

耀登电通科技(昆山)有限公司

Auden Communications & Multimedia Techno (Kunshan) Co., Ltd

# Antenna Evaluating Report

**Prepared By:**

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*Singer mao*

**Checked By :**

**Jianjun Mao**

**Date of Report:** 2023/1/5



Date	Rev	Description
2023-01-05	01	Testing



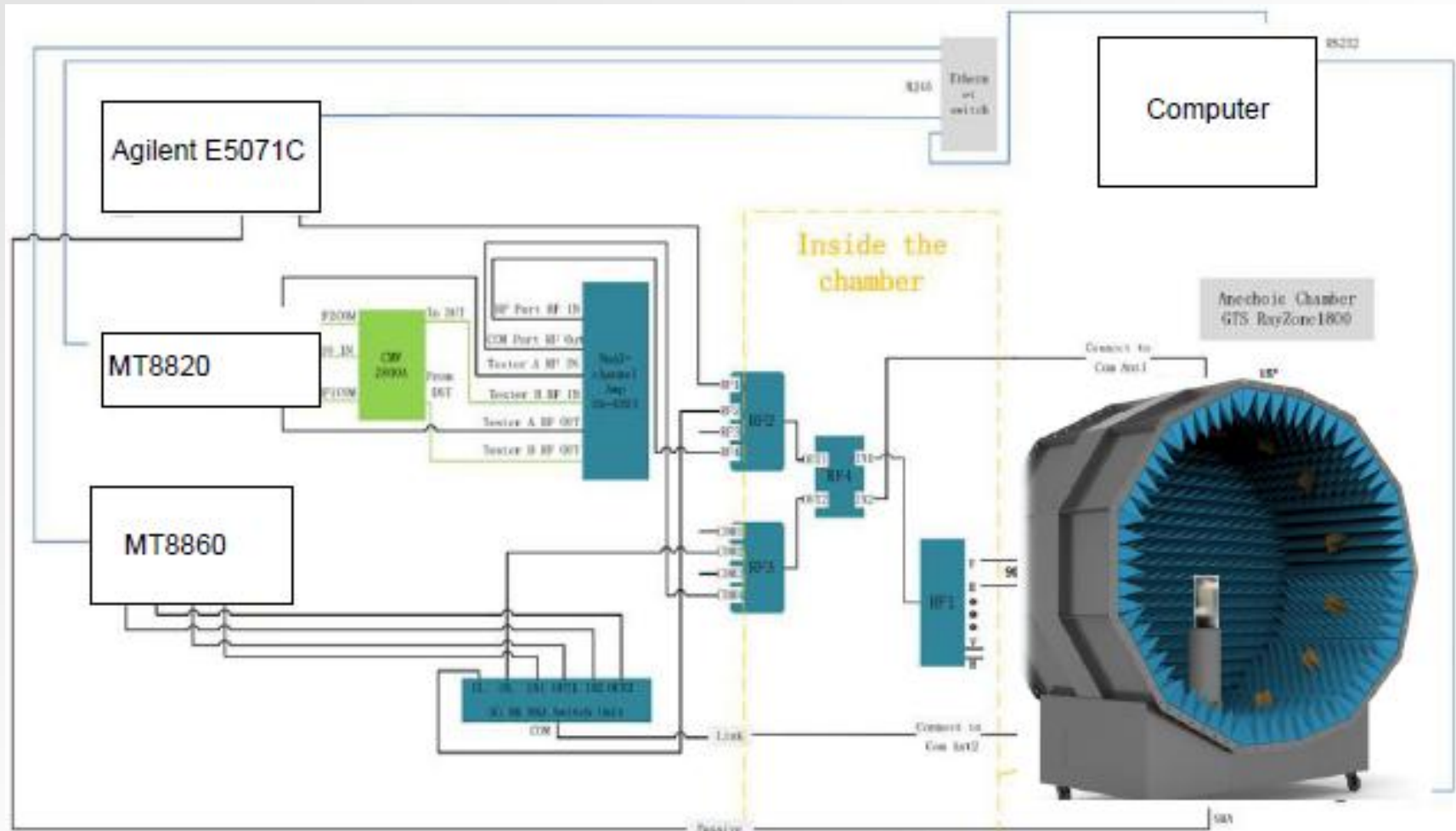
# LIST OF TEST EQUIPMENTS

Item	Kind of Equipment	Manufacturer	Type No.	Last calibration	Calibrated until	Calibration period
1	Spectrum Analyzer	Agilent	E5071C	2022.05.08	2023.06.09	1 year
2	2G/3G Communications Test Set	Agilent	8960	2022.05.08	2023.06.09	1 year
3	LTE Wireless Communications Test Set	Anritsu	MT8820	2022.05.08	2023.06.09	1 year
4	TD Communications Test Set	StarPoint	SP6010	2022.05.08	2023.06.09	1 year
5	WIFI Wireless Communications Test Set	Anritsu	MT8860	2022.05.08	2023.06.09	1 year
6	GPS Signal	Agilent	E4438C	2022.05.08	2023.06.09	1 year
7	Chamber	GTS	Rayzone1800	2022.05.08	2023.06.09	1 year

# Frequency Range

使用系统	Band	使用系统	Band
GSM		WIFI / BT	2.4G~2.5G
WCDMA		全球定位	GPS/BD
TD-SCDMA		FM	
CDMA		Others	
FDD LTE			
TDD LTE			

# Test set-up



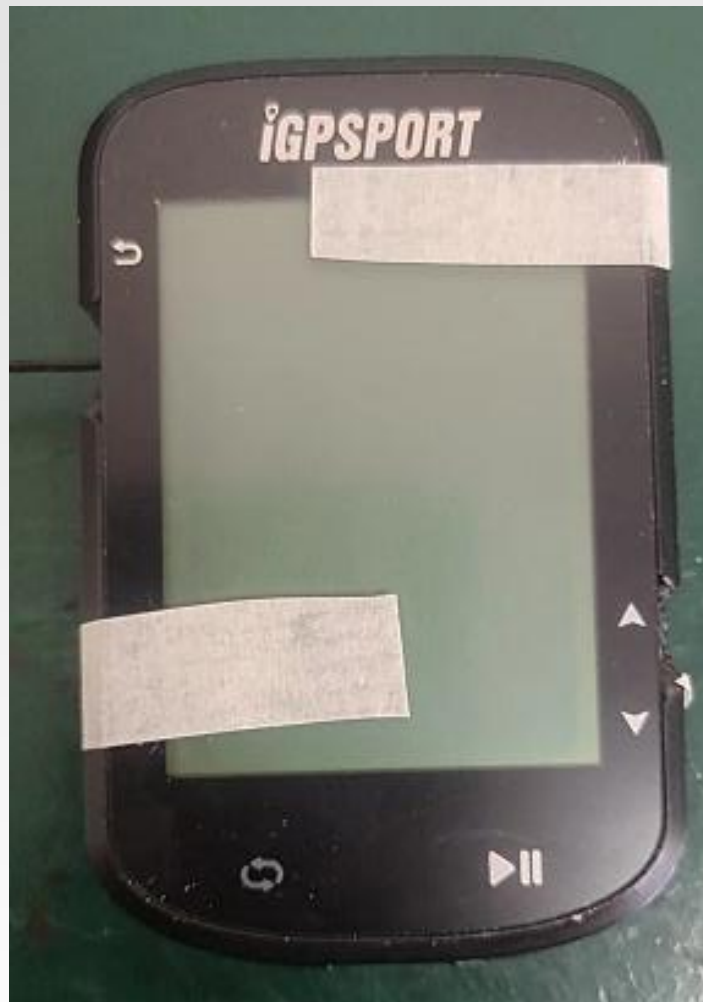
According to the specifications of the manufacturer, it must comply with the requirements of the following standards: ANSI/IEEE Std 149-2008



The method is used to measure the antenna 3D GAIN of EUT in OTA qualified Rayzone1800 chamber. Equipment Under Test(EUT) geometry centre vertical projection at the centre of platform, the distance from EUT to measurement antenna is 1m.



# Machine picture



BT下方走线

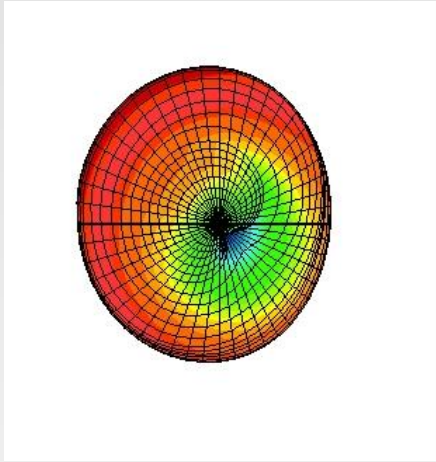
# GPS/BD passive standing wave and its efficiency



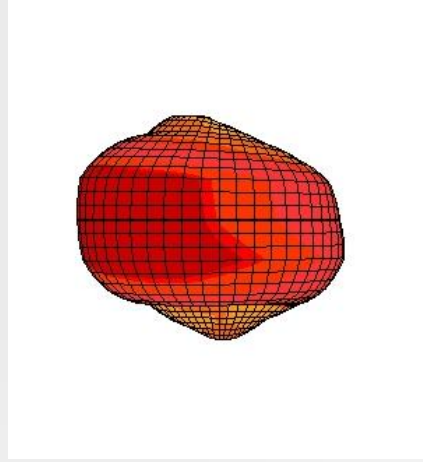
Frequency	Efficiency Total (%)	Gain Total (dBi)
1.55G	59.43	1.35
1.555G	60.67	1.43
1.56G	61.24	1.55
1.561G	61.09	1.55
1.565G	60.53	1.56
1.57G	60.12	1.6
1.575G	58.34	1.56
1.58G	56.89	1.52
1.585G	58.34	1.68
1.59G	59.02	1.77
1.595G	57.94	1.72
1.6G	58.08	1.78
1.605G	59.16	1.9

# GPS antenna pattern

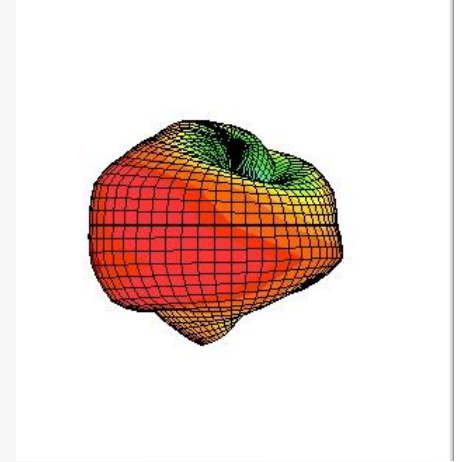
1.561GHz Front-Back View



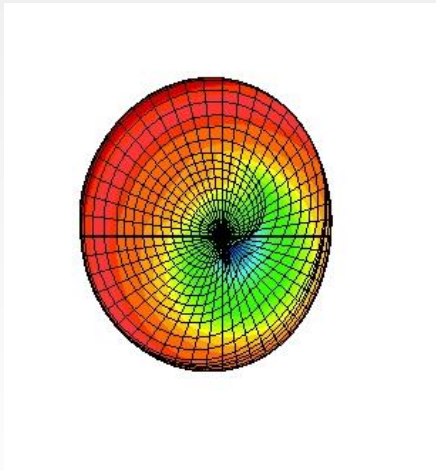
1.561GHz Left-Right View



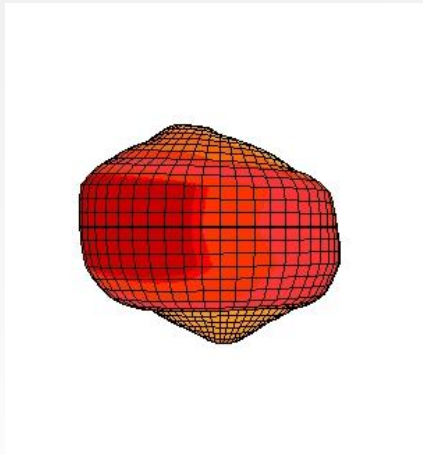
1.561GHz Up-Down View



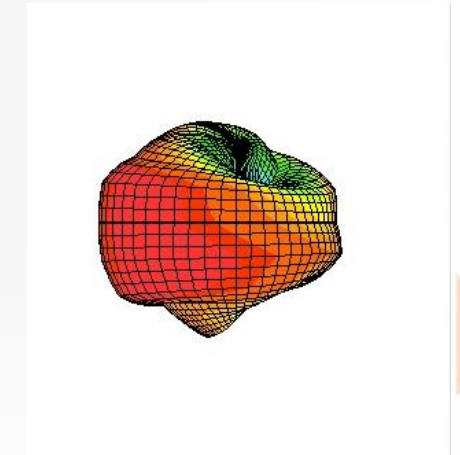
1.575GHz Front-Back View



1.575GHz Left-Right View



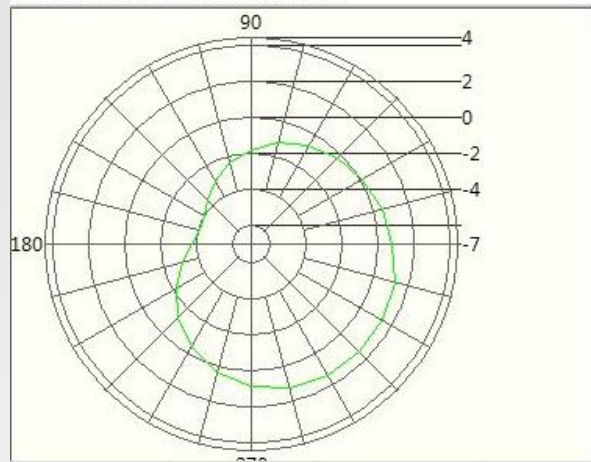
1.575GHz Up-Down View



# GPS antenna 2D diagram

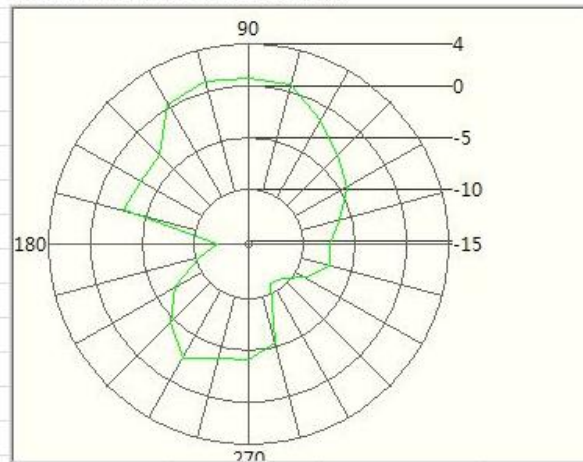
1.561GHz H

Excel XY Plot (Value dB / Angle deg.)



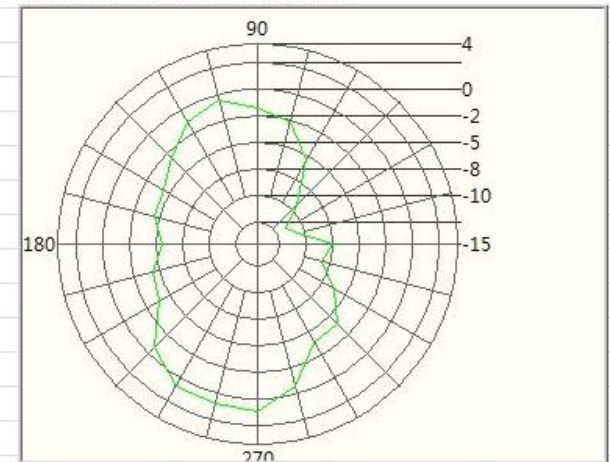
1.561GHz E1

Excel XY Plot (Value dB / Angle deg.)



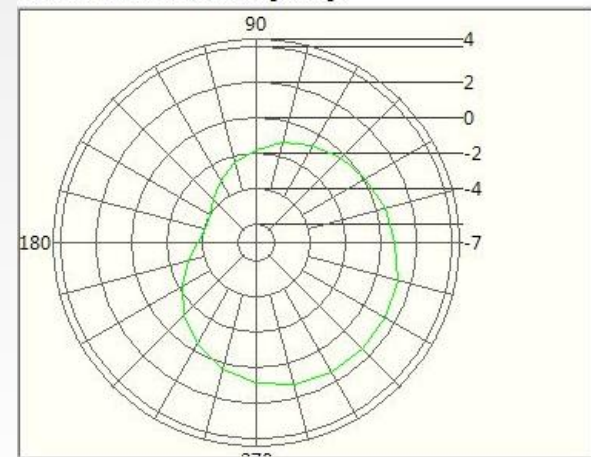
1.561GHz E2

Excel XY Plot (Value dB / Angle deg.)



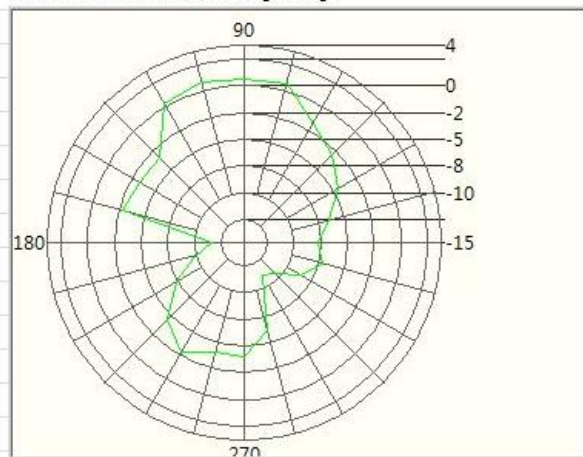
1.575GHz H

Excel XY Plot (Value dB / Angle deg.)



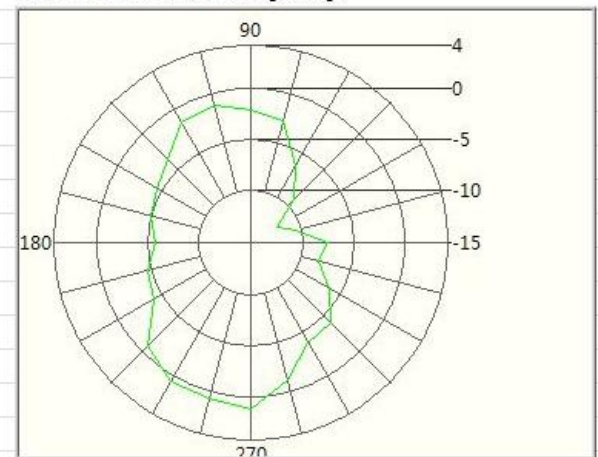
1.575GHz E1

Excel XY Plot (Value dB / Angle deg.)



1.575GHz E2

Excel XY Plot (Value dB / Angle deg.)



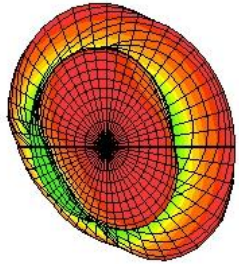
# BT passive standing wave and efficiency



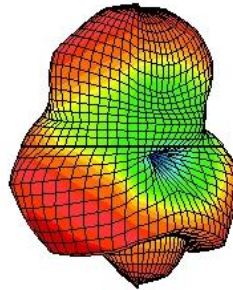
Frequency	Efficiency Total (%)	Gain Total (dBi)
2.4G	56.1	2.07
2.41G	55.59	1.96
2.42G	56.62	2.05
2.43G	57.41	2.13
2.44G	58.88	2.3
2.45G	61.24	2.47
2.46G	58.48	2.23
2.47G	57.94	1.99
2.48G	56.23	1.69
2.49G	53.58	1.21
2.5G	54.45	1.32

# BT passive standing wave and efficiency

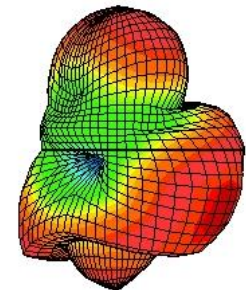
2.4GHz Front-Back View



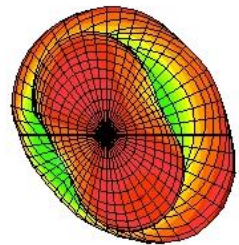
2.4GHz Left-Right View



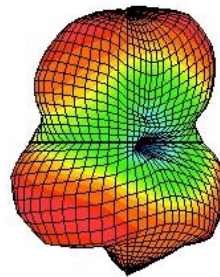
2.4GHz Up-Down View



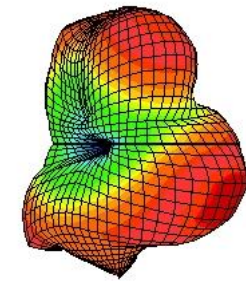
2.5GHz Front-Back View



2.5GHz Left-Right View



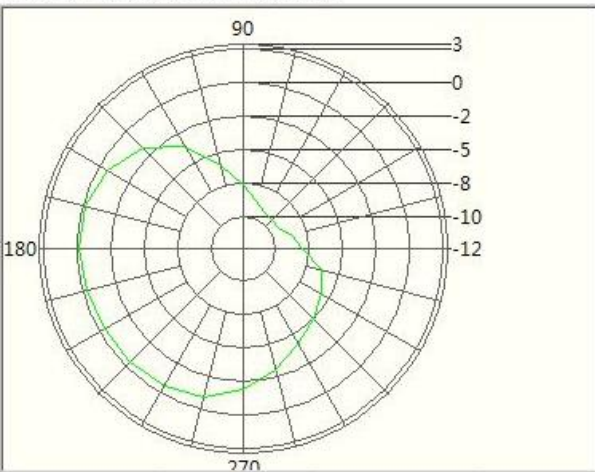
2.5GHz Up-Down View



# BT antenna 2D diagram

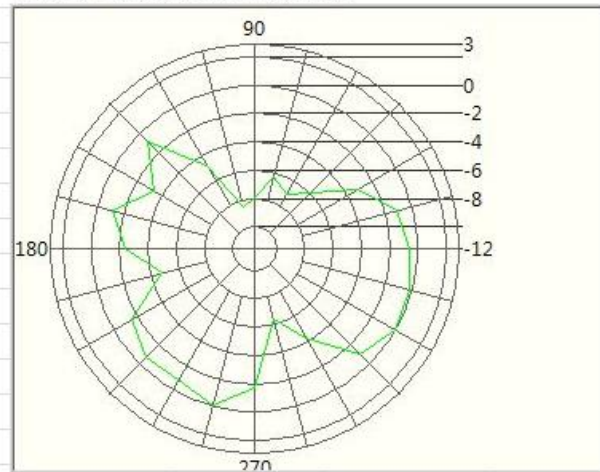
2.4GHz H

Excel XY Plot (Value dB / Angle deg.)



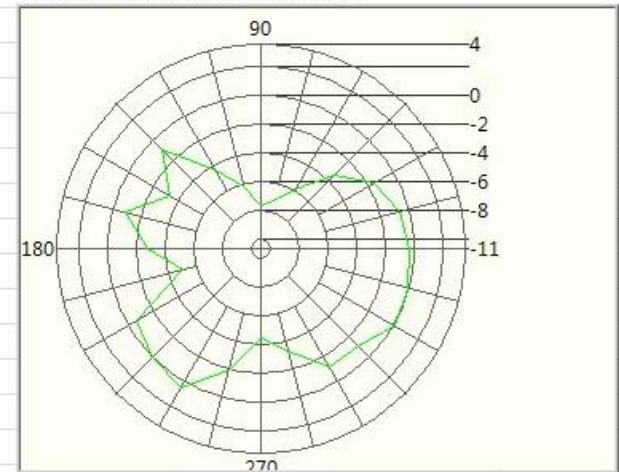
2.4GHz E1

Excel XY Plot (Value dB / Angle deg.)



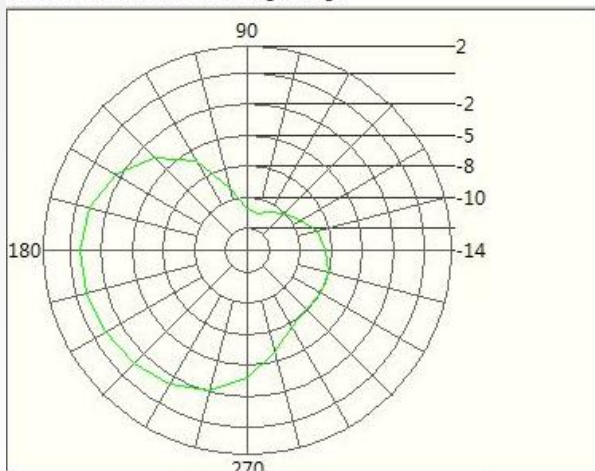
2.4GHz E2

Excel XY Plot (Value dB / Angle deg.)



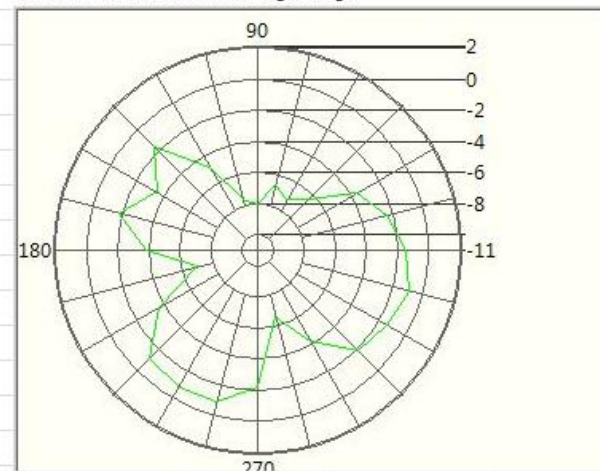
2.5GHz H

Excel XY Plot (Value dB / Angle deg.)



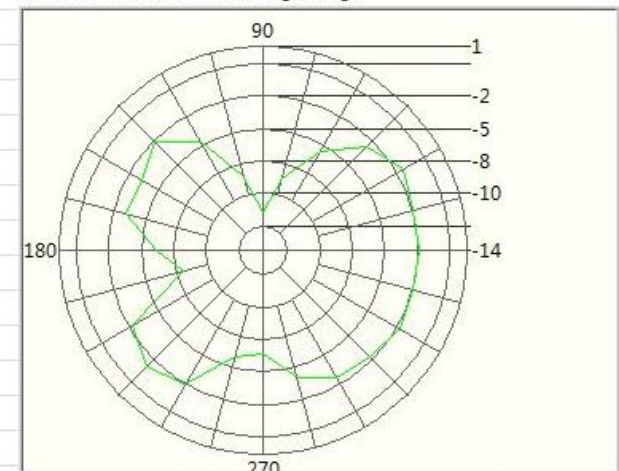
2.5GHz E1

Excel XY Plot (Value dB / Angle deg.)

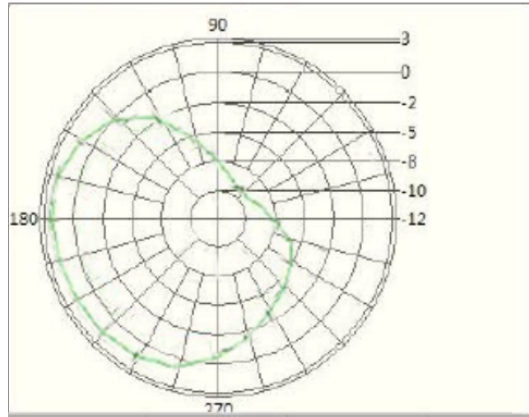


2.5GHz E2

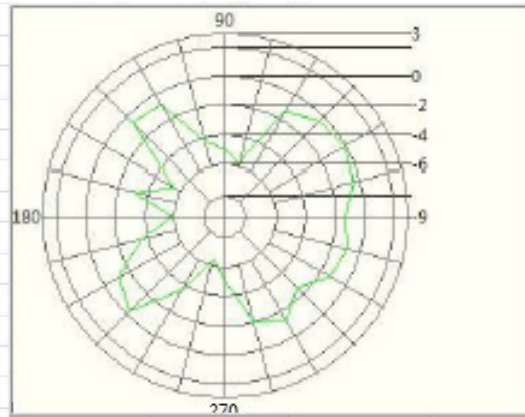
Excel XY Plot (Value dB / Angle deg.)



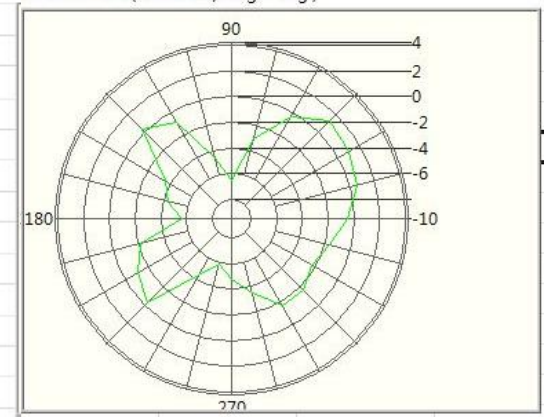
2.45GHz H  
Excel XY Plot (Value dB j Angle deg)

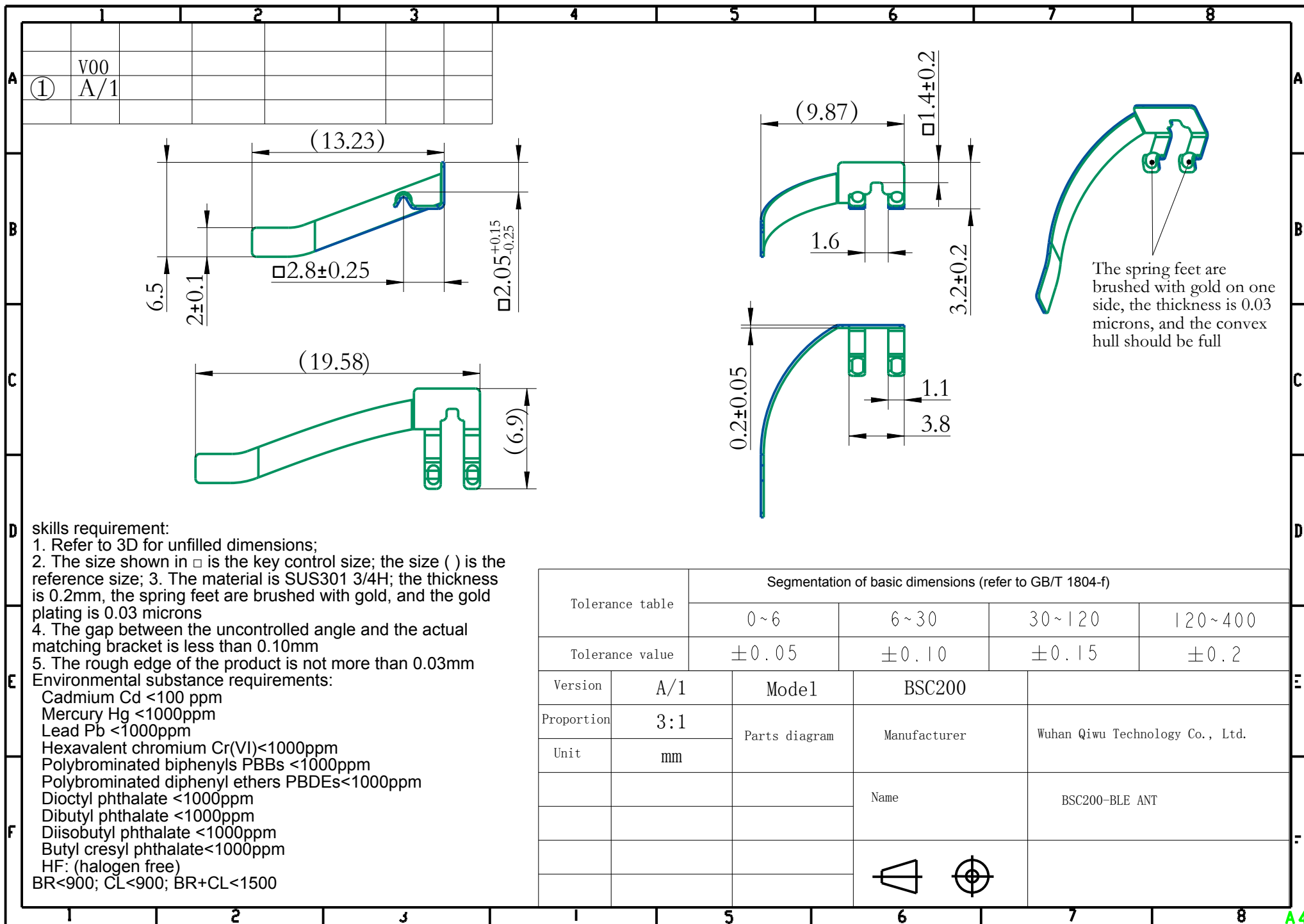


2.45GHz E1  
Excel XY Plot (Value dB j Angle deg)



2.45GHz E2  
Excel XY Plot (Value dB j Angle deg)





# Thank You



**AUDEN**  
**ASPIRE**  
**UPGRADE**  
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**EXCELLENCE**  
**NAVIGATOR**

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