

TEST REPORT

Report No.: SHATBL2406001W03

Applicant : Bolyga (Chongqing) New Energy Technology Co., Ltd

Product Name : Electric Bike

Brand Name : N/A

Model Name : Awaken-001

FCC ID : 2BH5Q-AWAKEN

Test Standard : 47 CFR 15.225

Date of Test : 2024.7.3~2024.7.15

Report Prepared by : Peter Ling
(Peter Ling)

Report Approved by : Chris Xu
(Chris Xu)

Authorized Signatory : Terry Yang
(Terry Yang)



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REVISION HISTORY

Rev.	Issue Date	Revisions	Revised by
00	2024.7.16	Initial Release	Chris Xu

DECLARATION OF REPORT

1. The device has been tested by ATBL, and the test results show that the equipment under test (EUT) is in compliance with the requirements of 47 CFR 15.225. And it is applicable only to the tested sample identified in the report.
2. This report shall not be reproduced except in full, without the written approval of ATBL, this document only be altered or revised by ATBL, personal only, and shall be noted in the revision of the document.
3. The general information of EUT in this report is provided by the customer or manufacture, ATBL is only responsible for the test data but not for the information provided by the customer or manufacture.
4. The results in this report is only apply to the sample as tested under conditions. The customer or manufacturer is responsible for ensuring that the additional production units of this model have the same electrical and mechanical components.
5. In this report, '□' indicates that EUT does not support content after '□', and '☑' indicates that it supports content after '☑'.
6. Both the conducted and radiated tests are conducted using modules with a supply voltage of 24 V.

SUMMARY OF TEST RESULT

Report Section	Standard Section	Test Item	Judgment	Remark
3.1	47 CFR 15.215(c)	20dB Bandwidth	PASS	--
	--	99% Bandwidth	Report only	--
3.2	47 CFR 15.225(e)	Frequency Stability	PASS	--
3.3	47 CFR 15.225(a)(b)(c)	Field Strength of Fundamental Emissions	PASS	--
3.4	47 CFR 15.225(d)&15.209	Radiated Spurious Emissions	PASS	--
3.5	47 CFR 15.207(a)	AC Power-Line Conducted Emission	PASS	--
3.6	47 CFR 15.203	Antenna Requirements	PASS	--

1. GENERAL DESCRIPTION

1.1. Applicant

Name : Bolyga(Chongqing) New Energy Technology Co. , Ltd
Address : No. 1, No. 3 Kangmao Road, Liangjiang new district, Chongqing, 7-11

1.2. Manufacturer

Name : Bolyga(Chongqing) New Energy Technology Co. , Ltd
Address : No. 1, No. 3 Kangmao Road, Liangjiang new district, Chongqing, 7-11

1.3. Factory

Name : Changzhou Merry E BIKE Co.,ltd
Address : No.6, hedian Rd. Tianning District, CHANGZHOU JIANGSU 213017, CHINA

1.4. General Information of EUT

General Information	
Equipment Name	Electric Bike
Brand Name	N/A
Model Name	Awaken-001
Series Model	N/A
Model Difference	N/A
SN or IMEI Code	240400531020001
Adapter	Model: DPLC165v55-M Input: AC 110-240 V,50/60 Hz Output: DC 54.6V,3.0A
Battery	Model: WDDBLJ-LXZ Rated Voltage: 48V Charge Limit Voltage: 54.6V Capacity: 25Ah
Hardware Version	BLJ-004
Software Version	LDCBB807C4825L1111212.
Connecting I/O Port(s)	Refer to the remark below.

Remark:

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

1.5. Equipment Specification

Equipment Specification	
Frequency Range	13.56MHz
Number of Channels	1
Type of Modulation	ASK
Antenna Type	PCB coil antenna
Antenna Gain	3dBi

1.6. Modification of EUT

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

1.7. Laboratory Information

Company Name	:	Shanghai ATBL Technology Co., Ltd.
Address	:	Building 8, No.160 Basheng Road, Waigaoqiao Free Trade Zone, Pudong New Area, Shanghai
Telephone	:	+86(0)21-51298625

1.8. Applicable Standards

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

47 CFR Part 15 Subpart C §15.225

ANSI C63.10-2013

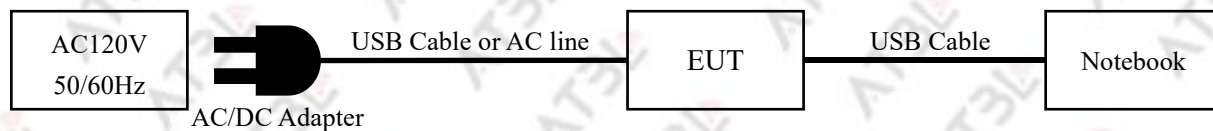
Remark:

All test items were verified and recorded according to the standards and without any deviation during the test.

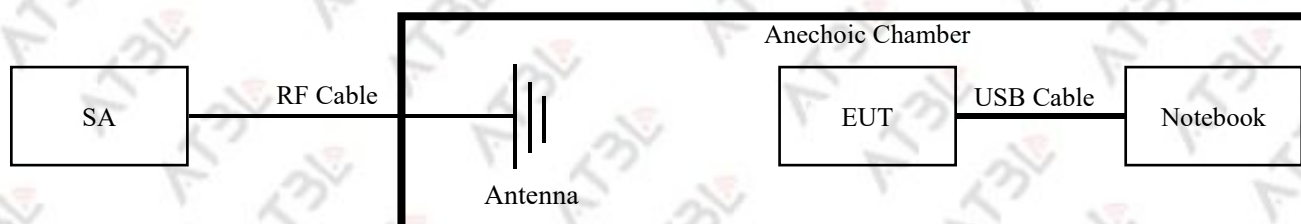
2. TEST CONFIGURATION OF EUT

2.1. Block Diagram of Test System

2.1.1. For AC Power-Line Conducted Emission



2.1.2. For Radiated Spurious Emission



2.1.3. For Conducted Test



2.2. Description of Support Units

NO.	Unit	Brand	Model	SN	Description
1	Notebook	Lenovo	DESKTOP-USDEO09	YX03NVW6	N/A
2	USB Cable	UGREEN	100cm	N/A	N/A

2.3. Test Software and Power Level

During the test, the channel and power control software provided by the customer is used to control the operation channel and output power level.

2.4. EUT Operating Conditions

For AC power-line conducted emission, the EUT was connected under the large package sizes transmission.

For radiated spurious emission and conducted test, the engineering test program was provided and make the EUT to continuous transmit/receive.

2.5. Equipment List

2.5.1. For AC Power-Line Conducted Emission

Equipment Name	Manufacturer	Model	Serial No.	Equipment No.	Calibration Date	Calibration Due Date
Test Receiver	R&S	ESPI	101679	SHATBL-E012	2024.03.28	2025.03.27
LISN	R&S	ENV216	100300	SHATBL-E013	2024.03.28	2025.03.27
LISN	R&S	ENV216	100333	SHATBL-E041	2024.03.28	2025.03.27
Thermometer	DeLi	N/A	N/A	SHATBL-E016	2023.09.26	2024.09.25
Test Software	FALA	EZ-EMC	N/A	SHATBL-E046	N/A	N/A

2.5.2. For Radiated Spurious Emission

Equipment Name	Manufacturer	Model	Serial No.	Equipment No.	Calibration Date	Calibration Due Date
Signal analyzer	Agilent	N9020A	MY50200811	SHATBL-E017	2024.03.28	2025.03.27
Amplifier	JPT	JPA0118-55-303 A	191000180005 5000	SHATBL-E006	2024.03.28	2025.03.27
Amplifier	JPT	JPA-10M1G32	210101000350 01	SHATBL-E005	2024.03.28	2025.03.27
Antenna/Turn table Controller	Brilliant	N/A	N/A	SHATBL-E007	N/A	N/A
Loop Antenna	Daze	ZN30900C	20077	SHATBL-E042	2024.05.13	2025.05.12
Bilog Antenna	SCHWARZBEC K	VULB 9168	01174	SHATBL-E008	2024.05.17	2025.05.16
Broad-band Horn Antenna	SCHWARZBEC K	BBHA 9120D	02334	SHATBL-E009	2024.05.17	2025.05.16
Thermometer	DeLi	N/A	N/A	SHATBL-E015	2023.09.26	2024.09.25
Test Software	FALA	EMC-RI	N/A	SHATBL-E046	N/A	N/A

2.5.3. For Conducted Test

Equipment Name	Manufacturer	Model	Serial No.	Equipment No.	Calibration Date	Calibration Due Date
Environmental Test Chamber	KSON	THS-B6C-150	9159K	SHATBL-W019	2024.03.28	2025.03.27
Vector signal generator	Agilent	N5182A	MY50143555	SHATBL-W037	2024.07.09	2025.07.08
Analog signal generator	Keysight	N5173B	MY60403026	SHATBL-W038	2024.07.09	2025.07.08
Wideband radio communication tester	R&S	CMW500	101331	SHATBL-W007	2024.07.09	2025.07.08
Spectrum analyzer	R&S	FSV40-N	101761	SHATBL-W036	2024.07.09	2025.07.08
Switch Box	N/A	RFSW3003328	RFSW201019	SHATBL-W029	N/A	N/A
Thermometer	DeLi	N/A	N/A	SHATBL-W012	2024.07.09	2025.07.08
Test Software	FALA	LZ-RF	N/A	SHATBL-W020	N/A	N/A

2.6. Measurement Uncertainty

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item		Uncertainty
1	Conducted Output Power		1.266dB
2	Power spectral density		1.282dB
3	Conducted Frequency Stability		10.14Hz
4	Conducted spurious emissions		1.73dB
5	RF Cable Loss		1.22dB
6	Radiated Spurious Emission 9KHz-30MHz		2.35dB
7	Radiated Spurious Emission 30MHz-1GHz		3.60dB
8	Radiated Spurious Emission 1GHz-18GHz		5.40dB
9	Radiated Spurious Emission 18GHz - 40GHz		8.20dB
10	Occupied bandwidth		23.20Hz
11	Conducted Emissions	9kHz ~ 150kHz	3.4dB
		150kHz ~ 30MHz	3.73dB

3. TEST RESULT

3.1. 20dB Bandwidth and 99% Bandwidth

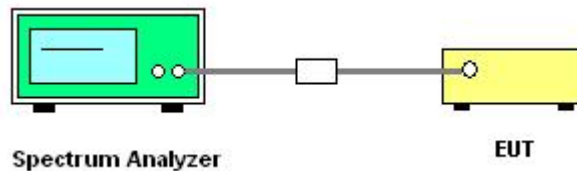
3.1.1. Limit

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 Procedure

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 20dB below carrier.
4. Measured the 99% OBW.

3.1.3. Test Setup



3.1.4. Test Result of 20dB Bandwidth and 99% Bandwidth

Please refer to the Appendix A.

3.2. Frequency Stability

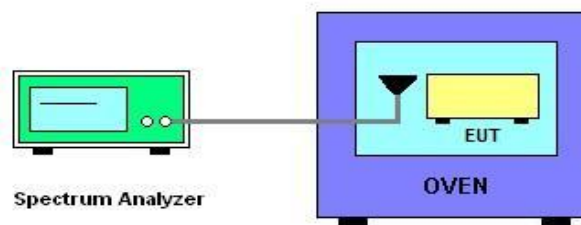
3.2.1. Limit

The frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$ (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 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.

3.2.3. Test Setup



3.2.4. Test Result of Frequency Stability

Please refer to the Appendix A.

3.3. Field Strength of Fundamental Emissions

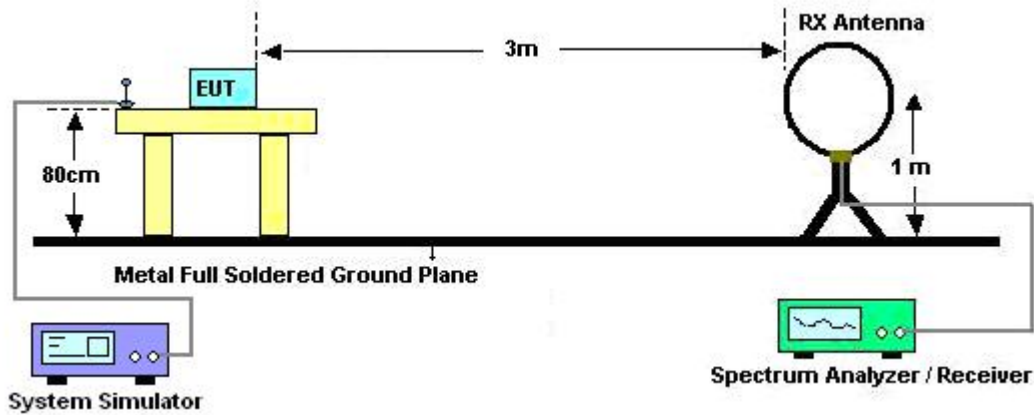
3.3.1. Limit

Rules and specifications	Rules and specifications			
Description	Compliance with the spectrum mask is tested with RBW set to 9kHz.			
Freq. of Emission	Field Strength	Field Strength	Field Strength	Field Strength
(MHz)	($\mu\text{V/m}$) at 30m	($\mu\text{V/m}$) at 30m	($\mu\text{V/m}$) at 30m	($\mu\text{V/m}$) at 30m
1.705~13.110	1.705~13.110	1.705~13.110	1.705~13.110	1.705~13.110
30	30	30	30	30
29.5	29.5	29.5	29.5	29.5
48.58	48.58	48.58	48.58	48.58
69.5	69.5	69.5	69.5	69.5
13.110~13.410	13.110~13.410	13.110~13.410	13.110~13.410	13.110~13.410
106	106	106	106	106

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 ($\text{dB}\mu\text{V/m}$) = $20 \log$ Emission level ($\mu\text{V/m}$).

3.3.3. Test Setup



3.3.4. Test Result of Field Strength of Fundamental Emissions

Please refer to the Appendix B.

3.4. Radiated Spurious Emissions

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.

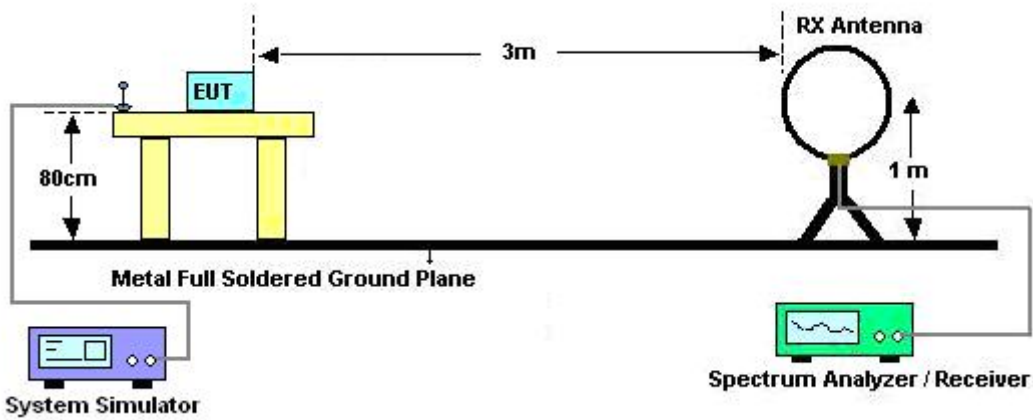
Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

3.4.2. Test Procedure

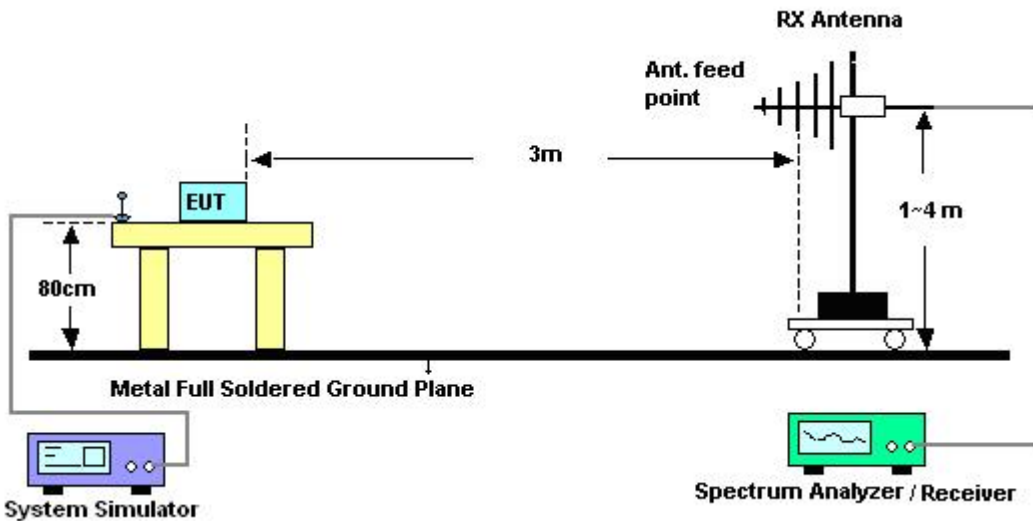
1. Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting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

3.4.3. Test Setup

3.4.3.1. For radiated emissions below 30MHz



3.4.3.2. For radiated emissions above 30MHz



3.4.4. Test Result of Radiated Spurious Emission

3.4.4.1. For 9 kHz ~ 30 MHz

Please refer to the Appendix B.

3.4.4.2. For above 30 MHz

Please refer to the Appendix B.

3.5. AC Power-Line Conducted Emission

3.5.1. Limit

For an intentional radiator 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:

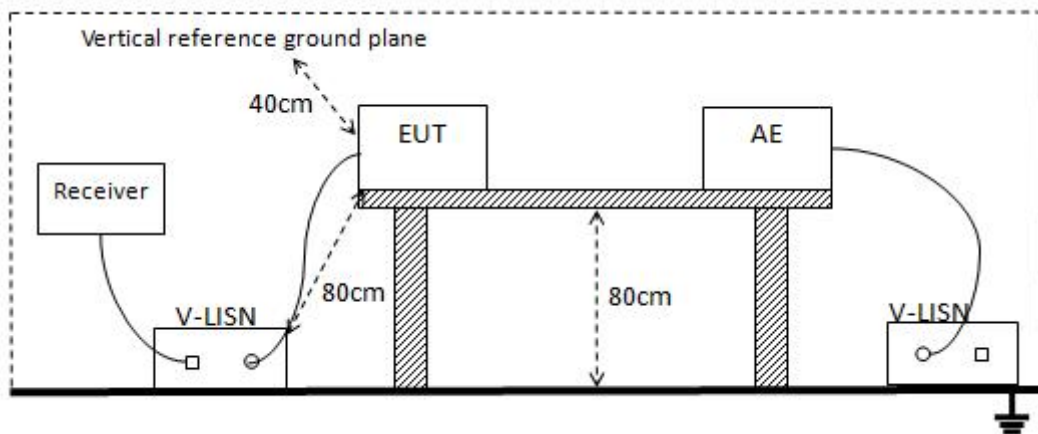
Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

3.5.2. Test Procedure

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room 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 = 9 kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

3.5.3. Test Setup



3.5.4. Test Result of AC Power-Line Conducted Emission

Please refer to the Appendix C.

3.6. Antenna Requirement

3.6.1. Standard Requirement

According to 47 CFR 15.203, 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.

3.6.2. EUT Antenna

The antenna used for the EUT is PCB coil antenna, which meets the antenna requirements.

4. Test Setup Photographs

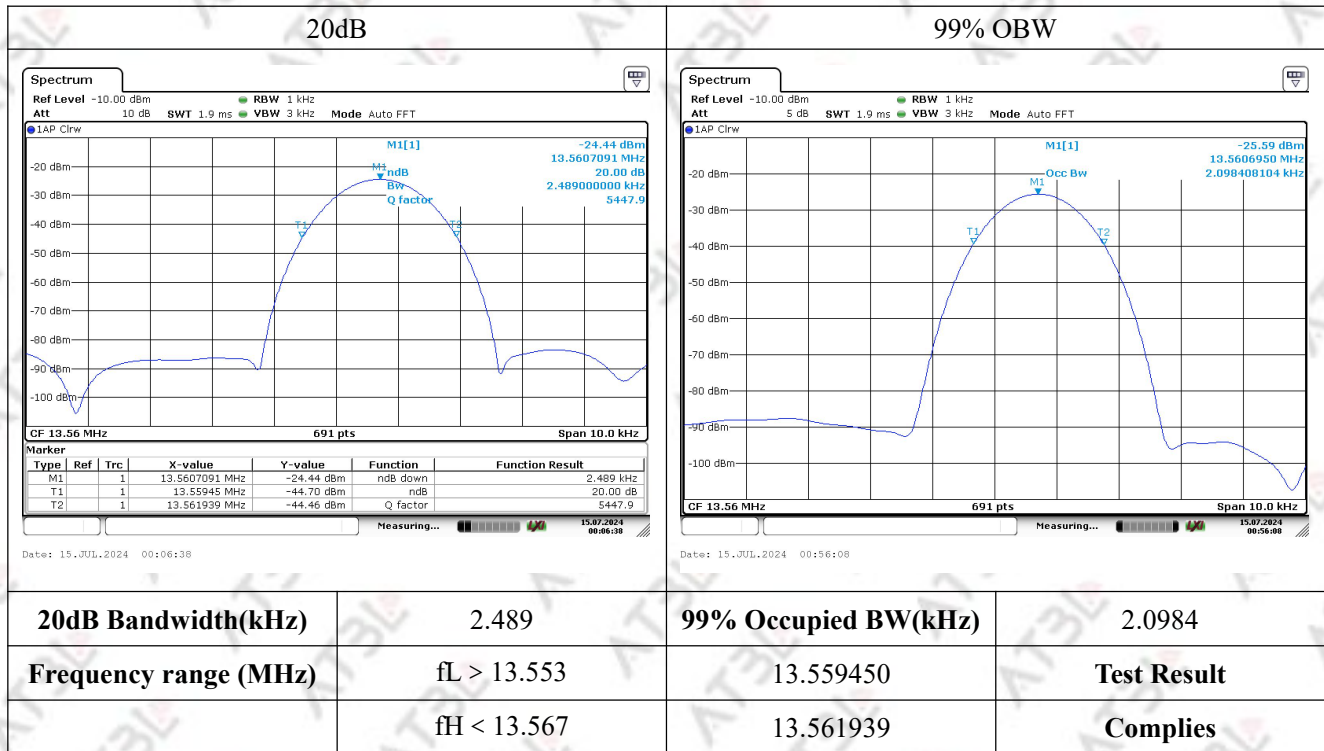
Please refer to the Appendix D.

*****END OF THE REPORT*****

Appendix A _ Conducted Test Data

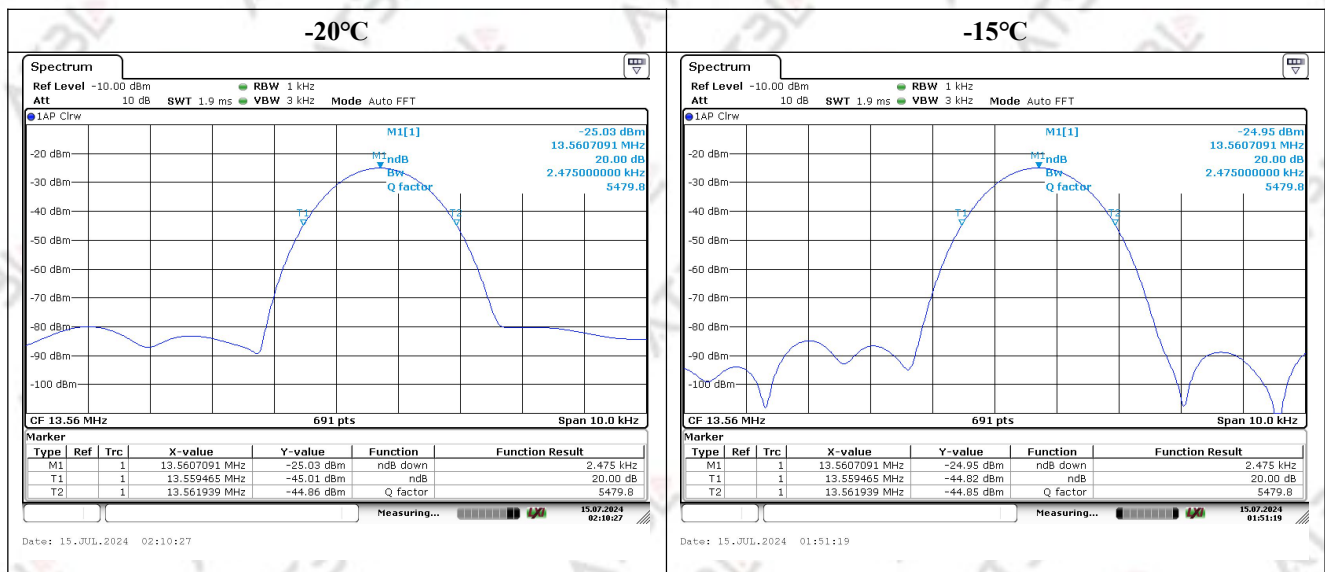
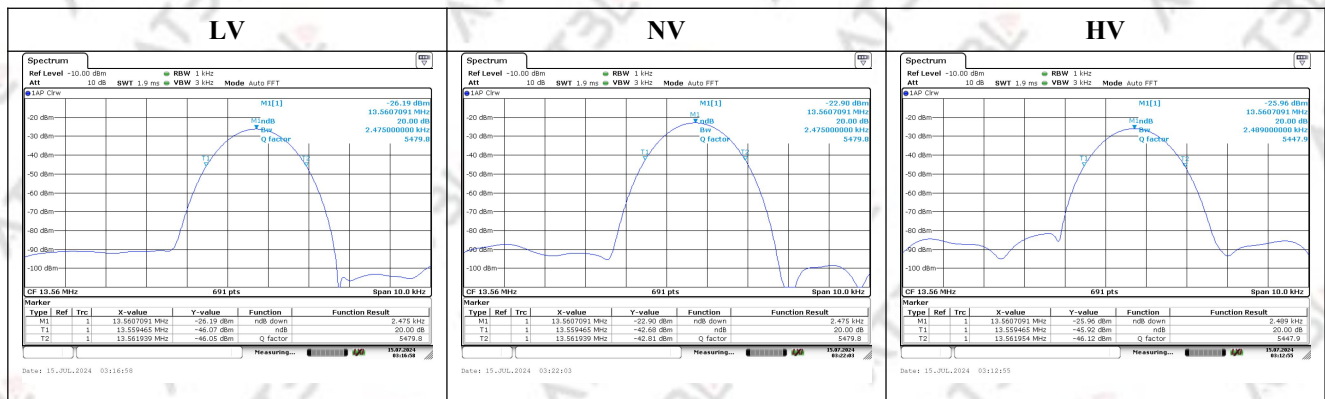
3.1.4. Test Result of 20dB Bandwidth and 99% Bandwidth

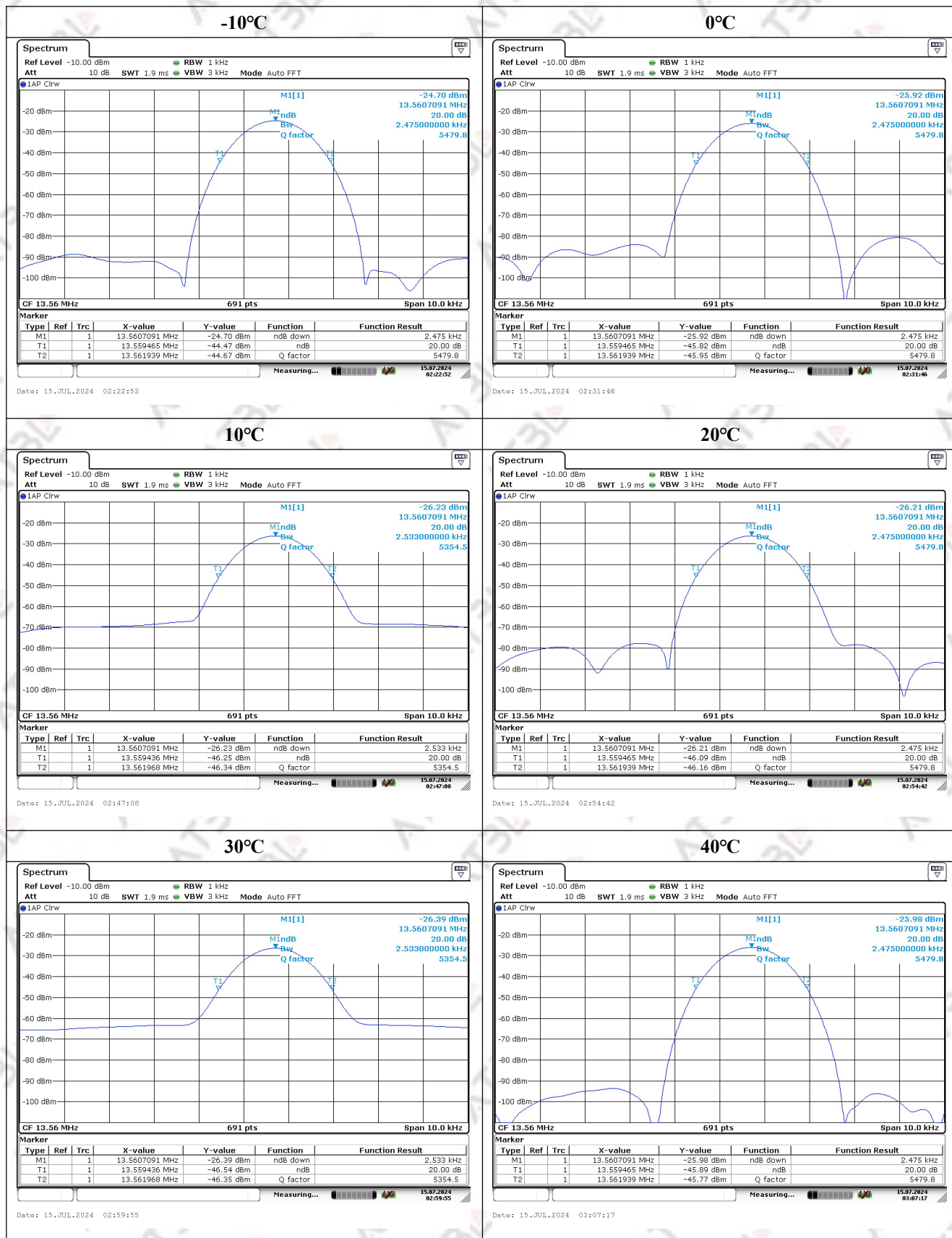
Temperature:	23.4°C	Relative Humidity:	55%RH
Test Voltage:	DC 24V	Test Mode:	NFC



3.2.4. Test Result of Frequency Stability

Voltage		Temperature	
Voltage (V _{DC})	Measurement Frequency (MHz)	Temperature (°C)	Measurement Frequency (MHz)
40	13.5607091	-20	13.5607091
48	13.5607091	-15	13.5607091
54.6	13.5607091	-10	13.5607091
--	--	0	13.5607091
--	--	10	13.5607091
--	--	20	13.5607091
--	--	30	13.5607091
--	--	40	13.5607091
Max.Deviation (MHz)	0.0007091	Max.Deviation (MHz)	0.0007091
Max.Deviation (ppm)	52.29	Max.Deviation (ppm)	52.29
Limit	FS < ±100 ppm	Limit	FS < ±100 ppm
Test Result	PASS	Test Result	PASS



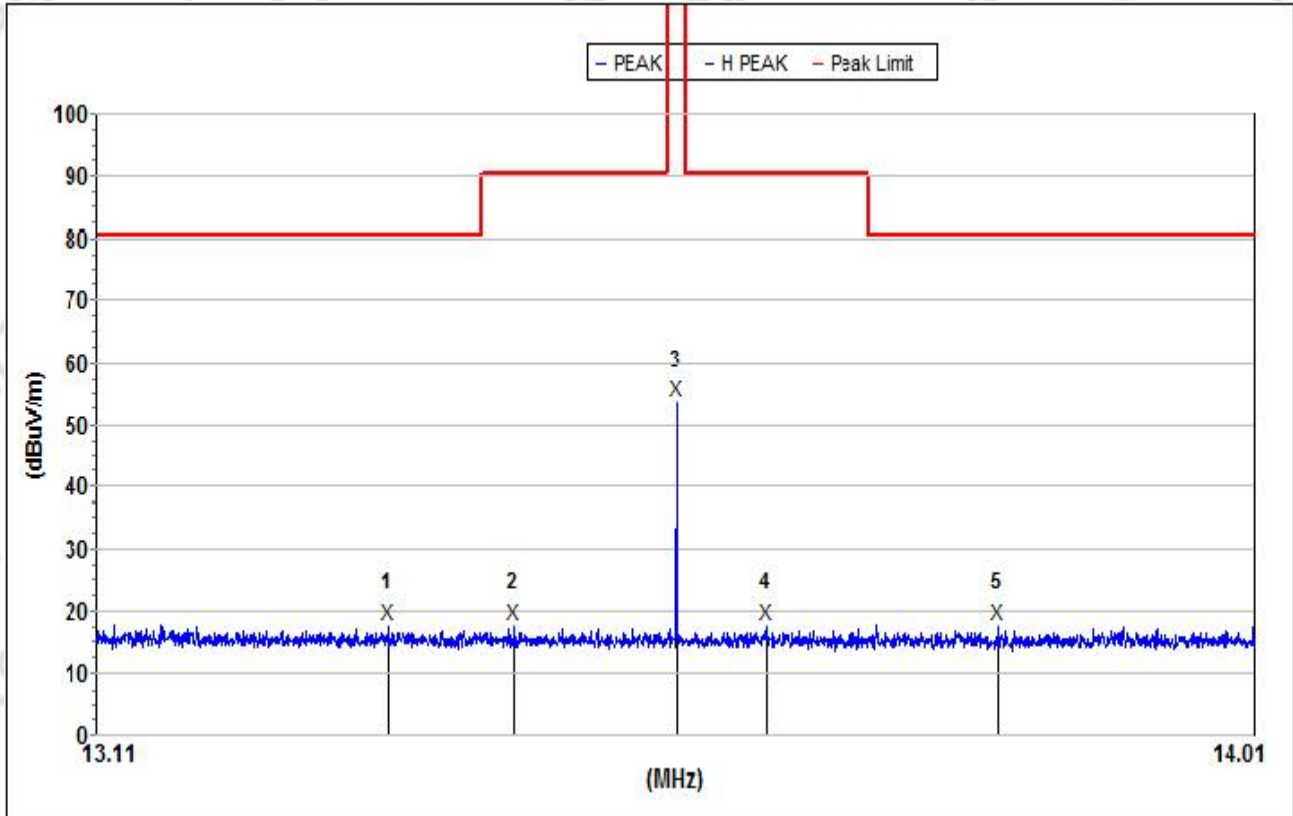


*****END OF APPENDIX A*****

Appendix B _ Radiated Test Data

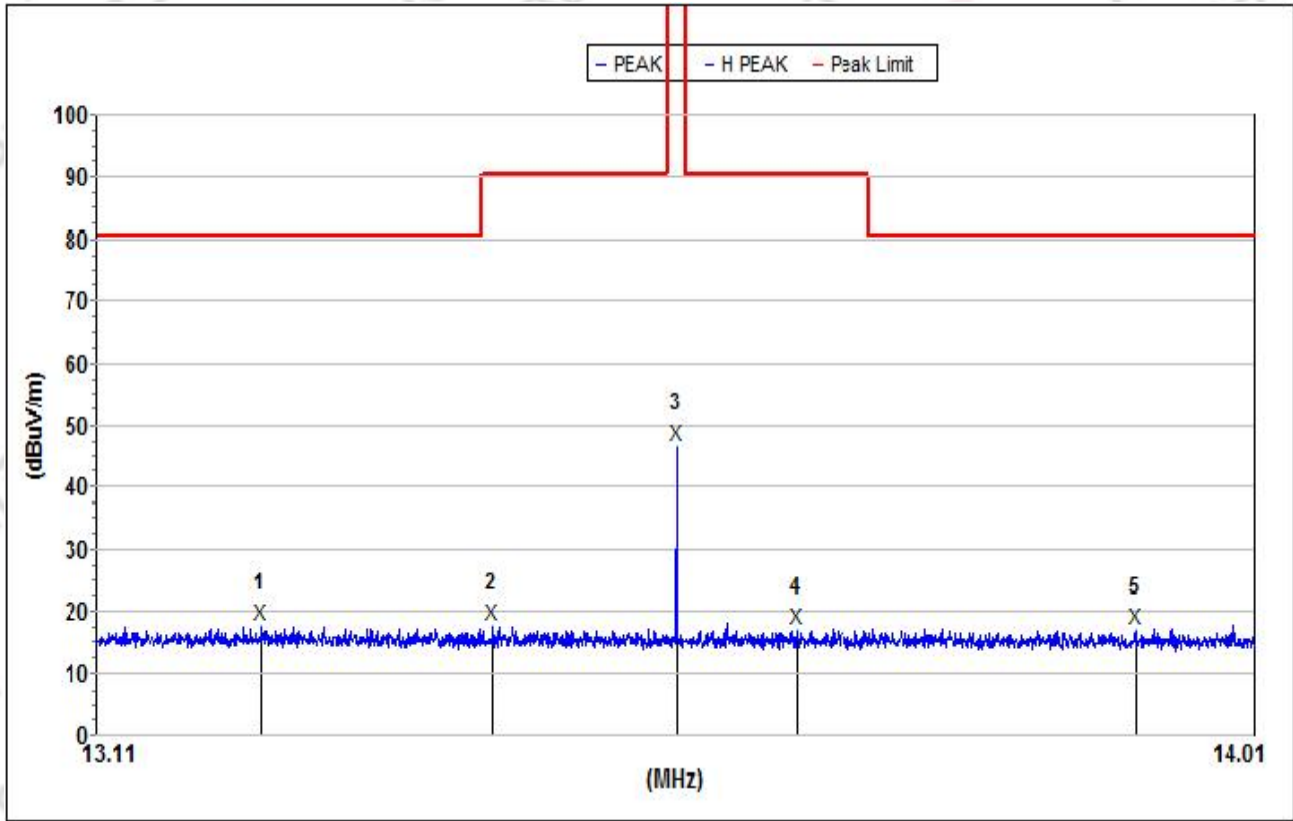
3.3.4. Test Result of Field Strength of Fundamental Emissions

Temperature:	23.4°C	Relative Humidity:	55%RH
Test Voltage:	DC 24V	Test Mode:	NFC X



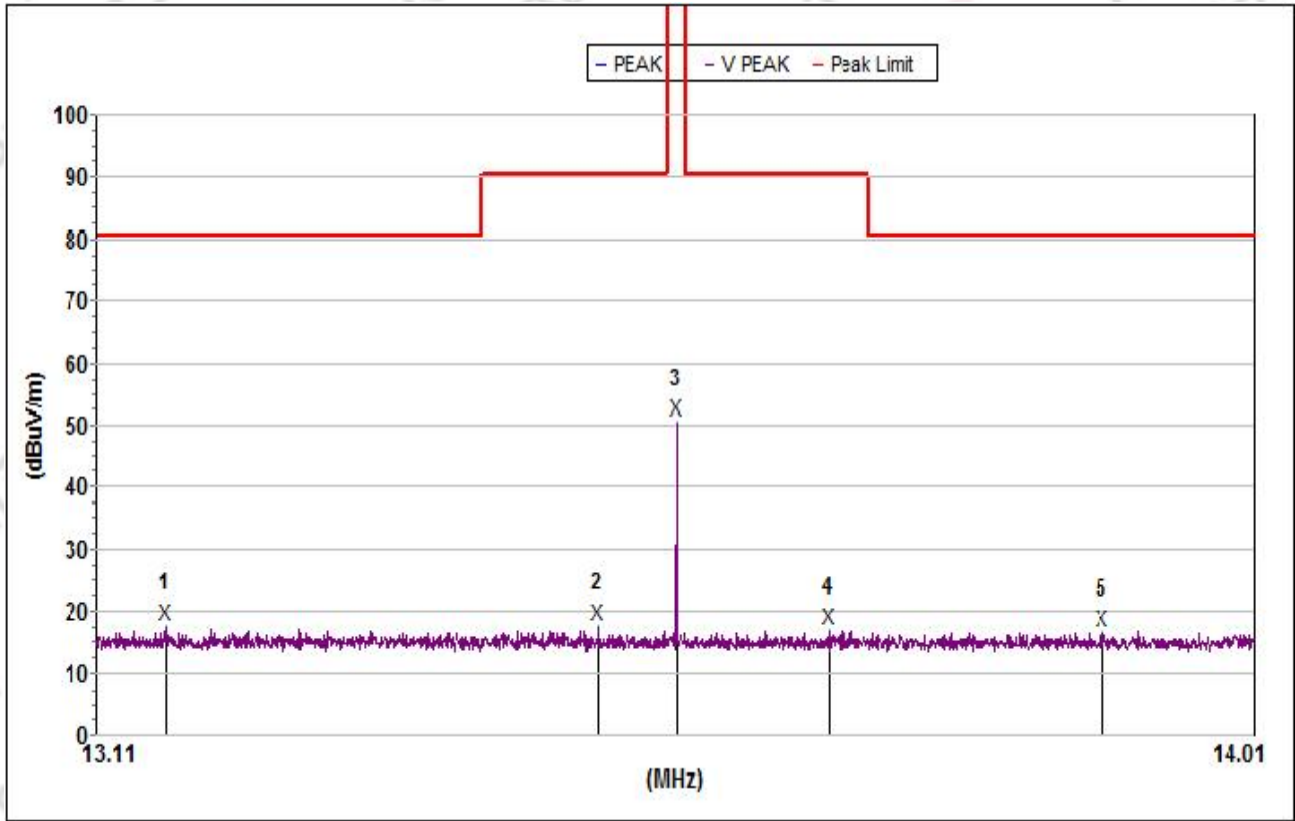
Mk.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Deg. (deg.)	Hi. (cm)	Ant.F/G. (dB/m)	Cbl.L. (dB)	Pol.
Peak:									
1	13.336954	17.6	80.5	62.9	107	100	19.4	0.2	X
2	13.434718	17.6	90.5	72.9	120	200	19.4	0.2	X
3	13.560632	53.7	124.0	70.3	23	200	19.3	0.2	X
4	13.630591	17.6	90.5	72.9	352	200	19.3	0.2	X
5	13.810967	17.7	80.5	62.8	278	300	19.3	0.2	X

Temperature:	23.4°C	Relative Humidity:	55%RH
Test Voltage:	DC 24V	Test Mode:	NFC Y



Mk.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Deg. (deg.)	Hi. (cm)	Ant.F/G. (dB/m)	Cbl.L. (dB)	Pol.
Peak:									
1	13.237704	17.7	80.5	62.8	251	200	19.4	0.2	Y
2	13.418226	17.7	90.5	72.8	56	100	19.4	0.2	Y
3	13.560632	46.7	124.0	77.3	309	200	19.3	0.2	Y
4	13.653688	17.0	90.5	73.5	295	300	19.3	0.2	Y
5	13.917287	17.0	80.5	63.5	68	200	19.3	0.2	Y

Temperature:	23.4°C	Relative Humidity:	55%RH
Test Voltage:	DC 24V	Test Mode:	NFC Z

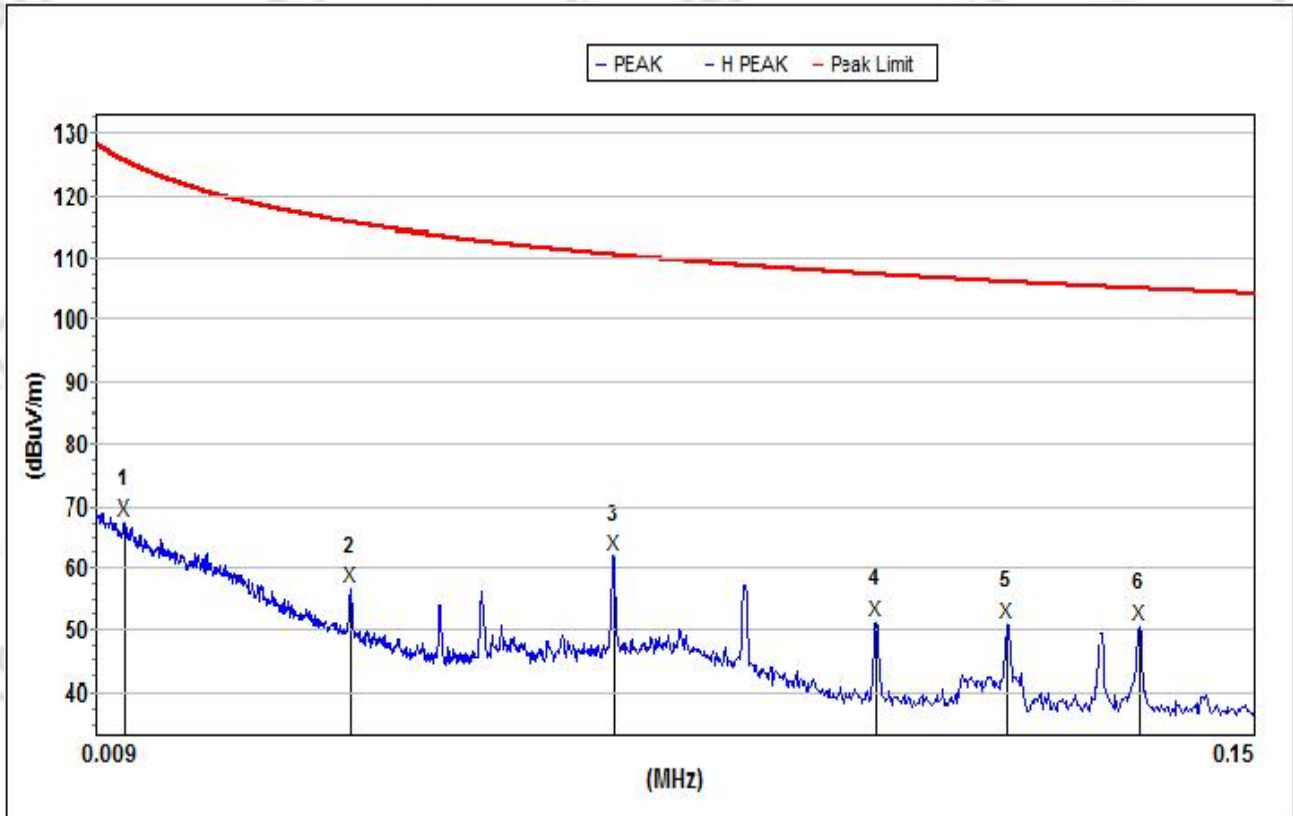


Mk.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Deg. (deg.)	Hi. (cm)	Ant.F/G. (dB/m)	Cbl.L. (dB)	Pol.
Peak:									
1	13.164079	17.6	80.5	62.9	360	100	19.4	0.2	Z
2	13.499993	17.7	90.5	72.8	41	200	19.4	0.2	Z
3	13.560632	50.6	124.0	73.4	8	200	19.3	0.2	Z
4	13.679095	17.0	90.5	73.5	17	300	19.3	0.2	Z
5	13.892360	16.8	80.5	63.7	252	100	19.3	0.2	Z

3.4.4. Test Result of Radiated Spurious Emission

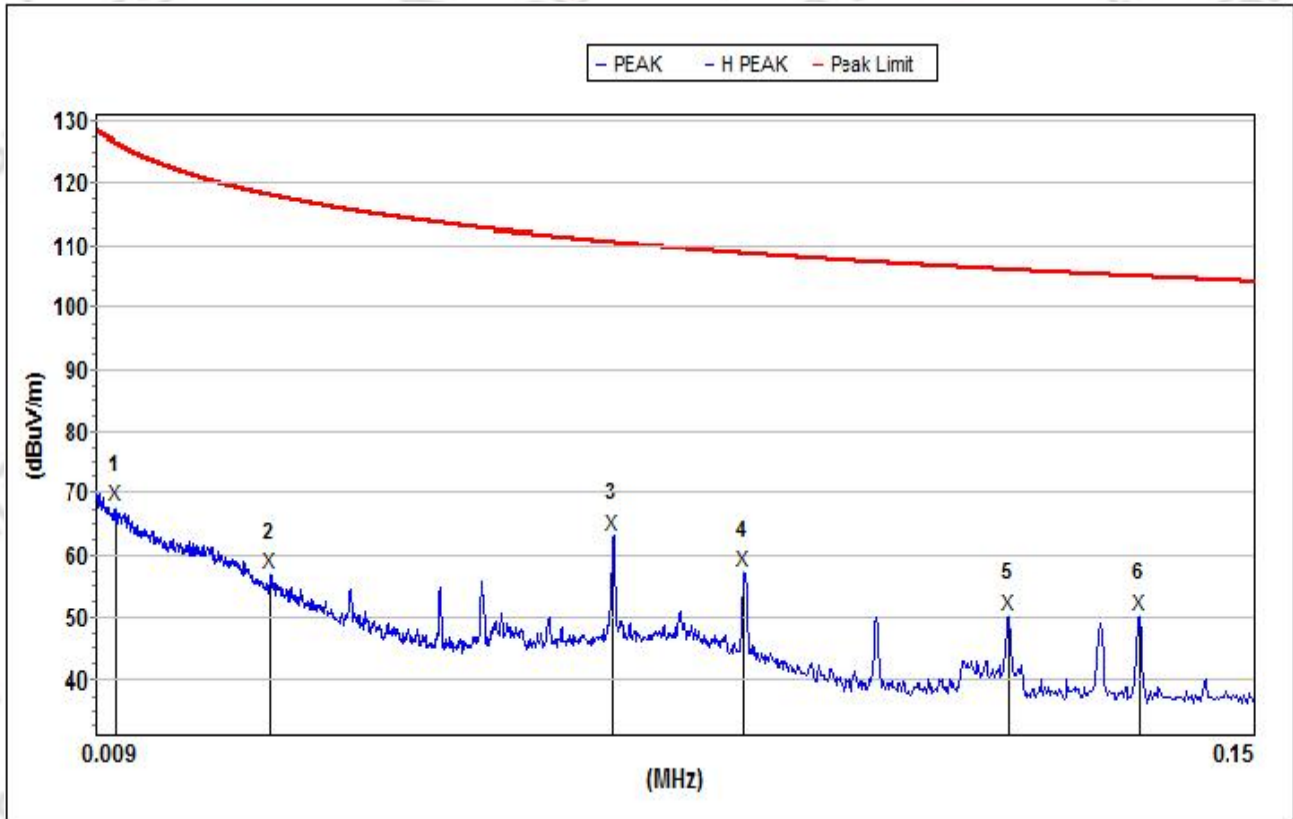
(9kHz-150kHz)

Temperature:	23.4°C	Relative Humidity:	55%RH
Test Voltage:	DC 24V	Test Mode:	NFC X



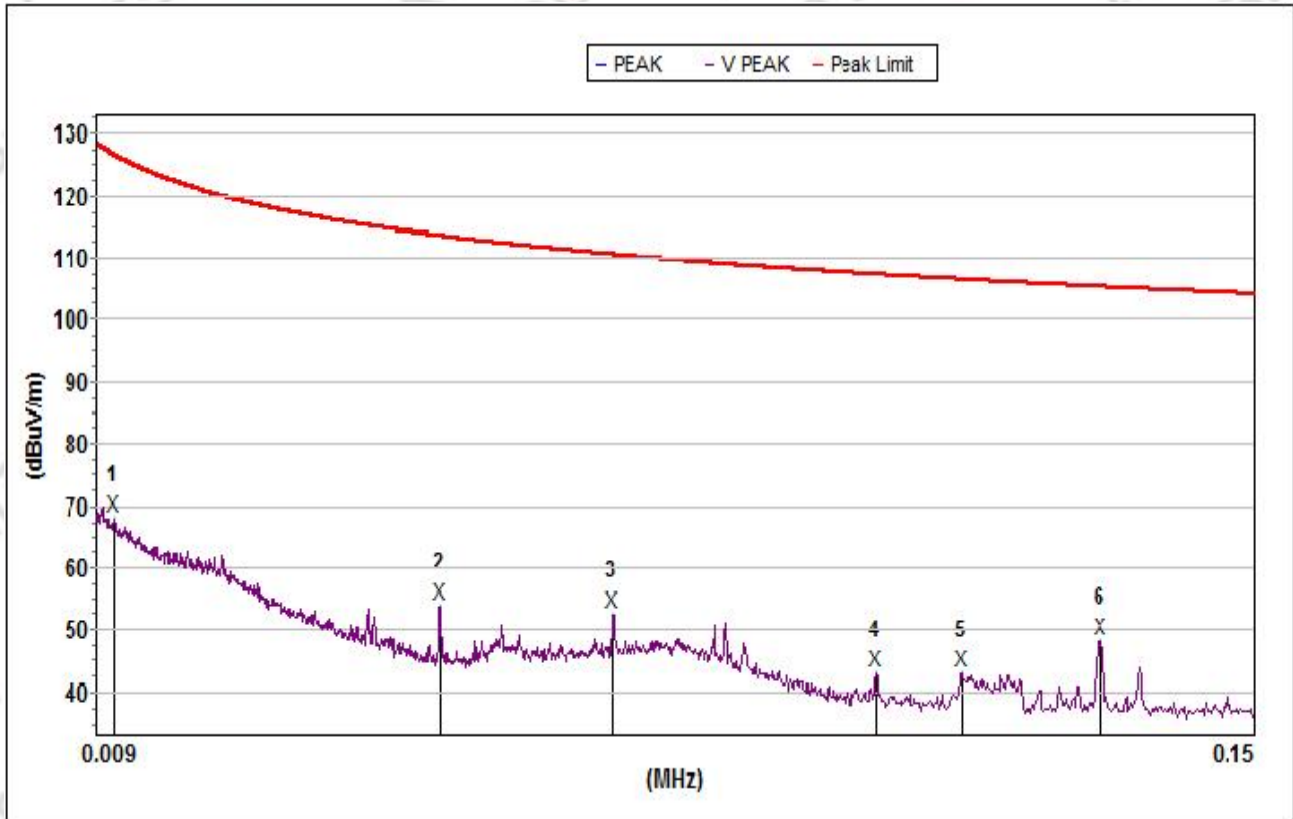
Mk.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Deg. (deg.)	Hi. (cm)	Ant.F/G. (dB/m)	Cbl.L. (dB)	Pol.
Peak:									
1	0.012368	67.4	125.7	58.3	360	100	35.3	0.1	X
2	0.039978	56.7	115.6	58.9	168	200	26.3	0.1	X
3	0.071976	62.0	110.5	48.5	336	100	28.3	0.1	X
4	0.103906	51.3	107.3	56.0	336	200	22.6	0.1	X
5	0.119937	51.2	106.0	54.8	358	100	22.5	0.1	X
6	0.135934	50.7	105.0	54.3	336	300	22.4	0.1	X

Temperature:	23.4°C	Relative Humidity:	55%RH
Test Voltage:	DC 24V	Test Mode:	NFC Y



Mk.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Deg. (deg.)	Hi. (cm)	Ant.F/G. (dB/m)	Cbl.L. (dB)	Pol.
Peak:									
1	0.011319	68.0	126.5	58.5	83	200	35.7	0.1	Y
2	0.030132	57.1	118.0	60.9	181	100	28.3	0.1	Y
3	0.071875	63.3	110.5	47.2	0	100	28.3	0.1	Y
4	0.087890	57.3	108.7	51.4	0	300	27.0	0.1	Y
5	0.120106	50.3	106.0	55.7	39	200	22.5	0.1	Y
6	0.135934	50.5	105.0	54.5	210	100	22.4	0.1	Y

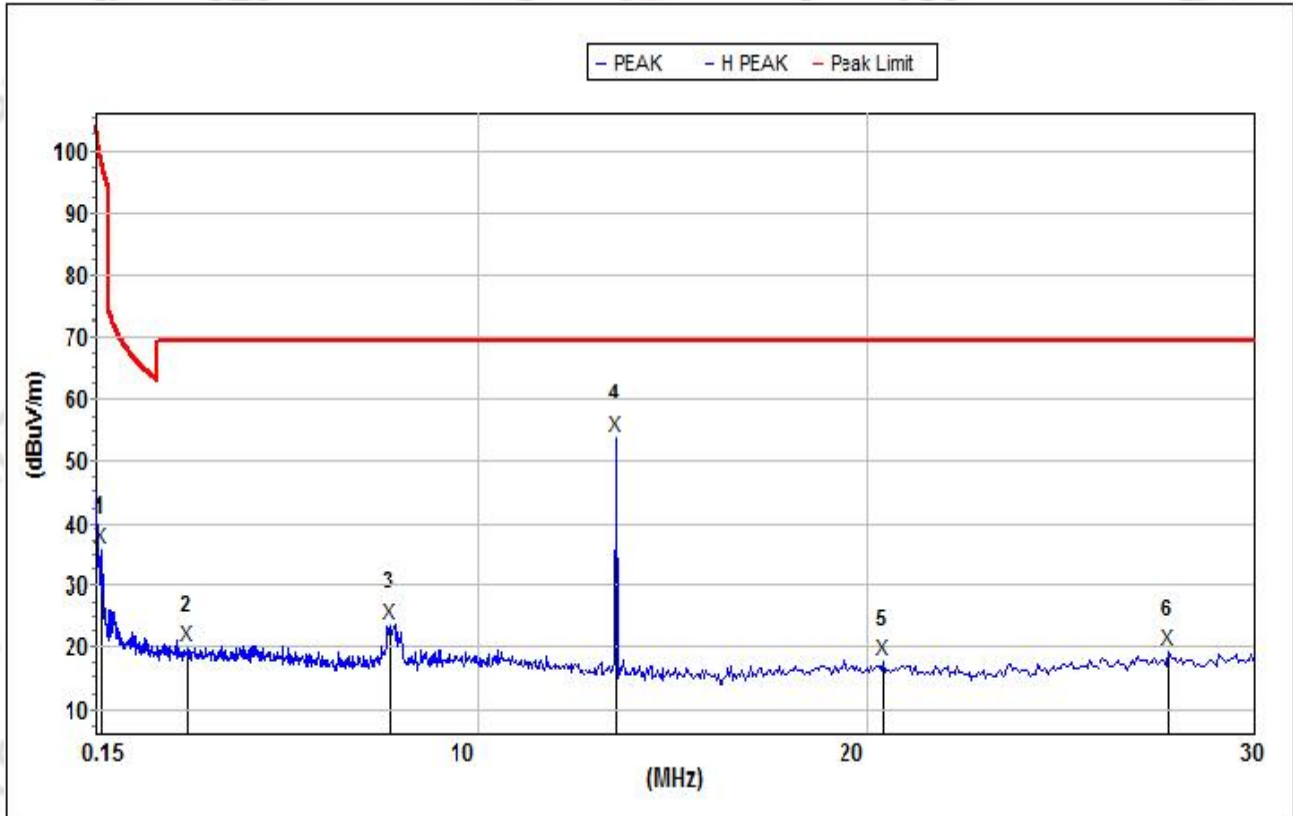
Temperature:	23.4°C	Relative Humidity:	55%RH
Test Voltage:	DC 24V	Test Mode:	NFC Z



Mk.	Freq (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Deg (deg.)	Hi (cm)	Ant.F/G (dB/m)	Cbl.L (dB)	Pol.
Peak:									
1	0.011177	68.2	126.6	58.4	335	100	35.7	0.1	Z
2	0.050778	53.9	113.5	59.6	185	200	24.3	0.1	Z
3	0.071875	52.6	110.5	57.9	1	100	28.3	0.1	Z
4	0.103906	43.3	107.3	64.0	359	300	22.6	0.1	Z
5	0.114175	43.1	106.5	63.4	323	100	22.5	0.1	Z
6	0.131236	48.6	105.3	56.7	197	200	22.4	0.1	Z

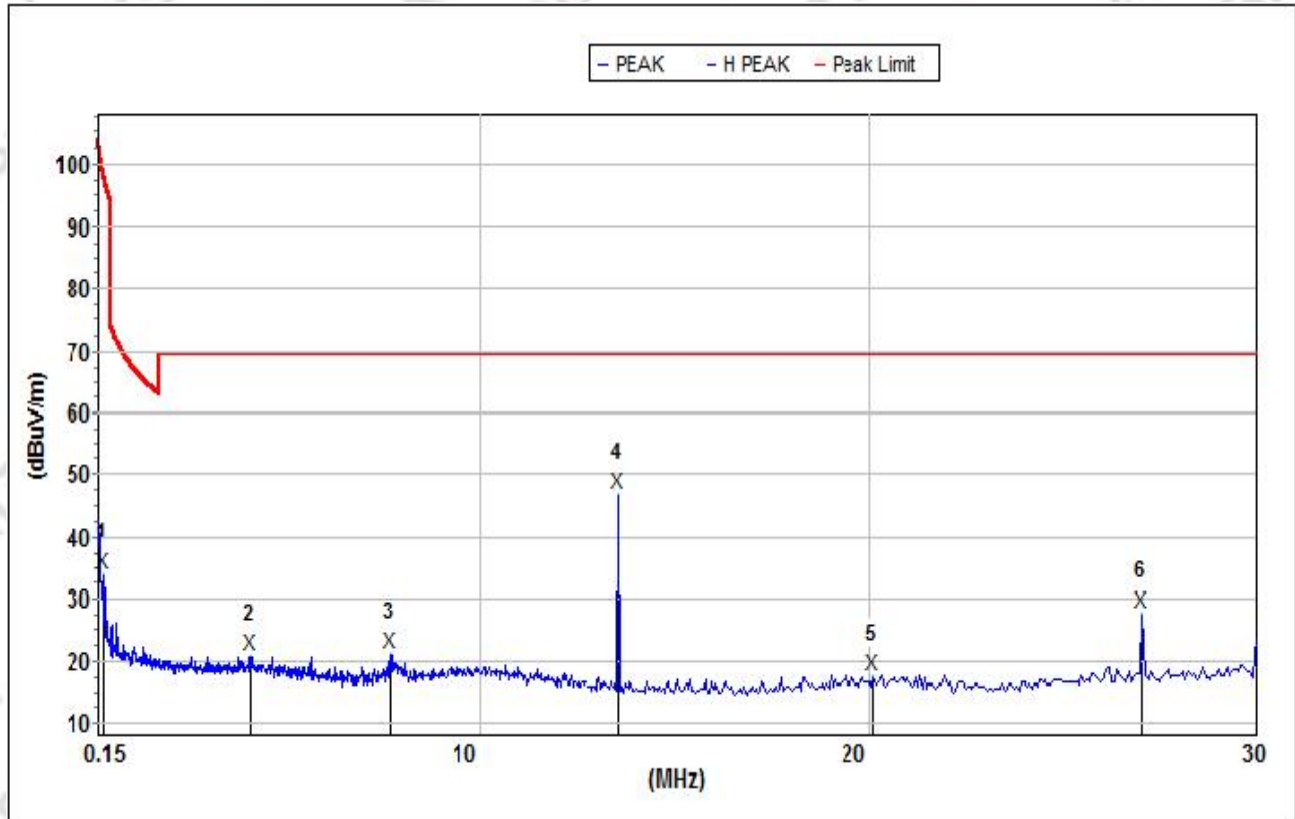
(150kHz~30MHz)

Temperature:	23.4°C	Relative Humidity:	55%RH
Test Voltage:	DC 24V	Test Mode:	NFC X



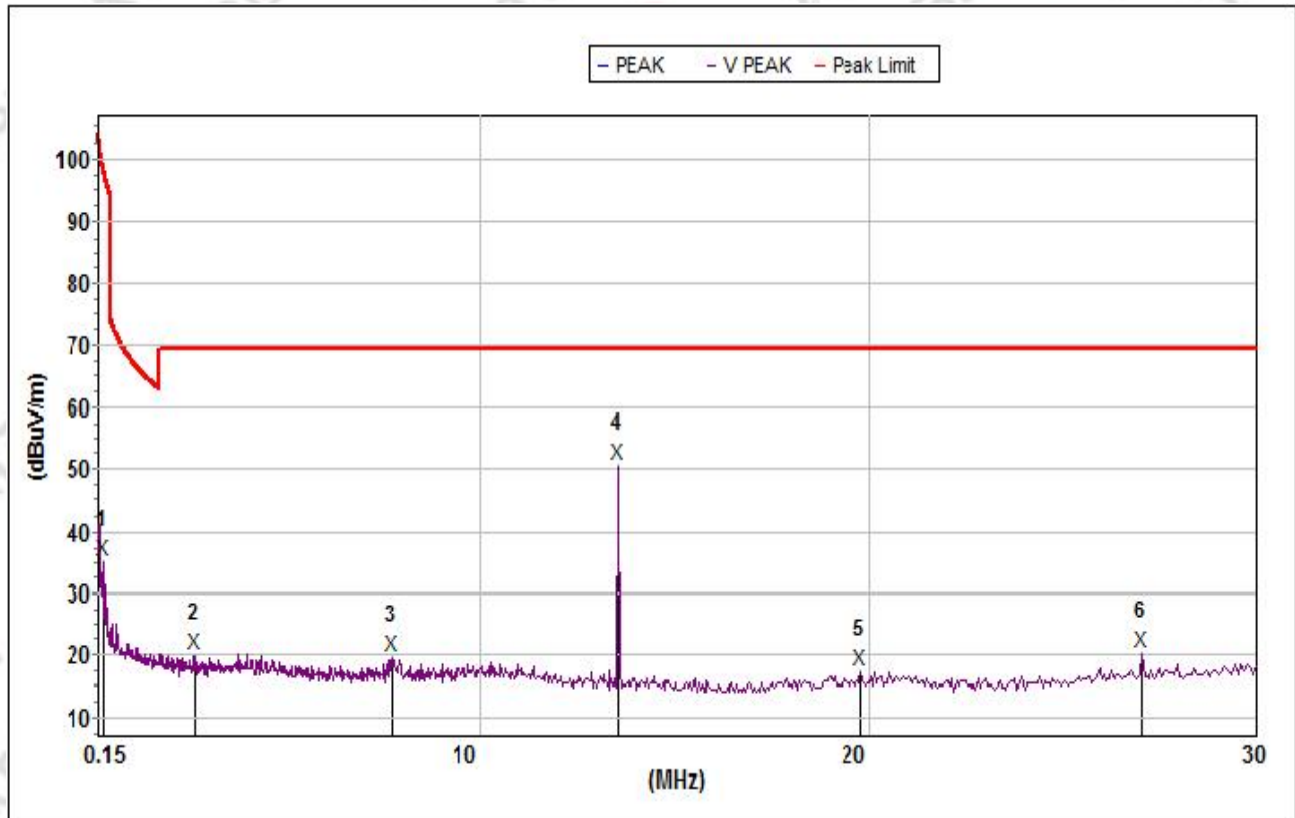
Mk.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Deg. (deg.)	Hi. (cm)	Ant.F/G. (dB/m)	Cbl.L. (dB)	Pol.
Peak:									
1	0.269	35.9	99.0	63.1	6	100	21.7	0.1	X
2	2.487	20.2	69.5	49.3	6	200	21.3	0.1	X
3	7.728	23.6	69.5	45.9	39	100	19.6	0.2	X
4	13.551	53.9	69.5	15.6	6	200	19.3	0.2	X
5	20.431	17.8	69.5	51.7	39	100	19.5	0.3	X
6	27.782	19.5	69.5	50.0	163	300	19.5	0.3	X

Temperature:	23.4°C	Relative Humidity:	55%RH
Test Voltage:	DC 24V	Test Mode:	NFC Y



Mk.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Deg. (deg.)	Hi. (cm)	Ant.F/G. (dB/m)	Cbl.L. (dB)	Pol.
Peak:									
1	0.269	34.1	99.0	64.9	66	200	21.7	0.1	Y
2	4.081	20.9	69.5	48.6	2	100	21.2	0.1	Y
3	7.687	21.2	69.5	48.3	192	200	19.6	0.2	Y
4	13.551	46.8	69.5	22.7	318	200	19.3	0.2	Y
5	20.109	17.6	69.5	51.9	232	100	19.4	0.3	Y
6	27.055	27.9	69.5	41.6	275	300	19.4	0.3	Y

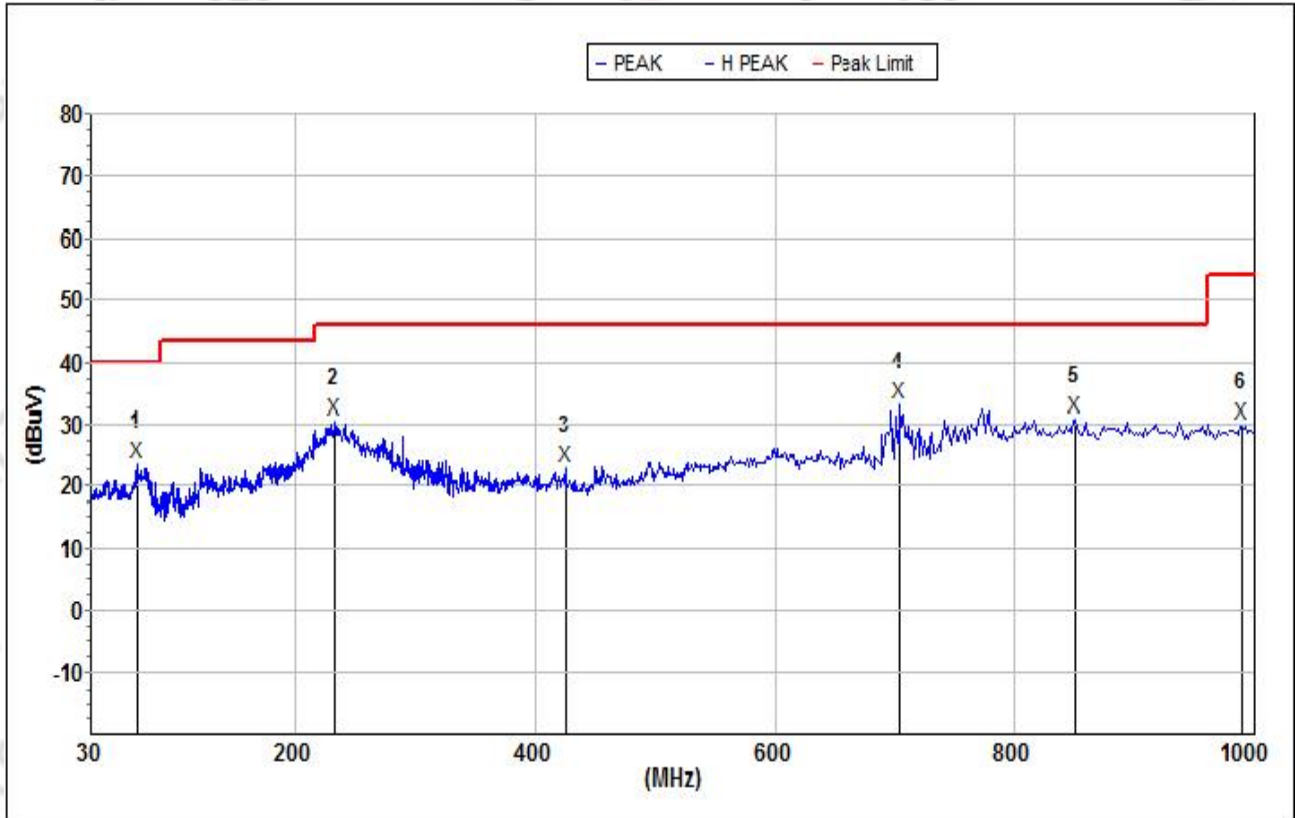
Temperature:	23.4°C	Relative Humidity:	55%RH
Test Voltage:	DC 24V	Test Mode:	NFC Y



Mk.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Deg. (deg.)	Hi. (cm)	Ant.F/G. (dB/m)	Cbl.L. (dB)	Pol .
Peak:									
1	0.269	35.2	99.0	63.8	321	200	21.7	0.1	Z
2	2.594	20.2	69.5	49.3	0	100	21.3	0.1	Z
3	7.728	19.9	69.5	49.6	360	100	19.6	0.2	Z
4	13.551	50.6	69.5	18.9	27	200	19.3	0.2	Z
5	19.792	17.4	69.5	52.1	110	300	19.4	0.3	Z
6	27.055	20.5	69.5	49.0	360	200	19.4	0.3	Z

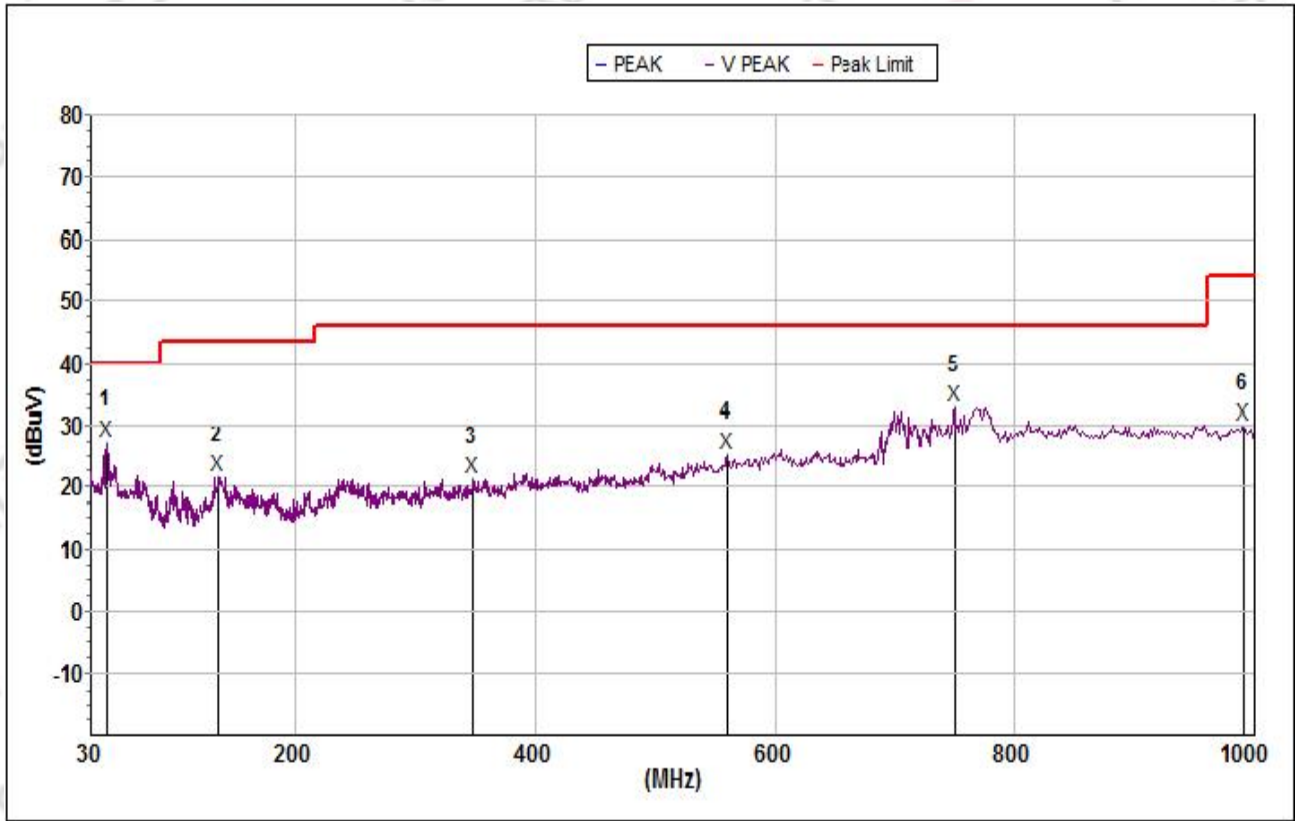
(30MHz~1000MHz)

Temperature:	23.4°C	Relative Humidity:	55%RH
Test Voltage:	DC 24V	Test Mode:	NFC H



Mk.	Freq. (MHz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Deg. (deg.)	Hi. (cm)	Ant.F/G. (dB)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak:										
1	67.794	23.7	40.0	16.3	291	100	16.8	29.4	1.1	H
2	233.349	30.7	46.0	15.3	0	200	17.0	32.6	1.9	H
3	425.028	23.2	46.0	22.8	213	300	22.2	32.9	2.5	H
4	704.226	33.4	46.0	12.6	39	100	26.8	33.8	3.2	H
5	849.545	31.1	46.0	14.9	100	300	28.7	32.1	3.5	H
6	989.535	30.0	54.0	24.0	180	300	29.8	33.6	3.8	H

Temperature:	23.4°C	Relative Humidity:	55%RH
Test Voltage:	DC 24V	Test Mode:	NFC V



Mk.	Freq. (MHz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Deg. (deg.)	Hi. (cm)	Ant.F/G. (dB)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak:										
1	43.050	27.4	40.0	12.6	70	300	19.2	29.7	0.9	V
2	135.982	21.7	43.5	21.8	13	300	18.0	33.0	1.5	V
3	348.638	21.5	46.0	24.5	24	200	20.2	32.5	2.3	V
4	560.693	25.3	46.0	20.7	182	100	25.0	32.3	2.9	V
5	748.794	32.8	46.0	13.2	231	100	27.6	32.7	3.3	V
6	991.272	29.9	54.0	24.1	37	200	29.8	33.6	3.8	V

Note:

1. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
2. Distance extrapolation factor = $40 \log (\text{specific distance} / \text{test distance})$ (dB);
3. Limit line = specific limits (dBuV) + distance extrapolation factor.

*****END OF APPENDIX B*****

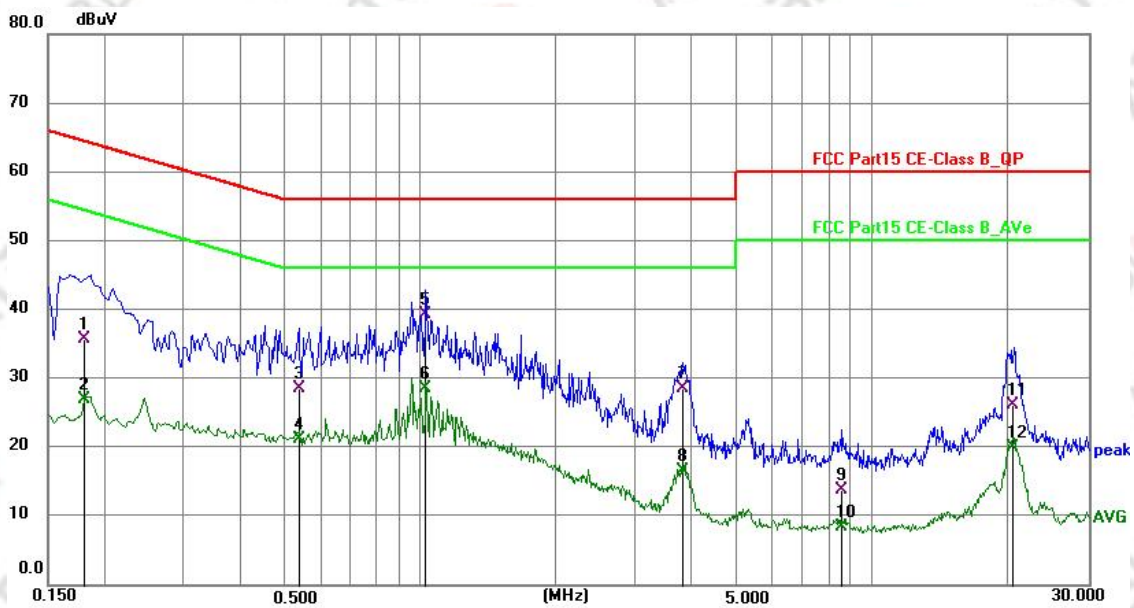
Appendix C _ AC Power-Line Conducted Emission Test Data

3.5.4. Test Result of AC Power-Line Conducted Emission

Temperature:	23.4°C	Relative Humidity:	55%RH
Test Voltage:	AC 120V/60Hz	Phase:	L1

Remark:

1. All readings are Quasi-Peak and Average values.
2. Margin = Result (Result =Reading + Factor)–Limit.
3. Factor=LISN factor+Cable loss+Limiter (10dB)

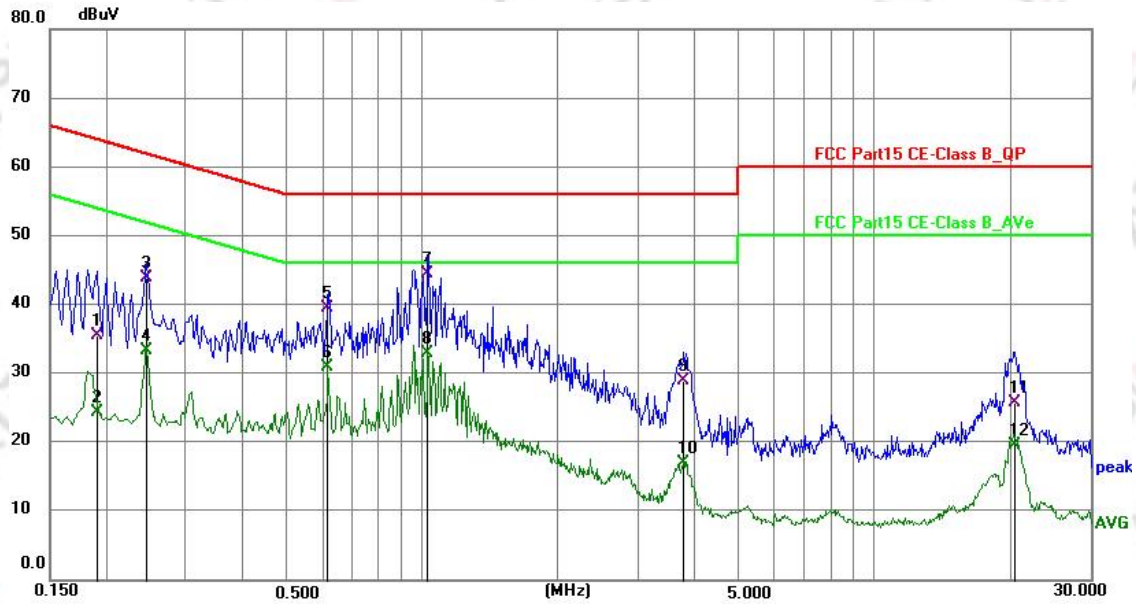


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1809	25.91	9.86	35.77	64.44	-28.68	QP
2	0.1809	17.16	9.86	27.02	54.44	-27.41	AVG
3	0.5378	18.60	9.87	28.47	56.00	-27.52	QP
4	0.5378	11.32	9.87	21.19	46.00	-24.83	AVG
5	1.0273	29.38	9.93	39.31	56.00	-16.70	QP
6	1.0273	18.62	9.93	28.55	46.00	-17.43	AVG
7	3.8234	18.50	10.06	28.56	56.00	-27.45	QP
8	3.8234	6.61	10.06	16.67	46.00	-29.31	AVG
9	8.5659	3.68	10.12	13.80	60.00	-46.26	QP
10	8.5659	-1.75	10.12	8.37	50.00	-41.65	AVG
11	20.4938	15.67	10.54	26.21	60.00	-33.81	QP
12	20.4938	9.46	10.54	20.00	50.00	-30.02	AVG

Temperature:	23.4°C	Relative Humidity:	55%RH
Test Voltage:	AC 120V/60Hz	Phase:	N

Remark:

1. All readings are Quasi-Peak and Average values.
2. Margin = Result (Result =Reading + Factor)–Limit.
3. Factor=LISN factor+Cable loss+Limiter (10dB)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1915	25.66	9.82	35.48	63.97	-28.47	QP
2	0.1915	14.46	9.82	24.28	53.97	-29.71	AVG
3	0.2451	34.10	9.80	43.90	61.92	-18.01	QP
4	0.2451	23.44	9.80	33.24	51.92	-18.67	AVG
5	0.6194	29.72	9.78	39.50	56.00	-16.48	QP
6	0.6194	21.15	9.78	30.93	46.00	-15.05	AVG
7	1.0279	34.62	9.79	44.41	56.00	-11.61	QP
8	1.0279	23.23	9.79	33.02	46.00	-12.96	AVG
9	3.7901	18.99	9.99	28.98	56.00	-27.04	QP
10	3.7901	7.05	9.99	17.04	46.00	-28.95	AVG
11	20.4834	15.14	10.56	25.70	60.00	-34.33	QP
12	20.4834	9.09	10.56	19.65	50.00	-30.31	AVG

*****END OF APPENDIX C*****

Appendix D _ Test Setup

Radiated Emissions for 30MHz~1GHz



AC Power Line Conducted Emissions



Radiated Emissions for 9kHz~30MHz

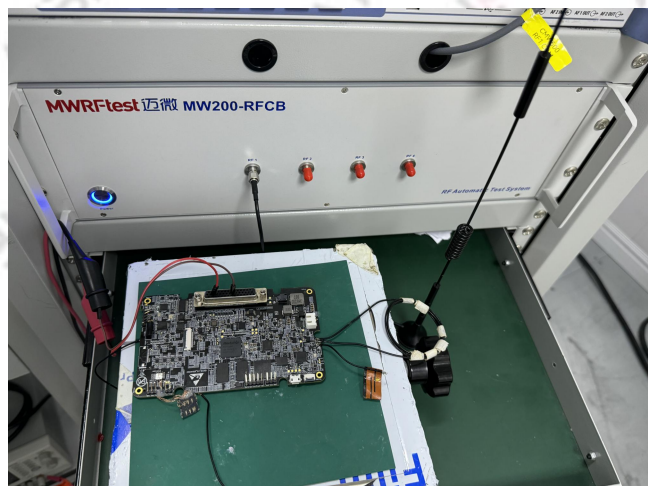


NFC for RF



Near View

N/A



N/A

*****END OF APPENDIX D*****