

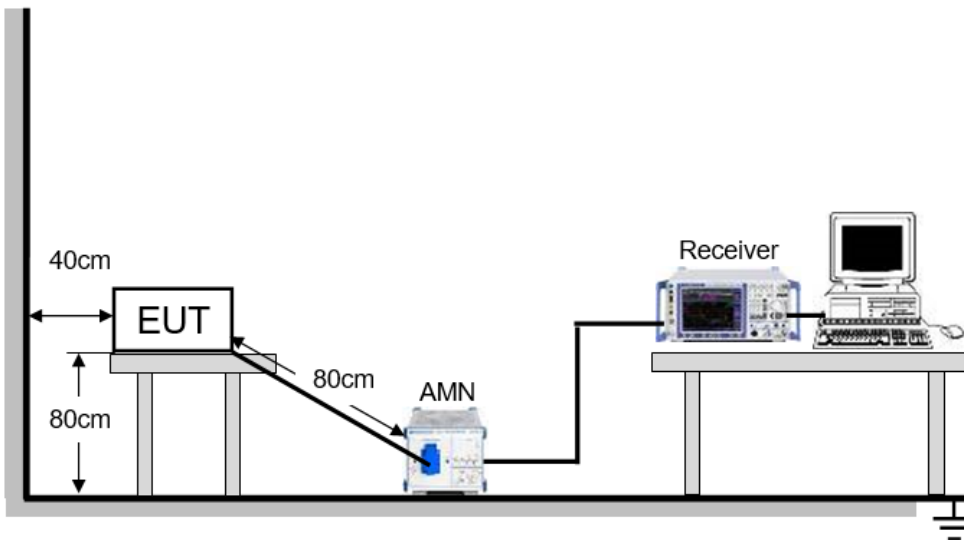
## 9. AC POWER LINE CONDUCTED EMISSIONS

### LIMITS

Please refer to FCC §15.207 (a)

FREQUENCY (MHz)	Limit (dBuV)	
	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

### TEST SETUP AND PROCEDURE



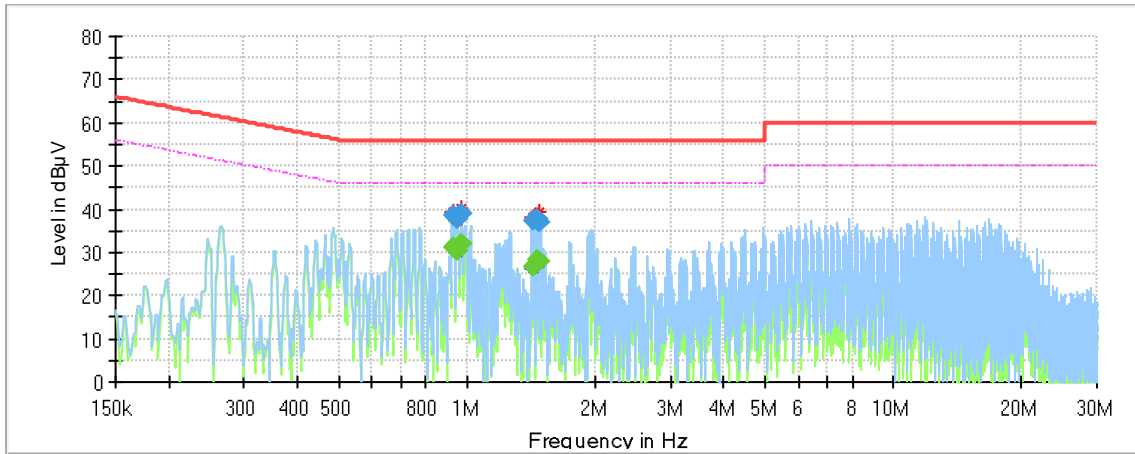
The EUT is put on a table of non-conducting material that is 80cm high. The vertical conducting wall of shielding is located 40cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI Measurement Receiver (R&S Test Receiver ESR3) is used to test the emissions from both sides of AC line. According to the requirements in Section 6.2 of ANSI C63.10-2013. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and average detector mode. The bandwidth of EMI test receiver is set at 9 kHz.

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application.



**TEST RESULTS (WORST CASE CONFIGURATION)**

**For L Line:**



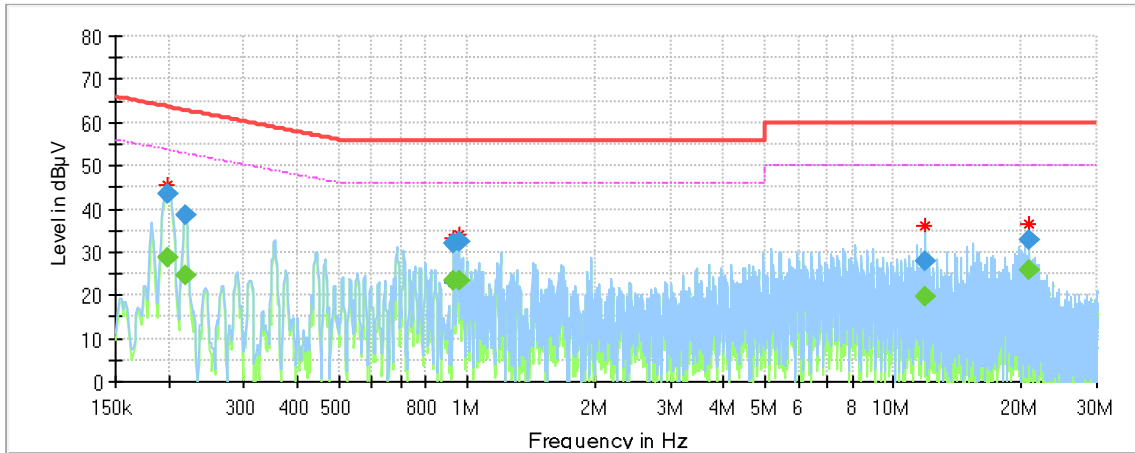
**Final Result**

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.929085	---	31.21	46.00	14.79	1000.0	9.000	L1	OFF	9.7
0.929085	38.59	---	56.00	17.41	1000.0	9.000	L1	OFF	9.7
0.948488	---	30.23	46.00	15.77	1000.0	9.000	L1	OFF	9.6
0.948488	37.65	---	56.00	18.35	1000.0	9.000	L1	OFF	9.6
0.972368	---	32.13	46.00	13.87	1000.0	9.000	L1	OFF	9.6
0.972368	39.11	---	56.00	16.89	1000.0	9.000	L1	OFF	9.6
1.436535	---	26.76	46.00	19.24	1000.0	9.000	L1	OFF	9.7
1.438028	37.39	---	56.00	18.61	1000.0	9.000	L1	OFF	9.7
1.460415	37.77	---	56.00	18.23	1000.0	9.000	L1	OFF	9.7
1.460415	---	28.17	46.00	17.83	1000.0	9.000	L1	OFF	9.7
1.479818	36.97	---	56.00	19.03	1000.0	9.000	L1	OFF	9.7
1.481310	---	27.74	46.00	18.26	1000.0	9.000	L1	OFF	9.7

- Note: 1. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 2. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).  
 3. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.  
 4. The extension cord/outlet strip was calibrated with the LISN as required by ANSI C63.10:2013 Clause 6.2.2.  
 5. Pre-testing all test modes and channels, and find the LCH of 11N HT40 MIMO mode which is the worst case, so only the worst case is included in this test report.



**For N Line:**



**Final Result**

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.199253	---	28.52	53.64	25.12	1000.0	9.000	N	OFF	9.5
0.199253	43.54	---	63.64	20.10	1000.0	9.000	N	OFF	9.5
0.218655	---	24.54	52.87	28.33	1000.0	9.000	N	OFF	9.5
0.218655	38.37	---	62.87	24.50	1000.0	9.000	N	OFF	9.5
0.930578	---	23.27	46.00	22.73	1000.0	9.000	N	OFF	9.5
0.930578	32.15	---	56.00	23.85	1000.0	9.000	N	OFF	9.5
0.955950	32.56	---	56.00	23.44	1000.0	9.000	N	OFF	9.5
0.955950	---	23.45	46.00	22.55	1000.0	9.000	N	OFF	9.5
11.913885	27.70	---	60.00	32.30	1000.0	9.000	N	OFF	9.8
11.913885	---	19.52	50.00	30.48	1000.0	9.000	N	OFF	9.8
20.807693	---	25.85	50.00	24.15	1000.0	9.000	N	OFF	10.1
20.807693	33.02	---	60.00	26.98	1000.0	9.000	N	OFF	10.1

- Note: 1. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 2. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).  
 3. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.  
 4. The extension cord/outlet strip was calibrated with the LISN as required by ANSI C63.10:2013 Clause 6.2.2.  
 5. Pre-testing all test modes and channels, and find the LCH of 11N HT40 MIMO mode which is the worst case, so only the worst case is included in this test report.



## 10. ANTENNA REQUIREMENTS

### APPLICABLE REQUIREMENTS

Please refer 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. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

Please refer to FCC §15.247(b)(4)

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### ANTENNA GAIN

The antenna gain of EUT are less than 6 dBi.

**END OF REPORT**