

ELECTROMAGNETIC EMISSIONS  
COMPLIANCE TEST REPORT

**FCC Applicant:** silex technology, Inc.  
2-3-1 Hikaridai, Seika-cho, Soraku-gun, Kyoto 619-0237, Japan

**Product Name:** SX-PCEAX

**Brand Name:** Silex Technology

**Model No.:** SX-PCEAX

**Model Difference:** N/A

**Report Number:** TERF2304000928ER

**FCC ID** N6C-PCEAX

**Issue Date:** May 9, 2023

**Date of Test:** April 20, 2023 ~ May 5, 2023

**Date of EUT Received:** April 20, 2023

Approved By

Blue Yang

**We hereby certify that:**

The above equipment was tested by SGS Taiwan Ltd. Central RF Lab The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10:2013 and the energy emitted by the sample EUT comply with FCC rule part §15.407.

The results of this report relate only to the sample identified in this report.

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## Revision History

Report Number	Revision	Description	Issue Date	Revised By	Remark
TERF2304000928ER	00	Original.	May 9, 2023	Karen Huang	

**Note:**

- The remark "\*" indicates modification of the report upon requests from certification body.

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## 1 GENERAL INFORMATION

### 1.1 Product Description

Product Name:	SX-PCEAX
Brand Name:	Silex Technology
Model No.:	SX-PCEAX
Model Difference:	N/A
Hardware Version:	N/A
Firmware Version:	N/A
Power Supply:	3.3Vdc from host equipment
Test Software (Name/Version)	QRCT v4.0.210.0

### 1.2 Modulation & Data Rate

Modulation type:	64QAM, 16QAM, QPSK, BPSK for OFDM
	256QAM for OFDM in 802.11ac
	256QAM, 1024QAM for OFDMA in 802.11ax
Transition Rate:	802.11 a: 6 - 54 Mbps
	802.11 n_20MHz: up to 144.4 Mbps
	802.11 n_40MHz: up to 300 Mbps
	802.11 ac_20MHz: up to 173.4 Mbps
	802.11 ac_40MHz: up to 400 Mbps
	802.11 ac_80MHz: up to 866.6 Mbps
	802.11 ac_160MHz: up to 1733.4 Mbps
	802.11 ax_20MHz: up to 286.8 Mbps
	802.11 ax_40MHz: up to 573.6 Mbps
	802.11 ax_80MHz: up to 1201 Mbps
802.11 ax_160MHz: up to 2402 Mbps	

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### 1.3 Antenna Designation

Antenna Type	Supplier	Antenna Part No.	Freq. (MHz)	Peak Antenna Gain (dBi)	Directional Gain (dBi)
Monopole	TAOGLAS	GW.05.0153	5150~5250	1.69	4.70
			5250~5350	1.92	4.93
Monopole	TE connectivity	2118907-8	5150~5250	1.44	4.45
			5250~5350	2.09	5.10

**Note:**

1. Pre-scanned was done on the above antennas, measurements were demonstrated by using the antenna with the highest gain as the worst case scenarios.
2. Antenna information is provided by the applicant.
3. For the detailed information, please refer to Appendix 1 in this report.

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1.4 FCC

Wi-Fi	Frequency Range	Channels	Rated Power(Avg) (dBm) (Worst Case)	Modulation Technology
a/ n_HT/ ac_VHT/ ax_HE 20M	5180~5240	4	16.49 dBm	OFDMA
	5260~5320	4	16.99 dBm	OFDM
n_HT ac_VHT/ ax_HE 40M	5190~5230	2	16.46 dBm	OFDMA
	5270~5310	2	16.41 dBm	OFDM
ac_VHT/ ax_HE 80M	5210	1	15.95 dBm	OFDMA
	5290	1	16.36 dBm	OFDMA
ac_VHT/ ax_HE 160M	5250	1	15.32 dBm	OFDMA

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### 1.5 Test Methodology of Applied Standards

FCC Part 15, Subpart E §15.407  
FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01  
FCC KDB 662911 D01 Multiple Transmitter Output v02r01  
ANSI C63.10:2013

### 1.6 Test Facility

Laboratory	Test Site Address	Test Site Name	FCC Designation number	IC CAB identifier
SGS Taiwan Ltd. Central RF Lab. (TAF code 3702)	No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan.	SAC 1	TW0027	TW3702
		SAC 2		
		SAC 3		
		Conduction 1		
		Conducted 1		
		Conducted 2		
		Conducted 3		
		Conducted 4		
		Conducted 5		
		Conducted 6		
	No.2, Keji 1st Rd., Guishan District, Taoyuan City, Taiwan 333	Conduction C	TW0028	
		SAC C		
		SAC D		
		SAC G		
		Conducted A		
		Conducted B		
		Conducted C		
		Conducted D		
		Conducted E		
		Conducted F		
Conducted G				

**Note:** Test site name is remarked on the equipment list in each section of this report as an indication where measurements occurred in specific test site and address.

### 1.7 Special Accessories

There are no special accessories used while test was conducted.

### 1.8 Equipment Modifications

There was no modification incorporated into the EUT.

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## 2 SYSTEM TEST CONFIGURATION

### 2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

### 2.2 EUT Exercise

An engineering test mode (software/firmware) that applicant provided was utilized to manipulate the EUT into transmit, selection of the test channel, and modulation scheme.

### 2.3 Test Procedure

#### 2.3.1 Conducted Test (RF)

The active antenna port of the unlicensed wireless device is connected to the spectrum analyzer with attenuator to protect the instrumentation. If a second antenna port is available, it is tested at one operating frequency, with other port(s) appropriately terminated, to verify it has similar output characteristics as the fully tested port.

#### 2.3.2 Radiated Emissions

The EUT is placed on a turn table. For emissions testing at or below 1 GHz, the table height shall be 0.8 m above the reference ground plane. For emission measurements above 1 GHz, the table height shall be 1.5 m. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this transmitter (EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made "while keeping the antenna in the 'cone of radiation' from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response." is still within the 3dB illumination BW of the measurement antenna.

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## 2.4 Measurement Results Explanation Example

### 2.4.1 Radiated Emission Test Sites For Measurements From 9 kHz To 30 MHz

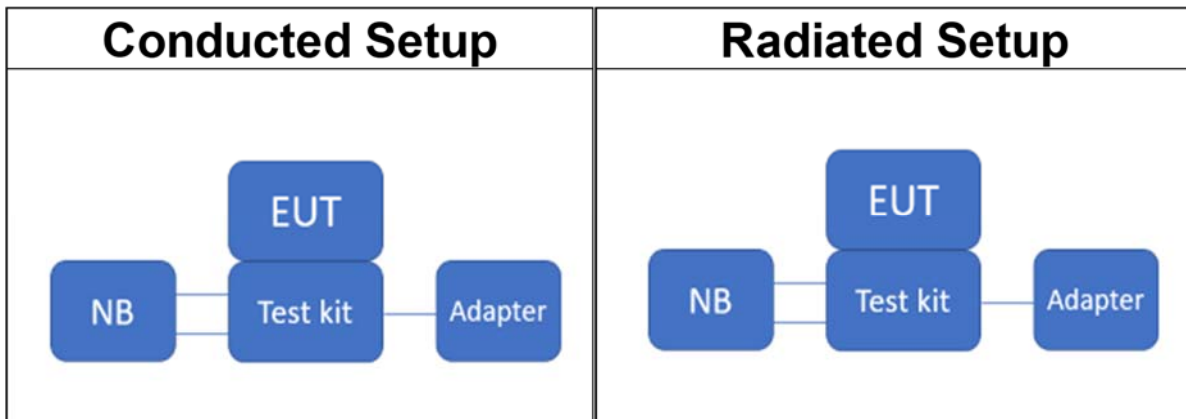
Radiated emission below 30MHz is measured in a 9m\*6m\*6m semi-anechoic chamber, the measurements correspond to those obtained at an open-field test site.

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

### 2.4.2 For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuation factor between EUT conducted port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly EUT RF output level.

## 2.5 Test Configuration



## 2.6 Control Unit(s)

Conducted Emission Test Site: Conducted 2					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Notebook	Lenovo	T430s	R9-WW5EG	N/A	N/A
Adapter	EDACPOWER	EA10682N-120	N/A	N/A	N/A
Radiated Emission Test Site: SAC 3					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Notebook	Lenovo	T430s	R9-WW5EG 13/0	N/A	N/A
Adapter	EDACPOWER	EA10682N-120	N/A	N/A	N/A

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### 3 SUMMARY OF TEST RESULT

FCC Rules	Description Of Test	Result
§15.407(a)	Maximum Conducted Output Power	Compliant
§15.407(a)	Power Spectral Density	Compliant
§15.205 §15.209 §15.407(b)	Undesirable Radiated Emissions	Compliant

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## 4 DESCRIPTION OF TEST MODES

### 4.1 Operating Frequencies

#### Operated band in 5150 MHz ~5250 MHz:

20 M		40 M		80 M	
CH	Freq (MHz)	CH	Freq (MHz)	CH	Freq (MHz)
36	5180	38	5190	42	5210
40	5200	46	5230		
44	5220				
48	5240				

#### Operated band in 5250 MHz ~5350 MHz:

20 M		40 M		80 M		160 M	
CH	Freq (MHz)	CH	Freq (MHz)	CH	Freq (MHz)	CH	Freq (MHz)
52	5260	54	5270	58	5290	50	5250
56	5280	62	5310				
60	5300						
64	5320						

#### Operated band in 5470 MHz ~5725 MHz:

20 M		40 M		80 M	
CH	Freq (MHz)	CH	Freq (MHz)	CH	Freq (MHz)
100	5500	102	5510	106	5530
104	5520	110	5550	122	5610
108	5540	118	5590	138	5690
112	5560	126	5630		
116	5580	134	5670		
120	5600	142	5710		
124	5620				
128	5640				
132	5660				
136	5680				
140	5700				
144	5720				

#### Operated band in 5725 MHz ~5850 MHz:

20 M		40 M		80 M	
CH	Freq (MHz)	CH	Freq (MHz)	CH	Freq (MHz)
114	5570	149	5745	151	5755
		153	5765	155	5775
		157	5785		
		161	5805		
		165	5825		

#### Operated band in 5850 MHz ~5895 MHz:

20 M		40 M		80 M		160 M	
CH	Freq (MHz)	CH	Freq (MHz)	CH	Freq (MHz)	CH	Freq (MHz)
169	5845	167	5835	171	5855	163	5815
173	5865	175	5875				
177	5885						

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#### 4.2 The Worst Test Modes and Channel Details

1. The EUT has been tested under operating condition.
2. Test program used to control the EUT for staying in continuous transmitting mode is programmed.
3. Investigation has been done on all the possible configurations for searching the worst case. The given UE is pre-scanned among below modes.

Modulation	Transmission Chain				Single Transmission Spatial	Multiple Transmission Spatial
	Ch0	Ch1	Ch2	Ch3		
<input checked="" type="checkbox"/> 802.11 a	<input checked="" type="checkbox"/> Ch0	<input checked="" type="checkbox"/> Ch1	<input type="checkbox"/> Ch2	<input type="checkbox"/> Ch3	<input checked="" type="checkbox"/> 1TX	<input checked="" type="checkbox"/> 2TX
<input checked="" type="checkbox"/> 802.11 n	<input checked="" type="checkbox"/> Ch0	<input checked="" type="checkbox"/> Ch1	<input type="checkbox"/> Ch2	<input type="checkbox"/> Ch3	<input checked="" type="checkbox"/> SISO	<input checked="" type="checkbox"/> 2TX
<input checked="" type="checkbox"/> 802.11 ac	<input checked="" type="checkbox"/> Ch0	<input checked="" type="checkbox"/> Ch1	<input type="checkbox"/> Ch2	<input type="checkbox"/> Ch3	<input checked="" type="checkbox"/> SISO	<input checked="" type="checkbox"/> 2TX
<input checked="" type="checkbox"/> 802.11 ax	<input checked="" type="checkbox"/> Ch0	<input checked="" type="checkbox"/> Ch1	<input type="checkbox"/> Ch2	<input type="checkbox"/> Ch3	<input checked="" type="checkbox"/> SISO	<input checked="" type="checkbox"/> 2TX

4. Therefore, below summary is the modes of test configuration that yield the highest reading and generate the highest emission chosen to carry out the relevantly mandatory test items.

CONDUCTED TEST						
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT
802.11a	5180-5240	36 to 48	36,44,48	OFDM	6	2TX
	5260-5320	52 to 64	52,60,64			
802.11n_HT20	5180-5240	36 to 48	36,44,48	OFDM	MCS0	2TX
	5260-5320	52 to 64	52,60,64			
802.11n_HT40	5190-5230	38 to 46	38,46	OFDM	MCS0	2TX
	5270-5310	54 to 62	54,62			
802.11ac_VHT80	5210	42	42	OFDM	MCS0	2TX
	5290	58	58			
802.11ac_VHT160	5250	50	50	OFDM	MCS0	2TX

CONDUCTED TEST							
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	RU CONFIGURATION	DATA RATE (Mbps)	ANTENNA PORT
802.11ax_HE20	5180-5240	36 to 48	36,44,48	OFDMA	FULL RU 26/0,26/8 52/37,52/40 106/53,106/54	MCS0	2TX
	5260-5320	52 to 64	52,60,64				
802.11ax_HE40	5190-5230	38 to 46	38,46	OFDMA	FULL RU 242/61,242/62	MCS0	2TX
	5270-5310	54 to 62	54,62				
802.11ax_HE80	5210	42	42	OFDMA	FULL RU 484/65,484/66	MCS0	2TX
	5290	58	58				
802.11ax_HE160	5250	50	50	OFDMA	FULL RU 996/67,996/S67	MCS0	2TX

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RADIATED EMISSION TEST (BELOW 1 GHz)						
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT
802.11a	5180~5240	36 to 48	44	OFDM	6	2TX
	5260~5320	52 to 64	60			

RADIATED EMISSION TEST (ABOVE 1 GHz)						
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT
802.11a	5180~5240	36 to 48	36,44,48	OFDM	6	2TX
	5260~5320	52 to 64	52,60,64			
802.11n_HT20	5180~5240	36 to 48	36,44,48	OFDM	MCS0	2TX
	5260~5320	52 to 64	52,60,64			
802.11n_HT40	5190~5230	38 to 46	38,46	OFDM	MCS0	2TX
	5270~5310	54 to 62	54,62			
802.11ac_VHT80	5210	42	42	OFDM	MCS0	2TX
	5290	58	58			

RADIATED EMISSION TEST (ABOVE 1 GHz)							
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	RU CONFIGURATION	DATA RATE (Mbps)	ANTENNA PORT
802.11ax_HE20	5180~5240	36 to 48	36,44,48	OFDMA	FULL RU 26/0,26/8 52/37,52/40	MCS0	2TX
	5260~5320	52 to 64	52,60,64				
802.11ax_HE40	5190~5230	38 to 46	38,46	OFDMA	FULL RU 242/61,242/62	MCS0	2TX
	5270~5310	54 to 62	54,62				
802.11ax_HE80	5210	42	42	OFDMA	FULL RU 484/65,484/66	MCS0	2TX
	5290	58	58				
802.11ax_HE160	5250	50	50	OFDMA	FULL RU 996/67,996/S67	MCS0	2TX

**Note:**

The field strength of radiated emission was measured as the EUT positioned in different orthogonal planes (E1/E2/H) based on actual usage of the EUT to pre-scan the emissions for determining the worst case scenario.

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## 5 MEASUREMENT UNCERTAINTY

Test Items	Uncertainty
Output Power measurement	+/- 1 dB
Emission Bandwidth	+/- 1.53 Hz
Undesignable radiated emission measurement	+/- 1.68 dB
Temperature	+/- 0.7 °C
Humidity	+/- 3 %
DC / AC Power Source	+/- 1 %

Radiated Spurious Emission Measurement Uncertainty				
<b>Polarization: Vertical</b>	+/-	<b>2.8</b>	<b>dB</b>	9kHz~30MHz
	+/-	<b>4.82</b>	<b>dB</b>	30MHz - 1000MHz
	+/-	<b>4.37</b>	<b>dB</b>	1GHz - 18GHz
	+/-	<b>4.21</b>	<b>dB</b>	18GHz - 40GHz
<b>Polarization: Horizontal</b>	+/-	<b>2.8</b>	<b>dB</b>	9kHz~30MHz
	+/-	<b>4.54</b>	<b>dB</b>	30MHz - 1000MHz
	+/-	<b>4.37</b>	<b>dB</b>	1GHz - 18GHz
	+/-	<b>4.21</b>	<b>dB</b>	18GHz - 40GHz

**Note:**

1. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.
2. The conformity assessment statement in this report is based solely on the test results, measurement uncertainty is excluded.

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## 6 MEASUREMENT EQUIPMENT USED

### 6.1 Conducted Measurement

Conducted Emission Test Site: Conducted 2					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EXA Spectrum Analyzer	KEYSIGHT	N9010B	MY59071541	07/14/2022	07/13/2023
Test Software	SGS	Radio Test Software	Ver. 21	N.C.R	N.C.R
Power Meter	Anritsu	ML2496A	2132007	09/21/2022	09/20/2023
Power Sensor	Anritsu	MA2411B	1911391	09/21/2022	09/20/2023
Power Sensor	Anritsu	MA2411B	1911392	09/21/2022	09/20/2023
Attenuator	Mini-Circuit	BW-S10W2+	4	12/13/2022	12/12/2023
DC Block	Mini-Circuits	BLK-18-S+	1	12/13/2022	12/12/2023

### 6.2 Radiated Measurement

Radiated Emission Test Site: SAC 3					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Horn Antenna	SCHWARZBECK	BBHA9170	184	12/30/2022	12/29/2023
Horn Antenna	SCHWARZBECK	BBHA9120D	1441	09/27/2022	09/26/2023
Bi-log Antenna	SCHWARZBECK	VULB9168	378	08/15/2022	08/14/2023
Loop Antenna	ETS.LINDGREN	6502	148045	10/05/2022	10/04/2023
Spectrum Analyzer	Agilent	E4446A	MY51100003	10/28/2022	10/27/2023
EMI Test Receiver	R&S	ESCI 7	100759	08/22/2022	08/21/2023
Pre-Amplifier	EMC Instruments	EMC118A45SEE	980868	12/13/2022	12/12/2023
Pre-Amplifier	EMC Instruments	EMC184045B	980135	10/27/2022	10/26/2023
Pre-Amplifier	HP	8447D	2944A07676	12/13/2022	12/12/2023
Filter 5150-5350 MHz	Micro-Tronics	BRM50703	1	12/13/2022	12/12/2023
High Pass Filter	WI	WHKX7.0/18G-8SS	45	12/13/2022	12/12/2023
Coaxial Cable	Huber Suhner	SUCOFLEX 104PEA	MY4251/4PEA	12/13/2022	12/12/2023
Coaxial Cable	EMC Instruments	EMC 107-SM-SM-500	221104	12/13/2022	12/12/2023
Coaxial Cable	EMC Instruments	EMC 107-SM-SM-1000	221103	12/13/2022	12/12/2023
Coaxial Cable	EMC Instruments	EMC 107-SM-SM-1500	221110	12/13/2022	12/12/2023
Coaxial Cable	EMC Instruments	EMC 107-SM-SM-8000	221109	12/13/2022	12/12/2023
Site Cal	SGS	SAC 3	N/A	01/01/2023	12/31/2023
Test Software	audix	e3	Ver. 9 210322	N.C.R	N.C.R

**NOTE:** N.C.R refers to Not Calibrated Required.

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## 7 MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

### 7.1 Standard Applicable

#### 7.1.1 Duty Cycle

Pre-analysis Check: While conducting average power measurement, duty cycle of each mode shall be checked to ensure its duty cycle in order to compensate for the loss due to insufficient ratio of duty cycle.

All duty cycle is pre-scanned, and result as obtained below shows only the most representative ones where duty cycle is conducted as the given transmission with given virtual operation that expresses the percentage.

#### 7.1.2 Output Power

Band	EUT CATEGORY		e-CRF Title 47 §15.407			
			Conducted Output Power	EIRP	TPC	Antenna Directional Gain Requirements
U-NII-1		Fixed point-to-point	1 Watt(30dBm)	Not required	Not required	23dBi
		Outdoor AP	1 Watt(30dBm)	Elevation angle above 30 degrees 125mW (21dBm)	Not required	6dBi
		Indoor AP	1 Watt(30dBm)	Not required	Not required	6dBi
	V	Other	250mW(23.98dBm)	Not required	Not required	6dBi
U-NII-2A	V	Other	250mW(23.98dBm) or 11dBm+10 log B	Not required	When EIRP >500mW At least 6dB below EIRP 1W (30dBm)	6dBi
U-NII-2C		Other	250mW(23.98dBm) or 11dBm+10 log B	Not required		6dBi
U-NII-3		Other	1 Watt(30dBm)	Not required	Not required	6dBi
		Fixed point-to-point	1 Watt(30dBm)	Not required	Not required	Not required
U-NII-4		Indoor AP (a channel spans 5725~5850 and 5850~5895MHz)	Not required	36dBm	Not required	Not required
		indoor client (a channel spans 5725~5850 and 5850~5895MHz)	Not required	30dBm	Not required	Not required
		subordinate device	Not required	36dBm	Not required	Not required
<p>1. If transmitting antennas of directional gain greater than the antenna requirements column, the Maximum transmit power shall be reduced by the amount in dB that the direction-al gain of the antenna.</p> <p>2. For the 10 log B, B is the 26 dB emission bandwidth.</p>						

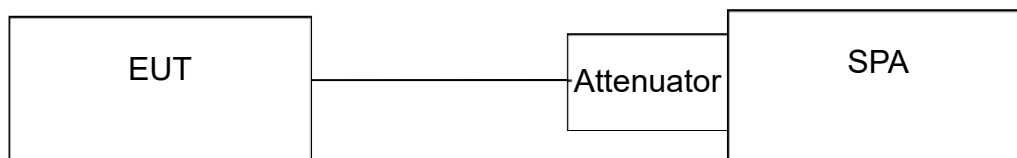
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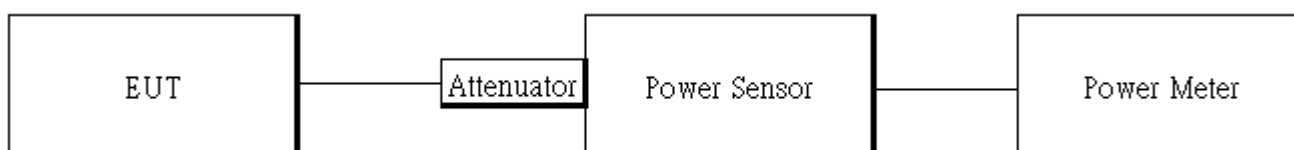


## 7.2 Test Setup

### 7.2.1 Duty Cycle



### 7.2.2 Output Power



## 7.3 Measurement Procedure

### 7.3.1 Duty Cycle Measurements

1. Set span = Zero
2. RBW = 8MHz
3. VBW = 8MHz,
4. Detector = Peak

### 7.3.2 Output Power Measurements

1. Place the EUT on the table and set it in transmitting mode.
2. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules .
3. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the power meter
4. Power Meter is used as the auxiliary test equipment to conduct the output power measurement.
5. Record the max. reading and add  $10 \log(1/\text{duty cycle})$ .
6. Repeat above procedures until all frequency (low, middle, and high channel) measured were complete.
7. MIMO mode: offset is set with "measure and add  $10 \log(N)$ " to measurement for MIMO mode. Offset = cable loss +  $10 \log(N)$ , where N is number of transmitting antenna.

#### Note:

As per section F. 2). e). (ii) of FCC KDB 662911 D01

If antenna gains are not equal and each transmit antenna is driven by only one spatial stream, directional gain may be calculated by either of the following formulas.

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$$DirectionalGain = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

where

Each antenna is driven by no more than one spatial stream;  
 NSS = the number of independent spatial streams of data;  
 NANT = the total number of antennas  
 $g_{j,k}$  =  $G_k / 20$  10Gk if the kth antenna is being fed by spatial stream j, or zero if it is not;  
 $G_k$  is the gain in dBi of the kth antenna.

The antenna gain is not greater than 6 dBi. Therefore, reduction of power is not required.

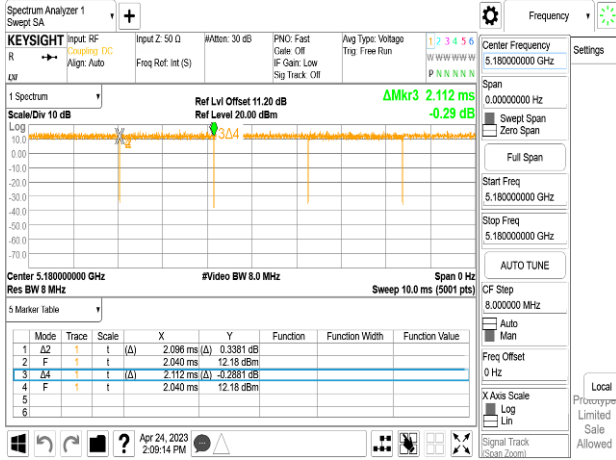
#### 7.4 Duty Cycle Measurement Result

Mode	Duty Cycle (%) =Ton / (Ton+Toff)	Duty Factor (dB) =10*log ( 1/Duty Cycle )	1/T (kHz)	VBW setting (kHz)
802.11a	99.24	0.03	0.48	0.01
802.11n_20	99.71	0.01	0.18	0.01
802.11ac_20	99.71	0.01	0.18	0.01
802.11n_40	99.71	0.01	0.18	0.01
802.11ac_40	99.71	0.01	0.18	0.01
802.11ac_80	99.71	0.01	0.18	0.01
802.11ac_160	99.71	0.01	0.18	0.01
802.11ax_20	99.67	0.01	0.18	0.01
802.11ax_40	99.71	0.01	0.18	0.01
802.11ax_80	99.71	0.01	0.18	0.01
802.11ax_160	99.71	0.01	0.18	0.01

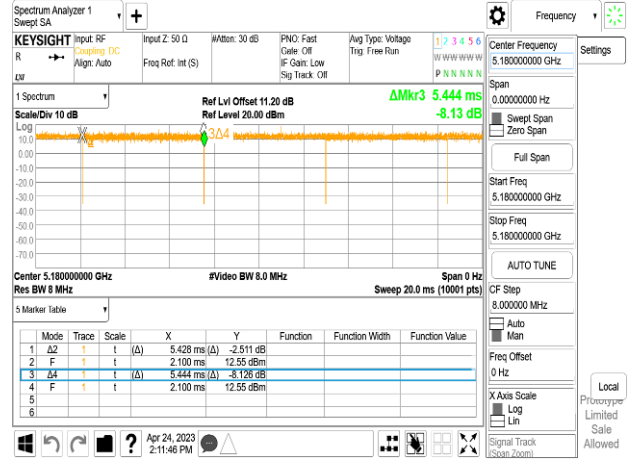
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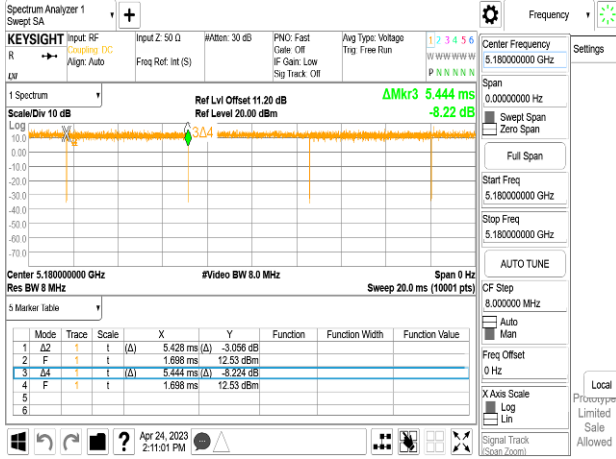
802.11a\_20MHz\_Chain0\_5180MHz



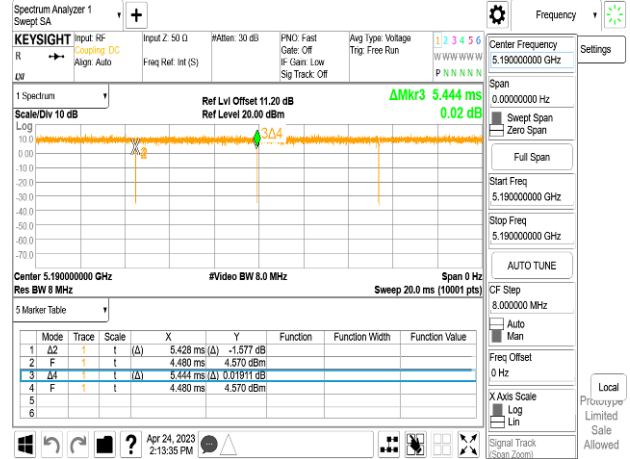
802.11ac\_20MHz\_Chain0\_5180MHz



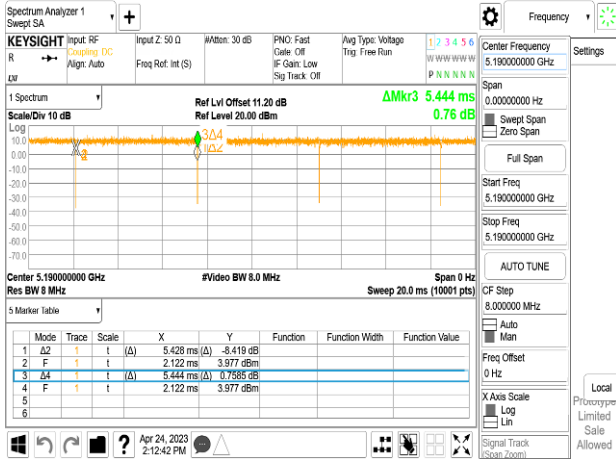
802.11n\_20MHz\_Chain0\_5180MHz



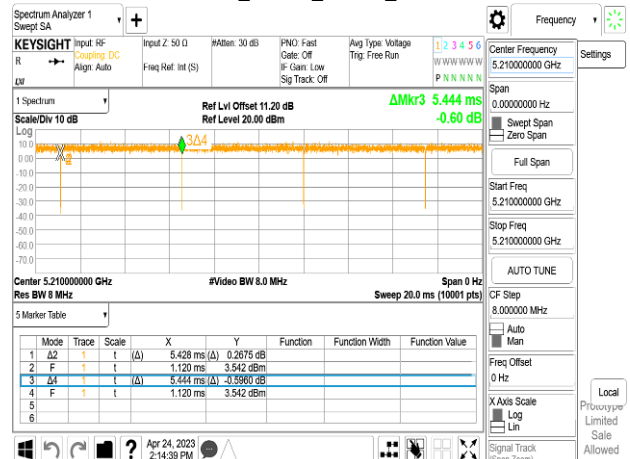
802.11ac\_40MHz\_Chain0\_5190MHz



802.11n\_40MHz\_Chain0\_5190MHz



802.11ac\_80MHz\_Chain0\_5210MHz

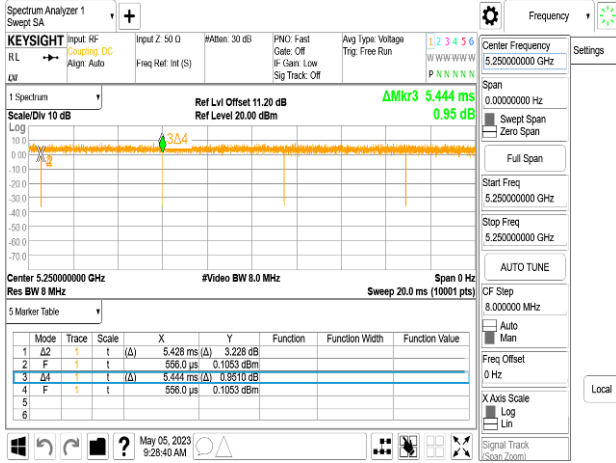


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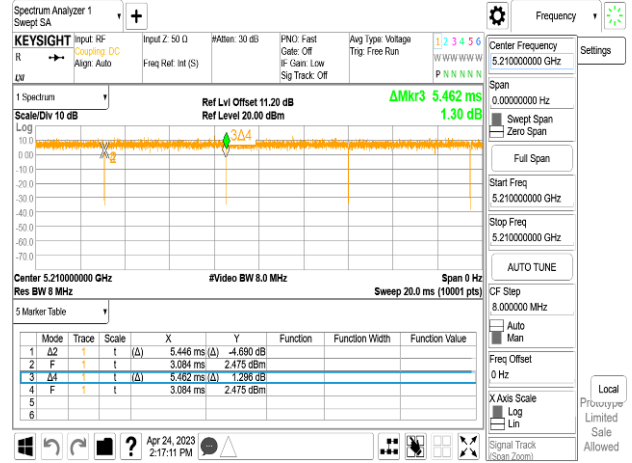
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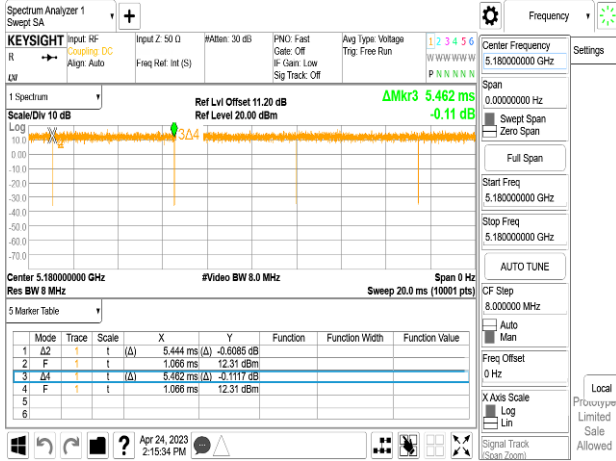
802.11ac\_160MHz\_Chain0\_5250MHz



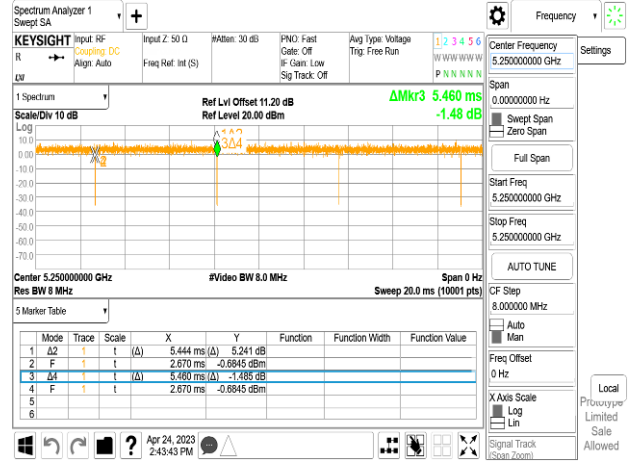
802.11ax\_80MHz\_Chain0\_5210MHz



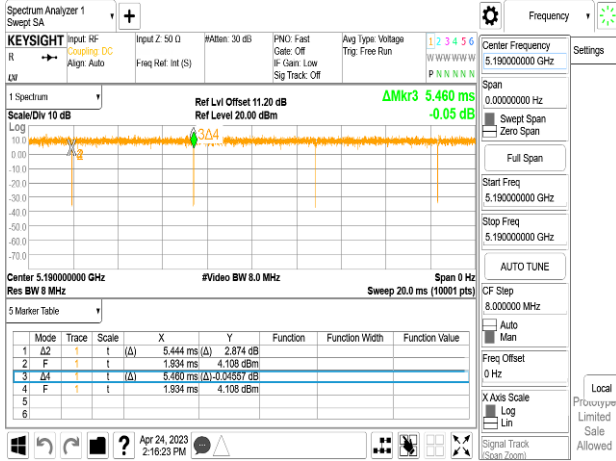
802.11ax\_20MHz\_Chain0\_5180MHz



802.11ax\_160MHz\_Chain0\_5250MHz



802.11ax\_40MHz\_Chain0\_5190MHz



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## 7.5 Output Power Measurement Result

### 7.5.1 FCC Output power

#### 802.11a\_2TX

CH	Frequency (MHz)	Data Rate	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
				Ch0	Ch1				
36	5180	6	12	11.57	12.09	14.85	30.558	23.98	PASS
44	5220	6	12.5	11.89	12.50	15.22	33.259	23.98	PASS
48	5240	6	12.5	11.95	12.50	<b>15.25</b>	33.474	23.98	PASS
52	5260	6	14.5	13.66	14.23	16.97	49.748	23.98	PASS
60	5300	6	14.5	13.67	14.26	<b>16.99</b>	49.986	23.98	PASS
64	5320	6	14	13.24	13.51	16.39	43.557	23.98	PASS

#### 802.11n\_HT20\_2TX

CH	Frequency (MHz)	Data Rate	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
				Ch0	Ch1				
36	5180	MCS0	13	12.19	12.66	15.44	35.029	23.98	PASS
44	5220	MCS0	13	12.16	12.68	15.44	35.000	23.98	PASS
48	5240	MCS0	13	12.19	12.68	<b>15.45</b>	35.114	23.98	PASS
52	5260	MCS0	14	12.87	13.42	16.17	41.368	23.98	PASS
60	5300	MCS0	14	13.00	13.53	<b>16.29</b>	42.521	23.98	PASS
64	5320	MCS0	13.5	12.49	12.79	15.66	36.775	23.98	PASS

#### 802.11n\_HT40\_2TX

CH	Frequency (MHz)	Data Rate	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
				Ch0	Ch1				
38	5190	MCS0	13.5	13.13	13.48	<b>16.32</b>	42.869	23.98	PASS
46	5230	MCS0	13.5	12.93	13.43	16.20	41.688	23.98	PASS
54	5270	MCS0	13.5	12.91	13.26	16.10	40.752	23.98	PASS
62	5310	MCS0	14	13.36	13.44	<b>16.41</b>	43.783	23.98	PASS

#### 802.11ac\_VHT20\_2TX

CH	Frequency (MHz)	Data Rate	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
				Ch0	Ch1				
36	5180	MCS0	13	12.20	12.62	15.43	34.898	23.98	PASS
44	5220	MCS0	13	12.08	12.69	15.41	34.743	23.98	PASS
48	5240	MCS0	13	12.10	12.74	<b>15.44</b>	35.032	23.98	PASS
52	5260	MCS0	14	12.79	13.35	16.09	40.662	23.98	PASS
60	5300	MCS0	14	13.02	13.47	<b>16.26</b>	42.303	23.98	PASS
64	5320	MCS0	13.5	12.55	12.70	15.64	36.632	23.98	PASS

#### 802.11ac\_VHT40\_2TX

CH	Frequency (MHz)	Data Rate	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
				Ch0	Ch1				
38	5190	MCS0	13.5	13.04	13.50	<b>16.29</b>	42.550	23.98	PASS
46	5230	MCS0	13.5	12.94	13.42	16.20	41.683	23.98	PASS
54	5270	MCS0	13.5	12.84	13.30	16.09	40.635	23.98	PASS
62	5310	MCS0	14	13.33	13.44	<b>16.40</b>	43.634	23.98	PASS

#### 802.11ac\_VHT80\_2TX

CH	Frequency (MHz)	Data Rate	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
				Ch0	Ch1				
42	5210	MCS0	13	12.27	12.67	<b>15.49</b>	35.379	23.98	PASS
58	5290	MCS0	13.5	12.70	13.15	<b>15.94</b>	39.298	23.98	PASS

#### 802.11ac\_VHT160\_2TX

CH	Frequency (MHz)	Data Rate	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
				Ch0	Ch1				
50	5250	MCS0	12.5	11.88	12.15	<b>15.03</b>	31.842	23.98	PASS

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802.11ax\_HE20\_2TX

CH	Frequency (MHz)	Data Rate	RU config.	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
					Ch0	Ch1				
36	5180	MCS0	full	14	13.10	13.82	16.49	44.561	23.98	PASS
		MCS0	26/0	4.5	5.32	5.63	8.49	7.067	23.98	PASS
		MCS0	52/37	7.5	7.80	8.14	10.99	12.554	23.98	PASS
		MCS0	106/53	10.5	10.46	11.28	13.90	24.570	23.98	PASS
44	5220	MCS0	full	14	13.09	13.70	16.42	43.857	23.98	PASS
		MCS0	26/0	4.5	5.24	5.61	8.44	6.988	23.98	PASS
		MCS0	52/37	7.5	7.90	8.04	10.99	12.546	23.98	PASS
		MCS0	106/53	10.5	10.41	11.27	13.88	24.411	23.98	PASS
48	5240	MCS0	full	14	13.06	13.74	16.43	43.933	23.98	PASS
		MCS0	26/0	4.5	5.23	5.69	8.48	7.048	23.98	PASS
		MCS0	52/37	7.5	7.85	8.10	10.99	12.565	23.98	PASS
		MCS0	106/53	10.5	10.46	11.09	13.80	23.994	23.98	PASS
52	5260	MCS0	full	14.5	13.57	14.05	16.83	48.209	23.98	PASS
		MCS0	26/8	11	11.08	11.90	14.52	28.340	23.98	PASS
		MCS0	52/40	14	13.42	14.18	16.83	48.209	23.98	PASS
		MCS0	106/54	13.5	13.19	13.68	16.46	44.224	23.98	PASS
60	5300	MCS0	full	14	13.08	13.73	16.43	43.972	23.98	PASS
		MCS0	26/8	11	11.17	11.80	14.51	28.256	23.98	PASS
		MCS0	52/40	14	13.49	14.30	16.93	49.300	23.98	PASS
		MCS0	106/54	14	13.60	14.29	<b>16.97</b>	49.812	23.98	PASS
64	5320	MCS0	full	14	13.07	13.35	16.23	41.946	23.98	PASS
		MCS0	26/8	11	11.12	11.87	14.53	28.352	23.98	PASS
		MCS0	52/40	13.5	13.12	13.61	16.39	43.517	23.98	PASS
		MCS0	106/54	14	13.48	13.78	16.65	46.209	23.98	PASS

802.11ax\_HE40\_2TX

CH	Frequency (MHz)	Data Rate	RU config.	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
					Ch0	Ch1				
38	5190	MCS0	full	14	13.28	13.60	<b>16.46</b>	44.217	23.98	PASS
		MCS0	242/61	13	13.19	13.49	16.36	43.207	23.98	PASS
46	5230	MCS0	full	14	13.16	13.59	16.39	43.584	23.98	PASS
		MCS0	242/61	13	12.88	13.48	16.20	41.718	23.98	PASS
54	5270	MCS0	full	14	13.04	13.49	<b>16.28</b>	42.499	23.98	PASS
		MCS0	242/62	13	12.82	13.37	16.12	40.894	23.98	PASS
62	5310	MCS0	full	14	13.12	13.17	16.16	41.286	23.98	PASS
		MCS0	242/62	12.5	12.20	12.41	15.32	34.034	23.98	PASS

802.11ax\_HE80\_2TX

CH	Frequency (MHz)	Data Rate	RU config.	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
					Ch0	Ch1				
42	5210	MCS0	full	13.5	12.72	13.14	<b>15.95</b>	39.337	23.98	PASS
		MCS0	484/65	12.5	12.40	12.79	15.61	36.411	23.98	PASS
58	5290	MCS0	full	14	13.23	13.46	<b>16.36</b>	43.246	23.98	PASS
		MCS0	484/66	13	12.96	13.37	16.18	41.522	23.98	PASS

802.11ax\_HE160\_2TX

CH	Frequency (MHz)	Data Rate	RU config.	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
					Ch0	Ch1				
50	5250	MCS0	full	13	12.02	12.57	<b>15.32</b>	34.014	23.98	PASS
		MCS0	996/67	12	12.08	12.47	15.29	33.824	23.98	PASS
		MCS0	996/S67	12.5	12.08	12.49	15.30	33.906	23.98	PASS

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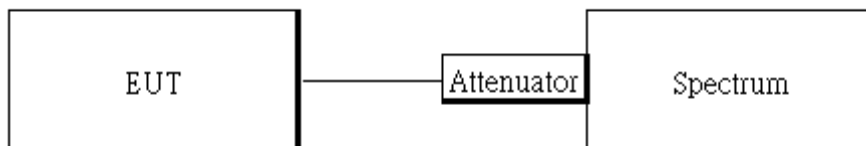
## 8 MAXIMUM POWER SPECTRAL DENSITY

### 8.1 Standard Applicable

Operation Bands	EUT CATEGORY		e-CRF Title 47 §15.407 Power Spectral Density	Antenna Directional Gain Requirements
U-NII-1		Outdoor Access Point (Master)	1. 17dBm/ MHz 2. EIRP<=125mW(21dBm) at any elevation angle > 30°	6dBi
		Indoor Access Point (Master)	17dBm / MHz	6dBi
		Fixed point-to-point Access Ponit	17dBm / MHz	23dBi
	V	Client device	11dBm / MHz	6dBi
U-NII-2A	V	All	11dBm / MHz	6dBi
U-NII-2C		All	11dBm / MHz	6dBi
U-NII-3		All	30dBm / 500kHz	6dBi
U-NII-4		Indoor AP	20dBm / MHz e.i.r.p.	Not required
		indoor client	14dBm / MHz e.i.r.p.	Not required
		subordinate device	20dBm / MHz e.i.r.p.	Not required

If transmitting antennas of directional gain greater than the antenna requirements column, the Maximum transmit power shall be reduced by the amount in dB that the direction-al gain of the antenna.

### 8.2 Test Setup



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### 8.3 Measurement Procedure

1. Place the EUT on the table and set it in transmitting mode.
2. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules .
3. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to Spectrum.
4. For U-NII1, U-NII-2A, U-NII-2C Band:  
Set RBW=1MHz, VBW=3MHz, where span is enough to capture the entire bandwidth, Sweep time = Auto (1001 pts), Detector = power averaging (rms), if available. Otherwise, use sample detector mode, traces 100 sweeps of video averaging. (SA-2 with the omission of procedure x, the integration with 26dB EBW bandwidth)  
For U-NII-3 Band:  
Set RBW=300kHz, VBW=1MHz, where span is enough to capture the entire bandwidth, Sweep time = Auto, detector = RMS or sample, traces 100 sweeps of video averaging.  
In addition, measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10 log (500 kHz/RBW) to the measured result.
5. Use the cursor on spectrum to peak search the highest level of trace
6. Record the max. reading and add 10 log(1/duty cycle).
7. Repeat above procedures until all default test channel (low, middle, and high) was complete.

*Note: For the test of PSD at MIMO mode, the highest emission of worst case employing Measure and add 10 log (N) technical is reported after the comparison between Main Antenna at single transmitting mode and Aux that yields the higher value. The MIMO transmitting mode produces higher value of outcome.*

**Note:**

As per section F. 2). e). (ii) of FCC KDB 662911 D01

If antenna gains are not equal and each transmit antenna is driven by only one spatial stream, directional gain may be calculated by either of the following formulas.

$$DirectionalGain = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

where

Each antenna is driven by no more than one spatial stream;

NSS = the number of independent spatial streams of data;

NANT = the total number of antennas

$g_{j,k}$  = / 20 10Gk if the kth antenna is being fed by spatial stream j, or zero if it is not;

$G_k$  is the gain in dBi of the kth antenna.

The antenna gain is not greater than 6 dBi. Therefore, reduction of power is not required.

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## 8.4 Measurement Result

POWER DENSITY 802.11a MODE						
Frequency (MHz)	Ch0 meas PSD (dBm/MHz)	Ch1 meas PSD (dBm/MHz)	Duty Factor (dB)	Total Corr'd PSD(dBm/MHz)	Limit	Margin (dB)
5180	0.457	0.377	0.00	3.43	11.00 dBm/MHz	-7.57
5220	0.646	0.681	0.00	3.67	11.00 dBm/MHz	-7.33
5240	0.460	0.706	0.00	3.60	11.00 dBm/MHz	-7.40
5260	2.321	2.434	0.00	5.39	11.00 dBm/MHz	-5.61
5300	2.132	2.363	0.00	5.26	11.00 dBm/MHz	-5.74
5320	1.417	1.814	0.00	4.63	11.00 dBm/MHz	-6.37
POWER DENSITY 802.11n HT20 MODE						
Frequency (MHz)	Ch0 meas PSD (dBm/MHz)	Ch1 meas PSD (dBm/MHz)	Duty Factor (dB)	Total Corr'd PSD(dBm/MHz)	Limit	Margin (dB)
5180	2.168	2.368	0.00	5.28	11.00 dBm/MHz	-5.72
5220	1.863	2.142	0.00	5.02	11.00 dBm/MHz	-5.98
5240	1.684	1.953	0.00	4.83	11.00 dBm/MHz	-6.17
5260	2.374	2.557	0.00	5.48	11.00 dBm/MHz	-5.52
5300	2.446	2.839	0.00	5.66	11.00 dBm/MHz	-5.34
5320	1.893	2.240	0.00	5.08	11.00 dBm/MHz	-5.92
POWER DENSITY 802.11n HT40 MODE						
Frequency (MHz)	Ch0 meas PSD (dBm/MHz)	Ch1 meas PSD (dBm/MHz)	Duty Factor (dB)	Total Corr'd PSD(dBm/MHz)	Limit	Margin (dB)
5190	0.143	0.019	0.00	3.09	11.00 dBm/MHz	-7.91
5230	0.110	0.025	0.00	3.08	11.00 dBm/MHz	-7.92
5270	0.145	-0.294	0.00	2.94	11.00 dBm/MHz	-8.06
5310	0.058	-0.032	0.00	3.02	11.00 dBm/MHz	-7.98
POWER DENSITY 802.11ac VHT80 MODE						
Frequency (MHz)	Ch0 meas PSD (dBm/MHz)	Ch1 meas PSD (dBm/MHz)	Duty Factor (dB)	Total Corr'd PSD(dBm/MHz)	Limit	Margin (dB)
5210	-2.998	-3.201	0.00	-0.09	11.00 dBm/MHz	-11.09
5290	-2.963	-2.723	0.00	0.17	11.00 dBm/MHz	-10.83
POWER DENSITY 802.11ac VHT160 MODE						
Frequency (MHz)	Ch0 meas PSD (dBm/MHz)	Ch1 meas PSD (dBm/MHz)	Duty Factor (dB)	Total Corr'd PSD(dBm/MHz)	Limit	Margin (dB)
5250	-6.99	-6.80	0.00	-3.89	11.00 dBm/MHz	-14.89

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POWER DENSITY 802.11ax HE20 MODE							
Frequency (MHz)	RU config.	Ch0 meas PSD (dBm/MHz)	Ch1 meas PSD (dBm/MHz)	Duty Factor (dB)	Total Corr'd PSD(dBm/MHz)	Limit	Margin (dB)
5180	full	3.607	3.287	0.00	6.46	11.00 dBm/MHz	-4.54
	26/0	2.041	2.392	0.00	5.23	11.00 dBm/MHz	-5.77
	52/37	2.023	2.079	0.00	5.06	11.00 dBm/MHz	-5.94
	106/53	1.892	2.246	0.00	5.08	11.00 dBm/MHz	-5.92
5220	full	2.818	3.186	0.00	6.02	11.00 dBm/MHz	-4.98
	26/0	2.301	2.540	0.00	5.43	11.00 dBm/MHz	-5.57
	52/37	2.211	1.579	0.00	4.92	11.00 dBm/MHz	-6.08
	106/53	1.965	2.105	0.00	5.05	11.00 dBm/MHz	-5.95
5240	full	2.730	2.876	0.00	5.81	11.00 dBm/MHz	-5.19
	26/0	2.426	1.965	0.00	5.21	11.00 dBm/MHz	-5.79
	52/37	2.233	2.222	0.00	5.24	11.00 dBm/MHz	-5.76
	106/53	2.242	2.160	0.00	5.21	11.00 dBm/MHz	-5.79
5260	full	2.852	3.299	0.00	6.09	11.00 dBm/MHz	-4.91
	26/8	7.540	7.741	0.00	10.65	11.00 dBm/MHz	-0.35
	52/40	7.590	8.026	0.00	10.82	11.00 dBm/MHz	-0.18
	106/54	4.693	4.790	0.00	7.75	11.00 dBm/MHz	-3.25
5300	full	2.535	2.807	0.00	5.68	11.00 dBm/MHz	-5.32
	26/8	7.389	7.957	0.00	10.69	11.00 dBm/MHz	-0.31
	52/40	7.605	7.906	0.00	10.77	11.00 dBm/MHz	-0.23
	106/54	4.733	4.946	0.00	7.85	11.00 dBm/MHz	-3.15
5320	full	2.290	2.743	0.00	5.53	11.00 dBm/MHz	-5.47
	26/8	7.576	7.754	0.00	10.68	11.00 dBm/MHz	-0.32
	52/40	7.185	7.148	0.00	10.18	11.00 dBm/MHz	-0.82
	106/54	4.794	4.625	0.00	7.72	11.00 dBm/MHz	-3.28
POWER DENSITY 802.11ax HE40 MODE							
Frequency (MHz)	RU config.	Ch0 meas PSD (dBm/MHz)	Ch1 meas PSD (dBm/MHz)	Duty Factor (dB)	Total Corr'd PSD(dBm/MHz)	Limit	Margin (dB)
5190	full	0.588	0.571	0.00	3.59	11.00 dBm/MHz	-7.41
	242/61	1.218	1.153	0.00	4.20	11.00 dBm/MHz	-6.80
5230	full	0.495	0.444	0.00	3.48	11.00 dBm/MHz	-7.52
	242/61	1.256	0.874	0.00	4.08	11.00 dBm/MHz	-6.92
5270	full	-0.219	0.016	0.00	2.91	11.00 dBm/MHz	-8.09
	242/62	0.904	0.751	0.00	3.84	11.00 dBm/MHz	-7.16
5310	full	-0.194	-0.417	0.00	2.71	11.00 dBm/MHz	-8.29
	242/62	-0.106	-0.178	0.00	2.87	11.00 dBm/MHz	-8.13
POWER DENSITY 802.11ax HE80 MODE							
Frequency (MHz)	RU config.	Ch0 meas PSD (dBm/MHz)	Ch1 meas PSD (dBm/MHz)	Duty Factor (dB)	Total Corr'd PSD(dBm/MHz)	Limit	Margin (dB)
5210	full	-2.638	-2.219	0.00	0.59	11.00 dBm/MHz	-10.41
	484/65	-2.080	-2.568	0.00	0.69	11.00 dBm/MHz	-10.31
5290	full	-2.437	-2.654	0.00	0.47	11.00 dBm/MHz	-10.53
	484/66	-2.488	-2.297	0.00	0.62	11.00 dBm/MHz	-10.38
POWER DENSITY 802.11ax HE160 MODE							
Frequency (MHz)	RU config.	Ch0 meas PSD (dBm/MHz)	Ch1 meas PSD (dBm/MHz)	Duty Factor (dB)	Total Corr'd PSD(dBm/MHz)	Limit	Margin (dB)
5250	full	-6.433	-6.276	0.00	-3.34	11.00 dBm/MHz	-14.34
	996/67	-5.456	-5.812	0.00	-2.62	11.00 dBm/MHz	-13.62
	996/S67	-6.070	-5.875	0.00	-2.96	11.00 dBm/MHz	-13.96

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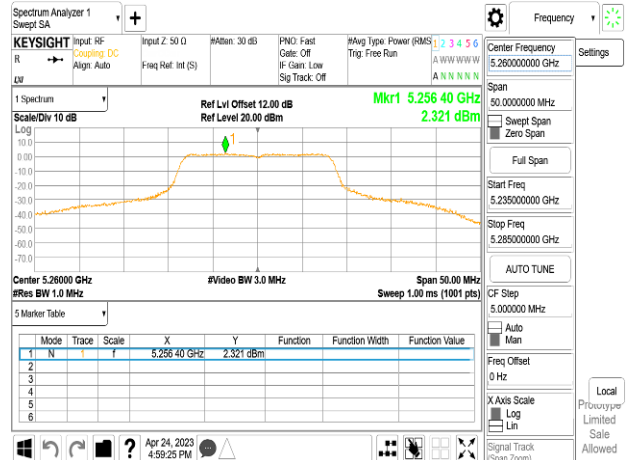
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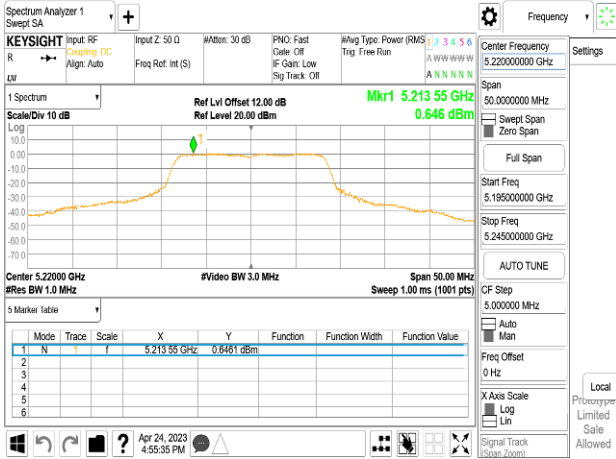
802.11a\_20MHz\_Chain0\_5180MHz



802.11a\_20MHz\_Chain0\_5260MHz



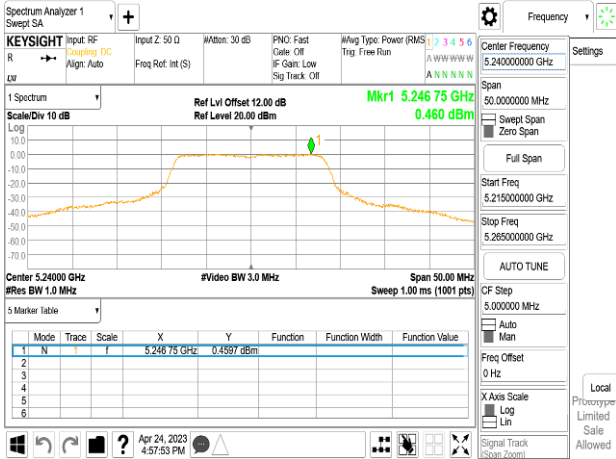
802.11a\_20MHz\_Chain0\_5220MHz



802.11a\_20MHz\_Chain0\_5300MHz



802.11a\_20MHz\_Chain0\_5240MHz



802.11a\_20MHz\_Chain0\_5320MHz

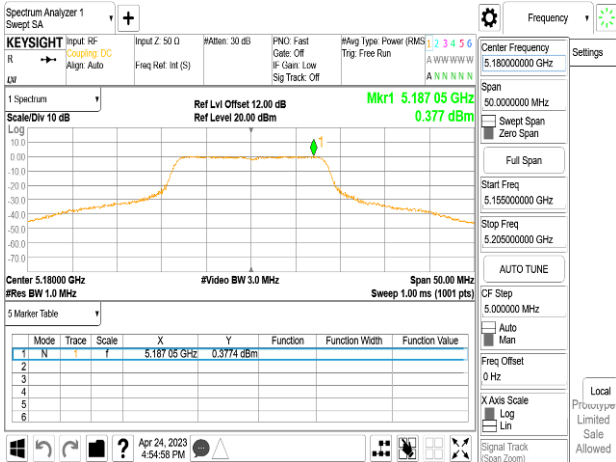


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802.11a\_20MHz\_Chain1\_5180MHz



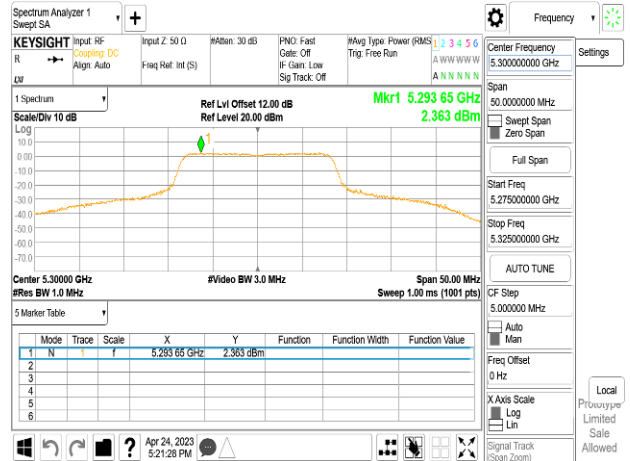
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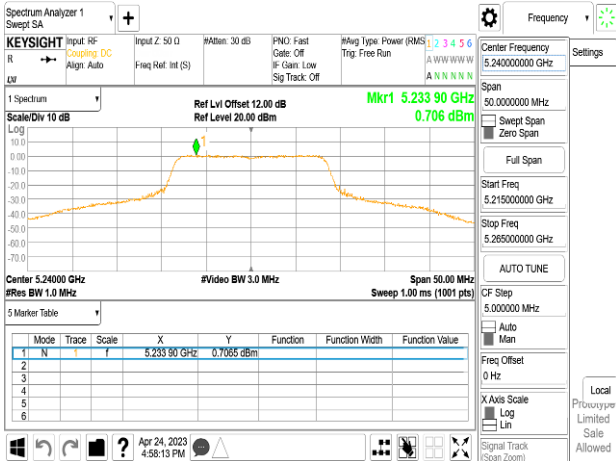
802.11a\_20MHz\_Chain1\_5220MHz



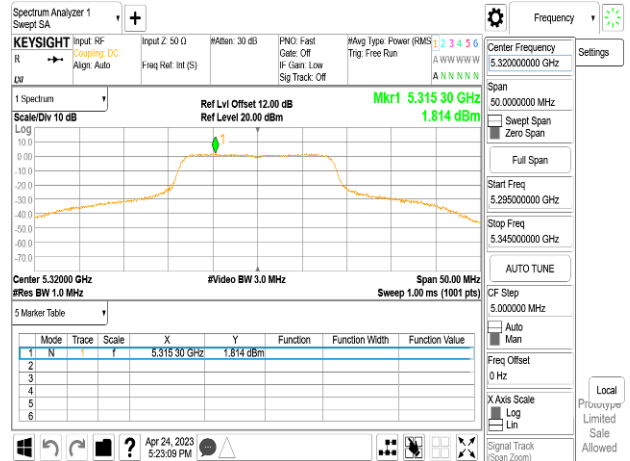
802.11a\_20MHz\_Chain1\_5300MHz



802.11a\_20MHz\_Chain1\_5240MHz



802.11a\_20MHz\_Chain1\_5320MHz

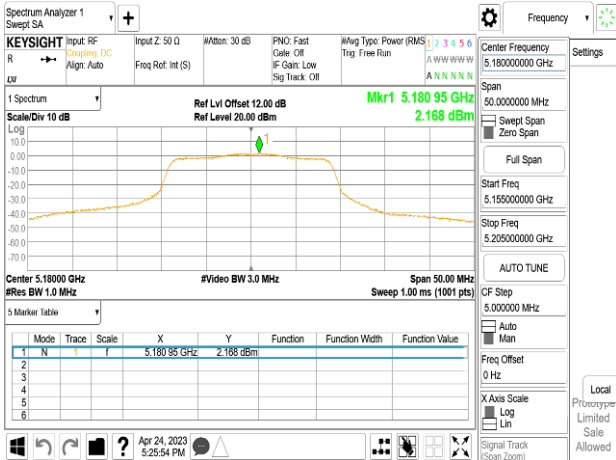


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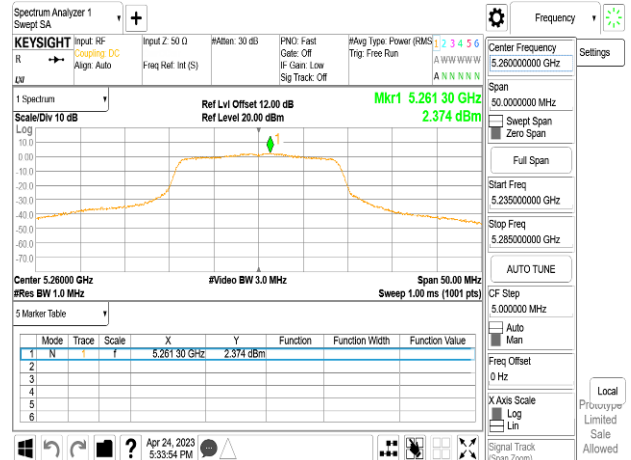
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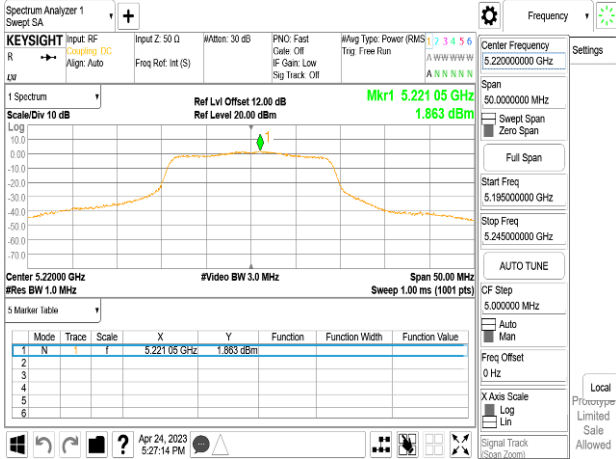
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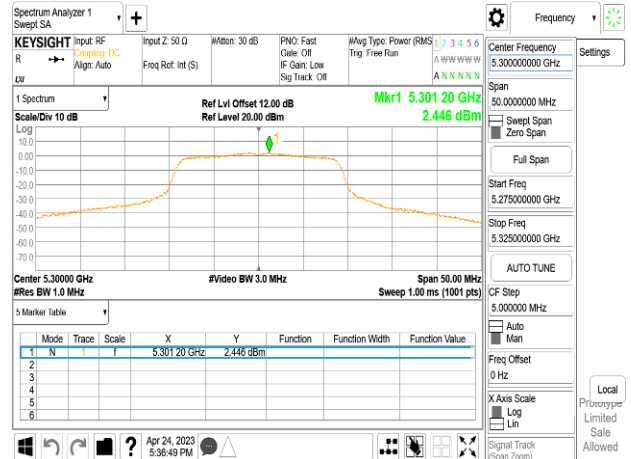
802.11n\_20MHz\_Chain0\_5260MHz



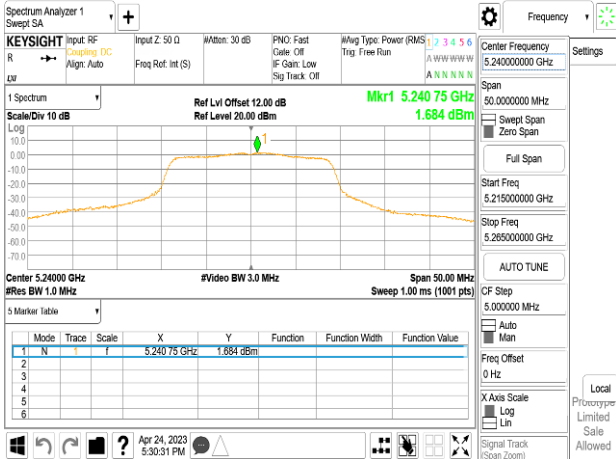
802.11n\_20MHz\_Chain0\_5220MHz



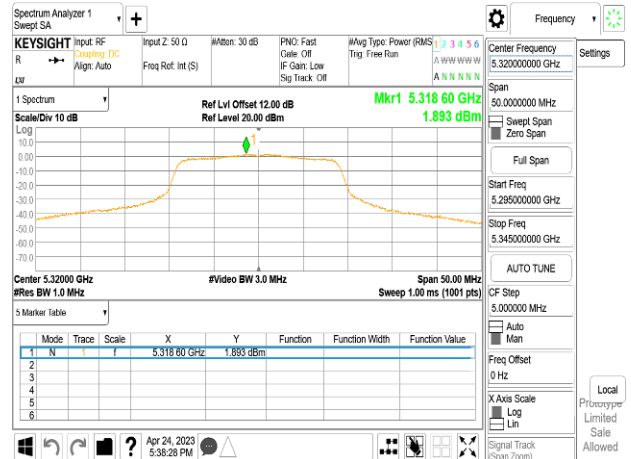
802.11n\_20MHz\_Chain0\_5300MHz



802.11n\_20MHz\_Chain0\_5240MHz



802.11n\_20MHz\_Chain0\_5320MHz



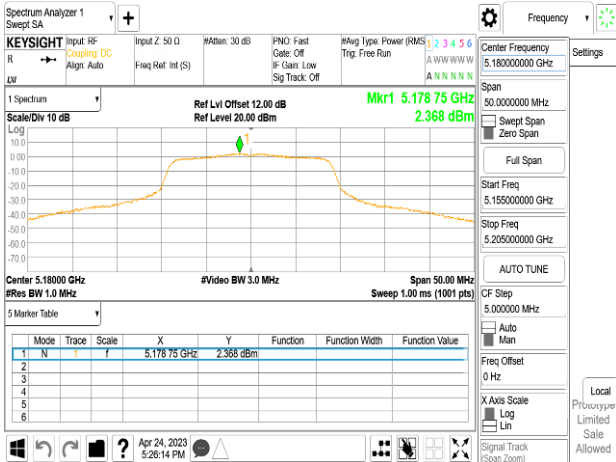
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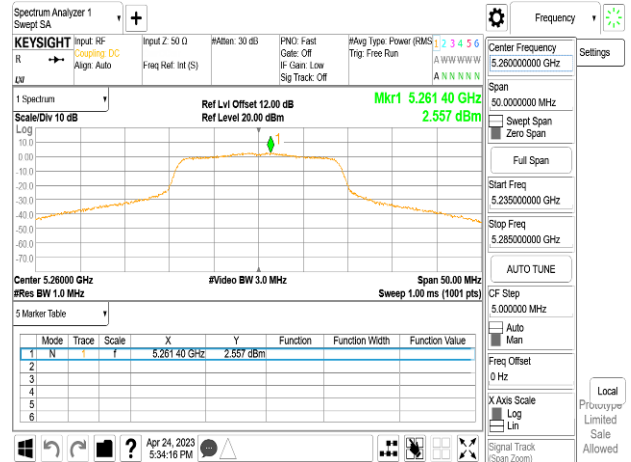
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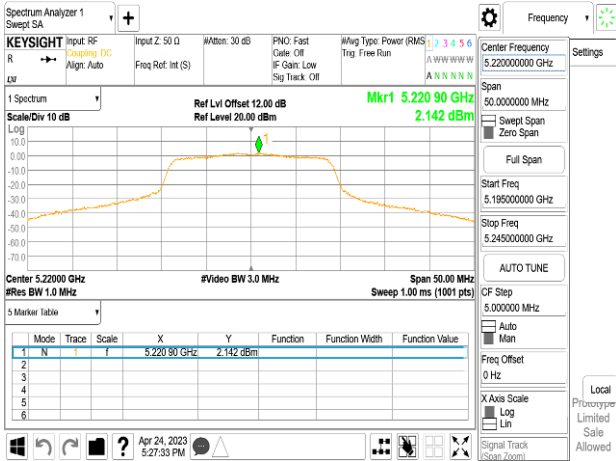
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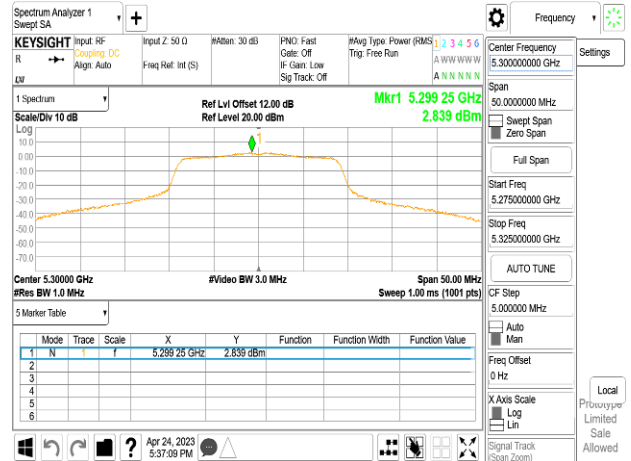
802.11n\_20MHz\_Chain1\_5260MHz



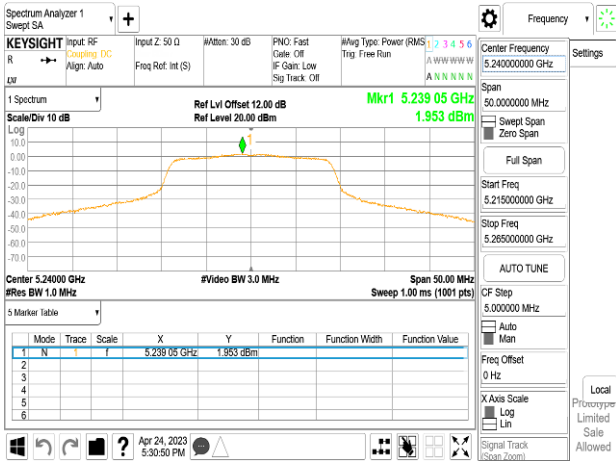
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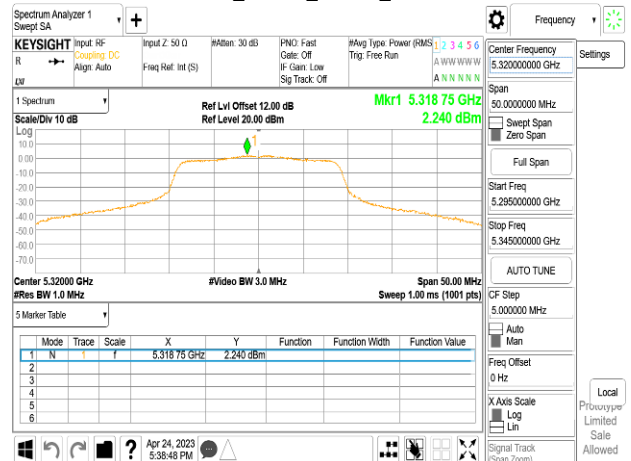
802.11n\_20MHz\_Chain1\_5300MHz



802.11n\_20MHz\_Chain1\_5240MHz



802.11n\_20MHz\_Chain1\_5320MHz

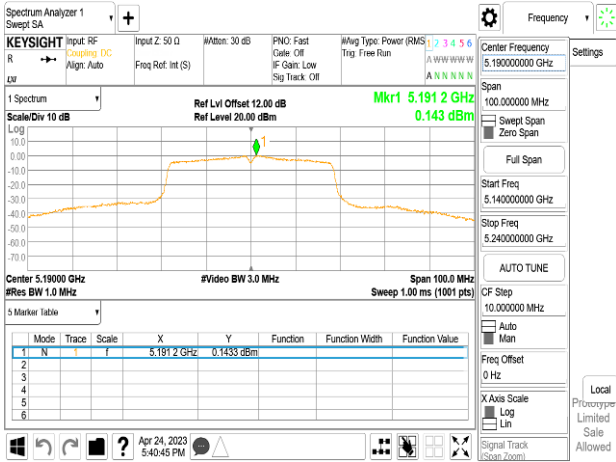


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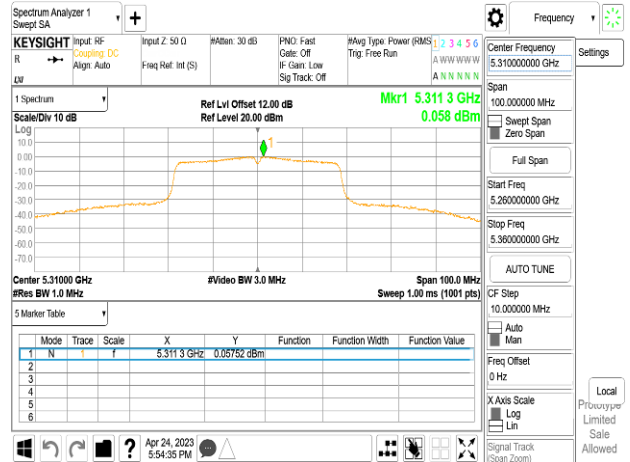
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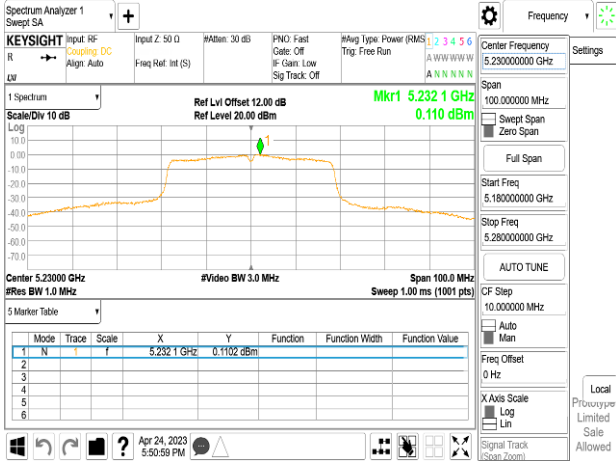
802.11n\_40MHz\_Chain0\_5190MHz



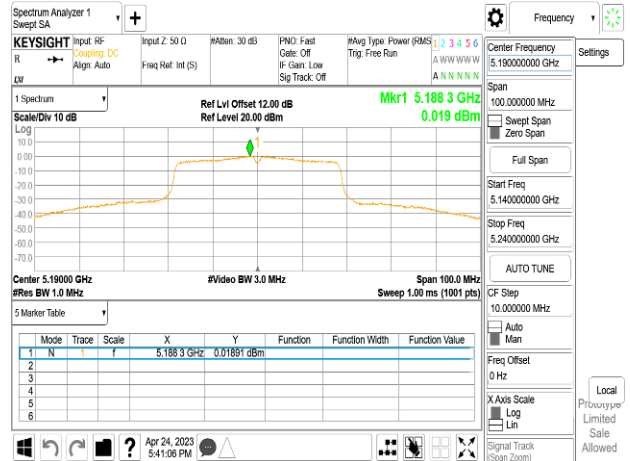
802.11n\_40MHz\_Chain0\_5310MHz



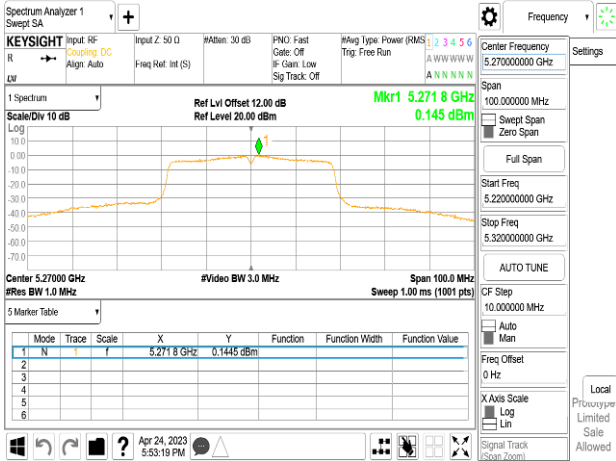
802.11n\_40MHz\_Chain0\_5230MHz



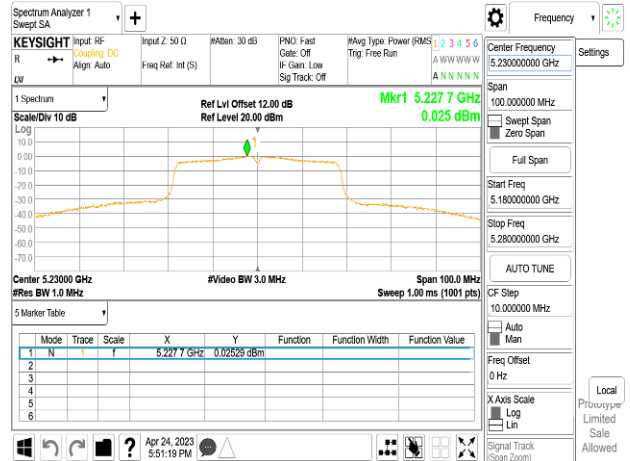
802.11n\_40MHz\_Chain1\_5190MHz



802.11n\_40MHz\_Chain0\_5270MHz



802.11n\_40MHz\_Chain1\_5230MHz

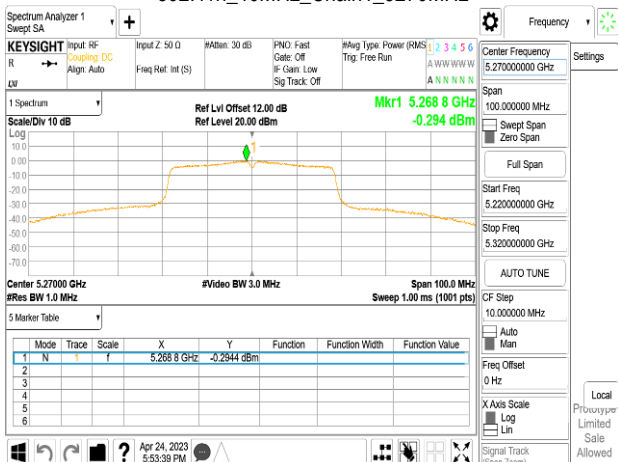


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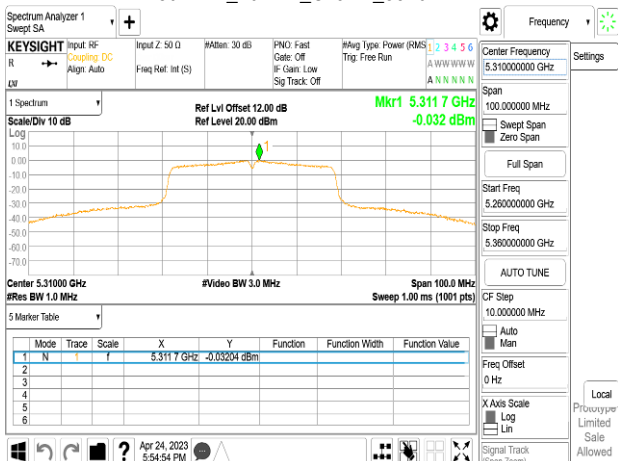
802.11n\_40MHz\_Chain1\_5270MHz



802.11ac\_80MHz\_Chain0\_5290MHz



802.11n\_40MHz\_Chain1\_5310MHz



802.11ac\_80MHz\_Chain1\_5210MHz



802.11ac\_80MHz\_Chain0\_5210MHz



802.11ac\_80MHz\_Chain1\_5290MHz



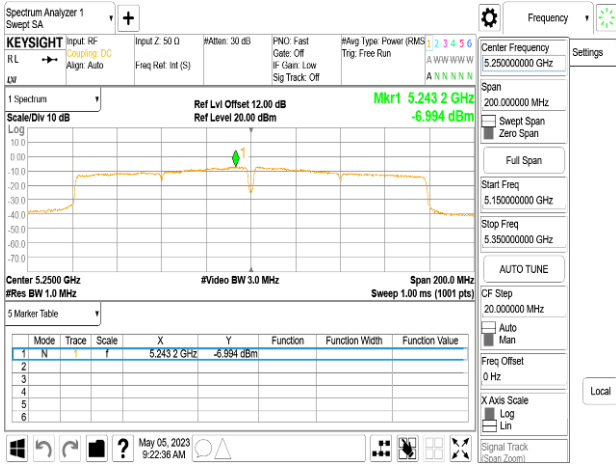
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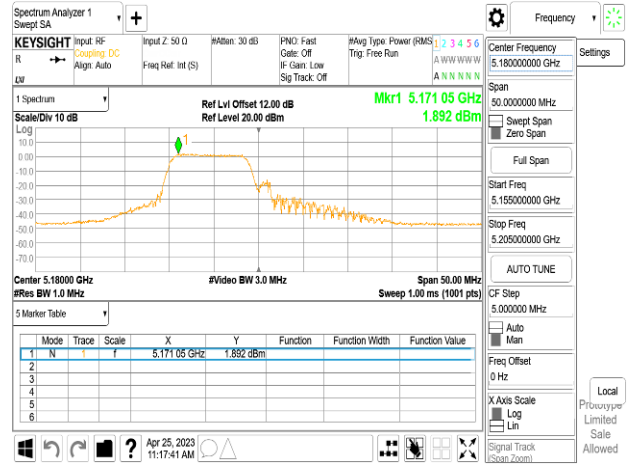
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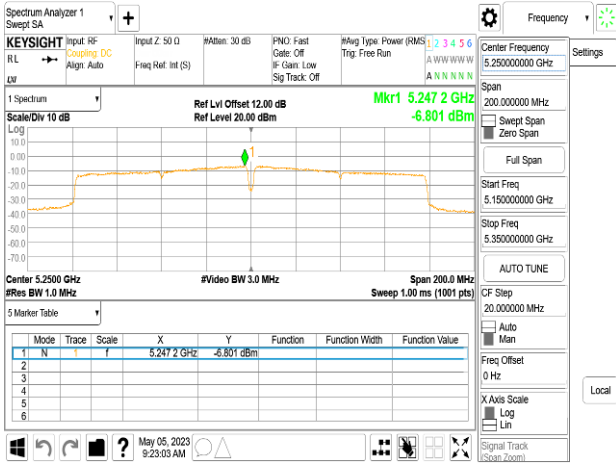
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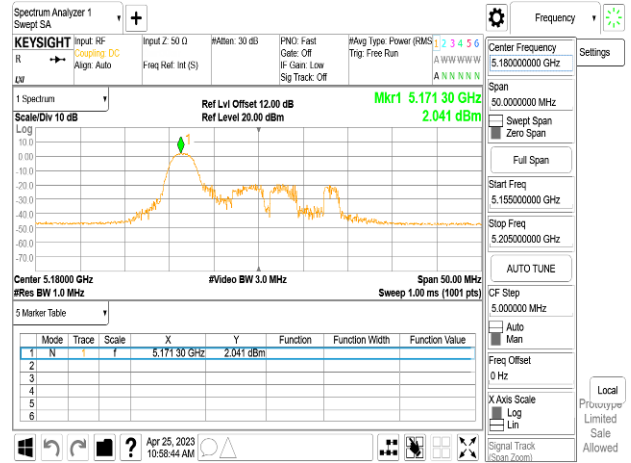
802.11ax\_20MHz\_Chain0\_5180MHz\_RU106\_53



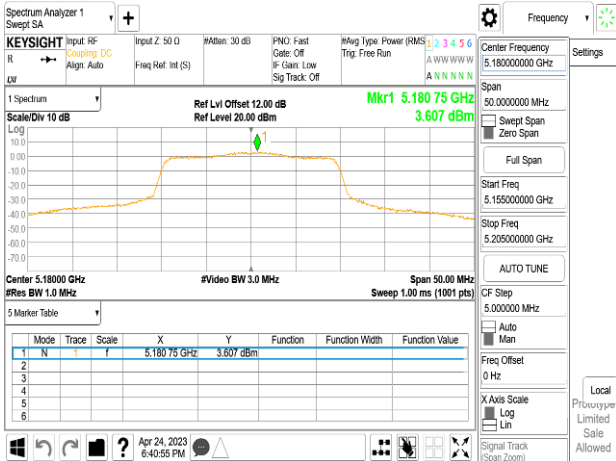
802.11ac\_160MHz\_Chain1\_5250MHz



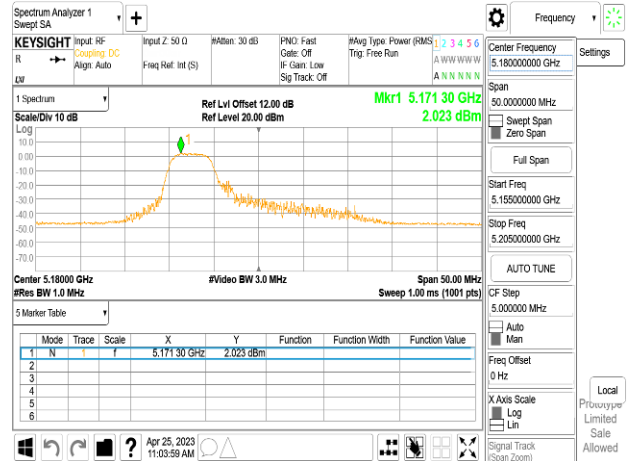
802.11ax\_20MHz\_Chain0\_5180MHz\_RU26\_0



802.11ax\_20MHz\_Chain0\_5180MHz



802.11ax\_20MHz\_Chain0\_5180MHz\_RU52\_37

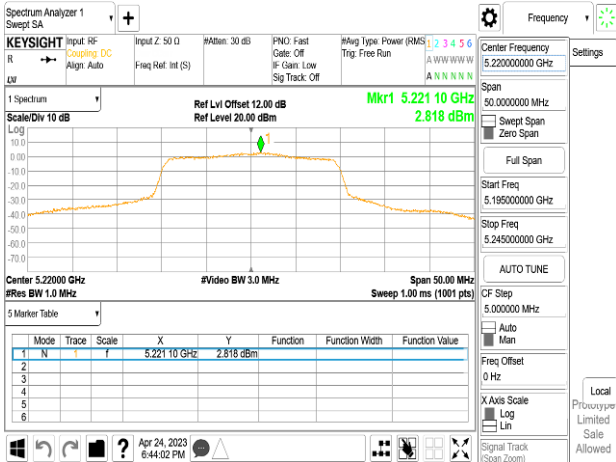


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802.11ax\_20MHz\_Chain0\_5220MHz



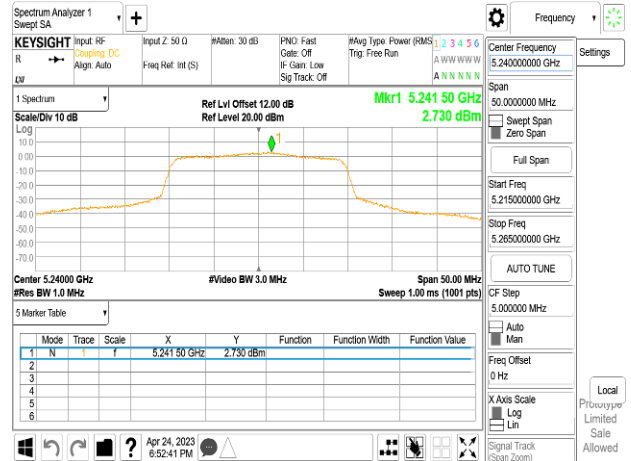
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802.11ax\_20MHz\_Chain0\_5220MHz\_RU106\_53



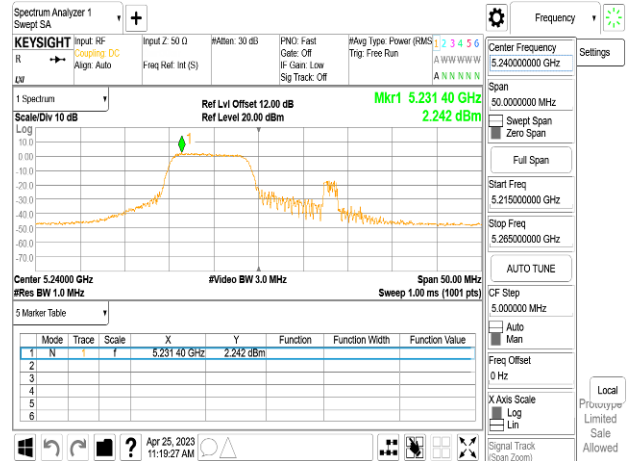
802.11ax\_20MHz\_Chain0\_5240MHz



802.11ax\_20MHz\_Chain0\_5220MHz\_RU26\_0



802.11ax\_20MHz\_Chain0\_5240MHz\_RU106\_53

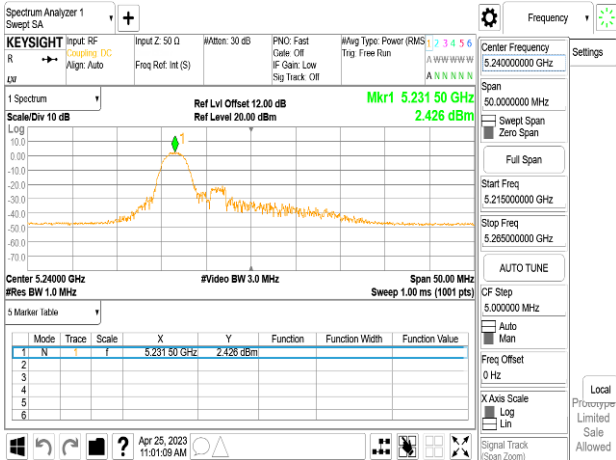


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802.11ax\_20MHz\_Chain0\_5240MHz\_RU26\_0



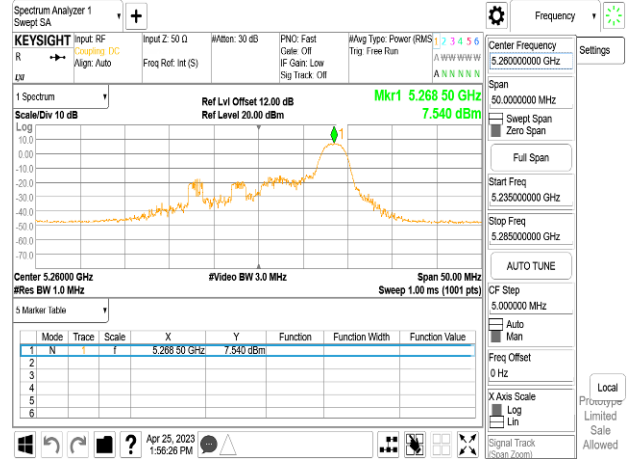
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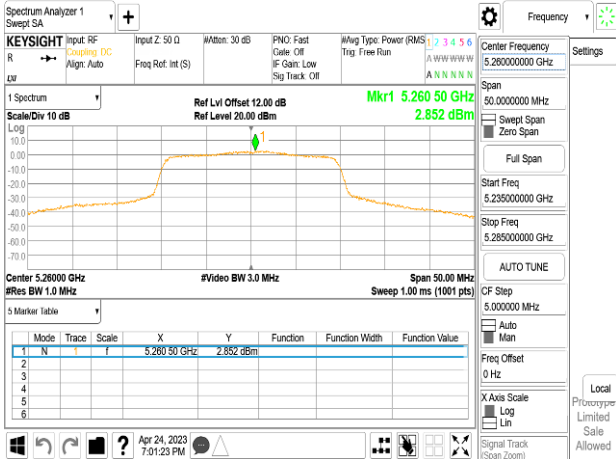
802.11ax\_20MHz\_Chain0\_5240MHz\_RU52\_37



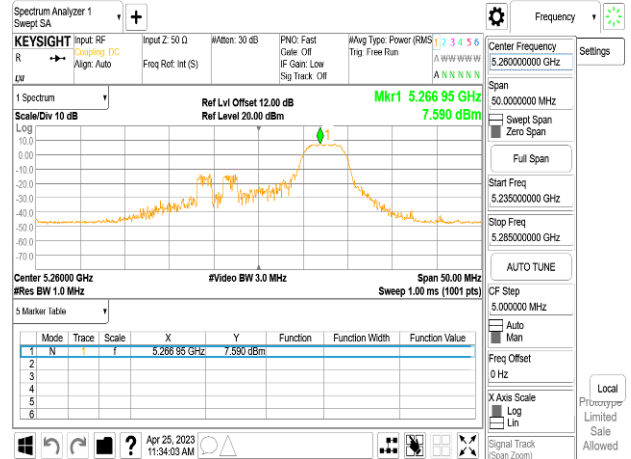
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802.11ax\_20MHz\_Chain0\_5260MHz



802.11ax\_20MHz\_Chain0\_5260MHz\_RU52\_40

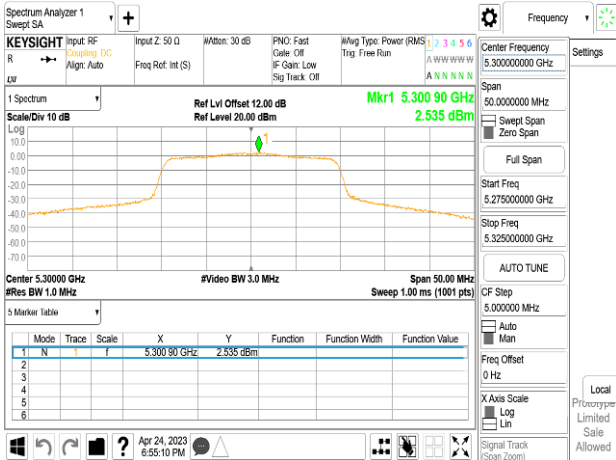


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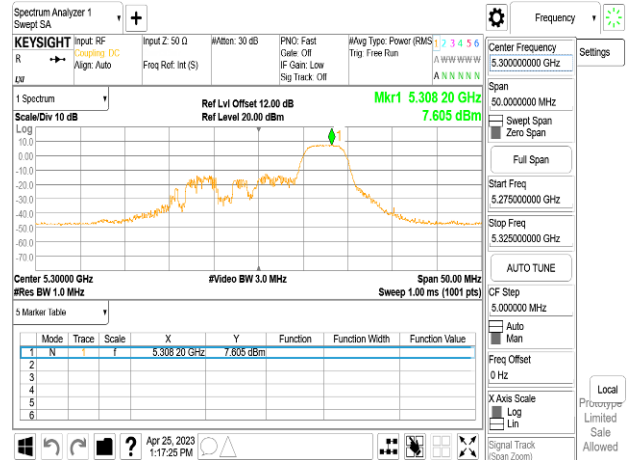
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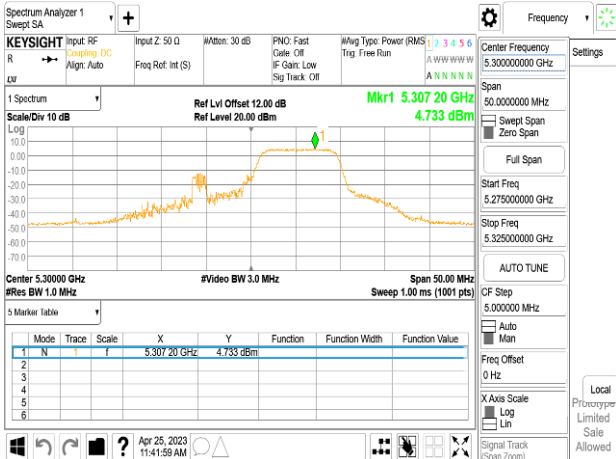
802.11ax\_20MHz\_Chain0\_5300MHz



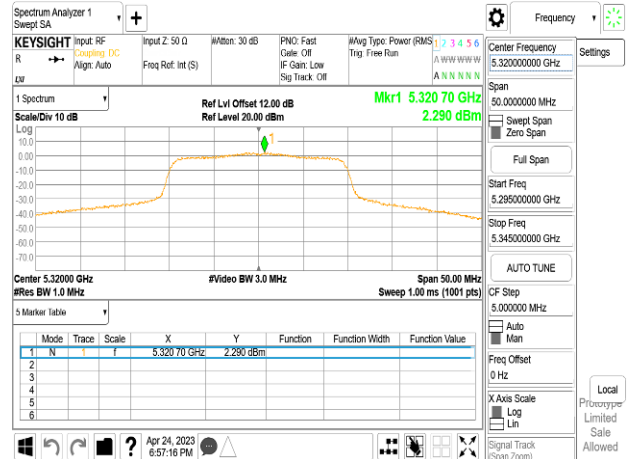
802.11ax\_20MHz\_Chain0\_5300MHz\_RU52\_40



802.11ax\_20MHz\_Chain0\_5300MHz\_RU106\_54



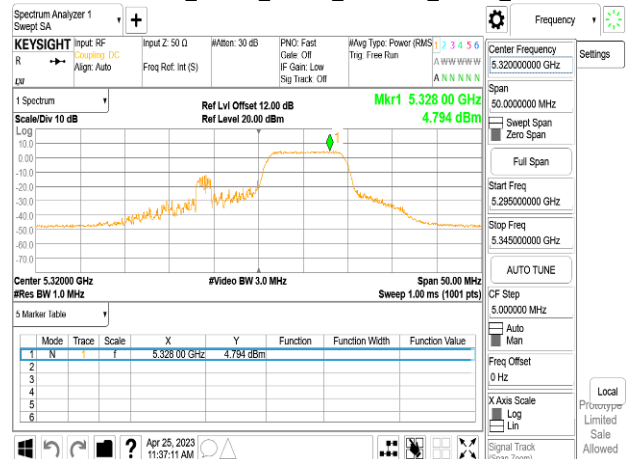
802.11ax\_20MHz\_Chain0\_5320MHz



802.11ax\_20MHz\_Chain0\_5300MHz\_RU26\_8



802.11ax\_20MHz\_Chain0\_5320MHz\_RU106\_54



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802.11ax\_20MHz\_Chain0\_5320MHz\_RU26\_8



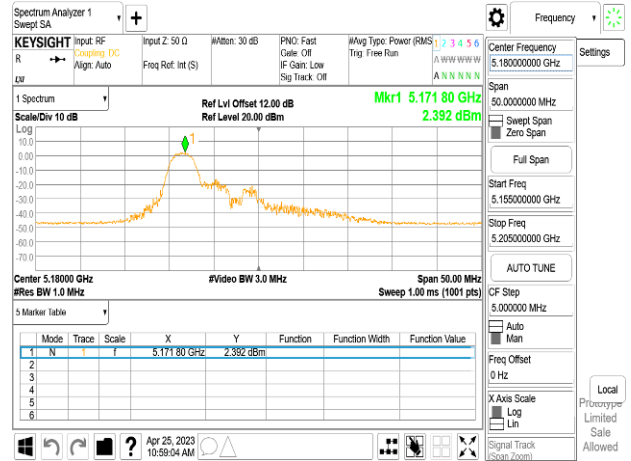
802.11ax\_20MHz\_Chain1\_5180MHz\_RU106\_53



802.11ax\_20MHz\_Chain0\_5320MHz\_RU52\_40



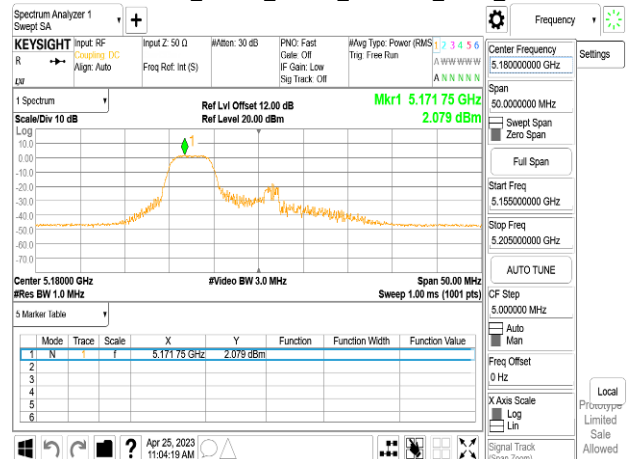
802.11ax\_20MHz\_Chain1\_5180MHz\_RU26\_0



802.11ax\_20MHz\_Chain1\_5180MHz



802.11ax\_20MHz\_Chain1\_5180MHz\_RU52\_37



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