



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(3) RSS-247 5.4 d)	Test Method(s):	C63.10 11.9.2.3.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11n HT20	Duty Cycle (%):	96.5
Modulation Coding Scheme:	MCS2	DCCF (dB):	-
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	6.24
Active Port(s):	B (Core 1)	Active Chain(s):	1

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2412	-	15.87	-	-	-	29.76	-13.89
2442	-	22.21	-	-	-	29.76	-7.55
2472	-	7.38	-	-	-	29.76	-22.38

**Table 32 - FCC Maximum Conducted (average) Output Power Results**

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	Σ					
2412	-	15.87	-	-	-	30.00	-14.13	22.11	36.00	-13.89
2442	-	22.21	-	-	-	30.00	-7.79	28.45	36.00	-7.55
2472	-	7.38	-	-	-	30.00	-22.62	13.62	36.00	-22.38

**Table 33 - ISED Maximum Conducted (average) Output Power Results**



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(3) RSS-247 5.4 d)	Test Method(s):	C63.10 11.9.2.3.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE20 SU	Duty Cycle (%):	95.8
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	-
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	6.24
Active Port(s):	B (Core 1)	Active Chain(s):	1

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2412	-	14.85	-	-	-	29.76	-14.91
2442	-	22.38	-	-	-	29.76	-7.38
2472	-	5.58	-	-	-	29.76	-24.18

**Table 34 - FCC Maximum Conducted (average) Output Power Results**

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	Σ					
2412	-	14.85	-	-	-	30.00	-15.15	21.09	36.00	-14.91
2442	-	22.38	-	-	-	30.00	-7.62	28.62	36.00	-7.38
2472	-	5.58	-	-	-	30.00	-24.42	11.82	36.00	-24.18

**Table 35 - ISED Maximum Conducted (average) Output Power Results**



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(3) RSS-247 5.4 d)	Test Method(s):	C63.10 11.9.2.3.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE20 RU26	Duty Cycle (%):	96.9
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	-
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	6.24
Active Port(s):	B (Core 1)	Active Chain(s):	1

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2412	-	12.55	-	-	-	29.76	-17.21
2442	-	14.40	-	-	-	29.76	-15.36
2472	-	-2.76	-	-	-	29.76	-32.52

**Table 36 - FCC Maximum Conducted (average) Output Power Results**

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	Σ					
2412	-	12.55	-	-	-	30.00	-17.45	18.79	36.00	-17.21
2442	-	14.40	-	-	-	30.00	-15.60	20.64	36.00	-15.36
2472	-	-2.76	-	-	-	30.00	-32.76	3.48	36.00	-32.52

**Table 37 - ISED Maximum Conducted (average) Output Power Results**



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(3) RSS-247 5.4 d)	Test Method(s):	C63.10 11.9.2.3.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE20 RU52	Duty Cycle (%):	96.5
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	-
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	6.24
Active Port(s):	B (Core 1)	Active Chain(s):	1

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2412	-	12.72	-	-	-	29.76	-17.04
2442	-	17.28	-	-	-	29.76	-12.48
2472	-	-2.37	-	-	-	29.76	-32.13

**Table 38 - FCC Maximum Conducted (average) Output Power Results**

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	Σ					
2412	-	12.72	-	-	-	30.00	-17.28	18.96	36.00	-17.04
2442	-	17.28	-	-	-	30.00	-12.72	23.52	36.00	-12.48
2472	-	-2.37	-	-	-	30.00	-32.37	3.87	36.00	-32.13

**Table 39 - ISED Maximum Conducted (average) Output Power Results**



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(3) RSS-247 5.4 d)	Test Method(s):	C63.10 11.9.2.3.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE20 RU106	Duty Cycle (%):	97.9
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	-
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	6.24
Active Port(s):	B (Core 1)	Active Chain(s):	1

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2412	-	12.69	-	-	-	29.76	-17.07
2442	-	20.18	-	-	-	29.76	-9.58
2472	-	-0.76	-	-	-	29.76	-30.52

**Table 40 - FCC Maximum Conducted (average) Output Power Results**

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	Σ					
2412	-	12.69	-	-	-	30.00	-17.31	18.93	36.00	-17.07
2442	-	20.18	-	-	-	30.00	-9.82	26.42	36.00	-9.58
2472	-	-0.76	-	-	-	30.00	-30.76	5.48	36.00	-30.52

**Table 41 - ISED Maximum Conducted (average) Output Power Results**



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(3) RSS-247 5.4 d)	Test Method(s):	C63.10 11.9.2.3.2
Additional Reference(s):	662911 D01 v02r01 F)2)f)(i), 662911 D01 v02r01 E)1)		

DUT Configuration			
Mode:	802.11n HT20	Duty Cycle (%):	96.5
Modulation Coding Scheme:	MCS2	DCCF (dB):	-
Antenna Configuration:	MIMO CDD	Peak Antenna Gain (dBi):	6.24
Active Port(s):	A+B (Core 0 + Core 1)	Active Chain(s):	0+1

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2412	15.72	15.91	-	-	18.83	29.76	-10.93
2442	22.33	22.14	-	-	25.23	29.76	-4.53
2472	6.89	6.82	-	-	9.87	29.76	-19.89

**Table 42 - FCC Maximum Conducted (average) Output Power Results**

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	Σ					
2412	15.72	15.91	-	-	18.83	30.00	-11.17	25.07	36.00	-10.93
2442	22.33	22.14	-	-	25.23	30.00	-4.77	31.47	36.00	-4.53
2472	6.89	6.82	-	-	9.87	30.00	-20.13	16.11	36.00	-19.89

**Table 43 - ISED Maximum Conducted (average) Output Power Results**



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(3) RSS-247 5.4 d)	Test Method(s):	C63.10 11.9.2.3.2
Additional Reference(s):	662911 D01 v02r01 F)2)f)(i), 662911 D01 v02r01 E)1)		

DUT Configuration			
Mode:	802.11ax HE20 SU	Duty Cycle (%):	95.8
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	-
Antenna Configuration:	MIMO CDD	Peak Antenna Gain (dBi):	6.24
Active Port(s):	A+B (Core 0 + Core 1)	Active Chain(s):	0+1

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2412	14.14	14.42	-	-	17.29	29.76	-12.47
2442	22.33	22.18	-	-	25.26	29.76	-4.50
2472	5.19	5.38	-	-	8.29	29.76	-21.47

**Table 44 - FCC Maximum Conducted (average) Output Power Results**

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	Σ					
2412	14.14	14.42	-	-	17.29	30.00	-12.71	23.53	36.00	-12.47
2442	22.33	22.18	-	-	25.26	30.00	-4.74	31.50	36.00	-4.50
2472	5.19	5.38	-	-	8.29	30.00	-21.71	14.53	36.00	-21.47

**Table 45 - ISED Maximum Conducted (average) Output Power Results**



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(3) RSS-247 5.4 d)	Test Method(s):	C63.10 11.9.2.3.2
Additional Reference(s):	662911 D01 v02r01 F)2)f)(i), 662911 D01 v02r01 E)1)		

DUT Configuration			
Mode:	802.11ax HE20 RU26	Duty Cycle (%):	96.5
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	-
Antenna Configuration:	MIMO CDD	Peak Antenna Gain (dBi):	6.24
Active Port(s):	A+B (Core 0 + Core 1)	Active Chain(s):	0+1

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2412	12.43	12.85	-	-	15.66	29.76	-14.10
2442	13.90	14.28	-	-	17.09	29.76	-12.67
2472	-4.53	-4.25	-	-	-1.38	29.76	-31.14

**Table 46 - FCC Maximum Conducted (average) Output Power Results**

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	Σ					
2412	12.43	12.85	-	-	15.66	30.00	-14.34	21.90	36.00	-14.10
2442	13.90	14.28	-	-	17.09	30.00	-12.91	23.33	36.00	-12.67
2472	-4.53	-4.25	-	-	-1.38	30.00	-31.38	4.86	36.00	-31.14

**Table 47 - ISED Maximum Conducted (average) Output Power Results**



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(3) RSS-247 5.4 d)	Test Method(s):	C63.10 11.9.2.3.2
Additional Reference(s):	662911 D01 v02r01 F)2)f)(i), 662911 D01 v02r01 E)1)		

DUT Configuration			
Mode:	802.11ax HE20 RU52	Duty Cycle (%):	96.4
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	-
Antenna Configuration:	MIMO CDD	Peak Antenna Gain (dBi):	6.24
Active Port(s):	A+B (Core 0 + Core 1)	Active Chain(s):	0+1

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2412	12.43	12.87	-	-	15.65	29.76	-14.11
2442	17.05	17.38	-	-	20.23	29.76	-9.53
2472	-3.30	-3.13	-	-	-0.21	29.76	-29.97

**Table 48 - FCC Maximum Conducted (average) Output Power Results**

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	Σ					
2412	12.43	12.87	-	-	15.65	30.00	-14.35	21.89	36.00	-14.11
2442	17.05	17.38	-	-	20.23	30.00	-9.77	26.47	36.00	-9.53
2472	-3.30	-3.13	-	-	-0.21	30.00	-30.21	6.03	36.00	-29.97

**Table 49 - ISED Maximum Conducted (average) Output Power Results**



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(3) RSS-247 5.4 d)	Test Method(s):	C63.10 11.9.2.3.2
Additional Reference(s):	662911 D01 v02r01 F)2)f)(i), 662911 D01 v02r01 E)1)		

DUT Configuration			
Mode:	802.11ax HE20 RU106	Duty Cycle (%):	97.8
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	-
Antenna Configuration:	MIMO CDD	Peak Antenna Gain (dBi):	6.24
Active Port(s):	A+B (Core 0 + Core 1)	Active Chain(s):	0+1

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2412	12.28	12.71	-	-	15.50	29.76	-14.26
2442	19.80	20.17	-	-	22.97	29.76	-6.79
2472	-2.43	-2.21	-	-	0.69	29.76	-29.07

**Table 50 - FCC Maximum Conducted (average) Output Power Results**

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	Σ					
2412	12.28	12.71	-	-	15.50	30.00	-14.50	21.74	36.00	-14.26
2442	19.80	20.17	-	-	22.97	30.00	-7.03	29.21	36.00	-6.79
2472	-2.43	-2.21	-	-	0.69	30.00	-29.31	6.93	36.00	-29.07

**Table 51 - ISED Maximum Conducted (average) Output Power Results**

FCC 47 CFR Part 15, Limit Clause 15.247 (b)(3)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt.

ISED RSS-247, Limit Clause 5.4 (b)

For DTSs employing digital modulation techniques operating in the bands 902-928 MHz and 2400-2483.5 MHz, the maximum peak conducted output power shall not exceed 1 W. The e.i.r.p. shall not exceed 4 W, except as provided in section 5.4(e) of the specification.



### 2.3.7 Test Location and Test Equipment Used

This test was carried out in RF Laboratory 1.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Multimeter	Fluke	79 Series III	611	12	21-Dec-2022
Hygrometer	Rotronic	I-1000	3068	12	21-Sep-2023
AC Programmable Power Supply	iTech	IT7324	5226	-	O/P Mon
Signal Conditioning Unit	TUV SUD	SPECTRUM SCU002	5759	12	05-Jul-2023
USB Power Sensor	Boonton	RTP5008	5830	12	07-Jul-2023
USB Power Sensor	Boonton	RTP5008	5832	12	07-Jul-2023

**Table 52**

O/P Mon – Output Monitored using calibrated equipment



## **2.4 Spurious Radiated Emissions**

### **2.4.1 Specification Reference**

FCC 47 CFR Part 15C, Clause 15.209 and 15.247 (d)  
ISED RSS-247, Clause 3.3 and 5.5  
ISED RSS-GEN, Clause, 6.13 and 8.9

### **2.4.2 Equipment Under Test and Modification State**

A2816, S/N: V712HT2WFF - Modification State 0

### **2.4.3 Date of Test**

06-October-2022 to 09-October-2022

### **2.4.4 Test Method**

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

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

Ports on the EUT were terminated with loads as described in ANSI C63.4 clause 6.2.4. For EUT's with multiple connectors of the same type, additional interconnecting cables were connected, and pre-scans performed to determine whether the level of the emissions were increased by >2 dB.

In the 30 MHz to 1 GHz range pre-scans were only performed on the mid channel (2437 MHz).

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 20 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.

At a measurement distance of 1 meter 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.

### 2.4.5 Test Setup Diagram

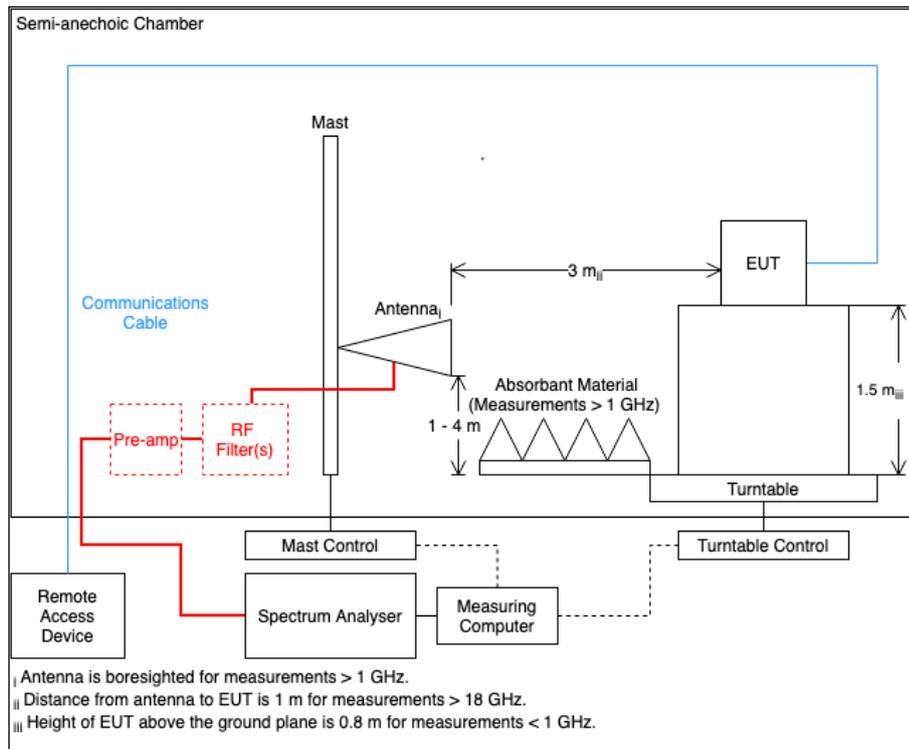


Figure 55

### 2.4.6 Environmental Conditions

Ambient Temperature	20.3 - 22.1 °C
Relative Humidity	38.4 - 40.6 %



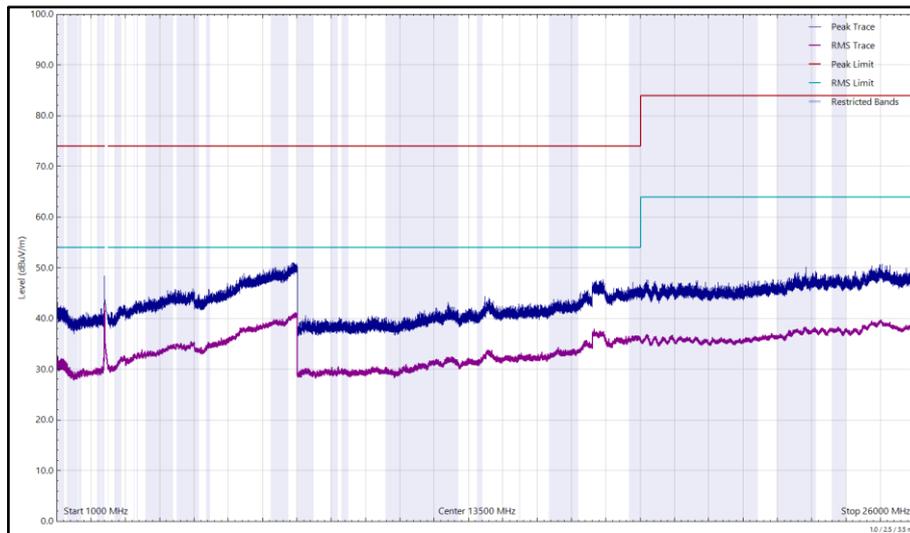
**2.4.7 Test Results**

2.4 GHz WLAN

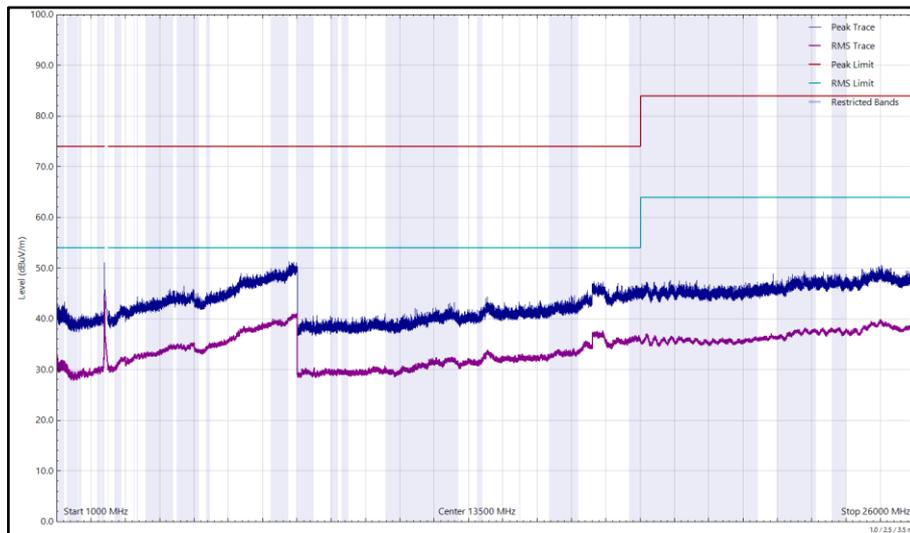
Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
*							

**Table 53 - 2412 MHz (CH1), 802.11b, Core 0, 1 GHz to 26 GHz**

\*No emissions found within 10 dB of the limit.



**Figure 56 - 2412 MHz (CH1), 802.11b, Core 0, 1 GHz to 26 GHz, Horizontal**



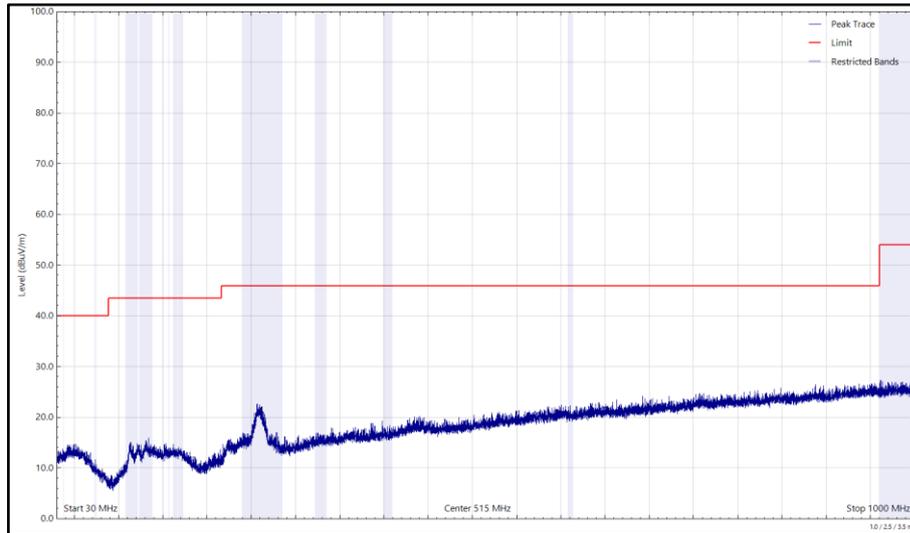
**Figure 57 - 2412 MHz (CH1), 802.11b, Core 0, 1 GHz to 26 GHz, Vertical**



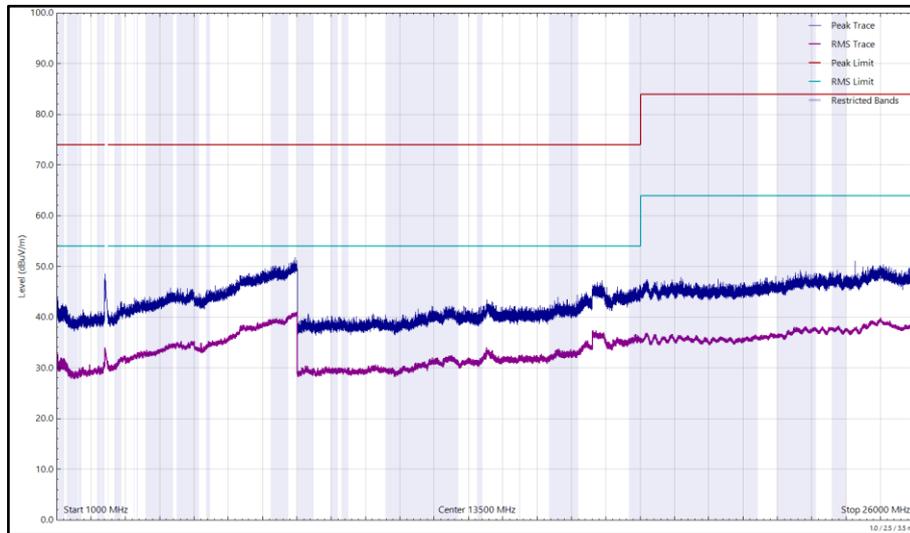
Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
*							

**Table 54 - 2437 MHz (CH6), 802.11b, Core 0, 30 MHz to 26 GHz**

\*No emissions found within 10 dB of the limit.



**Figure 58 - 2437 MHz (CH6), 802.11b, Core 0, 30 MHz to 1 GHz, Horizontal (Peak)**



**Figure 59 - 2437 MHz (CH6), 802.11b, Core 0, 1 GHz to 26 GHz, Horizontal**

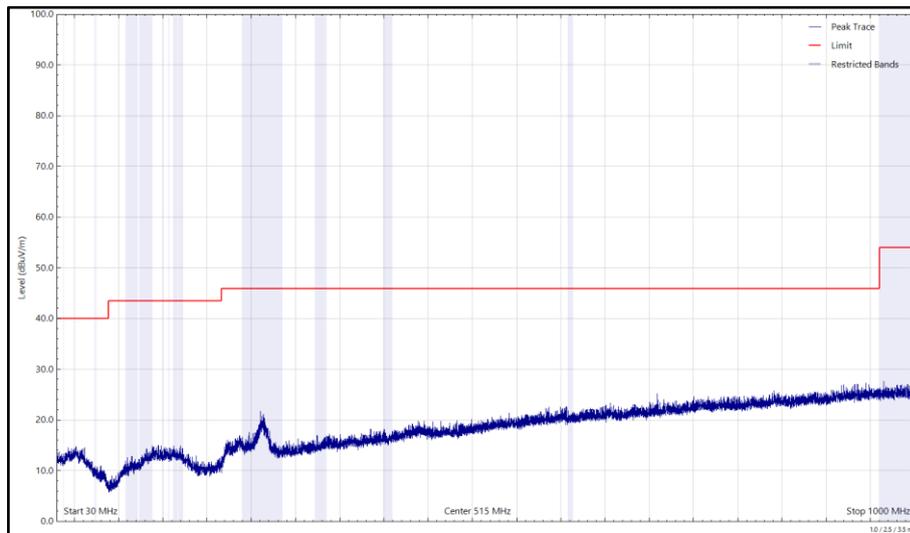


Figure 60 - 2437 MHz (CH6), 802.11b, Core 0, 30 MHz to 1 GHz, Vertical (Peak)

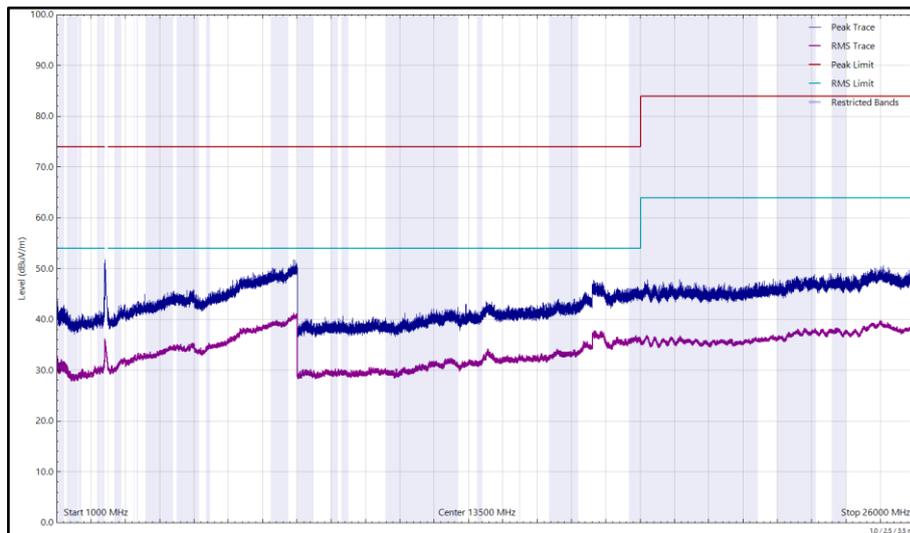


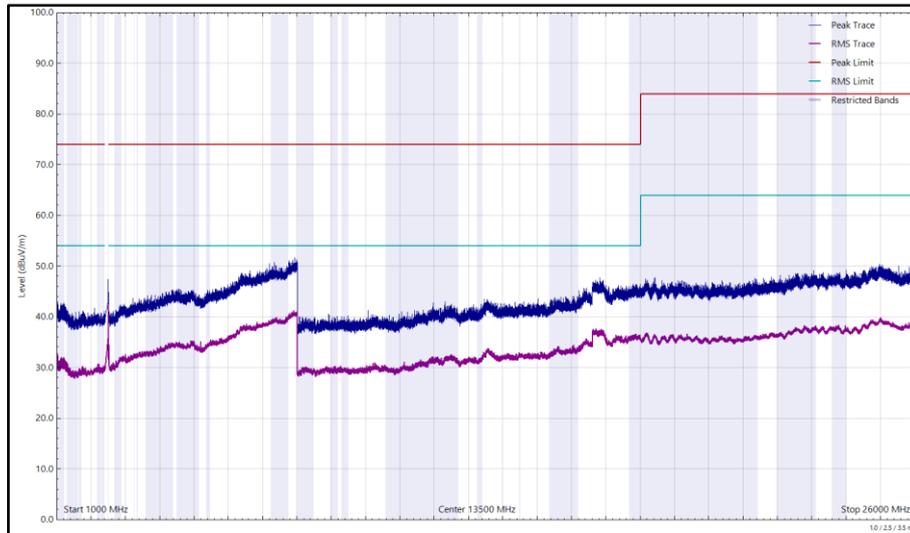
Figure 61 - 2437 MHz (CH6), 802.11b, Core 0, 1 GHz to 26 GHz, Vertical



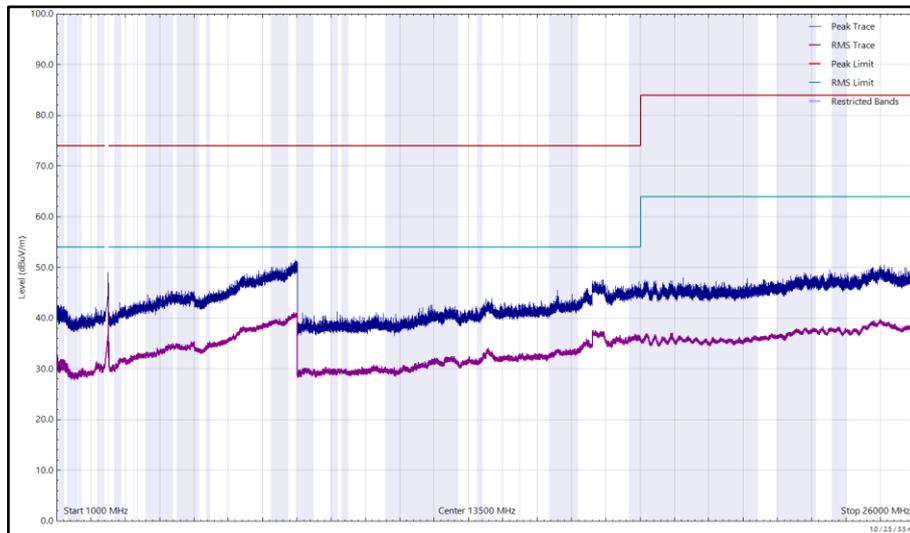
Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
*							

**Table 55 - 2472 MHz (CH13), 802.11b, Core 0, 1 GHz to 26 GHz**

\*No emissions found within 10 dB of the limit.



**Figure 62 - 2472 MHz (CH13), 802.11b, Core 0, 1 GHz to 26 GHz, Horizontal**



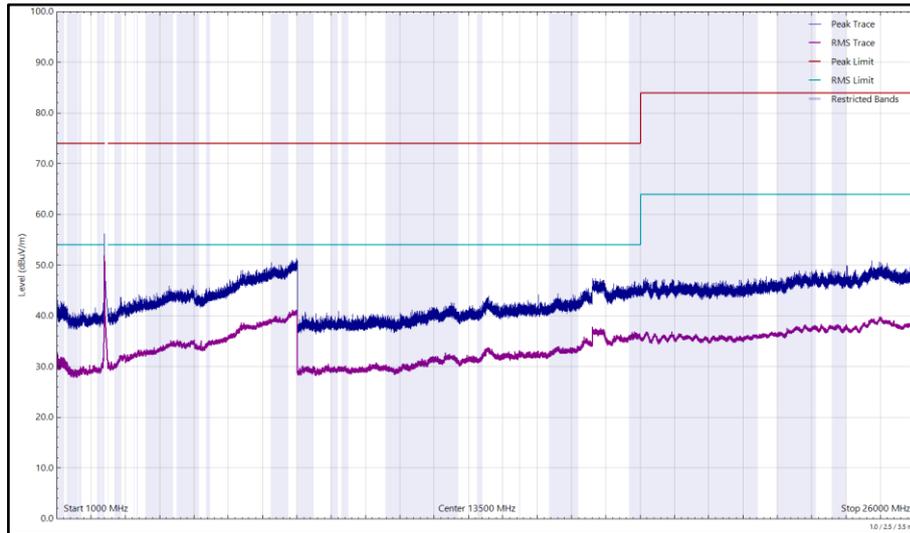
**Figure 63 - 2472 MHz (CH13), 802.11b, Core 0, 1 GHz to 26 GHz, Vertical**



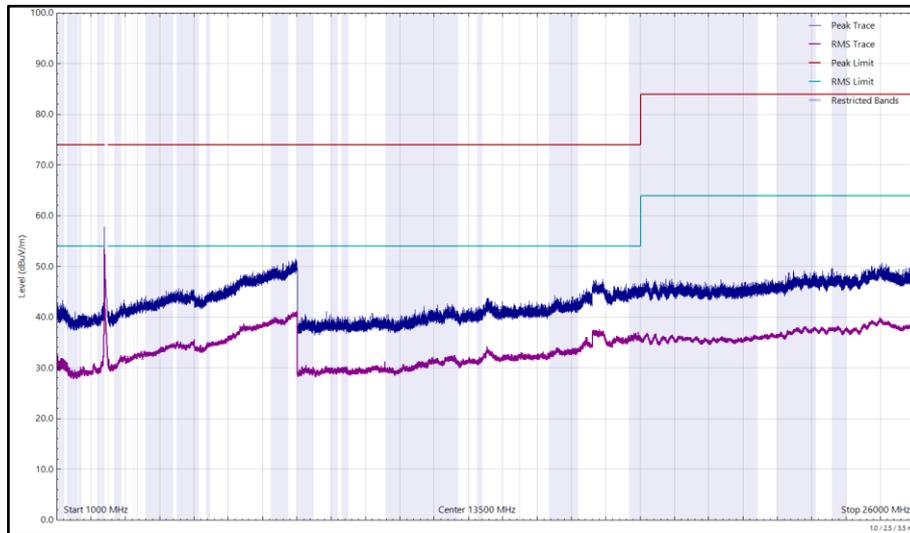
Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
*							

**Table 56 - 2412 MHz (CH1), 802.11b, Core 1, 1 GHz to 26 GHz**

\*No emissions found within 10 dB of the limit.



**Figure 64 - 2412 MHz (CH1), 802.11b, Core 1, 1 GHz to 26 GHz, Horizontal**



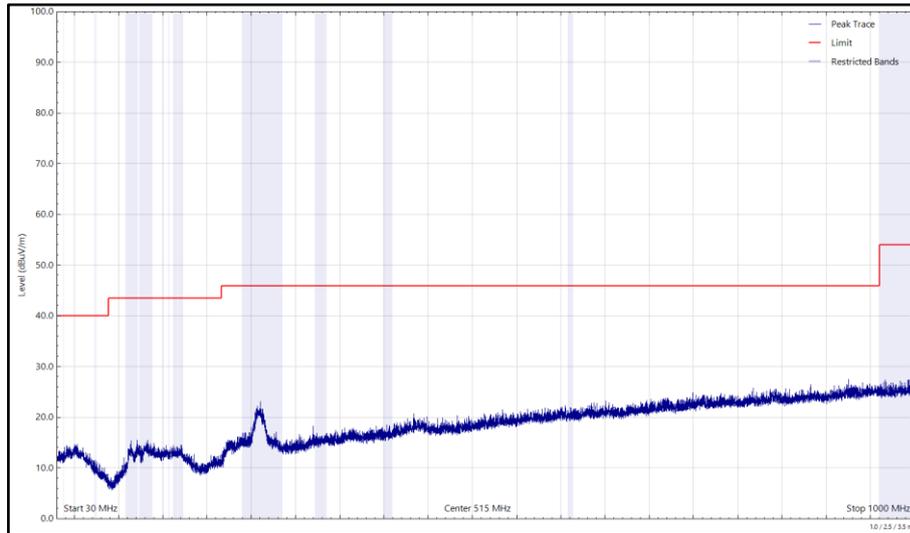
**Figure 65 - 2412 MHz (CH1), 802.11b, Core 1, 1 GHz to 26 GHz, Vertical**



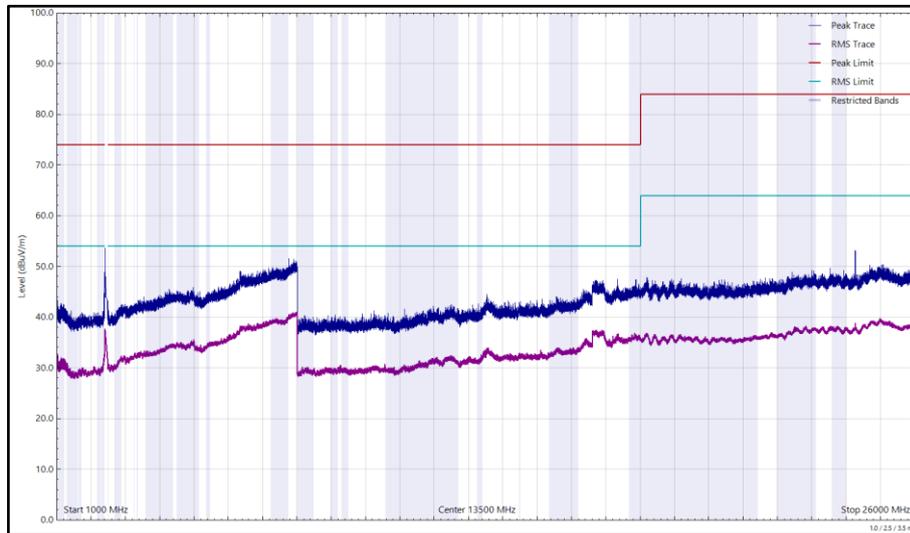
Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
*							

**Table 57 - 2437 MHz (CH6), 802.11b, Core 1, 30 MHz to 26 GHz**

\*No emissions found within 10 dB of the limit.



**Figure 66 - 2437 MHz (CH6), 802.11b, Core 1, 30 MHz to 1 GHz, Horizontal (Peak)**



**Figure 67 - 2437 MHz (CH6), 802.11b, Core 1, 1 GHz to 26 GHz, Horizontal**

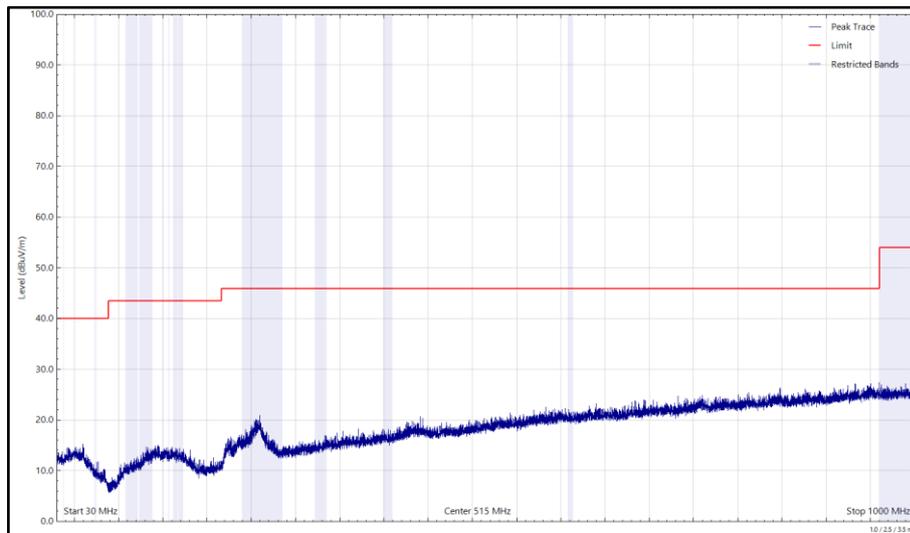


Figure 68 - 2437 MHz (CH6), 802.11b, Core 1, 30 MHz to 1 GHz, Vertical (Peak)

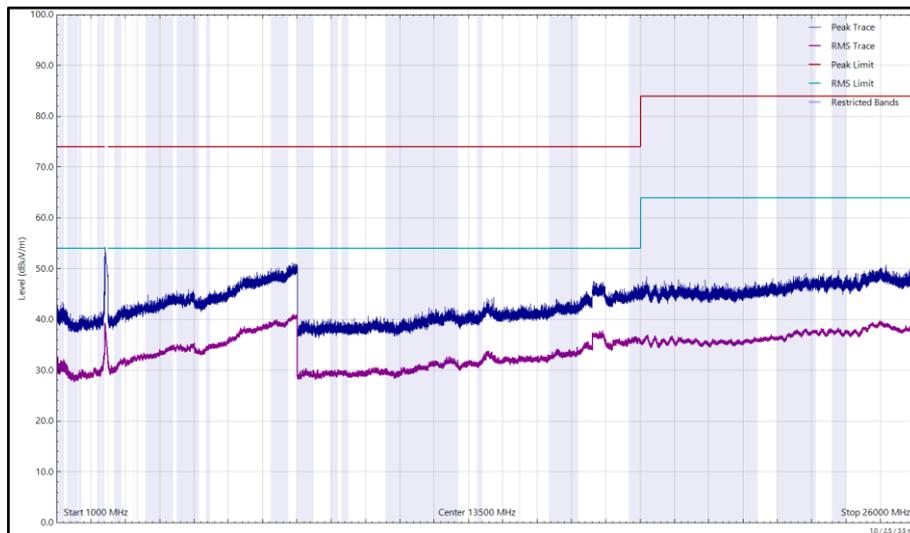


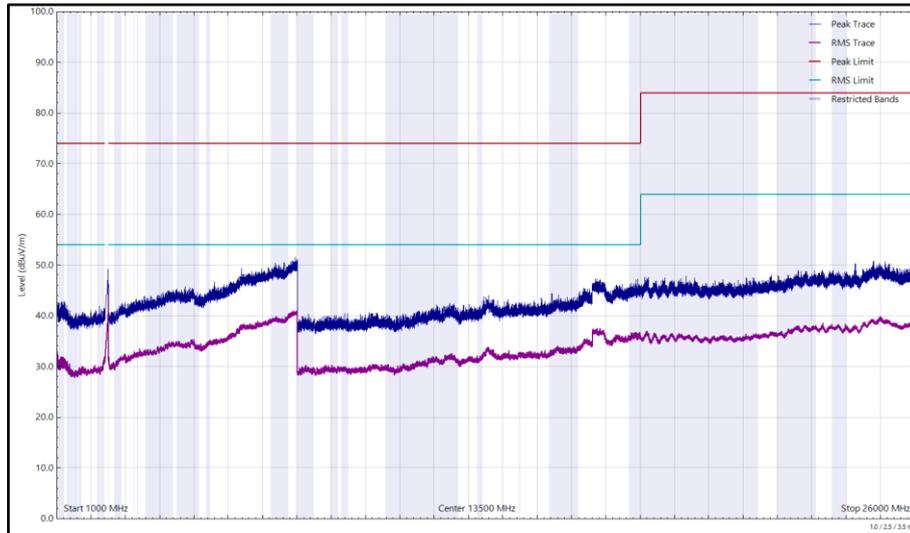
Figure 69 - 2437 MHz (CH6), 802.11b, Core 1, 1 GHz to 26 GHz, Vertical



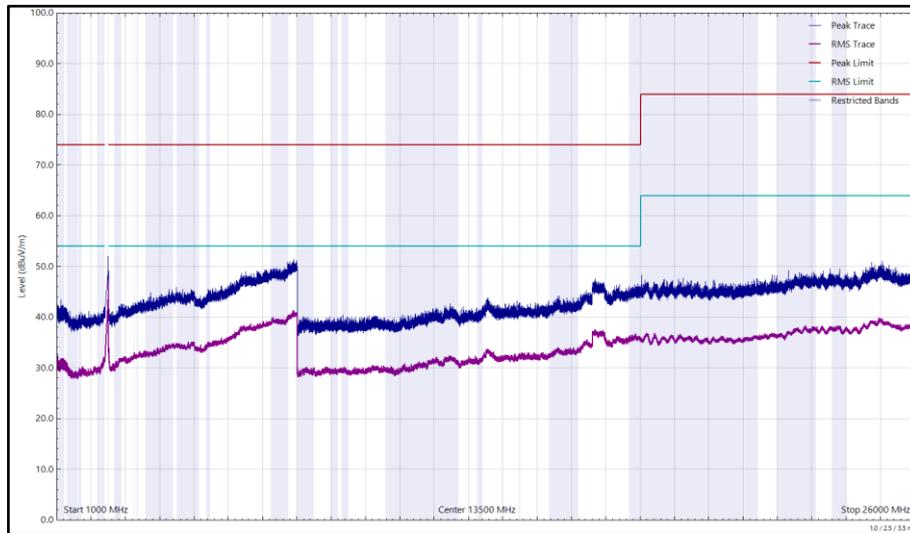
Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
*							

**Table 58 - 2472 MHz (CH13), 802.11b, Core 1, 1 GHz to 26 GHz**

\*No emissions found within 10 dB of the limit.



**Figure 70 - 2472 MHz (CH13), 802.11b, Core 1, 1 GHz to 26 GHz, Horizontal**



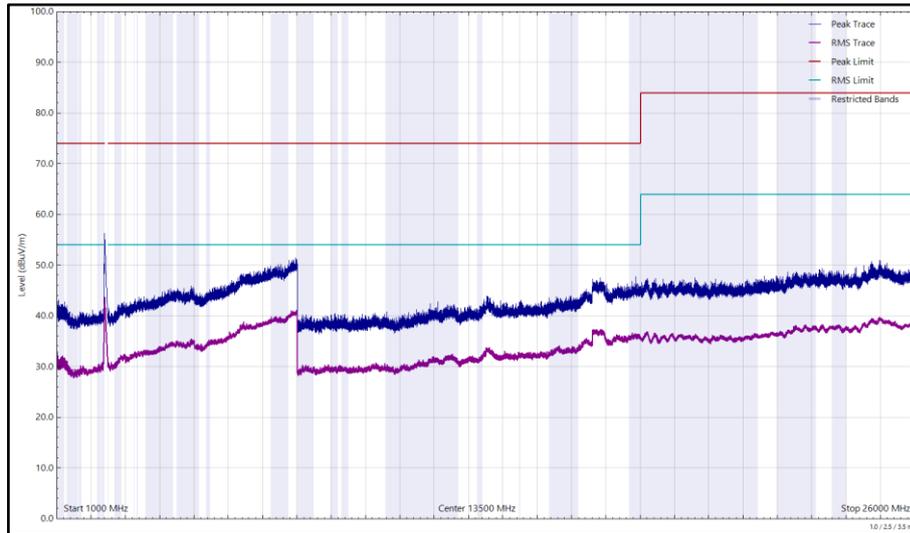
**Figure 71 - 2472 MHz (CH13), 802.11b, Core 1, 1 GHz to 26 GHz, Vertical**



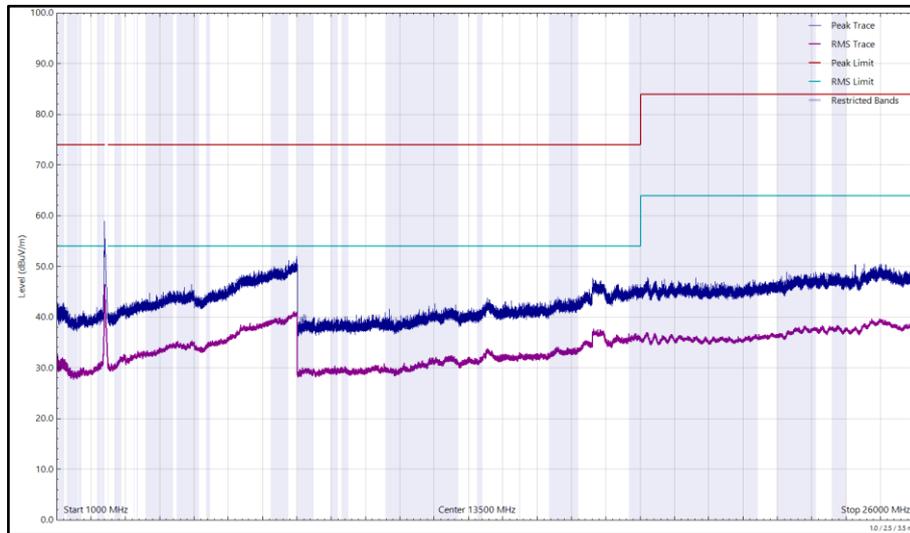
Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
*							

**Table 59 - 2412 MHz (CH1), 802.11g, Core 0, 1 GHz to 26 GHz**

\*No emissions found within 10 dB of the limit.



**Figure 72 - 2412 MHz (CH1), 802.11g, Core 0, 1 GHz to 26 GHz, Horizontal**



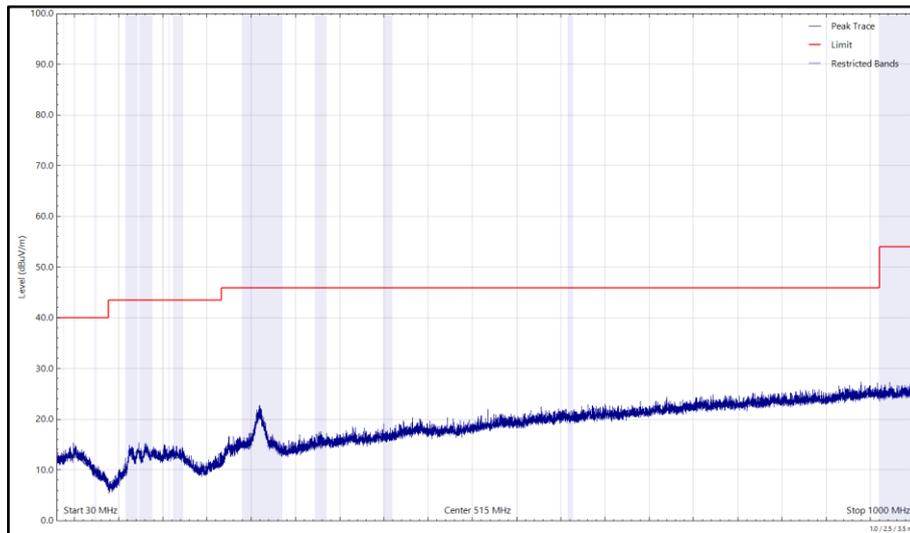
**Figure 73 - 2412 MHz (CH1), 802.11g, Core 0, 1 GHz to 26 GHz, Vertical**



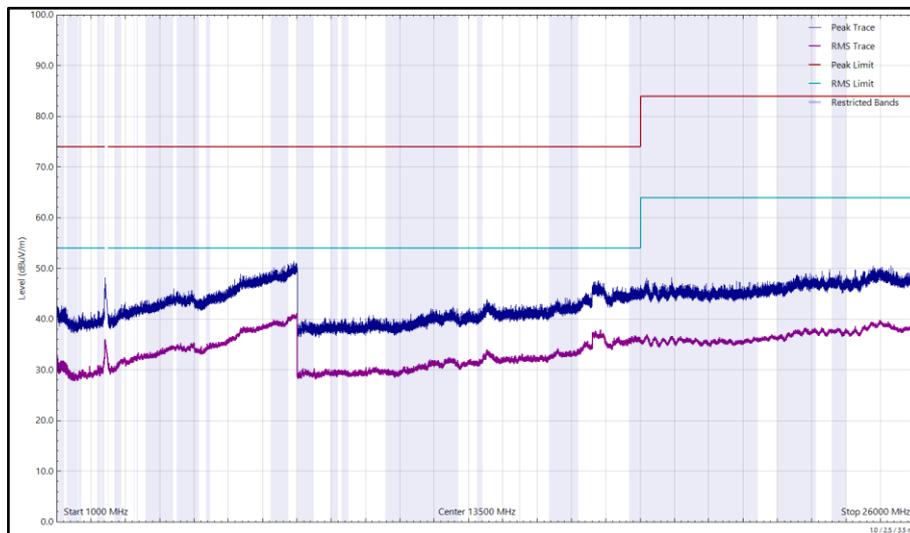
Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
*							

**Table 60 - 2437 MHz (CH6), 802.11g, Core 0, 30 MHz to 26 GHz**

\*No emissions found within 10 dB of the limit.



**Figure 74 - 2437 MHz (CH6), 802.11g, Core 0, 30 MHz to 1 GHz, Horizontal (Peak)**



**Figure 75 - 2437 MHz (CH6), 802.11g, Core 0, 1 GHz to 26 GHz, Horizontal**

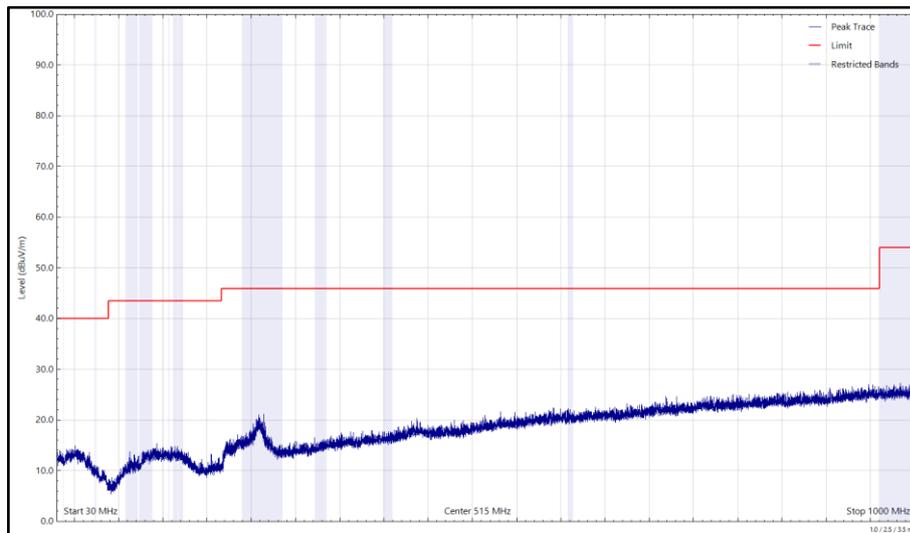


Figure 76 - 2437 MHz (CH6), 802.11g, Core 0, 30 MHz to 1 GHz, Vertical (Peak)

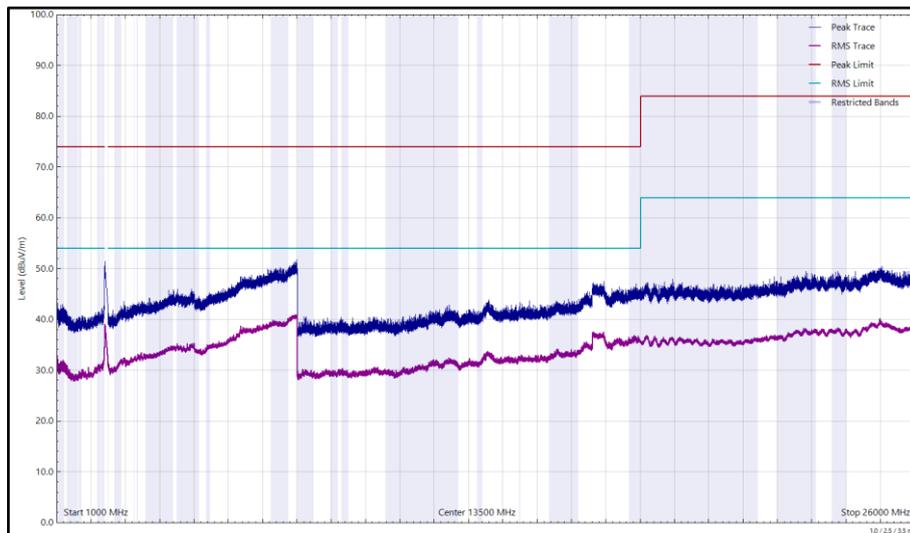


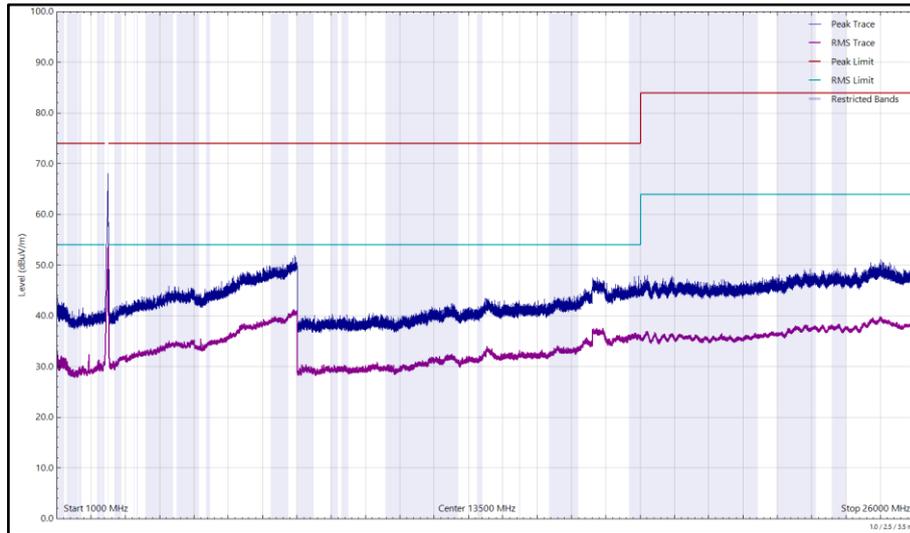
Figure 77 - 2437 MHz (CH6), 802.11g, Core 0, 1 GHz to 26 GHz, Vertical



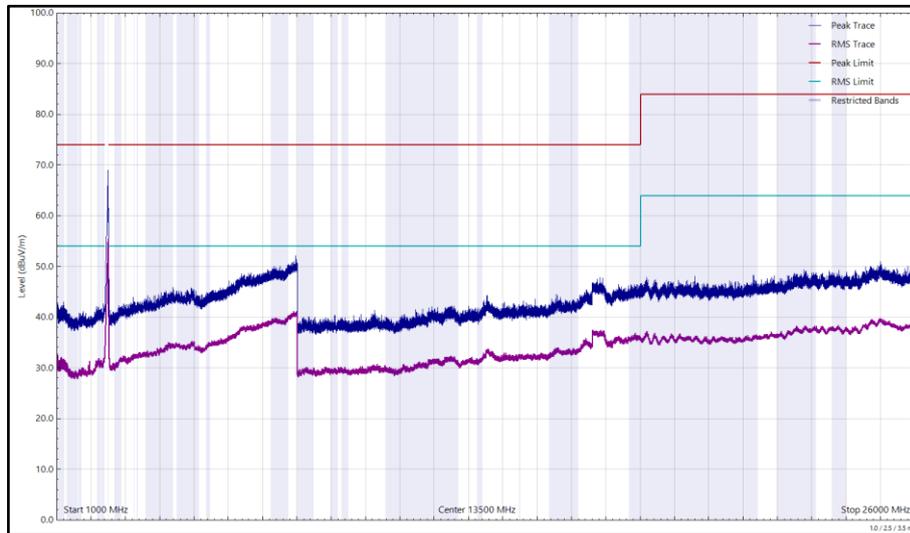
Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
*							

**Table 61 - 2472 MHz (CH13), 802.11g, Core 0, 1 GHz to 26 GHz**

\*No emissions found within 10 dB of the limit.



**Figure 78 - 2472 MHz (CH13), 802.11g, Core 0, 1 GHz to 26 GHz, Horizontal**



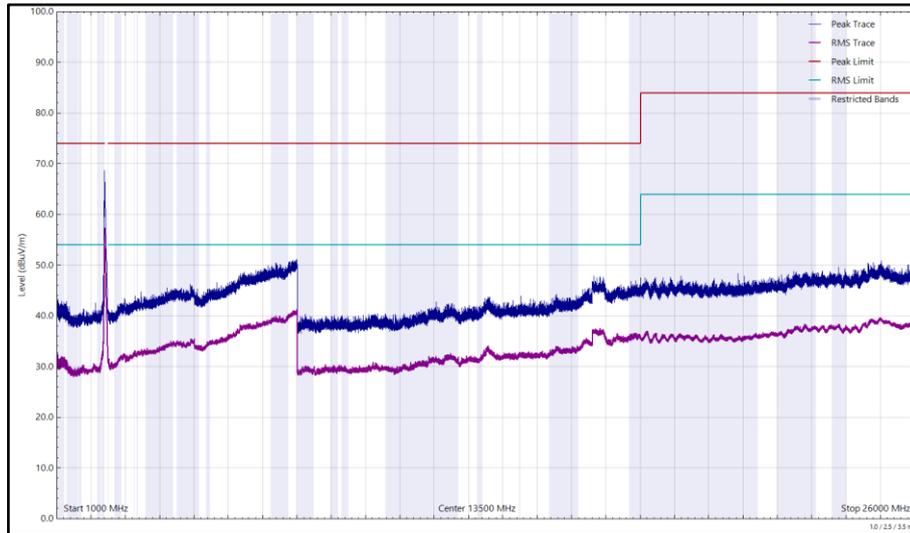
**Figure 79 - 2472 MHz (CH13), 802.11g, Core 0, 1 GHz to 26 GHz, Vertical**



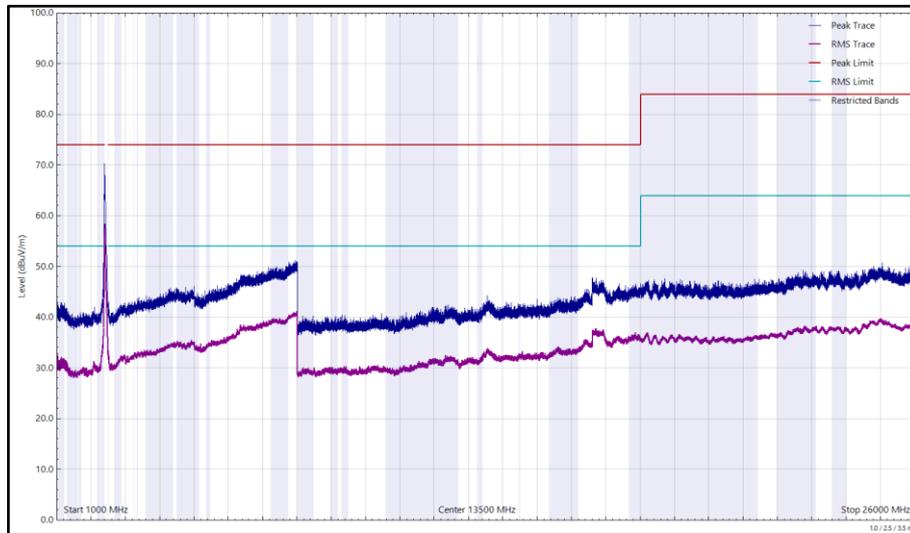
Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
*							

**Table 62 - 2412 MHz (CH1), 802.11g, Core 1, 1 GHz to 26 GHz**

\*No emissions found within 10 dB of the limit.



**Figure 80 - 2412 MHz (CH1), 802.11g, Core 1, 1 GHz to 26 GHz, Horizontal**



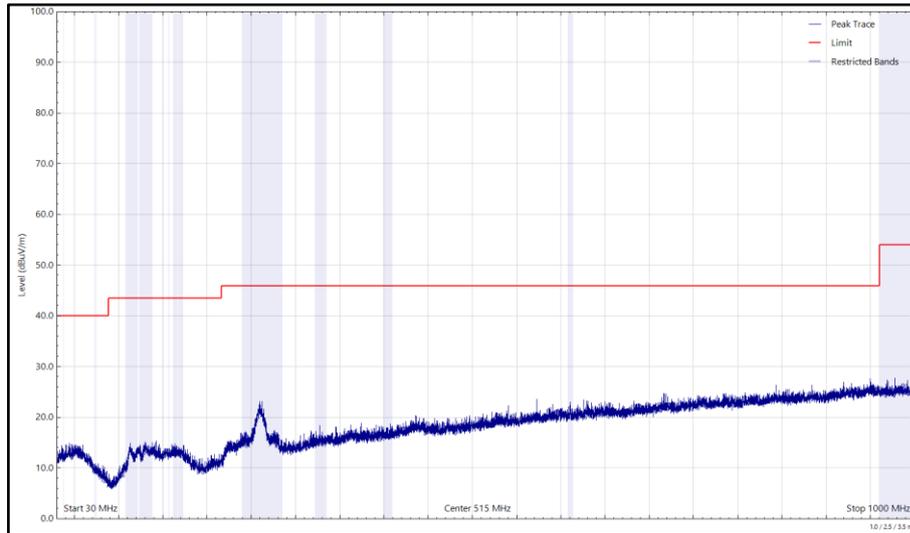
**Figure 81 - 2412 MHz (CH1), 802.11g, Core 1, 1 GHz to 26 GHz, Vertical**



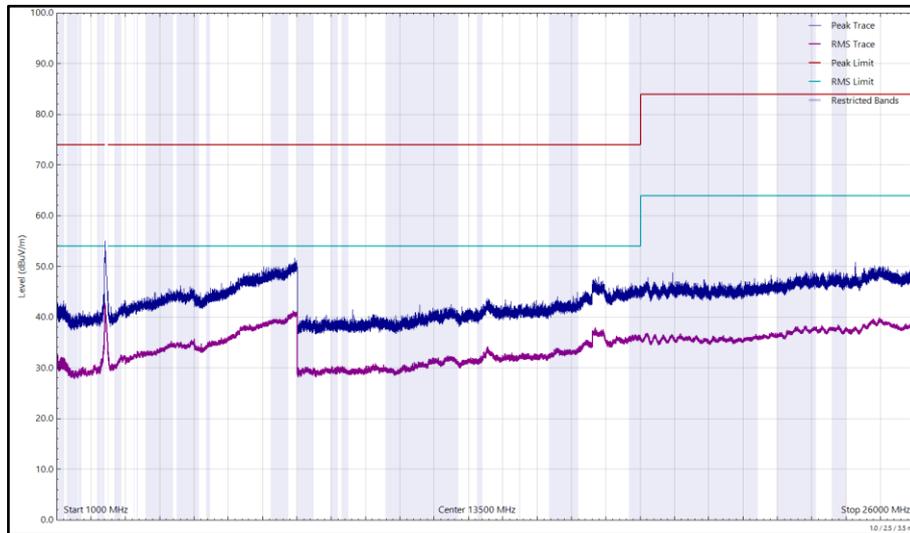
Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
*							

**Table 63 - 2437 MHz (CH6), 802.11g, Core 1, 30 MHz to 26 GHz**

\*No emissions found within 10 dB of the limit.



**Figure 82 - 2437 MHz (CH6), 802.11g, Core 1, 30 MHz to 1 GHz, Horizontal (Peak)**



**Figure 83 - 2437 MHz (CH6), 802.11g, Core 1, 1 GHz to 26 GHz, Horizontal**

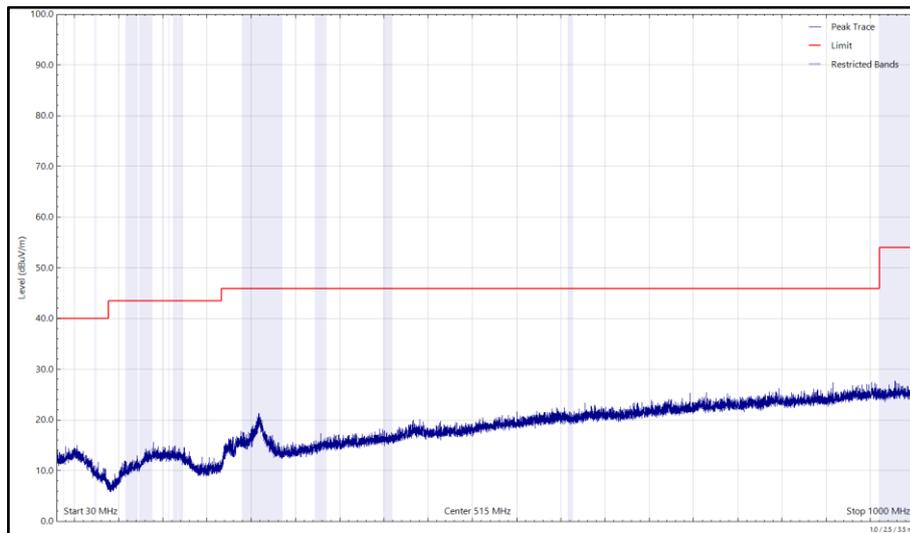


Figure 84 - 2437 MHz (CH6), 802.11g, Core 1, 30 MHz to 1 GHz, Vertical (Peak)

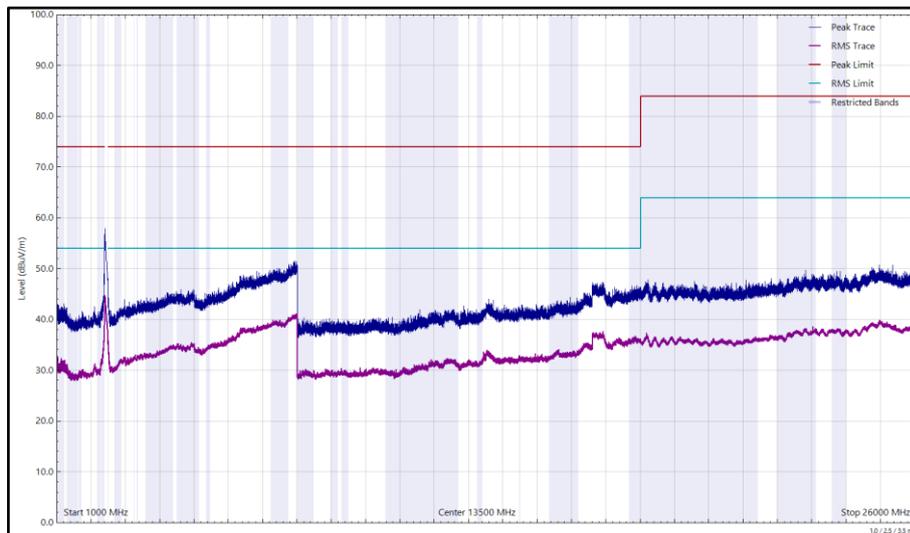


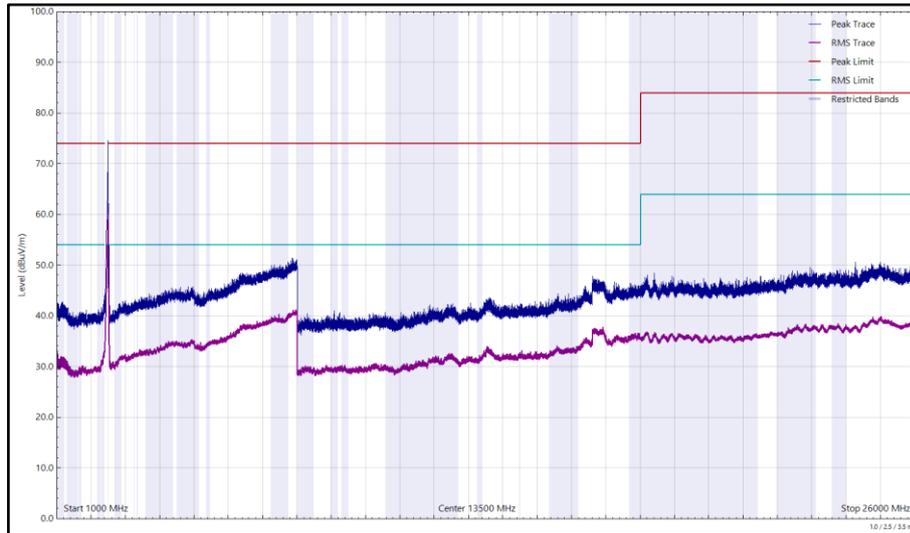
Figure 85 - 2437 MHz (CH6), 802.11g, Core 1, 1 GHz to 26 GHz, Vertical



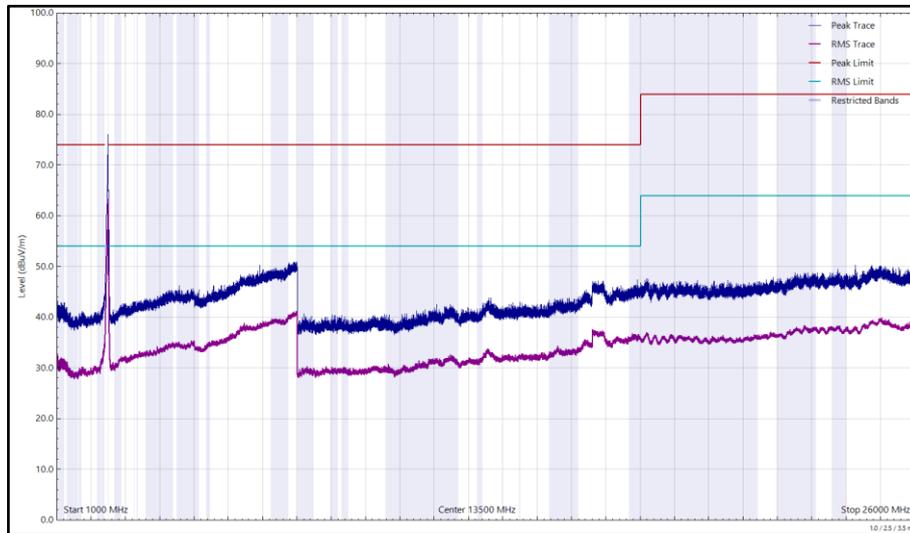
Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
*							

**Table 64 - 2472 MHz (CH13), 802.11g, Core 1, 1 GHz to 26 GHz**

\*No emissions found within 10 dB of the limit.



**Figure 86 - 2472 MHz (CH13), 802.11g, Core 1, 1 GHz to 26 GHz, Horizontal**



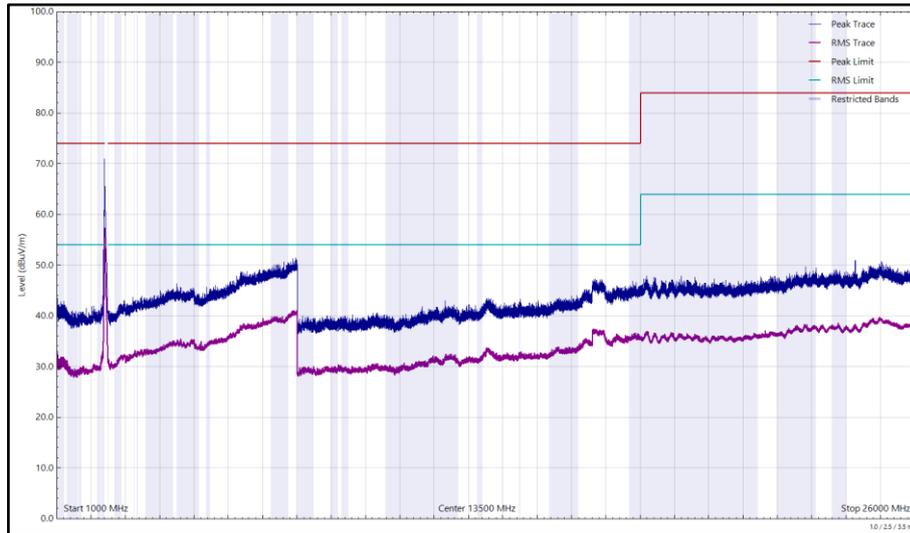
**Figure 87 - 2472 MHz (CH13), 802.11g, Core 1, 1 GHz to 26 GHz, Vertical**



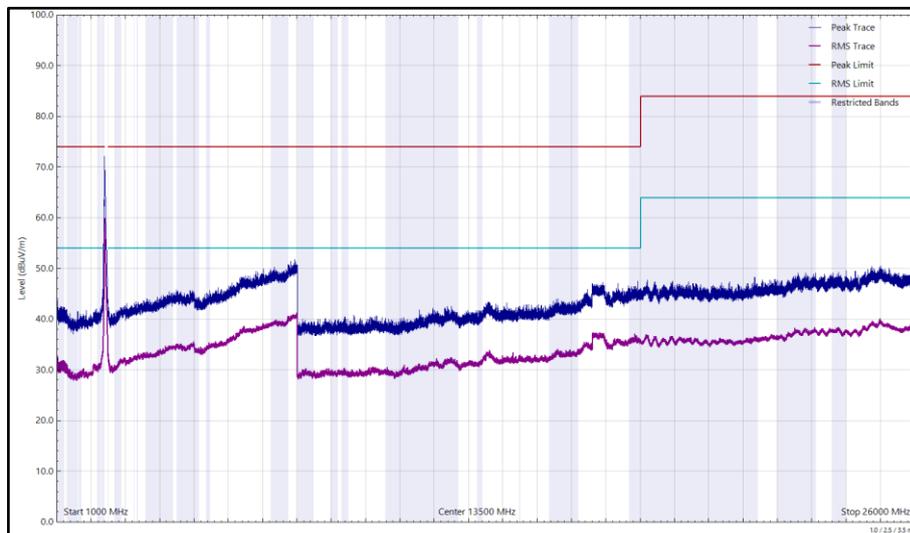
Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
*							

**Table 65 - 2412 MHz (CH1), HT20, CDD, Core 0 + Core 1, 1 GHz to 26 GHz**

\*No emissions found within 10 dB of the limit.



**Figure 88 - 2412 MHz (CH1), HT20, CDD, Core 0 + Core 1, 1 GHz to 26 GHz, Horizontal**



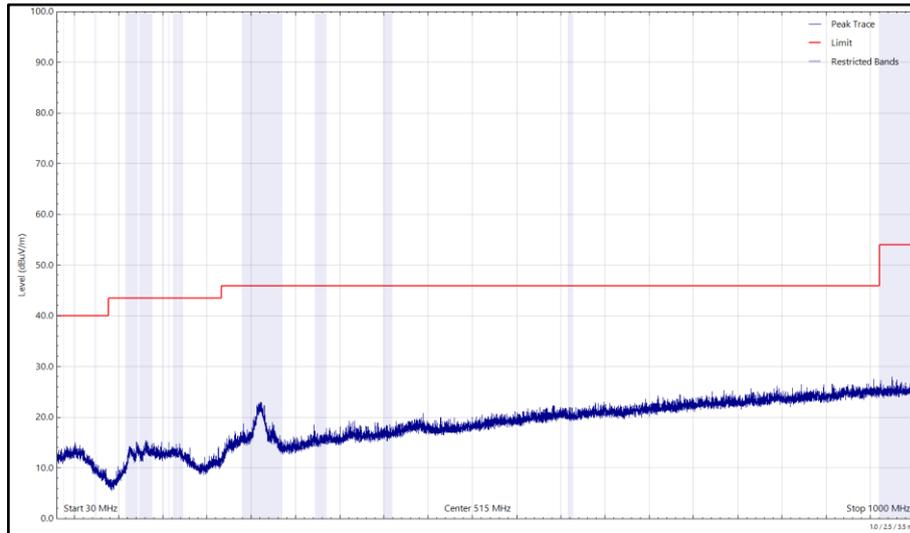
**Figure 89 - 2412 MHz (CH1), HT20, CDD, Core 0 + Core 1, 1 GHz to 26 GHz, Vertical**



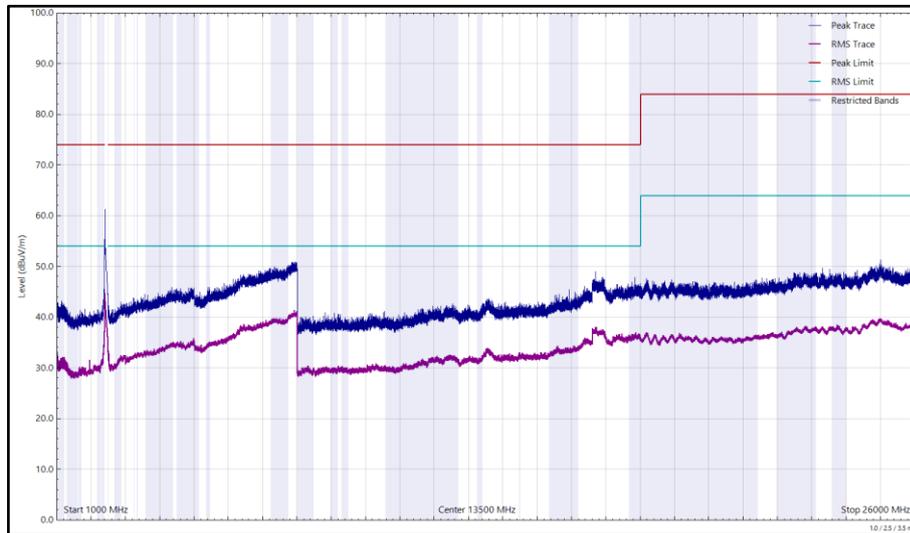
Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
*							

**Table 66 - 2437 MHz (CH6), HT20, CDD, Core 0 + Core 1, 30 MHz to 26 GHz**

\*No emissions found within 10 dB of the limit.



**Figure 90 - 2437 MHz (CH6), HT20, CDD, Core 0 + Core 1, 30 MHz to 1 GHz, Horizontal (Peak)**



**Figure 91 - 2437 MHz (CH6), HT20, CDD, Core 0 + Core 1, 1 GHz to 26 GHz, Horizontal**

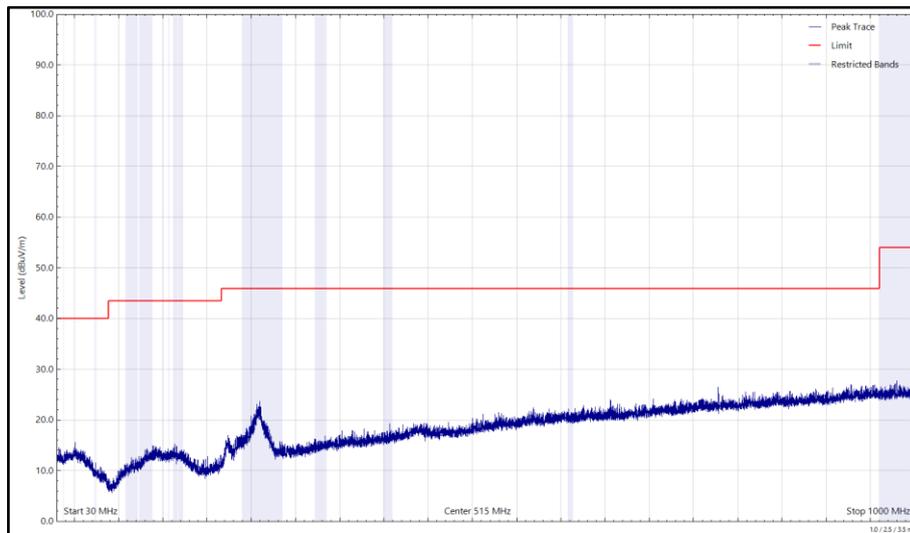


Figure 92 - 2437 MHz (CH6), HT20, CDD, Core 0 + Core 1, 30 MHz to 1 GHz, Vertical (Peak)

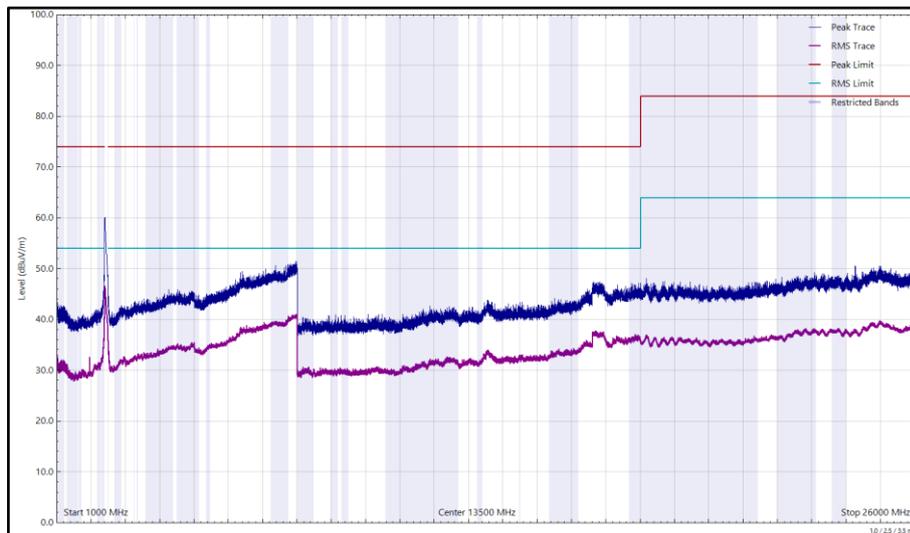


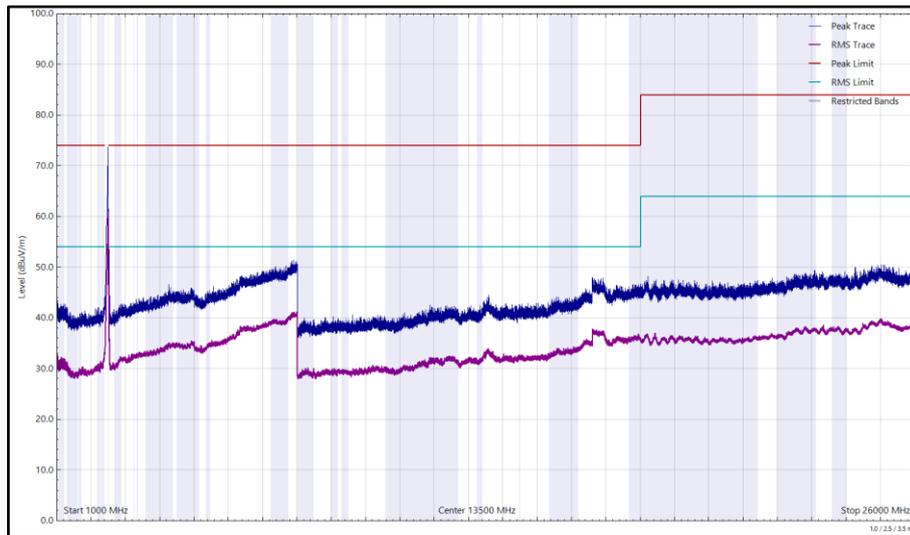
Figure 93 - 2437 MHz (CH6), HT20, CDD, Core 0 + Core 1, 1 GHz to 26 GHz, Vertical



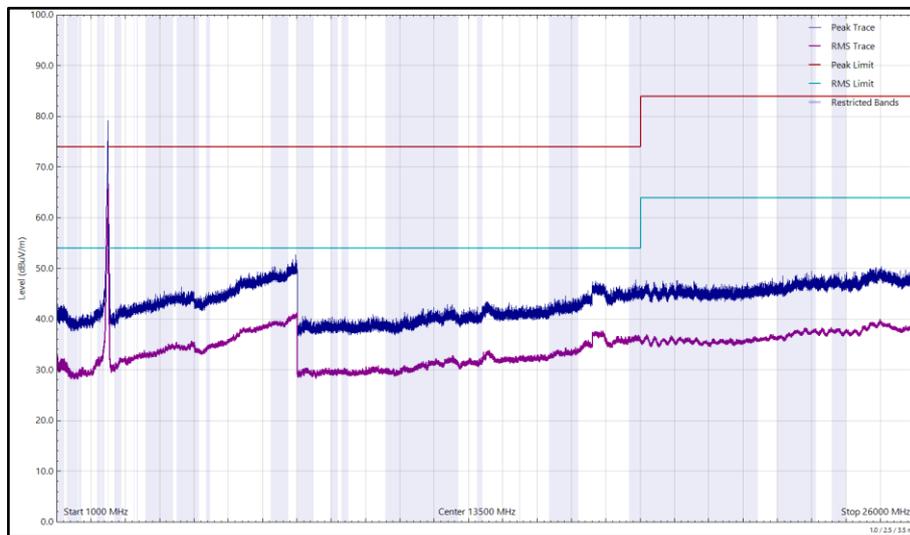
Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
*							

**Table 67 - 2472 MHz (CH13), HT20, CDD, Core 0 + Core 1, 1 GHz to 26 GHz**

\*No emissions found within 10 dB of the limit.



**Figure 94 - 2472 MHz (CH13), HT20, CDD, Core 0 + Core 1, 1 GHz to 26 GHz, Horizontal**



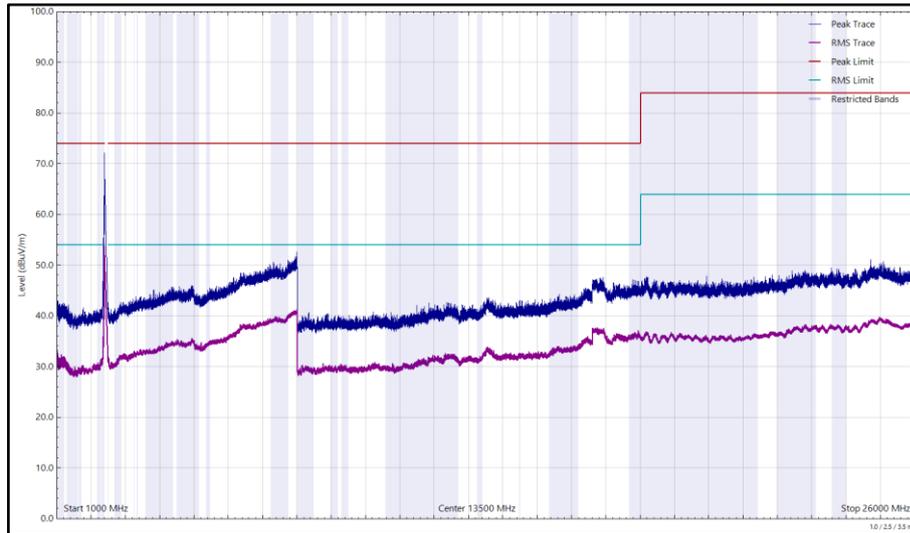
**Figure 95 - 2472 MHz (CH13), HT20, CDD, Core 0 + Core 1, 1 GHz to 26 GHz, Vertical**



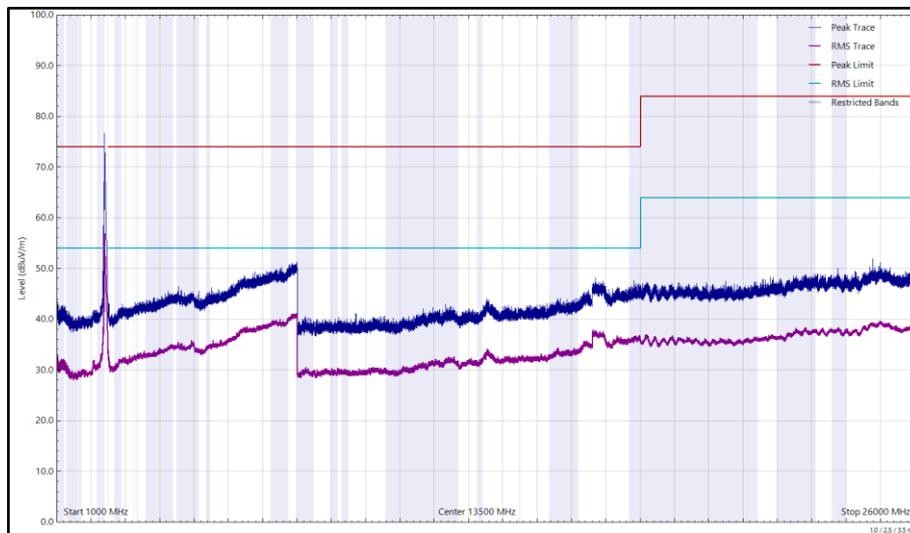
Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
*							

**Table 68 - 2412 MHz (CH1), HE20, RU26-0, Core 0 + Core 1, 1 GHz to 26 GHz**

\*No emissions found within 10 dB of the limit.



**Figure 96 - 2412 MHz (CH1), HE20, RU26-0, Core 0 + Core 1, 1 GHz to 26 GHz, Horizontal**



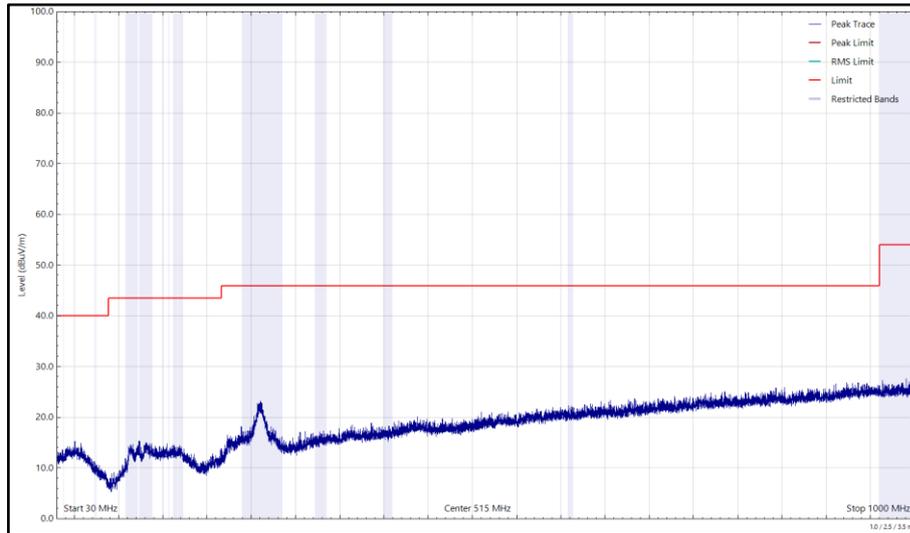
**Figure 97 - 2412 MHz (CH1), HE20, RU26-0, Core 0 + Core 1, 1 GHz to 26 GHz, Vertical**



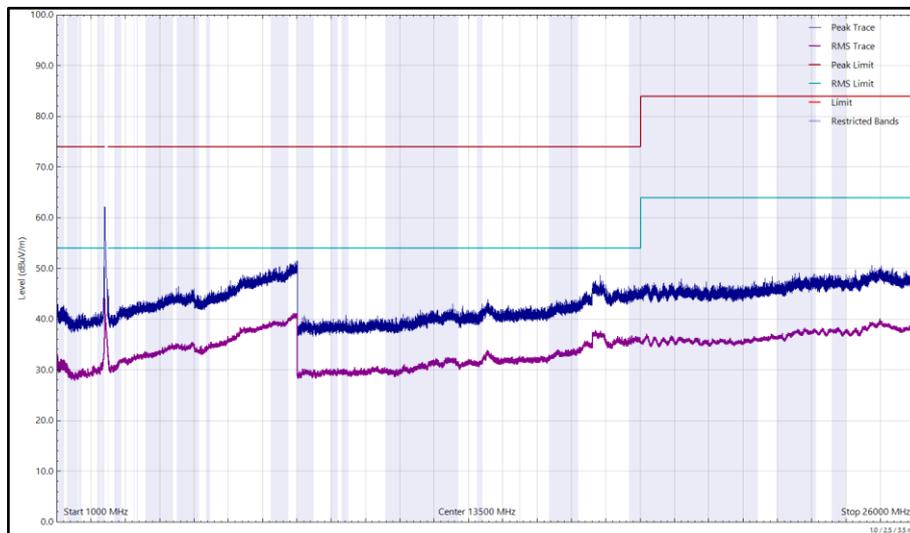
Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
*							

**Table 69 - 2437 MHz (CH6), HE20, RU26-0, Core 0 + Core 1, 30 MHz to 26 GHz**

\*No emissions found within 10 dB of the limit.



**Figure 98 - 2437 MHz (CH6), HE20, RU26-0, Core 0 + Core 1, 30 MHz to 1 GHz, Horizontal**



**Figure 99 - 2437 MHz (CH6), HE20, RU26-0, Core 0 + Core 1, 1 GHz to 26 GHz, Horizontal**

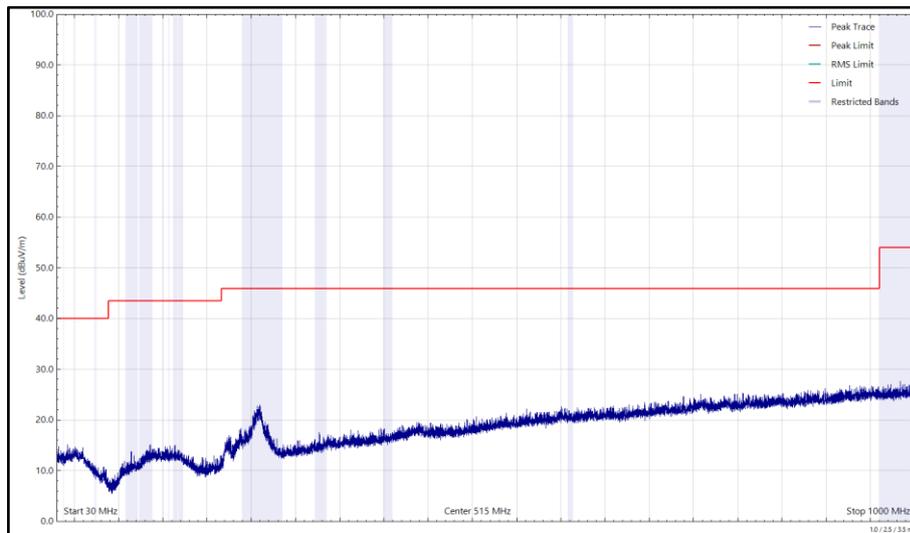


Figure 100 - 2437 MHz (CH6), HE20, RU26-0, Core 0 + Core 1, 30 MHz to 1 GHz, Vertical

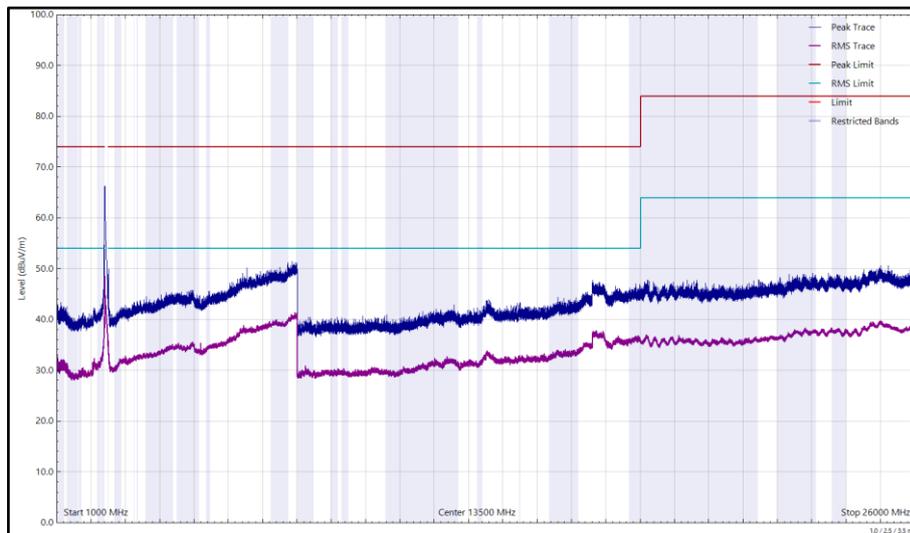


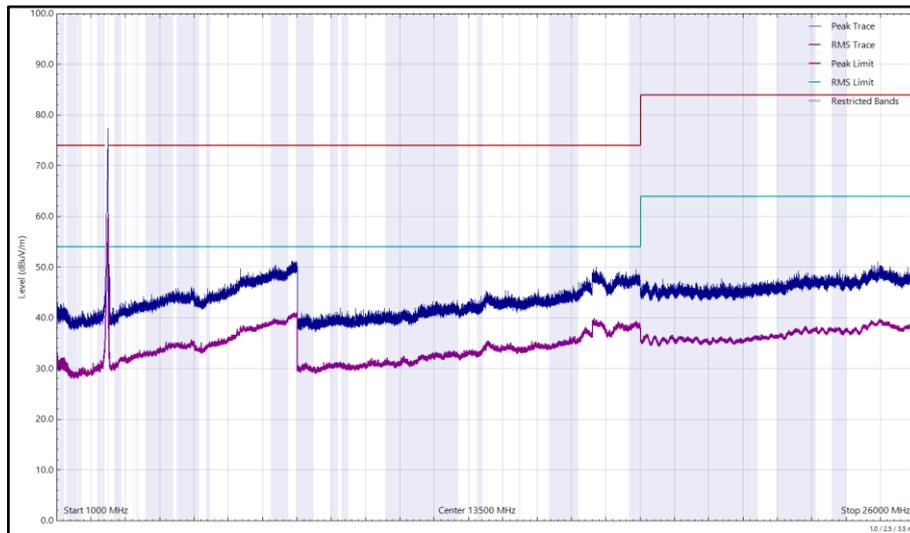
Figure 101 - 2437 MHz (CH6), HE20, RU26-0, Core 0 + Core 1, 1 GHz to 26 GHz, Vertical



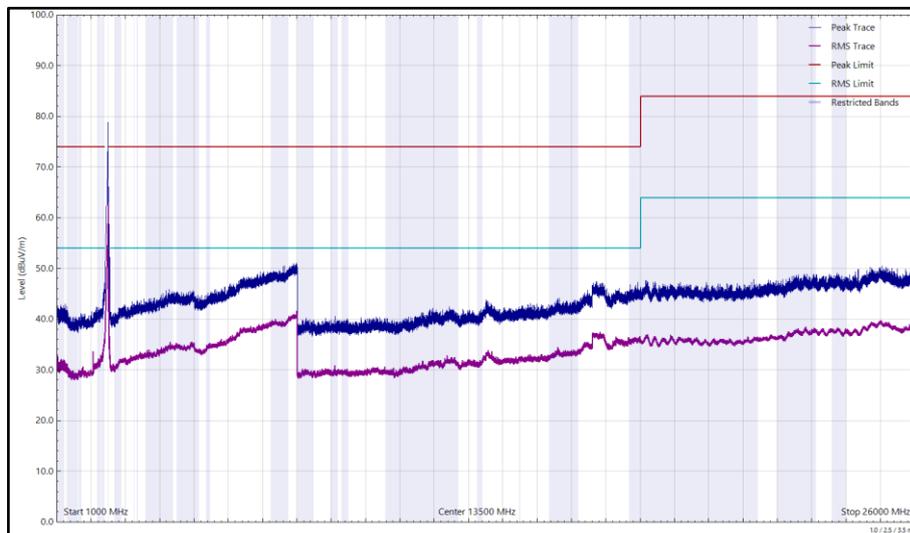
Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
*							

**Table 70 - 2472 MHz (CH13), HE20, RU26-0, Core 0 + Core 1, 1 GHz to 26 GHz**

\*No emissions found within 10 dB of the limit.



**Figure 102 - 2472 MHz (CH13), HE20, RU26-0, Core 0 + Core 1, 1 GHz to 26 GHz, Horizontal**



**Figure 103 - 2472 MHz (CH13), HE20, RU26-0, 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)

ISED RSS-247, Limit Clause 5.5

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced 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 that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under Section 5.4(4), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

In addition, radiated emissions which fall in the restricted bands, as defined in RSS-GEN, clause 8.10, must also comply with the radiated emission limits specified in RSS-GEN clause 8.9.



## 2.4.8 Test Location and Test Equipment Used

This test was carried out in RF Chamber 11.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Expires
Pre-Amplifier (8 GHz to 18 GHz)	Phase One	PS04-0086	1533	12	21-Feb-2023
True RMS Multimeter	Fluke	179	4006	12	29-Mar-2023
Quad Power Supply	Rohde & Schwarz	HMP4040	4955	-	O/P Mon
Band Reject Filter - 2.425 GHz	Wainwright	WRCGV14-2390-2400-2450-2460-50SS	5066	12	11-Oct-2022
Band Reject Filter - 2.4585 GHz	Wainwright	WRCGV14-2423.5-2433.5-2483.5-2493.5-50SS	5068	12	11-Oct-2022
EMI Test Receiver	Rohde & Schwarz	ESW44	5084	12	17-May-2023
Cable (18 GHz)	Rosenberger	LU7-071-1000	5102	12	20-Oct-2022
Cable (18 GHz)	Rosenberger	LU7-071-1000	5103	12	17-Nov-2022
Emissions Software	TUV SUD	EmX V3.1.4	5125	-	Software
Screened Room (11)	Rainford	Rainford	5136	36	24-Nov-2024
Mast	Maturo	TAM 4.0-P	5158	-	TU
Mast and Turntable Controller	Maturo	Maturo NCD	5159	-	TU
Turntable	Maturo	TT 15WF	5160	-	TU
Antenna (DRG 1-10.5GHz)	Schwarzbeck	BBHA9120B	5215	12	28-May-2023
DRG Horn Antenna (7.5-18GHz)	Schwarzbeck	HWRD750	5216	12	29-May-2023
Antenna (DRG, 15 GHz to 40 GHz)	Schwarzbeck	BBHA 9170	5217	12	25-Jan-2023
3 GHz High pass filter	Wainwright	WHKX12-2580-3000-18000-80SS	5220	12	23-Mar-2023
Preamplifier (30dB 1GHz to 18GHz)	Schwarzbeck	BBV 9718 C	5261	12	08-Apr-2023
Thermo-Hygro-Barometer	PCE Instruments	OCE-THB-40	5470	12	07-Apr-2023
2m SMA Cable	Junkosha	MWX221-02000AMSAMS/A	5518	12	12-Apr-2023
8m N Type Cable	Junkosha	MWX221-08000NMSNMS/B	5522	12	24-Mar-2023
7 GHz High pass Filter	Wainwright	WHKX12-5850-6800-18000-80SS	5550	12	19-May-2023
Cable (K Type 2m)	Junkosha	MWX241-02000KMSKMS/B	5936	12	14-May-2023
TRILOG Super Broadband Test Antenna	Schwarzbeck	VULB 9168	5942	24	03-Feb-2024

**Table 71**

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



**2.5 Authorised Band Edges**

**2.5.1 Specification Reference**

FCC 47 CFR Part 15C, Clause 15.247 (d)  
ISED RSS-247, Clause 5.5

**2.5.2 Equipment Under Test and Modification State**

A2816, S/N: V712HT2WFF - Modification State 0

**2.5.3 Date of Test**

17-June-2022 to 27-June-2022

**2.5.4 Test Method**

The test was performed in accordance with ANSI C63.10, clause 6.10.4.

**2.5.5 Environmental Conditions**

Ambient Temperature	22.2 - 25.1 °C
Relative Humidity	38.8 - 49.1 %



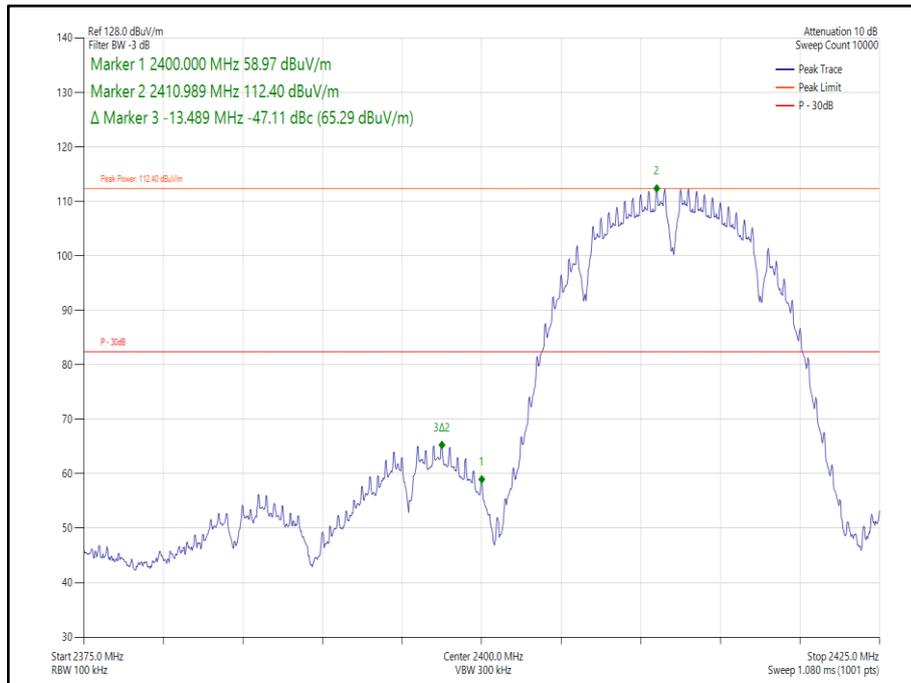
**2.5.6 Test Results**

2.4 GHz WLAN

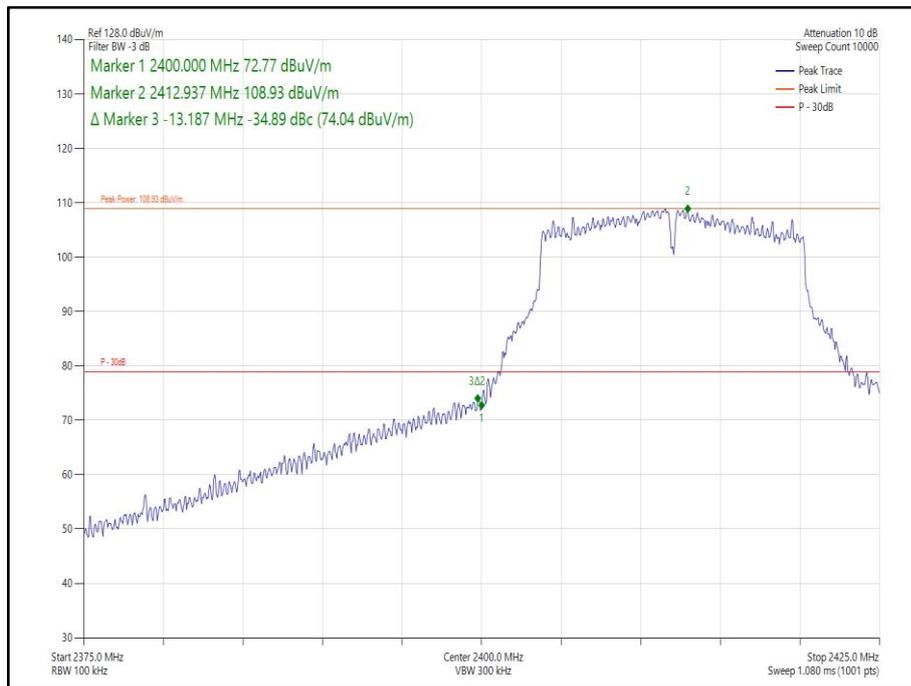
SISO

Mode	Data Rate /MCS	Resource size	Resource Index	TX Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
802.11b, Core 1	1 Mbps	-	-	2412	2400	-47.11
802.11g, Core 1	24 Mbps	-	-	2412	2400	-34.89
802.11n HT20, Core 1	MCS4	-	-	2412	2400	-34.91
802.11ax HE20, Core 1	MCS9x1	SU	-	2412	2400	-35.05
802.11ax HE20, Core 1	MCS9x1	26	0	2412	2400	-46.18

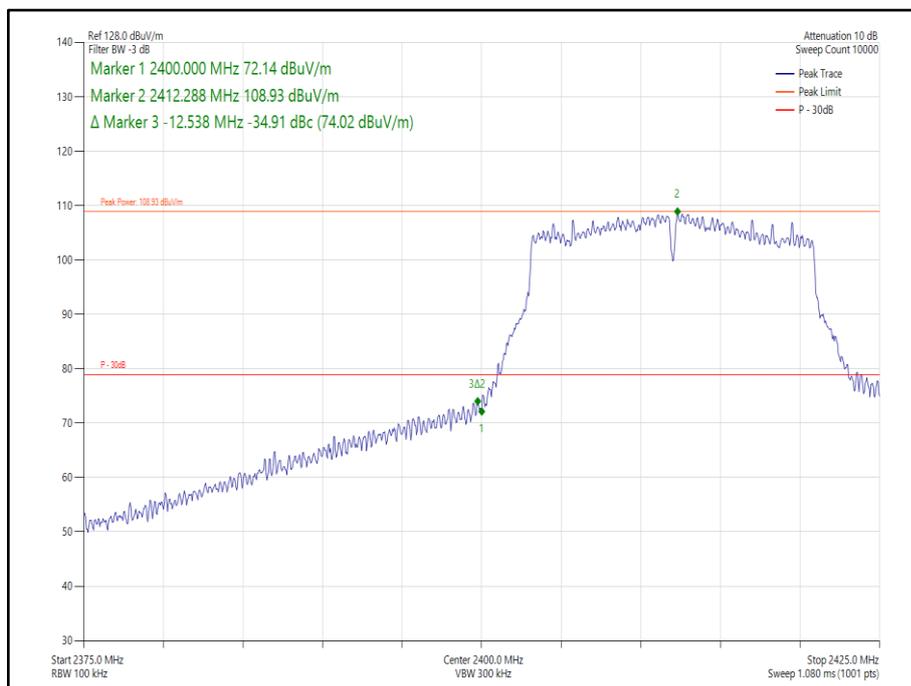
**Table 72 - SISO Authorised Band Edge Results**



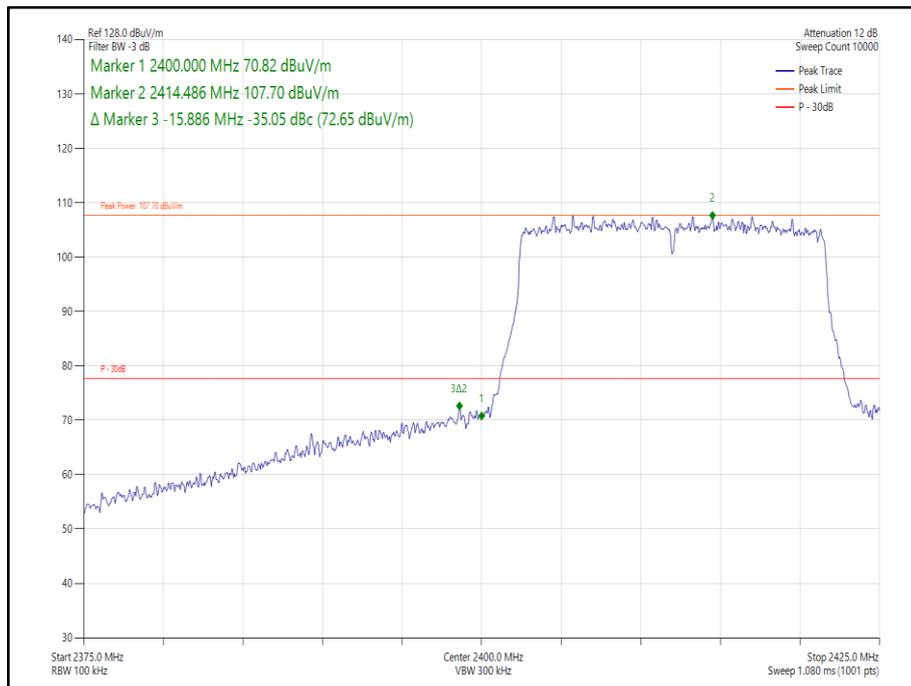
**Figure 104 - 802.11b, Core 1 - 2412 MHz  
 Band Edge Frequency 2400 MHz**



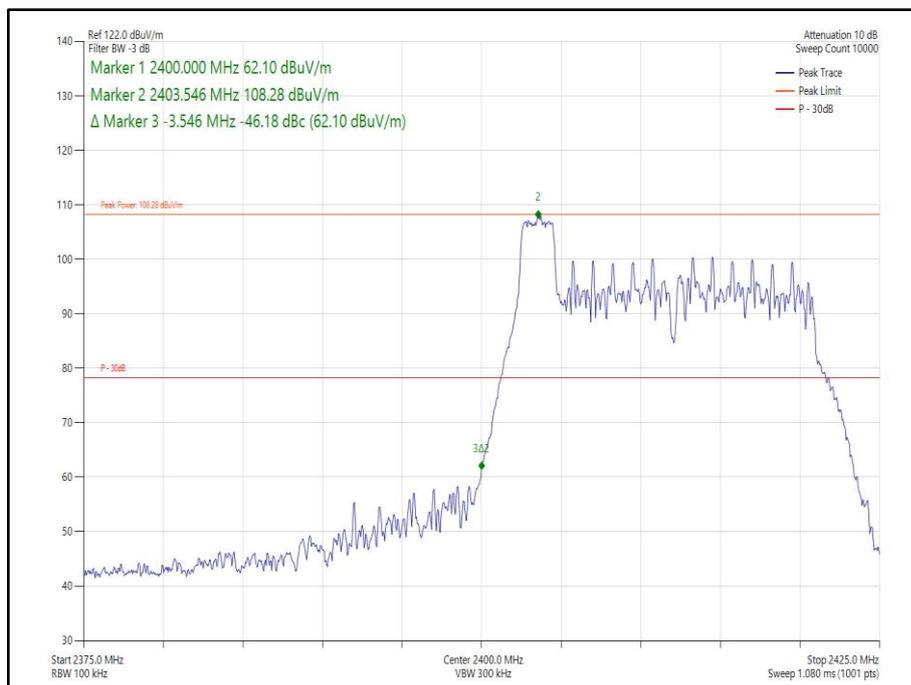
**Figure 105- 802.11g, Core 1 - 2412 MHz  
Band Edge Frequency 2400 MHz**



**Figure 106- 802.11n HT20, Core 1 - 2412 MHz  
Band Edge Frequency 2400 MHz**



**Figure 107- 802.11ax HE20, Core 1, SU - 2412 MHz  
Band Edge Frequency 2400 MHz**



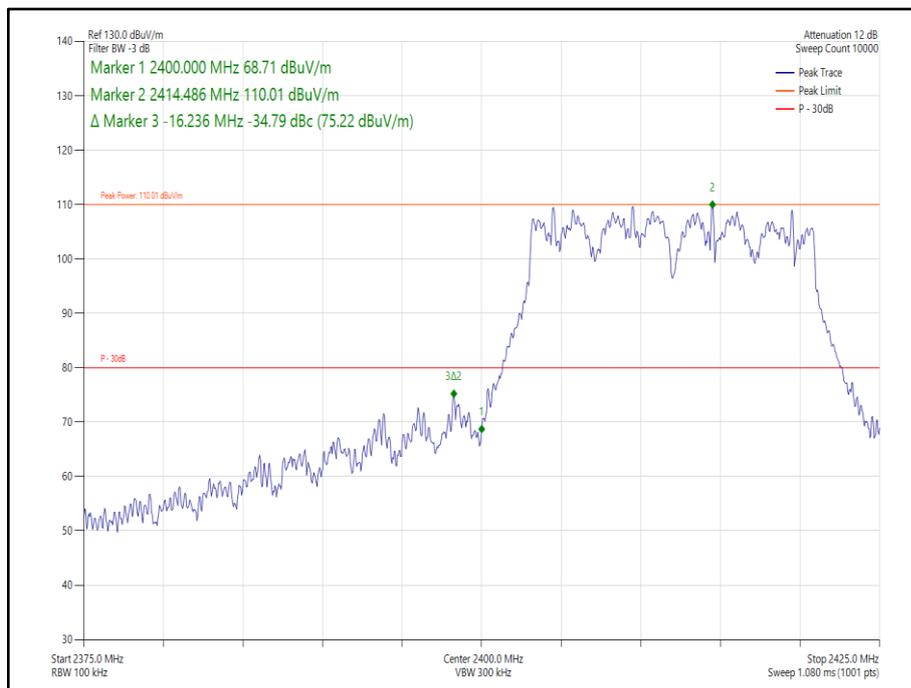
**Figure 108- 802.11ax HE20, Core 1, 26-0 - 2412 MHz  
Band Edge Frequency 2400 MHz**



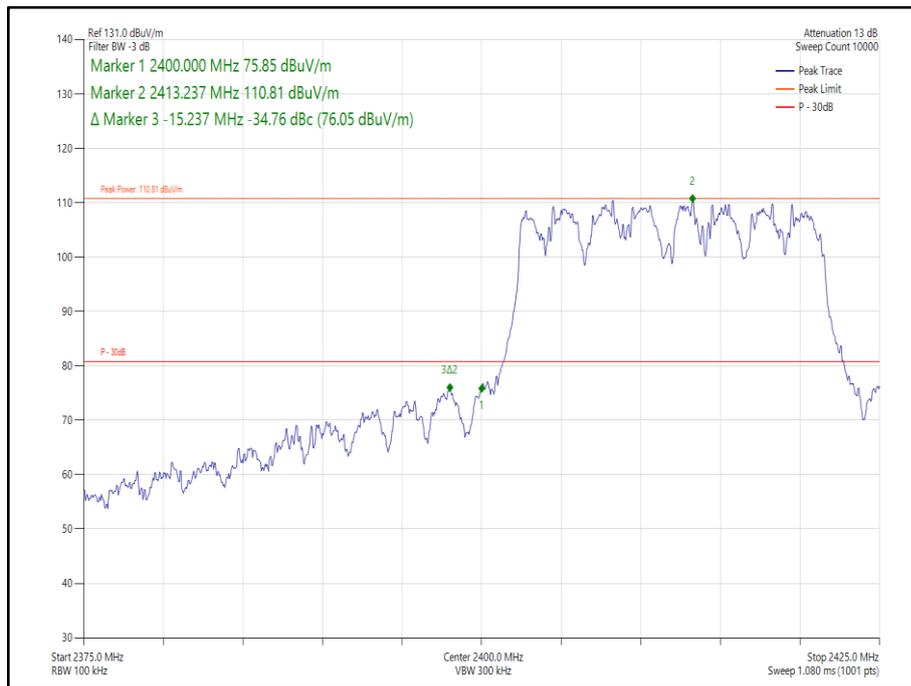
2TX MIMO

Mode	Data Rate/MCS	Resource size	Resource Index	TX Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
802.11n HT20, Cores 0-1	MCS7	-	-	2412	2400	-34.79
802.11ax HE20, Cores 0 - 1	MCS9x1	SU	-	2412	2400	-34.76
802.11ax HE20, Cores 0 - 1	MCS9x1	26	0	2412	2400	-48.97

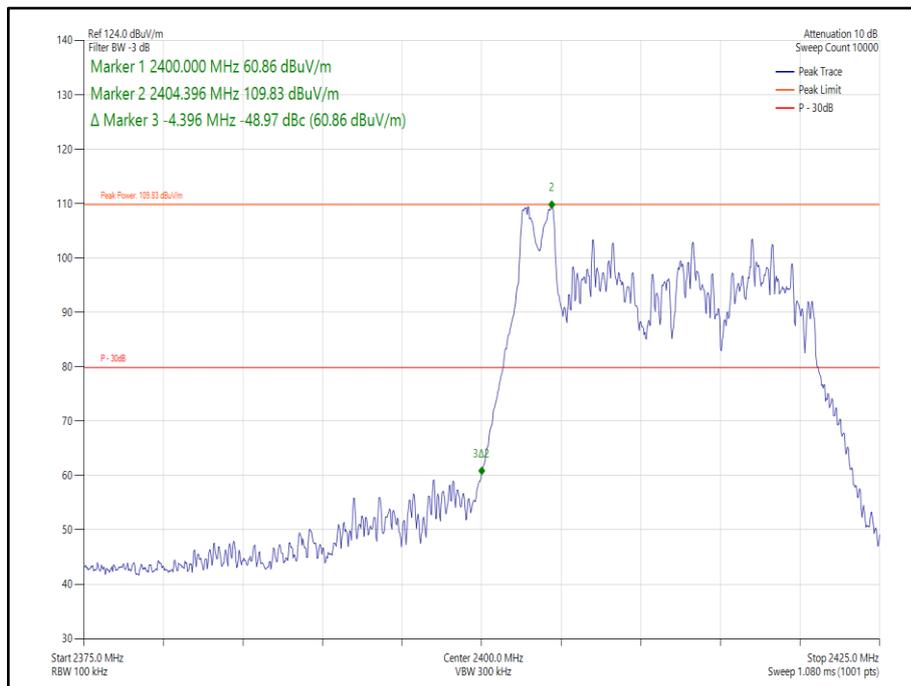
**Table 73 - MIMO 2TX Authorised Band Edge Results**



**Figure 109 - 802.11n HT20, Cores 0-1 - 2412 MHz  
 Band Edge Frequency 2400 MHz**



**Figure 110- 802.11ax HE20, Cores 0-1, SU - 2412 MHz  
Band Edge Frequency 2400 MHz**



**Figure 111- 802.11ax HE20, Cores 0-1, 26-0 - 2412 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.

ISED RSS-247, Limit Clause 5.5

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced 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 that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under Section 5.4(4), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

**2.5.7 Test Location and Test Equipment Used**

This test was carried out in EMC Chamber 5.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Screened Room (5)	Rainford	Rainford	1545	36	15-Apr-2024
Turntable Controller	Inn-Co GmbH	CO 1000	1606	-	TU
Mast Controller	Maturo GmbH	NCD	4810	-	TU
Tilt Antenna Mast	Maturo GmbH	TAM 4.0-P	4811	-	TU
Antenna (DRG 1-10.5GHz)	Schwarzbeck	BBHA9120B	4848	12	28-May-2023
Cable (SMA to SMA, 2 m)	Junkosha	MWX221-02000AMSAMS/A	5517	12	12-Apr-2023
EMI Test Receiver	Rohde & Schwarz	ESW44	5527	12	28-Apr-2023
Thermo-Hygro-Barometer	PCE Instruments	PCE-THB 40	5604	12	22-Sep-2022

**Table 74**

TU - Traceability Unscheduled



## **2.6 Power Spectral Density**

### **2.6.1 Specification Reference**

FCC 47 CFR Part 15C, Clause 15.247 (e)  
ISED RSS-247, Clause 5.2  
ISED RSS-GEN, Clause 6.12

### **2.6.2 Equipment Under Test and Modification State**

A2816, S/N: H12J4GXMVX - Modification State 0

### **2.6.3 Date of Test**

11-November-2022

### **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 AVGPSD-2).

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

### **2.6.5 Environmental Conditions**

Ambient Temperature	23.4 °C
Relative Humidity	46.5 %



**2.6.6 Test Results**

2.4 GHz WLAN

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):	-		

DUT Configuration			
Mode:	802.11b	Duty Cycle (%):	99.4
Data Rate:	1 Mbps	DCCF (dB):	N/A
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	-
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	3.0	-	-11.30	-	-	-	8.00	-19.30
2442	3.0	-	-11.42	-	-	-	8.00	-19.42
2472	3.0	-	-18.29	-	-	-	8.00	-26.29

**Table 75 - 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 (%):	97.6
Data Rate:	12 Mbps	DCCF (dB):	0.11
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	-
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	3.0	-	-12.60	-	-	-	8.00	-20.60
2442	3.0	-	-7.25	-	-	-	8.00	-15.25
2472	3.0	-	-22.99	-	-	-	8.00	-30.99

**Table 76 - 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 (%):	96.5
Modulation Coding Scheme:	MCS2	DCCF (dB):	0.15
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	-
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	3.0	-	-14.30	-	-	-	8.00	-22.30
2442	3.0	-	-7.67	-	-	-	8.00	-15.67
2472	3.0	-	-22.86	-	-	-	8.00	-30.86

**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:	802.11ax HE20 SU	Duty Cycle (%):	95.8
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	0.19
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	-
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	3.0	-	-15.76	-	-	-	8.00	-23.76
2442	3.0	-	-8.60	-	-	-	8.00	-16.60
2472	3.0	-	-25.12	-	-	-	8.00	-33.12

**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:	802.11ax HE20 RU26	Duty Cycle (%):	96.9
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	0.14
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	-
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	3.0	-	-12.25	-	-	-	8.00	-20.25
2442	3.0	-	-10.83	-	-	-	8.00	-18.83
2472	3.0	-	-28.10	-	-	-	8.00	-36.10

**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 RU52	Duty Cycle (%):	96.5
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	0.15
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	-
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	3.0	-	-13.10	-	-	-	8.00	-21.10
2442	3.0	-	-8.16	-	-	-	8.00	-16.16
2472	3.0	-	-28.93	-	-	-	8.00	-36.93

**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 RU106	Duty Cycle (%):	97.9
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	0.09
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	-
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	3.0	-	-16.84	-	-	-	8.00	-24.84
2442	3.0	-	-9.59	-	-	-	8.00	-17.59
2472	3.0	-	-29.30	-	-	-	8.00	-37.30

**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):	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 (%):	96.5
Modulation Coding Scheme:	MCS2	DCCF (dB):	0.16
Antenna Configuration:	MIMO CDD	Peak Antenna Gain (dBi):	-
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	3.0	-15.11	-14.07	-	-	-11.55	8.00	-19.55
2442	3.0	-8.17	-7.53	-	-	-4.83	8.00	-12.83
2472	3.0	-23.59	-23.17	-	-	-20.36	8.00	-28.36

**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):	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):	-
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	3.0	-15.81	-16.05	-	-	-12.92	8.00	-20.92
2442	3.0	-8.34	-8.61	-	-	-5.46	8.00	-13.46
2472	3.0	-25.02	-25.63	-	-	-22.30	8.00	-30.30

**Table 83 - 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):	0.15
Antenna Configuration:	MIMO CDD	Peak Antenna Gain (dBi):	-
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	3.0	-12.90	-11.91	-	-	-9.37	8.00	-17.37
2442	3.0	-11.70	-11.02	-	-	-8.34	8.00	-16.34
2472	3.0	-29.60	-29.09	-	-	-26.33	8.00	-34.33

**Table 84 - 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):	-
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	3.0	-13.27	-13.20	-	-	-10.23	8.00	-18.23
2442	3.0	-9.64	-8.91	-	-	-6.25	8.00	-14.25
2472	3.0	-28.87	-28.42	-	-	-25.63	8.00	-33.63

**Table 85 - 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):	-
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	3.0	-17.35	-17.27	-	-	-14.30	8.00	-22.30
2442	3.0	-9.63	-9.70	-	-	-6.65	8.00	-14.65
2472	3.0	-30.79	-31.27	-	-	-28.02	8.00	-36.02

**Table 86 - 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.

ISED RSS-247, Limit Clause 5.2(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

**2.6.7 Test Location and Test Equipment Used**

This test was carried out in RF Laboratory 1.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Multimeter	Fluke	79 Series III	611	12	21-Dec-2022
Hygrometer	Rotronic	I-1000	3068	12	21-Sep-2023
Frequency Standard	Spectracom	SecureSync 1200-0408-0601	4393	6	01-Feb-2023
AC Programmable Power Supply	iTech	IT7324	5226	-	O/P Mon
MXA Signal Analyser	Keysight Technologies	N9020B	5529	24	13-Sep-2024
Signal Conditioning Unit	TUV SUD	SPECTRUM SCU002	5759	12	05-Jul-2023

**Table 87**

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: $\pm 5.2$ dB 1 GHz to 40 GHz: $\pm 6.3$ dB
Emission Bandwidth	$\pm 545.646$ kHz
Maximum Conducted Output Power	$\pm 1.38$ dB
Spurious Radiated Emissions	30 MHz to 1 GHz: $\pm 5.2$ dB 1 GHz to 40 GHz: $\pm 6.3$ dB
Authorised Band Edges	30 MHz to 1 GHz: $\pm 5.2$ dB 1 GHz to 40 GHz: $\pm 6.3$ dB
Power Spectral Density	$\pm 1.49$ dB

**Table 88**

#### 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.