



FCC Test Report

APPLICANT : Lenovo(Shanghai) Electronics Technology Co., Ltd.
EQUIPMENT : Portable Tablet Computer
BRAND NAME : Lenovo
MODEL NAME : TB336FU
FCC ID : O57TB336FU
STANDARD : 47 CFR Part 15 Subpart B
CLASSIFICATION : Certification
TEST DATE(S) : Mar. 11, 2025 ~ Mar. 18, 2025

We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI C63.4-2014 and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia



Sporton International Inc. (Kunshan)

**No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300
People's Republic of China**



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SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.107	AC Conducted Emission	< 15.107 limits	PASS	Under limit 7.02 dB at 13.623 MHz
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	Under limit 3.06 dB at 72.44 MHz for Quasi-Peak

Conformity Assessment Condition:
The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacture who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account. Please refer to each test results in the section "Measurement Uncertainty".

Disclaimer:
The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.



1. General Description

1.1. Applicant

Lenovo(Shanghai) Electronics Technology Co., Ltd.
Section 304-305, Building No. 4, # 222, Meiyue Road, China (Shanghai) Pilot Free Trade Zone

1.2. Manufacturer

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

1.3. Product Feature of Equipment Under Test

Product Feature	
Equipment	Portable Tablet Computer
Brand Name	Lenovo
Model Name	TB336FU
FCC ID	O57TB336FU
EUT supports Radios application	WLAN 2.4GHz 802.11b/g/n HT20/HT40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE GNSS
SN Code	Conduction: HA24L4S2 for Sample 1 HA24K85R for Sample 2 HA285C5J for Sample 3 HA284R3V for Sample 4 HA286DJA for Sample 5 HA285XFA for Sample 6 HA284KP1 for Sample 7 HA284S2B for Sample 8 Radiation: 8SSP69A6R3YYHA1851F008X for Sample 1 8SSP69A6R3YYHA1851F00A3 for Sample 2 8SSP69A6R402HA29526004R for Sample 3 8SSP69A6R416HA28528001R for Sample 4 8SSP69A6R402HA29526005U for Sample 5 8SSP69A6R416HA28528001D for Sample 6 8SSP69A6R402HA29526000F for Sample 7 8SSP69A6R402HA295260087 for Sample 8
HW Version	TB336FU
SW Version	Lenovo ZUI 17.0
EUT Stage	Identical Prototype

Remark:

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. There are eight types of EUT, the differences could be referred to the TB336FU_Operational Description of Product Equality Declaration which is exhibit separately. According to the difference, we choose sample 1 to full test and the sample 2/3/4/5/6/7/8 is verified for the difference.

1.4. Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	802.11b/g/n: 2400 MHz ~ 2483.5 MHz 802.11a/n/ac: 5150 MHz ~ 5250 MHz; 5250 MHz ~ 5350 MHz; 5470 MHz ~ 5725 MHz; 5725 MHz ~ 5850 MHz Bluetooth: 2400 MHz ~ 2483.5 MHz
Rx Frequency	802.11b/g/n: 2400 MHz ~ 2483.5 MHz 802.11a/n/ac: 5150 MHz ~ 5250 MHz; 5250 MHz ~ 5350 MHz; 5470 MHz ~ 5725 MHz; 5725 MHz ~ 5850 MHz Bluetooth: 2400 MHz ~ 2483.5 MHz GNSS : 1559 MHz ~ 1610 MHz
Antenna Type	WLAN : PIFA Antenna Bluetooth : PIFA Antenna GNSS: PIFA Antenna
Type of Modulation	802.11b: DSSS (DBPSK / DQPSK / CCK) 802.11a/g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac: OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM) Bluetooth LE : GFSK Bluetooth (1Mbps) : GFSK Bluetooth (2Mbps) : $\pi/4$ -DQPSK Bluetooth (3Mbps) : 8-DPSK GNSS : BPSK

1.5. Modification of EUT

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



1.6. Test Location

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People’s Republic of China TEL : +86-512-57900158		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	CO01-KS 03CH02-KS 10CH01-KS	CN1257	314309

1.7. Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH02-KS	AUDIX	E3	6.2009-8-24a1
2.	10CH01-KS	AUDIX	E3	210616
3.	CO01-KS	AUDIX	E3	6.2009-8-24

1.8. Applicable Standards

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

- 47 CFR Part 15 Subpart B
- ANSI C63.4-2014

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

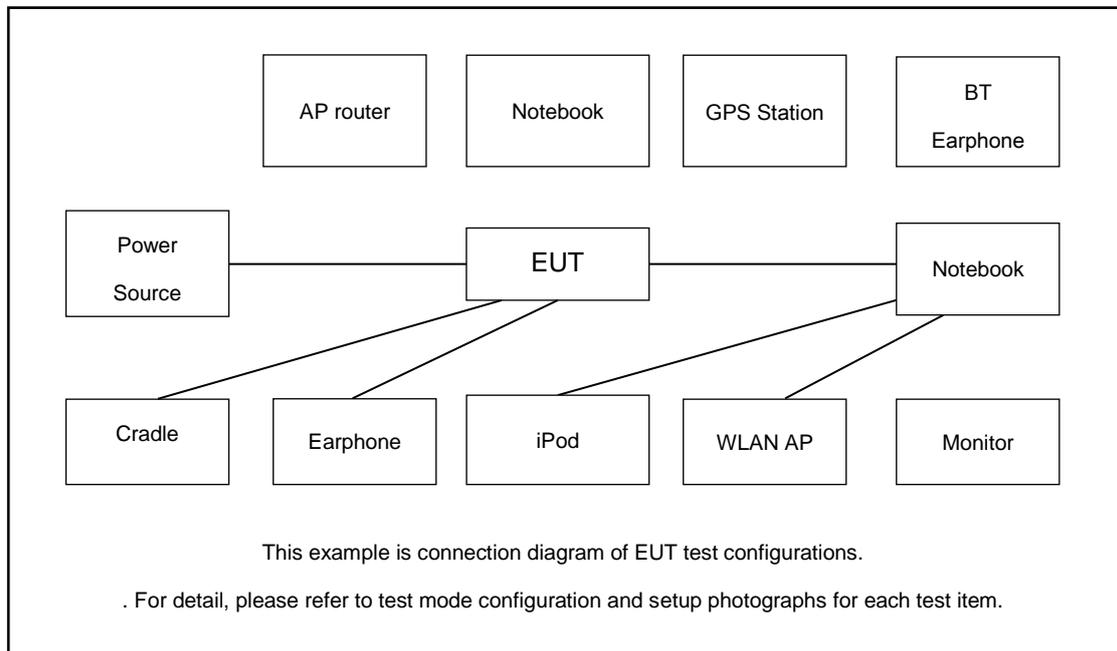
The EUT has been associated with peripherals pursuant to ANSI C63.4-2014 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (30MHz to the 5th harmonic of the highest frequency or to 40 GHz, whichever is lower).

Test Items	Function Type
AC Conducted Emission	Mode 1: Bluetooth Idle + WLAN (2.4G) Idle + Camera(Rear) + Earphone 1 + Battery 1 + pen + USB Cable 1(Charging from Adapter 1) for Sample 1
	Mode 2: Bluetooth Idle + WLAN (5G) Idle + Camera(Front) + Earphone 1 + Battery 1 + pen + USB Cable2 (Charging from Adapter 2) for Sample 1
	Mode 3: Bluetooth Idle + WLAN (2.4G) Idle + MPEG4(Run Color Bar) + Earphone 1 + Battery 1 + pen + USB Cable 1 (Charging from Adapter 3) for Sample 1
	Mode 4: Bluetooth Idle + WLAN (5G) Idle + GNSS Rx + Earphone 1 + Battery 1 + pen + USB Cable1 (Data Link with Notebook) + EUT (eMMC) USB Data Link to PC/NB for Sample 1
	Mode 5: Bluetooth Idle + WLAN (2.4G) Idle + Camera(Rear) + Earphone 1 + Battery 1 + pen + USB Cable1 (Data Link with Notebook) + PC/NB USB Data Link to EUT (eMMC) for Sample 1
	Mode 6: Bluetooth Idle + WLAN (5G) Idle + Camera(Rear) + Earphone 1 + Battery 1 + pen + USB Cable1 (Data Link with Notebook) + EUT (SD) USB Data Link to PC/NB for Sample 1
	Mode 7: Bluetooth Idle + WLAN (2.4G) Idle + Camera(Rear) + Earphone 1 + Battery 1 + pen + USB Cable 1(Data Link with Notebook) + PC/NB USB Data Link to EUT (SD) for Sample 1
	Mode 8: Bluetooth Idle + WLAN (5G) Idle + Camera(Rear) + Earphone 1 + Battery 1 + pen + USB Cable 2 (Data Link with Notebook) + EUT (eMMC) USB Data Link to PC/NB for Sample 1
	Mode 9: Bluetooth Idle + WLAN (2.4G) Idle + MPEG4(Run Color Bar) + Earphone 1 + Battery 1 + pen + USB Cable 1(Charging from Adapter1)for Sample 2
	Mode 10 : Bluetooth Idle + WLAN (2.4G) Idle + Camera(Rear) + Earphone 1 + Battery 1 + pen + USB Cable 1(Charging from Adapter1) for Sample 3
	Mode 11 : Bluetooth Idle + WLAN (2.4G) Idle + Camera(Rear) + Earphone 1 + Battery 2 + pen + USB Cable 1(Charging from Adapter1) for Sample 4
	Mode 12 : Bluetooth Idle + WLAN (5G) Idle + MPEG4(Run Color Bar) + Earphone 1 + Battery 2 + pen + USB Cable 1 (Data Link with Notebook) + EUT (eMMC) USB Data Link to PC/NB for Sample 4
	Mode 13 : Bluetooth Idle + WLAN (2.4G) Idle + MPEG4(Run Color Bar) + Earphone 1 + Battery 1 + pen + USB Cable 1(Charging from Adapter1) for Sample 5
	Mode 14 : Bluetooth Idle + WLAN (2.4G) Idle + MPEG4(Run Color Bar) + Earphone 1 + Battery 2 + pen + USB Cable 1(Charging from Adapter1) for Sample 6
	Mode 15 : Bluetooth Idle + WLAN (5G) Idle + MPEG4(Run Color Bar) + Earphone 1 + Battery 1 + pen + USB Cable 1 (Data Link with Notebook) + EUT (eMMC) USB Data Link to PC/NB for Sample 7
	Mode 16 : Bluetooth Idle + WLAN (5G) Idle+ MPEG4(Run Color Bar) + Earphone 1 + Battery 1 + pen + USB Cable 1 (Data Link with Notebook) + EUT (eMMC) USB Data Link to PC/NB for Sample 8
	Mode 17 : Bluetooth Idle + WLAN (2.4G) Idle + Camera(Rear) + Earphone 1 + Keyboard with Pogo Pin + Battery 1 + pen + USB Cable 1(Charging from Adapter1) for Sample 1

Radiated Emissions	<p>Mode 1: Bluetooth Idle + WLAN (2.4G) Idle + Camera(Rear) + Earphone 1 + Battery 1 + pen + USB Cable 1(Charging from Adapter1) for Sample 1</p> <p>Mode 2: Bluetooth Idle + WLAN (5G) Idle + Camera(Front) + Earphone 1 + Battery 1 + pen + USB Cable2 (Charging from Adapter 2) for Sample 1</p> <p>Mode 3: Bluetooth Idle + WLAN (2.4G) Idle + MPEG4(Run Color Bar) + Earphone 1 + Battery 1 + pen + USB Cable 1 (Charging from Adapter3) for Sample 1</p> <p>Mode 4: Bluetooth Idle + WLAN (5G) Idle + GNSS Rx + Earphone 1 + Battery 1 + pen + USB Cable1 (Data Link with Notebook) + EUT (eMMC) USB Data Link to PC/NB for Sample 1</p> <p>Mode 5: Bluetooth Idle + WLAN (2.4G) Idle + GNSS Rx + Earphone 1 + Battery 1 + pen + USB Cable1 (Data Link with Notebook) + PC/NB USB Data Link to EUT (eMMC) for Sample 1</p> <p>Mode 6: Bluetooth Idle + WLAN (5G) Idle + GNSS Rx + Earphone 1 + Battery 1 + pen + USB Cable1 (Data Link with Notebook) + EUT (SD) USB Data Link to PC/NB for Sample 1</p> <p>Mode 7: Bluetooth Idle + WLAN (2.4G) Idle + GNSS Rx + Earphone 1 + Battery 1 + pen + USB Cable 1(Data Link with Notebook) + PC/NB USB Data Link to EUT (SD) for Sample 1</p> <p>Mode 8: Bluetooth Idle + WLAN (5G) Idle + GNSS Rx + Earphone 1 + Battery 1 + pen + USB Cable 2 (Data Link with Notebook) + PC/NB USB Data Link to EUT (SD) for Sample 1</p> <p>Mode 9: Bluetooth Idle + WLAN (2.4G) Idle + GNSS Rx + Earphone 1 + Battery 1 + pen + OTG Cable With U Disk (R/W) Type-C Port for Sample 1</p> <p>Mode 10 : Bluetooth Idle + WLAN (2.4G) Idle + GNSS Rx + Earphone 2 + Battery 1 + pen for Sample 1</p> <p>Mode 11 : Bluetooth Idle + WLAN (2.4G) Idle+ + MPEG4(Run Color Bar) + Earphone 1 + Battery 1 + pen + USB Cable 1(Data Link with Notebook) + PC/NB USB Data Link to EUT (SD) for Sample 2</p> <p>Mode 12 : Bluetooth Idle + WLAN (2.4G) Idle+ + Camera(Rear) + Earphone 1 + Battery 1 + pen + USB Cable 1(Data Link with Notebook) + PC/NB USB Data Link to EUT (SD) for Sample 3</p> <p>Mode 13 : Bluetooth Idle + WLAN (2.4G) Idle + Camera(Rear) + Earphone 1 + Battery 2 + pen + USB Cable 1(Charging from Adapter1) for Sample 4</p> <p>Mode 14 : Bluetooth Idle + WLAN (2.4G) Idle + MPEG4(Run Color Bar) + Earphone 1 + Battery 2 + pen + USB Cable 1(Data Link with Notebook) + PC/NB USB Data Link to EUT (SD) for Sample 4</p> <p>Mode 15 : Bluetooth Idle + WLAN (2.4G) Idle + MPEG4(Run Color Bar) + Earphone 1 + Battery 1 + pen + USB Cable 1(Data Link with Notebook) + PC/NB USB Data Link to EUT (SD) for Sample 5</p> <p>Mode 16 : Bluetooth Idle + WLAN (2.4G) Idle+ MPEG4(Run Color Bar) + Earphone 1 + Battery 2 + pen + USB Cable 1(Data Link with Notebook) + PC/NB USB Data Link to EUT (SD) for Sample 6</p> <p>Mode 17 : Bluetooth Idle + WLAN (2.4G) Idle + MPEG4(Run Color Bar) + Earphone 1 + Battery 1 + pen + USB Cable 1 (Data Link with Notebook) + PC/NB USB Data Link to EUT (SD) for Sample 7</p> <p>Mode 18 : Bluetooth Idle + WLAN (2.4G) Idle + MPEG4(Run Color Bar) + Earphone 1 + Battery 1 + pen + USB Cable 1 (Data Link with Notebook) + PC/NB USB Data Link to EUT (SD) for Sample 8</p> <p>Mode 19 : Bluetooth Idle + WLAN (2.4G) Idle+ MPEG4(Run Color Bar) + Earphone 1 + Battery 1 + pen + Keyboard with Pogo Pin + USB Cable 1(Data Link with Notebook) + PC/NB USB Data Link to EUT (SD) for Sample 8</p>
Remark:	<ol style="list-style-type: none"> 1. The worst case of AC is mode 17; only the test data of this mode is reported. 2. The worst case of RE is mode 18; only the test data of this mode is reported. 3. Data Link with Notebook means data application transferred mode between EUT and Notebook.

2.2. Connection Diagram of Test System



The EUT has been associated with peripherals pursuant to ANSI C63.4-2014 and configuration operated in a manner tended to maximize its emission characteristics in a typical application

2.3. Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	WLAN AP	D-link	DIR-655	KA21R655B1	N/A	Unshielded, 1.8m
2.	WLAN AP	D-Link	G415	D43032RoHS	N/A	N/A
3.	Vector Signal Generator	R&S	SMBV100A	258305	N/A	N/A
4.	Hard Disk	Lenovo	F310	DoC	N/A	Shielded, 1.2m
5.	Hard disk	Ultra	WD	D3E024RoHS	N/A	N/A
6.	SD Card	Kingston	8GB	N/A	N/A	N/A
7.	OTG Cable	GAGZ	Type-C to USB	N/A	N/A	N/A
8.	Notebook	Lenovo	G480	QDS-BRCM1050I	N/A	shielded cable DC O/P 1.8m , Unshielded AC I/P cable 1.8m
9.	Notebook	acer	N20C5	R33142RoHS	N/A	N/A
10.	Bluetooth Earphone	Jlab	Jbuds mini	R3B170RoHS	N/A	N/A
11.	Earphone 1	N/A	N/A	N/A	3.5mm	N/A
12.	Earphone 2	N/A	N/A	N/A	Type-C	N/A



2.4. EUT Operation Test Setup

The EUT was attached to the Bluetooth earphone or WLAN AP, and the following programs installed in the EUT were programmed during the test.

1. Data application is transferred between notebook and EUT via USB cable.
2. Turn on camera to capture images.
3. Turn on MPEG4 function.
4. Turn on GNSS function to make the EUT receive continuous signals from GNSS station.



3. Test Result

3.1. Test of AC Conducted Emission Measurement

3.1.1 Limits of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

<Class B Limit>

Frequency of emission (MHz)	Conducted limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

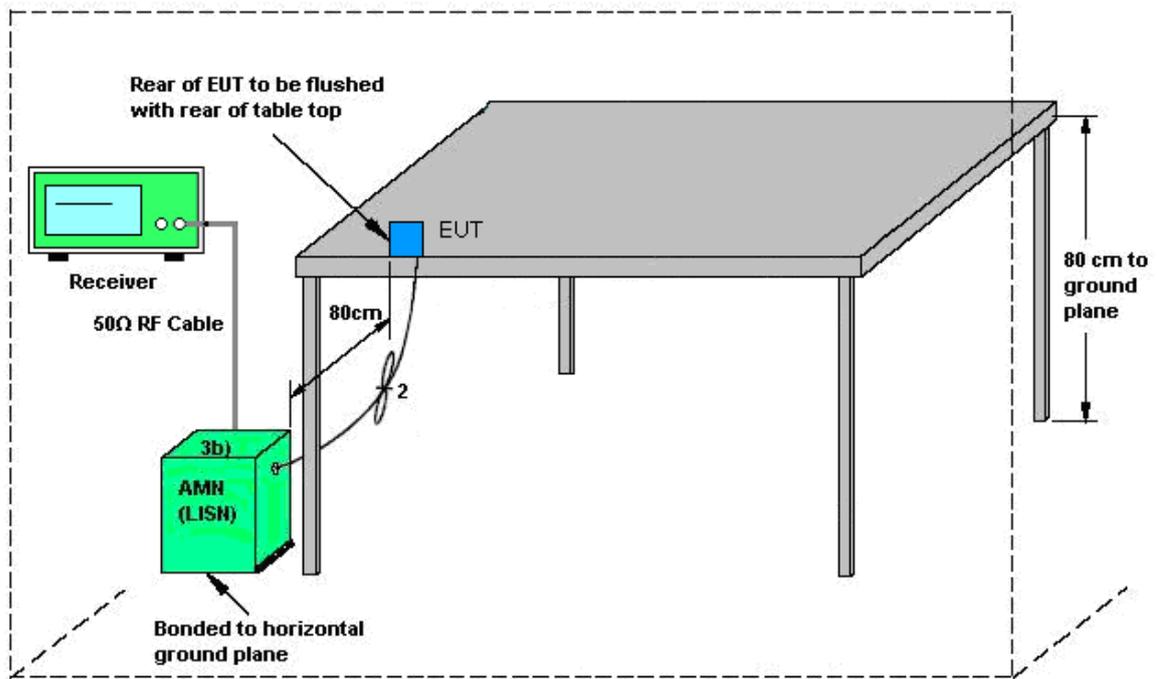
3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.1.3 Test Procedure

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

3.1.4 Test Setup

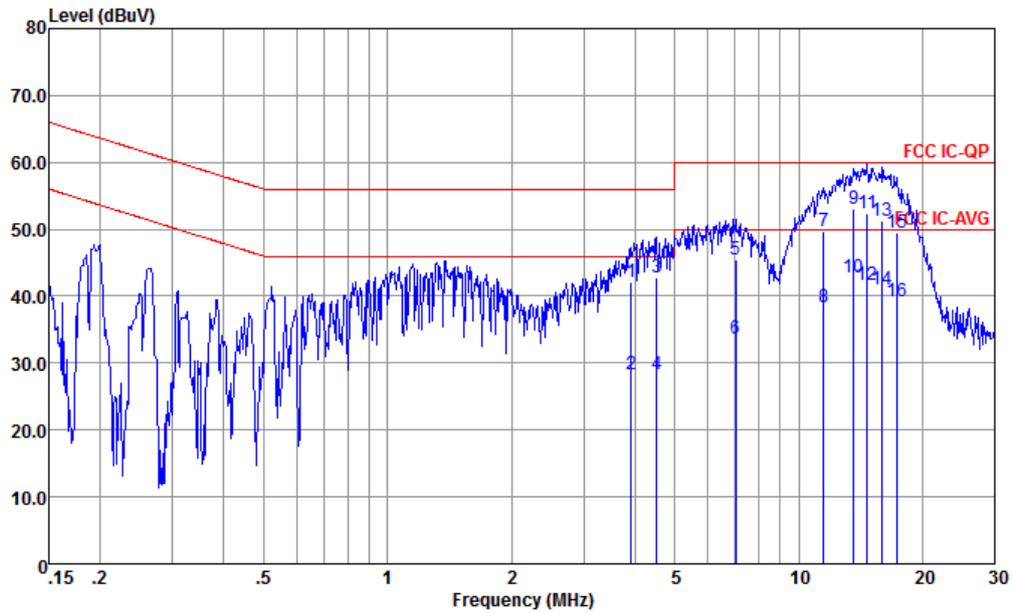


AMN = Artificial mains network (LISN)
AE = Associated equipment
EUT = Equipment under test
ISN = Impedance stabilization network



3.1.5 Test Result of AC Conducted Emission

Test Engineer :	Amos	Temperature :	24.2~25.6°C
		Relative Humidity :	37~39%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		

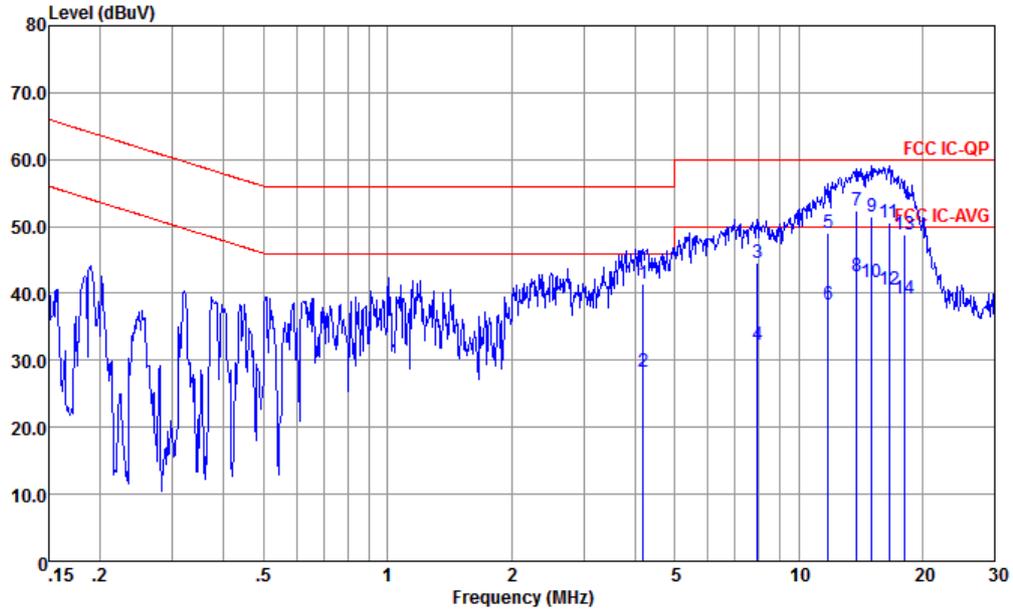


Site : CO01-KS
 Condition : FCC IC-QP LISN-060105-L 2024 LINE

	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
			dB	dBuV	dBuV	dB	dB	
1	3.922	42.22	-13.78	56.00	32.20	-0.19	10.21	QP
2	3.922	28.22	-17.78	46.00	18.20	-0.19	10.21	Average
3	4.525	42.90	-13.10	56.00	32.91	-0.21	10.20	QP
4	4.525	28.30	-17.70	46.00	18.31	-0.21	10.20	Average
5	7.025	45.48	-14.52	60.00	35.50	-0.22	10.20	QP
6	7.025	33.58	-16.42	50.00	23.60	-0.22	10.20	Average
7	11.498	49.63	-10.37	60.00	39.60	-0.22	10.25	QP
8	11.498	38.33	-11.67	50.00	28.30	-0.22	10.25	Average
9 *	13.623	52.98	-7.02	60.00	42.90	-0.19	10.27	QP
10	13.623	42.68	-7.32	50.00	32.60	-0.19	10.27	Average
11	14.672	52.29	-7.71	60.00	42.19	-0.18	10.28	QP
12	14.672	41.59	-8.41	50.00	31.49	-0.18	10.28	Average
13	15.970	51.25	-8.75	60.00	41.20	-0.23	10.28	QP
14	15.970	40.95	-9.05	50.00	30.90	-0.23	10.28	Average
15	17.383	49.57	-10.43	60.00	39.60	-0.32	10.29	QP
16	17.383	39.17	-10.83	50.00	29.20	-0.32	10.29	Average



Test Engineer :	Amos	Temperature :	24.2~25.6°C
		Relative Humidity :	37~39%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO01-KS
 Condition : FCC IC-QP LISN-060105-N 2024 NEUTRAL

	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	4.180	41.50	-14.50	56.00	31.50	-0.21	10.21	QP
2	4.180	28.30	-17.70	46.00	18.30	-0.21	10.21	Average
3	7.935	44.59	-15.41	60.00	34.59	-0.21	10.21	QP
4	7.935	32.29	-17.71	50.00	22.29	-0.21	10.21	Average
5	11.807	48.92	-11.08	60.00	38.90	-0.24	10.26	QP
6	11.807	38.22	-11.78	50.00	28.20	-0.24	10.26	Average
7	13.841	52.37	-7.63	60.00	42.30	-0.20	10.27	QP
8 *	13.841	42.57	-7.43	50.00	32.50	-0.20	10.27	Average
9	15.066	51.40	-8.60	60.00	41.30	-0.18	10.28	QP
10	15.066	41.70	-8.30	50.00	31.60	-0.18	10.28	Average
11	16.573	50.55	-9.45	60.00	40.50	-0.24	10.29	QP
12	16.573	40.65	-9.35	50.00	30.60	-0.24	10.29	Average
13	18.135	48.90	-11.10	60.00	38.90	-0.29	10.29	QP
14	18.135	39.20	-10.80	50.00	29.20	-0.29	10.29	Average

Note:

- Level(dBμV) = Read Level(dBμV) + LISN Factor(dB) + Cable Loss(dB)
- Over Limit(dB) = Level(dBμV) – Limit Line(dBμV)



3.2. Test of Radiated Emission Measurement

3.2.1. Limit of Radiated Emission

The emissions from an unintentional radiator shall not exceed the field strength levels specified in the following table:

<Class B Limit>

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

Note: Measurement below 1GHz follows the CISPR 22 limit line as below :

15.109 (g) As an alternative to the radiated emission limits shown in paragraphs (a) and (b) of this section, digital devices may be shown to comply with the standards contained in Third Edition of the International Special Committee on Radio Interference (CISPR), Pub. 22, "Information Technology Equipment - Radio Disturbance Characteristics - Limits and Methods of Measurement"

<CISPR 22 Class B Limit>

Frequency (MHz)	Field Strength (dBuV/meter)	Measurement Distance (meters)
30 – 230	30	10
230 – 1000	37	10

3.2.2. Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

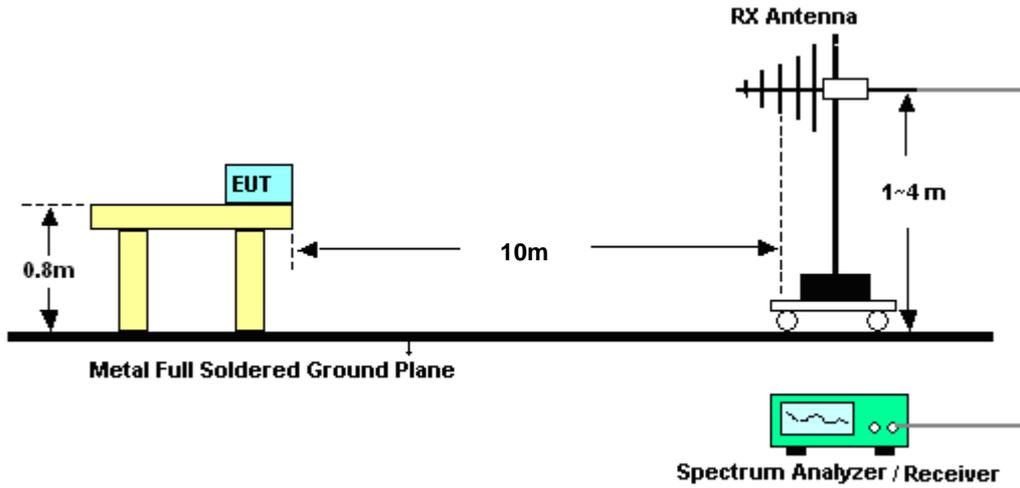


3.2.3. Test Procedures

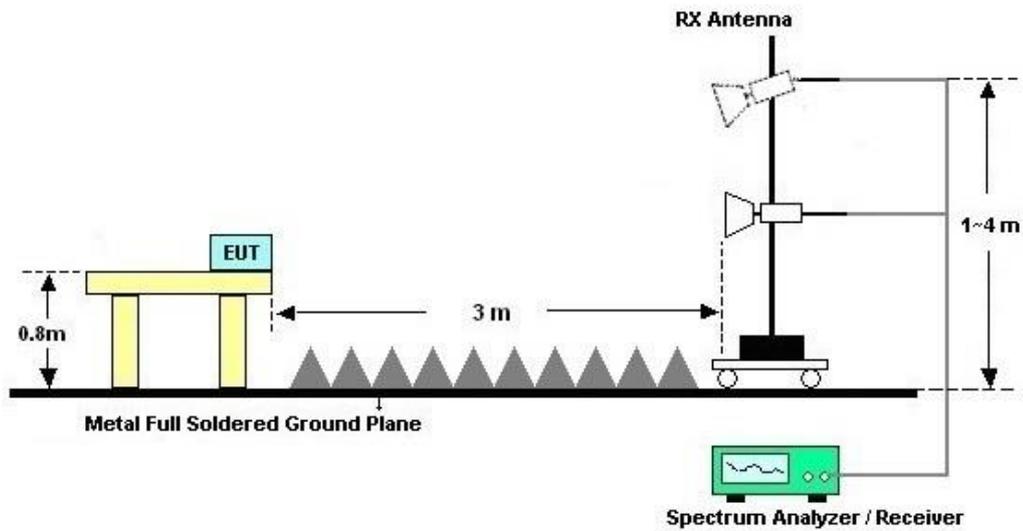
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 10 meters (30M~1G) and 3 meters (1G~ 30G) from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna is a Bi-Log antenna and its height is adjusted between one to four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, 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.
6. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode (RBW=120kHz/VBW=300kHz for frequency below 1GHz; RBW=1MHz VBW=3MHz (Peak), RBW=1MHz/VBW=10Hz (Average) for frequency above 1GHz).
7. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, peak values of EUT will be reported. Otherwise, the emission will be repeated by using the quasi-peak method and reported.
8. Emission level (dB μ V/m) = 20 log Emission level (μ V/m)
9. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
10. Exploratory radiated emissions testing of handheld and/or body-worn devices shall include rotation of the EUT through three orthogonal axes (X/Y/Z Plane) to determine the orientation (attitude) that maximizes the emissions.

3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



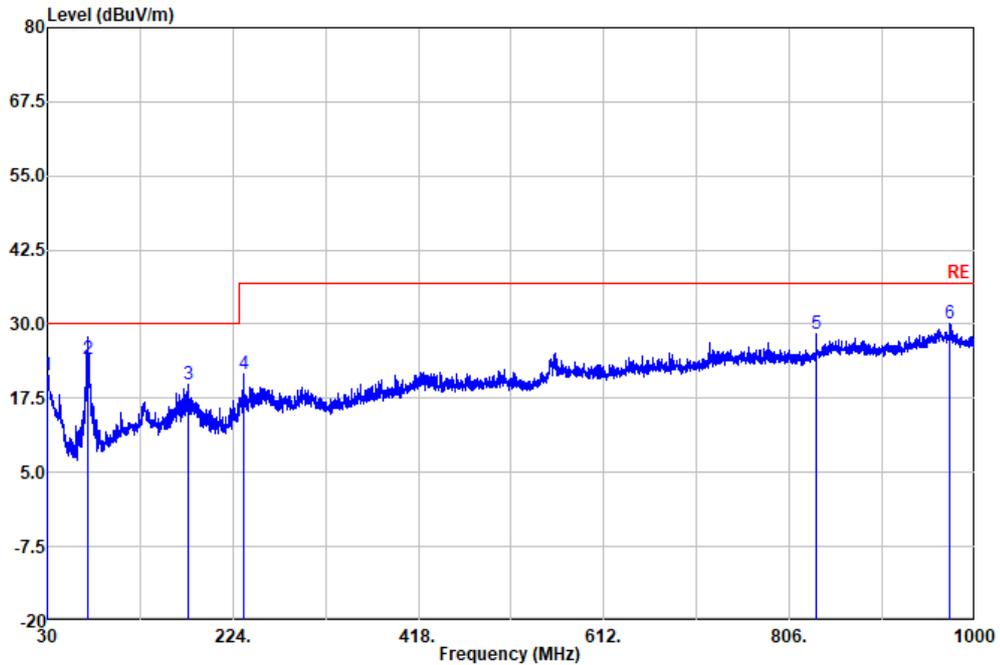
For radiated emissions above 1GHz





3.2.5. Test Result of Radiated Emission

Test Engineer :	Yoke Si	Temperature :	19.02~20.4°C
		Relative Humidity :	39~41%
Test Distance :	10m	Polarization :	Horizontal

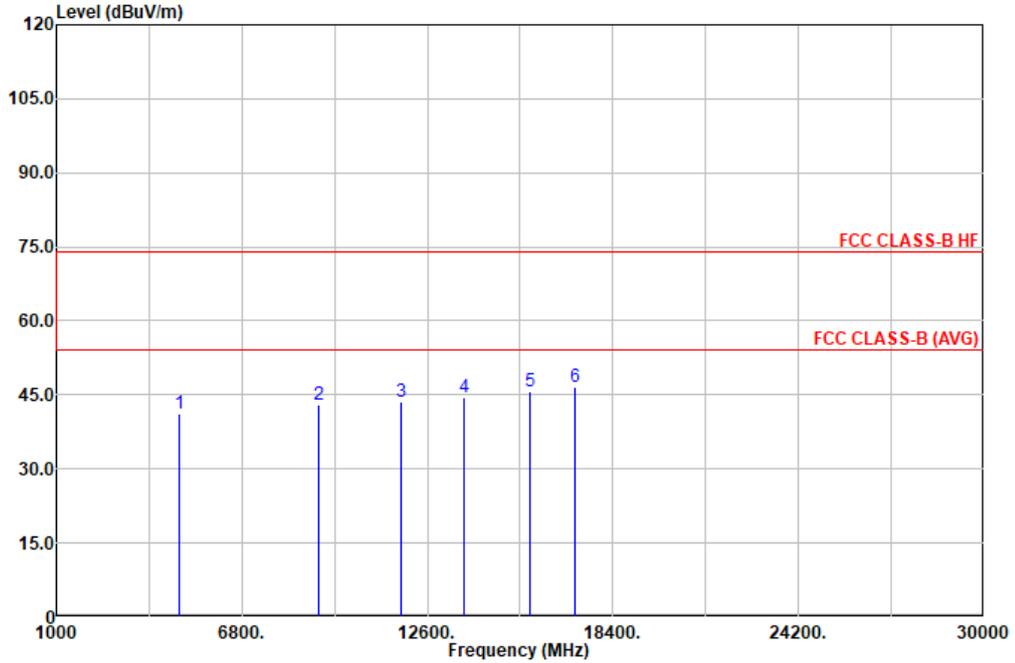


Site : 10CH01-KS
 Condition : RE 10m CBL6111D SN 63755 Horizontal

	Freq	Level	Limit Line	Over Limit	Ant Factor	Read Level	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dB/m	dBuV	dB	dB	cm	deg	
1	30.73	21.43	30.00	-8.57	24.74	29.01	0.31	32.63	--	--	Peak
2	72.44	24.13	30.00	-5.87	12.76	43.31	0.65	32.59	100	67	QP
3	176.96	19.85	30.00	-10.15	15.25	36.00	1.19	32.59	--	--	Peak
4	234.67	21.59	37.00	-15.41	16.81	35.94	1.44	32.60	--	--	Peak
5	834.13	28.26	37.00	-8.74	28.66	29.22	2.85	32.47	--	--	Peak
6	973.08	30.05	37.00	-6.95	31.67	26.73	3.06	31.41	--	--	Peak



Test Engineer :	Yoke Si	Temperature :	19.02~20.4°C
		Relative Humidity :	39~41%
Test Distance :	3m	Polarization :	Horizontal

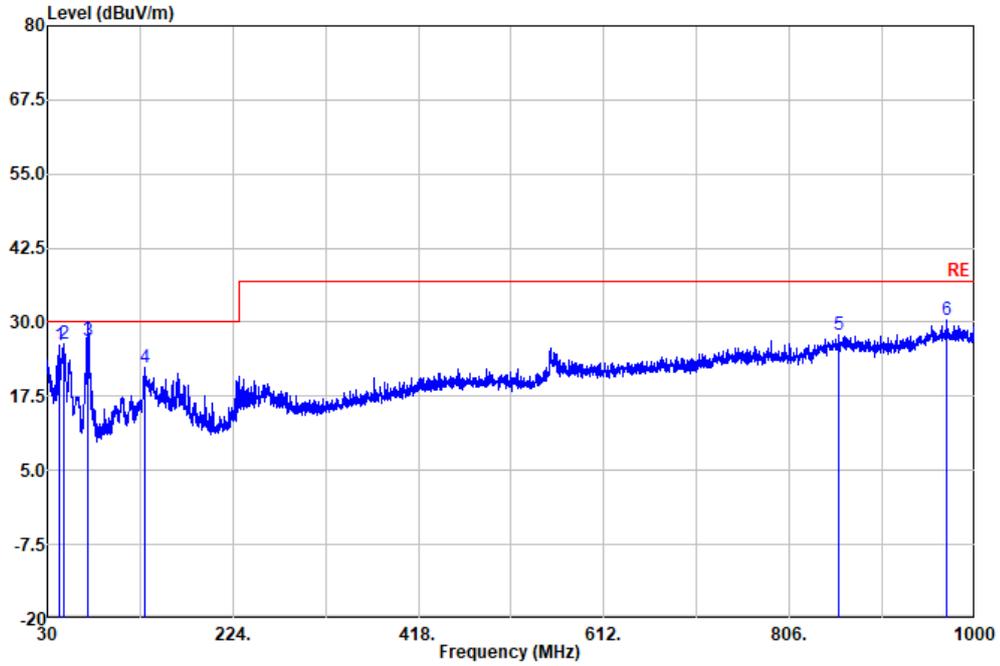


Site : 03CH02-KS
 Condition: FCC CLASS-B HF 3m 3117 SN 00251694 Horizontal

	Freq	Level	Limit	Over	Read	Ant	Cable	Preamp	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	4843.70	41.09	74.00	-32.91	63.83	34.20	7.40	64.34	--	--	Peak
2	9190.60	42.93	74.00	-31.07	59.42	36.28	10.25	63.02	--	--	Peak
3	11761.00	43.58	74.00	-30.42	54.12	38.41	12.03	60.98	--	--	Peak
4	13733.00	44.59	74.00	-29.41	54.37	38.85	13.26	61.89	--	--	Peak
5	15820.60	45.86	74.00	-28.14	54.40	40.37	13.79	62.70	--	--	Peak
6	17212.90	46.75	74.00	-27.25	53.99	41.12	14.42	62.78	--	--	Peak



Test Engineer :	Yoke Si	Temperature :	19.02~20.4°C
		Relative Humidity :	39~41%
Test Distance :	10m	Polarization :	Vertical

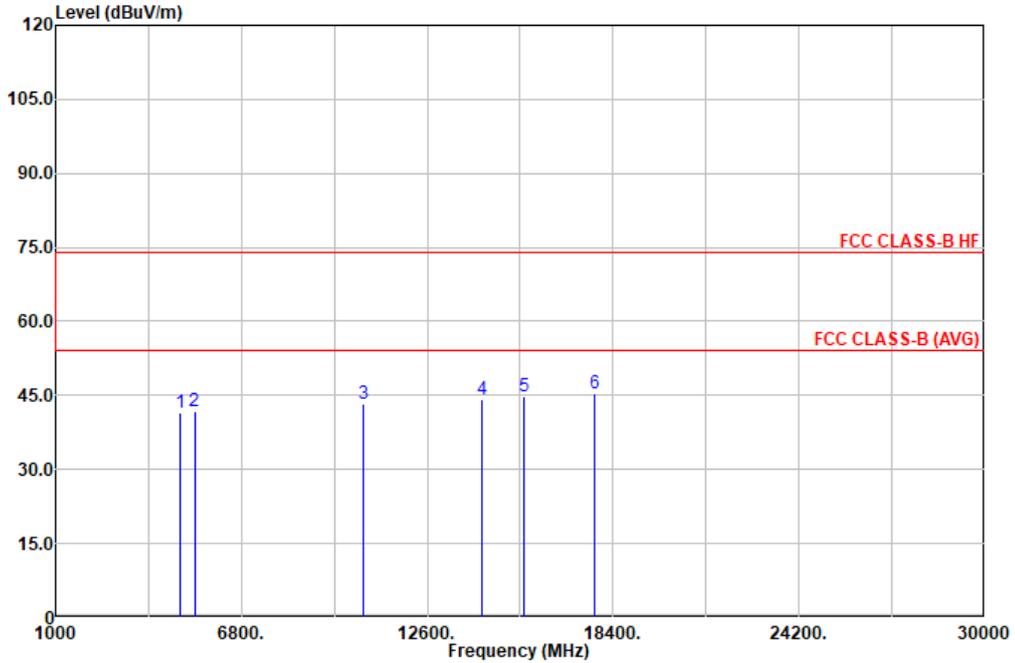


Site : 10CH01-KS
 Condition : RE 10m CBL6111D SN 63161 Vertical

	Freq	Level	Limit	Over	Ant	Read	Cable	Preamp	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dB/m	dBuV	dB	dB	cm	deg	
1	42.37	26.09	30.00	-3.91	18.67	39.60	0.42	32.60	--	--	Peak
2	46.73	26.39	30.00	-3.61	16.17	42.33	0.47	32.58	--	--	Peak
3	72.44	26.94	30.00	-3.06	12.77	46.20	0.71	32.74	100	63	QP
4	132.09	22.35	30.00	-7.65	17.72	36.30	1.04	32.71	--	--	Peak
5	857.41	27.89	37.00	-9.11	29.54	28.02	2.67	32.34	--	--	Peak
6	969.69	30.36	37.00	-6.64	31.53	27.34	2.97	31.48	--	--	Peak



Test Engineer :	Yoke Si	Temperature :	19.02~20.4°C
		Relative Humidity :	39~41%
Test Distance :	3m	Polarization :	Vertical



Site : 03CH02-KS
 Condition: FCC CLASS-B HF 3m 3117 SN 00251694 Vertical

	Freq	Level	Limit	Over	Read	Ant	Cable	Preamp	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	4879.40	41.63	74.00	-32.37	64.34	34.20	7.46	64.37	--	--	Peak
2	5335.00	41.92	74.00	-32.08	64.18	34.37	7.80	64.43	--	--	Peak
3	10611.80	43.28	74.00	-30.72	56.19	37.57	11.46	61.94	--	--	Peak
4	14295.70	44.09	74.00	-29.91	53.65	39.10	13.43	62.09	--	--	Peak
5	15640.40	44.91	74.00	-29.09	53.55	40.25	13.77	62.66	--	--	Peak
6	17819.80	45.52	74.00	-28.48	52.53	41.18	14.62	62.81	--	--	Peak

Note:

- Level(dBμV/m) = Read Level(dBμV) + Antenna Factor(dB/m) + Cable Loss(dB) - Preamp Factor(dB)
- Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)



4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Bilog Antenna	TESEQ	CBL6111D	63161	30MHz~1GHz	Oct. 25, 2024	Mar. 18, 2025	Oct. 24, 2025	Radiation (10CH01-KS)
Bilog Antenna	TESEQ	CBL6111D	63755	30MHz~1GHz	Oct. 25, 2024	Mar. 18, 2025	Oct. 24, 2025	Radiation (10CH01-KS)
EMI test receiver	R&S	ESR7	102630	9KHz~7GHz	Oct. 09, 2024	Mar. 18, 2025	Oct. 08, 2025	Radiation (10CH01-KS)
EMI test receive	R&S	ESR7	102631	9KHz~7GHz	Oct. 09, 2024	Mar. 18, 2025	Oct. 08, 2025	Radiation (10CH01-KS)
Amplifier	SONOMA	310N	422544	9KHz ~1GHZ	Oct. 09, 2024	Mar. 18, 2025	Oct. 08, 2025	Radiation (10CH01-KS)
Amplifier	SONOMA	310N	422545	9KHz ~1GHZ	Oct. 09, 2024	Mar. 18, 2025	Oct. 08, 2025	Radiation (10CH01-KS)
Controller	EM	3000-1	NA	NA	NCR	Mar. 18, 2025	NCR	Radiation (10CH01-KS)
Turn Table	EM	T-300-1	NA	0~360 degree	NCR	Mar. 18, 2025	NCR	Radiation (10CH01-KS)
Bore-site Antenna Mast	EM	MBD-400-1	NA	1 m~4 m	NCR	Mar. 18, 2025	NCR	Radiation (10CH01-KS)
Antenna Mast	EM	MBD-400-1	NA	1 m~4 m	NCR	Mar. 18, 2025	NCR	Radiation (10CH01-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55370528	10Hz-44G,MAX 30dB	Oct. 11, 2024	Mar. 18, 2025	Oct. 10, 2025	Radiation (03CH02-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75959	1GHz~18GHz	Mar. 01, 2025	Mar. 18, 2025	Feb. 28, 2026	Radiation (03CH02-KS)
SHF-EHF Horn	Com-power	AH-840	101115	18GHz~40GHz	Oct. 22, 2024	Mar. 18, 2025	Oct. 21, 2025	Radiation (03CH02-KS)
Amplifier	EM	EM18G40GA	060852	18~40GHz	Jan. 03, 2025	Mar. 18, 2025	Jan. 02, 2026	Radiation (03CH02-KS)
Amplifier	EM	EM01G18G	060840	1Ghz-18Ghz	Oct. 09, 2024	Mar. 18, 2025	Oct. 08, 2025	Radiation (03CH02-KS)
AC Power Source	Chroma	61601	616010002473	N/A	NCR	Mar. 18, 2025	NCR	Radiation (03CH02-KS)
Turn Table	MF	MF7802	N/A	0~360 degree	NCR	Mar. 18, 2025	NCR	Radiation (03CH02-KS)
Antenna Mast	MF	MF7802	N/A	1 m~4 m	NCR	Mar. 18, 2025	NCR	Radiation (03CH02-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	Apr. 18, 2024	Mar. 11, 2025	Apr. 17, 2025	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060103	9kHz~30MHz	Aug. 20, 2024	Mar. 11, 2025	Aug. 19, 2025	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060105	9kHz~30MHz	Apr. 18, 2024	Mar. 11, 2025	Apr. 17, 2025	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	AC 0V~300V, 45Hz~1000Hz	Oct. 09, 2024	Mar. 11, 2025	Oct. 08, 2025	Conduction (CO01-KS)

NCR: No Calibration Required



5. Measurement Uncertainty

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.84dB
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)-03CH02-KS

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.12dB
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)-03CH02-KS

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.30dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz) - 10CH01-KS(Horizontal)

Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y))	5.12dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz) - 10CH01-KS(Vertical)

Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y))	5.12dB
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