TESTING
No. L2264

Part 15B

TEST REPORT

Product Name	gogo Sport Music Player
Model Name	GH-Bxxx(xxx represent Numbers, owing to the different sales areas)
FCC ID	2AEJBGH-B
Applicant	Beijing Guochengwantong Information Technology Co., Ltd.
Manufacturer	Tianjing Zhuoda Technology Development Co., Ltd.
Date of issue	August 5, 2015

TA Technology (Shanghai) Co., Ltd.

GENERAL SUMMARY

Reference Standard(s)	**FCC Code CFR47 Part15B (2013)** Radio frequency device. **ANSI C63.4 (2014)** Methods of Measurement of Radio-Noise Emission from Low-Voltage Electrical and Electronic Equipment in the Range of 9 KHz to 40GHz.
Conclusion	This portable wireless equipment has been measured in all cases requested by the relevant standards. Test results in Chapter 2 of this test report are below limits specified in the relevant standards. General Judgment : **Pass**
Comment	The test result only responds to the measured sample.

Approved by Guangchang Fan	**Revised by** Wei Liu	**Performed by** Xianqing Li
Guangchang Fan	Jiangpeng Lan	Xianqing Li
Director	EMC Manager	EMC Engineer

TABLE OF CONTENT

1. General Information

1.1. Notes of the test report

TA Technology (Shanghai) Co., Ltd. has obtained the accreditation of China National Accreditation Service for Conformity Assessment (CNAS), and accreditation number: L2264.

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements. The site recognition number is 428261.

TA Technology (Shanghai) Co., Ltd. has been listed by industry Canada to perform electromagnetic emission measurement. The site recognition number is 8510A.

TA Technology (Shanghai) Co., Ltd. guarantees the reliability of the data presented in this test report, which is the results of measurements and tests performed for the items under test on the date and under the conditions stated in this test report and is based on the knowledge and technical facilities available at TA Technology (Shanghai) Co., Ltd. at the time of execution of the test.

TA Technology (Shanghai) Co., Ltd. is liable to the client for the maintenance by its personnel of the confidentiality of all information related to the items under test and the results of the test. The sample under test was selected by the Client.This report only refers to the item that has undergone the test.

The test results in this test report relate only to the devices specified in this report.This report shall not be reproduced except in full without the written approval of **TA Technology (Shanghai) Co., Ltd.**

If the electronic report is inconsistent with the printed one, it should be subject to the latter.

1.2. Testing laboratory

Company: TA Technology (Shanghai) Co., Ltd.

Address: No.145, Jintang Rd, Tangzhen Industry Park, Pudong

City: Shanghai

Post code: 201201

Country: P. R. China

Contact: Xu Kai

Telephone: +86-021-50791141/2/3

Fax: +86-021-50791141/2/3-8000

Website: http://www.ta-shanghai.com

E-mail: xukai@ta-shanghai.com

1.3. Applicant Information

Company: Beijing Guochengwantong Information Technology Co., Ltd

Address: 16F,Tower B, Ding Hao Building,No.3 Haidian Street,Haidian District
Beijing
P.R. China

1.4. Manufacturer Information

Company: Tianjing Zhuoda Technology Development Co., Ltd

Address: Xinye Street One,Western Economic and Technology Development Zone
Tianjin
P.R. China

1.5. Information of EUT

General information

Product IMEI:	17000002
Hardware Version:	V0.5
Software Version:	V0.7
Antenna Type:	Internal Antenna
Used Host Product:	Lenovo X61
Test Mode:	Transfer Mode

Ancillary equipment information

Equipment	SN:	Manufacturer
Lenovo X61	L3-D1224	/
USB cable	/	/

Auxiliary Equipment Details

Name	Model	Manufacturer	Cpacity
Battery	ICS651317	Zeni Power Co., Ltd	100mAh
Charger	GH-Bxxx(xxx represent Numbers, owing to the different sales areas)	Tianjing Zhuoda Technology Development Co., Ltd.	/

1.6. Test Date

The test is performed from July 20, 2015 to August 1, 2015.

2. Test Information

2.1. Summary of test results

Number	Test Case	Clause in FCC Rules	conclusion
1	Radiated Emission	15.109, ANSI C63.4-2014	PASS
2	Conducted Emission	15.107, ANSI C63.4-2014	PASS

2.2. Radiated Emission

Ambient condition

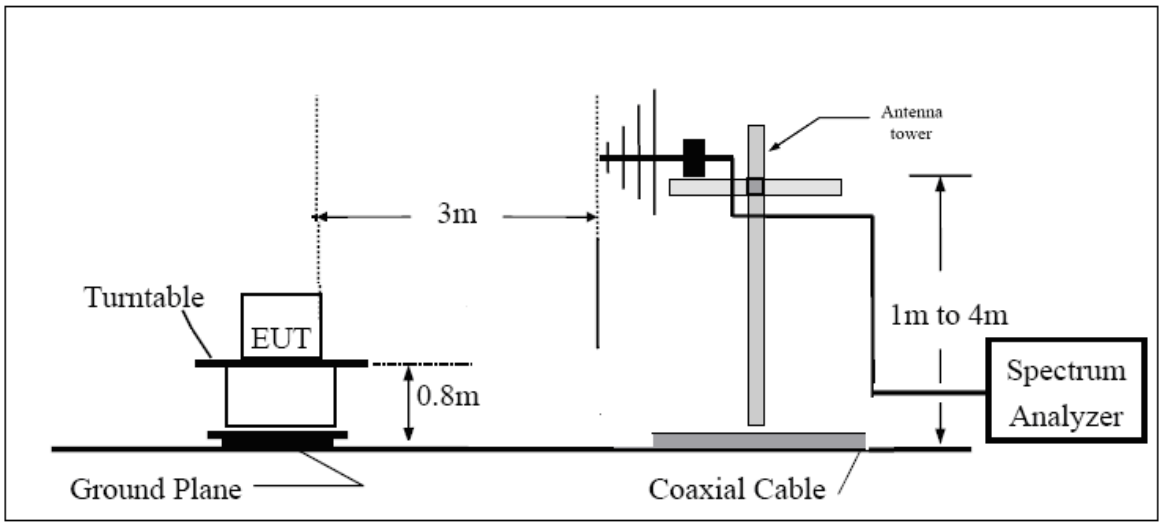
Temperature	Relative humidity	Pressure
24°C~26°C	45%~50%	102.5kPa

Methods of Measurement

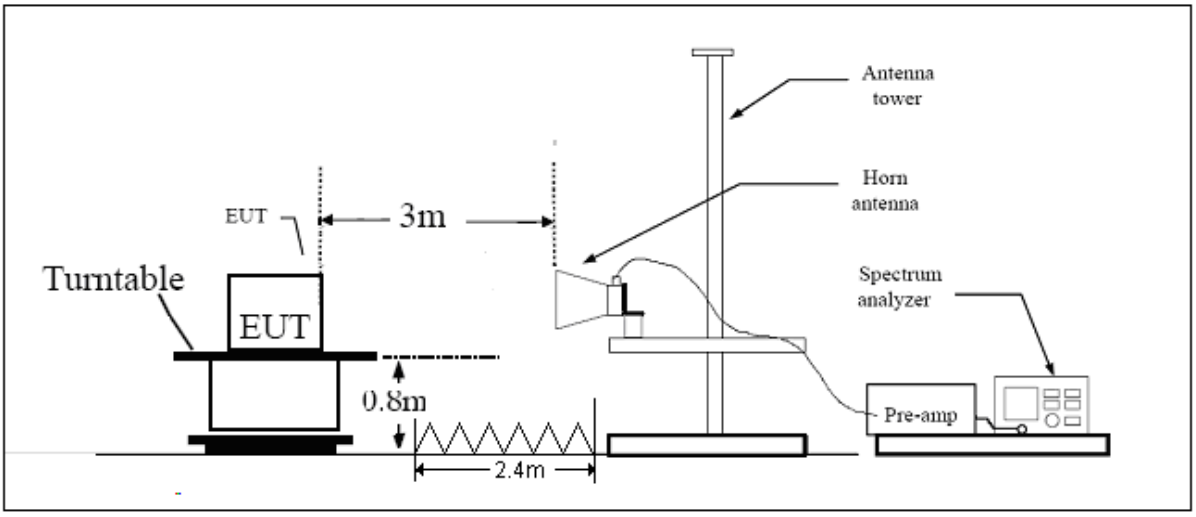
The EUT is placed on a non-metallic table 0.8m above the horizontal metal reference ground plane. The distance between EUT and receive antenna should be 3 meters. During the test, the EUT was operating in its typical mode. The test method is according to ANSI C63.4-2014. Sweep the whole frequency band through the range from 30MHz to the 5th harmonic of the carrier. During the test, the height of receive antenna shall be moved from 1 to 4 meters, and the antenna shall be performed under horizontal and vertical polarization. The turn table shall be rotated from 0 to 360 degrees for detecting the maximum of radiated signal level. During the test, EUT is connected to a laptop via a USB cable in the case of USB mode. The EUT is used as the peripheral equipment of the PC. The model of laptop is Lenovo X61 and the serial number of laptop is L3-D1224
The data is transferred from EUT to PC; PC is connected to server via a long LAN cable.
The data of cable loss and antenna factor has been calibrated in full testing frequency range before the testing. During the test, the EUT is worked at maximum output power.
Set the spectrum analyzer in the following:
Below 1GHz (detector: Peak and Quasi-Peak)
RBW=100kHz / VBW=300kHz / Sweep=AUTO
Above 1GHz(detector: Peak and Average):
RBW=1MHz VBW=3MHz/ Sweep=AUTO

Test Setup

Below 1GHz



Above 1GHz



Note: Area side:2.4mX3.6m

Limits

Frequency (MHz)	Field Strength (dBμV/m)	Detector
30 -88	40.0	Quasi-peak
88-216	43.5	Quasi-peak
216 – 960	46.0	Quasi-peak
960-1000	54.0	Quasi-peak
1000-5th harmonic of the highest frequency or 40GHz,which is lower	54 74	Average Peak

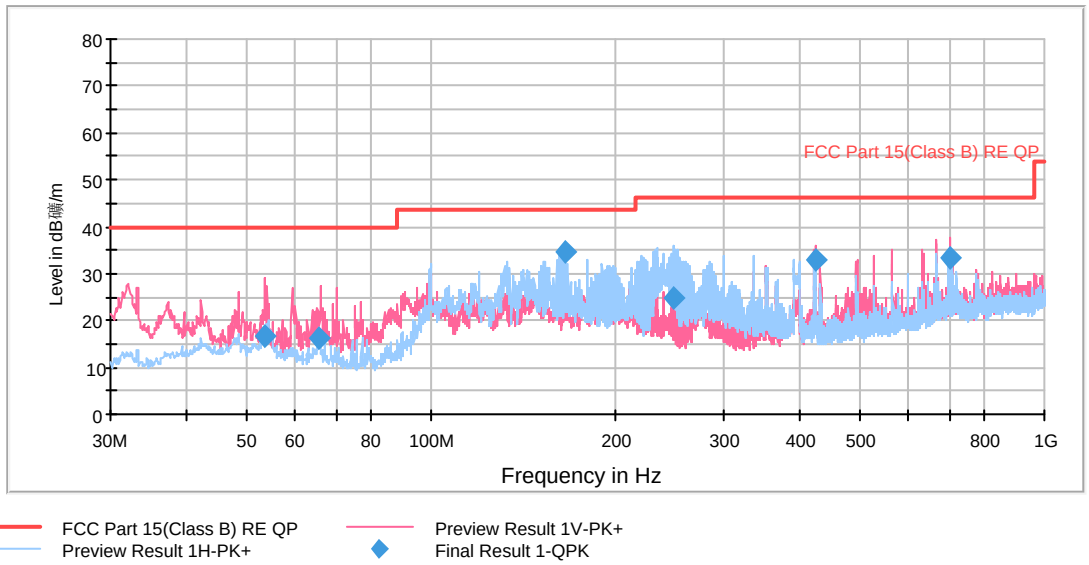
Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor *k* = 1.96. U= 3.92 dB.

Test Results

Transfer Mode

RE 30M-1GHz QP



Note: This graph displays the maximum values of horizontal and vertical by software.

Note: a font (Level in dBµV/m)in the test plot =(level in dBuv/m)

Radiated Emission from 30MHz to 1GHz

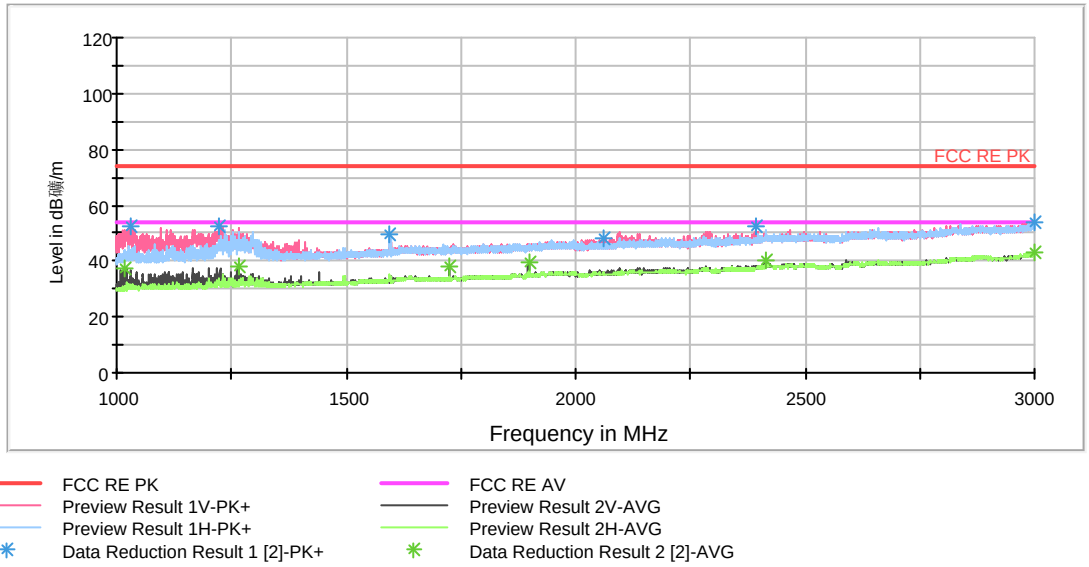
Frequency (MHz)	Quasi-Peak (dBuV/m)	Reading value (dBuV/m	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
53.508694	16.6	37.3	100.0	V	282.0	-20.7	23.4	40.0
65.846222	16.1	40.4	100.0	V	294.0	-24.3	23.9	40.0
165.986447	34.6	62.9	125.0	H	334.0	-28.3	8.9	43.5
248.874250	24.7	49.5	100.0	H	294.0	-24.8	21.3	46.0
424.123250	33.0	53.7	121.0	V	224.0	-20.7	13.0	46.0
704.109500	33.3	48.3	100.0	V	151.0	-15.0	12.7	46.0

Remark: 1. Quasi-Peak = Reading value + Correction factor

2. Correction Factor = Antenna factor+ Insertion loss(cable loss+amplifier gain)

3. Margin = Limit – Quasi-Peak

RE 1G-3GHz PK+AV



This graph displays the maximum values of horizontal and vertical by software.

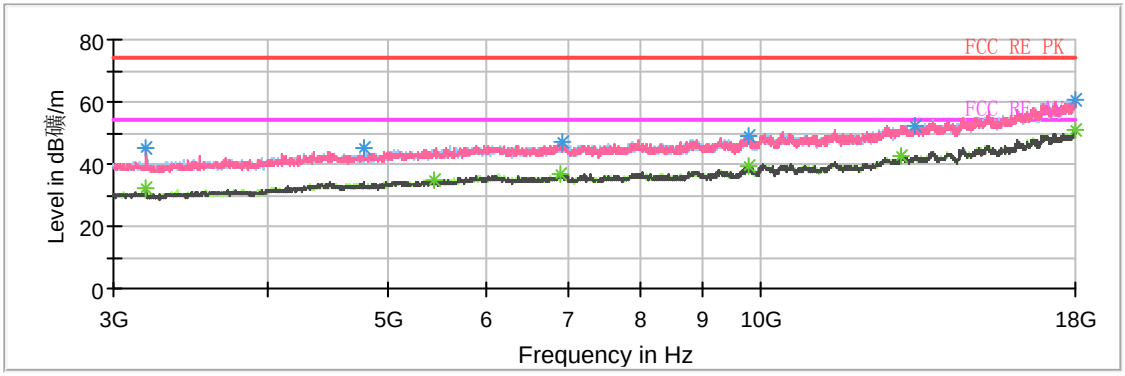
Note: a font (Level in dBµV/m) in the test plot =(level in dBuv/m)

Radiated Emission from 1GHz to 3GHz

Frequency (MHz)	Peak (dBuV/m)	Reading value (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1016.500000	50.5	59.7	100.0	V	97.0	-9.2	23.5	74
1268.250000	48.6	56.3	100.0	V	97.0	-7.7	25.4	74
1725.000000	44.8	49.8	100.0	V	6.0	-5.0	29.2	74
1897.500000	46.3	50.2	100.0	V	252.0	-3.9	27.7	74
2415.000000	48.9	49.5	100.0	V	338.0	-0.6	25.1	74
2998.500000	53.6	55.9	100.0	H	0.0	-2.3	20.4	74

Frequency (MHz)	Average (dBuV/m)	Reading value (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1016.500000	37.7	46.9	100.0	V	97.0	-9.2	16.3	54
1268.250000	37.9	45.6	100.0	V	97.0	-7.7	16.1	54
1725.000000	37.9	42.9	100.0	V	6.0	-5.0	16.1	54
1897.500000	39.4	43.3	100.0	V	252.0	-3.9	14.6	54
2415.000000	39.9	40.5	100.0	V	338.0	-0.6	14.1	54
2998.500000	42.8	45.1	100.0	H	0.0	-2.3	11.2	54

RE 3-18GHz PK+AV



FCC RE PK
Preview Result 1H-PK+
Preview Result 1V-PK+
Data Reduction Result 1 [1]-PK+
FCC RE AV
Preview Result 2H-AVG
Preview Result 2V-AVG
Data Reduction Result 2 [1]-AVG

This graph displays the maximum values of horizontal and vertical by software.
Note: a font (Level in dB磺/m)in the test plot =(level in dBuv/m)
Radiated Emission from 3GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Reading value (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3189.375000	45.3	47.0	100.0	V	346.0	-1.7	28.7	74
5448.750000	44.3	48.1	100.0	V	46.0	-3.8	29.7	74
6905.625000	45.3	52.2	100.0	V	279.0	-6.9	28.7	74
9781.875000	48.4	60.5	100.0	V	0.0	-12.1	25.6	74
13014.375000	51.8	68.0	100.0	V	46.0	-16.2	22.2	74
17994.375000	59.4	84.7	100.0	H	130.0	-25.3	14.6	74

Frequency (MHz)	Average (dBuV/m)	Reading value (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3189.375000	32.2	33.9	100.0	V	346.0	-1.7	21.8	54
5448.750000	34.8	38.6	100.0	V	46.0	-3.8	19.2	54
6905.625000	36.9	43.8	100.0	V	279.0	-6.9	17.1	54
9781.875000	39.1	51.2	100.0	V	0.0	-12.1	14.9	54
13014.375000	42.7	58.9	100.0	V	46.0	-16.2	11.3	54
17994.375000	51.2	76.5	100.0	H	130.0	-25.3	2.8	54

2.3. Conducted Emission

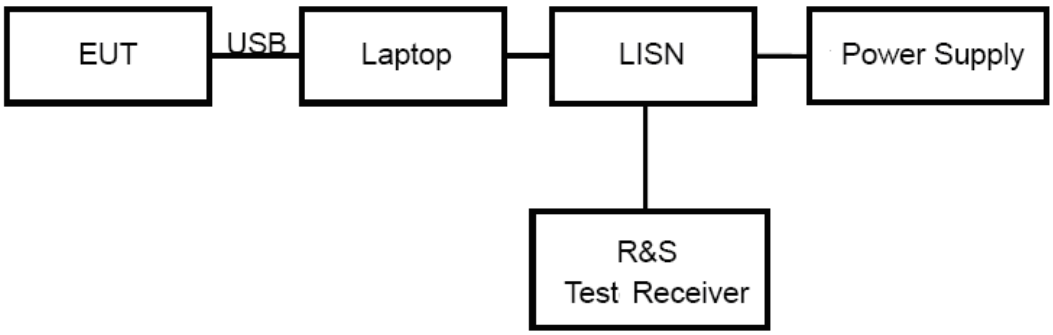
Ambient condition

Temperature	Relative humidity	Pressure
24°C ~26°C	50%~55%	102.5kPa

Methods of Measurement

The EUT is placed on a non-metallic table of 80cm height above the horizontal metal reference ground plane. During the test, the EUT was operating in its typical mode. The test method is according to ANSI C63.4-2014. Connect the AC power line of the EUT to the L.I.S.N. Use EMI receiver to detect the average and Quasi-peak value. RBW is set to 9 kHz, VBW is set to 30kHz.The measurement result should include both L line and N line. During the test, EUT is connected to a laptop via a USB cable in the case of USB mode. The EUT is used as the peripheral equipment of the PC. The model of laptop is Lenovo X61 and the serial number of laptop is L3-D1224

Test Setup



Note: Power Supply is AC Power source and it is used to the voltage 120V/60Hz.

Limits

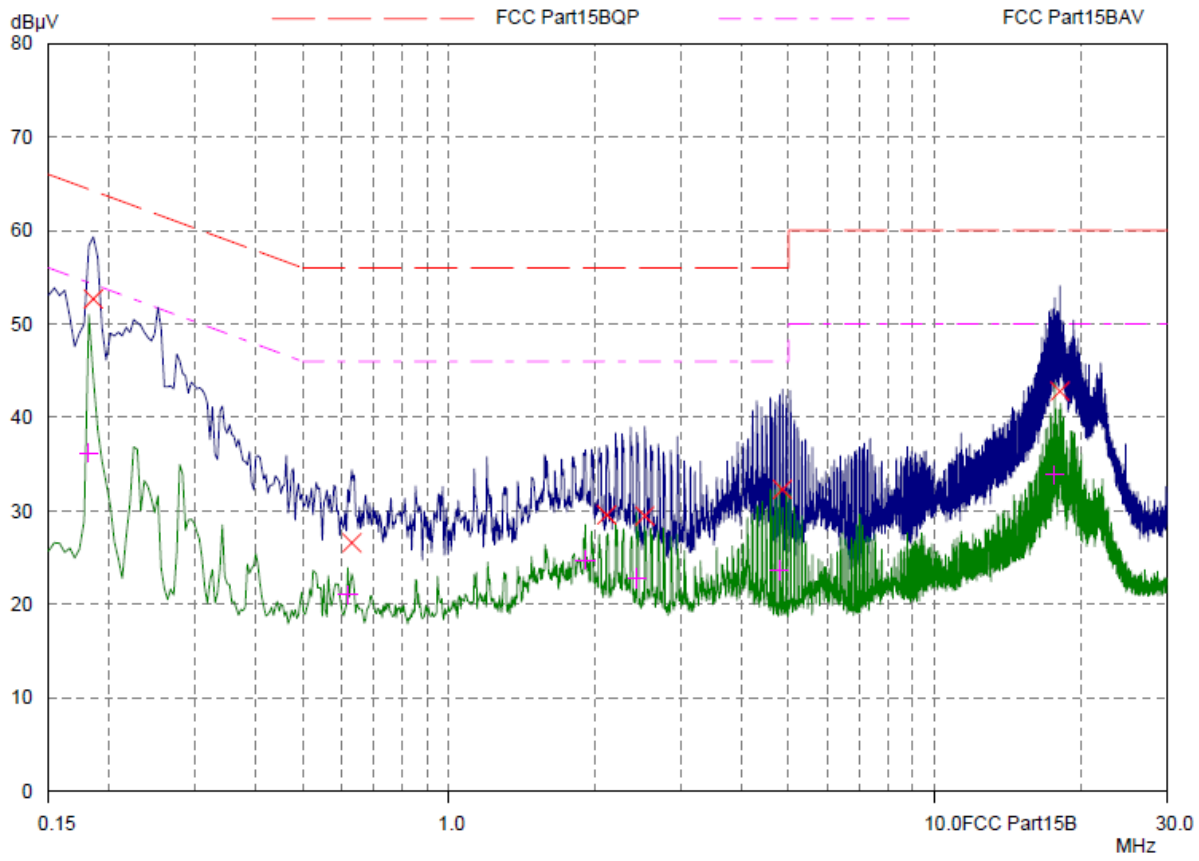
Frequency (MHz)	Conducted Limits(dBμV)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56 *	56 to 46*
0.5 - 5	56	46
5 - 30	60	50
*: Decreases with the logarithm of the frequency.		

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor *k* = 1.96. U= 2.69 dB.

Test Results

Transfer Mode



Final Measurement Results

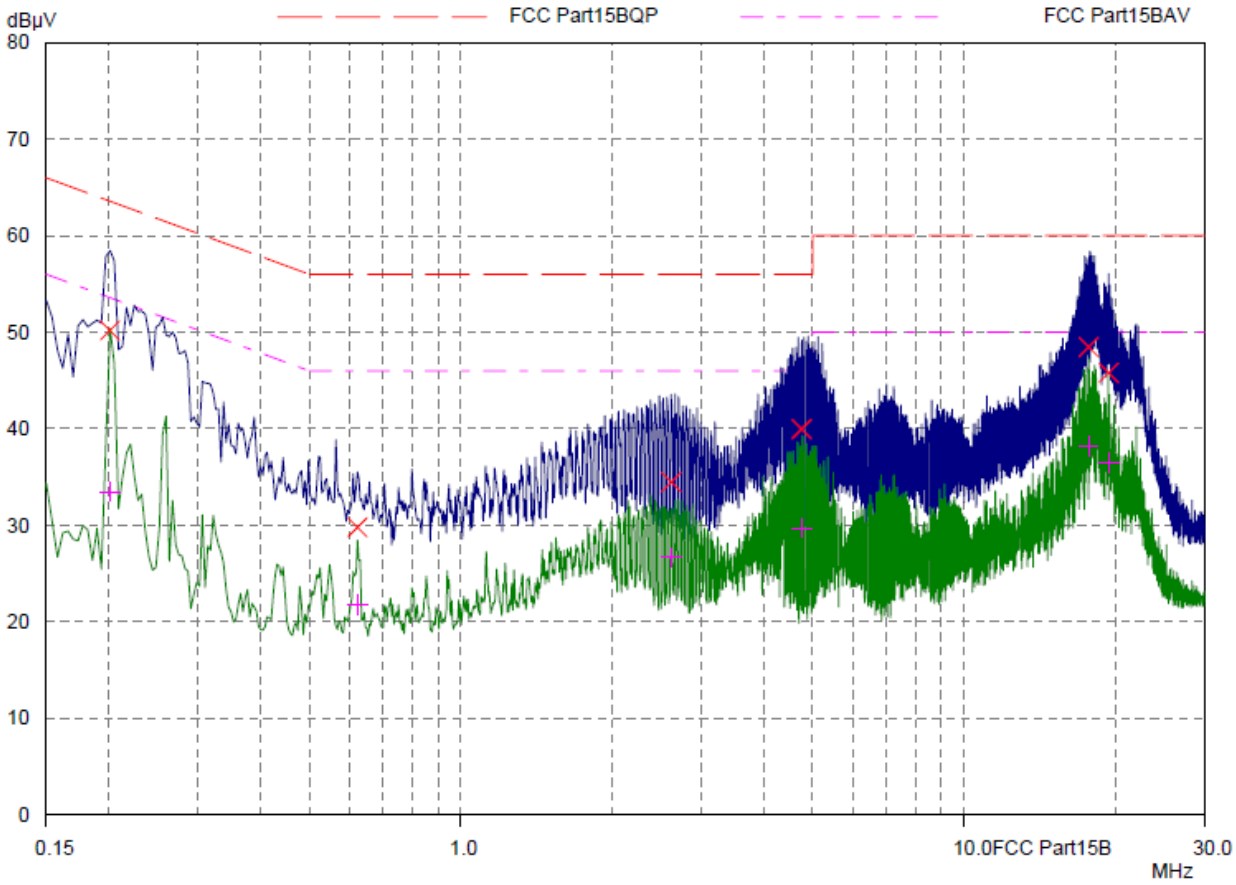
Frequency MHz	QP Level dBµV	QP Limit dBµV	QP Delta dB	Phase -	PE -
0.18515	52.67	64.25	11.58	L1	gnd
0.63046	26.58	56.00	29.42	L1	gnd
2.11093	29.58	56.00	26.42	L1	gnd
2.5289	29.47	56.00	26.53	L1	gnd
4.85703	32.32	56.00	23.68	L1	gnd
18.0875	42.81	60.00	17.19	L1	gnd

Frequency MHz	AV Level dBµV	AV Limit dBµV	AV Delta dB	Phase -	PE -
0.18125	36.22	54.43	18.21	L1	gnd
0.61875	21.04	46.00	24.96	L1	gnd
1.90781	24.74	46.00	21.26	L1	gnd
2.43515	22.81	46.00	23.19	L1	gnd
4.78281	23.70	46.00	22.30	L1	gnd
17.65	33.85	50.00	16.15	L1	gnd

Note: Blue trace uses the peak detection Green trace uses the average detection

Conducted Emission from 150 KHz to 30 MHz

L line



Final Measurement Results

Frequency MHz	QP Level dBµV	QP Limit dBµV	QP Delta dB	Phase -	PE -
0.20078	50.20	63.58	13.38	N	gnd
0.62265	29.78	56.00	26.22	N	gnd
2.61484	34.49	56.00	21.51	N	gnd
4.75546	39.98	56.00	16.02	N	gnd
17.67734	48.46	60.00	11.54	N	gnd
19.37265	45.79	60.00	14.21	N	gnd

Frequency MHz	AV Level dBµV	AV Limit dBµV	AV Delta dB	Phase -	PE -
0.20078	33.49	53.58	20.09	N	gnd
0.62265	21.81	46.00	24.19	N	gnd
2.61484	26.68	46.00	19.32	N	gnd
4.75546	29.71	46.00	16.29	N	gnd
17.67734	38.19	50.00	11.81	N	gnd
19.37265	36.51	50.00	13.49	N	gnd

Note: Blue trace uses the peak detection Green trace uses the average detection

Conducted Emission from 150 KHz to 30 MHz

N line

3. Main Test Instruments

No.	Name	Type	Manufacturer	Serial Number	Calibration Date	Expiration Time	Valid Period
01	EMI Test Receiver	ESCI	R&S	100948	2015-06-27	2016-06-26	1 year
02	Trilog Antenna	VULB 9163	SCHWARZBECK	9163-201	2013-06-19	2016-06-18	3 years
03	Signal Analyzer	FSV30	R&S	100815	2015-06-27	2016-06-26	1 year
04	Horn Antenna	HF907	R&S	100126	2015-06-30	2018-06-29	3 years
05	EMI Test Receiver	ESCS30	R&S	100138	2015-01-13	2016-01-12	1 year
06	LISN	ENV216	R&S	101171	2015-04-11	2016-04-10	1 year

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

ANNEX A： The EUT Appearance and Test Setup

A.1 EUT Appearance

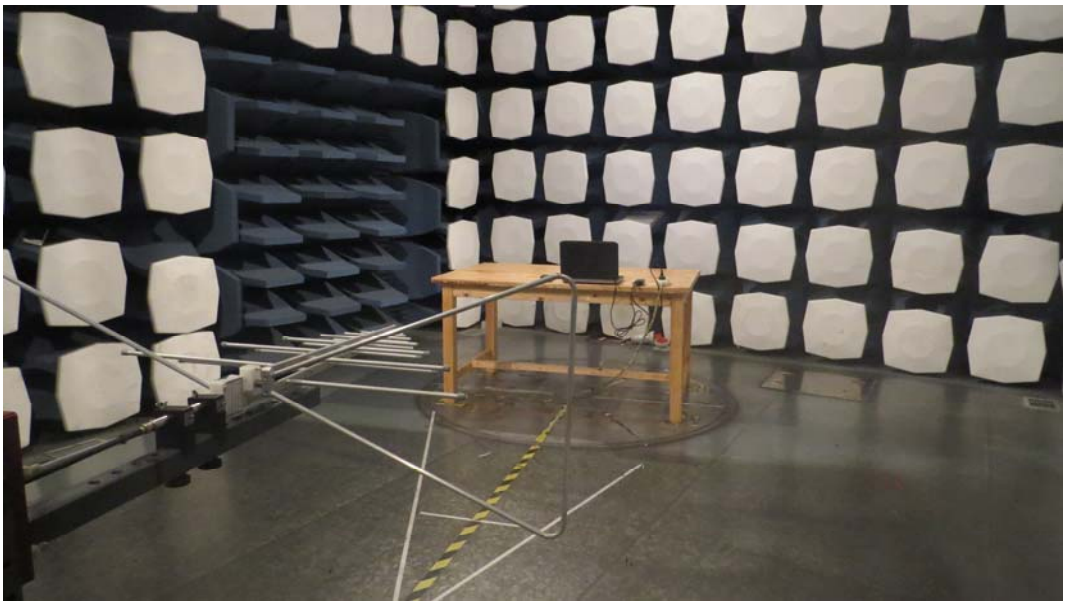
a: EUT

b: Adapter

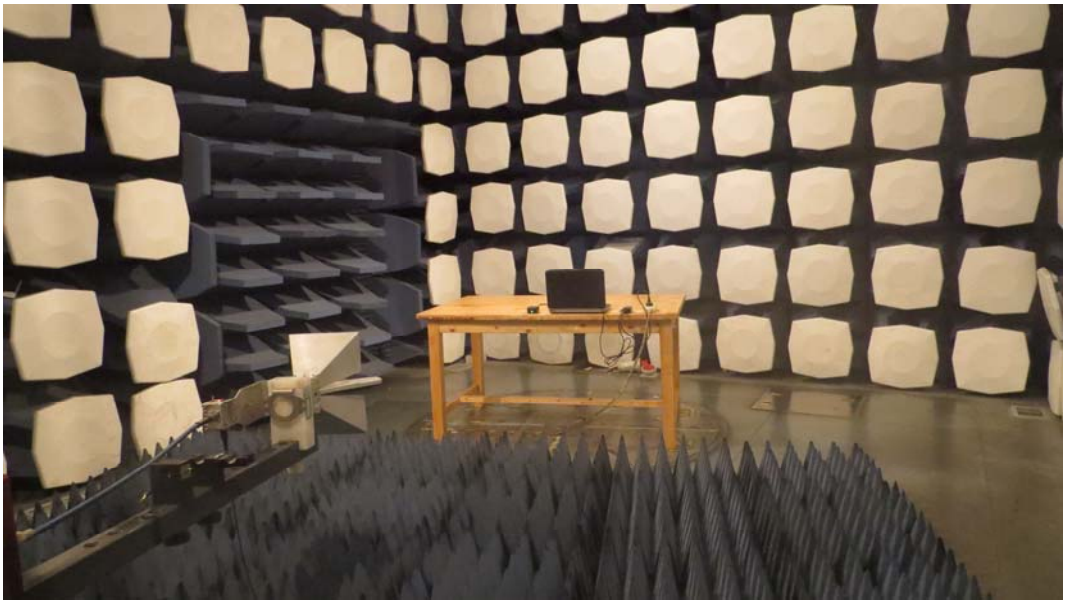
C : Accessory

Picture 1 EUT

A.2 Test Setup



a: Below 1GHz



b: Above 1GHz

Picture 2 Radiated Emission Test Setup

Picture 3 Conducted Emission Test Setup