FCC RF Test Report

APPLICANT	:	**Sony Mobile Communications Inc.**
EQUIPMENT	:	**GSM/WCDMA/LTE Phone+Bluetooth, DTS/UNII a/b/g/n/ac and NFC**
BRAND NAME	:	**Sony**
FCC ID	:	**PY7-14706B**
STANDARD	:	**47 CFR Part 2, 22(H), 24(E), 27**
CLASSIFICATION	:	**PCS Licensed Transmitter Held to Ear (PCE)**

This is a variant report which is only valid together with the original test report. The product was received on Jun. 07, 2017 and completely tested on Sep. 27, 2017. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA / EIA-603-D-2010 and the testing has shown the tested sample to be 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 INC., the test report shall not be reproduced except in full.

Reviewed by: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager

Testing Laboratory
1190

SPORTON INTERNATIONAL INC.
No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG760708-01B	Rev. 01	Initial issue of report	Oct. 26, 2017

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
	§22.913(a)(2)	Effective Radiated Power (Band 5)	ERP < 7 Watt		
	§24.232(c) §27.50(h)(2)	Equivalent Isotropic Radiated Power (Band 2) (Band 7)	EIRP < 2Watt		
4.4	§2.1053 §22.917(a) §24.238(a)	Radiated Spurious Emission (Band 2) (Band 5)	< $43+10\log_{10}$(P[Watts])	PASS	Under limit 9.88 dB at 10107.000 MHz
	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (Band 7)	< $55+10\log_{10}$(P[Watts])		

1 General Description

1.1 Applicant

Sony Mobile Communications Inc.
4-12-3 Higashi-Shinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan

1.2 Manufacturer

Sony Mobile Communications Inc.
4-12-3 Higashi-Shinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan

1.3 Product Feature of Equipment Under Test

GSM/WCDMA/LTE, Bluetooth, DTS/UNII a/b/g/n/ac, FM Receiver, NFC, and GPS

Standards-related Product Specification	
Antenna Type	PIFA Antenna

Remark: This is a variant report. All the test cases were performed on original report which can be referred to Sporton Report Number FG760710-01B.

EUT Information List			
HW Version	SW Version	S/N	Performed Test Item
A	1.14	CQ300001ZY	Conducted Measurement ERP/EIRP Test Radiated Spurious Emission

Accessory List	
Adapter 1	Model Name: UCH12
	S/N: VB17W34100238
Earphone 1	Model Name: MH410c
	S/N: N/A
USB Cable	Model Name: UCB20
	S/N: N/A

Note:

1. Above EUT list and accessory list used are electrically identical per declared by manufacturer.
2. Above the accessories list are used to exercise the EUT during test.
3. For other wireless features of this EUT, test report will be issued separately.

1.4 Modification of EUT

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

1.5 Emission Designator

LTE Band 2		QPSK	16QAM	64QAM
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Maximum EIRP(W)	Maximum EIRP(W)
1.4	1850.7 ~ 1909.3	0.2333	0.1932	0.1542
3	1851.5 ~ 1908.5	0.2317	0.1945	0.1570
5	1852.5 ~ 1907.5	0.2350	0.1991	0.1556
10	1855.0 ~ 1905.0	0.2404	0.2018	0.1585
15	1857.5 ~ 1902.5	0.2355	0.2018	0.1585
20	1860.0 ~ 1900.0	0.2427	0.2009	0.1607
LTE Band 5		QPSK	16QAM	64QAM
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Maximum ERP(W)	Maximum ERP(W)
1.4	824.7 ~ 848.3	0.1409	0.1122	0.0871
3	825.5 ~ 847.5	0.1422	0.1127	0.0879
5	826.5 ~ 846.5	0.1426	0.1132	0.0863
10	829.0 ~ 844.0	0.1429	0.1132	0.0885
LTE Band 7		QPSK	16QAM	64QAM
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Maximum EIRP(W)	Maximum EIRP(W)
5	2502.5 ~ 2567.5	0.1972	0.1622	0.1242
10	2505.0 ~ 2565.0	0.1977	0.1611	0.1245
15	2507.5 ~ 2562.5	0.1954	0.1614	0.1227
20	2510.0 ~ 2560.0	0.1991	0.1622	0.1262

1.6 Testing Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1190 and No. TW0007 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

Test Site	SPORTON INTERNATIONAL INC.
Test Site Location	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	**Sporton Site No.**
	TH05-HY

Test Site	SPORTON INTERNATIONAL INC.
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd Rd. Guishan Dist, Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	**Sporton Site No.**
	03CH15-HY

1.7 Applicable Standards

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

- 47 CFR Part 2, 22(H), 24(E), 27
- ANSI / TIA / EIA-603-D-2010
- FCC KDB 971168 D01 Power Meas. License Digital Systems v02r02
- FCC KDB 412172 D01 Determining ERP and EIRP v01r01

Remark:

1. 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.

2 Test Configuration of Equipment Under Test

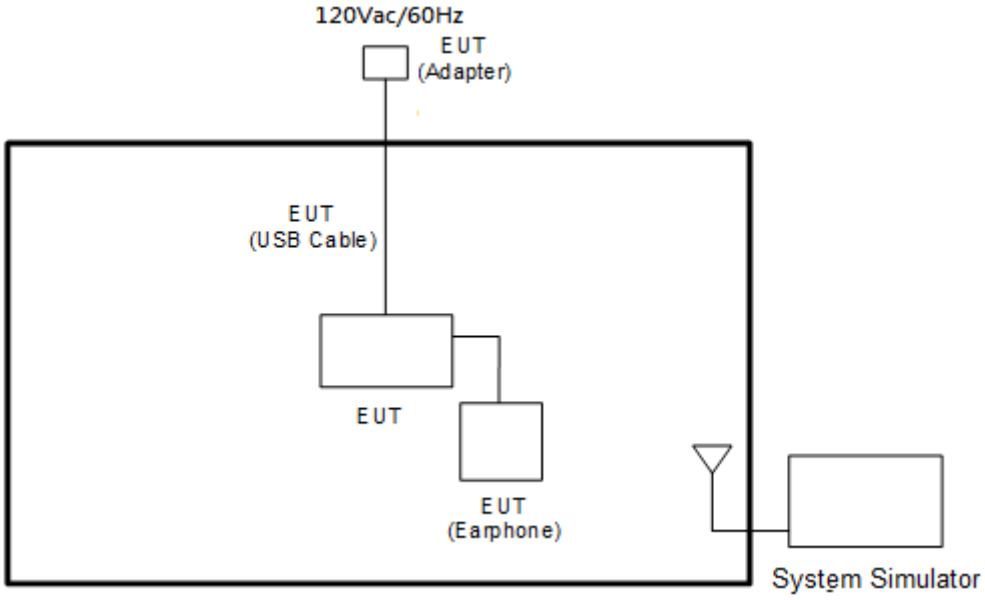
2.1 Test Mode

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v02r02 with maximum output power.

Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission.

Test Items	Band	Bandwidth (MHz)						Modulation			RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
Max. Output Power	2	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	5	v	v	v	v	-	-	v	v	v	v	v	v	v	v	v
	7	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v
E.R.P./ E.I.R.P.	2	v	v	v	v	v	v	v	v	v	v	v		v	v	v
	5	v	v	v	v	-	-	v	v	v	v	v		v	v	v
	7	-	-	v	v	v	v	v	v	v	v			v	v	v
Radiated Spurious Emission	2	v	v	v	v	v	v	v			v				v	
	5	v	v	v	v	-	-	v			v					v
	7	-	-	v	v	v	v	v			v				v	
Note	1. The mark "v " means that this configuration is chosen for testing 2. The mark "-" means that this bandwidth is not supported. 3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.															

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	LTE Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m

2.4 Frequency List of Low/Middle/High Channels

LTE Band 2 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	18700	18900	19100
	Frequency	1860	1880	1900
15	Channel	18675	18900	19125
	Frequency	1857.5	1880	1902.5
10	Channel	18650	18900	19150
	Frequency	1855	1880	1905
5	Channel	18625	18900	19175
	Frequency	1852.5	1880	1907.5
3	Channel	18615	18900	19185
	Frequency	1851.5	1880	1908.5
1.4	Channel	18607	18900	19193
	Frequency	1850.7	1880	1909.3

LTE Band 5 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
10	Channel	20450	20525	20600
	Frequency	829	836.5	844
5	Channel	20425	20525	20625
	Frequency	826.5	836.5	846.5
3	Channel	20415	20525	20635
	Frequency	825.5	836.5	847.5
1.4	Channel	20407	20525	20643
	Frequency	824.7	836.5	848.3

LTE Band 7 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	20850	21100	21350
	Frequency	2510	2535	2560
15	Channel	20825	21100	21375
	Frequency	2507.5	2535	2562.5
10	Channel	20800	21100	21400
	Frequency	2505	2535	2565
5	Channel	20775	21100	21425
	Frequency	2502.5	2535	2567.5

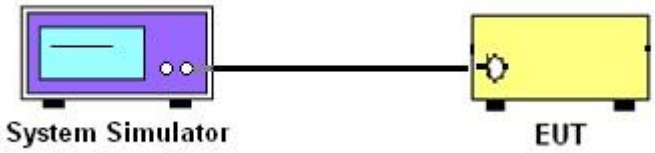
3 Conducted Test Items

3.1 Measuring Instruments

See list of measuring instruments of this test report.

3.2 Test Setup

3.2.1 Conducted Output Power



3.3 Test Result of Conducted Test

Please refer to Appendix A.

3.4 Conducted Output Power and ERP/EIRP

3.4.1 Description of the Conducted Output Power Measurement and ERP/EIRP Measurement

A system simulator was used to establish communication with the EUT. Its parameters were set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

The ERP of mobile transmitters must not exceed 7 Watts for LTE Band 5.

The EIRP of mobile transmitters must not exceed 2 Watts for LTE Band 2 and Band 7

According to KDB 412172 D01 Power Approach,

EIRP = $P_T + G_T – L_C$, ERP = EIRP -2.15, where

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB

3.4.2 Test Procedures

1. The transmitter output port was connected to the system simulator.
2. Set EUT at maximum power through the system simulator.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure and record the power level from the system simulator.

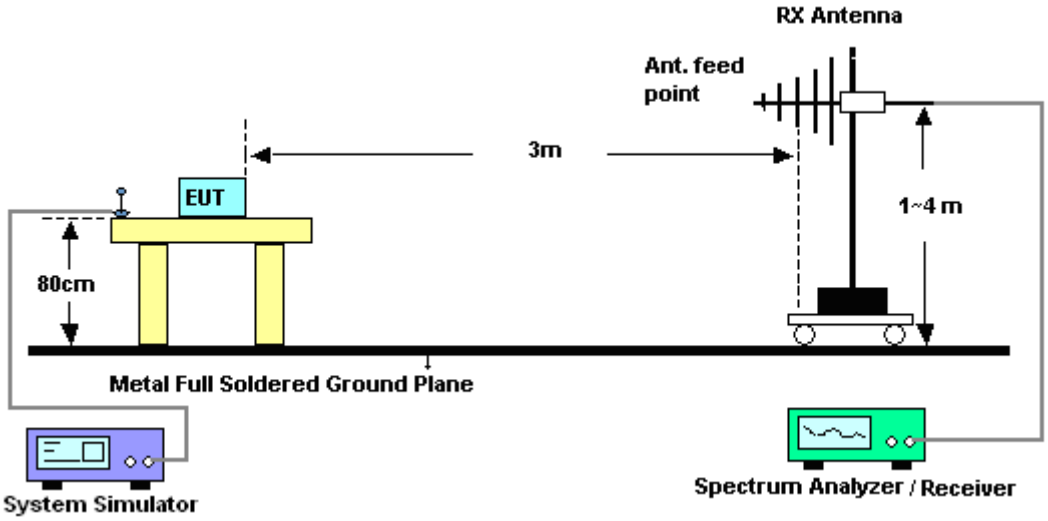
4 Radiated Test Items

4.1 Measuring Instruments

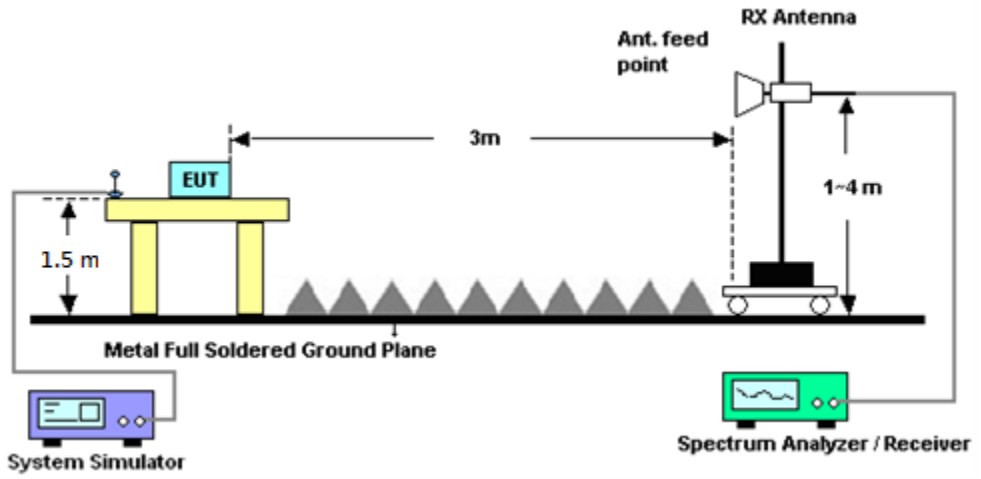
See list of measuring instruments of this test report.

4.2 Test Setup

4.2.1 For radiated test from 30MHz to 1GHz



4.2.2 For radiated test above 1GHz



4.3 Test Result of Radiated Test

Please refer to Appendix B.

4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI / TIA / EIA-603-D-2010. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

For Band 7:

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 55 + 10 log (P) dB.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

4.4.2 Test Procedures

1. The testing follows FCC KDB 971168 v02r02 Section 5.8 and ANSI / TIA-603-D-2010 Section 2.2.12.
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
9. Taking the record of output power at antenna port.
10. Repeat step 7 to step 8 for another polarization.
11. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
    The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
12. For Band 7:
    The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)
    EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
    ERP (dBm) = EIRP - 2.15

5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	Testo	608-H2	41410069	N/A	Aug. 21, 2017	Sep. 27, 2017	Aug. 20, 2018	Conducted (TH05-HY)
Programmable Power Supply	GW Instek	PSS-2005	EL890001	1V~20V 0.5A~5A	Oct. 03, 2016	Sep. 27, 2017	Oct. 02, 2017	Conducted (TH05-HY)
LTE Base Station	Anritsu	MT8820C	6201432821	GSM/GPRS /WCDMA/LTE	Oct. 11, 2016	Sep. 27, 2017	Oct. 10, 2017	Conducted (TH05-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY84209521	1GHz~26GHz	Dec. 02, 2016	Sep. 27, 2017	Dec. 01, 2017	Conducted (TH05-HY)
Bilog Antenna	TESEQ	CBL6111D& 00800N1D0	41912&05	30MHz to 1GHz	Jan. 07, 2017	Sep. 21, 2017~ Sep. 25, 2017	Jan. 06, 2018	Radiation (03CH15-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1522	1G~18GHz	Mar. 17, 2017	Sep. 21, 2017~ Sep. 25, 2017	Mar. 16, 2018	Radiation (03CH15-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170576	18GHz ~ 40GHz	Apr. 27, 2017	Sep. 21, 2017~ Sep. 25, 2017	Apr. 26, 2018	Radiation (03CH15-HY)
Amplifier	SONOMA	310N	363440	9kHz~1GHz	Nov. 09, 2016	Sep. 21, 2017~ Sep. 25, 2017	Nov. 08, 2017	Radiation (03CH15-HY)
Preamplifier	MITEQ	TTA 1840-35-HG	1887435	18GHz ~ 40GHz	Oct. 13, 2016	Sep. 21, 2017~ Sep. 25, 2017	Oct. 12, 2017	Radiation (03CH15-HY)
Preamplifier	Keysight	83017A	MY53270195	1GHz~26.5GHz	Aug. 21, 2017	Sep. 21, 2017~ Sep. 25, 2017	Aug. 20, 2018	Radiation (03CH15-HY)
Preamplifier	MITEQ	AMF-7D-00 101800	2025787	1GHZ~18GHZ	Feb. 13, 2017	Sep. 21, 2017~ Sep. 25, 2017	Feb. 12, 2018	Radiation (03CH15-HY)
Spectrum Analyzer	Agilent	N9030A	MY52350276	3Hz~44GHz	Mar. 23, 2017	Sep. 21, 2017~ Sep. 25, 2017	Mar. 22, 2018	Radiation (03CH15-HY)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Controller	ChainTek	3000-1	N/A	Control Turn table & Ant Mast	N/A	Sep. 21, 2017~ Sep. 25, 2017	N/A	Radiation (03CH15-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Sep. 21, 2017~ Sep. 25, 2017	N/A	Radiation (03CH15-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Sep. 21, 2017~ Sep. 25, 2017	N/A	Radiation (03CH15-HY)
Hygrometer	TECPEL	DTM-303B	TP140320	N/A	Mar. 20, 2017	Sep. 21, 2017~ Sep. 25, 2017	Mar. 19, 2018	Radiation (03CH15-HY)
Signal Generator	Rohde & Schwarz	SMF100A	101107	100kHz~40GHz	May 22, 2017	Sep. 21, 2017~ Sep. 25, 2017	May 21, 2018	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY249564 MY249524	25GHz~40GHz	Sep. 30, 2016	Sep. 21, 2017~ Sep. 25, 2017	Sep. 29, 2017	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY249564 MY249524	30MHz~1GHz	Sep. 30, 2016	Sep. 21, 2017~ Sep. 25, 2017	Sep. 29, 2017	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY249564 MY249524	1GHz~25GHz	Sep. 30, 2016	Sep. 21, 2017~ Sep. 25, 2017	Sep. 29, 2017	Radiation (03CH15-HY)
Filter	Wainwright	WHKX12-2700-3000-180	SN2	3 GHz High Pass	Nov. 22, 2016	Sep. 21, 2017~ Sep. 25, 2017	Nov. 21, 2017	Radiation (03CH15-HY)
Filter	Wainwright	WHKX12-1080-1200-150	SN1	1.2 GHz High Pass	Sep. 19, 2016	Sep. 21, 2017~ Sep. 25, 2017	Sep. 18, 2017	Radiation (03CH15-HY)
Filter	Wainwright	WLKS1200-12SS	SN2	1.2G Low Pass	Sep. 19, 2016	Sep. 21, 2017~ Sep. 25, 2017	Sep. 18, 2017	Radiation (03CH15-HY)
Notch Filter	Wainwright	WRCT/800/960-0.2/40-8	SN11	GSM850	Nov. 22, 2016	Sep. 21, 2017~ Sep. 25, 2017	Nov. 21, 2017	Radiation (03CH15-HY)
Notch Filter	Wainwright	WRCT1850/1910-40/8S	SN21	1900	Nov. 22, 2016	Sep. 21, 2017~ Sep. 25, 2017	Nov. 21, 2017	Radiation (03CH15-HY)
Notch Filter	Wainwright	WRCT2500/2570-10/40-	SN1 R	LTE Band7	Aug. 24, 2017	Sep. 21, 2017~ Sep. 25, 2017	Aug. 23, 2018	Radiation (03CH15-HY)
Test Software	N/A	E3	6.2009-8-24	N/A	N/A	Sep. 21, 2017~ Sep. 25, 2017	N/A	Radiation (03CH15-HY)

6 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.37**

Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.67**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.03**

Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	23.44	**23.75**	23.59
20	1	49		23.37	23.53	23.49
20	1	99		23.43	23.49	23.37
20	50	0		22.48	22.71	22.68
20	50	24		22.50	22.64	22.58
20	50	50		22.41	22.58	22.51
20	100	0		22.53	22.66	22.59
20	1	0	16-QAM	22.63	22.93	22.78
20	1	49		22.62	22.83	22.75
20	1	99		22.71	22.65	22.59
20	50	0		21.47	21.71	21.64
20	50	24		21.53	21.67	21.63
20	50	50		21.44	21.61	21.54
20	100	0		21.48	21.61	21.62
20	1	0	64-QAM	21.85	21.96	21.92
20	1	49		21.69	21.70	21.87
20	1	99		21.65	21.75	21.87
20	50	0		20.60	20.64	20.79
20	50	24		20.53	20.57	20.71
20	50	50		20.45	20.52	20.76
20	100	0		20.55	20.57	20.75
15	1	0	QPSK	23.40	23.62	23.60
15	1	37		23.34	23.51	23.41
15	1	74		23.32	23.49	23.34
15	36	0		22.47	22.69	22.62
15	36	20		22.49	22.63	22.58
15	36	39		22.46	22.59	22.53
15	75	0		22.52	22.64	22.59
15	1	0	16-QAM	22.65	22.95	22.85
15	1	37		22.62	22.83	22.74
15	1	74		22.65	22.75	22.53
15	36	0		21.48	21.69	21.63
15	36	20		21.53	21.64	21.57
15	36	39		21.46	21.59	21.50
15	75	0		21.51	21.67	21.57
15	1	0	64-QAM	21.87	21.90	21.80
15	1	37		21.72	21.70	21.85
15	1	74		21.71	21.74	21.87
15	36	0		20.71	20.61	20.75
15	36	20		20.65	20.57	20.71
15	36	39		20.57	20.54	20.74
15	75	0		20.60	20.56	20.68

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	23.36	23.71	23.55
10	1	25		23.20	23.58	23.51
10	1	49		23.31	23.55	23.44
10	25	0		22.32	22.64	22.57
10	25	12		22.30	22.66	22.54
10	25	25		22.37	22.59	22.53
10	50	0		22.28	22.61	22.53
10	1	0	16-QAM	22.45	22.95	22.77
10	1	25		22.37	22.82	22.72
10	1	49		22.48	22.74	22.52
10	25	0		21.30	21.64	21.54
10	25	12		21.32	21.62	21.57
10	25	25		21.33	21.57	21.49
10	50	0		21.26	21.63	21.53
10	1	0	64-QAM	21.80	21.80	21.88
10	1	25		21.72	21.69	21.90
10	1	49		21.66	21.61	21.79
10	25	0		20.62	20.57	20.67
10	25	12		20.61	20.54	20.77
10	25	25		20.54	20.51	20.70
10	50	0		20.61	20.53	20.75
5	1	0	QPSK	23.29	23.61	23.49
5	1	12		23.26	23.58	23.46
5	1	24		23.19	23.58	23.45
5	12	0		22.30	22.63	22.51
5	12	7		22.28	22.63	22.53
5	12	13		22.25	22.57	22.48
5	25	0		22.27	22.59	22.53
5	1	0	16-QAM	22.38	22.89	22.76
5	1	12		22.34	22.80	22.65
5	1	24		22.34	22.78	22.51
5	12	0		21.28	21.61	21.53
5	12	7		21.28	21.62	21.53
5	12	13		21.26	21.60	21.50
5	25	0		21.26	21.59	21.50
5	1	0	64-QAM	21.67	21.66	21.82
5	1	12		21.65	21.68	21.81
5	1	24		21.50	21.53	21.68
5	12	0		20.58	20.44	20.54
5	12	7		20.47	20.40	20.61
5	12	13		20.39	20.39	20.70
5	25	0		20.50	20.33	20.55

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	23.38	23.55	23.49
3	1	8		23.36	23.54	23.49
3	1	14		23.31	23.50	23.40
3	8	0		22.38	22.58	22.48
3	8	4		22.41	22.58	22.51
3	8	7		22.38	22.56	22.49
3	15	0		22.36	22.58	22.46
3	1	0	16-QAM	22.43	22.79	22.61
3	1	8		22.45	22.77	22.54
3	1	14		22.36	22.70	22.40
3	8	0		21.42	21.63	21.53
3	8	4		21.45	21.66	21.54
3	8	7		21.40	21.62	21.53
3	15	0		21.39	21.59	21.50
3	1	0	64-QAM	21.69	21.64	21.73
3	1	8		21.67	21.50	21.86
3	1	14		21.50	21.57	21.72
3	8	0		20.44	20.53	20.64
3	8	4		20.59	20.48	20.68
3	8	7		20.44	20.35	20.50
3	15	0		20.56	20.45	20.66
1.4	1	0	QPSK	23.20	23.44	23.29
1.4	1	3		23.25	23.49	23.33
1.4	1	5		23.23	23.42	23.25
1.4	3	0		23.28	23.51	23.37
1.4	3	1		23.31	23.58	23.40
1.4	3	3		23.29	23.53	23.37
1.4	6	0		22.32	22.51	22.38
1.4	1	0	16-QAM	22.33	22.72	22.43
1.4	1	3		22.40	22.76	22.47
1.4	1	5		22.36	22.70	22.38
1.4	3	0		22.24	22.52	22.34
1.4	3	1		22.29	22.56	22.42
1.4	3	3		22.24	22.49	22.31
1.4	6	0		21.34	21.58	21.45
1.4	1	0	64-QAM	21.78	21.69	21.72
1.4	1	3		21.69	21.66	21.75
1.4	1	5		21.55	21.45	21.77
1.4	3	0		20.60	20.50	20.58
1.4	3	1		20.52	20.38	20.65
1.4	3	3		20.44	20.40	20.70
1.4	6	0		20.52	20.42	20.60

LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	24.29	24.30	24.24
10	1	25		24.29	24.20	24.40
10	1	49		24.19	24.29	**24.50**
10	25	0		23.36	23.29	23.43
10	25	12		23.34	23.29	23.50
10	25	25		23.30	23.32	23.45
10	50	0		23.33	23.26	23.47
10	1	0	16-QAM	23.49	23.47	23.40
10	1	25		23.46	23.40	23.47
10	1	49		23.42	23.47	23.47
10	25	0		22.33	22.28	22.40
10	25	12		22.35	22.28	22.50
10	25	25		22.25	22.28	22.44
10	50	0		22.30	22.23	22.45
10	1	0	64-QAM	22.33	22.34	22.42
10	1	25		22.37	22.41	22.38
10	1	49		22.39	22.29	22.29
10	25	0		21.15	21.30	21.34
10	25	12		21.29	21.28	21.33
10	25	25		21.22	21.24	21.29
10	50	0		21.26	21.27	21.31
5	1	0	QPSK	24.32	24.30	24.45
5	1	12		24.31	24.19	24.44
5	1	24		24.29	24.28	24.49
5	12	0		23.38	23.27	23.46
5	12	7		23.39	23.29	23.44
5	12	13		23.36	23.36	23.45
5	25	0		23.40	23.28	23.40
5	1	0	16-QAM	23.45	23.45	23.46
5	1	12		23.49	23.42	23.45
5	1	24		23.48	23.45	23.45
5	12	0		22.38	22.29	22.49
5	12	7		22.41	22.31	22.45
5	12	13		22.39	22.35	22.46
5	25	0		22.37	22.26	22.40
5	1	0	64-QAM	22.25	22.22	22.30
5	1	12		22.29	22.29	22.27
5	1	24		22.31	22.26	22.10
5	12	0		21.06	21.27	21.24
5	12	7		21.21	21.22	21.29
5	12	13		21.15	21.20	21.24
5	25	0		21.09	21.21	21.23

LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	24.27	24.18	24.33
3	1	8		24.23	24.16	24.39
3	1	14		24.25	24.26	24.48
3	8	0		23.38	23.27	23.44
3	8	4		23.40	23.29	23.45
3	8	7		23.37	23.36	23.48
3	15	0		23.37	23.25	23.43
3	1	0	16-QAM	23.41	23.38	23.42
3	1	8		23.47	23.43	23.43
3	1	14		23.42	23.44	23.37
3	8	0		22.42	22.32	22.49
3	8	4		22.43	22.33	22.50
3	8	7		22.39	22.37	22.45
3	15	0		22.41	22.28	22.49
3	1	0	64-QAM	22.29	22.32	22.39
3	1	8		22.36	22.38	22.33
3	1	14		22.22	22.09	22.17
3	8	0		21.07	21.17	21.15
3	8	4		21.25	21.23	21.15
3	8	7		21.18	21.22	21.12
3	15	0		21.17	21.18	21.21
1.4	1	0	QPSK	24.16	24.06	24.25
1.4	1	3		24.18	24.12	24.31
1.4	1	5		24.15	24.13	24.28
1.4	3	0		24.28	24.13	24.43
1.4	3	1		24.33	24.23	24.40
1.4	3	3		24.28	24.17	24.44
1.4	6	0		23.27	23.16	23.46
1.4	1	0	16-QAM	23.40	23.31	23.40
1.4	1	3		23.44	23.34	23.45
1.4	1	5		23.38	23.35	23.35
1.4	3	0		23.23	23.11	23.36
1.4	3	1		23.27	23.17	23.37
1.4	3	3		23.23	23.10	23.33
1.4	6	0		22.33	22.22	22.44
1.4	1	0	64-QAM	22.25	22.21	22.33
1.4	1	3		22.18	22.27	22.26
1.4	1	5		22.35	22.27	22.17
1.4	3	0		21.11	21.17	21.32
1.4	3	1		21.27	21.08	21.30
1.4	3	3		21.13	21.18	21.09
1.4	6	0		21.23	21.21	21.14

LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	24.02	24.14	24.05
20	1	49		24.18	24.31	24.22
20	1	99		24.28	**24.39**	24.21
20	50	0		23.16	23.25	23.18
20	50	24		23.19	23.34	23.24
20	50	50		23.21	23.36	23.25
20	100	0		23.20	23.29	23.19
20	1	0	16-QAM	23.30	23.40	23.30
20	1	49		23.44	23.50	23.45
20	1	99		23.50	23.50	23.44
20	50	0		22.16	22.28	22.20
20	50	24		22.24	22.35	22.26
20	50	50		22.24	22.35	22.26
20	100	0		22.17	22.30	22.23
20	1	0	64-QAM	21.83	21.96	22.14
20	1	49		22.12	22.23	22.41
20	1	99		22.08	22.31	22.37
20	50	0		20.77	21.00	21.09
20	50	24		20.96	21.09	21.28
20	50	50		20.97	21.08	21.28
20	100	0		20.89	21.04	21.25
15	1	0	QPSK	24.07	24.19	24.08
15	1	37		24.16	24.31	24.16
15	1	74		24.14	24.29	24.26
15	36	0		23.15	23.27	23.27
15	36	20		23.21	23.40	23.39
15	36	39		23.19	23.35	23.34
15	75	0		23.21	23.31	23.32
15	1	0	16-QAM	23.35	23.48	23.44
15	1	37		23.45	23.45	23.42
15	1	74		23.43	23.44	23.45
15	36	0		22.18	22.27	22.30
15	36	20		22.25	22.39	22.37
15	36	39		22.23	22.35	22.35
15	75	0		22.21	22.32	22.30
15	1	0	64-QAM	21.83	21.94	21.95
15	1	37		21.98	22.06	22.24
15	1	74		21.99	22.17	22.29
15	36	0		20.76	20.96	20.96
15	36	20		20.93	21.06	21.15
15	36	39		20.94	20.94	21.17
15	75	0		20.83	20.90	21.07

LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	24.15	24.26	24.26
10	1	25		24.19	24.33	24.36
10	1	49		24.21	24.33	24.36
10	25	0		23.20	23.32	23.32
10	25	12		23.21	23.34	23.39
10	25	25		23.20	23.34	23.36
10	50	0		23.24	23.35	23.35
10	1	0	16-QAM	23.39	23.42	23.47
10	1	25		23.47	23.44	23.45
10	1	49		23.45	23.40	23.44
10	25	0		22.19	22.30	22.31
10	25	12		22.23	22.39	22.36
10	25	25		22.21	22.36	22.34
10	50	0		22.19	22.34	22.35
10	1	0	64-QAM	21.67	21.80	22.01
10	1	25		22.01	22.19	22.35
10	1	49		21.96	22.15	22.17
10	25	0		20.62	20.86	20.92
10	25	12		20.76	20.89	21.15
10	25	25		20.83	21.02	21.25
10	50	0		20.72	20.93	21.13
5	1	0	QPSK	24.19	24.30	24.29
5	1	12		24.25	24.30	24.35
5	1	24		24.23	24.35	24.30
5	12	0		23.22	23.32	23.31
5	12	7		23.26	23.38	23.35
5	12	13		23.25	23.35	23.37
5	25	0		23.22	23.33	23.33
5	1	0	16-QAM	23.43	23.50	23.48
5	1	12		23.47	23.46	23.44
5	1	24		23.47	23.44	23.42
5	12	0		22.23	22.33	22.32
5	12	7		22.27	22.42	22.40
5	12	13		22.28	22.39	22.39
5	25	0		22.21	22.36	22.32
5	1	0	64-QAM	21.72	21.81	22.06
5	1	12		22.08	22.16	22.34
5	1	24		22.07	22.29	22.23
5	12	0		20.59	20.87	21.07
5	12	7		20.76	20.91	21.15
5	12	13		20.97	21.00	21.27
5	25	0		20.77	20.96	21.20

Appendix B. Test Results of ERP/EIRP and Radiated Test

ERP/EIRP

LTE Band 2 / 1.4MHz (Average) (GT - LC = 0.1 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	3	1	23.31	0.2143	23.41	0.2193
Middle		3	1	23.58	0.2280	23.68	0.2333
Highest		3	1	23.40	0.2188	23.50	0.2239
Lowest	16QAM	1	3	22.40	0.1738	22.50	0.1778
Middle		1	3	22.76	0.1888	22.86	0.1932
Highest		1	3	22.47	0.1766	22.57	0.1807
Lowest	64QAM	1	0	21.78	0.1507	21.88	0.1542
Middle		1	0	21.69	0.1476	21.79	0.1510
Highest		1	0	21.72	0.1486	21.82	0.1521
Limit	EIRP < 2W			Result		PASS	

LTE Band 2 / 3MHz (Average) (GT - LC = 0.1 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	23.38	0.2178	23.48	0.2228
Middle		1	0	23.55	0.2265	23.65	0.2317
Highest		1	0	23.49	0.2234	23.59	0.2286
Lowest	16QAM	1	0	22.43	0.1750	22.53	0.1791
Middle		1	0	22.79	0.1901	22.89	0.1945
Highest		1	0	22.61	0.1824	22.71	0.1866
Lowest	64QAM	1	8	21.67	0.1469	21.77	0.1503
Middle		1	8	21.50	0.1413	21.60	0.1445
Highest		1	8	21.86	0.1535	21.96	0.1570
Limit	EIRP < 2W			Result		PASS	

LTE Band 2 / 5MHz (Average) (GT - LC = 0.1 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	23.29	0.2133	23.39	0.2183
Middle		1	0	23.61	0.2296	23.71	0.2350
Highest		1	0	23.49	0.2234	23.59	0.2286
Lowest	16QAM	1	0	22.38	0.1730	22.48	0.1770
Middle		1	0	22.89	0.1945	22.99	0.1991
Highest		1	0	22.76	0.1888	22.86	0.1932
Lowest	64QAM	1	0	21.67	0.1469	21.77	0.1503
Middle		1	0	21.66	0.1466	21.76	0.1500
Highest		1	0	21.82	0.1521	21.92	0.1556
Limit	EIRP < 2W			Result		PASS	

LTE Band 2 / 10MHz (Average) (GT - LC = 0.1 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	23.36	0.2168	23.46	0.2218
Middle		1	0	23.71	0.2350	23.81	0.2404
Highest		1	0	23.55	0.2265	23.65	0.2317
Lowest	16QAM	1	0	22.45	0.1758	22.55	0.1799
Middle		1	0	22.95	0.1972	23.05	0.2018
Highest		1	0	22.77	0.1892	22.87	0.1936
Lowest	64QAM	1	25	21.72	0.1486	21.82	0.1521
Middle		1	25	21.69	0.1476	21.79	0.1510
Highest		1	25	21.90	0.1549	22.00	0.1585
Limit	EIRP < 2W			Result		PASS	

LTE Band 2 / 15MHz (Average) (GT - LC = 0.1 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	23.40	0.2188	23.50	0.2239
Middle		1	0	23.62	0.2301	23.72	0.2355
Highest		1	0	23.60	0.2291	23.70	0.2344
Lowest	16QAM	1	0	22.65	0.1841	22.75	0.1884
Middle		1	0	22.95	0.1972	23.05	0.2018
Highest		1	0	22.85	0.1928	22.95	0.1972
Lowest	64QAM	1	0	21.87	0.1538	21.97	0.1574
Middle		1	0	21.90	0.1549	22.00	0.1585
Highest		1	0	21.80	0.1514	21.90	0.1549
Limit	EIRP < 2W			Result		PASS	

LTE Band 2 / 20MHz (Average) (GT - LC = 0.1 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	23.44	0.2208	23.54	0.2259
Middle		1	0	23.75	0.2371	23.85	0.2427
Highest		1	0	23.59	0.2286	23.69	0.2339
Lowest	16QAM	1	0	22.63	0.1832	22.73	0.1875
Middle		1	0	22.93	0.1963	23.03	0.2009
Highest		1	0	22.78	0.1897	22.88	0.1941
Lowest	64QAM	1	0	21.85	0.1531	21.95	0.1567
Middle		1	0	21.96	0.1570	22.06	0.1607
Highest		1	0	21.92	0.1556	22.02	0.1592
Limit	EIRP < 2W			Result		PASS	

LTE Band 5 / 1.4MHz (Average) (GT - LC = -0.8 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	3	3	24.28	0.2679	21.33	0.1358
Middle		3	3	24.17	0.2612	21.22	0.1324
Highest		3	3	24.44	0.2780	21.49	0.1409
Lowest	16QAM	1	3	23.44	0.2208	20.49	0.1119
Middle		1	3	23.34	0.2158	20.39	0.1094
Highest		1	3	23.45	0.2213	20.50	0.1122
Lowest	64QAM	1	5	22.35	0.1718	19.40	0.0871
Middle		1	5	22.27	0.1687	19.32	0.0855
Highest		1	5	22.17	0.1648	19.22	0.0836
Limit	ERP < 7W			Result		PASS	

LTE Band 5 / 3MHz (Average) (GT - LC = -0.8 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	14	24.25	0.2661	21.30	0.1349
Middle		1	14	24.26	0.2667	21.31	0.1352
Highest		1	14	24.48	0.2805	21.53	0.1422
Lowest	16QAM	1	8	23.47	0.2223	20.52	0.1127
Middle		1	8	23.43	0.2203	20.48	0.1117
Highest		1	8	23.43	0.2203	20.48	0.1117
Lowest	64QAM	1	0	22.29	0.1694	19.34	0.0859
Middle		1	0	22.32	0.1706	19.37	0.0865
Highest		1	0	22.39	0.1734	19.44	0.0879
Limit	ERP < 7W			Result		PASS	

LTE Band 5 / 5MHz (Average) (GT - LC = -0.8 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	24	24.29	0.2685	21.34	0.1361
Middle		1	24	24.28	0.2679	21.33	0.1358
Highest		1	24	24.49	0.2812	21.54	0.1426
Lowest	16QAM	1	12	23.49	0.2234	20.54	0.1132
Middle		1	12	23.42	0.2198	20.47	0.1114
Highest		1	12	23.45	0.2213	20.50	0.1122
Lowest	64QAM	1	24	22.31	0.1702	19.36	0.0863
Middle		1	24	22.26	0.1683	19.31	0.0853
Highest		1	24	22.10	0.1622	19.15	0.0822
Limit	ERP < 7W			Result		PASS	

LTE Band 7 / 5MHz (Average) (GT - LC = -1.4 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	12	24.25	0.2661	22.85	0.1928
Middle		1	12	24.30	0.2692	22.90	0.1950
Highest		1	12	24.35	0.2723	22.95	0.1972
Lowest	16QAM	1	0	23.43	0.2203	22.03	0.1596
Middle		1	0	23.50	0.2239	22.10	0.1622
Highest		1	0	23.48	0.2228	22.08	0.1614
Lowest	64QAM	1	12	22.08	0.1614	20.68	0.1169
Middle		1	12	22.16	0.1644	20.76	0.1191
Highest		1	12	22.34	0.1714	20.94	0.1242
Limit	EIRP < 2W			Result		PASS	

LTE Band 7 / 10MHz (Average) (GT - LC = -1.4 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	25	24.19	0.2624	22.79	0.1901
Middle		1	25	24.33	0.2710	22.93	0.1963
Highest		1	25	24.36	0.2729	22.96	0.1977
Lowest	16QAM	1	0	23.39	0.2183	21.99	0.1581
Middle		1	0	23.42	0.2198	22.02	0.1592
Highest		1	0	23.47	0.2223	22.07	0.1611
Lowest	64QAM	1	25	22.01	0.1589	20.61	0.1151
Middle		1	25	22.19	0.1656	20.79	0.1199
Highest		1	25	22.35	0.1718	20.95	0.1245
Limit	EIRP < 2W			Result		PASS	

LTE Band 7 / 15MHz (Average) (GT - LC = -1.4 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	37	24.16	0.2606	22.76	0.1888
Middle		1	37	24.31	0.2698	22.91	0.1954
Highest		1	37	24.16	0.2606	22.76	0.1888
Lowest	16QAM	1	0	23.35	0.2163	21.95	0.1567
Middle		1	0	23.48	0.2228	22.08	0.1614
Highest		1	0	23.44	0.2208	22.04	0.1600
Lowest	64QAM	1	74	21.99	0.1581	20.59	0.1146
Middle		1	74	22.17	0.1648	20.77	0.1194
Highest		1	74	22.29	0.1694	20.89	0.1227
Limit	EIRP < 2W			Result		PASS	

LTE Band 7 / 20MHz (Average) (GT - LC = -1.4 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	99	24.28	0.2679	22.88	0.1941
Middle		1	99	24.39	0.2748	22.99	0.1991
Highest		1	99	24.21	0.2636	22.81	0.1910
Lowest	16QAM	1	49	23.44	0.2208	22.04	0.1600
Middle		1	49	23.50	0.2239	22.10	0.1622
Highest		1	49	23.45	0.2213	22.05	0.1603
Lowest	64QAM	1	49	22.12	0.1629	20.72	0.1180
Middle		1	49	22.23	0.1671	20.83	0.1211
Highest		1	49	22.41	0.1742	21.01	0.1262
Limit	EIRP < 2W			Result		PASS	

Radiated Spurious Emission

LTE Band 2

LTE Band 2 / 1.4MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3763	-53.69	-13	-40.69	-72.66	-65.39	0.64	12.34	H
	5639	-48.47	-13	-35.47	-75.78	-59.88	0.83	12.24	H
	7517	-51.57	-13	-38.57	-75.78	-60.56	0.99	9.98	H
	9398	-40.34	-13	-27.34	-69.28	-51.14	1.08	11.88	H
									H
									H
									H
	3763	-53.07	-13	-40.07	-72.84	-64.77	0.64	12.34	V
	5639	-45.71	-13	-32.71	-67.48	-57.12	0.83	12.24	V
	7517	-51.43	-13	-38.43	-75.69	-60.42	0.99	9.98	V
	9398	-44.56	-13	-31.56	-72.64	-55.36	1.08	11.88	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 2 / 3MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3756	-53.93	-13	-40.93	-72.89	-65.64	0.64	12.35	H
	5639	-46.81	-13	-33.81	-67.69	-58.22	0.83	12.24	H
	7514	-50.53	-13	-37.53	-74.74	-59.50	0.99	9.96	H
	9391	-40.08	-13	-27.08	-69.03	-50.88	1.08	11.89	H
									H
									H
									H
	3763	-52.83	-13	-39.83	-72.57	-64.53	0.64	12.34	V
	5639	-45.29	-13	-32.29	-67.06	-56.70	0.83	12.24	V
	7515	-51.31	-13	-38.31	-75.57	-60.29	0.99	9.97	V
	9391	-44.86	-13	-31.86	-72.95	-55.66	1.08	11.89	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 2 / 5MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3756	-54.76	-13	-41.76	-73.72	-66.47	0.64	12.35	H
	5632	-50.35	-13	-37.35	-71.21	-61.75	0.83	12.23	H
	7511	-51.80	-13	-38.80	-76.01	-60.76	0.99	9.95	H
	9391	-40.18	-13	-27.18	-69.13	-50.98	1.08	11.89	H
									H
									H
									H
	3756	-53.66	-13	-40.66	-73.4	-65.37	0.64	12.35	V
	5632	-44.91	-13	-31.91	-66.62	-56.31	0.83	12.23	V
	7511	-51.69	-13	-38.69	-75.95	-60.65	0.99	9.95	V
	9391	-44.22	-13	-31.22	-72.31	-55.02	1.08	11.89	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 2 / 10MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3749	-54.46	-13	-41.46	-73.42	-66.17	0.64	12.35	H
	5625	-49.69	-13	-36.69	-70.56	-61.08	0.83	12.23	H
	7502	-50.71	-13	-37.71	-74.89	-59.63	0.99	9.91	H
	9377	-40.38	-13	-27.38	-69.34	-51.19	1.09	11.90	H
									H
									H
									H
	3749	-53.45	-13	-40.45	-73.19	-65.16	0.64	12.35	V
	5625	-47.66	-13	-34.66	-69.38	-59.05	0.83	12.23	V
	7502	-51.45	-13	-38.45	-75.72	-60.37	0.99	9.91	V
	9377	-43.65	-13	-30.65	-71.78	-54.46	1.09	11.90	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 2 / 15MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3749	-54.48	-13	-41.48	-73.44	-66.19	0.64	12.35	H
	5618	-50.36	-13	-37.36	-71.23	-61.74	0.84	12.22	H
	7494	-50.91	-13	-37.91	-75.09	-59.83	0.99	9.91	H
	9370	-40.96	-13	-27.96	-69.91	-51.78	1.09	11.90	H
									H
									H
									H
	3749	-53.89	-13	-40.89	-73.63	-65.60	0.64	12.35	V
	5618	-48.02	-13	-35.02	-69.74	-59.40	0.84	12.22	V
	7494	-51.07	-13	-38.07	-75.34	-59.99	0.99	9.91	V
	9370	-44.36	-13	-31.36	-72.51	-55.18	1.09	11.90	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 2 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3742	-55.18	-13	-42.18	-74.13	-66.90	0.64	12.35	H
	5611	-50.61	-13	-37.61	-71.46	-61.99	0.84	12.21	H
	7487	-50.82	-13	-37.82	-75	-59.76	0.99	9.93	H
	9356	-41.60	-13	-28.60	-70.56	-52.43	1.09	11.92	H
									H
									H
									H
	3742	-53.36	-13	-40.36	-73.05	-65.08	0.64	12.35	V
	5611	-48.79	-13	-35.79	-70.45	-60.17	0.84	12.21	V
	7484	-50.96	-13	-37.96	-75.21	-59.90	0.99	9.94	V
	9356	-44.91	-13	-31.91	-73.07	-55.74	1.09	11.92	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 5

LTE Band 5 / 1.4MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Highest	1696	-55.15	-13	-42.15	-66.05	-61.59	0.41	9.01	H
	2544	-46.15	-13	-33.15	-61.24	-54.28	0.51	10.79	H
	3390	-59.66	-13	-46.66	-75.77	-69.01	0.60	12.10	H
									H
									H
									H
									H
	1696	-55.51	-13	-42.51	-66.45	-61.95	0.41	9.01	V
	2544	-49.96	-13	-36.96	-64.43	-58.09	0.51	10.79	V
	3390	-59.56	-13	-46.56	-76.07	-68.91	0.60	12.10	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 5 / 3MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Highest	1696	-57.05	-13	-44.05	-67.95	-63.49	0.41	9.01	H
	2536	-39.34	-13	-26.34	-54.44	-47.47	0.51	10.79	H
	3384	-59.68	-13	-46.68	-75.81	-69.01	0.60	12.08	H
									H
									H
									H
									H
	1696	-55.02	-13	-42.02	-65.96	-61.46	0.41	9.01	V
	2536	-40.87	-13	-27.87	-55.32	-49.00	0.51	10.79	V
	3384	-59.41	-13	-46.41	-75.94	-68.74	0.60	12.08	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 5 / 5MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Highest	1688	-58.55	-13	-45.55	-69.42	-64.97	0.41	8.98	H
	2536	-38.28	-13	-25.28	-53.38	-46.41	0.51	10.79	H
	3377	-60.08	-13	-47.08	-76.21	-69.39	0.60	12.06	H
									H
									H
									H
									H
	1688	-58.12	-13	-45.12	-69.01	-64.54	0.41	8.98	V
	2536	-40.44	-13	-27.44	-54.89	-48.57	0.51	10.79	V
	3377	-59.49	-13	-46.49	-76.02	-68.80	0.60	12.06	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 5 / 10MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Highest	1680	-53.56	-13	-40.56	-64.43	-59.95	0.41	8.95	H
	2520	-41.40	-13	-28.40	-56.5	-49.54	0.51	10.80	H
	3360	-59.86	-13	-46.86	-76.02	-69.11	0.60	12.00	H
									H
									H
									H
									H
	1680	-52.85	-13	-39.85	-63.74	-59.24	0.41	8.95	V
	2520	-42.10	-13	-29.10	-56.53	-50.24	0.51	10.80	V
	3360	-59.38	-13	-46.38	-75.95	-68.63	0.60	12.00	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 7

LTE Band 7 / 5MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	5064	-50.58	-25	-25.58	-71.35	-61.81	0.79	12.01	H
	7596	-39.98	-25	-14.98	-64.4	-49.34	0.98	10.34	H
	10134	-35.47	-25	-10.47	-64.69	-46.19	1.16	11.88	H
									H
									H
									H
									H
	5064	-50.70	-25	-25.70	-72.38	-61.93	0.79	12.01	V
	7596	-44.57	-25	-19.57	-68.82	-53.93	0.98	10.34	V
	10134	-39.49	-25	-14.49	-68.02	-50.21	1.16	11.88	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 7 / 10MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Highest	5124	-49.36	-25	-24.36	-70.13	-60.61	0.78	12.02	H
	7680	-38.47	-25	-13.47	-63.2	-48.22	0.98	10.73	H
	10242	-35.23	-25	-10.23	-64.7	-46.01	1.16	11.95	H
									H
									H
									H
									H
	5124	-49.60	-25	-24.60	-71.06	-60.85	0.78	12.02	V
	7680	-44.65	-25	-19.65	-69.29	-54.40	0.98	10.73	V
	10242	-37.79	-25	-12.79	-66.7	-48.57	1.16	11.95	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 7 / 15MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	5058	-49.03	-25	-24.03	-69.8	-60.26	0.79	12.01	H
	7584	-41.47	-25	-16.47	-65.86	-50.77	0.98	10.29	H
	10116	-35.17	-25	-10.17	-64.38	-45.87	1.16	11.87	H
									H
									H
									H
									H
	5058	-49.25	-25	-24.25	-70.93	-60.48	0.79	12.01	V
	7584	-43.95	-25	-18.95	-68.21	-53.25	0.98	10.29	V
	10116	-37.33	-25	-12.33	-65.83	-48.03	1.16	11.87	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 7 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	5052	-48.06	-25	-23.06	-68.84	-59.28	0.79	12.01	H
	7578	-40.17	-25	-15.17	-64.55	-49.45	0.98	10.26	H
	10107	-34.88	-25	-9.88	-64.09	-45.58	1.17	11.86	H
									H
									H
									H
									H
	5052	-49.30	-25	-24.30	-71.04	-60.52	0.79	12.01	V
	7578	-44.27	-25	-19.27	-68.52	-53.55	0.98	10.26	V
	10107	-37.50	-25	-12.50	-66	-48.20	1.17	11.86	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Appendix C. Original Report

Please refer to Sporton report number FG760710-01B