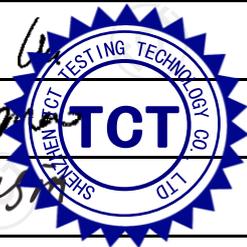


Test Report

Test Report No..... :	TCT240614E019	
Date of issue..... :	Jul. 26, 2024	
Testing laboratory	Shenzhen TCT Testing Technology Co., Ltd.	
Testing location/ address:	2101 & 2201, Zhenchang Factory, Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China	
Applicant's name..... :	Shenzhen Huafurui Technology Co., Ltd.	
Address..... :	Unit 601-03, 6/F, Block A, Building 1, Ganfeng Technology Building, No. 993 Jiaxian Road, Xiangjiaotang Community, Bantian Street, Longgang District, Shenzhen, P.R. China	
Manufacturer's name ... :	Shenzhen Huafurui Technology Co., Ltd.	
Address..... :	Unit 601-03, 6/F, Block A, Building 1, Ganfeng Technology Building, No. 993 Jiaxian Road, Xiangjiaotang Community, Bantian Street, Longgang District, Shenzhen, P.R. China	
Standard(s)	ETSI EN 300 330 V2.1.1 (2017-02)	
Product Name..... :	Smartphone	
Trade Mark	CUBOT	
Model/Type reference..... :	KINGKONG POWER 3	
Rating(s)..... :	Refer to EUT description of page 3	
Date of receipt of test item	Jun. 14, 2024	
Date (s) of performance of test..... :	Jun. 14, 2024 ~ Jul. 26, 2024	
Tested by (+signature) ... :	Rleo LIU	
Check by (+signature).... :	Beryl ZHAO	
Approved by (+signature):	Tomsin	



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1. General Product Information

1.1. EUT description

Product Name.....:	Smartphone
Model/Type reference.....:	KINGKONG POWER 3
Hardware Version.....:	E388_MAIN_PCB_V1.1
Software Version.....:	CUBOT_E071C_KINGKONG POWER 3_V01
Category.....:	II (Portable equipment)
Product Class.....:	Class I
Operation Frequency.....:	13.56MHz
Antenna Type.....:	FPC Antenna
Rating(s).....:	Adapter Information: Model: HJ-PD33W-EU Input: AC 100-240V, 50/60Hz, 0.8A Output: DC 5.0V, 3.0A/ DC 9.0V, 3.0A, 27.0W DC 12.0V, 2.75A, 33.0W MAX Rechargeable Li-polymer Battery DC 3.87V

Note: The antenna gain listed in this report is provided by applicant, and the test laboratory is not responsible for this parameter.

1.2. Model(s) list

None.

2. Test Result Summary

Radio Spectrum Matter (RSM) Part of Tx				
Test Item	Test Requirement	Test Method	Limit/Severity	Result
Transmitter H-field requirements	EN 300 330 Clause 4.3.4	EN 300 330 Clause 6.2.4	EN 300 330 Clause 4.3.4.3	PASS
Permitted range of operating frequencies	EN 300 330 Clause 4.3.2	EN 300 330 Clause 6.2.2	EN 300 330 Clause 4.3.2.3	PASS
Limits for transmitters in the range from 9 kHz to 30 MHz	EN 300 330 Clause 4.3.1	EN 300 330 Clause 6.2.2	EN 300 330 Clause 4.3.1.3	PASS
Limits for the permitted range of modulation bandwidth	EN 300 330 Clause 4.3.3	EN 300 330 Clause 6.2.3	EN 300 330 Clause 4.3.8.3	PASS
Transmitter radiated spurious	EN 300 330 Clause 4.2.8 Clause 4.2.9	EN 300 330 Clauses 6.2.8 and clause 6.2.9	EN 300 330 Clauses 4.3.8.3 and Clause 4.3.9.3	PASS

Radio Spectrum Matter (RSM) Part of Rx				
Test Item	Test Requirement	Test Method	Limit/Severity	Result
Adjacent channel selectivity	EN 300 330 Clause 4.4.3	EN 300 330 Clause 6.3.2	EN 300 330 Clause 4.4.3.3	N/A
Blocking or desensitization	EN 300 330 Clause 4.4.4	EN 300 330 Clause 6.3.3	EN 300 330 Clause 4.4.4.3	N/A
Receiver spurious emissions	EN 300 330 Clause 4.4.2	EN 300 330 Clauses 6.2.8 and Clause 6.2.9	EN 300 330 Clause 4.4.2.3	PASS

Note:

1. PASS: Test item meets the requirement.
2. N/A: Test case does not apply to the test object.
3. The test result judgment is decided by the limit of test standard.

3. General Information

3.1. Test environment and mode

Item	Normal condition	Extreme condition			
		HVHT	LVHT	HVLT	LVLT
Temperature	+25°C	+40°C	+40°C	-20°C	-20°C
Voltage	DC 3.87V	DC 4.35V	DC 3.5V	DC 4.35V	DC 3.5V
Humidity	20%-95%				
Atmospheric Pressure:	1008 mbar				
Test Mode:					
Transmitting mode:			Keep the EUT in transmitting mode with modulation.		
Receiving mode:			Keep the EUT in receiving mode.		

3.2. Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Equipment	Model No.	Serial No.	FCC ID	Trade Name
IC Card	/	/	/	/

Note:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

3.3. Test Instruments List

Radiated Emission				
Name	Model No.	Manufacturer	Date of Cal.	Due Date
EMI Test Receiver	ESCI7	R&S	Feb. 01, 2024	Jan. 31, 2025
Spectrum Analyzer	FSQ40	R&S	Jun. 27, 2024	Jun. 26, 2025
Pre-amplifier	8447D	HP	Jun. 27, 2024	Jun. 26, 2025
Pre-amplifier	LNPA_0118G-45	SKET	Feb. 01, 2024	Jan. 31, 2025
Pre-amplifier	LNPA_1840G-50	SKET	Feb. 01, 2024	Jan. 31, 2025
Broadband Antenna	VULB9163	Schwarzbeck	Jun. 29, 2024	Jun. 28, 2025
Horn Antenna	BBHA 9120D	Schwarzbeck	Jun. 29, 2024	Jun. 28, 2025
Horn Antenna	BBHA 9170	Schwarzbeck	Feb. 03, 2024	Feb. 02, 2025
Coaxial cable	RE-03-D	SKET	Jun. 27, 2024	Jun. 26, 2025
Coaxial cable	RE-03-M	SKET	Jun. 27, 2024	Jun. 26, 2025
Coaxial cable	RE-03-L	SKET	Jun. 27, 2024	Jun. 26, 2025
Coaxial cable	RE-04-D	SKET	Jun. 27, 2024	Jun. 26, 2025
Coaxial cable	RE-04-M	SKET	Jun. 27, 2024	Jun. 26, 2025
Coaxial cable	RE-04-L	SKET	Jun. 27, 2024	Jun. 26, 2025
Loop antenna	FMZB1519B	Schwarzbeck	Jun. 27, 2024	Jun. 26, 2025
Spectrum Analyzer	N9020A	Agilent	Jun. 27, 2024	Jun. 26, 2025
DC Power Supply	KR3005K	Kingrang	Jun. 27, 2024	Jun. 26, 2025
EMI Test Software	FA-03A2 RE+	EZ_EMG	/	/

4. Facilities and Accreditations

4.1. Facilities

The test facility is recognized, certified, or accredited by the following organizations:

- FCC - Registration No.: 645098

SHENZHEN TONGCE TESTING LAB

Designation Number: CN1205

The testing lab has been registered and fully described in a report with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

- IC - Registration No.: 10668A-1

SHENZHEN TONGCE TESTING LAB

CAB identifier: CN0031

The testing lab has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing.

4.2. Location

Shenzhen TCT Testing Technology Co., Ltd.

Address: 2101 & 2201, Zhenchang Factory, Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China

TEL: +86-755-27673339

4.3. Measurement Uncertainty

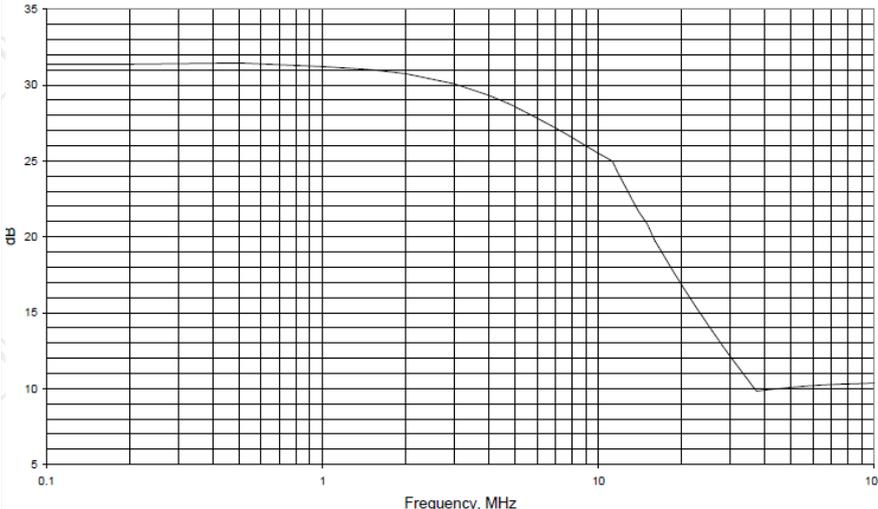
The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	MU
1	Conducted Emission	± 3.10 dB
2	RF power, conducted	± 0.12 dB
3	Spurious emissions, conducted	± 0.11 dB
4	All emissions, radiated(<1 GHz)	± 4.56 dB
5	All emissions, radiated(1 GHz - 18 GHz)	± 4.22 dB
6	All emissions, radiated(18 GHz- 40 GHz)	± 4.36 dB
7	Temperature	$\pm 0.1^{\circ}\text{C}$
8	Humidity	$\pm 1.0\%$

5. Transmitter Requirement

5.1. Radiated H-field

5.1.1. Test Specification

Test Requirement:	EN 300 330 clause 4.3.4																
Test Method:	EN 300 330 clause 6.2.4 and Annex H.2																
Receiver Setup	<table border="1"> <thead> <tr> <th>Frequency: (f)</th> <th>Detector type</th> <th>Measurement receiver bandwidth</th> <th>Spectrum analyser bandwidth</th> </tr> </thead> <tbody> <tr> <td>9 kHz ≤ f < 150 kHz</td> <td>Quasi Peak</td> <td>200 Hz</td> <td>300 Hz</td> </tr> <tr> <td>150 kHz ≤ f < 30 MHz</td> <td>Quasi Peak</td> <td>9 kHz</td> <td>10 kHz</td> </tr> <tr> <td>30 MHz ≤ f ≤ 1 000 MHz</td> <td>Quasi Peak</td> <td>120 kHz</td> <td>100 kHz</td> </tr> </tbody> </table> <p>NOTE: For the measurement of the ranges 6,765 MHz ≤ f ≤ 6,795 MHz and 11,810 MHz ≤ f ≤ 15,310 MHz, the measurement bandwidth has to be 200 Hz respectively 300 Hz.</p>	Frequency: (f)	Detector type	Measurement receiver bandwidth	Spectrum analyser bandwidth	9 kHz ≤ f < 150 kHz	Quasi Peak	200 Hz	300 Hz	150 kHz ≤ f < 30 MHz	Quasi Peak	9 kHz	10 kHz	30 MHz ≤ f ≤ 1 000 MHz	Quasi Peak	120 kHz	100 kHz
Frequency: (f)	Detector type	Measurement receiver bandwidth	Spectrum analyser bandwidth														
9 kHz ≤ f < 150 kHz	Quasi Peak	200 Hz	300 Hz														
150 kHz ≤ f < 30 MHz	Quasi Peak	9 kHz	10 kHz														
30 MHz ≤ f ≤ 1 000 MHz	Quasi Peak	120 kHz	100 kHz														
Limit:	<p>The H-field limit in dBμA/m at 3 m, H_{3m}, is determined by the following equation: $H_{3m} = H_{10m} + C_3$ where: H_{10m} is the H-field limit in dBμA/m at 10 m distance according to the present document; and C₃ is a conversion factor in dB determined from figure H.2.</p>  <p>Limit in 10m:</p> <table border="1"> <tr> <td>13,553 ≤ f ≤ 13,567</td> <td>42 (see note 3) or 60 (see notes 2 and 3)</td> </tr> </table> <p>For 13.56MHz H_{10m} = 42 dBμA/m @ 10m; C₃ = 23dB;</p>	13,553 ≤ f ≤ 13,567	42 (see note 3) or 60 (see notes 2 and 3)														
13,553 ≤ f ≤ 13,567	42 (see note 3) or 60 (see notes 2 and 3)																
Test Procedure:	Refer to EN 300 330 clause 6.2.4 and Annex H.2																
Test Instrument:	Reference to Item 3.3 for details																
Test Mode:	Tx mode with modulation																
Test Result:	PASS																

5.1.2. Test Result

Frequency	Measuring Bandwidth	Test condition	H-field Level @3m	H-field Level @10m	Limit in Table 4
13.56MHz	9 kHz	NVNT	-2.83dBμA/m	-25.83dBμA/m	42dBμA/m@10m
		HVHT	-2.89dBμA/m	-25.89dBμA/m	
		HVLT	-2.92dBμA/m	-25.92dBμA/m	
		LVHT	-2.86dBμA/m	-25.86dBμA/m	
		LVLT	-2.85dBμA/m	-25.85dBμA/m	



5.2. Permitted range of Operating Frequencies

5.2.1. Test Specification

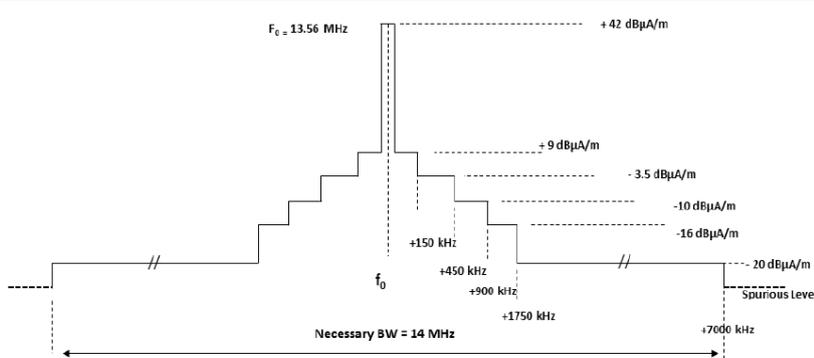
Test Requirement:	EN 300 330 clause 4.3.1
Test Method:	EN 300 330 clause 6.2.2
Limit:	Refer to Table 1: Frequency bands designated to Short Range Devices within 9 kHz to 30 MHz
Test Procedure:	Refer to EN 300 330 clause 6.2.2
Test Instrument:	Reference to Item 3.3 for details
Test Mode:	Tx mode with modulation
Test Result:	PASS

5.2.2. Test Result

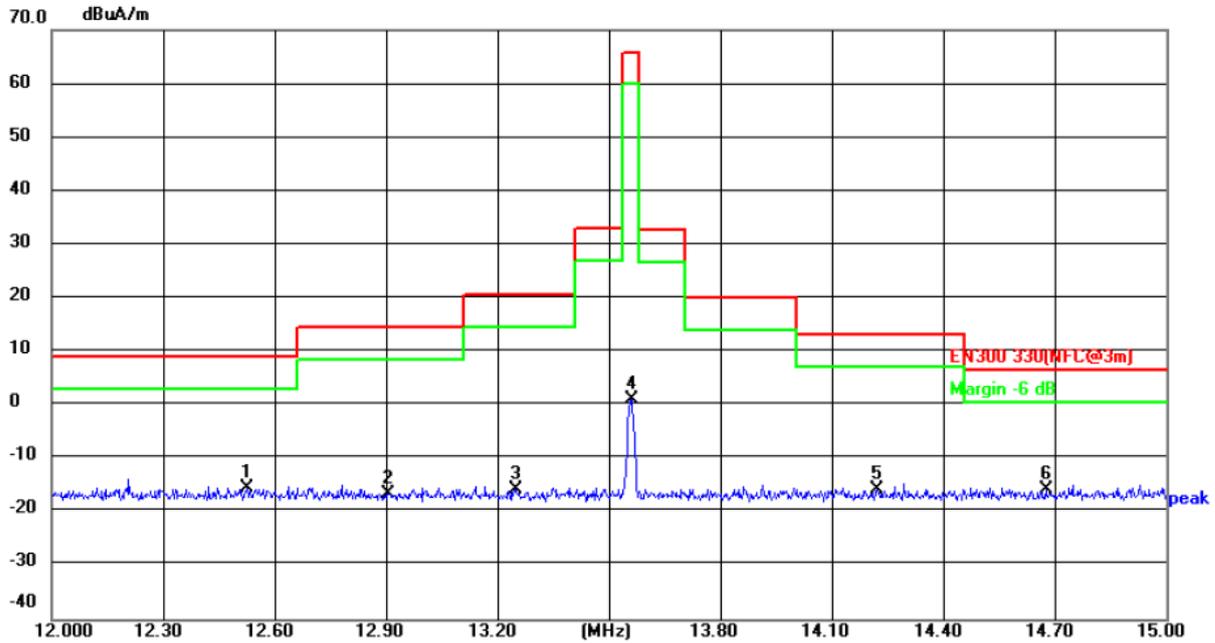
Measurement Conditions (in Normal & Extreme)		Bandwidth Measured (MHz) (15dB below carrier)		Limit (MHz)	
		Lowest frequency	Highest frequency	Lower	Higher
T _{normal} : (+25°C)	V _{norm} : (3.87Vdc)	13.5597	13.5623	13.553	13.567
T _{extreme} : (-20°C)	V _{extr} : (3.5Vdc)	13.5592	13.5621		
T _{extreme} : (+40°C)	V _{extr} : (4.35Vdc)	13.5594	13.5618		

5.3.Limits for permitted range of modulation bandwidth

5.3.1. Test Specification

Test Requirement:	EN 300 330 clause 4.3.3																																
Test Method:	EN 300 330 clause 6.2.3																																
Limit:	 <p>Figure I.3: Spectrum mask limit for wideband RFIDs (incl. NFC application) in the 13,56 MHz range</p> <table border="1"> <thead> <tr> <th rowspan="2">Frequency</th> <th colspan="2">Limit(dBuA/m)</th> </tr> <tr> <th>10m</th> <th>3m</th> </tr> </thead> <tbody> <tr> <td>F₀=13.56MHz</td> <td>42.0</td> <td>65.87</td> </tr> <tr> <td>F₀+150K</td> <td>9.0</td> <td>32.77</td> </tr> <tr> <td>F₀+150K</td> <td>9.0</td> <td>32.98</td> </tr> <tr> <td>F₀+(150K~450k)</td> <td>-3.5</td> <td>20.05</td> </tr> <tr> <td>F₀-(150K~450k)</td> <td>-3.5</td> <td>20.70</td> </tr> <tr> <td>F₀+(450K~900k)</td> <td>-10.0</td> <td>13.22</td> </tr> <tr> <td>F₀-(450K~900k)</td> <td>-10.0</td> <td>14.52</td> </tr> <tr> <td>F₀+(900K~1750k)</td> <td>-16.0</td> <td>6.61</td> </tr> <tr> <td>F₀-(900K~1750k)</td> <td>-16.0</td> <td>9.14</td> </tr> </tbody> </table> <p>Note: H_{3m}=H_{10m}+ factor C₃</p>	Frequency	Limit(dBuA/m)		10m	3m	F ₀ =13.56MHz	42.0	65.87	F ₀ +150K	9.0	32.77	F ₀ +150K	9.0	32.98	F ₀ +(150K~450k)	-3.5	20.05	F ₀ -(150K~450k)	-3.5	20.70	F ₀ +(450K~900k)	-10.0	13.22	F ₀ -(450K~900k)	-10.0	14.52	F ₀ +(900K~1750k)	-16.0	6.61	F ₀ -(900K~1750k)	-16.0	9.14
Frequency	Limit(dBuA/m)																																
	10m	3m																															
F ₀ =13.56MHz	42.0	65.87																															
F ₀ +150K	9.0	32.77																															
F ₀ +150K	9.0	32.98																															
F ₀ +(150K~450k)	-3.5	20.05																															
F ₀ -(150K~450k)	-3.5	20.70																															
F ₀ +(450K~900k)	-10.0	13.22																															
F ₀ -(450K~900k)	-10.0	14.52																															
F ₀ +(900K~1750k)	-16.0	6.61																															
F ₀ -(900K~1750k)	-16.0	9.14																															
Test Procedure:	Refer to EN 300 330 clause 6.2.3																																
Test Instrument:	Reference to Item 3.3 for details																																
Test Mode:	Tx mode with modulation																																
Test Result:	PASS																																

5.3.2. Test Result



Site: 3m Anechoic Chamber Polarization: **Coaxial** Temperature: 24.8(°C) Humidity: 51 %

Limit: EN300 330(NFC@3m) Power:DC 3.87 V

No.	Frequency (MHz)	Reading (dBuA)	Factor (dB/m)	Level (dBuA/m)	Limit (dBuA/m)	Margin (dB)	Detector	P/F	Remark
1	12.5250	-9.41	-6.02	-15.43	9.14	-24.57	peak	P	
2	12.9065	-11.09	-5.26	-16.35	14.52	-30.87	peak	P	
3	13.2480	15.53	-31.07	-15.54	20.70	-36.24	peak	P	
4	13.5600	32.20	-31.05	1.15	65.87	-64.72	peak	P	
5	14.2218	15.36	-31.01	-15.65	13.22	-28.87	peak	P	
6 *	14.6763	15.20	-30.99	-15.79	6.61	-22.40	peak	P	

Note: The both polarity (Coaxial and Coplanar) have been tested, only show the worst case (Coaxial) in this report.

5.4. Transmitter Spurious Radiation

5.4.1. Test Specification

Test Requirement:	EN 300 330 clause 4.3.8 & clause 4.3.9		
Test Method:	EN 300 330 clause 6.2.8 & clause 6.2.9		
Limit:	Frequencies <30 MHz		
	State	Frequency 9 kHz ≤ f < 10 MHz	Frequency 10 MHz ≤ f < 30 MHz
	Operating	27 dBμA/m at 9 kHz descending 3 dB/oct	-3,5 dBμA/m
	Standby	5,5 dBμA/m at 9 kHz descending 3 dB/oct	-25 dBμA/m
Limit:	Frequencies ≥30 MHz		
	State	47 MHz to 74 MHz 87,5 MHz to 118 MHz 174 MHz to 230 MHz 470 MHz to 790 MHz	Other frequencies between 30 MHz to 1 000 MHz
	Operating	4 nW	250 nW
	Standby	2 nW	2 nW
Test Procedure:	Refer to clause 6.2.8 & clause 6.2.9		
Test Instrument:	Reference to Item 3.3 for details		
Test Mode:	Tx mode with modulation		
Test Result:	PASS		
Remark	The standby mode is too lower than the limit, so not show in this report.		

5.4.2. Test Result

13.56MHz Tx in operation mode					
Frequency (MHz)	Transducer (dB)	Receiver QP Level (dBuA)	Level (dBuA/m)	Limit (dBuA/m)	Margin (dB)
0.012	-33.1	36.7	3.6	57.25	-53.65
0.051	-39.2	58.2	19	50.99	-31.99
0.115	-39.5	47.5	8	47.47	-39.47
0.280	-39.0	40.4	1.4	43.62	-42.22
0.855	-39.7	26.1	-13.6	38.62	-52.22
10.200	-40.3	18.6	-21.7	22.33	-44.03
26.400	-42.4	27.4	-15	11.27	-26.27
13.56MHz Tx in standby mode					
N/A: Not applicable, since the emission level of the EUT was too weak to be measured. (-70dBm was the minimum level which could be detected by measuring Rx when below 1GHz)					

13.56MHz Tx in operation mode				
Maximum Frequency MHz	Spurious Emission position and Level		Limit	Over Limit
	Polarization	dBm	dBm	dB
175.500	V	-74.46	-54.0	-20.46
188.110	V	-61.71	-54.0	-7.71
296.750	V	-75.62	-36.0	-39.62
528.580	V	-64.76	-54.0	-10.76
555.740	V	-60.96	-54.0	-6.96
582.900	V	-74.80	-54.0	-20.80
188.110	H	-74.94	-54.0	-20.94
271.284	H	-68.86	-36.0	-32.86
298.440	H	-75.20	-36.0	-39.20
351.070	H	-69.97	-36.0	-33.97
556.140	H	-59.42	-54.0	-5.42
839.950	H	-72.52	-36.0	-36.52

6. Receiver Requirement

6.1. Adjacent channel selectivity

6.1.1. Test Specification

Test result:

Only for channelized systems in the 27 MHz range, so Not applicable.

6.2. Blocking or Desensitization

6.2.1. Test Specification

Test result:

Receiver blocking or desensitization is only applicable for channelized systems where channel definitions are used, so Not applicable.

6.3. Receiver Spurious Radiation

6.3.1. Test Specification

Test Requirement:	EN 300 330 clause 4.4.2	
Test Method:	EN 300 330 clause 6.3	
Limit:	The spurious components below 30 MHz shall not exceed the generated H-field dB μ A/m values at 10 m. Frequencies <30 MHz	
	Frequency 9 kHz \leq f <10 MHz	Frequency 10 MHz \leq f < 30 MHz
	5,5 dB μ A/m at 9 kHz descending 3 dB/oct	-25 dB μ A/m
	Frequencies \geq 30 MHz	
	Frequency	Limit (dBm)
	Frequencies \geq 30 MHz	-57
Test Procedure:	1) For radiation below 30 MHz, see clause 6.2.8 2) For radiation at or above 30 MHz, see clause 6.2.9 Convert reading by 51,5 dB for measuring equipment calibrated in dB μ V or dB μ V/m.	
Test Instrument:	Reference to Item 3.3 for details	
Test Mode:	Receiver mode	
Test Result:	PASS	

6.3.2. Test Data

Test Result for Operating Mode (9KHz~30MHz)			
Frequency (MHz)	Measure Level (dBuA/m)	Limit (dBuA/m)	Margin (dB)
--	--	5.5 dB μ A/m at 9 kHz descending 3 dB/oct (9KHz – 10MHz)	--
--	--		--
--	--	-25 dB μ A/m (10MHz – 30MHz)	--
--	--		--
--	--		--

Remark:

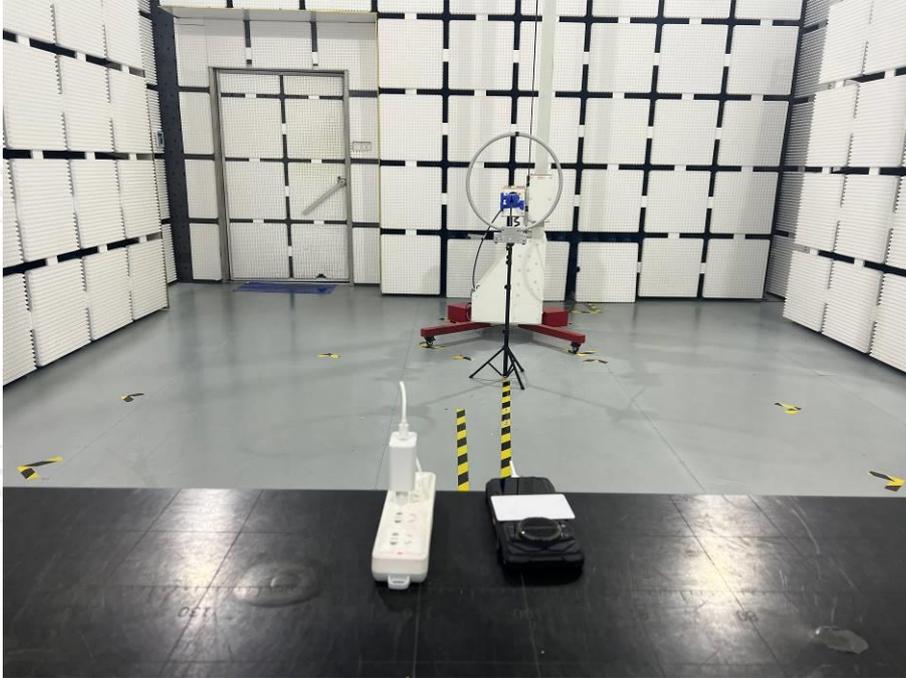
Data of measurement within this frequency range shown “ -- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured. Measured in frequency range from 9k~10th harmonic or 1GHz(which is greater).

Frequency (MHz)	Spurious Emission		Limit (dBm)	Test Result
	polarization	Level(dBm)		
40.68	Vertical	-68.73	-57dBm	PASS
94.92	V	-66.16		
122.04	V	-72.50		
-	V	-		
40.68	Horizontal	-70.44		
94.92	H	-68.72		
122.04	H	-73.96		
-	H	-		

Note: The test frequency range is 30MHz to 1G, the reading of other frequencies emissions is attenuated more than 20 dB below the limits or the field strength is too small to be measured

7. Photographs of Test Configuration

Radiated Emission



8. Photographs of EUT

Refer to the test report No. TCT240614E023

*******END OF REPORT*******