



FCC 15B Report

FCC ID: 2ABNJR77-BT

FCC 47 CFR Part 15 Subpart B

Product : Bluetooth Speaker

Trade Name :  See Me Here

Model Number : RV77-BT

Issued for

Shenzhen See Me Here Electronic Co., Ltd.

3-4th Floor, Building D, TongFuYu Industrial Park, Xixiang Town, Bao'an District, Shenzhen, China

Issued by

Shenzhen STONE Testing Technology Co., Ltd.

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The test results in the report only apply to the tested sample.*



TEST RESULT CERTIFICATION

Product : Bluetooth Speaker
Applicant..... : Shenzhen See Me Here Electronic Co., Ltd.
Address : 3-4th Floor, Building D, TongFuYu Industrial Park, Xixiang Town,
Bao'an District, Shenzhen, China
Manufacturer : Shenzhen See Me Here Electronic Co., Ltd.
Address : 3-4th Floor, Building D, TongFuYu Industrial Park, Xixiang Town,
Bao'an District, Shenzhen, China
Model No. : RV77-BT
Standards : FCC Part 15 Subpart B
Test Method..... : ANSI C63.4: 2003

The above equipment has been tested by Shenzhen STONE Testing Technology Co., Ltd. and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Test

Date of receipt of test item 2013-12-25

Date(s) of performance of test..... 2013-12-26 to 2014-01-03

Test Result..... : Pass

Testing by	:	<u>Linna Liu</u>	Date	:	<u>2014-01-02</u>
		(Linna Liu)			
Check by	:	<u>Andy Huang</u>	Date	:	<u>2014-01-03</u>
		(Andy Huang)			
Approved by	:	<u>Ethan Chen</u>	Date	:	<u>2014-01-03</u>
		(Ethan Chen)			



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1. TEST SUMMARY

Test procedures according to the technical standards:

FCC Part 15 B			
Emission			
Standard Section	Test Item	Judgment	Remark
FCC Part 15B 15.107	Conducted Emission	PASS	Class B
FCC Part 15B 15.109	Radiated Emissions	PASS	Class B

NOTE:

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

(2) The test results of this report relate only to the tested sample(s) identified in this report.



1.1 TEST FACILITY

Shenzhen STONE Testing Technology Co., Ltd.

Add. : F/6, Bldg.12, Zhongxing Industrial City, Chuangye Rd., Nanshan District, Shenzhen, Guangdong, China

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

FCC Registration No.: 323508

1.2 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** %.

A. Conducted Emission :

The measurement uncertainty is evaluated as ± 3.2 dB.

B. Radiated Measurement :

The measurement uncertainty is evaluated as ± 3.7 dB.



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	Bluetooth Speaker
Model Name	RV77-BT
Additional Model Number(s)	N/A
Model Difference	N/A
Power Source	DC power by Li-ion battery DC power from USB cable by host system
Power Rating	Li-ion battery: DC 3.7V 1000 mAh DC 5.0V from USB cable.
Remark	Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.

Note:

- (1) This Test Report is for compliance FCC Part 15 Subpart B, for compliance FCC Part 15 Subpart C, please refer to the Radio test reports.



2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generated from EUT, the test system was pre-scanning tested based on the consideration of following EUT operation mode or test configuration mode which possibly 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	USB Charging and Aux In Mode
Mode 2	USB Charging and Bluetooth Mode
Mode 3	USB Loading
Mode 4	Bluetooth Link

For Conducted Test	
Final Test Mode	Description
Mode 2	USB Charging and Bluetooth Mode

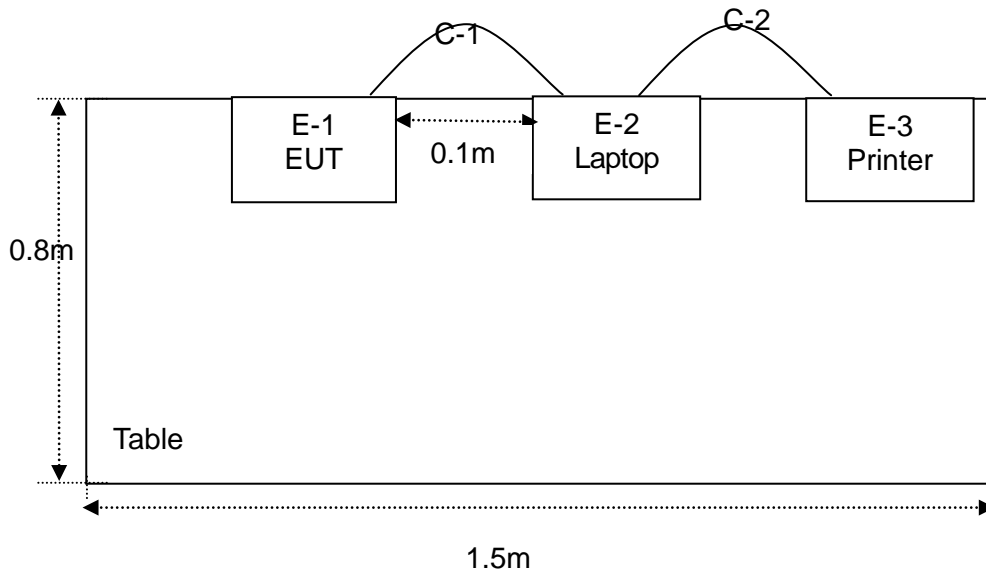
For Radiated Test (Below 1GHz)	
Final Test Mode	Description
Mode 1	USB Charging and Aux In Mode
Mode 3	USB Loading
Mode 4	Bluetooth Link
For Radiated Test (Above 1GHz)	
Mode 4	Bluetooth Link

Note:

- (1) After the preliminary scan, the final test was executed the worst condition and test data were recorded in this report.

2.3 DESCRIPTION OF TEST SETUP

Test Setup Block





2.4 DESCRIPTION TEST PERIPHERAL AND EUT PERIPHERAL

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	Bluetooth Speaker		RV77-BT	N/A	EUT
E-2	Laptop	LENOVO	P142S	N/A	
E-3	Printer	HP	5015N	N/A	

Item	Shielded Type	Ferrite Core	Length	Note
C-1	YES	YES	60cm	USB Cable
C-2	No	No	60cm	Audio Line

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.
- (3) “YES” means “shielded” “with core”; “NO” means “unshielded” “without core”.



3. CONDUCTED EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT (Frequency Range 150KHz-30MHz)

CLASS B LIMIT		
FREQUENCY (MHz)	Quasi-peak	Average
	dBuV	dBuV
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.

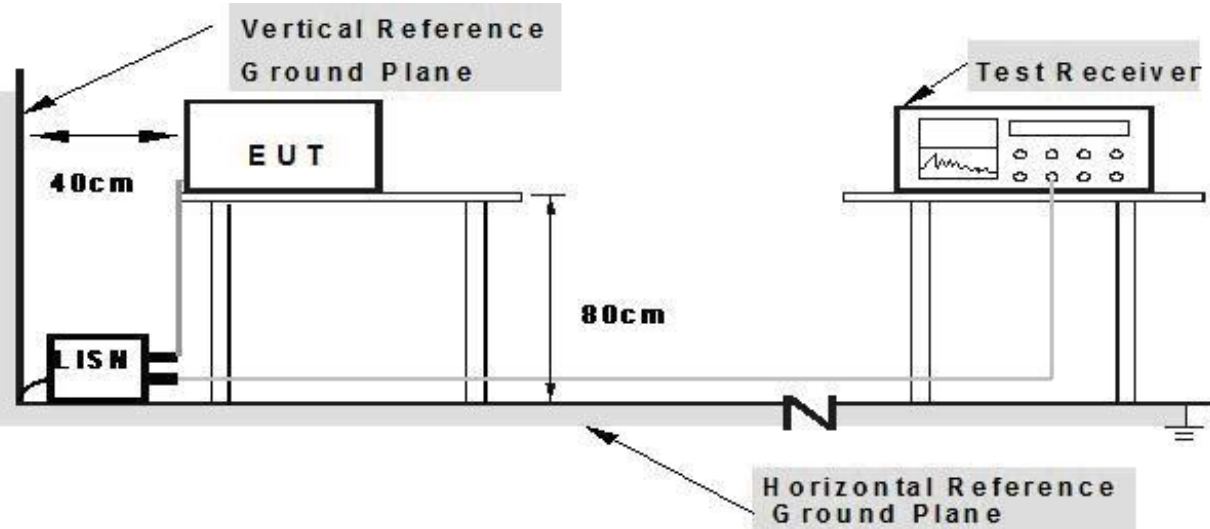
The following table is the setting of the receiver

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 placed 0.8 meters from the horizontal 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 TEST INSTRUMENTS

Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
LISN	R&S	NSLK81	8126466	Jul. 06, 2012	Jul. 05, 2014	1 year
LISN	R&S	NSLK81	8126487	Dec. 24, 2013	Dec. 23, 2014	1 year
50Ω Switch	ANRITSU CORP	MP59B	6200983704	Jul. 06, 2012	Jul. 05, 2014	1 year
Test Cable	N/A	C01	N/A	Jul. 06, 2012	Jul. 05, 2014	1 year
Test Cable	N/A	C02	N/A	Jul. 06, 2012	Jul. 05, 2014	1 year
Test Cable	N/A	C03	N/A	Jul. 06, 2012	Jul. 05, 2014	1 year
EMI Test Receiver	R&S	ESCI	1166.595	Jul. 06, 2012	Jul. 05, 2014	1 year
Passive Voltage Probe	ESH2-Z3	R&S	100196	Jul. 06, 2012	Jul. 05, 2014	1 year

3.5 EUT OPERATING CONDITIONS

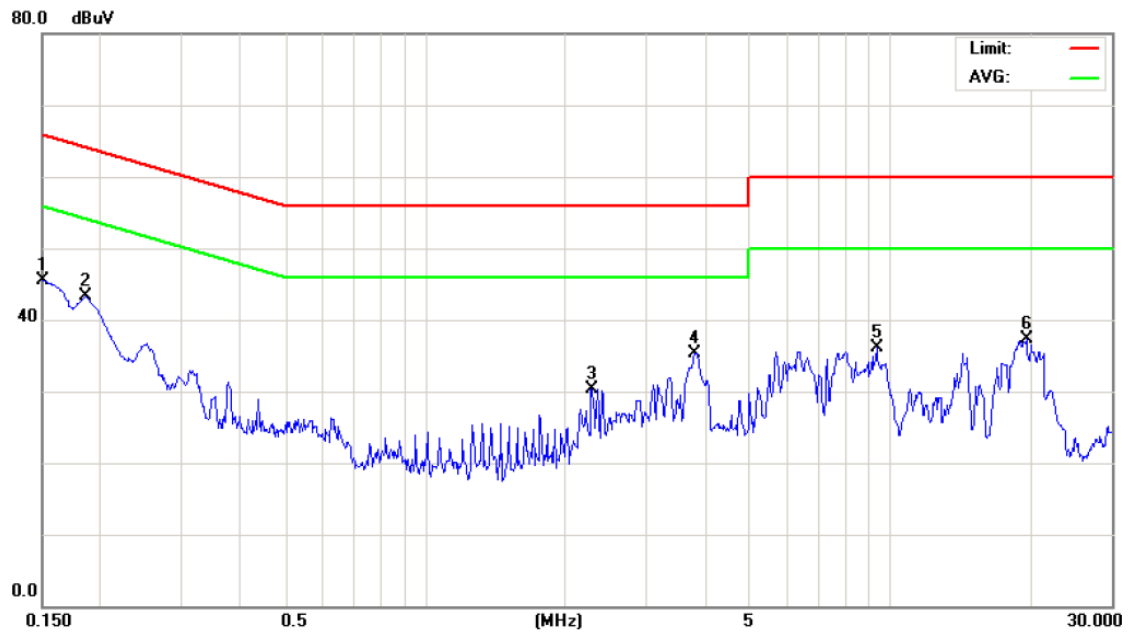
The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the follows during the testing.



3.6 TEST RESULTS

EUT :	Bluetooth Speaker	Model Name. :	RV77-BT
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010hPa	Test Date :	2013-12-27
Test Mode :	Mode 1	Phase :	Line
Test Voltage :	120V/ 60Hz		

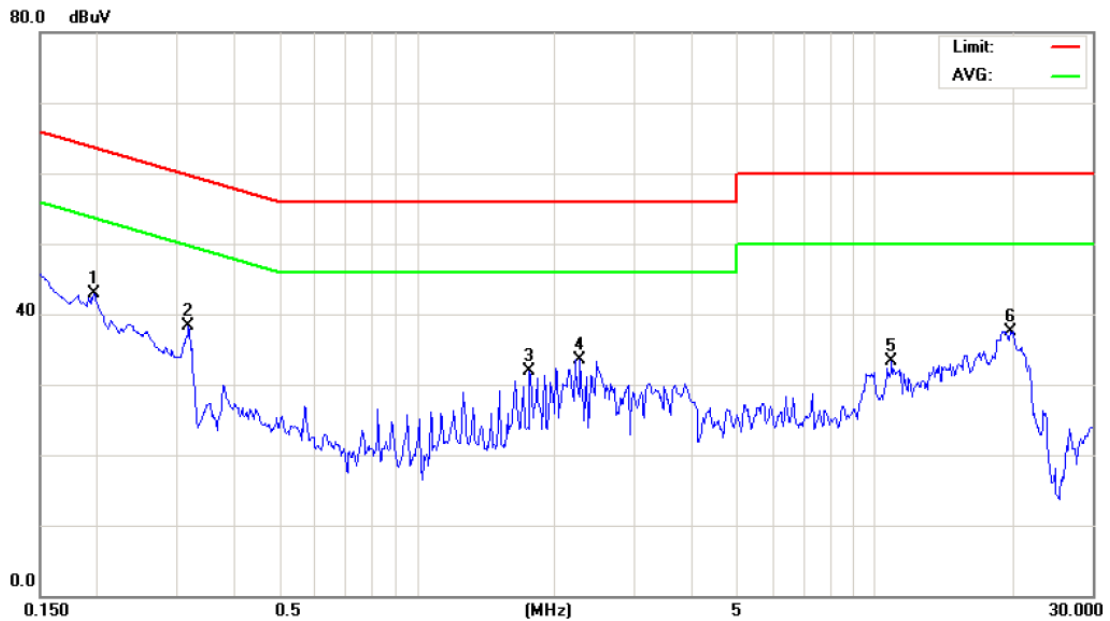
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1	*	0.1500	35.52	10.02	45.54	66.00	-20.46	QP
2		0.1853	33.25	10.03	43.28	64.24	-20.96	QP
3		2.2845	20.19	10.18	30.37	56.00	-25.63	QP
4		3.7993	25.04	10.20	35.24	56.00	-20.76	QP
5		9.3518	25.73	10.28	36.01	60.00	-23.99	QP
6		19.6354	26.91	10.49	37.40	60.00	-22.60	QP





EUT :	Bluetooth Speaker	Model Name. :	RV77-BT
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010hPa	Test Date :	2013-12-27
Test Mode :	Mode 2	Phase :	Neutral
Test Voltage :	120V/ 60Hz		

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1	*	0.1965	32.82	10.14	42.96	63.76	-20.80	QP
2		0.3165	28.09	10.14	38.23	59.80	-21.57	QP
3		1.7620	21.73	10.25	31.98	56.00	-24.02	QP
4		2.2726	23.23	10.27	33.50	56.00	-22.50	QP
5		10.9050	23.00	10.39	33.39	60.00	-26.61	QP
6		19.8445	26.99	10.50	37.49	60.00	-22.51	QP





4. RADIATED EMISSION MEASUREMENT

4.1 RADIATED EMISSION LIMIT

RADIATED EMISSION LIMITS (Below 1GHz)

CLASS B LIMIT		
FREQUENCY (MHz)	Field Strength (dBuV/m)	Measurement Distance (meters)
30 -88	40	3
88 -216	43.5	
216~960	46	
Above 960	54	

RADIATED EMISSION LIMITS (Above 1GHz)

FREQUENCY (MHz)	Class A (dBuV/m)(at 3 M)		Class B (dBuV/m)(at 3 M)	
	Peak	Average	Peak	Average
Above 1000	80	60	74	54

Note:

- (1) The limit for radiated test was performed according to FCC PART 15B.
- (2) The tighter limit applies at the band edges.
- (3) Emission Level(dBuV/m)=20log Emission Level(uV/m)
- (4) Peak detector limit is corresponding to 20 dB above the maximum permitted average limit.

According to FCC Part 15.33 (b), for an unintentional radiator, including a digital device, the spectrum shall be investigated from the lowest radio frequency signal generated or used in the device, without going below the lowest frequency for which radiated emission limit is specified, up to the frequency shown in the following table:

Highest frequency generated or used in the device or in which the device operated or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.75	30
1.75-108	1000
108-500	2000
500-1000	5000
Above 1000	5 th harmonic of the highest frequency or 40 GHz, whichever is lower

The following table is the setting of the spectrum

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10 th carrier harmonic
RB/ VB (emission in restricted band)	1MHz/ 3 MHz for Peak, 1MHz/ 10Hz for Average

4.2 TEST PROCEDURE

- The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- 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, above 1G Average detector mode will be instead.
- 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.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

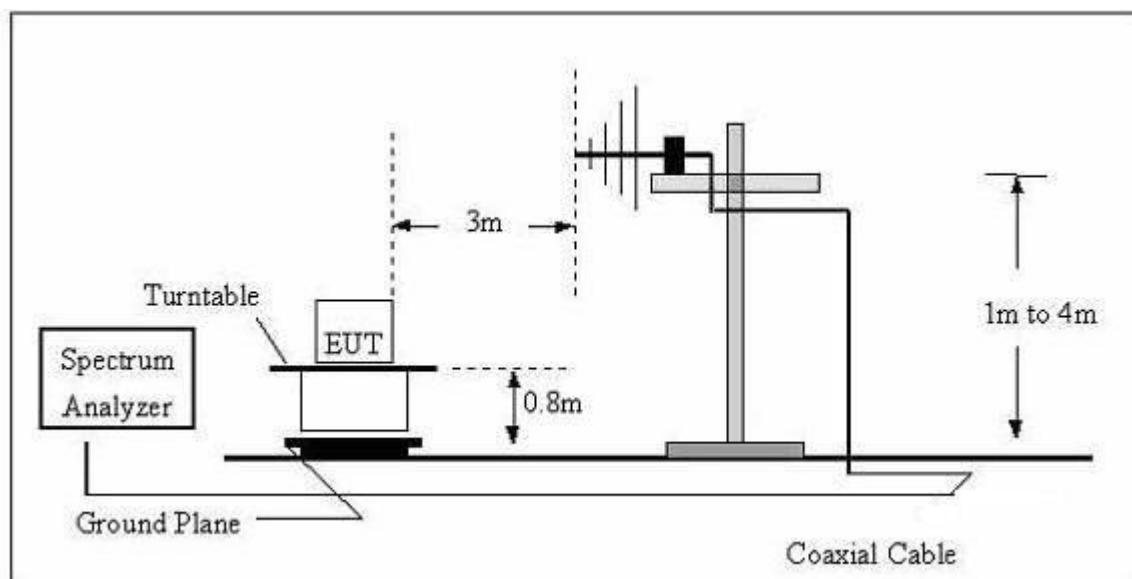
Note:

Both horizontal and vertical antenna polarities were tested.

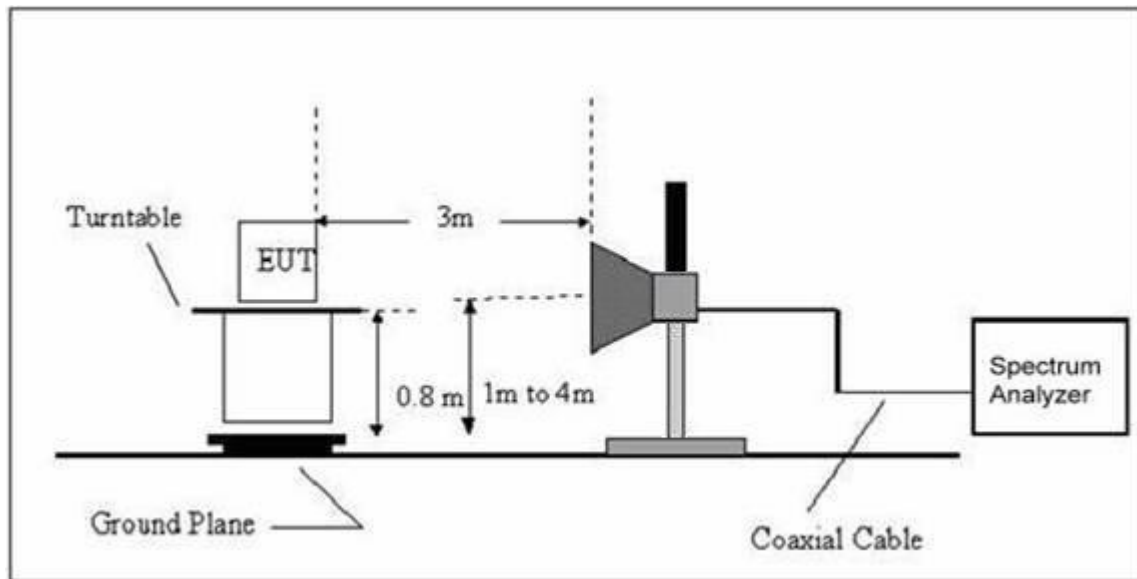
And performed pretest to three orthogonal axis. The worst case emissions were reported.

4.3 TEST SETUP

(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



(B) Radiated Emission Test Set-Up Frequency Above 1GHz



4.4 TEST INSTRUMENTS

Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
Broadband Antenna	R&S	VULB 9168	VULB 9168-456	Jul. 06, 2012	Jul. 05, 2014	1 year
Test Cable	N/A	R-01	N/A	Dec. 24, 2013	Dec. 23, 2014	1 year
Test Cable	N/A	R-02	N/A	Dec. 24, 2013	Dec. 23, 2014	1 year
EMI Test Receiver	R&S	ESCI	101324	Jul. 06, 2012	Jul. 05, 2014	1 year
Antenna Mast	EM	SC100_1	N/A	N/A	N/A	N/A
Turn Table	EM	SC100	060531	N/A	N/A	N/A
50Ω Switch	Anritsu Corp	MP59B	6200983705	Jul. 06, 2012	Jul. 05, 2014	1 year
Spectrum Analyzer	R&S	FSP40	100154	Jul. 06, 2012	Jul. 05, 2014	1 year
Horn Antenna	R&S	HF906	10029	Jul. 06, 2012	Jul. 05, 2014	1 year
Amplifier	EM	EM-30180	060538	Jul. 06, 2012	Jul. 05, 2014	1 year

4.5 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.



4.6 TEST RESULTS

4.6.1 TEST RESULTS (Bellow 1GHz)

EUT :	Bluetooth Speaker	Model Name. :	RV77-BT
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010hPa	Test Date :	2013-12-30
Test Mode :	Mode 1	Polarization :	Horizontal
Test Power :	DC 5V from PC		

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		173.9000	37.80	-4.19	33.61	43.50	-9.89	peak
2		235.3000	37.80	-4.03	33.77	46.00	-12.23	peak
3		325.5000	36.90	-1.23	35.67	46.00	-10.33	peak
4		472.4000	32.30	2.69	34.99	46.00	-11.01	peak
5		634.2000	30.70	6.36	37.06	46.00	-8.94	peak
6	*	754.9000	28.50	8.90	37.40	46.00	-8.60	peak

Remark:

Factor = Antenna Factor + Cable Loss.



EUT :	Bluetooth Speaker	Model Name. :	RV77-BT
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010hPa	Test Date :	2013-12-30
Test Mode :	Mode 1	Polarization :	Vertical
Test Power :	DC 5V from PC		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1		79.3000	37.98	-8.60	29.38	40.00	-10.62	peak
2		215.7000	40.31	-5.08	35.23	43.50	-8.27	peak
3		374.5600	34.90	0.17	35.07	46.00	-10.93	peak
4	*	583.2000	32.70	5.32	38.02	46.00	-7.98	peak
5		675.3000	29.70	7.19	36.89	46.00	-9.11	peak
6		785.2000	27.10	9.30	36.40	46.00	-9.60	peak

Remark:
Factor = Antenna Factor + Cable Loss.



EUT :	Bluetooth Speaker	Model Name. :	RV77-BT
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010hPa	Test Date :	2013-12-30
Test Mode :	Mode 3	Polarization :	Horizontal
Test Power :	DC 5V from PC		

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		45.6200	35.58	-4.70	30.88	40.00	-9.12	peak
2	*	58.6600	42.65	-5.47	37.18	40.00	-2.82	peak
3		95.8800	41.99	-8.88	33.11	43.50	-10.39	peak
4		192.5400	40.84	-6.59	34.25	43.50	-9.25	peak
5		358.6600	38.06	-1.33	36.73	46.00	-9.27	peak
6		489.5400	34.60	2.32	36.92	46.00	-9.08	peak

Remark:

Factor = Antenna Factor + Cable Loss.



EUT :	Bluetooth Speaker	Model Name. :	RV77-BT
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010hPa	Test Date :	2013-12-30
Test Mode :	Mode 3	Polarization :	Vertical
Test Power :	DC 5V from PC		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1	*	55.9500	38.35	-5.26	33.09	40.00	-6.91	peak
2		87.9400	36.95	-9.85	27.10	40.00	-12.90	peak
3		142.6500	34.87	-3.60	31.27	43.50	-12.23	peak
4		207.6600	39.11	-7.00	32.11	43.50	-11.39	peak
5		286.5500	35.52	-3.15	32.37	46.00	-13.63	peak
6		498.1100	33.88	2.47	36.35	46.00	-9.65	peak

Remark:

Factor = Antenna Factor + Cable Loss.



EUT :	Bluetooth Speaker	Model Name. :	RV77-BT
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010hPa	Test Date :	2013-12-30
Test Mode :	Mode 4	Polarization :	Horizontal
Test Power :	DC 3.7V		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1	*	78.3600	38.51	-8.66	29.85	40.00	-10.15	peak
2		123.6400	36.32	-4.85	31.47	43.50	-12.03	peak
3		187.5500	35.44	-6.16	29.28	43.50	-14.22	peak
4		226.3700	38.24	-5.85	32.39	46.00	-13.61	peak
5		336.8900	36.14	-1.90	34.24	46.00	-11.76	peak
6		414.7800	32.56	0.29	32.85	46.00	-13.15	peak

Remark:
Factor = Antenna Factor + Cable Loss.



EUT :	Bluetooth Speaker	Model Name. :	RV77-BT
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010hPa	Test Date :	2013-12-30
Test Mode :	Mode 4	Polarization :	Vertical
Test Power :	DC 3.7V		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1	*	54.6900	32.64	-5.15	27.49	40.00	-12.51	peak
2		106.5500	36.79	-6.92	29.87	43.50	-13.63	peak
3		178.3800	34.15	-4.92	29.23	43.50	-14.27	peak
4		223.5100	35.97	-6.03	29.94	46.00	-16.06	peak
5		346.9900	32.71	-1.63	31.08	46.00	-14.92	peak
6		487.7400	28.73	2.29	31.02	46.00	-14.98	peak

Remark:
Factor = Antenna Factor + Cable Loss.



4.6.2 TEST RESULTS (Above 1GHz)

EUT :	Bluetooth Speaker	Model Name. :	RV77-BT
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010hPa	Test Date :	2013-12-30
Test Mode :	Mode 4	Polarization :	Horizontal
Test Power :	DC 3.7V		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1		1602.120	51.29	-4.86	46.43	74.00	-27.57	peak
2	*	1602.120	36.09	-4.86	31.23	54.00	-22.77	AVG

Remark:

Factor = Antenna Factor + Cable Loss.



EUT :	Bluetooth Speaker	Model Name. :	RV77-BT
Temperature :	26 °C	Relative Humidity :	56%
Pressure :	1010hPa	Test Date :	2013-12-30
Test Mode :	Mode 4	Polarization :	Vertical
Test Power :	DC 3.7V		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1		1602.120	51.18	-4.86	46.32	74.00	-27.68	peak
2	*	1602.120	38.31	-4.86	33.45	54.00	-20.55	AVG

Remark:

Factor = Antenna Factor + Cable Loss.