

KC.IA.00504

Antenna Specification

1. Application:

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

2.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
WiFi	2400-2500/5150-5850MHz


2-2. Impedance


50 ohm nominal

2-3. VSWR

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

Frequency Band(MHz)	2400	2500	5150	5850
Typical Value: (VSWR)	1.6	1.0	1.2	1.2

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2-3-4 Measuring Method	<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 										
2-3-5 Picture	 <p>The screenshot displays the E5071C Network Analyzer interface. The main plot shows the S11 SWR (Standing Wave Ratio) versus frequency. The y-axis ranges from 1.000 to 11.000, and the x-axis ranges from 2 GHz to 6.2 GHz. A sharp resonance peak is visible at approximately 2.5 GHz. The plot is titled 'S11 SWR 1.000/ Ref 1.000 [F1]'. A table of data points is shown in the top left corner of the plot area:</p> <table border="1"> <thead> <tr> <th>Frequency (GHz)</th> <th>SWR</th> </tr> </thead> <tbody> <tr> <td>2.400000</td> <td>1.6708</td> </tr> <tr> <td>2.500000</td> <td>1.0669</td> </tr> <tr> <td>5.150000</td> <td>1.2504</td> </tr> <tr> <td>5.850000</td> <td>1.2147</td> </tr> </tbody> </table> <p>The plot also shows a small peak at approximately 5.15 GHz. The bottom status bar indicates 'Start 2 GHz', 'IFBW 70 kHz', 'Stop 6.2 GHz', and 'Cor II'. The date '2024-04-25' is displayed in the bottom right corner.</p>	Frequency (GHz)	SWR	2.400000	1.6708	2.500000	1.0669	5.150000	1.2504	5.850000	1.2147
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2.400000	1.6708										
2.500000	1.0669										
5.150000	1.2504										
5.850000	1.2147										

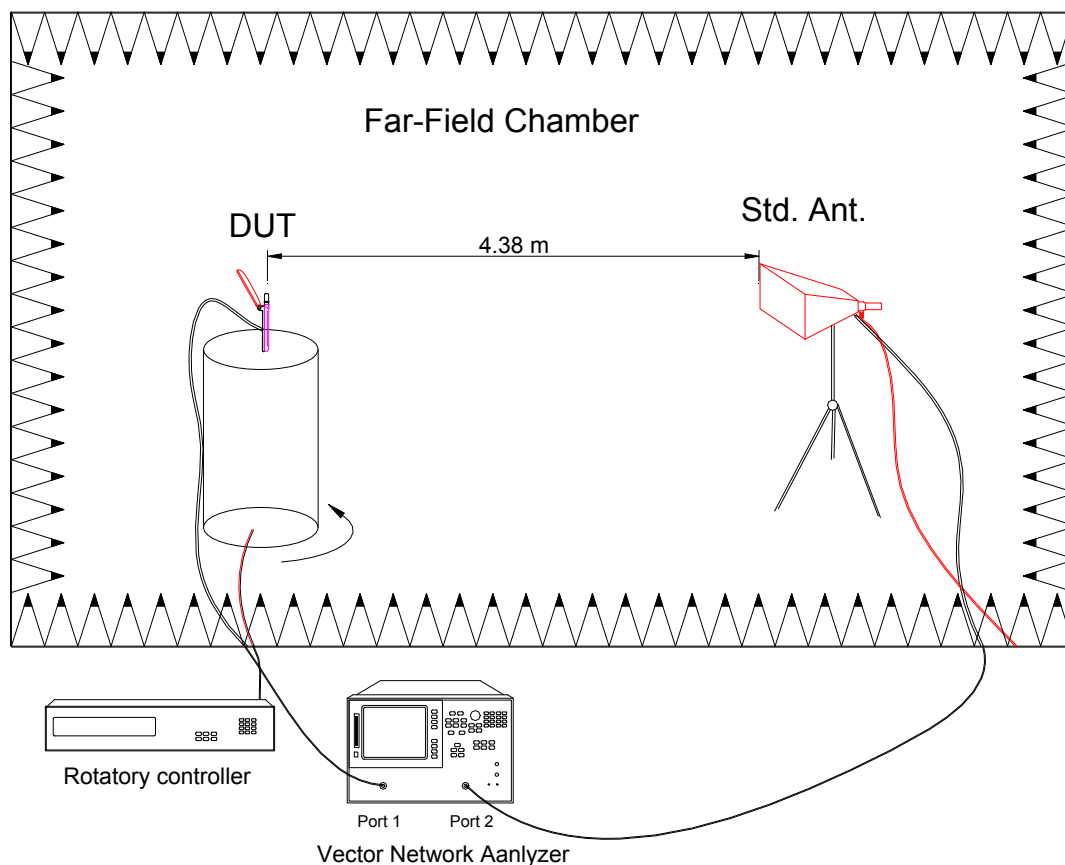
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2-4. Efficiency and Gain

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




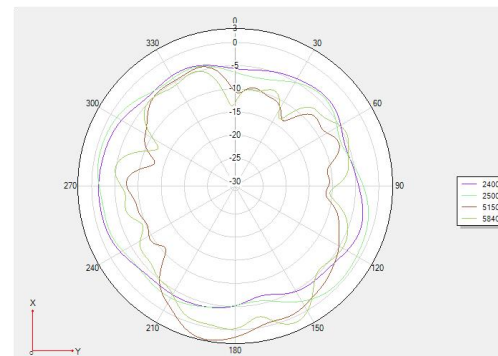
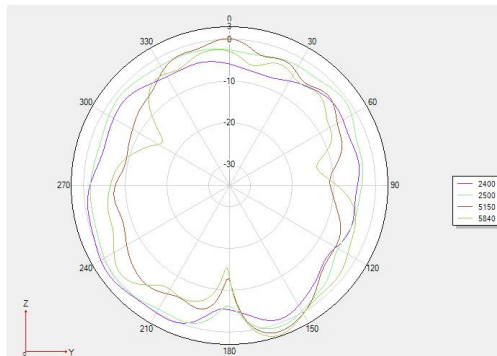
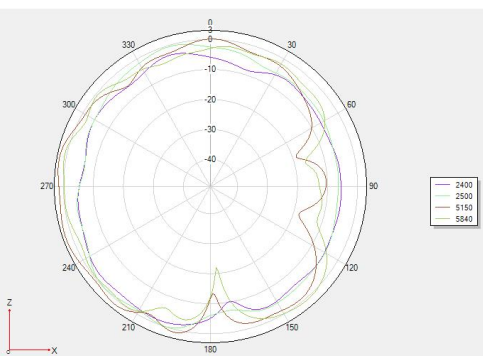
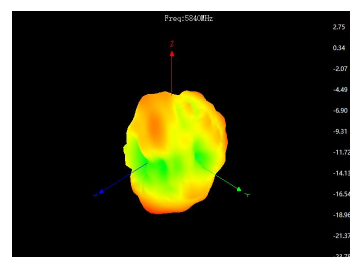
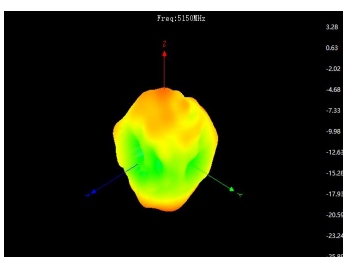
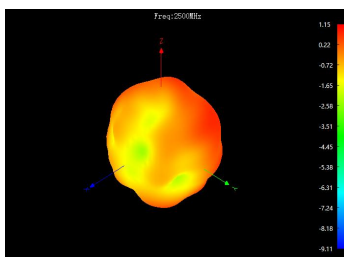
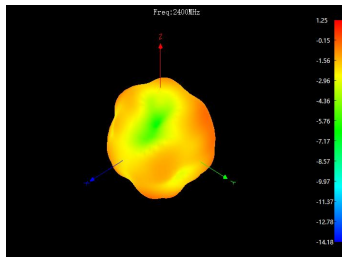
1. An anechoic chamber (7mx4mx3m) which satisfied far-field condition was applied to avoid multi-path effect
2. The quite room region is 40cmx40cmx40cm at the center of rotator
3. The distance between DUT and standard antenna is 4.38 m
4. Probing antenna (9120D horn antenna) and standard gain horn antenna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


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2-4-1 Efficiency and Gain and 3D Date

Frequency/Mhz	MaxGain/dBi	Efficiency / %	Frequency/Mhz	MaxGain/dBi	Efficiency / %
2400	1.25	51.17	5330	3.25	63.24
2410	1.62	54.08	5360	3.35	66.37
2420	1.13	52.97	5390	3.35	64.71
2430	1.27	54.45	5420	3.58	64.57
2440	1.14	56.62	5450	3.17	66.22
2450	0.6	55.98	5480	2.94	60.53
2460	0.75	57.54	5510	2.99	64.42
2470	0.4	58.48	5540	2.58	64.12
2480	0.93	60.67	5570	2.59	60.95
2490	0.82	63.68	5600	2.65	58.34
2500	1.15	65.77	5630	2.76	60.39
			5660	2.54	58.61
5150	3.28	63.97	5690	2.47	57.81
5180	3.25	65.61	5720	2.6	60.95
5210	3.19	64.42	5750	2.61	59.29
5240	3.3	63.39	5780	2.77	61.24
5270	3.26	60.53	5810	2.62	57.15
5300	3.12	61.8	5840	2.75	59.29

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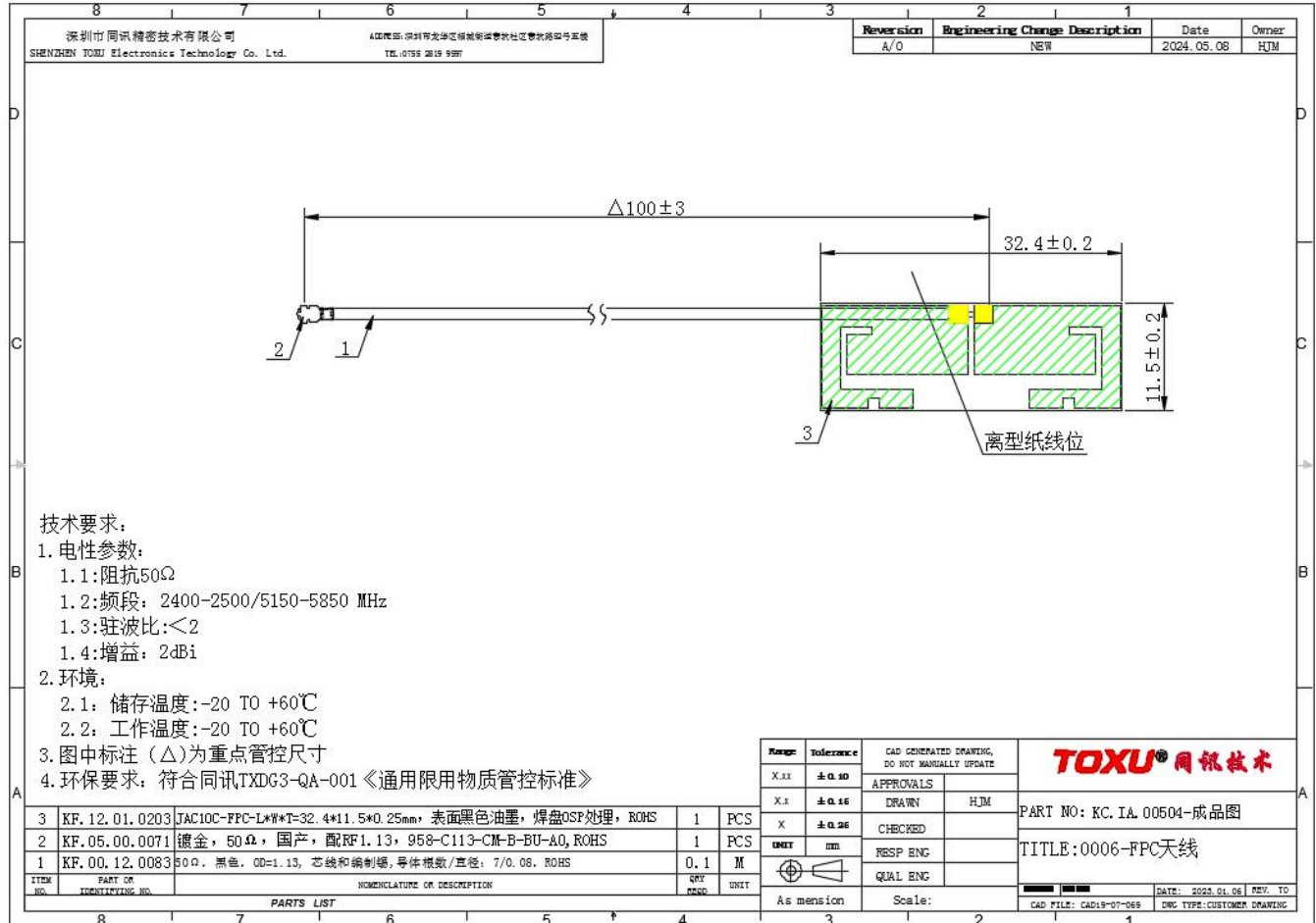



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3. Mechanical Specification:

3-1. Mechanical Configuration (Unit: mm)


The appearance of the antenna is according to drawing

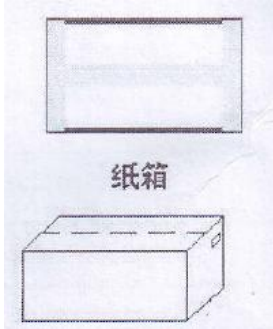


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4 .Packaging specification:

Product number: xxxxx			
Product model: xxxxx			
一、 Label requirements:			
Customer	xxx		
supplier	xxxxx		
Material coding	xx		
Product model	xx		
Number	XXX PCS	Factory date	X X X
Remarks			
二、 Boxing:			
Job description:			
1. Inner packaging:			
XXpcs A bag			
2. External packaging:			
Xx PCS ;			
3. Matters needing attention:			
a. Whether to add partition and pearl cotton;			
b. Label attachments, such as ROHS, etc.;			





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