

FCC and ISED Test Report

Apple Inc
Model: A3112

In accordance with FCC 47 CFR Part 15E,
ISED RSS-248 and ISED RSS-GEN
(6 GHz WLAN)

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



TUV SUD
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SIGNATURE			
NAME	JOB TITLE	RESPONSIBLE FOR	ISSUE DATE
James O'Reilly	RF Engineer	Authorised Signatory	06 November 2024

Signatures in this approval box have checked this document in line with the requirements of TUV SUD 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-248 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	Rachael Watkins	06 November 2024	

FCC Accreditation 553713/UK2026 Concorde Park, Fareham Test Laboratory	ISED Accreditation 28798 Concorde Park, Fareham Test Laboratory
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EXECUTIVE SUMMARY
A sample of this product was tested and found to be compliant with FCC 47 CFR Part 15E: 2023, ISED RSS-248: Issue 2 (2022-12) and ISED RSS-GEN: Issue 5 (2018-04) +A2 (2021-02) for the tests detailed in section 1.3.

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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	03-October-2024
2	Updated sections 1.3 and 2.3	08-October-2024
3	Updated section 2.9	24-October-2024
4	Updated sections 1.2, 2.1 and 2.8 for OBW/IBE test results (160 Mhz) and addition of OBW 26 dB plots in section 2.1.6	06-November-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-248: Issue 2 (2022-12) ISED RSS-GEN: Issue 5 (2018-04) +A2 (2021-02)
Start of Test	01-June-2024
Finish of Test	01-November-2024
Name of Engineer(s)	Feda Hussein, Feda Hussein, Mahmud Bari Chowdhury, Dale Hills, Thomas Randall, Tony Baby, Elliot Callender Stefan Gilfedder, David Hill and Philip Harrison
Related Document(s)	ANSI C63.10 (2020) KDB 662911 D01 v02r01 KDB 789033 D02 v02r01 KDB 987594 D02 v02 KDB 987594 DR03-45383



1.3 Brief Summary of Results

A brief summary of the tests carried out in accordance with FCC 47 CFR Part 15E, ISSED RSS-248 and ISSED RSS-GEN is shown below.

Section	Specification Clause			Test Description	Result	Comments/Base Standard
	Part 15E	RSS-248	RSS-GEN			
Configuration and Mode: 6 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	15.407 (a)	4.4	6.7	Emission Bandwidth	Pass	KDB 789033 D02 v02r01
2.2	15.407 (a)	4.5	6.12	Dual Client Test	Pass	KDB 987594 D02 v02r01
2.3	15.407 (d)(10)	-	-	Transmit Power Control	Pass	KDB 987594 DR03-45383
2.4	15.407 (a)	4.5	6.12	Maximum Conducted Output Power	Pass	KDB 662911 D01 v02r01 KDB 789033 D02 v02r01
2.5	15.407 (a)	4.5	-	Maximum Conducted Power Spectral Density	Pass	KDB 662911 D01 v02r01 KDB 789033 D02 v02r01
2.6	15.407 (b)	4.6	6.13	Authorised Band Edges	Pass	ANSI C63.10 (2020) KDB 789033 D02 v02r01
2.7	15.209 and 15.407 (b)	4.6	6.13 and 8.9	Spurious Radiated Emissions	Pass	ANSI C63.10 (2020) KDB 789033 D02 v02r01
2.8	15.407 (b)	4.6	6.13	Unwanted Emissions within the 5925-7125 MHz band	Pass	KDB 987594 D02 v02r01
2.9	15.407 (d)(6)	4.7	-	Contention Based Protocol	Pass	KDB 987594 D02 v02r01

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 6 GHz 802.11 radio supported SISO (Single Input/Single Output) and 2x2 MIMO (Multiple Input/Multiple Output) modes. 802.11a supports 20 MHz bandwidth only. 802.11ax supported 20 MHz, 40 MHz, 80 MHz and 160 MHz bandwidths.

802.11a mode supported SISO operation only. 802.11ax supported SISO, Cyclic Delay Diversity (CDD) and Space Division Multiplexing (SDM) modes. It also supported Transmit Beamforming (TxBF) mode on 20 MHz, 40 MHz and 80 MHz bandwidths. The EUT supported 802.11ax Single User (SU) and Multi-User (MU) with all Resource Unit (RU) sizes from 26 subcarriers, up to the maximum allowed, dependent on channel bandwidth.

The EUT is categorized a Dual Client (6CD) device operating in the 5.925-7.125 GHz bands. It will operate under the control of a Low Power Indoor (LPI) access point, or a standard power access point.

The EUT can also operate as a Very Low Power (6VL) device.

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.

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

SISO Modes (Core 0):

- 802.11a – 12 Mbps
- 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+1):

- 802.11ax HE20 SU – CDD (MCS2x1), SDM (MCS2x2) and TxBF (MCS2x1)
- 802.11ax HE40 SU – CDD (MCS2x1), SDM (MCS2x2) and TxBF (MCS2x1)
- 802.11ax HE80 SU – CDD (MCS2x1), SDM (MCS2x2) and TxBF (MCS2x1)
- 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



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 Contention Based Protocol, Dual Client & TPC tests 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 Contention Based Protocol, Dual Client & TPC tests are described in the relevant test result sections of the present document.

1.4.4 Antenna Gain Table

Antenna Port	Frequency Range (MHz)	Peak Gain (dBi)	Conducted Cable Loss (dB)
Core 0	5925 to 6105	5.2	1.15
	6105 to 6265	5.5	1.17
	6265 to 6425	6.1	1.21
	6425 to 6525	6.0	1.27
	6525 to 6875	6.4	1.25
	6875 to 7125	4.1	1.26
Core 1	5925 to 6105	3.2	1.15
	6105 to 6265	3.7	1.17
	6265 to 6425	2.4	1.21
	6425 to 6525	2.7	1.27
	6525 to 6875	3.8	1.25
	6875 to 7125	1.3	1.26

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: A3112			
Serial Number	Hardware Version	Software Version	Firmware
D2XW4JQFNK	REV1.0	24A21940x	23.30.16
MNV254CLPF	REV1.0	24A21940x	23.30.16
K67X45QH3Q	REV1.0	24A21940x	23.30.16
KVPG90WMK2	REV1.0	24A240	23.10.849.0.41.51.149
J6HWQT92RK	REV1.0	24A219040x	23.30.16
LG21599063	REV1.0	24A301	23.10.876.0.41.51.158
DQH6Q99MH	REV1.0	24A21940x	23.30.16
J6TVFGCDJC	REV1.0	24A8332	23.10.889.3

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: A3112, Serial Number: K67X45QH3Q			
0	As supplied by the customer	Not Applicable	Not Applicable
Model: A3112, Serial Number: D2XW4JQFNK			
0	As supplied by the customer	Not Applicable	Not Applicable
Model: A3112, Serial Number: MNV254CLPF			
0	As supplied by the customer	Not Applicable	Not Applicable
Model: A3112, Serial Number: KVPG90WMK2			
0	As supplied by the customer	Not Applicable	Not Applicable
Model: A3112, Serial Number: J6HWQT92RK			
0	As supplied by the customer	Not Applicable	Not Applicable
Model: A3112, Serial Number: DQH6Q99MH			
0	As supplied by the customer	Not Applicable	Not Applicable
Model: A3112, Serial Number: LG21599063			
0	As supplied by the customer	Not Applicable	Not Applicable
Model: A3112, Serial Number: J6TVFGCDJC			
0	As supplied by the customer	Not Applicable	Not Applicable

Table 5



1.8 Test Location

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

Test Name	Name of Engineer(s)	Accreditation
Configuration and Mode: 6 GHz WLAN		
Emission Bandwidth	Feda Hussein and David Hill	UKAS
Dual Client Test	Stefan Gilfedder	UKAS
Transmit Power Control	Philip Harrison	UKAS
Maximum Conducted Output Power	Feda Hussein, Mahmud Bari Chowdhury and David Hill	UKAS
Maximum Conducted Power Spectral Density	Feda Hussein, Mahmud Bari Chowdhury and David Hill	UKAS
Authorised Band Edges	Dale Hills, Elliot Callender and Tony Baby	UKAS
Spurious Radiated Emissions	Dale Hills, Thomas Randall and Tony Baby	UKAS
Unwanted Emissions within the 5925-7125 MHz band	Feda Hussein, Mahmud Bari Chowdhury and David Hill	UKAS
Contention Based Protocol	Stefan Gilfedder	UKAS

Table 6

Office Address:

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



2 Test Details

2.1 Emission Bandwidth

2.1.1 Specification Reference

FCC 47 CFR Part 15E, Clause 15.407 (a)
ISED RSS-248, Clause 4.4
ISED RSS-GEN, Clause 6.7

2.1.2 Equipment Under Test and Modification State

A3112, S/N: KVP90WMK2 - Modification State 0
A3112, S/N: J6HWQT92RK - Modification State 0

2.1.3 Date of Test

06-July-2024 to 01-November-2024

2.1.4 Test Method

The test was performed in accordance with KDB 789033 D02 clause II.C.1 for 26 dB bandwidth and clause II.D for 99% occupied bandwidth.

2.1.5 Environmental Conditions

Ambient Temperature	21.4 - 23.2 °C
Relative Humidity	47.5 - 53.6 %



2.1.6 Test Results

6 GHz WLAN

SISO

Protocol	26 dB Bandwidth (MHz)	
	Minimum	Maximum
802.11a SP	21.060	21.120
802.11ax HE20 SU SP	21.240	21.540
802.11ax HE40 SU SP	41.760	42.840
802.11ax HE80 SU SP	82.940	83.380
802.11ax HE160 SU SP	166.740	168.000
802.11a LPI	21.060	21.180
802.11ax HE20 SU LPI	21.180	21.540
802.11ax HE40 SU LPI	41.880	42.240
802.11ax HE80 SU LPI	82.500	83.160
802.11ax HE160 SU LPI	166.740	167.160
802.11a VLP	21.120	21.120
802.11ax HE20 SU VLP	21.240	21.360
802.11ax HE40 SU VLP	42.000	42.240
802.11ax HE80 SU VLP	82.500	82.940
802.11ax HE160 SU VLP	166.740	167.580

Table 7 - 26 dB Bandwidth Summary Results - SISO

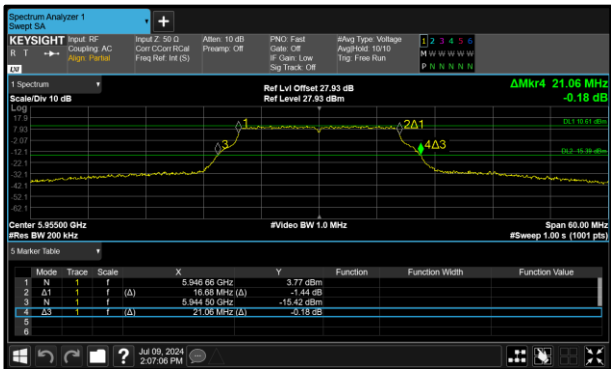


Figure 1 - 802.11a SP Minimum 26 dB EBW

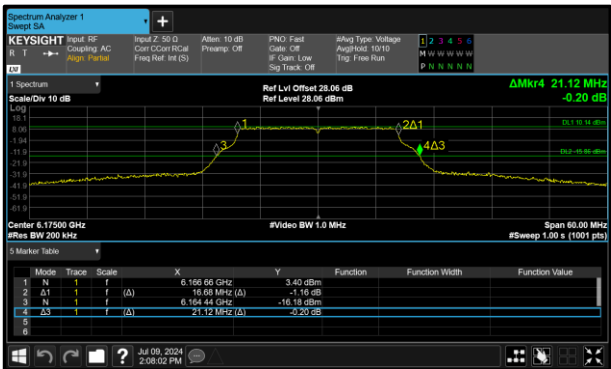
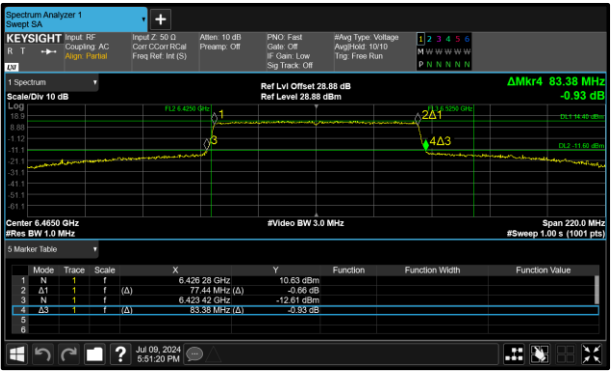
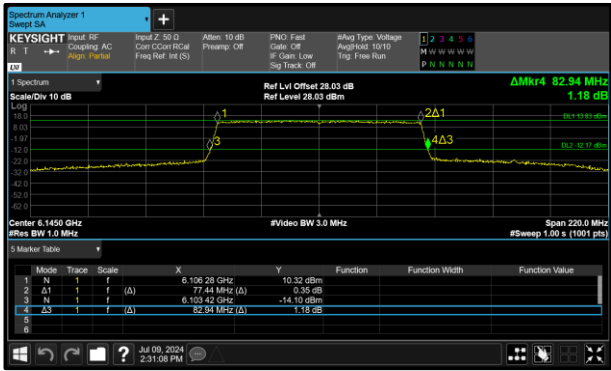
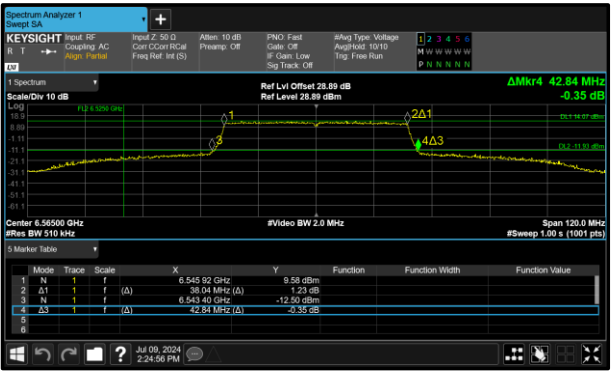
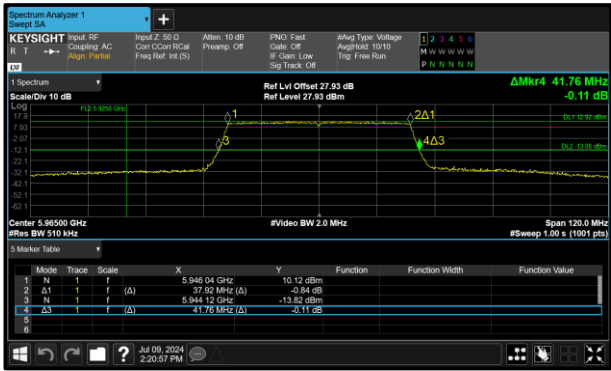
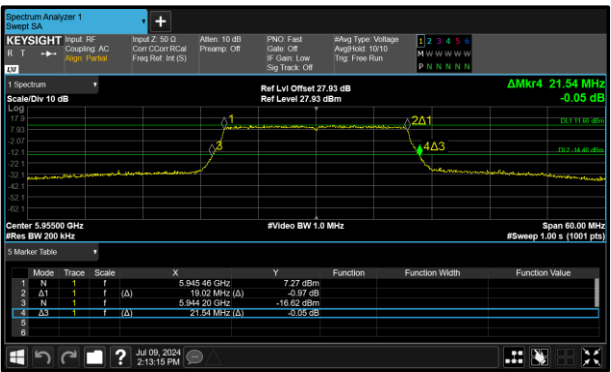
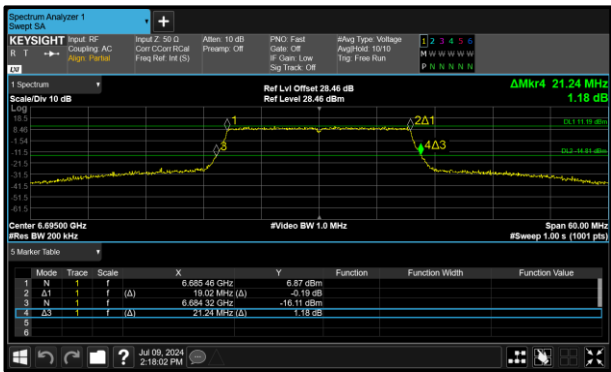


Figure 2 - 802.11a SP Maximum 26 dB EBW



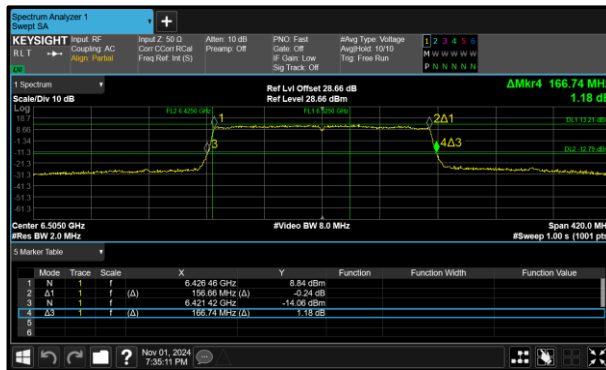


Figure 9 - 802.11ax HE160 SU SP Minimum 26 dB EBW

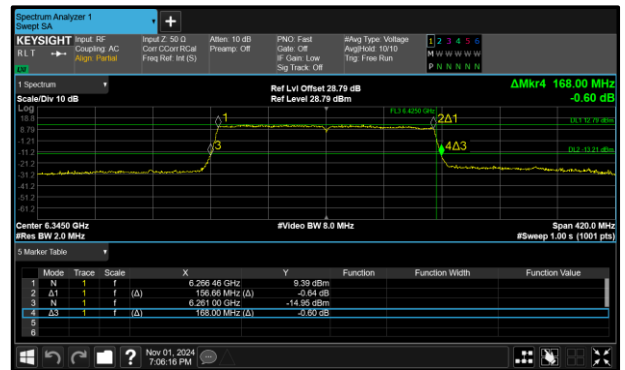


Figure 10 - 802.11ax HE160 SU SP Maximum 26 dB EBW

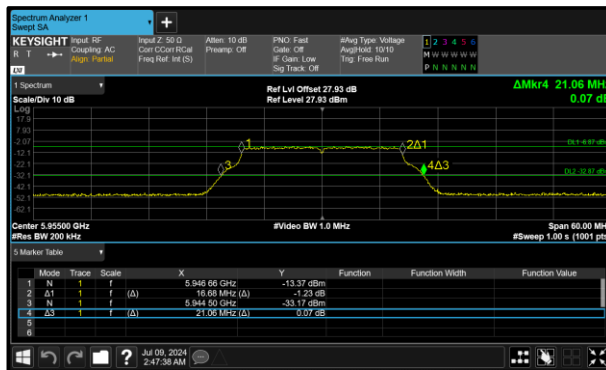


Figure 11 - 802.11a LPI Minimum 26 dB EBW

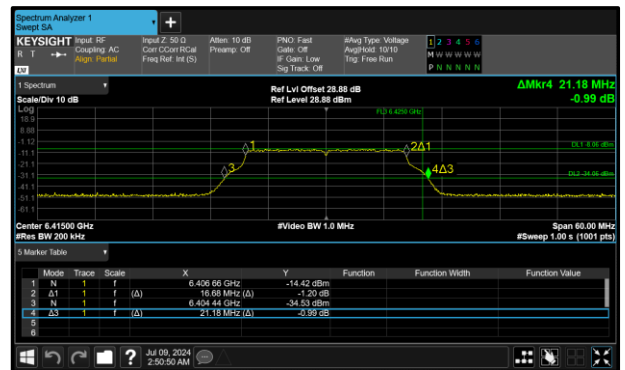


Figure 12 - 802.11a LPI Maximum 26 dB EBW

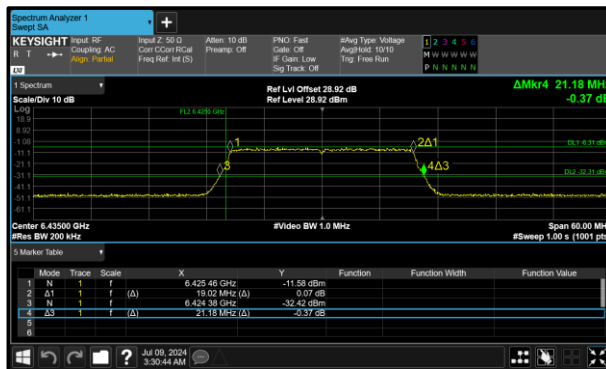


Figure 13 - 802.11ax HE20 SU LPI Minimum 26 dB EBW

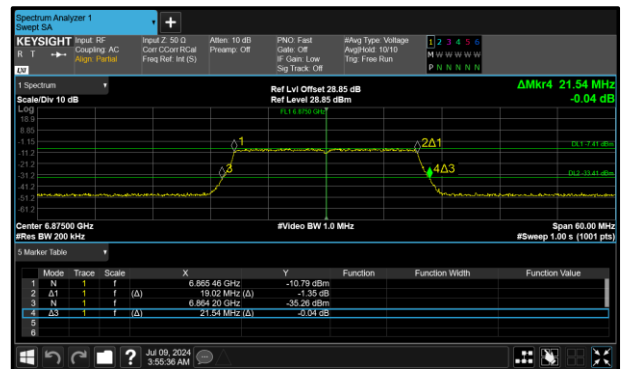


Figure 14 - 802.11ax HE20 SU LPI Maximum 26 dB EBW

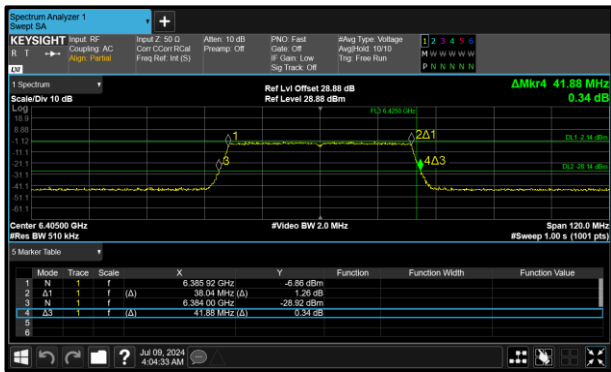


Figure 15 - 802.11ax HE40 SU LPI Minimum 26 dB EBW

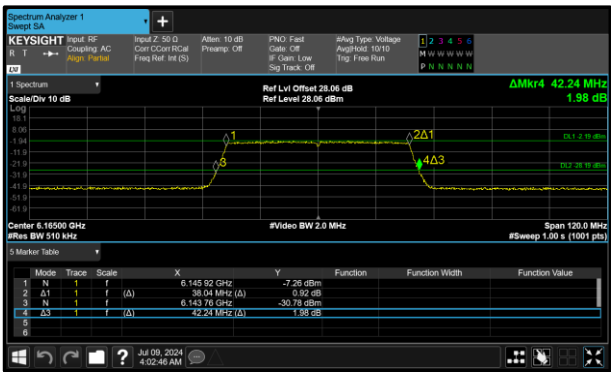


Figure 16 - 802.11ax HE40 SU LPI Maximum 26 dB EBW

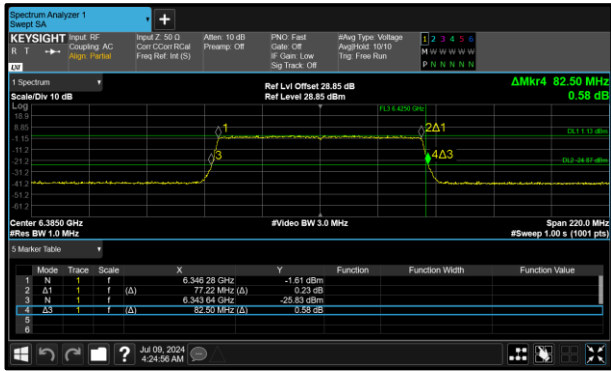


Figure 17 - 802.11ax HE80 SU LPI Minimum 26 dB EBW

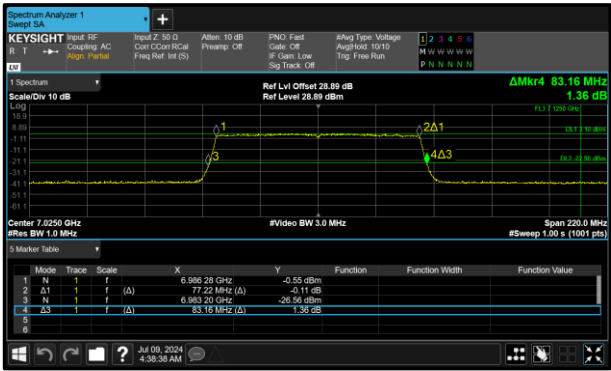


Figure 18 - 802.11ax HE80 SU LPI Maximum 26 dB EBW

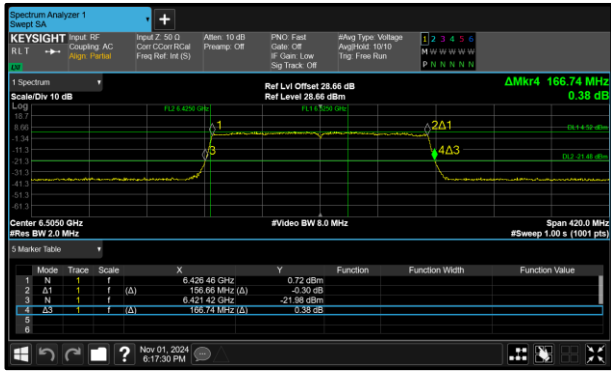


Figure 19 - 802.11ax HE160 SU LPI Minimum 26 dB EBW

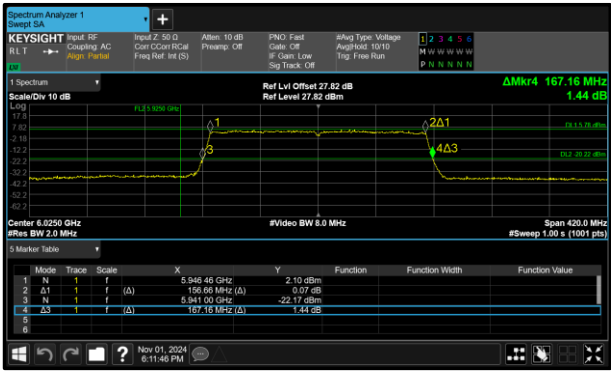


Figure 20 - 802.11ax HE160 SU LPI Maximum 26 dB EBW

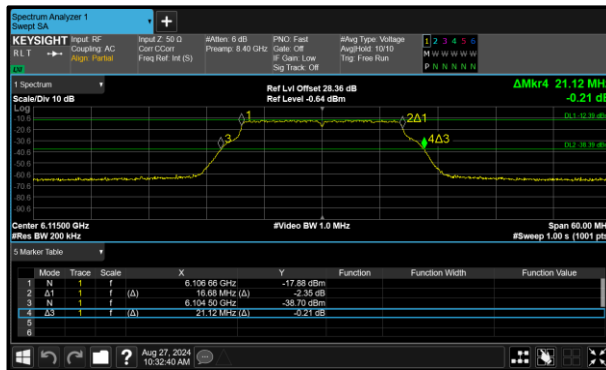


Figure 21 - 802.11a VLP Minimum 26 dB EBW

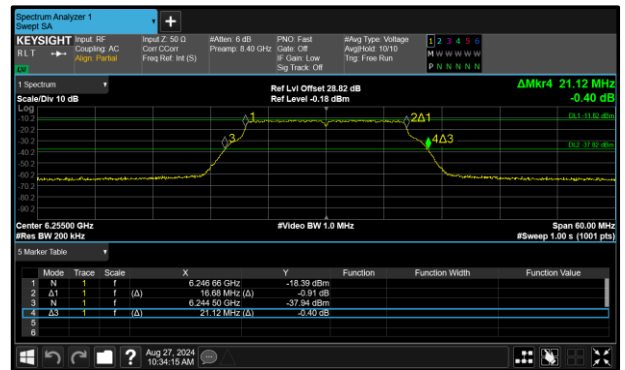


Figure 22 - 802.11a VLP Maximum 26 dB EBW

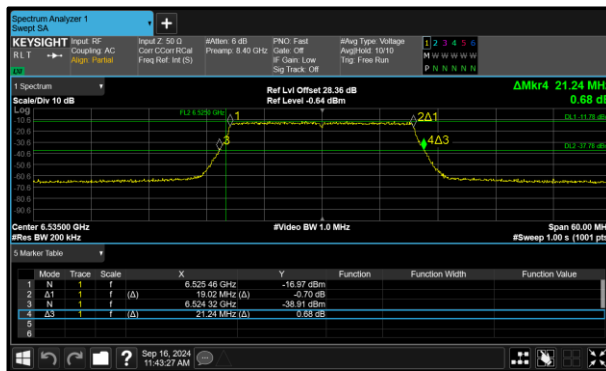


Figure 23 - 802.11ax HE20 SU VLP Minimum 26 dB EBW

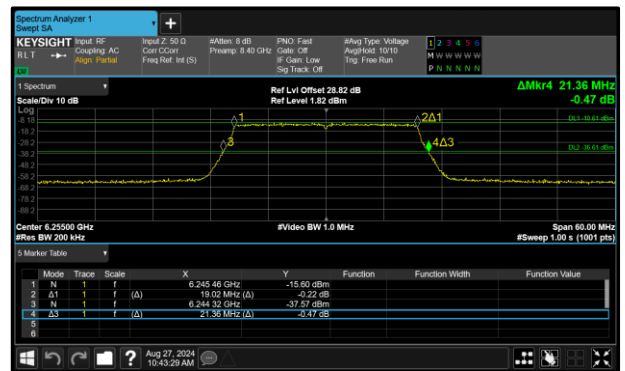


Figure 24 - 802.11ax HE20 SU VLP Maximum 26 dB EBW

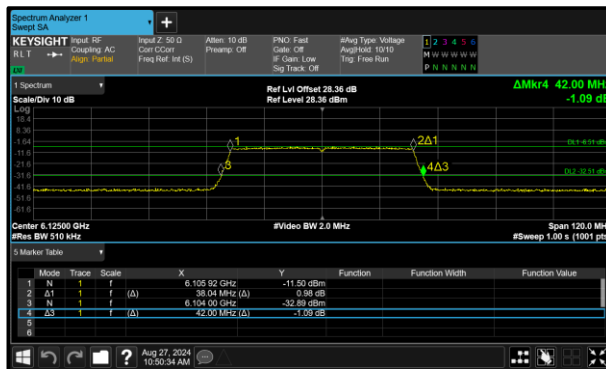


Figure 25 - 802.11ax HE40 SU VLP Minimum 26 dB EBW

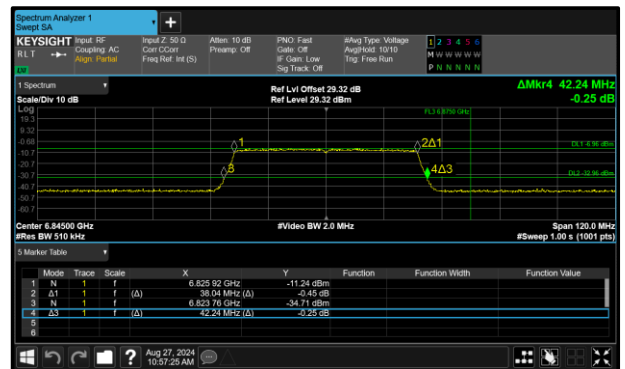


Figure 26 - 802.11ax HE40 SU VLP Maximum 26 dB EBW

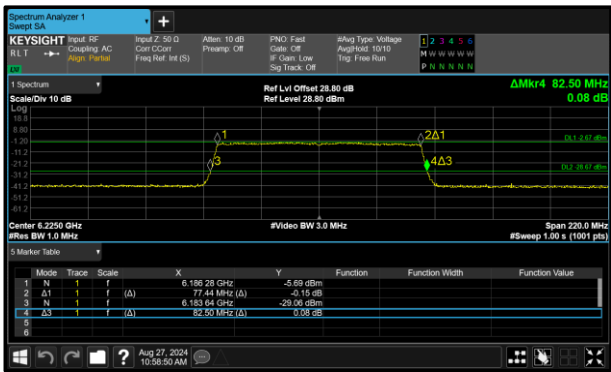


Figure 27 - 802.11ax HE80 SU VLP Minimum 26 dB EBW

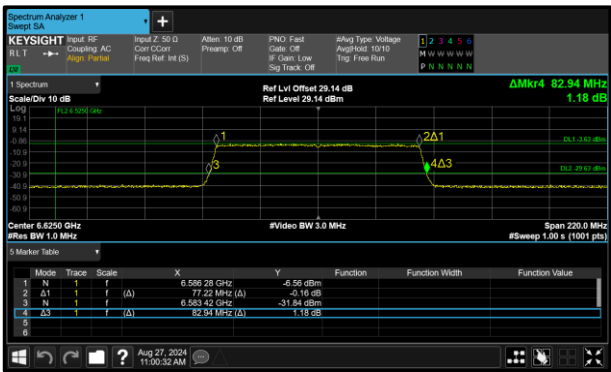


Figure 28 - 802.11ax HE80 SU VLP Maximum 26 dB EBW

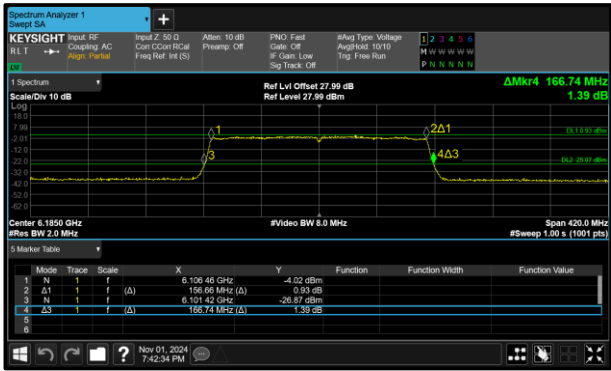


Figure 29 - 802.11ax HE160 SU VLP Minimum 26 dB EBW

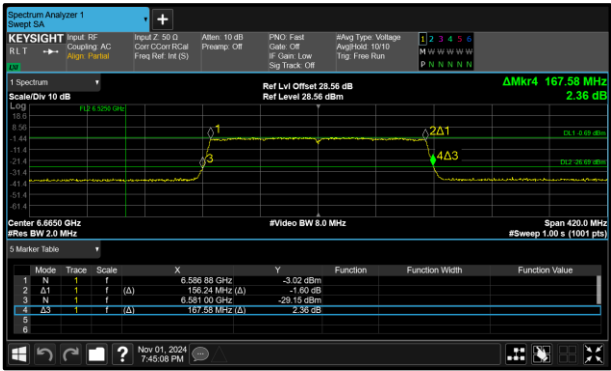


Figure 30 - 802.11ax HE160 SU VLP Maximum 26 dB EBW



Protocol	99% Bandwidth (MHz)	
	Minimum	Maximum
802.11a SP	16.680	16.680
802.11ax HE20 SU SP	19.020	19.020
802.11ax HE40 SU SP	37.920	38.160
802.11ax HE80 SU SP	77.220	77.440
802.11ax HE160 SU SP	156.240	156.660
802.11a LPI	16.680	16.680
802.11ax HE20 SU LPI	19.020	19.020
802.11ax HE40 SU LPI	37.920	38.040
802.11ax HE80 SU LPI	77.220	77.440
802.11ax HE160 SU LPI	156.240	156.660
802.11a VLP	16.680	16.680
802.11ax HE20 SU VLP	19.020	19.020
802.11ax HE40 SU VLP	38.040	38.040
802.11ax HE80 SU VLP	77.220	77.440
802.11ax HE160 SU VLP	156.660	156.660

Table 8 - 99% Bandwidth Summary Results - SISO

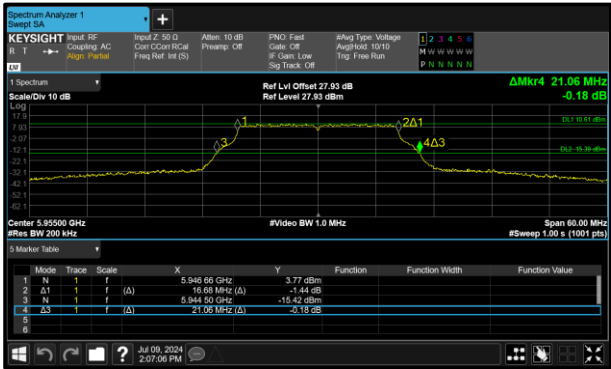


Figure 31 - 802.11a SP Minimum 99% OBW

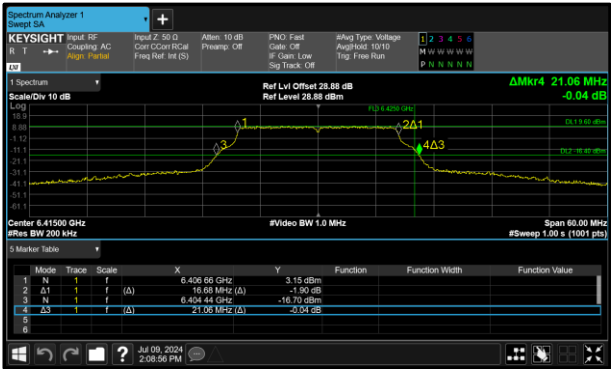


Figure 32 - 802.11a SP Maximum 99% OBW

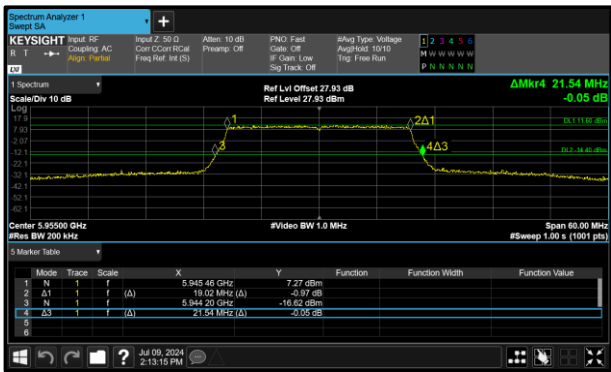


Figure 33 - 802.11ax HE20 SU SP
Minimum 99% OBW

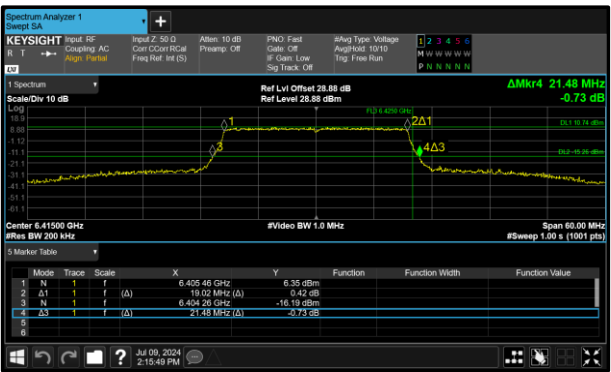


Figure 34 - 802.11ax HE20 SU SP
Maximum 99% OBW

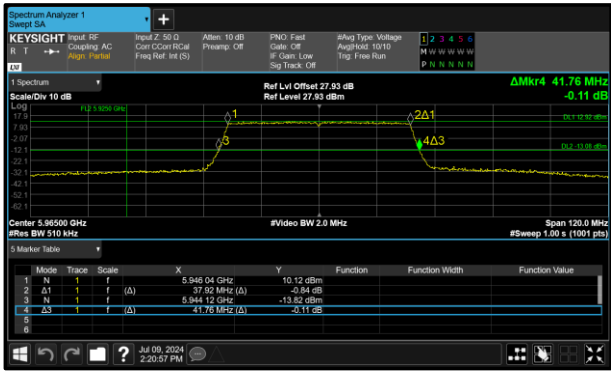


Figure 35 - 802.11ax HE40 SU SP
Minimum 99% OBW

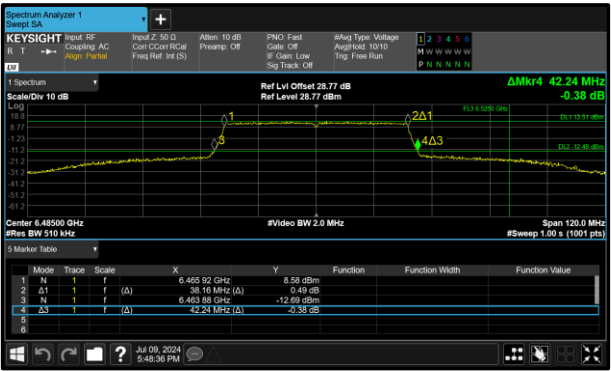


Figure 36 - 802.11ax HE40 SU SP
Maximum 99% OBW

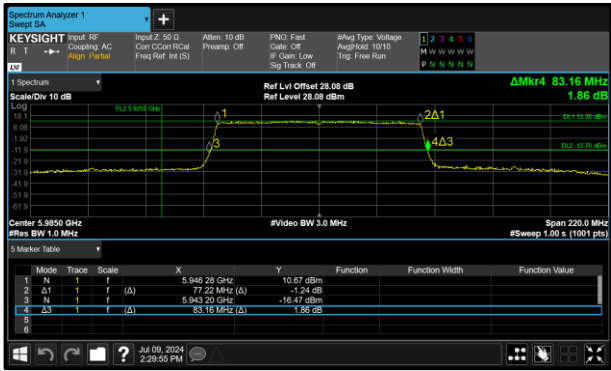


Figure 37 - 802.11ax HE80 SU SP
Minimum 99% OBW

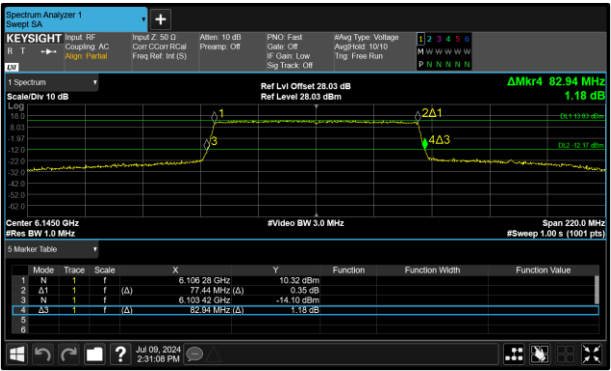


Figure 38 - 802.11ax HE80 SU SP
Maximum 99% OBW

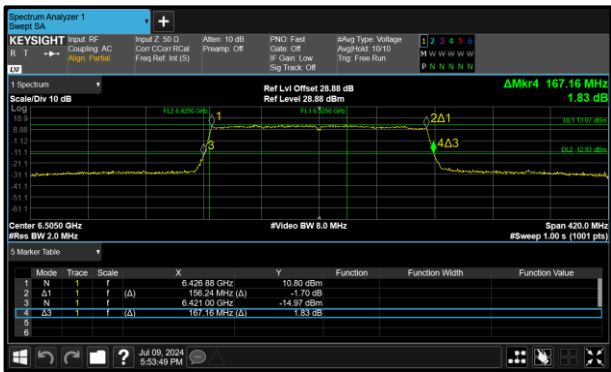


Figure 39 - 802.11ax HE160 SU SP
Minimum 99% OBW

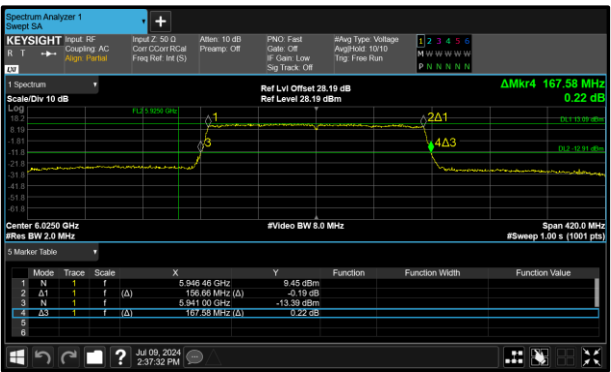


Figure 40 - 802.11ax HE160 SU SP
Maximum 99% OBW

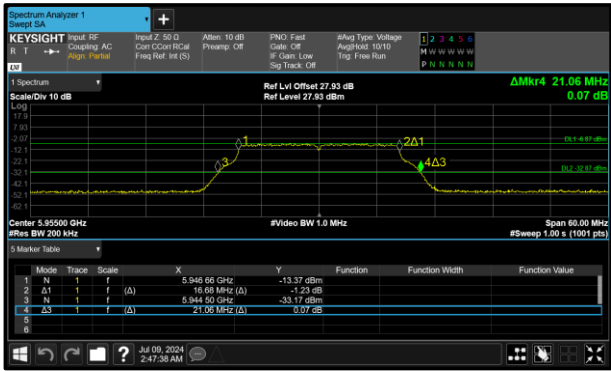


Figure 41 - 802.11a LPI Minimum 99%
OBW

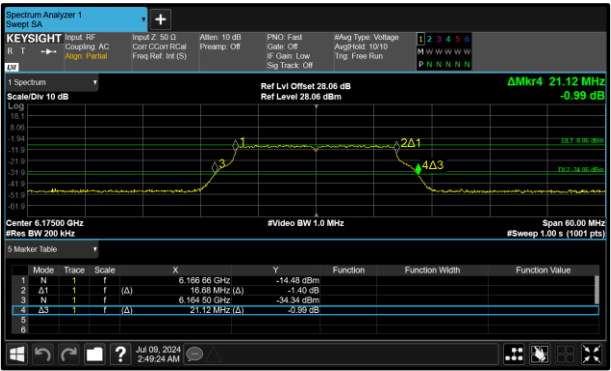


Figure 42 - 802.11a LPI Maximum 99%
OBW

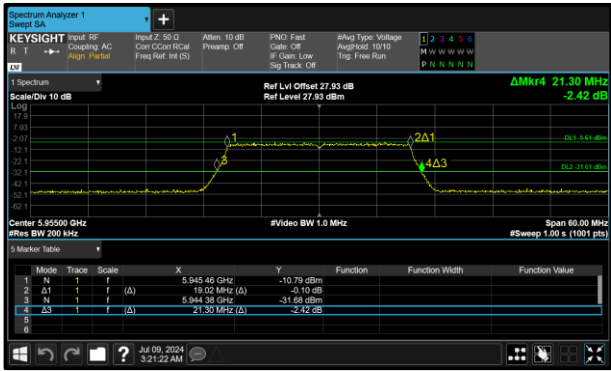


Figure 43 - 802.11ax HE20 SU LPI
Minimum 99% OBW

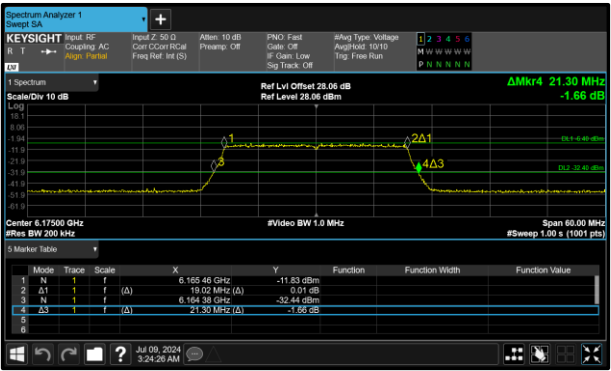


Figure 44 - 802.11ax HE20 SU LPI
Maximum 99% OBW

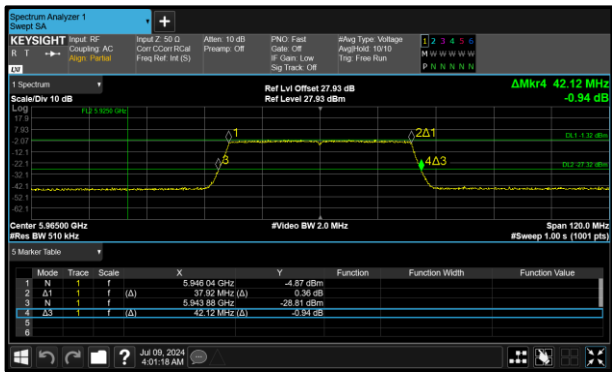


Figure 45 - 802.11ax HE40 SU LPI
Minimum 99% OBW

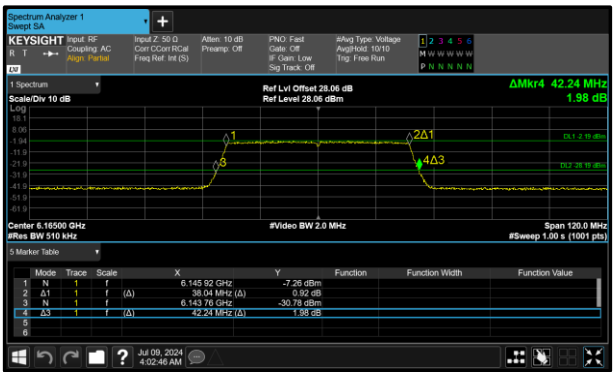


Figure 46 - 802.11ax HE40 SU LPI
Maximum 99% OBW

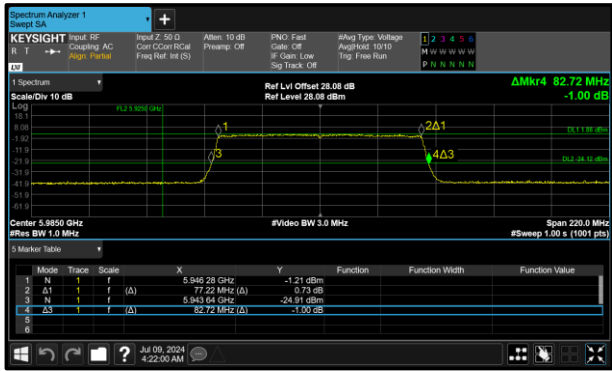


Figure 47 - 802.11ax HE80 SU LPI
Minimum 99% OBW

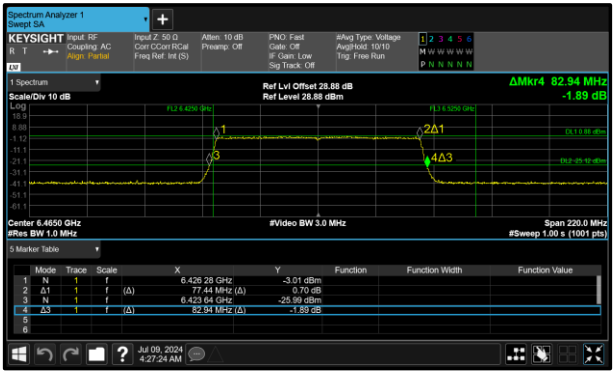


Figure 48 - 802.11ax HE80 SU LPI
Maximum 99% OBW

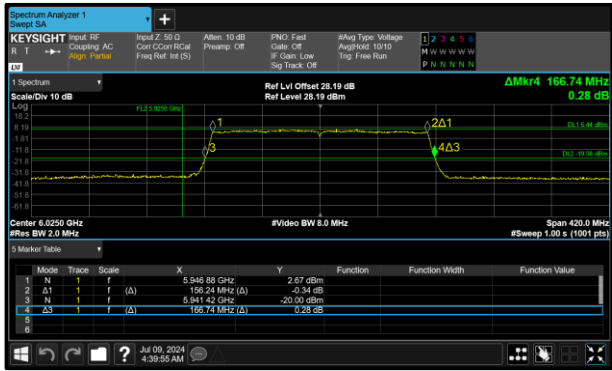


Figure 49 - 802.11ax HE160 SU LPI
Minimum 99% OBW

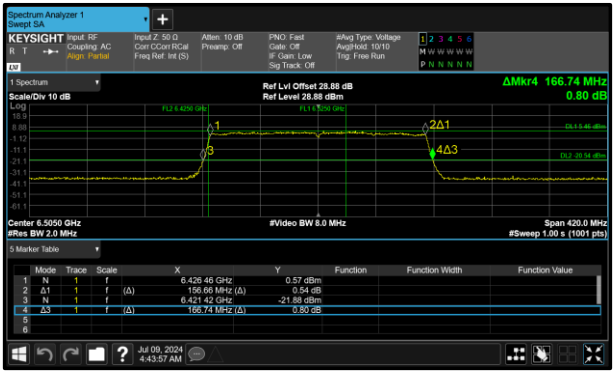


Figure 50 - 802.11ax HE160 SU LPI
Maximum 99% OBW

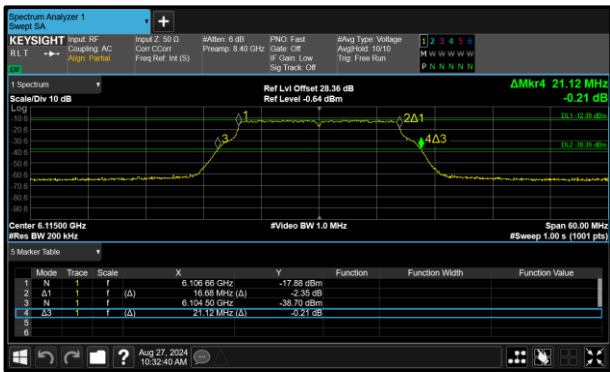


Figure 51 - 802.11a VLP Minimum 99% OBW

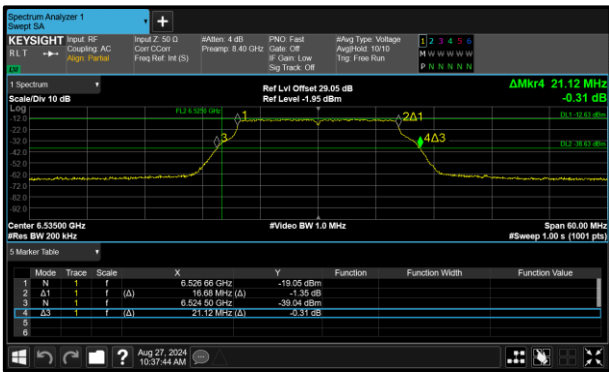


Figure 52 - 802.11a VLP Maximum 99% OBW

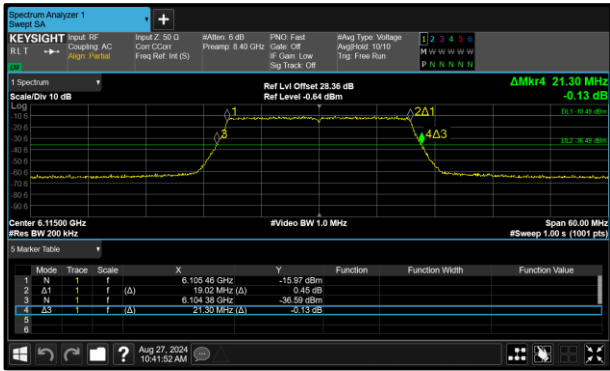


Figure 53 - 802.11ax HE20 SU VLP Minimum 99% OBW

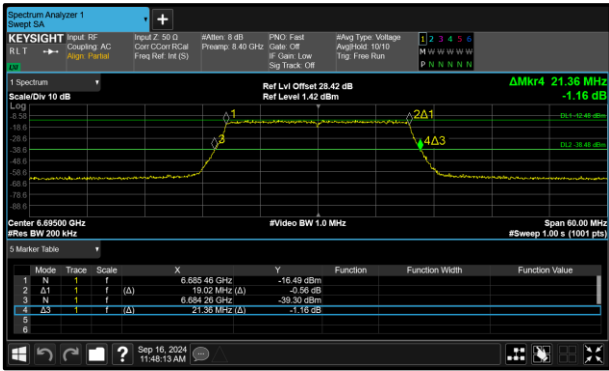


Figure 54 - 802.11ax HE20 SU VLP Maximum 99% OBW

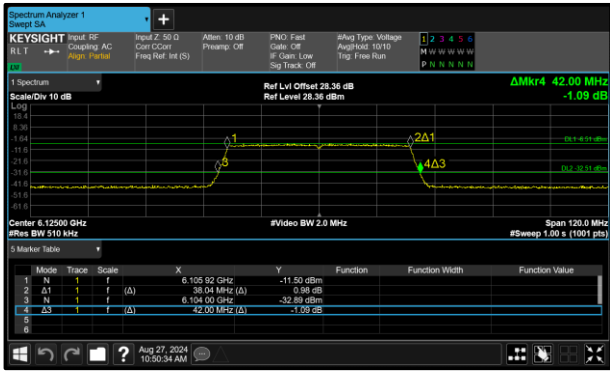


Figure 55 - 802.11ax HE40 SU VLP Minimum 99% OBW

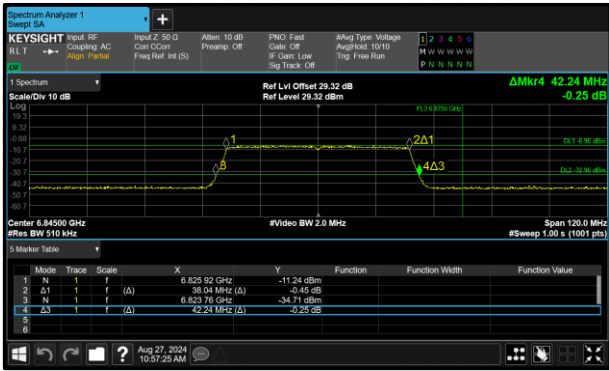


Figure 56 - 802.11ax HE40 SU VLP Maximum 99% OBW

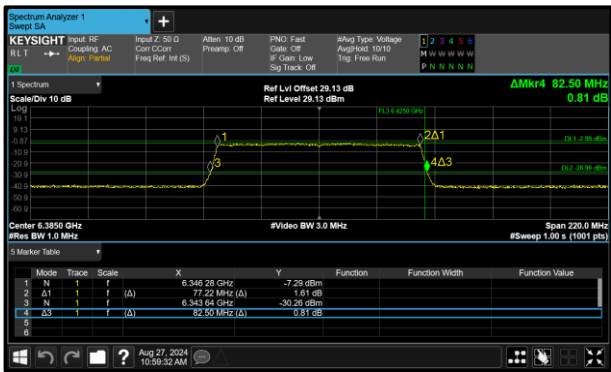


Figure 57 - 802.11ax HE80 SU VLP
Minimum 99% OBW

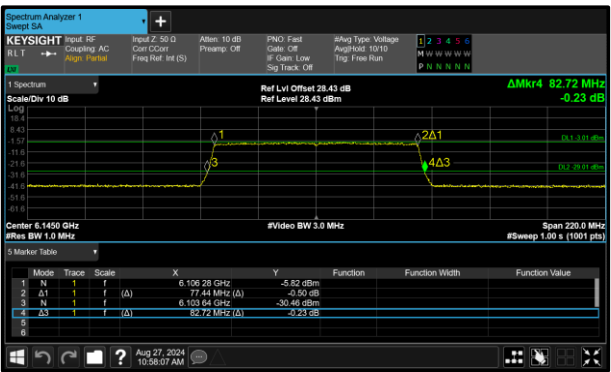


Figure 58 - 802.11ax HE80 SU VLP
Maximum 99% OBW

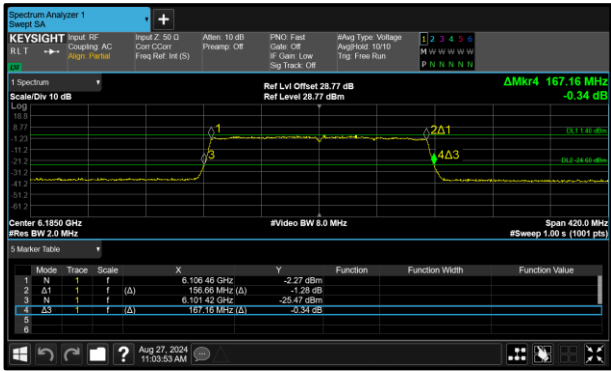


Figure 59 - 802.11ax HE160 SU VLP
Minimum 99% OBW

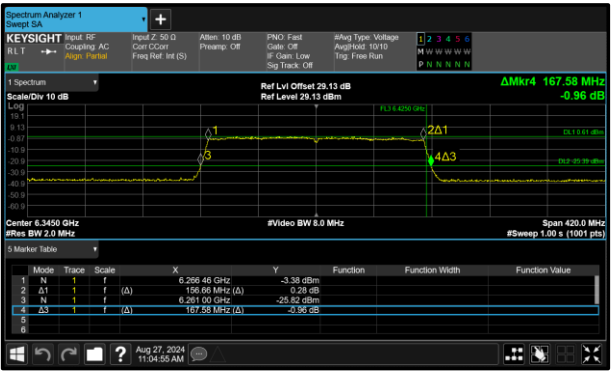


Figure 60 - 802.11ax HE160 SU VLP
Maximum 99% OBW



Test Configuration			
Frequency Range:	5.925-6.425 GHz 6.525-6.875 GHz	Band:	U-NII-5 U-NII-7
Limit Clause(s):	15.407 (a)(11)	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

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

Test Frequency (MHz)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
6115	21.120	-	-	-	320.000
6255	21.120	-	-	-	320.000
6415	21.120	-	-	-	320.000
6535	21.120	-	-	-	320.000
6695	21.120	-	-	-	320.000
6855	21.120	-	-	-	320.000

Table 9 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6115	16.680	-	-	-	320.000
6255	16.680	-	-	-	320.000
6415	16.680	-	-	-	320.000
6535	16.680	-	-	-	320.000
6695	16.680	-	-	-	320.000
6855	16.680	-	-	-	320.000

Table 10 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	5.925-6.425 GHz 6.525-6.875 GHz	Band:	U-NII-5 U-NII-7
Limit Clause(s):	15.407 (a)(11)	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

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

Test Frequency (MHz)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
6115	21.300	-	-	-	320.000
6255	21.360	-	-	-	320.000
6415	21.300	-	-	-	320.000
6535	21.480	-	-	-	320.000
6695	21.300	-	-	-	320.000
6855	21.420	-	-	-	320.000

Table 11 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6115	19.020	-	-	-	320.000
6255	19.020	-	-	-	320.000
6415	19.020	-	-	-	320.000
6535	19.020	-	-	-	320.000
6695	19.020	-	-	-	320.000
6855	19.020	-	-	-	320.000

Table 12 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	5.925-6.425 GHz 6.525-6.875 GHz	Band:	U-NII-5 U-NII-7
Limit Clause(s):	15.407 (a)(11)	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

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

Test Frequency (MHz)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
6125	42.000	-	-	-	320.000
6245	42.120	-	-	-	320.000
6405	42.000	-	-	-	320.000
6565	42.120	-	-	-	320.000
6685	42.120	-	-	-	320.000
6845	42.240	-	-	-	320.000

Table 13 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6125	38.040	-	-	-	320.000
6245	38.040	-	-	-	320.000
6405	38.040	-	-	-	320.000
6565	38.040	-	-	-	320.000
6685	38.040	-	-	-	320.000
6845	38.040	-	-	-	320.000

Table 14 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	5.925-6.425 GHz 6.525-6.875 GHz	Band:	U-NII-5 U-NII-7
Limit Clause(s):	15.407 (a)(11)	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

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

Test Frequency (MHz)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
6145	82.720	-	-	-	320.000
6225	82.500	-	-	-	320.000
6385	82.500	-	-	-	320.000
6625	82.940	-	-	-	320.000
6705	82.720	-	-	-	320.000
6785	82.720	-	-	-	320.000

Table 15 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6145	77.440	-	-	-	320.000
6225	77.440	-	-	-	320.000
6385	77.220	-	-	-	320.000
6625	77.220	-	-	-	320.000
6705	77.220	-	-	-	320.000
6785	77.220	-	-	-	320.000

Table 16 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	5.925-6.425 GHz 6.525-6.875 GHz	Band:	U-NII-5 U-NII-7
Limit Clause(s):	15.407 (a)(11)	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

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

Test Frequency (MHz)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
6185	166.740	-	-	-	320.000
6345	167.160	-	-	-	320.000
6665	167.580	-	-	-	320.000

Table 17 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6185	156.660	-	-	-	320.000
6345	156.660	-	-	-	320.000
6665	156.660	-	-	-	320.000

Table 18 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	5.925-6.425 GHz	Band:	U-NII-5
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11a LPI	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
5955	21.060	-	-	-	320.000
6175	21.120	-	-	-	320.000
6415	21.180	-	-	-	320.000

Table 19 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
5955	16.680	-	-	-	320.000
6175	16.680	-	-	-	320.000
6415	16.680	-	-	-	320.000

Table 20 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	5.925-6.425 GHz	Band:	U-NII-5
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE20 SU LPI	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
5955	21.300	-	-	-	320.000
6175	21.300	-	-	-	320.000
6415	21.360	-	-	-	320.000

Table 21 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
5955	19.020	-	-	-	320.000
6175	19.020	-	-	-	320.000
6415	19.020	-	-	-	320.000

Table 22 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	5.925-6.425 GHz	Band:	U-NII-5
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE40 SU LPI	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
5965	42.120	-	-	-	320.000
6165	42.240	-	-	-	320.000
6405	41.880	-	-	-	320.000

Table 23 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
5965	37.920	-	-	-	320.000
6165	38.040	-	-	-	320.000
6405	38.040	-	-	-	320.000

Table 24 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	5.925-6.425 GHz	Band:	U-NII-5
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE80 SU LPI	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
5985	82.720	-	-	-	320.000
6145	82.720	-	-	-	320.000
6385	82.500	-	-	-	320.000

Table 25 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
5985	77.220	-	-	-	320.000
6145	77.220	-	-	-	320.000
6385	77.220	-	-	-	320.000

Table 26 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	5.925-6.425 GHz	Band:	U-NII-5
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE160 SU LPI	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
6025	167.160	-	-	-	320.000
6185	167.160	-	-	-	320.000
6345	167.160	-	-	-	320.000

Table 27 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6025	156.240	-	-	-	320.000
6185	156.240	-	-	-	320.000
6345	156.240	-	-	-	320.000

Table 28 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	6.425-6.525 GHz	Band:	U-NII-6
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11a LPI	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
6435	21.120	-	-	-	320.000
6475	21.180	-	-	-	320.000
6515	21.120	-	-	-	320.000

Table 29 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6435	16.680	-	-	-	320.000
6475	16.680	-	-	-	320.000
6515	16.680	-	-	-	320.000

Table 30 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	6.425-6.525 GHz	Band:	U-NII-6
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE20 SU LPI	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
6435	21.180	-	-	-	320.000
6475	21.300	-	-	-	320.000
6515	21.300	-	-	-	320.000

Table 31 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6435	19.020	-	-	-	320.000
6475	19.020	-	-	-	320.000
6515	19.020	-	-	-	320.000

Table 32 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	6.425-6.525 GHz	Band:	U-NII-6
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE40 SU LPI	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
6445	41.880	-	-	-	320.000
6485	41.880	-	-	-	320.000
6525	42.000	-	-	-	320.000

Table 33 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6445	38.040	-	-	-	320.000
6485	37.920	-	-	-	320.000
6525	37.920	-	-	-	320.000

Table 34 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	6.425-6.525 GHz	Band:	U-NII-6
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE80 SU LPI	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
6465	82.940	-	-	-	320.000

Table 35 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6465	77.440	-	-	-	320.000

Table 36 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	6.425-6.525 GHz	Band:	U-NII-6
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE160 SU LPI	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
6505	166.740	-	-	-	320.000

Table 37 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6505	156.660	-	-	-	320.000

Table 38 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	6.525-6.875 GHz	Band:	U-NII-7
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11a LPI	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
6535	21.120	-	-	-	320.000
6695	21.120	-	-	-	320.000
6855	21.120	-	-	-	320.000
6875	21.120	-	-	-	320.000

Table 39 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6535	16.680	-	-	-	320.000
6695	16.680	-	-	-	320.000
6855	16.680	-	-	-	320.000
6875	16.680	-	-	-	320.000

Table 40 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	6.525-6.875 GHz	Band:	U-NII-7
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE20 SU LPI	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
6535	21.300	-	-	-	320.000
6695	21.300	-	-	-	320.000
6855	21.480	-	-	-	320.000
6875	21.540	-	-	-	320.000

Table 41 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6535	19.020	-	-	-	320.000
6695	19.020	-	-	-	320.000
6855	19.020	-	-	-	320.000
6875	19.020	-	-	-	320.000

Table 42 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	6.525-6.875 GHz	Band:	U-NII-7
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE40 SU LPI	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
6565	42.000	-	-	-	320.000
6685	42.000	-	-	-	320.000
6845	41.880	-	-	-	320.000

Table 43 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6565	38.040	-	-	-	320.000
6685	38.040	-	-	-	320.000
6845	38.040	-	-	-	320.000

Table 44 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	6.525-6.875 GHz	Band:	U-NII-7
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE80 SU LPI	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
6545	82.720	-	-	-	320.000
6625	82.720	-	-	-	320.000
6705	82.500	-	-	-	320.000
6785	82.720	-	-	-	320.000
6865	82.720	-	-	-	320.000

Table 45 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6545	77.220	-	-	-	320.000
6625	77.440	-	-	-	320.000
6705	77.220	-	-	-	320.000
6785	77.220	-	-	-	320.000
6865	77.220	-	-	-	320.000

Table 46 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	6.525-6.875 GHz	Band:	U-NII-7
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE160 SU LPI	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
6665	166.740	-	-	-	320.000
6825	167.160	-	-	-	320.000

Table 47 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6665	156.660	-	-	-	320.000
6825	156.660	-	-	-	320.000

Table 48 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	6.875-7.125 GHz	Band:	U-NII-8
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11a LPI	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
6895	21.060	-	-	-	320.000
6995	21.060	-	-	-	320.000
7115	21.120	-	-	-	320.000

Table 49 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6895	16.680	-	-	-	320.000
6995	16.680	-	-	-	320.000
7115	16.680	-	-	-	320.000

Table 50 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	6.875-7.125 GHz	Band:	U-NII-8
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE20 SU LPI	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
6895	21.240	-	-	-	320.000
6995	21.360	-	-	-	320.000
7095	21.300	-	-	-	320.000

Table 51 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6895	19.020	-	-	-	320.000
6995	19.020	-	-	-	320.000
7095	19.020	-	-	-	320.000

Table 52 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	6.875-7.125 GHz	Band:	U-NII-8
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE40 SU LPI	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
6885	41.880	-	-	-	320.000
6925	41.880	-	-	-	320.000
7005	41.880	-	-	-	320.000
7085	41.880	-	-	-	320.000

Table 53 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6885	38.040	-	-	-	320.000
6925	38.040	-	-	-	320.000
7005	38.040	-	-	-	320.000
7085	38.040	-	-	-	320.000

Table 54 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	6.875-7.125 GHz	Band:	U-NII-8
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE80 SU LPI	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
6945	82.720	-	-	-	320.000
7025	83.160	-	-	-	320.000

Table 55 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6945	77.220	-	-	-	320.000
7025	77.220	-	-	-	320.000

Table 56 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	6.875-7.125 GHz	Band:	U-NII-8
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE160 SU LPI	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
6985	166.740	-	-	-	320.000

Table 57 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6985	156.660	-	-	-	320.000

Table 58 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	5.925-6.425 GHz	Band:	U-NII-5
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11a SP	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
5955	21.060	-	-	-	320.000
6175	21.120	-	-	-	320.000
6415	21.060	-	-	-	320.000

Table 59 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
5955	16.680	-	-	-	320.000
6175	16.680	-	-	-	320.000
6415	16.680	-	-	-	320.000

Table 60 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	5.925-6.425 GHz	Band:	U-NII-5
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE20 SU SP	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
5955	21.540	-	-	-	320.000
6175	21.300	-	-	-	320.000
6415	21.480	-	-	-	320.000

Table 61 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
5955	19.020	-	-	-	320.000
6175	19.020	-	-	-	320.000
6415	19.020	-	-	-	320.000

Table 62 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	5.925-6.425 GHz	Band:	U-NII-5
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE40 SU SP	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
5965	41.760	-	-	-	320.000
6165	42.000	-	-	-	320.000
6405	42.360	-	-	-	320.000

Table 63 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
5965	37.920	-	-	-	320.000
6165	38.040	-	-	-	320.000
6405	38.040	-	-	-	320.000

Table 64 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	5.925-6.425 GHz	Band:	U-NII-5
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE80 SU SP	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
5985	83.160	-	-	-	320.000
6145	82.940	-	-	-	320.000
6385	82.940	-	-	-	320.000

Table 65 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
5985	77.220	-	-	-	320.000
6145	77.440	-	-	-	320.000
6385	77.440	-	-	-	320.000

Table 66 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	5.925-6.425 GHz	Band:	U-NII-5
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE160 SU SP	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
6025	167.580	-	-	-	320.000
6185	167.160	-	-	-	320.000
6345	168.000	-	-	-	320.000

Table 67 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6025	156.660	-	-	-	320.000
6185	156.660	-	-	-	320.000
6345	156.660	-	-	-	320.000

Table 68 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	6.425-6.525 GHz	Band:	U-NII-6
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11a SP	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)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6435	16.680	-	-	-	320.000
6475	16.680	-	-	-	320.000
6515	16.680	-	-	-	320.000

Table 69 - 99% Bandwidth Results

Test Configuration			
Frequency Range:	6.425-6.525 GHz	Band:	U-NII-6
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE20 SU SP	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)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6435	19.020	-	-	-	320.000
6475	19.020	-	-	-	320.000
6515	19.020	-	-	-	320.000

Table 70 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	6.425-6.525 GHz	Band:	U-NII-6
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE40 SU SP	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)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6445	38.040	-	-	-	320.000
6485	38.160	-	-	-	320.000
6525	38.040	-	-	-	320.000

Table 71 - 99% Bandwidth Results

Test Configuration			
Frequency Range:	6.425-6.525 GHz	Band:	U-NII-6
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE80 SU SP	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)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6465	77.440	-	-	-	320.000
6545	77.220	-	-	-	320.000

Table 72 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	6.425-6.525 GHz	Band:	U-NII-6
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE160 SU SP	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)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6505	156.240	-	-	-	320.000

Table 73 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	6.525-6.875 GHz	Band:	U-NII-7
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11a SP	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
6535	21.060	-	-	-	320.000
6695	21.120	-	-	-	320.000
6855	21.060	-	-	-	320.000

Table 74 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (MHz)
	A	B	C	D	
6535	16.680	-	-	-	320.000
6695	16.680	-	-	-	320.000
6855	16.680	-	-	-	320.000

Table 75 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	6.525-6.875 GHz	Band:	U-NII-7
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE20 SU SP	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
6535	21.420	-	-	-	320.000
6695	21.240	-	-	-	320.000
6855	21.300	-	-	-	320.000

Table 76 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6535	19.020	-	-	-	320.000
6695	19.020	-	-	-	320.000
6855	19.020	-	-	-	320.000

Table 77 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	6.525-6.875 GHz	Band:	U-NII-7
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE40 SU SP	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
6565	42.840	-	-	-	320.000
6685	42.240	-	-	-	320.000
6845	42.000	-	-	-	320.000

Table 78 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6565	38.040	-	-	-	320.000
6685	38.160	-	-	-	320.000
6845	38.040	-	-	-	320.000

Table 79 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	6.525-6.875 GHz	Band:	U-NII-7
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE80 SU SP	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
6625	83.380	-	-	-	320.000
6705	83.160	-	-	-	320.000
6785	82.940	-	-	-	320.000

Table 80 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6625	77.440	-	-	-	320.000
6705	77.440	-	-	-	320.000
6785	77.440	-	-	-	320.000

Table 81 - 99% Bandwidth Results



Test Configuration			
Frequency Range:	6.525-6.875 GHz	Band:	U-NII-7
Limit Clause(s):	15.407 (a)(11) RSS-248 4.4	Test Method(s):	C63.10 6.9.3 C63.10 12.5.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11ax HE160 SU SP	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)	26 dB Bandwidth (MHz)				FCC Limit (MHz)
	A	B	C	D	
6665	166.740	-	-	-	320.000

Table 82 - 26 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				ISED Limit (MHz)
	A	B	C	D	
6665	156.240	-	-	-	320.000

Table 83 - 99% Bandwidth Results

MIMO CDD

Protocol	26 dB Bandwidth (MHz)	
	Minimum	Maximum
802.11ax HE20 SU SP	21.180	21.480
802.11ax HE40 SU SP	41.760	42.240
802.11ax HE80 SU SP	82.500	83.160
802.11ax HE160 SU SP	166.320	168.000
802.11ax HE20 SU LPI	21.180	21.480
802.11ax HE40 SU LPI	41.760	42.240
802.11ax HE80 SU LPI	82.280	83.160
802.11ax HE160 SU LPI	165.480	168.000
802.11ax HE80 SU VLP	82.500	82.720
802.11ax HE160 SU VLP	166.740	168.000

Table 84 - 26 dB Bandwidth Summary Results - MIMO CDD

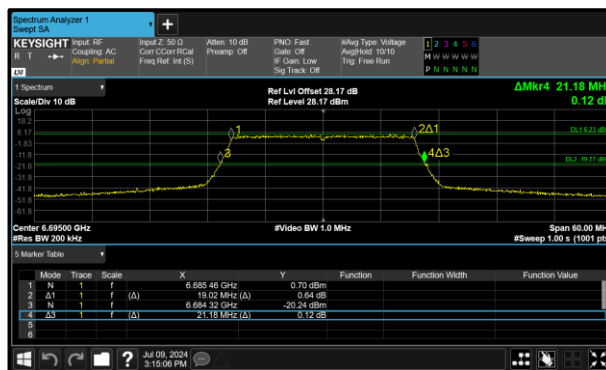


Figure 61 - 802.11ax HE20 SU SP Minimum 26 dB EBW



Figure 62 - 802.11ax HE20 SU SP Maximum 26 dB EBW

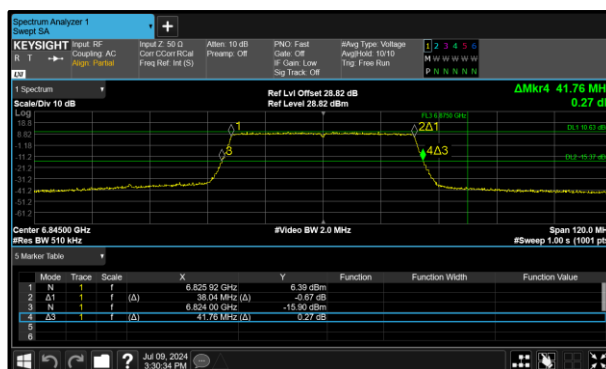


Figure 63 - 802.11ax HE40 SU SP Minimum 26 dB EBW

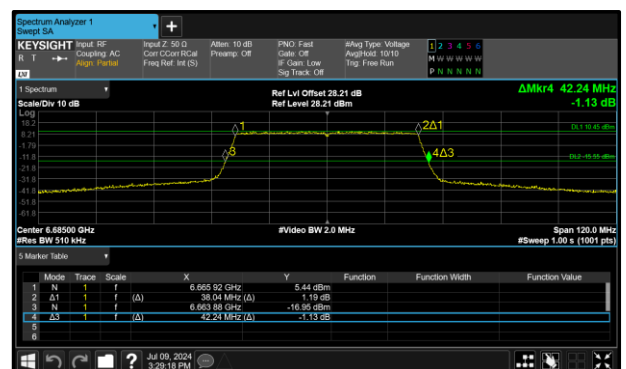


Figure 64 - 802.11ax HE40 SU SP Maximum 26 dB EBW

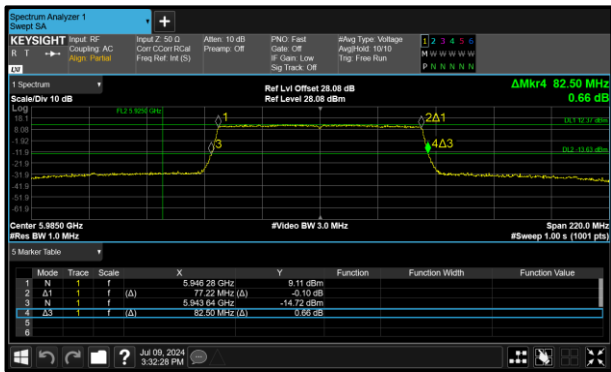


Figure 65 - 802.11ax HE80 SU SP Minimum 26 dB EBW

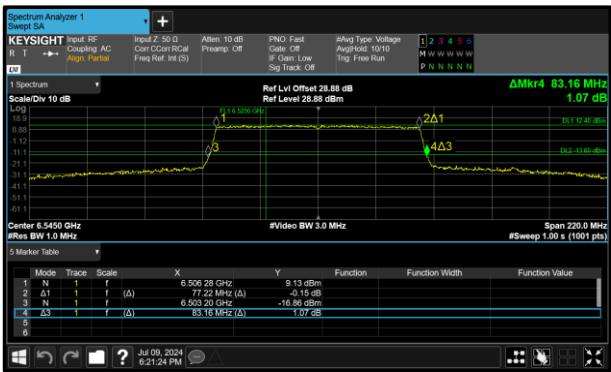


Figure 66 - 802.11ax HE80 SU SP Maximum 26 dB EBW

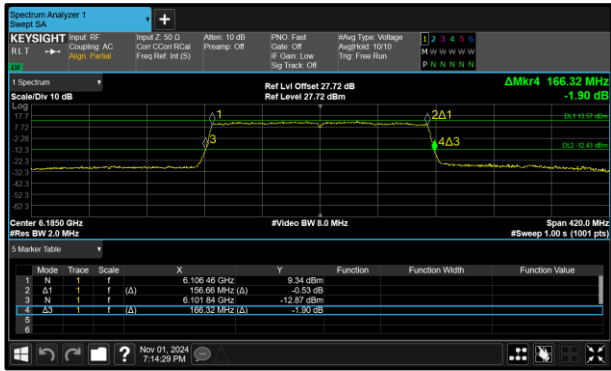


Figure 67 - 802.11ax HE160 SU SP Minimum 26 dB EBW

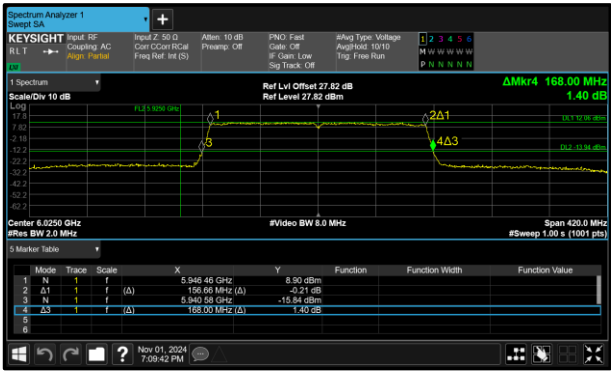


Figure 68 - 802.11ax HE160 SU SP Maximum 26 dB EBW

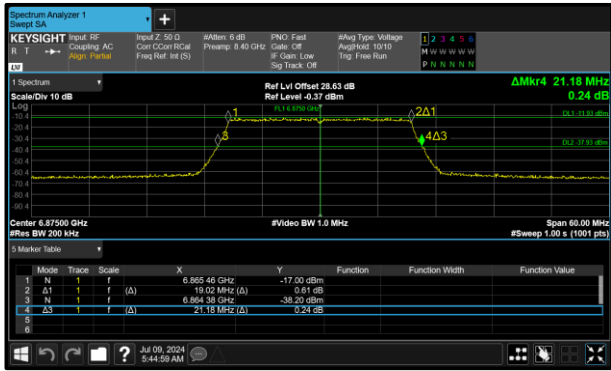


Figure 69 - 802.11ax HE20 SU LPI Minimum 26 dB EBW

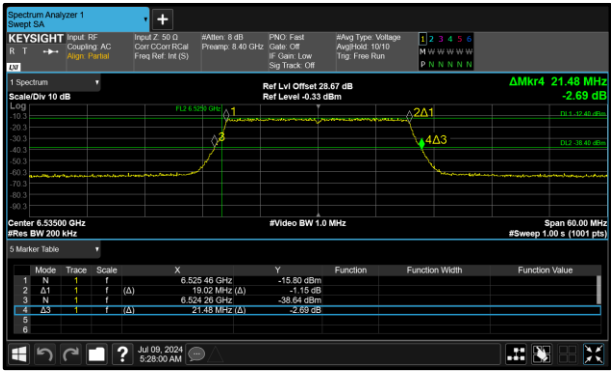


Figure 70 - 802.11ax HE20 SU LPI Maximum 26 dB EBW