

Note: 1. All the antennas have been pre-tested, and all modes of each antenna are tested. All the 20MHz bandwidth modulation had been tested, the 802.11n20 at 5180MHz, 5320MHz and 5500MHz were the worst case and record in his test report. All the 40MHz bandwidth modulation had been tested, the 802.11n40 at 5190MHz, 5310MHz and 5510MHz were the worst case and record in his test report.

2. The factor had been edited in the “Input Correction” of the Spectrum Analyzer.

3. Only the data of band edge emission at the restricted band 4.5GHz-5.15GHz and 5.35GHz-5.46GHz record in the report. Other restricted band 7.25GHz-7.77GHz were considered as ambient noise. No recording in the test report.

4. The sideband standard of U NII-3 frequency band is not defined, the transmitted signal does not fall in the restricted band, and the edge signal is far away from the edge of other restricted bands, and it is not recorded in the report.

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Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd  
Tel: +86-755 2523 4088 E-mail: [agc@agccert.com](mailto:agc@agccert.com) Web: <http://www.agccert.com/>

## 12. AC POWER LINE CONDUCTED EMISSION TEST

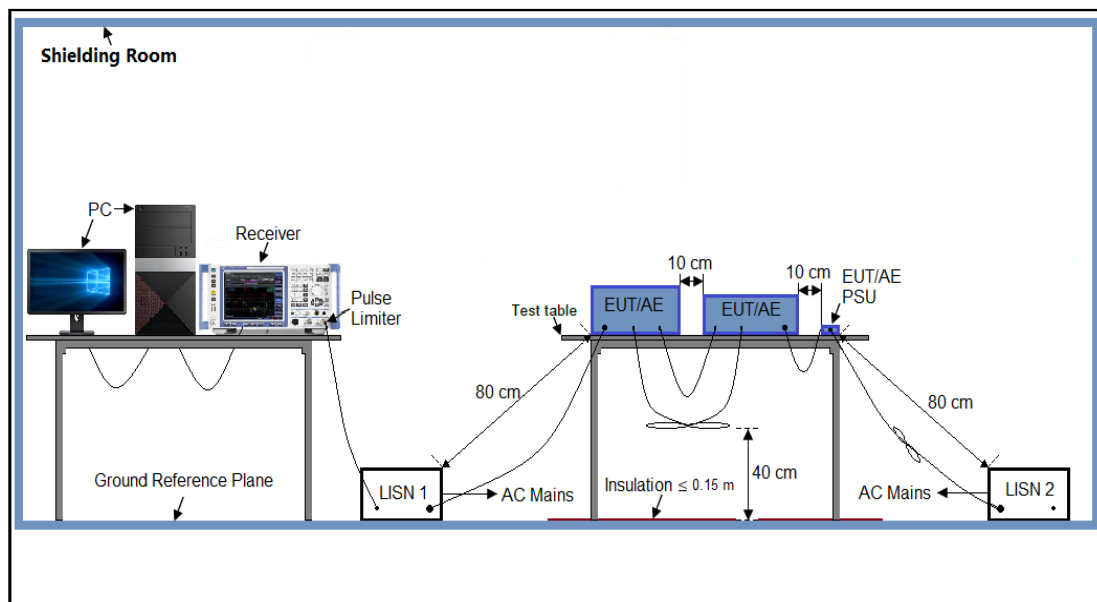
## 12.1. LIMITS OF LINE CONDUCTED EMISSION TEST

Frequency	Maximum RF Line Voltage	
	Q.P (dBμV)	Average (dBμV)
150kHz~500kHz	66-56	56-46
500kHz~5MHz	56	46
5MHz~30MHz	60	50

Note:

1. The lower limit shall apply at the transition frequency.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50MHz.

## 12.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST



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Tel: +86-755 2523 4088 E-mail: aac@aaccert.com Web: <http://www.aaccert.com/>

### 12.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST

1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
2. Support equipment, if needed, was placed as per ANSI C63.10.
3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
4. All support equipment received AC120V/60Hz power from a LISN, if any.
5. The EUT received charging voltage by adapter which received 120V/60Hz power by a LISN.
6. The test program was started. Emissions were measured on each current carrying line of the EUT using spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 Ohm load; the second scan had Line 1 connected to a 50 Ohm load and Line 2 connected to the Analyzer / Receiver.
7. Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
8. During the above scans, the emissions were maximized by cable manipulation.
9. The test mode(s) were scanned during the preliminary test.

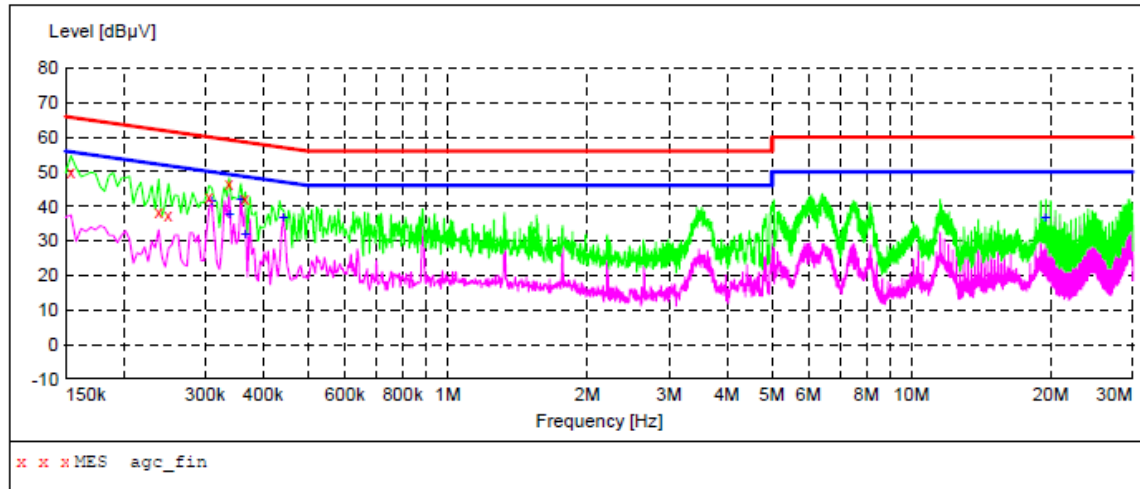
Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

### 12.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST

1. EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
2. A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less – 2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.
3. The test data of the worst case was reported on the Summary Data page.
4. All test channels had been tested. The 802.11n20 at 5180MHz is the worst case and recorded in the test report.

## 12.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST

### AC POWER LINE CONDUCTED EMISSION TEST-L



#### MEASUREMENT RESULT: "agc\_fin"

2023/8/28 17:48

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line
0.154000	50.10	6.1	66	15.7	QP	L1
0.238000	38.60	6.1	62	23.6	QP	L1
0.250000	37.50	6.1	62	24.3	QP	L1
0.306000	42.60	6.1	60	17.5	QP	L1
0.338000	46.30	6.1	59	13.0	QP	L1
0.366000	42.20	6.1	59	16.4	QP	L1

#### MEASUREMENT RESULT: "agc\_fin2"

2023/8/28 17:48

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line
0.310000	41.60	6.1	50	8.4	AV	L1
0.338000	38.10	6.1	49	11.2	AV	L1
0.358000	42.30	6.1	49	6.5	AV	L1
0.366000	32.00	6.1	49	16.6	AV	L1
0.442000	36.90	6.1	47	10.1	AV	L1
19.466000	37.00	7.1	50	13.0	AV	L1

### RESULT: PASS

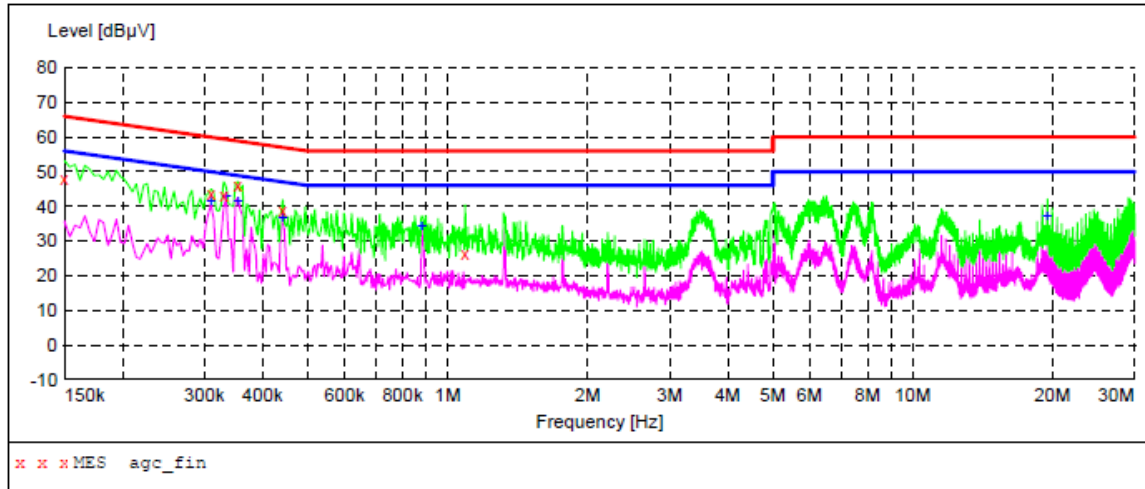
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Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: http://www.agccert.com/

### AC POWER LINE CONDUCTED EMISSION TEST-N



#### MEASUREMENT RESULT: "agc\_fin"

2023/8/28 17:51

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line
0.150000	47.80	6.1	66	18.2	QP	N
0.310000	43.60	6.1	60	16.4	QP	N
0.330000	42.90	6.1	60	16.6	QP	N
0.354000	45.90	6.1	59	13.0	QP	N
0.442000	38.90	6.1	57	18.1	QP	N
1.090000	26.40	6.2	56	29.6	QP	N

#### MEASUREMENT RESULT: "agc\_fin2"

2023/8/28 17:51

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line
0.310000	41.90	6.1	50	8.1	AV	N
0.334000	43.10	6.1	49	6.3	AV	N
0.354000	41.60	6.1	49	7.3	AV	N
0.442000	36.90	6.1	47	10.1	AV	N
0.882000	34.70	6.2	46	11.3	AV	N
19.462000	37.20	7.1	50	12.8	AV	N

#### RESULT: PASS

**Note:** All test channels had been tested. The 802.11a at 5240MHz is the worst case and recorded in the test report.

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## **APPENDIX I: PHOTOGRAPHS OF TEST SETUP**

Refer to the Report No.: AGC10514230801AP02

## **APPENDIX II: PHOTOGRAPHS OF EUT**

Refer to the Report No.: AGC10514230801AP03

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

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