RADIO TEST REPORT

(FCC Part 15 Subpart C)

Applicant:	HMD Global Oy
Address:	Bertel Jungin aukio 9,02600 Espoo, Finland

Manufacturer:	HMD Global Oy
Address:	Bertel Jungin aukio 9,02600 Espoo, Finland
Product:	Smart phone
Brand Name:	HMD
Model Name:	TA-1600/TA-1688
FCC ID:	2AJOTTA-1600
Date of tests:	Apr. 08, 2024 ~ May. 31, 2024

The tests have been carried out according to the requirements of the following standard:

☒ **Part 15 Subpart C §15. 225**

☒ **RSS-Gen Issue 5, Amendment 2 (February 2021)**

☒ **ANSI C63.10-2020**

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Prepared by Simon Wang	Approved by Luke Lu
Engineer / Mobile Department	Manager / Mobile Department
Simon Wang	Luke Lu
Date: May. 31, 2024	Date: May. 31, 2024

TABLE OF CONTENTS

BV 7Layers Communications Technology (Shenzhen) Co., Ltd

Room B37, Warehouse A5, No.3 Chiwan 4th Road, Zhaoshang Street, Nanshan District Shenzhen, Guangdong, People's Republic of China

Tel: +86 755 8869 6566
Fax: +86 755 8869 6577
Email: customerservice.sw@bureauveritas.com

REPORT REVISE RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
PSU-NQN2403180115RF12	Original release	May. 31, 2024

BV 7Layers Communications Technology (Shenzhen) Co., Ltd

Room B37, Warehouse A5, No.3 Chiwan 4th Road, Zhaoshang Street, Nanshan District Shenzhen, Guangdong, People's Republic of China

Tel: +86 755 8869 6566
Fax: +86 755 8869 6577
Email: customerservice.sw@bureauveritas.com

SUMMARY OF TEST RESULT

FCC Rule	IC Rule	Description	Limit	Result	Remark
-	RSS-Gen 6.7	99% Bandwidth	-	Pass	-
15.225(a)(b)(c)	RSS-210 Annex B.6	Field Strength of Fundamental Emissions	15.225(a)(b)(c) RSS-210 Annex B.6	Pass	-
15.215	-	20dB Spectrum Bandwidth	15.215	Pass	-
15.225(d) 15.209	RSS-210 Annex B.6	Radiated Emission	15.225(d) & 15.209 RSS-210 Annex B.6	Pass	-
15.207	RSS-GEN 8.8	AC Conducted Emission	15.207(a)	Note	
15.225(e)	Annex B.6	Frequency Stability	< ±100 ppm	Pass	-
15.203	RSS-Gen 6.8	Antenna Requirement	N/A	Pass	-

***Test Lab Information Reference**

Lab B:
Huarui 7Layers High Technology (Suzhou) Co., Ltd.
Lab Address:
Tower N, Innovation Center, 88 Zhuyi Road, High-tech District, Suzhou City, Anhui Province
Accredited Test Lab Cert 6613.01

The FCC Site Registration No. is 434559; The Designation No. is CN1325.

1 GENERAL DESCRIPTION

1.1 GENERAL DESCRIPTION OF EUT

Items	Description
Tx/Rx Frequency Range	13.559MHZ-13.561MHZ
Channel Number	1
20dBW	2.49 kHz
99%OBW	2.361 kHz
Antenna Type	Loop Antenna
Type of Modulation	ASK
HW VERSION	V2
SW VERSION	00WW_0_340

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

NOTE: Antenna gain and EUT conducted cable loss are provided by the customer, and the laboratory will record the results based on these items that involve these two parameters.

1. List of Accessory:

ACCESSORIES	BRAND	MANUFACTURER	MODEL	SPECIFICATION
LCD Panel	BOE	BOE	BF066XMM-TL4-F900	6.55inch, AMOLED;
Back cover	BIEL	BIEL	Panda-X	158 mm*73 mm*0.6 mm
Bezel	BIEL	BIEL	6103HG02-T6	160 mm_76 mm_8.5 mm
Photo Camera 1	AAC	AAC	P50AD01	50MP,AF
Photo Camera 2	AAC	AAC	W13FD02	13MP Ultra Wide, FF
Video Camera 1	AAC	AAC	T50AD01	50MP Tele, AF
Video Camera 2	AAC	AAC	MA8SD01	108MP+OIS, AF
CPU	Qualcomm	Qualcomm	SM-7435-1-PSP1026-TR-00-0-AB	Platform Baseband Chip_PSP_mmW_8 core_SMT
eMMC1 (=ROM1)	Samsung	Samsung	KM8L9001JM-B624T07	uMCP_254-ball FBGA_128GB_LPDD R4X_64Gb_SMT
eMMC2 (=ROM2)	Samsung	Samsung	KM8F9001JM-B813T07	uMCP_254-ball FBGA_256GB_LPDD R4X_64Gb_SMT
eMMC3 (=ROM3)	Samsung	Samsung	KM8F9001MM-B830T07	uMCP_254-ball FBGA_256GB_LPDD R4X_96Gb_SMT
Battery	HMD	Gaoyuan	HBA4633AA	RatedCapacity:4500mAh/17.51Wh

2. The differences between the first and second supply as follows and the specifications and RF parameters are the same.

Key Component list						
No.	Component	Description	First supply		Second supply	
			Supplier	Spec	Supplier	Spec
1	USB/ Analog audio headsets	Analog Audio Switch	Dioo	DIO4480WL25 Analog switch & MUX_WLCSP25_2.7-5.5V_3-Channel_1000MHz _SMT	Will	WAS4780C-25/TR Analog switch & MUX_CSP-25L_2.7-5.5V_2-Channel_950MHz_ SMT
2	Wireless charge	Load Switch	SGM	SGM2575ADYG/TR Load Switch_34 mΩ_11 W_WLCSP_SGM2575ADY G/TR_SGM	Dioo	DIO7290WL4 Load Switch_85 mΩ_11 W_WLCSP-4
3	Sensor	Barometer	Bosch	BMP580 Baroceptor _LGA-10_±0.05 hPa_48 bit_ SMT	Go er mic ro	SPL07-003 Baroceptor_10pin LGA_0.5Pa/°C_24 bit_SMT
4	Sensor	eCOMPASS	VTC	AF6837 Magnetic field sensor_WLCSP_10 LSB/μT_16 bit_I2C_SMT	Memsic	MMC5603NJL Ecompass_MMC56 03NJL_M EMSIC_MCOs
5	RF IC	LNA	Will	WS7916DF-6/TR RF_LNA_6-pin DFN_1150 MHz to 1615_SMT	Awinic	AW5005EDNR RF_LNA_AW5005 EDNR_Awi nic
6	Receiver	SP2T	Will	WS78022D-6/TR DFN-6_0.1GHz - 3.8GHz_SPDT_GPIO_SMT	Champ hill	QX8612GD 0.7 to 2.7GHz_SPDT_2 W_GPIO
7	USB connector	USB type-C connector	LETCON	15-16815-105-M1 USB TYPE C Connector_0.9 mm_16 pin_Female Head (elastic end)_Horizontal_None-waterproof_4.27 mm_Gold_SMT_480M	HRD	UC141-0B100DR0 USB TYPE C Connector_0.9 mm_16 pin_Female Head (elastic end)_Horizontal_No ne- waterproof_4.3 mm_Gold_SMT_48 0M

1.2 MODIFICATION OF EUT

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

1.3 APPLICABLE STANDARDS

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

- FCC Part 15 Subpart C §15.225
- ANSI C63.10-2020
- RSS-210 Issue 10
- RSS-Gen Issue 5

2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST

2.1 DESCRIPTIONS OF TEST MODE

Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

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

Note:

1. The EUT was programmed to be in continuously transmitting mode.
2. The ancillary equipment, NFC card, is used to make the EUT (NFC) continuously transmit at 13.56MHz and is placed around 3 cm gap to the EUT.
3. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, work in modes and data rates. Selected for the final test as listed below.

Frequency	Work in Modes	Type	Data Rate (Kbps)
13.56 MHz	☐ Card Emulation ☑ Reader/Writer ☐ Peer-to-Peer	☐ A ☐ B ☑ F ☐ V	☐ 106 ☑ 212 ☐ 424 ☐ 848

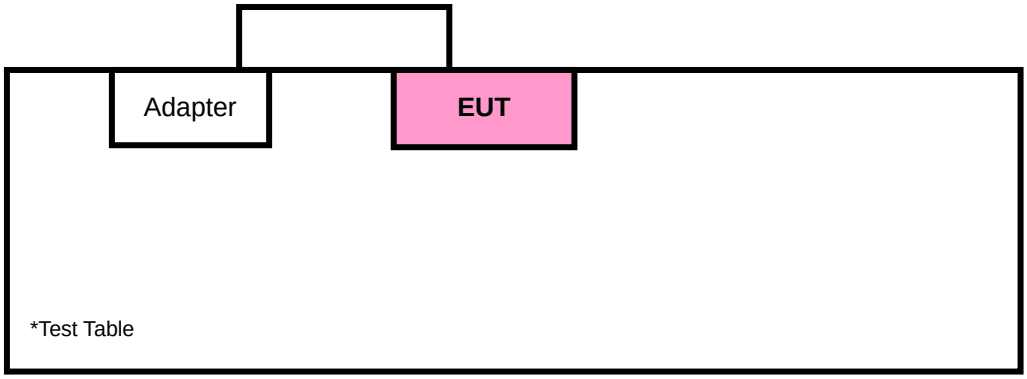
Remark:

The mark"☑" means is chosen for testing;

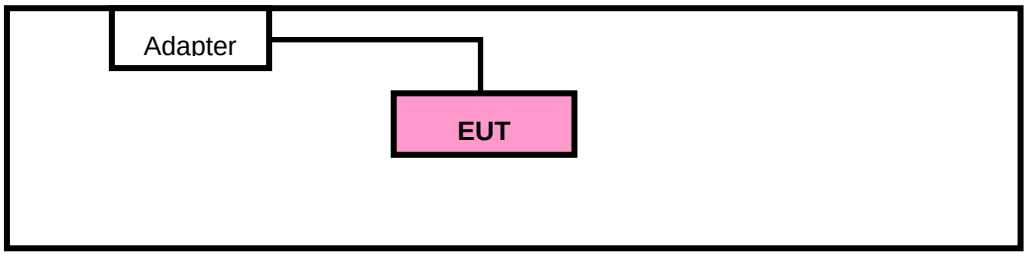
The mark"☐" means is not chosen for testing.

2.2 TEST CONFIGURATIONS

<AC Conducted Emissions>



< For Fundamental Emissions and Mask and Radiated Emissions Measurement >



2.3 SUPPORT EQUIPMENT

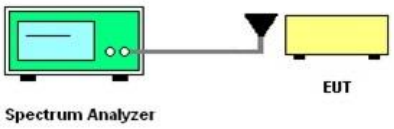
NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	N/A	N/A	N/A	N/A	N/A

2.4 TEST SETUP

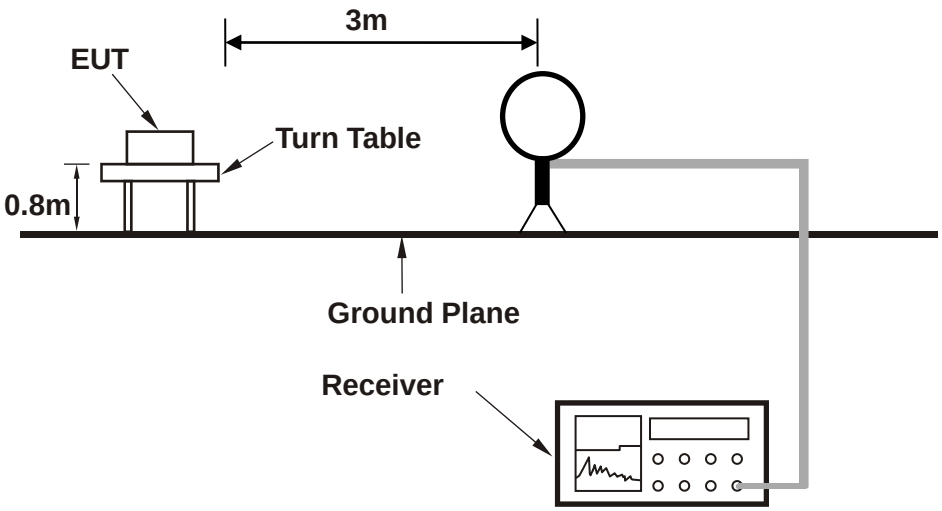
The EUT is continuously communicating during the tests.

EUT was set in the Hidden menu mode to enable NFC communications.

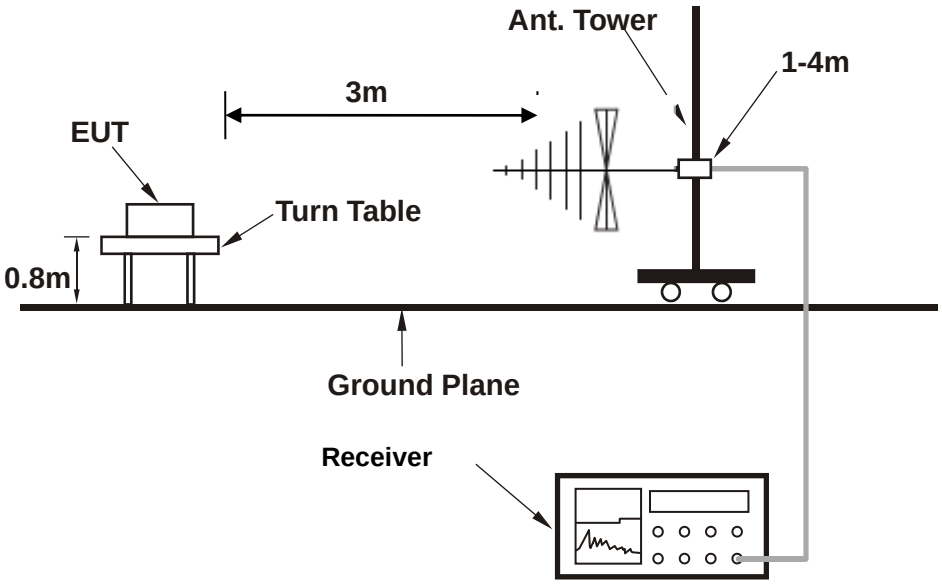
Setup diagram for Conducted Test



Setup diagram for Radiation(9KHz~30MHz) Test



Setup diagram for Radiation(Below 1G) Test



2.5 MEASUREMENT RESULTS EXPLANATION EXAMPLE

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example:

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 5 dB and 10dB attenuator.

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 5 + 10 = 15 (dB)

3 TEST RESULT

3.1 20DB AND 99% BANDWIDTH MEASUREMENT

3.1.1 LIMIT OF 20DB AND 99% BANDWIDTH

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

3.1.2 TEST PROCEDURES

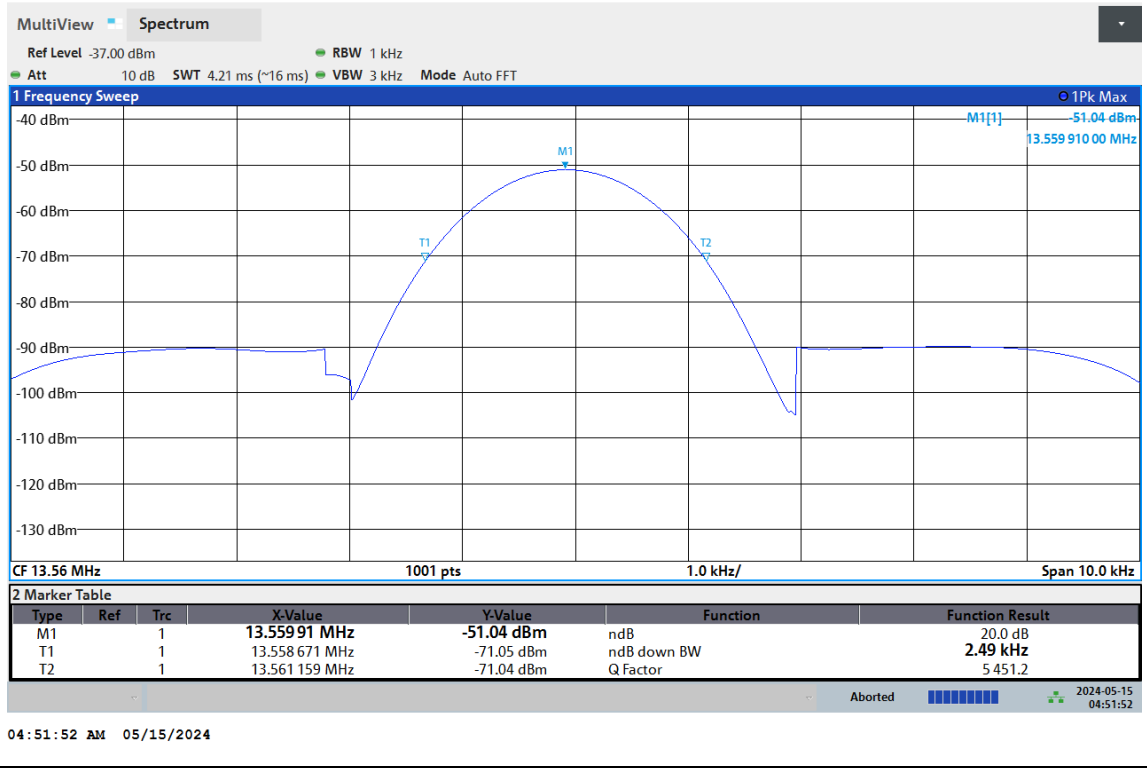
1. The spectrum analyzer connected via a receive antenna placed near the EUT in peak Max hold mode.
2. The resolution bandwidth of 1 kHz and the video bandwidth of 3 kHz were used. (Since the signal being measured is CW or CW-like, it is impractical to adjust RBW according to C63.10 because the bandwidth measured will always follow RBW and the result will be approximately twice as large as RBW.)
3. Measured the spectrum width with power higher than 20dB below carrier.
4. Measured the 99% OBW.

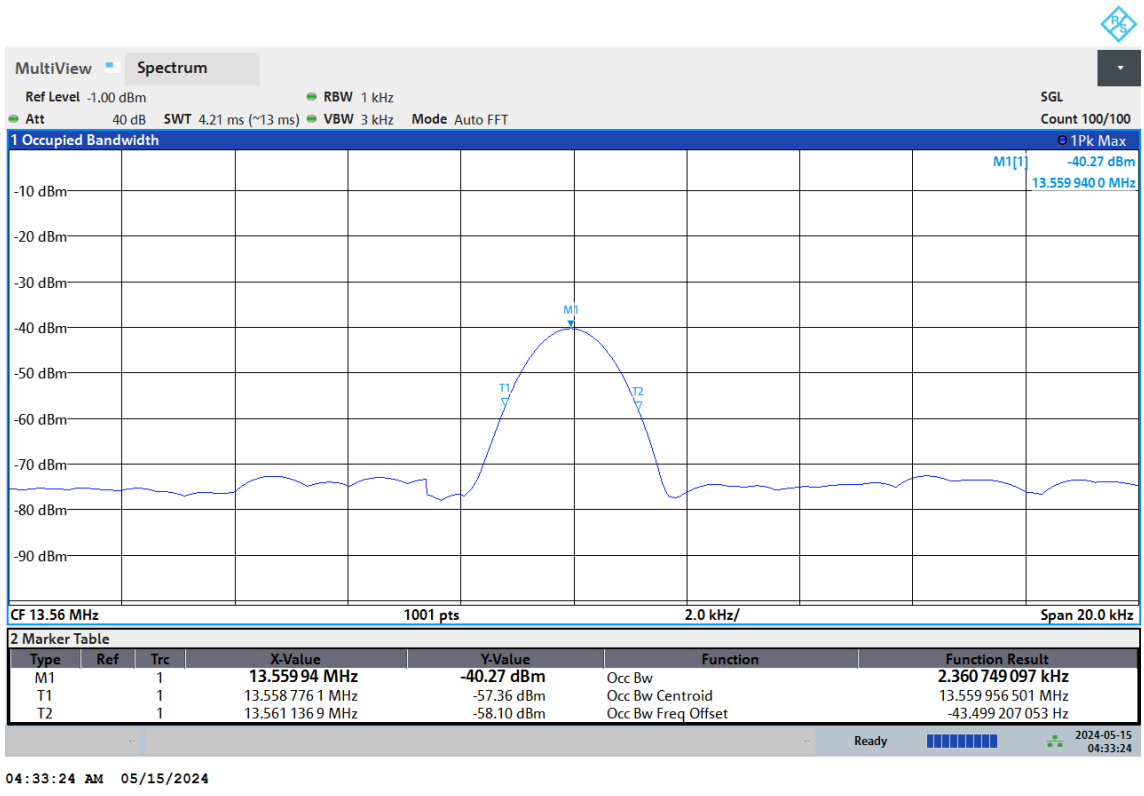
3.1.3 TEST RESULT OF 20DB AND 99% BANDWIDTH

Test Mode :	NFC	Temperature :	23℃
Test Engineer :	Hanwen Xu	Relative Humidity :	50%

Mode	Frequency	20dB Bandwidth [kHz]	99% OBW[kHz]	Verdict
NFC Type F_212 Kbps	13.56MHz	2.49	2.361	PASS

20dB Bandwidth & 99% Bandwidth Plot

Graphs	
NFC Type F_ 212 Kbps	

Graphs	
NFC Type F_ 212 Kbps	

3.2 FREQUENCY STABILITY MEASUREMENT

3.2.1 LIMIT OF FREQUENCY STABILITY

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.

3.2.2 TEST PROCEDURES

1. The spectrum analyzer connected via a receive antenna placed near the EUT.
2. EUT have 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 fc is declaring of channel frequency. Then the frequency error formula is (fc-f)/fc × 10^6 ppm and the limit is less than ±100ppm.
6. Extreme temperature rule is -20°C~50°C.

3.2.3 TEST RESULT OF FREQUENCY STABILITY

The NFC Type F_212 Kbps is the worst case, Only report worst mode data

NFC Type F_212 Kbps

Voltage (Vdc)	Temperature (℃)	Measurement Frequency (MHz)	Frequency Tolerance(ppm)	Limit(ppm)	Result
3.31	20	13.55993	-0.73	±100	Pass
4.47		13.56026	20.62		Pass
3.89	-20	13.56018	10.31		Pass
	-10	13.56038	22.65		Pass
	0	13.55966	-17.78		Pass
	10	13.55953	-13.49		Pass
	20	13.56012	0.87		Pass
	30	13.559445	-7.75		Pass
	40	13.55921	-16.43		Pass
	50	13.5611	7.22		Pass

3.3 FIELD STRENGTH OF FUNDAMENTAL EMISSIONS AND MASK MEASUREMENT

3.3.1 LIMIT OF FIELD STRENGTH OF FUNDAMENTAL EMISSIONS AND MASK

Rules and specifications	FCC CFR 47 Part 15 section 15.225 IC RSS-210 B.6			
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

3.3.2 TEST PROCEDURES

1. Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the loop receiving antenna mounted antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the receiving antenna was 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 9kHz.

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

3.3.3 TEST RESULTS OF FIELD STRENGTH OF FUNDAMENTAL EMISSIONS AND MASK (1.705 MHZ ~ 30 MHZ)

Test Mode :	NFC (13.56 MHz)	Temperature :	23℃
Test Engineer :	Hanwen Xu	Relative Humidity :	50%
Frequency Range	13.11MHz~14.01MHz	Polarization :	Horizontal

Rg	Frequency [MHz]	PK+ Level [dBµV/m]	PK+: QPK Limit [dBµV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
3	13.560	37.54	124.00	86.46	20.26	V	298.2	1.00

Test Mode :	NFC (13.56 MHz)	Temperature :	23℃
Test Engineer :	Hanwen Xu	Relative Humidity :	50%
Frequency Range	13.11MHz~14.01MHz	Polarization :	Vertical

Rg	Frequency [MHz]	PK+ Level [dBµV/m]	PK+: QPK Limit [dBµV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
3	13.560	36.91	124.00	87.09	20.26	H	328.1	1.00

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 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, 110-490 kHz. Radiated emission limits in these two bands are based on measurements employing an average detector.

3.4.3 TEST PROCEDURES

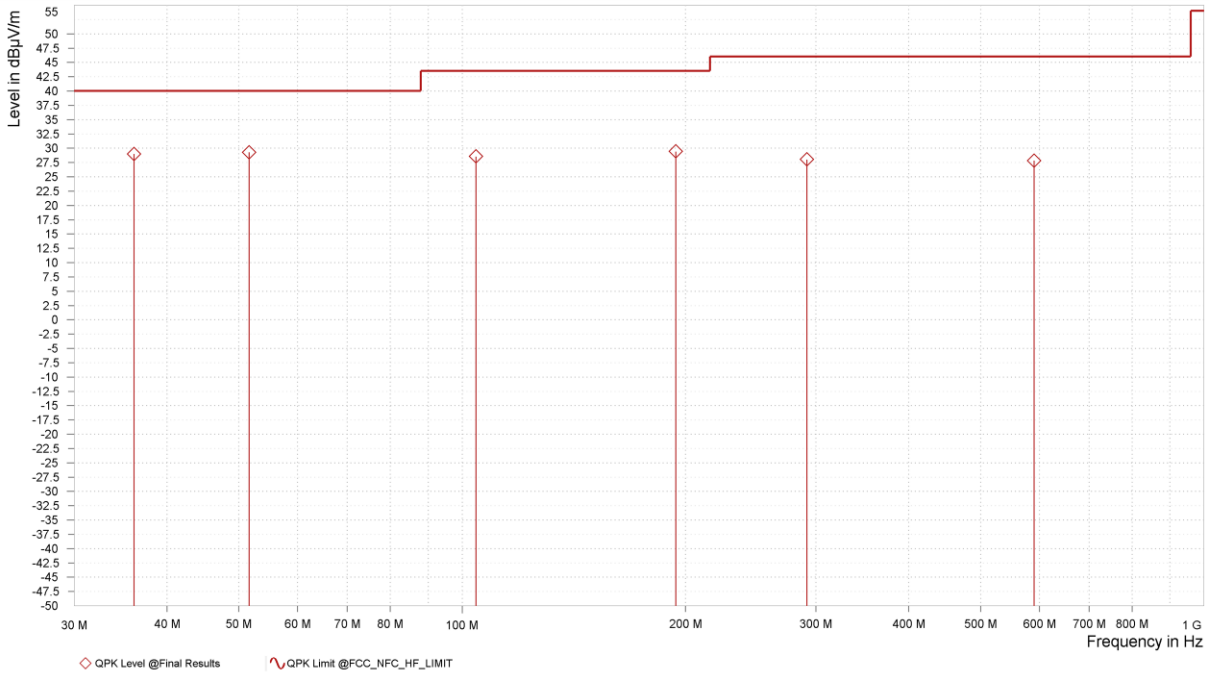
1. Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was 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 was scan (from 1 M to 4 M) and then the

turntable was 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 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver.

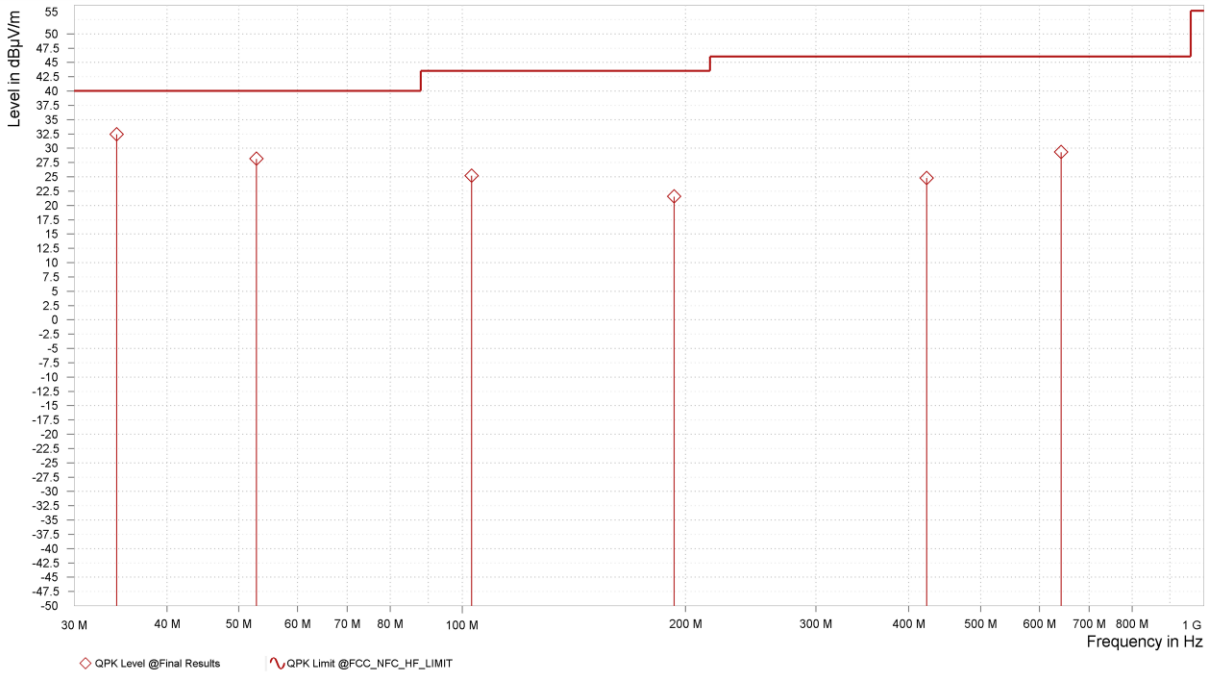
3.4.4 TEST RESULTS OF RADIATED EMISSIONS (9 KHZ ~ 30 MHZ)

Test Mode :	NFC (13.56 MHz)	Temperature :	23℃
Test Engineer :	Hanwen Xu	Relative Humidity :	50%
Frequency Range	9 KHz ~ 30 MHz	Polarization :	Horizontal



Rg	Frequency [MHz]	QPK Level [dBµV/m]	QPK Limit [dBµV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	36.129	28.98	40.00	11.02	-6.00	H	224.3	2.00	120.000
1	51.605	29.28	40.00	10.72	-3.65	H	359	1.00	120.000
1	104.425	28.53	43.50	14.97	-5.77	H	355	2.00	120.000
1	194.150	29.42	43.50	14.08	-5.52	H	135.6	1.00	120.000
1	291.459	28.03	46.00	17.97	-1.29	H	276.6	1.00	120.000
1	590.484	27.81	46.00	18.19	2.93	H	0.9	2.00	120.000

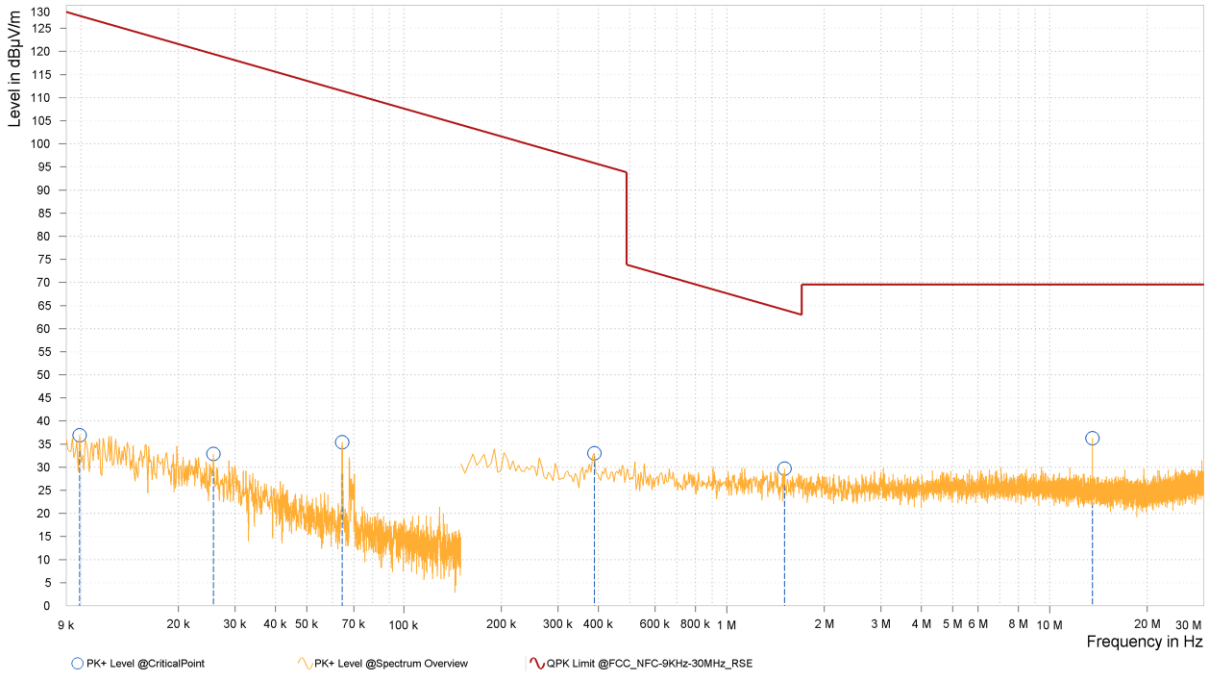
Test Mode :	NFC (13.56 MHz)	Temperature :	23℃
Test Engineer :	Hanwen Xu	Relative Humidity :	50%
Frequency Range	9 KHz ~ 30 MHz	Polarization :	Vertical



Rg	Frequency [MHz]	QPK Level [dBµV/m]	QPK Limit [dBµV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	34.233	32.42	40.00	7.58	-8.35	V	359.1	1.00	120.000
1	52.795	28.14	40.00	11.86	-5.12	V	5	1.00	120.000
1	103.015	25.19	43.50	18.31	-5.92	V	75	2.00	120.000
1	193.180	21.55	43.50	21.95	-5.75	V	75	2.00	120.000
1	422.718	24.77	46.00	21.23	2.79	V	135.5	1.00	120.000
1	641.850	29.29	46.00	16.71	2.83	V	274.2	1.00	120.000

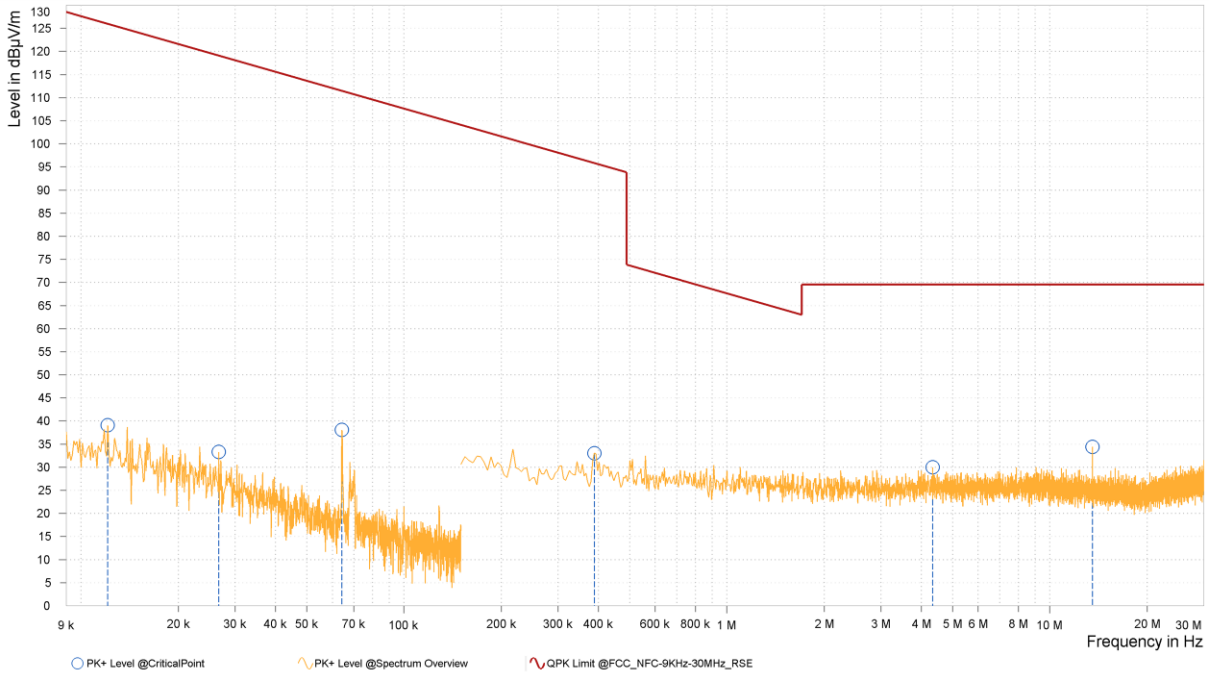
3.4.5 TEST RESULT OF RADIATED SPURIOUS EMISSION (30MHZ ~ 1GHZ)

Test Mode :	NFC (13.56MHz)	Temperature :	23℃
Test Engineer :	Hanwen Xu	Relative Humidity :	50%
Frequency Range	30MHz~1GHz	Polarization :	Horizontal



Rg	Frequency [MHz]	PK+ Level [dBµV/m]	PK+: QPK Limit [dBµV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	0.010	36.93	127.69	90.76	20.04	H	1	1.00
1	0.026	32.84	119.41	86.56	20.42	H	4.9	1.00
1	0.064	35.42	111.44	76.02	20.55	H	4.9	1.00
2	0.389	33.04	95.82	62.78	20.36	H	1	1.00
2	1.509	29.70	64.03	34.33	20.45	H	359	1.00
2	13.560	36.29	69.54	33.25	20.26	H	359	1.00

Test Mode :	NFC (13.56MHz)	Temperature :	23℃
Test Engineer :	Hanwen Xu	Relative Humidity :	50%
Frequency Range	30MHz~1GHz	Polarization :	Vertical



Rg	Frequency [MHz]	PK+ Level [dBµV/m]	PK+: QPK Limit [dBµV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	0.012	39.08	125.95	86.87	20.14	V	1	1.00
1	0.027	33.30	119.07	85.77	20.43	V	5.6	1.00
1	0.064	38.05	111.45	73.40	20.55	V	359.1	1.00
2	0.389	33.04	95.82	62.77	20.36	V	359.1	1.00
2	4.340	29.97	69.54	39.58	20.38	V	1	1.00
2	13.560	34.40	69.54	35.14	20.26	V	1	1.00

3.5 AC CONDUCTED EMISSION MEASUREMENT

3.5.1 LIMIT OF AC CONDUCTED EMISSION

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of Emission (MHz)	Conducted Limit (dBμV)	
	Quasi-Peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

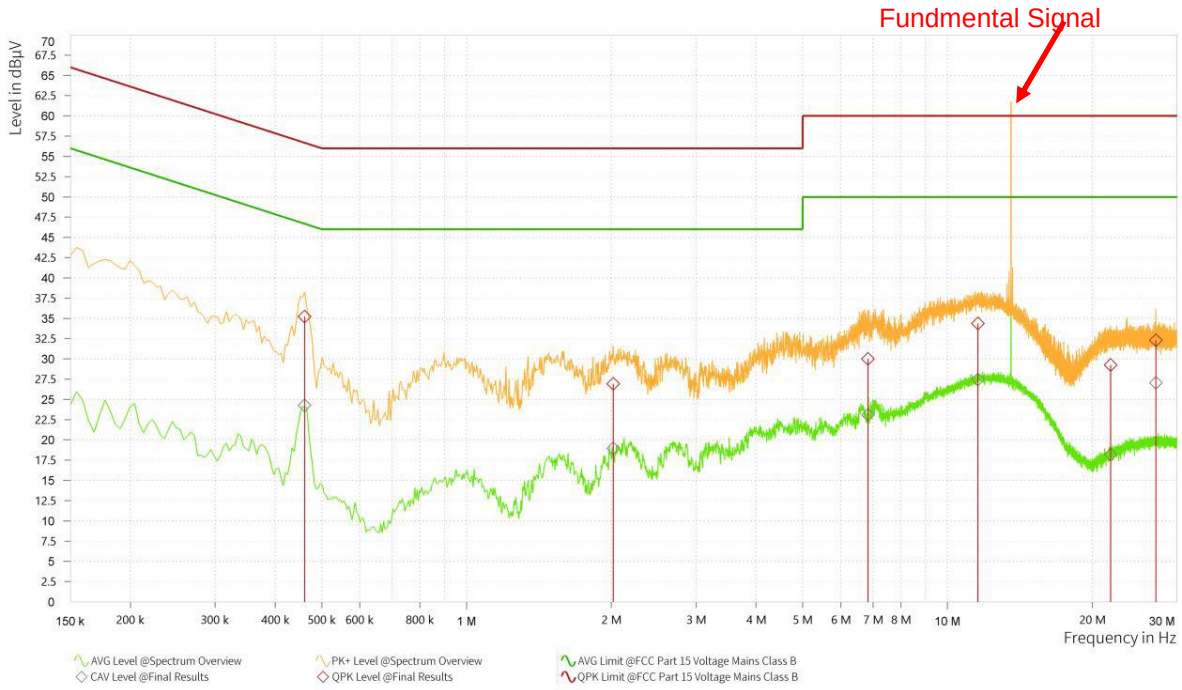
*Decreases with the logarithm of the frequency.

3.5.2 TEST PROCEDURES

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

3.5.3 TEST RESULT OF AC CONDUCTED EMISSION

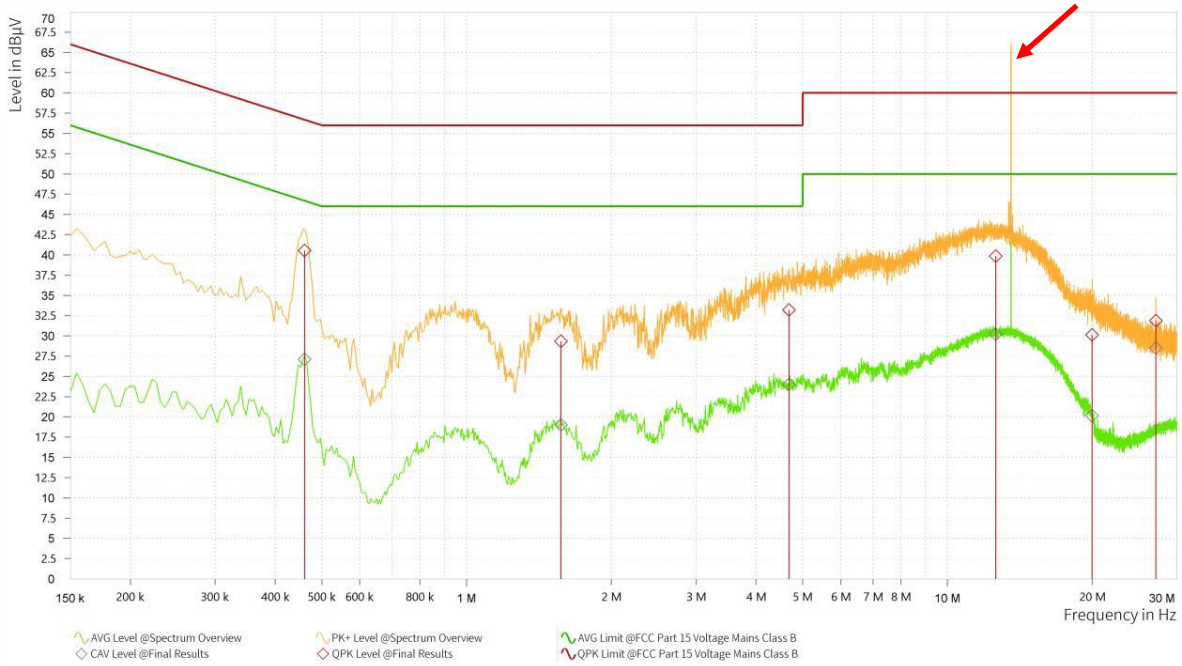
Test Mode :	NFC	Temperature :	26℃
Test Engineer :	Hanwen Xu	Relative Humidity :	51%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	NFC		



Rg	Frequency [MHz]	QPK Level [dBµV]	QPK Limit [dBµV]	QPK Margin [dB]	CAV Level [dBµV]	CAV: AVG Limit [dBµV]	CAV Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]
1	0.461	35.22	56.68	21.46	24.27	46.68	22.41	11.75	L1	9.000
1	2.018	26.94	56.00	29.06	18.94	46.00	27.06	11.76	L1	9.000
1	6.837	29.99	60.00	30.01	23.09	50.00	26.91	11.80	L1	9.000
1	11.567	34.39	60.00	25.61	27.47	50.00	22.53	11.83	L1	9.000
1	21.858	29.26	60.00	30.74	18.17	50.00	31.83	11.88	L1	9.000
1	27.119	32.28	60.00	27.72	27.04	50.00	22.96	11.90	L1	9.000

Test Mode :	NFC	Temperature :	26℃
Test Engineer :	Hanwen Xu	Relative Humidity :	51%
Test Voltage :	AC 120V/60Hz	Phase :	Neutral
Function Type :	NFC		

Fundmental Signal



Rg	Frequency [MHz]	QPK Level [dBµV]	QPK Limit [dBµV]	QPK Margin [dB]	CAV Level [dBµV]	CAV: AVG Limit [dBµV]	CAV Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]
1	0.461	40.54	56.68	16.14	27.09	46.68	19.59	12.79	N	9.000
1	1.572	29.33	56.00	26.67	19.01	46.00	26.99	12.74	N	9.000
1	4.682	33.21	56.00	22.79	24.01	46.00	21.99	12.76	N	9.000
1	12.597	39.84	60.00	20.16	30.22	50.00	19.78	12.81	N	9.000
1	19.991	30.12	60.00	29.88	20.14	50.00	29.86	12.85	N	9.000
1	27.119	31.88	60.00	28.12	28.49	50.00	21.51	12.88	N	9.000

3.6 ANTENNA REQUIREMENTS

3.6.1 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.

3.6.2 ANTENNA CONNECTED CONSTRUCTION

A Loop Antenna design is used.

3.6.3 ANTENNA GAIN

The antenna peak gain of EUT is less than 6 dBi.

4 LIST OF MEASURING EQUIPMENT

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
WIDEBANDRADIO COMMUNICATION TESTER	Rohde&Schwarz	CMW500	169399	Jun.27,22	Jun.26,24
3m Semi-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-02Chamber	Nov.24,22	Nov.23,25
Bilog Antenna	SCHWARZBECK	VULB 9163	1264	Feb.27,24	Feb.26,26
Loop Antenna	R&S	HFH2-Z2/Z2E	100976	Feb.24,24	Feb.23,26
Antenna Power Supply	RS	N/A	N/A	N/A	N/A
EMI Test Receiver	R&S	ESW44	101973	Feb.24,24	Feb.23,26
Measurement Software	R&S	ELEKTRA	N/A	N/A	N/A
Pre-Amplifier	R&S	SCU08F1	101028	Sep.16,22	Sep.15,24
CABLE	R&S	W13.01	N/A	Apr.28,23	Apr.27,24
CABLE	R&S	W13.01	N/A	Apr.27,24	Apr.26,25
CABLE	R&S	W13.02	N/A	Apr.28,23	Apr.27,24
CABLE	R&S	W13.02	N/A	Apr.27,24	Apr.26,25
CABLE	R&S	W12.14	N/A	Apr.28,23	Apr.27,24
CABLE	R&S	W12.14	N/A	Apr.27,24	Apr.26,25

NOTE: 1. The calibration interval of the above test instruments is 12/ 24/ 36 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

2. The test was performed in 3m Chamber.

3. The FCC Site Registration No. is 434559; The Designation No. is CN1325.

5 UNCERTAINTY OF EVALUATION

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	UNCERTAINTY
AC Power Conducted emissions	±2.70dB
Radiated emissions (9KHz~30MHz)	±2.68dB
Radiated emissions (30MHz~1GHz)	±4.98dB
Occupied Channel Bandwidth	±43.58KHz
Frequency Stability	±76.97Hz

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

----------End of the report----------