RADIO TEST REPORT

Report No: STS1706043F01

Issued for

RMS International (USA) inc.

The Village At Beacon Centre, Suite 111, 8323 NW 12th Street, Miami, Florida, 33126, USA

Product Name:	WALKIE TALKIE
Brand Name:	N/A
Model Name:	US35-0064/FD
Series Model:	US35-0059
FCC ID:	2AIFFUS35-0064FD
Test Standard:	FCC Part 15.235

BZT Testing Technology Co., Ltd

Add. : Buliding 17, Xinghua Road Xingwei industrial Park Fuyong, Baoan District, Shenzhen, Guangdong, China

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TEST REPORT CERTIFICATION

Applicant's name ..... :	RMS International (USA) Inc.
Address ..... :	The Village At Beacon Centre, Suite 111, 8323 NW 12th Street, Miami, Florida, 33126, USA
Manufacture's Name ..... :	RMS USA (HK) LTD
Address ..... :	Unit 1111, 11/ F., Peninsula Centre, 67 Mody Road, Tsim Sha Tsui, Kowloon, Hong Kong

Product description

Product name ..... :	WALKIE TALKIE
Model and/or type reference :	US35-0064/FD
Serial Model ..... :	US35-0059
Standards ..... :	FCC Part15.235

This device described above has been tested by BZT, the test results show that the equipment under test (EUT) is in compliancewith the FCC requirements. And it is applicable only to the tested sample identified in the report.
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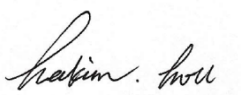
Date of Test ..... :

Date (s) of performance of tests ..... :	07 June. 2017 ~22 June. 2017
Date of Issue ..... :	22 June. 2017
Test Result ..... :	**Pass**

Testing Engineer : 

(Sean she)

Technical Manager : 

(Hakim.hou)

Authorized Signatory : 

(Vita Li)

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Revision History

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	22 June. 2017	STS1706043F01	ALL	Initial Issue

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 15.235			
Standard Section	Test Item	Judgment	Remark
15.235(a)	field strength	PASS	--
15.209	Radiated Emission	PASS	--
15.235(c)	Frequency Range	PASS	--
15.235(c)	total input power	PASS	
15.235(c)	Conducted Emission	PASS	
15.235	Band Edge	PASS	--

NOTE: (1)" N/A" denotes test is not applicable in this Test Report

(2) All tests are according to ANSI C63.10-2013

1.1 TEST FACTORY

BZT Testing Technology Co., Ltd.
Add. : Buliding 17, Xinghua Road Xingwei industrial Park Fuyong,
Baoan District, Shenzhen, Guangdong, China

FCC Registration No.: 701733

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y** ± **U**，where expended 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	Uncertainty
1	Conducted Emission (9KHz-150KHz)	±2.88dB
2	Conducted Emission (150KHz-30MHz)	±2.67dB
3	RF power,conducted	±0.70dB
4	Spurious emissions,conducted	±1.19dB
5	All emissions,radiated(<1G) 30MHz-200MHz	±2.83dB
6	All emissions,radiated(<1G) 200MHz-1000MHz	±2.94dB

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

<table>
<tr><td>Equipment</td><td>WALKIE TALKIE</td></tr>
<tr><td>Trade Name</td><td>N/A</td></tr>
<tr><td>Model Name</td><td>US35-0064/FD</td></tr>
<tr><td>Serial Model</td><td>US35-0059</td></tr>
<tr><td>Model Difference</td><td>Only different in model name</td></tr>
<tr><td>Product Description</td><td>The EUT is a WALKIE TALKIE
<table>
<tr><td>Operation Frequency:</td><td>49.858MHz</td></tr>
<tr><td>Modulation Type:</td><td>ASK</td></tr>
<tr><td>Antenna Designation:</td><td>integral antenna</td></tr>
<tr><td>Antenna Gain (dBi)</td><td>2.0 dbi</td></tr>
</table></td></tr>
<tr><td>Battery</td><td>DC 4.5V</td></tr>
<tr><td>Hardware version number</td><td>N/A</td></tr>
<tr><td>Software version number</td><td>N/A</td></tr>
<tr><td>Connecting I/O Port(s)</td><td>Please refer to the User's Manual</td></tr>
</table>

Note:

1. For a more detailed features description, please refer to the manufacturer’s specifications or the User's Manual.
2. Table for filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
A	N/A	US35-0064/FD	integral antenna	N/A	2.0	ANT

2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	TX Mode

	For Conducted Test
Final Test Mode	Description
Mode 1	TX Mode

	For Radiated Emission
Final Test Mode	Description
Mode 1	TX Mode

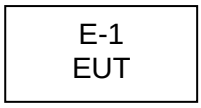
Note:

(1) The measurements are performed at the highest, middle, lowest available channels.

(2) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported

(3) We have be tested for all avaiable U.S. voltage and frequencies(For 120V,50/60Hz and 240V, 50/60Hz) for which the device is capable of operation.

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

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.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	Interphone	N/A	US35-0064/FD	US35-0059	EUT

Note:

(1)The support equipment was authorized by Declaration of Confirmation.

(2)For detachable type I/O cable should be specified the length in cm in『Length』column.

2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Spectrum Analyzer	Agilent	E4407B	MY50140340	2016.10.23	2017.10.22
Test Receiver	R&S	ESCI	101427	2016.10.23	2017.10.22
Bilog Antenna	TESEQ	CBL6111D	34678	2014.11.24	2017.11.23
Horn Antenna	Schwarzbeck	BBHA 9120D(1201) 1G-18G	9120D-1343	2015.03.05	2018.03.04
50Ω Coaxial Switch	Anritsu	MP59B	6200264416	2016.10.23	2017.10.22
PreAmplifier	Agilent	8449B	60538	2016.10.23	2017.10.22
Loop Antenna	EMCO	6502	9003-2485	2016.03.06	2019.03.03
USB RF power sensor	DARE	RPR3006W	15I00041SNO03	2016.10.23	2017.10.22
Spectrum Analyzer	Agilent	E4407B	MY50140340	2016.10.23	2017.10.22

Conduction Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Test Receiver	R&S	ESCI	101427	2016.10.23	2017.10.22
LISN	R&S	ENV216	101242	2016.10.23	2017.10.22
LISN	EMCO	3810/2NM	000-23625	2016.10.23	2017.10.22

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION LIMITS

operating frequency band. In case the emission fall within the restricted band specified on Part 207(a) limit in the table below has to be followed.

FREQUENCY (MHz)	Conducted Emission limit (dBuV)	
	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	**Setting**
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

3.2 TEST PROCEDURE

a. The EUT was 0.8 meters from the horizontal ground plane and 0.4 meters from the vertical ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.

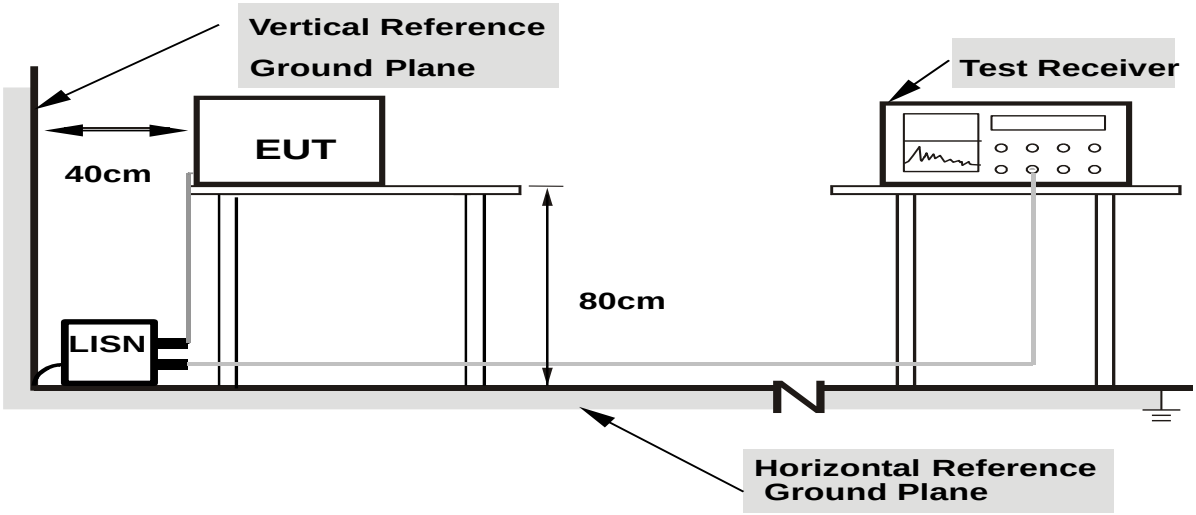
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

d. LISN at least 80 cm from nearest part of EUT chassis.

e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.3 TEST SETUP



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

3.4 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

3.5 TEST RESULTS

Note: EUT can not connected to AC power, not applicable.

4. RADIATED EMISSION MEASUREMENT

4.1 RADIATED EMISSION LIMITS

in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the Restricted band specified on Part15.205(a)&209(a) limit in the table and according to ANSI C63.10-2013 below has to be followed.

LIMITS OF RADIATED EMISSION MEASUREMENT (Frequency Range 9kHz-1000MHz)

Frequencies (MHz)	Field Strength (micorvolts/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

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	(dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

For Radiated Emission

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak
Start Frequency	1000 MHz(Peak/AV)
Stop Frequency	10th carrier hamonic(Peak/AV)
RB / VB (emission in restricted band)	1 MHz / 3 MHz

For Band edge

Spectrum Parameter	Setting
Detector	Peak
Start/Stop Frequency	Lower Band Edge: 2300 to 2403 MHz Upper Band Edge: 2479 to 2500 MHz
RB / VB (emission in restricted band)	1 MHz / 3 MHz

Receiver Parameter	Setting
Start ~ Stop Frequency	9kHz~90kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	90kHz~110kHz / RB 200Hz for QP
Start ~ Stop Frequency	110kHz~490kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	490kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

4.2 TEST PROCEDURE

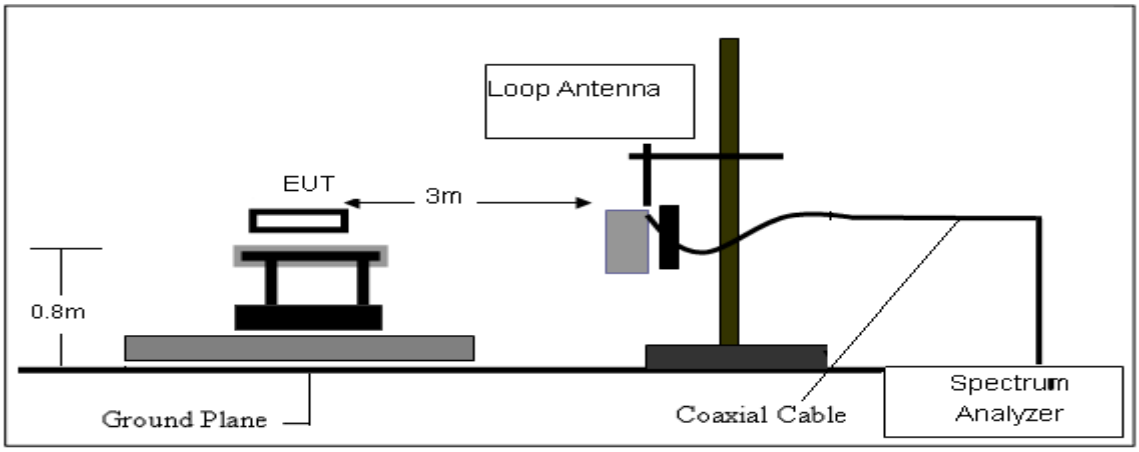
a. The measuring distance of at 3 m shall be used for measurements at frequency 0.009MHz up to 1GHz, and above 1GHz.
b. The EUT was placed on the top of a rotating table 0.8 meters(above 1GHz is 1.5 m) above the ground at a 3 meter anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The height of the equipment shall be 0.8 m(above 1GHz is 1.5 m); the height of the test antenna shall vary between 1 m to 4 m. Horizontal and vertical polarizations of the antenna are set to make the measurement
d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

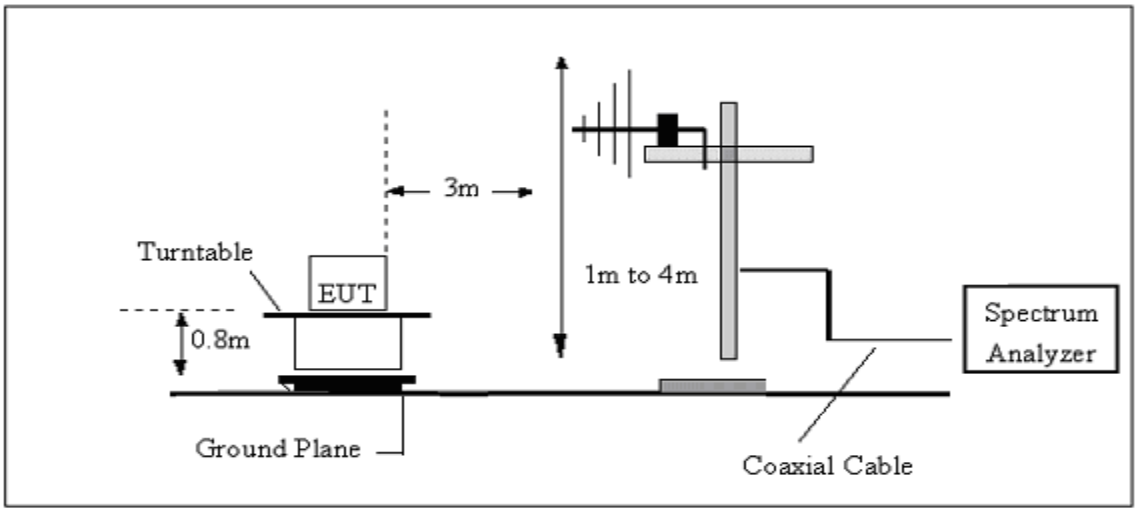
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

4.3 TEST SETUP

（A）Radiated Emission Test-Up Frequency Below 30MHz



（B）Radiated Emission Test-Up Frequency 30MHz~1GHz



4.4 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

4.5 TEST RESULTS

(Radiated Emission<30MHz (9KHz-30MHz, H-field))

Temperature:	20 ℃	Relative Humidtity:	48%
Pressure:	1010 hPa	Test Voltage:	DC 4.5V
Test Mode:	TX Mode	Polarization:	--

Not: Horizontal level have a test this is the worst.

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	PASS
--	--	--	--	PASS

Note:

The amplitude of spurious emissions which are attenuated by more than 20dB below the Permissible value has no need to be reported.

Distance extrapolation factor =40 log (specific distance/test distance)(dB);

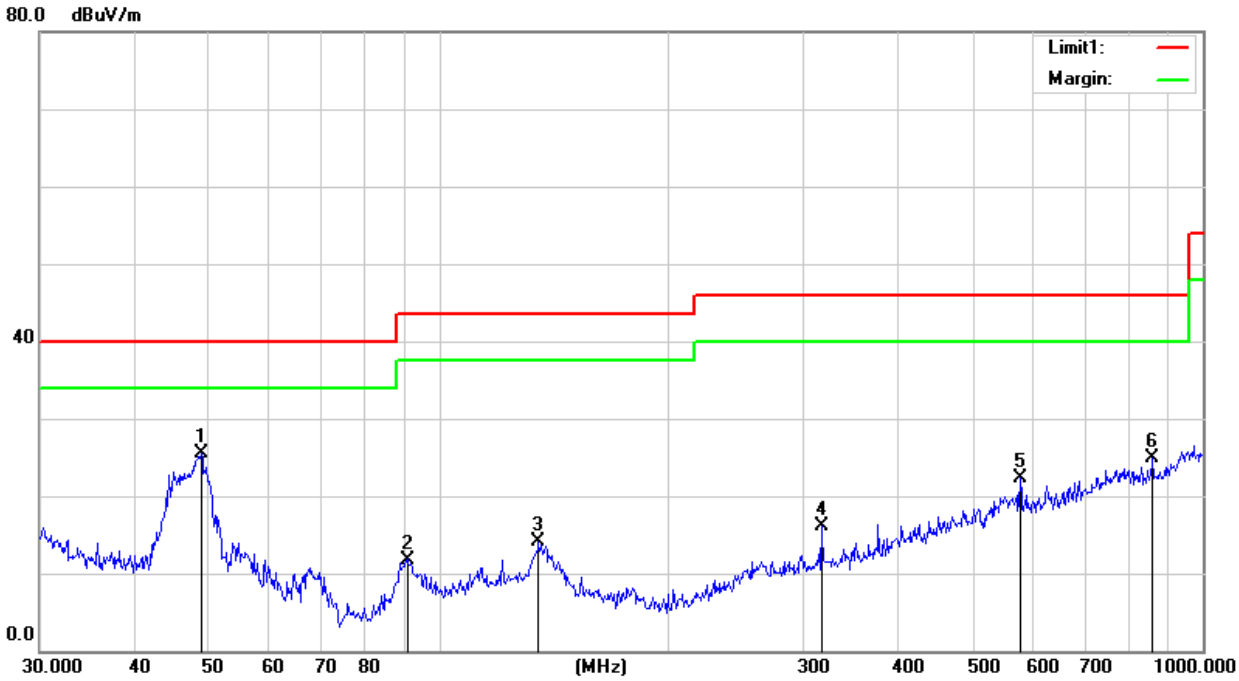
Limit line = specific limits(dBuv) + distance extrapolation factor

Between 30-1000MHz

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	1010hPa	Phase:	Horizontal
Test Voltage:	DC 4.5V	Test Mode:	Mode 1

Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
48.8430	46.45	-20.89	25.56	40.00	-14.44	QP
90.8554	31.91	-20.11	11.80	43.50	-31.70	QP
135.0320	31.60	-17.52	14.08	43.50	-29.42	QP
316.5890	30.47	-14.28	16.19	46.00	-29.81	QP
576.6443	29.04	-6.69	22.35	46.00	-23.65	QP
860.0352	27.51	-2.69	24.82	46.00	-21.18	QP

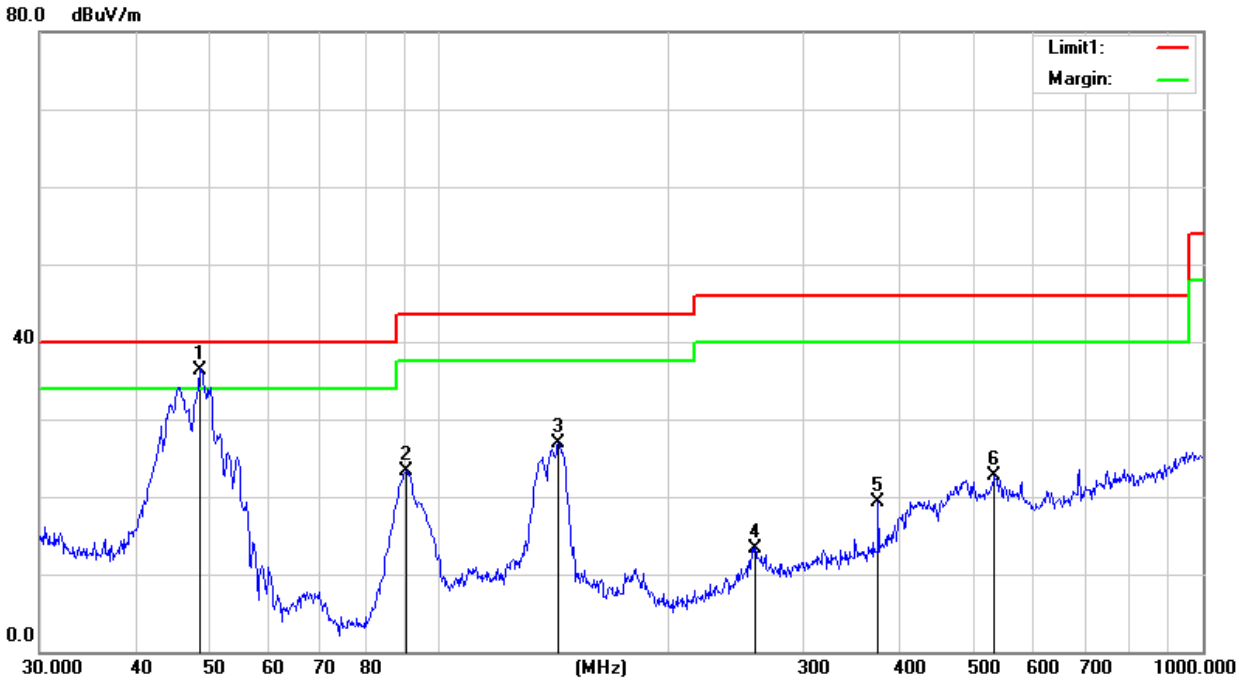
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	1010hPa	Phase:	Vertical
Test Voltage:	DC 4.5V	Test Mode:	Mode 1

Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
48.6720	57.20	-20.80	36.40	40.00	-3.60	QP
90.5374	43.53	-20.14	23.39	43.50	-20.11	QP
143.3261	44.51	-17.67	26.84	43.50	-16.66	QP
259.2337	28.55	-15.15	13.40	46.00	-32.60	QP
375.9384	32.04	-12.73	19.31	46.00	-26.69	QP
533.8320	30.19	-7.58	22.61	46.00	-23.39	QP

Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



4.6 TEST RESULTS (BAND EDGE)

Frequency (MHz)	Reading (dBμV)	Amplifier (dB)	Loss (dB)	Antenna Factor (dB/m)	Corrected Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type	Comment
49.82	27.25	30.19	0.60	7.45	-22.14	5.11	40	-34.89	QP	Vertical
49.82	25.32	30.19	0.60	7.45	-12.99	12.33	40	-27.67	QP	Horizontal
49.90	26.49	30.19	0.60	7.45	-22.14	4.35	40	-35.65	QP	Vertical
49.90	24.38	30.19	0.60	7.45	-12.78	11.60	40	-28.40	QP	Horizontal

Note:1. the level of the unmodulated carrier is less than the general limits in §15.209
2.Low measurement frequencies is range from 49.70 to 49.82 MHz, high measurement frequencies is range from 49.90 to 50 MHz.

5. FREQUENCY RANGE

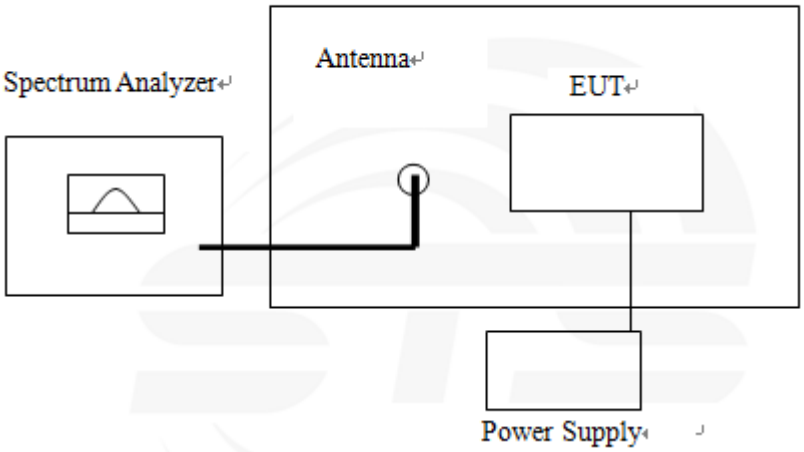
5.1 REQUIREMENT

According to FCC section 15.235, The RF carrier and modulation products shall be maintained within the band 49.82-49.90 MHz

5.2 TEST PROCEDURE

According to FCC section 15.235(c)(1), The RF carrier and modulation products shall be maintained within the band 49.82-49.90 MHz

5.3 TEST SETUP

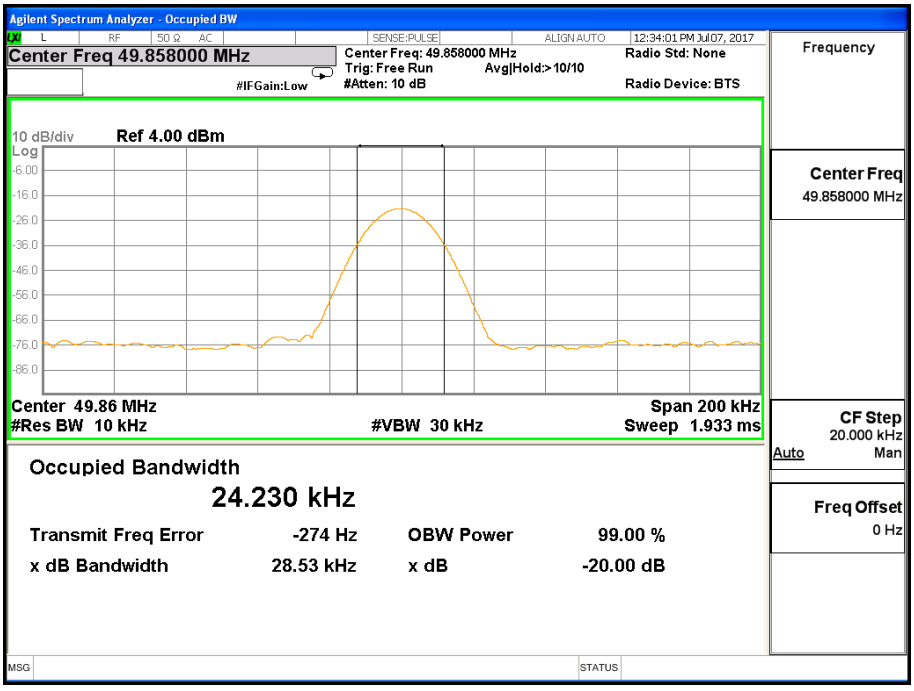


The EUT which is powered by the Battery, is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

5.5 TEST RESULTS

Temperature:	25 ℃	Relative Humidity:	50%
Pressure:	1012 hPa	Test Voltage:	DC 4.5V
Test Mode:	TX Mode		

Test frequency(MHz)	20dB bandwith(kHz)	Limit(MHz)	Remark
49.858	28.53	49.82-49.90	PASS



6. FIELD STRENGTH

6.1 APPLIED PROCEDURES / LIMIT

According to FCC section 15.235(a), The field strength of any emission within this band shall not exceed 10,000 microvolts/meter at 3 meters. The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in §15.35 for limiting peak emissions apply

6.2 TEST PROCEDURE

a. The EUT was placed on the top of a rotating table 0.8 metersabove the ground at a 3 meter anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The height of the equipment shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Horizontal and vertical polarizations of the antenna are set to make the measurement

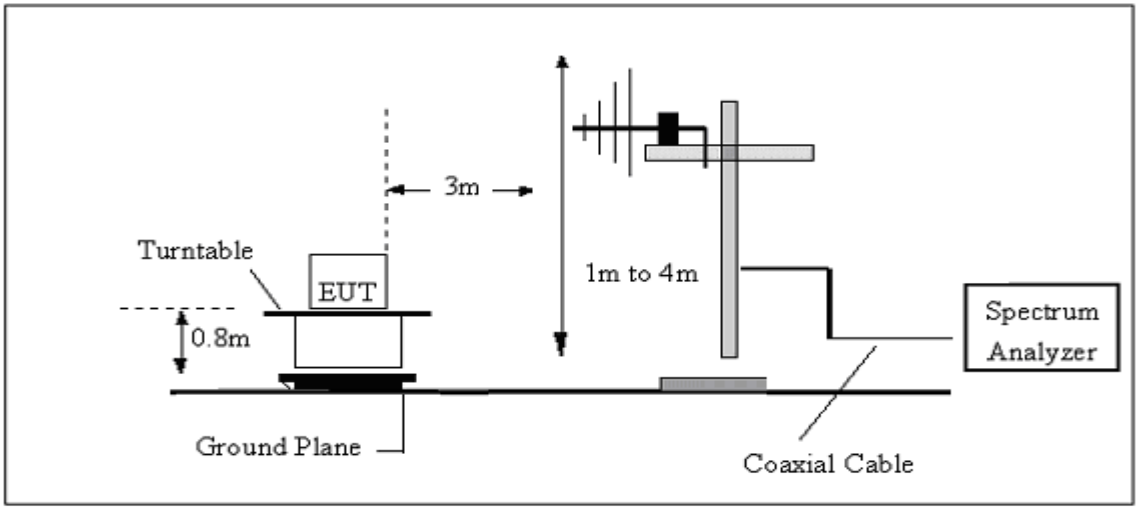
c. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Average detector mode re-measured.

d. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

6.3 TEST SETUP



6.5 TEST RESULTS

Temperature:	25 ℃	Relative Humidity:	60%
Pressure:	1012 hPa	Test Voltage:	DC 4.5V
Test Mode:	TX Mode		

Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
49.8580	65.75	100.00	-34.25	Peak	Horizontal
49.8580	43.84	80.00	-36.16	Average	Horizontal
49.8580	65.26	100.00	-34.74	Peak	Vertical
49.8580	46.41	80.00	-33.59	Average	Vertical

7. CONDUCTED POWER

7.1 REQUIREMENT

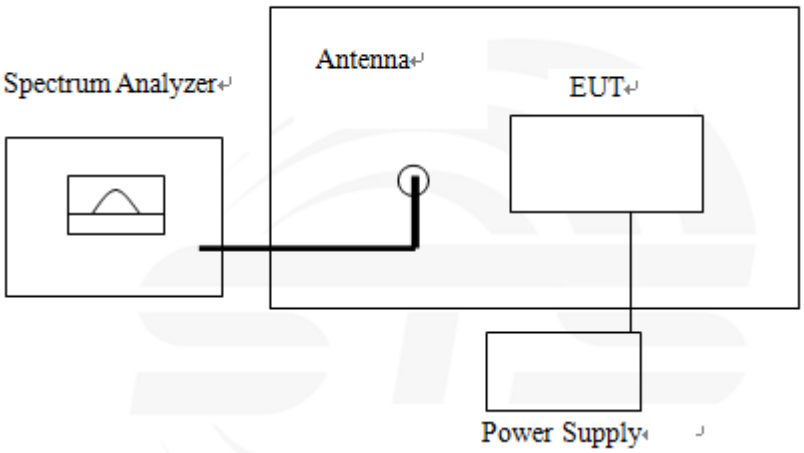
The total input power to the device measured at the battery or the power line terminals shall not exceed 100 milliwatts under any condition of modulation

7.2 TEST PROCEDURE

According to FCC section 15.235(c)(2),The total input power to the device measured at the battery or the power line terminals shall not exceed 100 milliwatts under any condition of modulation

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak
RB/VB	10KHz /10KHz
Sweep	Auto

7.3 TEST SETUP

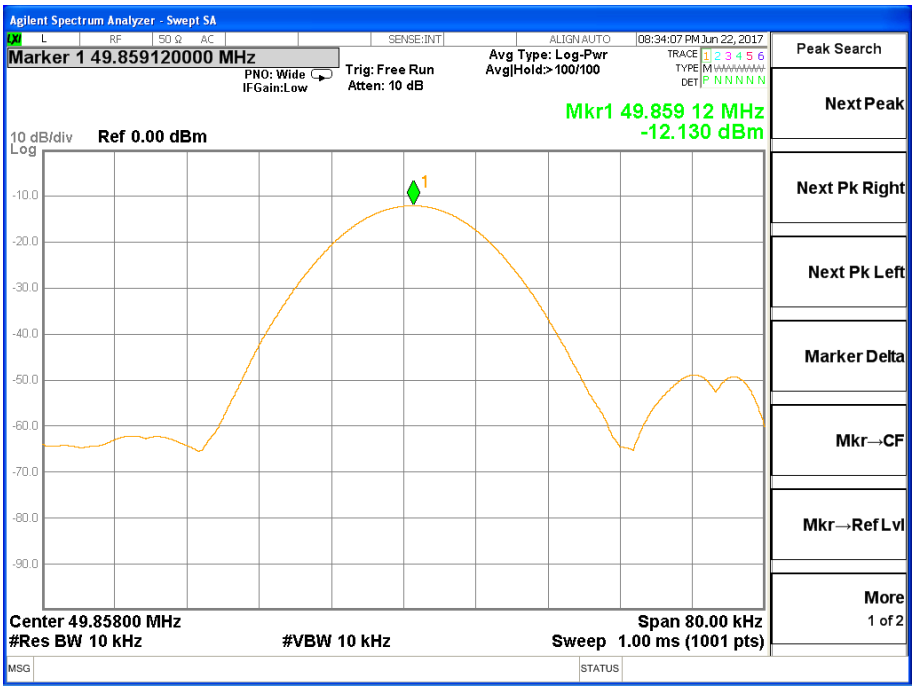


The EUT which is powered by the Battery, is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

7.4 TEST RESULTS

Temperature:	25 ℃	Relative Humidity:	60%
Pressure:	1012 hPa	Test Voltage:	DC 4.5V
Test Mode:	TX Mode		

Frequency (MHz)	Peak out power (dBm)	Limit (dBm)	Detector
49.8580	-12.130	10.00	Peak



8. CONDUCTED SPURIOUS EMISSION

8.1 REQUIREMENT

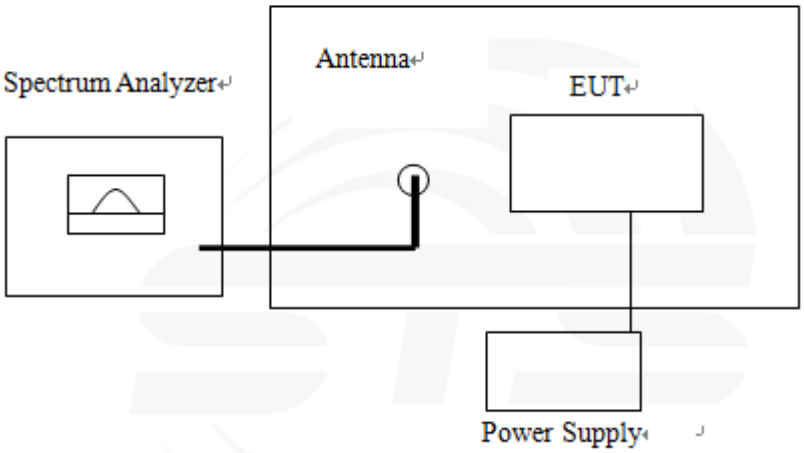
Emissions outside of this band shall be attenuated at least 20 dB below the level of the unmodulated carrier

8.2 TEST PROCEDURE

According to FCC section 15.235(c)(4), Emissions outside of this band shall be attenuated at least 20 dB below the level of the unmodulated carrier

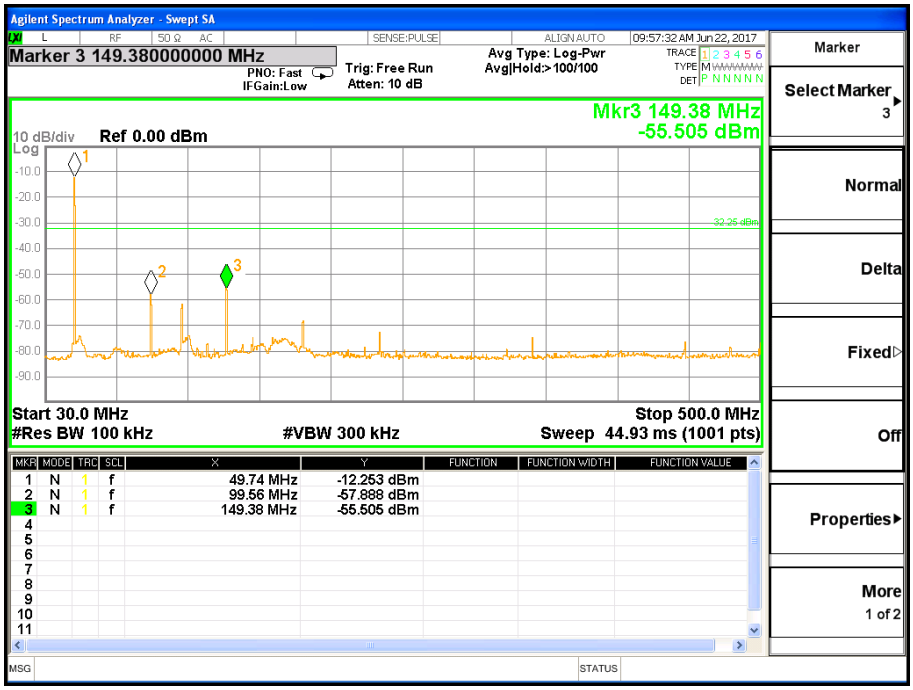
Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak
Star Frequency	30MHz
Stop Frequency	500MHz
RB/VB	100KHz /300KHz
Sweep	Auto

8.3 TEST SETUP



8.4 TEST RESULTS

Temperature:	25 ℃	Relative Humidity:	60%
Pressure:	1012 hPa	Test Voltage:	DC 4.5V
Test Mode:	TX Mode		



9. ANTENNA REQUIREMENT

9.1 STANDARD REQUIREMENT

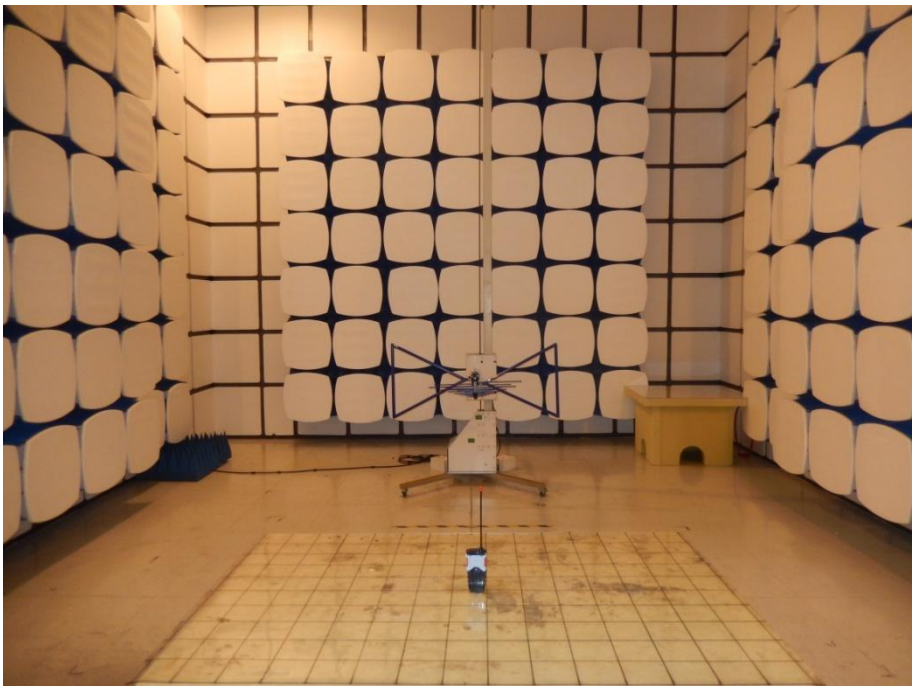
15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

9.2 EUT ANTENNA

The EUT antenna is integral Antenna. It comply with the standard requirement.

APPENDIX 1- PHOTOS OF TEST SETUP

Radiated Measurement Photos



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