

# Antenna Specifications

CUSTOMER		文巡	
CS P/N		UW02	
HX P/N		<u>A53-029-LDS-UW02-V6</u>	
Checked by(RF)	Checked by(ME)	Checked by(QA)	Approval led by
Customer Approval			



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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.

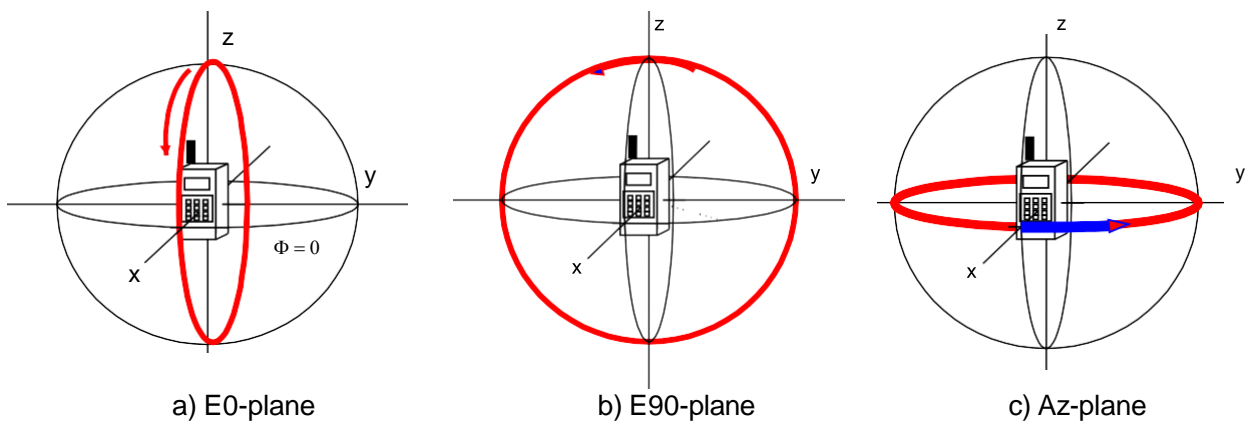


Figure 1-1 The coordinate system for the phone



## 2. Specifications

This report mainly provides the testing conditions of various electric and structural performance parameters for cell phone antenna ----UW02 Figure 2-1 shows the antenna designed by HXT & The fixturing of UW02

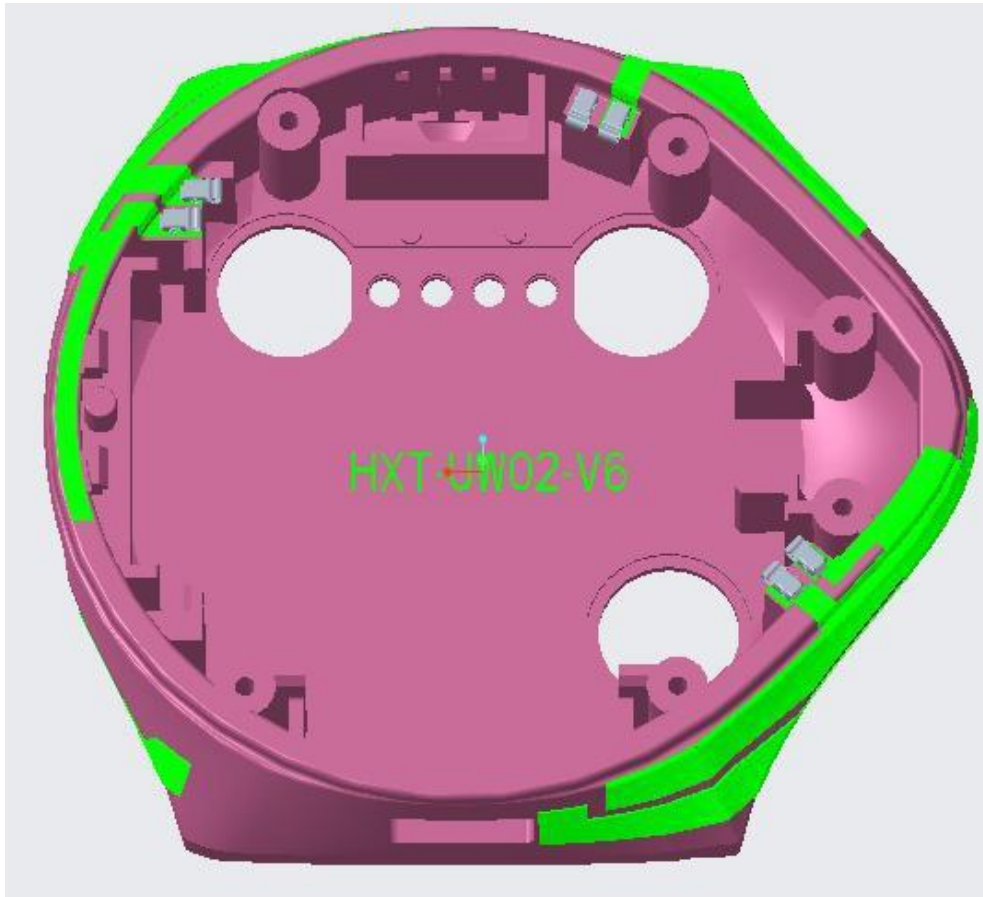


Figure 2-1 The antenna designed by HXT & The fixturing of UW02



# Antenna Specifications

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## 2.1 Frequency Band

Frequency Band	Tx(MHz)/Rx(MHz)
GSMB 2/3/5/8/WCDMA B1/2//5/8 4G B1/2/3/4/5/7/8/12/17/19/20/25/26/ 38/41	700~960,1710~2690

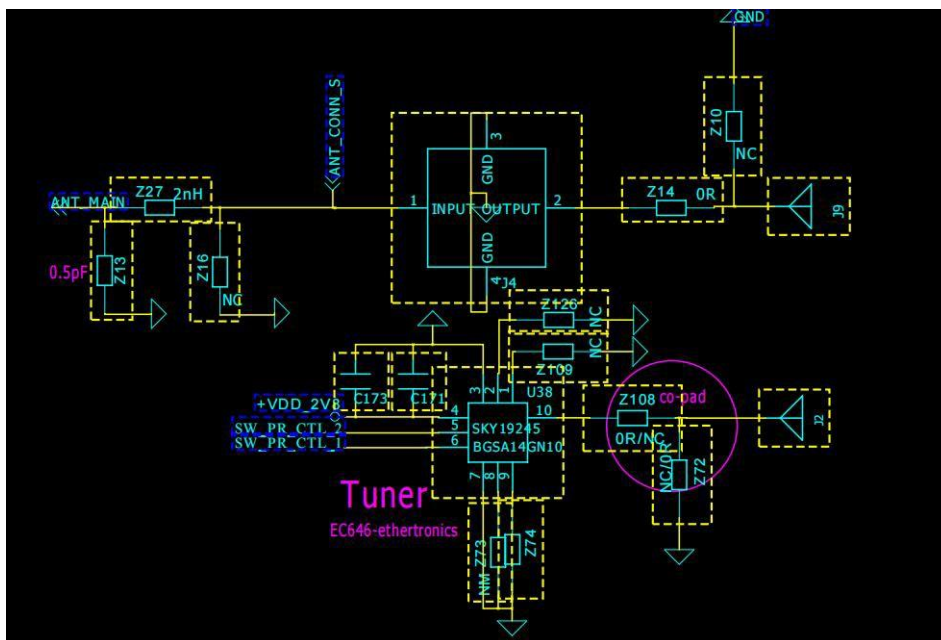
## 2.2 Impedance

### 2.2.1 Nominal

Nominal Impedance(including matching circuit) : 50 ohms

### 2.2.2 Matching Circuit

The matching circuit is as Figure 2-2.



bit number	value
Z109	0Ω
Z126	5.6nH
Z74	18nH
Z73	0Ω
ANTENN-MATCH	
bit number	value
Z10	12nH
Z14	0Ω
Z108	0Ω
Z72	NC

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# Antenna Specifications

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## 2.2.3 Switching Logic

Switching Logic	Band	bit number	value
RF1	GSM2/8/W1/2/8/ 4G 1/2/7/8/25/38/41	Z109	0Ω
RF2	GSM 5/W 5/4G 5/18/19/20/26	Z126	5.6nH
RF3	4G 12/17	Z74	18nH
RF4	GSM 3/4G 3/4	Z73	0Ω

## 2.3 Passive Measurements

### 2.3.1 Gain Specifications

Function	GAIN
BT	-1.2dBi
WIFI	-1.2dBi
GPS	-2dBi
GSM 900/1800/850/1900	-4.5dBi
WCDMA	-3.4dBi
LTE	-3.1dBi

### 2.3.2 S11 of the Typical Sample

Freq (MHz)	RF3		RF2		RF1/RF4					
	700	800	796	896	880	960	1710	2170	2500	2700
VSWR	3.2	7.5	4.5	7.9	3.7	8.6	3.5	4.7	3.4	4.1

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## 2.4 Active Measurements

### 2.4.1 Active Measurements Data

Total Radiated Power (TRP) and Total Isotropic Sensitivity (TIS) of the handsets with antenna are tested in the antenna chambers .

#### Chamber Test Data

2G	CH	TRP	TIS(灭)
<b>GSM850</b>	128	14.54	
	190	15.24	
	251	15.78	-83.06
<b>EGSM900</b>	1	18.71	
	62	19.47	
	124	19.42	-84.46
<b>DCS1800</b>	512	21.15	
	698	21.95	
	885	22.35	-100.21
<b>PCS1900</b>	512	24.24	
	661	24.55	
	810	24.28	-100.47
3G	CH	TRP	TIS(灭)
<b>WCDMA1</b>	9612	17.97	
	9750	17.25	
	9888	17.04	-98.59
<b>WCDMA2</b>	9262	17.36	
	9400	17.53	
	9538	17.49	-103.74
<b>WCDMA5</b>	4132	7.02	
	4183	7.43	
	4233	7.47	-88.14
<b>WCDMA8</b>	2712	7.84	
	2787	8.68	
	2863	8.05	-87.28
4G	CH	TRP	TIS
<b>TDD-B38(20M)</b>	37850	13.19	
	38000	13.15	
	38150	13.53	-87.25
<b>TDD-B41(20M)</b>	40340	15.51	
	40620	14.52	
	41140	13.24	-86.89

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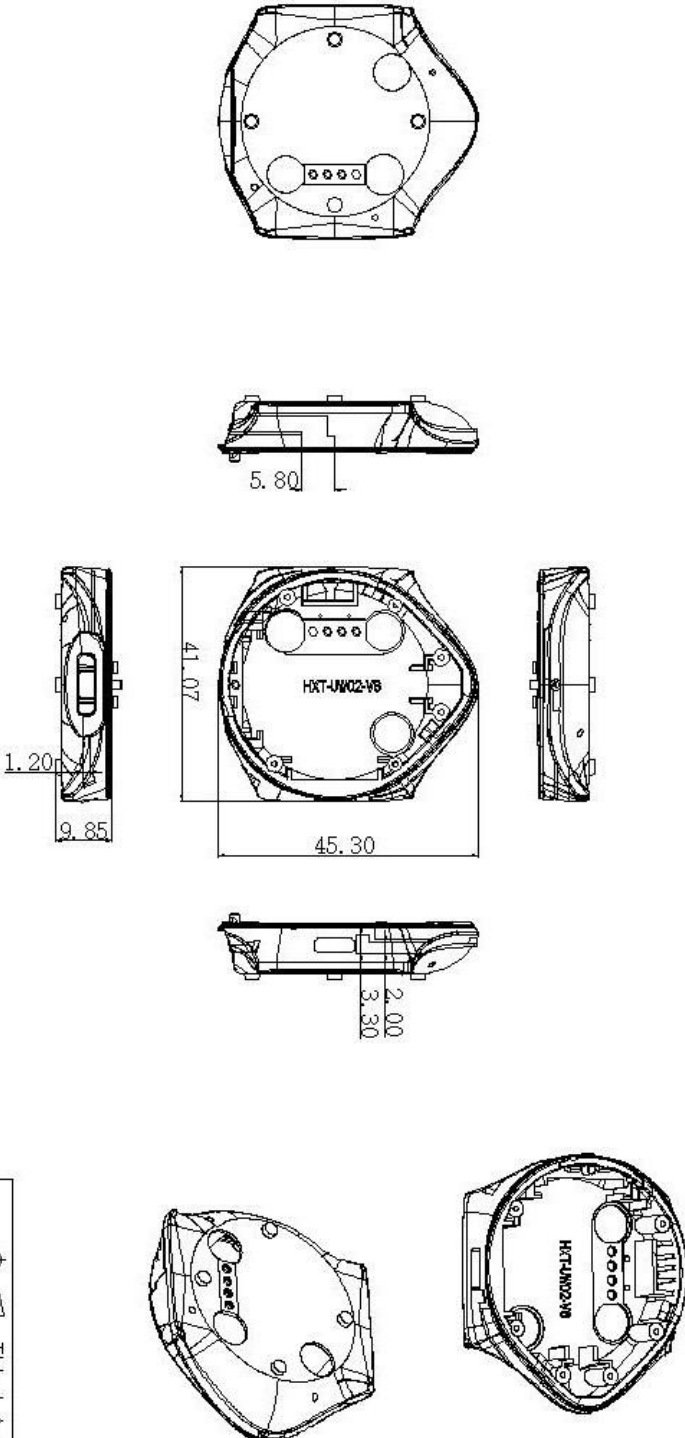
4G	CH	TRP	TIS
<b>FDD-B1(10M)</b>	18050	18.5	
	18300	17.14	
	18550	17.47	-89.66
<b>FDD-B2(10M)</b>	18650	19.32	
	18900	19.74	
	19150	19.49	-91.87
<b>FDD-B3(10M)</b>	19250	15.58	
	19900	15.56	
	18550	16.48	-89.29
<b>FDD-B4(10M)</b>	2000	15.6	
	20175	16.68	
	20350	17.02	-91.37
<b>FDD-B5(10M)</b>	20450	6.18	
	20525	7.31	
	20600	6.79	-76.15
<b>FDD-B7(10M)</b>	20800	13.91	
	21100	14.49	
	21400	13.21	-91.01
<b>FDD-B8(10M)</b>	21500	7.76	
	21625	9.85	
	21750	8.39	-76.48
<b>FDD-B12(10M)</b>	23060	3.65	
	23095	3.94	
	23130	4.76	-73.48
<b>FDD-B17(10M)</b>	23780	4.24	
	23790	4.63	
	23800	5.34	-73.58
<b>FDD-B19(10M)</b>	20050	6.32	
	24075	6.57	
	24100	6.81	-74.65
<b>FDD-B20(10M)</b>	24200	6.84	-75.68
	24300	6.71	
	24400	4.57	
<b>FDD-B25(10M)</b>	26090	17.86	
	26365	19.78	
	26640	17.48	-90.81
<b>FDD-B26(10M)</b>	26740	6.72	
	26865	6.24	
	26990	5.29	-75.18

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### 3. Mechanical Properties


#### 3.1 Specifications Drawings



HXT-AM02-NB

**技术要求**

1. LDS表面刮伤，压伤，无批锋，缩水，凹凸点；
2. 热熔闪光灯镜片后不能松动；
3. 具体尺寸参照3D。

	 Third Angle				
0~10	±0.05	○	0.02		
10~18	±0.06	◎	∅ 0.03		
18~30	±0.08	┘	0.02		
30~40	±0.09	∇	0.04		
40~	±0.10	Angle	±0.5°		

客户 CUSTOMERS		料号 Material		数量 QTY	
*****		见附表		01	
DRAWN BY	LTY	CHECKED BY	YMT	APPROVED BY	YMT
2022-09-13					

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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