

KC.IA.00343

Antenna Specification

1. Application:

This application shall apply for antenna unit which shall be used such as automotive, conventional communications, smart home, etc..

1. Electrical Specification:

Those specifications were specially defined for customer's model, and all characteristics were measured under the model's handset testing jig .

2-1. Frequency Band:

Frequency Band	MHz
GPS/WIFI2.4/5.8G	1575.42/2400-2500/5150-5850


2-2. Impedance

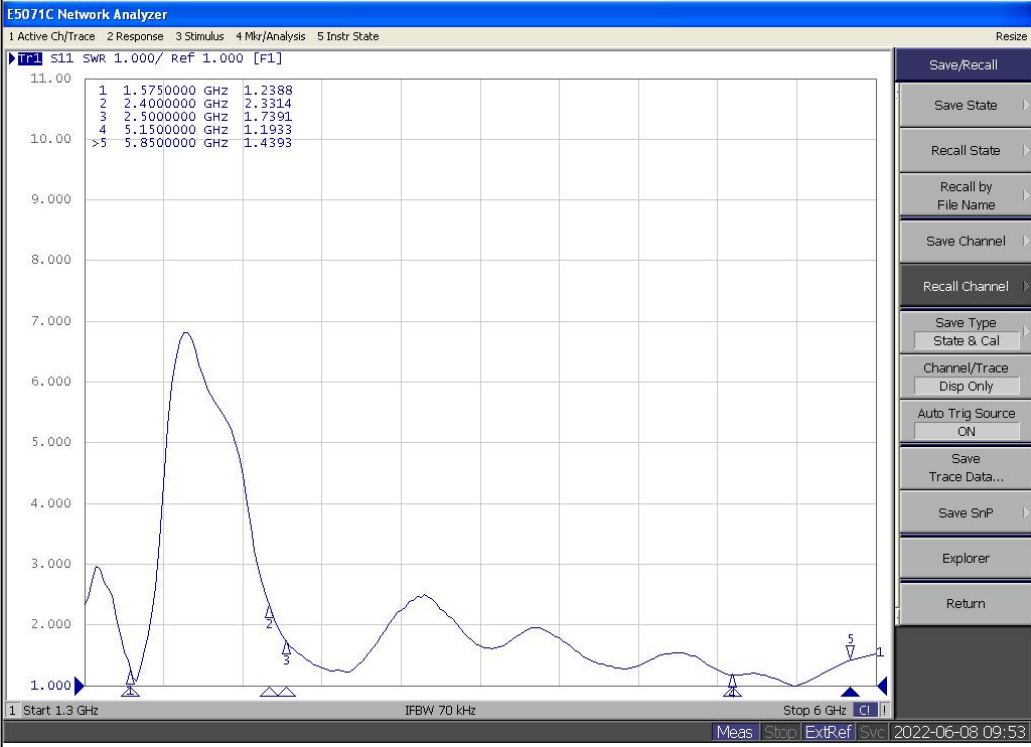
50 ohm nominal

2-3. VSWR

2-3-1.Measurement frequency points and VSWR value

Frequency Band(MHz)	1575.42	2400	2500	5150	5850
2-3-3. Typical Value:	1.23	2.33	1.73	1.19	1.43

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<p>2-3-4 Measuring Method</p>	<ol style="list-style-type: none"> 1. A 50Ω coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the VSWR. 2. Keeping this jig away from metal at least 20 cm 																		
<p>2-3-5 Picture</p>	 <table border="1" data-bbox="406 481 702 571"> <thead> <tr> <th>Point</th> <th>Frequency (GHz)</th> <th>SWR</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1.5750000</td> <td>1.2388</td> </tr> <tr> <td>2</td> <td>2.4000000</td> <td>2.3314</td> </tr> <tr> <td>3</td> <td>2.5000000</td> <td>1.7391</td> </tr> <tr> <td>4</td> <td>5.1500000</td> <td>1.1933</td> </tr> <tr> <td>5</td> <td>5.8500000</td> <td>1.4393</td> </tr> </tbody> </table>	Point	Frequency (GHz)	SWR	1	1.5750000	1.2388	2	2.4000000	2.3314	3	2.5000000	1.7391	4	5.1500000	1.1933	5	5.8500000	1.4393
Point	Frequency (GHz)	SWR																	
1	1.5750000	1.2388																	
2	2.4000000	2.3314																	
3	2.5000000	1.7391																	
4	5.1500000	1.1933																	
5	5.8500000	1.4393																	

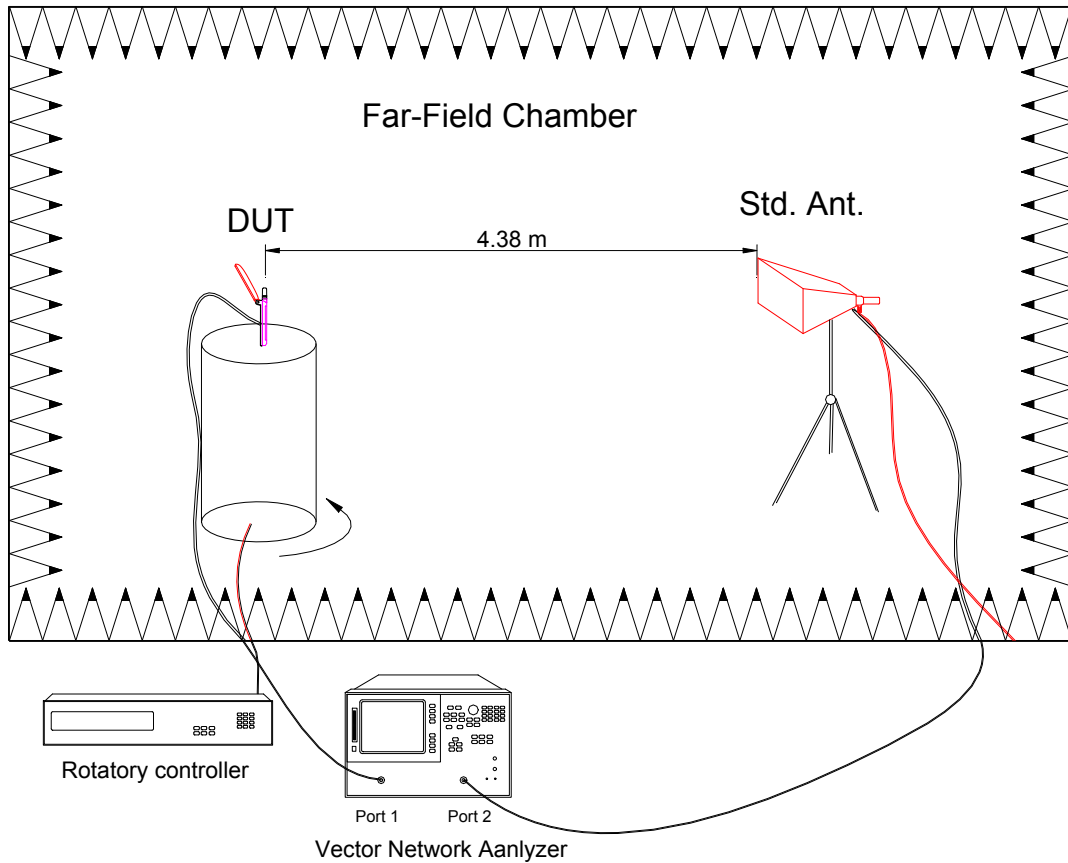
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2-4. Efficiency and Gain


4-5.1 Measure method

1. Using a low loss coaxial cable to link a standard handset jig
2. Fixed this handset jig on chamber's rotator plane
3. Linking jig into network analyzer port and using a probing horn antenna to collect data.
4. Using another standard gain horn antenna to calibrated those data

4-5.2 Chamber definition




1. An anechoic chamber (7mx4mx3m) which satisfied far-field condition was applied to avoid multi-path effect
2. The quiet room region is 40cmx40cmx40cm at the center of rotator
3. The distance between DUT and standard antenna is 4.38 m
4. Probing antenna (9120D horn antenna) and standard gain horn antenna (BBHA9120 LPF 700MHz ~6GHz)

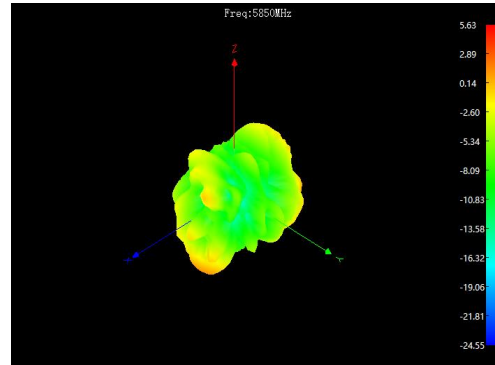
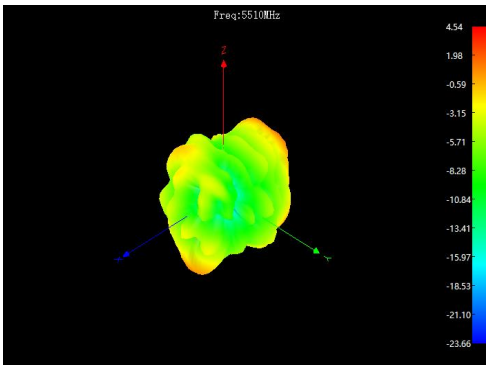
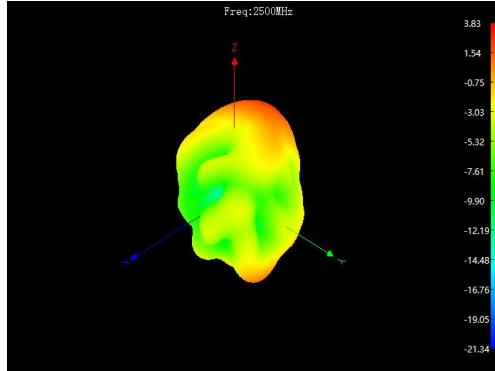
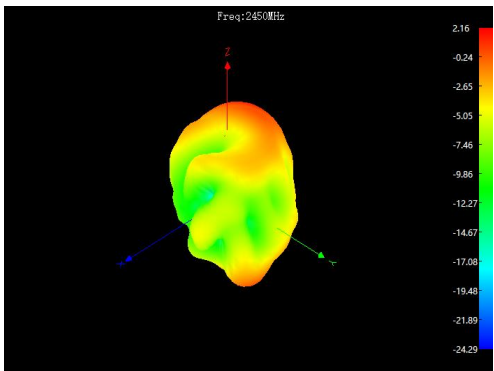
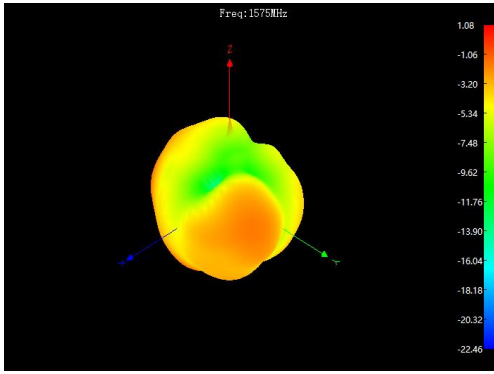
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2-4-1 Efficiency and Gain

Frequency/MHz	Efficiency / dB	MaxGain/dBi	Frequency/MHz	Efficiency / dB	MaxGain/dBi
1560	44.28	1.3	2400	40.46	1.72
1565	42.96	0.91	2410	44.16	2.11
1570	45.32	1.25	2420	42.36	1.95
1575	41.7	1.08	2430	44.36	2.15
1580	44.12	1.63	2440	48.53	2.63
1585	42.81	1.05	2450	45.6	2.16
1590	45.16	1.29	2460	52.36	3.09
1595	43.19	0.55	2470	50.93	2.71
1600	43.96	1.27	2480	57.94	3.64
1605	42.28	0.41	2490	56.23	3.12
			2500	61.38	3.83

Frequency/MHz	Efficiency / dB	MaxGain/dBi	Frequency/MHz	Efficiency / dB	MaxGain/dBi
5150	53.58	3.3	5510	59.02	4.54
5170	54.95	3.39	5530	58.88	4.57
5190	54.08	3.28	5550	57.94	4.59
5210	54.95	3.3	5570	57.15	4.6
5230	54.7	3.28	5590	58.34	4.73
5250	54.08	3.31	5610	59.16	4.78
5270	52.36	3.22	5630	58.75	4.85
5290	54.45	3.33	5650	58.61	4.94
5310	54.2	3.27	5670	57.81	5.1
5330	55.08	3.34	5690	55.59	5.06
5350	57.41	3.57	5710	58.61	5.42
5370	57.41	3.72	5730	58.21	5.49
5390	53.33	3.56	5750	56.1	5.46
5410	56.36	3.81	5770	54.45	5.49
5430	57.41	3.88	5790	53.33	5.46
5450	59.29	4.14	5810	53.58	5.53
5470	59.43	4.28	5830	54.2	5.58
5490	59.84	4.46	5850	54.7	5.63

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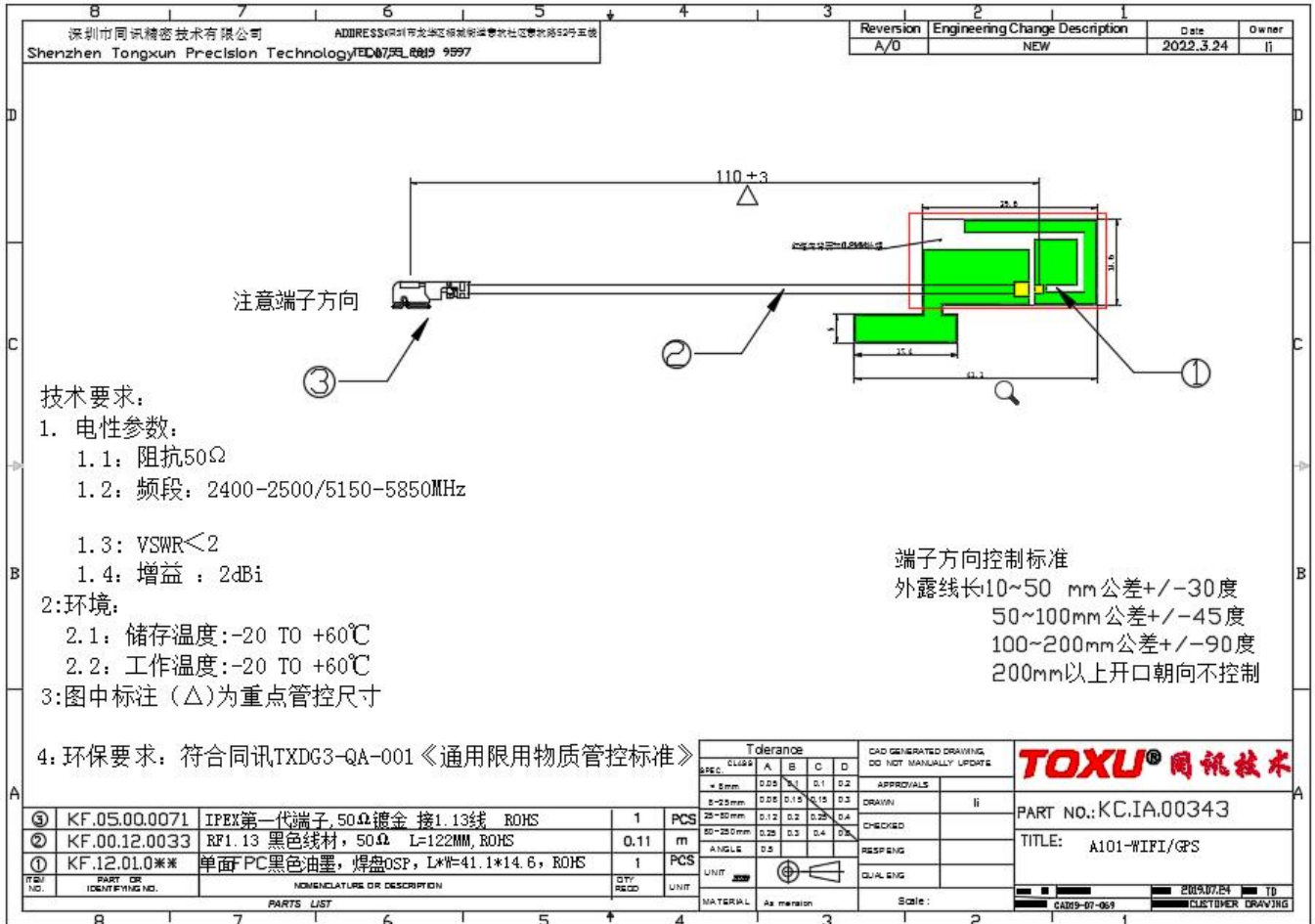


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3. Mechanical Specification:

3-1. Mechanical Configuration (Unit: mm)

The appearance of the antenna is according to drawing

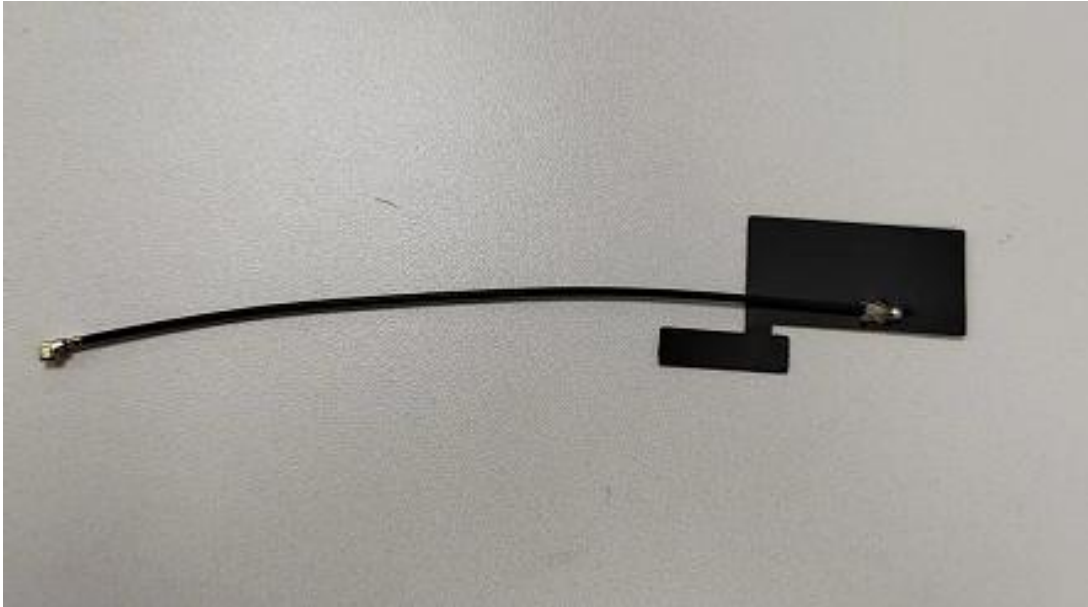



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3-2. Connector appearance:

IPEX

3-3. Product picture:



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4.包装规格:

产品料号: XXX			
产品型号: XXX			
一、标签要求:			
需方	XXX		
供方	XXXXX		
物料编码	XX		
产品型号	XX		
数量/单	XXX PCS	出厂日期	X 年 X 月 X 日
备注/其他			
二、装箱要求:			
作业说明:			
1. 内包装:			
产品 XXpcs 一袋, 放入小 PE 袋;			
2. 外包装:			
XxPCS 一箱;			
3. 注意事项:			
a. 是否要增设隔板、珍珠棉;			
b. 标签的帖附, 如 ROHS 等;			

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