

TEST REPORT

Report No..... : ATA2604166E-01
FCC ID..... : 2BVS3-X80PRO
Applicant..... : Shenzhen Newxinxing Technology Co. LTD
Address..... : Unit 401, Unit 2, Jandong, No.6, Technology Middle Road. Maling Community, YuehaiStreet, Nanshan District, Shenzhen, Guangdong, China
Manufacturer..... : Shenzhen Newxinxing Technology Co. LTD
Address..... : Unit 401, Unit 2, Jandong, No.6, Technology Middle Road. Maling Community, YuehaiStreet, Nanshan District, Shenzhen, Guangdong, China
Product Name..... : X80Pro
Trade Mark..... : N/A
Test Model..... : X80 Pro
Standard..... : FCC CFR Title 47 Part 15 Subpart C Section 15.225
Test procedure..... : IEEE/ANSI C63.10-2020
Date of Receipt..... : Apr. 12, 2026
Date of Test Date..... : Apr. 12, 2026~Apr. 22, 2026
Date of issue..... : Apr. 22, 2026
Test result..... : Pass

Compiled by:

(Printed name+signature)

Lily Zheng

Lily Zheng

Supervised by:

(Printed name+signature)

Travis Young

Travis Young

Approved by:

(Printed name+signature)

Jason chen

Jason chen

Testing Laboratory Name..... : Shenzhen ATA Testing Lab. Inc

Address..... : 4th Floor, Building 10, No.60 Nanchang Road, Nanchang Community, Xixiang Street, Bao'an District, Shenzhen City, China

This test report may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product endorsement by ATA. The test results in the report only apply to the tested sample. The test report shall be invalid without all the signatures of testing engineers, reviewer and approver. Any objections must be raised to ATA within 15 days since the date when the report is received. It will not be taken into consideration beyond this limit. The test report merely correspond to the test sample.

TABLE OF CONTENTS	Page
1. TEST SUMMARY	3
1.1. TEST STANDARDS	3
1.2. REPORT VERSION	3
1.3. TEST DESCRIPTION	4
1.4. TEST FACILITY	5
1.5. MEASUREMENT UNCERTAINTY	6
1.6. ENVIRONMENTAL CONDITIONS	6
2. GENERAL INFORMATION	7
2.1. GENERAL DESCRIPTION OF EUT	7
2.2. DESCRIPTION OF THE TEST MODES	8
2.3. BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	8
2.4. DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS	9
2.5. MEASUREMENT INSTRUMENTS LIST	10
2.5. TEST SOFTWARE	11
3. TEST ITEM AND RESULTS	12
3.1. ANTENNA REQUIREMENT	12
3.2. CONDUCTED EMISSION	13
3.3. RADIATED EMISSION MEASUREMENT	16
3.3.1 RADIATED EMISSION LIMITS	16
3.3.2 FCC CFR TITLE 47 PART 15 SUBPART C SECTION15.247 (D):	16
3.3.3 TEST PROCEDURE	18
3.3.4 FIELD STRENGTH CALCULATION	19
3.4. TEST RESULTS	20
4. FREQUENCY TOLERANCE	25
4.1. LIMIT	25
4.2. TEST PROCEDURE	25
4.3. TESTSETUP	25
4.4. EUT OPERATION CONDITIONS	25
4.5. TEST PROCEDURE	26
4.6. 20dB BANDWIDTH	27
4.7. LIMIT	27
4.8. TEST PROCEDURE	27
4.9. TEST SETUP	27
4.10. EUT OPERATION CONDITIONS	27
4.11. TEST RESULTS	28
5. EUT TEST PHOTOS	29
6. PHOTOGRAPHS OF EUT CONSTRUCTIONAL	29

1. TEST SUMMARY

1.1. Test Standards

The tests were performed according to following standards:

FCC Rules Part 15.225: Operation within the band 13.110-14.010 MHz. (a) The field strength of any emissions within the band 13.553-13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters.

ANSI C63.10-2020: American National Standard for Testing Unlicensed Wireless Devices.

1.2. Report version

Revised No.	Date of issue	Description
01	Apr. 22, 2026	Original

1.3. Test Description

FCC Part 15 Subpart C(15.247)			
Test Item	Standard Section	Result	Remark
	FCC		
Antenna Requirement	15.203	Pass	
Conducted Emission	15.207	Pass	
Radiated Emission	15.209 15.225(a)(b)(c)(d)	Pass	
Frequency Tolerance	15.22(e)	Pass	
20dB Bandwidth	15.205&15.209	Pass	

Note:(1) "N/A" denotes test is not applicable to this device.

1.4. Test Facility

Test Site	Shenzhen ATA Testing Lab. Inc
Test Site Location	4th Floor, Building 10, No. 60 Nanchang Road, Nanchang Community, Xixiang Street, Bao'an District, Shenzhen City, China
Telephone:	+86 0755-2783-0095
Fax:	+86 0755-2783-0095

The test facility is recognized, certified, or accredited by the following organizations:	A2LA Accreditation Lab Certificate Number: 839205
	FCC Accredited Lab Designation Number: CN1455

1.5. Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to TR-100028-01 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 1" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 2" and is documented in the Shenzhen ATA Testing Lab. Inc system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device. Below is the best measurement capability for Shenzhen ATA Testing Lab. Inc

Test Items	Measurement Uncertainty	U(k=2)
Radiated Emissions 9K-30MHz	± 2.70 dB	1.96
Radiated Emissions 30~1000MHz	± 5.432 dB	1.96
Radiated Emissions 1~18GHz	± 3.88 dB	1.96
Radiated Emissions 18~40GHz	± 5.32 dB	1.96
Conducted Emissions 9kHz~150KHz	± 3.90 dB	1.96
Conducted Emissions 150Hz~30MHz	± 3.52 dB	1.96
Conducted spurious emissions	± 1.60 dB	1.96
RF Output Ppower Conducted	± 0.58 dB	1.96
Power Spectral Density Conducted	± 1.52 dB	1.96
Occupied Bandwidth	$\pm 0.463\%$	1.96
Humidity uncertainty	$\pm 2.0\%$ RH	1.96
Temperature uncertainty	$\pm 0.6^{\circ}\text{C}$	1.96
Barometric pressure uncertainty	0.5hPa	1.96

Note (1): This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=1.96$.

1.6. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15~35°C
Relative Humidity:	30~60 %
Air Pressure:	950~1050mba

2. GENERAL INFORMATION

2.1. General Description of EUT

Product Name:	X80Pro
Trade Mark:	N/A
Test Model:	X80 Pro
Series Model(s):	X80, X80 Max, X80 Mini, X80 Plus, X80 Ultra, X90, X90 Pro, X90 Mini, X90 Max, X70, X70 Pro, X70 mini, X60, X60 Pro, X60 Plus, X60 Ultra, X50, X50 Max, X50 Pro, X50 ultra, X50 Plus, X50 Mini, X40, X40 Pro, X30, X30 Pro, X20, X20 Pro, X20 Max, X10, X10 Pro, X9, X9 Pro, X8, X8 Pro, X7, X7 Pro, X6, X6 Pro, X5, X5 Pro, X4, X3, X2, X1, X0, V8 mini, V8 Max, V8 Pro, V8 ULTRA, GT20, GT2000. V9, V10, V11, V12, V15
Model Difference:	The above-mentioned products share the same circuitry, PCB layout, electrical components, materials, circuit structure and decorative accessories' materials, but they differ in color.
Power Source:	Input Voltage: 54.6 $\pm$ 2.0A Max
Adpater	Model: JY-546200 Input: 110-240V 50/60Hz 2.5A Output: 54.6 $\pm$ 2.0A Max
Battery	48V 15Ah 720Wh
Hardware version:	V1.0
Software version:	V1.0
SDR	
Modulation type:	ASK
Operation frequency:	13.56MHz
Channel number:	1
Antenna type:	PCB Antenna
Antenna gain:	0dBi
Note: (1) All antenna information is provided by the manufacturer, test laboratory will not be responsible if any error. (2) The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity. (3) "N/A" Indicates inapplicability	

2.2. DESCRIPTION OF THE TEST MODES

Operating Frequency List: The device under test was tested under typical operating conditions. The applicant provided a fixed-frequency prototype to control the device under test to maintain continuous transmission and reception mode for testing. The device under test is provided for testing, operating frequency list:

Channel	Frequency (MHz)
1	13.56

Following channel(s) was (were) selected for the test as listed below.

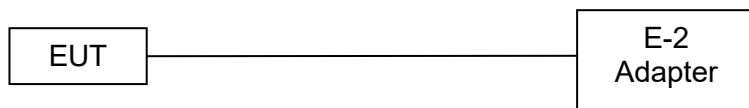
TESTED CHANNEL	TESTED FREQUENCY
Channel	13.56(MHz)

2.3. BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Radiated Spurious Emission Test



AC Conducted Emission Test



RF Conducted Test



2.4. DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

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	Mfr/Brand	Mode/Type	Note
E-2	Adapter	Guangzhou Ji Yin Power Electronics Co., Ltd	JY-546200	Product compatibility for use

Item	Equipment	Mfr/Brand	Length	Note
C-1	line	N/A	1m	Test use

Note : (1) For detachable type VO cables should be specified the length in cm in Length column.

(2) "YES" means "with core"; "NO" means "without core".

2.5. Measurement Instruments List

Radiation emission							
Item	Equipment No.	Equipment name	Manufacturer	Model	Serial No.	Calibration date	Due date
1	ATA-E-001	966 chamber	CRT	9*6*6M	CRTNDCR966	2025-03-21	2028-03-20
2	ATA-E-011	AC Power Source	XINOUEHUA	APW-1300N	202504292663	2025-05-08	2026-05-07
3	ATA-E-013	DC Power Source	XINOUEHUA	ADC250-32D	202504292667	2025-05-08	2026-05-07
4	ATA-E-033	Receiver	R&S	ESPI7	100092	2025-05-08	2026-05-07
5	ATA-E-034	Broadband antenna	Schwarzbeck	VULB9168	01839	2025-07-17	2026-07-17
6	ATA-E-035	High Frequency Horn Antenna	Schwarzbeck	BBHA 9120D	03169	2025-07-17	2026-07-17
7	ATA-E-038	Cable	Times	0-18GHz	/	2025-05-08	2026-05-07
9	ATA-E-040	6dB attenuator	Zhengchang Liubo	6dB	/	2025-05-08	2026-05-07
10	ATA-E-039	Cable	Times	0-1GHz	/	2025-05-08	2026-05-07
11	ATA-E-041	Preamplifier	COM MV	DLNA8-1-18G-2705	10241234	2025-05-08	2026-05-07
12	ATA-E-042	Preamplifier	COM MV	DLNA8-0.009-1000-1034	5252881	2025-05-08	2026-05-07
13	ATA-E-044	Filter	MWRFTesT	ZHPF6-C3000-18000-3129	08252098	2025-05-08	2026-05-07
14	ATA-E-045	Filter	MWRFTesT	ZHPF6-C6500-18000-175	08252097	2025-05-08	2026-05-07
15	ATA-E-046	Filter	MWRFTesT	ZBSF6-C2400-2483.5-543	08252096	2025-05-08	2026-05-07
16	ATA-E-047	Filter	MWRFTesT	ZBSF6-C5100-5900-5713	08252095	2025-05-08	2026-05-07
17	ATA-E-051	Spectrum Analyzer	R&S	FSV40-N	101779	2025-07-29	2026-07-28
18	ATA-E-052	Cable	HELPLIGHT	2.92J/2.92J 10M	/	2026-01-19	2027-01-18
19	ATA-E-054	Cable	HELPLIGHT	2.92J/2.92J 0.8M	/	2026-01-19	2027-01-18
20	ATA-E-059	Antenna Tower	CRT	AT-1	/	/	/
21	ATA-E-005	Temperature and humidity meter	deli	LE502-WH	/	2025-05-08	2026-05-07
22	ATA-E-064	Barometer	Qingping	CGP23W	/	2026-01-28	2027-01-27
23	ATA-E-048	Loop Antenna	ZHINA	ZN30900C	21104CCUT SE019	2025-05-08	2026-05-07
24	ATA-E-049	Horn Antenna	ECHO MICrowave.,Ltd.	OBH100400	12221225	2025-05-08	2026-05-07
25	ATA-E-051	Spectrum Analyzer	R&S	FSV40-N	101779	2025-05-08	2026-05-07

Conduction emission							
Item	Equipment No.	Equipment name	Manufacturer	Model	Serial No.	Calibration date	Due date
1	ATA-E-032	EMI TEST RECEIVER	Schwarzbeck	ESCI3	1009300	2025-05-08	2026-05-08
2	ATA-E-037	Pulse Limiter	Schwarzbeck	VTSD 9561 F-N	/	2025-05-08	2026-05-08
3	ATA-E-069	Conductive test cable	Schwarzbeck	2.5m	N/A	2026-01-28	2027-01-27
4	ATA-E-036	Artificial Mains Network	Schwarzbeck	NSLK 8127	01169	2025-05-08	2026-05-08
5	ATA-E-072	Three-Line V-Network	ZHINAN	2N33770A	13003	2026-01-26	2026-01-27
6	ATA-E-009	Temperature and humidity meter	deli	LE502-WH	/	2025-05-08	2026-05-08
7	ATA-E-010	Barometer	Qingping	CGP23W	/	2025-05-08	2026-05-08

RF Conducted Test							
Item	Equipment No.	Equipment name	Manufacturer	Model	Serial No.	Calibration date	Due date
	ATA-E-029	Spectrum Analyzer	Keysight	N9020A	MY50530404	2025-05-08	2026-05-07
1	ATA-E-030	MXG AnaioG Signal Generator	Agilent	N5181A	MY47420598	2025-05-08	2026-05-07
2	ATA-E-031	WIDEBAND RADIO COMMUNICATION TESTER	R&S	CMW500	161163	2025-05-08	2026-05-07
3	ATA-E-043	Radio Control Unit	MWRFTest	MW100-RFCB	MW250428A TA-55	2025-05-08	2026-05-07

Note:

1)The Cal. Interval was one year.

2)The cable loss has calculated in test result which connection between each test instruments.

2.5. Test Software

Software name	Model	Version
Conducted emission Measurement Software	EZ-EMC	FARAD-3A1.1+
Radiated emission Measurement Software	EZ-EMC	FARAD-3A1.1+
Bluetooth and WIFI Test System	MWRF8310	2.0.0.0

3. TEST ITEM AND RESULTS

3.1. Antenna requirement

Requirement

FCC CFR Title 47 Part 15 Subpart C Section 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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

FCC CFR Title 47 Part 15 Subpart C Section 15.247(c) (1)(i):

(i) Systems operating in the 2400~2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

Antenna Information

The maximum gain of antenna was 2.80dBi.

Note: The antenna gain is provided by the customer , if the data provided by the customer is not accurate, **Shenzhen ATA Testing Lab. Inc** does not assume any responsibility.

3.2. Conducted Emission

Limit

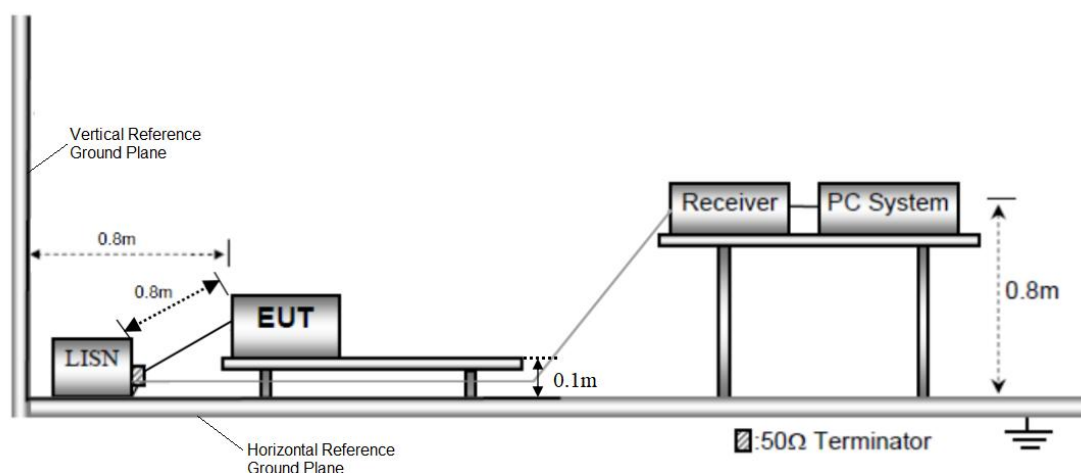
Conducted Emission Test Limit

Frequency	Maximum RF Line Voltage (dB μ V)	
	Quasi-peak Level	Average Level
150kHz~500kHz	66 ~ 56 *	56 ~ 46 *
500kHz~5MHz	56	46
5MHz~30MHz	60	50

Notes:

- (1) *Decreasing linearly with logarithm of the frequency.
- (2) The lower limit shall apply at the transition frequencies.
- (3) The limit decrease in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

Test Configuration



Test Procedure

1. The EUT was setup according to ANSI C63.10:2020 requirements.
2. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 0.1m above the conducting ground plane. The vertical conducting plane was located 80 cm to the rear of the EUT. All other surfaces of EUT were at least 0.8m from any other grounded conducting surface.
3. The EUT and simulators are connected to the main power through a line impedances stabilization network (LISN). The LISN provides a 50ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs)
4. Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
5. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
6. Conducted Emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

During the above scans, the emissions were maximized by cable manipulation.

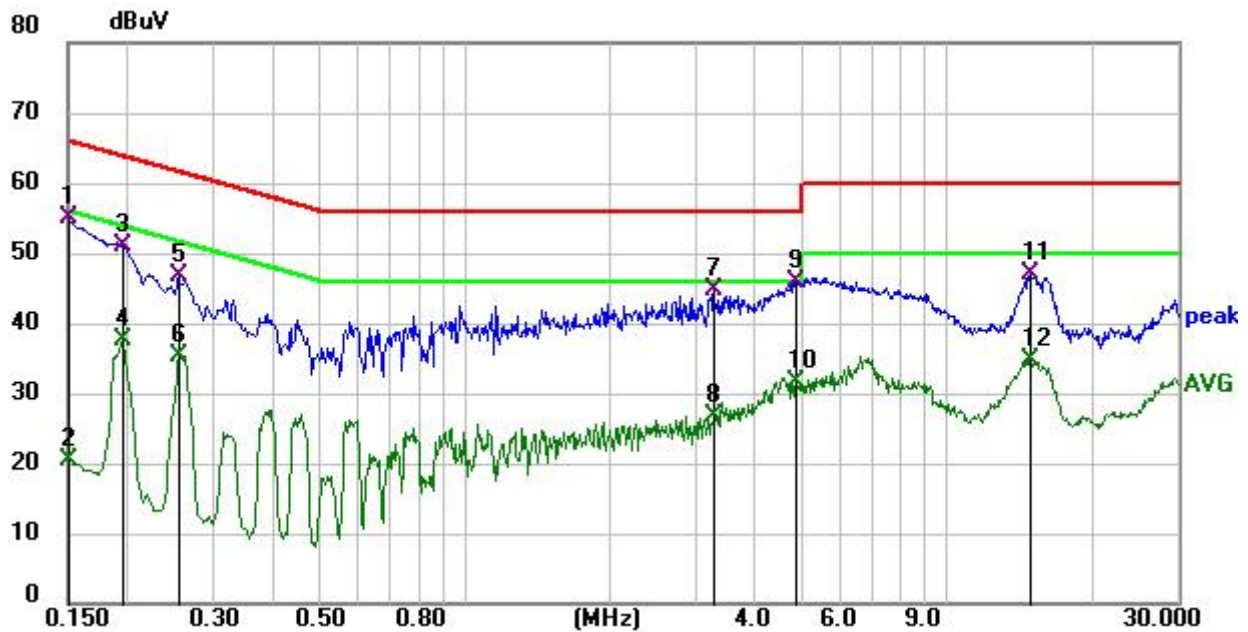
Test Mode:

N/A

Test Results

Pre-scan CH00, CH19 and CH39 channel, and found CH00 channel which it is worse case, so only show the test data for worse case.

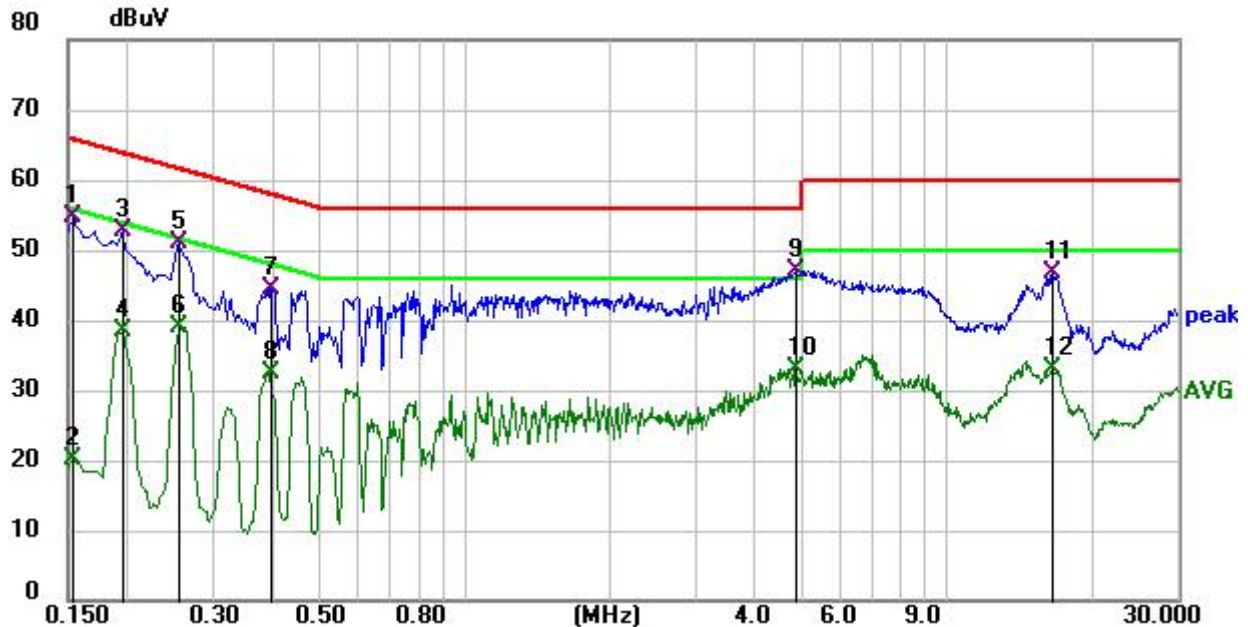
EUT:	X80 Pro	Model Name:	X80 Pro
Pressure:	1010 hPa	Phase:	L
Temperature	24.8℃	Humidity	52.1%
Test Mode:	Charging+TX	Test Voltage:	DC 48V from Adapter AC 120V/60Hz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1500	44.98	10.11	55.09	66.00	-10.91	QP
2	0.1500	10.31	10.11	20.42	56.00	-35.58	AVG
3	0.1940	40.86	10.10	50.96	63.86	-12.90	QP
4	0.1940	27.38	10.10	37.48	53.86	-16.38	AVG
5*	0.2540	36.66	10.11	46.77	61.63	-14.86	QP
6	0.2540	25.11	10.11	35.22	51.63	-16.41	AVG
7	3.2860	34.44	10.21	44.65	56.00	-11.35	QP
8	3.2860	16.55	10.21	26.76	46.00	-19.24	AVG
9	4.8820	35.67	10.22	45.89	56.00	-10.11	QP
10	4.8820	21.39	10.22	31.61	46.00	-14.39	AVG
11	14.9540	36.71	10.34	47.05	60.00	-12.95	QP
12	14.9540	24.44	10.34	34.78	50.00	-15.22	AVG

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)

EUT:	X80 Pro	Model Name:	X80 Pro
Pressure:	1010 hPa	Phase:	N
Temperature	24.8°C	Humidity	52.1%
Test Mode:	Charging+TX	Test Voltage:	DC 48V from Adapter AC 120V/60Hz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1539	44.55	10.11	54.66	65.79	-11.13	QP
2	0.1539	10.16	10.11	20.27	55.79	-35.52	AVG
3	0.1940	42.56	10.10	52.66	63.86	-11.20	QP
4	0.1940	28.20	10.10	38.30	53.86	-15.56	AVG
5*	0.2540	41.00	10.11	51.11	61.63	-10.52	QP
6	0.2540	28.97	10.11	39.08	51.63	-12.55	AVG
7	0.3980	34.32	10.12	44.44	57.90	-13.46	QP
8	0.3980	22.42	10.12	32.54	47.90	-15.36	AVG
9	4.8859	36.64	10.22	46.86	56.00	-9.14	QP
10	4.8859	22.81	10.22	33.03	46.00	-12.97	AVG
11	16.5300	36.37	10.34	46.71	60.00	-13.29	QP
12	16.5300	22.78	10.34	33.12	50.00	-16.88	AVG

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)

3.3. RADIATED EMISSION MEASUREMENT

3.3.1 RADIATED EMISSION LIMITS

(a) The field strength of any emissions within the band 13.553-13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters.

(b) Within the bands 13.410-13.553 MHz and 13.567-13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters. (c) Within the bands 13.110-13.410 MHz and 13.710-14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters. (d) The field strength of any emissions appearing outside of the 13.110-14.010 MHz band shall not exceed the general radiated emission limits in S15.209.

(Radiated Emission <30MHz (9KHz-30MHz, H-field) According to FCC section 15.225, for <30MHz, Radiated emissions were measured according to ANSI C63.4. The EUT was set to transmit at the highest output power. The EUT was set 30 meter away from the measuring antenna. The loop antenna was positioned 1 meter above the ground from the center of the loop. The measuring bandwidth was set to 10KHz. (Note: During testing the receive antenna was rotated about its axis to maximize the emission from the EUT) There was no detected Restricted bands and Radiated spurious emission below 30MHz. The 30m limit was converted to 3m Limit using square factor(x) as it was found by measurements as follows;

$$3 \text{ m Limit (dBuV/m)} = 20\log(X) + 40\log(30/3) = 20\log(15,848) + 40\log(30/3) = 124 \text{ dBuV}$$

$$3 \text{ m Limit (dBuV/m)} = 20\log(X) + 40\log(30/3) = 20\log(334) + 40\log(30/3) = 90.47 \text{ dBuV}$$

$$3 \text{ m Limit (dBuV/m)} = 20\log(X) + 40\log(30/3) = 20\log(106) + 40\log(30/3) = 80.506 \text{ dBuV}$$

$$3 \text{ m Limit (dBuV/m)} = 20\log(X) + 40\log(30/3) = 20\log(30) + 40\log(30/3) = 69.54 \text{ dBuV}$$

Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

LIMITS OF RADIATED EMISSION MEASUREMENT (Frequency Range 9kHz-1000MHz)

3.3.2 FCC CFR Title 47 Part 15 Subpart C Section 15.247 (d):

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

Frequency range (KHz)	Frequency(KHz)	Field Strength@300m		Field Strength@3m
		μV/m	dBμV/m	dBμV/m
9 ~ 490	9	266.67	48.52	128.52
	150	16.00	24.08	104.08
	490	4.90	13.80	93.80

Frequency range (KHz)	Frequency(KHz)	Field Strength@30m		Field Strength@3m
		μV/m	dBμV/m	dBμV/m
490 ~ 1705	490	48.98	33.80	73.80
	1705	14.08	22.97	62.97

Frequency range (KHz)	Frequency(KHz)	Field Strength@30m		Field Strength@3m
		μV/m	dBμV/m	dBμV/m
1705 ~ 30000	1705	30.00	29.54	69.54
	30000	30.00	29.54	69.54

Frequency range(MHz)	Field Strength@30m		Field Strength@3m
	$\mu\text{V/m}$	$\text{dB}\mu\text{V/m}$	$\text{dB}\mu\text{V/m}$
13.110 ~ 13.410	106	40.5	80.5
13.410 ~ 13.553	334	50.5	90.5
13.553~13.567	15.848	84	124.0
13.567 ~ 13.710	334	50.5	90.5
13.710~14.010	106	40.5	80.5

Note:

a) Field Strength ($\text{dB}\mu\text{V/m}$) = $20 \cdot \log[\text{Field Strength (}\mu\text{V/m)}]$.

b) In the emission tables above, the tighter limit applies at the Band edge. Radiated Emission >30MHz (30MHz-1GHz, E-field) According to FCC section 15.205, the field strength of radiated emissions from intentional radiators at a distance of 3 meters shall not exceed the following values:

Frequencies (MHz)	Field Strength (micovolts/meter)	Measurement Distance (meters)
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~90kHz/RB 200Hz for PK & AV
Start~Stop Frequency	90kHz~110kHz/RB 200Hz for QP
Start ~ Stop Frequency	110kHz~490kHz/RB 200Hz for PK&AV
Start ~ Stop Frequency	490kHz~30MHz/RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz/RB 120kHz for QP

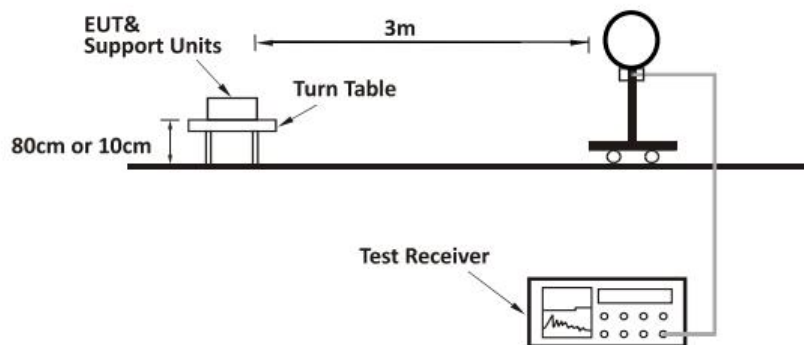
3.3.3 TEST PROCEDURE

- a. The test is performed in a 3m Semi-Anechoic Chamber; the antenna factor, cable loss and soon of the site (factors) is calculated to correct the reading. The EUT is placed on a 0.8m highinsulating Turn Table, and keeps 3m away from the Test Antenna, which is mounted on avariable-height antenna master tower. For the test Antenna
- b. In the frequency range of 9KHz to 30MHz, magnetic field is measured with Loop Test Antenna.The Test Antenna is positioned with its plane vertical at 1m distance from the EUT. The centerof the Loop Test Antenna is 1m above the ground. During the measurement the Loop TestAntenna rotates about its vertical axis for maximum response at each azimuth about the EUT.
- c. In the frequency range above 30MHz, Bi-Log Test Antenna (30MHz to 1GHz) used. TestAntenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above theground to determine the maximum value of the field strength. The emission levels at bothhorizontal and vertical polarizations should be tested.
- f. The initial step in collecting conducted emission data is a spectrum analyzer peak detectormode pre-scanning the measurement frequency range. Significant peaks are then marked andthen Quasi Peak detector mode re-measured.
- g. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, theEUT shall be deemed to meet QP Limits and then no additional QP Mode measurementperformed.
- h. For the actual test configuration, please refer to the related Item -EUT Test Photos.

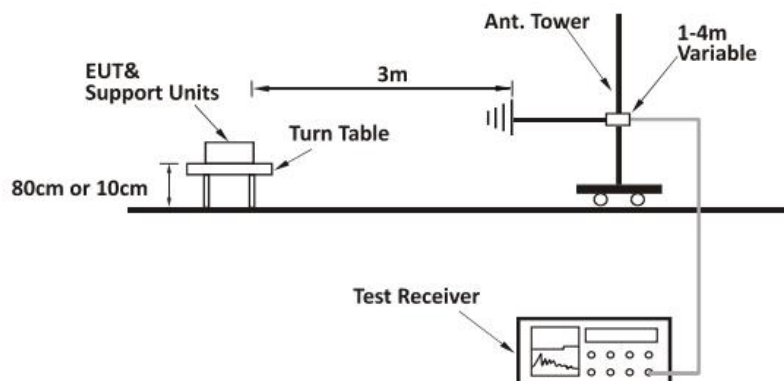
Note:

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

Test Configuration



Below 30MHz Test Setup



Below 1000MHz Test Setup

3.3.4 FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows: $FS = RA + AF + CL - AG$

Where

FS = Field Strength

CL = Cable Attenuation Factor (Cable Loss)

RA = Reading Amplitude

AG = Amplifier Gain

AF = Antenna Factor

For example

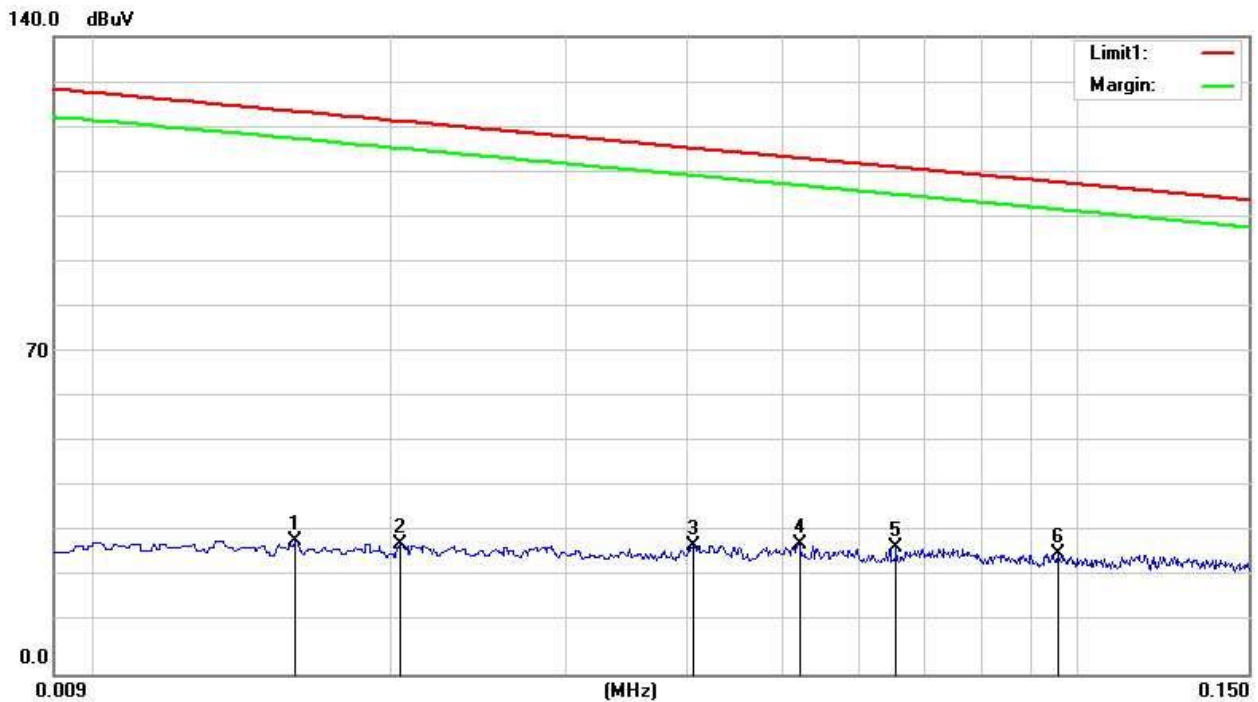
Frequency	FS	RA	AF	CL	AG	Factor
(MHz)	(dBμV/m)	(dBμV/m)	(dB)	(dB)	(dB)	(dB)
300	40	58.1	12.2	1.6	31.9	-18.1

Factor = $AF + CL - AG$

3.4. TEST RESULTS

(Radiated Emission<30MHz (9KHz-30MHz, H-field))

EUT:	X80 Pro	Model Name:	X80 Pro
Pressure:	1010 hPa	Phase:	Horizontal
Temperature	24.8℃	Humidity	52.1%
Test Mode:	TX	Test Voltage:	DC 48V



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	0.0161	9.34	19.81	29.15	123.52	-94.37	AVG
2	0.0205	8.34	20.09	28.43	121.41	-92.98	AVG
3	0.0404	8.65	19.69	28.34	115.46	-87.12	AVG
4	0.0520	9.01	19.44	28.45	113.27	-84.82	AVG
5	0.0652	8.83	19.08	27.91	111.33	-83.42	AVG
6*	0.0954	8.66	17.81	26.47	108.00	-81.53	QP

Emission Level= Read Level+ Correct Factor

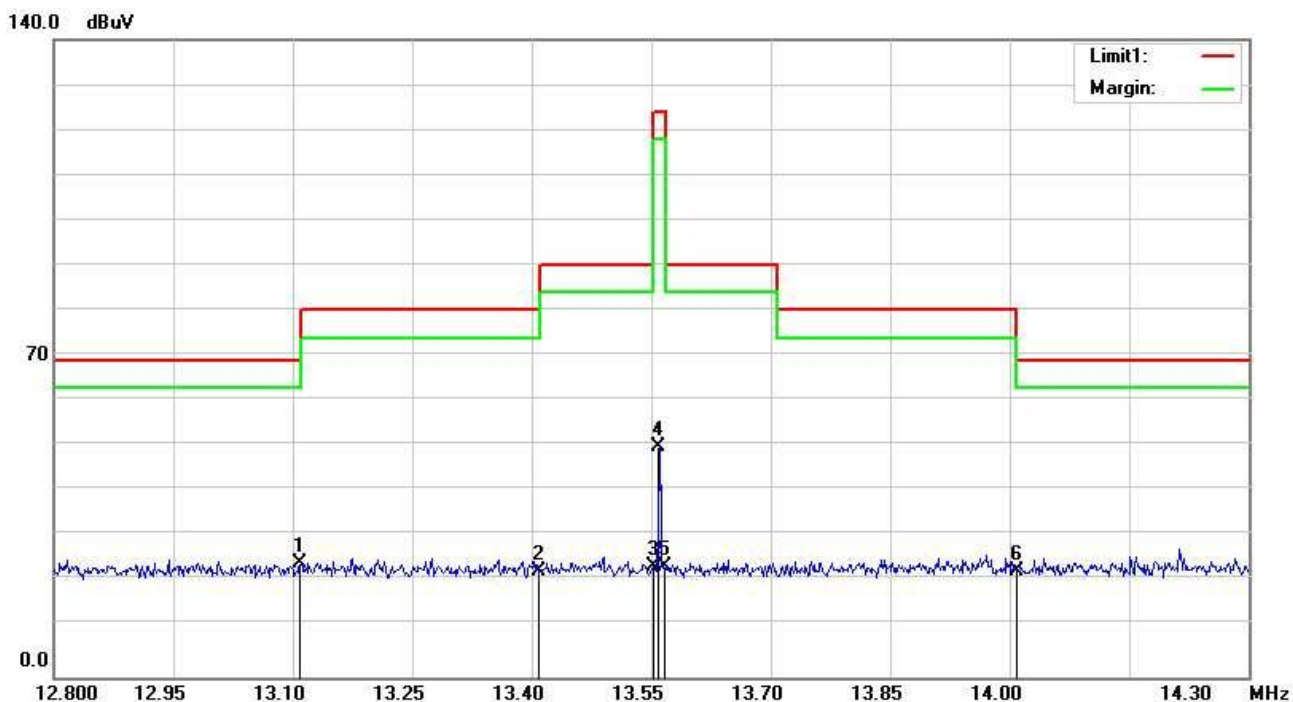
EUT:	X80 Pro	Model Name:	X80 Pro
Pressure:	1010 hPa	Phase:	Horizontal
Temperature	24.8°C	Humidity	52.1%
Test Mode:	TX	Test Voltage:	DC 48V



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	0.0130	19.52	35.64	55.16	125.31	-70.15	QP
2	0.0220	16.61	34.70	51.31	120.74	-69.43	QP
3	0.1121	15.35	25.60	40.95	106.60	-65.65	QP
4	0.5237	24.87	25.63	50.50	73.22	-22.72	QP
5	1.4106	22.70	25.99	48.69	64.61	-15.92	QP
6*	13.6227	27.95	25.96	53.91	69.50	-15.59	Peak

Emission Level= Read Level+ Correct Factor

EUT:	X80 Pro	Model Name:	X80 Pro
Pressure:	1010 hPa	Phase:	Horizontal
Temperature	24.8°C	Humidity	52.1%
Test Mode:	TX	Test Voltage:	DC 48V

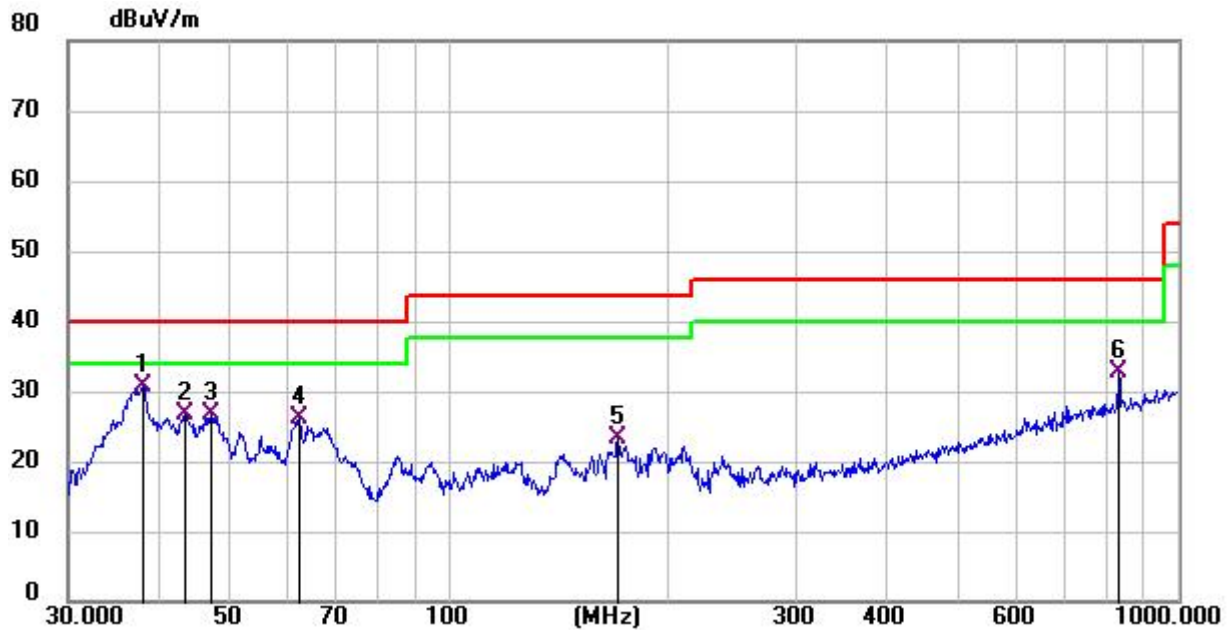


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	13.1100	4.13	20.88	25.01	69.50	-44.49	QP
2	13.4100	2.47	20.95	23.42	80.50	-57.08	QP
3	13.5530	3.18	20.98	24.16	90.50	-66.34	QP
4	13.5600	29.60	20.98	50.58	124.00	-73.42	Peak
5	13.5670	3.32	20.98	24.30	90.50	-66.20	QP
6*	14.0100	2.04	21.08	23.12	69.50	-46.38	QP

Emission Level= Read Level+ Correct Factor

Results of Radiated Emissions (30MHz~ 1000MHz)

EUT:	X80 Pro	Model Name:	X80 Pro
Pressure:	1010 hPa	Phase:	Horizontal
Temperature	24.8℃	Humidity	52.1%
Test Mode:	TX	Test Voltage:	DC 48V



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	38.0782	43.68	-12.84	30.84	40.00	-9.16	QP
2	43.3534	39.60	-12.85	26.75	40.00	-13.25	QP
3	47.1597	39.61	-12.98	26.63	40.00	-13.37	QP
4	62.2128	40.08	-14.04	26.04	40.00	-13.96	QP
5	170.1947	35.64	-12.43	23.21	43.50	-20.29	QP
6*	830.4000	33.74	-0.99	32.75	46.00	-13.25	QP

Emission Level= Read Level+ Correct Factor

EUT:	X80 Pro	Model Name:	X80 Pro
Pressure:	1010 hPa	Phase:	Horizontal
Temperature	24.8°C	Humidity	52.1%
Test Mode:	TX	Test Voltage:	DC 48V



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	35.7490	49.01	-13.21	35.80	40.00	-4.20	QP
2	38.6160	48.24	-12.74	35.50	40.00	-4.50	QP
3	42.4508	46.47	-12.77	33.70	40.00	-6.30	QP
4	46.8301	44.38	-12.98	31.40	40.00	-8.60	QP
5	60.0690	46.15	-13.75	32.40	40.00	-7.60	QP
6*	85.5975	48.30	-16.80	31.50	40.00	-8.50	QP

Emission Level= Read Level+ Correct Factor

4. FREQUENCY TOLERANCE

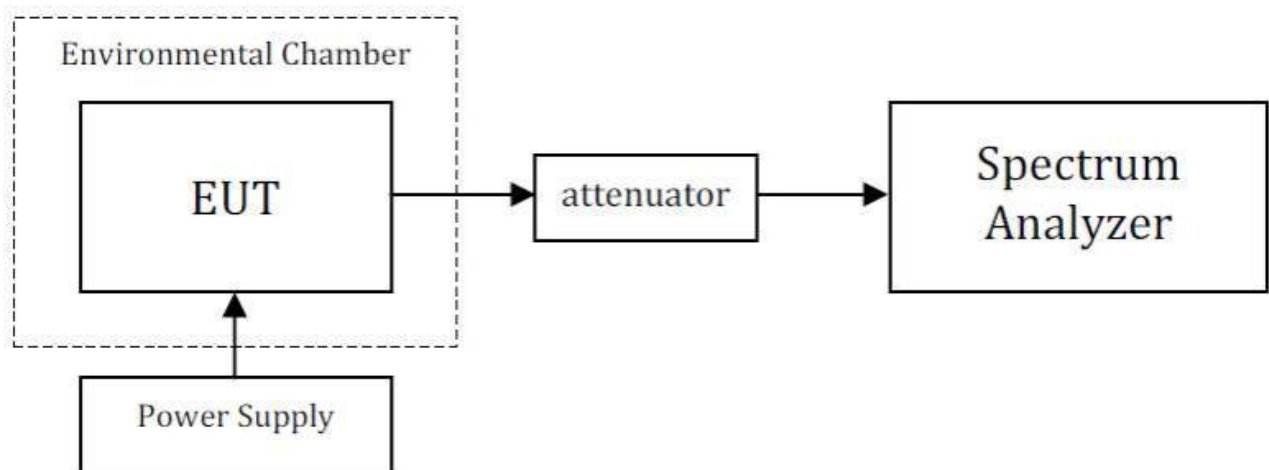
4.1. LIMIT

According to FCC section 15.225, the devices operating in the 13.553-13.567 MHz shall maintain the carrier frequency within 0.01% of the operating frequency over the temperature variation of -20°C to +50°C using an environmental chamber. The primary supply voltage is varied from 85% to 115% of the voltage normally at the input to the device or at the power supply terminals if cables are not normally supplied.

4.2. TEST PROCEDURE

According to FCC section 15.225(e), The frequency tolerance of the carrier signal shall be maintained within 0.01% 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.

4.3. TEST SETUP



The EUT which is powered by the Battery, is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50 Ohm; the path loss as the factor is calibrated to correct the reading.

4.4. EUT OPERATION CONDITIONS

Please refer to section 2.3 of this report.

4.5. TEST PROCEDURE

Pressure:	1010 hPa	Temperature	24.8℃
Temperature	24.8℃	Test Mode:	TX

13.56MHz:

VOLTAGE(%)	Test Conditions		Frequency(Hz)	Deviation(%)	Limit	Verdict
	Power (VDC)	Temperature (℃)				
100	6	+20℃(Ref)	13560751	0.00554	±0.01%	PASS
100		-20	13560752	0.00554	±0.01%	
100		-10	13560751	0.00554	±0.01%	
100		0	13560753	0.00555	±0.01%	
100		10	13560752	0.00555	±0.01%	
100		20	13560751	0.00554	±0.01%	
100		25	13560752	0.00555	±0.01%	
100		30	13560753	0.00555	±0.01%	
100		40	13560753	0.00555	±0.01%	
100		50	13560754	0.00556	±0.01%	
Battery End Point	6	20	13560753	0.00556	±0.01%	
70	4.2	20	13560752	0.00555	±0.01%	

4.6. 20dB Bandwidth

4.7. LIMIT

According to FCC section 15.215(c), the 20dB bandwidth should be contained within the frequency band designated in the rule section under which the EUT is operated, it was measured with a spectrum analyzer connected to the EUT while the EUT is operating in transmission mode

4.8. TEST PROCEDURE

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §13.553-13.567 MHz and in subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated. In the case of intentional radiators operating under the provisions of subpart E, the emission bandwidth may span across multiple contiguous frequency bands identified in that subpart. The requirement to contain the designated bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage. If a frequency stability is not specified in the regulations, it is recommended that the fundamental emission be kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of-band operation.

1. Set RBW = 100Hz.
2. Set the video Bandwidth (VBW) > 3 RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

4.9. TEST SETUP



4.10. EUT OPERATION CONDITIONS

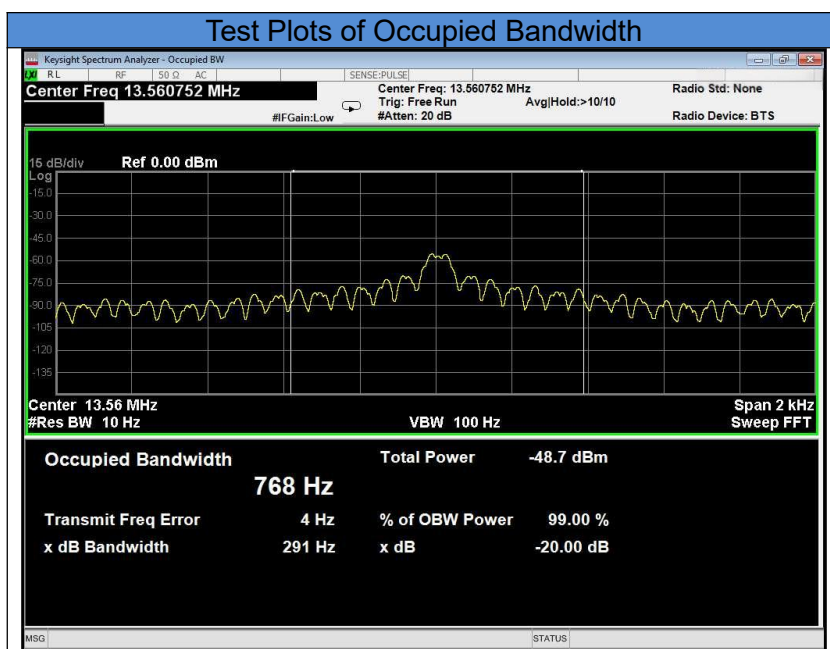
Please refer to section 2.3 of this report.

4.11. TEST RESULTS

Pressure:	1010 hPa	Temperature	24.8°C
Humidity	52.1%	Test Mode:	TX

Centre Frequency	20dB Bandwidth (Hz)	99% Bandwidth (Hz)	Frequency Range (MHz)
13.56	291	768	13.55945-13.56055

Test Graphs:



5. EUT TEST PHOTOS

Note: Refer to the attached test photos

6. PHOTOGRAPHS OF EUT CONSTRUCTIONAL

Note: Refer to the attached exterior and interior photos

*****THE END*****