




EN IEC 62311:2020 Report

Test Report No..... :	TCT240325E079	
Date of issue..... :	May 11, 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)	EN IEC 62311:2020	
Product Name..... :	Smartphone	
Trade Mark	CUBOT	
Model/Type reference..... :	KINGKONG ACE 3	
Rating(s)..... :	Refer to EUT description of page 3	
Date of receipt of test item	Mar. 25, 2024	
Date (s) of performance of test..... :	Mar. 25, 2024 ~ May 11, 2024	
Tested by (+signature) ... :	Brews XU	
Check by (+signature).... :	Beryl ZHAO	
Approved by (+signature):	Tomsin	

General disclaimer:

This report shall not be reproduced except in full, without the written approval of Shenzhen TCT Testing Technology Co., Ltd.. This document may be altered or revised by Shenzhen TCT Testing Technology Co., Ltd. personnel only, and shall be noted in the revision section of the document. The test results in the report only apply to the tested sample.

TABLE OF CONTENTS

1. General Product Information	3
1.1. EUT description	3
1.2. Model(s) list.....	3
2. General Information.....	4
2.1. Test environment and mode.....	4
2.2. Description of Support Units.....	4
2.3. Test Instruments List	4
3. Facilities and Accreditations	5
3.1. Facilities	5
3.2. Location	5
3.3. Measurement Uncertainty.....	5
4. Technical Requirements Specification in EN IEC 62311.....	6

1. General Product Information

1.1. EUT description

Product Name.....:	Smartphone
Model/Type reference.....:	KINGKONG ACE 3
Hardware Version.....:	G2310D-MD-V1.1
Software Version	CUBOT_ACE 3_E011C_V01
Operation Frequency	13.56MHz
Antenna Type.....:	FPC Antenna
Antenna Gain.....:	0dBi
Rating(s).....:	Adapter Information: Model: HJ-PD33W-EU Input: AC 100-240V, 50/60Hz, 0.8A Output: DC 5.0V, 3.0A, 15.0W or DC 9.0V, 3.0A, 27.0W or DC 12.0V, 2.75A, 33.0W MAX Rechargeable Li-ion 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. General Information

2.1. Test environment and mode

Item	Normal condition
Temperature	+25°C
Voltage	DC 3.87V
Humidity	56%
Atmospheric Pressure:	1008 mbar
Test Mode:	
Operational Mode	Keep the EUT in transmitting mode with modulation.

2.2. 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.

2.3. Test Instruments List

Conducted Emission				
Name	Model No.	Manufacturer	Date of Cal.	Due Date
Exposure Level Tester	EHP-200A	Narda	Jul. 05, 2023	Jul. 04, 2024

3. Facilities and Accreditations

3.1. 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.

3.2. 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

3.3. 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	Temperature	$\pm 0.1^{\circ}\text{C}$
2	Humidity	$\pm 1.0\%$
3	Spurious Emissions, Conducted	$\pm 1\text{ dB}$
4	All emissions, radiated(<1 GHz)	$\pm 4.56\text{ dB}$
5	All emissions, radiated(1 GHz - 18 GHz)	$\pm 4.22\text{ dB}$

4. Technical Requirements Specification in EN IEC 62311

Test Requirement:	EN IEC 62311																																																												
Limit:	<div>Reference levels for electric, magnetic and electromagnetic fields (0 Hz to 300 GHz, unperturbed rms values)</div> <table><tr><th>Frequency range</th><th>E-field strength (V/m)</th><th>H-field strength (A/m)</th><th>B-field (μT)</th><th>Equivalent plane wave power density S_{eq} (W/m²)</th></tr><tr><td>0-1 Hz</td><td>—</td><td>$3,2 \times 10^4$</td><td>4×10^4</td><td>—</td></tr><tr><td>1-8 Hz</td><td>10 000</td><td>$3,2 \times 10^4/f$</td><td>$4 \times 10^4/f^2$</td><td>—</td></tr><tr><td>8-25 Hz</td><td>10 000</td><td>$4\,000/f$</td><td>$5\,000/f$</td><td>—</td></tr><tr><td>0,025-0,8 kHz</td><td>$250/f$</td><td>$4/f$</td><td>$5/f$</td><td>—</td></tr><tr><td>0,8-3 kHz</td><td>$250/f$</td><td>5</td><td>6,25</td><td>—</td></tr><tr><td>3-150 kHz</td><td>87</td><td>5</td><td>6,25</td><td>—</td></tr><tr><td>0,15-1 MHz</td><td>87</td><td>$0,73/f$</td><td>$0,92/f$</td><td>—</td></tr><tr><td>1-10 MHz</td><td>$87/f^{1/2}$</td><td>$0,73/f$</td><td>$0,92/f$</td><td>—</td></tr><tr><td>10-400 MHz</td><td>28</td><td>0,073</td><td>0,092</td><td>2</td></tr><tr><td>400-2 000 MHz</td><td>$1,375 f^{1/2}$</td><td>$0,0037 f^{1/2}$</td><td>$0,0046 f^{1/2}$</td><td>$f/200$</td></tr><tr><td>2-300 GHz</td><td>61</td><td>0,16</td><td>0,20</td><td>10</td></tr></table> <div>Notes: 1. f as indicated in the frequency range column. 2. For frequencies between 100 kHz and 10 GHz, S_{eq}, E_2, H_2, and B_2 are to be averaged over any six-minute period. 3. For frequencies exceeding 10 GHz, S_{eq}, E_2, H_2, and B_2 are to be averaged over any $68/f^{1.05}$ -minute period (f in GHz). 4. No E-field value is provided for frequencies < 1 Hz, which are effectively static electric fields. For most people the annoying perception of surface electric charges will not occur at field strengths less than 25 kV/m. Spark discharges causing stress or annoyance should be avoided.</div>	Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (μT)	Equivalent plane wave power density S_{eq} (W/m ²)	0-1 Hz	—	$3,2 \times 10^4$	4×10^4	—	1-8 Hz	10 000	$3,2 \times 10^4/f$	$4 \times 10^4/f^2$	—	8-25 Hz	10 000	$4\,000/f$	$5\,000/f$	—	0,025-0,8 kHz	$250/f$	$4/f$	$5/f$	—	0,8-3 kHz	$250/f$	5	6,25	—	3-150 kHz	87	5	6,25	—	0,15-1 MHz	87	$0,73/f$	$0,92/f$	—	1-10 MHz	$87/f^{1/2}$	$0,73/f$	$0,92/f$	—	10-400 MHz	28	0,073	0,092	2	400-2 000 MHz	$1,375 f^{1/2}$	$0,0037 f^{1/2}$	$0,0046 f^{1/2}$	$f/200$	2-300 GHz	61	0,16	0,20	10
Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (μT)	Equivalent plane wave power density S_{eq} (W/m ²)																																																									
0-1 Hz	—	$3,2 \times 10^4$	4×10^4	—																																																									
1-8 Hz	10 000	$3,2 \times 10^4/f$	$4 \times 10^4/f^2$	—																																																									
8-25 Hz	10 000	$4\,000/f$	$5\,000/f$	—																																																									
0,025-0,8 kHz	$250/f$	$4/f$	$5/f$	—																																																									
0,8-3 kHz	$250/f$	5	6,25	—																																																									
3-150 kHz	87	5	6,25	—																																																									
0,15-1 MHz	87	$0,73/f$	$0,92/f$	—																																																									
1-10 MHz	$87/f^{1/2}$	$0,73/f$	$0,92/f$	—																																																									
10-400 MHz	28	0,073	0,092	2																																																									
400-2 000 MHz	$1,375 f^{1/2}$	$0,0037 f^{1/2}$	$0,0046 f^{1/2}$	$f/200$																																																									
2-300 GHz	61	0,16	0,20	10																																																									
Test Setup:	<div></div> <div>Note: Measurements should be made from all sides and the top of the primary/client pair, with the 10cm measured from the center of the probe(s) to the edge of the device.</div>																																																												
Test Procedure	<div>1. The RF exposure test was performed in anechoic chamber.</div> <div>2. The measurement probe was placed at test distance (10cm) which is between the edge of the charger and the geometric center of probe.</div> <div>3. The highest emission level was recorded and compared with limit as soon as measurement of each</div>																																																												

	points (A, B, C) were completed.
Test Instrument:	Refer to section 2.3 for details
Test Mode:	Refer to section 2.1 for details
Test Results:	PASS

4.1.1. Test Data

H-Filed Strength at 10 cm from the edges surrounding the EUT (A/m)

Frequency Range (MHz)	Test Position A (A/m)	Test Position B (A/m)	Test Position C (A/m)	Result (A/m)	Limits Test (A/m)
13.56	0.04	0.04	0.03	0.064	0.073

$$H = \sqrt{A^2 + B^2 + C^2} = \sqrt{0.04^2 + 0.04^2 + 0.03^2} \text{ A/m} = 0.064 \text{ A/m}$$

Limit = 0.073 A/m

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