FCC CO-LOCATION RADIO TEST REPORT

Equipment	:	**AC Charging Station_IC 80A**
Brand Name	:	**LITEON**
Model Name	:	**EX-1193-1, EX-1193-3, EX-1193-5, EX-1193-1-48, EX-1193-3-48, EX-1193-5-48**
Applicant	:	**LITE-ON Technology Corporation** **Bldg. C, 90, Chien 1 Rd., Chung-Ho, New Taipei City 23585, Taiwan (R.O.C)**
Manufacturer	:	**LITE-ON Technology Corporation** **Bldg. C, 90, Chien 1 Rd., Chung-Ho, New Taipei City 23585, Taiwan (R.O.C)**
Standard	:	**FCC 47 CFR Part 2, 22(H), 24(E), 27** **FCC Part 15 Subpart C §15.247** **FCC Part 15 Subpart C §15.225**

The product was received on Jul. 17, 2023 and testing was performed from Aug. 17, 2023 to Aug. 26, 2023. 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.

Louis Wu

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
FR371710C	01	Initial issue of report	Sep. 21, 2023

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	§2.1053 §22.917 (a) §24.238 (a) §27.53 (h) §90.691	Radiated Spurious Emission (Band 4) (Band 5) (Band 25) (Band 13) (Band 12)	Pass	15.32 dB under the limit at 1560.00 MHz
3.2	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	Pass	1.47 dB under the limit at 4924.00 MHz
3.3	15.225(a)(b)(c)	Field Strength of Fundamental Emissions	Pass	Max level 24.46 dBμV/m at 13.56 MHz
3.4	15.225(d) 15.209	Radiated Spurious Emissions	Pass	5.31 dB under the limit at 138.00MHz
3.5	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/manufacturer 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: Yun Huang
Report Producer: Clio Lo

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
General Specs	GSM//LTE, Wi-Fi 2.4GHz 802.11b/g/n, and NFC
Integrated WWAN Module	Brand Name: Quectel Model Name: BG96
Integrated WLAN Module	Brand Name: LITEON Model Name: LILY-W131
Integrated RFID Module	Brand Name: REYAX Model Name: RYORR2L
Antenna Type	WWAN: Fixed Internal Antenna WLAN: FPC Antenna NFC: PCB Loop Antenna
Antenna Gain (dBi)	LTE Band 4 : 2.3 LTE Band 5 : 1.0 LTE Band 12 : 2.4 LTE Band 13 : 0.8 LTE Band 25 : 3.2 WLAN 2.4GHz: 3.3

EUT Information						
Contains	**EX-1193-1**	**EX-1193-3**	**EX-1193-5**	**EX-1193-1-48**	**EX-1193-3-48**	**EX-1193-5-48**
LTE module	Support			Support		
Wi-Fi module	Support	Support	Support	Support	Support	Support
RFID module	Support		Support	Support		Support
current rating 80A	Support	Support	Support			
current rating 48A				Support	Support	Support

Remark:

1. The EUT's information above is declared by manufacturer. Please refer to Disclaimer in report summary.
2. All the tests performed with EX-1193-1.

1.2 Modification of EUT

No modifications made to the EUT during the testing.

1.3 Testing Location

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.) TEL: +886-3-327-0868 FAX: +886-3-327-0855	
Test Site No.	**Sporton Site No.**	
	03CH13-HY	03CH11-HY
Test Engineer	Rain Lee, Jacky Hung and Mancy Chou	Leo Li, Sam Chou and Troye Hsieh
Temperature (℃)	20~26	19.8~21.7
Relative Humidity (%)	40~65	55.1~65.7

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

FCC designation No.: TW3786

1.4 Applicable Standards

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

- FCC 47 CFR Part 2, 22(H), 24(E), 27
- FCC Part 15 Subpart C §15.247
- FCC Part 15 Subpart C §15.225
- FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- FCC KDB 414788 D01 Radiated Test Site v01r01.
- FCC KDB Publication No. 558074 D01 15.247 Meas Guidance v05r02
- ANSI C63.10-2013
- ANSI C63.26-2015
- ANSI / TIA-603-E

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.

2 Test Configuration of Equipment Under Test

a. Antenna port radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v03r01.

b. 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 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

c. When the EUT is open, it will continue NFC Tx.

2.1 Carrier Frequency and Channel

2412-2462 MHz	
802.11b	
Channel	Freq. (MHz)
11	2462

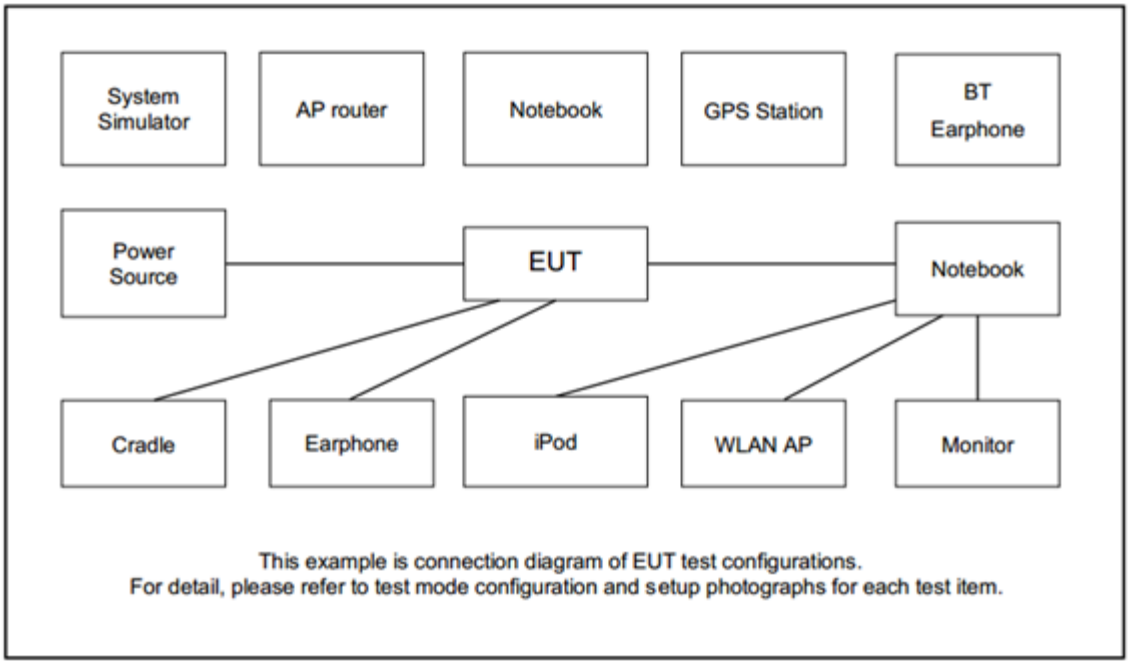
2.2 Test Mode

The final test modes include the worst data rates for each modulation shown in the table below.

<Co-Location>

Mode	Modulation	Data Rate
1	Cat-M1 LTE Band 4 Link + WLAN 2.4GHz 802.11b + NFC Link	QPSK + 6Mbps
2	Cat-M1 LTE Band 5 Link + WLAN 2.4GHz 802.11b + NFC Link	QPSK + 6Mbps
3	Cat-M1 LTE Band 13 Link + WLAN 2.4GHz 802.11b + NFC Link	QPSK + 6Mbps
4	Cat-M1 LTE Band 25 Link + WLAN 2.4GHz 802.11b + NFC Link	QPSK + 6Mbps
5	NB-IoT LTE Band 4 Link + WLAN 2.4GHz 802.11b + NFC Link	QPSK + 6Mbps
6	NB-IoT LTE Band 5 Link + WLAN 2.4GHz 802.11b + NFC Link	QPSK + 6Mbps
7	NB-IoT LTE Band 12 Link + WLAN 2.4GHz 802.11b + NFC Link	QPSK + 6Mbps
8	NB-IoT LTE Band 25 Link + WLAN 2.4GHz 802.11b + NFC Link	QPSK + 6Mbps

2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m

2.5 EUT Operation Test Setup

The RF test items, utility “labtool v2.0.0.92” was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide WLAN function channel selection, power level, data rate and the application type and for continuous transmitting signals.

3 Test Result

3.1 Radiated Spurious Emission Measurement for WWAN mode

3.1.1 Description of Radiated Spurious Emission Measurement

The radiated spurious emission was measured by substitution method according to ANSI / TIA-603-E and ANSI C63.26. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

For LTE Band 13

For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to −70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and −80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

3.1.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 7, ANSI / TIA-603-E Section 2.2.12.

1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
    The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
    EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
    ERP (dBm) = EIRP - 2.15

3.2 Radiated Band Edges and Spurious Emission Measurement for WLAN mode

3.2.1 Limit of Radiated band edge and Spurious Emission Measurement

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

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

3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

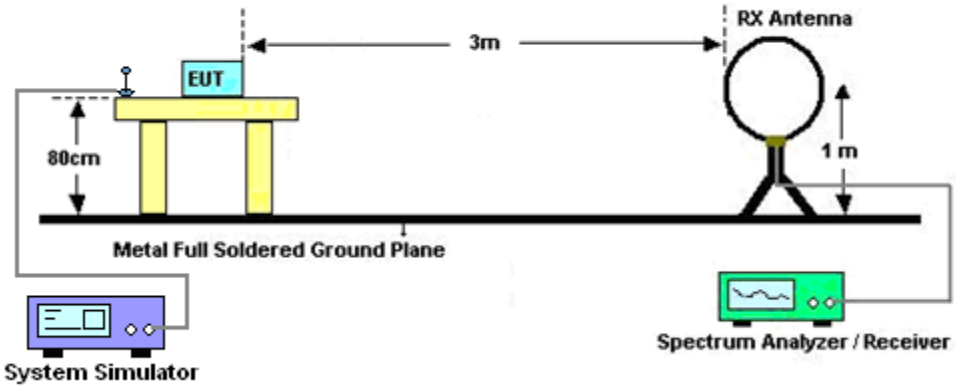
1. The testing follows the ANSI C63.10 Section 11.12.1 Radiated emission measurements.
2. The EUT is arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT is placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
4. The EUT is set 3 meters away from the receiving antenna, which is mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. 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 "-".

7. Radiated testing above 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 for scanning all frequencies. When there is no suspected emission found and the harmonic emission level is with at least 6 dB margin against average limit line, the position is marked as "-".

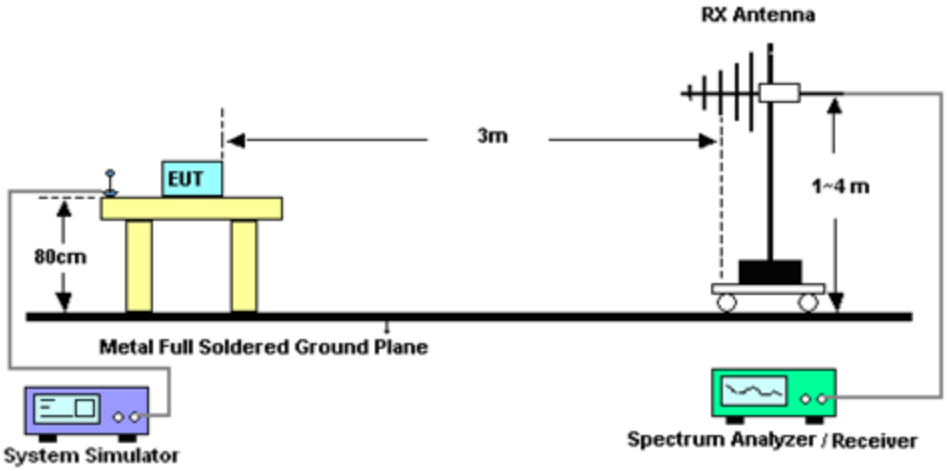
8. Use the following spectrum analyzer settings:
   (1) Span shall wide enough to fully capture the emission being measured;
   (2) Set RBW = 100 kHz for f < 1 GHz; VBW ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
   (3) Set RBW = 1 MHz, VBW= 3 MHz for f ≥ 1 GHz for peak measurement.
   For average measurement:
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

3.2.4 Test Setup

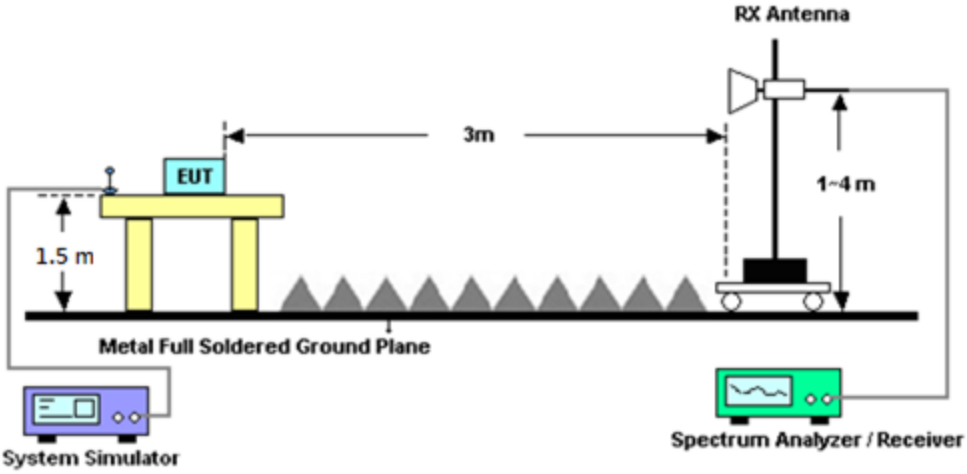
For radiated emissions below 30MHz



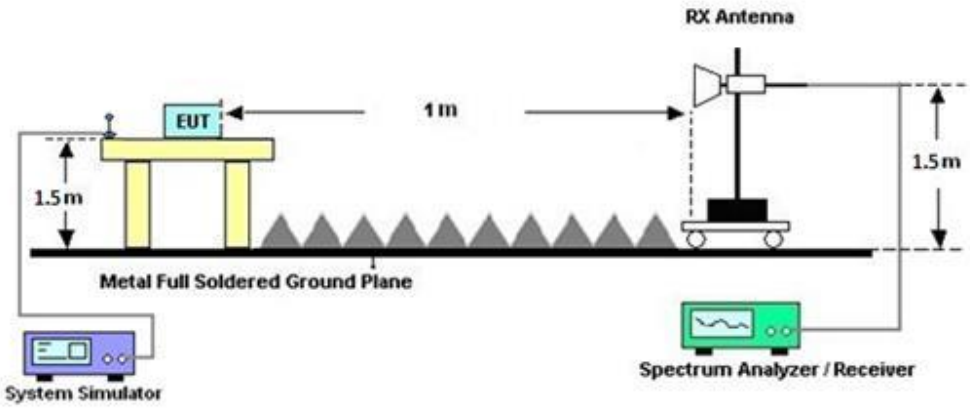
For radiated emissions from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



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

The low frequency, which starts from 9 kHz to 30 MHz, is pre-scanned and the result which is 20 dB lower than the limit line is not reported.

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 comes out very similar.

3.2.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix B and C.

3.2.7 Duty Cycle

Please refer to Appendix D.

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

Please refer to Appendix B and C.

3.3 Field Strength of Fundamental Emissions and Mask Measurement for NFC mode

3.3.1 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 (μV/m) at 30m	Field Strength (dBμV/m) at 30m	Field Strength (dBμV/m) at 10m	Field Strength (dBμV/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 (specific distance / test distance) (dB)

3.3.2 Measuring Instruments

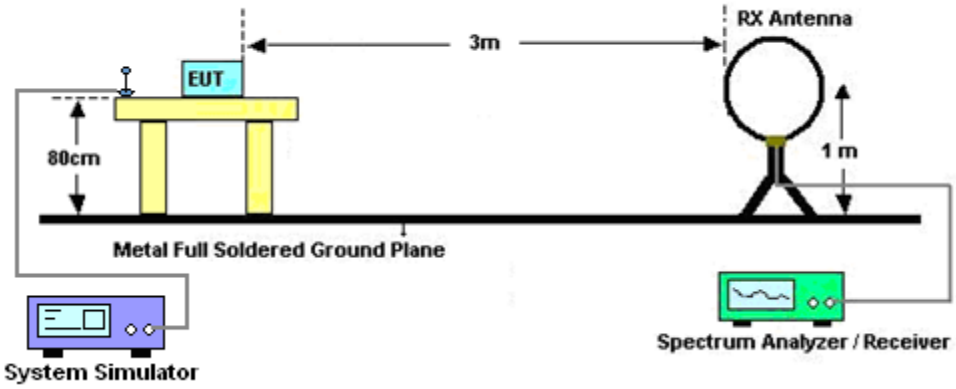
Please refer to the measuring equipment list in this test report.

3.3.3 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).

3.3.4 Test Setup

For radiated test below 30MHz



3.3.5 Test Result of Field Strength of Fundamental Emissions and Mask

Please refer to Appendix E.

3.4 Radiated Emissions Measurement for NFC mode

3.4.1 Limit

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

<For FCC>

Frequencies (MHz)	Field Strength (μV/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

3.4.2 Measuring Instruments

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

3.4.3 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

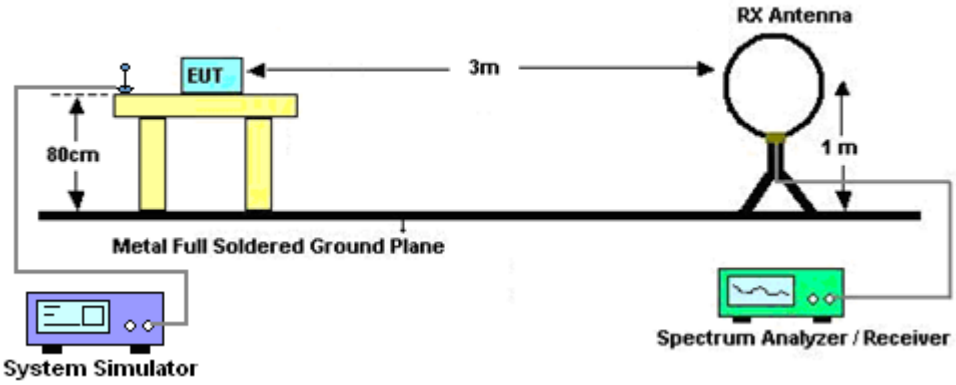
Note: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz and 110-490 kHz. Radiated emission limits in these two bands are based on measurements employing an average detector.

3.4.4 Test Procedures

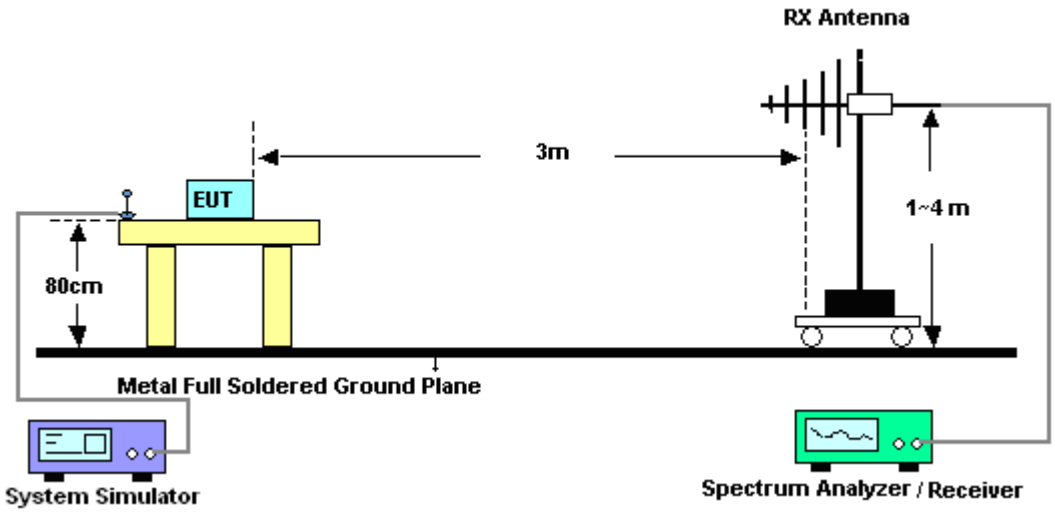
1. Configure the EUT according to ANSI C63.10. The EUT is placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower is placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting 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 "-".

3.4.5 Test Setup

For radiated test below 30MHz



For radiated test above 30MHz



3.4.6 Test Result of Radiated Emissions Measurement

Please refer to Appendix E.

Remark: 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.

3.5 Antenna Requirements

3.5.1 Standard Applicable

<For WWAN & WLAN mode>

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.

<For NFC mode>

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.

3.5.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Sep. 20, 2022	Aug. 17, 2023~ Aug. 24, 2023	Sep. 19, 2023	Radiation (03CH13-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 07, 2022	Aug. 17, 2023~ Aug. 24, 2023	Dec. 06, 2023	Radiation (03CH13-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA9170	1223	18GHz-40GHz	Jul. 10, 2023	Aug. 17, 2023~ Aug. 24, 2023	Jul. 09, 2024	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz~40GHz	Dec. 20, 2022	Aug. 17, 2023~ Aug. 24, 2023	Dec. 19, 2023	Radiation (03CH13-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170576	18GHz~40GHz	May 15, 2022	Aug. 17, 2023~ Aug. 24, 2023	May 14, 2024	Radiation (03CH13-HY)
Amplifier	SONOMA	310N	187282	9kHz~1GHz	Dec. 14, 2022	Aug. 17, 2023~ Aug. 24, 2023	Dec. 13, 2023	Radiation (03CH13-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N -06	40103 & 07	30MHz~1GHz	Apr. 23, 2023	Aug. 17, 2023~ Aug. 24, 2023	Apr. 22, 2024	Radiation (03CH13-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N -06	41912 & 05	30MHz~1GHz	Feb. 05, 2023	Aug. 17, 2023~ Aug. 24, 2023	Feb. 04, 2024	Radiation (03CH13-HY)
Hygrometer	TECPEL	DTM-303B	TP140325	N/A	Nov. 07, 2022	Aug. 17, 2023~ Aug. 24, 2023	Nov. 06, 2023	Radiation (03CH13-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1590074	1GHz~18GHz	May 16, 2023	Aug. 17, 2023~ Aug. 24, 2023	May 15, 2024	Radiation (03CH13-HY)
Preamplifier	EM Electronics	EM01G18G	060803	1GHz~18GHz	Jan. 10, 2023	Aug. 17, 2023~ Aug. 24, 2023	Jan. 09, 2024	Radiation (03CH13-HY)
Spectrum Analyzer	Keysight	N9010A	MY55370526	10Hz~44GHz	Mar. 23, 2023	Aug. 17, 2023~ Aug. 24, 2023	Mar. 22, 2024	Radiation (03CH13-HY)
Filter	Wainwright	WLK4-1000-1530-8000-40SS	SN12	1.53GHz Low Pass Filter	Sep. 13, 2022	Aug. 17, 2023~ Aug. 24, 2023	Sep. 12, 2023	Radiation (03CH13-HY)
Filter	Wainwright	WHKX12-1080-1200-15000-60SS	SN3	1.2GHz High Pass Filter	Jun. 29, 2023	Aug. 17, 2023~ Aug. 24, 2023	Jun. 28, 2024	Radiation (03CH13-HY)
Filter	Wainwright	WHKX12-2700-3000-18000-60SS	SN2	3GHz High Pass Filter	Jul. 10, 2023	Aug. 17, 2023~ Aug. 24, 2023	Jul. 09, 2024	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0030/126E	30MHz~18GHz	Feb. 08, 2023	Aug. 17, 2023~ Aug. 24, 2023	Feb. 07, 2024	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	804793/4	30MHz~18GHz	Feb. 08, 2023	Aug. 17, 2023~ Aug. 24, 2023	Feb. 07, 2024	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY15682/4	9 kHz~18GHz	Feb. 22, 2023	Aug. 17, 2023~ Aug. 24, 2023	Feb. 21, 2024	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24961/4	30MHz~18GHz	Feb. 08, 2023	Aug. 17, 2023~ Aug. 24, 2023	Feb. 07, 2024	Radiation (03CH13-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Aug. 17, 2023~ Aug. 24, 2023	N/A	Radiation (03CH13-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Aug. 17, 2023~ Aug. 24, 2023	N/A	Radiation (03CH13-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Aug. 17, 2023~ Aug. 24, 2023	N/A	Radiation (03CH13-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-02038	1GHz~18GHz	Jul. 31, 2023	Aug. 17, 2023~ Aug. 24, 2023	Jul. 30, 2024	Radiation (03CH13-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1212	1GHz~18GHz	Mar. 23, 2023	Aug. 17, 2023~ Aug. 24, 2023	Mar. 22, 2024	Radiation (03CH13-HY)

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Bilog Antenna	TESEQ	CBL 6111D & N-6-06	35414 & AT-N0602	30MHz~1GHz	Oct. 08, 2022	Aug. 24, 2023~ Aug. 26, 2023	Oct. 07, 2023	Radiation (03CH11-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Sep. 20, 2022	Aug. 24, 2023~ Aug. 26, 2023	Sep. 19, 2023	Radiation (03CH11-HY)
Amplifier	SONOMA	310N	187312	9kHz~1GHz	Dec. 09, 2022	Aug. 24, 2023~ Aug. 26, 2023	Dec. 08, 2023	Radiation (03CH11-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200486	10Hz~44GHz	Oct. 07, 2022	Aug. 24, 2023~ Aug. 26, 2023	Oct. 06, 2023	Radiation (03CH11-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY53290045	20MHz~8.4GHz	Apr. 25, 2023	Aug. 24, 2023~ Aug. 26, 2023	Apr. 24, 2024	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2859/2	30MHz~40GHz	Mar. 07, 2023	Aug. 24, 2023~ Aug. 26, 2023	Mar. 06, 2024	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	9K~30M	Mar. 07, 2023	Aug. 24, 2023~ Aug. 26, 2023	Mar. 06, 2024	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	30M~40G	Mar. 07, 2023	Aug. 24, 2023~ Aug. 26, 2023	Mar. 06, 2024	Radiation (03CH11-HY)
Filter	Wainwright	WLK4-1000-1530-8000-40SS	SN11	1.53G Low Pass	Sep. 12, 2022	Aug. 24, 2023~ Aug. 26, 2023	Sep. 11, 2023	Radiation (03CH11-HY)
Controller	EMEC	EM 1000	N/A	Control Turn table & Ant Mast	N/A	Aug. 24, 2023~ Aug. 26, 2023	N/A	Radiation (03CH11-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	Aug. 24, 2023~ Aug. 26, 2023	N/A	Radiation (03CH11-HY)
Turn Table	EMEC	TT 2000	N/A	0~360 Degree	N/A	Aug. 24, 2023~ Aug. 26, 2023	N/A	Radiation (03CH11-HY)
Software	Audix	E3 6.2009-8-24	RK-001053	N/A	N/A	Aug. 24, 2023~ Aug. 26, 2023	N/A	Radiation (03CH11-HY)

5 Measurement Uncertainty

<03CH11-HY>

Uncertainty of Radiated Emission Measurement (9 kHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.9 dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	6.3 dB

<03CH13-HY>

<For WWAN mode>

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.02 dB

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.55 dB

Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.82 dB

<For WLAN mode>

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	6.5 dB

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 6000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.4 dB

Uncertainty of Radiated Emission Measurement (6000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.8 dB

Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.3 dB

Appendix A. Test Results of Radiated Test

<Cat-M1>

LTE Band 25 + 802.11b Ch11 Tx + NFC Link

LTE Band 25 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3742	-32.69	-13	-19.69	-43.2	-42.96	1.26	11.53	H
	5613	-58.56	-13	-45.56	-73.57	-69.00	1.64	12.07	H
	7484	-50.83	-13	-37.83	-69.92	-60.13	1.94	11.24	H
									H
									H
									H
									H
	3742	-31.06	-13	-18.06	-41.37	-41.33	1.26	11.53	V
	5613	-58.90	-13	-45.90	-73.7	-69.34	1.64	12.07	V
	7484	-49.82	-13	-36.82	-68.89	-59.12	1.94	11.24	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 4 + 802.11b_Ch11 Tx + NFC Link

LTE Band 4 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3447	-37.99	-13	-24.99	-48.66	-48.20	1.08	11.29	H
	5170	-56.76	-13	-43.76	-71.14	-66.55	1.55	11.34	H
	6894	-57.16	-13	-44.16	-74.93	-66.39	1.85	11.09	H
									H
									H
									H
									H
	3447	-39.24	-13	-26.24	-49.78	-49.45	1.08	11.29	V
	5170	-55.51	-13	-42.51	-69.8	-65.30	1.55	11.34	V
	6894	-53.35	-13	-40.35	-71.56	-62.58	1.85	11.09	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 5 + 802.11b_Ch11 Tx + NFC Link

LTE Band 5 / 10MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1664	-36.61	-13	-23.61	-40.45	-42.67	0.95	9.17	H
	2496	-52.27	-13	-39.27	-58.96	-59.25	1.06	10.19	H
	3328	-51.93	-13	-38.93	-61.79	-59.73	1.10	11.06	H
	4160	-57.89	-13	-44.89	-68.74	-65.55	1.49	11.30	H
									H
									H
									H
	1664	-38.51	-13	-25.51	-42.11	-44.57	0.95	9.17	V
	2496	-50.74	-13	-37.74	-57.91	-57.72	1.06	10.19	V
	3328	-53.38	-13	-40.38	-63.13	-61.18	1.10	11.06	V
	4160	-57.63	-13	-44.63	-68.32	-65.29	1.49	11.30	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 13 + 802.11b_Ch11 Tx + NFC Link

LTE Band 13 / 5MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1560	-57.47	-42.15	-15.32	-61.36	-62.87	0.95	8.50	H
	2340	-50.86	-13	-37.86	-57.13	-58.04	1.03	10.36	H
	3119	-53.53	-13	-40.53	-63.30	-60.43	1.15	10.20	H
									H
									H
									H
									H
	1560	-59.78	-42.15	-17.63	-63.31	-65.18	0.95	8.50	V
	2340	-54.25	-13	-41.25	-60.75	-61.43	1.03	10.36	V
	3119	-53.12	-13	-40.12	-62.52	-60.02	1.15	10.20	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

<NB-IoT>

LTE Band 25 + 802.11b_Ch11 Tx + NFC Link

LTE Band 25 / 15kHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3763	-36.91	-13	-23.91	-48.42	-47.06	1.28	11.42	H
	5644	-56.68	-13	-43.68	-72.76	-67.05	1.64	12.01	H
	7526	-53.33	-13	-40.33	-73.4	-62.85	1.94	11.46	H
									H
									H
									H
									H
	3763	-33.86	-13	-20.86	-45.17	-44.01	1.28	11.42	V
	5644	-56.66	-13	-43.66	-72.59	-67.03	1.64	12.01	V
	7526	-53.68	-13	-40.68	-73.65	-63.20	1.94	11.46	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 4 + 802.11b_Ch11 Tx + NFC Link

LTE Band 4 / 15kHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3462	-42.60	-13	-29.60	-54.32	-52.85	1.08	11.32	H
	5193	-58.65	-13	-45.65	-74.09	-68.48	1.56	11.39	H
	6924	-55.69	-13	-42.69	-74.35	-64.88	1.86	11.05	H
									H
									H
									H
									H
	3462	-40.81	-13	-27.81	-52.36	-51.06	1.08	11.32	V
	5193	-58.28	-13	-45.28	-73.65	-68.11	1.56	11.39	V
	6924	-54.99	-13	-41.99	-74.12	-64.18	1.86	11.05	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 5 + 802.11b_Ch11 Tx + NFC Link

LTE Band 5 / 15kHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1675.8	-52.25	-13	-39.25	-66.97	-58.45	0.95	9.30	H
	2512	-53.51	-13	-40.51	-71.28	-60.52	1.06	10.22	H
	3350	-51.55	-13	-38.55	-72.28	-59.40	1.10	11.10	H
									H
									H
									H
									H
	1675.8	-54.41	-13	-41.41	-68.91	-60.61	0.95	9.30	V
	2512	-53.35	-13	-40.35	-71.53	-60.36	1.06	10.22	V
	3350	-51.32	-13	-38.32	-71.97	-59.17	1.10	11.10	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 12 + 802.11b_Ch11 Tx + NFC Link

LTE Band 12 / 15kHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1416	-36.67	-13.00	-23.67	-51.25	-40.91	0.90	7.30	H
	2120	-35.38	-13.00	-22.38	-52.09	-41.49	0.98	9.24	H
	2832	-44.33	-13.00	-31.33	-63.46	-51.57	1.13	10.53	H
	3536	-45.58	-13.00	-32.58	-66.63	-53.73	1.10	11.40	H
	4248	-46.04	-13.00	-33.04	-68.02	-53.79	1.50	11.40	H
									H
									H
	1416	-37.65	-13.00	-24.65	-51.50	-41.89	0.90	7.30	V
	2120	-42.77	-13.00	-29.77	-59.70	-48.88	0.98	9.24	V
	2832	-48.15	-13.00	-35.15	-66.84	-55.39	1.13	10.53	V
	3536	-45.88	-13.00	-32.88	-66.70	-54.03	1.10	11.40	V
	4248	-46.79	-13.00	-33.79	-68.56	-54.54	1.50	11.40	V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Appendix B. Radiated Spurious Emission

802.11b_Tx_Ch11 + Cat-M1 LTE Band 4 (20M) Link + NFC Tx (Band Edge @ 3m)

WIFI Ant. Simultaneously	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b_Tx_Ch11 + Cat-M1 LTE Band 4 (20M) + NFC Tx	*	2462	105.76	-	-	100.75	27.72	14.42	37.13	210	175	P	H
	*	2462	102.55	-	-	97.54	27.72	14.42	37.13	210	175	A	H
		2485.64	69.04	-4.96	74	63.88	27.86	14.44	37.14	210	175	P	H
		2488.52	43.1	-10.9	54	37.91	27.89	14.44	37.14	210	175	A	H
	*	2462	100.41	-	-	95.4	27.72	14.42	37.13	384	109	P	V
	*	2462	97.36	-	-	92.35	27.72	14.42	37.13	384	109	A	V
		2483.6	63.65	-10.35	74	58.51	27.84	14.44	37.14	384	109	P	V
		2488.72	40.25	-13.75	54	35.06	27.89	14.44	37.14	384	109	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

802.11b_Tx_Ch11 + Cat-M1 LTE Band 4 (20M) Link + NFC Tx (Harmonic @ 3m)

WIFI Ant. Simultaneously	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b_Tx_Ch11 + Cat-M1 LTE Band 4 (20M) + NFC Tx		4924	48.41	-25.59	74	65.29	32.9	65.29	57.06	400	181	P	H
		4924	47.32	-6.68	54	64.2	32.9	64.2	57.06	400	181	A	H
		7386	45.12	-28.88	74	56.65	36.58	56.65	56.96	-	-	P	H
													H
		4924	53.24	-20.76	74	70.12	32.9	70.12	57.06	249	183	P	V
		4924	47.1	-6.9	54	63.98	32.9	63.98	57.06	249	183	A	V
		7386	44.98	-29.02	74	56.51	36.58	56.51	56.96	-	-	P	V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.												

802.11b_Tx_Ch11 + Cat-M1 LTE Band 5 (10M) Link + NFC Tx (Band Edge @ 3m)

WIFI Ant. Simultaneously	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b_Tx_Ch11 + Cat-M1 LTE Band 5 (10M) + NFC Tx	*	2462	105.86	-	-	100.85	27.72	14.42	37.13	232	177	P	H
	*	2462	102.85	-	-	97.84	27.72	14.42	37.13	232	177	A	H
		2490	65.2	-8.8	74	60	27.9	14.44	37.14	232	177	P	H
		2486.24	45.46	-8.54	54	40.3	27.86	14.44	37.14	232	177	A	H
	*	2462	100.38	-	-	95.37	27.72	14.42	37.13	385	108	P	V
	*	2462	97.33	-	-	92.32	27.72	14.42	37.13	385	108	A	V
		2484.28	62.64	-11.36	74	57.5	27.84	14.44	37.14	385	108	P	V
		2488.28	40.17	-13.83	54	34.99	27.88	14.44	37.14	385	108	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

802.11b_Tx_Ch11 + Cat-M1 LTE Band 5 (10M) Link + NFC Tx (Harmonic @ 3m)

WIFI Ant. Simultaneously	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b_Tx_Ch 11 + Cat-M1 LTE Band 5 (10M) + NFC Tx		4924	49.51	-24.49	74	66.39	32.9	7.28	57.06	400	188	P	H
		4924	47.14	-6.86	54	64.02	32.9	7.28	57.06	400	188	A	H
		7386	45.57	-28.43	74	57.1	36.58	8.85	56.96	-	-	P	H
													H
		4924	53.73	-20.27	74	70.61	32.9	7.28	57.06	246	179	P	V
		4924	52.44	-1.56	54	69.32	32.9	7.28	57.06	246	179	A	V
		7386	44.79	-29.21	74	56.32	36.58	8.85	56.96	-	-	P	V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.												

802.11b_Tx_Ch11 + Cat-M1 LTE Band 13 (5M) Link + NFC Tx (Band Edge @ 3m)

WIFI Ant. Simultaneously	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b_Tx_Ch 11 + Cat-M1 LTE Band 13 (5M) + NFC Tx	*	2462	105.88	-	-	100.87	27.72	14.42	37.13	209	184	P	H
	*	2462	102.73	-	-	97.7	27.72	14.42	37.13	209	184	A	H
		2489.96	68.5	-5.5	74	63.3	27.9	14.44	37.14	209	184	P	H
		2484.52	47.2	-6.8	54	42.05	27.85	14.44	37.14	209	184	A	H
	*	2462	101.04	-	-	96.03	27.72	14.42	37.13	383	105	P	V
	*	2462	97.97	-	-	92.94	27.72	14.42	37.13	383	105	A	V
		2496.2	57.89	-16.11	74	52.62	27.96	14.45	37.14	383	105	P	V
		2488.48	40.47	-13.53	54	35.29	27.88	14.44	37.14	383	105	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

802.11b_Tx_Ch11 + Cat-M1 LTE Band 13 (5M) Link + NFC Tx (Harmonic @ 3m)

WIFI Ant. Simultaneously	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b_Tx_Ch 11 + Cat-M1 LTE Band 13 (5M) + NFC Tx		4924	49.68	-24.32	74	66.56	32.9	7.28	57.06	400	183	P	H
		4924	47.31	-6.69	54	64.19	32.9	7.28	57.06	400	183	A	H
		7386	46.09	-27.91	74	57.62	36.58	8.85	56.96	-	-	P	H
													H
		4924	54.13	-19.87	74	71.01	32.9	7.28	57.06	254	176	P	V
		4924	52.25	-1.75	54	69.13	32.9	7.28	57.06	254	176	A	V
		7386	45.53	-28.47	74	57.06	36.58	8.85	56.96	-	-	P	V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.												

802.11b_Tx_Ch11 + Cat-M1 LTE Band 25 (20M) Link + NFC Tx (Band Edge @ 3m)

WIFI Ant. Simultaneously	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b_Tx_Ch11 + Cat-M1 LTE Band 25 (20M) + NFC Tx	*	2462	105.77	-	-	100.76	27.72	14.42	37.13	206	175	P	H
	*	2462	102.58	-	-	97.57	27.72	14.42	37.13	206	175	A	H
		2493.88	66.03	-7.97	74	60.78	27.94	14.45	37.14	206	175	P	H
		2484.92	47.26	-6.74	54	42.11	27.85	14.44	37.14	206	175	A	H
	*	2462	100.45	-	-	95.44	27.72	14.42	37.13	385	110	P	V
	*	2462	97.41	-	-	92.4	27.72	14.42	37.13	385	110	A	V
		2487.76	61.03	-12.97	74	55.85	27.88	14.44	37.14	385	110	P	V
		2488.32	40.17	-13.83	54	34.99	27.88	14.44	37.14	385	110	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

802.11b_Tx_Ch11 + Cat-M1 LTE Band 25 (20M) Link + NFC Tx (Harmonic @ 3m)

WIFI Ant. Simultaneously	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b_Tx_Ch11 + Cat-M1 LTE Band 25 (20M) + NFC Tx		4924	48.49	-25.51	74	65.37	32.9	7.28	57.06	400	178	P	H
		4924	47.23	-6.77	54	64.11	32.9	7.28	57.06	400	178	A	H
		7386	45.92	-28.08	74	57.45	36.58	8.85	56.96	-	-	P	H
													H
		4924	53.66	-20.34	74	70.54	32.9	7.28	57.06	248	177	P	V
		4924	52.53	-1.47	54	69.41	32.9	7.28	57.06	248	177	A	V
		7386	44.87	-29.13	74	56.4	36.58	8.85	56.96	-	-	P	V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.												

802.11b_Tx_Ch11 + NB-IoT LTE Band 4 (15k) Link + NFC Tx (Band Edge @ 3m)

WIFI Ant. Simultaneously	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b_Tx_Ch11 + NB-IoT LTE Band 4 (15k) + NFC Tx	*	2462	106.41	-	-	101.4	27.72	14.42	37.13	206	177	P	H
	*	2462	103.05	-	-	98.04	27.72	14.42	37.13	206	177	A	H
		2486.16	67.91	-6.09	74	62.75	27.86	14.44	37.14	206	177	P	H
		2494.08	44.57	-9.43	54	39.32	27.94	14.45	37.14	206	177	A	H
	*	2462	100.48	-	-	95.47	27.72	14.42	37.13	374	96	P	V
	*	2462	97.24	-	-	92.23	27.72	14.42	37.13	374	96	A	V
		2486.68	50.82	-23.18	74	45.65	27.87	14.44	37.14	374	96	P	V
		2488.44	40.5	-13.5	54	35.32	27.88	14.44	37.14	374	96	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

802.11b_Tx_Ch11 + NB-IoT LTE Band 4 (15k) Link + NFC Tx (Harmonic @ 3m)

WIFI Ant. Simultaneously	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b_Tx_Ch 11 + NB-IoT LTE Band 4 (15k) + NFC Tx		4924	49.57	-24.43	74	66.45	32.9	7.28	57.06	400	180	P	H
		4924	47.64	-6.36	54	64.52	32.9	7.28	57.06	400	180	A	H
		7386	44.72	-29.28	74	56.25	36.58	8.85	56.96	-	-	P	H
		4924	53.93	-20.07	74	70.81	32.9	7.28	57.06	248	181	P	V
		4924	52.19	-1.81	54	69.07	32.9	7.28	57.06	248	181	A	V
		7386	44.94	-29.06	74	56.47	36.58	8.85	56.96	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.												

802.11b_Tx_Ch11 + NB-IoT LTE Band 5 (15k) Link + NFC Tx (Band Edge @ 3m)

WIFI Ant. Simultaneously	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b_Tx_Ch11 + NB-IoT LTE Band 5 (15k) + NFC Tx	*	2462	105.96	-	-	100.95	27.72	14.42	37.13	206	175	P	H
	*	2462	102.72	-	-	97.71	27.72	14.42	37.13	206	175	A	H
		2488.8	52.93	-21.07	74	47.74	27.89	14.44	37.14	206	175	P	H
		2485.68	46.87	-7.13	54	41.71	27.86	14.44	37.14	206	175	A	H
	*	2462	100.73	-	-	95.72	27.72	14.42	37.13	376	98	P	V
	*	2462	97.3	-	-	92.29	27.72	14.42	37.13	376	98	A	V
		2484.72	63.34	-10.66	74	58.19	27.85	14.44	37.14	376	98	P	V
		2488.52	40.83	-13.17	54	35.64	27.89	14.44	37.14	376	98	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

802.11b_Tx_Ch11 + NB-IoT LTE Band 5 (15k) Link + NFC Tx (Harmonic @ 3m)

WIFI Ant. Simultaneously	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b_Tx_Ch11 + NB-IoT LTE Band 5 (15k) + NFC Tx		4924	50.1	-23.9	74	66.98	32.9	7.28	57.06	400	183	P	H
		4924	47.33	-6.67	54	64.21	32.9	7.28	57.06	400	183	A	H
		7386	44.38	-29.62	74	55.91	36.58	8.85	56.96	-	-	P	H
		4924	54.37	-19.63	74	71.25	32.9	7.28	57.06	253	178	P	V
		4924	52.05	-1.95	54	68.93	32.9	7.28	57.06	253	178	A	V
		7386	45.2	-28.8	74	56.73	36.58	8.85	56.96	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.												

802.11b_Tx_Ch11 + NB-IoT LTE Band 12 (15k) Link + NFC Tx (Band Edge @ 3m)

WIFI Ant. Simultaneously	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b_Tx_Ch11 + NB-IoT LTE Band 12 (15k) + NFC Tx	*	2462	106.1	-	-	101.09	27.72	14.42	37.13	208	177	P	H
	*	2462	102.87	-	-	97.86	27.72	14.42	37.13	208	177	A	H
		2491.36	67.41	-6.59	74	62.19	27.91	14.45	37.14	208	177	P	H
		2488.72	43.47	-10.53	54	38.28	27.89	14.44	37.14	208	177	A	H
	*	2462	100.52	-	-	95.51	27.72	14.42	37.13	375	99	P	V
	*	2462	97.31	-	-	92.3	27.72	14.42	37.13	375	99	A	V
		2484.48	64.26	-9.74	74	59.12	27.84	14.44	37.14	375	99	P	V
		2488.56	40.72	-13.28	54	35.53	27.89	14.44	37.14	375	99	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

802.11b_Tx_Ch11 + NB-IoT LTE Band 12 (15k) Link + NFC Tx (Harmonic @ 3m)

WIFI Ant. Simultaneously	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b_Tx_Ch 11 + NB-IoT LTE Band 12 (15k) + NFC Tx		4924	49.54	-24.46	74	66.42	32.9	7.28	57.06	400	179	P	H
		4924	47.31	-6.69	54	64.19	32.9	7.28	57.06	400	179	A	H
		7386	44.89	-29.11	74	56.42	36.58	8.85	56.96	-	-	P	H
		4924	54.24	-19.76	74	71.12	32.9	7.28	57.06	256	175	P	V
		4924	52.08	-1.92	54	68.96	32.9	7.28	57.06	256	175	A	V
		7386	44.4	-29.6	74	55.93	36.58	8.85	56.96	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.												

802.11b_Tx_Ch11 + NB-IoT LTE Band 25 (15k) Link + NFC Tx (Band Edge @ 3m)

WIFI Ant. Simultaneously	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b_Tx_Ch11 + NB-IoT LTE Band 25 (15k) + NFC Tx	*	2462	105.98	-	-	100.97	27.72	14.42	37.13	207	178	P	H
	*	2462	102.76	-	-	97.75	27.72	14.42	37.13	207	178	A	H
		2497.96	56.6	-17.4	74	51.31	27.98	14.45	37.14	207	178	P	H
		2489.16	45.77	-8.23	54	40.58	27.89	14.44	37.14	207	178	A	H
	*	2462	100.43	-	-	95.42	27.72	14.42	37.13	374	99	P	V
	*	2462	97.17	-	-	92.16	27.72	14.42	37.13	374	99	A	V
		2493	60.42	-13.58	74	55.18	27.93	14.45	37.14	374	99	P	V
		2488.44	40.51	-13.49	54	35.33	27.88	14.44	37.14	374	99	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

802.11b_Tx_Ch11 + NB-IoT LTE Band 25 (15k) Link + NFC Tx (Harmonic @ 3m)

WIFI Ant. Simultaneously	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b_Tx_Ch11 + NB-IoT LTE Band 25 (15k) + NFC Tx		4924	49	-25	74	65.88	32.9	7.28	57.06	400	177	P	H
		4924	47.31	-6.69	54	64.19	32.9	7.28	57.06	400	177	A	H
		7386	45.53	-28.47	74	57.06	36.58	8.85	56.96	-	-	P	H
		4924	54.22	-19.78	74	71.1	32.9	7.28	57.06	249	182	P	V
		4924	52.2	-1.8	54	69.08	32.9	7.28	57.06	249	182	A	V
		7386	44.93	-29.07	74	56.46	36.58	8.85	56.96	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.												

Emission above 18GHz

2.4GHz WIFI 802.11b (SHF)

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz 802.11b SHF		24041	44.26	-29.74	74	61.33	39.37	-2.57	53.87	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		23355	43.63	-30.37	74	61.26	39.39	-2.73	54.29	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against limit line.
3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.

Emission below 1GHz

2.4GHz WIFI 802.11b (LF)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
2.4GHz 802.11b LF		30.54	23.15	-16.85	40	29.72	24.77	0.82	32.16	-	-	P	H
		144.75	31.25	-12.25	43.5	44.57	17.44	1.33	32.09	-	-	P	H
		263.01	35.3	-10.7	46	45.34	20.3	1.72	32.06	-	-	P	H
		549.9	37.1	-8.9	46	41.46	25.41	2.34	32.11	-	-	P	H
		720	39.27	-6.73	46	41.56	27.12	2.66	32.07	-	-	P	H
		1000	33.85	-20.15	54	30.67	30.48	3.16	30.46	-	-	P	H
													H
													H
													H
													H
													H
													H
		30.81	23.4	-16.6	40	30.05	24.69	0.82	32.16	-	-	P	V
		144.21	29.57	-13.93	43.5	42.87	17.46	1.33	32.09	-	-	P	V
		251.67	27.68	-18.32	46	39.26	18.78	1.7	32.06	-	-	P	V
		474.3	39.16	-6.84	46	45.36	23.65	2.17	32.02	-	-	P	V
		885.9	39.56	-6.44	46	39.2	28.84	2.97	31.45	-	-	P	V
		972	32.83	-21.17	54	29.43	31.04	3.11	30.75	-	-	P	V
													V
													V
													V
													V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against limit line.
3. 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 symbol

*	**Fundamental Frequency** which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is **Margin** line.
P/A	**P**eak or **A**verage
H/V	**H**orizontal or **V**ertical

A calculation example for radiated spurious emission is shown as below:

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)
2. Level(dBμV/m) =

Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

3. Margin (dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)

= 55.45 (dBμV/m)

2. Margin (dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)

= 43.54 (dBμV/m)

2. Margin (dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

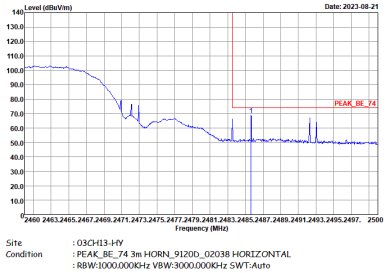
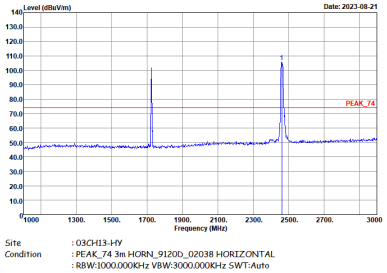
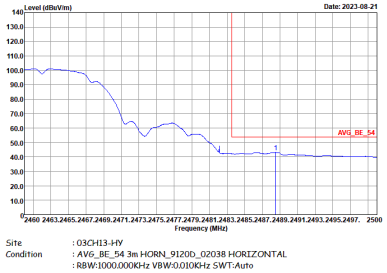
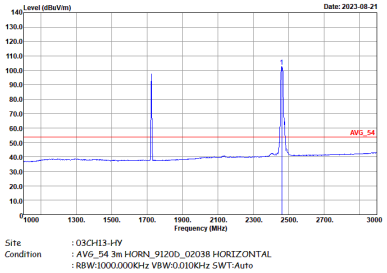
= 43.54(dBμV/m) – 54(dBμV/m)

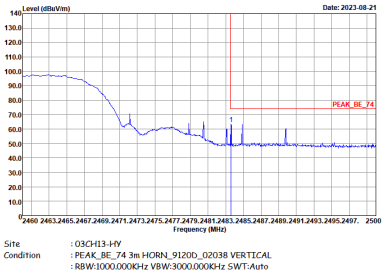
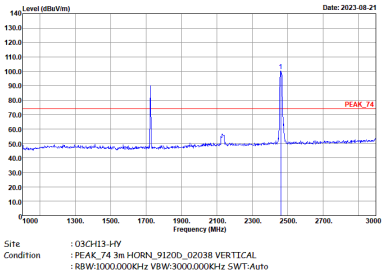
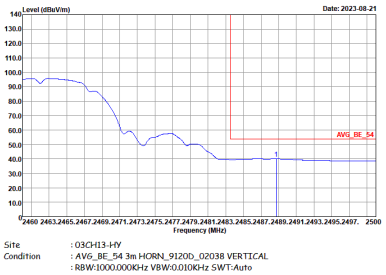
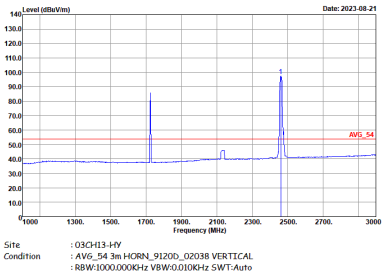
= -10.46(dB)

Both peak and average measured complies with the limit line, so test result is "PASS".

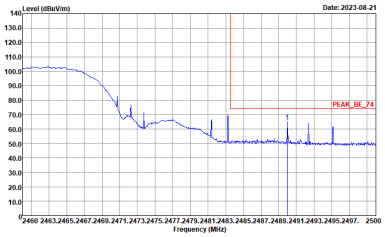
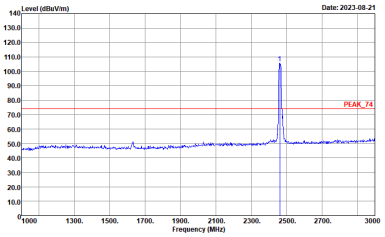
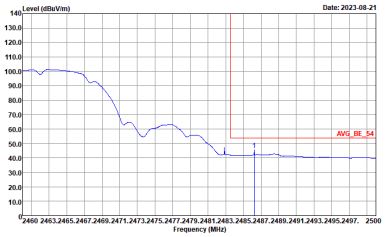
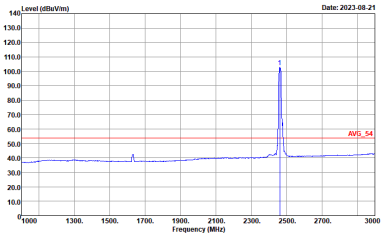
Appendix C. Radiated Spurious Emission Plots

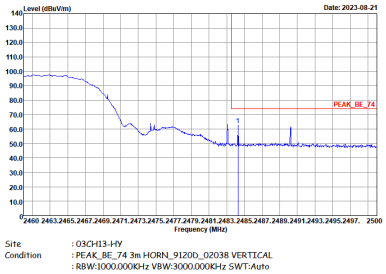
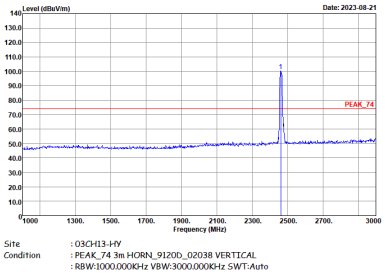
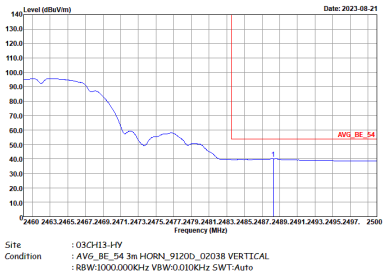
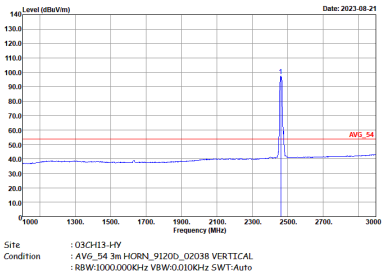
802.11b_Tx_Ch11 + Cat-M1 LTE Band 4 (20M) Link + NFC Tx (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
Simultaneously	Horizontal	Fundamental
Peak		
Avg.		

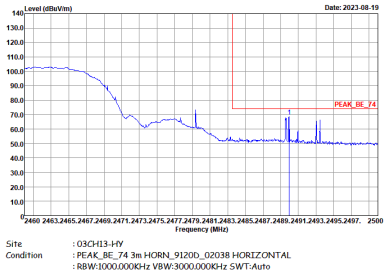
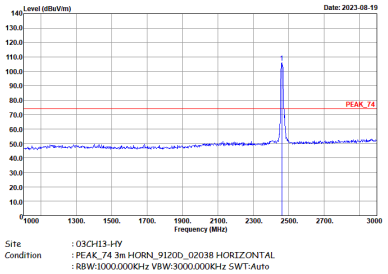
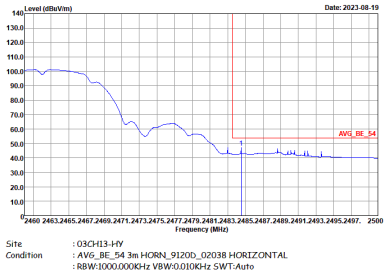
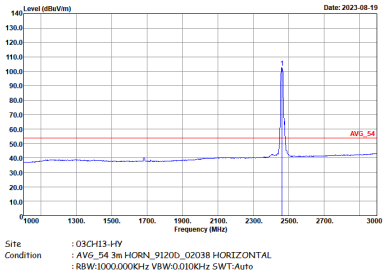
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
Simultaneously	Vertical	Fundamental
Peak		
Avg.		

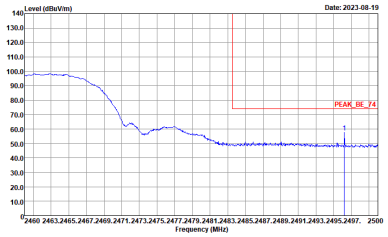
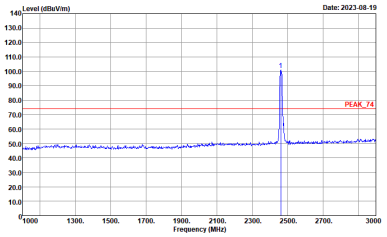
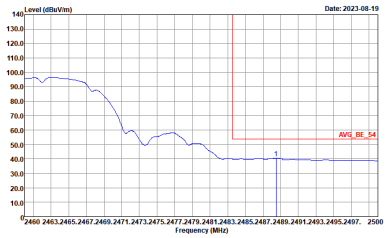
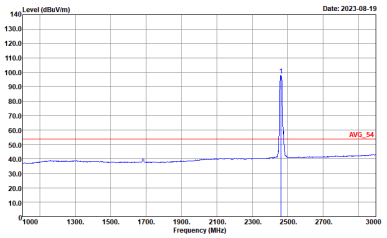
802.11b_Tx_Ch11 + Cat-M1 LTE Band 5 (10M) Link + NFC Tx (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
Simultaneously	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_9120D_02038 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH13-HY Condition : PEAK_74 3m HORN_9120D_02038 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_9120D_02038 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH13-HY Condition : AVG_54 3m HORN_9120D_02038 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

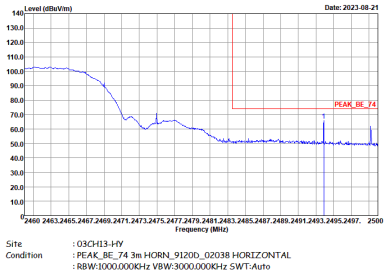
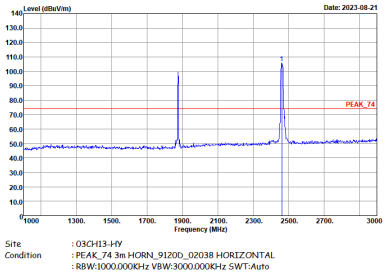
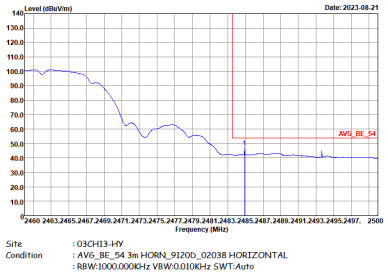
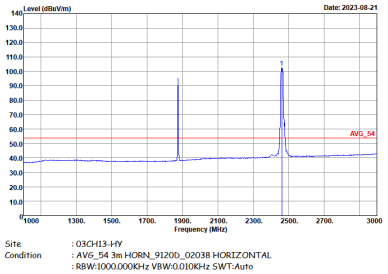
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
Simultaneously	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_9120D_02038 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH13-HY Condition : PEAK_74 3m HORN_9120D_02038 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_9120D_02038 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH13-HY Condition : AVG_54 3m HORN_9120D_02038 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

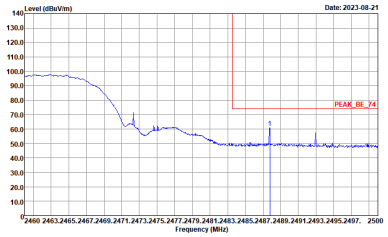
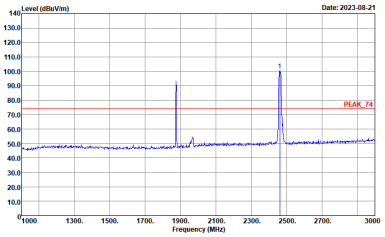
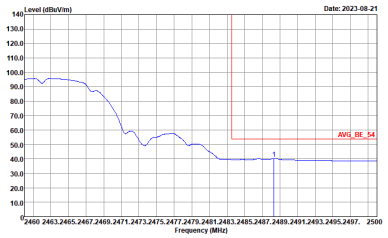
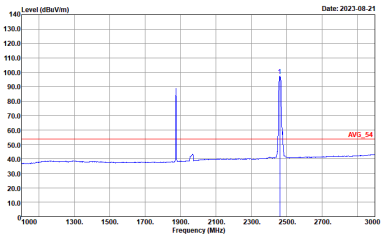
802.11b_Tx_Ch11 + Cat-M1 LTE Band 13 (5M) Link + NFC Tx (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
Simultaneously	Horizontal	Fundamental
Peak		
Avg.		

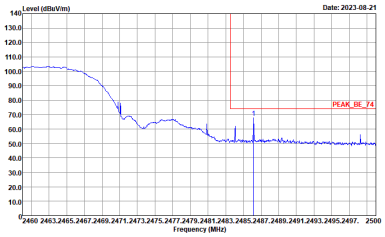
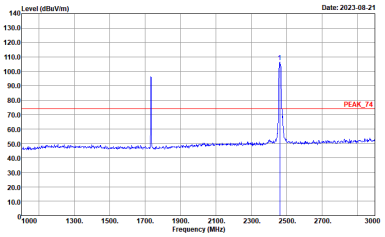
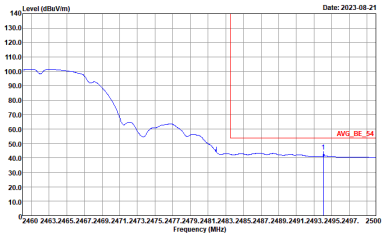
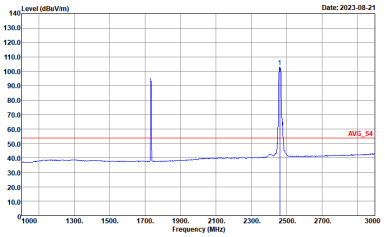
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
Simultaneously	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_9120D_02038 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH13-HY Condition : PEAK_74 3m HORN_9120D_02038 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_9120D_02038 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH13-HY Condition : AVG_54 3m HORN_9120D_02038 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

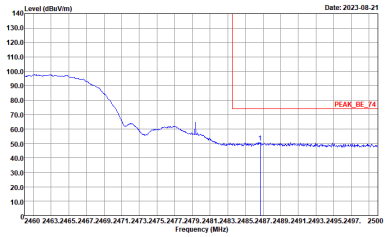
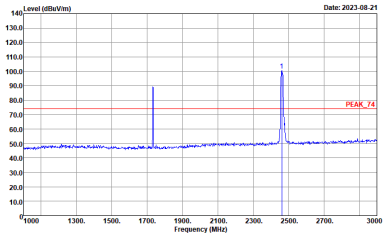
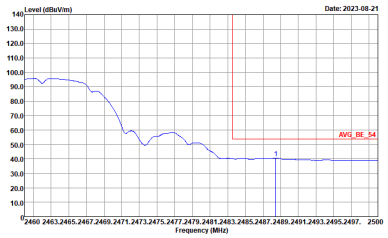
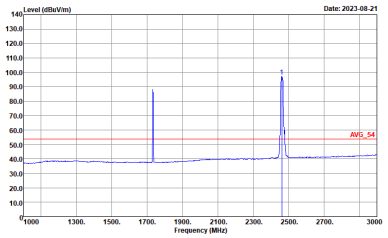
802.11b_Tx_Ch11 + Cat-M1 LTE Band 25 (20M) Link + NFC Tx (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
Simultaneously	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_9120D_02038 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH13-HY Condition : PEAK_74 3m HORN_9120D_02038 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_9120D_02038 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH13-HY Condition : AVG_54 3m HORN_9120D_02038 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

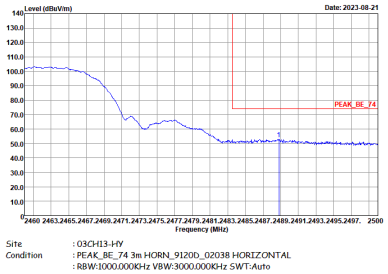
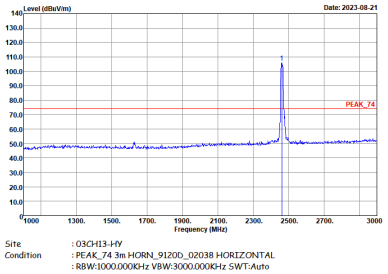
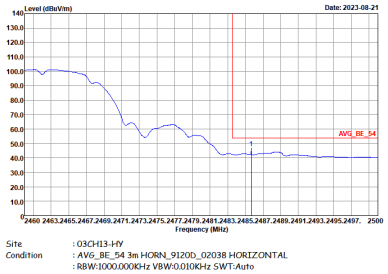
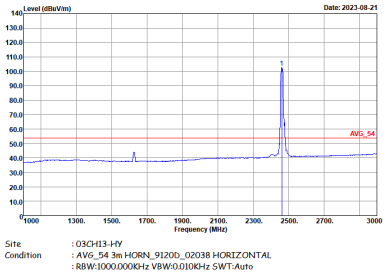
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
Simultaneously	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_9120D_02038 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH13-HY Condition : PEAK_74 3m HORN_9120D_02038 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_9120D_02038 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH13-HY Condition : AVG_54 3m HORN_9120D_02038 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

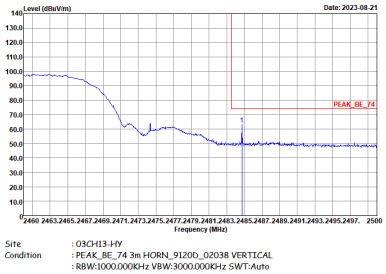
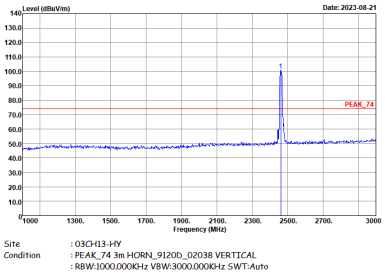
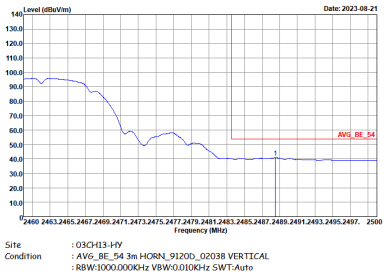
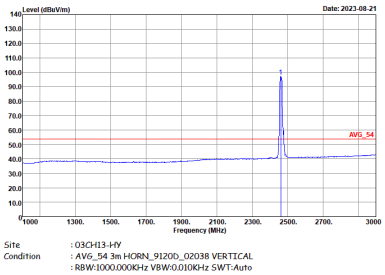
WIFI 802.11b + NB-IoT Band 4 + NFC Link (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
Simultaneously	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_9120D_02038 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH13-HY Condition : PEAK_74 3m HORN_9120D_02038 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_9120D_02038 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH13-HY Condition : AVG_54 3m HORN_9120D_02038 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

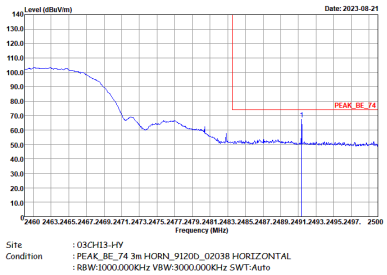
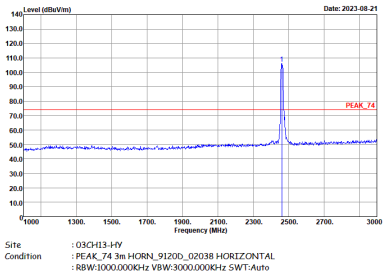
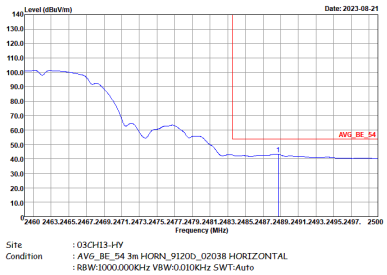
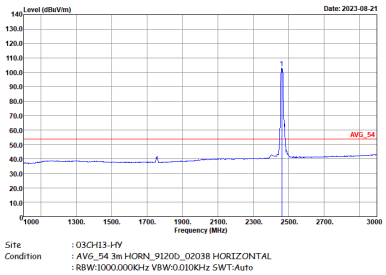
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
Simultaneously	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_9120D_02038 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH13-HY Condition : PEAK_74 3m HORN_9120D_02038 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_9120D_02038 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH13-HY Condition : AVG_54 3m HORN_9120D_02038 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

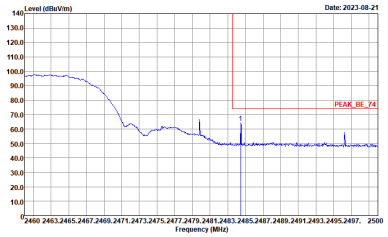
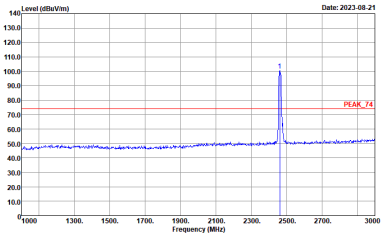
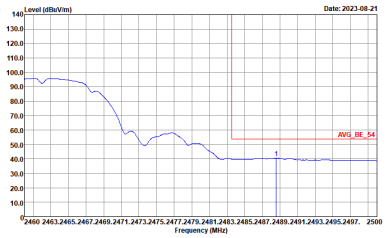
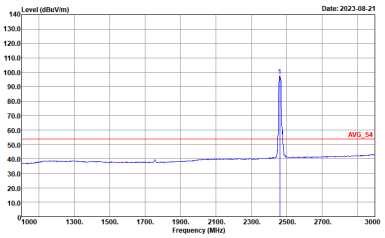
802.11b_Tx_Ch11 + NB-IoT LTE Band 5 (15k) Link + NFC Tx (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
Simultaneously	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_9120D_02038 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH13-HY Condition : PEAK_74 3m HORN_9120D_02038 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_9120D_02038 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH13-HY Condition : AVG_54 3m HORN_9120D_02038 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

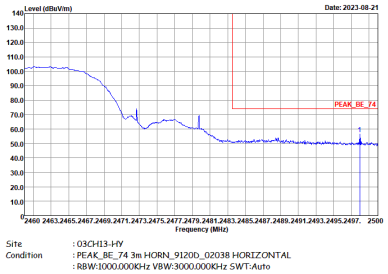
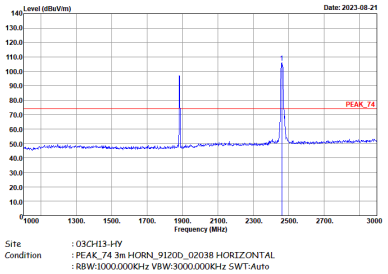
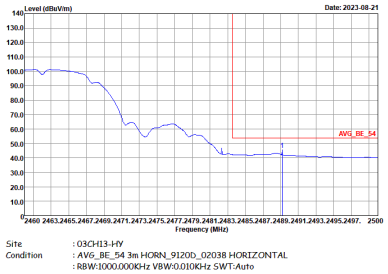
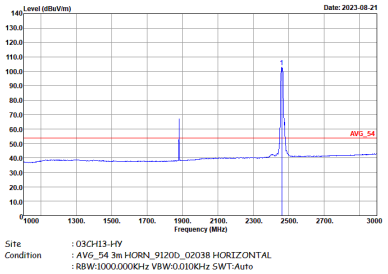
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
Simultaneously	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_9120D_02038 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH13-HY Condition : PEAK_74 3m HORN_9120D_02038 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_9120D_02038 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH13-HY Condition : AVG_54 3m HORN_9120D_02038 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

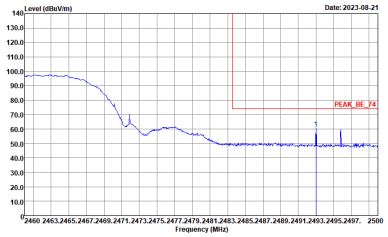
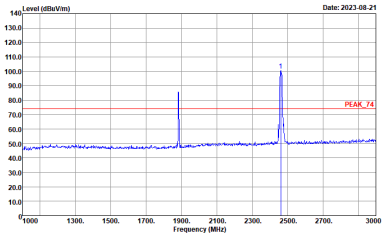
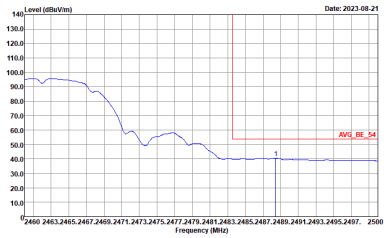
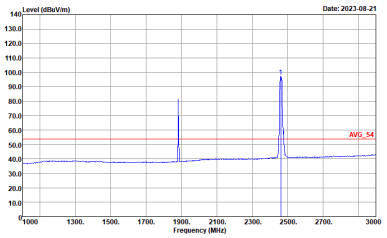
802.11b_Tx_Ch11 + NB-IoT LTE Band 12 (15k) Link + NFC Tx (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
Simultaneously	Horizontal	Fundamental
Peak		
Avg.		

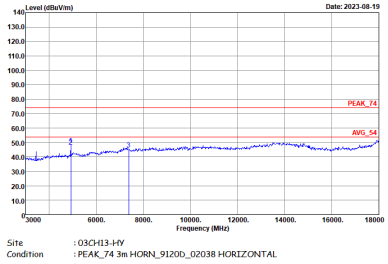
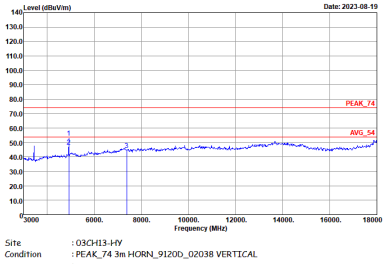
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
Simultaneously	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_9120D_02038 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH13-HY Condition : PEAK_74 3m HORN_9120D_02038 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_9120D_02038 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH13-HY Condition : AVG_54 3m HORN_9120D_02038 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

802.11b_Tx_Ch11 + NB-IoT LTE Band 25 (15k) Link + NFC Tx (Band Edge @ 3m)

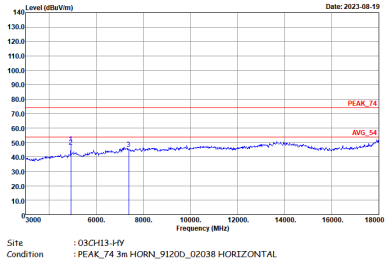
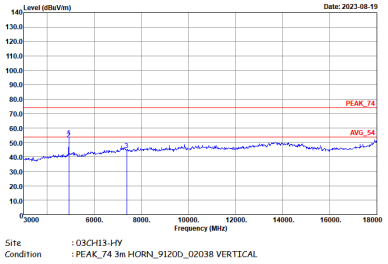
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
Simultaneously	Horizontal	Fundamental
Peak		
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
Simultaneously	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_9120D_02038 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH13-HY Condition : PEAK_74 3m HORN_9120D_02038 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_9120D_02038 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH13-HY Condition : AVG_54 3m HORN_9120D_02038 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

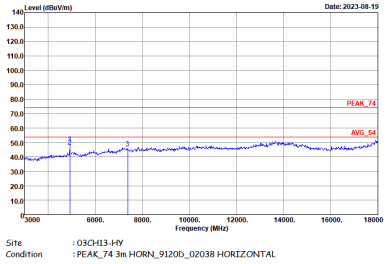
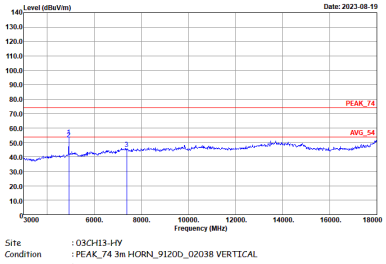
802.11b_Tx_Ch11 + Cat-M1 LTE Band 4 (20M) Link + NFC Tx (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
Simultaneously	Horizontal	Vertical
Peak Avg.		

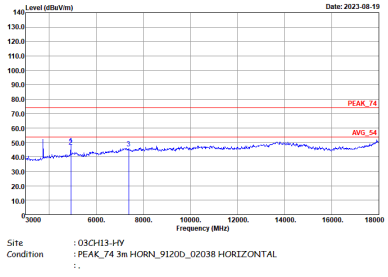
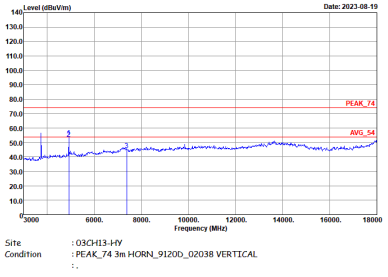
802.11b_Tx_Ch11 + Cat-M1 LTE Band 5 (10M) Link + NFC Tx (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
Simultaneously	Horizontal	Vertical
Peak Avg.		

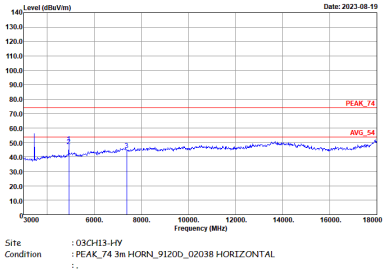
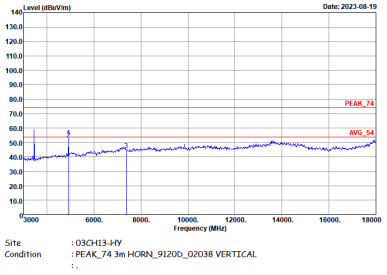
802.11b_Tx_Ch11 + Cat-M1 LTE Band 13 (5M) Link + NFC Tx (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
Simultaneously	Horizontal	Vertical
Peak Avg.		

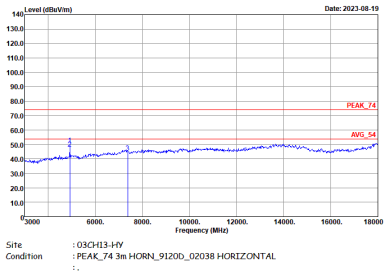
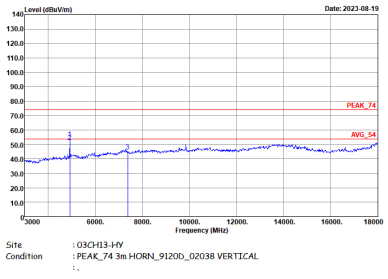
802.11b_Tx_Ch11 + Cat-M1 LTE Band 25 (20M) Link + NFC Tx (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
Simultaneously	Horizontal	Vertical
Peak Avg.		

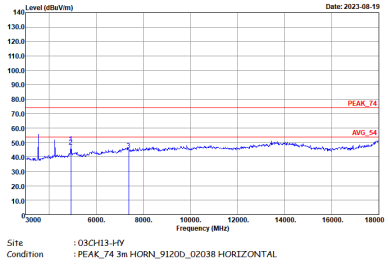
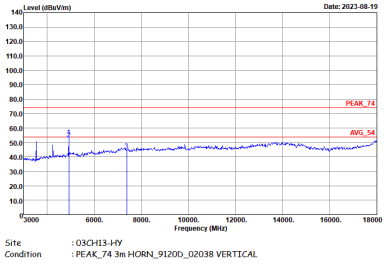
802.11b_Tx_Ch11 + NB-IoT LTE Band 4 (15k) Link + NFC Tx (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
Simultaneously	Horizontal	Vertical
Peak Avg.		

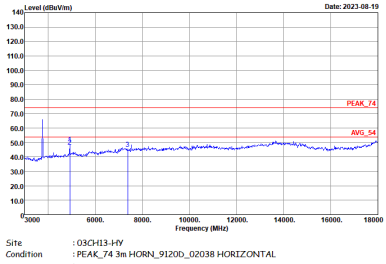
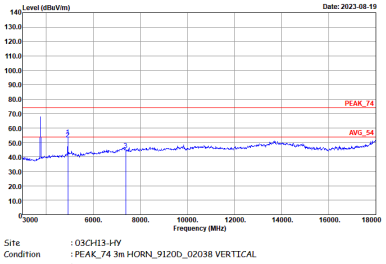
802.11b_Tx_Ch11 + NB-IoT LTE Band 5 (15k) Link + NFC Tx (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
Simultaneously	Horizontal	Vertical
Peak Avg.		

802.11b_Tx_Ch11 + NB-IoT LTE Band 12 (15k) Link + NFC Tx (Harmonic @ 3m)

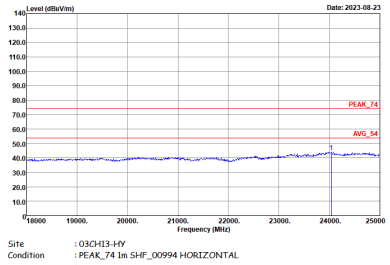
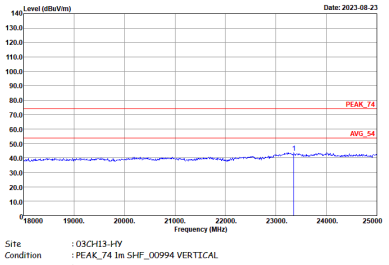
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
Simultaneously	Horizontal	Vertical
Peak Avg.		

802.11b_Tx_Ch11 + NB-IoT LTE Band 25 (15k) Link + NFC Tx (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
Simultaneously	Horizontal	Vertical
Peak Avg.		

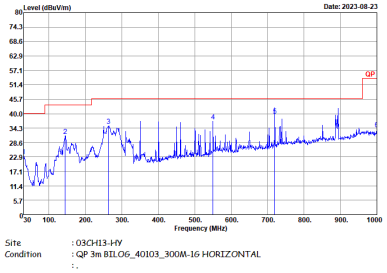
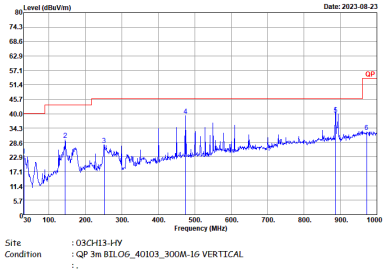
Emission above 18GHz

2.4GHz WIFI 802.11b (SHF @ 1m)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11b SHF	
1	Horizontal	Vertical
Peak Avg.		

Emission below 1GHz

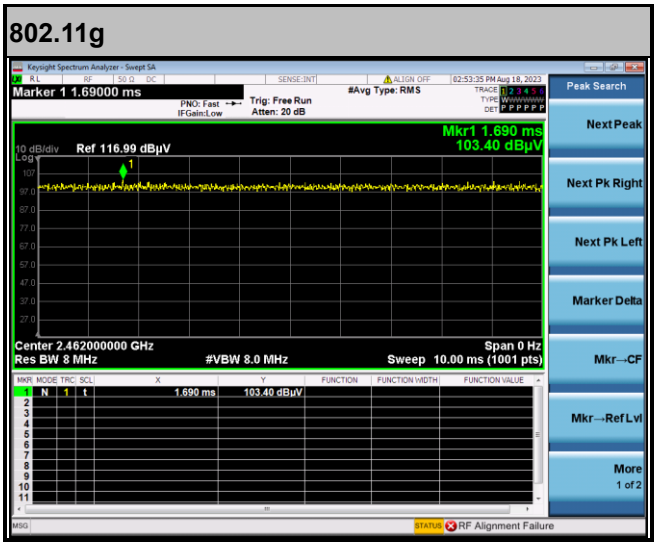
2.4GHz WIFI 802.11b (LF)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11b LF	
1	Horizontal	Vertical
QP / Peak		

Appendix D. Duty Cycle Plots

Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
802.11b	100.00	-	-	10Hz

802.11g

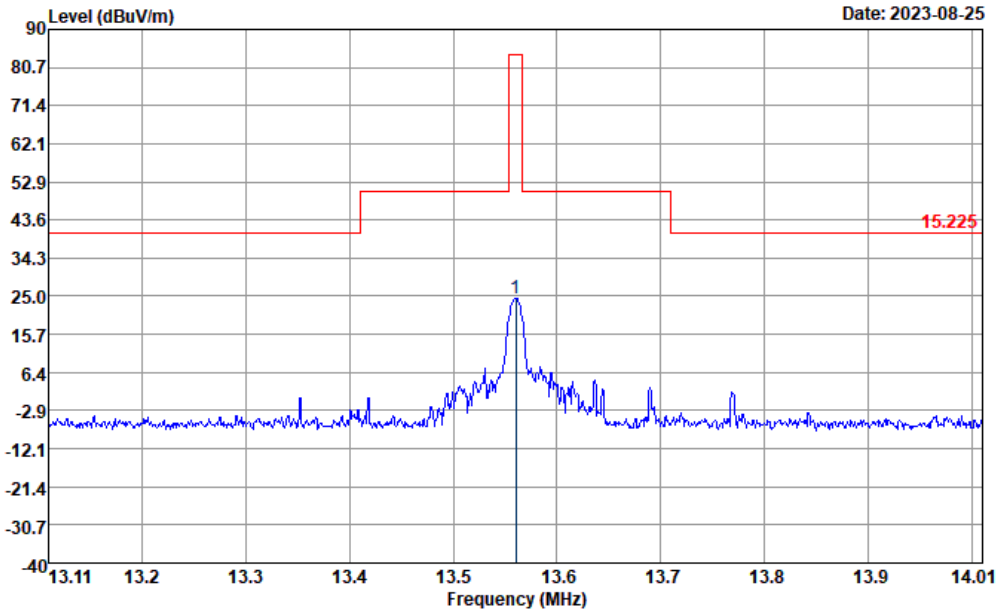


Appendix E. Test Results of Radiated Test Items

E1. Test Result of Field Strength of Fundamental Emissions

<Mode 1>

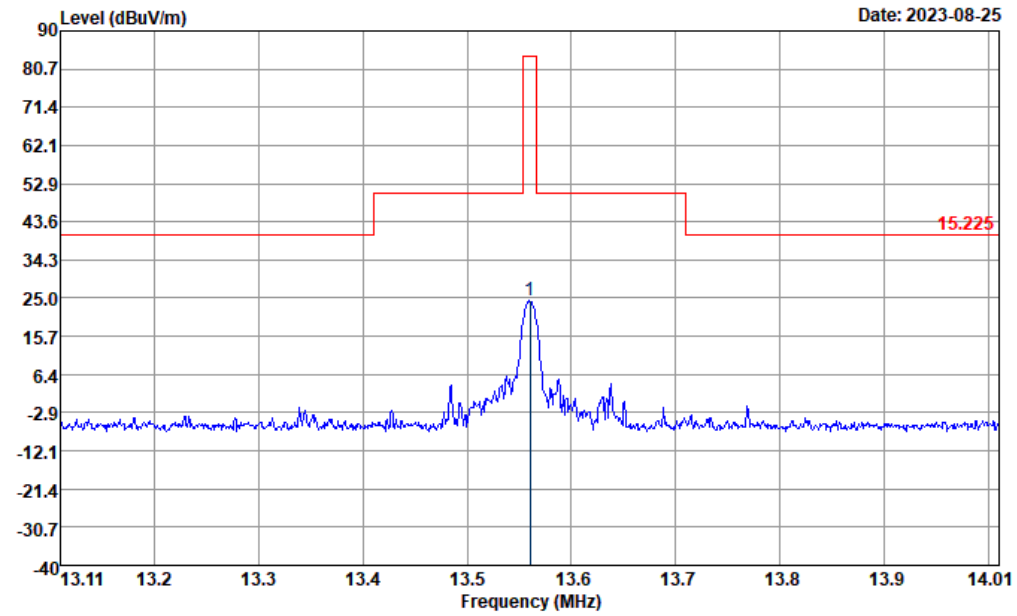
Test Mode :	NFC Tx	Test Frequency (MHz)	13.56



Site : 03CH11-HY
Condition : 15.225 3m LOOP_100488_220920 HORIZONTAL
: RBW:9.000KHz VBW:9.000KHz SWT:Auto

Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
13.56	24.46	40	-59.54	84	44.63	19.64	0.19	100	188	QP

Test Mode :	NFC Tx	Test Frequency (MHz)	13.56



Site : 03CH11-HY
Condition : 15.225 3m LOOP_100488_220920 VERTICAL
: RBW:9.000KHz VBW:9.000KHz SWT:Auto

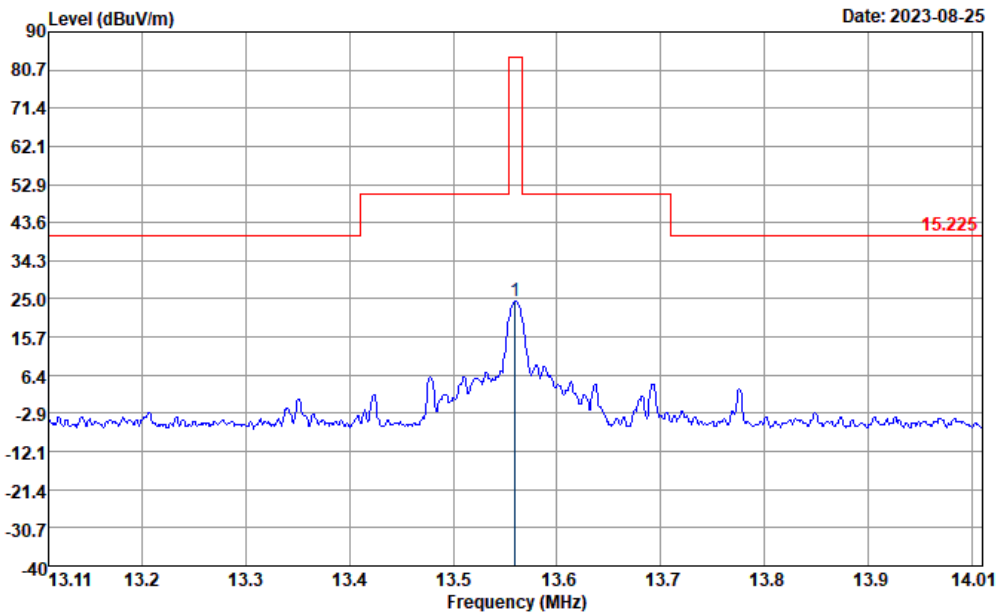
Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
13.56	24.3	40	-59.7	84	44.47	19.64	0.19	100	284	QP

Note :

1. Distance extrapolation factor = 40 log (specific distance / test distance) (dB)
2. Level = Antenna Factor + Cable Loss + Read Level - Distance extrapolation factor.

<Mode 2>

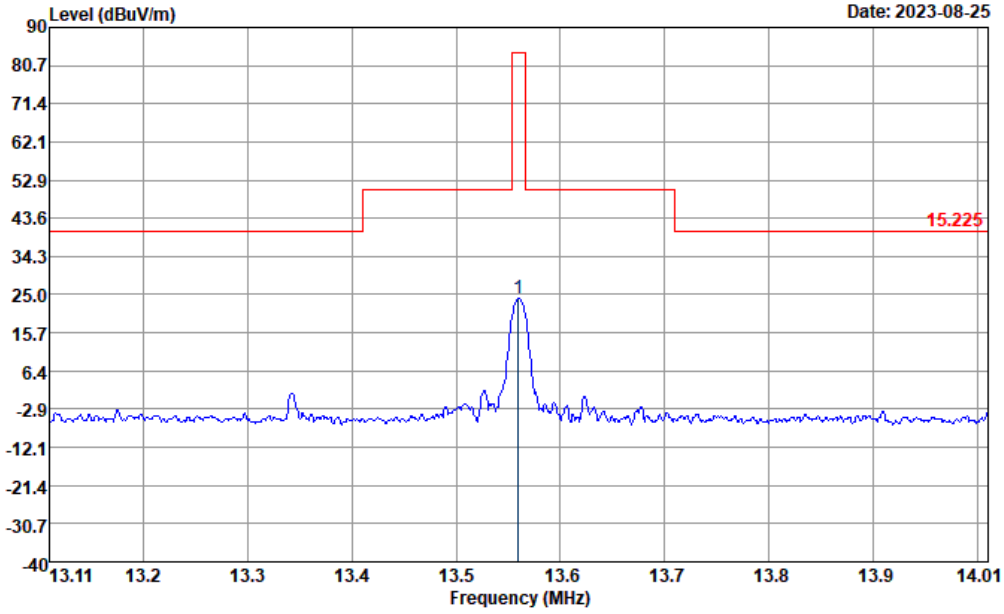
Test Mode :	NFC Tx	Test Frequency (MHz)	13.56



Site : 03CH11-HY
Condition : 15.225 3m LOOP_100488_220920 HORIZONTAL
: RBW:9.000KHz VBW:9.000KHz SWT:Auto

Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
13.56	24.41	40	-59.59	84	44.58	19.64	0.19	-	-	QP

Test Mode :	NFC Tx	Test Frequency (MHz)	13.56



Site : 03CH11-HY
Condition : 15.225 3m LOOP_100488_220920 VERTICAL
: RBW:9.000KHz VBW:9.000KHz SWT:Auto

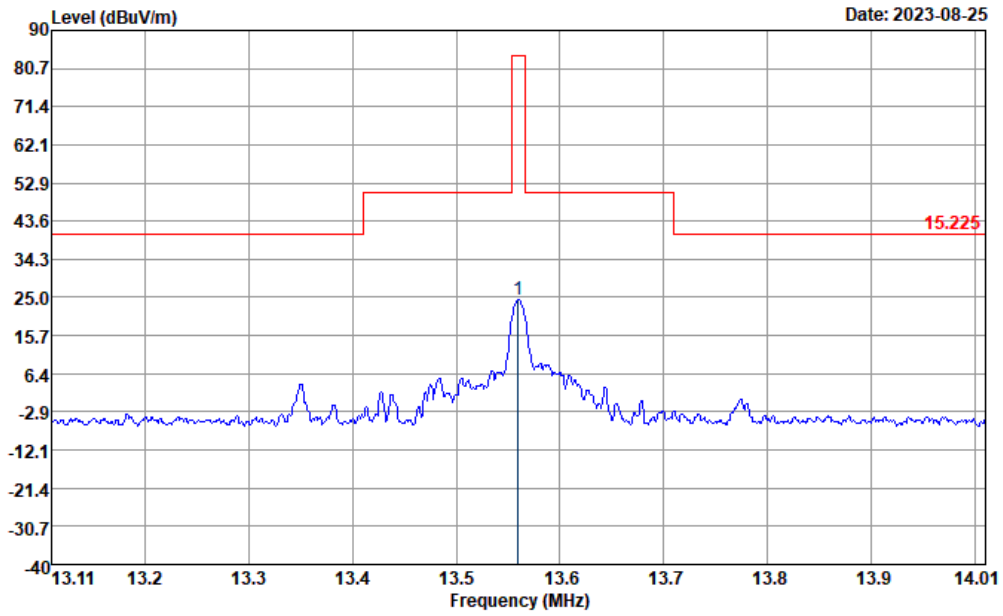
Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
13.56	24.06	40	-59.94	84	44.23	19.64	0.19	-	-	QP

Note :

1. Distance extrapolation factor = 40 log (specific distance / test distance) (dB)
2. Level = Antenna Factor + Cable Loss + Read Level - Distance extrapolation factor.

<Mode 3>

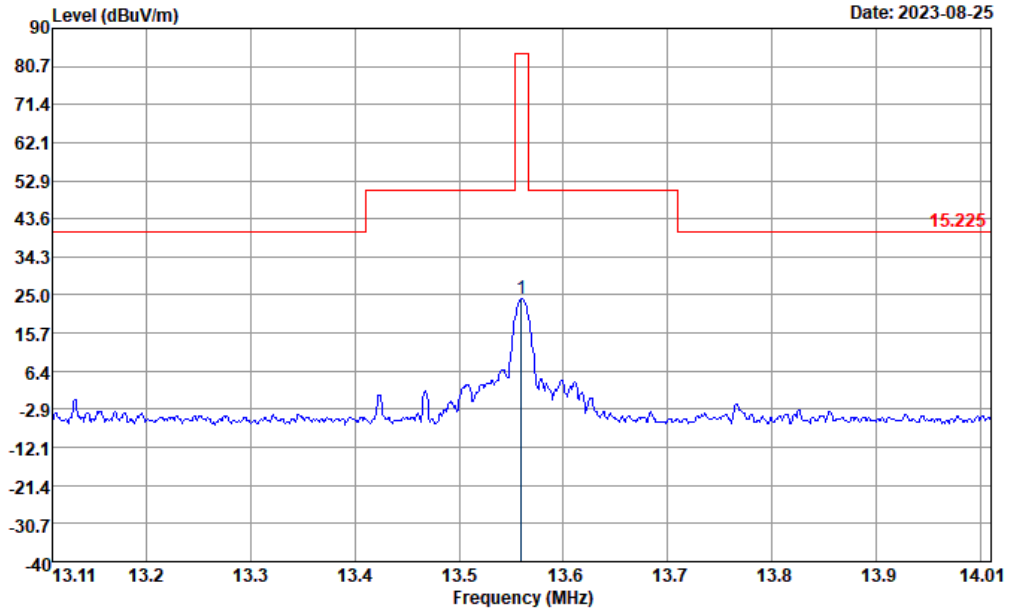
Test Mode :	NFC Tx	Test Frequency (MHz)	13.56



Site : 03CH11-HY
Condition : 15.225 3m LOOP_100488_220920 HORIZONTAL
: RBW:9.000KHz VBW:9.000KHz SWT:Auto

Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
13.56	24.39	40	-59.61	84	44.56	19.64	0.19	-	-	QP

Test Mode :	NFC Tx	Test Frequency (MHz)	13.56



Site : 03CH11-HY
Condition : 15.225 3m LOOP_100488_220920 VERTICAL
: RBW:9.000KHz VBW:9.000KHz SWT:Auto

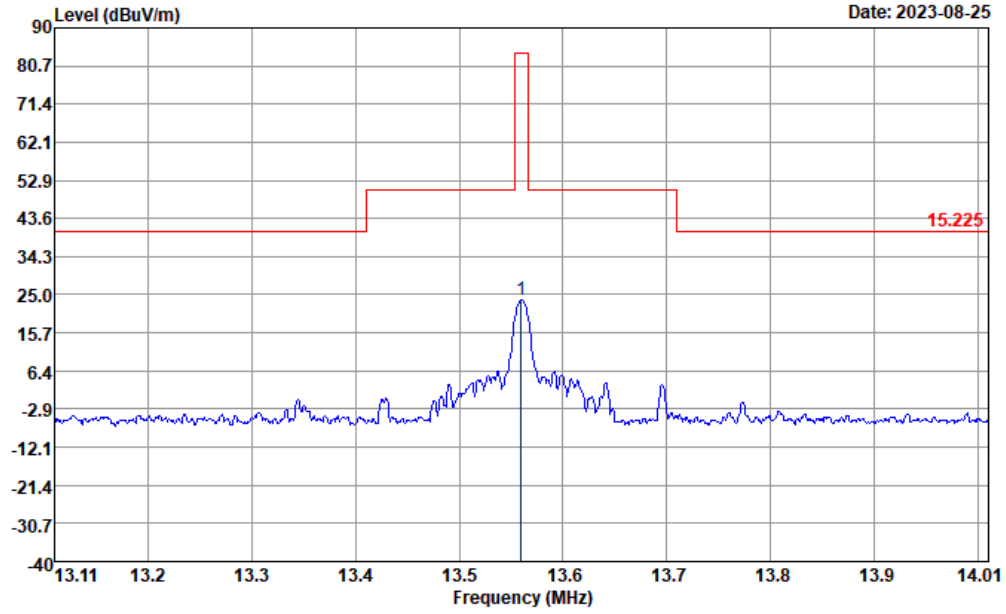
Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
13.56	24.04	40	-59.96	84	44.21	19.64	0.19	-	-	QP

Note :

1. Distance extrapolation factor = 40 log (specific distance / test distance) (dB)
2. Level = Antenna Factor + Cable Loss + Read Level - Distance extrapolation factor.

<Mode 4>

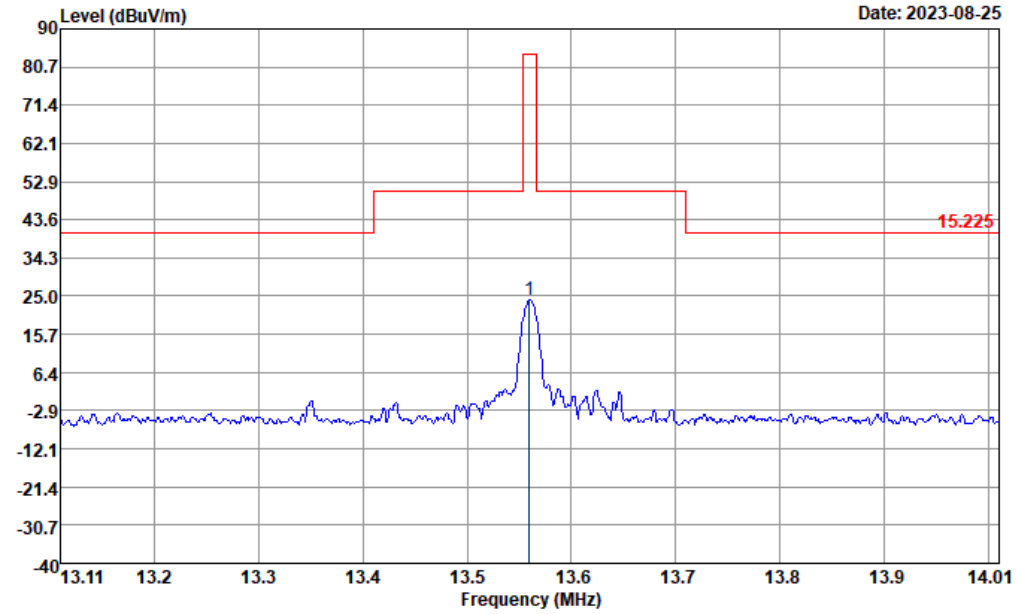
Test Mode :	NFC Tx	Test Frequency (MHz)	13.56



Site : 03CH11-HY
Condition : 15.225 3m LOOP_100488_220920 HORIZONTAL
: RBW:9.000KHz VBW:9.000KHz SWT:Auto

Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
13.56	23.66	40	-60.34	84	43.83	19.64	0.19	-	-	QP

Test Mode :	NFC Tx	Test Frequency (MHz)	13.56



Site : 03CH11-HY
Condition : 15.225 3m LOOP_100488_220920 VERTICAL
: RBW:9.000KHz VBW:9.000KHz SWT:Auto

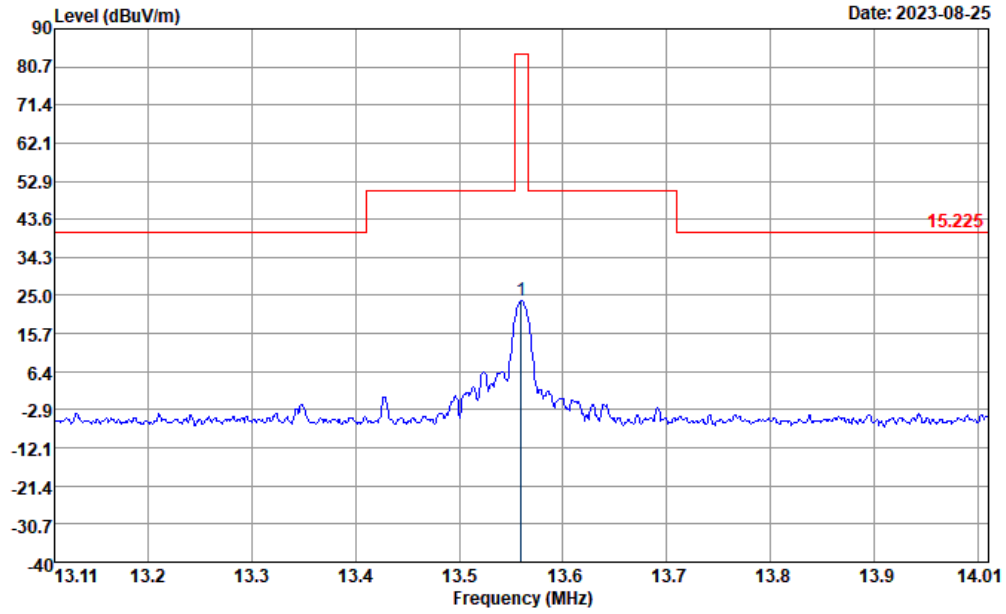
Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
13.56	23.96	40	-60.04	84	44.13	19.64	0.19	-	-	QP

Note :

1. Distance extrapolation factor = 40 log (specific distance / test distance) (dB)
2. Level = Antenna Factor + Cable Loss + Read Level - Distance extrapolation factor.

<Mode 5>

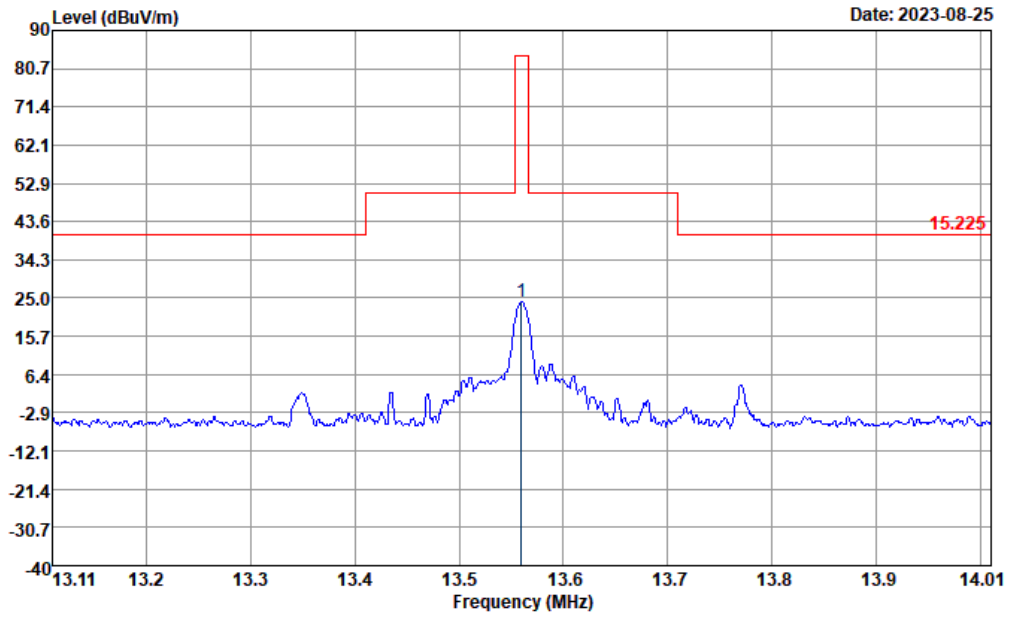
Test Mode :	NFC Tx	Test Frequency (MHz)	13.56



Site : 03CH11-HY
Condition : 15.225 3m LOOP_100488_220920 HORIZONTAL
: RBW:9.000KHz VBW:9.000KHz SWT:Auto

Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
13.56	23.71	40	-60.29	84	43.88	19.64	0.19	-	-	QP

Test Mode :	NFC Tx	Test Frequency (MHz)	13.56



Site : 03CH11-HY
Condition : 15.225 3m LOOP_100488_220920 VERTICAL
: RBW:9.000KHz VBW:9.000KHz SWT:Auto

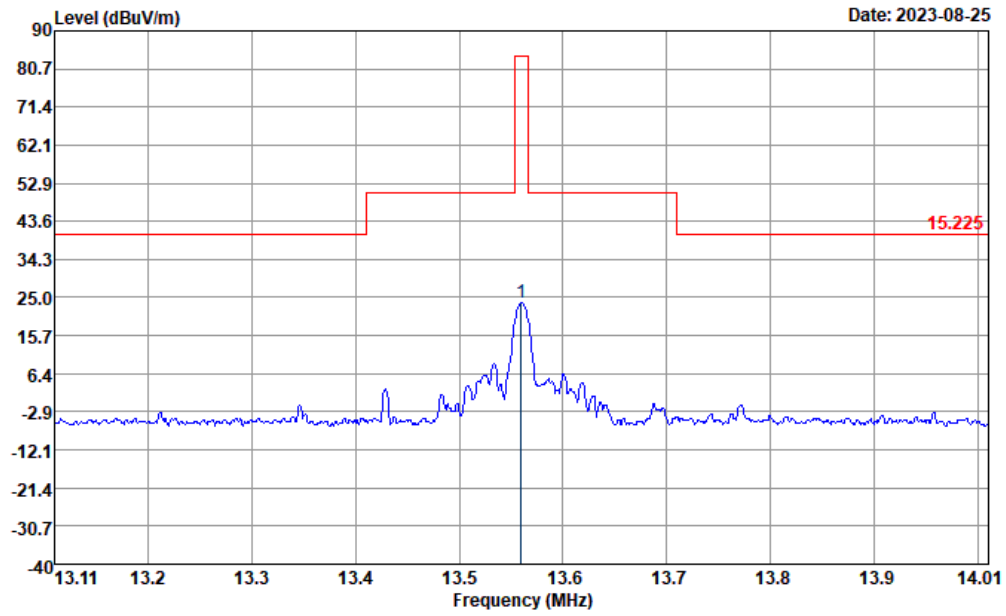
Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
13.56	24.04	40	-59.96	84	44.21	19.64	0.19	-	-	QP

Note :

1. Distance extrapolation factor = 40 log (specific distance / test distance) (dB)
2. Level = Antenna Factor + Cable Loss + Read Level - Distance extrapolation factor.

<Mode 6>

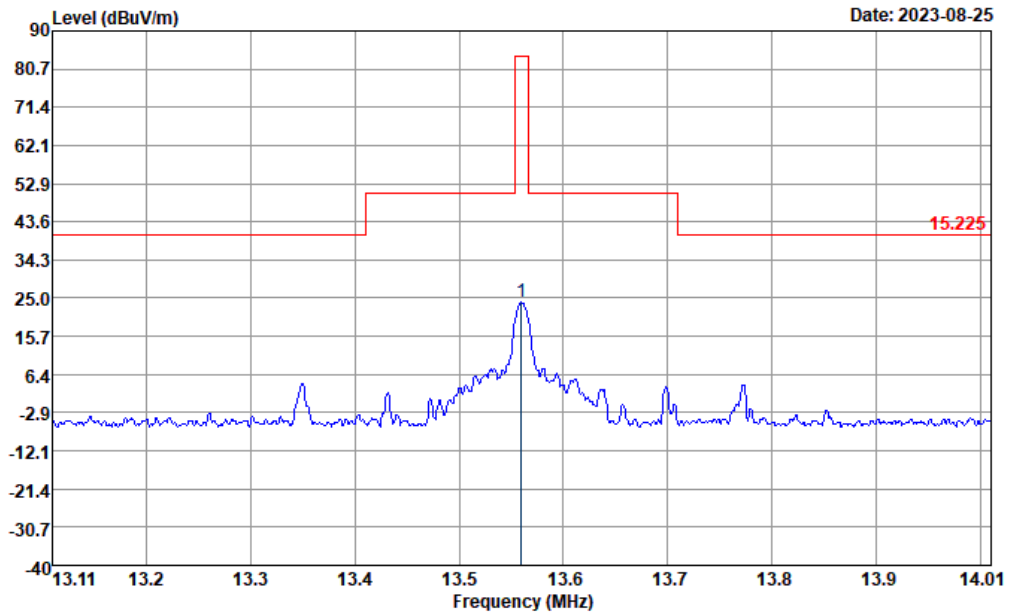
Test Mode :	NFC Tx	Test Frequency (MHz)	13.56



Site : 03CH11-HY
Condition : 15.225 3m LOOP_100488_220920 HORIZONTAL
: RBW:9.000KHz VBW:9.000KHz SWT:Auto

Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
13.56	23.71	40	-60.29	84	43.88	19.64	0.19	-	-	QP

Test Mode :	NFC Tx	Test Frequency (MHz)	13.56



Site : 03CH11-HY
Condition : 15.225 3m LOOP_100488_220920 VERTICAL
: RBW:9.000KHz VBW:9.000KHz SWT:Auto

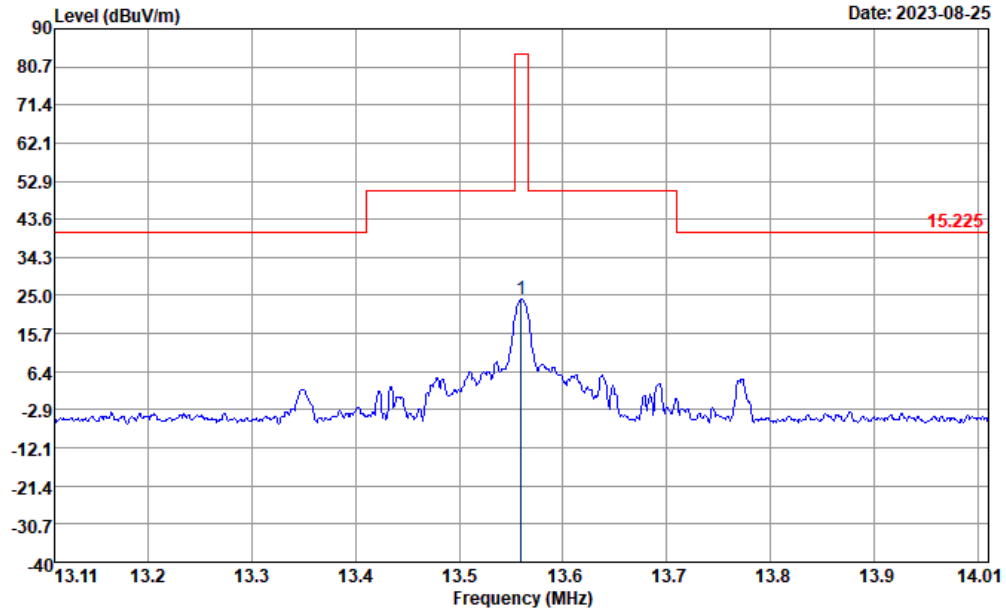
Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
13.56	23.92	40	-60.08	84	44.09	19.64	0.19	-	-	QP

Note :

1. Distance extrapolation factor = 40 log (specific distance / test distance) (dB)
2. Level = Antenna Factor + Cable Loss + Read Level - Distance extrapolation factor.

<Mode 7>

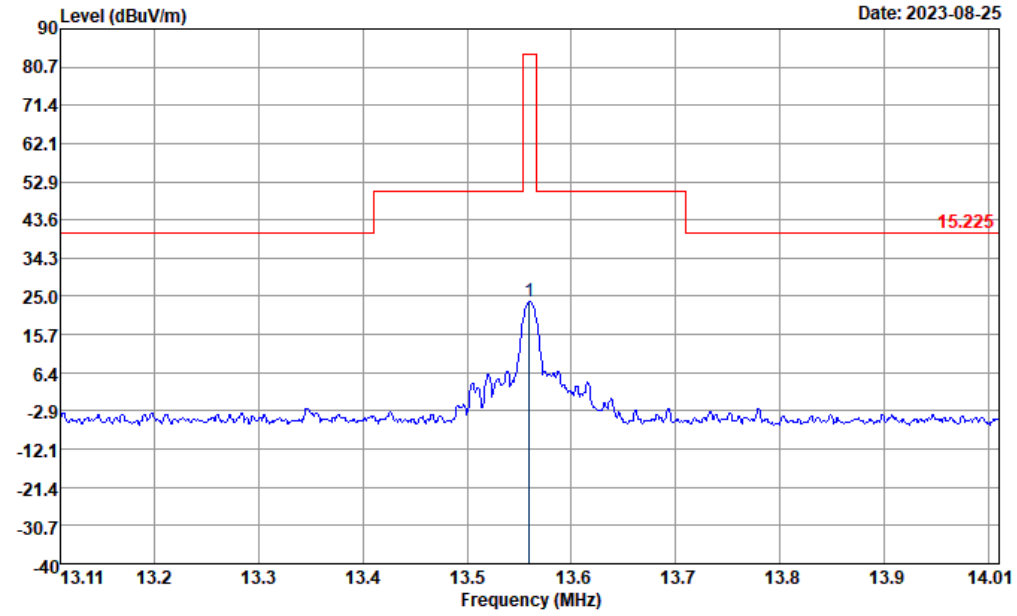
Test Mode :	NFC Tx	Test Frequency (MHz)	13.56



Site : 03CH11-HY
Condition : 15.225 3m LOOP_100488_220920 HORIZONTAL
: RBW:9.000KHz VBW:9.000KHz SWT:Auto

Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
13.56	24.05	40	-59.95	84	44.22	19.64	0.19	-	-	QP

Test Mode :	NFC Tx	Test Frequency (MHz)	13.56



Site : 03CH11-HY
Condition : 15.225 3m LOOP_100488_220920 VERTICAL
: RBW:9.000KHz VBW:9.000KHz SWT:Auto

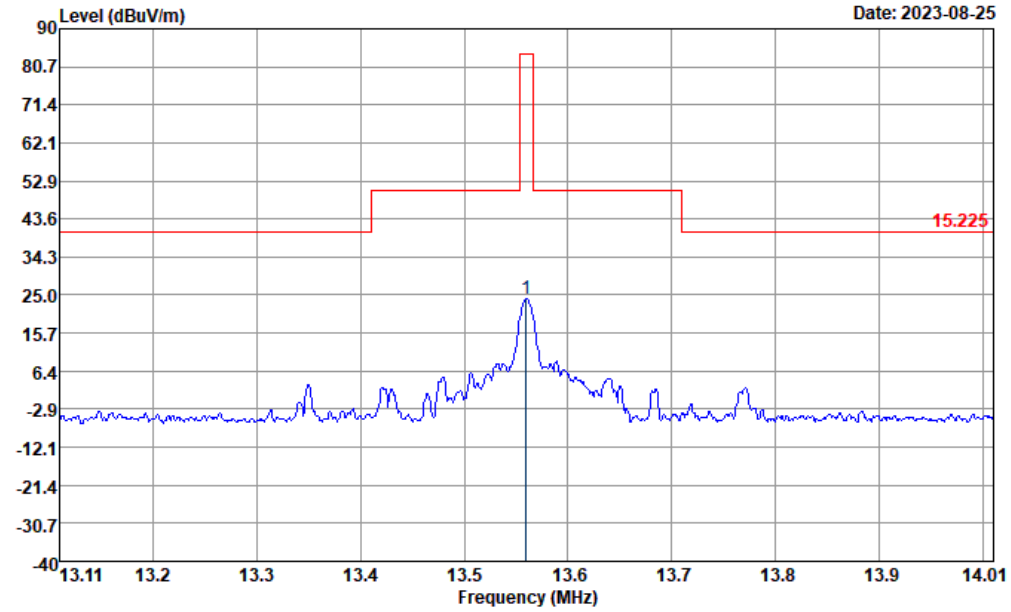
Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
13.56	23.7	40	-60.3	84	43.87	19.64	0.19	-	-	QP

Note :

1. Distance extrapolation factor = 40 log (specific distance / test distance) (dB)
2. Level = Antenna Factor + Cable Loss + Read Level - Distance extrapolation factor.

<Mode 8>

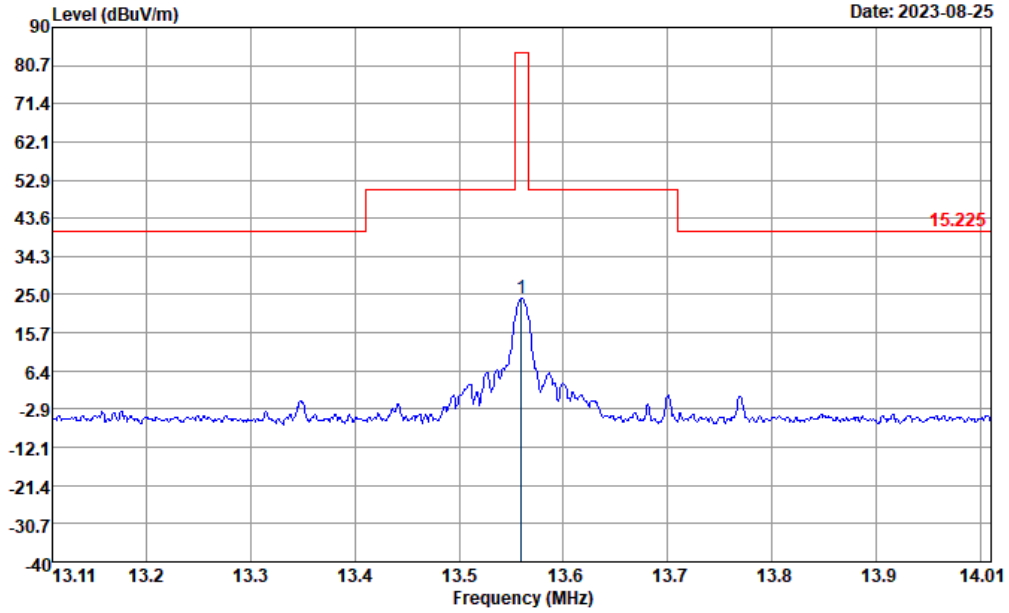
Test Mode :	NFC Tx	Test Frequency (MHz)	13.56



Site : 03CH11-HY
Condition : 15.225 3m LOOP_100488_220920 HORIZONTAL
: RBW:9.000KHz VBW:9.000KHz SWT:Auto

Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
13.56	23.98	40	-60.02	84	44.15	19.64	0.19	-	-	QP

Test Mode :	NFC Tx	Test Frequency (MHz)	13.56



Site : 03CH11-HY
Condition : 15.225 3m LOOP_100488_220920 VERTICAL
: RBW:9.000KHz VBW:9.000KHz SWT:Auto

Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
13.56	23.98	40	-60.02	84	44.15	19.64	0.19	-	-	QP

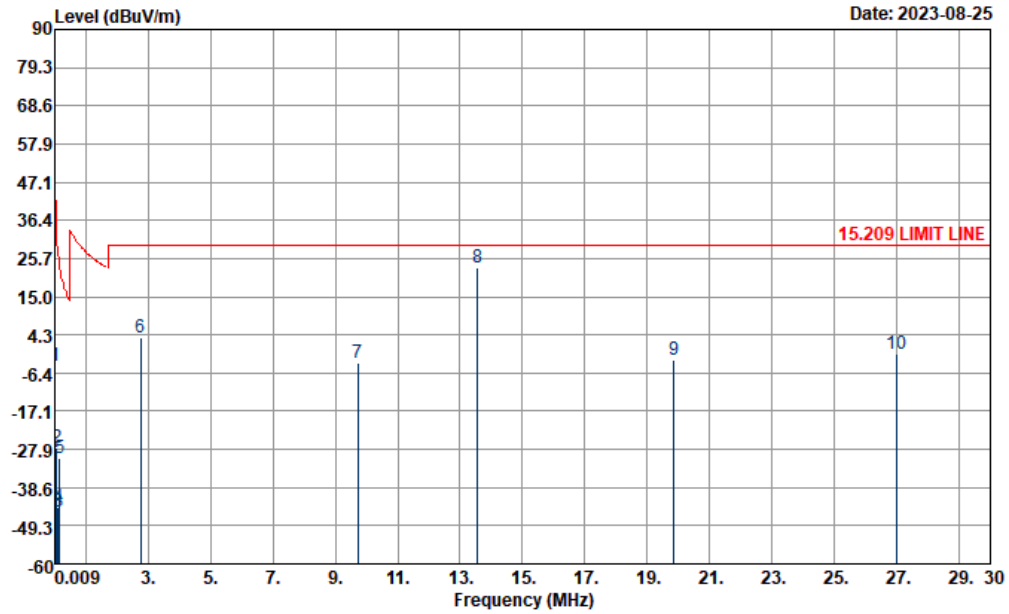
Note :

1. Distance extrapolation factor = 40 log (specific distance / test distance) (dB)
2. Level = Antenna Factor + Cable Loss + Read Level - Distance extrapolation factor.

E2. Results of Radiated Spurious Emissions (9 kHz~30MHz)

<Mode 1>

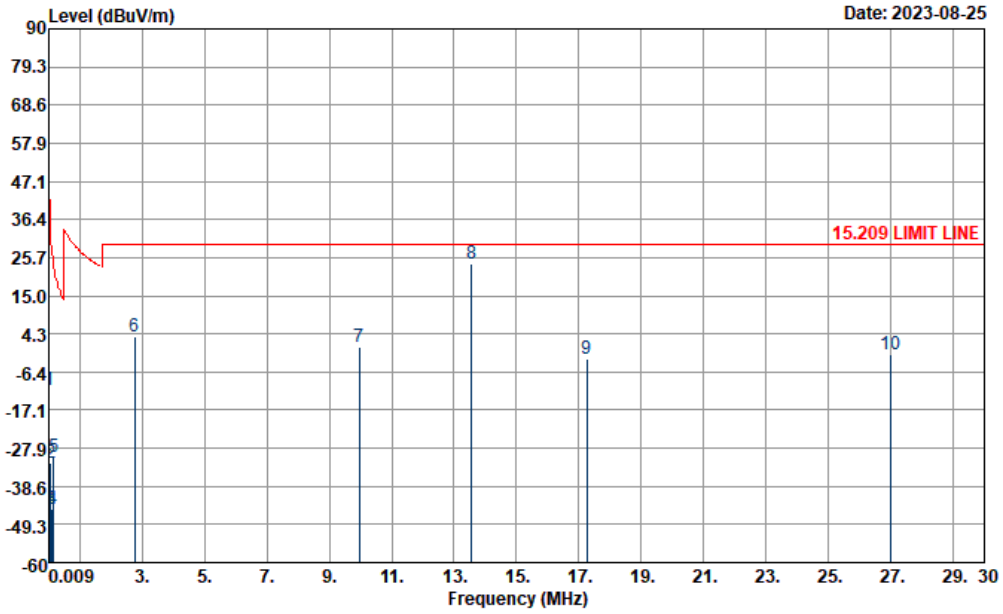
Test Mode :	NFC Tx	Polarization :	Horizontal



Site : 03CH11-HY
Condition : 15.209 LIMIT LINE 3m LOOP_100488_220920 HORIZONTAL
: RBW:9.000KHz VBW:27.000KHz SWT:Auto

Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.0193	-4.62	80	-46.51	41.89	55.53	19.83	0.02	-	-	Average
0.06645	-27.33	80	-58.48	31.15	32.93	19.72	0.02	-	-	Average
0.10578	-45.37	80	-72.49	27.12	14.99	19.62	0.02	-	-	QP
0.11568	-43.98	80	-70.32	26.34	16.38	19.62	0.02	-	-	Average
0.15544	-30.18	80	-53.95	23.77	30.17	19.62	0.03	-	-	Average
2.758	3.45	40	-26.05	29.5	23.77	19.61	0.07	-	-	QP
9.712	-3.55	40	-33.05	29.5	16.69	19.6	0.16	-	-	QP
13.56	23.16	40	-6.34	29.5	43.33	19.64	0.19	-	-	QP
19.861	-2.57	40	-32.07	29.5	17.28	19.97	0.18	-	-	QP
27.005	-1.05	40	-30.55	29.5	18.25	20.54	0.16	-	-	QP

Test Mode :	NFC Tx	Polarization :	Vertical



Site : 03CH11-HY
Condition : 15.209 LIMIT LINE 3m LOOP_100488_220920 VERTICAL
: RBW:9.000KHz VBW:27.000KHz SWT:Auto

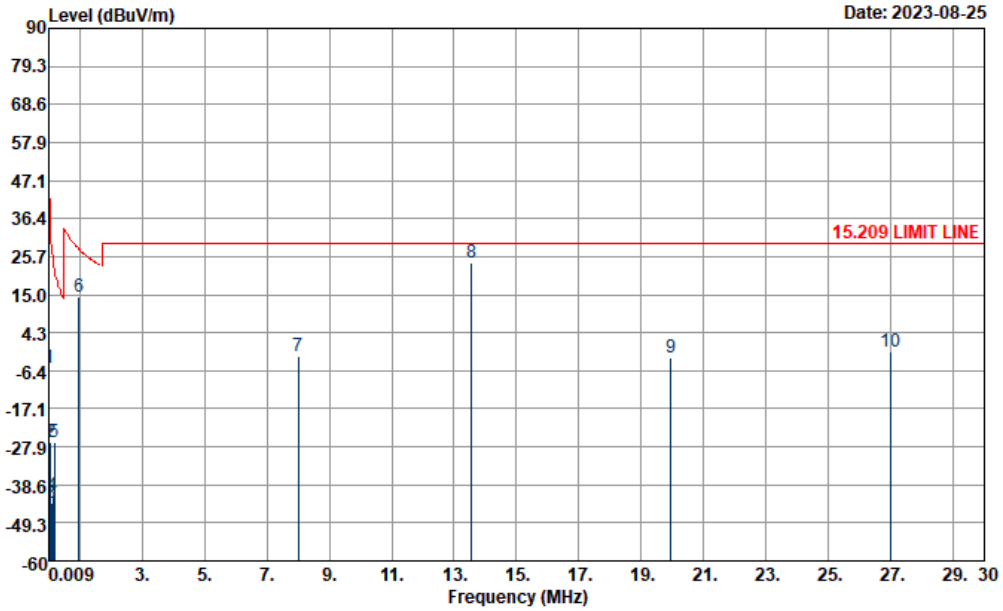
Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.01925	-11.42	80	-53.34	41.92	48.73	19.83	0.02	-	-	Average
0.06642	-31.91	80	-63.07	31.16	28.35	19.72	0.02	-	-	Average
0.10192	-45.01	80	-72.45	27.44	15.35	19.62	0.02	-	-	QP
0.11744	-44.76	80	-70.97	26.21	15.6	19.62	0.02	-	-	Average
0.1568	-30.27	80	-53.97	23.7	30.08	19.62	0.03	-	-	Average
2.758	3.36	40	-26.14	29.5	23.68	19.61	0.07	-	-	QP
9.952	0.53	40	-28.97	29.5	20.77	19.6	0.16	-	-	QP
13.56	23.95	40	-5.55	29.5	44.12	19.64	0.19	-	-	QP
17.269	-2.74	40	-32.24	29.5	17.31	19.76	0.19	-	-	QP
27	-1.37	40	-30.87	29.5	17.93	20.54	0.16	-	-	QP

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 (specific distance / test distance) (dB)
3. Level = Antenna Factor + Cable Loss + Read Level - Distance extrapolation factor.
4. 13.56 MHz is fundamental signal which can be ignored

<Mode 2>

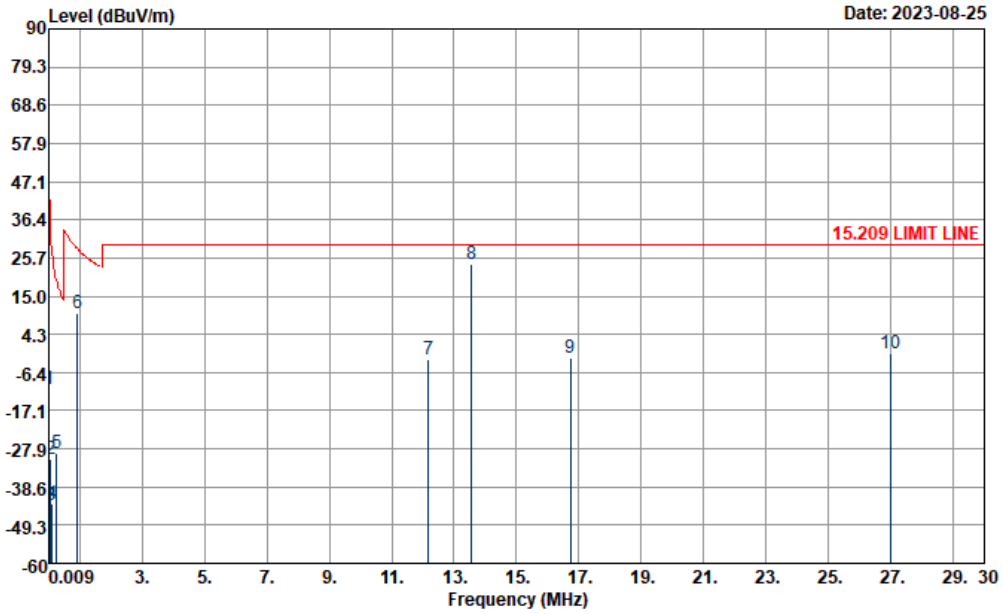
Test Mode :	NFC Tx	Polarization :	Horizontal



Site : 03CH11-HY
Condition : 15.209 LIMIT LINE 3m LOOP_100488_220920 HORIZONTAL
: RBW:0.200KHz VBW:0.600KHz SWT:Auto

Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.0192	-5.7	80	-47.64	41.94	54.44	19.84	0.02	-	-	Average
0.0663	-26.64	80	-57.81	31.17	33.62	19.72	0.02	-	-	Average
0.09266	-43.55	80	-71.82	28.27	16.74	19.69	0.02	-	-	QP
0.135	-41.63	80	-66.63	25	18.72	19.62	0.03	-	-	Average
0.18672	-26.41	80	-48.59	22.18	33.92	19.63	0.04	-	-	Average
0.96313	14.25	40	-13.68	27.93	34.66	19.56	0.03	-	-	QP
8	-2.22	40	-31.72	29.5	17.97	19.68	0.13	-	-	QP
13.56	24.11	40	-5.39	29.5	44.28	19.64	0.19	-	-	QP
19.951	-2.85	40	-32.35	29.5	16.99	19.98	0.18	-	-	QP
27	-1.12	40	-30.62	29.5	18.18	20.54	0.16	-	-	QP

Test Mode :	NFC Tx	Polarization :	Vertical



Site : 03CH11-HY
Condition : 15.209 LIMIT LINE 3m LOOP_100488_220920 VERTICAL
: RBW:0.200KHz VBW:0.600KHz SWT:Auto

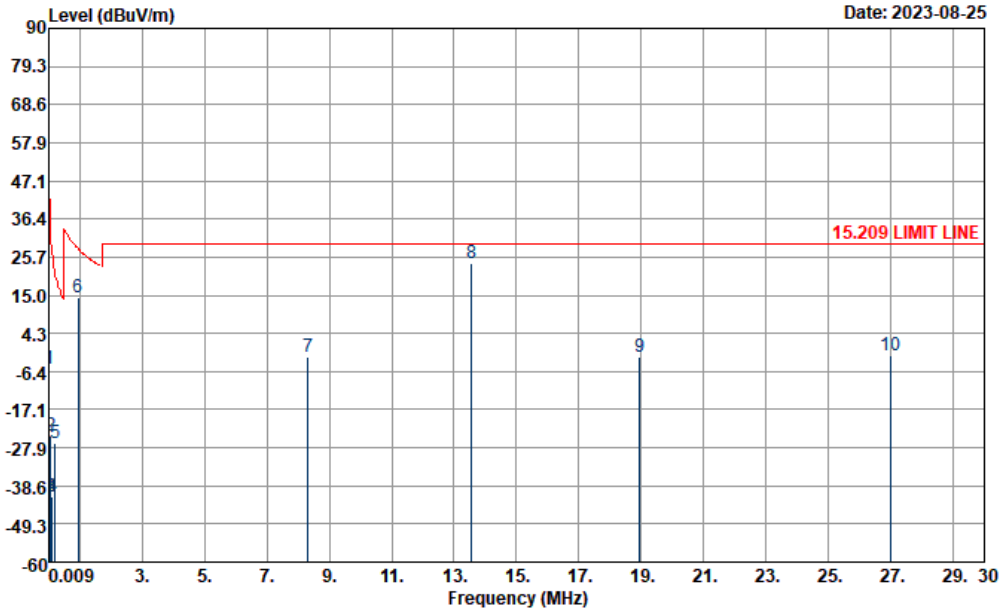
Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.0193	-10.92	80	-52.81	41.89	49.23	19.83	0.02	-	-	Average
0.06645	-30.61	80	-61.76	31.15	29.65	19.72	0.02	-	-	Average
0.10182	-43.9	80	-71.35	27.45	16.46	19.62	0.02	-	-	QP
0.11592	-43.34	80	-69.66	26.32	17.02	19.62	0.02	-	-	Average
0.2656	-29.24	80	-48.36	19.12	31.16	19.56	0.04	-	-	Average
0.91807	10.01	40	-18.34	28.35	30.42	19.56	0.03	-	-	QP
12.176	-2.78	40	-32.28	29.5	17.42	19.62	0.18	-	-	QP
13.56	24.07	40	-5.43	29.5	44.24	19.64	0.19	-	-	QP
16.738	-2.15	40	-31.65	29.5	17.93	19.73	0.19	-	-	QP
27	-1.16	40	-30.66	29.5	18.14	20.54	0.16	-	-	QP

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 (specific distance / test distance) (dB)
3. Level = Antenna Factor + Cable Loss + Read Level - Distance extrapolation factor.
4. 13.56 MHz is fundamental signal which can be ignored

<Mode 3>

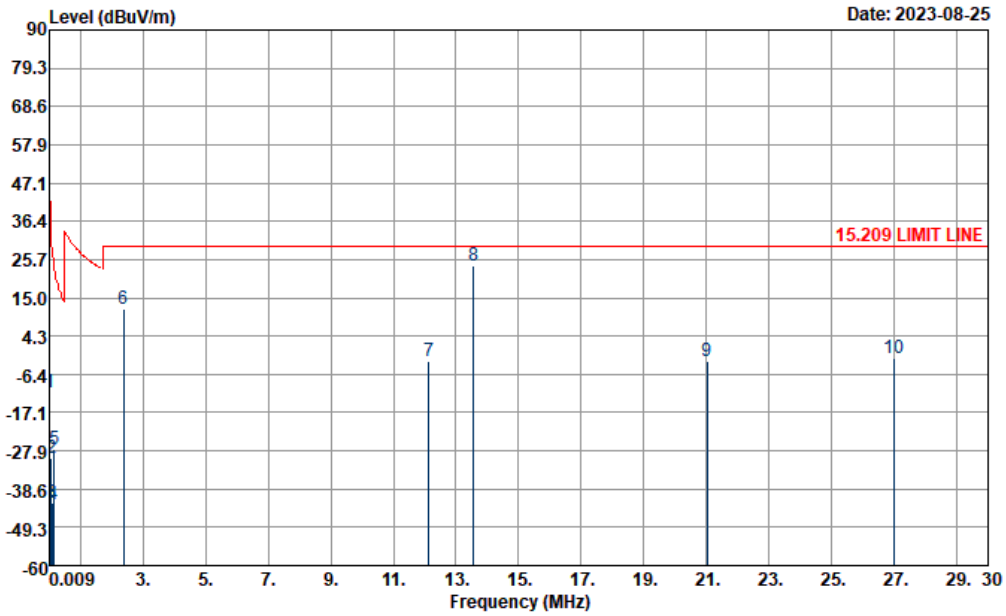
Test Mode :	NFC Tx	Polarization :	Horizontal



Site : 03CH11-HY
Condition : 15.209 LIMIT LINE 3m LOOP_100488_220920 HORIZONTAL
: RBW:0.200KHz VBW:0.600KHz SWT:Auto

Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.0192	-5.81	80	-47.75	41.94	54.33	19.84	0.02	-	-	Average
0.06639	-24.38	80	-55.54	31.16	35.88	19.72	0.02	-	-	Average
0.0977	-41.52	80	-69.33	27.81	18.82	19.64	0.02	-	-	QP
0.11312	-41.62	80	-68.15	26.53	18.74	19.62	0.02	-	-	Average
0.20134	-26.65	80	-48.18	21.53	33.68	19.63	0.04	-	-	Average
0.94811	14.54	40	-13.53	28.07	34.95	19.56	0.03	-	-	QP
8.328	-2.28	40	-31.78	29.5	17.93	19.65	0.14	-	-	QP
13.56	24.05	40	-5.45	29.5	44.22	19.64	0.19	-	-	QP
18.961	-2.27	40	-31.77	29.5	17.67	19.88	0.18	-	-	QP
27	-1.79	40	-31.29	29.5	17.51	20.54	0.16	-	-	QP

Test Mode :	NFC Tx	Polarization :	Vertical



Site : 03CH11-HY
Condition : 15.209 LIMIT LINE 3m LOOP_100488_220920 VERTICAL
: RBW:0.200KHz VBW:0.600KHz SWT:Auto

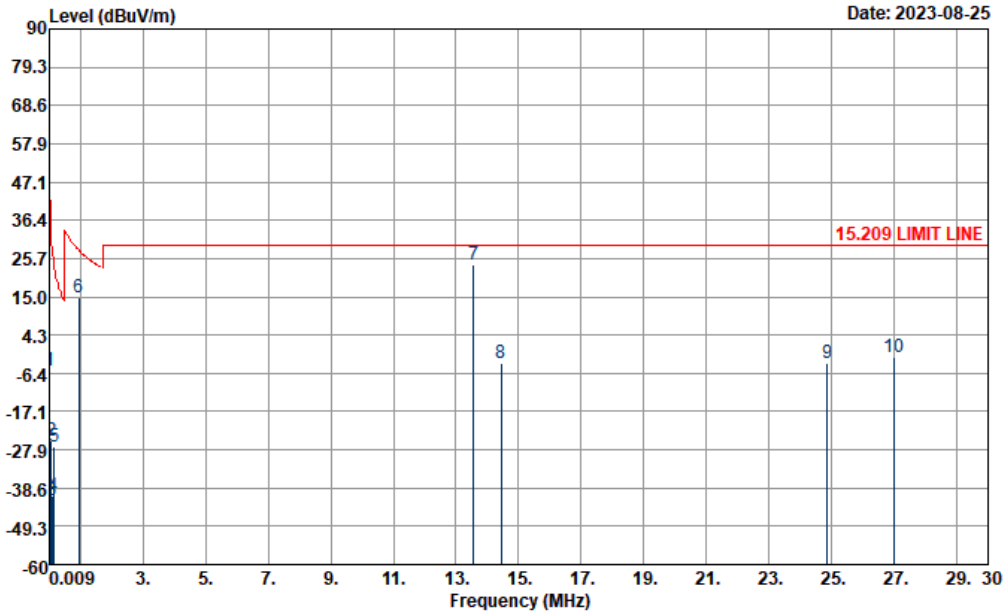
Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.0192	-11.35	80	-53.29	41.94	48.79	19.84	0.02	-	-	Average
0.06645	-29.72	80	-60.87	31.15	30.54	19.72	0.02	-	-	Average
0.0913	-42.46	80	-70.85	28.39	17.81	19.71	0.02	-	-	QP
0.11332	-42.83	80	-69.35	26.52	17.53	19.62	0.02	-	-	Average
0.15306	-27.57	80	-51.48	23.91	32.78	19.62	0.03	-	-	Average
2.383	11.96	40	-17.54	29.5	32.3	19.6	0.06	-	-	QP
12.12	-2.57	40	-32.07	29.5	17.63	19.62	0.18	-	-	QP
13.56	23.93	40	-5.57	29.5	44.1	19.64	0.19	-	-	QP
21.022	-2.56	40	-32.06	29.5	17.17	20.1	0.17	-	-	QP
27	-2.04	40	-31.54	29.5	17.26	20.54	0.16	-	-	QP

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 (specific distance / test distance) (dB)
3. Level = Antenna Factor + Cable Loss + Read Level - Distance extrapolation factor.
4. 13.56 MHz is fundamental signal which can be ignored

<Mode 4>

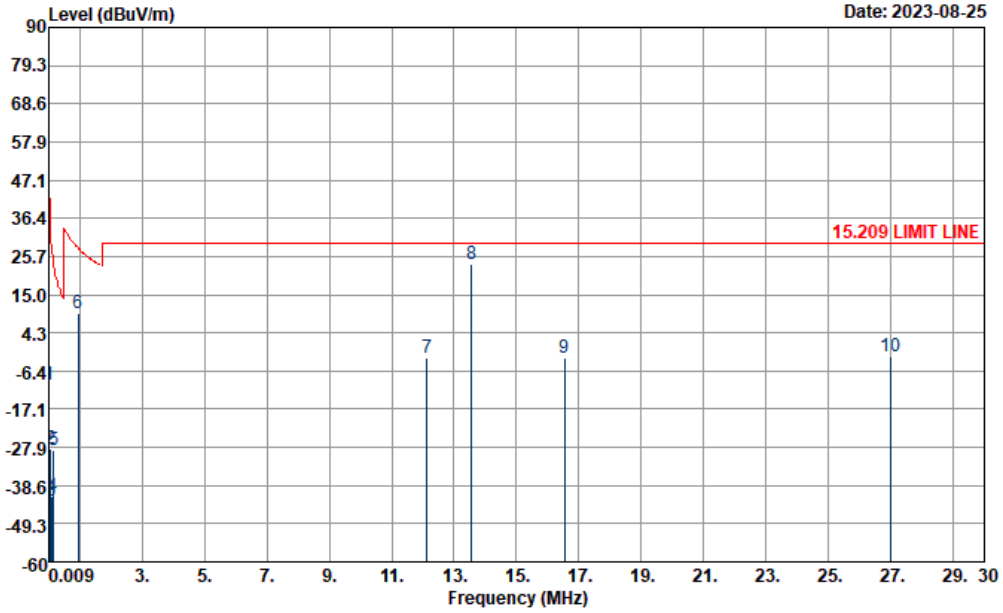
Test Mode :	NFC Tx	Polarization :	Horizontal



Site : 03CH11-HY
Condition : 15.209 LIMIT LINE 3m LOOP_100488_220920 HORIZONTAL
: RBW:0.200KHz VBW:0.600KHz SWT:Auto

Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.0192	-5.71	80	-47.65	41.94	54.43	19.84	0.02	-	-	Average
0.06633	-25.38	80	-56.55	31.17	34.88	19.72	0.02	-	-	Average
0.10426	-42.16	80	-69.4	27.24	18.2	19.62	0.02	-	-	QP
0.1194	-40.94	80	-67	26.06	19.42	19.62	0.02	-	-	Average
0.1687	-26.97	80	-50.03	23.06	33.38	19.62	0.03	-	-	Average
0.9406	14.62	40	-13.52	28.14	35.03	19.56	0.03	-	-	QP
13.56	24.09	40	-5.41	29.5	44.26	19.64	0.19	-	-	QP
14.448	-3.6	40	-33.1	29.5	16.56	19.64	0.2	-	-	QP
24.865	-3.48	40	-32.98	29.5	15.95	20.42	0.15	-	-	QP
27	-1.78	40	-31.28	29.5	17.52	20.54	0.16	-	-	QP

Test Mode :	NFC Tx	Polarization :	Vertical



Site : 03CH11-HY
Condition : 15.209 LIMIT LINE 3m LOOP_100488_220920 VERTICAL
: RBW:0.200KHz VBW:0.600KHz SWT:Auto

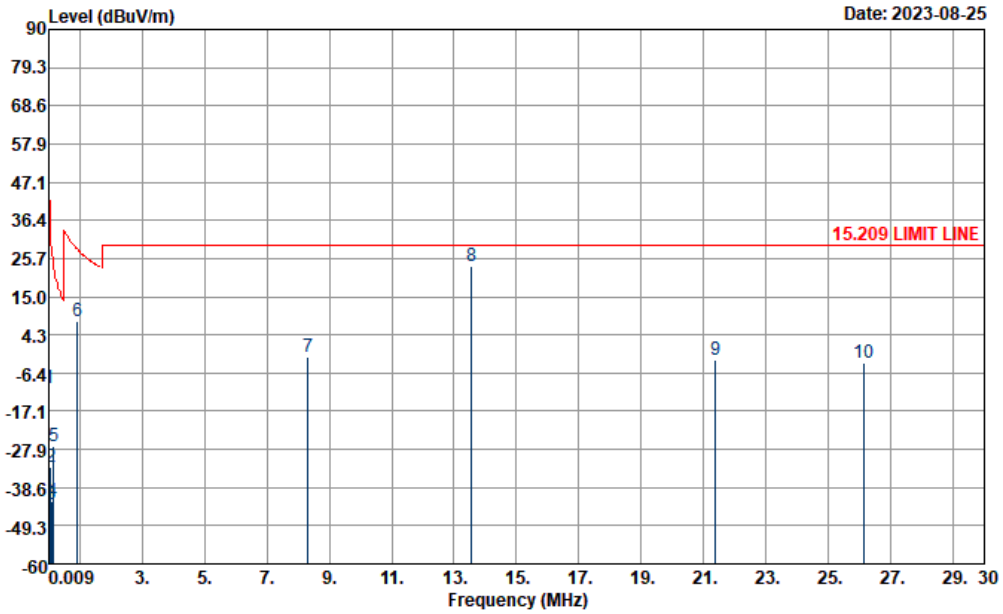
Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.0192	-10.48	80	-52.42	41.94	49.66	19.84	0.02	-	-	Average
0.06645	-28.26	80	-59.41	31.15	32	19.72	0.02	-	-	Average
0.1017	-42.91	80	-70.37	27.46	17.45	19.62	0.02	-	-	QP
0.11584	-41.67	80	-68	26.33	18.69	19.62	0.02	-	-	Average
0.16122	-28.67	80	-52.13	23.46	31.68	19.62	0.03	-	-	Average
0.9406	9.77	40	-18.37	28.14	30.18	19.56	0.03	-	-	QP
12.136	-2.65	40	-32.15	29.5	17.55	19.62	0.18	-	-	QP
13.56	23.6	40	-5.9	29.5	43.77	19.64	0.19	-	-	QP
16.549	-2.9	40	-32.4	29.5	17.2	19.71	0.19	-	-	QP
27	-2.13	40	-31.63	29.5	17.17	20.54	0.16	-	-	QP

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 (specific distance / test distance) (dB)
3. Level = Antenna Factor + Cable Loss + Read Level - Distance extrapolation factor.
4. 13.56 MHz is fundamental signal which can be ignored

<Mode 5>

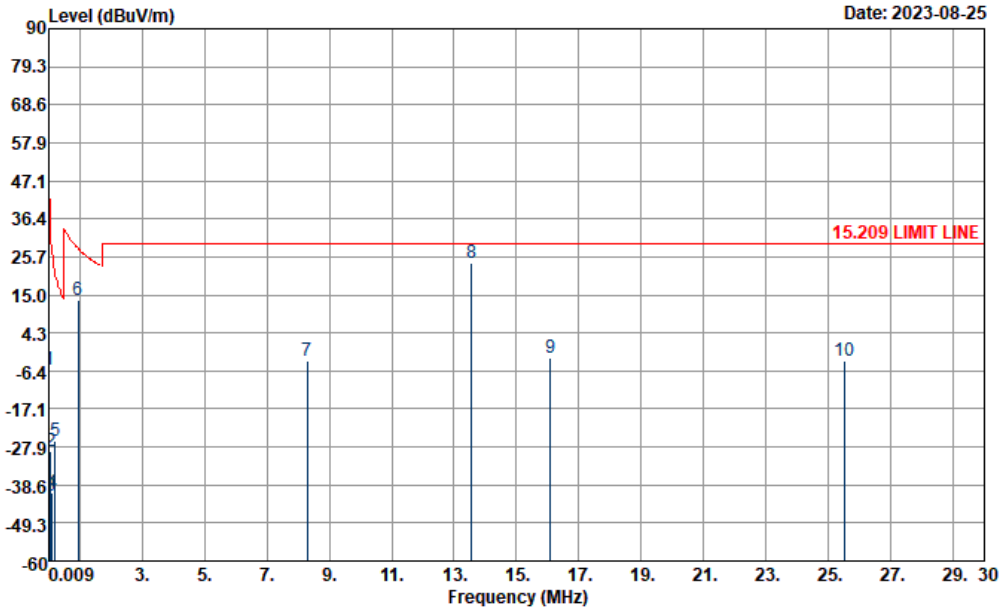
Test Mode :	NFC Tx	Polarization :	Horizontal



Site : 03CH11-HY
Condition : 15.209 LIMIT LINE 3m LOOP_100488_220920 HORIZONTAL
: RBW:0.200KHz VBW:0.600KHz SWT:Auto

Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.0192	-10.61	80	-52.55	41.94	49.53	19.84	0.02	-	-	Average
0.06645	-32.67	80	-63.82	31.15	27.59	19.72	0.02	-	-	Average
0.10192	-43.2	80	-70.64	27.44	17.16	19.62	0.02	-	-	QP
0.1174	-42.63	80	-68.84	26.21	17.73	19.62	0.02	-	-	Average
0.16632	-26.88	80	-50.07	23.19	33.47	19.62	0.03	-	-	Average
0.92558	8.1	40	-20.18	28.28	28.51	19.56	0.03	-	-	QP
8.312	-2.02	40	-31.52	29.5	18.19	19.65	0.14	-	-	QP
13.56	23.49	40	-6.01	29.5	43.66	19.64	0.19	-	-	QP
21.391	-2.75	40	-32.25	29.5	16.94	20.14	0.17	-	-	QP
26.16	-3.76	40	-33.26	29.5	15.55	20.53	0.16	-	-	QP

Test Mode :	NFC Tx	Polarization :	Vertical



Site : 03CH11-HY
Condition : 15.209 LIMIT LINE 3m LOOP_100488_220920 VERTICAL
: RBW:0.200KHz VBW:0.600KHz SWT:Auto

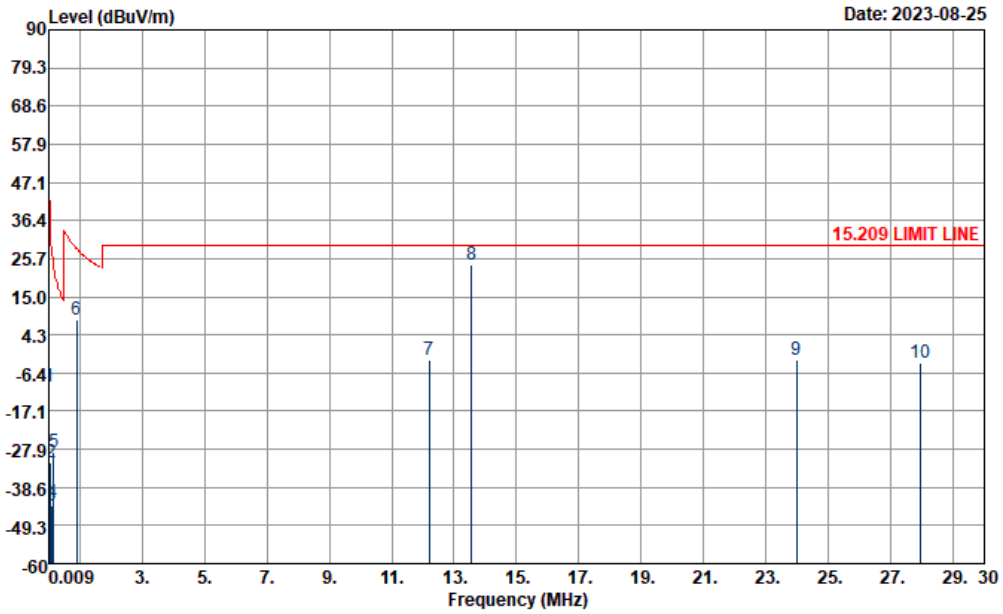
Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.0192	-6.24	80	-48.18	41.94	53.9	19.84	0.02	-	-	Average
0.06648	-29.18	80	-60.33	31.15	31.08	19.72	0.02	-	-	Average
0.09932	-41.59	80	-69.25	27.66	18.76	19.63	0.02	-	-	QP
0.11268	-40.95	80	-67.52	26.57	19.41	19.62	0.02	-	-	Average
0.20236	-26.27	80	-47.75	21.48	34.06	19.63	0.04	-	-	Average
0.94811	13.47	40	-14.6	28.07	33.88	19.56	0.03	-	-	QP
8.288	-3.63	40	-33.13	29.5	16.58	19.65	0.14	-	-	QP
13.56	23.87	40	-5.63	29.5	44.04	19.64	0.19	-	-	QP
16.081	-2.87	40	-32.37	29.5	17.26	19.67	0.2	-	-	QP
25.5	-3.49	40	-32.99	29.5	15.88	20.48	0.15	-	-	QP

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 (specific distance / test distance) (dB)
3. Level = Antenna Factor + Cable Loss + Read Level - Distance extrapolation factor.
4. 13.56 MHz is fundamental signal which can be ignored

<Mode 6>

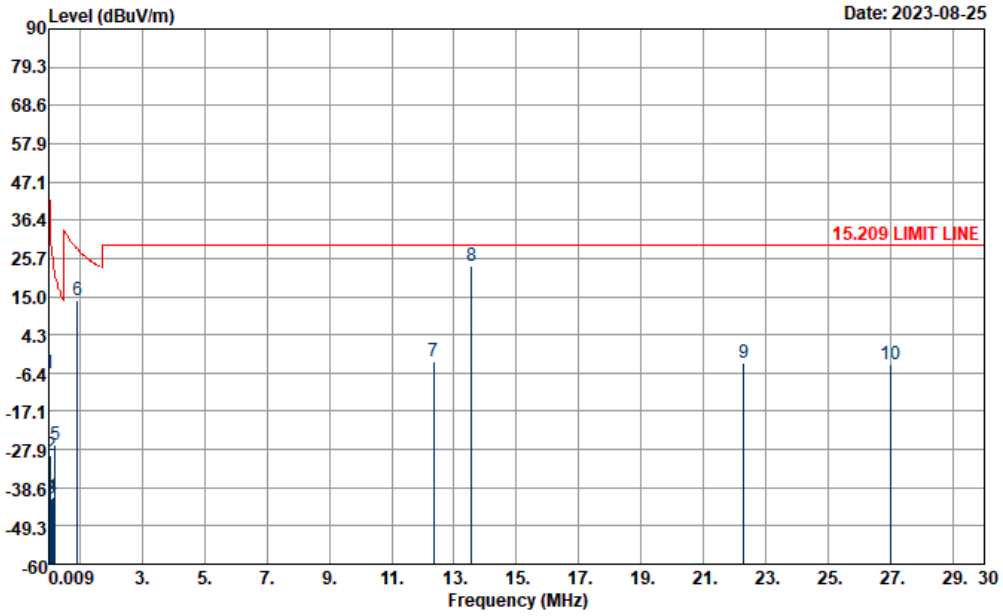
Test Mode :	NFC Tx	Polarization :	Horizontal



Site : 03CH11-HY
Condition : 15.209 LIMIT LINE 3m LOOP_100488_220920 HORIZONTAL
: RBW:0.200KHz VBW:0.600KHz SWT:Auto

Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.0192	-10.18	80	-52.12	41.94	49.96	19.84	0.02	-	-	Average
0.06648	-31.75	80	-62.9	31.15	28.51	19.72	0.02	-	-	Average
0.09176	-43.79	80	-72.14	28.35	16.49	19.7	0.02	-	-	QP
0.13496	-42.94	80	-67.94	25	17.41	19.62	0.03	-	-	Average
0.15714	-28.79	80	-52.47	23.68	31.56	19.62	0.03	-	-	Average
0.89554	8.46	40	-20.1	28.56	28.87	19.56	0.03	-	-	QP
12.192	-2.84	40	-32.34	29.5	17.36	19.62	0.18	-	-	QP
13.56	23.8	40	-5.7	29.5	43.97	19.64	0.19	-	-	QP
23.992	-2.84	40	-32.34	29.5	16.58	20.42	0.16	-	-	QP
27.95	-3.77	40	-33.27	29.5	15.52	20.54	0.17	-	-	QP

Test Mode :	NFC Tx	Polarization :	Vertical



Site : 03CH11-HY
Condition : 15.209 LIMIT LINE 3m LOOP_100488_220920 VERTICAL
: RBW:0.200KHz VBW:0.600KHz SWT:Auto

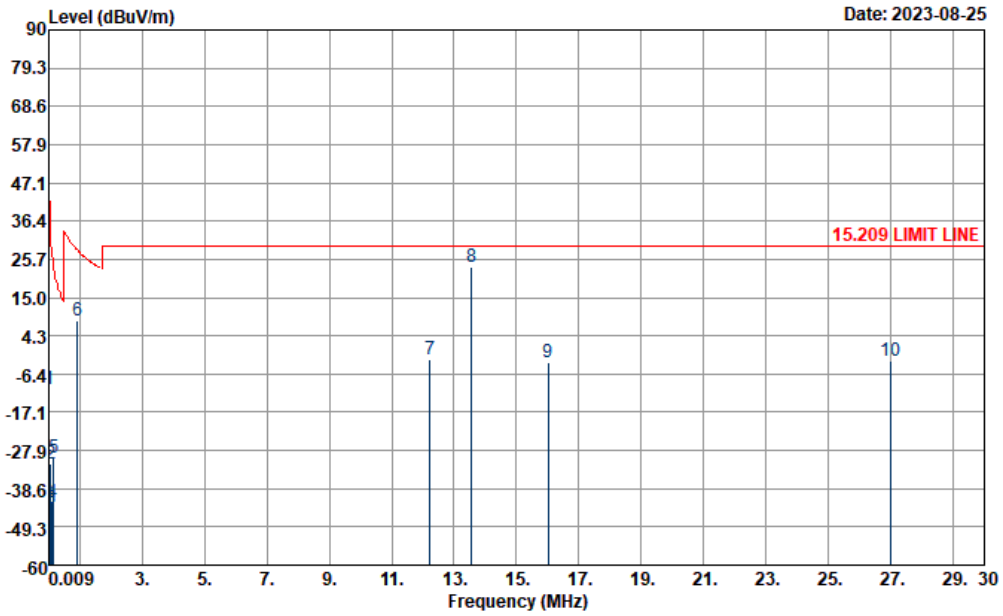
Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.01925	-6.41	80	-48.33	41.92	53.74	19.83	0.02	-	-	Average
0.06648	-29.48	80	-60.63	31.15	30.78	19.72	0.02	-	-	Average
0.09148	-41.48	80	-69.86	28.38	18.79	19.71	0.02	-	-	QP
0.13504	-41.21	80	-66.2	24.99	19.14	19.62	0.03	-	-	Average
0.20916	-26.53	80	-47.72	21.19	33.81	19.62	0.04	-	-	Average
0.93309	13.79	40	-14.42	28.21	34.2	19.56	0.03	-	-	QP
12.352	-3.25	40	-32.75	29.5	16.95	19.62	0.18	-	-	QP
13.56	23.7	40	-5.8	29.5	43.87	19.64	0.19	-	-	QP
22.291	-3.42	40	-32.92	29.5	16.18	20.23	0.17	-	-	QP
27	-4.2	40	-33.7	29.5	15.1	20.54	0.16	-	-	QP

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 (specific distance / test distance) (dB)
3. Level = Antenna Factor + Cable Loss + Read Level - Distance extrapolation factor.
4. 13.56 MHz is fundamental signal which can be ignored

<Mode 7>

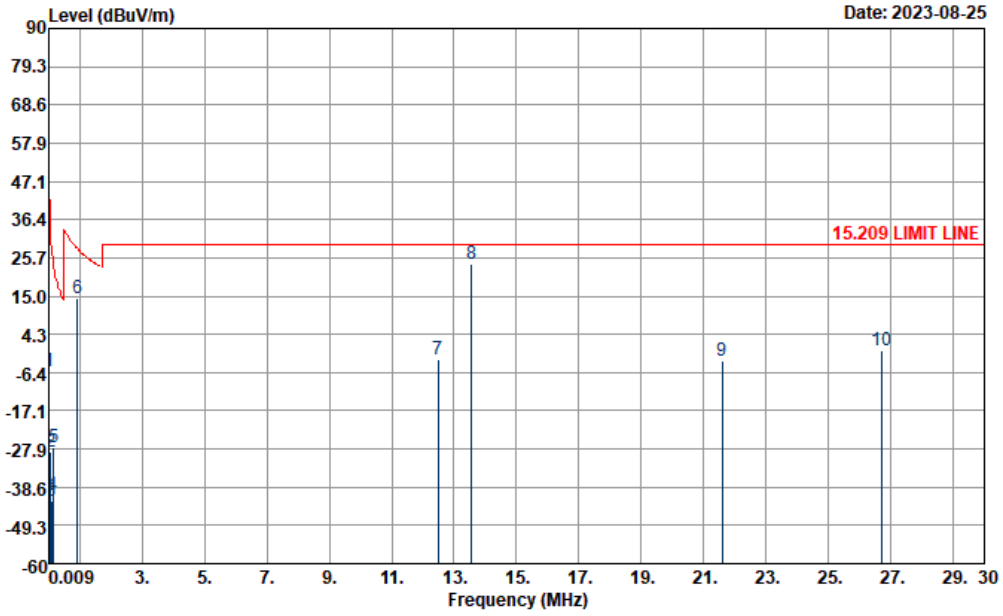
Test Mode :	NFC Tx	Polarization :	Horizontal



Site : 03CH11-HY
Condition : 15.209 LIMIT LINE 3m LOOP_100488_220920 HORIZONTAL
: RBW:0.200KHz VBW:0.600KHz SWT:Auto

Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.00905	-10.78	80	-59.25	48.47	49.08	20.11	0.03	-	-	Average
0.06636	-31.46	80	-62.63	31.17	28.8	19.72	0.02	-	-	Average
0.09448	-44.28	80	-72.38	28.1	16.02	19.68	0.02	-	-	QP
0.1152	-42.31	80	-68.69	26.38	18.05	19.62	0.02	-	-	Average
0.15408	-29.74	80	-53.59	23.85	30.61	19.62	0.03	-	-	Average
0.91807	8.55	40	-19.8	28.35	28.96	19.56	0.03	-	-	QP
12.224	-2.4	40	-31.9	29.5	17.8	19.62	0.18	-	-	QP
13.56	23.49	40	-6.01	29.5	43.66	19.64	0.19	-	-	QP
16.018	-3.05	40	-32.55	29.5	17.09	19.66	0.2	-	-	QP
27	-2.58	40	-32.08	29.5	16.72	20.54	0.16	-	-	QP

Test Mode :	NFC Tx	Polarization :	Vertical



Site : 03CH11-HY
Condition : 15.209 LIMIT LINE 3m LOOP_100488_220920 VERTICAL
: RBW:0.200KHz VBW:0.600KHz SWT:Auto

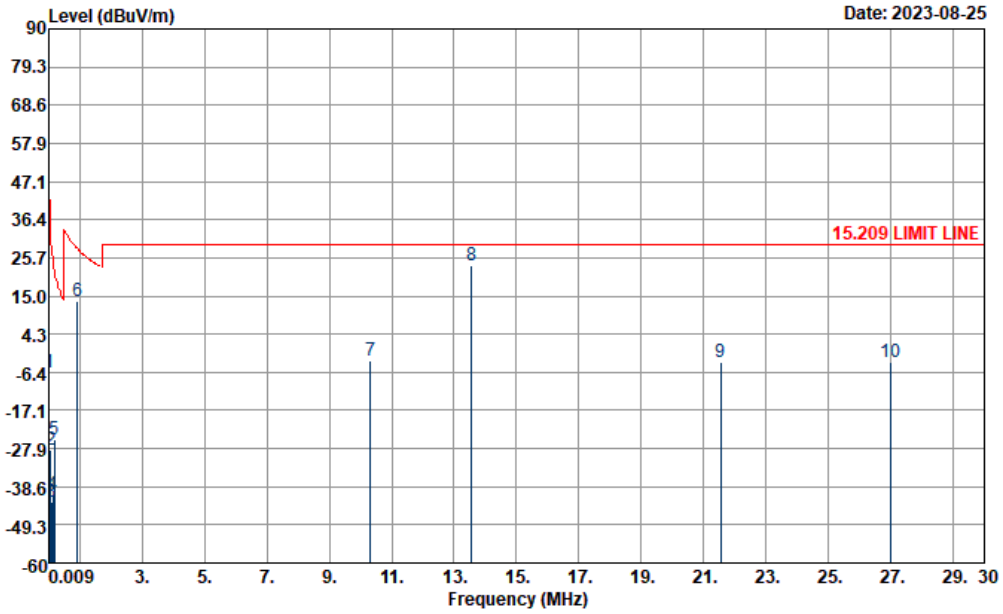
Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.01925	-6.15	80	-48.07	41.92	54	19.83	0.02	-	-	Average
0.06636	-28.61	80	-59.78	31.17	31.65	19.72	0.02	-	-	Average
0.1011	-42.57	80	-70.08	27.51	17.79	19.62	0.02	-	-	QP
0.135	-40.94	80	-65.94	25	19.41	19.62	0.03	-	-	Average
0.15918	-27.24	80	-50.81	23.57	33.11	19.62	0.03	-	-	Average
0.92558	14.18	40	-14.1	28.28	34.59	19.56	0.03	-	-	QP
12.48	-2.77	40	-32.27	29.5	17.43	19.62	0.18	-	-	QP
13.56	23.81	40	-5.69	29.5	43.98	19.64	0.19	-	-	QP
21.589	-3.19	40	-32.69	29.5	16.48	20.16	0.17	-	-	QP
26.725	-0.13	40	-29.63	29.5	19.17	20.54	0.16	-	-	QP

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 (specific distance / test distance) (dB)
3. Level = Antenna Factor + Cable Loss + Read Level - Distance extrapolation factor.
4. 13.56 MHz is fundamental signal which can be ignored

<Mode 8>

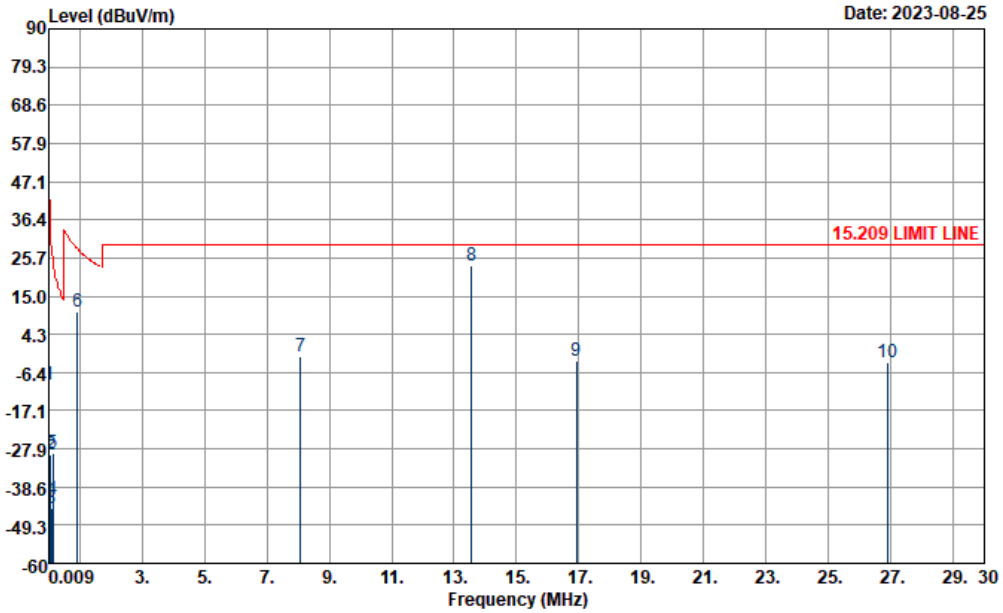
Test Mode :	NFC Tx	Polarization :	Horizontal



Site : 03CH11-HY
Condition : 15.209 LIMIT LINE 3m LOOP_100488_220920 HORIZONTAL
: RBW:0.200KHz VBW:0.600KHz SWT:Auto

Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.0192	-6.48	80	-48.42	41.94	53.66	19.84	0.02	-	-	Average
0.06639	-28.16	80	-59.32	31.16	32.1	19.72	0.02	-	-	Average
0.10348	-42.74	80	-70.05	27.31	17.62	19.62	0.02	-	-	QP
0.13496	-40.94	80	-65.94	25	19.41	19.62	0.03	-	-	Average
0.19216	-25.52	80	-47.45	21.93	34.81	19.63	0.04	-	-	Average
0.92558	13.68	40	-14.6	28.28	34.09	19.56	0.03	-	-	QP
10.32	-3.13	40	-32.63	29.5	17.11	19.6	0.16	-	-	QP
13.56	23.68	40	-5.82	29.5	43.85	19.64	0.19	-	-	QP
21.553	-3.64	40	-33.14	29.5	16.03	20.16	0.17	-	-	QP
27	-3.75	40	-33.25	29.5	15.55	20.54	0.16	-	-	QP

Test Mode :	NFC Tx	Polarization :	Vertical



Site : 03CH11-HY
Condition : 15.209 LIMIT LINE 3m LOOP_100488_220920 VERTICAL
: RBW:0.200KHz VBW:0.600KHz SWT:Auto

Frequency (MHz)	Level (dBµV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.01925	-9.8	80	-51.72	41.92	50.35	19.83	0.02	-	-	Average
0.06636	-29.45	80	-60.62	31.17	30.81	19.72	0.02	-	-	Average
0.09622	-44.4	80	-72.34	27.94	15.92	19.66	0.02	-	-	QP
0.13496	-42.14	80	-67.14	25	18.21	19.62	0.03	-	-	Average
0.15068	-29.18	80	-53.22	24.04	31.17	19.62	0.03	-	-	Average
0.92558	10.54	40	-17.74	28.28	30.95	19.56	0.03	-	-	QP
8.072	-1.76	40	-31.26	29.5	18.44	19.67	0.13	-	-	QP
13.56	23.56	40	-5.94	29.5	43.73	19.64	0.19	-	-	QP
16.927	-3.09	40	-32.59	29.5	16.97	19.75	0.19	-	-	QP
26.885	-3.48	40	-32.98	29.5	15.82	20.54	0.16	-	-	QP

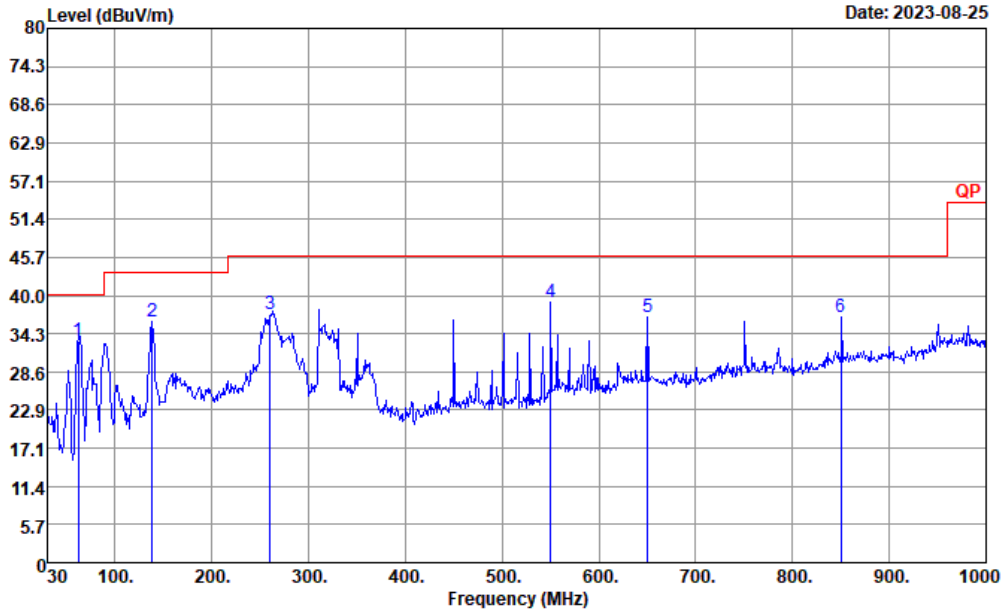
Note :

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 (specific distance / test distance) (dB)
3. Level = Antenna Factor + Cable Loss + Read Level - Distance extrapolation factor.
4. 13.56 MHz is fundamental signal which can be ignored

E3. Results of Radiated Spurious Emissions (30MHz~1GHz)

<Mode 1>

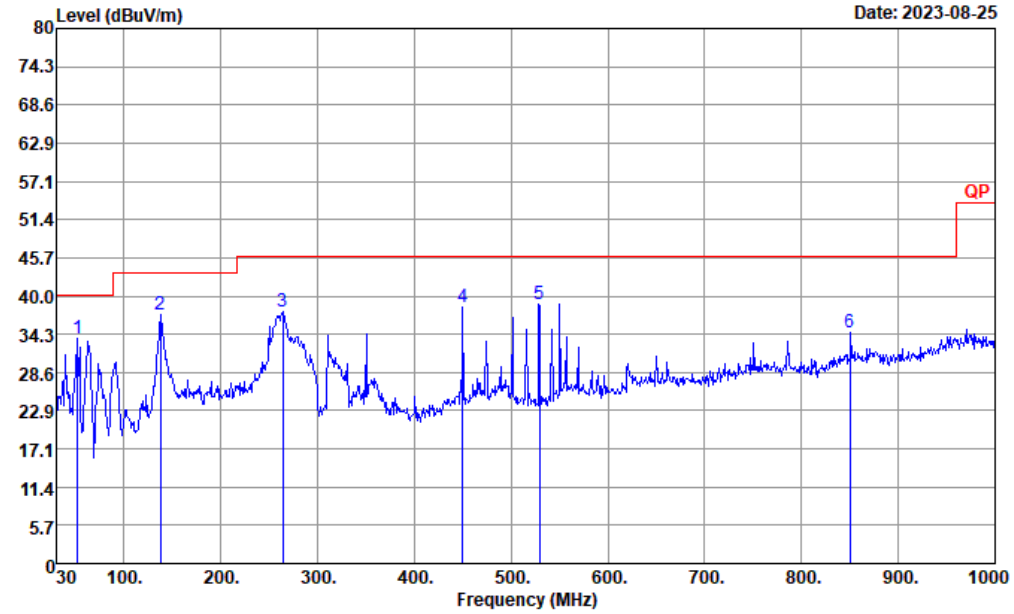
Test Mode :	NFC Tx	Polarization :	Horizontal



Site : 03CH11-HY
Condition : QP 3m 2_BILOG_35414_221008 HORIZONTAL

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
61.86	33.13	-6.87	40	52.54	11.56	1.27	32.24	-	-	Peak
138	36	-7.5	43.5	49.01	17.31	1.84	32.16	-	-	Peak
260.04	37.32	-8.68	46	47.36	19.49	2.49	32.02	-	-	Peak
549.9	39.06	-6.94	46	42.37	25.02	3.6	31.93	-	-	Peak
650	36.82	-9.18	46	38.82	26.03	3.91	31.94	-	-	Peak
850.2	36.79	-9.21	46	35.32	28.69	4.38	31.6	-	-	Peak

Test Mode :	NFC Tx	Polarization :	Vertical



Site : 03CH11-HY
Condition : QP 3m 2_BILOG_35414_221008 VERTICAL

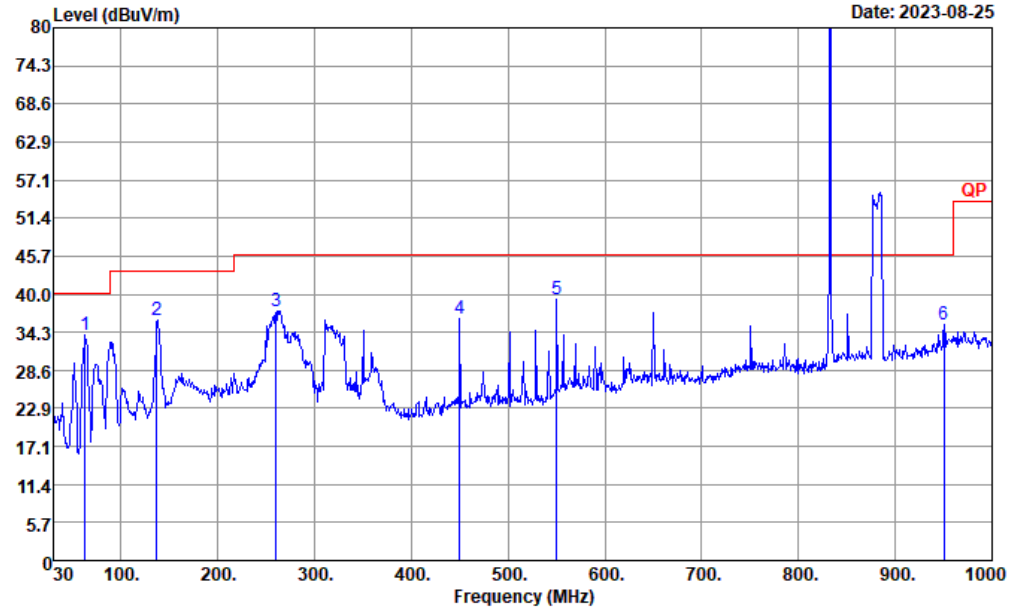
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
51.87	33.62	-6.38	40	51.45	13.22	1.2	32.25	-	-	Peak
137.73	37.15	-6.35	43.5	50.14	17.32	1.85	32.16	-	-	Peak
264.09	37.66	-8.34	46	47.52	19.65	2.51	32.02	-	-	Peak
449.8	38.43	-7.57	46	44.11	22.94	3.23	31.85	-	-	Peak
528.9	38.86	-7.14	46	43.7	23.66	3.54	32.04	-	-	Peak
850.2	34.46	-11.54	46	32.99	28.69	4.38	31.6	-	-	Peak

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 (dBµV/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 with sufficient margin against limit line or noise floor only.

<Mode 2>

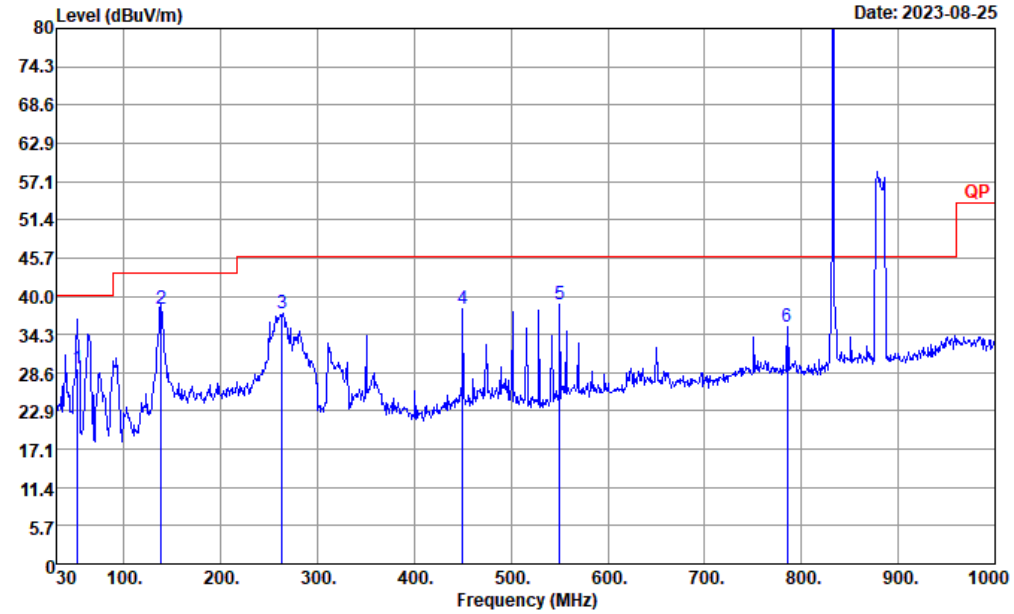
Test Mode :	NFC Tx	Polarization :	Horizontal



Site : 03CH11-HY
Condition : QP 3m 2_BILOG_35414_221008 HORIZONTAL

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
62.4	33.85	-6.15	40	53.28	11.54	1.27	32.24	-	-	Peak
136.92	36.09	-7.41	43.5	49.06	17.35	1.84	32.16	-	-	Peak
260.31	37.52	-8.48	46	47.54	19.5	2.5	32.02	-	-	Peak
449.8	36.31	-9.69	46	41.99	22.94	3.23	31.85	-	-	Peak
549.9	39.19	-6.81	46	42.5	25.02	3.6	31.93	-	-	Peak
950.3	35.51	-10.49	46	31.46	30.19	4.66	30.8	-	-	Peak

Test Mode :	NFC Tx	Polarization :	Vertical



Site : 03CH11-HY
Condition : QP 3m 2_BILOG_35414_221008 VERTICAL

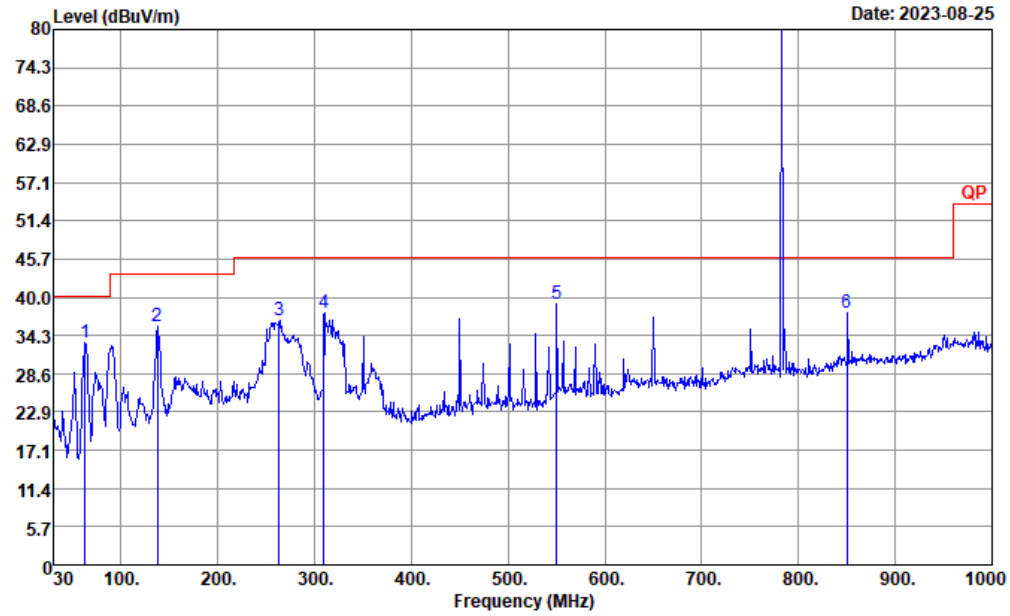
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
51.6	29.13	-10.87	40	46.82	13.36	1.2	32.25	100	0	QP
138	38.19	-5.31	43.5	51.2	17.31	1.84	32.16	100	341	QP
263.28	37.41	-8.59	46	47.28	19.64	2.51	32.02	-	-	Peak
449.8	38.11	-7.89	46	43.79	22.94	3.23	31.85	-	-	Peak
549.9	38.86	-7.14	46	42.17	25.02	3.6	31.93	-	-	Peak
785.1	35.36	-10.64	46	35.17	27.77	4.29	31.87	-	-	Peak

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 (dBµV/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 with sufficient margin against limit line or noise floor only.

<Mode 3>

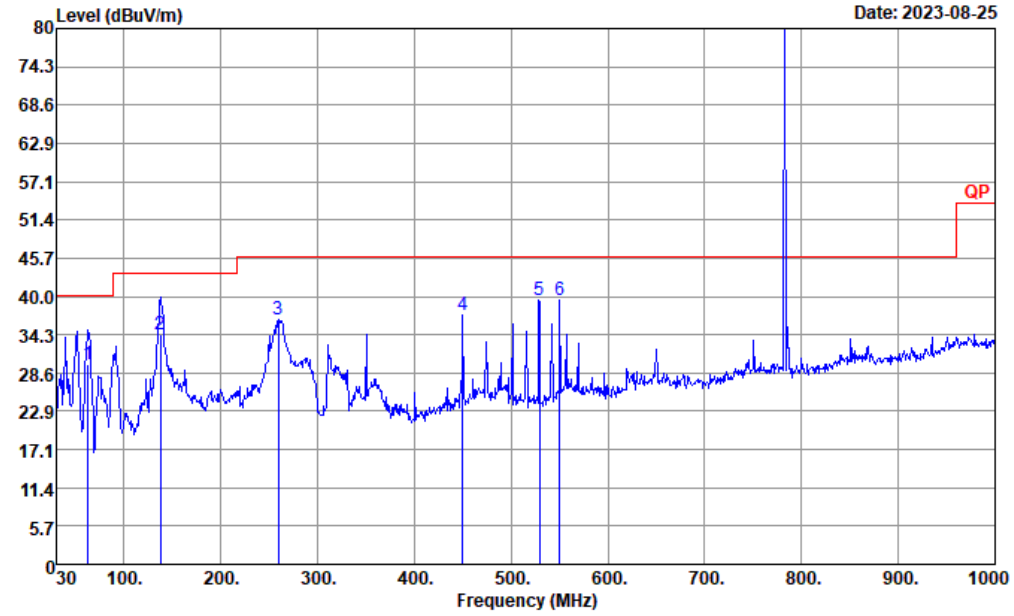
Test Mode :	NFC Tx	Polarization :	Horizontal



Site : 03CH11-HY
Condition : QP 3m 2_BILOG_35414_221008 HORIZONTAL

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
62.94	33.22	-6.78	40	52.69	11.51	1.26	32.24	-	-	Peak
137.19	35.57	-7.93	43.5	48.54	17.34	1.85	32.16	-	-	Peak
263.28	36.45	-9.55	46	46.32	19.64	2.51	32.02	-	-	Peak
309.8	37.64	-8.36	46	47.78	19.19	2.67	32	-	-	Peak
549.9	39.01	-6.99	46	42.32	25.02	3.6	31.93	-	-	Peak
850.2	37.58	-8.42	46	36.11	28.69	4.38	31.6	-	-	Peak

Test Mode :	NFC Tx	Polarization :	Vertical



Site : 03CH11-HY
Condition : QP 3m 2_BILOG_35414_221008 VERTICAL

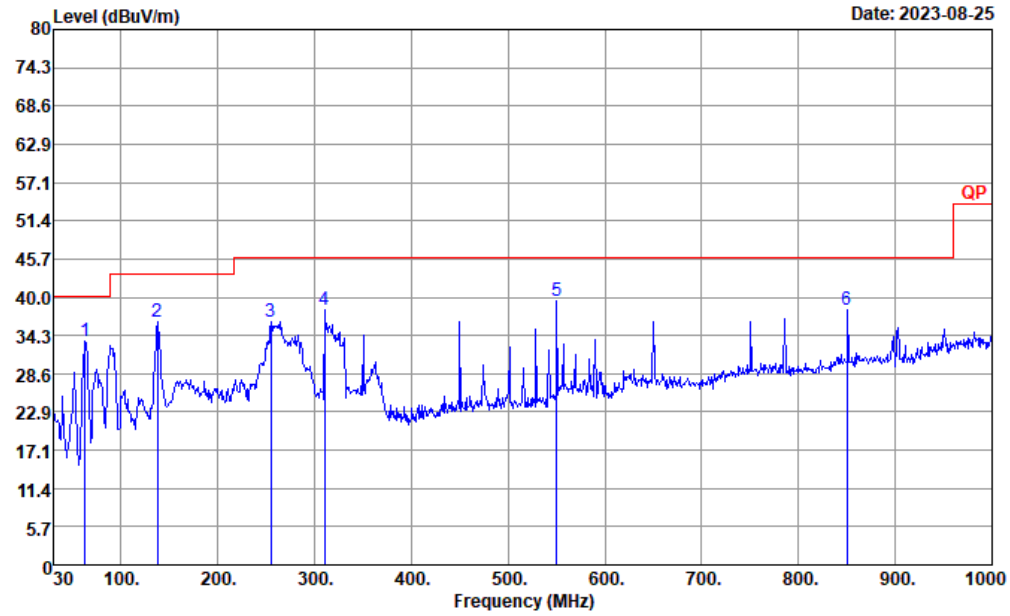
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
62.4	29.89	-10.11	40	49.32	11.54	1.27	32.24	100	72	QP
137.73	34.36	-9.14	43.5	47.35	17.32	1.85	32.16	100	343	QP
259.77	36.6	-9.4	46	46.68	19.45	2.49	32.02	-	-	Peak
449.8	37.23	-8.77	46	42.91	22.94	3.23	31.85	-	-	Peak
528.9	39.34	-6.66	46	44.18	23.66	3.54	32.04	-	-	Peak
549.9	39.43	-6.57	46	42.74	25.02	3.6	31.93	-	-	Peak

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 (dBµV/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 with sufficient margin against limit line or noise floor only.
5. In the graph, signals near the 800MHz-900MHz range and exceeding the limit are the primary frequency signals of Part 22H/Part 90s, which can be ignored.

<Mode 4>

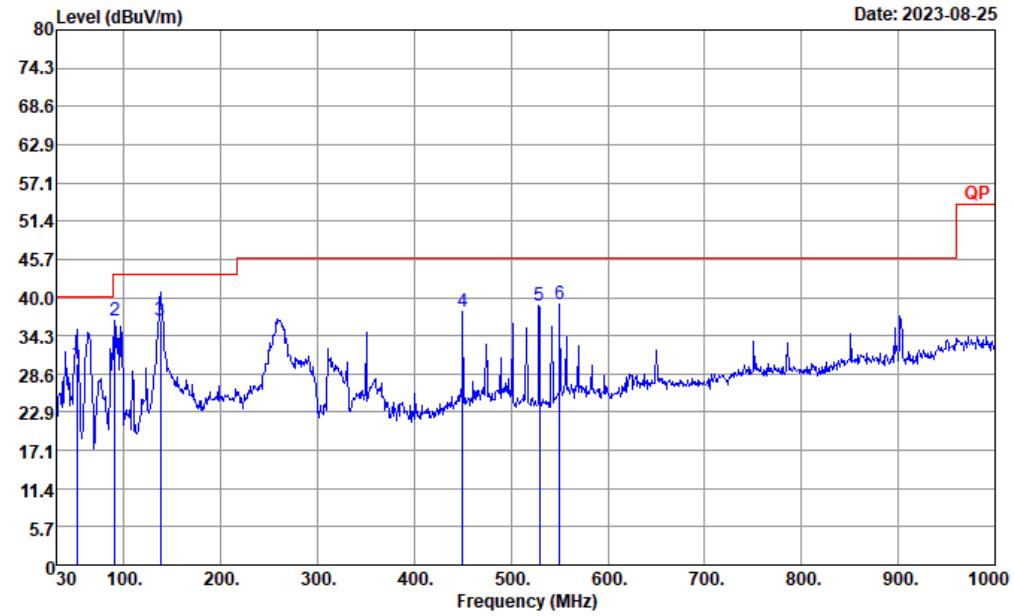
Test Mode :	NFC Tx	Polarization :	Horizontal



Site : 03CH11-HY
Condition : QP 3m 2_BILOG_35414_221008 HORIZONTAL

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
62.94	33.39	-6.61	40	52.86	11.51	1.26	32.24	-	-	Peak
137.46	36.33	-7.17	43.5	49.31	17.33	1.85	32.16	-	-	Peak
254.91	36.41	-9.59	46	47.28	18.68	2.48	32.03	-	-	Peak
310.5	38.04	-7.96	46	48.16	19.21	2.67	32	-	-	Peak
549.9	39.34	-6.66	46	42.65	25.02	3.6	31.93	-	-	Peak
850.2	38.14	-7.86	46	36.67	28.69	4.38	31.6	-	-	Peak

Test Mode :	NFC Tx	Polarization :	Vertical



Site : 03CH11-HY
Condition : QP 3m 2_BILOG_35414_221008 VERTICAL

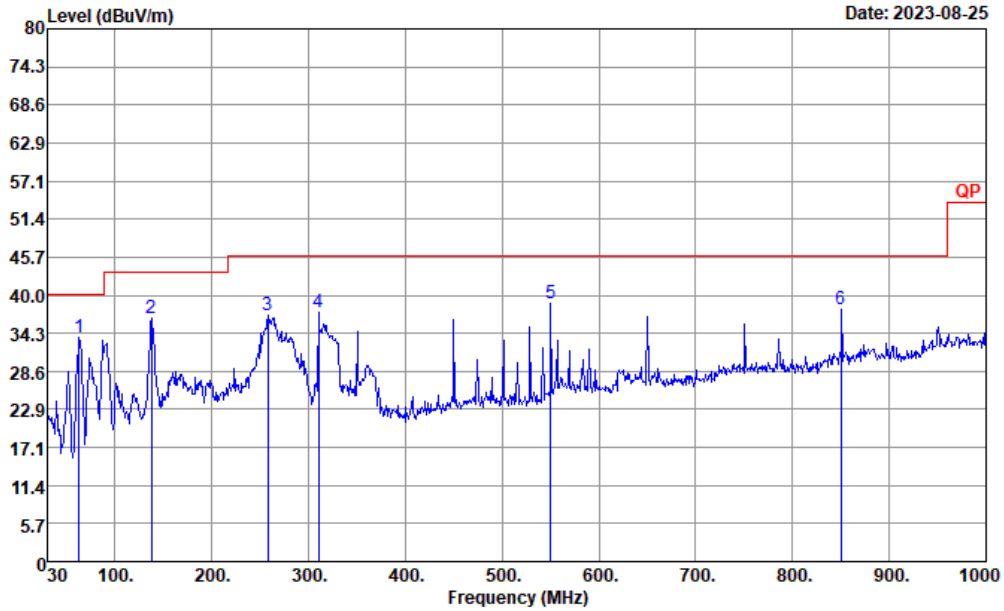
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
51.33	30.02	-9.98	40	47.57	13.5	1.2	32.25	100	143	QP
90.21	36.64	-6.86	43.5	52.56	14.63	1.58	32.13	-	-	Peak
137.19	36.55	-6.95	43.5	49.52	17.34	1.85	32.16	100	321	QP
449.8	37.78	-8.22	46	43.46	22.94	3.23	31.85	-	-	Peak
528.9	38.75	-7.25	46	43.59	23.66	3.54	32.04	-	-	Peak
549.9	38.96	-7.04	46	42.27	25.02	3.6	31.93	-	-	Peak

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 (dBµV/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 with sufficient margin against limit line or noise floor only.
5. In the graph, signals near the 800MHz-900MHz range and exceeding the limit are the primary frequency signals of Part 22H/Part 90s, which can be ignored.

<Mode 5>

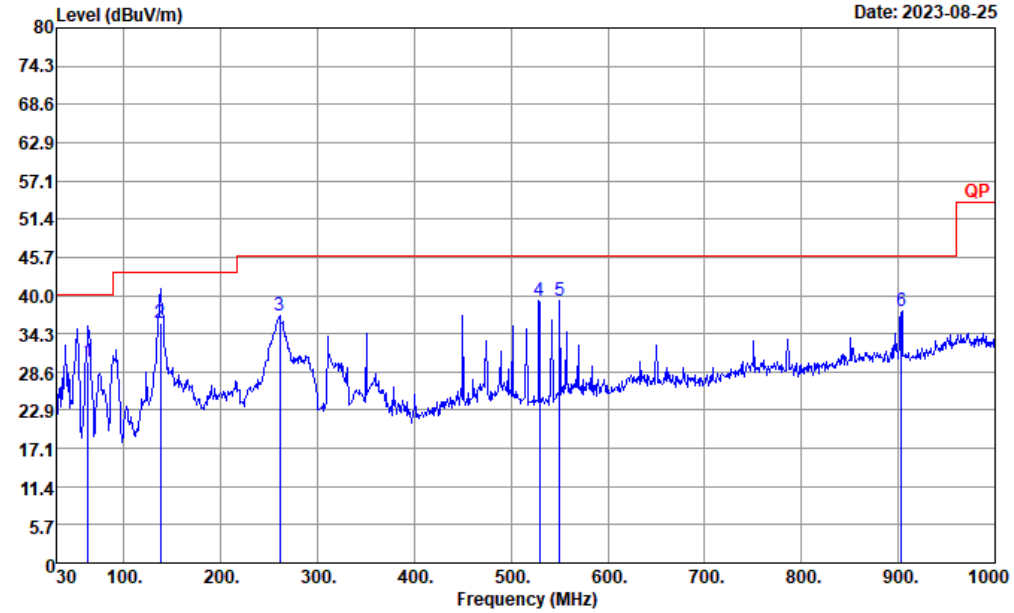
Test Mode :	NFC Tx	Polarization :	Horizontal



Site : 03CH11-HY
Condition : QP 3m 2_BILOG_35414_221008 HORIZONTAL

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
62.94	33.6	-6.4	40	53.07	11.51	1.26	32.24	-	-	Peak
137.19	36.62	-6.88	43.5	49.59	17.34	1.85	32.16	-	-	Peak
257.88	37.06	-8.94	46	47.47	19.14	2.48	32.03	-	-	Peak
310.5	37.33	-8.67	46	47.45	19.21	2.67	32	-	-	Peak
549.9	38.88	-7.12	46	42.19	25.02	3.6	31.93	-	-	Peak
850.2	37.82	-8.18	46	36.35	28.69	4.38	31.6	-	-	Peak

Test Mode :	NFC Tx	Polarization :	Vertical



Site : 03CH11-HY
Condition : QP 3m 2_BILOG_35414_221008 VERTICAL

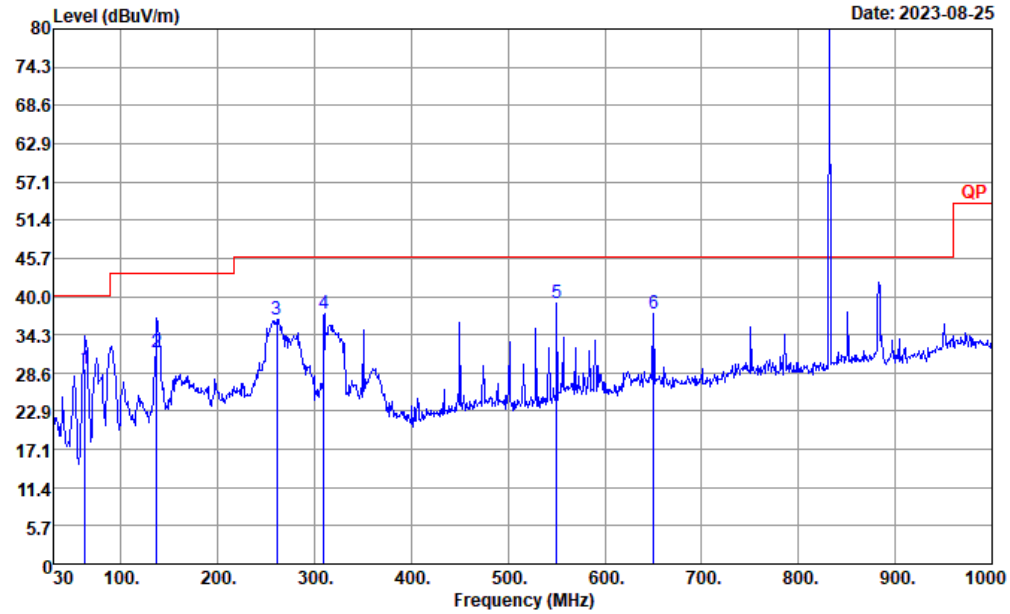
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
62.94	30.06	-9.94	40	49.53	11.51	1.26	32.24	100	53	QP
137.19	35.88	-7.62	43.5	48.85	17.34	1.85	32.16	100	322	QP
260.58	37.08	-8.92	46	47.08	19.52	2.5	32.02	-	-	Peak
528.9	39.27	-6.73	46	44.11	23.66	3.54	32.04	-	-	Peak
549.9	39.23	-6.77	46	42.54	25.02	3.6	31.93	-	-	Peak
903.4	37.6	-8.4	46	35.88	28.52	4.41	31.21	-	-	Peak

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 (dBµV/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 with sufficient margin against limit line or noise floor only.
5. In the graph, signals near the 800MHz-900MHz range and exceeding the limit are the primary frequency signals of Part 22H/Part 90s, which can be ignored.

<Mode 6>

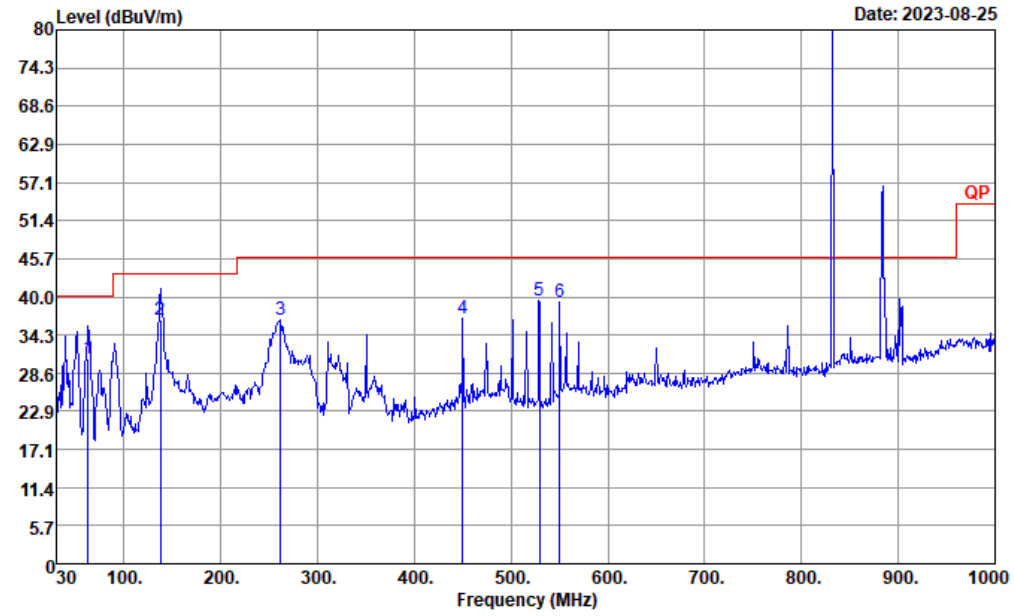
Test Mode :	NFC Tx	Polarization :	Horizontal



Site : 03CH11-HY
Condition : QP 3m 2_BILOG_35414_221008 HORIZONTAL

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
62.94	29.17	-10.83	40	48.64	11.51	1.26	32.24	200	4	QP
136.65	31.62	-11.88	43.5	44.59	17.35	1.84	32.16	100	360	QP
260.58	36.59	-9.41	46	46.59	19.52	2.5	32.02	-	-	Peak
309.8	37.48	-8.52	46	47.62	19.19	2.67	32	-	-	Peak
549.9	39.08	-6.92	46	42.39	25.02	3.6	31.93	-	-	Peak
650	37.33	-8.67	46	39.33	26.03	3.91	31.94	-	-	Peak

Test Mode :	NFC Tx	Polarization :	Vertical



Site : 03CH11-HY
Condition : QP 3m 2_BILOG_35414_221008 VERTICAL

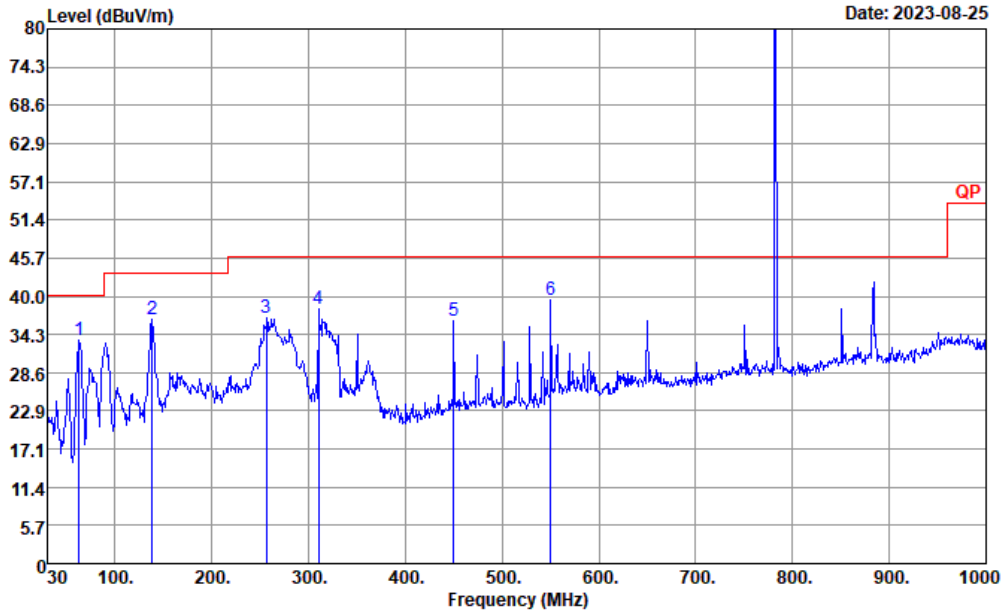
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
62.94	30.66	-9.34	40	50.13	11.51	1.26	32.24	100	88	QP
137.46	36.54	-6.96	43.5	49.52	17.33	1.85	32.16	100	338	QP
261.66	36.52	-9.48	46	46.48	19.56	2.5	32.02	-	-	Peak
449.8	36.81	-9.19	46	42.49	22.94	3.23	31.85	-	-	Peak
528.9	39.36	-6.64	46	44.2	23.66	3.54	32.04	-	-	Peak
549.9	39.23	-6.77	46	42.54	25.02	3.6	31.93	-	-	Peak

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 (dBµV/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 with sufficient margin against limit line or noise floor only.
5. In the graph, signals near the 800MHz-900MHz range and exceeding the limit are the primary frequency signals of Part 22H/Part 90s, which can be ignored.

<Mode 7>

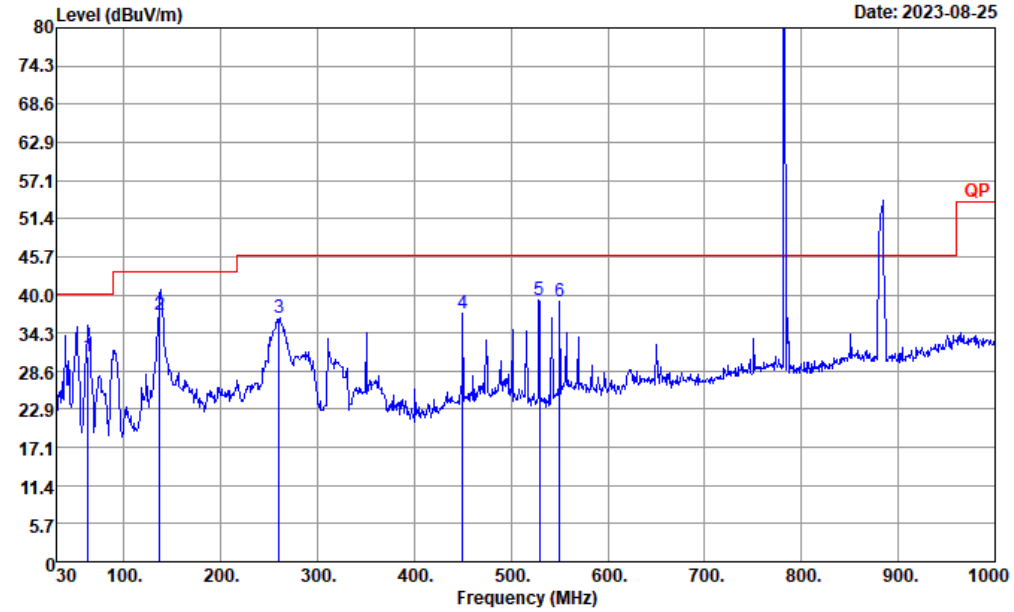
Test Mode :	NFC Tx	Polarization :	Horizontal



Site : 03CH11-HY
Condition : QP 3m 2_BILOG_35414_221008 HORIZONTAL

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
62.94	33.34	-6.66	40	52.81	11.51	1.26	32.24	-	-	Peak
138	36.5	-7	43.5	49.51	17.31	1.84	32.16	-	-	Peak
256.53	36.81	-9.19	46	47.44	18.92	2.48	32.03	-	-	Peak
310.5	38.17	-7.83	46	48.29	19.21	2.67	32	-	-	Peak
449.8	36.42	-9.58	46	42.1	22.94	3.23	31.85	-	-	Peak
549.9	39.51	-6.49	46	42.82	25.02	3.6	31.93	-	-	Peak

Test Mode :	NFC Tx	Polarization :	Vertical



Site : 03CH11-HY
Condition : QP 3m 2_BILOG_35414_221008 VERTICAL

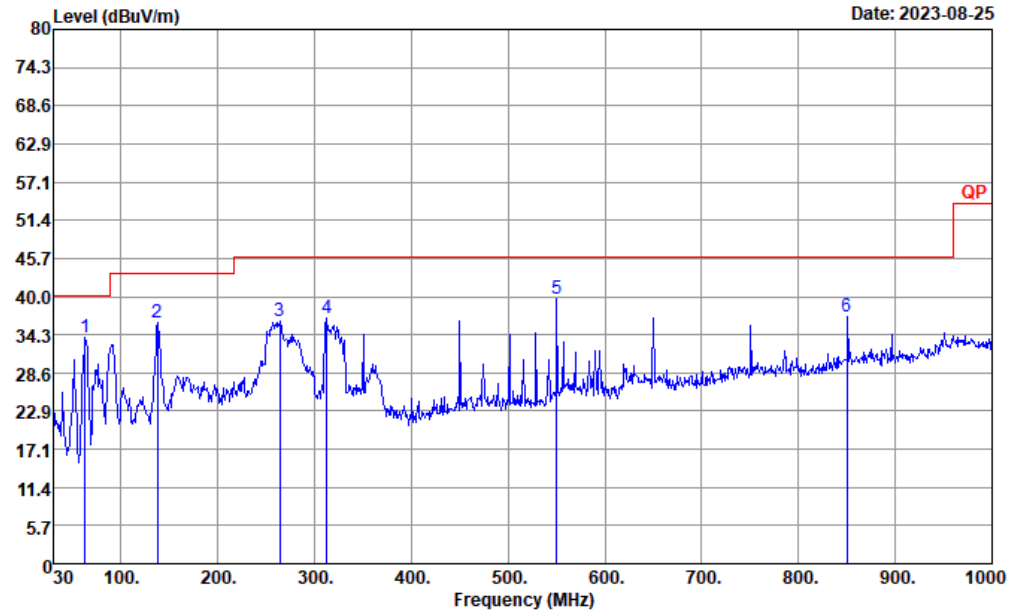
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
62.94	30.66	-9.34	40	50.13	11.51	1.26	32.24	100	88	QP
136.92	36.88	-6.62	43.5	49.85	17.35	1.84	32.16	100	326	QP
260.31	36.45	-9.55	46	46.47	19.5	2.5	32.02	-	-	Peak
449.8	37.19	-8.81	46	42.87	22.94	3.23	31.85	-	-	Peak
528.9	39.25	-6.75	46	44.09	23.66	3.54	32.04	-	-	Peak
549.9	38.99	-7.01	46	42.3	25.02	3.6	31.93	-	-	Peak

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 (dBµV/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 with sufficient margin against limit line or noise floor only.
5. In the graph, signals near the 800MHz-900MHz range and exceeding the limit are the primary frequency signals of Part 22H/Part 90s, which can be ignored.

<Mode 8>

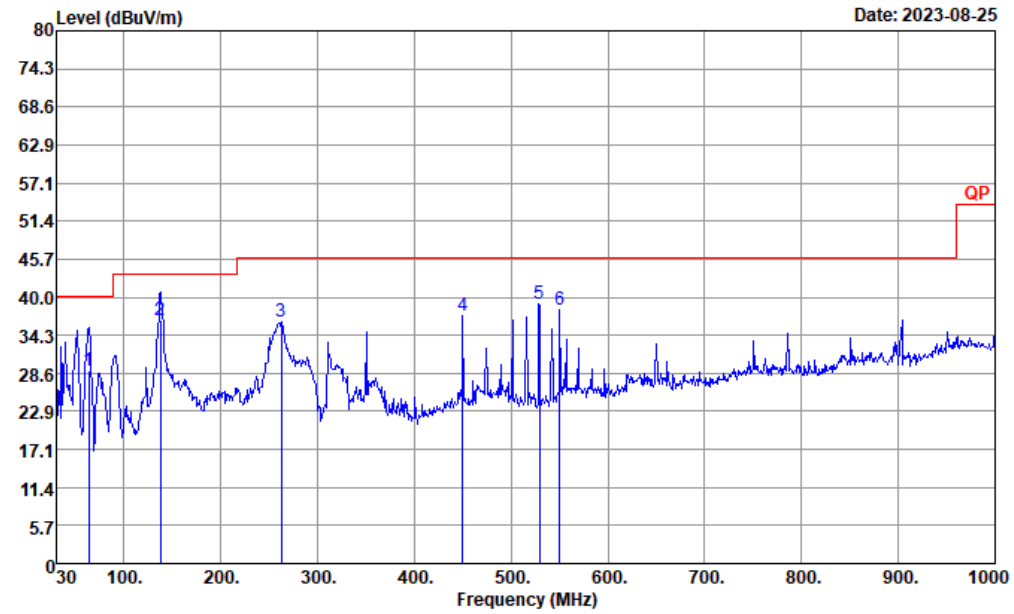
Test Mode :	NFC Tx	Polarization :	Horizontal



Site : 03CH11-HY
Condition : QP 3m 2_BILOG_35414_221008 HORIZONTAL

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
62.94	33.77	-6.23	40	53.24	11.51	1.26	32.24	-	-	Peak
137.46	36.02	-7.48	43.5	49	17.33	1.85	32.16	-	-	Peak
264.36	36.27	-9.73	46	46.17	19.61	2.51	32.02	-	-	Peak
312.6	36.75	-9.25	46	46.8	19.26	2.69	32	-	-	Peak
549.9	39.76	-6.24	46	43.07	25.02	3.6	31.93	-	-	Peak
850.2	36.92	-9.08	46	35.45	28.69	4.38	31.6	-	-	Peak

Test Mode :	NFC Tx	Polarization :	Vertical



Site : 03CH11-HY
Condition : QP 3m 2_BILOG_35414_221008 VERTICAL

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
63.21	29.07	-10.93	40	48.54	11.51	1.26	32.24	100	100	QP
137.46	36.59	-6.91	43.5	49.57	17.33	1.85	32.16	100	342	QP
262.2	36.36	-9.64	46	46.29	19.59	2.5	32.02	-	-	Peak
449.8	37.2	-8.8	46	42.88	22.94	3.23	31.85	-	-	Peak
528.9	38.93	-7.07	46	43.77	23.66	3.54	32.04	-	-	Peak
549.9	38.07	-7.93	46	41.38	25.02	3.6	31.93	-	-	Peak

Note:

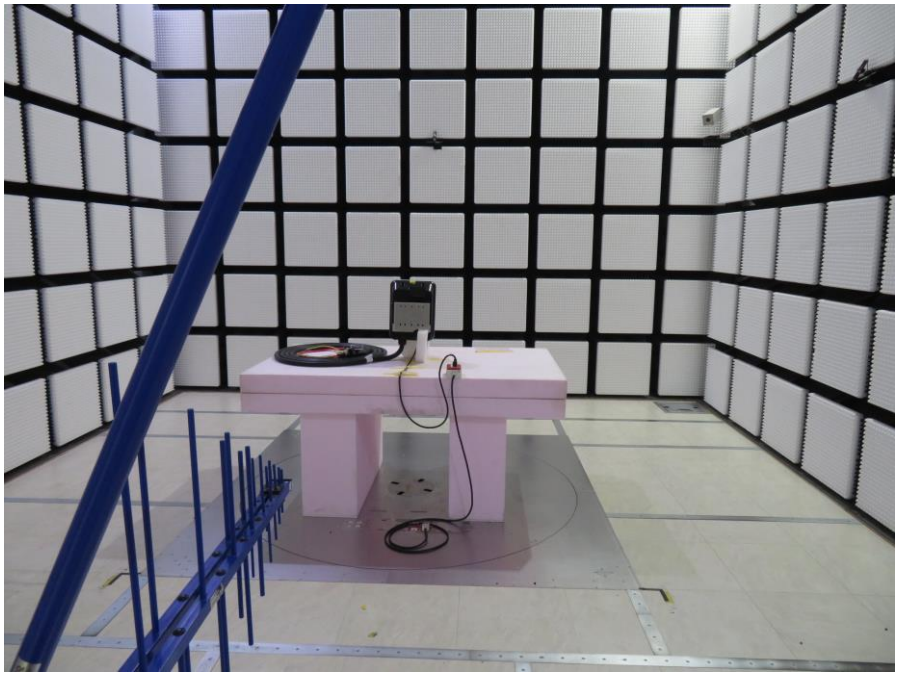
1. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
2. Emission level (dBµV/m) = 20 log Emission level (µV/m).
3. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor= Level.
4. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.
5. In the graph, signals near the 800MHz-900MHz range and exceeding the limit are the primary frequency signals of Part 22H/Part 90s, which can be ignored.

Appendix F. Setup Photographs

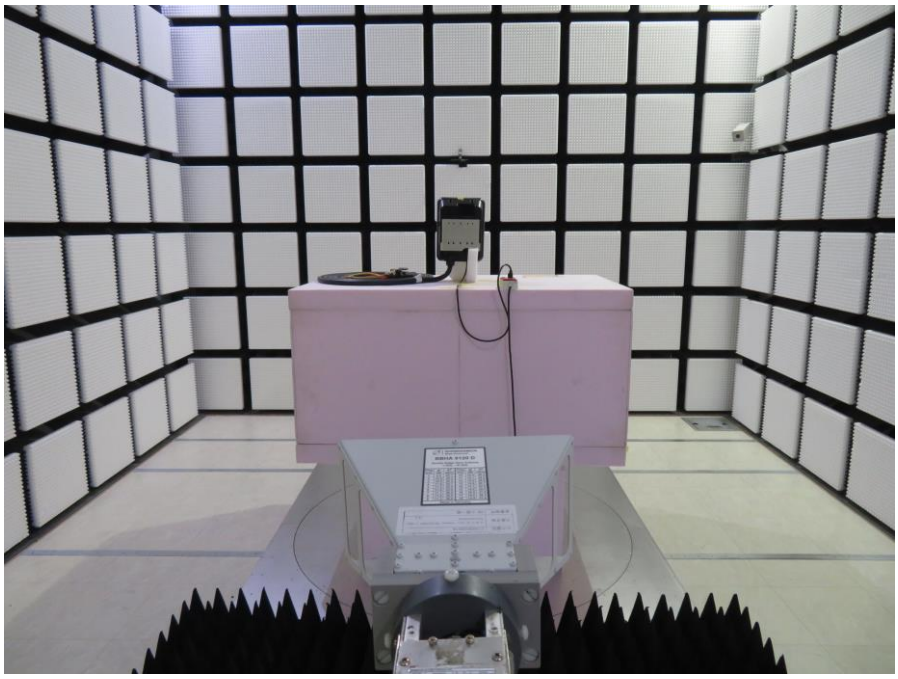
<Radiated Emission>

for WWAN and WLAN

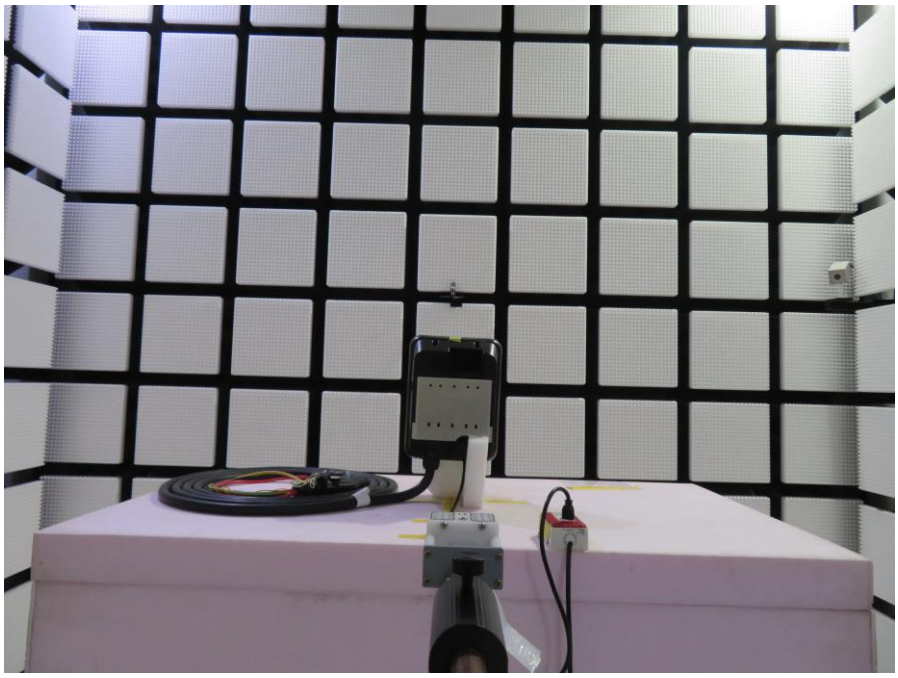
LF



HF

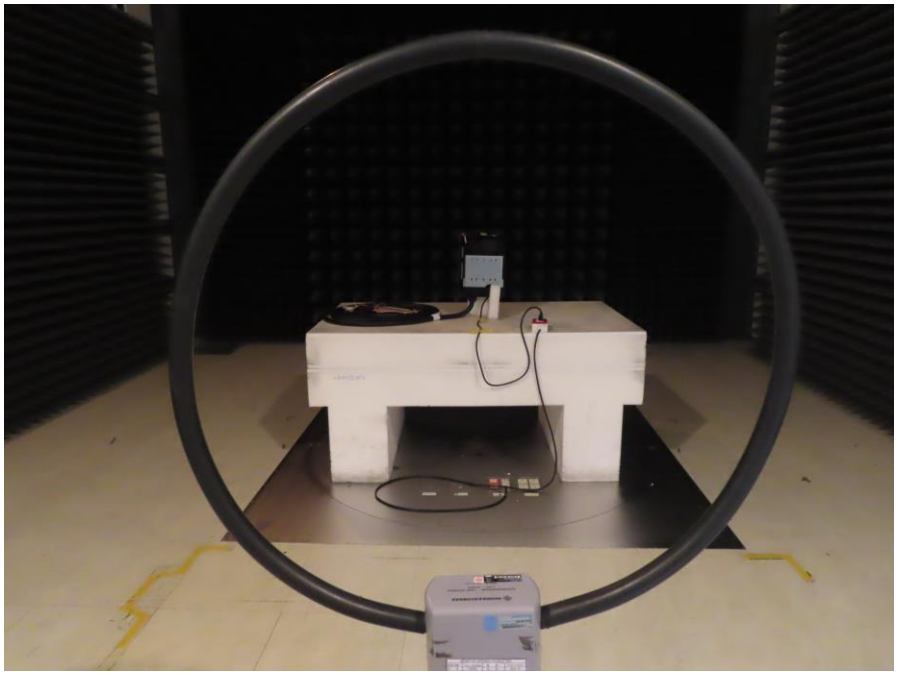


SHF

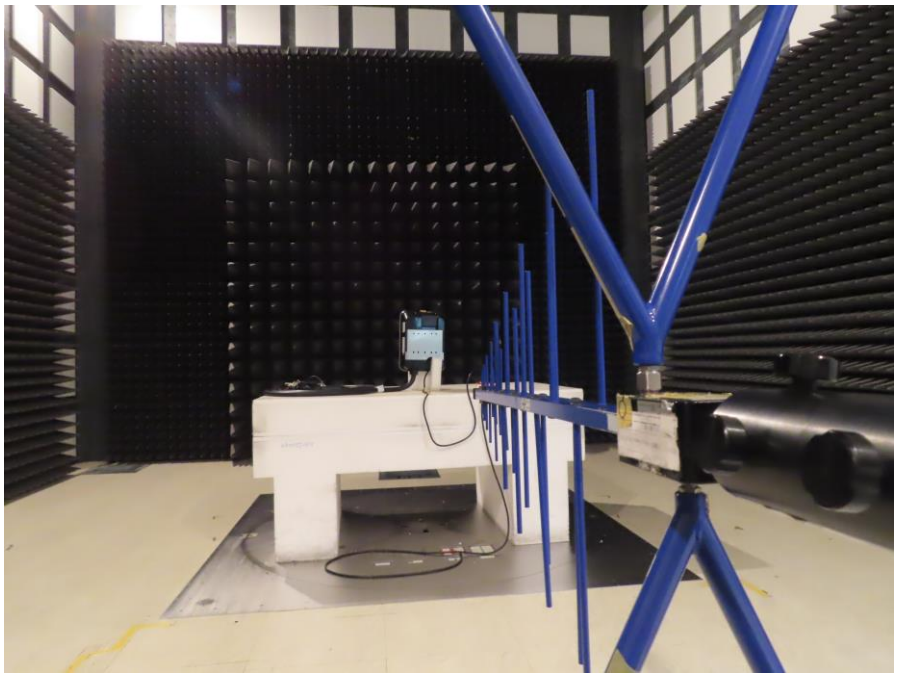


for NFC

9kHz ~ 30MHz



30MHz ~ 1GHz



———THE END———