Variant FCC RF Test Report

APPLICANT	:	Lenovo (Shanghai) Electronics Technology Co., Ltd.
EQUIPMENT	:	Tablet PC IdeaTab A3000-H
BRAND NAME	:	lenovo
MODEL NAME	:	60030, Z0A3
FCC ID	:	O57A3000H
STANDARD	:	FCC Part 15 Subpart C §15.247
CLASSIFICATION	:	(DTS) Digital Transmission System

This is a variant report which is only valid together with the original test report. The product was received on May 11, 2013 and completely tested on May 19, 2013. We, SPORTON INTERNATIONAL (KUNSHAN) INC., would like to declare that the tested sample has been evaluated in accordance with the procedures and shown the compliance with the applicable technical standards.

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

Reviewed by:

Jones Tsai

Jones Tsai / Manager

Testing Laboratory
2627

SPORTON INTERNATIONAL (KUNSHAN) INC.
No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C.

TABLE OF CONTENTS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR322704-04B	Rev. 01	This is a variant report for 60030, Z0A3. The product equality declaration could be referred to Appendix C. All the test cases were performed on original report which can be referred to Sporton Report Number FR322704B. Based on the original test report, only the Conducted Power and the worst case of Radiated Spurious Emissions were verified for the differences.	Jun. 13, 2013

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.247(b)(1)	Peak Output Power	≤ 30dBm	Pass	-
3.2	15.247(d)	Radiated Band Edges and Spurious Emission	15.209(a) & 15.247(d)	Pass	Under limit 11.13 dB at 2483.500 MHz

1 General Description

1.1 Applicant

Lenovo (Shanghai) Electronics Technology Co., Ltd.
No. 68 Building, 199 Fenju Road, Wai Gao Qiao FTZ, Shanghai, China

1.2 Manufacturer

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

1.3 Feature of Equipment Under Test

Product Feature	
Equipment	Tablet PC IdeaTab A3000-H
Brand Name	lenovo
Model Name	60030, Z0A3
FCC ID	O57A3000H
EUT supports Radios application	GPRS/EGPRS/WCDMA/HSPA/HSPA+/DC-HSDPA/ WLAN 11bgn/Bluetooth/Bluetooth 4.0 - LE
HW Version	LepadA3000-H
SW Version	A3000_130125
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.

1.4 Product Specification of Equipment Under Test

Product Specification subjective to this standard	
Tx/Rx Frequency Range	2402 MHz ~ 2480 MHz
Number of Channels	40
Carrier Frequency of Each Channel	2402+n*2 MHz; n=0~39
Maximum Output Power to Antenna	Bluetooth v4.0 - LE : -1.60 dBm (0.0007 W)
Antenna Type	Fixed Internal Antenna with gain 3.10 dBi
Type of Modulation	Bluetooth v4.0 - LE : GFSK

1.5 Testing Site

Test Site	SPORTON INTERNATIONAL (KUNSHAN) INC.		
Test Site Location	No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C. TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958		
Test Site No.	Sporton Site No.		FCC/IC Registration No.
	TH01-KS	03CH01-KS	149928/4086E-1

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

1.6 Applied Standards

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

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

Remark:

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 Descriptions of Test Mode

The RF output power was recorded in the following table:

Channel	Frequency	Bluetooth 4.0 – LE RF Output Power
		Data Rate / Modulation
		GFSK
		1Mbps
Ch00	2402MHz	-2.86 dBm
Ch19	2440MHz	-2.12 dBm
Ch39	2480MHz	**-1.60** dBm

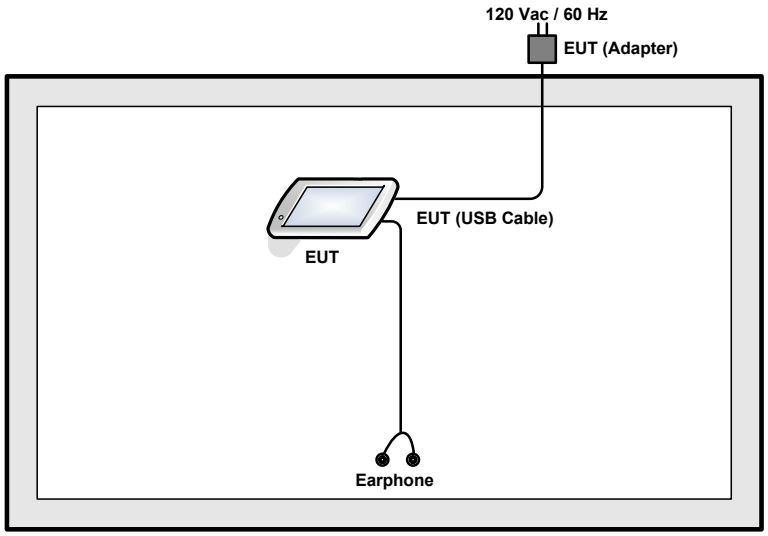
a. The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 and ANSI C63.10-2009 and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction (150 KHz to 30 MHz), radiation (9 KHz to the 10th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

2.2 Test Mode

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

Summary table of Test Cases	
Test Item	**Data Rate / Modulation**
	Bluetooth 4.0 – LE / GFSK
Conducted TCs	Mode 1: Bluetooth Tx CH00_2402 MHz_1Mbps Mode 2: Bluetooth Tx CH19_2440 MHz_1Mbps Mode 3: Bluetooth Tx CH39_2480 MHz_1Mbps
Radiated TCs	Mode 1: Bluetooth Tx CH39

2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	DC Power Supply	GWINSTEK	GPS-3030D	N/A	N/A	Unshielded, 1.8 m

2.5 Description of RF Function Operation Test Setup

For Bluetooth function, key in "＊＃＊＃3646633＃＊＃＊" on the EUT directly. Then, the EUT will get into the engineering modes to contact with Bluetooth base station for continuous transmitting and receiving signals.

2.6 Measurement Results Explanation Example

For conducted test items:

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

The spectrum analyzer offset is derived from RF cable loss and 10dB attenuator factor.
Offset = RF cable loss + attenuator factor.
Following table shows an offset computation example with cable loss 5.6 dB.

Example :
Offset(dB) = RF cable loss(dB) + attenuator factor(dB).
= 5.6 + 10 = 15.6 (dB)

3 Test Result

3.1 Peak Output Power Measurement

3.1.1 Limit of Peak Output Power

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

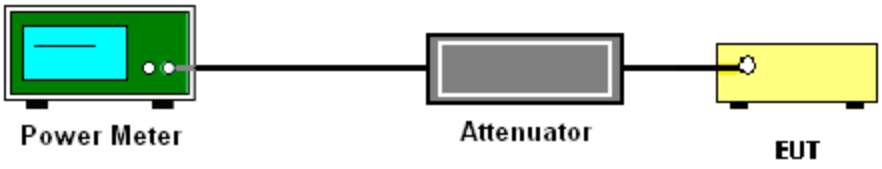
3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedures

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

3.1.4 Test Setup



3.1.5 Test Result of Peak Output Power

Test Mode :	Bluetooth 4.0 - LE	Temperature :	23~24℃
Test Engineer :	Lizy Li	Relative Humidity :	47~48%

Channel	Frequency (MHz)	RF Power (dBm)		
		GFSK	Max. Limits (dBm)	Pass/Fail
00	2402	0.27	30.00	Pass
19	2440	0.44	30.00	Pass
39	2480	1.09	30.00	Pass

3.2 Radiated Band Edges and Spurious Emission Measurement

3.2.1 Limit of Radiated Band Edges and Spurious Emission

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

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

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

Band	Duty Cycle(%)	T(ms)	1/T(KHz)	VBW Setting
Bluetooth 4.0 - LE	61.392	0.388	2.577	3KHz

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

Marker-Delta method：

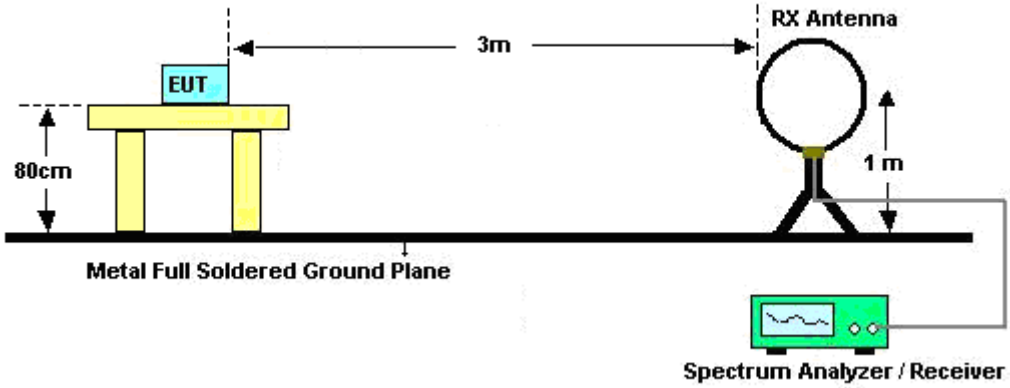
(1) Set RBW = 1 MHz, VBW = 3 MHz, peak detector.
Repeat the measurement with an average detector, use RBW = 1MHz
VBW = 10 Hz, when duty cycle is no less than 98 percent.
VBW ≥ 1/T, when duty cycle is less than 98 percent

(2) Set span = 10MHz, that encompasses both the peak of the fundamental emission and the band-edge emission under investigation. Set RBW = 100KHz, 1% of the total span. Set VBW = 100KHz >= RBW.

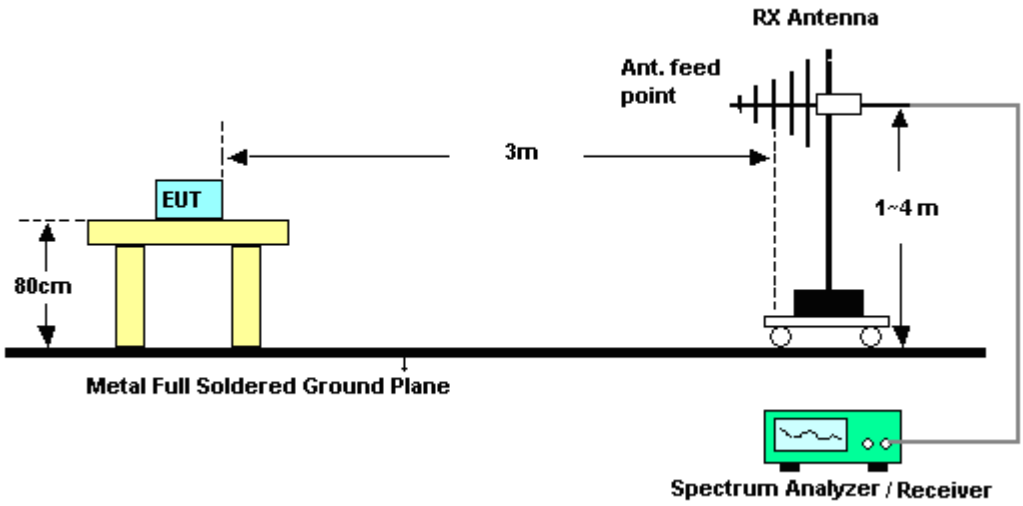
(3) Subtract the delta measured in step (2) from the field strengths measured in step (1). The resultant field strengths (peak/average) are then used to determine band-edge compliance as required by Section 15.205.

3.2.4 Test Setup

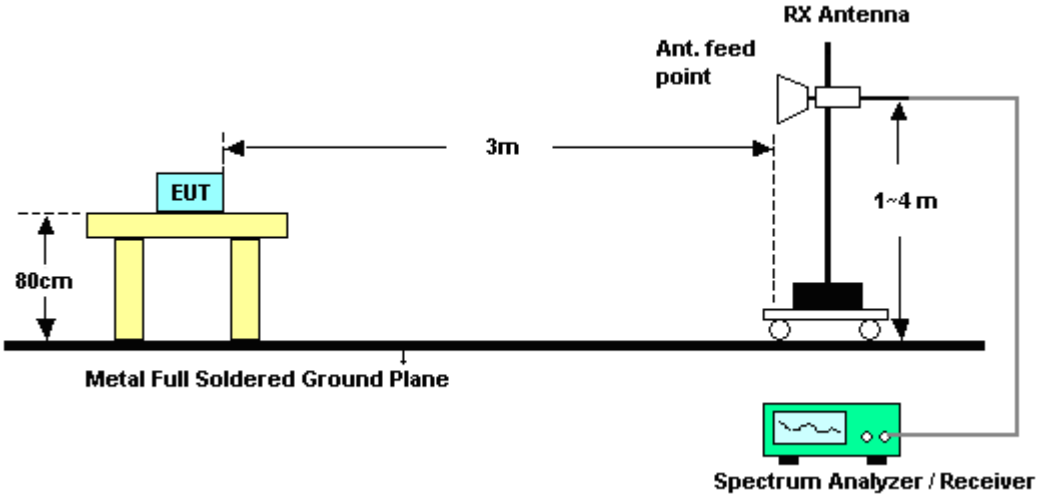
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

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

3.2.6 Test Result of Radiated Band Edges

Test Mode :	Mode 1	Temperature :	22~23°C
Test Channel :	39	Relative Humidity :	41~42%
		Test Engineer :	Steven Hao

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	58.41	-15.59	74	53.95	33.01	2.96	31.51	133	196	Peak
2483.5	54.79	0.79	54	50.33	33.01	2.96	31.51	133	196	Average
2483.5	42.89	-31.11	74	-	-	-	-	-	-	Peak
2483.5	42.13	-11.87	54	-	-	-	-	-	-	Average

Summary results of marker-delta method:

Test mode	Maximum field strength of the fundamental emission (dBµV/m)	Delta Result (dB)	Measurement Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result
Peak	98.1	55.21	42.89	74	-31.11	Pass
Average	97.34	55.21	42.13	54	-11.87	Pass

Note : Measurement result = Maximum field strength – Delta result

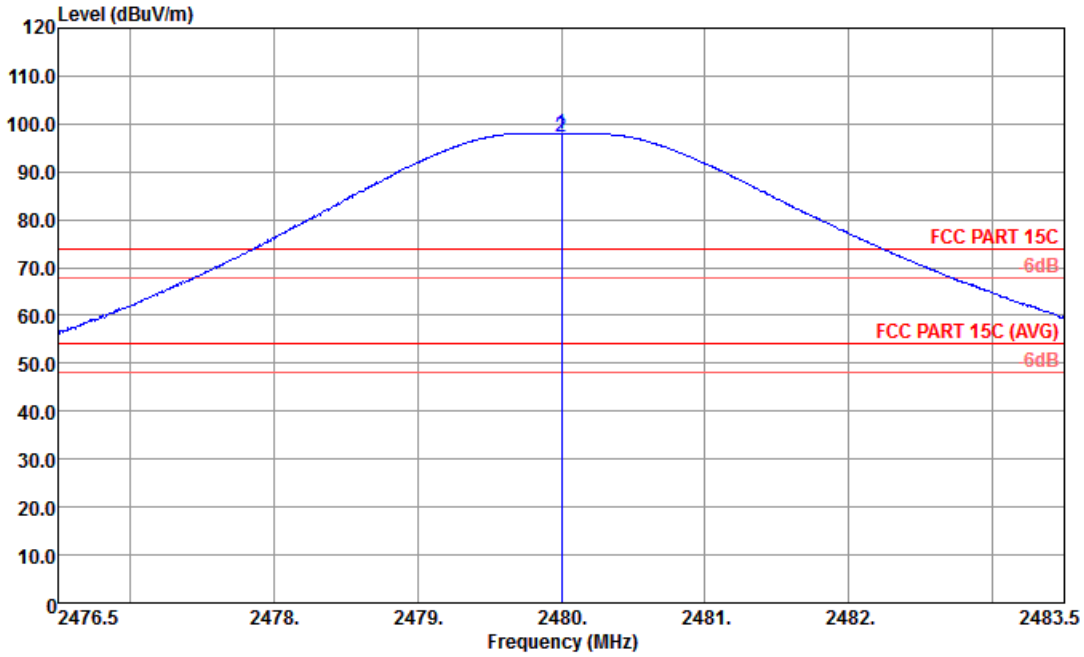
ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	57.81	-16.19	74	53.35	33.01	2.96	31.51	155	253	Peak
2483.5	53.67	-0.33	54	49.21	33.01	2.96	31.51	155	253	Average
2483.5	43.61	-30.39	74	-	-	-	-	-	-	Peak
2483.5	42.87	-11.13	54	-	-	-	-	-	-	Average

Summary results of marker-delta method:

Test mode	Maximum field strength of the fundamental emission (dBµV/m)	Delta Result (dB)	Measurement Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result
Peak	95.17	51.56	43.61	74	-30.39	Pass
Average	94.43	51.56	42.87	54	-11.13	Pass

Note : Measurement result = Maximum field strength – Delta result

Test Mode :	Mode 1	**Temperature :**	22~23°C
Test Channel :	39	**Relative Humidity :**	41~42%
Test Engineer :	Steven Hao	**Polarization :**	Horizontal

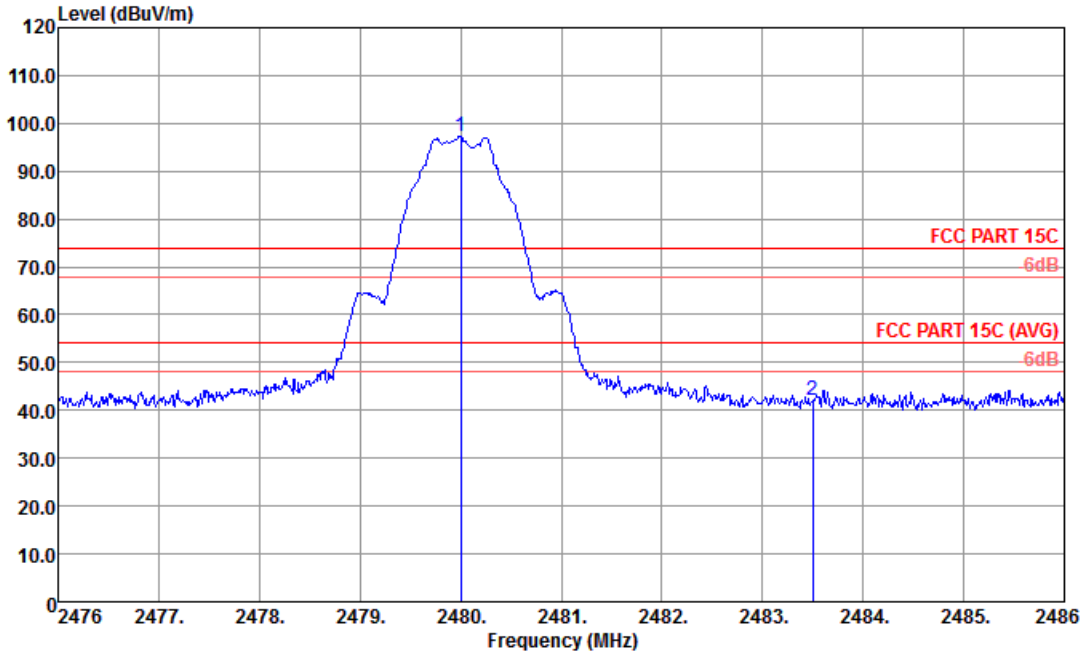


Site : 03CH01-KS
Condition : FCC PART 15C 3m HF ANT-100803 HORIZONTAL
: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 *	2480.00	98.10	24.10	74.00	93.64	33.01	2.96	31.51	105	152	Peak
2 *	2480.00	97.34	43.34	54.00	92.88	33.01	2.96	31.51	105	152	Average

* Maximum field strength of the fundamental emission

Test Mode :	Mode 1	**Temperature :**	22~23°C
Test Channel :	39	**Relative Humidity :**	41~42%
Test Engineer :	Steven Hao	**Polarization :**	Horizontal

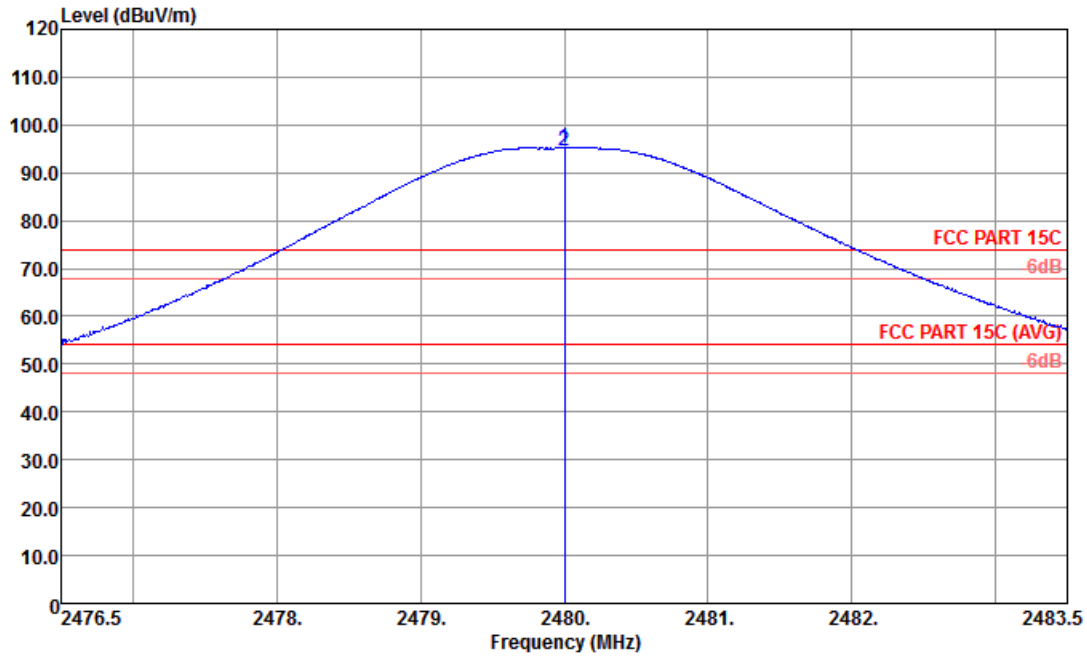


Site : 03CH01-KS
Condition : FCC PART 15C 3m HF ANT-100803 HORIZONTAL
: RBW:100.000KHz VBW:100.000KHz SWT:Auto

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 *	2480.00	97.36	23.36	74.00	92.90	33.01	2.96	31.51	106	155	Peak
2	2483.50	42.15	-31.85	74.00	37.69	33.01	2.96	31.51	106	155	Peak

* Marker-Delta Method (RBW/VBW=100KHz): 55.21 dB , single carrier Mode

Test Mode :	Mode 1	**Temperature :**	22~23°C
Test Channel :	39	**Relative Humidity :**	41~42%
Test Engineer :	Steven Hao	**Polarization :**	Vertical

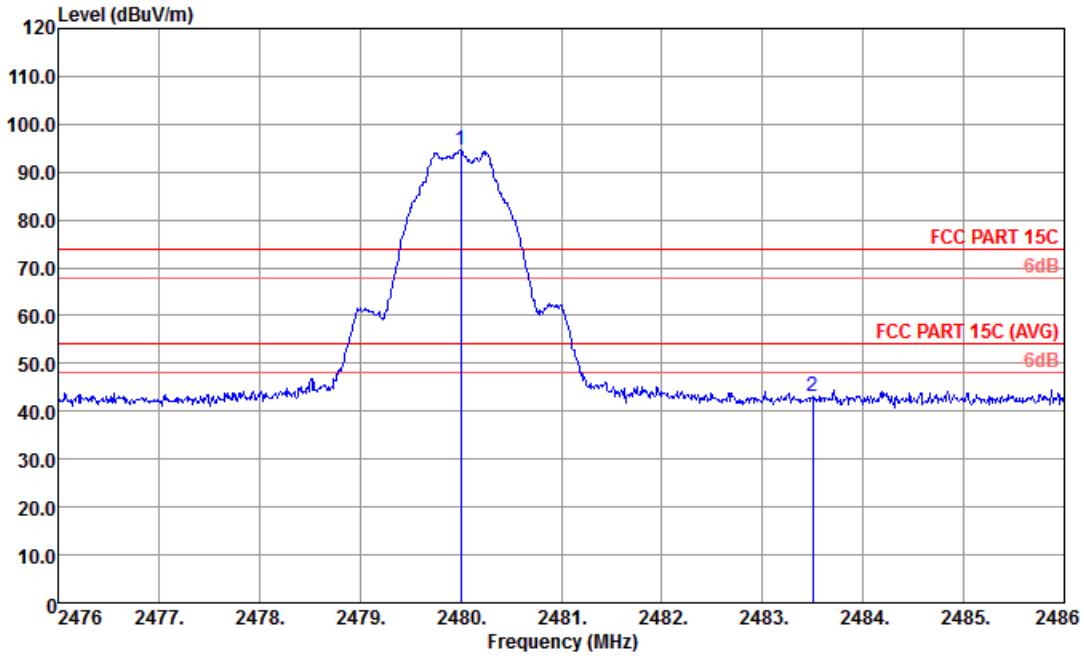


Site : 03CH01-KS
Condition : FCC PART 15C 3m HF ANT-100803 VERTICAL
: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 *	2480.00	95.17	21.17	74.00	90.71	33.01	2.96	31.51	155	251	Peak
2 *	2480.00	94.43	40.43	54.00	89.97	33.01	2.96	31.51	155	251	Average

* Maximum field strength of the fundamental emission

Test Mode :	Mode 1	**Temperature :**	22~23°C
Test Channel :	39	**Relative Humidity :**	41~42%
Test Engineer :	Steven Hao	**Polarization :**	Vertical



Site : 03CH01-KS
Condition : FCC PART 15C 3m HF ANT-100803 VERTICAL
: RBW:100.000KHz VBW:100.000KHz SWT:Auto

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 *	2480.00	94.69	20.69	74.00	90.23	33.01	2.96	31.51	155	323	Peak
2	2483.50	43.13	-30.87	74.00	38.67	33.01	2.96	31.51	155	323	Peak

* Marker-Delta Method (RBW/VBW=100KHz): 51.56 dB , single carrier Mode

3.2.7 Test Result of Radiated Spurious Emission (30 MHz ~ 10th Harmonic)

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

Test Mode :	Mode 1	**Temperature :**	22~23°C
Test Channel :	39	**Relative Humidity :**	41~42%
Test Engineer :	Steven Hao	**Polarization :**	Horizontal
Remark :	1. 2480 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.97	19.03	-20.97	40	34.98	17.29	0.34	33.58	-	-	Peak
165.8	26.46	-17.04	43.5	49.92	9.36	0.75	33.57	-	-	Peak
249.22	28.12	-17.88	46	48.68	11.96	0.92	33.44	-	-	Peak
308.39	30.48	-15.52	46	49.65	13.2	1	33.37	110	65	Peak
357.86	30.3	-15.7	46	47.87	14.67	1.11	33.35	-	-	Peak
561.56	22.83	-23.17	46	35.97	18.52	1.34	33	-	-	Peak
2480	97.63	-	-	93.17	33.01	2.96	31.51	104	157	Peak
2480	96.14	-	-	91.68	33.01	2.96	31.51	104	157	Average
4960	48.12	-25.88	74	40.14	35.2	4.29	31.51	121	321	Peak
7440	50.44	-23.56	74	39.52	36.27	5.57	30.92	121	54	Peak

Test Mode :	Mode 1	**Temperature :**	22~23°C
Test Channel :	39	**Relative Humidity :**	41~42%
Test Engineer :	Steven Hao	**Polarization :**	Vertical
Remark :	1. 2480 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.97	19.64	-20.36	40	35.59	17.29	0.34	33.58	-	-	Peak
100.81	20.33	-23.17	43.5	42.74	10.62	0.58	33.61	-	-	Peak
248.25	18.06	-27.94	46	38.66	11.92	0.92	33.44	-	-	Peak
302.57	19.72	-26.28	46	39.04	13.06	0.99	33.37	-	-	Peak
362.71	23.46	-22.54	46	40.9	14.8	1.11	33.35	-	-	Peak
561.56	27.12	-18.88	46	40.26	18.52	1.34	33	100	56	Peak
2480	97	-	-	92.54	33.01	2.96	31.51	100	319	Peak
2480	95.85	-	-	91.39	33.01	2.96	31.51	100	319	Average
4960	48.28	-25.72	74	40.3	35.2	4.29	31.51	120	133	Peak
7440	50.09	-23.91	74	39.17	36.27	5.57	30.92	142	119	Peak

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSP40	100319	9kHz~40GHz	Dec. 29, 2012	May 16, 2013	Dec. 28, 2013	Conducted (TH01-KS)
Power Meter	Agilent	E4416A	MY45101555	N/A	Aug. 22, 2012	May 16, 2013	Aug. 21, 2013	Conducted (TH01-KS)
Power Sensor	Agilent	E9327A	MY44421198	N/A	Aug. 22, 2012	May 16, 2013	Aug. 21, 2013	Conducted (TH01-KS)
DC Power Supply	GWINSTEK	GPS-3030D	E1884515	N/A	Aug. 22, 2012	May 16, 2013	Aug. 21, 2013	Conducted (TH01-KS)
Thermal Chamber	Ten Billion	TTC-B3S	TBN-960502	N/A	Dec. 29, 2012	May 16, 2013	Dec. 28, 2013	Conducted (TH01-KS)
EMI Test Receiver	R&S	ESCI	100534	9kHz~3GHz	Nov. 08, 2012	May 19, 2013	Nov. 07, 2013	Radiation (03CH01-KS)
Spectrum Analyzer	R&S	FSP30	100400	9kHz~30GHz	Jun. 01, 2012	May 19, 2013	May 31, 2013	Radiation (03CH01-KS)
Bilog Antenna	SCHAFFNER	CBL6112D	23182	25MHz~2GHz	Dec. 07, 2012	May 19, 2013	Dec. 06, 2013	Radiation (03CH01-KS)
HFH2-Z2 Loop Antenna	R&S	HFH2-Z2	100321	9KHZ-30MHZ	Oct. 22, 2012	May 19, 2013	Oct. 21, 2013	Radiation (03CH01-KS)
Double Ridge Horn Antenna	ETS-Lindgren	1908/7/13	00075957	1GHz~18GHz	Dec. 07, 2012	May 19, 2013	Dec. 06, 2013	Radiation (03CH01-KS)
Amplifier	com-power	PA-103A	161069	1MHz~1GHz	Jun. 01, 2012	May 19, 2013	May 31, 2013	Radiation (03CH01-KS)
Amplifier	Agilent	8449B	3008A02370	1GHz~26.5GHz	Dec. 29, 2012	May 19, 2013	Dec. 28, 2013	Radiation (03CH01-KS)
Active Horn Antenna	com-power	AHA-118	701023	1GHz~18GHz	Nov. 07, 2012	May 19, 2013	Nov. 06, 2013	Radiation (03CH01-KS)
SHF-EHF Horn	Schwarzbeck	BBHA 9170	9170249	15GHz~40GHz	Nov. 23, 2012	May 19, 2013	Nov. 22, 2013	Radiation (03CH01-KS)

5 Uncertainty of Evaluation

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

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

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

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

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

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

Appendix A. Photographs of EUT

Please refer to Sporton report number EP322704-04 as below.

Appendix C. Product Equality Declaration

Lenovo (Shanghai) Electronics Technology Co., Ltd.

No. 68 Building, 199 Fenju Road, Wai Gao Qiao FTZ,Shanghai,China
Tel: 86-21-50807240-8237 ; Fax: 86-21-50807240-8237

Product Equality Declaration

We, Lenovo (Shanghai) Electronics Technology Co., Ltd., declare on our sole responsibility for the product of 60030, Z0A3 as below:

The differences between **60030, Z0A3** and previous is as below, the main difference are EMCC Card/LCD panel and touch panel have different supplier.

	Original (Report Number: 322704)		Variant (Report Number: 322704-04)
	1st source	2nd source	3th source
EMMC	Trade name: Samsung Model name: KMK2U000VM-B604 KMK3U000VM-B410 KMKUS000VM-B410 KMKJS000VM-B309	Trade name: Hynix Model name: H9TP32A8JDMCPR-KGM	Trade name: Hynix Model name: H9TP17A8JDACNR-KGM
LCD panel	Trade name: BOE Model name: BP070WS1-200	Trade name: CMI Model name: HJ070IA-01I	Trade name: Bitland Model name: BT070TN03
Touch Panel	Trade name: Ofilm Model name: MCF-070-0834	Trade name: Ofilm Model name: MCF-070-0834	Trade name: AVC Model name: NTP070CM352002

Except listings above, the others are all the same.

Should you have any questions or comments regarding this matter, please have my best attention.

Sincerely yours,

Spring zhou

Contact Person: Spring Zhou
Company: Lenovo (Shanghai) Electronics Technology Co., Ltd.
TEL: 86-21-50807240-8237
FAX: 86-21-50807240-8237
E-mail: zhoucb1@lenovo.com