TUV SUD Limited
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Date: 2024.10.08 17:20:17 +01'00'

40 MHz Bandwidth - Core 0 (SISO)

Mode	Data Rate/ MCS	Resource Size	Resource Index	TX Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBuV/m)
802.11ax HE40	MCS 4x1	SU	-	5965	5925	83.49	65.65
802.11ax HE40	MCS 11x1	106	56	5965	5925	58.44	45.47
802.11ax HE40	MCS 4x1	SU	-	7085	7125	82.09	65.69
802.11ax HE40	MCS 11x1	26	0	7085	7125	69.80	48.91

Table 287 - SISO Authorised Band Edge Results

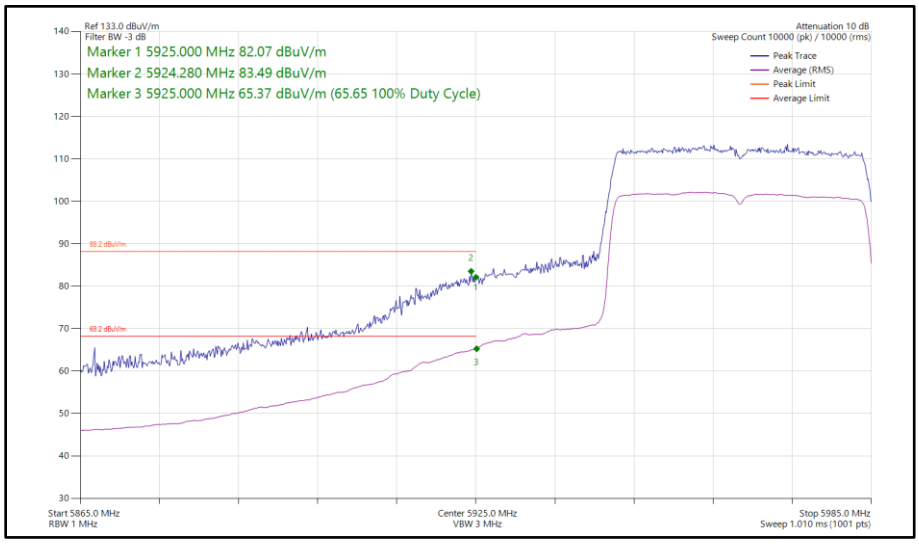

Figure 120 - 802.11ax HE40, SU, SISO, Core 0 - 5965 MHz Band Edge Frequency 5925 MHz

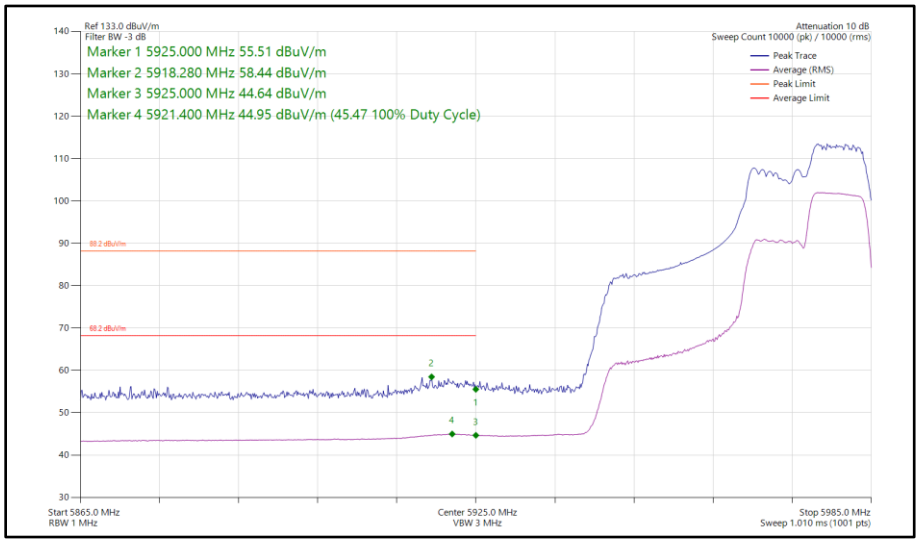

Figure 121 - 802.11ax HE40, RU 106-56, SISO, Core 0 - 5965 MHz Band Edge Frequency 5925 MHz

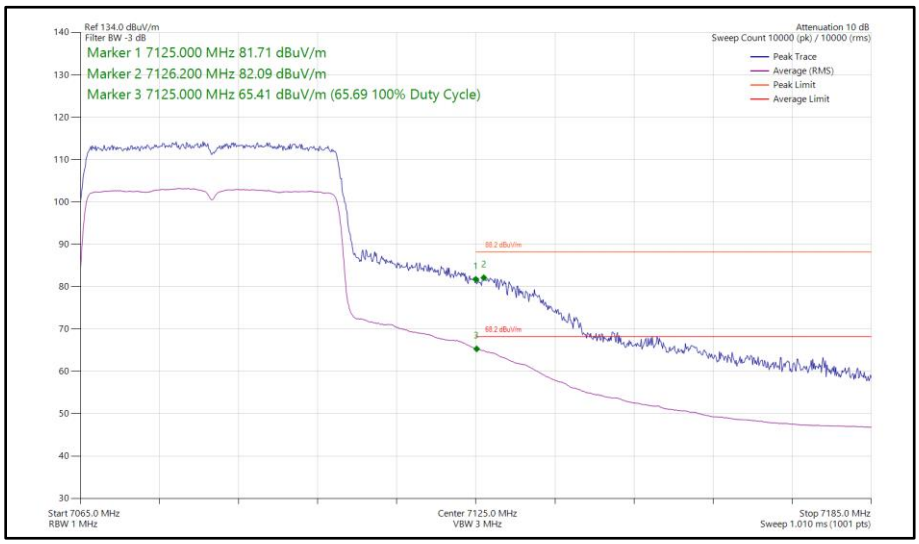

Figure 122 - 802.11ax HE40, SU, SISO, Core 0 - 7085 MHz Band Edge Frequency 7125 MHz

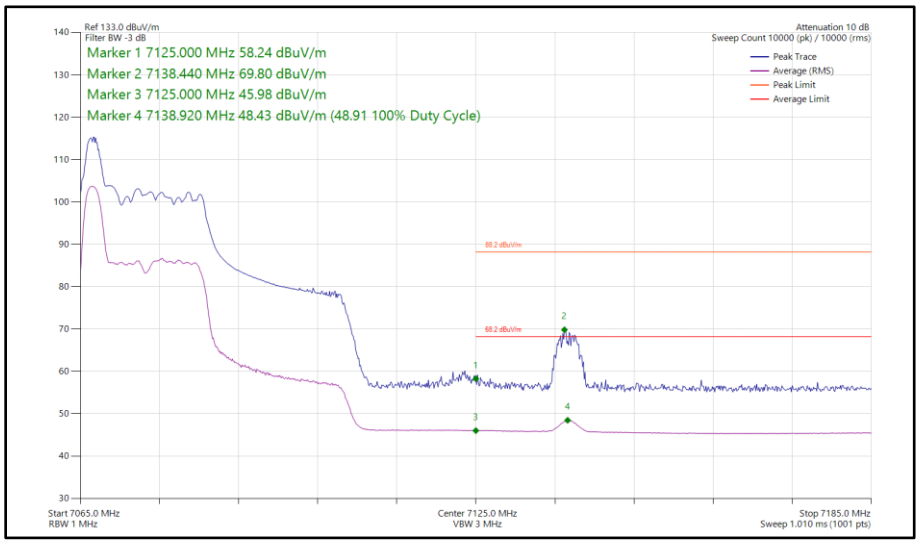

Figure 123 - 802.11ax HE40, RU 26-0, SISO, Core 0 - 7085 MHz Band Edge Frequency 7125 MHz

40 MHz Bandwidth - Core 1 (SISO)

Mode	Data Rate/ MCS	Resource Size	Resource Index	TX Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBuV/m)
802.11ax HE40	MCS 2x1	SU	-	5965	5925	81.04	65.61
802.11ax HE40	MCS 11x1	106	56	5965	5925	58.47	45.78
802.11ax HE40	MCS 4x1	SU	-	7085	7125	81.77	65.42
802.11ax HE40	MCS 11x1	52	37	7085	7125	71.66	50.23

Table 288 - SISO Authorised Band Edge Results

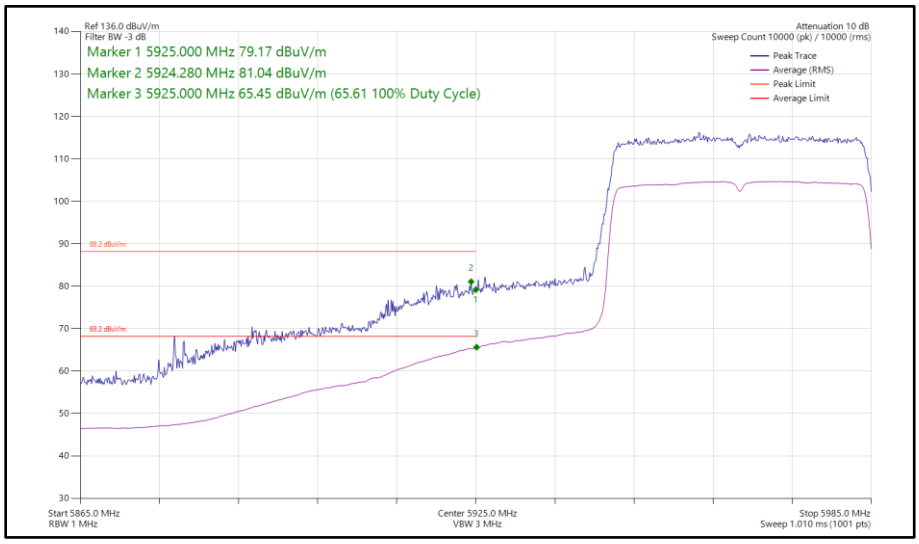

Figure 124 - 802.11ax HE40, SU, SISO, Core 1 - 5965 MHz Band Edge Frequency 5925 MHz

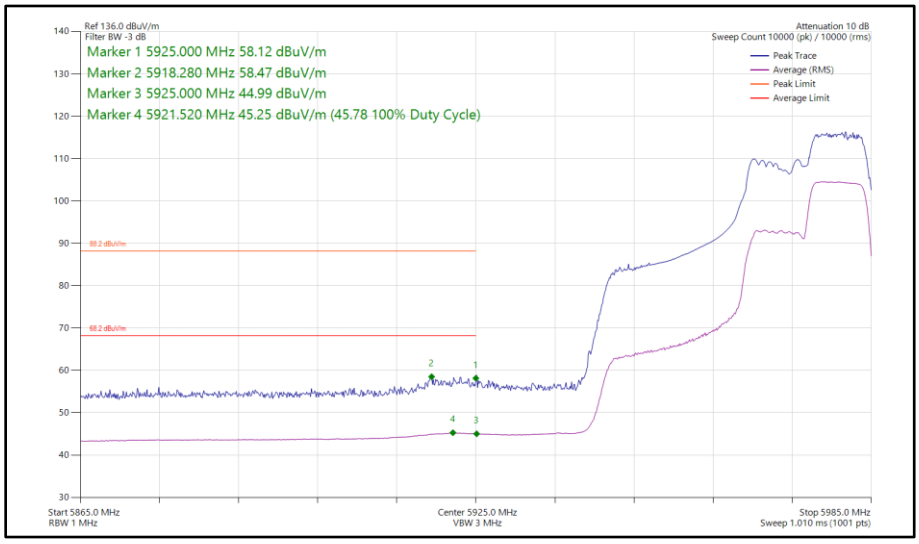

Figure 125 - 802.11ax HE40, RU 106-56, SISO, Core 1 - 5965 MHz Band Edge Frequency 5925 MHz

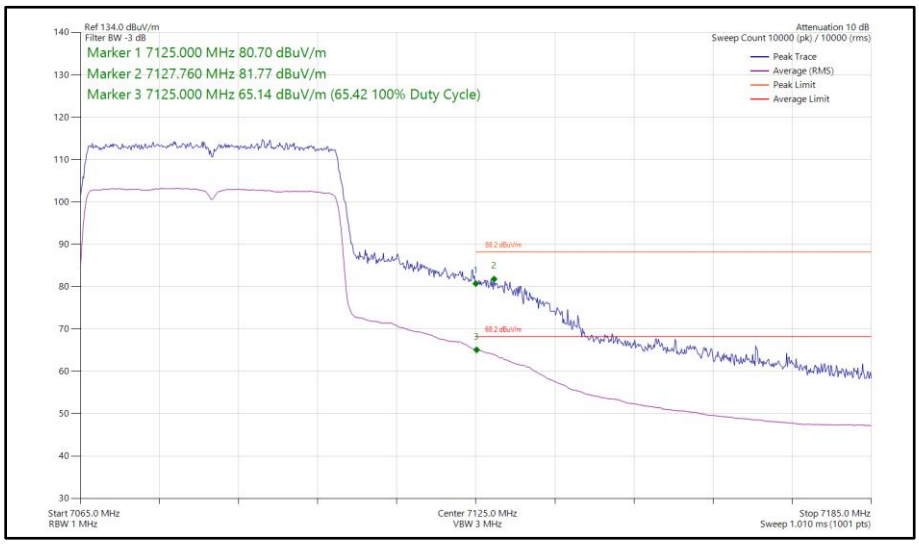

Figure 126 - 802.11ax HE40, SU, SISO, Core 1 - 7085 MHz Band Edge Frequency 7125 MHz

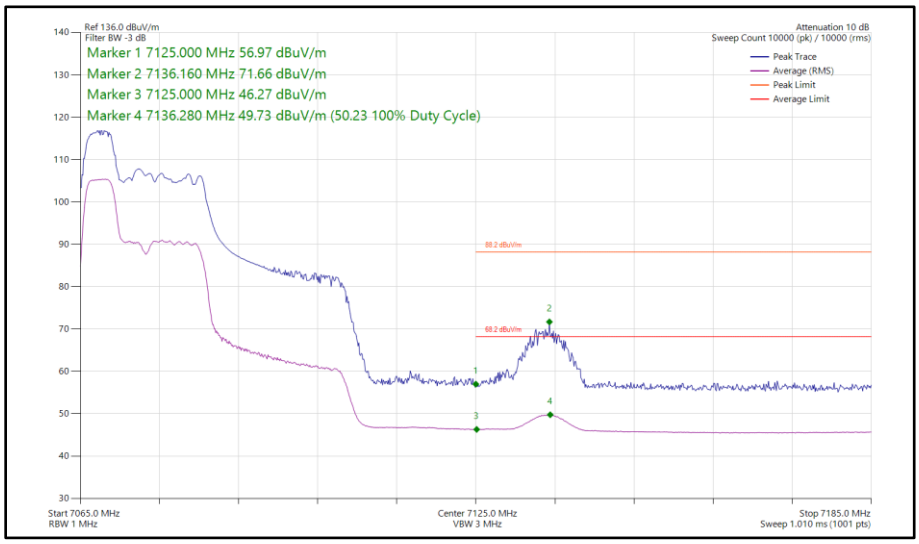

Figure 127 - 802.11ax HE40, RU 52-37, SISO, Core 1 - 7085 MHz Band Edge Frequency 7125 MHz

40 MHz Bandwidth - Core 0 - Core 1 (CDD)

Mode	Data Rate/ MCS	Resource Size	Resource Index	TX Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBuV/m)
802.11ax HE40	MCS 2x1	SU	-	5965	5925	79.39	65.27
802.11ax HE40	MCS 11x1	106	56	5965	5925	59.30	46.66
802.11ax HE40	MCS 4x1	SU	-	7085	7125	82.10	65.60
802.11ax HE40	MCS 11x1	26	0	7085	7125	70.99	50.06

Table 289 - CDD Authorised Band Edge Results

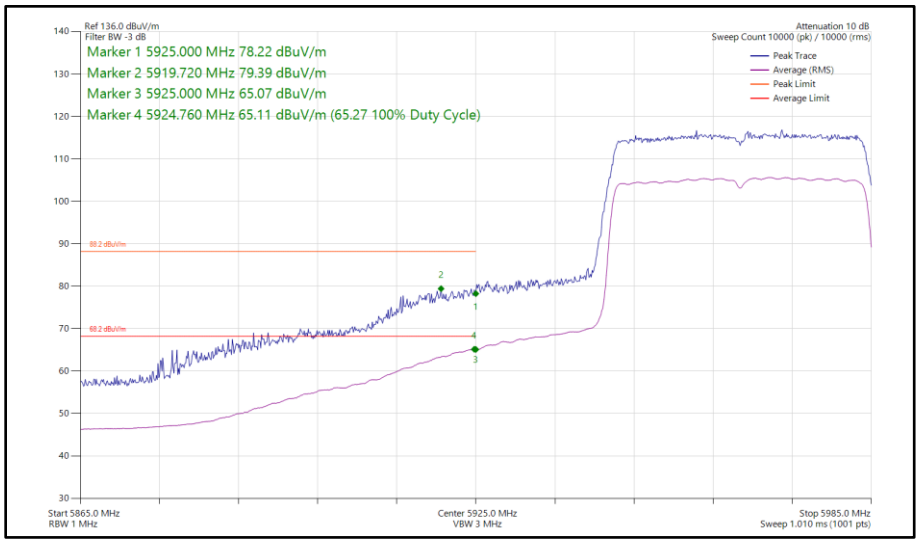

Figure 128 - 802.11ax HE40, SU, CDD, Core 0 - Core 1 - 5965 MHz Band Edge Frequency 5925 MHz

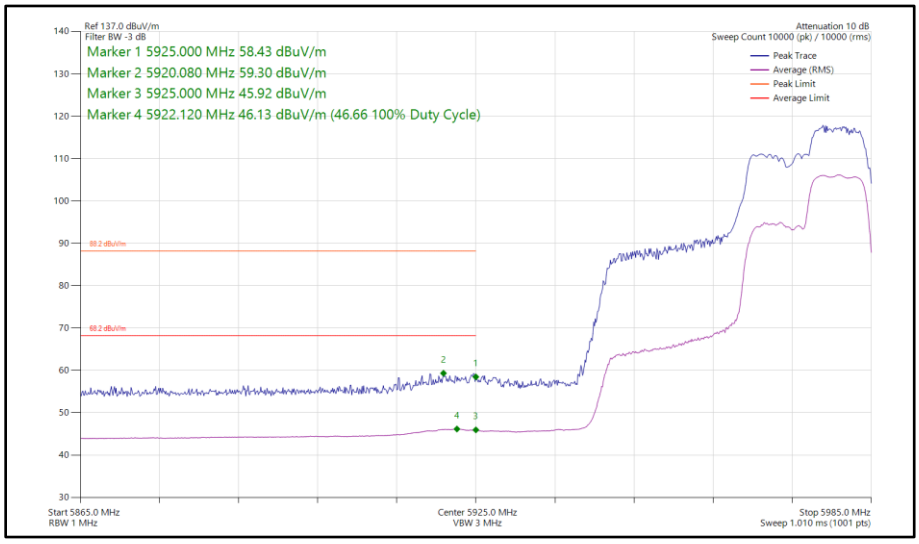

Figure 129 - 802.11ax HE40, RU 106-56, CDD, Core 0 - Core 1 - 5965 MHz Band Edge Frequency 5925 MHz

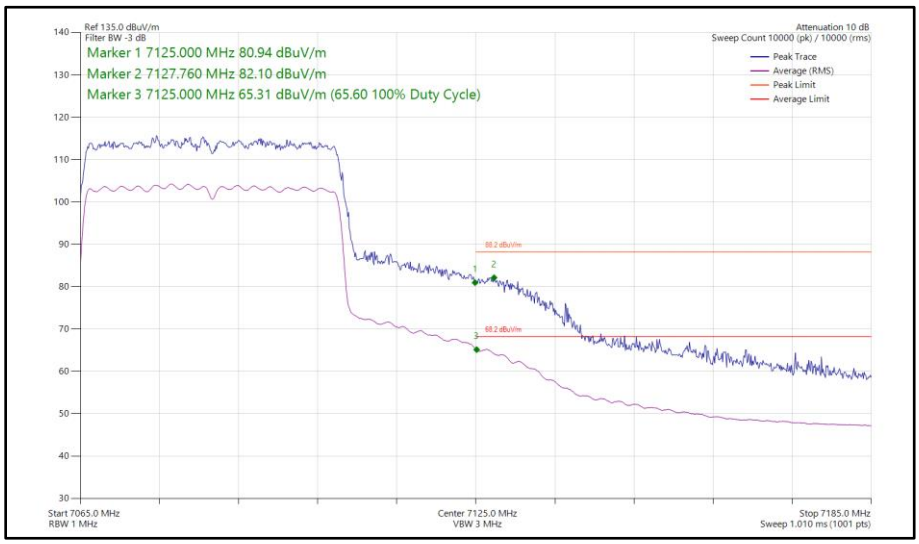

Figure 130 - 802.11ax HE40, SU, CDD, Core 0 - Core 1 - 7085 MHz Band Edge Frequency 7125 MHz

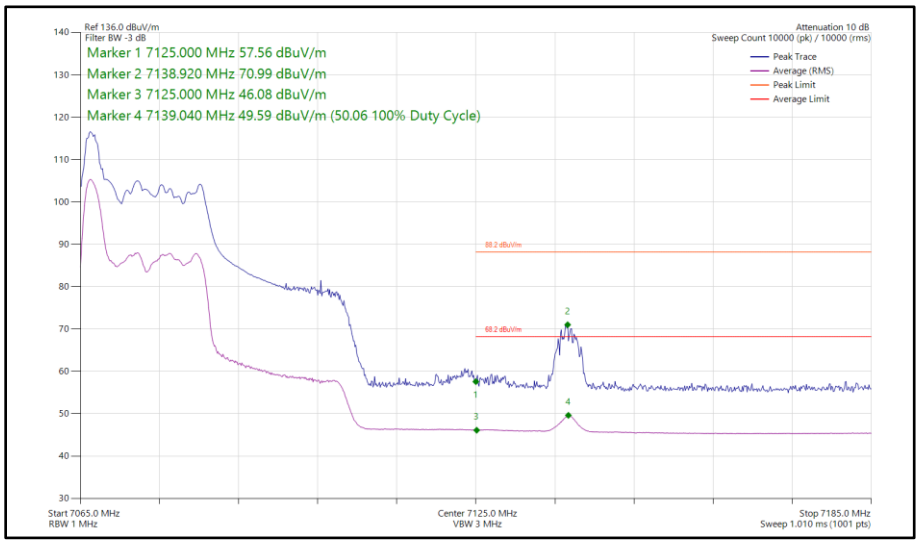

Figure 131 - 802.11ax HE40, RU 26-0, CDD, Core 0 - Core 1 - 7085 MHz Band Edge Frequency 7125 MHz

40 MHz Bandwidth - Core 0 - Core 1 (SDM)

Mode	Data Rate/ MCS	Resource Size	Resource Index	TX Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBuV/m)
802.11ax HE40	MCS 11x2	SU	-	5965	5925	83.19	62.77
802.11ax HE40	MCS 11x2	106	56	5965	5925	58.50	46.15
802.11ax HE40	MCS 11x2	SU	-	7085	7125	83.31	64.24
802.11ax HE40	MCS 11x2	26	0	7085	7125	70.09	49.76

Table 290 - SDM Authorised Band Edge Results

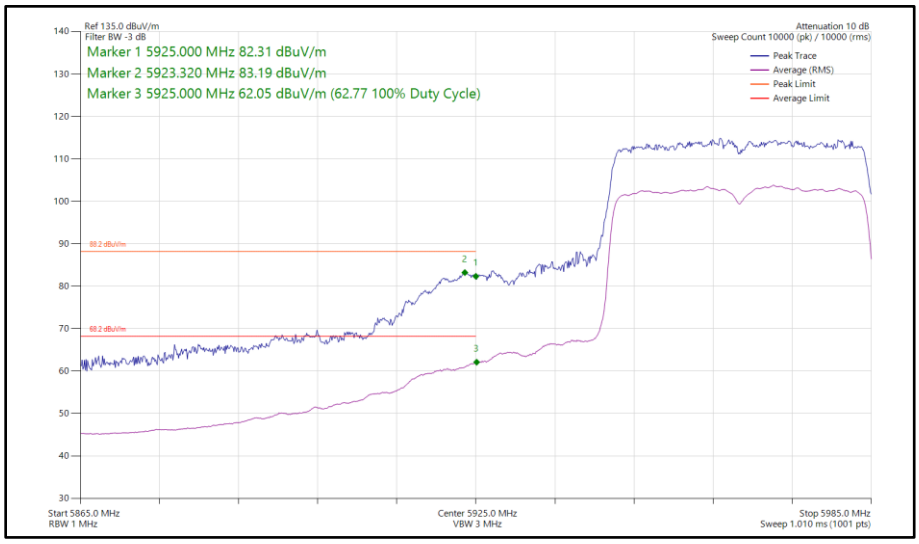

Figure 132 - 802.11ax HE40, SU, SDM, Core 0 - Core 1 - 5965 MHz Band Edge Frequency 5925 MHz

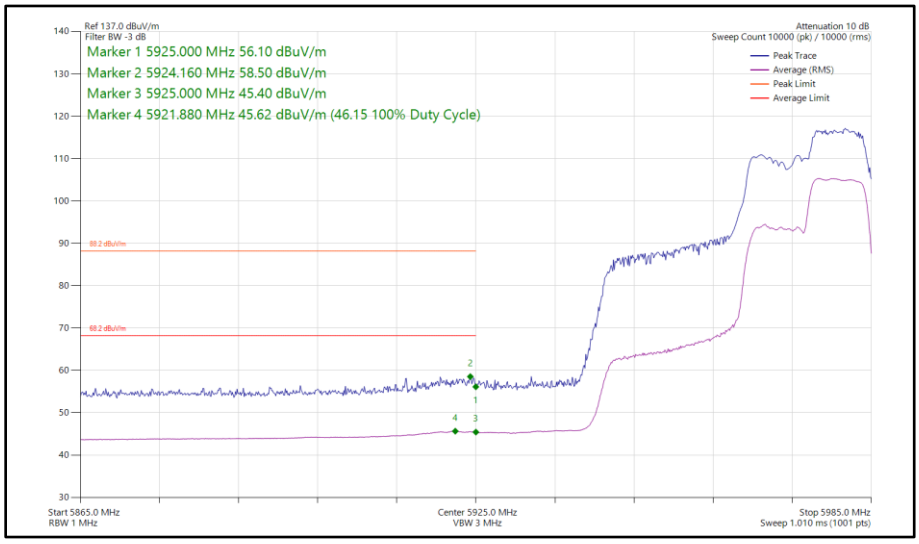

Figure 133 - 802.11ax HE40, RU 106-56, SDM, Core 0 - Core 1 - 5965 MHz Band Edge Frequency 5925 MHz

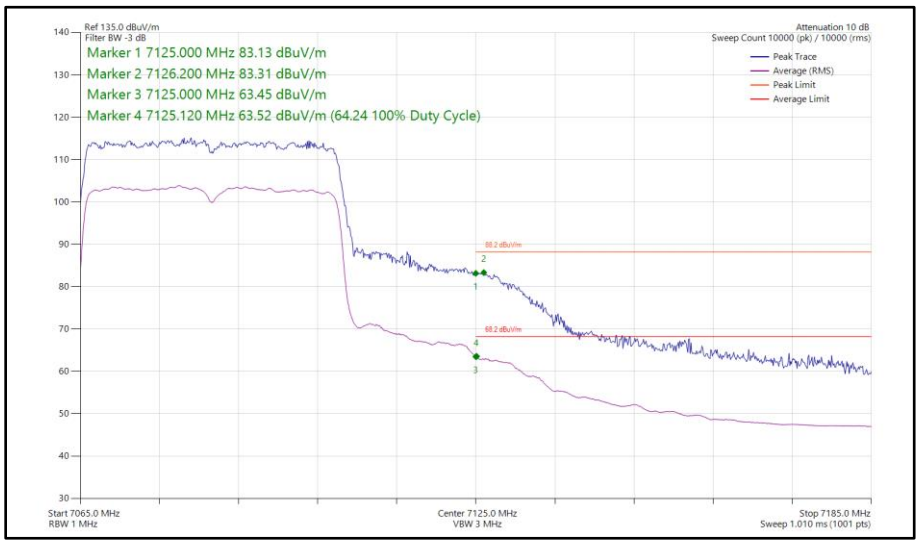

Figure 134 - 802.11ax HE40, SU, SDM, Core 0 - Core 1 - 7085 MHz Band Edge Frequency 7125 MHz

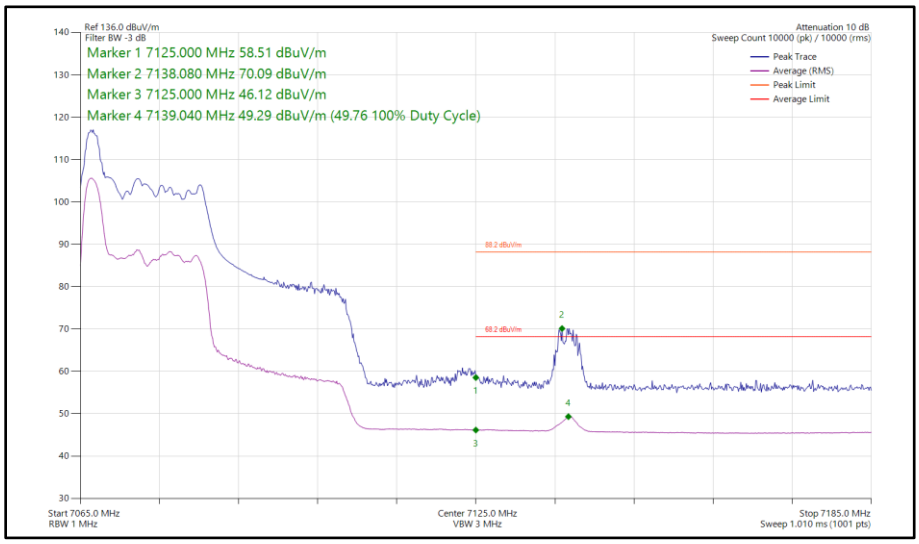

Figure 135 - 802.11ax HE40, RU 26-0, SDM, Core 0 - Core 1 - 7085 MHz Band Edge Frequency 7125 MHz

40 MHz Bandwidth - Core 0 - Core 1 (TxBF)

Mode	Data Rate/ MCS	Resource Size	Resource Index	TX Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBuV/m)
802.11ax HE40	MCS 4x1	SU	-	5965	5925	83.04	64.84
802.11ax HE40	MCS 11x1	SU	-	6005	5925	66.91	50.16
802.11ax HE40	MCS 11x1	SU	-	7045	7125	68.49	53.70
802.11ax HE40	MCS 2x1	SU	-	7085	7125	80.66	65.39

Table 291 - TxBF Authorised Band Edge Results

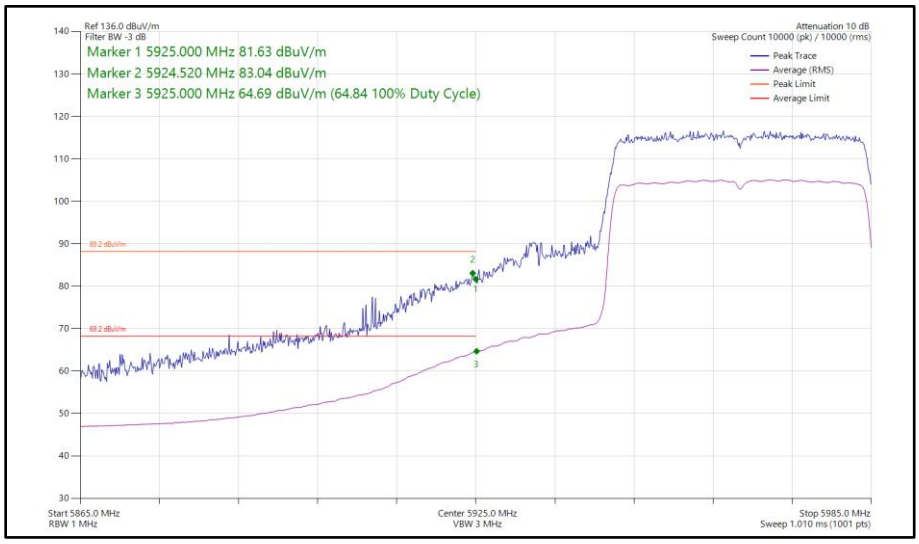

Figure 136 - 802.11ax HE40, SU, TxBF, Core 0 - Core 1 - 5965 MHz Band Edge Frequency 5925 MHz

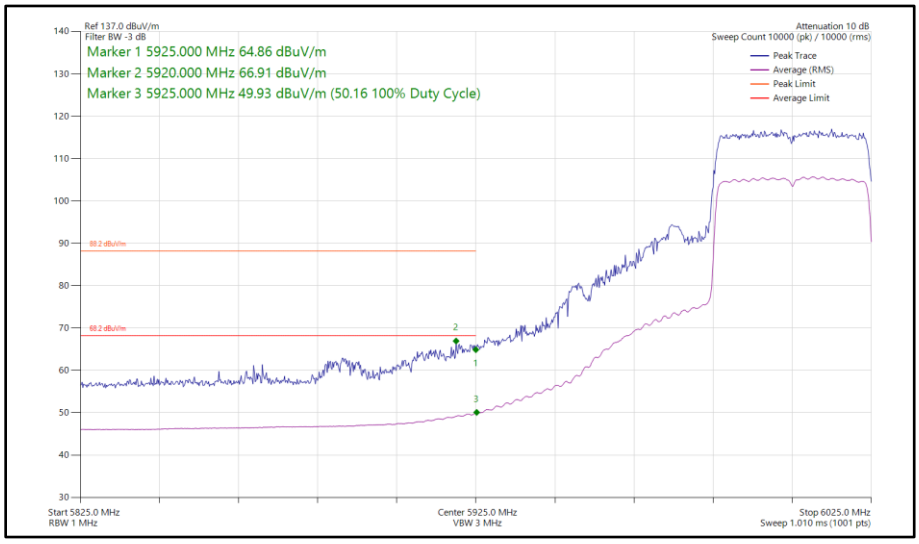

Figure 137 - 802.11ax HE40, SU, TxBF, Core 0 - Core 1 - 6005 MHz Band Edge Frequency 5925 MHz

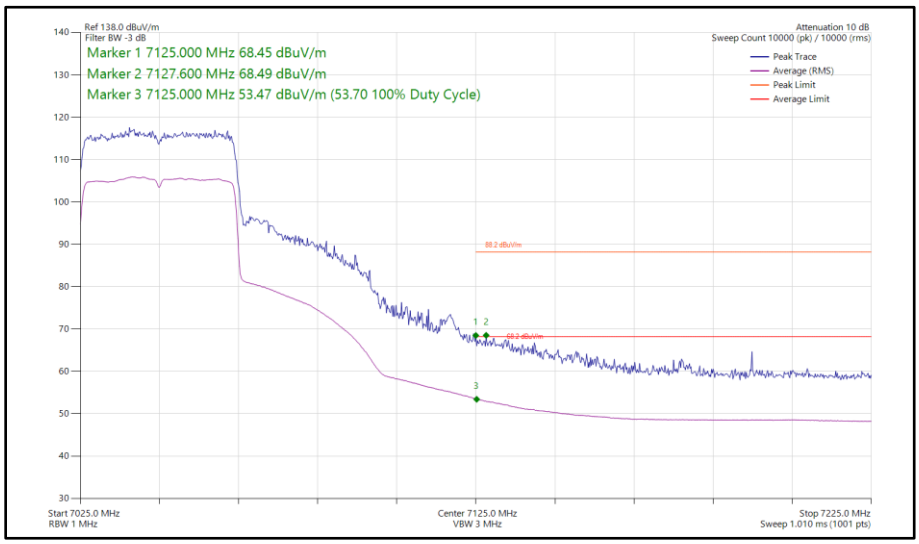

Figure 138 - 802.11ax HE40, SU, TxBF, Core 0 - Core 1 - 7045 MHz Band Edge Frequency 7125 MHz

Figure 139 - 802.11ax HE40, SU, TxBF, Core 0 - Core 1 - 7085 MHz Band Edge Frequency 7125 MHz

80 MHz Bandwidth - Core 0 (SISO)

Mode	Data Rate/ MCS	Resource Size	Resource Index	TX Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBuV/m)
802.11ax HE80	MCS 11x1	SU	-	5985	5925	81.58	65.24
802.11ax HE80	MCS 11x1	106	60	5985	5925	57.30	44.43
802.11ax HE80	MCS 4x1	SU	-	7025	7125	75.84	59.29
802.11ax HE80	MCS 11x1	106	53	7025	7125	62.57	47.39

Table 292 - SISO Authorised Band Edge Results

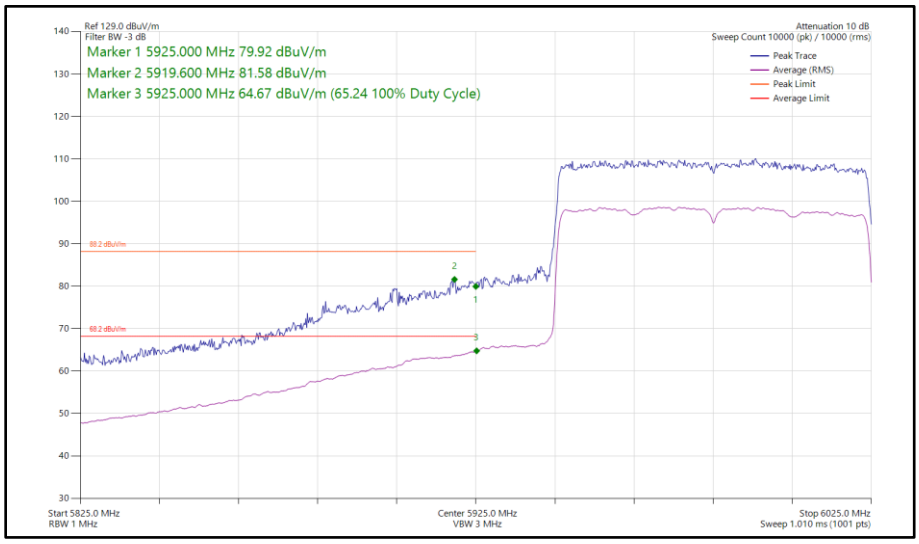

Figure 140 - 802.11ax HE80, SU, SISO, Core 0 - 5985 MHz Band Edge Frequency 5925 MHz

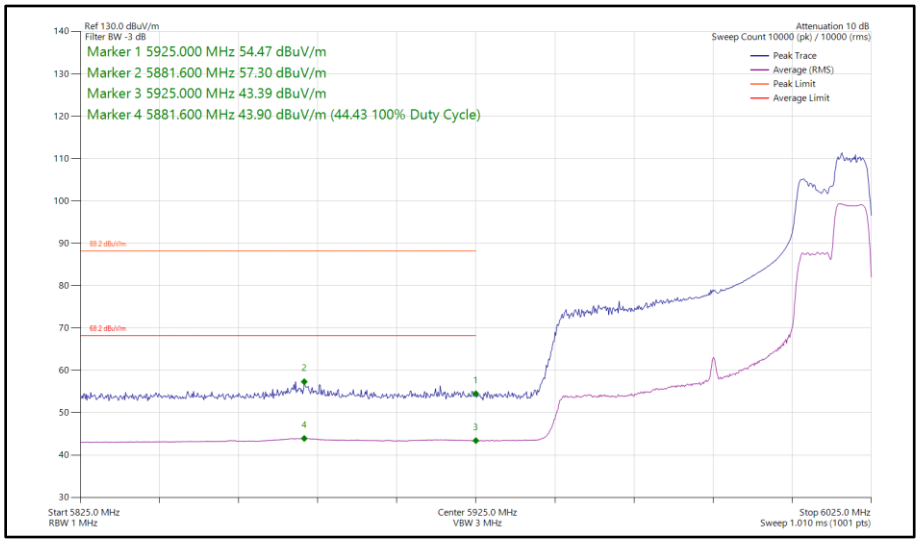

Figure 141 - 802.11ax HE80, RU 106-60, SISO, Core 0 - 5985 MHz Band Edge Frequency 5925 MHz

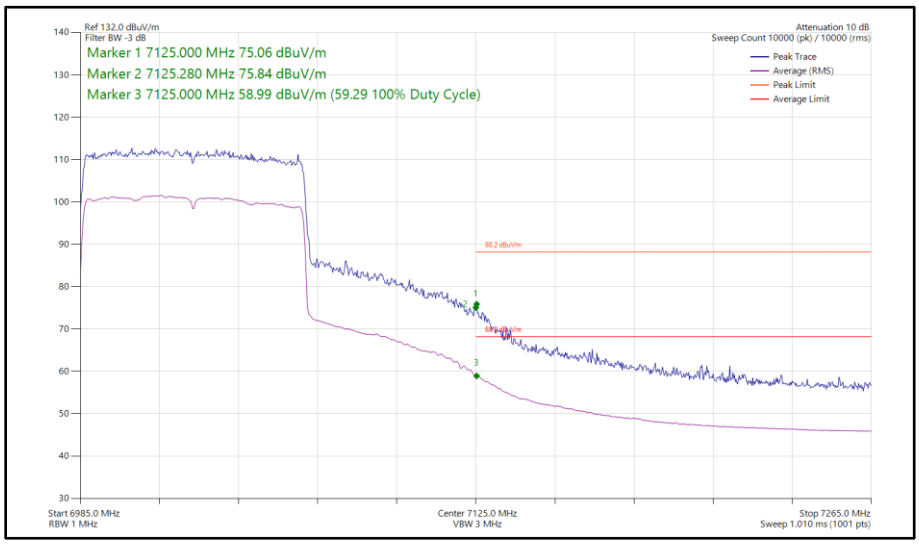

Figure 142 - 802.11ax HE80, SU, SISO, Core 0 - 7025 MHz Band Edge Frequency 7125 MHz

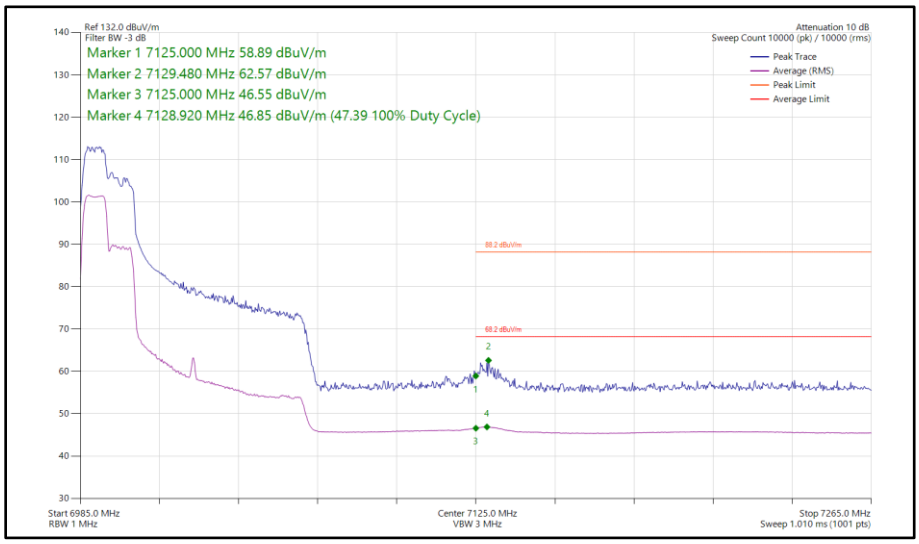

Figure 143 - 802.11ax HE80, RU 106-53, SISO, Core 0 - 7025 MHz Band Edge Frequency 7125 MHz

80 MHz Bandwidth - Core 1 (SISO)

Mode	Data Rate/ MCS	Resource Size	Resource Index	TX Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBuV/m)
802.11ax HE80	MCS 11x1	SU	-	5985	5925	81.71	65.28
802.11ax HE80	MCS 11x1	106	53	5985	5925	56.24	44.93
802.11ax HE80	MCS 2x1	SU	-	7025	7125	78.36	62.70
802.11ax HE80	MCS 11x1	106	53	7025	7125	64.05	48.42

Table 293 - SISO Authorised Band Edge Results

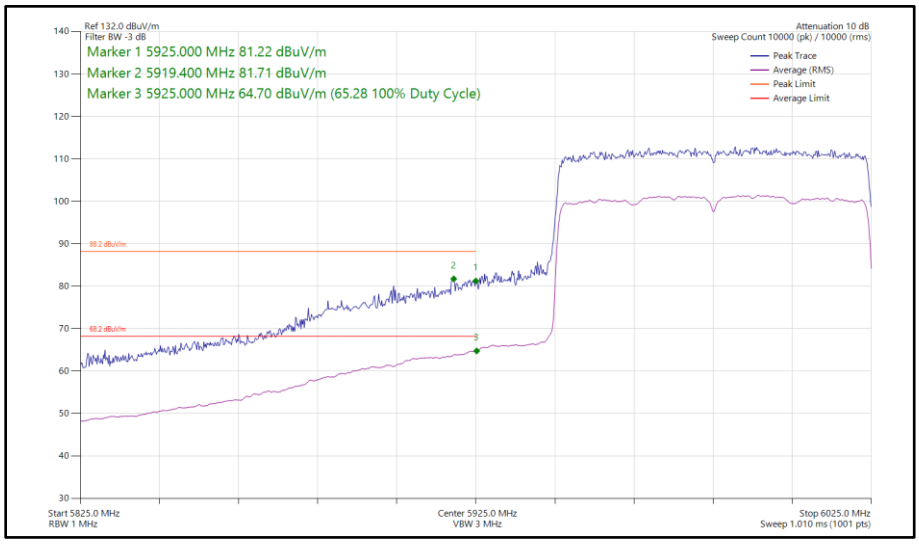

Figure 144 - 802.11ax HE80, SU, SISO, Core 1 - 5985 MHz Band Edge Frequency 5925 MHz

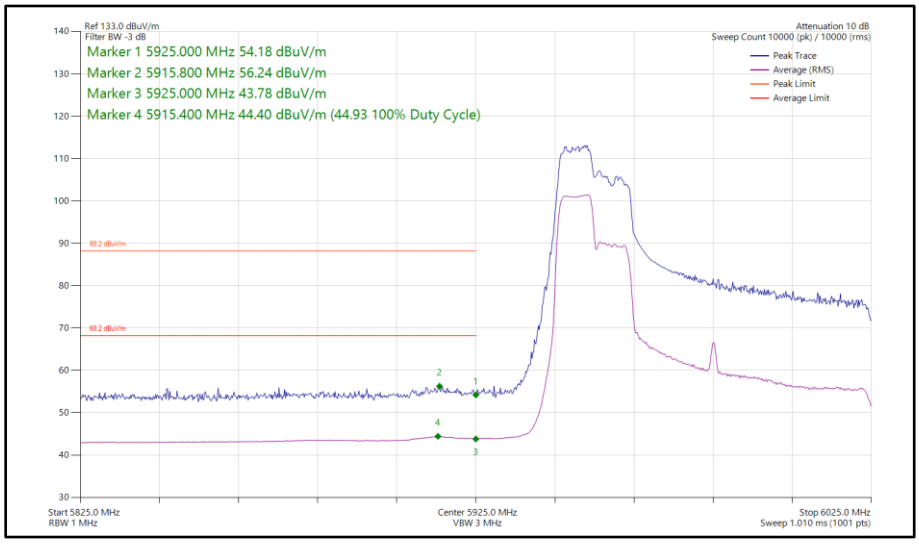

Figure 145 - 802.11ax HE80, RU 106-53, SISO, Core 1 - 5985 MHz Band Edge Frequency 5925 MHz

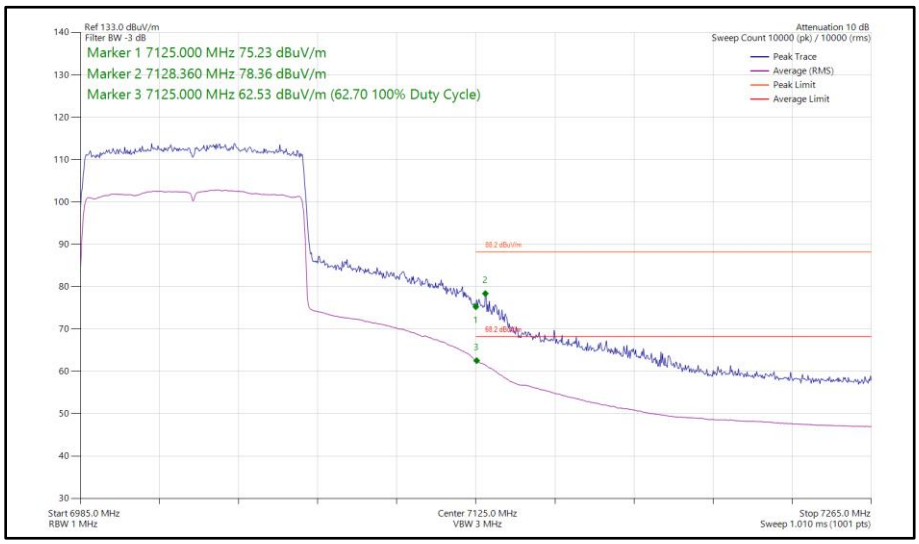

Figure 146 - 802.11ax HE80, SU, SISO, Core 1 - 7025 MHz
Band Edge Frequency 7125 MHz

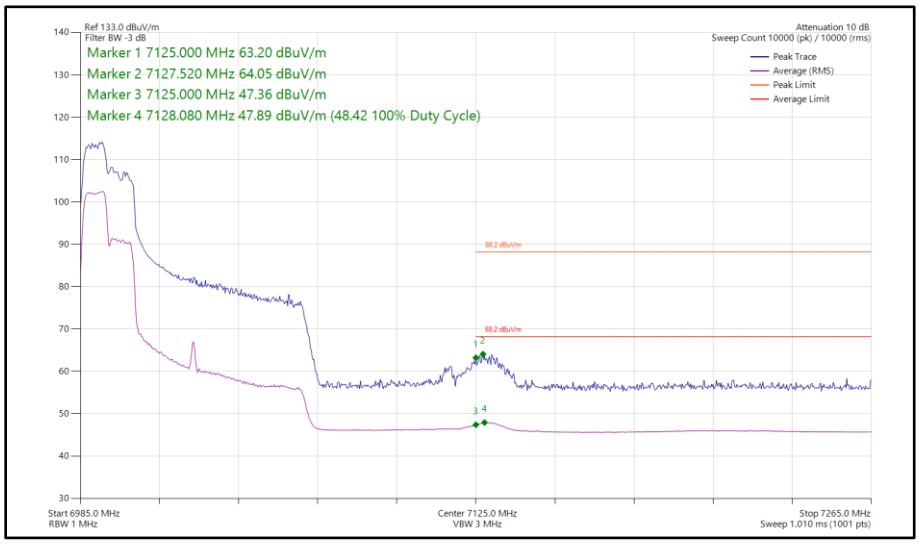

Figure 147 - 802.11ax HE80, RU 106-53, SISO, Core 1 - 7025 MHz
Band Edge Frequency 7125 MHz

80 MHz Bandwidth - Core 0 - Core 1 (CDD)

Mode	Data Rate/ MCS	Resource Size	Resource Index	TX Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBuV/m)
802.11ax HE80	MCS 4x1	SU	-	5985	5925	79.50	65.36
802.11ax HE80	MCS 11x1	106	53	5985	5925	56.54	45.55
802.11ax HE80	MCS 4x1	SU	-	7025	7125	78.79	62.74
802.11ax HE80	MCS 11x1	106	53	7025	7125	65.56	49.31

Table 294 - CDD Authorised Band Edge Results

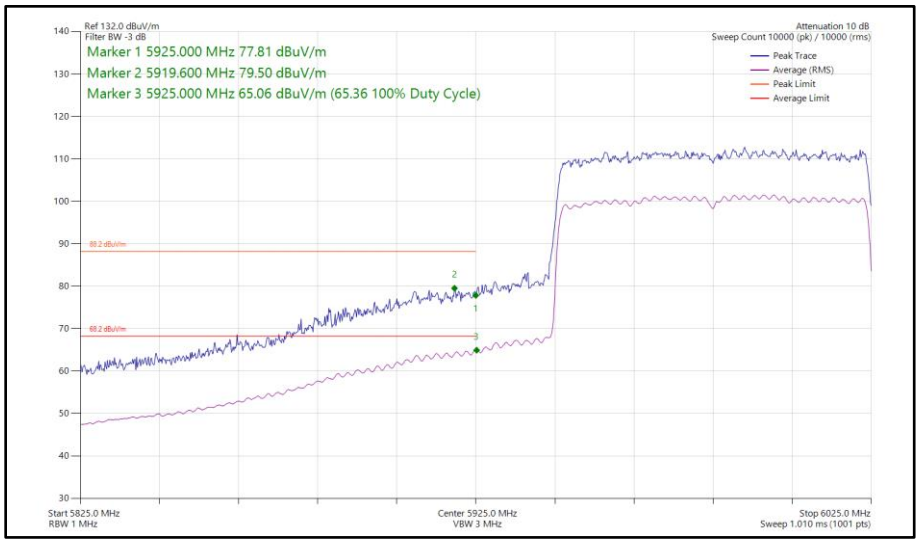

Figure 148 - 802.11ax HE80, SU, CDD, Core 0 - Core 1 - 5985 MHz Band Edge Frequency 5925 MHz

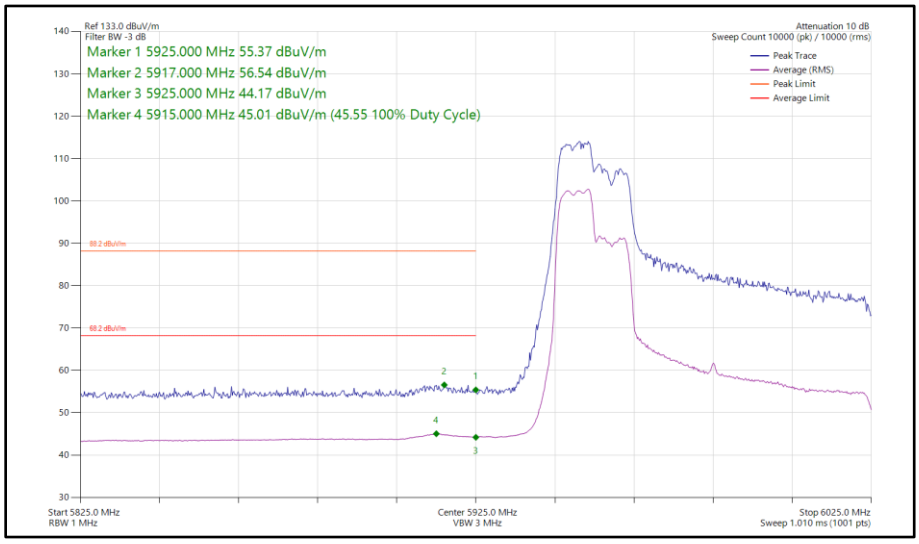

Figure 149 - 802.11ax HE80, RU 106-53, CDD, Core 0 - Core 1 - 5985 MHz Band Edge Frequency 5925 MHz

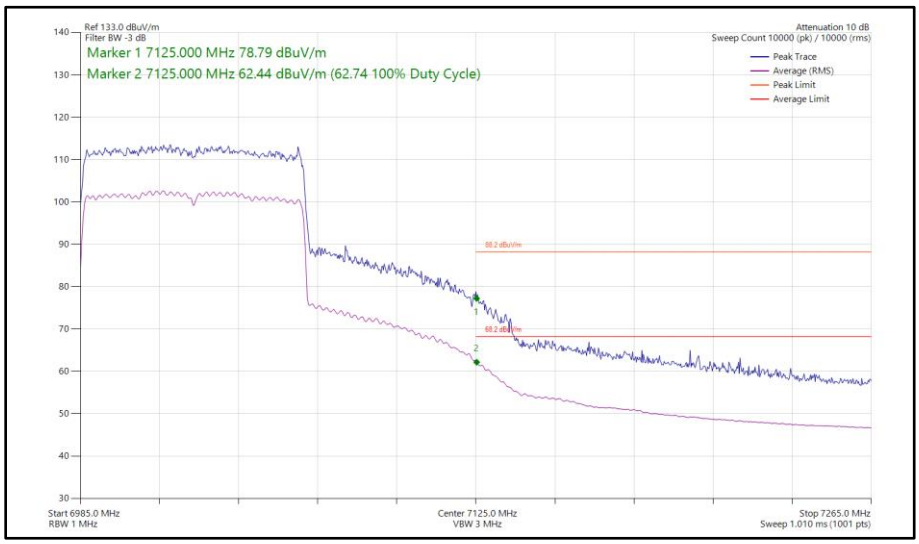

Figure 150 - 802.11ax HE80, SU, CDD, Core 0 - Core 1 - 7025 MHz Band Edge Frequency 7125 MHz

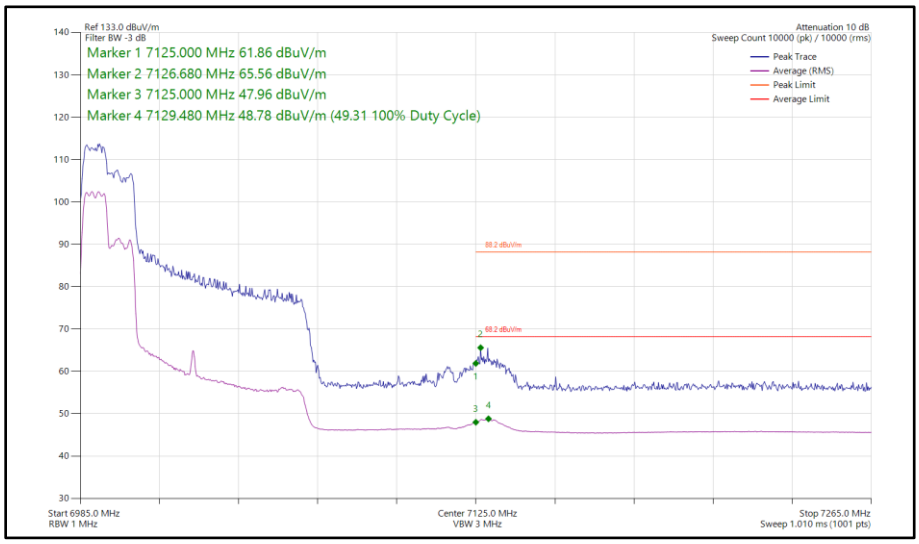

Figure 151 - 802.11ax HE80, RU 106-53, CDD, Core 0 - Core 1 - 7025 MHz Band Edge Frequency 7125 MHz

80 MHz Bandwidth - Core 0 - Core 1 (SDM)

Mode	Data Rate/ MCS	Resource Size	Resource Index	TX Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBuV/m)
802.11ax HE80	MCS 11x2	SU	-	5985	5925	80.82	65.59
802.11ax HE80	MCS 11x2	106	53	5985	5925	56.99	45.03
802.11ax HE80	MCS 4x2	SU	-	7025	7125	77.61	62.45
802.11ax HE80	MCS 11x2	26	0	7025	7125	67.74	47.68

Table 295 - SDM Authorised Band Edge Results

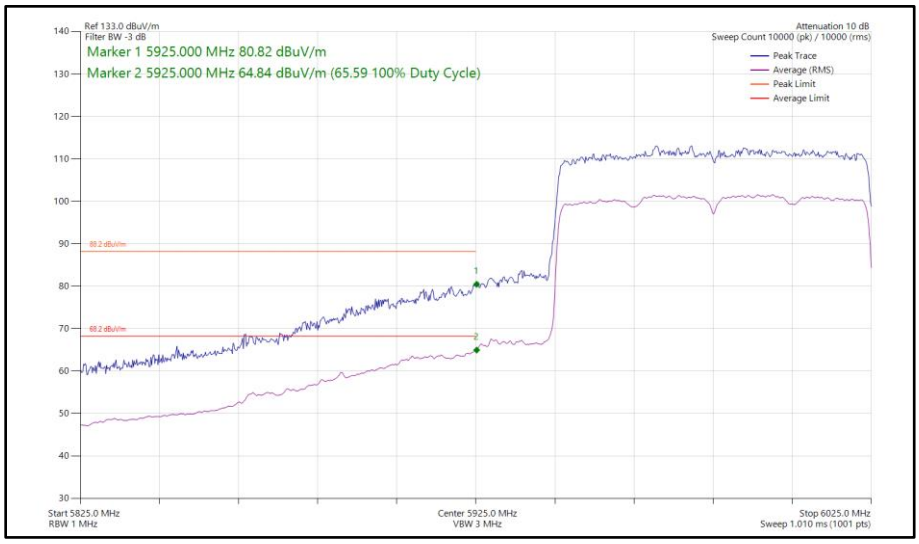

Figure 152 - 802.11ax HE80, SU, SDM, Core 0 - Core 1 - 5985 MHz Band Edge Frequency 5925 MHz

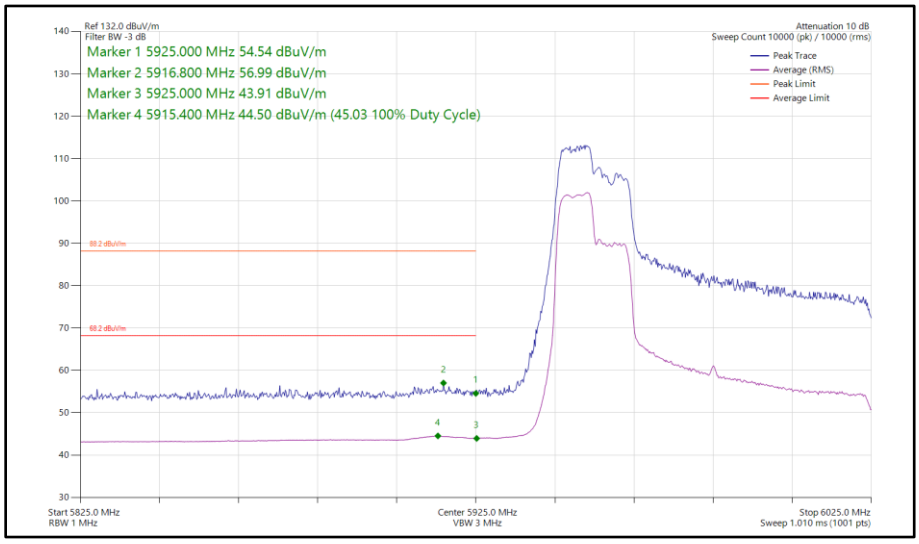

Figure 153 - 802.11ax HE80, RU 106-53, SDM, Core 0 - Core 1 - 5985 MHz Band Edge Frequency 5925 MHz

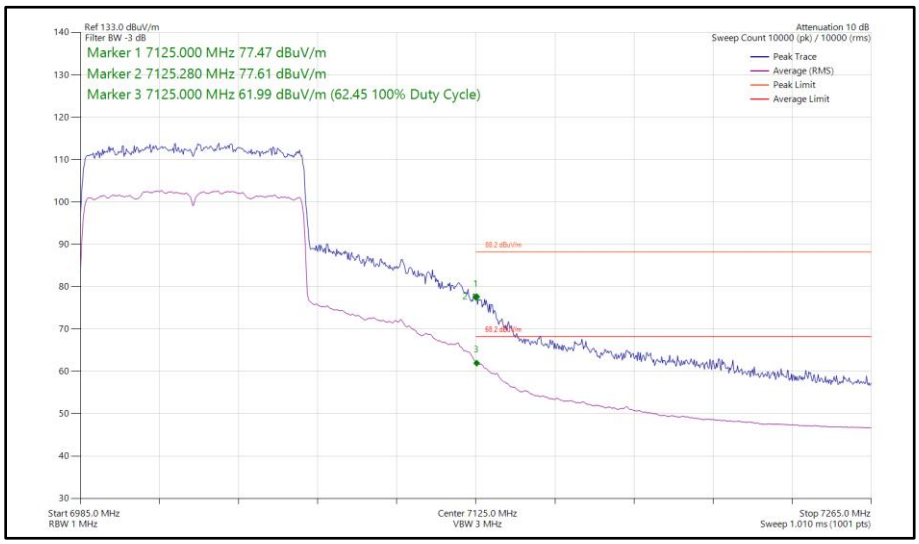

Figure 154 - 802.11ax HE80, SU, SDM, Core 0 - Core 1 - 7025 MHz Band Edge Frequency 7125 MHz

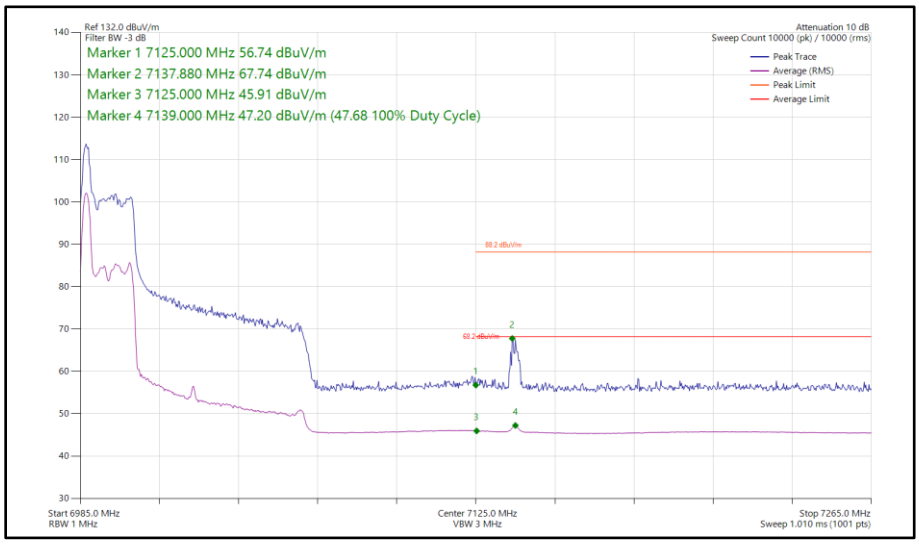

Figure 155 - 802.11ax HE80, RU 26-0, SDM, Core 0 - Core 1 - 7025 MHz Band Edge Frequency 7125 MHz

80 MHz Bandwidth - Core 0 - Core 1 (TxBF)

Mode	Data Rate/ MCS	Resource Size	Resource Index	TX Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBuV/m)
802.11ax HE80	MCS 2x1	SU	-	5985	5925	79.22	65.68
802.11ax HE80	MCS 11x1	SU	-	6065	5925	64.50	50.96
802.11ax HE80	MCS 11x1	SU	-	6945	7125	63.19	50.60
802.11ax HE80	MCS 4x1	SU	-	7025	7125	80.42	64.38

Table 296 - TxBF Authorised Band Edge Results

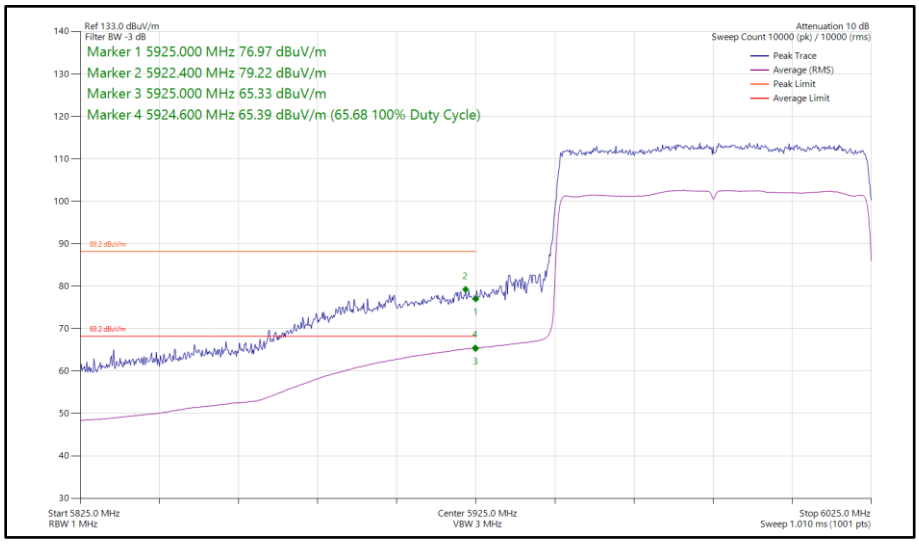

Figure 156 - 802.11ax HE80, SU, TxBF, Core 0 - Core 1 - 5985 MHz Band Edge Frequency 5925 MHz

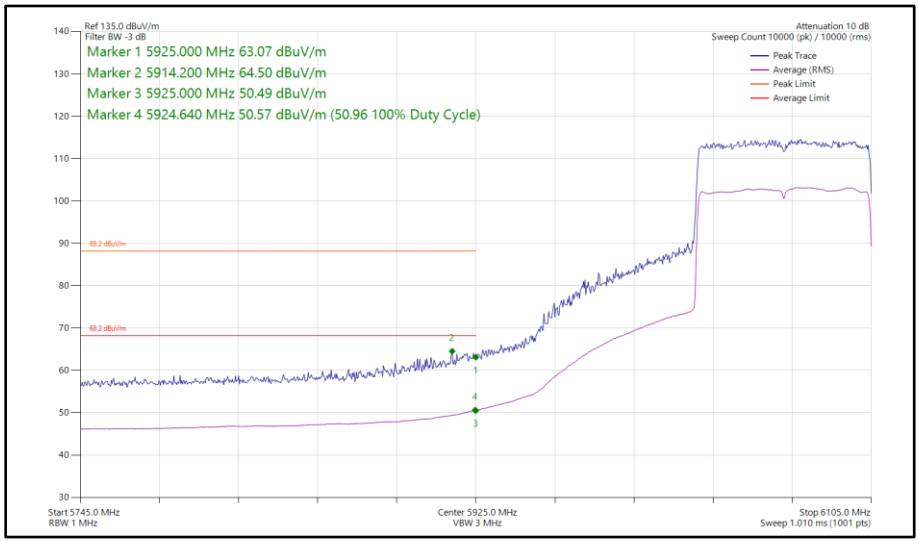

Figure 157 - 802.11ax HE80, SU, TxBF, Core 0 - Core 1 - 6065 MHz Band Edge Frequency 5925 MHz

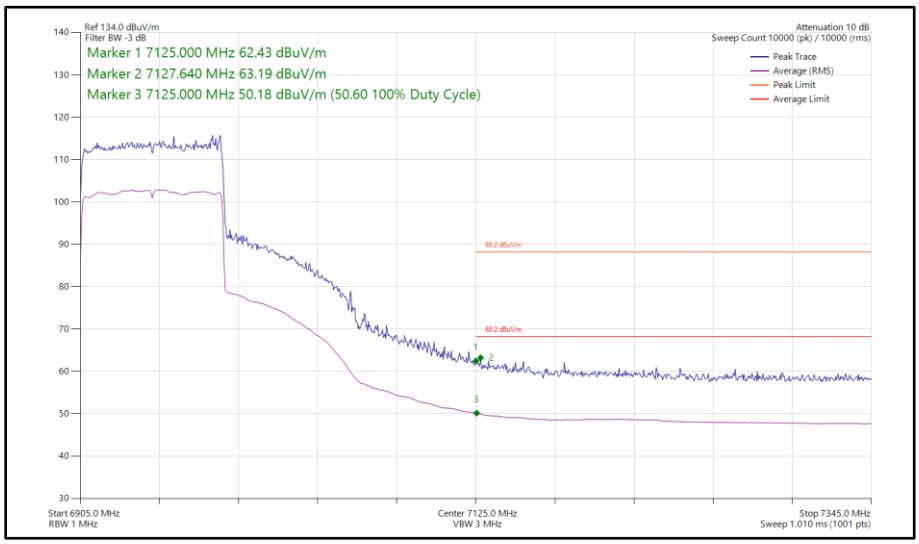

Figure 158 - 802.11ax HE80, SU, TxBF, Core 0 - Core 1 - 6945 MHz Band Edge Frequency 7125 MHz

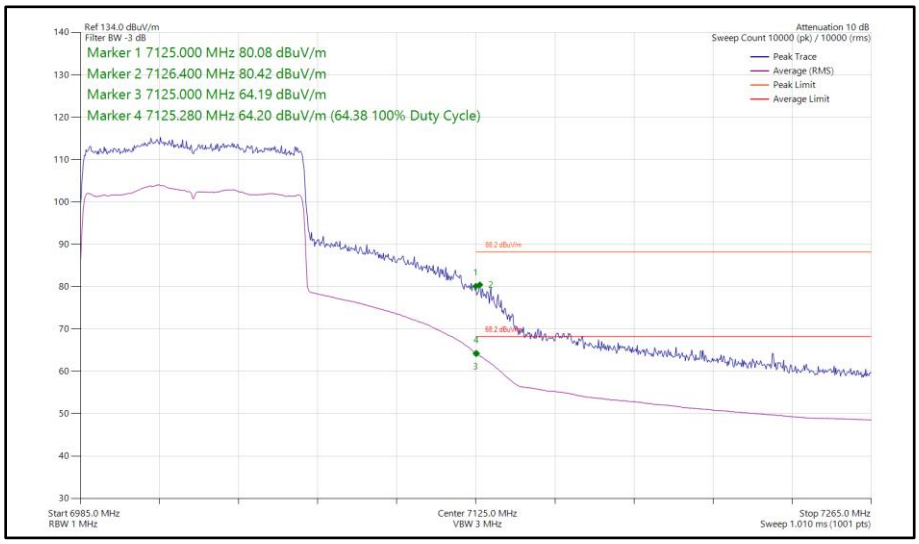

Figure 159 - 802.11ax HE80, SU, TxBF, Core 0 - Core 1 - 7025 MHz Band Edge Frequency 7125 MHz

160 MHz Bandwidth - Core 0 (SISO)

Mode	Data Rate/ MCS	Resource Size	Resource Index	TX Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBuV/m)
802.11ax HE160	MCS 11x1	SU	-	6025	5925	79.30	65.62
802.11ax HE160	MCS 11x1	52	37P	6025	5925	58.55	44.48
802.11ax HE160	MCS 2x1	SU	-	6985	7125	78.56	65.60
802.11ax HE160	MCS 11x1	106	60S	6985	7125	58.49	47.10

Table 297 - SISO Authorised Band Edge Results

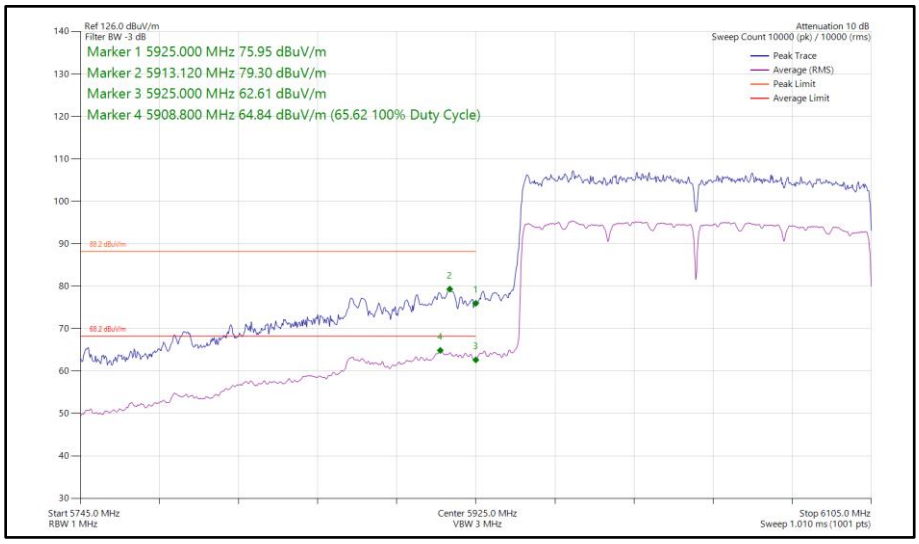

Figure 160 - 802.11ax HE160, SU, SISO, Core 0 - 6025 MHz Band Edge Frequency 5925 MHz

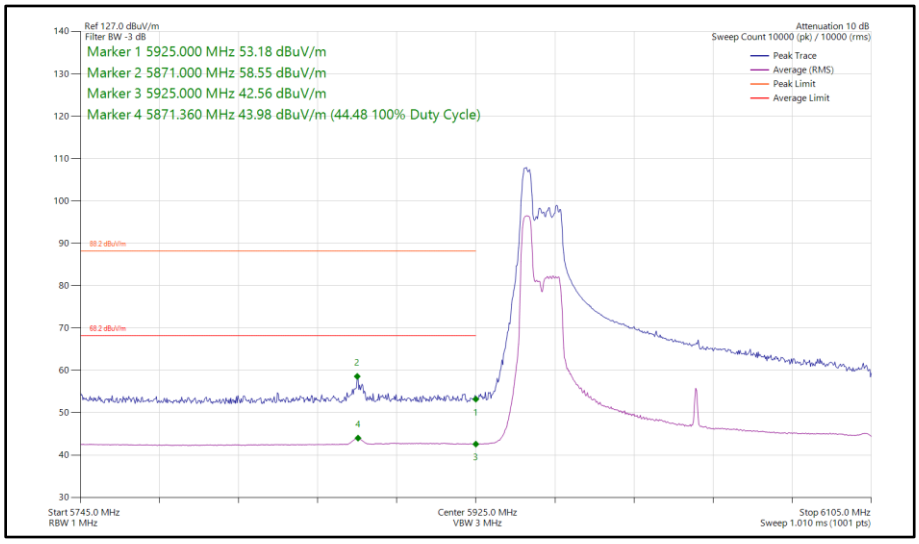

Figure 161 - 802.11ax HE160, RU 52-37P, SISO, Core 0 - 6025 MHz Band Edge Frequency 5925 MHz

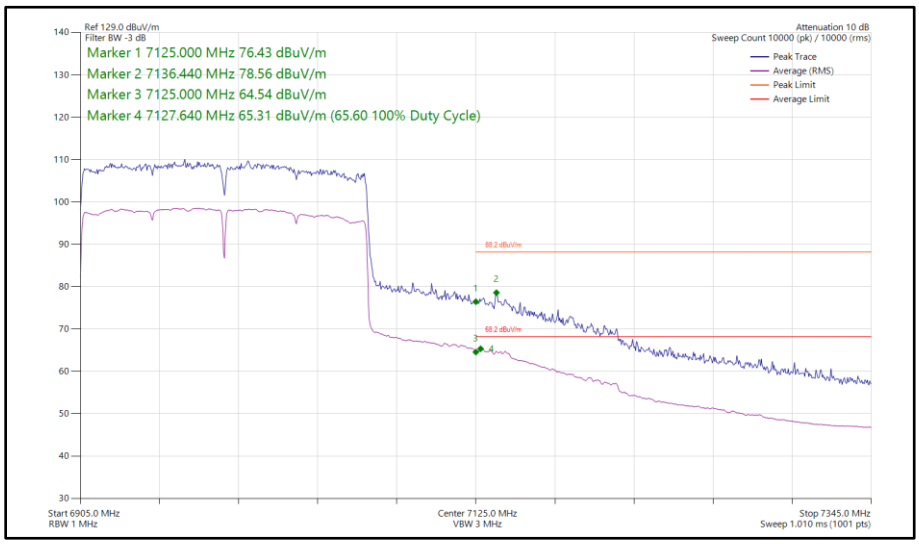

Figure 162 - 802.11ax HE160, SU, SISO, Core 0 - 6985 MHz Band Edge Frequency 7125 MHz

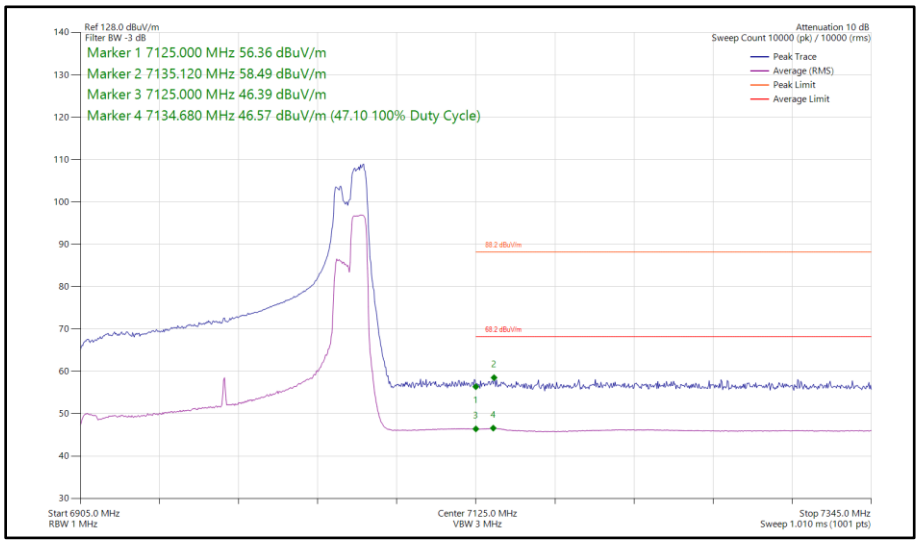

Figure 163 - 802.11ax HE160, RU 106-60S, SISO, Core 0 - 6985 MHz Band Edge Frequency 7125 MHz

160 MHz Bandwidth - Core 1 (SISO)

Mode	Data Rate/ MCS	Resource Size	Resource Index	TX Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBuV/m)
802.11ax HE160	MCS 11x1	SU	-	6025	5925	80.13	65.67
802.11ax HE160	MCS 11x1	52	37P	6025	5925	57.19	45.26
802.11ax HE160	MCS 11x1	SU	-	6985	7125	80.29	65.59
802.11ax HE160	MCS 11x1	106	60S	6985	7125	59.57	47.66

Table 298 - SISO Authorised Band Edge Results

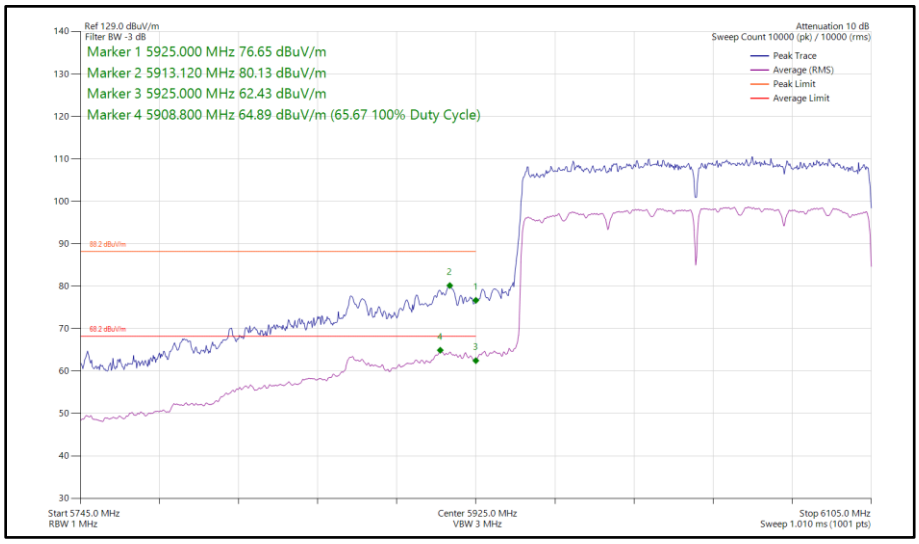

Figure 164 - 802.11ax HE160, SU, SISO, Core 1 - 6025 MHz Band Edge Frequency 5925 MHz

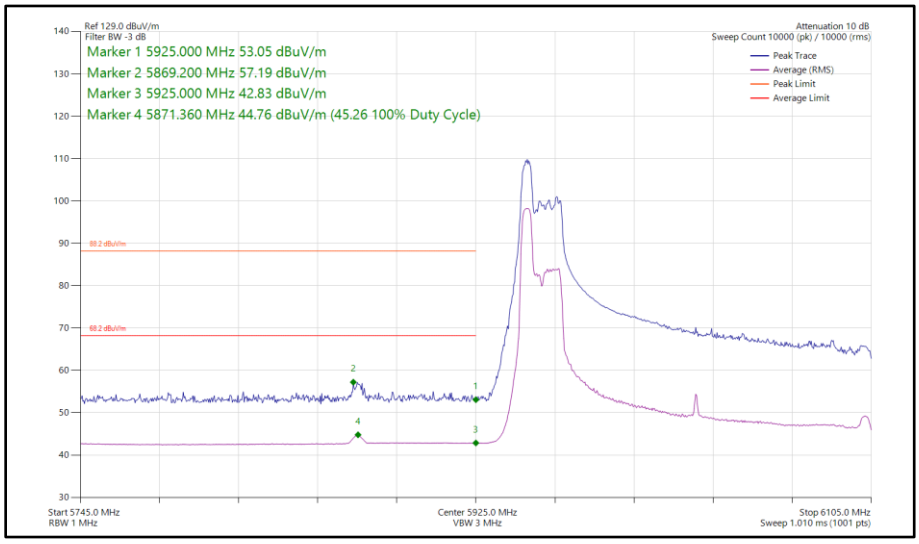

Figure 165 - 802.11ax HE160, RU 52-37P, SISO, Core 1 - 6025 MHz Band Edge Frequency 5925 MHz

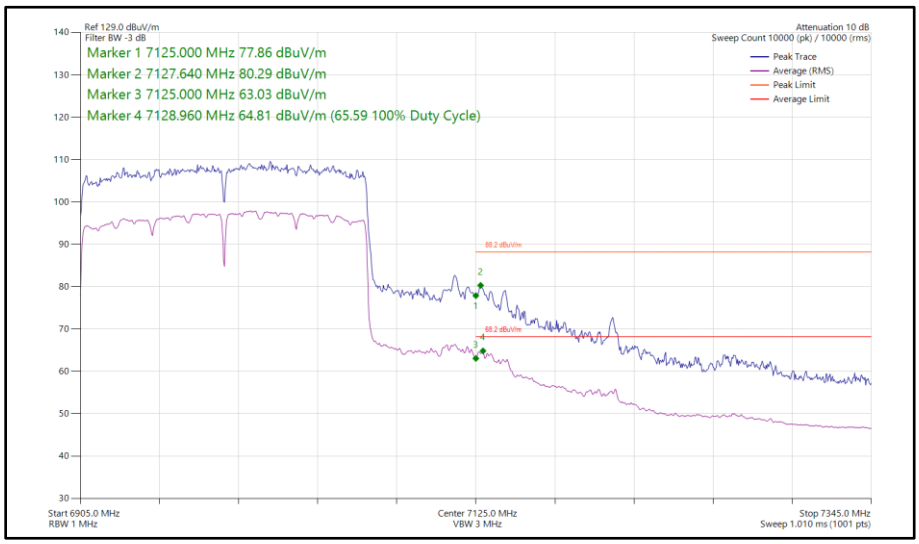

Figure 166 - 802.11ax HE160, SU, SISO, Core 1 - 6985 MHz Band Edge Frequency 7125 MHz

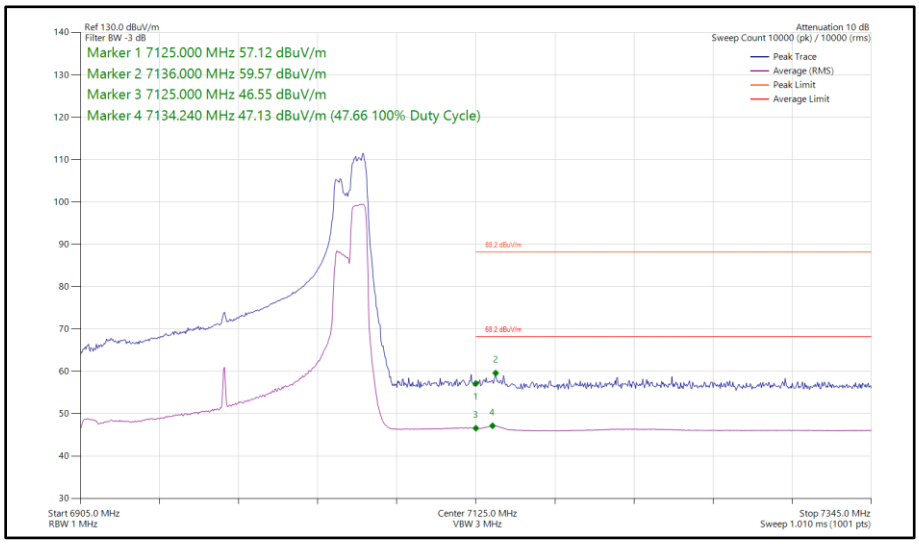

Figure 167 - 802.11ax HE160, RU 106-60S, SISO, Core 1 - 6985 MHz Band Edge Frequency 7125 MHz

160 MHz Bandwidth - Core 0 - Core 1 (CDD)

Mode	Data Rate/ MCS	Resource Size	Resource Index	TX Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBuV/m)
802.11ax HE160	MCS 11x1	SU	-	6025	5925	80.53	65.67
802.11ax HE160	MCS 11x1	106	53P	6025	5925	57.97	45.20
802.11ax HE160	MCS 2x1	SU	-	6985	7125	78.47	65.68
802.11ax HE160	MCS 11x1	106	60S	6985	7125	58.64	47.50

Table 299 - CDD Authorised Band Edge Results

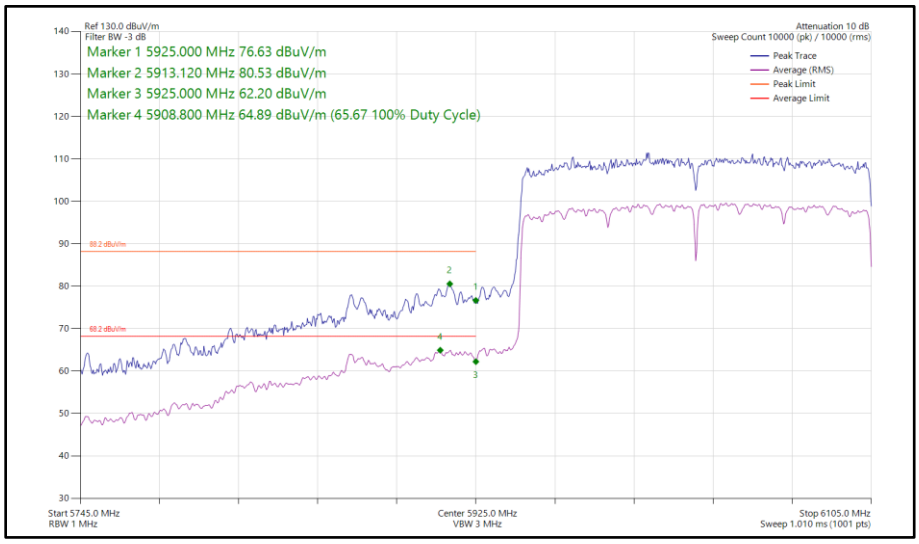

Figure 168 - 802.11ax HE160, SU, CDD, Core 0 - Core 1 - 6025 MHz Band Edge Frequency 5925 MHz

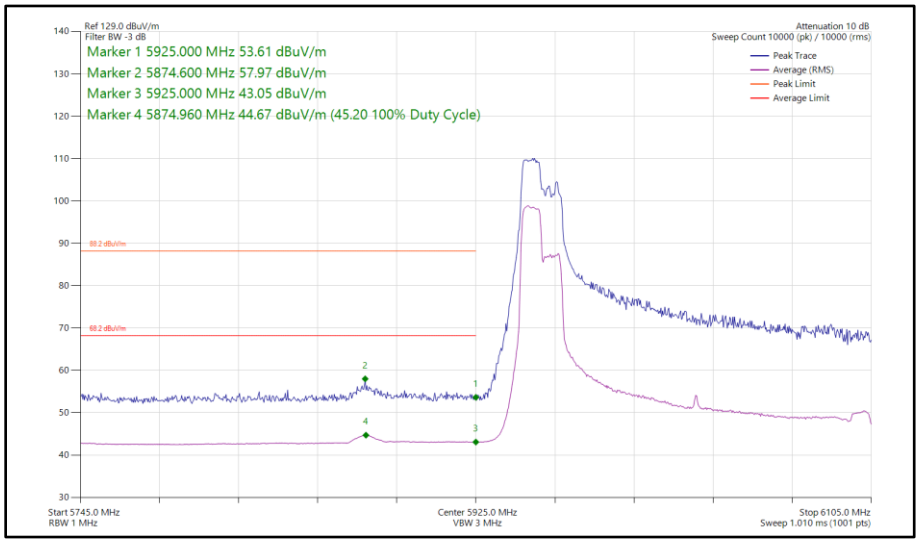

Figure 169 - 802.11ax HE160, RU 106-53P, CDD, Core 0 - Core 1 - 6025 MHz Band Edge Frequency 5925 MHz

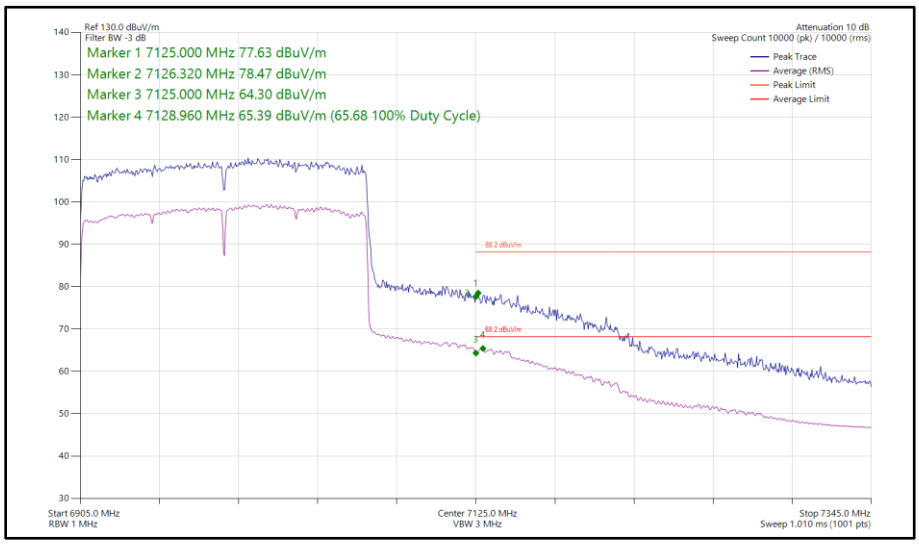

Figure 170 - 802.11ax HE160, SU, CDD, Core 0 - Core 1 - 6985 MHz Band Edge Frequency 7125 MHz

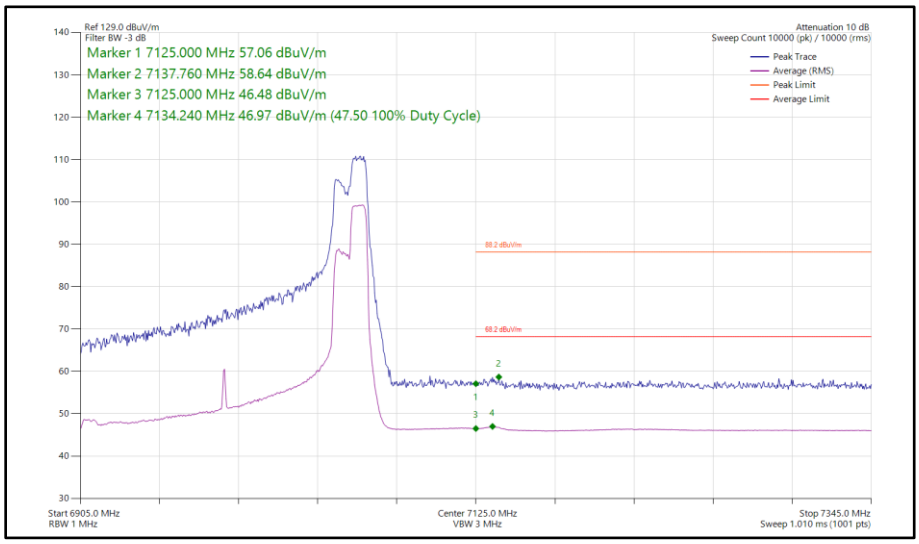

Figure 171 - 802.11ax HE160, RU 106-60S, CDD, Core 0 - Core 1 - 6985 MHz Band Edge Frequency 7125 MHz

160 MHz Bandwidth - Core 0 - Core 1 (SDM)

Mode	Data Rate/ MCS	Resource Size	Resource Index	TX Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBuV/m)
802.11ax HE160	MCS 11x2	SU	-	6025	5925	79.51	65.55
802.11ax HE160	MCS 11x2	106	53P	6025	5925	56.78	45.30
802.11ax HE160	MCS 2x2	SU	-	6985	7125	79.97	65.50
802.11ax HE160	MCS 11x2	106	60S	6985	7125	59.69	47.69

Table 300 - SDM Authorised Band Edge Results

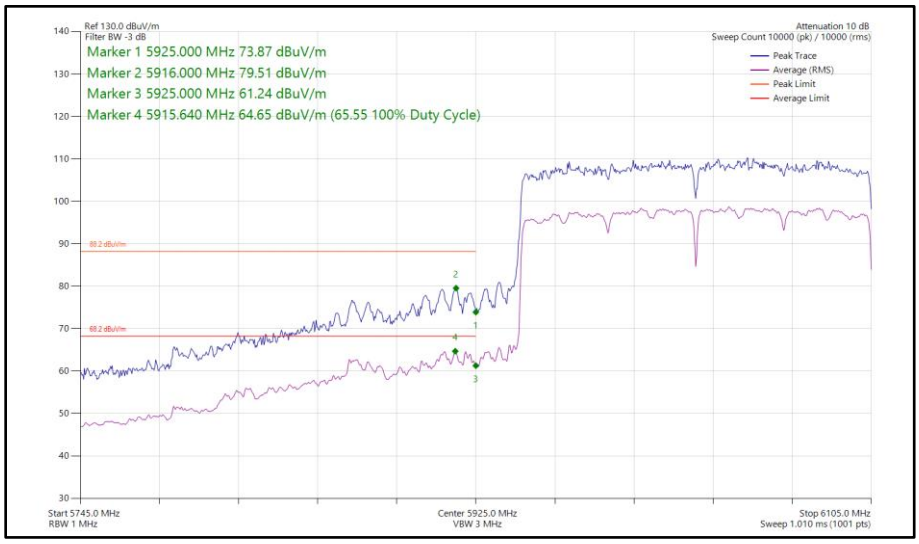

Figure 172 - 802.11ax HE160, SU, SDM, Core 0 - Core 1 - 6025 MHz Band Edge Frequency 5925 MHz

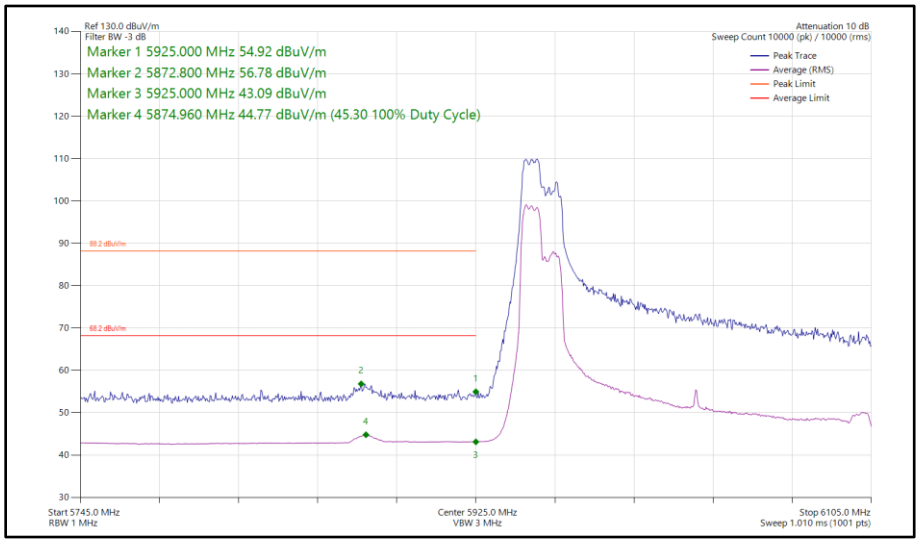

Figure 173 - 802.11ax HE160, RU 106-53P, SDM, Core 0 - Core 1 - 6025 MHz Band Edge Frequency 5925 MHz

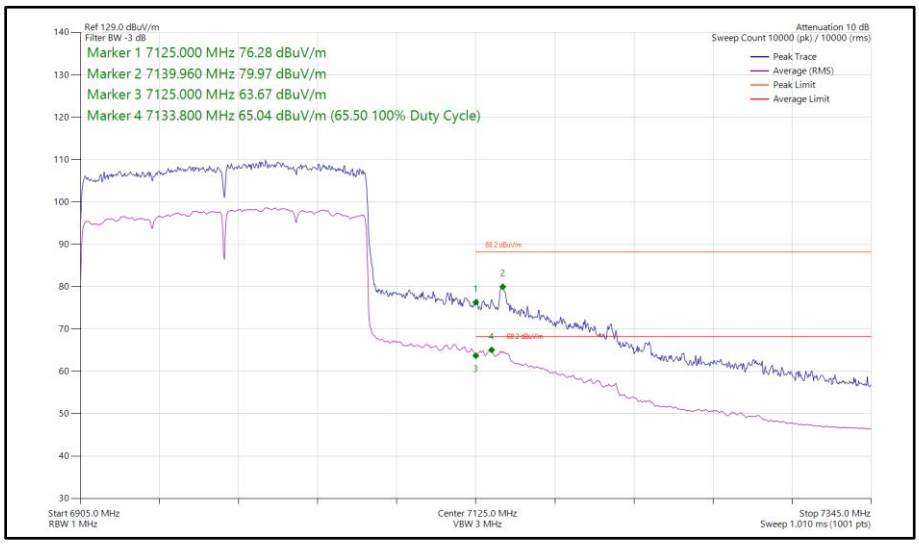

Figure 174 - 802.11ax HE160, SU, SDM, Core 0 - Core 1 - 6985 MHz Band Edge Frequency 7125 MHz

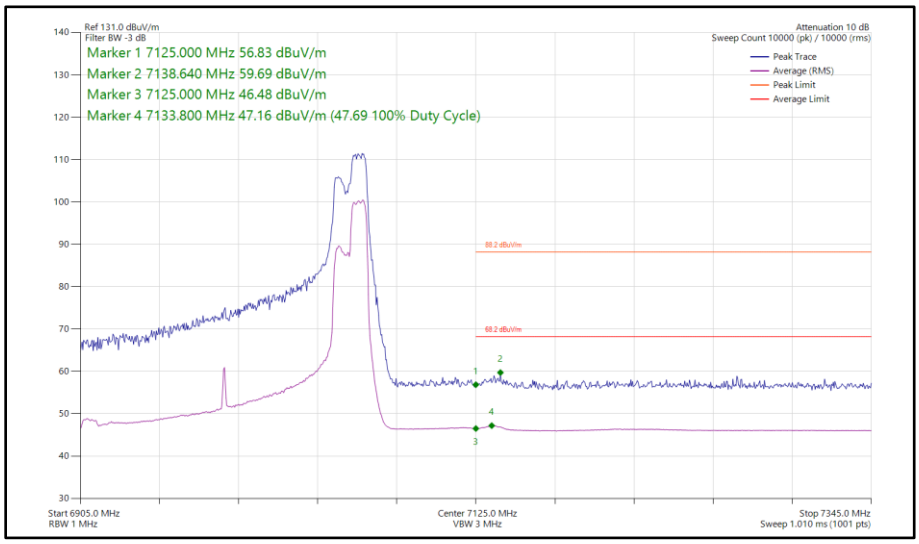

Figure 175 - 802.11ax HE160, RU 106-60S, SDM, Core 0 - Core 1 - 6985 MHz Band Edge Frequency 7125 MHz

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

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.

ISED RSS-248, Limit Clause 4.6.2(a)

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

2.6.7 Test Location and Test Equipment Used

This test was carried out in RF Chamber 15.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Emissions Software	TUV SUD	EmX V3.2.0	5125	-	Software
EMI Test Receiver	Rohde & Schwarz	ESW44	5911	12	11-Sep-2024
1500W (300V 12A) AC Power Supply	iTech	IT7324	5955	-	O/P Mon
5m Semi-Anechoic Chamber (Dual-Axis), Chamber 15	Albatross Projects	RF Chamber 15	5963	36	28-Apr-2025
Compact Antenna Mast	Maturo Gmbh	CAM4.0-P	5964	-	TU
Mast & Turntable Controller	Maturo Gmbh	FCU3.0	5966	-	TU
Tilt Antenna Mast	Maturo Gmbh	BAM4.5-P	5967	-	TU
Turntable	Maturo Gmbh	TT1.5SI	5968	-	TU
Cable (SMA to SMA 1m)	Junkosha	MWX221-01000AMSAMS/A	5997	12	14-Sep-2024
Cable (N to N 1m)	Junkosha	MWX221-01000AMSAMS/B	6009	12	05-Jun-2024
Horn Antenna (1-10 GHz)	Schwarzbeck	BBHA9120B	6140	12	26-Aug-2024
Horn Antenna (1-10 GHz)	Schwarzbeck	BBHA9120B	6142	12	26-Aug-2024
Digital Multimeter	Fluke	115	6147	12	16-Jun-2024
Humidity & Temperature meter	R.S Components	1364	6148	12	21-Jul-2024
SAC Switch Unit	TUV SUD	TUV_SSU_001	6191	12	18-Dec-2024
1m Cable	Junkosha	MWX241-01000AMSAMS/B	6740	12	01-Feb-2025
6.5m Cable	Junkosha	MWX221-06500AMSAMS/B	6744	12	01-Feb-2025

Table 301

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

2.7 Spurious Radiated Emissions

2.7.1 Specification Reference

FCC 47 CFR Part 15E, Clause 15.209 and 15.407 (b)
ISED RSS-248, Clause 4.6
ISED RSS-GEN, Clause 6.13 and 8.9

2.7.2 Equipment Under Test and Modification State

A3137, S/N: G63HC93373 - Modification State 0
A3137, S/N: M42K4610G2 - Modification State 0
A3137, S/N: FV5VYV72RL - Modification State 0

2.7.3 Date of Test

10-June-2024 to 12-July-2024

2.7.4 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 12.7.7.2 using an average trace.

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

2.7.5 Example Test Setup Diagram

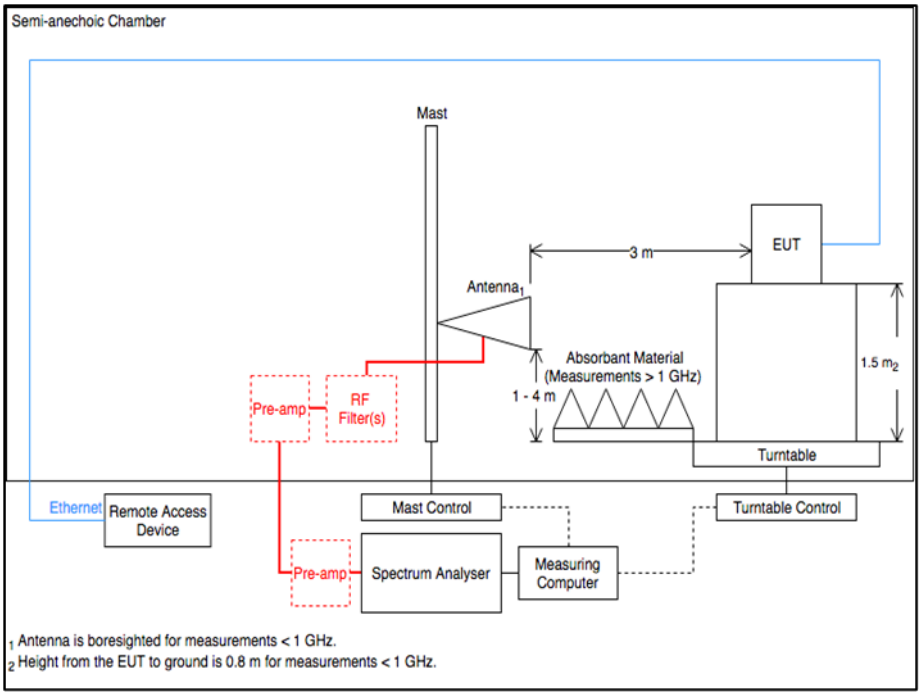

Figure 176 - Radiated Emissions Test Setup Diagram

2.7.6 Environmental Conditions

Ambient Temperature	20.4 - 23.4 °C
Relative Humidity	38.7 - 48.5 %

2.7.7 Test Results

6 GHz WLAN

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
5458.461	39.23	54.00	-14.77	RMS	195	131	Horizontal
5458.906	36.81	54.00	-17.19	RMS	183	115	Vertical
5904.856	48.45	68.20	-19.75	RMS	202	262	Horizontal

Table 302 - U-NII-5 - 5955 MHz (CH1), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz

No other emissions found within 10 dB of the limit.

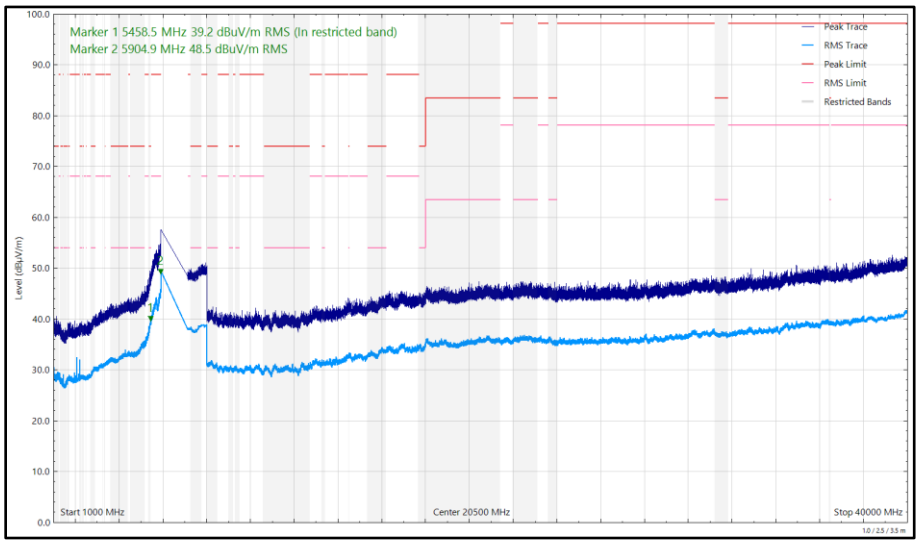

Figure 177 - U-NII-5 - 5955 MHz (CH1), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

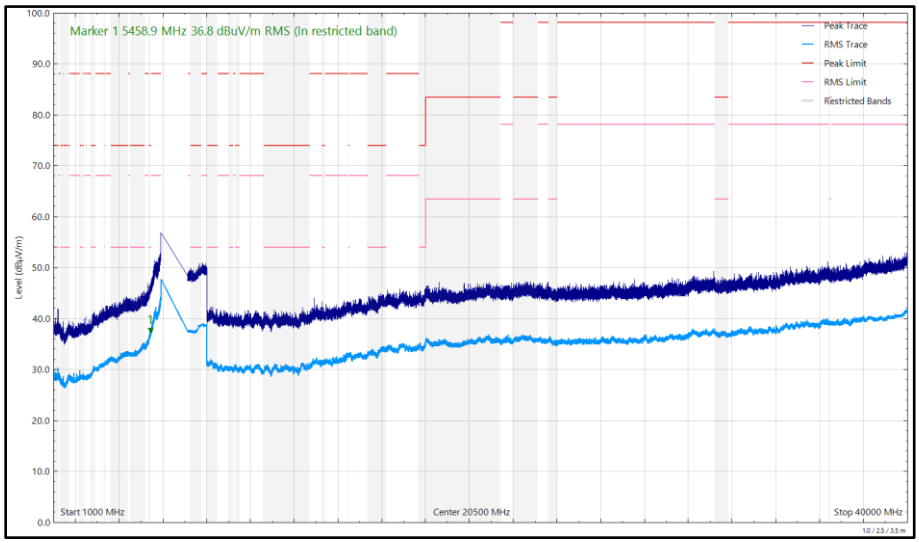

Figure 178 - U-NII-5 - 5955 MHz (CH1), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
5446.568	37.34	54.00	-16.66	RMS	185	220	Horizontal
5446.963	35.49	54.00	-18.51	RMS	350	136	Vertical
8233.355	34.19	54.00	-19.81	RMS	183	339	Horizontal

Table 303 - U-NII-5 - 6175 MHz (CH45), HE20, SU, CDD, Core 0 + Core 1, 30 MHz to 40 GHz

No other emissions found within 10 dB of the limit.

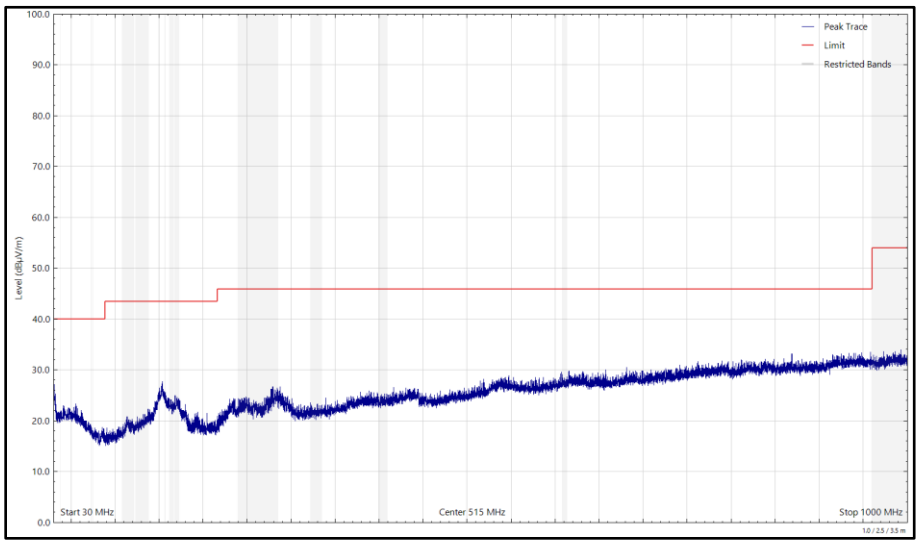

Figure 179 - U-NII-5 - 6175 MHz (CH45), HE20, SU, CDD, Core 0 + Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

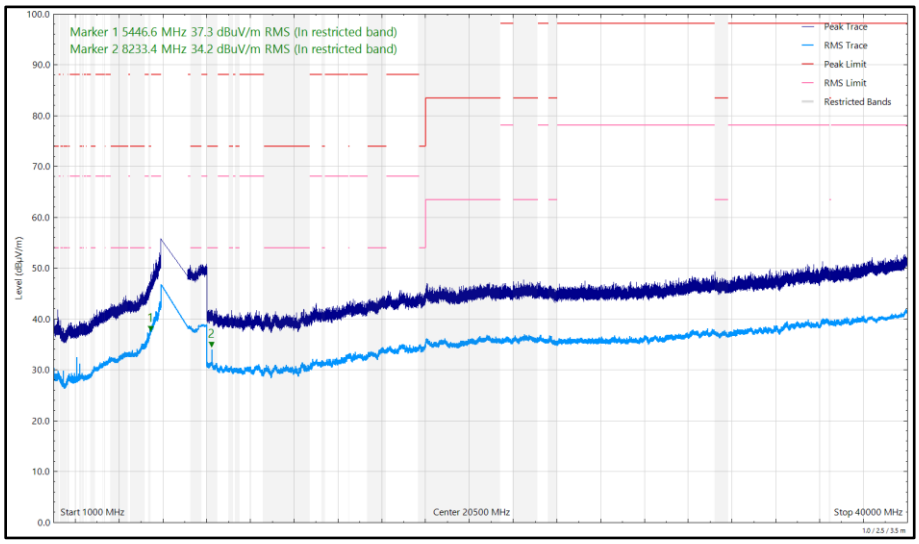

Figure 180 - U-NII-5 - 6175 MHz (CH45), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

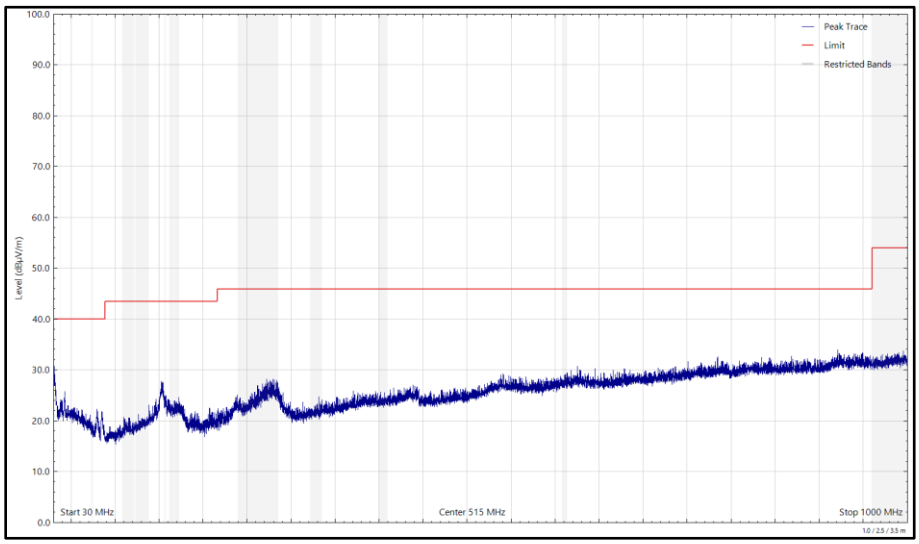

Figure 181 - U-NII-5 - 6175 MHz (CH45), HE20, SU, CDD, Core 0 + Core 1, 30 MHz to 1 GHz, Vertical (Peak)

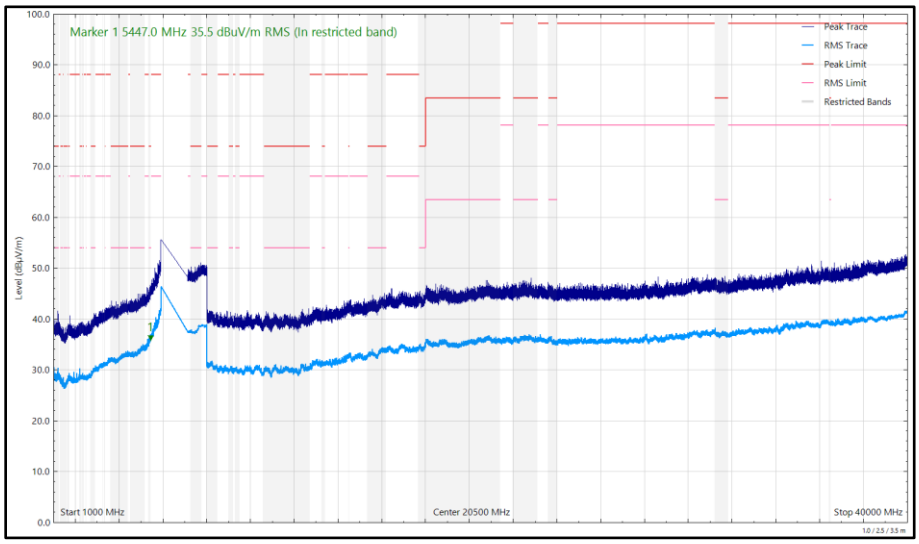

Figure 182 - U-NII-5 - 6175 MHz (CH45), HE20, SU, CDD, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical