



FCC RF Test Report

APPLICANT : Lenovo(Shanghai) Electronics Technology Co., Ltd.
EQUIPMENT : Stylus Pen
BRAND NAME : Lenovo
MODEL NAME : AP501U1
FCC ID : O57AP501U1
STANDARD : FCC Part 15 Subpart C §15.209
CLASSIFICATION : (DCD) Part 15 Low Power Transmitter Below 1705 kHz
TEST DATE(S) : Sep. 22, 2026 ~ Sep. 27, 2026

The product was received on Sep. 07, 2026. We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the test procedures 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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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR691008B-R01	Rev. 01	Initial issue of report	Oct. 19, 2026

SUMMARY OF THE TEST RESULT

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.209	Radiated Emission	Pass	Under limit 15.79 dB at 57.403MHz
3.2	15.207	AC Conducted Emission	Pass	Under limit 20.57 dB at 4.952 MHz
3.3	15.203	Antenna Requirements	Pass	-

Conformity Assessment Condition:

1. 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.
2. The measurement uncertainty please refer to each test result 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.

Reviewed by: Ashley Qian



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

Contact Name : Spring Zhou

Tel No.: 18116118237

1.2 Manufacturer

Lenovo Ireland International Limited

Viscount House, 6/7 Fitzwilliam Square East, Dublin, D02 Y447, Ireland

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Stylus Pen
Brand Name	Lenovo
Model Name	AP501U1
FCC ID	O57AP501U1
SN Code	Radiation 8SSO28F44084AAA4691002G Conduction: 8SSO28F44084AAA4691002L
Frequency Range	111 ~ 490kHz
Antenna Type	Spring antenna
Type of Modulation	PWM
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 Modification of EUT

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

1.5 Testing 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.
	03CH07-KS	CO01-KS	CN1257	314309
Test Engineer	Moon	Amos		
Temperature	21~22℃	25.3~26.2℃		
Relative Humidity	45~46%	38~40%		

1.6 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH07-KS	AUDIX	E3	6.2009-8-24a1
2.	CO01-KS	AUDIX	E3	6.2009-8-24

1.7 Applicable Standards

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

- ♦ FCC Part 15 Subpart C §15.209, §15.207
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.
- ♦ ANSI C63.10-2020+Cor.1-2023+C63.10a-2024 + Errata to C63.10a-2024

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

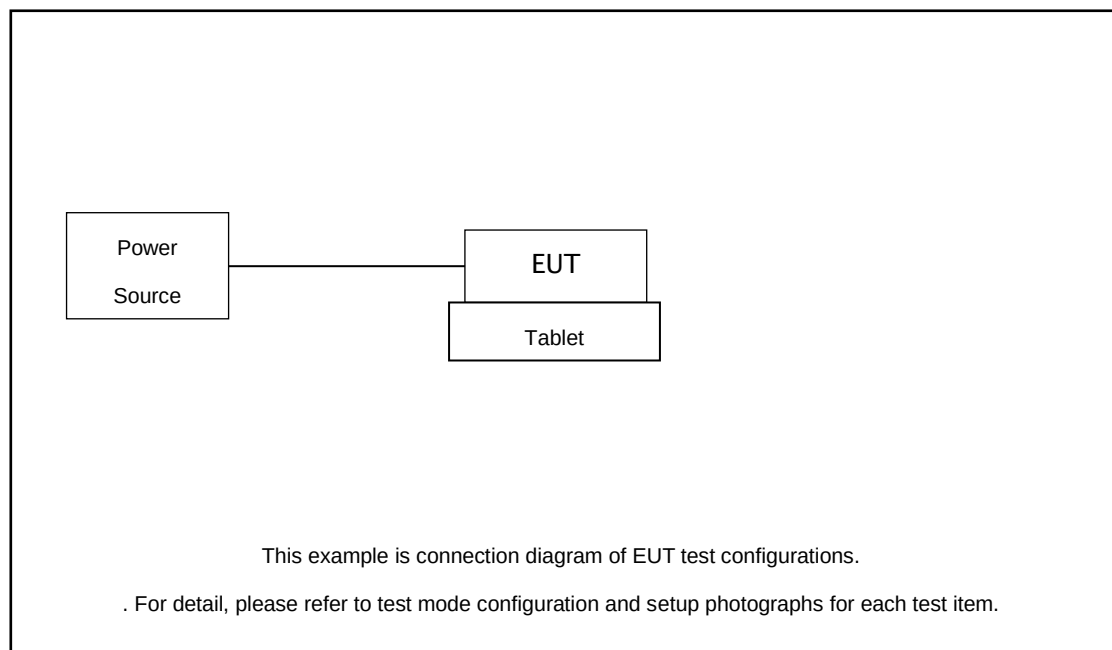
2. Test Configuration of Equipment Under Test

2.1 Descriptions of Test Mode

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: radiation emission (9 kHz to the 1000 MHz).

Test Items	Function Type
Radiated Emission	Mode 1 : specific RF technology Tx
AC Conducted Emission	Mode 1: Specific RF technology Link (touch the tablet screen) + USB Cable (Charging from adapter)

2.2 Connection Diagram of Test System



2.3 Table for Supporting Units

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Tablet	Lenovo	N/A	N/A	N/A	N/A

3. Test Results

3.1 Radiated Emissions Measurement

3.1.1 Limit of Radiated Emission

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

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

Receiver Parameter	Setting
Frequency Range: 9kHz~150kHz	RBW 200Hz for QP
Frequency Range: 150kHz~30MHz	RBW 9kHz for QP
Frequency Range: 30MHz~1000MHz	RBW 120kHz for Peak

Note: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz. Radiated emission limits in these two bands are based on measurements employing an average detector.

For radiated emissions from 9kHz to 1GHz test distance is 3m

For 9kHz ~ 30MHz

1. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
2. Distance extrapolation factor = $40 \log (\text{specific distance} / \text{test distance})$ (dB);
3. specific line (dB μ V/m) = $20 \log$ Emission level (μ V/m)
4. Limit line = specific limits (dB μ V/m) + distance extrapolation factor.

3.1.2 Measuring Instruments

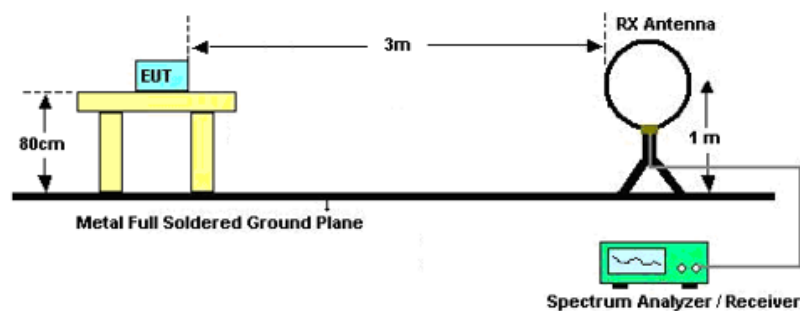
See list of measuring equipment of this test report.

3.1.3 Measuring Instrument Setting

Follow the guidelines in C63.10 with respect to maximizing the emission by rotating the EUT, measuring the emission for three EUT orthogonal planes, and adjusting the measurement antenna height and polarization. A pre-amp and a high pass filter are used for this test in order to get the good signal level.

3.1.4 Test Setup of Radiated Emission

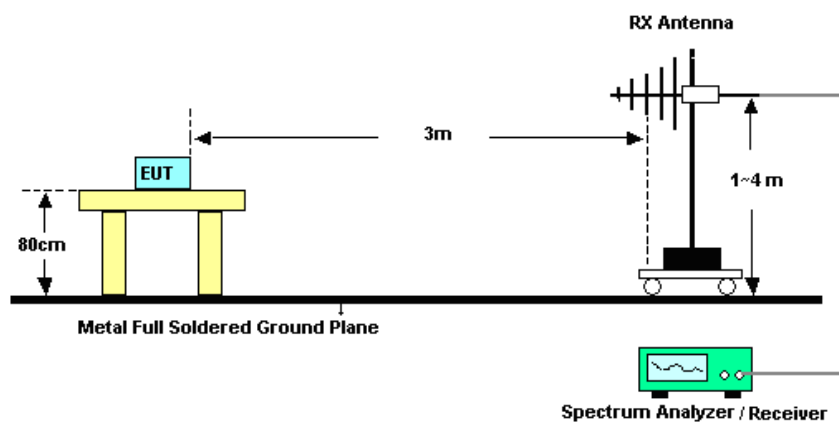
For radiated emissions below 30MHz



Note:

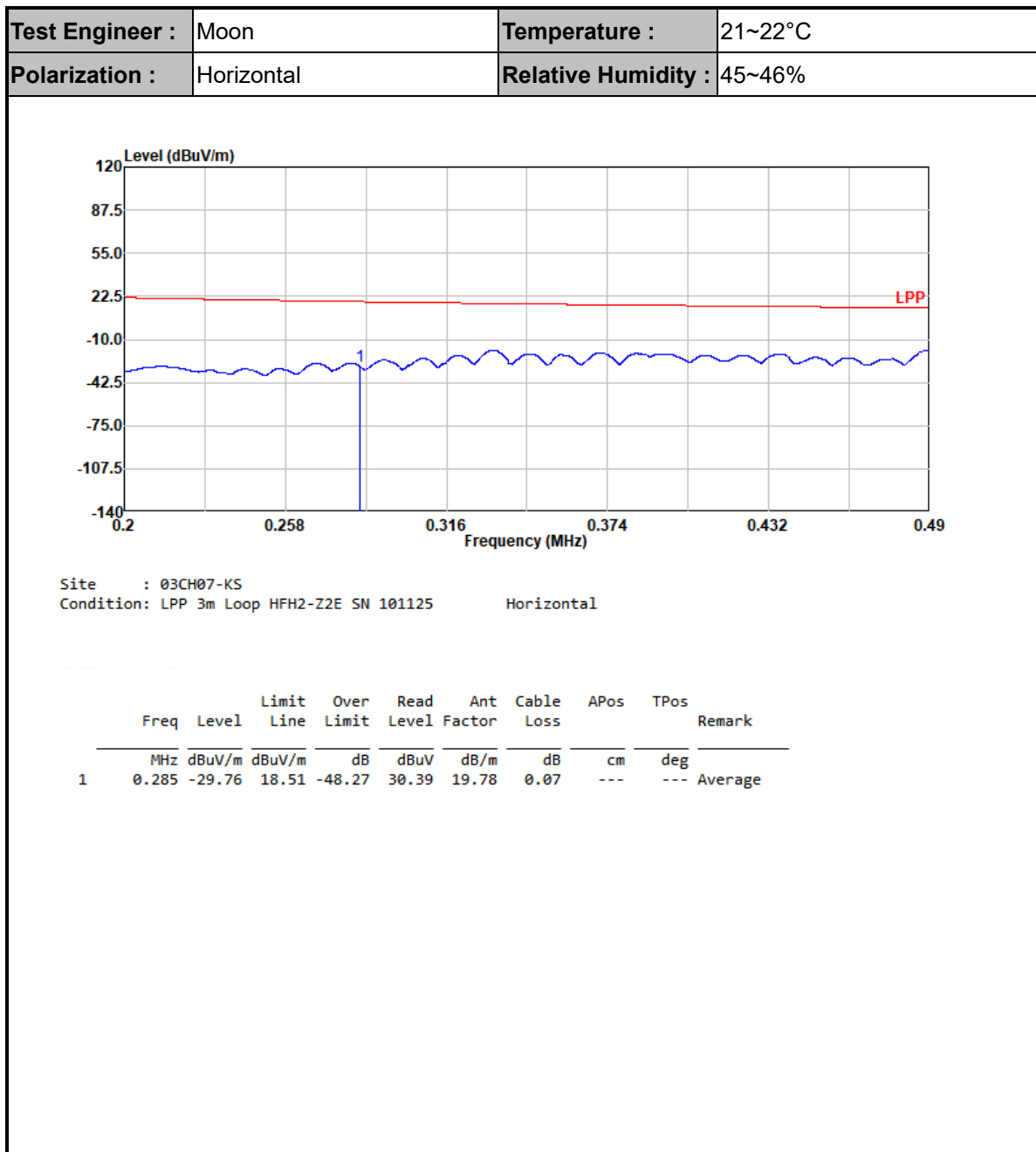
1. There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.
2. Tested for radiated below 30 MHz using a loop antenna in accordance with C63.10, the antenna was positioned in three antenna orientations: horizontal, vertical, and ground-parallel three polarization's, the worst case is horizontal & vertical polarization, test data of two mode was reported.

For radiated emissions above 30MHz



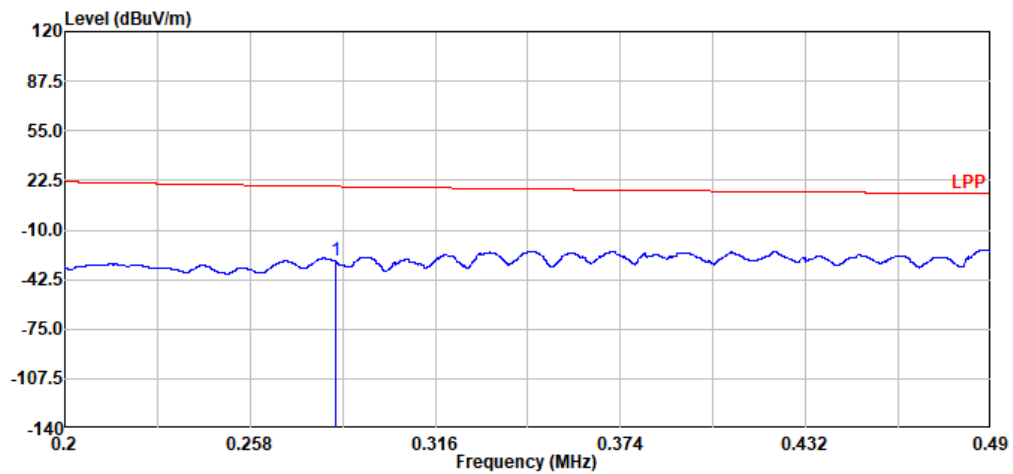


3.1.5 Test Result of Field Strength of Fundamental Emissions





Test Engineer :	Moon	Temperature :	21~22°C
Polarization :	Vertical	Relative Humidity :	45~46%

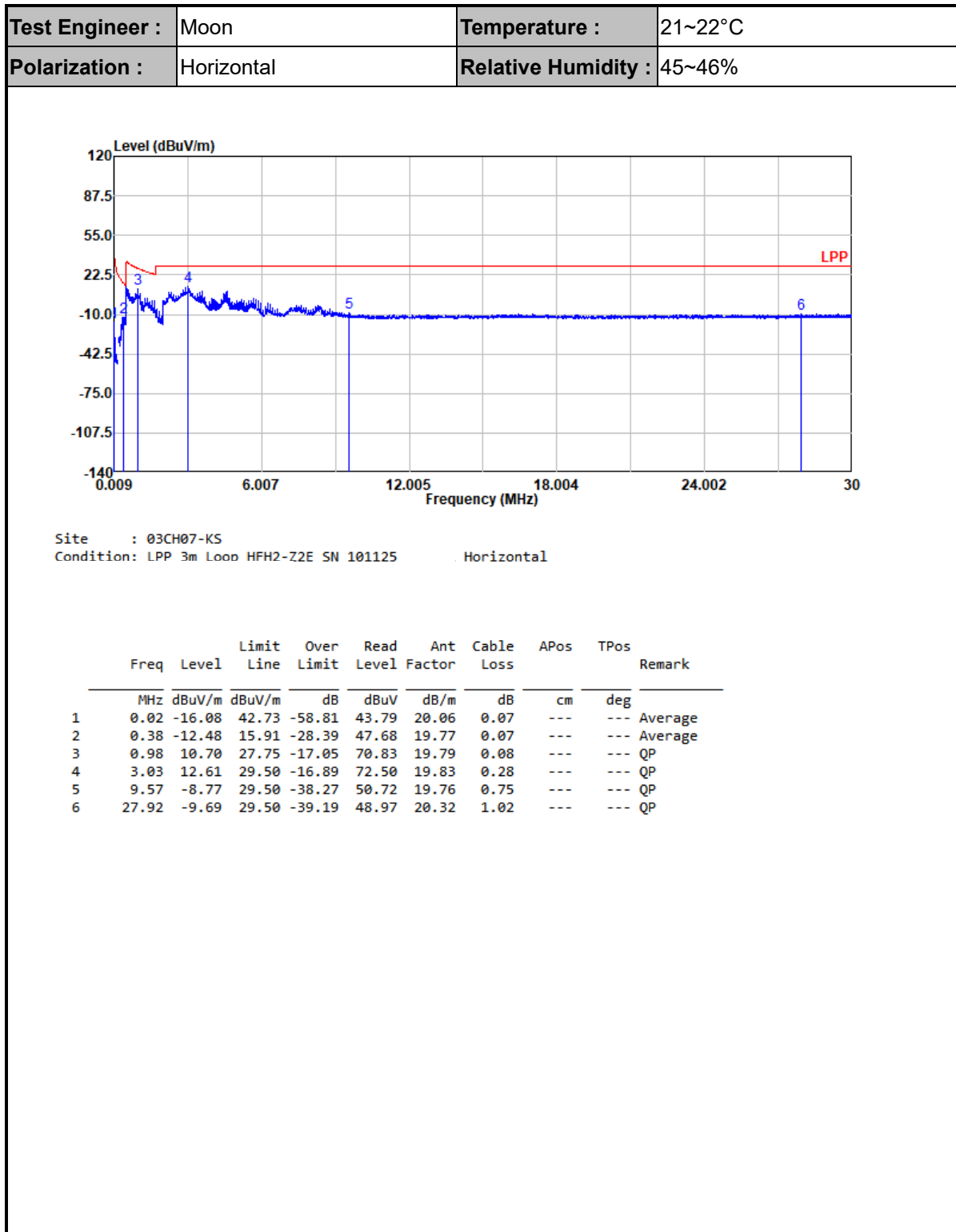


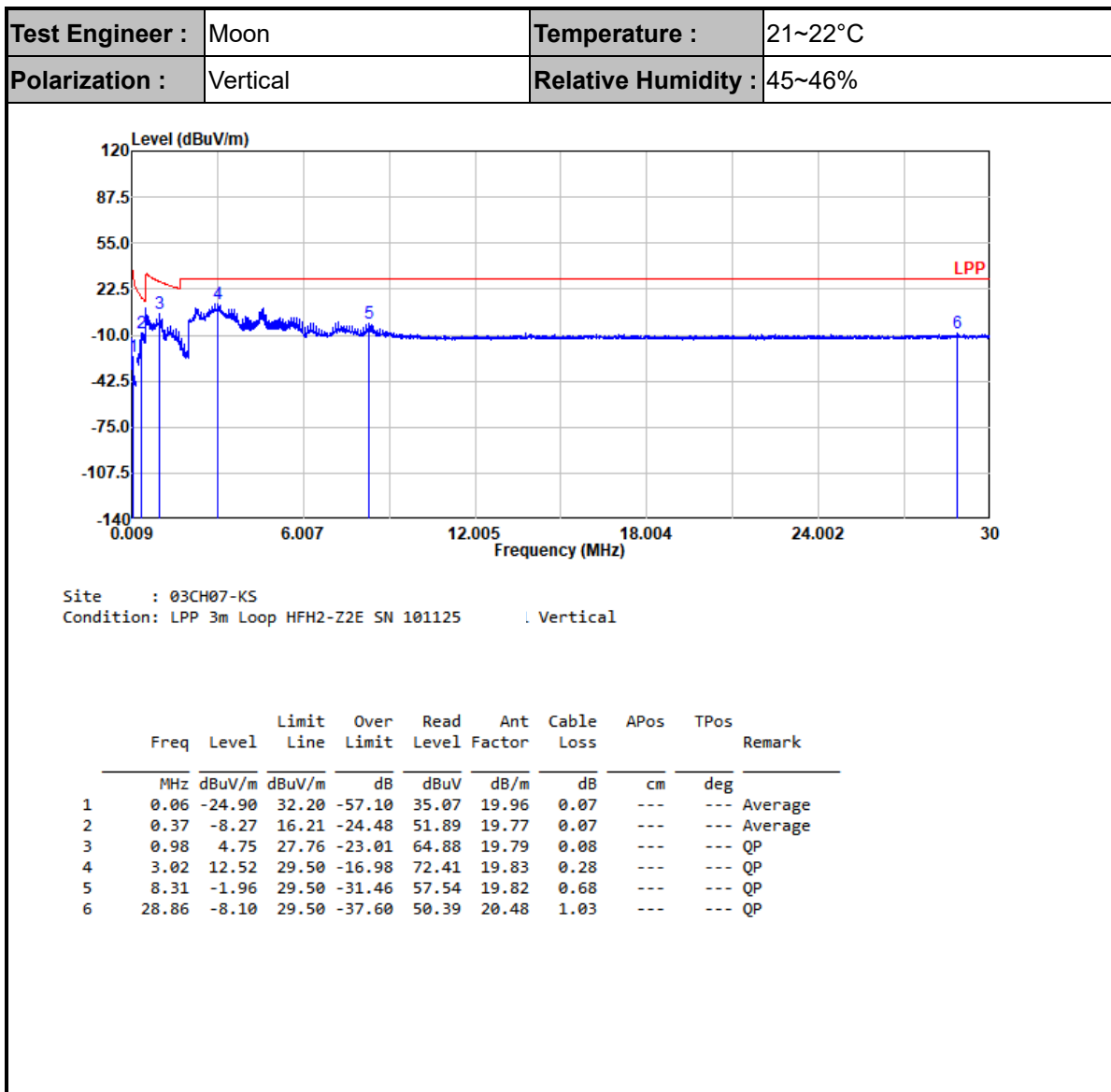
Site : 03CH07-KS
Condition: LPP 3m Loop HFH2-Z2E SN 101125 Vertical

	Freq	Level	Limit	Over	Read	Ant	Cable	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	cm	deg	
1	0.285	-29.76	18.51	-48.27	30.39	19.78	0.07	---	---	Average

Note:

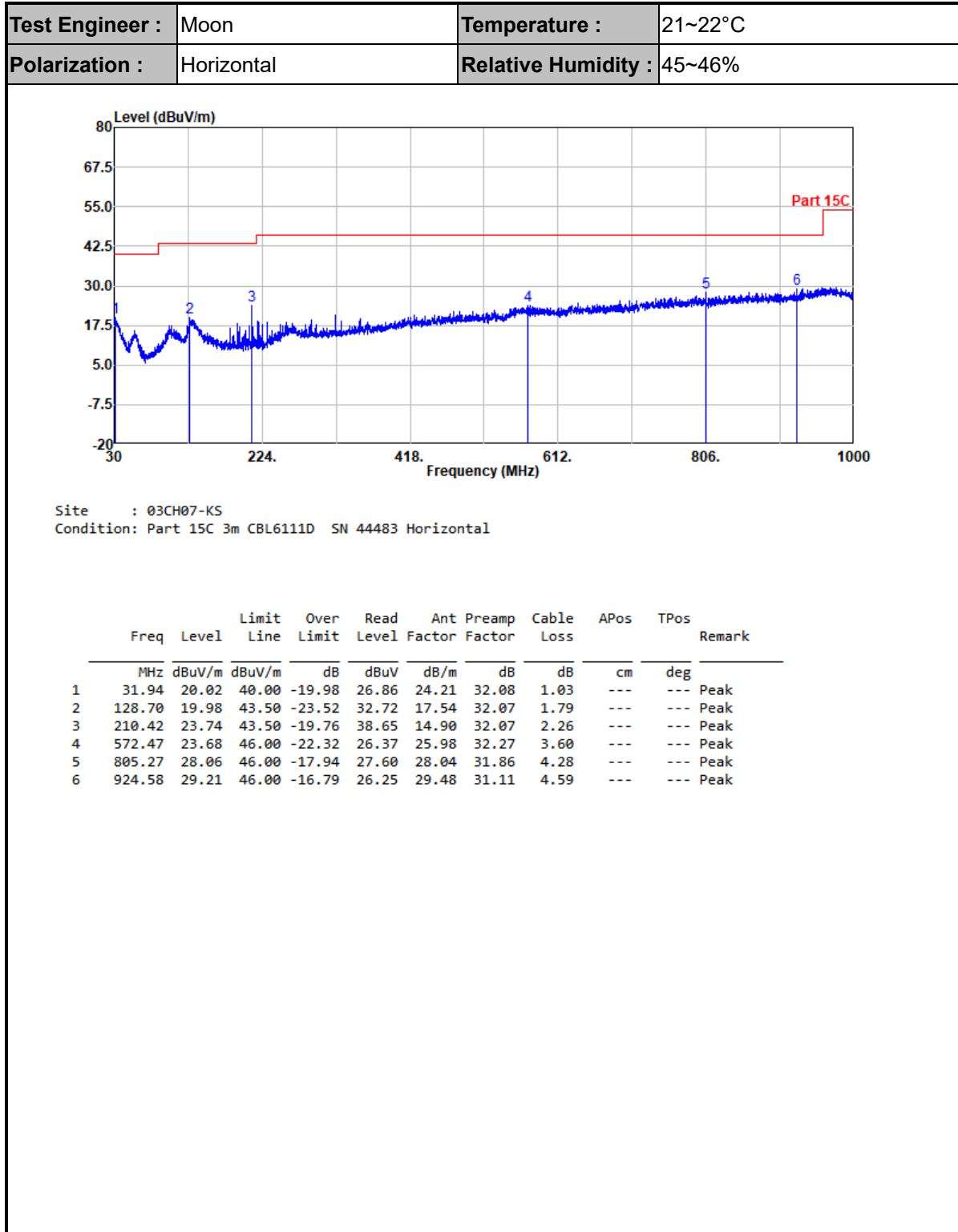
1. The field strength is tested at 3m distance then convert to 300m by adding Distance extrapolation factor.
2. Distance extrapolation factor = $40 \log (\text{specific distance} / \text{test distance})$ (dB);
3. specific line (dB μ V/m) = $20 \log$ Emission level (μ V/m)
4. Level(dB μ V/m) = Read Level(dB μ V) + Antenna Factor(dB/m) + Cable Loss(dB) + distance extrapolation factor
5. Over Limit(dB) = Level(dB μ V/m) – Limit Line(dB μ V/m)

3.1.6 Test Result of Radiated Emission (9kHz ~ 30MHz)




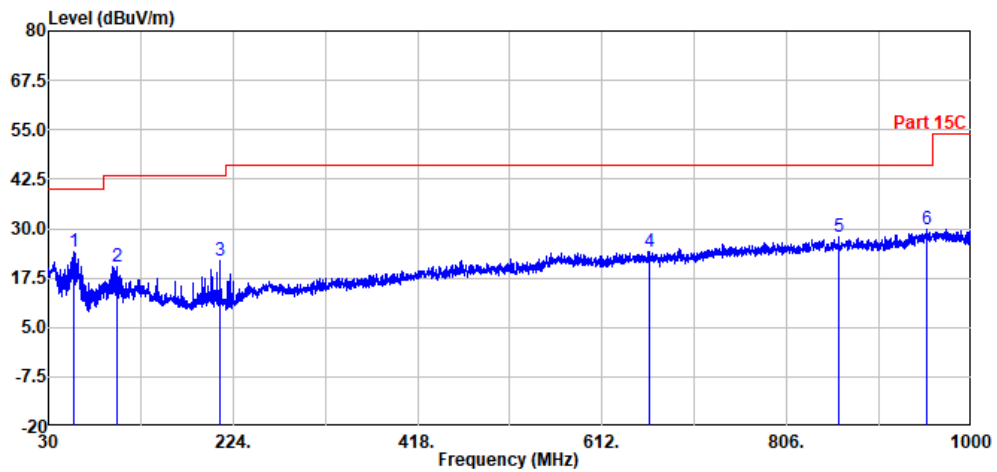
Note:

1. The field strength is tested at 3m distance then convert to 300m/30m by adding Distance extrapolation factor.
2. Distance extrapolation factor = 40 log (specific distance / test distance) (dB);
3. specific line (dBμV/m) = 20 log Emission level (μV/m)
4. Level(dBμV/m) = Read Level(dBμV) + Antenna Factor(dB/m) + Cable Loss(dB) + distance extrapolation factor
5. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

3.1.7 Test Result of Radiated Emission (30MHz ~ 1000MHz)




Test Engineer :	Moon	Temperature :	21~22°C
Polarization :	Vertical	Relative Humidity :	45~46%



Site : 03CH07-KS
Condition: Part 15C 3m CBL6111D SN 44483 Vertical

	Freq	Level	Limit	Over	Read	Ant	Preamp	Cable	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	57.40	24.21	40.00	-15.79	42.93	12.12	32.10	1.26	---	---	Peak
2	101.54	20.29	43.50	-23.21	34.73	16.02	32.09	1.63	---	---	Peak
3	210.18	21.86	43.50	-21.64	36.76	14.91	32.07	2.26	---	---	Peak
4	660.99	24.32	46.00	-21.68	26.35	26.30	32.23	3.90	---	---	Peak
5	860.81	28.07	46.00	-17.93	26.31	28.96	31.61	4.41	---	---	Peak
6	953.68	29.82	46.00	-16.18	25.32	30.80	30.91	4.61	---	---	Peak

Note:

1. $\text{Level(dBuV/m)} = \text{Read Level(dBuV)} + \text{Antenna Factor(dB/m)} + \text{Cable Loss(dB)}$
2. $\text{Over Limit(dB)} = \text{Level(dBuV/m)} - \text{Limit Line(dBuV/m)}$

3.2 AC Conducted Emission Measurement

3.2.1 Limit 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.

Frequency of emission (MHz)	Conducted limit (dB μ V)	
	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.

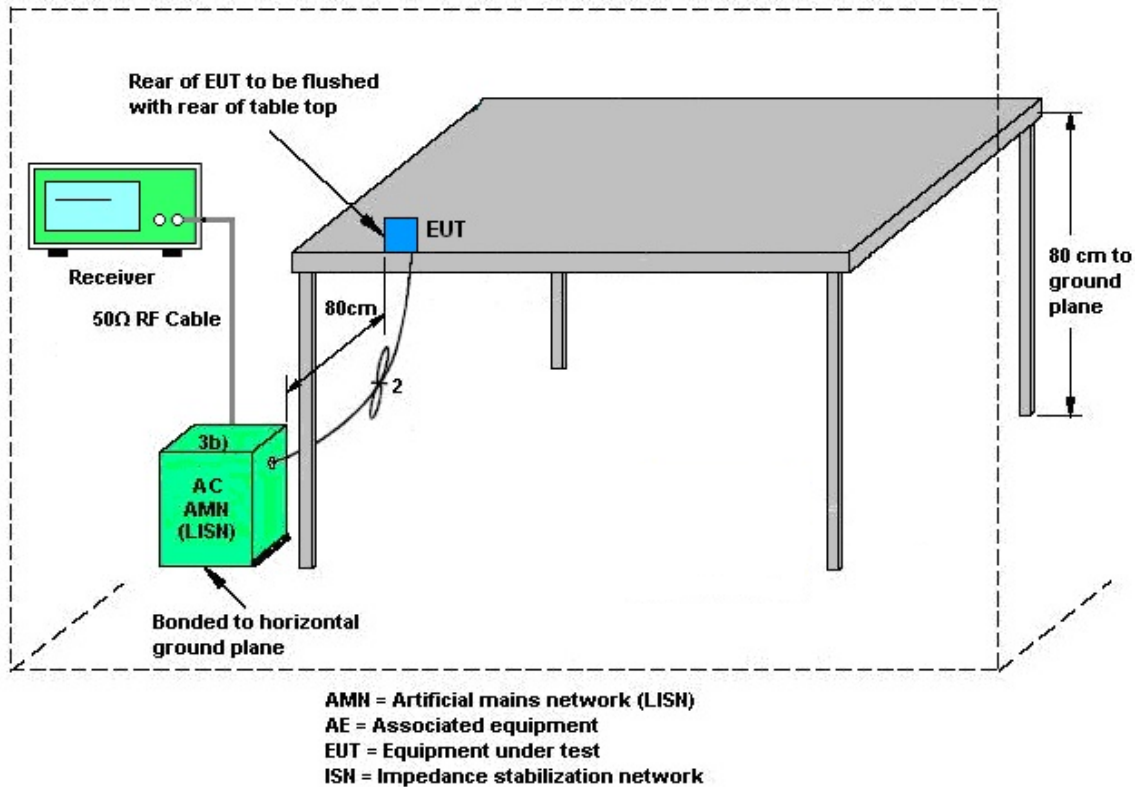
3.2.2 Measuring Instruments

The section 4.0 of List of Measuring Equipment of this test report is used for test.

3.2.3 Test Procedures

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.

3.2.4 Test Setup



3.2.5 Test Result of AC Conducted Emission

Please refer to Appendix A.

3.3 Antenna Requirements

3.3.1 Standard Applicable

Except for special regulations, the Low-power Radio-frequency Devices must not be equipped with any jacket for installing an antenna with extension cable. An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section.

The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited.

The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the rule.

3.3.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.



4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
MXE EMI Receiver	Keysight	N9038A	MY57290151	3Hz~8.4GHz	Jul. 02, 2026	Sep. 27, 2026	Jul. 01, 2027	Radiation (03CH07-KS)
Active loop antenna	R&S	HFH2-Z2E	101125	9kHz~30MHz	Aug. 10, 2026	Sep. 27, 2026	Aug. 09, 2027	Radiation (03CH07-KS)
Bilog Antenna	TESEQ	CBL 6111D	59913	30MHz~1GHz	Aug. 12, 2026	Sep. 27, 2026	Aug. 11, 2027	Radiation (03CH07-KS)
AC Power Source	Chroma	61601	616010002473	N/A	NCR	Sep. 27, 2026	NCR	Radiation (03CH07-KS)
Turn Table	EM	EM 1000-T	N/A	0~360 degree	NCR	Sep. 27, 2026	NCR	Radiation (03CH07-KS)
Antenna Mast	EM	EM 1000-A	N/A	1 m~4 m	NCR	Sep. 27, 2026	NCR	Radiation (03CH07-KS)
EMI Receiver	R&S	ESC17	100768	9kHz~7GHz;	Apr. 08, 2026	Sep. 22, 2026	Apr. 07, 2027	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060103	9kHz~30MHz	Jul. 02, 2026	Sep. 22, 2026	Jul. 01, 2027	Conduction (CO01-KS)
AC LISN	R&S	ENV216	100334	9kHz~30MHz	Apr. 08, 2026	Sep. 22, 2026	Apr. 07, 2027	Conduction (CO01-KS)
AC Power Source	Ouhan	APW-130NYT	202201040060	AC 0V~300V,45Hz~1000Hz	Apr. 08, 2026	Sep. 22, 2026	Apr. 07, 2027	Conduction (CO01-KS)

NCR: No Calibration Required

5. Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.10. All the measurement uncertainty value were shown with a coverage $K=2$ to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of AC Conducted Emission Measurement (0.15 MHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.09 dB
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Uncertainty of Radiated Emission Measurement (9 kHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.30 dB
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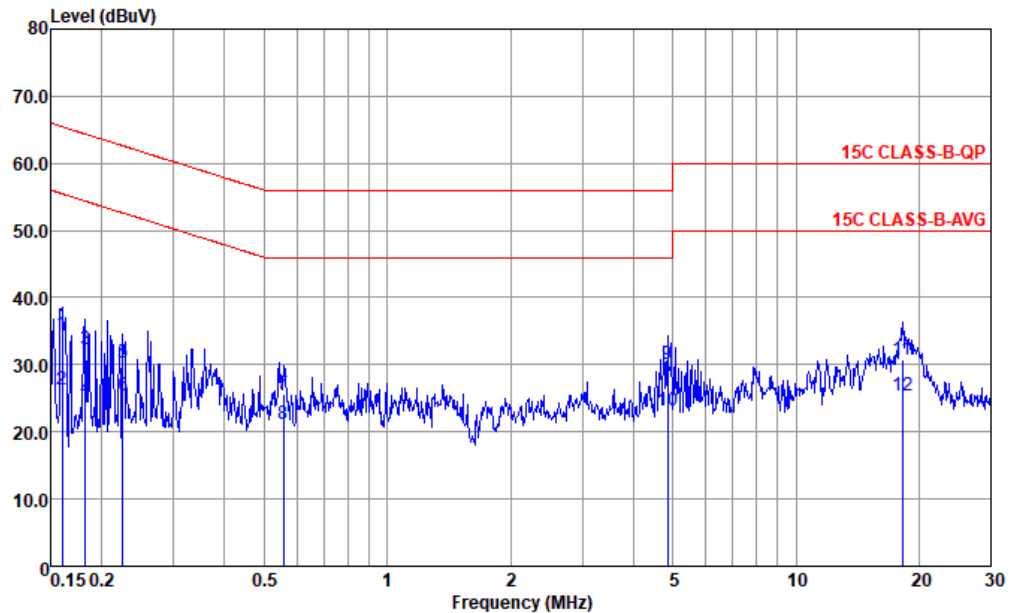
Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	6.28 dB
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----- THE END -----

Appendix A. AC Conducted Emission Test Results

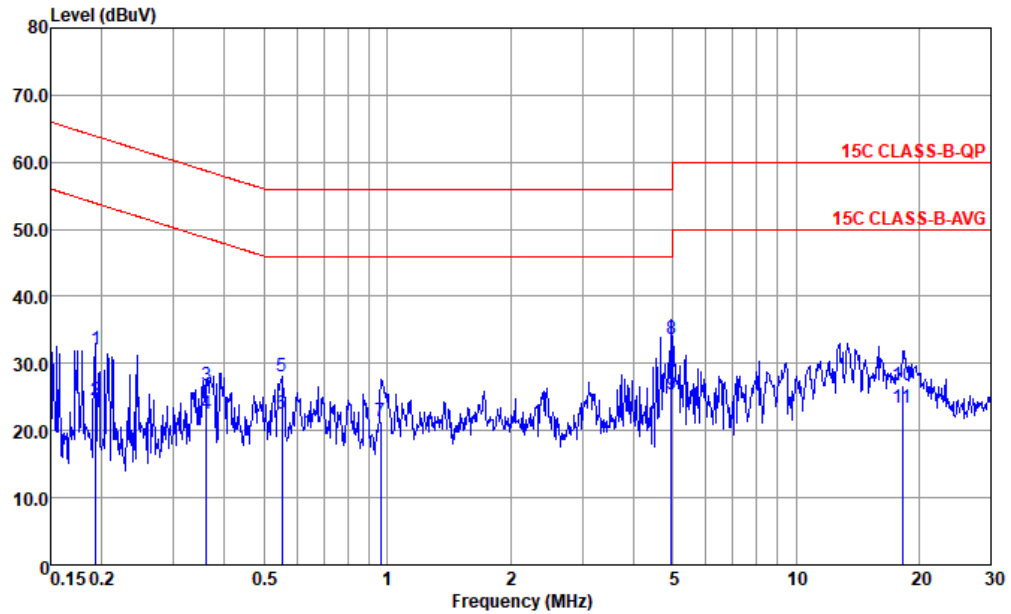
Test Engineer :	Buck zhao	Temperature :	25.3~26.2℃
		Relative Humidity :	38~40%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO01-KS
Condition : 15C CLASS-B-QP LISN-100334-L 2025 LINE

	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
		dBuV	dB	dBuV	dBuV	dB	dB	
1	0.160	34.50	-30.97	65.47	14.50	9.55	10.45	QP
2	0.160	26.20	-29.27	55.47	6.20	9.55	10.45	Average
3	0.182	32.21	-32.16	64.37	12.20	9.55	10.46	QP
4	0.182	24.91	-29.46	54.37	4.90	9.55	10.46	Average
5	0.226	30.26	-32.35	62.61	10.20	9.59	10.47	QP
6	0.226	25.36	-27.25	52.61	5.30	9.59	10.47	Average
7	0.558	25.58	-30.42	56.00	5.60	9.59	10.39	QP
8	0.558	21.18	-24.82	46.00	1.20	9.59	10.39	Average
9	4.848	30.05	-25.95	56.00	10.20	9.65	10.20	QP
10 *	4.848	23.15	-22.85	46.00	3.30	9.65	10.20	Average
11	18.232	30.76	-29.24	60.00	10.60	9.87	10.29	QP
12	18.232	25.37	-24.63	50.00	5.21	9.87	10.29	Average

Test Engineer :	Buck zhao	Temperature :	25.3~26.2℃
		Relative Humidity :	38~40%
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 : 15C CLASS-B-QP LISN-100334-N 2025 NEUTRAL

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.193	32.15	-31.74	63.89	12.10	9.59	10.46	QP
2	0.193	24.55	-29.34	53.89	4.50	9.59	10.46	Average
3	0.361	26.64	-32.05	56.69	6.59	9.56	10.49	QP
4	0.361	22.44	-26.25	46.69	2.39	9.56	10.49	Average
5	0.552	28.06	-27.94	56.00	7.90	9.77	10.39	QP
6	0.552	22.56	-23.44	46.00	2.40	9.77	10.39	Average
7	0.963	21.43	-24.57	46.00	1.20	9.95	10.28	Average
8	4.952	33.63	-22.37	56.00	13.80	9.63	10.20	QP
9 *	4.952	25.43	-20.57	46.00	5.60	9.63	10.20	Average
10	18.232	26.66	-33.34	60.00	6.60	9.77	10.29	QP
11	18.232	23.36	-26.64	50.00	3.30	9.77	10.29	Average

Note:

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