

**FCC RF Test Report** 

APPLICANT : Lenovo Mobile Communication Technology Ltd.

**EQUIPMENT**: Mobile Phone GSM/WCDMA

BRAND NAME : lenovo

MODEL NAME : Lenovo S820

MARKETING NAME: Mobile Phone GSM/WCDMA

MID : 82000011 FCC ID : YCNS820

STANDARD : FCC Part 15 Subpart C §15.247

CLASSIFICATION : (DTS) Digital Transmission System

The product was received on Apr. 25, 2013 and completely tested on Jun. 06, 2013. We, SPORTON INTERNATIONAL (SHENZHEN) INC., would like to declare that the tested sample has been evaluated in accordance with the procedures and shown the compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL (SHENZHEN) INC., the test report shall not be reproduced except in full.

Reviewed by:

Jones Tsai / Manager



Report No.: FR342509B

# SPORTON INTERNATIONAL (SHENZHEN) INC.

No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan warehouse, Nanshan District, Shenzhen, Guangdong, P.R.C.

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**REVISION HISTORY** 

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR342509B	Rev. 01	Initial issue of report	Jun. 14, 2013

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**SUMMARY OF TEST RESULT** 

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.247(a)(2)	6dB Bandwidth	≥ 0.5MHz	Pass	-
3.2	15.247(b)(1)	Peak Output Power	≤ 30dBm	Pass	-
3.5	15.247(e)	Power Spectral Density	≤ 8dBm	Pass	-
3.4	15.247(d)	Conducted Band Edges and Spurious Emission	≤ 20dBc	Pass	-
3.5	15.247(d)	Radiated Band Edges and Spurious Emission	15.209(a) & 15.247(d)	Pass	Under limit 8.9 dB at 2483.500 MHz
3.6	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 5.00 dB at 0.490 MHz
3.7	15.203 & 15.247(b)	Antenna Requirement	N/A	Pass	-

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1 General Description

# 1.1 Applicant

## Lenovo Mobile Communication Technology Ltd.

No.999, Qishan North 2nd Road, Information & Optoelectronics Park, Torch Hi-tech Industry Development Zone, Xiamen, P.R.China

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## 1.2 Manufacturer

## **Lenovo PC HK Limited**

23/F, Lincoln House, Taikoo Place 979 King's Road, Quarry Bay, Hong Kong

# 1.3 Feature of Equipment Under Test

Product Feature				
Equipment Mobile Phone GSM/WCDMA				
Brand Name	lenovo			
Model Name	Lenovo S820			
Marketing Name	Mobile Phone GSM/WCDMA			
MID	82000011			
FCC ID YCNS820				
FUT aumonte Dadice application	GSM/GPRS/EGPRS/WCDMA/HSPA/HSPA+/DC-HSDPA/			
EUT supports Radios application	WLAN 11bgn/Bluetooth/Bluetooth v4.0 - LE			
HW Version	Swarovski_MB_H301			
SW Version	Lenovo S820_ROW_S104_130514			
EUT Stage Production Unit				

**Remark:** The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

# 1.4 Product Specification of Equipment Under Test

Product Specification subjective to this standard			
Tx/Rx Frequency Range	2402 MHz ~ 2480 MHz		
Number of Channels	40		
Carrier Frequency of Each Channel	2402+n*2 MHz; n=0~39		
Maximum Output Power to Antenna	Bluetooth v4.0 - LE : 1.07 dBm (0.0013 W)		
Antenna Type	PIFA Antenna type with gain 1 dBi		
Type of Modulation	Bluetooth v4.0 - LE : GFSK		

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# 1.5 Testing Site

Test Site	SPORTON INTERNATIONAL (SHENZHEN) INC.				
Test Site Location	No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan warehouse, Nanshan District, Shenzhen, Guangdong, P.R.C.				
	TEL: +86-755- 3320-2398				
Test Site No.		Sporton Site No	•	FCC/IC Registration No.	
rest Site No.	TH01-SZ	03CH01-SZ	CO01-SZ	831040/4086F-1	

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The test site complies with ANSI C63.4 2003 requirement.

# 1.6 Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart C §15.247
- FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r01
- ANSI C63.10-2009

### Remark:

- All test items were verified and recorded according to the standards and without any deviation during the test.
- 2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

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2 Test Configuration of Equipment Under Test

# 2.1 Descriptions of Test Mode

The RF output power was recorded in the following table:

		Bluetooth 4.0 – LE RF Output Power
Channel	Гиа жиза m ач.	Data Rate / Modulation
Chamilei	Frequency	GFSK
		1Mbps
Ch00	2402MHz	1.02 dBm
Ch19	2440MHz	1.05 dBm
Ch39	2480MHz	<b>1.07</b> dBm

- a. The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 and ANSI C63.10-2009 and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction (150 KHz to 30 MHz), radiation (9 KHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). Pre-scanned tests, X, Y, Z in three orthogonal panels to determine the final configuration (Y plane as worst plane) from all possible combinations.
- b. AC power line Conducted Emission was tested under maximum output power.

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# 2.2 Test Mode

The following summary table is showing all test modes to demonstrate in compliance with the standard.

	Summary table of Test Cases					
Test Item	Data Rate / Modulation					
rest item	Bluetooth 4.0 – LE / GFSK					
Conducted	Mode 1: Bluetooth Tx CH00_2402 MHz_1Mbps					
TCs	Mode 2: Bluetooth Tx CH19_2440 MHz_1Mbps					
105	Mode 3: Bluetooth Tx CH39_2480 MHz_1Mbps					
Radiated	Mode 1: Bluetooth Tx CH00_2402 MHz_1Mbps					
TCs	Mode 2: Bluetooth Tx CH19_2440 MHz_1Mbps					
105	Mode 3: Bluetooth Tx CH39_2480 MHz_1Mbps					
AC	Mode 1 :GSM850 Idle + Bluetooth Link + WLAN Link + USB Cable 1 (Charging from					
Conducted	Adapter) + Earphone					
Emission	Adapter) · Larphone					

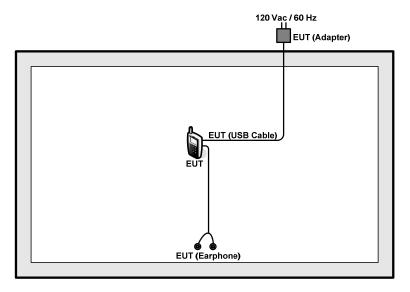
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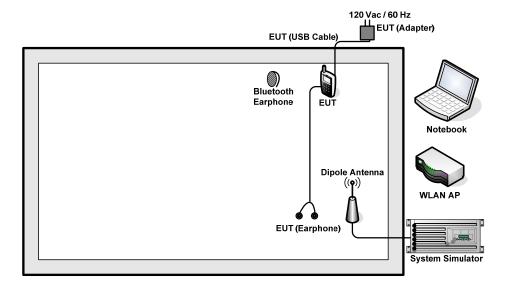
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#### **Connection Diagram of Test System** 2.3

# <Bluetooth 4.0 - LE Tx Mode>



## <AC Conducted Emission Mode>



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# 2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	Agilent	E5515C	N/A	N/A	Unshielded, 1.8 m
2.	DC Power Supply	TOPWORD	3303DR	N/A	N/A	Unshielded, 1.8 m
3.	WLAN AP	D-Link	DIR-612	N/A	N/A	Unshielded, 1.8 m
4.	Notebook	Lenovo	G480	PPD-AR5B195	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
5.	Bluetooth Earphone	Lenovo	LBH301	N/A	N/A	N/A

# 2.5 Description of RF Function Operation Test Setup

For Bluetooth function, key in "# # # 7820 #" on the EUT directly. Then, the EUT will get into the engineering modes to contact with Bluetooth base station for continuous transmitting and receiving signals.

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# 2.6 Measurement Results Explanation Example

## For conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and 10dB attenuator between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss and 10dB attenuator factor.

Offset = RF cable loss + attenuator factor.

Following table shows an offset computation example with cable loss 7.5 dB.

# Example:

 $Offset(dB) = RF \ cable \ loss(dB) + attenuator \ factor(dB).$ 

= 7.5 + 10 = 17.5(dB)

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# 3 Test Result

## 3.1 6dB Bandwidth Measurement

## 3.1.1 Limit of 6dB Bandwidth

The minimum 6 dB bandwidth shall be at least 500 KHz.

# 3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

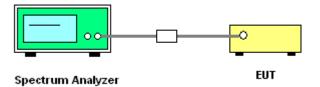
## 3.1.3 Test Procedures

- 1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r01.
- 2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.

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- 3. Set to the maximum power setting and enable the EUT transmit continuously.
- 4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6 dB bandwidth must be greater than 500 KHz.
- 5. Measure and record the results in the test report.

## 3.1.4 Test Setup



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## 3.1.5 Test Result of 6dB Bandwidth

Test Mode :	Bluetooth 4.0 - LE	Temperature :	<b>24~26</b> ℃
Test Engineer :	Blithe Li	Relative Humidity :	50~53%

Channel	Frequency (MHz)	6dB Bandwidth (MHz)
00	2402	0.678
19	2440	0.680
39	2480	0.686

## 6 dB Bandwidth Plot on Channel 00



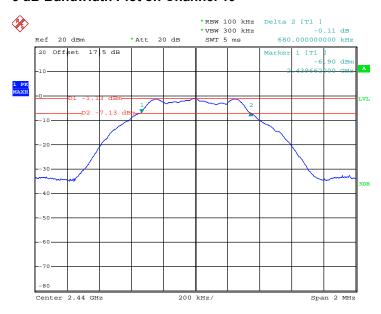
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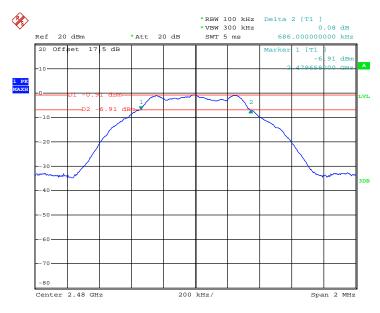
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## 6 dB Bandwidth Plot on Channel 19



Date: 31.MAY.2013 12:49:08

## 6 dB Bandwidth Plot on Channel 39



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# 3.2 Peak Output Power Measurement

## 3.2.1 Limit of Peak Output Power

For systems using digital modulation in the 2400-2483.5MHz, the limit for peak output power is 30dBm. If transmitting antenna of directional gain greater than 6dBi is used, the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

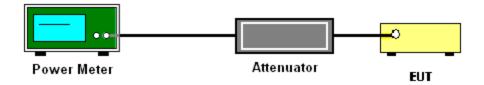
## 3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

### 3.2.3 Test Procedures

- The testing follows the Measurement Procedure of FCC KDB No. 558074 D01 DTS Meas. Guidance v03r01.
- 2. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
- 3. Set to the maximum power setting and enable the EUT transmit continuously.
- 4. Measure the conducted output power and record the results in the test report.

## 3.2.4 Test Setup



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# FCC RF Test Report

# 3.2.5 Test Result of Peak Output Power

Test Mode :	Bluetooth 4.0 - LE	Temperature :	<b>24~26</b> ℃
Test Engineer :	Blithe Li	Relative Humidity :	50~53%

Francis		RF Power (dBm)				
Channel	Frequency GFSK (MHz)		Max. Limits	Dece/Feil		
	(WITZ)	1 Mbps	(dBm)	Pass/Fail		
00	2402	1.02	30.00	Pass		
19	2440	1.05	30.00	Pass		
39	2480	1.07	30.00	Pass		

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3.3 Power Spectral Density Measurement

## 3.3.1 Limit of Power Spectral Density

The peak power spectral density shall not be greater than 8dBm in any 3KHz band at any time interval of continuous transmission.

## 3.3.2 Measuring Instruments

See list of measuring instruments of this test report.

## 3.3.3 Test Procedures

- The testing follows Measurement Procedure 10.2 Option 1 of FCC KDB Publication No. 558074
   D01 DTS Meas. Guidance v03r01
- 2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
- 3. Set to the maximum power setting and enable the EUT transmit continuously.
- 4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz. Video bandwidth VBW = 10 kHz In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW)
- 5. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level.
- 6. Measure and record the results in the test report.
- 7. The Measured power density (dBm)/ 100KHz is a reference level and used as 20dBc down limit line for Conducted Band Edges and Conducted Spurious Emission.

## 3.3.4 Test Setup



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# FCC RF Test Report

# 3.3.5 Test Result of Power Spectral Density

Test Mode :	Bluetooth 4.0 - LE	Temperature :	<b>24~26</b> ℃
Test Engineer :	Blithe Li	Relative Humidity :	50~53%

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Channal	Frequency	Power	Max. Limits	Dage/Fail		
Channel (MHz)		PSD/100KHz (dBm)	PSD/3KHz (dBm)	(dBm/3KHz)	Pass/Fail	
00	2402	-0.94	-15.12	8	Pass	
19	2440	-1.15	-15.33	8	Pass	
39	2480	-0.90	-15.06	8	Pass	

### Note:

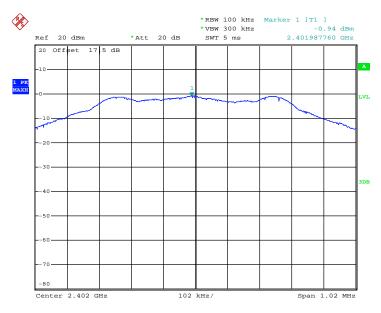
- 1. Measured power density (dBm) has offset with cable loss.
- 2. The Measured power density (dBm)/ 100KHz is reference level and used as 20dBc down for Conducted Band Edges and Conducted Spurious Emission limit line.

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# 3.3.6 Test Result of Power Spectral Density Plots (100kHz)

## PSD 100kHz Plot on Channel 00



Date: 31.MAY.2013 12:44:07

## PSD 100kHz Plot on Channel 19

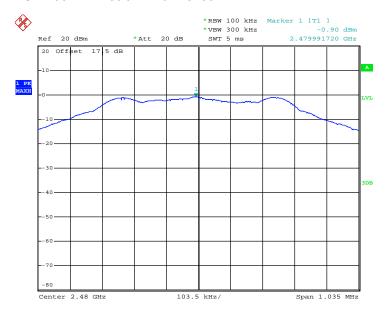


Date: 31.MAY.2013 12:51:11

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## PSD 100kHz Plot on Channel 39



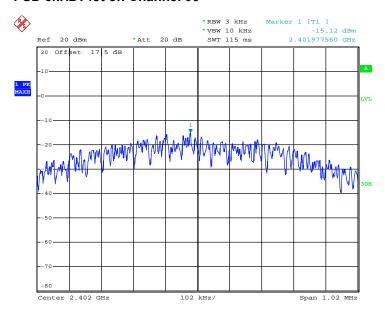
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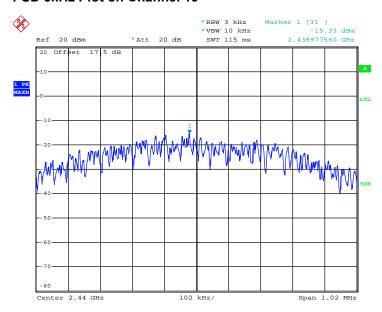
# 3.3.7 Test Result of Power Spectral Density Plots (3kHz)

## **PSD 3kHz Plot on Channel 00**



Date: 31.MAY.2013 12:43:38

## **PSD 3kHz Plot on Channel 19**

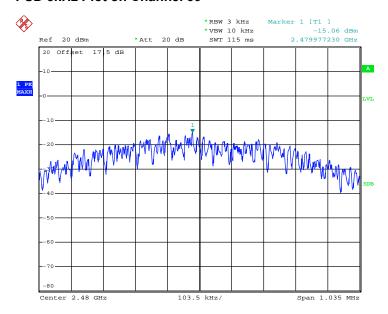


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## **PSD 3kHz Plot on Channel 39**



Date: 31.MAY.2013 12:54:53

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#### 3.4 **Conducted Band Edges and Spurious Emission Measurement**

#### 3.4.1 **Limit of Conducted Band Edges and Spurious Emission**

All harmonics/spurious must be at least 20 dB down from the highest emission level within the authorized band.

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#### 3.4.2 **Measuring Instruments**

See list of measuring instruments of this test report.

## 3.4.3 Test Procedure

- 1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r01.
- 2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
- 3. Set to the maximum power setting and enable the EUT transmit continuously.
- 4. Set RBW = 100 KHz, VBW=300 KHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB per 15.247(d).
- 5. Measure and record the results in the test report.
- 6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

## 3.4.4 Test Setup



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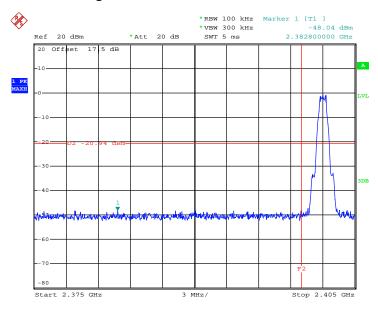
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# 3.4.5 Test Result of Conducted Band Edges

Test Mode :	Bluetooth 4.0 - LE	Temperature :	<b>24~26</b> ℃
Test Channel :	00 and 39	Relative Humidity :	50~53%
		Test Engineer :	Blithe Li

# Low Band Edge Plot on Channel 00

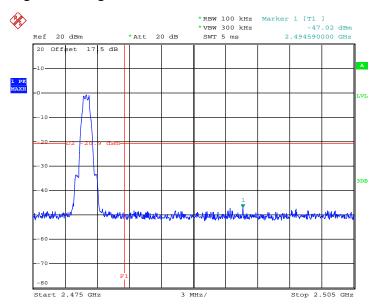


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# High Band Edge Plot on Channel 39



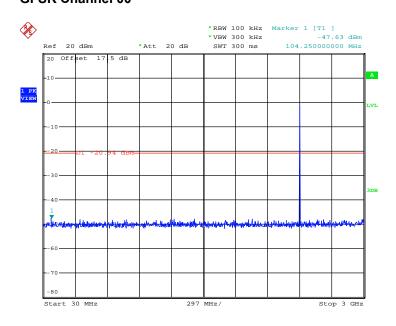
Date: 31.MAY.2013 12:56:01

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# 3.4.6 Test Result of Conducted Spurious Emission

Test Mode :	Bluetooth 4.0 - LE	Temperature :	<b>24~26</b> ℃
Test Channel :	00	Relative Humidity :	50~53%
		Test Engineer :	Blithe Li

# Conducted Spurious Emission Plot on Bluetooth LE GFSK Channel 00

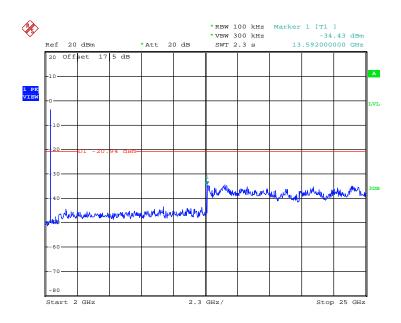


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Conducted Spurious Emission Plot on Bluetooth LE GFSK Channel 00



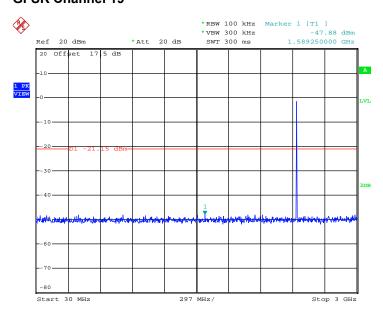
Date: 31.MAY.2013 12:45:20

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Test Mode :	Bluetooth 4.0 - LE	Temperature :	<b>24~26</b> ℃
Test Channel :	19	Relative Humidity :	50~53%
		Test Engineer :	Blithe Li

# Conducted Spurious Emission Plot on Bluetooth LE GFSK Channel 19

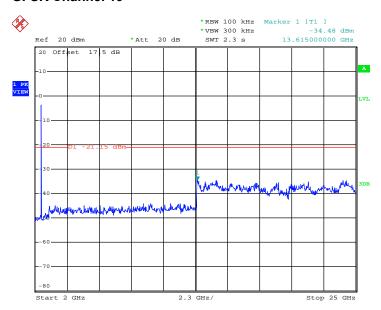


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# Conducted Spurious Emission Plot on Bluetooth LE GFSK Channel 19



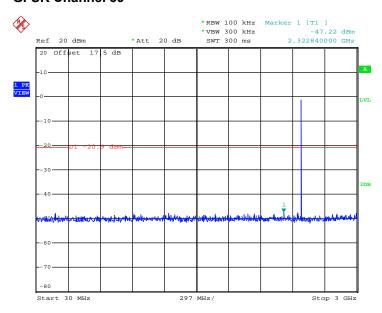
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# FCC RF Test Report

Test Mode :	Bluetooth 4.0 - LE	Temperature :	<b>24~26</b> ℃
Test Channel :	39	Relative Humidity :	50~53%
		Test Engineer :	Blithe Li

# Conducted Spurious Emission Plot on Bluetooth LE GFSK Channel 39

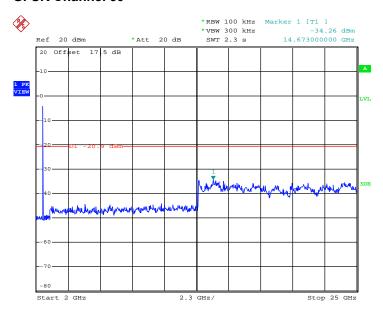


Date: 31.MAY.2013 12:56:25

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# Conducted Spurious Emission Plot on Bluetooth LE GFSK Channel 39



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# 3.5 Radiated Band Edges and Spurious Emission Measurement

## 3.5.1 Limit of Radiated Band Edges and Spurious Emission

In any 100 KHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the FCC section 15.209 limits as below.

Frequency	Field Strength	Measurement Distance		
(MHz)	(microvolts/meter)	(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		

# 3.5.2 Measuring Instruments

See list of measuring instruments of this test report.

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## 3.5.3 Test Procedures

- 1. The testing follows the guidelines in ANSI C63.10-2009 and ANSI C63.4-2003 test site requirement.
- 2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
- 3. The EUT was placed on a turntable with 0.8 meter above ground.
- 4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
- 5. Corrected Reading: Antenna Factor + Cable Loss + Read Level Preamp Factor = Level
- 6. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
- 7. Use the following spectrum analyzer settings:
  - (1) Span shall wide enough to fully capture the emission being measured;
  - (2) Set RBW=100 KHz for f < 1 GHz; VBW ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
  - (3) Set RBW = 1 MHz, VBW= 3MHz for  $f \ge 1$  GHz for peak measurement. For average measurement:
    - VBW = 10 Hz, when duty cycle is no less than 98 percent.
    - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

Band	Duty Cycle(%)	T(ms)	1/T(KHz)	VBW Setting	
Bluetooth 4.0 - LE	60.76	0.384	2.604	3KHz	

**Note:** For average measurement with duty cycle < 98%, use reduced VBW measurement method 4.2.3.2.3 in ANSI C63.10.

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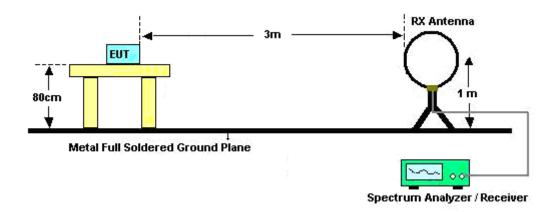
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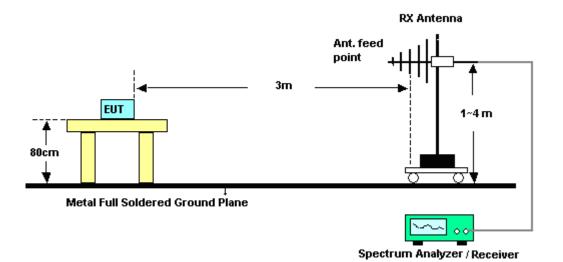


# 3.5.4 Test Setup

## For radiated emissions below 30MHz



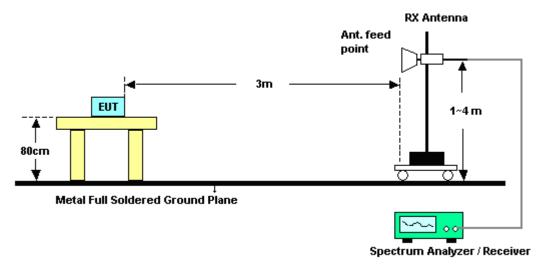
## For radiated emissions from 30MHz to 1GHz



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## For radiated emissions above 1GHz



# 3.5.5 Test Results of Radiated Spurious Emission (9 kHz ~ 30 MHz)

The low frequency, which started from 9 KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

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# FCC RF Test Report

# 3.5.6 Test Result of Radiated Band Edges

Test Mode :	Mode 1	Temperature :	24~25°C
Test Channel :	00	Relative Humidity :	49~50%
		Test Engineer :	Robin Luo

Report No.: FR342509B

	ANTENNA POLARITY : HORIZONTAL									
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
(MHz)	( dBuV/m )	( dB )	(dBuV/m)	(dBuV)	( dB )	( dB )	( dB )	( cm )	( deg )	
2386.32	47.86	-26.14	74	41.09	32.14	4.42	29.79	123	333	Peak
2386.14	38.2	-15.8	54	31.43	32.14	4.42	29.79	123	333	Average

	ANTENNA POLARITY : VERTICAL									
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
(MHz)	( dBuV/m )	( dB )	(dBuV/m)	(dBuV)	( dB )	( dB )	( dB )	( cm )	(deg)	
2386.05	47.79	-26.21	74	41.02	32.14	4.42	29.79	129	132	Peak
2386.05	37.72	-16.28	54	30.95	32.14	4.42	29.79	129	132	Average

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Test Mode :	Mode 3	Temperature :	24~25°C
Test Channel :	39	Relative Humidity :	49~50%
		Test Engineer :	Robin Luo

Report No.: FR342509B

	ANTENNA POLARITY : HORIZONTAL													
Frequency	Level	Over	Limit	Read	Antenna Cable Pr		Preamp	Ant	Table	Remark				
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos					
(MHz)	( dBµV/m )	( dB )	( dBµV/m )	(dBµV)	( dB )	( dB )	( dB )	( cm )	( deg )					
2483.5	56.36	-17.64	74	49.38	32.27	4.47	29.76	142	0	Peak				
2483.5	52.74	-1.26	54	45.76	32.27	4.47	29.76	142	0	Average				
2483.5	45.87	-28.13	74	-	-	-	-	-	-	Peak				
2483.5	45.1	-8.9	54	1	-	-	-	-	-	Average				

Summary results of marker-delta method:

Test mode	Maximum field strength of the fundamental emission (dBμV/m)	Delta Result (dB)	Measurement Result (dBμV/m)	Limit (dBµV/m)	Margin (dB)	Result
Peak	93.71	47.84	45.87	74	-28.13	Pass
Average	92.94	47.84	45.1	54	-8.9	Pass

Note: Measurement result = Maximum field strength – Delta result

	ANTENNA POLARITY: VERTICAL													
Frequency	Level	Level Over Limit			Antenna Cable Pi		Preamp	Ant	Table	Remark				
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos					
(MHz)	( dBµV/m )	( dB )	( dBµV/m )	(dBµV)	( dB )	( dB )	( dB )	( cm )	( deg )					
2483.5	57.03	-16.97	74	50.05	32.27	4.47	29.76	100	43	Peak				
2483.5	53.74	-0.26	54	46.76	32.27	4.47	29.76	100	43	Average				
2483.5	45.76	-28.24	74	-	-	-	-	-	-	Peak				
2483.5	44.89	-9.11	54	-	-	-	-	-	-	Average				

Summary results of marker-delta method:

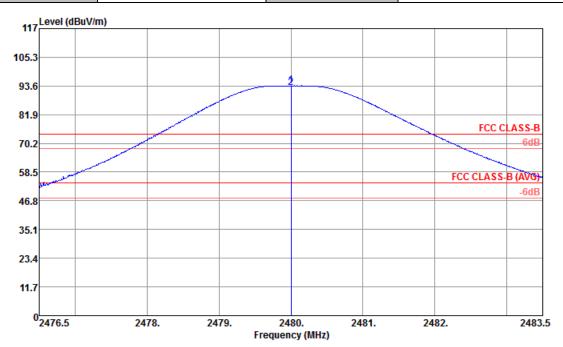
Test mode	Maximum field strength of the fundamental emission (dBμV/m) (dB)		Measurement Result (dBμV/m)	Limit (dBµV/m)	Margin (dB)	Result
Peak	94.9	49.14	45.76	74	-28.24	Pass
Average	94.03	49.14	44.89	54	-9.11	Pass

Note: Measurement result = Maximum field strength – Delta result

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Test Mode :	Mode 3	Temperature :	24~25°C
Test Channel :	78	Relative Humidity :	49~50%
Test Engineer :	Robin Luo	Polarization :	Horizontal



: 03CH01-SZ

Site Condition : FCC CLASS-B 3m HF\_ANT\_121012 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

Freq	Level				Antenna Factor			T/Pos	Remark
MHz	$\overline{\tt dBuV/m}$	dB	$\overline{\tt dBuV/m}$	dBuV	$\overline{dB/m}$	dB	dB	 deg	
1 P 2480.00 2 A 2480.00									Peak Average

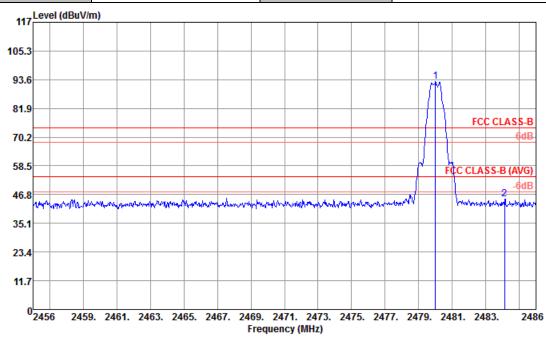
Maximum field strength of the fundamental emission

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Test Mode :	Mode 3	Temperature :	24~25°C
Test Channel :	78	Relative Humidity :	49~50%
Test Engineer :	Robin Luo	Polarization :	Horizontal

Report No.: FR342509B



Site : 03CH01-SZ

Condition : FCC CLASS-B 3m HF\_ANT\_121012 HORIZONTAL : RBW:100.000KHz VBW:100.000KHz SWT:Auto

Freq	Level				Antenna Factor				Remark
MHz	$\overline{\tt dBuV/m}$	dB	$\overline{\tt dBuV/m}$	dBuV	$\overline{dB/m}$	dB	dB	 deg	
2480.00 2484.14									Peak Peak

\* Marker-Delta Method (RBW/VBW=100KHz): 47.84 dB , single carrier Mode

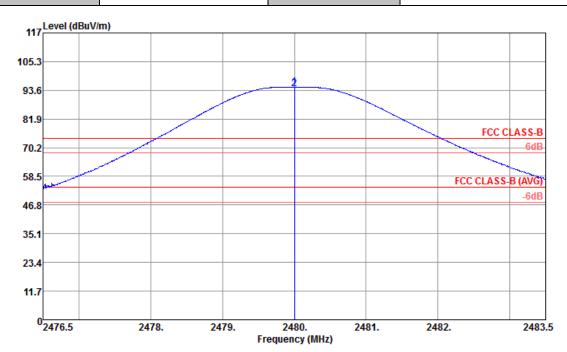
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Test Mode :	Mode 3	Temperature :	24~25°C
Test Channel :	78	Relative Humidity :	49~50%
Test Engineer :	Robin Luo	Polarization :	Vertical

Report No.: FR342509B



Site

: 03CH01-SZ : FCC CLASS-B 3m HF\_ANT\_121012 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Condition

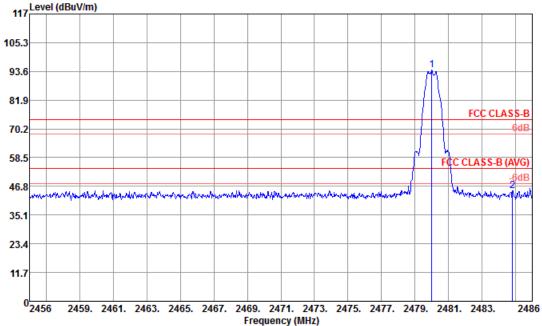
Freq	Level						Preamp Factor		T/Pos	Remark
MHz	$\overline{\tt dBuV/m}$	dB	$\overline{\tt dBuV/m}$	dBuV	$\overline{dB/m}$	dB	dB	cm	deg	
2480.00 2480.00										Peak Average

Maximum field strength of the fundamental emission

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Test Mode: Mode 3 Temperature : 24~25°C Test Channel: 78 49~50% Relative Humidity: Test Engineer: Robin Luo Polarization: Vertical 117 Level (dBuV/m)

Report No.: FR342509B



Site : 03CH01-SZ

: FCC CLASS-B 3m HF\_ANT\_121012 VERTICAL Condition

: RBW:100.000KHz VBW:100.000KHz SWT:Auto

	Freq	Level				Antenna Factor				T/Pos	Remark
	MHz	$\overline{\tt dBuV/m}$	dB	$\overline{\tt dBuV/m}$	dBuV	$\overline{dB/m}$	dB	dB	cm	deg	
1 P 24						32. 27 32. 27					Peak Peak

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Marker-Delta Method (RBW/VBW=100KHz): 49.14 dB, single carrier Mode

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# 3.5.7 Test Result of Radiated Spurious Emission (30 MHz ~ 10<sup>th</sup> Harmonic)

**Note:** Below 1GHz for radiated emission measurement, pre-scanned all test modes and only choose the worst case mode was recorded in the report.

Test Mode :	Mod	e 1	Temperature :	24~25°C				
Test Channel :	00		Relative Humidity :	49~50%				
Test Engineer :	Robi	in Luo	Polarization :	Horizontal				
	1.	2402 MHz is fundamer	e ignored.					
	2.	2399 MHz and 7206 MHz are not within restricted bands, and their limit line						
Damaile :		20dB below the highes	t emission level. For e	xample, 98.28 dBuV/m - 20dB =				
Remark :		78.28dBuV/m.						
	3.	Average measurement	t was not performed if	peak level went lower than the				
		average limit.						

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	( dBuV/m )	(dB)	( dBuV/m )		( dB )	( dB )	(dB)	( cm )	( deg )	
2399	62.08	-16.2	78.28	55.3	32.14	4.42	29.78	123	333	Peak
2402	98.28	-	-	91.48	32.14	4.44	29.78	123	333	Peak
2402	97.53	-	-	90.73	32.14	4.44	29.78	123	333	Average
4804	39.08	-34.92	74	57.18	33.63	5.95	57.68	100	122	Peak
7206	39.94	-38.34	78.28	55.19	35.27	7.47	57.99	100	164	Peak

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Test Mode :	Mod	e 1	Temperature :	24~25°C				
Test Channel :	00		Relative Humidity :	49~50%				
Test Engineer :	Rob	in Luo	Polarization :	Vertical				
	1.	2402 MHz is fundamental signal which can be ignored.						
	2.	2399 MHz and 7206 M	IHz are not within restr	icted bands, and their limit lines				
Remark :		20dB below the highes	t emission level.					
	3.	Average measuremen	Average measurement was not performed if peak level went lower than the					
		average limit.						

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	( dBuV/m )	(dB)	( dBuV/m )		( dB )	(dB)	( dB )	( cm )	( deg )	
2399	60.42	-16.07	76.49	53.64	32.14	4.42	29.78	129	132	Peak
2402	96.49	-	-	89.69	32.14	4.44	29.78	129	132	Peak
2402	95.72	-	-	88.92	32.14	4.44	29.78	129	132	Average
4804	38.87	-35.13	74	56.97	33.63	5.95	57.68	100	176	Peak
7206	39.35	-37.14	76.49	54.6	35.27	7.47	57.99	163	227	Peak

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Test Mode :	Mode 2	Temperature :	24~25°C					
Test Channel :	19	Relative Humidity :	49~50%					
Test Engineer :	Robin Luo	Polarization :	Horizontal					
	1. 2440 MHz is fundament	al signal which can be	ignored.					
Remark :	2. Average measurement	was not performed if	peak level went lower than the					
	average limit.							

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	( dBuV/m )	(dB)	( dBuV/m )	(dBuV)	( dB )	(dB)	(dB)	( cm )	( deg )	
2440	95.58	-	-	88.68	32.22	4.45	29.77	100	217	Peak
2440	94.66	-	-	87.76	32.22	4.45	29.77	100	217	Average
4880	39.52	-34.48	74	57.1	33.8	6.02	57.4	100	166	Peak
7320	39.59	-34.41	74	54.33	35.32	7.9	57.96	100	142	Peak

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Test Mode :	Mode 2	Temperature :	24~25°C					
Test Channel :	19	Relative Humidity :	49~50%					
Test Engineer :	Robin Luo	Polarization :	Vertical					
	1. 2440 MHz is fundament	al signal which can be	ignored.					
Remark :	2. Average measurement	was not performed if	peak level went lower than the					
	average limit.							

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	( dBuV/m )	(dB)	( dBuV/m )	(dBuV)	( dB )	( dB )	(dB)	( cm )	( deg )	
2440	96.7	-	-	89.8	32.22	4.45	29.77	124	65	Peak
2440	96.08	-	-	89.18	32.22	4.45	29.77	124	65	Average
4880	38.13	-35.87	74	55.71	33.8	6.02	57.4	100	65	Peak
7320	39.81	-34.19	74	54.55	35.32	7.9	57.96	125	69	Peak

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Test Mode :	Mode 3	Temperature :	24~25°C				
Test Channel :	39	Relative Humidity :	49~50%				
Test Engineer :	Robin Luo	Polarization :	Horizontal				
	1. 2480 MHz is fundament	al signal which can be	ignored.				
Remark :	2. Average measurement was not performed if peak level went lower than the						
	average limit.						

Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
(MHz)	( dBuV/m )	Limit (dB)	Line ( dBuV/m )	Level (dBuV)	Factor ( dB )	Loss (dB)	Factor (dB)	Pos (cm)	Pos ( deg )	
46.49	20.71	-19.29	40	41.65	8.7	0.88	30.52	-	-	Peak
241.46	23.54	-22.46	46	40.2	11.9	1.64	30.2	-	-	Peak
266.68	24.26	-21.74	46	39.66	13.03	1.68	30.11	-	-	Peak
278.32	26.88	-19.12	46	42.33	12.93	1.69	30.07	-	-	Peak
303.54	28.11	-17.89	46	43.36	13.04	1.7	29.99	100	163	Peak
421.88	25.55	-20.45	46	36.5	16.7	1.94	29.59	-	-	Peak
2480	94.79	-	-	87.81	32.27	4.47	29.76	142	0	Peak
2480	92.98	-	-	86	32.27	4.47	29.76	142	0	Average
4960	38.85	-35.15	74	55.76	34.01	6.13	57.05	100	199	Peak
7440	40.44	-33.56	74	54.92	35.37	8.08	57.93	132	55	Peak

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Test Mode :	Mode 3	Temperature :	24~25°C				
Test Channel :	39	Relative Humidity :	49~50%				
Test Engineer :	Robin Luo	Polarization :	Vertical				
	1. 2480 MHz is fundament	al signal which can be	ignored.				
Remark :	2. Average measurement	2. Average measurement was not performed if peak level went lower than the					
	average limit.						

Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
(MHz)	( dBuV/m )	Limit ( dB )	Line ( dBuV/m )	Level (dBuV)	Factor ( dB )	Loss (dB)	Factor ( dB )	Pos (cm)	Pos ( deg )	
103.72	34.26	-9.24	43.5	52.24	11.5	1.17	30.65	100	196	Peak
254.07	32.01	-13.99	46	47.58	12.9	1.68	30.15	-	-	Peak
278.32	26	-20	46	41.45	12.93	1.69	30.07	-	-	Peak
317.12	25.56	-20.44	46	39.78	13.98	1.74	29.94	-	-	Peak
426.73	26.3	-19.7	46	37.23	16.7	1.95	29.58	-	-	Peak
451.95	25.27	-20.73	46	35.89	16.88	1.99	29.49	-	-	Peak
2480	96.88	-	-	89.9	32.27	4.47	29.76	100	43	Peak
2480	95.71	-	-	88.73	32.27	4.47	29.76	100	43	Average
4960	38.58	-35.42	74	55.49	34.01	6.13	57.05	100	360	Peak
7440	40.57	-33.43	74	55.05	35.37	8.08	57.93	125	184	Peak

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### 3.6 AC Conducted Emission Measurement

#### 3.6.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Eroquency of emission (MUz)	Conducted limit (dBuV)				
Frequency of emission (MHz)	Quasi-peak	Average			
0.15-0.5	66 to 56*	56 to 46*			
0.5-5	56	46			
5-30	60	50			

<sup>\*</sup>Decreases with the logarithm of the frequency.

#### 3.6.2 Measuring Instruments

See list of measuring instruments of this test report.

#### 3.6.3 Test Procedures

- 1. The testing follows the guidelines in ANSI C63.10-2009 and ANSI C63.4-2003 test site requirement.
- 2. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- 3. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- 4. All the support units are connecting to the other LISN.
- 5. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- 6. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
- 7. Both sides of AC line were checked for maximum conducted interference.
- 8. The frequency range from 150 kHz to 30 MHz was searched.
- Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

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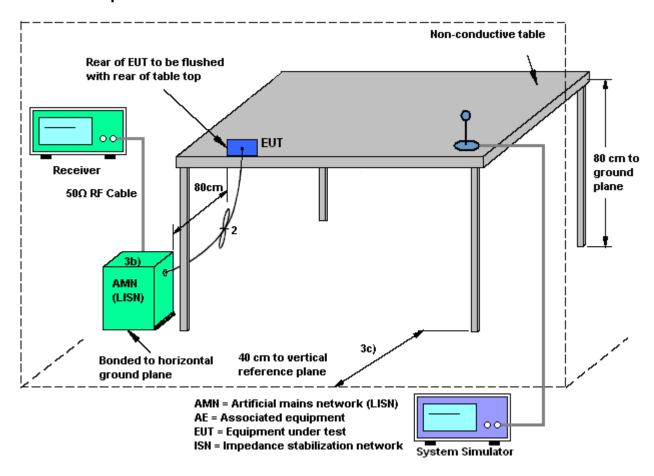
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3.6.4 Test Setup



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### 3.6.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1			Temperature :		25~26	25~26℃	
Test Engineer :	Leo Liao		Rela	Relative Humidity :		48~49%		
Test Voltage :	120Vac /	60Hz	Phas	Phase :		Line		
Function Type :	GSM850 Idle + Bluetooth Adapter) + Earphone		th Link			- USB	USB Cable 1 (Charging from	
Remark :	All emissi	ions not reported	d here a	re more	than 10	dB bel	ow the prescr	ribed limit.
100	Level (dBuV)				Dat	e: 2013-0	5-31 Time: 11:04:3	37
90								
80							100	
70						-		
60				9 0.	D 7 1	7 10 10	FCC 15C_QF	<u> </u>
				1			FCC 15C_AVG	6
50	M .	Ande Mr.		140	n	1		
40	HAMAA		K.J.KUP PTO	MAY STANK	ulayan kalinda da Mara	stratistics.	Hydrif Wyders	-
30	AAAAA	/ \	1315	district the			"Man Cambridge	M
			. 0 16	1/				
20								
	2 2 3			3 0	9 9	10 (0110)		
10								
0								
0	.15 .2	.5 1		2 ency (MHz	5	10	) 20	30
0 Site	.15 .2 : CO01-S	SZ SC_QP LISN_L_2000	Frequ	ency (MHz	)			30
0 Site	.15 .2 : CO01-S	SZ SC_QP LISN_L_2000	Frequ 0601 LIN Dimit	ency (MHz E Read	lisn	Cable		30
0 Site	.15 .2 : CO01-S	SZ SC_QP LISN_L_2000	Frequ 0601 LIN Dimit	ency (MHz E Read	LISN Factor	Cable	Remark	30
0 Site	.15 .2 : CO01-S .on: FCC 15 Freq	Over Level Limit	Frequ  Description of the second seco	Read Level	LISN Factor	Cable Loss dB	Remark	30
Site Conditi	.15 .2 : COO1-S .on: FCC 15 Freq MHz 0.48 0.48	Over Level Limit  dBuV dB  32.70 -13.62 41.20 -15.12	Limit Line dBuV 46.32 56.32	Read Level dBuV	LISN Factor dB	Cable Loss dB	Remark ————————————————————————————————————	30
Site Conditi	.15 .2 : COO1-S .on: FCC 15 Freq MHz 0.48 0.48 0.51	Over Level Limit dBuV dB 32.70 -13.62 41.20 -15.12 28.61 -17.39	Limit Line dBuV 46.32 56.32 46.00	Read Level dBuV 22.60 31.10 18.50	LISN Factor dB 0.02 0.02 0.02 0.02	Cable Loss  dB  10.08 10.08 10.09	Remark  Average QP Average	30
Site Conditi	.15 .2 : COO1-S .on: FCC 15 Freq MHz 0.48 0.48 0.51 0.51	Over Level Limit dBuV dB 32.70 -13.62 41.20 -15.12 28.61 -17.39 38.51 -17.49	Limit Line dBuV 46.32 56.32 46.00 56.00	Read Level dBuV 22.60 31.10 18.50 28.40	LISN Factor dB 0.02 0.02 0.02 0.02 0.02	Cable Loss  dB  10.08 10.08 10.09 10.09	Remark  Average QP Average QP	30
Site Conditi	.15 .2 : CO01-S : CO 15 Freq MHz 0.48 0.48 0.51 0.51 0.56	Over Level Limit dBuV dB 32.70 -13.62 41.20 -15.12 28.61 -17.39 38.51 -17.49 30.91 -15.09	Limit Line dBuV 46.32 56.32 46.00 56.00 46.00	Read Level dBuV 22.60 31.10 18.50 28.40 20.80	LISN Factor dB 0.02 0.02 0.02 0.02 0.02 0.02 0.02	Cable Loss  dB  10.08 10.08 10.09 10.09 10.09	Remark  Average QP Average QP Average	30
Site Conditi	.15 .2 : COO1-S .on: FCC 15 Freq MHz 0.48 0.48 0.51 0.51 0.56 0.56	Over Level Limit dBuV dB 32.70 -13.62 41.20 -15.12 28.61 -17.39 38.51 -17.49 30.91 -15.09 40.51 -15.49	Limit Line dBuV 46.32 56.32 46.00 56.00 46.00 56.00	Read Level  dBuV  22.60 31.10 18.50 28.40 20.80 30.40	LISN Factor dB 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.0	Cable Loss  dB  10.08 10.08 10.09 10.09 10.09 10.09	Remark  Average QP Average QP Average QP	30
Site Conditi	.15 .2 : COO1-S .on: FCC 15 Freq MHz 0.48 0.48 0.51 0.51 0.56 0.56 0.59	Over Level Limit dBuV dB 32.70 -13.62 41.20 -15.12 28.61 -17.39 38.51 -17.49 30.91 -15.09	Limit Line  dBuV  46.32 56.32 46.00 56.00 46.00 56.00	Read Level  dBuV  22.60 31.10 18.50 28.40 20.80 30.40 19.91	LISN Factor dB	Cable Loss  dB  10.08 10.08 10.09 10.09 10.09 10.09 10.09	Remark  Average QP Average QP Average QP Average QP Average	30
Site Conditi	.15 .2 : COO1-S : COO1-S : On: FCC 15 Freq MHz 0.48 0.48 0.51 0.51 0.56 0.56 0.59 0.59	Over Level Limit dBuV dB 32.70 -13.62 41.20 -15.12 28.61 -17.39 38.51 -17.49 30.91 -15.09 40.51 -15.49 30.02 -15.98	Limit Line  dBuV  46.32 56.32 46.00 56.00 46.00 56.00 56.00	Read Level  dBuV  22.60 31.10 18.50 28.40 20.80 30.40 19.91 30.31	LISN Factor dB 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.0	Cable Loss  dB  10.08 10.08 10.09 10.09 10.09 10.09 10.09	Remark  Average QP Average QP Average QP Average QP Average	30
1 * 2 3 4 5 6 7 8 9 10	.15 .2 : COO1-S.on: FCC 15 Freq MHz 0.48 0.48 0.51 0.56 0.56 0.59 0.78 0.78	Over Level Limit  dBuV dB  32.70 -13.62 41.20 -15.12 28.61 -17.39 38.51 -17.49 30.91 -15.09 40.51 -15.49 30.02 -15.98 40.42 -15.58 28.63 -17.37 39.13 -16.87	dBuV  46.32 56.32 46.00 56.00 46.00 56.00 46.00 56.00	Read Level  dBuV  22.60 31.10 18.50 20.80 30.40 19.91 30.31 18.51 29.01	LISN Factor  dB  0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.	Cable Loss  dB  10.08 10.09 10.09 10.09 10.09 10.09 10.09 10.10 10.10	Remark  Average QP Average QP Average QP Average QP Average QP	30
1 * 2 3 4 5 6 7 8 9 10 11	.15 .2 : COO1-S.on: FCC 15 Freq MHz 0.48 0.48 0.51 0.56 0.56 0.59 0.59 0.78 0.78 0.82	Over Level Limit dBuV dB 32.70 -13.62 41.20 -15.12 28.61 -17.39 38.51 -17.49 30.91 -15.09 40.51 -15.49 30.02 -15.58 40.42 -15.58 28.63 -17.37 39.13 -16.87	Limit Line dBuV 46.32 56.32 46.00 56.00 46.00 56.00 46.00 56.00 46.00	Read Level  dBuV  22.60 31.10 18.50 28.40 20.80 30.40 19.91 30.31 18.51 29.01 19.00	LISN Factor dB 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.0	Cable Loss  dB  10.08 10.09 10.09 10.09 10.09 10.09 10.10 10.10 10.11	Remark  Average QP Average QP Average QP Average QP Average QP Average	30
1 * 2 3 4 5 6 7 8 9 10 11 12	.15 .2 : COO1-S.on: FCC 15 Freq MHz 0.48 0.48 0.51 0.56 0.56 0.59 0.78 0.78 0.82 0.82	Over Level Limit dBuV dB 32.70 -13.62 41.20 -15.12 28.61 -17.39 38.51 -17.49 30.91 -15.09 40.51 -15.49 30.02 -15.98 40.42 -15.58 28.63 -17.37 39.13 -16.87 40.13 -15.87	### Frequence   Frequence	Read Level  dBuV  22.60 31.10 18.50 28.40 20.80 30.40 19.91 30.31 18.51 29.01 19.00 30.00	LISN Factor dB 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.0	Cable Loss  dB  10.08 10.09 10.09 10.09 10.09 10.09 10.10 10.11 10.11	Remark  Average QP Average QP Average QP Average QP Average QP Average QP	30
1 * 2 3 4 5 6 7 8 9 10 11 12 13	.15 .2 : COO1-S.on: FCC 15 Freq MHz 0.48 0.48 0.51 0.51 0.56 0.59 0.78 0.78 0.78 0.82 0.82 1.49	Over Level Limit    dBuV   dB     32.70 -13.62     41.20 -15.12     28.61 -17.39     38.51 -17.49     30.91 -15.09     40.51 -15.49     30.02 -15.98     40.42 -15.58     28.63 -17.37     39.13 -16.87     29.13 -16.87     29.13 -15.87     26.16 -19.84	Limit Line  dBuV  46.32 56.32 46.00 56.00 46.00 56.00 46.00 56.00 46.00 56.00 46.00	Read Level  dBuV  22.60 31.10 18.50 28.40 20.80 30.40 19.91 30.31 18.51 29.01 19.00 30.00 16.00	LISN Factor  dB  0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.	Cable Loss  dB  10.08 10.09 10.09 10.09 10.09 10.10 10.11 10.11 10.11	Remark  Average QP Average QP Average QP Average QP Average QP Average QP Average	30
1 * 2 3 4 5 6 7 8 9 10 11 12 13 14	.15 .2 : COO1-S.on: FCC 15 Freq MHz 0.48 0.48 0.51 0.56 0.56 0.59 0.78 0.78 0.78 0.82 0.82 1.49 1.49	Over Level Limit dBuV dB 32.70 -13.62 41.20 -15.12 28.61 -17.39 38.51 -17.49 30.91 -15.09 40.51 -15.49 30.02 -15.98 40.42 -15.58 28.63 -17.37 39.13 -16.87 29.13 -16.87 40.13 -15.87 26.16 -19.84 36.16 -19.84	## Frequence   Control   C	Read Level  dBuV  22.60 31.10 18.50 28.40 20.80 30.40 19.91 30.31 18.51 29.01 19.00 30.00 16.00 26.00	LISN Factor dB 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.0	Cable Loss  dB  10.08 10.09 10.09 10.09 10.09 10.10 10.11 10.11 10.13 10.13	Remark  Average QP	30
1 * 2 3 4 5 6 7 8 9 10 11 12 13	.15 .2 : COO1-S.on: FCC 15 Freq MHz 0.48 0.48 0.51 0.56 0.59 0.78 0.78 0.78 0.82 0.82 1.49 1.49 1.71	Over Level Limit    dBuV   dB     32.70 -13.62     41.20 -15.12     28.61 -17.39     38.51 -17.49     30.91 -15.09     40.51 -15.49     30.02 -15.98     40.42 -15.58     28.63 -17.37     39.13 -16.87     29.13 -16.87     29.13 -15.87     26.16 -19.84	## Frequence   Comparison   Com	Read Level  dBuV  22.60 31.10 18.50 28.40 20.80 30.40 19.91 30.31 18.51 29.01 19.00 30.00 16.00 26.00 14.61	LISN Factor  dB  0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.	Cable Loss  dB  10.08 10.08 10.09 10.09 10.09 10.09 10.10 10.11 10.11 10.13 10.13 10.13	Remark  Average QP Average	30
1 * 2 3 4 5 6 7 8 9 10 11 12 13 14 15	Treq  15 .2  : CO01-S on: FCC 15  Freq  MHz  0.48 0.48 0.51 0.56 0.59 0.59 0.78 0.78 0.78 0.82 0.82 1.49 1.49 1.71 1.71	Over Level Limit    dBuV   dB     32.70	## Frequence   Frequence	Read Level  dBuV  22.60 31.10 18.50 28.40 20.80 30.40 19.91 30.31 18.51 29.01 19.00 30.00 16.00 26.00 14.61 25.81	LISN Factor  dB  0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.	Cable Loss  dB  10.08 10.09 10.09 10.09 10.09 10.10 10.11 10.11 10.13 10.13 10.13	Remark  Average QP	30

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Report Version : Rev. 01



Function Type : GSM85 Adapte	c / 60Hz 50 Idle + Bluetooth r) + Earphone ssions not reported	here are more than 10	48~49%  Neutral  + USB Cable 1 (Charging in the control of the con
Function Type : GSM85 Adapte  Remark : All emis	50 Idle + Bluetooth r) + Earphone ssions not reported	here are more than 10	+ USB Cable 1 (Charging of dB below the prescribed limit
Remark: All emis	r) + Earphone ssions not reported	here are more than 10	dB below the prescribed limi
100 Level (dBuV 90 80	•		•
90 80	7)	Da	te: 2013-05-31 Time: 11:18:49
90			
80			
70			
			FCC 15C_QP
60			And the second s
50	A ASABAMA	abre	FCC 15C_AVG
40\ \ \ \ \ \ \		THE PROPERTY OF THE PROPERTY O	and the second of the second o
30 V V V	V V V V V 1 1 1 779 19	21 7 23 25 2291	mount
20			
10			
0.15 .2	.5 1	2 5	10 20 30
Fre	Over : q Level Limit	Limit Read LISN Line Level Factor	Cable Loss Remark
MH	z dBuV dB	dBuV dBuV dB	dB
2.1			
1 * 0.49	9 41.10 -5.00	46.10 30.99 0.02	10.09 Average
2 0.49	9 49.80 -6.30	56.10 39.69 0.02	10.09 QP
2 0.49 3 0.50	9 49.80 -6.30 6 37.51 -8.49	56.10 39.69 0.02 46.00 27.40 0.02	10.09 QP 10.09 Average
2 0.49 3 0.50 4 0.50	9 49.80 -6.30 6 37.51 -8.49 6 46.41 -9.59	56.10 39.69 0.02 46.00 27.40 0.02 56.00 36.30 0.02	10.09 QP 10.09 Average 10.09 QP
2 0.49 3 0.50 4 0.50	9 49.80 -6.30 6 37.51 -8.49 6 46.41 -9.59 0 36.01 -9.99	56.10 39.69 0.02 46.00 27.40 0.02 56.00 36.30 0.02 46.00 25.90 0.02	10.09 QP 10.09 Average 10.09 QP 10.09 Average
2 0.41 3 0.56 4 0.56 5 0.66 6 0.66 7 0.63	9 49.80 -6.30 6 37.51 -8.49 6 46.41 -9.59 0 36.01 -9.99 0 45.01 -10.99 5 34.12 -11.88	56.10     39.69     0.02       46.00     27.40     0.02       56.00     36.30     0.02       46.00     25.90     0.02       56.00     34.90     0.02       46.00     24.00     0.02	10.09 QP 10.09 Average 10.09 QP 10.09 Average 10.09 QP 10.10 Average
2 0.49 3 0.56 4 0.56 5 0.66 6 0.66 7 0.65 8 0.65	9 49.80 -6.30 6 37.51 -8.49 6 46.41 -9.59 0 36.01 -9.99 0 45.01 -10.99 5 34.12 -11.88 5 43.92 -12.08	56.10     39.69     0.02       46.00     27.40     0.02       56.00     36.30     0.02       46.00     25.90     0.02       56.00     34.90     0.02       46.00     24.00     0.02       56.00     33.80     0.02	10.09 QP 10.09 Average 10.09 QP 10.09 Average 10.09 QP 10.10 Average 10.10 QP
2 0.41 3 0.56 4 0.56 5 0.66 6 0.66 7 0.65 8 0.65 9 0.66	9 49.80 -6.30 6 37.51 -8.49 6 46.41 -9.59 0 36.01 -9.99 0 45.01 -10.99 5 34.12 -11.88 5 43.92 -12.08 8 36.22 -9.78	56.10     39.69     0.02       46.00     27.40     0.02       56.00     36.30     0.02       46.00     25.90     0.02       56.00     34.90     0.02       46.00     24.00     0.02       56.00     33.80     0.02       46.00     26.10     0.02	10.09 QP 10.09 Average 10.09 QP 10.09 Average 10.09 QP 10.10 Average 10.10 QP
2 0.49 3 0.56 4 0.56 5 0.66 6 0.66 7 0.68 8 0.68 9 0.66	9 49.80 -6.30 6 37.51 -8.49 6 46.41 -9.59 0 36.01 -9.99 0 45.01 -10.99 5 34.12 -11.88 5 43.92 -12.08 8 36.22 -9.78 8 46.32 -9.68	56.10     39.69     0.02       46.00     27.40     0.02       56.00     36.30     0.02       46.00     25.90     0.02       56.00     34.90     0.02       46.00     24.00     0.02       56.00     33.80     0.02       46.00     26.10     0.02       56.00     36.20     0.02	10.09 QP 10.09 Average 10.09 QP 10.09 Average 10.09 QP 10.10 Average 10.10 QP 10.10 Average 10.10 QP
2 0.49 3 0.56 4 0.56 5 0.66 6 0.66 7 0.65 8 0.65 9 0.66 10 0.66 11 0.72 12 0.72	9 49.80 -6.30 6 37.51 -8.49 6 46.41 -9.59 0 36.01 -9.99 0 45.01 -10.99 5 34.12 -11.88 5 43.92 -12.08 8 36.22 -9.78 8 46.32 -9.68 2 35.82 -10.18 2 46.12 -9.88	56.10     39.69     0.02       46.00     27.40     0.02       56.00     36.30     0.02       46.00     25.90     0.02       56.00     34.90     0.02       46.00     24.00     0.02       56.00     33.80     0.02       46.00     26.10     0.02       56.00     36.20     0.02       46.00     25.70     0.02       56.00     36.00     0.02	10.09 QP 10.09 Average 10.09 QP 10.09 Average 10.10 Average 10.10 QP 10.10 Average 10.10 QP 10.10 Average 10.10 QP
2 0.44 3 0.56 4 0.56 5 0.66 6 0.66 7 0.65 8 0.65 9 0.66 10 0.66 11 0.77 12 0.77 13 0.86	9 49.80 -6.30 6 37.51 -8.49 6 46.41 -9.59 0 36.01 -9.99 0 45.01 -10.99 34.12 -11.88 5 43.92 -12.08 8 36.22 -9.78 8 46.32 -9.68 2 35.82 -10.18 2 46.12 -9.88 0 34.63 -11.37	56.10     39.69     0.02       46.00     27.40     0.02       56.00     36.30     0.02       46.00     25.90     0.02       56.00     34.90     0.02       46.00     24.00     0.02       56.00     33.80     0.02       46.00     26.10     0.02       56.00     36.20     0.02       46.00     25.70     0.02       56.00     36.00     0.02       46.00     24.50     0.02	10.09 QP 10.09 Average 10.09 QP 10.09 Average 10.10 Average 10.10 QP 10.10 Average 10.10 QP 10.10 Average 10.10 QP 10.10 Average 10.10 QP
2 0.4 3 0.5 4 0.5 5 0.6 6 0.6 7 0.6 8 0.6 9 0.6 10 0.6 11 0.7 12 0.7 13 0.8 14 0.8	9 49.80 -6.30 6 37.51 -8.49 6 46.41 -9.59 0 36.01 -9.99 0 45.01 -10.99 5 34.12 -11.88 5 43.92 -12.08 8 36.22 -9.78 8 46.32 -9.68 2 35.82 -10.18 2 46.12 -9.88 0 34.63 -11.37 0 44.63 -11.37	56.10     39.69     0.02       46.00     27.40     0.02       56.00     36.30     0.02       46.00     25.90     0.02       56.00     34.90     0.02       46.00     24.00     0.02       56.00     33.80     0.02       46.00     26.10     0.02       56.00     36.20     0.02       46.00     25.70     0.02       56.00     36.00     0.02       46.00     24.50     0.02       56.00     34.50     0.02	10.09 QP 10.09 Average 10.09 QP 10.09 Average 10.10 Average 10.10 QP 10.10 Average 10.10 QP 10.10 Average 10.10 QP 10.11 Average 10.11 QP
2 0.4 3 0.5 4 0.5 5 0.6 6 0.6 7 0.6 8 0.6 9 0.6 10 0.6 11 0.7 12 0.7 13 0.8 14 0.8 15 0.8	9 49.80 -6.30 6 37.51 -8.49 6 46.41 -9.59 0 36.01 -9.99 0 45.01 -10.99 5 34.12 -11.88 5 43.92 -12.08 8 36.22 -9.78 8 46.32 -9.68 2 35.82 -10.18 2 46.12 -9.88 0 34.63 -11.37 0 44.63 -11.37 3 34.43 -11.57	56.10     39.69     0.02       46.00     27.40     0.02       56.00     36.30     0.02       46.00     25.90     0.02       56.00     34.90     0.02       46.00     24.00     0.02       56.00     33.80     0.02       46.00     26.10     0.02       56.00     36.20     0.02       46.00     25.70     0.02       56.00     36.00     0.02       46.00     24.50     0.02       56.00     34.50     0.02       46.00     24.30     0.02	10.09 QP 10.09 Average 10.09 QP 10.09 Average 10.10 QP 10.10 Average 10.10 QP 10.10 Average 10.10 QP 10.10 Average 10.10 QP 10.11 Average 10.11 QP 10.11 Average
2 0.4 3 0.5 4 0.5 5 0.6 6 0.6 7 0.6 8 0.6 9 0.6 10 0.6 11 0.7 12 0.7 13 0.8 14 0.8 15 0.8 16 0.8	9 49.80 -6.30 6 37.51 -8.49 6 46.41 -9.59 0 36.01 -9.99 0 45.01 -10.99 5 34.12 -11.88 5 43.92 -12.08 8 36.22 -9.78 8 46.32 -9.68 2 35.82 -10.18 2 46.12 -9.88 0 34.63 -11.37 0 44.63 -11.37 1 44.63 -11.37 3 34.43 -11.57 3 44.73 -11.27	56.10     39.69     0.02       46.00     27.40     0.02       56.00     36.30     0.02       46.00     25.90     0.02       56.00     34.90     0.02       46.00     24.00     0.02       56.00     33.80     0.02       46.00     26.10     0.02       56.00     36.20     0.02       46.00     25.70     0.02       56.00     36.00     0.02       46.00     24.50     0.02       56.00     34.50     0.02       46.00     24.30     0.02       56.00     34.60     0.02	10.09 QP 10.09 Average 10.09 QP 10.09 Average 10.10 QP 10.10 Average 10.10 QP 10.10 Average 10.10 QP 10.10 Average 10.10 QP 10.11 Average 10.11 QP 10.11 Average 10.11 QP
2 0.41 3 0.56 4 0.56 5 0.66 6 0.66 7 0.65 8 0.66 9 0.66 10 0.66 11 0.77 12 0.77 13 0.86 14 0.86 15 0.83 16 0.83 17 0.96	9 49.80 -6.30 6 37.51 -8.49 6 46.41 -9.59 0 36.01 -9.99 0 45.01 -10.99 5 34.12 -11.88 5 43.92 -12.08 8 36.22 -9.78 8 46.32 -9.68 2 35.82 -10.18 2 46.12 -9.88 34.63 -11.37 0 44.63 -11.37 3 34.43 -11.57 3 44.73 -11.57 3 44.73 -11.67	56.10     39.69     0.02       46.00     27.40     0.02       56.00     36.30     0.02       46.00     25.90     0.02       56.00     34.90     0.02       46.00     24.00     0.02       56.00     33.80     0.02       46.00     26.10     0.02       56.00     36.20     0.02       46.00     25.70     0.02       56.00     36.00     0.02       46.00     24.50     0.02       56.00     34.50     0.02       46.00     24.30     0.02	10.09 QP 10.09 Average 10.09 QP 10.09 Average 10.09 QP 10.10 Average 10.10 QP 10.10 Average 10.10 QP 10.10 Average 10.10 QP 10.11 Average 10.11 QP 10.11 Average 10.11 QP 10.11 Average 10.11 QP 10.11 Average

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Test Mode :	Mode 1		Ten	Temperature :		25~2	25~26℃		
Test Engineer :	Leo Liao			Rela	Relative Humidity :		48~4	48~49%	
Test Voltage :	120Vac /	60Hz		Pha	Phase :		Neut	Neutral	
Function Type :		Idle + E + Earpho		Link	+ WLA	AN Link	+ USB	Cable 1 (	Charging from
Remark :	All emiss	ions not r	reported	here a	are more	e than 10	dB bel	low the pres	scribed limit.
L.	evel (dBuV)					Dat	e: 20 <b>1</b> 3-0	5-31 Time: 11:18	3:49
100									
90								100	
80					3 0				
70									
70								FCC 15C_0	np.
60								Service Control	
50	-	- A 460	M2mas.					FCC 15C_A	<u>VG</u>
40	MAAA	AMANAM	10 12 DVI	nu 32 my	n Ath	PRO PROPERTY	Madeline	who have been a second	
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0	15 .2	.5	1	Erogu	2 oney (MHz)	5	10	20	30
0.1	: CO01-S	Z	N_20006	01 NEU	ency (MHz)			20	30
0.1	: CO01-S	z C_QP LISN	_N_20006	01 NEU	ency (MHz) FRAL Read	LISN	Cable		30
0.1	: CO01-S	Z	_N_20006	01 NEU	ency (MHz) FRAL Read		Cable	20	30
0 <mark>.1</mark> Site	: CO01-S	z C_QP LISN	_N_20006	01 NEU	ency (MHz) FRAL Read	LISN	Cable		30
0.1	: C001-S on: FCC 15 Freq MHz	Z C_QP LISN Level 1	N_20006  Over : Limit  dB	01 NEU	RAL Read Level dBuV	LISN Factor dB	Cable Loss dB	Remark	30
0.1 Site Conditio	: C001-S on: FCC 15 Freq MHz	Z C_QP LISN Level 1	_N_20006  Over : Limit  dB	01 NEU	Read Level dBuV	LISN Factor dB	Cable Loss dB	Remark	30
0.1 Site Conditio	: C001-S on: FCC 15 Freq MHz 0.99 1.50	Z C_QP LISN Level 1 dBuV	_N_20006  Over : Limit  dB	Limit Line dBuV	Read Level dBuV	LISN Factor  dB  0.02 0.03 0.03	Cable Loss  dB  10.11 10.13 10.13	Remark  QP Average QP	30
0.1 Site Conditio	: C001-S in: FCC 15  Freq  MHz  0.99 1.50 1.50	Z C_QP LISN Level 1 dBuV 42.63 -: 30.85 -:	_N_20006  Over : Limit  dB  13.37 15.15 14.05 15.59	01 NEU	Read Level dBuV 32.50 20.69 31.79 20.20	LISN Factor  dB  0.02 0.03 0.03	Cable Loss  dB  10.11 10.13 10.13 10.17	Remark  QP Average QP Average	30
0.1 Site Conditio	: C001-S in: FCC 15  Freq  MHz  0.99 1.50 1.50 2.51 2.51	Z C_QF LISN dBuV 42.63 -: 30.85 -: 41.95 -: 30.41 -: 41.41 -:	_N_20006  Over : Limit  dB  13.37 15.15 14.05 15.59 14.59	01 NEU	Read Level dBuV 32.50 20.69 31.79 20.20 31.20	LISN Factor  dB  0.02 0.03 0.03 0.04 0.04	Cable Loss  dB  10.11 10.13 10.13 10.17 10.17	Remark  QP Average QP Average QP	30
20 21 22 23 24 25	: C001-S in: FCC 15  Freq  MHz  0.99 1.50 1.50 2.51 2.51 3.45	Z C_QP LISN dBuV 42.63 -: 30.85 -: 41.95 -: 30.41 -: 41.41 -: 30.34 -:	_N_20006  Over : Limit  dB  13.37 15.15 14.05 15.59 14.59 15.66	01 NEU	Read Level dBuV 32.50 20.69 31.79 20.20 31.20 20.10	LISN Factor  dB  0.02 0.03 0.03 0.04 0.04 0.05	Cable Loss  dB  10.11 10.13 10.13 10.17 10.17 10.17	Remark  QP Average QP Average QP Average	30
0.1 Site Conditio	: C001-S in: FCC 15  Freq  MHz  0.99 1.50 1.50 2.51 2.51 3.45 3.45	Z C_QP LISN dBuV 42.63 -: 30.85 -: 41.95 -: 30.41 -: 41.41 -: 30.34 -: 41.04 -:	Over : Limit  dB  13.37 15.15 14.05 15.59 14.59 14.59 15.66 14.96	01 NEU	Read Level  dBuV  32.50 20.69 31.79 20.20 31.20 20.10 30.80	LISN Factor  dB  0.02 0.03 0.03 0.04 0.04 0.05 0.05	Cable Loss  dB  10.11 10.13 10.13 10.17 10.17 10.19 10.19	Remark  QP Average QP Average QP Average QP Average QP	30
20 21 22 23 24 25 26 27	: C001-S n: FCC 15 Freq MHz 0.99 1.50 1.50 2.51 2.51 3.45 3.45 4.25	Z C_QF LISN dBuV 42.63 -: 30.85 -: 41.95 -: 41.41 -: 30.34 -: 41.04 -: 30.26 -:	Over : dB : 13.37 : 15.15 : 14.05 : 15.59 : 14.59 : 15.66 : 14.96 : 15.74 :	01 NEU	Read Level  dBuV  32.50 20.69 31.79 20.20 31.20 20.10 30.80 20.00	LISN Factor  dB  0.02 0.03 0.03 0.04 0.04 0.05 0.05 0.07	Cable Loss  dB  10.11 10.13 10.17 10.17 10.19 10.19	Remark  QP Average QP Average QP Average QP Average	30
20 21 22 23 24 25 26 27 28	: C001-S n: FCC 15  Freq  MHz  0.99 1.50 1.50 2.51 2.51 3.45 3.45 4.25 4.25	Z C_QF LISN dBuV 42.63 -: 30.85 -: 41.95 -: 41.41 -: 30.34 -: 41.04 -: 30.26 -: 40.46 -:	Over : dB : 13.37 : 15.15 : 14.59 : 14.59 : 14.59 : 15.74 : 15.54 :	01 NEUT	Read Level  dBuV  32.50 20.69 31.79 20.20 31.20 20.10 30.80 20.00 30.20	LISN Factor  dB  0.02 0.03 0.03 0.04 0.04 0.05 0.05 0.07 0.07	Cable Loss  dB  10.11 10.13 10.17 10.17 10.19 10.19 10.19 10.19	Remark  QP Average QP Average QP Average QP Average QP	30
20 21 22 23 24 25 26 27	: C001-S n: FCC 15  Freq  MHz  0.99 1.50 1.50 2.51 2.51 3.45 3.45 4.25 4.25 4.48	Z C_QF LISN dBuV 42.63 -: 30.85 -: 41.95 -: 41.41 -: 30.34 -: 41.04 -: 30.26 -:	Over : Limit dB 13.37 15.15 14.05 15.59 14.59 15.66 14.96 15.74 15.84 15.84	01 NEUT Limit Line dBuV 56.00 46.00 56.00 46.00 56.00 46.00	Read Level  dBuV  32.50 20.69 31.79 20.20 31.20 20.10 30.80 20.00 30.20 19.90	LISN Factor  dB  0.02 0.03 0.03 0.04 0.05 0.05 0.07 0.07 0.07	Cable Loss  dB  10.11 10.13 10.17 10.17 10.17 10.19 10.19 10.19 10.19 10.19	Remark  QP Average QP Average QP Average QP Average QP Average	30
20 21 22 23 24 25 26 27 28 29	: C001-S n: FCC 15  Freq  MHz  0.99 1.50 1.50 2.51 2.51 3.45 4.25 4.25 4.25 4.48 4.48	Z C_QP LISN dBuV 42.63 -: 30.85 -: 41.95 -: 41.41 -: 41.04 -: 30.26 -: 40.46 -: 30.16 -:	Over : dB  13.37 15.15 14.05 15.59 14.59 14.59 15.66 14.96 15.74 15.84 15.64	01 NEUT Limit Line dBuV 56.00 46.00 56.00 46.00 56.00 46.00 56.00	Read Level  32.50 20.69 31.79 20.20 31.20 20.10 30.80 20.00 30.20 19.90 30.10	LISN Factor  dB  0.02 0.03 0.03 0.04 0.04 0.05 0.05 0.07 0.07 0.07	Cable Loss  dB  10.11 10.13 10.17 10.17 10.19 10.19 10.19 10.19 10.19 10.19	Remark  QP Average QP Average QP Average QP Average QP Average QP Average QP	30

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#### 3.7 **Antenna Requirements**

#### 3.7.1 **Standard Applicable**

If directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. 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 FCC rule.

#### 3.7.2 Antenna Connected Construction

Non-standard connector used.

#### 3.7.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

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**List of Measuring Equipment** 4

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSP30	101400	9kHz~30GHz	Mar. 28, 2013	May 31, 2013	Mar. 27, 2014	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1218010	N/A	Mar. 28, 2013	May 31, 2013	Mar. 27, 2014	Conducted (TH01-SZ)
Power Sensor	Anritsu	MA2411B	1207253	N/A	Mar. 28, 2013	May 31, 2013	Mar. 27, 2014	Conducted (TH01-SZ)
DC Power Supply	TOPWORD	3303DR	N/A714621	N/A	Mar. 28, 2013	May 31, 2013	Mar. 27, 2014	Conducted (TH01-SZ)
Thermal Chamber	Hongzhan	LP-150U	HD20120425	N/A	Mar. 28, 2013	May 31, 2013	Mar. 27, 2014	Conducted (TH01-SZ)
ESCI TEST Receiver	R&S	ESCI	100724	9kHz~3GHz	Mar. 28, 2013	Jun. 06, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
Spectrum Analyzer	R&S	FSP30	101362	9kHz~30GHz	Oct. 11, 2012	Jun. 06, 2013	Oct. 10, 2013	Radiation (03CH01-SZ)
Double Ridge Horn Amtenna	ETS Lindgren	3117	00119436	1GHz~18GHz	Oct. 12, 2012	Jun. 06, 2013	Oct. 11, 2013	Radiation (03CH01-SZ)
Bilog Antenna	SCHAFFNER	CBL6112B	2614	30MHz~2GHz	Nov. 03, 2012	Jun. 06, 2013	Nov. 02, 2013	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9kHz~3GHz Gain 30dB	Mar. 28, 2013	Jun. 06, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
Amplifier	Yiai	AV3860B	04030	2GHz~26.5GHz	Mar. 28, 2013	Jun. 06, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
SHF-EHF -Horn	Schwarzbeck	BBHA9170	BBHA9170249	14GHz~40GHz	Nov. 23, 2012	Jun. 06, 2013	Nov. 22, 2013	Radiation (03CH01-SZ)
Loop Antenna	R&S	HFH2-Z2	100321	9KHz~30MHZ	Oct. 22, 2012	Jun. 06, 2013	Oct. 21, 2013	Radiation (03CH01-SZ)
ESCIO TEST Receiver	R&S	1142.8007.0 3	100724	9kHz~3GHz	Mar. 28, 2013	May 31, 2013	Mar. 27, 2014	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103912	9kHz~30MHz	Mar. 28, 2013	May 31, 2013	Mar. 27, 2014	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103892	9kHz~30MHz	Mar. 28, 2013	May 31, 2013	Mar. 27, 2014	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000891	N/A	Nov. 20, 2012	May 31, 2013	Nov. 19, 2013	Conduction (CO01-SZ)
AC Filter	ETS-LINDGREN	LRE-2030/P EN 256260	00093783	N/A	N/A	May 31, 2013	N/A	Conduction (CO01-SZ)
AC Filter	ETS-LINDGREN	LRE-2030/P EN 256260	00097973	N/A	N/A	May 31, 2013	N/A	Conduction (CO01-SZ)
System Simulator	Agilent	E5515C	MY50264168	GSM/WCDMA /CDMA2000	Oct. 09, 2012	May 31, 2013	Oct. 08, 2013	Conduction (CO01-SZ)

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# 5 Uncertainty of Evaluation

#### Uncertainty of Conducted Emission Measurement (150 kHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence	2.26
of 95% (U = 2Uc(y))	2.20

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#### <u>Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)</u>

Measuring Uncertainty for a Level of Confidence	2.54
of 95% (U = 2Uc(y))	2.54

### **Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)**

Measuring Uncertainty for a Level of Confidence	4.70
of 95% (U = 2Uc(y))	4.72

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# Appendix A. Photographs of EUT

Please refer to Sporton report number EP342509 as below.

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