

FCC REPORT

Applicant: Shenzhen Coosea Group Company Limited

Address of Applicant: Room B, 18th Floor, Building A, Fintech Building, No.11 Keyuan Road, Yuehai Street, Nanshan District, Shenzhen, China.

Equipment Under Test (EUT)

Product Name: Mobile phone

Model No.: ZEEKER P10

Trade mark: ZEEKER

FCC ID: 2A2GN-P10

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.209

Date of sample receipt: 27 Aug., 2021

Date of Test: 28 Aug., to 16 Sep., 2021

Date of report issue: 26 Sep., 2021

Test Result: PASS*

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Bruce Zhang
Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the JYT product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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2 Version

Version No.	Date	Description
00	18 Sep., 2021	Original
01	26 Sep., 2021	Updated the description of EUT antenna. Page 8

Tested By: Mike Ou **Date:** 26 Sep., 2021
Test Engineer

Reviewed By: Winner Zhang **Date:** 26 Sep., 2021
Project Engineer

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4 Test Summary

Test Item	Section in CFR 47	Result
Spurious emissions	15.209	Pass
20dB Bandwidth	15.215(c)	Pass
Conducted Emission	15.207	Pass
Remark:		
1. Pass: The EUT complies with the essential requirements in the standard. 2. The cable insertion loss used by "RF Output Power" and other conduction measurement items is 0.5dB (provided by the customer).		
Test Method:	ANSI C63.4-2014 ANSI C63.10-2013	

5 General Information

5.1 Client Information

Applicant:	Shenzhen Coosea Group Company Limited
Address:	Room B, 18th Floor, Building A, Fintech Building, No.11 Keyuan Road, Yuehai Street, Nanshan District, Shenzhen, China.
Manufacturer:	Sichuan Koobee Communication Equipment Co., Ltd.
Address:	3 Floor, Building 2, 69 Gangyuan Road West Section, Lingang Development Zone, Yibin City, Sichuan Province
Factory:	Sichuan Koobee Communication Equipment Co., Ltd.
Address:	3 Floor, Building 2, 69 Gangyuan Road West Section, Lingang Development Zone, Yibin City, Sichuan Province

5.2 General Description of E.U.T.

Product Name:	Mobile phone
Model No.:	ZEEKER P10
Operation Frequency:	110kHz~205kHz
Modulation type:	ASK
Antenna Type:	Coil Antenna
Power supply:	Rechargeable Li-ion Polymer Battery DC3.85V, 5900mAh
AC adapter:	Model: UF22P03 Input: AC100-240V, 50/60Hz, 0.5A Output: 5.0V == 3.0A, or 9.0V == 2.0A, or 12.0V == 1.5A
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

5.3 Test mode

Transmitting mode:	Keep the EUT in transmitting mode with modulation
<i>Remark:</i>	
<i>Pre-scan input: 5V, output: 5V, 1A/6V, 1.25A/9V, 1.1A and input: 9V, output: 5V, 1A/6V, 1.25A/9V, 1.1A of the Power supply, found input: 5V, output: 9V, 1.1A was worse case mode. So the report only reflects the worse mode.</i>	

5.4 Description of Support Units

Manufacturer	Description	Model	S/N	FCC ID/DoC
Skytek	Wireless charging match load	N/A	N/A	N/A
Shenzhen HengChangshengding Electronics Co., Ltd.	Adapter	HCSD-12650100	N/A	N/A

5.5 Measurement Uncertainty

Parameter	Expanded Uncertainty (Confidence of 95%)
Conducted Emission (9kHz ~ 150KHz) for V-AMN	3.11 dB
Conducted Emission (150kHz ~ 30MHz) for V-AMN	2.62 dB
Radiated Emission (9kHz ~ 30MHz electric field) for 3m SAC	3.13 dB
Radiated Emission (9kHz ~ 30MHz magnetic field) for 3m SAC	3.13 dB
Radiated Emission (30MHz ~ 1GHz) for 3m SAC	4.45 dB
Radiated Emission (1GHz ~ 18GHz) for 3m SAC	5.34 dB

5.6 Additions to, deviations from, or exclusions from the method

No

5.7 Laboratory Facility

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

● **FCC - Designation No.: CN1211**

JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

● **ISED – CAB identifier.: CN0021**

The 3m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

● **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: <https://portal.a2la.org/scopepdf/4346-01.pdf>

5.8 Laboratory Location

Shenzhen Zhongjian Nanfang Testing Co., Ltd.

Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.

Tel: +86-755-23118282, Fax: +86-755-23116366

Email: info-JYTee@lets.com, Website: <http://www.ccis-cb.com>

5.9 Test Instruments list

Radiated Emission:					
Test Equipment	Manufacturer	Model No.	Serial No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
3m SAC	ETS	RFD-100	Q1984	04-14-2021	04-13-2024
Loop Antenna	SCHWARZBECK	FMZB 1519 B	1519B-044	03-07-2021	03-06-2022
BiConiLog Antenna	SCHWARZBECK	VULB9163	9163-1246	03-07-2021	03-06-2022
Biconical Antenna	SCHWARZBECK	VUBA 9117	9117#359	06-17-2021	06-17-2022
Horn Antenna	SCHWARZBECK	BBHA9120D	912D-916	03-07-2021	03-06-2022
Broad-Band Horn Antenna	SCHWARZBECK	BBHA9170	1067	04-02-2021	04-01-2022
Broad-Band Horn Antenna	SCHWARZBECK	BBHA9170	1068	04-02-2021	04-01-2022
EMI Test Receiver	Rohde & Schwarz	ESRP7	101070	03-03-2021	03-02-2022
Spectrum analyzer	Rohde & Schwarz	FSP30	101454	03-03-2021	03-02-2022
Spectrum analyzer	Keysight	N9010B	MY60240202	11-27-2020	11-26-2021
Low Pre-amplifier	SCHWARZBECK	BBV9743B	00305	03-07-2021	03-06-2022
High Pre-amplifier	SKET	LNPA_0118G-50	MF280208233	03-07-2021	03-06-2022
Cable	Qualwave	JYT3M-1G-NN-8M	JYT3M-1	03-07-2021	03-06-2022
Cable	Qualwave	JYT3M-18G-NN-8M	JYT3M-2	03-07-2021	03-06-2022
Cable	Qualwave	JYT3M-1G-BB-5M	JYT3M-3	03-07-2021	03-06-2022
Cable	Bost	JYT3M-40G-SS-8M	JYT3M-4	04-02-2021	04-01-2022
EMI Test Software	Tonscend	TS+	Version:3.0.0.1		

Conducted Emission:					
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
EMI Test Receiver	Rohde & Schwarz	ESCI 3	101189	03-03-2021	03-02-2022
LISN	Rohde & Schwarz	ENV432	101602	04-06-2021	04-05-2022
LISN	Rohde & Schwarz	ESH3-Z5	843862/010	06-18-2020	06-17-2022
ISN	Schwarzbeck	CAT3 8158	#96	03-03-2021	03-02-2022
ISN	Schwarzbeck	CAT5 8158	#166	03-03-2021	03-02-2022
ISN	Schwarzbeck	NTFM 8158	#126	03-03-2021	03-02-2022
RF Switch	TOP PRECISION	RSU0301	N/A	03-03-2021	03-02-2022
Cable	Bost	JYTCE-1G-NN-2M	JYTCE-1	03-03-2021	03-02-2022
Cable	Bost	JYTCE-1G-BN-3M	JYTCE-2	03-03-2021	03-02-2022
EMI Test Software	AUDIX	E3	Version: 6.110919b		

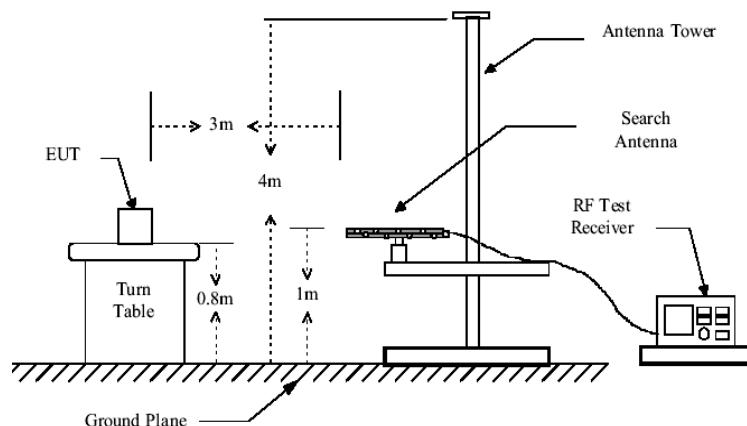
6 Test results and Measurement Data

6.1 Antenna requirement

Standard requirement:	FCC Part15 C Section 15.203
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.	
E.U.T Antenna:	E.U.T Antenna is a coil antenna, which uses a permanently connected antenna.

6.2 Radiated Emission

Test Requirement:	FCC Part15 C Section 15.209							
Test Frequency Range:	9kHz to 1000MHz							
Test site:	Measurement Distance: 3m(Semi-Anechoic Chamber)							
Receiver setup:	Frequency	Detector	RBW	VBW	Remark			
	9kHz-150kHz	Quasi-peak	200Hz	600Hz	Quasi-peak Value			
	150kHz-30MHz	Quasi-peak	9kHz	30kHz	Quasi-peak Value			
	30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak Value			
	Above 1GHz	Peak	1MHz	3MHz	Peak Value			
Limit:	Frequency (MHz)	Limit (uV/m @3m)	Distance (m)					
	0.009-0.490	2400/F(kHz)	300					
	0.490-1.705	24000/F(kHz)	30					
	1.705-30	30	30					
	30-88	100	3					
	88-216	150	3					
	216-960	200	3					
Test Procedure:	Above 1GHz	500	3					
	<p>a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.</p> <p>b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</p> <p>c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</p> <p>d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.</p> <p>e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</p> <p>f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</p>							
	<p>Test setup:</p> <p>9kHz-30MHz</p> <p>30MHz-1GHz</p>							



Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass
Remark:	The emission levels of above 1 GHz are very lower than the limit and not show in test report.

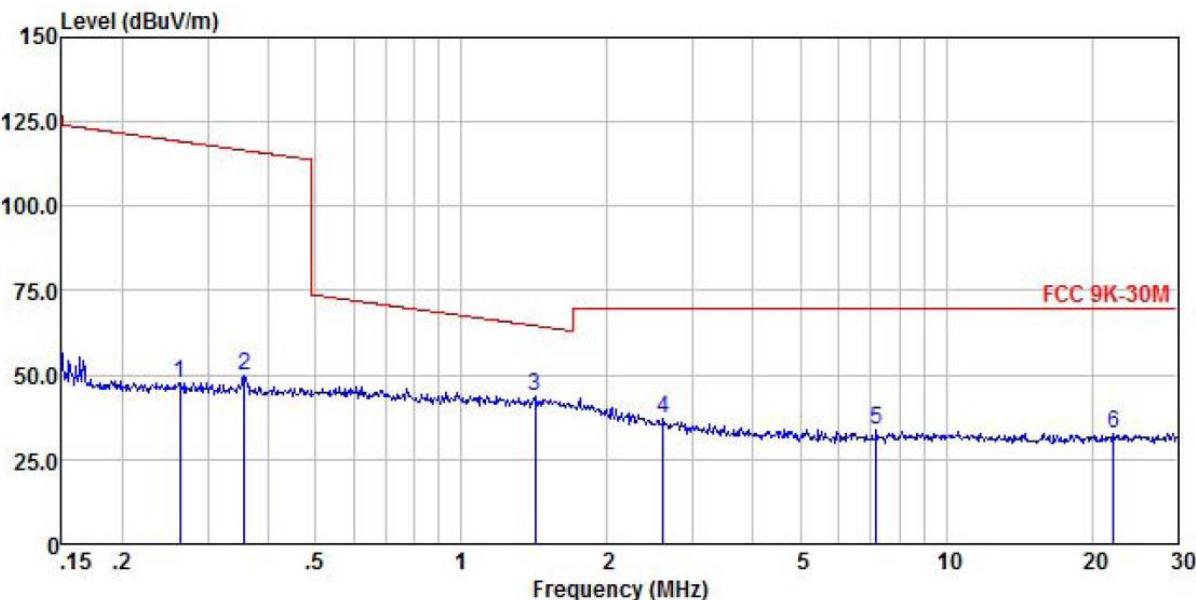
Measurement Data:**a) Fundamental field strength**

Peak value				
Test Polarization	Frequency (kHz)	H-field@3m (dB μ V)	Limit@3m (dB μ V)	Result
Horizontal	157.65	65.56	83.65	Pass
Vertical	157.65	59.80	83.65	Pass
Average value				
Test Polarization	Frequency (kHz)	H-field@3m (dB μ V)	Limit@3m (dB μ V)	Result
Horizontal	157.65	51.62	63.65	Pass
Vertical	157.65	47.85	63.65	Pass

b) Radiated spurious:

Below 1GHz:

Product Name:	Mobile phone	Product Model:	ZEEKER P10
Test By:	Mike	Test mode:	Charing mode
Test Frequency:	9kHz~30MHz	Polarization:	Vertical
Test Voltage:	AC 120V/60Hz	Environment:	Temp: 24°C Huni: 57%

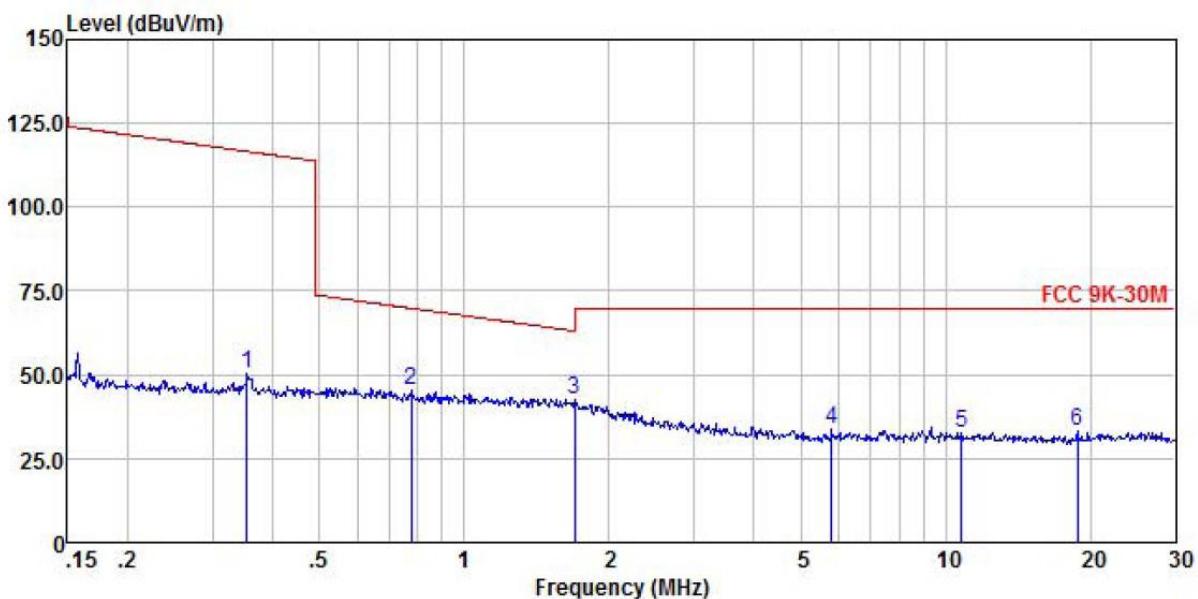


Freq	ReadAntenna		Cable		Limit	Over	Over
	Level	Factor	Loss	Preamp			
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	0.263	27.09	20.48	0.05	0.00	47.62	119.21
2	0.358	29.15	20.63	0.06	0.00	49.84	116.54
3	1.418	22.96	20.47	0.17	0.00	43.60	64.60
4	2.608	16.54	20.41	0.21	0.00	37.16	69.50
5	7.175	13.57	20.12	0.32	0.00	34.01	69.50
6	22.180	12.34	19.69	0.55	0.00	32.58	69.50

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Name:	Mobile phone	Product Model:	ZEEKER P10
Test By:	Mike	Test mode:	Charing mode
Test Frequency:	9kHz~30MHz	Polarization:	Horizontal
Test Voltage:	AC 120V/60Hz	Environment:	Temp: 24°C Huni: 57%



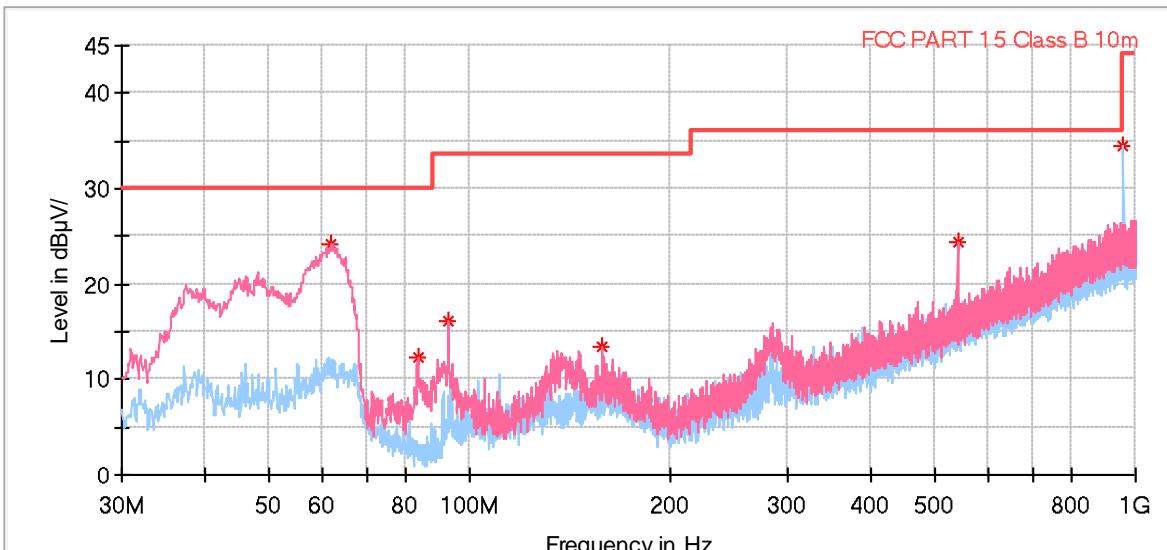
Freq	Read	Antenna	Cable	Preamp	Limit	Over	Line	Limit	Remark
	Freq	Level	Factor	Loss					
MHz	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	0.354	29.58	20.63	0.06	0.00	50.27	116.63	-66.36	Peak
2	0.775	24.78	20.61	0.09	0.00	45.48	69.83	-24.35	Peak
3	1.698	22.27	20.45	0.17	0.00	42.89	63.04	-20.15	Peak
4	5.805	13.24	20.10	0.33	0.00	33.67	69.50	-35.83	Peak
5	10.790	12.20	20.21	0.39	0.00	32.80	69.50	-36.70	Peak
6	18.820	13.04	19.66	0.49	0.00	33.19	69.50	-36.31	Peak

Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Name:	Mobile phone	Product Model:	ZEEKER P10
Test By:	Mike	Test mode:	Charing mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Vertical & Horizontal
Test Voltage:	AC 120V/60Hz	Environment:	Temp: 24°C Huni: 57%

Full Spectrum



Frequency ↓ (MHz)	MaxPeak ↓ (dB μ V/m)	Limit ↓ (dB μ V/m)	Margin ↓ (dB)	Height ↓ (cm)	Pol.	Azimuth ↓ (deg)	Corr. ↓ (dB/m)
62.010000	24.13	30.00	5.87	100.0	V	234.0	-16.7
83.447000	12.35	30.00	17.65	100.0	V	21.0	-20.1
93.050000	16.22	33.50	17.28	100.0	V	286.0	-19.7
157.458000	13.35	33.50	20.15	100.0	V	110.0	-15.4
539.929000	24.45	36.00	11.55	100.0	V	139.0	-8.0
960.036000	34.58	44.00	9.42	100.0	H	60.0	-0.6

Remark:

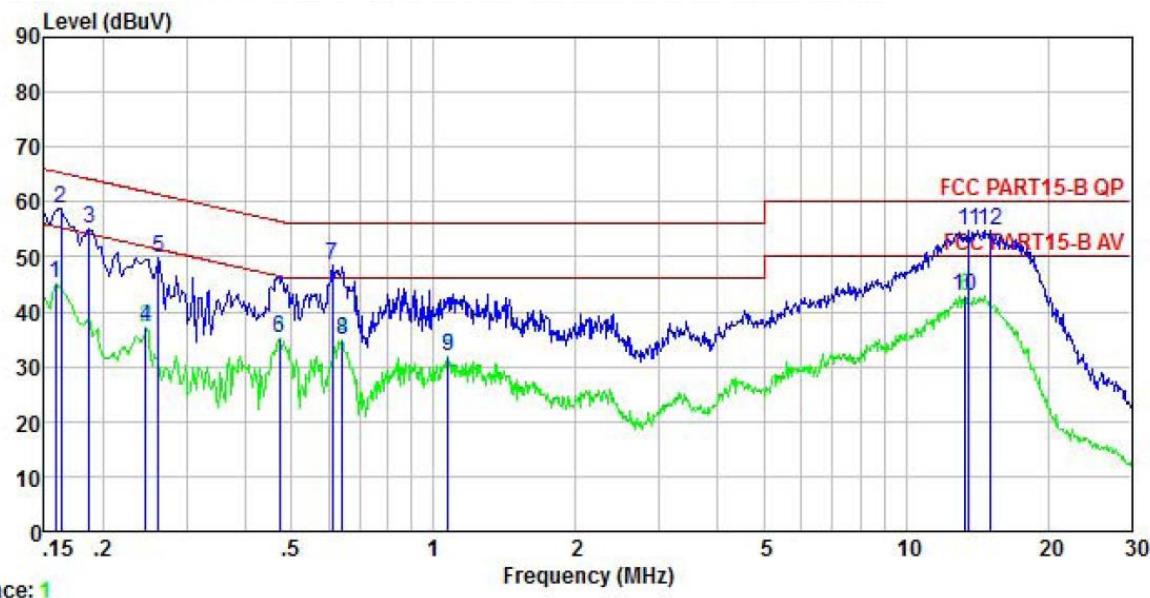
- Final Level = Receiver Read level + Antenna Factor + Cable Loss + Aux Factor – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.
- The Aux Factor is a notch filter switch box loss, this item is not used.

6.3 Conducted Emission

Test Requirement:	FCC Part 15 B Section 15.207					
Test Frequency Range:	150kHz to 30MHz					
Class / Severity:	Class B					
Receiver setup:	RBW=9kHz, VBW=30kHz					
Limit:	Frequency range (MHz)		Limit (dB μ V)			
			Quasi-peak Average			
	0.15-0.5	66 to 56*	56 to 46*			
	0.5-5	56	46			
Limit:	0.5-30	60	50			
	* Decreases with the logarithm of the frequency.					
Test setup:	<p>Reference Plane</p> <p>LISN</p> <p>40cm</p> <p>80cm</p> <p>AUX Equipment</p> <p>E.U.T</p> <p>Test table/Insulation plane</p> <p>EMI Receiver</p> <p>Filter</p> <p>AC power</p> <p>Remark E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m</p>					
Test procedure	<ol style="list-style-type: none"> 1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network(L.I.S.N.). They provide a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2014 on conducted measurement. 					
Test environment:	Temp.:	23 °C	Humid.:	56%	Press.:	101kPa
Test Instruments:	Refer to section 5.9 for details					
Test mode:	Refer to section 5.3 for details					
Test results:	Pass					

Measurement data:

Product name:	Mobile phone	Product Model:	ZEEKER P10
Test by:	Mike	Test mode:	Charing mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Line
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5°C Huni: 55%

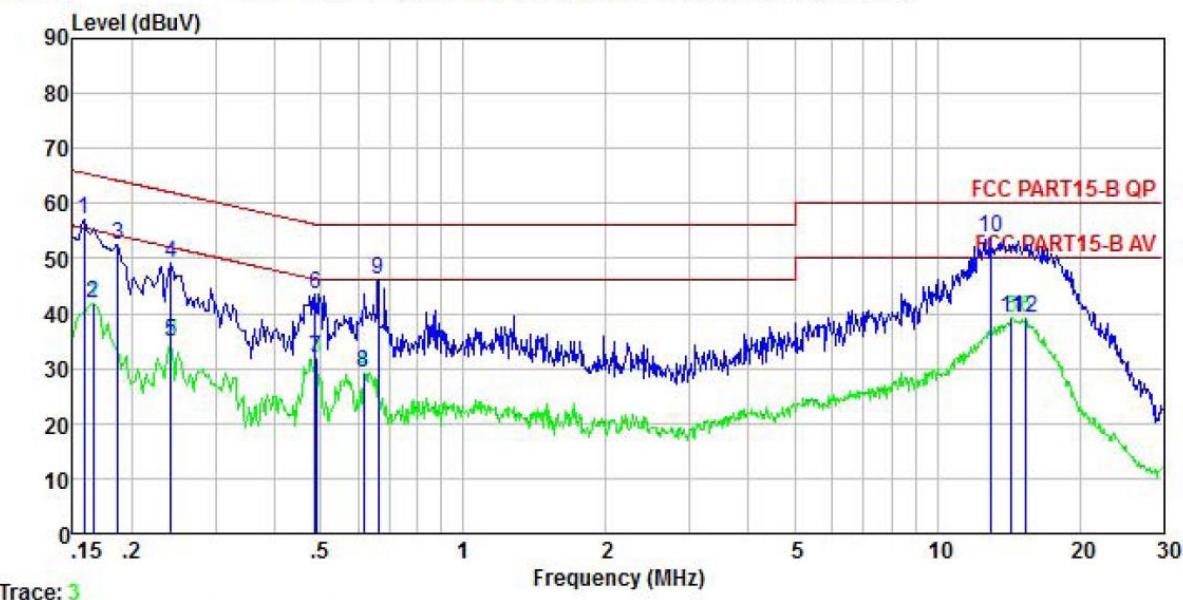


Freq	Read	LISN	Aux	Cable	Level	Limit	Over	Remark	
	Level	Factor	Factor	Loss		Line	Limit		
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.158	34.86	10.22	-0.07	0.01	45.02	55.56	-10.54	Average
2	0.162	48.72	10.22	-0.08	0.01	58.87	65.34	-6.47	QP
3	0.186	44.91	10.23	-0.13	0.02	55.03	64.20	-9.17	QP
4	0.246	27.02	10.25	-0.21	0.01	37.07	51.91	-14.84	Average
5	0.262	39.92	10.25	-0.23	0.01	49.95	61.38	-11.43	QP
6	0.471	24.95	10.29	-0.15	0.03	35.12	46.49	-11.37	Average
7	0.611	38.65	10.30	-0.38	0.02	48.59	56.00	-7.41	QP
8	0.641	24.81	10.30	-0.39	0.02	34.74	46.00	-11.26	Average
9	1.071	21.10	10.32	0.39	0.07	31.88	46.00	-14.12	Average
10	13.337	28.84	10.72	3.11	0.11	42.78	50.00	-7.22	Average
11	13.623	40.82	10.73	3.21	0.12	54.88	60.00	-5.12	QP
12	15.066	40.43	10.77	3.61	0.14	54.95	60.00	-5.05	QP

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Receiver Read level + LISN Factor + Cable Loss.

Product name:	Mobile phone	Product Model:	ZEEKER P10
Test by:	Mike	Test mode:	Charing mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Neutral
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5°C Huni: 55%

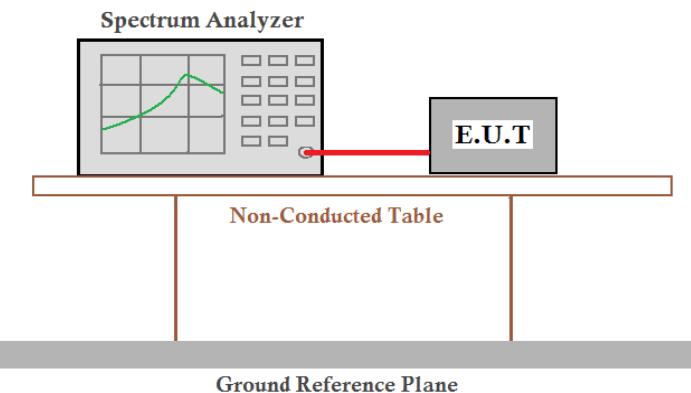


Freq MHz	Read Level dBuV	LISN Factor	Aux Factor	Cable Loss dB	Limit Line dBuV	Over Line Limit dB	Remark
	MHz	dB	dB	dB			
1	0.158	46.94	10.20	0.01	57.16	65.56	-8.40 QP
2	0.166	31.68	10.20	0.01	41.90	55.16	-13.26 Average
3	0.186	42.34	10.21	0.00	52.57	64.20	-11.63 QP
4	0.242	38.77	10.23	0.00	49.01	62.04	-13.03 QP
5	0.242	24.52	10.23	0.00	34.76	52.04	-17.28 Average
6	0.486	33.28	10.28	0.02	43.61	56.23	-12.62 QP
7	0.489	21.44	10.28	0.02	31.77	46.19	-14.42 Average
8	0.617	19.03	10.29	0.04	29.38	46.00	-16.62 Average
9	0.661	35.86	10.30	0.04	46.23	56.00	-9.77 QP
10	12.920	40.42	10.68	2.47	53.68	60.00	-6.32 QP
11	14.364	25.45	10.71	2.91	39.20	50.00	-10.80 Average
12	15.388	25.34	10.74	2.87	39.10	50.00	-10.90 Average

Notes:

- An initial pre-scan was performed on the line and neutral lines with peak detector.
- Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
- Final Level =Receiver Read level + LISN Factor + Cable Loss.

6.4 20dB Bandwidth

Test Requirement:	FCC Part15 C Section 15.215 (c)
Receiver setup:	RBW=1 kHz, VBW=3 kHz, detector: Peak
Limit:	The fundamental emission be kept within atleast the central 80% of the permitted band
Test Procedure:	<ol style="list-style-type: none"> 1. According to the follow Test-setup, keep the relative position between the artificial antenna and the EUT. 2. Set the EUT to proper test channel. 3. Max hold the radiated emissions, mark the peak power frequency point and the -20dB upper and lower frequency points. 4. Read 20dB bandwidth.
Test setup:	
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data

20dB bandwidth (kHz)	Limits
0.415	N/A

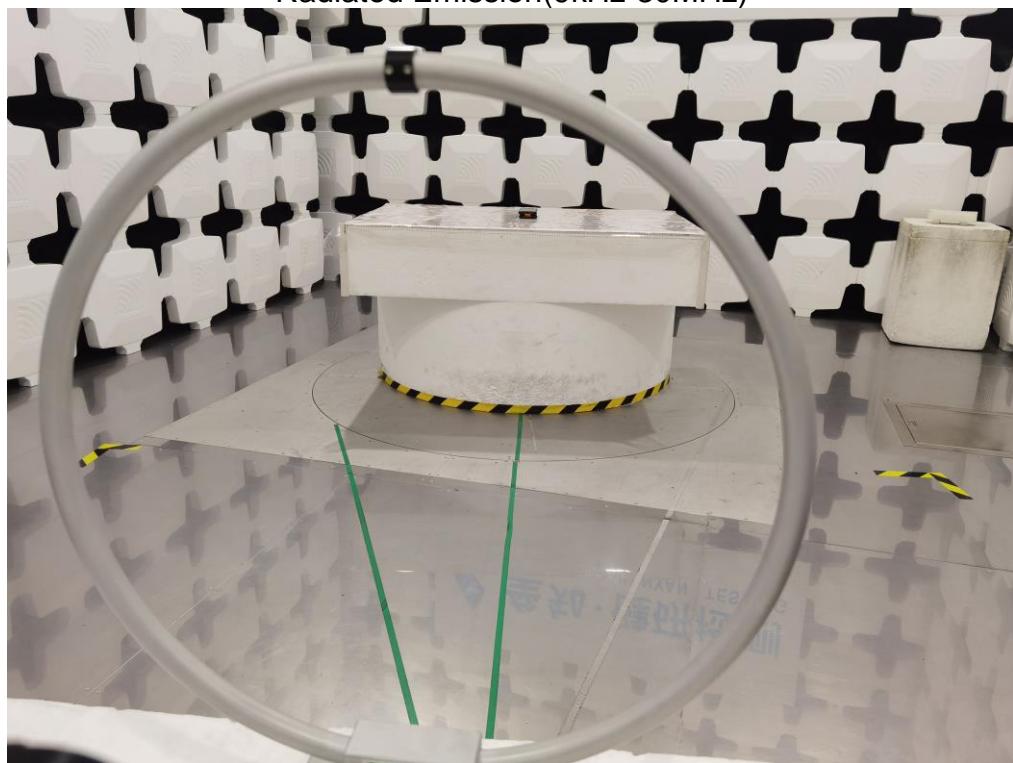
Remark: For report purpose only.

Test plot as follows:

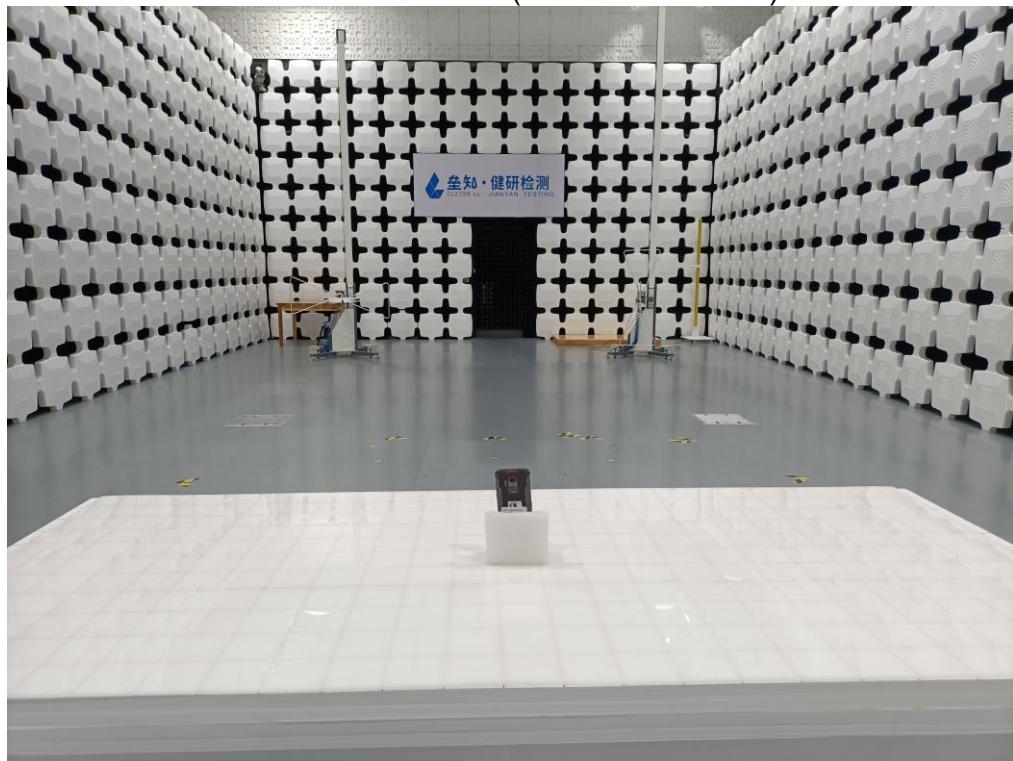


7 Test Setup Photos

Radiated Emission(9kHz-30MHz)



Radiated Emission(30MHz-1000MHz)



Conducted Emission**8 EUT Constructional Details**

Reference to the test report No. JYTSZB-R12-2101653.

-----End of report-----