



FCC RADIO TEST REPORT

FCC ID : WIYPUCK1000001

Equipment : 3-in-1 card reader

Brand Name :  **CASTLES**
TECHNOLOGY

Model Name : PUCK1000, PUCK1000XXXXXX (X=0-9, A-Z, a-z, Blank, _ or -)

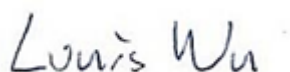
Applicant : CASTLES TECHNOLOGY CO., LTD.
6F, NO. 207-5, SEC. 3, BEIXIN RD., XINDIAN DISTRICT, NEW
TAIPEI CITY 231030, TAIWAN (R.O.C.)

Manufacturer : CASTLES TECHNOLOGY CO., LTD.
6F, NO. 207-5, SEC. 3, BEIXIN RD., XINDIAN DISTRICT, NEW
TAIPEI CITY 231030, TAIWAN (R.O.C.)

Standard : FCC Part 15 Subpart C §15.225

The product was received on Jul. 03, 2026 and testing was performed from Jul. 14, 2026 to Jul. 31, 2026. We, Sporton International Inc. Wensan Laboratory, 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 from Sporton International Inc. Wensan Laboratory, the test report shall not be reproduced except in full.



Approved by: Louis Wu

Sporton International Inc. Wensan Laboratory

No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)



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History of this test report

Report No.	Version	Description	Issue Date
FR670124	01	Initial issue of report	Aug. 05, 2026

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.207	AC Power Line Conducted Emissions	Pass	-
3.2	15.215(c)	20dB Spectrum Bandwidth	Pass	-
	2.1049	99% OBW Spectrum Bandwidth	Pass	-
3.3	15.225(e)	Frequency Stability	Pass	-
3.4	15.225(a)(b)(c)	Field Strength of Fundamental Emissions	Pass	-
3.5	15.225(d) 15.209	Radiated Spurious Emissions	Pass	-
3.6	15.203	Antenna Requirement	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: Duko Chen

Report Producer: Lili Lu

1. General Description

1.1 Product Feature of Equipment Under Test

Product Feature
General Specs NFC
Antenna Type NFC: Loop Antenna

Remark: The EUT's information above is declared by manufacturer. Please refer to Disclaimer in report summary.

EUT Information List	
S/N	Performed Test Item
C260611-001	RF Near Field
C260611-003	Conducted Emission
C260611-002	Radiated Spurious Emission

1.2 Modification of EUT

No modifications made to the EUT during the testing.

1.3 Testing Location

The test location is accredited based on TAF code 1190 and 3786 designated by NCC (National Communication Commission).

Test Site	Sporton International Inc. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)
Remark	The Conducted Emission test item subcontracted to Sporton International Inc. EMC & Wireless Communications Laboratory.

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)

FCC designation No.: TW1190 and TW3786

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



1.4 Applicable Standards

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

- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01
- ♦ FCC Part 15 Subpart C §15.225
- ♦ ANSI C63.10-2020 + Cor.1-2023

Remark:

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. The TAF code is not including all the FCC KDB listed without accreditation.
3. 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

Investigation has been done on all the possible configurations.

The following table is a list of the test modes shown in this test report.

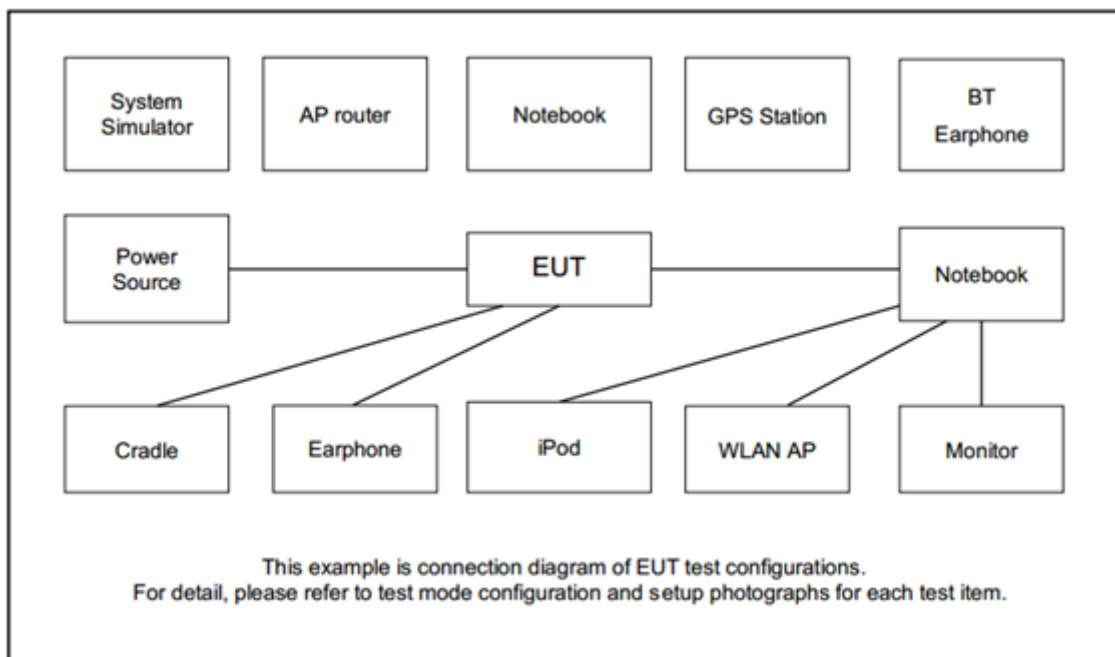
Test Items	
AC Power Line Conducted Emissions	Field Strength of Fundamental Emissions
20dB Spectrum Bandwidth	Frequency Stability
Radiated Emissions 9kHz~30MHz	Radiated Emissions 30MHz~1GHz

The EUT pre-scanned in reader mode with NFC tag (four NFC type A, B, F) and without reading tag. Based on the highest field strength of fundamental and spurious emissions, the worst case type (type F) was recorded in this report.

The measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape), and three receiving antenna orientations (parallel, perpendicular, and ground-parallel) for Loop Antenna, and adjusting the measurement antenna orientation, following C63.10 exploratory test procedures and only the worst case emissions were reported in this report.

Test Cases	
AC Conducted Emission	Mode 1: NFC Read + USB cable (Type C) to Notebook
Remark: For Radiated Test Cases, the tests were performed with Notebook.	

2.2 Connection Diagram of Test System



2.3 Table for Supporting Units

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	WLAN AP	ASUS	RT-AC52	MSQ-RTAC66U	N/A	Unshielded, 1.8m
2.	iPod	Apple	A1285	DoC	Shielded, 1.0m	N/A
3.	Notebook	Dell	Latitude 3420	FCC DoC	N/A	AC I/P: Unshielded, 1.2m DC O/P: Shielded, 1.8m
4.	Test NB	Dell	Latitude 3400	N/A	93S2KW2	N/A
5.	NFC Card A	N/A	N/A	N/A	NFCA-5	N/A
6.	NFC Card B	N/A	N/A	N/A	NFCB-42	N/A
7.	NFC Card F	N/A	N/A	N/A	NFCF-16	N/A

2.4 EUT Operation Test Setup

The EUT is programmed to be in continuously transmitting mode.

The ancillary equipment, NFC card, is used to make the EUT (NFC) continuously transmitting signal (Power Level: Default) at 13.56MHz.

3. Test Results

3.1 AC Power Line Conducted Emissions Measurement

3.1.1 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.

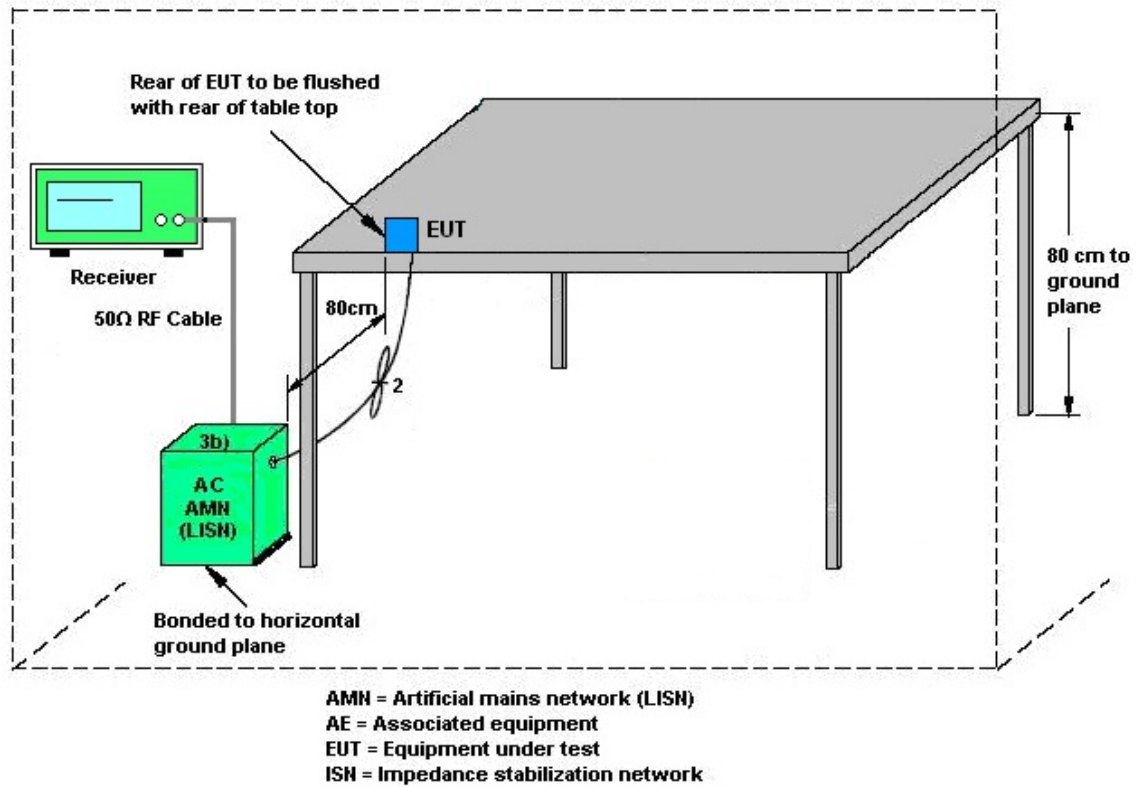
3.1.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.1.3 Test Procedures

1. The EUT is placed 0.4 meter away from the conducting wall of the shielding room, and is 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 shall be used.
6. Both Line and Neutral shall be tested in order to find out the maximum conducted emission.
7. The frequency range from 150 kHz to 30 MHz is scanned.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9 kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

3.1.4 Test setup



3.1.5 Test Result of AC Conducted Emission

Please refer to Appendix A.

Note:

(1) with antenna

Remark: 13.560MHz is the NFC RF fundamental signal.

(2) with dummy load

Remark: Only the fundamental NFC signal needs to be retested per C63.4.

3.2 20dB and 99% OBW Spectrum Bandwidth Measurement

3.2.1 Limit

Intentional radiators must be designed to ensure that the 20 dB and 99% emission bandwidth in the specific band 13.553~13.567 MHz.

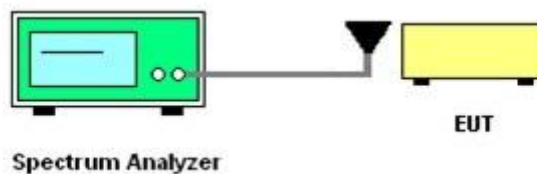
3.2.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.2.3 Test Procedures

1. The spectrum analyzer connected via a receive antenna placed near the EUT in peak Max Hold Mode.
2. The resolution bandwidth of 1 kHz and the video bandwidth of 3 kHz were used.
3. Measured the spectrum width with power higher than 20 dB below carrier.
4. Measured the 99% OBW.

3.2.4 Test Setup



3.2.5 Test Result of Near Field Test Items

Please refer to Appendix B.

3.3 Frequency Stability Measurement

3.3.1 Limit

The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% (100ppm) of the operating frequency over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed by using a new battery.

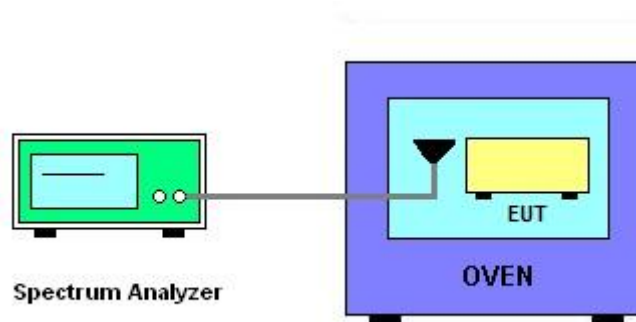
3.3.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.3.3 Test Procedures

1. The spectrum analyzer connected via a receive antenna placed near the EUT.
2. EUT has transmitted signal and fixed channelize.
3. Set the spectrum analyzer span to view the entire emissions bandwidth.
4. Set RBW = 1 kHz, VBW = 3 kHz with peak detector and maxhold settings.
5. The f_c is declaring of channel frequency. Then the frequency error formula is $(f_c - f)/f_c \times 10^6$ ppm and the limit is less than ± 100 ppm.
6. Extreme temperature rule is -20°C~50°C.

3.3.4 Test Setup



3.3.5 Test Result of Near Field Test Items

Please refer to Appendix B.

3.4 Field Strength of Fundamental Emissions and Mask Measurement

3.4.1 Limit

Rules and specifications	FCC CFR 47 Part 15 section 15.225			
Description	Compliance with the spectrum mask is tested with RBW set to 9kHz.			
Freq. of Emission (MHz)	Field Strength (μ V/m) at 30m	Field Strength (dB μ V/m) at 30m	Field Strength (dB μ V/m) at 10m	Field Strength (dB μ V/m) at 3m
1.705~13.110	30	29.5	48.58	69.5
13.110~13.410	106	40.5	59.58	80.5
13.410~13.553	334	50.5	69.58	90.5
13.553~13.567	15848	84.0	103.08	124.0
13.567~13.710	334	50.5	69.58	90.5
13.710~14.010	106	40.5	59.58	80.5
14.010~30.000	30	29.5	48.58	69.5

Remark:

1. The field strength test result is in 3m test distance, follow test rules the test data use distance extrapolation factor and reported in this report at 30m test result.
2. Distance extrapolation factor = $40 \log (\text{specific distance} / \text{test distance})$ (dB)

3.4.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

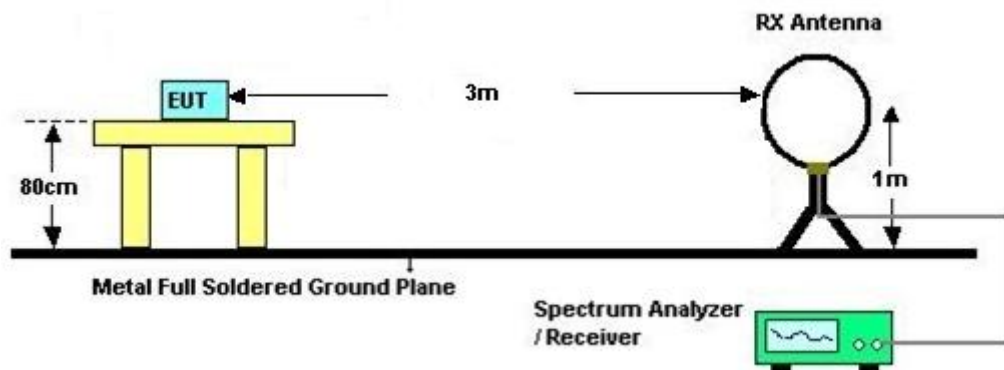
3.4.3 Test Procedures

1. Configure the EUT according to ANSI C63.10. The EUT is placed on the top of the turntable 0.8 meter above ground. The phase center of the loop receiving antenna mounted antenna tower is placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable is rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the receiving antenna is fixed at one meter above ground to find the maximum emissions field strength.
4. For Fundamental emissions, use the receiver to measure QP reading.
5. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.
6. Compliance with the spectrum mask is tested with RBW set to 9 kHz.

Note: Emission level (dBμV/m) = 20 log Emission level (μV/m).

3.4.4 Test Setup

For radiated test below 30MHz



3.4.5 Test Result of Field Strength of Fundamental Emissions and Mask

Please refer to Appendix C.

3.5 Radiated Emissions Measurement

3.5.1 Limit

The field strength of any emissions which appear outside of 13.110 ~14.010MHz band shall not exceed the general radiated emissions limits.

Frequencies (MHz)	Field Strength (μ V/m)	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

3.5.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.5.3 Measuring Instrument Setting

The following table is the setting of receiver:

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

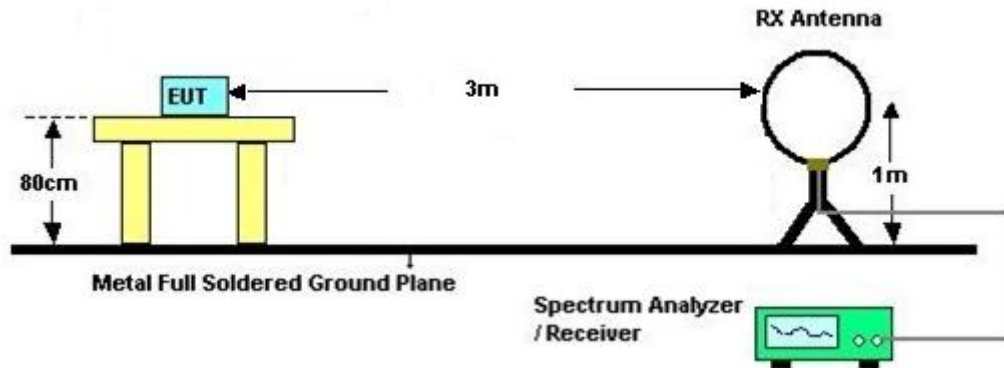
Note: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz and 110-490 kHz. Radiated emission limits in these two bands are based on measurements employing an average detector.

3.5.4 Test Procedures

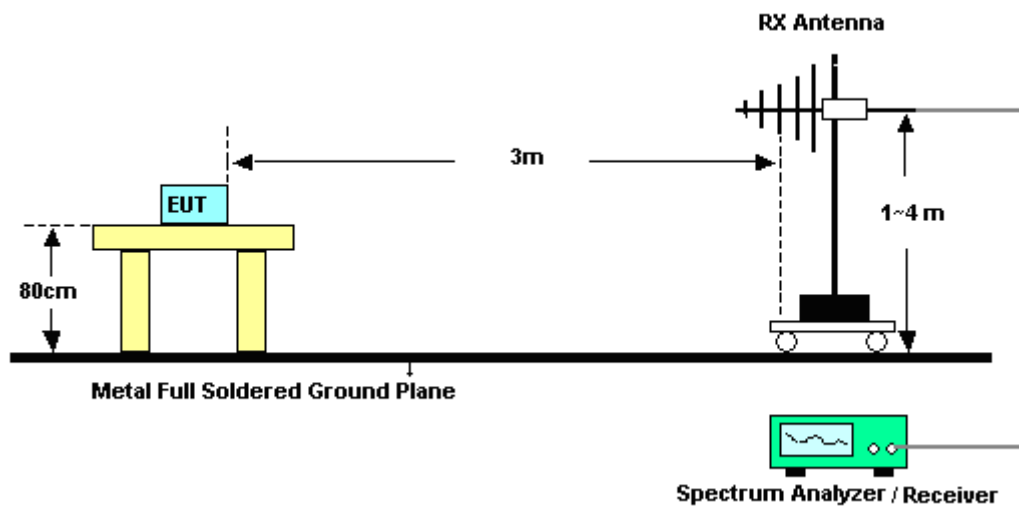
1. Configure the EUT according to ANSI C63.10. The EUT is placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower is placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable is rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna is varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower is scanned (from 1 M to 4 M) and then the turntable is rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.
7. In case the emission is lower than 30 MHz, loop antenna has to be used for measurement and the recorded data shall be QP measured by receiver.
8. Radiated testing below 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading. When there is no suspected emission found and the emission level is with at least 6 dB margin against QP limit line, the position is marked as “-”.

3.5.5 Test Setup

For radiated test below 30MHz



For radiated test above 30MHz



3.5.6 Test Result of Radiated Emissions Measurement

Please refer to Appendix C.

Remark:

1. There is adequate comparison measurement of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.
2. After pre-scan three receiving antenna orientations parallel (horizontal), perpendicular(vertical), and ground-parallel for Loop Antenna, the worst case is receiving antenna parallel.



3.6 Antenna Requirements

3.6.1 Standard Applicable

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 a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of § 15.211, 15.213, 15.217, 15.219, 15.221, or § 15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

3.6.2 Antenna Anti-Replacement Construction

Antenna permanently attached.



4. List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	Rohde & Schwarz	FSP30	101329	9kHz~30GHz	Sep. 30, 2025	Jul. 17, 2026	Sep. 29, 2026	Conducted (TH05-HY)
DC Power Supply	GW Instek	GPE-2323	GEU871221	0V~64V ; 0A~6A	Apr. 17, 2026	Jul. 17, 2026	Apr. 16, 2027	Conducted (TH05-HY)
Temperature & Humidity Cabinet Chamber	ESPEC	SU-241	92003713	-30°C ~95°C	Feb 23, 2026	Jul. 17, 2026	Feb 22, 2027	Conducted (TH05-HY)
Hygrometer	TECPEL	DTM-303A	TP224371	N/A	Jun. 15, 2026	Jul. 17, 2026	Jun. 14, 2027	Conducted (TH05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Jul. 20, 2026	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	N/A	Dec. 16, 2025	Jul. 20, 2026	Dec. 15, 2026	Conduction (CO05-HY)
Hygrometer	TECPEL	DTM-303A	TP210031	N/A	Jun. 15, 2026	Jul. 20, 2026	Jun. 14, 2027	Conduction (CO05-HY)
Two-Line V-Network	Rohde & Schwarz	ENV 216 +EMCI-EXP-US S	100080+N-021	N/A	Apr. 22, 2026	Jul. 20, 2026	Apr. 21, 2027	Conduction (CO05-HY)
Two-Line V-Network	Rohde & Schwarz	ENV216	100081	N/A	Jul. 25, 2025	Jul. 20, 2026	Jul. 24, 2026	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32	N/A	N/A	N/A	Jul. 20, 2026	N/A	Conduction (CO05-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-F N	00691	N/A	Jul. 29, 2025	Jul. 20, 2026	Jul. 28, 2026	Conduction (CO05-HY)
LISN Cable	MVE	RG-400	MQT24082501	N/A	Oct. 14, 2025	Jul. 20, 2026	Oct. 13, 2026	Conduction (CO05-HY)
Bilog Antenna with 6dB pad	TESEQ & VGT	CBL 6111D & VFA_Z-04002-N-06	66925 & 24006	30MHz~1GHz	Apr. 12, 2026	Jul. 14, 2026~Jul. 31, 2026	Apr. 11, 2027	Radiation (03CH11-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2E	101108	9 kHz~30 MHz	Dec. 11, 2025	Jul. 14, 2026~Jul. 31, 2026	Dec. 10, 2026	Radiation (03CH11-HY)
Amplifier	SONOMA	310N	187312	9kHz~1GHz	Dec. 06, 2025	Jul. 14, 2026~Jul. 31, 2026	Dec. 05, 2026	Radiation (03CH11-HY)
Signal Analyzer	Keysight	N9010A	MY54200486	10Hz~44GHz	May 28, 2026	Jul. 14, 2026~Jul. 31, 2026	May 27, 2027	Radiation (03CH11-HY)
EMI Test Receiver	Agilent	N9038A(MXE)	MY53290045	20Hz~8.4GHz	Apr. 30, 2026	Jul. 14, 2026~Jul. 31, 2026	Apr. 29, 2027	Radiation (03CH11-HY)
Controller	EMEC	EM 1000	N/A	Control Turn table & Ant Mast	N/A	Jul. 14, 2026~Jul. 31, 2026	N/A	Radiation (03CH11-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	Jul. 14, 2026~Jul. 31, 2026	N/A	Radiation (03CH11-HY)
Turn Table	EMEC	TT 2000	N/A	0~360 Degree	N/A	Jul. 14, 2026~Jul. 31, 2026	N/A	Radiation (03CH11-HY)
Software	Audix	E3	RK-002391	N/A	N/A	Jul. 14, 2026~Jul. 31, 2026	N/A	Radiation (03CH11-HY)
USB Data Logger	TECPEL	TR-32	HE17XM6804	N/A	Dec. 15, 2025	Jul. 14, 2026~Jul. 31, 2026	Dec. 14, 2026	Radiation (03CH11-HY)
Hygrometer	TECPEL	DTM-303B	TP200880	N/A	Aug. 26, 2025	Jul. 14, 2026~Jul. 31, 2026	Aug. 25, 2026	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	804013/2	30M~40G	Mar. 04, 2026	Jul. 14, 2026~Jul. 31, 2026	Mar. 03, 2027	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	9K~30M	Mar. 04, 2026	Jul. 14, 2026~Jul. 31, 2026	Mar. 03, 2027	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	30M~40G	Mar. 04, 2026	Jul. 14, 2026~Jul. 31, 2026	Mar. 03, 2027	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	805139 2	9K~30M	Mar. 04, 2026	Jul. 14, 2026~Jul. 31, 2026	Mar. 03, 2027	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	805139 2	30M~40G	Mar. 04, 2026	Jul. 14, 2026~Jul. 31, 2026	Mar. 03, 2027	Radiation (03CH11-HY)
Filter	Wainwright	WHK20/1000C 7/40SS	SN2	20MHz High Pass Filter	Sep. 09, 2025	Jul. 14, 2026~Jul. 31, 2026	Sep. 08, 2026	Radiation (03CH11-HY)

5. Measurement Uncertainty

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	3.70 dB
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Uncertainty of Radiated Emission Measurement (9 kHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	3.40 dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	6.50 dB
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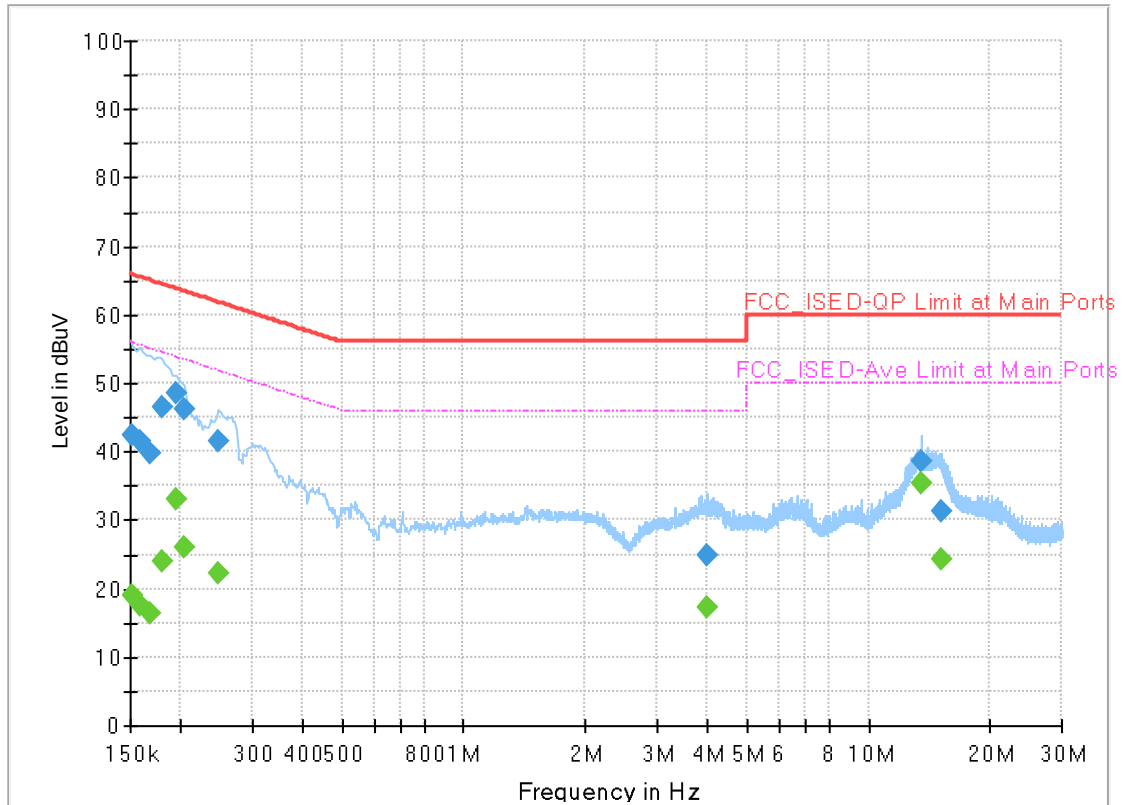


Appendix A. Test Results of Conducted Emission Test

EUT Information

Report NO : 670124
 Test Mode : Mode 1
 Test Voltage : 120Vac/60Hz
 Phase : Line

Full Spectrum



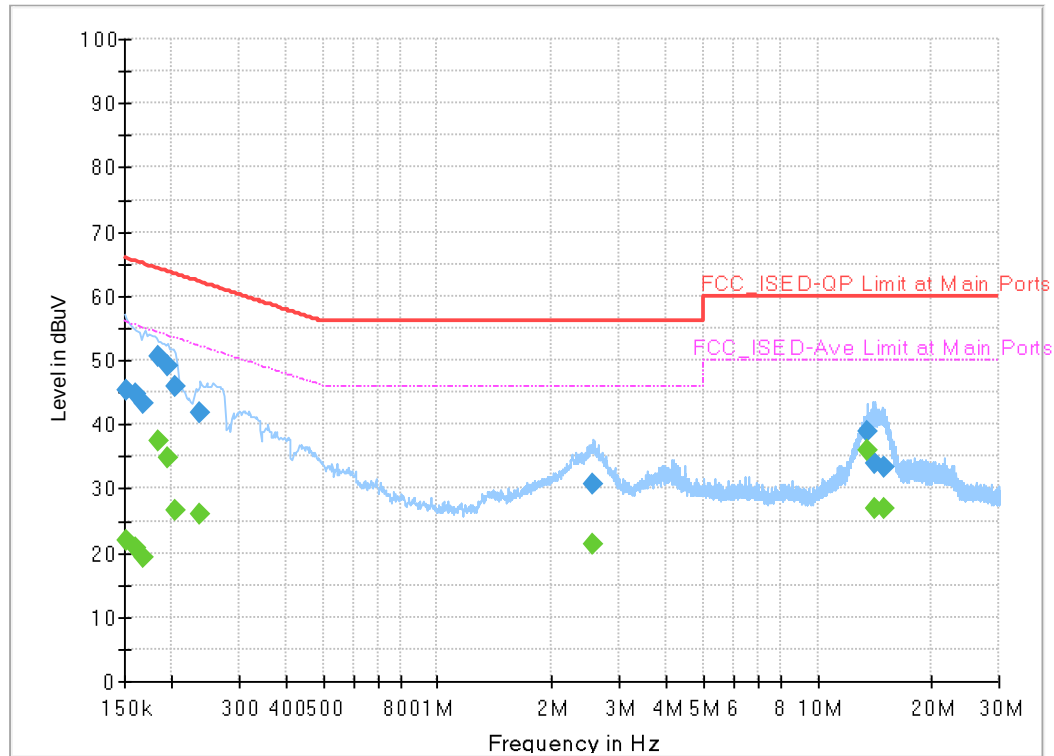
Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	19.07	55.88	36.81	L1	OFF	19.9
0.152250	42.43	---	65.88	23.45	L1	OFF	19.9
0.159000	---	17.64	55.52	37.88	L1	OFF	19.9
0.159000	41.49	---	65.52	24.03	L1	OFF	19.9
0.168000	---	16.51	55.06	38.55	L1	OFF	19.9
0.168000	39.69	---	65.06	25.37	L1	OFF	19.9
0.179250	---	23.97	54.52	30.55	L1	OFF	19.9
0.179250	46.43	---	64.52	18.09	L1	OFF	19.9
0.195000	---	33.09	53.82	20.73	L1	OFF	19.9
0.195000	48.56	---	63.82	15.26	L1	OFF	19.9
0.204000	---	26.17	53.45	27.28	L1	OFF	19.9
0.204000	46.34	---	63.45	17.11	L1	OFF	19.9
0.246750	---	22.30	51.87	29.57	L1	OFF	19.9
0.246750	41.50	---	61.87	20.37	L1	OFF	19.9
4.008750	---	17.37	46.00	28.63	L1	OFF	20.1
4.008750	24.84	---	56.00	31.16	L1	OFF	20.1
13.560000	---	35.52	50.00	14.48	L1	OFF	20.7
13.560000	38.61	---	60.00	21.39	L1	OFF	20.7
15.213750	---	24.24	50.00	25.76	L1	OFF	20.8
15.213750	31.24	---	60.00	28.76	L1	OFF	20.8

EUT Information

Report NO : 670124
 Test Mode : Mode 1
 Test Voltage : 120Vac/60Hz
 Phase : Neutral

Full Spectrum

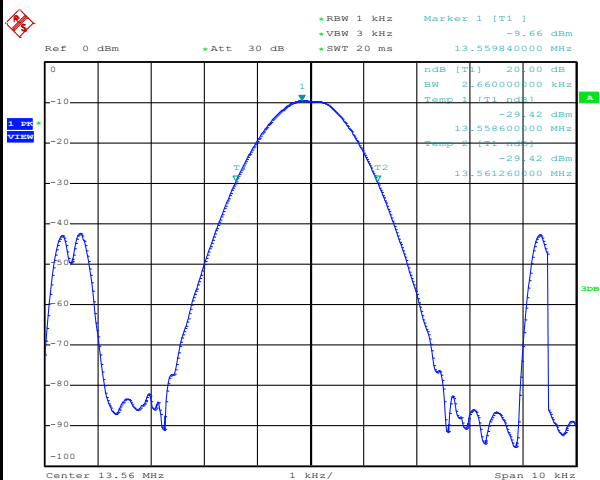
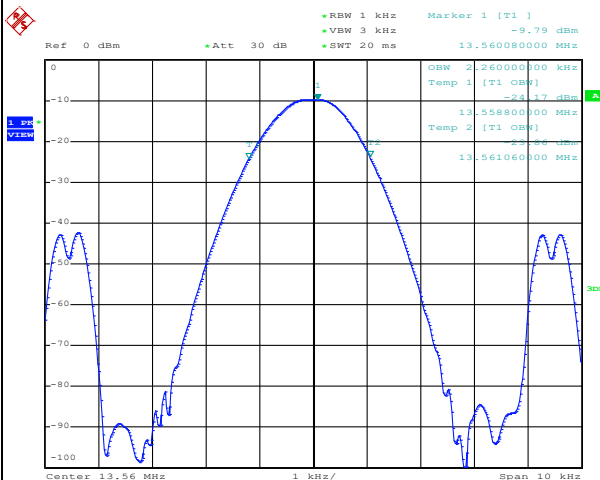


Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	21.91	55.88	33.97	N	OFF	19.9
0.152250	45.28	---	65.88	20.60	N	OFF	19.9
0.161250	---	20.83	55.40	34.57	N	OFF	19.9
0.161250	44.87	---	65.40	20.53	N	OFF	19.9
0.168000	---	19.18	55.06	35.88	N	OFF	19.9
0.168000	43.16	---	65.06	21.90	N	OFF	19.9
0.183750	---	37.45	54.31	16.86	N	OFF	19.9
0.183750	50.54	---	64.31	13.77	N	OFF	19.9
0.195000	---	34.85	53.82	18.97	N	OFF	19.9
0.195000	49.06	---	63.82	14.76	N	OFF	19.9
0.204000	---	26.71	53.45	26.74	N	OFF	19.9
0.204000	46.02	---	63.45	17.43	N	OFF	19.9
0.237750	---	26.02	52.17	26.15	N	OFF	19.9
0.237750	41.81	---	62.17	20.36	N	OFF	19.9
2.573250	---	21.35	46.00	24.65	N	OFF	20.0
2.573250	30.80	---	56.00	25.20	N	OFF	20.0
13.560000	---	35.86	50.00	14.14	N	OFF	20.7
13.560000	38.96	---	60.00	21.04	N	OFF	20.7
14.203500	---	26.86	50.00	23.14	N	OFF	20.7
14.203500	34.06	---	60.00	25.94	N	OFF	20.7
14.939250	---	26.77	50.00	23.23	N	OFF	20.7
14.939250	33.41	---	60.00	26.59	N	OFF	20.7

Appendix B. Test Results of Near Field Test Items

B1. Test Result of 20dB Spectrum Bandwidth

Test mode		Test Frequency (MHz)	
NFC Tx		13.56	
 Ref 0 dBm Att 30 dB RBW 1 kHz VBW 3 kHz SWT 20 ms Marker 1 [T1] -9.66 dBm 13.559840000 MHz 2.660000000 kHz 13.558600000 MHz 13.561260000 MHz Center 13.56 MHz 1 kHz/ Span 10 kHz Date: 17.JUL.2026 09:02:34		 Ref 0 dBm Att 30 dB RBW 1 kHz VBW 3 kHz SWT 20 ms Marker 1 [T1] -9.79 dBm 13.560080000 MHz 2.260000000 kHz 13.558600000 MHz 13.561260000 MHz Center 13.56 MHz 1 kHz/ Span 10 kHz Date: 17.JUL.2026 09:01:01	
20dB Bandwidth (kHz)	2.660	99% OccupiedBW(kHz)	2.260
Frequency range (MHz)	$f_L > 13.553$	13.558600000	Test Result
	$f_H < 13.567$	13.561260000	Complies

Remark: Because the measured signal is CW adjusting the RBW per C63.10 would not be practical since measured bandwidth will always follow the RBW and the result will be approximately twice the RBW.

B2. Test Result of Frequency Stability

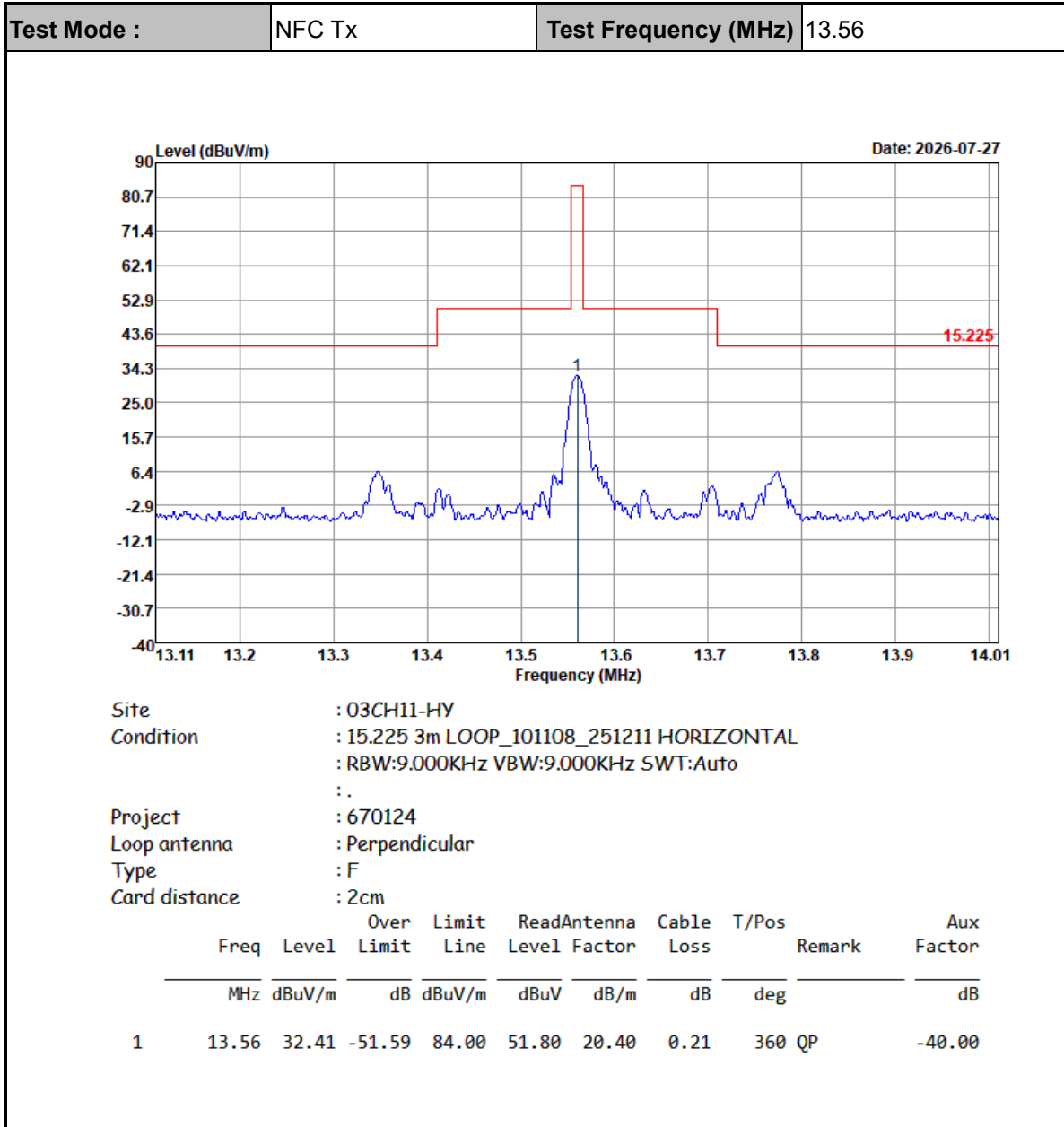
Voltage vs. Frequency Stability		Temperature vs. Frequency Stability		
Voltage (Vdc)	Measurement Frequency (MHz)	Temperature (°C)	Time (min)	Measurement Frequency (MHz)
5	13.559930	-20	0	13.559980
4.75	13.559910		2	13.559980
5.25	13.559920		5	13.559980
			10	13.559980
		-10	0	13.559970
			2	13.559960
			5	13.559960
			10	13.559960
		0	0	13.559940
			2	13.559940
			5	13.559940
			10	13.559940
		10	0	13.559920
			2	13.559910
			5	13.559920
			10	13.559910
		20	0	13.559900
			2	13.559900
			5	13.559900
			10	13.559900
		30	0	13.559890
			2	13.559900
			5	13.559910
			10	13.559900
		40	0	13.559920
			2	13.559920
			5	13.559930
			10	13.559930



Voltage vs. Frequency Stability		Temperature vs. Frequency Stability		
Voltage (Vdc)	Measurement Frequency (MHz)	Temperature (°C)	Time (min)	Measurement Frequency (MHz)
		50	0	13.559950
			2	13.559950
			5	13.559950
			10	13.559960
Max.Deviation (MHz)	-0.000090	Max.Deviation (MHz)		-0.000110
Max.Deviation (ppm)	-6.6372	Max.Deviation (ppm)		-8.1121
Limit	FS < ±100 ppm	Limit		FS < ±100 ppm
Test Result	PASS	Test Result		PASS

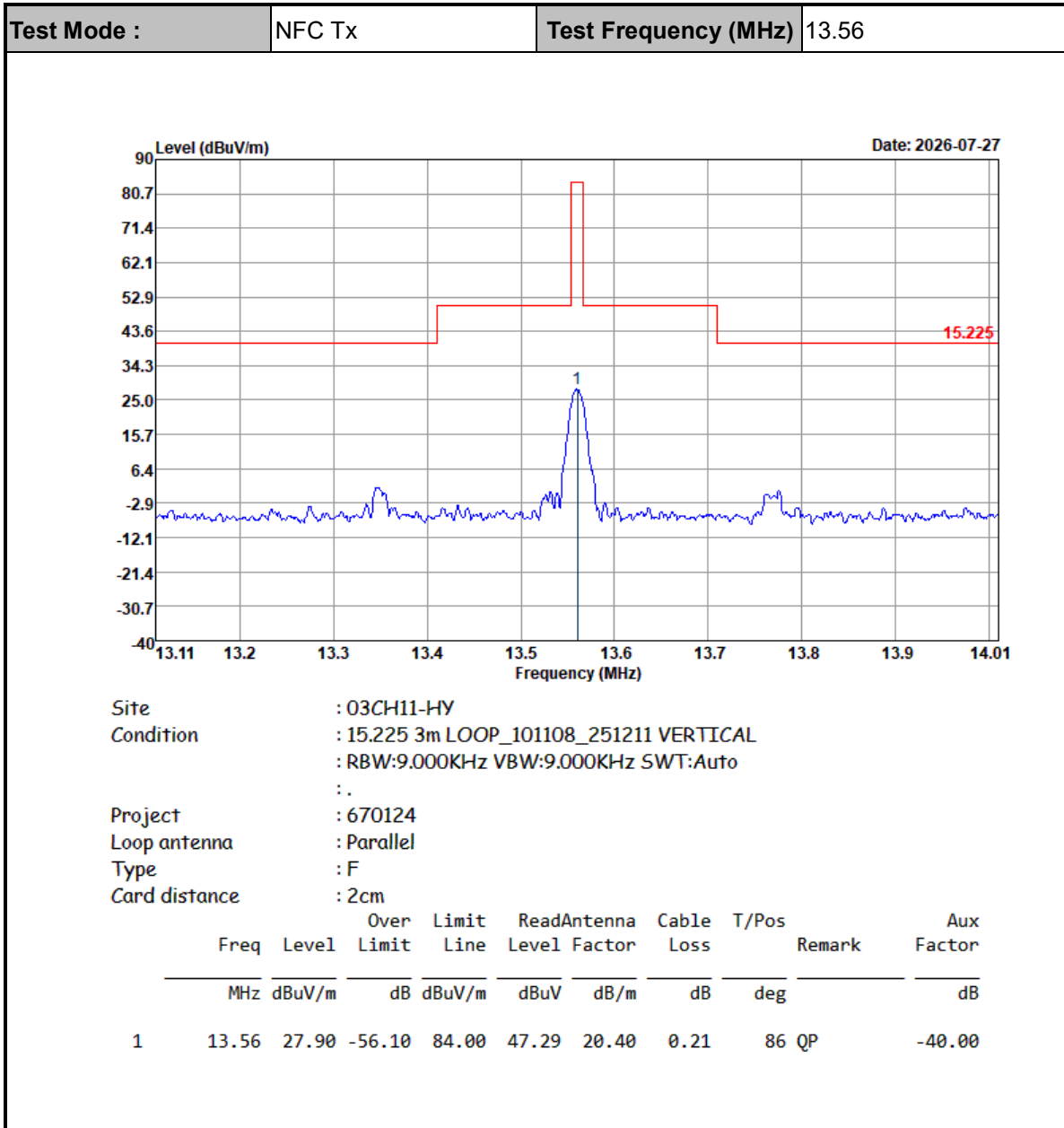
Appendix C. Test Results of Radiated Test Items

C1. Test Result of Field Strength of Fundamental Emissions

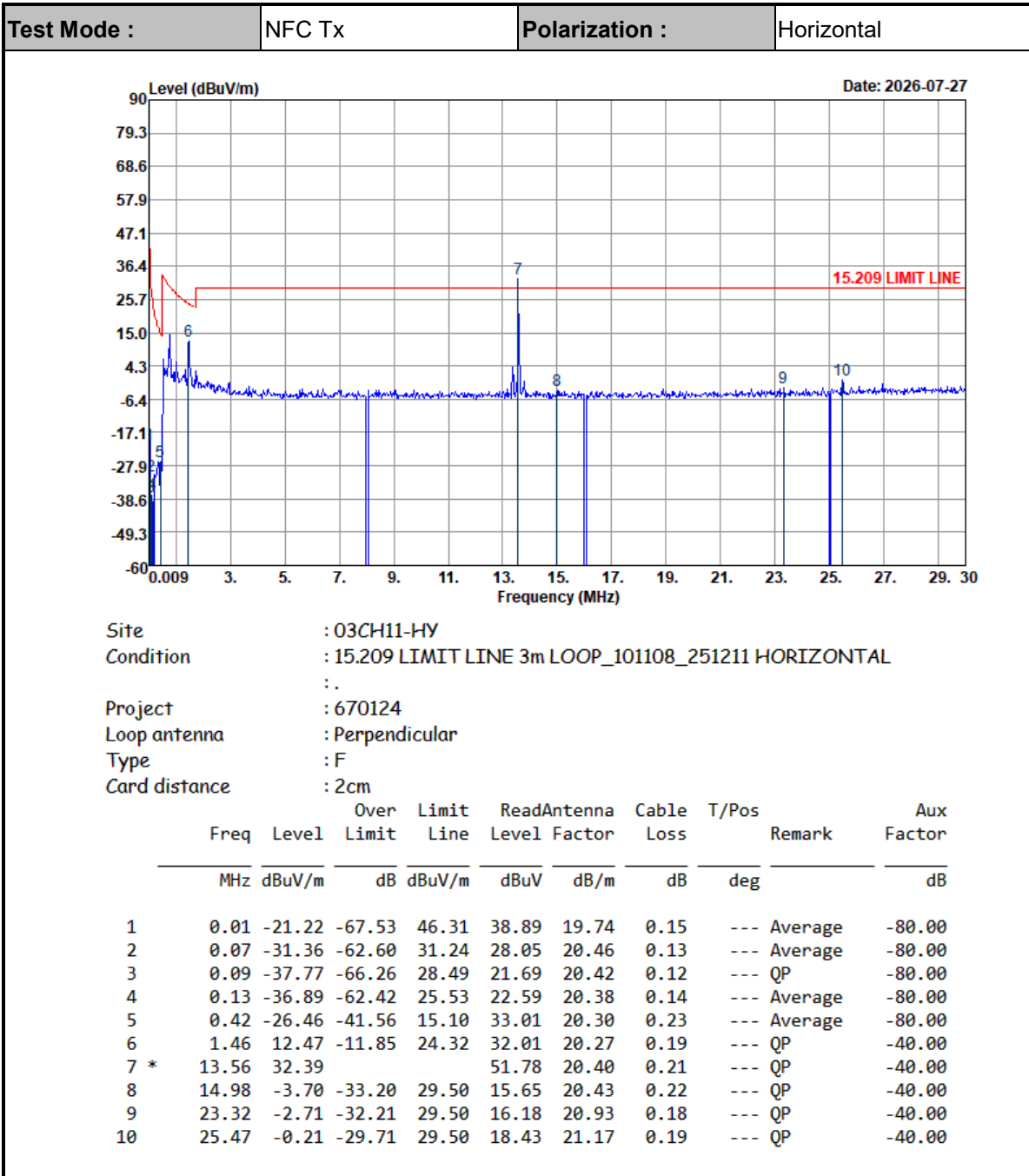


Note :

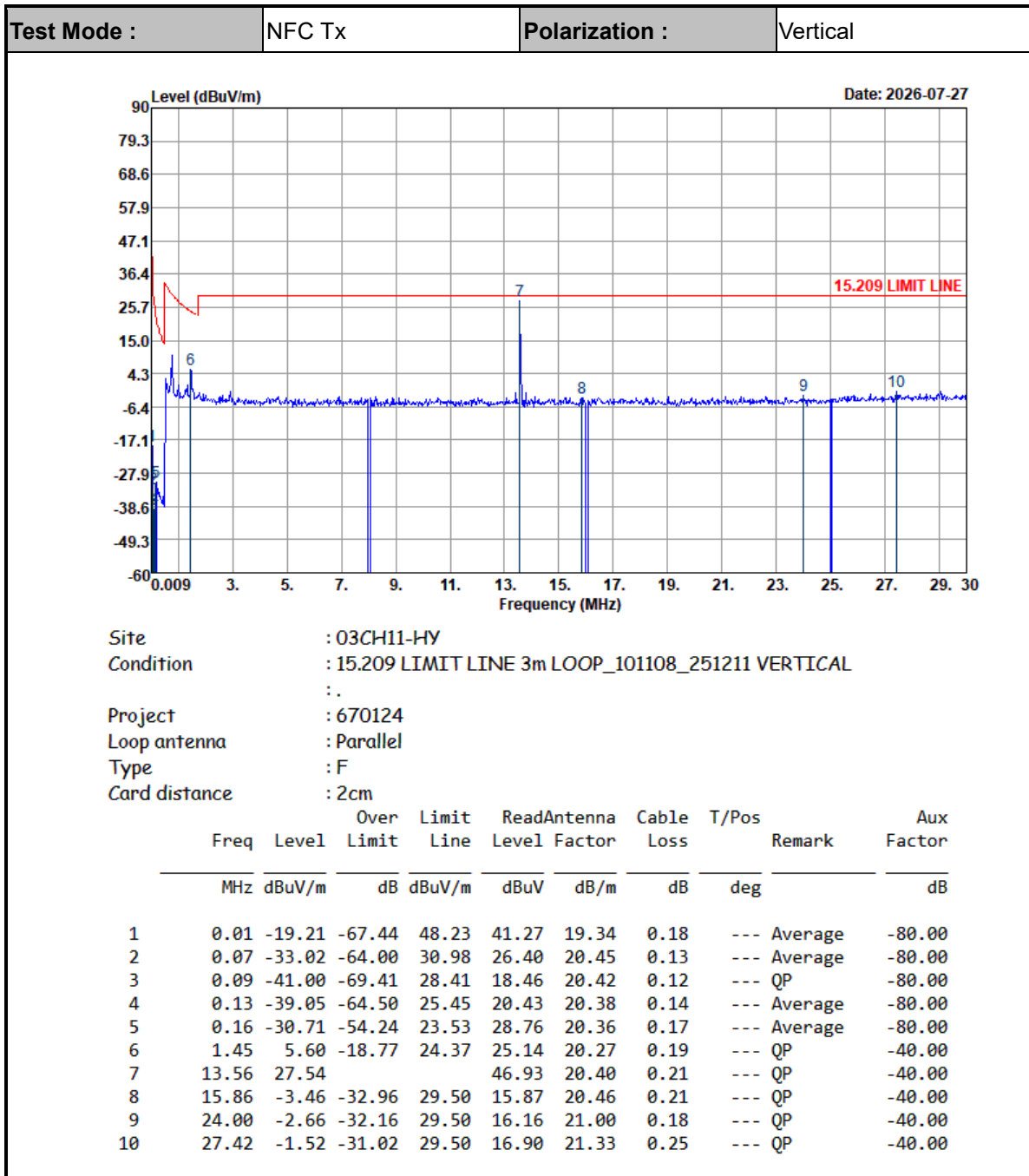
1. Distance extrapolation factor = $40 \log (\text{specific distance} / \text{test distance}) \text{ (dB)} = 40 \log (30/3) = 40 \text{ (dB)}$
2. Level = Antenna Factor + Cable Loss + Read Level - Distance extrapolation factor.

**Note :**

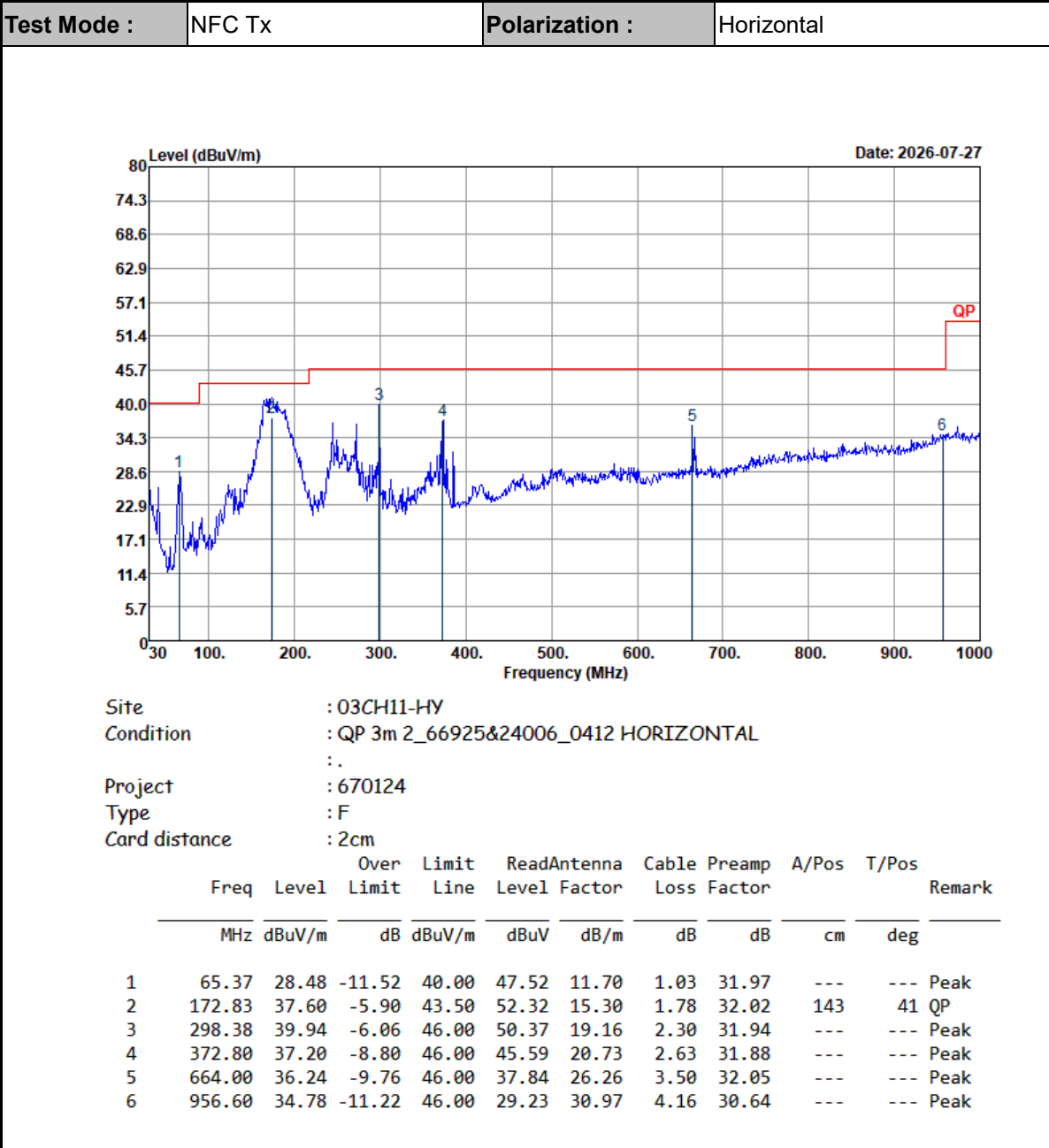
1. Distance extrapolation factor = $40 \log (\text{specific distance} / \text{test distance})$ (dB) = $40 \log (30/3) = 40$ (dB)
2. Level = Antenna Factor + Cable Loss + Read Level - Distance extrapolation factor.

C2. Results of Radiated Spurious Emissions (9 kHz~30MHz)

Note :

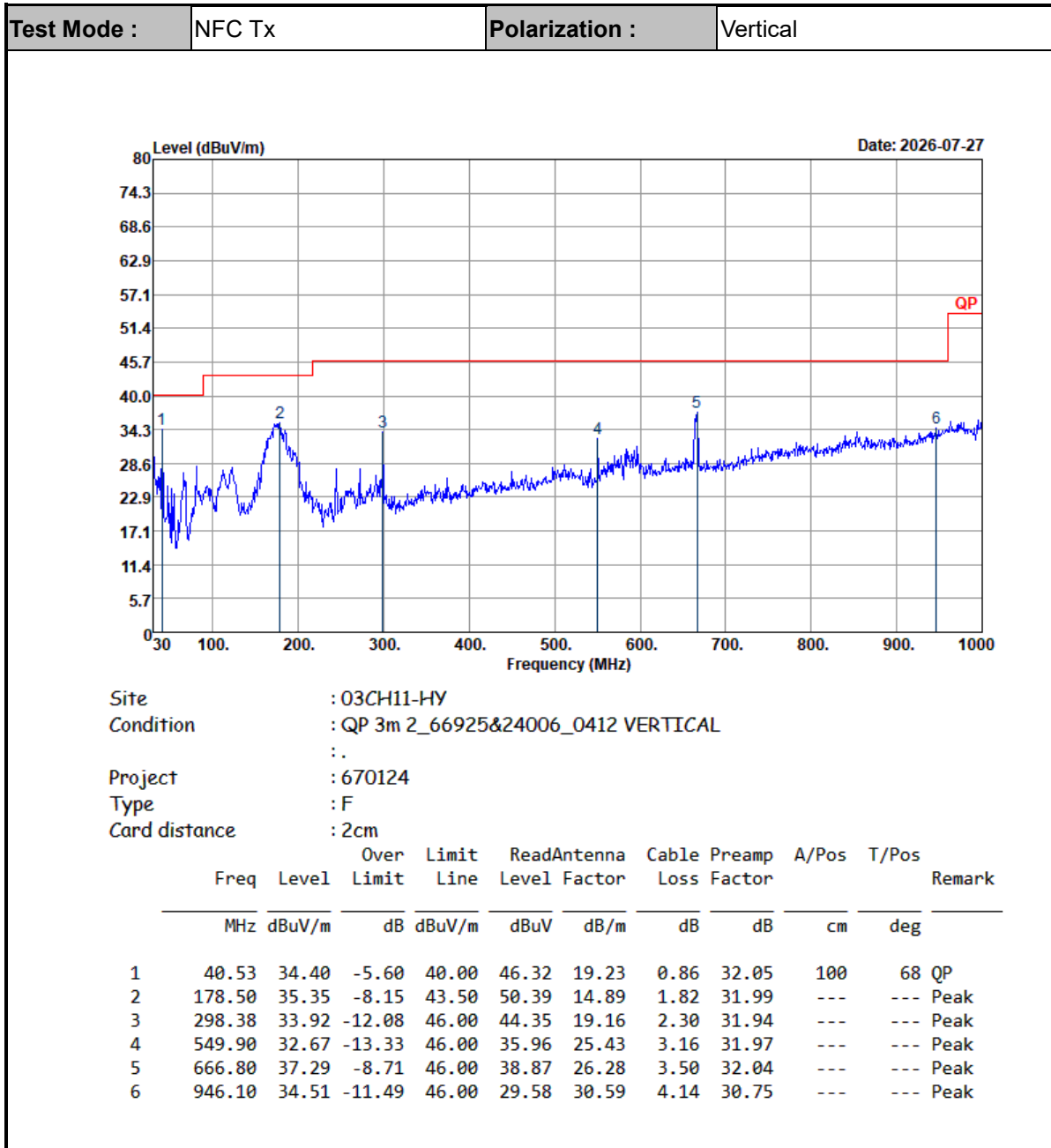
1. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
2. Distance extrapolation factor = $40 \log (\text{specific distance} / \text{test distance})$ (dB)
EX.:
For below 490kHz Distance extrapolation factor = $40 \log (300/3) = 80$ (dB)
For 490kHz to 30MHz Distance extrapolation factor = $40 \log (30/3) = 40$ (dB)
3. Level = Antenna Factor + Cable Loss + Read Level - Distance extrapolation factor.
4. 13.56 MHz is fundamental signal which can be ignored


Note :

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)
EX.:
For below 490kHz Distance extrapolation factor = $40 \log (300/3) = 80$ (dB)
For 490kHz to 30MHz Distance extrapolation factor = $40 \log (30/3) = 40$ (dB)
3. Level = Antenna Factor + Cable Loss + Read Level - Distance extrapolation factor.
4. 13.56 MHz is fundamental signal which can be ignored

C3. Results of Radiated Spurious Emissions (30MHz~1GHz)

Note:

1. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor= Level.
4. The emission position marked as "-" means no suspected emission found and emission level has at least 6dB margin against limit or emission is noise floor only.


Note:

1. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
2. Emission level (dBuV/m) = 20 log Emission level (μV/m).
3. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor= Level.
4. The emission position marked as "-" means no suspected emission found and emission level has at least 6dB margin against limit or emission is noise floor only.