



FCC RADIO TEST REPORT

FCC ID : 2AJN7-TP00110BUC
Equipment : Notebook Computer
Brand Name : Lenovo
Model Name : TP00110B
Applicant : LC Future Center
7F., No.780, Bei'an Rd., Zhongshan Dist.,
Taipei City 104, Taiwan
Manufacturer : LC Future Center Limited Taiwan Branch
7F., No.780, Bei'an Rd., Zhongshan Dist.,
Taipei City 104, Taiwan
Standard : FCC 47 CFR Part 2, and 90(S)

Equipment: Fibocom L860-GL and Intel AX201D2W tested inside of Lenovo Notebook Computer.

The product was received on Oct. 11, 2019 and testing was started from Nov. 04, 2019 and completed on Nov. 20, 2019. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA-603-E and has been in compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

The test results in this variant report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Approved by: Louis Wu

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan



Table of Contents

History of this test report.....	3
Summary of Test Result.....	4
1 General Description	5
1.1 Feature of Equipment Under Test.....	5
1.2 Product Specification of Equipment Under Test	5
1.3 Modification of EUT	5
1.4 Testing Site.....	6
1.5 Applied Standards	6
2 Test Configuration of Equipment Under Test	7
2.1 Test Mode.....	7
2.2 Connection Diagram of Test System	7
2.3 Support Unit used in test configuration and system.....	8
2.4 Frequency List of Low/Middle/High Channels.....	8
3 Conducted Test Items.....	9
3.1 Measuring Instruments.....	9
3.2 Conducted Output Power Measurement and ERP Measurement	10
3.3 Field Strength of Spurious Radiation Measurement	11
4 List of Measuring Equipment.....	13
5 Uncertainty of Evaluation.....	14
Appendix A. Test Results of Conducted Test	
Appendix B. Test Results of ERP and Radiated Test	
Appendix C. Test Setup Photographs	



History of this test report

Report No.	Version	Description	Issued Date
FG901139E	01	Initial issue of report	Nov. 26, 2019
FG901139E	01	Revise applicant information	Feb. 25, 2020



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.2	§2.1046 §90.635	Conducted Output Power and Effective Radiated Power	Pass	-
3.3	§2.1053 §90.691	Field Strength of Spurious Radiation	Pass	Under limit 22.29 dB at 2440.000 MHz

Remark: This is a variant report which can be referred Product Equality Declaration. All the test cases were performed on original report (FCC ID: 2AJN7-TP00110AUC). Based on the original report, the test cases were verified.

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Wii Chang

Report Producer: Yimin Ho



1 General Description

1.1 Feature of Equipment Under Test

Product Feature	
Equipment	Notebook Computer
Brand Name	Lenovo
Model Name	TP00110B
FCC ID	2AJN7-TP00110BUC
Sample 1	EUT with Amphenol Antenna
Sample 2	EUT with SPEEDWIRE Antenna
EUT supports Radios application	WCDMA/HSPA/LTE/GNSS
EUT Stage	Production Unit

Remark:

1. The above EUT's information was declared by manufacturer.
2. Equipment: Fibocom L860-GL and Intel AX201D2W tested inside of Lenovo Notebook Computer.

Antenna Information				
WWAN				3G<E (dBi)
Antenna 1	Manufacturer	Amphenol	Peak gain	2.30
	Part number	LX9865-16-000-C	Type	PIFA
Antenna 2	Manufacturer	SPEEDWIRE	Peak gain	2.07
	Part number	F.0G.ZV-0008-001-00	Type	PIFA

1.2 Product Specification of Equipment Under Test

Product Specification subjective to this standard	
Tx Frequency	LTE Band 26 : 814.7 ~ 823.3 MHz
Rx Frequency	LTE Band 26 : 859.7 ~ 868.3 MHz
Bandwidth	1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz
Maximum Output Power to Antenna	23.42 dBm
Type of Modulation	QPSK / 16QAM / 64QAM

1.3 Modification of EUT

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

1.4 Testing Site

Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan
Test Site No.	Sporton Site No.
	TH05-HY
Test Engineer	Jacky Wang
Temperature	23~25°C
Relative Humidity	52~55%

Note: The test site complies with ANSI C63.4 2014 requirement.

Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City, Taiwan
Test Site No.	Sporton Site No.
	03CH13-HY
Test Engineer	J.C. Liang and Wilson Wu
Temperature	21.5~23.5°C
Relative Humidity	46.9~49.5%

Note: The test site complies with ANSI C63.4 2014 requirement.

FCC Designation No.: TW1190 and TW0007

1.5 Applied Standards

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

- ♦ FCC 47 CFR Part 2, 90
- ♦ ANSI / TIA-603-E
- ♦ ANSI C63.26-2015
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01
- ♦ Interim Guidance for Equipment Authorization of Devices with Channel Bandwidths Combined Across Two Contiguous Service Rule Allocations OET/Lab/EACB, June 6, 2013

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

2 Test Configuration of Equipment Under Test

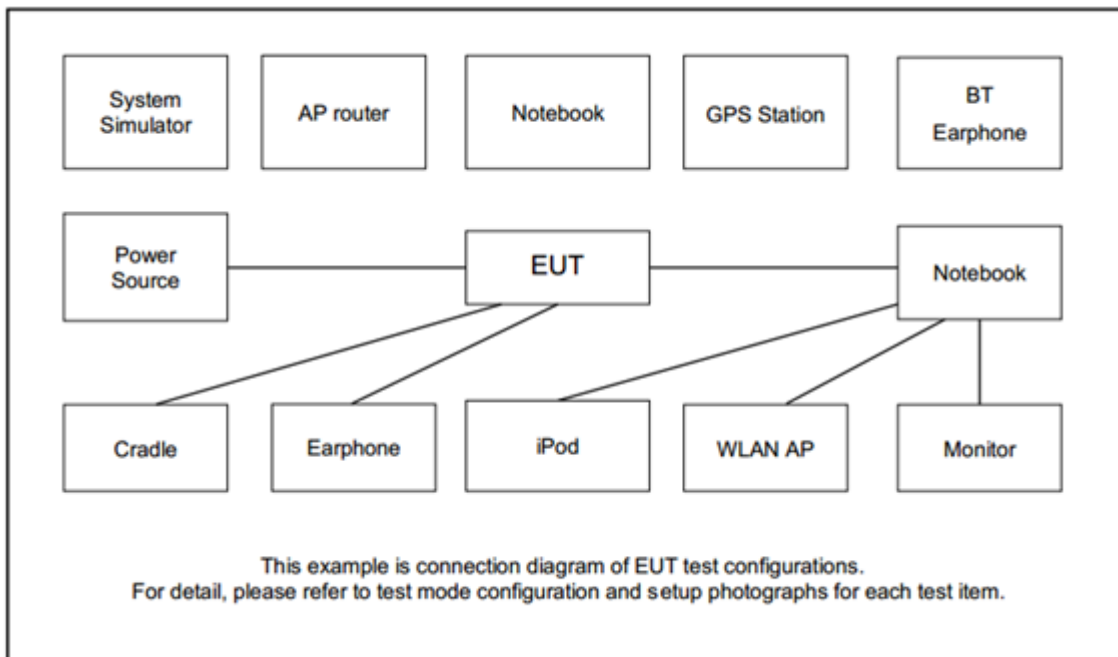
2.1 Test Mode

During all testing, EUT is in link mode with base station emulator at maximum power level.

Frequency range investigated for radiated emission is 30 MHz to 9000 MHz.

Conducted Test Cases	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	26	v	v	v	v	v	-	v	v	v	v	v	v	v	v	v
E.R.P.	26					v	-	v	v	v	v			v		
Radiated Spurious Emission	26	Worst Case											v	v	v	
Remark	<ol style="list-style-type: none"> The mark "v" means that this configuration is chosen for testing The mark "-" means that this bandwidth is not supported. LTE Band26 transmit frequency for part22 rule is 824MHz-849MHz, for part90 rule is 814MHz-824MHz. ERP over 15MHz bandwidth complies the ERP limit line of part22 rule, therefore ERP of the partial frequency spectrum which falls within part 22 also complies. All the radiated test cases were performed with Adapter 1 and Sample 1. 															

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.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	Earphone	Ziya	N/A	N/A	Unshielded, 1.2 m	N/A

2.4 Frequency List of Low/Middle/High Channels

LTE Band 26 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
15	Channel	26765	-	-
	Frequency	821.5	-	-
10	Channel	-	26740	-
	Frequency	-	819	-
5	Channel	26715	26740	26765
	Frequency	816.5	819	821.5
3	Channel	26705	26740	26775
	Frequency	815.5	819	822.5
1.4	Channel	26697	26740	26783
	Frequency	814.7	819	823.3

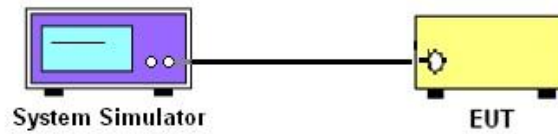
3 Conducted Test Items

3.1 Measuring Instruments

See list of measuring instruments of this test report.

3.1.1 Test Setup

3.1.2 Conducted Output Power



3.1.3 Test Result of Conducted Test

Please refer to Appendix A.



3.2 Conducted Output Power Measurement and ERP Measurement

3.2.1 Description of the Conducted Output Power Measurement and ERP Measurement

A system simulator was used to establish communication with the EUT. Its parameters were set to enforce EUT transmitting at the maximum 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 26.

According to KDB 412172 D01 Power Approach,

$EIRP = P_T + G_T - L_C$, 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

3.2.2 Test Procedures

1. The transmitter output port was connected to the system simulator.
2. Set EUT at maximum power through 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.

3.3 Field Strength of Spurious Radiation Measurement

3.3.1 Description of Field Strength of Spurious Radiated Measurement

The radiated spurious emission was measured by substitution method according to ANSI / TIA-603-E. The power of any emission FCC Part 90.691 on any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth at least $43 + 10 \log (P)$ dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

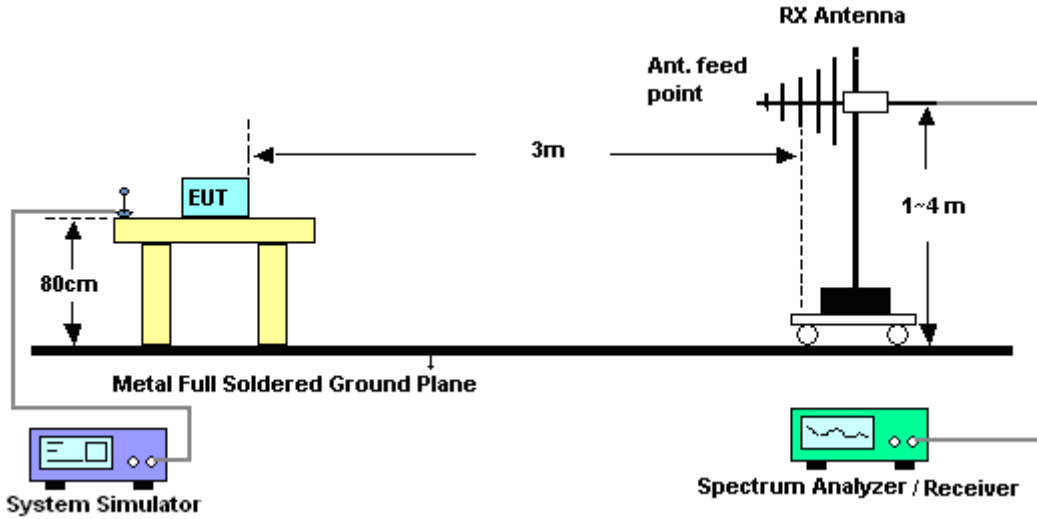
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43+10\log_{10}(P[\text{Watts}])$ dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

3.3.2 Test Procedures

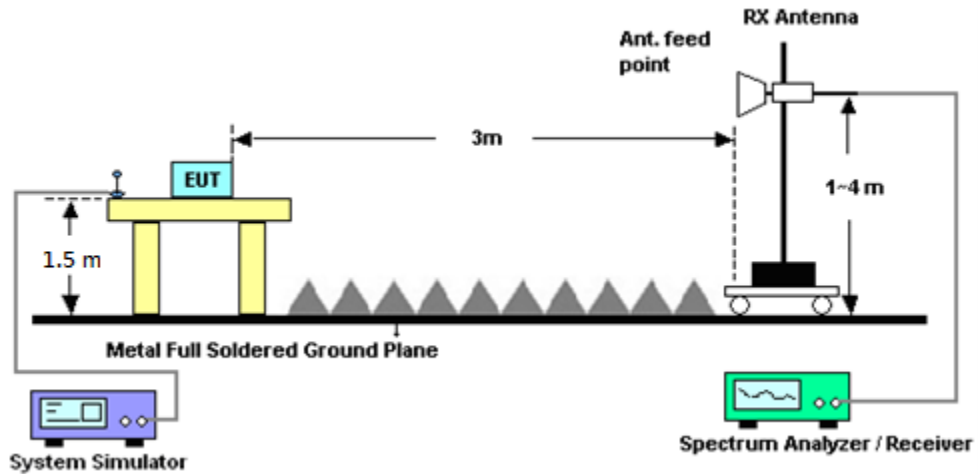
1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. 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.
5. For testing below 1GHz, make the measurement with the spectrum analyzer's RBW = 100 kHz, VBW = 3MHz, Sweep = 500ms, Taking the record of maximum spurious emission.
6. For testing above 1GHz, make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, Sweep = 500ms, 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. $\text{EIRP (dBm)} = \text{S.G. Power} - \text{Tx Cable Loss} + \text{Tx Antenna Gain}$
12. $\text{ERP (dBm)} = \text{EIRP} - 2.15$
13. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
14. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)

3.3.3 Test Setup

For radiated test from 30MHz to 1GHz



For radiated test above 1GHz



3.3.4 Test Result of Field Strength of Spurious Radiated

Please refer to Appendix B.



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01 N-06	40103 & 07	30MHz~1GHz	Apr. 30, 2019	Nov. 04, 2019~ Nov. 20, 2019	Apr. 29, 2020	Radiation (03CH13-HY)
Bilog Antenna	TESEQ	CBL 6111D&00802 N1D01N-06	54682 & AT-N0603	30MHz~1GHz	Sep. 26, 2019	Nov. 04, 2019~ Nov. 20, 2019	Sep. 25, 2020	Radiation (03CH13-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-124 1	1GHz~18GHz	Jul. 02, 2019	Nov. 04, 2019~ Nov. 20, 2019	Jul. 01, 2020	Radiation (03CH13-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-121 2	1GHz~18GHz	May 14, 2019	Nov. 04, 2019~ Nov. 20, 2019	May 13, 2020	Radiation (03CH13-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170 576	18GHz~40GHz	May 14, 2019	Nov. 04, 2019~ Nov. 20, 2019	May 13, 2020	Radiation (03CH13-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170 584	18GHz~40GHz	Dec. 05, 2018	Nov. 04, 2019~ Nov. 20, 2019	Dec. 04, 2019	Radiation (03CH13-HY)
Amplifier	SONOMA	310N	187282	9kHz~1GHz	Dec. 18, 2018	Nov. 04, 2019~ Nov. 20, 2019	Dec. 17, 2019	Radiation (03CH13-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1590074	1GHz~18GHz	May 20, 2019	Nov. 04, 2019~ Nov. 20, 2019	May 19, 2020	Radiation (03CH13-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 06, 2018	Nov. 04, 2019~ Nov. 20, 2019	Dec. 05, 2019	Radiation (03CH13-HY)
Preamplifier	Agilent	8449B	3008A023 75	1GHz~26.5GHz	May 27, 2019	Nov. 04, 2019~ Nov. 20, 2019	May 26, 2020	Radiation (03CH13-HY)
Spectrum Analyzer	Keysight	N9010A	MY553705 26	10Hz~44GHz	Mar. 19, 2019	Nov. 04, 2019~ Nov. 20, 2019	Mar. 18, 2020	Radiation (03CH13-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Nov. 04, 2019~ Nov. 20, 2019	N/A	Radiation (03CH13-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Nov. 04, 2019~ Nov. 20, 2019	N/A	Radiation (03CH13-HY)
Software	Audix	E3 6.2009-8-24	RK-00099 2	N/A	N/A	Nov. 04, 2019~ Nov. 20, 2019	N/A	Radiation (03CH13-HY)
Signal Generator	Rohde & Schwarz	SMF100A	101107	100kHz~40GHz	Aug. 27, 2019	Nov. 04, 2019~ Nov. 20, 2019	Aug. 26, 2020	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SF102/2*11S K252	MY4278/2	9kHz~40GHz	May 16, 2019	Nov. 04, 2019~ Nov. 20, 2019	May 15, 2020	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24961/ 4	30M-18G	Feb. 13, 2019	Nov. 04, 2019~ Nov. 20, 2019	Feb. 12, 2020	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2859/2	30M~40GHz	Mar. 13, 2019	Nov. 04, 2019~ Nov. 20, 2019	Mar. 12, 2020	Radiation (03CH13-HY)
Filter	Wainwright	WHKX12-270 0-3000-18000 -60SS	SN2	3GHz High Pass Filter	Jul. 14, 2019	Nov. 04, 2019~ Nov. 20, 2019	Jul. 13, 2020	Radiation (03CH13-HY)
Filter	Wainwright	WHKX12-108 0-1200-15000 -60SS	SN3	1.2GHz High Pass Filter	Jul. 03, 2019	Nov. 04, 2019~ Nov. 20, 2019	Jul. 02, 2020	Radiation (03CH13-HY)
LTE Base Station	Anritsu	MT8820C	620110750 9	-	Jul. 03, 2019	Nov. 04, 2019	Jul. 02, 2020	Conducted (TH05-HY)



5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.07
---	------

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.48
---	------

Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.92
---	------



Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

LTE Band 26 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	23.42	-	-
15	1	37		23.35	-	-
15	1	74		23.35	-	-
15	36	0		22.38	-	-
15	36	20		22.31	-	-
15	36	39		22.31	-	-
15	75	0		22.37	-	-
15	1	0	16-QAM	22.81	-	-
15	1	37		22.62	-	-
15	1	74		22.64	-	-
15	36	0		21.38	-	-
15	36	20		21.37	-	-
15	36	39		21.45	-	-
15	75	0		21.39	-	-
15	1	0	64-QAM	21.61	-	-
15	1	37		21.50	-	-
15	1	74		21.60	-	-
15	36	0		20.36	-	-
15	36	20		20.37	-	-
15	36	39		20.44	-	-
15	75	0		20.37	-	-
10	1	0	QPSK	-	23.34	-
10	1	25		-	23.31	-
10	1	49		-	23.19	-
10	25	0		-	22.36	-
10	25	12		-	22.26	-
10	25	25		-	22.24	-
10	50	0		-	22.32	-
10	1	0	16-QAM	-	22.64	-
10	1	25		-	22.68	-
10	1	49		-	22.45	-
10	25	0		-	21.42	-
10	25	12		-	21.35	-
10	25	25		-	21.22	-
10	50	0		-	21.36	-
10	1	0	64-QAM	-	21.49	-
10	1	25		-	21.61	-
10	1	49		-	21.34	-
10	25	0		-	20.38	-
10	25	12		-	20.34	-
10	25	25		-	20.31	-
10	50	0		-	20.42	-



LTE Band 26 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.41	23.39	23.28
5	1	12		23.25	23.36	23.26
5	1	24		23.28	23.19	23.22
5	12	0		22.23	22.34	22.18
5	12	7		22.27	22.27	22.17
5	12	13		22.32	22.17	22.20
5	25	0		22.36	22.30	22.28
5	1	0	16-QAM	22.78	22.65	22.69
5	1	12		22.53	22.67	22.58
5	1	24		22.54	22.47	22.50
5	12	0		21.33	21.35	21.21
5	12	7		21.37	21.38	21.24
5	12	13		21.45	21.24	21.29
5	25	0		21.34	21.42	21.21
5	1	0	64-QAM	21.55	21.57	21.43
5	1	12		21.40	21.61	21.42
5	1	24		21.54	21.37	21.35
5	12	0		20.35	20.40	20.27
5	12	7		20.37	20.36	20.30
5	12	13		20.41	20.30	20.22
5	25	0		20.36	20.35	20.28
3	1	0	QPSK	23.35	23.39	23.33
3	1	8		23.35	23.35	23.20
3	1	14		23.29	23.18	23.24
3	8	0		22.22	22.33	22.16
3	8	4		22.27	22.34	22.22
3	8	7		22.28	22.22	22.20
3	15	0		22.30	22.37	22.30
3	1	0	16-QAM	22.77	22.68	22.74
3	1	8		22.58	22.68	22.56
3	1	14		22.63	22.43	22.52
3	8	0		21.38	21.42	21.26
3	8	4		21.27	21.33	21.20
3	8	7		21.43	21.29	21.26
3	15	0		21.30	21.43	21.24
3	1	0	64-QAM	21.59	21.57	21.52
3	1	8		21.47	21.61	21.50
3	1	14		21.57	21.30	21.40
3	8	0		20.32	20.37	20.26
3	8	4		20.31	20.41	20.21
3	8	7		20.44	20.27	20.25
3	15	0		20.31	20.42	20.28



LTE Band 26 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	23.40	23.35	23.29
1.4	1	3		23.30	23.33	23.26
1.4	1	5		23.29	23.17	23.25
1.4	3	0		23.07	23.13	23.03
1.4	3	1		23.07	23.14	23.06
1.4	3	3		23.18	23.09	23.04
1.4	6	0		22.30	22.32	22.22
1.4	1	0	16-QAM	22.80	22.70	22.74
1.4	1	3		22.58	22.71	22.58
1.4	1	5		22.55	22.40	22.45
1.4	3	0		22.10	22.21	22.06
1.4	3	1		22.07	22.19	22.07
1.4	3	3		22.20	22.12	22.01
1.4	6	0		21.33	21.38	21.26
1.4	1	0	64-QAM	21.52	21.53	21.52
1.4	1	3		21.42	21.64	21.42
1.4	1	5		21.57	21.38	21.35
1.4	3	0		21.16	21.25	21.08
1.4	3	1		21.09	21.16	21.11
1.4	3	3		21.20	21.06	21.10
1.4	6	0		21.12	21.13	21.08



Appendix B. Test Results of ERP and Radiated Test

ERP

<Reporting Only>

LTE Band 26 / 15MHz (Channel 26765) (GT - LC = 1.39 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	23.42	0.2198	22.66	0.1845
Middle		-	-	-	-	-	-
Highest		-	-	-	-	-	-
Lowest	16QAM	1	0	22.81	0.1910	22.05	0.1603
Middle		-	-	-	-	-	-
Highest		-	-	-	-	-	-
Lowest	64QAM	1	0	21.61	0.1449	20.85	0.1216
Middle		-	-	-	-	-	-
Highest		-	-	-	-	-	-
Limit	ERP < 7W			Result		PASS	



Radiated Spurious Emission

LTE Band 26

LTE Band 26 / 1.4MHz / 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)
Lowest	1632	-38.80	-13	-25.80	-51.74	-44.13	1.22	8.70	H
	2448	-36.50	-13	-23.50	-53.38	-43.38	1.43	10.46	H
	3264	-47.61	-13	-34.61	-66.4	-55.48	1.68	11.69	H
	4072	-49.44	-13	-36.44	-69.86	-57.28	2.11	12.10	H
									H
									H
	1632	-38.16	-13	-25.16	-50.96	-43.49	1.22	8.70	V
	2448	-37.20	-13	-24.20	-54.46	-44.08	1.43	10.46	V
	3264	-48.42	-13	-35.42	-67.51	-56.29	1.68	11.69	V
	4072	-49.12	-13	-36.12	-70.06	-56.96	2.11	12.10	V
								V	
								V	
Middle	1640	-40.02	-13	-27.02	-52.98	-45.38	1.22	8.73	H
	2456	-37.07	-13	-24.07	-53.93	-43.95	1.43	10.46	H
	3280	-50.36	-13	-37.36	-69.05	-58.26	1.69	11.74	H
	4096	-50.49	-13	-37.49	-70.89	-58.34	2.10	12.10	H
									H
									H
	1640	-41.18	-13	-28.18	-54.01	-46.54	1.22	8.73	V
	2456	-37.40	-13	-24.40	-54.61	-44.28	1.43	10.46	V
	3280	-47.22	-13	-34.22	-66.26	-55.12	1.69	11.74	V
	4096	-49.57	-13	-36.57	-70.52	-57.42	2.10	12.10	V
								V	
								V	
Highest	1648	-41.24	-13	-28.24	-54.21	-46.63	1.23	8.76	H
	2472	-37.36	-13	-24.36	-54.19	-44.25	1.44	10.48	H
	3296	-50.87	-13	-37.87	-69.46	-58.81	1.70	11.79	H
	4120	-50.11	-13	-37.11	-70.49	-57.97	2.09	12.10	H
									H
									H
	1648	-41.76	-13	-28.76	-54.61	-47.15	1.23	8.76	V
	2472	-37.28	-13	-24.28	-54.4	-44.17	1.44	10.48	V
	3296	-47.41	-13	-34.41	-66.4	-55.35	1.70	11.79	V
	4120	-49.56	-13	-36.56	-70.51	-57.42	2.09	12.10	V
								V	
								V	

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



LTE Band 26 / 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)
Middle	1632	-37.19	-13	-24.19	-50.13	-42.52	1.22	8.70	H
	2440	-35.29	-13	-22.29	-52.19	-42.16	1.43	10.45	H
	3256	-47.05	-13	-34.05	-65.89	-54.90	1.67	11.67	H
	4072	-48.10	-13	-35.10	-68.52	-55.94	2.11	12.10	H
									H
									H
									H
	1632	-38.09	-13	-25.09	-50.89	-43.42	1.22	8.70	V
	2440	-36.51	-13	-23.51	-53.82	-43.38	1.43	10.45	V
	3256	-46.92	-13	-33.92	-66.04	-54.77	1.67	11.67	V
	4072	-47.18	-13	-34.18	-68.12	-55.02	2.11	12.10	V
									V
									V
									V

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

LTE Band 26 / 15MHz / 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)
Lowest	1656	-39.94	-13	-26.94	-52.93	-45.35	1.23	8.79	H
	2488	-37.36	-13	-24.36	-54.15	-44.26	1.44	10.49	H
	3312	-49.52	-13	-36.52	-68.02	-57.49	1.72	11.84	H
	4144	-50.24	-13	-37.24	-70.6	-58.11	2.08	12.10	H
									H
									H
									H
	1656	-38.57	-13	-25.57	-51.43	-43.98	1.23	8.79	V
	2488	-36.08	-13	-23.08	-53.11	-42.98	1.44	10.49	V
	3312	-46.02	-13	-33.02	-64.96	-53.99	1.72	11.84	V
	4144	-48.31	-13	-35.31	-69.27	-56.18	2.08	12.10	V
									V
									V
									V

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