



RF TEST REPORT

Report No.: SET2021-03863

Product Name: AI Safety System

FCC ID: NCI-M360-M800

Model No. : Mobile 360 M800

Applicant: VIA TECHNOLOGIES, INC.

Address: 8F., NO.535, CHUNG CHEN RD., XINDIAN DIST., NEW
TAIPEI CITY 231, TAIWAN (R.O.C.)

Dates of Testing: 03/01/2021 —03/22/2021

Issued by: CCIC Southern Testing Co., Ltd.

Lab Location: Electronic Testing Building, No. 43 Shahe Road, Xili Street,
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Test Report

Product Name : AI Safety System

Brand Name : VIA

Trade Name : VIA

Applicant : VIA TECHNOLOGIES, INC.

Applicant Address : 8F., NO.535, CHUNG CHEN RD., XINDIAN DIST., NEW
TAIPEI CITY 231, TAIWAN (R.O.C.)

Manufacturer : VIA TECHNOLOGIES, INC.

Manufacturer Address : 8F., NO.535, CHUNG CHEN RD., XINDIAN DIST., NEW
TAIPEI CITY 231, TAIWAN (R.O.C.)

Test Standards : 47 CFR Part 15 Subpart E 15.407

Test Result : PASS

Tested by :

Vincent

2021.05.10

Vincent, Test Engineer

Reviewed by :

Chris You

2021.05.10

Chris You, Senior Engineer

Approved by :

Shuangwen Zhang

2021.05.10

Shuangwen Zhang, Manager

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Change History		
Issue	Date	Reason for change
1.0	2021.05.10	First edition

1. General Information

1.1. EUT Description

EUT Type	AI Safety System
EUT supports Radios application	WLAN5.0GHz 802.11a/n (HT20/40)/ac(VHT20/40/80)
Product Type	vehicle-mounted
TPC	Not Support
Modulation Type	CCK, DQPSK, DBPSK for DSSS 256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode only
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6 Mbps 802.11n : up to 150 Mbps 802.11ac: up to 433.3Mbps
Frequency Range	Band UNII-1: 5150 ~ 5250MHz Band UNII-3: 5725 ~ 5850MHz
Channel Bandwidth	802.11a: 20MHz, 802.11n: 20MHz/40MHz 802.11ac: 20MHz/40MHz/80MHz
Antenna Type	External
Antenna Gain	2.37dBi
Output Power (Max.)	Band UNII-1: 12.88 dBm Band UNII-3: 12.86dBm

Note: The antenna gain and RF adapter/cable insert loss provided by manufacture.

1.2. Test Standards and Results

The objective of the report is to perform testing according to below standards for the EUT FCC Certification:

No.	Identity	Document Title
1	47 CFR Part 15 Subpart E § 15.407	Radio Frequency Devices
2	789033 D02 General UNII Test Procedures New Rules v02r01	Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E
3	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices

Test detailed items/section required by FCC rules and results are as below:

No.	FCC Rule	Description	Result
1	15.203	Antenna Requirement	PASS
2	15.407(a)	Maximum Conducted Output Power	PASS
3	15.407(a)	Emission Bandwidth(26 dB Bandwidth)	PASS
	15.407(e)	Emission Bandwidth(6 dB Bandwidth)	PASS
	-	Emission Bandwidth(99%)	PASS
4	15.407(a)	Power spectral density (PSD)	PASS
5	15.207	AC Power Line Conducted Emission	PASS
6	15.209	Radiated Band Edges and Spurious	PASS
	15.407(b)	Emission	
7	15.407(g)	Frequency Stability	PASS

1.3. Channel List

Operated band in 5150 MHz ~ 5250MHz

4 channels are provided for 802.11a, 802.11n-HT20, and 802.11ac-VHT20

Channel	Frequency	Channel	Frequency
36	5180 MHz	44	5220 MHz
40	5200 MHz	48	5240 MHz

2 channels are provided for 802.11n-HT40 and 802.11ac-VHT40

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel are provided for 802.11ac-VHT80

Channel	Frequency	Channel	Frequency
42	5210 MHz	/	/

Operated band in 5725 MHz ~ 5850MHz

5 channels are provided for 802.11a

Channel	Frequency	Channel	Frequency
149	5745 MHz	161	5805 MHz
153	5765 MHz	165	5825 MHz
157	5785 MHz	/	/

2 channels are provided for 802.11n-HT40 and 802.11ac-VHT40

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

1 channel are provided for 802.11ac-VHT80

Channel	Frequency	Channel	Frequency
155	5775 MHz	/	/

1.4. Test environment and mode

Operating Environment	
Temperature	24°C
Humidity	57 % RH
Atmospheric Pressure	1010 mbar
Test mode:	
Continuously transmitting mode	Keeps the EUT in 100% duty cycle transmitting with modulation in SISO, duty cycle factor is not required.

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

For Frequency band 5150 ~ 5250 MHz			
Mode	Modulation scheme / bandwidth		
	5180 MHz	5220 MHz	5240 MHz
802.11a	6 Mbps	6 Mbps	6 Mbps
802.11n/ac – HT20	MCS 0	MCS 0	MCS 0
Frequency	5190 MHz		5230 MHz
802.11n/ac – HT40	MCS 0		MCS 0
Frequency	5210 MHz		
802.11ac – VHT80	MCS 0		
For Frequency band 5725 ~ 5850 MHz			
Mode	Modulation scheme / bandwidth		
	5745 MHz	5785 MHz	5825 MHz
802.11a	6 Mbps	6 Mbps	6 Mbps
802.11n/ac – HT20	MCS 0	MCS 0	MCS 0
Frequency	5755 MHz		5795 MHz
802.11n/ac – HT40	MCS 0		MCS 0
Frequency	5775 MHz		
802.11ac – VHT80	MCS 0		

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 modes or test configuration modes mentioned above was evaluated respectively.

Pretest Test Mode	Description
Mode 1	TX A Mode / CH36, CH44, CH48 (UNII-1)
Mode 2	TX N20 Mode / CH36, CH44, CH48 (UNII-1)
Mode 3	TX N40 Mode / CH38, CH46 (UNII-1)
Mode 4	TX AC20 Mode / CH36, CH44, CH48 (UNII-1)
Mode 5	TX AC40 Mode / CH38, CH46 (UNII-1)
Mode 6	TX AC80 Mode / CH42 (UNII-1)
Mode 7	TX A Mode / CH149, CH157, CH165 (UNII-3)
Mode 8	TX N20 Mode / CH149, CH157, CH165 (UNII-3)
Mode 9	TX N40 Mode / CH151, CH159 (UNII-3)
Mode 10	TX AC20 Mode / CH149, CH157, CH165 (UNII-3)
Mode 11	TX AC40 Mode / CH151, CH159 (UNII-3)
Mode 12	TX AC80 Mode / CH155 (UNII-3)
Mode 13	TX Mode

The EUT system operated these modes were found to be the worst case during the pre-scanning test as following:

For Conducted Test	
Final Test Mode	Description
Mode 13	TX Mode
For Radiated Test	
Final Test Mode	Description
Mode 1	TX A Mode / CH36, CH44, CH48 (UNII-1)
Mode 2	TX AC20 Mode / CH36, CH44, CH48 (UNII-1)
Mode 3	TX AC40 Mode / CH38, CH46 (UNII-1)
Mode 4	TX AC80 Mode / CH42 (UNII-1)
Mode 5	TX A Mode / CH149, CH157, CH165 (UNII-3)
Mode 6	TX AC20 Mode / CH149, CH157, CH165 (UNII-3)
Mode 7	TX AC40 Mode / CH151, CH159 (UNII-3)
Mode 8	TX AC80 Mode / CH155 (UNII-3)

1.5. EUT Operation Test Setup

For RF test items, an engineering test program was provided and enable to make EUT transmitting.

1.6. Power level setup in software

Power level setup in software for 5G wifi			
UNII-1			
Frequency (MHz)	5180	5220	5240
A mode	15	15	15
Frequency (MHz)	5180	5220	5240
N20 mode	15	15	15
Frequency (MHz)	5190	5230	\
N40 mode	15	15	\
Frequency (MHz)	5180	5220	5240
AC20 mode	15	15	15
Frequency (MHz)	5190	5230	\
AC40 mode	15	15	\
Frequency (MHz)	5210	\	\
AC80 mode	15	\	\
Power level setup in software for 5G wifi			
UNII-3			
Frequency (MHz)	5745	5785	5825
A mode	14	14	14
Frequency (MHz)	5745	5785	5825
N20 mode	13	13	13
Frequency (MHz)	5755	5795	\
N40 mode	13	13	\
Frequency (MHz)	5745	5785	5825
AC20 mode	13	13	13
Frequency (MHz)	5755	5795	\
AC40 mode	13	13	\
Frequency (MHz)	5775	\	\
AC80 mode	13	\	\



1.7. Laboratory Facilities

CNAS-Lab Code: L1659

CCIC-SET is a third party testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L1659.

FCC-Registration No.: CN1283

CCIC Southern Testing Co., Ltd EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Designation Number: CN1283, valid time is until April 19th, 2023.

ISED Registration: 11185A-1

CAB identifier: CN0064

CCIC Southern Testing Co., Ltd. EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 11185A-1 on Aug. 04, 2016, valid time is until April 19th, 2023.

A2LA Code: 5721.01

CCIC-SET is a third party testing organization accredited by A2LA according to ISO/IEC 17025. The accreditation certificate number is 5721.01.

2. Test Requirements

2.1. Antenna requirement

2.1.1. Applicable Standard

According to FCC 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 shall be considered sufficient to comply with the provisions of this section.

And according to FCC 47 CFR Section 15.407(E), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

2.1.2. Antenna Information

Antenna Type	External
EUT	AI Safety System
Operating frequency range	5180-5320MHz,5745-5825 MHz
Antenna Gain	2.37dBi(Maximum)

2.1.3. Result: comply

The EUT has a permanently and irreplaceable attached antenna. Please refer to the EUT internal photos.

2.2. Output Power

2.2.1. Limit of Output Power

FCC 15.407(a)

The maximum conducted output power should not exceed:

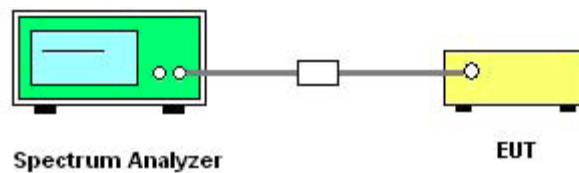
Band	EUT Category	Limit
U-NII-1	<input type="checkbox"/> Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p \leq 125mW(21dBm) at any elevation angle above 30 degrees as measured from the horizon)
	<input type="checkbox"/> Fixed point-to-point Access device	1 Watt (30 dBm)
	<input type="checkbox"/> Indoor Access Point	1 Watt (30 dBm)
	<input checked="" type="checkbox"/> Mobile and portable client device	250mW (24 dBm)
U-NII-2A	<input type="checkbox"/>	250mW (24 dBm) or 11dBm+10logB* Whichever is less.
U-NII-2C	<input type="checkbox"/>	250mW (24 dBm) or 11dBm+10logB* Whichever is less.
U-NII-3	<input checked="" type="checkbox"/>	1 Watt (30 dBm)

Note: B* is the 26 dB emission bandwidth in MHz.

2.2.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.2.3. Test Setup



2.2.4. Test Procedures

1. The testing follows the Measurement Procedure of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Method SA-1
2. The RF output of EUT was connected to spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.



4. Set RBW=1MHz, VBW=3MHz, Sweep time=Auto, Detector=average (RMS), Compute power by integrating the spectrum across the 99%OBW.
5. Measure the conducted output power and record the results in the test report.

2.2.5. Test Result

Please refer to APPENDIX A for detail

2.3. Emission Bandwidth

2.3.1. Limit of Bandwidth

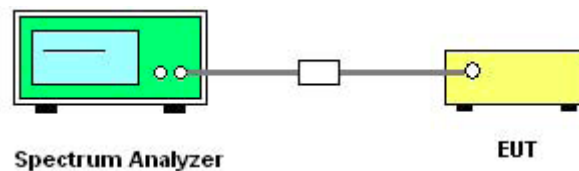
There is no limit bandwidth for band U-NII-1, U-NII-2A and U-NII-2C.

The minimum of 6dB bandwidth measurement is 0.5 MHz for U-NII-3.

2.3.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.3.3. Test Setup



2.3.4. Test Procedures

1. The testing follows the Measurement Procedure of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.

3. Set to the maximum power setting and enable the EUT transmit continuously.

4. For 26dB bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) = approximately 1%EBW, VBW \geq 3RBW, Detector = Peak, Trace mode = max hold
Span > 26 dB bandwidth and Sweep time = auto

5. Use the spectrum analyzer N dB down function to find the 26dB bandwidth.

6. For 6 Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) = 100kHz
VBW = 300 kHz, Detector = Peak, Trace mode = max hold

7. Use the spectrum analyzer N dB down function to find the 6dB bandwidth

8. Measure and record the worst results in the test report.



2.3.5. Test Results Bandwidth

Please refer to APPENDIX A for detail

2.4. Power spectral density (PSD)

2.4.1. Limit of Power Spectral Density

FCC 15.407(a)

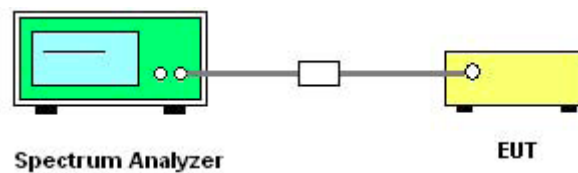
The maximum power spectral density should not exceed:

Band	EUT Category	Limit
U-NII-1	<input type="checkbox"/> Access Point (Master device)	17 dBm/MHz
	<input type="checkbox"/> Fixed point-to-point Access device	
	<input checked="" type="checkbox"/> Mobile and portable client device	11 dBm/MHz
U-NII-2A	<input type="checkbox"/>	11 dBm/MHz
U-NII-2C	<input type="checkbox"/>	11 dBm/MHz
U-NII-3	<input checked="" type="checkbox"/>	30dBm/500kHz

2.4.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.4.3. Test Setup



2.4.4. Test Procedures

1. Place the EUT on the table and set it in transmitting mode.
2. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
3. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to Spectrum.

4. For U-NII-1, U-NII-2A, U-NII-2C Band:

Using method SA-1

Set RBW=1MHz, VBW=3MHz, where span is enough to capture the entire bandwidth, Sweep time = Auto, detector = sample, traces 100 sweeps of averaging mode.

For U-NII-3 Band:

Set RBW=500 kHz, $VBW \geq 3RBW$, where span is enough to capture the entire bandwidth, Sweep time = Auto, detector = sample, traces 100 sweeps of averaging mode.



5. Use peak search function on the instrument to find the peak of the spectrum and record its value
6. Repeat above procedures until all default test channel (low, middle, and high) was complete.

2.4.5. Test Results of Power spectral density

Please refer to APPENDIX A for detail

2.5. Frequency Stability

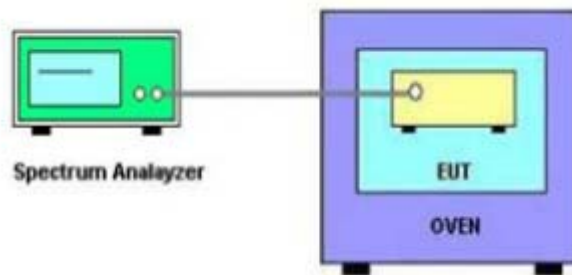
2.5.1. Limit

FCC 15.407(b) Frequency Stability	
Frequency Band(MHz)	Limit
5150~5250	Specified in the user's manual
5250~5350	
5470~5725	
5725~5850	

2.5.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.5.3. Test Setup



2.5.4. Test Procedures

1. The EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously.
3. The EUT is installed in an environment test chamber with external power source.
4. Set the chamber to operate at 50 centigrade and external power source to output at nominal voltage of EUT.
5. A sufficient stabilization period at each temperatures in used prior to each frequency measurement.
6. The test shall be performed under -10 to 55 centigrade and 85 to 115 percent of the nominal voltage. Change setting of chamber and external power source to complete all conditions.
7. Measure and record the worst results in the test report.



2.5.5. Test Results of Frequency Stability

Please refer to APPENDIX A for detail

2.6. Radiated Band Edge and Spurious Emission

2.6.1. Limit of Radiated Band Edges and Spurious Emission

Radiated emission which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

Frequency (MHz)	Field Strength ($\mu\text{V}/\text{m}$)	Measurement Distance (m)
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

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

Limits of unwanted emission out of the restricted bands

Applicable To	Limit	
789033 D02 General UNII Test Procedures New Rules V02r01	Field Strength at 3m	
	PK:74(dB $\mu\text{V}/\text{m}$)	AV:54 (dB $\mu\text{V}/\text{m}$)

Frequency Band (MHz)	Frequency (MHz)	EIRP Limit (dBm)	Equivalent Field Strength (3m) (dB $\mu\text{V}/\text{m}$)
5150 - 5250	Outside of the 5.15~5.35 GHz	-27	68.2
5250 - 5350	Outside of the 5.15~5.35 GHz		
5470 -5725	Outside of the 5.47~5.725 GHz		

FCC 15.407			
Frequency Band (MHz)	Frequency (MHz)	EIRP Limit (dBm)	Equivalent Field Strength (3m) (dBμV/m)
5725 - 5850	<5650	-27	68.2
	5650~5700	-27~10	68.2~105.2
	5700~5720	10~15.6	105.2~110.8
	5720~5725	15.6~27	110.8~122.2
	5850~5855	27~15.6	122.2~110.8
	5855~5875	15.6~10	110.8~105.2
	5875~5925	10~-27	105.2~68.2
	>5925	-27	68.2

Note: 1. The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

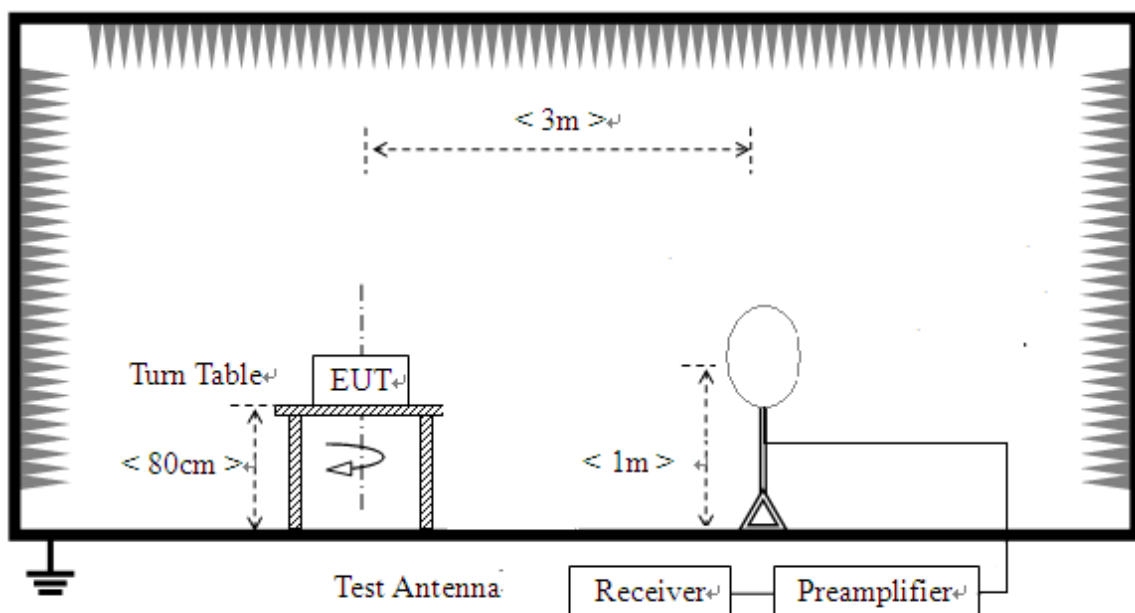
$$E = \frac{1000000 \sqrt{30P}}{3} \mu\text{V/m, where } P \text{ is the eirp (Watts).}$$

2.6.2. Measuring Instruments

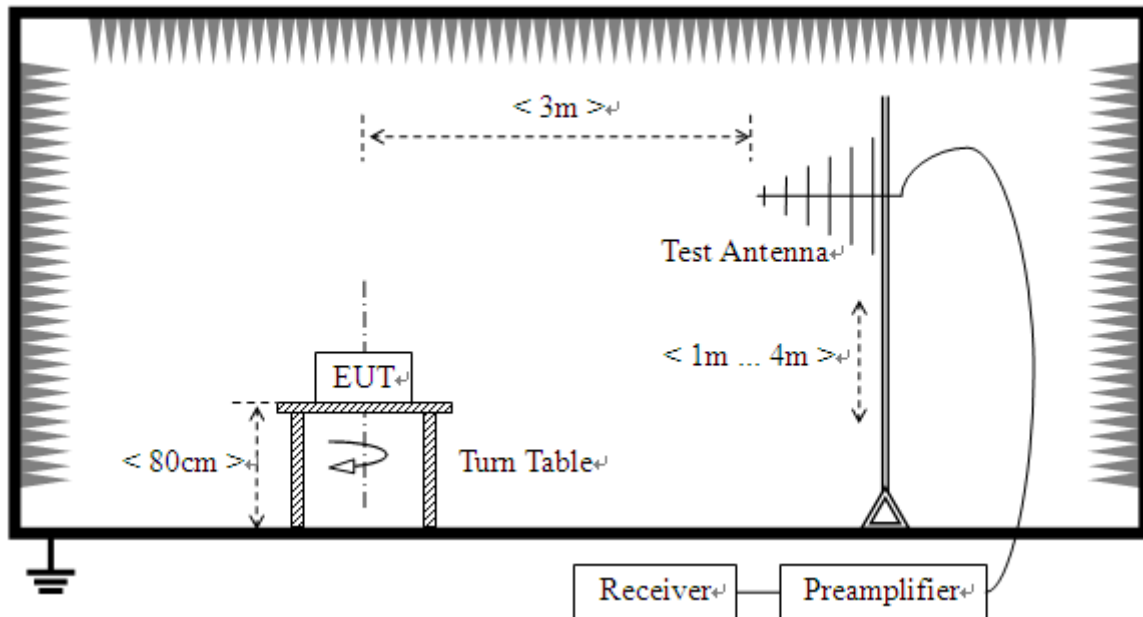
The measuring equipment is listed in the section 3 of this test report.

2.6.3. Test Setup

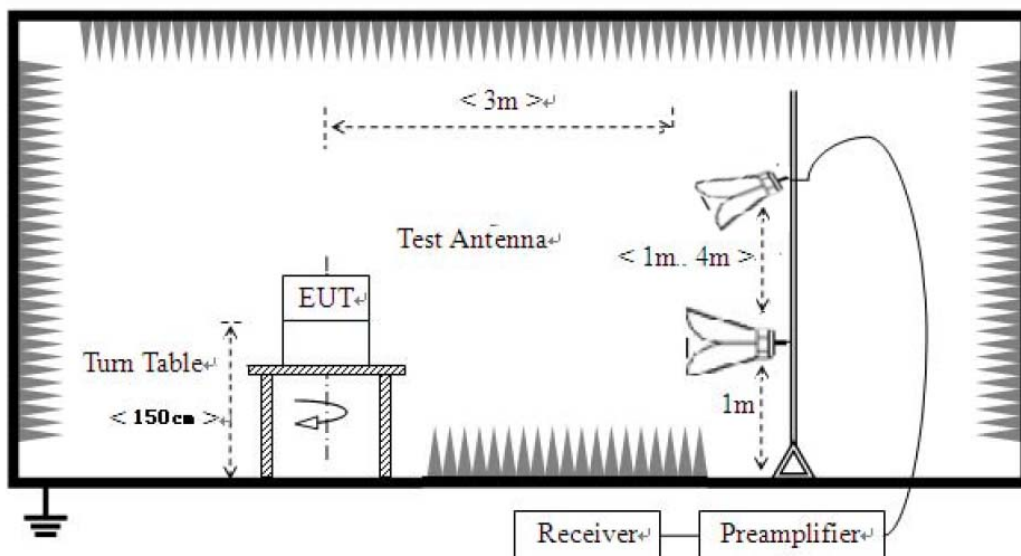
For radiated emissions from 9 KHz to 30 MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



2.6.4. Test Procedures

1. The EUT was placed on the top of a rotating table 0.8 meters (for below 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. The height of antenna 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.
4. 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 and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
6. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average (Duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor ($10 \log(1/\text{duty cycle})$).
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.
5. All modes of operation were investigated and the worst-case emissions are reported.

The worst mode as below:

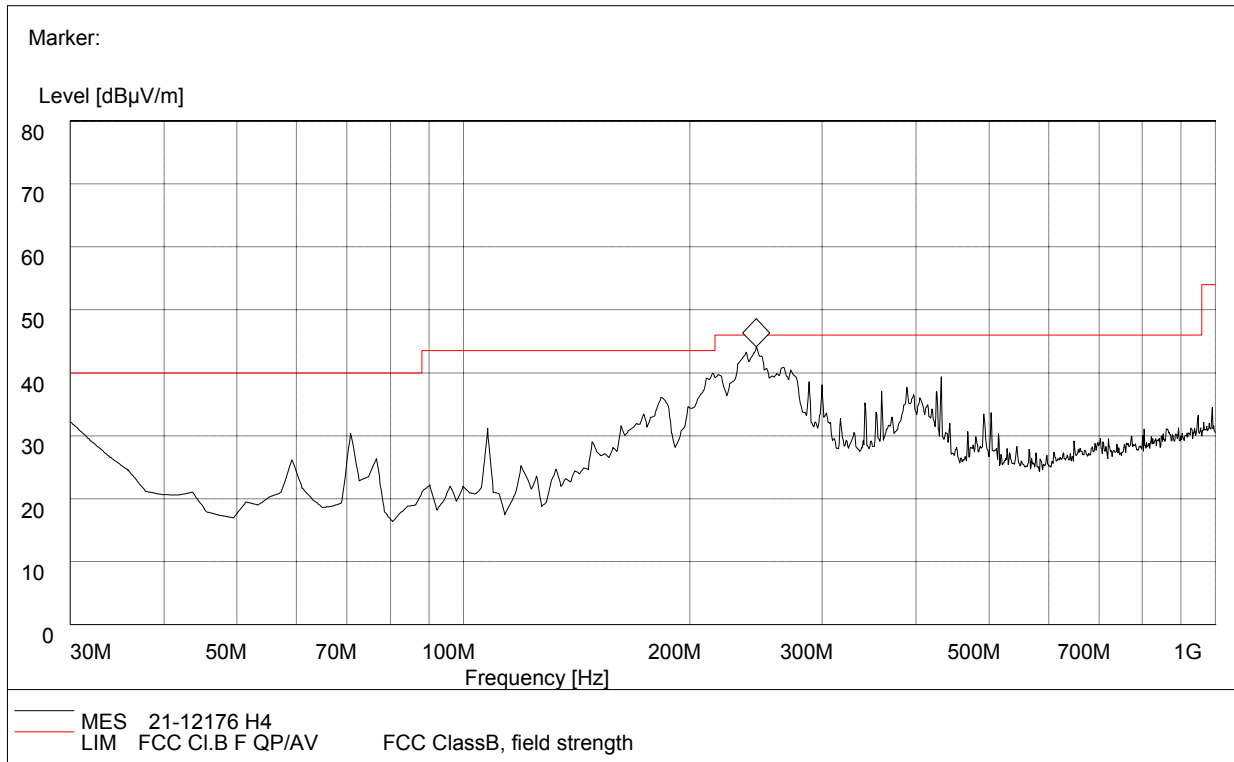
11a CH36 TX for below 1GHz

2.6.5. Test Results of Radiated Band Edge and Spurious Emission

For 9 KHz to 30MHz

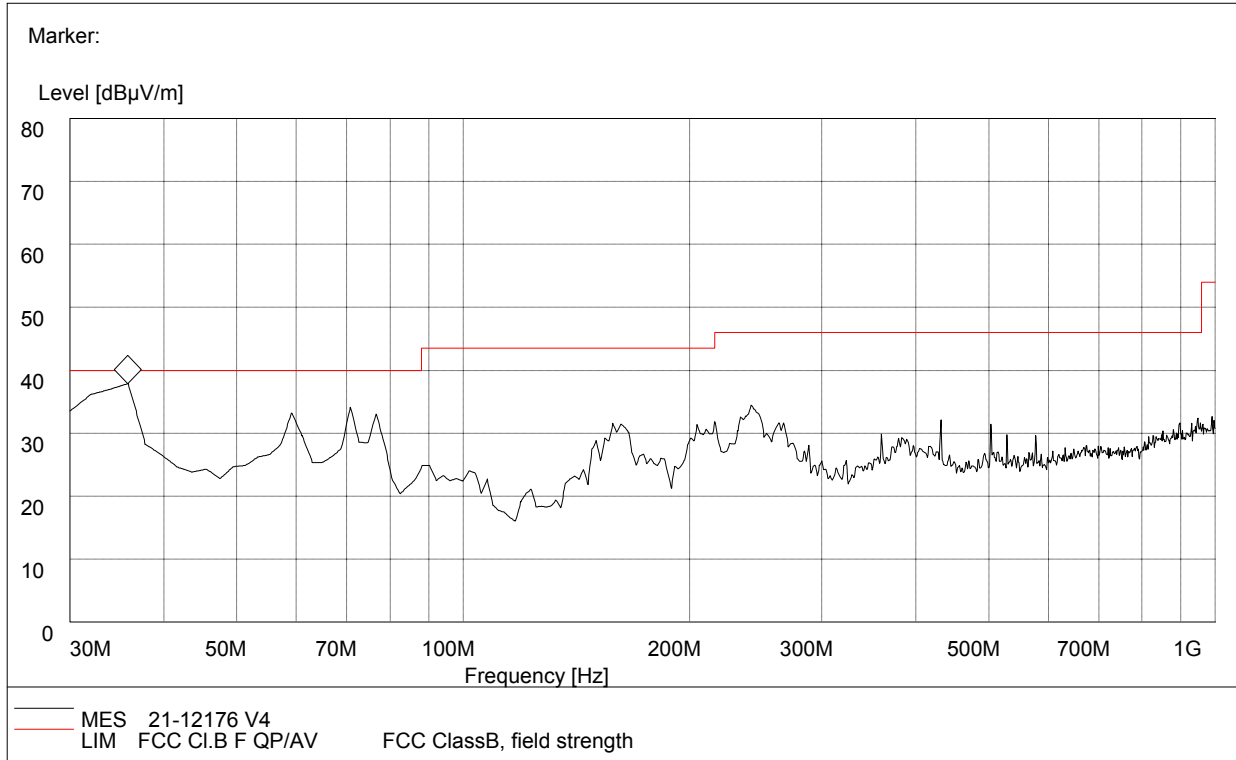
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

For 30MHz to 1000 MHz



30MHz to 1GHz, Antenna Horizontal

Frequency (MHz)	QuasiPeak (dBµV/m)	Bandwidth (kHz)	Corr. Factor (dB/m)	Antenna height (cm)	Limit (dBµV/m)	Margin	Antenna	Verdict
35.280000	31.58	120.000	17.9	100.0	40.0	8.42	Horizontal	Pass
69.250000	29.75	120.000	11.2	100.0	40.0	10.25	Horizontal	Pass
107.580000	31.20	120.000	10.8	100.0	43.5	12.3	Horizontal	Pass
183.260000	35.08	120.000	12.8	100.0	43.5	8.42	Horizontal	Pass
214.300000	38.75	120.000	13.1	100.0	43.5	4.75	Horizontal	Pass
245.320000	43.52	120.000	21.0	100.0	46.0	2.48	Horizontal	Pass



30MHz to 1GHz, Antenna Vertical

Frequency (MHz)	QuasiPeak (dB μ V/m)	Bandwidth (kHz)	Corr. Factor (dB μ V/m)	Antenna height (cm)	Limit (dB μ V/m)	Margin	Antenna	Verdict
35.280000	36.25	120.000	17.9	100.0	40.0	3.75	Vertical	Pass
58.330000	31.93	120.000	7.0	100.0	40.0	8.07	Vertical	Pass
70.580000	33.28	120.000	10.2	100.0	40.0	6.72	Vertical	Pass
75.630000	32.96	120.000	15.8	100.0	40.0	7.04	Vertical	Pass
158.020000	30.90	120.000	19.3	100.0	43.5	12.6	Vertical	Pass
241.460000	34.54	120.000	23.9	100.0	46.0	11.46	Vertical	Pass

**For 1GHz to 40 GHz****ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11a_5180MHz)**

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	56.32	PK	68.20	-11.88	1.50	300	48.82	7.50
2	5150.00	44.91	AV	54.00	-9.09	1.50	300	37.41	7.50
3	10360.00	55.36	PK	68.20	-12.84	1.50	300	35.56	19.80

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11a_5180MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	53.95	PK	68.20	-14.25	1.60	200	46.45	7.50
2	5150.00	41.98	AV	54.00	-12.02	1.60	200	34.48	7.50
3	10360.00	56.88	PK	68.20	-11.32	1.60	200	37.08	19.80

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11a_5220MHz)**

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	10400.00	55.95	PK	68.20	-12.25	1.60	320	36.05	19.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11a_5220MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	10400.00	57.98	PK	68.20	-10.22	1.60	320	38.08	19.90

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11a_5240MHz)**

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	54.62	PK	68.20	-13.58	1.60	250	46.62	8.00
2	5350.00	42.40	AV	54.00	-11.6	1.60	250	34.40	8.00
3	10480.00	56.25	PK	68.20	-11.95	1.60	250	36.35	19.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11a_5240MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	54.95	PK	68.20	-13.25	1.70	300	46.95	8.00
2	5350.00	42.86	AV	54.00	-11.14	1.70	300	34.86	8.00
3	10480.00	56.36	PK	68.20	-11.84	1.70	300	36.46	19.90

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11a_5745MHz)**

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5725.00	55.59	PK	68.20	-12.61	1.50	120	45.94	9.65
2	11490.00	56.36	PK	68.20	-11.84	1.50	120	34.66	21.70
3	11490.00	43.58	AV	54.00	-10.42	1.50	120	21.88	21.70

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11a_5745MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5725.00	54.62	PK	68.20	-13.58	1.50	300	44.97	9.65
2	11490.00	55.87	PK	68.20	-12.33	1.50	300	34.17	21.70
3	11490.00	43.45	AV	54.00	-10.55	1.50	300	21.75	21.70

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11a_5785MHz)**

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	11570.00	59.65	PK	68.20	-8.55	1.70	290	37.95	21.70
2	11570.00	47.59	AV	54.00	-6.41	1.70	290	25.89	21.70

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11a_5785MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	11570.00	56.95	PK	68.20	-11.25	1.60	300	35.25	21.70
2	11570.00	44.63	AV	54.00	-9.37	1.60	300	22.93	21.70

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11a_5825MHz)**

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5850.00	53.66	PK	68.20	-14.54	1.50	300	43.88	9.78
2	11650.00	57.24	PK	68.20	-10.96	1.50	300	35.34	21.90
3	11650.00	45.45	AV	54.00	-8.55	1.50	300	23.55	21.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11a_5825MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5850.00	56.35	PK	68.20	-11.85	1.60	250	46.57	9.78
2	11650.00	57.58	PK	68.20	-10.62	1.60	250	35.68	21.90
3	11650.00	45.32	AV	54.00	-8.68	1.60	250	23.42	21.90

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n20_5180MHz)**

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	55.25	PK	68.20	-12.95	1.80	260	47.75	7.50
2	5150.00	43.49	AV	54.00	-10.51	1.80	260	35.99	7.50
3	10360.00	54.59	PK	68.20	-13.61	1.80	260	34.79	19.80

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n20_5180MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	52.98	PK	68.20	-15.22	1.70	200	45.48	7.50
2	5150.00	41.13	AV	54.00	-12.87	1.70	200	33.63	7.50
3	10360.00	55.84	PK	68.20	-12.36	1.70	200	36.04	19.80

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n20_5220MHz)**

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	10400.00	54.62	PK	68.20	-13.58	1.80	200	34.72	19.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n20_5220MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	10400.00	56.95	PK	68.20	-11.25	1.80	200	37.05	19.90

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n20_5240MHz)**

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	55.26	PK	68.20	-12.94	1.90	260	47.26	8.00
2	5350.00	43.04	AV	54.00	-10.96	1.90	260	35.04	8.00
3	10480.00	57.26	PK	68.20	-10.94	1.90	260	37.36	19.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n20_5240MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	56.36	PK	68.20	-11.84	1.80	200	48.36	8.00
2	5350.00	44.27	AV	54.00	-9.73	1.80	200	36.27	8.00
3	10480.00	55.95	PK	68.20	-12.25	1.80	200	36.05	19.90

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n20_5745MHz)**

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5725.00	54.65	PK	68.20	-13.55	1.50	150	45.00	9.65
2	11490.00	58.62	PK	68.20	-9.58	1.50	150	36.92	21.70
3	11490.00	46.13	AV	54.00	-7.87	1.50	150	24.43	21.70

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n20_5745MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5725.00	53.95	PK	68.20	-14.25	1.50	300	44.30	9.65
2	11490.00	54.87	PK	68.20	-13.33	1.50	300	33.17	21.70
3	11490.00	42.84	AV	54.00	-11.16	1.50	300	21.14	21.70

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n20_5785MHz)**

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	11570.00	58.99	PK	68.20	-9.21	1.70	300	37.29	21.70
2	11570.00	46.93	AV	54.00	-7.07	1.70	300	25.23	21.70

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n20_5785MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	11570.00	57.95	PK	68.20	-10.25	1.60	280	36.25	21.70
2	11570.00	46.21	AV	54.00	-7.79	1.60	280	24.51	21.70

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n20_5825MHz)**

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5850.00	52.62	PK	68.20	-15.58	1.50	290	42.84	9.78
2	11650.00	56.95	PK	68.20	-11.25	1.50	300	35.05	21.90
3	11650.00	45.16	AV	54.00	-8.84	1.50	300	23.26	21.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n20_5825MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5850.00	57.95	PK	68.20	-10.25	1.60	240	48.17	9.78
2	11650.00	59.36	PK	68.20	-8.84	1.60	240	37.46	21.90
3	11650.00	47.10	AV	54.00	-6.9	1.60	240	25.20	21.90

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11ac20_5180MHz)**

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	54.85	PK	68.20	-13.35	1.80	260	47.35	7.50
2	5150.00	43.36	AV	54.00	-10.64	1.80	260	35.86	7.50
3	10360.00	55.95	PK	68.20	-12.25	1.80	260	36.15	19.80

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11ac20_5180MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	56.95	PK	68.20	-11.25	1.70	200	49.45	7.50
2	5150.00	45.20	AV	54.00	-8.80	1.70	200	37.70	7.50
3	10360.00	55.84	PK	68.20	-12.36	1.70	200	36.04	19.80

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11ac20_5220MHz)**

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	10400.00	55.95	PK	68.20	-12.25	1.80	200	36.05	19.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11ac20_5220MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	10400.00	57.65	PK	68.20	-10.55	1.80	200	37.75	19.90

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11ac20_5240MHz)**

No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	56.95	PK	68.20	-11.25	1.90	260	48.95	8.00
2	5350.00	44.73	AV	54.00	-9.27	1.90	260	36.73	8.00
3	10480.00	57.26	PK	68.20	-10.94	1.90	260	37.36	19.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11ac20_5240MHz)

No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	58.95	PK	68.20	-9.25	1.80	200	50.95	8.00
2	5350.00	46.86	AV	54.00	-7.14	1.80	200	38.86	8.00
3	10480.00	56.33	PK	68.20	-11.87	1.80	200	36.43	19.90

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11ac20_5745MHz)**

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5725.00	56.95	PK	68.20	-11.25	1.60	300	47.30	9.65
2	11490.00	57.85	PK	68.20	-10.35	1.60	300	36.15	21.70
3	11490.00	45.20	AV	54.00	-8.8	1.60	300	23.50	21.70

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11ac20_5745MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5725.00	54.25	PK	68.20	-13.95	1.50	300	44.60	9.65
2	11490.00	56.99	PK	68.20	-11.21	1.50	300	35.29	21.70
3	11490.00	44.14	AV	54.00	-9.86	1.50	300	22.44	21.70

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11ac20_5785MHz)**

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	11570.00	57.59	PK	68.20	-10.61	1.60	280	35.89	21.70
2	11570.00	45.53	AV	54.00	-8.47	1.60	280	23.83	21.70

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11ac20_5785MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	11570.00	56.95	PK	68.20	-11.25	1.70	300	35.25	21.70
2	11570.00	45.21	AV	54.00	-8.79	1.70	300	23.51	21.70

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11ac20_5825MHz)**

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5850.00	54.25	PK	68.20	-13.95	1.80	200	44.47	9.78
2	11650.00	56.33	PK	68.20	-11.87	1.80	300	34.43	21.90
3	11650.00	44.54	AV	54.00	-9.46	1.80	300	22.64	21.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11ac20_5825MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5850.00	58.95	PK	68.20	-9.25	1.50	200	49.17	9.78
2	11650.00	57.62	PK	68.20	-10.58	1.50	200	35.72	21.90
3	11650.00	45.36	AV	54.00	-8.64	1.50	200	23.46	21.90

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n40_5190MHz)**

No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	58.65	PK	68.20	-9.55	1.50	300.00	51.15	7.50
2	5150.00	46.43	AV	54.00	-7.57	1.50	300.00	38.93	7.50
3	10380.00	56.36	PK	68.20	-11.84	1.50	300.00	36.56	19.80

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n40_5190MHz)

No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	58.21	PK	68.20	-9.99	1.60	280.00	50.71	7.50
2	5150.00	46.64	AV	54.00	-7.36	1.60	280.00	39.14	7.50
3	10380.00	56.32	PK	68.20	-11.88	1.60	280.00	36.52	19.80

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n40_5230MHz)**

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	56.33	PK	68.20	-11.87	1.70	120.00	48.33	8.00
2	5350.00	44.90	AV	54.00	-9.1	1.70	120.00	36.90	8.00
3	10460.00	55.84	PK	68.20	-12.36	1.70	120.00	35.94	19.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n40_5230MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	56.95	PK	68.20	-11.25	1.50	290.00	48.95	8.00
2	5350.00	45.75	AV	54.00	-8.25	1.50	290.00	37.75	8.00
3	10460.00	57.55	PK	68.20	-10.65	1.50	290.00	37.65	19.90

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n40_5755MHz)**

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5725.00	56.36	PK	68.20	-11.84	1.60	200.00	46.71	9.65
2	11510.00	57.85	PK	68.20	-10.35	1.60	200.00	36.15	21.70
3	11510.00	46.73	AV	54.00	-7.27	1.60	200.00	25.03	21.70

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n40_5755MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5725.00	55.95	PK	68.20	-12.25	1.80	300.00	46.30	9.65
2	11510.00	57.26	PK	68.20	-10.94	1.80	300.00	35.56	21.70
3	11510.00	46.72	AV	54.00	-7.28	1.80	300.00	25.02	21.70

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n40_5795MHz)**

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5850.00	59.36	PK	68.20	-8.84	1.80	270.00	49.58	9.78
2	11590.00	57.23	PK	68.20	-10.97	1.80	270.00	35.43	21.80
3	11590.00	46.55	AV	54.00	-7.45	1.80	270.00	24.75	21.80

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n40_5795MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5850.00	57.32	PK	68.20	-10.88	1.80	300.00	47.54	9.78
2	11590.00	56.32	PK	68.20	-11.88	1.80	300.00	34.52	21.80
3	11590.00	45.74	AV	54.00	-8.26	1.80	300.00	23.94	21.80

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11ac40_5190MHz)**

No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	57.40	PK	68.20	-10.81	1.60	280.00	49.90	7.50
2	5150.00	44.66	AV	54.00	-9.345	1.60	280.00	37.16	7.50
3	10380.00	56.66	PK	68.20	-11.54	1.60	280.00	36.86	19.80

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11ac40_5190MHz)

No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	58.25	PK	68.20	-9.95	1.70	300.00	50.75	7.50
2	5150.00	46.68	AV	54.00	-7.32	1.70	300.00	39.18	7.50
3	10380.00	56.98	PK	68.20	-11.22	1.70	300.00	37.18	19.80

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11ac40_5230MHz)**

No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	56.66	PK	68.20	-11.54	1.80	300.00	48.66	8.00
2	5350.00	45.23	AV	54.00	-8.77	1.80	300.00	37.23	8.00
3	10460.00	57.42	PK	68.20	-10.78	1.80	120.00	37.52	19.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11ac40_5230MHz)

No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	58.62	PK	68.20	-9.58	1.60	200.00	50.62	8.00
2	5350.00	47.42	AV	54.00	-6.58	1.60	200.00	39.42	8.00
3	10460.00	56.47	PK	68.20	-11.73	1.60	200.00	36.57	19.90

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11ac40_5755MHz)**

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5725.00	56.69	PK	68.20	-11.51	1.60	180.00	47.04	9.65
2	11510.00	56.95	PK	68.20	-11.25	1.60	180.00	35.25	21.70
3	11510.00	44.92	AV	54.00	-9.08	1.60	180.00	23.22	21.70

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11ac40_5755MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5725.00	56.95	PK	68.20	-11.25	1.70	260.00	47.30	9.65
2	11510.00	58.22	PK	68.20	-9.98	1.70	260.00	36.52	21.70
3	11510.00	46.86	AV	54.00	-7.14	1.70	260.00	25.16	21.70

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11ac40_5795MHz)**

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5850.00	58.65	PK	68.20	-9.55	1.50	300.00	48.87	9.78
2	11590.00	56.32	PK	68.20	-11.88	1.50	300.00	34.52	21.80
3	11590.00	45.09	AV	54.00	-8.91	1.50	300.00	23.29	21.80

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11ac40_5795MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5850.00	56.95	PK	68.20	-11.25	1.80	210.00	47.17	9.78
2	11590.00	57.36	PK	68.20	-10.84	1.80	210.00	35.56	21.80
3	11590.00	46.12	AV	54.00	-7.88	1.80	210.00	24.32	21.80



ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11ac-VHT80_5210MHz)									
No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	56.32	PK	68.20	-11.88	1.60	200.00	48.82	7.50
2	5150.00	44.70	AV	54.00	-9.30	1.60	200.00	37.20	7.50
3	10420.00	56.40	PK	68.20	-11.81	1.60	200.00	36.50	19.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11ac-VHT80_5210MHz)									
No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	56.77	PK	68.20	-11.43	1.80	300.00	49.27	7.50
2	5150.00	44.42	AV	54.00	-9.58	1.80	300.00	36.92	7.50
3	10420.00	58.22	PK	68.20	-9.98	1.80	300.00	38.32	19.90



ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11ac-VHT80_5775MHz)									
No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	56.95	PK	68.20	-11.25	1.70	300.00	48.95	8.00
2	5350.00	46.76	AV	54.00	-7.24	1.70	300.00	38.76	8.00
3	10580.00	57.20	PK	68.20	-11.00	1.70	300.00	37.20	20.00
4	10580.00	46.75	AV	54.00	-7.25	1.70	300.00	26.75	20.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11ac-VHT80_5775MHz)									
No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	55.95	PK	68.20	-12.25	1.60	200.00	47.95	8.00
2	5350.00	45.56	AV	54.00	-8.44	1.60	200.00	37.56	8.00
3	10580.00	57.95	PK	68.20	-21.54	1.60	200.00	37.95	20.00
4	10580.00	47.17	AV	54.00	-11.60	1.60	200.00	27.17	20.00

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

2.7. Conducted Emission

2.7.1. Limit of Conducted Emission

FCC 15.207,

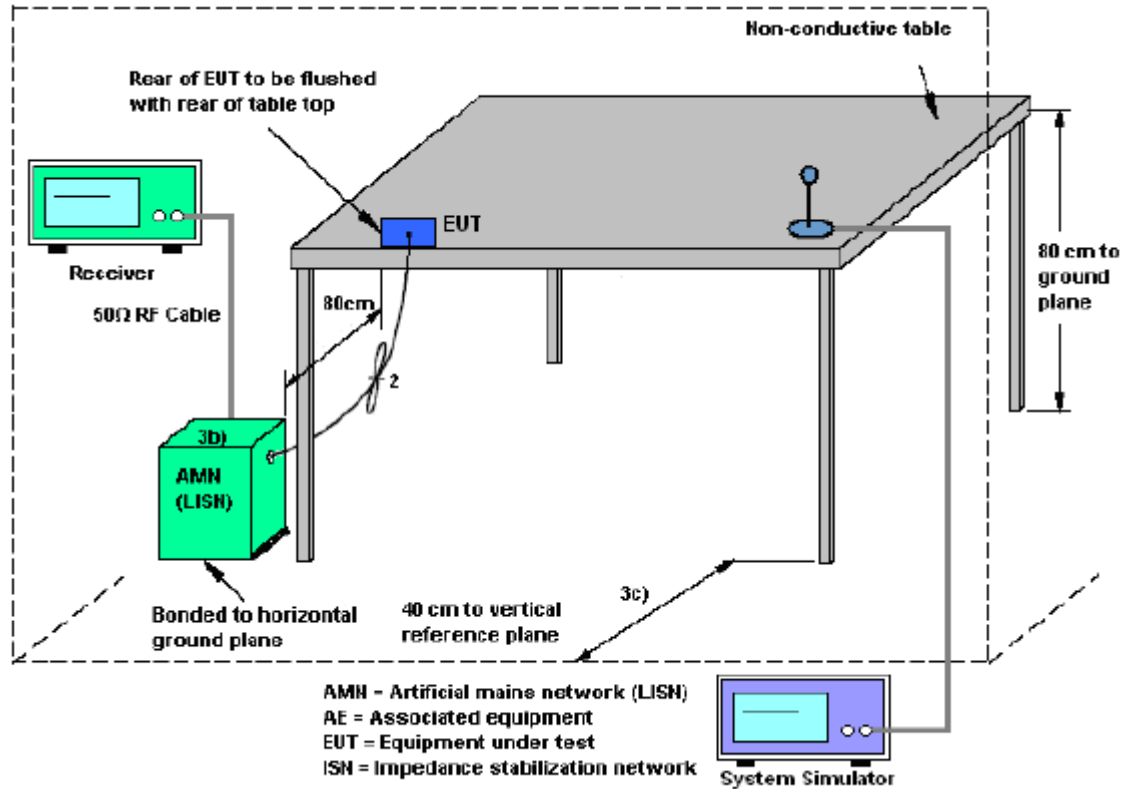
For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency range (MHz)	Conducted Limit (dB μ V)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

2.7.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.7.3. Test Setup

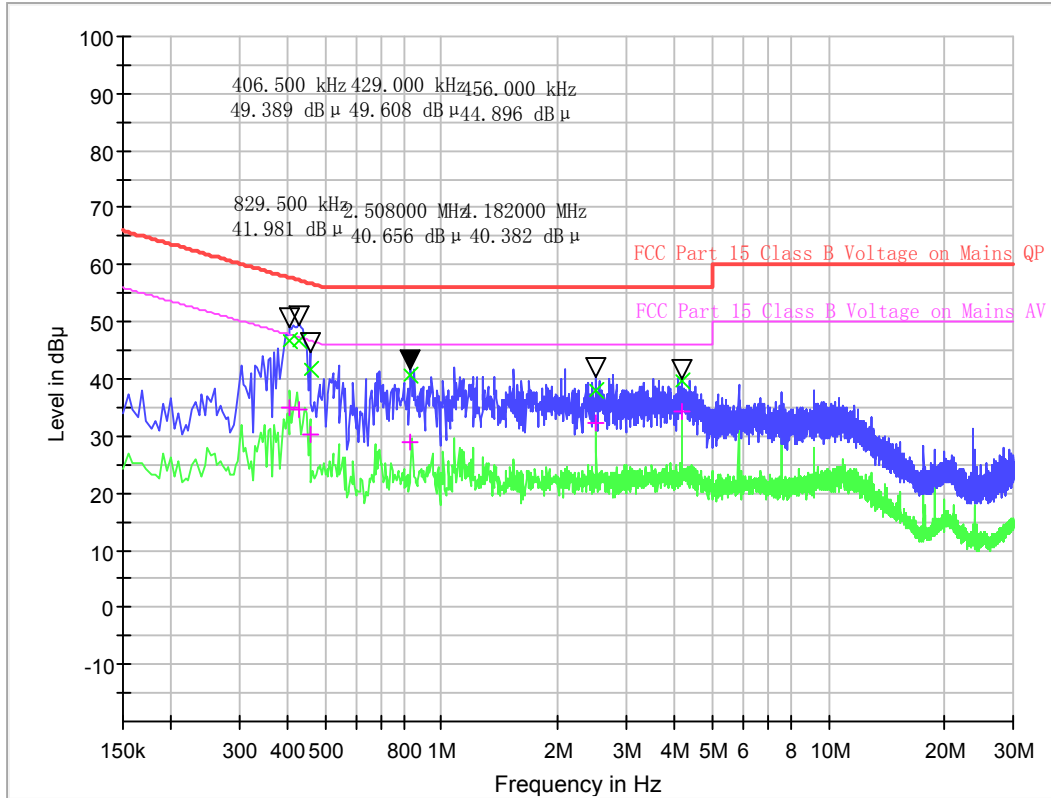


2.7.4. Test Procedures

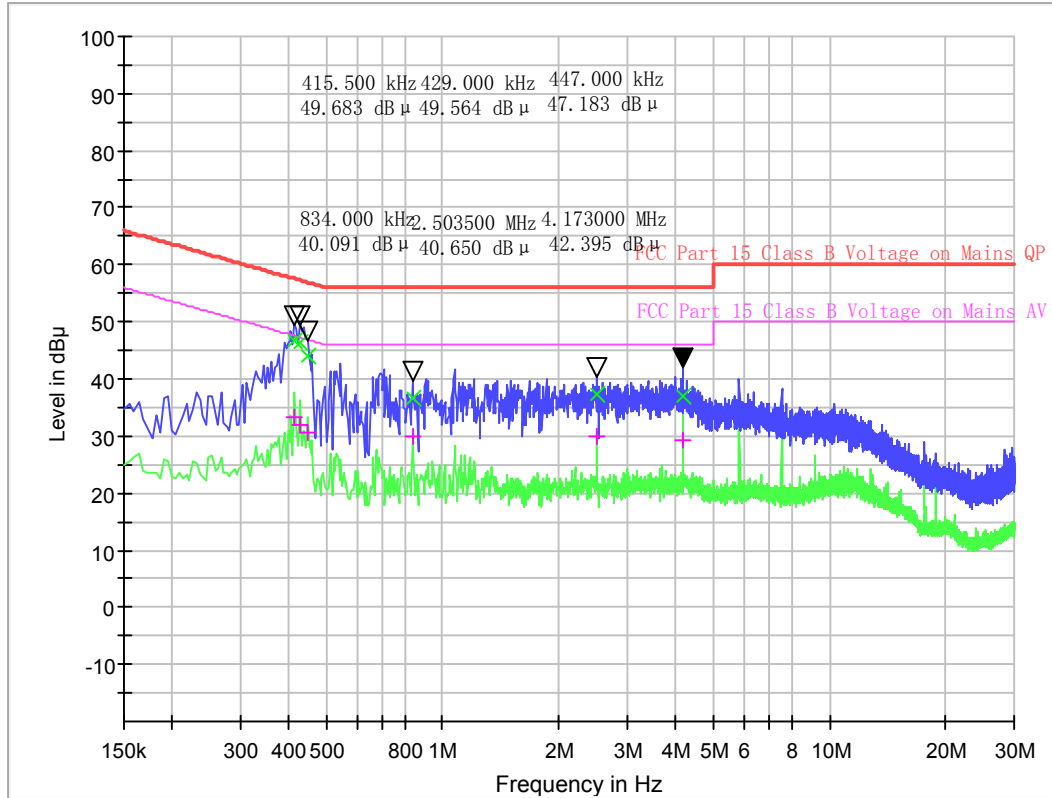
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

2.7.5. Test Results of Conducted Emission

The EUT configuration of the emission tests is 5G WLAN Link + USB Cable (Charging from Adapter)



Frequency (MHz)	QuasiPeak (dB µ V)	Average (dB µ V)	Cabel Loss (dB)	Corr. (dB)	Margin - QPK	Limit - QPK	Margin - AV	Limit - AV (dB µ V)
0.406500	46.56	35.12	0.1	10.1	11.16	57.7	12.60	47.7
0.429000	46.76	34.65	0.1	10.1	10.51	57.3	12.62	47.3
0.456000	41.75	30.25	0.1	10.1	15.02	56.8	16.52	46.8
0.829500	40.64	29.10	0.1	10.1	15.36	56.0	16.90	46.0
2.508000	37.89	32.24	0.2	10.2	18.11	56.0	13.76	46.0
4.182000	39.64	34.37	0.2	10.2	16.36	56.0	11.63	46.0



Frequency (MHz)	QuasiPeak (dB µ V)	CAverage (dB µ V)	Cabel Loss (dB)	Corr. (dB)	Margin - QPK	Limit - QPK	Margin - AV	Limit - AV (dB µ V)
0.415500	46.77	33.25	0.1	10.1	10.77	57.5	14.29	47.5
0.429000	46.31	31.80	0.1	10.1	10.96	57.3	15.47	47.3
0.447000	44.17	30.72	0.1	10.1	12.76	56.9	16.21	46.9
0.834000	36.54	29.97	0.1	10.1	19.46	56.0	16.03	46.0
2.503500	37.28	29.94	0.2	10.2	18.72	56.0	16.06	46.0
4.173000	37.11	29.32	0.2	10.2	18.89	56.0	16.68	46.0

Test Result: PASS

**Note: Correction factor=Cabel loss+ attenuation factor
attenuation factor=10dB**

3. List of measuring equipment

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	EMI TEST RECEIVER	KEYSIGHT	N9038A	A141202036	2020.09.21	2021.09.20
2	Power Meter	R&S	NRP-Z31	102872	2020.05.18	2021.05.17
3	TURNTABLE	ETS	2088	2149	N/A	N/A
4	ANTENNA MAST	ETS	2075	2346	N/A	N/A
5	EMI TEST Software	R&S	ESK1	N/A	N/A	N/A
6	Horn antenna (18GHz~26.5GHz)	AR	AT4003A	325306	2020.09.16	2022.09.15
7	Amplifier 30M~1GHz	MILMEGA	80RF1000-10004	A140101634	2021.01.26	2022.01.25
8	Amplifier 1G~18GHz	MILMEGA	AS0104R-800/40 0	A160302517	2021.01.26	2022.01.25
9	High pass filter	Compliance Direction systems	BSU-6	34202	2020.11.10	2021.11.09
10	Horn Antenna	R&S	HF906	A0304225	2019.04.17	2022.04.16
11	Horn Antenna	R&S	ESIB7	A0501375	2020.06.24	2021.06.23
12	ULTRA-BROADBAND ANTENNA	SCHWARZBEC K	VULB9160	A0805560	2019.05.24	2022.05.23
13	Passive Loop Antenna	R&S	HFH2-Z2	100047	2019.04.26	2022.04.25
14	Temperature chamber	XSM	DNF810C	A0501375	2020.05.26	2021.05.25
15	Spectrum Analyzer	KEYSIGHT	N9030A	A160702554	2020.05.18	2021.05.17
16	Power Supply	R&S	ESIB26	A0304218	2021.01.04	2022.01.03
17	LISN	ROHDE&SCH WARZ	ENV216	A140701847	2020.09.22	2021.09.21
18	Test software	ECIT	Eagle	V2.0	N/A	N/A

4. Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.10-2013. All the measurement uncertainty value were shown with a coverage $K=2$ to indicate 95% level of confidence . The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of Conducted Emission Measurement (150KHz~30MHz)

Measuring Uncertainty for a level of confidence of 95%($U=2U_c(y)$)	2.8dB
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Uncertainty of Radiated Emission Measurement (30MHz~1GHz)

Measuring Uncertainty for a level of confidence of 95%($U=2U_c(y)$)	3.91dB
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Uncertainty of Radiated Emission Measurement (1GHz~18GHz)

Measuring Uncertainty for a level of confidence of 95%($U=2U_c(y)$)	4.5dB
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Uncertainty of Radiated Emission Measurement (18GHz~40GHz)

Measuring Uncertainty for a level of confidence of 95%($U=2U_c(y)$)	4.9dB
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