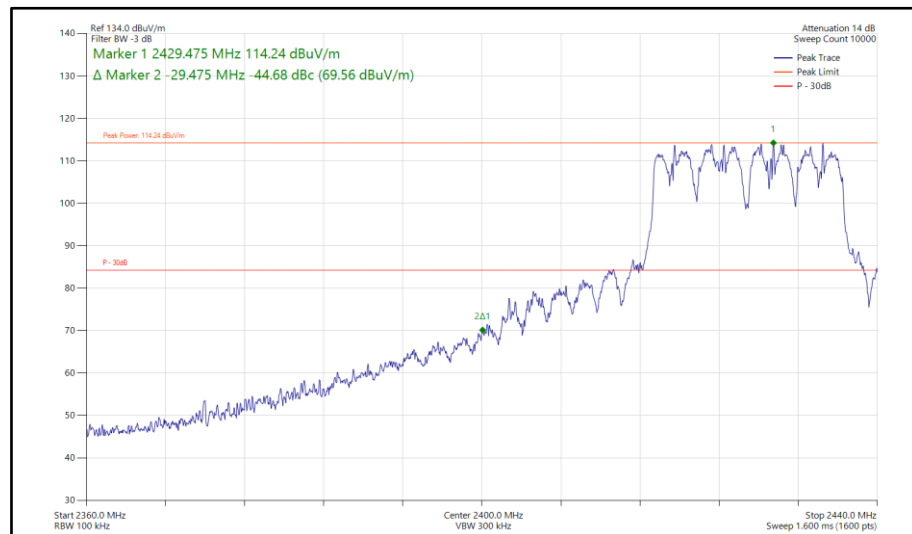
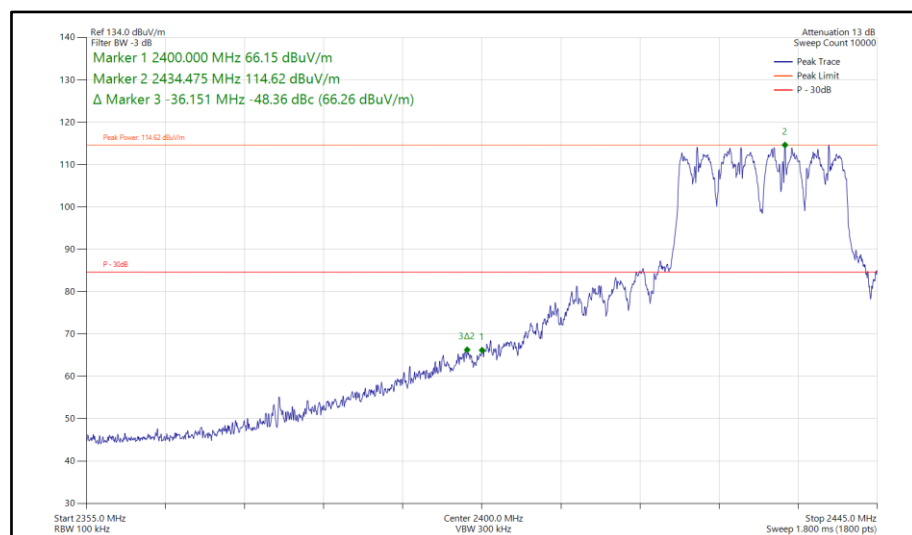




**Figure 199 - 802.11ax HE20, SU, CDD, Core 0 - Core 1 - 2427 MHz
Band Edge Frequency 2400 MHz**



**Figure 200 - 802.11ax HE20, SU, CDD, Core 0 - Core 1 - 2432 MHz
Band Edge Frequency 2400 MHz**

FCC 47 CFR Part 15, Limit Clause 15.247 (d)

20 dB below the fundamental measured in a 100 kHz bandwidth using a peak detector. If the transmitter complies with the conducted power limits, based on the use of RMS averaging over a time interval, the attenuation required shall be 30 dB below the fundamental instead of 20 dB.



2.4.7 Test Location and Test Equipment Used

This test was carried out in RF Chamber 14 and RF Chamber 16.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Emissions Software	TUV SUD	EmX V3.4.2	5125	-	Software
Test Receiver	Rohde & Schwarz	ESW44	5914	12	24-May-2025
1500W (300V 12A) AC Power Supply	iTech	IT7324	5956	-	O/P Mon
1500W (300V 12A) AC Power Supply	iTech	IT7324	5957	-	O/P Mon
5m Semi-Anechoic Chamber (Dual-Axis)	Albatross Projects	RF Chamber 14	5958	36	26-Apr-2025
Compact Antenna Mast	Maturo Gmbh	CAM4.0-P	5959	-	TU
Mast & Turntable Controller	Maturo Gmbh	FCU3.0	5960	-	TU
Tilt Antenna Mast	Maturo Gmbh	BAM4.5-P	5961	-	TU
Turntable	Maturo Gmbh	TT1.5SI	5962	-	TU
3m Semi-Anechoic Chamber, Chamber16	Albatross Projects	RF Chamber 16	5972	36	24-May-2025
Mast & Turntable Controller	Maturo Gmbh	FCU3.0	5973	-	TU
Tilt Antenna Mast	Maturo Gmbh	BAM4.5-P	5974	-	TU
Turntable	Maturo Gmbh	TT1.5SI	5975	-	TU
Cable (SMA to SMA 1m)	Junkosha	MWX221-01000AMSAMS/A	5997	12	14-Sep-2024
Cable (N to N 1m)	Junkosha	MWX221-01000NMSNMS/B	5999	12	20-May-2025
Cable (SMA to SMA 1m)	Junkosha	MWX221-01000AMSAMS/A	6007	12	20-May-2025
Cable (SMA to SMA 6.5m)	Junkosha	MWX221-06500AMSAMS/B	6014	12	24-Aug-2024
Horn Antenna (1-10 GHz)	Schwarzbeck	BBHA9120B	6140	12	05-May-2025
Horn Antenna (1-10 GHz)	Schwarzbeck	BBHA9120B	6141	12	05-May-2025
Digital Multimeter	Fluke	115	6145	12	06-Jun-2025
Digital Multimeter	Fluke	115	6146	12	06-Jun-2025
Humidity & Temperature meter	R.S Components	1364	6148	12	29-Jul-2025
SAC Switch Unit	TUV SUD	TUV_SSU_001	6190	12	22-Dec-2024
SAC Switch Unit	TUV SUD	TUV_SSU_001	6191	12	18-Dec-2024
EMI Test Receiver	Rohde & Schwarz	ESW44	6294	12	06-Jan-2025
Humidity and Temperature Meter	R.S Components	1364	6346	12	06-Mar-2025
1m Cable	Junkosha	MWX241-01000AMSAMS/B	6740	12	01-Feb-2025
1m Cable	Junkosha	MWX241-01000AMSAMS/B	6741	12	01-Feb-2025
6.5m Cable	Junkosha	MWX221-06500AMSAMS/B	6744	12	01-Feb-2025

Table 57

TU - Traceability Unscheduled
O/P Mon - Output Monitored using calibrated equipment



2.5 Spurious Radiated Emissions

2.5.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.209 and 15.247 (d)

2.5.2 Equipment Under Test and Modification State

A3185, S/N: LD12H296C1 - Modification State 0
A3185, S/N: GX224MWRCX - Modification State 0

2.5.3 Date of Test

13-August-2024 to 21-August-2024

2.5.4 Test Method

This test was performed in accordance with ANSI C63.10, clause 6.3, 6.5 and 6.6.

Ports on the EUT were terminated with loads as described in ANSI C63.10 clause 6.2.3.

The EUT was placed on the non-conducting platform in a manner typical of a normal installation.

In the 30 MHz to 1 GHz range pre-scans were only performed on the mid channel (2442 MHz) only.

For frequencies > 1 GHz, plots for average measurements were taken in accordance with ANSI C63.10, clause 11.12.2.5.2.

The plots shown are the characterisation of the EUT. The limits on the plots represent the most stringent case for restricted bands, (74/54 dBuV/m) when compared to 30 dBc outside restricted bands. The limits shown have been used as a threshold to determine where further measurements are necessary. Where results are within 10 dB of the limits shown on the plots, further investigation was carried out and reported in results tables.

The following conversion can be applied to convert from dBµV/m to µV/m:
 $10^{(\text{Field Strength in dB}\mu\text{V/m}/20)}$

Above 18 GHz, the measurement distance was reduced to 1 m. The limit line was increased by $20 \cdot \text{LOG}(3/1) = 9.54$ dB.

Where formal measurements have been necessary, the results have been presented in the emissions table.

2.5.5 Example Test Setup Diagram

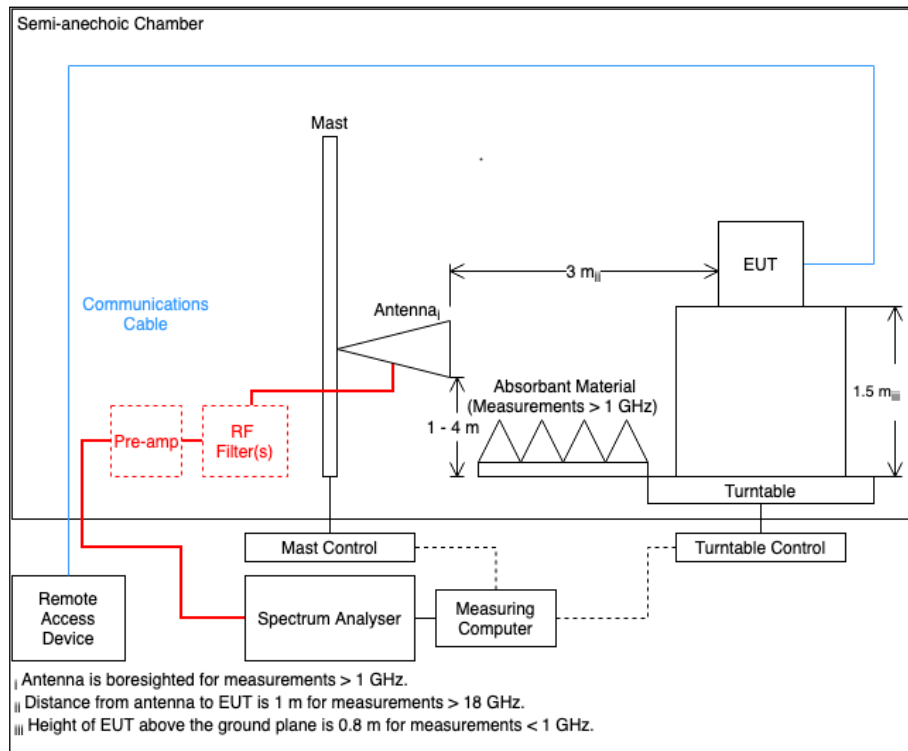


Figure 201

2.5.6 Environmental Conditions

Ambient Temperature	22.0 - 23.9 °C
Relative Humidity	41.7 - 56.4 %



2.5.7 Test Results

2.4 GHz WLAN

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation	Orientation
*								

Table 58 - 2412 MHz (CH1), 802.11b, Core 0, 1 to 26 GHz

*No emissions found within 10 dB of the limit.

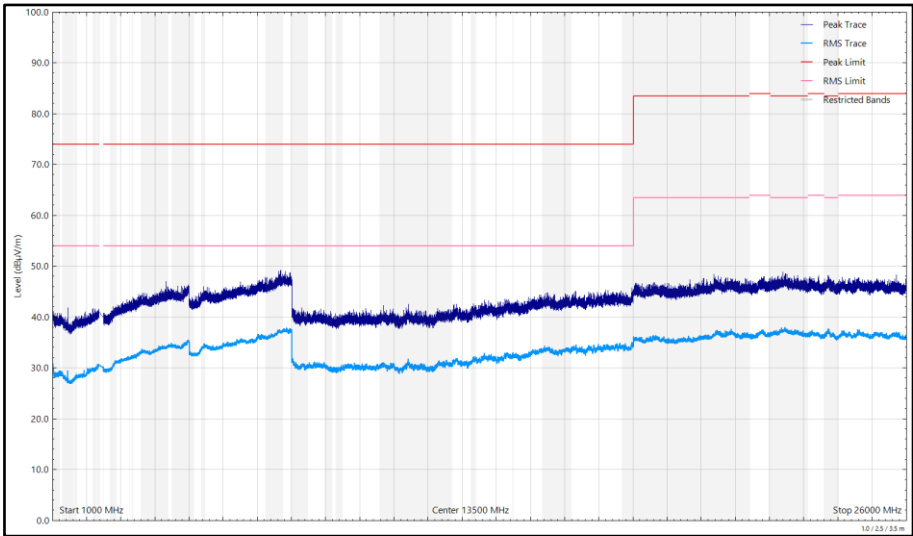


Figure 202 - 2412 MHz (CH1), 802.11b, Core 0, 1 GHz to 26 GHz, Horizontal

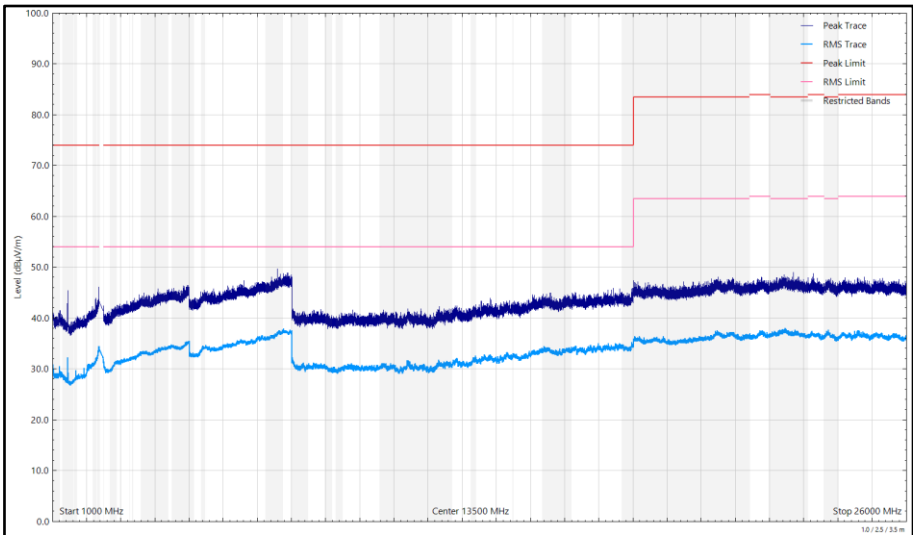


Figure 203 - 2412 MHz (CH1), 802.11b, Core 0, 1 GHz to 26 GHz, Vertical



Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation	Orientation
*								

Table 59 - 2442 MHz (CH7), 802.11b, Core 0, 30 MHz to 26 GHz

*No emissions found within 10 dB of the limit.

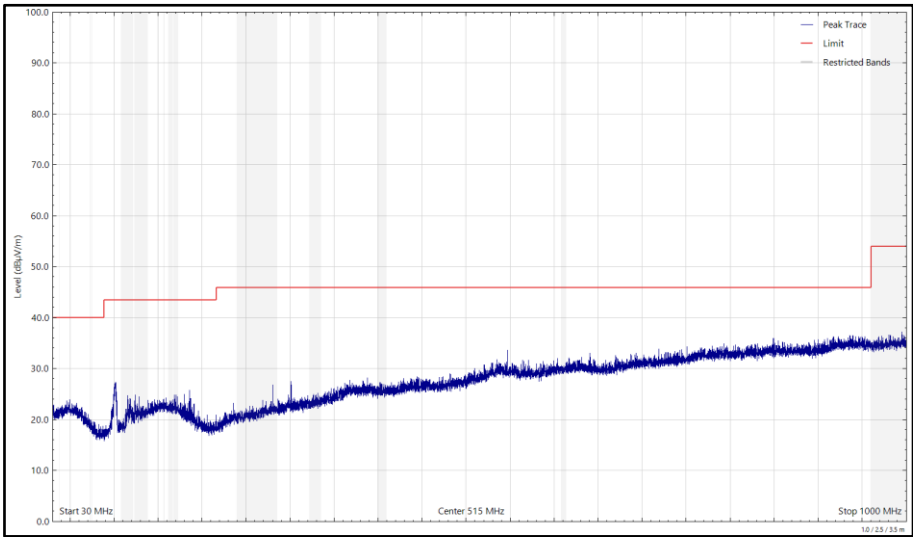


Figure 204 - 2442 MHz (CH7), 802.11b, Core 0, 30 MHz to 1 GHz, Horizontal (Peak)

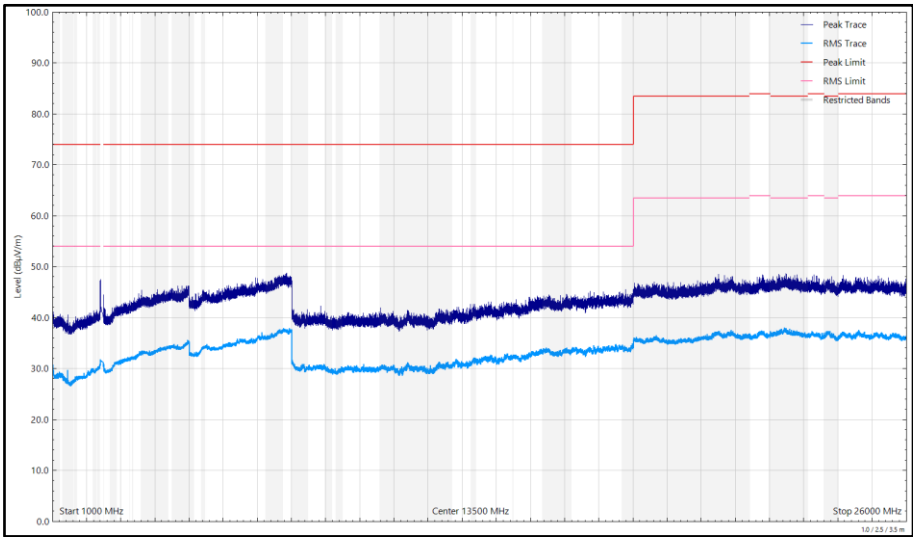


Figure 205 - 2442 MHz (CH7), 802.11b, Core 0, 1 GHz to 26 GHz, Horizontal

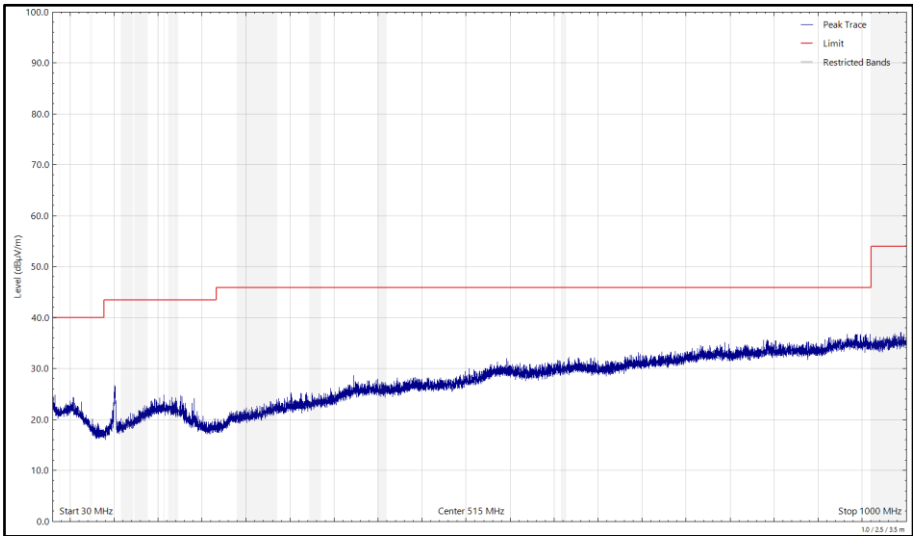


Figure 206 - 2442 MHz (CH7), 802.11b, Core 0, 30 MHz to 1 GHz, Vertical (Peak)

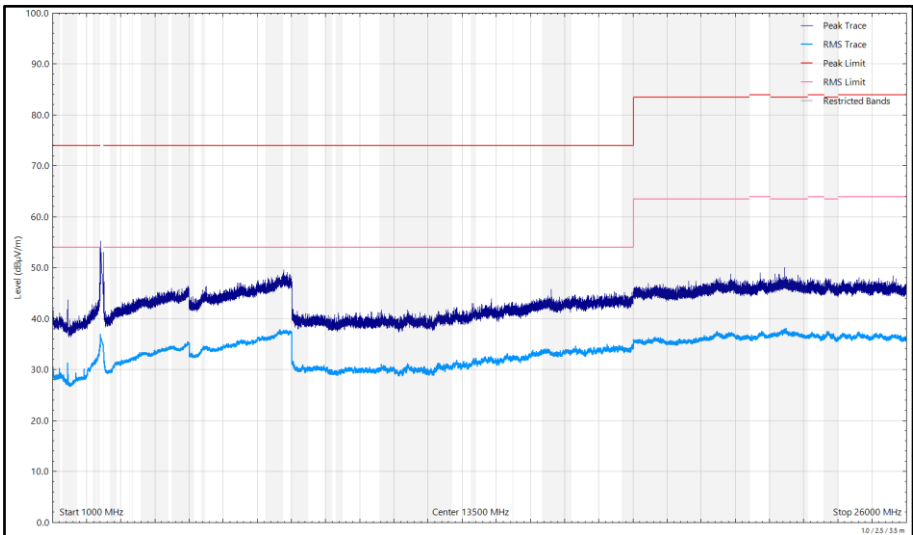


Figure 207 - 2442 MHz (CH7), 802.11b, Core 0, 1 GHz to 26 GHz, Vertical



Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation	Orientation
*								

Table 60 - 2472 MHz (CH13), 802.11b, Core 0, 1 to 26 GHz

*No emissions found within 10 dB of the limit.

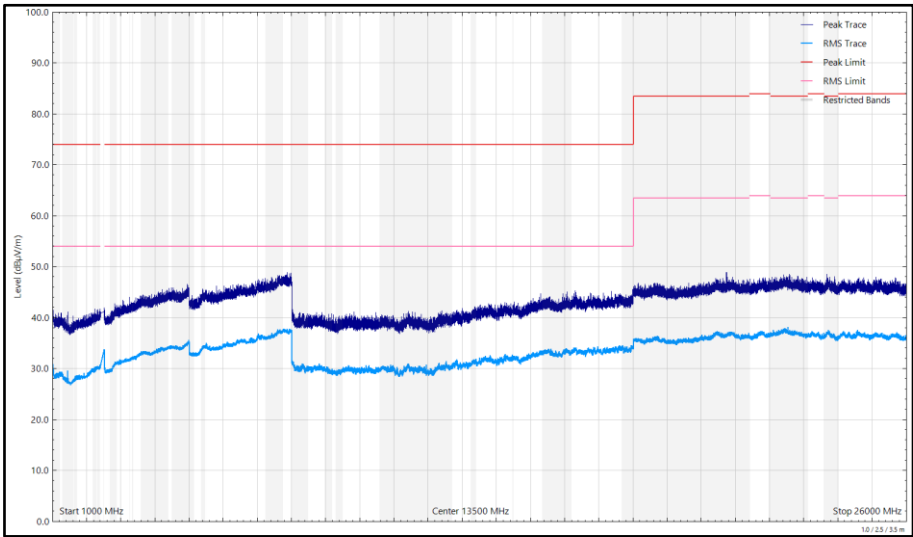


Figure 208 - 2472 MHz (CH13), 802.11b, Core 0, 1 GHz to 26 GHz, Horizontal

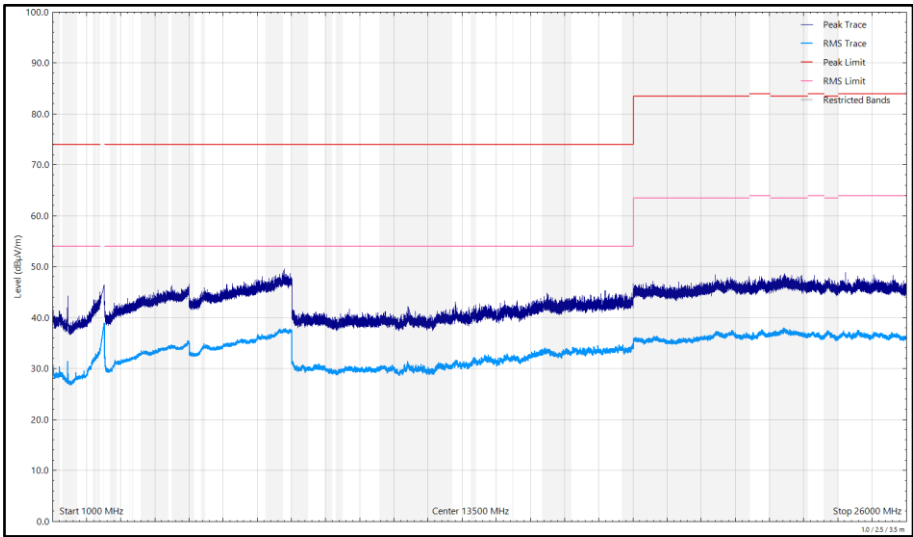


Figure 209 - 2472 MHz (CH13), 802.11b, Core 0, 1 GHz to 26 GHz, Vertical



Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation	Orientation
*								

Table 61 - 2412 MHz (CH1), 802.11b, Core 1, 1 to 26 GHz

*No emissions found within 10 dB of the limit.

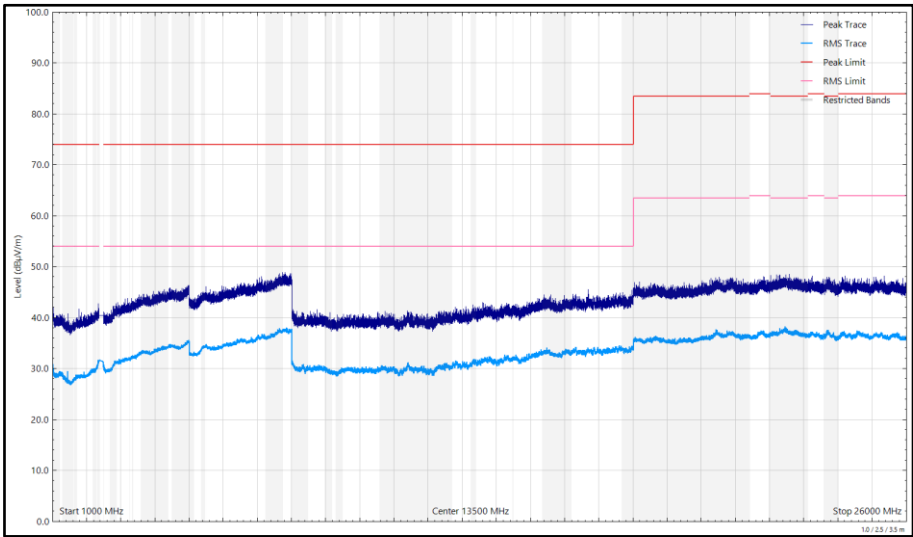


Figure 210 - 2412 MHz (CH1), 802.11b, Core 1, 1 GHz to 26 GHz, Horizontal

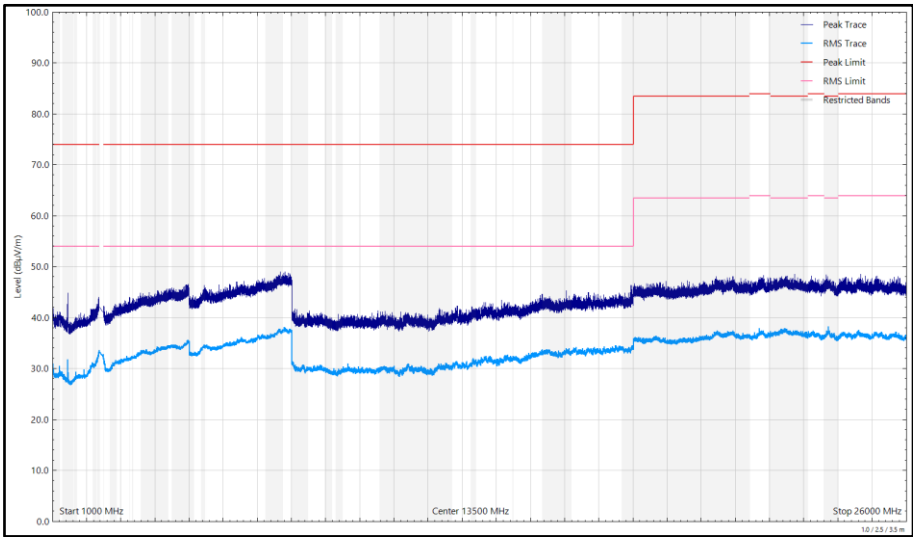


Figure 211 - 2412 MHz (CH1), 802.11b, Core 1, 1 GHz to 26 GHz, Vertical



Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation	Orientation
*								

Table 62 - 2442 MHz (CH7), 802.11b, Core 1, 30 MHz to 26 GHz

*No emissions found within 10 dB of the limit.

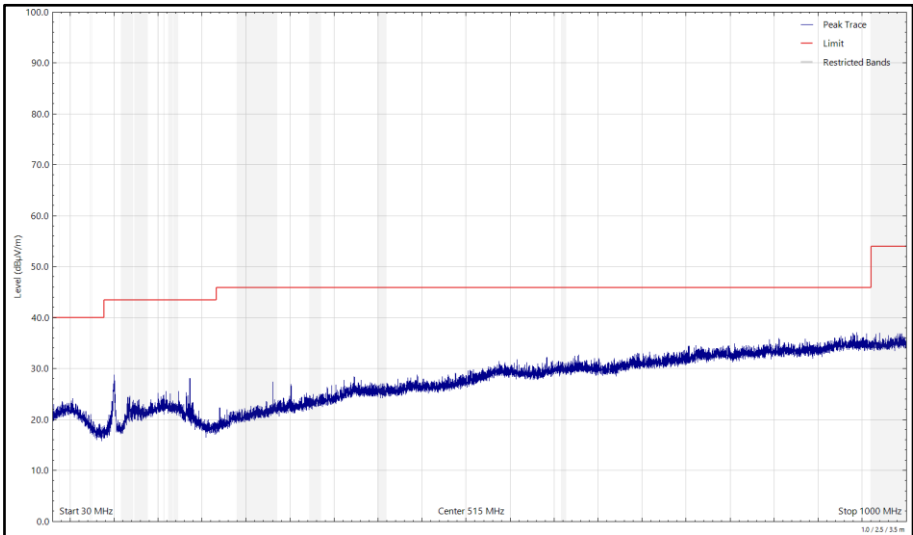


Figure 212 - 2442 MHz (CH7), 802.11b, Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

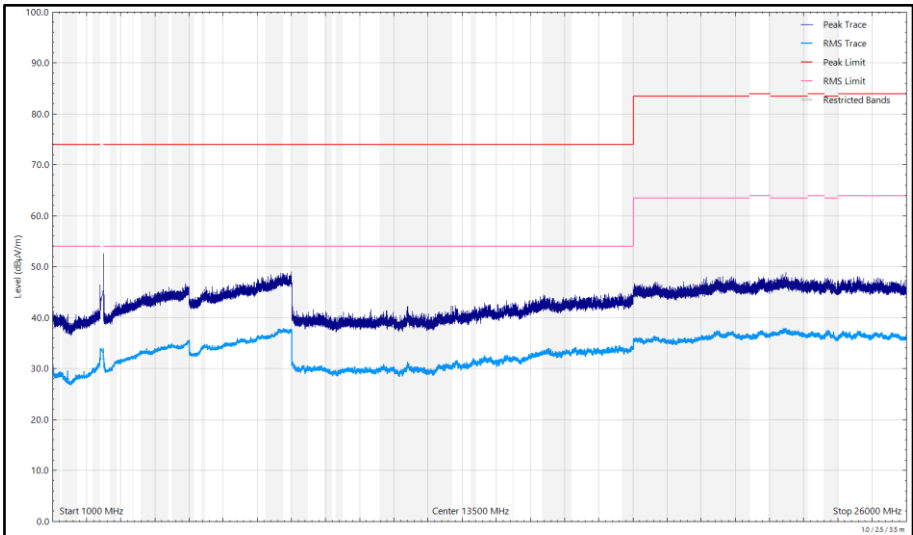


Figure 213 - 2442 MHz (CH7), 802.11b, Core 1, 1 GHz to 26 GHz, Horizontal

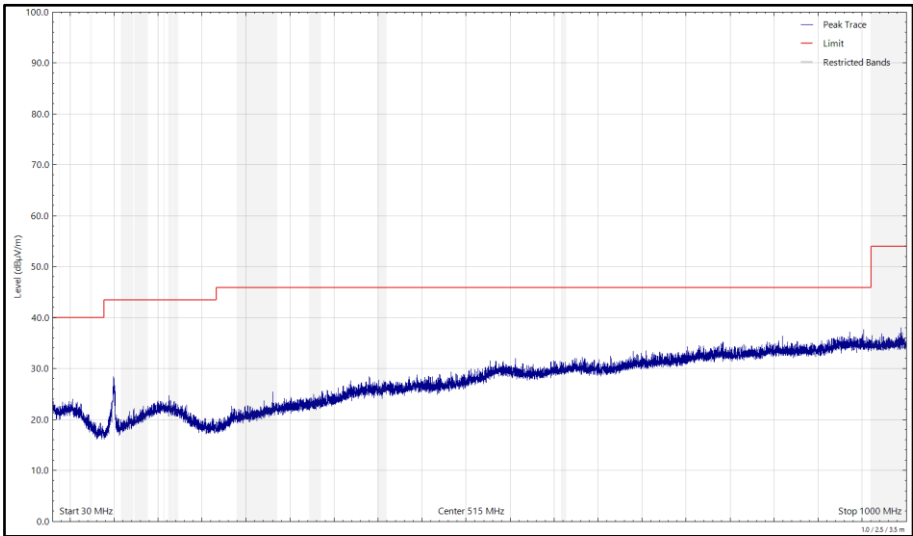


Figure 214 - 2442 MHz (CH7), 802.11b, Core 1, 30 MHz to 1 GHz, Vertical (Peak)

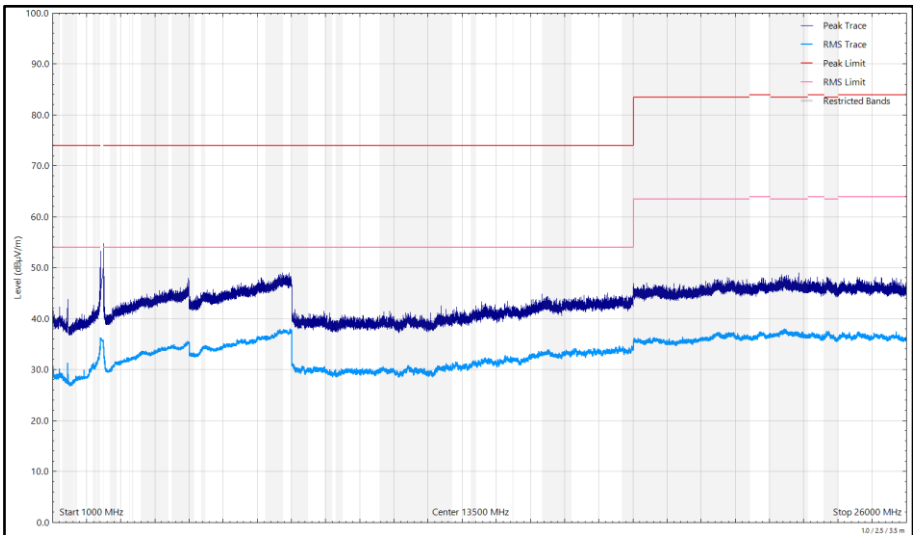


Figure 215 - 2442 MHz (CH7), 802.11b, Core 1, 1 GHz to 26 GHz, Vertical



Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation	Orientation
*								

Table 63 - 2472 MHz (CH13), 802.11b, Core 1, 1 to 26 GHz

*No emissions found within 10 dB of the limit.

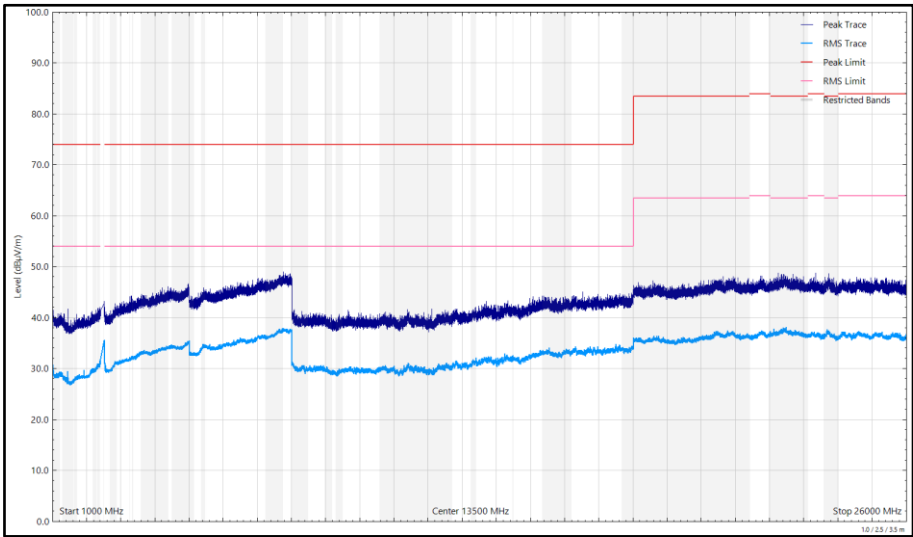


Figure 216 - 2472 MHz (CH13), 802.11b, Core 1, 1 GHz to 26 GHz, Horizontal

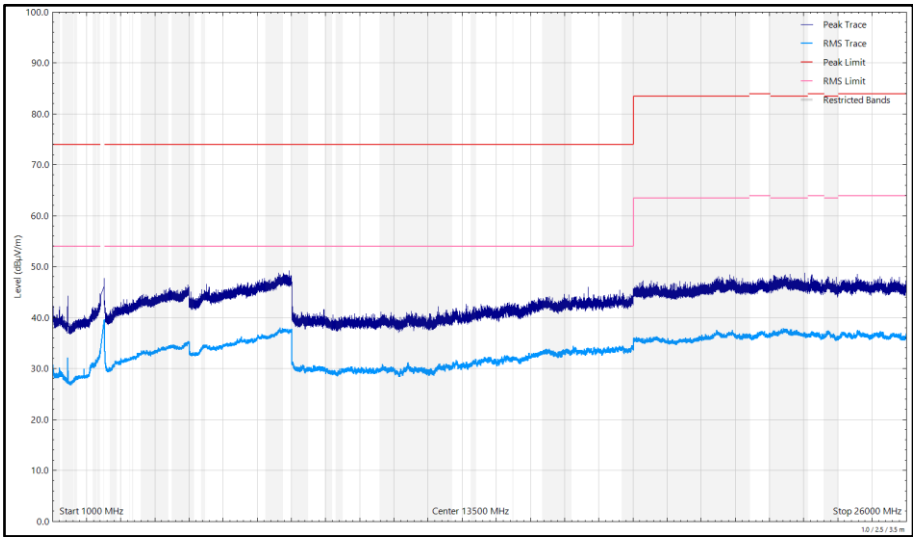


Figure 217 - 2472 MHz (CH13), 802.11b, Core 1, 1 GHz to 26 GHz, Vertical



Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation	Orientation
*								

Table 64 - 2412 MHz (CH1), 802.11g, Core 0, 1 to 26 GHz

*No emissions found within 10 dB of the limit.

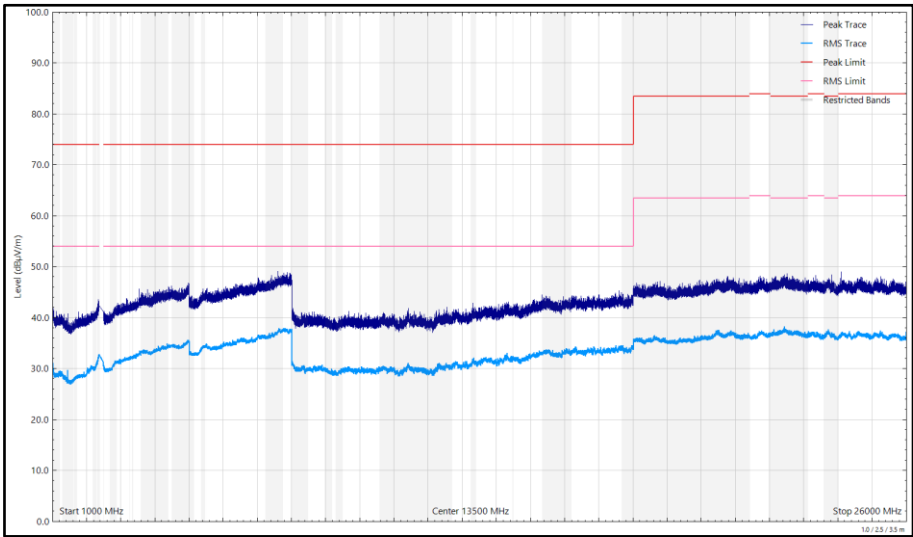


Figure 218 - 2412 MHz (CH1), 802.11g, Core 0, 1 GHz to 26 GHz, Horizontal

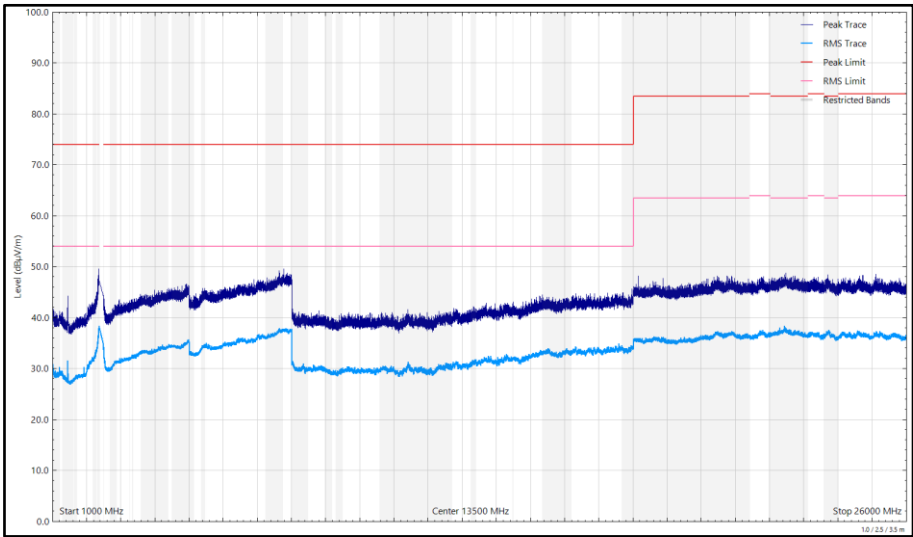


Figure 219 - 2412 MHz (CH1), 802.11g, Core 0, 1 GHz to 26 GHz, Vertical

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation	Orientation
2389.836	39.80	54.00	-14.20	RMS	355	373	Vertical	
2483.535	39.38	54.00	-14.62	RMS	308	390	Horizontal	
2483.665	43.33	54.00	-10.67	RMS	341	398	Vertical	
2486.321	60.50	74.00	-13.50	Peak	358	356	Vertical	

Table 65 - 2442 MHz (CH7), 802.11g, Core 0, 30 MHz to 26 GHz

No other emissions found within 10 dB of the limit.

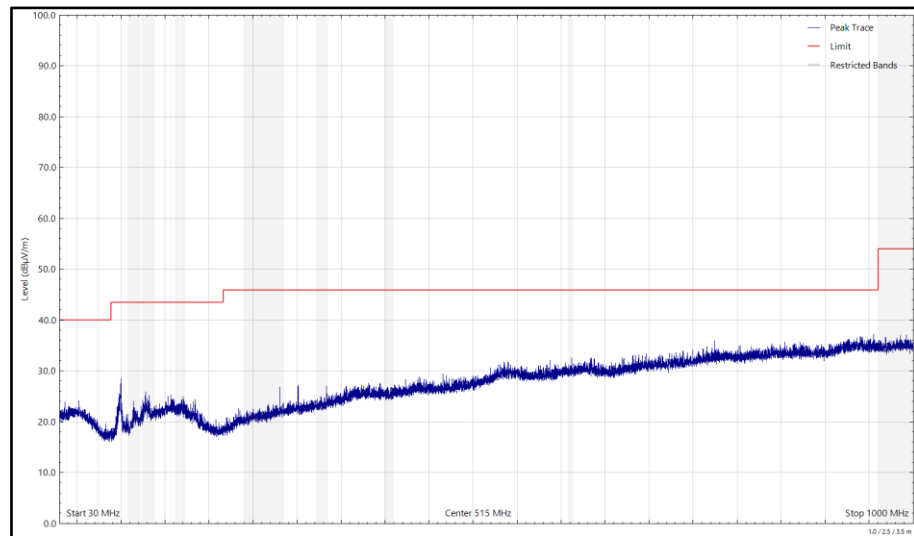


Figure 220 - 2442 MHz (CH7), 802.11g, Core 0, 30 MHz to 1 GHz, Horizontal (Peak)

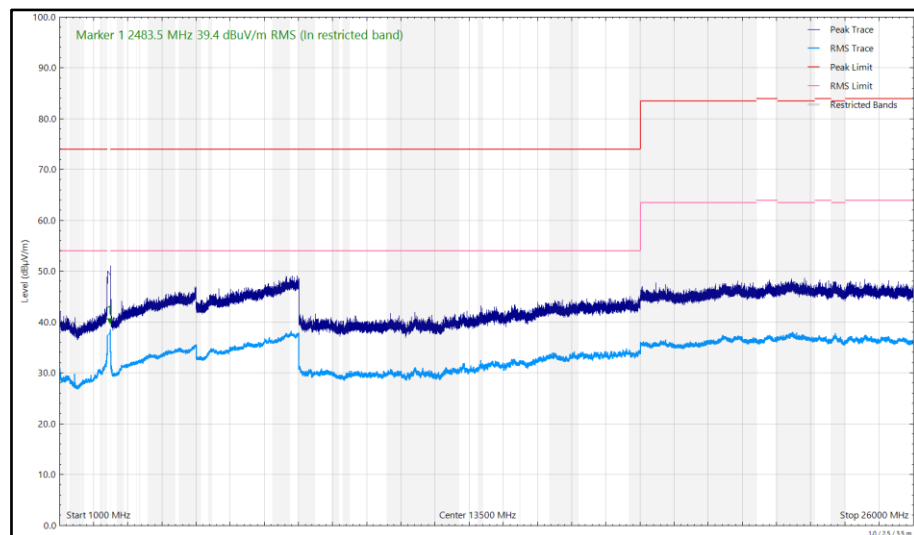


Figure 221 - 2442 MHz (CH7), 802.11g, Core 0, 1 GHz to 26 GHz, Horizontal

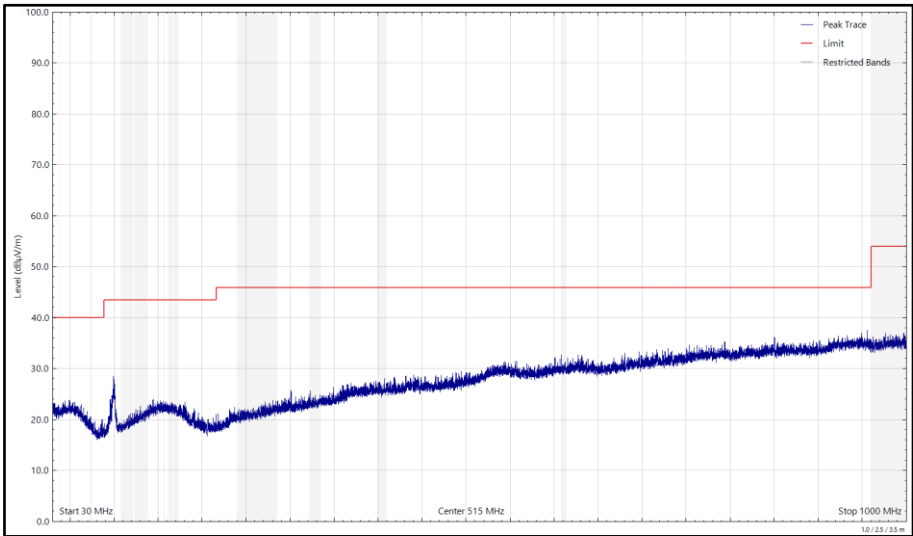


Figure 222 - 2442 MHz (CH7), 802.11g, Core 0, 30 MHz to 1 GHz, Vertical (Peak)

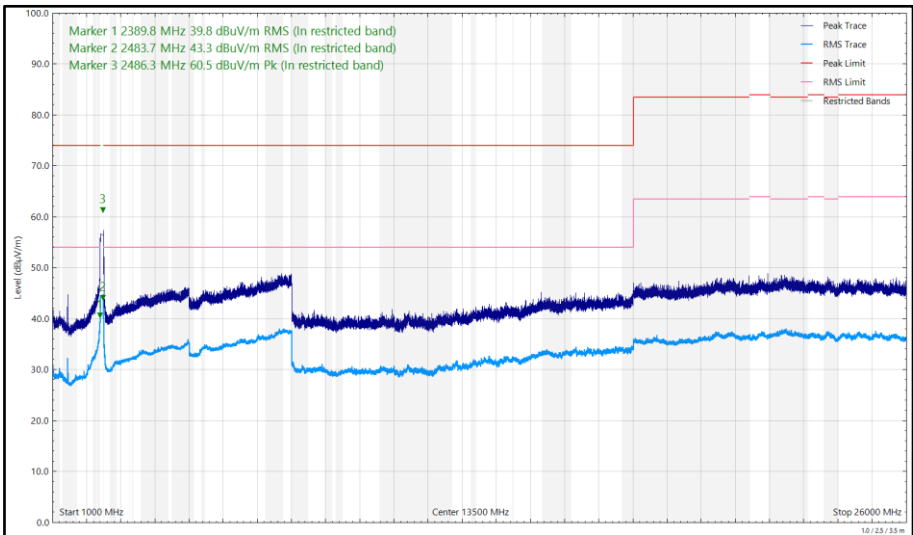


Figure 223 - 2442 MHz (CH7), 802.11g, Core 0, 1 GHz to 26 GHz, Vertical

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation	Orientation
2508.511	67.36	79.55	-12.19	Peak	337	397	Vertical	

Table 66 - 2472 MHz (CH13), 802.11g, Core 0, 1 to 26 GHz

No other emissions found within 10 dB of the limit.

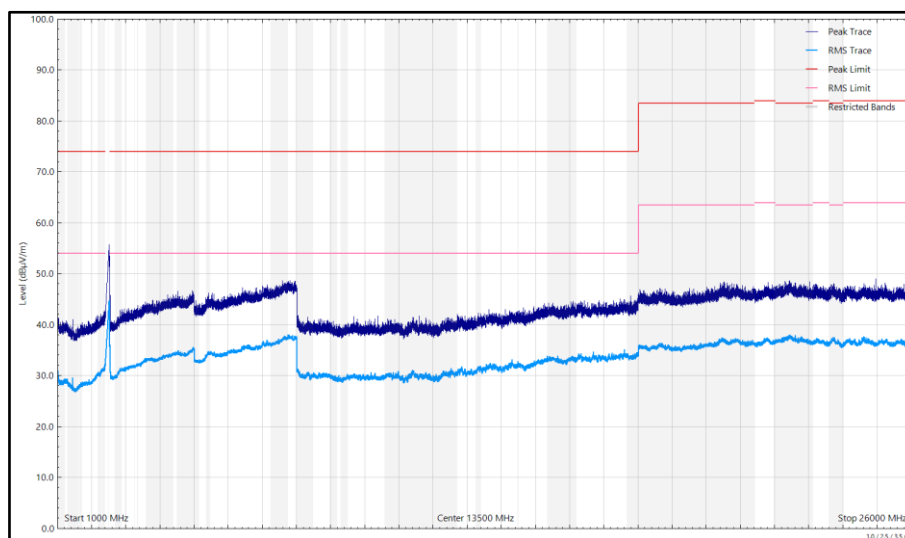


Figure 224 - 2472 MHz (CH13), 802.11g, Core 0, 1 GHz to 26 GHz, Horizontal

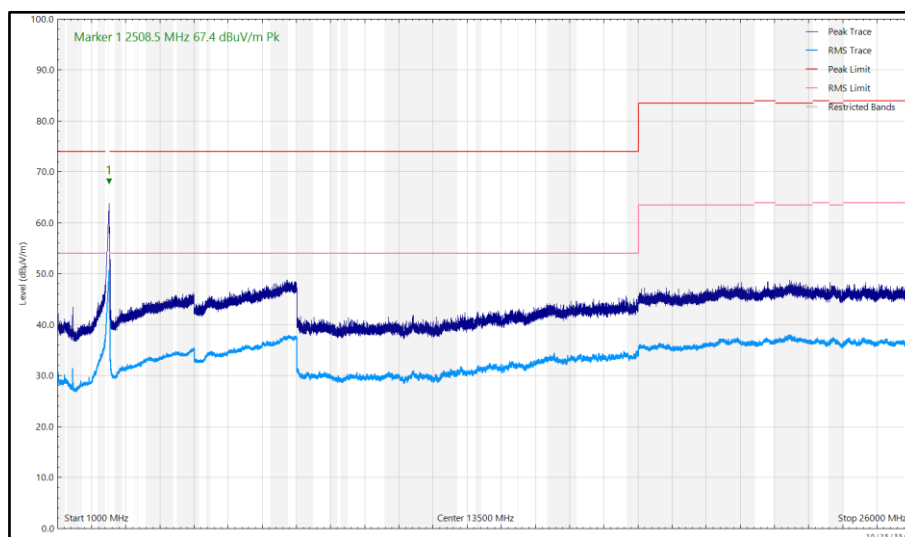


Figure 225 - 2472 MHz (CH13), 802.11g, Core 0, 1 GHz to 26 GHz, Vertical

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation	Orientation
*								

Table 67 - 2412 MHz (CH1), 802.11g, Core 1, 1 to 26 GHz

*No emissions found within 10 dB of the limit.

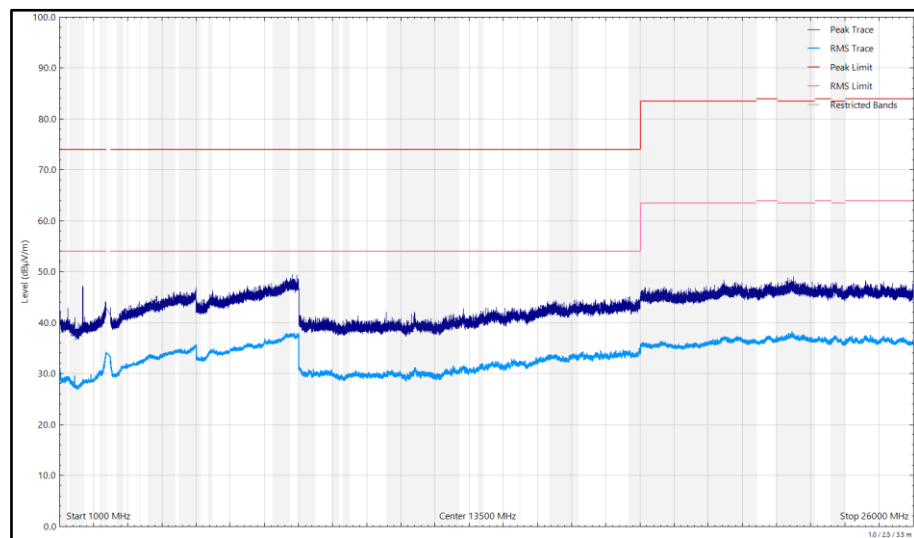


Figure 226 - 2412 MHz (CH1), 802.11g, Core 1, 1 GHz to 26 GHz, Horizontal

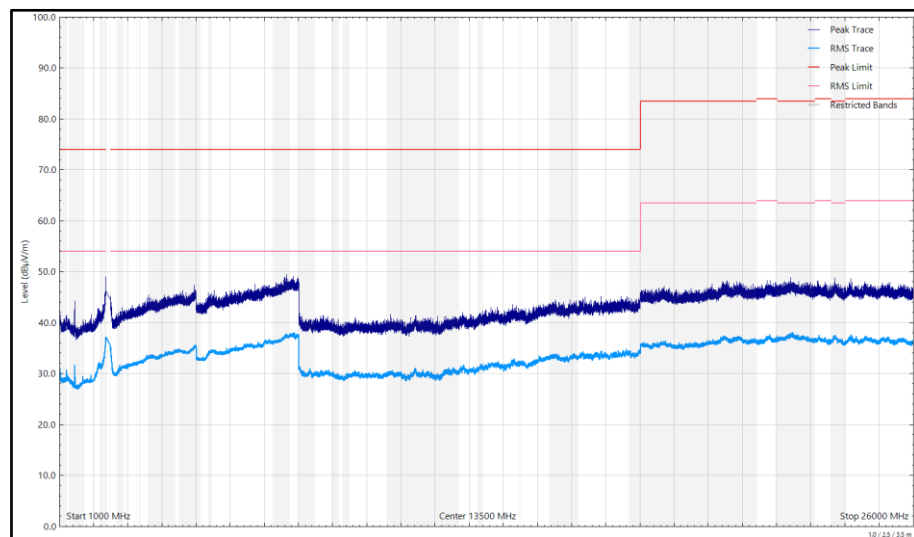


Figure 227 - 2412 MHz (CH1), 802.11g, Core 1, 1 GHz to 26 GHz, Vertical

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation	Orientation
2483.520	44.28	54.00	-9.72	RMS	48	356	Vertical	
2483.627	41.19	54.00	-12.81	RMS	64	400	Horizontal	
2485.485	61.65	74.00	-12.35	Peak	46	395	Vertical	

Table 68 - 2442 MHz (CH7), 802.11g, Core 1, 30 MHz to 26 GHz

No other emissions found within 10 dB of the limit.

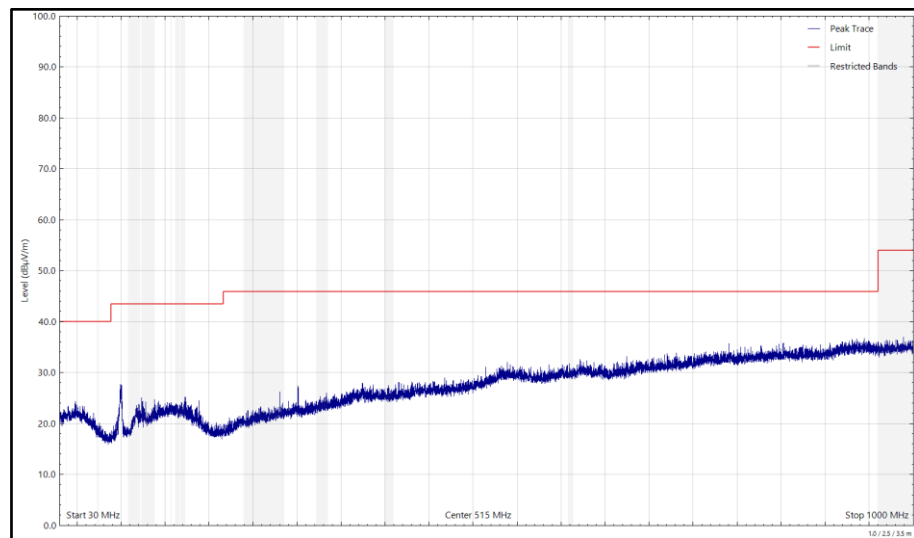


Figure 228 - 2442 MHz (CH7), 802.11g, Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

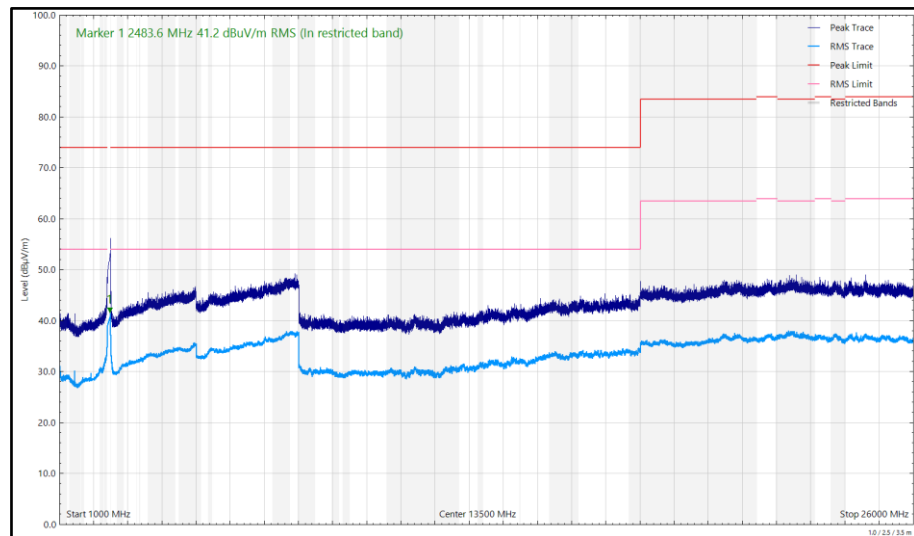


Figure 229 - 2442 MHz (CH7), 802.11g, Core 1, 1 GHz to 26 GHz, Horizontal

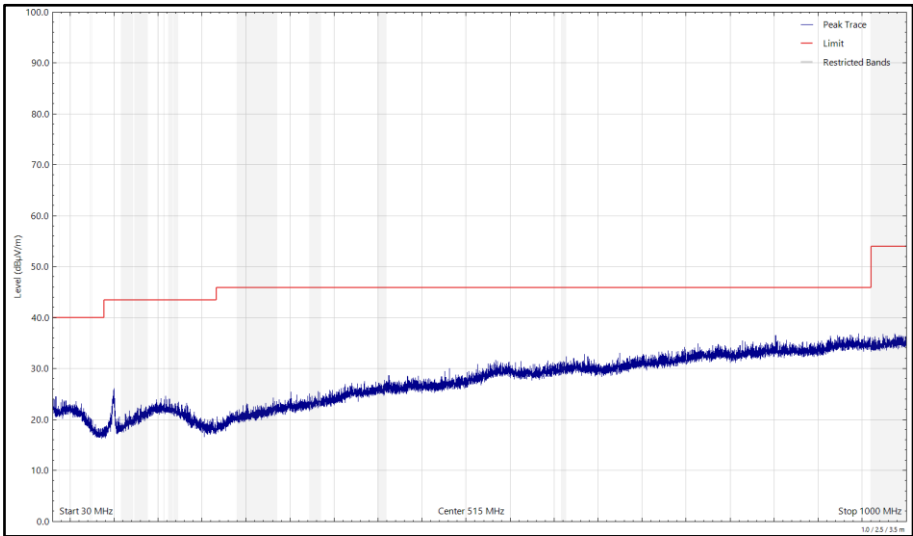


Figure 230 - 2442 MHz (CH7), 802.11g, Core 1, 30 MHz to 1 GHz, Vertical (Peak)

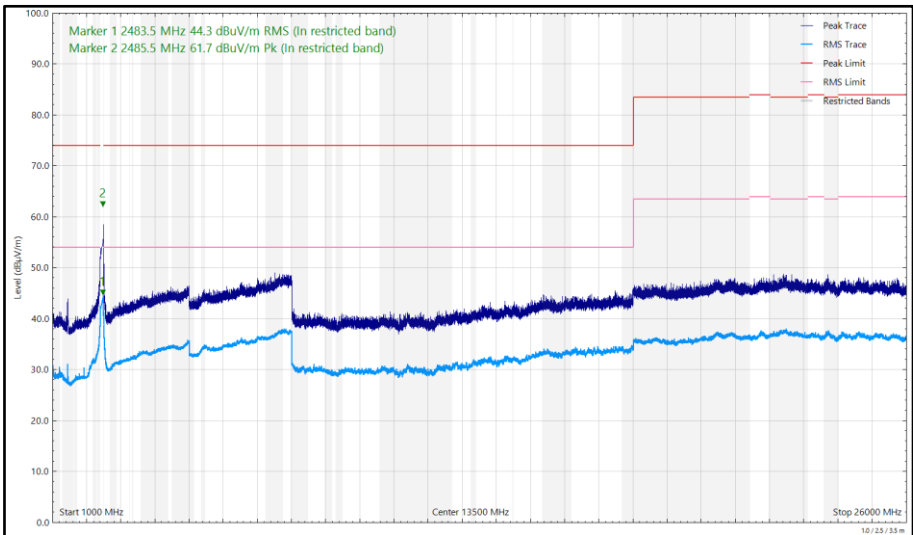


Figure 231 - 2442 MHz (CH7), 802.11g, Core 1, 1 GHz to 26 GHz, Vertical

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation	Orientation
2509.546	65.84	79.55	-13.71	Peak	44	390	Vertical	

Table 69 - 2472 MHz (CH13), 802.11g, Core 1, 1 to 26 GHz

No other emissions found within 10 dB of the limit.

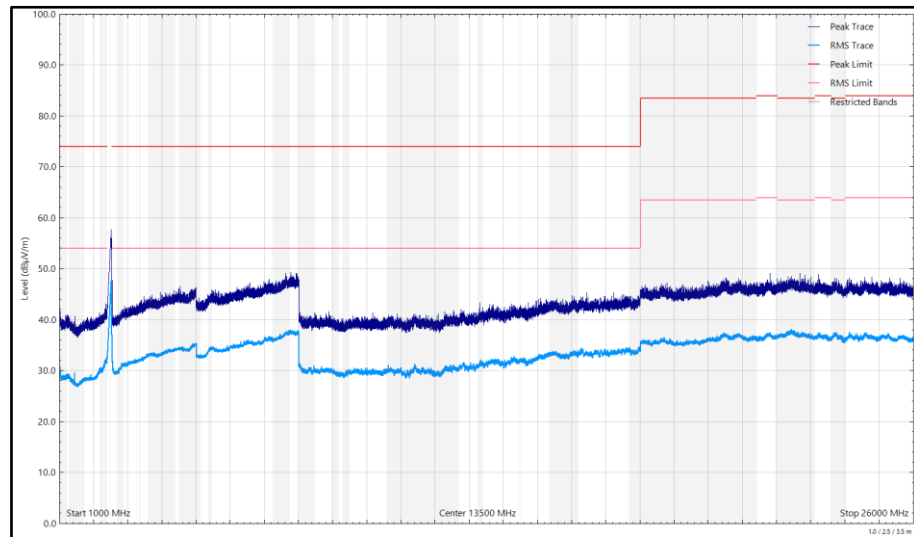


Figure 232 - 2472 MHz (CH13), 802.11g, Core 1, 1 GHz to 26 GHz, Horizontal

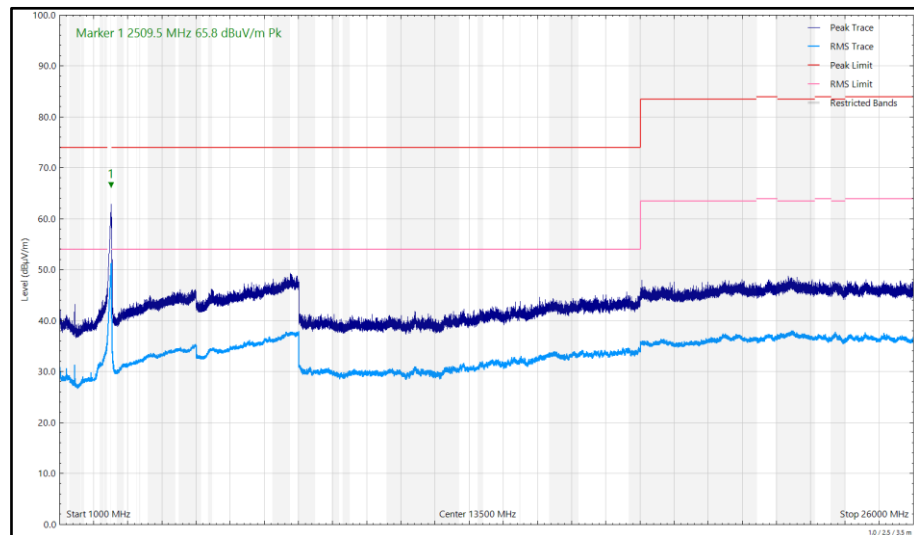


Figure 233 - 2472 MHz (CH13), 802.11g, Core 1, 1 GHz to 26 GHz, Vertical

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation	Orientation
2354.999	40.51	54.00	-13.49	RMS	8	306	Vertical	

Table 70 - 2412 MHz (CH1), HT20, CDD, Core 0 + Core 1, 1 to 26 GHz

No other emissions found within 10 dB of the limit.

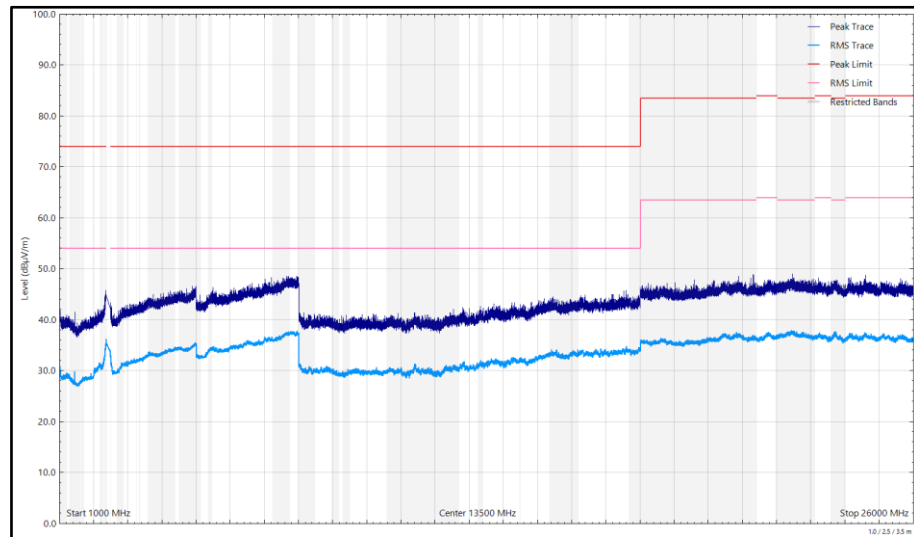


Figure 234 - 2412 MHz (CH1), HT20, CDD, Core 0 + Core 1, 1 GHz to 26 GHz, Horizontal

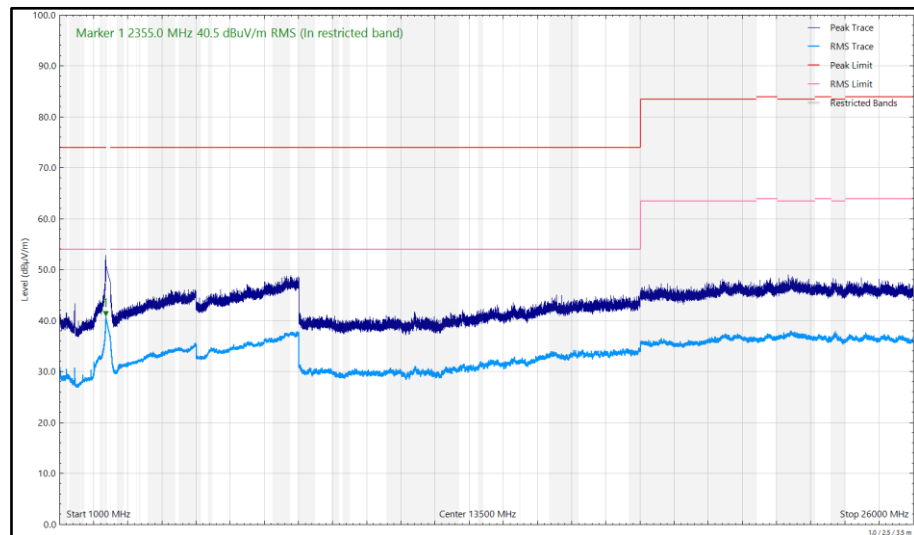


Figure 235 - 2412 MHz (CH1), HT20, CDD, Core 0 + Core 1, 1 GHz to 26 GHz, Vertical

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation	Orientation
2389.850	42.02	54.00	-11.98	RMS	49	381	Vertical	
2389.936	39.43	54.00	-14.57	RMS	59	377	Horizontal	
2484.794	63.51	74.00	-10.49	Peak	28	318	Vertical	
2484.802	47.14	54.00	-6.86	RMS	54	394	Vertical	
2484.872	43.32	54.00	-10.68	RMS	64	346	Horizontal	
2485.086	60.48	74.00	-13.52	Peak	62	390	Horizontal	

Table 71 - 2442 MHz (CH7), HT20, CDD, Core 0 + Core 1, 30 MHz to 26 GHz

No other emissions found within 10 dB of the limit.

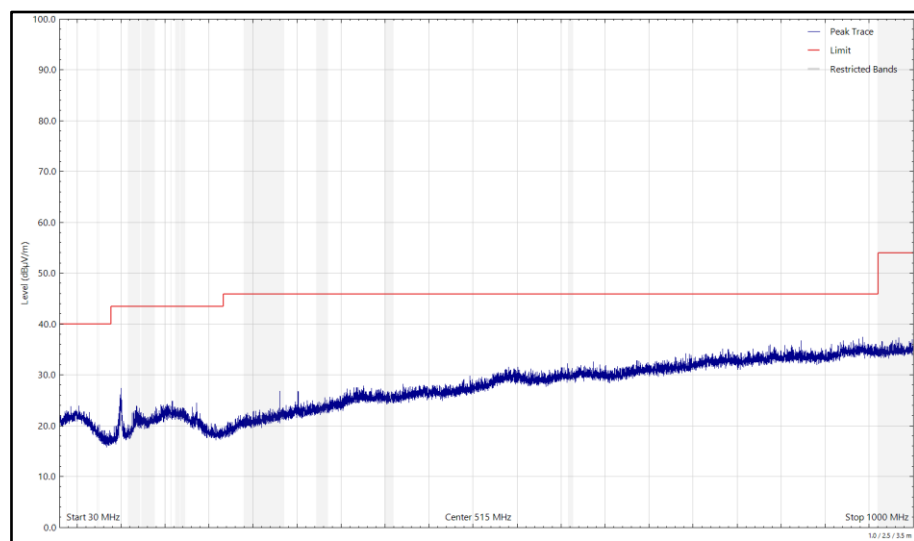


Figure 236 - 2442 MHz (CH7), HT20, CDD, Core 0 + Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

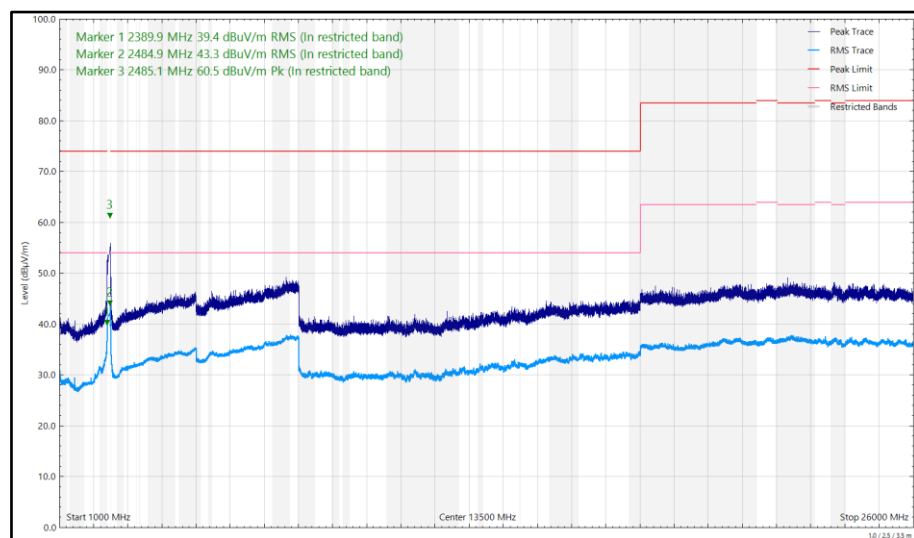


Figure 237 - 2442 MHz (CH7), HT20, CDD, Core 0 + Core 1, 1 GHz to 26 GHz, Horizontal

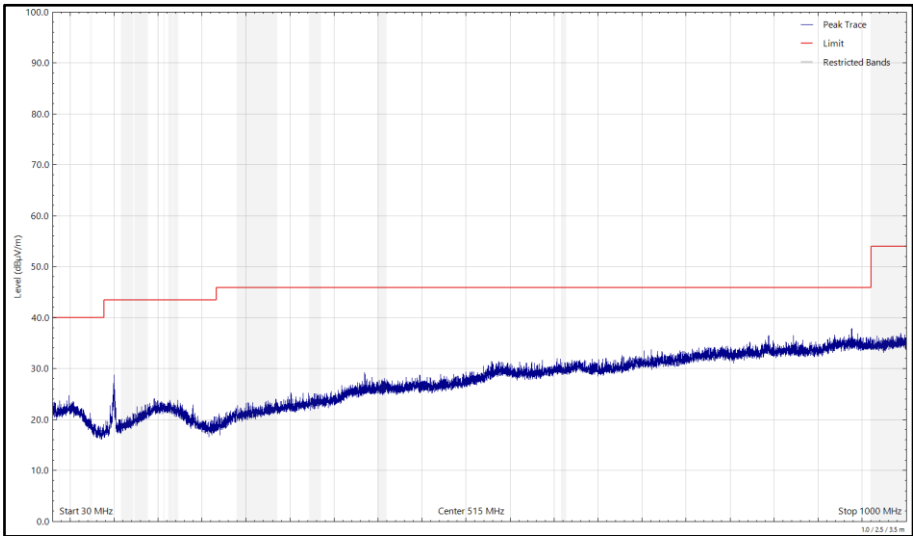


Figure 238 - 2442 MHz (CH7), HT20, CDD, Core 0 + Core 1, 30 MHz to 1 GHz, Vertical (Peak)

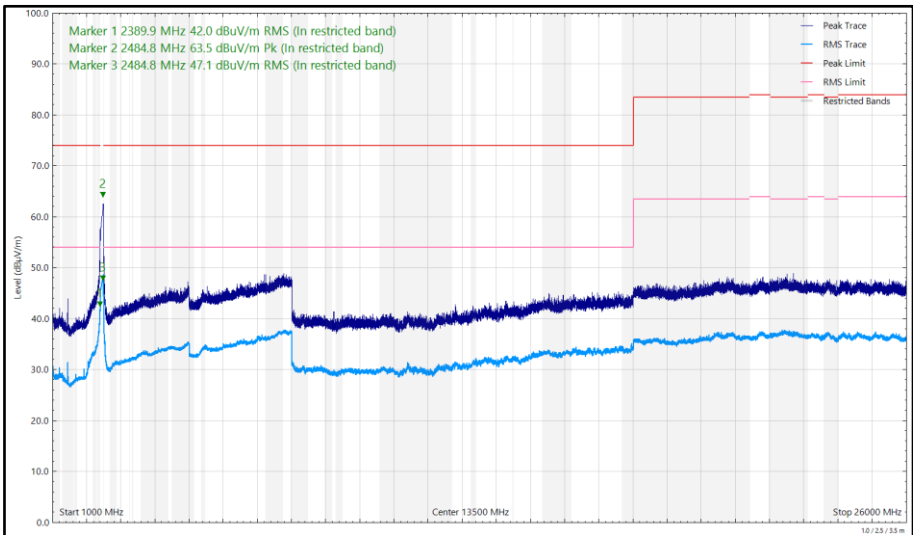


Figure 239 - 2442 MHz (CH7), HT20, CDD, Core 0 + Core 1, 1 GHz to 26 GHz, Vertical



Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation	Orientation
2509.848	72.61	83.61	-11.00	Peak	47	356	Vertical	

Table 72 - 2472 MHz (CH13), HT20, CDD, Core 0 + Core 1, 1 to 26 GHz

No other emissions found within 10 dB of the limit.

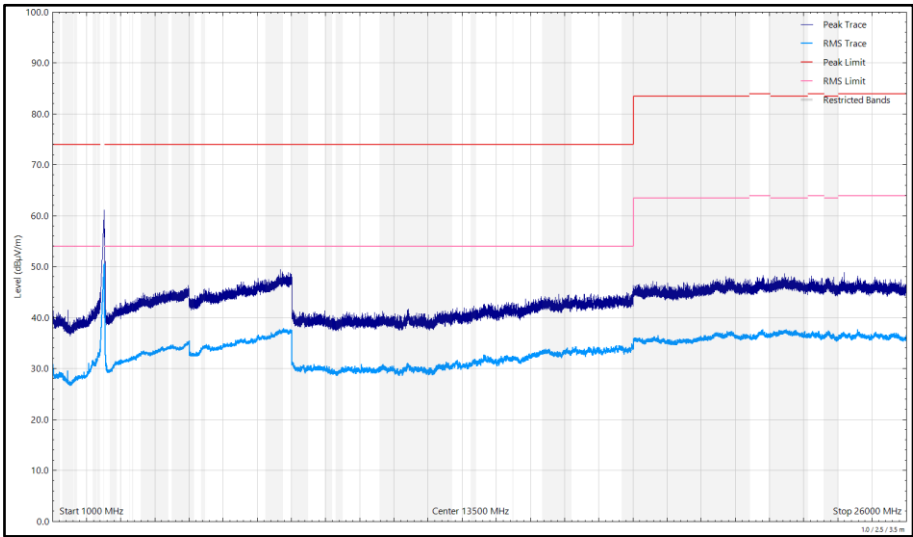


Figure 240 - 2472 MHz (CH13), HT20, CDD, Core 0 + Core 1, 1 GHz to 26 GHz, Horizontal

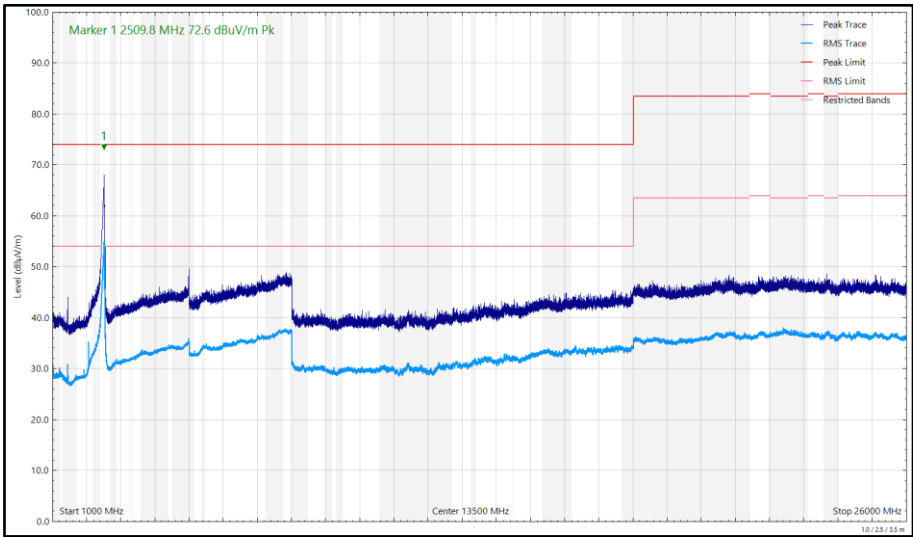


Figure 241 - 2472 MHz (CH13), HT20, CDD, Core 0 + Core 1, 1 GHz to 26 GHz, Vertical

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation	Orientation
*								

Table 73 - 2412 MHz (CH1), HE20, RU26-0, CDD, Core 0 + Core 1, 1 to 26 GHz

*No emissions found within 10 dB of the limit.

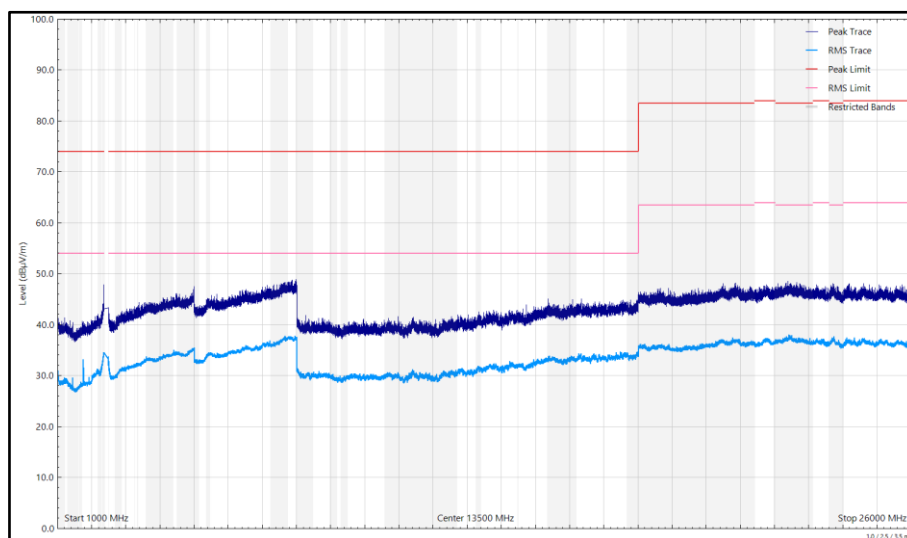


Figure 242 - 2412 MHz (CH1), HE20, RU26-0, CDD, Core 0 + Core 1, 1 GHz to 26 GHz, Horizontal

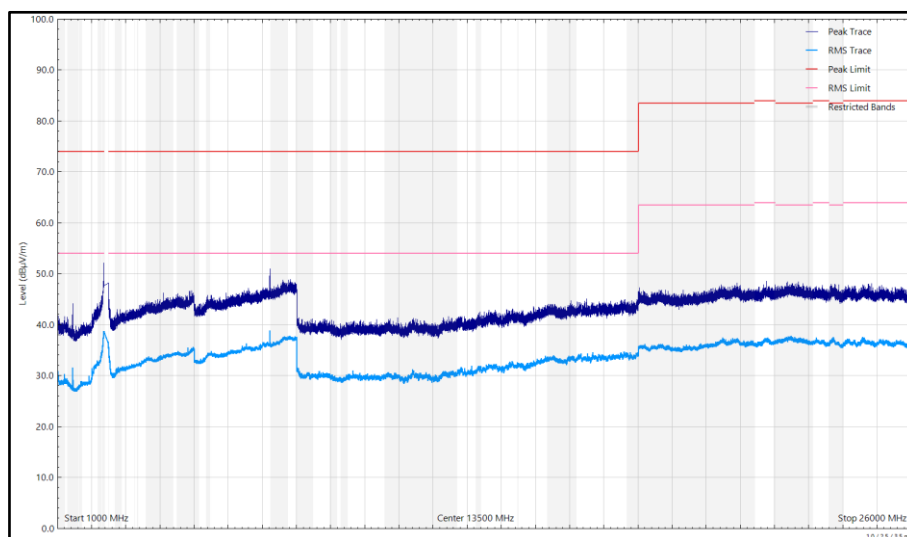


Figure 243 - 2412 MHz (CH1), HE20, RU26-0, CDD, Core 0 + Core 1, 1 GHz to 26 GHz, Vertical

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation	Orientation
2389.949	40.87	54.00	-13.13	RMS	7	337	Vertical	
2483.529	40.35	54.00	-13.65	RMS	21	398	Vertical	
2483.601	60.73	74.00	-13.27	Peak	37	400	Vertical	

Table 74 - 2442 MHz (CH7), HE20, RU26-0, CDD, Core 0 + Core 1, 30 MHz to 26 GHz

No other emissions found within 10 dB of the limit.

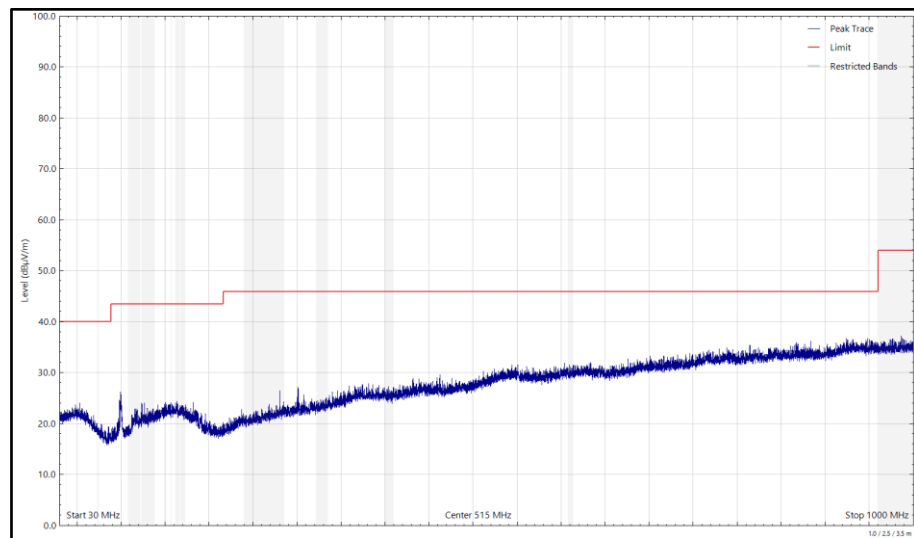


Figure 244 - 2442 MHz (CH7), HE20, RU26-0, CDD, Core 0 + Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

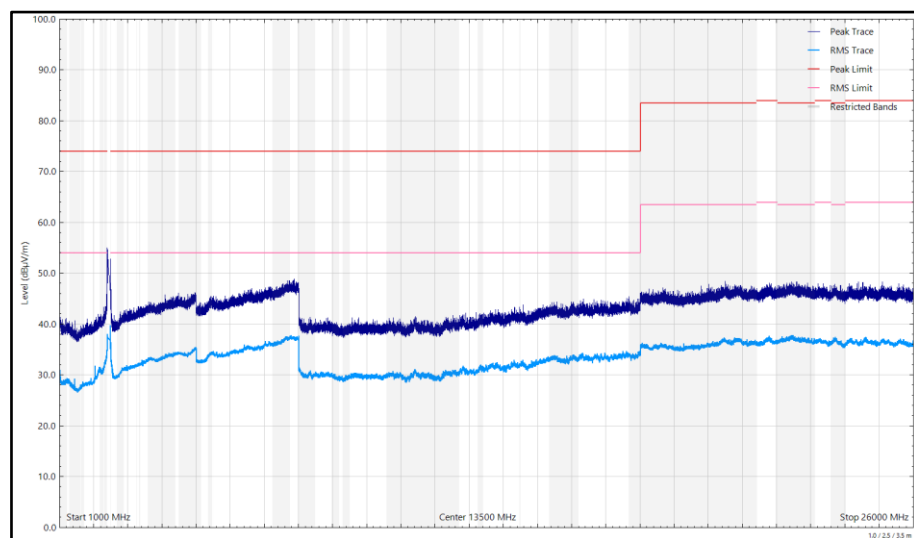


Figure 245 - 2442 MHz (CH7), HE20, RU26-0, CDD, Core 0 + Core 1, 1 GHz to 26 GHz, Horizontal

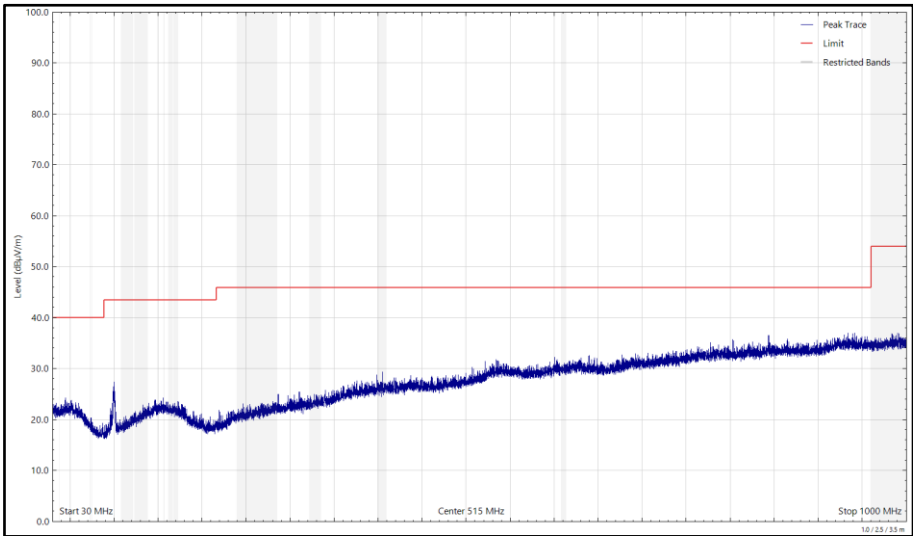


Figure 246 - 2442 MHz (CH7), HE20, RU26-0, CDD, Core 0 + Core 1, 30 MHz to 1 GHz, Vertical (Peak)

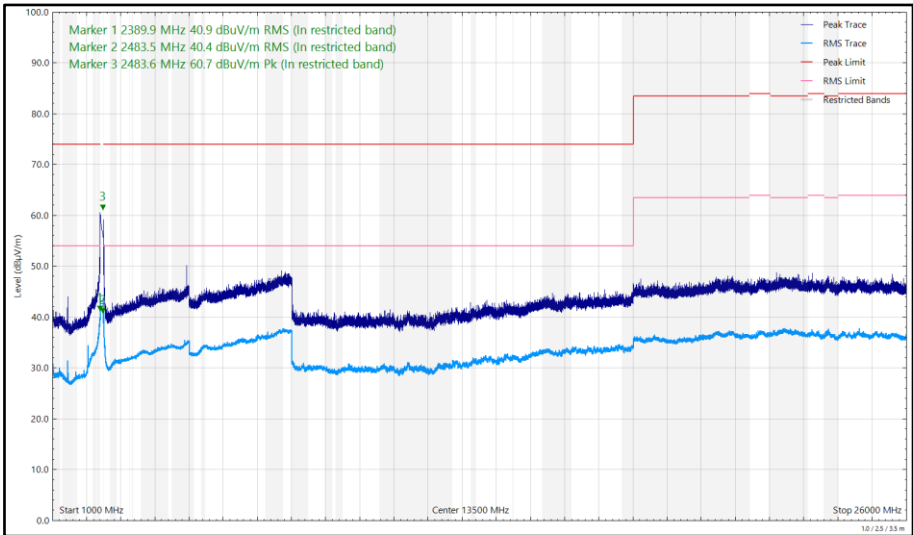


Figure 247 - 2442 MHz (CH7), HE20, RU26-0, CDD, Core 0 + Core 1, 1 GHz to 26 GHz, Vertical



Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation	Orientation
7389.875	38.67	54.00	-15.33	Peak	46	280	Vertical	Restricted Band

Table 75 - 2472 MHz (CH13), HE20, RU26-0, CDD, Core 0 + Core 1, 1 to 26 GHz

No other emissions found within 10 dB of the limit.

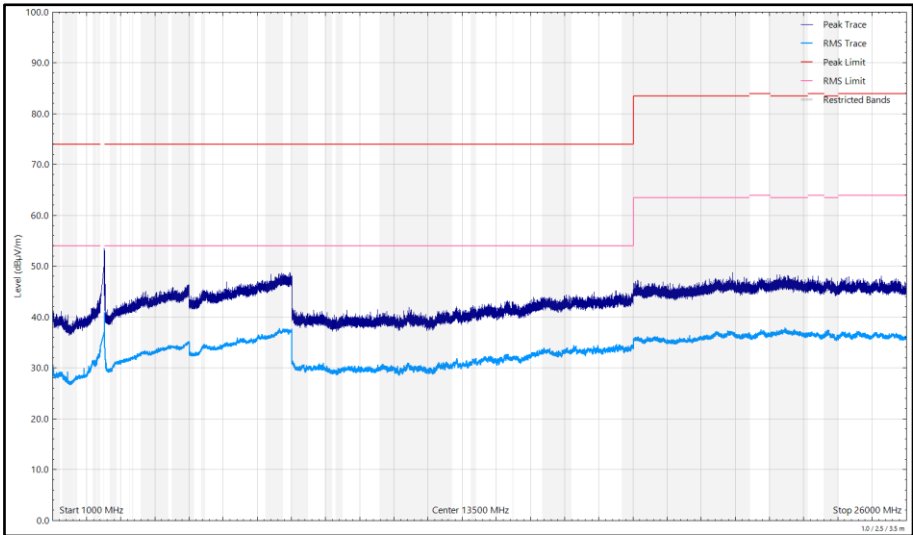


Figure 248 - 2472 MHz (CH13), HE20, RU26-0, CDD, Core 0 + Core 1, 1 GHz to 26 GHz, Horizontal

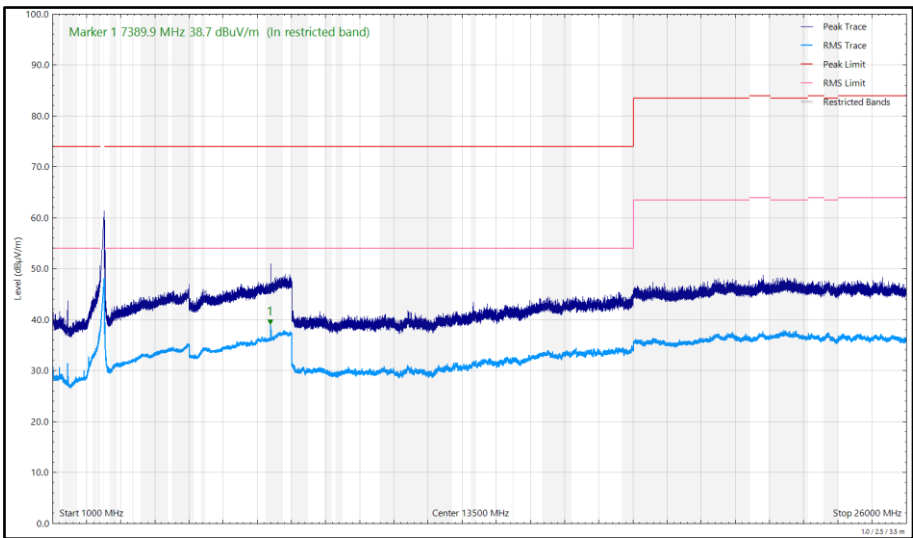


Figure 249 - 2472 MHz (CH13), HE20, RU26-0, CDD, Core 0 + Core 1, 1 GHz to 26 GHz, Vertical



FCC 47 CFR Part 15, Limit Clause 15.247 (d)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in 15.209(a).

2.5.8 Test Location and Test Equipment Used

This test was carried out in RF Chamber 14, RF Chamber 15 and RF Chamber 17.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Emissions Software	TUV SUD	EmX V3.4.2	5125	-	Software
EMI Test Receiver	Rohde & Schwarz	ESW44	5912	12	07-Aug-2025
Test Receiver	Rohde & Schwarz	ESW44	5914	12	24-May-2025
Cable (K Type 2m)	Junkosha	MWX241-02000KMSKMS/B	5935	12	10-Jun-2025
DRG Horn Antenna (7.5-18GHz)	Schwarzbeck	HWRD750	5940	12	05-May-2025
TRILOG Super Broadband Test Antenna	Schwarzbeck	VULB 9168	5943	24	24-May-2026
1500W (300V 12A) AC Power Supply	iTech	IT7324	5955	-	O/P Mon
1500W (300V 12A) AC Power Supply	iTech	IT7324	5956	-	O/P Mon
5m Semi-Anechoic Chamber (Dual-Axis)	Albatross Projects	RF Chamber 14	5958	36	26-Apr-2025
Compact Antenna Mast	Maturo Gmbh	CAM4.0-P	5959	-	TU
Mast & Turntable Controller	Maturo Gmbh	FCU3.0	5960	-	TU
Tilt Antenna Mast	Maturo Gmbh	BAM4.5-P	5961	-	TU
Turntable	Maturo Gmbh	TT1.5SI	5962	-	TU
5m Semi-Anechoic Chamber (Dual-Axis), Chamber 15	Albatross Projects	RF Chamber 15	5963	36	28-Apr-2025
Compact Antenna Mast	Maturo Gmbh	CAM4.0-P	5964	-	TU
Mast & Turntable Controller	Maturo Gmbh	FCU3.0	5966	-	TU
Tilt Antenna Mast	Maturo Gmbh	BAM4.5-P	5967	-	TU
Turntable	Maturo Gmbh	TT1.5SI	5968	-	TU
Cable (SMA to SMA 1m)	Junkosha	MWX221-01000AMSAMS/A	5997	12	14-Sep-2024
Cable (N to N 1m)	Junkosha	MWX221-01000NMSNMS/B	5999	12	20-May-2025
Cable (N to N 7m)	Junkosha	MWX221-07000NMSNMS/B	6005	12	20-May-2025



Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Cable (N to N 8m)	Junkosha	MWX221-08000NMSNMS/A	6006	12	20-May-2025
Cable (SMA to SMA 1m)	Junkosha	MWX221-01000AMSAMS/A	6008	12	20-May-2025
Cable (N to N 8m)	Junkosha	MWX221-08000NMSNMS/A	6017	12	14-Sep-2024
Cable (N to N 3m)	Junkosha	MWX221-03000NMSNMS/A	6025	12	20-May-2025
Horn Antenna (1-10 GHz)	Schwarzbeck	BBHA9120B	6140	12	05-May-2025
Digital Multimeter	Fluke	115	6146	12	06-Jun-2025
Digital Multimeter	Fluke	115	6147	12	06-Jun-2025
Humidity & Temperature meter	R.S Components	1364	6149	12	12-Aug-2025
SAC Switch Unit	TUV SUD	TUV_SSU_001	6191	12	18-Dec-2024
8GHz Highpass Filter	Wainwright	WHKX 7150 8000 18000 50SS	6195	12	23-Apr-2025
Pre Amp 8 - 18 GHz	Wright Technologies	APS06 0061	6198	12	03-Jun-2025
Attenuator 4dB	Pasternack	PE7074-4	6201	24	24-May-2026
Attenuator 4dB	Pasternack	PE7074-4	6204	24	20-Jun-2026
Cable (SMA to SMA 20cm)	TUV SUD	MH-FH 8-18	6214	12	23-Apr-2025
EMI Test Receiver	Rohde & Schwarz	ESW44	6294	12	06-Jan-2025
USB Spectrum Analyser	Signal Hound	SA124B	6295	-	TU
USB Spectrum Analyser	Signal Hound	SA124B	6296	-	TU
USB Spectrum Analyser	Signal Hound	SA124B	6297	-	TU
USB Spectrum Analyser	Signal Hound	SA124B	6298	-	TU
EMC Test Receiver	Rohde & Schwarz	ESW44	6333	12	16-Feb-2025
Digital Multimeter	Fluke	115	6345	12	24-Jul-2025
Humidity and Temperature Meter	R.S Components	1364	6346	12	06-Mar-2025
Trilog Super Broadband Test Antenna	Schwarzbeck	VULB 9168	6456	24	10-Feb-2025
AC Power Supply	iTech	IT7324	6657	-	O/P Mon
3m Semi-Anechoic Chamber	Albatross Projects	RF Chamber 17	6658	36	28-Jan-2026
Mast and Turntable Controller	Maturo Gmbh	FCU3.0	6659	-	TU
Tilt Antenna Mast	Maturo Gmbh	BAM4.5-P	6660	-	TU
Turntable	Maturo Gmbh	TT1.5SI	6661	-	TU
1m Cable	Junkosha	MWX241-01000AMSAMS/B	6740	12	01-Feb-2025
6.5m Cable	Junkosha	MWX221-06500AMSAMS/B	6744	12	01-Feb-2025
Double Ridge Active Horn Antenna (18-40 GHz)	Com-Power	AHA-840	6771	24	17-Jan-2025
Mast & Turntable Controller	Maturo Gmbh	FCU3.0	6795	-	TU
Tilt Antenna Mast	Maturo Gmbh	BAM4.5-P	6796	-	TU



Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
8M SMA Cable	Junkosha	MWX221-08000AMSAMS/B	6834	12	14-Aug-2025
Humidity and Temperature Meter	R.S Components	1364	6486	12	04-Jun-2025

Table 76

TU - Traceability Unscheduled
O/P Mon - Output Monitored using calibrated equipment



2.6 Power Spectral Density

2.6.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.247 (e)

2.6.2 Equipment Under Test and Modification State

A3185, S/N: GRJJT9QH7L - Modification State 0

2.6.3 Date of Test

16-September-2024

2.6.4 Test Method

This test was performed in accordance with ANSI C63.10, clause 11.10.5.

Where the EUT duty cycle was < 98 % and repeatable within 2 %, the spectrum analyser was set to trace (power) averaging and a duty cycle correction was added as calculated in the result tables below (Method AVGPS-2).

MIMO output port summing was performed in accordance with KDB 662911 D01 E)2)b) and F)2)f)ii).

2.6.5 Environmental Conditions

Ambient Temperature	22.2 °C
Relative Humidity	54.6 %



2.6.6 Test Results

2.4 GHz WLAN

SISO

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (e) RSS-247 5.2 b)	Test Method(s):	C63.10 11.10.5
Additional Reference(s):	-		
Note(s):	DCCF was added to the spectrum analyser reference level offset.		

DUT Configuration			
Mode:	802.11b	Duty Cycle (%):	99.4
Data Rate:	1 Mbps	DCCF (dB):	0.03
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	4.80
Active Port(s):	B (Core 1)	Active Chain(s):	1

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2412	100.0	-	1.84	-	-	1.84	8.00	-6.16
2442	100.0	-	2.33	-	-	2.33	8.00	-5.67
2472	100.0	-	-1.80	-	-	-1.80	8.00	-9.80

Table 77 - Maximum Power Spectral Density Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (e) RSS-247 5.2 b)	Test Method(s):	C63.10 11.10.5
Additional Reference(s):	-		
Note(s):	DCCF was added to the spectrum analyser reference level offset.		

DUT Configuration			
Mode:	802.11g	Duty Cycle (%):	97.8
Data Rate:	12 Mbps	DCCF (dB):	0.10
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	4.80
Active Port(s):	B (Core 1)	Active Chain(s):	1

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2412	100.0	-	-0.87	-	-	-0.87	8.00	-8.87
2442	100.0	-	4.27	-	-	4.27	8.00	-3.73
2472	100.0	-	-11.68	-	-	-11.68	8.00	-19.68

Table 78 - Maximum Power Spectral Density Results

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (e) RSS-247 5.2 b)	Test Method(s):	C63.10 11.10.5
Additional Reference(s):	-		
Note(s):	DCCF was added to the spectrum analyser reference level offset.		

DUT Configuration			
Mode:	802.11n HT20	Duty Cycle (%):	96.9
Modulation Coding Scheme:	MCS2	DCCF (dB):	0.14
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	4.80
Active Port(s):	B (Core 1)	Active Chain(s):	1

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2412	100.0	-	-2.03	-	-	-2.03	8.00	-10.03
2442	100.0	-	4.19	-	-	4.19	8.00	-3.81
2472	100.0	-	-12.94	-	-	-12.94	8.00	-20.94

Table 79 - Maximum Power Spectral Density Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (e) RSS-247 5.2 b)	Test Method(s):	C63.10 11.10.5
Additional Reference(s):	-		
Note(s):	DCCF was added to the spectrum analyser reference level offset.		

DUT Configuration			
Mode:	802.11ax HE20 SU	Duty Cycle (%):	96.0
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	0.18
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	4.80
Active Port(s):	B (Core 1)	Active Chain(s):	1

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2412	100.0	-	-3.68	-	-	-3.68	8.00	-11.68
2442	100.0	-	2.36	-	-	2.36	8.00	-5.65
2472	100.0	-	-14.73	-	-	-14.73	8.00	-22.73

Table 80 - Maximum Power Spectral Density Results

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (e) RSS-247 5.2 b)	Test Method(s):	C63.10 11.10.5
Additional Reference(s):	-		
Note(s):	DCCF was added to the spectrum analyser reference level offset.		

DUT Configuration			
Mode:	802.11ax HE20 RU26	Duty Cycle (%):	96.7
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	0.15
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	4.80
Active Port(s):	B (Core 1)	Active Chain(s):	1

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2412	100.0	-	1.60	-	-	1.60	8.00	-6.40
2442	100.0	-	1.80	-	-	1.80	8.00	-6.20
2472	100.0	-	-18.14	-	-	-18.14	8.00	-26.14

Table 81 - Maximum Power Spectral Density Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (e) RSS-247 5.2 b)	Test Method(s):	C63.10 11.10.5
Additional Reference(s):	-		
Note(s):	DCCF was added to the spectrum analyser reference level offset.		

DUT Configuration			
Mode:	802.11ax HE20 RU52	Duty Cycle (%):	96.5
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	0.16
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	4.80
Active Port(s):	B (Core 1)	Active Chain(s):	1

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2412	100.0	-	2.12	-	-	2.12	8.00	-5.88
2442	100.0	-	1.74	-	-	1.74	8.00	-6.27
2472	100.0	-	-17.79	-	-	-17.79	8.00	-25.79

Table 82 - Maximum Power Spectral Density Results

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (e) RSS-247 5.2 b)	Test Method(s):	C63.10 11.10.5
Additional Reference(s):	-		
Note(s):	DCCF was added to the spectrum analyser reference level offset.		

DUT Configuration			
Mode:	802.11ax HE20 RU106	Duty Cycle (%):	98.0
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	0.09
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	4.80
Active Port(s):	B (Core 1)	Active Chain(s):	1

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2412	100.0	-	-1.31	-	-	-1.31	8.00	-9.31
2442	100.0	-	2.22	-	-	2.22	8.00	-5.78
2472	100.0	-	-19.54	-	-	-19.54	8.00	-27.54

Table 83 - Maximum Power Spectral Density Results



MIMO CDD

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (e) RSS-247 5.2 b)	Test Method(s):	C63.10 11.10.5
Additional Reference(s):	662911 D01 v02r01 E)2)b)		
Note(s):	DCCF was added to the spectrum analyser reference level offset.		

DUT Configuration			
Mode:	802.11n HT20	Duty Cycle (%):	96.6
Modulation Coding Scheme:	MCS2	DCCF (dB):	0.15
Antenna Configuration:	MIMO CDD	Peak Antenna Gain (dBi):	7.66
Active Port(s):	A+B (Core 0 + Core 1)	Active Chain(s):	0+1

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2412	100.0	-3.58	-2.96	-	-	-0.25	6.34	-6.59
2442	51.0	1.32	1.54	-	-	4.44	6.34	-1.90
2472	100.0	-13.36	-13.22	-	-	-10.28	6.34	-16.62

Table 84 - FCC Maximum Power Spectral Density Results

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2412	100.0	-3.58	-2.96	-	-	-0.25	8.00	-8.25
2442	51.0	1.32	1.54	-	-	4.44	8.00	-3.56
2472	100.0	-13.36	-13.22	-	-	-10.28	8.00	-18.28

Table 85 - ISED Maximum Power Spectral Density Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (e) RSS-247 5.2 b)	Test Method(s):	C63.10 11.10.5
Additional Reference(s):	662911 D01 v02r01 E)2)b)		
Note(s):	DCCF was added to the spectrum analyser reference level offset.		

DUT Configuration			
Mode:	802.11ax HE20 SU	Duty Cycle (%):	95.8
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	0.19
Antenna Configuration:	MIMO CDD	Peak Antenna Gain (dBi):	7.66
Active Port(s):	A+B (Core 0 + Core 1)	Active Chain(s):	0+1

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2412	100.0	-5.74	-5.93	-	-	-2.83	6.34	-9.17
2437	100.0	1.97	1.94	-	-	4.96	6.34	-1.38
2472	100.0	-14.61	-15.08	-	-	-11.83	6.34	-18.17

Table 86 - FCC Maximum Power Spectral Density Results

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2412	100.0	-5.74	-5.93	-	-	-2.83	8.00	-10.83
2437	100.0	1.97	1.94	-	-	4.96	8.00	-3.04
2472	100.0	-14.61	-15.08	-	-	-11.83	8.00	-19.83

Table 87 - ISED Maximum Power Spectral Density Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (e) RSS-247 5.2 b)	Test Method(s):	C63.10 11.10.5
Additional Reference(s):	662911 D01 v02r01 E)2)b)		
Note(s):	DCCF was added to the spectrum analyser reference level offset.		

DUT Configuration			
Mode:	802.11ax HE20 RU26	Duty Cycle (%):	96.5
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	0.16
Antenna Configuration:	MIMO CDD	Peak Antenna Gain (dBi):	7.66
Active Port(s):	A+B (Core 0 + Core 1)	Active Chain(s):	0+1

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2412	100.0	1.42	1.71	-	-	4.57	6.34	-1.77
2442	100.0	1.93	1.92	-	-	4.93	6.34	-1.41
2472	100.0	-22.01	-21.98	-	-	-18.98	6.34	-25.32

Table 88 - FCC Maximum Power Spectral Density Results

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2412	100.0	1.42	1.71	-	-	4.57	8.00	-3.43
2442	100.0	1.93	1.92	-	-	4.93	8.00	-3.07
2472	100.0	-22.01	-21.98	-	-	-18.98	8.00	-26.98

Table 89 - ISED Maximum Power Spectral Density Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (e) RSS-247 5.2 b)	Test Method(s):	C63.10 11.10.5
Additional Reference(s):	662911 D01 v02r01 E)2)b)		
Note(s):	DCCF was added to the spectrum analyser reference level offset.		

DUT Configuration			
Mode:	802.11ax HE20 RU52	Duty Cycle (%):	96.4
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	0.16
Antenna Configuration:	MIMO CDD	Peak Antenna Gain (dBi):	7.66
Active Port(s):	A+B (Core 0 + Core 1)	Active Chain(s):	0+1

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2412	100.0	1.86	1.66	-	-	4.77	6.34	-1.57
2442	51.0	-0.91	-0.73	-	-	2.19	6.34	-4.15
2472	100.0	-24.23	-24.30	-	-	-21.25	6.34	-27.59

Table 90 - FCC Maximum Power Spectral Density Results

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2412	100.0	1.86	1.66	-	-	4.77	8.00	-3.23
2442	51.0	-0.91	-0.73	-	-	2.19	8.00	-5.81
2472	100.0	-24.23	-24.30	-	-	-21.25	8.00	-29.25

Table 91 - ISED Maximum Power Spectral Density Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (e) RSS-247 5.2 b)	Test Method(s):	C63.10 11.10.5
Additional Reference(s):	662911 D01 v02r01 E)2)b)		
Note(s):	DCCF was added to the spectrum analyser reference level offset.		

DUT Configuration			
Mode:	802.11ax HE20 RU106	Duty Cycle (%):	97.8
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	0.10
Antenna Configuration:	MIMO CDD	Peak Antenna Gain (dBi):	7.66
Active Port(s):	A+B (Core 0 + Core 1)	Active Chain(s):	0+1

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2412	100.0	-2.98	-2.78	-	-	0.13	6.34	-6.21
2442	51.0	-0.74	-0.95	-	-	2.17	6.34	-4.17
2472	100.0	-23.60	-23.64	-	-	-20.61	6.34	-26.95

Table 92 - FCC Maximum Power Spectral Density Results

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2412	100.0	-2.98	-2.78	-	-	0.13	8.00	-7.87
2442	51.0	-0.74	-0.95	-	-	2.17	8.00	-5.83
2472	100.0	-23.60	-23.64	-	-	-20.61	8.00	-28.61

Table 93 - ISED Maximum Power Spectral Density Results

FCC 47 CFR Part 15, Limit Clause 15.247 (e)

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.



2.6.7 Test Location and Test Equipment Used

This test was carried out in RF Chamber 18.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Hygrometer	Rotronic	I-1000	3068	12	07-Nov-2024
AC Programmable Power Supply	iTech	IT7324	5225	-	O/P Mon
MXA Signal Analyser	Keysight Technologies	N9020B	5529	24	13-Dec-2024
Digital Multimeter	Fluke	115	6145	12	06-Jun-2025
Signal Conditioning Unit	TUV SUD	SPECTRUM_SCU001	6426	12	07-Feb-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6752	12	06-Feb-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6753	12	06-Feb-2025

Table 94

O/P Mon - Output Monitored using calibrated equipment

3 Measurement Uncertainty

For a 95% confidence level, the measurement uncertainties for defined systems are:

Test Name	Measurement Uncertainty
Restricted Band Edges	30 MHz to 1 GHz: ± 5.2 dB 1 GHz to 40 GHz: ± 6.3 dB
Emission Bandwidth	± 545.65 kHz
Maximum Conducted Output Power	± 1.38 dB
Authorised Band Edges	30 MHz to 1 GHz: ± 5.2 dB 1 GHz to 40 GHz: ± 6.3 dB
Spurious Radiated Emissions	30 MHz to 1 GHz: ± 5.2 dB 1 GHz to 40 GHz: ± 6.3 dB
Power Spectral Density	± 1.49 dB

Table 95

Measurement Uncertainty Decision Rule – Accuracy Method

Determination of conformity with the specification limits is based on the decision rule according to IEC Guide 115:2021, Clause 4.4.3 (Procedure 2). The measurement results are directly compared with the test limit to determine conformance with the requirements of the standard.

Risk: The uncertainty of measurement about the measured result is negligible with regard to the final pass/fail decision. The measurement result can be directly compared with the test limit to determine conformance with the requirement (compare IEC Guide 115). The level of risk to falsely accept and falsely reject items is further described in ILAC-G8.