



TEST REPORT

Applicant Name : YEALINK(XIAMEN) NETWORK TECHNOLOGY CO.,LTD.
Address : No.666 Hu'an Rd. Huli District Xiamen City, Fujian, P.R. China
Report Number : RA221208-60247E-RF-00
FCC ID: T2C-VCMB360

Test Standard (s)

FCC Part 15C

Sample Description

Product Type: Microphone Charging Base
Model No.: VCMB360
Multiple Model(s) No.: N/A
Trade Mark: **Yealink**
Date Received: 2022/12/08
Report Date: 2023/01/05

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards above.

Prepared and Checked By:

Nick Fang

Nick Fang
EMC Engineer

Approved By:

Candy Li

Candy Li
EMC Engineer

Note: This report may contain data that are not covered by the A2LA accreditation and are marked with an asterisk "*" .

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TABLE OF CONTENTS

DOCUMENT REVISION HISTORY	3
GENERAL INFORMATION	4
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	4
OBJECTIVE	4
TEST METHODOLOGY	4
MEASUREMENT UNCERTAINTY	5
TEST FACILITY	5
SYSTEM TEST CONFIGURATION	6
JUSTIFICATION	6
EUT EXERCISE SOFTWARE	6
LOCAL SUPPORT EQUIPMENT	6
EXTERNAL I/O CABLE	6
BLOCK DIAGRAM OF TEST SETUP	7
SUMMARY OF TEST RESULTS	8
TEST EQUIPMENT LIST	9
FCC §15.203 – ANTENNA REQUIREMENT	10
APPLICABLE STANDARD	10
ANTENNA CONNECTED CONSTRUCTION	10
FCC §15.207 – AC LINE CONDUCTED EMISSION	11
APPLICABLE STANDARD	11
EUT SETUP	11
EMI TEST RECEIVER SETUP	11
TEST PROCEDURE	12
CORRECTED FACTOR & MARGIN CALCULATION	12
TEST DATA	12
FCC §15.205 & §15.209 - RADIATED EMISSIONS TEST	15
APPLICABLE STANDARD	15
EUT SETUP	15
EMI TEST RECEIVER SETUP	16
CORRECTED AMPLITUDE & MARGIN CALCULATION	16
TEST DATA	16
FCC §2.1049- OCCUPIED BANDWIDTH	25
STANDARD APPLICABLE	25
TEST PROCEDURE	25
TEST DATA	25

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	RA221208-60247E-RF-00	Original Report	2023/01/05

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Frequency Range	120.5 kHz
Antenna Type	Coil
Input Voltage	DC 5V from USB port
Output Power	10Watts
Sample serial number	1XFX-1 (Assigned by ATC)
Sample/EUT Status	Good condition
Adapter information	Model: YLPS052000UC1-US Input: AC 100-240V, 50/60Hz, 0.5A Output: DC 5V, 2A

Objective

This test report is in accordance with Part 2, Subpart J, and Part 15, Subparts A and C of the Federal Communications Commission's rules.

The objective is to determine the compliance of EUT with FCC rules, section 15.203, 15.205, 15.207 and 15.209.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

All emissions measurement was performed at Shenzhen Accurate Technology Co., Ltd. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Measurement Uncertainty

Parameter		Uncertainty
AC Power Lines Conducted Emissions		2.72dB
Emissions, Radiated	9kHz – 30MHz	2.66dB
	30MHz - 1GHz	4.28dB
Temperature		1°C
Humidity		6%
Supply voltages		0.4%

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

Test Facility

The test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 708358, the FCC Designation No.: CN1189. Accredited by American Association for Laboratory Accreditation (A2LA) The Certificate Number is 429 7.01.

Listed by Innovation, Science and Economic Development Canada (ISED), the Registration Number is 5077A.

SYSTEM TEST CONFIGURATION

Justification

The system was configured for testing in a test mode

EUT Exercise Software

No software used in test.

Local Support Equipment

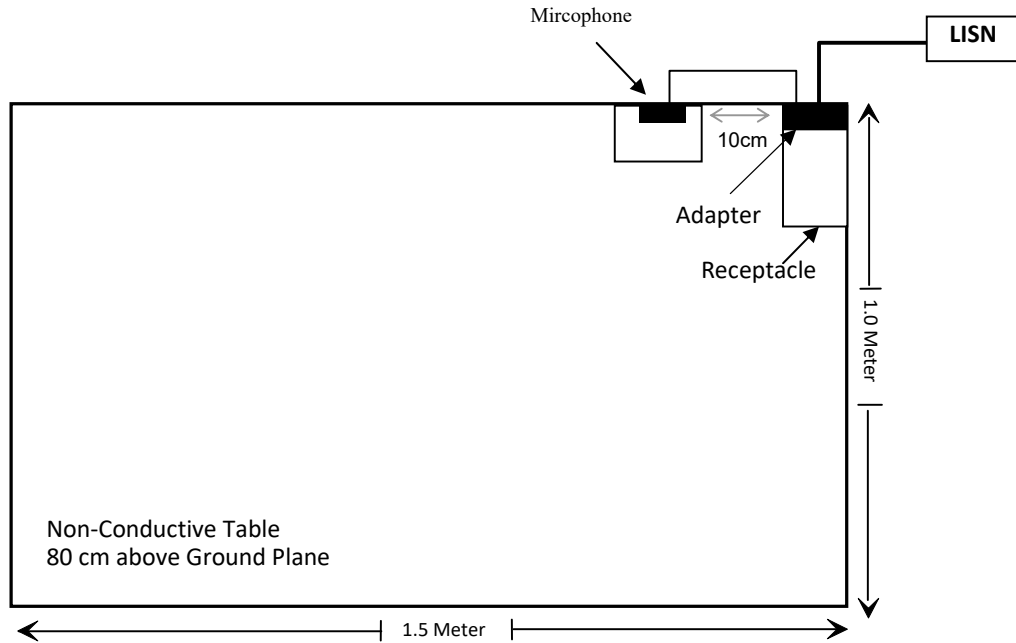
Manufacturer	Description	Model	Serial Number
YEALINK	Mircophone	VCM36-W	Unknown
BULL	Receptacle	GN-415K	5503290068073

External I/O Cable

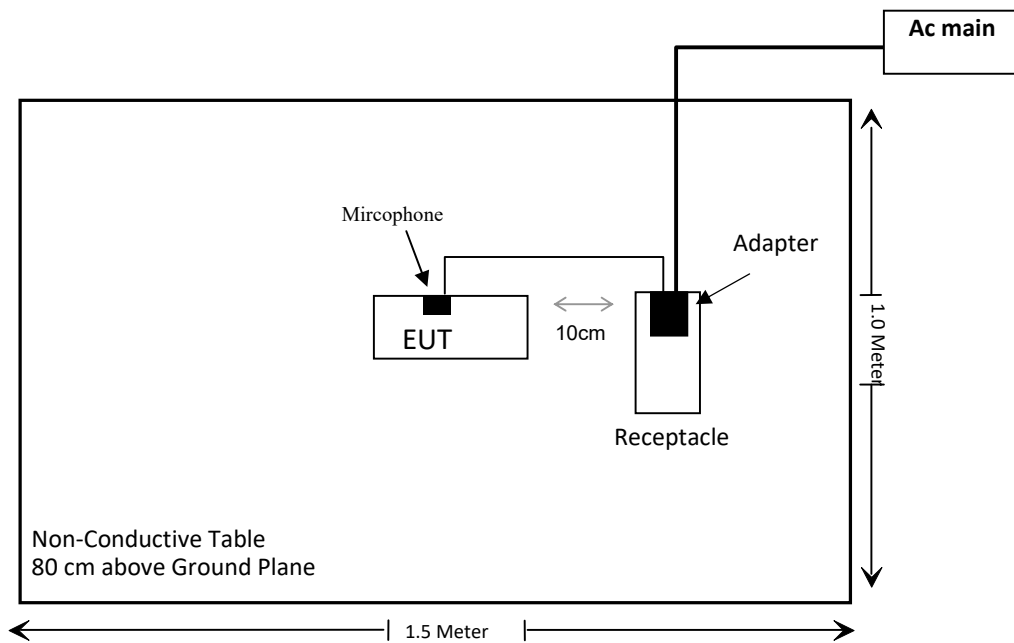
Cable Description	Length (m)	From Port	To
Un-shield Un-Detachable DC Power Cable	1.5	Adapter	EUT

Block Diagram of Test Setup

For conducted emission:



For Radiated Emission



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
FCC§1.1310 & §2.1091	Maximum Permissible Exposure(MPE)	Compliant*
FCC§15.203	Antenna Requirement	Compliant
FCC§15.207	AC Line Conducted Emission	Compliant
§15.209 §15.205	Radiated Emission Test	Compliant
§2.1049	Occupied Bandwidth	Compliant

Compliant*: Please refer to MPE report number: CR221264367-00.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Conducted Emissions Test					
Rohde& Schwarz	EMI Test Receiver	ESCI	100784	2022/11/25	2023/11/24
Rohde & Schwarz	L.I.S.N.	ENV216	101314	2022/11/25	2023/11/24
Unknown	RF Coaxial Cable	No.17	N0350	2022/11/25	2023/11/24
Anritsu Corp	50 Coaxial Switch	MP59B	6100237248	2022/12/07	2023/12/06
Conducted Emission Test Software: e3 19821b (V9)					
RF Radiated test					
Rohde& Schwarz	Test Receiver	ESR	102725	2022/11/25	2023/11/24
SONOMA INSTRUMENT	Amplifier	310 N	186131	2022/11/08	2023/11/07
SCHWARZBECK	LOOP ANTENNA	FMZB1516	1516131	2021/12/22	2024/12/21
Schwarzbeck	Bilog Antenna	VULB9163	9163-323	2021/07/06	2024/07/05
Radiated Emission Test Software: e3 19821b (V9)					
Unknown	RF Coaxial Cable	No.12	N040	2022/11/25	2023/11/24
Unknown	RF Coaxial Cable	No.13	N300	2022/11/25	2023/11/24
Unknown	RF Coaxial Cable	No.14	N800	2022/11/25	2023/11/24

* **Statement of Traceability:** Shenzhen Accurate Technology Co., Ltd. attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC§15.203 – ANTENNA REQUIREMENT

Applicable Standard

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 shall be considered sufficient to comply with the provisions of this section.

Antenna Connected Construction

The EUT has one coil antenna arrangement which was permanently attached, fulfill the requirement of this section. Please refer to the EUT photos.

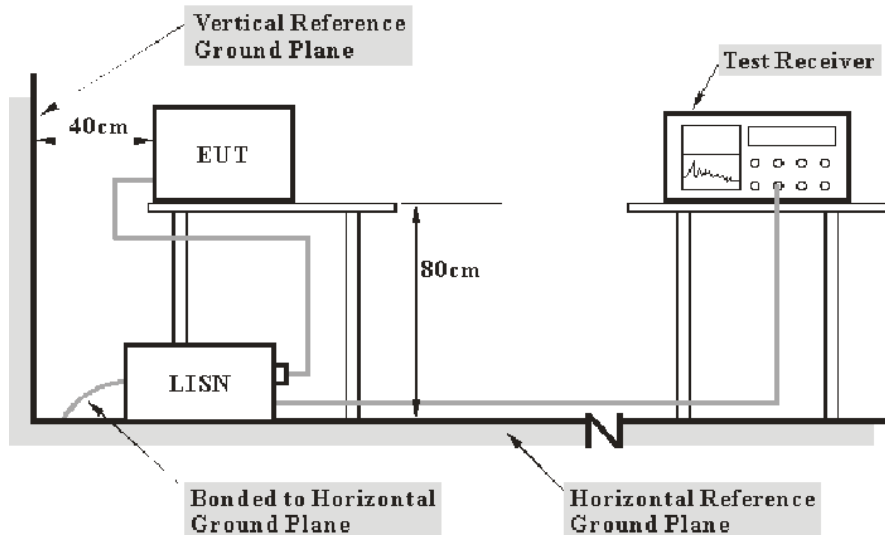
Result: Compliant.

FCC §15.207 – AC LINE CONDUCTED EMISSION

Applicable Standard

FCC§15.207

EUT Setup



- Note: 1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

Test Procedure

During the conducted emission test, the adapter was connected to the outlet of the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All final data was recorded in the Quasi-peak and average detection mode.

Corrected Factor & Margin Calculation

The Corrected factor is calculated by adding LISN VDF (Voltage Division Factor), Cable Loss and Transient Limiter Attenuation. The basic equation is as follows:

$$\text{Correction Factor} = \text{LISN VDF} + \text{Cable Loss} + \text{Transient Limiter Attenuation}$$

The “**Over Limit**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an over limit of -7 dB means the emission is 7 dB below the limit. The equation for calculation is as follows:

$$\begin{aligned} \text{Over Limit} &= \text{Level} - \text{Limit} \\ \text{Level} &= \text{Reading level} + \text{Factor} \end{aligned}$$

Test Data

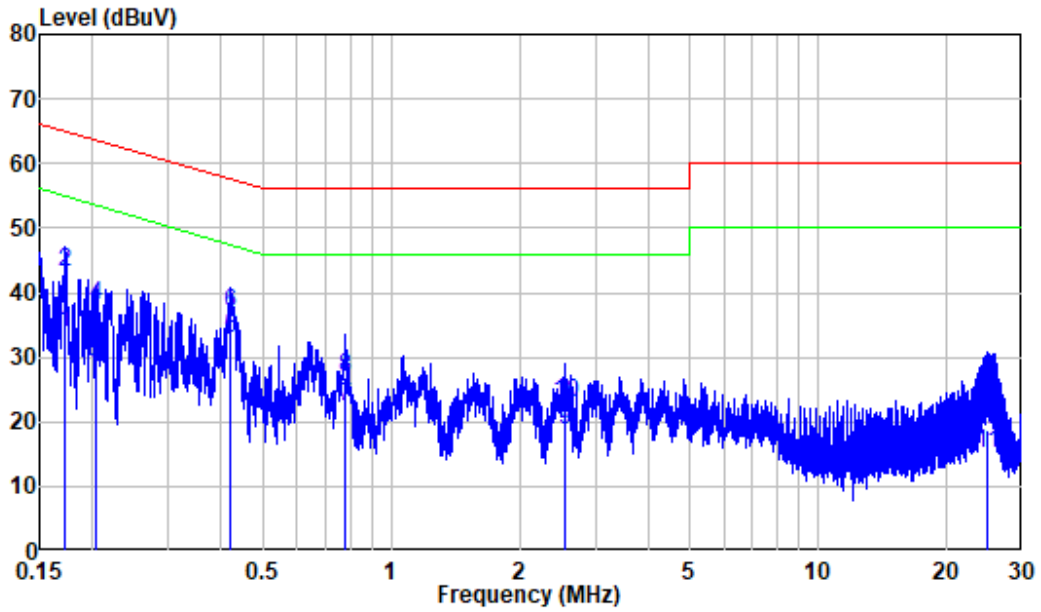
Environmental Conditions

Temperature:	24 °C
Relative Humidity:	49 %
ATM Pressure:	101.0 kPa

The testing was performed by Lipa Wu on 2022-12-30.

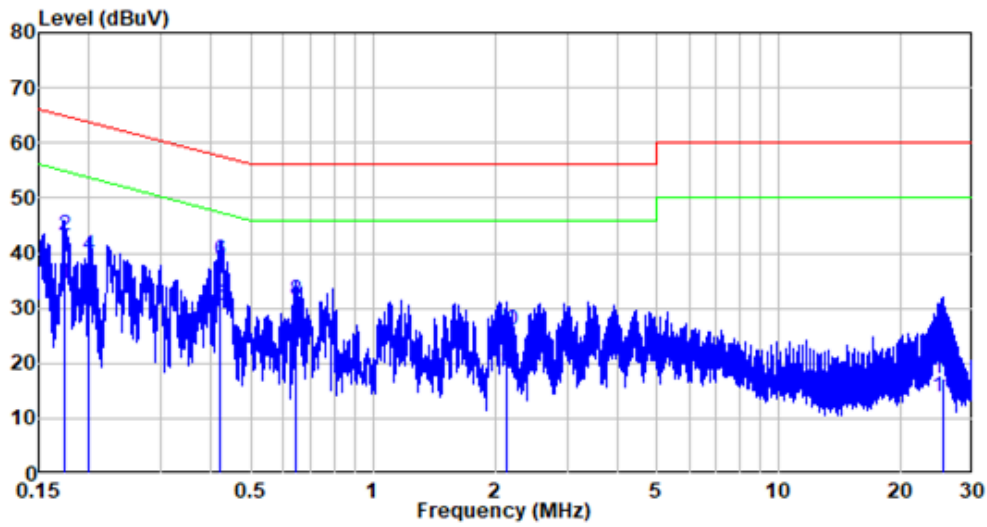
Test Mode: Wireless Charging

AC 120 V/60 Hz, Line:



	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.172	9.80	23.90	33.70	54.84	-21.14	Average
2	0.172	9.80	33.28	43.08	64.84	-21.76	QP
3	0.202	9.80	19.09	28.89	53.51	-24.62	Average
4	0.202	9.80	28.12	37.92	63.51	-25.59	QP
5	0.421	9.80	22.96	32.76	47.42	-14.66	Average
6	0.421	9.80	26.98	36.78	57.42	-20.64	QP
7	0.782	9.81	12.50	22.31	46.00	-23.69	Average
8	0.782	9.81	16.92	26.73	56.00	-29.27	QP
9	2.554	9.83	9.02	18.85	46.00	-27.15	Average
10	2.554	9.83	13.12	22.95	56.00	-33.05	QP
11	24.856	10.05	5.08	15.13	50.00	-34.87	Average
12	24.856	10.05	8.79	18.84	60.00	-41.16	QP

AC 120V/ 60 Hz, Neutral:



	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.174	9.80	24.47	34.27	54.77	-20.50	Average
2	0.174	9.80	33.24	43.04	64.77	-21.73	QP
3	0.200	9.80	19.73	29.53	53.61	-24.08	Average
4	0.200	9.80	29.68	39.48	63.61	-24.13	QP
5	0.420	9.80	20.74	30.54	47.45	-16.91	Average
6	0.420	9.80	28.76	38.56	57.45	-18.89	QP
7	0.647	9.81	14.29	24.10	46.00	-21.90	Average
8	0.647	9.81	21.69	31.50	56.00	-24.50	QP
9	2.123	9.82	8.77	18.59	46.00	-27.41	Average
10	2.123	9.82	16.25	26.07	56.00	-29.93	QP
11	25.372	10.15	3.74	13.89	50.00	-36.11	Average
12	25.372	10.15	7.19	17.34	60.00	-42.66	QP

FCC §15.205 & §15.209 - RADIATED EMISSIONS TEST

Applicable Standard

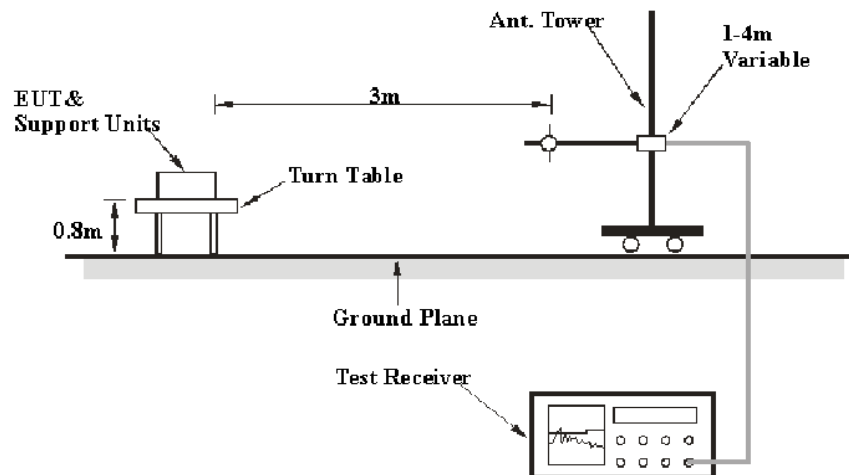
As per FCC Part 15.209

(a) Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

**Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§15.231 and 15.241.

EUT Setup



The radiated emission tests were performed in the 3-meter chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC Part Subpart C limits.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

During the radiated emission test, the EMI test Receiver was set with the following configurations:

Frequency Range	RBW	Video B/W	Measurement
9 kHz – 150 kHz	300 Hz	1 kHz	PK
150 kHz – 30 MHz	10 kHz	30 kHz	PK
30 MHz – 1000 MHz	120 kHz	300 kHz	QP

The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

If the maximized peak measured value complies with the limit, then it is unnecessary to perform an QP/Average measurement

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Meter Reading} + \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

The “**Over Limit/Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an over limit/margin of -7dB means the emission is 7dB below the limit. The equation for calculation is as follows:

$$\begin{aligned} \text{Over Limit/Margin} &= \text{Level/Result} - \text{Limit.} \\ \text{Level/Result} &= \text{Reading level} + \text{Factor} \end{aligned}$$

Test Data

Environmental Conditions

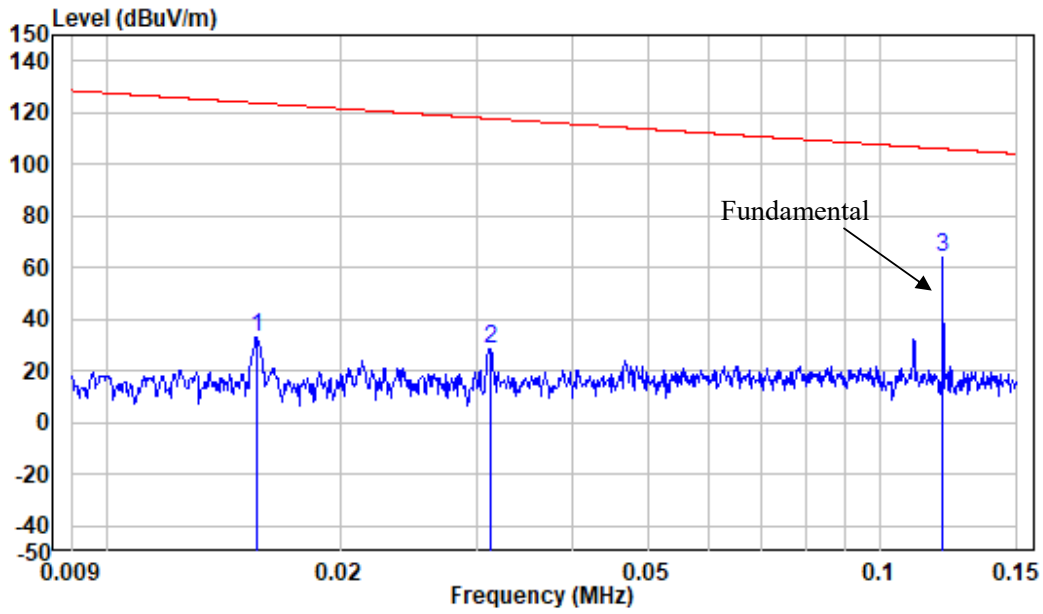
Temperature:	24 °C
Relative Humidity:	56 %
ATM Pressure:	101 kPa

The testing was performed by Jimi Zheng on 2022-12-29.

Test Mode: Wireless Charging

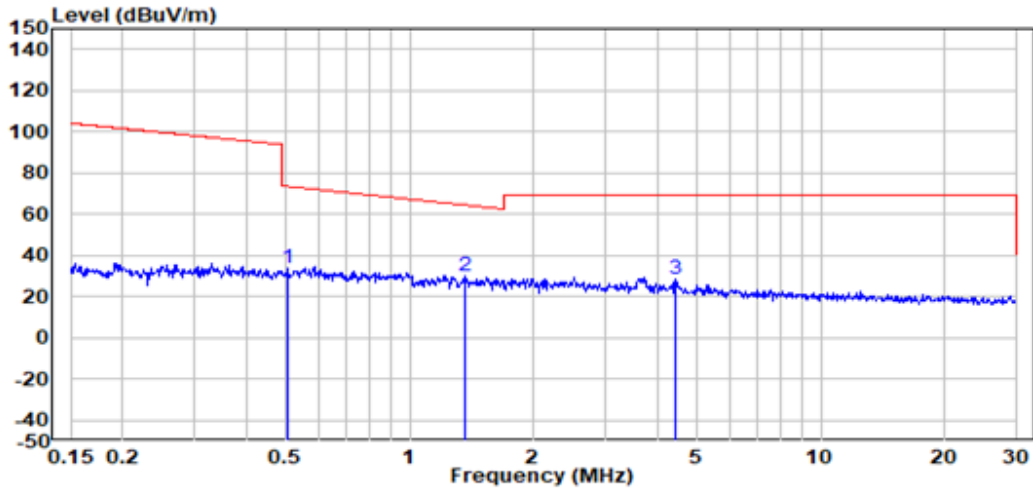
Ground-parallel:

9 kHz~150 kHz



	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.016	-11.54	44.61	33.07	123.73	-90.66	Peak
2	0.031	-11.63	40.30	28.67	117.67	-89.00	Peak
3	0.120	-11.79	76.02	64.23	105.99	-41.76	Peak

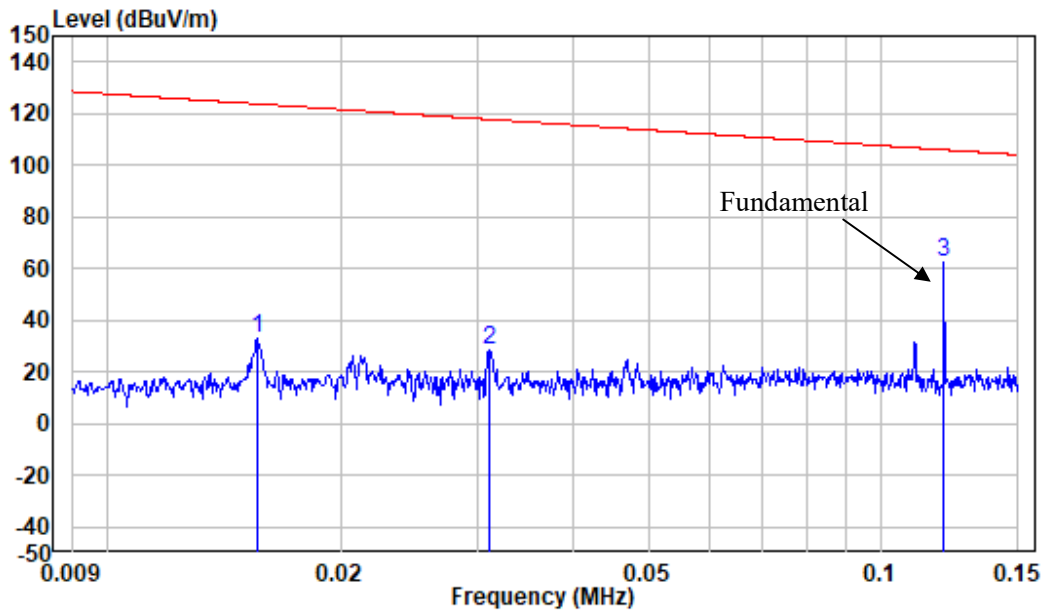
150 kHz~30 MHz



	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.505	-11.59	45.33	33.74	73.54	-39.80	Peak
2	1.367	-11.49	41.73	30.24	64.70	-34.46	Peak
3	4.430	-11.69	40.17	28.48	69.54	-41.06	Peak

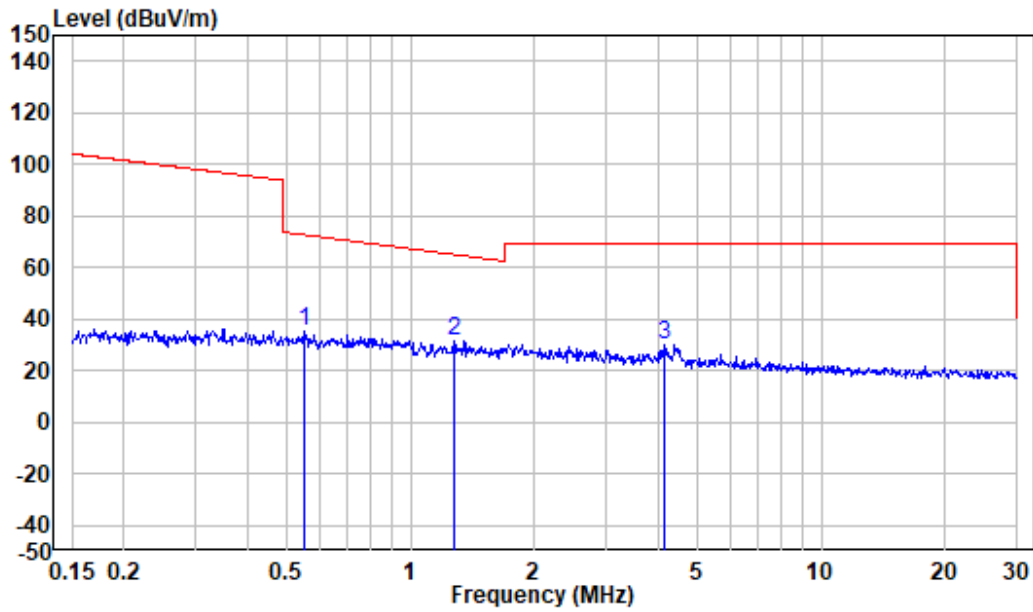
Perpendicular:

9 kHz~150 kHz



	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.016	-11.54	44.61	33.07	123.73	-90.66	Peak
2	0.031	-11.63	39.99	28.36	117.72	-89.36	Peak
3	0.120	-11.79	74.15	62.36	105.99	-43.63	Peak

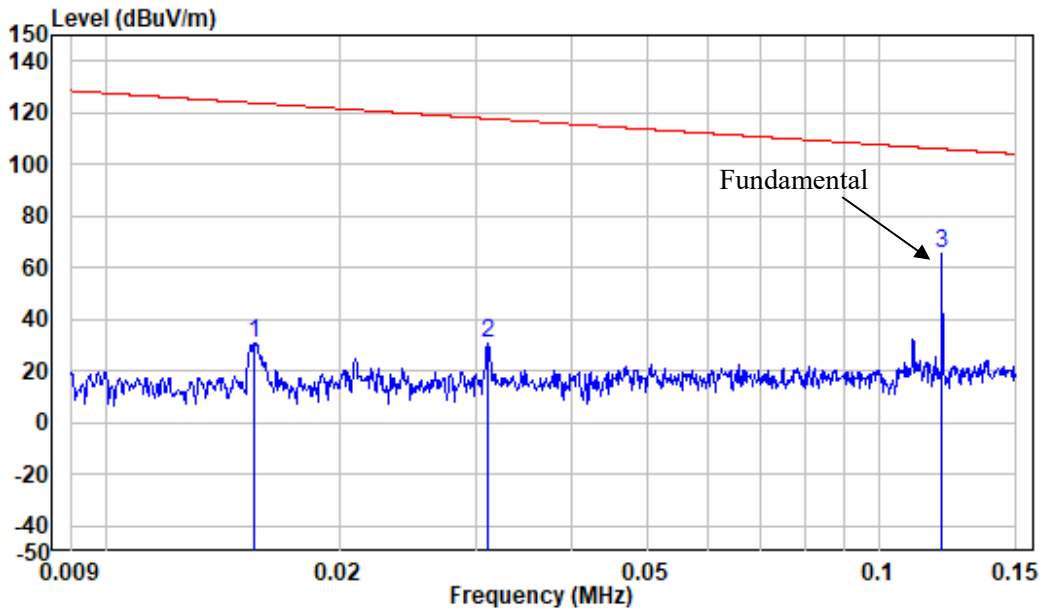
150 kHz~30 MHz



	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.549	-11.64	46.63	34.99	72.79	-37.80	Peak
2	1.282	-11.51	43.06	31.55	65.27	-33.72	Peak
3	4.136	-11.69	41.96	30.27	69.54	-39.27	Peak

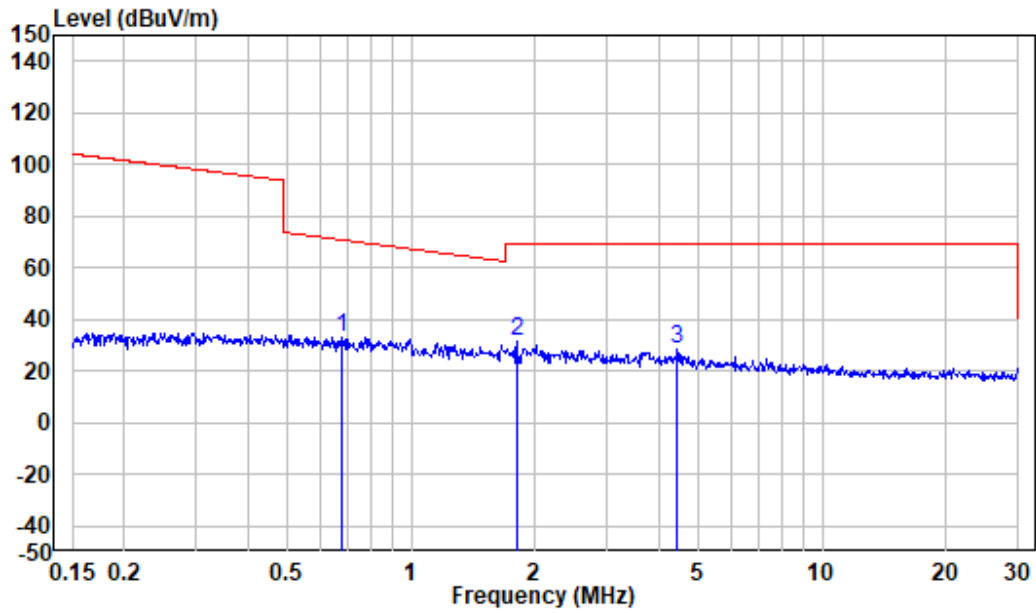
Parallel:

9 kHz~150 kHz



	Freq	Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.016	-11.54	42.42	30.88	123.78	-92.90	Peak
2	0.031	-11.63	42.66	31.03	117.72	-86.69	Peak
3	0.120	-11.79	77.18	65.39	105.99	-40.60	Peak

150 kHz~30 MHz

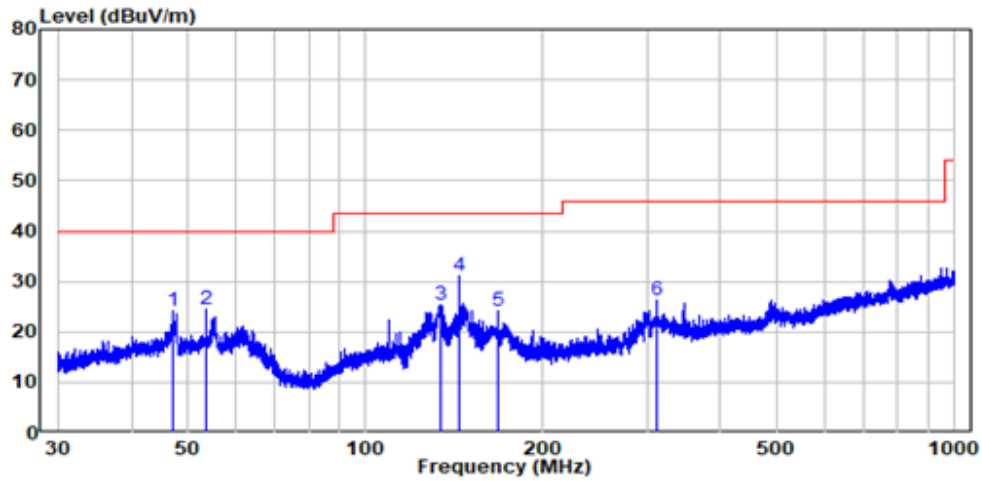


	Freq	Factor	Read Level	Limit Level	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB
1	0.675	-11.83	45.15	33.32	70.95	-37.63 Peak
2	1.810	-11.38	42.55	31.17	69.54	-38.37 Peak
3	4.430	-11.69	40.53	28.84	69.54	-40.70 Peak

30MHz~1GHz:

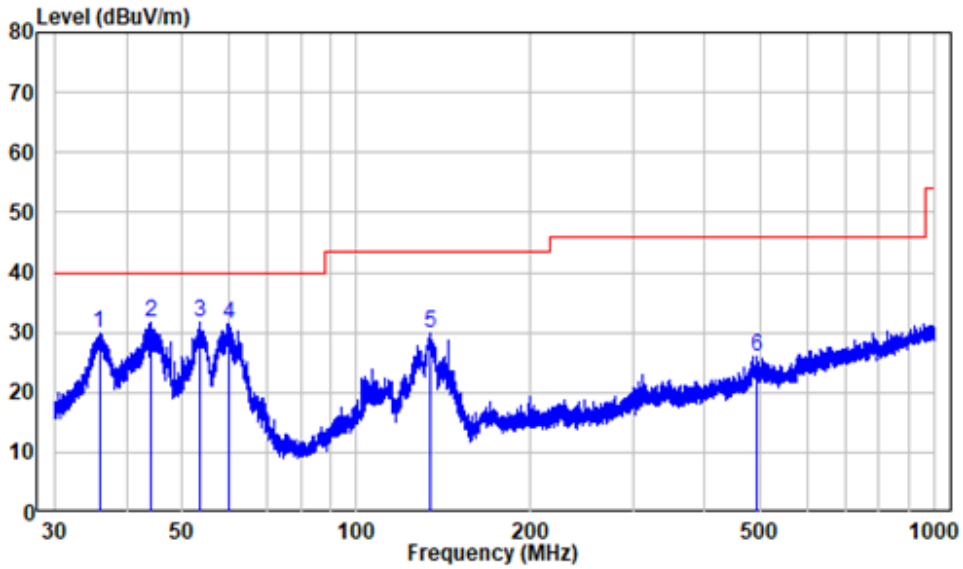
Note: when the result of Peak below the limit of QP more than 6dB, just the peak value was record

Horizontal



	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	47.077	-10.00	34.03	24.03	40.00	-15.97	Peak
2	53.623	-10.27	34.66	24.39	40.00	-15.61	Peak
3	133.912	-14.98	40.23	25.25	43.50	-18.25	Peak
4	144.019	-15.52	46.61	31.09	43.50	-12.41	Peak
5	168.045	-13.78	37.94	24.16	43.50	-19.34	Peak
6	312.043	-8.82	35.10	26.28	46.00	-19.72	Peak

Vertical



	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	35.890	-11.23	41.23	30.00	40.00	-10.00	Peak
2	44.178	-9.91	41.47	31.56	40.00	-8.44	Peak
3	53.740	-10.30	42.00	31.70	40.00	-8.30	Peak
4	59.938	-10.60	42.06	31.46	40.00	-8.54	Peak
5	134.206	-14.98	44.85	29.87	43.50	-13.63	Peak
6	493.117	-4.55	30.54	25.99	46.00	-20.01	Peak

FCC §2.1049- OCCUPIED BANDWIDTH

Standard Applicable

According to FCC 47 §2.1049.

Test Procedure

Measure the 99% Occupied bandwidth use the test Receiver 99% OBW function. Record the emission bandwidth.

Test Data

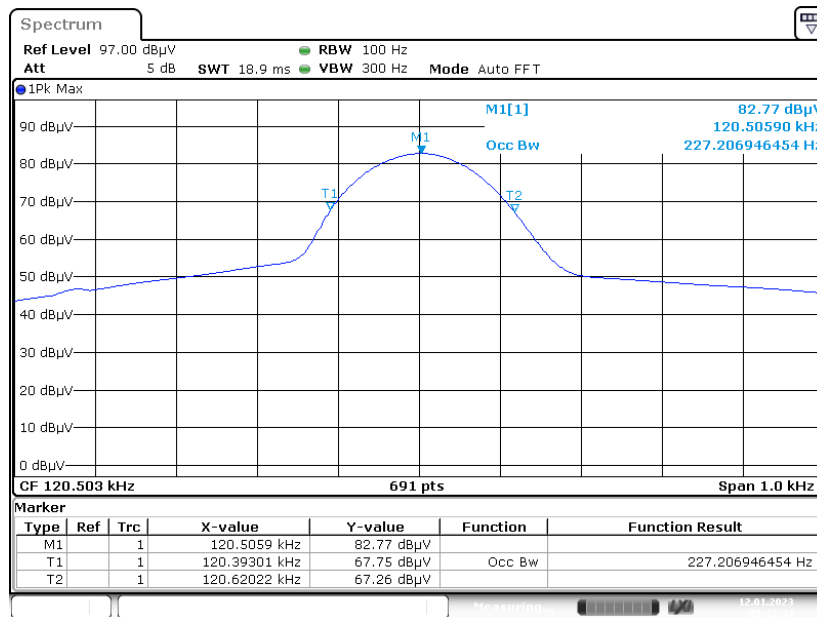
Environmental Conditions

Temperature:	25 °C
Relative Humidity:	62 %
ATM Pressure:	101.0 kPa

The testing was performed by Level Li on 2023-01-12.

Test Mode: Transmitting

OBW = 227Hz



Date: 12. JAN. 2023 09:42:44

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