

Antenna Specifications

CUSTOMER		文巡	
CS P/N		UG02-4G&WIFI&BT	
HX P/N		<u>A53-033-F-UG02</u>	
Checked by(RF)	Checked by(ME)	Checked by(QA)	Approval led by
Model		UG02	



Antenna Specifications

SHENZHEN HENGXIANGTONG ANTENNA TECHNOLOGY CO., LTD.

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1. General Description

This document provides the antenna specifications on electric, mechanic and reliability. The testing conditions and related pictures are also included.

1.1 Print Acceptance

Samples and Antenna Specifications are to be sent to customer. When they are approved, the approval form should be completed, signed, and sent back to HX before further mass production batches can be delivered.

1.2 Coordinate System

The coordinate system for the phone is defined as follows:

- Origin in center of gravity.
- Positive X axis is perpendicular to, and directed from, front plane.
- Positive Y axis is perpendicular to, and directed from, right side plane (as seen from front).
- Positive Z axis is perpendicular to, and directed from, top plane.

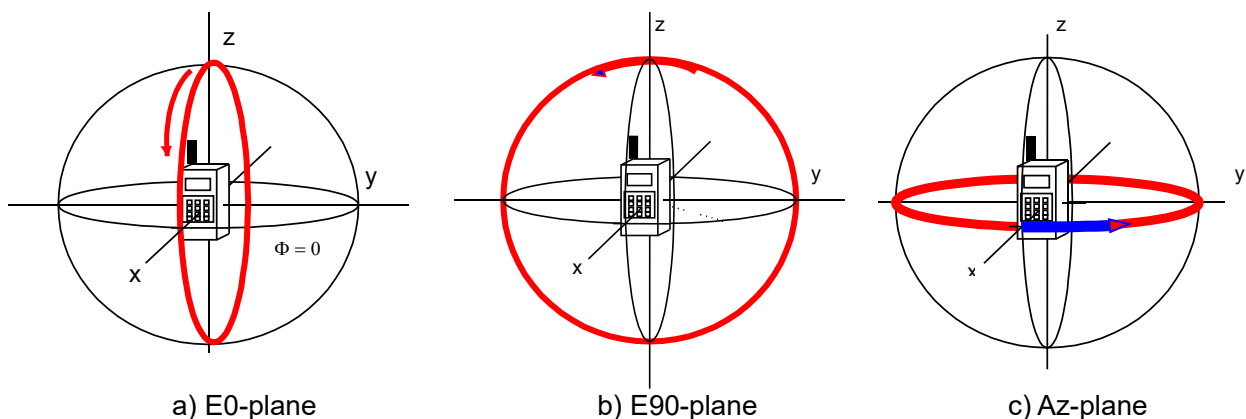


Figure 1-1 The coordinate system for the phone



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2. Specifications

This report mainly provides the testing conditions of various electric and structural performance parameters for cell phone antenna ---UG02 Figure 2-1 shows the antenna designed by HX & The fixturing of UG02

Figure 2-1 The antenna designed by HX & The fixturing of UG02

Add: 3/F,Building4,XinJianXing Industrial Park,Yanguang Industrial Zone, Xili Town, Nanshan District, ShenZhen, P.R.China,
Tel. +86-755-27657751 Fax +86-755-27599500

2.1 Frequency Band

Band	Frequency(MHz)
GPS	1575.42
WIFI	2400-2480
LTE	703-880 1710-2155

Figure 2-2: Matching circuit

2.2 Passive Measurements

2.2.1 VSWR & Gain Specifications

VSWR		GAIN	
Freq.Band(MHz)	SPEC	Freq.Band(MHz)	SPEC
1575.42	≤ 2.0	1575.42	$\geq -1.5\text{dBi}$
2400-2500	≤ 2.0	2400-2500	$\geq -1.5\text{dBi}$
650-2700	≤ 3.0	650-2700	$\geq -1.5\text{dBi}$

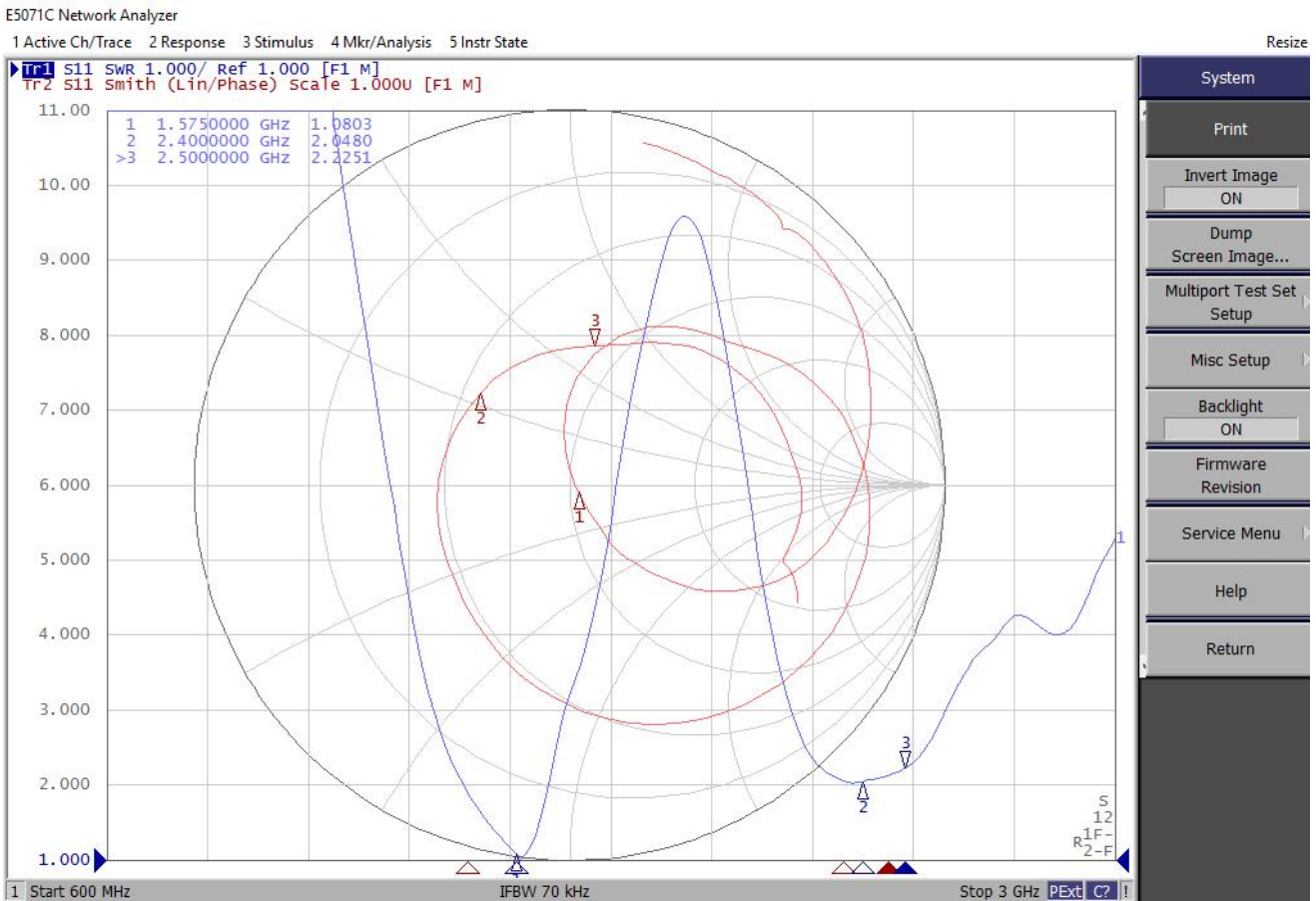
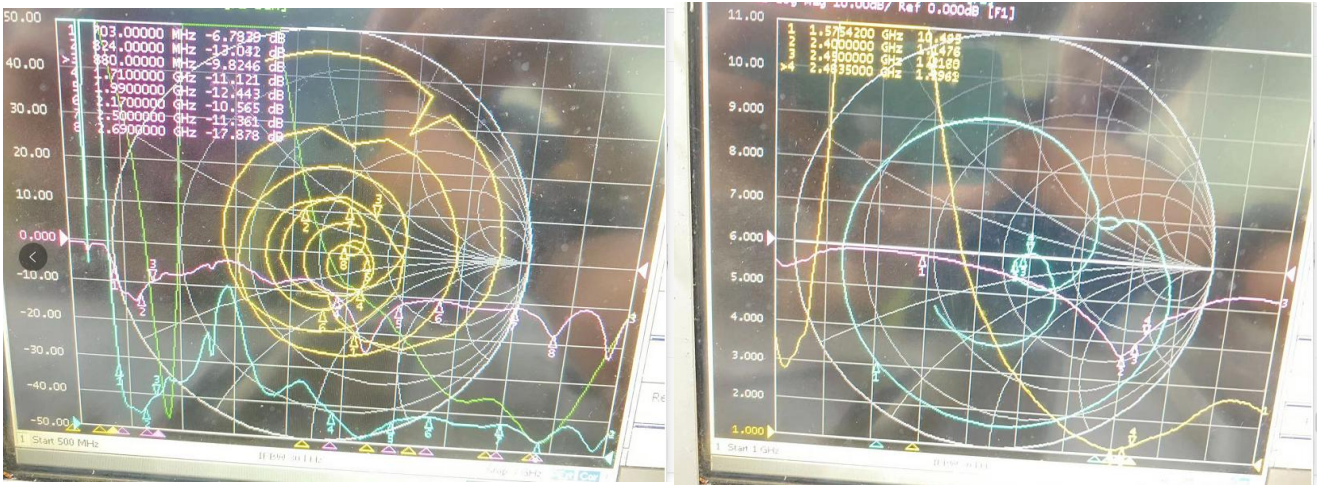
2.2.2 S11 of the Typical Sample

Freq (MHz)	703	824	894	1710	2155
R.L(dB).	-7.5	-12	-9.7	-9.7	-12
VSWR	2.1	1.5	1.9	1.8	1.6

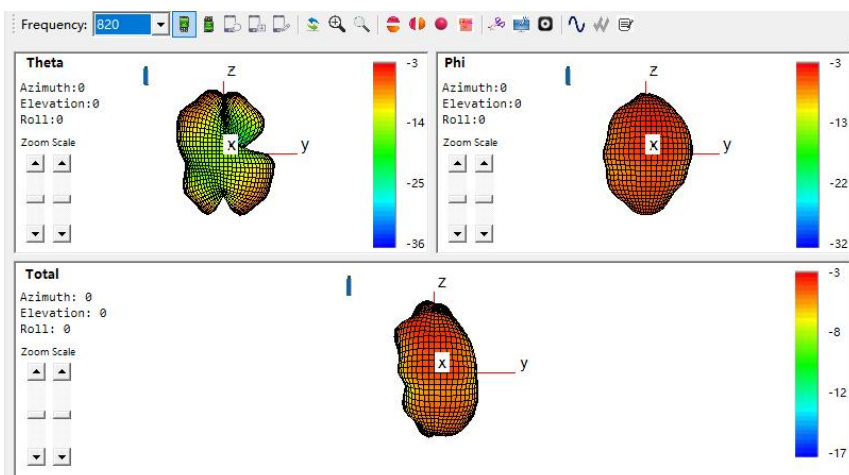
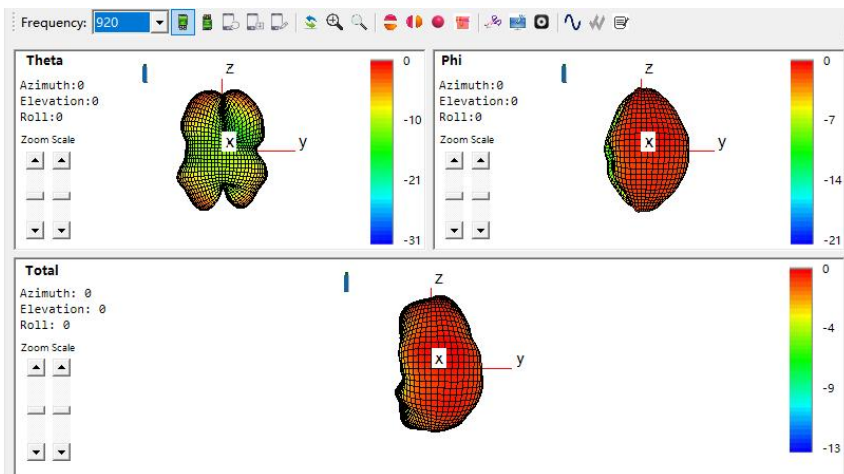
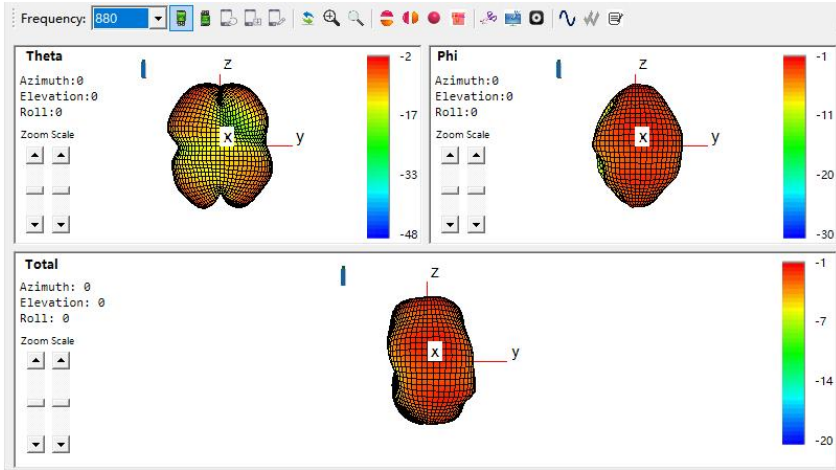
2.2.3

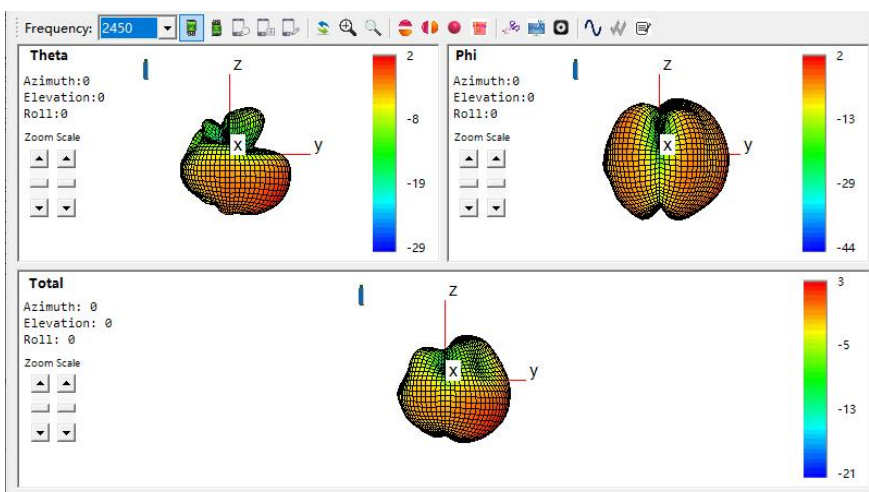
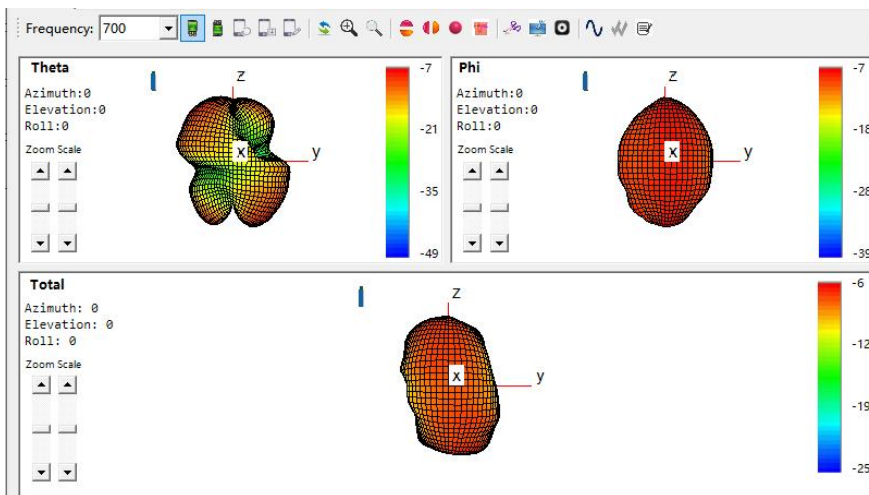
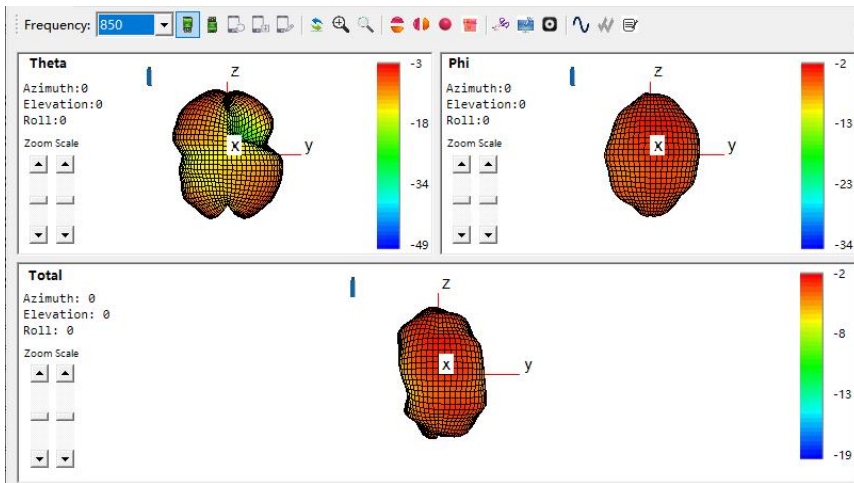
RF1	0 Ω	GSM900/DCS1800/PCS1900+W1900/W2100+LTE1/2/3/4/7/25/41
RF2	4.7NH	GSM850+W850+LTE5+LTE5/18/19/26
RF3	15NH	LTE12/17/28

无源驻波图:



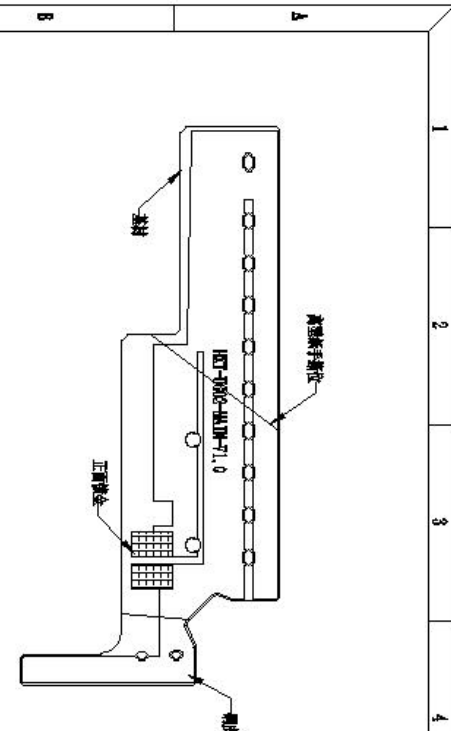
暗室测试数据:

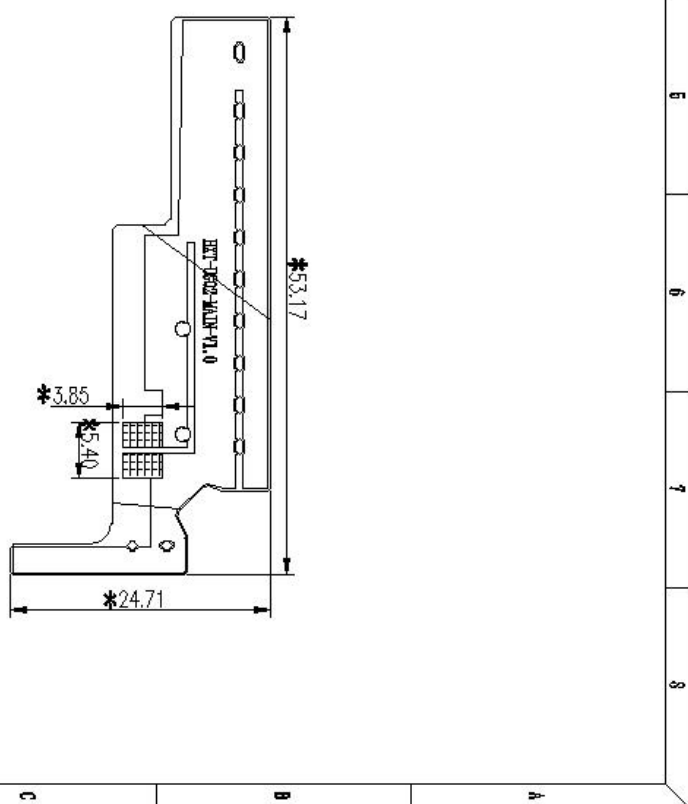




3. Mechanical Properties

3.1 Specifications Drawings











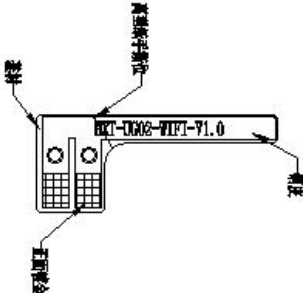
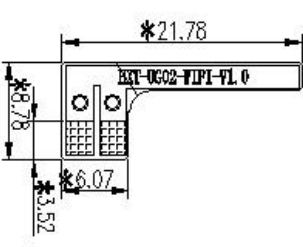
NOTE

- 1.材料：各组成部分材料规格如图纸中做标注，总厚 $0.10 \pm 0.02\text{MM}$ （不含高透纸）。
- 2.尺寸公差：标“*”的为重点尺寸，恒信恒通所有尺寸公差不得超过 ± 0.05 ，模具外相外型尺寸公差不得超过 ± 0.1 ，未注尺寸以图影为准。
- 3.镀层：镀层 $\text{Ni} < 1.5 - 5\mu\text{m} >$ + 金层 $\text{Au} < 0.025 - 0.075\mu\text{m} >$ 。
- 4.可靠性测试：盐雾测试、温度测试、湿度测试、振动测试、恒湿恒湿试验、冷热冲击试验。
- 5.所用材料满足环保要求。

Rev	1	2	3	4	5	6	7
Description	新图纸						
Date							
Remark							

 Third angle	 0.02	 0.03	 0.04	 $\pm 0.5^\circ$		
ϕ -0.10 ±0.05 10~18 ±0.05 18~30 ±0.08 30~40 ±0.09 40~ ±0.10 EPOXONS	Project ASR-039-F	Part Name CSR-TPC	Part No. A0	Material 聚酰	Treatment	Date 2022-08-12
Design by 李永田	Checked by RF	Approved by	Scale 1:1	Rev 1	Wind	Title


深圳市恒信通天线技术有限公司

1	2	3	4	5	6	7	8																																																
A	B	C																																																					
																																																							
																																																							
<p>NOTE</p> <p>1. 材质：各组成部分材质规格按如图右侧表格，总厚度$0.10 \pm 0.02\text{MM}$（不含高阻层）。</p> <p>2. 尺寸公差：标“*”的为重点尺寸，精度按所有尺寸公差不超过± 0.05，模具冲由外形尺寸公差不超过± 0.1，未注尺寸以图形为准。</p> <p>3. 镀层：铜层$\text{Ni} < 1.5 - 5\text{um}$；金层$\text{Au} < 0.025 - 0.075\text{um}$。</p> <p>4. 可靠性测试：盐雾腐蚀试验\擦拭腐蚀试验\耐酸性测试\恒湿恒压试验\冷热冲击试验。</p> <p>5. 所用物料满足环保要求。</p>																																																							
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				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Third Angle</td> <td style="text-align: center;">Project</td> <td colspan="2" style="text-align: center;">深圳市恒祥通天线技术有限公司</td> </tr> <tr> <td style="text-align: center;">$\phi - 10 \pm 0.05$</td> <td style="text-align: center;">Part Name</td> <td colspan="2" style="text-align: center;">AG3-033-TP</td> </tr> <tr> <td style="text-align: center;">$10 \sim 18 \pm 0.05$</td> <td style="text-align: center;">Part No.</td> <td colspan="2" style="text-align: center;">WIFI-TPC</td> </tr> <tr> <td style="text-align: center;">$18 \sim 30 \pm 0.05$</td> <td style="text-align: center;">Material</td> <td colspan="2" style="text-align: center;">聚脂</td> </tr> <tr> <td style="text-align: center;">$30 \sim 40 \pm 0.05$</td> <td style="text-align: center;">Treatment</td> <td colspan="2"></td> </tr> <tr> <td style="text-align: center;">$40 \sim \pm 0.10$</td> <td style="text-align: center;">Date</td> <td colspan="2" style="text-align: center;">2022-08-12</td> </tr> <tr> <td style="text-align: center;">Locus</td> <td style="text-align: center;">Designed by</td> <td colspan="2" style="text-align: center;">李永田</td> </tr> <tr> <td style="text-align: center;">EXPROJMS</td> <td style="text-align: center;">Checked by</td> <td colspan="2" style="text-align: center;">JD</td> </tr> <tr> <td></td> <td style="text-align: center;">Approved by</td> <td colspan="2" style="text-align: center;">TP</td> </tr> <tr> <td></td> <td style="text-align: center;">Unit</td> <td colspan="2" style="text-align: center;">mm</td> </tr> <tr> <td></td> <td style="text-align: center;">Scale</td> <td colspan="2" style="text-align: center;">FIT</td> </tr> <tr> <td></td> <td style="text-align: center;">Rev</td> <td colspan="2" style="text-align: center;">A1</td> </tr> </table>				Third Angle	Project	深圳市恒祥通天线技术有限公司		$\phi - 10 \pm 0.05$	Part Name	AG3-033-TP		$10 \sim 18 \pm 0.05$	Part No.	WIFI-TPC		$18 \sim 30 \pm 0.05$	Material	聚脂		$30 \sim 40 \pm 0.05$	Treatment			$40 \sim \pm 0.10$	Date	2022-08-12		Locus	Designed by	李永田		EXPROJMS	Checked by	JD			Approved by	TP			Unit	mm			Scale	FIT			Rev	A1	
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1		2		3		4	
5		6		7		8	
1		2		3		4	
5		6		7		8	
1		2		3		4	
5		6		7		8	

NOTE

1.材料: 各短截部分材质规格如图在右列表格, 总厚度: 0.10±0.02MM(不含高阻胶)。

2.尺寸及公差: 标“*” 均为重点尺寸, 高精度规格所有尺寸公差不得超过±0.05, 模具冲油外形尺寸公差不得超过±0.1, 未注尺寸以图样为准。

3.镀层: 镀层Ni<1.5-5um>+镀层Au<0.025-0.075um>。

4.可溶性测试: 盐雾测试法\微波测试法\耐老化测试\耐盐雾测试\恒湿恒湿测试\冷热冲击测试。

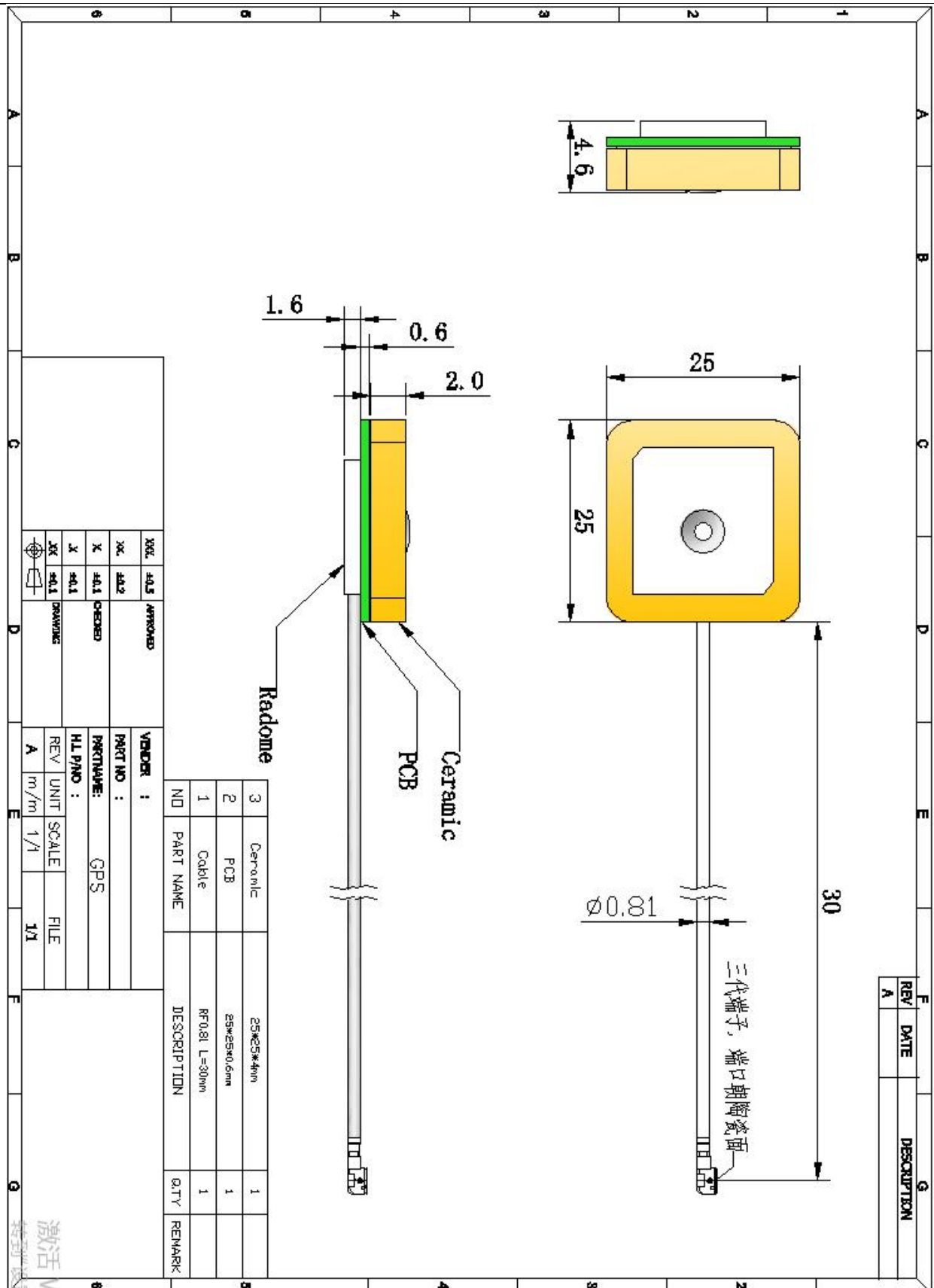
5.所用物料满足环保要求

φ	Third angle	Project	AGS-03A-2R	Date	2022-08-12
0~10	±0.05	Part Name	HT-PTC	Designed by	李永田
10~18	±0.06	Part No.	A0	Checked by	JP
18~30	±0.08	Material	黑油	Approved by	
30~40	±0.09	Treatment		Unit	mm
40~	±0.10			Scale	1:1
	angle			PT	
	±0.5°			Rev	01

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 Tel. +86-755-27657751 Fax +86-755-27599500

4. Environmental Characteristic

Test Item	Test description
1. Low Temperature	Temp.: -20 °C Time: 24 hours
2. High Temperature	Temp.: 80°C Time: 24 hours
3. Salt Fog	5±0.1% Nad salt fog PH Value: 6.5-7.2 Temp: 35±1°C Time:24 hours