



Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
11491.120	36.37	54.00	-17.63	RMS	96	242	Vertical

Table 655 - U-NII-3 - 5745 MHz (CH149), 802.11a, Core 1, 1 GHz to 40 GHz

No other emissions found within 10 dB of the limit.

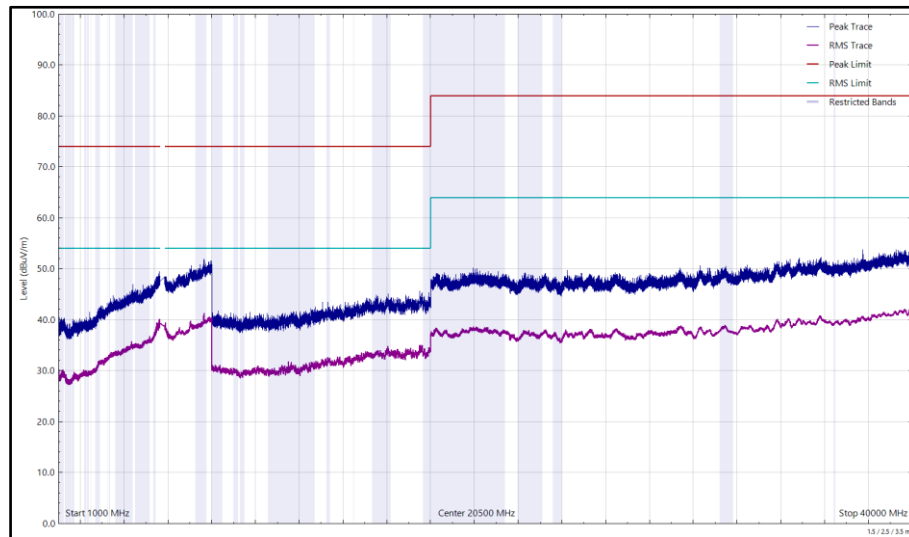


Figure 548 - U-NII-3 - 5745 MHz (CH149), 802.11a, Core 1, 1 GHz to 40 GHz, Horizontal

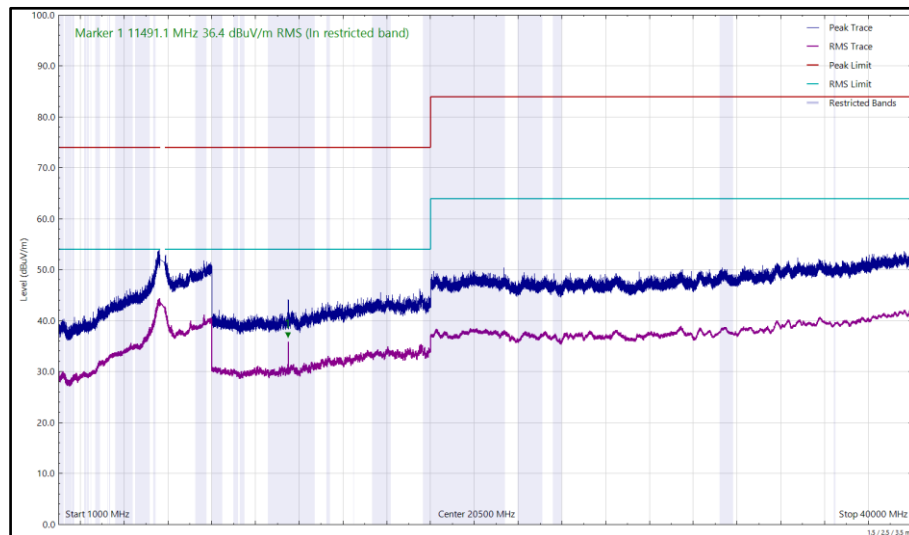


Figure 549 - U-NII-3 - 5745 MHz (CH149), 802.11a, Core 1, 1 GHz to 40 GHz, Vertical



Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
11652.270	34.78	54.00	-19.22	RMS	97	227	Vertical

Table 656 - U-NII-3 - 5825 MHz (CH165), 802.11a, Core 1, 30 MHz to 40 GHz

No other emissions found within 10 dB of the limit.

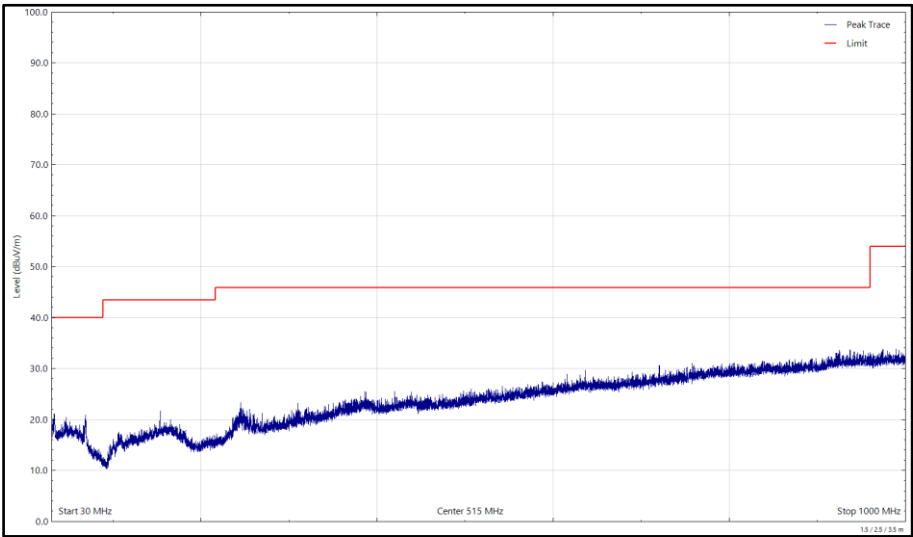


Figure 550 - U-NII-3 - 5825 MHz (CH165), 802.11a, Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

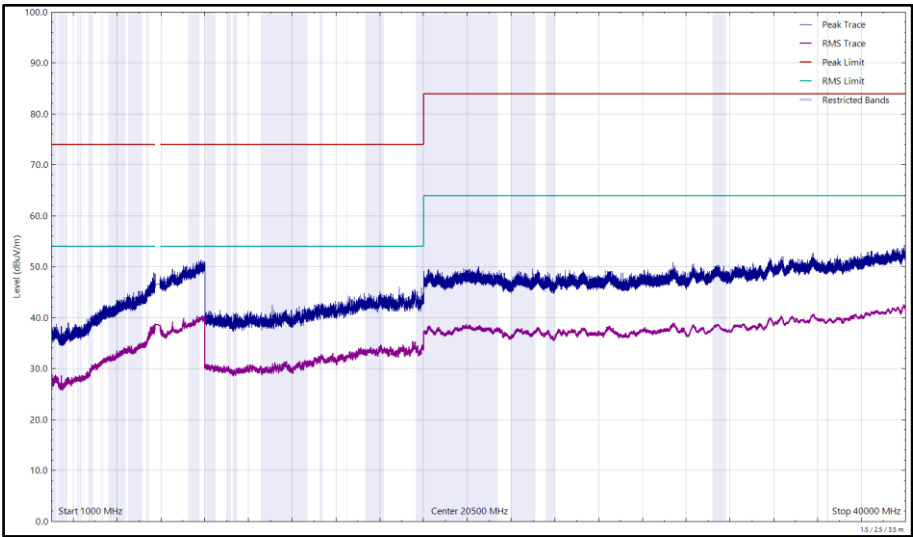


Figure 551 - U-NII-3 - 5825 MHz (CH165), 802.11a, Core 1, 1 GHz to 40 GHz, Horizontal

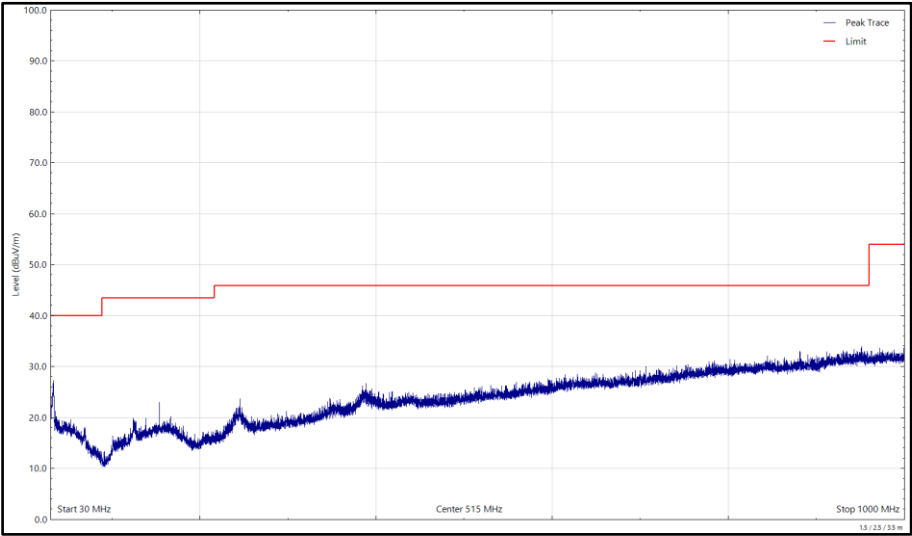


Figure 552 - U-NII-3 - 5825 MHz (CH165), 802.11a, Core 1, 30 MHz to 1 GHz, Vertical (Peak)

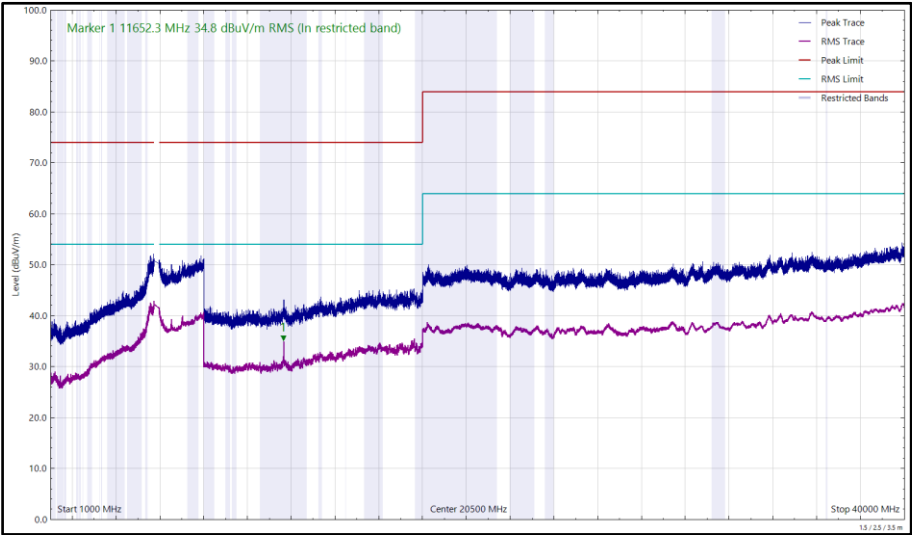


Figure 553 - U-NII-3 - 5825 MHz (CH165), 802.11a, Core 1, 1 GHz to 40 GHz, Vertical



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

Table 657 - U-NII-1 - 5180 MHz (CH36), HE20, RU26-0, CDD, Core 0 + Core 1, 30 MHz to 40 GHz

*No emissions found within 10 dB of the limit.

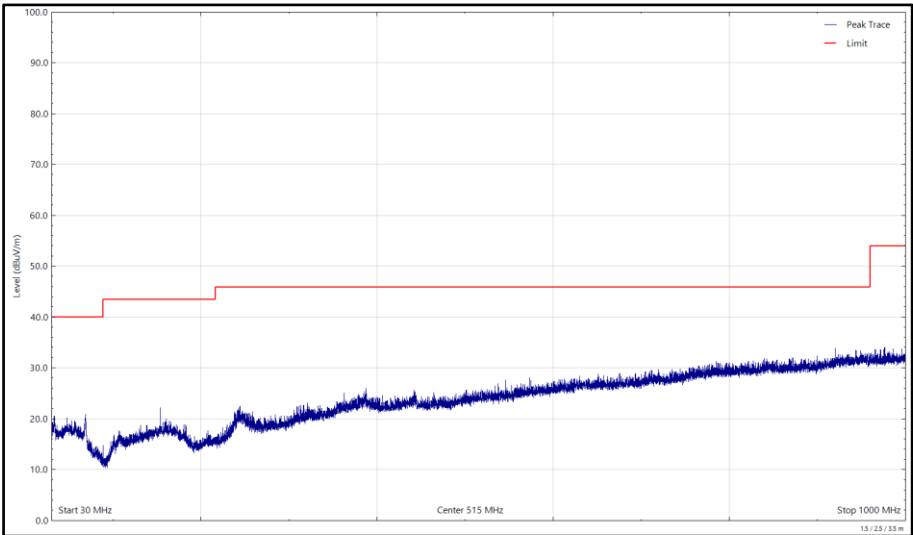


Figure 554 - U-NII-1 - 5180 MHz (CH36), HE20, RU26-0, CDD, Core 0 + Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

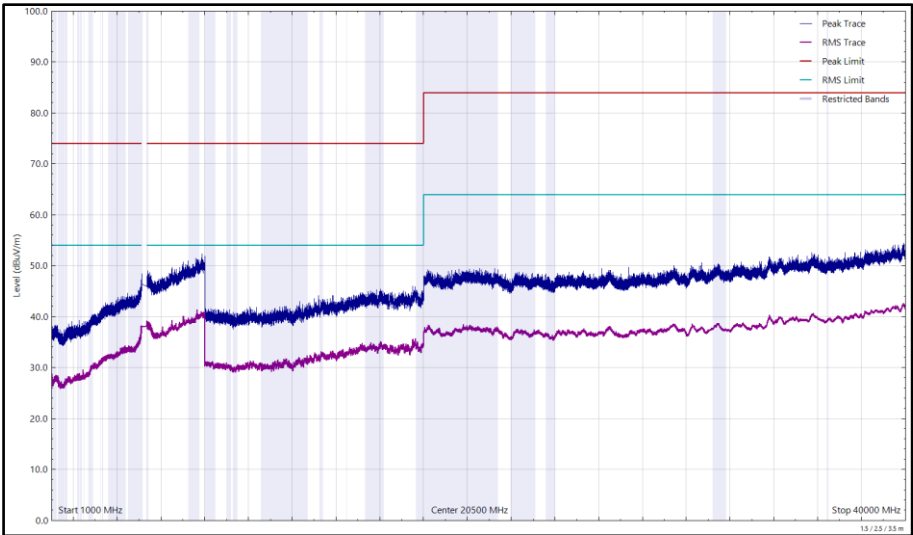


Figure 555 - U-NII-1 - 5180 MHz (CH36), HE20, RU26-0, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

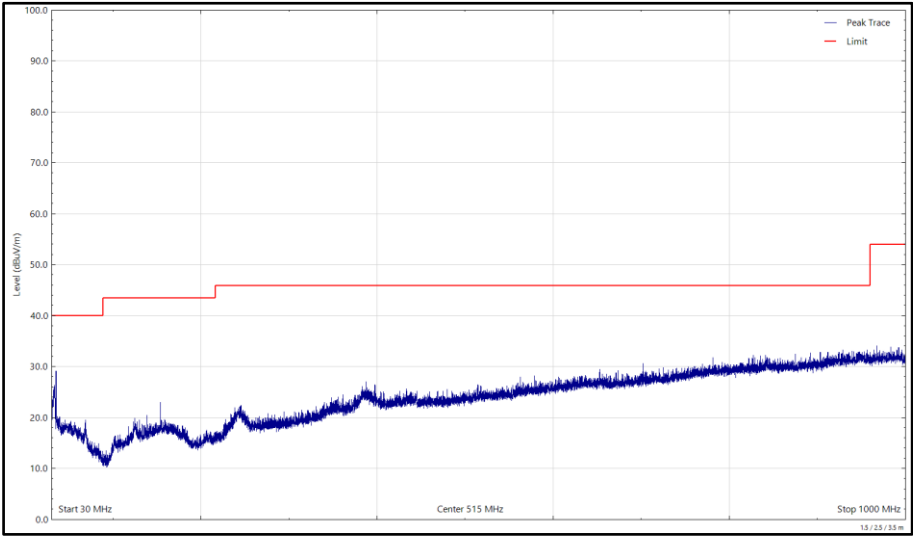


Figure 556 - U-NII-1 - 5180 MHz (CH36), HE20, RU26-0, CDD, Core 0 + Core 1, 30 MHz to 1 GHz, Vertical (Peak)

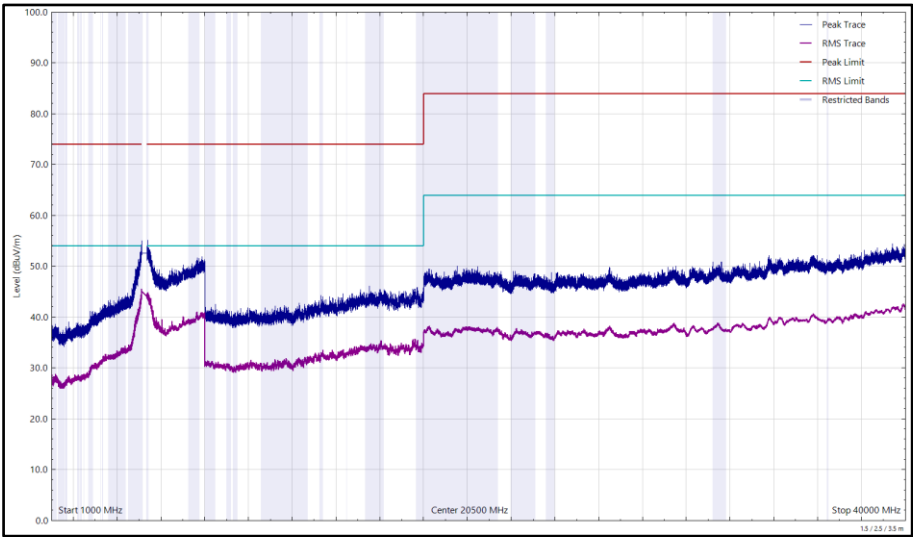


Figure 557 - U-NII-1 - 5180 MHz (CH36), HE20, RU26-0, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
10624.595	40.61	54.00	-13.39	RMS	183	251	Vertical
10624.730	36.91	54.00	-17.09	RMS	191	334	Horizontal
15936.477	42.47	54.00	-11.53	RMS	205	369	Horizontal
15936.800	41.35	54.00	-12.65	RMS	142	399	Vertical
15940.375	53.97	74.00	-20.03	Peak	203	322	Horizontal

Table 658 - U-NII-2A - 5320 MHz (CH64), HE20, RU52-37, CDD, Core 0 + Core 1, 1 GHz to 40 GHz

No other emissions found within 10 dB of the limit.

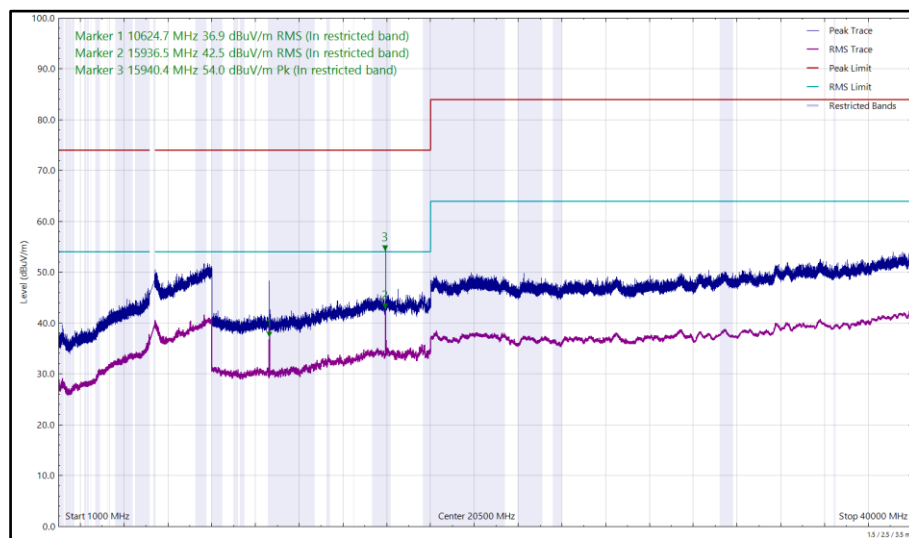


Figure 558 - U-NII-2A - 5320 MHz (CH64), HE20, RU52-37, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

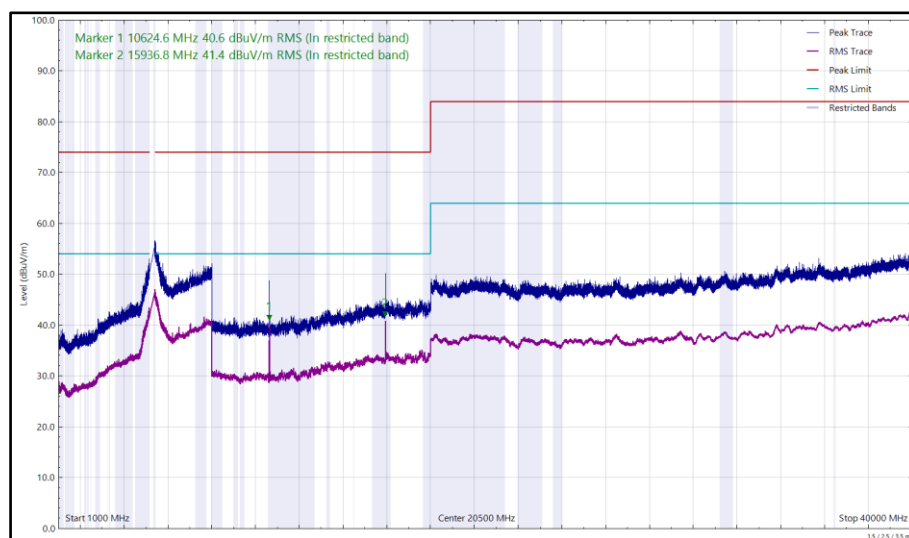


Figure 559 - U-NII-2A - 5320 MHz (CH64), HE20, RU52-37, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical



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

Table 659 - U-NII-2C - 5500 MHz (CH100), HE20, RU52-37, CDD, Core 0 + Core 1, 1 GHz to 40 GHz

*No emissions found within 10 dB of the limit.

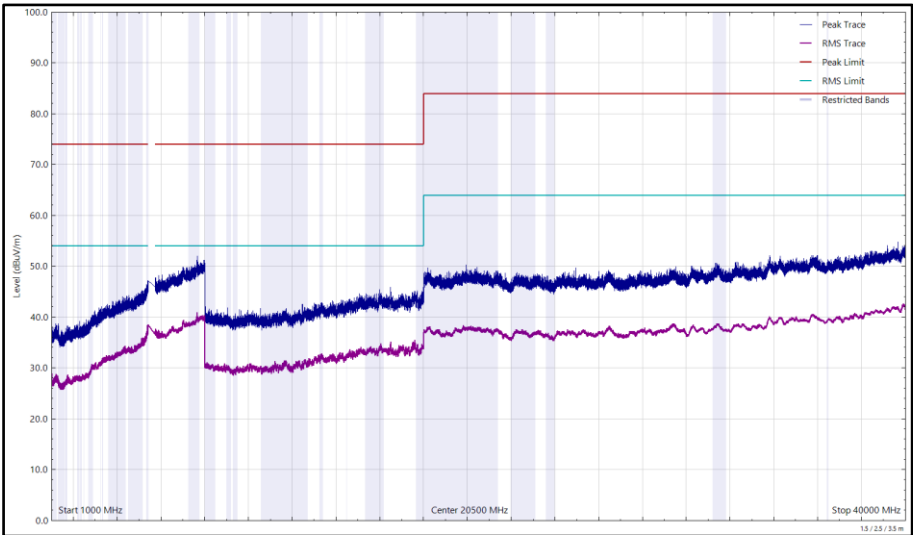


Figure 560 - U-NII-2C - 5500 MHz (CH100), HE20, RU52-37, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

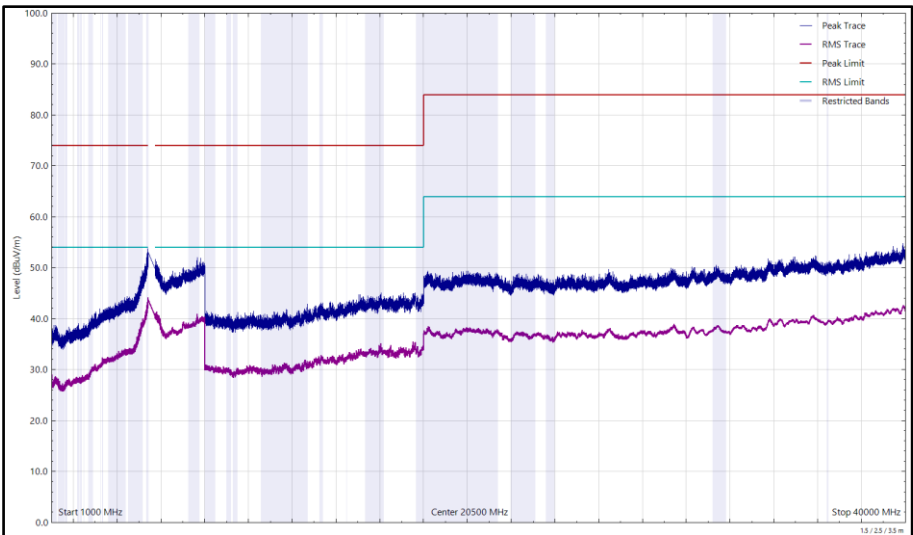
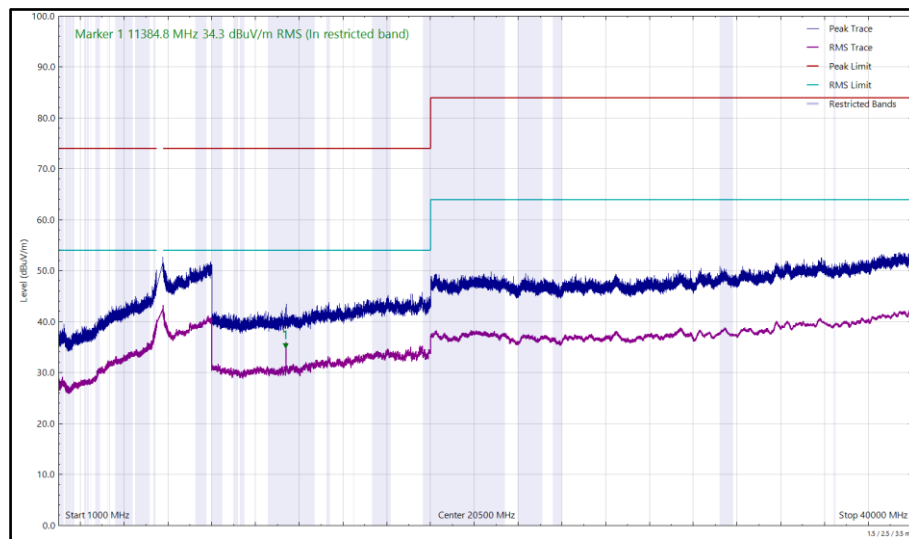


Figure 561 - U-NII-2C - 5500 MHz (CH100), HE20, RU52-37, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

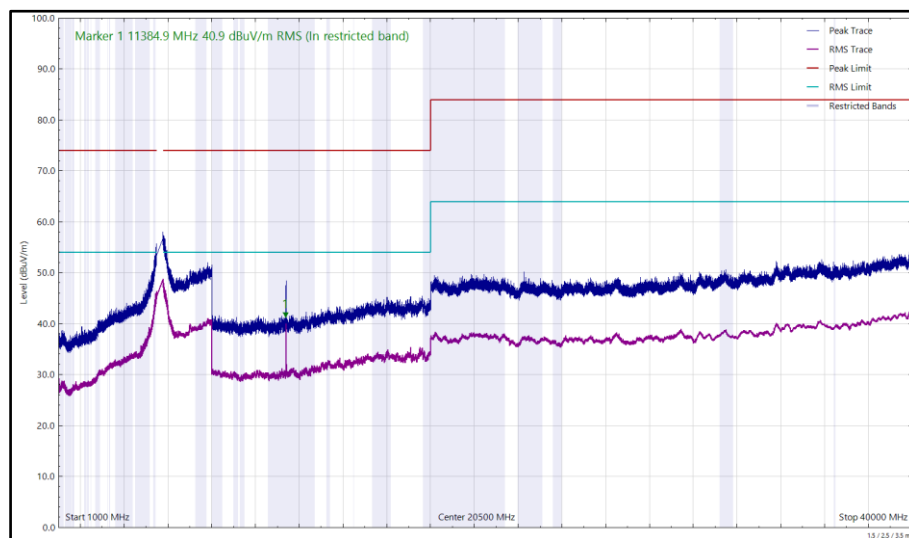
Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
11384.797	34.34	54.00	-19.66	RMS	222	374	Horizontal
11384.870	40.90	54.00	-13.10	RMS	95	235	Vertical

**Table 660 - U-NII-2C - 5700 MHz (CH140), HE20, RU52-37, CDD, Core 0 + Core 1,
1 GHz to 40 GHz**

No other emissions found within 10 dB of the limit.



**Figure 562 - U-NII-2C - 5700 MHz (CH140), HE20, RU52-37, CDD, Core 0 + Core 1,
1 GHz to 40 GHz, Horizontal**

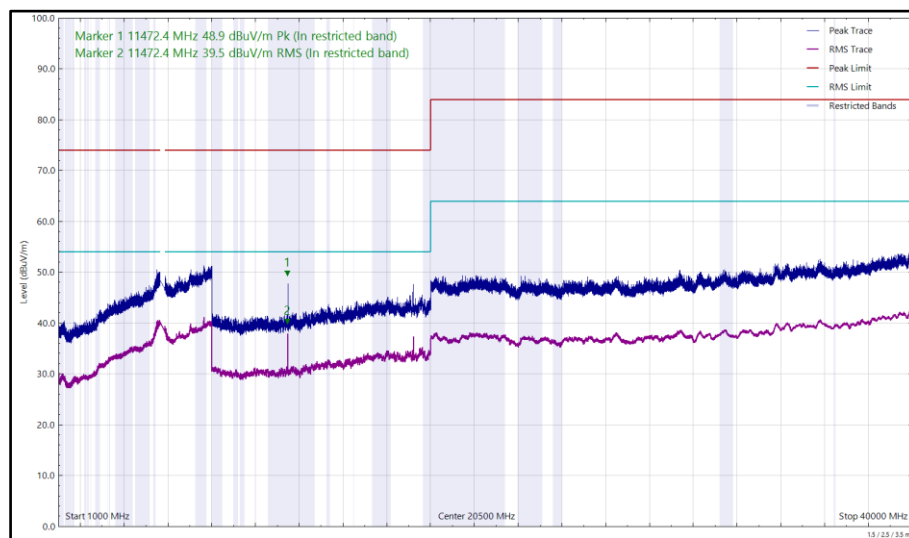


**Figure 563 - U-NII-2C - 5700 MHz (CH140), HE20, RU52-37, CDD, Core 0 + Core 1,
1 GHz to 40 GHz, Vertical**

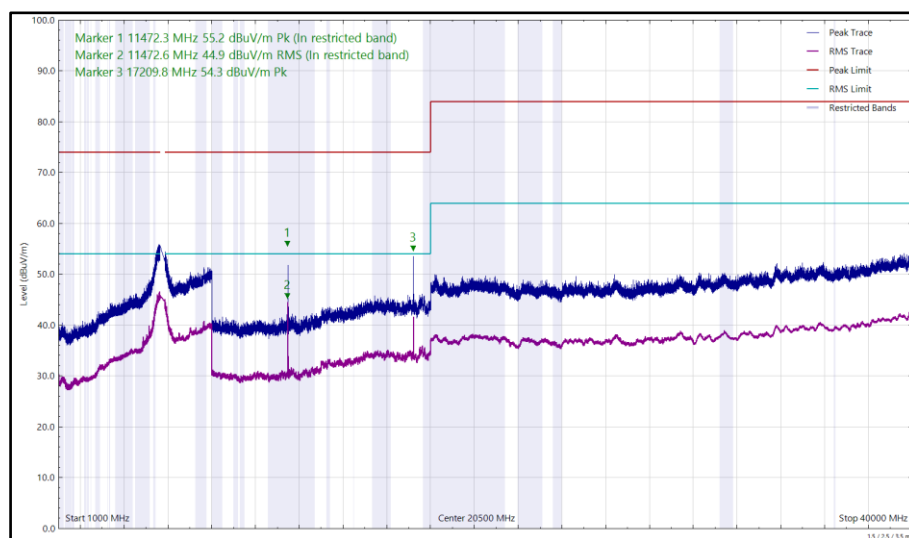
Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
11472.295	55.19	74.00	-18.81	Peak	95	227	Vertical
11472.365	48.91	74.00	-25.09	Peak	198	361	Horizontal
11472.365	39.52	54.00	-14.48	RMS	205	390	Horizontal
11472.605	44.87	54.00	-9.13	RMS	95	253	Vertical
17209.777	54.33	68.20	-13.87	Peak	48	287	Vertical

**Table 661 - U-NII-3 - 5745 MHz (CH149), HE20, RU26-0, CDD, Core 0 + Core 1,
1 GHz to 40 GHz**

No other emissions found within 10 dB of the limit.



**Figure 564 - U-NII-3 - 5745 MHz (CH149), HE20, RU26-0, CDD, Core 0 + Core 1,
1 GHz to 40 GHz, Horizontal**



**Figure 565 - U-NII-3 - 5745 MHz (CH149), HE20, RU26-0, 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
11632.560	54.13	74.00	-19.87	Peak	97	212	Vertical
11632.615	38.35	54.00	-15.65	RMS	99	210	Vertical

Table 662 - U-NII-3 - 5825 MHz (CH165), HE20, RU26-0, CDD, Core 0 + Core 1, 30 MHz to 40 GHz

No other emissions found within 10 dB of the limit.

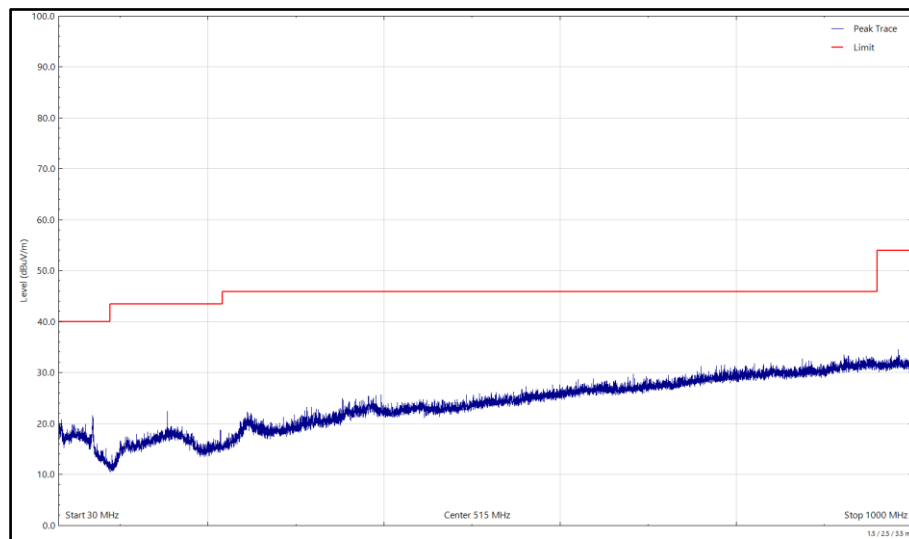


Figure 566 - U-NII-3 - 5825 MHz (CH165), HE20, RU26-0, CDD, Core 0 + Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

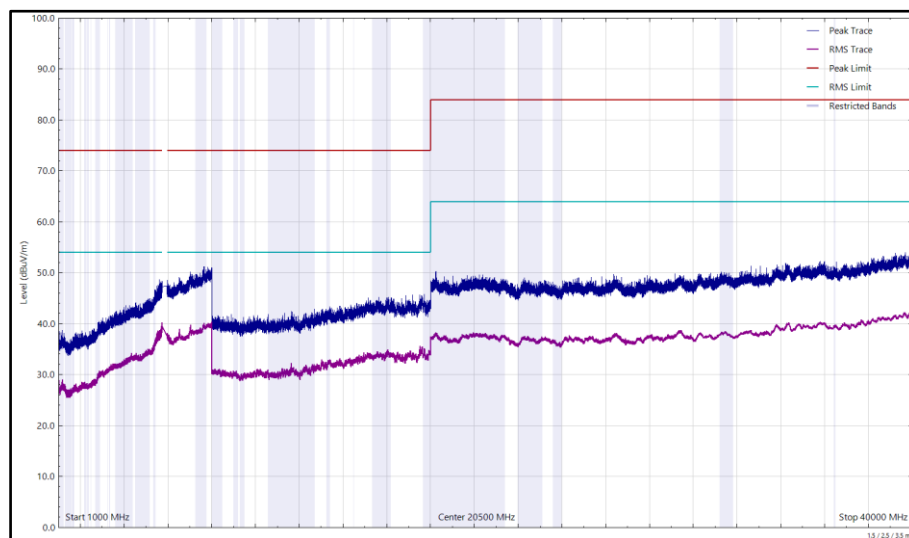


Figure 567 - U-NII-3 - 5825 MHz (CH165), HE20, RU26-0, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

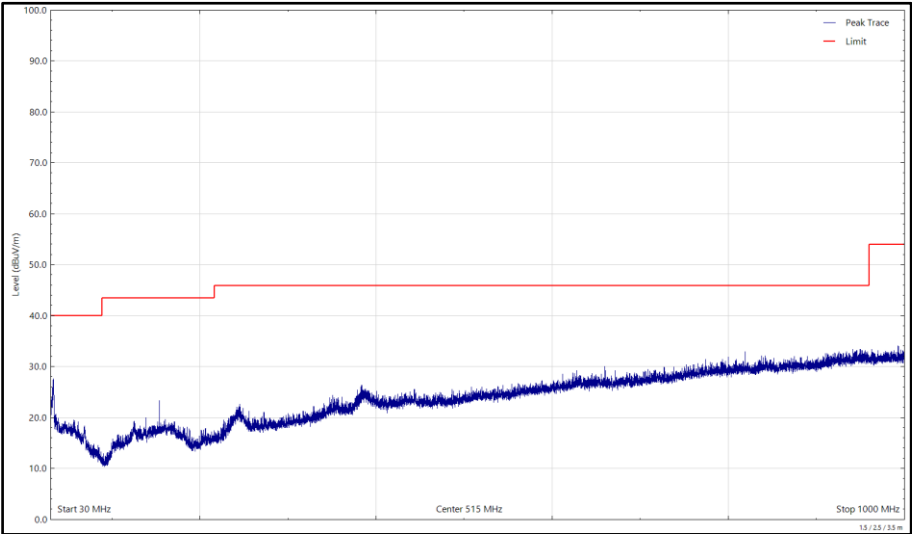


Figure 568 - U-NII-3 - 5825 MHz (CH165), HE20, RU26-0, CDD, Core 0 + Core 1, 30 MHz to 1 GHz, Vertical (Peak)

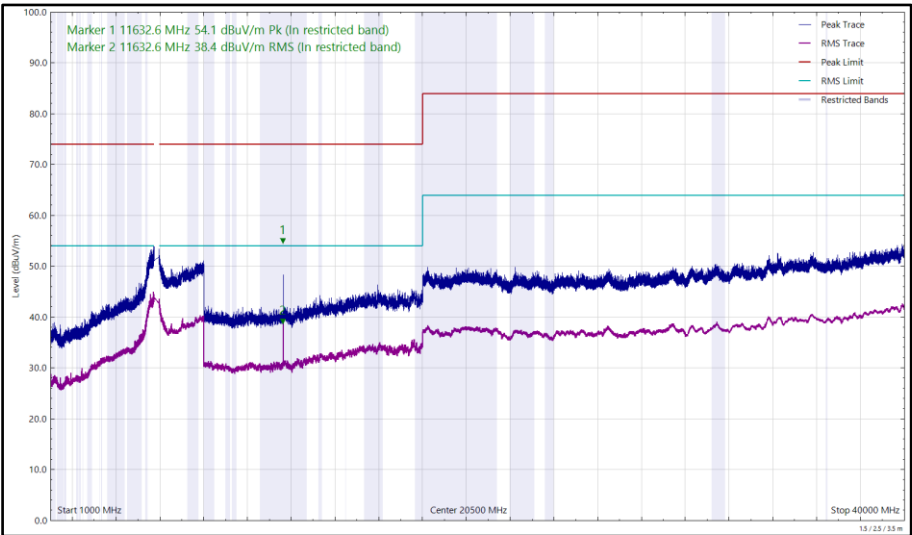


Figure 569 - U-NII-3 - 5825 MHz (CH165), HE20, RU26-0, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
15538.580	34.60	54.00	-19.40	RMS	136	340	Vertical
15540.505	33.18	54.00	-20.82	RMS	242	302	Horizontal

Table 663 - U-NII-1 - 5180 MHz (CH36), VHT20, CDD, Core 0 + Core 1, 30 MHz to 40 GHz

No other emissions found within 10 dB of the limit.

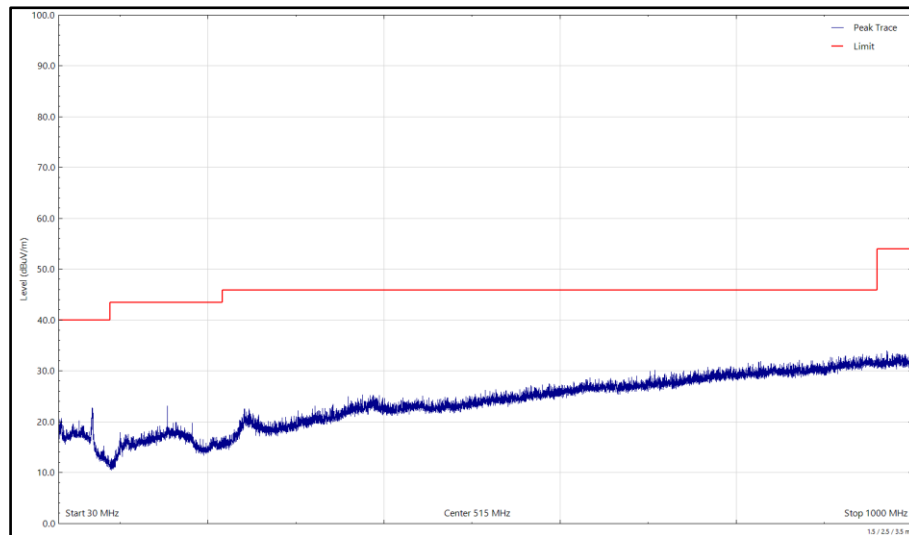


Figure 570 - U-NII-1 - 5180 MHz (CH36), VHT20, CDD, Core 0 + Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

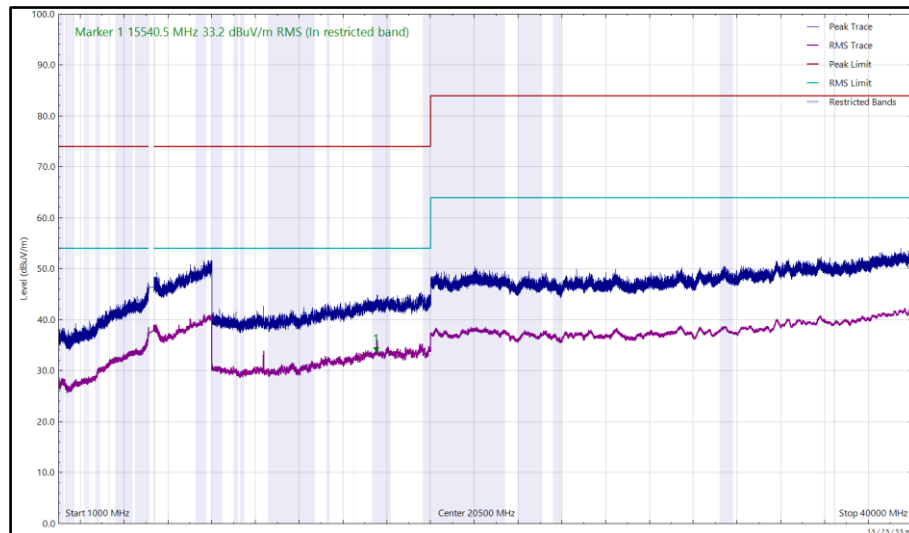


Figure 571 - U-NII-1 - 5180 MHz (CH36), VHT20, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

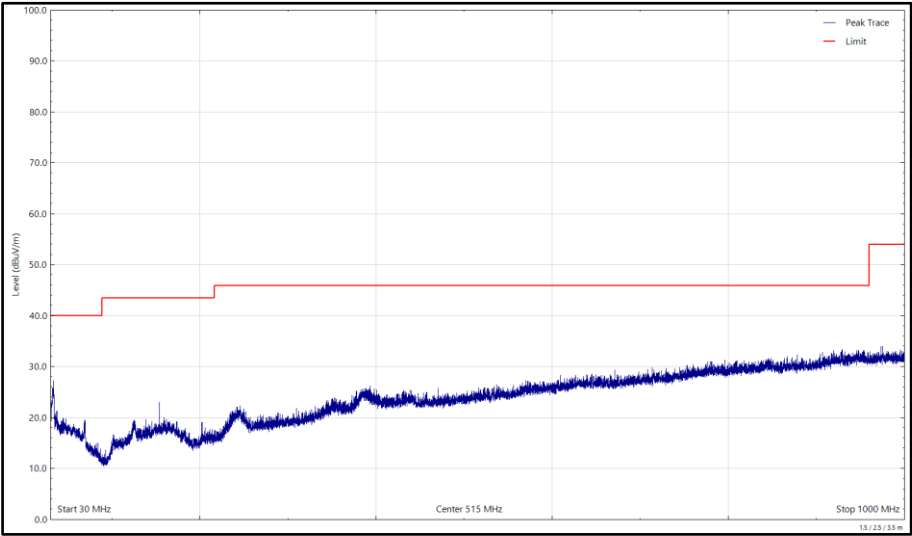


Figure 572 - U-NII-1 - 5180 MHz (CH36), VHT20, CDD, Core 0 + Core 1, 30 MHz to 1 GHz, Vertical (Peak)

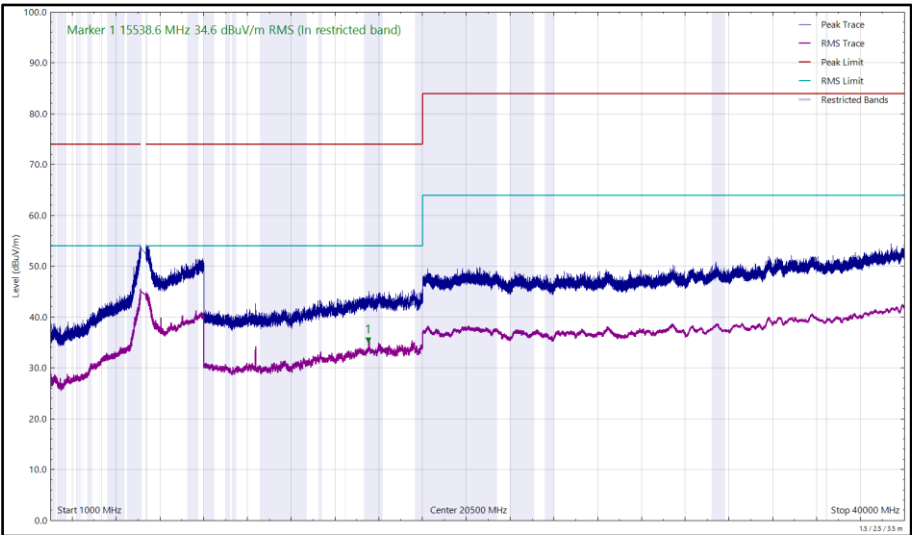


Figure 573 - U-NII-1 - 5180 MHz (CH36), VHT20, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
10639.195	35.76	54.00	-18.24	RMS	99	242	Vertical
10639.384	35.46	54.00	-18.54	RMS	197	320	Horizontal
15971.155	33.19	54.00	-20.81	RMS	282	392	Vertical

Table 664 - U-NII-2A - 5320 MHz (CH64), VHT20, CDD, Core 0 + Core 1, 1 GHz to 40 GHz

No other emissions found within 10 dB of the limit.

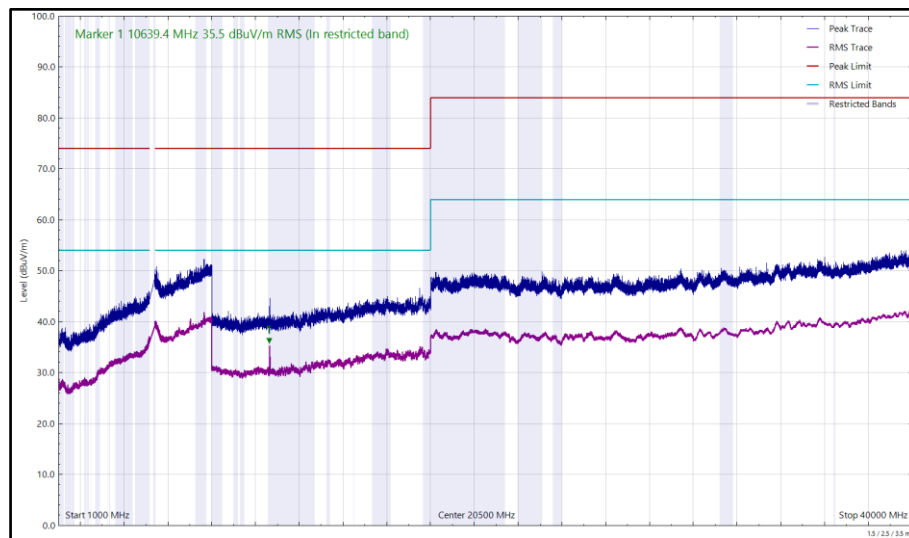


Figure 574 - U-NII-2A - 5320 MHz (CH64), VHT20, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

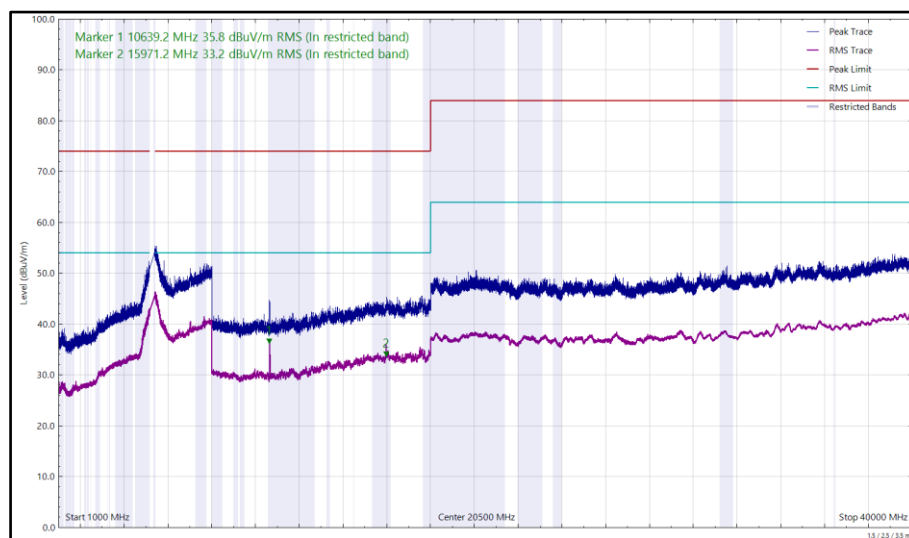


Figure 575 - U-NII-2A - 5320 MHz (CH64), VHT20, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical



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

Table 665 - U-NII-2C - 5500 MHz (CH100), VHT20, CDD, Core 0 + Core 1, 1 GHz to 40 GHz

*No emissions found within 10 dB of the limit.

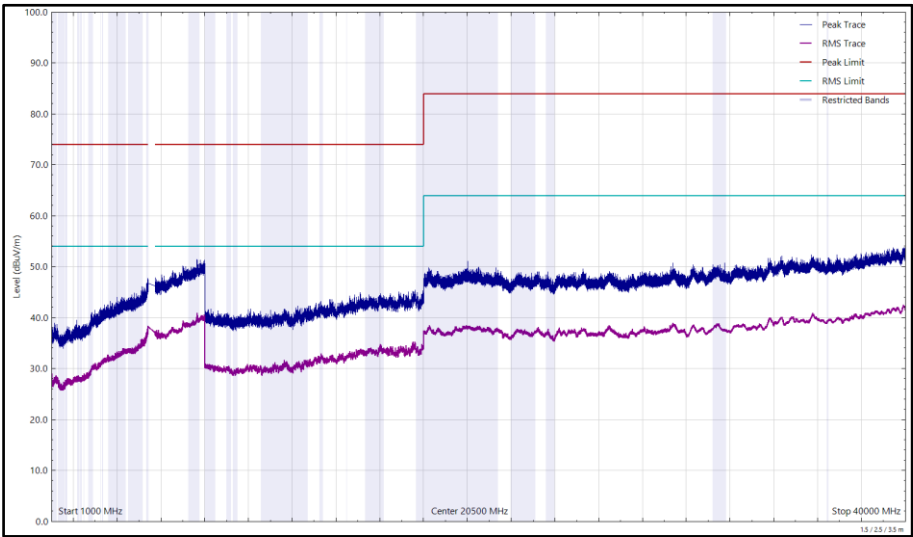


Figure 576 - U-NII-2C - 5500 MHz (CH100), VHT20, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

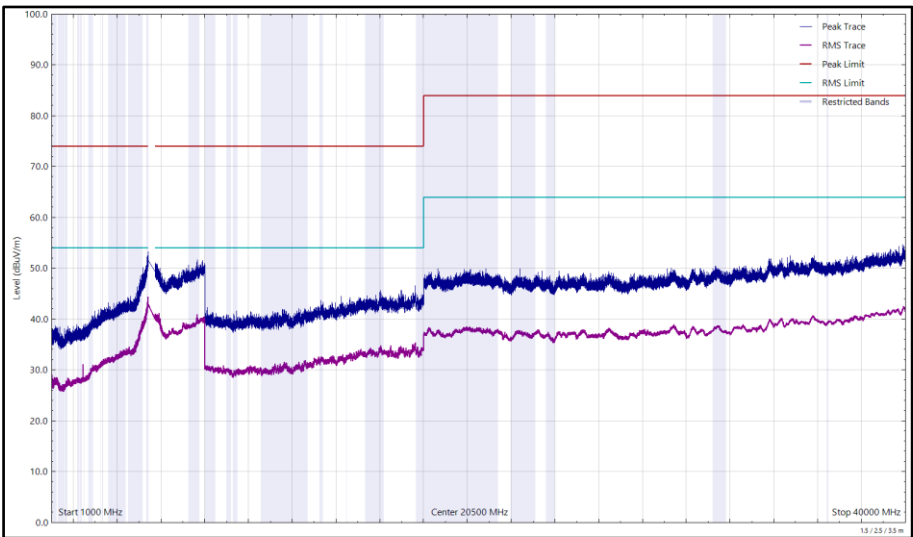


Figure 577 - U-NII-2C - 5500 MHz (CH100), VHT20, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
11399.820	36.53	54.00	-17.47	RMS	95	236	Vertical

Table 666 - U-NII-2C - 5700 MHz (CH140), VHT20, CDD, Core 0 + Core 1, 1 GHz to 40 GHz

No other emissions found within 10 dB of the limit.

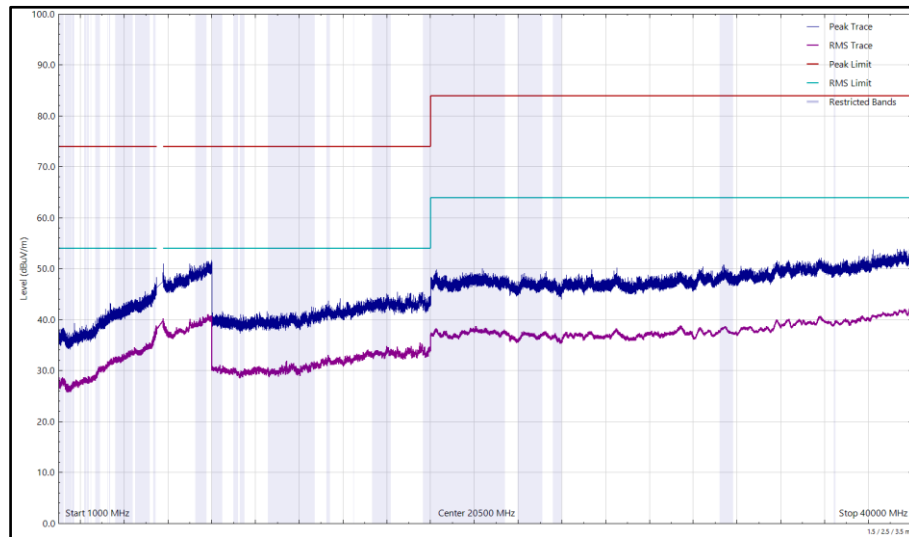


Figure 578 - U-NII-2C - 5700 MHz (CH140), VHT20, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

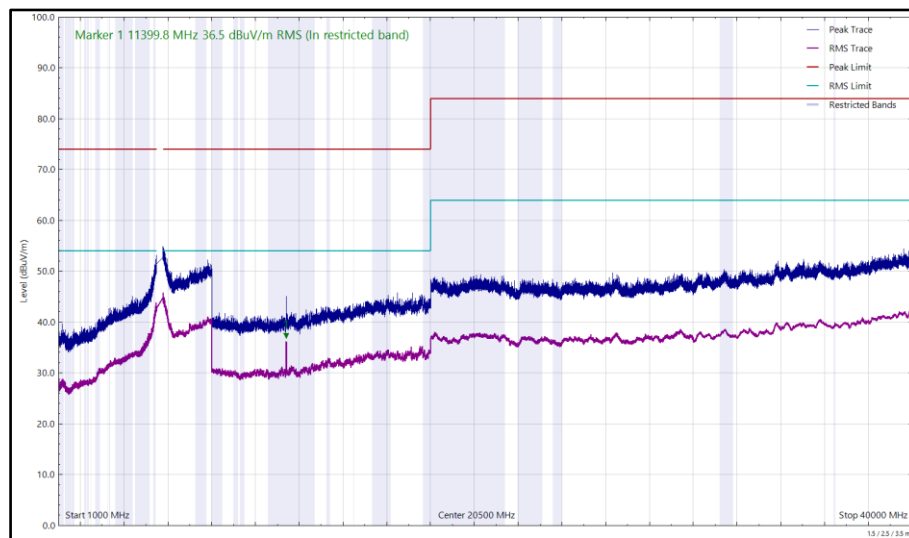


Figure 579 - U-NII-2C - 5700 MHz (CH140), VHT20, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
11489.775	39.04	54.00	-14.96	RMS	96	227	Vertical

Table 667 - U-NII-3 - 5745 MHz (CH149), VHT20, CDD, Core 0 + Core 1, 1 GHz to 40 GHz

No other emissions found within 10 dB of the limit.

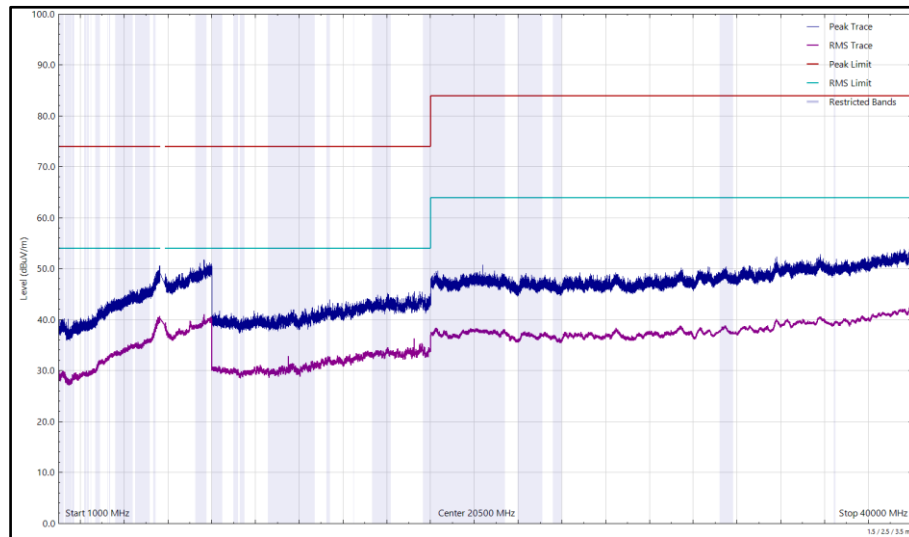


Figure 580 - U-NII-3 - 5745 MHz (CH149), VHT20, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

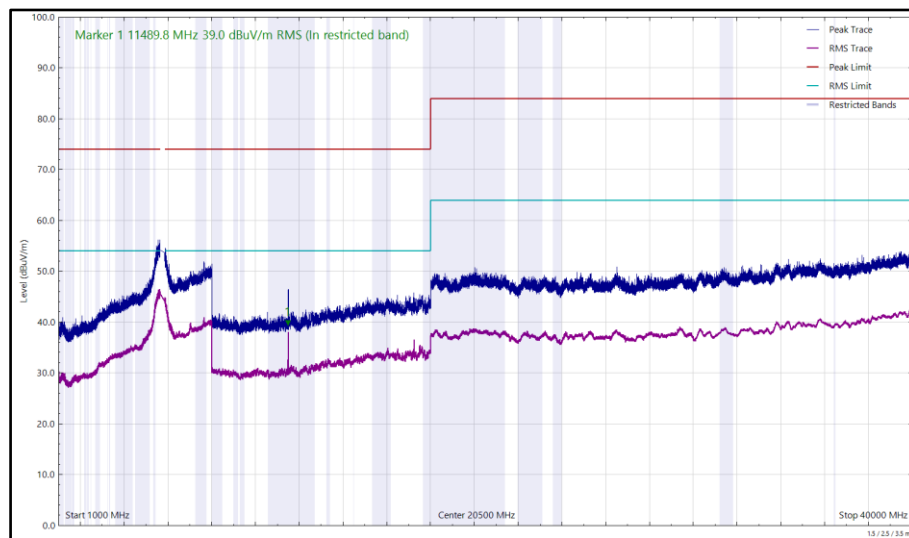


Figure 581 - U-NII-3 - 5745 MHz (CH149), VHT20, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
11649.850	42.32	54.00	-11.68	RMS	95	215	Vertical

Table 668 - U-NII-3 - 5825 MHz (CH165), VHT20, CDD, Core 0 + Core 1, 30 MHz to 40 GHz

No other emissions found within 10 dB of the limit.

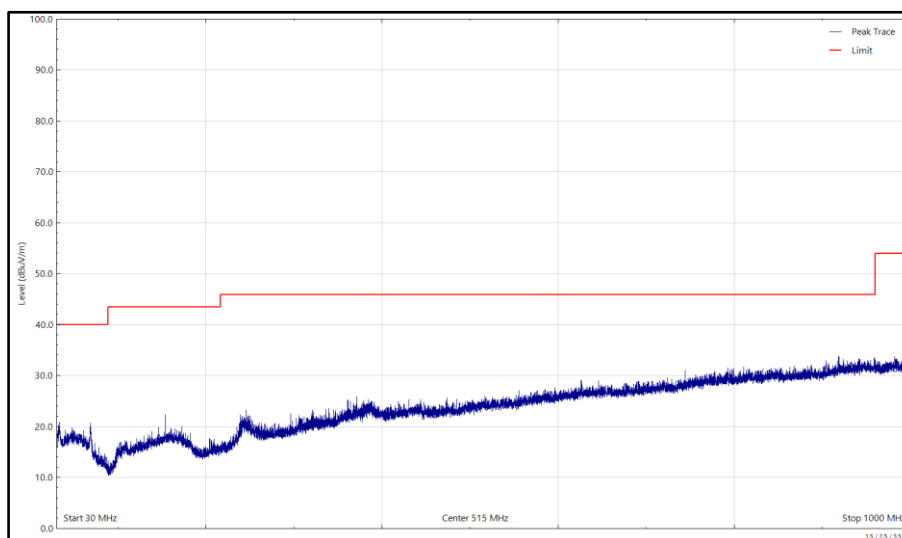


Figure 582 - U-NII-3 - 5825 MHz (CH165), VHT20, CDD, Core 0 + Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

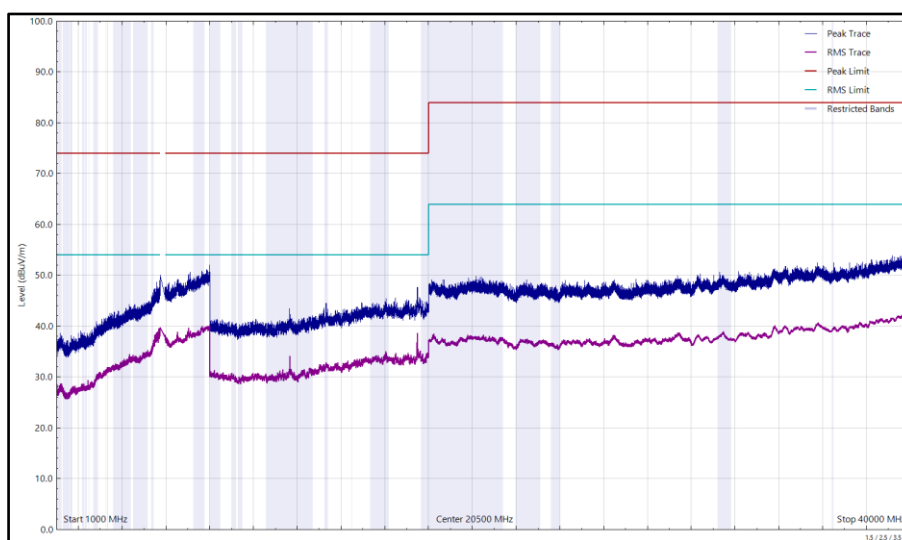


Figure 583 - U-NII-3 - 5825 MHz (CH165), VHT20, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

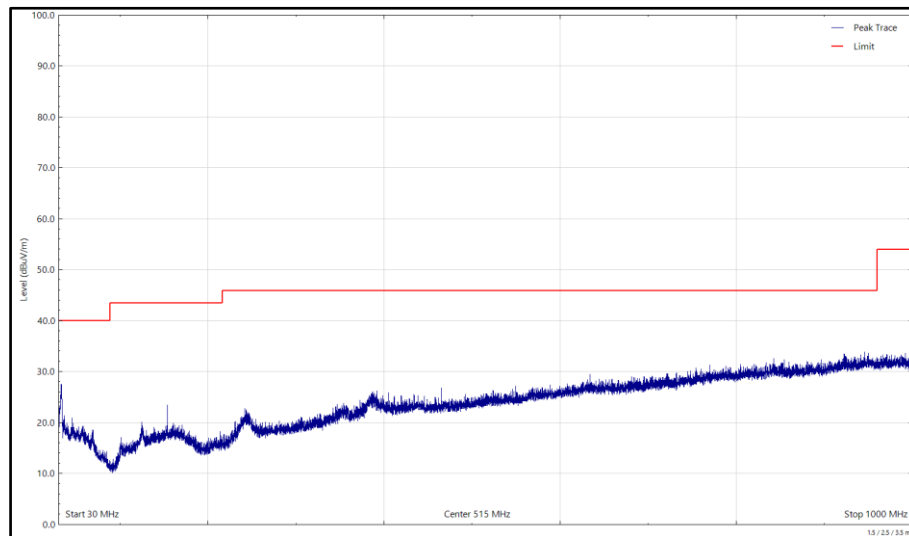


Figure 584 - U-NII-3 - 5825 MHz (CH165), VHT20, CDD, Core 0 + Core 1, 30 MHz to 1 GHz, Vertical (Peak)

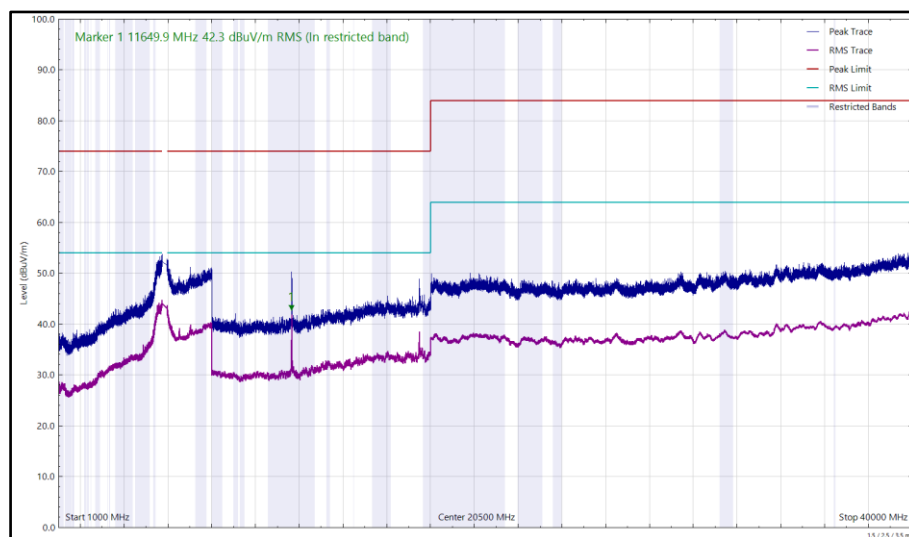


Figure 585 - U-NII-3 - 5825 MHz (CH165), VHT20, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical



FCC 47 CFR Part 15, Limit Clause 15.407(b)(1)(2)(3)(4)

Emissions not falling within the restricted bands listed in FCC 47 CFR Part 15.209:

For transmitters operating in the 5.15-5.25 GHz band: ≤ -27 dBm/MHz outside 5150-5350 MHz.

For transmitters operating in the 5.25-5.35 GHz band: ≤ -27 dBm/MHz outside 5150-5350 MHz.

For transmitters operating in the 5.47-5.725 GHz band: ≤ -27 dBm/MHz outside 5470-5725 MHz

For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Emissions within the restricted bands listed in FCC 47 CFR Part 15.209:

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

Table 669 - Radiated Emissions Limit Table (FCC)



ISED RSS-247, Limit Clause 6.2.1.2, 6.2.2.2, 6.2.3.2 and 6.2.4.2 and ISED RSS-GEN, Limit Clause 8.9

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

For transmitters with operating frequencies in the band 5150-5250 MHz, all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. Any unwanted emissions that fall into the band 5250-5350 MHz shall be attenuated below the channel power by at least 26 dB.

For transmitters with operating frequencies in the bands 5250-5350 MHz and 5470-5725 MHz, all emissions outside the band 5250-5350 MHz and 5470-5725 MHz shall not exceed -27 dBm/MHz e.i.r.p.

Devices operating in the band 5725-5850 MHz shall have e.i.r.p. of unwanted emissions comply with the following:

- a) 27 dBm/MHz at frequencies from the band edges decreasing linearly to 15.6 dBm/MHz at 5 MHz above or below the band edges;
- b) 15.6 dBm/MHz at 5 MHz above or below the band edges decreasing linearly to 10 dBm/MHz at 25 MHz above or below the band edges;
- c) 10 dBm/MHz at 25 MHz above or below the band edges decreasing linearly to -27 dBm/MHz at 75 MHz above or below the band edges; and
- d) -27 dBm/MHz at frequencies more than 75 MHz above or below the band edges.

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

Frequency (MHz)	Field Strength ($\mu\text{V}/\text{m}$) at 3m	Field Strength Limit ($\text{dB}\mu\text{V}/\text{m}$) at 3m
30 to 88	100	40.00
88 to 216	150	43.52
216 to 960	200	46.02
Above 960	500	53.98

Table 670 - Radiated Emissions Limit Table (ISED)



2.6.7 Test Location and Test Equipment Used

This test was carried out in RF Laboratory 15.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Emissions Software	TUV SUD	EmX V3.1.10 V.	5125	-	Software
EMI Test Receiver	Rohde & Schwarz	ESW44	5911	12	24-Mar-2023
Cable (K Type 2m)	Junkosha	MWX241-02000KMSKMS/B	5937	12	14-May-2023
DRG Horn Antenna (7.5-18GHz)	Schwarzbeck	HWRD750	5939	12	29-May-2023
TRILOG Super Broadband Test Antenna	Schwarzbeck	VULB 9168	5944	24	03-Feb-2024
1500W (300V 12A) AC Power Supply	iTech	IT7324	5956	-	O/P Mon
5m Semi-Anechoic Chamber (Dual-Axis)	Albatross Projects	RF Chamber 15	5963	36	28-Apr-2025
Compact Antenna Mast	Maturo Gmbh	CAM4.0-P	5964	-	TU
Mast & Turntable Controller	Maturo Gmbh	FCU3.0	5966	-	TU
Tilt Antenna Mast	Maturo Gmbh	BAM4.5-P	5967	-	TU
Turntable	Maturo Gmbh	TT1.5SI	5968	-	TU
Cable (SMA to SMA 1m)	Junkosha	MWX221-01000AMSAMS/A	5996	12	06-Jun-2023
Cable (N to N 1m)	Junkosha	MWX221-01000NMSNMS/B	5999	12	05-Jun-2023
Cable (N to N 7m)	Junkosha	MWX221-07000NMSNMS/B	6005	12	05-Jun-2023
Cable (N to N 8m)	Junkosha	MWX221-08000NMSNMS/A	6006	12	05-Jun-2023
Cable (SMA to SMA 1m)	Junkosha	MWX221-01000AMSAMS/A	6007	12	06-Jun-2023
Cable (SMA to SMA 6.5m)	Junkosha	MWX221-06500AMSAMS/B	6014	12	07-Jun-2023
Horn Antenna (1-10 GHz)	Schwarzbeck	BBHA9120B	6140	12	21-Jun-2023
Digital Multimeter	Fluke	115	6147	12	16-Jun-2023
Humidity & Temperature meter	R.S Components	1364	6150	12	17-Jun-2023
Double Ridge Active Horn Antenna (18-40 GHz)	Com-Power	AHA-840	6188	24	02-Jun-2024
SAC Switch Unit	TUV SUD	TUV_SSU_001	6191	12	12-Dec-2023
8GHz Highpass Filter	Wainwright	WHKX 7150 8000 18000 50SS	6195	12	15-Jul-2023
Pre Amp 8 - 18 GHz	Wright Technologies	APS06 0061	6198	12	19-Jul-2023
Attenuator 4dB	Pasternack	PE7074-4	6203	24	16-Jul-2024
Cable (SMA to SMA 20cm)	TUV SUD	MH-FH 8-18	6214	12	25-Jul-2023

Table 671

TU – Traceability Unscheduled

O/P Mon – Output Monitored using calibrated equipment



2.7 Channel Move Time, Channel Closing Transmission Time and Non-Occupancy Period

2.7.1 Specification Reference

FCC 47 CFR Part 15E, Clause 15.407 (h)(2)(iii)(iv)
ISED RSS-247, Clause 6.3.2(c)(d)(e)

2.7.2 Equipment Under Test and Modification State

A2941, S/N: FQP4FCF32N - Modification State 0

2.7.3 Date of Test

17-March-2023

2.7.4 Test Method

This test was performed in accordance with FCC KDB 905462 D02, clause 7.8.3.

To calibrate the level of the radar at the input to the DFS Master device, the DFS Master was replaced by the spectrum analyser and the output of the vector signal generator adjusted to give -62 dBm.

Radar Pulse Type 0 was transmitted, and the spectrum monitored. The transmissions from the UUT were observed for a period of 12 seconds after the final injected Radar Pulse.

It was checked that all transmissions stopped within the 10 second period defined from the point of the end of the final Radar pulse + 10 seconds. In addition, the aggregate on time during the first 200 ms and the following 9.8 seconds of the Channel Move Time was computed.

The markers on the trace data correspond to the following time periods:

Yellow - End Of Radar Burst, (T0)

Purple - End Of Channel Move Time, (T0 + 10 seconds)

To verify the non-occupancy period, the external trigger was used to trigger a 30-minute sweep from the moment the radar burst sequence was injected. It was verified that no transmissions occurred on the test channel during this time period.

The EUT supports direct communication with another client while under supervision of a DFS Master. Therefore, this direct client-to-client mode was also tested in accordance with KDB 905462 D03 clause (b)3.

2.7.5 Environmental Conditions

Ambient Temperature 24.1 °C

Relative Humidity 40.1 %

2.7.6 Test Results

5 GHz WLAN - Master to Client - 802.11ac VHT160

The equipment was set up as shown in the diagram below.

A test laptop was connected via an Ethernet cable to the Master device and was configured to run iPerf, transmitting UDP to the EUT. An appropriate rate and buffer was found and used to achieve the correct channel loading. The EUT The channel loading was set to >17% by adjusting the bandwidth specified in the iPerf UDP transfer.

Radar Type	Pulse Width (μ s)	PRI (μ s)	Number of Pulses
0	1	1428	18

Table 672 - Radar Pulse Type 0 Characteristics

Manufacturer	Model	Serial Number	FCC ID
ASUS	GT-AXE11000	M8IG0X400285XVN	MSQ-RTAXJF00

Table 673 - Details of Master Device used to support testing

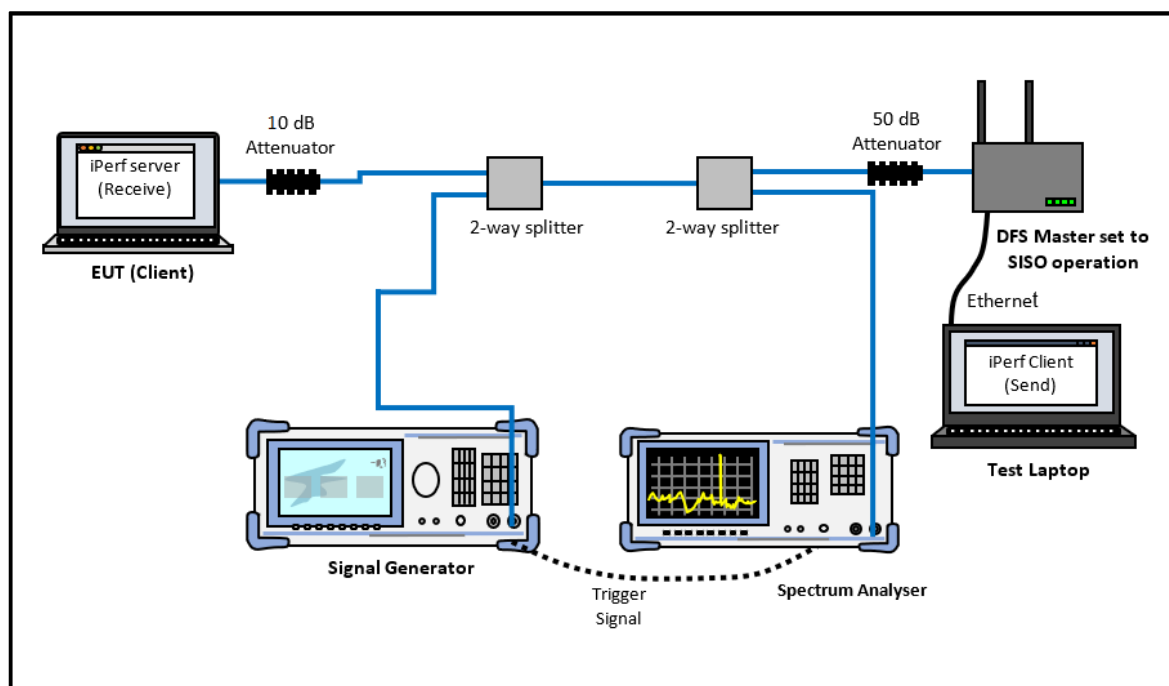


Figure 586 - Test Equipment Setup Diagram for Client without Radar Detection with Injection at the Master



Figure 587 - Verification of Radar Type 0

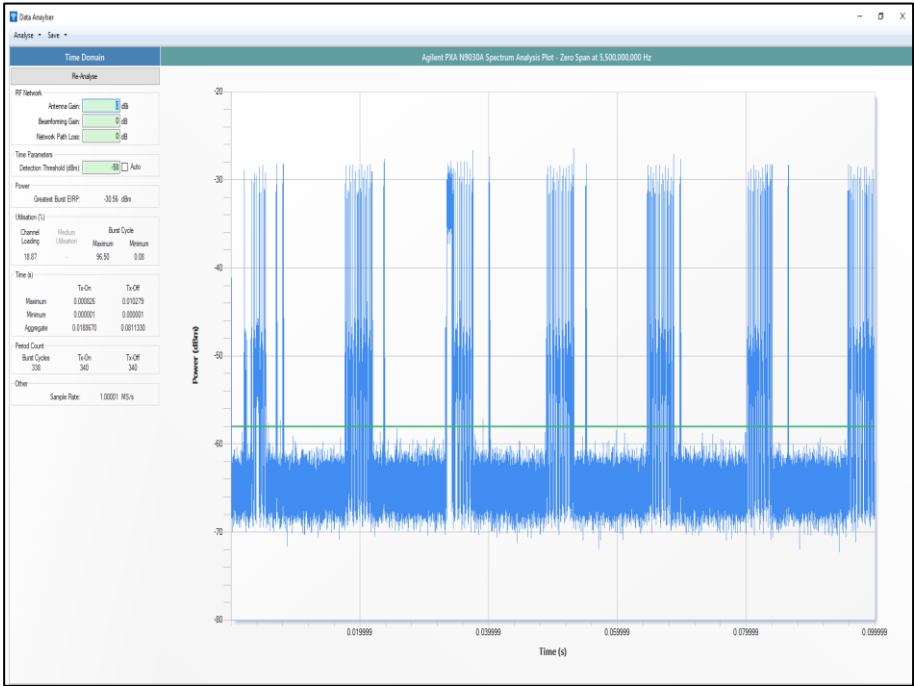


Figure 588 - Channel Loading

The channel loading was 18.87%

Maximum Transmit Power	Value (Notes 1 and 2)
≥ 200 milliwatt	-64 dBm
< 200 milliwatt	-62 dBm
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna. Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.	

Table 674 - DFS Detection Thresholds for Master Devices and Client Devices with Radar Detection

Test Parameter	Result
Test Channel	CH114 (5570 MHz), Control CH100 (5500 MHz)
Channel Move Time	0.895 s
Channel Closing Time (Aggregate Time During 200 ms)	24.960 ms
Channel Closing Time (Aggregate Time During 200 ms to 10 s)	5.160 ms
Channel Closing Time (Aggregate Time During 10 s)	30.120 ms
Transmission Observed During Non-Occupancy Period	No

Table 675 - In-Service Monitoring Test Results

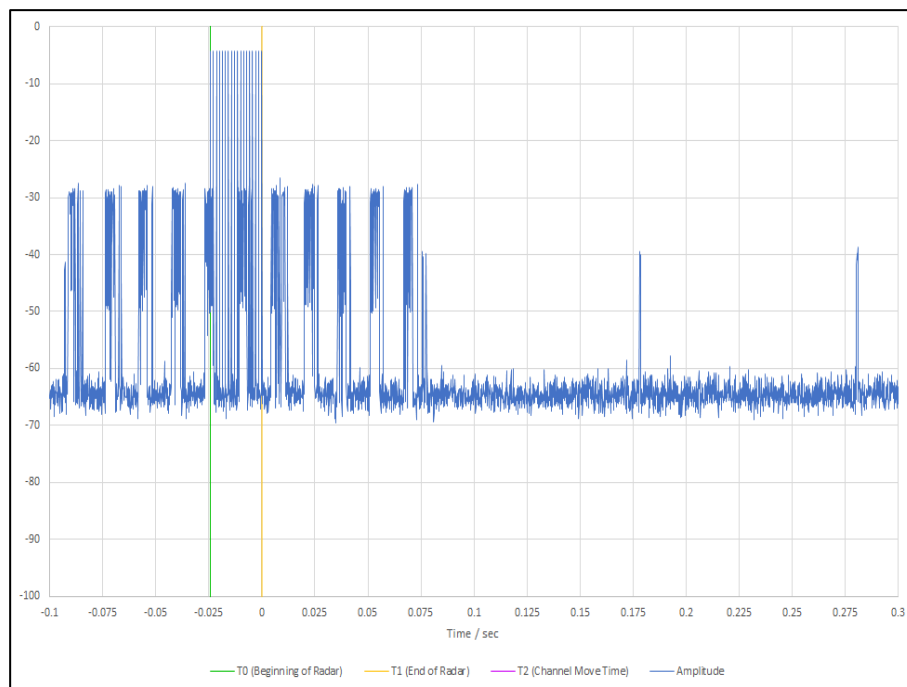


Figure 589 - First 200 ms of Channel Shutdown Period

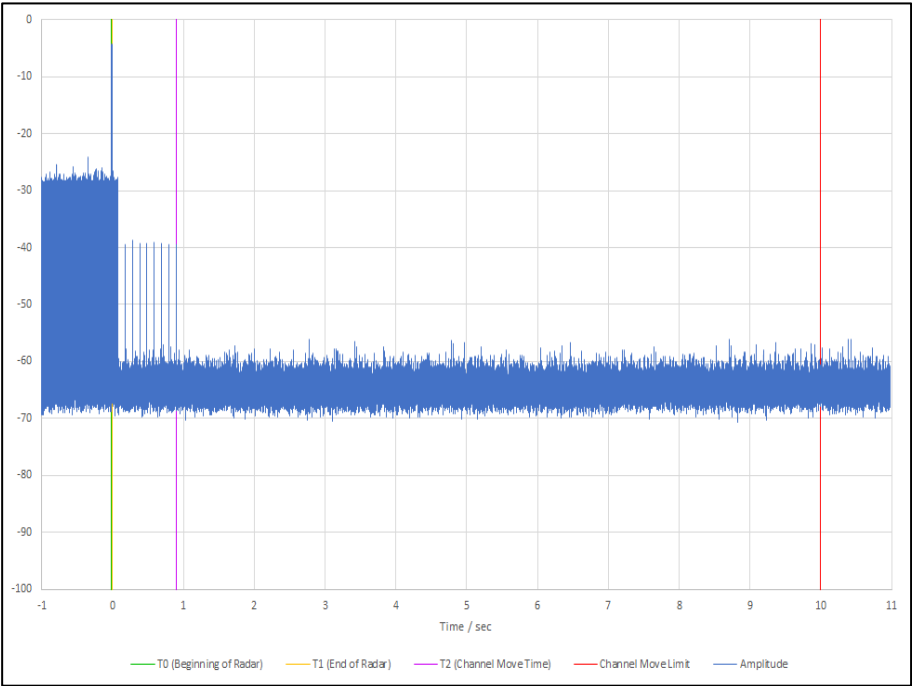


Figure 590 - First 12 s of Channel Shutdown Period

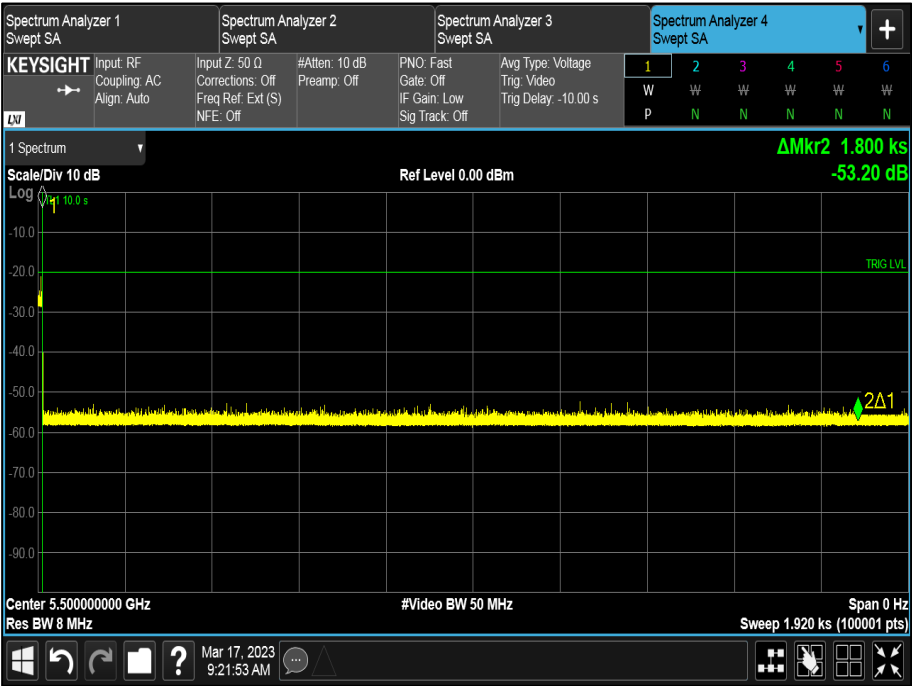


Figure 591 - 30 minute Non-Occupancy Period

5 GHz WLAN - Client to Client - 802.11ac VHT160

The equipment was set up as shown in the diagram below.

The EUT and a 2nd client device were both connected to the DFS Master device. The 2nd client device was set to stream video directly to the EUT using the AirPlay protocol, while under the supervision of the DFS master (but without the DFS master re-transmitting the data packets). The channel loading was checked to ensure it was >17%.

Radar Type	Pulse Width (μ s)	PRI (μ s)	Number of Pulses
0	1	1428	18

Table 676 - Radar Pulse Type 0 Characteristics

Manufacturer	Model	Serial Number	FCC ID
ASUS	GT-AXE11000	M8IG0X400285XVN	MSQ-RTAXJF00

Table 677 - Details of Master Device used to support testing

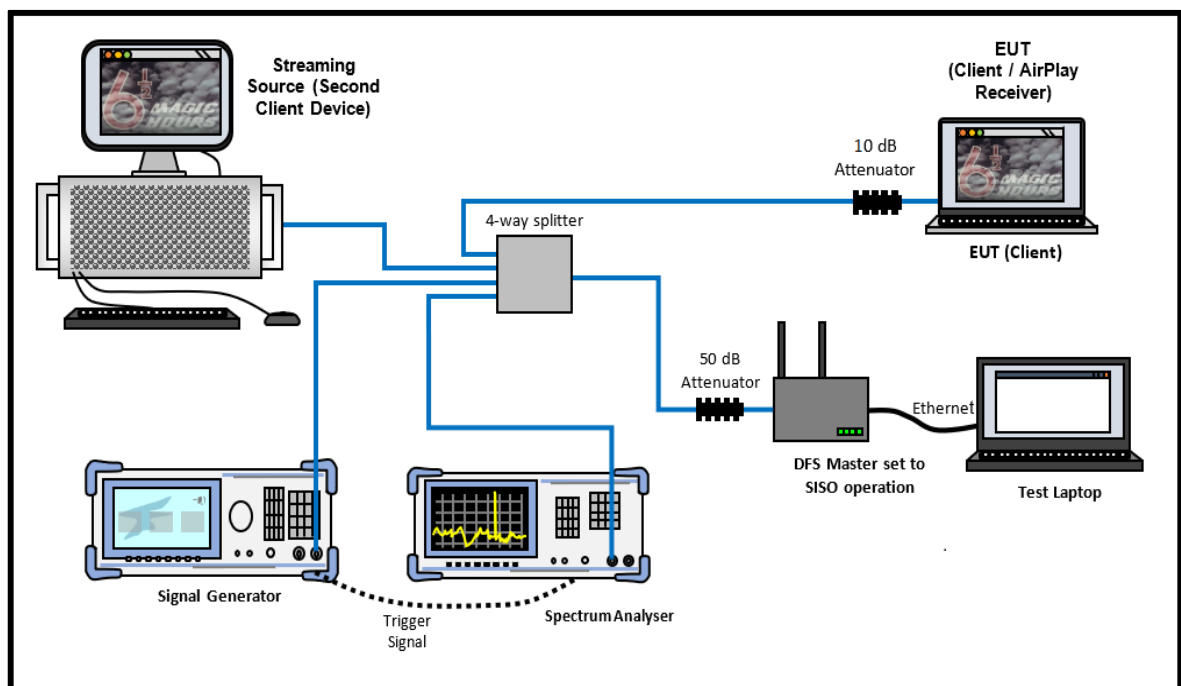


Figure 592 - Test Equipment Setup Diagram for Client without Radar Detection with Injection at the Master



Figure 593 - Verification of Radar Type 0

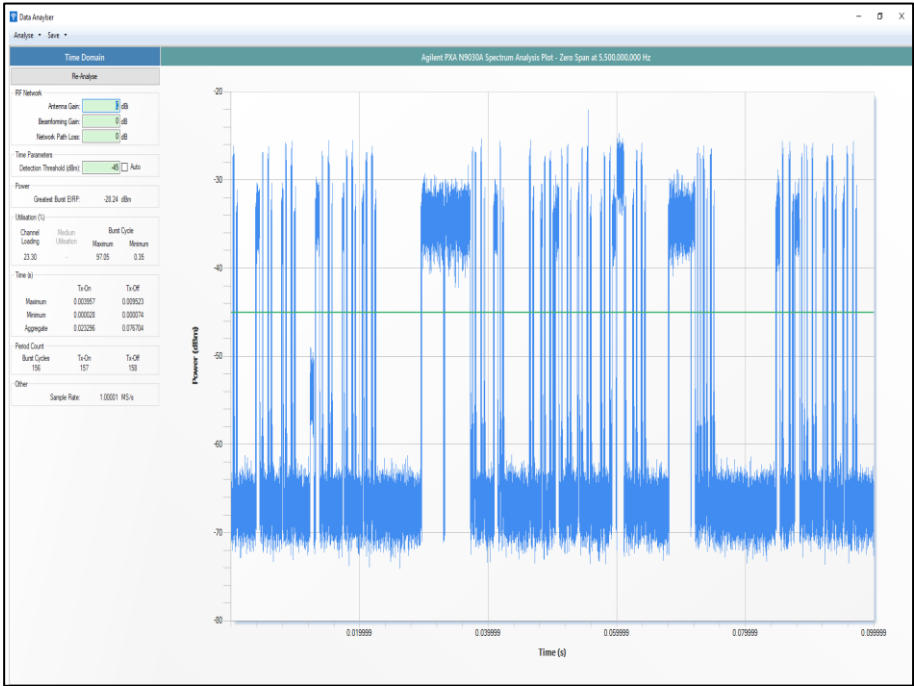


Figure 594 - Channel Loading

The channel loading was 23.30%.

Maximum Transmit Power	Value (Notes 1 and 2)
≥ 200 milliwatt	-64 dBm
< 200 milliwatt	-62 dBm
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna. Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.	

Table 678 - DFS Detection Thresholds for Master Devices and Client Devices with Radar Detection

Test Parameter	Result
Test Channel	CH114 (5570 MHz), Control CH100 (5500 MHz)
Channel Move Time	0.847 s
Channel Closing Time (Aggregate Time During 200 ms)	23.040 ms
Channel Closing Time (Aggregate Time During 200 ms to 10 s)	8.400 ms
Channel Closing Time (Aggregate Time During 10 s)	31.440 ms
Transmission Observed During Non-Occupancy Period	No

Table 679 - In-Service Monitoring Test Results

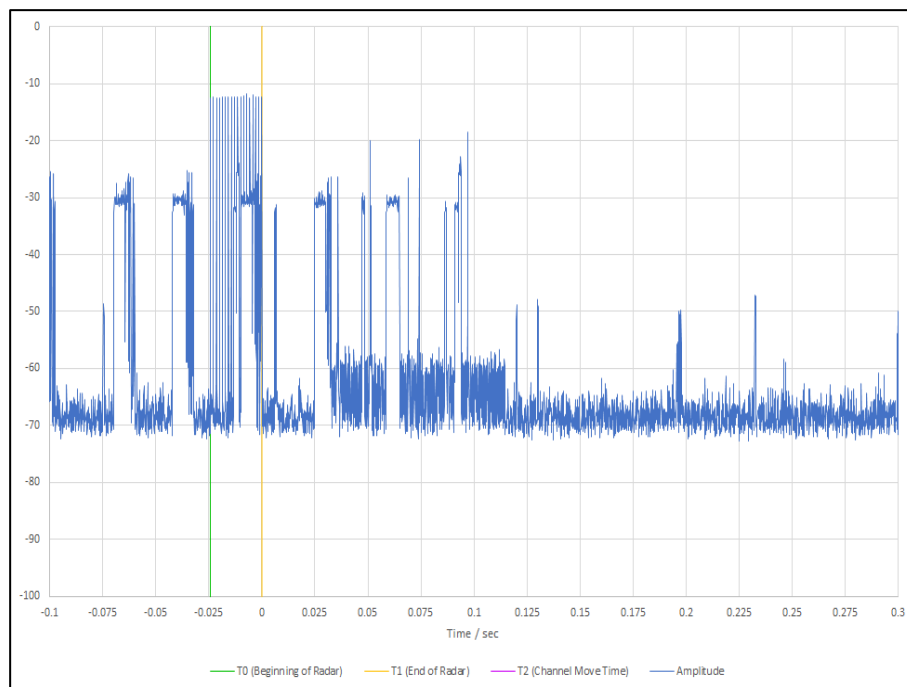


Figure 595 - First 200 ms of Channel Shutdown Period

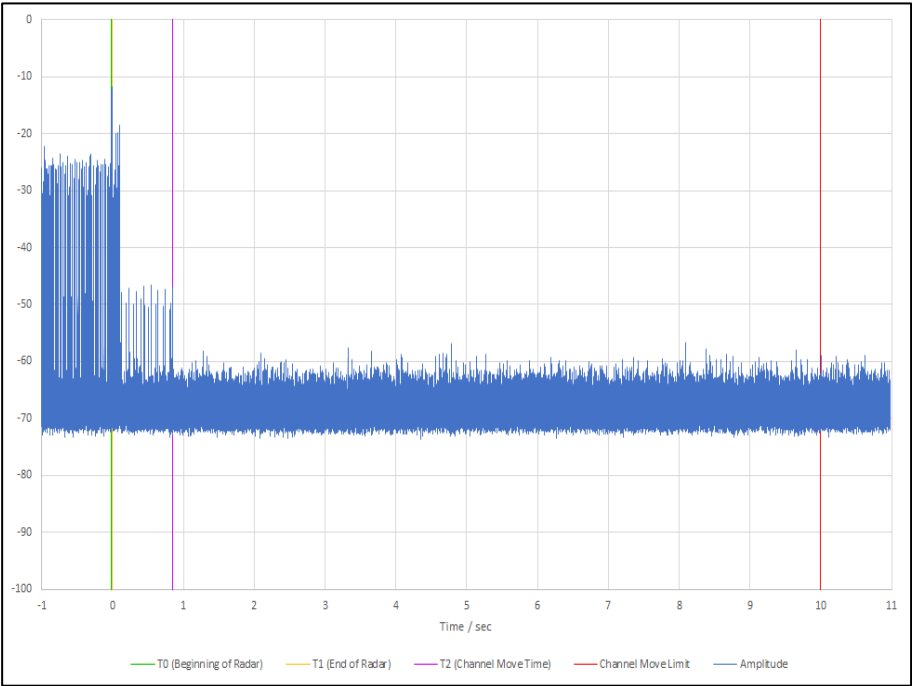


Figure 596 - First 12 s of Channel Shutdown Period

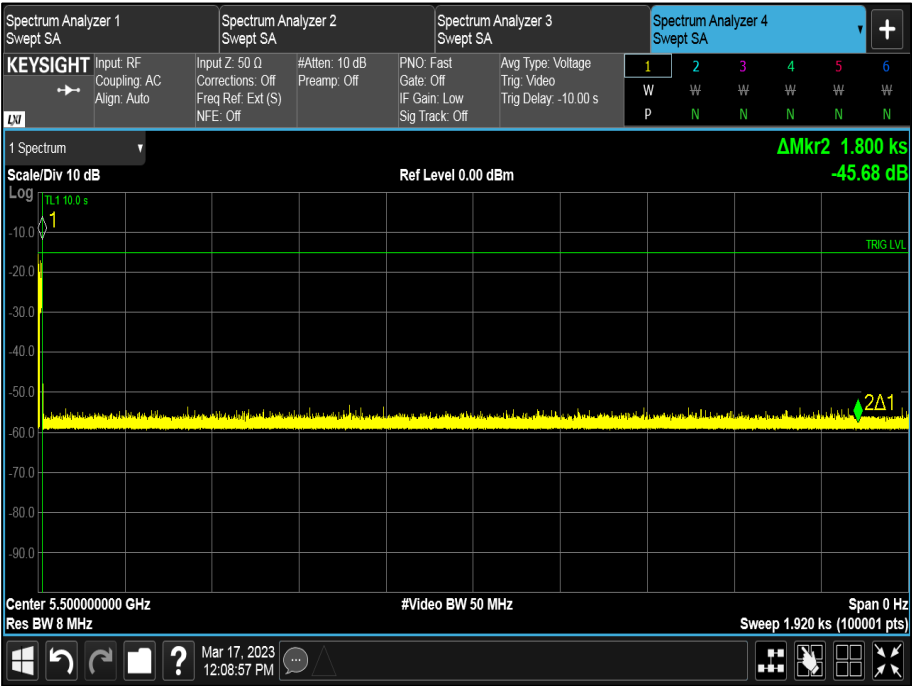


Figure 597 - 30 minute Non-Occupancy Period



FCC 47 CFR Part 15, Limit Clause 15.407 (h)(2)(iii)

Channel Move Time	<10 seconds
Channel Closing Time (Aggregate Time During 200ms)	<200 ms
Channel Closing Time (Aggregate Time During +200ms to 10s)	<60 ms

Table 680 - Channel Move Time and Channel Closing Transmission Time Limit

FCC 47 CFR Part 15, Limit Clause 15.407 (h)(2)(iv)

Non-occupancy Period	> 30 minutes
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Table 681 - Non-Occupancy Limit

ISED RSS-247, Limit Clause 6.3.2

Devices shall comply with the following requirements, however, the requirement for in-service monitoring does not apply to slave devices without radar detection.

In-service monitoring: an LE-LAN device shall be able to monitor the operating channel to check that a co-channel radar has not moved or started operation within range of the LE-LAN device. During in-service monitoring, the LE-LAN radar detection function continuously searches for radar signals between normal LE-LAN transmissions.

Channel availability check time: the device shall check whether there is a radar system already operating on the channel before it initiates a transmission on a channel and when it moves to a channel. The device may start using the channel if no radar signal with a power level greater than the interference threshold value specified in Section 6.3.1 above is detected within 60 seconds. This requirement only applies in the master operational mode.

Channel move time: after a radar signal is detected, the device shall cease all transmissions on the operating channel within 10 seconds.

Channel closing transmission time: is comprised of 200 ms starting at the beginning of the channel move time plus any additional intermittent control signals required to facilitate a channel move (an aggregate of 60 ms) over the remaining 10-second period of the channel move time.

Non-occupancy period: a channel that has been flagged as containing a radar signal, either by a channel availability check or in-service monitoring, is subject to a 30-minute non-occupancy period where the channel cannot be used by the LE-LAN device. The non-occupancy period starts from the time that the radar signal is detected.



2.7.7 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
Attenuator (20dB, 1W)	Sealectro	60-674-1020-89	1520	-	O/P Mon
Hygrometer	Rotronic	I-1000	3220	12	15-Nov-2023
Frequency Standard	Spectracom	SecureSync 1200-0408-0601	4393	6	13-Jul-2023
Power splitter - 4 port	Mini-Circuits	ZN4PD1-63-S+	4744	12	21-Feb-2024
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
2.92mm 1m cable	Junkosha	MWX211/B	5415	12	24-Jul-2023
3.5 mm 2m Cable	Junkosha	MWX221-02000DMS	5427	12	29-Mar-2023
Attenuator 5W 30dB DC-18GHz	Aaren	AT40A-4041-D18-30	5505	12	21-Feb-2024
2-Way Power Divider (2 to 8 GHz)	Aaren	AT30A-TE0208-2-AF	5684	12	21-Dec-2023
2-Way Power Divider (2-8 GHz)	Aaren	AT30A-TE0208-2-AF	5685	12	21-Dec-2023
Vector Signal Generator	Rohde & Schwarz	SMM100A	5915	36	01-Mar-2026
WiFi 6E Tri-Band Gaming Router	Asus	GT-AXE110000	5926	-	TU
Coaxial Fixed Attenuator DC-18GHz 5W 10dB	RF-Lambda	RFS5G18B10SMP	6177	12	17-Jul-2023

Table 682

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
Restricted Band Edges	± 6.3 dB
Emission Bandwidth	± 974.92 kHz
Maximum Conducted Output Power	± 1.38 dB
Maximum Conducted Power Spectral Density	± 1.49 dB
Authorised Band Edges	± 6.3 dB
Spurious Radiated Emissions	30 MHz to 1 GHz: ± 5.2 dB 1 GHz to 40 GHz: ± 6.3 dB
Channel Move Time, Channel Closing Transmission Time and Non-Occupancy Period	Time: ± 0.47 % Power: ± 1.29 dB

Table 683

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.