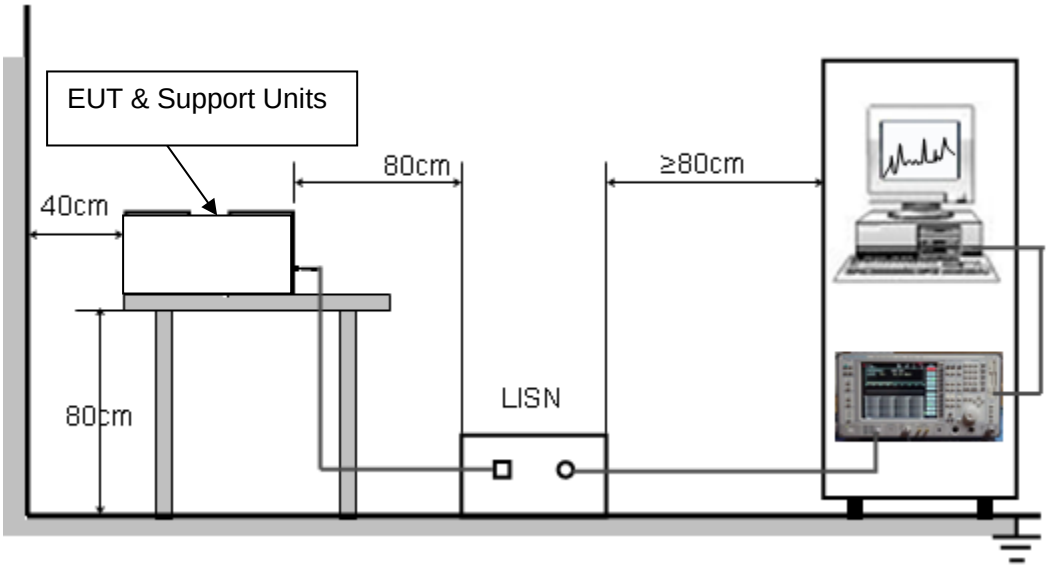
12. LINE CONDUCTED EMISSION TEST

12.1. LIMITS OF LINE CONDUCTED EMISSION TEST

Frequency	Maximum RF Line Voltage	
	Q.P.(dBuV)	Average(dBuV)
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 0.50 MHz.

12.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST



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 DC 5V power from adapter which received AC120V/60Hz power from a LISN.
6. The test program was started. Emissions were measured on each current carrying line of the EUT using a 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.

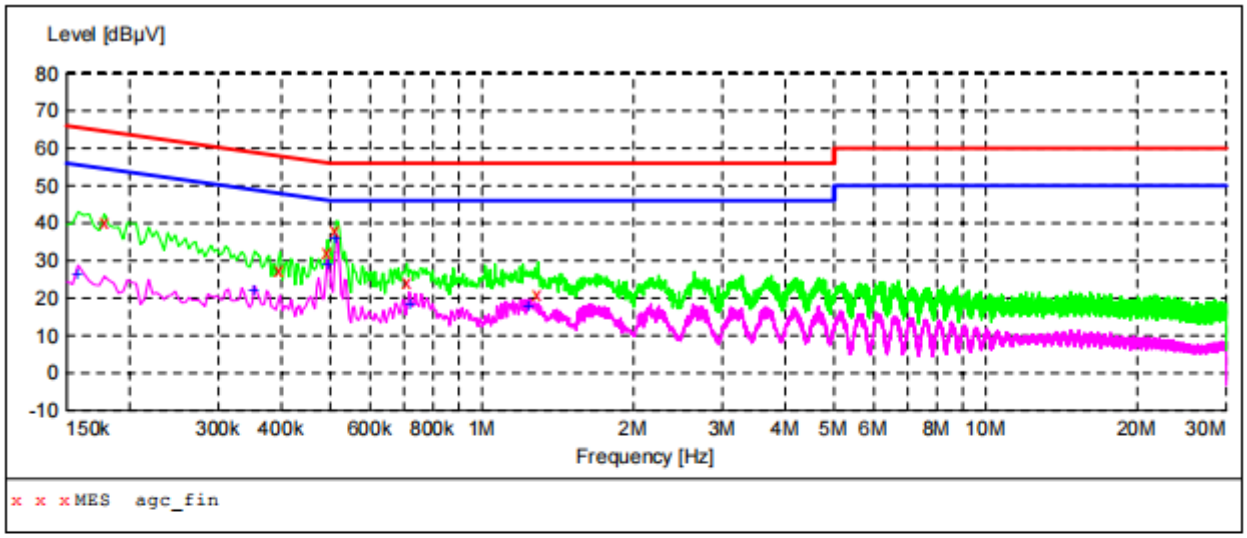
Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

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 condition(s) was reported on the Summary Data page.

12.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST

LINE CONDUCTED EMISSION TEST-L1



MEASUREMENT RESULT: "agc_fin"

2022/11/9 10:06

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.178000	40.00	6.7	65	24.6	QP	L1	GND
0.398000	27.60	5.7	58	30.3	QP	L1	GND
0.494000	32.40	5.4	56	23.7	QP	L1	GND
0.514000	37.90	5.4	56	18.1	QP	L1	GND
0.710000	24.00	5.4	56	32.0	QP	L1	GND
1.294000	20.80	5.8	56	35.2	QP	L1	GND

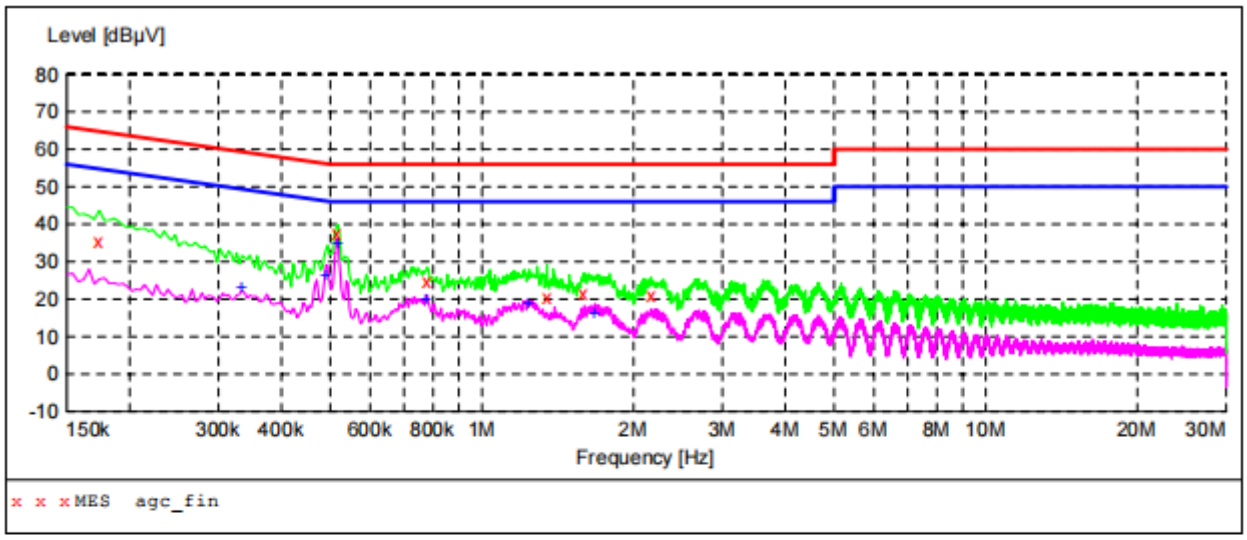
MEASUREMENT RESULT: "agc_fin2"

2022/11/9 10:06

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.158000	26.30	6.8	56	29.3	AV	L1	GND
0.354000	21.90	5.8	49	27.0	AV	L1	GND
0.494000	29.20	5.4	46	16.9	AV	L1	GND
0.514000	35.90	5.4	46	10.1	AV	L1	GND
0.718000	18.30	5.4	46	27.7	AV	L1	GND
1.234000	17.70	5.7	46	28.3	AV	L1	GND

RESULT: PASS

LINE CONDUCTED EMISSION TEST-N



MEASUREMENT RESULT: "agc_fin"

2022/11/9 10:02

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.174000	35.20	6.7	65	29.6	QP	N	GND
0.518000	37.60	5.4	56	18.4	QP	N	GND
0.778000	24.60	5.4	56	31.4	QP	N	GND
1.346000	20.60	5.9	56	35.4	QP	N	GND
1.594000	21.80	6.1	56	34.2	QP	N	GND
2.166000	20.90	6.5	56	35.1	QP	N	GND

MEASUREMENT RESULT: "agc_fin2"

2022/11/9 10:02

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.334000	23.10	5.9	49	26.3	AV	N	GND
0.490000	26.40	5.4	46	19.8	AV	N	GND
0.518000	34.70	5.4	46	11.3	AV	N	GND
0.778000	19.80	5.4	46	26.2	AV	N	GND
1.234000	19.10	5.7	46	26.9	AV	N	GND
1.678000	16.10	6.2	46	29.9	AV	N	GND

RESULT: PASS

N/A

Note: All the test modes had been tested, the BLE 1M Mode 2 was the worst case. Only the data of the worst case would be record in this test report.

APPENDIX A: PHOTOGRAPHS OF TEST SETUP

Refer to the Report No.: AGC00749221101AP02

APPENDIX B: PHOTOGRAPHS OF EUT

Refer to the Report No.: AGC00749221101AP03

----END OF REPORT----

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