

8.7.7.2 IEEE 802.11g (CDD) mode

Full Spectrum

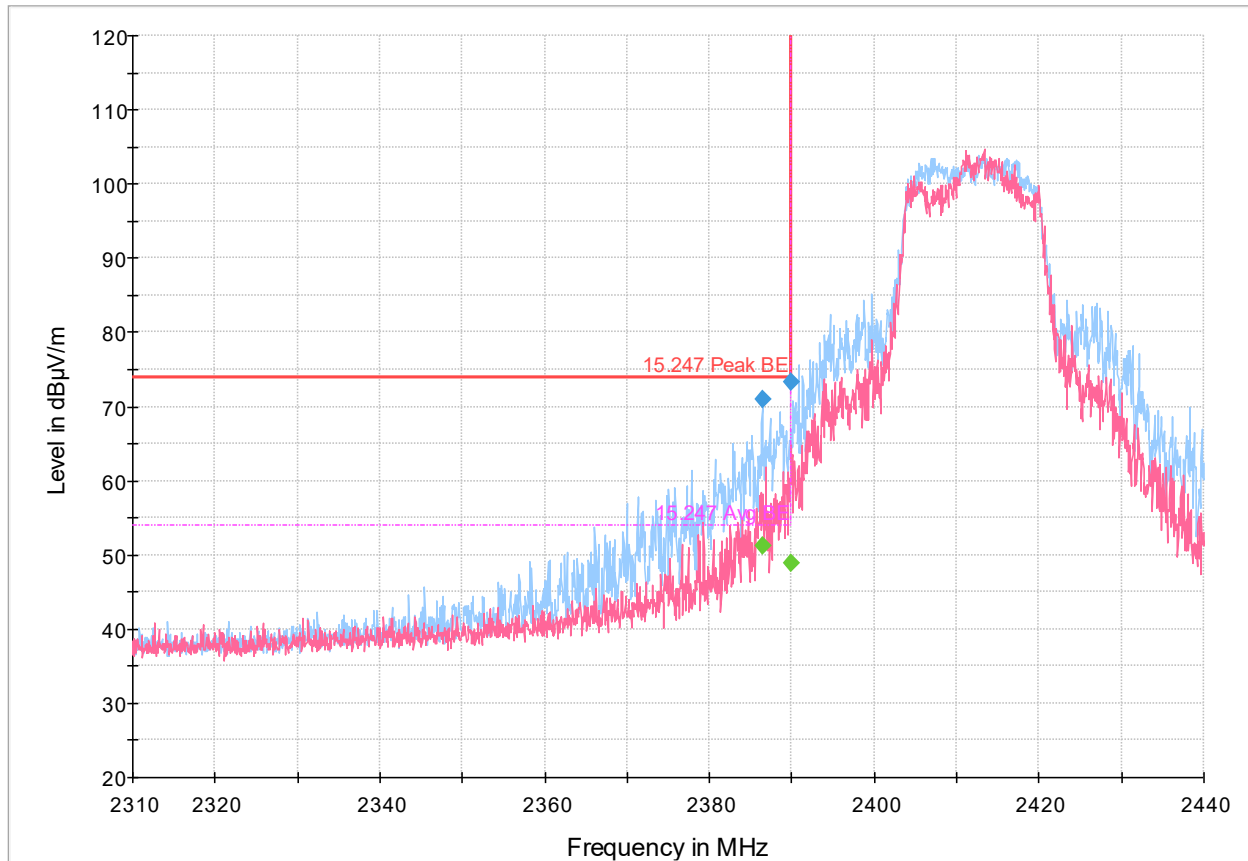


Figure 8.7-123: Radiated emissions spectral plot (2.31 GHz - 2.44 GHz)

Table 8.7-6: Radiated emissions results

Frequency (MHz)	MaxPeak (dBμV/m)	CAverage (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2386.440000	---	51.13	53.90	2.77	5000.0	1000.000	289.0	H	300.0	-4.4
2386.440000	70.96	---	73.90	2.94	5000.0	1000.000	289.0	H	300.0	-4.4
2390.000000	---	48.82	53.90	5.08	5000.0	1000.000	291.0	H	310.0	-4.4
2390.000000	73.26	---	73.90	0.64	5000.0	1000.000	291.0	H	310.0	-4.4

Notes: ¹ Field strength (dBμV/m) = receiver/spectrum analyzer value (dBμV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

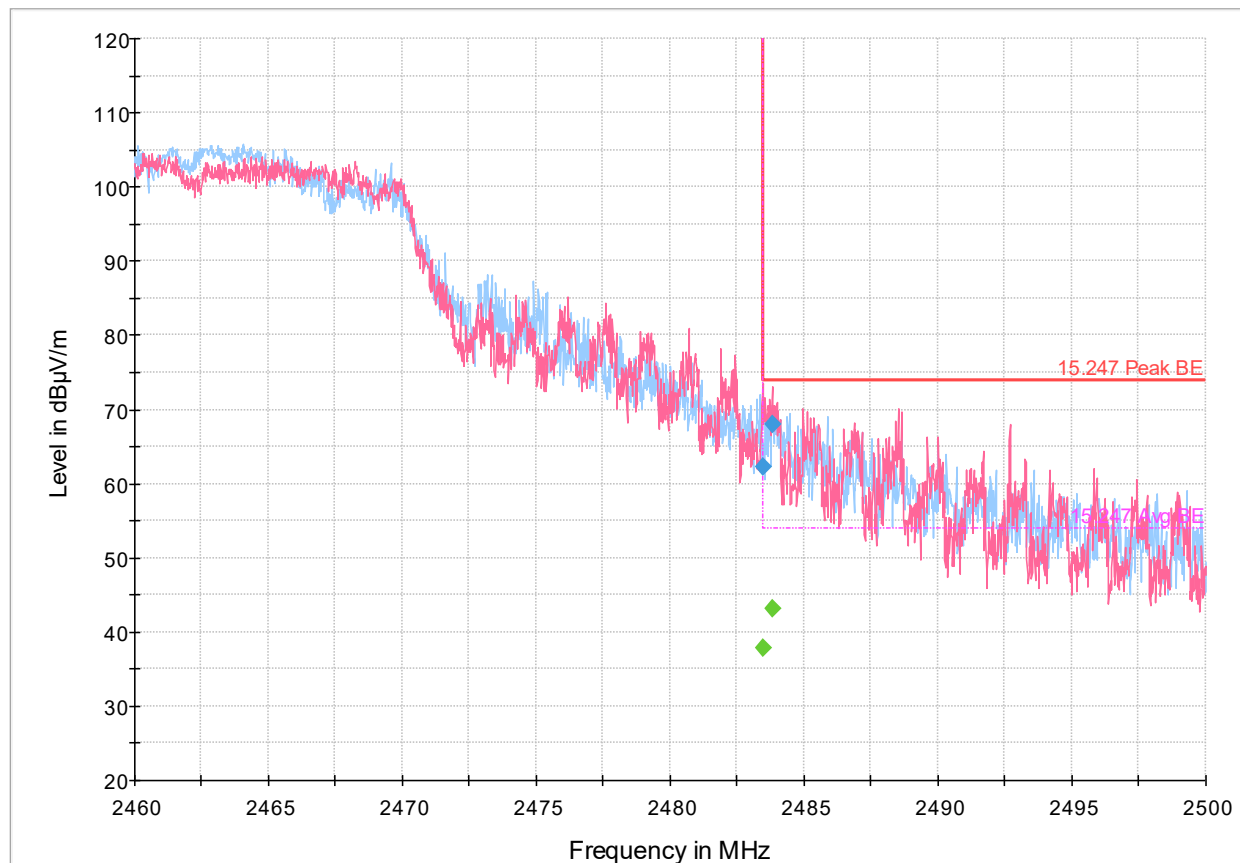


Figure 8.7-124: Radiated emissions spectral plot (2.46 GHz - 2.5 GHz)

Table 8.7-7: Radiated emissions results

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.500000	---	37.92	53.90	15.98	5000.0	1000.000	361.0	V	310.0	-4.0
2483.500000	62.27	---	73.90	11.63	5000.0	1000.000	361.0	V	310.0	-4.0
2483.800000	---	43.05	53.90	10.85	5000.0	1000.000	112.0	V	198.0	-4.0
2483.800000	68.08	---	73.90	5.82	5000.0	1000.000	112.0	V	198.0	-4.0

Notes: ¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

8.7.7.3 IEEE 802.11n HT20 (CDD) mode

Full Spectrum

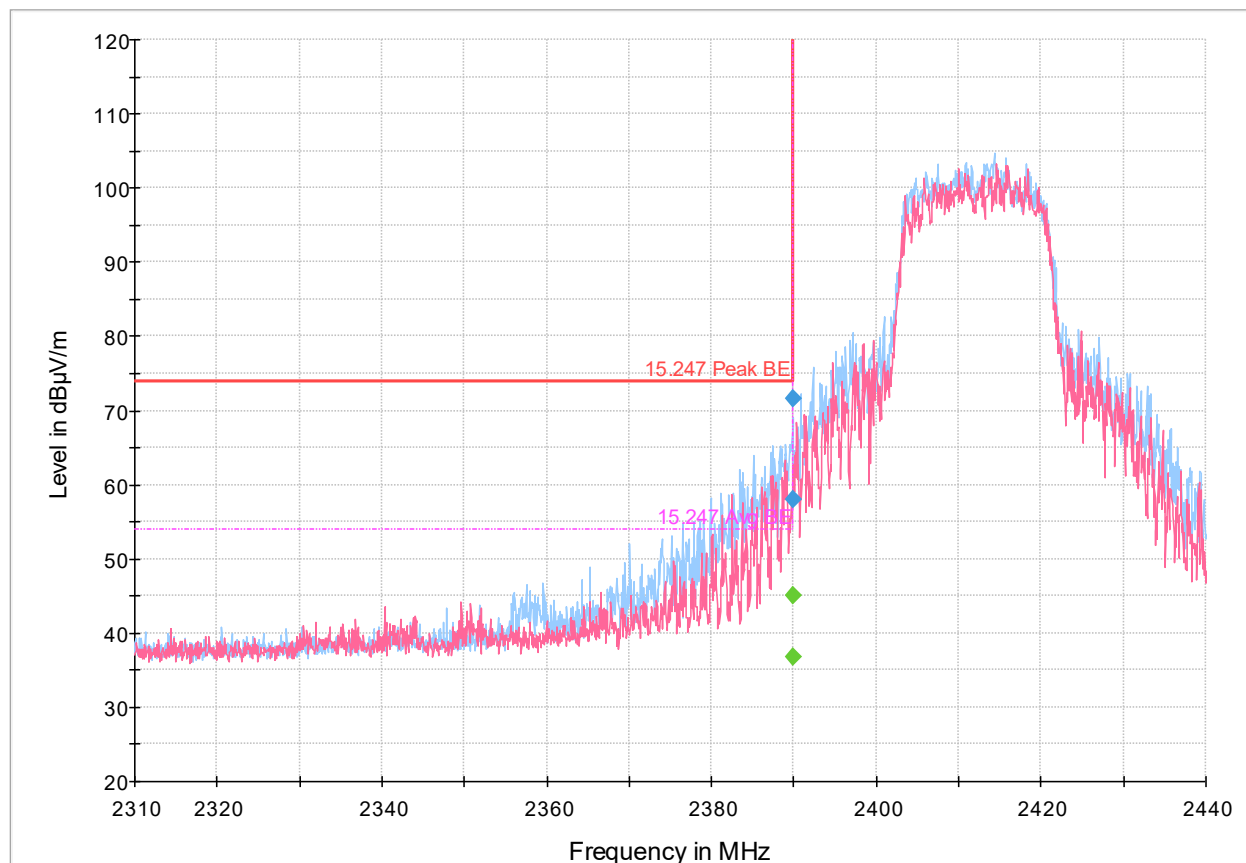


Figure 8.7-125: Radiated emissions spectral plot (2.31 GHz - 2.44 GHz)

Table 8.7-8: Radiated emissions results

Frequency (MHz)	MaxPeak (dBμV/m)	CAverage (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2389.885000	71.50	---	73.90	2.40	5000.0	1000.000	291.0	H	309.0	-4.4
2389.885000	---	45.04	53.90	8.86	5000.0	1000.000	291.0	H	309.0	-4.4
2390.000000	57.98	---	73.90	15.92	5000.0	1000.000	232.0	H	283.0	-4.4
2390.000000	---	36.76	53.90	17.14	5000.0	1000.000	232.0	H	283.0	-4.4

Notes: ¹ Field strength (dBμV/m) = receiver/spectrum analyzer value (dBμV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

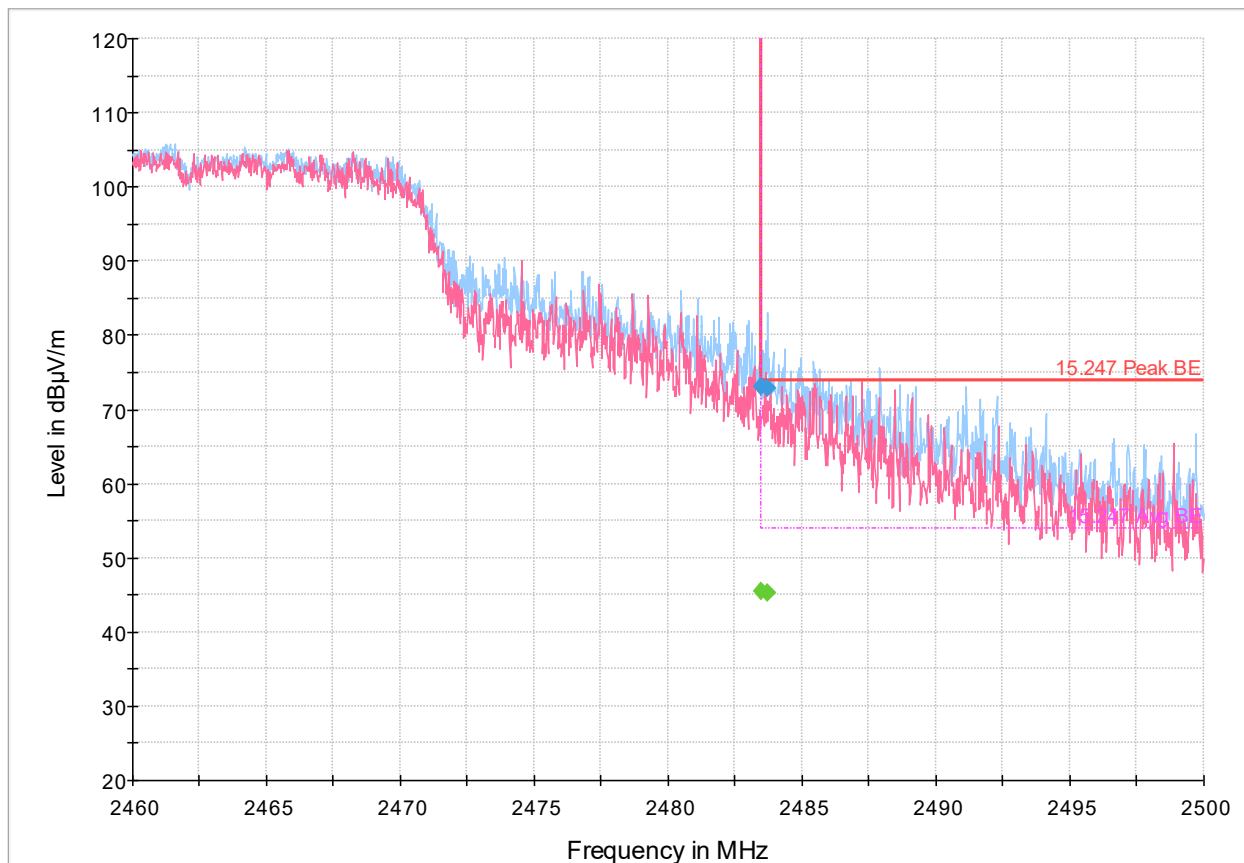


Figure 8.7-126: Radiated emissions spectral plot (2.46 GHz - 2.5 GHz)

Table 8.7-9: Radiated emissions results

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.500000	73.08	---	73.90	0.82	5000.0	1000.000	391.0	V	205.0	-4.0
2483.500000	---	45.39	53.90	8.51	5000.0	1000.000	391.0	V	205.0	-4.0
2483.700000	72.90	---	73.90	1.00	5000.0	1000.000	390.0	V	207.0	-4.0
2483.700000	---	45.28	53.90	8.62	5000.0	1000.000	390.0	V	207.0	-4.0

Notes: ¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

8.7.7.4 IEEE 802.11n HT40 (CDD) mode

Full Spectrum

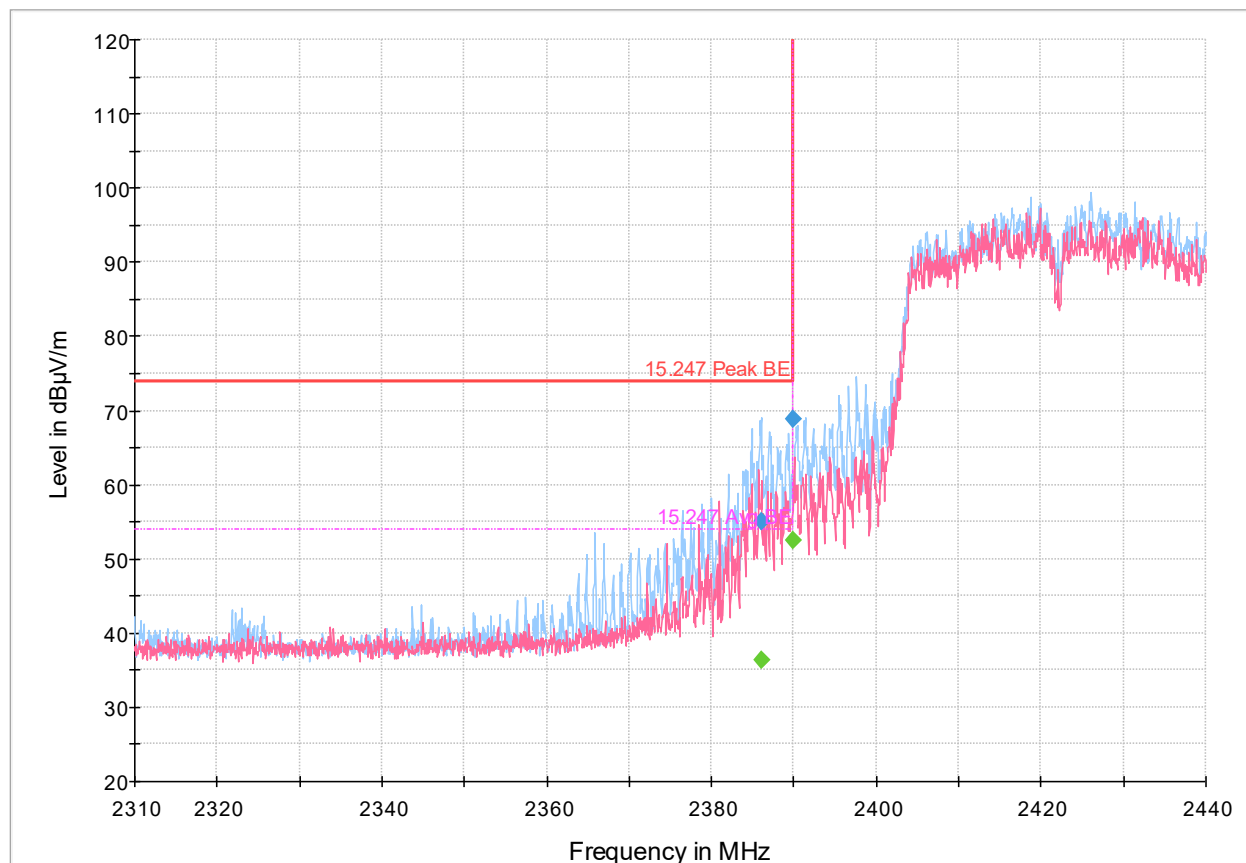


Figure 8.7-127: Radiated emissions spectral plot (2.31 GHz - 2.44 GHz)

Table 8.7-10: Radiated emissions results

Frequency (MHz)	MaxPeak (dBμV/m)	CAverage (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2386.050000	55.04	---	73.90	18.86	5000.0	1000.000	291.0	V	318.0	-4.4
2386.050000	---	36.26	53.90	17.64	5000.0	1000.000	291.0	V	318.0	-4.4
2390.000000	68.76	---	73.90	5.14	5000.0	1000.000	282.0	H	304.0	-4.4
2390.000000	---	52.58	53.90	1.32	5000.0	1000.000	282.0	H	304.0	-4.4

Notes: ¹ Field strength (dBμV/m) = receiver/spectrum analyzer value (dBμV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

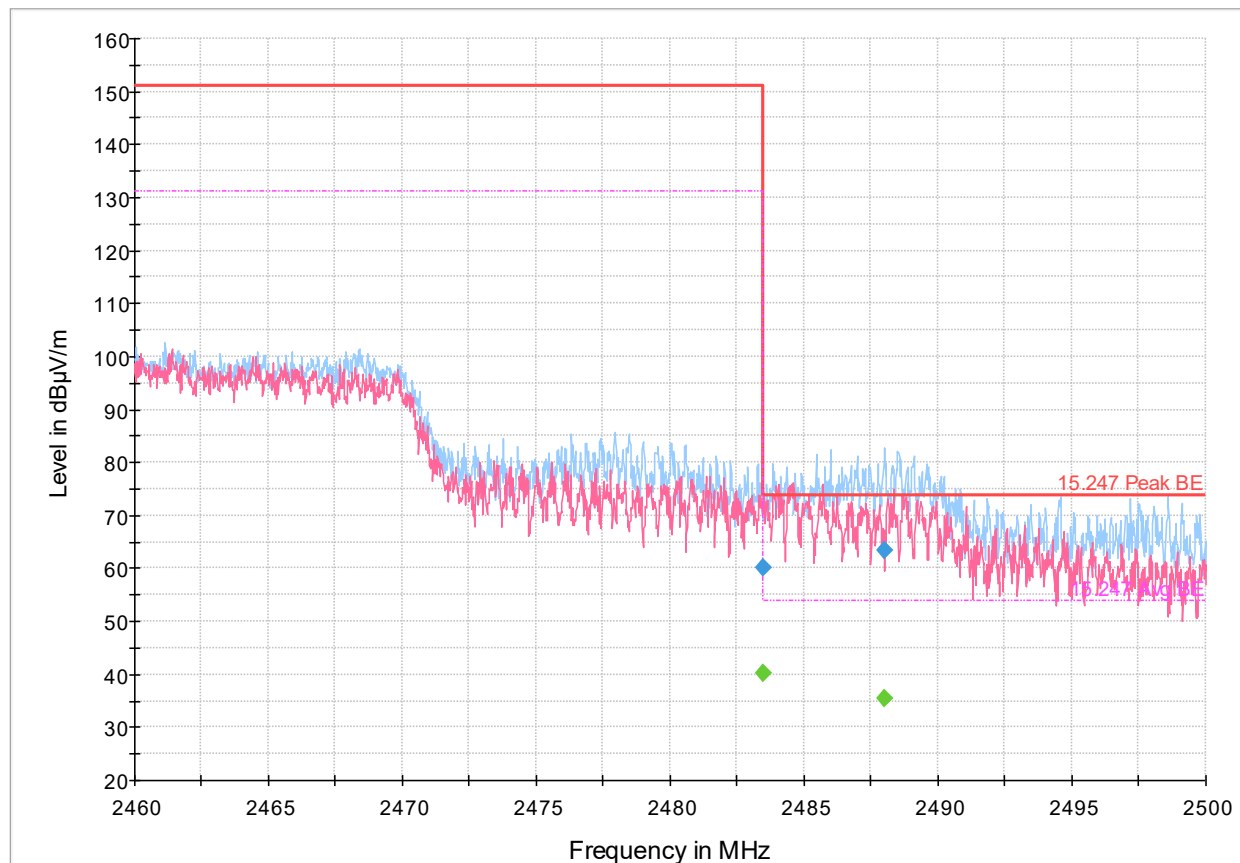


Figure 8.7-128: Radiated emissions spectral plot (2.46 GHz - 2.5 GHz)

Table 8.7-11: Radiated emissions results

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.500000	60.25	---	73.90	13.65	5000.0	1000.000	309.0	V	306.0	-4.0
2483.500000	---	40.28	53.90	13.62	5000.0	1000.000	309.0	V	306.0	-4.0
2488.000000	63.47	---	73.90	10.43	5000.0	1000.000	245.0	V	239.0	-4.0
2488.000000	---	35.35	53.90	18.55	5000.0	1000.000	245.0	V	239.0	-4.0

Notes: ¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

8.7.8 Test data – Radiated spurious emissions < 1 GHz

8.7.8.1 IEEE 802.11n HT40 (CDD) mode

Full Spectrum

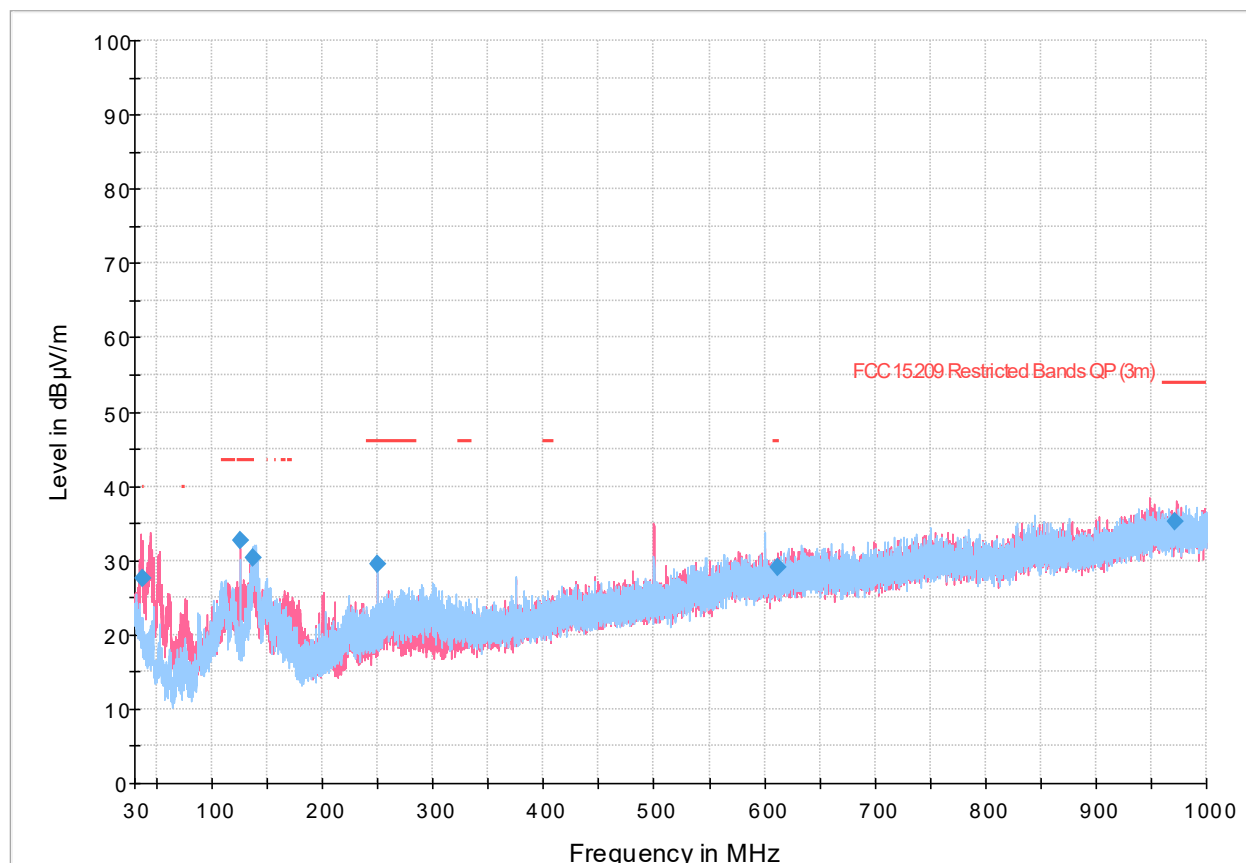


Figure 8.7-129: Radiated emissions spectral plot (30 MHz - 1 GHz)

Table 8.7-12: Radiated emissions results

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
37.026000	27.56	---	---	5000.0	120.000	117.0	V	135.0	20.9
125.015333	32.63	43.52	10.89	5000.0	120.000	104.0	V	171.0	18.4
137.418667	30.32	43.52	13.20	5000.0	120.000	214.0	H	102.0	18.7
250.016000	29.52	46.02	16.50	5000.0	120.000	138.0	H	56.0	20.2
612.500000	29.17	46.02	16.85	5000.0	120.000	214.0	V	129.0	29.4
971.878000	35.30	53.98	18.68	5000.0	120.000	148.0	V	246.0	35.5

Notes: ¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

8.7.9 Test data – Radiated spurious emissions > 1 GHz

8.7.9.1 IEEE 802.11b (CDD) mode

Full Spectrum

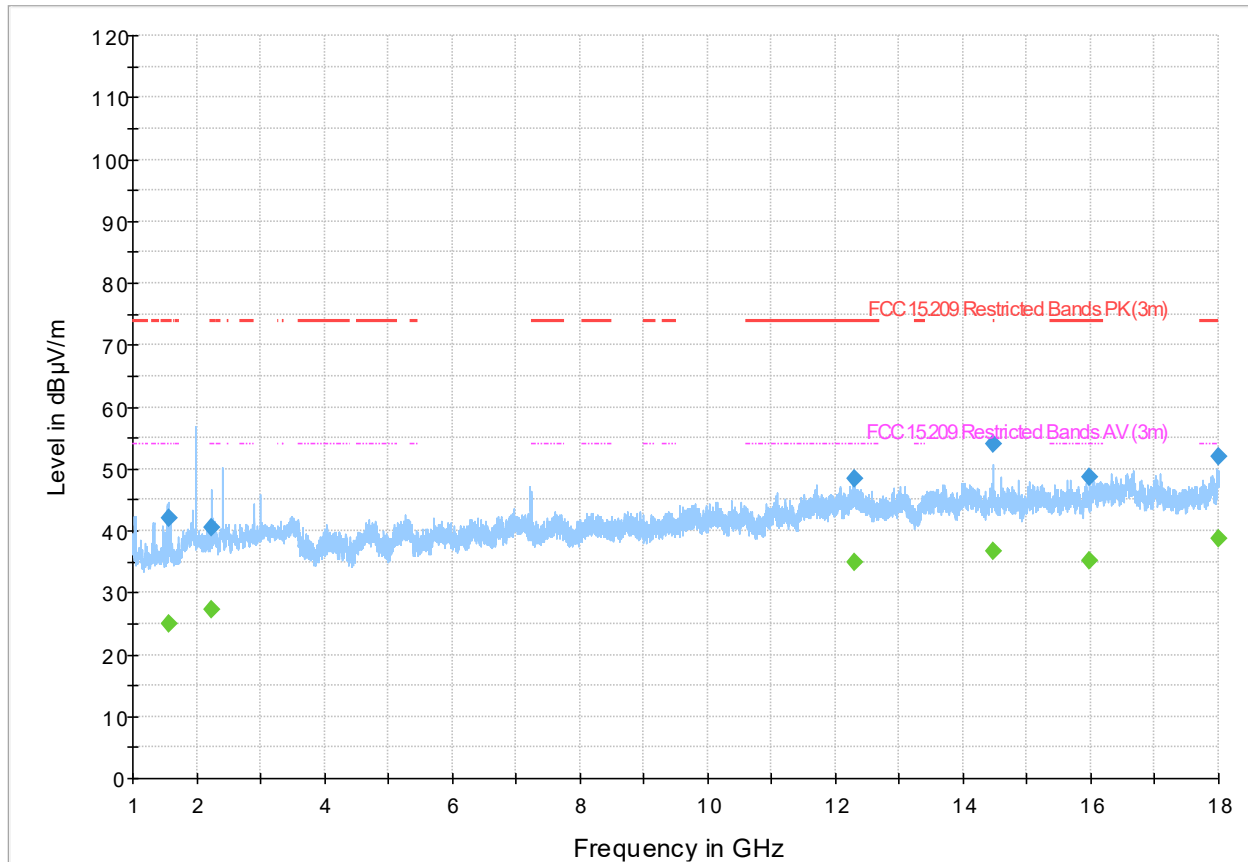


Figure 8.7-130: Radiated emissions spectral plot (1 GHz - 18 GHz), 2412 MHz

Table 8.7-13: Radiated emissions results, 2412 MHz

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1559.650000	---	25.05	53.98	28.93	5000.0	1000.000	156.0	H	274.0	-9.6
1559.650000	42.00	---	73.98	31.98	5000.0	1000.000	156.0	H	274.0	-9.6
2245.700000	40.49	---	73.98	33.49	5000.0	1000.000	248.0	V	257.0	-5.4
2245.700000	---	27.27	53.98	26.71	5000.0	1000.000	248.0	V	257.0	-5.4
12303.200000	48.45	---	73.98	25.53	5000.0	1000.000	400.0	H	254.0	15.0
12303.200000	---	34.92	53.98	19.06	5000.0	1000.000	400.0	H	254.0	15.0
14472.250000	---	36.73	53.98	17.25	5000.0	1000.000	164.0	H	282.0	16.9
14472.250000	53.98	---	73.98	20.00	5000.0	1000.000	164.0	H	282.0	16.9
15969.100000	48.59	---	73.98	25.39	5000.0	1000.000	392.0	V	152.0	21.4
15969.100000	---	35.04	53.98	18.94	5000.0	1000.000	392.0	V	152.0	21.4
17992.150000	---	38.85	53.98	15.13	5000.0	1000.000	120.0	H	357.0	24.8
17992.150000	52.06	---	73.98	21.92	5000.0	1000.000	120.0	H	357.0	24.8

Notes: ¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

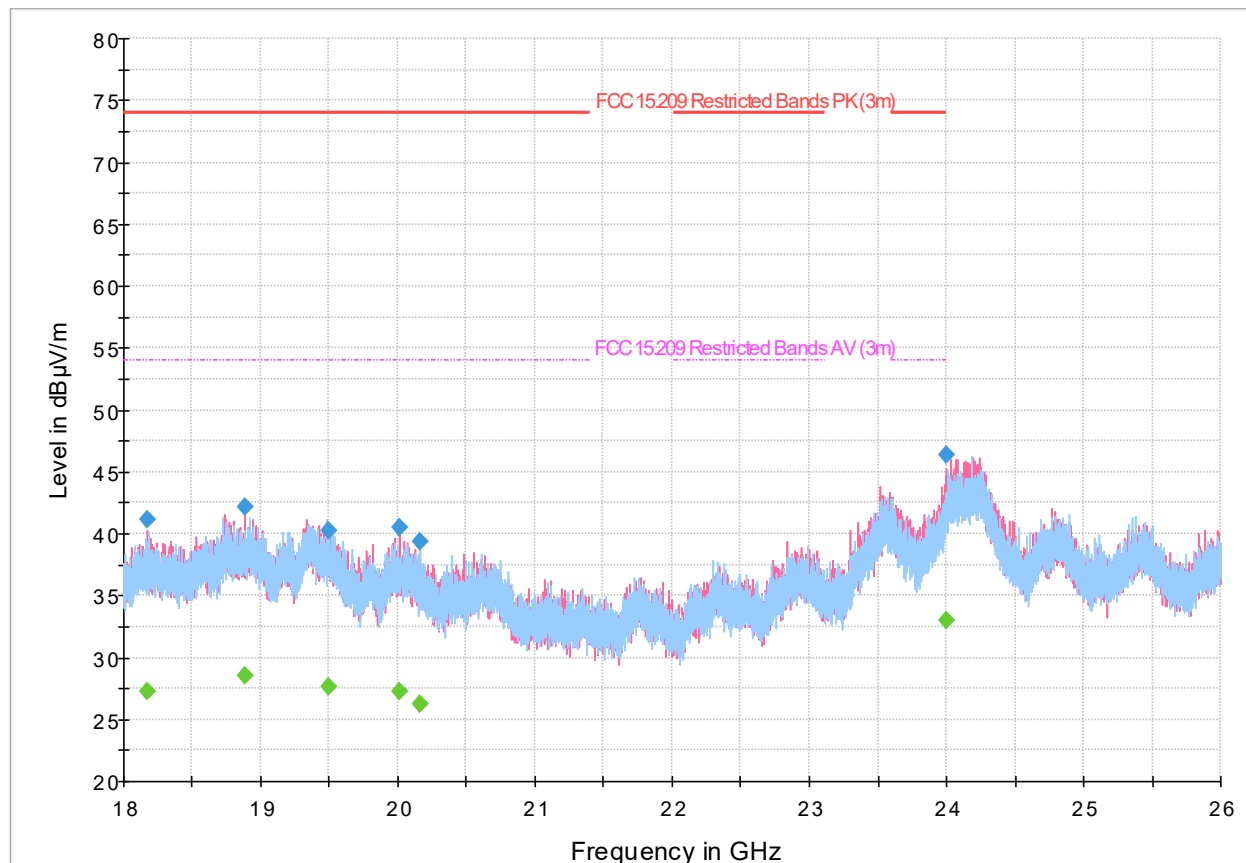


Figure 8.7-131: Radiated emissions spectral plot (18 GHz - 26 GHz), 2412 MHz

Table 8.7-14: Radiated emissions results, 2412 MHz

Frequency (MHz)	MaxPeak (dBμV/m)	CAverage (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18177.500000	41.17	---	73.98	32.81	5000.0	1000.000	110.0	V	147.0	15.6
18177.500000	---	27.32	53.98	26.66	5000.0	1000.000	110.0	V	147.0	15.6
18885.700000	42.19	---	73.98	31.79	5000.0	1000.000	373.0	V	169.0	15.9
18885.700000	---	28.50	53.98	25.48	5000.0	1000.000	373.0	V	169.0	15.9
19492.300000	40.29	---	73.98	33.69	5000.0	1000.000	225.0	H	225.0	16.4
19492.300000	---	27.62	53.98	26.36	5000.0	1000.000	225.0	H	225.0	16.4
20007.700000	---	27.26	53.98	26.72	5000.0	1000.000	214.0	V	264.0	16.5
20007.700000	40.56	---	73.98	33.42	5000.0	1000.000	214.0	V	264.0	16.5
20161.700000	39.42	---	73.98	34.56	5000.0	1000.000	107.0	H	318.0	16.6
20161.700000	---	26.23	53.98	27.75	5000.0	1000.000	107.0	H	318.0	16.6
23994.500000	---	32.97	53.98	21.01	5000.0	1000.000	301.0	V	112.0	27.1
23994.500000	46.39	---	73.98	27.59	5000.0	1000.000	301.0	V	112.0	27.1

Notes: ¹ Field strength (dBμV/m) = receiver/spectrum analyzer value (dBμV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

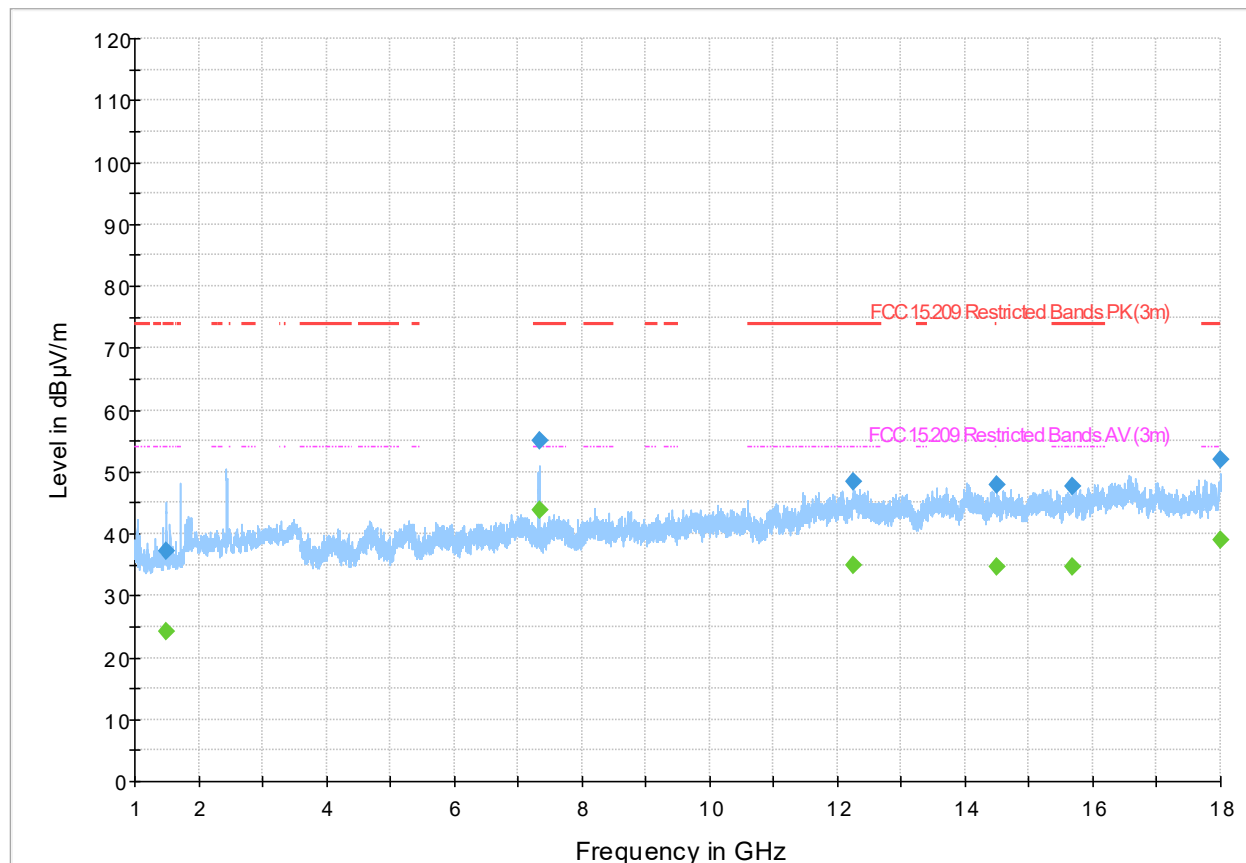


Figure 8.7-132: Radiated emissions spectral plot (1 GHz - 18 GHz), 2442 MHz

Table 8.7-15: Radiated emissions results, 2442 MHz

Frequency (MHz)	MaxPeak (dBμV/m)	CAverage (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1497.100000	37.23	---	73.98	36.75	5000.0	1000.000	320.0	V	136.0	-10.0
1497.100000	---	24.09	53.98	29.89	5000.0	1000.000	320.0	V	136.0	-10.0
7334.400000	---	43.90	53.98	10.08	5000.0	1000.000	211.0	H	292.0	5.5
7334.400000	55.11	---	73.98	18.87	5000.0	1000.000	211.0	H	292.0	5.5
12249.350000	48.50	---	73.98	25.48	5000.0	1000.000	202.0	V	145.0	15.7
12249.350000	---	34.97	53.98	19.01	5000.0	1000.000	202.0	V	145.0	15.7
14494.550000	---	34.68	53.98	19.30	5000.0	1000.000	380.0	V	290.0	16.5
14494.550000	47.78	---	73.98	26.20	5000.0	1000.000	380.0	V	290.0	16.5
15686.850000	---	34.76	53.98	19.22	5000.0	1000.000	378.0	H	0.0	20.0
15686.850000	47.62	---	73.98	26.36	5000.0	1000.000	378.0	H	0.0	20.0
17997.400000	---	38.94	53.98	15.04	5000.0	1000.000	170.0	V	289.0	25.1
17997.400000	52.04	---	73.98	21.94	5000.0	1000.000	170.0	V	289.0	25.1

Notes: ¹ Field strength (dBμV/m) = receiver/spectrum analyzer value (dBμV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

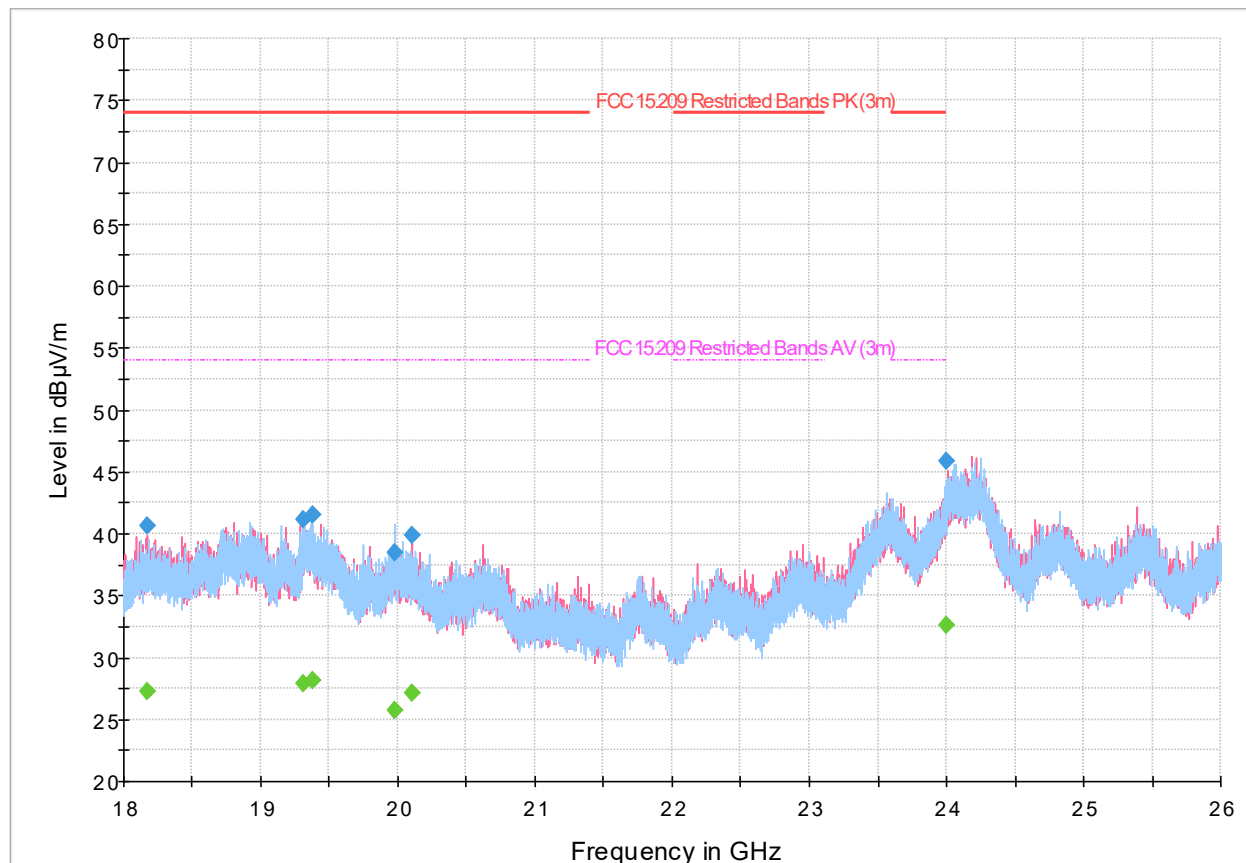


Figure 8.7-133: Radiated emissions spectral plot (18 GHz - 26 GHz), 2442 MHz

Table 8.7-16: Radiated emissions results, 2442 MHz

Frequency (MHz)	MaxPeak (dBμV/m)	CAverage (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18173.300000	---	27.30	53.98	26.68	5000.0	1000.000	332.0	V	0.0	15.6
18173.300000	40.64	---	73.98	33.34	5000.0	1000.000	332.0	V	0.0	15.6
19306.900000	---	27.90	53.98	26.08	5000.0	1000.000	100.0	H	150.0	16.7
19306.900000	41.18	---	73.98	32.80	5000.0	1000.000	100.0	H	150.0	16.7
19377.300000	41.53	---	73.98	32.45	5000.0	1000.000	319.0	H	345.0	16.6
19377.300000	---	28.20	53.98	25.78	5000.0	1000.000	319.0	H	345.0	16.6
19972.900000	---	25.69	53.98	28.29	5000.0	1000.000	337.0	H	55.0	16.3
19972.900000	38.49	---	73.98	35.49	5000.0	1000.000	337.0	H	55.0	16.3
20101.700000	---	27.09	53.98	26.89	5000.0	1000.000	253.0	V	204.0	16.8
20101.700000	39.91	---	73.98	34.07	5000.0	1000.000	253.0	V	204.0	16.8
23994.500000	45.84	---	73.98	28.14	5000.0	1000.000	171.0	H	138.0	27.1
23994.500000	---	32.65	53.98	21.33	5000.0	1000.000	171.0	H	138.0	27.1

Notes: ¹ Field strength (dBμV/m) = receiver/spectrum analyzer value (dBμV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

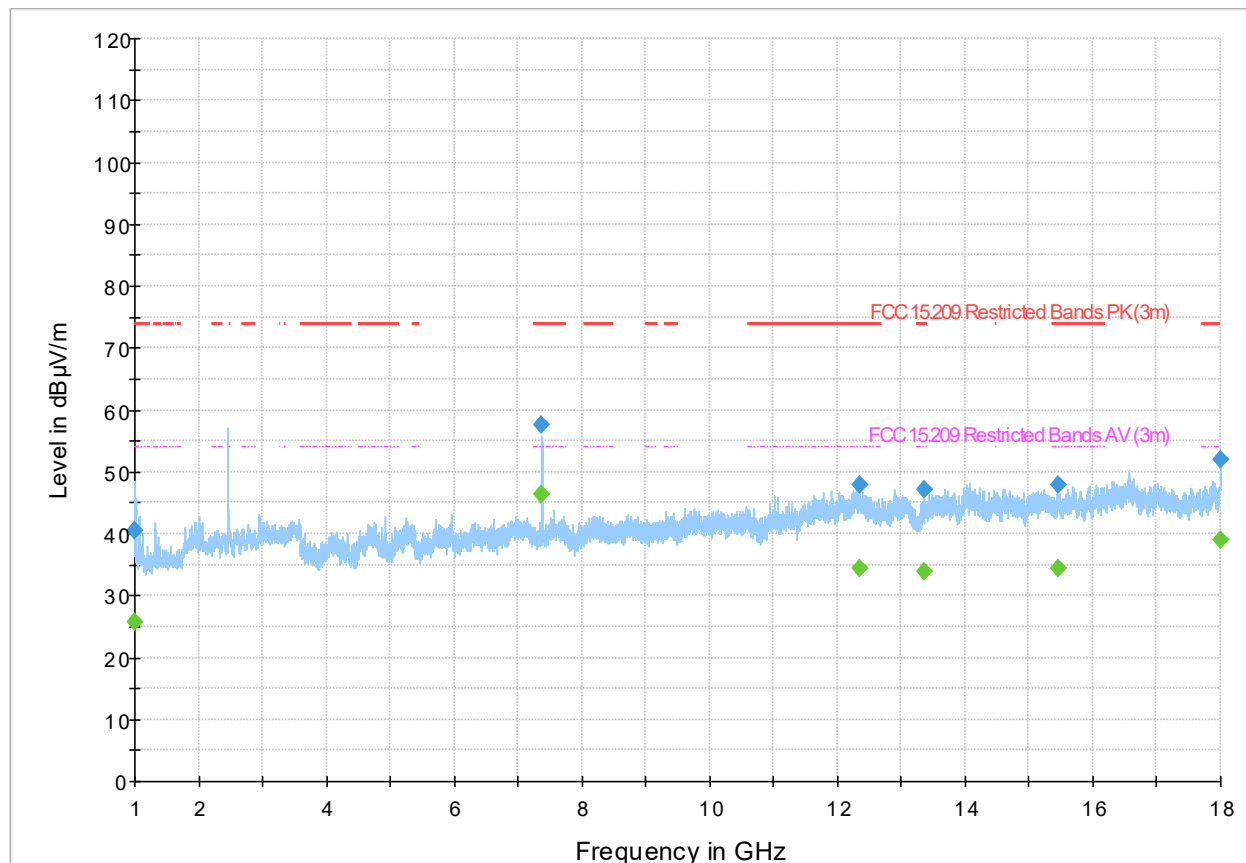


Figure 8.7-134: Radiated emissions spectral plot (1 GHz - 18 GHz), 2462 MHz

Table 8.7-17: Radiated emissions results, 2462 MHz

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1004.600000	40.52	---	73.98	33.46	5000.0	1000.000	275.0	H	235.0	-10.5
1004.600000	---	25.84	53.98	28.14	5000.0	1000.000	275.0	H	235.0	-10.5
7377.750000	---	46.41	53.98	7.57	5000.0	1000.000	206.0	H	31.0	5.5
7377.750000	57.70	---	73.98	16.28	5000.0	1000.000	206.0	H	31.0	5.5
12361.700000	---	34.36	53.98	19.62	5000.0	1000.000	334.0	V	324.0	15.2
12361.700000	47.79	---	73.98	26.19	5000.0	1000.000	334.0	V	324.0	15.2
13363.950000	---	33.87	53.98	20.11	5000.0	1000.000	307.0	V	225.0	16.5
13363.950000	47.10	---	73.98	26.88	5000.0	1000.000	307.0	V	225.0	16.5
15465.650000	---	34.44	53.98	19.54	5000.0	1000.000	275.0	H	121.0	19.0
15465.650000	47.82	---	73.98	26.16	5000.0	1000.000	275.0	H	121.0	19.0
17998.900000	52.05	---	73.98	21.93	5000.0	1000.000	143.0	H	134.0	25.2
17998.900000	---	38.98	53.98	15.00	5000.0	1000.000	143.0	H	134.0	25.2

Notes: ¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

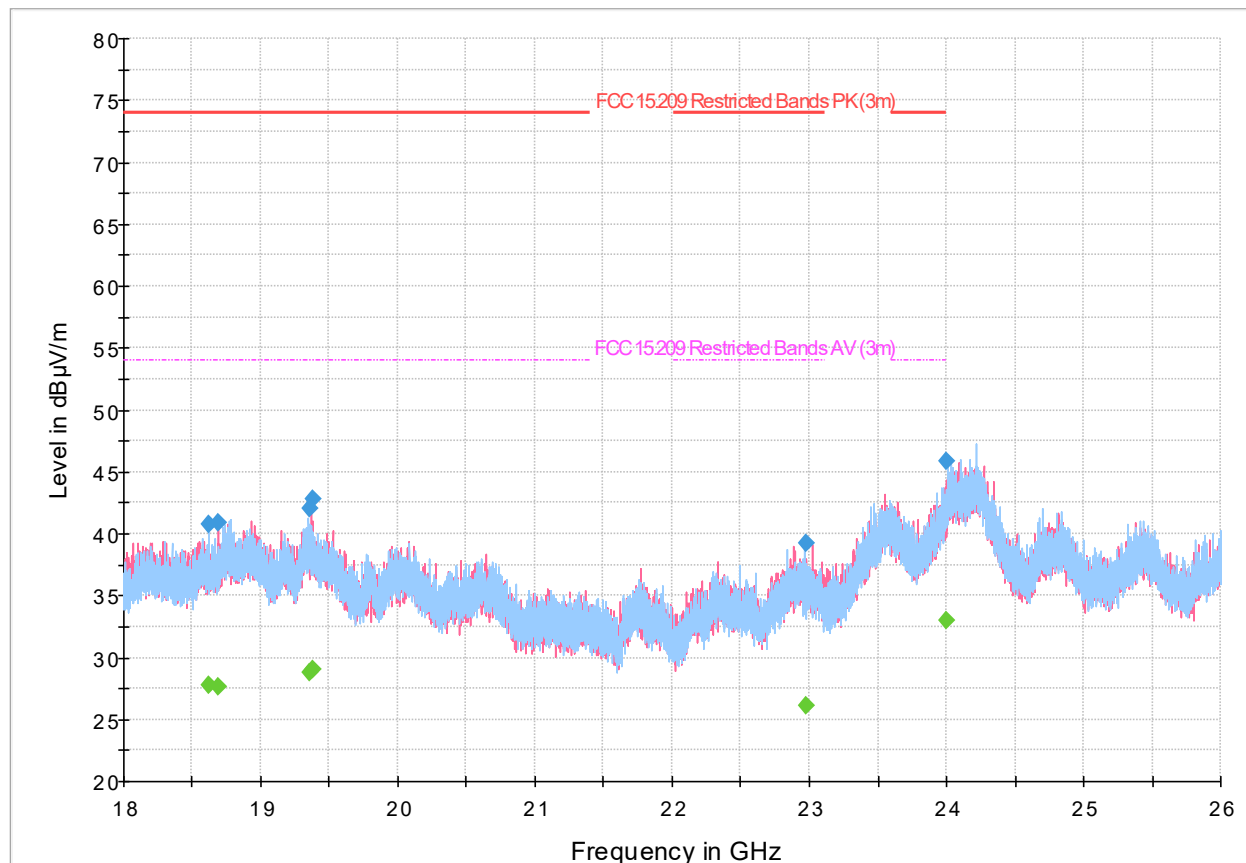


Figure 8.7-135: Radiated emissions spectral plot (18 GHz - 26 GHz), 2462 MHz

Table 8.7-18: Radiated emissions results, 2462 MHz

Frequency (MHz)	MaxPeak (dBμV/m)	CAverage (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18619.700000	---	27.79	53.98	26.19	5000.0	1000.000	131.0	H	139.0	16.0
18619.700000	40.78	---	73.98	33.20	5000.0	1000.000	131.0	H	139.0	16.0
18688.900000	40.91	---	73.98	33.07	5000.0	1000.000	307.0	V	0.0	16.0
18688.900000	---	27.69	53.98	26.29	5000.0	1000.000	307.0	V	0.0	16.0
19361.300000	41.98	---	73.98	32.00	5000.0	1000.000	282.0	V	353.0	16.7
19361.300000	---	28.73	53.98	25.25	5000.0	1000.000	282.0	V	353.0	16.7
19376.300000	---	29.01	53.98	24.97	5000.0	1000.000	344.0	V	310.0	16.7
19376.300000	42.75	---	73.98	31.23	5000.0	1000.000	344.0	V	310.0	16.7
22972.100000	39.23	---	73.98	34.76	5000.0	1000.000	363.0	H	55.0	18.9
22972.100000	---	26.06	53.98	27.92	5000.0	1000.000	363.0	H	55.0	18.9
23994.500000	45.88	---	73.98	28.10	5000.0	1000.000	387.0	V	56.0	27.1
23994.500000	---	32.95	53.98	21.03	5000.0	1000.000	387.0	V	56.0	27.1

Notes: ¹ Field strength (dBμV/m) = receiver/spectrum analyzer value (dBμV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

8.7.9.2 IEEE 802.11g (CDD) mode

Full Spectrum

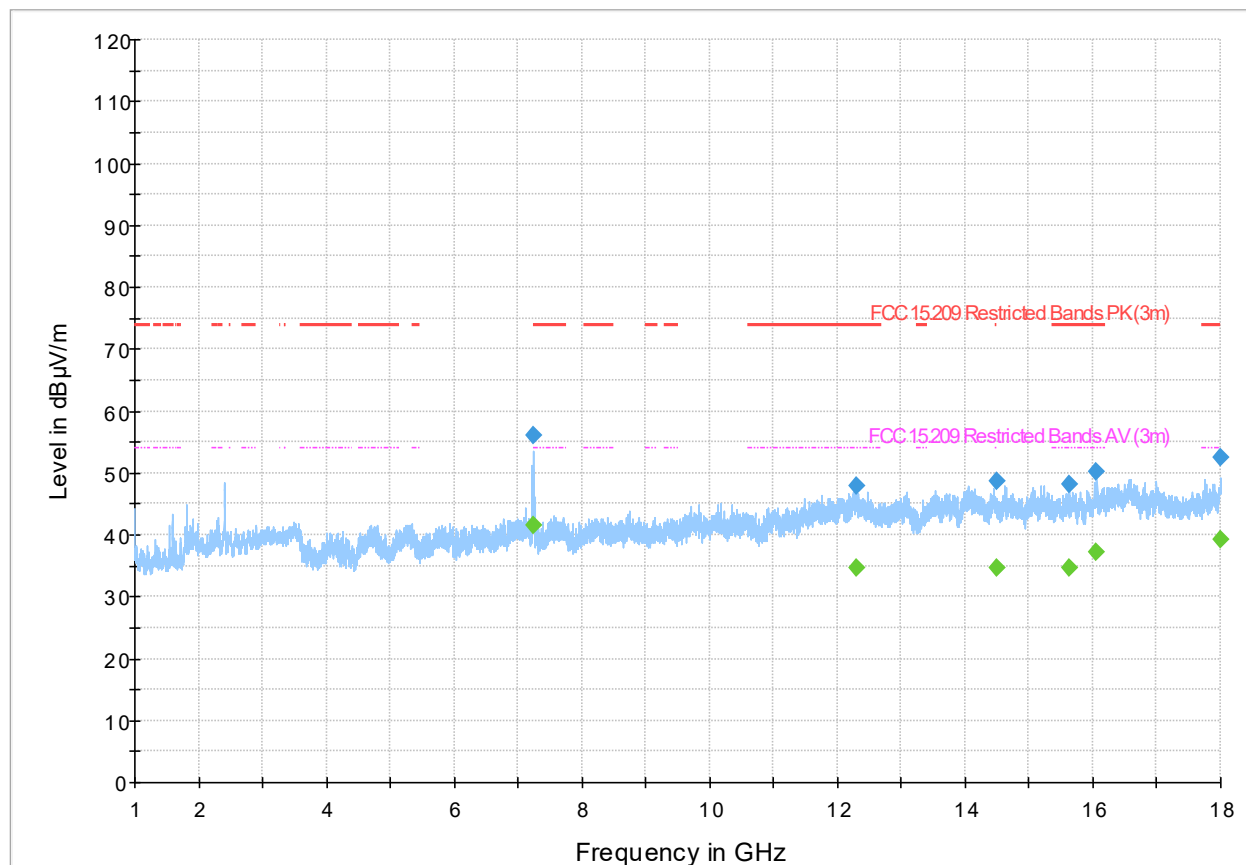


Figure 8.7-136: Radiated emissions spectral plot (1 GHz - 18 GHz), 2412 MHz

Table 8.7-19: Radiated emissions results, 2412 MHz

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7245.450000	---	41.65	---	---	5000.0	1000.000	217.0	H	319.0	5.6
7245.450000	56.07	---	---	---	5000.0	1000.000	217.0	H	319.0	5.6
12293.600000	---	34.74	53.98	19.24	5000.0	1000.000	336.0	V	96.0	15.1
12293.600000	47.92	---	73.98	26.06	5000.0	1000.000	336.0	V	96.0	15.1
14501.800000	48.63	---	---	---	5000.0	1000.000	348.0	V	11.0	16.4
14501.800000	---	34.77	---	---	5000.0	1000.000	348.0	V	11.0	16.4
15621.150000	---	34.55	53.98	19.43	5000.0	1000.000	314.0	V	163.0	19.6
15621.150000	48.21	---	73.98	25.77	5000.0	1000.000	314.0	V	163.0	19.6
16053.850000	50.10	---	73.98	23.88	5000.0	1000.000	334.0	V	100.0	22.3
16053.850000	---	37.22	53.98	16.76	5000.0	1000.000	334.0	V	100.0	22.3
17999.800000	---	39.36	53.98	14.62	5000.0	1000.000	331.0	V	357.0	25.3
17999.800000	52.53	---	73.98	21.45	5000.0	1000.000	331.0	V	357.0	25.3

Notes: ¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

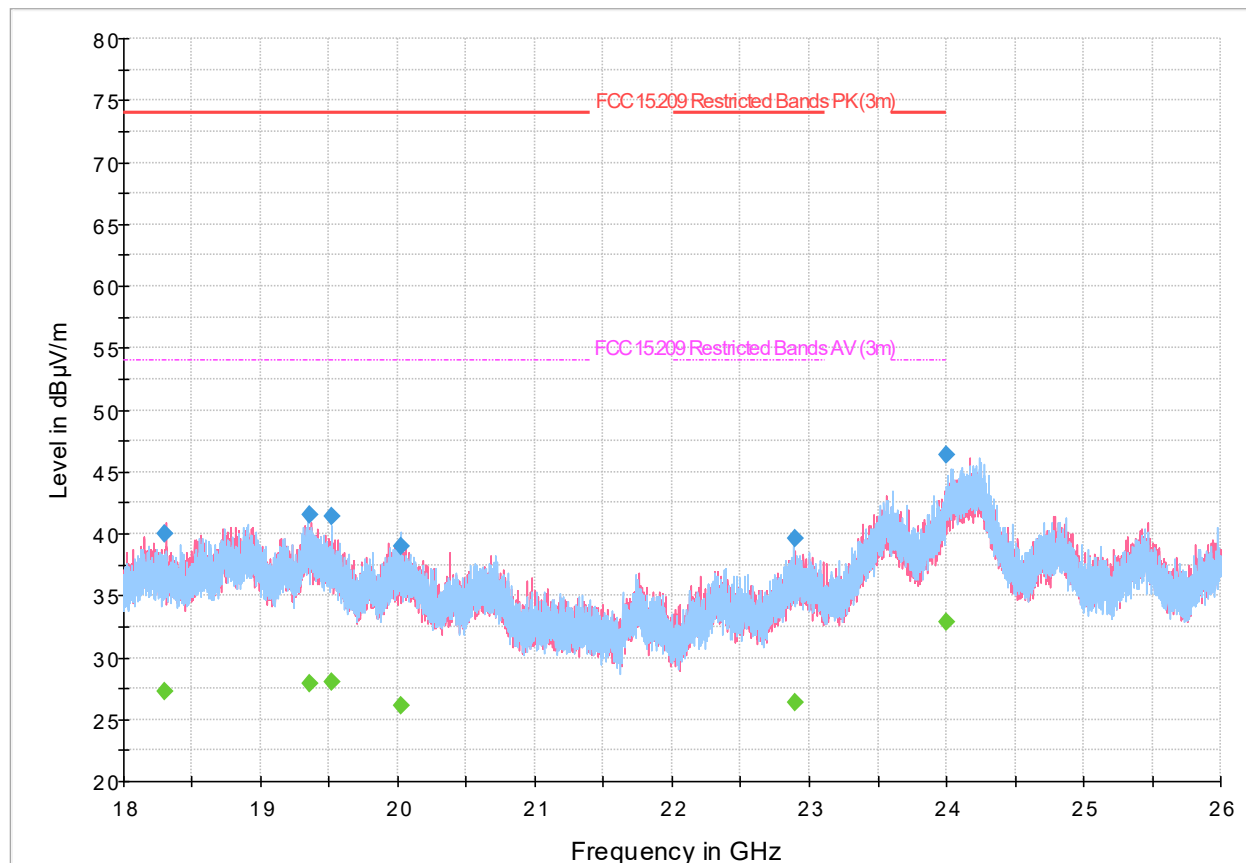


Figure 8.7-137: Radiated emissions spectral plot (18 GHz - 26 GHz), 2412 MHz

Table 8.7-20: Radiated emissions results, 2412 MHz

Frequency (MHz)	MaxPeak (dBμV/m)	CAverage (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18304.100000	39.96	---	73.98	34.02	5000.0	1000.000	261.0	V	266.0	15.4
18304.100000	---	27.29	53.98	26.69	5000.0	1000.000	261.0	V	266.0	15.4
19353.300000	---	27.88	53.98	26.10	5000.0	1000.000	127.0	H	156.0	16.7
19353.300000	41.53	---	73.98	32.45	5000.0	1000.000	127.0	H	156.0	16.7
19517.300000	---	27.96	53.98	26.02	5000.0	1000.000	386.0	H	55.0	16.3
19517.300000	41.36	---	73.98	32.62	5000.0	1000.000	386.0	H	55.0	16.3
20018.700000	39.04	---	73.98	34.94	5000.0	1000.000	113.0	H	284.0	16.5
20018.700000	---	26.13	53.98	27.85	5000.0	1000.000	113.0	H	284.0	16.5
22893.100000	39.67	---	73.98	34.31	5000.0	1000.000	236.0	H	192.0	19.1
22893.100000	---	26.36	53.98	27.62	5000.0	1000.000	236.0	H	192.0	19.1
24000.100000	46.35	---	---	---	5000.0	1000.000	400.0	H	11.0	27.2
24000.100000	---	32.84	---	---	5000.0	1000.000	400.0	H	11.0	27.2

Notes: ¹ Field strength (dBμV/m) = receiver/spectrum analyzer value (dBμV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

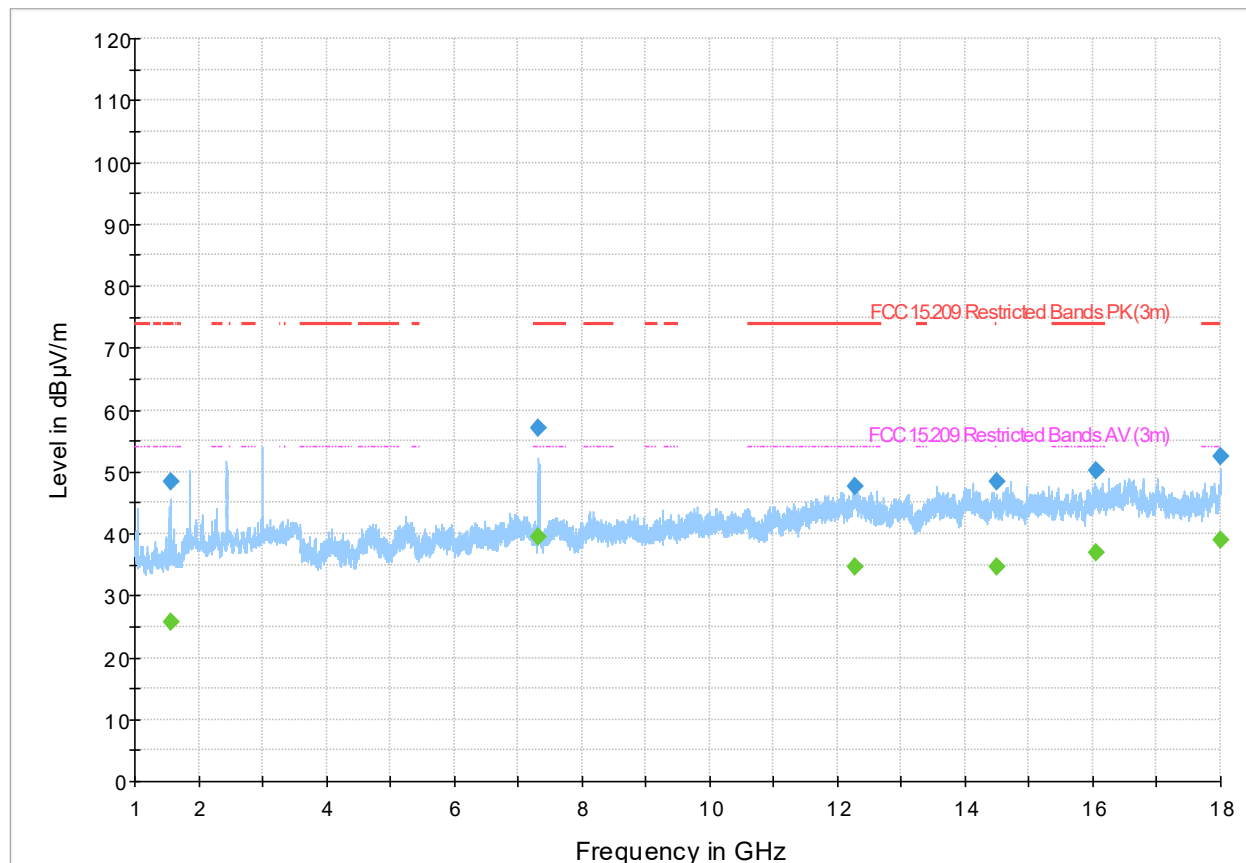


Figure 8.7-138: Radiated emissions spectral plot (1 GHz - 18 GHz), 2442 MHz

Table 8.7-21: Radiated emissions results, 2442 MHz

Frequency (MHz)	MaxPeak (dBμV/m)	CAverage (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1570.750000	---	25.82	53.98	28.16	5000.0	1000.000	137.0	H	52.0	-9.6
1570.750000	48.47	---	73.98	25.51	5000.0	1000.000	137.0	H	52.0	-9.6
7327.250000	56.96	---	73.98	17.02	5000.0	1000.000	194.0	H	32.0	5.5
7327.250000	---	39.39	53.98	14.59	5000.0	1000.000	194.0	H	32.0	5.5
12280.050000	47.69	---	73.98	26.29	5000.0	1000.000	248.0	V	0.0	15.3
12280.050000	---	34.69	53.98	19.29	5000.0	1000.000	248.0	V	0.0	15.3
14495.300000	48.36	---	73.98	25.62	5000.0	1000.000	285.0	V	64.0	16.5
14495.300000	---	34.77	53.98	19.21	5000.0	1000.000	285.0	V	64.0	16.5
16051.950000	---	37.01	53.98	16.97	5000.0	1000.000	374.0	H	65.0	22.4
16051.950000	50.29	---	73.98	23.69	5000.0	1000.000	374.0	H	65.0	22.4
17995.000000	52.44	---	73.98	21.54	5000.0	1000.000	209.0	H	294.0	25.0
17995.000000	---	38.88	53.98	15.10	5000.0	1000.000	209.0	H	294.0	25.0

Notes: ¹ Field strength (dBμV/m) = receiver/spectrum analyzer value (dBμV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

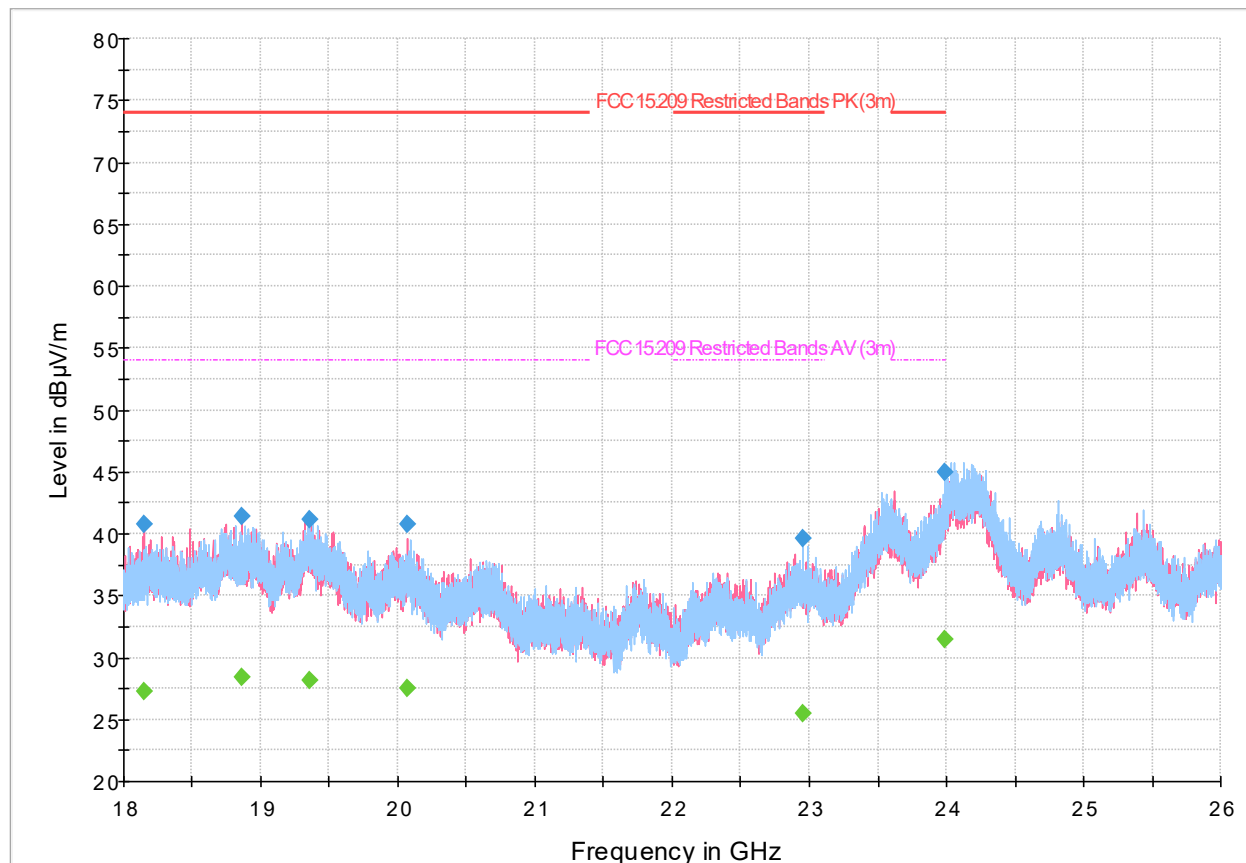


Figure 8.7-139: Radiated emissions spectral plot (18 GHz - 26 GHz), 2442 MHz

Table 8.7-22: Radiated emissions results, 2442 MHz

Frequency (MHz)	MaxPeak (dBμV/m)	CAverage (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18148.900000	40.75	---	73.98	33.23	5000.0	1000.000	400.0	V	246.0	15.6
18148.900000	---	27.31	53.98	26.67	5000.0	1000.000	400.0	V	246.0	15.6
18858.900000	41.43	---	73.98	32.55	5000.0	1000.000	252.0	V	55.0	15.9
18858.900000	---	28.35	53.98	25.63	5000.0	1000.000	252.0	V	55.0	15.9
19354.100000	---	28.14	53.98	25.84	5000.0	1000.000	400.0	H	11.0	16.7
19354.100000	41.09	---	73.98	32.89	5000.0	1000.000	400.0	H	11.0	16.7
20071.700000	---	27.46	53.98	26.52	5000.0	1000.000	364.0	V	0.0	16.8
20071.700000	40.74	---	73.98	33.24	5000.0	1000.000	364.0	V	0.0	16.8
22953.100000	---	25.53	53.98	28.45	5000.0	1000.000	355.0	H	313.0	18.9
22953.100000	39.62	---	73.98	34.36	5000.0	1000.000	355.0	H	313.0	18.9
23987.700000	---	31.48	53.98	22.50	5000.0	1000.000	184.0	H	20.0	26.9
23987.700000	45.03	---	73.98	28.95	5000.0	1000.000	184.0	H	20.0	26.9

Notes: ¹ Field strength (dBμV/m) = receiver/spectrum analyzer value (dBμV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

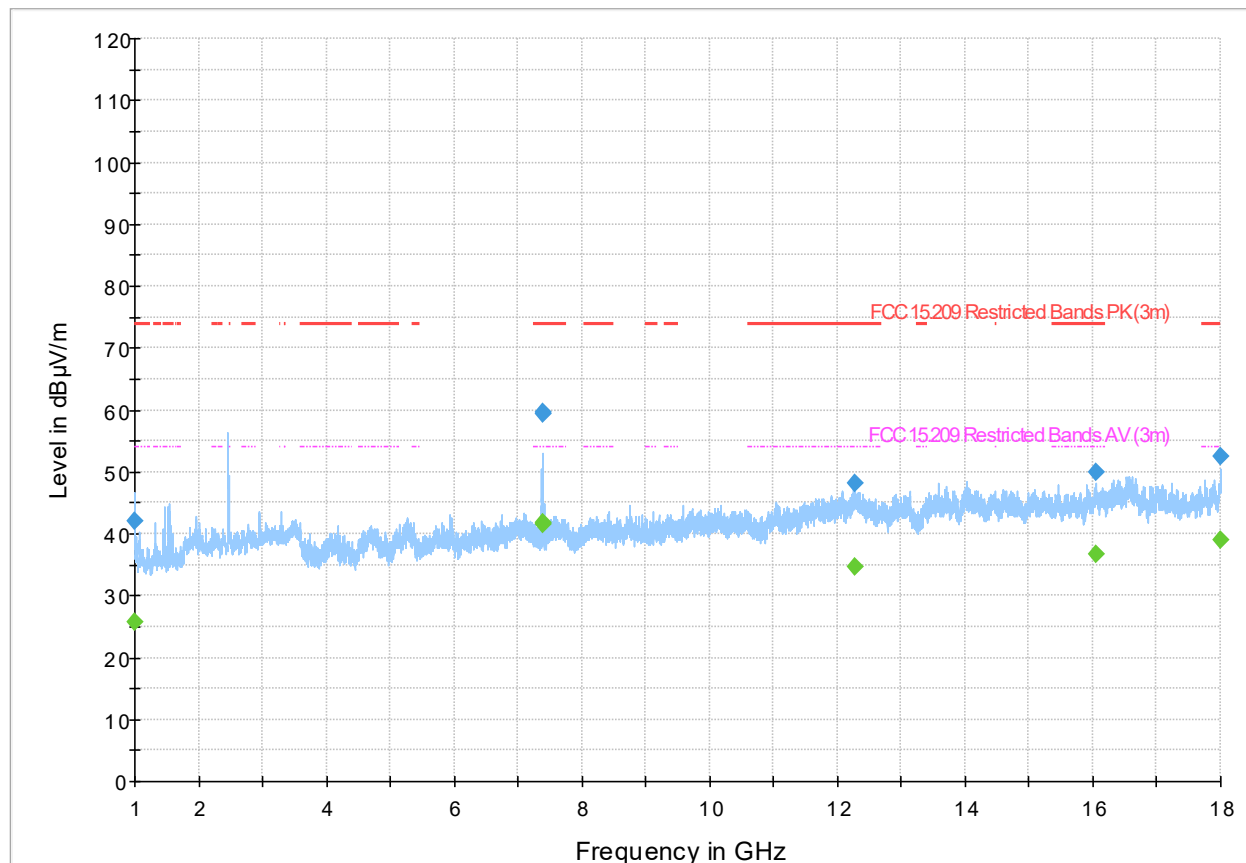


Figure 8.7-140: Radiated emissions spectral plot (1 GHz - 18 GHz), 2462 MHz

Table 8.7-23: Radiated emissions results, 2462 MHz

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1006.200000	41.96	---	73.98	32.02	5000.0	1000.000	276.0	V	176.0	-10.5
1006.200000	---	25.76	53.98	28.22	5000.0	1000.000	276.0	V	176.0	-10.5
7385.400000	---	41.60	53.98	12.38	5000.0	1000.000	207.0	H	32.0	5.5
7385.400000	59.37	---	73.98	14.61	5000.0	1000.000	207.0	H	32.0	5.5
7385.550000	---	41.77	53.98	12.21	5000.0	1000.000	208.0	H	296.0	5.5
7385.550000	59.51	---	73.98	14.47	5000.0	1000.000	208.0	H	296.0	5.5
12283.100000	---	34.73	53.98	19.25	5000.0	1000.000	318.0	V	0.0	15.2
12283.100000	48.09	---	73.98	25.89	5000.0	1000.000	318.0	V	0.0	15.2
16058.900000	---	36.78	53.98	17.20	5000.0	1000.000	120.0	V	106.0	22.1
16058.900000	49.89	---	73.98	24.09	5000.0	1000.000	120.0	V	106.0	22.1
17994.100000	52.56	---	73.98	21.42	5000.0	1000.000	292.0	V	258.0	24.9
17994.100000	---	38.95	53.98	15.03	5000.0	1000.000	292.0	V	258.0	24.9

Notes: ¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

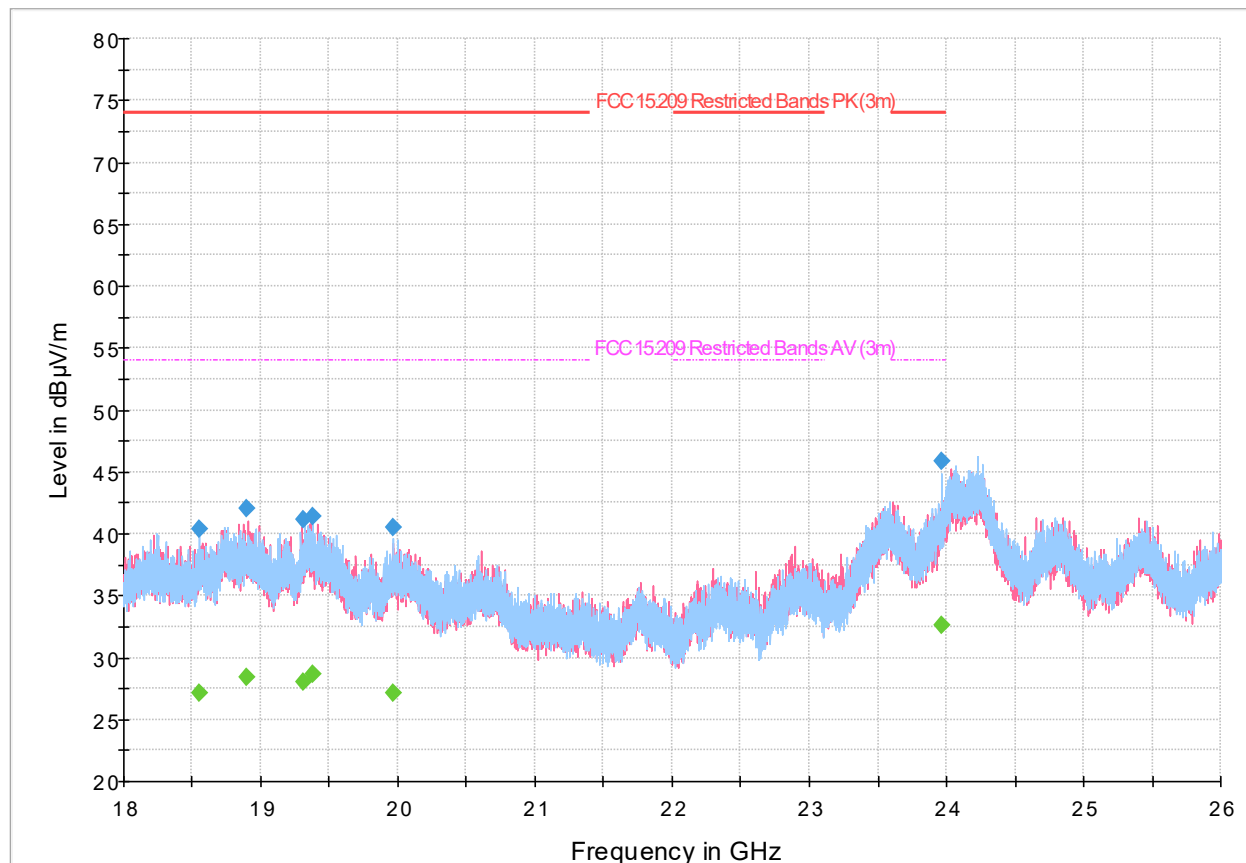


Figure 8.7-141: Radiated emissions spectral plot (18 GHz - 26 GHz), 2462 MHz

Table 8.7-24: Radiated emissions results, 2462 MHz

Frequency (MHz)	MaxPeak (dBμV/m)	CAverage (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18554.300000	40.34	---	73.98	33.64	5000.0	1000.000	235.0	H	321.0	16.0
18554.300000	---	27.09	53.98	26.89	5000.0	1000.000	235.0	H	321.0	16.0
18901.300000	---	28.46	53.98	25.52	5000.0	1000.000	392.0	V	66.0	15.9
18901.300000	42.02	---	73.98	31.96	5000.0	1000.000	392.0	V	66.0	15.9
19314.100000	41.12	---	73.98	32.86	5000.0	1000.000	339.0	H	299.0	16.7
19314.100000	---	28.07	53.98	25.91	5000.0	1000.000	339.0	H	299.0	16.7
19383.300000	41.43	---	73.98	32.55	5000.0	1000.000	291.0	H	11.0	16.6
19383.300000	---	28.67	53.98	25.31	5000.0	1000.000	291.0	H	11.0	16.6
19964.100000	---	27.15	53.98	26.83	5000.0	1000.000	124.0	H	21.0	16.3
19964.100000	40.53	---	73.98	33.45	5000.0	1000.000	124.0	H	21.0	16.3
23969.300000	45.91	---	73.98	28.07	5000.0	1000.000	371.0	H	259.0	26.6
23969.300000	---	32.65	53.98	21.33	5000.0	1000.000	371.0	H	259.0	26.6

Notes: ¹ Field strength (dBμV/m) = receiver/spectrum analyzer value (dBμV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

8.7.9.3 IEEE 802.11n HT20 (CDD) mode

Full Spectrum

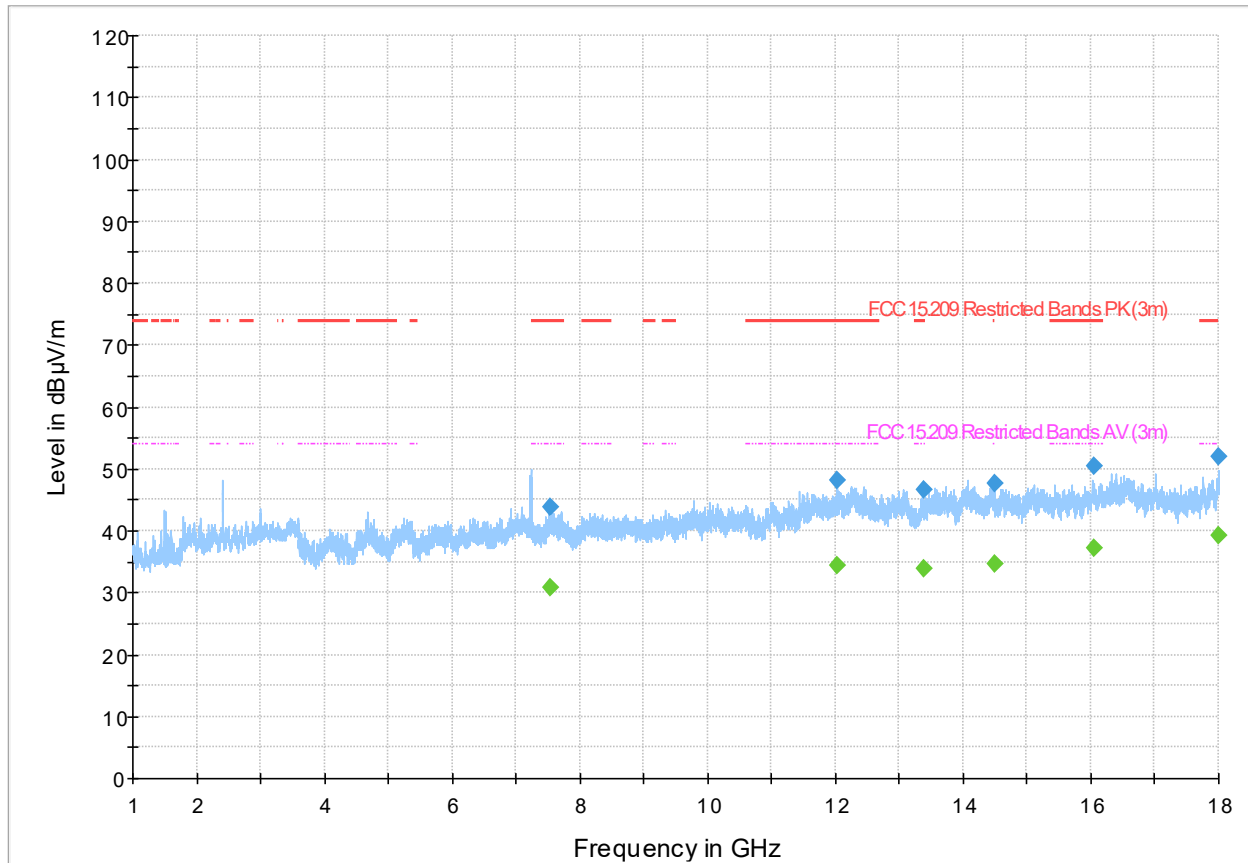


Figure 8.7-142: Radiated emissions spectral plot (1 GHz - 18 GHz), 2412 MHz

Table 8.7-25: Radiated emissions results, 2412 MHz

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7546.500000	---	30.72	53.98	23.26	5000.0	1000.000	332.0	H	283.0	5.7
7546.500000	43.94	---	73.98	30.04	5000.0	1000.000	332.0	H	283.0	5.7
12021.100000	48.13	---	73.98	25.85	5000.0	1000.000	207.0	H	342.0	14.8
12021.100000	---	34.42	53.98	19.56	5000.0	1000.000	207.0	H	342.0	14.8
13375.200000	---	33.99	53.98	19.99	5000.0	1000.000	269.0	H	344.0	16.5
13375.200000	46.75	---	73.98	27.23	5000.0	1000.000	269.0	H	344.0	16.5
14492.600000	---	34.63	53.98	19.35	5000.0	1000.000	296.0	H	165.0	16.5
14492.600000	47.62	---	73.98	26.36	5000.0	1000.000	296.0	H	165.0	16.5
16047.700000	---	37.29	53.98	16.69	5000.0	1000.000	298.0	V	42.0	22.4
16047.700000	50.55	---	73.98	23.43	5000.0	1000.000	298.0	V	42.0	22.4
17997.650000	52.01	---	73.98	21.97	5000.0	1000.000	371.0	H	119.0	25.2
17997.650000	---	39.15	53.98	14.83	5000.0	1000.000	371.0	H	119.0	25.2

Notes: ¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

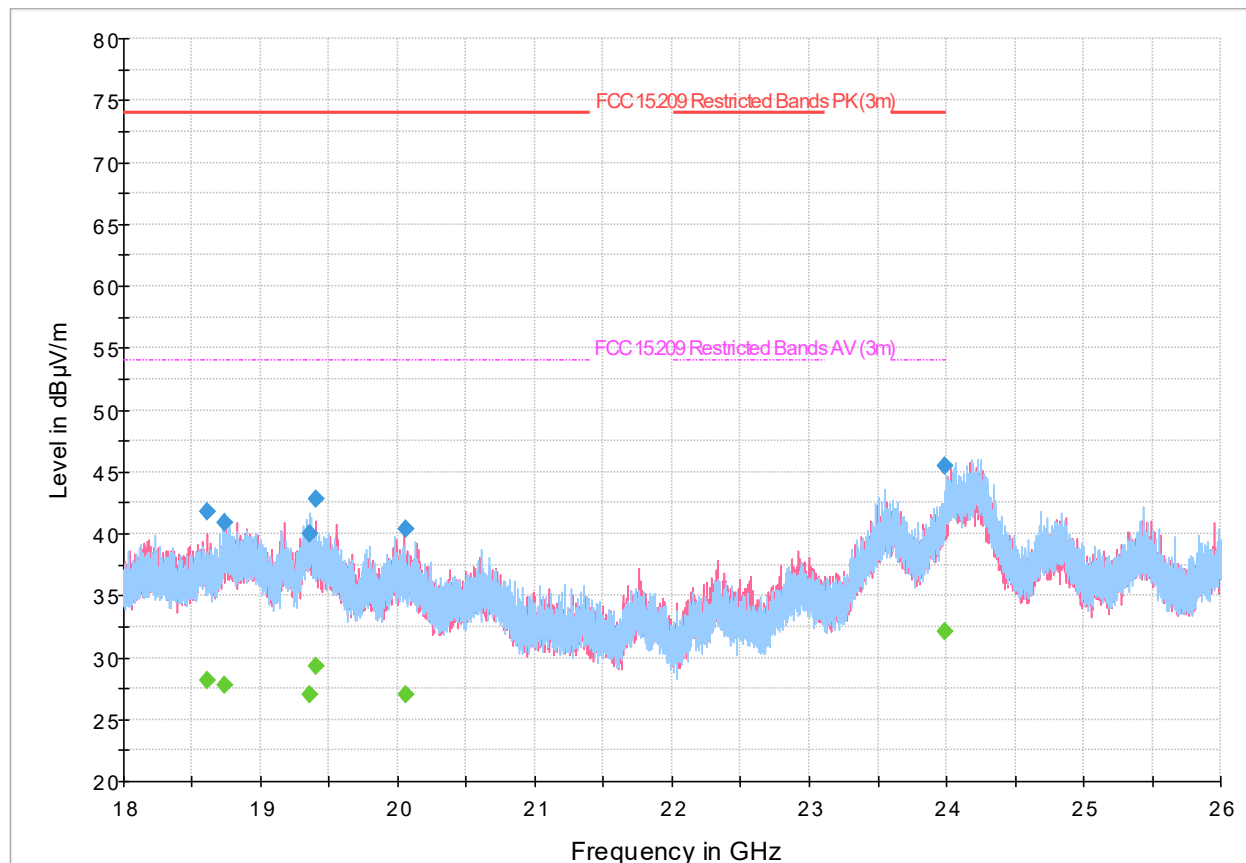


Figure 8.7-143: Radiated emissions spectral plot (18 GHz - 26 GHz), 2412 MHz

Table 8.7-26: Radiated emissions results, 2412 MHz

Frequency (MHz)	MaxPeak (dBμV/m)	CAverage (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18608.900000	---	28.13	53.98	25.85	5000.0	1000.000	396.0	V	0.0	16.0
18608.900000	41.82	---	73.98	32.16	5000.0	1000.000	396.0	V	0.0	16.0
18738.500000	---	27.78	53.98	26.20	5000.0	1000.000	336.0	H	184.0	15.9
18738.500000	40.85	---	73.98	33.13	5000.0	1000.000	336.0	H	184.0	15.9
19354.900000	39.96	---	73.98	34.02	5000.0	1000.000	104.0	H	133.0	16.7
19354.900000	---	26.97	53.98	27.01	5000.0	1000.000	104.0	H	133.0	16.7
19404.300000	42.85	---	73.98	31.13	5000.0	1000.000	342.0	V	136.0	16.6
19404.300000	---	29.28	53.98	24.70	5000.0	1000.000	342.0	V	136.0	16.6
20052.700000	40.36	---	73.98	33.62	5000.0	1000.000	155.0	V	263.0	16.7
20052.700000	---	27.04	53.98	26.94	5000.0	1000.000	155.0	V	263.0	16.7
23986.100000	45.49	---	73.98	28.49	5000.0	1000.000	104.0	H	20.0	26.9
23986.100000	---	32.16	53.98	21.82	5000.0	1000.000	104.0	H	20.0	26.9

Notes: ¹ Field strength (dBμV/m) = receiver/spectrum analyzer value (dBμV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

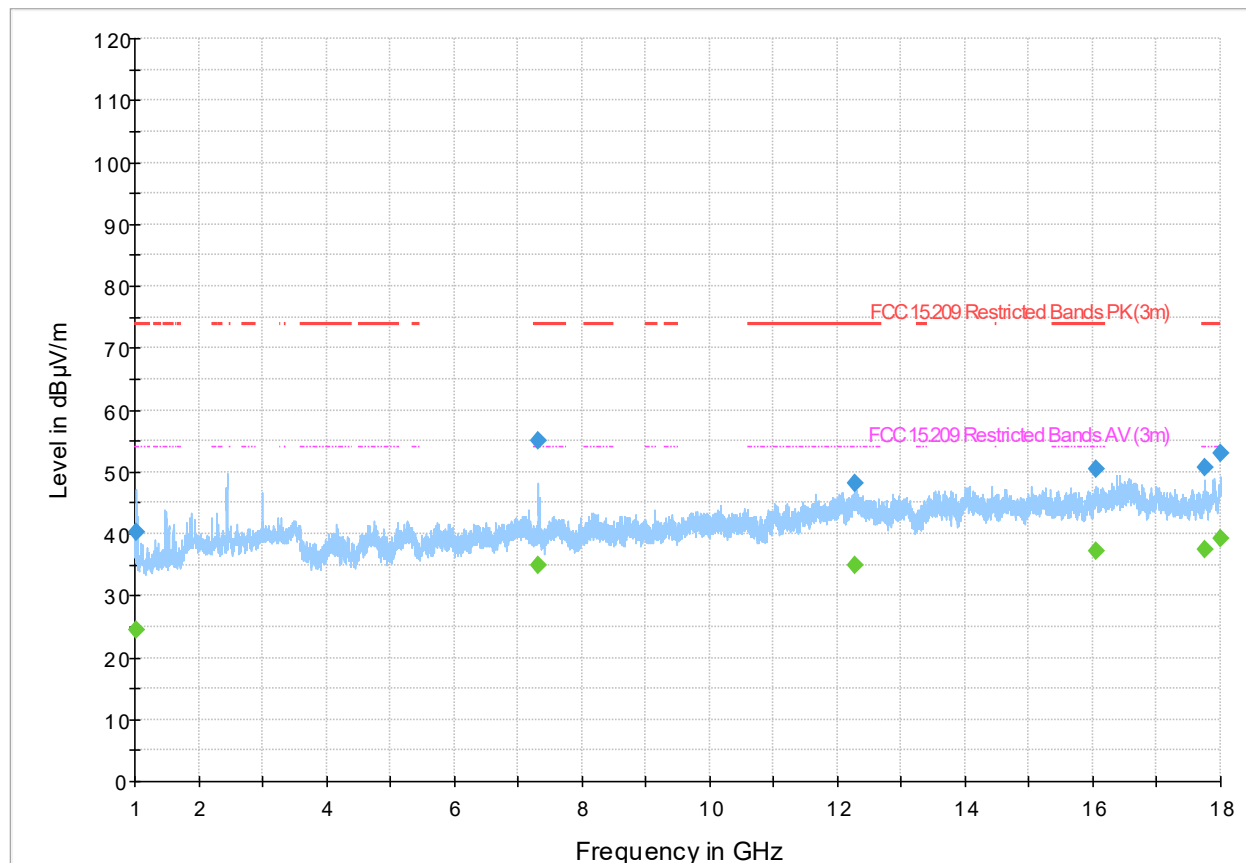


Figure 8.7-144: Radiated emissions spectral plot (1 GHz - 18 GHz), 2442 MHz

Table 8.7-27: Radiated emissions results, 2442 MHz

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1033.500000	40.22	---	73.98	33.76	5000.0	1000.000	166.0	H	227.0	-11.0
1033.500000	---	24.49	53.98	29.49	5000.0	1000.000	166.0	H	227.0	-11.0
7320.700000	---	34.84	53.98	19.14	5000.0	1000.000	197.0	H	292.0	5.5
7320.700000	55.14	---	73.98	18.84	5000.0	1000.000	197.0	H	292.0	5.5
12271.050000	---	34.99	53.98	18.99	5000.0	1000.000	358.0	H	292.0	15.4
12271.050000	48.26	---	73.98	25.72	5000.0	1000.000	358.0	H	292.0	15.4
16047.000000	---	37.10	53.98	16.88	5000.0	1000.000	242.0	H	10.0	22.3
16047.000000	50.35	---	73.98	23.63	5000.0	1000.000	242.0	H	10.0	22.3
17755.150000	50.75	---	73.98	23.23	5000.0	1000.000	113.0	H	41.0	21.6
17755.150000	---	37.47	53.98	16.51	5000.0	1000.000	113.0	H	41.0	21.6
17999.400000	---	39.27	53.98	14.71	5000.0	1000.000	385.0	V	30.0	25.3
17999.400000	52.91	---	73.98	21.07	5000.0	1000.000	385.0	V	30.0	25.3

Notes: ¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

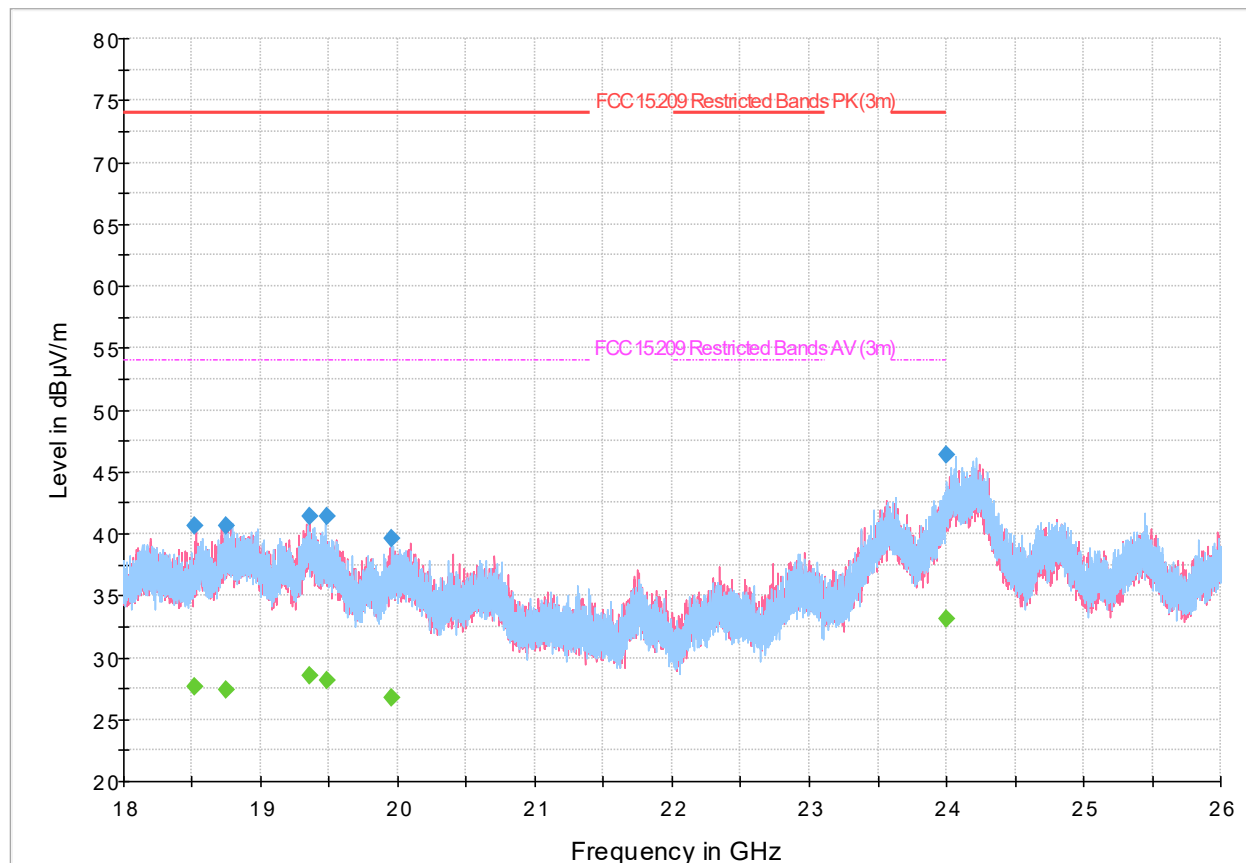


Figure 8.7-145: Radiated emissions spectral plot (18 GHz - 26 GHz), 2442 MHz

Table 8.7-28: Radiated emissions results, 2442 MHz

Frequency (MHz)	MaxPeak (dBμV/m)	CAverage (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18520.100000	---	27.58	53.98	26.40	5000.0	1000.000	324.0	V	335.0	15.9
18520.100000	40.59	---	73.98	33.39	5000.0	1000.000	324.0	V	335.0	15.9
18750.700000	40.63	---	73.98	33.35	5000.0	1000.000	141.0	H	339.0	15.9
18750.700000	---	27.33	53.98	26.65	5000.0	1000.000	141.0	H	339.0	15.9
19352.500000	41.41	---	73.98	32.57	5000.0	1000.000	285.0	V	169.0	16.7
19352.500000	---	28.52	53.98	25.46	5000.0	1000.000	285.0	V	169.0	16.7
19477.300000	41.46	---	73.98	32.52	5000.0	1000.000	239.0	H	0.0	16.5
19477.300000	---	28.13	53.98	25.85	5000.0	1000.000	239.0	H	0.0	16.5
19956.100000	39.59	---	73.98	34.39	5000.0	1000.000	215.0	H	158.0	16.3
19956.100000	---	26.69	53.98	27.29	5000.0	1000.000	215.0	H	158.0	16.3
24002.700000	---	33.15	---	---	5000.0	1000.000	339.0	V	331.0	27.2
24002.700000	46.33	---	---	---	5000.0	1000.000	339.0	V	331.0	27.2

Notes: ¹ Field strength (dBμV/m) = receiver/spectrum analyzer value (dBμV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

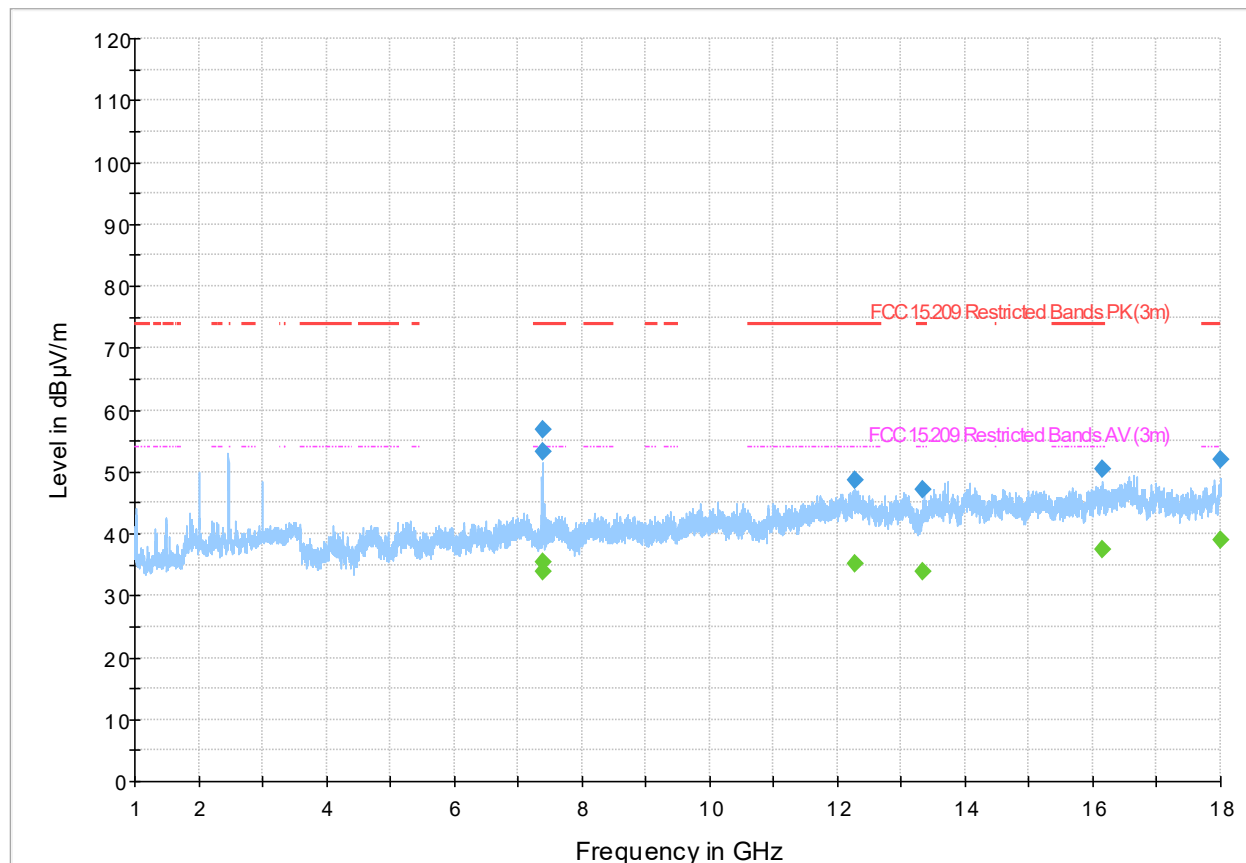


Figure 8.7-146: Radiated emissions spectral plot (1 GHz - 18 GHz), 2462 MHz

Table 8.7-29: Radiated emissions results, 2462 MHz

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7384.950000	---	33.83	53.98	20.15	5000.0	1000.000	172.0	H	330.0	5.5
7384.950000	53.14	---	73.98	20.84	5000.0	1000.000	172.0	H	330.0	5.5
7392.600000	56.80	---	73.98	17.18	5000.0	1000.000	206.0	H	297.0	5.5
7392.600000	---	35.48	53.98	18.50	5000.0	1000.000	206.0	H	297.0	5.5
12278.300000	48.57	---	73.98	25.41	5000.0	1000.000	341.0	H	64.0	15.3
12278.300000	---	35.09	53.98	18.89	5000.0	1000.000	341.0	H	64.0	15.3
13344.900000	---	33.85	53.98	20.13	5000.0	1000.000	179.0	H	284.0	16.4
13344.900000	47.21	---	73.98	26.77	5000.0	1000.000	179.0	H	284.0	16.4
16152.250000	---	37.34	53.98	16.64	5000.0	1000.000	387.0	V	283.0	22.8
16152.250000	50.51	---	73.98	23.47	5000.0	1000.000	387.0	V	283.0	22.8
17994.850000	---	39.01	53.98	14.97	5000.0	1000.000	180.0	V	151.0	25.0
17994.850000	52.02	---	73.98	21.96	5000.0	1000.000	180.0	V	151.0	25.0

Notes: ¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum



Figure 8.7-147: Radiated emissions spectral plot (18 GHz - 26 GHz), 2462 MHz

Table 8.7-30: Radiated emissions results. 2462 MHz

Frequency (MHz)	MaxPeak (dBμV/m)	CAverage (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18635.300000	41.36	---	73.98	32.62	5000.0	1000.000	400.0	V	101.0	16.0
18635.300000	---	28.12	53.98	25.86	5000.0	1000.000	400.0	V	101.0	16.0
18741.300000	---	27.64	53.98	26.34	5000.0	1000.000	239.0	H	88.0	15.9
18741.300000	41.12	---	73.98	32.86	5000.0	1000.000	239.0	H	88.0	15.9
19317.700000	41.29	---	73.98	32.69	5000.0	1000.000	190.0	H	196.0	16.7
19317.700000	---	27.94	53.98	26.04	5000.0	1000.000	190.0	H	196.0	16.7
19530.500000	---	28.15	53.98	25.83	5000.0	1000.000	334.0	V	190.0	16.3
19530.500000	41.50	---	73.98	32.48	5000.0	1000.000	334.0	V	190.0	16.3
20060.900000	40.63	---	73.98	33.35	5000.0	1000.000	383.0	H	282.0	16.7
20060.900000	---	27.12	53.98	26.86	5000.0	1000.000	383.0	H	282.0	16.7
23985.100000	45.30	---	73.98	28.68	5000.0	1000.000	234.0	H	323.0	26.9
23985.100000	---	32.46	53.98	21.52	5000.0	1000.000	234.0	H	323.0	26.9

Notes: ¹ Field strength (dBμV/m) = receiver/spectrum analyzer value (dBμV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

8.7.9.4 IEEE 802.11n HT40 (CDD) mode

Full Spectrum

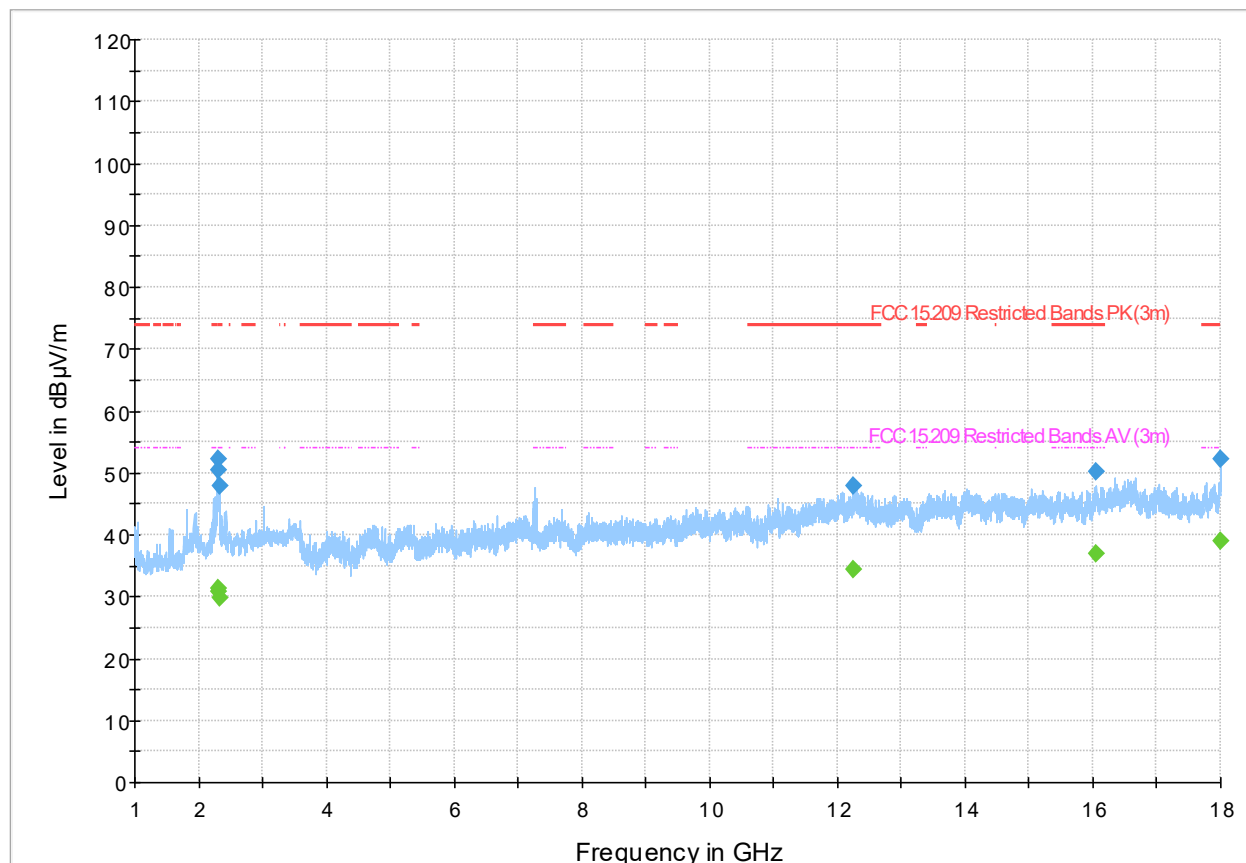


Figure 8.7-148: Radiated emissions spectral plot (1 GHz - 18 GHz), 2422 MHz

Table 8.7-31: Radiated emissions results, 2422 MHz

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2298.550000	52.25	---	73.98	21.73	5000.0	1000.000	140.0	V	194.0	-5.1
2298.550000	---	31.36	53.98	22.62	5000.0	1000.000	140.0	V	194.0	-5.1
2306.000000	50.56	---	---	---	5000.0	1000.000	100.0	V	128.0	-5.1
2306.000000	---	30.75	---	---	5000.0	1000.000	100.0	V	128.0	-5.1
2320.100000	---	29.78	53.98	24.20	5000.0	1000.000	275.0	H	337.0	-5.1
2320.100000	47.78	---	73.98	26.20	5000.0	1000.000	275.0	H	337.0	-5.1
12257.850000	---	34.33	53.98	19.65	5000.0	1000.000	344.0	H	52.0	15.6
12257.850000	47.84	---	73.98	26.14	5000.0	1000.000	344.0	H	52.0	15.6
16043.000000	50.16	---	73.98	23.82	5000.0	1000.000	301.0	H	117.0	22.2
16043.000000	---	37.04	53.98	16.94	5000.0	1000.000	301.0	H	117.0	22.2
17994.850000	52.19	---	73.98	21.79	5000.0	1000.000	314.0	V	145.0	25.0
17994.850000	---	38.97	53.98	15.01	5000.0	1000.000	314.0	V	145.0	25.0

Notes: ¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

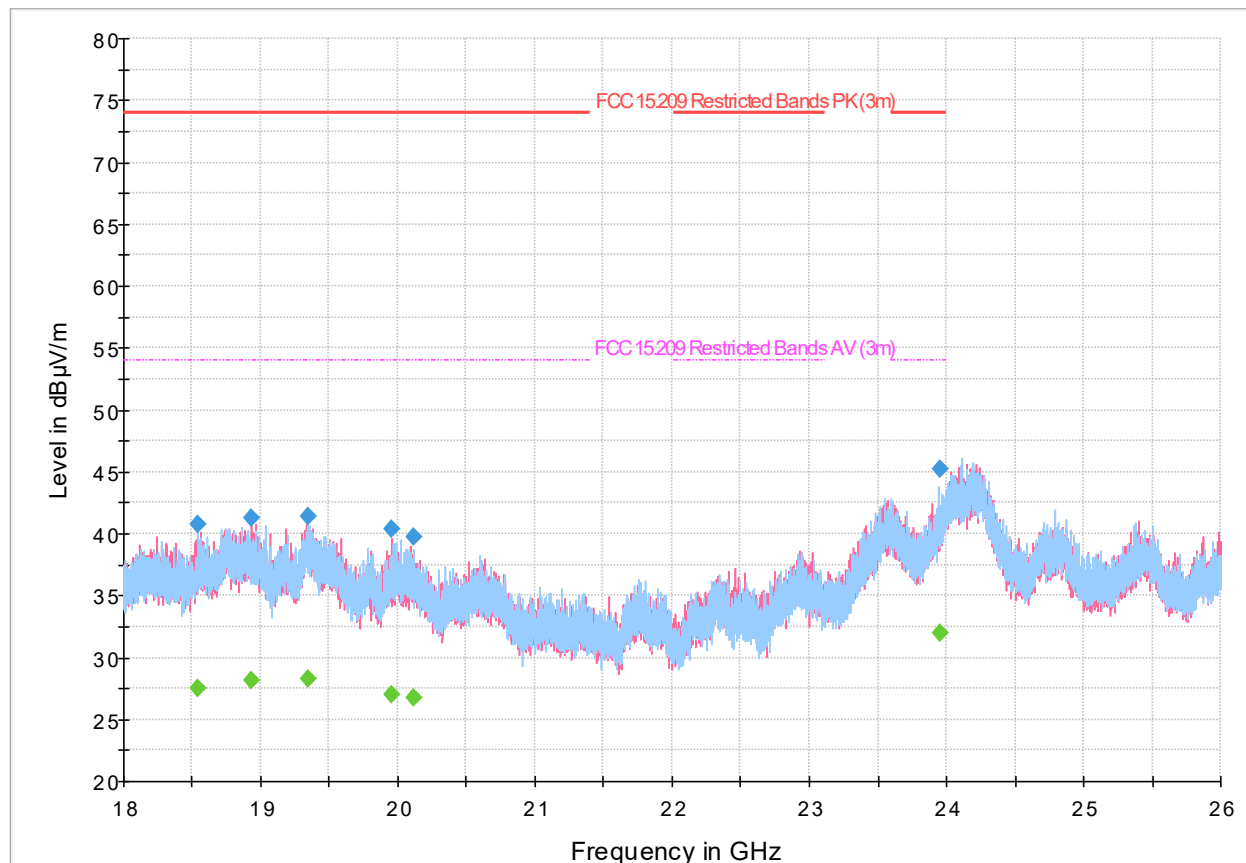


Figure 8.7-149: Radiated emissions spectral plot (18 GHz - 26 GHz), 2422 MHz

Table 8.7-32: Radiated emissions results, 2422 MHz

Frequency (MHz)	MaxPeak (dBμV/m)	CAverage (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18541.900000	40.77	---	73.98	33.21	5000.0	1000.000	135.0	H	219.0	16.0
18541.900000	---	27.53	53.98	26.45	5000.0	1000.000	135.0	H	219.0	16.0
18930.300000	41.21	---	73.98	32.77	5000.0	1000.000	331.0	V	125.0	15.9
18930.300000	---	28.18	53.98	25.80	5000.0	1000.000	331.0	V	125.0	15.9
19344.100000	41.38	---	73.98	32.60	5000.0	1000.000	107.0	H	242.0	16.7
19344.100000	---	28.29	53.98	25.69	5000.0	1000.000	107.0	H	242.0	16.7
19957.300000	---	26.98	53.98	27.00	5000.0	1000.000	342.0	V	56.0	16.3
19957.300000	40.41	---	73.98	33.57	5000.0	1000.000	342.0	V	56.0	16.3
20110.500000	39.69	---	73.98	34.29	5000.0	1000.000	248.0	H	337.0	16.8
20110.500000	---	26.79	53.98	27.19	5000.0	1000.000	248.0	H	337.0	16.8
23950.500000	---	31.98	53.98	22.00	5000.0	1000.000	144.0	H	65.0	26.2
23950.500000	45.17	---	73.98	28.81	5000.0	1000.000	144.0	H	65.0	26.2

Notes: ¹ Field strength (dBμV/m) = receiver/spectrum analyzer value (dBμV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

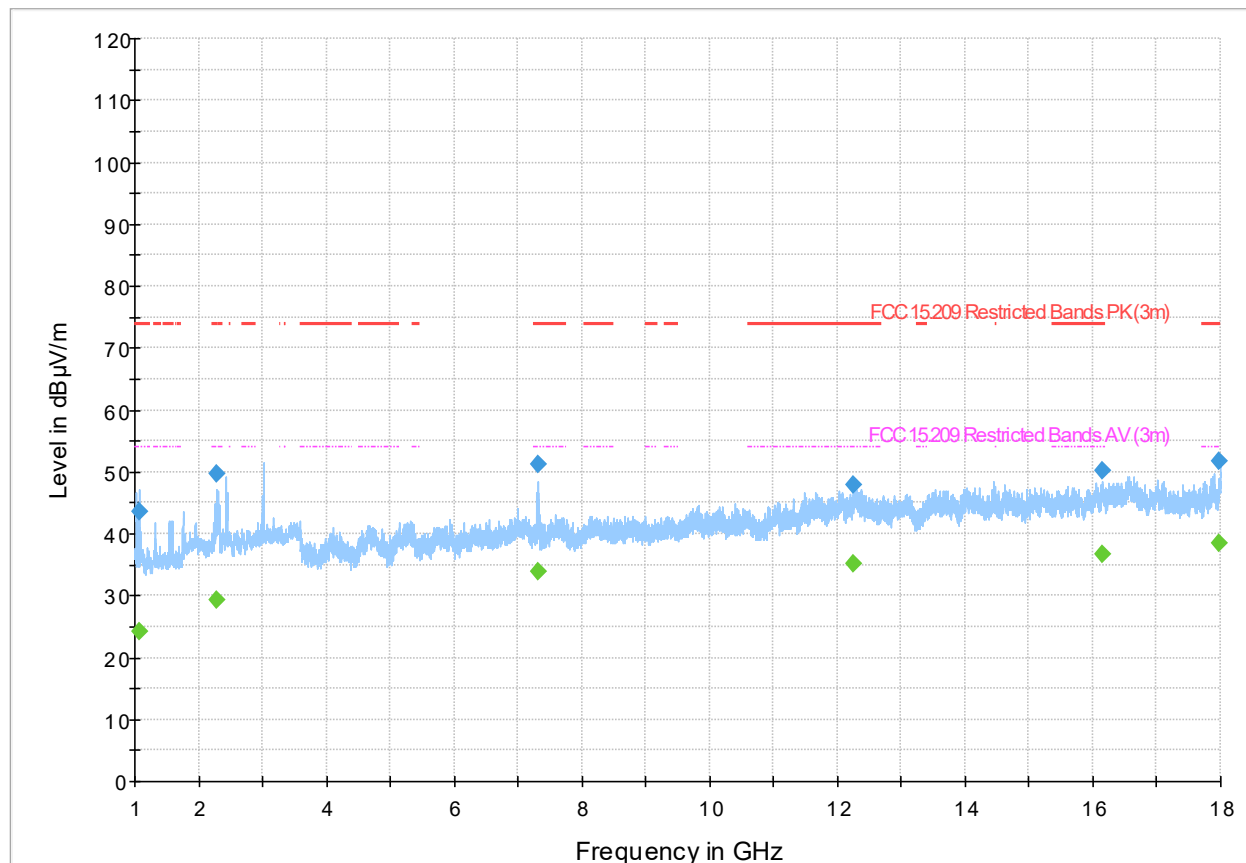


Figure 8.7-150: Radiated emissions spectral plot (1 GHz - 18 GHz), 2437 MHz

Table 8.7-33: Radiated emissions results, 2437 MHz

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1070.300000	43.68	---	73.98	30.30	5000.0	1000.000	203.0	H	324.0	-10.9
1070.300000	---	24.12	53.98	29.86	5000.0	1000.000	203.0	H	324.0	-10.9
2292.600000	49.56	---	73.98	24.42	5000.0	1000.000	319.0	H	303.0	-5.1
2292.600000	---	29.34	53.98	24.64	5000.0	1000.000	319.0	H	303.0	-5.1
7321.750000	51.33	---	73.98	22.65	5000.0	1000.000	212.0	H	283.0	5.5
7321.750000	---	33.77	53.98	20.21	5000.0	1000.000	212.0	H	283.0	5.5
12257.500000	---	35.11	53.98	18.87	5000.0	1000.000	396.0	H	284.0	15.6
12257.500000	47.82	---	73.98	26.16	5000.0	1000.000	396.0	H	284.0	15.6
16145.600000	---	36.78	53.98	17.20	5000.0	1000.000	269.0	V	31.0	22.6
16145.600000	50.24	---	73.98	23.74	5000.0	1000.000	269.0	V	31.0	22.6
17986.150000	51.74	---	73.98	22.24	5000.0	1000.000	314.0	H	165.0	24.4
17986.150000	---	38.59	53.98	15.39	5000.0	1000.000	314.0	H	165.0	24.4

Notes: ¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

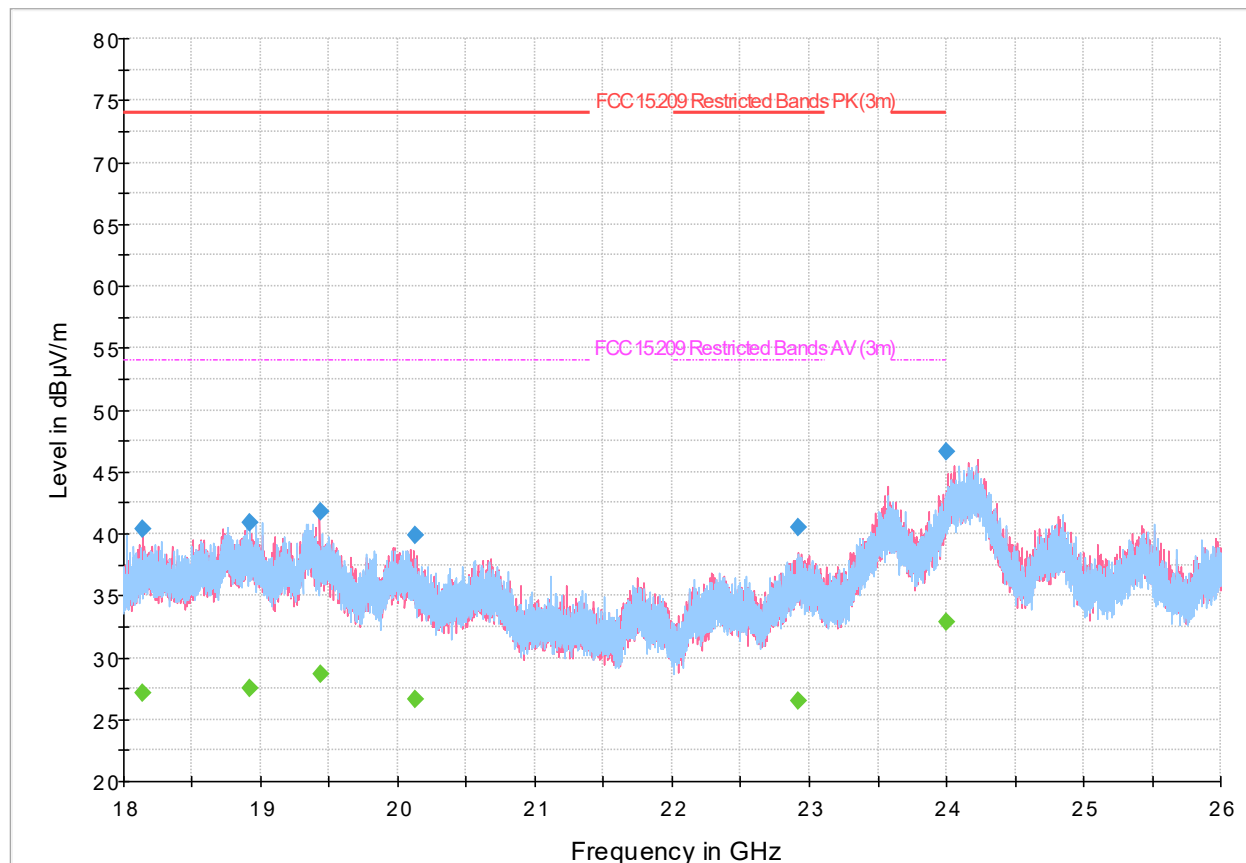


Figure 8.7-151: Radiated emissions spectral plot (18 GHz - 26 GHz), 2437 MHz

Table 8.7-34: Radiated emissions results

Frequency (MHz)	MaxPeak (dBμV/m)	CAverage (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18137.900000	---	27.11	53.98	26.87	5000.0	1000.000	322.0	V	11.0	15.6
18137.900000	40.32	---	73.98	33.66	5000.0	1000.000	322.0	V	11.0	15.6
18924.300000	40.93	---	73.98	33.05	5000.0	1000.000	391.0	H	170.0	15.9
18924.300000	---	27.57	53.98	26.41	5000.0	1000.000	391.0	H	170.0	15.9
19435.300000	41.74	---	73.98	32.24	5000.0	1000.000	267.0	V	42.0	16.5
19435.300000	---	28.63	53.98	25.35	5000.0	1000.000	267.0	V	42.0	16.5
20122.700000	39.82	---	73.98	34.16	5000.0	1000.000	203.0	V	308.0	16.8
20122.700000	---	26.62	53.98	27.36	5000.0	1000.000	203.0	V	308.0	16.8
22916.100000	---	26.52	53.98	27.46	5000.0	1000.000	296.0	V	98.0	19.0
22916.100000	40.55	---	73.98	33.43	5000.0	1000.000	296.0	V	98.0	19.0
24000.900000	46.65	---	---	---	5000.0	1000.000	400.0	V	66.0	27.2
24000.900000	---	32.81	---	---	5000.0	1000.000	400.0	V	66.0	27.2

Notes: ¹ Field strength (dBμV/m) = receiver/spectrum analyzer value (dBμV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

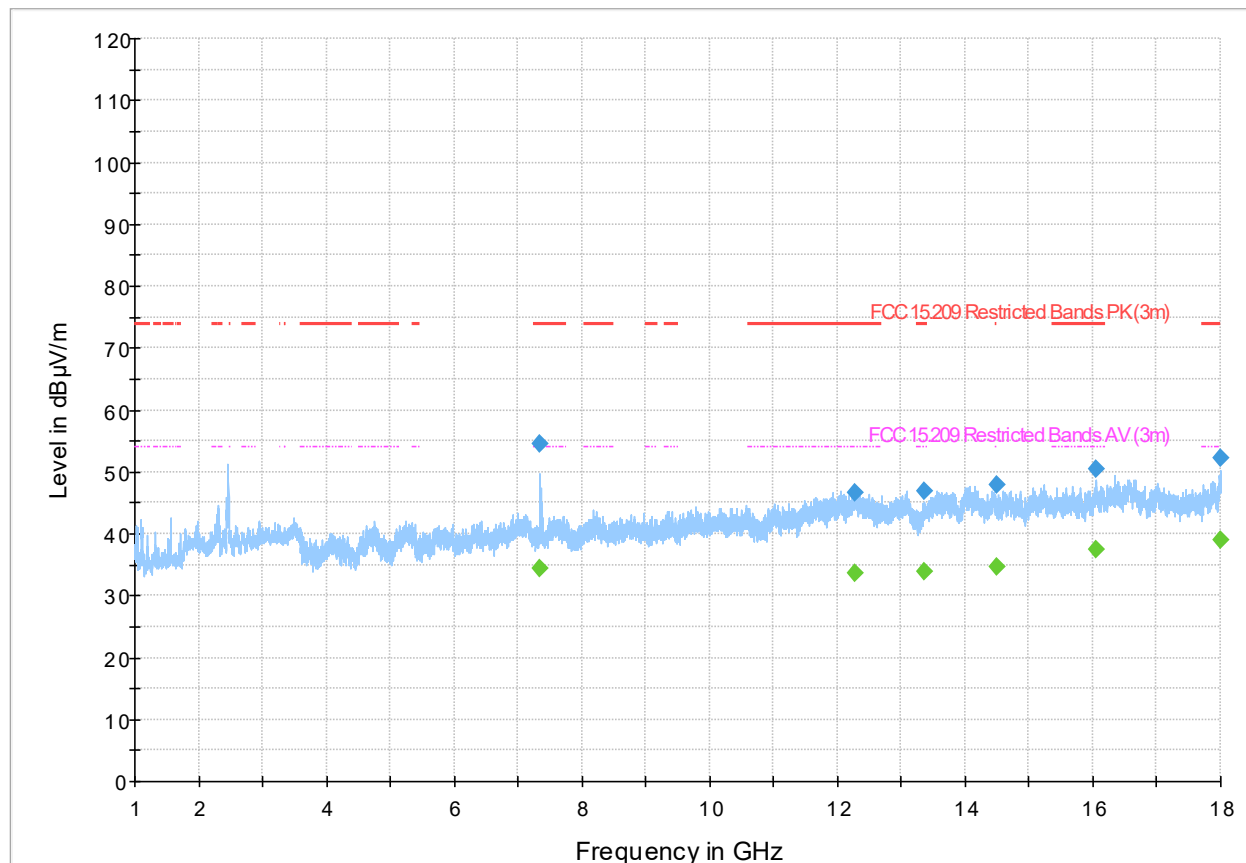


Figure 8.7-152: Radiated emissions spectral plot (1 GHz - 18 GHz), 2452 MHz

Table 8.7-35: Radiated emissions results, 2452 MHz

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7350.600000	---	34.51	53.98	19.47	5000.0	1000.000	188.0	H	329.0	5.5
7350.600000	54.52	---	73.98	19.46	5000.0	1000.000	188.0	H	329.0	5.5
12288.000000	46.68	---	73.98	27.30	5000.0	1000.000	120.0	H	75.0	15.1
12288.000000	---	33.68	53.98	20.30	5000.0	1000.000	120.0	H	75.0	15.1
13366.500000	---	33.94	53.98	20.04	5000.0	1000.000	212.0	H	216.0	16.5
13366.500000	46.87	---	73.98	27.11	5000.0	1000.000	212.0	H	216.0	16.5
14497.900000	47.81	---	73.98	26.17	5000.0	1000.000	276.0	V	204.0	16.4
14497.900000	---	34.77	53.98	19.21	5000.0	1000.000	276.0	V	204.0	16.4
16048.650000	---	37.38	53.98	16.60	5000.0	1000.000	400.0	H	66.0	22.4
16048.650000	50.34	---	73.98	23.64	5000.0	1000.000	400.0	H	66.0	22.4
17989.650000	---	38.90	53.98	15.08	5000.0	1000.000	261.0	V	247.0	24.7
17989.650000	52.32	---	73.98	21.66	5000.0	1000.000	261.0	V	247.0	24.7

Notes: ¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

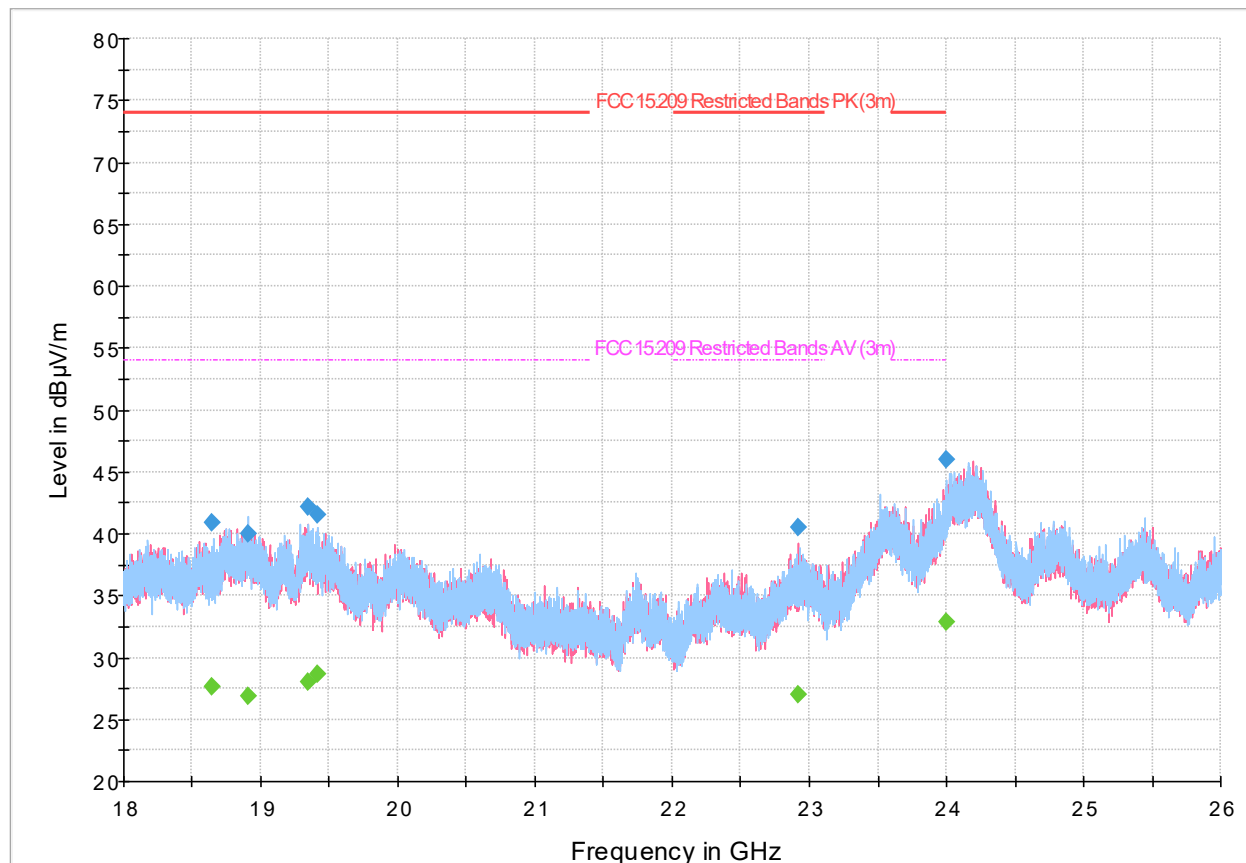


Figure 8.7-153: Radiated emissions spectral plot (18 GHz - 26 GHz), 2452 MHz

Table 8.7-36: Radiated emissions results, 2452 MHz

Frequency (MHz)	MaxPeak (dBμV/m)	CAverage (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18647.700000	40.83	---	73.98	33.15	5000.0	1000.000	156.0	H	307.0	16.0
18647.700000	---	27.70	53.98	26.28	5000.0	1000.000	156.0	H	307.0	16.0
18907.700000	---	26.94	53.98	27.04	5000.0	1000.000	200.0	H	78.0	15.9
18907.700000	40.02	---	73.98	33.96	5000.0	1000.000	200.0	H	78.0	15.9
19339.300000	42.18	---	73.98	31.80	5000.0	1000.000	396.0	V	89.0	16.7
19339.300000	---	28.02	53.98	25.96	5000.0	1000.000	396.0	V	89.0	16.7
19415.100000	41.54	---	73.98	32.44	5000.0	1000.000	338.0	H	310.0	16.6
19415.100000	---	28.72	53.98	25.26	5000.0	1000.000	338.0	H	310.0	16.6
22915.700000	40.56	---	73.98	33.42	5000.0	1000.000	382.0	V	308.0	19.0
22915.700000	---	27.00	53.98	26.98	5000.0	1000.000	382.0	V	308.0	19.0
23994.900000	---	32.83	53.98	21.15	5000.0	1000.000	141.0	H	66.0	27.1
23994.900000	46.01	---	73.98	27.97	5000.0	1000.000	141.0	H	66.0	27.1

Notes: ¹ Field strength (dBμV/m) = receiver/spectrum analyzer value (dBμV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

8.8 Power spectral density

8.8.1 References and limits

- FCC 47 CFR Part 15, Subpart C: §15.247(e)
- ISSED: RSS-247: §5.2(b)
- Test method: ANSI C63.10-2020 §11.10.3

§15.247:

- (e) For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

RSS-247:

- 5.2 DTSS include systems that employ digital modulation techniques resulting in spectral characteristics similar to direct sequence systems. The following applies to the bands 902-928 MHz and 2400-2483.5 MHz:

- (b) The transmitter power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of section 5.4(d), (i.e., the power spectral density shall be determined using the same method as is used to determine the conducted output power).

8.8.2 Test summary

Verdict	Pass		
Test date	March 4, 2024	Temperature	21 °C
Test engineer	Chenhao Ma, Wireless Test Technician	Air pressure	1008 mbar
Test location	☒ Wireless bench ☐ Other:	Relative humidity	55 %

8.8.3 Notes

Testing was performed with the transmitter operating on a fixed channel (lowest, middle, and highest) at maximum output power.

The spectral plots within this section have been corrected with all relevant transducer factors.

8.8.4 Setup details

EUT power input during test	120 VAC / 60 Hz
EUT setup configuration	☒ Table-top ☐ Floor standing ☐ Other:

Spectrum analyzer settings:

Resolution bandwidth	3 kHz
Video bandwidth	10 kHz
Detector mode	RMS (power averaging)
Trace mode	Average
Measurement time	> 100 sweeps, 1 second sweep time

8.8.5 Test data

8.8.5.1 IEEE 802.11b (CDD) mode

Table 8.8-1: Power spectral density test data

Channel	Frequency (MHz)	Modulation	Average power density (dBm/3kHz)			Total power density (dBm/3kHz)	Power Density Limit (dBm/3kHz)
			ANT1	ANT2	ANT3		
1	2412	CCK-DQPSK (5.5 Mbps)	1.14	0.41	1.16	5.69	8.00
7	2442		1.36	0.89	1.22	5.93	8.00
11	2462		2.55	0.72	1.43	6.40	8.00

The maximum gain is 5.11 dBi < 6 dBi, so the output power density limit shall not be reduced.

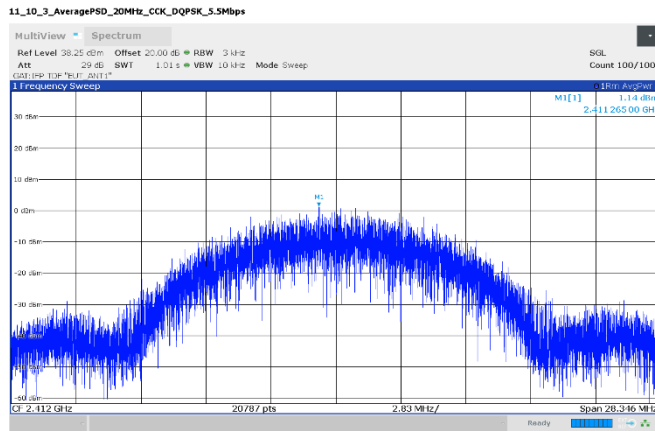


Figure 8.8-1: Power spectral density, 2412 MHz, Antenna 1

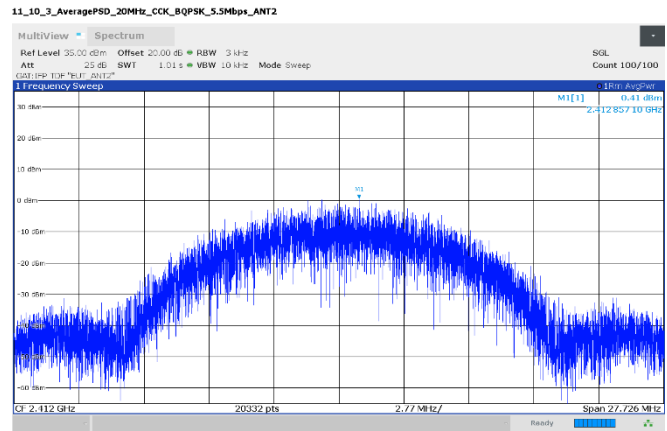


Figure 8.8-2: Power spectral density, 2412 MHz, Antenna 2

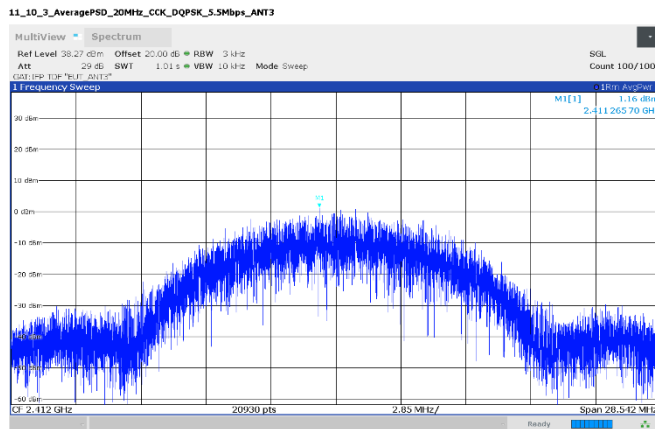


Figure 8.8-3: Power spectral density, 2412 MHz, Antenna 3

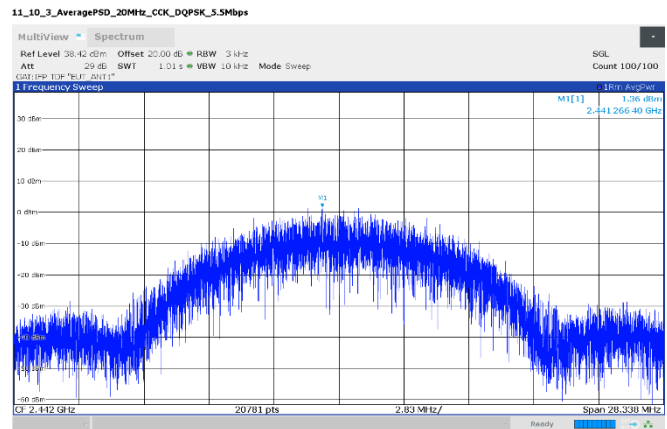


Figure 8.8-4: Power spectral density, 2442 MHz, Antenna 1

Section 8
Test name
Specification(s)

Testing data
 Power spectral density
 FCC 15.247 & RSS-247

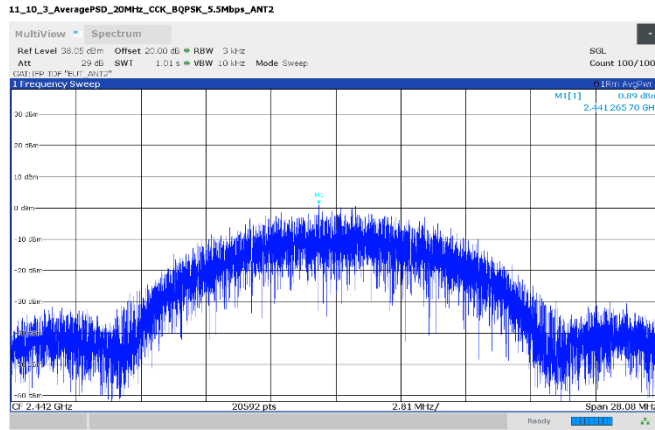


Figure 8.8-5: Power spectral density, 2442 MHz, Antenna 2

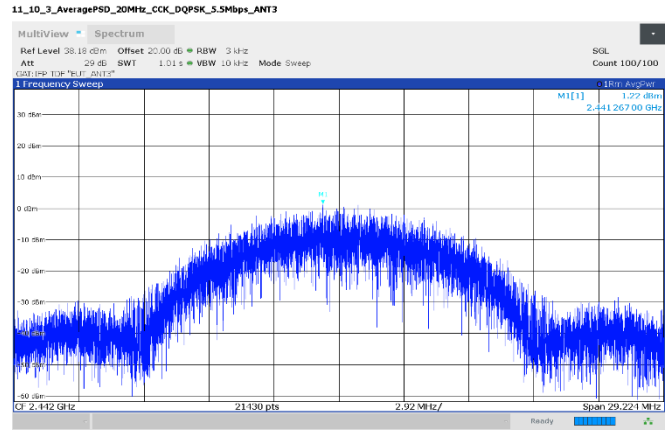


Figure 8.8-6: Power spectral density, 2442 MHz, Antenna 3

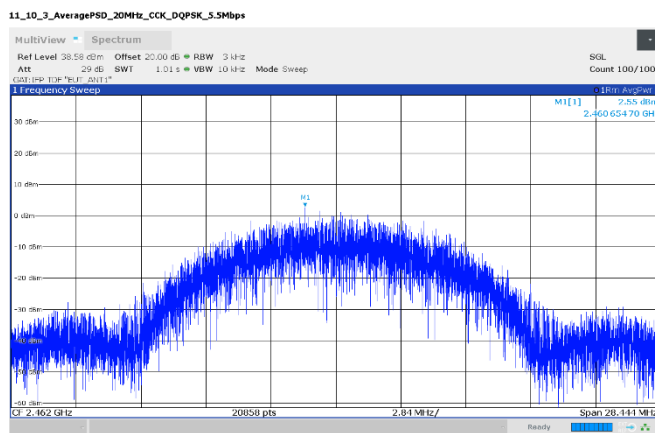


Figure 8.8-7: Power spectral density, 2462 MHz, Antenna 1

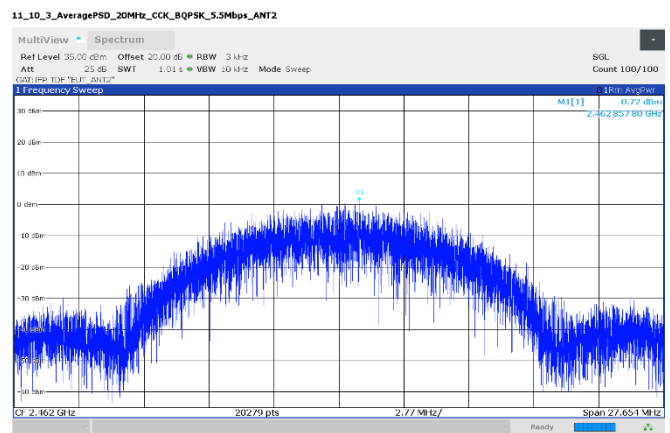


Figure 8.8-8: Power spectral density, 2462 MHz, Antenna 2

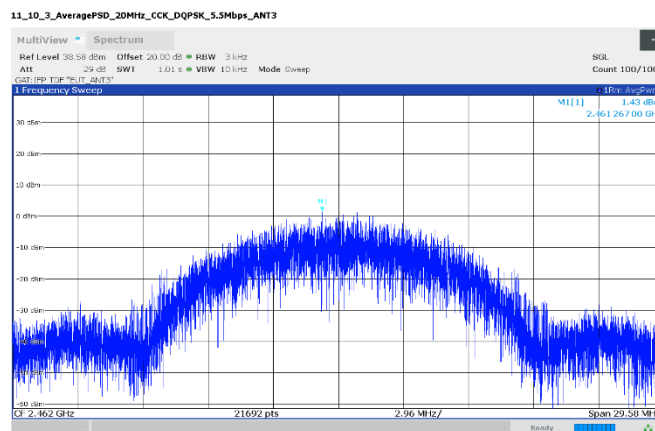


Figure 8.8-9: Power spectral density, 2462 MHz, Antenna 3

8.8.5.2 IEEE 802.11g (CDD) mode

Table 8.8-2: Power spectral density test data

Channel	Frequency (MHz)	Modulation	Average power density (dBm/3kHz)			Total power density (dBm/3kHz)	Power Density Limit (dBm/3kHz)
			ANT1	ANT2	ANT3		
1	2412	OFDM-64QAM (54 Mbps)	-6.46	-6.40	-7.08	-1.89	8.00
7	2442		-5.84	-6.68	-6.76	-1.64	8.00
11	2462		-5.70	-6.32	-6.22	-1.30	8.00

The maximum gain is 5.11 dBi < 6 dBi, so the output power density limit shall not be reduced.

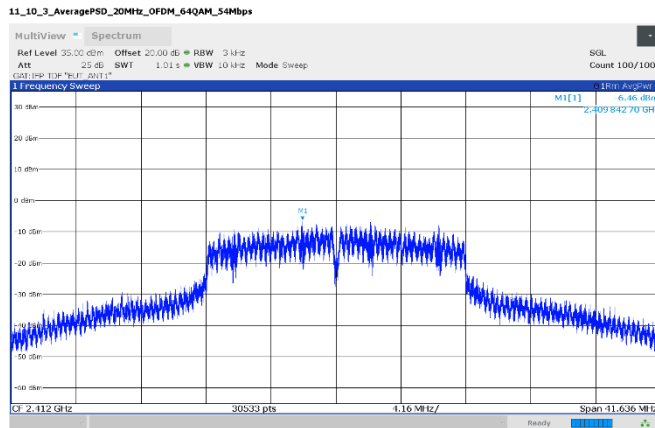


Figure 8.8-10: Power spectral density, 2412 MHz, Antenna 1

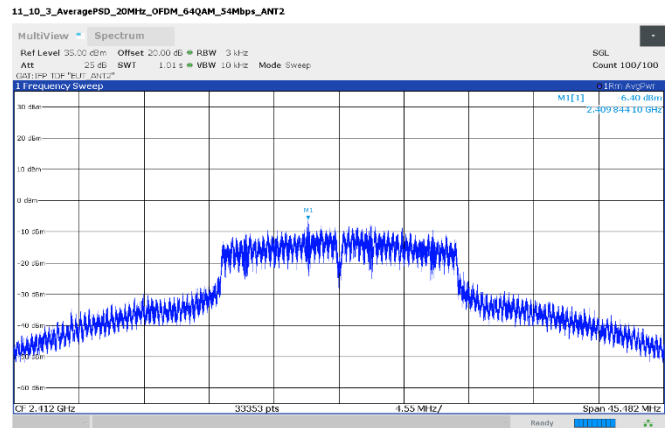


Figure 8.8-11: Power spectral density, 2412MHz, Antenna 2

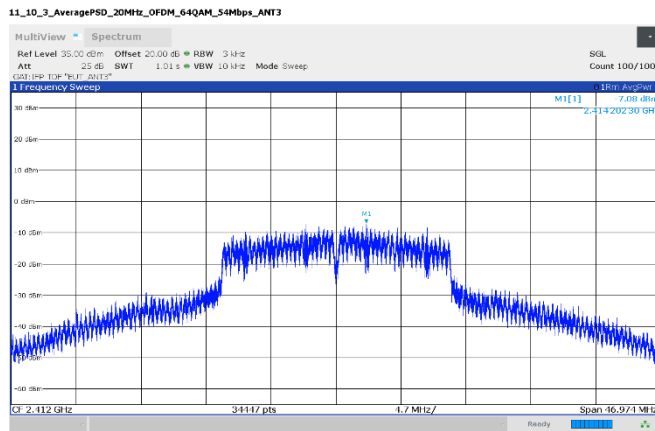


Figure 8.8-12: Power spectral density, 2412 MHz, Antenna 3

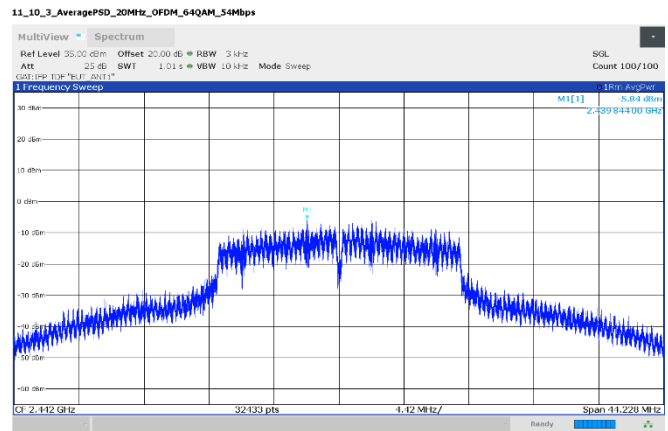


Figure 8.8-13: Power spectral density, 2442 MHz, Antenna 1

Section 8
Test name
Specification(s)

Testing data
 Power spectral density
 FCC 15.247 & RSS-247

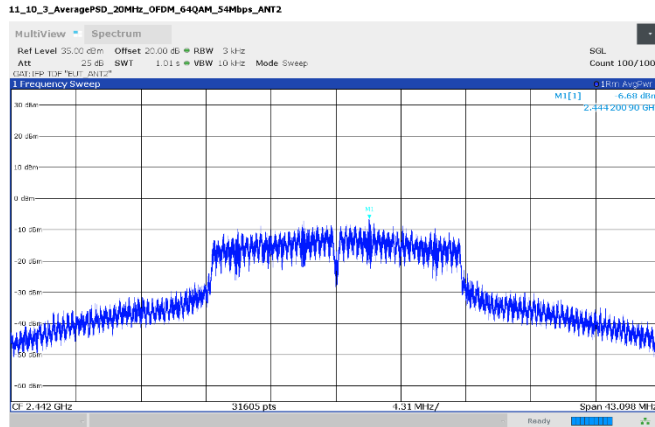


Figure 8.8-14: Power spectral density, 2442 MHz, Antenna 2

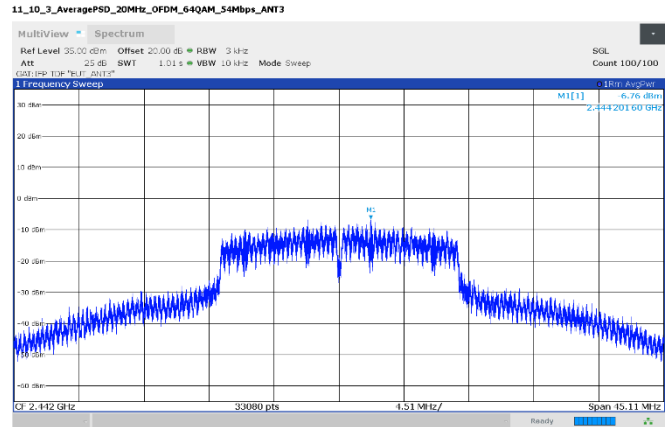


Figure 8.8-15: Power spectral density, 2442 MHz, Antenna 3

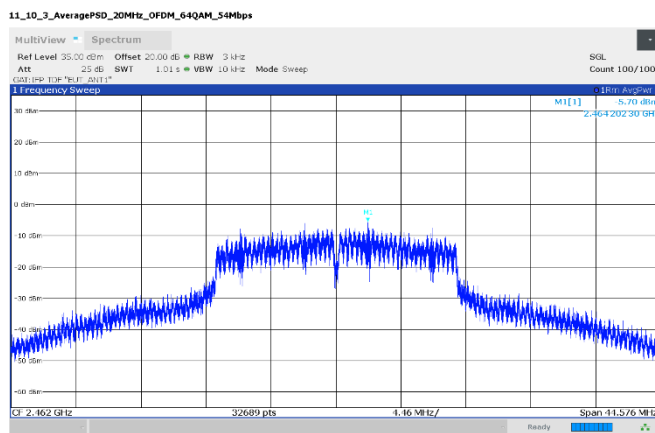


Figure 8.8-16: Power spectral density, 2462 MHz, Antenna 1

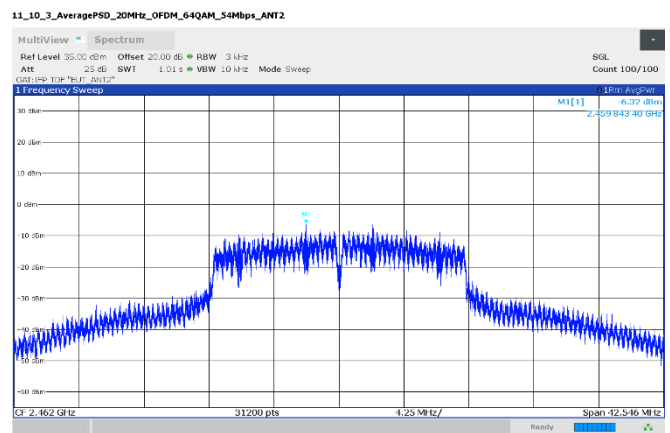


Figure 8.8-17: Power spectral density, 2462 MHz, Antenna 2

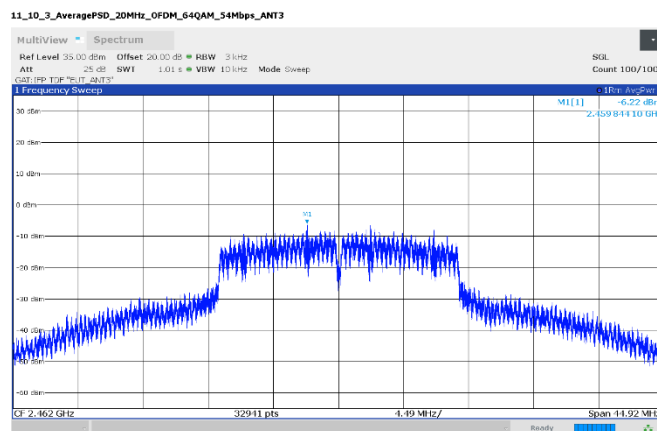


Figure 8.8-18: Power spectral density, 2462 MHz, Antenna 3

8.8.5.3 IEEE 802.11n HT20 (CDD) mode

Table 8.8-3: Power spectral density test data

Channel	Frequency (MHz)	Modulation	Average power density (dBm/3kHz)			Total power density (dBm/3kHz)	Power Density Limit (dBm/3kHz)
			ANT1	ANT2	ANT3		
1	2412	OFDM-	-5.44	-4.12	-4.99	-0.01	8.00
7	2442	64QAM_MCS23 (195	-5.00	-3.57	-4.68	0.40	8.00
11	2462	Mbps)	-5.46	-3.15	-5.05	0.34	8.00

The maximum gain is 5.11 dBi < 6 dBi, so the output power density limit shall not be reduced.

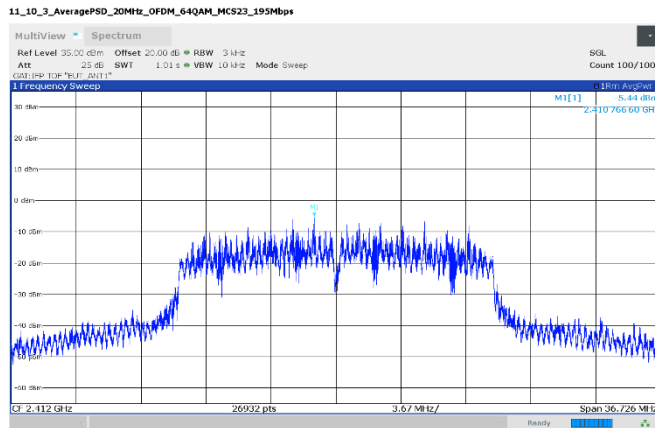


Figure 8.8-19: Power spectral density, 2412 MHz, Antenna 1

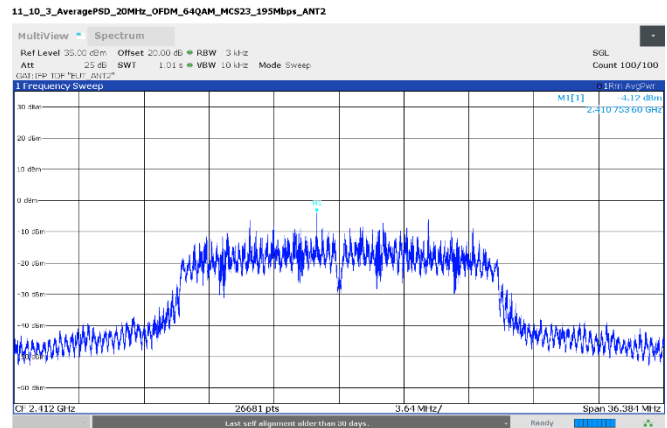


Figure 8.8-20: Power spectral density, 2412MHz, Antenna 2

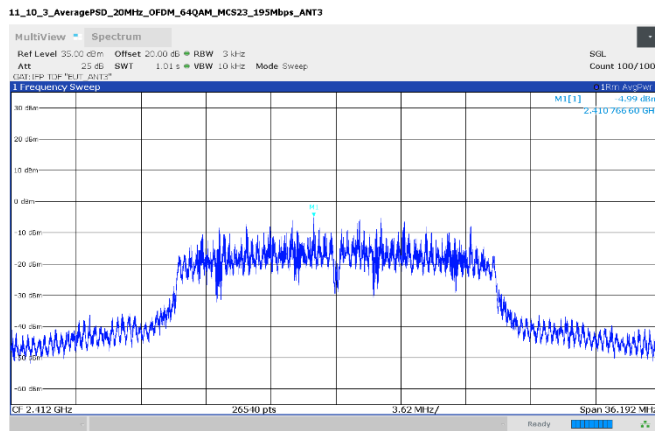


Figure 8.8-21: Power spectral density, 2412 MHz, Antenna 3

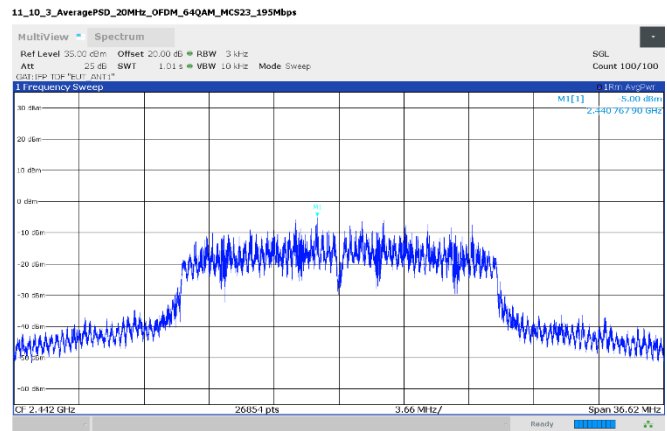


Figure 8.8-22: Power spectral density, 2442 MHz, Antenna 1

Section 8
Test name
Specification(s)

Testing data
Power spectral density
FCC 15.247 & RSS-247

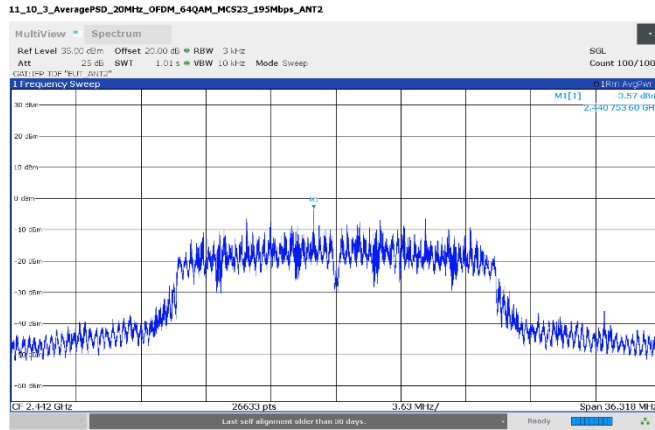


Figure 8.8-23: Power spectral density, 2442 MHz, Antenna 2

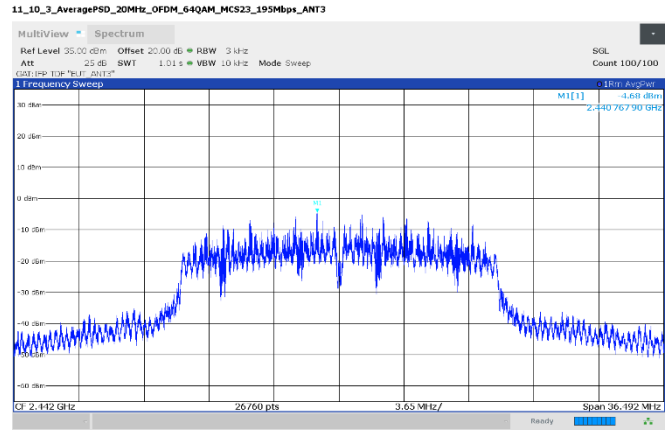


Figure 8.8-24: Power spectral density, 2442 MHz, Antenna 3

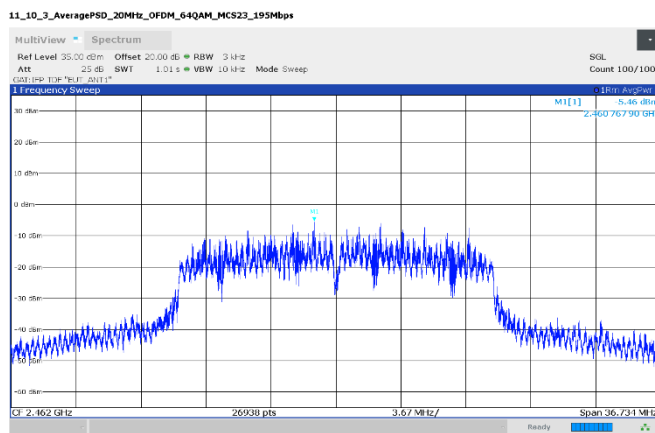


Figure 8.8-25: Power spectral density, 2462 MHz, Antenna 1

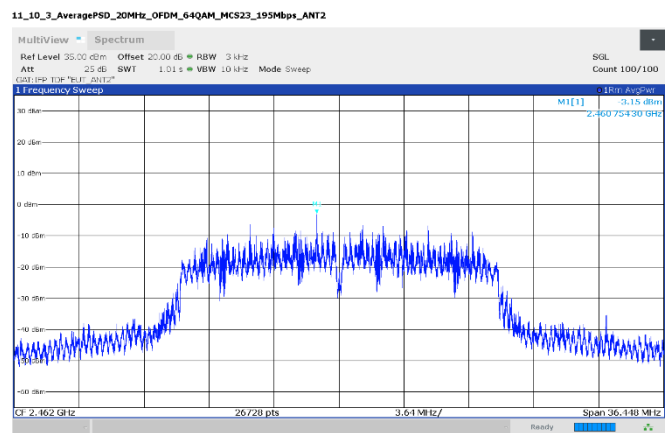


Figure 8.8-26: Power spectral density, 2462 MHz, Antenna 2

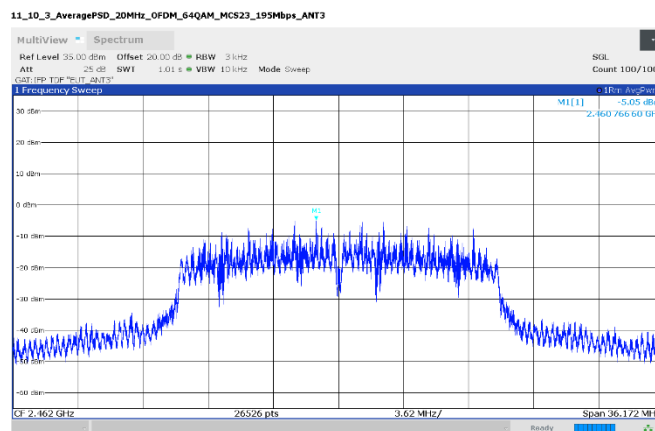


Figure 8.8-27: Power spectral density, 2462 MHz, Antenna 3

8.8.5.4 IEEE 802.11n HT40 (CDD) mode

Table 8.8-4: Power spectral density test data

Channel	Frequency (MHz)	Modulation	Average power density (dBm/3kHz)			Total power density (dBm/3kHz)	Power Density Limit (dBm/3kHz)
			ANT1	ANT2	ANT3		
3	2422	OFDM-	-6.86	-6.71	-5.80	-1.66	8.00
6	2437	64QAM_MCS22	-6.60	-6.23	-5.86	-1.45	8.00
9	2452	(175.5 Mbps)	-6.76	-6.31	-5.94	-1.66	8.00

The maximum gain is 5.11 dBi < 6 dBi, so the output power density limit shall not be reduced.

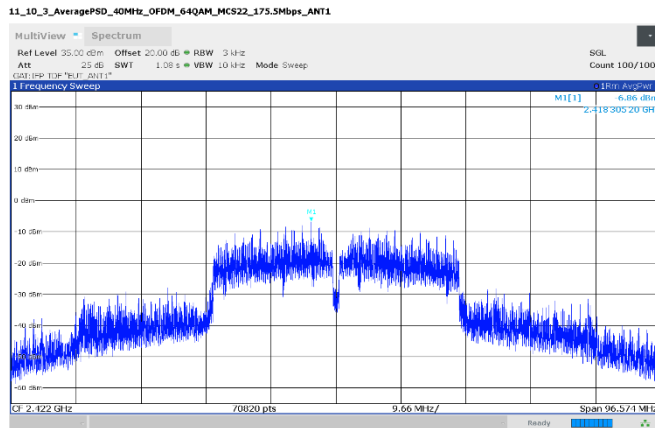


Figure 8.8-28: Power spectral density, 2422 MHz, Antenna 1

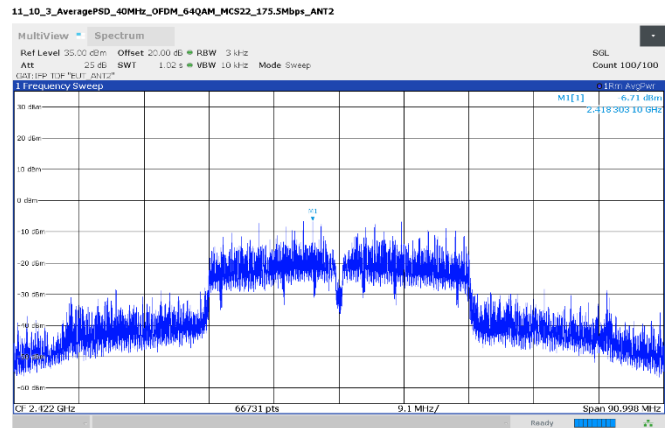


Figure 8.8-29: Power spectral density, 2422MHz, Antenna 2

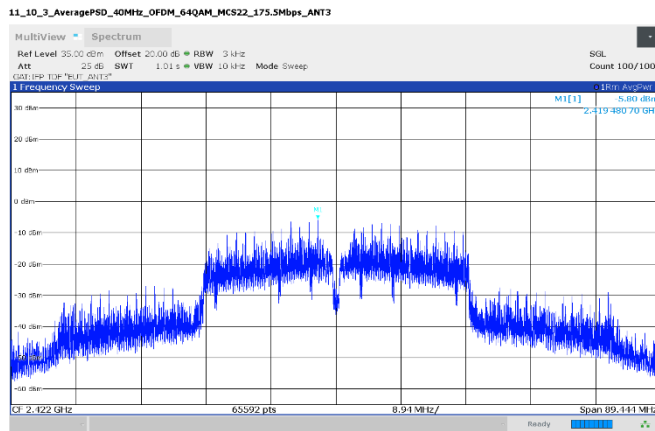


Figure 8.8-30: Power spectral density, 2422 MHz, Antenna 3

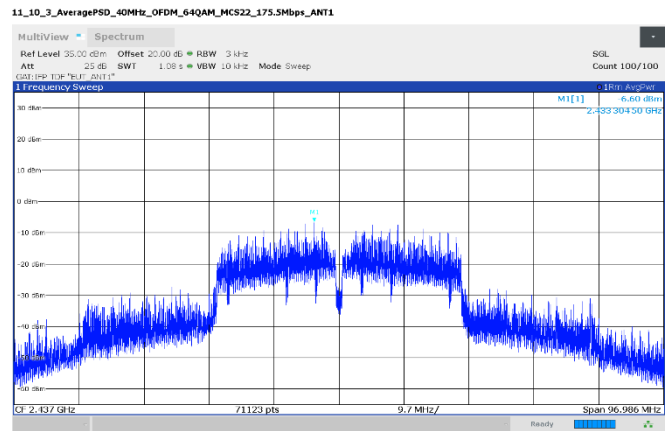


Figure 8.8-31: Power spectral density, 2437 MHz, Antenna 1

Section 8
Test name
Specification(s)

Testing data
Power spectral density
FCC 15.247 & RSS-247

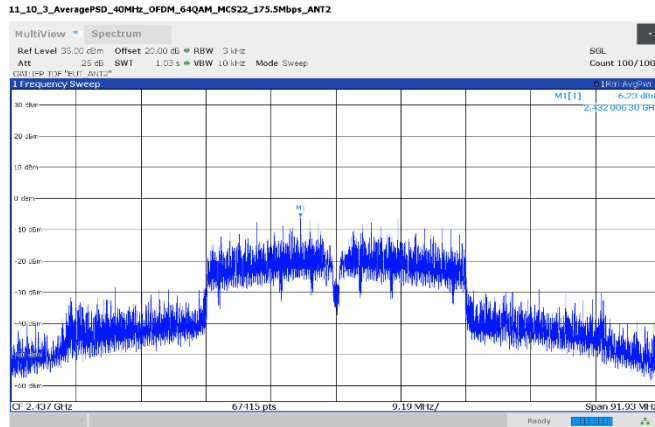


Figure 8.8-32: Power spectral density, 2437 MHz, Antenna 2

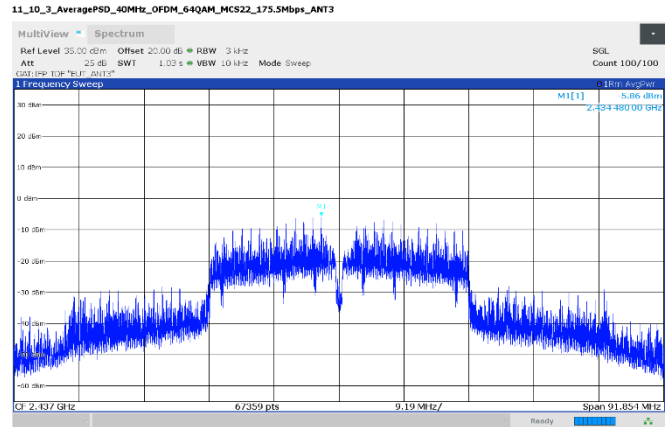


Figure 8.8-33: Power spectral density, 2437 MHz, Antenna 3

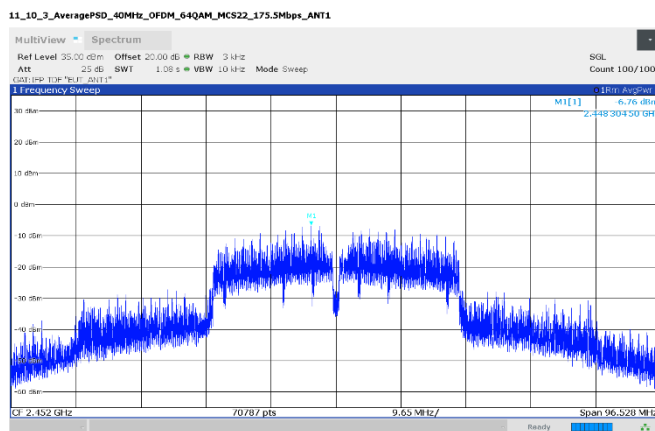


Figure 8.8-34: Power spectral density, 2452 MHz, Antenna 1

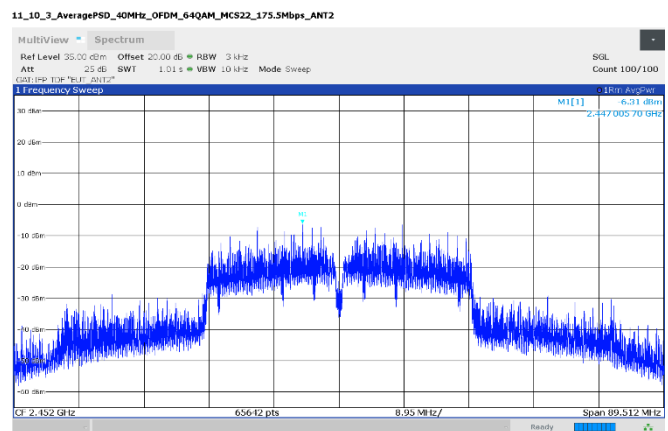


Figure 8.8-35: Power spectral density, 2452 MHz, Antenna 2

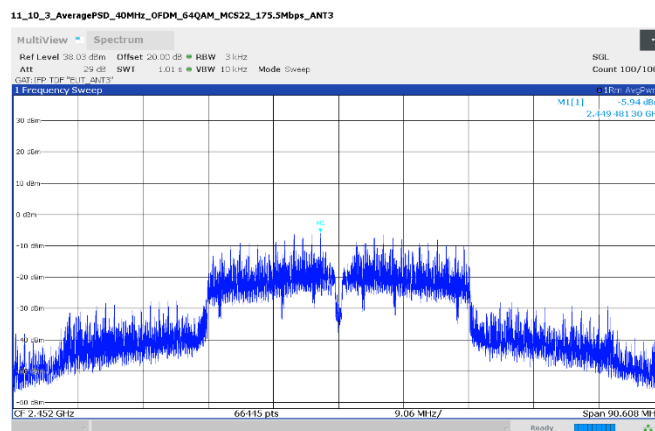


Figure 8.8-36: Power spectral density, 2452 MHz, Antenna 3

8.9 99% occupied bandwidth

8.9.1 References and limits

- ISED: RSS-Gen: §6.7
- Test method: ANSI C63.4-2020: §6.9.2

RSS-GEN:

6.7 The occupied bandwidth or the “99% emission bandwidth” is defined as the frequency range between two points, one above and the other below the carrier frequency, within which 99% of the total transmitted power of the fundamental transmitted emission is contained. The occupied bandwidth shall be reported for all equipment in addition to the specified bandwidth required in the applicable RSSs.

8.9.2 Test summary

Verdict	Pass		
Test date	March 4, 2024	Temperature	21 °C
Test engineer	Chenhao Ma, Wireless Test Technician	Air pressure	1005 mbar
Test location	☒ Wireless bench ☐ Other:	Relative humidity	54 %

8.9.3 Notes

Testing was performed with the transmitter operating on a fixed channel (lowest, middle, and highest) at maximum output power.

The spectral plots within this section have been corrected with all relevant transducer factors.

8.9.4 Setup details

EUT power input during test	120 VAC / 60 Hz
EUT setup configuration	☒ Table-top ☐ Floor standing ☐ Other:

Receiver settings:

Resolution bandwidth	1-5 % of occupied bandwidth
Video bandwidth	~ 3 x resolution bandwidth
Detector mode	Peak
Trace mode	Max Hold
Measurement time	Long enough for trace to stabilize

8.9.5 Test data

8.9.5.1 IEEE 802.11b (CDD) mode:

Table 8.9-1: 99% occupied bandwidth test data, IEEE 802.11b (CDD) mode

Channel	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)		
			ANT1	ANT2	ANT3
1	2412	CCK-DQPSK (5.5 Mbps)	14.173	13.863	14.271
7	2442		14.169	14.040	14.612
11	2462		14.222	13.827	14.790

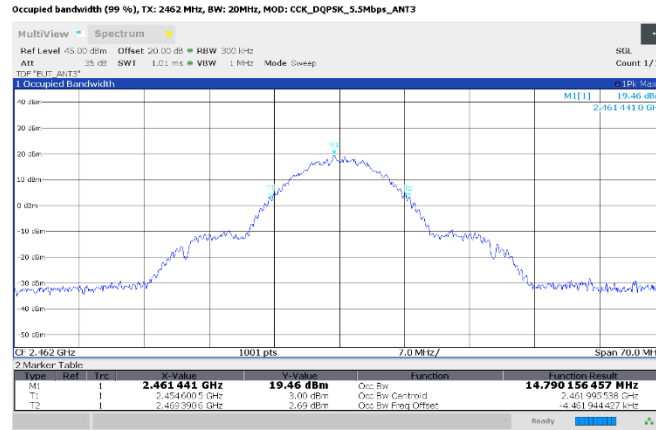


Figure 8.9-1: 99% occupied bandwidth, IEEE 802.11b (CDD mode), maximum measured 99% occupied bandwidth

8.9.5.2 IEEE 802.11g (CDD) mode:

Table 8.9-2: 99% occupied bandwidth test data, IEEE 802.11g (CDD) mode

Channel	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)		
			ANT1	ANT2	ANT3
1	2412	OFDM-64QAM (54 Mbps)	20.818	22.741	23.487
7	2442		22.114	21.549	22.555
11	2462		22.288	21.273	22.460

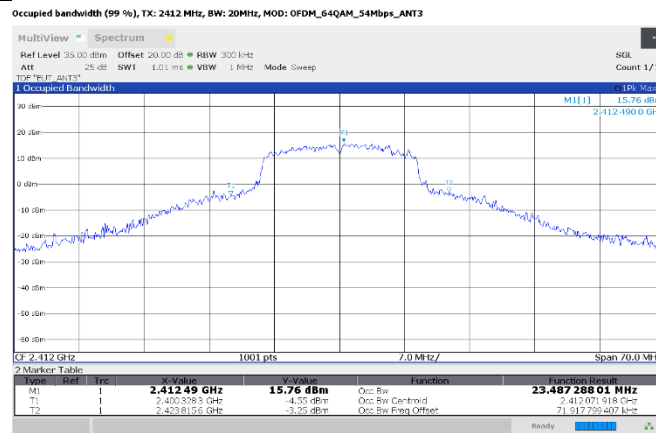


Figure 8.9-2: 99% occupied bandwidth, IEEE 802.11g (CDD mode), maximum measured 99% occupied bandwidth

8.9.5.3 IEEE 802.11n HT20 (CDD) mode:

Table 8.9-3: 99% occupied bandwidth test data, IEEE 802.11n HT20 (CDD) mode

Channel	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)		
			ANT1	ANT2	ANT3
1	2412	OFDM-64QAM_MCS23 (195 Mbps)	18.363	18.192	18.096
7	2442		18.310	18.159	18.246
11	2462		18.367	18.224	18.086

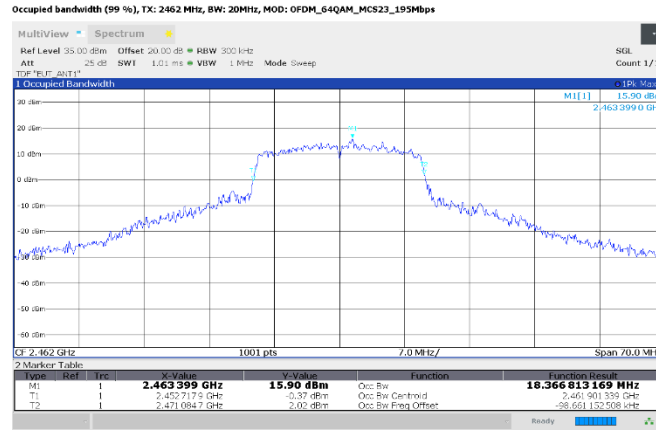


Figure 8.9-3: 99% occupied bandwidth, IEEE 802.11n HT20 (CDD mode), maximum measured 99% occupied bandwidth

8.9.5.4 IEEE 802.11n HT40 (CDD) mode:

Table 8.9-4: 99% occupied bandwidth test data, IEEE 802.11n HT40 (CDD) mode

Channel	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)		
			ANT1	ANT2	ANT3
3	2422	OFDM-64QAM_MCS22 (175.5 Mbps)	48.287	45.499	44.722
6	2437		48.493	45.965	45.927
9	2452		48.264	44.756	45.304

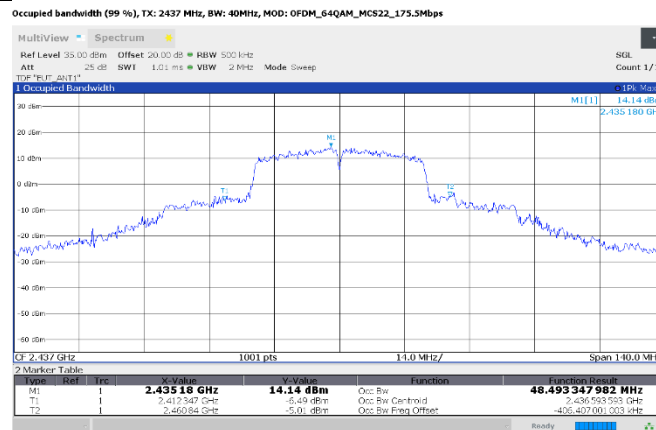


Figure 8.9-4: 99% occupied bandwidth, IEEE 802.11n HT20 (CDD mode), maximum measured 99% occupied bandwidth

End of test report