

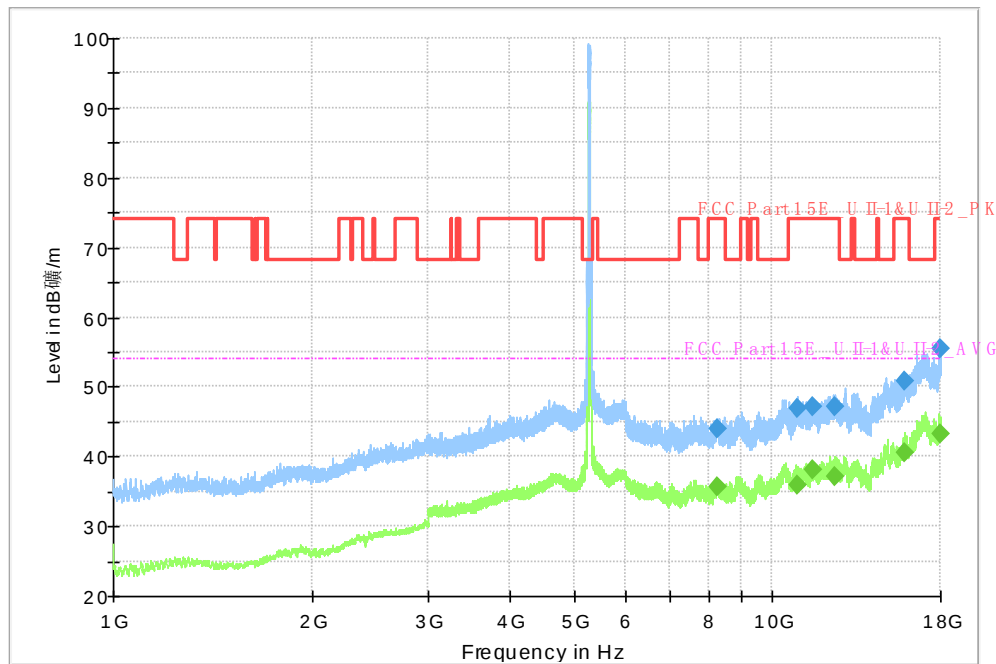


Fig. 79 Transmitter Spurious Emission (802.11n-HT40, CH54 5270MHz)

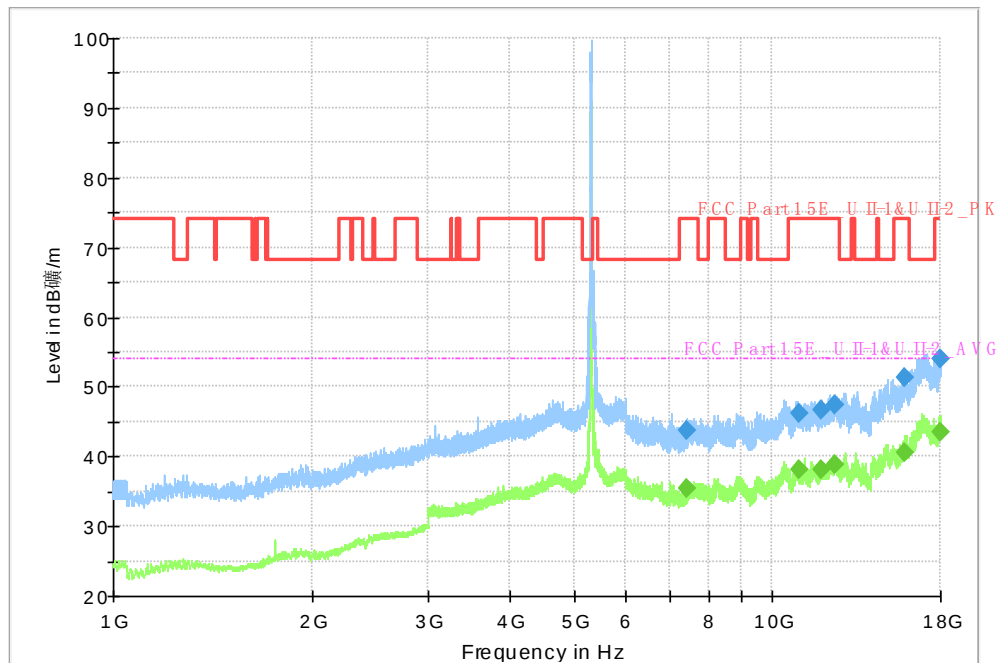


Fig. 80 Transmitter Spurious Emission (802.11n-HT40, CH62 5310MHz)

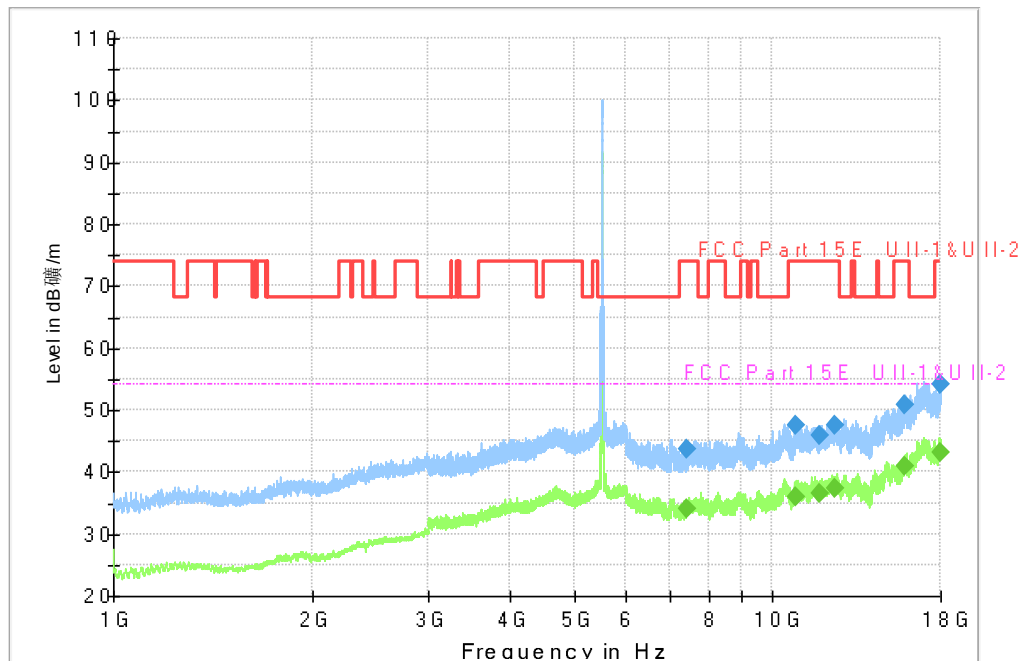


Fig. 81 Transmitter Spurious Emission (802.11n-HT40, CH102 5510MHz)

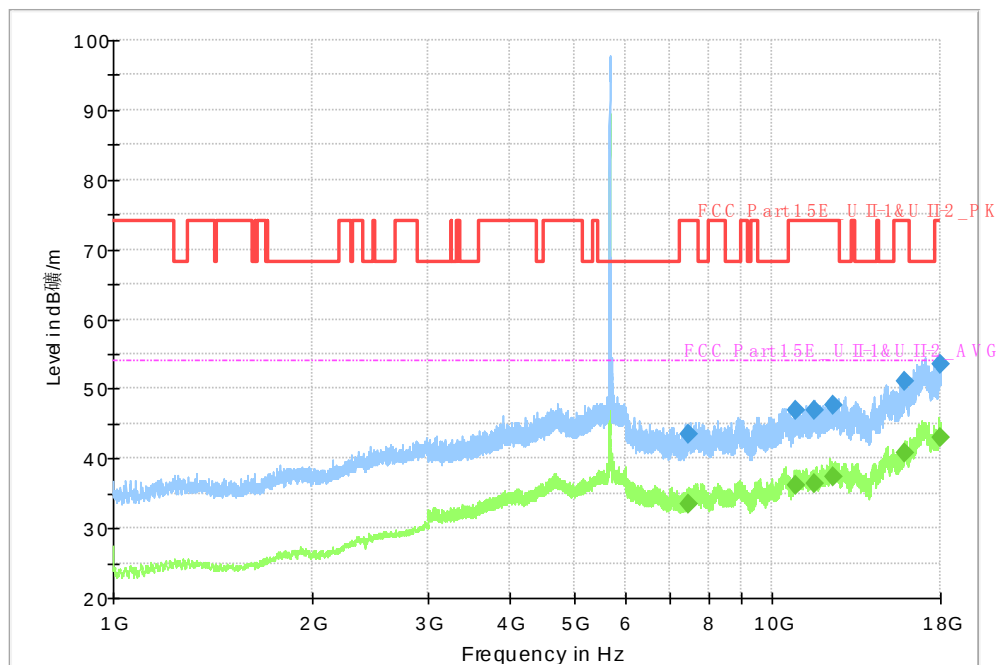


Fig. 82 Transmitter Spurious Emission (802.11n-HT40, CH134 5670MHz)

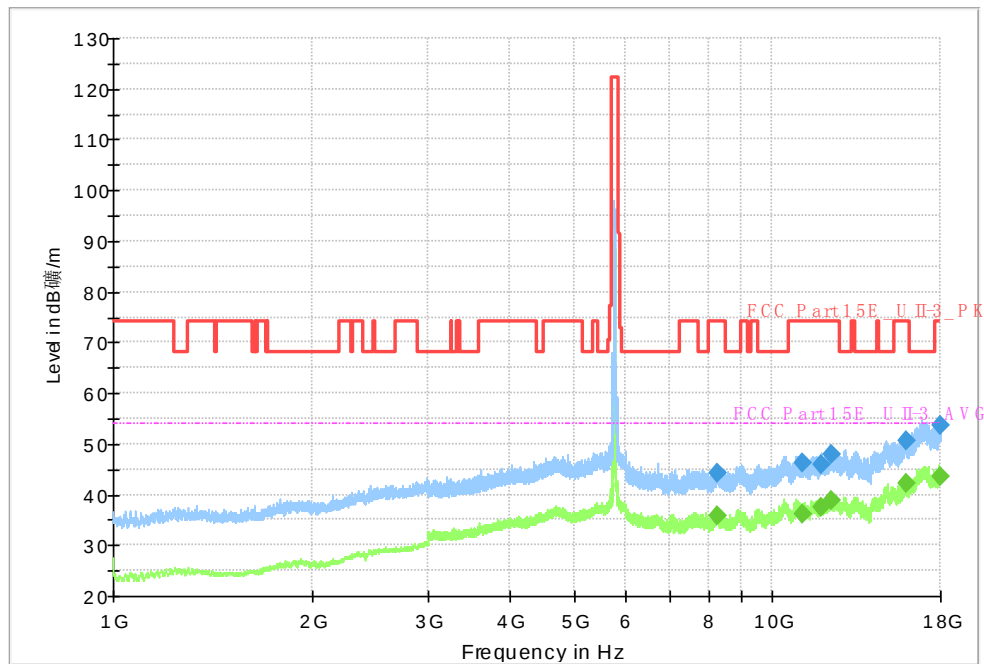


Fig. 83 Transmitter Spurious Emission (802. 11ac-VHT40, CH151 5755MHz)

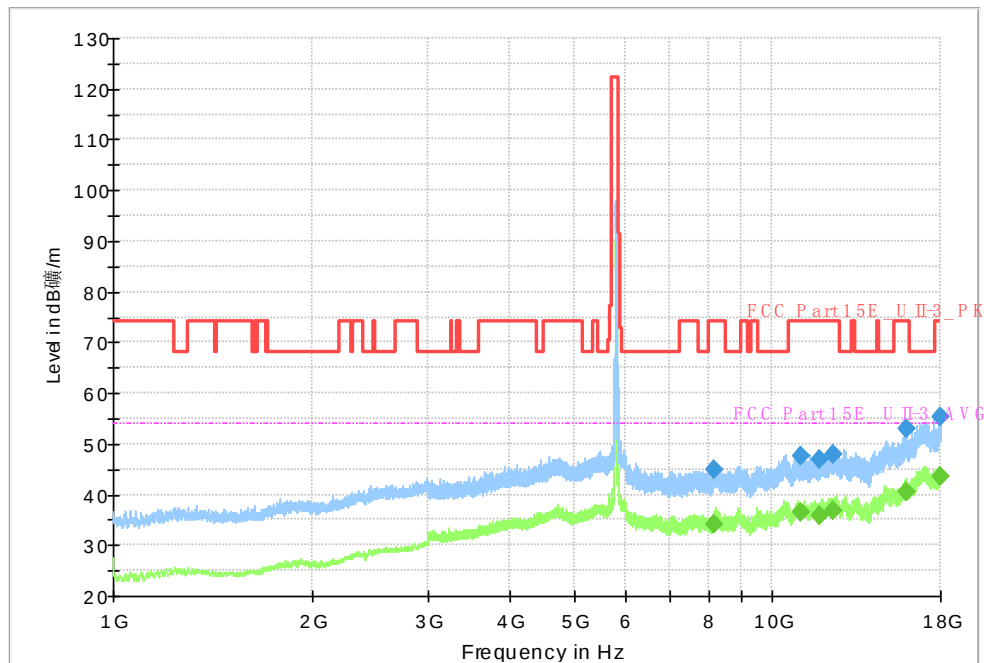


Fig. 84 Transmitter Spurious Emission (802. 11ac-VHT40, CH159 5795MHz)

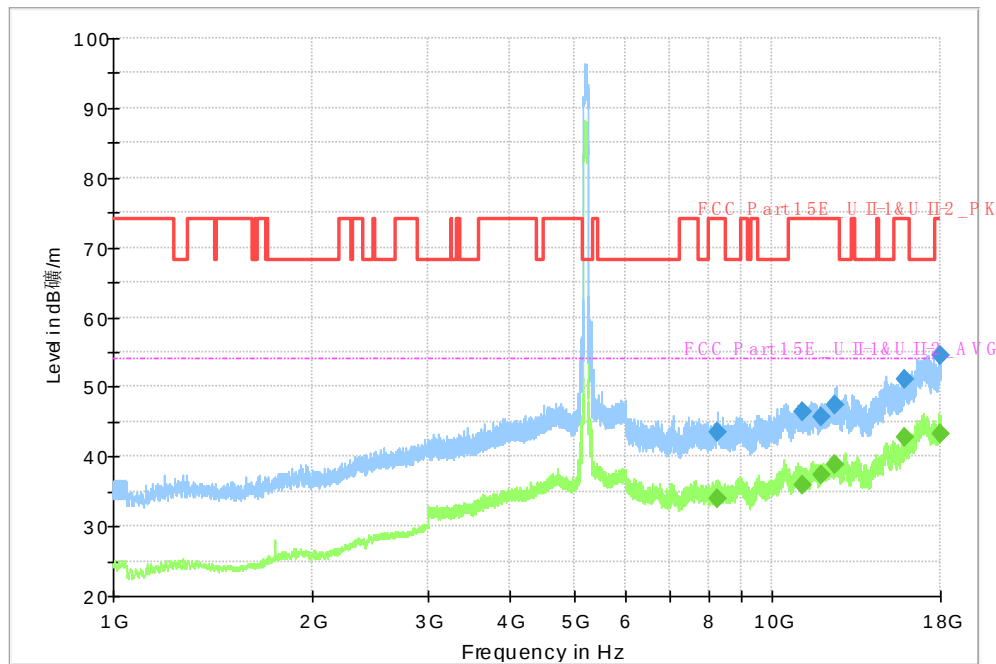


Fig. 85 Transmitter Spurious Emission (802. 11ac-VHT80, CH42 5210MHz)

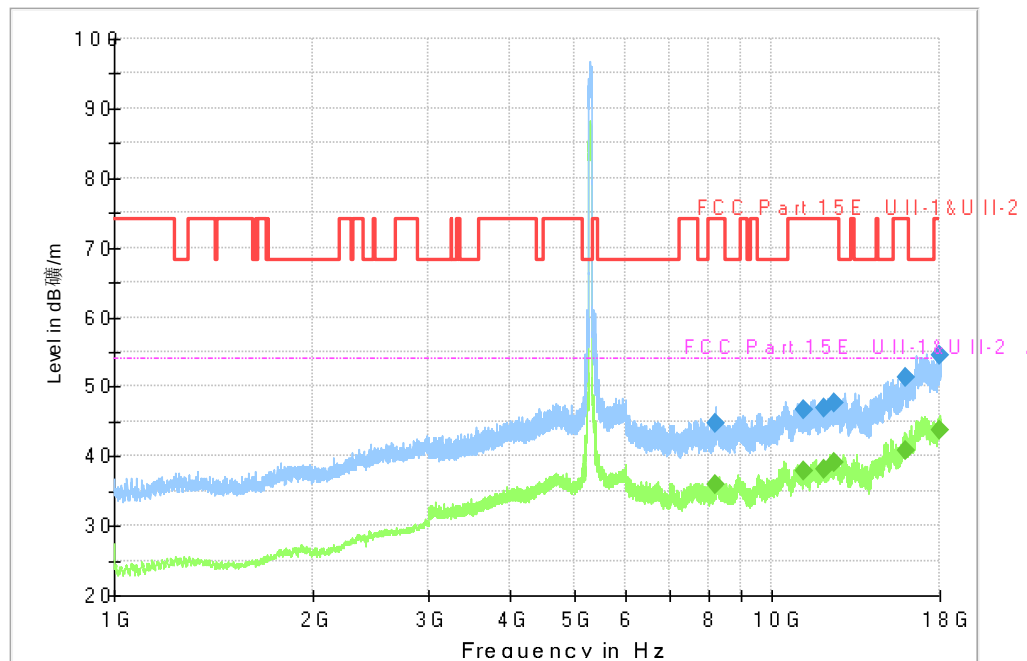


Fig. 86 Transmitter Spurious Emission (802. 11ac-VHT80, CH58 5290MHz)

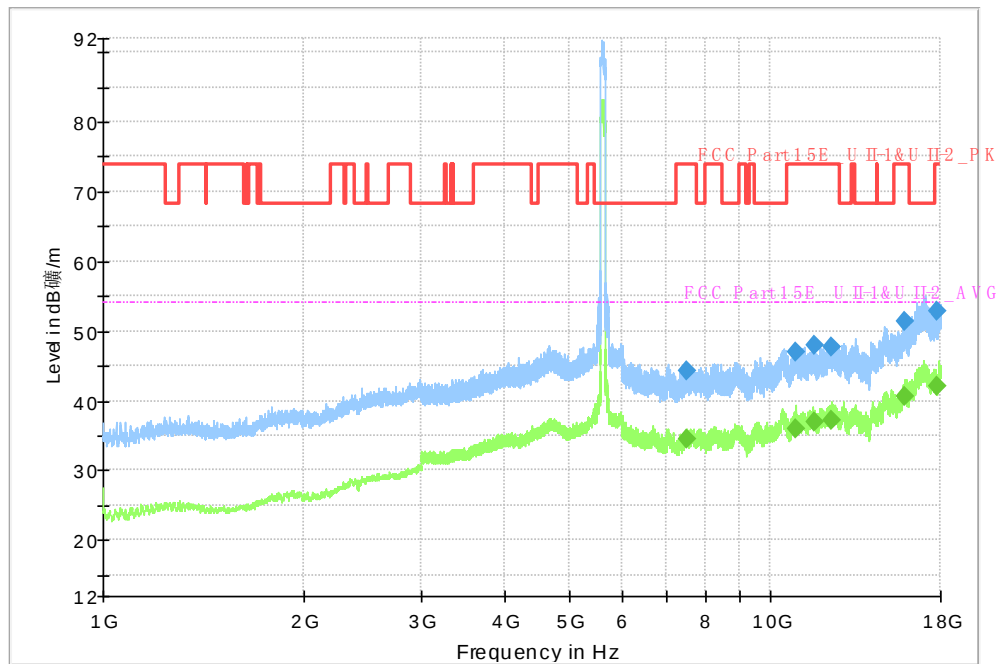


Fig. 87 Transmitter Spurious Emission (802. 11ac-VHT80, CH122 5610MHz)

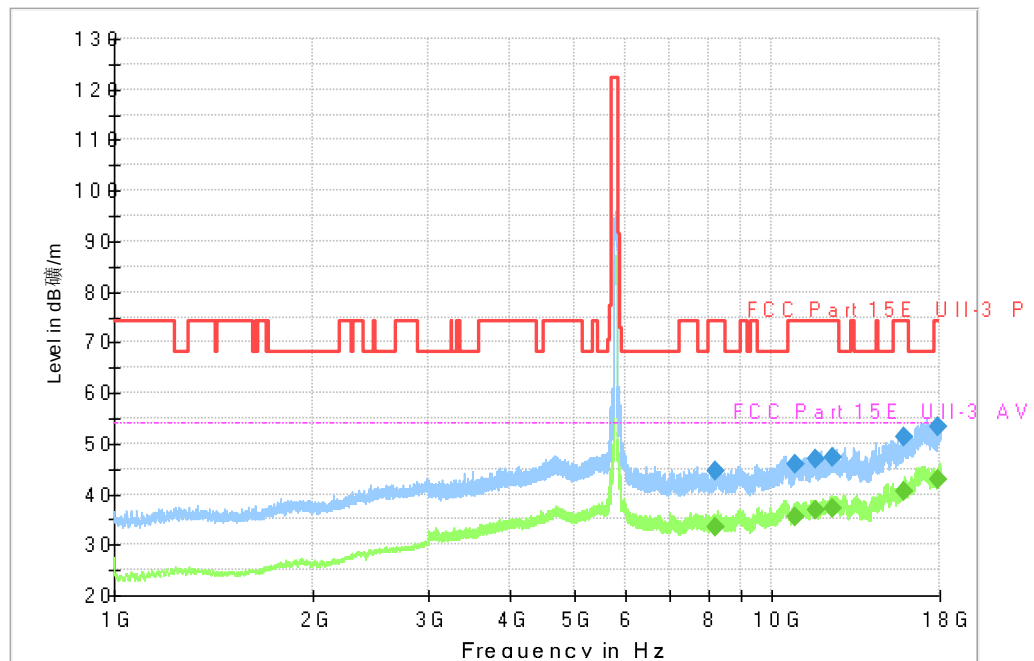


Fig. 88 Transmitter Spurious Emission (802. 11ac-VHT80, CH155 5775MHz)

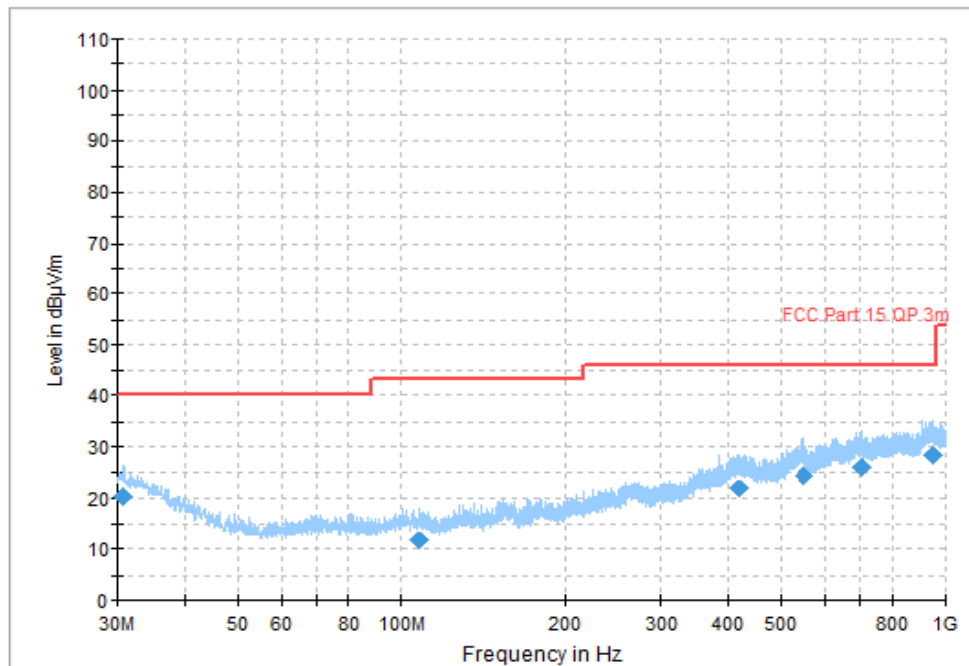


Fig. 89 Transmitter Spurious Emission (All channel, 30MHz~1GHz)

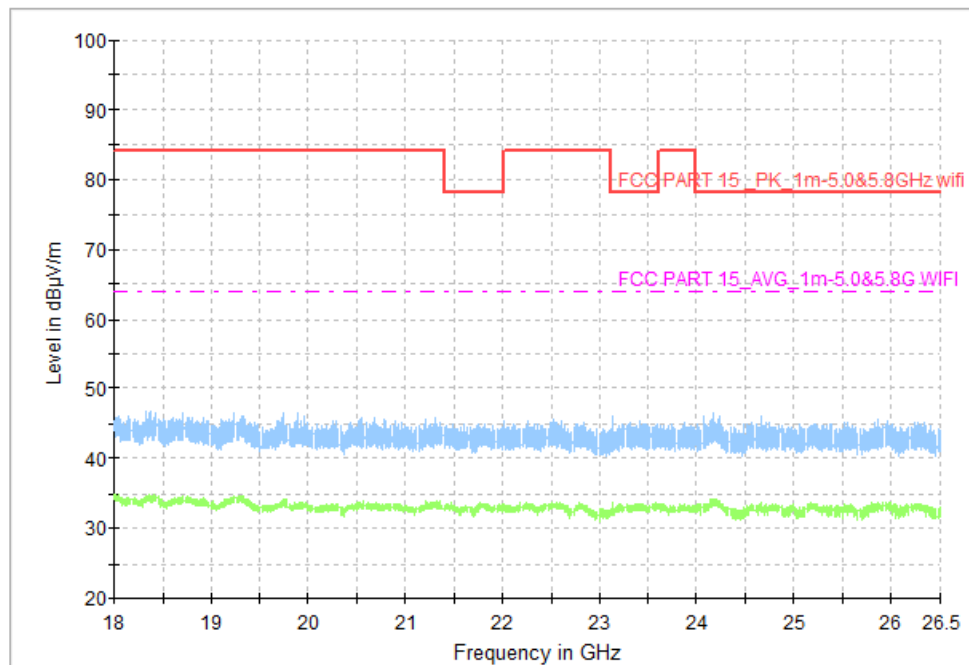


Fig. 90 Transmitter Spurious Emission (All channel, 18GHz~26.5GHz)

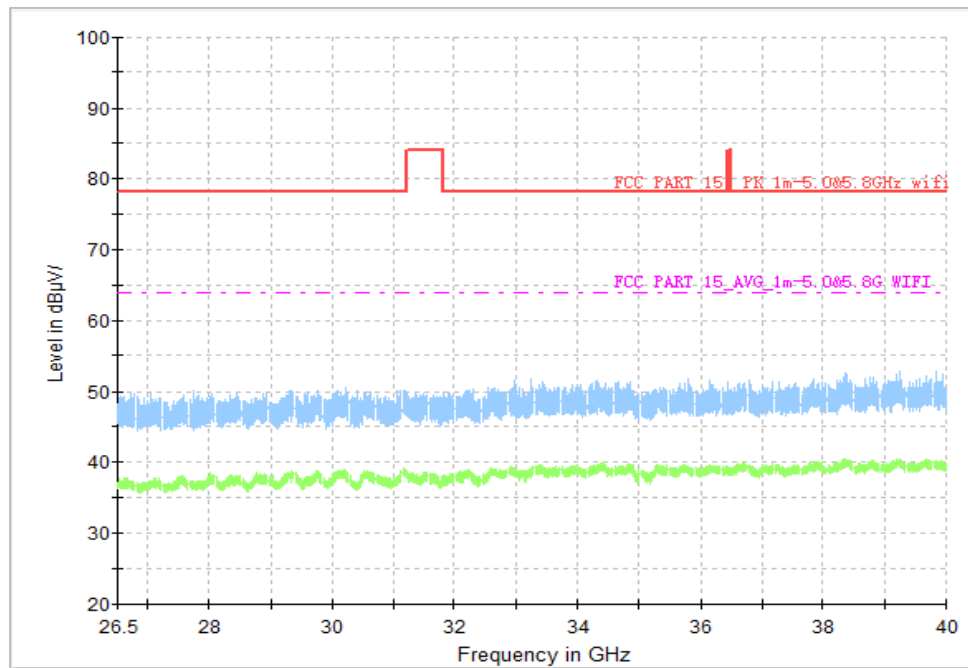


Fig. 91 Transmitter Spurious Emission (All channel, 26.5GHz~40GHz)

Worst Case Result
802.11a CH48

Frequency (MHz)	Max Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
7662.923077	46.12	74.00	27.88	V	5.7
8264.769231	46.37	74.00	27.63	V	5.9
10916.769231	47.01	74.00	26.99	V	9.4
12414.461539	48.87	74.00	25.13	V	11.4
15879.692308	51.15	74.00	22.85	H	14.0
17973.230769	53.18	74.00	20.82	V	19.1

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
7662.923077	34.27	54.00	19.73	V	5.7
8264.769231	34.49	54.00	19.51	V	5.9
10916.769231	36.36	54.00	17.64	V	9.4
12414.461539	37.59	54.00	16.41	V	11.4
15879.692308	41.23	54.00	12.77	H	14.0
17973.230769	43.17	54.00	10.83	V	19.1

802.11a CH52

Frequency (MHz)	Max Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
7615.384616	44.26	74.00	29.74	V	5.7
8241.230769	45.66	74.00	28.34	V	5.9
11224.153846	46.82	74.00	27.18	V	9.7
12473.538462	48.09	74.00	25.91	H	11.3
15947.538462	51.80	74.00	22.20	V	14.1
17910.923077	53.93	74.00	20.07	V	18.9

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
7615.384616	34.47	54.00	19.53	V	5.7
8241.230769	34.60	54.00	19.40	V	5.9
11224.153846	36.66	54.00	17.34	V	9.7
12473.538462	37.64	54.00	16.36	H	11.3
15947.538462	40.76	54.00	13.24	V	14.1
17910.923077	43.53	54.00	10.47	V	18.9

802.11a CH116

Frequency (MHz)	Max Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
7630.615385	43.86	74.00	30.14	V	5.7
8230.153846	45.50	74.00	28.50	H	5.9
10998.461539	50.60	74.00	23.40	H	9.7
12456.923077	47.51	74.00	26.49	V	11.4
15961.846154	50.67	74.00	23.33	V	14.1
17994.923077	53.23	74.00	20.77	V	19.2

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
7630.615385	34.24	54.00	19.76	V	5.7
8230.153846	34.17	54.00	19.83	H	5.9
10998.461539	39.58	54.00	14.42	H	9.7
12456.923077	37.95	54.00	16.05	V	11.4
15961.846154	40.47	54.00	13.53	V	14.1
17994.923077	42.93	54.00	11.07	V	19.2

802.11a CH165

Frequency (MHz)	Max Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
7543.846154	43.86	74.00	30.14	V	5.6
8236.615385	44.94	74.00	29.06	H	5.9
10908.923077	46.86	74.00	27.14	H	9.4
12346.615385	48.05	74.00	25.95	H	11.2
15864.461539	51.94	74.00	22.06	H	14.0
17920.153846	53.76	74.00	20.24	V	18.9

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
7543.846154	33.62	54.00	20.38	V	5.6
8236.615385	34.41	54.00	19.59	H	5.9
10908.923077	36.40	54.00	17.60	H	9.4
12346.615385	37.32	54.00	16.68	H	11.2
15864.461539	40.80	54.00	13.20	H	14.0
17920.153846	43.70	54.00	10.30	V	18.9

802.11n-HT40 CH46

Frequency (MHz)	Max Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
7449.692308	43.31	74.00	30.69	V	5.7
8277.692308	44.55	74.00	29.45	H	6.0
11056.153846	46.93	74.00	27.07	H	9.7
11484.461539	47.69	74.00	26.31	H	10.1
12219.230769	47.37	74.00	26.63	H	10.9
15917.076923	50.48	74.00	23.52	V	14.1

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
7449.692308	34.19	54.00	18.81	V	5.7
8277.692308	35.11	54.00	18.89	H	6.0
11056.153846	36.86	54.00	17.14	H	9.7
11484.461539	38.29	54.00	15.71	H	10.1
12219.230769	39.00	54.00	16.00	H	10.9
15917.076923	41.36	54.00	12.64	V	14.1

802.11n-HT40 CH62

Frequency (MHz)	Max Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
7613.538462	43.90	74.00	30.10	V	5.7
10824.923077	45.84	74.00	28.16	H	9.2
11864.307692	46.39	74.00	27.61	H	10.1
12172.153846	46.89	74.00	27.11	H	10.7
12449.076923	48.32	74.00	25.68	H	11.4
15894.923077	51.50	74.00	22.50	H	14.0

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
7613.538462	35.62	54.00	18.38	V	5.7
10824.923077	37.34	54.00	16.66	H	9.2
11864.307692	37.44	54.00	16.56	H	10.1
12172.153846	38.84	54.00	15.16	H	10.7
12449.076923	39.04	54.00	14.96	H	11.4
15894.923077	40.34	54.00	13.66	H	14.0

802.11n-HT40 CH134

Frequency (MHz)	Max Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
8259.692308	45.15	74.00	28.85	H	5.9
10896.000000	46.59	74.00	27.41	V	9.4
11659.846154	47.10	74.00	26.90	H	9.9
12287.538462	46.62	74.00	27.38	H	11.0
15891.692308	49.84	74.00	24.16	H	14.0
17981.076923	54.44	74.00	19.56	H	19.1

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
8259.692308	33.77	54.00	20.23	H	5.9
10896.000000	35.89	54.00	18.11	V	9.4
11659.846154	36.37	54.00	17.63	H	9.9
12287.538462	36.78	54.00	17.22	H	11.0
15891.692308	39.96	54.00	14.04	H	14.0
17981.076923	43.41	54.00	10.59	H	19.1

802.11n-HT40 CH159

Frequency (MHz)	Max Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
8222.307692	44.39	74.00	29.61	H	5.9
11066.307692	47.04	74.00	26.96	V	9.7
11635.846154	48.11	74.00	25.89	H	9.9
12468.000000	47.32	74.00	26.68	H	11.3
15858.000000	51.61	74.00	22.39	V	14.0
17916.000000	54.23	74.00	19.77	V	18.9

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
8222.307692	33.69	54.00	20.31	H	5.9
11066.307692	35.96	54.00	18.04	V	9.7
11635.846154	36.56	54.00	17.44	H	9.9
12468.000000	36.91	54.00	17.09	H	11.3
15858.000000	40.28	54.00	13.72	V	14.0
17916.000000	43.41	54.00	10.59	V	18.9

802.11ac-VHT80 CH42

Frequency (MHz)	Max Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
7440.461539	43.95	74.00	30.05	V	5.7
8239.384616	44.94	74.00	29.06	V	5.9
10918.153846	45.97	74.00	28.03	V	9.4
12331.384615	46.98	74.00	27.02	V	11.1
15821.538462	49.82	74.00	24.18	V	14.0
17923.384615	53.80	74.00	20.20	H	18.9

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
7440.461539	35.11	54.00	18.89	V	5.7
8239.384616	35.77	54.00	18.23	V	5.9
10918.153846	37.65	54.00	16.35	V	9.4
12331.384615	37.97	54.00	16.03	V	11.1
15821.538462	39.62	54.00	14.38	V	14.0
17923.384615	43.21	54.00	10.79	H	18.9

802.11ac-VHT80 CH58

Frequency (MHz)	Max Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
8220.461539	44.67	74.00	29.33	H	5.9
10882.615385	45.64	74.00	28.36	V	9.3
11536.153846	46.46	74.00	27.54	V	10.1
12461.076923	48.28	74.00	25.72	V	11.4
15888.923077	51.38	74.00	22.62	V	14.0
17913.230769	54.01	74.00	19.99	V	18.9

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
8220.461539	35.67	54.00	18.33	H	5.9
10882.615385	37.43	54.00	16.57	V	9.3
11536.153846	37.86	54.00	16.14	V	10.1
12461.076923	37.92	54.00	16.08	V	11.4
15888.923077	40.46	54.00	13.54	V	14.0
17913.230769	43.25	54.00	10.75	V	18.9

802.11ac-VHT80 CH122

Frequency (MHz)	Max Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
8305.846154	44.54	74.00	29.46	H	6.0
10874.769231	45.99	74.00	28.01	H	9.3
11611.846154	46.69	74.00	27.31	V	9.9
12299.076923	47.27	74.00	26.73	V	11.0
15871.384615	52.38	74.00	21.62	V	14.0
17953.384615	54.09	74.00	19.91	V	19.0

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
8305.846154	33.50	54.00	20.50	H	6.0
10874.769231	35.64	54.00	18.36	H	9.3
11611.846154	36.27	54.00	17.73	V	9.9
12299.076923	36.95	54.00	17.05	V	11.0
15871.384615	40.49	54.00	13.51	V	14.0
17953.384615	43.37	54.00	10.63	V	19.0

802.11ac-VHT80 CH155

Frequency (MHz)	Max Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
8178.461539	44.45	74.00	29.55	V	6.0
10751.538462	46.12	74.00	27.88	V	9.0
11413.384615	45.44	74.00	28.56	V	10.0
12210.923077	47.21	74.00	26.79	H	10.8
15872.769231	52.22	74.00	21.78	H	14.0
17928.923077	54.96	74.00	19.04	H	18.9

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
8178.461539	33.62	54.00	20.38	V	6.0
10751.538462	35.23	54.00	18.77	V	9.0
11413.384615	35.47	54.00	18.53	V	10.0
12210.923077	36.56	54.00	17.44	H	10.8
15872.769231	40.75	54.00	13.25	H	14.0
17928.923077	43.31	54.00	10.69	H	18.9

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

A.9. Radiated Spurious Emissions < 30MHz

Measurement Limit (15.209, 9kHz-30MHz):

Frequency (MHz)	Field strength ($\mu\text{V/m}$)	Measurement distance (m)
0.009 - 0.490	$2400/F(\text{kHz})$	300
0.490 - 1.705	$24000/F(\text{kHz})$	30
1.705 - 30.0	30	30

The measurement is made according to KDB 789033.

Note: The measurement distance during the test is 3m. The limit used in plots recalculated based on the extrapolation factor of 40 dB/decade.

Measurement Result:

Channel	Frequency Range	Test Results	Conclusion
All Channel	9kHz ~ 30MHz	Fig.92	P

Conclusion: PASS

Test graphs as below:

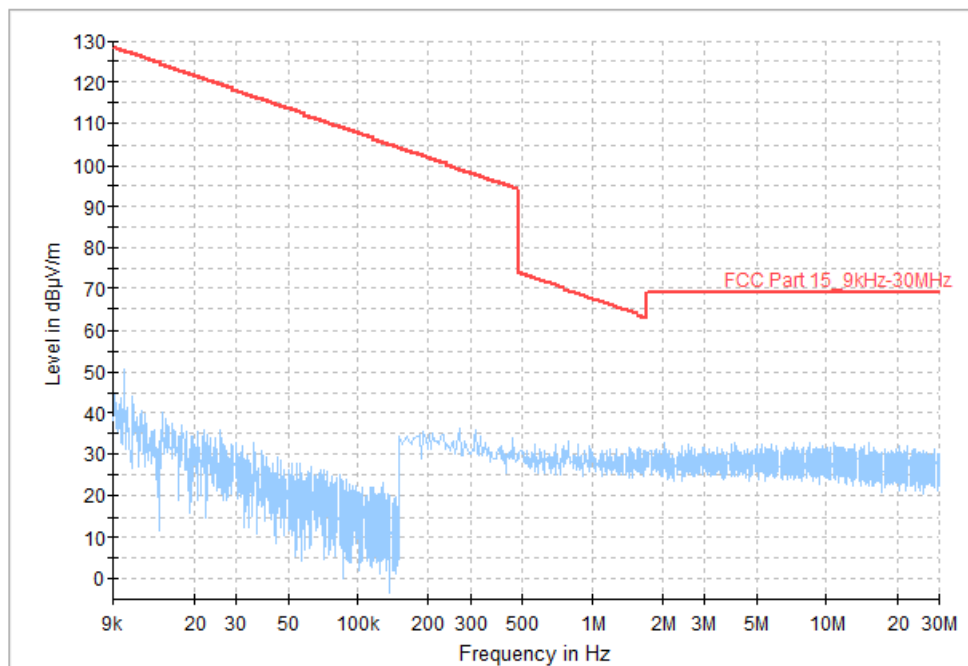


Fig. 92 Radiated Spurious Emission (All Channel, 9kHz ~ 30MHz)

A.10. AC Power Line Conducted Emission

Test Condition:

Voltage(V)	Frequency(Hz)
120	60

Measurement Result and limit:

RLAN (Quasi-peak Limit) - AE3

Frequency range (MHz)	Quasi-peak Limit (dB μ V)	Result (dB μ V)		Conclusion
		Traffic	Idle	
0.15 to 0.5	66 to 56	Fig.93	Fig.94	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.

RLAN (Average Limit) - AE3

Frequency range (MHz)	Average-peak Limit (dB μ V)	Result (dB μ V)		Conclusion
		Traffic	Idle	
0.15 to 0.5	56 to 46	Fig.93	Fig.94	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.

Note: The measurement results include the L1 and N measurements.

Conclusion: PASS

Test graphs as below:

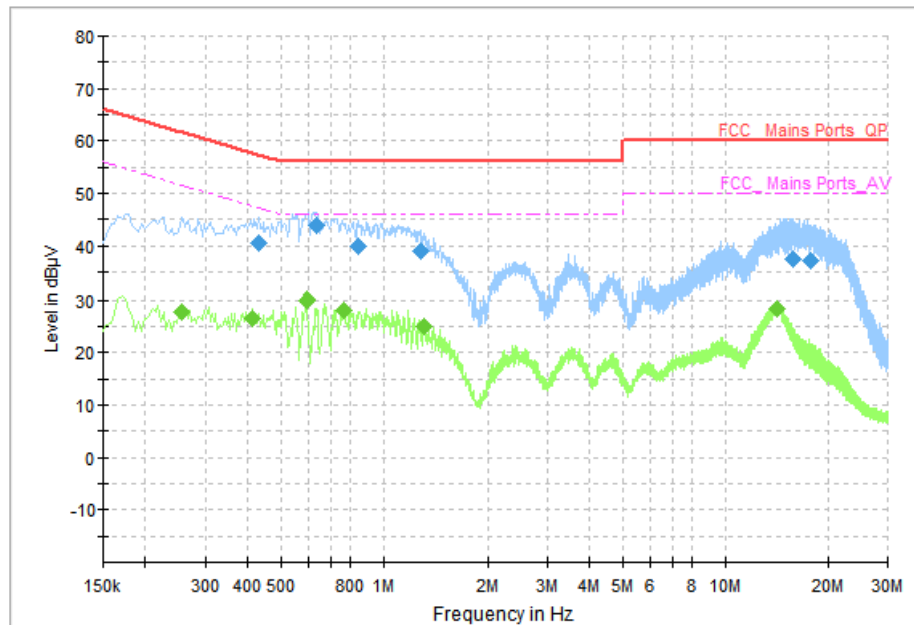


Fig. 93 AC Power line Conducted Emission (Traffic)

Measurement Result: Quasi Peak

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.430000	40.67	57.25	16.58	L1	ON	10
0.634000	43.95	56.00	12.05	L1	ON	10
0.846000	40.00	56.00	16.00	L1	ON	10
1.282000	38.97	56.00	17.03	L1	ON	10
15.850000	37.49	60.00	22.51	N	ON	11
17.874000	37.30	60.00	22.70	N	ON	10

Measurement Result: Average

Frequency (MHz)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.254000	27.66	51.63	23.96	N	ON	10
0.410000	26.47	47.65	21.18	N	ON	10
0.594000	29.93	46.00	16.07	N	ON	10
0.762000	28.02	46.00	17.98	N	ON	10
1.318000	24.98	46.00	21.02	L1	ON	10
14.174000	28.22	50.00	21.78	N	ON	11

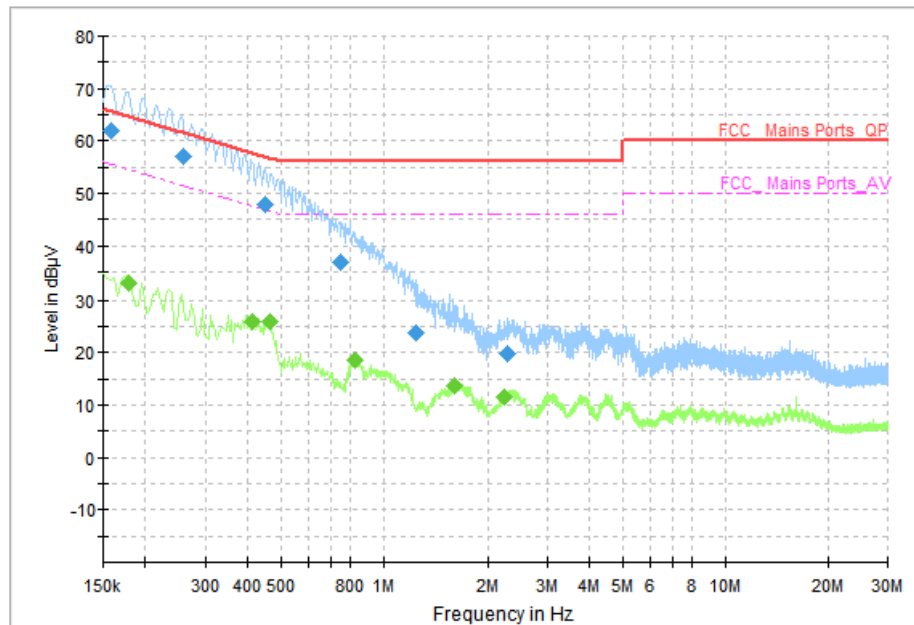


Fig. 94 AC Power line Conducted Emission (Idle)

Measurement Result: Quasi Peak

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.150000	45.79	66.00	20.21	N	ON	10
0.430000	40.55	57.25	16.70	L1	ON	10
0.634000	43.93	56.00	12.07	L1	ON	10
0.862000	40.08	56.00	15.92	L1	ON	10
1.266000	39.11	56.00	16.89	L1	ON	10
16.306000	37.68	60.00	22.32	N	ON	11

Measurement Result: Average

Frequency (MHz)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.250000	27.25	51.76	24.51	N	ON	10
0.410000	26.50	47.65	21.15	N	ON	10
0.594000	29.95	46.00	16.05	N	ON	10
0.762000	28.11	46.00	17.89	N	ON	10
1.274000	25.18	46.00	20.82	L1	ON	10
13.994000	28.03	50.00	21.97	N	ON	11



A.11. Power control

A Transmission Power Control mechanism is not required for systems with an e.i.r.p. of less than 27dBm (500mW).

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