TEST REPORT

Application No.:	SEWM2305000160RG
Applicant:	Xiaomi Communications Co., Ltd.
Address of Applicant:	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085
Manufacturer:	Xiaomi Communications Co., Ltd.
Address of Manufacturer:	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085
EUT Description:	Mobile Phone
Model No.:	23076RA4BR, XIG03
Trade Mark:	Redmi
FCC ID:	2AFZZRA4BR
Standards:	FCC 47 CFR Part 15, Subpart C 15.225
Date of Receipt:	2023/04/26
Date of Test:	2023/04/30 to 2023/05/13 (for original report SEWM2304000137RG07) 2023/06/12 to 2023/06/12 (for new report SEWM2305000160RG07)
Date of Issue:	2023/06/12
Test Result :	**PASS ***

* In the configuration tested, the EUT detailed in this report complied with the standards specified above.

Authorized Signature:

Panta Sun

Panta Sun
Wireless Laboratory Manager

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1 Version

Revision Record				
Version	***Chapter***	***Date***	***Modifier***	***Remark***
01		2023/06/12		Original

Prepared By		**(Ives Cheng) / Test Engineer**
Checked By		**(Well Wei) / Reviewer**

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2 Test Summary

Test Item	FCC Rules No.	Test Method	Test Result	Result
Antenna Requirement	15.203	--	Clause 4.1	PASS
AC Power Line Conducted Emission	15.207	ANSI C63.10-2020 Section 6.2	Clause 4.2	PASS
20dB Spectrum Bandwidth	15.215(c)	ANSI C63.10-2020 Section 6.9.2	Clause 4.3	PASS
Frequency Stability	15.225(e)	ANSI C63.10-2020 Section 6.8	Clause 4.4	PASS
Field Strength of Fundamental Emissions	15.225(a)(b)(c)	ANSI C63.10-2020 Section 6.4.7	Clause 4.5	PASS
Radiated Spurious Emissions	15.225(d)/15.209	ANSI C63.10-2020 Section 6.4/6.5	Clause 4.6	PASS

Remark:

This test report (Report No.: SEWM2305000160RG07 issue on 2023/06/12) is based on the original test report (Report No.: SEWM2304000137RG07 issue on 2023/05/29).

Review this report and original report, this report just changing the parts according to the declaration letter from client.

Considering to the difference, pre-scan were performed on the sample in this report to find the items which can be influential to the result in the original test report for fully retest.

Therefore in this report only AC Power Line Conducted Emission were tested, Radiated Spurious Emissions and Field Strength of Fundamental Emissions were performed based on the worst case of the original report with report number SEWM2304000137RG07 issue on 2023/05/29 and other test data in this report are based on the previous report with report number SEWM2304000137RG07 issue on 2023/05/29.

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3 General Information

3.1 Details of Client

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Manufacturer:	Xiaomi Communications Co., Ltd.
Address of Manufacturer:	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

3.2 Test Location

Company:	SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.
Address:	South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone
Post code:	215000
Test engineer:	Ives Cheng, King-p Li

3.3 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **A2LA (Certificate No. 6336.01)**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 6336.01.

- **Innovation, Science and Economic Development Canada**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0120.

IC#: 27594.

- **FCC –Designation Number: CN1312**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized as an accredited testing laboratory.

Designation Number: CN1312.

Test Firm Registration Number: 717327

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3.4 General Description of EUT

EUT Description:	Mobile Phone	
Model No.:	23076RA4BR, XIG03	
Trade Mark:	Redmi	
Hardware Version:	P1.1	
Software Version:	MIUI 14	
IMEI:	RF Conducted	IMEI1: 866672060059267 IMEI2: 866672060059275
	RSE & AC power line	IMEI1: 866672060046926 IMEI2: 866672060046934
Operation Frequency:	13.56MHz	
NFC Type:	Type A, B and F	
	Remark: the EUT has been pre-scanned in NFC Type A, B and F. the worst type(Type A) was recorded in this report if no others remark in the test items.	
Modulation Type:	ASK	
Antenna Type:	FPC+Ferrite	
Remark: As above information is provided and confirmed by the applicant. SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.		

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3.5 Test Environment

Environment Parameter	101.0 kPa Selected Values During Tests	
Relative Humidity	44-46 % RH Ambient	
Value	**Temperature(℃)**	**Voltage(V)**
NTNV	22~23	3.85
Remark: The extreme Voltage and extreme Temperature are refer to the test data of Frequency Stability.		

3.6 Description of Support Units

The EUT has been tested as an independent unit.

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4 Test results and Measurement Data

4.1 Antenna Requirement

Standard requirement:	47 CFR Part 15C Section 15.203
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.	
The antenna of the EUT are permanently attached.	

4.2 Worst-case configuration and mode

The fundamental of the EUT was investigated under three orthogonal orlentations X, Y, and Z. The Z orientation was determined to be the worst-case orientation.

In addition, Type A, B and F at each supported data rate and with/without a tag were investigated to determine the worst case based on the highest power and spurious emissions. Type A, 106Kbps without tag was determined to be the worst case and therefore Type A, 106Kbps without tag was selected for all final tests.

Although these tests were performed ther than open area test site, adequate comparison measurements were confirmed against 30m open are test site. Therefore sufficient tests were made to demonstrate that the altemative site prduces results that correlate with the ones of tests made in an ope field based on KDB 414788.

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4.3 AC Power Line Conducted Emissions

Test Requirement:	47 CFR Part 15C Section 15.207		
Test Method:	ANSI C63.10-2020 Section 6.2		
Test Frequency Range:	150kHz to 30MHz		
Limit:	Frequency range(MHz)	Limit (dBuV)	
		Quasi-peak	Average
	0.15-0.5	66 to 56*	56 to 46*
	0.5-5	56	46
	5-30	60	50
	* Decreases with the logarithm of the frequency.		
Test Procedure:	1) The mains terminal disturbance voltage test was conducted in a shielded room. 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50Ω/50μH + 5Ω linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded. 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane. 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2. 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10-2020 on conducted measurement.		

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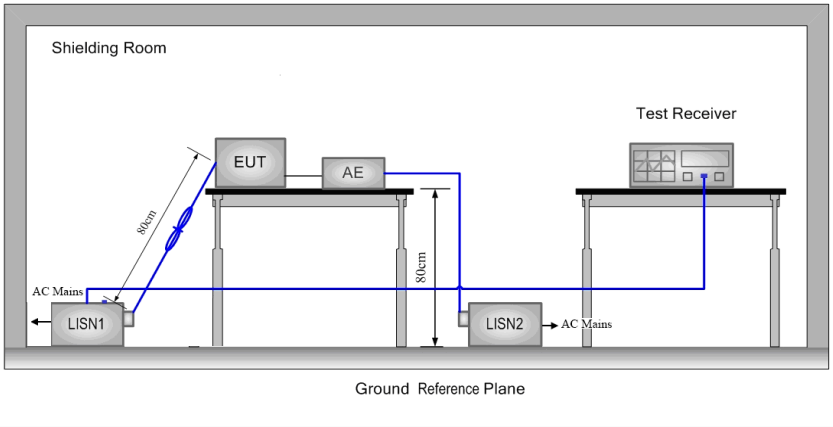
Test Setup:	
Instruments Used:	Refer to section 6 for details.
Test Results:	Pass

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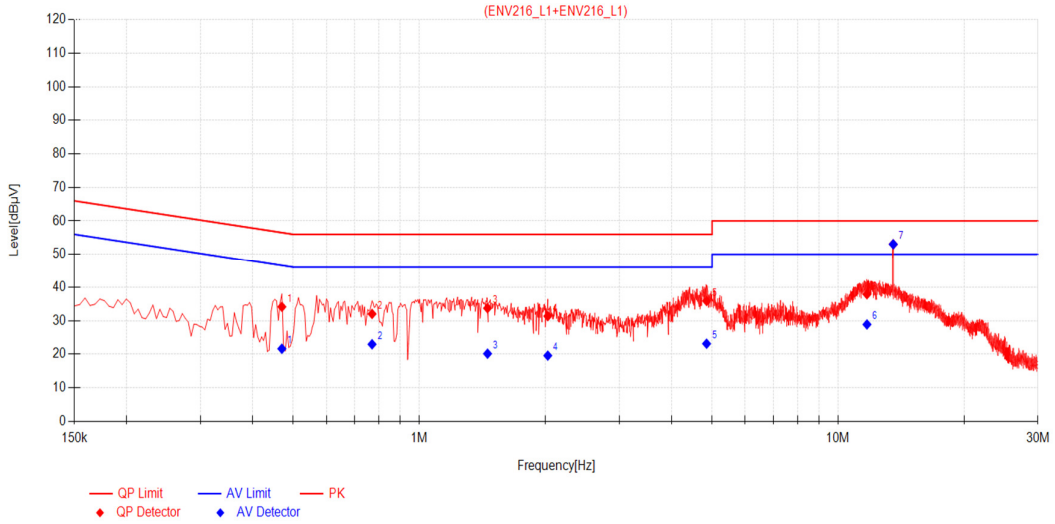
Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

Phase:	Line



Data List

NO.	Frequency [MHz]	Factor [dB]	QP Reading [dBµV]	QP Value [dBµV]	QP Limit [dBµV]	QP Margin [dB]	AV Reading [dBµV]	AV Value [dBµV]	AV Limit [dBµV]	AV Margin [dB]	Verdict
1	0.4695	11.60	22.54	34.14	56.52	22.38	10.04	21.64	46.52	24.88	PASS
2	0.7710	11.69	20.33	32.02	56.00	23.98	11.28	22.97	46.00	23.03	PASS
3	1.4550	11.72	22.01	33.73	56.00	22.27	8.45	20.17	46.00	25.83	PASS
4	2.0265	11.73	19.63	31.36	56.00	24.64	7.86	19.59	46.00	26.41	PASS
5	4.8525	11.79	24.11	35.90	56.00	20.10	11.35	23.14	46.00	22.86	PASS
6	11.7240	11.89	26.00	37.89	60.00	22.11	17.00	28.89	50.00	21.11	PASS
7	13.5465	11.91	41.14	53.05	-	-	41.14	53.05	-	-	PASS

Remark:
1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Value =Reading[dBµV] + Factor(Lisn factor[dB] + cable loss[dB]).
3. Margin = Limit[dBµV] – Value[dBµV]

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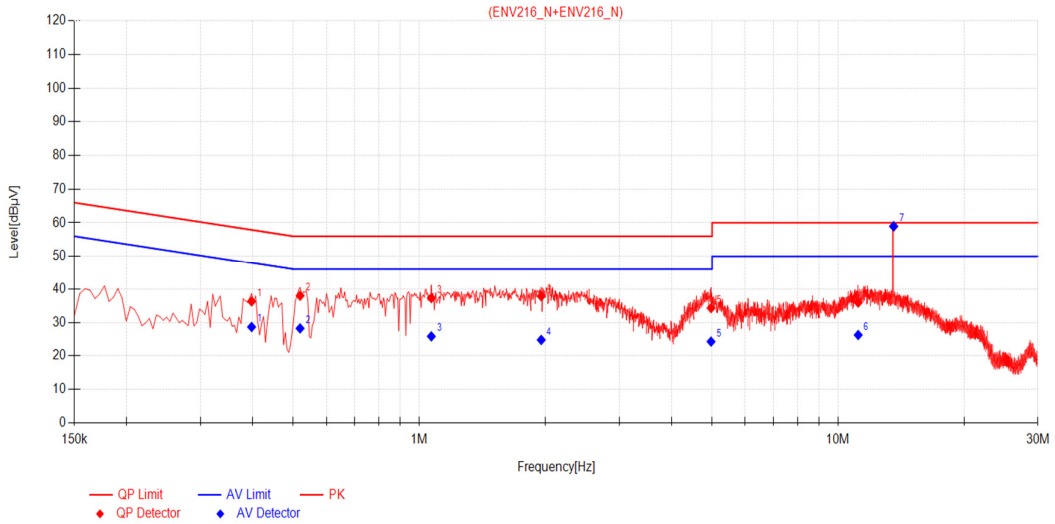
Phase:	Neutral



Data List

NO.	Frequency [MHz]	Factor [dB]	QP Reading [dBμV]	QP Value [dBμV]	QP Limit [dBμV]	QP Margin [dB]	AV Reading [dBμV]	AV Value [dBμV]	AV Limit [dBμV]	AV Margin [dB]	Verdict
1	0.3975	11.62	24.68	36.30	57.91	21.61	17.03	28.65	47.91	19.26	PASS
2	0.5190	11.61	26.39	38.00	56.00	18.00	16.62	28.23	46.00	17.77	PASS
3	1.0680	11.73	25.57	37.30	56.00	18.70	14.12	25.85	46.00	20.15	PASS
4	1.9545	11.74	26.12	37.86	56.00	18.14	13.04	24.78	46.00	21.22	PASS
5	4.9740	11.81	22.50	34.31	56.00	21.69	12.46	24.27	46.00	21.73	PASS
6	11.1705	11.89	24.05	35.94	60.00	24.06	14.36	26.25	50.00	23.75	PASS
7	13.5735	11.91	47.06	58.97	-	-	47.06	58.97	-	-	PASS

Remark:
1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Value =Reading[dBμV] + Factor(Lisn factor[dB] + cable loss[dB]).
3. Margin = Limit[dBμV] – Value[dBμV]

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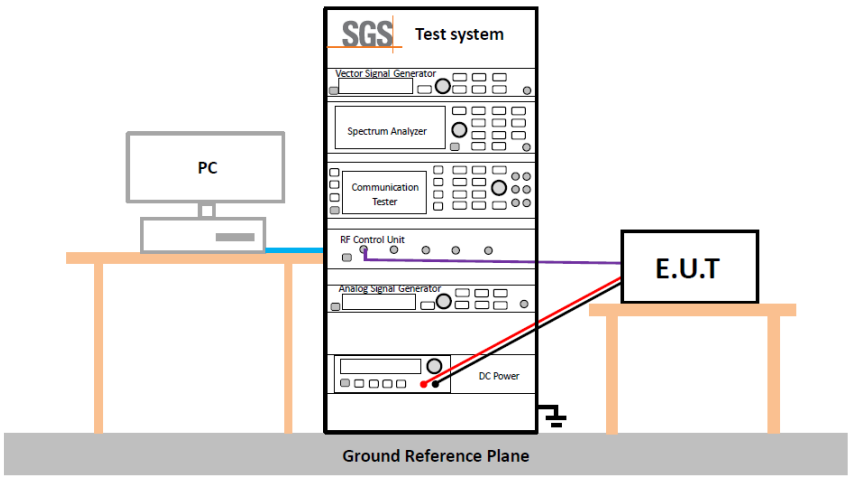
4.4 20dB Spectrum Bandwidth

Test Requirement:	47 CFR Part 15C Section 15.215(c)
Test Method:	ANSI C63.10-2020 Section 6.9.2
Test Setup:	
Instruments Used:	Refer to section 6 for details
Limit:	Intentional radiators must be designed to ensure that the 20dB in the specific band 13.553~13.567MHz.
Test Results:	Pass
The detailed test data see: **Appendix**	

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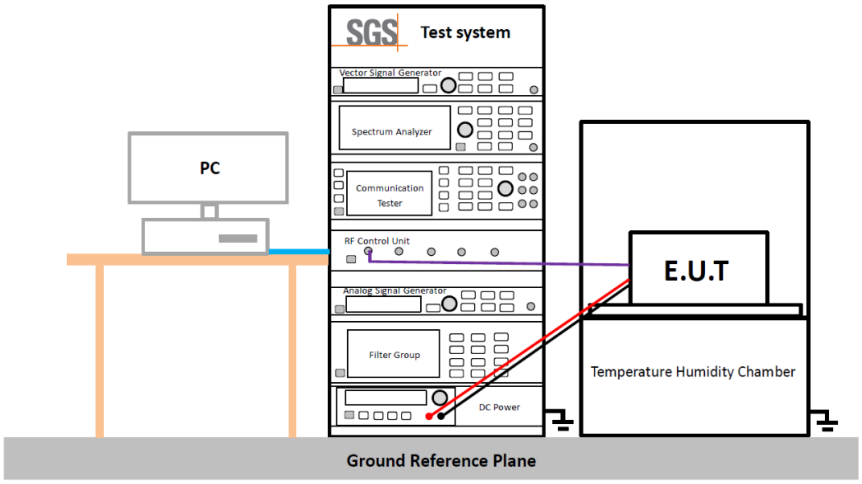
4.5 Frequency Stability

Test Requirement:	47 CFR Part 15C Section 15.225(e)
Test Method:	ANSI C63.10-2020 Section 6.8
Test Setup:	
Instruments Used:	Refer to section 6 for details
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 using a new battery.
Test Results:	Pass
The detailed test data see: **Appendix**	

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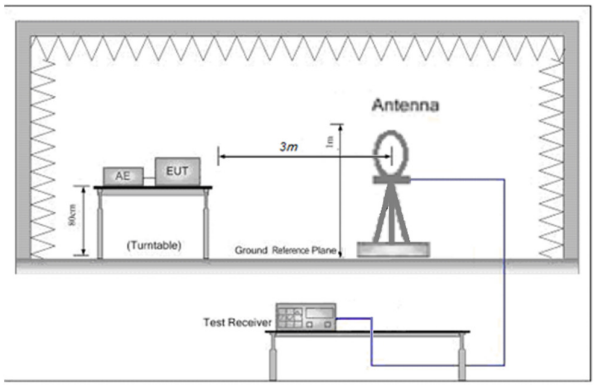
4.6 Field Strength of Fundamental Emissions

Test Requirement:	47 CFR Part 15C Section 15.225				
Test Method:	ANSI C63.10-2020 Section 6.4.7				
Test Site:	Measurement Distance: 3m (Semi-Anechoic Chamber)				
Limit:	Frequency	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 MHz	30	29.5	48.58	69.5
	13.110-13.410 MHz	106	40.5	59.58	80.5
	13.410-13.553 MHz	334	50.5	69.58	90.5
	13.553-13.567 MHz	15,848	84.0	103.08	124.0
	13.567-13.710 MHz	334	50.5	69.58	90.5
	13.710-14.010 MHz	106	40.5	59.58	80.5
	14.010~30.000 MHz	30	29.5	48.58	69.5
Test Setup:	 Figure 1. Below 30MHz				
Test Procedure:	a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters(for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.				

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	f. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, And found the Z axis positioning which it is worse case. g. Repeat above procedures until all frequencies measured was complete. h. RBW set to 9kHz.
Exploratory Test Mode:	Transmitting with modulation. Charge + Transmitting mode.
Final Test Mode:	**Transmitting with modulation.** Pretest the EUT at Charge + Transmitting mode.Only the worst case is recorded in the report.
Instruments Used:	Refer to section 6 for details
Test Results:	Pass
The detailed test data see: **Appendix**	

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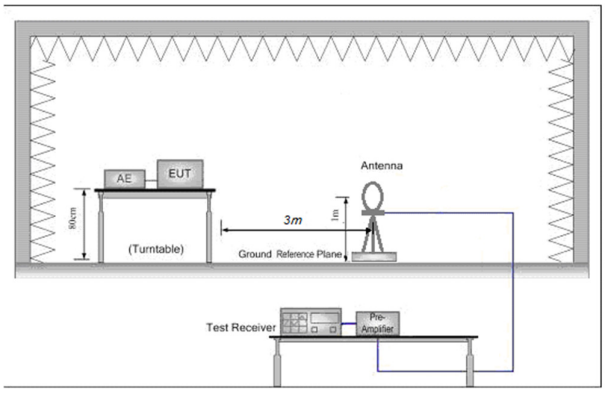
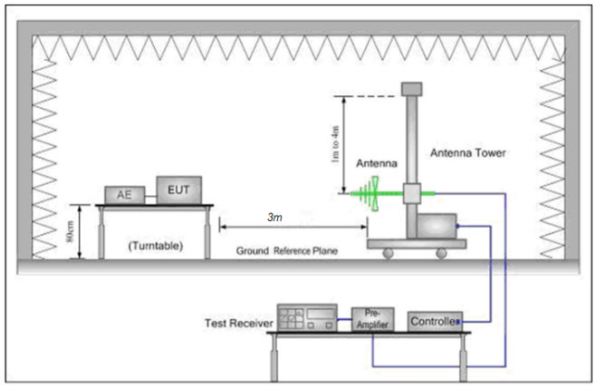
4.7 Radiated Spurious Emissions

Test Requirement:	47 CFR Part 15C Section 15.209 and 15.225				
Test Method:	ANSI C63.10-2020 Section 6.4&6.5				
Test Site:	Measurement Distance: 3m (Semi-Anechoic Chamber)				
Limit:	Frequency	Field strength (microvolt/meter)	Limit (dBuV/m)	Remark	Measurement distance (m)
	0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
	0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
	1.705MHz-30MHz	30	-	-	30
	30MHz-88MHz	100	40.0	Quasi-peak	3
	88MHz-216MHz	150	43.5	Quasi-peak	3
	216MHz-960MHz	200	46.0	Quasi-peak	3
	Above 960MHz	500	54.0	Quasi-peak	3
	Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.				
Test Setup:	 Figure 1. Below 30MHz		 Figure 2. Above 30MHz		
Test Procedure:	i. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation. j. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. k. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. l. For each suspected emission, the EUT was arranged to its worst case and then				

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	the antenna was tuned to heights from 1 meter to 4 meters(for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. m. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. n. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, And found the Z axis positioning which it is worse case. o. Repeat above procedures until all frequencies measured was complete.
Exploratory Test Mode:	Transmitting with modulation. Charge + Transmitting mode.
Final Test Mode:	Transmitting with modulation. Pretest the EUT at Charge + Transmitting mode.Only the worst case is recorded in the report.
Instruments Used:	Refer to section 6 for details
Test Results:	Pass
The detailed test data see: **Appendix**	

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5 Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	Measurement Uncertainty
1	Radio Frequency	±1.0 %
2	Occupied Bandwidth	±1.0 %
3	Conduction Emission	± 2.90dB (150kHz to 30MHz)
4	Radiated Emission	± 3.13dB (9k to 30MHz)
		± 4.8dB (30M to 1GHz)

Remark:
The U_{lab} (lab Uncertainty) is less than $U_{cispr/ETSI}$ (CISPR/ETSI Uncertainty), so the test results
– compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
– non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

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6 Equipment List

RF Test Equipment (for original report)					
Test Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal. date (yyyy/mm/dd)**	**Cal.Due date (yyyy/mm/dd)**
Shielding Room	Brilliant-emc	N/A	SUWI-04-01-06	2021/05/08	2024/05/07
Temperature and humidity meter	MingGao	TH101B	SUWI-01-01-07	2023/02/06	2024/02/05
Signal Analyzer	ROHDE& SCHWARZ	FSV3030	SUWI-01-02-02	2022/05/17	2023/05/16
Measurement Software	Tonscend	JS1120-3 Test System V3.1.55	SUWI-02-09-09	NCR	NCR
Signal Analyzer	ROHDE& SCHWARZ	FSW43	SUWI-01-02-04	2022/05/28	2023/05/27
Wideband Radio Communication Tester	ROHDE& SCHWARZ	CMW500	SUWI-01-16-05	2023/02/06	2024/02/05
DC Power Supply	HYELEC	HY3005B	SUWI-01-18-01	2023/02/06	2024/02/05
Power meter	Anritsu	ML2495A	SUWI-01-31-01	2022/11/23	2023/11/22
Pulse power sensor	Anritsu	MA2411B	SUWI-01-32-01	2022/11/23	2023/11/22
MXG Vector signal genitor	KEYSIGHT	N5182B	SUWI-01-38-01	2023/02/06	2024/02/05
Temperature Chamber	ESPEC	SU-242	SUWI-01-13-01	2023/02/06	2024/02/05
Signal Generator	ROHDE&SCHWARZ	SMM100A	SN:101716	2023/02/22	2024/02/21

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Conduction Test Equipment (for original and new report)					
Test Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal. date (yyyy/mm/dd)**	**Cal.Due date (yyyy/mm/dd)**
Test receiver	ROHDE&SCHWARZ	ESR7	SUWI-01-10-01	2023/02/08	2024/02/07
Temperature and humidity meter	MingGao	TH101B	SUWI-01-01-06	2023/02/07	2024/02/06
Artificial network	ROHDE&SCHWARZ	ENV216	SUWI-01-19-03	2023/02/08	2024/02/07
Artificial network	ROHDE&SCHWARZ	ENV216	SUWI-01-19-04	2023/02/08	2024/02/07
Measurement Software	Tonscend	JS32-CE V4.0.0.2	SUWI-02-09-05	NCR	NCR

RSE Test System (for original and new report)					
Test Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal. date (yyyy/mm/dd)**	**Cal.Due date (yyyy/mm/dd)**
Semi-Anechoic Chamber	Brilliant-emc	N/A	SUWI-04-02-01	2021/05/08	2024/05/07
Temperature and humidity meter	MingGao	TH101B	SUWI-01-01-05	2023/02/07	2024/02/06
Test receiver	ROHDE&SCHWARZ	ESR7	SUWI-01-10-01	2023/02/08	2024/02/07
Receiving antenna	SCHWRZBECK MESS-ELEKTRONIK	VULB 9163	SUWI-01-11-01	2021/05/16	2023/05/15
				2023/05/13	2024/05/12
Active Loop Antenna	SCHWRZBECK MESS-ELEKTRONIK	FMZB 1519B	SUWI-01-21-01	2021/06/10	2023/06/09
				2023/05/13	2024/05/12
Amplifier	Tonscend	TAP9K3G40	SUWI-01-14-01	2023/02/06	2024/02/05
Measurement Software	Tonscend	JS32-RE V4.0.0.0	SUWI-02-09-04	NCR	NCR

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7 Photographs - Setup Photos

Refer to Appendix A.4 NFC Setup Photos.

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Appendix

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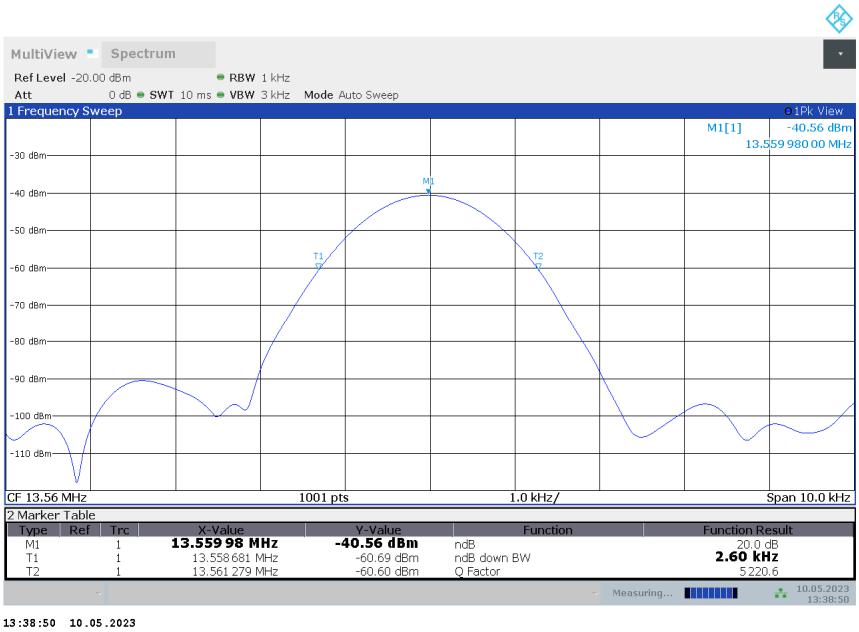
20dB Bandwidth



Note:

Because the measured signal is CW or CW-like 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.

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Frequency tolerance

Declared Frequency (MHz)		13.56MHz			
Startup					
Temperature (°C)	Voltage(VDC)	Measurement Frequency(MHz)	Frequency Tolerance (%)	Limit (%)	Result
50	3.85	13.55996	0.0003	±0.01	Pass
40		13.55998	0.0001		Pass
30		13.55996	0.0003		Pass
20		13.55998	0.0001		Pass
10		13.55998	0.0001		Pass
0		13.55997	0.0002		Pass
-10		13.55998	0.0001		Pass
-20		13.55996	0.0003		Pass
20	4.45	13.55997	0.0002		Pass
	3.60	13.55996	0.0003		Pass

Declared Frequency (MHz)		13.56MHz			
2mins					
Temperature (°C)	Voltage(VDC)	Measurement Frequency(MHz)	Frequency Tolerance (%)	Limit (%)	Result
50	3.85	13.55998	0.0001	±0.01	Pass
40		13.55998	0.0001		Pass
30		13.55996	0.0003		Pass
20		13.55998	0.0001		Pass
10		13.55998	0.0001		Pass
0		13.55997	0.0002		Pass
-10		13.55998	0.0001		Pass
-20		13.55997	0.0002		Pass
20	4.45	13.55997	0.0002		Pass
	3.60	13.55996	0.0003		Pass

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Declared Frequency (MHz)		13.56MHz			
5mins					
Temperature (°C)	Voltage(VDC)	Measurement Frequency(MHz)	Frequency Tolerance (%)	Limit (%)	Result
50	3.85	13.55996	0.0003	±0.01	Pass
40		13.55997	0.0002		Pass
30		13.55996	0.0003		Pass
20		13.55997	0.0002		Pass
10		13.55998	0.0001		Pass
0		13.55997	0.0002		Pass
-10		13.55996	0.0003		Pass
-20		13.55998	0.0001		Pass
20	4.45	13.55996	0.0003		Pass
	3.60	13.55996	0.0003		Pass

Declared Frequency (MHz)		13.56MHz			
10mins					
Temperature (°C)	Voltage(VDC)	Measurement Frequency(MHz)	Frequency Tolerance (%)	Limit (%)	Result
50	3.85	13.55998	0.0001	±0.01	Pass
40		13.55997	0.0002		Pass
30		13.55997	0.0002		Pass
20		13.55998	0.0001		Pass
10		13.55998	0.0001		Pass
0		13.55997	0.0002		Pass
-10		13.55996	0.0003		Pass
-20		13.55996	0.0003		Pass
20	4.45	13.55997	0.0002		Pass
	3.60	13.55997	0.0002		Pass

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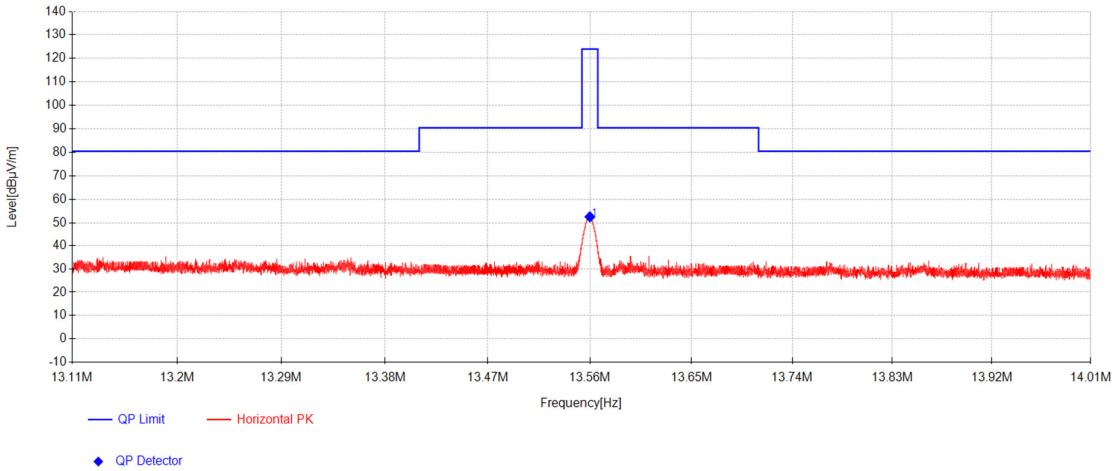
Field Strength of Fundamental Emissions

NFC_Emission Mask(Type 2)

Polarization:	Horizontal



Data List

NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	13.56	32.22	19.67	0.69	52.58	124.00	71.42	100	194	Horizontal

Remark:
1. The Quasi-Peak measurements were performed on the EUT.
2. Value = Reading + Antenna Factor + Factor.
3. Factor=Cable loss.

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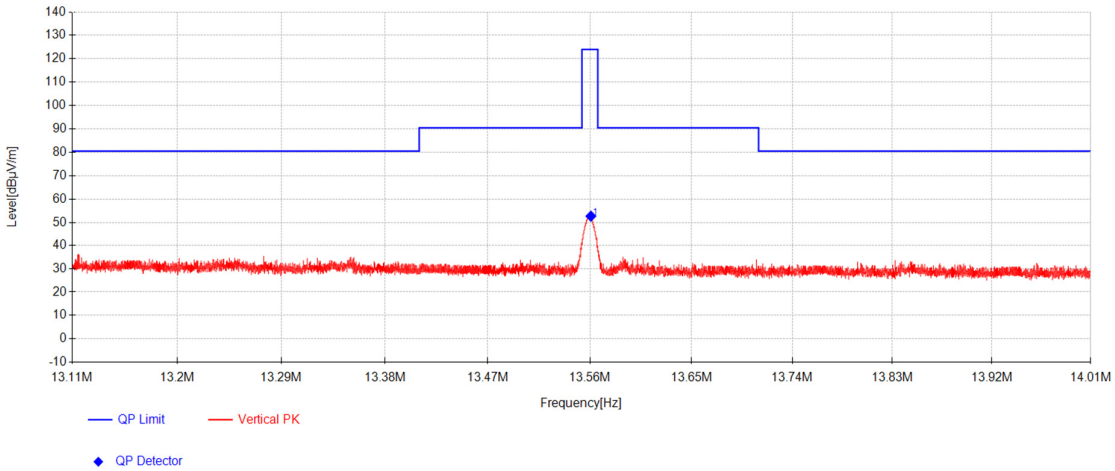
Polarization:	Vertical



Data List

NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	13.5609	32.38	19.67	0.69	52.74	124.00	71.26	100	197	Vertical

Remark:
1. The Quasi-Peak measurements were performed on the EUT.
2. Value = Reading + Antenna Factor + Factor.
3. Factor=Cable loss.

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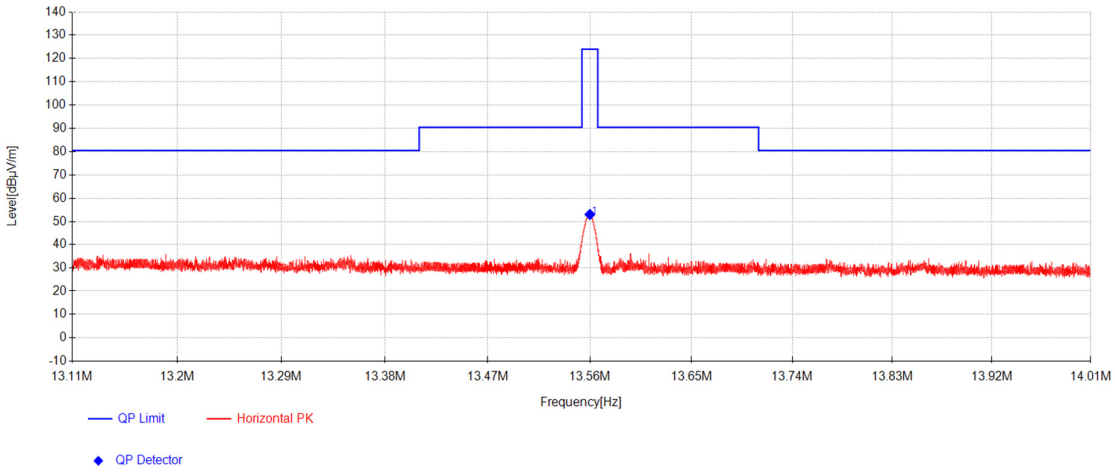
Test on the worst case:

NFC_Emission Mask(Type 2)

Polarization: Horizontal



Data List										
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	13.56	32.73	19.67	0.69	53.09	124.00	70.91	100	204	Horizontal

Remark:
1. The Quasi-Peak measurements were performed on the EUT.
2. Value = Reading + Antenna Factor + Factor.
3. Factor=Cable loss.

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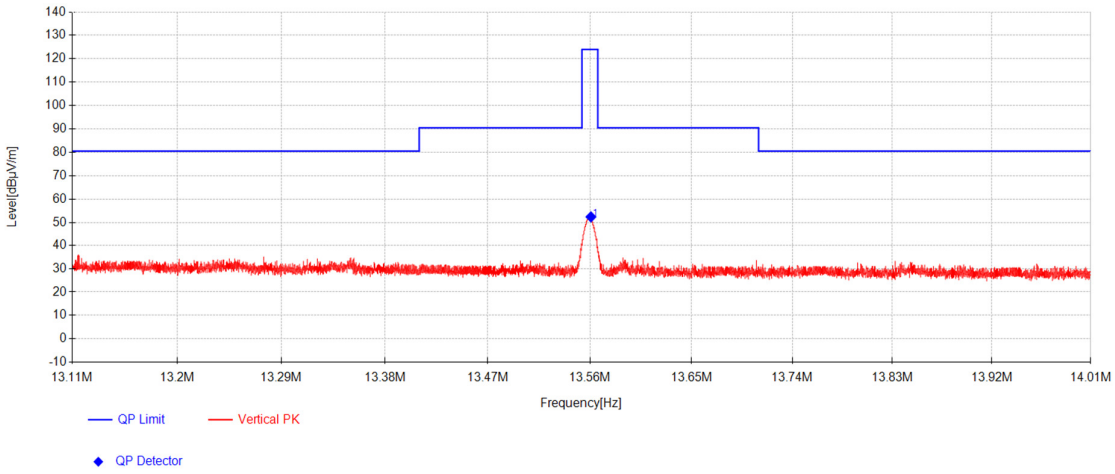
Polarization:	Vertical



Data List

NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	13.5609	32.08	19.67	0.69	52.44	124.00	71.56	100	89	Vertical

Remark:
1. The Quasi-Peak measurements were performed on the EUT.
2. Value = Reading + Antenna Factor + Factor.
3. Factor=Cable loss.

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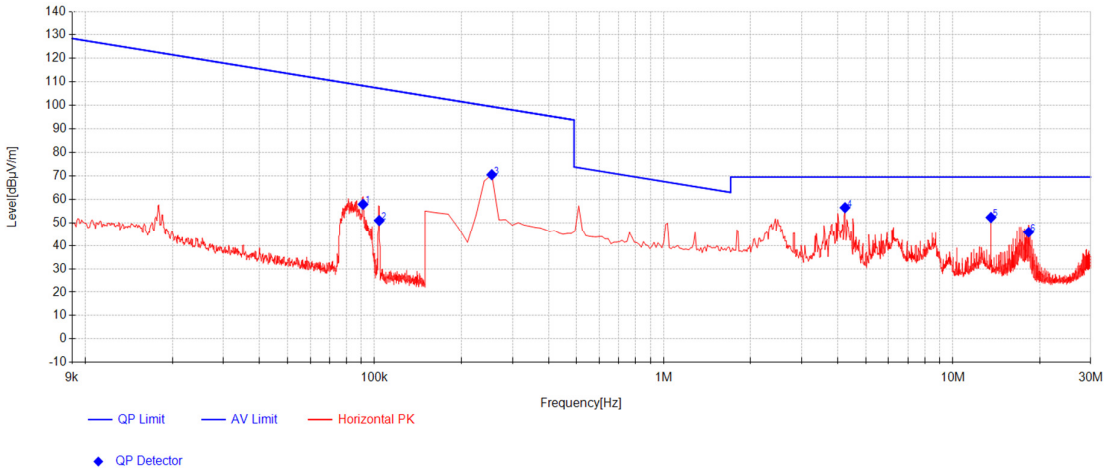
Radiated Spurious Emissions

NFC_RSE(Type 2)

Polarization: Horizontal



Data List

NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	0.0913	37.25	20.21	0.43	57.89	108.39	50.50	100	148	Horizontal
2	0.1038	30.26	20.27	0.43	50.96	107.28	56.32	100	273	Horizontal
3	0.2545	49.78	20.30	0.43	70.51	99.49	28.98	100	359	Horizontal
4	4.2415	36.09	19.86	0.51	56.46	69.54	13.08	100	223	Horizontal
5	13.5594	31.91	19.67	0.69	52.27	69.54	17.27	100	3	Horizontal
6	18.3079	25.21	19.83	0.78	45.82	69.54	23.72	100	170	Horizontal

Remark:
1. The Quasi-Peak measurements were performed on the EUT.
2. Value = Reading + Antenna Factor + Factor.
3. Factor=Cable loss.

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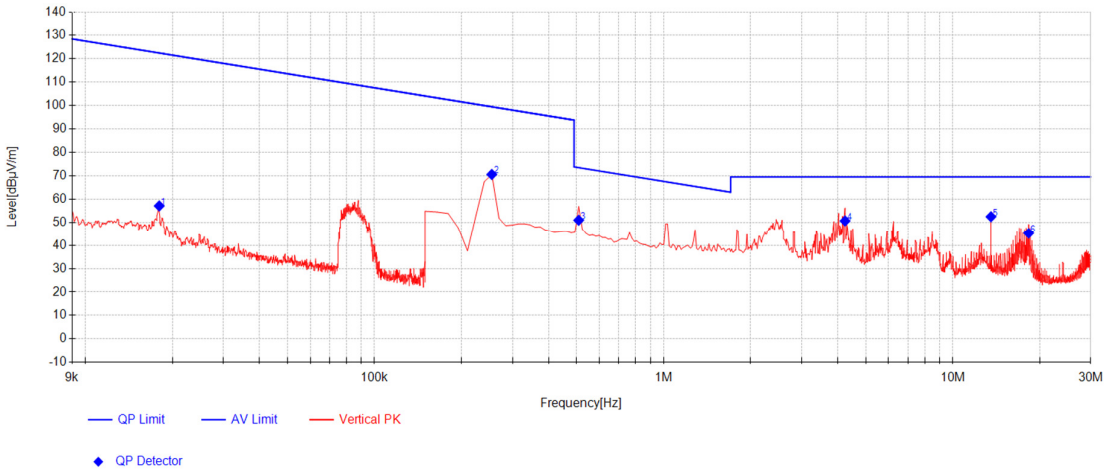
Polarization: Vertical



Data List

NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	0.018	36.83	19.84	0.43	57.10	122.49	65.39	100	349	Vertical
2	0.2545	49.85	20.30	0.43	70.58	99.49	28.91	100	127	Vertical
3	0.5084	30.24	20.29	0.44	50.97	73.48	22.51	100	360	Vertical
4	4.2415	30.29	19.86	0.51	50.66	69.54	18.88	100	360	Vertical
5	13.5594	32.11	19.67	0.69	52.47	69.54	17.07	100	192	Vertical
6	18.3079	24.59	19.83	0.78	45.20	69.54	24.34	100	339	Vertical

Remark:
1. The Quasi-Peak measurements were performed on the EUT.
2. Value = Reading + Antenna Factor + Factor.
3. Factor=Cable loss.

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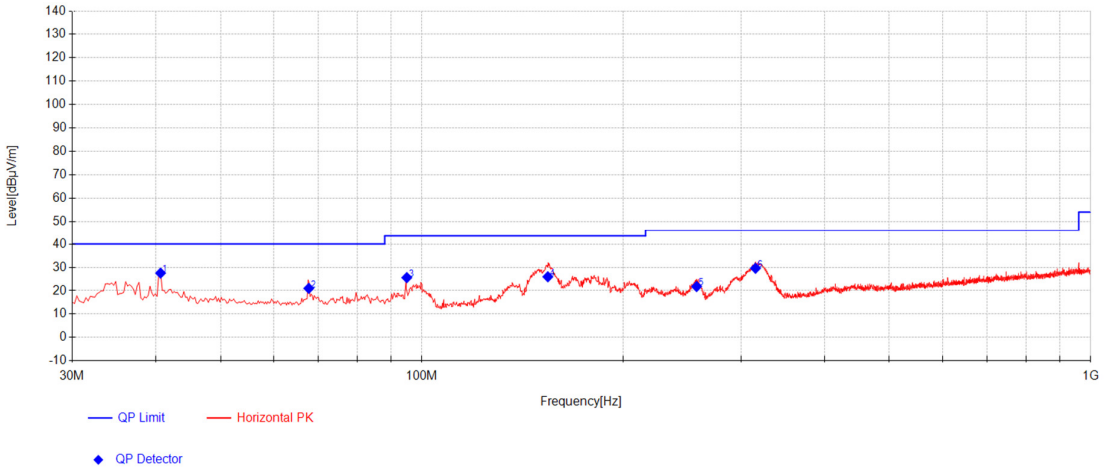
NFC_RE(Type 2)

Polarization:	Horizontal



Data List

NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	40.6724	41.61	14.01	-28.08	27.54	40.00	12.46	201	3	Horizontal
2	67.7557	37.43	11.29	-27.71	21.01	40.00	18.99	220	360	Horizontal
3	94.9395	43.33	9.78	-27.52	25.59	43.50	17.91	190	323	Horizontal
4	154.2881	39.16	13.97	-27.17	25.96	43.50	17.54	180	3	Horizontal
5	257.5153	36.35	11.75	-26.33	21.77	46.00	24.23	114	106	Horizontal
6	315.3745	42.93	13.12	-26.46	29.59	46.00	16.41	120	88	Horizontal

Remark:
1. The Quasi-Peak measurements were performed on the EUT.
2. Final Value Level = Reading + Antenna Factor + Factor.
3. Factor=Cable loss – Preamplifier Factor.

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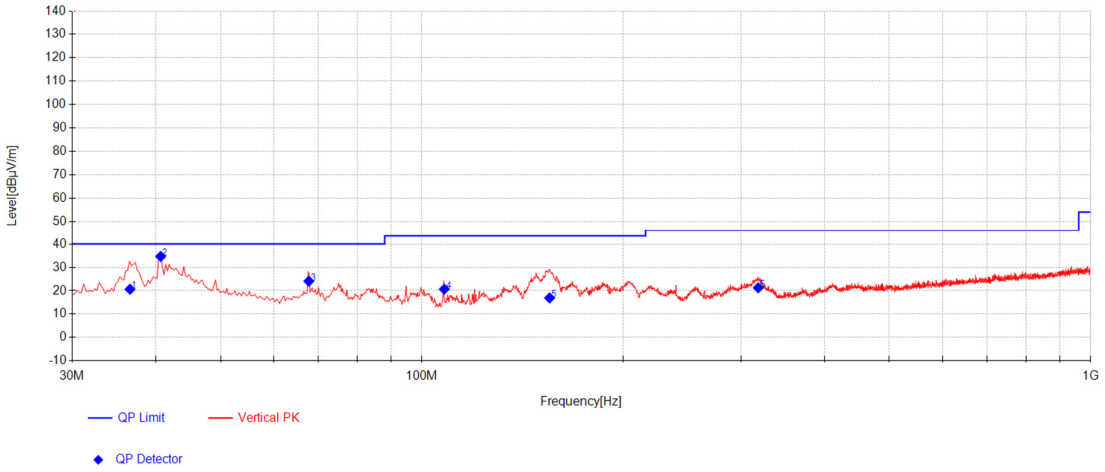
Polarization:	Vertical



Data List

NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	36.6107	35.27	13.60	-28.25	20.62	40.00	19.38	109	357	Vertical
2	40.6909	48.73	14.01	-28.08	34.66	40.00	5.34	107	334	Vertical
3	67.7562	40.50	11.29	-27.71	24.08	40.00	15.92	100	56	Vertical
4	108.0118	37.14	10.92	-27.41	20.65	43.50	22.85	105	356	Vertical
5	155.2151	30.02	13.99	-27.11	16.90	43.50	26.60	120	264	Vertical
6	318.3700	34.45	13.19	-26.40	21.24	46.00	24.76	254	155	Vertical

Remark:
1. The Quasi-Peak measurements were performed on the EUT.
2. Final Value Level = Reading + Antenna Factor + Factor.
3. Factor=Cable loss – Preamplifier Factor.

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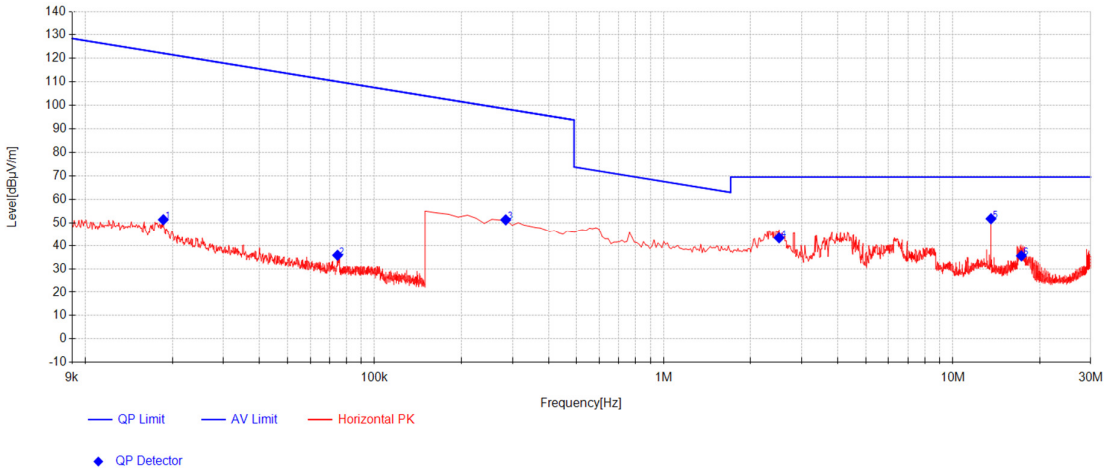
Test on the worst case:

NFC_RSE(Type 2)

Polarization:	Horizontal



Data List

NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	0.0186	31.07	19.85	0.43	51.35	122.21	70.86	100	254	Horizontal
2	0.0745	15.37	19.97	0.43	35.77	110.16	74.39	100	142	Horizontal
3	0.2844	30.55	20.30	0.44	51.29	98.52	47.23	100	263	Horizontal
4	2.5093	23.02	19.75	0.48	43.25	69.54	26.29	100	254	Horizontal
5	13.5594	31.41	19.67	0.69	51.77	69.54	17.77	100	142	Horizontal
6	17.2775	14.86	19.89	0.76	35.50	69.54	34.04	100	26	Horizontal

Remark:
1. The Quasi-Peak measurements were performed on the EUT.
2. Value = Reading + Antenna Factor + Factor.
3. Factor=Cable loss.

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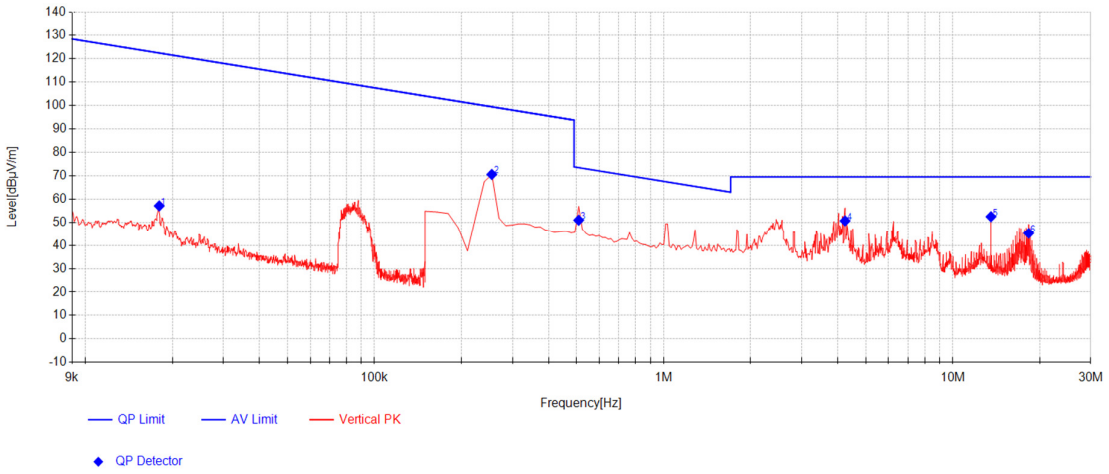
Polarization: Vertical



Data List

NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	0.0149	30.22	19.83	0.43	50.48	124.13	73.65	100	102	Vertical
2	0.2545	36.9	20.30	0.43	57.63	99.49	41.86	100	142	Vertical
3	2.36	23.68	19.74	0.47	43.89	69.54	25.65	100	265	Vertical
4	4.0922	23.98	19.85	0.51	44.34	69.54	25.20	100	254	Vertical
5	6.1827	18.69	19.84	0.55	39.08	69.54	30.46	100	142	Vertical
6	13.5594	33.11	19.67	0.69	53.47	69.54	16.07	100	263	Vertical

Remark:
1. The Quasi-Peak measurements were performed on the EUT.
2. Value = Reading + Antenna Factor + Factor.
3. Factor=Cable loss.

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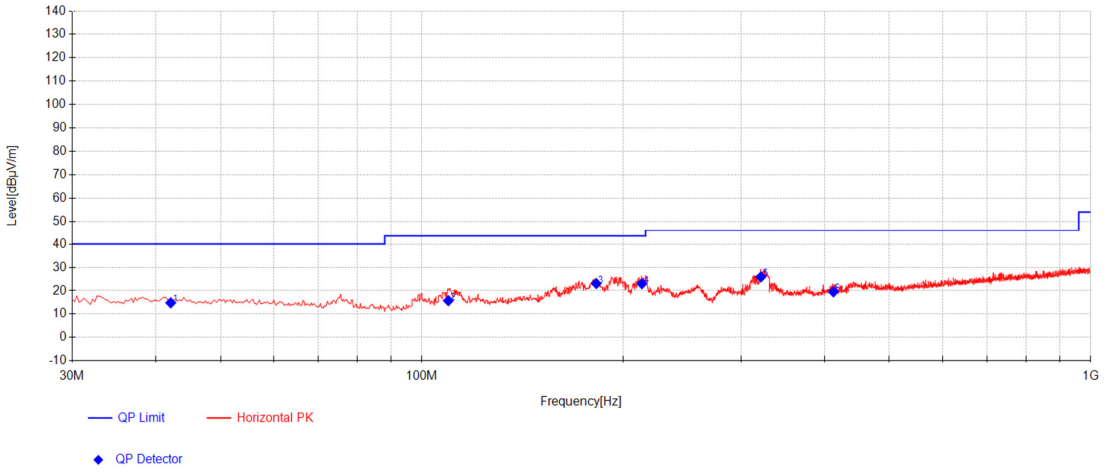
NFC_RE(Type 2)

Polarization:	Horizontal



Data List

NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	42.125	28.98	13.89	-28.07	14.81	40.00	25.19	142	203	Horizontal
2	109.54	32.06	11.08	-27.42	15.73	43.50	27.77	265	201	Horizontal
3	182.29	35.89	14.13	-26.97	23.05	43.50	20.45	285	254	Horizontal
4	213.33	39.24	10.35	-26.59	23.00	43.50	20.50	254	141	Horizontal
5	321.2425	38.96	13.24	-26.31	25.89	46.00	20.11	142	142	Horizontal
6	412.4225	30.06	15.05	-25.60	19.51	46.00	26.49	263	32	Horizontal

Remark:
1. The Quasi-Peak measurements were performed on the EUT.
2. Final Value Level = Reading + Antenna Factor + Factor.
3. Factor=Cable loss – Preamplifier Factor.

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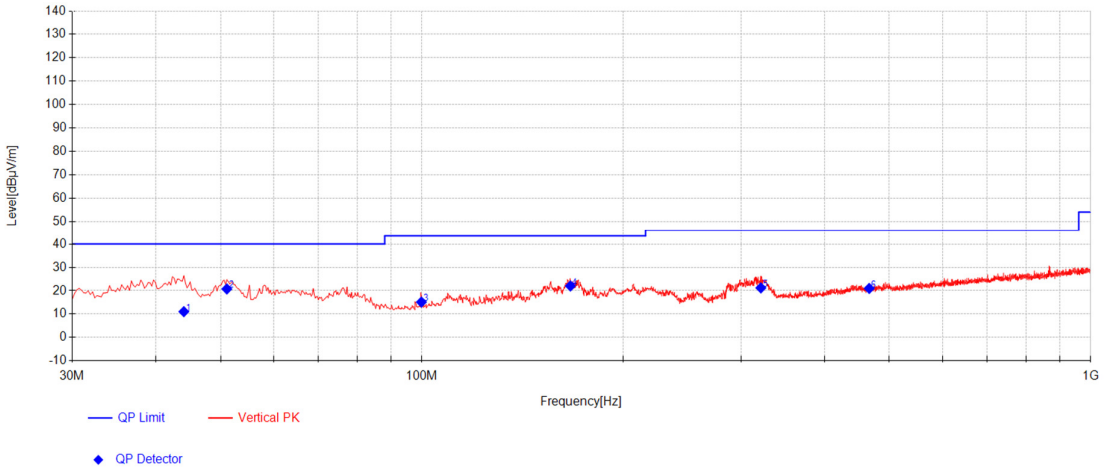
Polarization:	Vertical



Data List

NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	44.065	25.34	13.73	-28.05	11.02	40.00	28.98	142	201	Vertical
2	51.0975	35.26	13.45	-27.97	20.75	40.00	19.25	265	142	Vertical
3	99.84	32.36	10.14	-27.36	15.13	43.50	28.37	285	265	Vertical
4	166.77	34.26	14.32	-26.56	22.02	43.50	21.48	254	254	Vertical
5	321.2425	34.28	13.24	-26.31	21.21	46.00	24.79	142	11	Vertical
6	466.5	29.98	16.15	-25.16	20.97	46.00	25.03	263	23	Vertical

Remark:
1. The Quasi-Peak measurements were performed on the EUT.
2. Final Value Level = Reading + Antenna Factor + Factor.
3. Factor=Cable loss – Preamplifier Factor.

---End of Report---

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