FCC and ISED Test Report

Apple Inc
Model: A2681

In accordance with FCC 47 CFR Part 15C, ISED RSS-247 and ISED RSS-GEN (2.4 GHz WLAN)

Prepared for: Apple Inc
One Apple Park Way, Cupertino
California, 95014, USA

FCC ID: BCGA2681 IC: 579C-A2681

Add value.
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Simon Bennett
Digitally signed by Simon Bennett
Date: 2022.05.03 15:02:03 +01'00'

Document 75954421-11 Issue 01

SIGNATURE			
NAME	**JOB TITLE**	**RESPONSIBLE FOR**	**ISSUE DATE**
Simon Bennett	Director Of Test Operations	Authorised Signatory	03 May 2022

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 15C, 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	Hollie Marshall	03 May 2022	

FCC Accreditation
90987 Octagon House, Fareham Test Laboratory

ISED Accreditation
12669A Octagon House, Fareham Test Laboratory

EXECUTIVE SUMMARY
A sample of this product was tested and found to be compliant with FCC 47 CFR Part 15C: 2020, ISED RSS-247: Issue 2 (02-2017) and ISED RSS-GEN: Issue 5 (04-2018) + A2 (02-2021) for the tests detailed in section 1.3.

TÜV SÜD
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Contents

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	03 May 2022

Table 1

1.2 Introduction

Applicant	Apple Inc
Manufacturer	Apple Inc
Model Number(s)	A2681
Serial Number(s)	TN4J7KWW5H, DQH576VJ7N and MW4P32N6T0
Hardware Version(s)	REV 1.0
Software Version(s)	21E71860f and 21E61410w
Number of Samples Tested	3
Test Specification/Issue/Date	FCC 47 CFR Part 15C: 2020 ISED RSS-247: Issue 2 (02-2017) ISED RSS-GEN: Issue 5 (04-2018) + A2 (02-2021)
Order Number	0540246998
Date of Receipt of EUT	08-February-2022
Start of Test	08-February-2022
Finish of Test	08-April-2022
Name of Engineer(s)	Taha Shafique, Jaiyanth Balendrarajah, Ahmad Javid, Danial Shafique, Faisal Malyar, Thomas Biddlecombe, Ian Hart, Colin Brain and Mohammad Malik
Related Document(s)	ANSI C63.10 (2013) KDB 662911 D01 v02r01

1.3 Brief Summary of Results

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

Section	Specification Clause			Test Description	Result	Comments/Base Standard
	Part 15C	RSS-247	RSS-GEN			
Configuration and Mode: 2.4 GHz WLAN						
-	15.203	-	-	Antenna Requirement	N/T	The devices complies with the provisions of this section, as it uses a permanently attached antenna
2.1	15.205	3.1	8.10	Restricted Band Edges	Pass	
2.2	15.247 (a)(2)	5.2	6.7	Emission Bandwidth	Pass	
2.3	15.247 (b)	5.4	6.12	Maximum Conducted Output Power	Pass	
2.4	15.247 (d) and 15.209	3.3 and 5.5	6.13 and 8.9	Spurious Radiated Emissions	Pass	
2.5	15.247 (d)	5.5	-	Authorised Band Edges	Pass	
2.6	15.247 (e)	5.2	6.12	Power Spectral Density	Pass	

Table 2

1.4 Product Information

1.4.1 Technical Description

The equipment under test was an Apple laptop computer with Bluetooth® and IEEE 802.11 a/b/g/n/ac/ax Wi-Fi in the 2.4 GHz and 5 GHz bands.

1.4.2 Test Modes

The EUT's 2.4 GHz 802.11 radio supports Single Input/Single Output (SISO) and 2x2 MIMO (Multiple Input/Multiple Output). It supports 802.11b and g for SISO and 802.11n and ax at 20 MHz channel bandwidths for SISO and MIMO. 802.11ax supports RU 26/52/106/242.

The EUT uses different output powers per core dependent on how many cores are used. It uses the same conducted power across all cores in any given mode, but due to the different antenna gains the radiated power per core differs.

After preliminary investigations were performed, the EUT was therefore tested in the following worst-case modes:

SISO Modes (Core 0):

- 802.11b 1 Mbps
- 802.11g 12 Mbps
- 802.11n HT20 MCS2
- 802.11ax HE20 SU MCS2x1, RU26-X* MCS2x1, RU52-X* MCS2x1 and RU106-X* MCS2x1.

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

- 802.11n HT20 MCS2 – CDD
- 802.11ax HE20 CDD SU MCS2x1, RU26-X* MCS2x1, RU52-X* MCS2x1 and RU106-X* MCS2x1.

*The position of the resource unit was placed nearest the edge of the operating band as this was deemed worst case.

1.4.3 Test Set-up

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 tests, the EUT was put into a continuous transmit test mode with the chipset manufacturer's test commands via a script running on a support laptop. 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.

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	2400 to 2480	3.77	1.0
Core 1	2400 to 2480	3.45	1.0

Table 3

1.5 Deviations from the Standard

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

1.6 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: A2681, Serial Number: TN4J7KWW5H			
0	As supplied by the customer	Not Applicable	Not Applicable
Model: A2681, Serial Number: MW4P32N6T0			
0	As supplied by the customer	Not Applicable	Not Applicable
Model: A2681, Serial Number: DQH576VJ7N			
0	As supplied by the customer	Not Applicable	Not Applicable

Table 4

1.7 Test Location

TÜV SÜD conducted the following tests at our Fareham Test Laboratory.

Test Name	Name of Engineer(s)	Accreditation
Configuration and Mode: 2.4 GHz WLAN		
Restricted Band Edges	Taha Shafique, Jaiyanth Balendrarajah, Ahmad Javid, Danial Shafique and Faisal Malyar	UKAS
Emission Bandwidth	Thomas Biddlecombe	UKAS
Maximum Conducted Output Power	Thomas Biddlecombe	UKAS
Spurious Radiated Emissions	Ian Hart. Colin Brain, Mohammad Malik and Ahmad Javid	UKAS
Authorised Band Edges	Taha Shafique, Jaiyanth Balendrarajah, Ahmad Javid, Danial Shafique and Faisal Malyar	UKAS
Power Spectral Density	Thomas Biddlecombe	UKAS

Table 5

Office Address:

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Concorde Way
Fareham
Hampshire
PO15 5RL
United Kingdom

2 Test Details

2.1 Restricted Band Edges

2.1.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.205
ISED RSS-247, Clause 3.1
ISED RSS-GEN, Clause 8.10

2.1.2 Equipment Under Test and Modification State

A2681, S/N: DQH576VJ7N - Modification State 0

2.1.3 Date of Test

08-February-2022 to 08-April-2022

2.1.4 Test Method

This test was performed in accordance with ANSI C63.10, clause 6.10.5 and 11.12.1.

Plots for average measurements were taken in accordance with ANSI C63.10, clause 11.12.2.5.2. Where the measured duty cycle was < 98 % the duty cycle was measured and a correction factor of 10*LOG(1/x) was applied to the tabulated data in the tables below.

The following conversion can be applied to convert from dBµV/m to µV/m:
10^(Field Strength in dBµV/m/20).

2.1.5 Environmental Conditions

Ambient Temperature	18.9 - 23.2 °C
Relative Humidity	26.9 - 46.5 %

2.1.6 Test Results

2.4 GHz WLAN

Mode	Data Rate /MCS	Resource Size	Resource Index	TX Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
802.11b, Core 0	1 Mbps	-	-	2412	2390.0	56.76	46.80
802.11b, Core 0	1 Mbps	-	-	2462	2483.5	58.09	49.57
802.11b, Core 0	1 Mbps	-	-	2467	2483.5	59.78	50.20
802.11b, Core 0	1 Mbps	-	-	2472	2483.5	58.20	50.21
802.11g, Core 0	54 Mbps	-	-	2412	2390.0	66.40	50.69
802.11g, Core 0	12 Mbps	-	-	2462	2483.5	62.44	50.80
802.11g, Core 0	54 Mbps	-	-	2467	2483.5	64.65	50.75
802.11g, Core 0	12 Mbps	-	-	2472	2483.5	62.86	50.86
802.11n HT20, Core 0	MCS 4	-	-	2412	2390.0	64.68	50.93
802.11n HT20, Core 0	MCS 2	-	-	2462	2483.5	62.44	50.75
802.11n HT20, Core 0	MCS 4	-	-	2467	2483.5	63.24	50.79
802.11n HT20, Core 0	MCS 4	-	-	2472	2483.5	65.54	50.94
802.11ax HE20, Core 0	MCS 9	SU	-	2412	2390.0	66.09	50.77
802.11ax HE20, Core 0	MCS 2	SU	-	2462	2483.5	62.80	50.95
802.11ax HE20, Core 0	MCS 4	SU	-	2467	2483.5	64.48	51.00
802.11ax HE20, Core 0	MCS 2	SU	-	2472	2483.5	65.95	50.92
802.11ax HE20, Core 0	MCS 9	26	0	2412	2390.0	57.51	43.25
802.11ax HE20, Core 0	MCS 9	26	8	2462	2483.5	58.58	43.97
802.11ax HE20, Core 0	MCS 9	26	8	2467	2483.5	61.16	45.43
802.11ax HE20, Core 0	MCS 9	26	8	2472	2483.5	68.42	48.55

Table 6 - SISO Restricted Band Edge Results

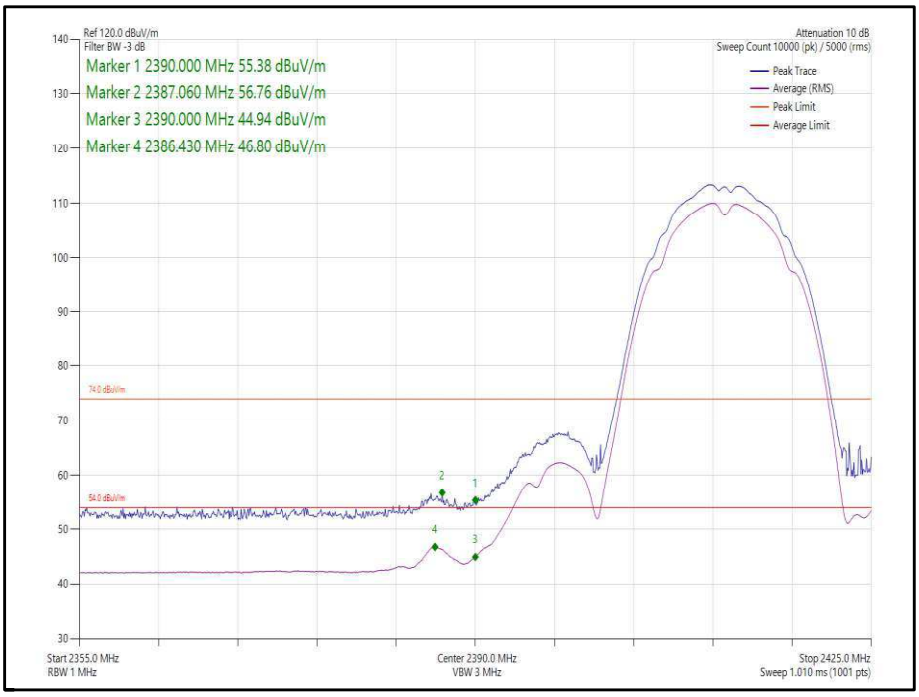

Figure 1 - 802.11b, Core 0 - 2412 MHz, Band Edge Frequency 2390.0 MHz

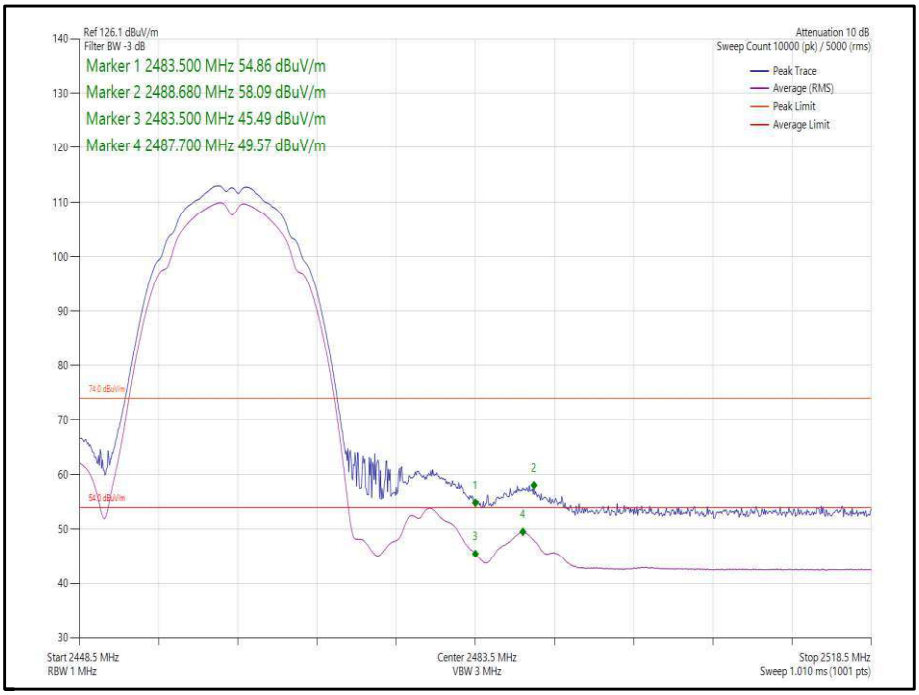

Figure 2 - 802.11b, Core 0 - 2462 MHz, Band Edge Frequency 2483.5 MHz

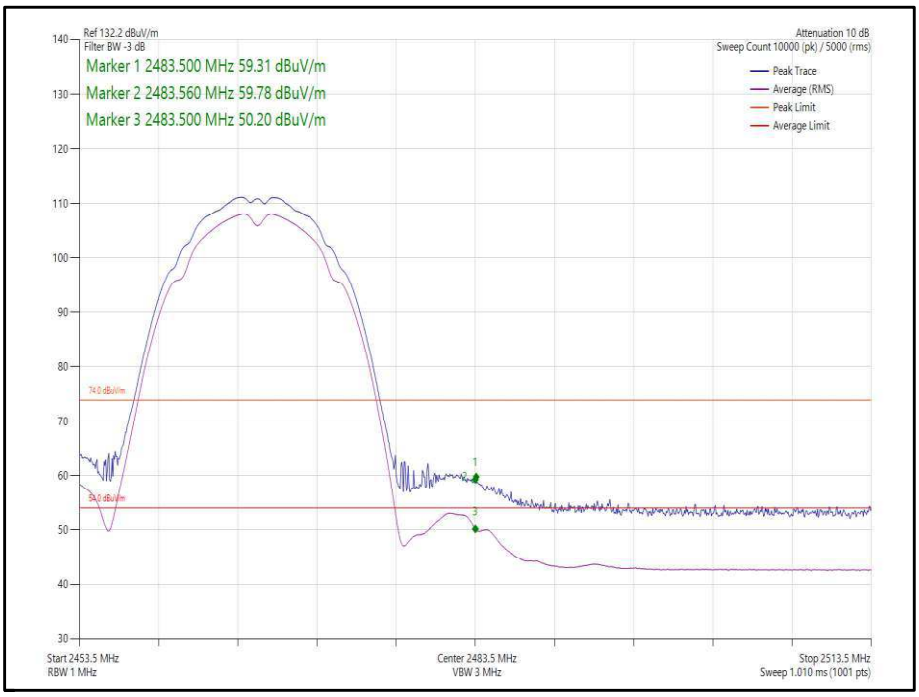

Figure 3 - 802.11b, Core 0 - 2467 MHz, Band Edge Frequency 2483.5 MHz

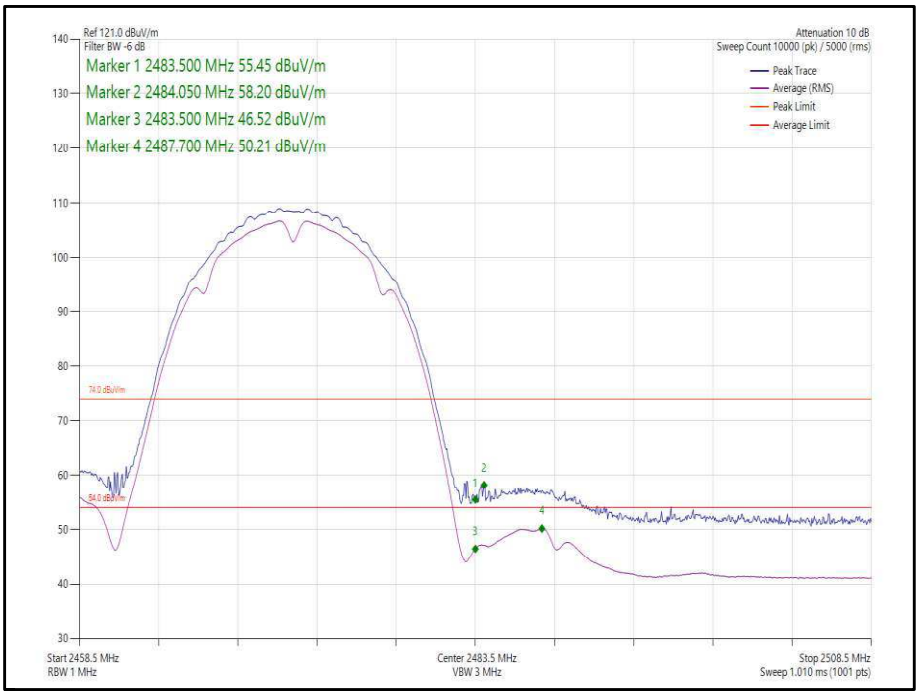

Figure 4 - 802.11b, Core 0 - 2472 MHz, Band Edge Frequency 2483.5 MHz

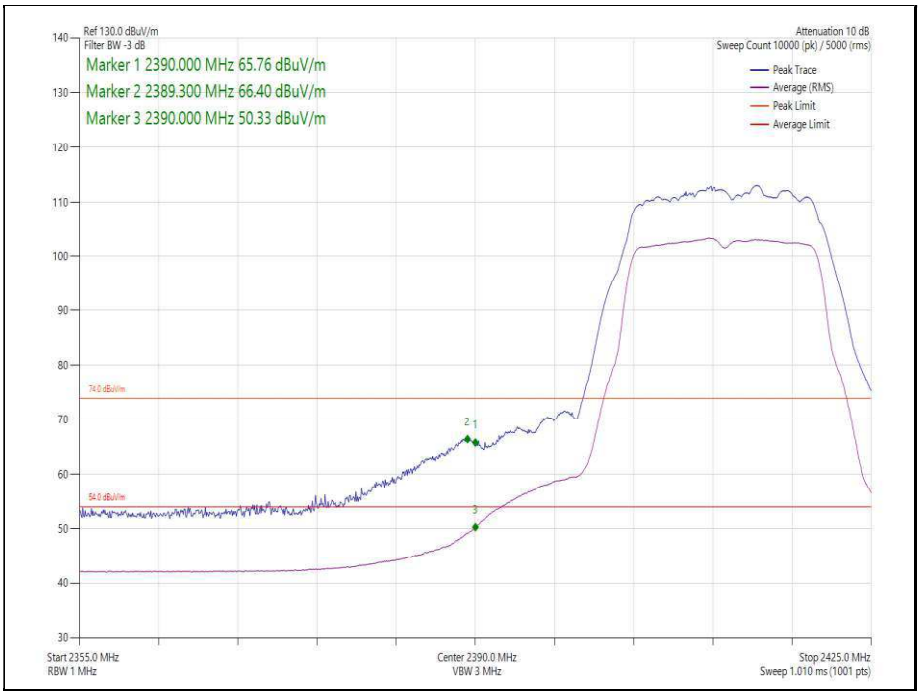

Figure 5 - 802.11g, Core 0 - 2412 MHz, Band Edge Frequency 2390.0 MHz

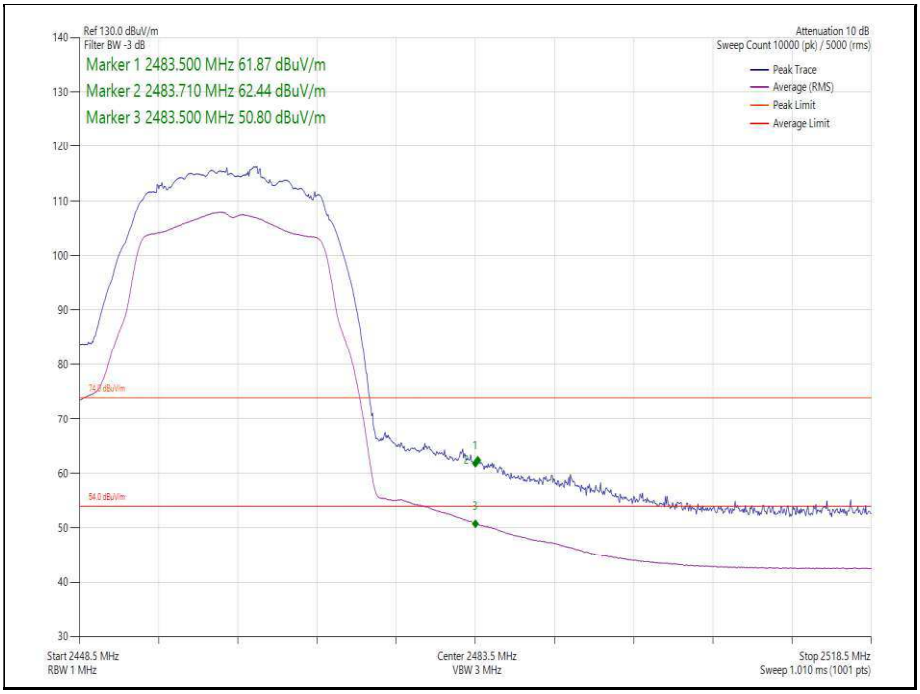

Figure 6 - 802.11g, Core 0 - 2462 MHz, Band Edge Frequency 2483.5 MHz

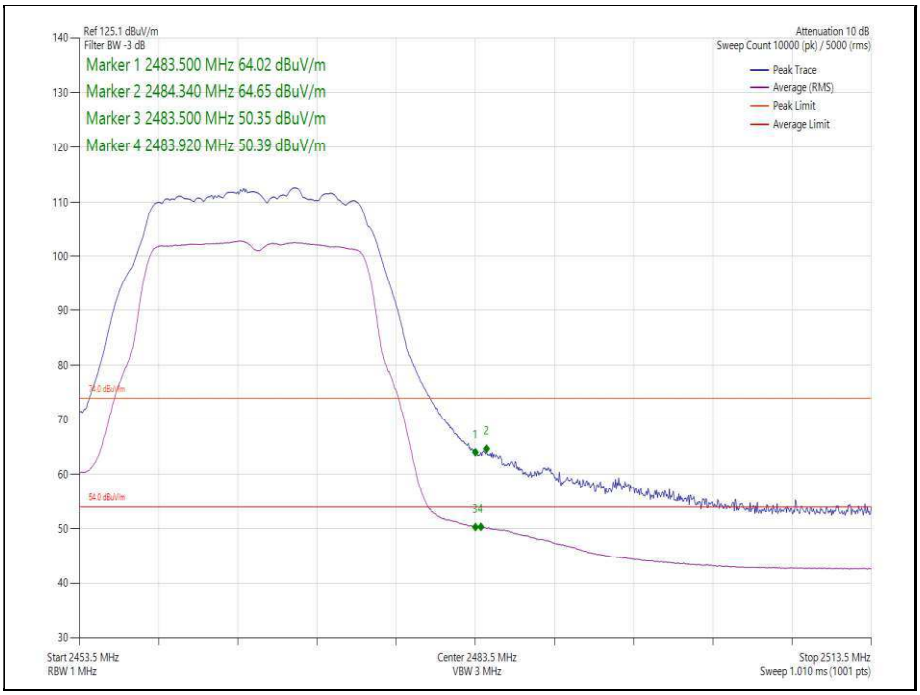

Figure 7 - 802.11g, Core 0 - 2467 MHz, Band Edge Frequency 2483.5 MHz

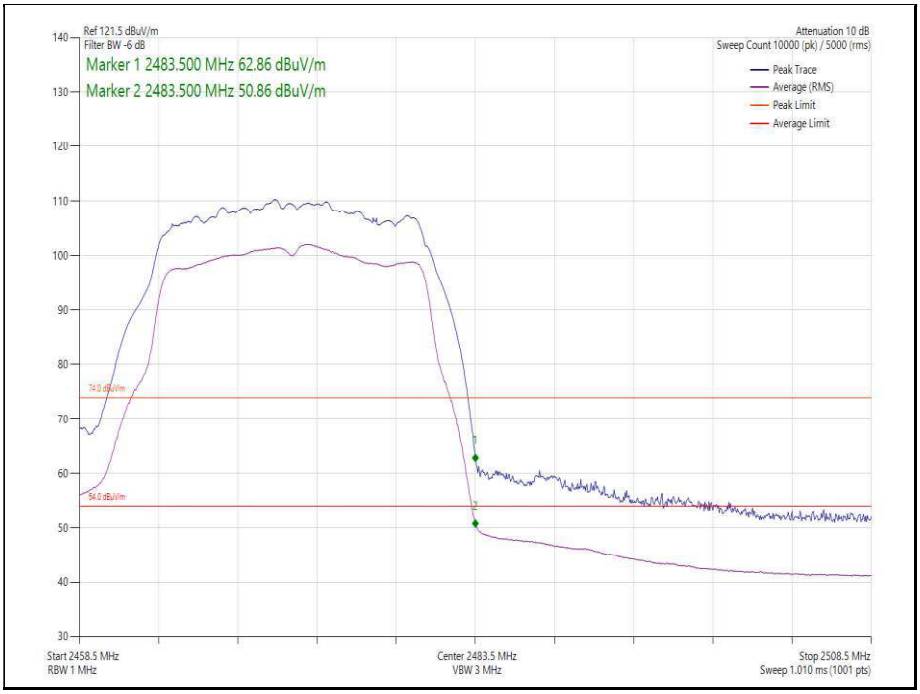

Figure 8 - 802.11g, Core 0 - 2472 MHz, Band Edge Frequency 2483.5 MHz

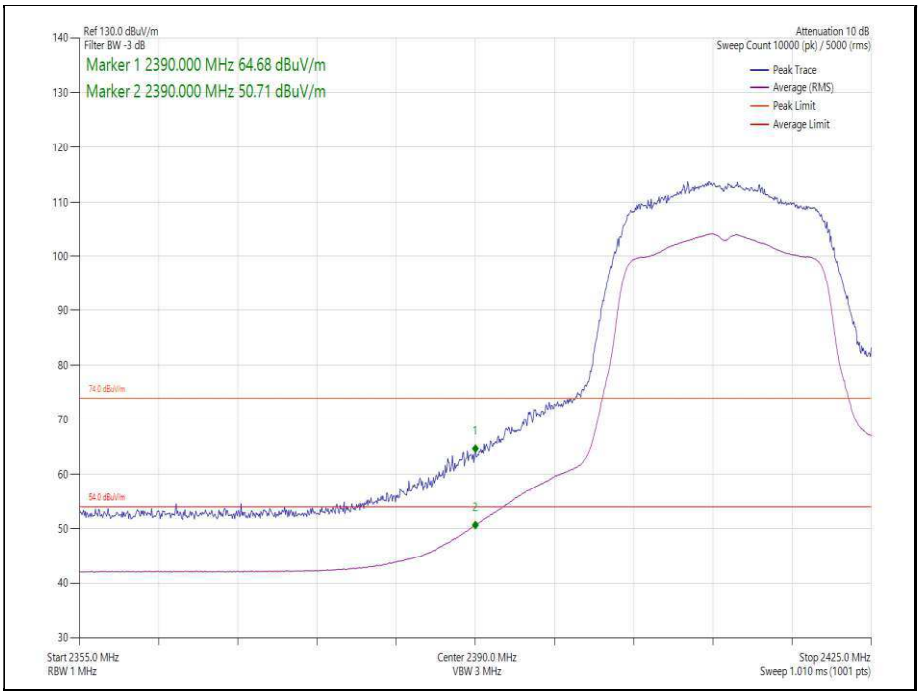

Figure 9 - 802.11n, HT20, Core 0 - 2412 MHz, Band Edge Frequency 2390 MHz

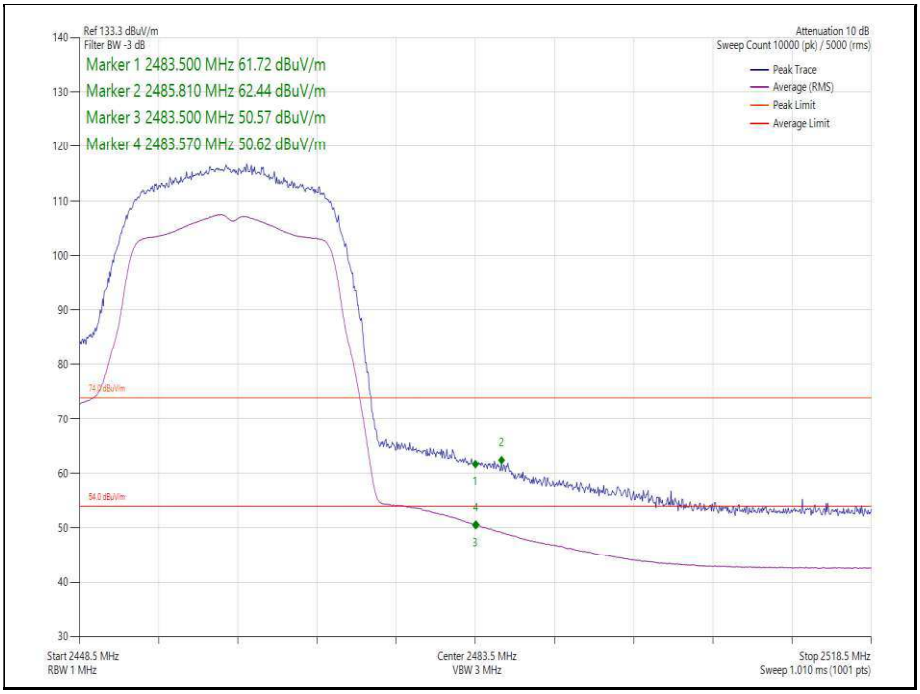

Figure 10 - 802.11n HT20, Core 0 - 2462 MHz, Band Edge Frequency 2483.5 MHz

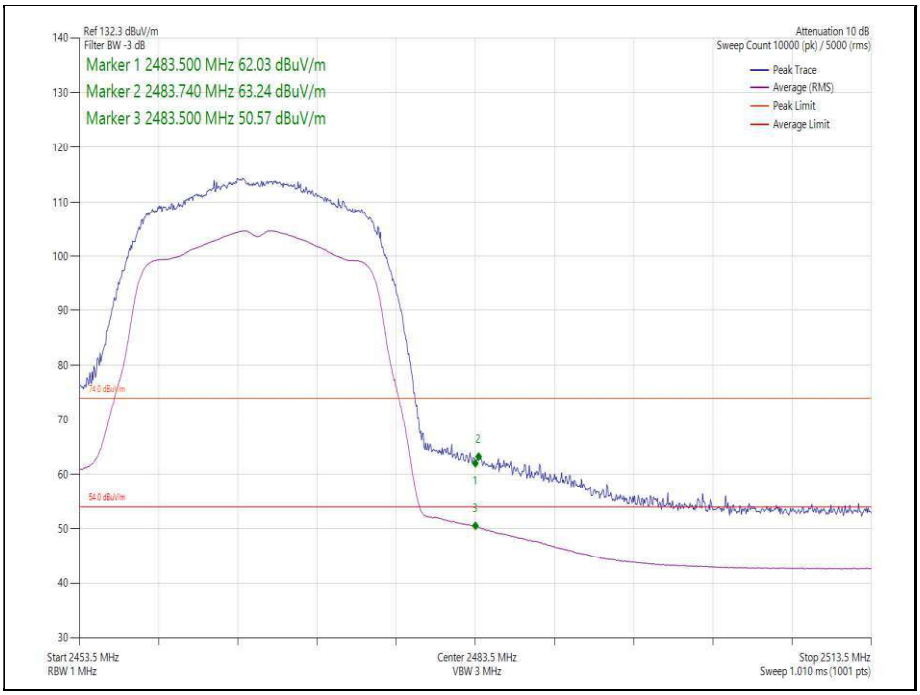

Figure 11 - 802.11n HT20, Core 0 - 2467 MHz, Band Edge Frequency 2483.5 MHz

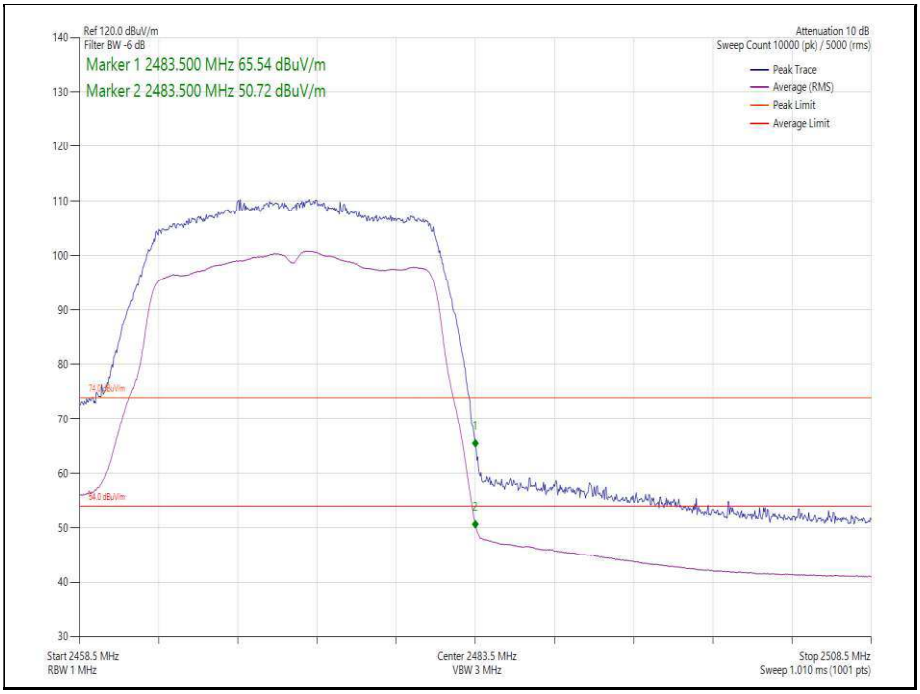

Figure 12 - 802.11n HT20, Core 0 - 2472 MHz, Band Edge Frequency 2483.5 MHz

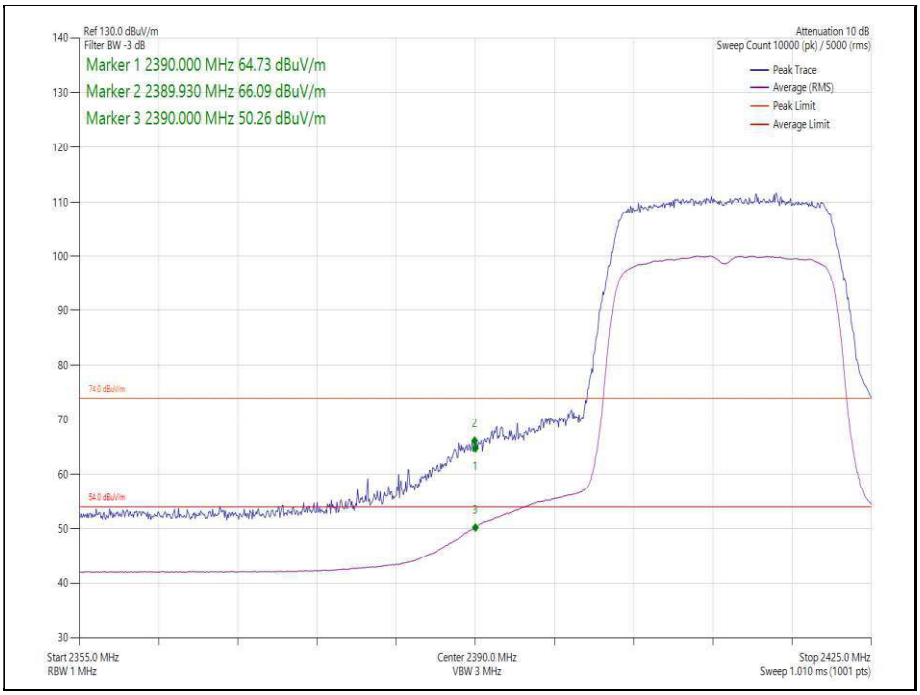

Figure 13 - 802.11ax HE20, Core 0, SU - 2412 MHz, Band Edge Frequency 2390 MHz

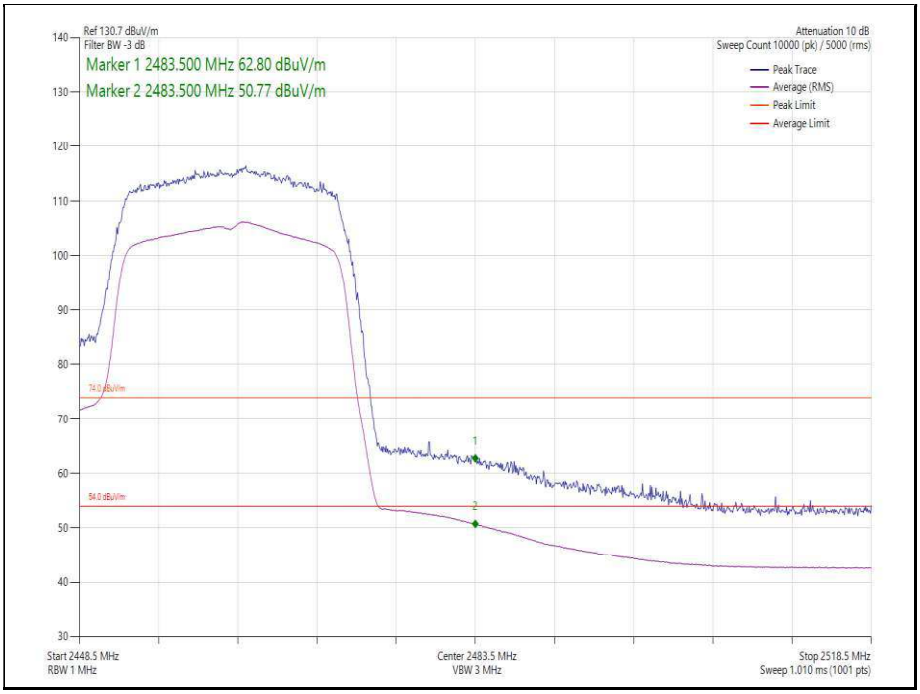

Figure 14 - 802.11ax HE20, Core 0, SU - 2462 MHz, Band Edge Frequency 2483.5 MHz

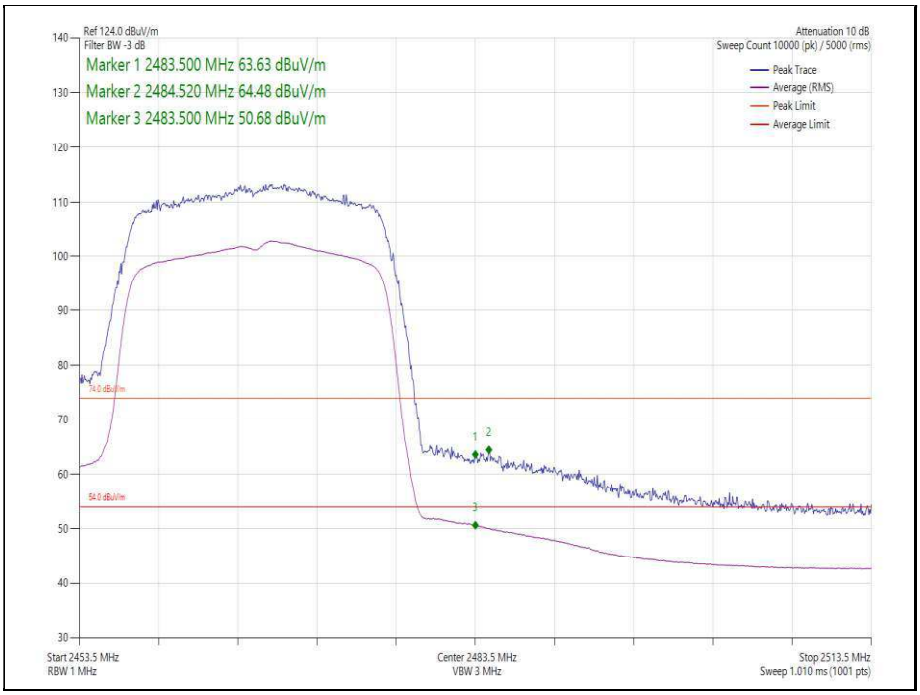

Figure 15 - 802.11ax HE20, Core 0, SU - 2467 MHz, Band Edge Frequency 2483.5 MHz

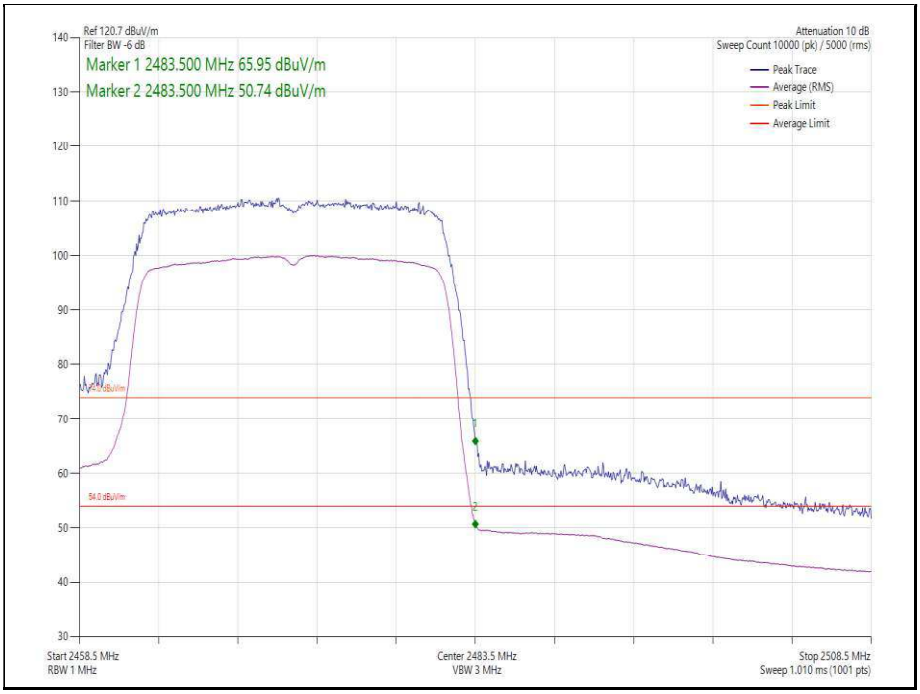

Figure 16 - 802.11ax HE20, Core 0, SU - 2472 MHz, Band Edge Frequency 2483.5 MHz

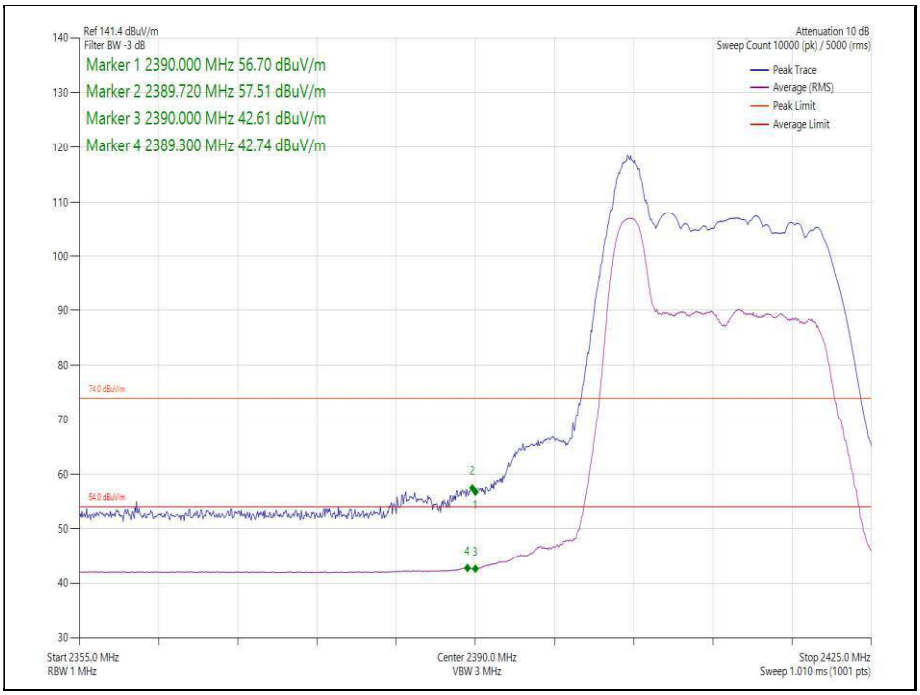

Figure 17 - 802.11ax HE20, Core 0, 26-0 - 2412 MHz, Band Edge Frequency 2390 MHz

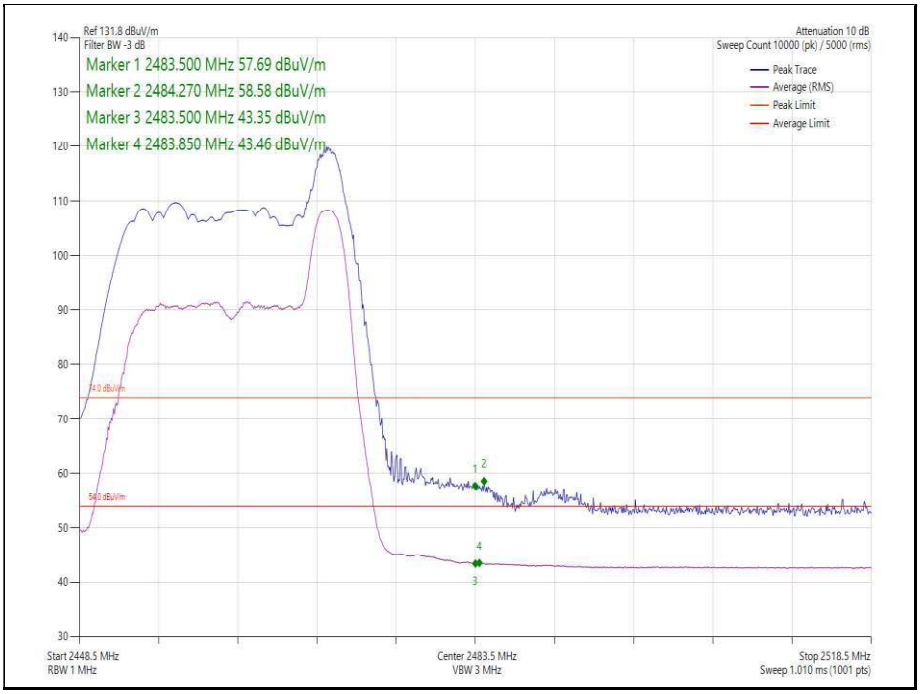

Figure 18 - 802.11ax HE20, Core 0, 26-8 - 2462 MHz, Band Edge Frequency 2483.5 MHz

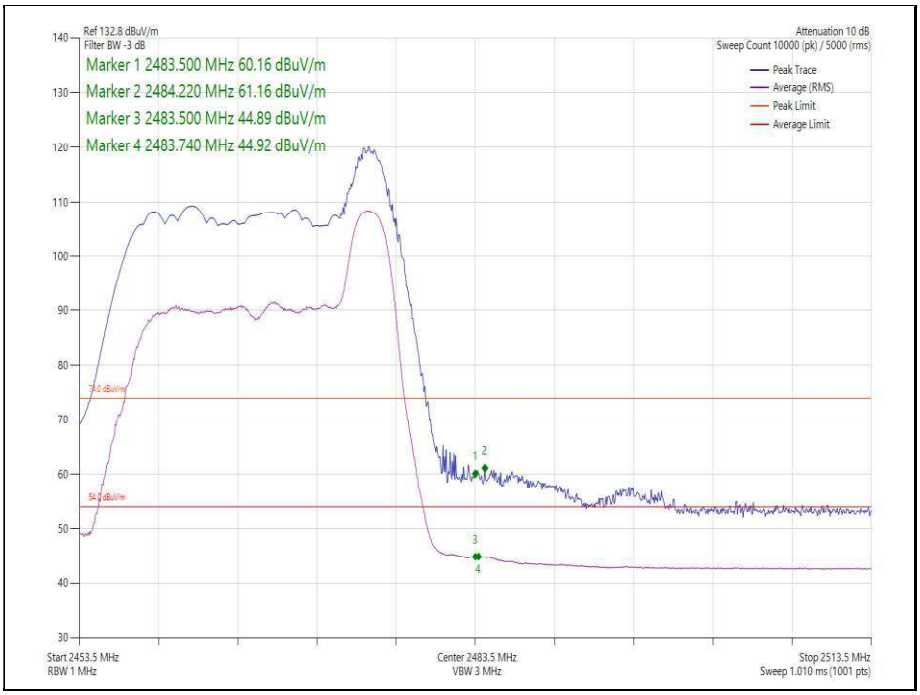

Figure 19 - 802.11ax HE20, Core 0, 26-8 - 2467 MHz, Band Edge Frequency 2483.5 MHz

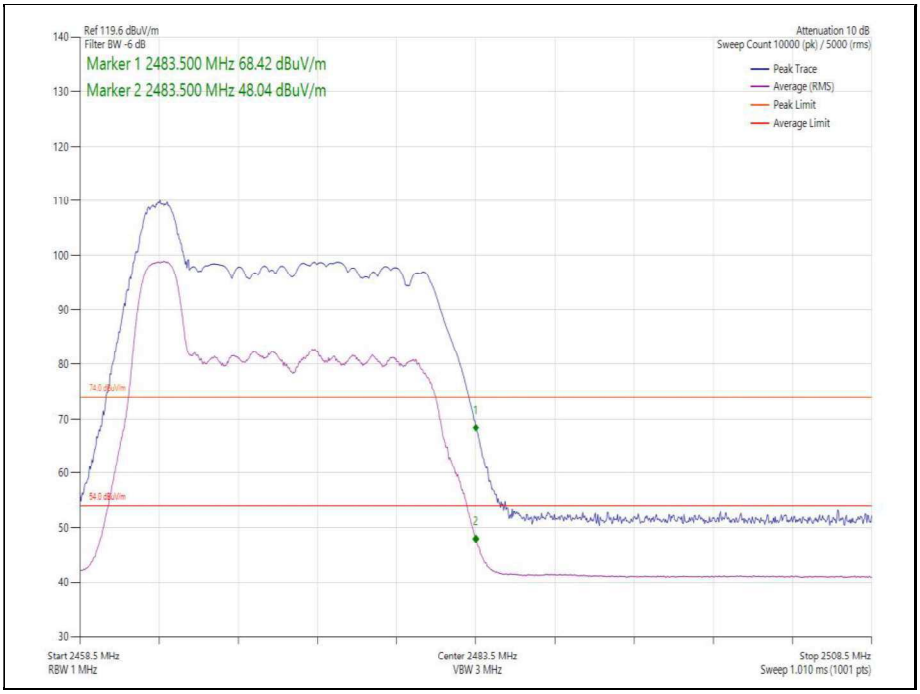

Figure 20 - 802.11ax HE20, Core 0, 26-8 - 2472 MHz, Band Edge Frequency 2483.5 MHz

Mode	Data Rate/ MCS	Resource Size	Resource Index	TX Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
802.11n HT20, Core 0-1	MCS 4	-	-	2412	2390.0	64.40	50.77
802.11n HT20, Core 0-1	MCS 4	-	-	2462	2483.5	63.51	50.95
802.11n HT20, Core 0-1	MCS 2	-	-	2467	2483.5	62.46	50.93
802.11n HT20, Core 0-1	MCS 2	-	-	2472	2483.5	63.03	50.88
802.11ax HE20, Core 0-1	MCS 4	SU	-	2412	2390.0	65.85	50.98
802.11ax HE20, Core 0-1	MCS 9	SU	-	2462	2483.5	64.64	50.96
802.11ax HE20, Core 0-1	MCS 4	SU	-	2467	2483.5	64.05	50.49
802.11ax HE20, Core 0-1	MCS 4	SU	-	2472	2483.5	64.32	50.90
802.11ax HE20, Core 0-1	MCS 9	26	0	2412	2390.0	62.22	44.38
802.11ax HE20, Core 0-1	MCS 9	26	8	2462	2483.5	61.13	44.48
802.11ax HE20, Core 0-1	MCS 9	26	8	2467	2483.5	63.45	47.09
802.11ax HE20, Core 0-1	MCS 9	26	8	2472	2483.5	68.54	48.03

Table 7 – MIMO 2TX Restricted Band Edge Results

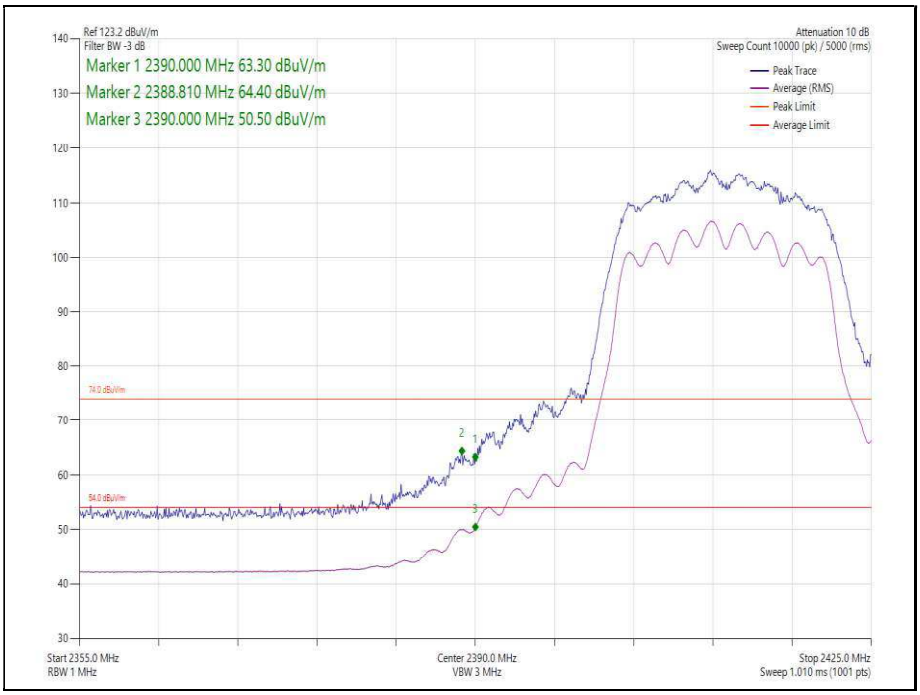

Figure 21 - 802.11n HT20, Core 0-1 - 2412 MHz, Band Edge Frequency 2390 MHz

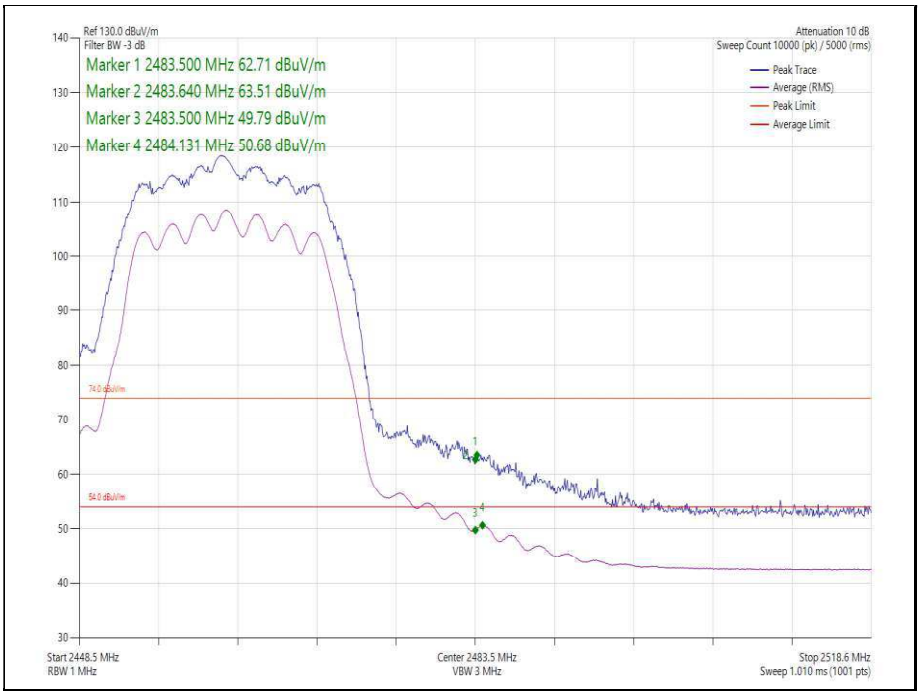

Figure 22 - 802.11n HT20, Core 0-1 - 2462 MHz, Band Edge Frequency 2483.5 MHz

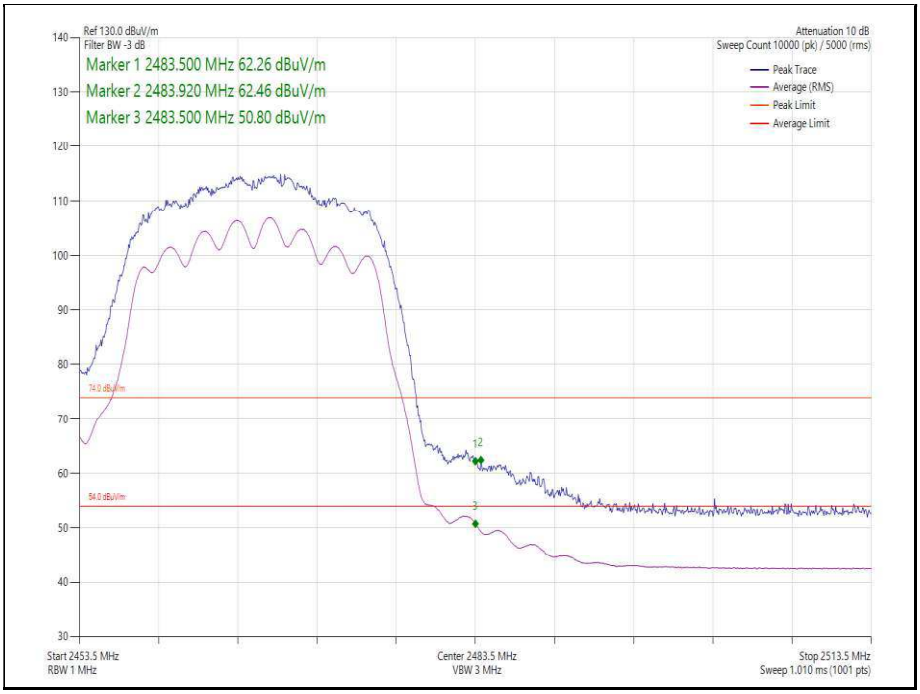

Figure 23 - 802.11n HT20, Core 0-1 - 2467 MHz, Band Edge Frequency 2483.5 MHz

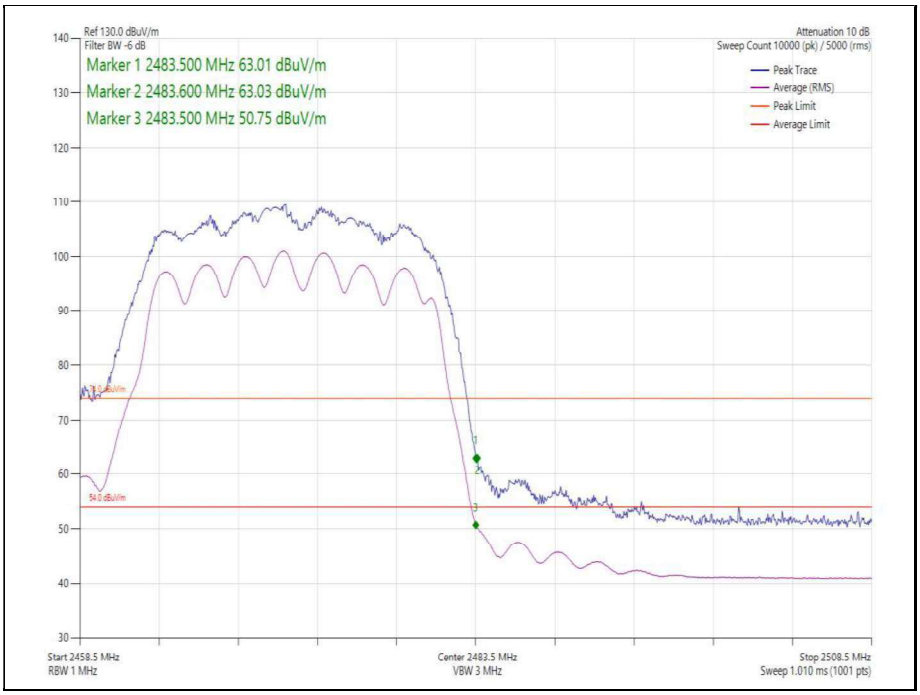

Figure 24 - 802.11n HT20, Core 0-1 - 2472 MHz, Band Edge Frequency 2483.5 MHz

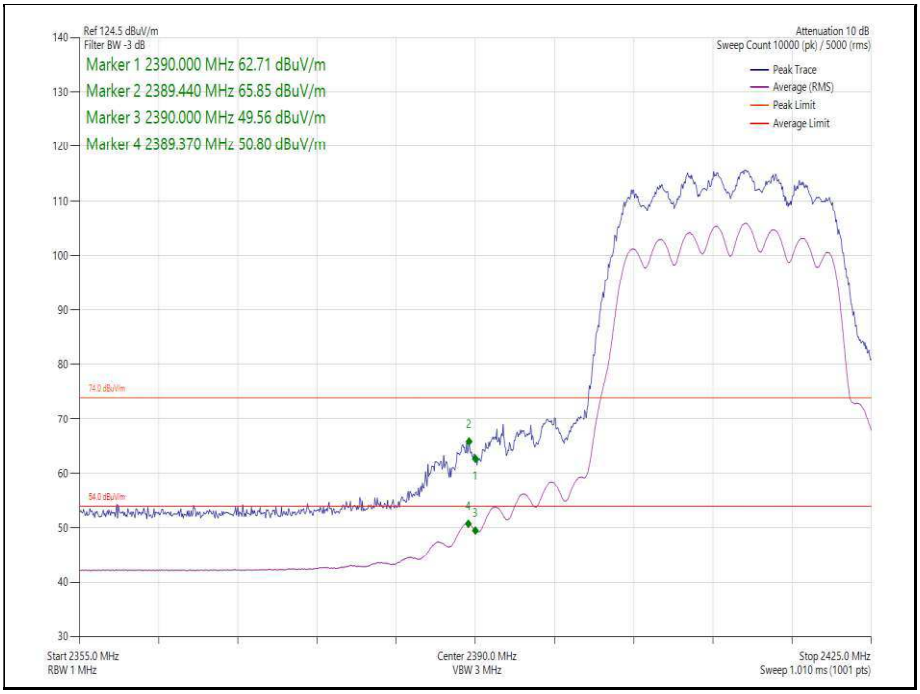

Figure 25 - 802.11ax HE20, Core 0-1, SU - 2412 MHz, Band Edge Frequency 2390 MHz

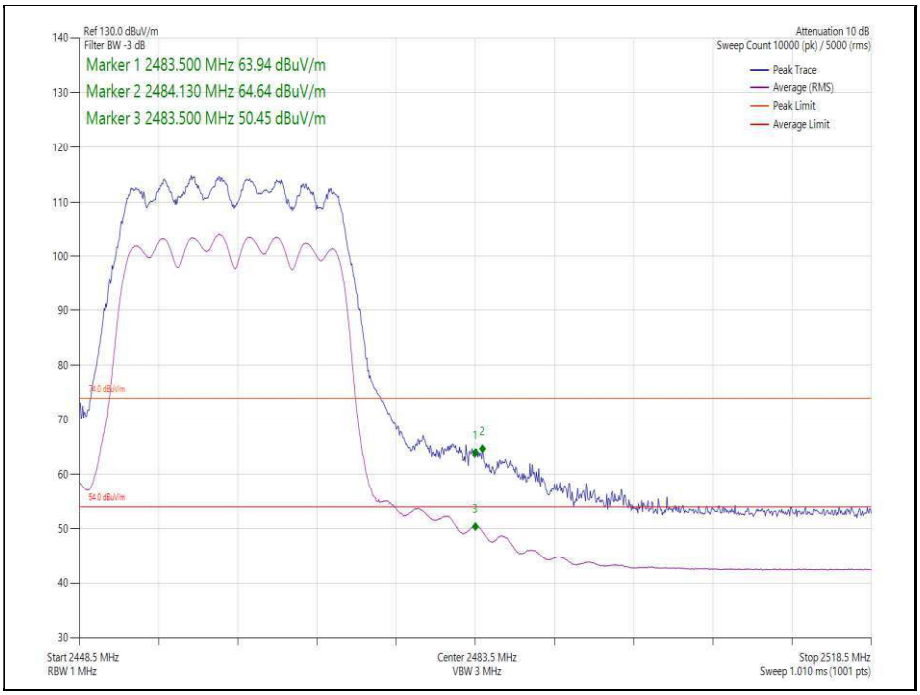

Figure 26 - 802.11ax HE20, Core 0-1, SU - 2462 MHz, Band Edge Frequency 2483.5 MHz

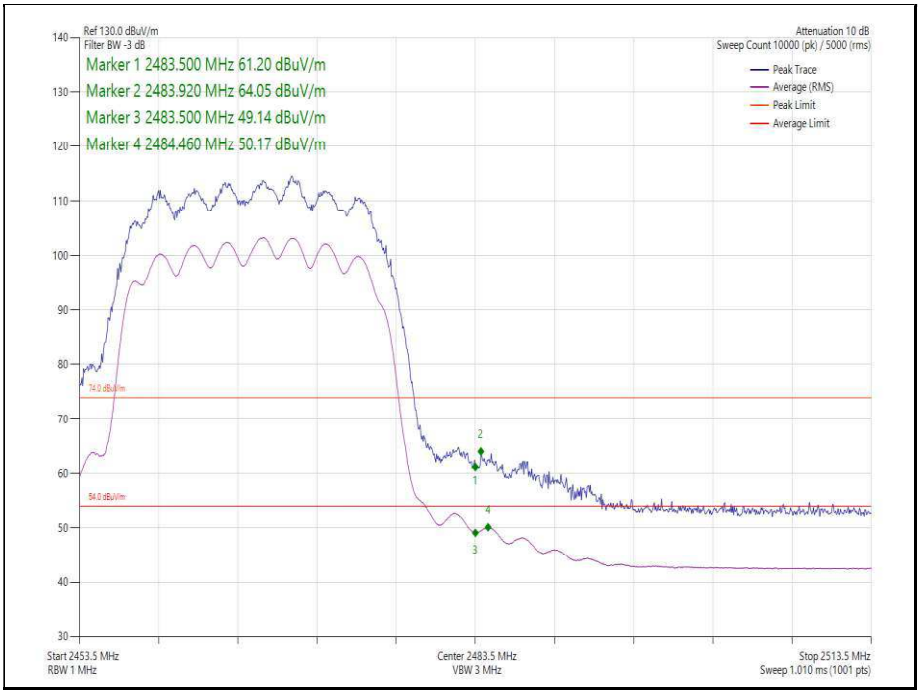

Figure 27 - 802.11ax HE20, Core 0-1, SU - 2467 MHz, Band Edge Frequency 2483.5 MHz

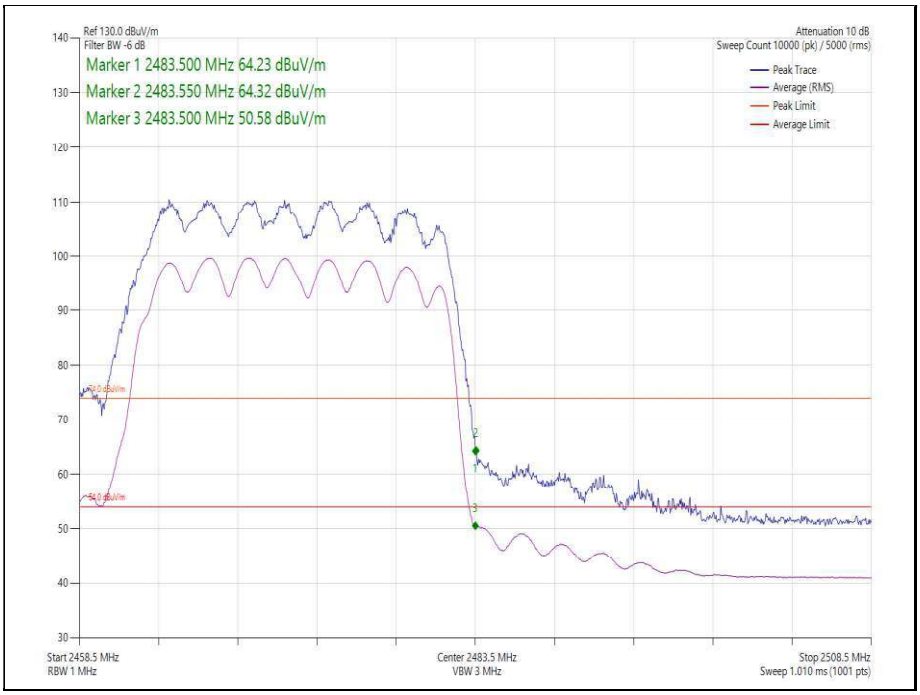

Figure 28 - 802.11ax HE20, Core 0-1, SU - 2472 MHz, Band Edge Frequency 2483.5 MHz

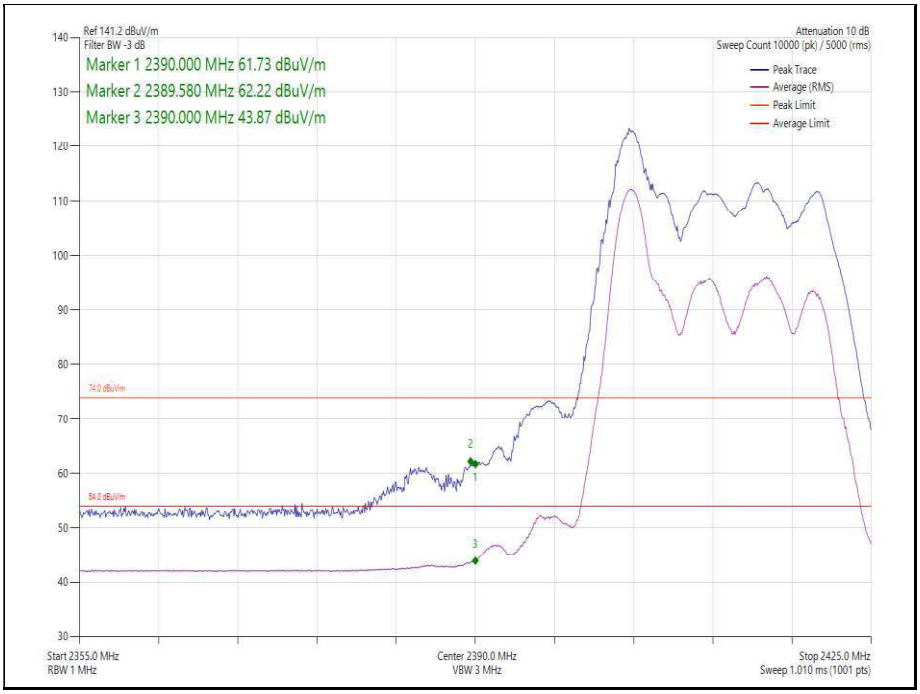

Figure 29 - 802.11ax HE20, Core 0-1, 26-0 - 2412 MHz, Band Edge Frequency 2390 MHz

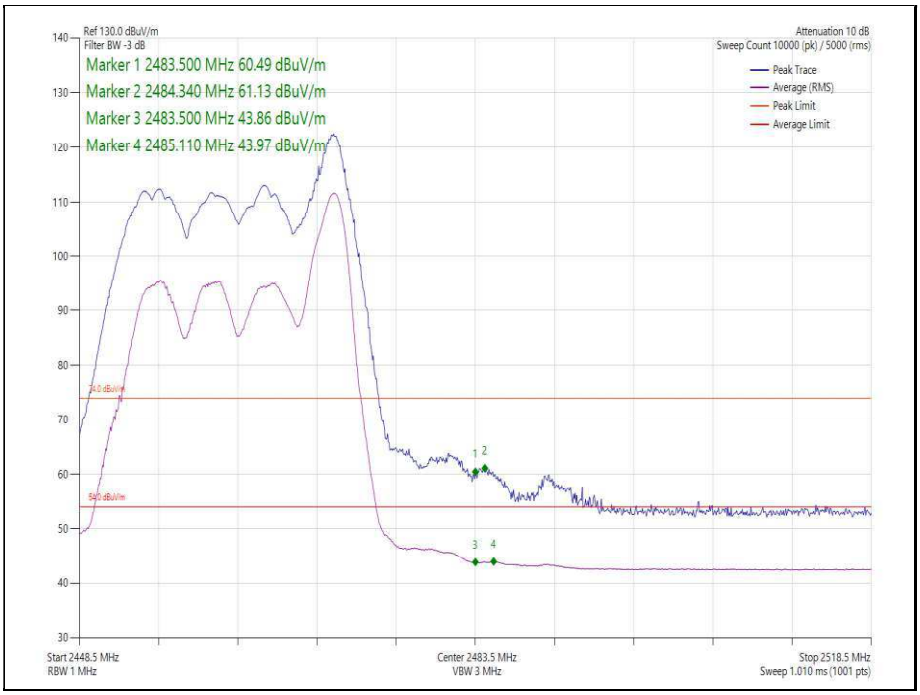

Figure 30 - 802.11ax HE20, Core 0-1, 26-8 - 2462 MHz, Band Edge Frequency 2483.5 MHz

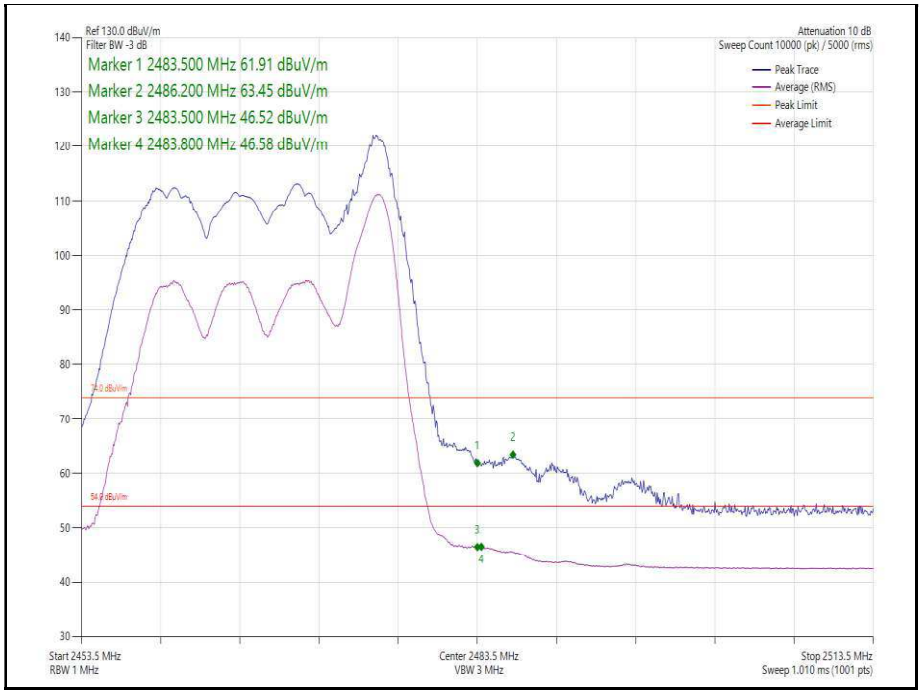

Figure 31 - 802.11ax HE20, Core 0-1, 26-8 - 2467 MHz, Band Edge Frequency 2483.5 MHz

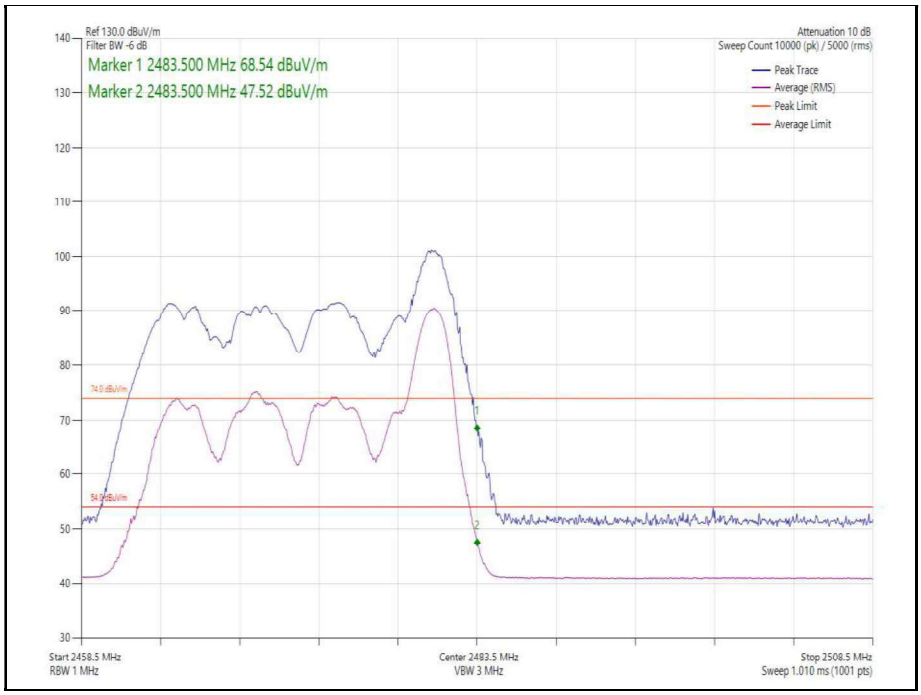

Figure 32 - 802.11ax HE20, Core 0-1, 26-8 - 2472 MHz, Band Edge Frequency 2483.5 MHz

FCC 47 CFR Part 15, Limit Clause 15.209

Frequency (MHz)	Field Strength (µV/m at 3 m)
30 to 88	100
88 to 216	150
216 to 960	200
Above 960	500

Table 8

ISED RSS-GEN, Limit Clause 8.9

Frequency (MHz)	Field Strength (µV/m at 3 m)
30 to 88	100
88 to 216	150
216 to 960	200
Above 960*	500

Table 9

*Unless otherwise specified, for all frequencies greater than 1 GHz, the radiated emission limits for licence-exempt radio apparatus stated in applicable RSSs (including RSS-Gen) are based on measurements using a linear average detector function having a minimum resolution bandwidth of 1 MHz. If an average limit is specified for the EUT, then the peak emission shall also be measured with instrumentation properly adjusted for such factors as pulse desensitization to ensure the peak emission is less than 20 dB above the average limit.

2.1.7 Test Location and Test Equipment Used

This test was carried out in RF Chamber 11.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Expires
Screened Room (5)	Rainford	Rainford	1545	36	15-Apr-2024
Double Ridge Broadband Horn Antenna	Schwarzbeck	BBHA 9120 B	4848	12	01-Apr-2022
Screened Room (11)	Rainford	Rainford	5136	36	24-Nov-2024
Double Ridge Broadband Horn Antenna	Schwarzbeck	BBHA 9120 B	5215	12	01-May-2022
Preamplifier (30dB 1GHz to 18GHz)	Schwarzbeck	BBV 9718 C	5261	12	08-Apr-2022
Attenuator 5W 10dB DC-18GHz	Aaren	AT40A-4041-D18-10	5495	12	14-Apr-2022
1m -SMA Cable	Junkosha	MWX221-01000AMSAMS/A	5513	12	09-Apr-2022
2m SMA Cable	Junkosha	MWX221-02000AMSAMS/A	5517	12	09-Apr-2022
2m SMA Cable	Junkosha	MWX221-02000AMSAMS/A	5518	12	09-Apr-2022
8m N-Type Cable	Junkosha	MWX221-08000NMSNMS/B	5520	12	24-Mar-2023*
8m N Type Cable	Junkosha	MWX221-08000NMSNMS/B	5522	12	24-Mar-2023*
EMI Test Receiver	Rohde & Schwarz	ESW44	5527	12	15-Apr-2022
Thermo-Hygro-Barometer	PCE Instruments	PCE-THB 40	5604	12	22-Sep-2022
Thermo-Hygro-Barometer	PCE Instruments	PCE-THB 40	5605	12	23-Sep-2022
EMI Test Receiver	Rohde & Schwarz	ESW44	5911	12	24-Feb-2023

Table 10

*All test equipment was within its calibration period at the time of testing.

2.2 Emission Bandwidth

2.2.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.247 (a)(2)
ISED RSS-247, Clause 5.2
ISED RSS-GEN, Clause, 6.7

2.2.2 Equipment Under Test and Modification State

A2681, S/N: TN4J7KWW5H - Modification State 0

2.2.3 Date of Test

24-March-2022

2.2.4 Test Method

This test was performed in accordance with ANSI C63.10, clause 11.8.1 for 6 dB BW and 6.9.3 for 99% occupied bandwidth measurements.

2.2.5 Environmental Conditions

Ambient Temperature	23.4 °C
Relative Humidity	22.7 %

2.2.6 Test Results

2.4 GHz WLAN

6 dB Bandwidth Summary

Protocol	6 dB Bandwidth (MHz)	
	Minimum	Maximum
802.11b	8.160	8.600
802.11g	15.240	15.840
802.11n HT20	15.240	17.340
802.11ax HE20 SU	16.620	18.900

Table 11 - 6 dB Bandwidth Summary Results

Figure 33 - 802.11b Minimum 6 dB EBW

Figure 34 - 802.11b Maximum 6 dB EBW

Figure 35 - 802.11g Minimum 6 dB EBW

Figure 36 - 802.11g Maximum 6 dB EBW

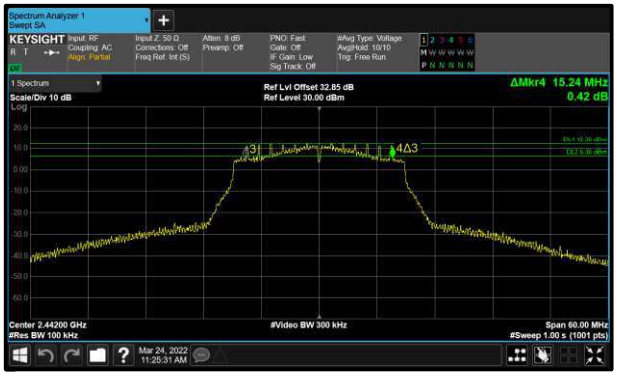

Figure 37 - 802.11n HT20 Minimum 6 dB EBW

Figure 38 - 802.11n HT20 Maximum 6 dB EBW

Figure 39 - 802.11ax HE20 SU Minimum 6 dB EBW

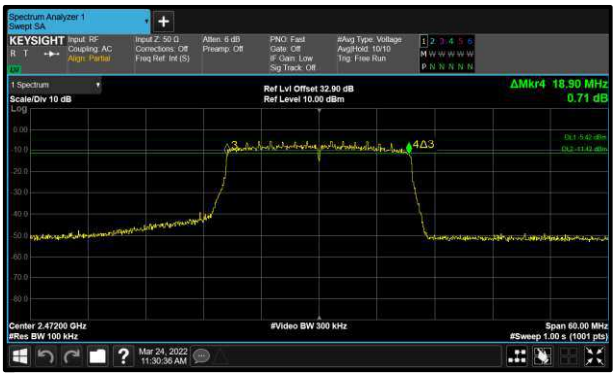

Figure 40 - 802.11ax HE20 SU Maximum 6 dB EBW

99 % Bandwidth Summary

Protocol	99% Bandwidth (MHz)	
	Minimum	Maximum
802.11b	12.720	12.900
802.11g	16.320	16.620
802.11n HT20	17.520	17.760
802.11ax HE20 SU	18.780	18.960

Table 12 - 99% Bandwidth Summary Results

Figure 41 - 802.11b Minimum 99% OBW

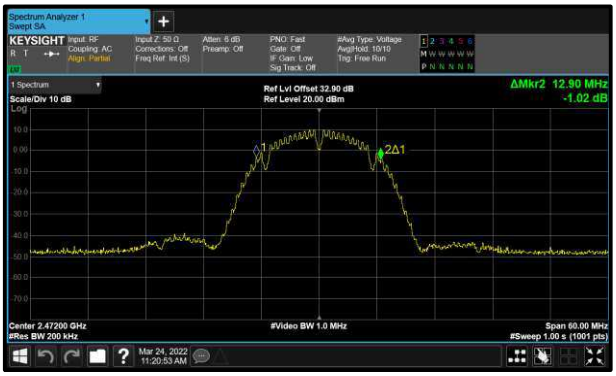

Figure 42 - 802.11b Maximum 99% OBW

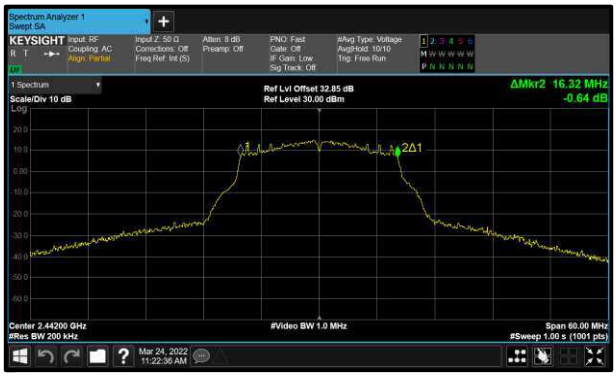

Figure 43 - 802.11g Minimum 99% OBW

Figure 44 - 802.11g Maximum 99% OBW

Figure 45 - 802.11n HT20 Minimum 99% OBW

Figure 46 - 802.11n HT20 Maximum 99% OBW

Figure 47 - 802.11ax HE20 SU Minimum 99% OBW

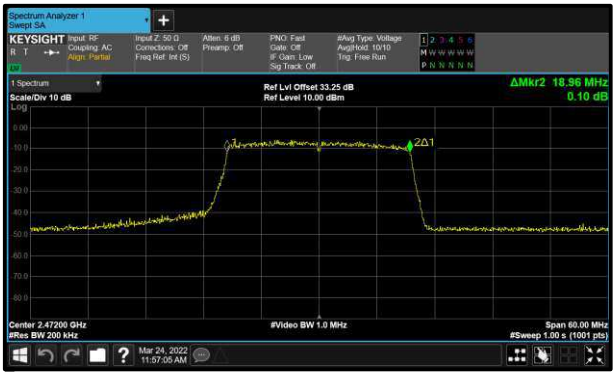

Figure 48 - 802.11ax HE20 SU Maximum 99% OBW

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(2) RSS-247 5.2 a)	Test Method(s):	C63.10 6.9.3 C63.10 11.8.1
Additional Reference(s):	-		

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

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	8.600	-	-	-	≥500.0
2442	8.160	-	-	-	≥500.0
2472	8.160	-	-	-	≥500.0

Table 13 - 6 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	12.720	-	-	-	-
2442	12.720	-	-	-	-
2472	12.900	-	-	-	-

Table 14 - 99% Bandwidth Results

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(2) RSS-247 5.2 a)	Test Method(s):	C63.10 6.9.3 C63.10 11.8.1
Additional Reference(s):	-		

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

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	15.240	-	-	-	≥500.0
2442	15.240	-	-	-	≥500.0
2472	15.840	-	-	-	≥500.0

Table 15 - 6 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	16.620	-	-	-	-
2442	16.320	-	-	-	-
2472	16.500	-	-	-	-

Table 16 - 99% Bandwidth Results

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(2) RSS-247 5.2 a)	Test Method(s):	C63.10 6.9.3 C63.10 11.8.1
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11n HT20	Duty Cycle (%):	-
Modulation Coding Scheme:	MCS2	DCCF (dB):	-
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	-
Active Port(s):	A (Core 0)	Active Chain(s):	0

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	17.340	-	-	-	≥500.0
2442	15.240	-	-	-	≥500.0
2472	17.040	-	-	-	≥500.0

Table 17 - 6 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	17.700	-	-	-	-
2442	17.520	-	-	-	-
2472	17.640	-	-	-	-

Table 18 - 99% Bandwidth Results

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(2) RSS-247 5.2 a)	Test Method(s):	C63.10 6.9.3 C63.10 11.8.1
Additional Reference(s):	-		

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

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	16.620	16.320	-	-	≥500.0
2442	15.240	15.300	-	-	≥500.0
2472	17.340	17.280	-	-	≥500.0

Table 19 - 6 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	17.760	17.700	-	-	-
2442	17.520	17.520	-	-	-
2472	17.640	17.700	-	-	-

Table 20 - 99% Bandwidth Results

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(2) RSS-247 5.2 a)	Test Method(s):	C63.10 6.9.3 C63.10 11.8.1
Additional Reference(s):	-		

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

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	17.040	-	-	-	≥500.0
2442	18.780	-	-	-	≥500.0
2472	18.900	-	-	-	≥500.0

Table 21 - 6 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	18.780	-	-	-	-
2442	18.840	-	-	-	-
2472	18.900	-	-	-	-

Table 22 - 99% Bandwidth Results

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(2) RSS-247 5.2 a)	Test Method(s):	C63.10 6.9.3 C63.10 11.8.1
Additional Reference(s):	-		

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

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	18.000	16.620	-	-	≥500.0
2442	18.780	18.360	-	-	≥500.0
2472	18.900	18.900	-	-	≥500.0

Table 23 - 6 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	18.900	18.840	-	-	-
2442	18.840	18.900	-	-	-
2472	18.900	18.960	-	-	-

Table 24 - 99% Bandwidth Results

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(2) RSS-247 5.2 a)	Test Method(s):	C63.10 6.9.3 C63.10 11.8.1
Additional Reference(s):	-		

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

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	12.120	-	-	-	≥500.0
2442	2.160	-	-	-	≥500.0
2472	15.900	-	-	-	≥500.0

Table 25 - 6 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	18.420	-	-	-	-
2442	18.360	-	-	-	-
2472	18.600	-	-	-	-

Table 26 - 99% Bandwidth Results

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(2) RSS-247 5.2 a)	Test Method(s):	C63.10 6.9.3 C63.10 11.8.1
Additional Reference(s):	-		

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

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	12.120	2.160	-	-	≥500.0
2442	2.220	2.160	-	-	≥500.0
2472	2.160	14.640	-	-	≥500.0

Table 27 - 6 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	18.420	18.300	-	-	-
2442	18.360	18.360	-	-	-
2472	18.660	18.420	-	-	-

Table 28 - 99% Bandwidth Results

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(2) RSS-247 5.2 a)	Test Method(s):	C63.10 6.9.3 C63.10 11.8.1
Additional Reference(s):	-		

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

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	17.040	-	-	-	≥500.0
2442	17.100	-	-	-	≥500.0
2472	17.100	-	-	-	≥500.0

Table 29 - 6 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	18.240	-	-	-	-
2442	18.180	-	-	-	-
2472	18.480	-	-	-	-

Table 30 - 99% Bandwidth Results

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(2) RSS-247 5.2 a)	Test Method(s):	C63.10 6.9.3 C63.10 11.8.1
Additional Reference(s):	-		

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

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	17.160	17.100	-	-	≥500.0
2442	17.100	17.100	-	-	≥500.0
2472	17.100	17.160	-	-	≥500.0

Table 31 - 6 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	18.240	18.180	-	-	-
2442	18.180	18.120	-	-	-
2472	18.540	18.240	-	-	-

Table 32 - 99% Bandwidth Results

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(2) RSS-247 5.2 a)	Test Method(s):	C63.10 6.9.3 C63.10 11.8.1
Additional Reference(s):	-		

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

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	17.220	-	-	-	≥500.0
2442	17.220	-	-	-	≥500.0
2472	17.160	-	-	-	≥500.0

Table 33 - 6 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	18.180	-	-	-	-
2442	18.180	-	-	-	-
2472	18.420	-	-	-	-

Table 34 - 99% Bandwidth Results

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(2) RSS-247 5.2 a)	Test Method(s):	C63.10 6.9.3 C63.10 11.8.1
Additional Reference(s):	-		

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

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	17.220	17.160	-	-	≥500.0
2442	17.220	17.220	-	-	≥500.0
2472	17.220	17.160	-	-	≥500.0

Table 35 - 6 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	18.180	18.120	-	-	-
2442	18.180	18.060	-	-	-
2472	18.420	18.180	-	-	-

Table 36 - 99% Bandwidth Results

FCC 47 CFR Part 15, Limit Clause 15.247(a)(2) and ISED RSS-247, Clause 5.2(a)

The minimum 6 dB Bandwidth shall be at least 500 kHz.

2.2.7 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 Expires
Multimeter	Iso-tech	IDM101	2421	12	28-Oct-2022
Hygrometer	Rotronic	I-1000	3220	12	05-Nov-2022
Frequency Standard	Spectracom	SecureSync 1200-0408-0601	4393	6	30-Jun-2022
AC Programmable Power Supply	iTech	IT7324	5226	-	O/P Mon
MXA Signal Analyser	Keysight Technologies	N9020B	5529	24	06-Jun-2022
Signal Commissioning Unit	TUV SUD	SCU002	5759	12	30-Jun-2022
USB Power Sensor	Boonton	RTP5008	5830	12	10-May-2022
USB Power Sensor	Boonton	RTP5008	5832	12	10-May-2022
USB Power Sensor	Boonton	RTP5008	5833	12	10-May-2022
USB Power Sensor	Boonton	RTP5008	5834	12	10-May-2022
Modular Power System Mainframe	Keysight Technologies	N6701C	5835	-	TU
DC Power Module 60V 20A 300W	Keysight Technologies	N6754A	5836	-	O/P Mon

Table 37

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

2.3 Maximum Conducted Output Power

2.3.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.247 (b),
ISED RSS-247, Clause 5.4
ISED RSS-GEN, Clause 6.12

2.3.2 Equipment Under Test and Modification State

A2681, S/N: TN4J7KWW5H - Modification State 0

2.3.3 Date of Test

24-March-2022

2.3.4 Test Method

The test was performed in accordance with ANSI C63.10 clause 11.9.2.3.2 Method AVGPM-G.

MIMO output port summing was performed in accordance with KDB 662911 D01. For the CDD results, the Directional Gain was calculated in accordance with clause F)2)f)(ii) using the calculations from F)2)f)(i) with worst-case individual gain and an array gain of zero.

2.3.5 Environmental Conditions

Ambient Temperature	23.4 °C
Relative Humidity	22.7 %

2.3.6 Test Results

2.4 GHz WLAN

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

DUT Configuration			
Mode:	802.11b	Duty Cycle (%):	98.8
Data Rate:	1 Mbps	DCCF (dB):	-
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	3.77
Active Port(s):	A (Core 0)	Active Chain(s):	0

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2412	22.47	-	-	-	-	30.00	-7.53
2442	22.39	-	-	-	-	30.00	-7.61
2472	16.55	-	-	-	-	30.00	-13.45

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

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	∑					
2412	22.47	-	-	-	-	30.00	-7.53	26.24	36.00	-9.76
2442	22.39	-	-	-	-	30.00	-7.61	26.16	36.00	-9.84
2472	16.55	-	-	-	-	30.00	-13.45	20.32	36.00	-15.68

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

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

DUT Configuration			
Mode:	802.11g	Duty Cycle (%):	97.7
Data Rate:	12 Mbps	DCCF (dB):	-
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	3.77
Active Port(s):	A (Core 0)	Active Chain(s):	0

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2412	18.96	-	-	-	-	30.00	-11.04
2442	22.27	-	-	-	-	30.00	-7.73
2472	5.98	-	-	-	-	30.00	-24.02

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

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	∑					
2412	18.96	-	-	-	-	30.00	-11.04	22.73	36.00	-13.27
2442	22.27	-	-	-	-	30.00	-7.73	26.04	36.00	-9.96
2472	5.98	-	-	-	-	30.00	-24.02	9.75	36.00	-26.25

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

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

DUT Configuration			
Mode:	802.11n HT20	Duty Cycle (%):	96.4
Modulation Coding Scheme:	MCS2	DCCF (dB):	-
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	3.77
Active Port(s):	A (Core 0)	Active Chain(s):	0

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2412	18.64	-	-	-	-	30.00	-11.36
2442	22.26	-	-	-	-	30.00	-7.74
2472	5.84	-	-	-	-	30.00	-24.16

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

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	∑					
2412	18.64	-	-	-	-	30.00	-11.36	22.41	36.00	-13.59
2442	22.26	-	-	-	-	30.00	-7.74	26.03	36.00	-9.97
2472	5.84	-	-	-	-	30.00	-24.16	9.61	36.00	-26.39

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

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

DUT Configuration			
Mode:	802.11n HT20	Duty Cycle (%):	96.5
Modulation Coding Scheme:	MCS2	DCCF (dB):	-
Antenna Configuration:	MIMO CDD	Peak Antenna Gain (dBi):	3.77
Active Port(s):	A+B (Core 0 + Core 1)	Active Chain(s):	0+1

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2412	16.78	17.17	-	-	19.99	30.00	-10.01
2442	22.22	21.98	-	-	25.11	30.00	-4.89
2472	3.34	2.97	-	-	6.16	30.00	-23.84

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

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	∑					
2412	16.78	17.17	-	-	19.99	30.00	-10.01	23.76	36.00	-12.24
2442	22.22	21.98	-	-	25.11	30.00	-4.89	28.88	36.00	-7.12
2472	3.34	2.97	-	-	6.16	30.00	-23.84	9.93	36.00	-26.07

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

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

DUT Configuration			
Mode:	802.11ax HE20 SU	Duty Cycle (%):	95.9
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	-
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	3.77
Active Port(s):	A (Core 0)	Active Chain(s):	0

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2412	17.39	-	-	-	-	30.00	-12.61
2442	22.15	-	-	-	-	30.00	-7.85
2472	4.38	-	-	-	-	30.00	-25.62

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

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	∑					
2412	17.39	-	-	-	-	30.00	-12.61	21.16	36.00	-14.84
2442	22.15	-	-	-	-	30.00	-7.85	25.92	36.00	-10.08
2472	4.38	-	-	-	-	30.00	-25.62	8.15	36.00	-27.85

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

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

DUT Configuration			
Mode:	802.11ax HE20 SU	Duty Cycle (%):	95.8
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	-
Antenna Configuration:	MIMO CDD	Peak Antenna Gain (dBi):	3.77
Active Port(s):	A+B (Core 0 + Core 1)	Active Chain(s):	0+1

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2412	16.12	16.50	-	-	19.32	30.00	-10.68
2442	21.93	21.65	-	-	24.79	30.00	-5.21
2472	1.87	1.69	-	-	4.79	30.00	-25.21

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

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	∑					
2412	16.12	16.50	-	-	19.32	30.00	-10.68	23.09	36.00	-12.91
2442	21.93	21.65	-	-	24.79	30.00	-5.21	28.56	36.00	-7.44
2472	1.87	1.69	-	-	4.79	30.00	-25.21	8.56	36.00	-27.44

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

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

DUT Configuration			
Mode:	802.11ax HE20 RU26	Duty Cycle (%):	96.5
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	-
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	3.77
Active Port(s):	A (Core 0)	Active Chain(s):	0

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2412	14.21	-	-	-	-	30.00	-15.79
2442	14.20	-	-	-	-	30.00	-15.80
2472	-2.39	-	-	-	-	30.00	-32.39

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

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	∑					
2412	14.21	-	-	-	-	30.00	-15.79	17.98	36.00	-18.02
2442	14.20	-	-	-	-	30.00	-15.80	17.97	36.00	-18.03
2472	-2.39	-	-	-	-	30.00	-32.39	1.38	36.00	-34.62

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

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

DUT Configuration			
Mode:	802.11ax HE20 RU26	Duty Cycle (%):	96.5
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	-
Antenna Configuration:	MIMO CDD	Peak Antenna Gain (dBi):	3.77
Active Port(s):	A+B (Core 0 + Core 1)	Active Chain(s):	0+1

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2412	14.29	14.10	-	-	17.20	30.00	-12.80
2442	14.18	13.96	-	-	17.07	30.00	-12.93
2472	-5.46	-4.94	-	-	-2.19	30.00	-32.19

Table 52 - FCC Maximum Conducted (average) Output Power Results

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	∑					
2412	14.29	14.10	-	-	17.20	30.00	-12.80	20.97	36.00	-15.03
2442	14.18	13.96	-	-	17.07	30.00	-12.93	20.84	36.00	-15.16
2472	-5.46	-4.94	-	-	-2.19	30.00	-32.19	1.58	36.00	-34.42

Table 53 - ISED Maximum Conducted (average) Output Power Results

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

DUT Configuration			
Mode:	802.11ax HE20 RU52	Duty Cycle (%):	96.4
Modulation Coding Scheme:	MCS2x1	DCCF (dB):	-
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	3.77
Active Port(s):	A (Core 0)	Active Chain(s):	0

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2412	17.19	-	-	-	-	30.00	-12.81
2442	17.25	-	-	-	-	30.00	-12.75
2472	0.55	-	-	-	-	30.00	-29.45

Table 54 - FCC Maximum Conducted (average) Output Power Results

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	∑					
2412	17.19	-	-	-	-	30.00	-12.81	20.96	36.00	-15.04
2442	17.25	-	-	-	-	30.00	-12.75	21.02	36.00	-14.98
2472	0.55	-	-	-	-	30.00	-29.45	4.32	36.00	-31.68

Table 55 - ISED Maximum Conducted (average) Output Power Results