FCC Test Report

APPLICANT : LugTrack, LLC.

EQUIPMENT: GLOBAL LOCATOR

BRAND NAME : TUMI

MODEL NAME : 014341D

MARKETING NAME : TUMI Global Locator

FCC ID : 2AFPZ-TGL001

STANDARD : FCC 47 CFR FCC Part 15 Subpart B

CLASSIFICATION: Certification

The product was received on Aug. 24, 2015 and testing was completed on Dec. 22, 2015. We, SPORTON INTERNATIONAL (SHENZHEN) INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI C63.4-2009 and has been in 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.

Prepared by: Andy Yeh / Manager

Approved by: Jones Tsai / Manager

SPORTON INTERNATIONAL (SHENZHEN) INC.

1F & 2F, Building A, Morning Business Center, No. 4003 ShiGu Rd., Xili Town, Nanshan District, Shenzhen, Guangdong, P. R. China

SPORTON INTERNATIONAL (SHENZHEN) INC.

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Testing Laboratory 2353

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC582403	Rev. 01	Initial issue of report	Mar. 15, 2016

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SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.107	ICES003 Section 6.1	AC Conducted Emission	< 15.107 limits < ICES003 6.1 limits	PASS	Under limit 10.56 dB at 0.450 MHz
3.2	15.109	ICES003 Section 6.2	Radiated Emission	< 15.109 limits < ICES003 6.2 limits	PASS	Under limit 3.17 dB at 236.280 MHz

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1. General Description

1.1. Applicant

LugTrack, LLC.

225 US Highway 35, Suite #201, Red Bank, New Jersey, 07701 USA

1.2. Manufacturer

LugTrack, LLC.

225 US Highway 35, Suite #201, Red Bank, New Jersey, 07701 USA

1.3. Product Feature of Equipment Under Test

	Product Feature
Equipment	GLOBAL LOCATOR
Brand Name	TUMI
Model Name	014341D
Marketing Name	TUMI Global Locator
FCC ID	2AFPZ-TGL001
	GPRS/EGPRS/
EUT supports Radios application	WCDMA/HSPA/HSPA+(16QAM uplink is not supported)/
EO I Supports Radios application	WLAN2.4GHz 802.11b/g/n HT20/HT40/
	Bluetooth v2.1+EDR/Bluetooth v4.0 LE
IMEL Code	Conduction: 352582070509212/352582070509212
IMEI Code	Radiation: 352582070509246/352582070509246
HW Version	LGT-001-V1
SW Version	MOLY.WR8.W1315.MD.WG.MP.V35.P4
EUT Stage	Identical Prototype

Remark:

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

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1.4. Product Specification of Equipment Under Test

Standards-related Product Specification				
	GSM850: 824.2 MHz ~ 848.8 MHz			
	GSM1900: 1850.2 MHz ~ 1909.8MHz			
Tx Frequency	WCDMA Band V: 826.4 MHz ~ 846.6 MHz			
TX Frequency	WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz			
	802.11b/g/n: 2412 MHz ~ 2462 MHz			
	Bluetooth: 2402 MHz ~ 2480 MHz			
	GSM850: 869.2 MHz ~ 893.8 MHz			
	GSM1900: 1930.2 MHz ~ 1989.8 MHz			
	WCDMA Band V: 871.4 MHz ~ 891.6 MHz			
Rx Frequency	WCDMA Band II: 1932.4 MHz ~ 1987.6 MHz			
	802.11b/g/n: 2412 MHz ~ 2462 MHz			
	Bluetooth: 2402 MHz ~ 2480 MHz			
	GPS : 1.57542 GHz			
	WWAN : PIFA Antenna			
Antenna Type	WLAN: PIFA Antenna			
Antenna Type	Bluetooth : PIFA Antenna			
	GPS: PIFA Antenna			
	GPRS: GMSK			
	EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK			
	WCDMA: QPSK (Uplink)			
	HSDPA: QPSK (Uplink)			
	HSUPA: QPSK (Uplink)			
	HSPA+: 16QAM (Uplink is not supported)			
Type of Modulation	802.11b: DSSS (DBPSK / DQPSK / CCK)			
	802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)			
	Bluetooth LE : GFSK			
	Bluetooth (1Mbps) : GFSK			
	Bluetooth (2Mbps) : π /4-DQPSK			
	Bluetooth (3Mbps) : 8-DPSK			
	GPS: BPSK			

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1.5. Modification of EUT

No modifications are made to the EUT during all test items.

1.6. Test Location

Test Site SPORTON INTERNATIONAL (SHENZHEN) INC.			
	1F & 2F,Building A, Morning Business Center, No. 4003 ShiGu Rd., Xili Town,		
	Nanshan District, Shenzhen, Guangdong, P. R. China		
Test Site Location	TEL: +86-755-8637-9589		
	FAX: +86-755-8637-9595		
Took Cita No	Sporton Site No.		
Test Site No.	CO01-SZ		

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. China				
	TEL: +86-755- 3320-2398				
Took Site No	Sporton Site No.	FCC/IC Registration No.			
Test Site No.	03CH01-SZ	831040/4086F			

Note: The test site complies with ANSI C63.4 2009 requirement.

1.7. Applicable Standards

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

- FCC 47 CFR FCC Part 15 Subpart B
- ANSI C63.4-2009
- IC ICES-003 Issue 5
- IC RSS-Gen Issue 4

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.

SPORTON INTERNATIONAL (SHENZHEN) INC.

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2. Test Configuration of Equipment Under Test

2.1. Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2009 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 (30MHz to the 5th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

The following tables are showing the test modes as the worst cases and recorded in this report.

		Te	st Condition	on
Item	EUT Configuration		EMI RE<1G	EMI RE≥1G
1.	Charging Mode (EUT with adapter)	\boxtimes	\boxtimes	Note 1
2.	Data application transferred mode (EUT with notebook)	\boxtimes	\boxtimes	\boxtimes

Abbreviations:

EMI AC: AC conducted emissions

EMI RE ≥ 1G: EUT radiated emissions ≥ 1GHz

EMI RE < 1G: EUT radiated emissions < 1GHz

Note 1: Testing for this mode is not required or not the worst case.

Remark: For signal above 1GHz, the worst case was test item 2.

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Test Items	EUT Configure Mode	Function Type
AC Conducted		Mode 1: GPRS850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Battery + GPS Rx + SIM1 <fig.1></fig.1>
Emission	1/2	Mode 2: WCDMA Band II Idle + Bluteooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Battery + GPS Rx + SIM2 <fig.2></fig.2>
Dadiated		Mode 1: GPRS850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Battery + GPS Rx + SIM1 <fig.1></fig.1>
Radiated Emissions < 1GHz	1/2	Mode 2: WCDMA Band II Idle + Bluteooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Battery + GPS Rx + SIM2 <fig.2></fig.2>
Radiated Emissions ≥ 1GHz	2	Mode 1: WCDMA Band II Idle + Bluteooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Battery + GPS Rx + SIM2 <fig.2></fig.2>

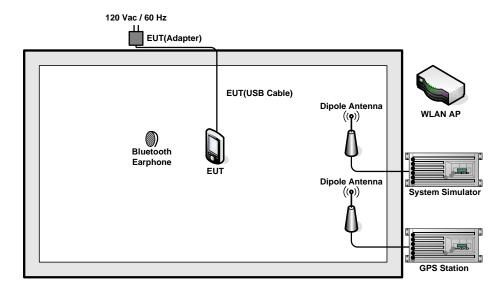
Remark:

- 1. The worst case of AC is mode 1; and the USB Link mode of AC is mode 2, the test data of these modes were reported.
- 2. The worst case of RE < 1G is mode 2; only the test data of this mode was reported.
- Data Link with Notebook means data application transferred mode between EUT and Notebook.

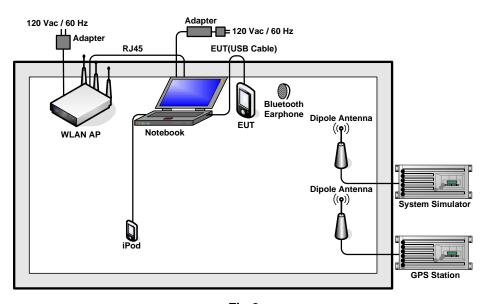
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2.2. Connection Diagram of Test System



<Fig.1>



<Fig.2>

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2.3. Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	GPS Station	ADIVIC	MP9000	N/A	N/A	Unshielded, 1.8 m
3.	WLAN AP	ASUSTek	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 2.7 m
4.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
5.	Bluetooth Earphone	Nokia	BH-108	PYAHS-107W	N/A	N/A
6.	Bluetooth Earphone	Samsung	HS3000	A3LHS3000	N/A	N/A
7.	Notebook	Lenovo	E540	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
8.	iPod	Apple	MC525 ZP/A	FCC DoC	Shielded, 1.0 m	N/A
9.	iPod nano 8GB	Apple	MC690ZP/A	FCC DoC	Shielded, 1.2 m	N/A

2.4. EUT Operation Test Setup

The EUT was in GSM or WCDMA idle mode during the testing. The EUT was synchronized to the BCCH, and is in continuous receiving mode by setting system simulator's paging reorganization.

At the same time, the EUT was attached to the Bluetooth earphone or WLAN AP, and the following programs installed in the EUT were programmed during the test.

- 1. Data application is transferred between Notebook and EUT via USB cable.
- 2. Turn on GPS function to make the EUT receive continuous signals from GPS station.

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3. Test Result

3.1. Test of AC Conducted Emission Measurement

3.1.1 Limits 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.

Frequency of emission	Conducted	limit (dBuV)
(MHz)	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.

3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

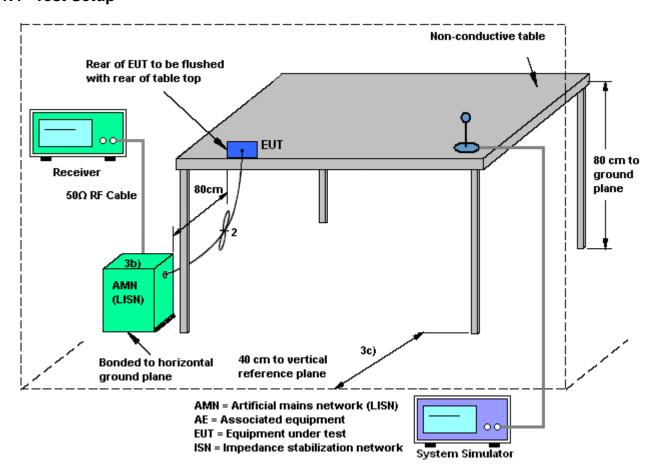
3.1.3 Test Procedure

- 1. 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.
- 2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- 3. All the support units are connecting to the other LISN.
- 4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- 5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
- 6. Both sides of AC line were checked for maximum conducted interference.
- 7. The frequency range from 150 kHz to 30 MHz was searched.
- 8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

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3.1.4 Test Setup

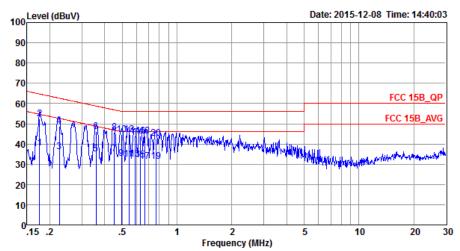


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3.1.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	21~23℃
Test Engineer :	Jacky Yang	Relative Humidity :	41~43%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GPRS850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from		
Function Type :	Adapter) + Battery + GPS R	x + SIM1	



Site : CO01-SZ Condition: FCC 15B_QP LISN_L_20150304 LINE

Project : (FC) 582403

Mode : Mode 1

: 352582070509212/352582070509212

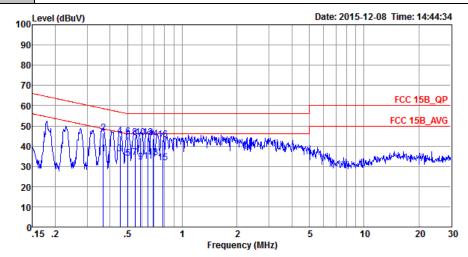
			Over	Limit	Read	LISN	Cable	
	Freq	Level	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBu∀	dB	dBuV	dBu∀	dB	dB	
1	0.18		-16.68	54.68	27.20			Average
2	0.18	52.40	-12.28	64.68	41.60	0.48	10.32	QP
3	0.23	36.00	-16.61	52.61	25.20	0.53	10.27	Average
4	0.23	48.60	-14.01	62.61	37.80	0.53	10.27	QP
5	0.36	35.23	-13.51	48.74	24.50	0.55	10.18	Average
6	0.36	46.03	-12.71	58.74	35.30	0.55	10.18	QP
7	0.45	34.97	-11.88	46.85	24.20	0.61	10.16	Average
8 *	0.45	45.77	-11.08	56.85	35.00	0.61		
9	0.49	33.02	-13.08	46.10	22.19	0.67	10.16	Average
10	0.49	44.52	-11.58	56.10	33.69	0.67		_
11	0.54	32.59	-13.41	46.00	21.80	0.64	10.15	Average
12	0.54	44.79	-11.21	56.00	34.00	0.64		_
13	0.59	32.46	-13.54	46.00	21.70	0.61	10.15	Average
14	0.59	43.76	-12.24	56.00	33.00	0.61		
15	0.63	32.23	-13.77	46.00	21.50	0.58		Average
16	0.63	43.93	-12.07	56.00	33.20	0.58		_
17	0.67	31.21	-14.79		20.50			Average
18	0.67		-12.19		33.10			_
19	0.77		-14.72	46.00	20.60			Average
20	0.77		-13.22	56.00	32.10		10.15	
20	0.11	12.70	10.22	30.00	52.10	0.00	10.15	×-

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Test Mode: Mode 1 21~23℃ Temperature : Test Engineer: Jacky Yang Relative Humidity: 41~43% Test Voltage: 120Vac / 60Hz Phase: Neutral GPRS850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from **Function Type:** Adapter) + Battery + GPS Rx + SIM1



: CO01-SZ Site

Condition: FCC 15B_QP LISN_N_20150304 NEUTRAL

Project : (FC) 582403

Mode : Mode 1

IMEI : 352582070509212/352582070509212

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBu∀	dB	dBuV	dBuV	dB	dB	
1	0.37	36.24	-12.32	48.56	25.50	0.56	10.18	Average
2	0.37	46.34	-12.22	58.56	35.60	0.56	10.18	QP
3 *	0.45	36.24	-10.56	46.80	25.50	0.58	10.16	Average
4	0.45	44.84	-11.96	56.80	34.10	0.58	10.16	QP
5	0.50	34.06	-11.94	46.00	23.29	0.61	10.16	Average
6	0.50	44.66	-11.34	56.00	33.89	0.61	10.16	QP
7	0.55	34.15	-11.85	46.00	23.41	0.59	10.15	Average
8	0.55	44.45	-11.55	56.00	33.71	0.59	10.15	QP
9	0.59	32.23	-13.77	46.00	21.50	0.58	10.15	Average
10	0.59	44.23	-11.77	56.00	33.50	0.58	10.15	QP
11	0.65	32.31	-13.69	46.00	21.60	0.56	10.15	Average
12	0.65	44.31	-11.69	56.00	33.60	0.56	10.15	QP
13	0.69	34.30	-11.70	46.00	23.60	0.55	10.15	Average
14	0.69	43.60	-12.40	56.00	32.90	0.55	10.15	QP
15	0.78	31.60	-14.40	46.00	20.90	0.55	10.15	Average
16	0.78	43.10	-12.90	56.00	32.40	0.55	10.15	QP

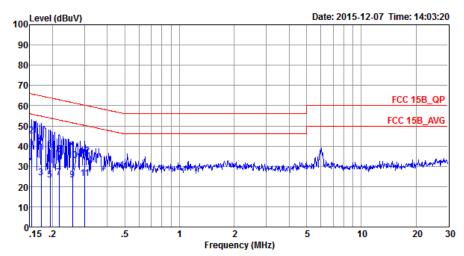
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Report No.: FC582403

Test Mode :	Mode 2	Temperature :	21~23℃					
Test Engineer :	Jacky Yang	Relative Humidity :	41~43%					
Test Voltage :	120Vac / 60Hz	Phase :	Line					
	VCDMA Band II Idle + Bluteooth Idle + WLAN Idle + USB Cable (Data Link with							

Function Type: Notebook) + Battery + GPS Rx + SIM2



: CO01-SZ

Condition: FCC 15B_QP LISN_L_20150304 LINE

Project : (FC) 582403 : Mode 2 Mode

: 352582070509212/352582070509212 IMEI

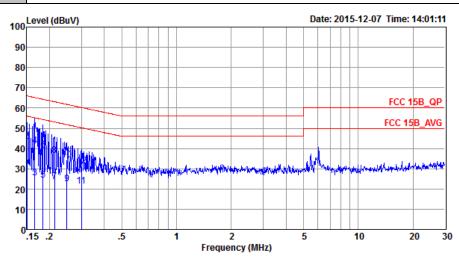
	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBu∀	dBu₹	dB	dB	
1	0.15	29.49	-26.33	55.82	18.69	0.44	10.36	Average
2 *	0.15	44.89	-20.93	65.82	34.09	0.44	10.36	QP
3	0.17	24.50	-30.31	54.81	13.70	0.47	10.33	Average
4	0.17	41.40	-23.41	64.81	30.60	0.47	10.33	QP
5	0.19	23.31	-30.53	53.84	12.50	0.51	10.30	Average
6	0.19	38.21	-25.63	63.84	27.40	0.51	10.30	QP
7	0.22	24.31	-28.61	52.92	13.51	0.53	10.27	Average
8	0.22	35.71	-27.21	62.92	24.91	0.53	10.27	QP
9	0.26	23.19	-28.32	51.51	12.40	0.55	10.24	Average
10	0.26	32.89	-28.62	61.51	22.10	0.55	10.24	QP
11	0.30	23.97	-26.22	50.19	13.20	0.57	10.20	Average
12	0.30	35.07	-25.12	60.19	24.30	0.57	10.20	QP

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Test Mode :	Mode 2	Temperature :	21~23℃							
Test Engineer :	Jacky Yang	Relative Humidity :	41~43%							
Test Voltage :	120Vac / 60Hz	Phase :	Neutral							
	WCDMA Band II Idle + Bluteooth Idle + WLAN Idle + USB Cable (Data Link									

Function Type: Notebook) + Battery + GPS Rx + SIM2



: CO01-SZ Site

Condition: FCC 15B_QP LISN_N_20150304 NEUTRAL

Project : (FC) 582403 Mode : Mode 2

IMEI : 352582070509212/352582070509212

			Over	Limit	Read	LISN	Cable	
	Freq	Level	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBuV	dB	dBu∀	dBu∇	dB	dB	
1	0.15	28.21	-27.79	56.00	17.40	0.45	10.36	Average
2 *	0.15	43.61	-22.39	66.00	32.80	0.45	10.36	QP
3	0.17	25.31	-29.85	55.16	14.50	0.47	10.34	Average
4	0.17	41.51	-23.65	65.16	30.70	0.47	10.34	QP
5	0.18	24.21	-30.07	54.28	13.41	0.49	10.31	Average
6	0.18	39.11	-25.17	64.28	28.31	0.49	10.31	QP
7	0.21	23.50	-29.60	53.10	12.70	0.52	10.28	Average
8	0.21	36.60	-26.50	63.10	25.80	0.52	10.28	QP
9	0.25	22.50	-29.28	51.78	11.71	0.55	10.24	Average
10	0.25	34.40	-27.38	61.78	23.61	0.55	10.24	QP
11	0.30	21.49	-28.75	50.24	10.70	0.59	10.20	Average
12	0.30	31.19	-29.05	60.24	20.40	0.59	10.20	QP

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3.2. Test of Radiated Emission Measurement

3.2.1. Limit of Radiated Emission

The emissions from an unintentional radiator shall not exceed the field strength levels specified in the following table:

Frequency	Field Strength	Measurement Distance		
(MHz)	(microvolts/meter)	(meters)		
30 – 88	100	3		
88 – 216	150	3		
216 - 960	200	3		
Above 960	500	3		

3.2.2. Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.2.3. Test Procedures

- 1. The EUT was placed on a turntable with 0.8 meter above ground.
- The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
- 3. The table was rotated 360 degrees to determine the position of the highest radiation.
- 4. The antenna is a Bi-Log antenna and its height is adjusted between one to four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
- 5. For each suspected emission, 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.
- Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode (RBW=120kHz/VBW=300kHz for frequency below 1GHz; RBW=1MHz VBW=3MHz (Peak), RBW=1MHz/VBW=10Hz (Average) for frequency above 1GHz).
- 7. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, peak values of EUT will be reported. Otherwise, the emission will be repeated by using the quasi-peak method and reported.
- 8. Emission level $(dB\mu V/m) = 20 \log Emission level (\mu V/m)$
- 9. Corrected Reading: Antenna Factor + Cable Loss + Read Level Preamp Factor = Level

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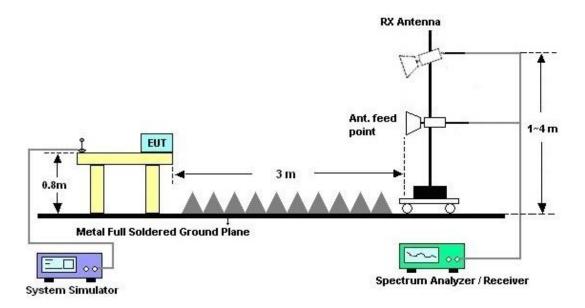
Report No.: FC582403

3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz

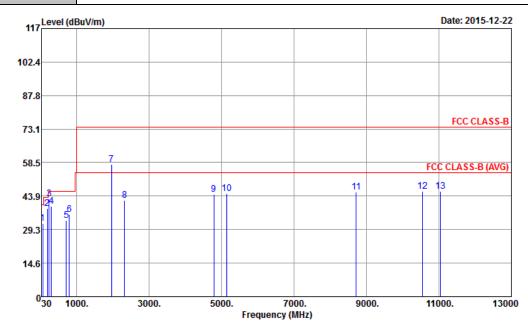


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3.2.5. Test Result of Radiated Emission

Test Mode :	Mode 2	Temperature :	23~25°C				
Test Engineer :	Kaer Huang	Relative Humidity :	48~52%				
Test Distance :	3m	Polarization :	Horizontal				
Eurotion Type	WCDMA Band II Idle + Bluteooth Idle + WLAN Idle + USB Cable (Data Link with						
Function Type :	Notebook) + Battery + GPS Rx + SIM2						
Remark :	#7 is system simulator signa	l which can be ignored	l.				



: 03CH01-SZ Site

: FCC CLASS-B 3m LF_ANT(23188)_151017 HORIZONTAL : (FC) 582403 Condition

Project Mode : Mode 2

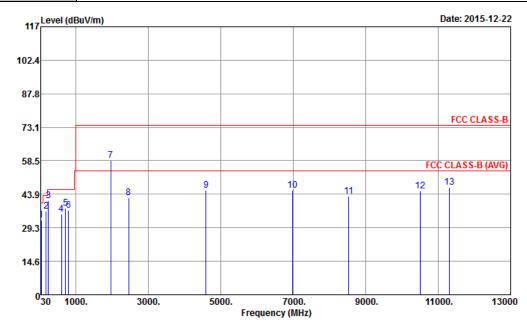
		Level ———— dBuV/m		Limit Line dBuV/m		Antenna Factor dB/m			A/Pos	T/Pos deg	Remark
1	66.18	32.07	-7.93	40.00	48.54	8.56	0.89	25.92			Peak
2	187.14	38.61	-4.89	43.50	51.02	11.53	1.38	25.32			Peak
3	236.28	42.83	-3.17	46.00	54.25	12.18	1.57	25.17	100	20	Peak
4	300.00	39.46	-6.54	46.00	48.69	14.10	1.71	25.04			Peak
5	715.10	33.09	-12.91	46.00	36.10	20.62	2.71	26.34			Peak
6	799.80	35.69	-10.31	46.00	36.48	22.50	2.88	26.17			Peak
7	1960.00	57.60			79.93	31.74	4.57	58.64			Peak
8	2320.00	42.05	-31.95	74.00	63.12	32.53	4.99	58.59			Peak
9	4786.00	44.55	-29.45	74.00	61.20	34.38	7.43	58.46			Peak
10	5140.00	44.88	-29.12	74.00	60.20	34.68	7.72	57.72			Peak
11	8716.00	45.60	-28.40	74.00	55.92	36.46	10.94	57.72			Peak
12	10554.00	45.94	-28.06	74.00	54.18	38.53	12.32	59.09	100	0	Peak
13	11036.00	45.82	-28.18	74.00	53.99	38.83	12.57	59.57			Peak

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Report No.: FC582403

Test Mode :	Mode 2	Temperature :	23~25°C						
Test Engineer :	Kaer Huang	Relative Humidity :	48~52%						
Test Distance :	3m	Polarization :	Vertical						
Function Type :	WCDMA Band II Idle + Bluteooth Idle + WLAN Idle + USB Cable (Data Link with								
Function Type :	Notebook) + Battery + GPS	Rx + SIM2							
Remark :	#7 is system simulator signa	#7 is system simulator signal which can be ignored.							



: 03CH01-SZ Site

: FCC CLASS-B 3m LF_ANT(23188)_151017 VERTICAL : (FC) 582403 Condition

Project Mode : Mode 2

	Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	45.12	32.71	-7.29	40.00	44.81	12.99	0.89	25.98			Peak
2	181.47	36.52	-6.98	43.50	48.98	11.51	1.38	25.35			Peak
3	240.06	41.20	-4.80	46.00	52.54	12.25	1.57	25.16	100	0	Peak
4	597.50	35.10	-10.90	46.00	39.33	19.69	2.52	26.44			Peak
5	720.00	37.83	-8.17	46.00	40.72	20.73	2.71	26.33			Peak
6	796.30	36.84	-9.16	46.00	37.73	22.41	2.88	26.18			Peak
7	1960.00	58.68			81.01	31.74	4.57	58.64			Peak
8	2462.00	42.44	-31.56	74.00	63.34	32.67	5.17	58.74			Peak
9	4594.00	45.71	-28.29	74.00	63.72	34.25	7.27	59.53			Peak
10	6978.00	45.66	-28.34	74.00	57.45	36.11	9.27	57.17			Peak
11	8530.00	42.91	-31.09	74.00	53.05	36.24	11.04	57.42			Peak
12	10514.00	45.27	-28.73	74.00	53.52	38.51	12.30	59.06			Peak
13	11314.00	46.90	-27.10	74.00	54.95	39.05	12.59	59.69	100	0	Peak

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4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Receiver	R&S	ESCI7	100724	9kHz~3GHz;	Nov. 23, 2015	Dec. 07, 2015~ Dec. 08, 2015	Nov. 22, 2016	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	103892	9kHz~30MHz	Feb. 02, 2015	Dec. 07, 2015~ Dec. 08, 2015	Feb. 01, 2016	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	MessTec	AN3016	16850	9kHz~30MHz	Feb. 02, 2015	Dec. 07, 2015~ Dec. 08, 2015	Feb. 01, 2016	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	61602000089 1	100Vac~250Vac	Aug. 07, 2015	Dec. 07, 2015~ Dec. 08, 2015	Aug. 06, 2016	Conduction (CO01-SZ)
Pulse Limiter	COM-POWER	LIT-153 Transient Limiter	53139	150kHz~30MHz	Oct. 20, 2015	Dec. 07, 2015~ Dec. 08, 2015	Oct. 19, 2016	Conduction (CO01-SZ)
EMI Test Receiver&SA	Agilent Technologies	N9038A	MY52260185	20Hz~26.5GHz	May 26, 2015	Dec. 22, 2015	May 25, 2016	Radiation (03CH01-SZ)
Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz;M ax 30dBm	Jun. 07, 2015	Dec. 22, 2015	Jun. 06, 2016	Radiation (03CH01-SZ)
Bilog Antenna	TeseQ	CBL6112D	23188	30MHz-2GHz	Oct. 17, 2015	Dec. 22, 2015	Oct. 16, 2016	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS Lindgren	3117	00119436	1GHz~18GHz	Oct. 17, 2015	Dec. 22, 2015	Oct. 16, 2016	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9kHz~3000MHz / 30 dB	Jan. 28, 2015	Dec. 22, 2015	Jan. 27, 2016	Radiation (03CH01-SZ)
Amplifier	Agilent Technologies	83017A	MY39501302	500MHz~26.5G Hz	Jan. 28, 2015	Dec. 22, 2015	Jan. 27, 2016	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	61601000198 5	N/A	NCR	Dec. 22, 2015	NCR	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Dec. 22, 2015	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Dec. 22, 2015	NCR	Radiation (03CH01-SZ)

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5. Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of	2.3 dB
Confidence of 95% (U = 2Uc(y))	

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

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

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