FCC and ISED Test Report

Apple Inc
Model: A3241

In accordance with FCC 47 CFR Part 15E, ISED RSS-247 and ISED RSS-GEN (5 GHz WLAN)

TUV SUD Limited
Digitally signed by TUV SUD Limited
Date: 2024.12.20 16:21:23 Z

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FCC ID: BCGA3241 IC: 579C-A3241

COMMERCIAL-IN-CONFIDENCE

Document 75962766-42 Issue 02

SIGNATURE			
NAME	**JOB TITLE**	**RESPONSIBLE FOR**	**ISSUE DATE**
James O'Reilly	RF Engineer	Authorised Signatory	20 December 2024

Signatures in this approval box have checked this document in line with the requirements of TÜV SÜD document control rules.

ENGINEERING STATEMENT

The measurements shown in this report were made in accordance with the procedures described on test pages. All reported testing was carried out on a sample equipment to demonstrate limited compliance with FCC 47 CFR Part 15E, ISED RSS-247 and ISED RSS-GEN. The sample tested was found to comply with the requirements defined in the applied rules.

RESPONSIBLE FOR	NAME	DATE	SIGNATURE
Report Generation	Lauren Walters	20 December 2024	

FCC Accreditation
492497/UK2010 Octagon House, Fareham Test Laboratory
553713/UK2026 Concorde Park, Fareham Test Laboratory

ISED Accreditation
12669A/UK0003 Octagon House, Fareham Test Laboratory
28798/UK0003 Concorde Park, Fareham Test Laboratory

EXECUTIVE SUMMARY

A sample of this product was tested and found to be compliant with FCC 47 CFR Part 15E: 2023, ISED RSS-247: Issue 3 (2023-08) and ISED RSS-GEN: Issue 5 (2018-04) + A2 (2021-02) for the tests detailed in section 1.3.

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ACCREDITATION

Our UKAS Accreditation does not cover opinions and interpretations and any expressed are outside the scope of our UKAS Accreditation. Results of tests not covered by our UKAS Accreditation Schedule are marked NUA (Not UKAS Accredited). Results of tests covered by our Flexible UKAS Accreditation Schedule are marked FS (Flexible Scope).

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1 Report Summary

1.1 Report Modification Record

Alterations and additions to this report will be issued to the holders of each copy in the form of a complete document.

Issue	Description of Change	Date of Issue
1	First Issue	13-Dec-2024
2	Updated Sections 2.1.6 and 2.5.6	20-Dec-2024

Table 1

1.2 Introduction

Applicant	Apple Inc
Manufacturer	Apple Inc
EUT/Sample Identification	Refer to section 1.6
Test Specification/Issue/Date	FCC 47 CFR Part 15E: 2023 ISED RSS-247: Issue 3 (2023-08) ISED RSS-GEN: Issue 5 (2018-04) + A2 (2021-02)
Start of Test	02-May-2024
Finish of Test	18-November-2024
Name of Engineer(s)	Ahmed Al Derdiri, Akhil Rajendran Bhaskaran Nair, Colin Brain, Dale Hills, Elliot Callender, Ian Hart, Ioan-Alexandru Bogatu, Jamal Imoro Abubakar, James Woods, Manohar Thota, Marius Vasii, Michael Evans, Morsalin Hossain, Thomas Randall, Tony Baby, Vineeth Nagaraj, Thomas Biddlecombe, Feda Hussein, Murad Mustafa and Stefan Gilfedder
Related Document(s)	ANSI C63.4 (2014) ANSI C63.10 (2020) KDB 662911 D01 v02r01 KDB 789033 D02 v02r01 KDB 905462 D02 v02 KDB 905462 D03 v01r02

1.3 Brief Summary of Results

A brief summary of the tests carried out in accordance with FCC 47 CFR Part 15E, ISED RSS-247 and ISED RSS-GEN is shown below.

Section	Specification Clause			Test Description	Result	Comments/Base Standard
	Part 15E	RSS-247	RSS-GEN			
Configuration and Mode: 5 GHz WLAN						
-	15.203	-	-	Antenna Requirement	N/T	The device complies with the provisions of this section, as it uses permanently attached integral antennas.
2.1	15.205	3.3	8.10	Restricted Band Edges	Pass	ANSI C63.10 (2020)
2.2	15.407 (a)	6.2	-	Emission Bandwidth	Pass	ANSI C63.10 (2020)
2.3	15.407 (a)	6.2	-	Maximum Conducted Output Power	Pass	ANSI C63.10 (2020) KDB 662911 D01 v02r01
2.4	15.407 (a)	6.2	-	Maximum Conducted Power Spectral Density	Pass	ANSI C63.10 (2020) KDB 662911 D01 v02r01
2.5	15.407 (b)	6.2	-	Authorised Band Edges	Pass	ANSI C63.10 (2020)
2.6	15.209 and 15.407 (b)	6.2	6.13 and 8.9	Spurious Radiated Emissions	Pass	ANSI C63.4 (2014) ANSI C63.10 (2020)
2.7	15.407 (h)(2)(iii)(iv)	Clause 6.3.2(c)(d)(e)	-	Channel Move Time, Channel Closing Transmission Time and Non-Occupancy Period	Pass	KDB 905462 D02 v02 KDB 905462 D03 v01r02

Table 2

1.4 Product Information

1.4.1 Technical Description

The equipment under test (EUT) was a portable laptop computer.

1.4.2 Test Modes

The EUT's 5 GHz 802.11 radio supports SISO (Single Input/Single Output) and 2x2 MIMO (Multiple Input/Multiple Output) modes. 802.11a supports only 20 MHz bandwidth SISO operation. 802.11n supports 20 MHz and 40 MHz bandwidths. 802.11ac and ax operate at 20 MHz, 40 MHz, 80 MHz and 160 MHz bandwidths. 802.11n, ac and ax support SISO, Cyclic Delay Diversity (CDD) and Space Division Multiplexing (SDM) modes. 802.11n and ac additionally support Transmit Beamforming (TxBF) mode on 20 MHz, 40 MHz, and 80 MHz bandwidths.

The EUT supports 802.11ax Single User (SU) and Multi-User (MU) with all Resource Unit (RU) sizes from 26 subcarriers up to the maximum possible (dependent on channel bandwidth), other than in U-NII-2A and U-NII-2C where RU-26 is not supported.

The EUT uses different output powers per core dependent on how many cores are used. The EUT also uses different power tables for Cyclic Delay Diversity (CDD), Space Division Multiplexing (SDM) and Transmit Beamforming (TxBF) modes. It uses the same conducted power across all cores in any given mode, but due to the different antenna gains the radiated powers per core differ.

US and CA country codes change the power table used for U-NII band 1. Therefore U-NII-1 channels were tested using both power settings for each country's respective limits.

Band edge testing was performed in all modes with multiple modulation types, with only the worst-case reported. After band edge and additional preliminary investigations were performed to find worst-case operation, the EUT was tested in the following supported transmit modes:

SISO Modes (5150-5250 & 5725-5850 MHz: Core 1 / 5250-5725 MHz: Core 0):

- 802.11a - 12 Mbps
- 802.11n HT20 - MCS2
- 802.11n HT40 - MCS2
- 802.11ac VHT80 - MCS2x1
- 802.11ac VHT160 - MCS2x1
- 802.11ax HE20 SU - MCS2x1
- 802.11ax HE40 SU - MCS2x1
- 802.11ax HE80 SU - MCS2x1
- 802.11ax HE160 SU - MCS2x1
- 802.11ax HE20 MU RU26/52/106 - MCS2x1

2x2 MIMO Modes (Core 0 + Core 1):

- 802.11n/ac (V)HT20 - CDD (MCS2), SDM (MCS10) and TxBF (MCS2x1)
- 802.11n/ac (V)HT40 - CDD (MCS2), SDM (MCS10) and TxBF (MCS2x1)
- 802.11ac VHT80 - CDD (MCS2x1), SDM (MCS2x2) and TxBF (MCS2x1)
- 802.11ac VHT160 - CDD (MCS2x1) and SDM (MCS2x2)
- 802.11ax HE20 SU - CDD (MCS2x1) and SDM (MCS2x2)
- 802.11ax HE40 SU - CDD (MCS2x1) and SDM (MCS2x2)
- 802.11ax HE80 SU - CDD (MCS2x1) and SDM (MCS2x2)
- 802.11ax HE160 SU - CDD (MCS2x1) and SDM (MCS2x2)
- 802.11ax HE20 MU RU26/52/106 - CDD (MCS2x1) and SDM (MCS2x2)

Note: The RU offset for bottom and middle channels were placed in the lowest position and on the top channel, the offset was placed in the upper most position. HT (802.11n) modes were used for CDD and SDM and VHT (802.11ac) modes were used for TxBF.

1.4.3 Test Setup

For conducted tests the EUT antennas were disconnected and replaced with U.FL to SMA test cables to enable conducted testing on each core. The loss of these test cables were known and compensated for in any conducted measurements.

For all testing except DFS the EUT was put into a continuous transmit test mode with the chipset manufacturer's test commands. The EUT then transmitted the required type of packeted 802.11 data frames of fixed length, containing the standard headers and with pseudo-random data content, ensuring the measured signals were representative and contained all the symbols at the highest power control level.

The test setup used for DFS is described in the test result section of the present document.

All testing was performed with the EUT powered via a 120 V AC, 60 Hz source.

1.4.4 Antenna Gain Table

Antenna Port	Frequency Range (MHz)	Peak Gain (dBi)	Conducted Cable Loss (dB)
Core 0	5150 to 5250	7.14	1.07
	5250 to 5350	7.01	1.07
	5470 to 5725	6.6	1.17
	5725 to 5850	4.83	1.18
Core 1	5150 to 5250	7.19	1.07
	5250 to 5350	6.85	1.07
	5470 to 5725	5.58	1.17
	5725 to 5850	5.17	1.18

Table 3

1.5 Deviations from the Standard

No deviations from the applicable test standard were made during testing.

1.6 Identification of the EUT

The table below details identification of the EUT(s) that have been used to carry out the testing within this report.

Model: A3241		
Serial Number	Hardware Version	Software Version
D6HQJJJW2Q	REV1.0	24A12461c
HJKCRQM3K9	REV1.0	24A12461c
K2K9N270NG	REV1.0	24A12461c
HL7FYF26WD	REV1.0	24A12461c
DC9Y0RWVP9	REV1.0	24C29
DT7LYX5QXT	REV1.0	24A12461c
DCLWQTFQGK	REV1.0	24A12461c
G0Q65Y9HP6	REV1.0	24A12461c
FWKQMY7GHY	REV1.0	24A12461c
H43VYD6H4D	REV1.0	24C29
GNF9559TWD	REV1.0	24A11601e

Table 4

1.7 EUT Modification Record

The table below details modifications made to the EUT during the test programme.

The modifications incorporated during each test are recorded on the appropriate test pages.

Modification State	Description of Modification still fitted to EUT	Modification Fitted By	Date Modification Fitted
Model: A3241, Serial Number: K2K9N270NG			
0	As supplied by the customer	Not Applicable	Not Applicable
Model: A3241, Serial Number: HL7FYF26WD			
0	As supplied by the customer	Not Applicable	Not Applicable
Model: A3241, Serial Number: HJKCRQM3K9			
0	As supplied by the customer	Not Applicable	Not Applicable
Model: A3241, Serial Number: DT7LYX5QXT			
0	As supplied by the customer	Not Applicable	Not Applicable
Model: A3241, Serial Number: DC9Y0RWVP9			
0	As supplied by the customer	Not Applicable	Not Applicable
Model: A3241, Serial Number: G0Q65Y9HP6			
0	As supplied by the customer	Not Applicable	Not Applicable
Model: A3241, Serial Number: FWKQMY7GHY			
0	As supplied by the customer	Not Applicable	Not Applicable
Model: A3241, Serial Number: H43VYD6H4D			
0	As supplied by the customer	Not Applicable	Not Applicable
Model: A3241, Serial Number: D6HQJJJW2Q			
0	As supplied by the customer	Not Applicable	Not Applicable
Model: A3241, Serial Number: DCLWQTFQGK			
0	As supplied by the customer	Not Applicable	Not Applicable
Model: A3241, Serial Number: GNF9559TWD			
0	As supplied by the customer	Not Applicable	Not Applicable

Table 5

1.8 Test Location

TÜV SÜD conducted the following tests at our Octagon House Test Laboratory.

Test Name	Name of Engineer(s)	Accreditation
Configuration and Mode: 5 GHz WLAN		
Emission Bandwidth	Thomas Biddlecombe	UKAS
Maximum Conducted Output Power	Thomas Biddlecombe	UKAS
Maximum Conducted Power Spectral Density	Thomas Biddlecombe	UKAS

Table 6

Office Address:

TÜV SÜD
Octagon House
Concorde Way
Fareham
Hampshire
PO15 5RL
United Kingdom

TÜV SÜD conducted the following tests at our Concorde Park Test Laboratory.

Test Name	Name of Engineer(s)	Accreditation
Configuration and Mode: 5 GHz WLAN		
Restricted Band Edges	Ahmed Al Derdiri, Akhil Rajendran Bhaskaran Nair, Colin Brain, Dale Hills, Elliot Callender, Ian Hart, Ioan-Alexandru Bogatu, Jamal Imoro Abubakar, James Woods, Manohar Thota, Marius Vasii, Michael Evans, Morsalin Hossain, Thomas Randall, Tony Baby and Vineeth Nagaraj	UKAS
Emission Bandwidth	Feda Hussein	UKAS
Maximum Conducted Output Power	Feda Hussein and Murad Mustafa	UKAS
Maximum Conducted Power Spectral Density	Feda Hussein and Murad Mustafa	UKAS
Authorised Band Edges	Ahmed Al Derdiri, Akhil Rajendran Bhaskaran Nair, Colin Brain, Elliot Callender, Dale Hills, Ian Hart, Ioan-Alexandru Bogatu, Jamal Imoro Abubakar, James Woods, Manohar Thota, Marius Vasii, Michael Evans, Morsalin Hossain, Thomas Randall, Tony Baby and Vineeth Nagaraj	UKAS
Spurious Radiated Emissions	Akhil Rajendran Bhaskaran Nair, Colin Brain, Thomas Randall, Tony Baby and Vineeth Nagaraj	UKAS
Channel Move Time, Channel Closing Transmission Time and Non-Occupancy Period	Stefan Gilfedder	UKAS

Table 7

Office Address:

TÜV SÜD
Concorde Park
Concorde Way
Fareham
Hampshire
PO15 5FG
United Kingdom

2 Test Details

2.1 Restricted Band Edges

2.1.1 Specification Reference

FCC 47 CFR Part 15E, Clause 15.205
ISED RSS-247, Clause 3.3
ISED RSS-GEN, Clause 8.10

2.1.2 Equipment Under Test and Modification State

A3241, S/N: HJKCRQM3K9 - Modification State 0
A3241, S/N: K2K9N270NG - Modification State 0
A3241, S/N: DCLWQTFQGK - Modification State 0
A3241, S/N: DC9Y0RWVP9 - Modification State 0
A3241, S/N: GNF9559TWD - Modification State 0

2.1.3 Date of Test

02-May-2024 to 30-September-2024

2.1.4 Test Method

The test was performed in accordance with ANSI C63.10, clause 6.10.5.

Restricted Band Edge measurements were performed with the device operating in the various SISO and MIMO modes supported by the device

The measurements displayed within this report have been limited to those modes which have been shown to be worst case.

Further measurements are held on file by TÜV SÜD and are available if required.

2.1.5 Environmental Conditions

Ambient Temperature	21.1 - 23.8 °C
Relative Humidity	33.4 - 59.3 %

2.1.6 Test Results

5 GHz WLAN

20 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)
802.11a	24 Mbps	-	-	5180	5150	64.36	51.30
802.11a	54 Mbps	-	-	5200	5150	63.85	49.07
802.11n HT20	MCS 2	-	-	5180	5150	63.23	51.39
802.11n HT20	MCS 7	-	-	5200	5150	65.94	49.47
802.11ax HE20	MCS 2x1	SU	-	5180	5150	63.02	51.19
802.11ax HE20	MCS 11x1	106	54	5180	5150	65.79	48.96
802.11ax HE20	MCS 11x1	SU	-	5200	5150	68.59	50.08
802.11a	54 Mbps	-	-	5300	5350	61.60	49.15
802.11a	54 Mbps	-	-	5320	5350	64.96	51.50
802.11n HT20	MCS 7	-	-	5300	5350	65.41	49.52
802.11n HT20	MCS 4	-	-	5320	5350	66.23	51.47
802.11ax HE20	MCS 11x1	SU	-	5300	5350	69.05	50.11
802.11ax HE20	MCS 2x1	SU	-	5320	5350	65.23	51.45
802.11ax HE20	MCS 11x1	106	54	5320	5350	65.94	49.48
802.11a	24 Mbps	-	-	5500	5460	63.34	47.99
802.11a	54 Mbps	-	-	5520	5460	62.45	47.41
802.11n HT20	MCS 4	-	-	5500	5460	63.66	48.11
802.11n HT20	MCS 7	-	-	5520	5460	63.11	46.82
802.11ax HE20	MCS 4x1	SU	-	5500	5460	63.43	48.84
802.11ax HE20	MCS 11x1	106	53	5500	5460	62.38	46.80
802.11ax HE20	MCS 11x1	SU	-	5520	5460	63.05	46.32
802.11ax HE20	MCS 11x1	SU	-	5540	5460	61.43	46.92

Table 8 - SISO Restricted Band Edge Results

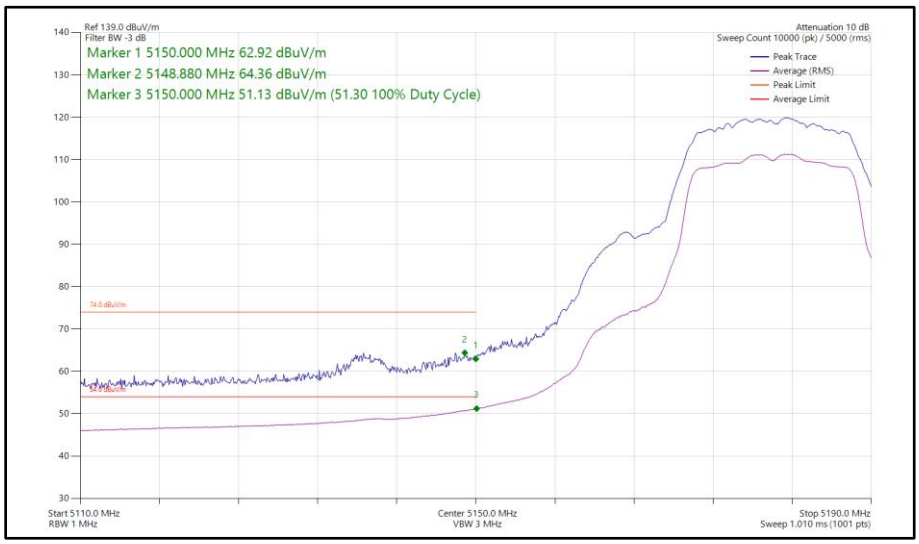

Figure 1 - 802.11a, SISO, Core 0 - 5180 MHz
Band Edge Frequency 5150 MHz

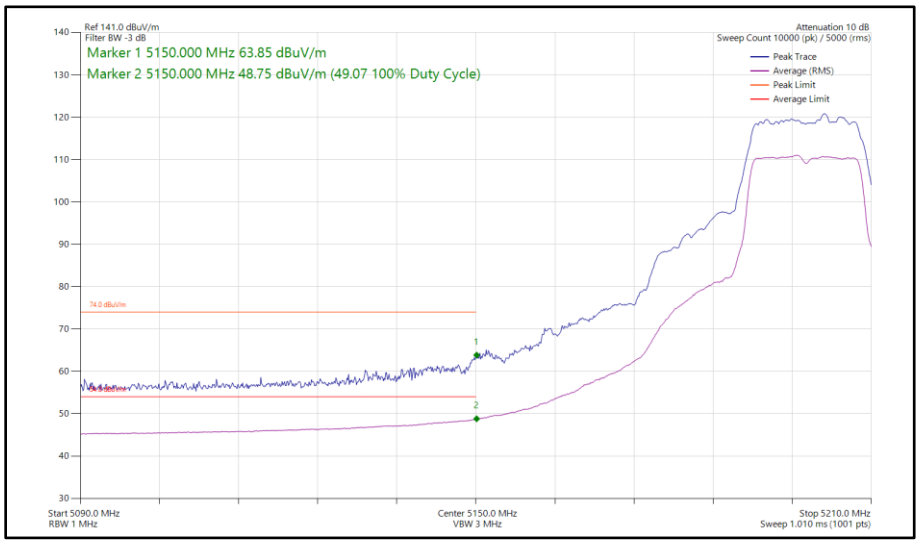

Figure 2 - 802.11a, SISO, Core 0 - 5200 MHz
Band Edge Frequency 5150 MHz

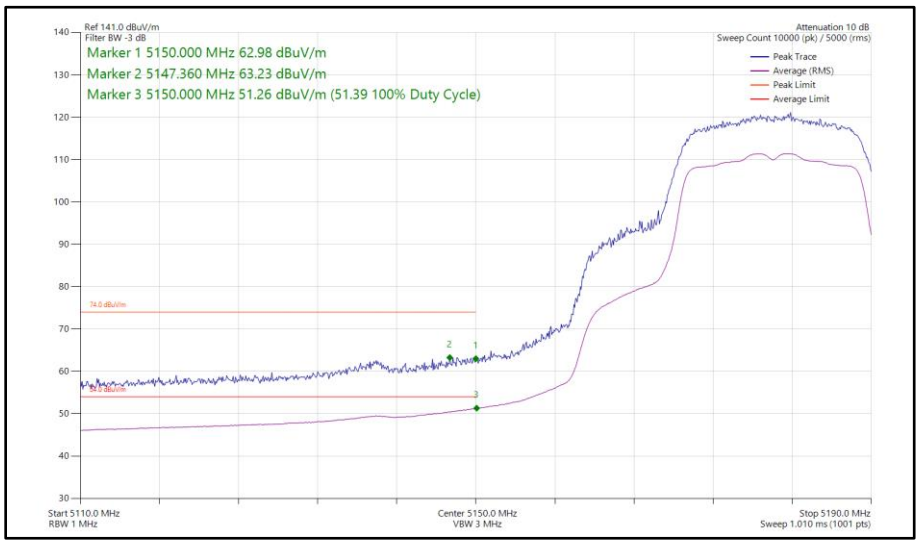

Figure 3 - 802.11n HT20, SISO, Core 0 - 5180 MHz
Band Edge Frequency 5150 MHz

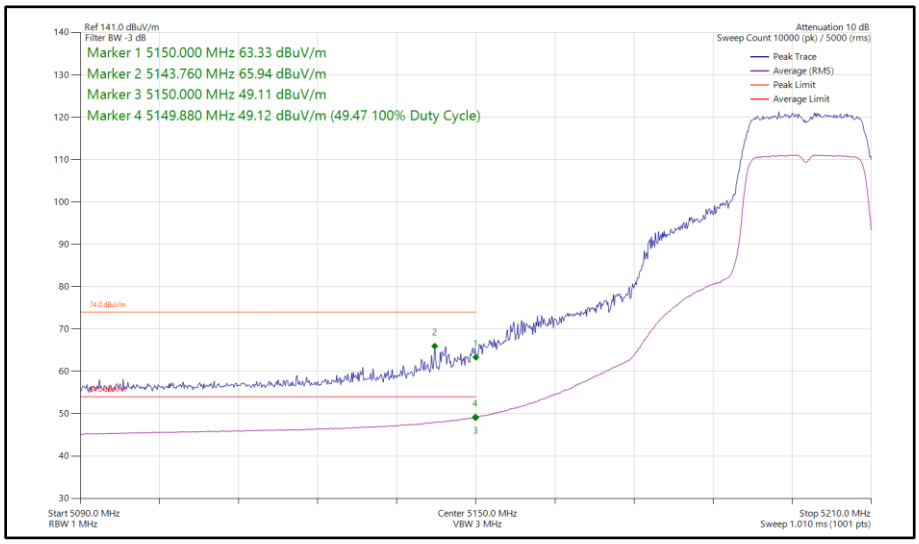

Figure 4 - 802.11n HT20, SISO, Core 0 - 5200 MHz
Band Edge Frequency 5150 MHz

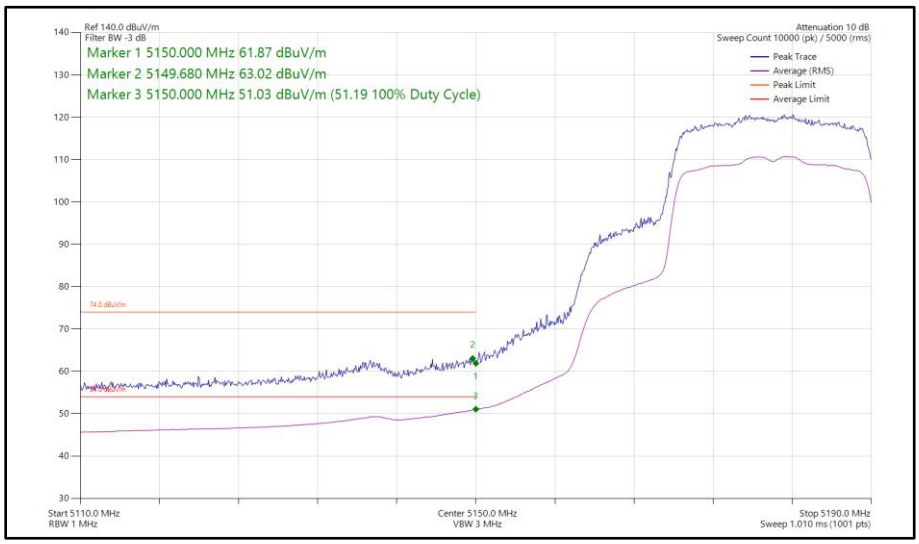

Figure 5 - 802.11ax HE20, SU, SISO, Core 0 - 5180 MHz
Band Edge Frequency 5150 MHz

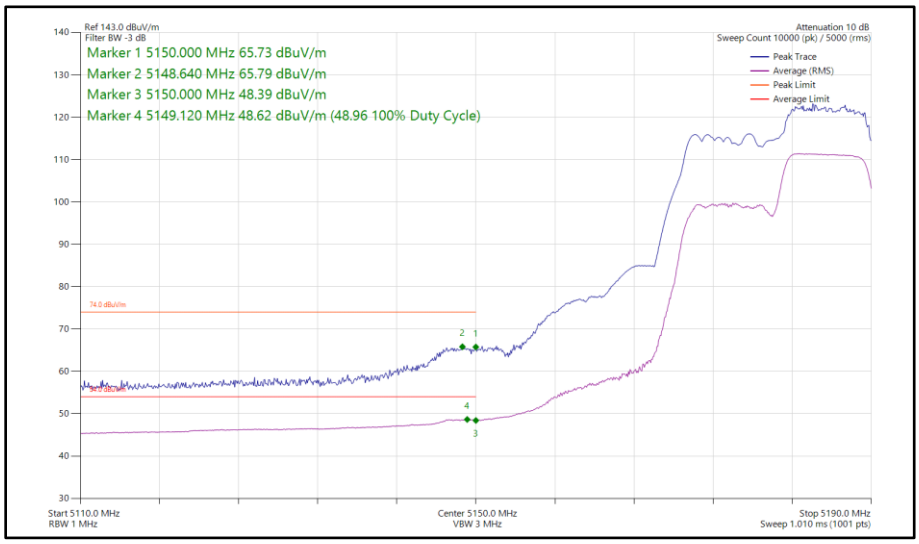

Figure 6 - 802.11ax HE20, RU 106-54, SISO, Core 0 - 5180 MHz
Band Edge Frequency 5150 MHz

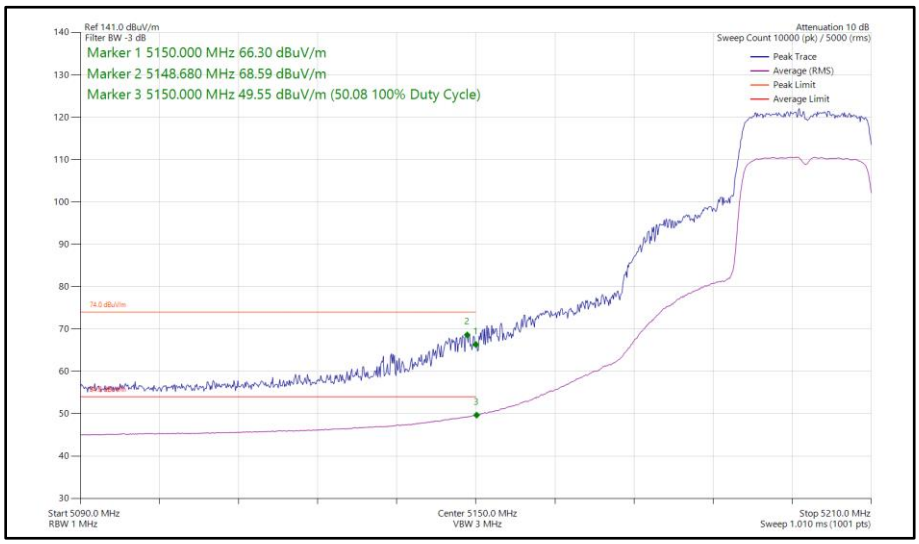

Figure 7 - 802.11ax HE20, SU, SISO, Core 0 - 5200 MHz
Band Edge Frequency 5150 MHz

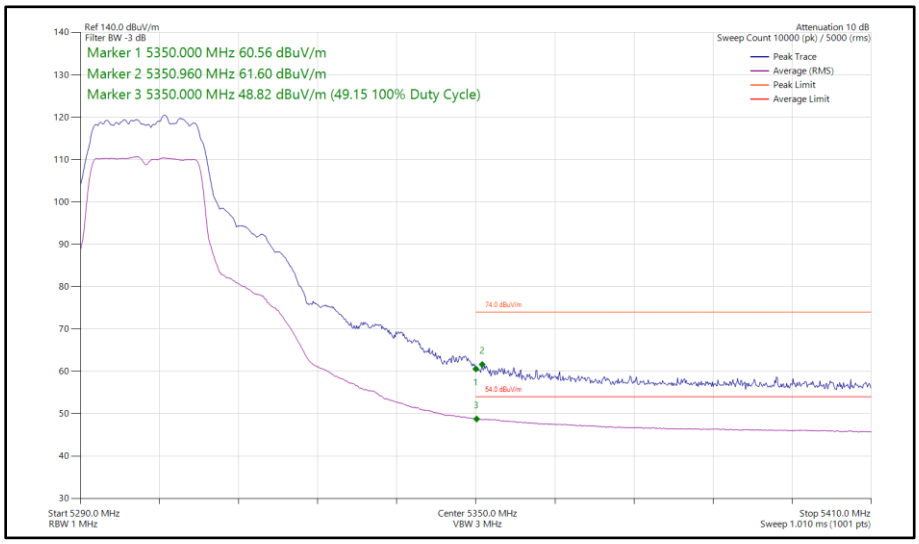

Figure 8 - 802.11a, SISO, Core 0 - 5300 MHz
Band Edge Frequency 5350 MHz

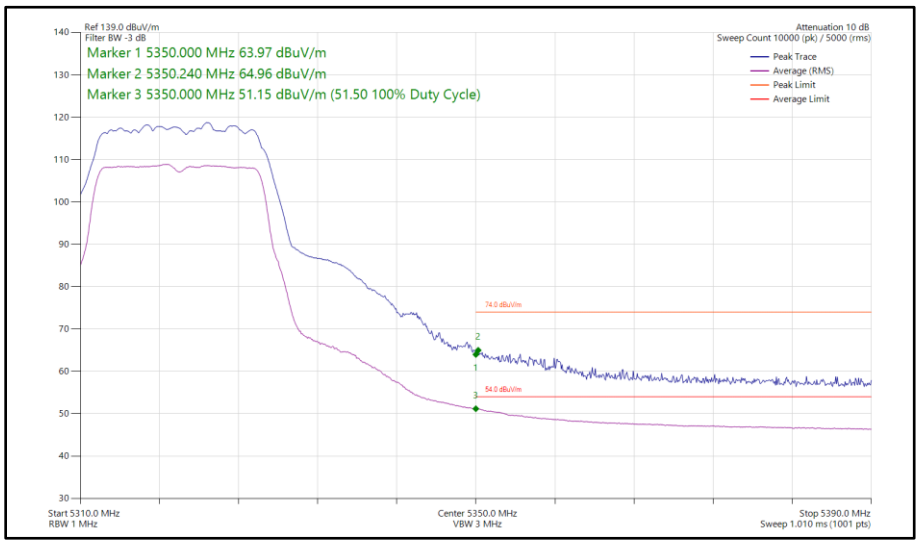

Figure 9 - 802.11a, SISO, Core 0 - 5320 MHz
Band Edge Frequency 5350 MHz

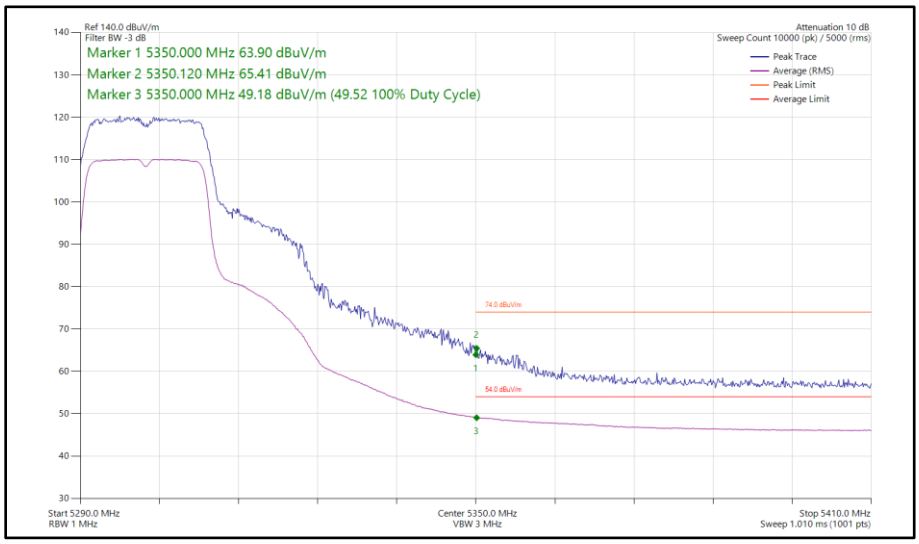

Figure 10 - 802.11n HT20, SISO, Core 0 - 5300 MHz
Band Edge Frequency 5350 MHz

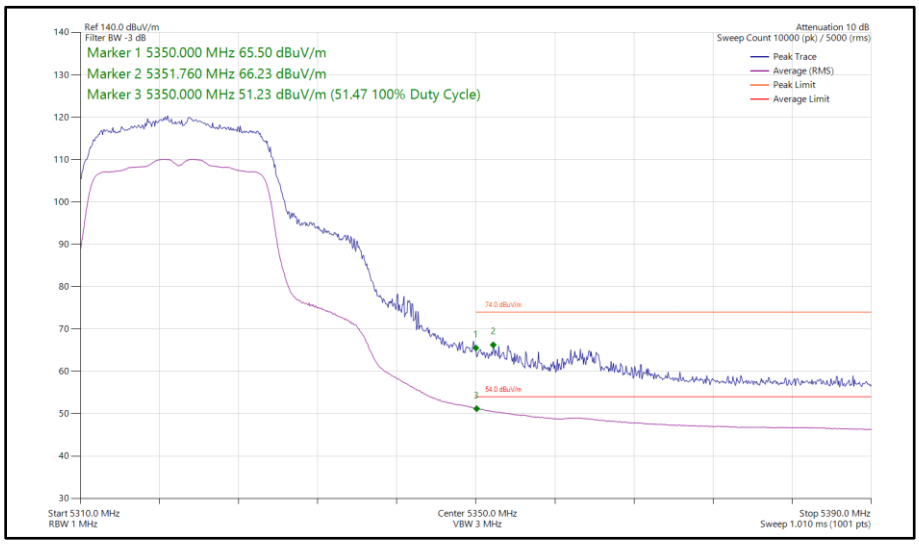

Figure 11 - 802.11n HT20, SISO, Core 0 - 5320 MHz
Band Edge Frequency 5350 MHz

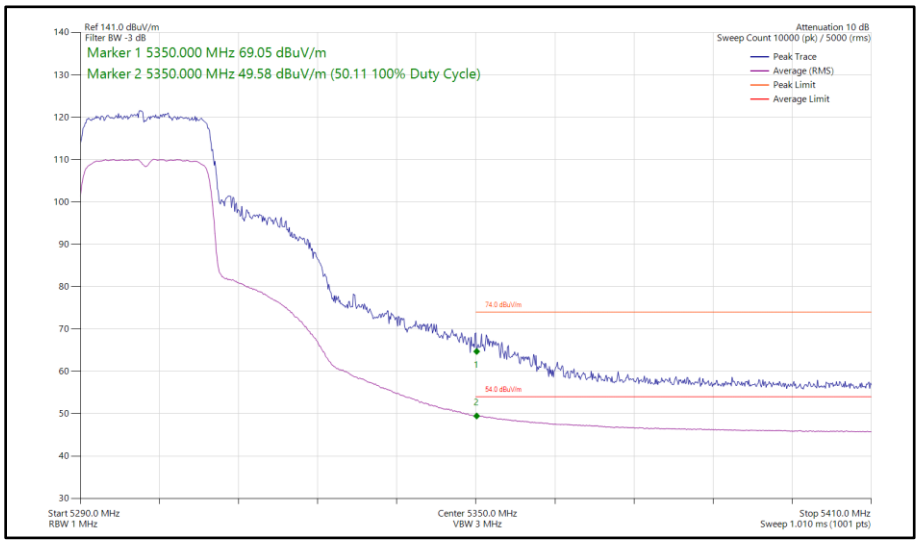

Figure 12 - 802.11ax HE20, SU, SISO, Core 0 - 5300 MHz
Band Edge Frequency 5350 MHz

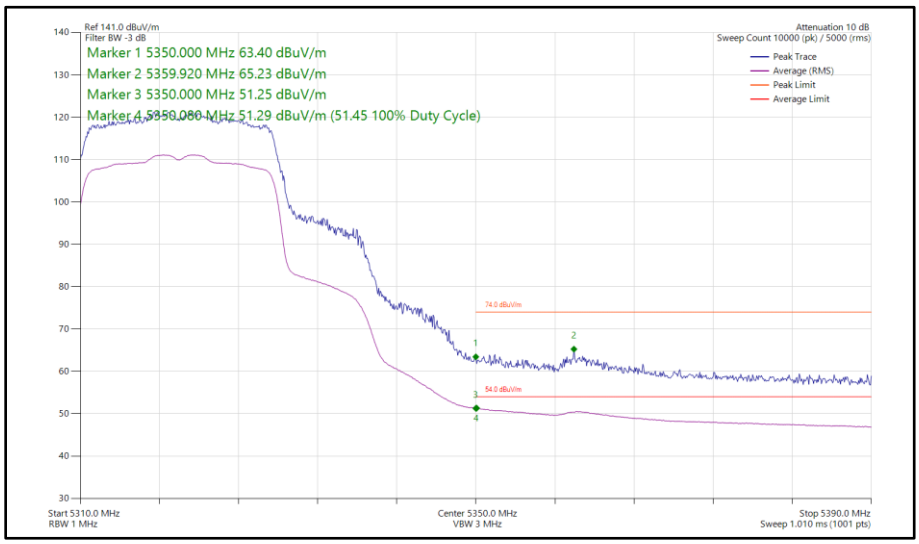

Figure 13 - 802.11ax HE20, SU, SISO, Core 0 - 5320 MHz Band Edge Frequency 5350 MHz

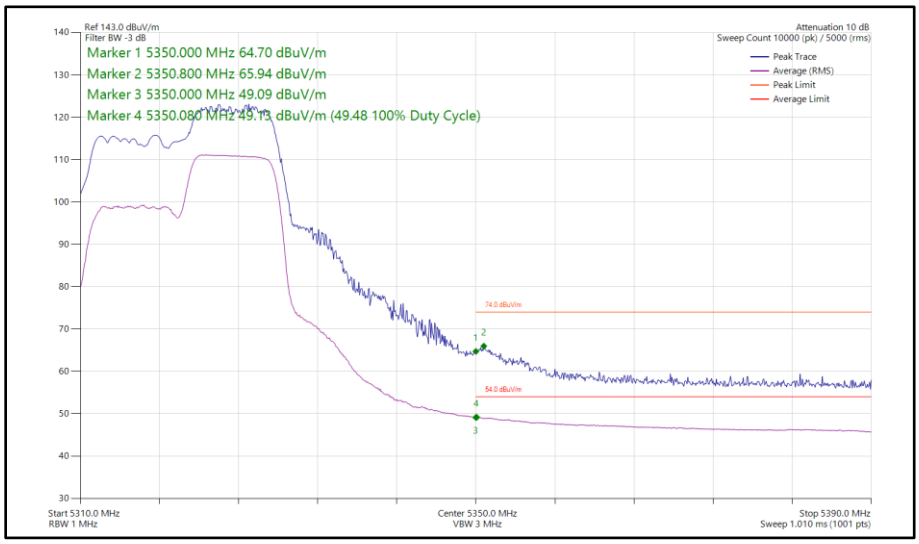

Figure 14 - 802.11ax HE20, RU 106-54, SISO, Core 0 - 5320 MHz Band Edge Frequency 5350 MHz

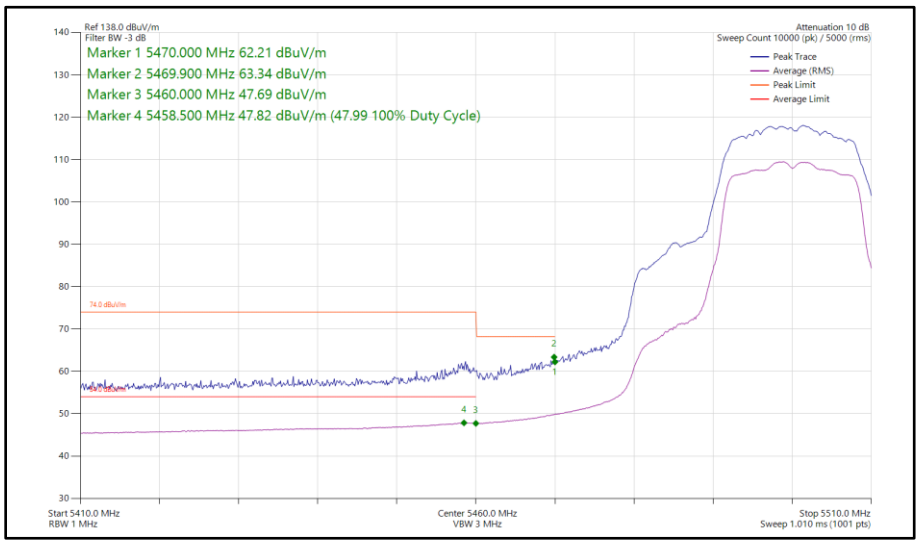

Figure 15 - 802.11a, SISO, Core 0 - 5500 MHz
Band Edge Frequency 5460 MHz

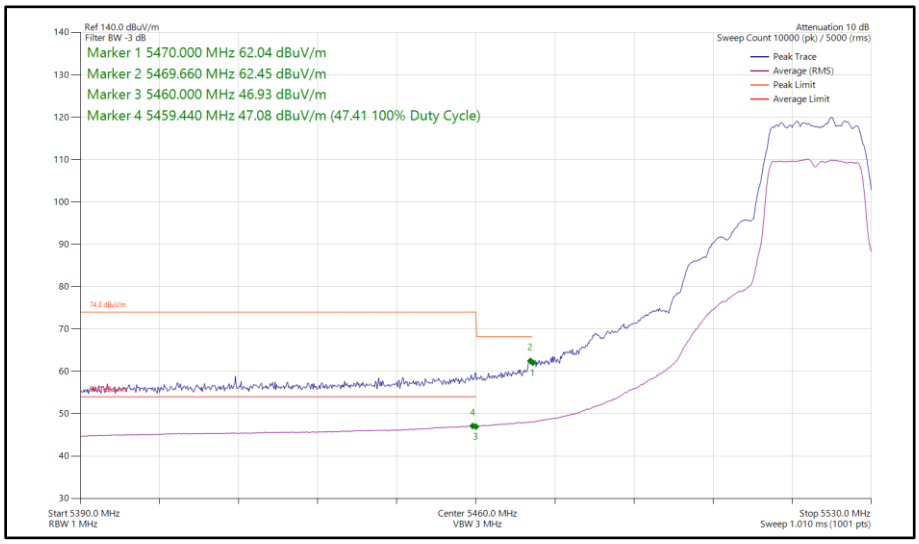

Figure 16 - 802.11a, SISO, Core 0 - 5520 MHz
Band Edge Frequency 5460 MHz

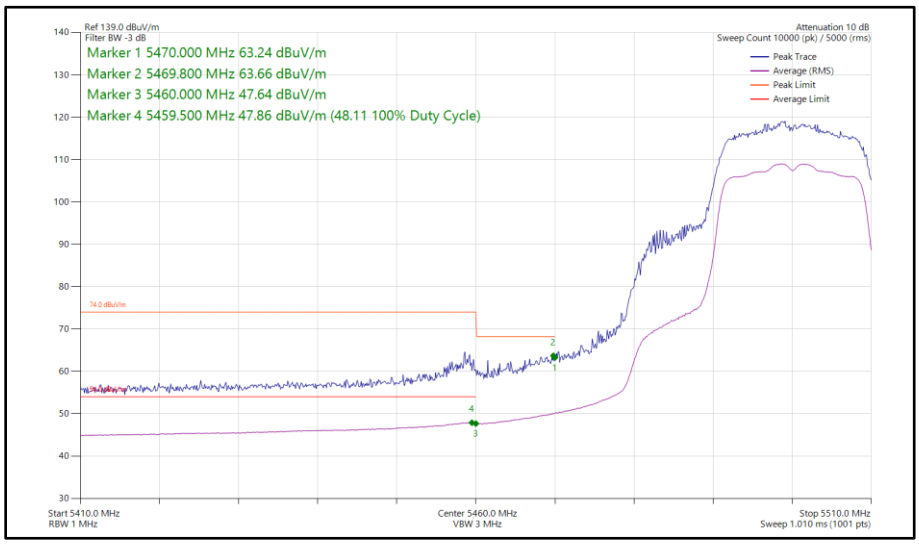

Figure 17 - 802.11n HT20, SISO, Core 0 - 5500 MHz
Band Edge Frequency 5460 MHz

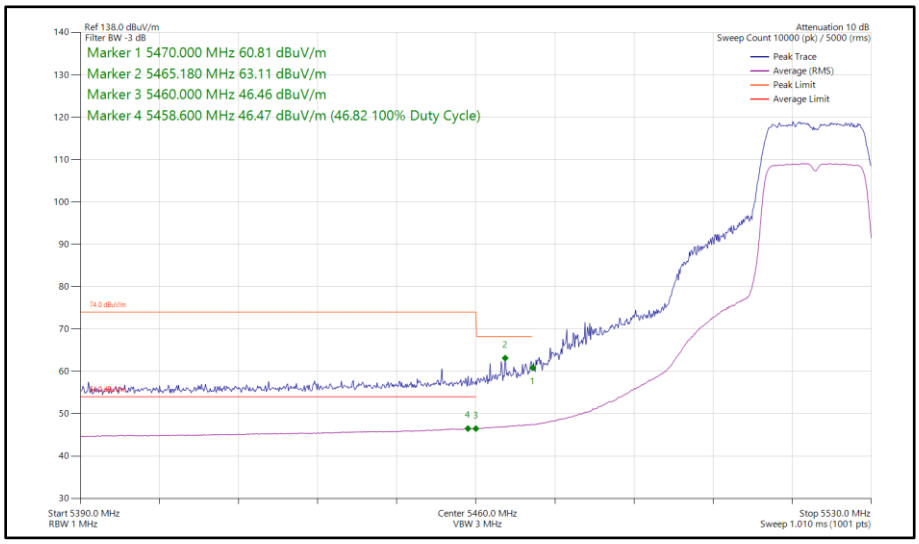

Figure 18 - 802.11n HT20, SISO, Core 0 - 5520 MHz
Band Edge Frequency 5460 MHz

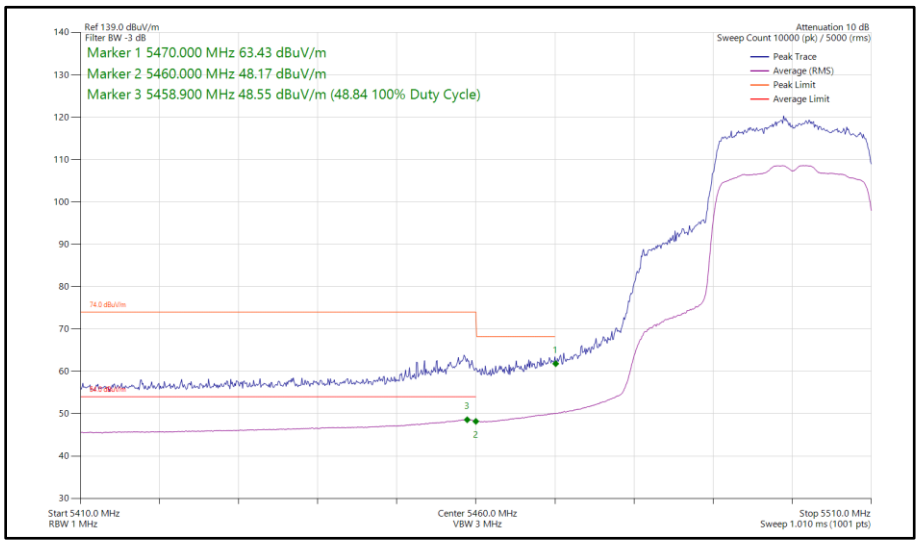

Figure 19 - 802.11ax HE20, SU, SISO, Core 0 - 5500 MHz Band Edge Frequency 5460 MHz

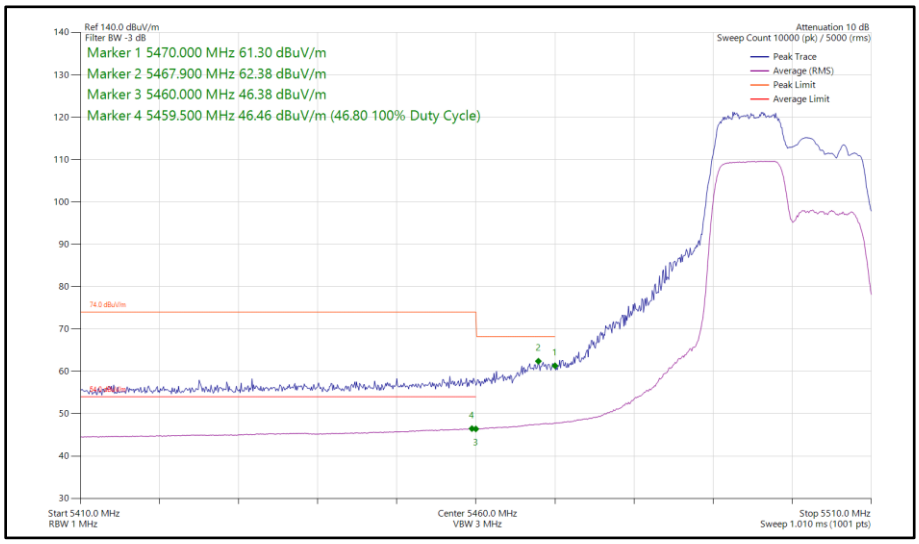

Figure 20 - 802.11ax HE20, RU 106-53, SISO, Core 0 - 5500 MHz Band Edge Frequency 5460 MHz

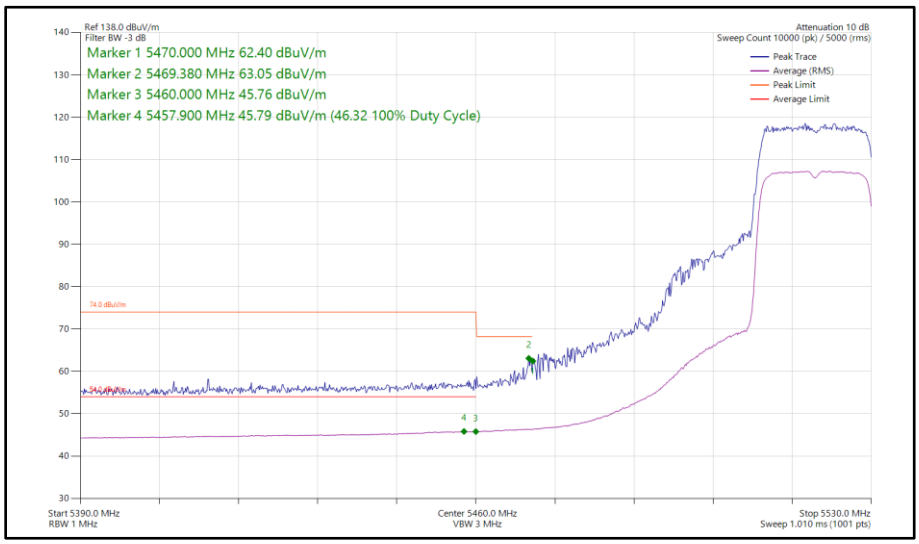

Figure 21 - 802.11ax HE20, SU, SISO, Core 0 - 5520 MHz Band Edge Frequency 5460 MHz

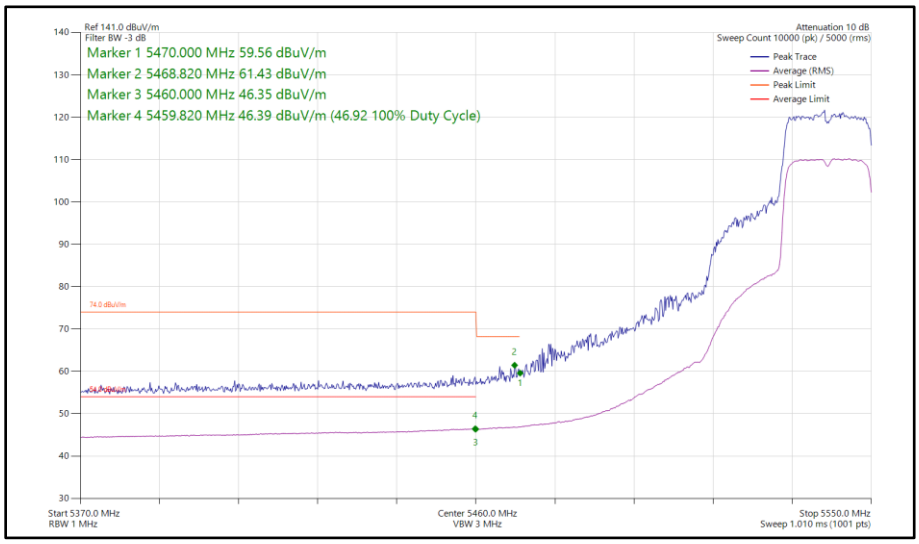

Figure 22 - 802.11ax HE20, SU, SISO, Core 0 - 5540 MHz Band Edge Frequency 5460 MHz

20 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)
802.11a	12 Mbps	-	-	5180	5150	64.54	51.42
802.11a	54 Mbps	-	-	5200	5150	64.00	49.36
802.11n HT20	MCS 2	-	-	5180	5150	64.00	51.43
802.11n HT20	MCS 7	-	-	5200	5150	64.95	48.56
802.11ax HE20	MCS 2x1	SU	-	5180	5150	64.47	51.43
802.11ax HE20	MCS 11x1	106	53	5180	5150	66.08	49.54
802.11ax HE20	MCS 11x1	SU	-	5200	5150	66.42	48.99
802.11a	54 Mbps	-	-	5300	5350	61.07	48.48
802.11a	54 Mbps	-	-	5320	5350	66.27	51.29
802.11n HT20	MCS 7	-	-	5300	5350	63.38	48.14
802.11n HT20	MCS 7	-	-	5320	5350	69.47	50.26
802.11ax HE20	MCS 11x1	SU	-	5300	5350	66.38	48.60
802.11ax HE20	MCS 11x1	SU	-	5320	5350	69.13	50.70
802.11ax HE20	MCS 11x1	106	53	5320	5350	59.46	46.46
802.11a	24 Mbps	-	-	5500	5460	63.63	47.70
802.11a	54 Mbps	-	-	5520	5460	62.37	47.16
802.11n HT20	MCS 7	-	-	5500	5460	63.30	46.53
802.11n HT20	MCS 7	-	-	5520	5460	63.35	46.66
802.11ax HE20	MCS 11x1	SU	-	5500	5460	63.56	46.54
802.11ax HE20	MCS 11x1	106	54	5500	5460	63.50	46.17
802.11ax HE20	MCS 4x1	SU	-	5520	5460	63.51	47.11
802.11ax HE20	MCS 11x1	SU	-	5540	5460	58.06	46.00

Table 9 - SISO Restricted Band Edge Results

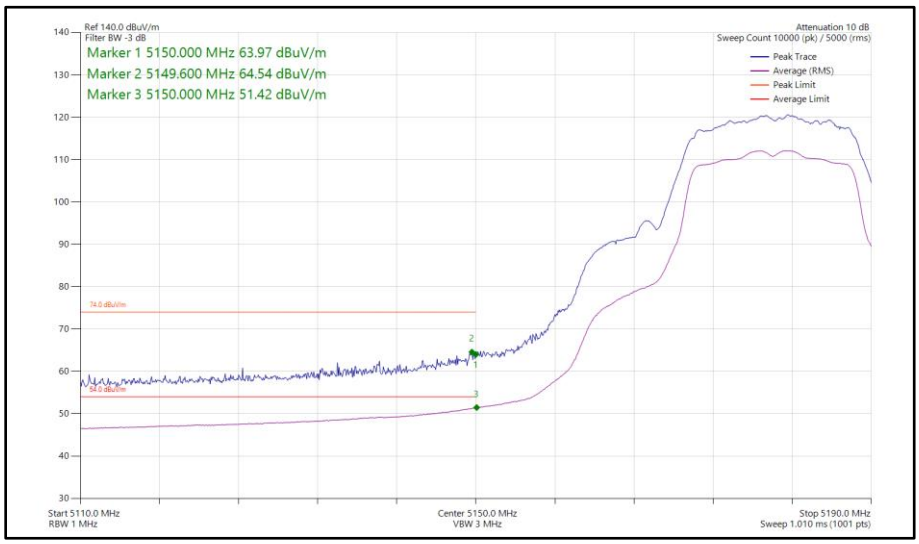

Figure 23 - 802.11a, SISO, Core 1 - 5180 MHz
Band Edge Frequency 5150 MHz

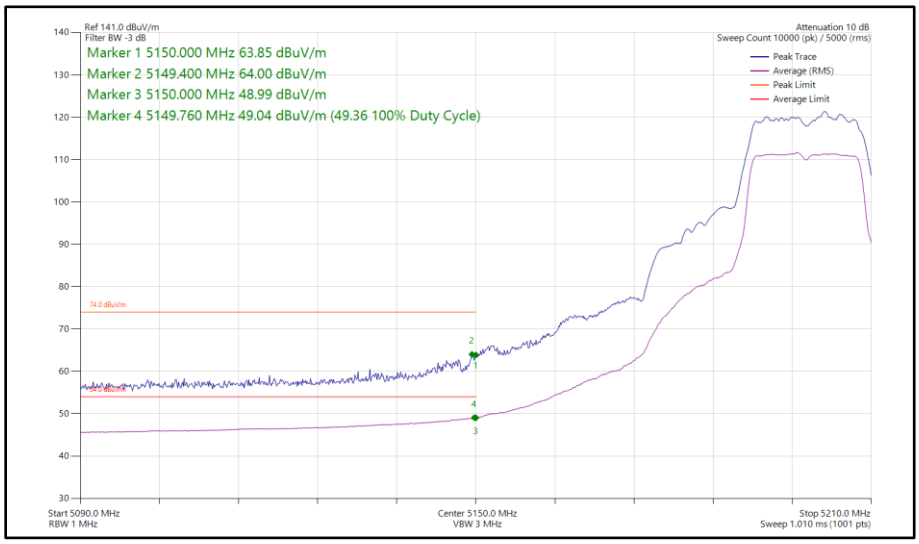

Figure 24 - 802.11a, SISO, Core 1 - 5200 MHz
Band Edge Frequency 5150 MHz

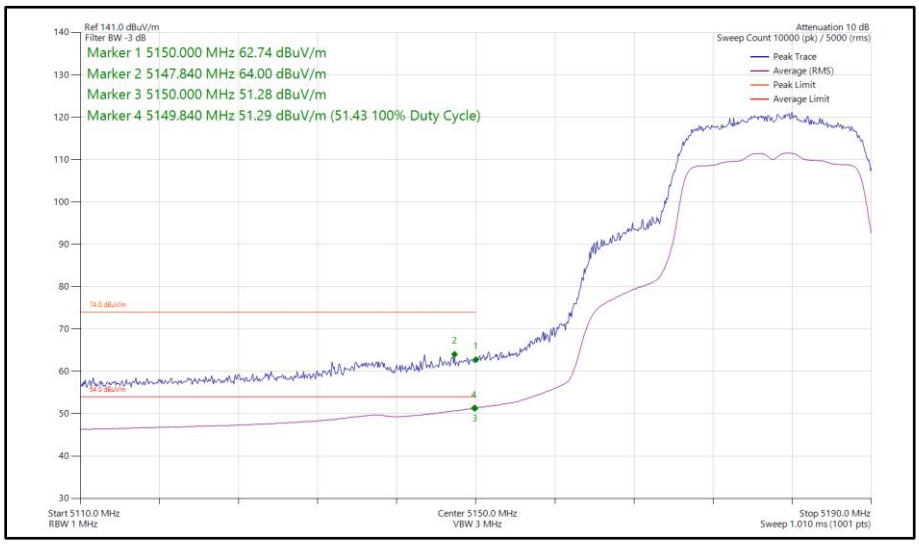

Figure 25 - 802.11n HT20, SISO, Core 1 - 5180 MHz
Band Edge Frequency 5150 MHz

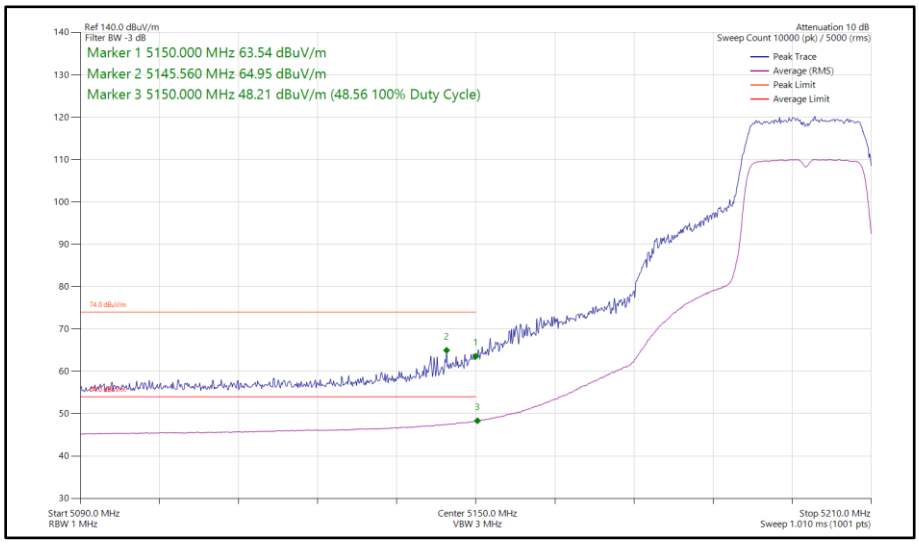

Figure 26 - 802.11n HT20, SISO, Core 1 - 5200 MHz
Band Edge Frequency 5150 MHz

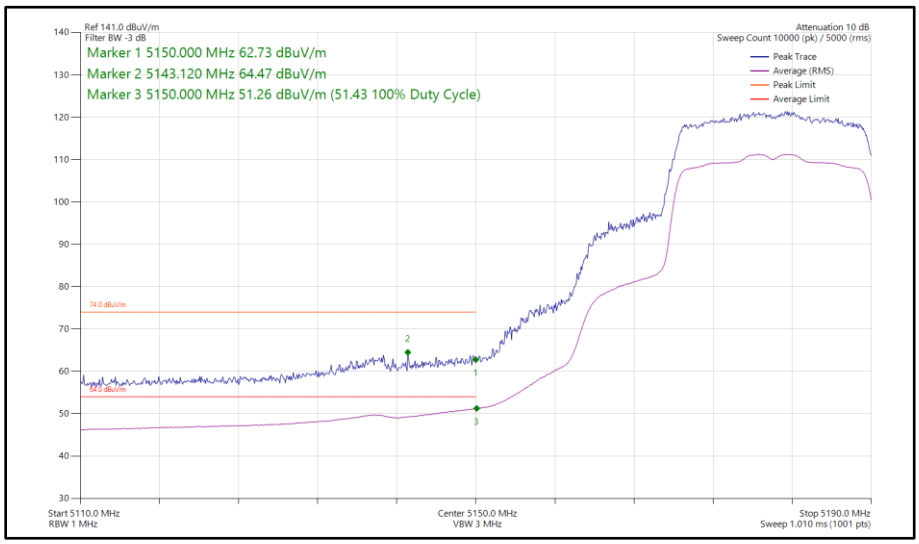

Figure 27 - 802.11ax HE20, SU, SISO, Core 1 - 5180 MHz
Band Edge Frequency 5150 MHz

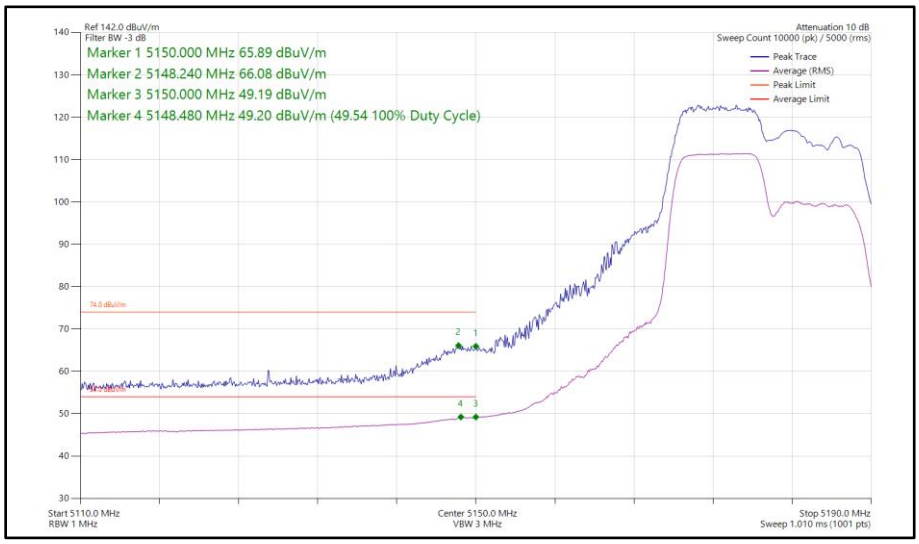

Figure 28 - 802.11ax HE20, RU 106-53, SISO, Core 1 - 5180 MHz
Band Edge Frequency 5150 MHz

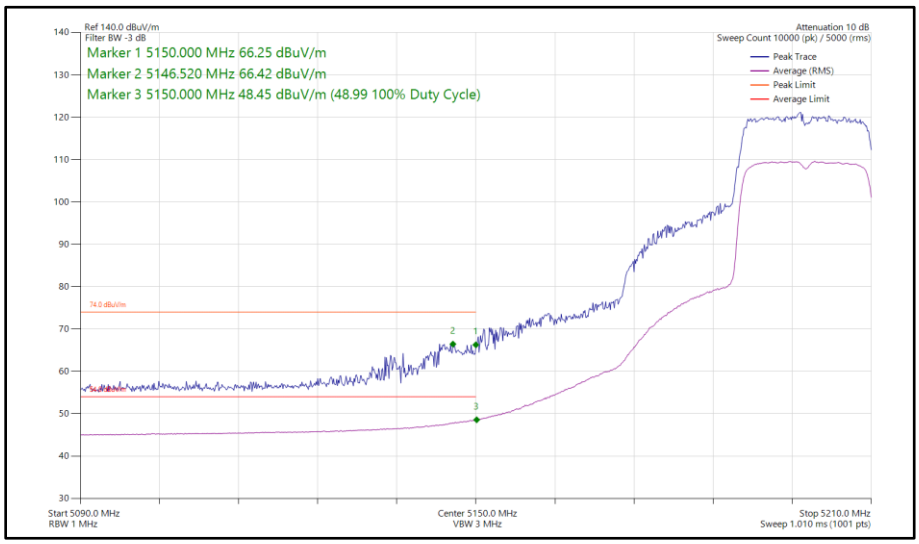

Figure 29 - 802.11ax HE20, SU, SISO, Core 1 - 5200 MHz
Band Edge Frequency 5150 MHz

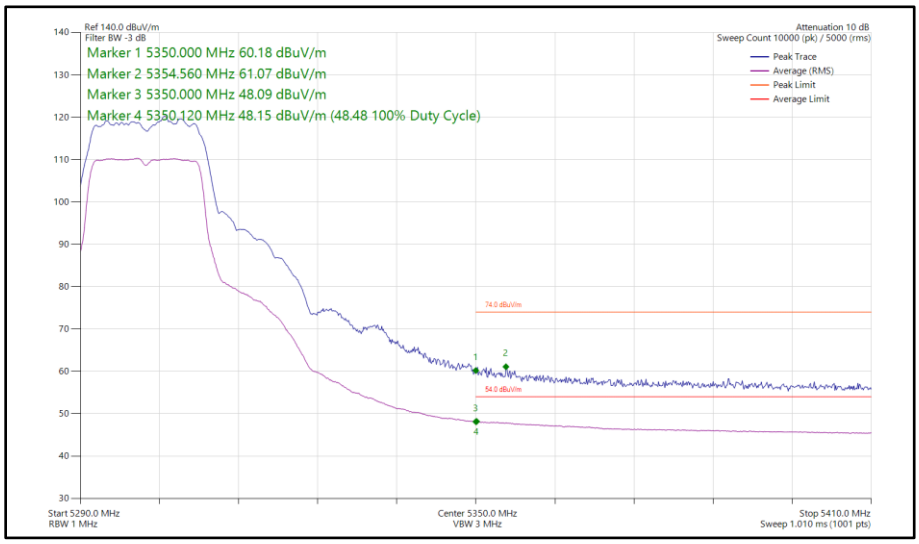

Figure 30 - 802.11a, SISO, Core 1 - 5300 MHz
Band Edge Frequency 5350 MHz

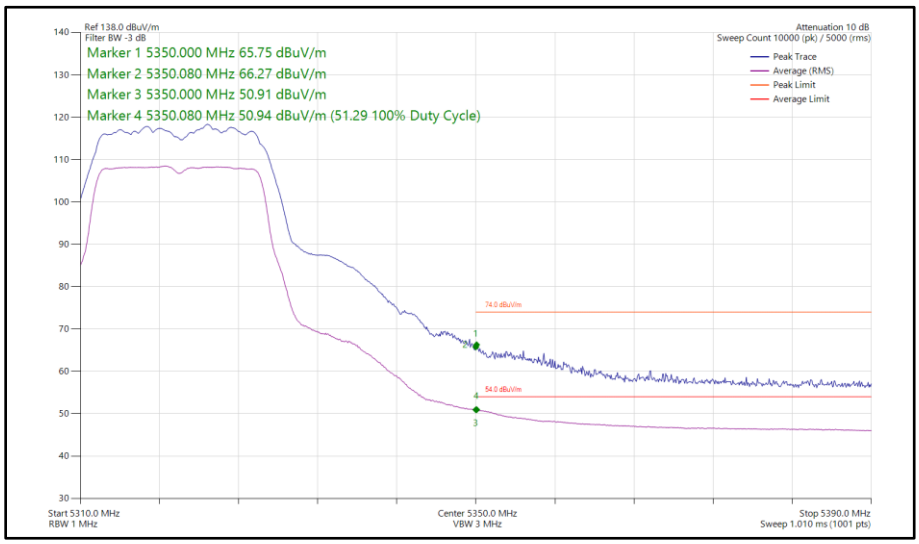

Figure 31 - 802.11a, SISO, Core 1 - 5320 MHz
Band Edge Frequency 5350 MHz

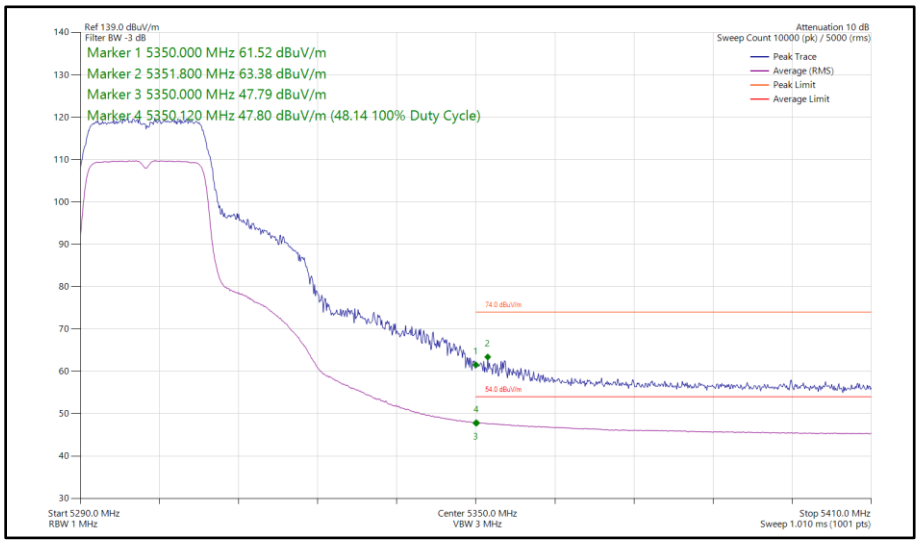

Figure 32 - 802.11n HT20, SISO, Core 1 - 5300 MHz
Band Edge Frequency 5350 MHz

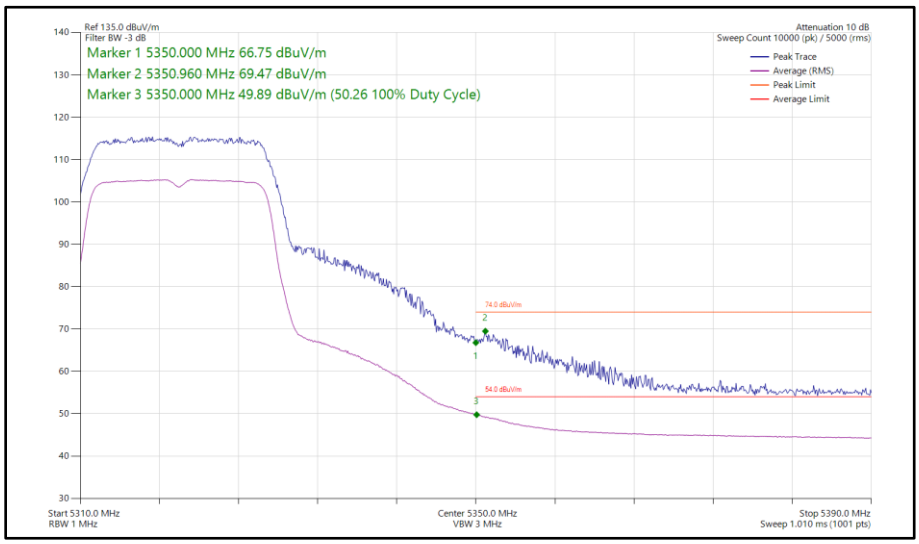

Figure 33 - 802.11n HT20, SISO, Core 1 - 5320 MHz
Band Edge Frequency 5350 MHz

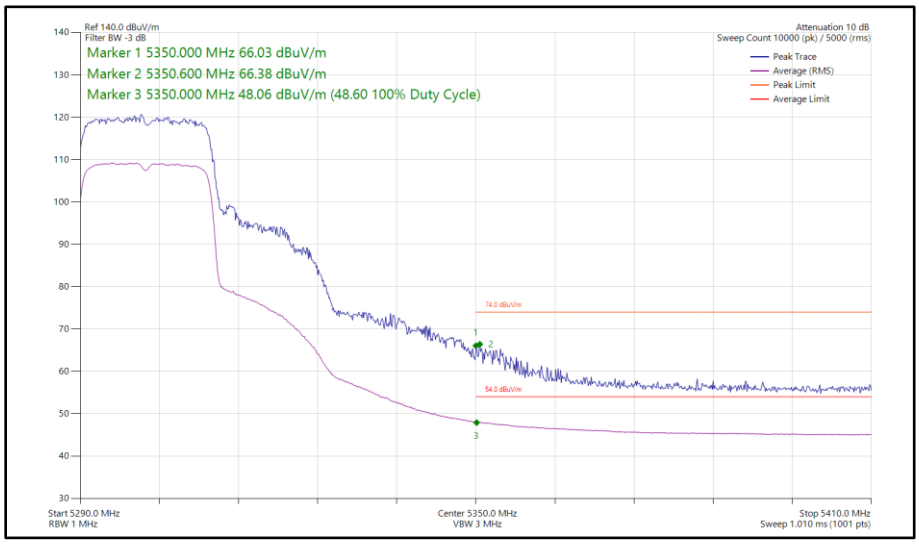

Figure 34 - 802.11ax HE20, SU, SISO, Core 1 - 5300 MHz
Band Edge Frequency 5350 MHz

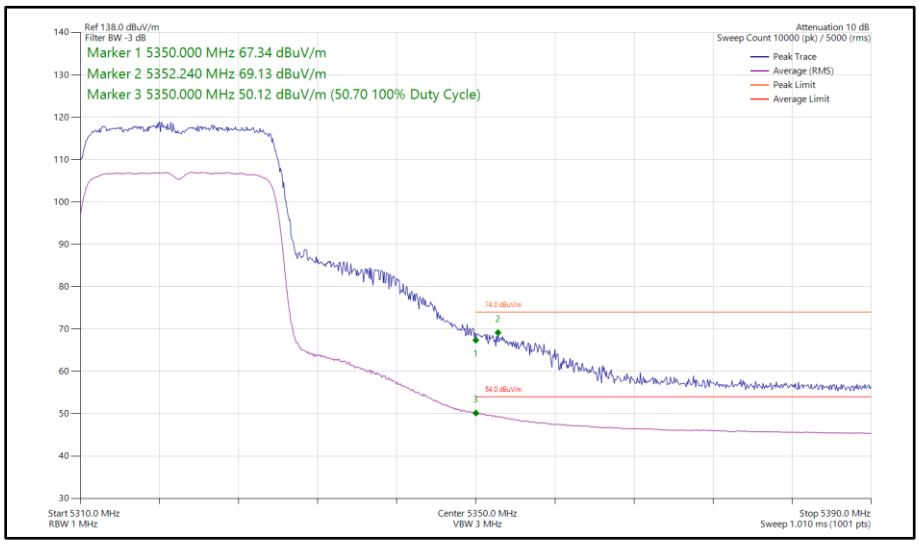

Figure 35 - 802.11ax HE20, SU, SISO, Core 1 - 5320 MHz Band Edge Frequency 5350 MHz

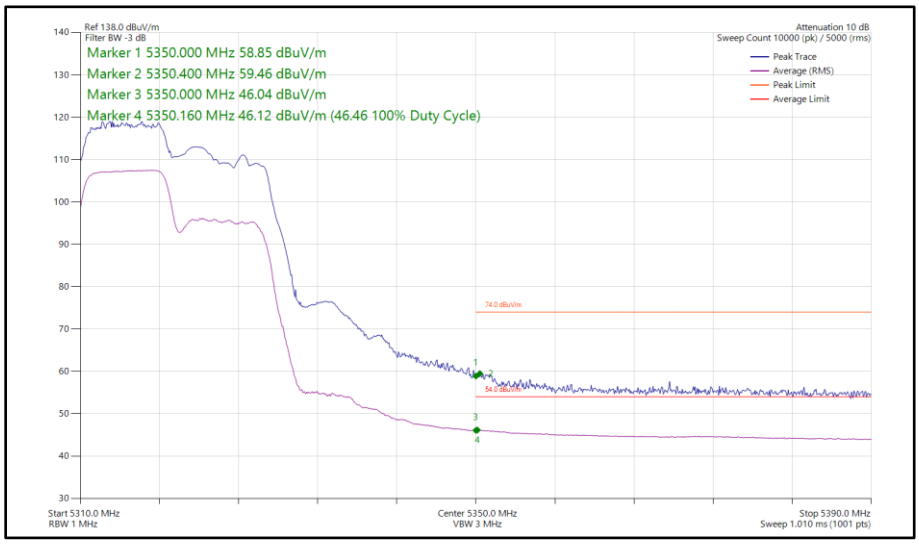

Figure 36 - 802.11ax HE20, RU 106-53, SISO, Core 1 - 5320 MHz Band Edge Frequency 5350 MHz

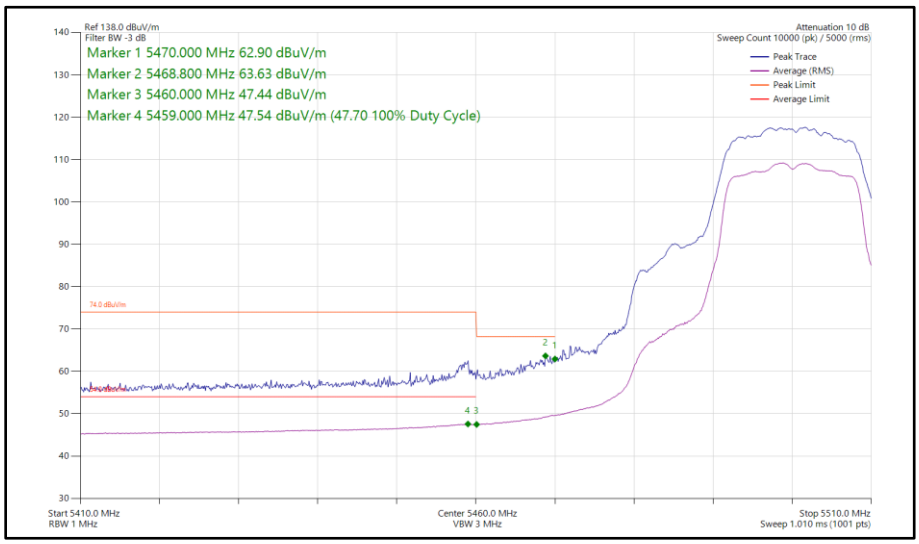

Figure 37 - 802.11a, SISO, Core 1 - 5500 MHz
Band Edge Frequency 5460 MHz

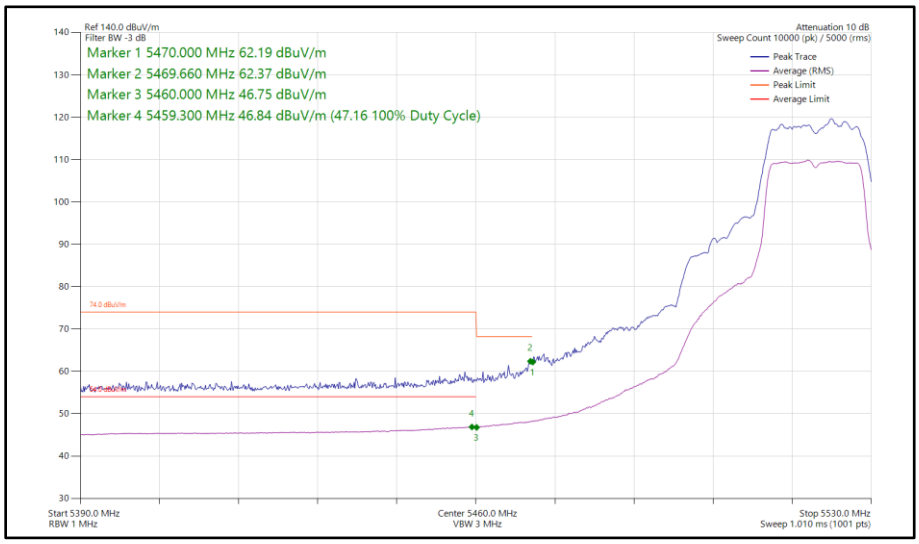

Figure 38 - 802.11a, SISO, Core 1 - 5520 MHz
Band Edge Frequency 5460 MHz

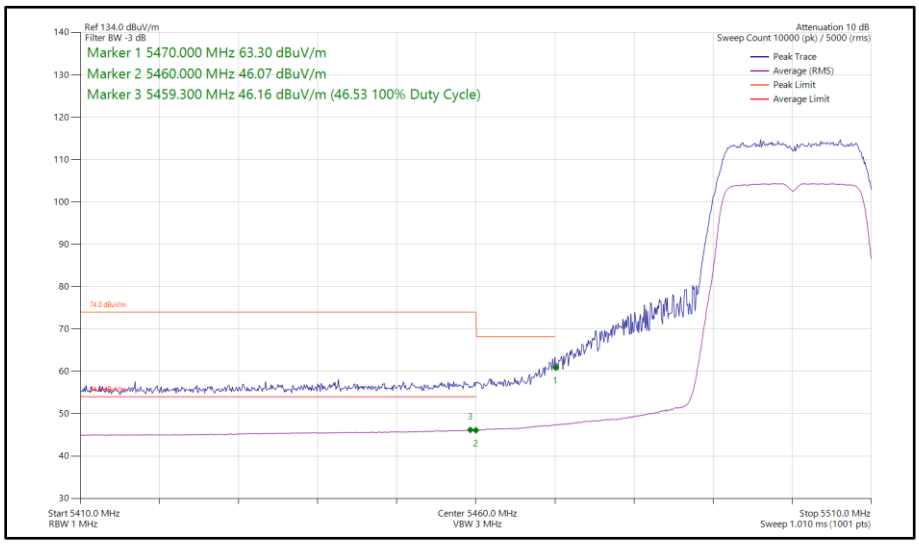

Figure 39 - 802.11n HT20, SISO, Core 1 - 5500 MHz
Band Edge Frequency 5460 MHz

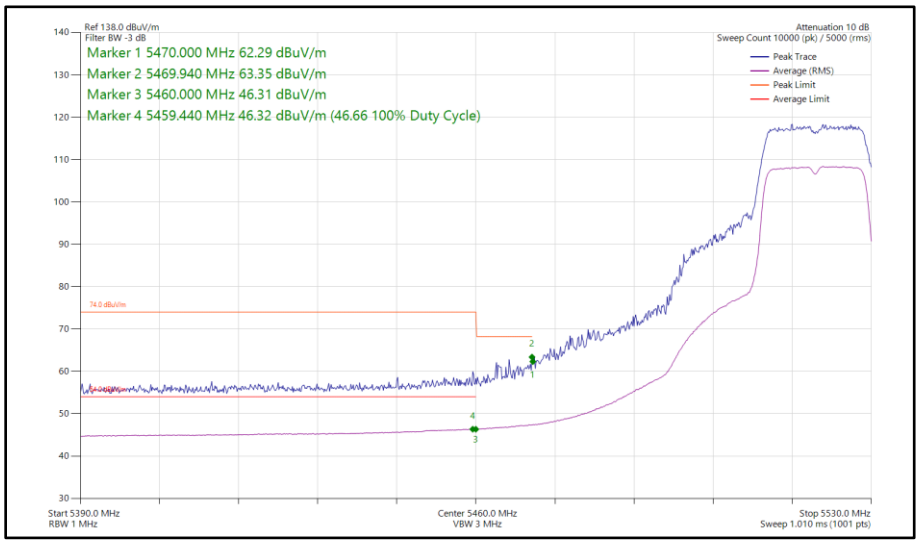

Figure 40 - 802.11n HT20, SISO, Core 1 - 5520 MHz
Band Edge Frequency 5460 MHz

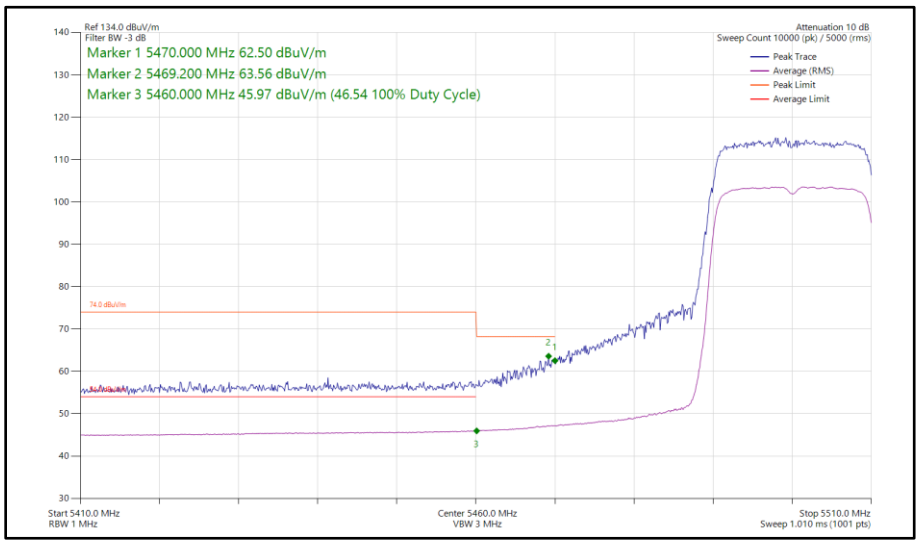

Figure 41 - 802.11ax HE20, SU, SISO, Core 1 - 5500 MHz Band Edge Frequency 5460 MHz

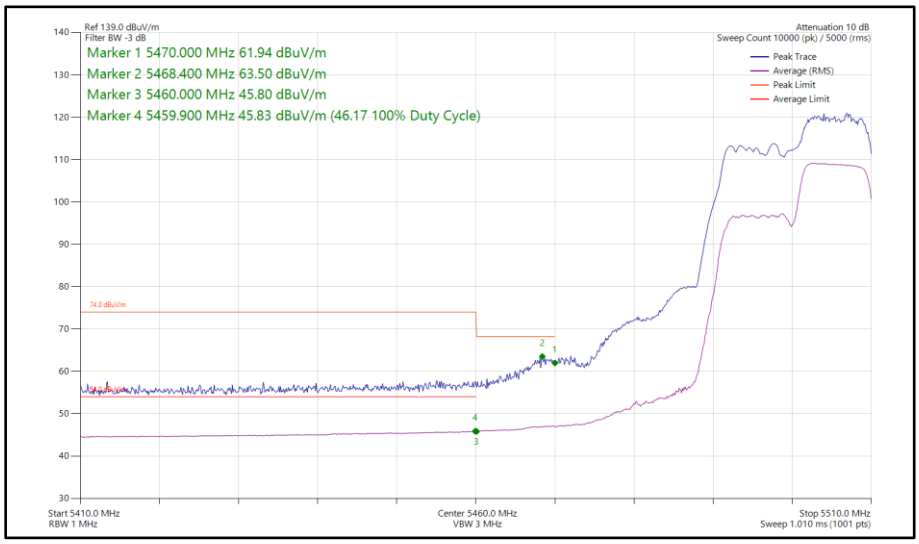

Figure 42 - 802.11ax HE20, RU 106-54, SISO, Core 1 - 5500 MHz Band Edge Frequency 5460 MHz

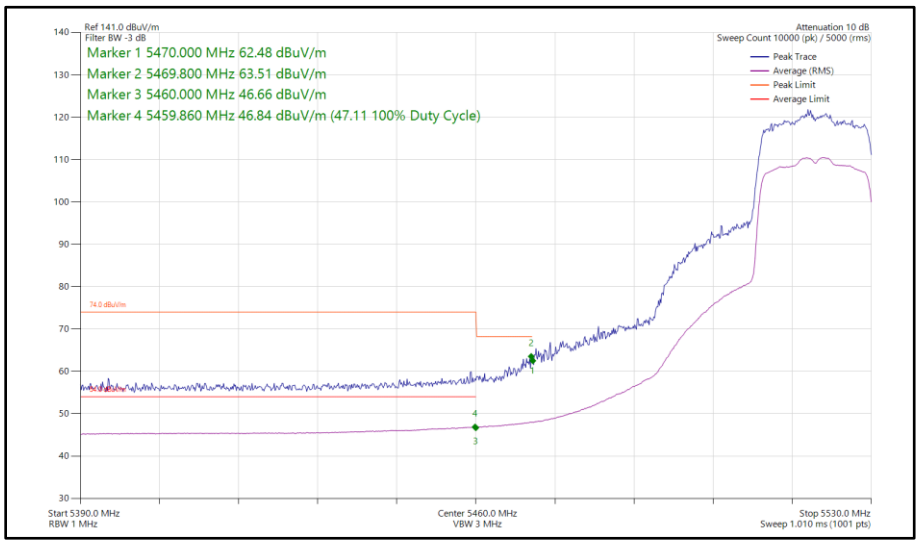

Figure 43 - 802.11ax HE20, SU, SISO, Core 1 - 5520 MHz Band Edge Frequency 5460 MHz

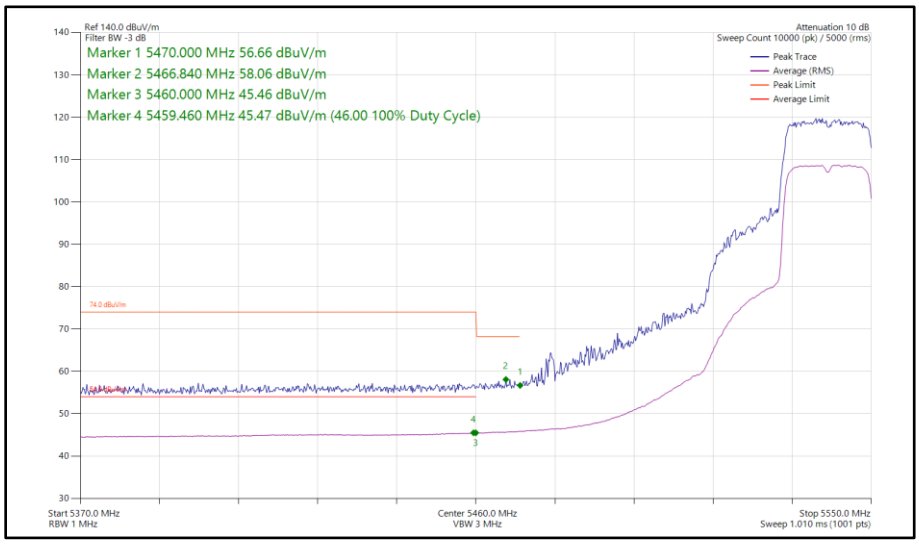

Figure 44 - 802.11ax HE20, SU, SISO, Core 1 - 5540 MHz Band Edge Frequency 5460 MHz

20 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)
802.11n HT20	MCS 7	-	-	5180	5150	69.41	51.00
802.11n HT20	MCS 7	-	-	5200	5150	65.47	48.53
802.11ax HE20	MCS 11x1	SU	-	5180	5150	69.47	50.60
802.11ax HE20	MCS 11x1	106	53	5180	5150	66.56	49.65
802.11ax HE20	MCS 11x1	SU	-	5200	5150	68.82	48.77
802.11n HT20	MCS 7	-	-	5300	5350	66.33	50.95
802.11n HT20	MCS 2	-	-	5320	5350	63.00	51.41
802.11ax HE20	MCS 11x1	SU	-	5300	5350	68.69	50.91
802.11ax HE20	MCS 4x1	SU	-	5320	5350	66.53	51.47
802.11ax HE20	MCS 11x1	106	54	5320	5350	66.40	51.49
802.11n HT20	MCS 7	-	-	5500	5460	63.67	46.54
802.11n HT20	MCS 7	-	-	5520	5460	63.67	47.78
802.11ax HE20	MCS 11x1	SU	-	5500	5460	63.68	47.02
802.11ax HE20	MCS 11x1	106	54	5500	5460	63.53	48.11
802.11ax HE20	MCS 2x1	SU	-	5520	5460	63.67	47.62
802.11ax HE20	MCS 11x1	SU	-	5540	5460	62.51	48.67

Table 10 - CDD Restricted Band Edge Results

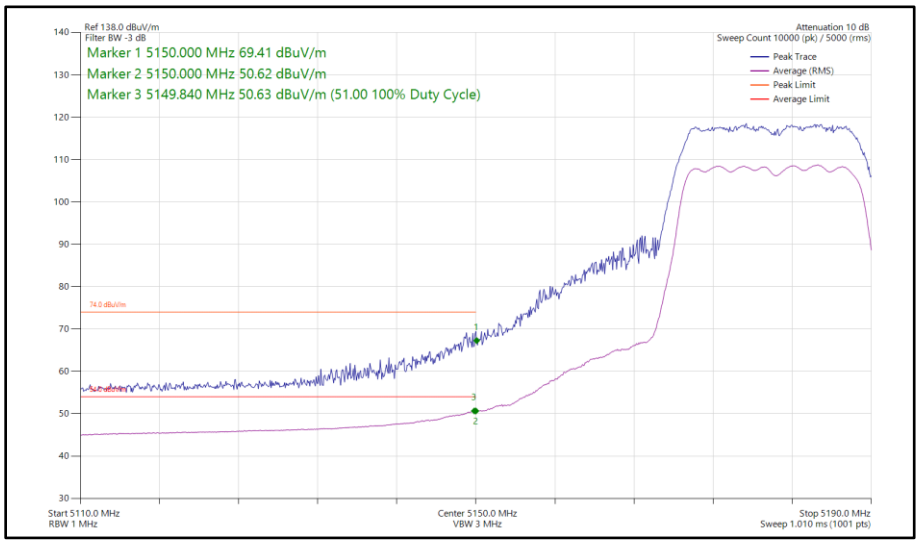

Figure 45 - 802.11n HT20, CDD, Core 0 - Core 1 - 5180 MHz Band Edge Frequency 5150 MHz

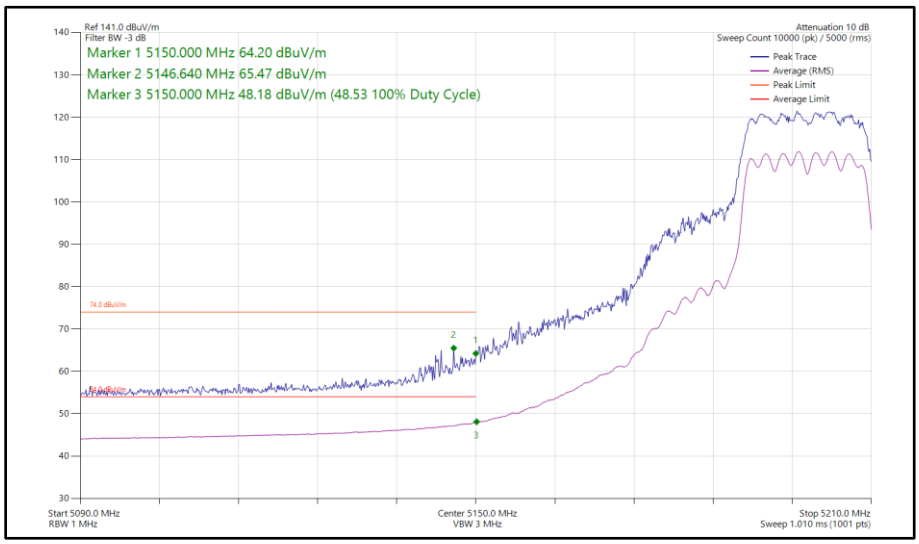

Figure 46 - 802.11n HT20, CDD, Core 0 - Core 1 - 5200 MHz Band Edge Frequency 5150 MHz

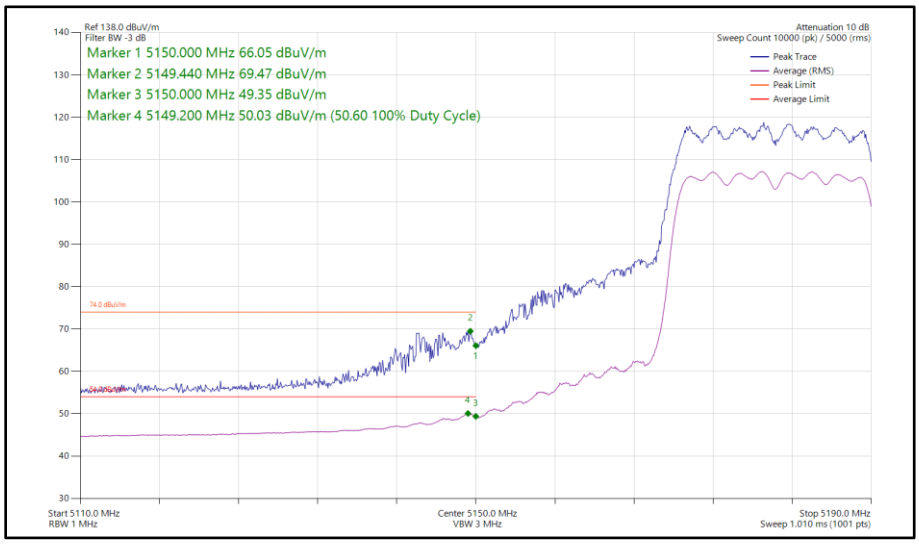

Figure 47 - 802.11ax HE20, SU, CDD, Core 0 - Core 1 - 5180 MHz Band Edge Frequency 5150 MHz

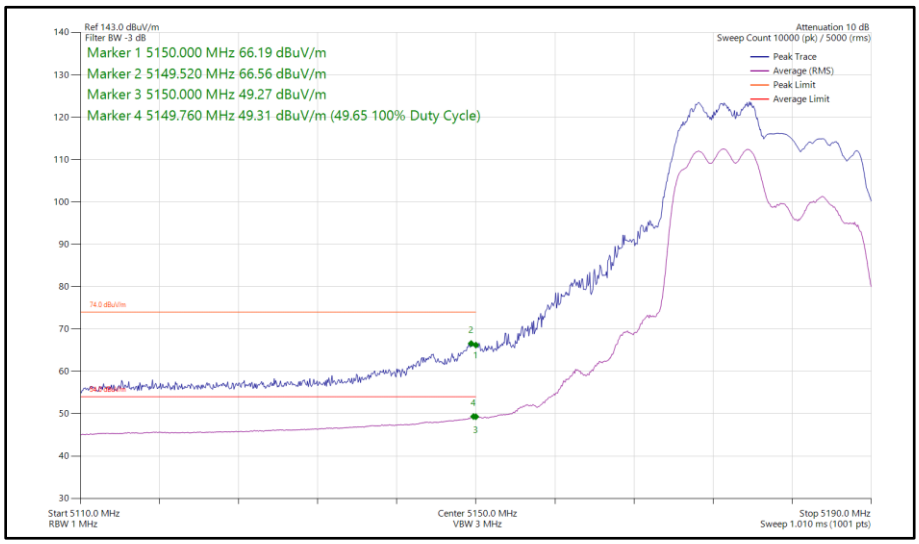

Figure 48 - 802.11ax HE20, RU 106-53, CDD, Core 0 - Core 1 - 5180 MHz Band Edge Frequency 5150 MHz

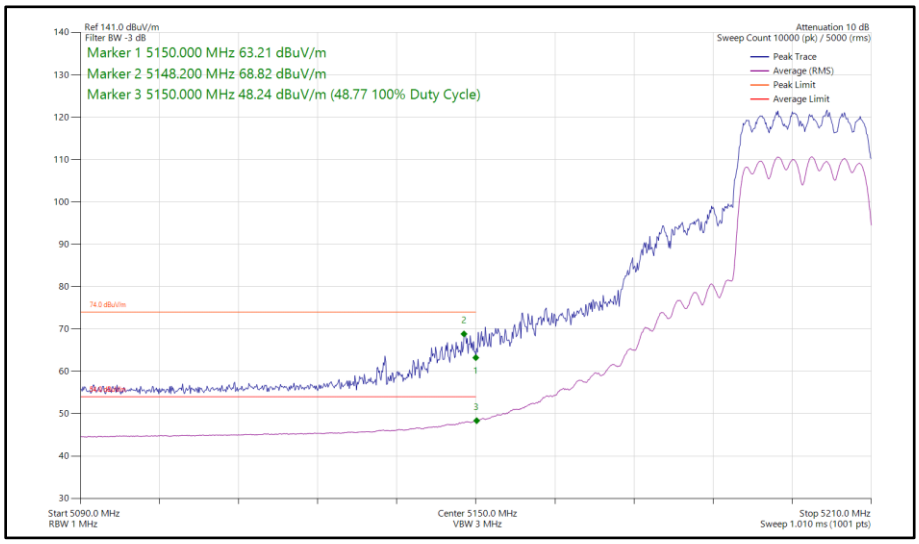

Figure 49 - 802.11ax HE20, SU, CDD, Core 0 - Core 1 - 5200 MHz Band Edge Frequency 5150 MHz

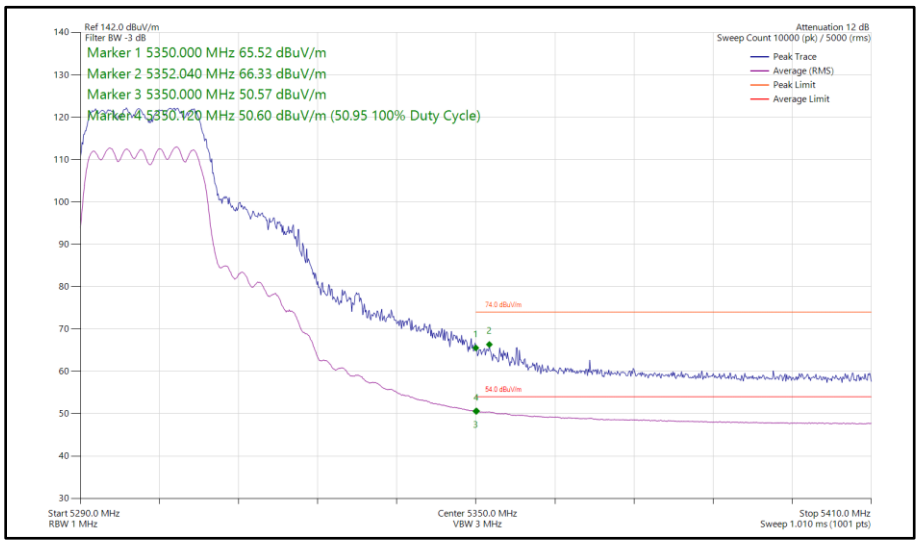

Figure 50 - 802.11n HT20, CDD, Core 0 - Core 1 - 5300 MHz Band Edge Frequency 5350 MHz

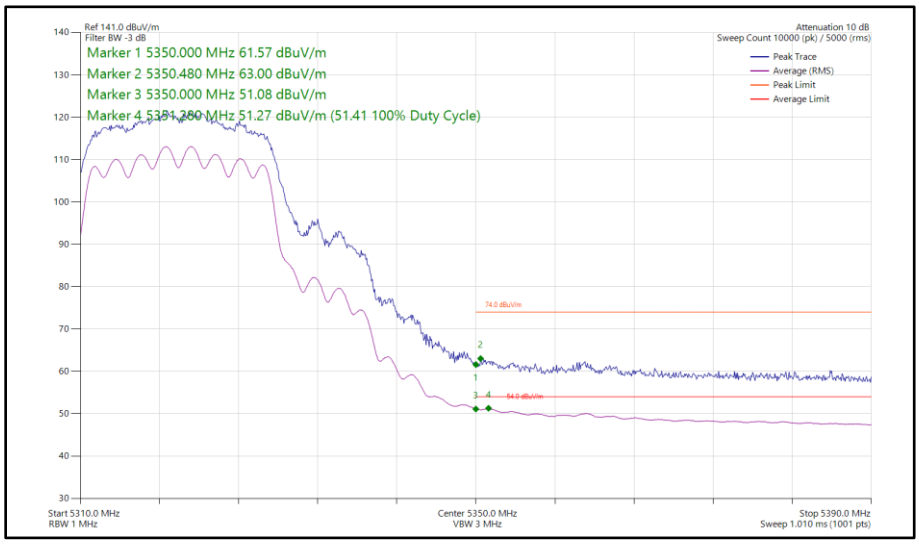

Figure 51 - 802.11n HT20, CDD, Core 0 - Core 1 - 5320 MHz Band Edge Frequency 5350 MHz

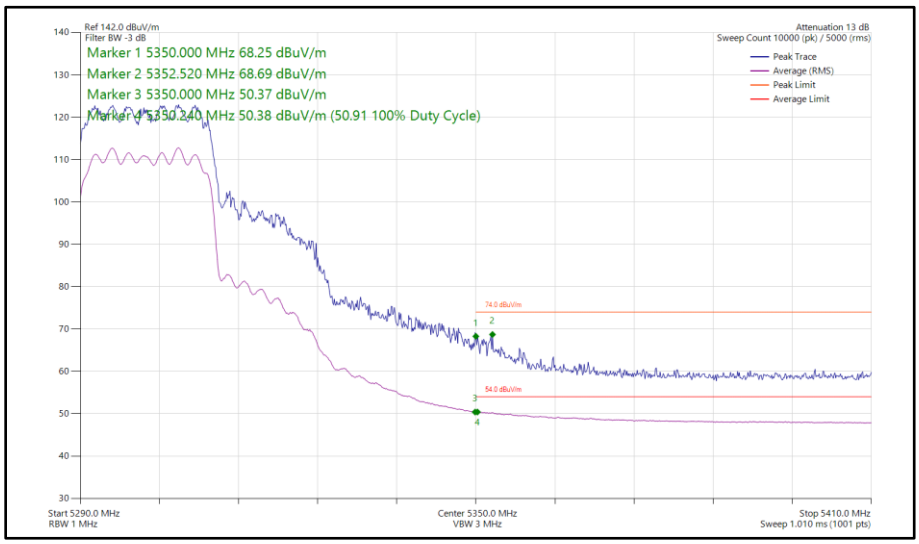

Figure 52 - 802.11ax HE20, SU, CDD, Core 0 - Core 1 - 5300 MHz Band Edge Frequency 5350 MHz

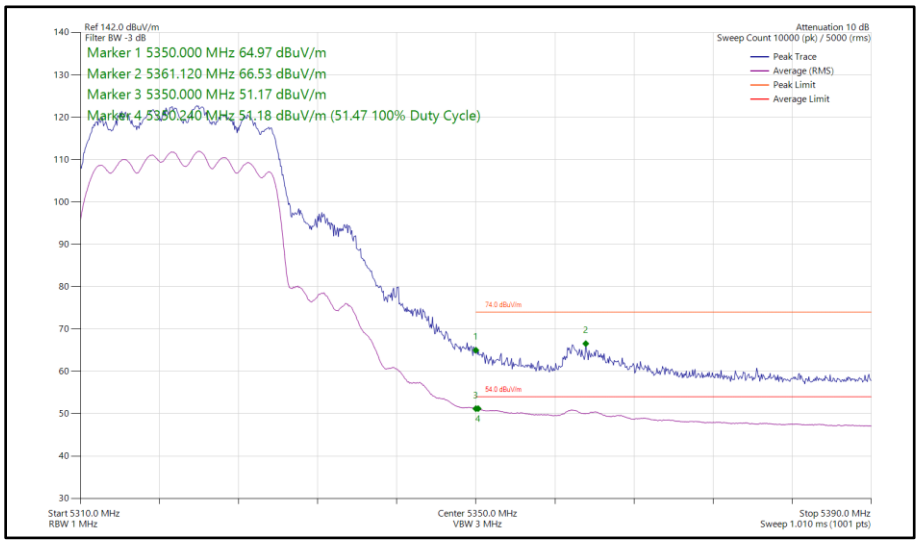

Figure 53 - 802.11ax HE20, SU, CDD, Core 0 - Core 1 - 5320 MHz Band Edge Frequency 5350 MHz

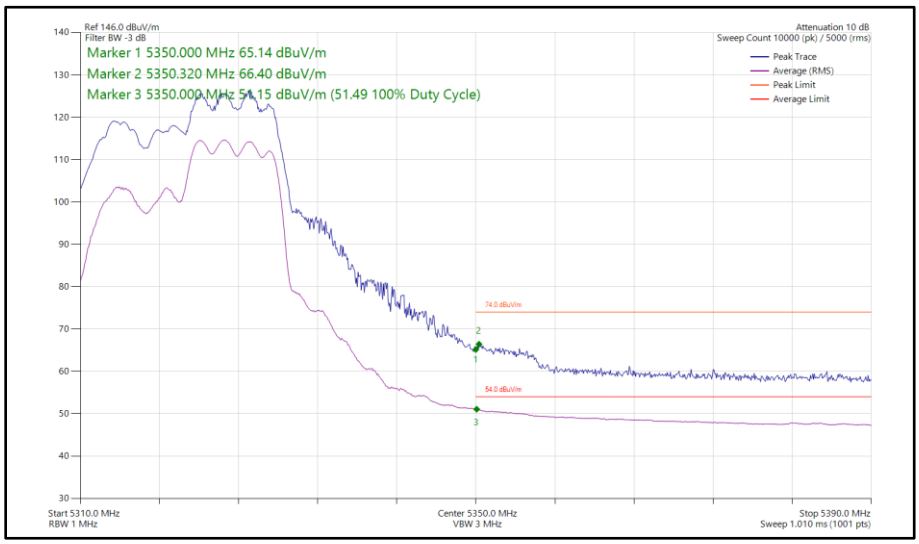

Figure 54 - 802.11ax HE20, RU 106-54, CDD, Core 0 - Core 1 - 5320 MHz Band Edge Frequency 5350 MHz

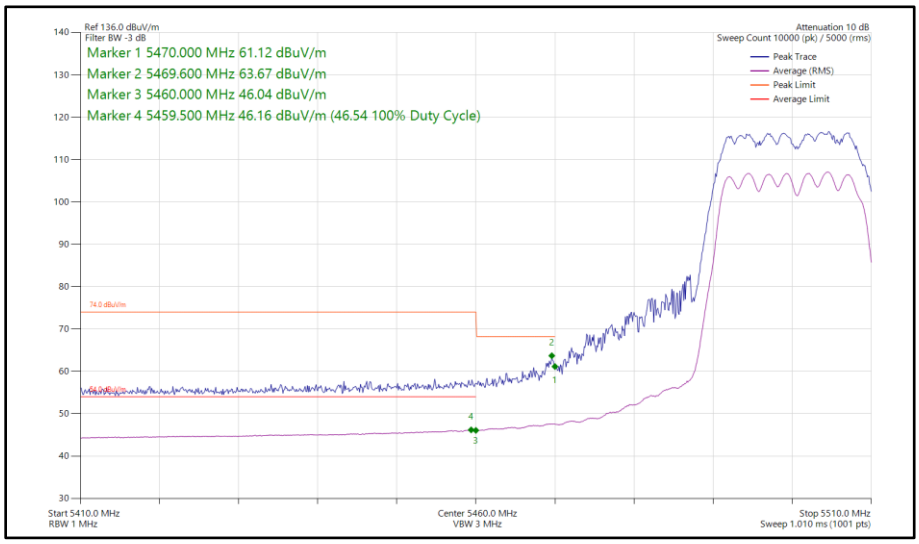

Figure 55 - 802.11n HT20, CDD, Core 0 - Core 1 - 5500 MHz Band Edge Frequency 5460 MHz

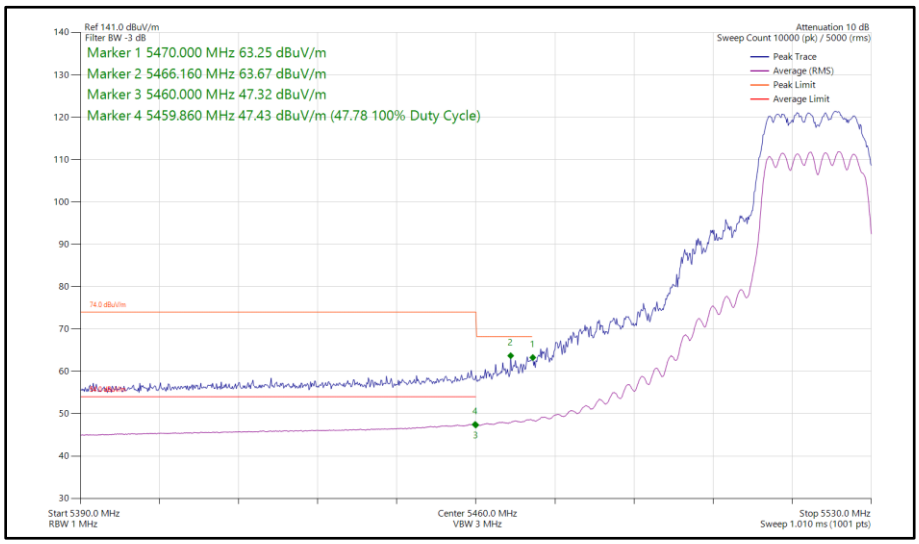

Figure 56 - 802.11n HT20, CDD, Core 0 - Core 1 - 5520 MHz Band Edge Frequency 5460 MHz

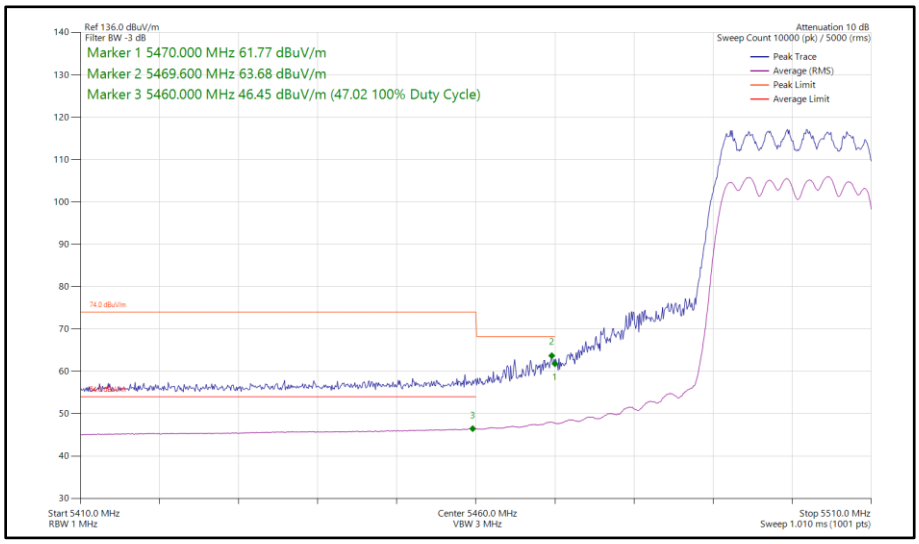

Figure 57 - 802.11ax HE20, SU, CDD, Core 0 - Core 1 - 5500 MHz Band Edge Frequency 5460 MHz

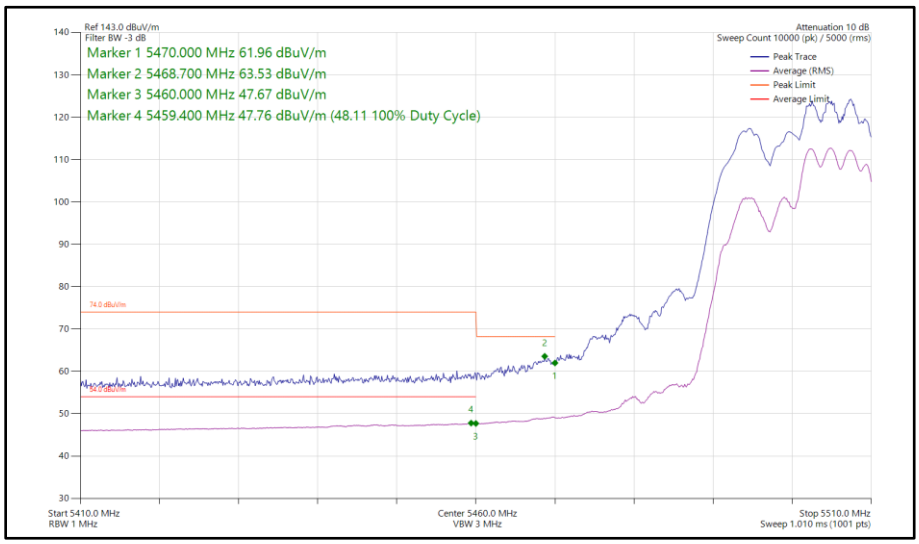

Figure 58 - 802.11ax HE20, RU 106-54, CDD, Core 0 - Core 1 - 5500 MHz Band Edge Frequency 5460 MHz

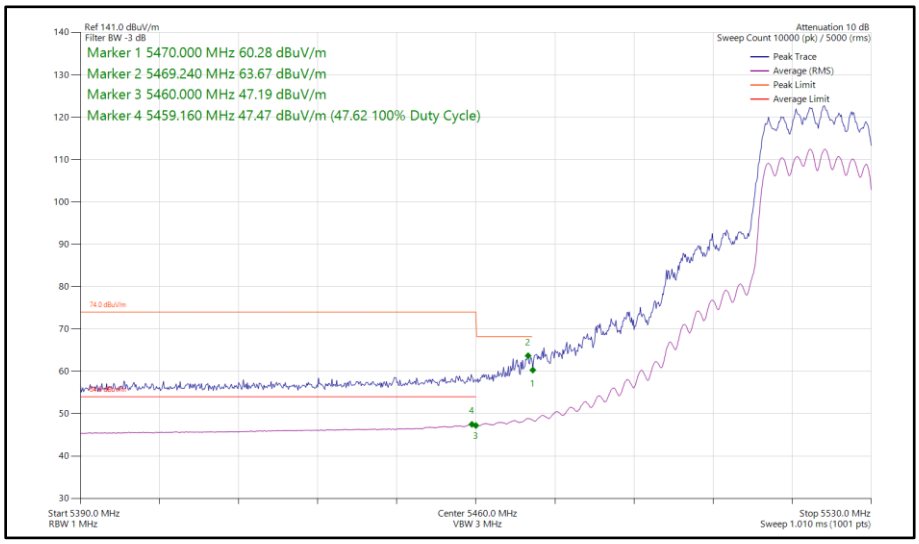

Figure 59 - 802.11ax HE20, SU, CDD, Core 0 - Core 1 - 5520 MHz Band Edge Frequency 5460 MHz

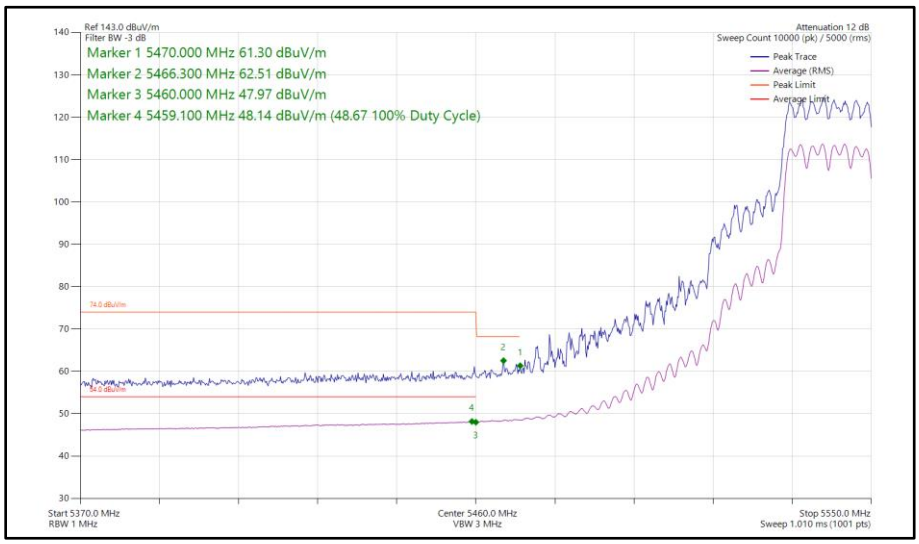

Figure 60 - 802.11ax HE20, SU, CDD, Core 0 - Core 1 - 5540 MHz Band Edge Frequency 5460 MHz