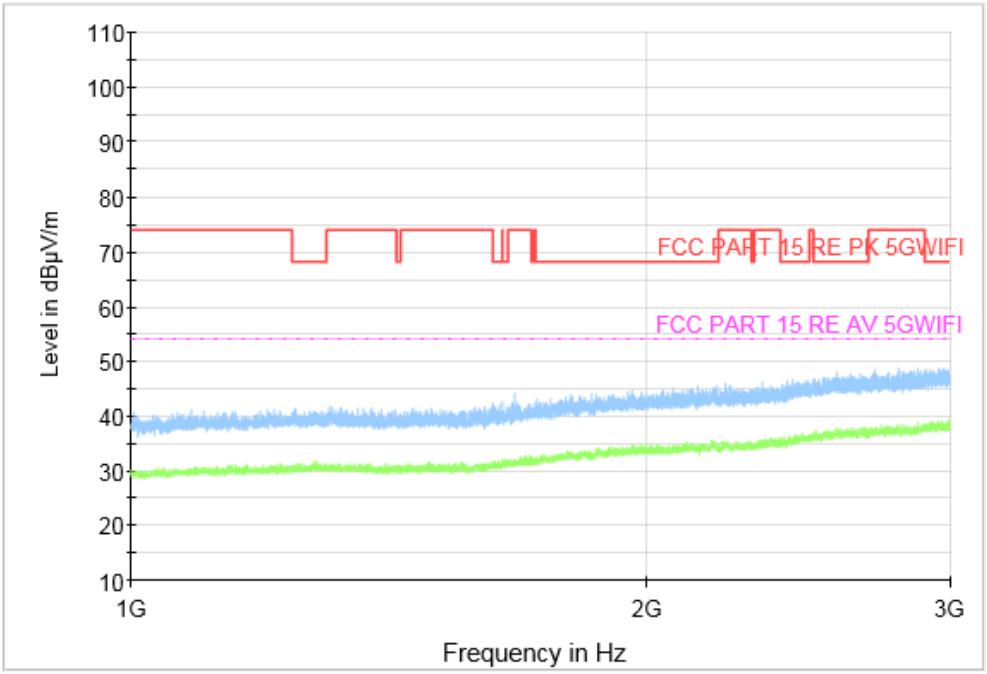

Fig. 51 Transmitter Spurious Emission (802. 11n-HT40, CH151 5755MHz, 1 GHz-3 GHz), SISO

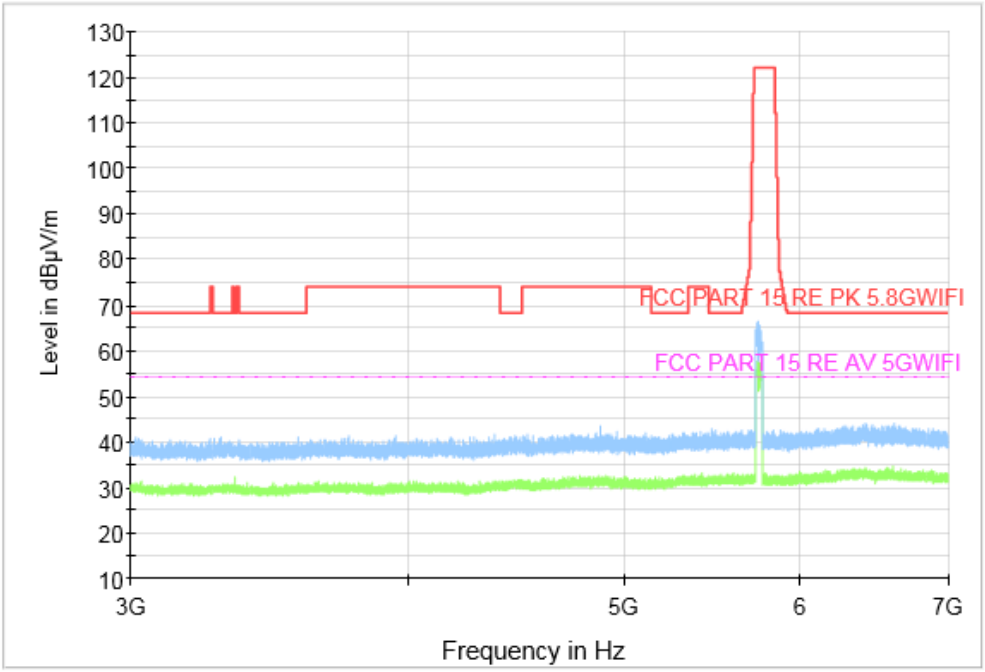

Fig. 52 Transmitter Spurious Emission (802. 11n-HT40, CH151 5755MHz, 3 GHz-7 GHz), SISO

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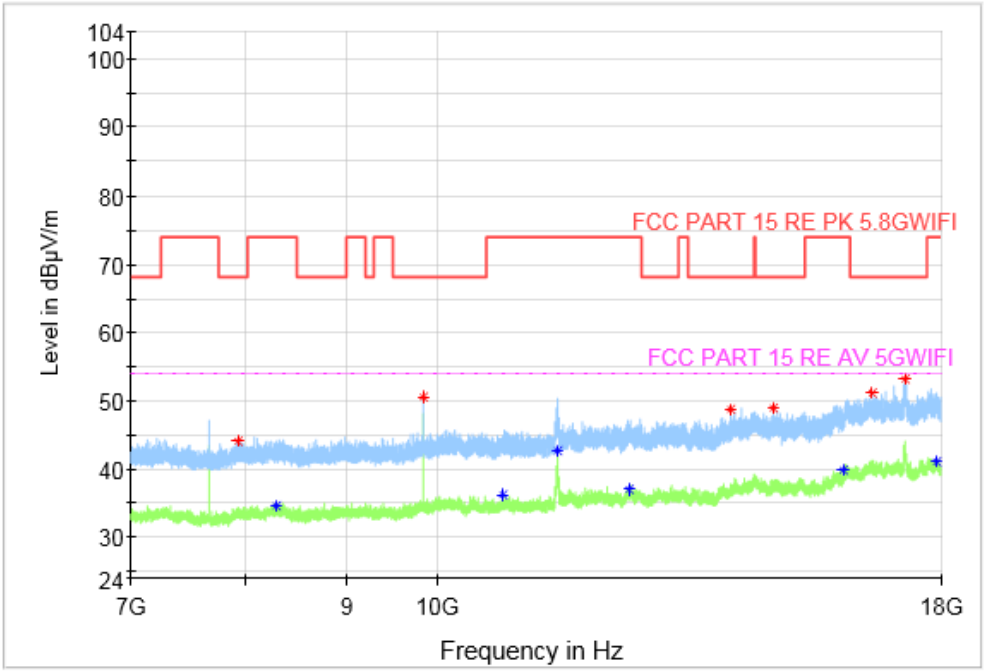

Fig. 53 Transmitter Spurious Emission (802. 11n-HT40, CH151 5755MHz, 7 GHz-18 GHz), SISO

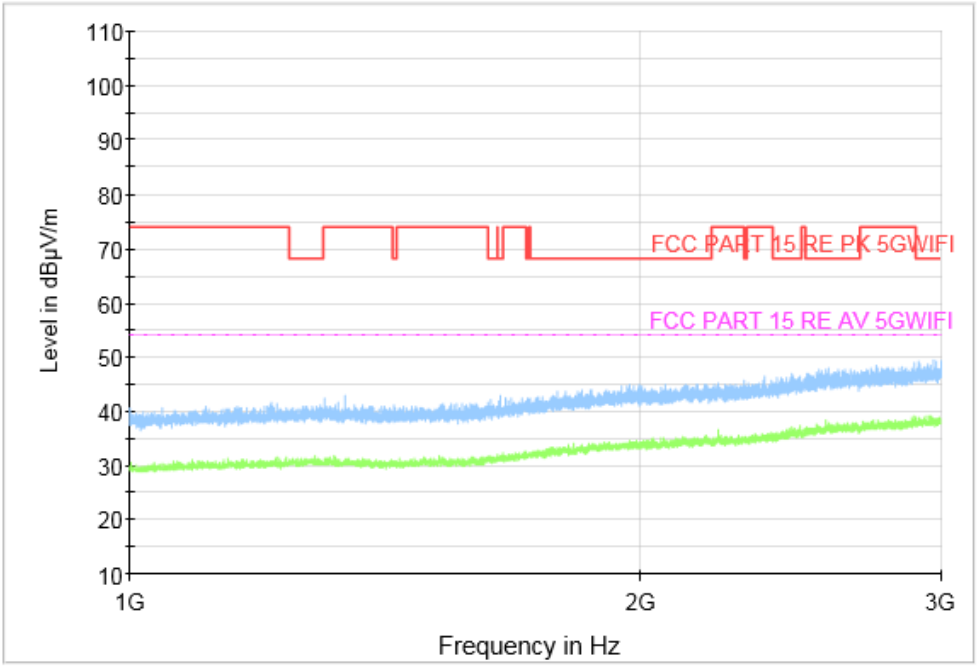

Fig. 54 Transmitter Spurious Emission (802. 11n-HT40, CH159 5795MHz, 1 GHz-3 GHz), SISO

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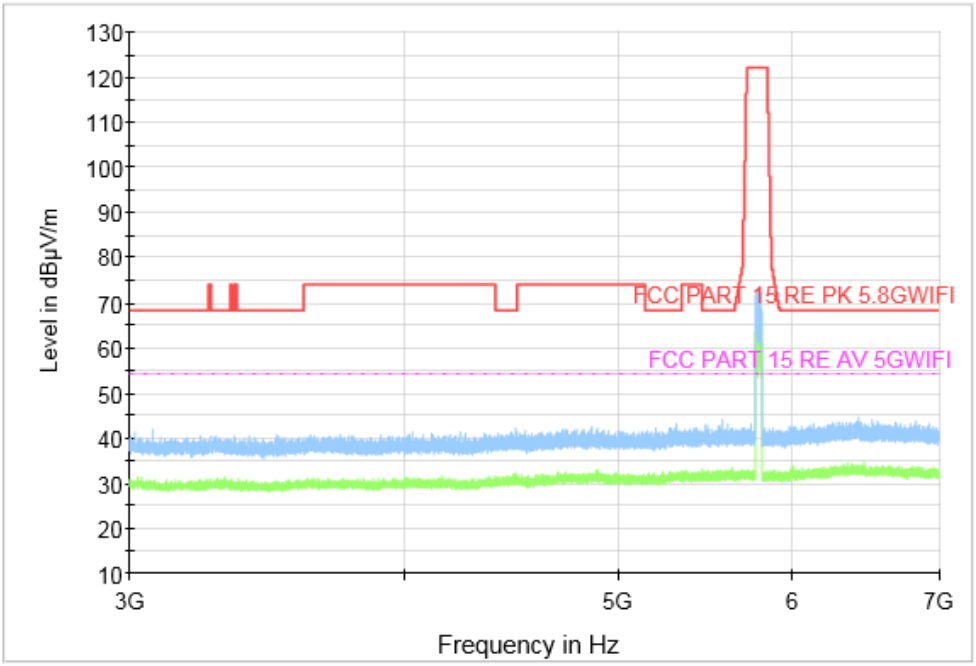

Fig. 55 Transmitter Spurious Emission (802. 11n-HT40, CH159 5795MHz, 3 GHz-7 GHz), SISO

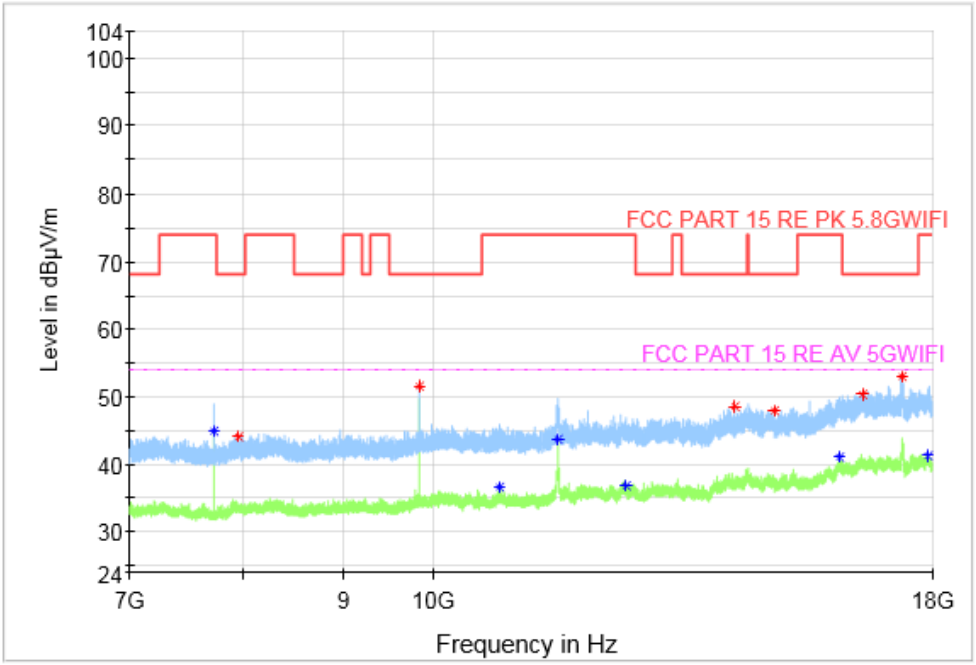

Fig. 56 Transmitter Spurious Emission (802. 11n-HT40, CH159 5795MHz, 7 GHz-18 GHz), SISO

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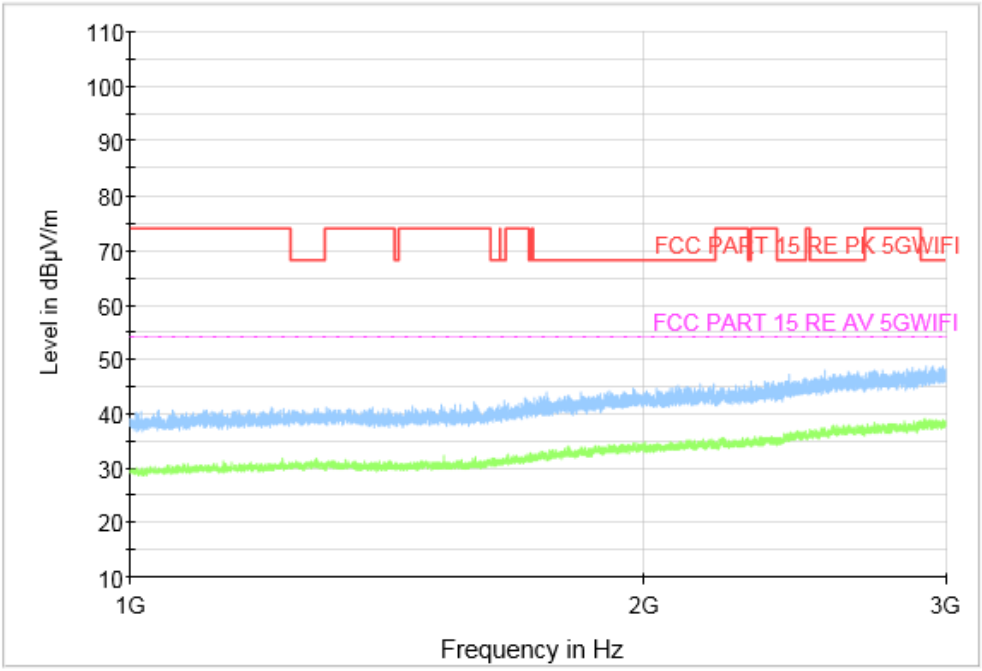

Fig. 57 Transmitter Spurious Emission (802. 11ac-VHT80, CH42 5210MHz, 1 GHz-3 GHz), SISO

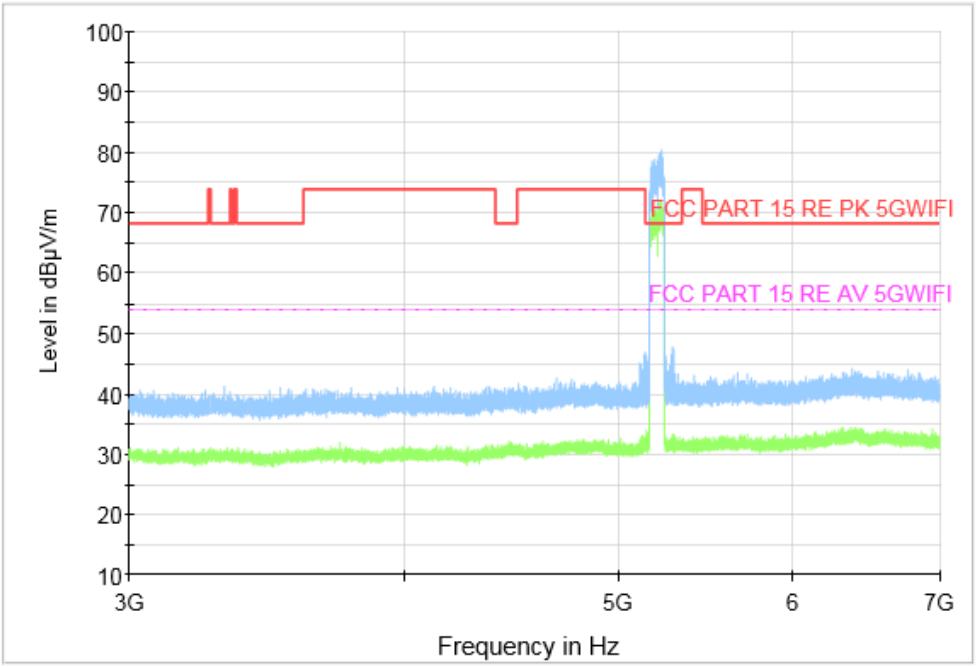

Fig. 58 Transmitter Spurious Emission (802. 11ac-VHT80, CH42 5210MHz, 3 GHz-7 GHz), SISO

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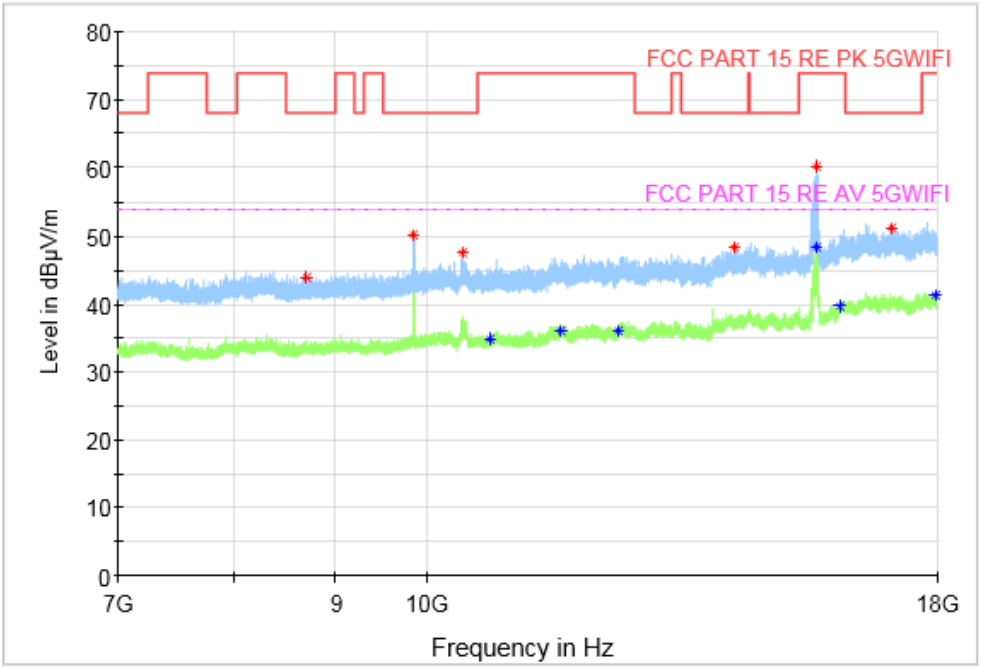

Fig. 59 Transmitter Spurious Emission (802. 11ac-VHT80, CH42 5210MHz, 7 GHz-18 GHz), SISO

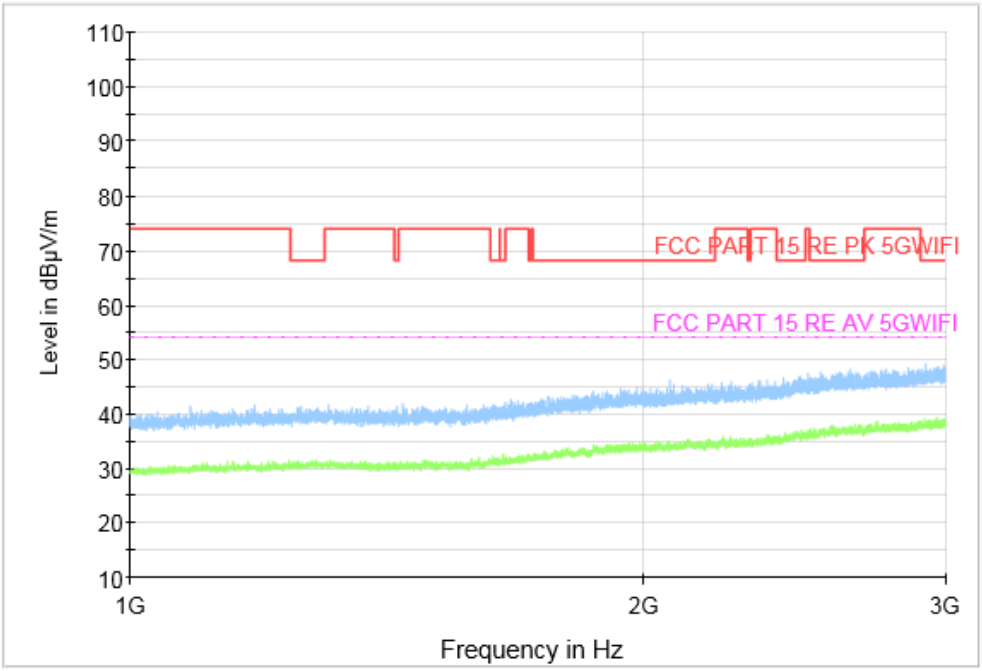

Fig. 60 Transmitter Spurious Emission (802. 11ac-VHT80, CH155 5775MHz, 1 GHz-3 GHz), SISO

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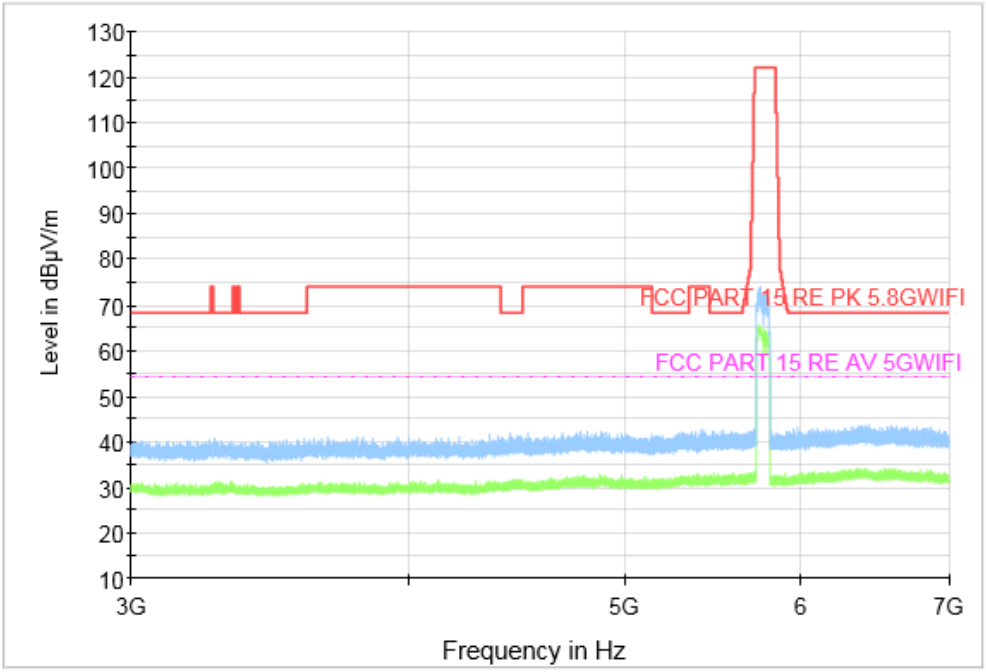

Fig. 61 Transmitter Spurious Emission (802. 11ac-VHT80, CH155 5775MHz, 3 GHz-7 GHz), SISO

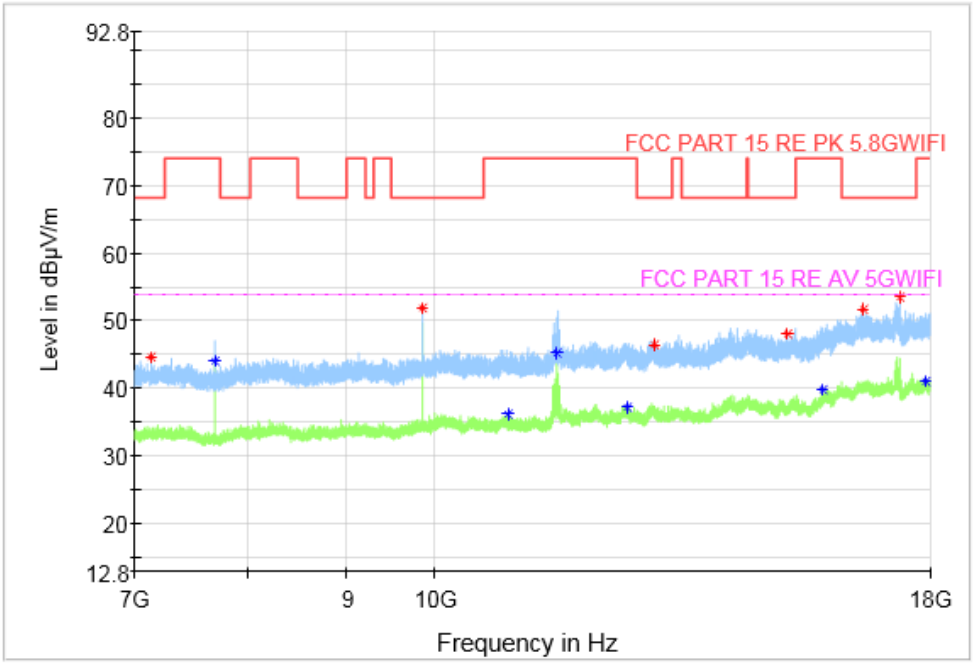

Fig. 62 Transmitter Spurious Emission (802. 11ac-VHT80, CH155 5775MHz, 7 GHz-18 GHz), SISO

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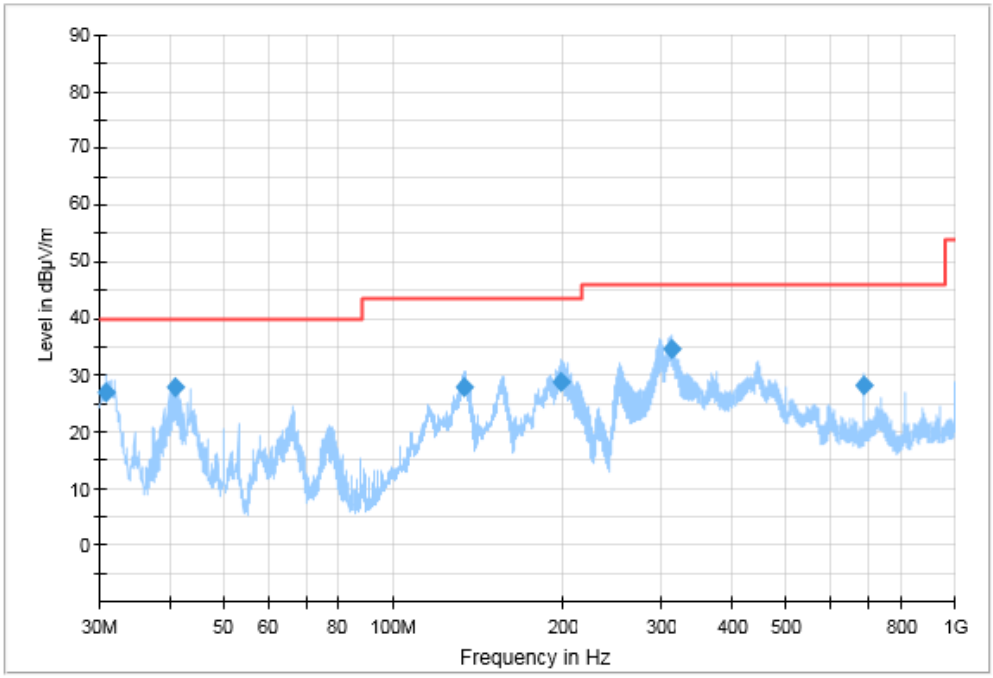

Fig. 63 Transmitter Spurious Emission (All channel, 30MHz~1GHz), SISO

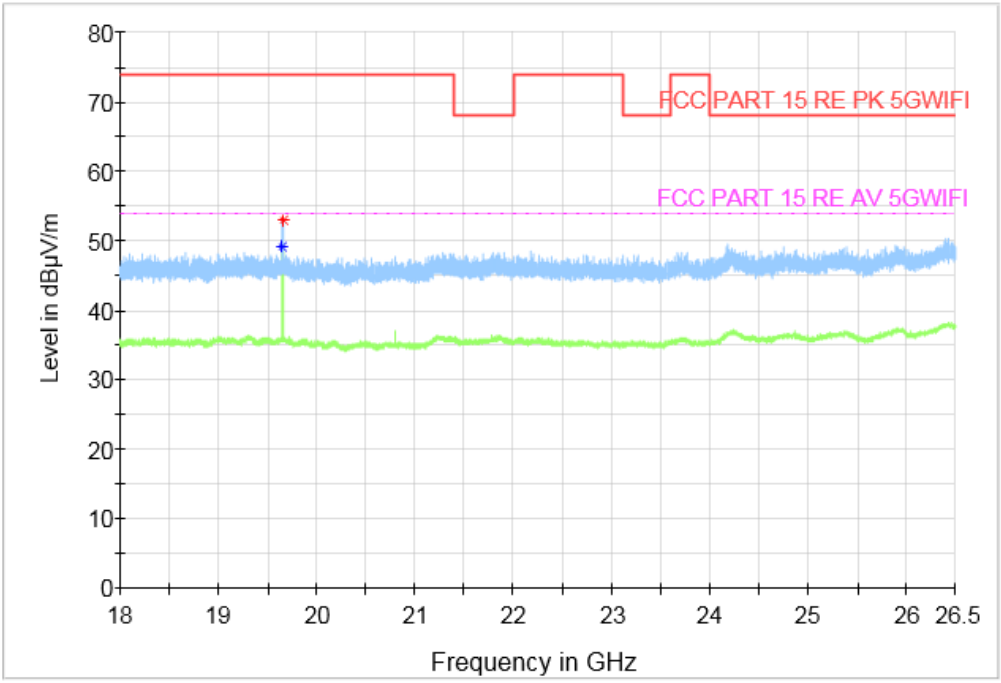

Fig. 64 Transmitter Spurious Emission (All channel, 18GHz~26.5GHz), SISO

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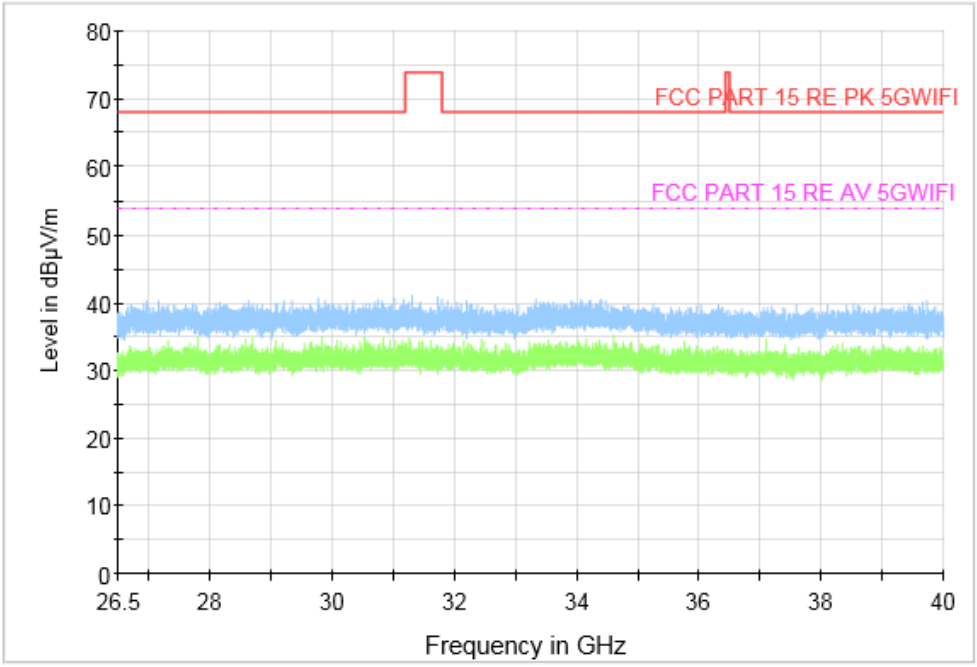

Fig. 65 Transmitter Spurious Emission (All channel, 26.5GHz~40GHz), SISO

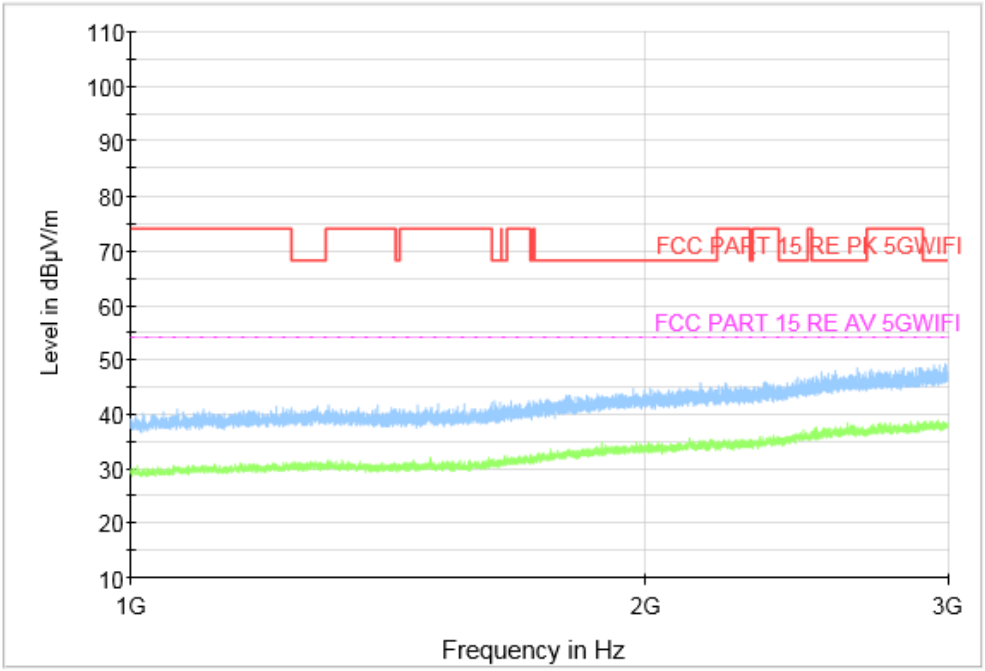

Fig. 66 Transmitter Spurious Emission (802.11n-HT20, CH36 5180MHz, 1 GHz-3 GHz), MIMO

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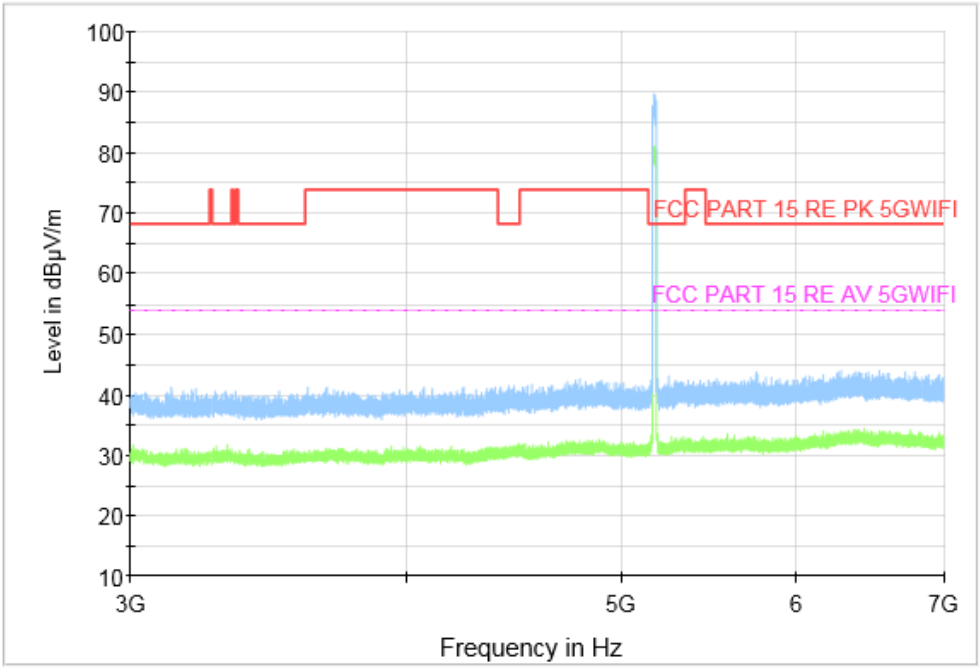

Fig. 67 Transmitter Spurious Emission (802.11 n-HT20, CH36 5180MHz, 3 GHz-7 GHz), MIMO

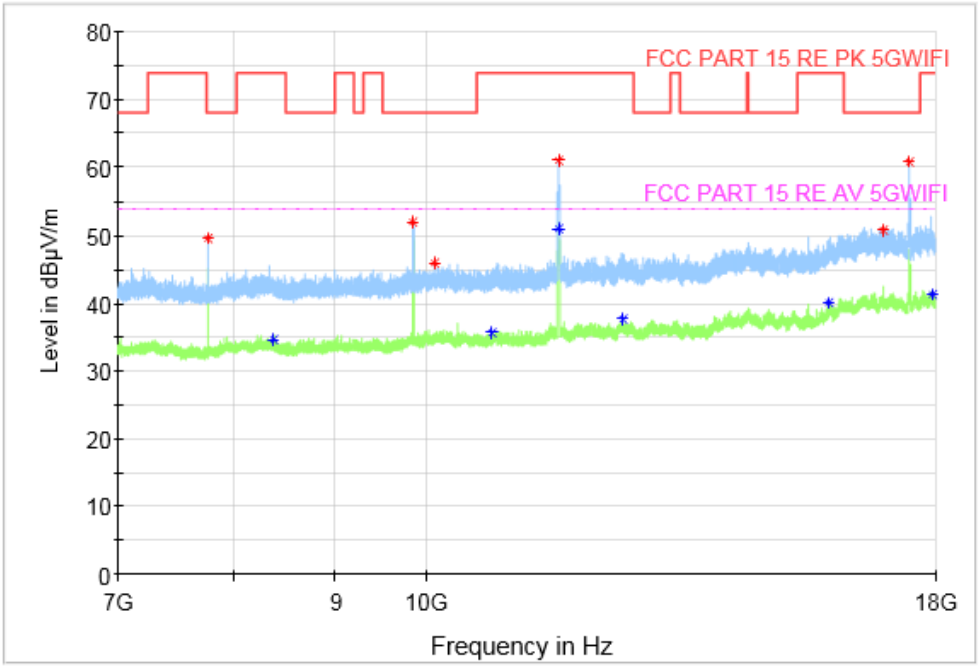

Fig. 68 Transmitter Spurious Emission (802.11 n-HT20, CH36 5180MHz, 7 GHz-18 GHz), MIMO

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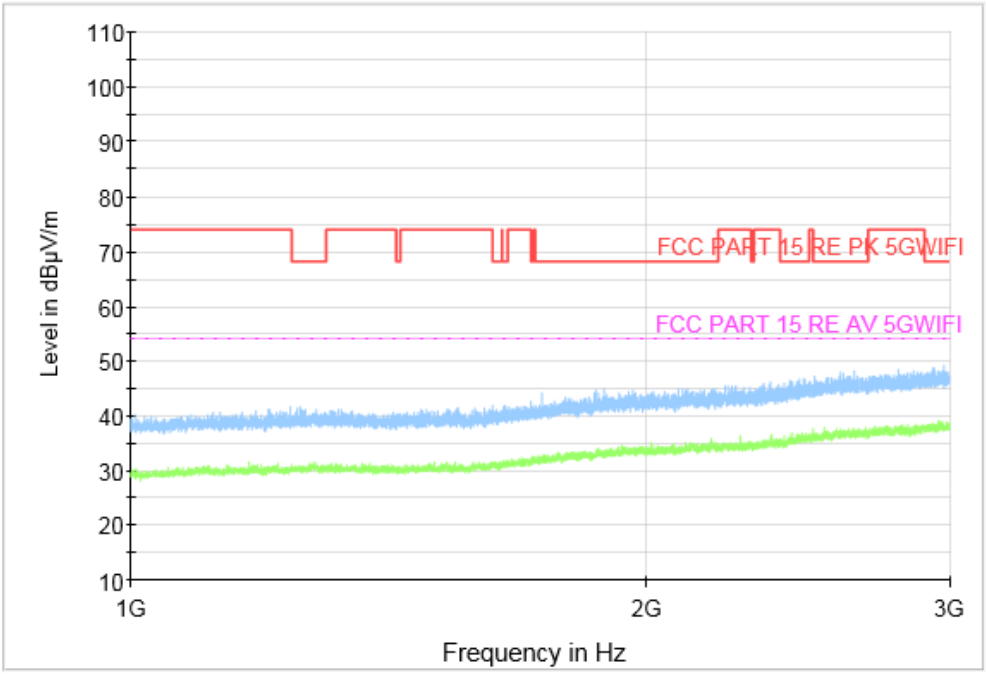

Fig. 69 Transmitter Spurious Emission (802.11 n-HT20, CH40 5200MHz, 1 GHz-3 GHz), MIMO

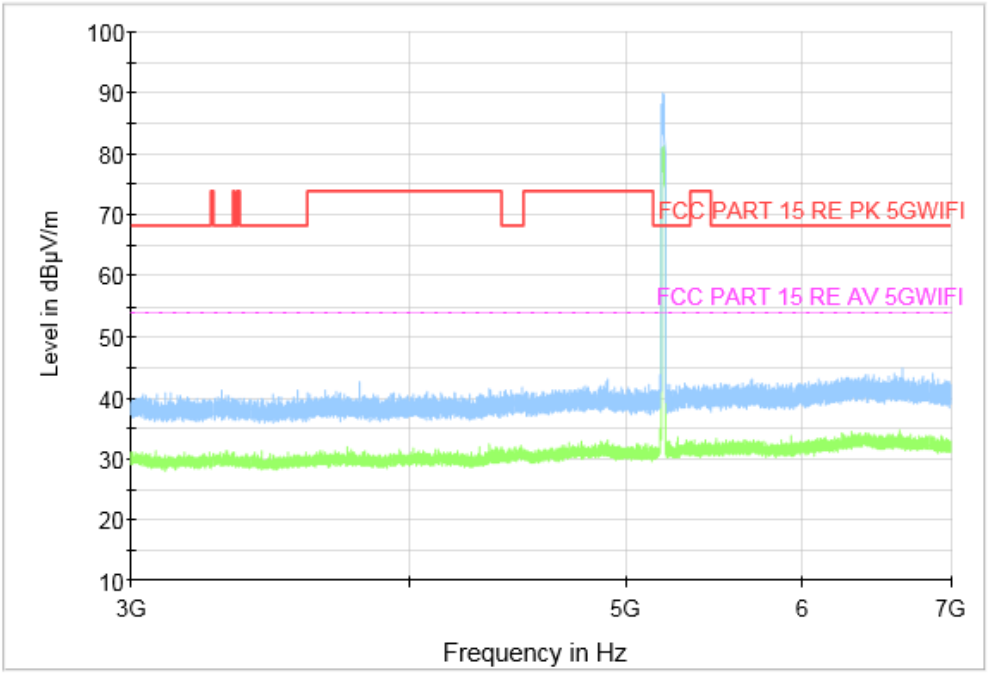

Fig. 70 Transmitter Spurious Emission (802.11 n-HT20, CH40 5200MHz, 3 GHz-7 GHz), MIMO

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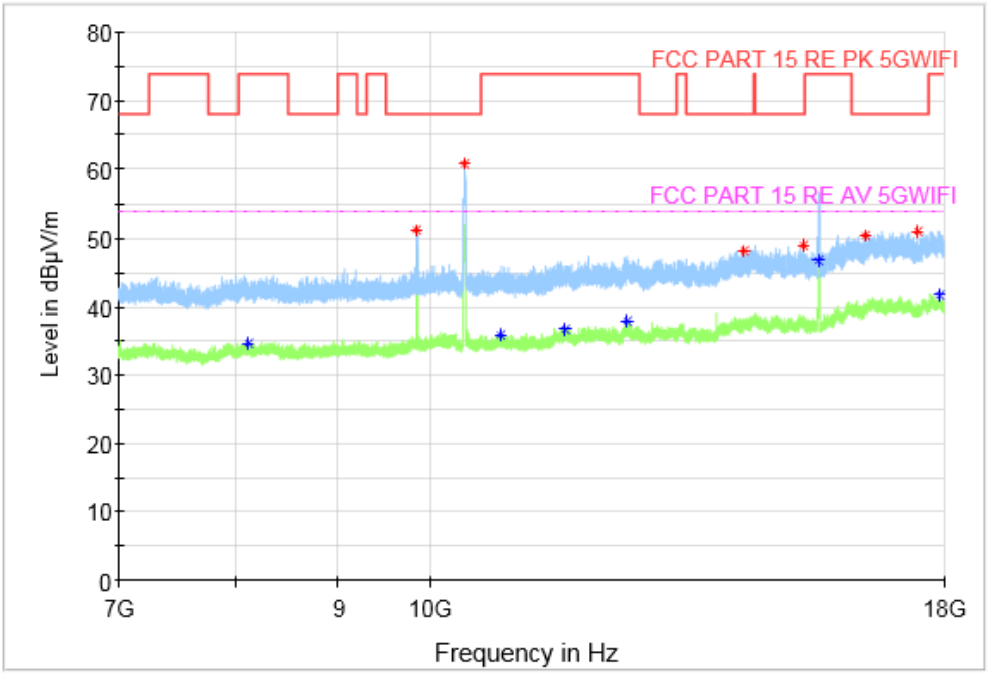

Fig. 71 Transmitter Spurious Emission (802.11 n-HT20, CH40 5200MHz, 7 GHz-18 GHz), MIMO

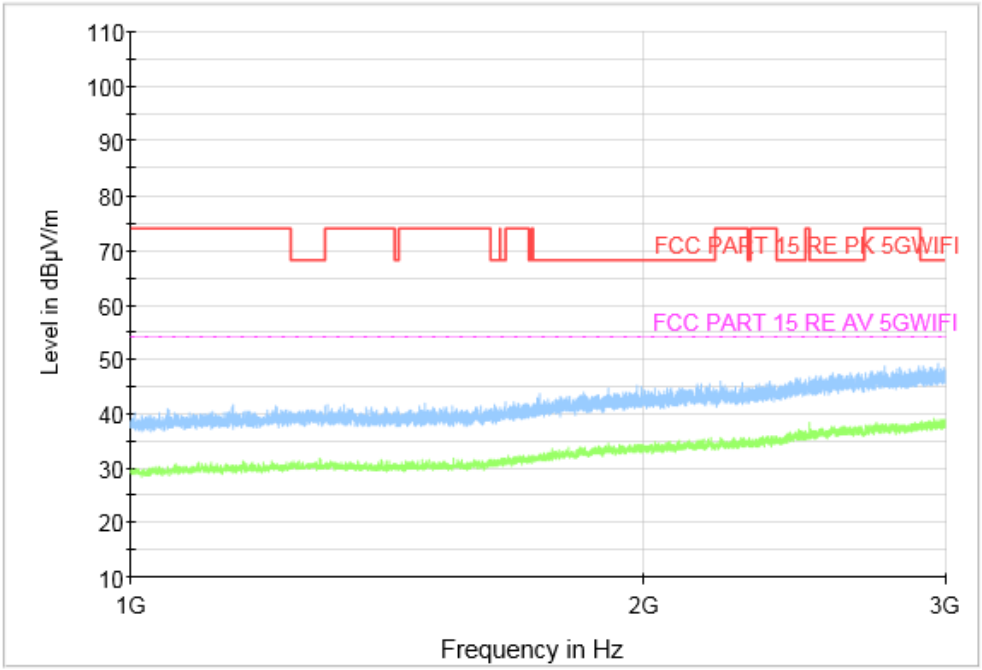

Fig. 72 Transmitter Spurious Emission (802.11 n-HT20, CH48 5240MHz, 1 GHz-3 GHz), MIMO

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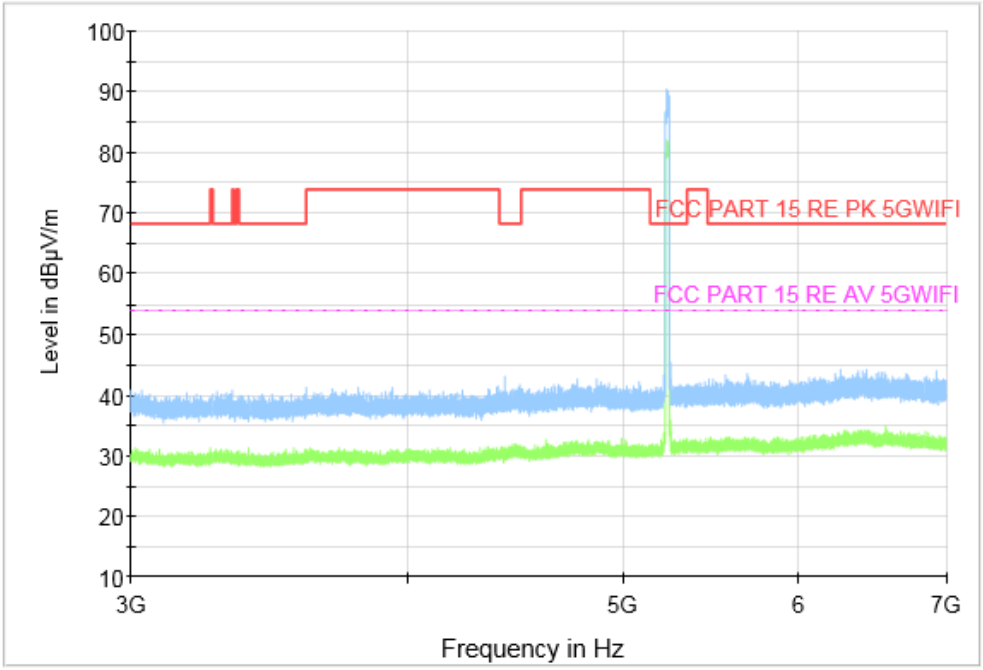

Fig. 73 Transmitter Spurious Emission (802.11 n-HT20, CH48 5240MHz, 3 GHz-7 GHz), MIMO

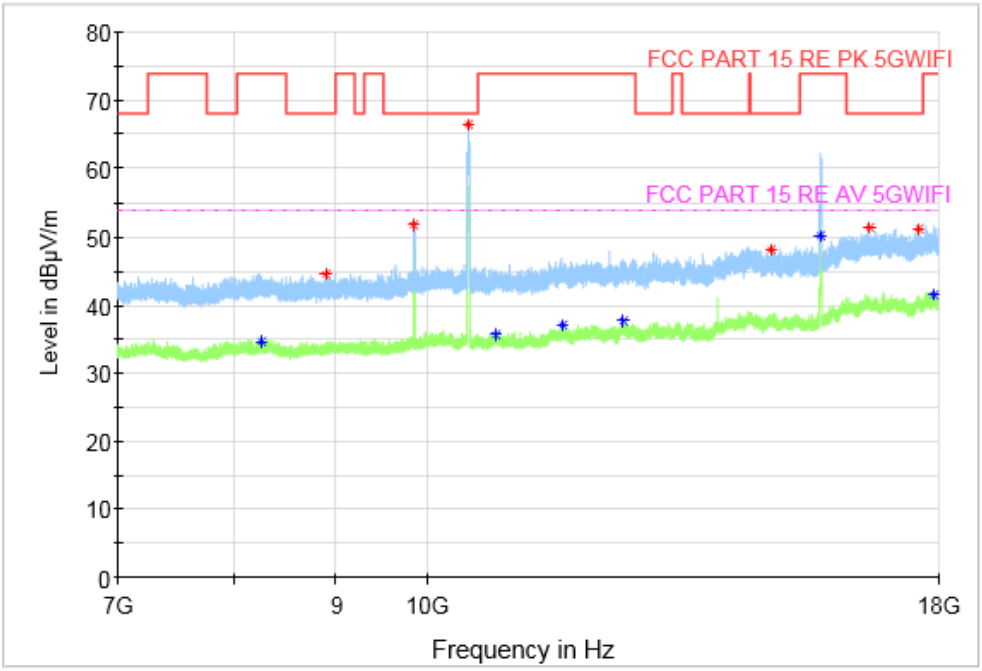

Fig. 74 Transmitter Spurious Emission (802.11 n-HT20, CH48 5240MHz, 7 GHz-18 GHz), MIMO

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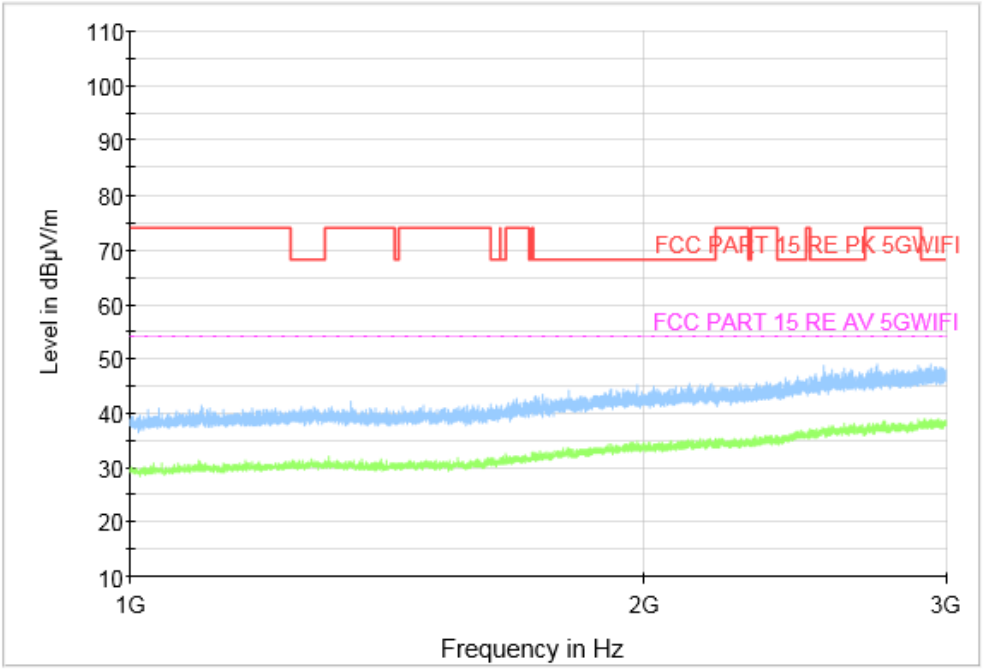

Fig. 75 Transmitter Spurious Emission (802. 11 n-HT20, CH149 5745MHz, 1 GHz-3 GHz), MIMO

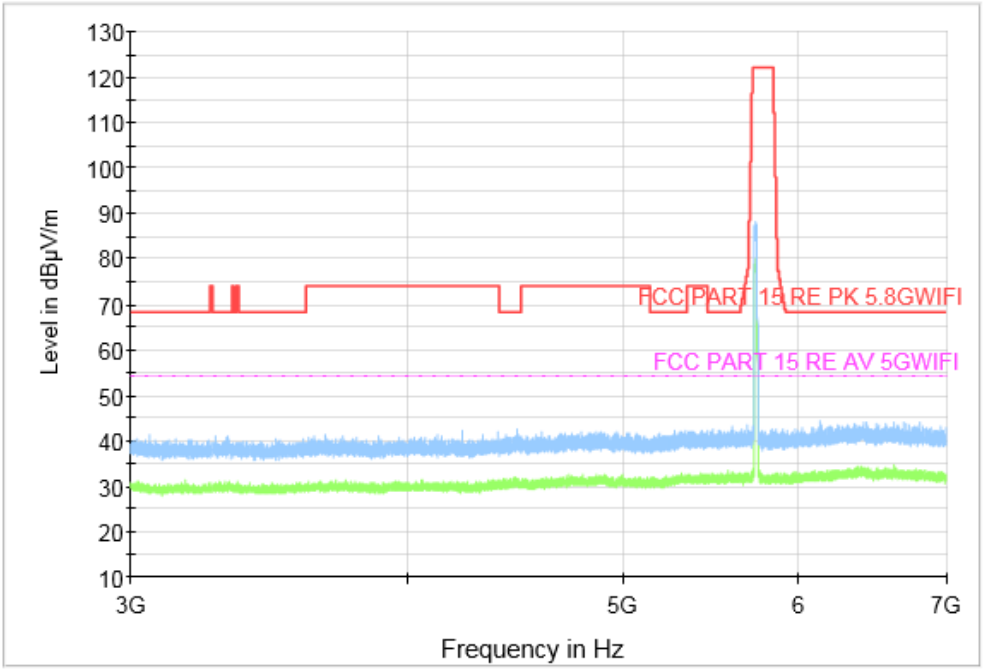

Fig. 76 Transmitter Spurious Emission (802. 11 n-HT20, CH149 5745MHz, 3 GHz-7 GHz), MIMO

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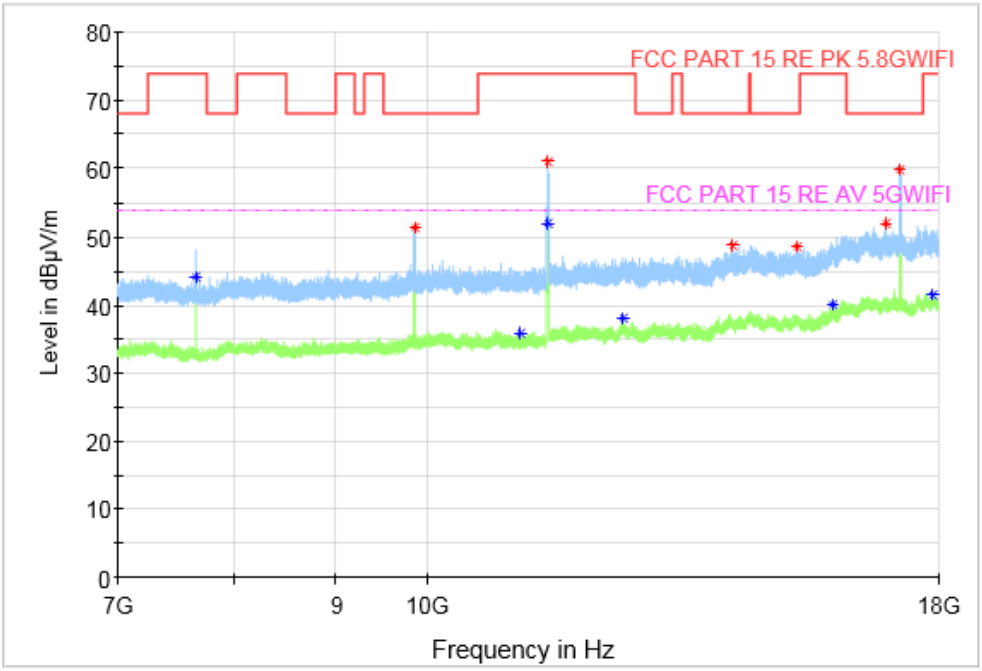

Fig. 77 Transmitter Spurious Emission (802. 11 n-HT20, CH149 5745MHz, 7 GHz-18 GHz), MIMO

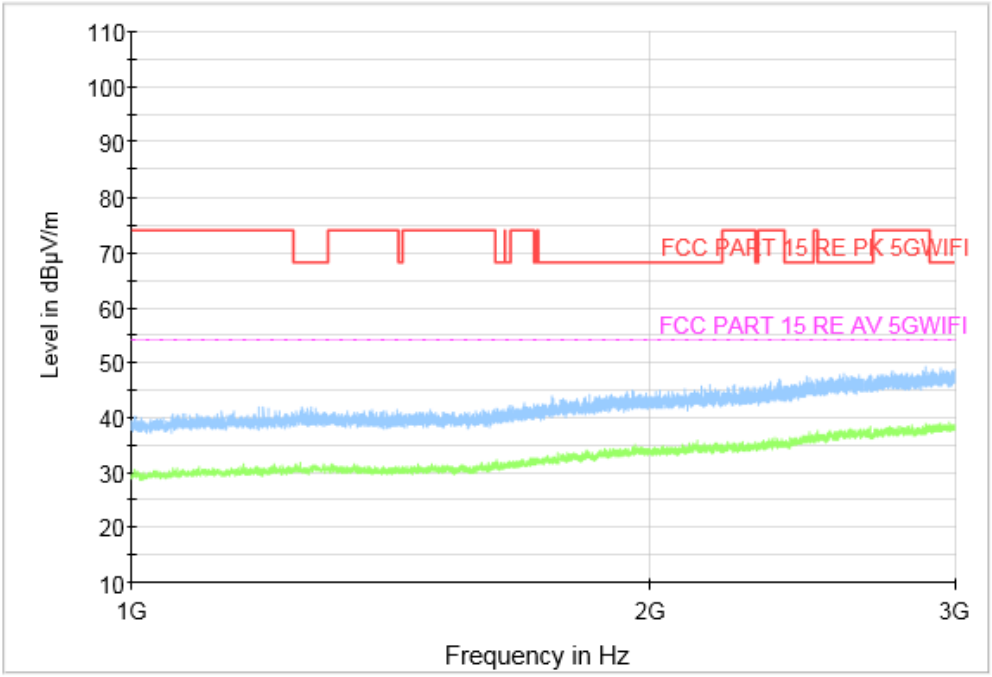

Fig. 78 Transmitter Spurious Emission (802. 11 n-HT20, CH157 5785MHz, 1 GHz-3 GHz), MIMO

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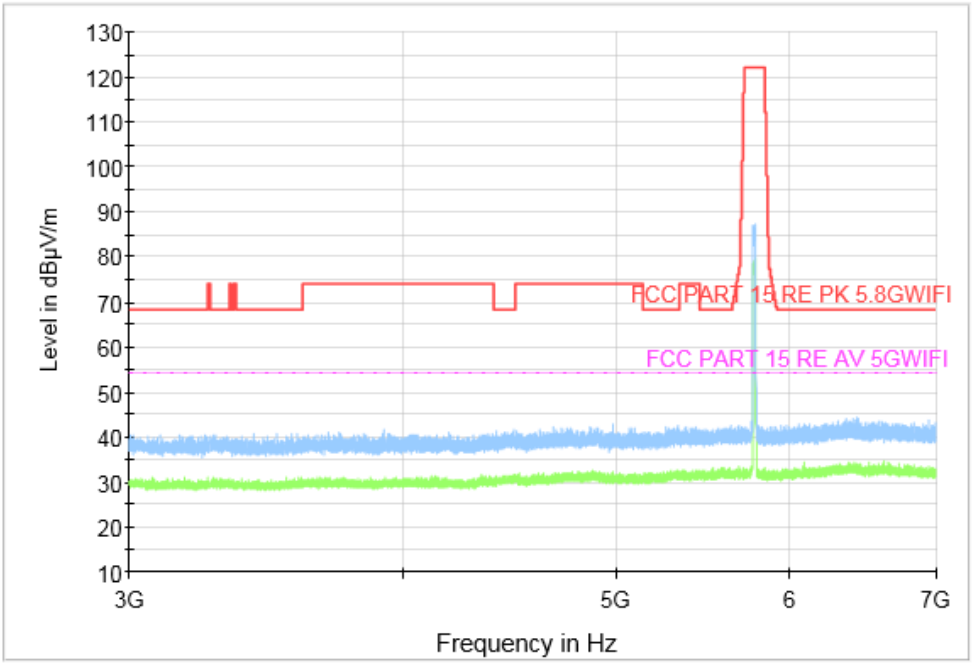

Fig. 79 Transmitter Spurious Emission (802. 11 n-HT20, CH157 5785MHz, 3 GHz-7 GHz), MIMO

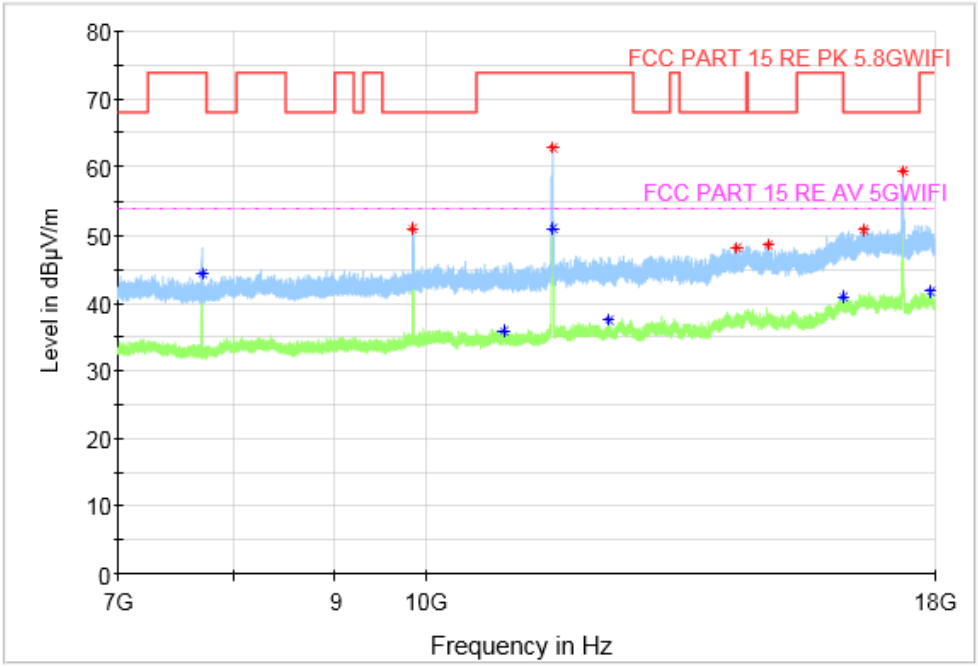

Fig. 80 Transmitter Spurious Emission (802. 11 n-HT20, CH157 5785MHz, 7 GHz-18 GHz), MIMO

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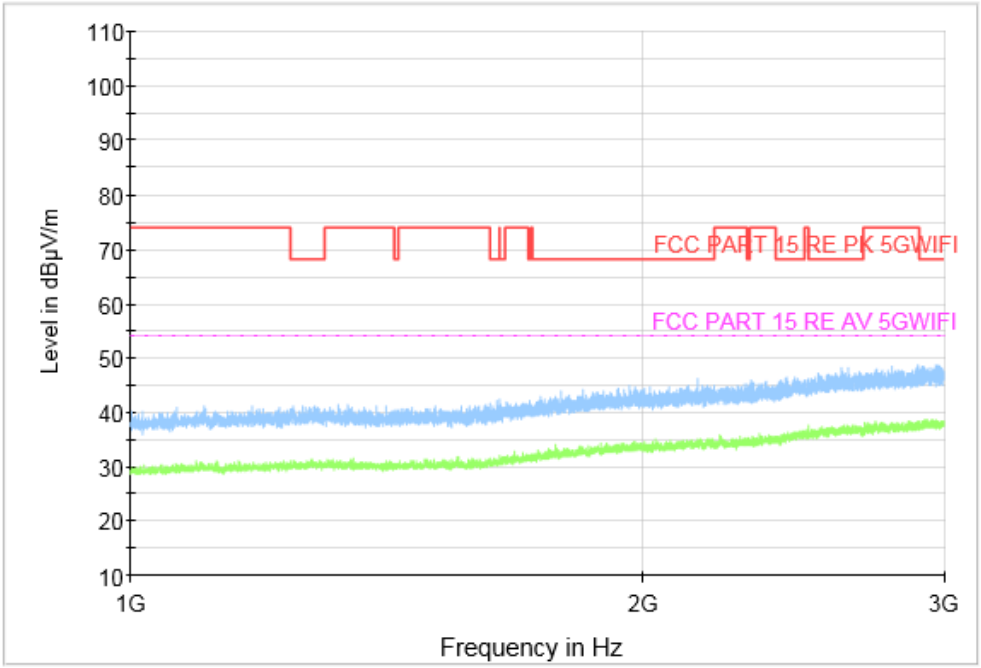

Fig. 81 Transmitter Spurious Emission (802. 11 n-HT20, CH165 5825MHz, 1 GHz-3 GHz), MIMO

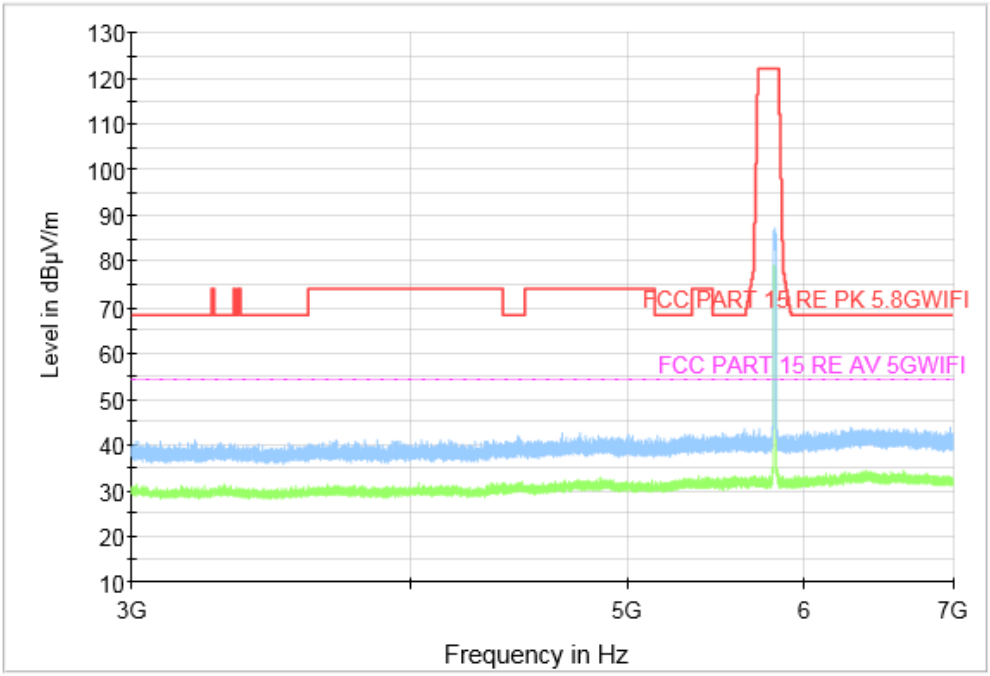

Fig. 82 Transmitter Spurious Emission (802. 11 n-HT20, CH165 5825MHz, 3 GHz-7 GHz), MIMO

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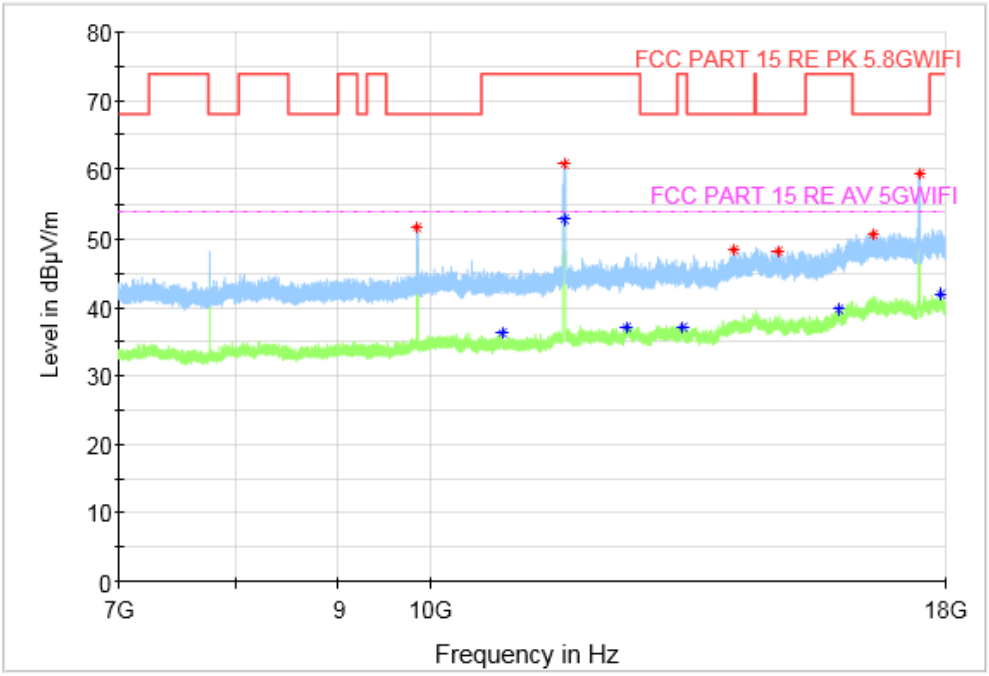

Fig. 83 Transmitter Spurious Emission (802. 11 n-HT20, CH165 5825MHz, 7 GHz-18 GHz), MIMO

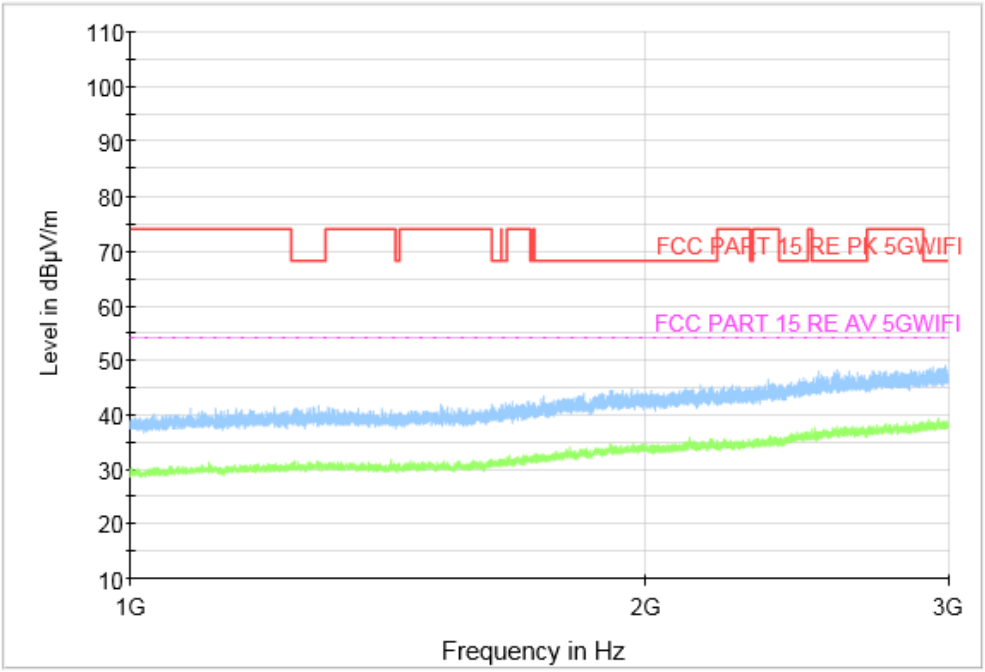

Fig. 84 Transmitter Spurious Emission (802.11n-HT40, CH38 5190MHz, 1 GHz-3 GHz), MIMO

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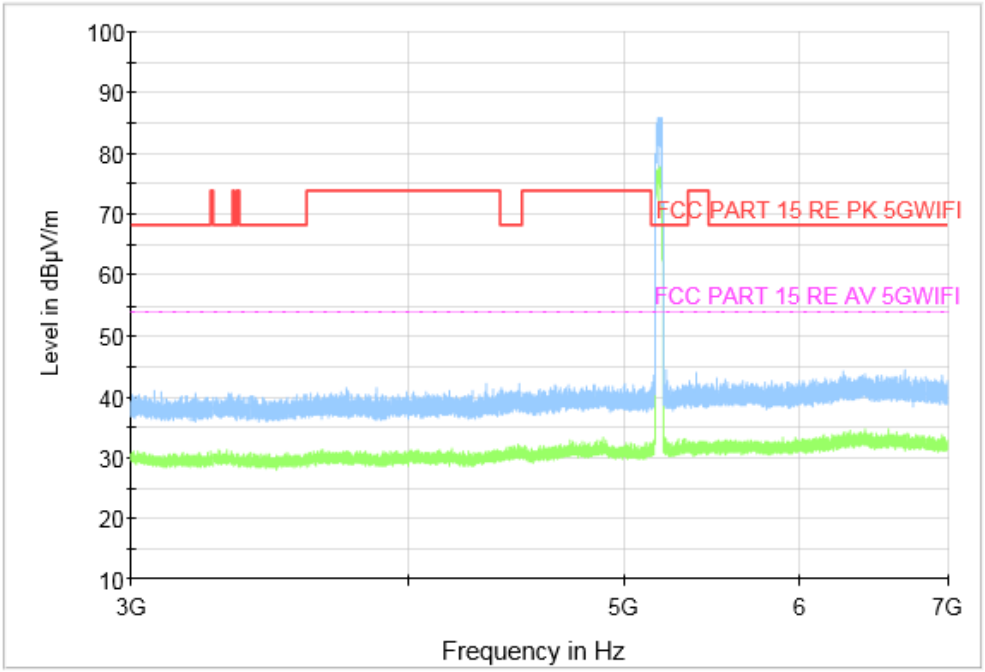

Fig. 85 Transmitter Spurious Emission (802.11n-HT40, CH38 5190MHz, 3 GHz-7 GHz), MIMO

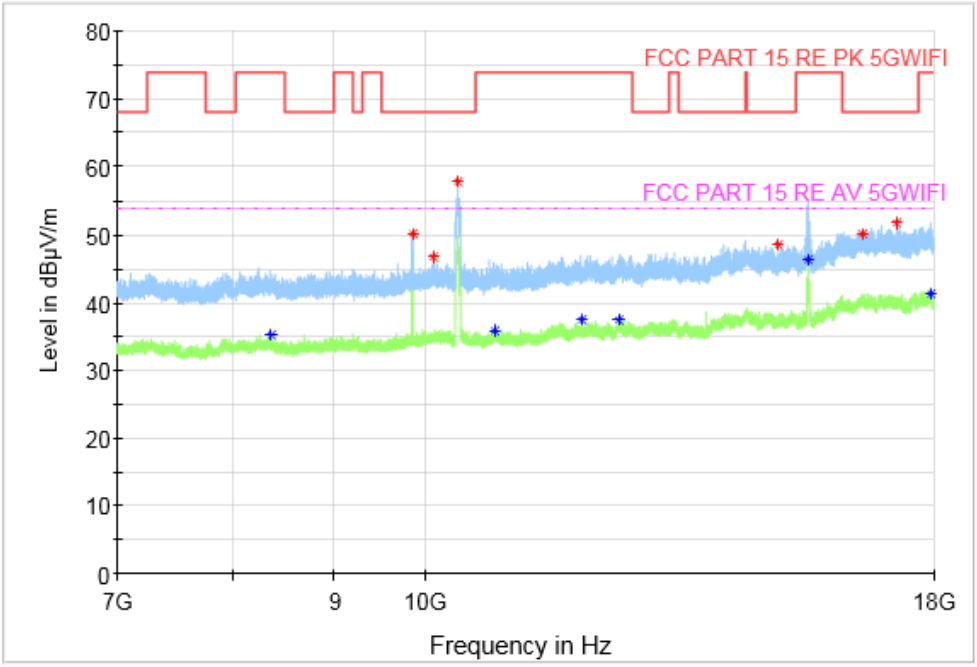

Fig. 86 Transmitter Spurious Emission (802.11n-HT40, CH38 5190MHz, 7 GHz-18 GHz), MIMO

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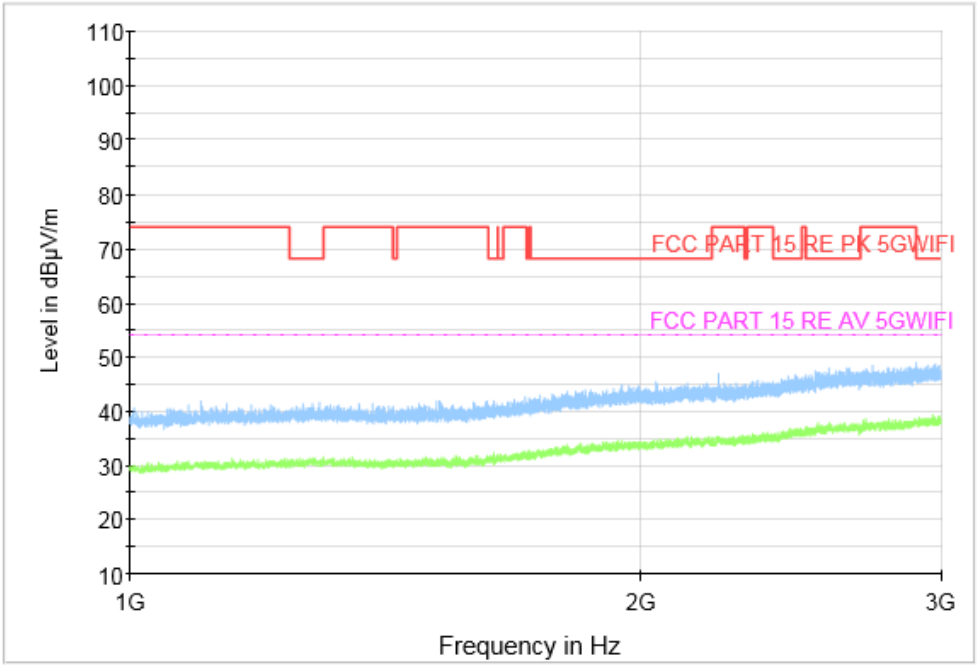

Fig. 87 Transmitter Spurious Emission (802.11n-HT40, CH46 5230MHz, 1 GHz-3 GHz), MIMO

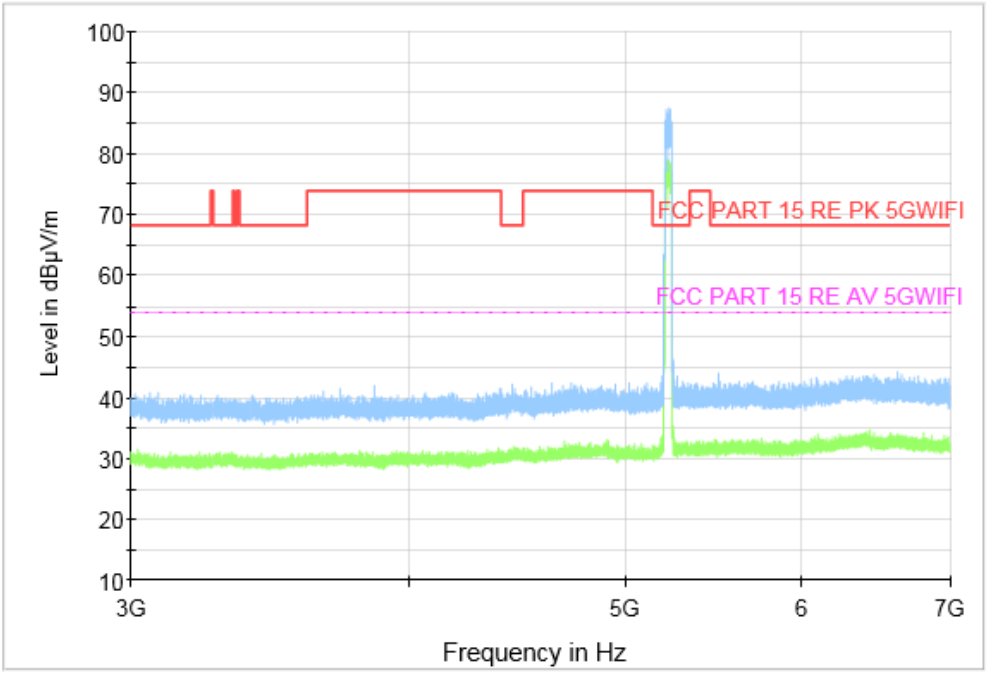

Fig. 88 Transmitter Spurious Emission (802.11n-HT40, CH46 5230MHz, 3 GHz-7 GHz), MIMO

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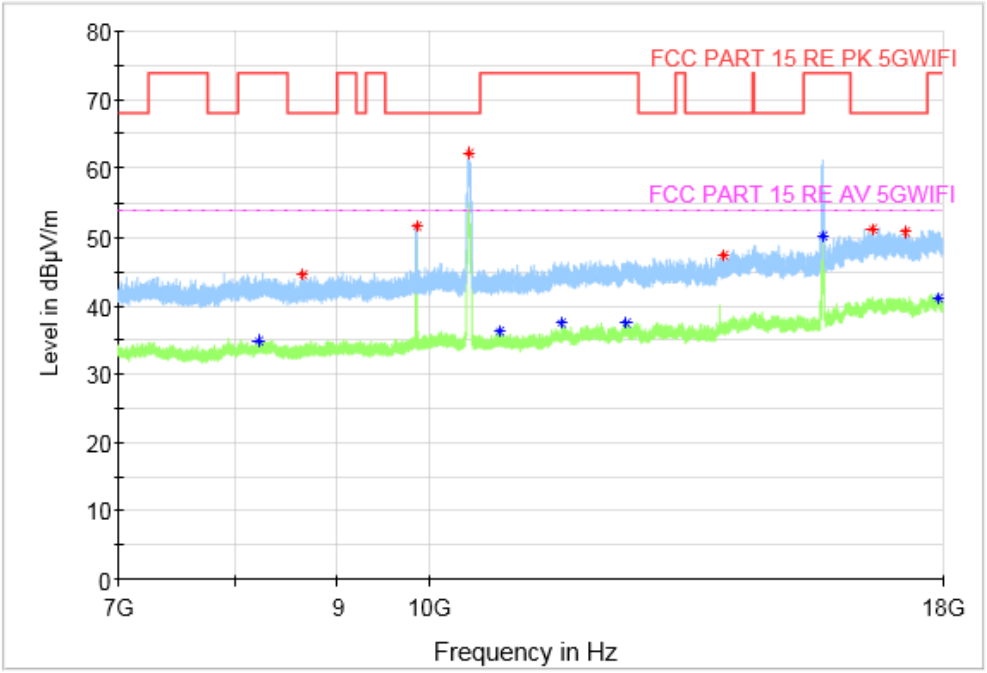

Fig. 89 Transmitter Spurious Emission (802.11n-HT40, CH46 5230MHz, 7 GHz-18 GHz), MIMO

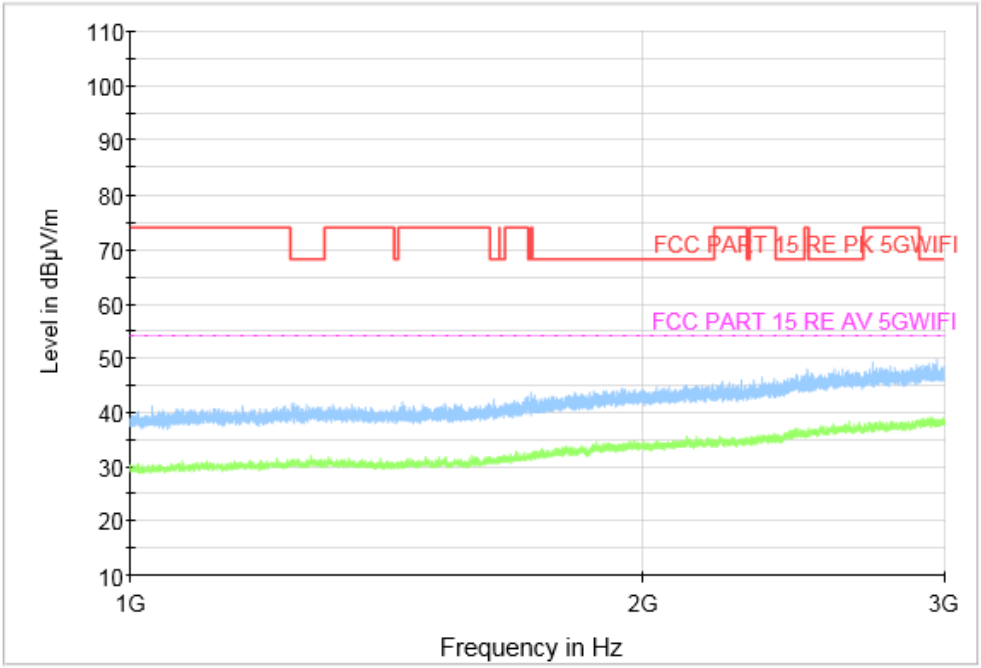

Fig. 90 Transmitter Spurious Emission (802. 11n-HT40, CH151 5755MHz, 1 GHz-3 GHz), MIMO

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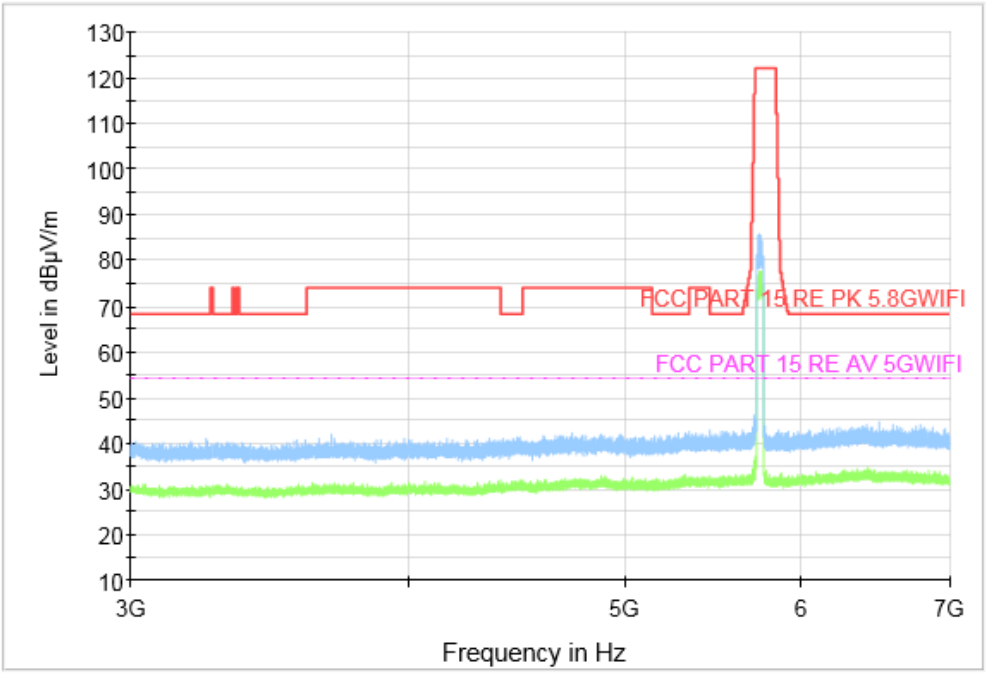

Fig. 91 Transmitter Spurious Emission (802. 11n-HT40, CH151 5755MHz, 3 GHz-7 GHz), MIMO

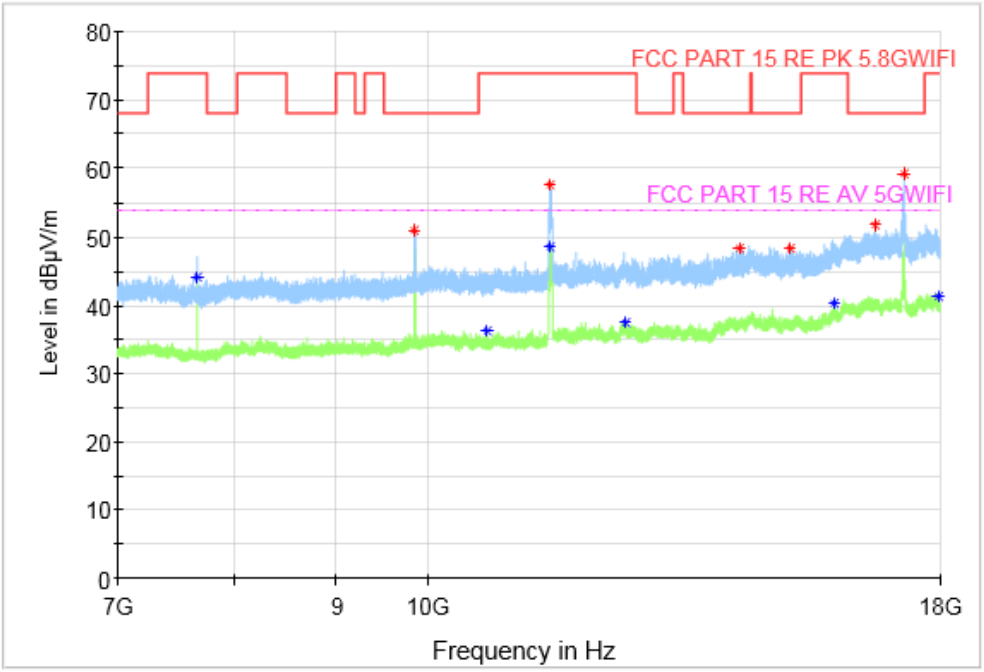

Fig. 92 Transmitter Spurious Emission (802. 11n-HT40, CH151 5755MHz, 7 GHz-18 GHz), MIMO

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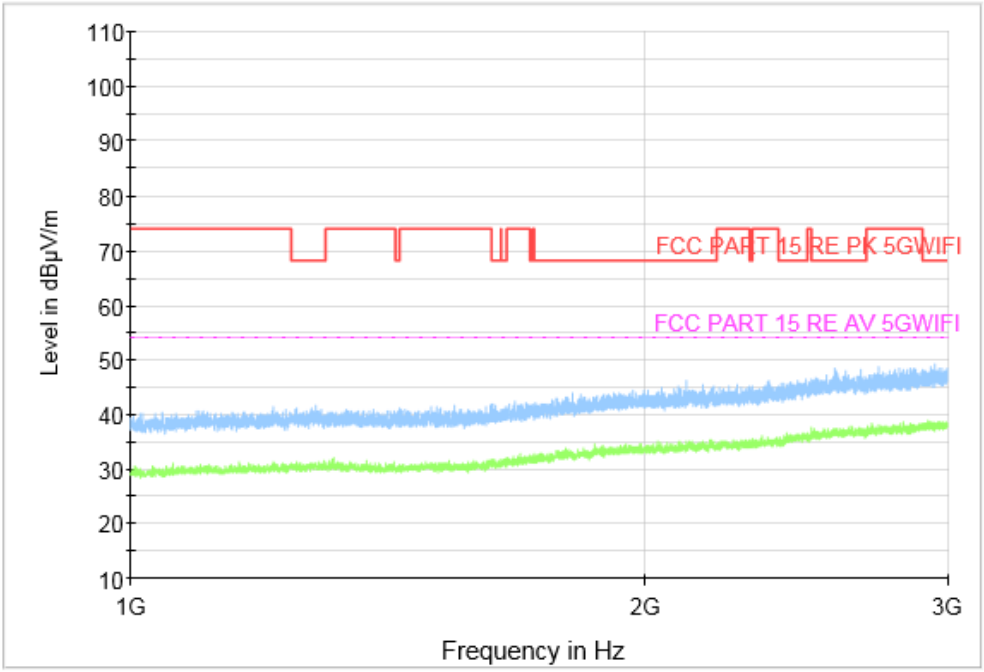

Fig. 93 Transmitter Spurious Emission (802. 11n-HT40, CH159 5795MHz, 1 GHz-3 GHz), MIMO

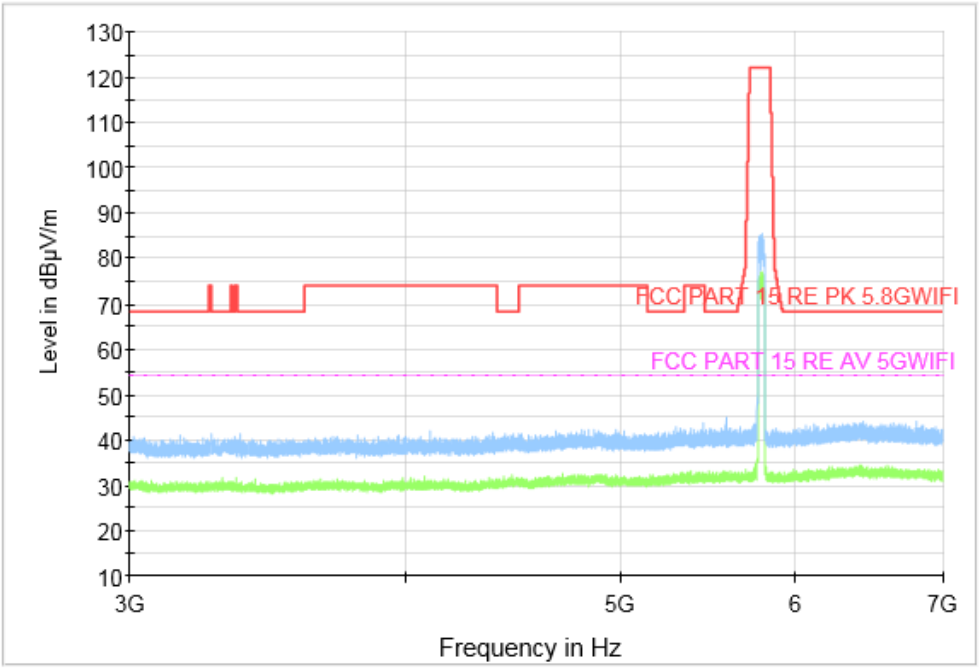

Fig. 94 Transmitter Spurious Emission (802. 11n-HT40, CH159 5795MHz, 3 GHz-7 GHz), MIMO

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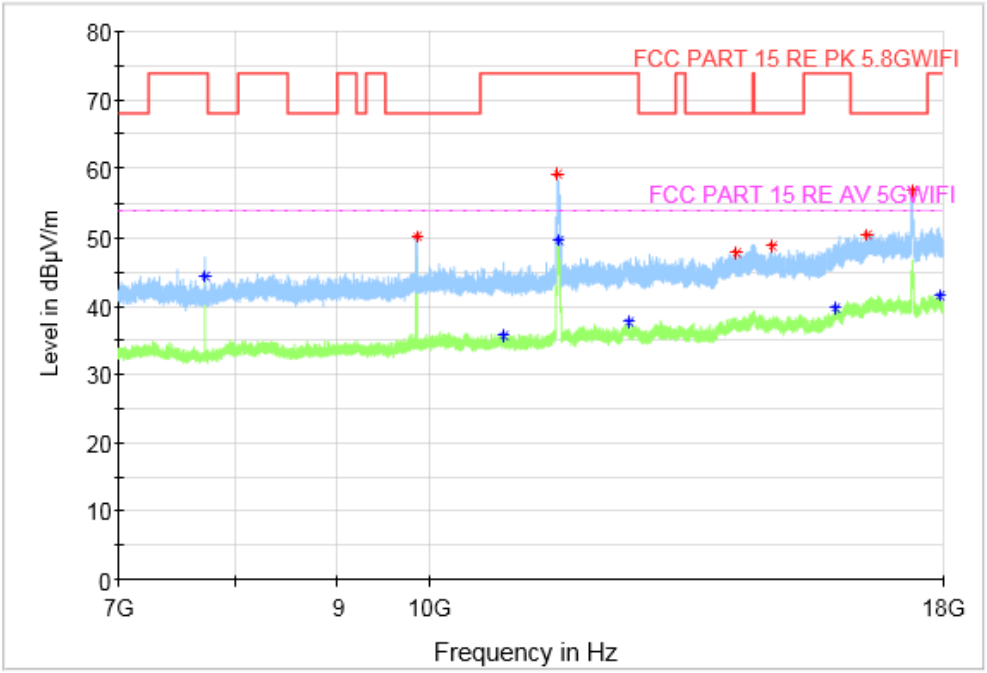

Fig. 95 Transmitter Spurious Emission (802. 11n-HT40, CH159 5795MHz, 7 GHz-18 GHz), MIMO

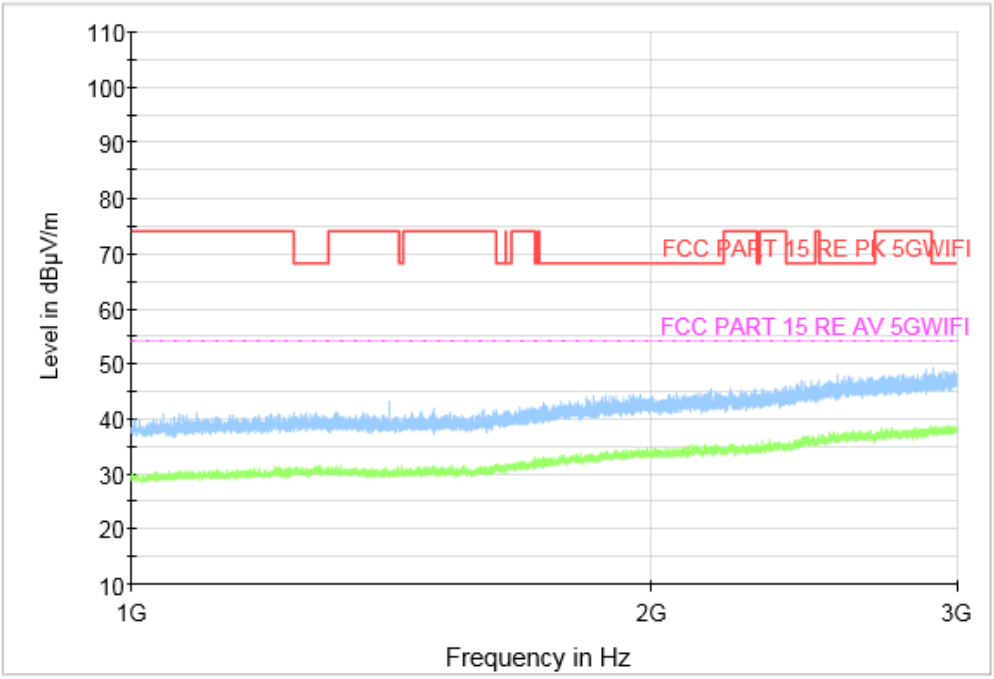

Fig. 96 Transmitter Spurious Emission (802. 11ac-VHT80, CH42 5210MHz, 1 GHz-3 GHz), MIMO

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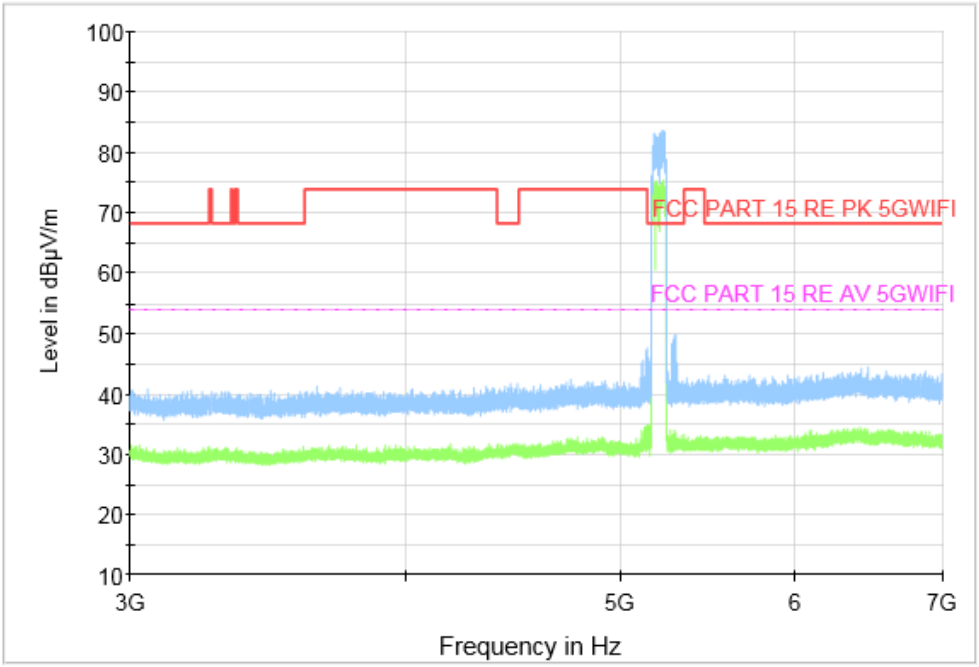

Fig. 97 Transmitter Spurious Emission (802. 11ac-VHT80, CH42 5210MHz, 3 GHz-7 GHz), MIMO

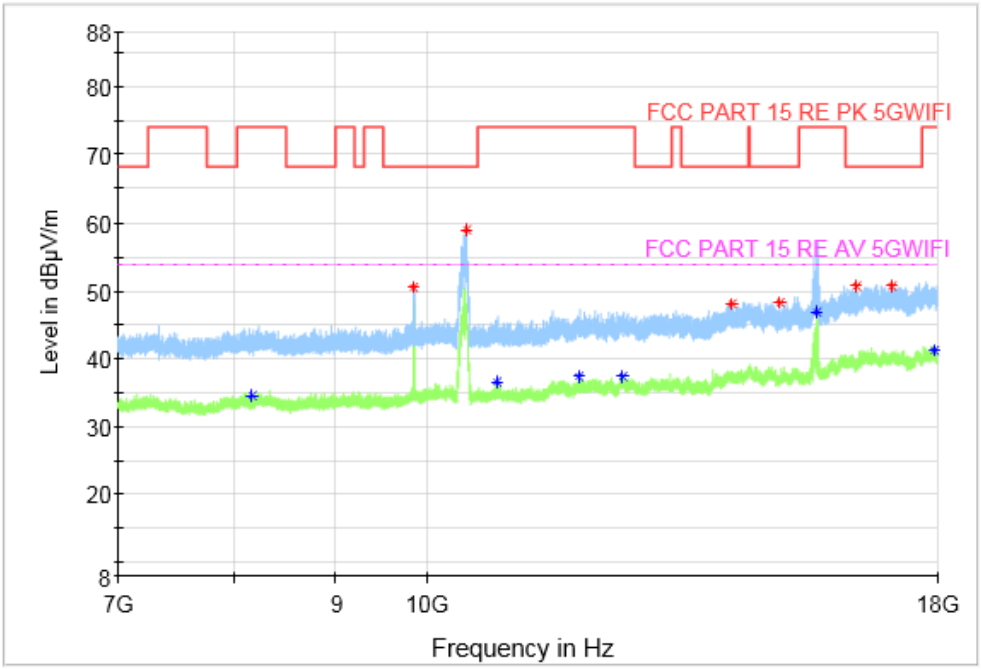

Fig. 98 Transmitter Spurious Emission (802. 11ac-VHT80, CH42 5210MHz, 7 GHz-18 GHz), MIMO

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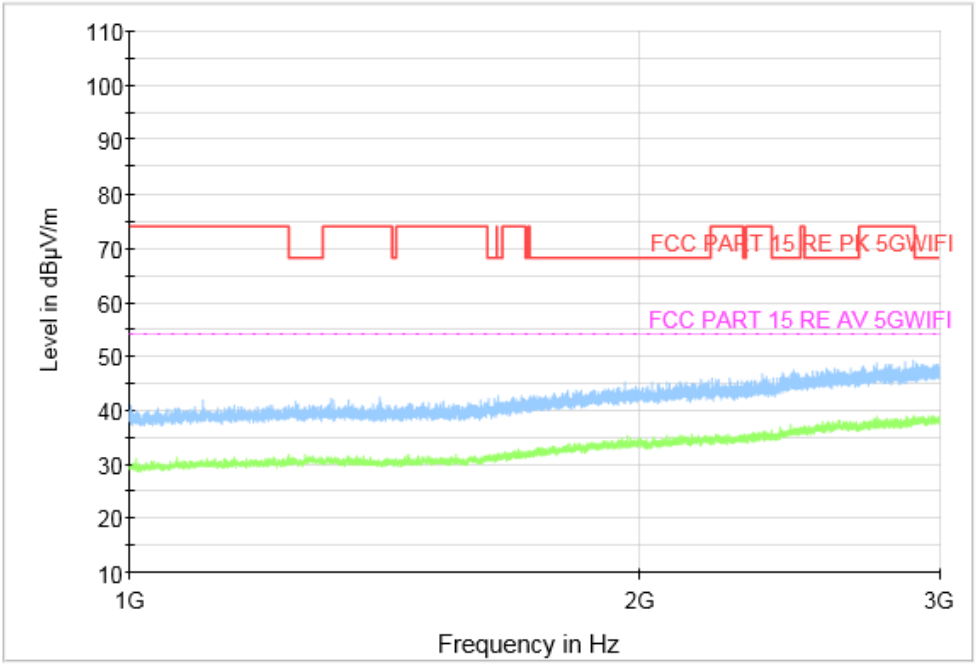

Fig. 99 Transmitter Spurious Emission (802. 11ac-VHT80, CH155 5775MHz, 1 GHz-3 GHz), MIMO

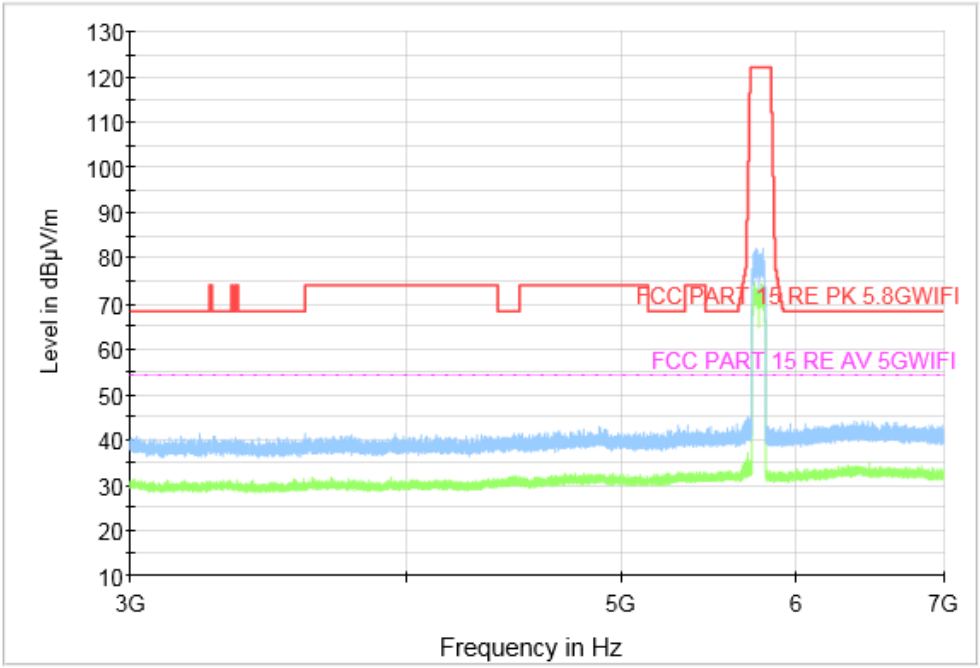

Fig. 100 Transmitter Spurious Emission (802. 11ac-VHT80, CH155 5775MHz, 3 GHz-7 GHz), MIMO

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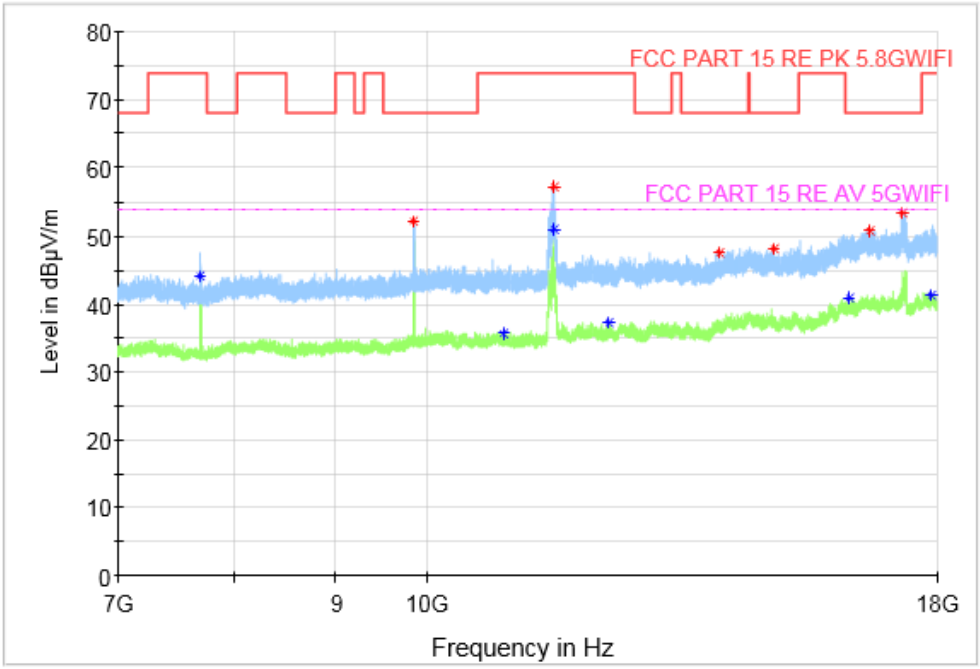

Fig. 101 Transmitter Spurious Emission (802. 11ac-VHT80, CH155 5775MHz, 7 GHz-18 GHz), MIMO

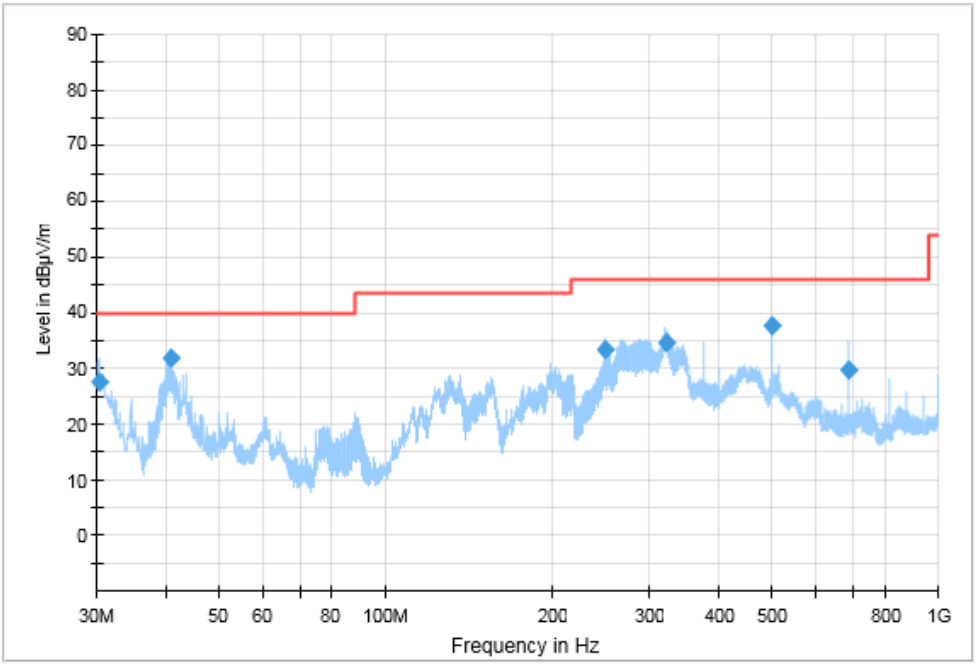

Fig. 102 Transmitter Spurious Emission (All channel, 30MHz~1GHz), MIMO

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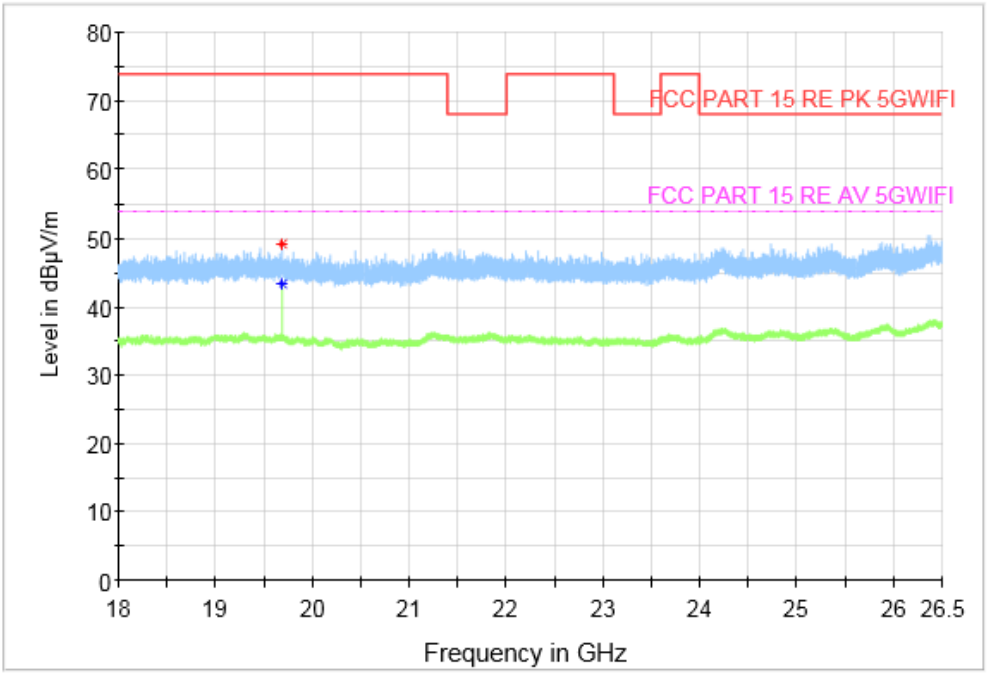

Fig. 103 Transmitter Spurious Emission (All channel, 18GHz~26.5GHz), MIMO

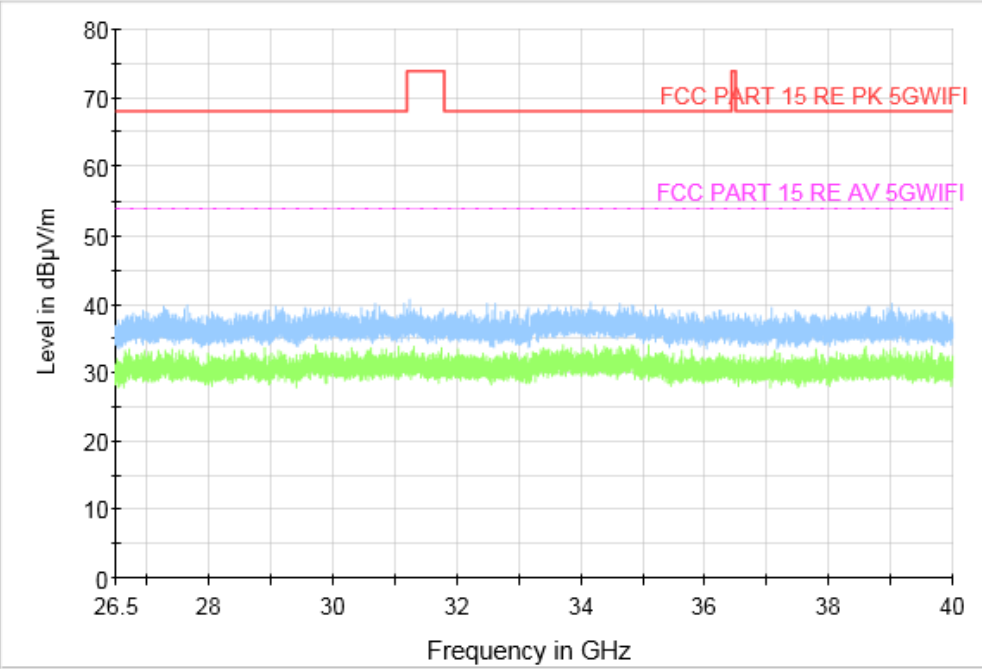

Fig. 104 Transmitter Spurious Emission (All channel, 26.5GHz~40GHz), MIMO

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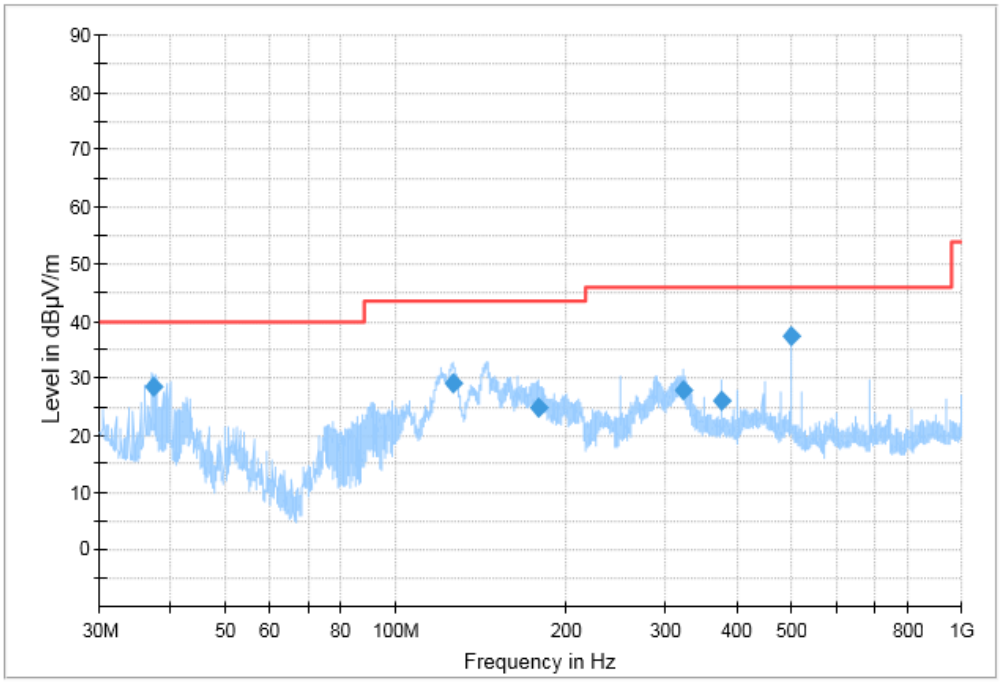

Fig. 105 Transmitter Spurious Emission (Co-located, 30MHz~1GHz)

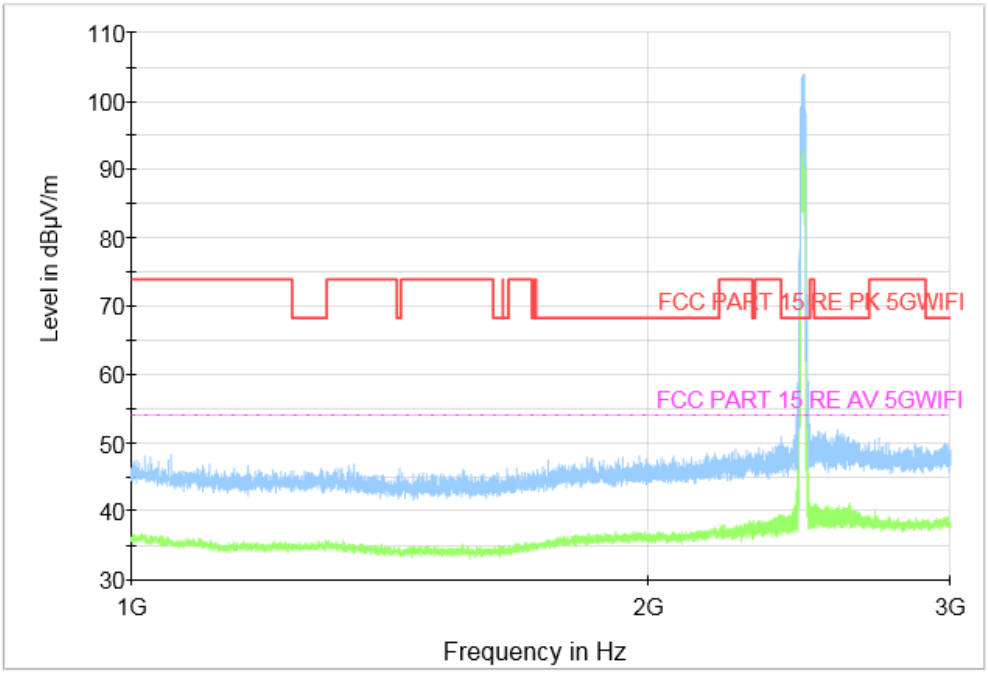

Fig. 106 Transmitter Spurious Emission (Co-located, 1 GHz-3 GHz)

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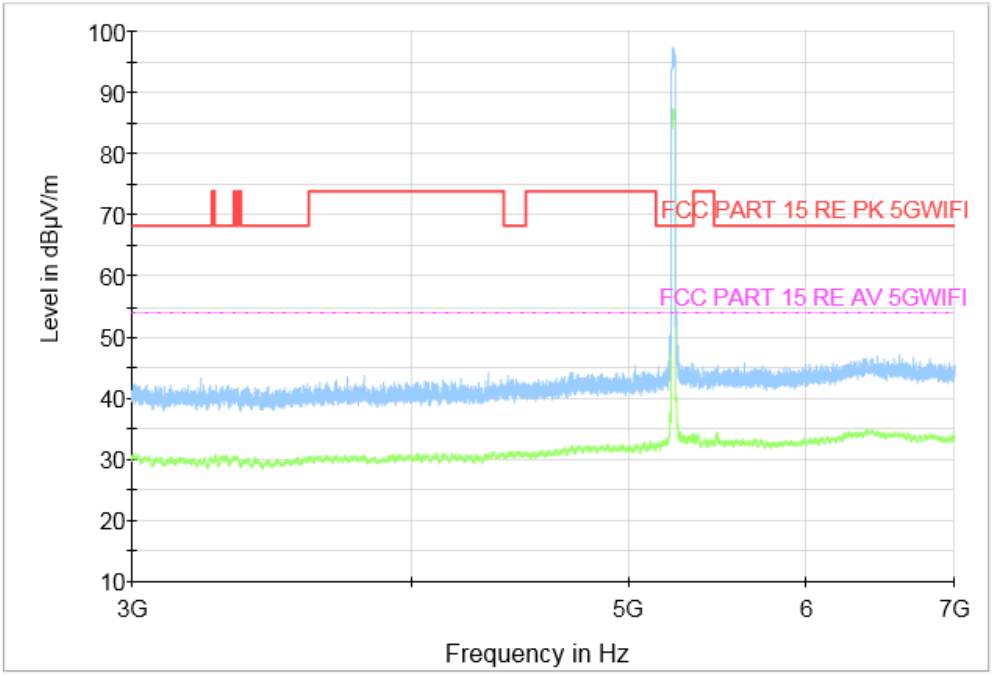

Fig. 107 Transmitter Spurious Emission (Co-located, 3 GHz-7 GHz)

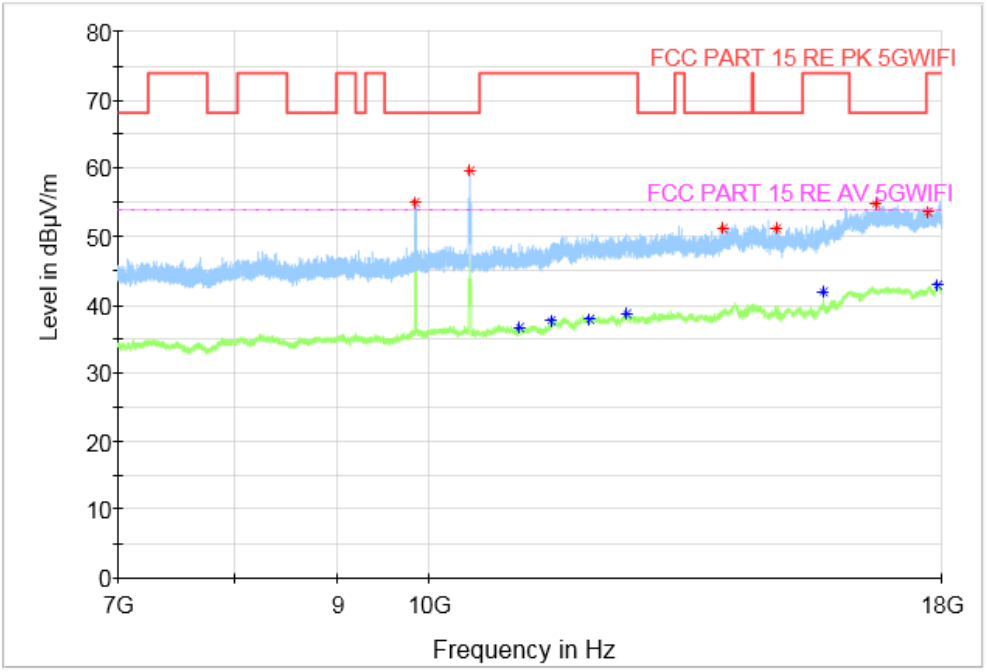

Fig. 108 Transmitter Spurious Emission (Co-located, 7 GHz-18 GHz)

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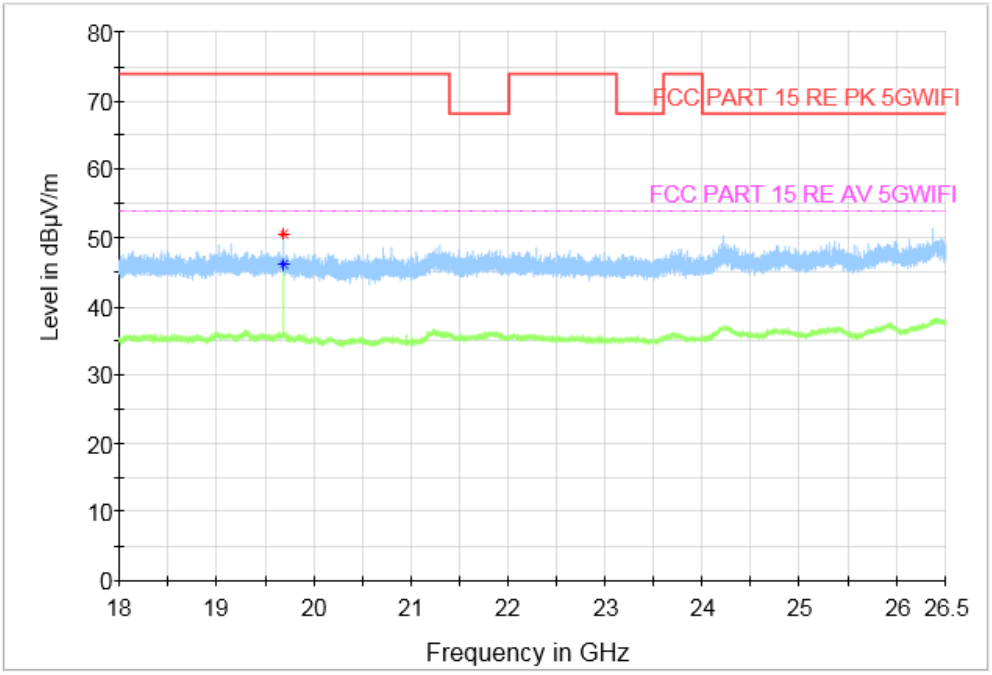

Fig. 109 Transmitter Spurious Emission (Co-located, 18GHz~26.5GHz)

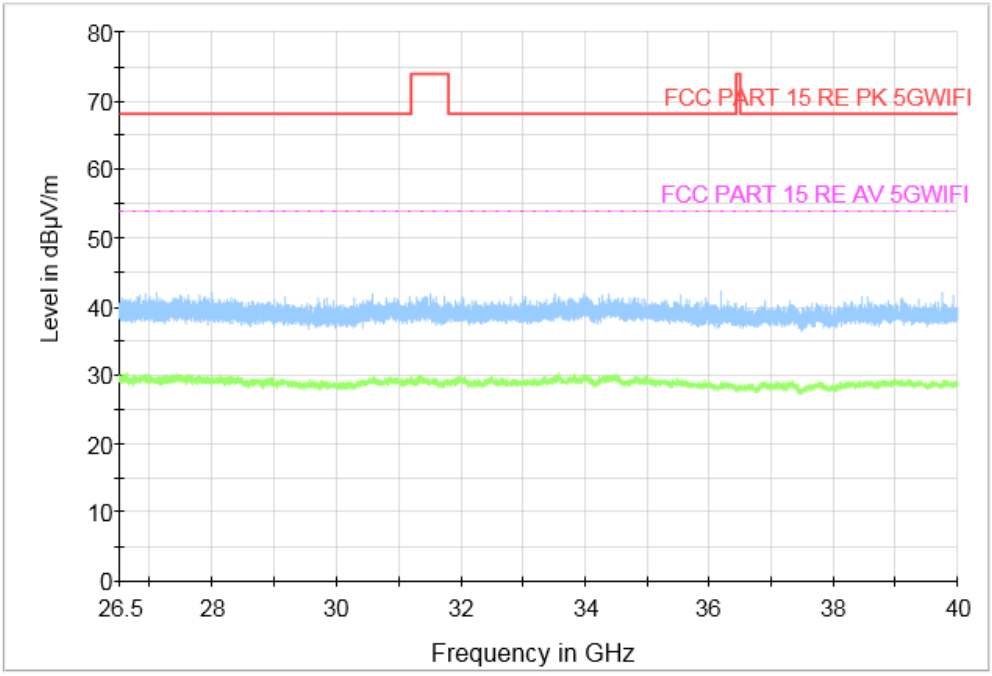

Fig. 110 Transmitter Spurious Emission (Co-located, 26.5GHz~40GHz)

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A.9. Radiated Spurious Emissions < 30MHz

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

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

The measurement is made according to KDB 789033, KDB 662911.

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.111	**P**

MIMO:

Mode	Frequency Range	Test Results	Conclusion
All Channel	9 kHz ~30 MHz	Fig.112	**P**

Radiated Emissions for Co-located:

Mode	Frequency Range	Test Results	Conclusion
All Channel	9 kHz ~30 MHz	Fig.113	**P**

Conclusion: PASS

Test graphs as below:

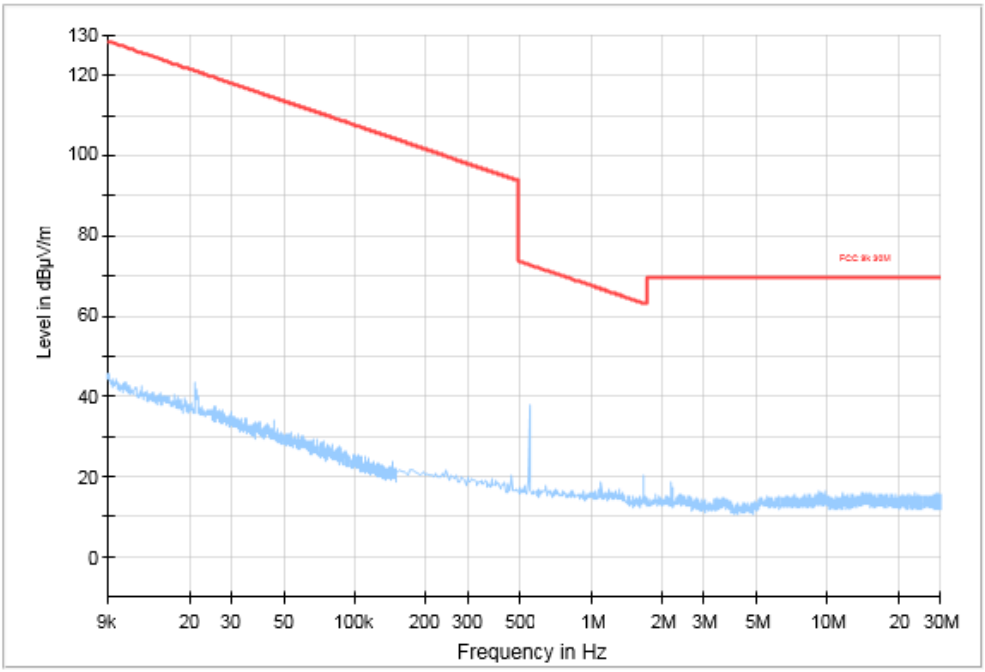

Fig. 111 Radiated Spurious Emission (All Channel, 9 kHz ~30 MHz),SISO

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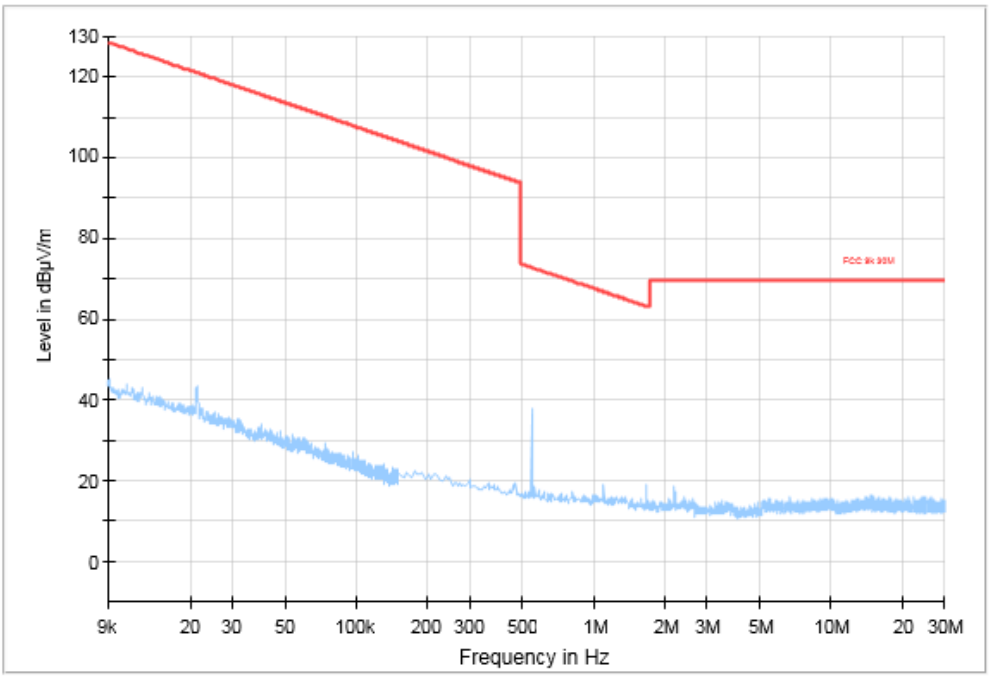

Fig. 112 Radiated Spurious Emission (All Channel, 9 kHz ~30 MHz),MIMO

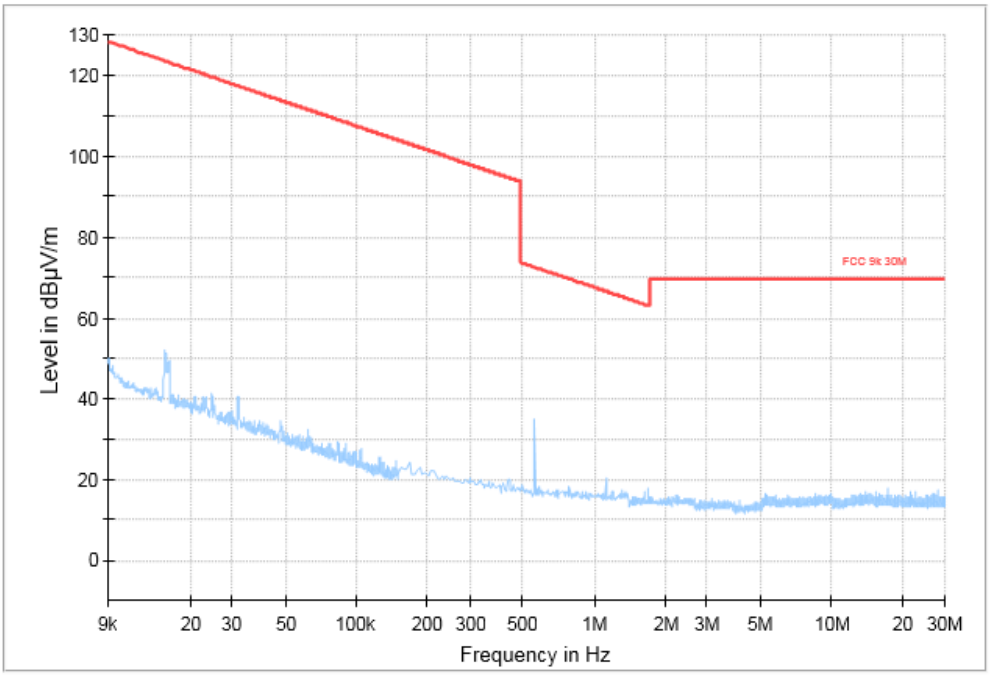

Fig. 113 Radiated Spurious Emission (All Channel, 9 kHz ~30 MHz), Co-located

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A.10. AC Power Line Conducted Emission

Test Condition:

Voltage（V）	Frequency（Hz）
120	60

Measurement Result and limit:

RLAN (Quasi-peak Limit)-AE1

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)		Conclusion
		Traffic	Idle	
0.15 to 0.5	66 to 56	Fig.114	Fig.115	**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)-AE1

Frequency range (MHz)	Average-peak Limit (dBμV)	Result (dBμV)		Conclusion
		Traffic	Idle	
0.15 to 0.5	56 to 46	Fig 107	Fig 108	**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:

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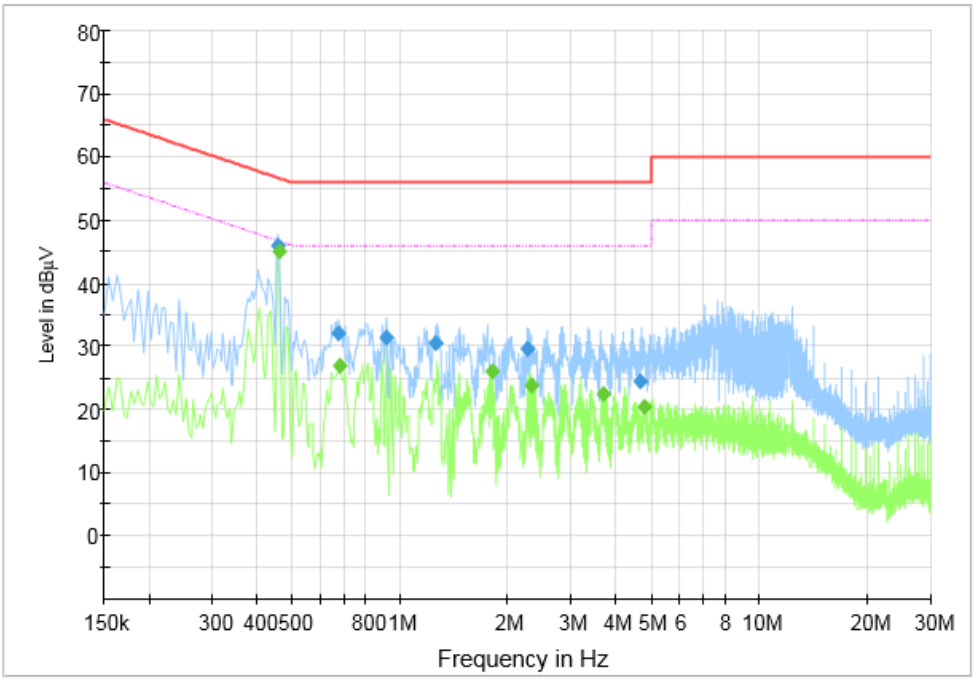

Fig. 114 AC Power line Conducted Emission (802.11n, AE1, 120V)

Measurement Result: Quasi Peak

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.456	46.05	56.77	10.72	L1	ON	9.6
0.672	32.08	56.00	23.92	L1	ON	9.6
0.912	31.45	56.00	24.55	L1	ON	9.7
1.260	30.46	56.00	25.54	L1	ON	9.7
2.260	29.60	56.00	26.40	N	ON	9.7
4.668	24.47	56.00	31.53	N	ON	9.7

Measurement Result: Average

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.460	45.08	46.69	1.62	L1	ON	9.6
0.680	27.00	46.00	19.00	L1	ON	9.6
1.808	26.03	46.00	19.97	L1	ON	9.7
2.316	23.91	46.00	22.10	L1	ON	9.7
3.668	22.44	46.00	23.56	L1	ON	9.7
4.768	20.44	46.00	25.56	L1	ON	9.7

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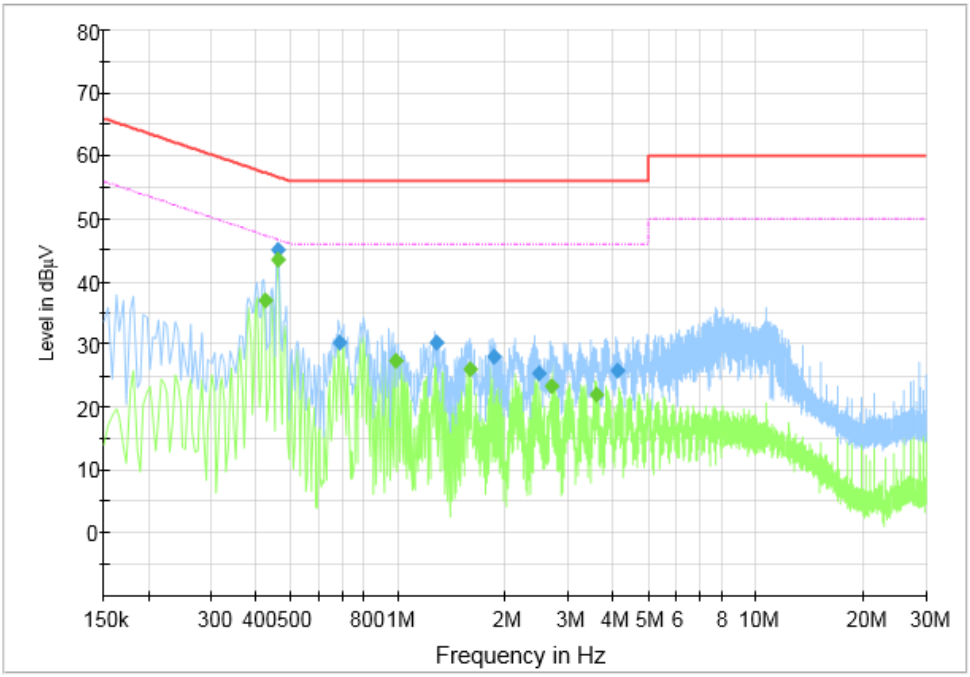

Fig. 115 AC Power line Conducted Emission (Idle, AE1, 120V)

Measurement Result: Quasi Peak

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.460	45.07	56.69	11.62	L1	ON	9.6
0.684	30.38	56.00	25.62	N	ON	9.6
1.284	30.28	56.00	25.72	L1	ON	9.7
1.844	28.05	56.00	27.95	N	ON	9.7
2.472	25.33	56.00	30.67	L1	ON	9.7
4.108	25.83	56.00	30.17	N	ON	9.7

Measurement Result: Average

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.424	37.13	47.37	10.24	L1	ON	9.6
0.460	43.41	46.69	3.28	L1	ON	9.6
0.984	27.31	46.00	18.69	L1	ON	9.7
1.584	26.10	46.00	19.90	L1	ON	9.7
2.688	23.32	46.00	22.68	L1	ON	9.7
3.572	21.96	46.00	24.04	L1	ON	9.7

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A.11. Frequency Stability

Manufacturers ensured the EUT meet the requirement of frequency stability, such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

Measurement Condition:

T min = 0˚C T nom = 25˚C T max = 40˚C

Measurement Result:

Mode	Channel	Condition		Frequency	Conclusion
802.11a	5180 MHz (CH36)	T nom	V nom	5179.9875	**P**
		T max	V nom	5179.9784	**P**
		T min	V nom	5179.9859	**P**
802.11n-HT20	5180 MHz (CH36)	T nom	V nom	5179.9894	**P**
		T max	V nom	5179.9798	**P**
		T min	V nom	5179.9849	**P**
802.11n HT40	5550 MHz (CH110)	T nom	V nom	5549.9253	**P**
		T max	V nom	5549.9681	**P**
		T min	V nom	5549.9677	**P**
802.11ac VHT80	5690 MHz (CH138)	T nom	V nom	5689.9871	**P**
		T max	V nom	5689.9678	**P**
		T min	V nom	5689.9764	**P**

A.12. 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*****

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