

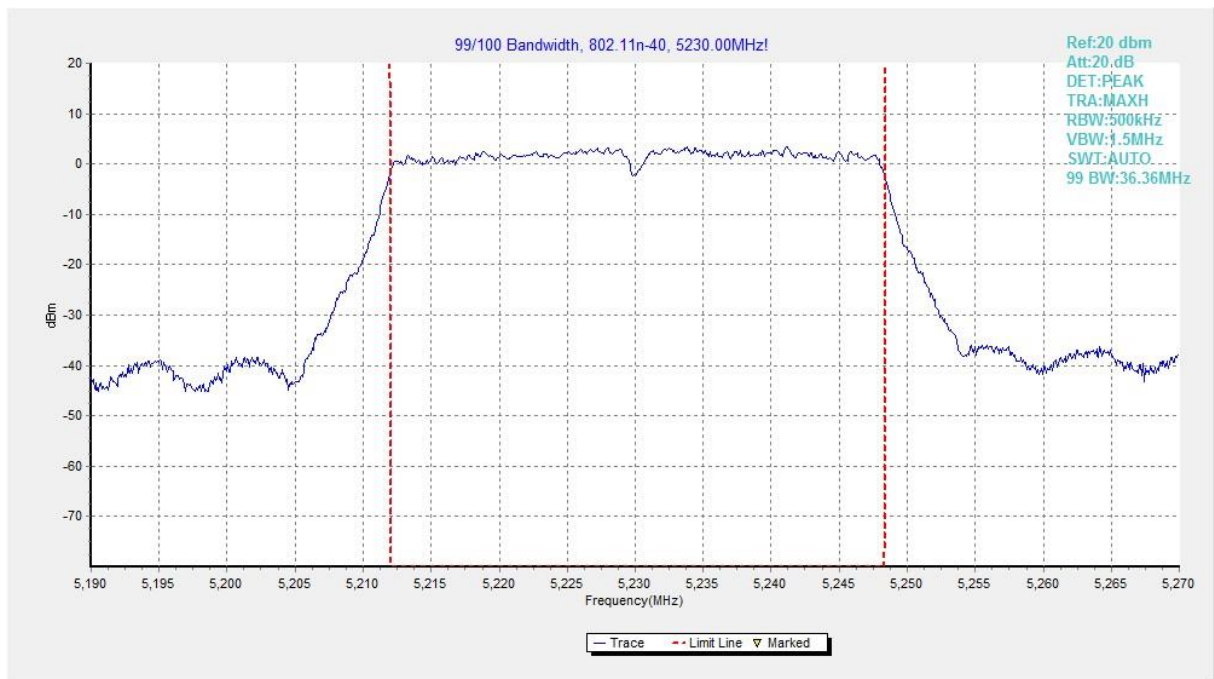


Fig. 37 99% Occupied Bandwidth (802.11n-HT40, 5230MHz)

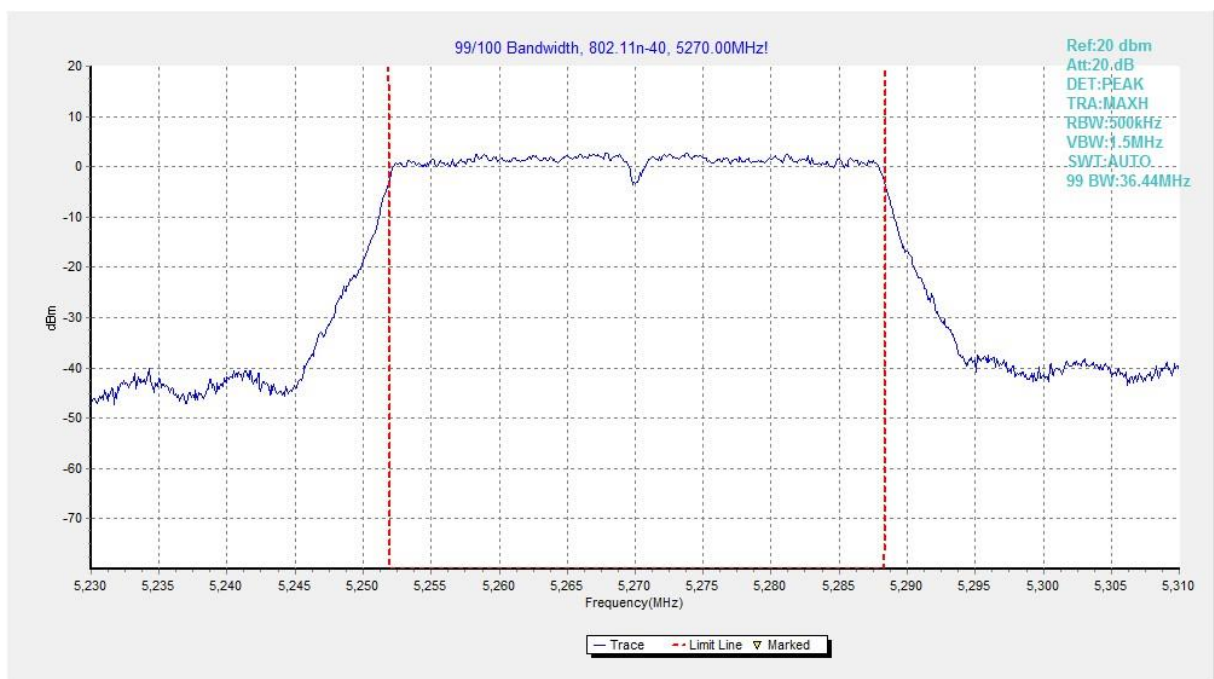


Fig. 38 99% Occupied Bandwidth (802.11n-HT40, 5270MHz)

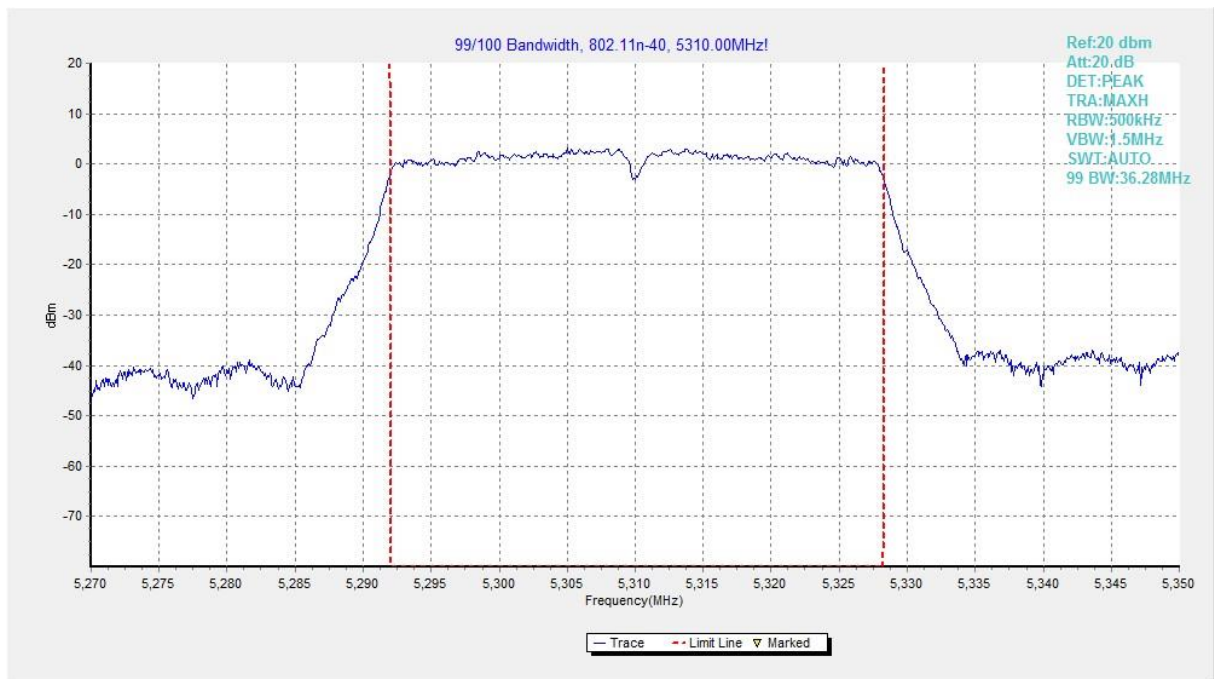


Fig. 39 99% Occupied Bandwidth (802.11n-HT40, 5310MHz)

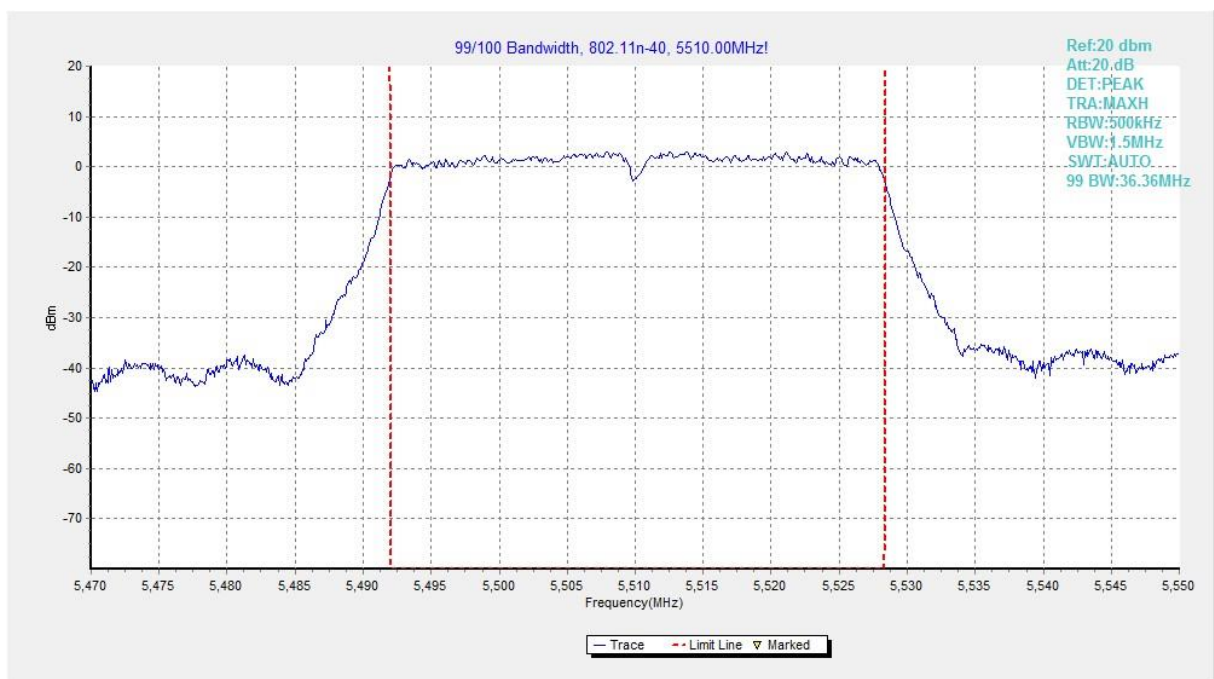


Fig. 40 99% Occupied Bandwidth (802.11n-HT40, 5510MHz)

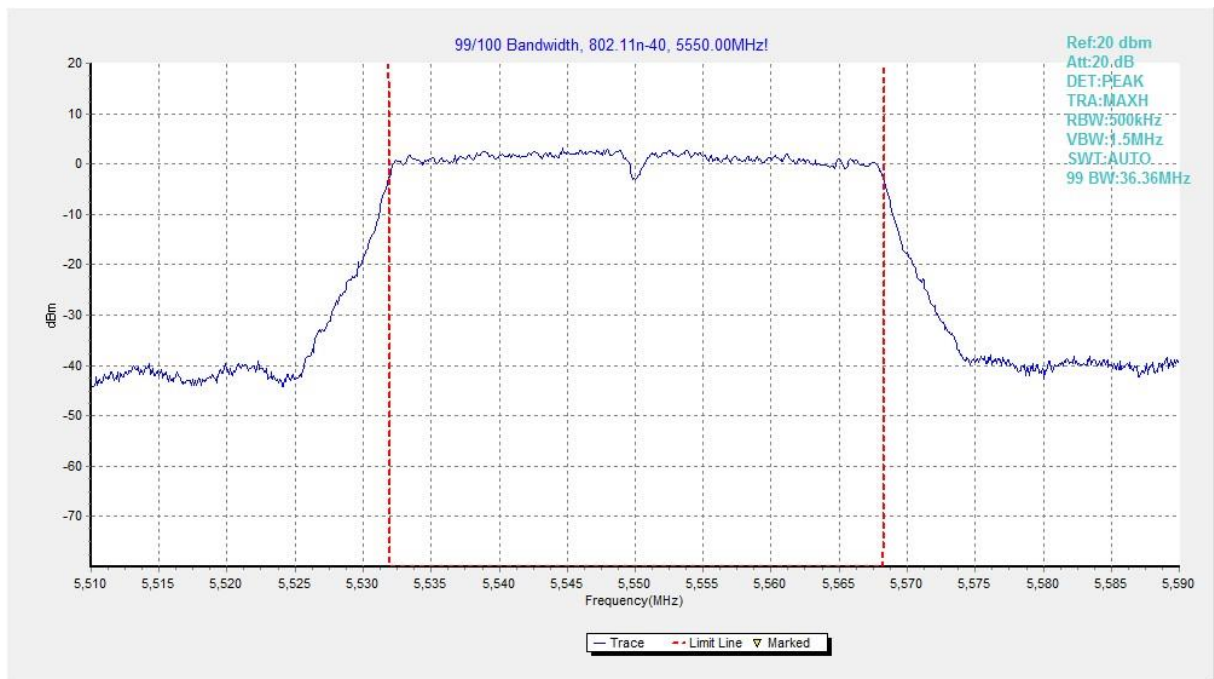


Fig. 41 99% Occupied Bandwidth (802.11n-HT40, 5550MHz)

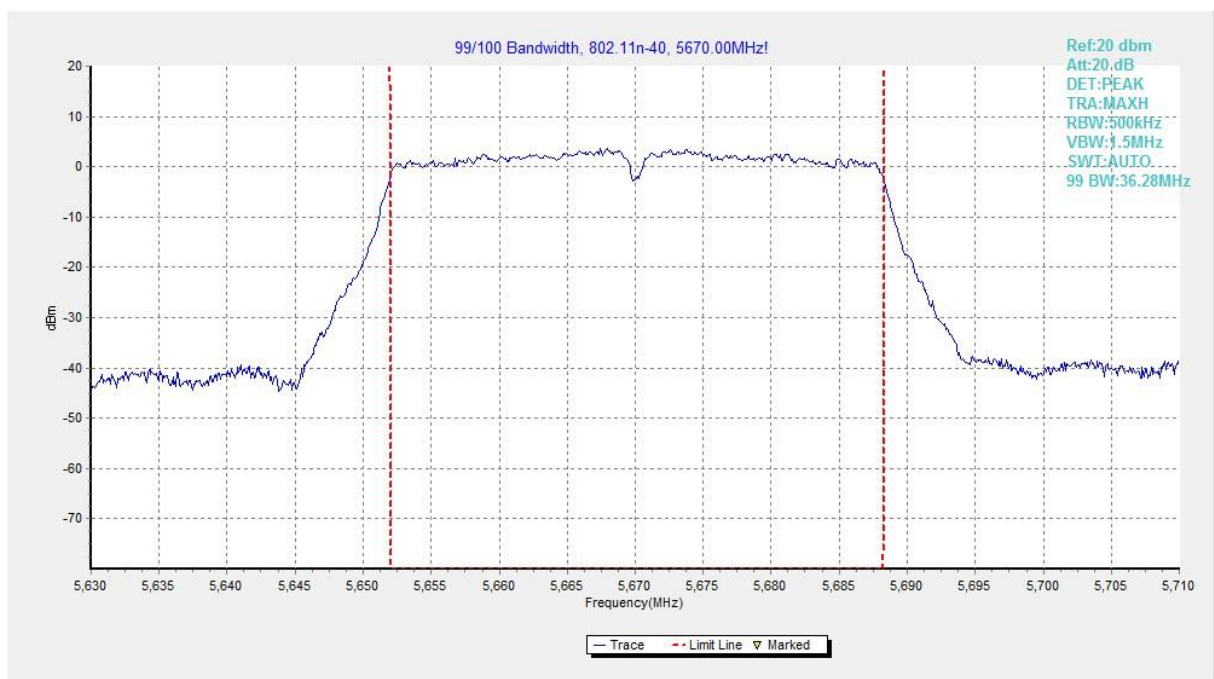


Fig. 42 99% Occupied Bandwidth (802.11n-HT40, 5670MHz)

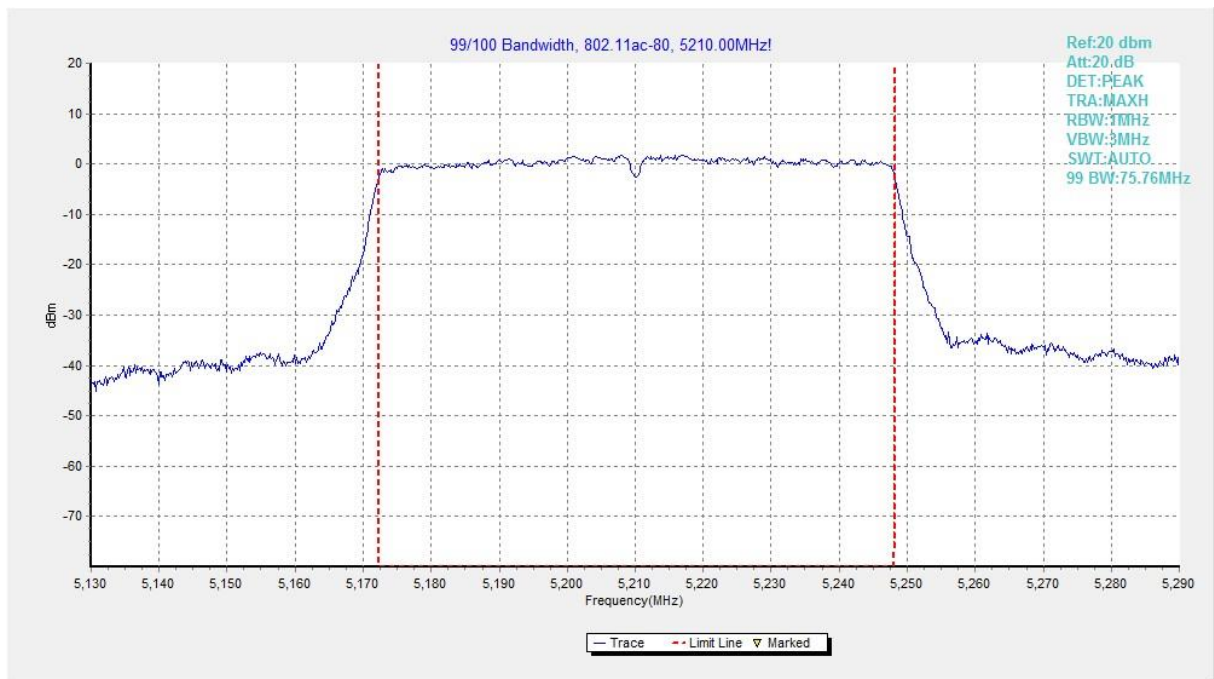


Fig. 43 99% Occupied Bandwidth (802.11ac-VHT80, 5210MHz)

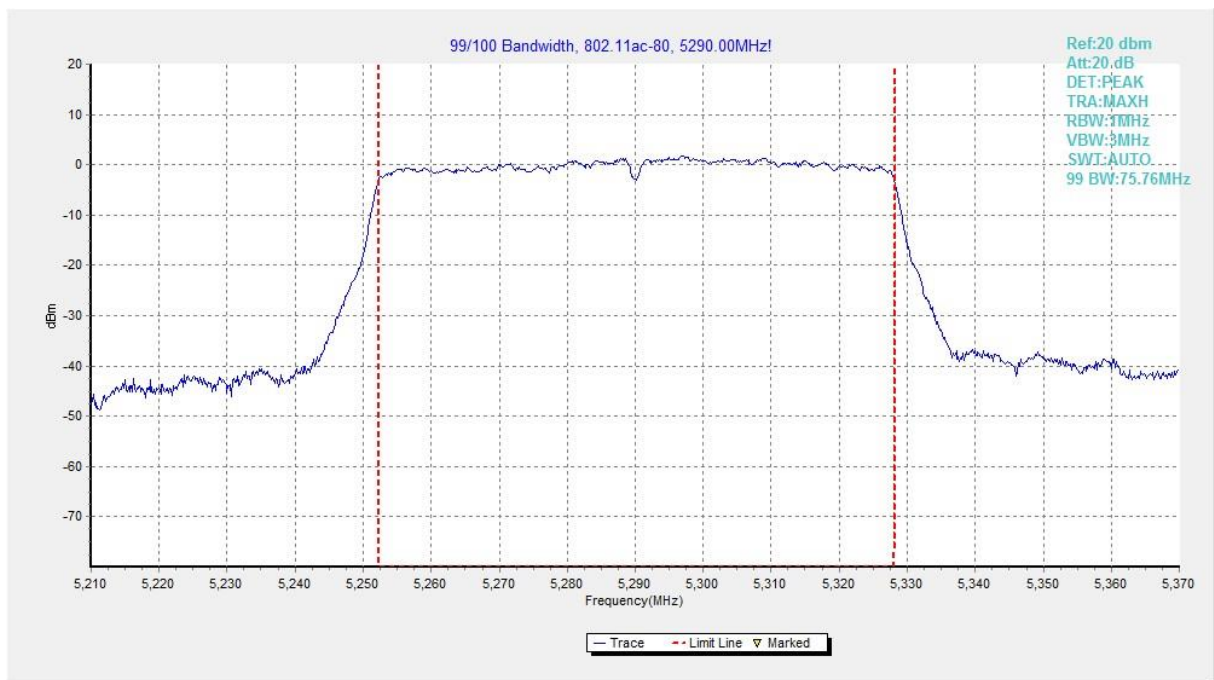


Fig. 44 99% Occupied Bandwidth (802.11ac-VHT80, 5290MHz)

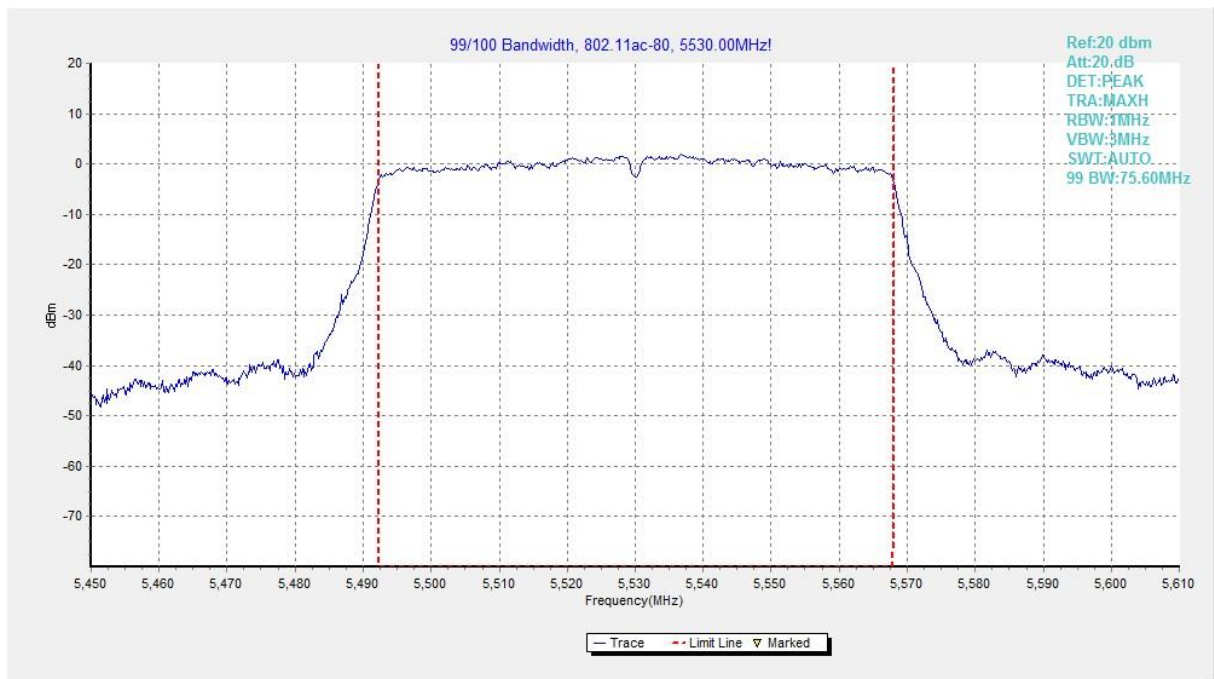


Fig. 45 99% Occupied Bandwidth (802.11ac-VHT80, 5530MHz)

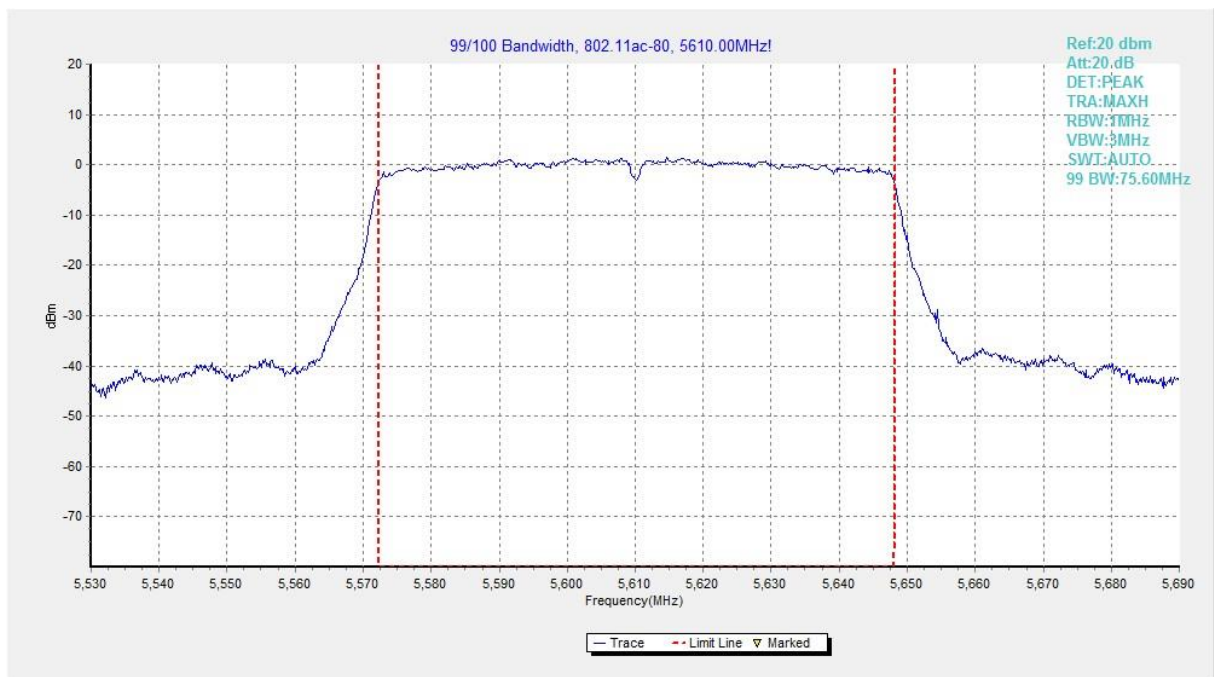


Fig. 46 99% Occupied Bandwidth (802.11ac-VHT80, 5610MHz)

A.7. Band Edges Compliance

Measurement Limit:

Standard	Limit (dBuV/m)	
FCC 47 CFR Part 15.209	Peak	74
	Average	54

The measurement is made according to KDB 789033

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)).

Measurement Result:

SISO:

Mode	Channel	Test Results	Conclusion
802.11a	5180 MHz(CH36)	Fig.47	P
	5320 MHz(CH64)	Fig.48	P
	5500 MHz(CH100)	Fig.49	P
	5700 MHz(CH140)	Fig.50	P
	5745 MHz(CH149)	Fig.51	P
	5825 MHz(CH165)	Fig.52	P
802.11n-HT40	5190 MHz(CH38)	Fig.53	P
	5310 MHz(CH62)	Fig.54	P
	5510 MHz(CH102)	Fig.55	P
	5670 MHz(CH134)	Fig.56	P
	5755 MHz(CH151)	Fig.57	P
	5795 MHz(CH159)	Fig.58	P
802.11ac-VHT80	5210 MHz(CH42)	Fig.59	P
	5290 MHz(CH58)	Fig.60	P
	5530 MHz(CH106)	Fig.61	P
	5775 MHz(CH155)	Fig.62	P

MIMO:

Mode	Channel	Test Results	Conclusion
802.11n-HT20	5180 MHz(CH36)	Fig.63	P
	5320 MHz(CH64)	Fig.64	P
	5500 MHz(CH100)	Fig.65	P
	5700 MHz(CH140)	Fig.66	P
	5745 MHz(CH149)	Fig.67	P
	5825 MHz(CH165)	Fig.68	P
802.11n-HT40	5190 MHz(CH38)	Fig.69	P
	5310 MHz(CH62)	Fig.70	P
	5510 MHz(CH102)	Fig.71	P



	5670 MHz(CH134)	Fig.72	P
	5755 MHz(CH151)	Fig.73	P
	5795 MHz(CH159)	Fig.74	P
802.11ac-VHT80	5210 MHz(CH42)	Fig.75	P
	5290 MHz(CH58)	Fig.76	P
	5530 MHz(CH106)	Fig.77	P
	5775 MHz(CH155)	Fig.78	P

See below for test graphs.

Conclusion: PASS

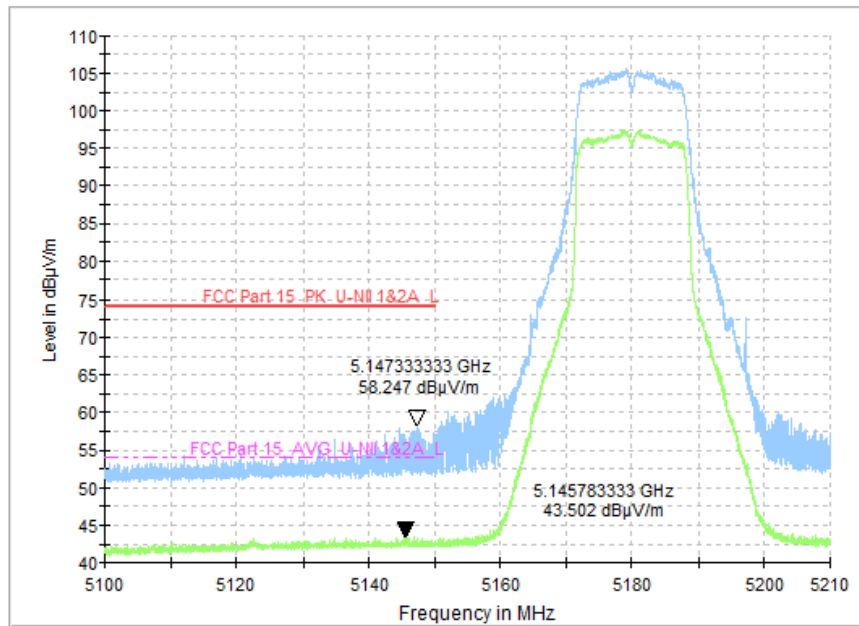


Fig. 47 Band Edges (802.11a, CH36 5180MHz)

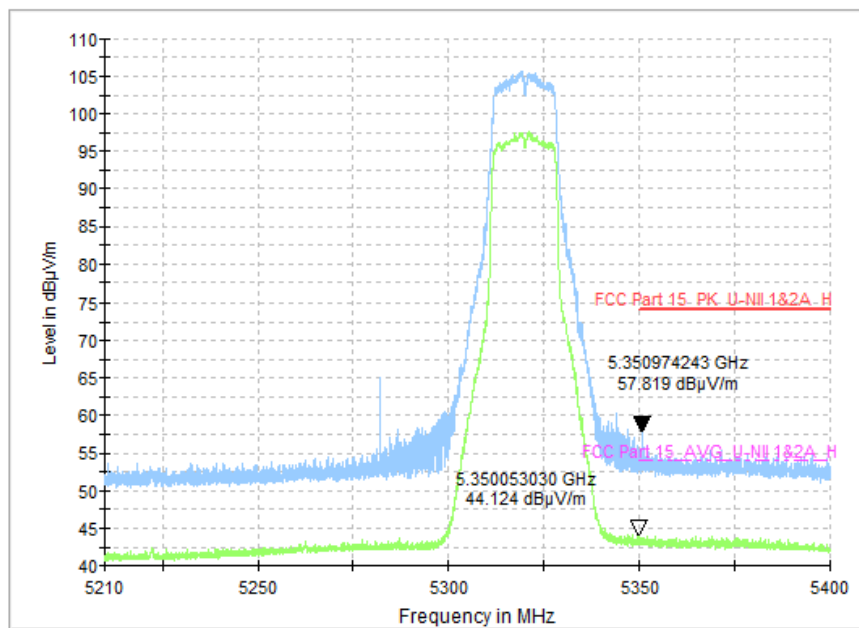


Fig. 48 Band Edges (802.11a, CH64 5320MHz)

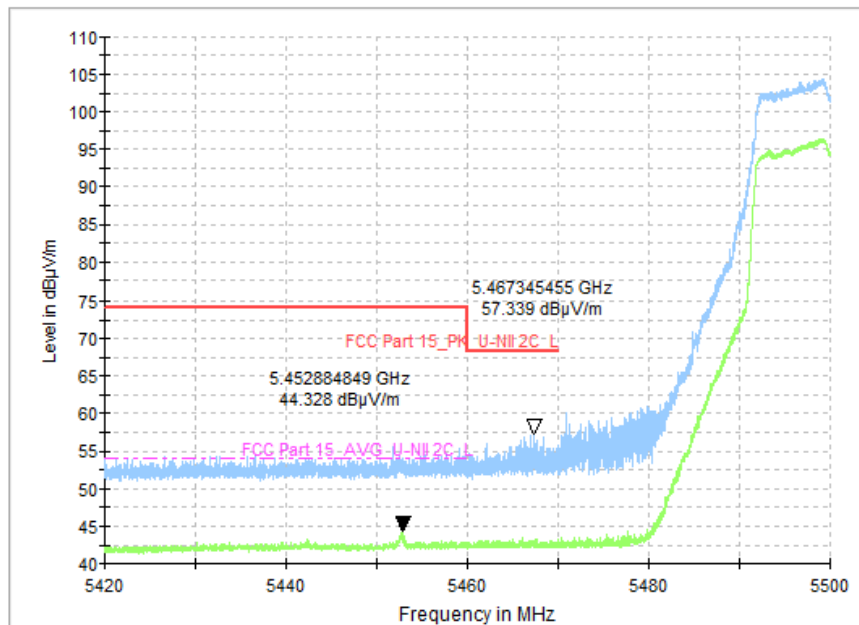


Fig. 49 Band Edges (802.11a, CH100 5500MHz)

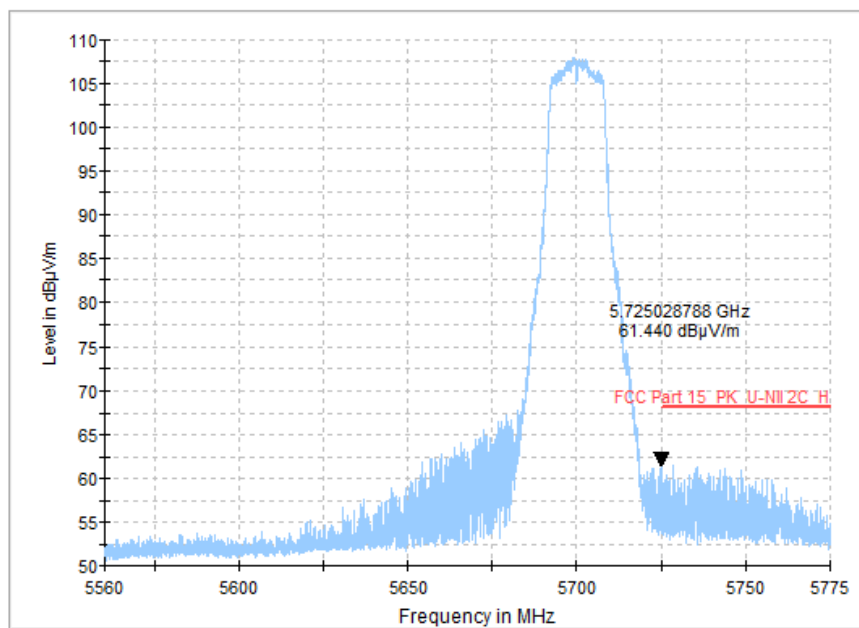


Fig. 50 Band Edges (802.11a, CH140 5700MHz)

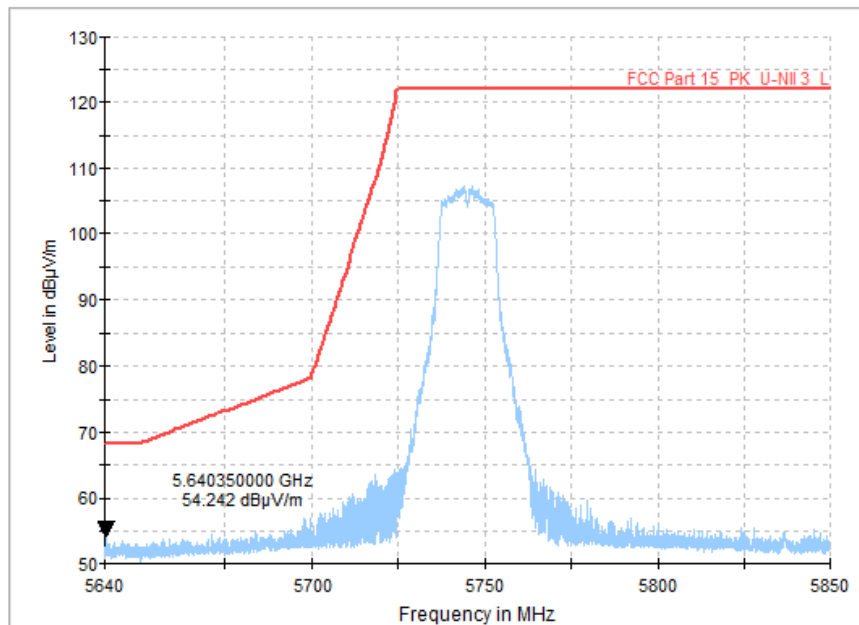


Fig. 51 Band Edges (802.11a, CH149 5745MHz)

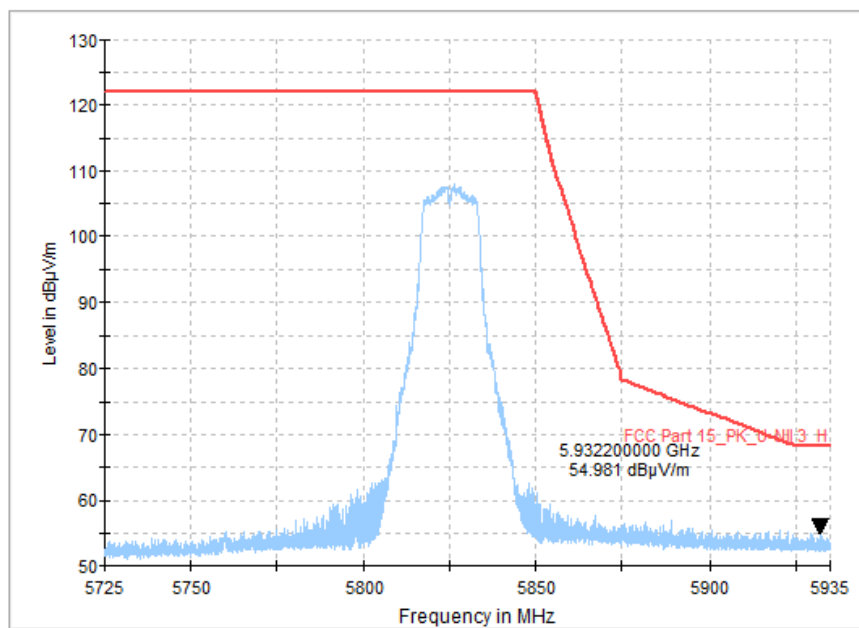


Fig. 52 Band Edges (802.11a, CH165 5825MHz)

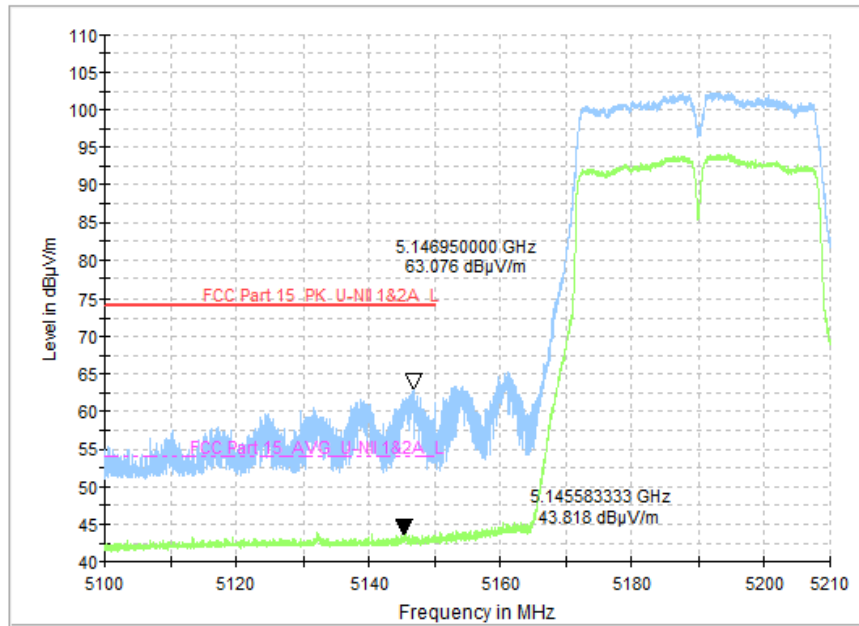


Fig. 53 Band Edges (802.11n-HT40, CH38 5190MHz)

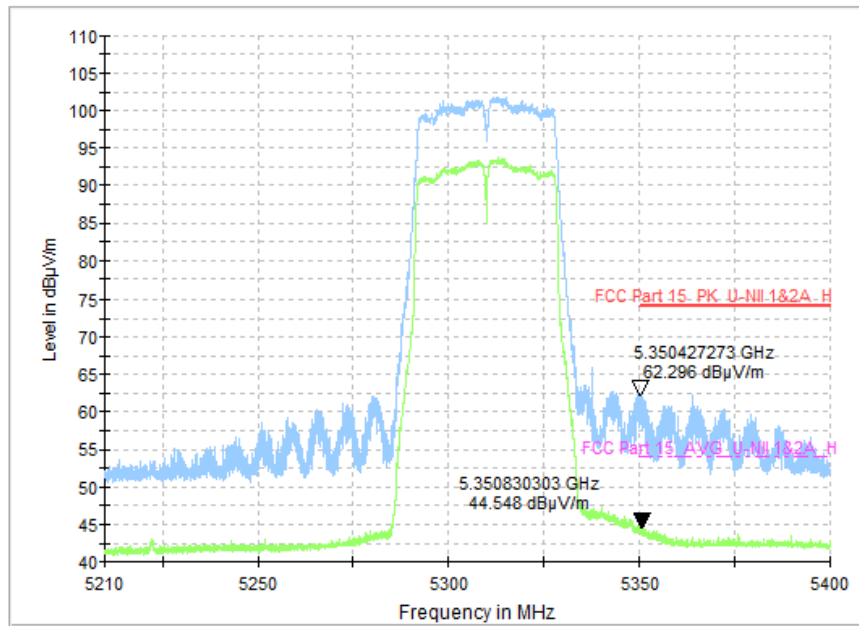


Fig. 54 Band Edges (802.11n-HT40, CH62 5310MHz)

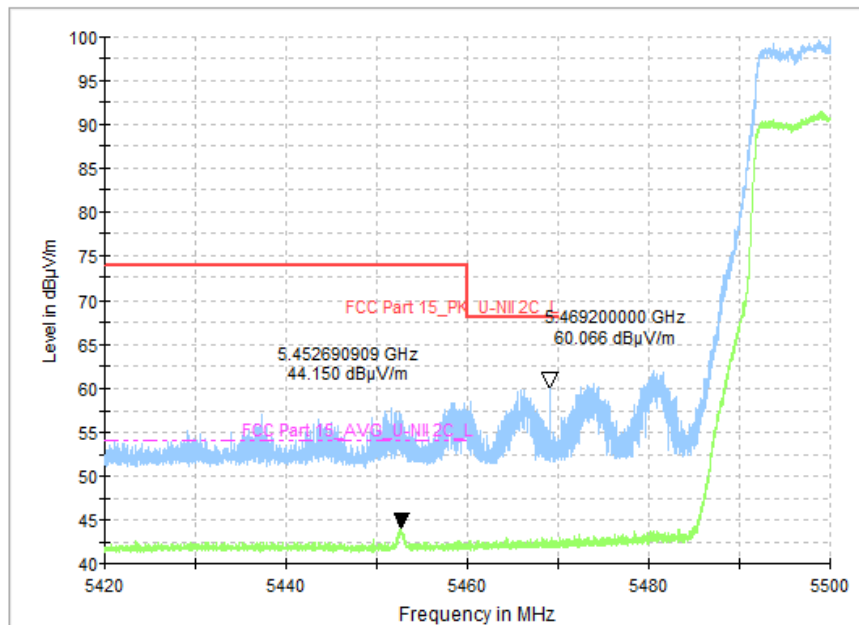


Fig. 55 Band Edges (802.11n-HT40, CH102 5510MHz)

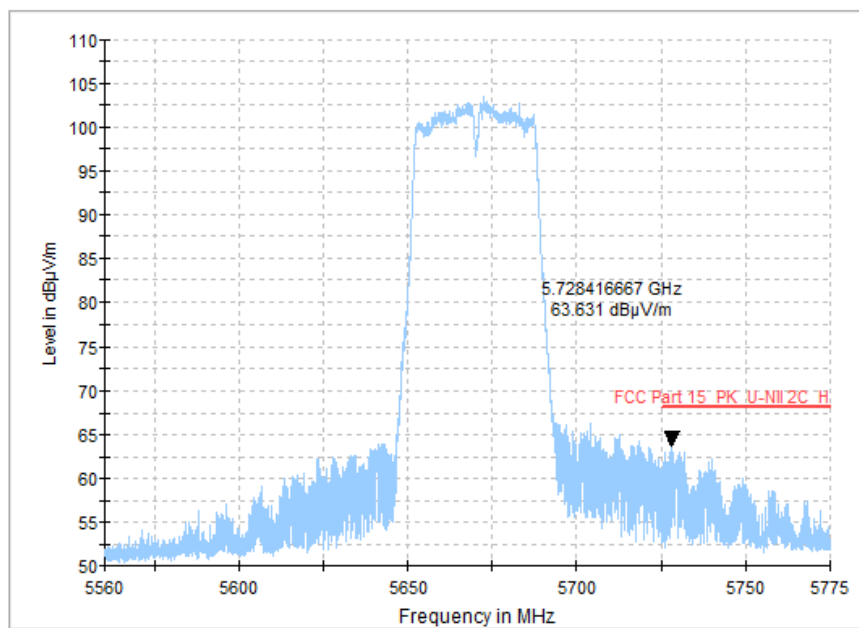


Fig. 56 Band Edges (802.11n-HT40, CH134 5670MHz)

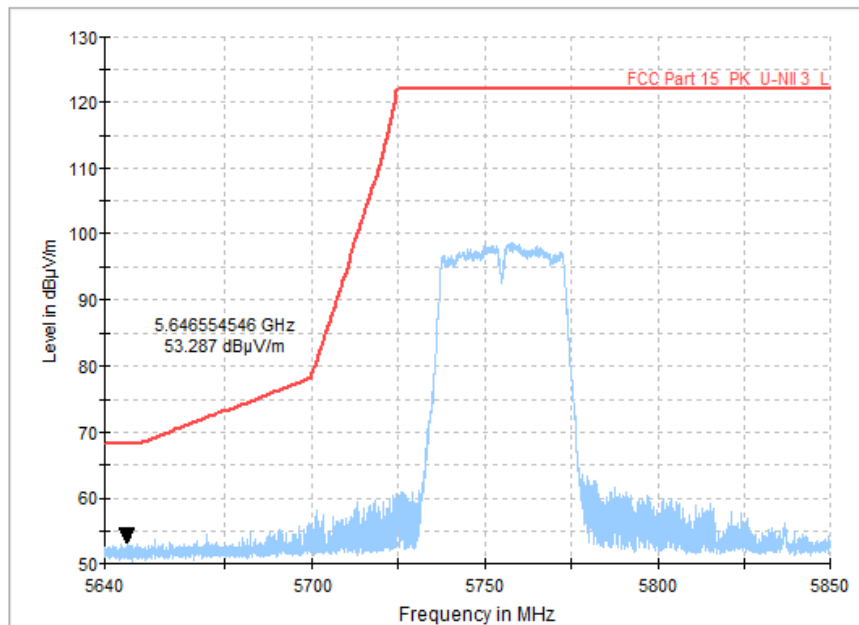


Fig. 57 Band Edges (802.11n-HT40, CH151 5755MHz)

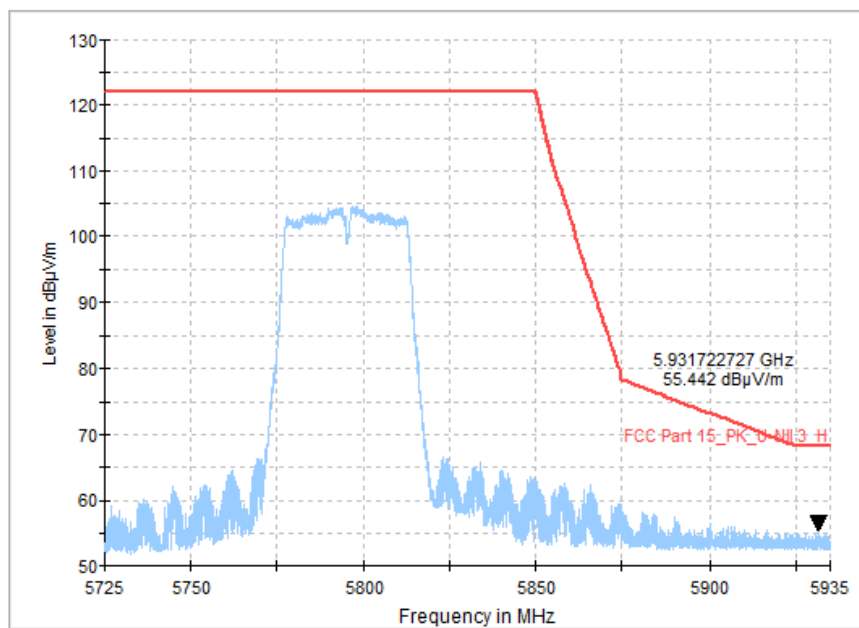


Fig. 58 Band Edges (802.11n-HT40, CH159 5795MHz)

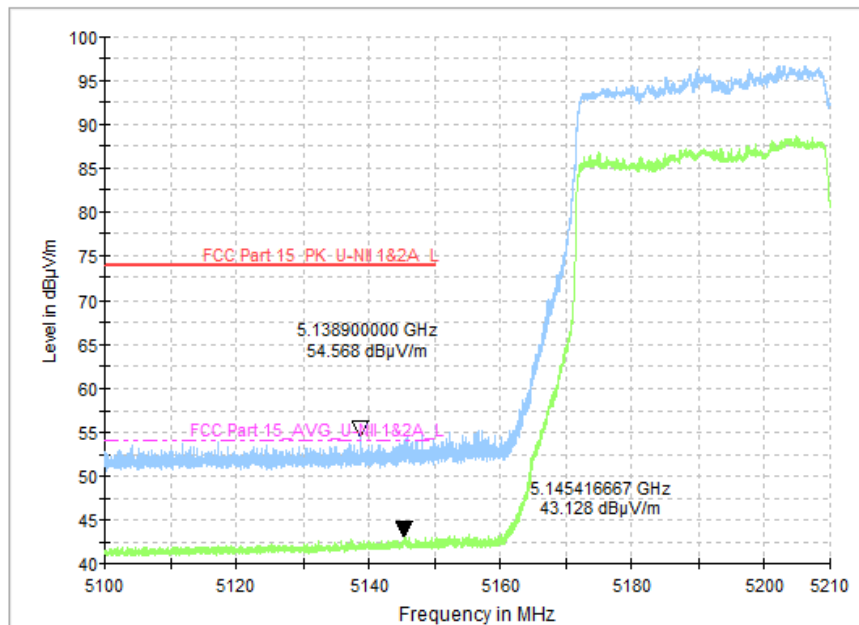


Fig. 59 Band Edges (802.11ac-VHT80, CH42 5210MHz)

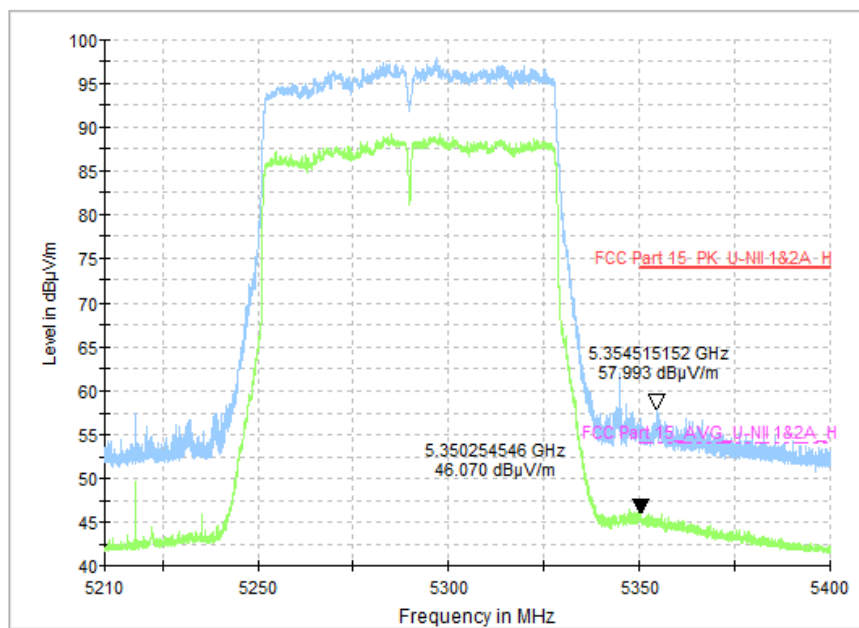


Fig. 60 Band Edges (802.11ac-VHT80, CH58 5290MHz)

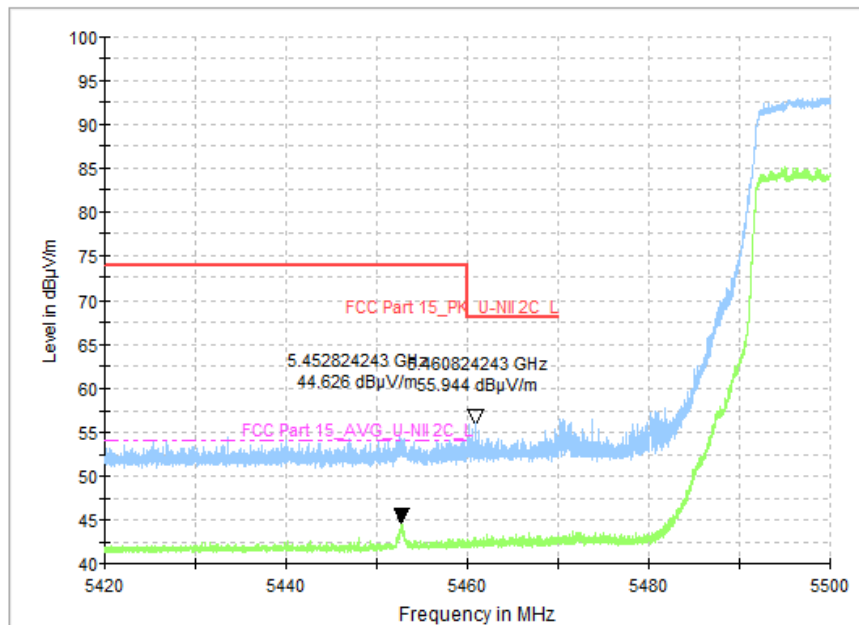


Fig. 61 Band Edges (802.11ac-VHT80, CH106 5530MHz)

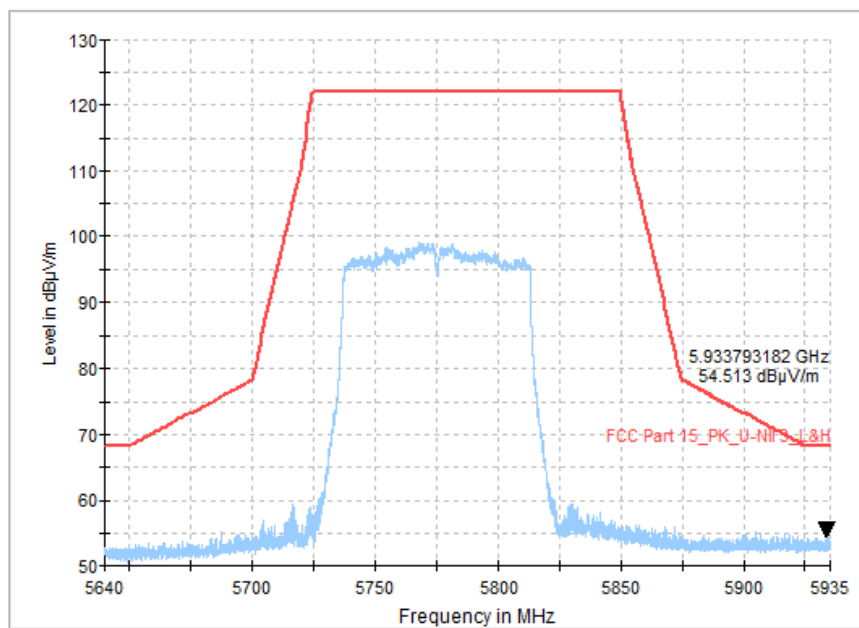


Fig. 62 Band Edges (802.11ac-VHT80, CH155 5775MHz)

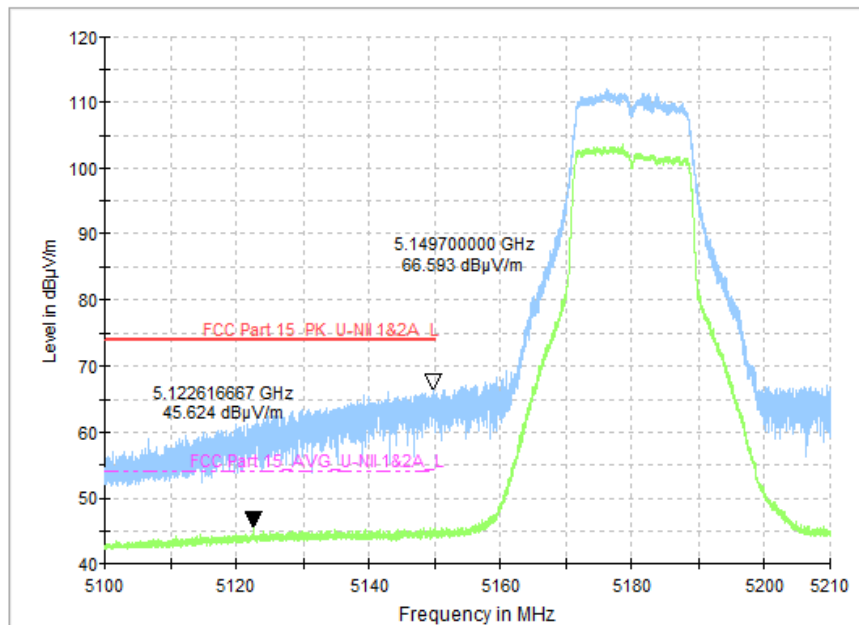


Fig. 63 Band Edges (802.11n-HT20, CH36 5180MHz, MIMO)

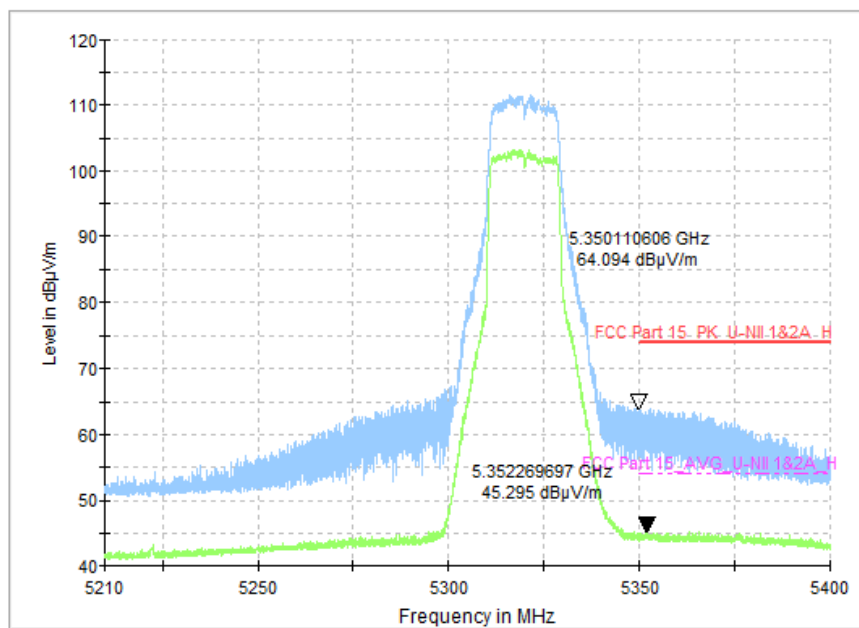


Fig. 64 Band Edges (802.11n-HT20, CH64 5320MHz, MIMO)

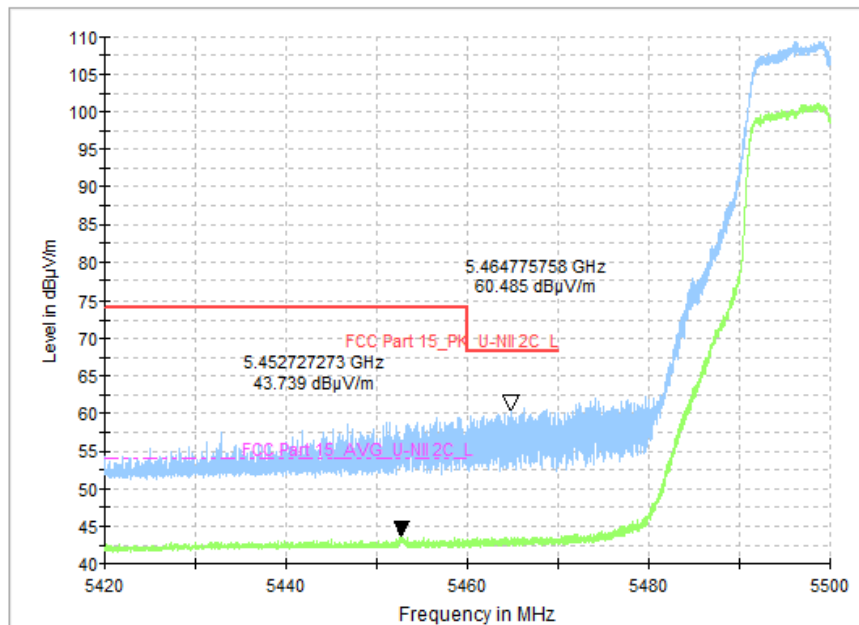


Fig. 65 Band Edges (802.11n-HT20, CH100 5500MHz, MIMO)

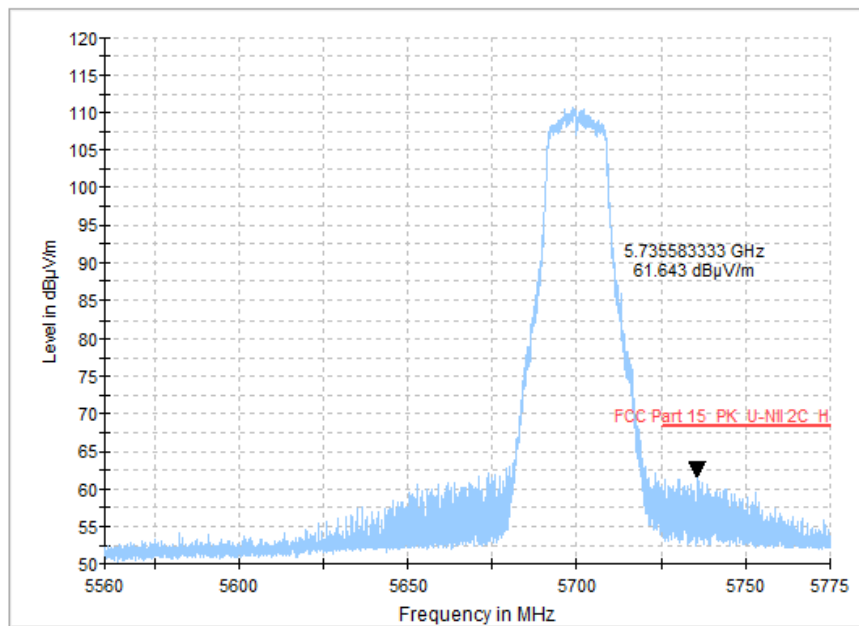


Fig. 66 Band Edges (802.11n-HT20, CH140 5700MHz, MIMO)

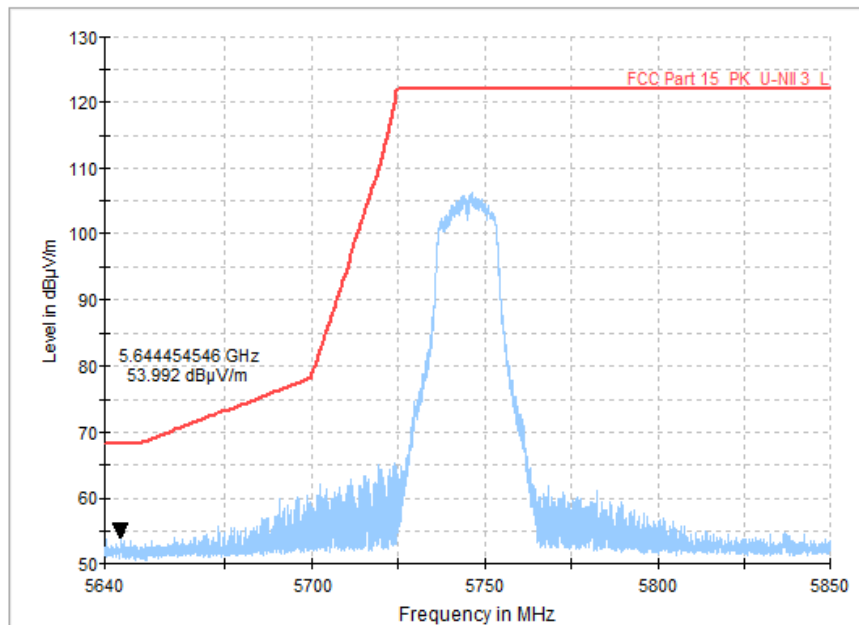


Fig. 67 Band Edges (802.11n-HT20, CH149 5745MHz, MIMO)

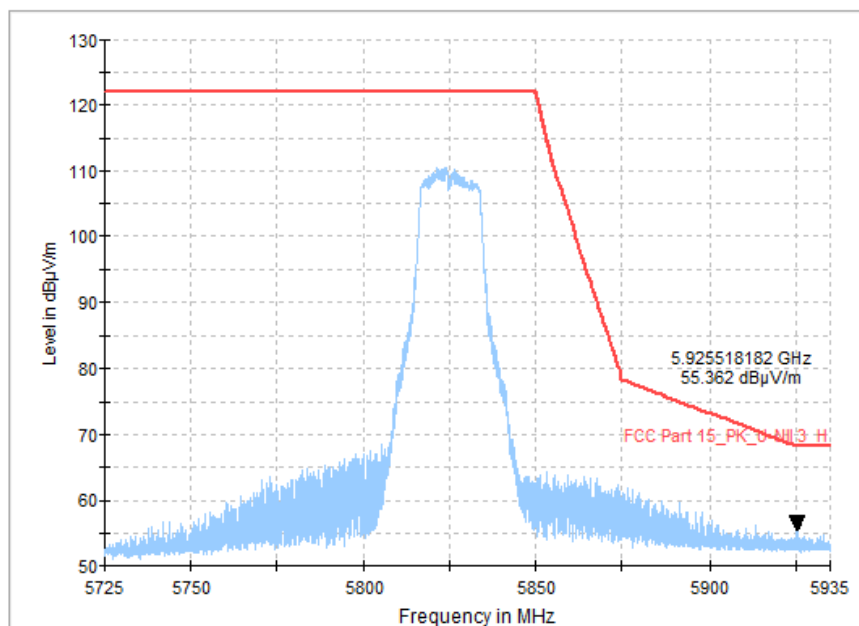


Fig. 68 Band Edges (802.11n-HT20, CH165 5825MHz, MIMO)

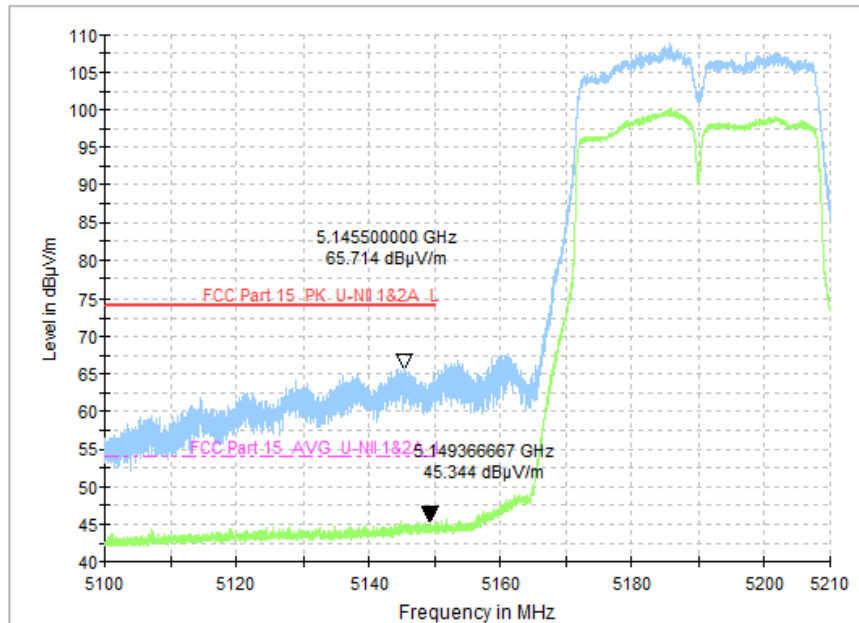


Fig. 69 Band Edges (802.11n-HT40, CH38 5190MHz, MIMO)

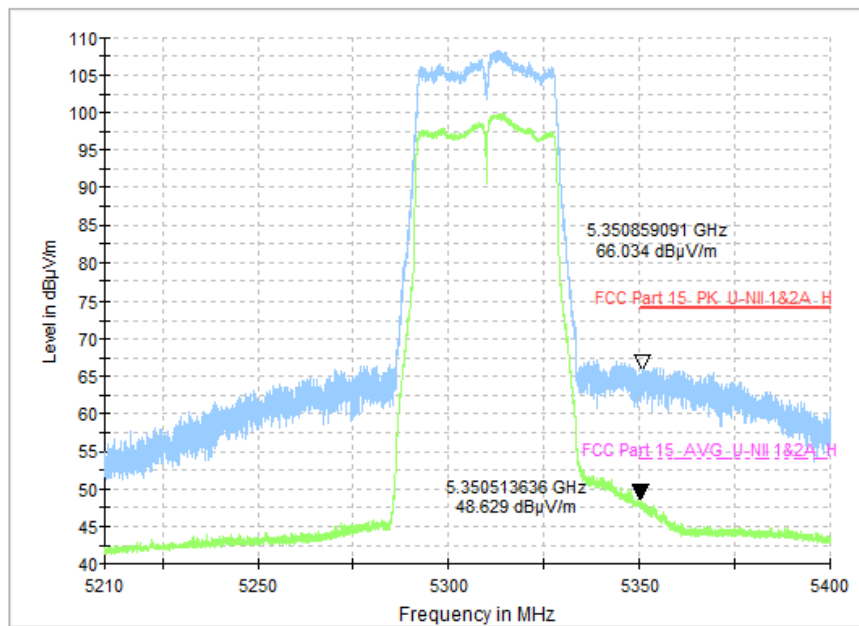


Fig. 70 Band Edges (802.11n-HT40, CH62 5310MHz, MIMO)

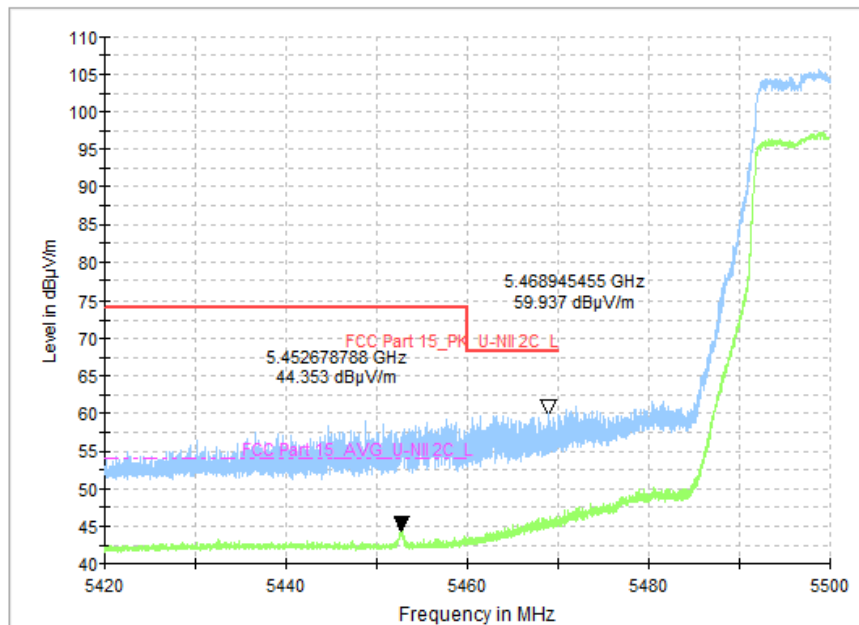


Fig. 71 Band Edges (802.11n-HT40, CH102 5510MHz, MIMO)

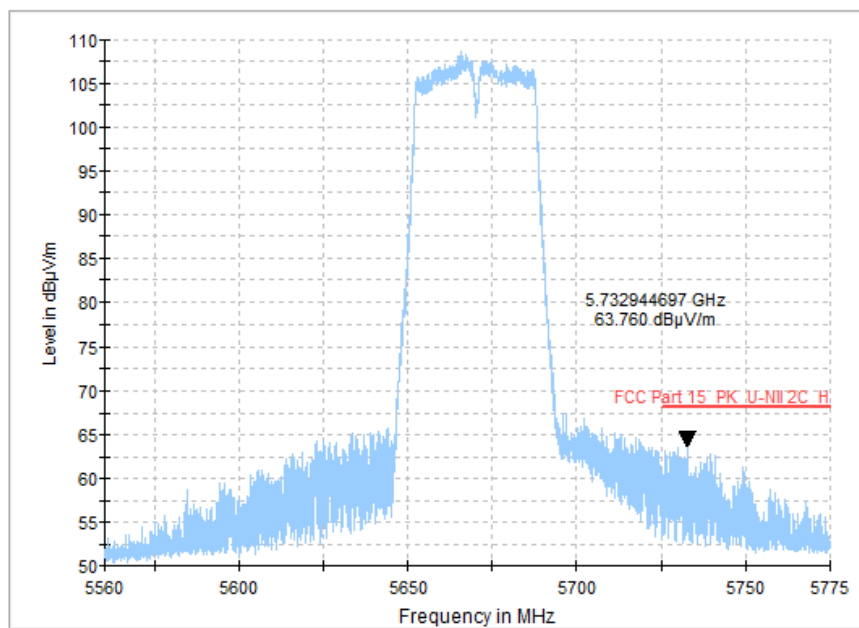


Fig. 72 Band Edges (802.11n-HT40, CH134 5670MHz, MIMO)

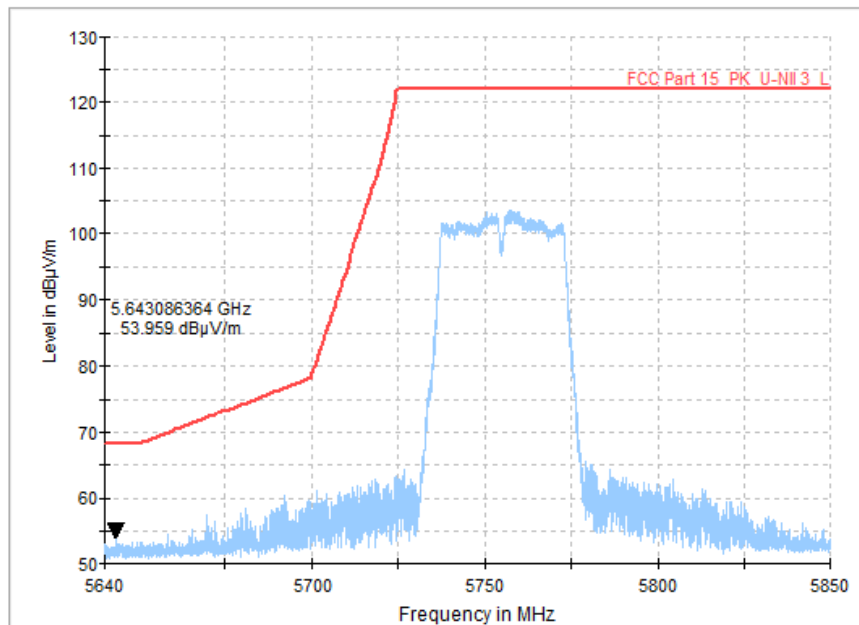


Fig. 73 Band Edges (802.11n-HT40, CH151 5755MHz, MIMO)

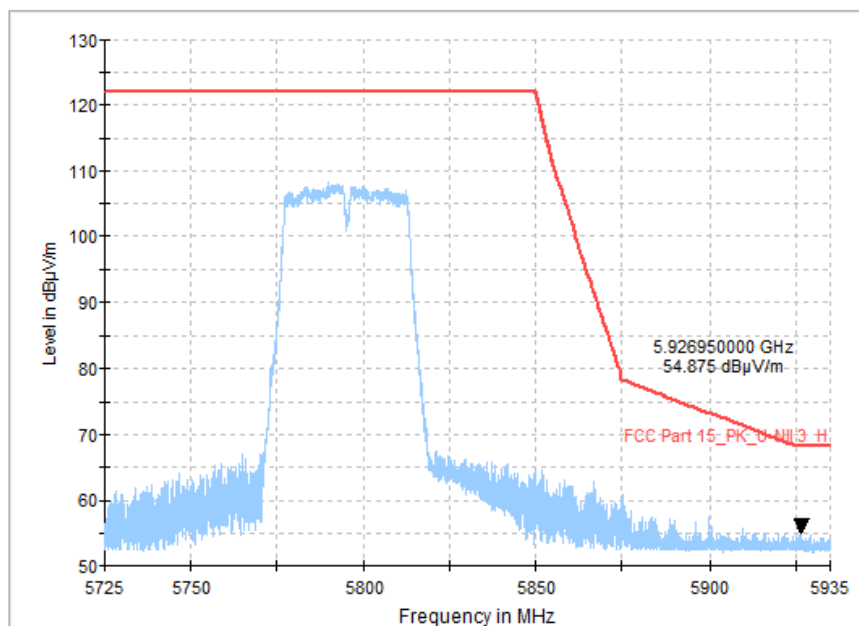


Fig. 74 Band Edges (802.11n-HT40, CH159 5795MHz, MIMO)

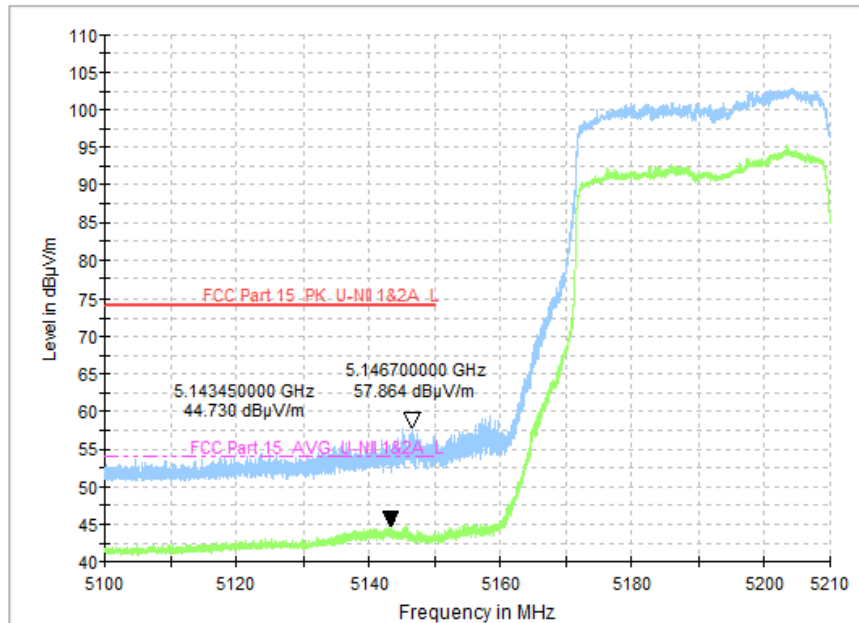


Fig. 75 Band Edges (802.11ac-VHT80, CH42 5210MHz, MIMO)

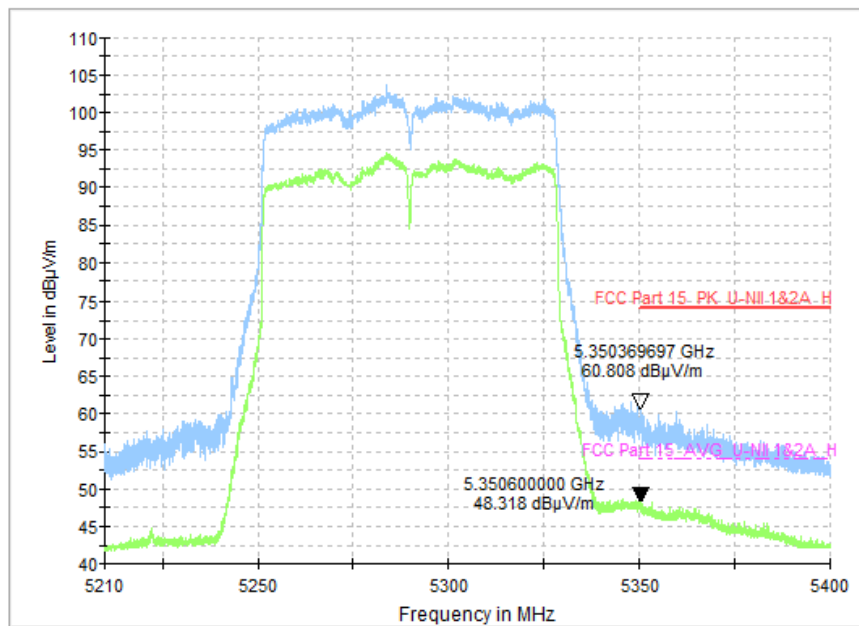


Fig. 76 Band Edges (802.11ac-VHT80, CH58 5290MHz, MIMO)

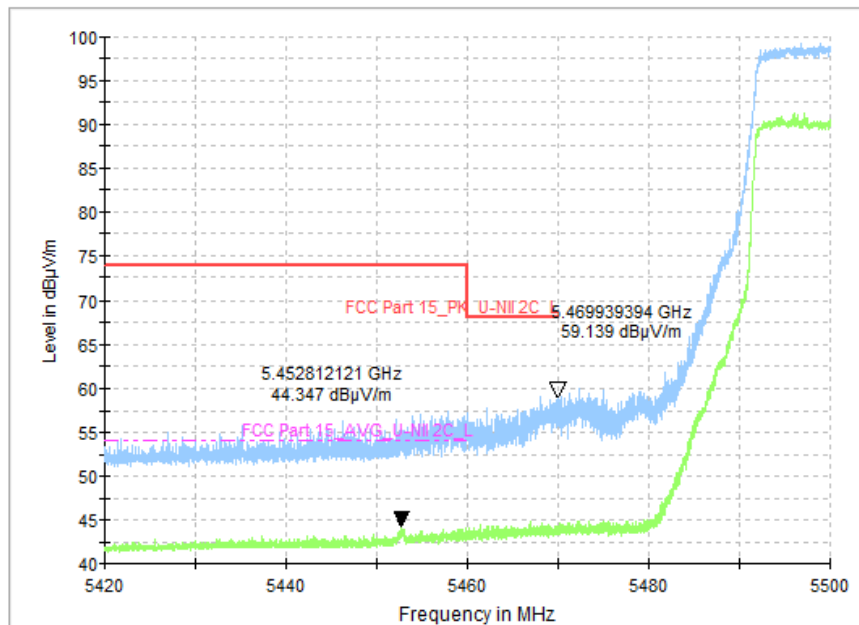


Fig. 77 Band Edges (802.11ac-VHT80, CH106 5530MHz, MIMO)

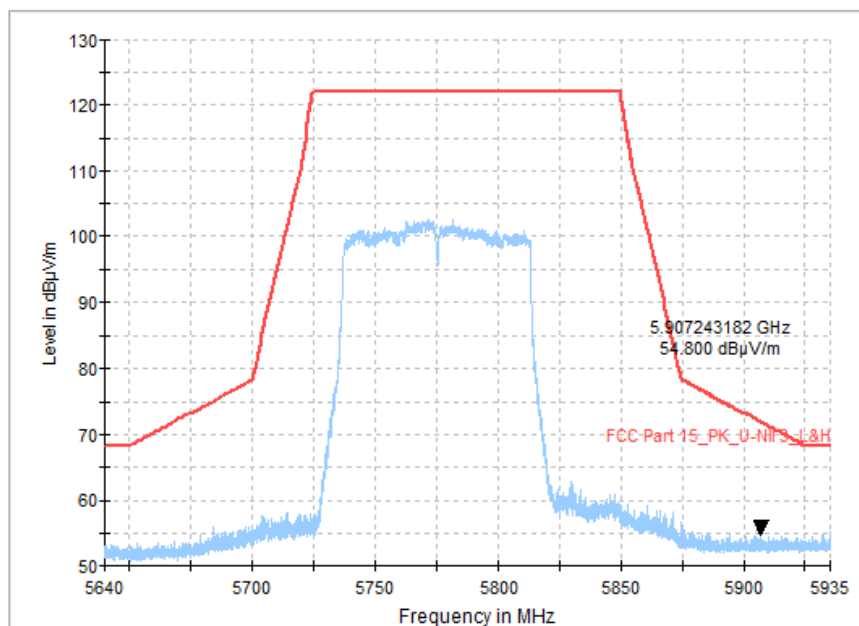


Fig. 78 Band Edges (802.11ac-VHT80, CH155 5775MHz, MIMO)

A.8. Transmitter Spurious Emission

Measurement Limit:

Standard	Limit (dBuV/m)	
FCC 47 CFR Part 15.209	Peak	74
	Average	54

The measurement is made according to KDB 789033.

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 (dBμV/m)	Measurement distance (m)
30-88	40.0	3
88-216	43.5	3
216-960	46.0	3
Above 960	54.0	3

Note: For frequency range below 960MHz, the limit in 15.209 is defined in 10m test distance. The limit used above is calculated from 10m to 3m.

Measurement Result:

SISO:

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11a	5180MHz(Ch36)	1 GHz ~18 GHz	Fig.79	P
	5200MHz(Ch40)	1 GHz ~18 GHz	Fig.80	P
	5240MHz(Ch48)	1 GHz ~18 GHz	Fig.81	P
	5260MHz(Ch52)	1 GHz ~18 GHz	Fig.82	P
	5280MHz(Ch56)	1 GHz ~18 GHz	Fig.83	P
	5320MHz(Ch64)	1 GHz ~18 GHz	Fig.84	P
	5500MHz(Ch100)	1 GHz ~18 GHz	Fig.85	P
	5600MHz(Ch120)	1 GHz ~18 GHz	Fig.86	P
	5700MHz(Ch140)	1 GHz ~18 GHz	Fig.87	P
	5745MHz(Ch149)	1 GHz ~18 GHz	Fig.88	P
	5785MHz(Ch157)	1 GHz ~18 GHz	Fig.89	P
	5825MHz(Ch165)	1 GHz ~18 GHz	Fig.90	P
802.11n-HT40	5190MHz(Ch38)	1 GHz ~18 GHz	Fig.91	P
	5230MHz(Ch46)	1 GHz ~18 GHz	Fig.92	P
	5270MHz(Ch54)	1 GHz ~18 GHz	Fig.93	P
	5310MHz(Ch62)	1 GHz ~18 GHz	Fig.94	P
	5510MHz(Ch102)	1 GHz ~18 GHz	Fig.95	P
	5580MHz(Ch118)	1 GHz ~18 GHz	Fig.96	P
	5670MHz(Ch134)	1 GHz ~18 GHz	Fig.97	P
	5755MHz(Ch151)	1 GHz ~18 GHz	Fig.98	P

	5795MHz(Ch159)	1 GHz ~18 GHz	Fig.99	P
802.11ac -VHT80	5210MHz(Ch42)	1 GHz ~18 GHz	Fig.100	P
	5290MHz(Ch58)	1 GHz ~18 GHz	Fig.101	P
	5530MHz(Ch106)	1 GHz ~18 GHz	Fig.102	P
	5610MHz(Ch122)	1 GHz ~18 GHz	Fig.103	P
	5775MHz(Ch155)	1 GHz ~18 GHz	Fig.104	P
All channels		30 MHz ~1 GHz	Fig.105	P
		18 GHz ~26.5 GHz	Fig.106	P
		26.5GHz~40GHz	Fig.107	P

MIMO:

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n- HT20	5180MHz(Ch36)	1 GHz ~18 GHz	Fig.108	P
	5200MHz(Ch40)	1 GHz ~18 GHz	Fig.109	P
	5240MHz(Ch48)	1 GHz ~18 GHz	Fig.110	P
	5260MHz(Ch52)	1 GHz ~18 GHz	Fig.111	P
	5280MHz(Ch56)	1 GHz ~18 GHz	Fig.112	P
	5320MHz(Ch64)	1 GHz ~18 GHz	Fig.113	P
	5500MHz(Ch100)	1 GHz ~18 GHz	Fig.114	P
	5600MHz(Ch120)	1 GHz ~18 GHz	Fig.115	P
	5700MHz(Ch140)	1 GHz ~18 GHz	Fig.116	P
	5745MHz(Ch149)	1 GHz ~18 GHz	Fig.117	P
	5785MHz(Ch157)	1 GHz ~18 GHz	Fig.118	P
	5825MHz(Ch165)	1 GHz ~18 GHz	Fig.119	P
802.11n- HT40	5190MHz(Ch38)	1 GHz ~18 GHz	Fig.120	P
	5230MHz(Ch46)	1 GHz ~18 GHz	Fig.121	P
	5270MHz(Ch54)	1 GHz ~18 GHz	Fig.122	P
	5310MHz(Ch62)	1 GHz ~18 GHz	Fig.123	P
	5510MHz(Ch102)	1 GHz ~18 GHz	Fig.124	P
	5580MHz(Ch118)	1 GHz ~18 GHz	Fig.125	P
	5670MHz(Ch134)	1 GHz ~18 GHz	Fig.126	P
	5755MHz(Ch151)	1 GHz ~18 GHz	Fig.127	P
	5795MHz(Ch159)	1 GHz ~18 GHz	Fig.128	P
802.11ac -VHT80	5210MHz(Ch42)	1 GHz ~18 GHz	Fig.129	P
	5290MHz(Ch58)	1 GHz ~18 GHz	Fig.130	P
	5530MHz(Ch106)	1 GHz ~18 GHz	Fig.131	P
	5610MHz(Ch122)	1 GHz ~18 GHz	Fig.132	P
	5775MHz(Ch155)	1 GHz ~18 GHz	Fig.133	P
All channels		30 MHz ~1 GHz	Fig.134	P
		18 GHz ~26.5 GHz	Fig.135	P
		26.5GHz~40GHz	Fig.136	P

Worst Case Result
SISO:
802.11a CH157

Frequency (MHz)	Max Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
6217.000000	54.45	68.20	13.75	H	18.7
9951.237500	45.10	68.20	23.10	V	7.0
13937.812500	49.23	68.20	18.97	H	12.0
14863.562500	49.61	68.20	18.59	H	12.8
16712.000000	50.35	68.20	17.85	H	15.8
17275.500000	50.86	68.20	17.34	V	16.9

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
7408.862500	34.60	54.00	19.40	H	5.2
8222.637500	34.85	54.00	19.15	V	6.2
10776.837500	36.62	54.00	17.38	V	7.9
11454.087500	37.35	54.00	16.65	H	9.3
12111.450000	38.12	54.00	15.88	V	10.9
17903.312500	42.16	54.00	11.84	V	16.6

802.11n-HT40 CH159

Frequency (MHz)	Max Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
6231.000000	53.92	68.20	14.28	H	18.6
7868.962500	44.84	68.20	23.36	V	5.6
8760.137500	45.02	68.20	23.18	H	5.8
9888.887500	47.35	68.20	20.85	V	6.9
14157.875000	50.35	68.20	17.85	H	12.5
16994.625000	52.57	68.20	15.63	H	16.5

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
7376.075000	35.41	54.00	18.59	H	5.2
8210.812500	35.89	54.00	18.11	V	6.1
11122.450000	38.62	54.00	15.38	H	8.5
12046.950000	39.63	54.00	14.37	V	10.7
15726.312500	43.16	54.00	10.84	V	14.3
17939.187500	43.58	54.00	10.42	V	16.6

802.11ac-VHT80 CH155

Frequency (MHz)	Max Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
6195.500000	53.74	68.20	14.46	V	18.9
7846.925000	44.12	68.20	24.08	V	5.7
8778.950000	45.02	68.20	23.18	V	5.8
10003.375000	46.47	68.20	21.73	V	7.0
14882.812500	49.52	68.20	18.68	H	12.8
17030.937500	52.42	68.20	15.78	V	16.7

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
7396.500000	34.79	54.00	19.21	H	5.2
8219.412500	35.67	54.00	18.33	V	6.2
11113.312500	38.45	54.00	15.55	H	8.5
12073.825000	39.20	54.00	14.80	H	10.8
15792.812500	42.79	54.00	11.21	V	14.6
17988.625000	43.21	54.00	10.79	H	16.5

MIMO:
802.11n-HT20 CH157

Frequency (MHz)	Max Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
6176.500000	52.29	68.20	15.91	V	18.9
9952.312500	46.23	68.20	21.97	H	7.0
12970.937500	48.64	68.20	19.56	H	11.9
13840.250000	47.96	68.20	20.24	H	12.0
14857.875000	49.57	68.20	18.63	V	12.8
17099.187500	51.95	68.20	16.25	V	16.9

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
7499.700000	33.75	54.00	20.25	H	5.3
8238.762500	35.43	54.00	18.57	V	6.2
11065.475000	37.56	54.00	16.44	V	8.4
12021.687500	39.16	54.00	14.84	V	10.6
15812.500000	42.22	54.00	11.78	H	14.7
17944.437500	42.65	54.00	11.35	H	16.5

802.11n-HT40 CH159

Frequency (MHz)	Max Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
6252.500000	53.34	68.20	14.86	V	18.4
7827.575000	43.91	68.20	24.29	H	5.7
8664.462500	44.20	68.20	24.00	H	5.7
9815.787500	45.47	68.20	22.73	V	6.8
10211.387500	46.27	68.20	21.93	V	7.2
16985.875000	52.80	68.20	15.40	V	16.5

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
7381.450000	34.75	54.00	19.25	H	5.2
8261.337500	35.29	54.00	18.71	V	6.2
11091.812500	37.76	54.00	16.24	H	8.4
12054.475000	39.17	54.00	14.83	H	10.7
15765.687500	42.33	54.00	11.67	H	14.5
17947.937500	42.54	54.00	11.46	V	16.5

802.11ac-VHT80 CH58

Frequency (MHz)	Max Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
6230.500000	54.51	68.20	13.69	V	18.9
7854.450000	43.95	68.20	24.25	V	5.6
8767.662500	44.67	68.20	23.53	V	5.8
10020.575000	44.95	68.20	23.25	V	7.0
13846.812500	48.85	68.20	19.35	H	12.0
16964.875000	52.08	68.20	16.12	H	16.4

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB)
7503.462500	34.48	54.00	19.52	V	5.3
8219.412500	35.53	54.00	18.47	V	6.2
11116.000000	37.70	54.00	16.30	H	8.5
12052.325000	39.74	54.00	14.26	H	10.7
15767.437500	42.28	54.00	11.72	V	14.5
17956.250000	42.69	54.00	11.31	H	16.5

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:

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

See below for test graphs.

Conclusion: PASS

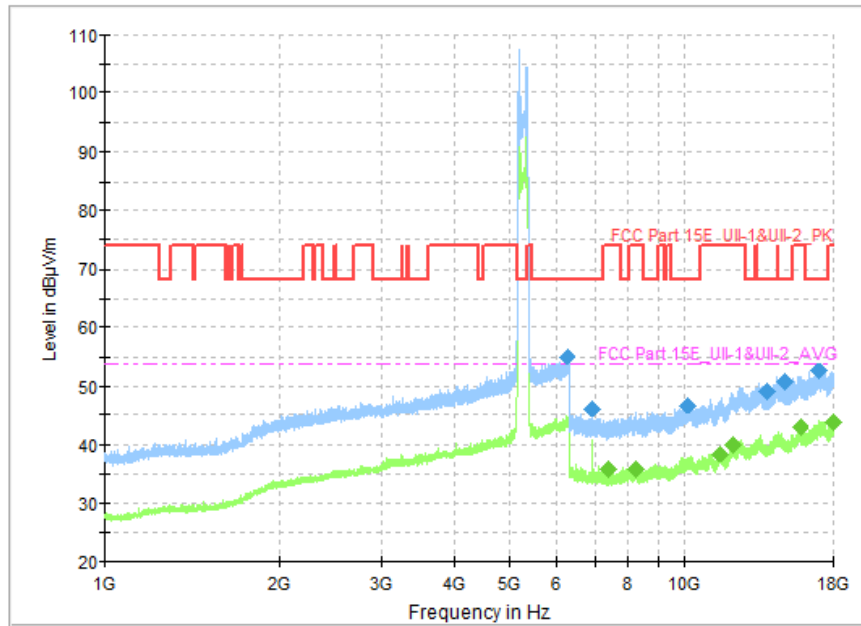


Fig. 79 Transmitter Spurious Emission (802.11a, CH36 5180MHz, 1 GHz-18 GHz)

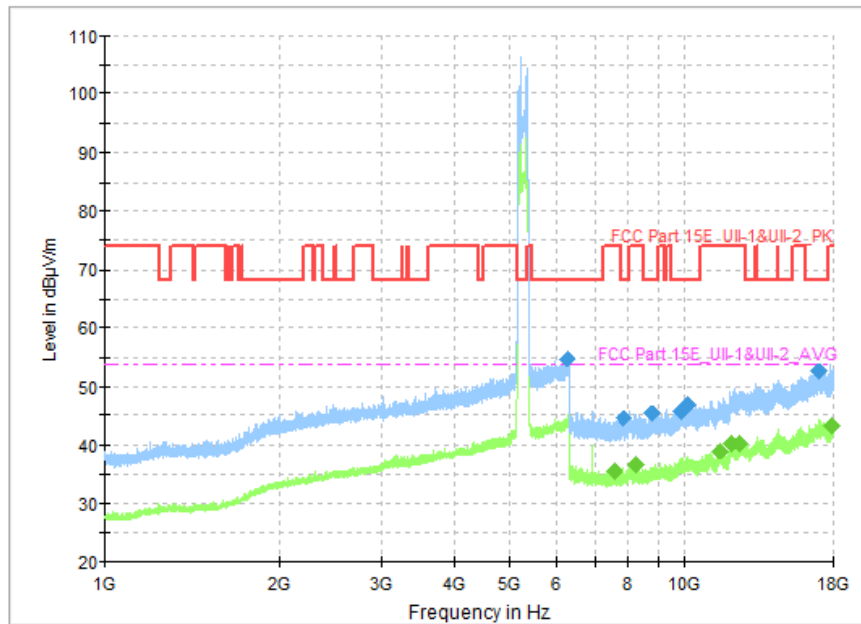


Fig. 80 Transmitter Spurious Emission (802.11a, CH40 5200MHz, 1 GHz-18 GHz)

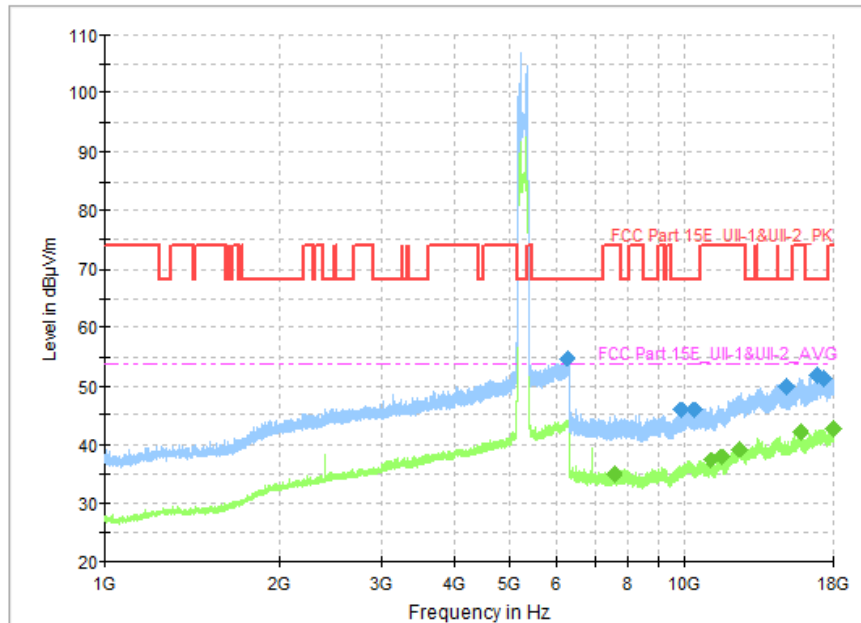


Fig. 81 Transmitter Spurious Emission (802.11a, CH48 5240MHz, 1 GHz-18 GHz)

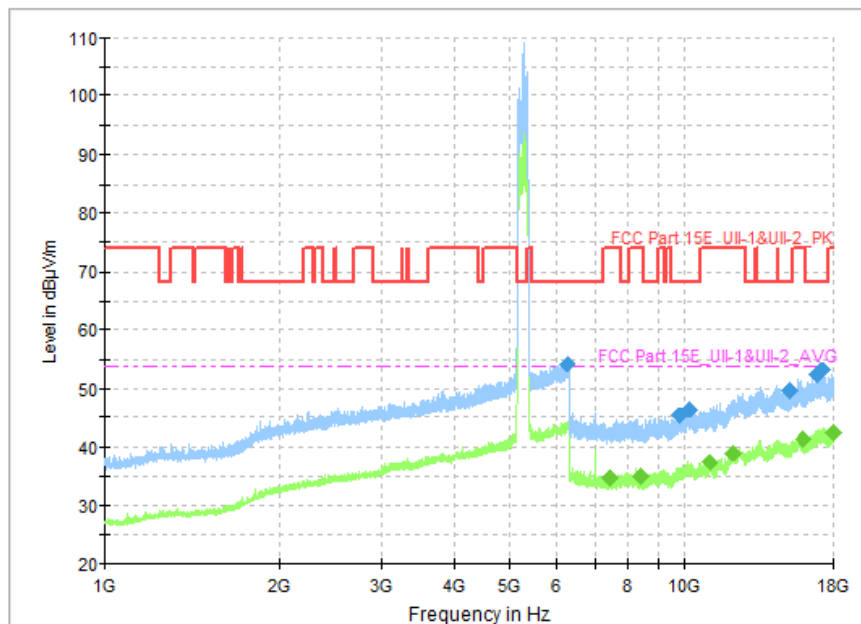


Fig. 82 Transmitter Spurious Emission (802.11a, CH52 5260MHz, 1 GHz-18 GHz)

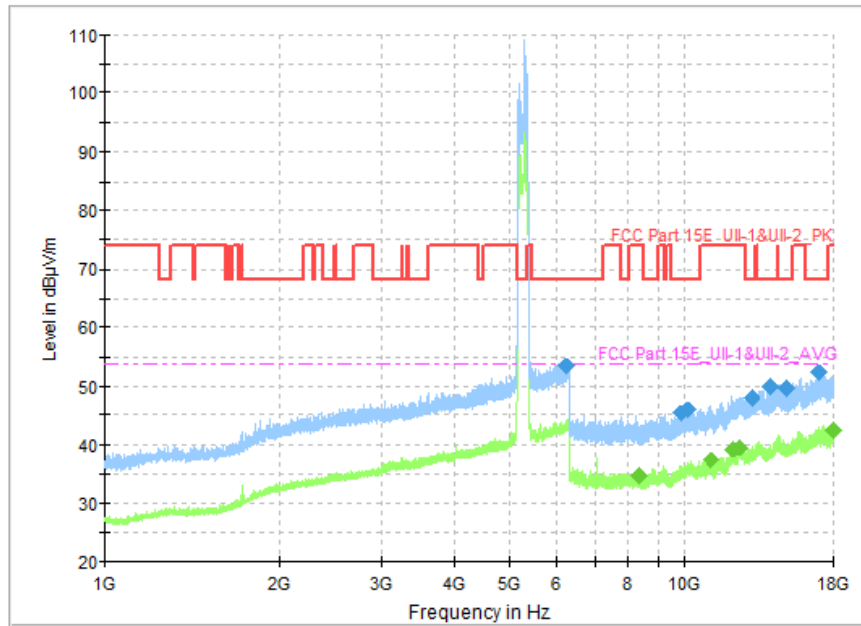


Fig. 83 Transmitter Spurious Emission (802.11a, CH56 5280MHz, 1 GHz-18 GHz)

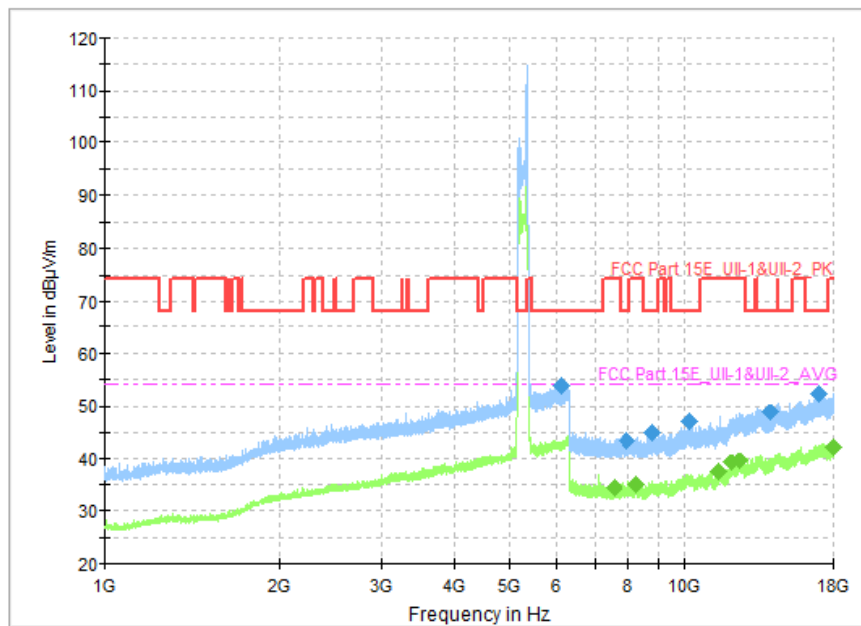


Fig. 84 Transmitter Spurious Emission (802.11a, CH64 5320MHz, 1 GHz-18 GHz)

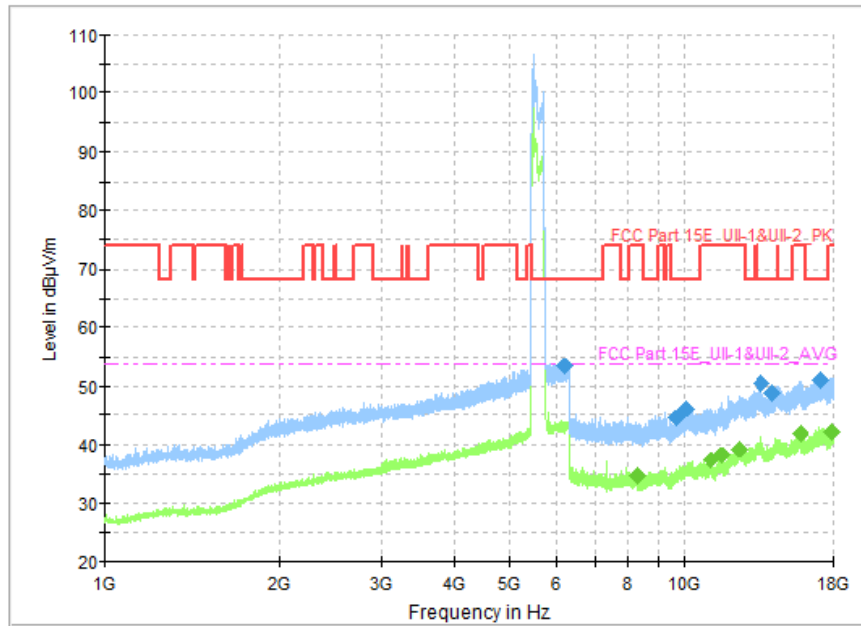


Fig. 85 Transmitter Spurious Emission (802.11a, CH100 5500MHz, 1 GHz-18 GHz)

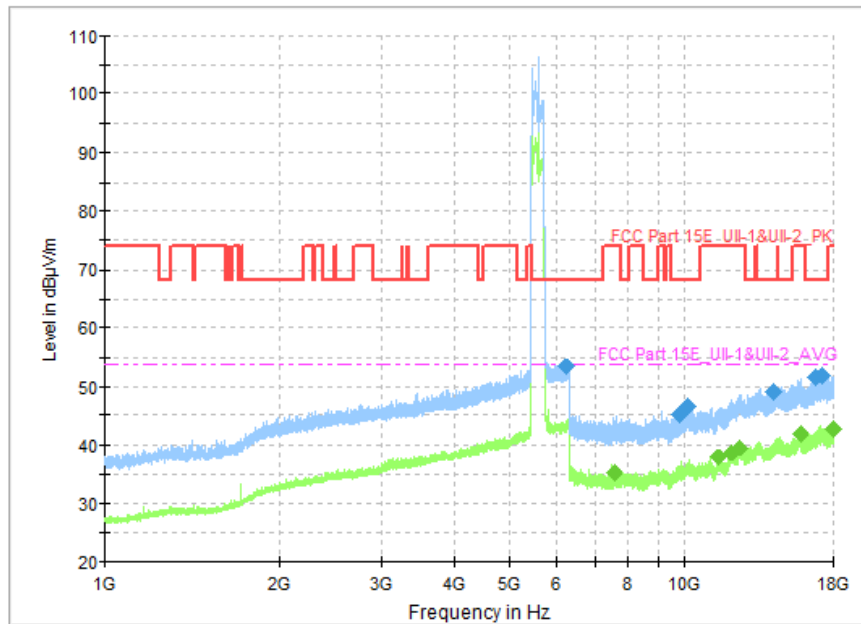


Fig. 86 Transmitter Spurious Emission (802.11a, CH120 5600MHz, 1 GHz-18 GHz)

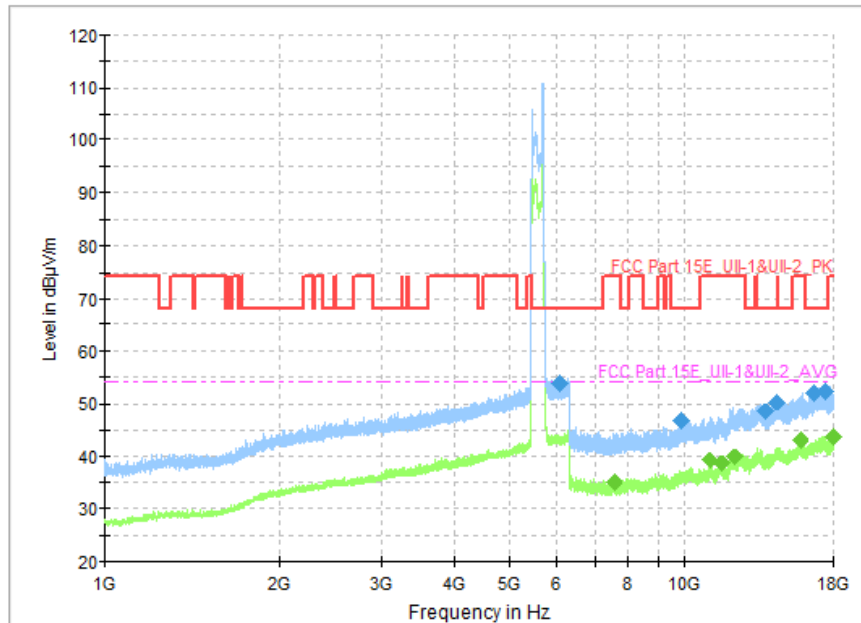


Fig. 87 Transmitter Spurious Emission (802.11a, CH140 5700MHz, 1 GHz-18 GHz)

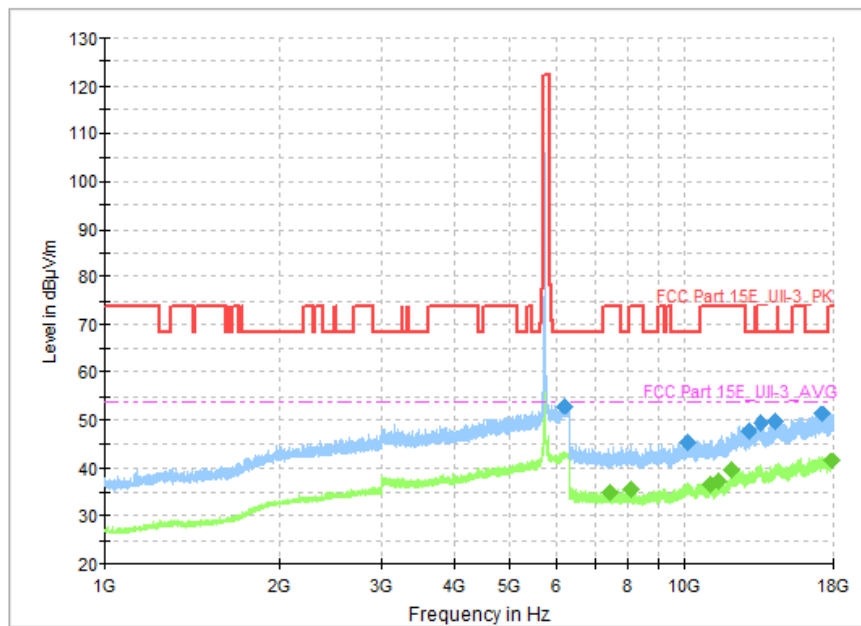


Fig. 88 Transmitter Spurious Emission (802.11a, CH149 5745MHz, 1 GHz-18 GHz)

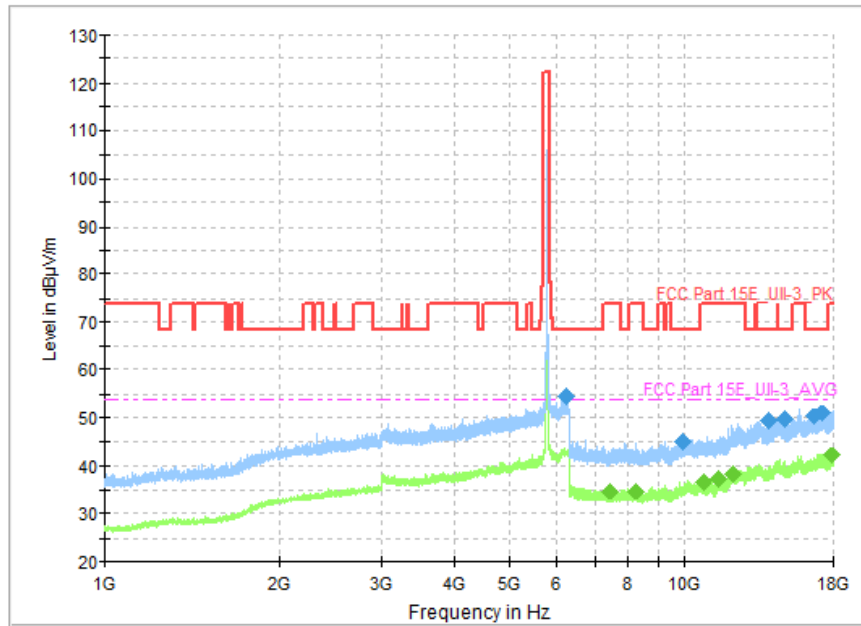


Fig. 89 Transmitter Spurious Emission (802.11a, CH157 5785MHz, 1 GHz-18 GHz)

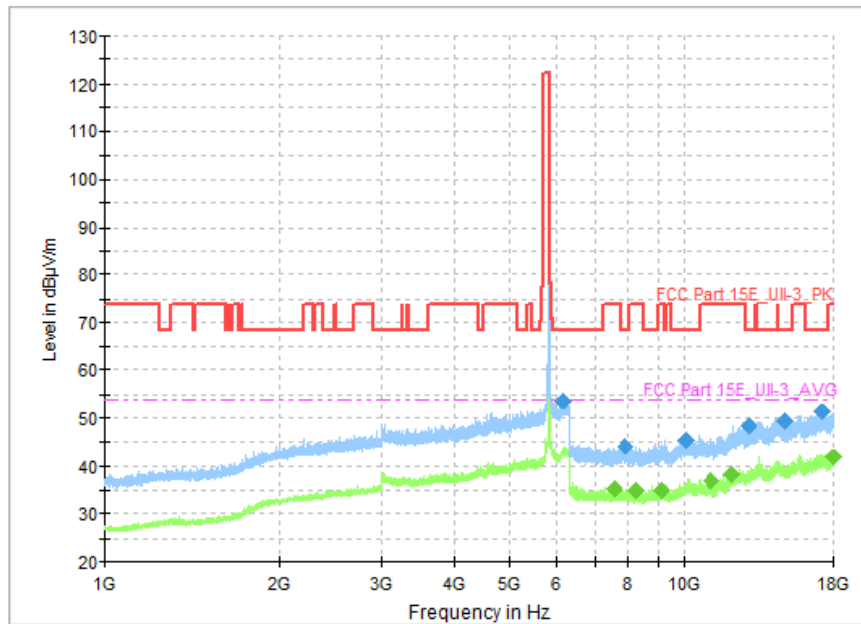


Fig. 90 Transmitter Spurious Emission (802.11a, CH165 5825MHz, 1 GHz-18 GHz)

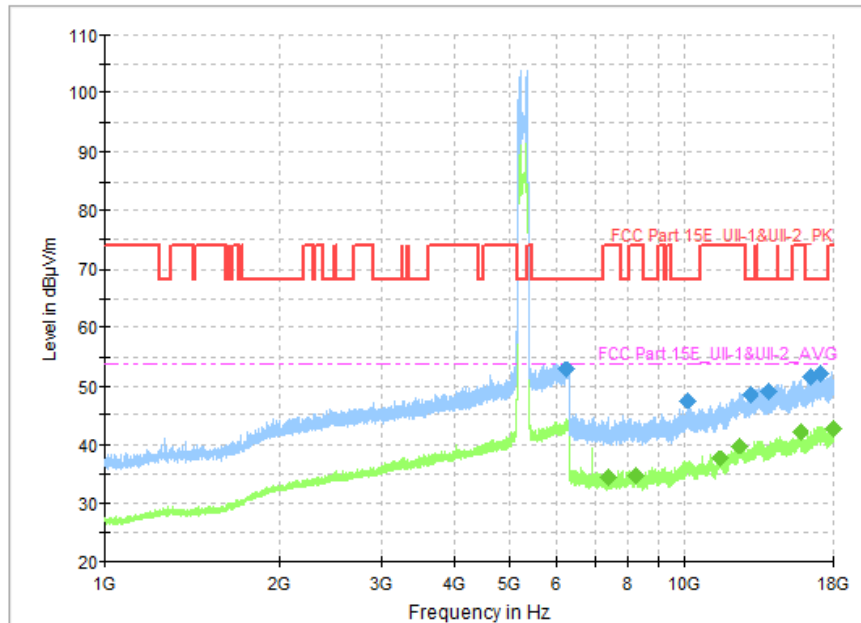


Fig. 91 Transmitter Spurious Emission (802.11n-HT40, CH38 5190MHz, 1 GHz-18 GHz)

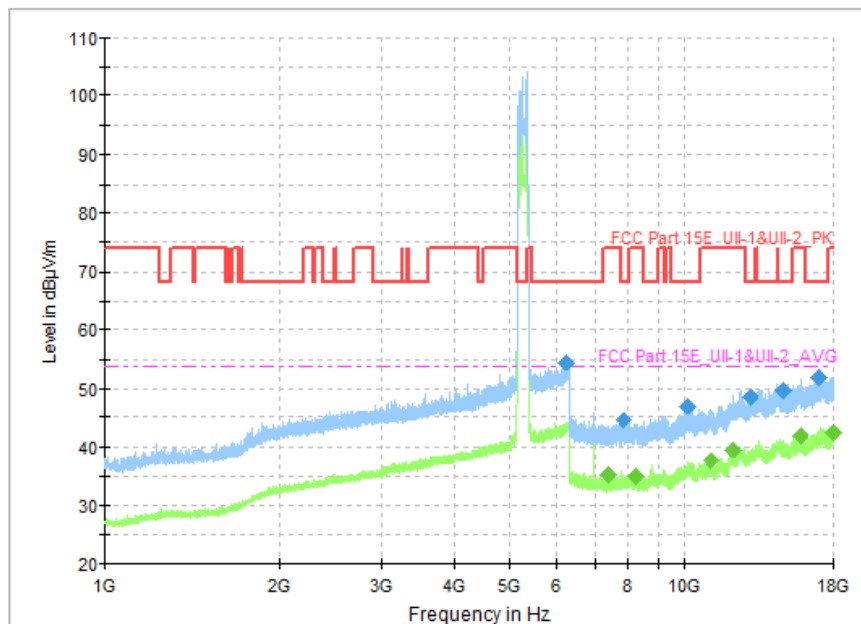


Fig. 92 Transmitter Spurious Emission (802.11n-HT40, CH46 5230MHz, 1 GHz-18 GHz)

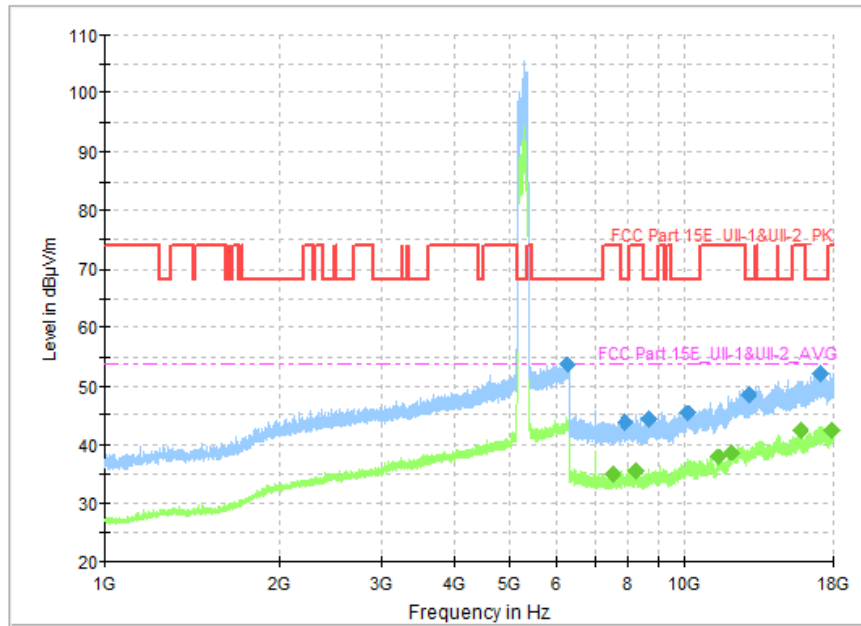


Fig. 93 Transmitter Spurious Emission (802.11n-HT40, CH54 5270MHz, 1 GHz-18 GHz)

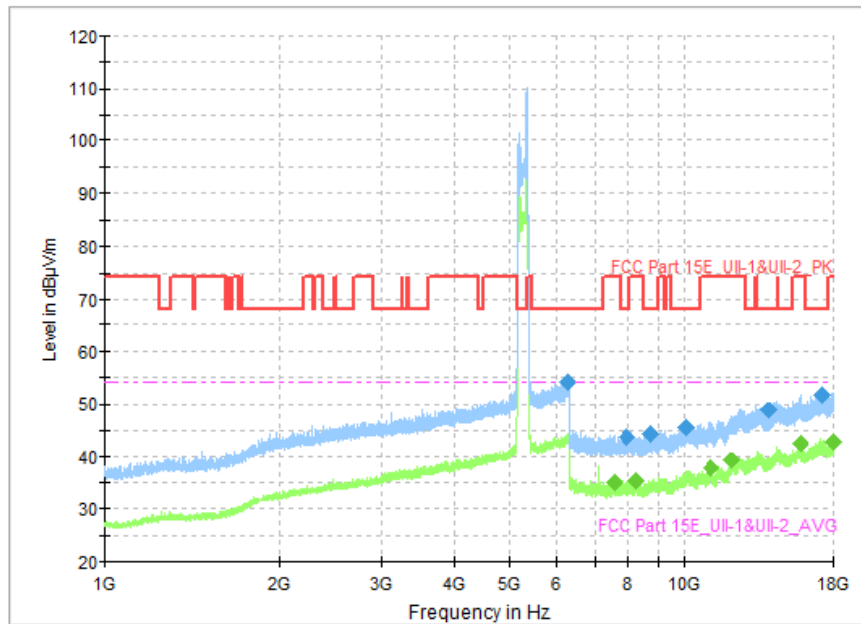


Fig. 94 Transmitter Spurious Emission (802.11n-HT40, CH62 5310MHz, 1 GHz-18 GHz)

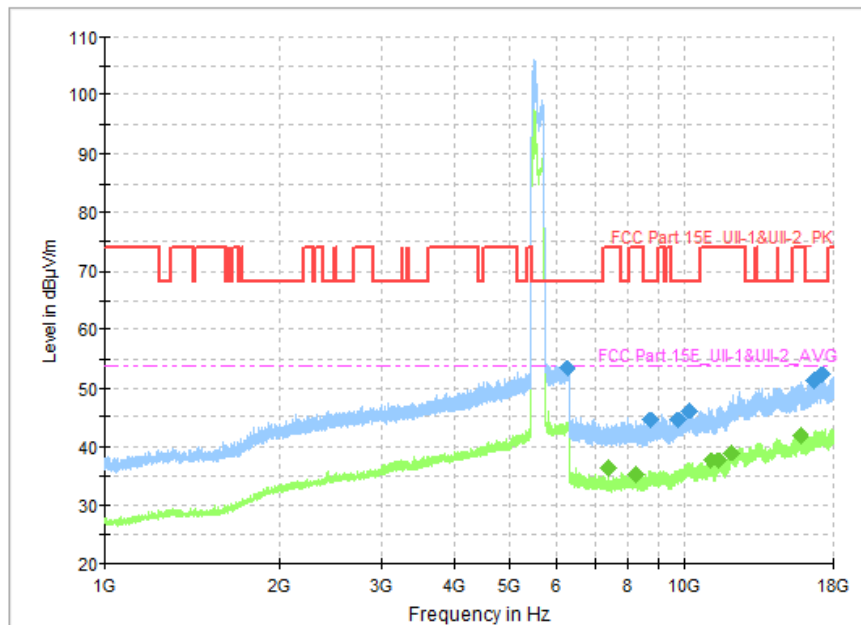


Fig. 95 Transmitter Spurious Emission (802.11n-HT40, CH102 5510MHz, 1 GHz-18 GHz)

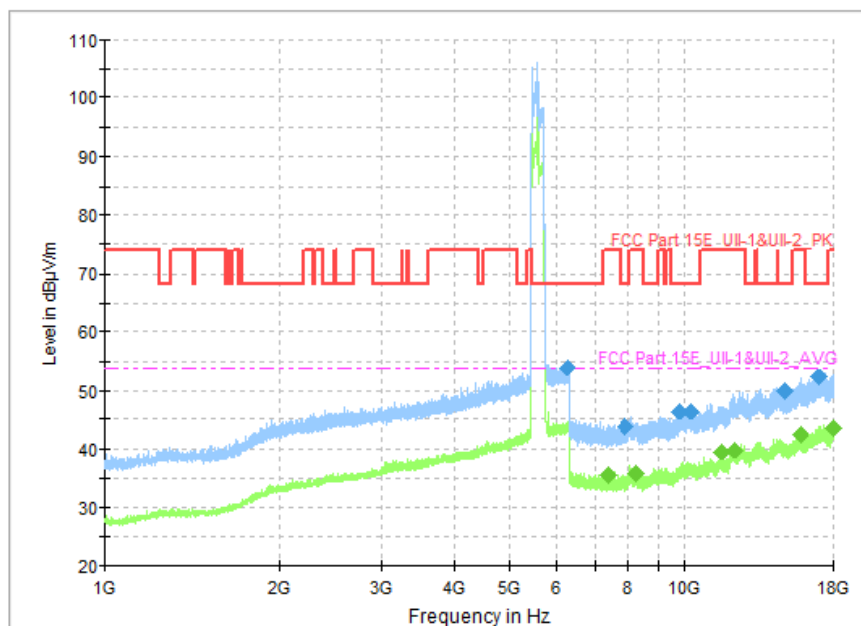


Fig. 96 Transmitter Spurious Emission (802.11n-HT40, CH118 5580MHz, 1 GHz-18 GHz)

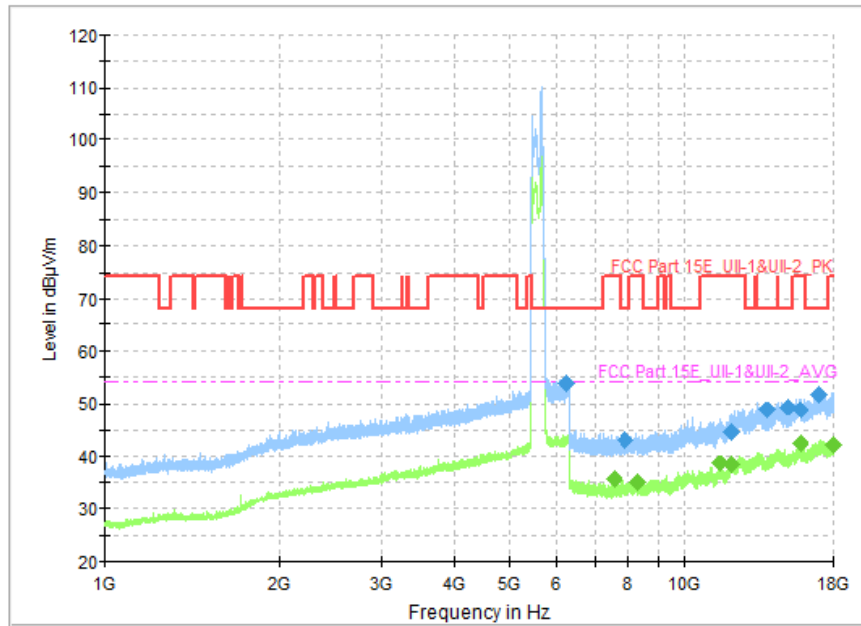


Fig. 97 Transmitter Spurious Emission (802.11n-HT40, CH134 5670MHz, 1 GHz-18 GHz)

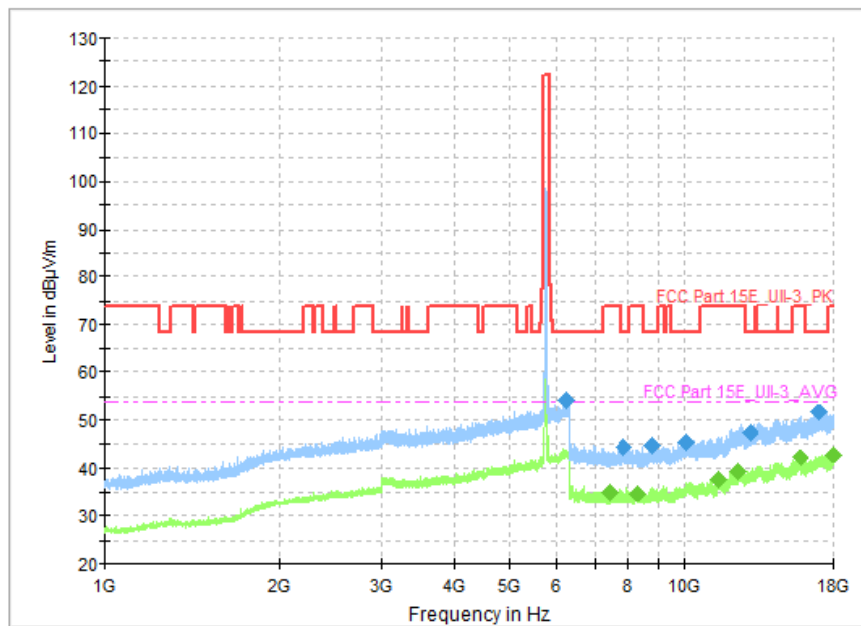


Fig. 98 Transmitter Spurious Emission (802.11n-HT40, CH151 5755MHz, 1 GHz-18 GHz)

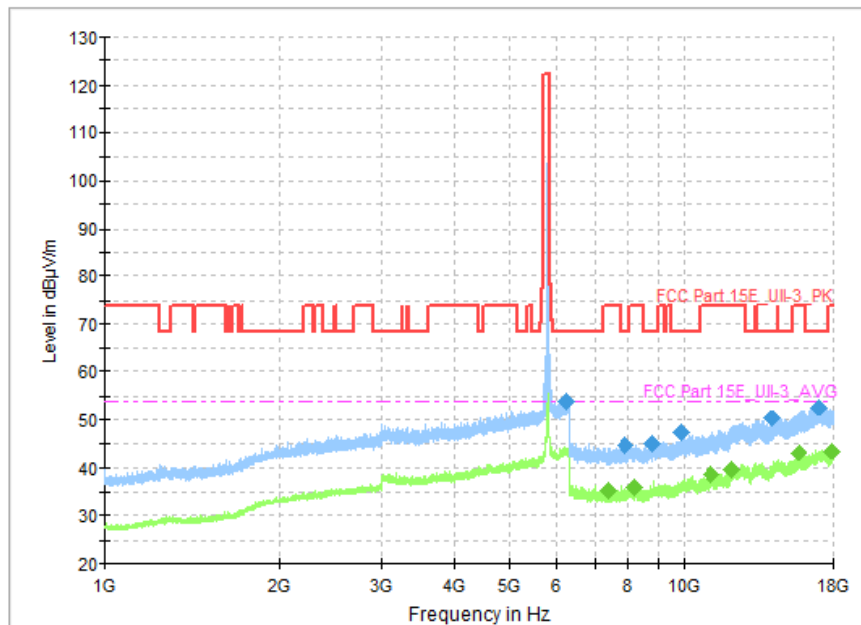


Fig. 99 Transmitter Spurious Emission (802.11n-HT40, CH159 5795MHz, 1 GHz-18 GHz)

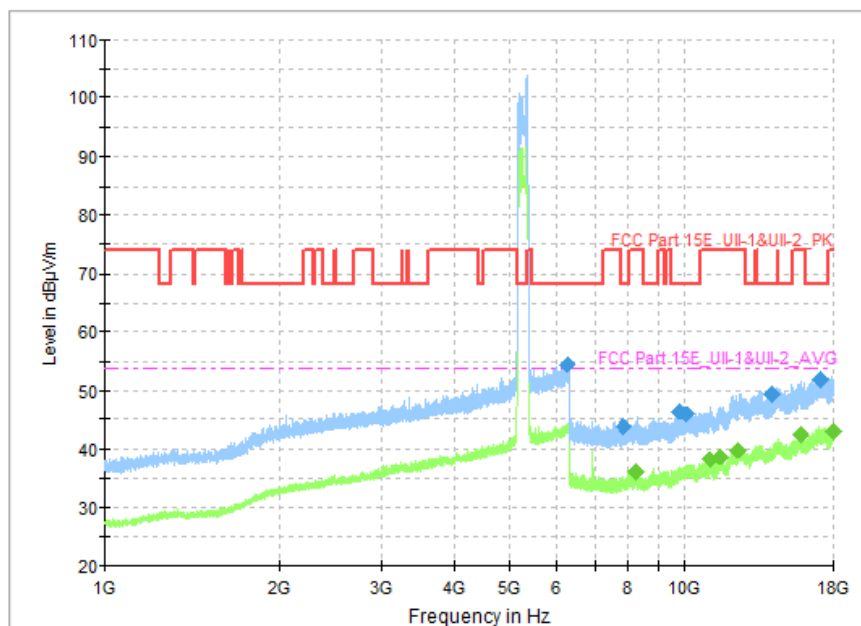


Fig. 100 Transmitter Spurious Emission (802.11ac-VHT80, CH42 5210MHz, 1 GHz-18 GHz)

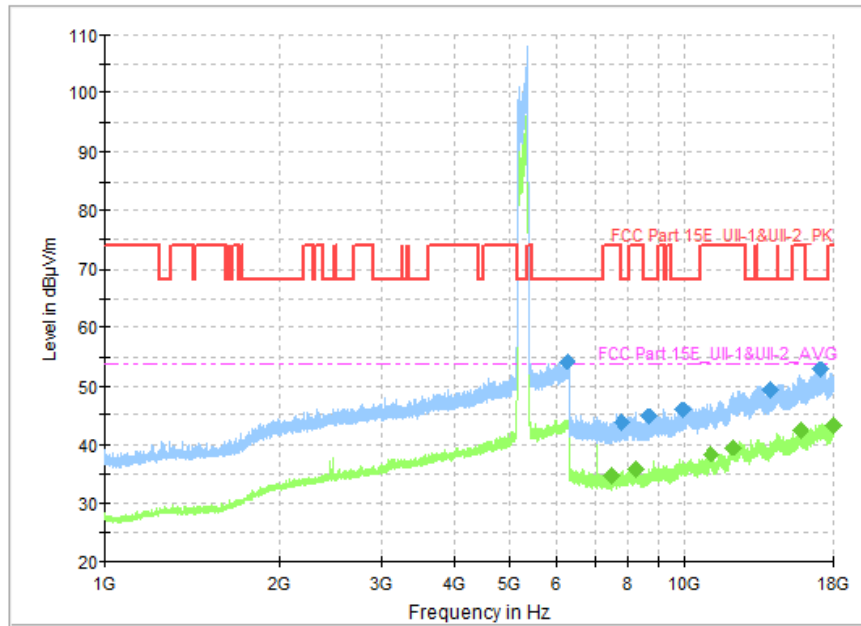


Fig. 101 Transmitter Spurious Emission (802.11ac-VHT80, CH58 5290MHz, 1 GHz-18 GHz)

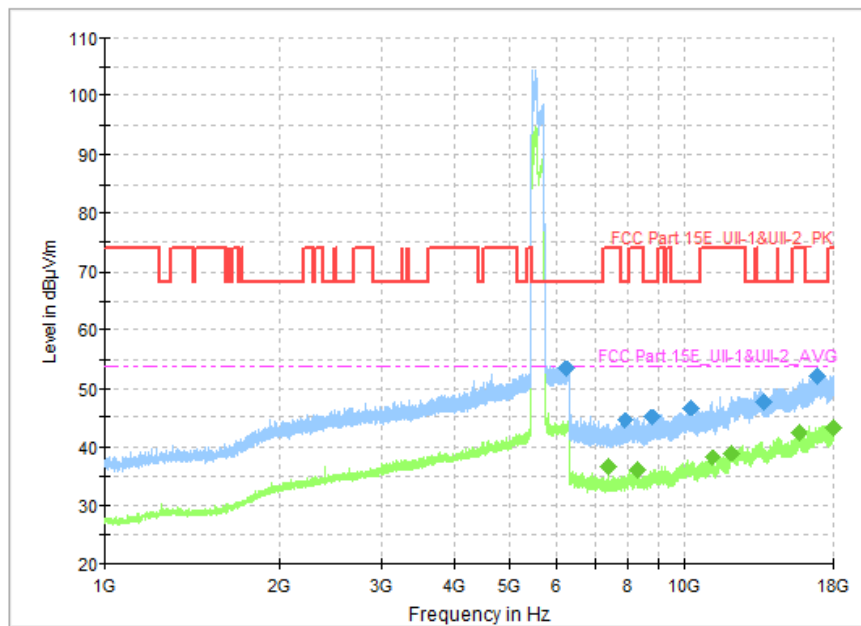


Fig. 102 Transmitter Spurious Emission (802.11ac-VHT80, CH106 5530MHz, 1 GHz-18 GHz)

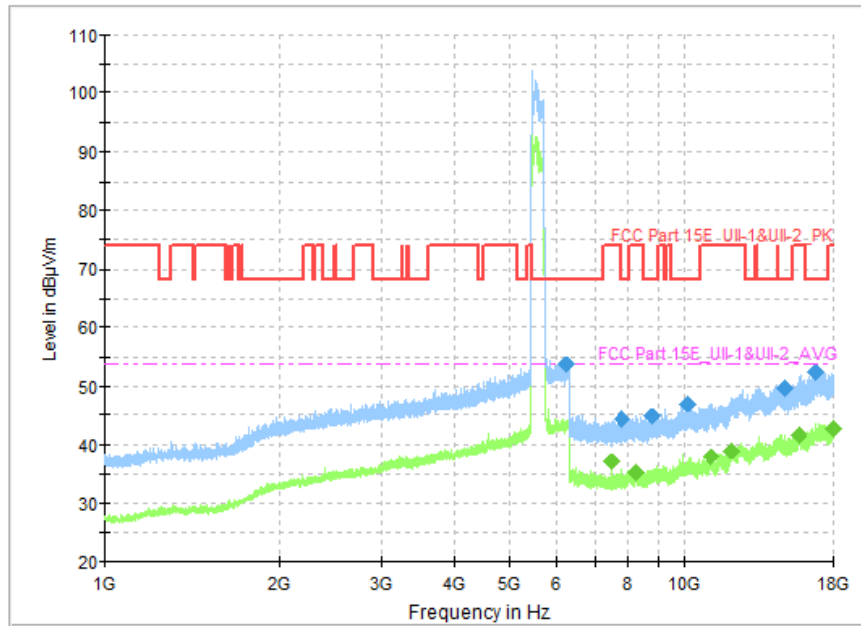


Fig. 103 Transmitter Spurious Emission (802.11ac-VHT80, CH122 5610MHz, 1 GHz-18 GHz)

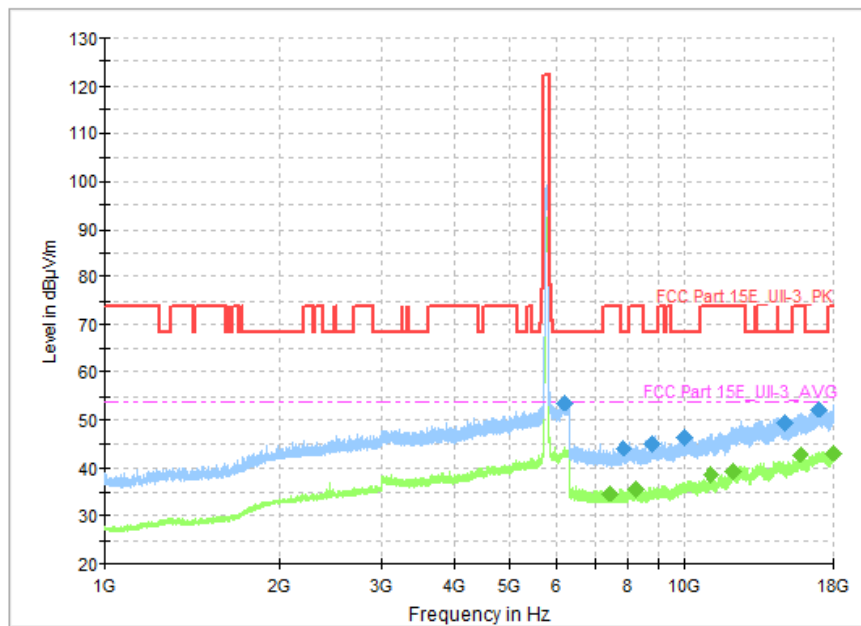


Fig. 104 Transmitter Spurious Emission (802.11ac-VHT80, CH155 5775MHz, 1 GHz-18 GHz)

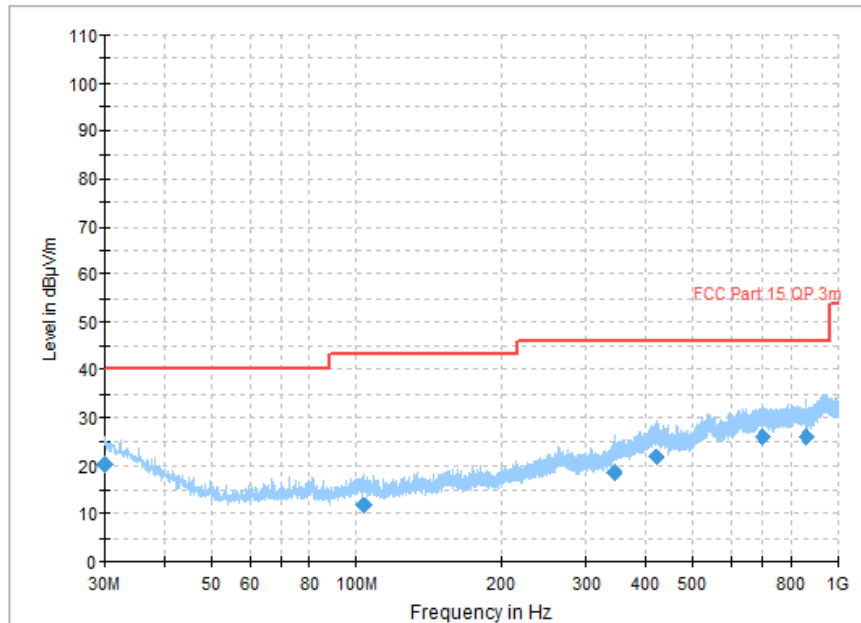


Fig. 105 Transmitter Spurious Emission (All channel, 30MHz~1GHz)

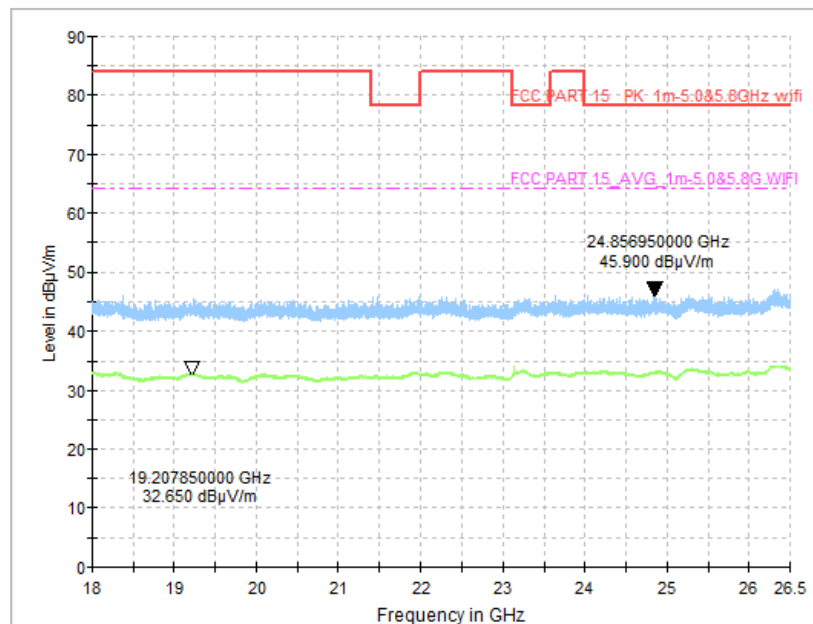


Fig. 106 Transmitter Spurious Emission (All channel, 18GHz~26.5GHz)

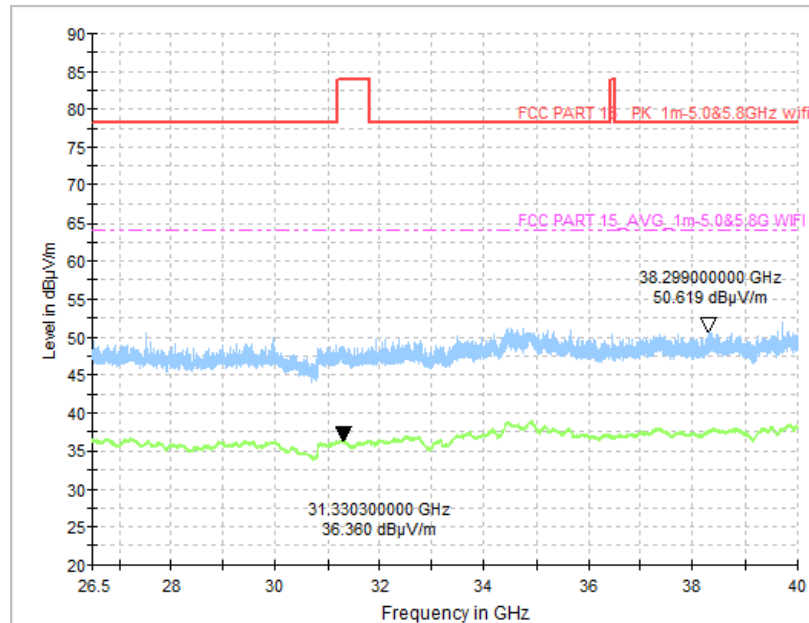


Fig. 107 Transmitter Spurious Emission (All channel, 26.5GHz~40GHz)

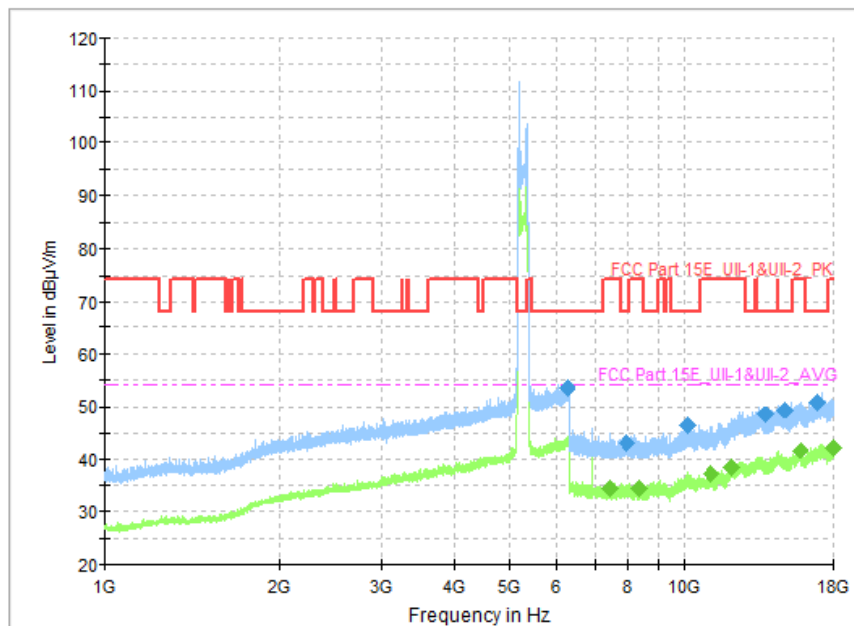


Fig. 108 Transmitter Spurious Emission (802.11n-HT20, CH36 5180MHz, 1 GHz-18 GHz, MIMO)

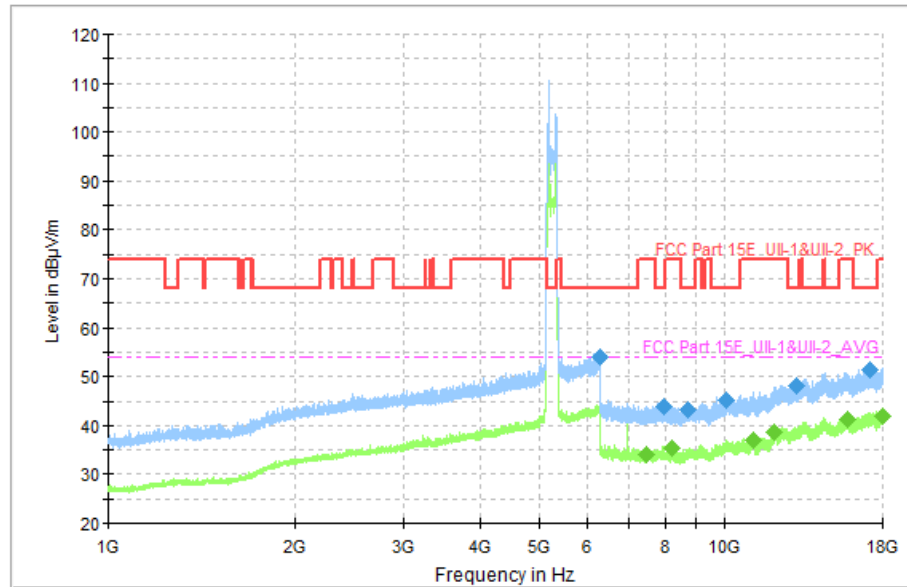


Fig. 109 Transmitter Spurious Emission (802.11n-HT20, CH40 5200MHz, 1 GHz-18 GHz, MIMO)

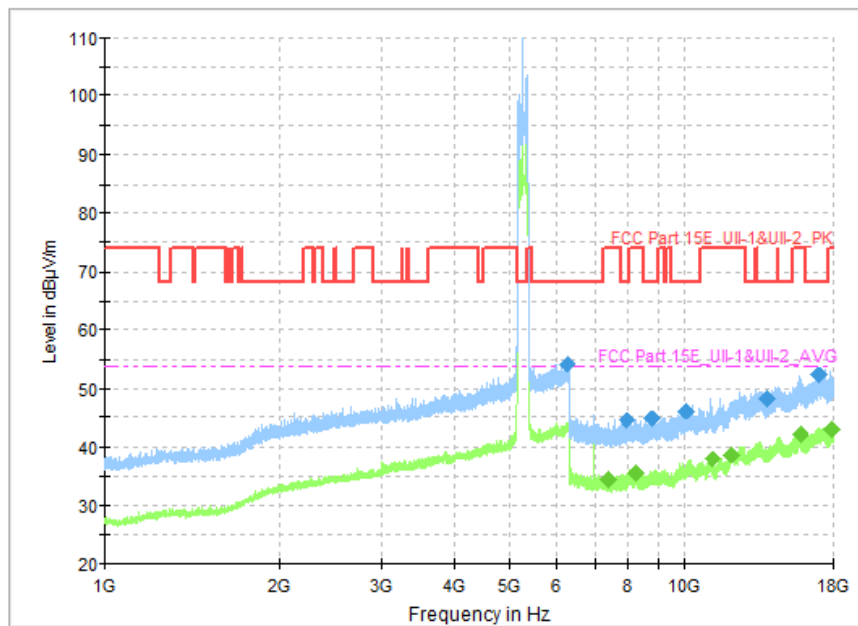


Fig. 110 Transmitter Spurious Emission (802.11n-HT20, CH48 5240MHz, 1 GHz-18 GHz, MIMO)

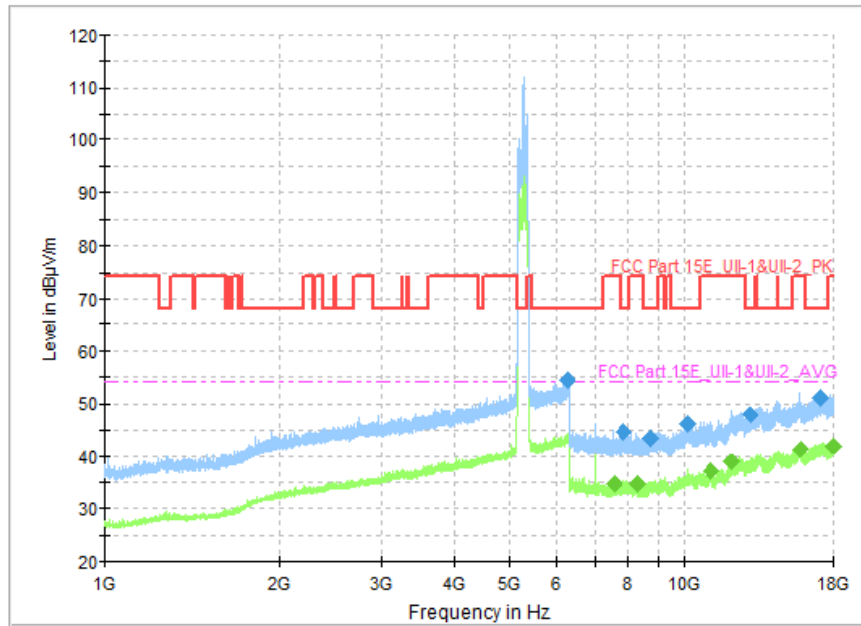


Fig. 111 Transmitter Spurious Emission (802.11n-HT20, CH52 5260MHz, 1 GHz-18 GHz, MIMO)

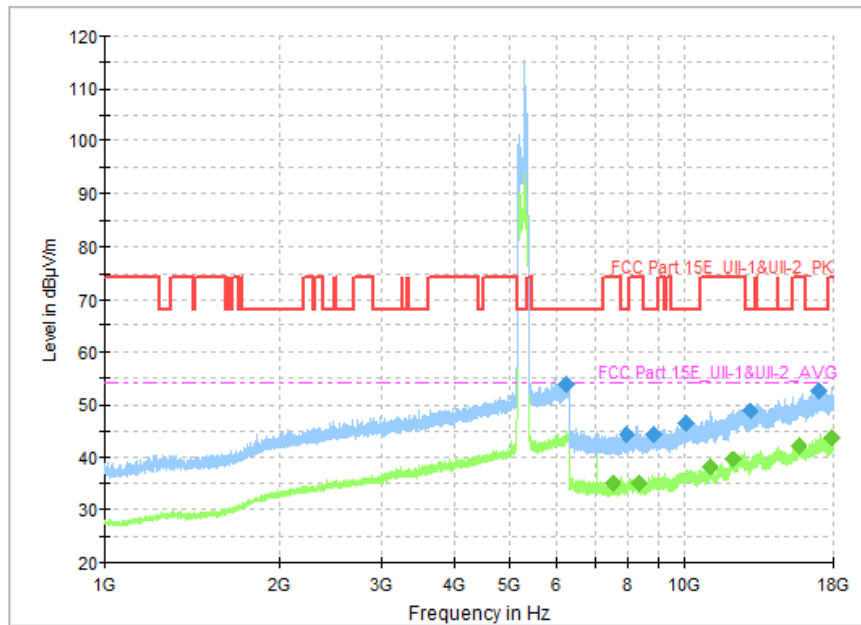


Fig. 112 Transmitter Spurious Emission (802.11n-HT20, CH56 5280MHz, 1 GHz-18 GHz, MIMO)

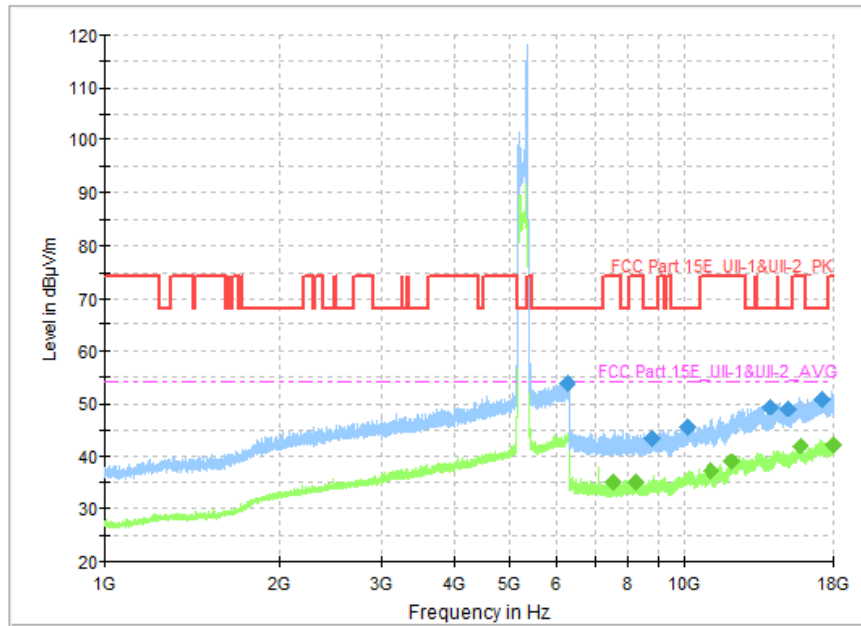


Fig. 113 Transmitter Spurious Emission (802.11n-HT20, CH64 5320MHz, 1 GHz-18 GHz, MIMO)

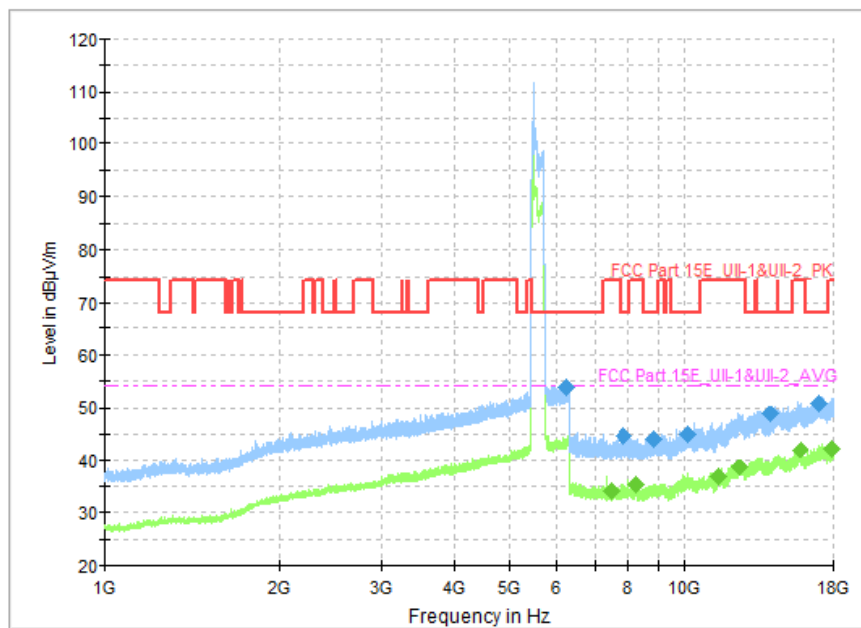


Fig. 114 Transmitter Spurious Emission (802.11n-HT20, CH100 5500MHz, 1 GHz-18 GHz, MIMO)

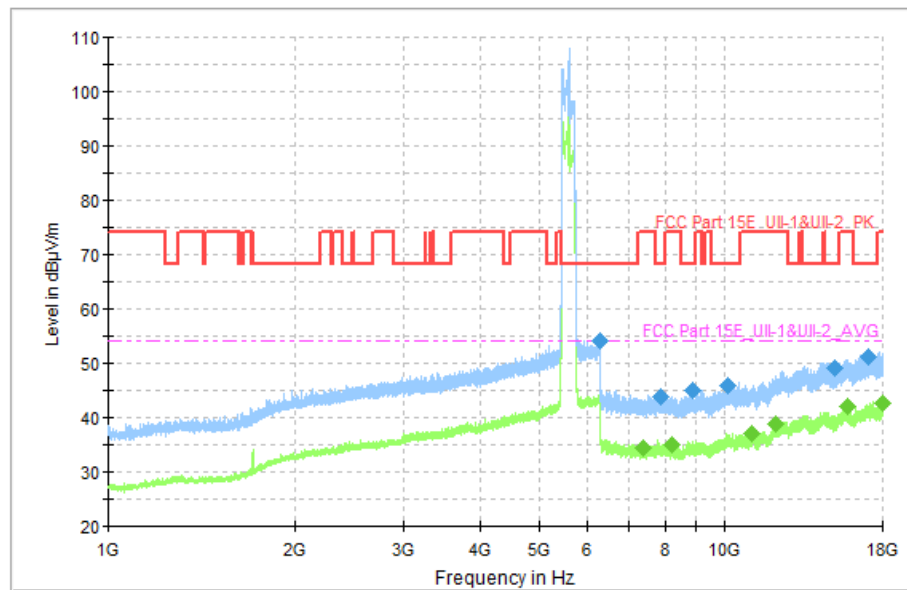


Fig. 115 Transmitter Spurious Emission (802.11n-HT20, CH120 5600MHz, 1 GHz-18 GHz, MIMO)

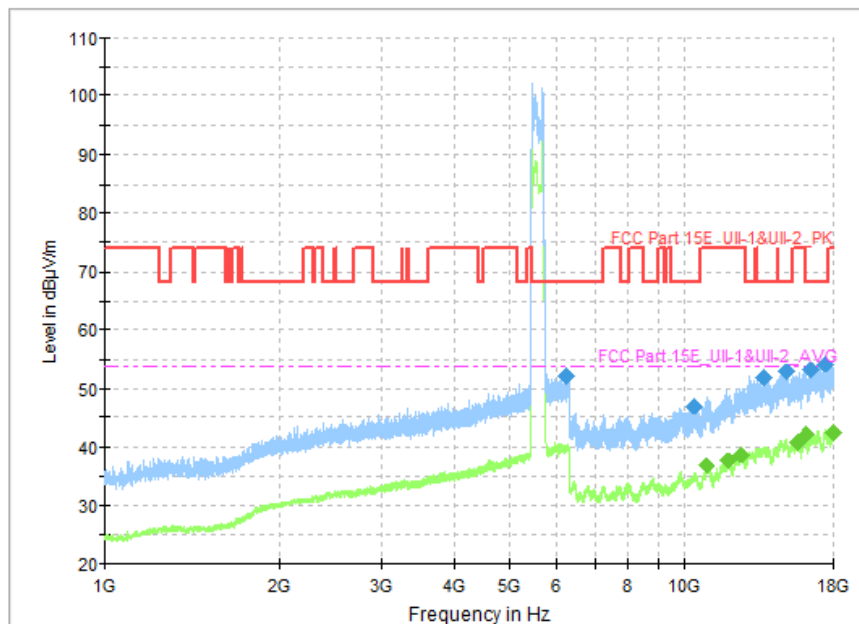


Fig. 116 Transmitter Spurious Emission (802.11n-HT20, CH140 5700MHz, 1 GHz-18 GHz, MIMO)

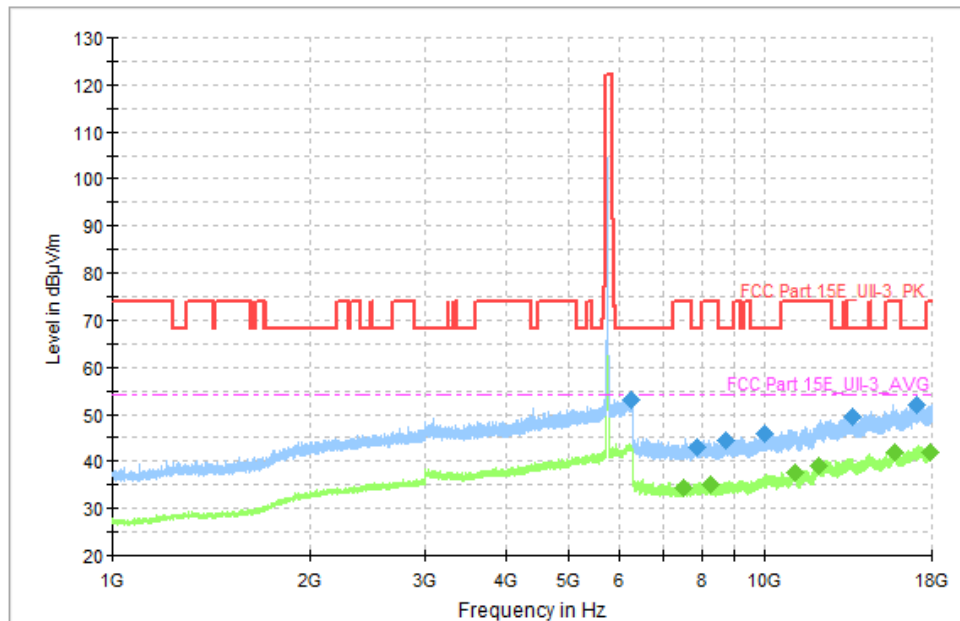


Fig. 117 Transmitter Spurious Emission (802.11n-HT20, CH149 5745MHz, 1 GHz-18 GHz, MIMO)

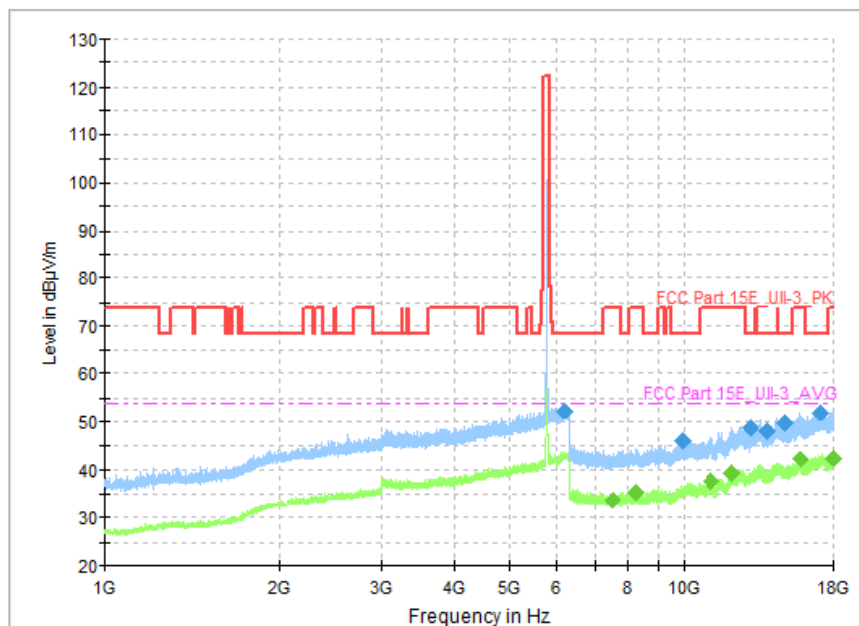


Fig. 118 Transmitter Spurious Emission (802.11n-HT20, CH157 5785MHz, 1 GHz-18 GHz, MIMO)

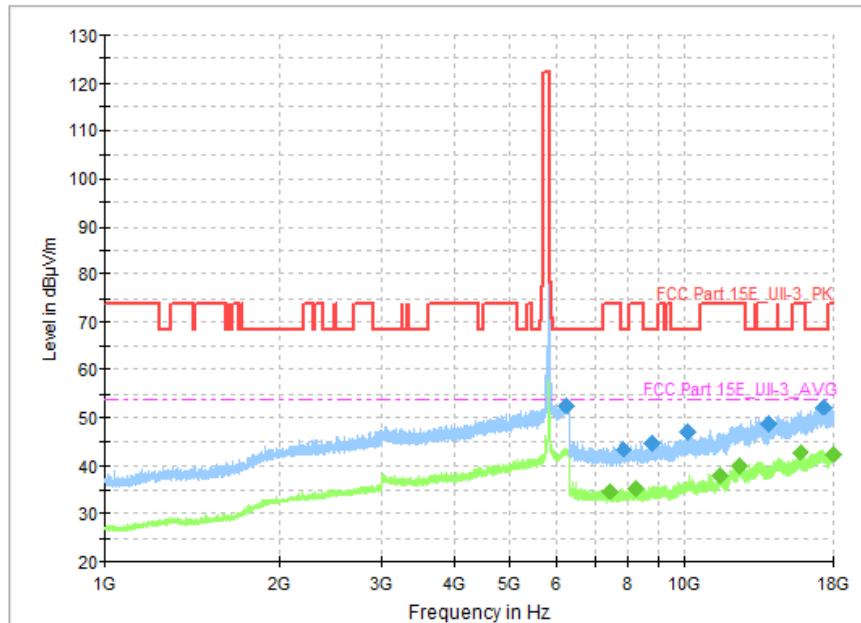


Fig. 119 Transmitter Spurious Emission (802.11n-HT20, CH165 5825MHz, 1 GHz-18 GHz, MIMO)

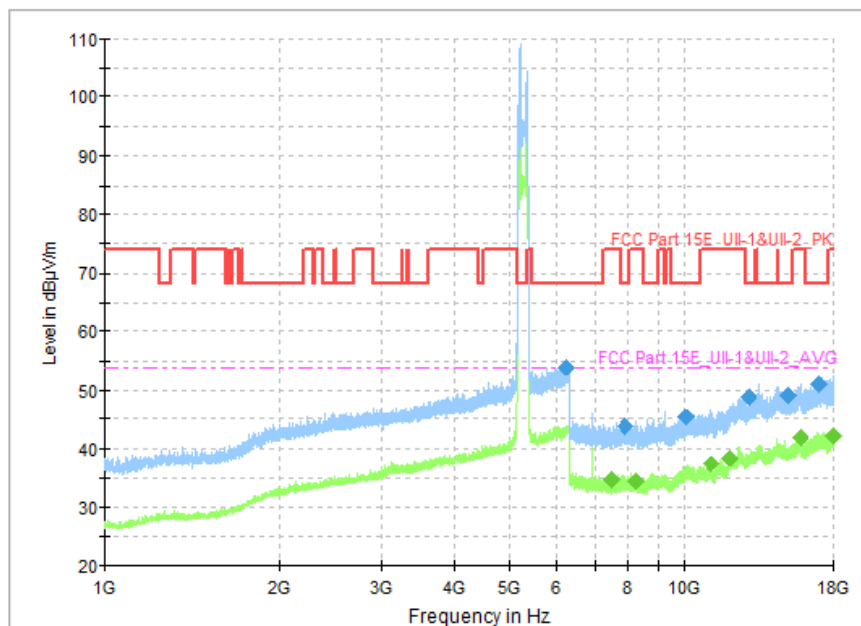


Fig. 120 Transmitter Spurious Emission (802.11n-HT40, CH38 5190MHz, 1 GHz-18 GHz, MIMO)

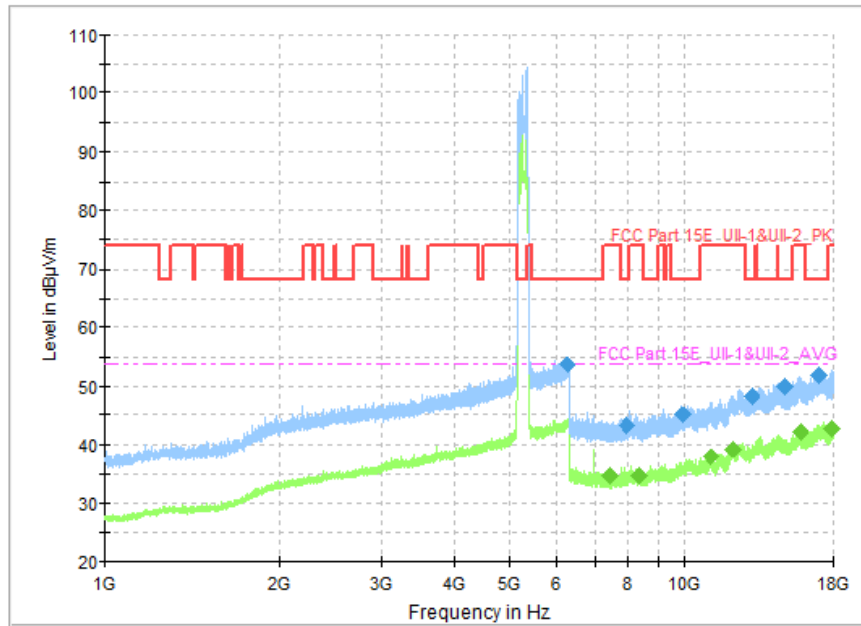


Fig. 121 Transmitter Spurious Emission (802.11n-HT40, CH46 5230MHz, 1 GHz-18 GHz, MIMO)

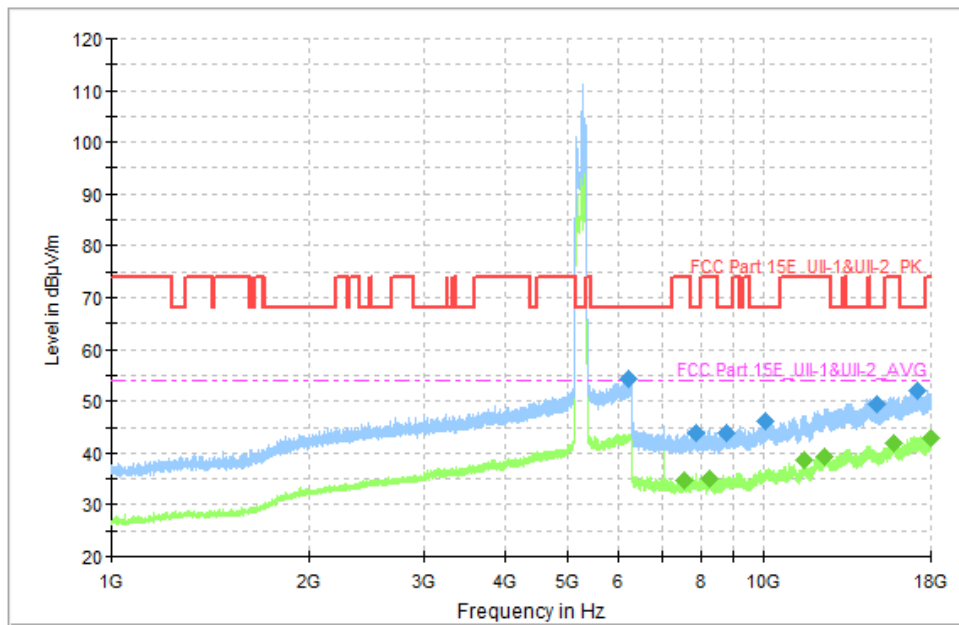


Fig. 122 Transmitter Spurious Emission (802.11n-HT40, CH54 5270MHz, 1 GHz-18 GHz, MIMO)

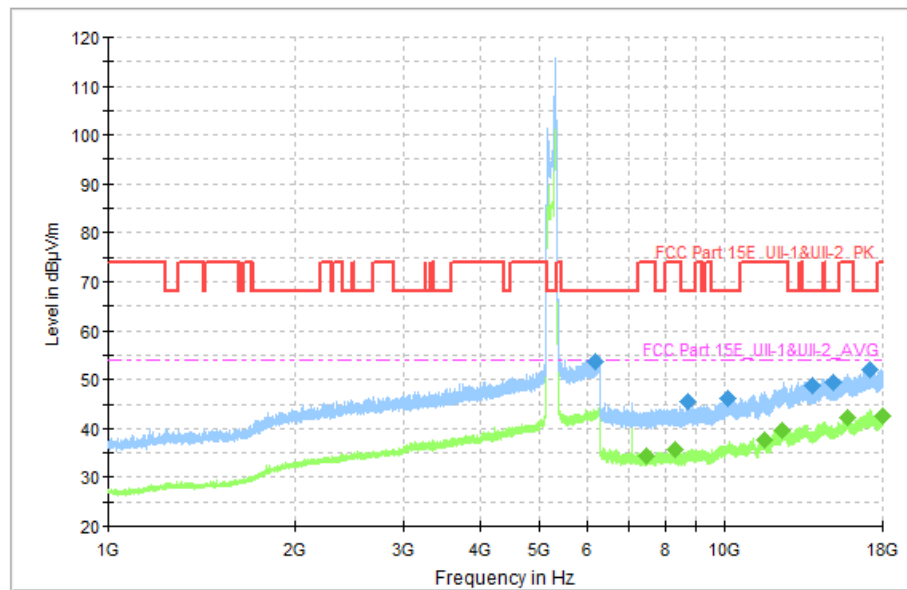


Fig. 123 Transmitter Spurious Emission (802.11n-HT40, CH62 5310MHz, 1 GHz-18 GHz, MIMO)

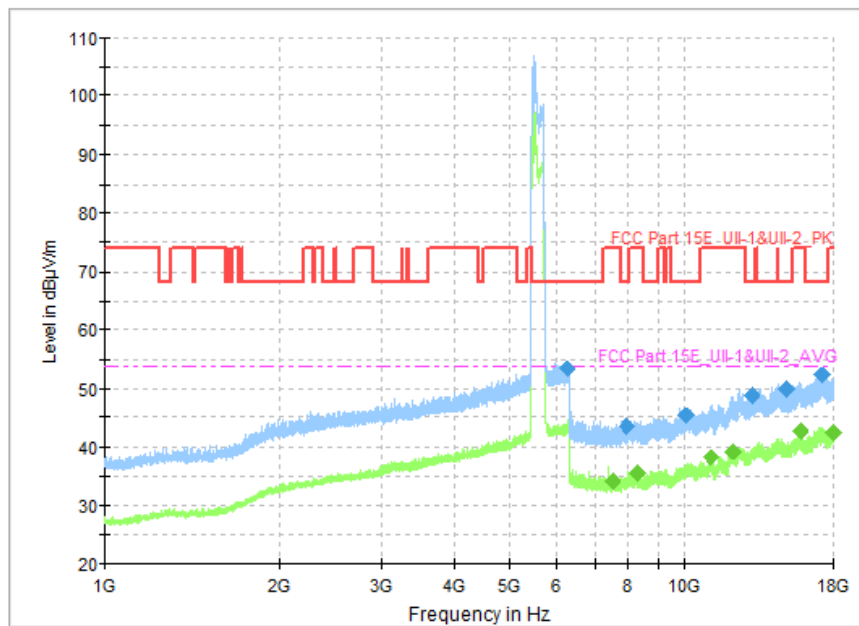


Fig. 124 Transmitter Spurious Emission (802.11n-HT40, CH102 5510MHz, 1 GHz-18 GHz, MIMO)

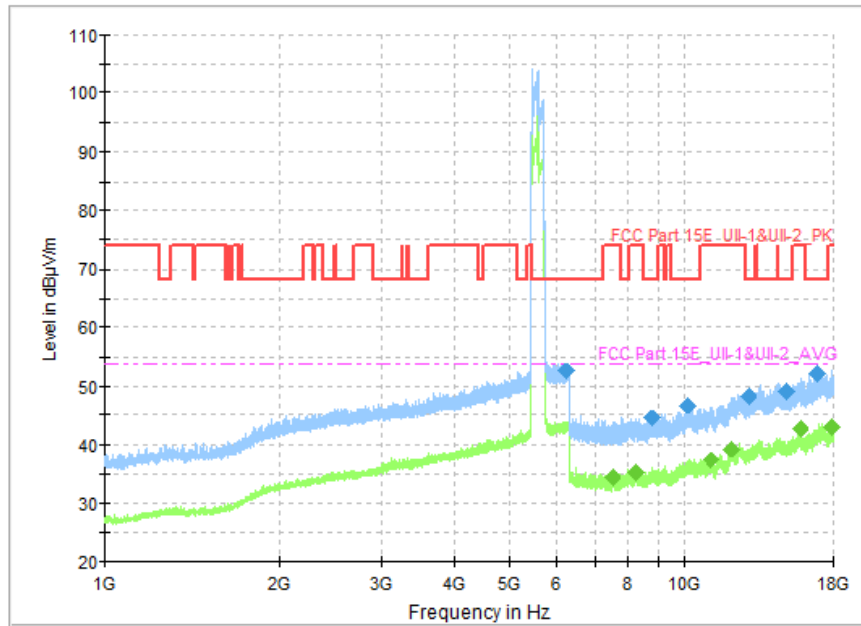


Fig. 125 Transmitter Spurious Emission (802.11n-HT40, CH118 5580MHz, 1 GHz-18 GHz, MIMO)

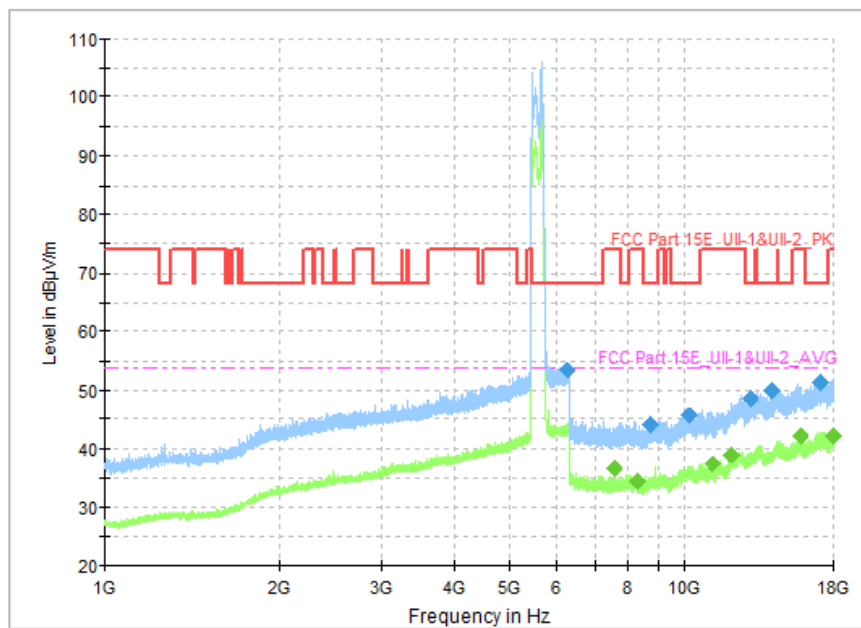


Fig. 126 Transmitter Spurious Emission (802.11n-HT40, CH134 5670MHz, 1 GHz-18 GHz, MIMO)

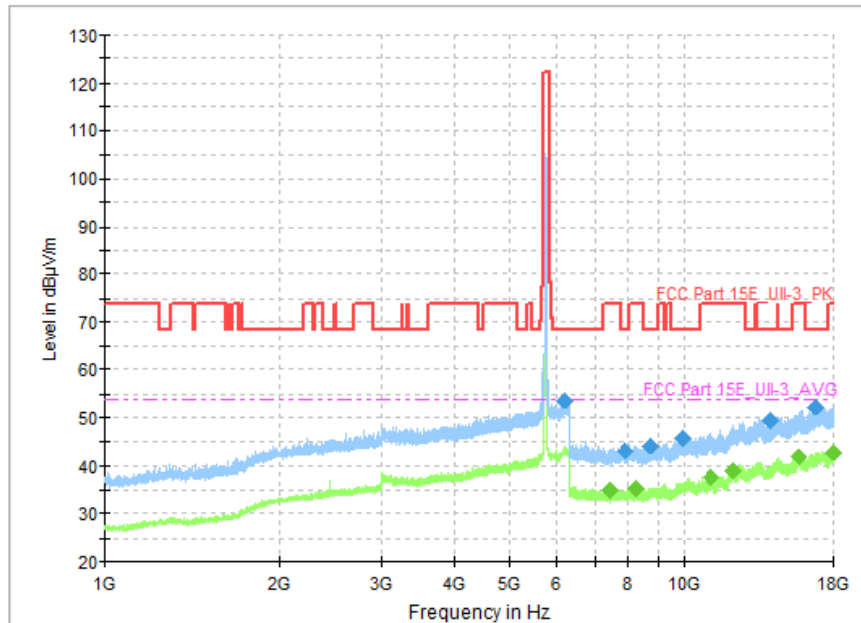


Fig. 127 Transmitter Spurious Emission (802.11n-HT40, CH151 5755MHz, 1 GHz-18 GHz, MIMO)

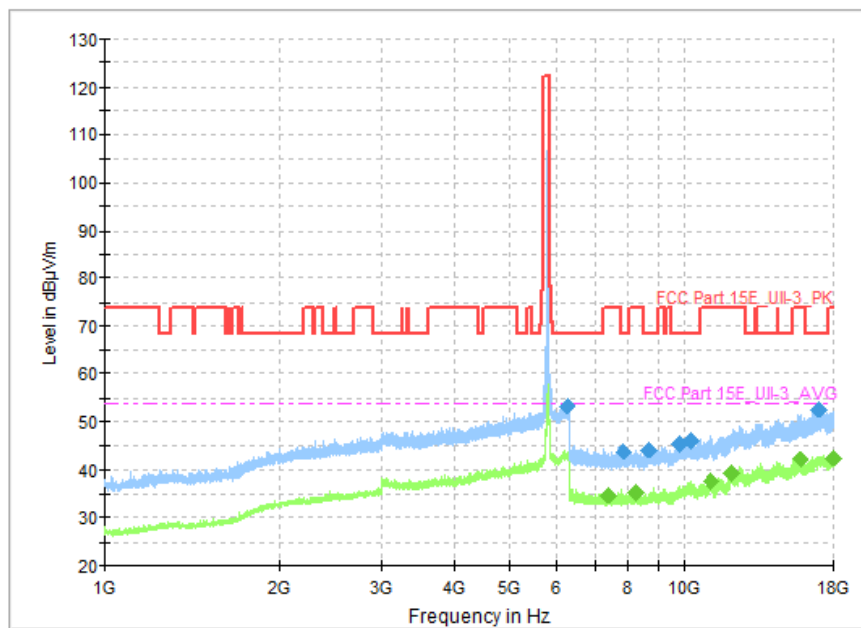


Fig. 128 Transmitter Spurious Emission (802.11n-HT40, CH159 5795MHz, 1 GHz-18 GHz, MIMO)

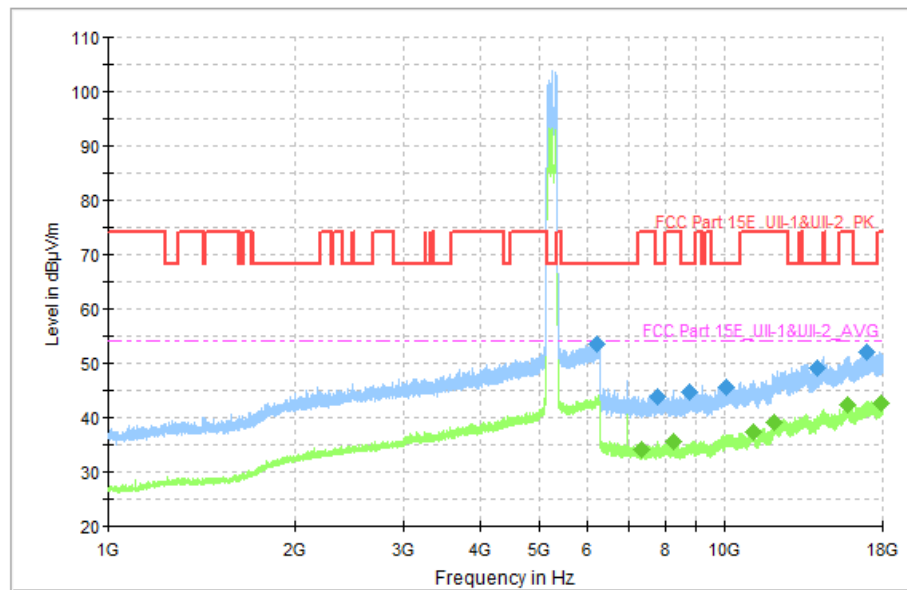


Fig. 129 Transmitter Spurious Emission (802.11ac-VHT80, CH42 5210MHz, 1 GHz-18 GHz, MIMO)

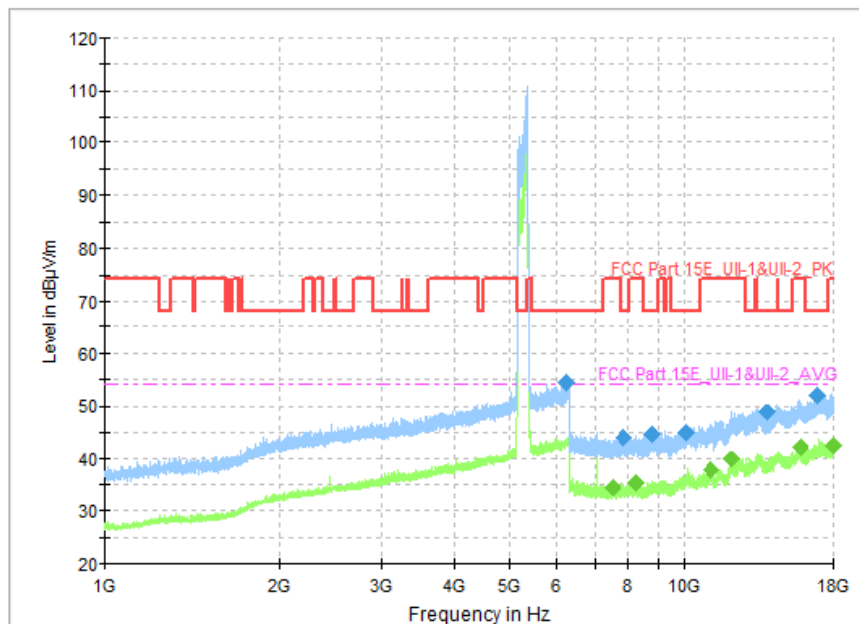


Fig. 130 Transmitter Spurious Emission (802.11ac-VHT80, CH58 5290MHz, 1 GHz-18 GHz, MIMO)

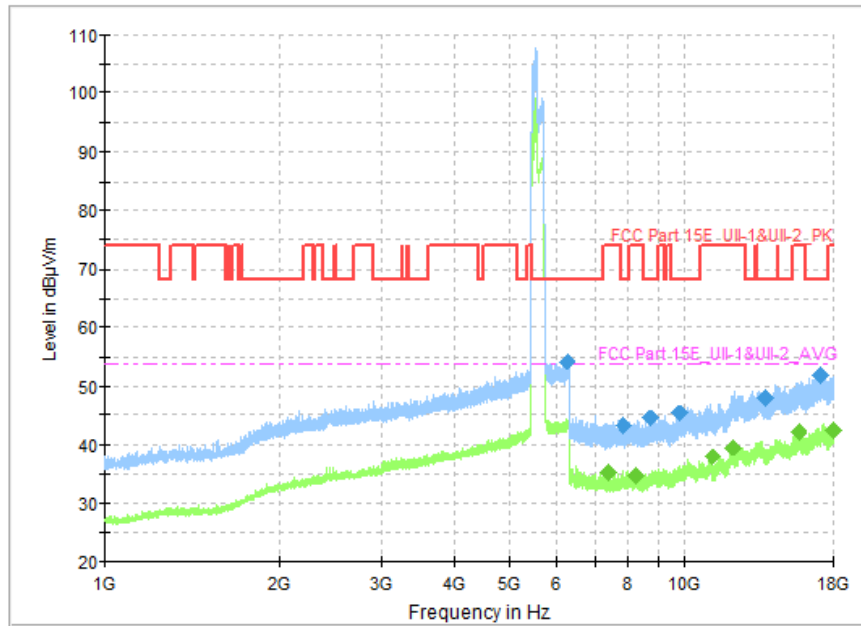


Fig. 131 Transmitter Spurious Emission (802.11ac-VHT80, CH106 5530MHz, 1 GHz-18 GHz, MIMO)

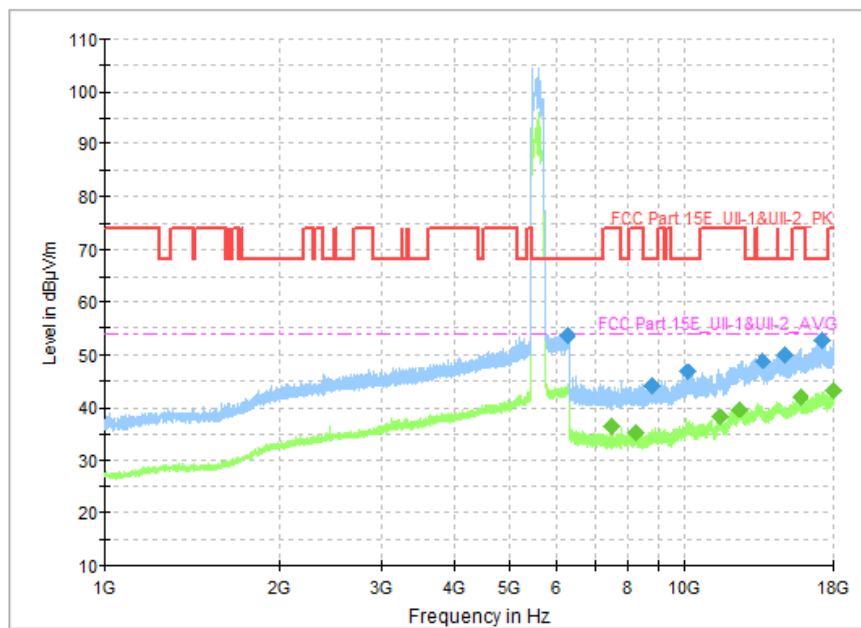


Fig. 132 Transmitter Spurious Emission (802.11ac-VHT80, CH122 5610MHz, 1 GHz-18 GHz, MIMO)

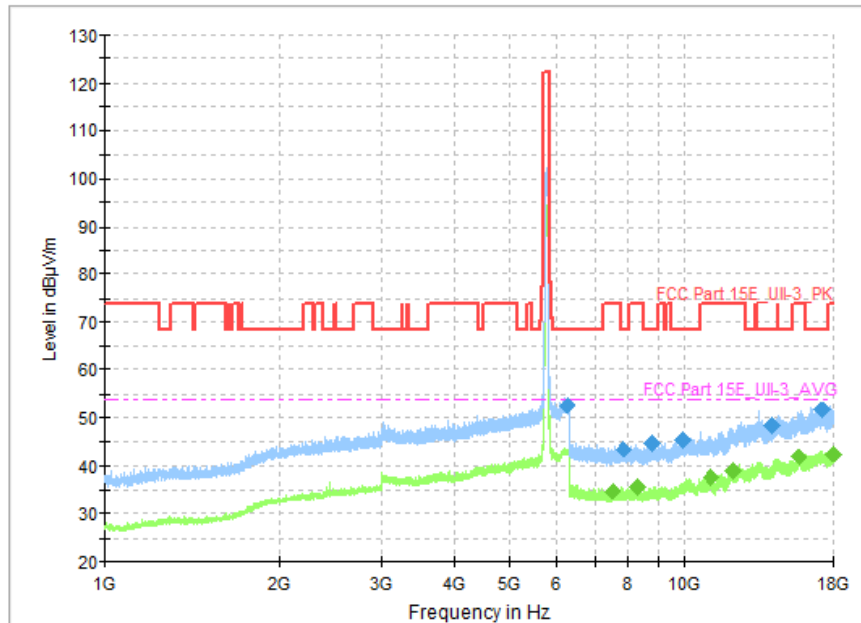


Fig. 133 Transmitter Spurious Emission (802.11ac-VHT80, CH155 5775MHz, 1 GHz-18 GHz, MIMO)

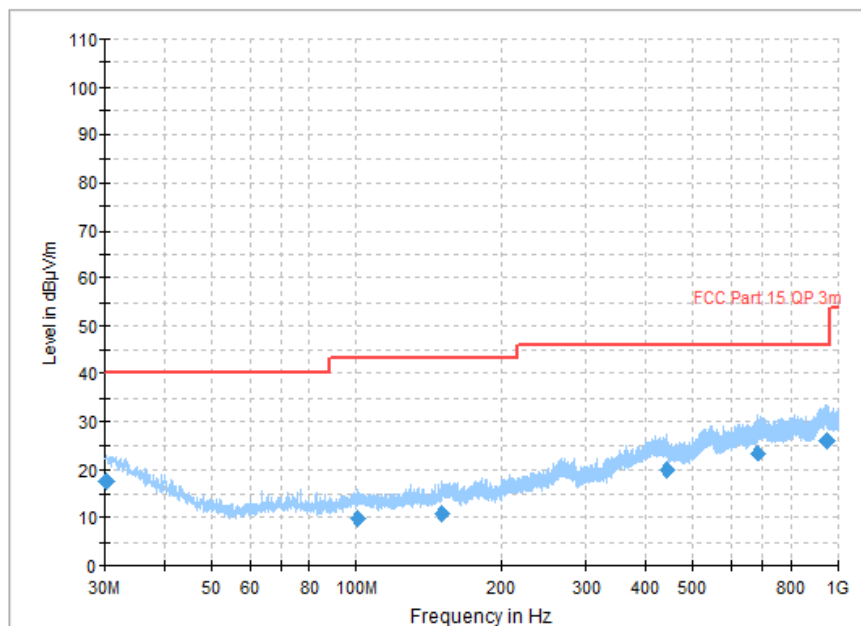


Fig. 134 Transmitter Spurious Emission (All channel, 30MHz~1GHz, MIMO)

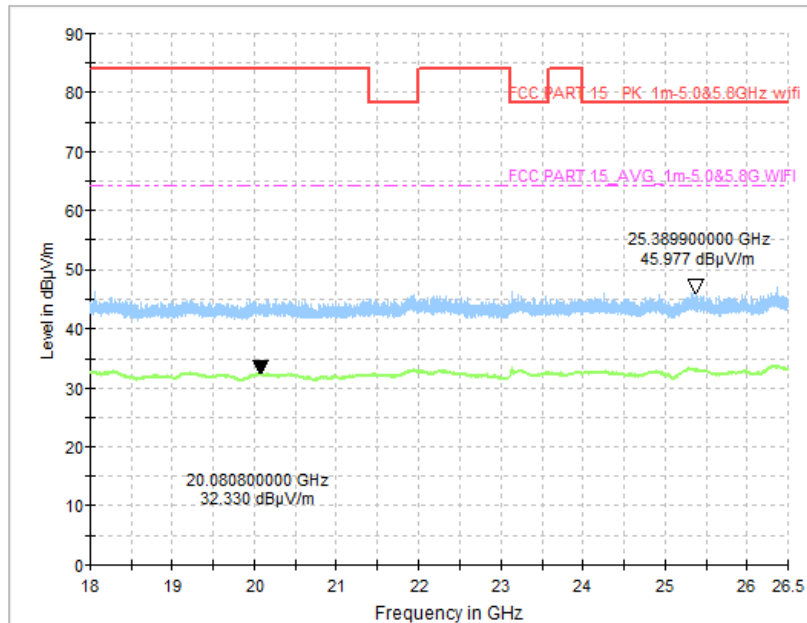


Fig. 135 Transmitter Spurious Emission (All channel, 18GHz~26.5GHz, MIMO)

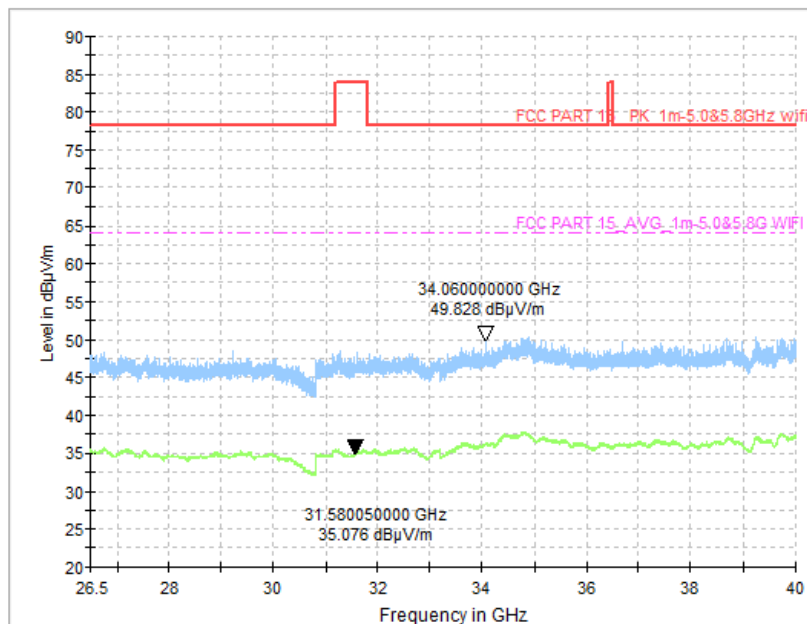


Fig. 136 Transmitter Spurious Emission (All channel, 26.5GHz~40GHz, MIMO)

A.9. Radiated Spurious Emissions < 30MHz**Measurement Limit (15.209, 9 kHz-30MHz):**

Frequency (MHz)	Field strength ($\mu\text{V/m}$)	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

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 (Worst case):**SISO:**

Mode	Frequency Range	Test Results	Conclusion
All Channel	9 kHz ~30 MHz	Fig.137	P

MIMO:

Mode	Frequency Range	Test Results	Conclusion
All Channel	9 kHz ~30 MHz	Fig.138	P

See below for test graphs.**Conclusion: PASS**

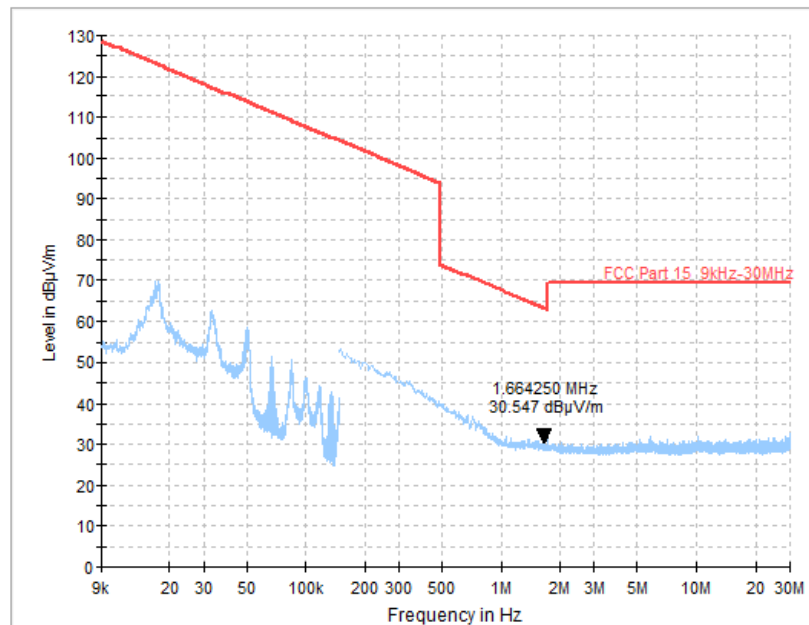


Fig. 137 Radiated Spurious Emission (All Channel, 9 kHz ~30 MHz)

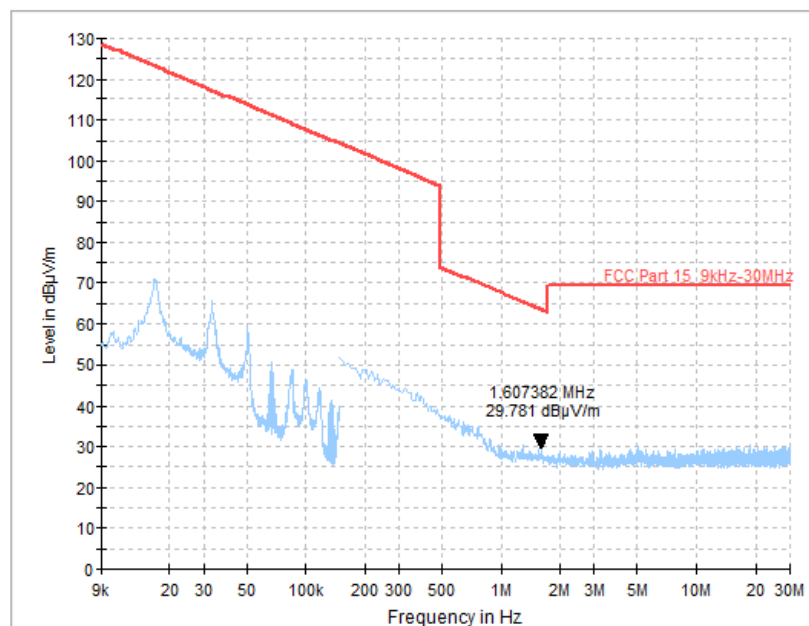


Fig. 138 Radiated Spurious Emission (All Channel, 9 kHz ~30 MHz, MIMO)

A.10. AC Power Line Conducted Emission

Test Condition:

Voltage (V)	Frequency (Hz)
120	60

Measurement Result and limit:

RLAN- A2, A3

Frequency range (MHz)	Quasi-peak Limit (dB μ V)	Average-peak Limit (dB μ V)	Result (dB μ V)		Conclusion
			Traffic	Idle	
0.15 to 0.5	66 to 56	56 to 46	Fig.139	Fig.140	P
0.5 to 5	56	46			
5 to 30	60	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.

See below for test graphs.

Conclusion: **PASS**

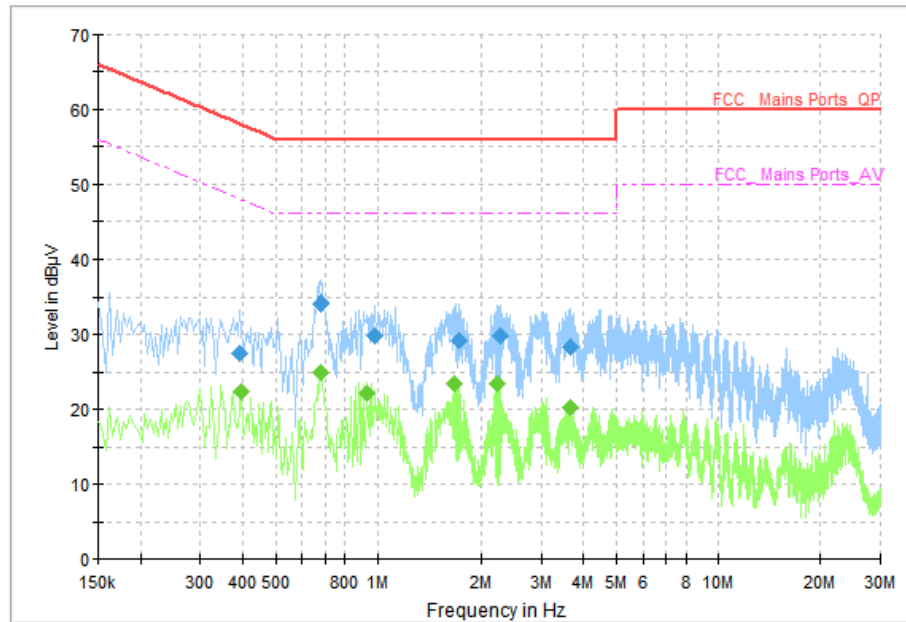


Fig. 139 AC Power line Conducted Emission (Traffic)

Measurement Result: Quasi Peak

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.390000	27.56	58.06	30.50	N	ON	10
0.682000	34.23	56.00	21.77	N	ON	10
0.982000	29.93	56.00	26.07	N	ON	10
1.722000	29.27	56.00	26.73	N	ON	10
2.282000	29.82	56.00	26.18	N	ON	10
3.666000	28.48	56.00	27.52	N	ON	10

Measurement Result: Average

Frequency (MHz)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.398000	22.38	47.90	25.51	N	ON	10
0.678000	25.07	46.00	20.93	N	ON	10
0.934000	22.26	46.00	23.74	N	ON	10
1.666000	23.45	46.00	22.55	N	ON	10
2.226000	23.56	46.00	22.44	N	ON	10
3.646000	20.18	46.00	25.82	N	ON	10

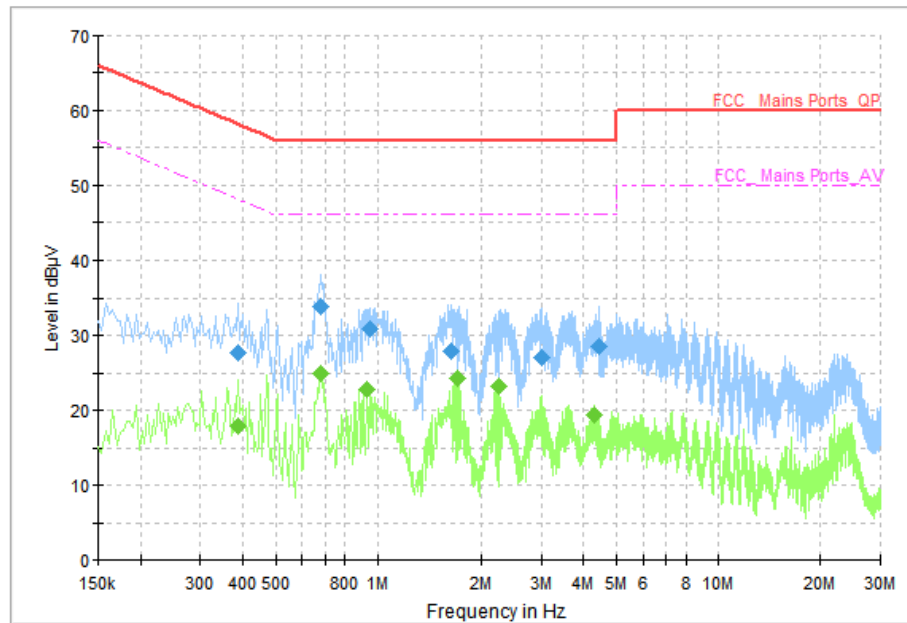


Fig. 140 AC Power line Conducted Emission (Idle)

Measurement Result: Quasi Peak

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.386000	27.65	58.15	30.49	N	ON	10
0.682000	33.97	56.00	22.03	N	ON	10
0.954000	31.04	56.00	24.96	N	ON	10
1.634000	27.99	56.00	28.01	N	ON	10
2.998000	27.08	56.00	28.93	N	ON	10
4.454000	28.56	56.00	27.44	N	ON	10

Measurement Result: Average

Frequency (MHz)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.386000	18.01	48.15	30.14	N	ON	10
0.678000	24.96	46.00	21.04	N	ON	10
0.930000	22.82	46.00	23.18	N	ON	10
1.694000	24.23	46.00	21.77	N	ON	10
2.254000	23.28	46.00	22.72	N	ON	10
4.314000	19.33	46.00	26.67	N	ON	10



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*****