

B.6.2 Transmitter Spurious Emission - Radiated

Method of Measurement: See ANSI C63.10-2013-clause 6.4 & 6.5 & 6.6

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247, 15.205, 15.209	20dB below peak output power

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

Limit in restricted band:

Frequency of emission (MHz)	Field strength(uV/m)	Field strength(dBuV/m)
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Frequency (MHz)	Field strength(μV/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

Test Condition

The EUT was placed on a non-conductive table. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

Frequency of emission (MHz)	RBW/VBW	Sweep Time(s)
30-1000	100KHz/300KHz	5
1000-4000	1MHz/3MHz	15
4000-18000	1MHz/3MHz	40
18000-26500	1MHz/3MHz	20

EUT ID: EUT1

Measurement results for Set.1:

802.11b mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11b	1	2.31GHz~2.43GHz---L	Fig.B.6.2.1	P
	11	2.45GHz~2.50GHz---H	Fig.B.6.2.2	P

802.11g mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11g	1	2.31GHz~2.43GHz---L	Fig.B.6.2.3	P
	11	2.45GHz~2.50GHz---H	Fig.B.6.2.4	P

802.11n-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT20)	1	2.31GHz~2.43GHz---L	Fig.B.6.2.5	P
	11	2.45GHz~2.50GHz---H	Fig.B.6.2.6	P

Note:

A "reference path loss" is established and the A_{Rpl} is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

P_{Mea} is the field strength recorded from the instrument.

The measurement results are obtained as described below:

Result= $P_{Mea}+A_{Rpl}= P_{Mea}+Cable\ Loss+Antenna\ Factor$

Peak
802.11b
Ch1

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17955.5	57.9	-25.5	46.7	36.7	74.0	37.3	H
17968	57.6	-25.5	46.7	36.4	74.0	37.6	H
17971	57.6	-25.5	46.7	36.4	74.0	37.6	V
17980	57.5	-25.5	46.7	36.3	74.0	37.7	H
17964.5	57.3	-25.5	46.7	36.1	74.0	37.9	V
2352	57.1	-20.1	28	49.2	74.0	24.8	H

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17883.5	58	-25.5	46.7	36.8	74.0	37.2	V
17954	57.6	-25.5	46.7	36.4	74.0	37.6	H
17987	57.5	-25.5	46.7	36.3	74.0	37.7	H
17880.5	57.3	-25.5	46.7	36.1	74.0	37.9	H
17942.5	57.3	-25.5	46.7	36.1	74.0	37.9	H
17958	57.1	-25.5	46.7	35.9	74.0	38.1	V

Ch11

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17988	58.1	-25.5	46.7	36.9	74.0	37.1	H
17490	57.4	-26.9	45.2	39.0	74.0	35.0	H
17961	57.4	-25.5	46.7	36.2	74.0	37.8	V
17963	57.3	-25.5	46.7	36.1	74.0	37.9	V
17948	57.2	-25.5	46.7	36.0	74.0	38.0	V
2499.2	54.5	-20	28.4	46.1	74.0	27.9	V

802.11g

Ch1

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17941.5	57.5	-25.5	46.7	36.3	74.0	37.7	H
17974.5	57.4	-25.5	46.7	36.2	74.0	37.8	H
17953	57.3	-25.5	46.7	36.1	74.0	37.9	V
17889.5	57.2	-25.5	46.7	36.0	74.0	38.0	V
17911.5	57.2	-25.5	46.7	36.0	74.0	38.0	V
2379.2	57	-20	28.1	49.0	74.0	25.0	H

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17948	57.6	-25.5	46.7	36.4	74.0	37.6	H
17937	57.2	-25.5	46.7	36.0	74.0	38.0	V
17962.5	57.2	-25.5	46.7	36.0	74.0	38.0	V
17963	57.2	-25.5	46.7	36.0	74.0	38.0	V
17907.5	57	-25.5	46.7	35.8	74.0	38.2	H
17841.5	56.9	-25.5	46.7	35.7	74.0	38.3	H

Ch11

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17931	57.7	-25.5	46.7	36.5	74.0	37.5	V
17970.5	57.5	-25.5	46.7	36.3	74.0	37.7	V
17991.5	57.4	-25.5	46.7	36.2	74.0	37.8	H
17843	57.3	-25.5	46.7	36.1	74.0	37.9	V
17974	57.3	-25.5	46.7	36.1	74.0	37.9	V
2489.2	54.6	-20	28.3	46.3	74.0	27.7	V

802.11n-HT20
Ch1

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17936.5	57.7	-25.5	46.7	36.5	74.0	37.5	V
17927.5	57.6	-25.5	46.7	36.4	74.0	37.6	V
17982	57.6	-25.5	46.7	36.4	74.0	37.6	V
17961	57.5	-25.5	46.7	36.3	74.0	37.7	V
17960	57.3	-25.5	46.7	36.1	74.0	37.9	H
2387.4	54.9	-20	28.1	46.9	74.0	27.1	V

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17920	57.6	-25.5	46.7	36.4	74.0	37.6	V
17930.5	57.5	-25.5	46.7	36.3	74.0	37.7	V
17796	57.4	-25.5	46.7	36.2	74.0	37.8	V
17890.5	57.3	-25.5	46.7	36.1	74.0	37.9	V
17908.5	57.1	-25.5	46.7	35.9	74.0	38.1	H
17941.5	57.1	-25.5	46.7	35.9	74.0	38.1	H

Ch11

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17907	58.1	-25.5	46.7	36.9	74.0	37.1	V
17910	57.9	-25.5	46.7	36.7	74.0	37.3	V
17946	57.5	-25.5	46.7	36.3	74.0	37.7	H
17968.5	57.5	-25.5	46.7	36.3	74.0	37.7	H
17989	57.5	-25.5	46.7	36.3	74.0	37.7	V
2485.1	56.1	-20	28.3	47.8	74.0	26.2	V

Average
802.11b
Ch1

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17945	46.4	-25.5	46.7	25.2	54.0	28.8	V
17954.5	46.4	-25.5	46.7	25.2	54.0	28.8	H
17956	46.3	-25.5	46.7	25.1	54.0	28.9	V
17959.5	46.3	-25.5	46.7	25.1	54.0	28.9	V
17968	46.3	-25.5	46.7	25.1	54.0	28.9	H
2385	44.8	-20	28.1	36.8	54.0	17.2	H

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17945.5	46.4	-25.5	46.7	25.2	54.0	28.8	V
17952	46.4	-25.5	46.7	25.2	54.0	28.8	H
17883.5	46.3	-25.5	46.7	25.1	54.0	28.9	V
17957.5	46.3	-25.5	46.7	25.1	54.0	28.9	H
17855	46.2	-25.5	46.7	25.0	54.0	29.0	H
17977	46.2	-25.5	46.7	25.0	54.0	29.0	V

Ch11

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17998.5	46.4	-25.5	46.7	25.2	54.0	28.8	V
17938	46.2	-25.5	46.7	25.0	54.0	29.0	H
17946.5	46.2	-25.5	46.7	25.0	54.0	29.0	V
17948.5	46.2	-25.5	46.7	25.0	54.0	29.0	V
17954	46.2	-25.5	46.7	25.0	54.0	29.0	H
2487	41.7	-20	28.3	33.4	54.0	20.6	V

802.11g
Ch1

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17970	46.3	-25.5	46.7	25.1	54.0	28.9	V
17971	46.3	-25.5	46.7	25.1	54.0	28.9	H
17986.5	46.3	-25.5	46.7	25.1	54.0	28.9	H
17896.5	46.1	-25.5	46.7	24.9	54.0	29.1	V
17905	46.1	-25.5	46.7	24.9	54.0	29.1	V
2382.9	44.8	-20	28.1	36.8	54.0	17.2	H

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17974.5	46.6	-25.5	46.7	25.4	54.0	28.6	H
17999	46.4	-25.5	46.7	25.2	54.0	28.8	H
17951	46.3	-25.5	46.7	25.1	54.0	28.9	H
17940.5	46.2	-25.5	46.7	25.0	54.0	29.0	V
17942	46.2	-25.5	46.7	25.0	54.0	29.0	V
17983.5	46.2	-25.5	46.7	25.0	54.0	29.0	H

Ch11

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17953.5	46.4	-25.5	46.7	25.2	54.0	28.8	V
17955	46.4	-25.5	46.7	25.2	54.0	28.8	V
17993.5	46.4	-25.5	46.7	25.2	54.0	28.8	V
17996	46.4	-25.5	46.7	25.2	54.0	28.8	V
17946.5	46.3	-25.5	46.7	25.1	54.0	28.9	V
2485.1	41.9	-20	28.3	33.6	54.0	20.4	V

802.11n-HT20
Ch1

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17961	46.5	-25.5	46.7	25.3	54.0	28.7	V
17956	46.4	-25.5	46.7	25.2	54.0	28.8	H
17944.5	46.3	-25.5	46.7	25.1	54.0	28.9	H
17963	46.2	-25.5	46.7	25.0	54.0	29.0	H
17982	46.2	-25.5	46.7	25.0	54.0	29.0	V
2388	41.7	-20	28.1	33.7	54.0	20.3	V

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17988	46.8	-25.5	46.7	25.6	54.0	28.4	V
17938	46.4	-25.5	46.7	25.2	54.0	28.8	V
17956.5	46.4	-25.5	46.7	25.2	54.0	28.8	V
17978.5	46.4	-25.5	46.7	25.2	54.0	28.8	V
17985	46.3	-25.5	46.7	25.1	54.0	28.9	V
17991	46.3	-25.5	46.7	25.1	54.0	28.9	H

Ch11

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17993.5	46.8	-25.5	46.7	25.6	54.0	28.4	V
17938	46.6	-25.5	46.7	25.4	54.0	28.6	V
17977.5	46.4	-25.5	46.7	25.2	54.0	28.8	H
17985	46.4	-25.5	46.7	25.2	54.0	28.8	H
17939	46.3	-25.5	46.7	25.1	54.0	28.9	V
2485.1	42.3	-20	28.3	34.0	54.0	20.0	V

Test graphs as below:

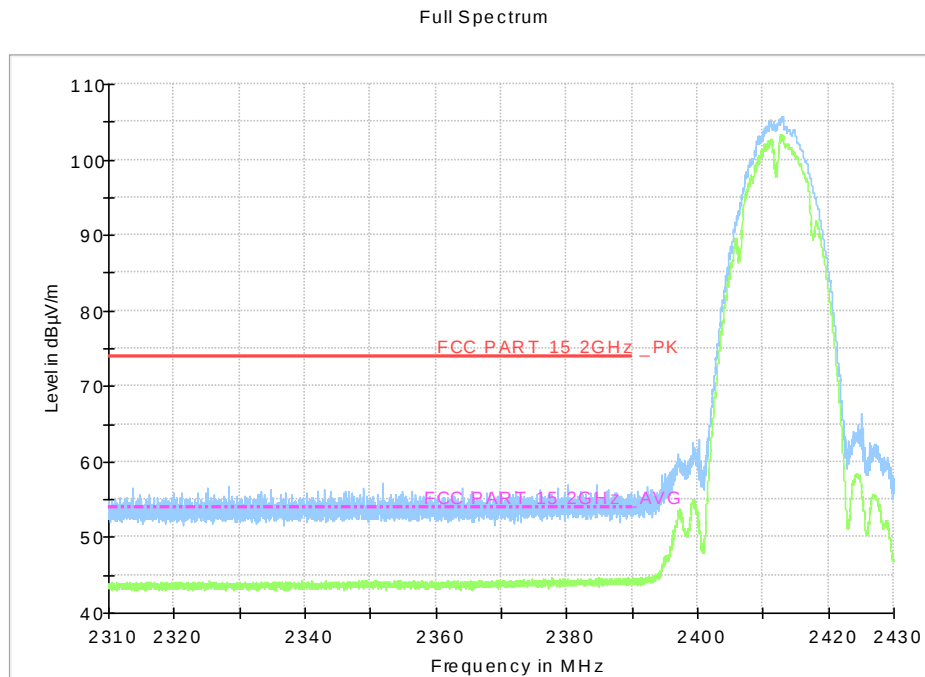


Fig.B.6.2.1 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch1, 2.31 GHz – 2.45GHz

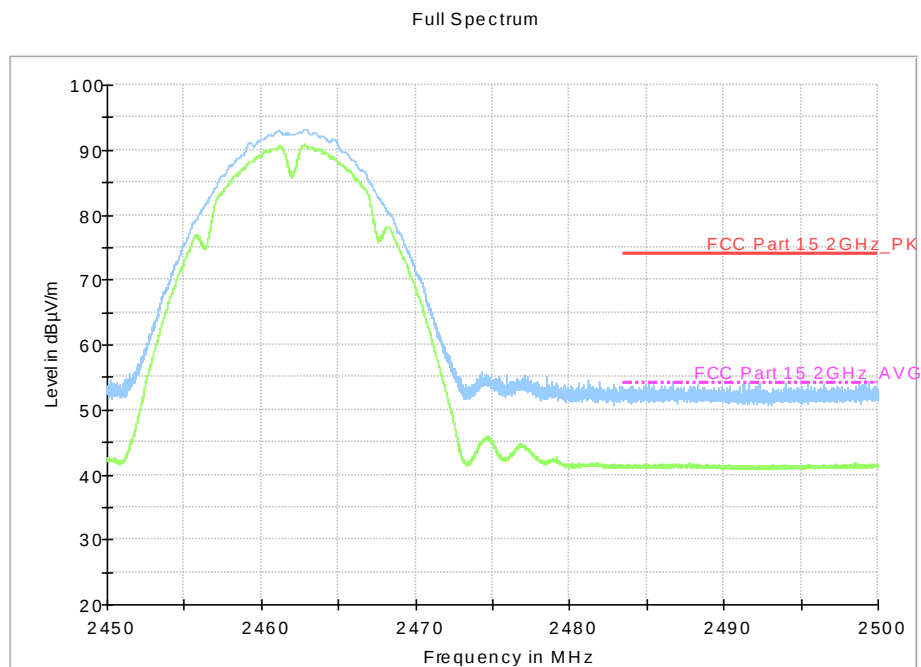


Fig.B.6.2.2 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz

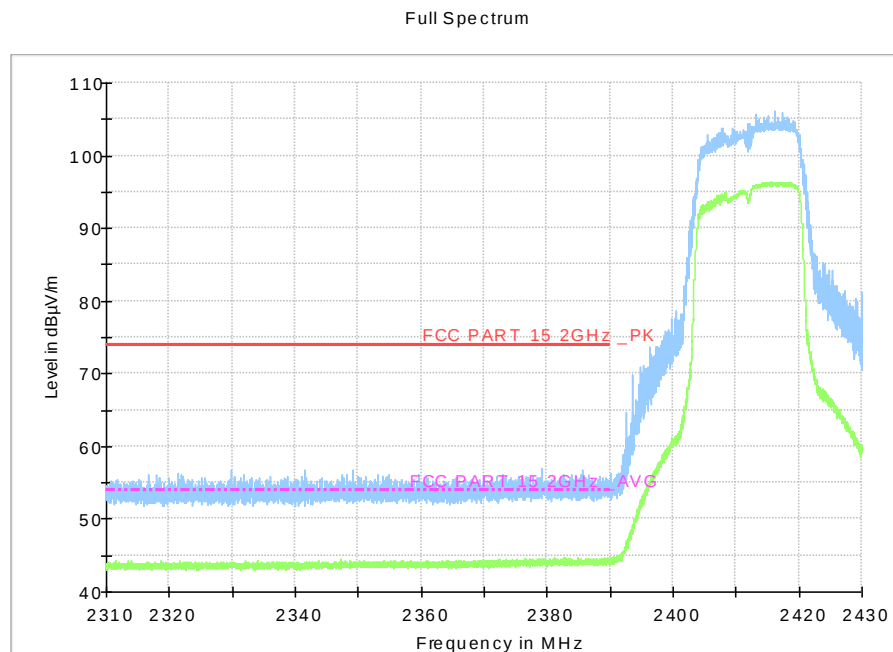


Fig.B.6.2.3 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch1, 2.31 GHz - 2.45GHz

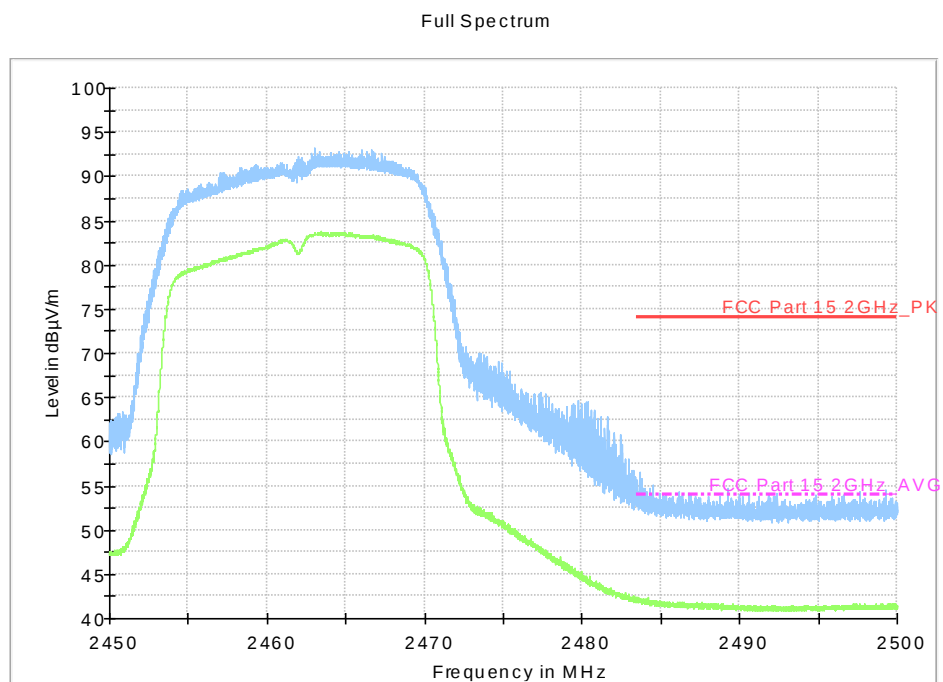
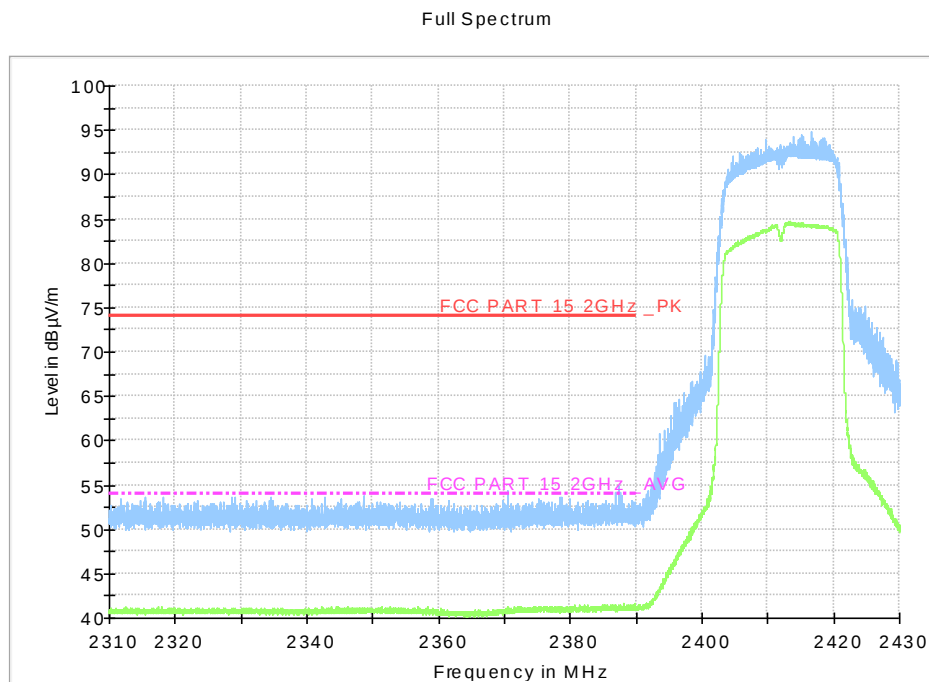
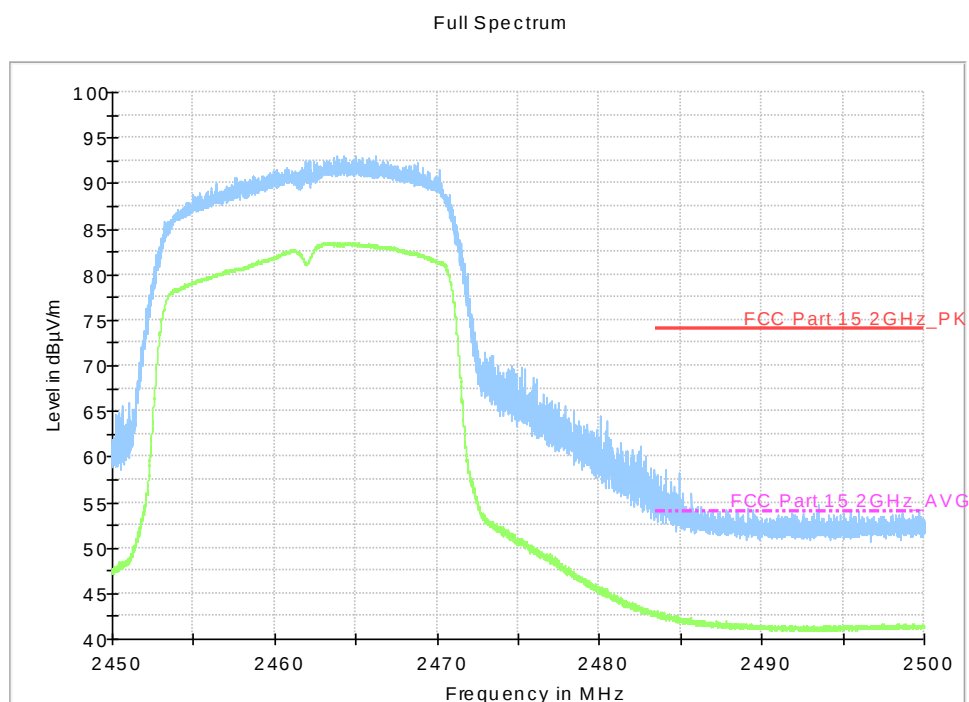


Fig.B.6.2.4 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz



**Fig.B.6.2.5 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch1,
2.31 GHz - 2.45GHz**



**Fig.B.6.2.6 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch11,
2.45 GHz - 2.50GHz**

B.7. AC Power-line Conducted Emission

Method of Measurement: See ANSI C63.10-2013-clause 6.2

- 1 The one EUT cable configuration and arrangement and mode of operation that produced the emission with the highest amplitude relative to the limit is selected for the final measurement, while applying the appropriate modulating signal to the EUT.
- 2 If the EUT is relocated from an exploratory test site to a final test site, the highest emissions shall be remaximized at the final test location before final ac power-line conducted emission measurements are performed.
- 3 The final test on all current-carrying conductors of all of the power cords to the equipment that comprises the EUT (but not the cords associated with other non-EUT equipment in the system) is then performed for the full frequency range for which the EUT is being tested for compliance without further variation of the EUT arrangement, cable positions, or EUT mode of operation.
- 4 If the EUT is comprised of equipment units that have their own separate ac power connections, e.g., floor-standing equipment with independent power cords for each shelf that are able to connect directly to the ac power network, each current-carrying conductor of one unit is measured while the other units are connected to a second (or more) LISN(s). All units shall be separately measured. If a power strip is provided by the manufacturer, to supply all of the units making up the EUT, only the conductors in the power cord of the power strip shall be measured.
- 5 If the EUT uses a detachable antenna, these measurements shall be made with a suitable dummy load connected to the antenna output terminals; otherwise, the tests shall be made with the antenna connected and, if adjustable, fully extended. When measuring the ac conducted emissions from a device that operates between 150 kHz and 30 MHz a non-detachable antenna may be replaced with a dummy load for the measurements within the fundamental emission band of the transmitter, but only for those measurements.³⁶ Record the six highest EUT emissions relative to the limit of each of the current-carrying conductors of the power cords of the equipment that comprises the EUT over the frequency range specified by the procuring or regulatory agency. Diagram or photograph the test setup that was used. See Clause 8 for full reporting requirements.

Test Condition:

Voltage (V)	Frequency (Hz)
120	60

Measurement Result and limit:
WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)		Conclusion
		With charger AE5		
		802.11b	Idle	
0.15 to 0.5	66 to 56	Fig.B.7.1	Fig.B.7.2	P
0.5 to 5	56			
5 to 30	60			
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dBμV)	Result (dBμV)		Conclusion
		With charger AE5		
		802.11b	Idle	
0.15 to 0.5	56 to 46	Fig.B.7.1	Fig.B.7.2	P
0.5 to 5	46			
5 to 30	50			
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)		Conclusion
		With charger AE6		
		802.11b	Idle	
0.15 to 0.5	67 to 56	Fig.B.7.3	Fig.B.7.4	P
0.5 to 5	56			
5 to 30	60			
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dBμV)	Result (dBμV)		Conclusion
		With charger AE6		
		802.11b	Idle	
0.15 to 0.5	56 to 46	Fig.B.7.3	Fig.B.7.4	P
0.5 to 5	46			
5 to 30	50			
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)		Conclusion
		With charger AE7		
		802.11b	Idle	
0.15 to 0.5	68 to 56	Fig.B.7.5	Fig.B.7.6	P
0.5 to 5	56			
5 to 30	60			
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dBμV)	Result (dBμV)		Conclusion
		With charger AE7		
		802.11b	Idle	
0.15 to 0.5	56 to 46	Fig.B.7.5	Fig.B.7.6	P
0.5 to 5	46			
5 to 30	50			
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)		Conclusion
		With charger AE8		
		802.11b	Idle	
0.15 to 0.5	69 to 56	Fig.B.7.7	Fig.B.7.8	P
0.5 to 5	56			
5 to 30	60			
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dBμV)	Result (dBμV)		Conclusion
		With charger AE8		
		802.11b	Idle	
0.15 to 0.5	56 to 46	Fig.B.7.7	Fig.B.7.8	P
0.5 to 5	46			
5 to 30	50			
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

Conclusion: Pass

Test graphs as below:

Measurement results for Set.1:

Result for Traffic:

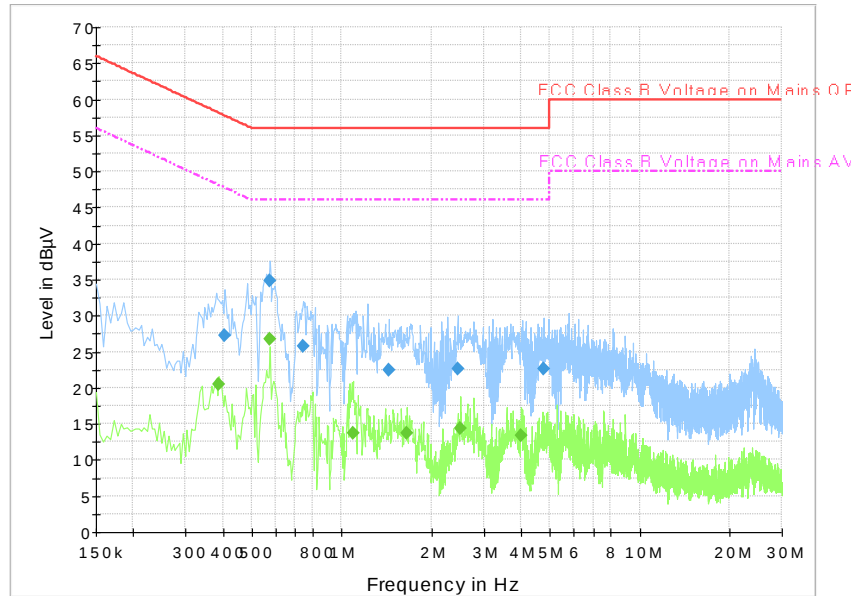


Fig.B.7.1 AC Powerline Conducted Emission-802.11b

Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.406500	27.2	1000.0	9.000	On	N	19.6	30.5	57.7	
0.573000	34.9	1000.0	9.000	On	N	19.5	21.1	56.0	
0.744000	25.7	1000.0	9.000	On	L1	19.6	30.3	56.0	
1.441500	22.4	1000.0	9.000	On	N	19.6	33.6	56.0	
2.449500	22.6	1000.0	9.000	On	L1	19.6	33.4	56.0	
4.776000	22.6	1000.0	9.000	On	N	19.7	33.4	56.0	

Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.388500	20.4	1000.0	9.000	On	N	19.6	27.7	48.1	
0.573000	26.8	1000.0	9.000	On	N	19.5	19.2	46.0	
1.090500	13.7	1000.0	9.000	On	L1	19.6	32.3	46.0	
1.662000	13.6	1000.0	9.000	On	N	19.6	32.4	46.0	
2.499000	14.3	1000.0	9.000	On	L1	19.6	31.7	46.0	
4.011000	13.4	1000.0	9.000	On	N	19.7	32.6	46.0	

Measurement results for Set.1:

Result for Idle:

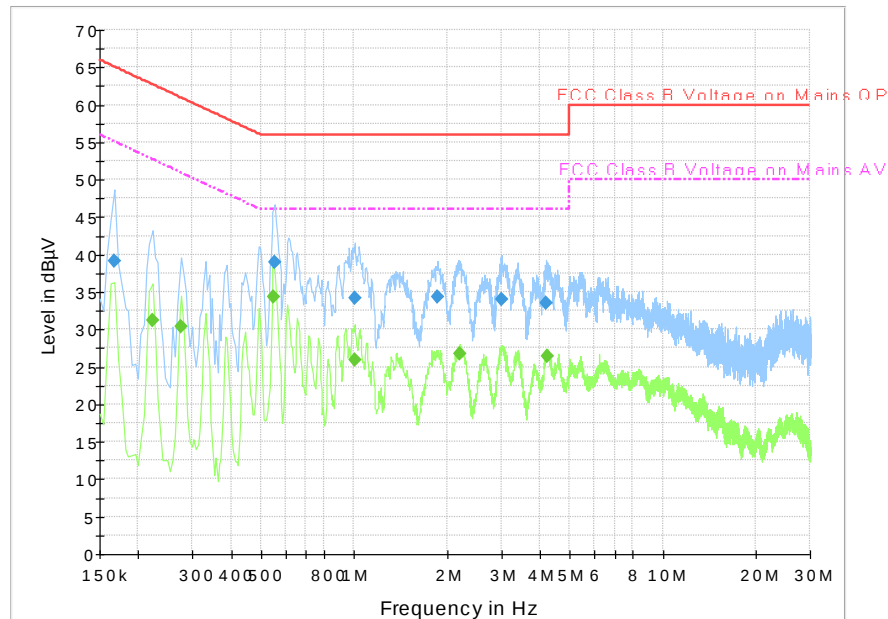


Fig.B.7.2 AC Powerline Conducted Emission-Idle

Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.168000	39.1	1000.0	9.000	On	L1	19.7	25.9	65.1	
0.555000	38.9	1000.0	9.000	On	L1	19.6	17.1	56.0	
1.005000	34.2	1000.0	9.000	On	L1	19.6	21.8	56.0	
1.864500	34.3	1000.0	9.000	On	L1	19.5	21.7	56.0	
3.003000	34.1	1000.0	9.000	On	L1	19.6	21.9	56.0	
4.191000	33.4	1000.0	9.000	On	L1	19.7	22.6	56.0	

Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.222000	31.2	1000.0	9.000	On	L1	19.6	21.5	52.7	
0.276000	30.4	1000.0	9.000	On	L1	19.6	20.5	50.9	
0.550500	34.4	1000.0	9.000	On	N	19.5	11.6	46.0	
1.005000	25.9	1000.0	9.000	On	L1	19.6	20.1	46.0	
2.193000	26.8	1000.0	9.000	On	L1	19.6	19.2	46.0	
4.218000	26.4	1000.0	9.000	On	L1	19.8	19.6	46.0	

Measurement results for Set.2:

Result for Traffic:

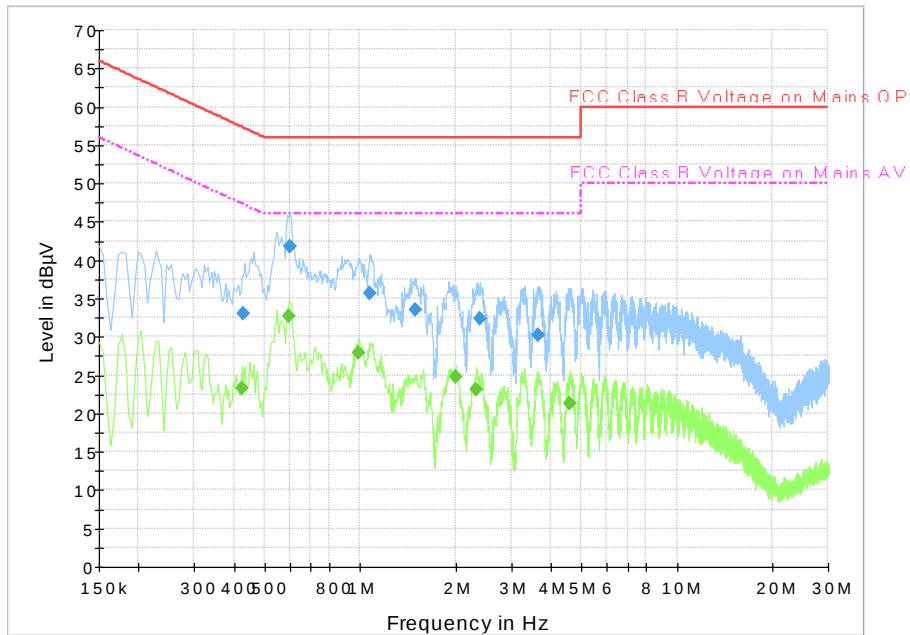


Fig.B.7.3 AC Powerline Conducted Emission-802.11b

Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.429000	33.1	1000.0	9.000	On	N	19.6	24.2	57.3	
0.600000	41.8	1000.0	9.000	On	L1	19.6	14.2	56.0	
1.072500	35.7	1000.0	9.000	On	L1	19.6	20.3	56.0	
1.495500	33.5	1000.0	9.000	On	L1	19.6	22.5	56.0	
2.395500	32.4	1000.0	9.000	On	L1	19.6	23.6	56.0	
3.660000	30.2	1000.0	9.000	On	L1	19.7	25.8	56.0	

Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.424500	23.2	1000.0	9.000	On	N	19.6	24.1	47.4	
0.595500	32.7	1000.0	9.000	On	N	19.5	13.3	46.0	
0.991500	27.8	1000.0	9.000	On	N	19.6	18.2	46.0	
2.004000	24.7	1000.0	9.000	On	N	19.5	21.3	46.0	
2.332500	23.2	1000.0	9.000	On	L1	19.6	22.8	46.0	
4.578000	21.3	1000.0	9.000	On	L1	19.8	24.7	46.0	

Measurement results for Set.2:

Result for Idle:

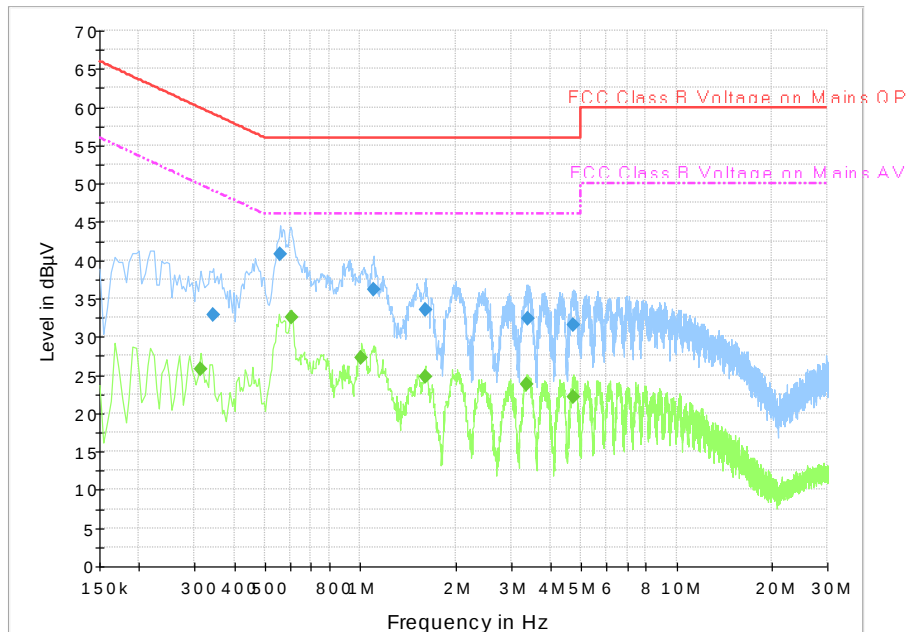


Fig.B.7.4 AC Powerline Conducted Emission-Idle

Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.343500	32.9	1000.0	9.000	On	L1	19.6	26.3	59.1	
0.559500	40.8	1000.0	9.000	On	N	19.5	15.2	56.0	
1.099500	36.1	1000.0	9.000	On	L1	19.6	19.9	56.0	
1.608000	33.5	1000.0	9.000	On	L1	19.6	22.5	56.0	
3.403500	32.4	1000.0	9.000	On	L1	19.7	23.6	56.0	
4.735500	31.5	1000.0	9.000	On	L1	19.8	24.5	56.0	

Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.312000	25.7	1000.0	9.000	On	L1	19.6	24.2	49.9	
0.604500	32.5	1000.0	9.000	On	L1	19.6	13.5	46.0	
1.009500	27.2	1000.0	9.000	On	L1	19.6	18.8	46.0	
1.603500	24.7	1000.0	9.000	On	N	19.6	21.3	46.0	
3.363000	23.7	1000.0	9.000	On	L1	19.7	22.3	46.0	
4.704000	22.1	1000.0	9.000	On	L1	19.8	23.9	46.0	

Measurement results for Set.3:

Result for Traffic:

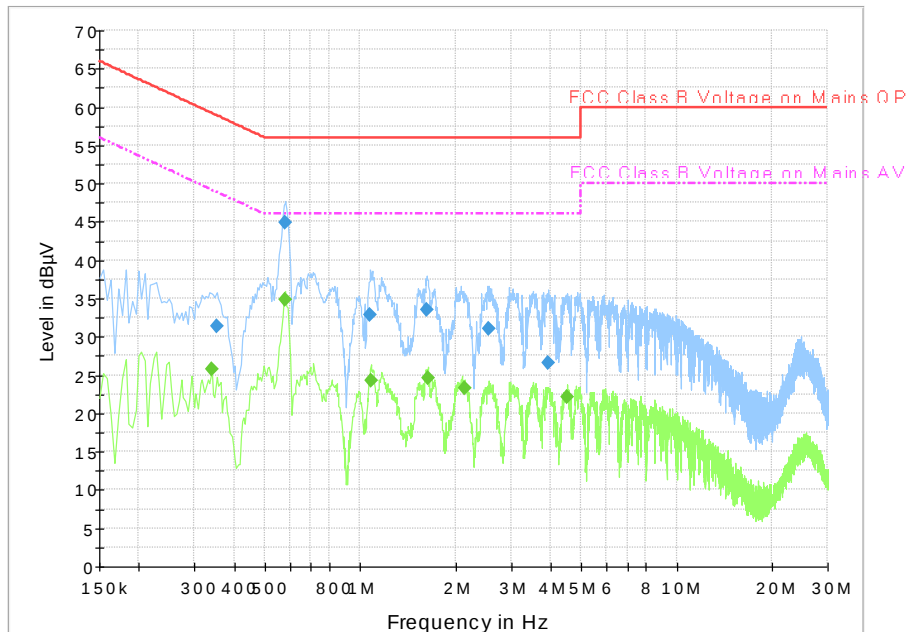


Fig.B.7.5 AC Powerline Conducted Emission-802.11b

Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.352500	31.4	1000.0	9.000	On	N	19.6	27.5	58.9	
0.582000	44.9	1000.0	9.000	On	L1	19.6	11.1	56.0	
1.077000	32.8	1000.0	9.000	On	N	19.6	23.2	56.0	
1.626000	33.4	1000.0	9.000	On	N	19.6	22.6	56.0	
2.553000	31.0	1000.0	9.000	On	L1	19.6	25.0	56.0	
3.930000	26.7	1000.0	9.000	On	L1	19.7	29.3	56.0	

Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.339000	25.8	1000.0	9.000	On	L1	19.6	23.4	49.2	
0.577500	34.8	1000.0	9.000	On	L1	19.6	11.2	46.0	
1.081500	24.3	1000.0	9.000	On	L1	19.6	21.7	46.0	
1.639500	24.7	1000.0	9.000	On	L1	19.6	21.3	46.0	
2.148000	23.3	1000.0	9.000	On	N	19.5	22.7	46.0	
4.524000	22.2	1000.0	9.000	On	N	19.7	23.8	46.0	

Measurement results for Set.3:

Result for Idle:

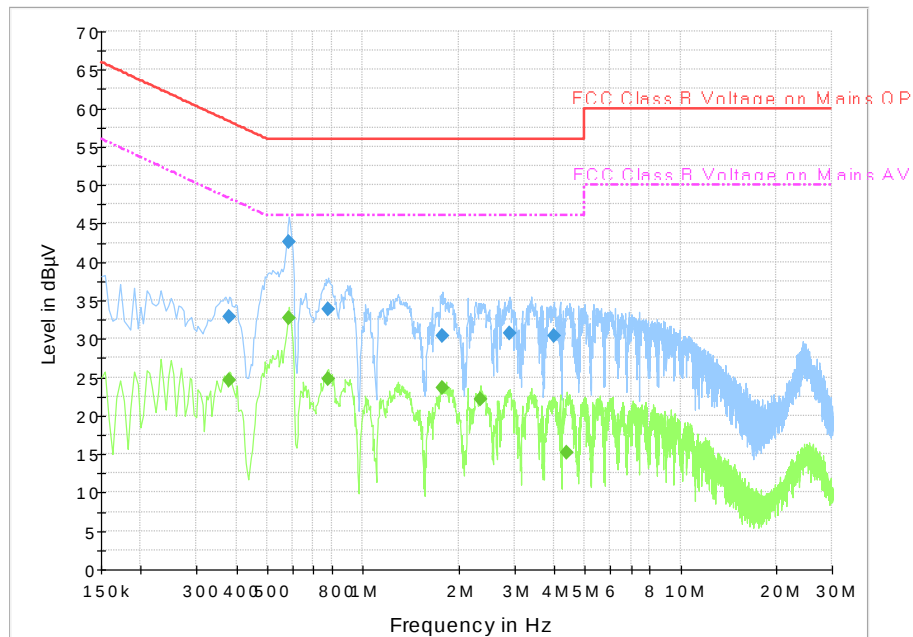


Fig.B.7.6 AC Powerline Conducted Emission-Idle

Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.379500	32.9	1000.0	9.000	On	N	19.6	25.4	58.3	
0.586500	42.6	1000.0	9.000	On	L1	19.6	13.4	56.0	
0.775500	33.9	1000.0	9.000	On	N	19.5	22.1	56.0	
1.774500	30.4	1000.0	9.000	On	N	19.5	25.6	56.0	
2.890500	30.7	1000.0	9.000	On	N	19.6	25.3	56.0	
3.984000	30.4	1000.0	9.000	On	N	19.7	25.6	56.0	

Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.379500	24.6	1000.0	9.000	On	N	19.6	23.7	48.3	
0.586500	32.6	1000.0	9.000	On	L1	19.6	13.4	46.0	
0.775500	24.8	1000.0	9.000	On	N	19.5	21.2	46.0	
1.783500	23.6	1000.0	9.000	On	L1	19.5	22.4	46.0	
2.341500	22.1	1000.0	9.000	On	L1	19.6	23.9	46.0	
4.380000	15.2	1000.0	9.000	On	N	19.7	30.8	46.0	

Measurement results for Set.4:

Result for Traffic:

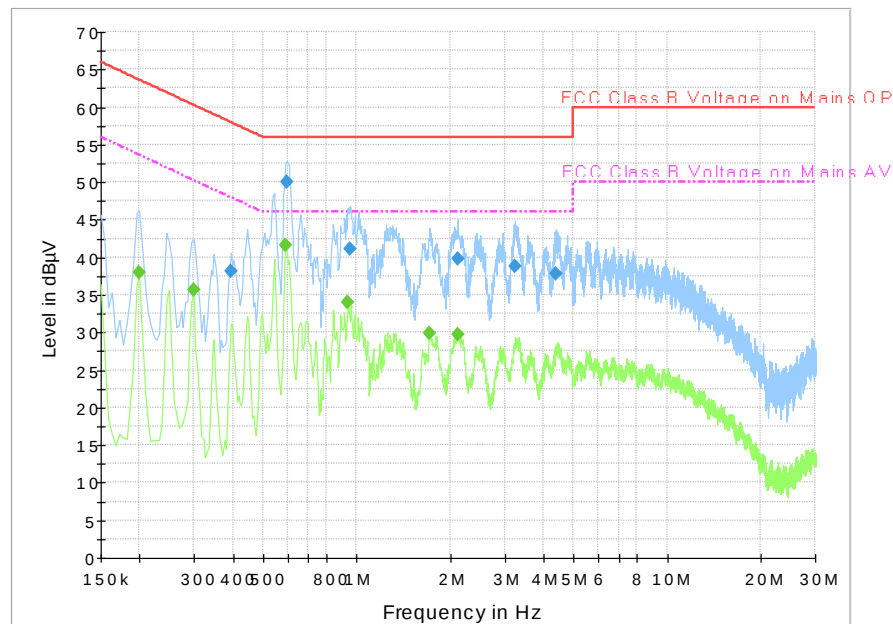


Fig.B.7.7 AC Powerline Conducted Emission-802.11b

Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.393000	38.2	1000.0	9.000	On	L1	19.6	19.8	58.0	
0.595500	50.1	1000.0	9.000	On	L1	19.6	5.9	56.0	
0.955500	41.1	1000.0	9.000	On	L1	19.6	14.9	56.0	
2.112000	39.8	1000.0	9.000	On	N	19.5	16.2	56.0	
3.228000	38.9	1000.0	9.000	On	N	19.6	17.1	56.0	
4.375500	37.8	1000.0	9.000	On	N	19.7	18.2	56.0	

Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.199500	38.0	1000.0	9.000	On	N	19.6	15.6	53.6	
0.298500	35.7	1000.0	9.000	On	N	19.6	14.6	50.3	
0.591000	41.5	1000.0	9.000	On	L1	19.6	4.5	46.0	
0.937500	33.9	1000.0	9.000	On	L1	19.6	12.1	46.0	
1.720500	29.8	1000.0	9.000	On	L1	19.6	16.2	46.0	
2.130000	29.7	1000.0	9.000	On	N	19.5	16.3	46.0	

Measurement results for Set.4:

Result for Idle:

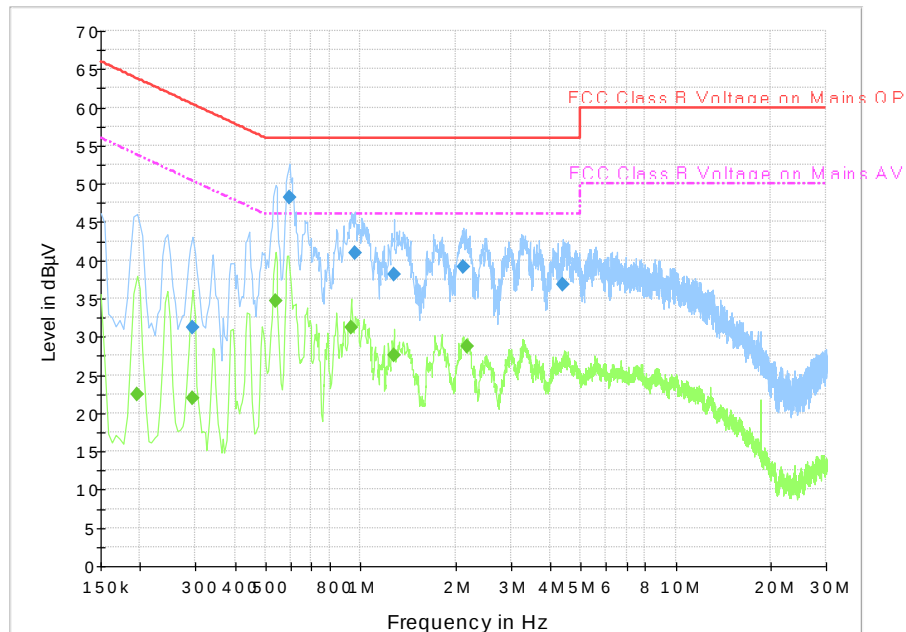


Fig.B.7.8 AC Powerline Conducted Emission-Idle

Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

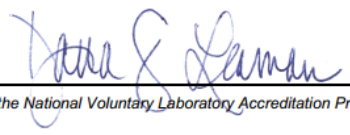
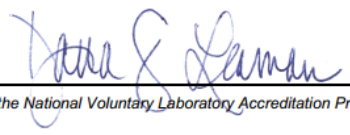
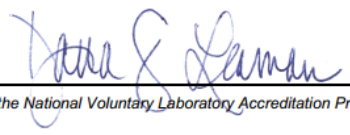
Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.294000	31.2	1000.0	9.000	On	N	19.6	29.2	60.4	
0.595500	48.3	1000.0	9.000	On	L1	19.6	7.7	56.0	
0.960000	41.0	1000.0	9.000	On	L1	19.6	15.0	56.0	
1.279500	38.2	1000.0	9.000	On	L1	19.6	17.8	56.0	
2.125500	39.1	1000.0	9.000	On	N	19.5	16.9	56.0	
4.398000	36.9	1000.0	9.000	On	L1	19.8	19.1	56.0	

Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.195000	22.5	1000.0	9.000	On	N	19.6	31.3	53.8	
0.294000	21.9	1000.0	9.000	On	L1	19.6	28.5	50.4	
0.537000	34.6	1000.0	9.000	On	L1	19.6	11.4	46.0	
0.933000	31.3	1000.0	9.000	On	L1	19.6	14.7	46.0	
1.279500	27.5	1000.0	9.000	On	L1	19.6	18.5	46.0	
2.188500	28.6	1000.0	9.000	On	N	19.6	17.4	46.0	

ANNEX C: Accreditation Certificate

United States Department of Commerce National Institute of Standards and Technology NVLAP[®]  Certificate of Accreditation to ISO/IEC 17025:2017 NVLAP LAB CODE: 600118-0 Telecommunication Technology Labs, CAICT Beijing China <i>is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:</i> Electromagnetic Compatibility & Telecommunications <i>This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated January 2009).</i> <table><tr><td> 2020-09-29 through 2021-09-30 <i>Effective Dates</i> </td><td></td><td>  <i>For the National Voluntary Laboratory Accreditation Program</i> </td></tr></table>		2020-09-29 through 2021-09-30 <i>Effective Dates</i>		 <i>For the National Voluntary Laboratory Accreditation Program</i>
2020-09-29 through 2021-09-30 <i>Effective Dates</i>		 <i>For the National Voluntary Laboratory Accreditation Program</i>		

END OF REPORT