

TEST REPORT

Report No.: SHATBL2505014W02

Applicant : Jiangsu Niu Electric Technology Co., Ltd

Product Name : Motor-dirven cycle

Brand Name : NIU

Model Name : XQi300

FCC ID : 2AZ6G-X3JW552

Test Standard : 47 CFR 15.225

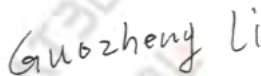
Date of Test : 2025.06.14~2025.06.19

Report Prepared by :



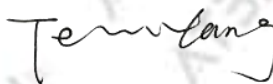
(Emily)

Report Approved by :



(Guozheng Li)

Authorized Signatory :



(Terry Yang)



TABLE OF CONTENTS

REVISION HISTORY	3
DECLARATION OF REPORT	4
SUMMARY OF TEST RESULT	5
1. GENERAL DESCRIPTION	6
1.1. Applicant	6
1.2. Manufacturer	6
1.3. Factory	6
1.4. General Information of EUT	7
1.5. Equipment Specification	8
1.6. Modification of EUT	8
1.7. Laboratory Information	8
1.8. Applicable Standards	8
2. TEST CONFIGURATION OF EUT	9
2.1. Block Diagram of Test System	9
2.2. Description of Support Units	9
2.3. EUT Operating Conditions	9
2.4. Equipment List	10
2.5. Measurement Uncertainty	10
3. TEST RESULT	11
3.1. Radiated Spurious Emissions	11
4. APPENDIX	13
Appendix A _ Radiated Test Data	14

REVISION HISTORY

Rev.	Issue Date	Revisions	Revised by
00	2025.6.20	Initial Release	Guozheng Li

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 '☑'

SUMMARY OF TEST RESULT

Report Section	Standard Section	Test Item	Judgment	Remark
3.1	47 CFR 15.225(d)&15.209	Radiated Spurious Emissions	PASS	--

Remark:

The RF module of this report is the same with the RF module of report SHATBL2312027W02. Therefore in this report only radiated spurious emissions were performed based on the worst case of the original FCC ID with ID number 2AZ6G-X3JW552 issued on 2024/1/16 and other test data in this report are based on the previous FCC ID with ID number 2AZ6G-X3JW552 issued on 2024/1/16.

1. GENERAL DESCRIPTION

1.1. Applicant

Name : Jiangsu Niu Electric Technology Co., Ltd
Address : No.387 Changting Road, West Taihu Science and Technology Industrial Park,
Changzhou City,Jiangsu P.R. China

1.2. Manufacturer

Name : Jiangsu Niu Electric Technology Co., Ltd
Address : No.387 Changting Road, West Taihu Science and Technology Industrial Park,
Changzhou City,Jiangsu P.R. China

1.3. Factory

Name : Jiangsu Niu Electric Technology Co., Ltd
Address : No.387 Changting Road, West Taihu Science and Technology Industrial Park,
Changzhou City,Jiangsu P.R. China

1.4. General Information of EUT

General Information	
Equipment Name	Motor-driven cycle
Brand Name	NIU
Model Name	XQi300
Series Model	N/A
Model Difference	N/A
Sample No.	202505150009002
Power Input	55V~84V
Adapter	Model:PLD500-EVCN07-84 Brand:NIU Input:100-240Vac, 50-60Hz, 6.0A Max. Output:82.5Vdc 6.0A
Battery	Model:NIU-72H32A1 Brand:NIU Rated Voltage:74Vdc Charge Limit Voltage:83.6Vdc Capacity:32Ah
Hardware Version	X3E13S51
Software Version	X3E13W51
Operating Temperature Range	-10 ~ +45℃
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	coil antenna
Antenna Gain	3 dBi

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
FCC-Registration Number	:	485917
A2LA Number	:	6184.01
CNAS Number	:	CNAS L14531
CAB Identifier	:	CN1306
ISED Designation Number	:	27371

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 C63.10-2020

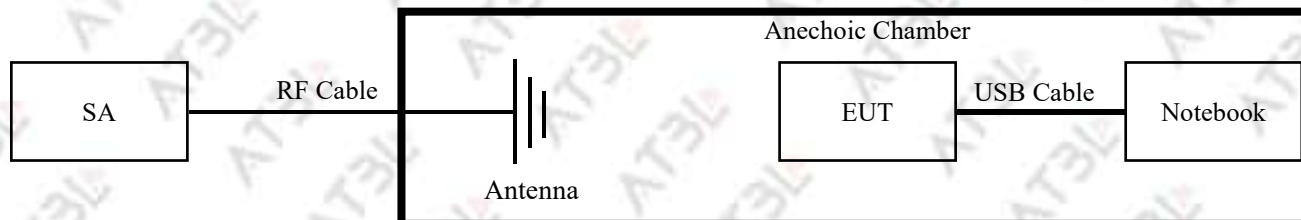
Remark:

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 Radiated Spurious Emission



2.2. Description of Support Units

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

2.3. EUT Operating Conditions

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

2.4. Equipment List

2.4.1. For Radiated Spurious Emission

Kind of Equipment	Manufacturer	Type No.	Serial No.	equipment number	Calibrated until	Calibrated due until	Cal. Interval
Signal analyzer	Agilent	N9020A	MY50200811	SHATBL-E017	2025.03.17	2026.03.16	1 year
Amplifier	JPT	JPA0118-55-303A	1910001800055000	SHATBL-E006	2025.03.24	2026.03.23	1 year
Amplifier	JPT	JPA-10M1G32	21010100035001	SHATBL-E005	2025.03.17	2026.03.16	1 year
Antenna/Turntable Controller	Brilliant	N/A	N/A	SHATBL-E007	N/A	N/A	N/A
Loop Antenna(9kHz-30 MHz)	Daze	ZN30900C	20077	SHATBL-E042	2025.05.13	2026.05.12	1 year
Bilog Antenna	SCHWARZBECK	VULB 9168	01174	SHATBL-E008	2025.05.20	2026.05.19	1 year
Broad-band Horn Antenna	SCHWARZBECK	BBHA 9120D	02334	SHATBL-E009	2025.05.20	2026.05.19	1 year
Horn Antenna	COM-POWER	AH-1840	10100008	SHATBL-E043	2025.07.27	2026.07.26	1 year
Thermometer	DeLi	N/A	N/A	SHATBL-E015	2025.08.01	2026.07.31	1 year
Test Software	FALA	EMC-RI(Ver.4A2)	N/A	N/A	N/A	N/A	N/A
Wideband radio communication tester	R&S	CMW500	101331	SHATBL-W044	2025.07.28	2026.07.27	1 year
Spectrum analyzer	R&S	FSV40-N	101761	SHATBL-W036	2025.07.28	2026.07.27	1 year

2.5. 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	RF output power, conducted	$\pm 0.958\text{dB}$
2	Conducted spurious emissions	$\pm 2.988\text{dB}$
3	All emissions, radiated 30MHz-1GHz	$\pm 2.50\text{dB}$
4	All emissions, radiated 1GHz-18GHz	$\pm 3.51\text{dB}$
5	Occupied bandwidth	$\pm 23.20\text{Hz}$
6	Power spectral density	$\pm 0.886\text{dB}$

3. TEST RESULT

3.1. Radiated Spurious Emissions

3.1.1. 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

3.1.2. 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,

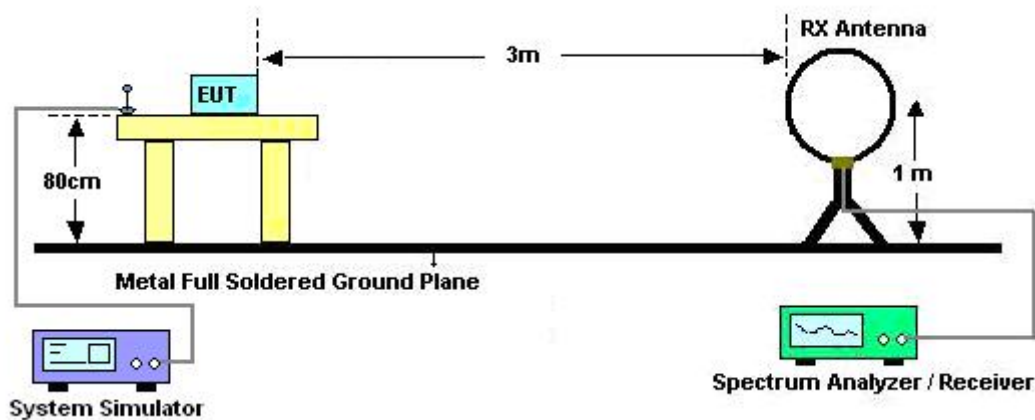
and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than

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.

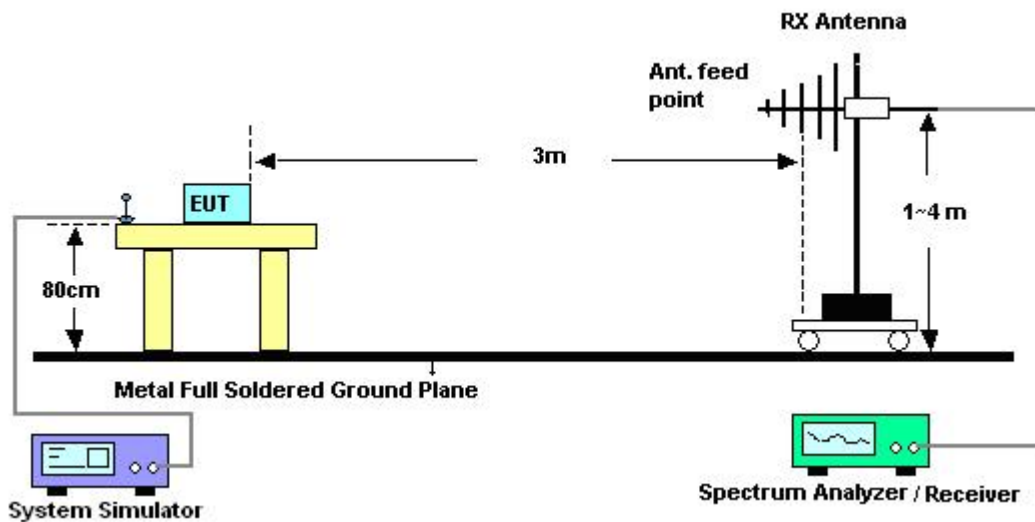
7. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. Antenna Requirements

3.1.3. Test Setup

3.1.3.1. For radiated emissions below 30MHz



3.1.3.2. For radiated emissions above 30MHz



3.1.4. Test Result of Radiated Spurious Emission

3.1.4.1. For 9 kHz ~ 30 MHz

Please refer to the Appendix A.

3.1.4.2. For above 30 MHz

Please refer to the Appendix A.

4. APPENDIX

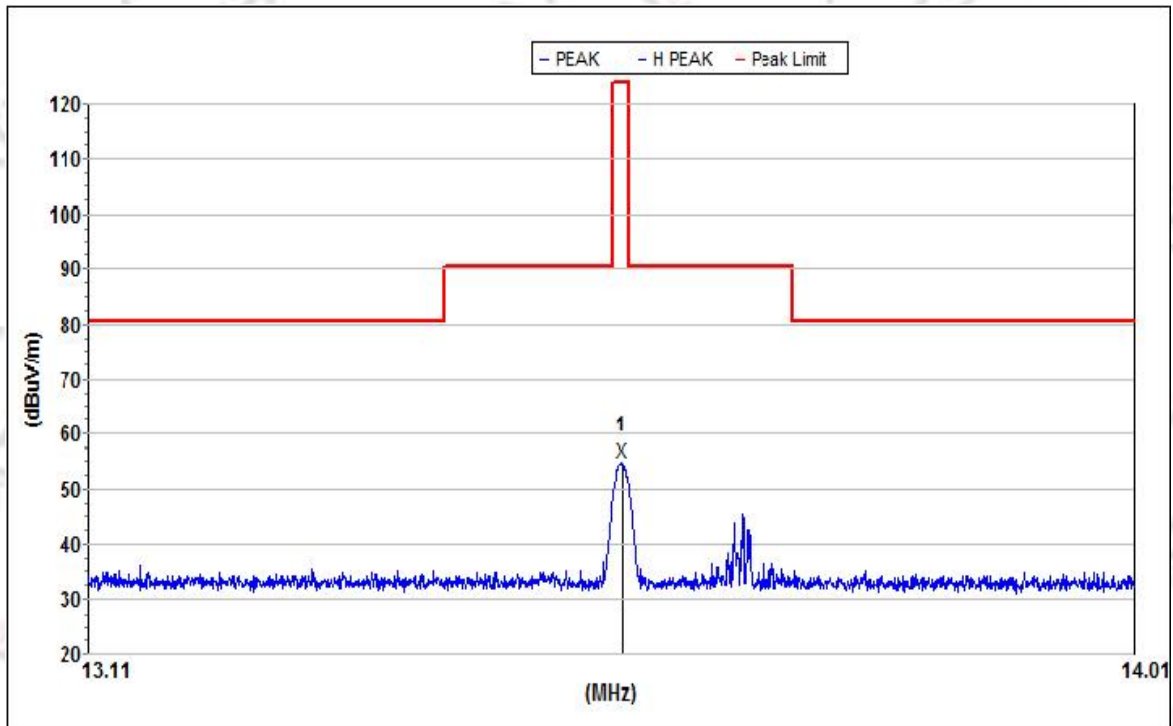
Appendix A	Test Data
Appendix B	Setup Photos
Appendix C1	External Photos
Appendix C2	Internal Photos

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

Appendix A _ Radiated Test Data

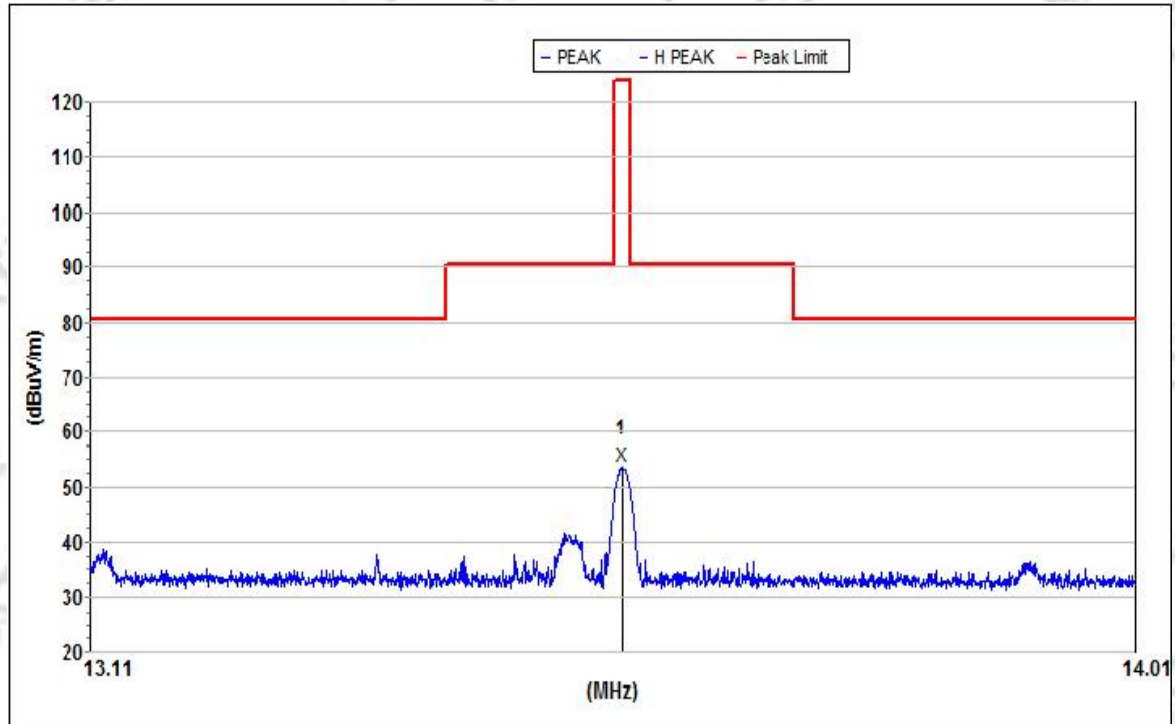
3.3.4. Test Result of Field Strength of Fundamental Emissions

Temperature:	23.4℃	Relative Humidity:	55%RH
Test Voltage:	DC 72V	Test Mode:	NFC H



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	13.584012	54.2	124.0	68.4	30	200	18.3	0.2	H

Temperature:	23.4 °C	Relative Humidity:	55%RH
Test Voltage:	DC 72V	Test Mode:	NFC V

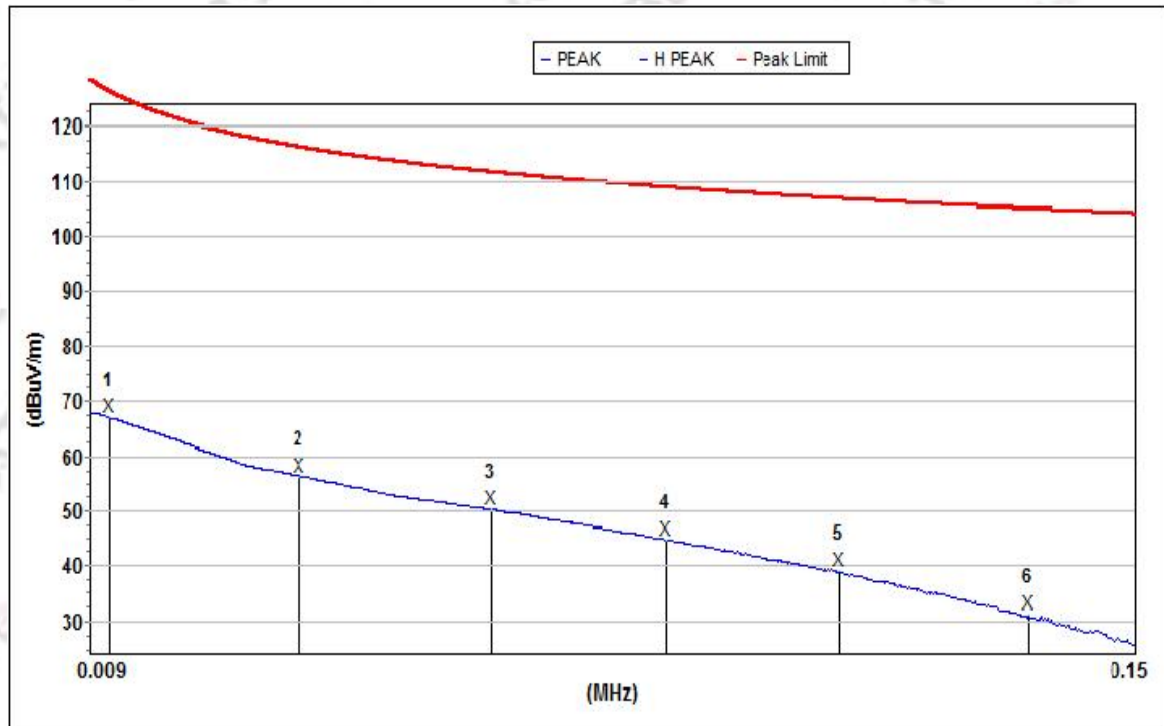


Mk.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Deg. (deg.)	Hi. (cm)	Ant.F/G. (dB/m)	Cbl.L. (dB)	Pol.
Peak:									
1	13.45372	52.2	124.0	67.8	0	200	18.9	0.2	V

3.4.4. Test Result of Radiated Spurious Emission

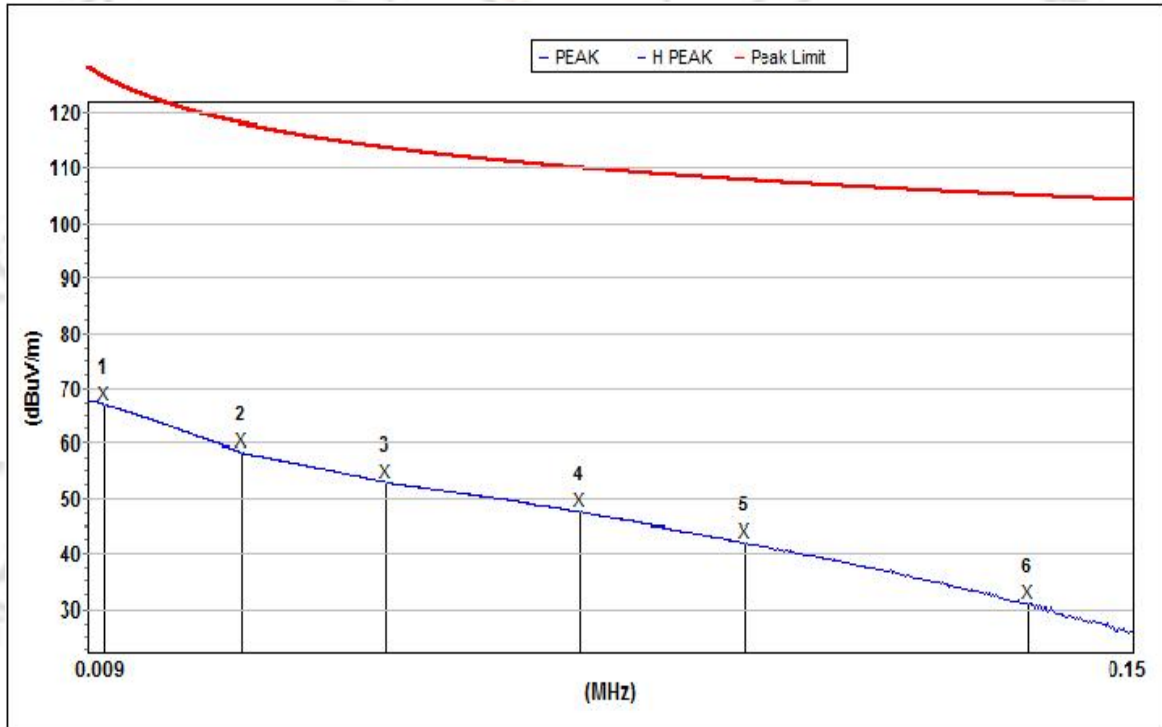
(9kHz-150kHz)

Temperature:	23.4℃	Relative Humidity:	55%RH
Test Voltage:	DC 72V	Test Mode:	NFC H



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	0.012613	66.4	126.3	58.8	360	100	-15.3	0.0	H
2	0.036110	56.8	116.2	58.2	360	150	-24.1	0.0	H
3	0.063372	52.1	111.6	60.8	360	200	-27.2	0.1	H
4	0.085462	43.3	108.8	63.5	360	250	-28.4	0.1	H
5	0.108520	39.6	106.8	67.2	153	300	-28.2	0.1	H
6	0.132522	31.4	105.0	73.4	96	350	-28.5	0.1	H

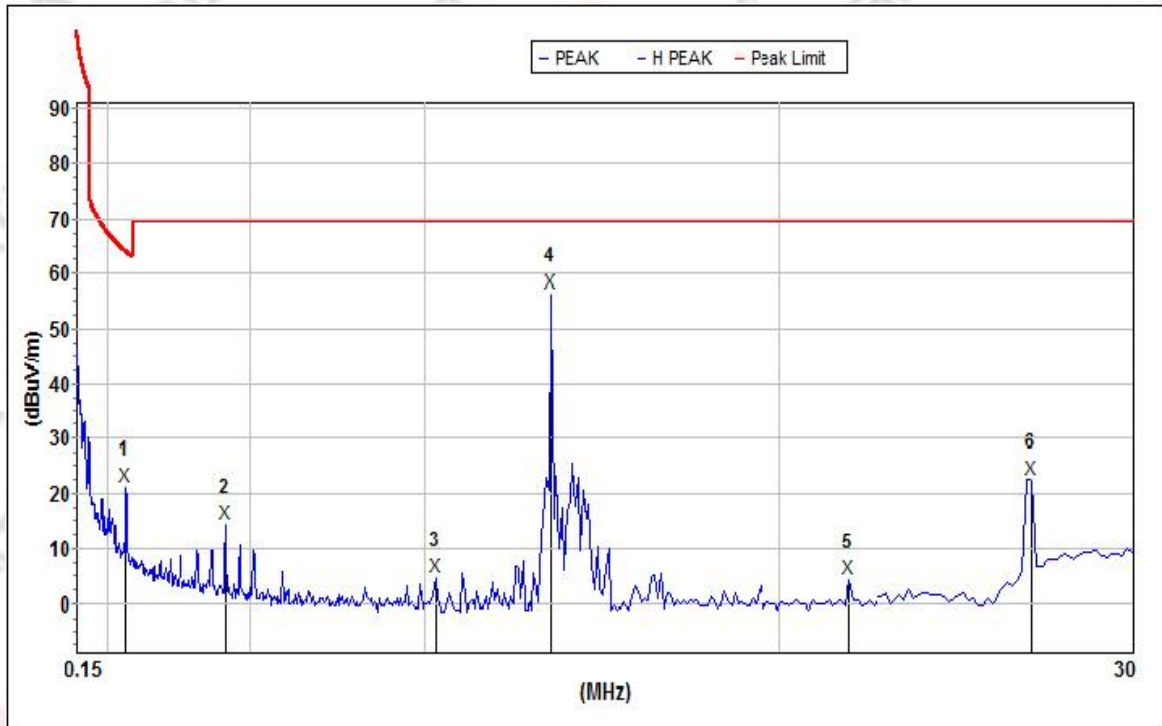
Temperature:	23.4°C	Relative Humidity:	55%RH
Test Voltage:	DC 72V	Test Mode:	NFC V



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	0.011212	66.5	126.7	59.3	0	300	-15.1	0.0	V
2	0.028439	57.3	118.1	59.4	0	250	-22.8	0.0	V
3	0.047525	52.6	113.8	59.8	0	200	-25.5	0.1	V
4	0.074396	46.3	110.0	61.8	0	150	-27.8	0.1	V
5	0.091632	41.6	107.8	64.4	0	100	-28.3	0.1	V
6	0.135242	30.7	104.9	73.6	0	30	-28.7	0.1	V

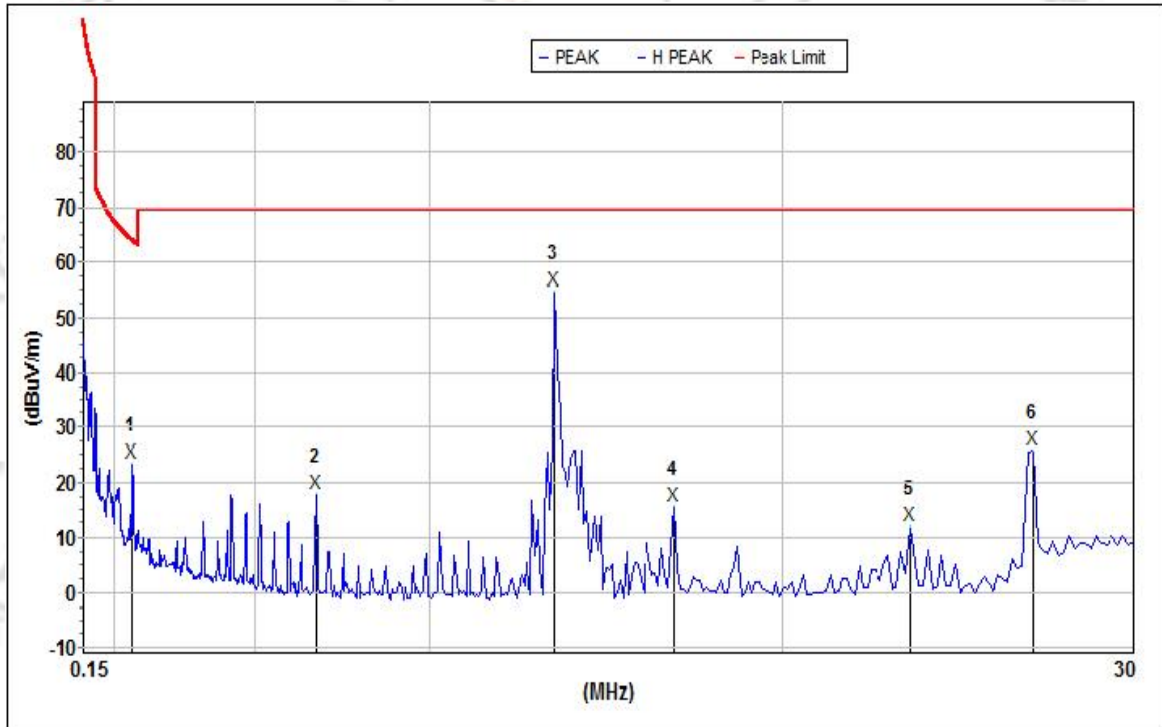
(150kHz~30MHz)

Temperature:	23.4℃	Relative Humidity:	55%RH
Test Voltage:	DC 72V	Test Mode:	NFC H



Mk.	Freq. (MHz)	Level(d BuV/m)	Limit(dBuV/ m)	Margin(d B)	Deg.(de g.)	Hi.(c m)	Ant.F/G.(dB /m)	Cbl.L.(d B)	Po l.
Peak:									
1	1.517262	21.2	64.0	42.3	0	100	-29.4	0.1	H
2	4.326548	14.1	69.5	53.7	0	150	-29.5	0.1	H
3	10.258379	4.4	69.5	64.4	0	200	-31.4	0.2	H
4	13.540577	56.1	69.5	12.5	47	250	-31.5	0.2	H
5	21.933148	4.2	69.5	64.6	83	300	-31.2	0.3	H
6	27.114675	22.4	69.5	46.4	47	350	-31.5	0.3	H

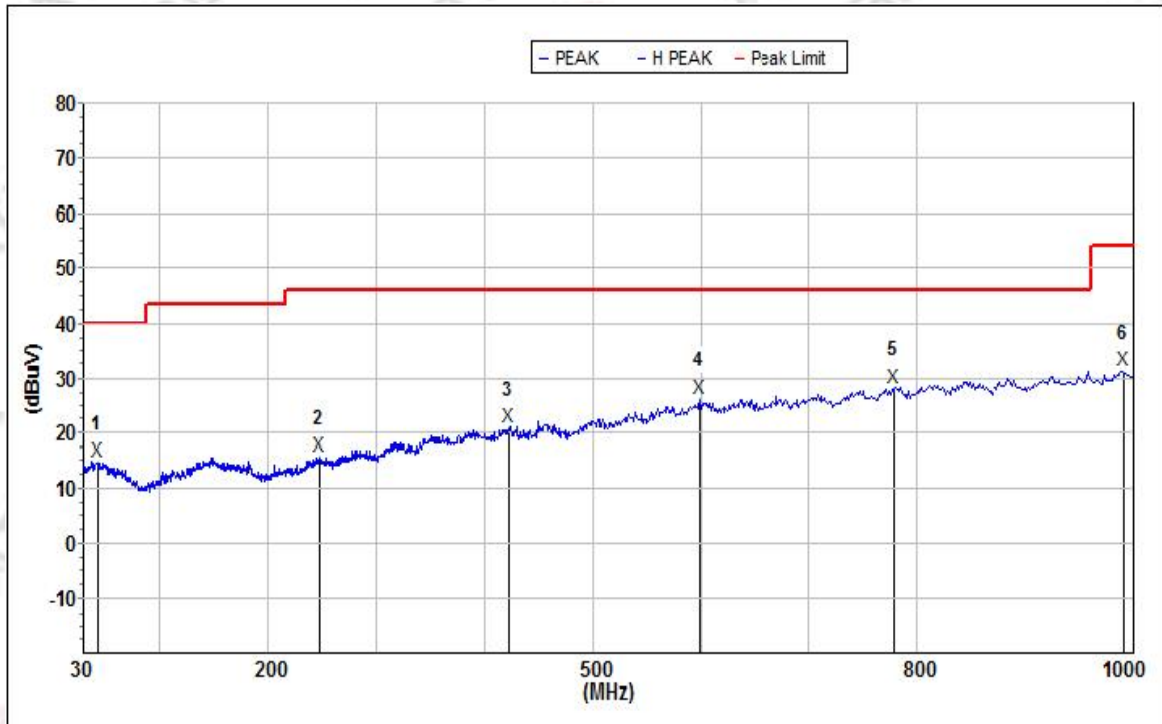
Temperature:	23.4°C	Relative Humidity:	55%RH
Test Voltage:	DC 72V	Test Mode:	NFC V



Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Deg.(deg.)	Hi.(cm)	Ant.F/G.(dB/m)	Cbl.L.(dB)	Po l.
Peak:									
1	1.519292	23.6	64.0	40.4	353	300	-30.0	0.1	V
2	6.769114	17.9	69.5	51.6	106	250	-31.4	0.1	V
3	13.550857	54.7	69.5	14.8	56	200	-31.9	0.2	V
4	16.928170	15.5	69.5	54.0	22	150	-31.9	0.2	V
5	23.636050	12.0	69.5	57.5	22	100	-31.9	0.3	V
6	27.126995	25.7	69.5	43.8	22	30	-32.1	0.3	V

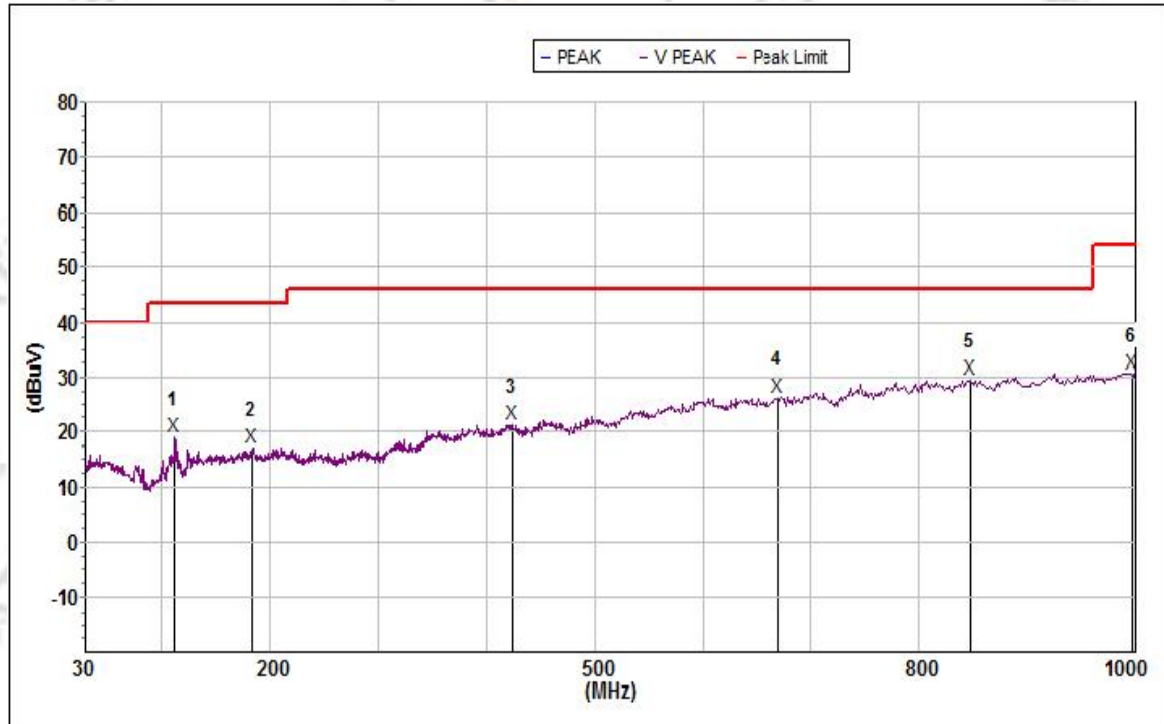
(30MHz~1000MHz)

Temperature:	23.4℃	Relative Humidity:	55%RH
Test Voltage:	DC 72V	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	43.050357	14.6	40.0	25.0	1	396	17.7	31.5	0.6	H
2	248.521523	15.6	46.0	29.4	107	100	16.5	31.4	1.5	H
3	422.765323	21.0	46.0	24.5	129	299	21.4	31.6	2.2	H
4	599.320347	26.3	46.0	19.3	0	100	25.2	30.9	3.0	H
5	779.603463	28.2	46.0	17.2	338	299	27.2	31.2	3.3	H
6	991.235634	31.1	54.0	22.3	33	299	29.5	31.6	3.6	H

Temperature:	23.4°C	Relative Humidity:	55%RH
Test Voltage:	DC 72V	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	111.334522	19.0	43.5	24.1	0	300	15.2	31.4	0.8	V
2	183.100304	17.1	43.5	25.6	249	300	18.1	31.5	1.1	V
3	423.520145	21.4	46.0	24.2	51	200	21.8	31.8	1.8	V
4	670.457146	26.3	46.0	19.1	0	101	26.2	31.0	2.5	V
5	846.530461	29.6	46.0	15.5	344	101	28.3	31.2	3.2	V
6	996.456353	30.4	54.0	22.6	207	200	29.6	31.4	3.6	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 (specific distance / test distance) (dB);
3. Limit line = specific limits (dBμV) + distance extrapolation factor.

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