

TEST REPORT

Application No.: SZCR2504001597WM
Applicant: Sonim Technologies, Inc.
Address of Applicant: 4445 Eastgate Mall, Suite 200, San Diego, California 92121 United States
Manufacturer: Sonim Technologies, Inc.
Address of Manufacturer: 4445 Eastgate Mall, Suite 200, San Diego, California 92121 United States
Equipment Under Test (EUT):
EUT Name: smartphone
Model No.: X800
Type No.: S1003/S1001/S1004/S1005/S1006/S1010
Trade Mark: Sonim
FCC ID: WYPS1003
Standard(s) : 47 CFR Part 15, Subpart E 15.407
Date of Receipt: 2025-04-22
Date of Test: 2025-04-24 to 2025-04-25
Date of Issue: 2025-05-07

Test Result:

Pass*

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

Keny Xu

Keny Xu
EMC Laboratory Manager



SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch (EMC) EEC Laboratory.

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SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250400159705

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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2025-05-07		Original

Authorized for issue by:				
		Calvin Weng		
		Calvin Weng/Project Engineer		
		Eric Fu		
		Eric Fu/Reviewer		



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2 Test Summary

Radio Spectrum Matter Part				
Item	Standard	Method	Requirement	Result
Radiated Emissions (Below 1GHz)	47 CFR Part 15, Subpart E 15.407	ANSI C63.10 (2013) Section 6.4,6.5	47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)	Pass
Radiated Emissions (Above 1GHz)		ANSI C63.10 (2013) Section 6.6	47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)	Pass
Radiated Emissions which fall in the restricted bands		ANSI C63.10 (2013) Section 6.10.5	47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)	Pass

Remark:

Model No.: X800

This test report (Ref. No.: SZCR250400159705) is only valid with the original test report (Ref. No.: SZCR241000381005).

According to the declaration from the applicant, the models in this report and models in original report were identical, only difference with being added an alternative battery and LCD.

Considering to the difference, pre-scan were performed on the sample in this report to find the items which can be influential to the result in the original test report for retest.

Therefore in this report Radiated Emission were spot checked on model and shown the data in this report, other tests please refer to original report SZCR241000381005.



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4 General Information

4.1 Details of E.U.T.

Power supply:	DC3.87V by Li-ion battery(5000mAh) Recharged by AC/DC power adapter Adapter M/N:1-CHUSQ302-097 Adapter Manufacturer: HUIZHOU PUAN ELEOTRONICS CO.,LTD Adapter output: 5V/3A,9V/2A,12V/1.5A Battery M/N:BAT-05000-21S Battery Manufacturer: Tianjin Lishen Juyuan New Energy Technology Co., Ltd.
Cable(s):	USB type C cable M/N: HX-YLMK-16 1.5m shielded cable without ferrite core USB type C cable manufacturer: HUIZHOU WASHIN ELECTRONICS CO.,LTD
Operation Frequency/Number of channels (20MHz):	U-NII-1: 5180-5240MHz (4 Channels) U-NII-2A: 5260-5320MHz (4 Channels) U-NII-2C: 5500-5700MHz (11 Channels) U-NII-3: 5745-5825MHz (5 Channels)
Operation Frequency/Number of channels/(40MHz):	U-NII-1: 5190-5230MHz (2 Channels) U-NII-2A: 5270-5310MHz (2 Channels) U-NII-2C: 5510-5670MHz (5 Channels) U-NII-3: 5755-5795MHz (2 Channels)
Operation Frequency/Number of channels (80MHz):	U-NII-1: 5210MHz (1 Channel) U-NII-2A: 5290MHz (1 Channel) U-NII-2C: 5530-5610MHz (2 Channels) U-NII-3: 5775MHz (1 Channel)
Operation Frequency/Number of channels (160MHz):	U-NII-1/2A: 5250MHz (1 Channel); U-NII-2C: 5570MHz (1 Channel)
Modulation Type:	802.11a: OFDM (64QAM, 16QAM, QPSK, BPSK) 802.11n: OFDM (BPSK, QPSK, 16QAM, 64QAM) 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM) 802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM)
Channel Spacing:	802.11a/n/ac/ax 20: 20MHz 802.11n/ac/ax 40: 40MHz 802.11ac/ax 80: 80MHz 802.11ax 160: 320MHz
DFS Function:	Slave without radar detection function
TPC Function:	Without TPC function
Antenna Type:	PIFA Antenna
Antenna Gain:	Ant9:-0.4dBi, Ant10: 1.5dBi

Remark:The information in this section is provided by the applicant or manufacturer, SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.



5 Equipment List

Radiated Emissions (Below 1GHz)					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Loop Antenna	ETS-Lindgren	6502	SEM003-08	2023-11-20	2025-11-19
3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEM001-01	2023-06-19	2026-06-18
MXE EMI Receiver	Agilent Technologies	N9038A	SEM004-15	2024-08-14	2025-08-13
BiConiLog Antenna	ETS-LINDGREN	3142C	SEM003-01	2023-09-16	2025-09-15
Pre-Amplifier	Agilent Technologies	8447D	SEM005-01	2025-03-04	2026-03-03
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM025-01	2024-07-06	2025-07-05

Radiated Emissions (Above 1GHz)					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Signal & Spectrum Analyzer	Rohde & Schwarz	FSV	SZ-WRG-M-048	2025-01-07	2026-01-06
Low Noise Amplifier 1G-18GHz	Tonscend	TAP01018050	SZ-WRG-M-051	2025-01-07	2026-01-06
Low Noise Amplifier 18G-40GHz	Tonscend	TAP18040048	SZ-WRG-M-052	2025-01-08	2026-01-07
Double Ridge Horn Antenna 1GHz-18GHz	SCHWARZBECK	BBHA 9120 D	SZ-WRG-M-055	2023-12-21	2025-12-20
SHF-EHF Horn 15GHz-40GHz	SCHWARZBECK	BBHA 9170	SZ-WRG-M-056	2023-12-25	2025-12-24
RSE Test Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Chamber	CRTSGSSAC966	N/A	SZ-WRG-C-063	2025-01-06	2028-01-05
Humidity and Temperature Indicator	deli	8838	SEM002-46	2024-07-24	2025-07-23



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Radiated Emissions which fall in the restricted bands

Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Signal & Spectrum Analyzer	Rohde & Schwarz	FSV	SZ-WRG-M-048	2025-01-07	2026-01-06
Low Noise Amplifier 30M-8GHz	Tonscend	TAP30M8G30	SZ-WRG-M-050	2025-01-07	2026-01-06
Double Ridge Horn Antenna 1GHz-18GHz	SCHWARZBECK	BBHA 9120 D	SZ-WRG-M-055	2023-12-21	2025-12-20
SHF-EHF Horn 15GHz-40GHz	SCHWARZBECK	BBHA 9170	SZ-WRG-M-056	2023-12-25	2025-12-24
RSE Test Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Chamber	CRTSGSSAC966	N/A	SZ-WRG-C-063	2025-01-06	2028-01-05
Humidity and Temperature Indicator	deli	8838	SEM002-46	2024-07-24	2025-07-23

General used equipment

Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Humidity/ Temperature Indicator	deli	8838	SEM002-32	2024-07-24	2025-07-23
Humidity/ Temperature Indicator	deli	8838	SEM002-33	2024-07-24	2025-07-23
Barometer	Changchun Meteorological Industry Factory	DYM3	SEM002-01	2025-03-03	2026-03-02



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6 Radio Spectrum Matter Test Results

6.1 Radiated Emissions (Below 1GHz)

Test Requirement 47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)

Test Method: ANSI C63.10 (2013) Section 6.4,6.5

Limit:

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
960-1000	500	3

6.1.1 E.U.T. Operation

Operating Environment:

Temperature: 22.5 °C

Humidity: 44.5 % RH

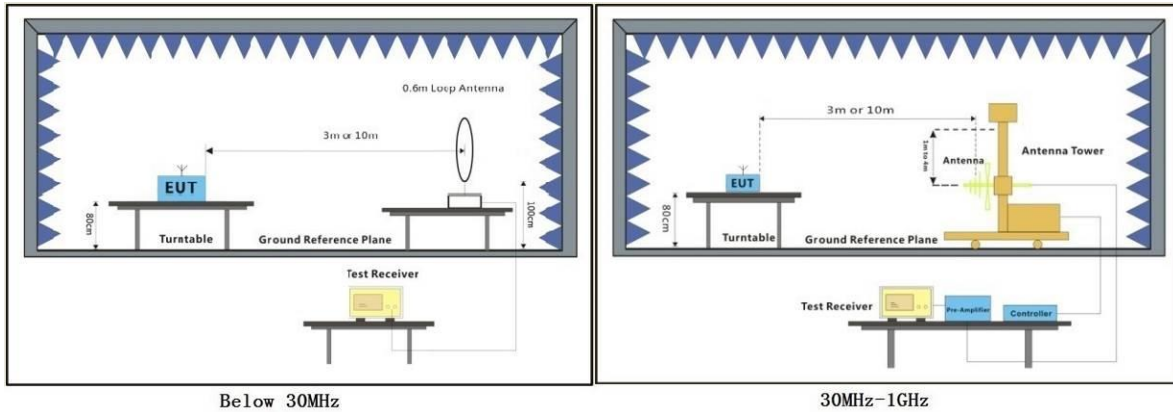
Atmospheric Pressure: 1020 mbar

6.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	05	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.
Pre-scan	06	TX mode (U-NII-2A) _Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.
Pre-scan	07	TX mode (U-NII-2C) _Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.
Pre-scan	08	TX mode (U-NII-3) _Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.



6.1.3 Test Setup Diagram



Below 30MHz

30MHz-1GHz



6.1.4 Measurement Procedure and Data

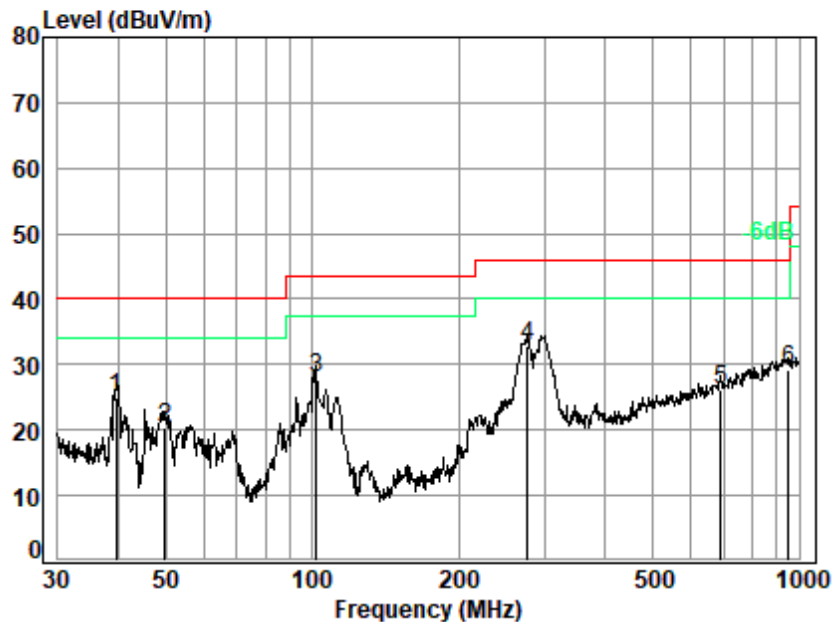
- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using quasi-peak method as specified and then reported in a data sheet.
- g. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- i. Repeat above procedures until all frequencies measured was complete.

Remark:

1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor
2. For emission below 1GHz, through the pre-scan found the worst case is the lowest channel of 802.11a. Only the worst case is recorded in the report.
3. Scan from 9kHz to 30MHz, the disturbance below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.
4. The disturbance below 1GHz was very low and the harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.



Test Mode: 05; Polarity: Horizontal



Site : chamber

Condition: 3m HORIZONTAL

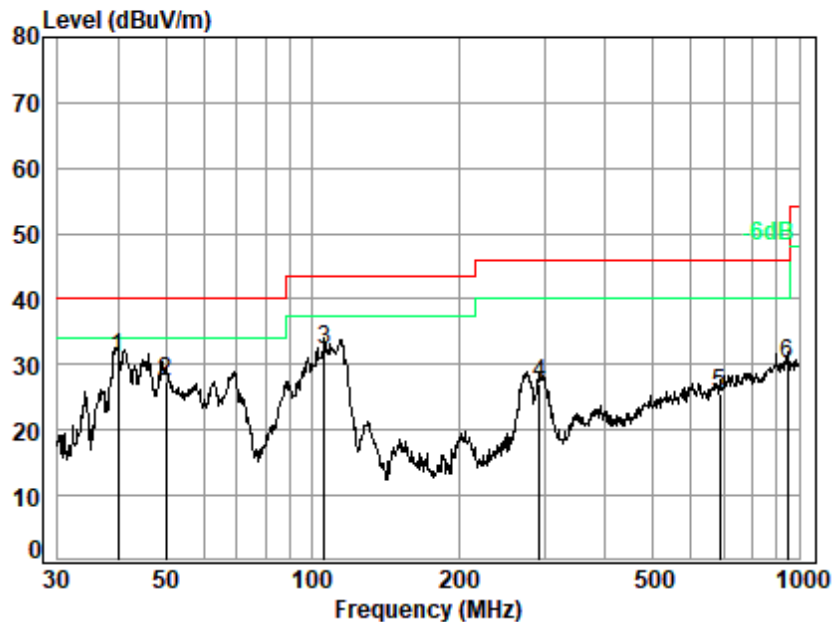
Job No. : 01599WM/01597WM

Test Mode: 05

	Ant	Cable	Preamp	Read		Limit	Over	
	Freq	Factor	Loss	Factor	Level	Level	Line	Limit Remark
	MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB
1	39.576	16.60	0.78	27.76	35.30	24.92	40.00	-15.08 QP
2	49.881	12.79	0.86	27.73	34.36	20.28	40.00	-19.72 QP
3	102.001	12.33	1.24	27.58	41.97	27.96	43.50	-15.54 QP
4 q	277.094	17.00	2.11	26.85	40.46	32.72	46.00	-13.28 QP
5	691.987	25.74	3.52	27.74	24.65	26.17	46.00	-19.83 QP
6	952.094	28.17	4.26	26.39	23.06	29.10	46.00	-16.90 QP



Test Mode: 05; Polarity: Vertical



Site : chamber

Condition: 3m VERTICAL

Job No. : 01599WM/01597WM

Test Mode: 05

		Ant	Cable	Preamp	Read	Limit	Over	
	Freq	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dB/m	dB	dB	dBuV	dBuV/m	dB	
1	q	39.854	16.48	0.78	27.76	41.44	30.94	40.00 -9.06 QP
2		50.057	12.75	0.86	27.73	41.52	27.40	40.00 -12.60 QP
3		106.013	12.18	1.27	27.56	46.23	32.12	43.50 -11.38 QP
4		293.084	17.28	2.17	26.78	34.29	26.96	46.00 -19.04 QP
5		687.151	25.71	3.50	27.76	24.14	25.59	46.00 -20.41 QP
6		945.440	28.26	4.24	26.44	23.97	30.03	46.00 -15.97 QP



6.2 Radiated Emissions (Above 1GHz)

Test Requirement 47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)

Test Method: ANSI C63.10 (2013) Section 6.6

Limit:

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

*(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.

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.



6.2.1 E.U.T. Operation

Operating Environment:

Temperature: 23.5 °C

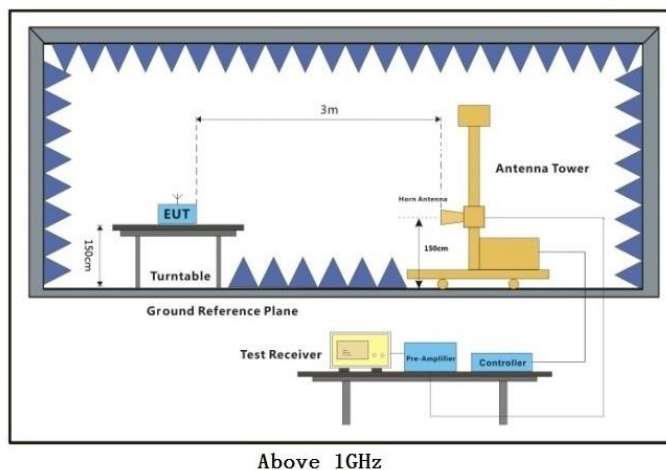
Humidity: 40.2 % RH

Atmospheric Pressure: 1020 mbar

6.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	05	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.
Pre-scan	06	TX mode (U-NII-2A) _Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.
Pre-scan	07	TX mode (U-NII-2C) _Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.
Pre-scan	08	TX mode (U-NII-3) _Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.

6.2.3 Test Setup Diagram



6.2.4 Measurement Procedure and Data

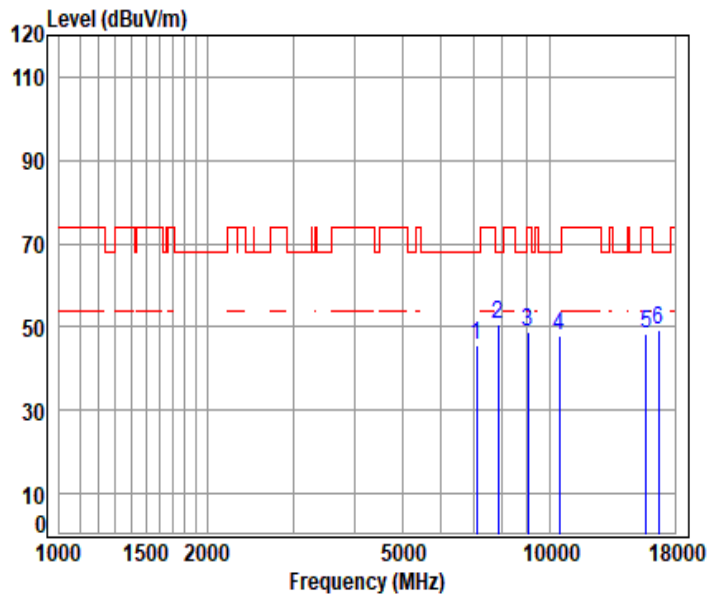
- a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak or average method as specified and then reported in a data sheet.
- g. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- i. Repeat above procedures until all frequencies measured was complete.

Remark:

1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor
2. Scan from 18GHz to 40GHz, the disturbance above 18GHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.
3. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.
4. The disturbance above 18GHz were very low and the harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.
5. For devices with multiple operating modes, measurements on the middle channel is used to determine the worst-case mode(s). Only the worst case mode with the highest output power and the mode with the highest output power spectral density for each modulation family (e.g., OFDM and direct sequence spread spectrum) is recorded in the test report.
6. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for Peak detection (PK) and Average detection (AV) at frequency above 1GHz.
7. For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle $< 98\%$) or 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.



11a_TX_CH_48_Horizontal



Condition: 3m HORIZONTAL

Job No : 01597WM/01599WM

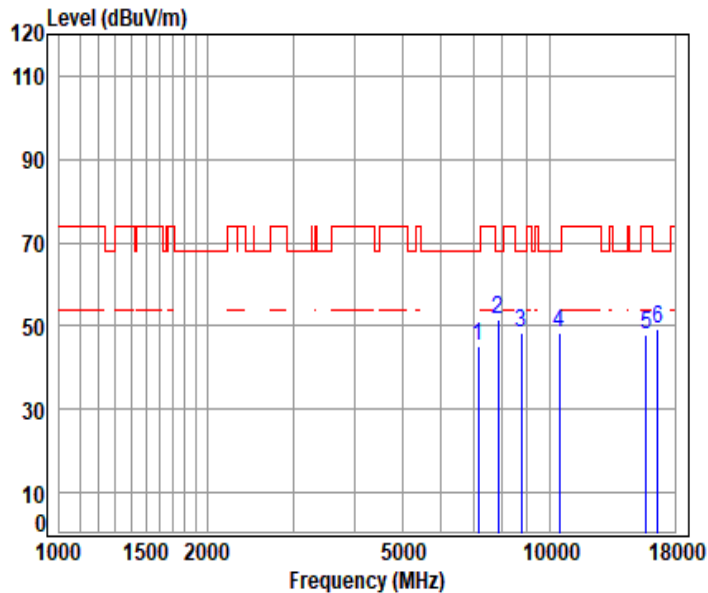
Mode : 5240 TX RSE

: 5G Wi-Fi 11a

	Cable	Ant	Preamp	Read		Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
7102.293	11.98	36.40	56.62	54.08	45.84	68.20	-22.36	peak
7855.832	11.44	37.42	56.02	58.03	50.87	68.20	-17.33	peak
9023.043	12.14	38.60	54.98	52.84	48.60	74.00	-25.40	peak
10480.000	13.64	39.08	53.81	48.86	47.77	68.20	-20.43	peak
15720.000	17.22	38.58	54.08	46.62	48.34	74.00	-25.66	peak
16676.140	17.60	39.35	54.20	46.63	49.38	68.20	-18.82	peak



11a_TX_CH_48_Vertical



Condition: 3m VERTICAL

Job No : 01597WM/01599WM

Mode : 5240 TX RSE

: 5G Wi-Fi 11a

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	7160.403	11.71	36.52	56.57	53.74	45.40	68.20	-22.80	peak
2	7855.832	11.44	37.42	56.02	58.75	51.59	68.20	-16.61	peak
3	8760.413	12.19	38.50	55.22	52.74	48.21	68.20	-19.99	peak
4	10480.000	13.64	39.08	53.81	49.61	48.52	68.20	-19.68	peak
5	15720.000	17.22	38.58	54.08	46.26	47.98	74.00	-26.02	peak
6	16591.430	17.66	39.17	54.18	46.44	49.09	68.20	-19.11	peak



6.3 Radiated Emissions which fall in the restricted bands

Test Requirement 47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)

Test Method: ANSI C63.10 (2013) Section 6.10.5

Limit:

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

*(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.

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.



6.3.1 E.U.T. Operation

Operating Environment:

Temperature: 23.5 °C

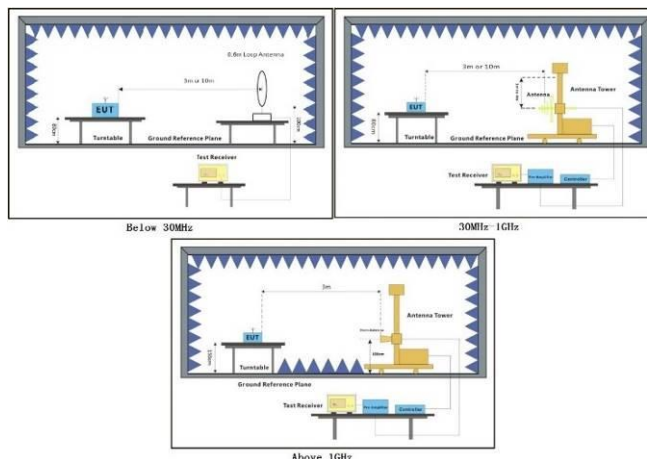
Humidity: 40.2 % RH

Atmospheric Pressure: 1020 mbar

6.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Pre-scan	05	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.
Pre-scan	06	TX mode (U-NII-2A) _Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.
Pre-scan	07	TX mode (U-NII-2C) _Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.
Final test	08	TX mode (U-NII-3) _Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.

6.3.3 Test Setup Diagram



6.3.4 Measurement Procedure and Data

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- j. Repeat above procedures until all frequencies measured was complete.

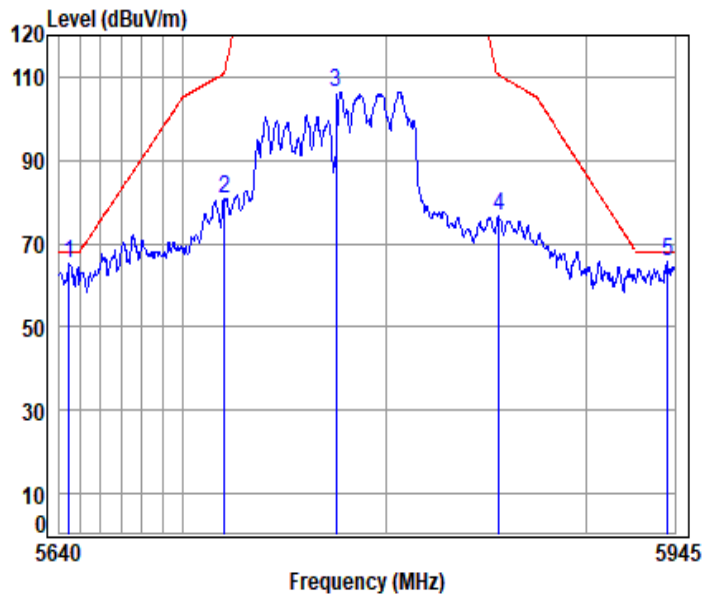
Remark 1: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

Remark 2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for Peak detection (PK) and Average detection (AV) at frequency above 1GHz.

Remark 3. For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle $< 98\%$) or 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.



11ax_80M_Partial_RU484_TX_CH_155_Horizontal



Condition: 3m HORIZONTAL

Job No : 01577WM/01599WM

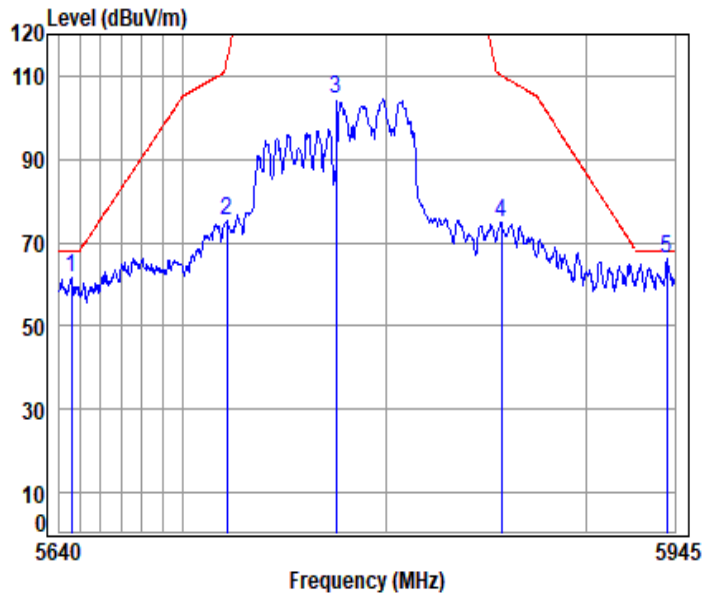
Mode : 5775 Band edge

: 5.8G Wi-Fi 11ax80 RU484

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5644.754	10.48	33.09	30.64	52.32	65.25	68.20	-2.95	peak
2	5720.171	10.65	33.24	30.61	67.65	80.93	111.19	-30.26	peak
3	5775.000	10.91	33.35	30.59	92.77	106.44	-----	-----	peak
4	5856.124	10.95	33.59	30.56	62.90	76.88	110.48	-33.60	peak
5 pp	5941.244	10.86	33.58	30.52	51.84	65.76	68.20	-2.44	peak



11ax_80M_Partial_RU484_TX_CH_155_Vertical



Condition: 3m VERTICAL

Job No : 01577WM/01599WM

Mode : 5775 Band edge

: 5.8G Wi-Fi 11ax80 RU484

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5645.646	10.48	33.09	30.64	48.71	61.64	68.20	-6.56	peak
2	5721.376	10.66	33.24	30.61	61.81	75.10	113.94	-38.84	peak
3	5775.000	10.91	33.35	30.59	90.61	104.28	-----	-----	peak
4	5857.357	10.95	33.59	30.56	60.71	74.69	110.14	-35.45	peak
5 pp	5940.931	10.86	33.58	30.52	52.05	65.97	68.20	-2.23	peak



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7 Test Setup Photo

Refer to Appendix - Test Setup Photo for SZCR2504001597WM

8 EUT Constructional Details (EUT Photos)

Refer to Appendix – External and Internal Photos for SZCR2504001597WM

- End of the Report -

