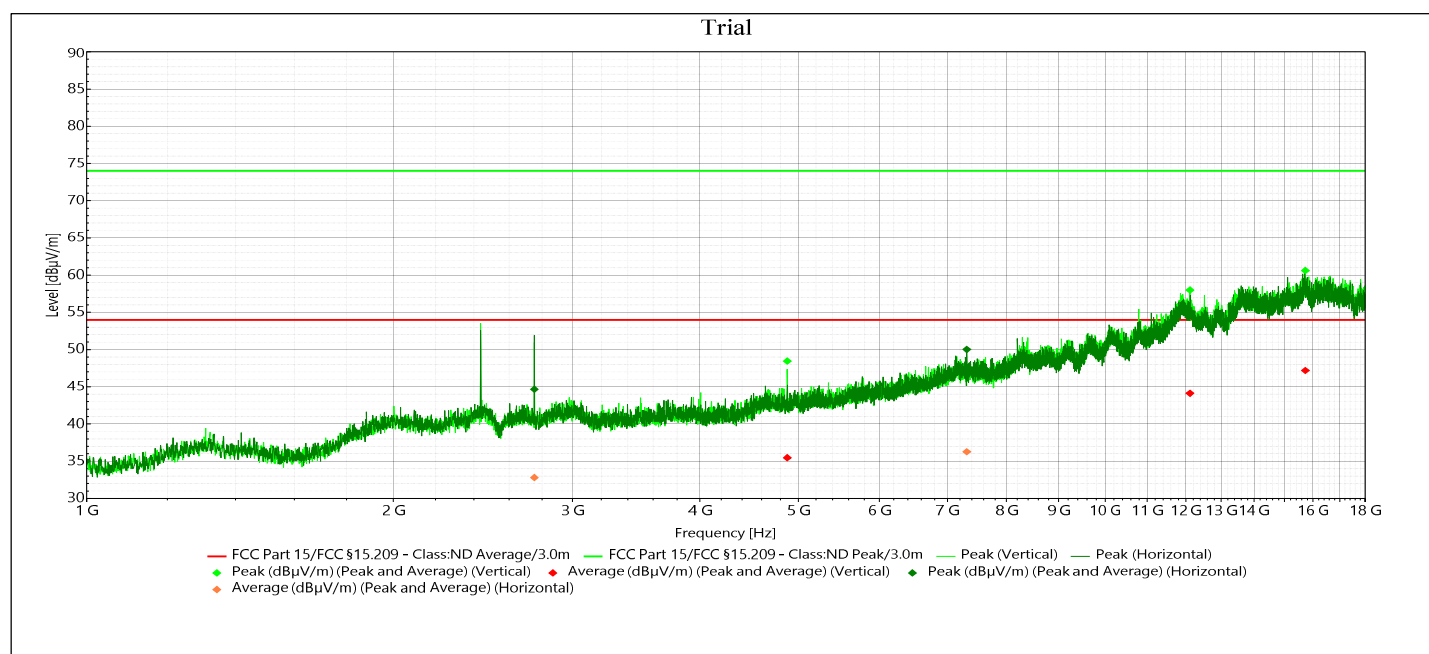




Spurious Emissions 1 - 18GHz - Mobile Mark DM2 Antenna - Mid Channel

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
1 GHz - 18 GHz	3m	Vertical	1 MHz	18001 Pts	Auto
1 GHz - 18 GHz	3m	Horizontal	1 MHz	18001 Pts	Auto



Limit: FCC Part 15/FCC §15.209 **Test Date:** 4/14/2023 **EUT Orientation:** **Test Results:** Pass

Test Notes: Mid Channel 2437.88MHz

Figure 2-67 – RE Spurious Emissions 1-18 GHz – Mobile Mark DM2 Antenna - Mid Channel

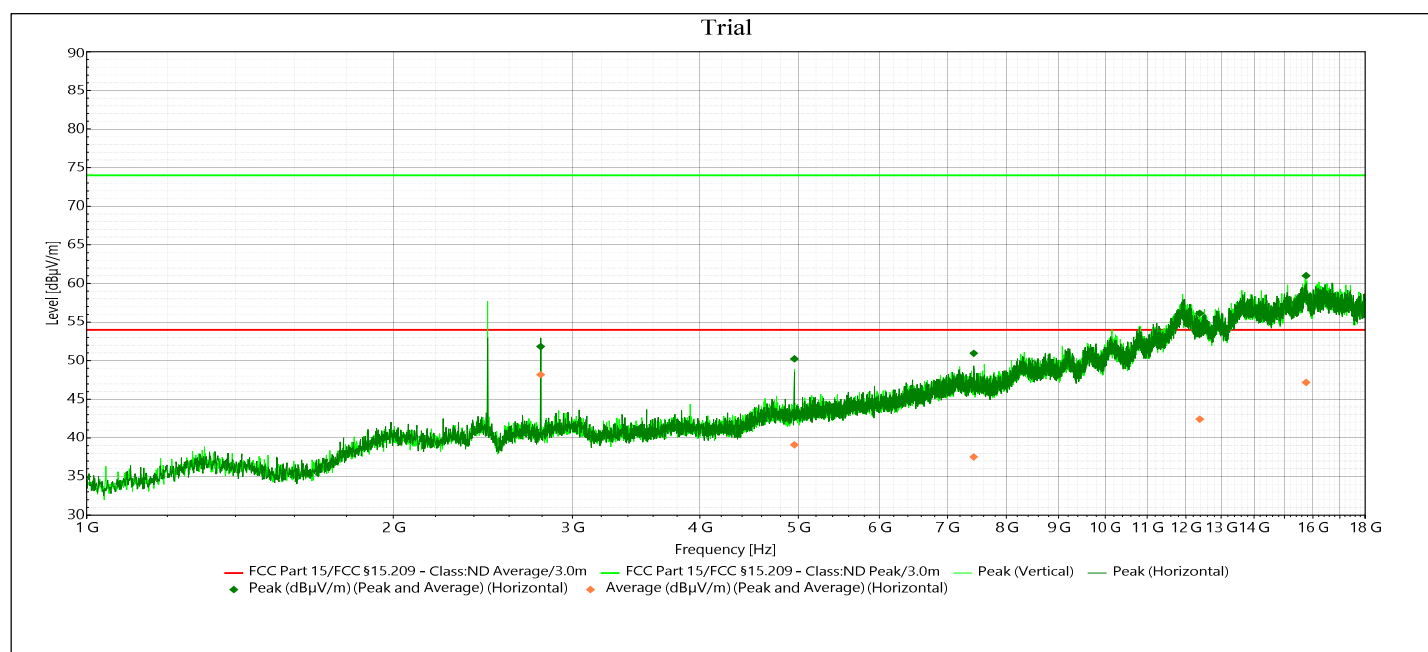
**Table 2.10-17 – RE Spurious Emissions 1-18 GHz – Mobile Mark DM2 Antenna - Mid Channel**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
4875.056	48.44	74.00	-25.56	35.46	54.00	-18.54	360.00	4.00	Vertical	Pass
12111.389	57.99	74.00	-16.01	44.13	54.00	-9.87	228.00	4.00	Vertical	Pass
15724.833	60.61	74.00	-13.39	47.19	54.00	-6.81	0.00	4.00	Vertical	Pass
2751.944	44.66	74.00	-29.34	32.80	54.00	-21.20	360.00	1.00	Horizontal	Pass
7313.611	50.01	74.00	-23.99	36.27	54.00	-17.73	94.00	1.00	Horizontal	Pass



Spurious Emissions 1 - 18GHz - Mobile Mark DM2 Antenna - High Channel

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
1 GHz - 18 GHz	3m	Vertical	1 MHz	18001 Pts	Auto
1 GHz - 18 GHz	3m	Horizontal	1 MHz	18001 Pts	Auto



Limit: FCC Part 15/FCC §15.209 **Test Date:** 4/14/2023 **EUT Orientation:** **Test Results:** Pass

Test Notes: High Channel 2476.8MHz

Figure 2-68 – RE Spurious Emissions 1-18 GHz – Mobile Mark DM2 Antenna - High Channel

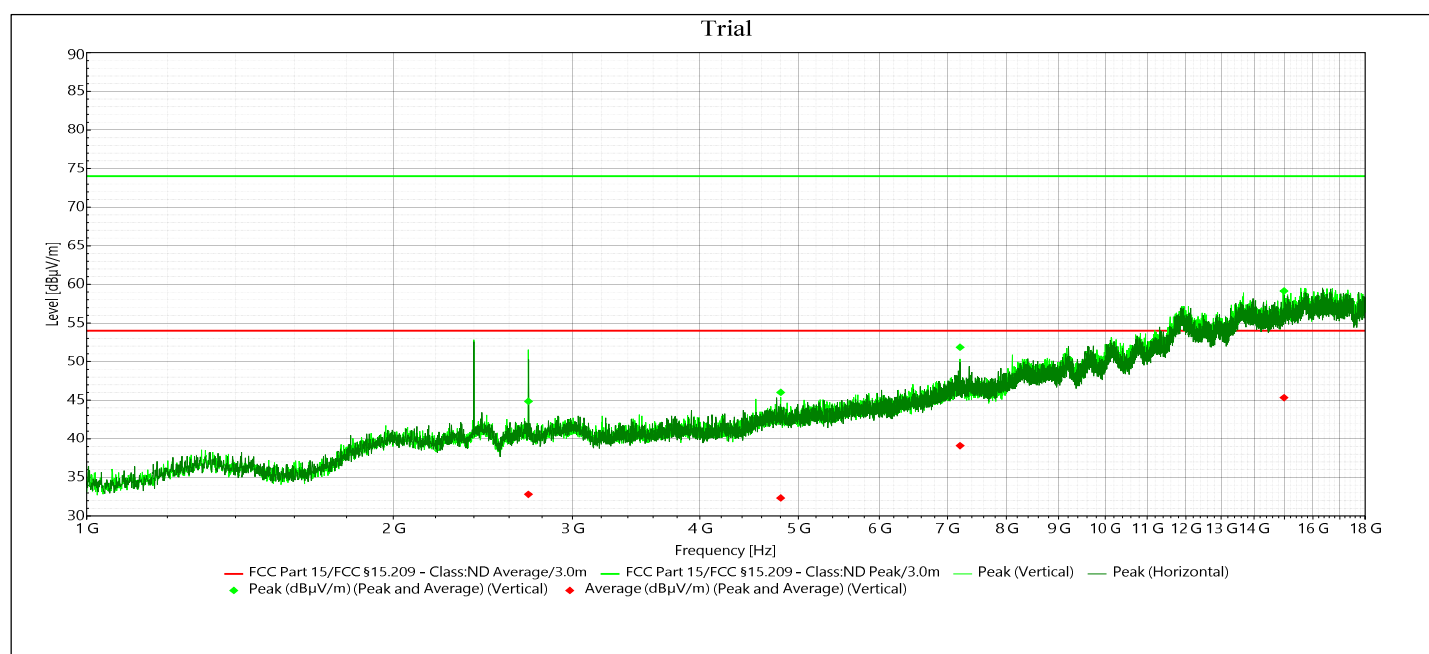
**Table 2.10-18 – RE Spurious Emissions 1-18 GHz – Mobile Mark DM2 Antenna - High Channel**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
2791.611	51.83	74.00	-22.17	48.19	54.00	-5.81	132.00	4.00	Horizontal	Pass
4953.444	50.23	74.00	-23.77	39.10	54.00	-14.90	93.00	1.00	Horizontal	Pass
7429.778	50.96	74.00	-23.04	37.53	54.00	-16.47	132.00	4.00	Horizontal	Pass
12384.333	56.14	74.00	-17.86	42.42	54.00	-11.58	267.00	4.00	Horizontal	Pass
15750.333	61.01	74.00	-12.99	47.18	54.00	-6.82	360.00	4.00	Horizontal	Pass



Spurious Emissions 1 - 18GHz - Mobile Mark SMW-304 Antenna - Low CH 2401.024MHz

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
1 GHz - 18 GHz	3m	Vertical	1 MHz	18001 Pts	Auto
1 GHz - 18 GHz	3m	Horizontal	1 MHz	18001 Pts	Auto



Limit: FCC Part 15/FCC §15.209 **Test Date:** 4/20/2023 **EUT Orientation:** **Test Results:** Pass

Test Notes: Low Channel 2401.02MHz

Figure 2-69 – RE Spurious Emissions 1-18 GHz – Mobile Mark SMW-304 Antenna - Low CH 2401.024MHz



**Table 2.10-19 – RE Spurious Emissions 1-18 GHz – Mobile Mark SMW-304 Antenna - Low CH
2401.024MHz**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
2715.111	44.85	74.00	-29.15	32.80	54.00	-21.20	0.00	1.00	Vertical	Pass
4802.333	46.01	74.00	-27.99	32.34	54.00	-21.66	266.00	1.00	Vertical	Pass
7203.111	51.85	74.00	-22.15	39.11	54.00	-14.89	94.00	4.00	Vertical	Pass
14983.444	59.15	74.00	-14.85	45.32	54.00	-8.68	0.00	1.00	Vertical	Pass

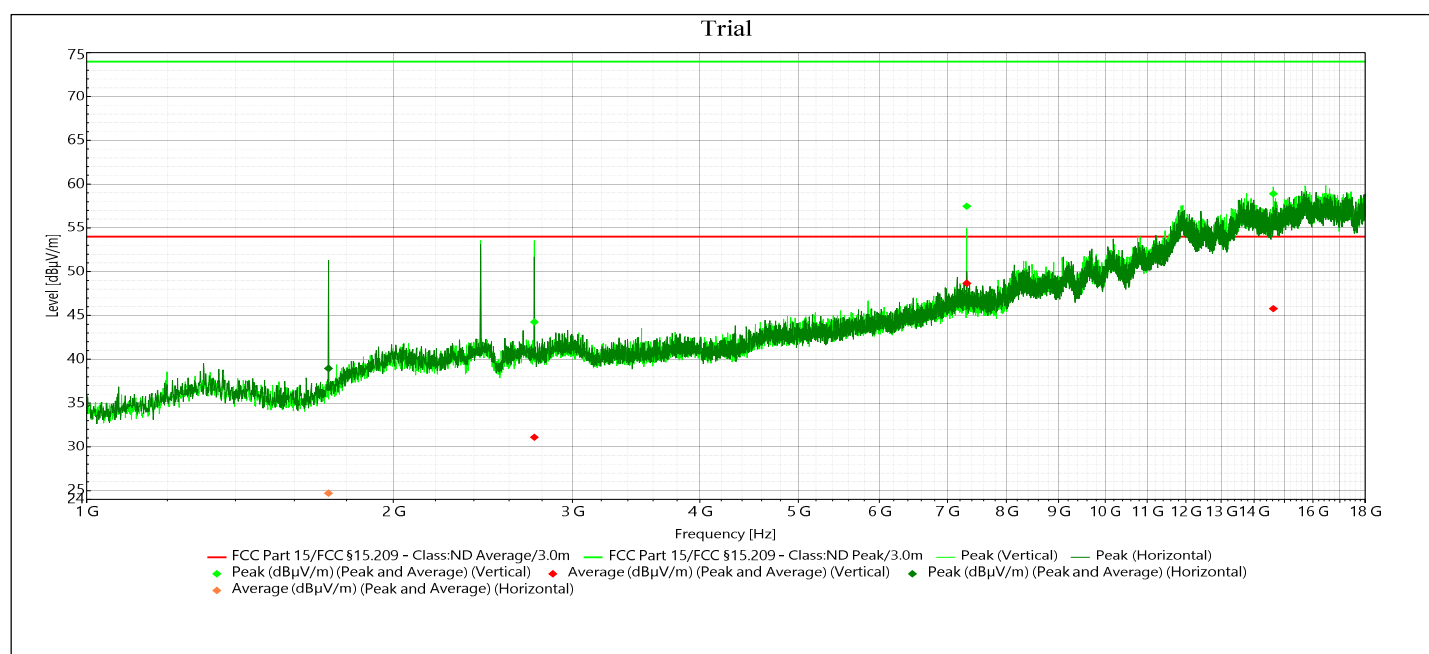
TÜV SÜD America Inc
141 14th Street NW
New Brighton, MN 55112

Phone: 651-631-2487
www.tuv-sud-america.com



Spurious Emissions 1 - 18GHz - Mobile Mark SMW-304 Antenna - Mid CH 2437.88MHz

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
1 GHz - 18 GHz	3m	Vertical	1 MHz	18001 Pts	Auto
1 GHz - 18 GHz	3m	Horizontal	1 MHz	18001 Pts	Auto



Limit: FCC Part 15/FCC §15.209 **Test Date:** 4/20/2023 **EUT Orientation:** **Test Results:** Pass

Test Notes: Mid Channel 2437.88MHz

Figure 2-70 – RE Spurious Emissions 1-18 GHz – Mobile Mark SMW-304 Antenna - Mid CH 2437.88MHz

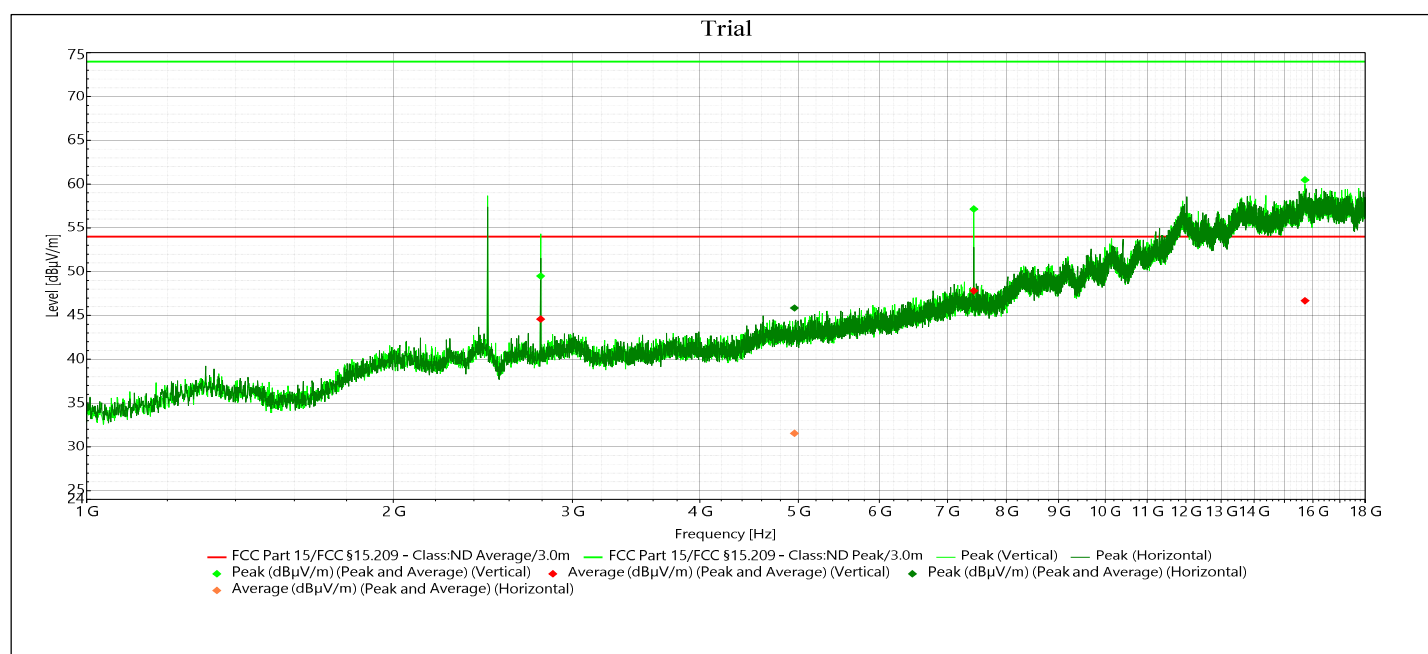
**Table 2.10-20 – RE Spurious Emissions 1-18 GHz – Mobile Mark SMW-304 Antenna - Mid CH 2437.88MHz**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
2751.944	44.25	74.00	-29.75	31.09	54.00	-22.91	360.00	1.00	Vertical	Pass
7313.611	57.47	74.00	-16.53	48.67	54.00	-5.33	93.00	4.00	Vertical	Pass
14627.389	58.90	74.00	-15.10	45.78	54.00	-8.22	266.00	4.00	Vertical	Pass
1728.167	38.95	74.00	-35.05	24.71	54.00	-29.29	228.00	1.00	Horizontal	Pass



Spurious Emissions 1 - 18GHz - Mobile Mark SMW-304 Antenna - High CH 2476.8MHz

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
1 GHz - 18 GHz	3m	Vertical	1 MHz	18001 Pts	Auto
1 GHz - 18 GHz	3m	Horizontal	1 MHz	18001 Pts	Auto



Limit: FCC Part 15/FCC §15.209 **Test Date:** 4/20/2023 **EUT Orientation:** **Test Results:** Pass

Test Notes: High Channel 2476.8MHz

Figure 2-71 – RE Spurious Emissions 1-18 GHz – Mobile Mark SMW-304 Antenna - High CH 2476.8MHz

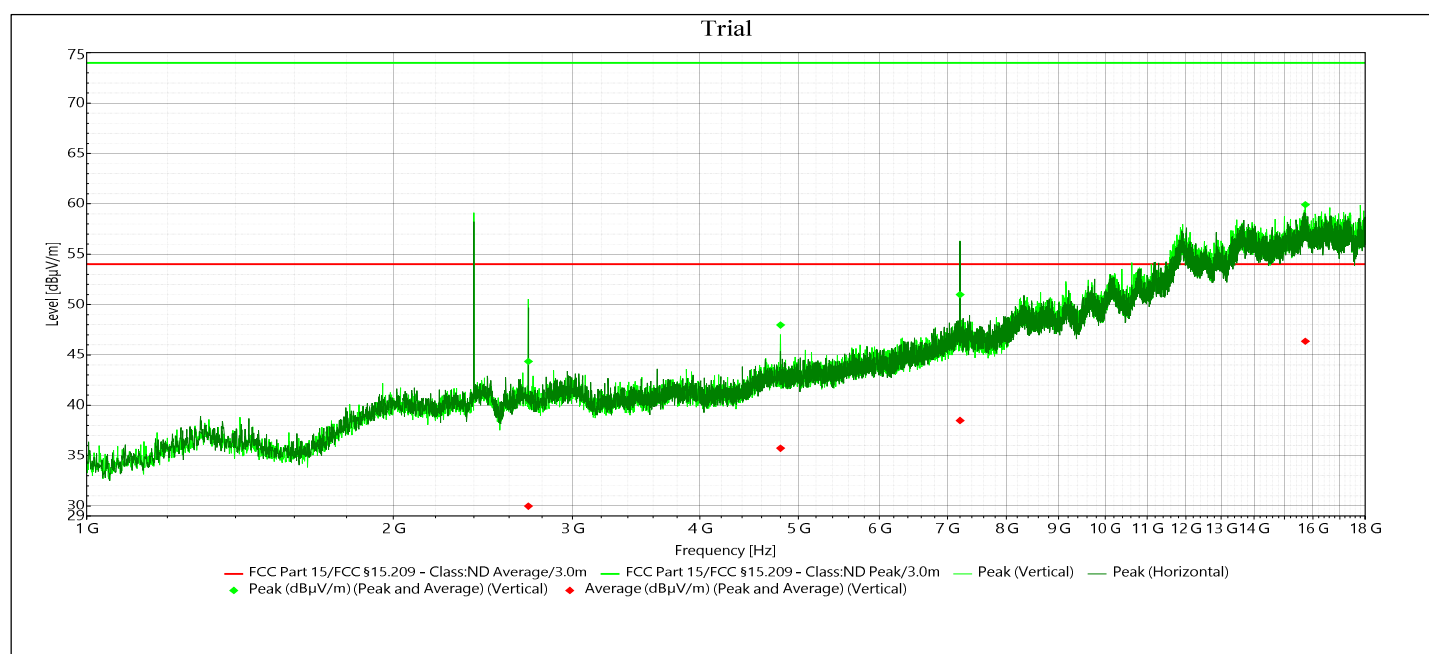
**Table 2.10-21 – RE Spurious Emissions 1-18 GHz – Mobile Mark SMW-304 Antenna - High CH 2476.8MHz**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
2791.611	49.50	74.00	-24.50	44.59	54.00	-9.41	132.00	4.00	Vertical	Pass
7430.722	57.15	74.00	-16.85	47.81	54.00	-6.19	266.00	1.00	Vertical	Pass
15712.556	60.48	74.00	-13.52	46.68	54.00	-7.32	227.00	4.00	Vertical	Pass
4953.444	45.85	74.00	-28.15	31.54	54.00	-22.46	227.00	1.00	Horizontal	Pass



Spurious Emissions 1 - 18GHz - How Tsen S-001 Antenna - Low CH 2437.88MHz

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
1 GHz - 18 GHz	3m	Vertical	1 MHz	18001 Pts	Auto
1 GHz - 18 GHz	3m	Horizontal	1 MHz	18001 Pts	Auto



Limit: FCC Part 15/FCC §15.209 **Test Date:** 4/20/2023 **EUT Orientation:** **Test Results:** Pass

Test Notes: Low Channel 2401.02MHz

Figure 2-72 – RE Spurious Emissions 1-18 GHz – How Tsen S-001 Antenna - Low CH 2437.88MHz

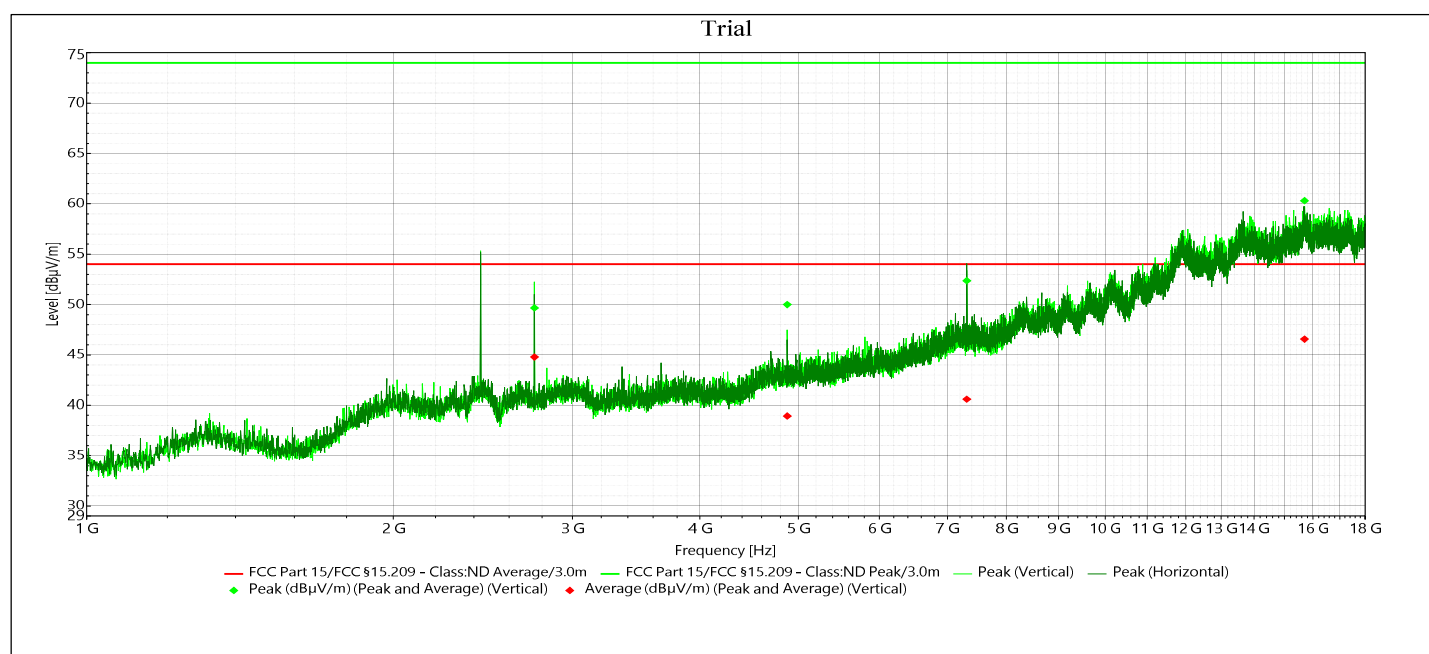
**Table 2.10-22 – RE Spurious Emissions 1-18 GHz – How Tsen S-001 Antenna - Low CH 2437.88MHz**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
2715.111	44.35	74.00	-29.65	29.98	54.00	-24.02	132.00	4.00	Vertical	Pass
4801.389	47.96	74.00	-26.04	35.73	54.00	-18.27	360.00	1.00	Vertical	Pass
7203.111	50.98	74.00	-23.02	38.48	54.00	-15.52	94.00	4.00	Vertical	Pass
15721.056	59.92	74.00	-14.08	46.35	54.00	-7.65	132.00	4.00	Vertical	Pass



Spurious Emissions 1 - 18GHz - How Tsen S-001 Antenna - Mid Ch 2437.88MHz

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
1 GHz - 18 GHz	3m	Vertical	1 MHz	18001 Pts	Auto
1 GHz - 18 GHz	3m	Horizontal	1 MHz	18001 Pts	Auto



Limit: FCC Part 15/FCC §15.209 **Test Date:** 4/20/2023 **EUT Orientation:** **Test Results:** Pass

Test Notes: Mid Channel 2437.88MHz

Figure 2-73 – RE Spurious Emissions 1-18 GHz – How Tsen S-001 Antenna - Mid Ch 2437.88MHz

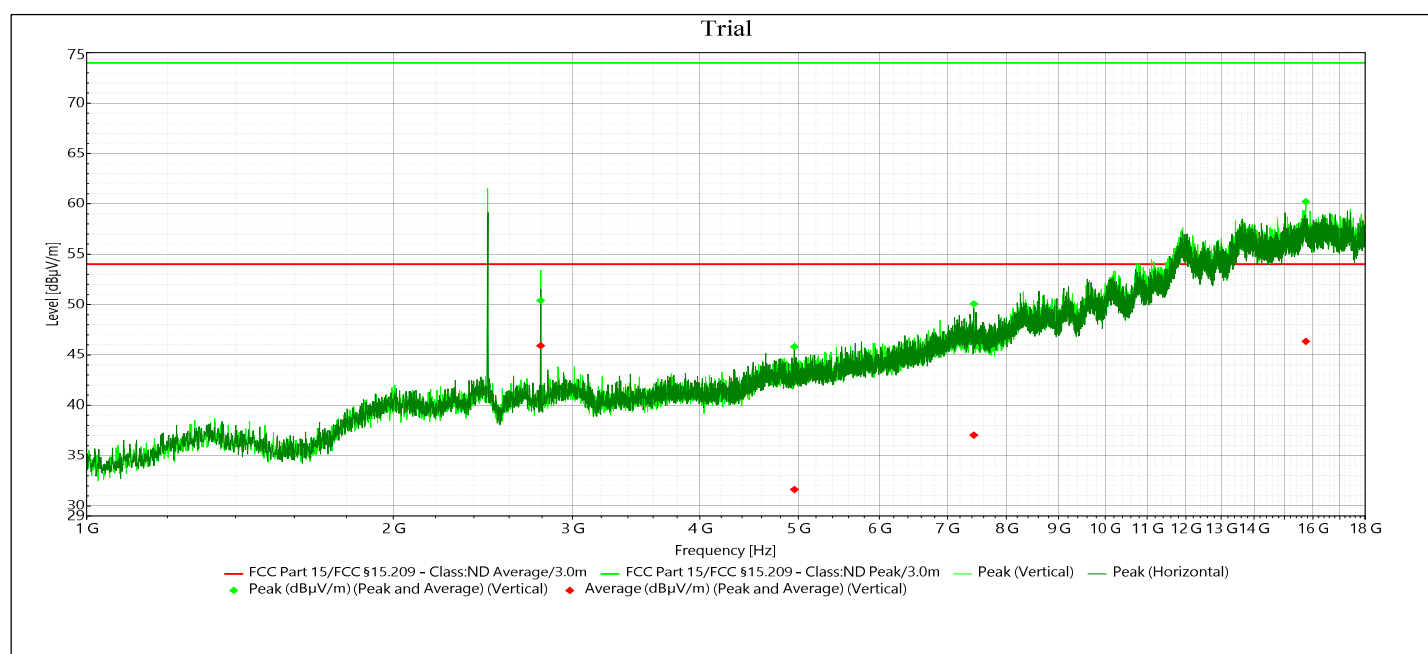
**Table 2.10-23 – RE Spurious Emissions 1-18 GHz – How Tsen S-001 Antenna - Mid Ch 2437.88MHz**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
2752.889	49.66	74.00	-24.34	44.79	54.00	-9.21	360.00	1.00	Vertical	Pass
4875.056	50.00	74.00	-24.00	38.92	54.00	-15.08	228.00	1.00	Vertical	Pass
7313.611	52.36	74.00	-21.64	40.60	54.00	-13.40	93.00	4.00	Vertical	Pass
15693.667	60.31	74.00	-13.69	46.56	54.00	-7.44	132.00	4.00	Vertical	Pass



Spurious Emissions 1 - 18GHz - How Tsen S-001 Antenna - High Ch 2476.8MHz

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
1 GHz - 18 GHz	3m	Vertical	1 MHz	18001 Pts	Auto
1 GHz - 18 GHz	3m	Horizontal	1 MHz	18001 Pts	Auto



Limit: FCC Part 15/FCC §15.209 **Test Date:** 4/20/2023 **EUT Orientation:** **Test Results:** Pass

Test Notes: High Channel 2476.8MHz

Figure 2-74 – RE Spurious Emissions 1-18 GHz – How Tsen S-001 Antenna - High Ch 2476.8MHz

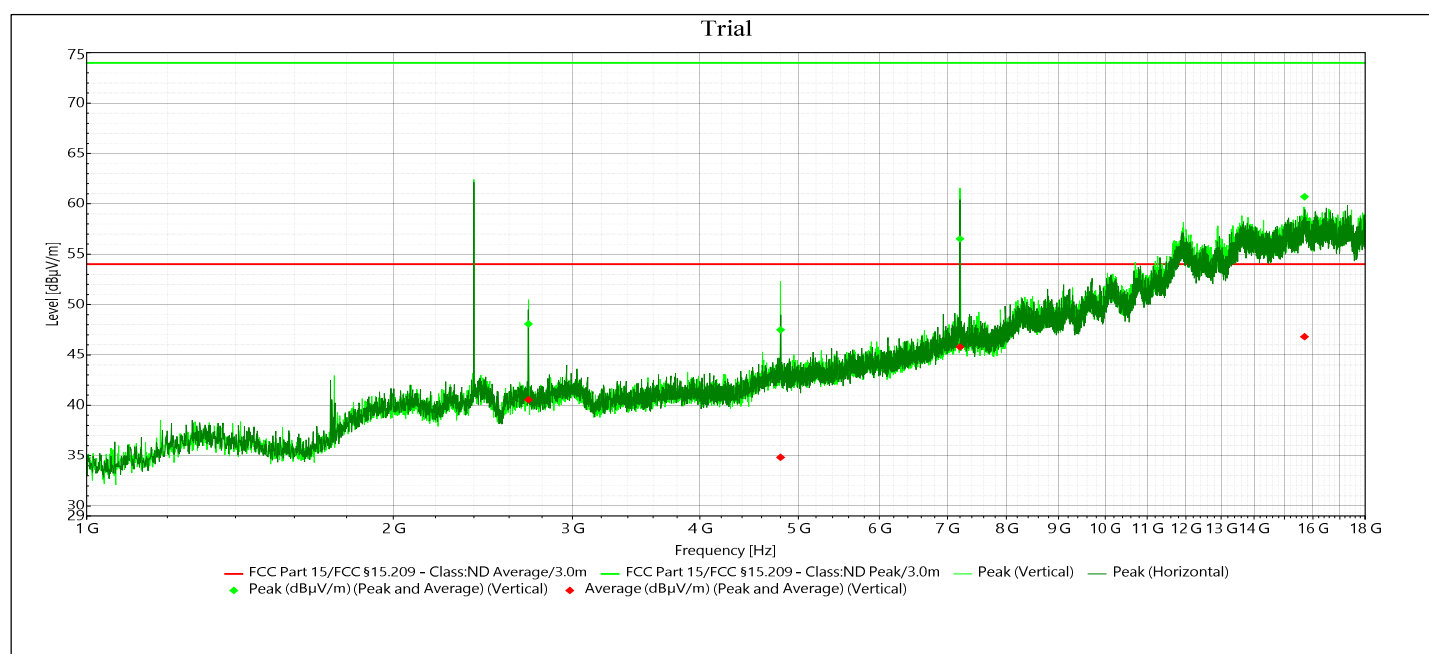
**Table 2.10-24 – RE Spurious Emissions 1-18 GHz – How Tsen S-001 Antenna - High Ch 2476.8MHz**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
2791.611	50.40	74.00	-23.60	45.91	54.00	-8.09	132.00	4.00	Vertical	Pass
4954.389	45.81	74.00	-28.19	31.63	54.00	-22.37	267.00	4.00	Vertical	Pass
7430.722	50.07	74.00	-23.93	37.03	54.00	-16.97	93.00	4.00	Vertical	Pass
15742.778	60.22	74.00	-13.78	46.34	54.00	-7.66	360.00	1.00	Vertical	Pass



Spurious Emissions 1 - 18GHz - Mobile Mark LTMG511 Antenna - Low CH 2.401G

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
1 GHz - 18 GHz	3m	Vertical	1 MHz	18001 Pts	Auto
1 GHz - 18 GHz	3m	Horizontal	1 MHz	18001 Pts	Auto



Limit: FCC Part 15/FCC §15.209 **Test Date:** 4/21/2023 **EUT Orientation:** **Test Results:** Pass

Test Notes: Low Channel 2401.02MHz

Figure 2-75 – RE Spurious Emissions 1-18 GHz – Mobile Mark LTMG511 Antenna - Low CH 2.401G

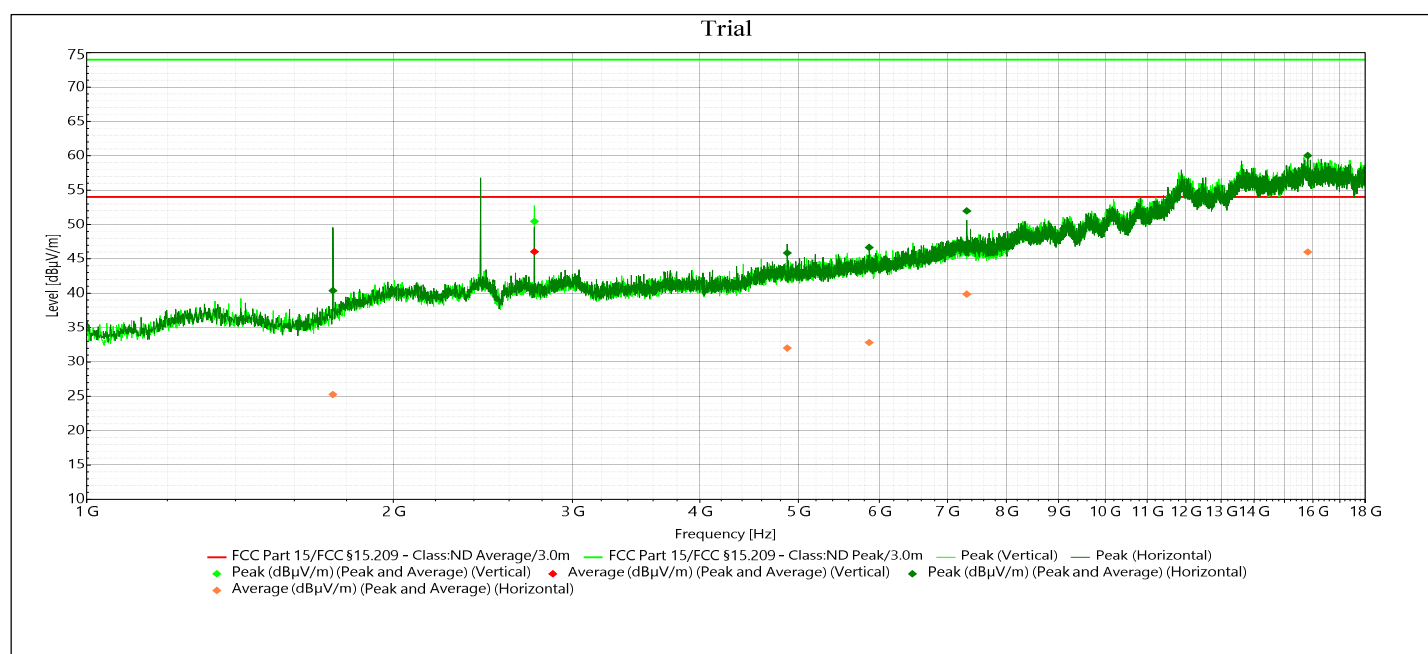
**Table 2.10-25 – RE Spurious Emissions 1-18 GHz – Mobile Mark LTMG511 Antenna - Low CH 2.401G**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
2716.056	48.08	74.00	-25.92	40.55	54.00	-13.45	93.00	4.00	Vertical	Pass
4801.389	47.48	74.00	-26.52	34.83	54.00	-19.17	267.00	4.00	Vertical	Pass
7202.167	56.52	74.00	-17.48	45.79	54.00	-8.21	0.00	4.00	Vertical	Pass
15692.722	60.70	74.00	-13.30	46.81	54.00	-7.19	0.00	1.00	Vertical	Pass



Spurious Emissions 1 - 18GHz - Mobile Mark LTMG511 Antenna - Mid Ch 2437.88MHz

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
1 GHz - 18 GHz	3m	Vertical	1 MHz	18001 Pts	Auto
1 GHz - 18 GHz	3m	Horizontal	1 MHz	18001 Pts	Auto



Limit: FCC Part 15/FCC §15.209 **Test Date:** 4/21/2023 **EUT Orientation:** **Test Results:** Pass

Test Notes: Mid Channel 2437.8MHz

Figure 2-76 – RE Spurious Emissions 1-18 GHz – Mobile Mark LTMG511 Antenna - Mid Ch 2437.88MHz

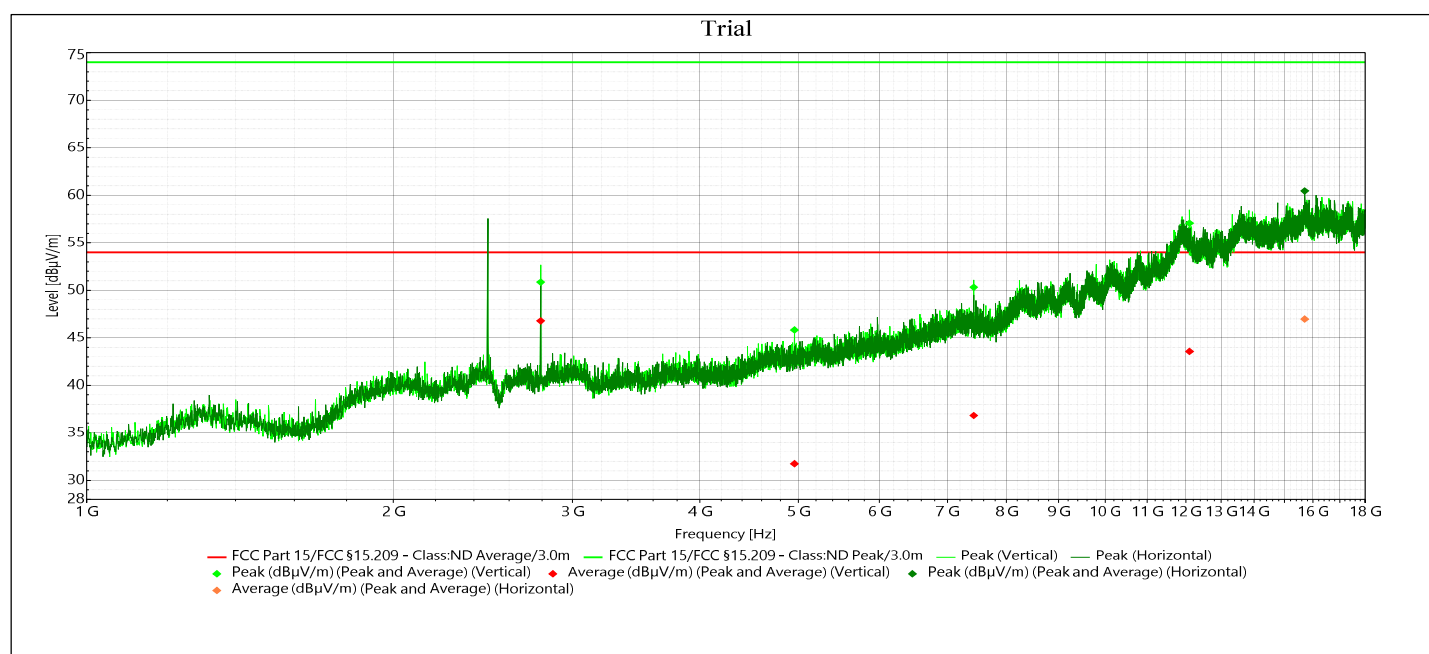
**Table 2.10-26 – RE Spurious Emissions 1-18 GHz – Mobile Mark LTMG511 Antenna - Mid Ch 2437.88MHz**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
2752.889	50.46	74.00	-23.54	46.05	54.00	-7.95	132.00	4.00	Vertical	Pass
1745.167	40.37	74.00	-33.63	25.26	54.00	-28.74	267.00	4.00	Horizontal	Pass
4875.056	45.86	74.00	-28.14	32.02	54.00	-21.98	93.00	4.00	Horizontal	Pass
5866.722	46.66	74.00	-27.34	32.82	54.00	-21.18	267.00	1.00	Horizontal	Pass
7313.611	51.97	74.00	-22.03	39.87	54.00	-14.13	0.00	1.00	Horizontal	Pass
15807.000	60.04	74.00	-13.96	46.00	54.00	-8.00	360.00	1.00	Horizontal	Pass



Spurious Emissions 1 - 18GHz - Mobile Mark LTMG511 Antenna - High Ch 2476.8MHz

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
1 GHz - 18 GHz	3m	Vertical	1 MHz	18001 Pts	Auto
1 GHz - 18 GHz	3m	Horizontal	1 MHz	18001 Pts	Auto



Limit: FCC Part 15/FCC §15.209 **Test Date:** 4/21/2023 **EUT Orientation:** **Test Results:** Pass

Test Notes: High Channel 2476.8MHz

Figure 2-77 – RE Spurious Emissions 1-18 GHz – Mobile Mark LTMG511 Antenna - High Ch 2476.8MHz

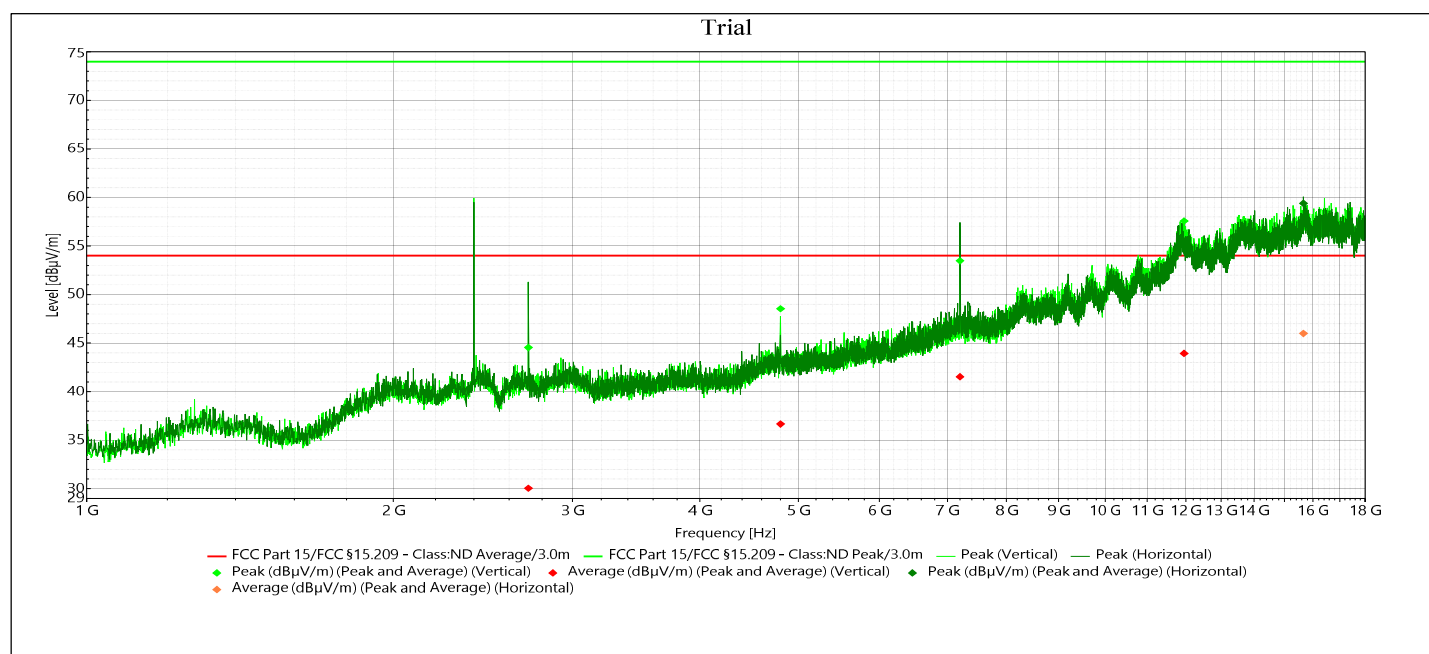
**Table 2.10-27 – RE Spurious Emissions 1-18 GHz – Mobile Mark LTMG511 Antenna - High Ch 2476.8MHz**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
2791.611	50.85	74.00	-23.15	46.78	54.00	-7.22	132.00	4.00	Vertical	Pass
4953.444	45.82	74.00	-28.18	31.74	54.00	-22.26	0.00	4.00	Vertical	Pass
7429.778	50.31	74.00	-23.69	36.82	54.00	-17.18	266.00	1.00	Vertical	Pass
12100.056	57.06	74.00	-16.94	43.57	54.00	-10.43	0.00	4.00	Vertical	Pass
15699.333	60.45	74.00	-13.55	46.97	54.00	-7.03	132.00	4.00	Horizontal	Pass



Spurious Emissions 1 - 18GHz - Laird MAF94192 Antenna - Low CH 2.401G

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
1 GHz - 18 GHz	3m	Vertical	1 MHz	18001 Pts	Auto
1 GHz - 18 GHz	3m	Horizontal	1 MHz	18001 Pts	Auto



Limit: FCC Part 15/FCC §15.209 **Test Date:** 4/21/2023 **EUT Orientation:** **Test Results:** Pass

Test Notes: Low Channel 2401.02MHz

Figure 2-78 – RE Spurious Emissions 1-18 GHz – Laird MAF94192 Antenna - Low CH 2.401G

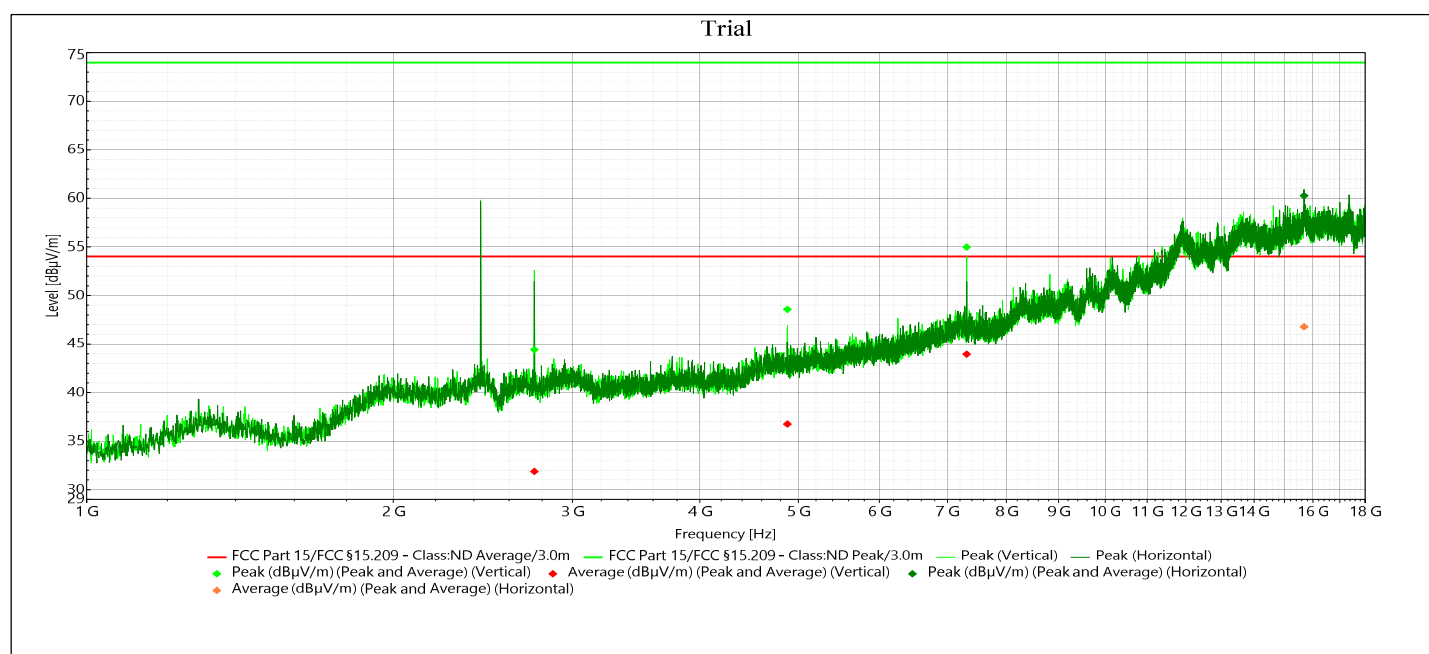
**Table 2.10-28 – RE Spurious Emissions 1-18 GHz – Laird MAF94192 Antenna - Low CH 2.401G**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
2715.111	44.54	74.00	-29.46	30.05	54.00	-23.95	360.00	4.00	Vertical	Pass
4801.389	48.54	74.00	-25.46	36.67	54.00	-17.33	228.00	4.00	Vertical	Pass
7202.167	53.48	74.00	-20.52	41.53	54.00	-12.47	93.00	1.00	Vertical	Pass
11954.611	57.57	74.00	-16.43	43.94	54.00	-10.06	0.00	4.00	Vertical	Pass
15652.111	59.39	74.00	-14.61	45.99	54.00	-8.01	360.00	4.00	Horizontal	Pass



Spurious Emissions 1 - 18GHz - Laird MAF94192 Antenna - Mid CH 2437.88MHz

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
1 GHz - 18 GHz	3m	Vertical	1 MHz	18001 Pts	Auto
1 GHz - 18 GHz	3m	Horizontal	1 MHz	18001 Pts	Auto



Limit: FCC Part 15/FCC §15.209 **Test Date:** 4/21/2023 **EUT Orientation:** **Test Results:** Pass

Test Notes: Mid Channel 2437.8MHz

Figure 2-79 – RE Spurious Emissions 1-18 GHz – Laird MAF94192 Antenna - Mid CH 2437.88MHz

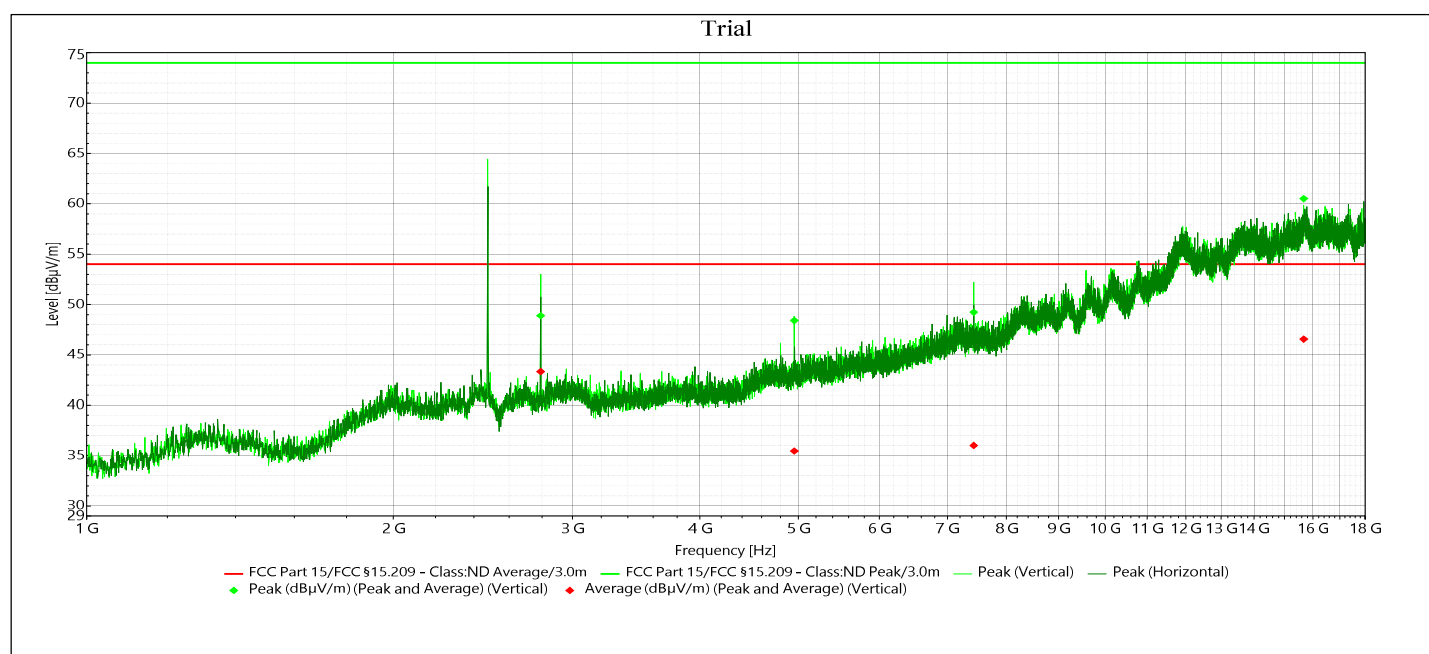
**Table 2.10-29 – RE Spurious Emissions 1-18 GHz – Laird MAF94192 Antenna - Mid CH 2437.88MHz**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
2751.944	44.42	74.00	-29.58	31.88	54.00	-22.12	132.00	4.00	Vertical	Pass
4876.000	48.57	74.00	-25.43	36.75	54.00	-17.25	360.00	1.00	Vertical	Pass
7312.667	54.98	74.00	-19.02	43.95	54.00	-10.05	228.00	1.00	Vertical	Pass
15678.556	60.27	74.00	-13.73	46.77	54.00	-7.23	94.00	1.00	Horizontal	Pass



Spurious Emissions 1 - 18GHz - Laird MAF94192 Antenna - High CH 2476.8MHz

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
1 GHz - 18 GHz	3m	Vertical	1 MHz	18001 Pts	Auto
1 GHz - 18 GHz	3m	Horizontal	1 MHz	18001 Pts	Auto



Limit: FCC Part 15/FCC §15.209 **Test Date:** 4/21/2023 **EUT Orientation:** **Test Results:** Pass

Test Notes: High Channel 2476.8MHz

Figure 2-80 – RE Spurious Emissions 1-18 GHz – Laird MAF94192 Antenna - High CH 2476.8MHz

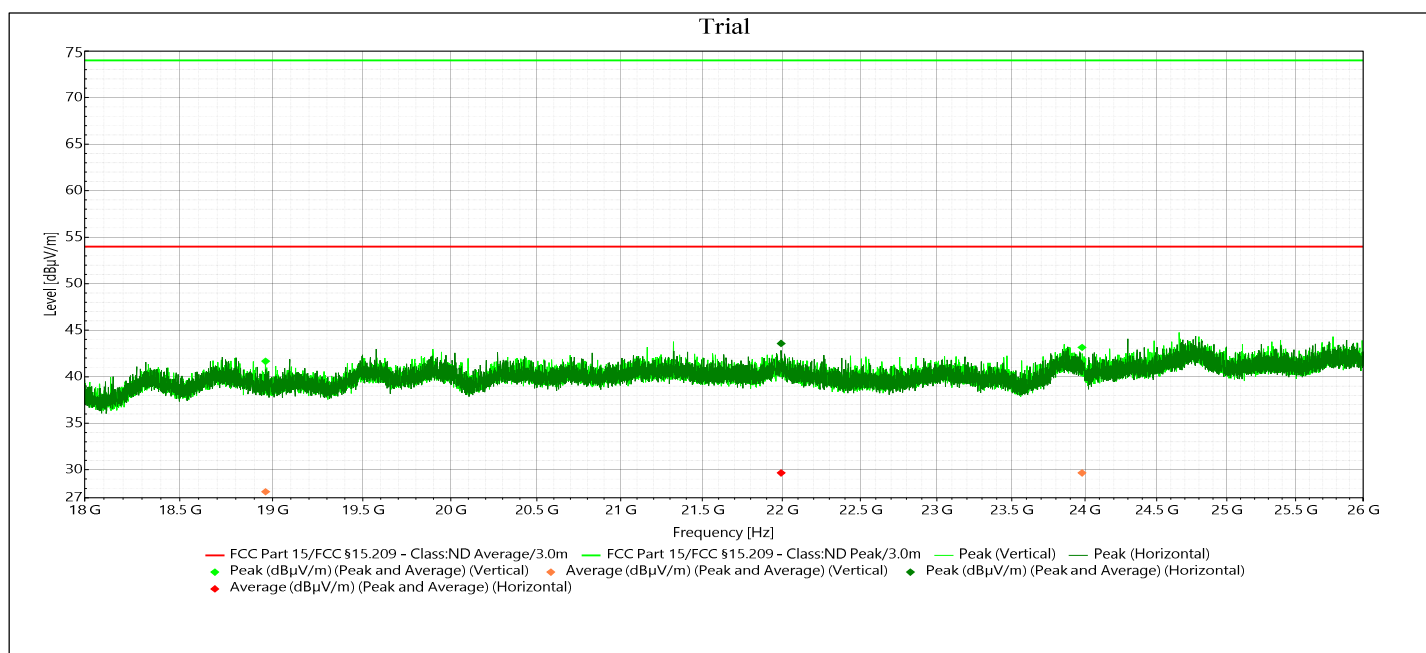
**Table 2.10-30 – RE Spurious Emissions 1-18 GHz – Laird MAF94192 Antenna - High CH 2476.8MHz**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
2791.611	48.89	74.00	-25.11	43.34	54.00	-10.66	360.00	1.00	Vertical	Pass
4952.500	48.41	74.00	-25.59	35.45	54.00	-18.55	0.00	1.00	Vertical	Pass
7429.778	49.23	74.00	-24.77	36.00	54.00	-18.00	267.00	1.00	Vertical	Pass
15666.278	60.51	74.00	-13.49	46.56	54.00	-7.44	94.00	4.00	Vertical	Pass



Spurious Emissions 18 - 26GHz - Mobile Mark DM2 Antenna - Low CH 2401.024MHz

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
18 GHz - 26 GHz	3m	Vertical	1 MHz	18001 Pts	Auto
18 GHz - 26 GHz	3m	Horizontal	1 MHz	18001 Pts	Auto



Limit: FCC Part 15/FCC §15.209 **Test Date:** 4/28/2023 **EUT Orientation:** **Test Results:** Pass

Test Notes: Low CH 2401.024MHz

Figure 2-81 – RE Spurious Emissions 18-26 GHz – Mobile Mark DM2 Antenna - Low CH 2401.024MHz

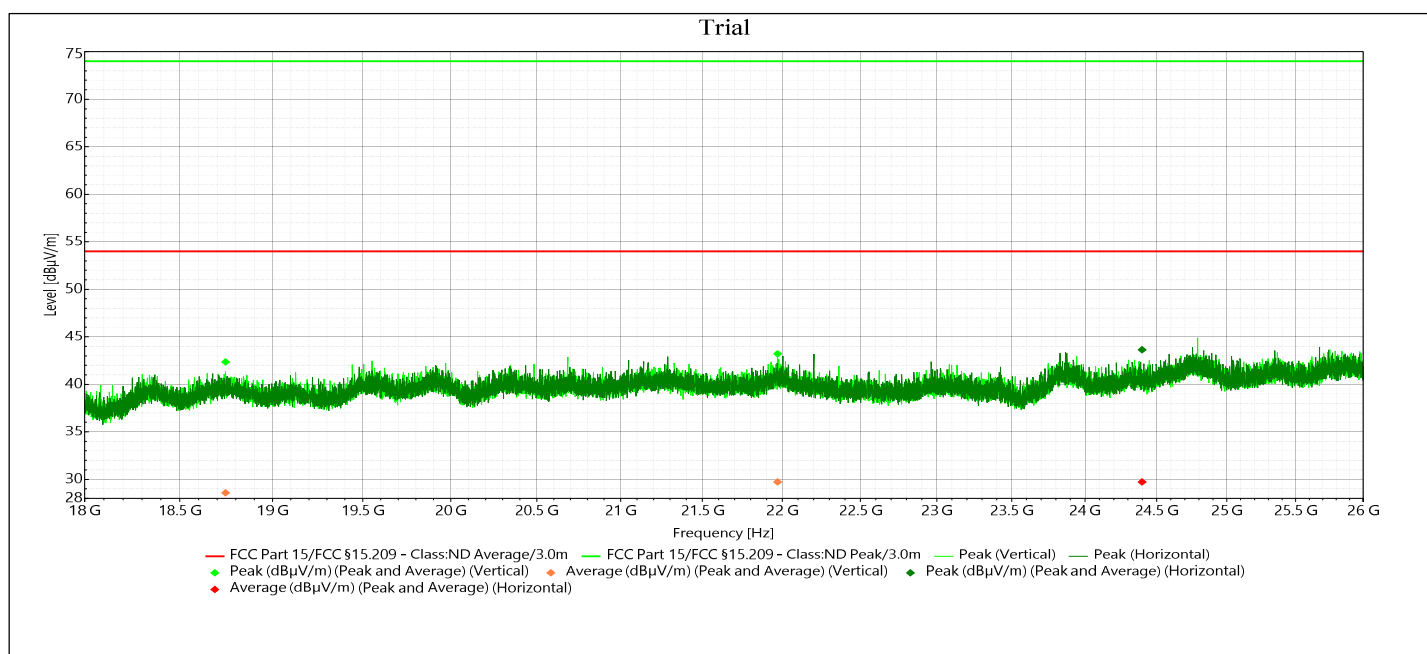
**Table 2.10-31 – RE Spurious Emissions 18-26 GHz – Mobile Mark DM2 Antenna - Low CH 2401.024MHz**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
18962.222	41.66	74.00	-32.34	27.64	54.00	-26.36	265.00	1.00	Vertical	Pass
23980.444	43.15	74.00	-30.85	29.66	54.00	-24.34	228.00	2.44	Vertical	Pass
21992.000	43.57	74.00	-30.43	29.66	54.00	-24.34	162.00	2.44	Horizontal	Pass



Spurious Emissions 18 - 26GHz - Mobile Mark DM2 Antenna - Mid CH 2437.88MHz

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
18 GHz - 26 GHz	3m	Vertical	1 MHz	18001 Pts	Auto
18 GHz - 26 GHz	3m	Horizontal	1 MHz	18001 Pts	Auto



Limit:
FCC Part 15/FCC §15.209

Test Date: 4/28/2023

EUT Orientation:

Test Results:
Pass

Test Notes: Mid CH 2437.88MHz

Figure 2-82 – RE Spurious Emissions 18-26 GHz – Mobile Mark DM2 Antenna - Mid CH 2437.88MHz

**Table 2.10-32 – RE Spurious Emissions 18-26 GHz – Mobile Mark DM2 Antenna - Mid CH 2437.88MHz**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
18744.889	42.35	74.00	-31.65	28.58	54.00	-25.42	265.00	3.97	Vertical	Pass
21969.778	43.21	74.00	-30.79	29.73	54.00	-24.27	162.00	2.44	Vertical	Pass
24398.222	43.64	74.00	-30.36	29.72	54.00	-24.28	360.00	2.44	Horizontal	Pass

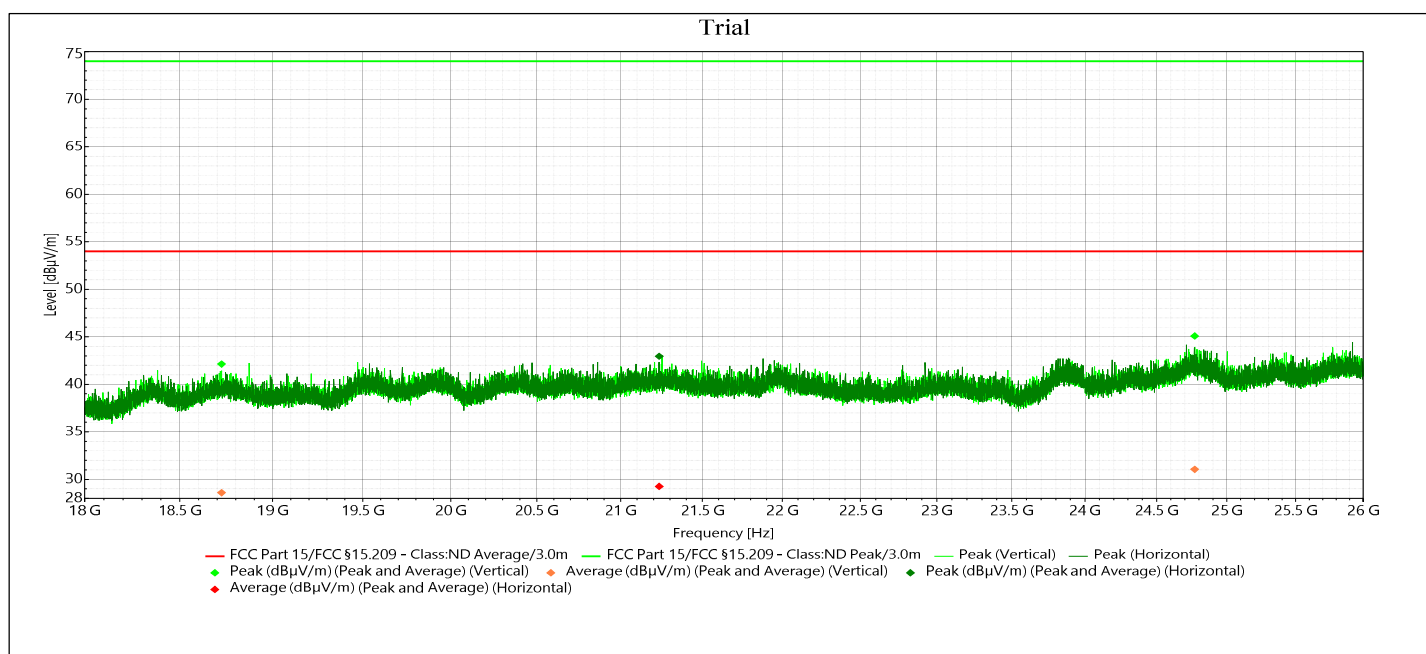
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Spurious Emissions 18 - 26GHz - Mobile Mark DM2 Antenna - High CH 2476.8MHz

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
18 GHz - 26 GHz	3m	Vertical	1 MHz	18001 Pts	Auto
18 GHz - 26 GHz	3m	Horizontal	1 MHz	18001 Pts	Auto



Limit:
FCC Part 15/FCC §15.209

Test Date: 4/28/2023

EUT Orientation:

Test Results:
Pass

Test Notes: High CH 2476.8MHz

Figure 2-83 – RE Spurious Emissions 18-26 GHz – Mobile Mark DM2 Antenna - High CH 2476.8MHz

**Table 2.10-33 – RE Spurious Emissions 18-26 GHz – Mobile Mark DM2 Antenna - High CH 2476.8MHz**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
18723.111	42.14	74.00	-31.86	28.60	54.00	-25.40	360.00	1.00	Vertical	Pass
24770.222	45.08	74.00	-28.92	31.06	54.00	-22.94	29.00	3.97	Vertical	Pass
21234.222	42.95	74.00	-31.05	29.26	54.00	-24.74	360.00	2.44	Horizontal	Pass

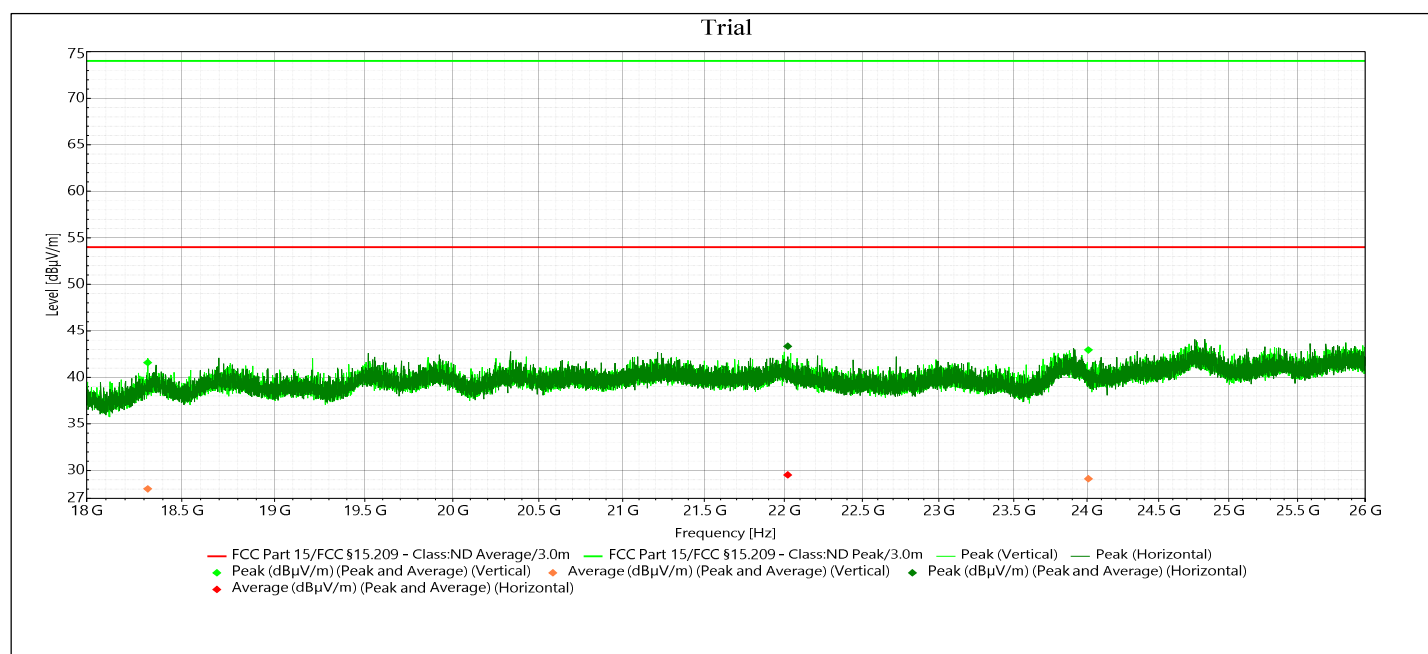
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Spurious Emissions 18 - 26GHz - Mobile Mark SMW-304 Antenna - Low CH 2401.024MHz

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
18 GHz - 26 GHz	3m	Vertical	1 MHz	18001 Pts	Auto
18 GHz - 26 GHz	3m	Horizontal	1 MHz	18001 Pts	Auto



Limit:
FCC Part 15/FCC §15.209

Test Date: 4/28/2023

EUT Orientation:

Test Results:
Pass

Test Notes: Low CH 2401.024MHz

Figure 2-84 – RE Spurious Emissions 18-26 GHz – Mobile Mark SMW-304 Antenna - Low CH 2401.024MHz



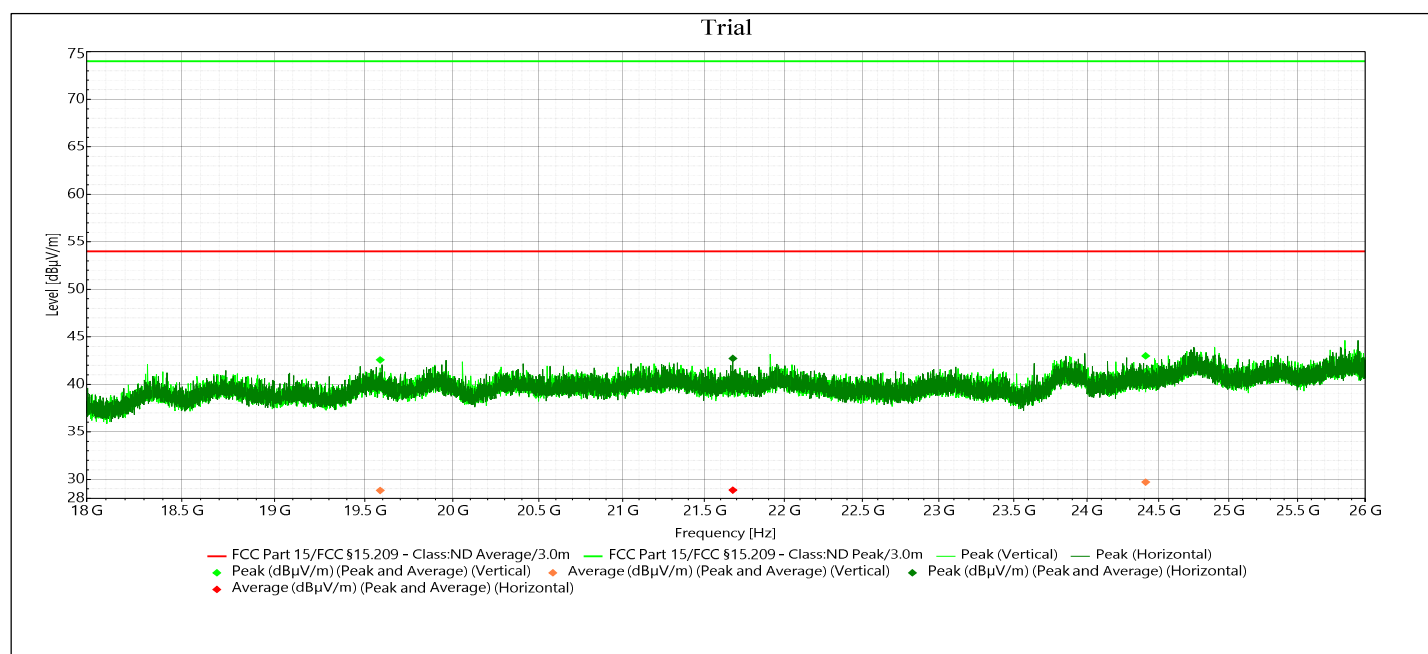
**Table 2.10-34 – RE Spurious Emissions 18-26 GHz – Mobile Mark SMW-304 Antenna - Low CH
2401.024MHz**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
18319.111	41.59	74.00	-32.41	28.02	54.00	-25.98	331.00	4.00	Vertical	Pass
24010.222	42.95	74.00	-31.05	29.11	54.00	-24.89	228.00	4.00	Vertical	Pass
22021.333	43.35	74.00	-30.65	29.52	54.00	-24.48	162.00	1.00	Horizontal	Pass



Spurious Emissions 18 - 26GHz - Mobile Mark SMW-304 Antenna - Mid CH 2437.88MHz

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
18 GHz - 26 GHz	3m	Vertical	1 MHz	18001 Pts	Auto
18 GHz - 26 GHz	3m	Horizontal	1 MHz	18001 Pts	Auto



Limit:
FCC Part 15/FCC §15.209

Test Date: 4/28/2023

EUT Orientation:

Test Results:
Pass

Test Notes: Mid CH 2437.88MHz

Figure 2-85 – RE Spurious Emissions 18-26 GHz – Mobile Mark SMW-304 Antenna - Mid CH 2437.88MHz



**Table 2.10-35 – RE Spurious Emissions 18-26 GHz – Mobile Mark SMW-304 Antenna - Mid CH
2437.88MHz**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
19586.667	42.57	74.00	-31.43	28.83	54.00	-25.17	331.00	2.44	Vertical	Pass
24409.778	42.99	74.00	-31.01	29.70	54.00	-24.30	360.00	3.97	Vertical	Pass
21677.333	42.72	74.00	-31.28	28.87	54.00	-25.13	360.00	3.97	Horizontal	Pass

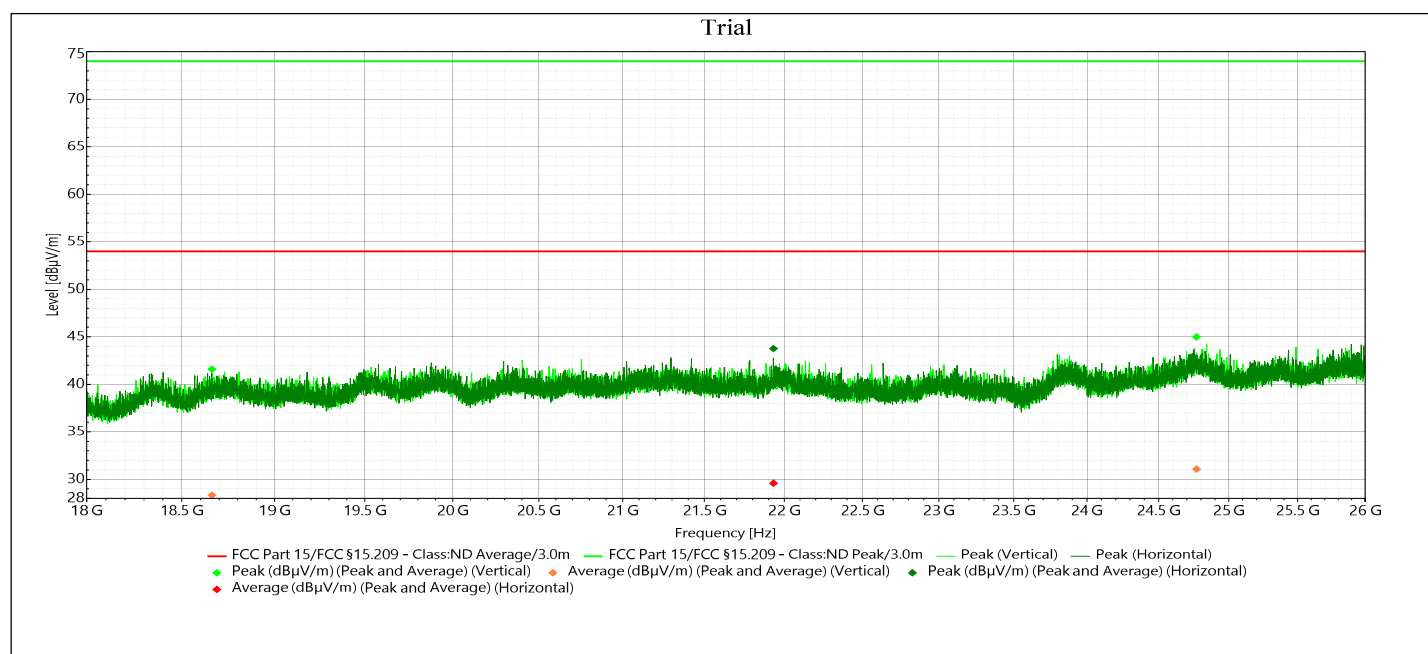
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Spurious Emissions 18 - 26GHz - Mobile Mark SMW-304 Antenna - High CH 2476.8MHz

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
18 GHz - 26 GHz	3m	Vertical	1 MHz	18001 Pts	Auto
18 GHz - 26 GHz	3m	Horizontal	1 MHz	18001 Pts	Auto



Limit:
FCC Part 15/FCC §15.209

Test Date: 4/28/2023

EUT Orientation:

Test Results:
Pass

Test Notes: High CH 2476.8MHz

Figure 2-86 – RE Spurious Emissions 18-26 GHz – Mobile Mark SMW-304 Antenna - High CH 2476.8MHz



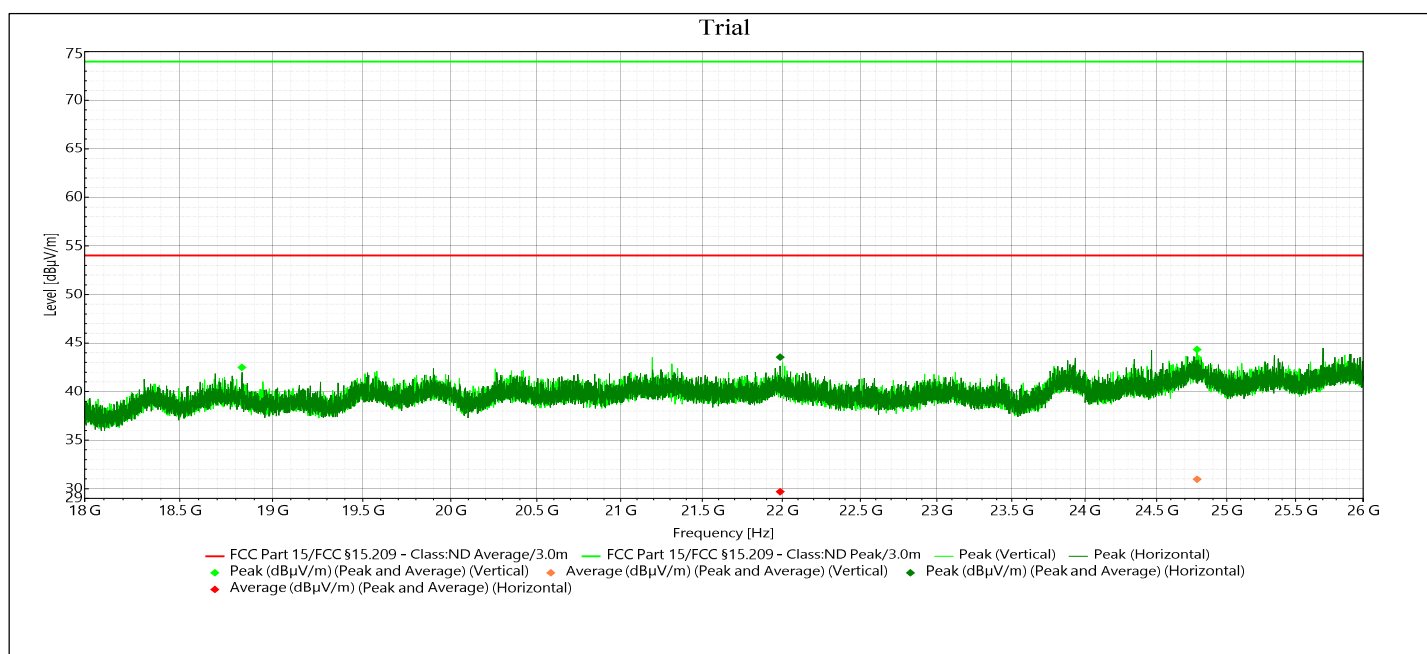
**Table 2.10-36 – RE Spurious Emissions 18-26 GHz – Mobile Mark SMW-304 Antenna - High CH
2476.8MHz**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
18661.333	41.60	74.00	-32.40	28.33	54.00	-25.67	331.00	2.44	Vertical	Pass
24768.889	44.98	74.00	-29.02	31.07	54.00	-22.93	295.00	1.00	Vertical	Pass
21931.556	43.76	74.00	-30.24	29.59	54.00	-24.41	162.00	3.97	Horizontal	Pass



Spurious Emissions 18 - 26GHz - How Tsen S-001 Antenna - Low CH 2401.024MHz

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
18 GHz - 26 GHz	3m	Vertical	1 MHz	18001 Pts	Auto
18 GHz - 26 GHz	3m	Horizontal	1 MHz	18001 Pts	Auto



Limit:
FCC Part 15/FCC §15.209

Test Date: 4/28/2023

EUT Orientation:

Test Results:
Pass

Test Notes: Low CH 2401.024MHz

Figure 2-87 – RE Spurious Emissions 18-26 GHz – How Tsen S-001 Antenna - Low CH 2401.024MHz

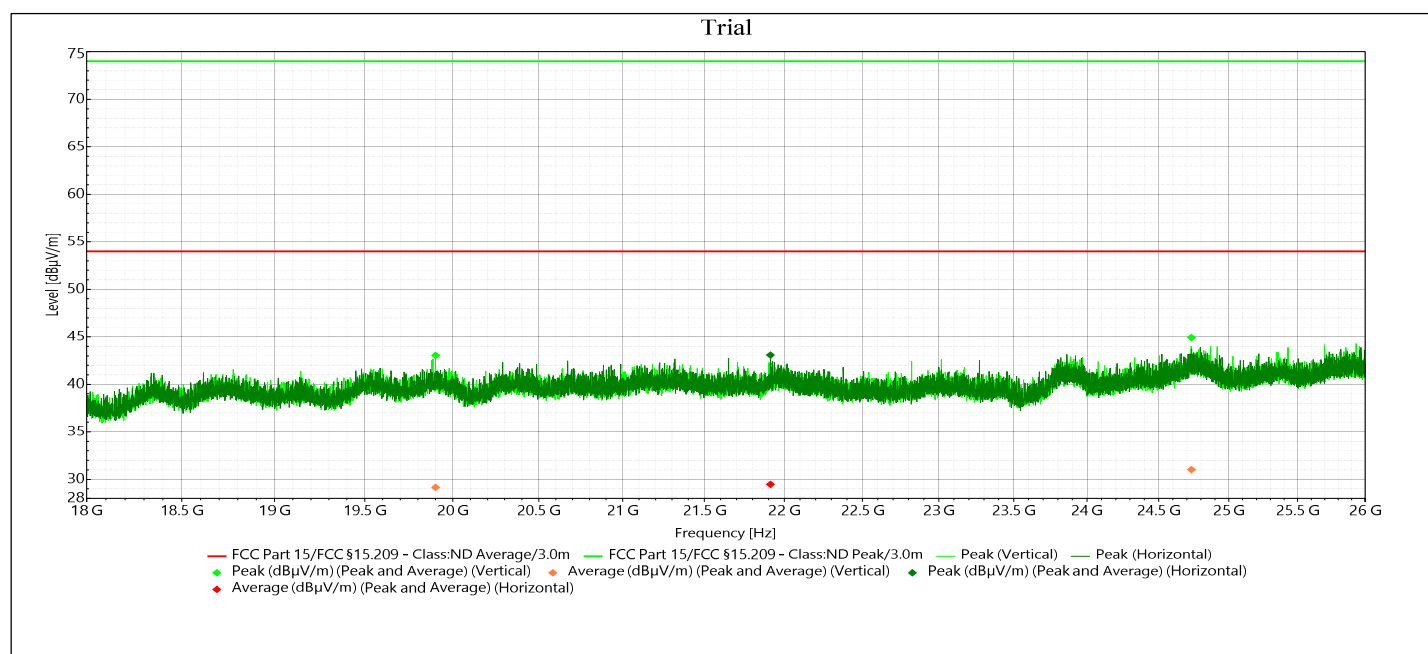
**Table 2.10-37 – RE Spurious Emissions 18-26 GHz – How Tsen S-001 Antenna - Low CH 2401.024MHz**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
18832.889	42.49	74.00	-31.51	28.25	54.00	-25.75	132.00	1.00	Vertical	Pass
24787.556	44.34	74.00	-29.66	30.96	54.00	-23.04	0.00	3.97	Vertical	Pass
21986.222	43.55	74.00	-30.45	29.68	54.00	-24.32	360.00	2.44	Horizontal	Pass



Spurious Emissions 18 - 26GHz - How Tsen S-001 Antenna - Mid CH 2437.88MHz

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
18 GHz - 26 GHz	3m	Vertical	1 MHz	18001 Pts	Auto
18 GHz - 26 GHz	3m	Horizontal	1 MHz	18001 Pts	Auto



Limit:
FCC Part 15/FCC §15.209

Test Date: 4/28/2023

EUT Orientation:

Test Results:
Pass

Test Notes: Mid CH 2437.88MHz

Figure 2-88 – RE Spurious Emissions 18-26 GHz – How Tsen S-001 Antenna - Mid CH 2437.88MHz

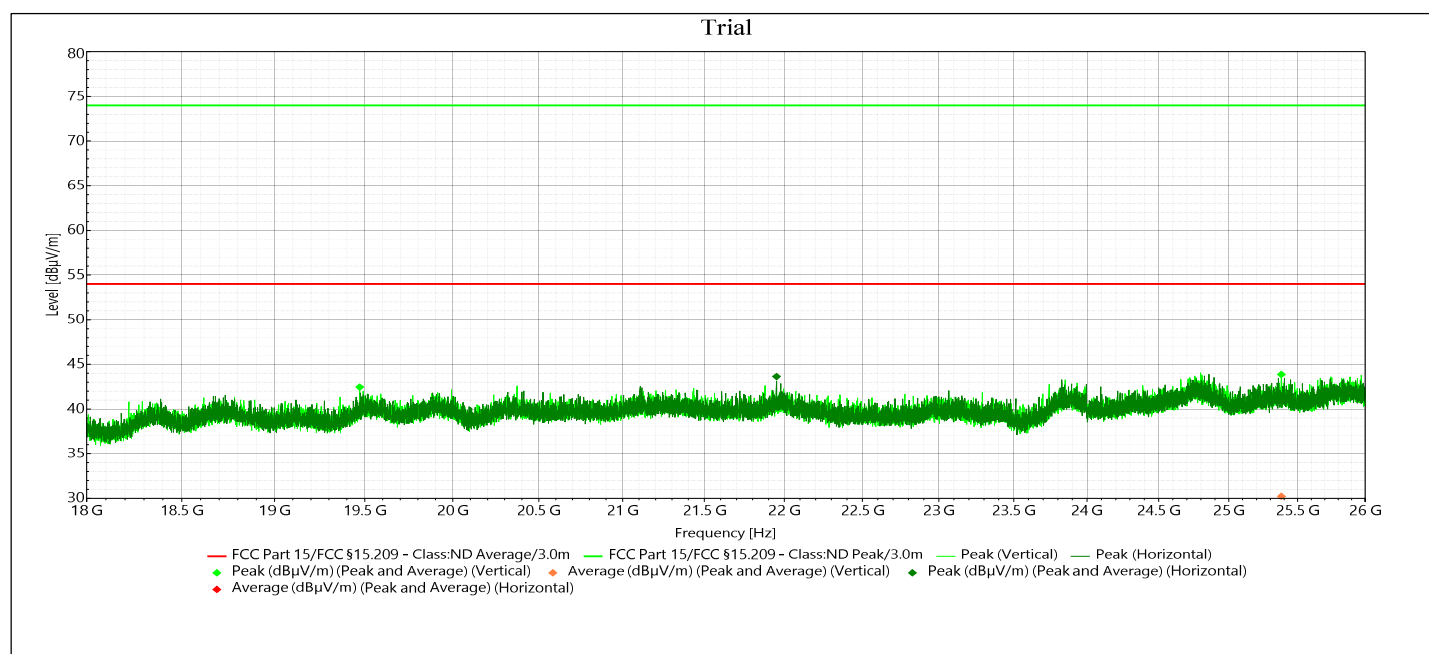
**Table 2.10-38 – RE Spurious Emissions 18-26 GHz – How Tsen S-001 Antenna - Mid CH 2437.88MHz**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
19900.889	43.04	74.00	-30.96	29.16	54.00	-24.84	265.00	1.00	Vertical	Pass
24732.889	44.93	74.00	-29.07	31.02	54.00	-22.98	295.00	2.44	Vertical	Pass
21912.444	43.08	74.00	-30.92	29.47	54.00	-24.53	162.00	1.00	Horizontal	Pass



Spurious Emissions 18 - 26GHz - How Tsen S-001 Antenna - High CH 2476.8MHz

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
18 GHz - 26 GHz	3m	Vertical	1 MHz	18001 Pts	Auto
18 GHz - 26 GHz	3m	Horizontal	1 MHz	18001 Pts	Auto



Limit: FCC Part 15/FCC §15.209 **Test Date:** 4/28/2023 **EUT Orientation:** **Test Results:** Pass

Test Notes: High CH 2476.8MHz

Figure 2-89 – RE Spurious Emissions 18-26 GHz – How Tsen S-001 Antenna - High CH 2476.8MHz

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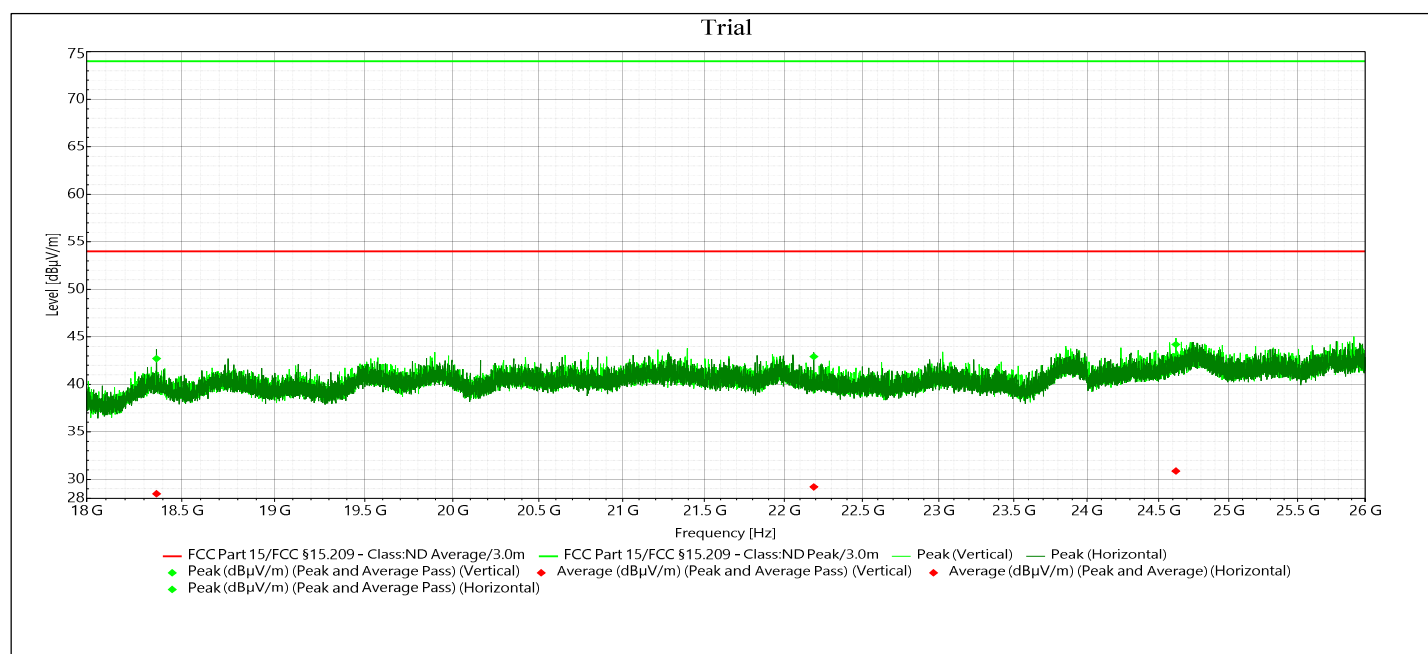
**Table 2.10-39 – RE Spurious Emissions 18-26 GHz – How Tsen S-001 Antenna - High CH 2476.8MHz**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
19471.556	42.46	74.00	-31.54	28.74	54.00	-25.26	360.00	3.97	Vertical	Pass
25380.444	43.88	74.00	-30.12	30.22	54.00	-23.78	162.00	1.00	Vertical	Pass
21951.111	43.64	74.00	-30.36	29.72	54.00	-24.28	65.00	1.00	Horizontal	Pass



Spurious Emissions 18 - 26GHz - Mobile Mark LTMG511 Antenna - Low CH 2401.024MHz

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
18 GHz - 26 GHz	3m	Vertical	1 MHz	18001 Pts	Auto
18 GHz - 26 GHz	3m	Horizontal	1 MHz	18001 Pts	Auto



Limit: FCC Part 15/FCC §15.209 **Test Date:** 4/29/2023 **EUT Orientation:** **Test Results:** Pass

Test Notes: Low CH 2401.2MHz

**Figure 2-90 – RE Spurious Emissions 18-26 GHz – Mobile Mark LTMG511 Antenna - Low CH
2401.024MHz**



**Table 2.10-40 – RE Spurious Emissions 18-26 GHz – Mobile Mark LTMG511 Antenna - Low CH
2401.024MHz**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
24622.667	44.20	74.00	-29.80	30.87	54.00	-23.13	265.00	2.44	Vertical	Pass
18365.778	42.70	74.00	-31.30	28.48	54.00	-25.52	228.00	4.00	Horizontal	Pass
22187.556	42.92	74.00	-31.08	29.20	54.00	-24.80	29.00	3.97	Horizontal	Pass