



FCC RADIO TEST REPORT

FCC ID : XRAFB423
Equipment : Wireless Device
Brand Name : Fitbit
Model Name : FB423
Applicant : Fitbit, LLC
199 Fremont Street, 14th Floor, San Francisco, CA 94105 USA
Manufacturer : Fitbit, LLC
199 Fremont Street, 14th Floor, San Francisco, CA 94105 USA
Standard : FCC Part 15 Subpart C §15.225

The product was received on Jun. 08, 2022 and testing was performed from Jun. 14, 2022 to Jul. 05, 2022. 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
FR260301B	01	Initial issue of report	Jul. 26, 2022
FR260301B	02	Revise Product Feature	Aug. 09, 2022



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
-	15.207	AC Power Line Conducted Emissions	Not Required	-
3.1	15.215(c)	20dB Spectrum Bandwidth	Pass	-
	2.1049	99% OBW Spectrum Bandwidth	Reporting only	-
3.2	15.225(e)	Frequency Stability	Pass	-
3.3	15.225(a)(b)(c)	Field Strength of Fundamental Emissions	Pass	Max level 4.61 dBµV/m at 13.560 MHz
3.4	15.225(d) 15.209	Radiated Spurious Emissions	Pass	12.34 dB under the limit at 54.250MHz
3.5	15.203	Antenna Requirements	Pass	-

Note:

1. Not required means after assessing, test items are not necessary to carry out.
2. The device is not able to do NFC transmission when charging mode. Therefore AC Power Line Conducted Emissions test is not required.

Declaration of Conformity:
1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers. It's means measurement values may risk exceeding the limit of regulation standards, if measurement uncertainty is include in test results.
2. The measurement uncertainty please refer to this report "Uncertainty of Evaluation".
Comments and Explanations:
The product specifications of the EUT presented in the report are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Yun Huang
Report Producer: Ruby Zou



1. General Description

1.1 Product Feature of Equipment Under Test

Bluetooth-LE, NFC and GNSS.

Product Feature	
Sample 1	EUT with battery (VDL)
Sample 2	EUT with battery (ATL)
Sample 3	EUT with battery (Highpower)
HW version	FF1b
SW version	57.4001.115.47
Antenna Type	Bluetooth-LE: Slot Antenna GPS / Glonass: Slot Antenna NFC: 3-turn coil Antenna

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

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.	
	TH05-HY	03CH11-HY
Test Engineer	Cotty Hsu	Fu Chen
Temperature	24~25°C	20.5~21.2°C
Relative Humidity	46~47%	57.4~67.5%

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 Part 15 Subpart C §15.225
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01
- ♦ ANSI C63.10-2013

Remark:

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. The TAF code is not including all the FCC KDB listed without accreditation.
3. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.



2. Test Configuration of Equipment Under Test

2.1 Descriptions of Test Mode

Investigation has been done on all the possible configurations.

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

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

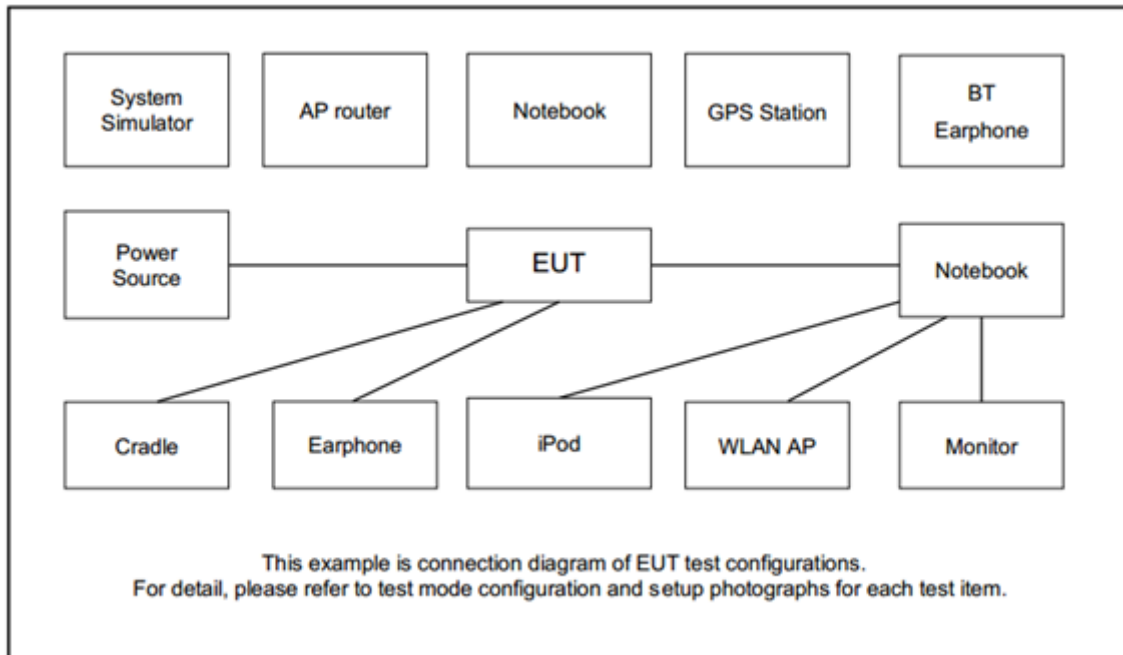
The NFC test is performed with app “Tera term” installed in the mobile phone. It can enable continuous transmission with type A/B/F tag respectively.

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

The measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape), and adjusting the measurement antenna orientation, following C63.10 exploratory test procedures and find Z plane as worst plane.

Remark: For Radiated Test Cases, the tests were performed with Sample 3.

2.2 Connection Diagram of Test System



2.3 EUT Operation Test Setup

The RF test items, utility “Tera term” was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level (Power setting: Default), data rate (Type F Bit Rate: 424kbps) and the application type and for continuous transmitting signals.

3. Test Results

3.1 20dB and 99% OBW Spectrum Bandwidth Measurement

3.1.1 Limit

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

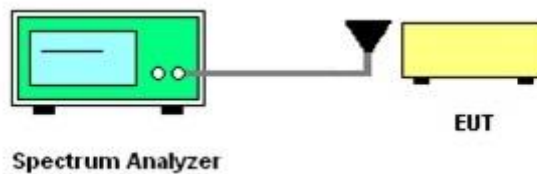
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

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

3.1.4 Test Setup



3.1.5 Test Result of RF Near Field Test Items

Please refer to Appendix A.

3.2 Frequency Stability Measurement

3.2.1 Limit

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

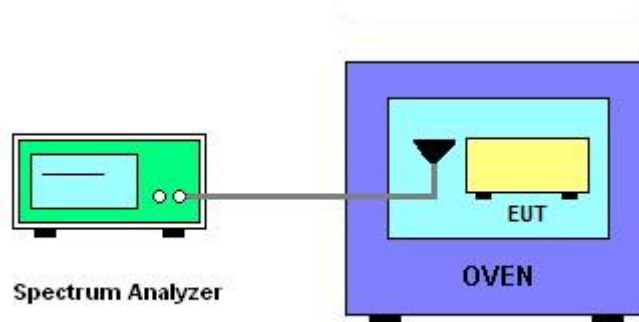
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

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

3.2.4 Test Setup



3.2.5 Test Result of RF Near Field Test Items

Please refer to Appendix A.



3.3 Field Strength of Fundamental Emissions and Mask Measurement

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 = $40 \log(\text{specific distance} / \text{test distance})$ (dB)

3.3.2 Measuring Instruments

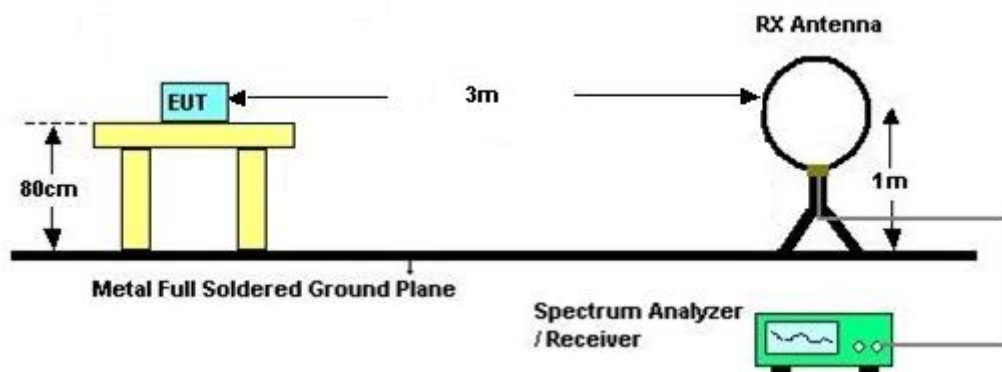
Please refer to the measuring equipment list in this test report.

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 (dB μ V/m) = 20 log Emission level (μ V/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 B.



3.4 Radiated Emissions Measurement

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.

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.

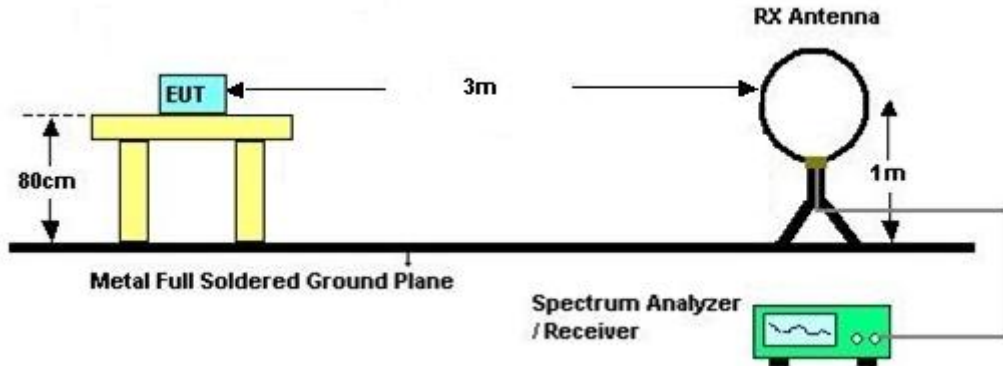


3.4.4 Test Procedures

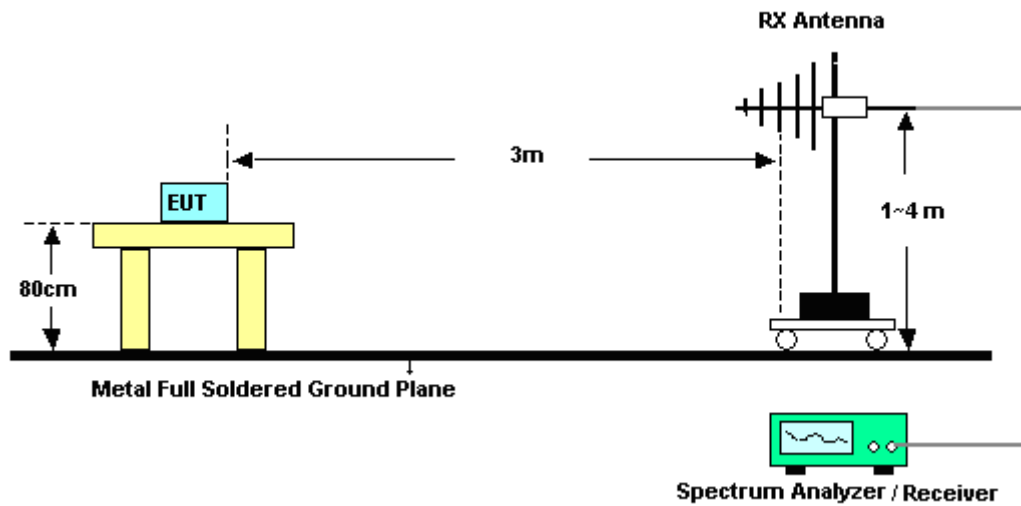
1. Configure the EUT according to ANSI C63.10. The EUT is placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower is placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting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

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 B.

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

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
DC Power Supply	GW Instek	GPP-2323	GES906037	0V~64V ; 0A~6A	Jan. 06, 2022	Jun. 27, 2022~ Jul. 05, 2022	Jan. 05, 2023	RF Near Field (TH05-HY)
Hygrometer	TECEPEL	DTM-303B	TP210073	N/A	Nov. 16, 2021	Jun. 27, 2022~ Jul. 05, 2022	Nov. 15, 2022	RF Near Field (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP30	101329	9kHz~30GHz	Sep. 30, 2021	Jun. 27, 2022~ Jul. 05, 2022	Sep. 29, 2022	RF Near Field (TH05-HY)
Temperature & Humidity Cabinet Chamber	ESPEC	LHU-113	1012005860	-20°C~85°C	Dec. 09, 2021	Jun. 27, 2022~ Jul. 05, 2022	Dec. 08, 2022	RF Near Field (TH05-HY)
Nearby field probe	LANGER EMV-TECHNIK	LF-U5	02-559	100 kHz up to 50 MHz	Apr. 04, 2022	Jun. 27, 2022~ Jul. 05, 2022	Apr. 03, 2023	RF Near Field (TH05-HY)
Bilog Antenna	TESEQ	CBL 6111D & N-6-06	35414 & AT-N0602	30MHz~1GHz	Oct. 09, 2021	Jun. 14, 2022~ Jun. 15, 2022	Oct. 08, 2022	Radiation (03CH11-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Jan. 07, 2022	Jun. 14, 2022~ Jun. 15, 2022	Jan. 06, 2023	Radiation (03CH11-HY)
Amplifier	SONOMA	310N	187312	9kHz~1GHz	Dec. 10, 2021	Jun. 14, 2022~ Jun. 15, 2022	Dec. 09, 2022	Radiation (03CH11-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200486	10Hz~44GHz	Oct. 15, 2021	Jun. 14, 2022~ Jun. 15, 2022	Oct. 14, 2022	Radiation (03CH11-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY55420170	20MHz~8.4GHz	Jul. 15, 2021	Jun. 14, 2022~ Jun. 15, 2022	Jul. 14, 2022	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2859/2	30MHz-40GHz	Mar. 10, 2022	Jun. 14, 2022~ Jun. 15, 2022	Mar. 09, 2023	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9kHz-30MHz	Mar. 10, 2022	Jun. 14, 2022~ Jun. 15, 2022	Mar. 09, 2023	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	30MHz-18GHz	Mar. 10, 2022	Jun. 14, 2022~ Jun. 15, 2022	Mar. 09, 2023	Radiation (03CH11-HY)
Filter	Wainwright	WHK20/1000C 7/40SS	SN2	20M High Pass	Sep. 13, 2021	Jun. 14, 2022~ Jun. 15, 2022	Sep. 12, 2022	Radiation (03CH11-HY)
Controller	EMEC	EM 1000	N/A	Control Turn table & Ant Mast	N/A	Jun. 14, 2022~ Jun. 15, 2022	N/A	Radiation (03CH11-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	Jun. 14, 2022~ Jun. 15, 2022	N/A	Radiation (03CH11-HY)
Turn Table	EMEC	TT 2000	N/A	0~360 Degree	N/A	Jun. 14, 2022~ Jun. 15, 2022	N/A	Radiation (03CH11-HY)
Software	Audix	E3 6.2009-8-24	RK-001053	N/A	N/A	Jun. 14, 2022~ Jun. 15, 2022	N/A	Radiation (03CH11-HY)
Hygrometer	TECEPEL	DTM-303B	TP140325	N/A	Nov. 26, 2021	Jun. 14, 2022~ Jun. 15, 2022	Nov. 25, 2022	Radiation (03CH11-HY)
Hygrometer	TECEPEL	DTM-303B	TP200880	QA-3-031	Sep. 30, 2021	Jun. 14, 2022~ Jun. 15, 2022	Sep. 29, 2022	Radiation (03CH11-HY)



5. Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.7 dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.8 dB
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Appendix A. Test Results of RF Near Field Test Items

A1. Test Result of 20dB Spectrum Bandwidth

Test mode	NFC Tx	Test Frequency (MHz)	13.56
Date: 5.JUL.2022 09:21:22		Date: 5.JUL.2022 09:14:50	
20dB Bandwidth (kHz)	2.640	99% OccupiedBW(kHz)	2.260
Frequency range (MHz)	$f_L > 13.553$	13.55898	Test Result
	$f_H < 13.567$	13.56162	Complies

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



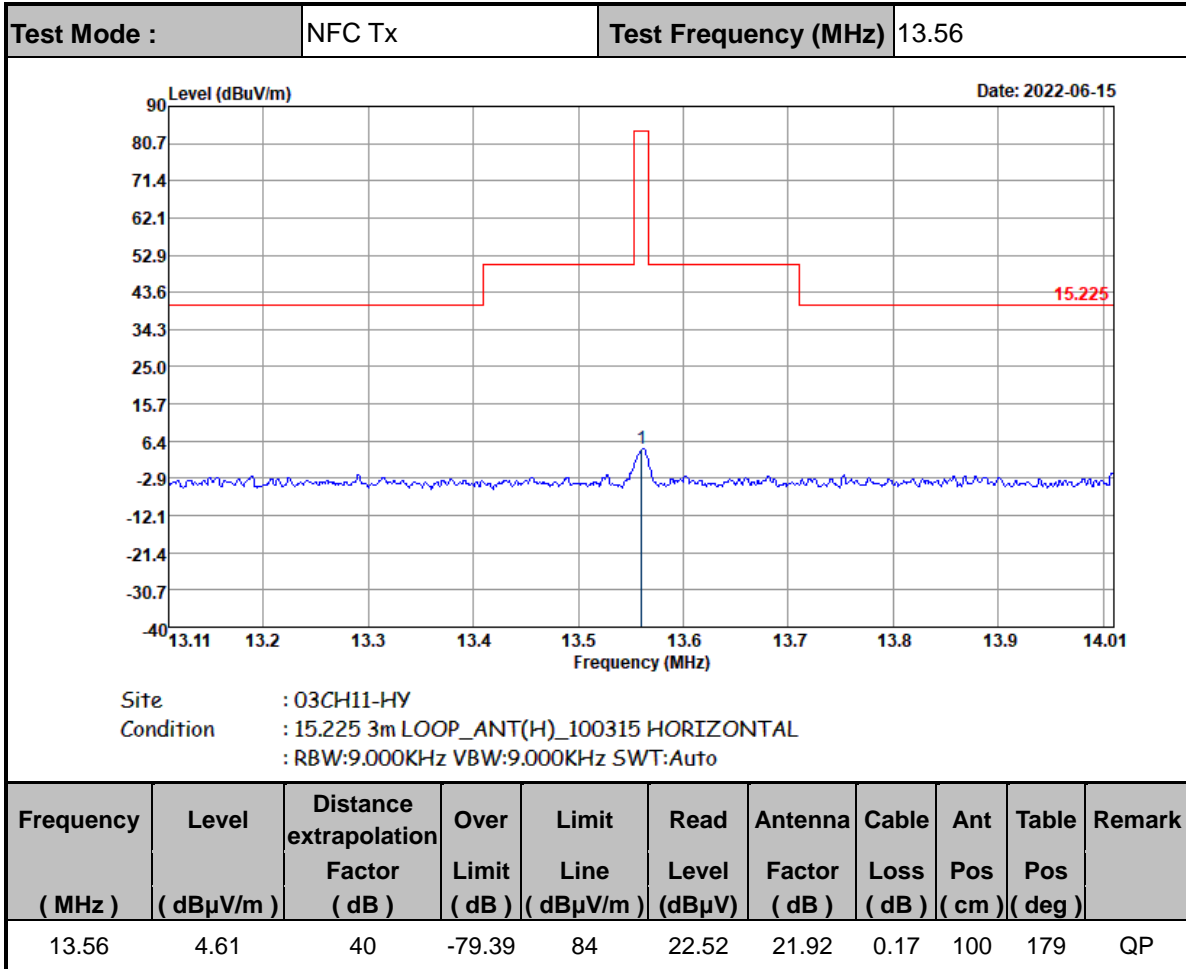
A2. Test Result of Frequency Stability

Voltage vs. Frequency Stability		Temperature vs. Frequency Stability		
Voltage (Vdc)	Measurement Frequency (MHz)	Temperature (°C)	Time	Measurement Frequency (MHz)
3.85	13.560300	-10	0	13.560370
	13.558980		2	13.560360
	13.560330		5	13.560380
			10	13.560370
		0	0	13.560320
			2	13.560330
			5	13.560330
			10	13.560310
		10	0	13.560320
			2	13.560222
			5	13.560310
			10	13.560300
		20	0	13.560320
			2	13.560310
			5	13.560250
			10	13.560340
		30	0	13.560310
			2	13.560300
			5	13.560340
			10	13.560332
		40	0	13.560320
			2	13.560310
			5	13.560320
			10	13.560330
Max.Deviation (MHz)	-0.001020	Max.Deviation (MHz)	0.000380	
Max.Deviation (ppm)	-75.2212	Max.Deviation (ppm)	28.0236	
Limit	FS < ±100 ppm	Limit	FS < ±100 ppm	
Test Result	PASS	Test Result	PASS	



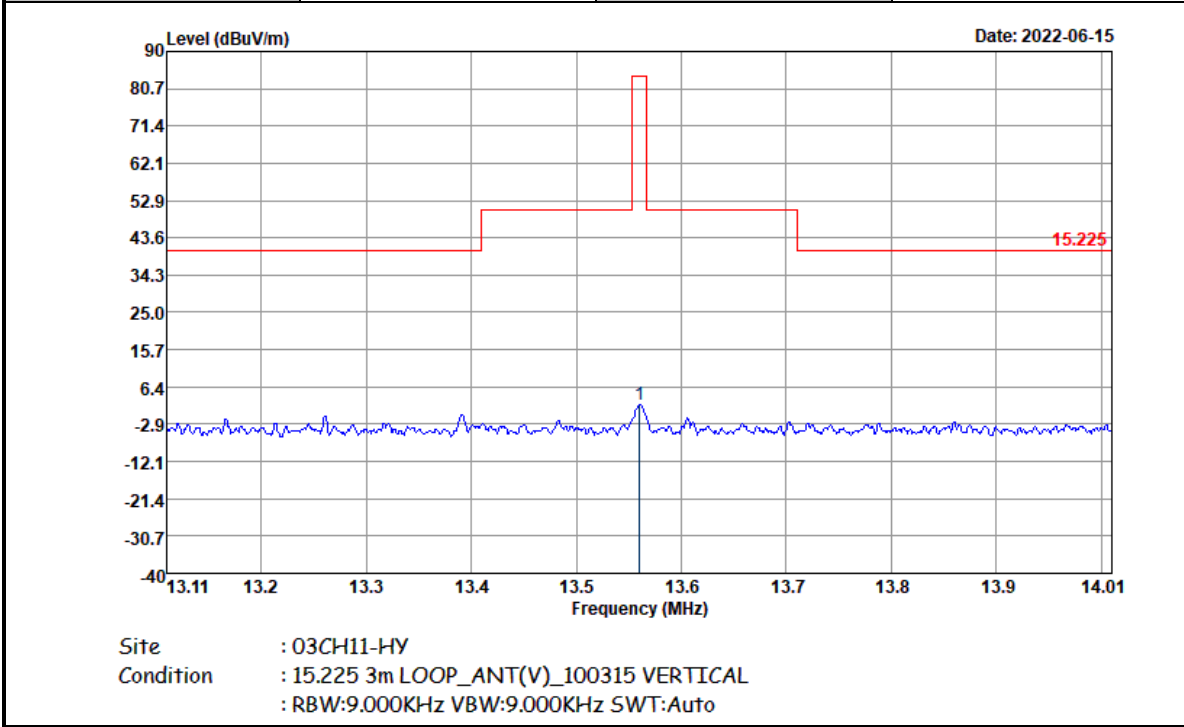
Appendix B. Test Results of Radiated Test Items

B1. Test Result of Field Strength of Fundamental Emissions





Test Mode :	NFC Tx	Test Frequency (MHz)	13.56
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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	2	40	-82	84	19.91	21.92	0.17	100	76	QP

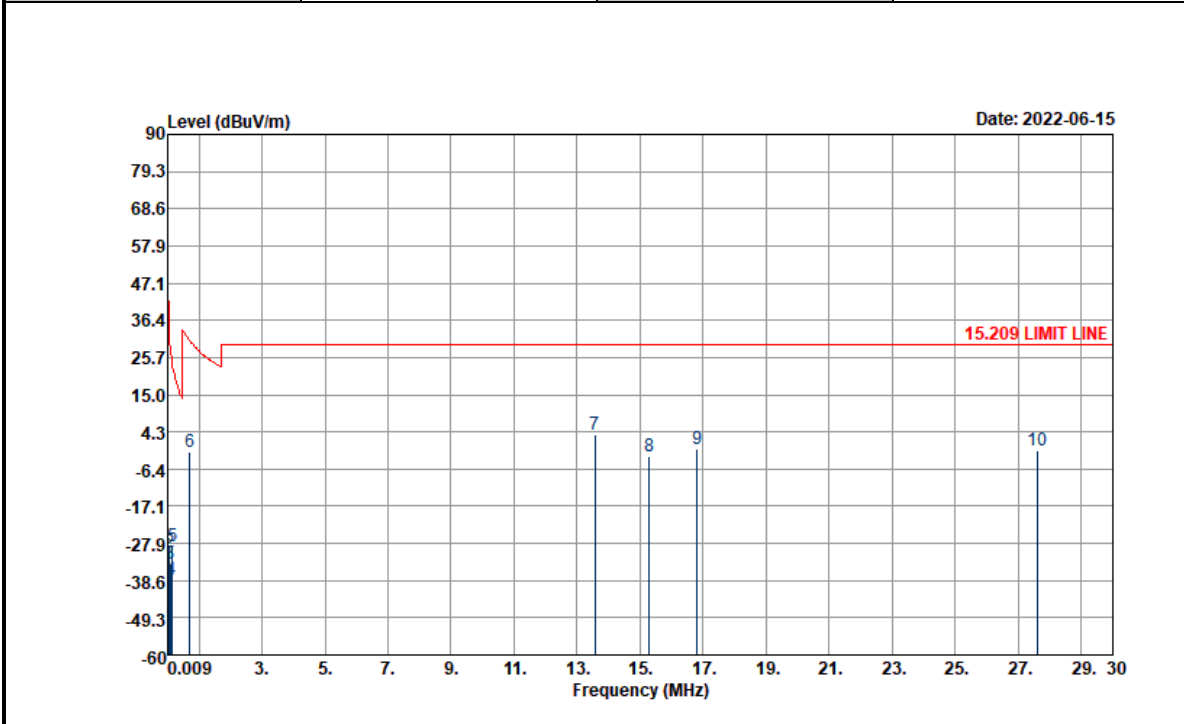
Note :

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



B2. Results of Radiated Spurious Emissions (9 kHz~30MHz)

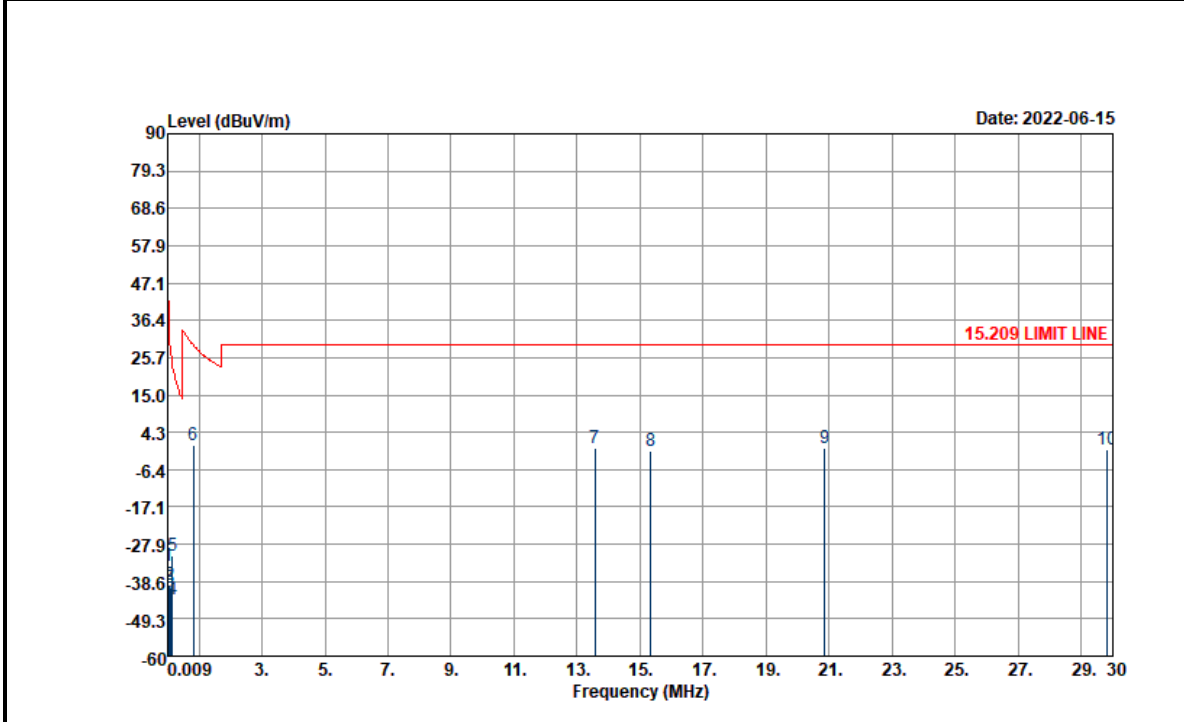
Test Mode :	NFC Tx	Polarization :	Horizontal
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Frequency (MHz)	Level (dBμV/m)	Distance extrapolation Factor (dB)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.01925	-33.85	80	-75.77	41.92	26.85	19.15	0.15	-	-	Average
0.06582	-30.24	80	-61.48	31.24	30.27	19.35	0.14	-	-	Average
0.09346	-33.61	80	-61.8	28.19	27.51	18.74	0.14	-	-	QP
0.12104	-38.09	80	-64.04	25.95	23.1	18.67	0.14	-	-	Average
0.15068	-28.72	80	-52.76	24.04	32.35	18.78	0.15	-	-	Average
0.70779	-1.4	40	-32.01	30.61	18.94	19.52	0.14	-	-	QP
13.56	3.35	40	-26.15	29.5	21.26	21.92	0.17	-	-	QP
15.296	-2.77	40	-32.27	29.5	14.97	22.08	0.18	-	-	QP
16.801	-0.69	40	-30.19	29.5	16.91	22.21	0.19	-	-	QP
27.62	-0.94	40	-30.44	29.5	16.09	22.73	0.24	-	-	QP



Test Mode :	NFC Tx	Polarization :	Vertical
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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	-34.04	80	-75.96	41.92	26.66	19.15	0.15	-	-	Average
0.06585	-39.65	80	-70.88	31.23	20.86	19.35	0.14	-	-	Average
0.09882	-40.4	80	-68.11	27.71	20.83	18.63	0.14	-	-	QP
0.14832	-43.71	80	-67.89	24.18	17.38	18.77	0.14	-	-	Average
0.16428	-31.34	80	-54.63	23.29	29.69	18.82	0.15	-	-	Average
0.82795	0.57	40	-28.67	29.24	20.83	19.6	0.14	-	-	QP
13.56	-0.34	40	-29.84	29.5	17.57	21.92	0.17	-	-	QP
15.344	-1.13	40	-30.63	29.5	16.61	22.08	0.18	-	-	QP
20.869	-0.17	40	-29.67	29.5	17.09	22.53	0.21	-	-	QP
29.8	-0.88	40	-30.38	29.5	16.08	22.79	0.25	-	-	QP

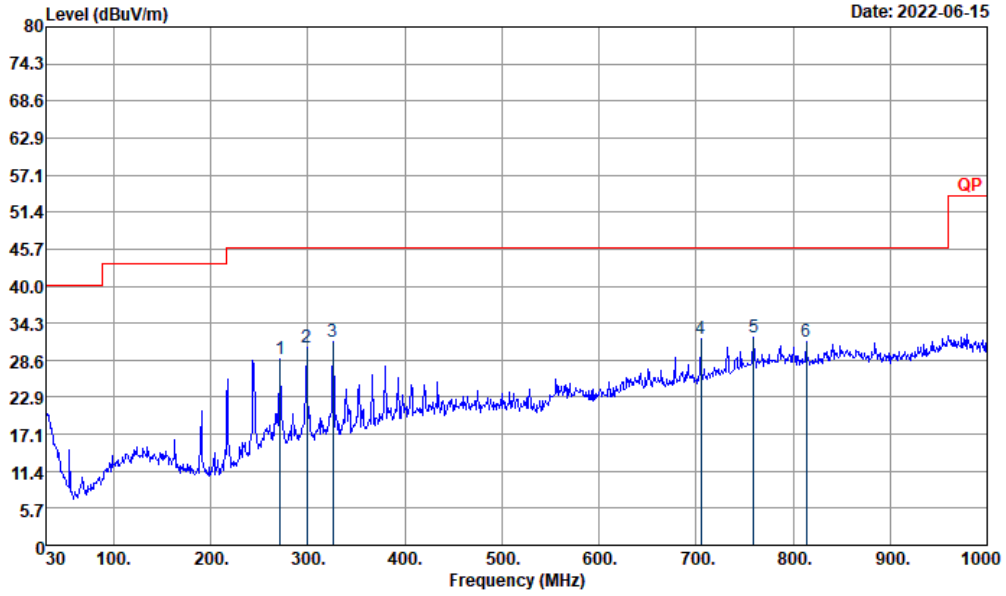
Note :

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



B3. Results of Radiated Spurious Emissions (30MHz~1GHz)

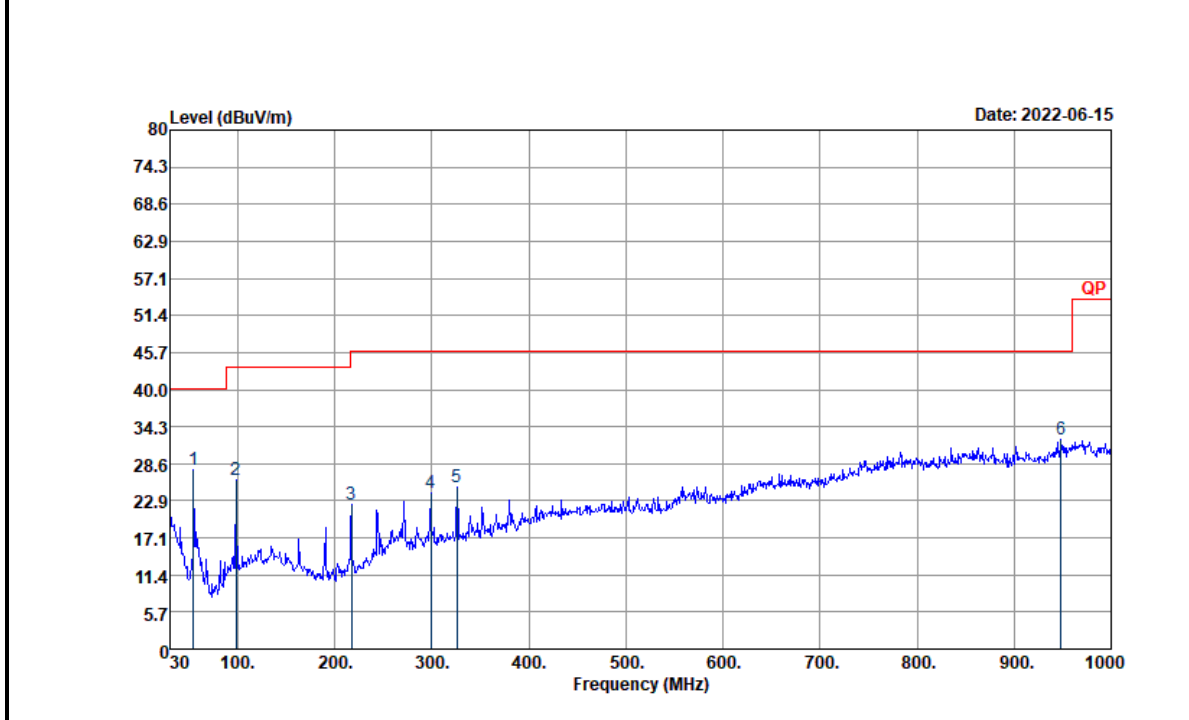
Test Mode :	NFC Tx	Polarization :	Horizontal
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Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
271.53	28.85	-17.15	46	39.65	18.81	2.6	32.21	-	-	Peak
298.69	30.44	-15.56	46	40.74	19.06	2.73	32.09	-	-	Peak
325.85	31.41	-14.59	46	40.99	19.55	2.85	31.98	-	-	Peak
705.12	31.93	-14.07	46	33.21	26.52	4.53	32.33	-	-	Peak
759.44	32.14	-13.86	46	31.28	27.96	4.9	32	-	-	Peak
813.76	31.39	-14.61	46	29.45	27.89	5.73	31.68	-	-	Peak



Test Mode :	NFC Tx	Polarization :	Vertical
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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
54.25	27.66	-12.34	40	46.51	12.43	1.2	32.48	-	-	Peak
97.9	26.07	-17.43	43.5	41.43	15.41	1.61	32.38	-	-	Peak
217.21	22.2	-23.8	46	37.41	14.92	2.32	32.45	-	-	Peak
298.69	24.13	-21.87	46	34.43	19.06	2.73	32.09	-	-	Peak
325.85	25.03	-20.97	46	34.61	19.55	2.85	31.98	-	-	Peak
948.59	32.28	-13.72	46	27.15	30.33	5.7	30.9	-	-	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.

————THE END————