2.4.7 Test Location and Test Equipment Used

This test was carried out in RF Chamber 14.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Emissions Software	TUV SUD	EmX V3.1.10	5125	-	Software
EMI Test Receiver	Rohde & Schwarz	ESW44	5912	12	17-Mar-2023
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
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
Cable (SMA to SMA 1m)	Junkosha	MWX221-01000AMSAMS/A	5997	12	06-Jun-2023
Cable (SMA to SMA 6.5m)	Junkosha	MWX221-06500AMSAMS/B	6003	12	07-Jun-2023
Cable (SMA to SMA 1m)	Junkosha	MWX221-01000AMSAMS/A	6008	12	06-Jun-2023
Horn Antenna (1-10 GHz)	Schwarzbeck	BBHA9120B	6141	12	21-Jun-2023
SAC Switch Unit	TUV SUD	TUV_SSU_001	6144	12	05-Dec-2023
Digital Multimeter	Fluke	115	6145	12	17-Jun-2023
Humidity & Temperature meter	R.S Components	1364	6149	12	17-Jun-2023

Table 330

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

2.5 Unwanted Emissions within the 5925-7125 MHz band

2.5.1 Specification Reference

FCC 47 CFR Part 15E, Clause 15.407 (b)
ISED RSS-248, Clause 4.7
ISED RSS-GEN, Clause 6.13

2.5.2 Equipment Under Test and Modification State

A2873, S/N: XC39V4G1XF - Modification State 0
A2873, S/N: TXK29QXNGH - Modification State 0

2.5.3 Date of Test

18-March-2023 to 20-March-2023

2.5.4 Test Method

This test was performed in accordance with KDB 987594 D02, clause J.

2.5.5 Environmental Conditions

Ambient Temperature	21.7 - 23.0 °C
Relative Humidity	37.7 - 39.2 %

2.5.6 Test Results

6 GHz WLAN

SISO

Protocol	Unwanted Emissions Within the RLAN Band	
	Margin (dB)	Frequency (MHz)
802.11a	8.37	7081.400
802.11ax HE20 SU	9.85	6862.100
802.11ax HE40 SU	9.37	6858.780
802.11ax HE80 SU	8.91	6788.340
802.11ax HE160 SU	9.62	6719.000

Table 331 - Unwanted Emissions Within the RLAN Band Summary Results

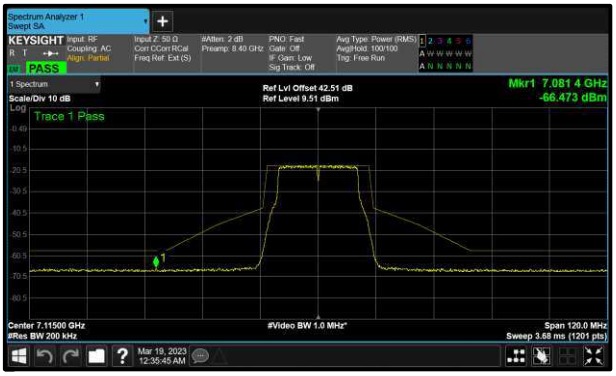

Figure 93 - B (Core 1) 802.11a 7115 MHz (CH233)

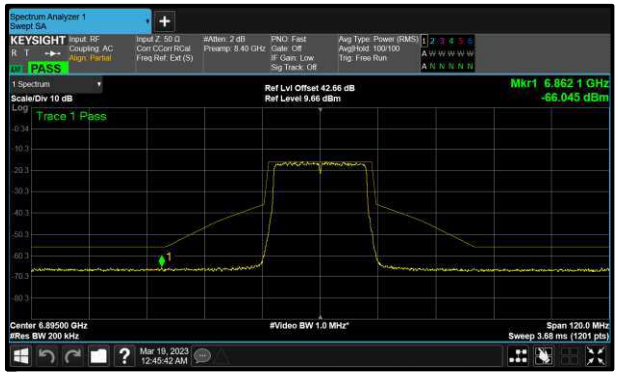

Figure 94 - B (Core 1) 802.11ax HE20 SU 6895 MHz (CH189)

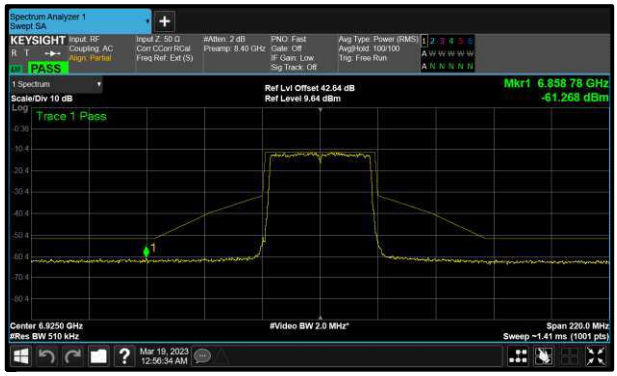

Figure 95 - B (Core 1) 802.11ax HE40 SU 6925 MHz (CH195)

Figure 96 - B (Core 1) 802.11ax HE80 SU 6945 MHz (CH199)

Figure 97 - B (Core 1) 802.11ax HE160 SU 6985 MHz (CH207)

Test Configuration			
Frequency Range:	5925 MHz – 7125 MHz	Band:	U-NII-5 to U-NII-8
Limit Clause(s):	15.407(b)	Test Method(s):	KDB 987594 clause j

DUT Configuration			
Mode:	802.11a	Duty Cycle (%):	-
Data Rate:	12 Mbps	DCCF (dB):	-
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	-
Active Port(s):	A (Core 0) | B (Core 1)	Active Chain Id(s):	0 | 1

Test Frequency (MHz)	Unwanted Emissions Within the RLAN Band Margin (dB)			
	A	B	C	D
5955	-	11.52	-	-
6175	-	11.94	-	-
6415	-	12.35	-	-
6435	12.08	-	-	-
6475	12.28	-	-	-
6515	12.07	-	-	-
6535	-	12.36	-	-
6695	-	12.09	-	-
6855	-	11.97	-	-
6875	-	9.95	-	-
6895	-	9.81	-	-
6995	-	10.25	-	-
7115	-	8.37	-	-

Table 332 - Unwanted Emissions Within the Band Results

Test Configuration			
Frequency Range:	5925 MHz – 7125 MHz	Band:	U-NII-5 to U-NII-8
Limit Clause(s):	15.407(b)	Test Method(s):	KDB 987594 clause j

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

Test Frequency (MHz)	Unwanted Emissions Within the RLAN Band Margin (dB)			
	A	B	C	D
5955	-	11.50	-	-
6175	-	12.33	-	-
6415	-	12.14	-	-
6435	12.10	-	-	-
6475	11.70	-	-	-
6515	11.72	-	-	-
6535	-	11.89	-	-
6695	-	12.08	-	-
6855	-	11.83	-	-
6875	-	9.95	-	-
6895	-	9.85	-	-
6995	-	9.85	-	-
7095	-	10.56	-	-

Table 333 - Unwanted Emissions Within the Band Results

Test Configuration			
Frequency Range:	5925 MHz – 7125 MHz	Band:	U-NII-5 to U-NII-8
Limit Clause(s):	15.407(b)	Test Method(s):	KDB 987594 clause j

DUT Configuration			
Mode:	802.11ax HE40 SU	Duty Cycle (%):	-
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	-
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	-
Active Port(s):	A (Core 0) | B (Core 1)	Active Chain Id(s):	0 | 1

Test Frequency (MHz)	Unwanted Emissions Within the RLAN Band Margin (dB)			
	A	B	C	D
5965	-	10.44	-	-
6165	-	11.14	-	-
6405	-	11.89	-	-
6445	11.00	-	-	-
6485	11.47	-	-	-
6525	10.72	11.54	-	-
6565	-	10.92	-	-
6685	-	11.26	-	-
6845	-	11.42	-	-
6885	-	9.61	-	-
6925	-	9.37	-	-
7005	-	9.57	-	-
7085	-	9.73	-	-

Table 334 - Unwanted Emissions Within the Band Results

Test Configuration			
Frequency Range:	5925 MHz – 7125 MHz	Band:	U-NII-5 to U-NII-8
Limit Clause(s):	15.407(b)	Test Method(s):	KDB 987594 clause j

DUT Configuration			
Mode:	802.11ax HE80 SU	Duty Cycle (%):	-
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	-
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	-
Active Port(s):	A (Core 0) | B (Core 1)	Active Chain Id(s):	0 | 1

Test Frequency (MHz)	Unwanted Emissions Within the RLAN Band Margin (dB)			
	A	B	C	D
5985	-	9.78	-	-
6145	-	11.18	-	-
6385	-	11.17	-	-
6465	11.23	-	-	-
6545	11.26	11.33	-	-
6625	-	10.71	-	-
6705	-	11.71	-	-
6785	-	11.43	-	-
6865	-	9.24	-	-
6945	-	8.91	-	-
7025	-	9.15	-	-

Table 335 - Unwanted Emissions Within the Band Results

Test Configuration			
Frequency Range:	5925 MHz – 7125 MHz	Band:	U-NII-5 to U-NII-8
Limit Clause(s):	15.407(b)	Test Method(s):	KDB 987594 clause j

DUT Configuration			
Mode:	802.11ax HE160 SU	Duty Cycle (%):	-
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	-
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	-
Active Port(s):	A (Core 0) | B (Core 1)	Active Chain Id(s):	0 | 1

Test Frequency (MHz)	Unwanted Emissions Within the RLAN Band Margin (dB)			
	A	B	C	D
6025	-	10.39	-	-
6185	-	11.24	-	-
6345	-	12.05	-	-
6505	10.33	-	-	-
6665	-	12.09	-	-
6825	-	10.40	-	-
6985	-	9.62	-	-

Table 336 - Unwanted Emissions Within the Band Results

SISO RU

Protocol	Unwanted Emissions Within the RLAN Band	
	Margin (dB)	Frequency (MHz)
802.11ax HE20 RU106	9.67	6957.500
802.11ax HE20 RU26	9.71	7028.500
802.11ax HE20 RU52	9.72	6946.400

Table 337 - Unwanted Emissions Within the RLAN Band Summary Results

Figure 98 - B (Core 1) 802.11ax HE20 RU106 6995 MHz (CH209)

Figure 99 - B (Core 1) 802.11ax HE20 RU26 6995 MHz (CH209)

Figure 100 - B (Core 1) 802.11ax HE20 RU52 6895 MHz (CH189)

Test Configuration			
Frequency Range:	5925 MHz – 7125 MHz	Band:	U-NII-5 to U-NII-8
Limit Clause(s):	15.407(b)	Test Method(s):	KDB 987594 clause j

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

Test Frequency (MHz)	Unwanted Emissions Within the RLAN Band Margin (dB)			
	A	B	C	D
5955 (RU26.0)	-	11.71	-	-
6175 (RU26.0)	-	11.80	-	-
6415 (RU26.8)	-	12.58	-	-
6435 (RU26.0)	11.76	-	-	-
6475 (RU26.0)	11.96	-	-	-
6515 (RU26.8)	11.66	-	-	-
6535 (RU26.0)	-	12.27	-	-
6695 (RU26.0)	-	11.65	-	-
6855 (RU26.8)	-	12.19	-	-
6875 (RU26.3)	-	10.01	-	-
6875 (RU26.5)	-	10.26	-	-
6895 (RU26.0)	-	10.00	-	-
6995 (RU26.0)	-	9.71	-	-
7095 (RU26.8)	-	9.81	-	-

Table 338 - Unwanted Emissions Within the Band Results

Test Configuration			
Frequency Range:	5925 MHz – 7125 MHz	Band:	U-NII-5 to U-NII-8
Limit Clause(s):	15.407(b)	Test Method(s):	KDB 987594 clause j

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

Test Frequency (MHz)	Unwanted Emissions Within the RLAN Band Margin (dB)			
	A	B	C	D
5955 (RU52.37)	-	11.68	-	-
6175 (RU52.37)	-	11.98	-	-
6415 (RU52.40)	-	12.43	-	-
6435 (RU52.37)	11.89	-	-	-
6475 (RU52.37)	12.05	-	-	-
6515 (RU52.40)	11.86	-	-	-
6535 (RU52.37)	-	12.43	-	-
6695 (RU52.37)	-	12.55	-	-
6855 (RU52.40)	-	12.02	-	-
6875 (RU52.38)	-	9.84	-	-
6875 (RU52.39)	-	10.09	-	-
6895 (RU52.37)	-	9.72	-	-
6995 (RU52.37)	-	10.14	-	-
7095 (RU52.40)	-	10.16	-	-

Table 339 - Unwanted Emissions Within the Band Results

Test Configuration			
Frequency Range:	5925 MHz – 7125 MHz	Band:	U-NII-5 to U-NII-8
Limit Clause(s):	15.407(b)	Test Method(s):	KDB 987594 clause j

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

Test Frequency (MHz)	Unwanted Emissions Within the RLAN Band Margin (dB)			
	A	B	C	D
5955 (RU106.53)	-	11.37	-	-
6175 (RU106.53)	-	11.68	-	-
6415 (RU106.54)	-	12.40	-	-
6435 (RU106.53)	12.13	-	-	-
6475 (RU106.53)	12.21	-	-	-
6515 (RU106.54)	12.06	-	-	-
6535 (RU106.53)	-	12.36	-	-
6695 (RU106.53)	-	11.99	-	-
6855 (RU106.54)	-	10.76	-	-
6875 (RU106.53)	-	10.16	-	-
6875 (RU106.54)	-	10.00	-	-
6895 (RU106.53)	-	9.79	-	-
6995 (RU106.53)	-	9.67	-	-
7095 (RU106.54)	-	9.95	-	-

Table 340 - Unwanted Emissions Within the Band Results

MIMO CDD

Protocol	Unwanted Emissions Within the RLAN Band	
	Margin (dB)	Frequency (MHz)
802.11ax HE20 SU	5.68	6963.200
802.11ax HE40 SU	2.61	6817.800
802.11ax HE80 SU	3.60	6808.080
802.11ax HE160 SU	5.75	6716.000

Table 341 - Unwanted Emissions Within the RLAN Band Summary Results

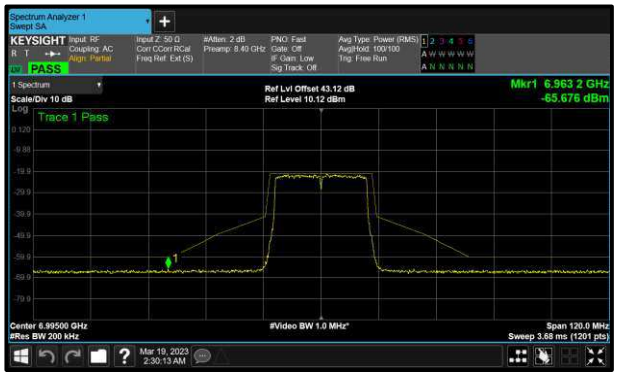

Figure 101 - A (Core 0) 802.11ax HE20 SU 6995 MHz (CH209)

Figure 102 - B (Core 1) 802.11ax HE40 SU 6885 MHz (CH187)

Figure 103 - B (Core 1) 802.11ax HE80 SU 6945 MHz (CH199)

Figure 104 - B (Core 1) 802.11ax HE160 SU 6985 MHz (CH207)

Test Configuration			
Frequency Range:	5925 MHz – 7125 MHz	Band:	U-NII-5 to U-NII-8
Limit Clause(s):	15.407(b)	Test Method(s):	KDB 987594 clause j

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

Test Frequency (MHz)	Unwanted Emissions Within the RLAN Band Margin (dB)			
	A	B	C	D
5955	7.02	7.41	-	-
6175	7.26	7.68	-	-
6415	7.27	7.29	-	-
6435	7.05	7.07	-	-
6475	6.79	7.15	-	-
6515	7.15	7.19	-	-
6535	6.69	7.24	-	-
6695	6.87	6.83	-	-
6855	6.47	6.92	-	-
6875	6.28	6.70	-	-
6895	6.07	6.48	-	-
6995	5.68	6.44	-	-
7095	6.21	6.69	-	-

Table 342 - Unwanted Emissions Within the Band Results

Test Configuration			
Frequency Range:	5925 MHz – 7125 MHz	Band:	U-NII-5 to U-NII-8
Limit Clause(s):	15.407(b)	Test Method(s):	KDB 987594 clause j

DUT Configuration			
Mode:	802.11ax HE40 SU	Duty Cycle (%):	-
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	-
Antenna Configuration:	MIMO CDD	Peak Antenna Gain (dBi):	-
Active Port(s):	A+B (Core 0 + Core 1)	Active Chain Id(s):	0+1

Test Frequency (MHz)	Unwanted Emissions Within the RLAN Band Margin (dB)			
	A	B	C	D
5965	4.41	5.65	-	-
6165	5.80	6.26	-	-
6405	6.06	6.49	-	-
6445	6.15	7.06	-	-
6485	6.12	6.74	-	-
6525	5.38	5.74	-	-
6565	4.96	5.41	-	-
6685	5.47	4.56	-	-
6845	5.36	4.00	-	-
6885	4.63	2.61	-	-
6925	4.59	3.37	-	-
7005	5.08	3.77	-	-
7085	4.68	4.06	-	-

Table 343 - Unwanted Emissions Within the Band Results

Test Configuration			
Frequency Range:	5925 MHz – 7125 MHz	Band:	U-NII-5 to U-NII-8
Limit Clause(s):	15.407(b)	Test Method(s):	KDB 987594 clause j

DUT Configuration			
Mode:	802.11ax HE80 SU	Duty Cycle (%):	-
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	-
Antenna Configuration:	MIMO CDD	Peak Antenna Gain (dBi):	-
Active Port(s):	A+B (Core 0 + Core 1)	Active Chain Id(s):	0+1

Test Frequency (MHz)	Unwanted Emissions Within the RLAN Band Margin (dB)			
	A	B	C	D
5985	5.26	5.47	-	-
6145	5.98	6.77	-	-
6385	6.21	6.40	-	-
6465	6.93	7.22	-	-
6545	5.55	5.41	-	-
6625	5.42	5.11	-	-
6705	6.02	4.77	-	-
6785	6.21	4.96	-	-
6865	5.32	5.10	-	-
6945	4.63	3.60	-	-
7025	4.79	4.48	-	-

Table 344 - Unwanted Emissions Within the Band Results

Test Configuration			
Frequency Range:	5925 MHz – 7125 MHz	Band:	U-NII-5 to U-NII-8
Limit Clause(s):	15.407(b)	Test Method(s):	KDB 987594 clause j

DUT Configuration			
Mode:	802.11ax HE160 SU	Duty Cycle (%):	-
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	-
Antenna Configuration:	MIMO CDD	Peak Antenna Gain (dBi):	-
Active Port(s):	A+B (Core 0 + Core 1)	Active Chain Id(s):	0+1

Test Frequency (MHz)	Unwanted Emissions Within the RLAN Band Margin (dB)			
	A	B	C	D
6025	6.44	6.52	-	-
6185	6.92	7.70	-	-
6345	6.83	8.04	-	-
6505	6.90	6.91	-	-
6665	7.34	6.80	-	-
6825	6.30	5.81	-	-
6985	5.97	5.75	-	-

Table 345 - Unwanted Emissions Within the Band Results

MIMO CDD RU

Protocol	Unwanted Emissions Within the RLAN Band	
	Margin (dB)	Frequency (MHz)
802.11ax HE20 RU106	5.95	7029.800
802.11ax HE20 RU52	5.95	6848.700

Table 346 - Unwanted Emissions Within the RLAN Band Summary Results

Figure 105 - A (Core 0) 802.11ax HE20 RU106 6995 MHz (CH209)

Figure 106 - A (Core 0) 802.11ax HE20 RU52 6895 MHz (CH189)

Test Configuration			
Frequency Range:	5925 MHz – 7125 MHz	Band:	U-NII-5 to U-NII-8
Limit Clause(s):	15.407(b)	Test Method(s):	KDB 987594 clause j

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

Test Frequency (MHz)	Unwanted Emissions Within the RLAN Band Margin (dB)			
	A	B	C	D
5955 (RU52.37)	7.03	7.72	-	-
6175 (RU52.37)	7.47	7.81	-	-
6415 (RU52.40)	6.89	7.30	-	-
6435 (RU52.37)	6.81	7.17	-	-
6475 (RU52.37)	7.20	7.27	-	-
6515 (RU52.40)	6.89	7.24	-	-
6535 (RU52.37)	6.97	7.21	-	-
6695 (RU52.37)	6.70	7.34	-	-
6855 (RU52.40)	6.46	7.08	-	-
6875 (RU52.38)	6.18	6.76	-	-
6875 (RU52.39)	6.44	7.00	-	-
6895 (RU52.37)	5.95	6.38	-	-
6995 (RU52.37)	6.12	6.42	-	-
7095 (RU52.40)	6.23	6.79	-	-

Table 347 - Unwanted Emissions Within the Band Results

Test Configuration			
Frequency Range:	5925 MHz – 7125 MHz	Band:	U-NII-5 to U-NII-8
Limit Clause(s):	15.407(b)	Test Method(s):	KDB 987594 clause j

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

Test Frequency (MHz)	Unwanted Emissions Within the RLAN Band Margin (dB)			
	A	B	C	D
6175 (RU106.53)	7.27	7.34	-	-
6415 (RU106.54)	6.84	7.15	-	-
6435 (RU106.53)	6.61	7.24	-	-
6475 (RU106.53)	7.19	7.30	-	-
6515 (RU106.54)	6.72	7.17	-	-
6535 (RU106.53)	6.72	7.13	-	-
6695 (RU106.53)	6.84	7.21	-	-
6855 (RU106.54)	6.38	6.78	-	-
6875 (RU106.53)	6.23	6.99	-	-
6875 (RU106.54)	6.37	6.60	-	-
6895 (RU106.53)	6.19	6.44	-	-
6995 (RU106.53)	5.95	6.47	-	-
7095 (RU106.54)	6.13	6.70	-	-

Table 348 - Unwanted Emissions Within the Band Results

MIMO SDM

Protocol	Unwanted Emissions Within the RLAN Band	
	Margin (dB)	Frequency (MHz)
802.11ax HE20 SU	6.14	7034.300
802.11ax HE40 SU	4.33	6921.840
802.11ax HE80 SU	6.66	6812.700
802.11ax HE160 SU	7.47	6734.000

Table 349 - Unwanted Emissions Within the RLAN Band Summary Results

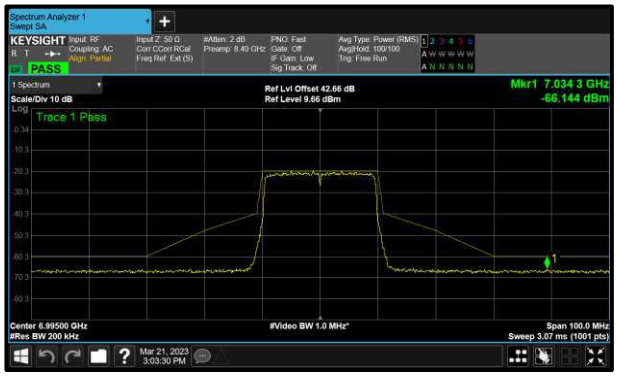

Figure 107 - B (Core 1) 802.11ax HE20 SU 6995 MHz (CH209)

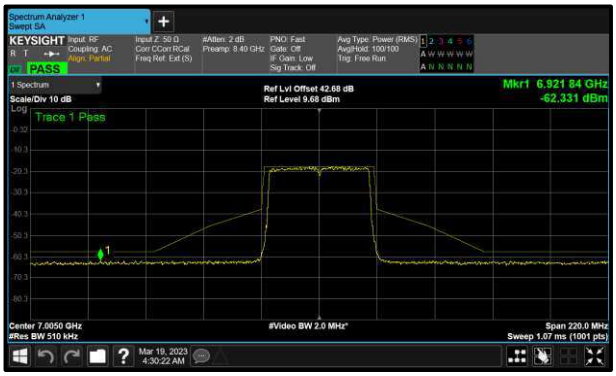

Figure 108 - B (Core 1) 802.11ax HE40 SU 7005 MHz (CH211)

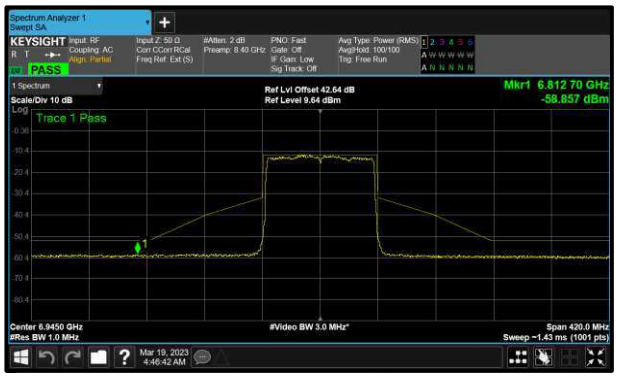

Figure 109 - B (Core 1) 802.11ax HE80 SU 6945 MHz (CH199)

Figure 110 - B (Core 1) 802.11ax HE160 SU 6985 MHz (CH207)

Test Configuration			
Frequency Range:	5925 MHz – 7125 MHz	Band:	U-NII-5 to U-NII-8
Limit Clause(s):	15.407(b)	Test Method(s):	KDB 987594 clause j

DUT Configuration			
Mode:	802.11ax HE20 SU	Duty Cycle (%):	-
Modulation Coding Scheme:	MCS2x2	DCCF (dB):	-
Antenna Configuration:	MIMO SDM	Peak Antenna Gain (dBi):	-
Active Port(s):	A+B (Core 0 + Core 1)	Active Chain Id(s):	0+1

Test Frequency (MHz)	Unwanted Emissions Within the RLAN Band Margin (dB)			
	A	B	C	D
5955	7.83	9.71	-	-
6175	9.32	10.00	-	-
6415	9.53	8.71	-	-
6435	9.59	9.11	-	-
6475	10.15	8.83	-	-
6515	10.13	9.25	-	-
6535	9.47	8.16	-	-
6695	9.09	7.98	-	-
6855	9.36	6.67	-	-
6875	8.27	6.93	-	-
6895	8.24	6.52	-	-
6995	7.98	6.14	-	-
7095	7.59	7.78	-	-

Table 350 - Unwanted Emissions Within the Band Results

Test Configuration			
Frequency Range:	5925 MHz – 7125 MHz	Band:	U-NII-5 to U-NII-8
Limit Clause(s):	15.407(b)	Test Method(s):	KDB 987594 clause j

DUT Configuration			
Mode:	802.11ax HE40 SU	Duty Cycle (%):	-
Modulation Coding Scheme:	MCS2x2	DCCF (dB):	-
Antenna Configuration:	MIMO SDM	Peak Antenna Gain (dBi):	-
Active Port(s):	A+B (Core 0 + Core 1)	Active Chain Id(s):	0+1

Test Frequency (MHz)	Unwanted Emissions Within the RLAN Band Margin (dB)			
	A	B	C	D
5965	8.29	8.76	-	-
6165	8.29	9.08	-	-
6405	8.69	9.30	-	-
6445	9.98	10.29	-	-
6485	9.05	9.89	-	-
6525	8.32	8.72	-	-
6565	8.50	7.84	-	-
6685	8.21	7.69	-	-
6845	8.61	6.89	-	-
6885	6.72	4.48	-	-
6925	8.21	7.19	-	-
7005	5.95	4.33	-	-
7085	6.03	5.43	-	-

Table 351 - Unwanted Emissions Within the Band Results

Test Configuration			
Frequency Range:	5925 MHz – 7125 MHz	Band:	U-NII-5 to U-NII-8
Limit Clause(s):	15.407(b)	Test Method(s):	KDB 987594 clause j

DUT Configuration			
Mode:	802.11ax HE80 SU	Duty Cycle (%):	-
Modulation Coding Scheme:	MCS2x2	DCCF (dB):	-
Antenna Configuration:	MIMO SDM	Peak Antenna Gain (dBi):	-
Active Port(s):	A+B (Core 0 + Core 1)	Active Chain Id(s):	0+1

Test Frequency (MHz)	Unwanted Emissions Within the RLAN Band Margin (dB)			
	A	B	C	D
5985	6.90	7.81	-	-
6145	8.22	8.83	-	-
6385	8.72	9.34	-	-
6465	9.23	9.56	-	-
6545	8.45	8.25	-	-
6625	8.50	7.53	-	-
6705	8.84	7.94	-	-
6785	8.62	7.42	-	-
6865	7.74	7.39	-	-
6945	7.29	6.66	-	-
7025	7.50	6.93	-	-

Table 352 - Unwanted Emissions Within the Band Results

Test Configuration			
Frequency Range:	5925 MHz – 7125 MHz	Band:	U-NII-5 to U-NII-8
Limit Clause(s):	15.407(b)	Test Method(s):	KDB 987594 clause j

DUT Configuration			
Mode:	802.11ax HE160 SU	Duty Cycle (%):	-
Modulation Coding Scheme:	MCS2x2	DCCF (dB):	-
Antenna Configuration:	MIMO SDM	Peak Antenna Gain (dBi):	-
Active Port(s):	A+B (Core 0 + Core 1)	Active Chain Id(s):	0+1

Test Frequency (MHz)	Unwanted Emissions Within the RLAN Band Margin (dB)			
	A	B	C	D
6025	8.71	8.39	-	-
6185	9.05	9.31	-	-
6345	9.04	9.92	-	-
6505	8.97	9.33	-	-
6665	9.93	8.85	-	-
6825	9.09	7.73	-	-
6985	8.13	7.47	-	-

Table 353 - Unwanted Emissions Within the Band Results

MIMO SDM RU

Protocol	Unwanted Emissions Within the RLAN Band	
	Margin (dB)	Frequency (MHz)
802.11ax HE20 RU106	6.49	6944.500
802.11ax HE20 RU26	6.28	6845.900
802.11ax HE20 RU52	6.50	6962.400

Table 354 - Unwanted Emissions Within the RLAN Band Summary Results

Figure 111 - B (Core 1) 802.11ax HE20 RU106 6995 MHz (CH209)

Figure 112 - B (Core 1) 802.11ax HE20 RU26 6875 MHz (CH185)

Figure 113 - B (Core 1) 802.11ax HE20 RU52 6995 MHz (CH209)

Test Configuration			
Frequency Range:	5925 MHz – 7125 MHz	Band:	U-NII-5 to U-NII-8
Limit Clause(s):	15.407(b)	Test Method(s):	KDB 987594 clause j

DUT Configuration			
Mode:	802.11ax HE20 RU26	Duty Cycle (%):	-
Modulation Coding Scheme:	MCS2x2	DCCF (dB):	-
Antenna Configuration:	MIMO SDM	Peak Antenna Gain (dBi):	-
Active Port(s):	A+B (Core 0 + Core 1)	Active Chain Id(s):	0+1

Test Frequency (MHz)	Unwanted Emissions Within the RLAN Band Margin (dB)			
	A	B	C	D
5955 (RU26.0)	8.55	8.91	-	-
6175 (RU26.0)	8.61	9.06	-	-
6415 (RU26.8)	9.54	8.81	-	-
6435 (RU26.0)	9.64	9.16	-	-
6475 (RU26.0)	9.24	9.07	-	-
6515 (RU26.8)	9.55	8.44	-	-
6535 (RU26.0)	8.59	7.38	-	-
6695 (RU26.0)	8.47	7.48	-	-
6855 (RU26.8)	8.34	6.75	-	-
6875 (RU26.3)	7.18	6.28	-	-
6875 (RU26.5)	7.83	6.96	-	-
6895 (RU26.0)	7.86	6.55	-	-
6995 (RU26.0)	7.28	6.44	-	-
7095 (RU26.8)	7.35	6.62	-	-

Table 355 - Unwanted Emissions Within the Band Results

Test Configuration			
Frequency Range:	5925 MHz – 7125 MHz	Band:	U-NII-5 to U-NII-8
Limit Clause(s):	15.407(b)	Test Method(s):	KDB 987594 clause j

DUT Configuration			
Mode:	802.11ax HE20 RU52	Duty Cycle (%):	-
Modulation Coding Scheme:	MCS2x2	DCCF (dB):	-
Antenna Configuration:	MIMO SDM	Peak Antenna Gain (dBi):	-
Active Port(s):	A+B (Core 0 + Core 1)	Active Chain Id(s):	0+1

Test Frequency (MHz)	Unwanted Emissions Within the RLAN Band Margin (dB)			
	A	B	C	D
5955 (RU52.37)	7.86	9.41	-	-
6175 (RU52.37)	9.29	9.63	-	-
6415 (RU52.40)	9.98	9.58	-	-
6435 (RU52.37)	9.63	9.49	-	-
6475 (RU52.37)	9.92	8.88	-	-
6515 (RU52.40)	9.69	8.75	-	-
6535 (RU52.37)	8.87	7.80	-	-
6695 (RU52.37)	8.92	7.87	-	-
6855 (RU52.40)	8.40	6.98	-	-
6875 (RU52.38)	8.07	6.88	-	-
6875 (RU52.39)	8.34	6.78	-	-
6895 (RU52.37)	7.60	6.57	-	-
6995 (RU52.37)	7.65	6.50	-	-
7095 (RU52.40)	7.87	7.35	-	-

Table 356 - Unwanted Emissions Within the Band Results

Test Configuration			
Frequency Range:	5925 MHz – 7125 MHz	Band:	U-NII-5 to U-NII-8
Limit Clause(s):	15.407(b)	Test Method(s):	KDB 987594 clause j

DUT Configuration			
Mode:	802.11ax HE20 RU106	Duty Cycle (%):	-
Modulation Coding Scheme:	MCS2x2	DCCF (dB):	-
Antenna Configuration:	MIMO SDM	Peak Antenna Gain (dBi):	-
Active Port(s):	A+B (Core 0 + Core 1)	Active Chain Id(s):	0+1

Test Frequency (MHz)	Unwanted Emissions Within the RLAN Band Margin (dB)			
	A	B	C	D
5955 (RU106.53)	8.07	8.67	-	-
6175 (RU106.53)	8.76	9.29	-	-
6415 (RU106.54)	9.54	9.22	-	-
6435 (RU106.53)	9.44	9.85	-	-
6475 (RU106.53)	9.41	8.97	-	-
6515 (RU106.54)	10.52	9.03	-	-
6535 (RU106.53)	8.43	8.19	-	-
6695 (RU106.53)	8.84	7.81	-	-
6855 (RU106.54)	8.63	6.81	-	-
6875 (RU106.53)	8.07	6.78	-	-
6875 (RU106.54)	8.39	6.88	-	-
6895 (RU106.53)	7.54	6.56	-	-
6995 (RU106.53)	7.70	6.49	-	-
7095 (RU106.54)	7.99	7.34	-	-

Table 357 - Unwanted Emissions Within the Band Results

TxBF

Protocol	Unwanted Emissions Within the RLAN Band	
	Margin (dB)	Frequency (MHz)
802.11ax HE40 SU	0.98	6466.500
802.11ax HE80 SU	1.30	6662.200

Table 358 - Unwanted Emissions Within the RLAN Band Summary Results

Figure 114 - B (Core 1) 802.11ax HE40 SU 6445 MHz (CH99)

Figure 115 - B (Core 1) 802.11ax HE80 SU 6785 MHz (CH167)

Test Configuration			
Frequency Range:	5925 – 6525 MHz	Band:	U-NII-5, U-NII-6
Limit Clause(s):	15.407(b)	Test Method(s):	KDB 987594 clause j

DUT Configuration			
Mode:	802.11ax HE40 SU	Duty Cycle (%):	-
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	-
Antenna Configuration:	TxBF	Peak Antenna Gain (dBi):	-
Active Port(s):	A+B (Core 0 + Core 1)	Active Chain Id(s):	0+1

Test Frequency (MHz)	Unwanted Emissions Within the RLAN Band Margin (dB)			
	A	B	C	D
6285	3.34	5.34	-	-
6325	1.91	2.32	-	-
6405	3.15	2.36	-	-
6445	2.23	0.98	-	-
6485	3.45	4.25	-	-

Table 359 - Unwanted Emissions Within the Band Results

Test Configuration			
Frequency Range:	5925 – 7125 MHz	Band:	U-NII-5, U-NII-6, U-NII-7, U-NII-8
Limit Clause(s):	15.407(b)	Test Method(s):	KDB 987594 clause j

DUT Configuration			
Mode:	802.11ax HE80 SU	Duty Cycle (%):	-
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	-
Antenna Configuration:	TxBF	Peak Antenna Gain (dBi):	-
Active Port(s):	A+B (Core 0 + Core 1)	Active Chain Id(s):	0+1

Test Frequency (MHz)	Unwanted Emissions Within the RLAN Band Margin (dB)			
	A	B	C	D
5985	3.17	4.05	-	-
6145	4.59	4.67	-	-
6385	1.80	4.19	-	-
6465	4.66	4.32	-	-
6545	2.41	3.82	-	-
6625	3.11	2.21	-	-
6705	3.01	2.40	-	-
6785	3.06	1.30	-	-
6865	2.94	2.03	-	-
6945	2.02	3.11	-	-
7025	2.57	1.94	-	-

Table 360 - Unwanted Emissions Within the Band Results

FCC 47 CFR Part 15, Limit Clause 15.407(b)(6)

For transmitters operating within the 5.925–7.125 GHz bands:

Power spectral density must be suppressed by 20 dB at 1 MHz outside of channel edge, by 28 dB at one channel bandwidth from the channel center, and by 40 dB at one- and one-half times the channel bandwidth away from channel center. At frequencies between one megahertz outside an unlicensed device's channel edge and one channel bandwidth from the center of the channel, the limits must be linearly interpolated between 20 dB and 28 dB suppression, and at frequencies between one and one- and onehalf times an unlicensed device's channel bandwidth, the limits must be linearly interpolated between 28 dB and 40 dB suppression. Emissions removed from the channel center by more than one- and one-half times the channel bandwidth must be suppressed by at least 40 dB.

ISED RSS-248, Limit Clause 4.7.2(b)

e.i.r.p. spectral density of unwanted emissions falling into the 5925-7125 MHz band shall be attenuated (in dB) below the reference power spectral density by:

i. 20 dB at 1 MHz away from the channel edge; and
ii. a linearly interpolated value between 20 dB and 28 dB at frequencies between 1 MHz outside of channel edge and one (1) channel bandwidth from the operating channel centre, respectively; and
iii. 28 dB at one (1) channel bandwidth away from the operating channel centre; and
iv. a linearly interpolated value between 28 dB and 40 dB at frequencies between one (1) channel bandwidth from the channel centre and one- and one-half (1.5) times the channel bandwidth away from the operating channel centre, respectively; and
v. 40 dB at one- and one-half (1.5) times the channel bandwidth away from the channel centre; and
vi. a minimum of 40 dB at frequencies that are further away than one and one-half (1.5) times the channel bandwidth from the channel centre.

2.5.7 Test Location and Test Equipment Used

This test was carried out in RF Laboratory 14.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Hygrometer	Rotronic	I-1000	3068	12	21-Sep-2023
1800-6000 MHz Power Splitter	Mini-Circuits	ZN2PD-63-S+	4055	-	O/P Mon
Multi-GNSS Simulator (GPS)	Spirent	GSS6700	4596	12	22-Aug-2023
Power splitter - 2 port	Mini-Circuits	ZN2PD-63-S+	4743	12	30-Nov-2023
EXA	Keysight Technologies	N9010B	4968	24	19-Jan-2024
Network Analyser	Keysight Technologies	E5063A	5018	12	29-Sep-2023
Cable (18 GHz)	Rosenberger	LU7-071-1000	5096	12	23-Oct-2023
Cable (18 GHz)	Rosenberger	LU7-071-1000	5100	12	23-Oct-2023
Electronic Calibration Module	Keysight Technologies	85093C	5188	12	09-Sep-2023
AC Programmable Power Supply	iTech	IT7324	5227	-	O/P Mon
Attenuator 5W 30dB DC-18GHz	Aaren	AT40A-4041-D18-30	5504	12	21-Apr-2023
Directional Coupler 2-8GHz	RF-Lambda	RFDC2G8G10	5765	-	O/P Mon
Directional Coupler 2-8GHz	RF-Lambda	RFDC2G8G10	5766	-	O/P Mon
1500VA AC Power Supply	iTech	IT7324	5907	-	O/P Mon
MXA Signal Analyser	Keysight Technologies	N9020B	5919	24	13-Mar-2024
Signal Conditioning Unit	TUV SUD	SPECTRUM SCU003	5932	12	10-May-2023
Digital Multimeter	Fluke	115	6145	12	17-Jun-2023
Signal Conditioning Unit	TUV SUD	SCU005	6350	-	O/P Mon

Table 361

O/P Mon - Output Monitored using calibrated equipment

2.6 Spurious Radiated Emissions

2.6.1 Specification Reference

FCC 47 CFR Part 15E, Clause 15.209 and 15.407 (b)
ISED RSS-248, Clause 4.7
ISED RSS-GEN, Clause 6.13 and 8.9

2.6.2 Equipment Under Test and Modification State

A2873, S/N: P6Y46G4WP2 - Modification State 0

2.6.3 Date of Test

02-March-2023 to 06-March-2023

2.6.4 Test Method

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

Tests were performed in HE20 CDD in 2TX MIMO mode, with measurements undertaken from 30 MHz to 40 GHz on channels 45 (6175 MHz), 105 (6475 MHz), 149 (6695 MHz), and 209 (6995 MHz).

For the purpose of this testing, spurious emissions were limited to 1 GHz to 40 GHz on all other test channels.

All testing was performed using the lowest data rate/modulation scheme for the applicable mode.

Plots for average measurements were taken in accordance with ANSI C63.10, clause 12.7.7.2 with max-hold trace to characterize the EUT. Where emissions were detected, final average measurements were taken in accordance with ANSI C63.10, clause 4.1.4.2.2.

The plots shown are the characterization of the EUT. The limits on the plots represent the most stringent case for restricted bands, (54/74 dBuV/m @ 3 m and 64/84 dBuV/m @ 1m) when compared to -27 dBm/MHz RMS EIRP and -7dBM/MHz Peak EIRP outside restricted bands. The limits shown have been used as a threshold to determine where further measurements are necessary. Where results are within 10dB 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^(Field Strength in dBµV/m/20).

EIRP was converted to field strength at 3m using the following formula:
Field Strength (dBµV/m at 3 m) = EIRP (dBm) + 95.2 dB

2.6.5 Test Setup Diagram

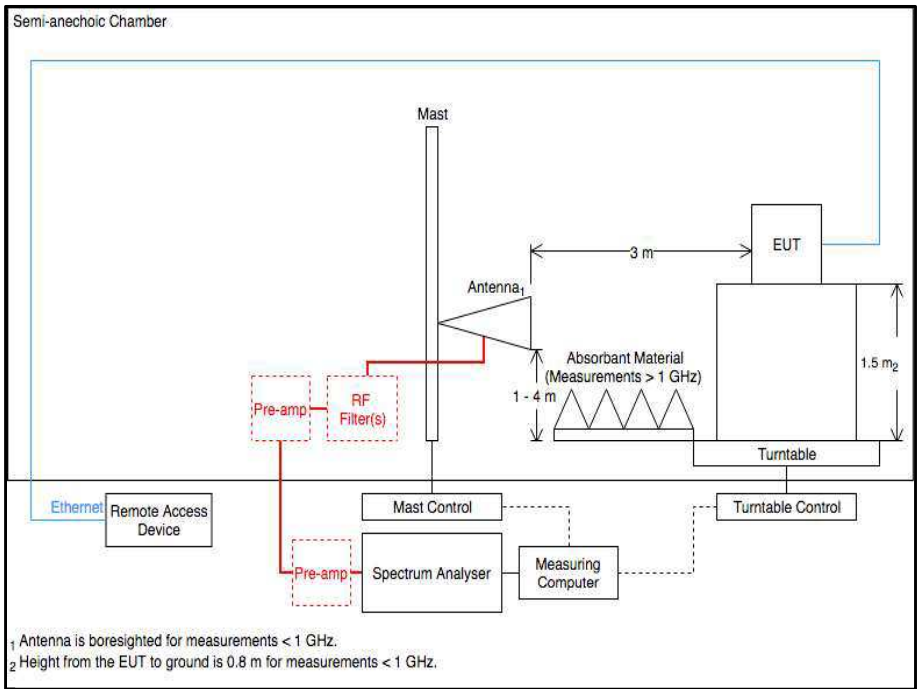

Figure 116 - Radiated Emissions Test Setup Diagram

2.6.6 Environmental Conditions

Ambient Temperature	21.5 - 23.2 °C
Relative Humidity	33.9 - 38.3 %

2.6.7 Test Results

6 GHz WLAN

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

Table 362 - U-NII-5 - 5955 MHz (CH1), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz

*No emissions found within 10 dB of the limit.

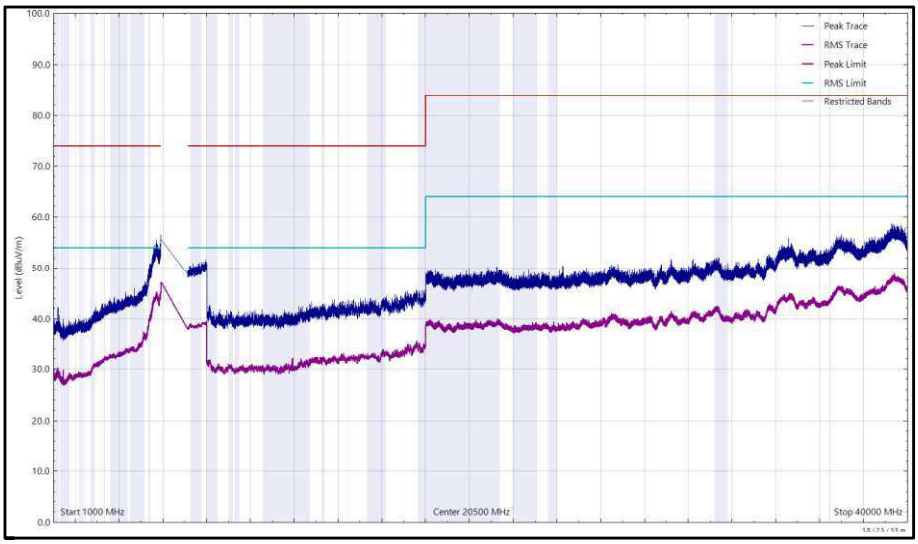

Figure 117 - U-NII-5 - 5955 MHz (CH1), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

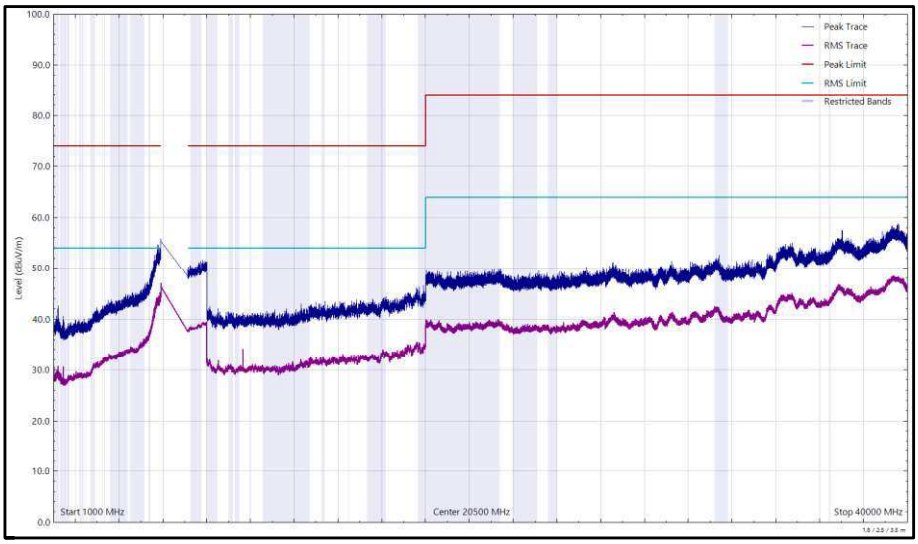

Figure 118 - U-NII-5 - 5955 MHz (CH1), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

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

Table 363 - U-NII-5 - 6175 MHz (CH45), HE20, SU, CDD, Core 0 + Core 1, 30 MHz to 40 GHz

*No emissions found within 10 dB of the limit.

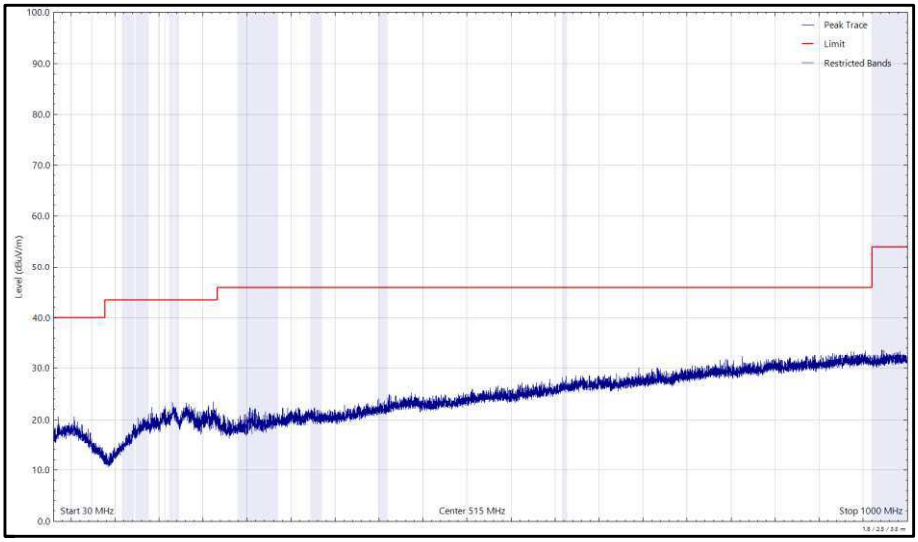

Figure 119 - U-NII-5 - 6175 MHz (CH45), HE20, SU, CDD, Core 0 + Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

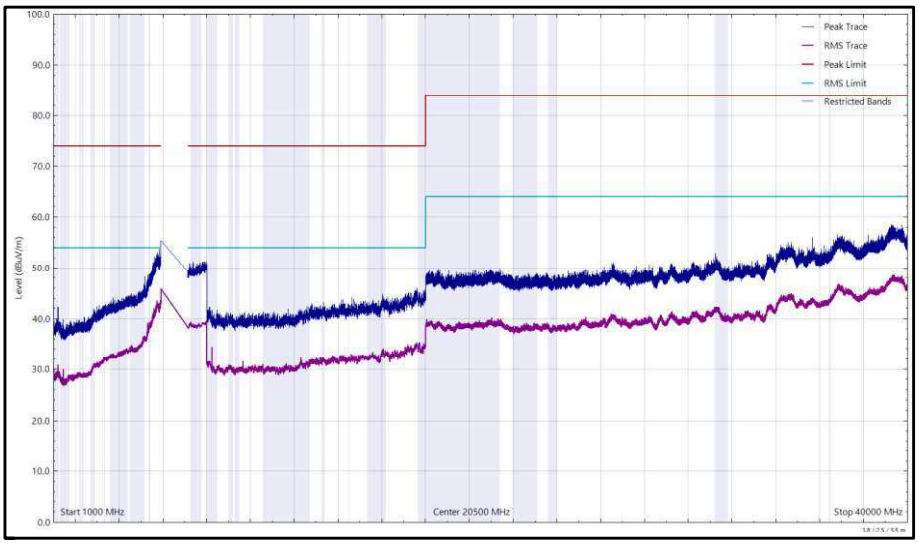

Figure 120 - U-NII-5 - 6175 MHz (CH45), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

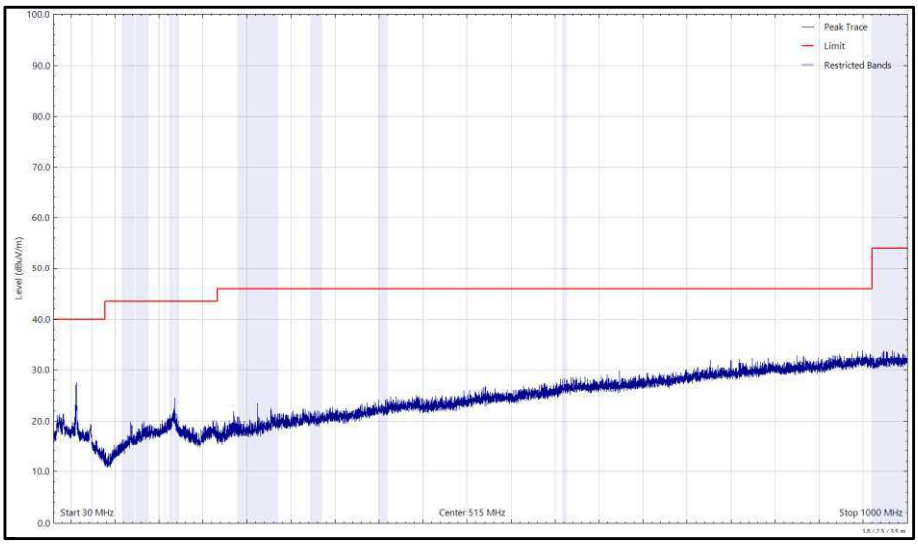

Figure 121 - U-NII-5 - 6175 MHz (CH45), HE20, SU, CDD, Core 0 + Core 1, 30 MHz to 1 GHz, Vertical (Peak)

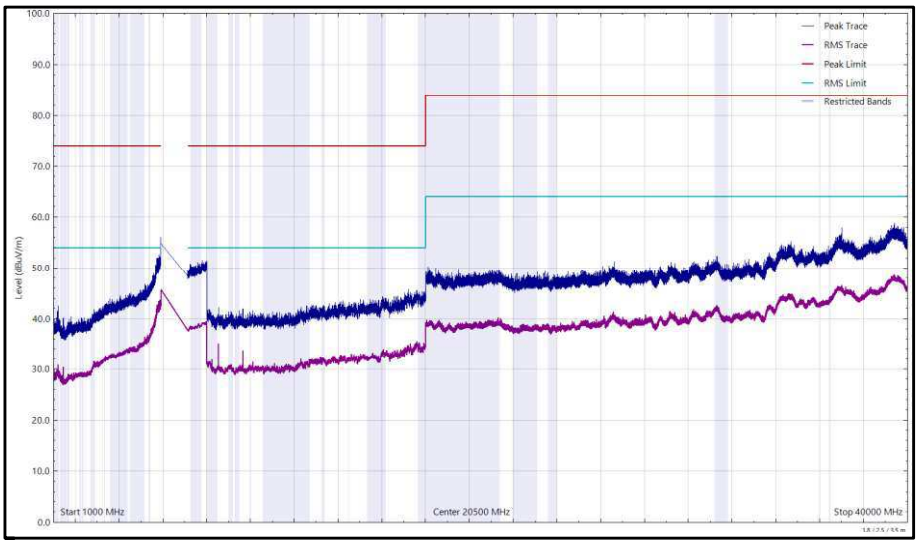

Figure 122 - U-NII-5 - 6175 MHz (CH45), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

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

Table 364 - U-NII-5 - 6415 MHz (CH93), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz

*No emissions found within 10 dB of the limit.

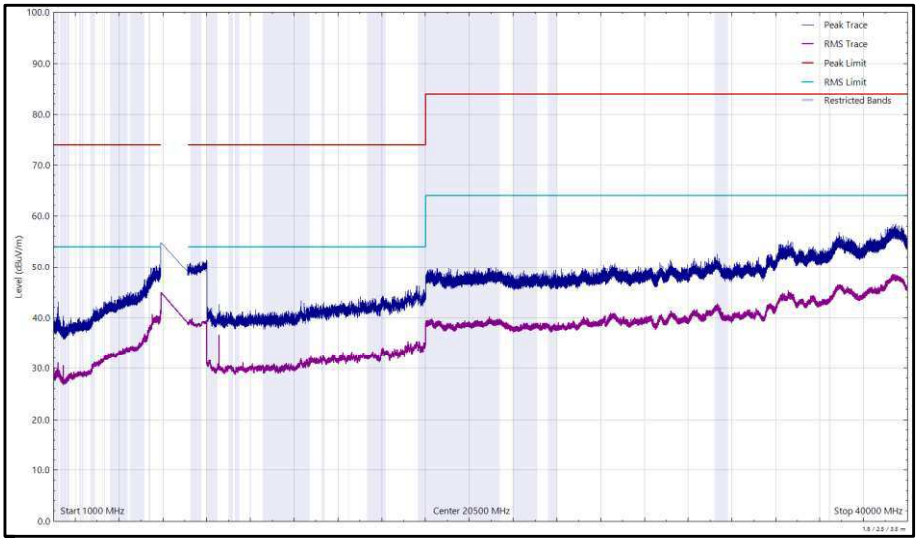

Figure 123 - U-NII-5 - 6415 MHz (CH93), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

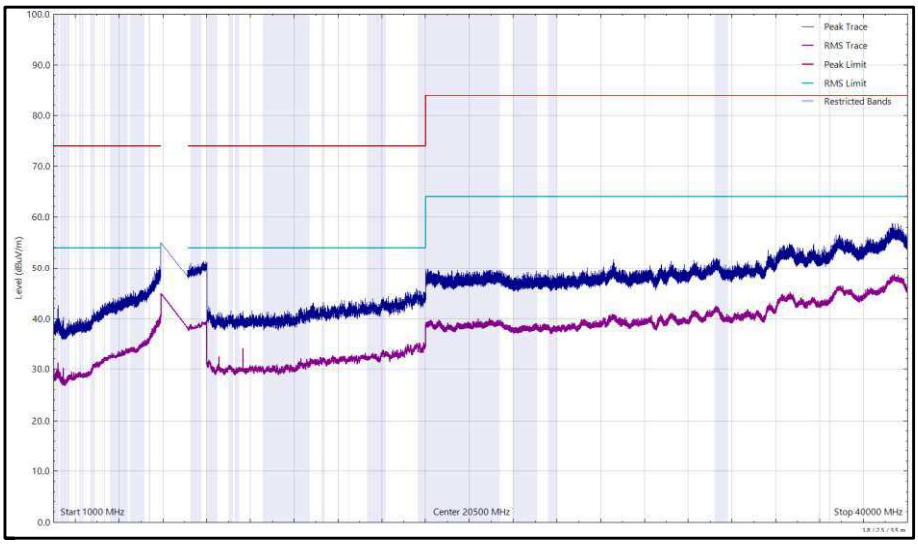

Figure 124 - U-NII-5 - 6415 MHz (CH93), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

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

Table 365 - U-NII-6 - 6435 MHz (CH97), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz

*No emissions found within 10 dB of the limit.

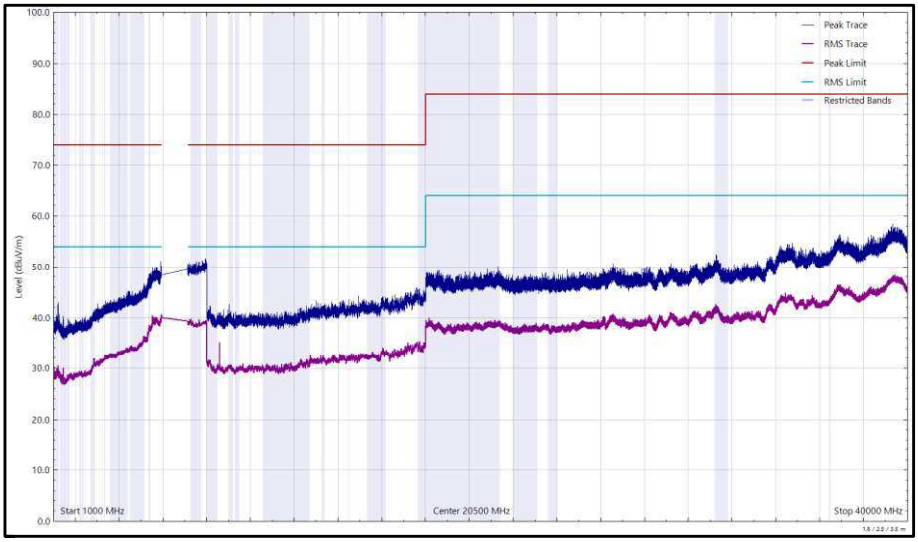

Figure 125 - U-NII-6 - 6435 MHz (CH97), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

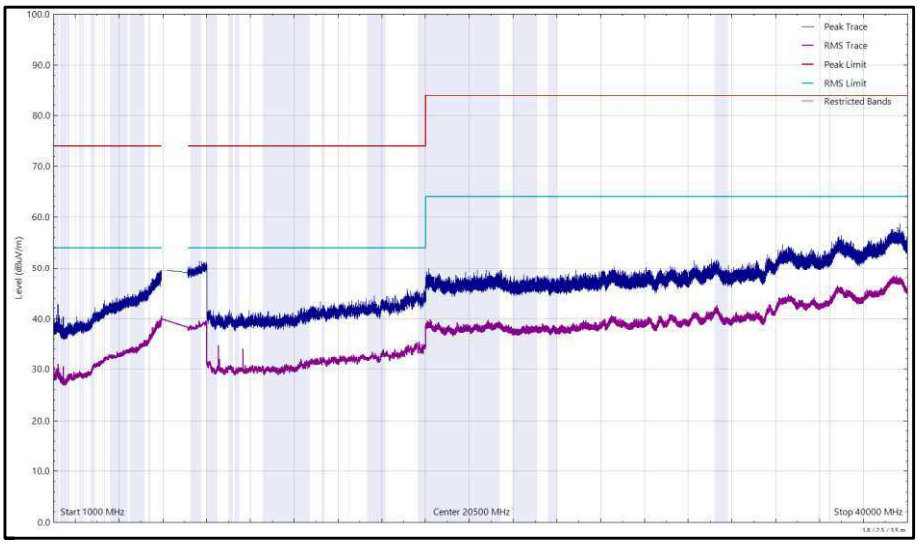

Figure 126 - U-NII-6 - 6435 MHz (CH97), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

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

Table 366 - U-NII-6 - 6475 MHz (CH105), HE20, SU, CDD, Core 0 + Core 1, 30 MHz to 40 GHz

*No emissions found within 10 dB of the limit.

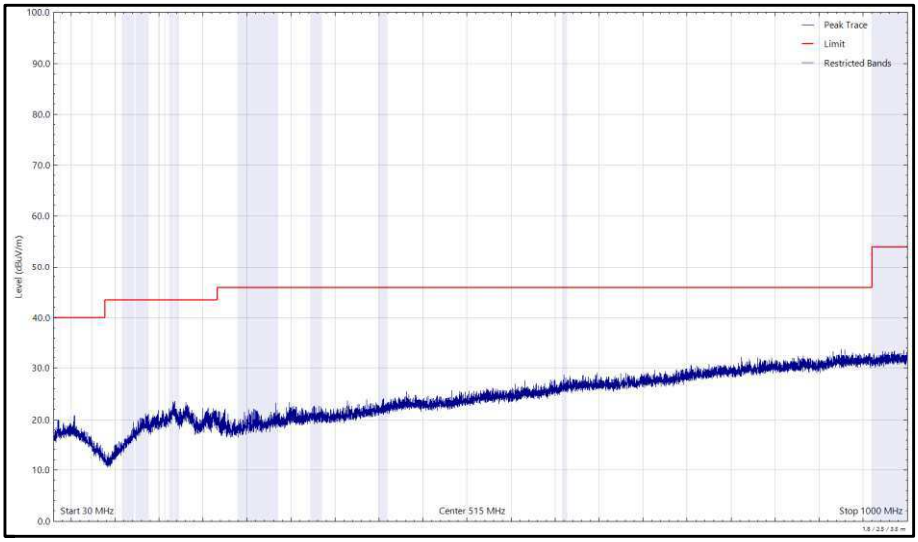

Figure 127 - U-NII-6 - 6475 MHz (CH105), HE20, SU, CDD, Core 0 + Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

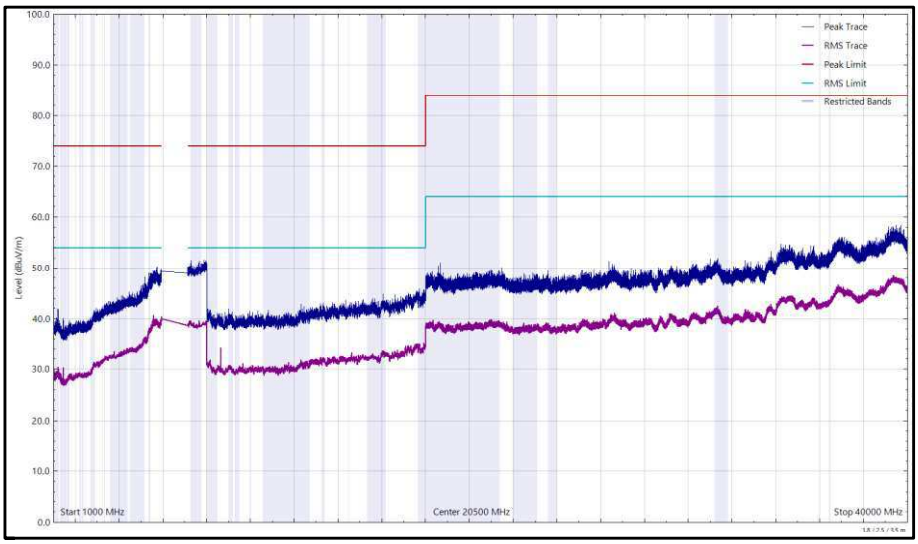

Figure 128 - U-NII-6 - 6475 MHz (CH105), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

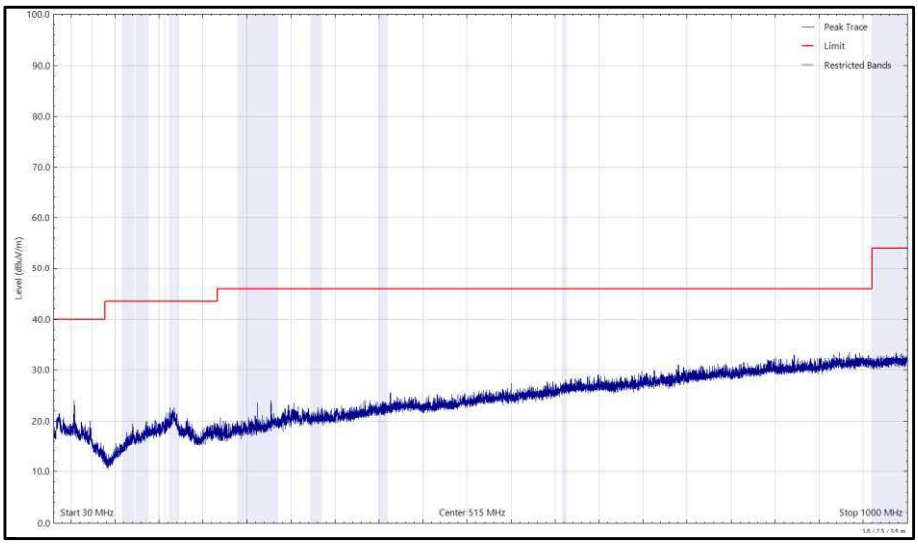

Figure 129 - U-NII-6 - 6475 MHz (CH105), HE20, SU, CDD, Core 0 + Core 1, 30 MHz to 1 GHz, Vertical (Peak)

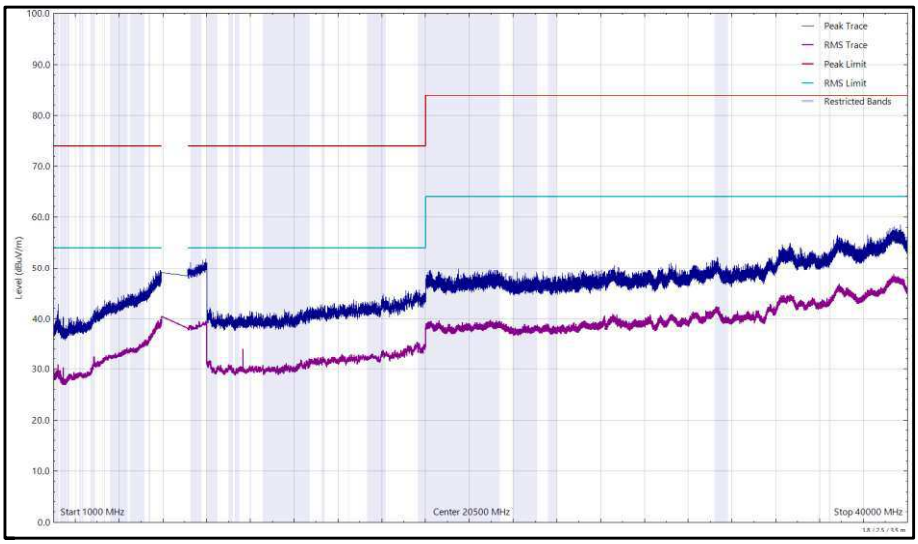

Figure 130 - U-NII-6 - 6475 MHz (CH105), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

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

Table 367 - U-NII-6 - 6515 MHz (CH113), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz

*No emissions found within 10 dB of the limit.

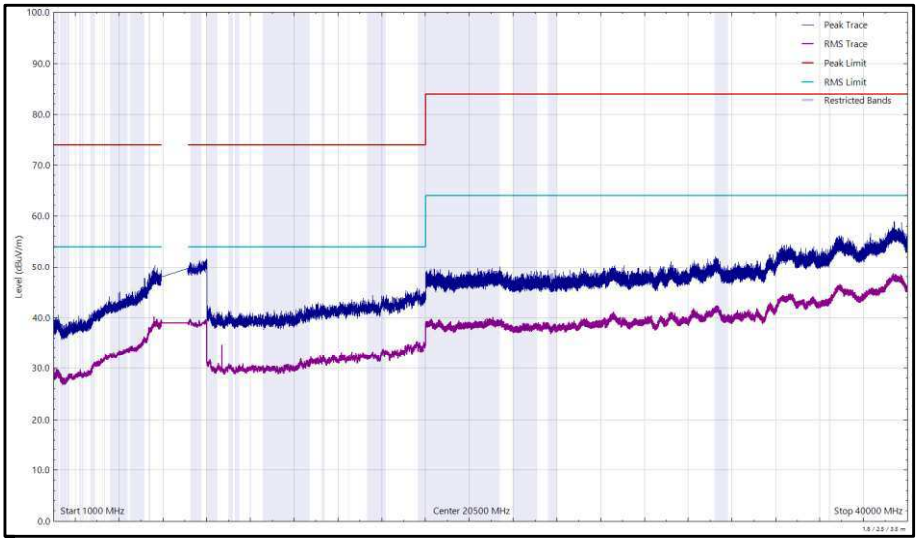

Figure 131 - U-NII-6 - 6515 MHz (CH113), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

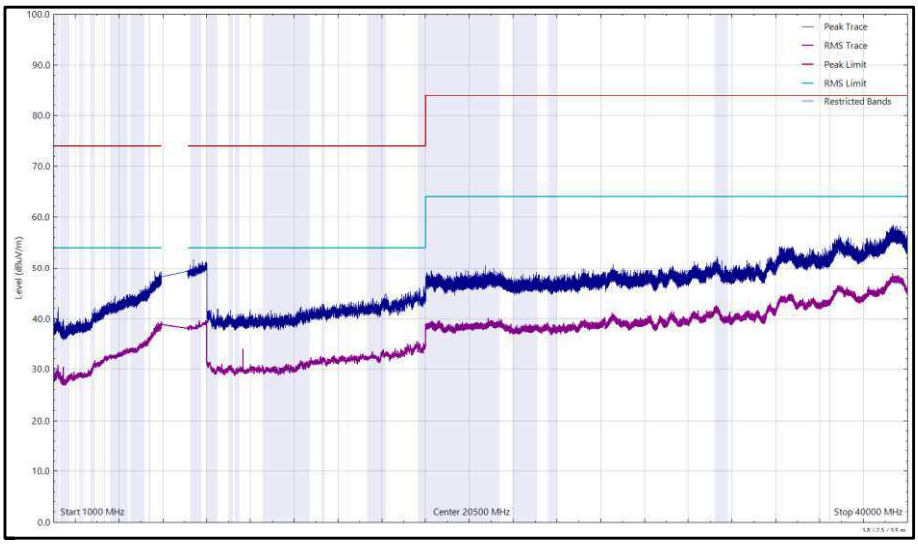

Figure 132 - U-NII-6 - 6515 MHz (CH113), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

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

Table 368 - U-NII-7 - 6535 MHz (CH117), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz

*No emissions found within 10 dB of the limit.

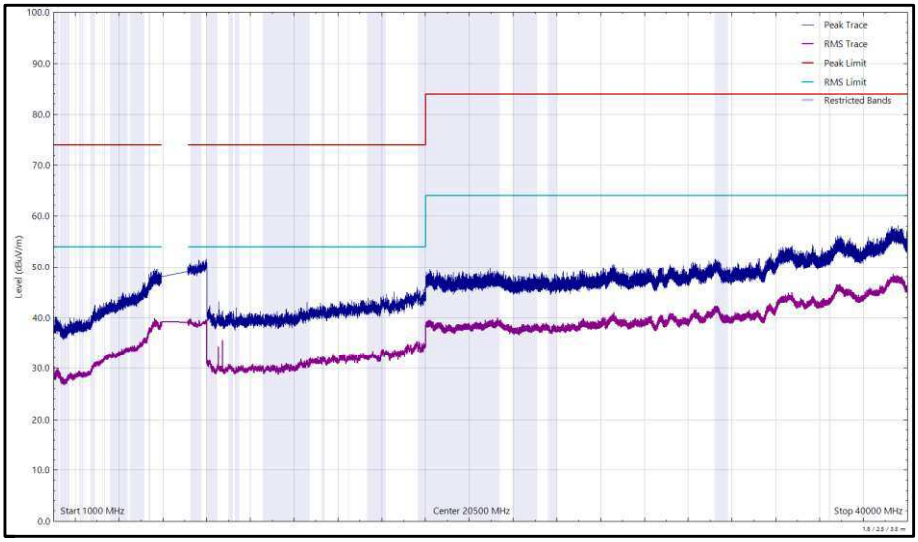

Figure 133 - U-NII-7 - 6535 MHz (CH117), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

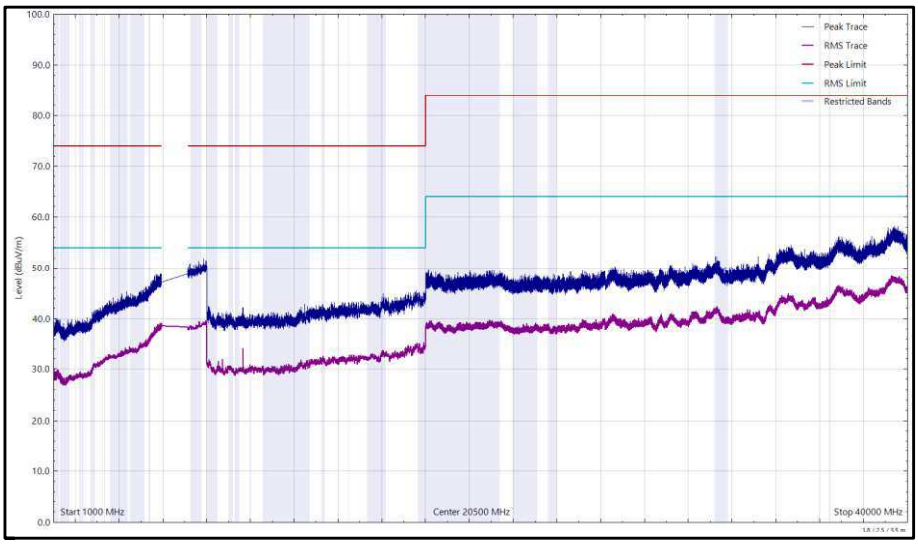

Figure 134 - U-NII-7 - 6535 MHz (CH117), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

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

Table 369 - U-NII-7 - 6695 MHz (CH149), HE20, SU, CDD, Core 0 + Core 1, 30 MHz to 40 GHz

*No emissions found within 10 dB of the limit.

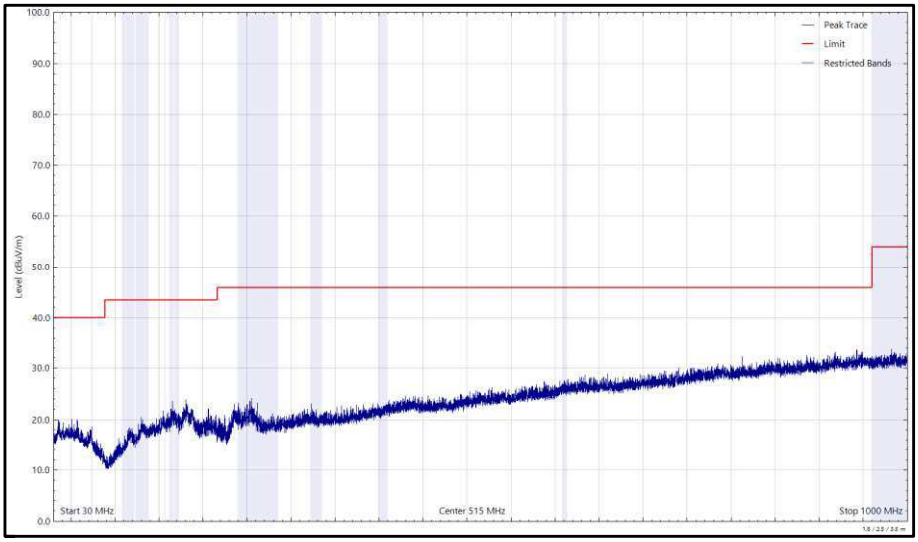

Figure 135 - U-NII-7 - 6695 MHz (CH149), HE20, SU, CDD, Core 0 + Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

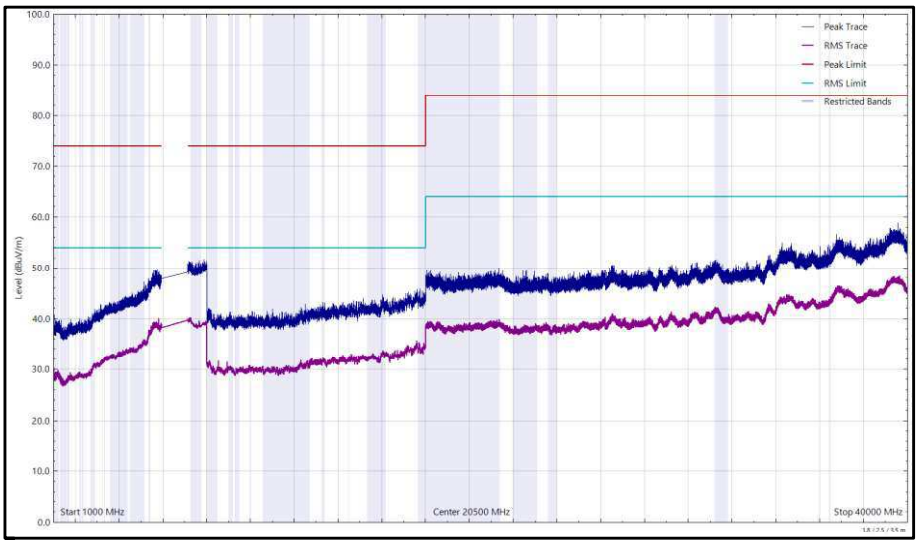

Figure 136 - U-NII-7 - 6695 MHz (CH149), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

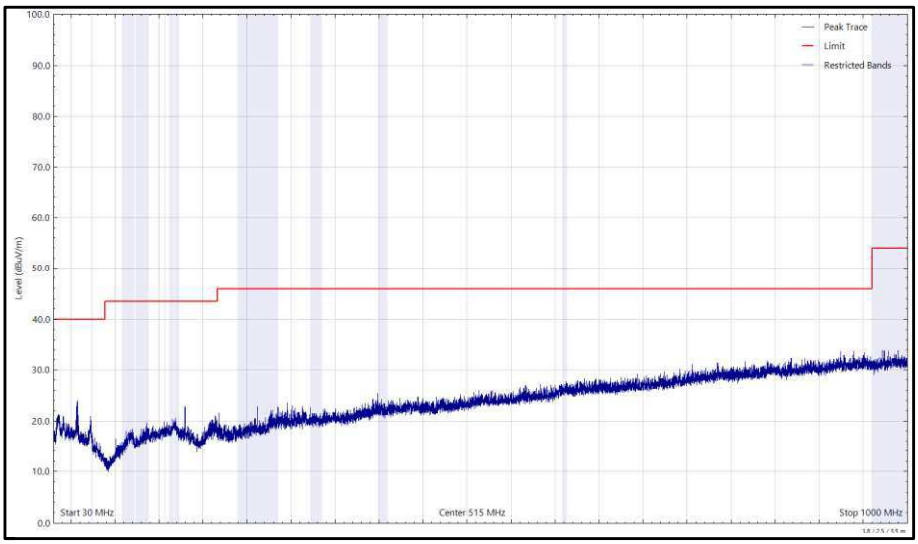

Figure 137 - U-NII-7 - 6695 MHz (CH149), HE20, SU, CDD, Core 0 + Core 1, 30 MHz to 1 GHz, Vertical (Peak)

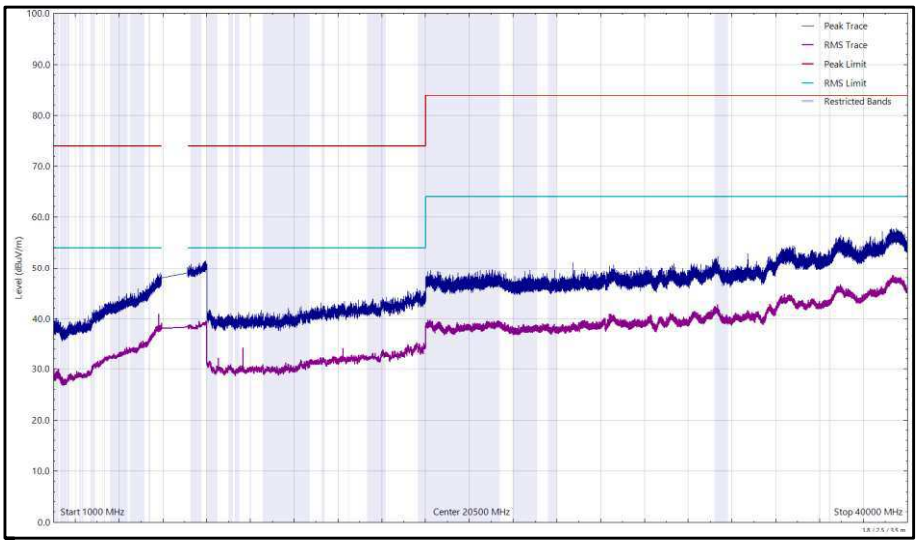

Figure 138 - U-NII-7 - 6695 MHz (CH149), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

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

Table 370 - U-NII-7 - 6855 MHz (CH181), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz

*No emissions found within 10 dB of the limit.

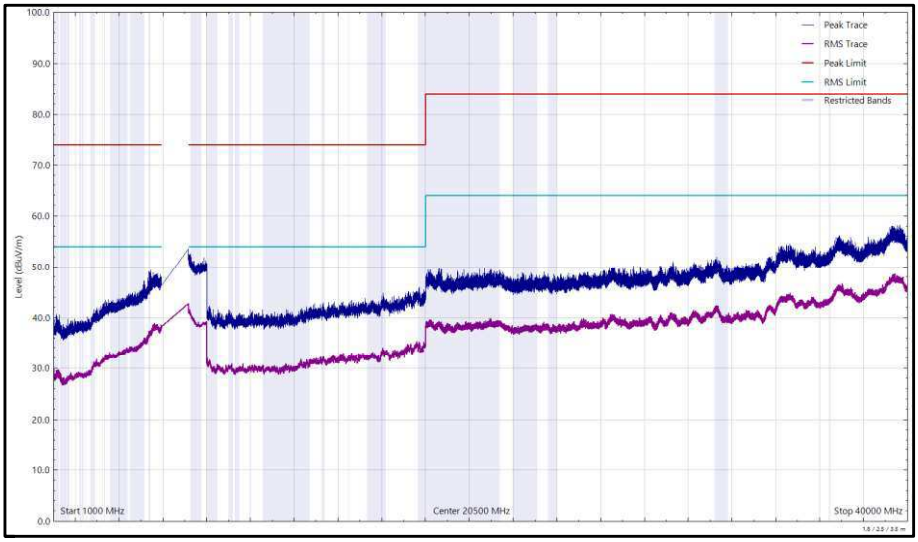

Figure 139 - U-NII-7 - 6855 MHz (CH181), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

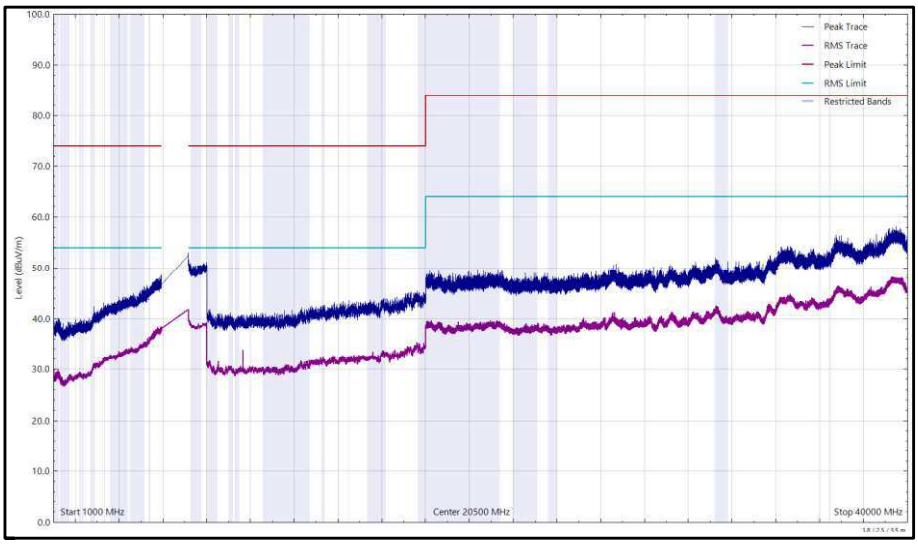

Figure 140 - U-NII-7 - 6855 MHz (CH181), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

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

Table 371 - U-NII-8 - 6895 MHz (CH189), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz

*No emissions found within 10 dB of the limit.

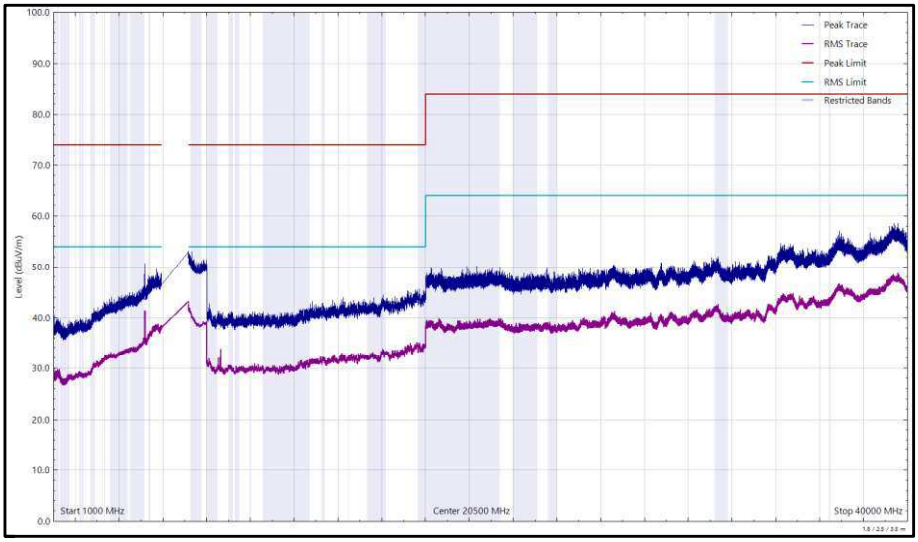

Figure 141 - U-NII-8 - 6895 MHz (CH189), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

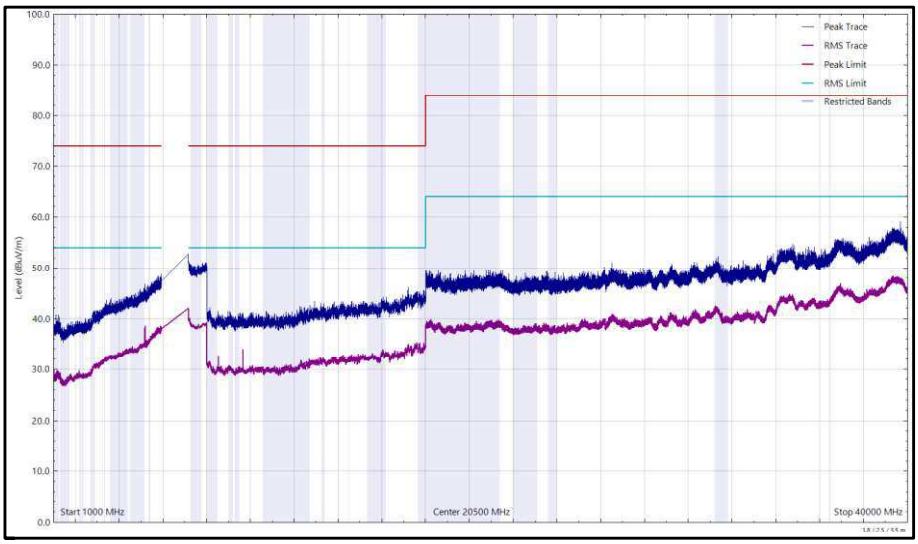

Figure 142 - U-NII-8 - 6895 MHz (CH189), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

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

Table 372 - U-NII-8 - 6995 MHz (CH209), HE20, SU, CDD, Core 0 + Core 1, 30 MHz to 40 GHz

*No emissions found within 10 dB of the limit.

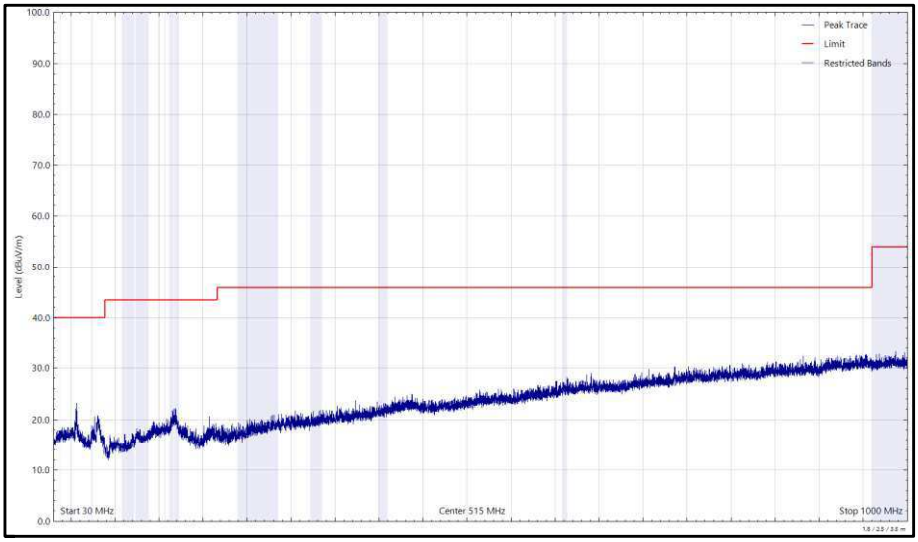

Figure 143 - U-NII-8 - 6995 MHz (CH209), HE20, SU, CDD, Core 0 + Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

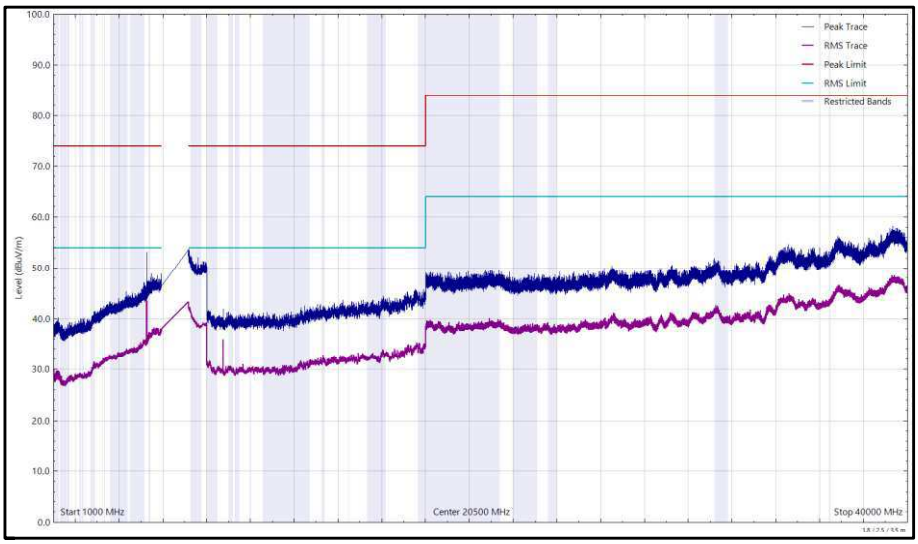

Figure 144 - U-NII-8 - 6995 MHz (CH209), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

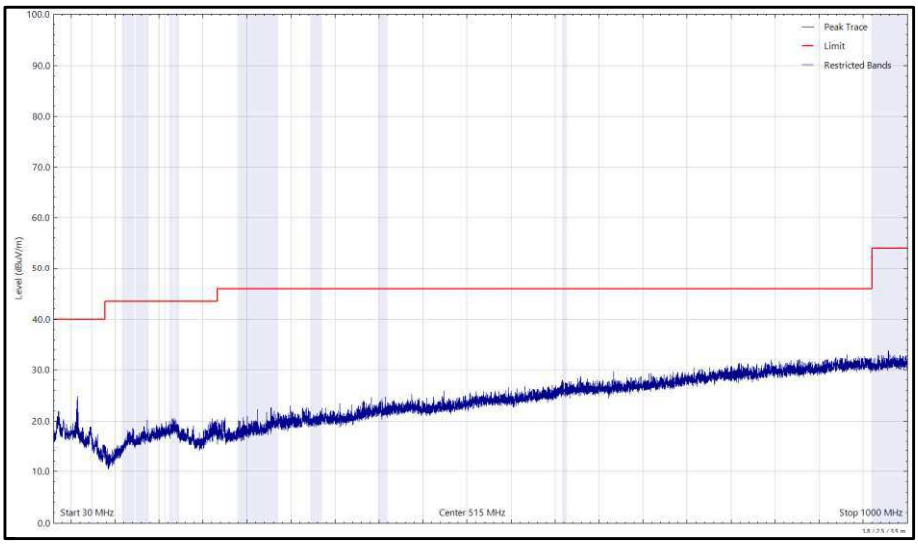

Figure 145 - U-NII-8 - 6995 MHz (CH209), HE20, SU, CDD, Core 0 + Core 1, 30 MHz to 1 GHz, Vertical (Peak)

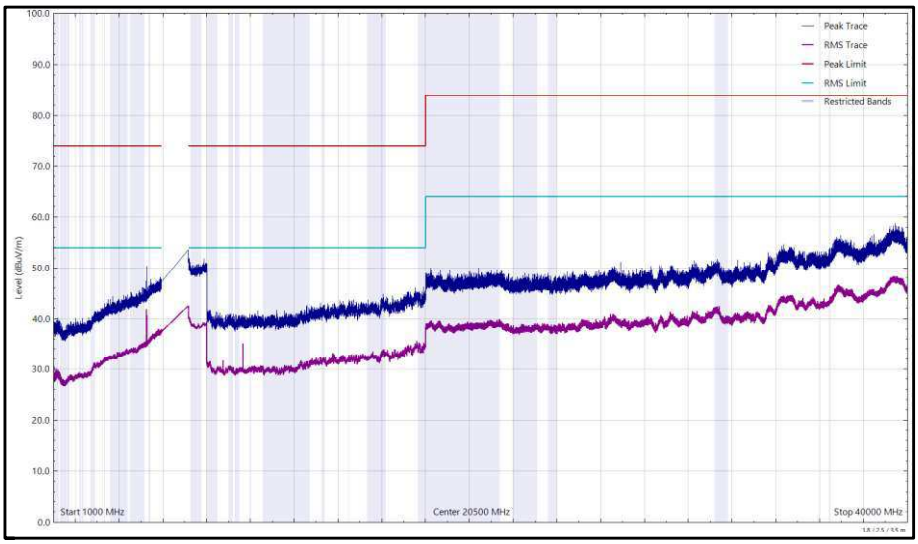

Figure 146 - U-NII-8 - 6995 MHz (CH209), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

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

Table 373 - U-NII-8 - 7115 MHz (CH233), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz

*No emissions found within 10 dB of the limit.

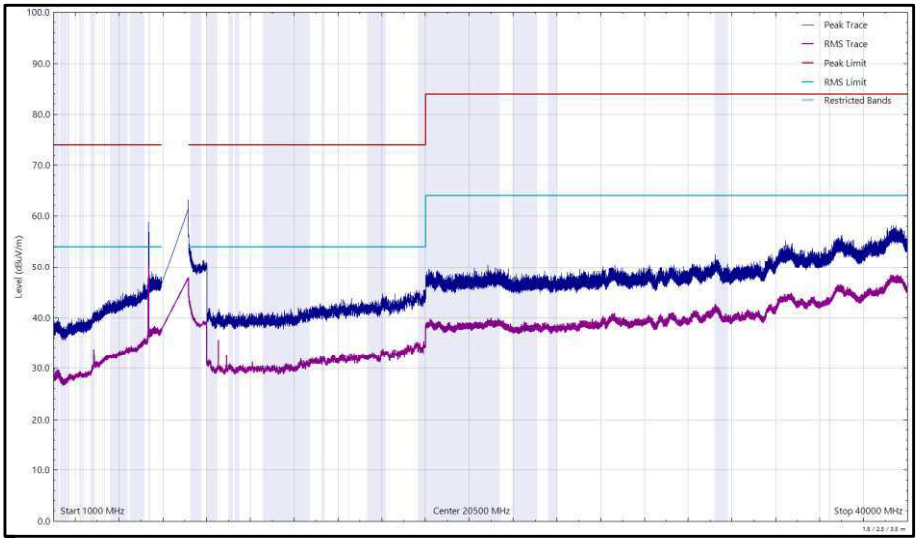

Figure 147 - U-NII-8 - 7115 MHz (CH233), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

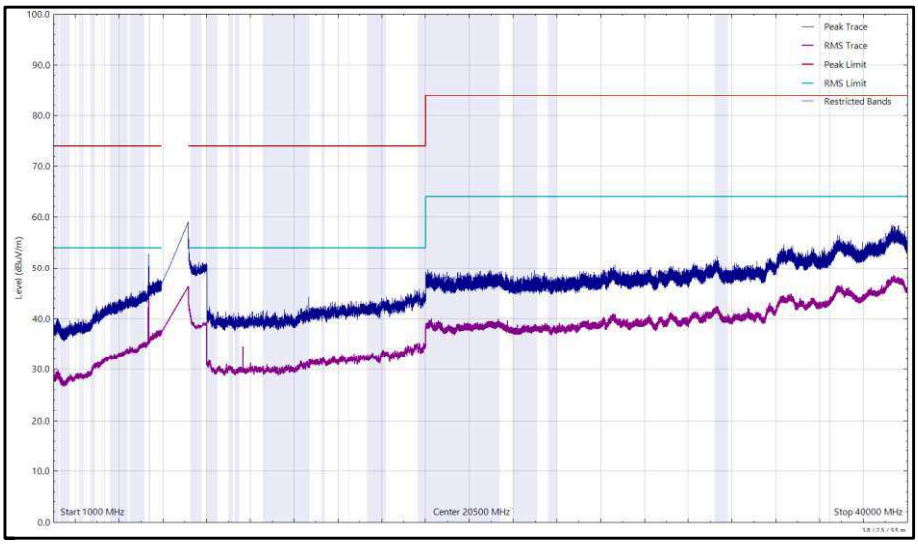

Figure 148 - U-NII-8 - 7115 MHz (CH233), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

FCC 47 CFR Part 15, Limit Clause 15.407(b)(5) and 15.209

Emissions not falling within the restricted bands listed in 15.205:

For transmitters operating within the 5.925–7.125 GHz band: Any emissions outside of the 5.925–7.125 GHz band must not exceed an e.i.r.p. of -27 dBm/MHz.

Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in 15.209.

Emissions within the restricted bands listed in FCC 47 CFR Part 15.205:

Frequency (MHz)	Field Strength Limit at 3m (µV/m)	Field Strength Limit at 3m (dBµV/m)
30 to 88	100	40.00
88 to 216	150	43.52
216 to 960	200	46.02
Above 960	500	53.98

Table 374 - Radiated Emissions Limit Table (FCC)

ISED RSS-248, Limit Clause 4.7.2(a) and ISED RSS-GEN, Limit Clause 8.9

Emissions not falling within the restricted bands listed in ISED RSS-GEN, Clause 8.10:

Any emissions outside of the 5925-7125 MHz band shall not exceed –27 dBm/MHz e.i.r.p.

Any emissions below 1000 MHz shall meet the general field strength limits specified in RSS-Gen

Emissions falling within the restricted bands listed in ISED RSS-GEN, Clause 8.10:

Frequency (MHz)	Field Strength Limit at 3m (µV/m)	Field Strength Limit at 3m (dBµV/m)
30 to 88	100	40.00
88 to 216	150	43.52
216 to 960	200	46.02
Above 960	500	53.98

Table 375 - Radiated Emissions Limit Table (ISED)

2.6.8 Test Location and Test Equipment Used

This test was carried out in RF Chamber 14.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Emissions Software	TUV SUD	EmX V3.1.10	5125	-	Software
EMI Test Receiver	Rohde & Schwarz	ESW44	5912	12	17-Mar-2023
Test Receiver	Rohde & Schwarz	ESW44	5914	12	24-Feb-2024
Cable (K Type 2m)	Junkosha	MWX241-02000KMSKMS/B	5935	12	14-May-2023
DRG Horn Antenna (7.5-18GHz)	Schwarzbeck	HWRD750	5941	12	29-May-2023
TRILOG Super Broadband Test Antenna	Schwarzbeck	VULB 9168	5943	24	03-Feb-2024
1500W (300V 12A) AC Power Supply	iTech	IT7324	5955	-	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
Tilt Antenna Mast	Maturo Gmbh	BAM4.5-P	5961	-	TU
Turntable	Maturo Gmbh	TT1.5SI	5962	-	TU
Cable (SMA to SMA 1m)	Junkosha	MWX221-01000AMSAMS/A	5997	12	06-Jun-2023
Cable (SMA to SMA 6.5m)	Junkosha	MWX221-06500AMSAMS/B	6003	12	07-Jun-2023
Cable (SMA to SMA 1m)	Junkosha	MWX221-01000AMSAMS/A	6008	12	06-Jun-2023
Cable (N to N 1m)	Junkosha	MWX221-01000AMSAMS/B	6009	12	07-Jun-2023
Cable (N to N 7m)	Junkosha	MWX221-07000NMSNMS/B	6016	12	05-Jun-2023
Cable (N to N 8m)	Junkosha	MWX221-08000NMSNMS/A	6017	12	05-Jun-2023
Horn Antenna (1-10 GHz)	Schwarzbeck	BBHA9120B	6141	12	21-Jun-2023
SAC Switch Unit	TUV SUD	TUV_SSU_001	6144	12	05-Dec-2023
Digital Multimeter	Fluke	115	6147	12	16-Jun-2023
Humidity & Temperature meter	R.S Components	1364	6149	12	17-Jun-2023
Double Ridge Active Horn Antenna (18-40 GHz)	Com-Power	AHA-840	6188	24	02-Jun-2024
8 GHz Highpass Filter	Wainwright	WHKX 7150 8000 18000 50SS	6194	12	15-Jul-2023
Pre Amp 8 - 18 GHz	Wright Technologies	APS06 0061	6199	12	19-Jul-2023
Attenuator 4dB	Pasternack	PE7074-4	6202	24	16-Jul-2024
Cable (SMA to SMA 20cm)	TUV SUD	MH-FH 8-18	6215	12	25-Jul-2023

Table 376

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

2.7 Contention Based Protocol

2.7.1 Specification Reference

FCC 47 CFR Part 15E, Clause 15.407 (d)(6)
ISED RSS-248, Clause 4.8

2.7.2 Equipment Under Test and Modification State

A2873, S/N: CQYY9K32V0 - Modification State 0

2.7.3 Date of Test

23-March-2023

2.7.4 Test Method

This test was performed in accordance with KDB 987594 D02, clause I.

The AWGN signal level was initially set at a level much less than the required threshold level (<< -62 dBm) it was verified at this point that transmissions from the device under test (DUT) were present. The signal level was gradually increased until it was observed that the DUT continuously ceased transmissions with the AWGN signal present, i.e. no partial transmissions other than short control signalling transmissions.

The AWGN Signal level recorded is the level in to the DUT's receiver, corrected for all cable losses. This level was adjusted in 1 dB steps. Where the ‘minimal’ and ‘on’ levels are recorded as the same, the EUT went from fully transmitting to ceasing entirely within the 1 dB step change. The minimum antenna gain value was then used to correct the level as described in KDB 987594 D04.

Timing plots showing verification that transmissions from the DUT responded to the interferer have been included in the test results below.

2.7.5 Test Setup Diagram

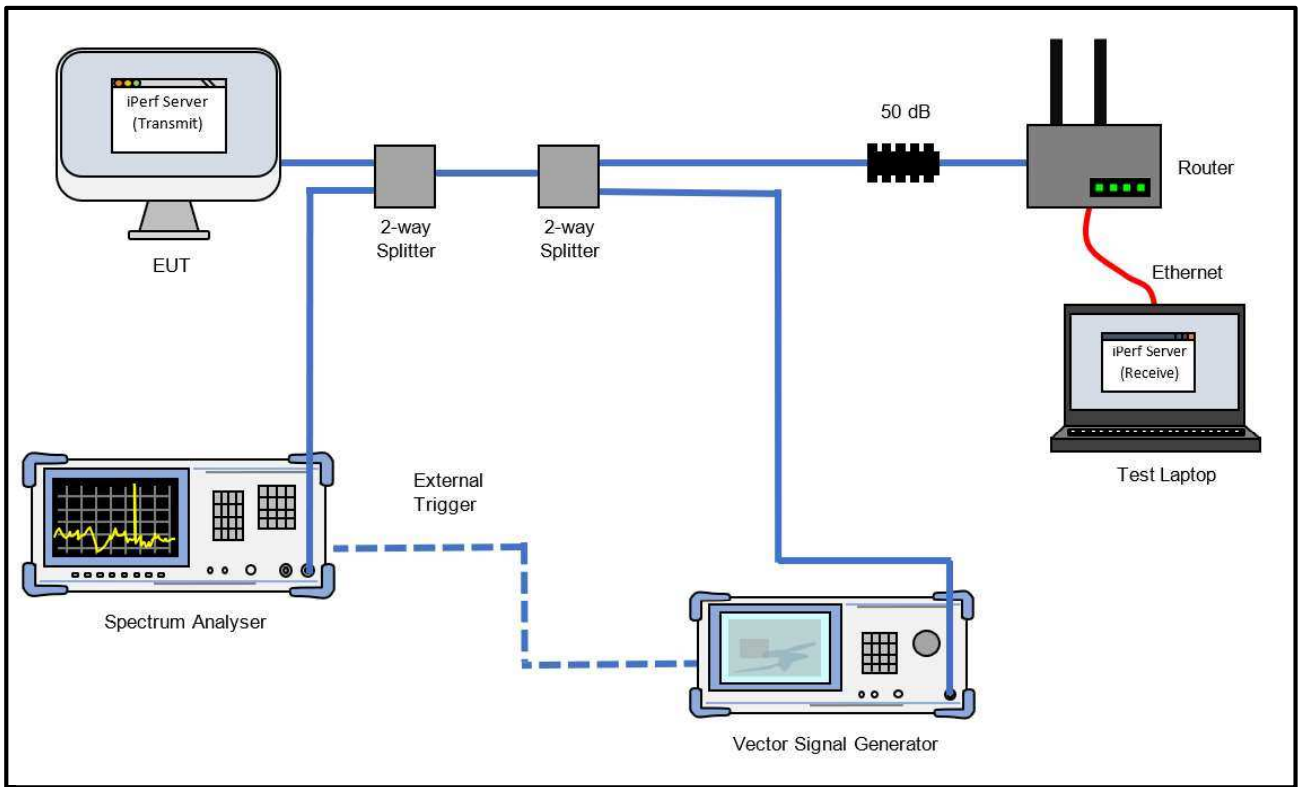

Figure 149 - Test Equipment Setup Diagram

2.7.6 Environmental Conditions

Ambient Temperature	23.9 °C
Relative Humidity	42.8 %

2.7.7 Test Results

6 GHz WLAN

Figure 150 - Example of AWGN Signal

Parameter	Results		
U-NII Band	5	5	5
Channel Number	37	37	37
Bandwidth (MHz)	20	20	20
DUT Centre Frequency (MHz)	6135	6135	6135
AWGN Centre Frequency (MHz)	6135	6135	6135
AWGN Signal Power (dBm)	-73	-69	-68
Antenna Gain (dBi)	3.51	3.51	3.51
Adjusted Power (dBm)	-76.51	-72.51	-71.51
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 377 - U-NII-5, Minimum Bandwidth

Figure 151 - U-NII-5, Minimum Bandwidth

Parameter	Results		
U-NII Band	5	5	5
Channel Number	47	47	47
Bandwidth (MHz)	160	160	160
DUT Centre Frequency (MHz)	6185	6185	6185
AWGN Centre Frequency (MHz)	6110	6110	6110
AWGN Signal Power (dBm)	-70	-67	-66
Antenna Gain (dBi)	3.51	3.51	3.51
Adjusted Power (dBm)	-73.51	-70.51	-69.51
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 378 - U-NII-5, Maximum Bandwidth (AWGN Low)

Figure 152 - U-NII-5, Minimum Bandwidth (AWGN Low)

Parameter	Results		
U-NII Band	5	5	5
Channel Number	47	47	47
Bandwidth (MHz)	160	160	160
DUT Centre Frequency (MHz)	6185	6185	6185
AWGN Centre Frequency (MHz)	6185	6185	6185
AWGN Signal Power (dBm)	-72	-70	-68
Antenna Gain (dBi)	3.51	3.51	3.51
Adjusted Power (dBm)	-75.51	-73.51	-71.51
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 379 - U-NII-5, Maximum Bandwidth (AWGN Mid)

Figure 153 - U-NII-5, Minimum Bandwidth (AWGN Mid)

Parameter	Results		
U-NII Band	6	6	6
Channel Number	111	111	111
Bandwidth (MHz)	160	160	160
DUT Centre Frequency (MHz)	6505	6505	6505
AWGN Centre Frequency (MHz)	6430	6430	6430
AWGN Signal Power (dBm)	-68	-66	-65
Antenna Gain (dBi)	2.82	2.82	2.82
Adjusted Power (dBm)	-70.82	-68.82	-67.82
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 380 - U-NII-5, Maximum Bandwidth (AWGN High)

Figure 154 - U-NII-5, Minimum Bandwidth (AWGN High)

Parameter	Results		
U-NII Band	6	6	6
Channel Number	101	101	101
Bandwidth (MHz)	20	20	20
DUT Centre Frequency (MHz)	6455	6455	6455
AWGN Centre Frequency (MHz)	6455	6455	6455
AWGN Signal Power (dBm)	-67	-67	-66
Antenna Gain (dBi)	2.82	2.82	2.82
Adjusted Power (dBm)	-69.82	-69.82	-68.82
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 381 - U-NII-6, Minimum Bandwidth

Figure 155 - U-NII-6, Minimum Bandwidth

Parameter	Results		
U-NII Band	6	6	6
Channel Number	111	111	111
Bandwidth (MHz)	160	160	160
DUT Centre Frequency (MHz)	6505	6505	6505
AWGN Centre Frequency (MHz)	6430	6430	6430
AWGN Signal Power (dBm)	-68	-66	-65
Antenna Gain (dBi)	2.82	2.82	2.82
Adjusted Power (dBm)	-70.82	-68.82	-67.82
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 382 - U-NII-6, Maximum Bandwidth (AWGN Low)

Figure 156 - U-NII-6, Minimum Bandwidth (AWGN Low)

Parameter	Results		
U-NII Band	6	6	6
Channel Number	111	111	111
Bandwidth (MHz)	160	160	160
DUT Centre Frequency (MHz)	6505	6505	6505
AWGN Centre Frequency (MHz)	6505	6505	6505
AWGN Signal Power (dBm)	-68	-66	-65
Antenna Gain (dBi)	2.82	2.82	2.82
Adjusted Power (dBm)	-70.82	-68.82	-67.82
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 383 - U-NII-6, Maximum Bandwidth (AWGN Mid)

Figure 157 - U-NII-6, Minimum Bandwidth (AWGN Mid)

Parameter	Results		
U-NII Band	6	6	6
Channel Number	111	111	111
Bandwidth (MHz)	160	160	160
DUT Centre Frequency (MHz)	6505	6505	6505
AWGN Centre Frequency (MHz)	6580	6580	6580
AWGN Signal Power (dBm)	-65	-64	-60
Antenna Gain (dBi)	2.82	2.82	2.82
Adjusted Power (dBm)	-67.82	-66.82	-62.82
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 384 - U-NII-6, Maximum Bandwidth (AWGN High)

Figure 158 - U-NII-6, Minimum Bandwidth (AWGN High)

Parameter	Results		
U-NII Band	7	7	7
Channel Number	133	133	133
Bandwidth (MHz)	20	20	20
DUT Centre Frequency (MHz)	6615	6615	6615
AWGN Centre Frequency (MHz)	6615	6615	6615
AWGN Signal Power (dBm)	-67	-65	-64
Antenna Gain (dBi)	4.37	4.37	4.37
Adjusted Power (dBm)	-71.37	-69.37	-68.37
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 385 - U-NII-7, Minimum Bandwidth

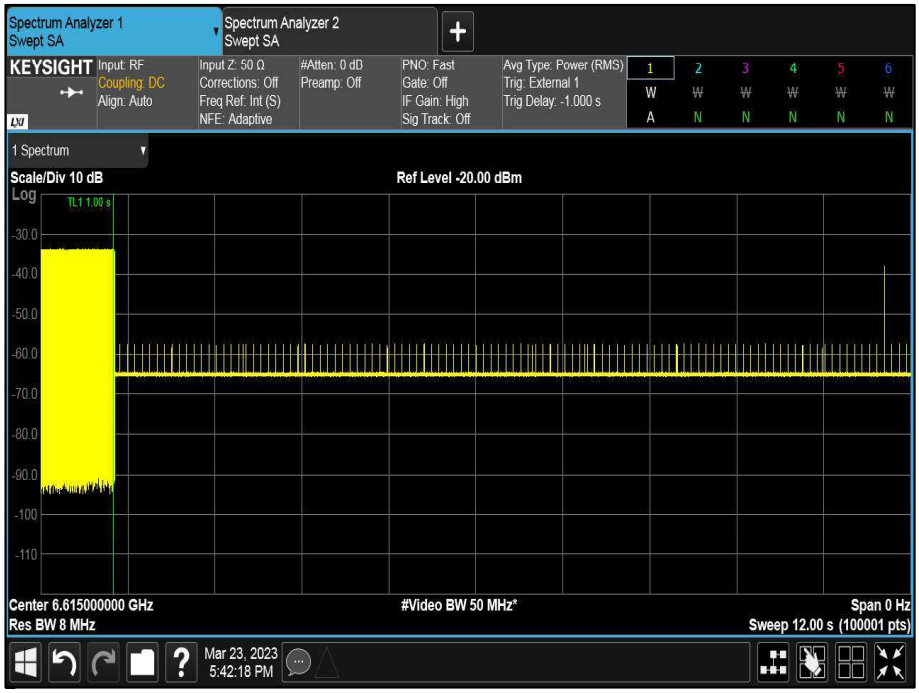

Figure 159 - U-NII-7, Minimum Bandwidth

Parameter	Results		
U-NII Band	7	7	7
Channel Number	143	143	143
Bandwidth (MHz)	160	160	160
DUT Centre Frequency (MHz)	6665	6665	6665
AWGN Centre Frequency (MHz)	6590	6590	6590
AWGN Signal Power (dBm)	-66	-64	-63
Antenna Gain (dBi)	4.37	4.37	4.37
Adjusted Power (dBm)	-70.37	-68.37	-67.37
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 386 - U-NII-7, Maximum Bandwidth (AWGN Low)

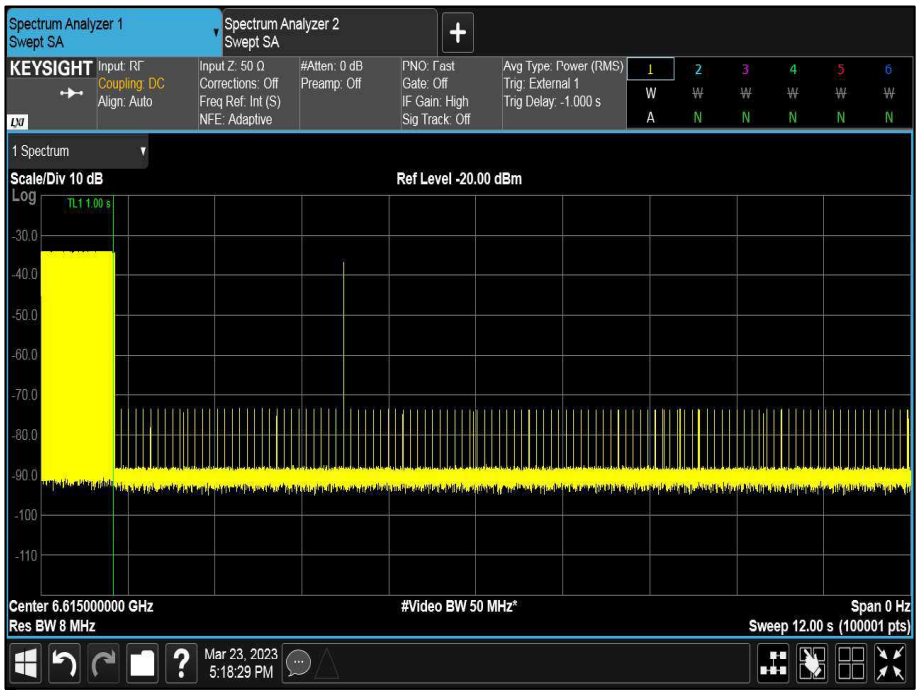

Figure 160 - - U-NII-7, Minimum Bandwidth (AWGN Low)

Parameter	Results		
U-NII Band	7	7	7
Channel Number	143	143	143
Bandwidth (MHz)	160	160	160
DUT Centre Frequency (MHz)	6665	6665	6665
AWGN Centre Frequency (MHz)	6665	6665	6665
AWGN Signal Power (dBm)	-65	-63	-62
Antenna Gain (dBi)	4.37	4.37	4.37
Adjusted Power (dBm)	-69.37	-67.37	-66.37
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 387 - U-NII-7, Maximum Bandwidth (AWGN Mid)

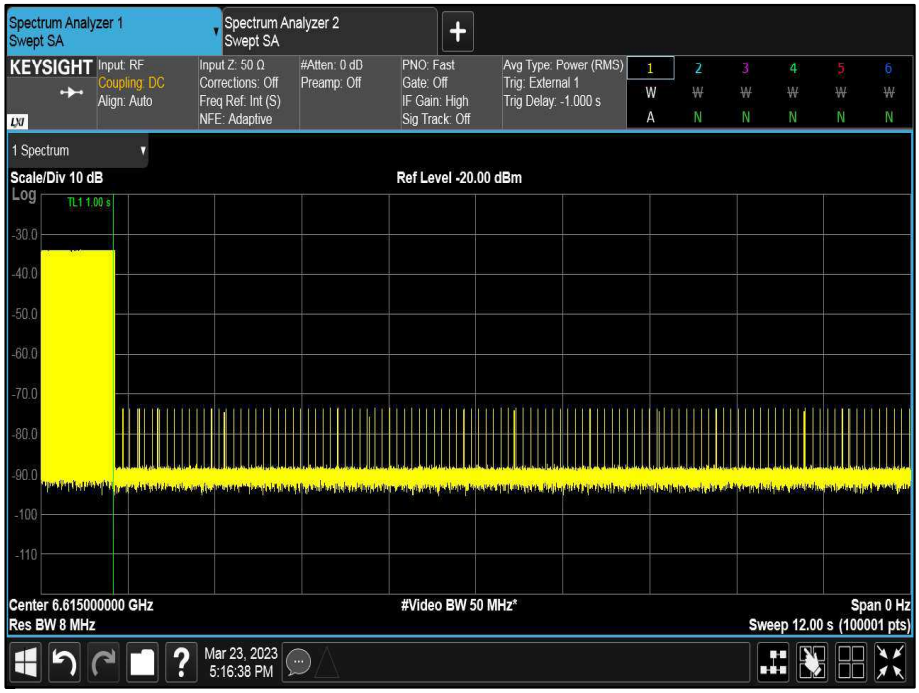

Figure 161 - - U-NII-7, Minimum Bandwidth (AWGN Mid)

Parameter	Results		
U-NII Band	7	7	7
Channel Number	143	143	143
Bandwidth (MHz)	160	160	160
DUT Centre Frequency (MHz)	6665	6665	6665
AWGN Centre Frequency (MHz)	6740	6740	6740
AWGN Signal Power (dBm)	-62	-62	-61
Antenna Gain (dBi)	4.37	4.37	4.37
Adjusted Power (dBm)	-66.37	-66.37	-65.37
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 388 - U-NII-7, Maximum Bandwidth (AWGN High)

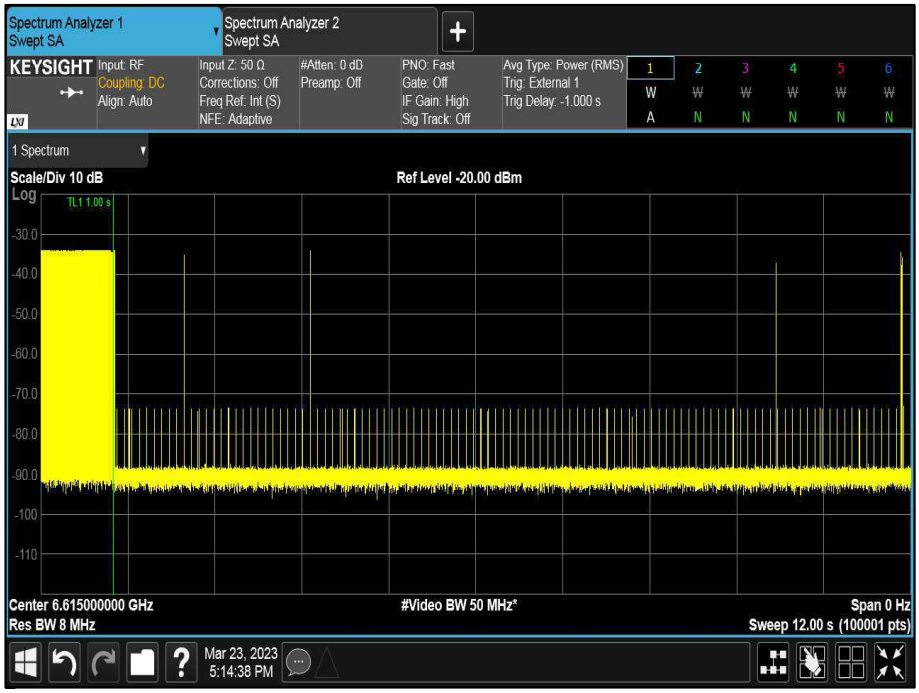

Figure 162 - - U-NII-7, Minimum Bandwidth (AWGN High)

Parameter	Results		
U-NII Band	8	8	8
Channel Number	197	197	197
Bandwidth (MHz)	20	20	20
DUT Centre Frequency (MHz)	6935	6935	6935
AWGN Centre Frequency (MHz)	6935	6935	6935
AWGN Signal Power (dBm)	-69	-69	-68
Antenna Gain (dBi)	2.89	2.89	2.89
Adjusted Power (dBm)	-71.89	-71.89	-70.89
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 389 - U-NII-8, Minimum Bandwidth

Figure 163 - U-NII-8, Minimum Bandwidth

Parameter	Results		
U-NII Band	7	7	7
Channel Number	143	143	143
Bandwidth (MHz)	160	160	160
DUT Centre Frequency (MHz)	6665	6665	6665
AWGN Centre Frequency (MHz)	6590	6590	6590
AWGN Signal Power (dBm)	-66	-64	-63
Antenna Gain (dBi)	4.37	4.37	4.37
Adjusted Power (dBm)	-70.37	-68.37	-67.37
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 390 - U-NII-8, Maximum Bandwidth (AWGN Low)

Figure 164 - U-NII-8, Minimum Bandwidth (AWGN Low)

Parameter	Results		
U-NII Band	8	8	8
Channel Number	207	207	207
Bandwidth (MHz)	160	160	160
DUT Centre Frequency (MHz)	6985	6985	6985
AWGN Centre Frequency (MHz)	6985	6985	6985
AWGN Signal Power (dBm)	-68	-66	-65
Antenna Gain (dBi)	2.89	2.89	2.89
Adjusted Power (dBm)	-70.89	-68.89	-67.89
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 391 - U-NII-8, Maximum Bandwidth (AWGN Mid)

Figure 165 - U-NII-8, Minimum Bandwidth (AWGN Mid)

Parameter	Results		
U-NII Band	8	8	8
Channel Number	207	207	207
Bandwidth (MHz)	160	160	160
DUT Centre Frequency (MHz)	6985	6985	6985
AWGN Centre Frequency (MHz)	7060	7060	7060
AWGN Signal Power (dBm)	-65	-61	-60
Antenna Gain (dBi)	2.89	2.89	2.89
Adjusted Power (dBm)	-67.89	-63.89	-62.89
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 392 - U-NII-8, Maximum Bandwidth (AWGN High)

Figure 166 - U-NII-8, Minimum Bandwidth (AWGN High)

FCC 47 CFR Part 15.407 (d)(6)

Indoor access points, subordinate devices and client devices operating in the 5.925–7.125 GHz band must employ a contention-based protocol.

KDB 987594, Limit Clause I

Indoor access points, subordinate devices and client devices operating in the 5.925-7.125 GHz band (herein referred to as unlicensed devices) are required to use technologies that include a contention-based protocol to avoid co-channel interference with incumbent devices sharing the band. To ensure incumbent co-channel operations are detected in a technology-agnostic manner, unlicensed devices are required to detect co-channel radio frequency energy (energy detect) and avoid simultaneous transmission.

Unlicensed low-power indoor devices must detect co-channel radio frequency power that is at least -62 dBm or lower. Upon detection of energy in the band, unlicensed low power indoor devices must vacate the channel (in which incumbent signal is transmitted) and stay off the incumbent channel as long as detected radio frequency power is equal to or greater than the threshold (-62 dBm). The -62 dBm (or lower) threshold is referenced to a 0 dBi antenna gain.

To ensure incumbent operations are reliably detected in the band, low power indoor devices must detect RF energy throughout their intended operating channel. For example, an 802.11 device that plans to transmit a 40 MHz- wide signal (on a primary 20 MHz channel and a secondary 20 MHz channel) must detect energy throughout the entire 40 MHz channel. Additionally, low-power indoor devices must detect co-channel energy with 90% or greater certainty.

ISED RSS-248, Limit Clause 4.8.2

The RLAN devices shall utilize a contention-based protocol to detect the presence of any emissions on the channel that the RLAN device intends to occupy. The RLAN device must detect within its entire occupied bandwidth a radio frequency power of –62 dBm or lower. The minimum detection threshold power is the received power averaged over a 1microsecond reference to a 0 dBi antenna.

If an emission is detected, the RLAN device shall vacate the occupied channel and shall not transmit on this channel until the detected radio frequency power is equal to or greater than the -62 dBm threshold.

2.7.8 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
EXA	Keysight Technologies	N9010B	4969	24	07-Feb-2024
Cable (18 GHz)	Rosenberger	LU7-071-1000	5103	12	18-Dec-2023
Cable (18 GHz)	Rosenberger	LU7-071-2000	5106	12	18-Dec-2023
3.5 mm 1m Cable	Junkosha	MWX221-01000DMS	5416	12	06-Mar-2024
3.5 mm 2m Cable	Junkosha	MWX221-02000DMS	5427	12	29-Mar-2023
Vector Signal Generator	Rohde & Schwarz	SMM100A	5915	36	01-Mar-2026
WiFi 6E Tri-Band Gaming Router	Asus	GT-AXE110000	5926	-	TU
Humidity & Temperature meter	R.S Components	1364	6148	12	17-Jun-2023
Test Coupling Network	TUV SUD	TUV_RxTest_001	6387	-	O/P Mon

Table 393

TU - Traceability Unscheduled
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
Emission Bandwidth	± 3.914 MHz
Maximum Conducted Output Power	± 1.38 dB
Maximum Conducted Power Spectral Density	± 1.49 dB
Authorised Band Edges	± 6.3 dB
Unwanted Emissions within the 5925-7125 MHz band	± 3.45 dB
Spurious Radiated Emissions	30 MHz to 1 GHz: ± 5.2 dB 1 GHz to 40 GHz: ± 6.3 dB
Contention Based Protocol	Time: 0.30% Interfer BW: 267.98 kHz Interferer Level: 0.80 dB

Table 394

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.