TEST REPORT

Applicant Name :	INFINIX MOBILITY LIMITED
Address :	FLAT 39 8/F BLOCK D WAH LOK INDUSTRIAL CENTRE 31-35 SHAN MEI STREET FOTAN NT, Hong Kong
Report Number :	SZNS220215-04527E-RF-00DA1
FCC ID:	2AIZN-X6812B

Test Standard (s)

FCC PART 15.407

Sample Description

Product Type:	Mobile Phone
Model No.:	X6812B
Multiple Model(s) No.:	N/A
Trade Mark:	Infinix
Date Received:	2022/02/15
Date of Test:	2022/02/22~2022/02/25
Report Date:	2022/03/01

Test Result:	Pass*

* In the configuration tested, the EUT complied with the standards above.

Prepared and Checked By:

Ting Lü
EMC Engineer

Approved By:

Robert Li
EMC Engineer

Note: This report may contain data that are not covered by the A2LA accreditation and are marked with an asterisk "★ ".
Shenzhen Accurate Technology Co., Ltd. is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with an asterisk '*'. Customer model name, addresses, names, trademarks etc. are not considered data.
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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Frequency Range	5G Wi-Fi: 5150-5250MHz & 5725-5850MHz
Maximum conducted output power	11.35dBm(5150-5250MHz) 10.69dBm(5725-5850MHz)
Modulation Technique	OFDM
Antenna Specification*	-2.0dBi (It is provided by the applicant)
Voltage Range	DC 3.85V from battery or DC 5.0V or DC7.5V from adapter
Sample serial number	SZNS220215-04527E-RFA1-S1 (Assigned by ATC)
Sample/EUT Status	Good condition
Adapter information	Model: U180XSA Input: AC 100-240V, 50/60Hz, 0.6A Output: DC 5.0V, 2.4A or DC7.5V,2.4A 18.0W Max

Objective

This test report is in accordance with Part 2-Subpart J, Part 15-Subparts A and E of the Federal Communication Commissions rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart E, section 15.203, 15.205, 15.207, 15.209 and 15.407 rules.

This is a CIIPC application of the device; the differences between the original device and the current one are as follows:

(1) Adding one of Adapter.

Based on above differences, it will affected partial test data, so the changed items were performed.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices. And KDB789033 D02 General U-NII Test Procedures New Rules v02r01.

All emissions measurement was performed at Shenzhen Accurate Technology Co., Ltd. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Each test item follows test standards and with no deviation.

Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		5%
RF Frequency		$0.082*10^{-7}$
RF output power, conducted		0.73dB
Unwanted Emission, conducted		1.6dB
AC Power Lines Conducted Emissions		2.72dB
Emissions, Radiated	9kHz - 30MHz	2.66dB
	30MHz - 1GHz	4.28dB
	1GHz - 18GHz	4.98dB
	18GHz - 26.5GHz	5.06dB
	26.5GHz - 40GHz	4.72dB
Temperature		1℃
Humidity		6%
Supply voltages		0.4%

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

Test Facility

The test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 708358, the FCC Designation No.: CN1189. Accredited by American Association for Laboratory Accreditation (A2LA) The Certificate Number is 429 7.01.

Listed by Innovation, Science and Economic Development Canada (ISEDC), the Registration Number is 5077A.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in an engineering mode, which was provided by manufacturer.

The EUT can operate in 802.11a/n20/n40/ac20/ac40/ac80 modes.

For 5150-5250MHz Band, 7 channels are provided to testing:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	44	5220
38	5190	46	5230
40	5200	48	5240
42	5210	/	/

For 802.11a, 802.11n20/ac20 mode: channel 36, 40, 48 were tested; For 802.11n40/ac40 mode: channel 38, 46 were tested. For 802.11ac80 mode, channel 42 was tested.

For 5725-5850MHz Band, 8 channels are provided to testing:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	157	5785
151	5755	159	5795
153	5765	161	5805
155	5775	165	5825

For 802.11a, 802.11n20/ac20 mode: channel 149, 157, 165 were tested; For 802.11n40/ac40 mode: channel 151, 159 were tested. For 802.11ac80 mode, channel 155 was tested.

EUT Exercise Software

Test in the engineer mode.

Test frequencies and power level were configured as below:

U-NII	Mode	Frequency (MHz)	Data Rate (Mbps)	Power Level*
5150 – 5250MHz	802.11 a	5180	6	Default
		5200	6	Default
		5240	6	Default
	802.11 n20	5180	MCS0	Default
		5200	MCS0	Default
		5240	MCS0	Default
	802.11 n40	5190	MCS0	Default
		5230	MCS0	Default
	802.11 ac20	5180	MCS0	Default
		5200	MCS0	Default
		5240	MCS0	Default
	802.11 ac40	5190	MCS0	Default
		5230	MCS0	Default
	802.11 ac80	5210	MCS0	Default
5725 – 5850MHz	802.11 a	5745	6	Default
		5785	6	Default
		5825	6	Default
	802.11 n20	5745	MCS0	Default
		5785	MCS0	Default
		5825	MCS0	Default
	802.11 n40	5755	MCS0	Default
		5795	MCS0	Default
	802.11 ac20	5745	MCS0	Default
		5785	MCS0	Default
		5825	MCS0	Default
	802.11 ac40	5755	MCS0	Default
		5795	MCS0	Default
	802.11 ac80	5775	MCS0	Default

Note 1: The worse-case data rates are determined to be as follows for each mode based upon investigations by measuring the output power and PSD across all data rated bandwidths, and modulations.
Note 2: The power level was provided by the applicant.

Duty cycle

Test Result: Pass. Please refer to the original report SZ1210813-34307E-RF-00B.

Equipment Modifications

No modification was made to the EUT tested.

Support Equipment List and Details

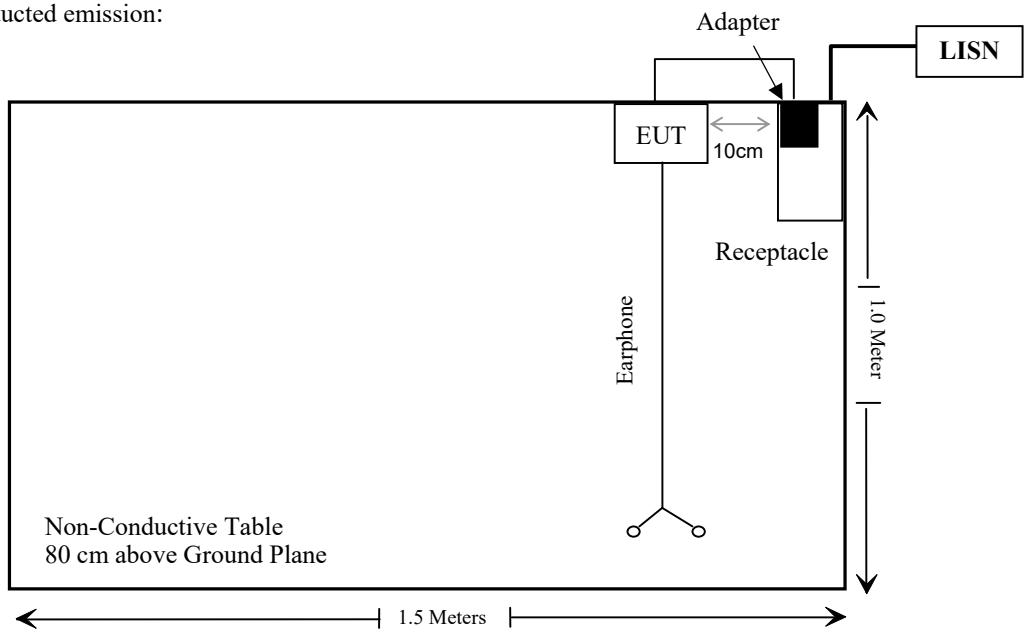
Manufacturer	Description	Model	Serial Number
Unknown	earphone	Unknown	Unknown

External I/O Cable

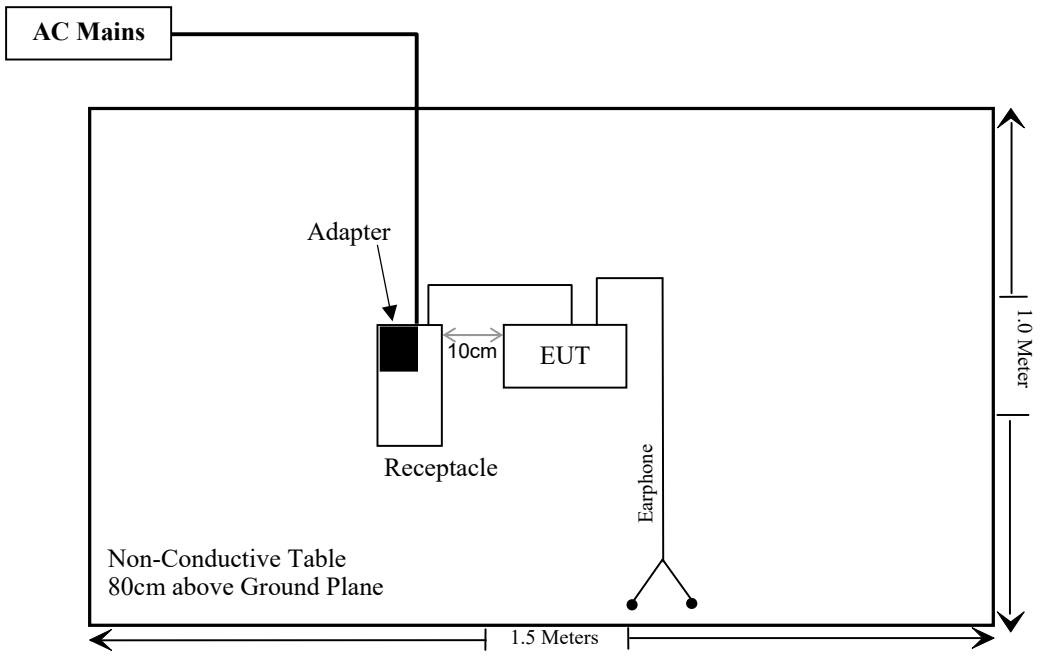
Cable Description	Length (m)	From Port	To
Un-shielding Detachable USB Cable	1.0	EUT	Adapter

Block Diagram of Test Setup

For conducted emission:



For Radiated Emissions (below 1GHz):



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1307 (b) (1) & §2.1093	RF Exposure	Compliant*
§15.203	Antenna Requirement	Compliant*
§15.407(b)(9)& §15.207(a)	Conducted Emissions	Compliant
§15.205& §15.209 &§15.407(b)	Undesirable Emission& Restricted Bands	Compliant
§15.407(a) (e)	26 dB Emission Bandwidth & 6dB Bandwidth	Compliant*
§15.407(a)	Conducted Transmitter Output Power	Compliant*
§15.407 (a)	Power Spectral Density	Compliant*
§15.407 (h)	Transmit Power Control (TPC)	Not Applicable
§15.407 (h)	Dynamic Frequency Selection (DFS)	Not Applicable*

Not Applicable: the EUT has no TPC function which was declarded by the applicant.
Not Applicable*: the EUT not operating within frequency range of 5250-5350MHz&5470-5725MHz.
Compliant*:Please refer to the original report SZ1210813-34307E-RF-00B.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Conducted emission test					
Rohde& Schwarz	EMI Test Receiver	ESCI	100784	2021/12/13	2022/12/12
Rohde & Schwarz	L.I.S.N.	ENV216	101314	2021/12/13	2022/12/12
Anritsu Corp	50 Coaxial Switch	MP59B	6100237248	2021/12/13	2022/12/12
Unknown	RF Coaxial Cable	No.17	N0350	2021/12/14	2022/12/13
Conducted Emission Test Software: e3 19821b (V9)					
Radiated emission test					
Rohde& Schwarz	Test Receiver	ESR	102725	2021/12/13	2022/12/12
SONOMA INSTRUMENT	Amplifier	310 N	186131	2021/11/09	2022/11/08
Schwarzbeck	Bilog Antenna	VULB9163	9163-323	2021/07/06	2024/07/05
Unknown	RF Coaxial Cable	No.12	N040	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.13	N300	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.14	N800	2021/12/14	2022/12/13
Radiated Emission Test Software: e3 19821b (V9)					

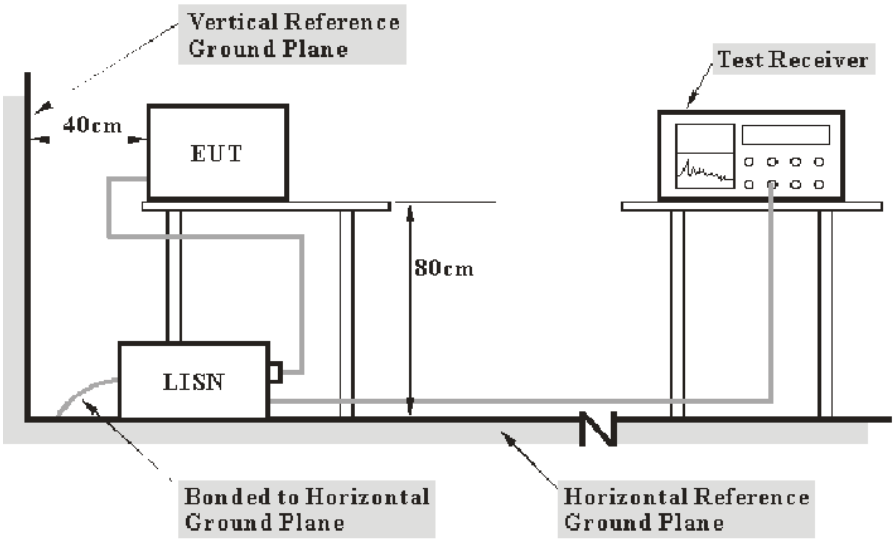
*** Statement of Traceability:** Shenzhen Accurate Technology Co., Ltd. attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC §15.407 (b) (6) §15.207 (a) – CONDUCTED EMISSIONS

Applicable Standard

FCC §15.207, §15.407(b) (6)

EUT Setup



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

Test Procedure

During the conducted emission test, the adapter was connected to the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and Average detection mode.

Transd Factor & Margin Calculation

The Transd factor is calculated by adding LISN VDF (Voltage Division Factor) and Cable Loss. The basic equation is as follows:

Factor = LISN VDF + Cable Loss

The "**Over limit**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over limit of -7 dB means the emission is 7 dB below the limit. The equation for calculation is as follows:

Over Limit = Level – Limit
Level = Read Level + Factor

Test Data

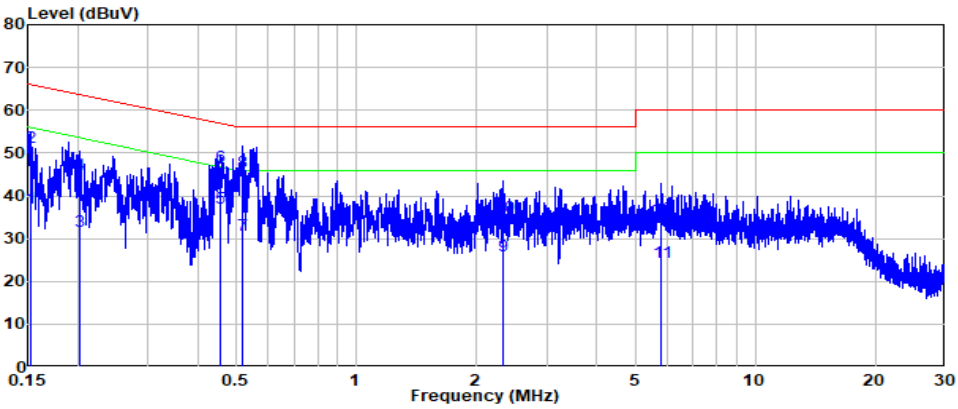
Environmental Conditions

Temperature:	23°C
Relative Humidity:	53 %
ATM Pressure:	101.0 kPa

The testing was performed by Bin Duan on 2022-02-22.

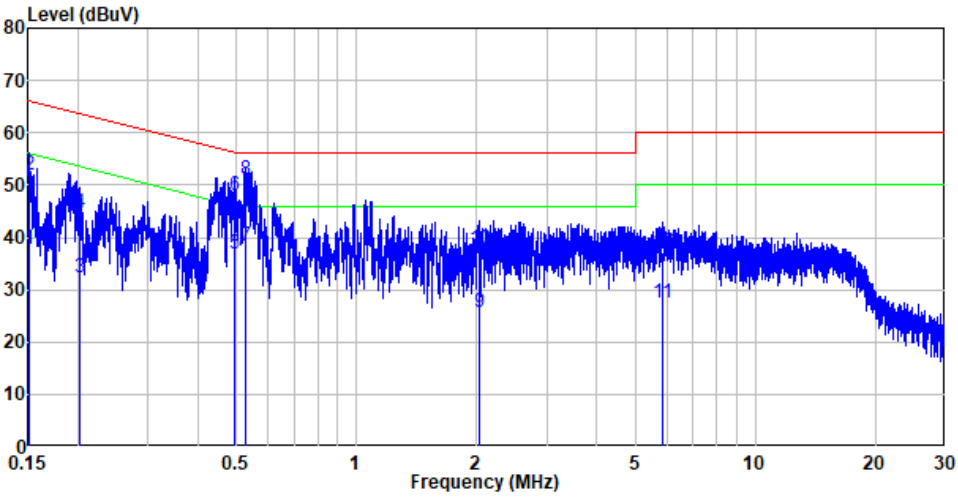
EUT operation mode: Transmitting (worst case is 802.11a, 5200MHz)

AC 120V/60 Hz, Line:



No.	Frequency	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.152	9.80	27.40	37.20	55.88	-18.68	Average
2	0.152	9.80	41.49	51.29	65.88	-14.59	QP
3	0.203	9.80	21.99	31.79	53.49	-21.70	Average
4	0.203	9.80	35.06	44.86	63.49	-18.63	QP
5	0.456	9.80	27.33	37.13	46.76	-9.63	Average
6	0.456	9.80	36.97	46.77	56.76	-9.99	QP
7	0.518	9.81	20.95	30.76	46.00	-15.24	Average
8	0.518	9.81	35.77	45.58	56.00	-10.42	QP
9	2.343	9.82	16.00	25.82	46.00	-20.18	Average
10	2.343	9.82	25.22	35.04	56.00	-20.96	QP
11	5.836	9.86	14.73	24.59	50.00	-25.41	Average
12	5.836	9.86	24.77	34.63	60.00	-25.37	QP

AC 120V/60 Hz, Neutral:



No.	Frequency	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.151	9.80	27.99	37.79	55.94	-18.15	Average
2	0.151	9.80	42.19	51.99	65.94	-13.95	QP
3	0.203	9.80	22.47	32.27	53.49	-21.22	Average
4	0.203	9.80	34.78	44.58	63.49	-18.91	QP
5	0.496	9.80	27.17	36.97	46.07	-9.10	Average
6	0.496	9.80	38.09	47.89	56.07	-8.18	QP
7	0.529	9.81	28.44	38.25	46.00	-7.75	Average
8	0.529	9.81	41.36	51.17	56.00	-4.83	QP
9	2.031	9.82	15.82	25.64	46.00	-20.36	Average
10	2.031	9.82	27.77	37.59	56.00	-18.41	QP
11	5.851	9.93	17.57	27.50	50.00	-22.50	Average
12	5.851	9.93	27.07	37.00	60.00	-23.00	QP

§15.205 & §15.209 & §15.407(B)– UNDESIRABLE EMISSION

Applicable Standard

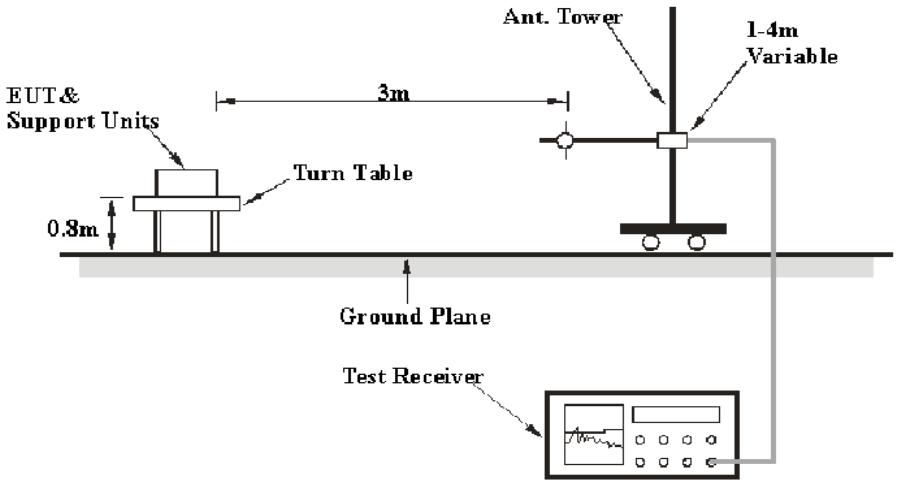
FCC §15.407 (b); §15.209; §15.205;

(b) Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:
(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
(4) For transmitters operating in the 5.725-5.85 GHz band:
(i) All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209.

EUT Setup

Below 1 GHz:



The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC 15.209 and FCC 15.407 limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

EMI Test Receiver & Spectrum Analyzer Setup

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Measurement
30 MHz – 1000 MHz	100 kHz	300 kHz	120 kHz	QP

Test Procedure

Radiated Spurious Emission

During the radiated emission test, the adapter was connected to the AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all the installation combinations.

Data was recorded in Quasi-peak detection mode for frequency range of 30 MHz-1GHz.

Factor & Margin Calculation

The Factor is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain. The basic equation is as follows:

Factor = Antenna Factor + Cable Loss - Amplifier Gain

The "**Over Limit**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over Limit of -7dB means the emission is 7dB below the limit. The equation for calculation is as follows:

Over Limit = Level – Limit
Level = Read Level + Factor

Test Data

Environmental Conditions

Temperature:	19 ℃
Relative Humidity:	58 %
ATM Pressure:	101.0 kPa

The testing was performed by Chao Mo on 2022-02-25 for below 1GHz.

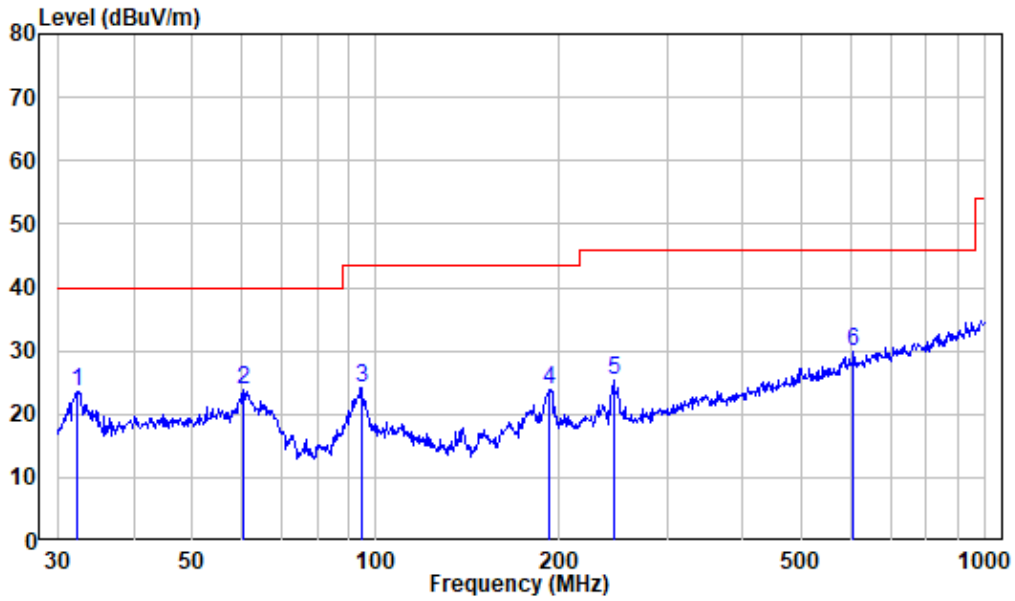
EUT operation mode: Transmitting (Pre-scan in the X,Y and Z axes of orientation, the worst case of X-axes orientation was recorded)

Note: for test data of above 1GHz, please refer to the original report: SZ1210813-34307E-RF-00B.

30 MHz – 1 GHz: *(worst case is 802.11a, 5200MHz)*

Note: When the test result of peak was less than the limit of QP more than 6dB, just peak value were recorded.

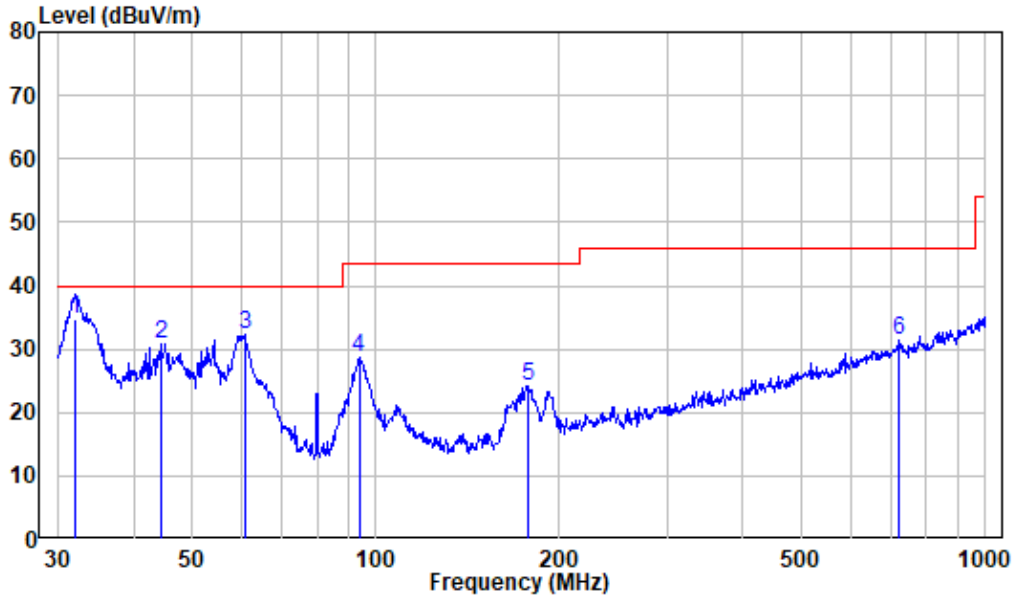
Horizontal



Site : chamber
Condition: 3m HORIZONTAL
2Model : X6812B
Test Mode: 5G WIFI

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	32.293	-12.13	35.65	23.52	40.00	-16.48	Peak
2	60.704	-10.91	34.90	23.99	40.00	-16.01	Peak
3	94.760	-12.53	36.80	24.27	43.50	-19.23	Peak
4	191.745	-11.29	35.21	23.92	43.50	-19.58	Peak
5	245.090	-10.57	35.86	25.29	46.00	-20.71	Peak
6	607.787	-2.34	32.12	29.78	46.00	-16.22	Peak

Vertical



Site : chamber
Condition: 3m VERTICAL
2Model : X6812B
Test Mode: 5G WIFI

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	32.067	-12.16	46.79	34.63	40.00	-5.37	QP
2	44.275	-9.91	40.84	30.93	40.00	-9.07	Peak
3	60.918	-11.00	43.23	32.23	40.00	-7.77	Peak
4	93.768	-12.76	41.35	28.59	43.50	-14.91	Peak
5	177.509	-12.99	37.16	24.17	43.50	-19.33	Peak
6	721.726	-1.33	32.67	31.34	46.00	-14.66	Peak

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