

FCC RADIO TEST REPORT

FCC ID: T8RAXNL23

Product: AXONE NEMO LIGHT

Trade Mark: TEXA

Model No.: AXONE NEMO LIGHT

Family Model: N/A

Report No.: S24041602106004

Issue Date: Jun 06, 2024

Prepared for

TEXA S.p.A

Via 1 Maggio, 9 - 31050 Monastier di Treviso (TV) - Italy

Prepared by

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TEST RESULT CERTIFICATION

Applicant's name.....: TEXA S.p.A

Address.....: Via 1 Maggio, 9 - 31050 Monastier di Treviso (TV) - Italy

Manufacturer's Name.....: PiPO TECHNOLOGY CO., LTD

Address.....: Area B C, 3F, Bao Yun Da Logistics Center, Warehouse building
Xixiang Avenue, Bao An district Shenzhen China

Product description

Product name.....: AXONE NEMO LIGHT

Trade Mark.....: TEXA

Model and/or type reference : AXONE NEMO LIGHT

Family Model.....: N/A

Test Sample Number.....: S231124042001, S240416021006

Date of Test.....: Nov 24, 2023 ~ Jan 16, 2024
Apr 16, 2024 ~ Jun 06, 2024

Standards.....: FCC Part15.407

Test procedure..... ANSI C63.10-2013
KDB 789033 D02 General UNII Test Procedures New Rules
v02r01

This device described above has been tested by NTEK, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements/ the Industry Canada requirements.. And it is applicable only to the tested sample identified in the report.

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Note: Some test data for this report are based on the original test report S23112404206004, dated by Jan 16, 2024

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Table of Contents	Page
1 . SUMMARY OF TEST RESULTS	5
1.1 FACILITIES AND ACCREDITATIONS	6
1.2 MEASUREMENT UNCERTAINTY	6
2 . GENERAL INFORMATION	7
2.1 GENERAL DESCRIPTION OF EUT	7
2.2 DESCRIPTION OF TEST MODES	9
2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	10
2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)	11
2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS	12
3 . TEST REQUIREMENTS	14
3.1 CONDUCTED EMISSION MEASUREMENT	14
3.2 RADIATED EMISSION MEASUREMENT	19

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1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.407) , Subpart E			
Standard Section	Test Item	Judgment	Remark
15.207	AC Power Line Conducted Emissions	PASS	
15.209(a), 15.407 (b)(1) 15.407 (b)(4)	Spurious Radiated Emissions	PASS	
15.407 (a)(1) 15.407 (a)(3)	26 dB and 99% Emission Bandwidth	PASS	
15.407(e)	Minimum 6 dB bandwidth	PASS	
15.407 (a)(1) 15.407 (a)(3)	Maximum Conducted Output Power	PASS	
15.407(b)(1) 15.407(b)(4)	Band Edge	PASS	
15.407 (a)(1) 15.407 (a)(3)	Power Spectral Density	PASS	
15.407(b)	Spurious Emissions at Antenna Terminals	PASS	
15.203	Antenna Requirement	PASS	
15.407(c)	Automatically discontinue transmission	PASS	

NOTE:

(1) "N/A" denotes test is not applicable in this Test Report

1.1 FACILITIES AND ACCREDITATIONS

FACILITIES

All measurement facilities used to collect the measurement data are located at 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen 518126 P.R. China.

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.10 and CISPR Publication 22.

LABORATORY ACCREDITATIONS AND LISTINGS

Site Description

CNAS-Lab. : The Certificate Registration Number is L5516.

IC-Registration : The Certificate Registration Number is 9270A.
CAB identifier:CN0074

FCC- Accredited : Test Firm Registration Number: 463705.
Designation Number: CN1184

A2LA-Lab. : The Certificate Registration Number is 4298.01
This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009).

Name of Firm : Shenzhen NTEK Testing Technology Co., Ltd.

Site Location : 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen 518126 P.R. China.

1.2 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 Emission Test	$\pm 2.80\text{dB}$
2	RF power, conducted	$\pm 0.16\text{dB}$
3	Spurious emissions, conducted	$\pm 0.21\text{dB}$
4	All emissions, radiated(30MHz~1GHz)	$\pm 2.64\text{dB}$
5	All emissions, radiated(1GHz~6GHz)	$\pm 2.40\text{dB}$
6	All emissions, radiated(> 6GHz)	$\pm 2.52\text{dB}$
7	Temperature	$\pm 0.5^\circ\text{C}$
8	Humidity	$\pm 2\%$
9	All emissions, radiated(9KHz~30MHz)	$\pm 6\text{dB}$

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	AXONE NEMO LIGHT	
Trade Mark	TEXA	
FCC ID	T8RAXNL23	
Model Name	AXONE NEMO LIGHT	
Family Model	N/A	
Model Difference	N/A	
Product Description	IEEE 802.11 WLAN Mode Supported	<input checked="" type="checkbox"/> 802.11a/n/ac (20MHz channel bandwidth) <input checked="" type="checkbox"/> 802.11n/ac (40MHz channel bandwidth) <input checked="" type="checkbox"/> 802.11ac (80MHz channel bandwidth)
	Modulation	OFDM with BPSK/QPSK/16QAM/64QAM/256QAM for 802.11a/n/ac;
	Operating Frequency Range	<input checked="" type="checkbox"/> 5180-5240MHz for 802.11a/n(HT20)/ac(VHT20); 5190-5230MHz for 802.11n(HT40)/ac(VHT40); 5210MHz for 802.11ac(VHT80) <input checked="" type="checkbox"/> 5745-5825 MHz for 802.11a/n(HT20)/ac(VHT20); 5755-5795 MHz for 802.11n(HT40)/ac(VHT40); 5775MHz for 802.11ac(VHT80)
	Number of Channels	<input checked="" type="checkbox"/> 4 channels for 802.11a/n20/ac20 in the 5180-5240MHz band ; 2 channels for 802.11 n40/ac40 in the 5190-5230MHz band ; 1 channels for 802.11 ac80 in the 5210MHz band ; <input checked="" type="checkbox"/> 5 channels for 802.11a/n20/ac20 in the 5745-5825MHz band ; 2 channels for 802.11 n40/ac40 in the 5755-5795MHz band ; 1 channels for 802.11 ac80 in the 5775MHz band ;
	Antenna Type	FPCB Antenna
	Antenna Gain	Ant 1:2.96 dBi; Ant 2:2.69 dBi
	Smart system	<input checked="" type="checkbox"/> SISO for 802.11a/n/ac <input type="checkbox"/> MIMO for 802.11n/ac
	Based on the application, features, or specification exhibited in User's Manual, More details of EUT technical specification, please refer to the User's Manual.	
Adapter	Model: FX36C-120300K Input: 100-240V~50/60Hz 0.8A Output: 12.0V---3.0A (36W)	
Battery	DC 7.4V, 6000mAh, 44.4Wh	
Power supply	DC 7.4V from battery or DC 12V from adapter	
Connecting I/O Port(s)	Please refer to the User's Manual	
HW Version	S103ANJSR100-D8GB	
FW Version	JS-BI-101-S103ANJSR100-D8GB-309-A.bin	
SW Version	Windows 11 pro 22H2 22621.1992	

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
2. Frequency and Channel list for 802.11a/n/ac(20MHz) band I (5180-5240MHz):

802.11a/n/ac(20MHz) Carrier Frequency Channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	44	5220	-	-	-	-
40	5200	48	5240	-	-	-	-

Frequency and Channel list for 802.11n/ac(40MHz) band I (5190-5230MHz):

802.11n/ac(40MHz) Carrier Frequency Channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	-	-	-	-	-	-
46	5230	-	-	-	-	-	-

Frequency and Channel list for 802.11ac(80MHz) band I (5210MHz):

802.11ac(80MHz) Carrier Frequency Channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
42	5210	-	-	-	-	-	-

Frequency and Channel list for 802.11a/n/ac(20 MHz) band IV (5745-5825MHz):

802.11a/n/ac(20 MHz) Carrier Frequency Channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	153	5765	157	5785	161	5805
165	5825	-	-	-	-	-	-

Frequency and Channel list for 802.11n/ac(40MHz) band IV (5755-5795MHz):

802.11n/ac(40MHz) Carrier Frequency Channel					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
151	5755	159	5795	-	-

Frequency and Channel list for 802.11ac(80MHz) band IV (5775MHz):

802.11ac(80MHz) Carrier Frequency Channel					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
155	5775			-	-

2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	Normal Link Mode
Mode 2	802.11a / n 20 / ac 20 CH36/ CH40/ CH 48 802.11a / n 20 / ac 20 CH149/ CH157/ CH 165
Mode 3	802.11n40 / ac40 CH38/ CH 46 802.11n 40 / ac 40 CH 151 / CH 159
Mode 4	802.11ac80 CH 42 802.11ac 80 CH 155

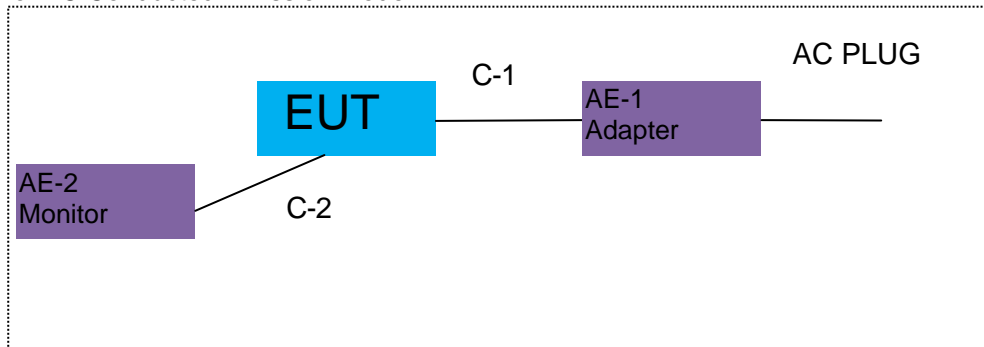
For Radiated Emission	
Final Test Mode	Description
Mode 1	Normal Link Mode
Mode 2	802.11a / n 20 / ac 20 CH36/ CH40/ CH 48 802.11a / n 20 / ac 20 CH149/ CH157/ CH 165
Mode 3	802.11n40 / ac40 CH38/ CH 46 802.11n 40 / ac 40 CH 151 / CH 159
Mode 4	802.11ac80 CH 42 802.11ac 80 CH 155

Note:

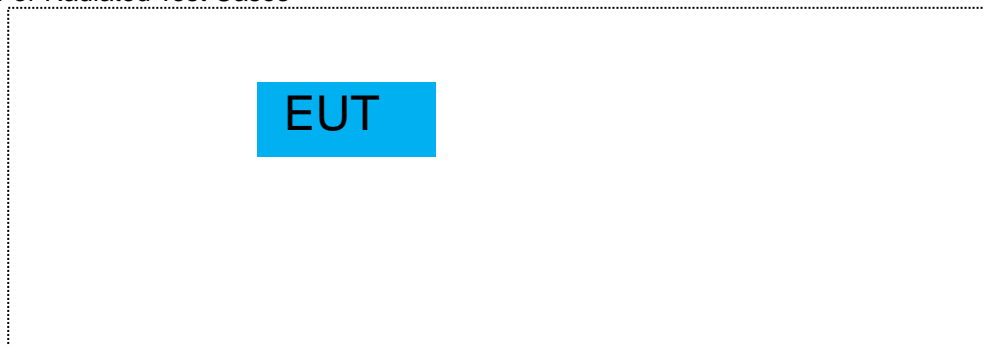
- (1) The measurements are performed at the highest, middle, lowest available channels.
- (2) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

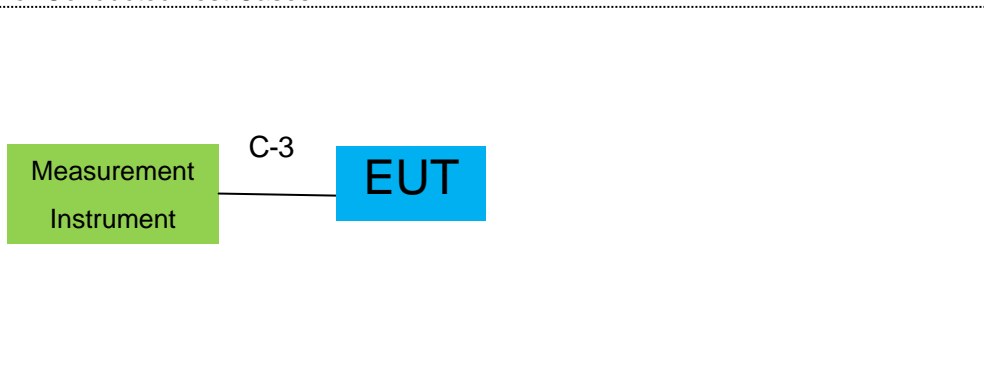
For AC Conducted Emission Mode



For Radiated Test Cases



For Conducted Test Cases



Note:1.The temporary antenna connector is soldered on the PCB board in order to perform conducted tests and this temporary antenna connector is listed in the equipment list.
 2.EUT built-in battery-powered, the battery is fully-charged.

2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Model/Type No.	Series No.	Note
AE-1	Adapter	FX36C-120300K	N/A	Peripherals
AE-2	Monitor	N/A	N/A	Peripherals

Item	Cable Type	Shielded Type	Ferrite Core	Length
C-1	USB Cable	YES	NO	1.0m
C-2	Power Cable	YES	NO	1.0m
C-3	RF Cable	YES	NO	0.1m

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.

2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation& Conducted Test equipment

	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Spectrum Analyzer	Agilent	E4407B	MY45108040	2023.03.27	2024.03.26	1 year
2	Spectrum Analyzer	Agilent	N9020A	MY49100060	2023.05.29	2024.05.28	1 year
3	Spectrum Analyzer	R&S	FSV40	101417	2023.05.29	2024.05.28	1 year
4	Test Receiver	R&S	ESPI7	101318	2024.03.12	2025.03.11	1 year
5	Bilog Antenna	TESEQ	CBL6111D	31216	2023.03.16	2024.03.16	1 year
6	50Ω Coaxial Switch	Anritsu	MP59B	6200983705	2023.05.06	2026.05.05	3 year
7	Horn Antenna	SCHWARZBECK	BBHA 9120D	2816	2023.01.12	2026.01.11	3 year
8	Horn Antenna	SCHWARZBECK	BBHA 9120D	2816	2023.01.12	2026.01.11	3 year
9	Amplifier	EMC	EMC051835SE	980246	2024.01.23	2025.01.22	1 year
10	Active Loop Antenna	SCHWARZBECK	FMZB 1519B	055	2023.11.03	2026.11.02	3 year
11	Power Meter	DARE	RPR3006W	15I00041SN084	2023.05.29	2024.05.28	1 year
12	Test Cable (9KHz-30MHz)	N/A	R-01	N/A	2022.06.17	2025.06.16	3 year
13	Test Cable (30MHz-1GHz)	N/A	R-02	N/A	2022.06.17	2025.06.16	3 year
14	High Test Cable(1G-40G Hz)	N/A	R-03	N/A	2022.06.17	2025.06.16	3 year
15	Filter	TRILTHIC	2400MHz	29	2023.03.26	2026.03.25	3 year
16	temporary antenna connector (Note)	NTS	R001	N/A	N/A	N/A	N/A

Note:

We will use the temporary antenna connector (soldered on the PCB board) When conducted test
And this temporary antenna connector is listed within the instrument list

AC Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Test Receiver	R&S	ESCI	101160	2024.03.12	2025.03.11	1 year
2	LISN	R&S	ENV216	101313	2024.03.12	2025.03.11	1 year
3	LISN	SCHWARZBECK	NNLK 8129	8129245	2024.03.12	2025.03.11	1 year
4	50Ω Coaxial Switch	ANRITSU CORP	MP59B	6200983704	2023.05.06	2026.05.05	3 year
5	Test Cable (9KHz-30MHz)	N/A	C01	N/A	2023.05.06	2026.05.05	3 year
6	Test Cable (9KHz-30MHz)	N/A	C02	N/A	2023.05.06	2026.05.05	3 year
7	Test Cable (9KHz-30MHz)	N/A	C03	N/A	2023.05.06	2026.05.05	3 year

Note: Each piece of equipment is scheduled for calibration once a year except the Test Cable& Aux Equipment which is scheduled for calibration every 3 years.

3. TEST REQUIREMENTS

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 APPLICABLE STANDARD

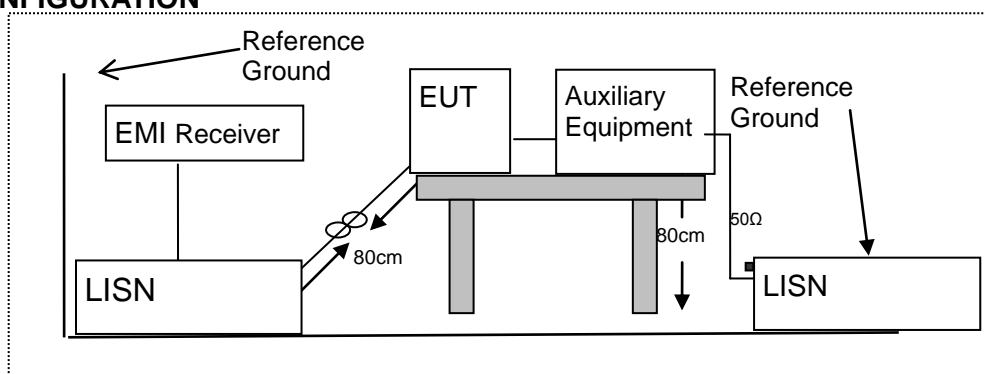
According to FCC Part 15.207(a)

3.1.2 CONFORMANCE LIMIT

Frequency(MHz)	Conducted Emission Limit	
	Quasi-peak	Average
0.15-0.5	66-56*	56-46*
0.5-5.0	56	46
5.0-30.0	60	50

Note: 1. *Decreases with the logarithm of the frequency
 2. The lower limit shall apply at the transition frequencies
 3. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

3.1.3 TEST CONFIGURATION



3.1.4 TEST PROCEDURE

According to the requirements in Section 13.1.4.1 of ANSI C63.10-2013 Conducted emissions the EUT measured in the frequency range between 0.15 MHz and 30 MHz using CISPR Quasi-Peak and average detector mode.

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room.
2. The EUT was placed on a table which is 0.8m above ground plane.
3. Connect EUT to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
4. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40cm long.
5. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
6. LISN at least 80 cm from nearest part of EUT chassis.
7. The frequency range from 150KHz to 30MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth(IF bandwidth=9KHz) with Maximum Hold Mode
9. For the actual test configuration, please refer to the related Item –EUT Test Photos.

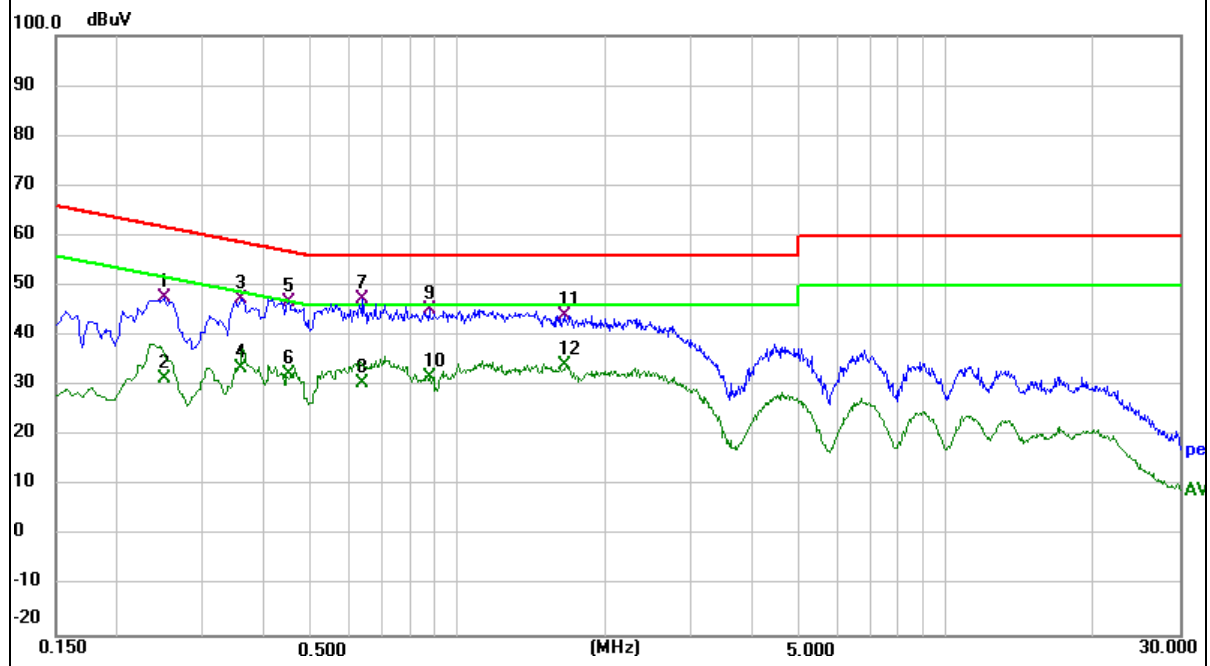
3.1.5 TEST RESULTS

EUT :	AXONE NEMO LIGHT	Model Name :	AXONE NEMO LIGHT
Temperature :	22°C	Relative Humidity :	57%
Pressure :	1010hPa	Phase :	L
Test Voltage :	DC 12V from Adapter AC 120V/60Hz	Test Mode :	Mode 1(5.2G)

Frequency (MHz)	Reading Level (dBμV)	Correct Factor (dB)	Measure-ment (dBμV)	Limits (dBμV)	Margin (dB)	Remark
0.2500	37.42	10.14	47.56	61.76	-14.20	QP
0.2500	21.31	10.14	31.45	51.76	-20.31	AVG
0.3593	37.10	10.36	47.46	58.74	-11.28	QP
0.3593	23.29	10.36	33.65	48.74	-15.09	AVG
0.4500	36.16	10.55	46.71	56.88	-10.17	QP
0.4500	21.95	10.55	32.50	46.88	-14.38	AVG
0.6380	36.31	10.93	47.24	56.00	-8.76	QP
0.6380	19.65	10.93	30.58	46.00	-15.42	AVG
0.8740	33.75	11.40	45.15	56.00	-10.85	QP
0.8740	20.44	11.40	31.84	46.00	-14.16	AVG
1.6500	31.08	12.96	44.04	56.00	-11.96	QP
1.6500	21.06	12.96	34.02	46.00	-11.98	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

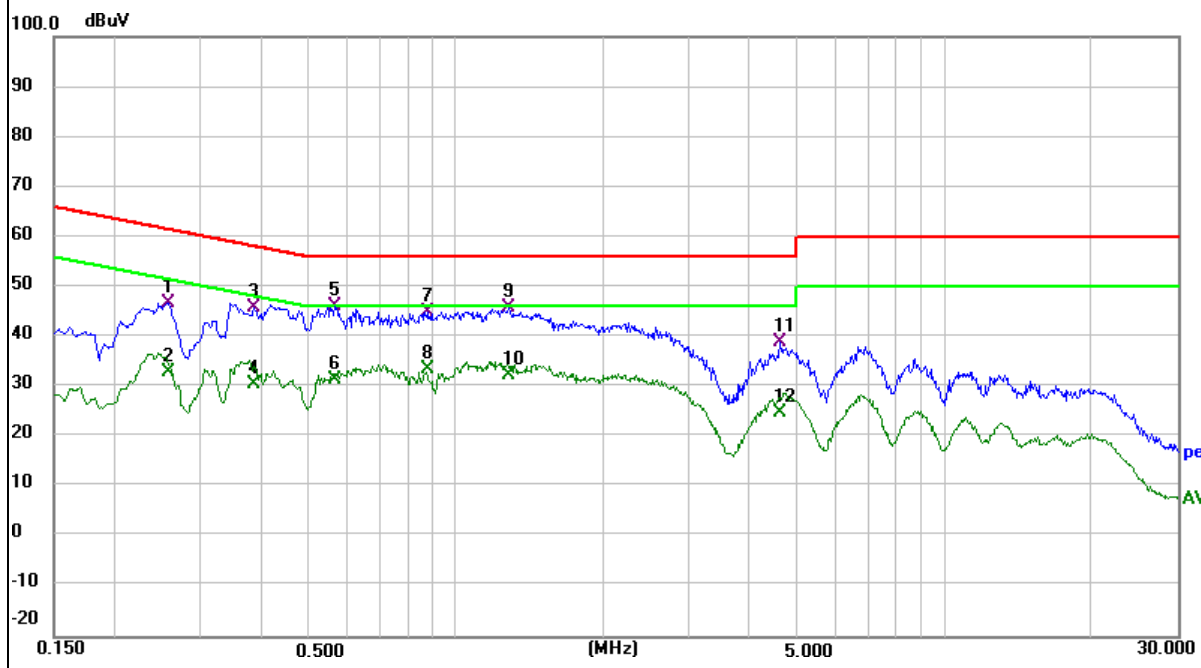


EUT :	AXONE NEMO LIGHT	Model Name :	AXONE NEMO LIGHT
Temperature :	22°C	Relative Humidity :	57%
Pressure :	1010hPa	Phase :	N
Test Voltage :	DC 12V from Adapter AC 120V/60Hz	Test Mode :	Mode 1(5.2G)

Frequency (MHz)	Reading Level (dBμV)	Correct Factor (dB)	Measure-ment (dBμV)	Limits (dBμV)	Margin (dB)	Remark
0.2580	36.72	10.16	46.88	61.50	-14.62	QP
0.2580	22.86	10.16	33.02	51.50	-18.48	AVG
0.3860	35.39	10.42	45.81	58.15	-12.34	QP
0.3860	20.03	10.42	30.45	48.15	-17.70	AVG
0.5660	35.42	10.79	46.21	56.00	-9.79	QP
0.5660	20.79	10.79	31.58	46.00	-14.42	AVG
0.8740	33.53	11.40	44.93	56.00	-11.07	QP
0.8740	22.29	11.40	33.69	46.00	-12.31	AVG
1.2860	33.56	12.24	45.80	56.00	-10.20	QP
1.2860	20.26	12.24	32.50	46.00	-13.50	AVG
4.6060	29.32	9.67	38.99	56.00	-17.01	QP
4.6060	15.23	9.67	24.90	46.00	-21.10	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

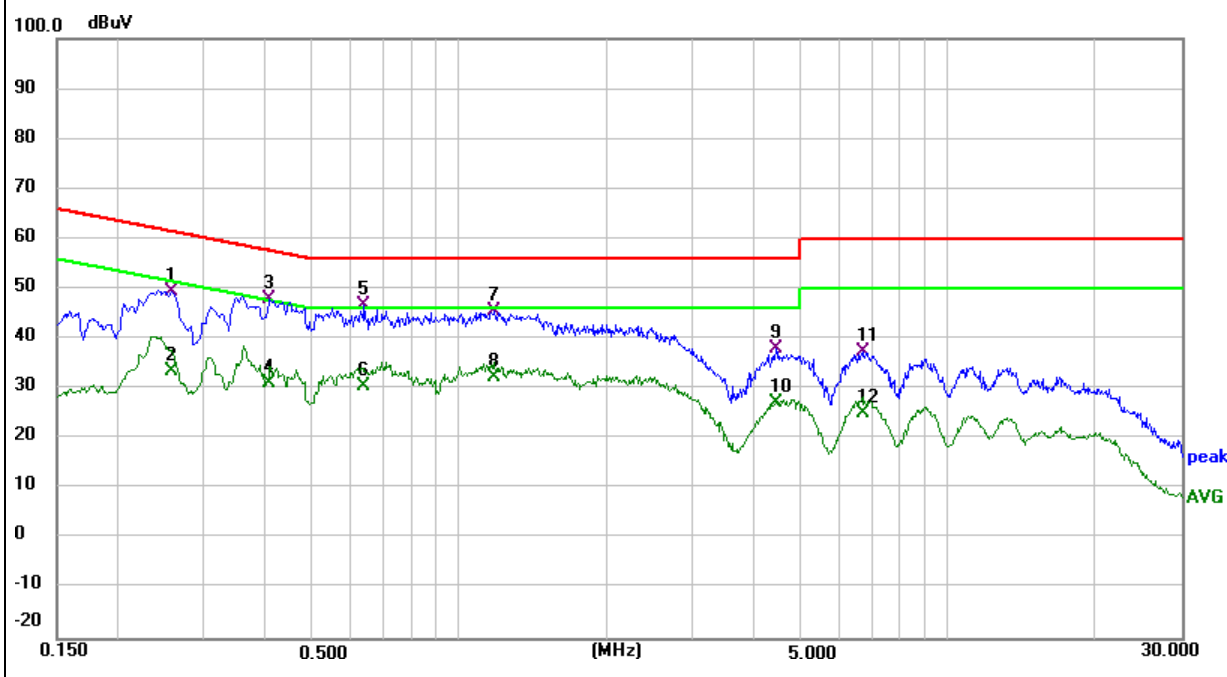


EUT :	AXONE NEMO LIGHT	Model Name :	AXONE NEMO LIGHT
Temperature :	22 °C	Relative Humidity :	57%
Pressure :	1010hPa	Phase :	L
Test Voltage :	DC 12V from Adapter AC 120V/60Hz	Test Mode :	Mode 1(5.8G)

Frequency (MHz)	Reading Level (dBμV)	Correct Factor (dB)	Measure-ment (dBμV)	Limits (dBμV)	Margin (dB)	Remark
0.2580	39.17	10.16	49.33	61.50	-12.17	QP
0.2580	23.42	10.16	33.58	51.50	-17.92	AVG
0.4100	37.43	10.47	47.90	57.65	-9.75	QP
0.4100	20.78	10.47	31.25	47.65	-16.40	AVG
0.6380	35.81	10.93	46.74	56.00	-9.26	QP
0.6380	19.52	10.93	30.45	46.00	-15.55	AVG
1.1820	33.42	12.02	45.44	56.00	-10.56	QP
1.1820	20.34	12.02	32.36	46.00	-13.64	AVG
4.4420	28.31	9.67	37.98	56.00	-18.02	QP
4.4420	17.44	9.67	27.11	46.00	-18.89	AVG
6.6860	27.68	9.68	37.36	60.00	-22.64	QP
6.6860	15.57	9.68	25.25	50.00	-24.75	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

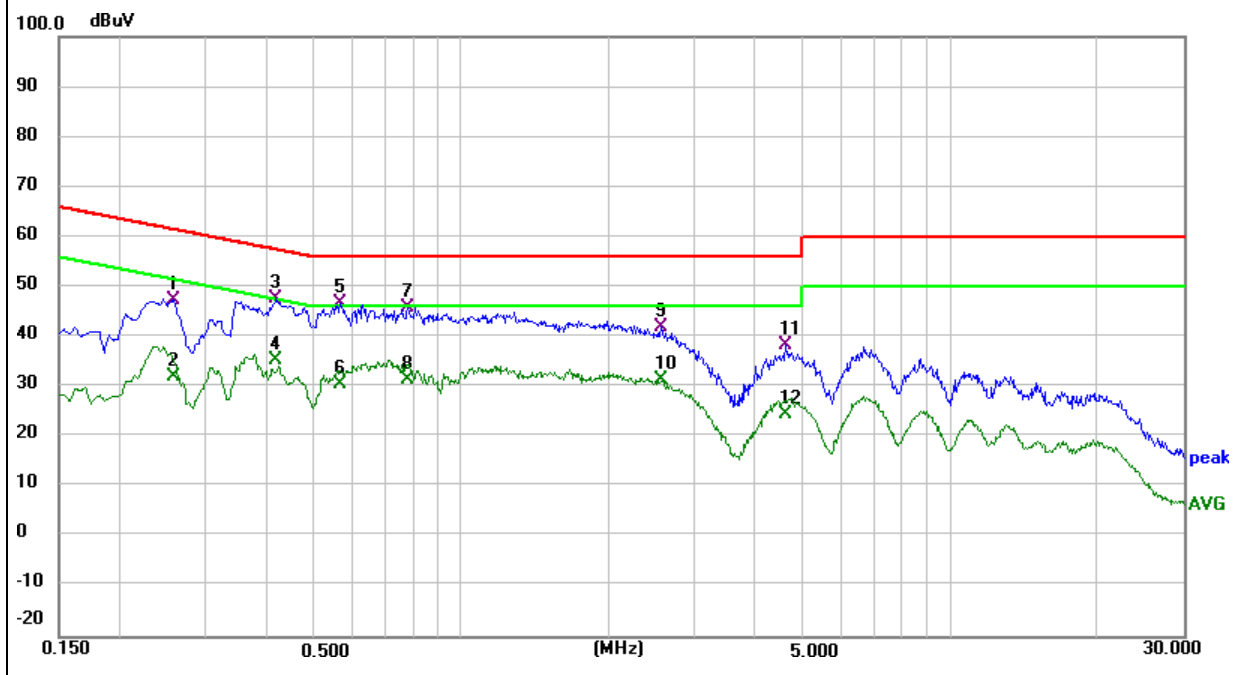


EUT :	AXONE NEMO LIGHT	Model Name :	AXONE NEMO LIGHT
Temperature :	22 °C	Relative Humidity :	57%
Pressure :	1010hPa	Phase :	N
Test Voltage :	DC 12V from Adapter AC 120V/60Hz	Test Mode :	Mode 1(5.8G)

Frequency (MHz)	Reading Level (dBμV)	Correct Factor (dB)	Measure-ment (dBμV)	Limits (dBμV)	Margin (dB)	Remark
0.2580	37.22	10.16	47.38	61.50	-14.12	QP
0.2580	21.86	10.16	32.02	51.50	-19.48	AVG
0.4180	37.08	10.49	47.57	57.49	-9.92	QP
0.4180	24.83	10.49	35.32	47.49	-12.17	AVG
0.5660	35.92	10.79	46.71	56.00	-9.29	QP
0.5660	19.69	10.79	30.48	46.00	-15.52	AVG
0.7780	34.56	11.22	45.78	56.00	-10.22	QP
0.7780	20.36	11.22	31.58	46.00	-14.42	AVG
2.5660	32.22	9.67	41.89	56.00	-14.11	QP
2.5660	21.87	9.67	31.54	46.00	-14.46	AVG
4.6060	28.82	9.67	38.49	56.00	-17.51	QP
4.6060	15.02	9.67	24.69	46.00	-21.31	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.



3.2 RADIATED EMISSION MEASUREMENT

3.2.1 APPLICABLE STANDARD

According to FCC Part 15.407(b) and 15.209

3.2.2 CONFORMANCE LIMIT

According to FCC Part 15.407(b)(7): radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

According to FCC Part 15.205, Restricted bands

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(2)
13.36-13.41			

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Restricted Frequency(MHz)	Field Strength (μV/m)	Field Strength (dBμV/m)	Measurement Distance
0.009-0.490	2400/F(KHz)	20 log (uV/m)	300
0.490-1.705	24000/F(KHz)	20 log (uV/m)	30
1.705-30.0	30	29.5	30
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

Limits of Radiated Emission Measurement(Above 1000MHz)

Frequency(MHz)	Class B (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Remark : 1. Emission level in dBuV/m=20 log (uV/m)

2. Measurement was performed at an antenna to the closed point of EUT distance of meters.

3. For Frequency 9kHz~30MHz:

Distance extrapolation factor =40log(Specific distance/ test distance)(dB);

Limit line=Specific limits(dBuV) + distance extrapolation factor.

For Frequency above 30MHz:

Distance extrapolation factor =20log(Specific distance/ test distance)(dB);

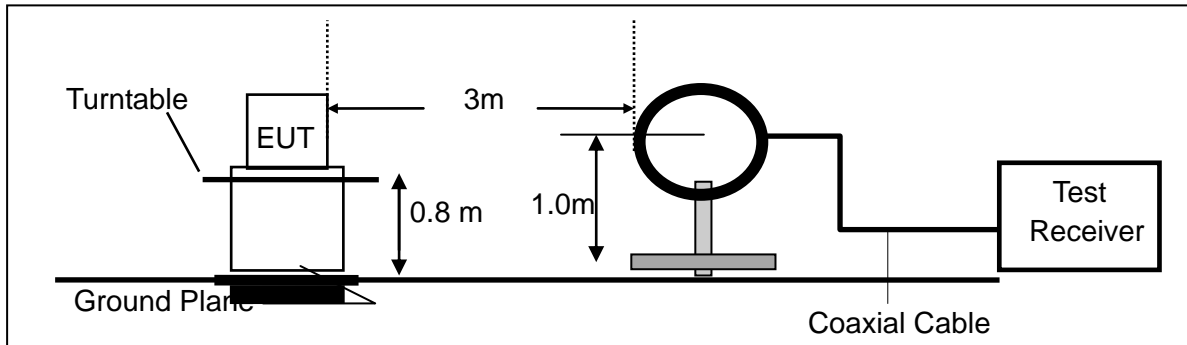
Limit line=Specific limits(dBuV) + distance extrapolation factor.

3.2.3 MEASURING INSTRUMENTS

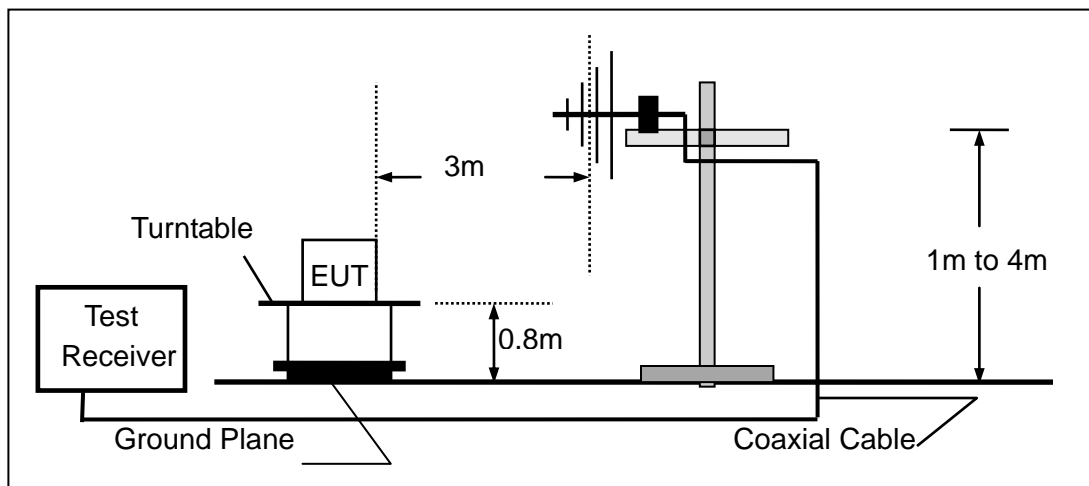
The Measuring equipment is listed in the section 6.3 of this test report.

3.2.4 TEST CONFIGURATION

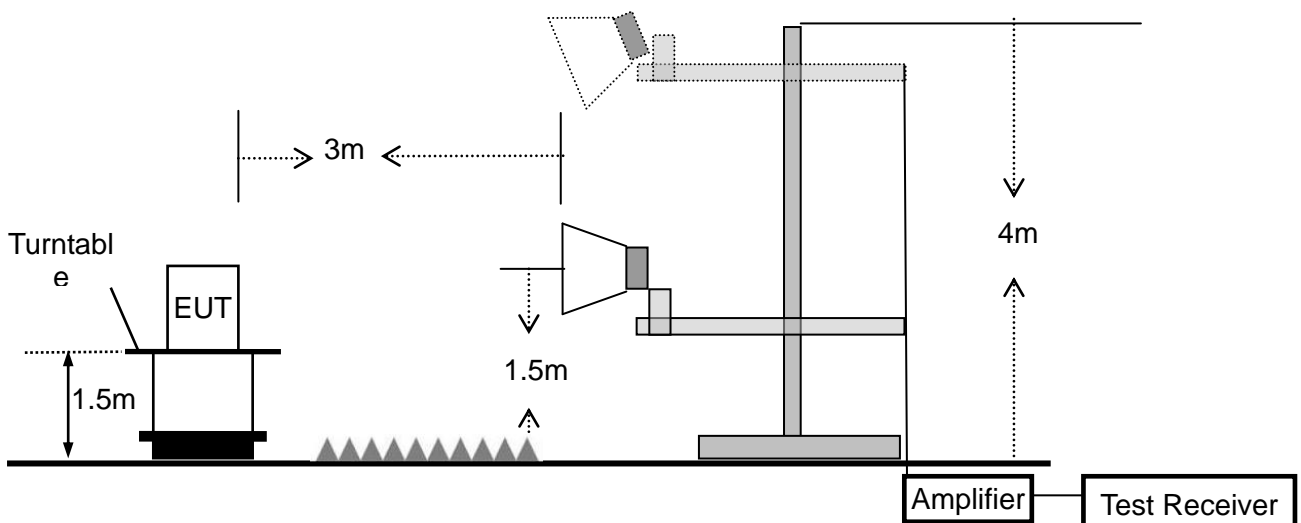
(a) For radiated emissions below 30MHz



(b) For radiated emissions from 30MHz to 1000MHz



(c) For radiated emissions above 1000MHz



3.2.5 TEST PROCEDURE

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.10-2013. The test distance is 3m. The setup is according to the requirements in Section 13.1.4.1 of ANSI C63.10-2013 and CAN/CSA-CEI/IEC CISPR 22.

This test is required for any spurious emission that falls in a Restricted Band, as defined in Section 15.205. It must be performed with the highest gain of each type of antenna proposed for use with the EUT.

Use the following spectrum analyzer settings:

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 1MHz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

- The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- The EUT was placed on the top of a rotating table 0.8 m for below 1GHz and 1.5m for above 1GHz the ground at a 3 meter. The table was rotated 360 degrees to determine the position of the highest radiation.
- The height of the equipment or of the substitution antenna shall be 0.8 m for below 1GHz and 1.5m for above 1GHz; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

During the radiated emission test, the Spectrum Analyzer was set with the following configurations:

Frequency Band (MHz)	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	QP	120 kHz	300 kHz
Above 1000	Peak	1 MHz	1 MHz
	Average	1 MHz	1 MHz

Note: for the frequency ranges below 30 MHz, a narrower RBW is used for these ranges but the measured value should add a RBW correction factor (RBWCF) where $RBWCF [dB] = 10 \cdot \lg(100 [kHz] / \text{narrower RBW [kHz]})$. , the narrower RBW is 1 kHz and RBWCF is 20 dB for the frequency 9 kHz to 150 kHz, and the narrower RBW is 10 kHz and RBWCF is 10 dB for the frequency 150 kHz to 30 MHz.

3.2.6 TEST RESULTS (9KHz – 30 MHz)

EUT:	AXONE NEMO LIGHT	Model Name. :	AXONE NEMO LIGHT
Temperature:	20 °C	Relative Humidity:	48%
Pressure:	1010 hPa	Test Voltage :	DC 7.4V,
Test Mode :	TX	Polarization :	--

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	N/A
--	--	--	--	N/A

NOTE:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

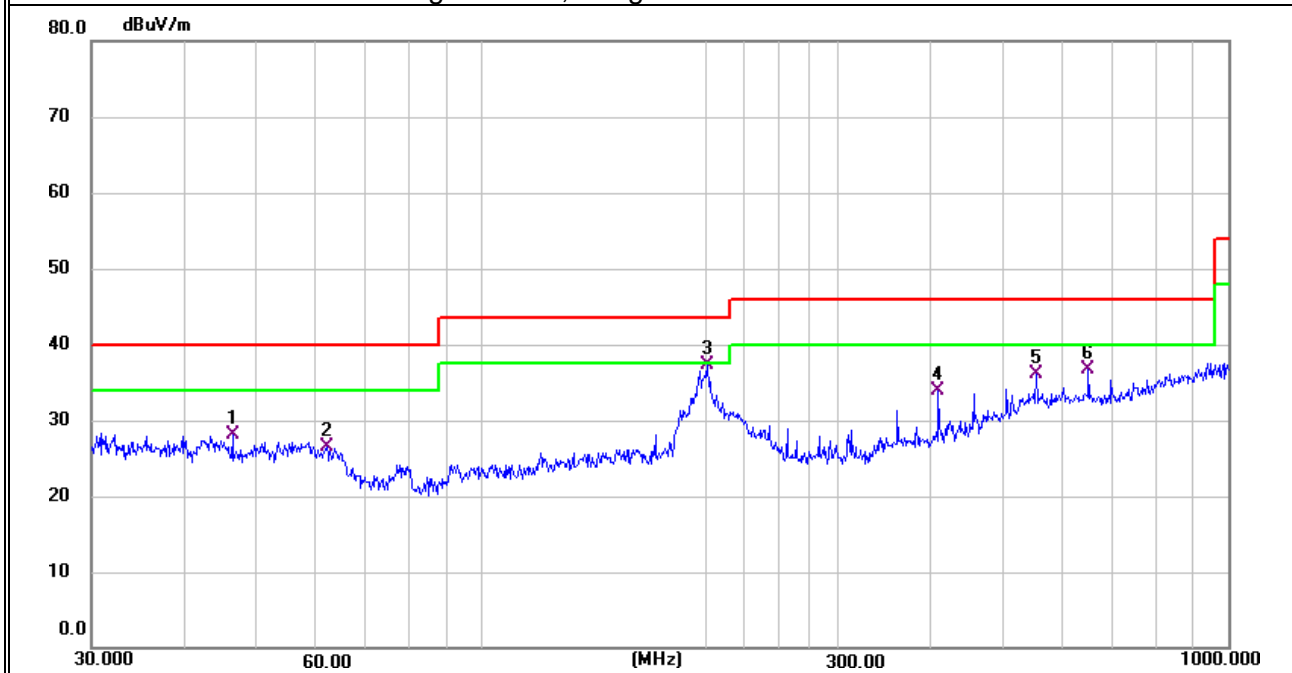
3.2.7 TEST RESULTS (30MHz – 1GHz)

EUT :	AXONE NEMO LIGHT	Model Name. :	AXONE NEMO LIGHT
Temperature :	25°C	Relative Humidity :	55%
Pressure :	1010 hPa	Test Voltage :	DC 7.4V,
Test Mode :	TX(5.2G)- 802.11ac20 (Mid CH) Ant1		

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
V	46.3402	8.63	19.39	28.02	40.00	-11.98	QP
V	61.9950	7.86	18.59	26.45	40.00	-13.55	QP
V	200.6880	19.81	17.44	37.25	43.50	-6.25	QP
V	408.9460	11.48	22.38	33.86	46.00	-12.14	QP
V	552.8831	10.32	25.77	36.09	46.00	-9.91	QP
V	649.6594	10.02	26.70	36.72	46.00	-9.28	QP

Remark:

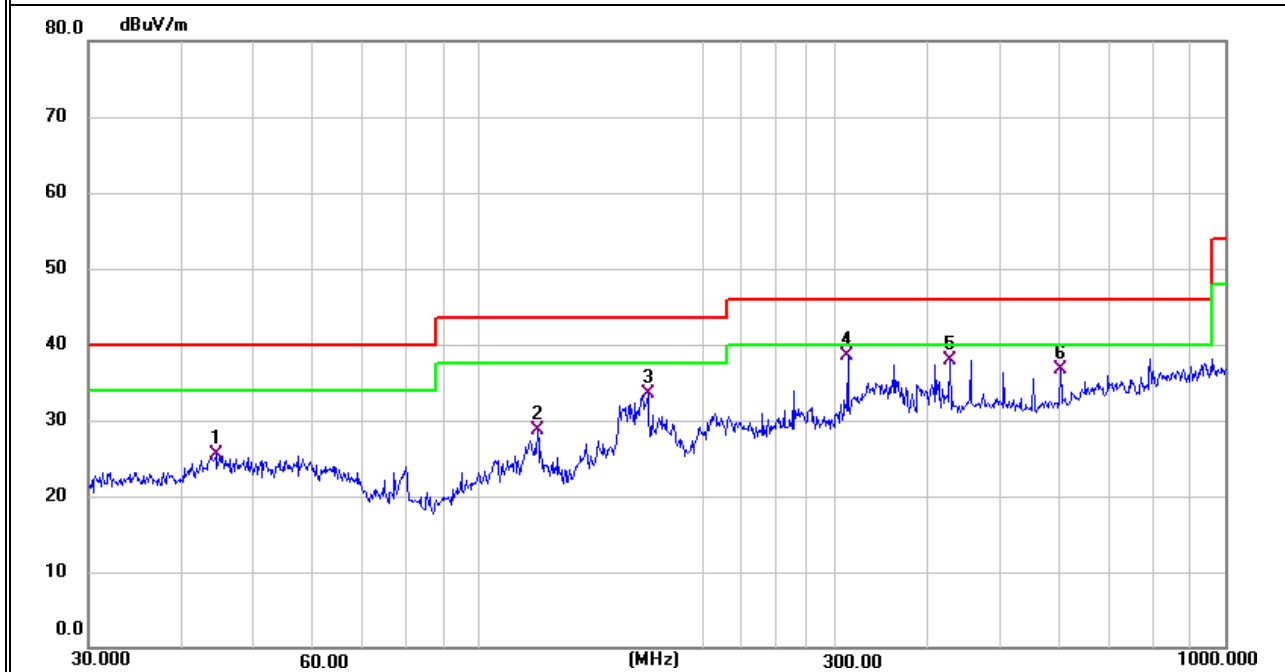
Emission Level = Meter Reading + Factor, Margin= Emission Level - Limit



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	44.4307	6.00	19.47	25.47	40.00	-14.53	QP
H	119.8555	12.36	16.41	28.77	43.50	-14.73	QP
H	168.4137	18.49	15.04	33.53	43.50	-9.97	QP
H	312.1792	18.28	20.22	38.50	46.00	-7.50	QP
H	428.0192	14.84	23.07	37.91	46.00	-8.09	QP
H	601.4265	10.05	26.74	36.79	46.00	-9.21	QP

Remark:

Emission Level = Meter Reading + Factor, Margin= Emission Level - Limit



Note(1)“802.11ac20” mode is the worst mode.

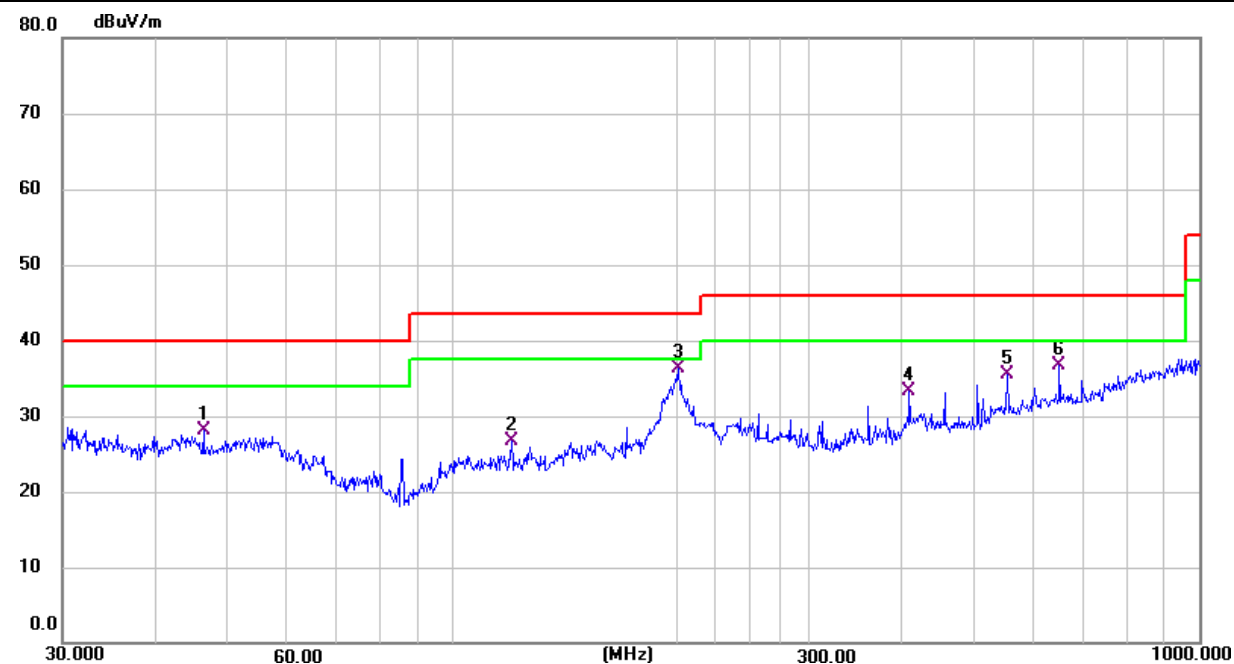
(2)Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

EUT :	AXONE NEMO LIGHT	Model Name. :	AXONE NEMO LIGHT
Temperature :	25°C	Relative Humidity :	55%
Pressure :	1010 hPa	Test Voltage :	DC 7.4V,
Test Mode :	TX(5.8G)- 802.11ac20(Mid CH) Ant1		

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
V	46.3402	8.63	19.39	28.02	40.00	-11.98	QP
V	119.8555	10.25	16.41	26.66	43.50	-16.84	QP
V	200.6880	18.81	17.44	36.25	43.50	-7.25	QP
V	408.9460	10.98	22.38	33.36	46.00	-12.64	QP
V	552.8831	9.82	25.77	35.59	46.00	-10.41	QP
V	649.6594	10.02	26.70	36.72	46.00	-9.28	QP

Remark:

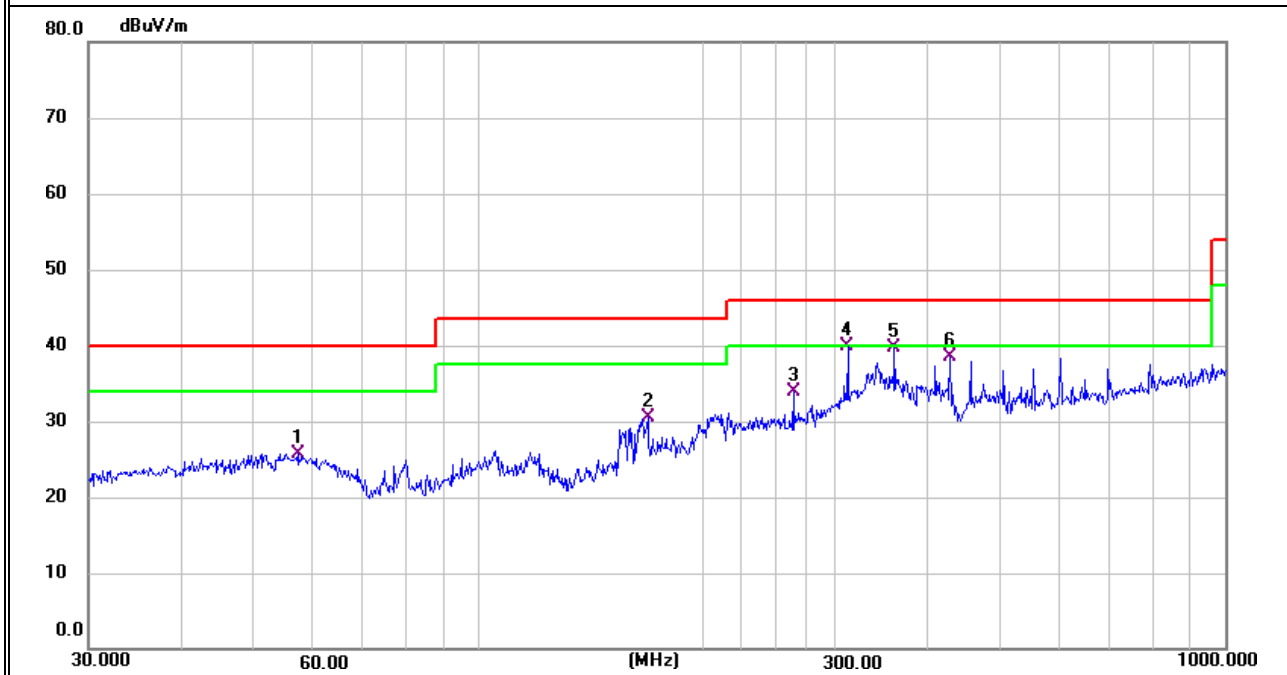
Emission Level = Meter Reading + Factor, Margin= Emission Level - Limit



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	57.1914	6.47	19.29	25.76	40.00	-14.24	QP
H	168.4137	15.49	15.04	30.53	43.50	-12.97	QP
H	263.8190	14.84	19.16	34.00	46.00	-12.00	QP
H	312.1792	19.78	20.22	40.00	46.00	-6.00	QP
H	360.4476	17.74	22.06	39.80	46.00	-6.20	QP
H	428.0192	15.34	23.07	38.41	46.00	-7.59	QP

Remark:

Emission Level = Meter Reading + Factor, Margin= Emission Level - Limit



Note(1)“802.11ac20” mode is the worst mode.

(2)Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

END OF REPORT