



FCC TEST REPORT

Huizhou Beijia Electronic Technology Co., Ltd.

Walkie talkie

Test Model: WT15

Prepared for : Huizhou Beijia Electronic Technology Co., Ltd.
Address : 4th Floor, Songshan Group Factory, Baishi Village,
Qiuchang Street, Huiyang District, Huizhou City,
Guangdong Province, China

Prepared by : Shenzhen LCS Compliance Testing Laboratory Ltd.
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Date of receipt of test sample : May 19, 2023
Number of tested samples : 2
Serial number : Prototype
Date of Test : May 19, 2023 ~ May 31, 2023
Date of Report : May 31, 2023





FCC TEST REPORT	
FCC 47 CFR Part 15 Subpart B, Class B, ANSI C63.4 -2014	
Report Reference No.	LCSA051923008E
Date Of Issue.....	May 31, 2023
Testing Laboratory Name.....	Shenzhen LCS Compliance Testing Laboratory Ltd.
Address.....	Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China
Testing Location/ Procedure....	Full application of Harmonised standards ☒ Partial application of Harmonised standards ☐ Other standard testing method ☐
Applicant's Name.....	Huizhou Beijia Electronic Technology Co., Ltd.
Address.....	4th Floor, Songshan Group Factory, Baishi Village, Qiuchang Street, Huiyang District, Huizhou City, Guangdong Province, China
Test Specification	
Standard.....	FCC 47 CFR Part 15 Subpart B, Class B, ANSI C63.4 -2014
Test Report Form No.....	LCSEMC-1.0
TRF Originator.....	Shenzhen LCS Compliance Testing Laboratory Ltd.
Master TRF.....	Dated 2011-03
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Test Item Description.....	Walkie talkie
Trade Mark.....	N/A
Test Model	WT15
Ratings.....	Input: DC 5V DC 3.7V 1200mAH Ni-MH BATTERY PACK
Result	Positive

Compiled by:

Li Huan/ Administrator

Supervised by:

Cary Luo/ Technique principal

Approved by:

Gavin Liang/ Manager



Shenzhen LCS Compliance Testing Laboratory Ltd.

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**FCC TEST REPORT****Test Report No.: LCSA051923008E**May 31, 2023

Date of issue

Test Model : WT15

EUT..... : Walkie talkie

Applicant..... : Huizhou Beijia Electronic Technology Co., Ltd.Address..... : 4th Floor, Songshan Group Factory, Baishi Village,
Qiuchang Street, Huiyang District, Huizhou City,
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Manufacturer..... : Huizhou Beijia Electronic Technology Co., Ltd.Address..... : 4th Floor, Songshan Group Factory, Baishi Village,
Qiuchang Street, Huiyang District, Huizhou City,
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Telephone..... : /

Fax..... : /

Factory..... : Huizhou Beijia Electronic Technology Co., Ltd.Address..... : 4th Floor, Songshan Group Factory, Baishi Village,
Qiuchang Street, Huiyang District, Huizhou City,
Guangdong Province, China

Telephone..... : /

Fax..... : /

Test Result according to the standards on page 6: Positive

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.



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Revision History

Report Version	Issue Date	Revision Content	Revised By
000	May 31, 2023	Initial Issue	---





TABLE OF CONTENTS

Test Report Description	Page
1. SUMMARY OF STANDARDS AND RESULTS.....	6
1.1. Description of Standards and Results.....	6
2. GENERAL INFORMATION.....	7
2.1. Description of Device (EUT).....	7
2.2. Support Equipment List.....	8
2.3 External I/O Cable.....	8
2.4. Description of Test Facility.....	8
2.5. Statement of the Measurement Uncertainty.....	9
2.6. Measurement Uncertainty.....	9
3. TEST RESULTS.....	10
3.1. POWER LINE CONDUCTED EMISSION MEASUREMENT.....	10
3.2. Radiated emission Measurement.....	14
4. PHOTOGRAPH.....	21
5. EXTERNAL AND INTERNAL PHOTOS OF THE EUT.....	22
6. INTERIOR PHOTOGRAPHS OF THE EUT.....	22





1. SUMMARY OF STANDARDS AND RESULTS

1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION				
Item	Description of Test Item	Standard	Limits	Results
15.107	Conducted disturbance at mains terminals	FCC 47 CFR Part 15 Subpart B, Class B, ANSI C63.4 -2014	Class B	PASS
15.109	Radiated disturbance	FCC 47 CFR Part 15 Subpart B, Class B, ANSI C63.4 -2014	Class B	PASS
15.111	Antenna power conduction limits for receivers.	FCC 47 CFR Part 15 Subpart B, Class B, ANSI C63.4 -2014	2nW	N/A*

N/A* is an abbreviation for Not Applicable, CB receivers and receivers that operate (tune) in the frequency range 30 to 960 MHz that are provided only with a permanently attached antenna shall comply with the radiated emission limitations in this part, as measured with the antenna attached.

Test mode:

Mode 1	Channel 4 (462.6375MHz) RX + Charge mode	Final Test and Record
Mode 2	Channel 11 (467.6375MHz) RX + Charge mode	Final Test
Mode 3	Channel 15 (462.5750MHz) RX + Charge mode	Final Test

Note: Measured at mode 1, mode 2 and mode 3, only recorded worst case at mode 1 in this report.





2. GENERAL INFORMATION

2.1. Description of Device (EUT)

EUT : Walkie talkie

Trade Mark : N/A

Test Model : WT15

Power Supply : Input: DC 5V
DC 3.7V 1200mAh Ni-MH BATTERY PACK

Highest internal frequency (Fx) : Fx > 1 GHz

Highest internal frequency (Fx)	Highest measured frequency
Fx ≤ 108 MHz	1 GHz
108 MHz < Fx ≤ 500 MHz	2 GHz
500 MHz < Fx ≤ 1 GHz	5 GHz
Fx > 1 GHz	5 × Fx up to a maximum of 6 GHz

NOTE 1 For FM and TV broadcast receivers, Fx is determined from the highest frequency generated or used excluding the local oscillator and tuned frequencies.
Where Fx is unknown, the radiated emission measurements shall be performed up to 6 GHz.





2.2. Support Equipment List

Manufacturer	Description	Model	Serial Number	Certificate
Huizhou Beijia Electronic Technology Co., Ltd.	--	A1720EMC3277	--	FCC

2.3 External I/O Cable

I/O Port Description	Quantity	Cable
--	--	--

2.4. Description of Test Facility

Site Description
EMC Lab.

: NVLAP Accreditation Code is 600167-0.
FCC Designation Number is CN5024.
CAB identifier is CN0071.
CNAS Registration Number is L4595.





2.5. Statement of the Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. To CISPR 16 – 4 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements” and is documented in the LCS quality system acc. To DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

2.6. Measurement Uncertainty

Test	Parameters	Expanded Uncertainty (Ulab)	Expanded Uncertainty (Ucisp)
Conducted Emission	Level accuracy (9kHz to 150kHz) (150kHz to 30MHz)	± 2.63 dB ± 2.35 dB	± 3.8 dB ± 3.4 dB
Radiated Emission	Level accuracy (9kHz to 30MHz)	± 3.68 dB	N/A
Radiated Emission	Level accuracy (30MHz to 1000MHz)	± 3.48 dB	± 5.3 dB
Radiated Emission	Level accuracy (above 1000MHz)	± 3.90 dB	± 5.2 dB

(1) Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus.

(2) The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor of $k=2$, which for a normal distribution corresponds to a coverage probability of approximately 95%.





3. TEST RESULTS

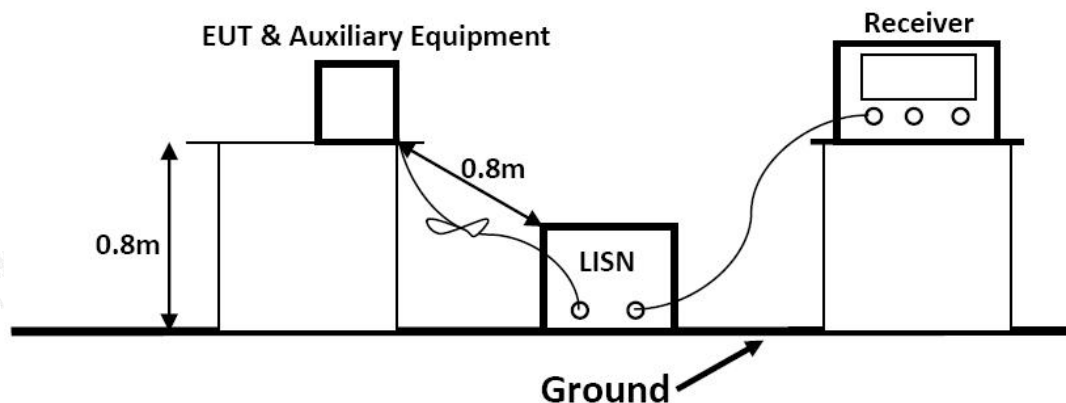
3.1. POWER LINE CONDUCTED EMISSION MEASUREMENT

3.1.1. Test Equipment

The following test equipments are used during the power line conducted measurement:

Item	Equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	EMI Test Software	Farad	EZ	/	N/A	N/A
2	EMI Test Receiver	R&S	ESR3	102312	2023-02-15	2024-02-14
3	Artificial Mains	R&S	ENV216	101288	2022-06-16	2023-06-15
4	Pulse Limiter	R&S	ESH3-Z2	102750-NB	2022-08-19	2023-08-18
5	Impedance Stabilization Network	TESEQ	ISN T800	45130	2022-10-29	2023-10-28

3.1.2. Block Diagram of Test Setup



3.1.3. Test Standard

Power Line Conducted Emission Limits (Class B)

Frequency (MHz)			Limit (dB μ V)	
			Quasi-peak Level	Average Level
0.15	~	0.50	66.0 ~ 56.0 *	56.0 ~ 46.0 *
0.50	~	5.00	56.0	46.0
5.00	~	30.00	60.0	50.0

NOTE1-The lower limit shall apply at the transition frequencies.

NOTE2-The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.

3.1.4. EUT Configuration on Test

The following equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner, which tends to maximize its emission characteristics in a normal application.

3.1.5. Operating Condition of EUT

3.1.5.1. Setup the EUT as shown on Section 3.1.2





3.1.5.2. Turn on the power of all equipments.

3.1.5.3. Let the EUT work in measuring Mode 1 and measure it.

3.1.6. Test Procedure

The EUT system is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to FCC/ANSI C63.4-2014 on Conducted Emission Measurement.

The bandwidth of the test receiver is set at 9kHz.

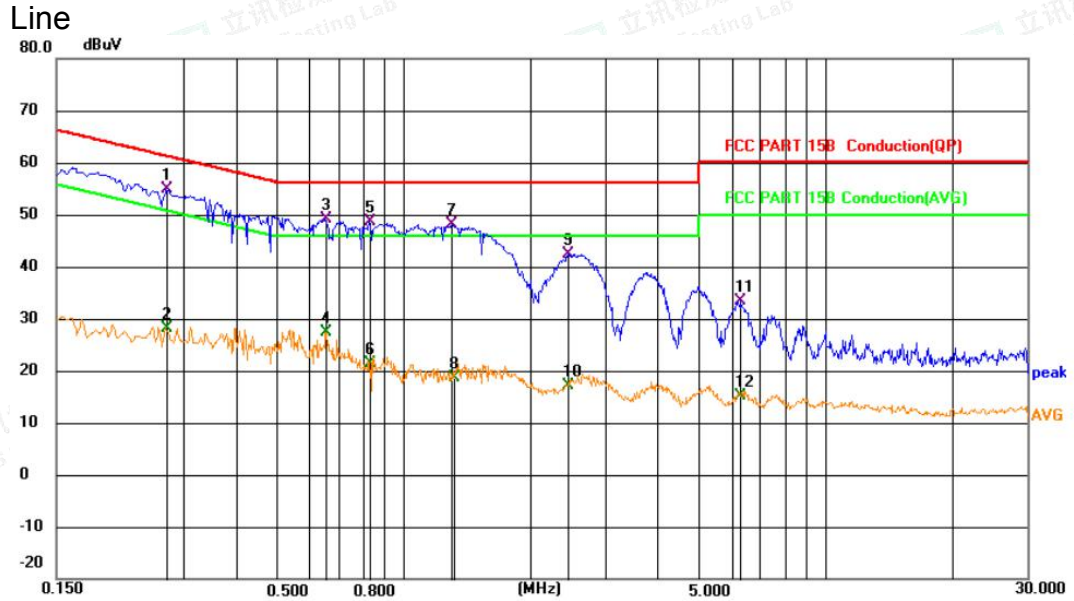
The frequency range from 150kHz to 30MHz is investigated

3.1.7. Test Results





AC Conducted Emission @ AC 120V/60Hz (worst case)



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin		
		MHz	Level	Factor	ment			Detector	Comment
			dBuV	dB	dBuV	dBuV	dB		
1	*	0.2730	35.17	19.63	54.80	61.03	-6.23	QP	
2		0.2730	8.42	19.63	28.05	51.03	-22.98	AVG	
3		0.6541	29.40	19.65	49.05	56.00	-6.95	QP	
4		0.6541	7.84	19.65	27.49	46.00	-18.51	AVG	
5		0.8296	29.03	19.64	48.67	56.00	-7.33	QP	
6		0.8296	1.79	19.64	21.43	46.00	-24.57	AVG	
7		1.2975	28.38	19.66	48.04	56.00	-7.96	QP	
8		1.3156	-0.99	19.66	18.67	46.00	-27.33	AVG	
9		2.4541	22.73	19.68	42.41	56.00	-13.59	QP	
10		2.4541	-2.55	19.68	17.13	46.00	-28.87	AVG	
11		6.3105	13.59	19.71	33.30	60.00	-26.70	QP	
12		6.3105	-4.57	19.71	15.14	50.00	-34.86	AVG	



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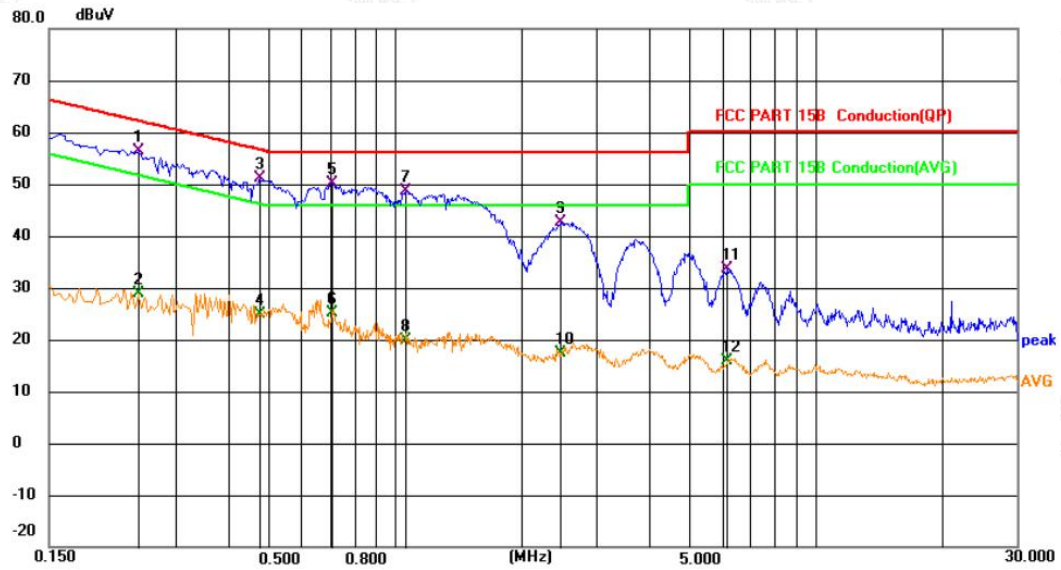
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Neutral



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin	
		MHz	Level	Factor	ment			
			dBuV	dB	dBuV	dBuV	dB	Detector Comment
1		0.2446	36.64	19.63	56.27	61.94	-5.67	QP
2		0.2446	9.14	19.63	28.77	51.94	-23.17	AVG
3	*	0.4786	31.51	19.64	51.15	56.36	-5.21	QP
4		0.4786	5.17	19.64	24.81	46.36	-21.55	AVG
5		0.7081	30.46	19.65	50.11	56.00	-5.89	QP
6		0.7081	5.45	19.65	25.10	46.00	-20.90	AVG
7		1.0591	28.88	19.65	48.53	56.00	-7.47	QP
8		1.0591	0.35	19.65	20.00	46.00	-26.00	AVG
9		2.4766	22.81	19.70	42.51	56.00	-13.49	QP
10		2.4766	-2.41	19.70	17.29	46.00	-28.71	AVG
11		6.1756	13.76	19.80	33.56	60.00	-26.44	QP
12		6.1756	-4.02	19.80	15.78	50.00	-34.22	AVG





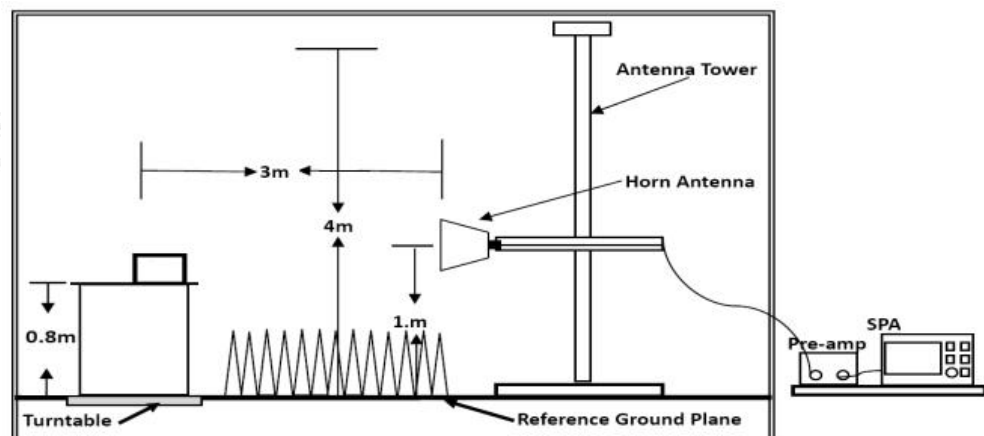
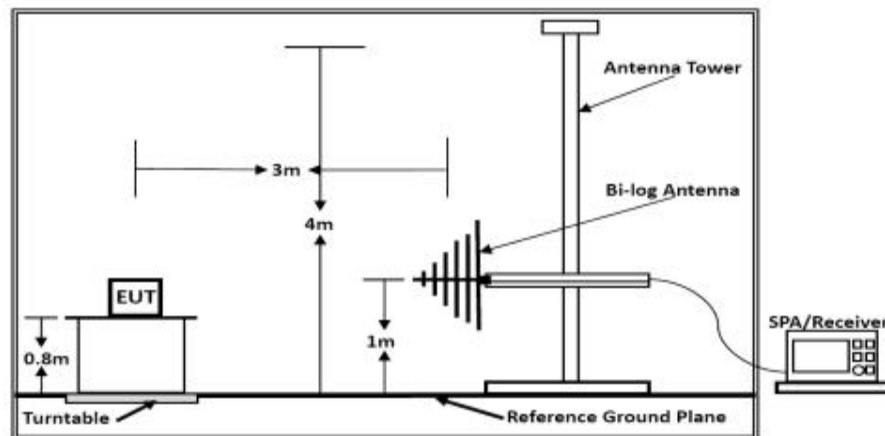
3.2. Radiated emission Measurement

3.2.1. Test Equipment

The following test equipments are used during the radiated emission measurement:

Item	Equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	EMI Test Software	AUDIX	E3	/	N/A	N/A
2	By-log Antenna	SCHWARZBECK	VULB9163	9163-470	2021-09-12	2024-09-11
3	Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1925	2021-09-05	2024-09-04
4	EMI Test Receiver	R&S	ESPI	101940	2022-08-18	2023-08-17
5	Broadband Preamplifier	/	BP-01M18G	P190501	2022-06-16	2023-06-15
6	EMI Test Software	Farad	EZ	/	N/A	N/A
7	MXA Signal Analyzer	Agilent	N9020A	MY50510140	2022-10-29	2023-10-28
8	EMI Test Receiver	R&S	ESPI	101940	2022-08-18	2023-08-17

3.2.2. Block Diagram of Test Setup





3.2.3. Radiated Emission Limit (Class B)

Limits for Radiated Disturbance Below 1GHz

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		$\mu\text{V/m}$	$\text{dB}(\mu\text{V})/\text{m}$
30 ~ 88	3	100	40
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46
960 ~ 1000	3	500	54
Remark : (1) Emission level $(\text{dB})\mu\text{V} = 20 \log \text{Emission level } \mu\text{V/m}$ (2) The smaller limit shall apply at the cross point between two frequency bands. (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.			
Limits for Radiated Emission Above 1GHz			
Frequency (MHz)	Distance (Meters)	Peak Limit ($\text{dB}\mu\text{V/m}$)	Average Limit ($\text{dB}\mu\text{V/m}$)
Above 1000	3	74	54
***Note: The lower limit applies at the transition frequency.			

3.2.4. EUT Configuration on Measurement

The following equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

3.2.5. Operating Condition of EUT

3.2.5.1. Setup the EUT as shown in Section 3.2.2.

3.2.5.2. Let the EUT work in test Mode 1 and measure it.

3.2.6. Test Procedure

EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated by-log antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2014 on radiated emission measurement.

3.2.7. Measuring Instruments and Setting

Please refer to equipment list in this report. The following table is the setting of spectrum analyzer and receiver





Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB/VB 200Hz/1KHz for QP/AVG
Start ~ Stop Frequency	150kHz~30MHz / RB/VB 9kHz/30KHz for QP/AVG
Start ~ Stop Frequency	30MHz~1000MHz / RB/VB 120kHz/1MHz for QP

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (Emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 1/B kHz for Average
RB / VB (Emission in non-restricted band)	1MHz / 1MHz for Peak, 1 MHz / 1/B kHz for Average

The frequency range from 30MHz to 1000MHz and above 1000MHz is checked.

3.2.8. Radiated Emission Noise Measurement Result

PASS.

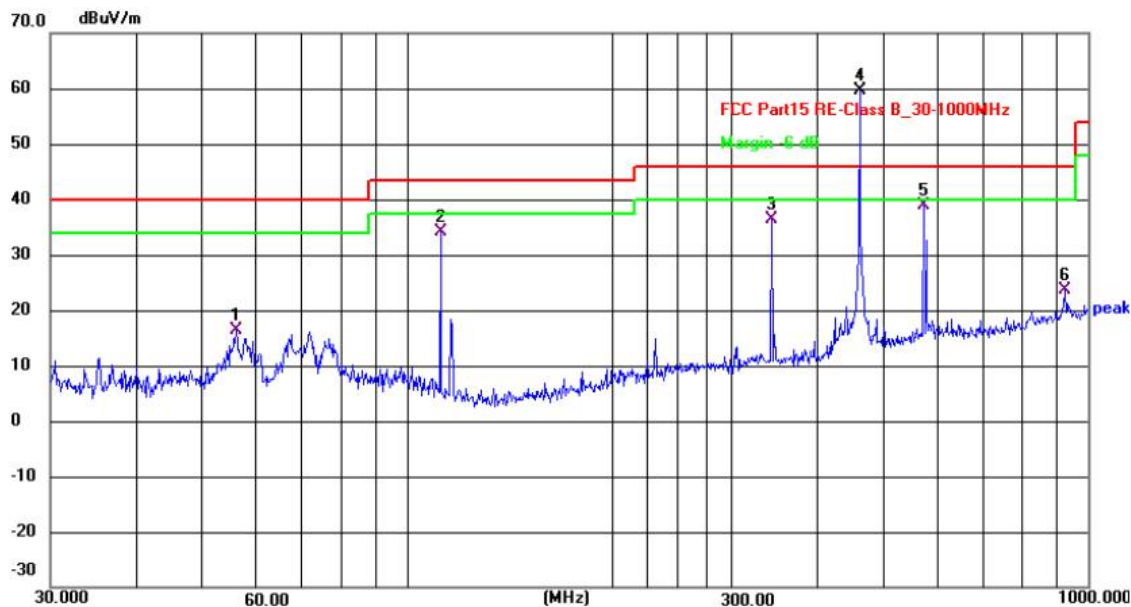
The scanning waveforms please refer to the next page.

Remark: The emission level over limit of below test plots was signal generator output signal level; not EUT emission levels.





Test Model	WT15	Test Mode	Mode 1
Environmental Conditions	23.8°C, 52.1% RH	Detector Function	Quasi-peak
Pol	Horizontal	Distance	3m
Test Engineer	Jack Cheng	Test Voltage	DC 4.5V

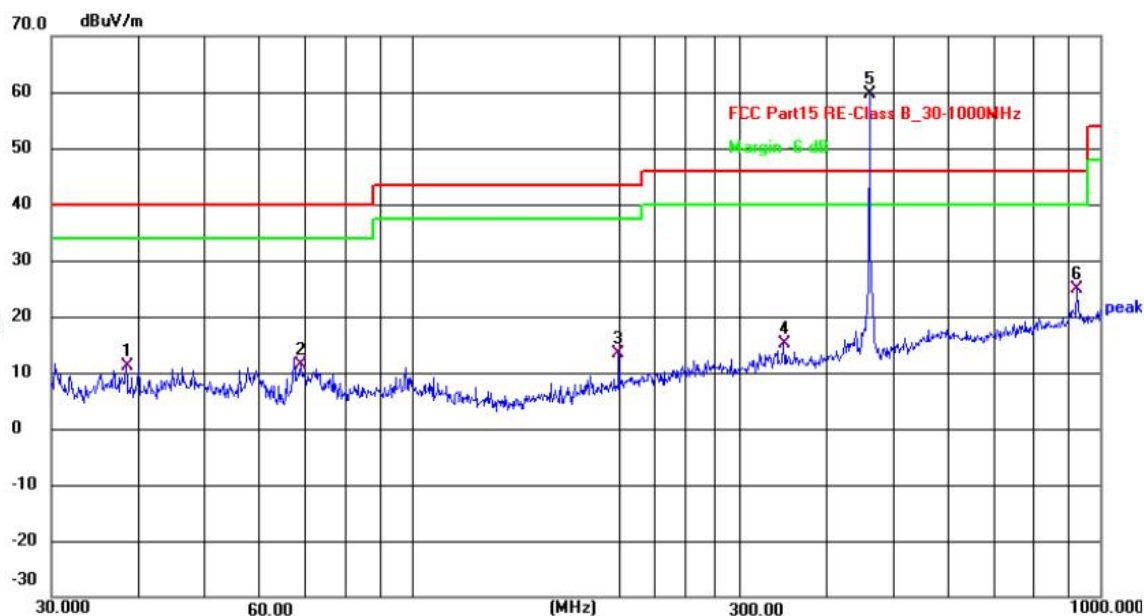


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	56.1974	34.47	-18.17	16.30	40.00	-23.70	QP
2	112.1304	53.39	-19.25	34.14	43.50	-9.36	QP
3	343.1800	51.18	-14.68	36.50	46.00	-9.50	QP
4	462.3455	73.96	-14.33	59.63	46.00	13.63	peak
5	574.6258	49.79	-10.87	38.92	46.00	-7.08	QP
6	925.7562	31.55	-7.93	23.62	46.00	-22.38	QP





Test Model	WT15	Test Mode	Mode 1
Environmental Conditions	23.8°C, 52.1% RH	Detector Function	Quasi-peak
Pol	Vertical	Distance	3m
Test Engineer	Jack Cheng	Test Voltage	DC 4.5V



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	38.4809	28.85	-17.62	11.23	40.00	-28.77	QP
2	69.1140	30.85	-19.41	11.44	40.00	-28.56	QP
3	199.9855	30.78	-17.39	13.39	43.50	-30.11	QP
4	346.8092	29.92	-14.78	15.14	46.00	-30.86	QP
5	462.3455	74.11	-14.46	59.65	46.00	13.65	peak
6	925.7562	32.93	-7.94	24.99	46.00	-21.01	QP

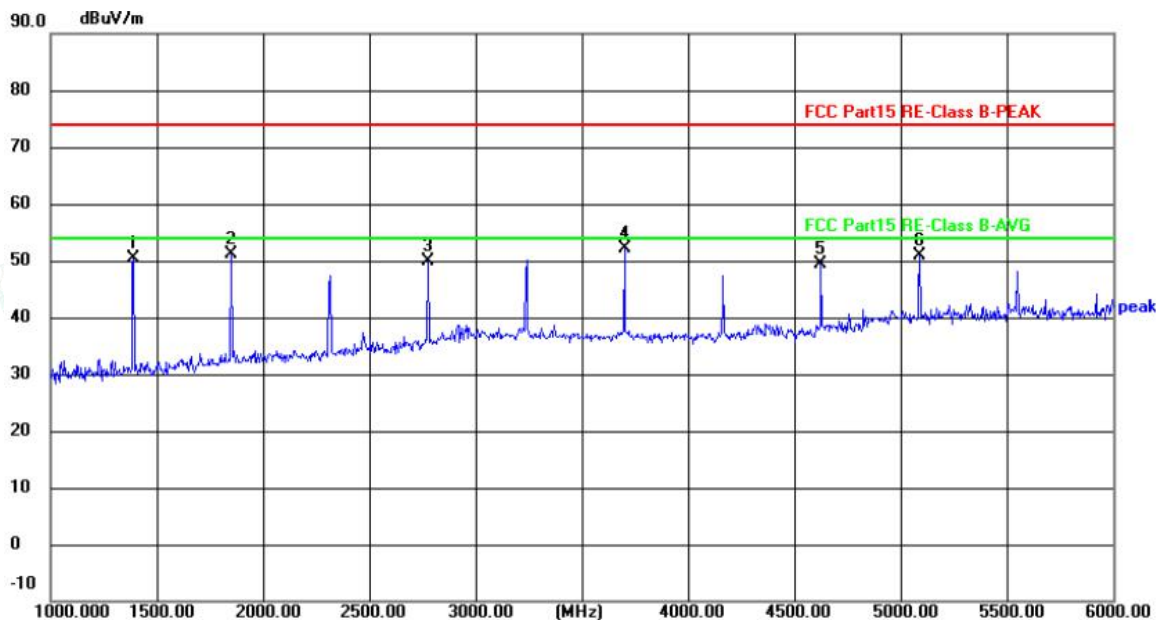
Note: Margin= Reading Level+Correct Factor – Limit

Correct Factor=Antenna Factor+Cable Factor – Pre-Amplifier Factor





Test Model	WT15	Test Mode	Mode 1 (Above 1GHz)
Environmental Conditions	23.9°C, 52.0% RH	Detector Function	Peak + AV
Pol	Horizontal	Distance	3m
Test Engineer	Jack Cheng	Test Voltage	DC 4.5V

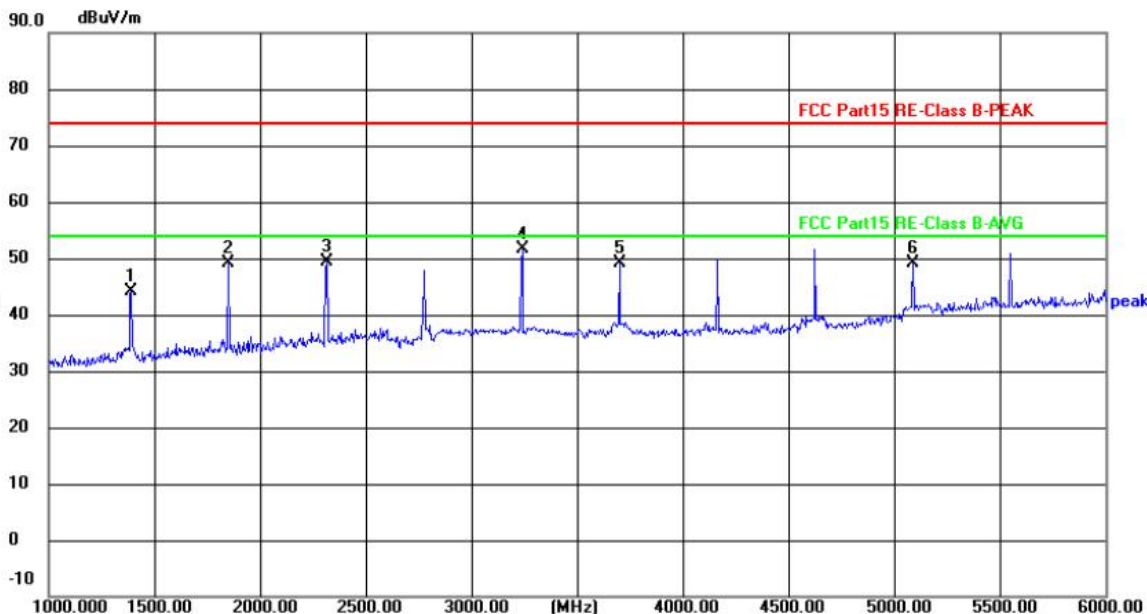


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1390.000	65.60	-15.26	50.34	74.00	-23.66	peak
2	1850.000	64.95	-13.89	51.06	74.00	-22.94	peak
3	2775.000	60.25	-10.38	49.87	74.00	-24.13	peak
4	3700.000	61.13	-9.06	52.07	74.00	-21.93	peak
5	4625.000	55.41	-5.97	49.44	74.00	-24.56	peak
6	5090.000	54.85	-3.95	50.90	74.00	-23.10	peak





Test Model	WT15	Test Mode	Mode 1 (Above 1GHz)
Environmental Conditions	23.9℃, 52.0% RH	Detector Function	Peak + AV
Pol	Vertical	Distance	3m
Test Engineer	Jack Cheng	Test Voltage	DC 4.5V



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1390.000	59.48	-15.26	44.22	74.00	-29.78	peak
2	1850.000	63.03	-13.89	49.14	74.00	-24.86	peak
3	2315.000	61.36	-11.99	49.37	74.00	-24.63	peak
4	3240.000	61.22	-9.50	51.72	74.00	-22.28	peak
5	3700.000	58.13	-9.06	49.07	74.00	-24.93	peak
6	5090.000	53.12	-3.95	49.17	74.00	-24.83	peak

Note:

- Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- Measurements above show only up to 6 maximum emissions noted.
- 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.
- Factor = Antenna Factor + Cable Loss + Amplifier Factor
Emission Level = Reading level + Factor
Margin = Emission Level - Limit





4. PHOTOGRAPH

Please refer to separated files for Test Setup Photos of the EUT.





5. EXTERNAL AND INTERNAL PHOTOS OF THE EUT

Please refer to separated files for External Photos of the EUT.

6. INTERIOR PHOTOGRAPHS OF THE EUT

Please refer to separated files for Internal Photos of the EUT.

-----THE END OF TEST REPORT-----

