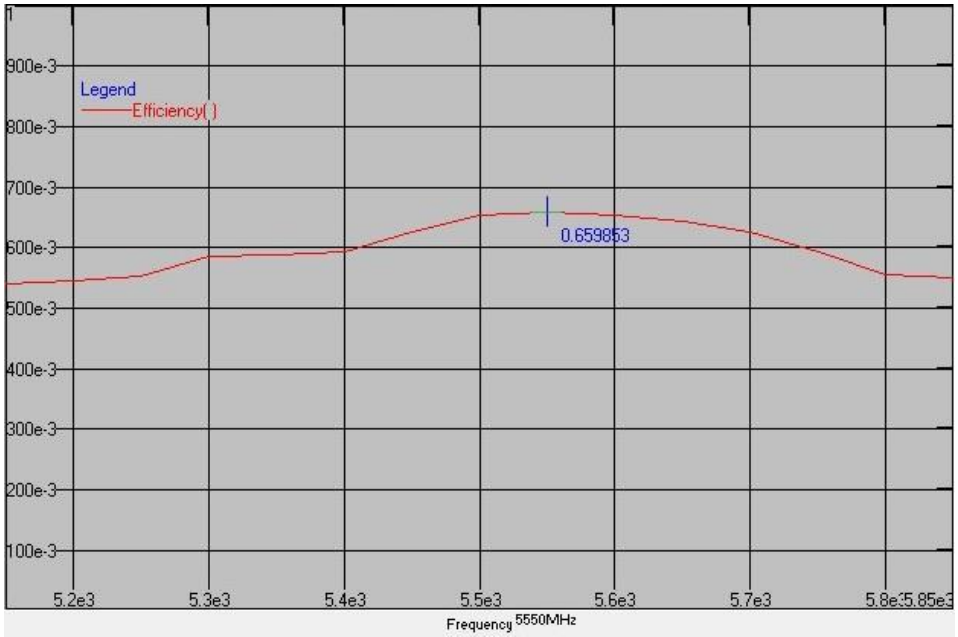


Maximum Peak Gain at 2470 MHz : 1.94 dBi

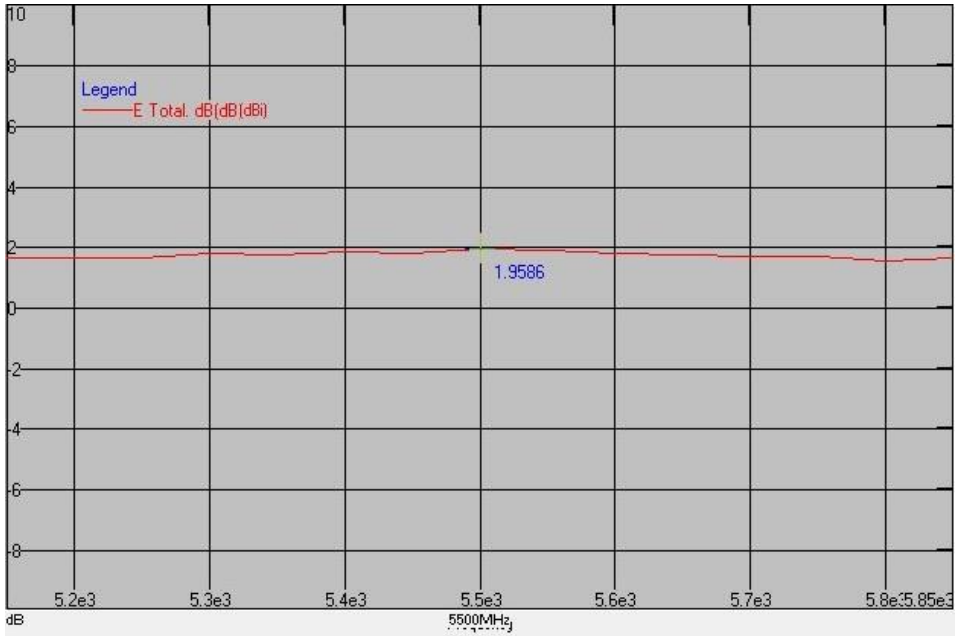
1. Antenna Characteristics

WiFi_ANT 2 (5G)

1.2 Antenna Efficiency and Peak Gain



Maximum Efficiency at 5550 MHz : 65.99 %

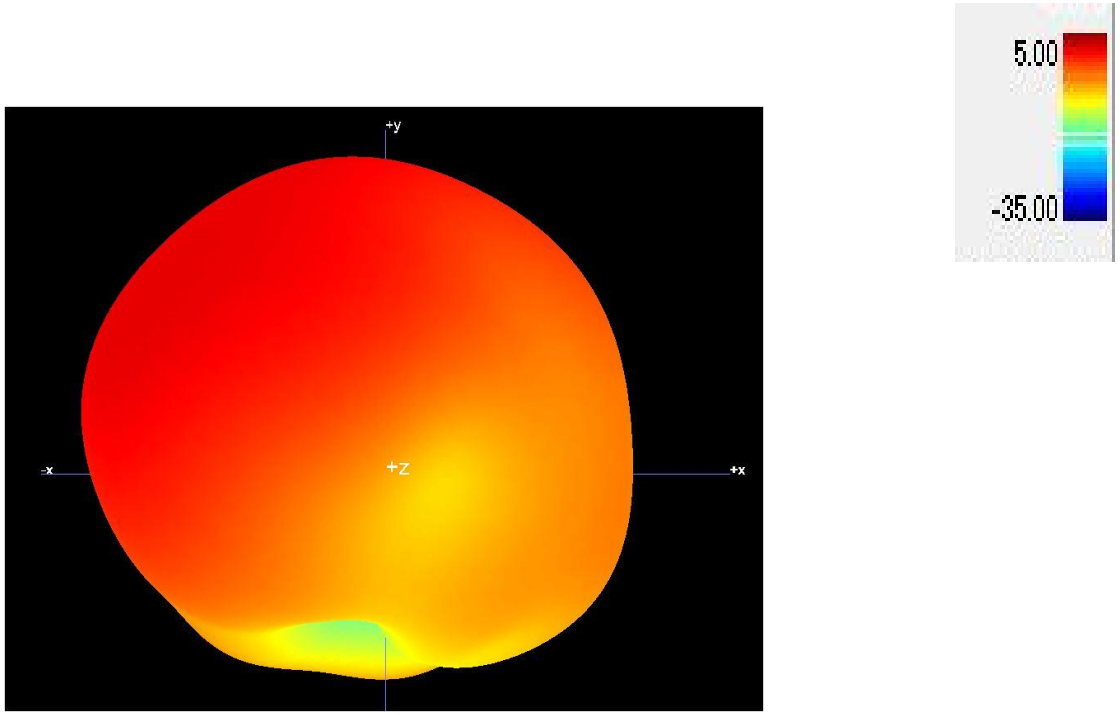


Maximum Peak Gain at 5500 MHz : 1.96 dBi

1. Antenna Characteristics

1.3 3D Patterns

WiFi_ANT 1 (2G)

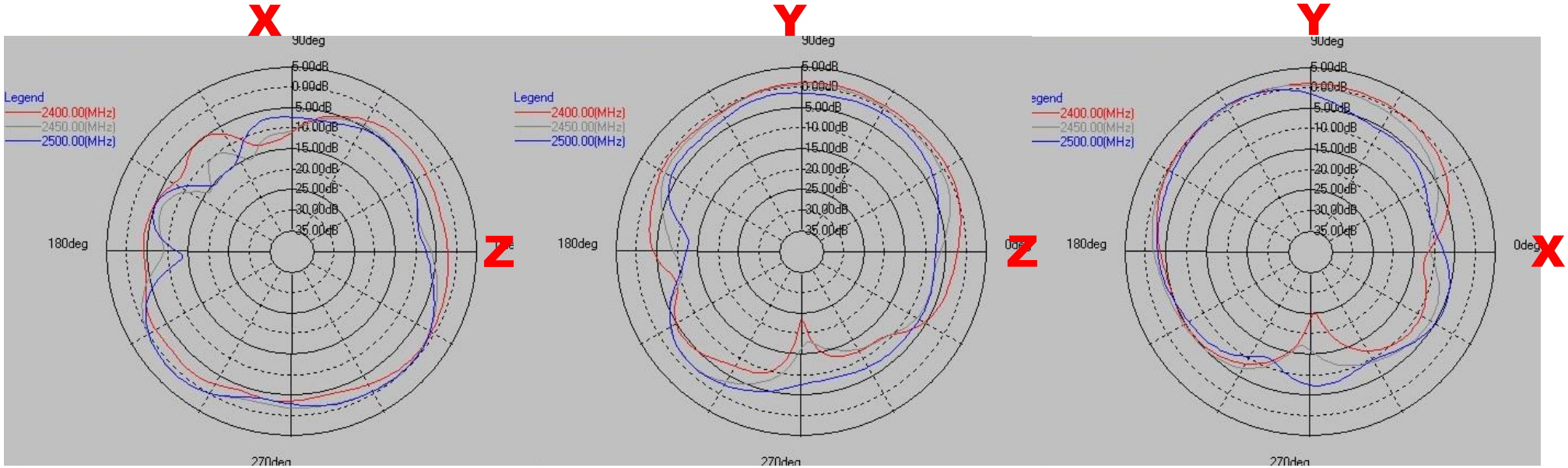


2450MHz

1. Antenna Characteristics

WiFi_ANT 1 (2G)

1.3 2D Radiation Patterns

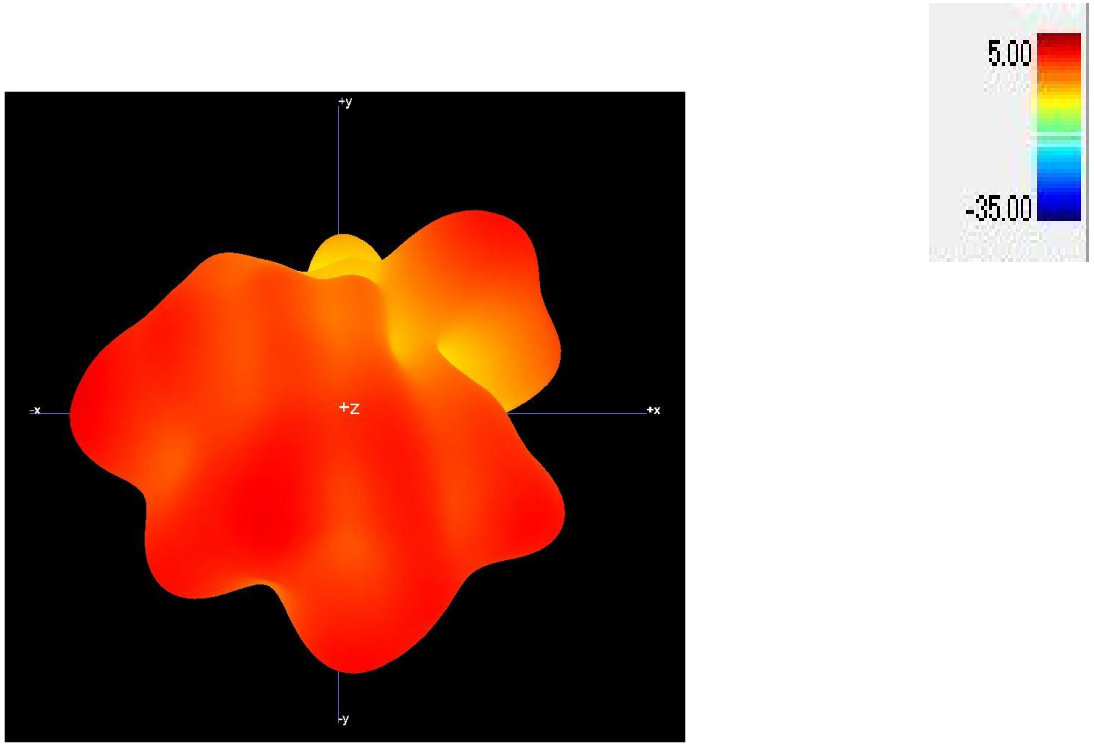


	ZX plane		ZY plane		XY plane	
Frequency [MHz]	**Max Value [dBi]**	**Average [dBi]**	**Max Value [dBi]**	**Average [dBi]**	**Max Value [dBi]**	**Average [dBi]**
2400	**-0.70**	**-3.45**	**0.95**	**-2.40**	**0.79**	**-2.98**
2450	**1.02**	**-3.50**	**0.45**	**-3.18**	**0.83**	**-3.20**
2500	**1.09**	**-3.70**	**-1.32**	**-4.20**	**0.85**	**-4.18**

1. Antenna Characteristics

1.3 3D Patterns

WiFi_ANT 1 (5G)

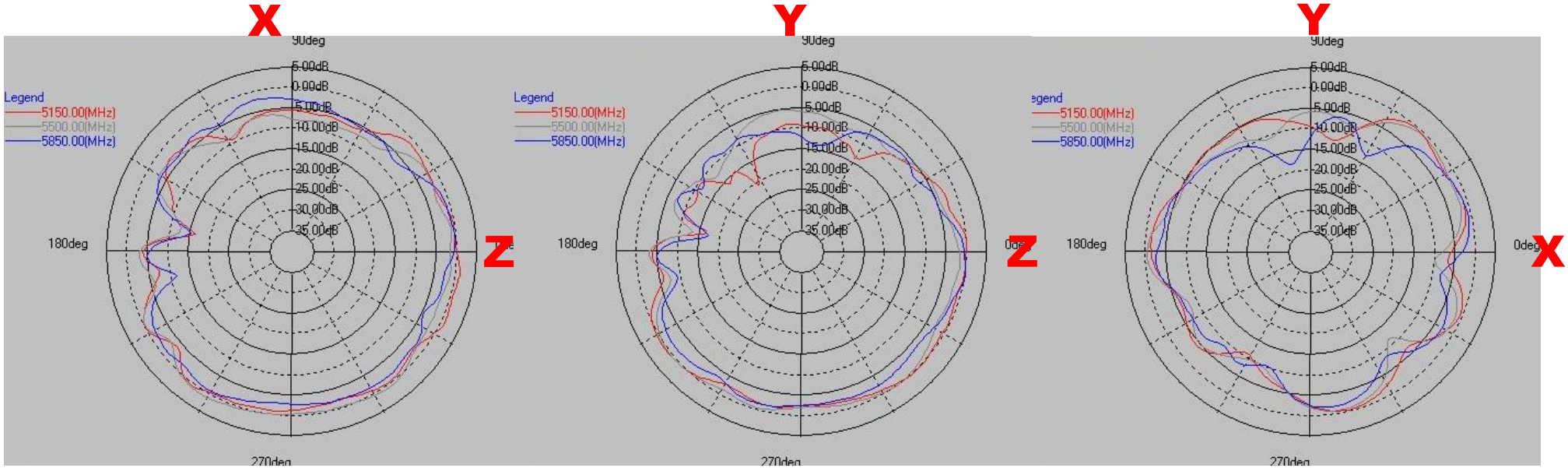


5500MHz

1. Antenna Characteristics

WiFi_ANT 1 (5G)

1.3 2D Radiation Patterns

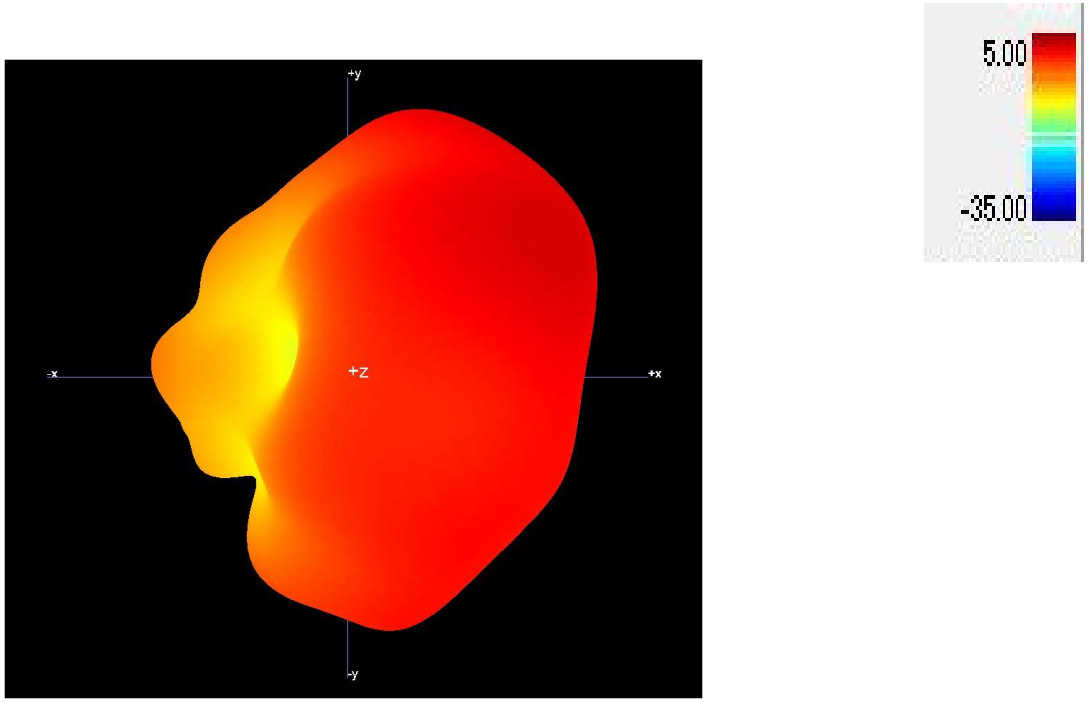


	ZX plane		ZY plane		XY plane	
Frequency [MHz]	**Max Value [dBi]**	**Average [dBi]**	**Max Value [dBi]**	**Average [dBi]**	**Max Value [dBi]**	**Average [dBi]**
5150	**1.18**	**-2.34**	**0.66**	**-3.18**	**-0.48**	**-3.72**
5500	**1.04**	**-2.48**	**0.42**	**-3.22**	**-0.50**	**-4.26**
5850	**-0.20**	**-3.12**	**0.21**	**-4.35**	**-0.72**	**-5.24**

1. Antenna Characteristics

1.3 3D Patterns

WiFi_ANT 2 (2G)

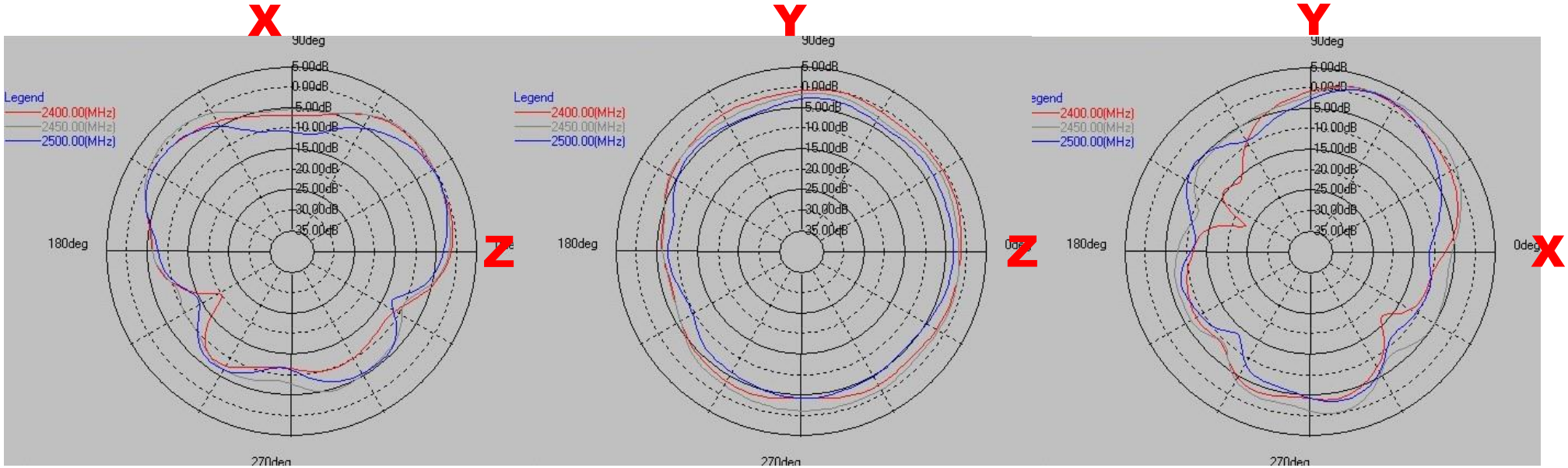


2450MHz

1. Antenna Characteristics

WiFi_ANT 2 (2G)

1.3 2D Radiation Patterns

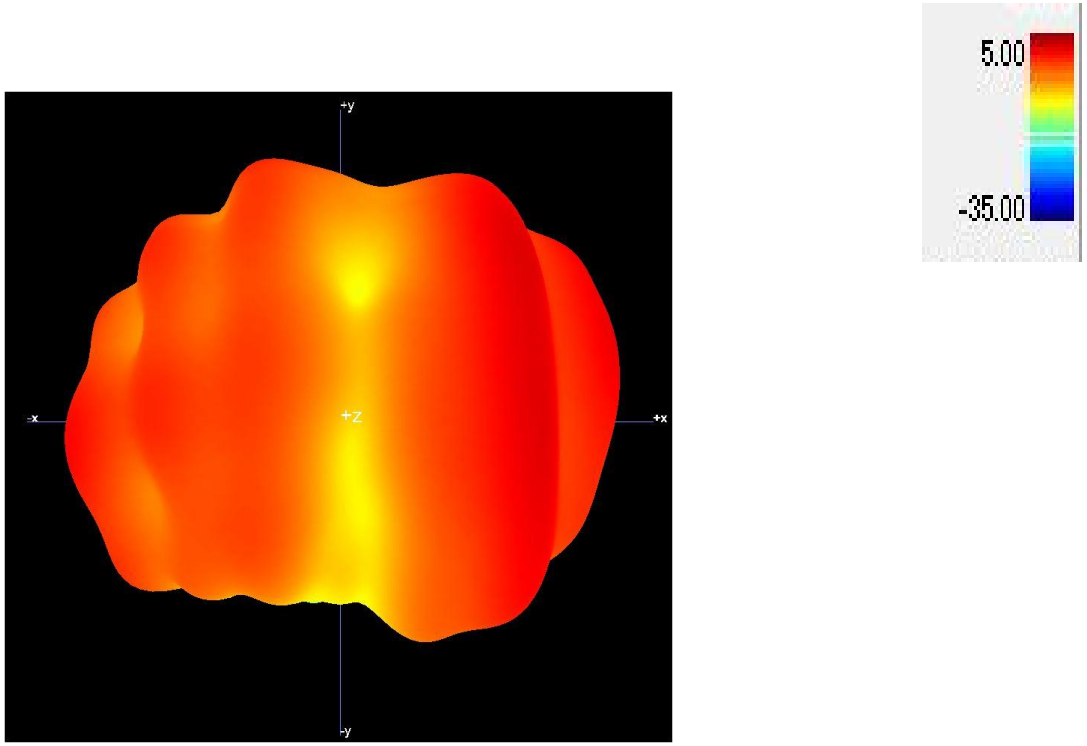


	ZX plane		ZY plane		XY plane	
Frequency [MHz]	**Max Value [dBi]**	**Average [dBi]**	**Max Value [dBi]**	**Average [dBi]**	**Max Value [dBi]**	**Average [dBi]**
2400	**-0.15**	**-4.52**	**-0.36**	**-2.55**	**1.46**	**-4.33**
2450	**0.62**	**-3.59**	**-1.24**	**-2.57**	**1.84**	**-2.83**
2500	**-0.27**	**-5.20**	**-2.65**	**-4.77**	**1.58**	**-4.93**

1. Antenna Characteristics

1.3 3D Patterns

WiFi_ANT 2 (5G)

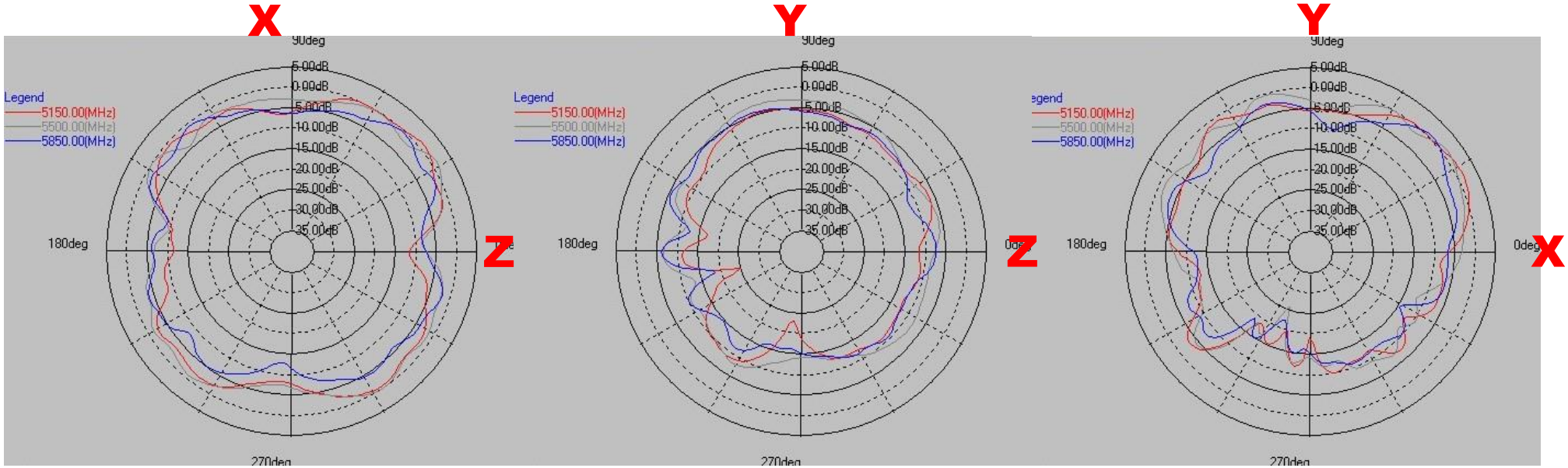


5500MHz

1. Antenna Characteristics

WiFi_ANT 2 (5G)

1.3 2D Radiation Patterns



	ZX plane		ZY plane		XY plane	
Frequency [MHz]	**Max Value [dBi]**	**Average [dBi]**	**Max Value [dBi]**	**Average [dBi]**	**Max Value [dBi]**	**Average [dBi]**
5150	**1.20**	**-3.18**	**-5.00**	**-9.36**	**1.53**	**-4.59**
5500	**1.27**	**-2.51**	**-2.91**	**-7.13**	**1.32**	**-4.09**
5850	**-0.43**	**-4.48**	**-4.52**	**-8.70**	**0.74**	**-6.13**

1. Antenna Characteristics

1.4 Summary Table

WiFi_ANT 1						
Frequency [MHz]	**2400**	**2450**	**2500**	**5150**	**5500**	**5850**
Peak gain(dBi)	**1.58**	**1.89**	**1.56**	**1.59**	**1.84**	**1.66**
Efficiency(%)	**63.01**	**71.39**	**63.16**	**51.56**	**58.70**	**53.17**
WiFi_ANT 2						
Frequency [MHz]	**2400**	**2450**	**2500**	**5150**	**5500**	**5850**
Peak gain(dBi)	**1.69**	**1.85**	**1.60**	**1.65**	**1.96**	**1.65**
Efficiency(%)	**61.42**	**72.92**	**61.64**	**54.12**	**65.42**	**55.12**

Thank you

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