EMC TEST REPORT

Applicant:	Lenovo(Shanghai) Electronics Technology Co., Ltd.
Address:	NO.68 BUILDING, 199 FENJU RD, China (Shanghai) Pilot Free Trade Zone, 200131, CHINA

Manufacturer or Supplier	Lenovo PC HK Limited
Address	23/F, Lincoln House, Taikoo Place 979 King's Road, Quarry Bay, Hong Kong
Product	Lenovo Mobile Phone
Brand Name	Lenovo
Model Name	Lenovo PB2-650Y
FCC ID	O57PB2650Y
Date of tests	May 20, 2016 ~ Jun. 13, 2016

The submitted sample of the above equipment has been tested for according to the requirements of the following standards:

☒ **FCC Part 15, Subpart B, Class B**
☒ **ANSI C63.4:2014**

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Issued by Amyee Qian Engineer / Mobile Department	Approved by William Chung Manager / Mobile Department
	 Date: Jun. 14, 2016

Table of Contents

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FV160520W001	Original release	Jun. 14, 2016

1 GENERAL INFORMATION

1.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Lenovo Mobile Phone	
MODEL NAME	Lenovo PB2-650Y	
NOMINAL VOLTAGE	5.2Vdc (adapter or host equipment) 3.8Vdc (Li-ion, battery)	
BATTERY	Brand Name: Lenovo Model Name: L16D1P31 Power Rating: DC 3.8V, 40500mAh, Li-ion	
MODULATION TYPE	**WLAN**	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
	Bluetooth	GFSK, π/4-DQPSK, 8DPSK
	GSM/EDGE	GMSK, 8PSK
	WCDMA	BPSK/QPSK
	LTE	QPSK/16QAM
OPERATING FREQUENCY	**WLAN**	2412 ~ 2462MHz for 11b/g/n(HT20) 2422 ~ 2452MHz for 11n(HT40) 5180 ~ 5240MHz, 5260 ~ 5320MHz 5500 ~ 5700MHz, 5745 ~ 5825MHz for 11a/ n(HT20)/ n(HT40)
	Bluetooth	2402MHz ~ 2480MHz
	GSM/EDGE	824.2MHz ~ 848.8MHz (FOR GSM 850) 1850.2MHz ~ 1909.8MHz (FOR PCS 1900)
	WCDMA	1852.4MHz ~ 1907.6MHz (FOR WCDMA 850) 826.4MHz ~ 846.6MHz (FOR WCDMA 1900) 1712.4MHz ~ 1752.6MHz (FOR WCDMA IV)
	LTE	1850.7MHz ~ 1909.3MHz (FOR LTE Band2) 1710.7MHz ~ 1754.3MHz (FOR LTE Band4) 824.7MHz ~ 848.3MHz (FOR LTE Band5) 2502.5MHz ~ 2567.5MHz (FOR LTE Band7) 699.7MHz ~ 715.3MHz (FOR LTE Band12) 779.5MHz ~ 784.5MHz (FOR LTE Band13) 706.5MHz ~ 713.5MHz (FOR LTE Band17)
HW Version	LenovoPad PB2-650Y	
SW Version	PB2-650Y_160517	
I/O PORTS	Refer to user's manual	
CABLE	USB cable: non-shielded, detachable, 1.0meter	
ACCESSORY DEVICES	Refer to note as below	

NOTE:
1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

2. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
3. There were Sample A and Sample B for this project, the difference is as below:

SAMPLE	EUT CONFIGURATION INFORMATION
A	LCD panel +TP1+Front camera 1+back camera 1+eMMC 1/ eMMC 2+speaker 1+receiver 1+vibrator 1+battery 1
B	LCD panel +TP2+Front camera 2+back camera 2+eMMC 3/ eMMC 4+speaker 2+receiver 2+vibrator 2+battery 2

LIST OF ACCESSORIES:

ACCESSORIES	BRAND	MANUFACTURER	MODEL	SPECIFICATION
AC Adapter 1	Lenovo	Acbel	C-P35	I/P:100-240Vac, 500mA O/P:5.2Vdc, 2000mA
AC Adapter 2	Lenovo	Huntkey	C-P35	I/P:100-240Vac, 500mA O/P:5.2Vdc, 2000mA
Battery 1	Lenovo	SCUD	L16D1P31	Rating: 3.8Vdc, 4050mAh
Battery 2	Lenovo	SUNWODA	L16D1P32	Rating: 3.8Vdc, 4050mAh
USB Cable 1	LIQI	--	LQ-025254	1.0m non-shielded cable w/o core
USB Cable 2	STARW	--	XJ-007046-1	1.0m non-shielded cable w/o core
LCD Panel+TP1	Tianma	--	TM065JVSP03-00IPS gold MIPI	--
LCD Panel+TP2	GIS	--	TC064GFL01 IPS Black MIPI	--
Front Camera 1	O-Film	--	L5693F20	--
Front Camera 2	Q Technology Limited	--	F5693AQ	--
Back Camera 1	Q Technology Limited	--	F3M2YBX	--
Back Camera 2	Sunny Opotech	--	F13S05Y	--
eMMC 1	SAMSUNG	--	KMRX1000BM-B614	32G
eMMC2	Samsung	--	KMQE10013M-B318	16G
eMMC 3	Hynix	--	H9TQ26ADFTACUR-KUM	32G
eMMC 4	Hynix	--	H9TQ17ABJTACUR-KUM	16G
Speaker 1	Haosheng	--	P9898_SPK_BOX_ASM	--
Speaker 2	Midi	--	P9898_SPK_BOX_ASM_MD	--
receiver 1	Xichun	--	KFR1506G2.8-32-HV	--
receiver 2	Midi	--	MIDRC1506M2.8	--
vibrator 1	Hongzhifa	--	HZF1027A-P02L9	--
vibrator 2	AWA SEIMITSU	--	LC-B68L	--

1.2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart B			
Standard Section	**Test Item**	**Result**	**Remark**
FCC Part 15, Subpart B, Class B ANSI C63.4:2014	Conducted Test	PASS	Meets limits minimum passing margin is 12.37dB at 0.162000MHz.
	Radiated Emission Test (30MHz ~ 1GHz)	PASS	Meets Class B Limit Minimum passing margin is -5.10dB at 85.15MHz
	Radiated Emission Test (Above 1GHz)	PASS	Meets Class B Limit Minimum passing margin is -9.21dB at 5794MHz

1.3 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	150kHz ~ 30MHz	+/-2.66dB
Radiated emissions	30MHz ~ 1GHz	+/-4.06dB
	1GHz ~ 18GHz	+/-4.58dB

1.4 DESCRIPTION OF TEST MODES

Sample	Test Mode	Test Condition
	Radiated emission test	
A	1	GSM850 Idle+ Adapter 1+ Earphone + USB cable1+ BT Idle + Wifi Idle(2.4G) + GPS Rx+ SMI2
A	2	GSM1900 Idle + Adapter 1+ Earphone + USB cable2+ BT Idle + Wifi Idle(5G) + GLONASS Rx+ SMI2
A	3	WCDMA850 Idle + Adapter2 + Earphone + USB cable1+ BT Idle + Wifi Idle(2.4G) + GPS Rx + SMI1
A	4	WCDMA1900 Idle + Adapter2 + Earphone + USB cable2+ BT Idle + Wifi Idle(5G) + GLONASS Rx+ SMI1
A	5	WCDMA B4 Idle + Adapter2 + Earphone + USB cable2+ BT Idle + Wifi Idle(5G) + GLONASS Rx+ SMI1
A	6	LTE B2 Idle+ Adapter 1+ Earphone + USB cable1+ BT Idle + Wifi Idle(2.4G) + GPS Rx+ SMI1
A	7	LTE B4 Idle + Adapter 1+ Earphone + USB cable1+ BT Idle + Wifi Idle(5G) + GLONASS Rx+ SMI1
A	8	LTE B5 Idle+ Adapter 1+ Earphone + USB cable1+ BT Idle + Wifi Idle(2.4G) + GPS Rx+ SMI1
A	9	LTE B7 Idle + Adapter 1+ Earphone + USB cable1+ BT Idle + Wifi Idle(5G) + GLONASS Rx+ SMI1+FM Rx
B	10	LTE B12 Idle+ Adapter 1+ Earphone + USB cable1+ BT Idle + Wifi Idle(2.4G) + GPS Rx+ SMI1+Mpeg4
A	11	LTE B13 Idle + USB Link+ Earphone + USB cable1+ BT Idle + Wifi Idle(5G) + GLONASS Rx+ SMI1+Front camera on
A	12	LTE B17 Idle+ USB Link + Earphone + USB cable2+ BT Idle + Wifi Idle(2.4G) + GPS Rx+ SMI1+Back camera on
	Conducted emission test	
A	1	GSM850 Idle+ Adapter 1+ Earphone + USB cable1+ BT Idle + Wifi Idle(2.4G) + GPS Rx+ SMI2
A	2	GSM1900 Idle + Adapter 1+ Earphone + USB cable2+ BT Idle + Wifi Idle(5G) + GLONASS Rx+ SMI2
A	3	WCDMA850 Idle + Adapter2 + Earphone + USB cable1+ BT Idle + Wifi Idle(2.4G) + GPS Rx + SMI1
A	4	WCDMA1900 Idle + Adapter2 + Earphone + USB cable2+ BT Idle + Wifi Idle(5G) + GLONASS Rx+ SMI1
A	5	WCDMA B4 Idle + Adapter2 + Earphone + USB cable2+ BT Idle + Wifi Idle(5G) + GLONASS Rx+ SMI1
A	6	LTE B2 Idle+ Adapter 1+ Earphone + USB cable1+ BT Idle + Wifi Idle(2.4G) + GPS Rx+ SMI1
A	7	LTE B4 Idle + Adapter 1+ Earphone + USB cable1+ BT Idle + Wifi Idle(5G) + GLONASS Rx+ SMI1
A	8	LTE B5 Idle+ Adapter 1+ Earphone + USB cable1+ BT Idle + Wifi Idle(2.4G) + GPS Rx+ SMI1
A	9	LTE B7 Idle + Adapter 1+ Earphone + USB cable1+ BT Idle + Wifi Idle(5G) + GLONASS Rx+ SMI1+FM Rx

B	10	LTE B12 Idle+ Adapter 1+ Earphone + USB cable1+ BT Idle + Wifi Idle(2.4G) + GPS Rx+ SMI1+Mpeg4
A	11	LTE B13 Idle + Adapter 1+ Earphone + USB cable1+ BT Idle + Wifi Idle(5G) + GLONASS Rx+ SMI1+Front camera on
A	12	LTE B17 Idle+ Adapter 1+ Earphone + USB cable2+ BT Idle + Wifi Idle(2.4G) + GPS Rx+ SMI1+Back camera on

NOTE:

1. For conducted emission test, test mode 1 was the worst case and only this mode was presented in this report.
2. For radiated emission test, test mode 10 was the worst case and only this mode was presented in this report.

1.5 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

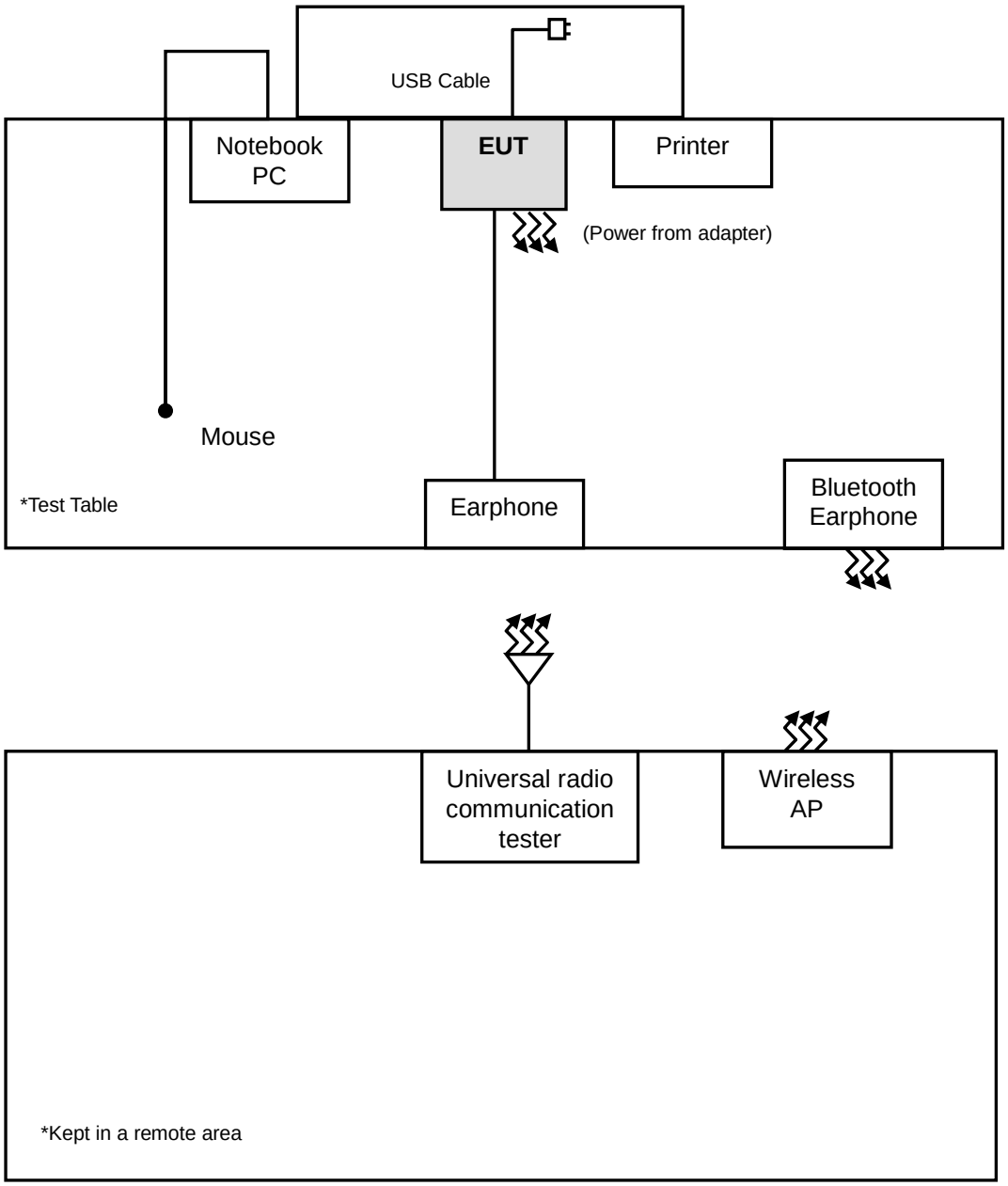
FOR EMISSION TESTS

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Universal Radio Communication Tester	R&S	CMU200	123259	N/A
2	Wireless AP	ABOCOM	WR224GR	060500749P	D43064
3	Bluetooth Earphone	FAP00	H6080	12098	N/A
4	Notebook	DELL	E6420	9H12FS1	N/A
5	Mouse	DELL	M056UOA	01688082	N/A
6	Printer	HP	hp LaserJet 1300	CNSJF75989	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	N/A
2	N/A
3	N/A
4	DC Line: Unshielded, Undetachable, 2.0m
5	USB Line: Unshielded, Undetachable 1.8m;
6	USB Line: Shielded, Detachable 1.5m;

NOTE:
1. All power cords of the above support units are non shielded (1.8m).
2. Items 3-4 acted as communication partners.

1.6 CONFIGURATION OF SYSTEM UNDER TEST



2 EMISSION TEST

2.1 CONDUCTED EMISSION MEASUREMENT

2.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

TEST STANDARD: FCC Part 15, Subpart B (Section: 15.107)

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBμV)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	60	50

NOTE: 1.The lower limit shall apply at the transition frequencies.

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

2.1.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESCS30	100340	May 11,15	May 10,17
Artificial Mains Network	Rohde&Schwarz	ENV216	101173	Mar. 04,16	Mar. 03,17
Artificial Mains Network	Rohde&Schwarz	ESH3-Z5	100317	Apr. 05,16	Apr. 04,17
Voltage probe	SCHWARZBECK	TK 9421	TK 9421-176	Jan. 08,16	Jan. 07,17
Test software	ADT	ADT_Cond_V7.3.7	N/A	N/A	N/A

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. The test was performed in HwaYa Shielded Room 1.

3. The VCCI Site Registration No. is C-2040.

2.1.3 TEST PROCEDURES

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

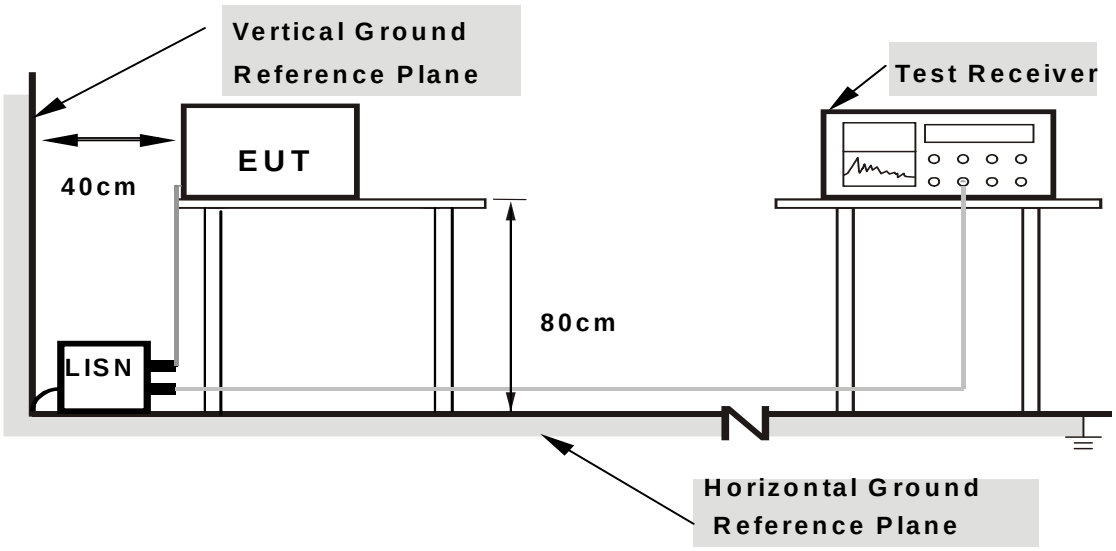
c. The frequency range from 150 kHz to 30MHz was searched. Emission levels under (Limit - 20dB) were not recorded.

NOTE: All modes of operation were investigated and the worst-case emissions are reported.

2.1.4 DEVIATION FROM TEST STANDARD

No deviation.

2.1.5 TEST SETUP



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

For the actual test configuration, please refer to the attached file (Test Setup Photo).

2.1.6 EUT OPERATING CONDITIONS

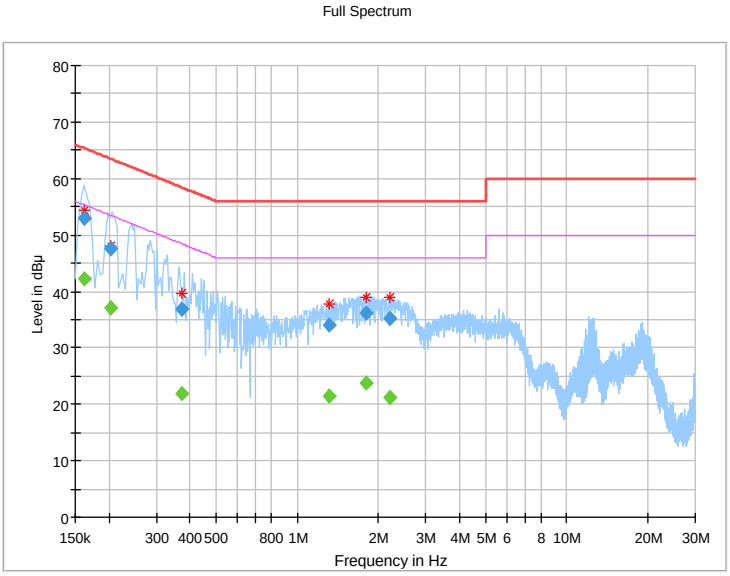
a. Turned on the power and connected of all equipment.
b. EUT was operated according to the use type described in the manufacturer's specifications or the user's manual.

2.1.7 TEST RESULTS

TEST VOLTAGE	DC 5.2V From Adapter Input 230 Vac, 50 Hz	6dB BANDWIDTH	9 kHz
ENVIRONMENTAL CONDITIONS	24deg. C, 55RH	TESTED BY	Eric

Frequency (MHz)	QuasiPeak (dB¦ÌV)	CAverage (dB¦ÌV)	Limit (dB¦ÌV)	Margin (dB)	Line	Filter	Corr. (dB)
0.162000	---	42.30	55.36	13.06	L	ON	9.6
0.162000	**52.99**	**---**	**65.36**	**12.37**	**L**	**ON**	**9.6**
0.204000	---	37.13	53.45	16.32	L	ON	9.7
0.204000	47.48	---	63.45	15.97	L	ON	9.7
0.372000	---	21.87	48.46	26.59	L	ON	9.7
0.372000	36.81	---	58.46	21.65	L	ON	9.7
1.314000	---	21.35	46.00	24.65	L	ON	9.7
1.314000	34.09	---	56.00	21.91	L	ON	9.7
1.804000	---	23.89	46.00	22.11	L	ON	9.7
1.804000	36.22	---	56.00	19.78	L	ON	9.7
2.208000	---	21.12	46.00	24.88	L	ON	9.7
2.208000	35.22	---	56.00	20.78	L	ON	9.7

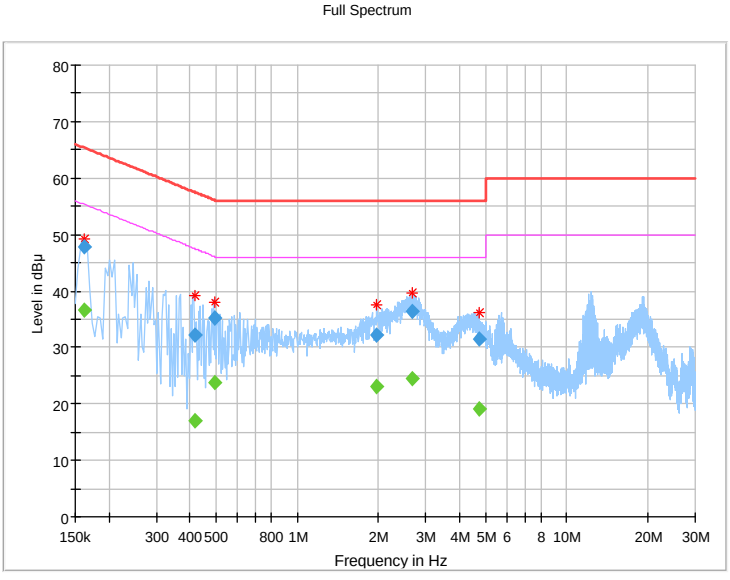
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



TEST VOLTAGE	DC 5.2V From Adapter Input 230 Vac, 50 Hz	6dB BANDWIDTH	9 kHz
ENVIRONMENTAL CONDITIONS	24deg. C, 55RH	TESTED BY	Eric

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.162000	---	36.58	55.36	18.78	N	ON	10.1
0.162000	47.71	---	65.36	17.65	N	ON	10.1
0.416000	---	16.96	47.53	30.57	N	ON	10.1
0.416000	32.29	---	57.53	25.24	N	ON	10.1
0.492000	---	23.68	46.13	22.45	N	ON	10.1
0.492000	35.26	---	56.13	20.87	N	ON	10.1
1.980000	---	23.20	46.00	22.80	N	ON	9.8
1.980000	32.24	---	56.00	23.76	N	ON	9.8
2.668000	---	24.49	46.00	21.51	N	ON	9.8
2.668000	36.34	---	56.00	19.66	N	ON	9.8
4.744000	---	19.06	46.00	26.94	N	ON	9.8
4.744000	31.53	---	56.00	24.47	N	ON	9.8

REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



2.2 RADIATED EMISSION MEASUREMENT

2.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

TEST STANDARD: FCC Part 15, Subpart B (Section: 15.109)

Emissions radiated outside of the specified bands, shall be according to the general radiated limits as following:

Radiated Emissions Limits at 10 meters (dBμV/m)				
Frequencies (MHz)	**FCC 15B/ ICES-003, Class A**	**FCC 15B / ICES-003, Class B**	**CISPR 22, Class A**	**CISPR 22, Class B**
30-88	39	29.5	40	30
88-216	43.5	33.1		
216-230	46.4	35.6		
230-960			47	37
960-1000	49.5	43.5		
1000-3000	Avg: 49.5 Peak: 69.5	Avg: 43.5 Peak: 63.5	Not defined	Not defined
3000+			Not defined	Not defined

Radiated Emissions Limits at 3 meters (dBμV/m)				
Frequencies (MHz)	**FCC 15B / ICES-003, Class A**	**FCC 15B / ICES-003, Class B**	**CISPR 22, Class A**	**CISPR 22, Class B**
30-88	49.5	40	50.5	40.5
88-216	54	43.5		
216-230	56.9	46		
230-960			57.5	47.5
960-1000	60	54		
1000-3000	Avg: 60 Peak: 80	Avg: 54 Peak: 74	Avg: 56 Peak: 76	Avg: 50 Peak: 70
3000+			Avg: 60 Peak: 80	Avg: 54 Peak: 74

NOTE: 1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.
4. QP detector shall be applied if not specified.

2.2.2 TEST INSTRUMENTS

Frequency range below1GHz

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESCI	100962	Mar. 04,16	Mar. 03,17
EMI Test Receiver	Rohde&Schwarz	ESCI	101418	Mar. 04,16	Mar. 03,17
Trilog-Broadband Antenna	SCHWARZBECK	VULB 9168	9168-555	Nov. 20, 15	Nov. 19, 16
Trilog-Broadband Antenna	SCHWARZBECK	VULB 9168	9168-554	Dec. 30, 15	Dec. 29, 16
Bilog Antenna	Teseq	CBL 6111D	27089	Jun. 25,15	Jun. 24,16
Signal Amplifier	Agilent	8447D	2944A10488	Jun. 25,15	Jun. 24,16
Signal Amplifier	Agilent	8447D	2944A11174	Jun. 25,15	Jun. 24,16
10m Semi-anechoic Chamber	CHANGLING	21.4m*12.1m*8.8m	NSEMC006	Mar. 12,16	Mar. 11,18
Test Software	ADT	ADT_Radiated_V8.7.x	N/A	N/A	N/A

Frequency range above 1GHz

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	Euroshieldpn-CT0001143-1216	May 12,15	May 12,17
Bilog Antenna	ETS-LINDGREN	3143B	00161965	Oct. 23,15	Oct. 22,16
Horn Antenna	ETS-LINDGREN	3117	00168728	Dec. 10,14	Dec. 10,16
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Mar. 14,15	Mar. 14,17
Signal Pre-Amplifier	EMSI	EMC 9135	980249	Aug. 18,15	Aug. 17,16
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	Aug. 20,15	Aug. 19,16
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Aug. 18,15	Aug. 17,16
MXG Analog Microvave Signal Generator	KEYSIGHT	N5183A	MY50143024	Mar. 03,16	Mar. 04,17

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 1.
3. The FCC Site Registration No. is 477732.
4. The IC Site Registration No. is IC 7450F-1.
5. The VCCI Site Registration No. is R-1893.

2.2.3 TEST PROCEDURE

The basic test procedure was in accordance with ANSI C63.4:2014 (section 12).

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters Semi-anechoic chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 10 meters (below 1GHz) and 3 meters (above 1GHz) away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. The bore sight should be used during the test above 1GHz.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

f. The test receiver/spectrum was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz.

NOTE:

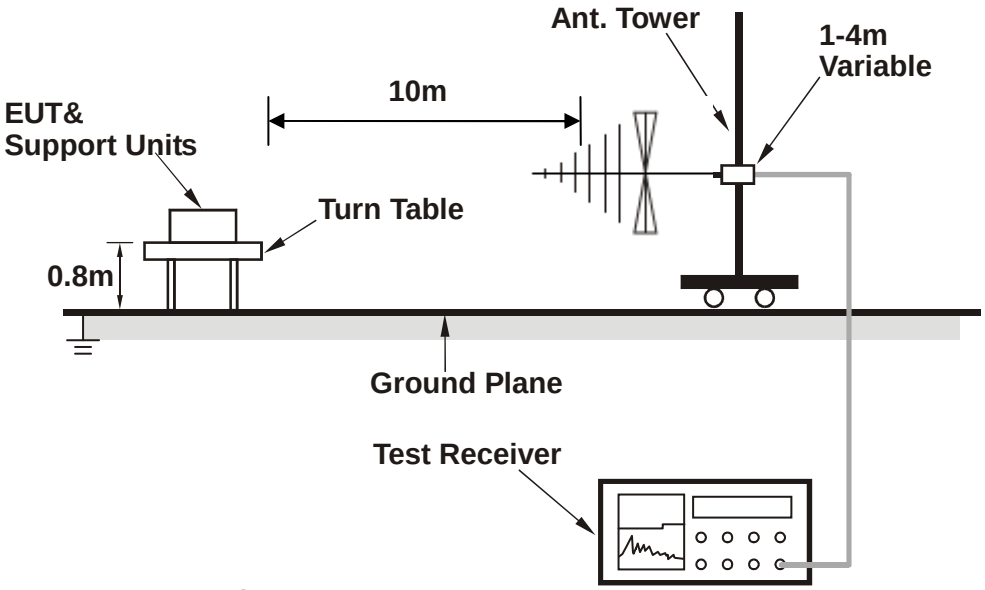
1. The resolution bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth is 1MHz and video bandwidth of test receiver/spectrum analyzer is 3MHz for Peak detection at frequency above 1GHz. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth of test receiver/spectrum analyzer is 1Hz for Average detection (AV) at frequency above 1GHz.
3. For measurement of frequency above 1000 MHz, the EUT was set 3 meters away from the receiver antenna.
4. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
5. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) (if the raw value not contains the amplifier);
6. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Amplifier Gain(dB) (if the raw value contains the amplifier).
7. Margin value = Emission level – Limit value.

2.2.4 DEVIATION FROM TEST STANDARD

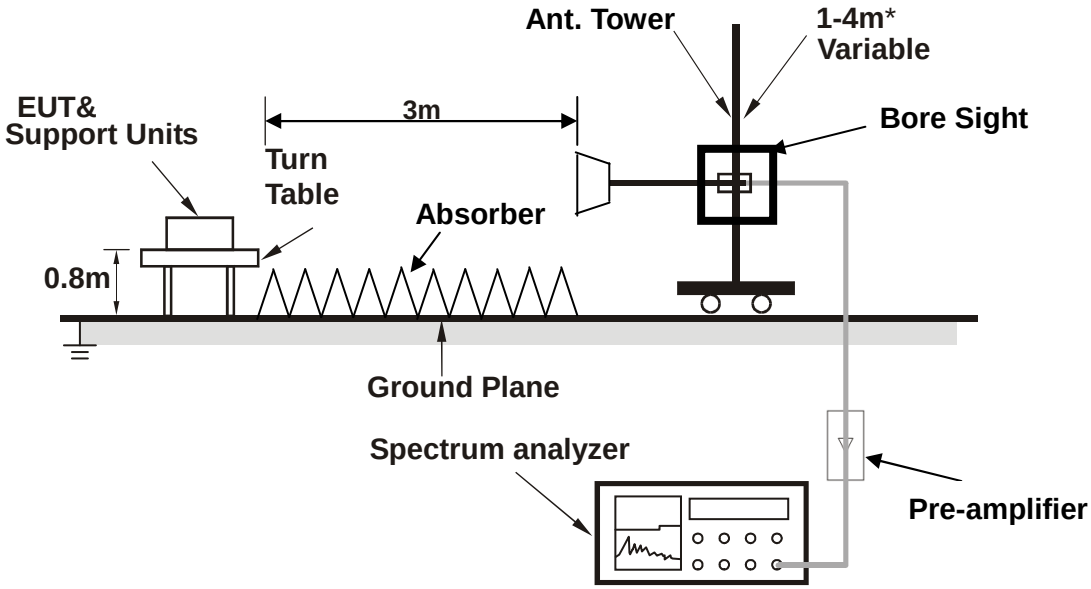
No deviation.

2.2.5 TEST SETUP

<Frequency Range below 1GHz>



<Frequency Range above 1GHz>



***** : depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

2.2.6 EUT OPERATING CONDITIONS

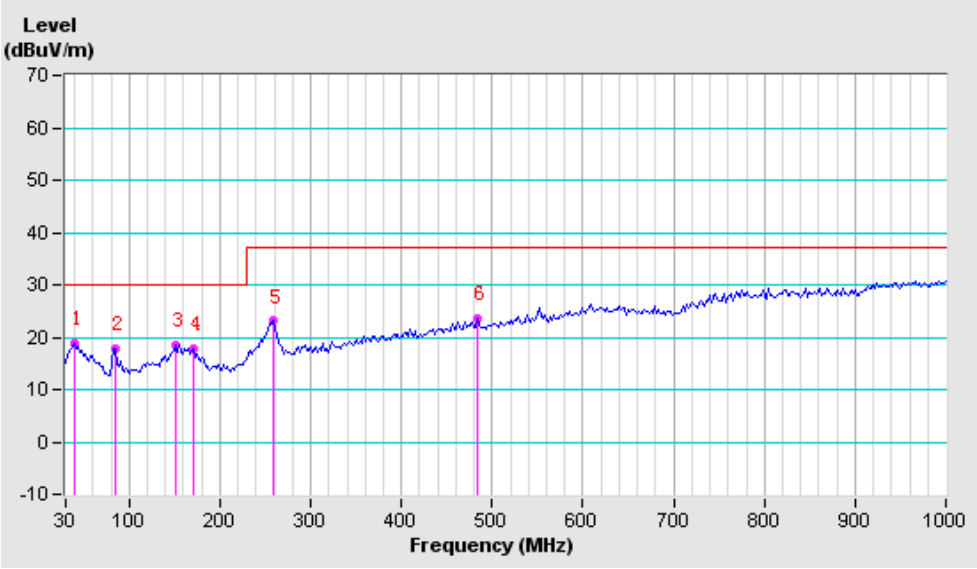
Same as item 2.1.6.

2.2.7 TEST RESULTS

TEST VOLTAGE	DC 5.2V From Adapter Input 120Vac, 50 Hz	**FREQUENCY RANGE**	30-1000 MHz
ENVIRONMENTAL CONDITIONS	26deg. C, 61 %RH	**DETECTOR FUNCTION & BANDWIDTH**	Quasi-Peak , 120 kHz
TESTED BY	Kery		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 10 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	39.70	-7.35	26.21	18.86	30.00	-11.14	400	111
2	84.32	-13.54	31.43	17.89	30.00	-12.11	400	43
3	150.28	-7.27	25.68	18.41	30.00	-11.59	400	43
4	171.62	-7.80	25.64	17.84	30.00	-12.16	200	65
5	258.92	-7.03	30.14	23.11	37.00	-13.89	400	33
6	483.96	-1.75	25.42	23.67	37.00	-13.33	400	38

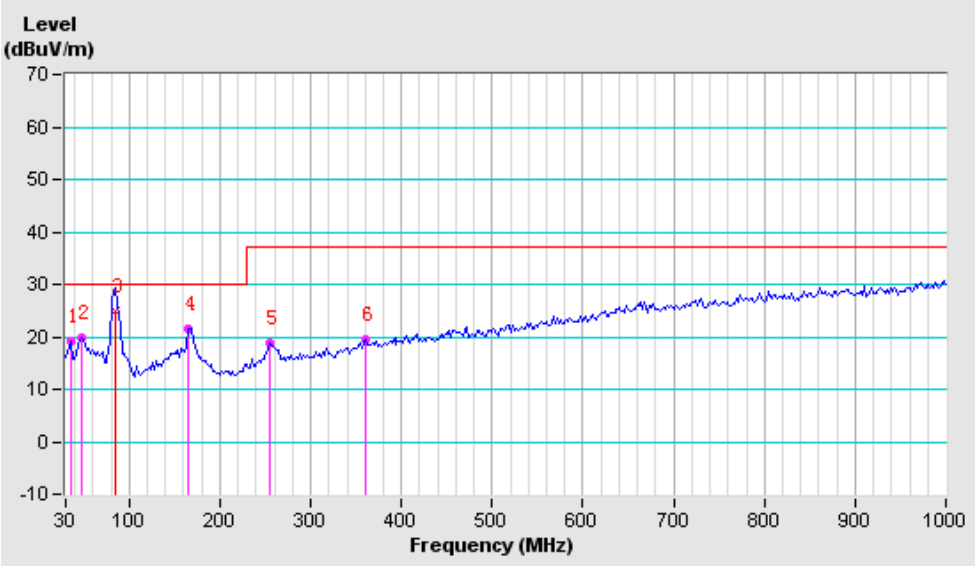
REMARKS:
1. Peak detector quick scan is showed on the graph and final quasi-peak detector data is measured corresponding to relevant limit and recorded in the data table.
2. Negative sign (-) in the margin column signify levels below the limit.
3. Frequency range scanned: 30MHz to 1000MHz.
4. Only emissions significantly above equipment noise floor are reported.



TEST VOLTAGE	DC 5.2V From Adapter Input 120 Vac, 50 Hz	**FREQUENCY RANGE**	30-1000 MHz
ENVIRONMENTAL CONDITIONS	26deg. C, 61 %RH	**DETECTOR FUNCTION & BANDWIDTH**	Quasi-Peak , 120 kHz
TESTED BY	Kery		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 10 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	35.82	-8.92	28.03	19.11	30.00	-10.89	100	32
2	47.46	-8.16	28.11	19.95	30.00	-10.05	100	263
3	**85.15**	**-12.27**	**37.17**	**24.90**	**30.00**	**-5.10**	**100**	**271**
4	165.80	-7.76	29.41	21.65	30.00	-8.35	100	194
5	255.04	-7.19	26.11	18.92	37.00	-18.08	300	357
6	359.80	-3.32	22.83	19.51	37.00	-17.49	300	316

REMARKS:
1. Peak detector quick scan is showed on the graph and final quasi-peak detector data is measured corresponding to relevant limit and recorded in the data table.
2. Negative sign (-) in the margin column signify levels below the limit.
3. Frequency range scanned: 30MHz to 1000MHz.
4. Only emissions significantly above equipment noise floor are reported.



TEST VOLTAGE	DC 5.2V From Adapter Input 120 Vac, 50 Hz	**FREQUENCY RANGE**	1-6 GHz
ENVIRONMENTAL CONDITIONS	26deg. C, 61 %RH	**DETECTOR FUNCTION & BANDWIDTH**	Peak/Average, 1 MHz
TESTED BY	Alex Chen		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M									
FREQ. (MHz)	**EMISSION LEVEL (dBuV/m)**	**READ LEVEL (dBuV)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA FACTOR (dB /m)**	**CABLE LOSS (dB)**	**ANTENNA HEIGHT (cm)**	**TABLE ANGLE (Degree)**	**REMARK**
2037	32.06	40.95	54.00	-21.94	31.94	7.52	100	65	Average
2037	43.74	52.63	74.00	-30.26	31.94	7.52	100	65	Peak
3788	36.62	41.21	54.00	-17.38	33.46	10.45	100	208	Average
3788	48.12	52.71	74.00	-25.88	33.46	10.45	100	208	Peak
5794	44.79	42.06	54.00	-9.21	35.25	16.63	100	300	Average
5794	55.29	52.56	74.00	-18.71	35.25	16.63	100	300	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M									
FREQ. (MHz)	**EMISSION LEVEL (dBuV/m)**	**READ LEVEL (dBuV)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA FACTOR (dB /m)**	**CABLE LOSS (dB)**	**ANTENNA HEIGHT (cm)**	**TABLE ANGLE (Degree)**	**REMARK**
2443	33.20	40.92	54.00	-20.80	32.34	8.25	100	333	Average
2443	43.26	50.98	74.00	-30.74	32.34	8.25	100	333	Peak
4041	37.04	40.93	54.00	-16.96	33.84	10.86	100	85	Average
4041	48.04	51.93	74.00	-25.96	33.84	10.86	100	85	Peak
6285	44.48	41.27	54.00	-9.52	35.56	16.79	100	188	Average
6285	55.33	52.12	74.00	-18.67	35.56	16.79	100	188	Peak

REMARKS:
1. Peak detector quick scan is showed on the graph and final quasi-peak detector data is measured corresponding to relevant limit and recorded in the data table.
2. Negative sign (-) in the margin column signify levels below the limit.
3. Frequency range scanned: 1GHz to 6GHz.
4. Only emissions significantly above equipment noise floor are reported.

3 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications were made to the EUT by the lab during the test.

---END---