



Report No.: FG1D0314E

FCC RADIO TEST REPORT

FCC ID : PU5-TP00137BLF Equipment : Notebook Computer

Brand Name : Lenovo

Model Name : TP00137A, TP00137B
Applicant : Wistron Corporation

21F, No. 88, Sec. 1, Hsin Tai Wu Rd., Hsichih

Dist, New Taipei City 221, Taiwan

Manufacturer : Lenovo PC HK Limited.

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

Standard : FCC 47 CFR Part 2, and 90(S)

Equipment: Fibocom L860-GL-16 tested inside of Lenovo Notebook Computer.

The product was received on Dec. 03, 2021 and testing was performed from Dec. 25, 2021 to Jan. 27, 2022. We, Sporton International Inc. Wensan 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 test results in this partial report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Wensan Laboratory, the test report shall not be reproduced except in full.

Approved by: Louis Wu

Louis Wu

Sporton International Inc. Wensan Laboratory

TEL: 0800-800005 Page Number : 1 of 17
FAX: 886-3-327-0855 Issued Date : Feb. 18, 2022

E-mail: Alex@sporton.com.tw Report Version : 02

Table of Contents

Hi	story o	of this test report	3
Su	mmar	ry of Test Result	4
1	Gene	eral Description	5
	1.1	Feature of Equipment Under Test	5
	1.2	Product Specification of Equipment Under Test	
	1.3	Modification of EUT	
	1.4	Testing Site	
	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	
	2.3	Support Unit used in test configuration and system	8
	2.4	Frequency List of Low/Middle/High Channels	9
3	Cond	ducted Test Itemsducted Test Items	10
	3.1	Measuring Instruments	10
	3.2	Conducted Output Power Measurement and ERP Measurement	
	3.3	Field Strength of Spurious Radiation Measurement	
4	List	of Measuring Equipment	
5	Unce	ertainty of Evaluation	17
Αp	pendi	ix A. Test Results of Conducted Test	
Αp	pendi	ix B. Test Results of ERP and Radiated Test	
Δr	nendi	ix C. Test Setup Photographs	

TEL: 0800-800005 FAX: 886-3-327-0855 E-mail: Alex@sporton.com.tw

Report Template No.: BU5-FGLTE90S Version 2.4

Page Number : 2 of 17

Issued Date : Feb. 18, 2022

Report No. : FG1D0314E

Report Version : 02

History of this test report

Report No. : FG1D0314E

Report No.	Version	Description	Issued Date
FG1D0314E	01	Initial issue of report	Jan. 28, 2022
FG1D0314E	02	 Revise remark in summary of test result Revise list of measuring equipment 	Feb. 18, 2022

TEL: 0800-800005 Page Number : 3 of 17
FAX: 886-3-327-0855 Issued Date : Feb. 18, 2022

E-mail : Alex@sporton.com.tw Report Version : 02

Summary of Test Result

Report No.: FG1D0314E

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	-
-	-	Peak-to-Average Ratio	-	See Note
-	§2.1049 §90.209	Occupied Bandwidth and 26dB Bandwidth	-	See Note
-	§2.1051 §90.691	Emission masks – In-band emissions	-	See Note
-	§2.1051 §90.691	Emission masks – Out of band emissions	-	See Note
-	§2.1055 §90.213	Frequency Stability for Temperature & Voltage	-	See Note
3.3	§2.1053 §90.691	Field Strength of Spurious Radiation	Pass	Under limit 49.90 dB at 2448.000 MHz

Note:

- 1. The module (Model: L860-GL-16) makes no difference after verifying output power, this report reuses test data from the module report.
- Conducted power was verified to be consistent with the original modular approval, so the output power level in the original modular grant is referenced in this report for determining ERP of this host product.

Declaration of Conformity:

- The test results (PASS/FAIL) with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
 It's means measurement values may risk exceeding the limit of regulation standards, if measurement uncertainty is include in test results.
- The measurement uncertainty please refer to this report "Uncertainty of Evaluation".

Comments and Explanations:

The product specifications of the EUT presented in the report are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Sheng Kuo
Report Producer: Tina Chuang

TEL: 0800-800005 Page Number : 4 of 17
FAX: 886-3-327-0855 Issued Date : Feb. 18, 2022

E-mail: Alex@sporton.com.tw Report Version : 02

1 General Description

1.1 Feature of Equipment Under Test

Product Feature						
Equipment	Notebook Computer					
Brand Name	Lenovo					
Model Name	TP00137A, TP00137B					
FCC ID	PU5-TP00137BLF					
Sample 1	EUT with AVX Antenna					
Sample 2	EUT with AWAN Antenna					
EUT supports Radios application	WCDMA/HSPA/LTE/GNSS					
EUT Stage	Production Unit					

Report No.: FG1D0314E

Remark:

- 1. The above EUT's information was declared by manufacturer.
- 2. Equipment: Fibocom L860-GL-16 tested inside of Lenovo Notebook Computer.

WWAN Antenna Information								
	Manufacturer	AVX	Peak gain (dBi)	1.96				
Main Antenna	Part number	025.901X1.0001	Туре	PIFA				
Walli Antenna	Manufacturer	AWAN	Peak gain (dBi)	-1.70				
	Part number	025.901WX.0001	Туре	PIFA				

Remark: The above EUT's information was declared by manufacturer. Please refer to Comments and Explanations in report summary.

1.2 Product Specification of Equipment Under Test

Product Specification subjective to this standard							
Tx Frequency	814.7 ~ 823.3 MHz						
Rx Frequency	859.7 ~ 868.3 MHz						
Bandwidth	1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz						
Maximum Output Power to Antenna	22.93 dBm						
Type of Modulation	QPSK / 16QAM / 64QAM						

1.3 Modification of EUT

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

TEL: 0800-800005 Page Number : 5 of 17 Issued Date : Feb. 18, 2022

E-mail : Alex@sporton.com.tw Report Version : 02

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 333, Taiwan				
Test Site No.	Sporton Site No.				
Test Site No.	TH03-HY (TAF Code: 1190)				
Test Engineer	Benjamin Lin				
Temperature	23.5~25℃				
Relative Humidity	49.4~52%				
	The Conducted test item subcontracted to Sporton International Inc. EMC &				
Remark	Wireless Communications Laboratory.				

Report No.: FG1D0314E

Test Site	Sporton International Inc. Wensan Laboratory			
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan			
Test Site No.	Sporton Site No.			
rest site No.	03CH15-HY			
Test Engineer	Leo Lee, Mancy Chou, and Bigshow Wang			
Temperature	22.5~24.5			
Relative Humidity	45~55			

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

FCC Designation No.: TW1190 and TW3786

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
- FCC KDB 414788 D01 Radiated Test Site 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.
- The TAF code is not including all the FCC KDB listed without accreditation. 2.

TEL: 0800-800005 : 6 of 17 Page Number FAX: 886-3-327-0855 Issued Date : Feb. 18, 2022 : 02

Report Version E-mail: Alex@sporton.com.tw

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.

For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in Tablet Type (three orthogonal axis (X: flat, Y: portrait, Z: landscape)) and Notebook Type, adjusting the measurement antenna orientation, following C63.26 exploratory test procedures and find X Plane as worst plane.

Report No.: FG1D0314E

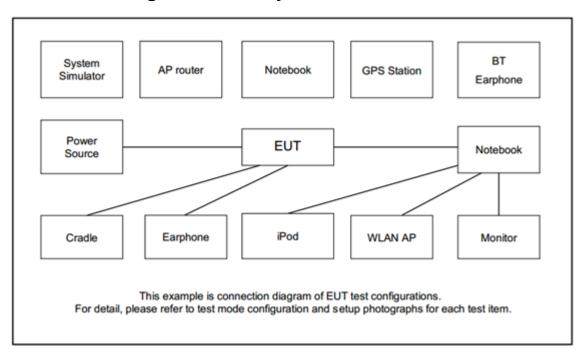
Frequency range investigated for radiated emission is 30 MHz to 9000 MHz.

Conducted	Dand	Bandwidth (MHz)			Modulation			RB#			Test Channel		nnel			
Test Cases	Band	1.4	3	5	10	15	20	QPSK	16QAM	64QAM	1	Half	Full	L	М	Н
Max. Output Power	26	V	٧	V	٧	v	-	v	v	v	٧		٧	v	v	v
E.R.P.	26	v	v	v	V	v	-	v	v	v	Max Power					
Radiated Spurious Emission	26	v		v	V		-	v			V			v	v	v
Remark	1. The mark "v" means that this configuration is chosen for testing 2. The mark "-" means that this bandwidth is not supported. 3. 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. 4. All the radiated test cases were performed with Sample 1															

TEL: 0800-800005 Page Number : 7 of 17
FAX: 886-3-327-0855 Issued Date : Feb. 18, 2022

E-mail: Alex@sporton.com.tw Report Version : 02

2.2 Connection Diagram of Test System



Report No.: FG1D0314E

2.3 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	System Simulator	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m
3.	iPod Earphone	Apple	N/A	Verification	Unshielded, 1.0 m	N/A

TEL: 0800-800005 Page Number : 8 of 17
FAX: 886-3-327-0855 Issued Date : Feb. 18, 2022

E-mail : Alex@sporton.com.tw Report Version : 02

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	-	-					
15	Frequency	821.5	-	-					
40	Channel	-	26740	-					
10	Frequency	-	819	-					
5	Channel	26715	26740	26765					
5	Frequency	816.5	819	821.5					
2	Channel	26705	26740	26775					
3	Frequency	815.5	819	822.5					
1.4	Channel	26697	26740	26783					
1.4	Frequency	814.7	819	823.3					

Report No. : FG1D0314E

TEL: 0800-800005 : 9 of 17 Page Number FAX: 886-3-327-0855 Issued Date : Feb. 18, 2022 Report Version : 02

E-mail: Alex@sporton.com.tw

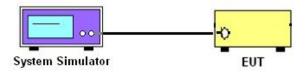
3 Conducted Test Items

3.1 Measuring Instruments

See list of measuring instruments of this test report.

3.1.1 Test Setup

3.1.2 Conducted Output Power



Report No.: FG1D0314E

3.1.3 Test Result of Conducted Test

Please refer to Appendix A.

E-mail: Alex@sporton.com.tw Report Version : 02

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.

Report No.: FG1D0314E

The ERP of mobile transmitters must not exceed 100 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.

E-mail: Alex@sporton.com.tw Report Version: 02

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.

Report No.: FG1D0314E

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+10log₁₀(P[Watts]) dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

3.3.2 Test Procedures

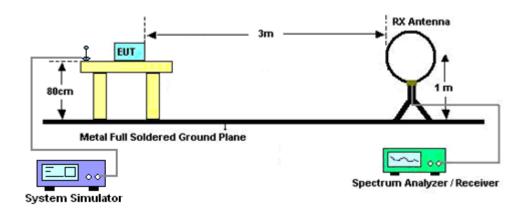
- 1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
- 1. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
- 2. The table was rotated 360 degrees to determine the position of the highest spurious emission.
- 3. 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.
- 4. 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.
- 5. 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.
- 6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
- 7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
- 8. Taking the record of output power at antenna port.
- 9. Repeat step 7 to step 8 for another polarization.
- 10. EIRP (dBm) = S.G. Power Tx Cable Loss + Tx Antenna Gain
- 11. ERP (dBm) = EIRP 2.15
- 12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
- 13. The limit line is derived from 43 + 10log(P) dB below the transmitter power P(Watts)

TEL: 0800-800005 Page Number : 12 of 17
FAX: 886-3-327-0855 Issued Date : Feb. 18, 2022

E-mail : Alex@sporton.com.tw Report Version : 02

3.3.3 Test Setup

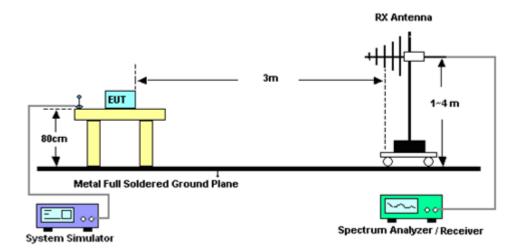
For radiated test below 30MHz



Report No.: FG1D0314E

For radiated test from 30MHz to 1GHz

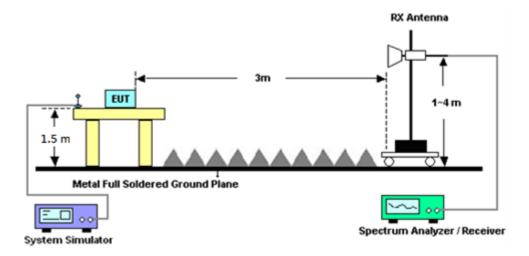
Report Template No.: BU5-FGLTE90S Version 2.4



TEL: 0800-800005 Page Number : 13 of 17
FAX: 886-3-327-0855 Issued Date : Feb. 18, 2022

E-mail: Alex@sporton.com.tw Report Version : 02

For radiated test above 1GHz



3.3.4 Test Result of Field Strength of Spurious Radiated

Please refer to Appendix B.

Note:

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is adequate comparison measurement of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.

TEL: 0800-800005 FAX: 886-3-327-0855 E-mail: Alex@sporton.com.tw

Report Template No.: BU5-FGLTE90S Version 2.4

Page Number : 14 of 17

Issued Date : Feb. 18, 2022

Report No.: FG1D0314E

Report Version : 02

List of Measuring Equipment 4

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Sep. 07, 2021	Dec. 26, 2021~ Jan. 27, 2022	Sep. 06, 2022	Radiation (03CH15-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01 N-06	37059 & 01	30MHz~1GHz	Oct. 09, 2021	Dec. 26, 2021~ Jan. 27, 2022	Oct. 08, 2022	Radiation (03CH15-HY)
Bilog Antenna	TESEQ	CBL6111D&0 0800N1D01N- 06	41912 & 05	30MHz to 1GHz	Feb. 08, 2021	Dec. 26, 2021~ Jan. 27, 2022	Feb. 07, 2022	Radiation (03CH15-HY)
Amplifier	SONOMA	310N	363440	9kHz~1GHz	Dec. 28, 2020	Dec. 26, 2021	Dec. 27, 2021	Radiation (03CH15-HY)
Amplifier	SONOMA	310N	363440	9kHz~1GHz	Dec. 27, 2021	Dec. 27, 2021~ Jan. 03, 2022	Dec. 26, 2022	Radiation (03CH15-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-016 20	1-18GHz	Oct. 25, 2021	Dec. 26, 2021~ Jan. 27, 2022	Oct. 24, 2022	Radiation (03CH15-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-132 6	1GHz~18GHz	Oct. 25, 2021	Dec. 26, 2021~ Jan. 27, 2022	Oct. 24, 2022	Radiation (03CH15-HY)
Preamplifier	Jet-Power	JPA0118-55-3 03	171000180 0055006	1GHz~18GHz	May 06, 2021	Dec. 26, 2021~ Jan. 27, 2022	May 05, 2022	Radiation (03CH15-HY)
Amplifier	E-INSTRUME NT TECH LTD	ERA-10M-700 0-MR	EC190024 7	10MHz-7GHz	Dec. 03, 2021	Dec. 26, 2021~ Jan. 27, 2022	Dec. 02, 2022	Radiation (03CH15-HY)
Preamplifier	EM Electronics	EM01G18G	060803	1GHz-18GHz	Dec. 16, 2021	Dec. 26, 2021~ Jan. 27, 2022	Dec. 15, 2022	Radiation (03CH15-HY)
Spectrum Analyzer	Keysight	N9038A	MY541300 85	20MHz~8.4GHz	Oct. 21, 2021	Dec. 26, 2021~ Jan. 27, 2022	Oct. 20, 2022	Radiation (03CH15-HY
Spectrum Analyzer	Keysight	N9010A	MY542004 85	10Hz~44GHz	Mar. 05, 2021	Dec. 26, 2021~ Jan. 27, 2022	Mar. 04, 2022	Radiation (03CH15-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Dec. 26, 2021~ Jan. 27, 2022	N/A	Radiation (03CH15-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Dec. 26, 2021~ Jan. 27, 2022	N/A	Radiation (03CH15-HY)
Software	Audix	E3 6.2009-8-24(k 5)	RK-00045 1	N/A	N/A	Dec. 26, 2021~ Jan. 27, 2022	N/A	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104, 102E	MY36980/ 4,MY9838/ 4PE,50840 5/2E	30MHz~18G	Nov. 15, 2021	Dec. 26, 2021~ Jan. 27, 2022	Nov. 14, 2022	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz-40GHz	Feb. 22, 2021	Dec. 26, 2021~ Jan. 27, 2022	Feb. 21, 2022	Radiation (03CH15-HY)

Report No. : FG1D0314E

TEL: 0800-800005 : 15 of 17 Page Number FAX: 886-3-327-0855 Issued Date : Feb. 18, 2022 Report Version : 02

E-mail: Alex@sporton.com.tw

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Filter	Wainwright	WLK4-1000-15 30-8000-40SS	SN12	1.53GHz Low Pass Filter	Sep. 14, 2021	Dec. 26, 2021~ Jan. 27, 2022	Sep. 13, 2022	Radiation (03CH15-HY)
Filter	Wainwright	WHKX12-935- 1000-15000-4 0ST	SN1	1GHz High Pass Filter	Apr. 29, 2021	Dec. 26, 2021~ Jan. 27, 2022	Apr. 28, 2022	Radiation (03CH15-HY)
Filter	Wainwright	WHKX12-2700 -3000-18000-6 0ST	SN4	3GHz High Pass Filter	Sep. 15, 2021	Dec. 26, 2021~ Jan. 27, 2022	Sep. 14, 2022	Radiation (03CH15-HY)
Signal Generator	Anritsu	MG3694C	163401	0.1Hz~40GHz	Jan. 31, 2021	Dec. 26, 2021~ Jan. 27, 2022	Jan. 30, 2022	Radiation (03CH15-HY)
Base Station (Measure)	Anritsu	MT8821C	6262025341	N/A	Oct. 05, 2021	Dec. 25, 2021	Oct. 04, 2022	Conducted (TH03-HY)

Report No. : FG1D0314E

TEL: 0800-800005 : 16 of 17 Page Number FAX: 886-3-327-0855 : Feb. 18, 2022 Issued Date Report Version : 02

E-mail: Alex@sporton.com.tw

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of	
Measuring Uncertainty for a Level of	2.92 dB
Confidence of 95% (U = 2Uc(y))	2.92 db

Report No.: FG1D0314E

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

Measuring Uncertainty for a Level of	3.72 dB
Confidence of 95% (U = 2Uc(y))	3.72 UB

E-mail : Alex@sporton.com.tw Report Version : 02

Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power&ERP)

	LTE Band 26 Maximum Average Power [dBm] (GT - LC = 1.96 dB)											
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)				
15	1	0		22.92	-	-						
15	1	74	QPSK	22.69	-	-	22.73	0.1875				
15	75	0		21.63	-	-						
15	1	0	16-QAM	21.96	-	-	21.77	0.1503				
15	1	0	64-QAM	20.68	-	-	20.49	0.1119				
Limit	Limit Conducted power < 100W				Result Pass							

Report No. : FG1D0314E

	LTE Band 26 Maximum Average Power [dBm] (GT - LC = 1.96 dB)												
BW [MHz]	RB Size	RB Size RB Offset Mod Lowest Middle Highest ERP (dBm) ERP (W)											
10	1	0	QPSK	-	22.93	-	22.74	0.1879					
10	1	0	16-QAM	-	21.72	-	21.53	0.1422					
10	1	0	64-QAM	-	20.89	-	20.70	0.1175					
Limit	Limit Conducted power < 100W				Result		Pa	ISS					

	LTE Band 26 Maximum Average Power [dBm] (GT - LC = 1.96 dB)											
BW [MHz]	RB Size	RB Size RB Offset Mod Lowest Middle Highest ERP (dBm) ERP (W)										
5	1	0	QPSK	22.63	22.89	22.89	22.70	0.1862				
5	1	0	16-QAM	21.86	22.36	21.85	22.17	0.1648				
5	1	0	64-QAM	20.96	20.72	21.23	21.04	0.1271				
Limit	nit Conducted power < 100W				Result	Pa	ISS					

	LTE Band 26 Maximum Average Power [dBm] (GT - LC = 1.96 dB)											
BW [MHz]	RB Size	RB Size RB Offset Mod Lowest Middle Highest ERP (dBm) ERP (W)										
3	1	0	QPSK	22.63	22.86	22.92	22.73	0.1875				
3	1	0	16-QAM	21.72	22.58	21.68	22.39	0.1734				
3	1	0	64-QAM	20.78	21.63	20.69	21.44	0.1393				
Limit	Conduc	ted power	< 100W		Result		Pass					

	LTE Band 26 Maximum Average Power [dBm] (GT - LC = 1.96 dB)											
BW [MHz]	RB Size	RB Size RB Offset Mod Lowest Middle Highest ERP (dBm) ERP (W)										
1.4	1	0	QPSK	22.69	22.21	22.85	22.66	0.1845				
1.4	1	0	16-QAM	21.85	22.36	22.18	22.17	0.1648				
1.4	1	0	64-QAM	20.69	21.21	21.25	21.06	0.1276				
Limit	Conduc	ted power	< 100W		Result		Pa	ISS				

Appendix B. Test Results of Radiated Test

LTE Band 26

			Lī	ΓE Band 26 /	1.4MHz / QF	PSK			
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)
	1628	-70.31	-13	-57.31	-50.97	-75.46	1.82	9.12	Н
	2442	-68.14	-13	-55.14	-53.75	-74.22	2.23	10.47	Н
	3256	-67.88	-13	-54.88	-56.55	-75.25	2.60	12.12	Н
									Н
									Н
									Н
Lowest									Н
Lowest	1628	-69.09	-13	-56.09	-50.18	-74.24	1.82	9.12	V
	2442	-68.21	-13	-55.21	-54.25	-74.29	2.23	10.47	V
	3256	-67.24	-13	-54.24	-56.33	-74.61	2.60	12.12	V
									V
									V
									V
									V
	1637	-70.65	-13	-57.65	-51.39	-75.87	1.83	9.20	Н
	2455	-68.80	-13	-55.80	-54.52	-74.94	2.24	10.53	Н
	3272	-67.70	-13	-54.70	-56.34	-75.13	2.61	12.19	Н
									Н
									Н
									Н
Middle									Н
	1637	-70.18	-13	-57.18	-51.38	-75.40	1.83	9.20	V
	2455	-67.52	-13	-54.52	-53.59	-73.66	2.24	10.53	V
	3272	-67.14	-13	-54.14	-56.2	-74.57	2.61	12.19	V
									V
									V
									V

TEL: 0800-800005 FAX: 886-3-327-0855 E-mail: Alex@sporton.com.tw

Page Number

: B1 of B5

Report No.: FG1D0314E



		1		1	T			T	
	1645	-69.94	-13	-56.94	-50.72	-75.22	1.83	9.26	Н
	2468	-63.60	-13	-50.60	-49.45	-69.81	2.25	10.61	Н
	3288	-67.88	-13	-54.88	-56.49	-75.36	2.62	12.25	Η
									Н
									Н
									Н
l limb a at									Н
Highest	1645	-68.43	-13	-55.43	-49.69	-73.71	1.83	9.26	V
	2468	-66.26	-13	-53.26	-52.36	-72.47	2.25	10.61	V
	3288	-67.24	-13	-54.24	-56.25	-74.72	2.62	12.25	V
									V
									V
									V
									V

Report No.: FG1D0314E

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

TEL: 0800-800005 Page Number : B2 of B5

			L	TE Band 26	/ 5MHz / QP	SK			
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)
	1624	-70.57	-13	-57.57	-51.21	-75.69	1.82	9.09	Н
	2443	-69.17	-13	-56.17	-57.78	-75.26	2.23	10.47	Н
	3257	-67.62	-13	-54.62	-56.29	-74.99	2.60	12.13	Н
									Н
									Н
									Н
Lowest									Н
Lowest	1624	-69.87	-13	-56.87	-50.96	-74.99	1.82	9.09	V
	2443	-69.01	-13	-56.01	-55.05	-75.10	2.23	10.47	V
	3257	-67.20	-13	-54.20	-56.29	-74.57	2.60	12.13	V
									V
									V
									V
									V
	1632	-66.65	-13	-53.65	-47.35	-71.83	1.82	9.16	Н
	2448	-63.89	-13	-50.89	-49.55	-70.00	2.24	10.49	Н
	3264	-67.74	-13	-54.74	-56.4	-75.14	2.61	12.16	Н
									Н
									Н
									Н
Middle									Н
Middle	1632	-63.15	-13	-50.15	-44.31	-68.33	1.82	9.16	V
	2448	-62.90	-13	-49.90	-48.95	-69.01	2.24	10.49	V
	3264	-67.24	-13	-54.24	-56.31	-74.64	2.61	12.16	V
									V
									V
									V
									V

Report No. : FG1D0314E

TEL: 0800-800005 Page Number : B3 of B5



		1			l			ı	
	1638	-70.55	-13	-57.55	-51.29	-75.78	1.83	9.20	Н
	2458	-69.12	-13	-56.12	-54.87	-75.28	2.24	10.55	Н
	3280	-67.68	-13	-54.68	-56.31	-75.14	2.61	12.22	Н
									Н
									Н
									Н
∐ighost									Н
Highest	1638	-70.40	-13	-57.40	-51.72	-75.63	1.83	9.20	V
	2458	-67.53	-13	-54.53	-53.61	-73.69	2.24	10.55	V
	3280	-67.19	-13	-54.19	-56.24	-74.65	2.61	12.22	V
									V
									V
									V
									V

Report No.: FG1D0314E

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

TEL: 0800-800005 Page Number : B4 of B5

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	1629	-69.88	-13	-56.88	-550.55	-75.04	1.82	9.13	Н
	2443	-68.21	-13	-55.21	-53.82	-74.30	2.23	10.47	Н
	3256	-67.74	-13	-54.74	-56.41	-75.11	2.60	12.12	Н
									Н
									Н
									Н
									Н
	1629	-67.37	-13	-54.37	-48.53	-72.53	1.82	9.13	V
	2443	-67.73	-13	-54.73	-53.77	-73.82	2.23	10.47	V
	3256	-67.39	-13	-54.39	-56.48	-74.76	2.60	12.12	V
									V
									V
									V
									V

Report No.: FG1D0314E

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

TEL: 0800-800005 Page Number : B5 of B5