

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	

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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.

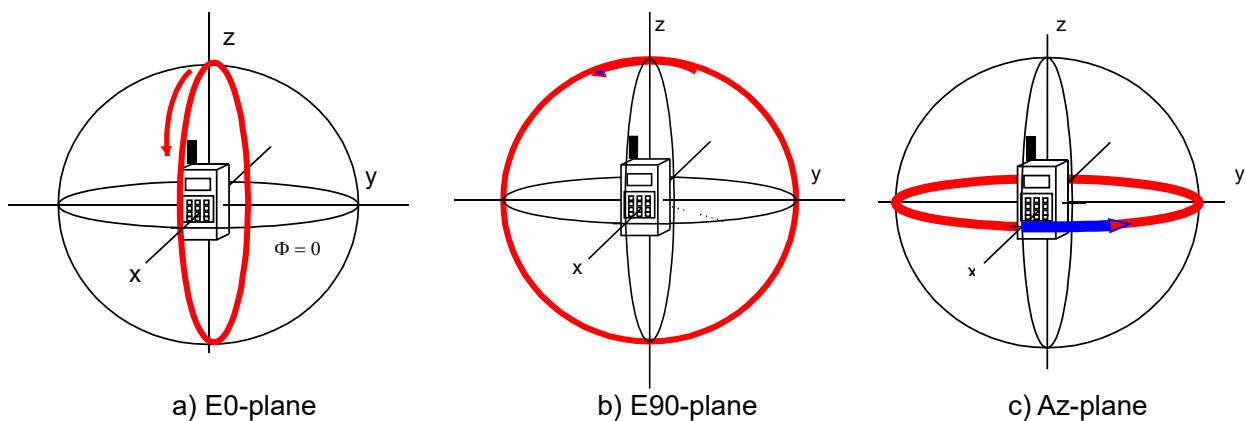


Figure 1-1 The coordinate system for the phone



Antenna Specifications

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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,Yangguang 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	$\geq -1.5\text{dBi}$

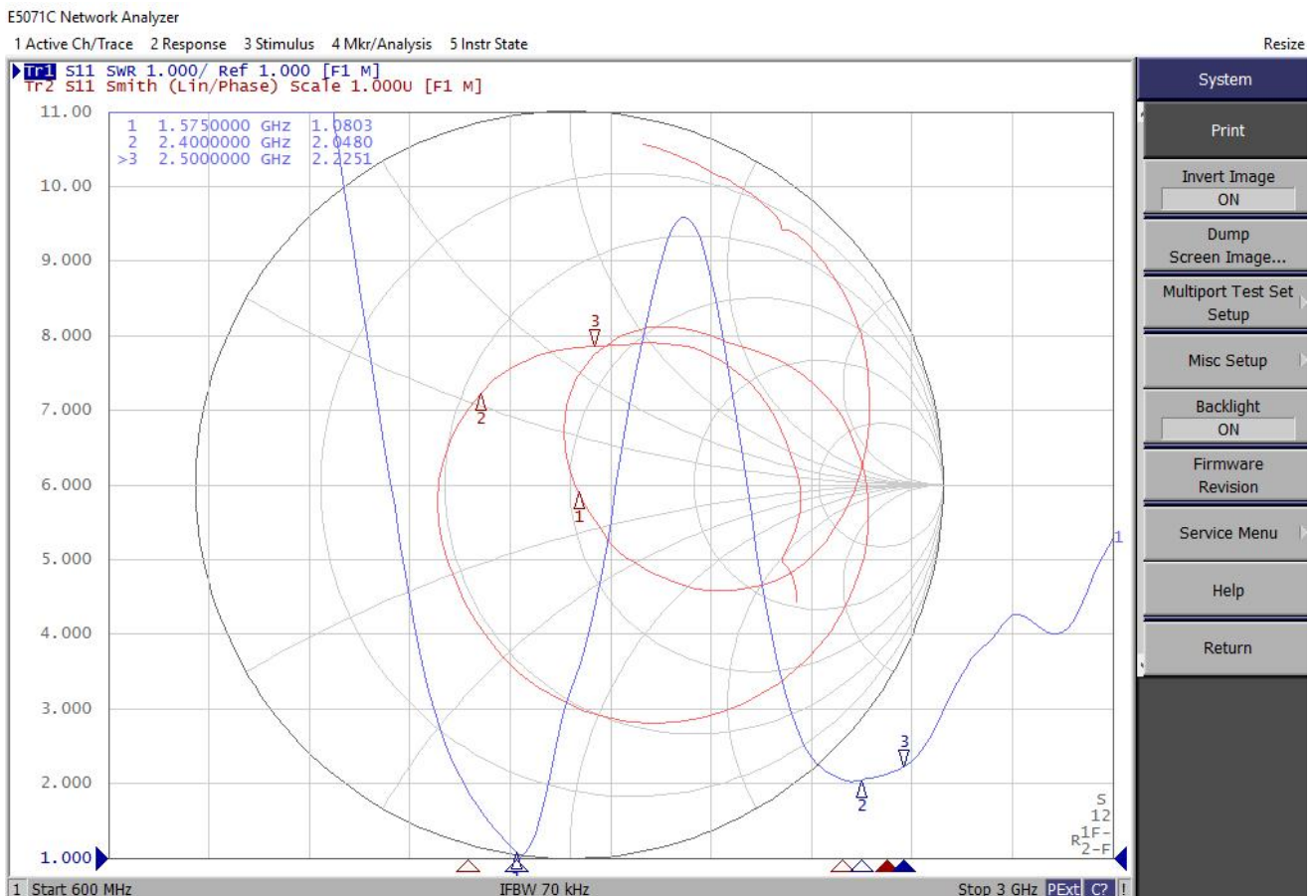
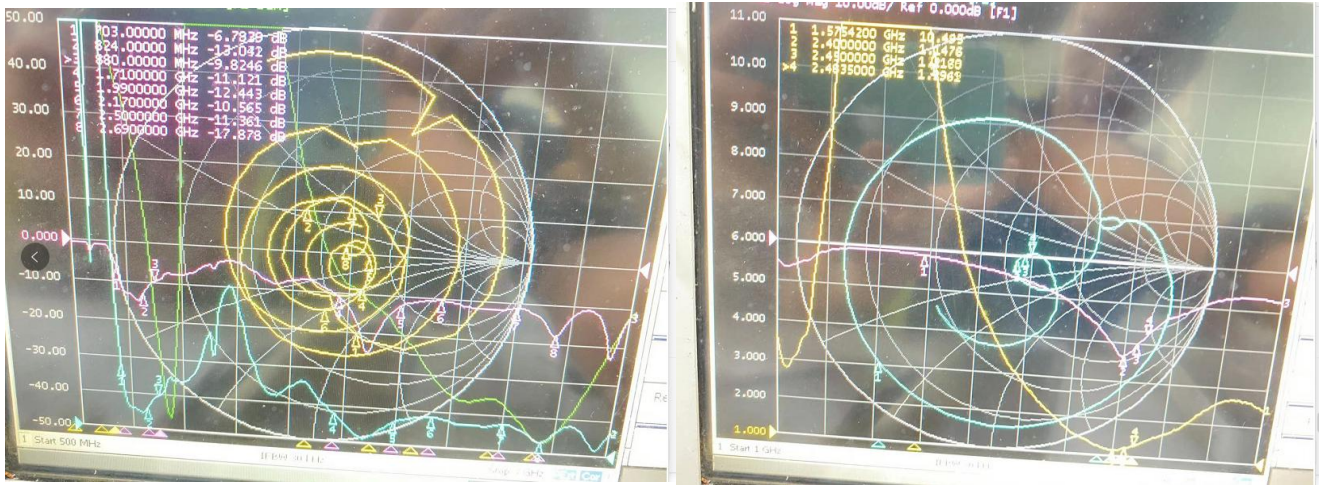
2.2.2 S11 of the Typical Sample

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

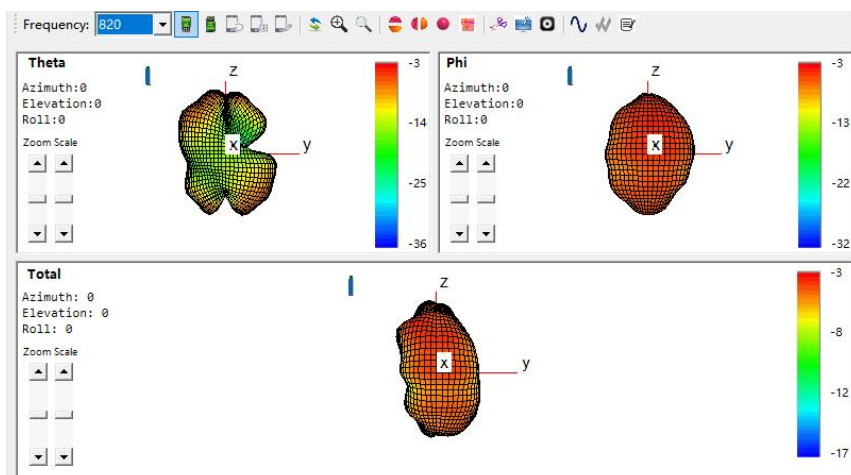
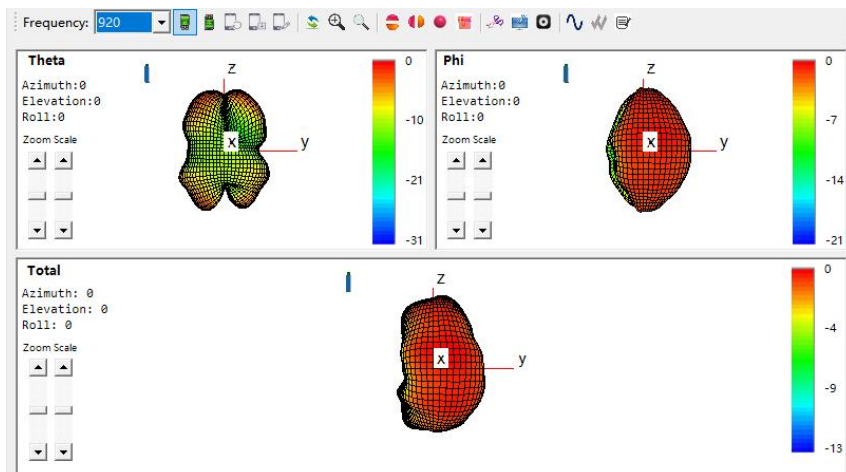
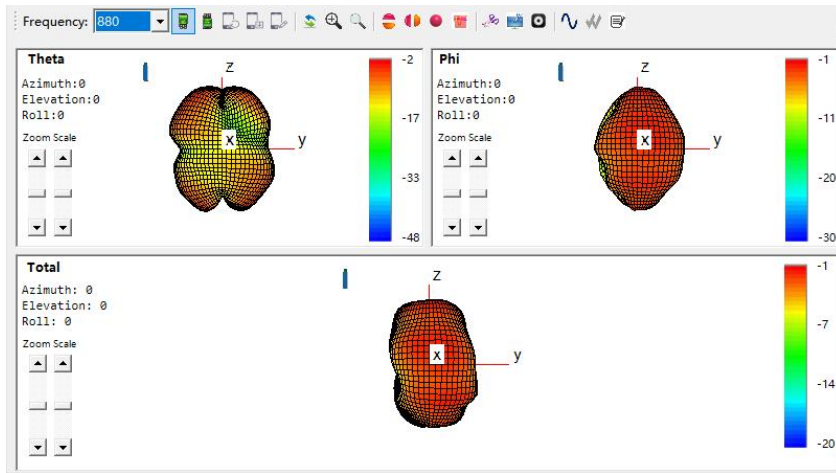
2.2.3

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

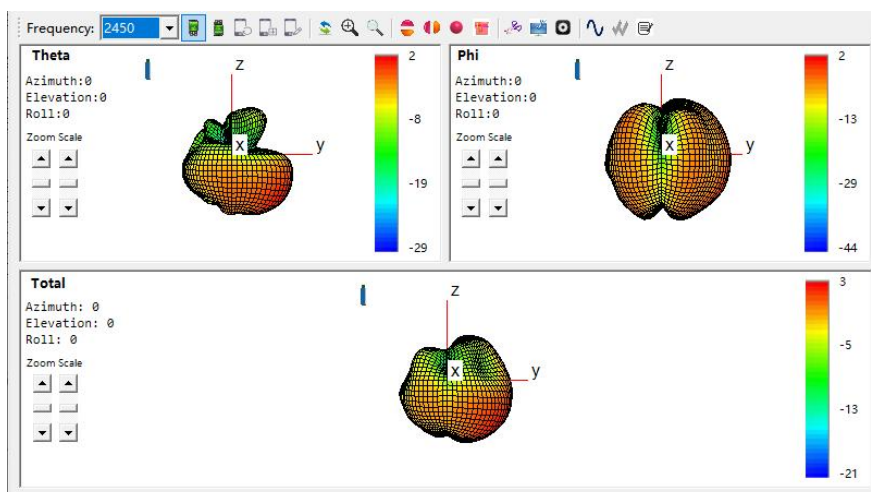
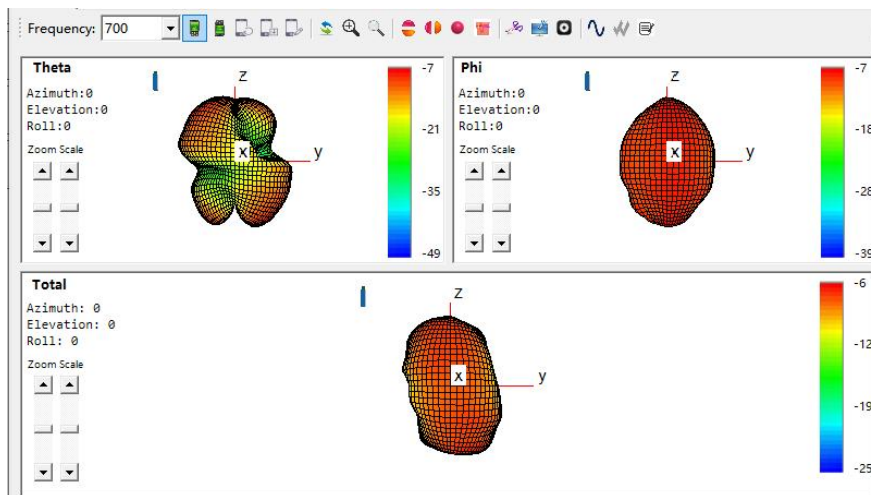
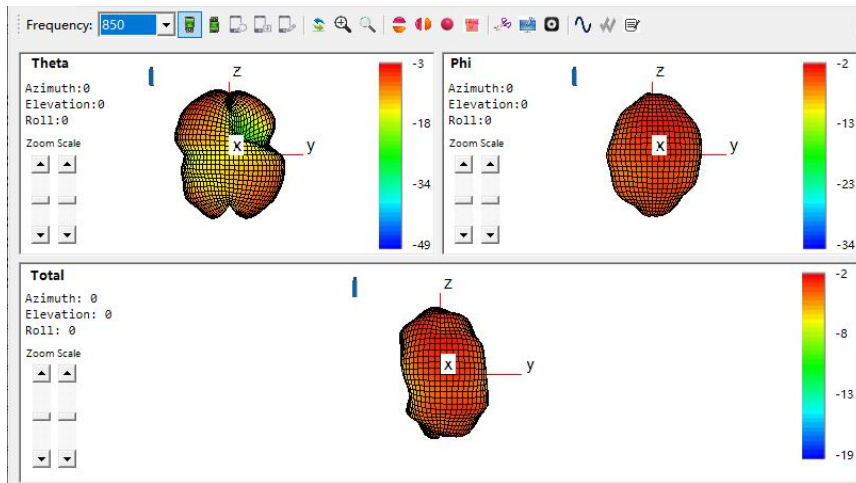
无源驻波图:



暗室测试数据:



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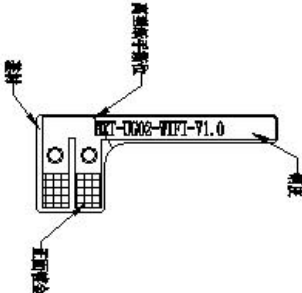
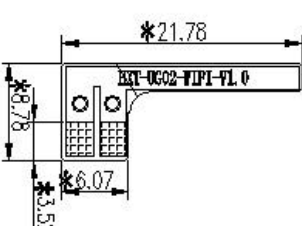
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3.Mechanical Properties

3.1Specifications Drawings

1	2	3	4	5	6	7	8																																																						
NOTE 1.材料: 各组成零件的材质规格按照图面右侧表格,总厚度$0.10\pm 0.02\text{MM}$(不含高温纸)。 2.尺寸公差: 标“*”的为重点尺寸,须按表格所标尺寸公差不得超过± 0.05,其余尺寸公差不得超过± 0.1,未注尺寸以图形为准。 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: 盐雾腐蚀试验\温度湿度试验\温度恒湿试验\冷热冲击试验。 5.所用材料满足环保要求。				<table border="1"><thead><tr><th colspan="2">Third angle</th><th colspan="2">Project</th><th colspan="2">Date</th></tr><tr><th>Part No.</th><th>Part Name</th><th>Part No.</th><th>Part Name</th><th>Designed by</th><th>2022-08-12</th></tr></thead><tbody><tr><td>10~18</td><td>± 0.05</td><td>0</td><td>0.02</td><td></td><td>李永田</td></tr><tr><td>18~30</td><td>± 0.05</td><td>0</td><td>0.03</td><td></td><td></td></tr><tr><td>30~40</td><td>± 0.05</td><td>0</td><td>0.02</td><td></td><td></td></tr><tr><td>40~</td><td>± 0.10</td><td>0</td><td>0.04</td><td></td><td></td></tr></tbody></table> <table border="1"><thead><tr><th colspan="2">Treatment</th><th colspan="2">Approved by</th><th colspan="2">Scale</th></tr><tr><th>Material</th><th>Treatment</th><th>Material</th><th>Treatment</th><th>Scale</th><th>PTT</th></tr></thead><tbody><tr><td>铜板</td><td></td><td></td><td></td><td></td><td></td></tr></tbody></table> Unit: mm Scale: 1:1 Rev: A Wind: 1				Third angle		Project		Date		Part No.	Part Name	Part No.	Part Name	Designed by	2022-08-12	10~18	± 0.05	0	0.02		李永田	18~30	± 0.05	0	0.03			30~40	± 0.05	0	0.02			40~	± 0.10	0	0.04			Treatment		Approved by		Scale		Material	Treatment	Material	Treatment	Scale	PTT	铜板					
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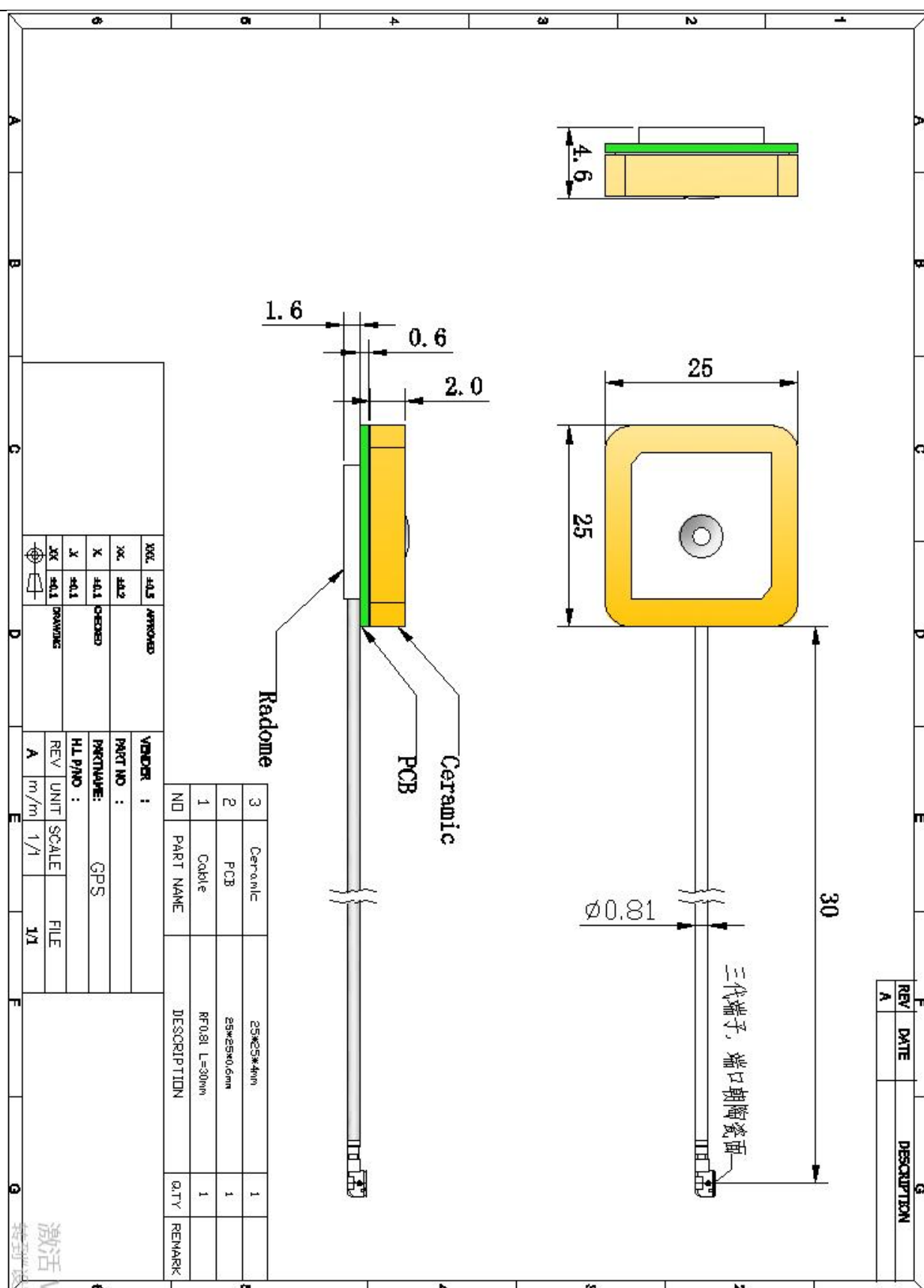
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- 5.所用物料满足环保要求

④ Third angle	Project	AS3-038-WR	Date	2022-08-12
0~10 ± 0.05 ○ 0.02	Part Name	DT-FPC	Designed by	李永田
10~18 ± 0.06 ◎ 0.03	Part No.	A0	Checked by	MD
18~30 ± 0.08 ⊥ 0.02	Material	黑油	Approved by	NT
30~40 ± 0.09 ∇ 0.04	Treatment		Unit	mm
40~ ± 0.10 angle $\pm 0.5^\circ$			Scale	1:1
⑤ Tolerances			Rev	01

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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