RF TEST REPORT

Applicant	ZTE Corporation
FCC ID	SRQ-A2023PG
Product	5G NR Multi model smart phone
Model	ZTE A2023PG
Report No.	R2203A0249-R6V1
Issue Date	June 1, 2022

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR47 Part 15E (2021)**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

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Approved by: Kai Xu

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Version	Revision description	Issue Date
Rev.0	Initial issue of report.	May 16, 2022
Rev.1	Update data. Update information.	June 1, 2022
Note: This revised report (Report No. R2203A0249-R6V1) supersedes and replaces the previously issued report (Report No. R2203A0249-R6). Please discard or destroy the previously issued report and dispose of it accordingly.		

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Summary of measurement results

Number	Test Case	Clause in FCC rules	Verdict
1	Average output power	15.407(a)	PASS
2	Occupied bandwidth	15.407(e)	PASS
3	Frequency stability	15.407(g)	PASS
4	Power spectral density	15.407(a)	PASS
5	Unwanted Emissions	15.407(b)	PASS
6	Conducted Emissions	15.207	PASS
Date of Testing: March 17, 2022 ~ May 12, 2022 and June 1, 2022 Date of Sample Received: March 17, 2022			
Note: PASS: The EUT complies with the essential requirements in the standard. FAIL: The EUT does not comply with the essential requirements in the standard. All indications of Pass/Fail in this report are opinions expressed by TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.			

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1. Test Laboratory

1.1. Notes of the test report

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1.2. Test facility

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

A2LA (Certificate Number: 3857.01)

TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

1.3. Testing Location

Company:	TA Technology (Shanghai) Co., Ltd.
Address:	No.145, Jintang Rd, Tangzhen Industry Park, Pudong
City:	Shanghai
Post code:	201201
Country:	P. R. China
Contact:	Xu Kai
Telephone:	+86-021-50791141/2/3
Fax:	+86-021-50791141/2/3-8000
Website:	http://www.ta-shanghai.com
E-mail:	xukai@ta-shanghai.com

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2. General Description of Equipment under Test

2.1. Applicant and Manufacturer Information

Applicant	ZTE Corporation
Applicant address	ZTE Plaza, #55 Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, China
Manufacturer	ZTE Corporation
Manufacturer address	ZTE Plaza, #55 Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, China

2.2. General information

EUT Description	
Model	ZTE A2023PG
SN	327324440042
Hardware Version	ZTE A2023PGHW1.0
Software Version	MyOS12.0.2_A2023PG_GLB
Power Supply	Battery / AC adapter
Antenna Type	Internal Antenna
Antenna Gain	Antenna 1: -2.4dBi Antenna 2:0dBi
Directional Gain	-1.036dBi
Operating Frequency Range(s)	U-NII-1: 5150MHz-5250MHz U-NII-2A:5250MHz -5350MHz U-NII-2C: 5470MHz-5600MHz ,5650MHz-5725MHz U-NII-3: 5725MHz -5850MHz
Modulation Type	802.11a/n (HT20/HT40) : OFDM 802.11ac (VHT20/VHT40/VHT80): OFDM 802.11ax (HE20/HE40/HE80):OFDM
Max. Conducted Power	21.92dBm
Testing temperature range:	-20 ° C to 55° C
Operating temperature range:	-10 ° C to 40° C
Operating voltage range:	3.7V to 4.45 V
State DC voltage:	3.89V
EUT Accessory	
Adapter	Manufacturer: ShenZhen KunXing Technology Co., Ltd. Model: STC-A59152050AC-Z
Battery	Manufacturer: Zhuhai Cosmx Battery Co., Ltd.

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	Model: Li3949T44P8h806459
Earphone 1	Manufacturer: JUWEI ELECTRONICS CO.,LTD Model: JWEP1092-Z01
Earphone 2	Manufacturer: ShenZhen FDC Electronic Co.,Ltd Model: DEM-9A
USB Cable 1	Manufacturer: King Power Electronics Co., Ltd Model: TC20-TC20-W-100-M-6A-HSF
USB Cable 2	Manufacturer: Luxshare-ICT Co., Ltd Model: TC20-TC20-W-100-M-6A-HSF
Type-C to 3.5 mm Headphone Jack Adapter	Manufacturer: HUIZHOU JUWEI ELECTRONICS CO. ,LTD Model: HMZ24
Note: 1. The EUT is sent from the applicant to TA and the information of the EUT is declared by the applicant. 2. This device support automatically discontinue transmission, while the device is not transmitting any information, the device can automatically discontinue transmission and become standby mode for power saving. The device can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission. 3. There is more than one USB cable/ Earphone, each one should be applied throughout the compliance test respectively, and however, only the worst case (USB cable 1) will be recorded in this report.	

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3. Applied Standards

According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

Test standards:

FCC CFR47 Part 15E (2021) Unlicensed National Information Infrastructure Devices

ANSI C63.10 (2013)

Reference standard:

KDB 789033 D02 General UNII Test Procedures New Rules v02r01

KDB 662911 D01 Multiple Transmitter Output v02r01

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4. Test Configuration

Test Mode

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

The radiated emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in stand-up position (Z axis) and the worst case was recorded.

In order to find the worst case condition, Pre-tests are needed at the presence of different data rate. Preliminary tests have been done on all the configuration for confirming worst case. Data rate below means worst-case rate of each test item.

Worst-case data rates are shown as following table.

Mode	Data Rate		
	Antenna 1	Antenna 2	MIMO
802.11a	6 Mbps	6 Mbps	/
802.11n HT20	MCS0	MCS0	MCS8
802.11n HT40	MCS0	MCS0	MCS8
802.11ac VHT20	MCS0	MCS0	MCS0
802.11ac VHT40	MCS0	MCS0	MCS0
802.11ac VHT80	MCS0	MCS0	MCS0
802.11ax HE20	MCS0	MCS0	MCS0
802.11ax HE40	MCS0	MCS0	MCS0
802.11ax HE80	MCS0	MCS0	MCS0

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The worst case Antenna mode for each of the following tests for Wi-Fi:

Test Cases	Antenna 1	Antenna 2	MIMO
Average conducted output power	O	O	802.11n HT20/40 802.11ac VHT20/40/80 802.11ax HE20/40/80
Occupied bandwidth	802.11a	--	802.11n HT20/40 802.11ac VHT20/40/80 802.11ax HE20/40/80
Frequency stability	802.11a	--	--
Power Spectral Density	O	O	802.11n HT20/40 802.11ac VHT20/40/80 802.11ax HE20/40/80
Unwanted Emissions	802.11a	--	802.11n HT20/40 802.11ac VHT20/40/80 802.11ax HE20/40/80
Conducted Emissions	O	--	--
Note：“O”: test all bands			

According to RF Output power results in chapter 5.1, MIMO was selected as the worst antenna for 802.11n HT20/40, 802.11ac VHT20/40/80,802.11ax HE20/40/80. SISO Antenna 1 was selected as the worst SISO antenna for 802.11a.

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Wireless Technology and Frequency Range

Wireless Technology		Bandwidth	Channel	Frequency
Wi-Fi	U-NII-1	20 MHz	36	5180MHz
			40	5200MHz
			44	5220MHz
			48	5240MHz
		40 MHz	38	5190MHz
			46	5230MHz
		80 MHz	42	5210MHz
	U-NII-2A	20 MHz	52	5260MHz
			56	5280MHz
			60	5300MHz
			64	5320MHz
		40 MHz	54	5270MHz
			62	5310MHz
		80 MHz	58	5290MHz
	U-NII-2C	20 MHz	100	5500MHz
			104	5520MHz
			108	5540MHz
			112	5560MHz
			116	5580MHz
			132	5660MHz
			136	5680MHz
			140	5700MHz
		40 MHz	102	5510MHz
			110	5550MHz
			134	5670MHz
		80 MHz	106	5530MHz
			138	5690MHz
	U-NII-3	20 MHz	149	5745MHz
			153	5765MHz
			157	5785MHz
			161	5805MHz
			165	5825MHz
		40 MHz	151	5755MHz
			159	5795MHz
		80 MHz	155	5775MHz
Does this device support TPC Function? ☐Yes ☒No				
Does this device support TDWR Band? ☐Yes ☒No				

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5. Test Case Results

5.1. Occupied Bandwidth

Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable.

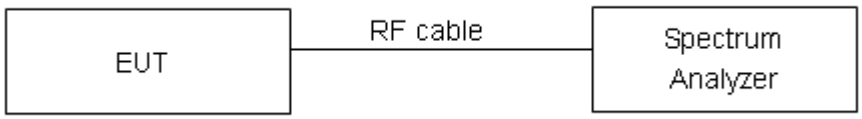
For U-NII-1/U-NII-2A/U-NII-2C, set RBW ≈1% OCB kHz, VBW ≥ 3 × RBW, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 26 dB relative to the maximum level measured in the fundamental emission.

For U-NII-3, Set RBW = 100 kHz, VBW ≥ 3 × RBW, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Note: The automatic bandwidth measurement capability of a spectrum analyzer or EMI receiver may be employed if it implements the functionality described above.

Use the 99 % power bandwidth function of the instrument

Test Setup



Limits

Rule FCC Part §15.407(e)

Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U= 936 Hz.

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Test Results:

U-NII-1

Mode	Carrier frequency (MHz)	99% bandwidth (MHz)	Minimum 26 dB bandwidth (MHz)	Conclusion
802.11a	5180	16.43	19.06	PASS
	5200	16.40	19.07	PASS
	5240	16.42	19.15	PASS
802.11n HT20	5180	17.60	20.02	PASS
	5200	17.60	20.42	PASS
	5240	17.59	20.17	PASS
802.11n HT40	5190	36.09	39.52	PASS
	5230	36.10	39.56	PASS
802.11ac VHT20	5180	17.60	19.94	PASS
	5200	17.59	20.25	PASS
	5240	17.60	20.41	PASS
802.11ac VHT40	5190	36.12	39.73	PASS
	5230	36.09	39.76	PASS
802.11ac VHT80	5210	75.48	81.88	PASS
802.11ax HE20	5180	18.95	20.78	PASS
	5200	18.93	20.81	PASS
	5240	18.97	20.94	PASS
802.11ax HE40	5190	37.71	40.43	PASS
	5230	37.75	40.20	PASS
802.11ax HE80	5210	77.17	81.64	PASS

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U-NII-2A

Mode	Carrier frequency (MHz)	99% bandwidth (MHz)	Minimum 26 dB bandwidth (MHz)	Conclusion
802.11a	5260	16.42	19.36	PASS
	5300	16.41	18.85	PASS
	5320	16.42	19.10	PASS
802.11n HT20	5260	17.63	19.94	PASS
	5300	17.61	20.39	PASS
	5320	17.61	20.25	PASS
802.11n HT40	5270	36.10	39.53	PASS
	5310	36.09	39.99	PASS
802.11ac VHT20	5260	17.60	20.75	PASS
	5300	17.61	20.36	PASS
	5320	17.61	20.41	PASS
802.11ac VHT40	5270	36.09	39.49	PASS
	5310	36.11	40.17	PASS
802.11ac VHT80	5290	75.48	81.61	PASS
802.11ax HE20	5260	18.98	22.07	PASS
	5300	18.95	21.01	PASS
	5320	18.96	20.86	PASS
802.11ax HE40	5270	37.78	40.30	PASS
	5310	37.78	40.08	PASS
802.11ax HE80	5290	77.18	81.93	PASS

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U-NII-2C

Mode	Carrier frequency (MHz)	99% bandwidth (MHz)	Minimum 26 dB bandwidth (MHz)	Conclusion
802.11a	5500	16.47	21.11	PASS
	5580	16.48	21.18	PASS
	5700	16.52	22.66	PASS
	5720	16.52	25.14	PASS
802.11n HT20	5500	17.62	21.53	PASS
	5580	17.64	20.84	PASS
	5700	17.65	22.24	PASS
	5720	17.69	25.70	PASS
802.11n HT40	5510	36.08	39.75	PASS
	5550	36.11	39.50	PASS
	5670	36.11	39.82	PASS
	5710	36.08	39.76	PASS
802.11ac VHT20	5500	17.64	21.42	PASS
	5580	17.63	20.99	PASS
	5700	17.64	23.77	PASS
	5720	17.65	22.85	PASS
802.11ac VHT40	5510	36.11	39.48	PASS
	5550	36.09	40.23	PASS
	5670	36.08	39.72	PASS
	5710	36.09	39.90	PASS
802.11ac VHT80	5530	75.53	82.02	PASS
	5690	75.53	81.80	PASS
802.11ax-HE20	5500	18.96	23.15	PASS
	5580	19.00	22.04	PASS
	5700	18.96	22.21	PASS
	5720	18.97	24.78	PASS
802.11ax-HE40	5510	37.79	40.16	PASS
	5550	37.76	40.39	PASS
	5670	37.74	40.47	PASS
	5710	37.69	40.83	PASS
802.11ax-HE 80	5530	77.13	81.70	PASS
	5690	77.04	82.67	PASS

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U-NII-3

Mode	Carrier frequency (MHz)	99% bandwidth (MHz)	Minimum 6 dB bandwidth (MHz)	Limit (kHz)	Conclusion
802.11a	5745	16.42	16.30	500	PASS
	5785	16.42	16.32	500	PASS
	5825	16.40	16.32	500	PASS
802.11n HT20	5745	17.58	17.55	500	PASS
	5785	17.56	17.53	500	PASS
	5825	17.56	17.56	500	PASS
802.11n HT40	5755	36.06	36.28	500	PASS
	5795	36.07	35.06	500	PASS
802.11ac VHT20	5745	17.57	17.04	500	PASS
	5785	17.57	17.56	500	PASS
	5825	17.56	17.63	500	PASS
802.11ac VHT40	5755	36.04	35.90	500	PASS
	5795	36.04	36.03	500	PASS
802.11ac VHT80	5775	75.42	75.12	500	PASS
802.11ax HE20	5745	18.90	18.27	500	PASS
	5785	18.92	18.50	500	PASS
	5825	18.91	18.47	500	PASS
802.11ax HE40	5755	37.75	37.85	500	PASS
	5795	37.68	37.94	500	PASS
802.11ax HE80	5775	77.17	77.76	500	PASS

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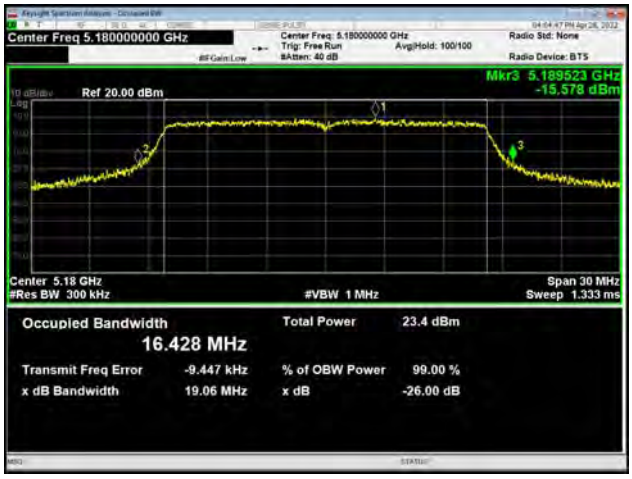
U-NII-1, 802.11a
Carrier frequency (MHz): 5180



U-NII-1, 802.11n HT20
Carrier frequency (MHz): 5180

U-NII-1, 802.11a
Carrier frequency (MHz): 5200

U-NII-1, 802.11n HT20
Carrier frequency (MHz): 5200

U-NII-1, 802.11a
Carrier frequency (MHz):5240

U-NII-1, 802.11n HT20
Carrier frequency (MHz):5240

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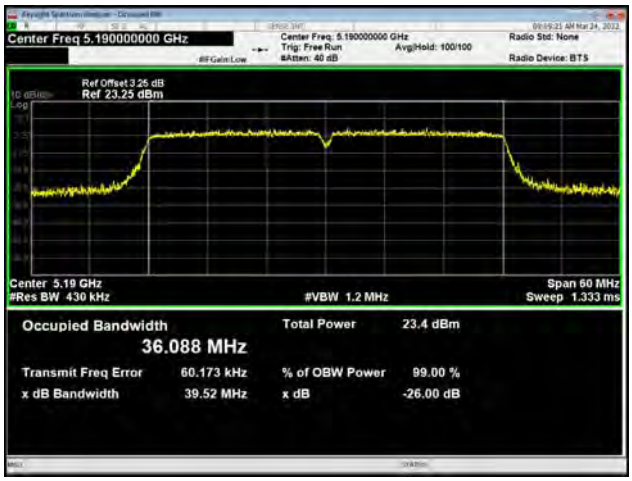
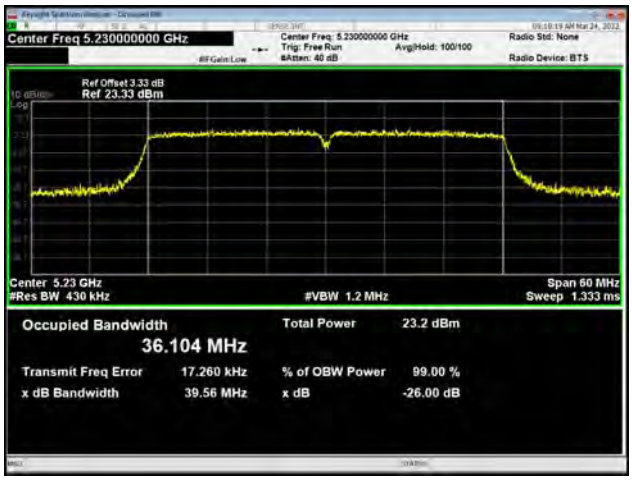
U-NII-1, 802.11n HT40
Carrier frequency (MHz): 5190



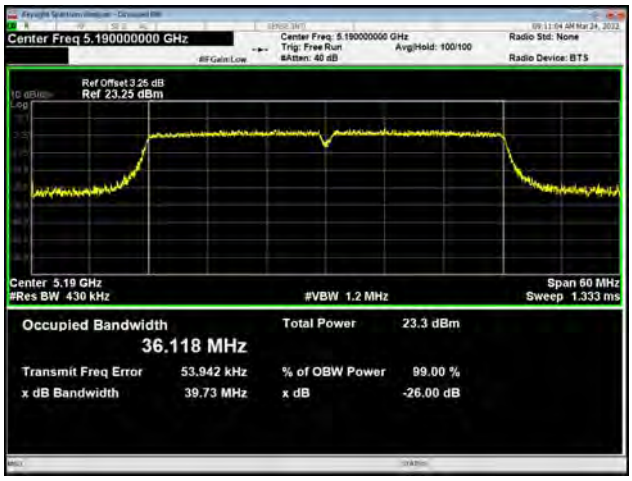
U-NII-1, 802.11ac VHT20
Carrier frequency (MHz): 5180

U-NII-1, 802.11n HT40
Carrier frequency (MHz): 5230



U-NII-1, 802.11ac VHT20
Carrier frequency (MHz): 5200

U-NII-1, 802.11ac VHT40
Carrier frequency (MHz): 5190



U-NII-1, 802.11ac VHT20
Carrier frequency (MHz):5240

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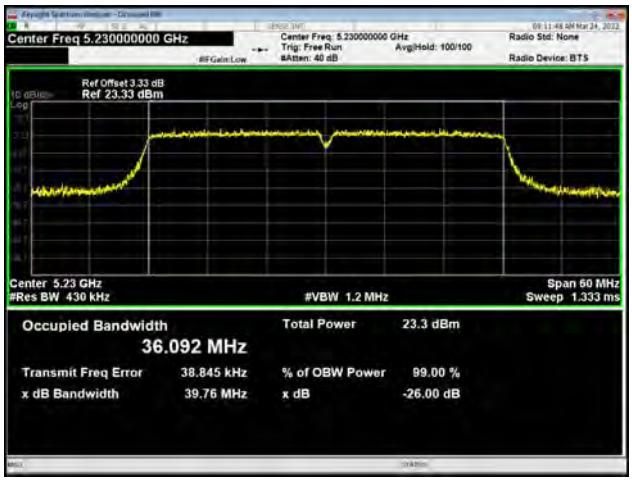
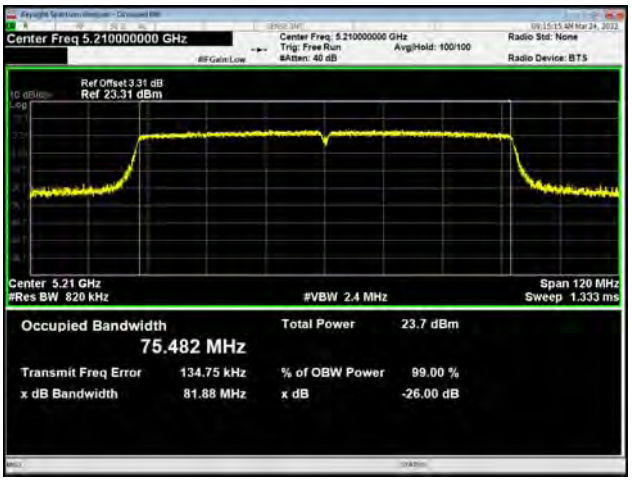
U-NII-1, 802.11ac VHT40
Carrier frequency (MHz): 5230

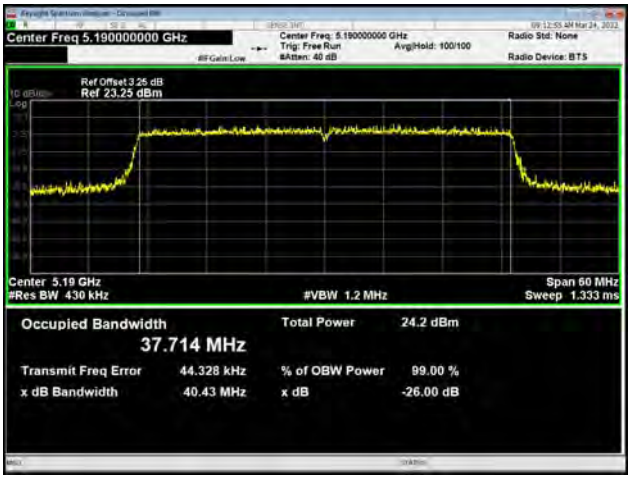


U-NII-1, 802.11ac VHT80
Carrier frequency (MHz): 5210



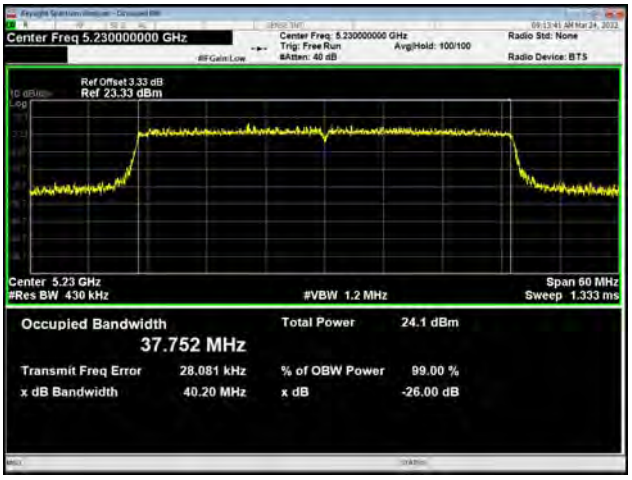
U-NII-1, 802.11ax HE20
Carrier frequency (MHz): 5180

U-NII-1, 802.11ax HE40
Carrier frequency (MHz): 5190



U-NII-1, 802.11ax HE20
Carrier frequency (MHz): 5200

U-NII-1, 802.11ax HE40
Carrier frequency (MHz): 5230



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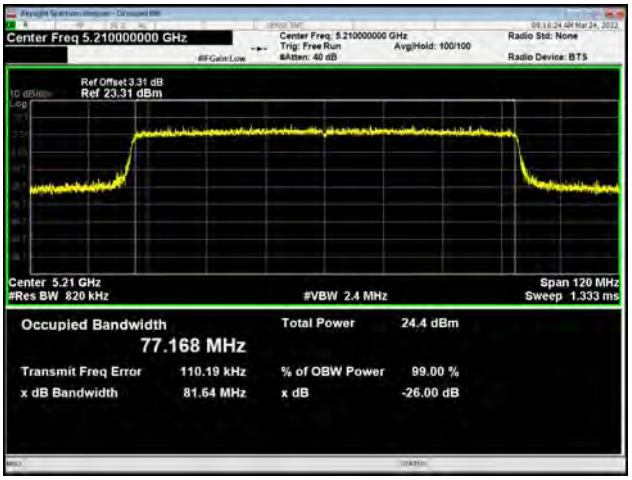
U-NII-1, 802.11ax HE20
Carrier frequency (MHz):5240

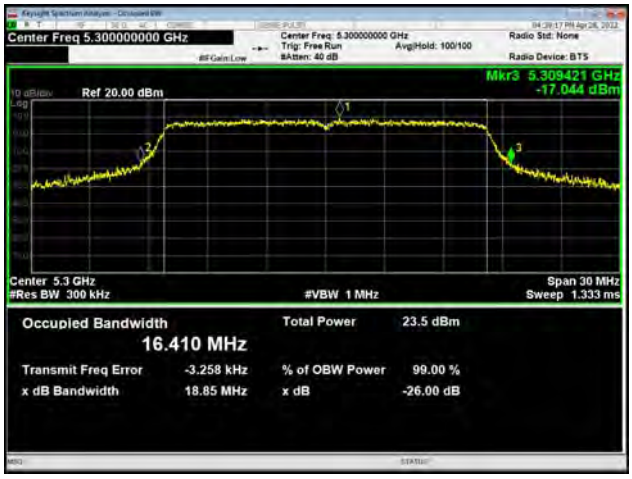
U-NII-1, 802.11ax HE80
Carrier frequency (MHz): 5210



U-NII-2A, 802.11a
Carrier frequency (MHz): 5260

U-NII-2A, 802.11n HT20
Carrier frequency (MHz): 5260

U-NII-2A, 802.11a
Carrier frequency (MHz): 5300



U-NII-2A, 802.11n HT20
Carrier frequency (MHz): 5300

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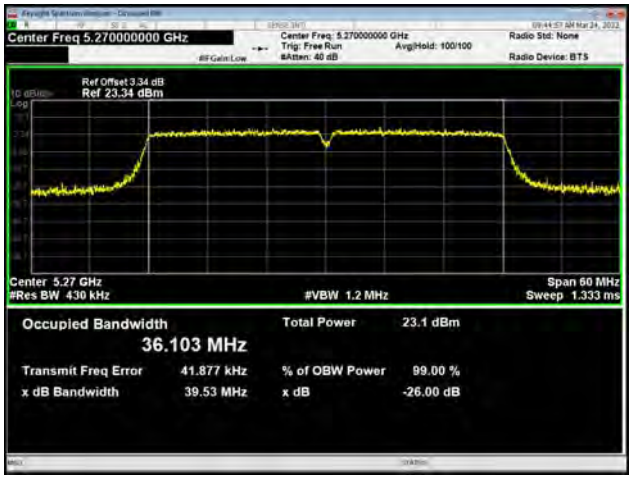
U-NII-2A, 802.11a
Carrier frequency (MHz):5320

U-NII-2A, 802.11n HT20
Carrier frequency (MHz):5320

U-NII-2A, 802.11n HT40
Carrier frequency (MHz): 5270



U-NII-2A, 802.11ac VHT20
Carrier frequency (MHz):5260

U-NII-2A, 802.11n HT40
Carrier frequency (MHz): 5310

U-NII-2A, 802.11ac VHT20
Carrier frequency (MHz): 5300

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U-NII-2A, 802.11ac VHT40
Carrier frequency (MHz): 5270

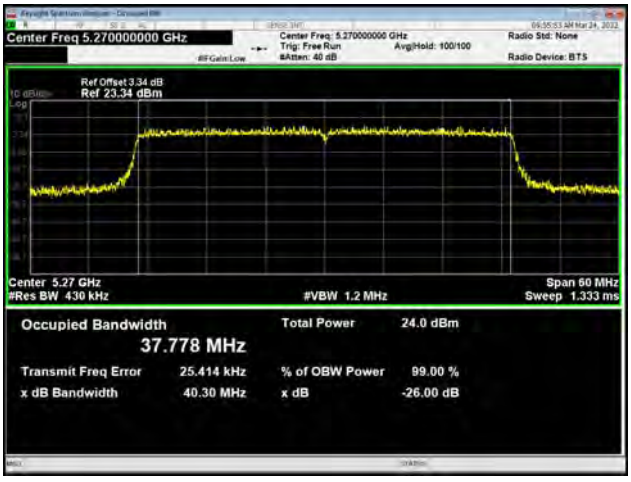
U-NII-2A, 802.11ac VHT20
Carrier frequency (MHz):5320

U-NII-2A, 802.11ac VHT40
Carrier frequency (MHz): 5310

U-NII-2A, 802.11ac VHT80
Carrier frequency (MHz): 5290

U-NII-2A, 802.11ax HE20
Carrier frequency (MHz):5260

U-NII-2A, 802.11ax HE40
Carrier frequency (MHz): 5270



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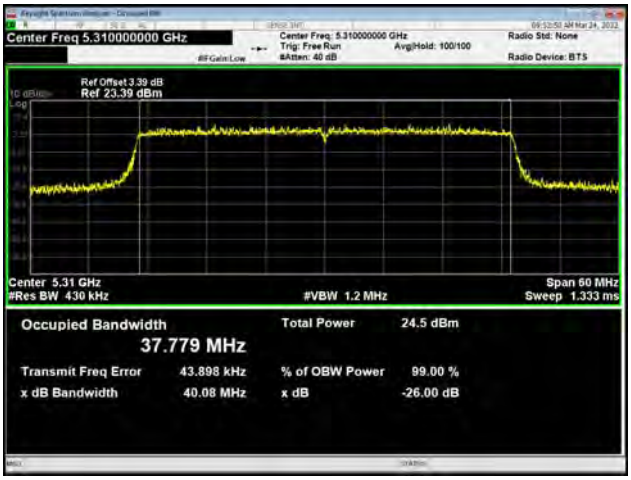
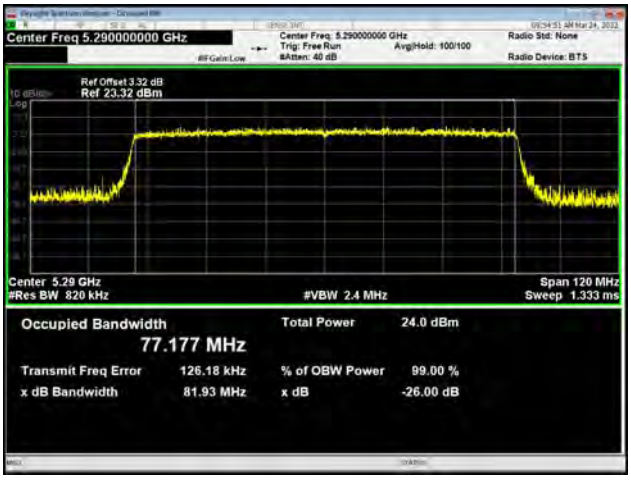
U-NII-2A, 802.11ax HE20
Carrier frequency (MHz): 5300

U-NII-2A, 802.11ax HE40
Carrier frequency (MHz): 5310



U-NII-2A, 802.11ax HE20
Carrier frequency (MHz):5320

U-NII-2A, 802.11ax HE80
Carrier frequency (MHz): 5290



U-NII-2C, 802.11a
Carrier frequency (MHz): 5500

U-NII-2C, 802.11n HT20
Carrier frequency (MHz): 5500

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U-NII-2C, 802.11a
Carrier frequency (MHz): 5580

U-NII-2C, 802.11n HT20
Carrier frequency (MHz): 5580

U-NII-2C, 802.11a
Carrier frequency (MHz):5700

U-NII-2C, 802.11n HT20
Carrier frequency (MHz):5700

U-NII-2C, 802.11a
Carrier frequency (MHz):5720

U-NII-2C, 802.11n HT20
Carrier frequency (MHz):5720

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U-NII-2C, 802.11n HT40
Carrier frequency (MHz): 5510

U-NII-2C, 802.11ac VHT20
Carrier frequency (MHz): 5500

U-NII-2C, 802.11n HT40
Carrier frequency (MHz): 5550

U-NII-2C, 802.11ac VHT20
Carrier frequency (MHz): 5580

U-NII-2C, 802.11n HT40
Carrier frequency (MHz): 5670

U-NII-2C, 802.11ac VHT20
Carrier frequency (MHz):5700

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U-NII-2C, 802.11n HT40
Carrier frequency (MHz): 5710

U-NII-2C, 802.11ac VHT20
Carrier frequency (MHz):5720

U-NII-2C, 802.11ac VHT40
Carrier frequency (MHz): 5510

U-NII-2C, 802.11ac VHT80
Carrier frequency (MHz): 5530

U-NII-2C, 802.11ac VHT40
Carrier frequency (MHz): 5550

U-NII-2C, 802.11ac VHT80
Carrier frequency (MHz): 5690

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U-NII-2C, 802.11ac VHT40
Carrier frequency (MHz): 5670

U-NII-2C, 802.11ac VHT40
Carrier frequency (MHz): 5710

U-NII-2C, 802.11ax HE20
Carrier frequency (MHz): 5500

U-NII-2C, 802.11ax HE40
Carrier frequency (MHz): 5510

U-NII-2C, 802.11ax HE20
Carrier frequency (MHz): 5580

U-NII-2C, 802.11ax HE40
Carrier frequency (MHz): 5550

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U-NII-2C, 802.11ax HE20
Carrier frequency (MHz):5700

U-NII-2C, 802.11ax HE40
Carrier frequency (MHz): 5670

U-NII-2C, 802.11ax HE20
Carrier frequency (MHz):5720

U-NII-2C, 802.11ax HE40
Carrier frequency (MHz): 5710

U-NII-2C, 802.11ax HE80
Carrier frequency (MHz): 5530

U-NII-2C, 802.11ax HE80
Carrier frequency (MHz): 5690

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99% bandwidth

U-NII-3, 802.11a
Carrier frequency (MHz): 5745

U-NII-3, 802.11n HT20
Carrier frequency (MHz): 5745

U-NII-3, 802.11a
Carrier frequency (MHz): 5785

U-NII-3, 802.11n HT20
Carrier frequency (MHz): 5785

U-NII-3, 802.11a
Carrier frequency (MHz): 5825

U-NII-3, 802.11n HT20
Carrier frequency (MHz): 5825

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U-NII-3, 802.11n HT40
Carrier frequency (MHz): 5755

U-NII-3, 802.11ac VHT20
Carrier frequency (MHz): 5745

U-NII-3, 802.11n HT40
Carrier frequency (MHz): 5795

U-NII-3, 802.11ac VHT20
Carrier frequency (MHz): 5785

U-NII-3, 802.11ac VHT40
Carrier frequency (MHz): 5755

U-NII-3, 802.11ac VHT20
Carrier frequency (MHz): 5825

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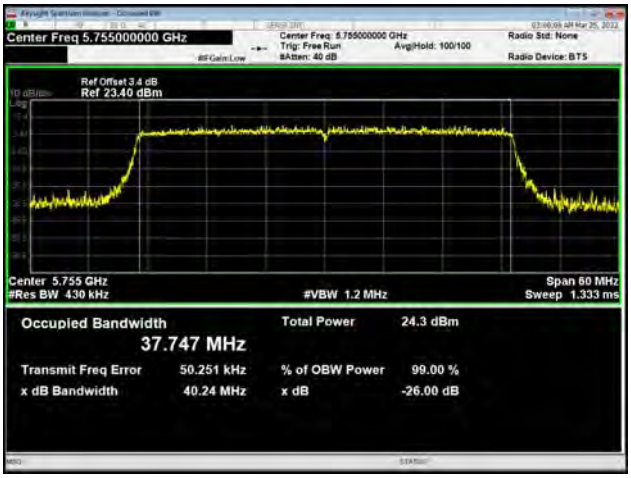
U-NII-3, 802.11ac VHT40
Carrier frequency (MHz): 5795

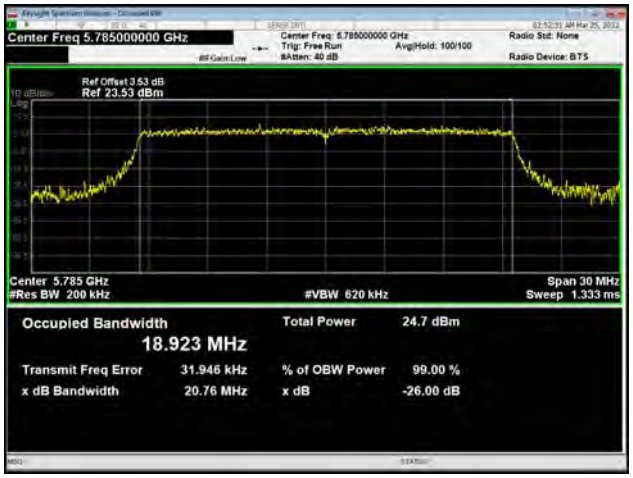
U-NII-3, 802.11ac VHT80
Carrier frequency (MHz): 5775

U-NII-3, 802.11ax HE20
Carrier frequency (MHz): 5745

U-NII-3, 802.11ax HE40
Carrier frequency (MHz): 5755



U-NII-3, 802.11ax HE20
Carrier frequency (MHz): 5785



U-NII-3, 802.11ax HE40
Carrier frequency (MHz): 5795

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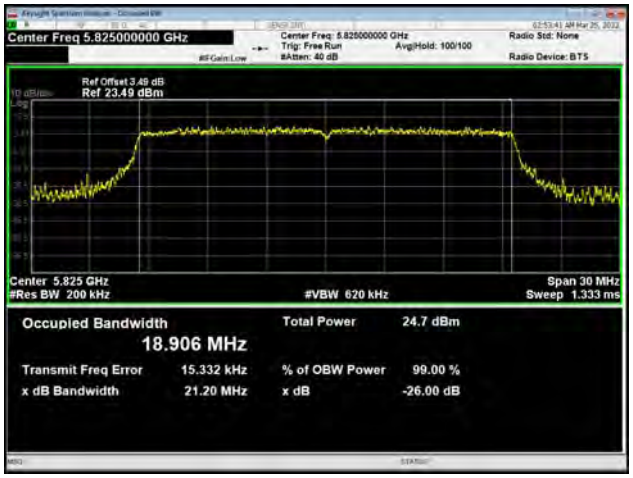
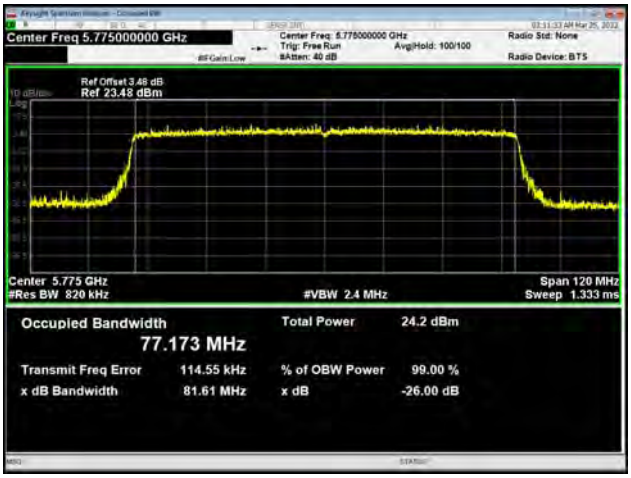
U-NII-3, 802.11ax HE20 Carrier frequency (MHz): 5825	U-NII-3, 802.11ax HE80 Carrier frequency (MHz): 5775
	

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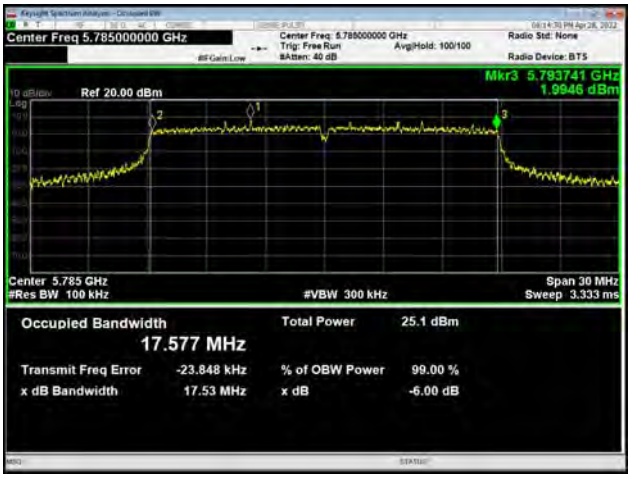
Minimum 6 dB bandwidth

U-NII-3, 802.11a
Carrier frequency (MHz): 5745

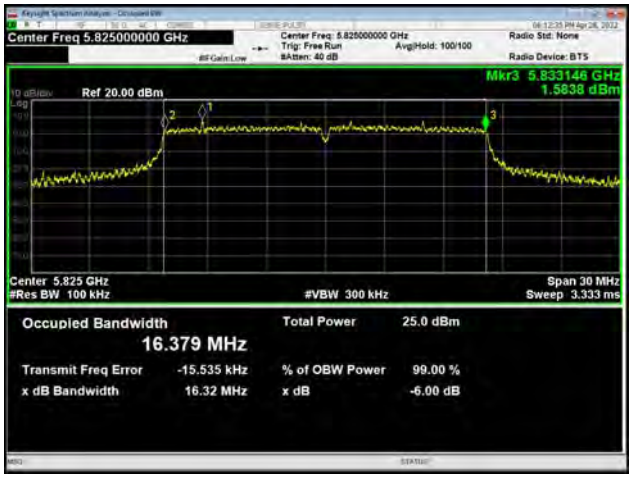
U-NII-3, 802.11n HT20
Carrier frequency (MHz): 5745

U-NII-3, 802.11a
Carrier frequency (MHz): 5785

U-NII-3, 802.11n HT20
Carrier frequency (MHz): 5785



U-NII-3, 802.11a
Carrier frequency (MHz): 5825



U-NII-3, 802.11n HT20
Carrier frequency (MHz): 5825

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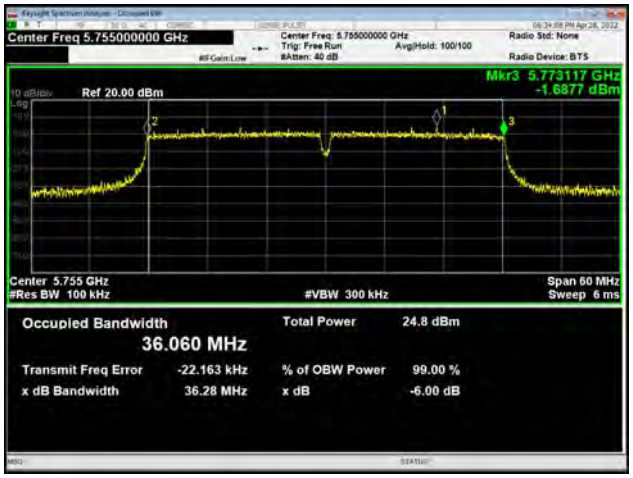
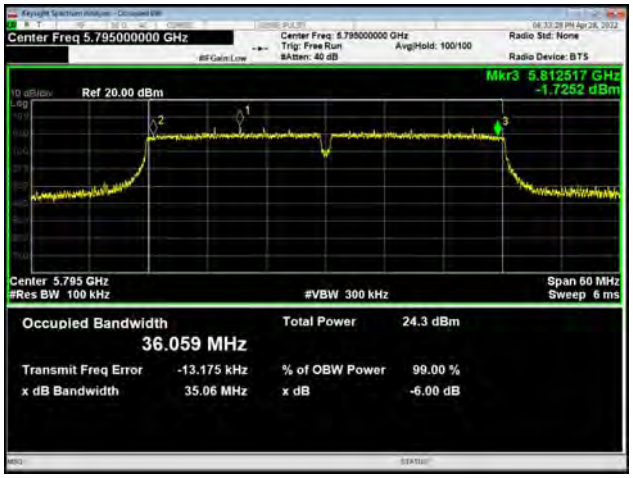
U-NII-3, 802.11n HT40
Carrier frequency (MHz): 5755



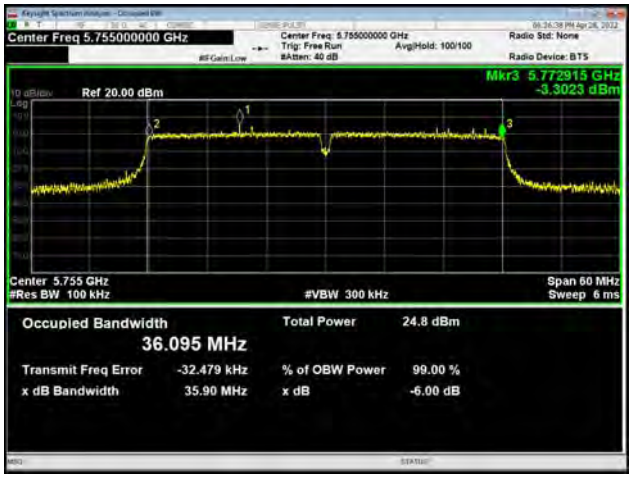
U-NII-3, 802.11ac VHT20
Carrier frequency (MHz): 5745

U-NII-3, 802.11n HT40
Carrier frequency (MHz): 5795

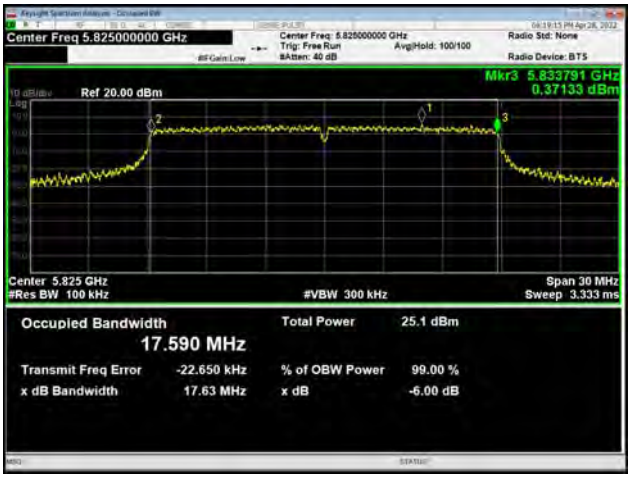


U-NII-3, 802.11ac VHT20
Carrier frequency (MHz): 5785

U-NII-3, 802.11ac VHT40
Carrier frequency (MHz): 5755



U-NII-3, 802.11ac VHT20
Carrier frequency (MHz): 5825



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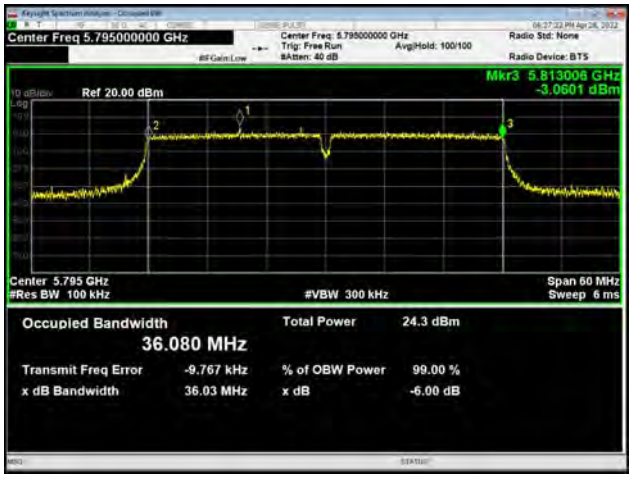
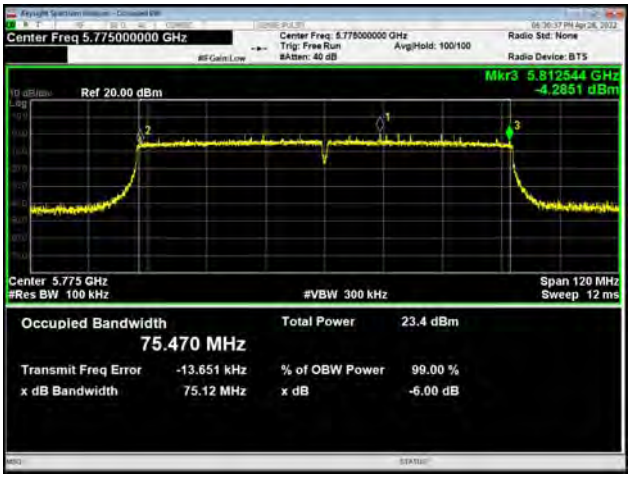
U-NII-3, 802.11ac VHT40
Carrier frequency (MHz): 5795

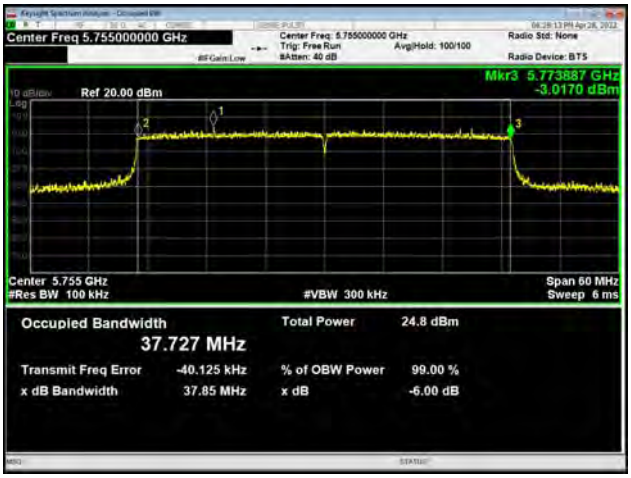


U-NII-3, 802.11ac VHT80
Carrier frequency (MHz): 5775



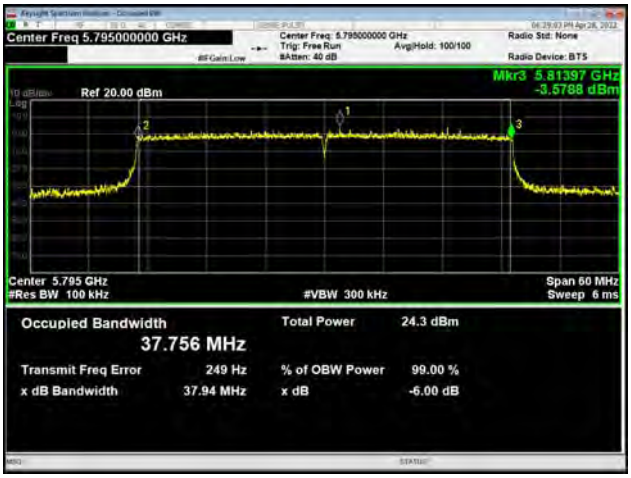
U-NII-3, 802.11ax HE20
Carrier frequency (MHz): 5745

U-NII-3, 802.11ax HE40
Carrier frequency (MHz): 5755



U-NII-3, 802.11ax HE20
Carrier frequency (MHz): 5785

U-NII-3, 802.11ax HE40
Carrier frequency (MHz): 5795



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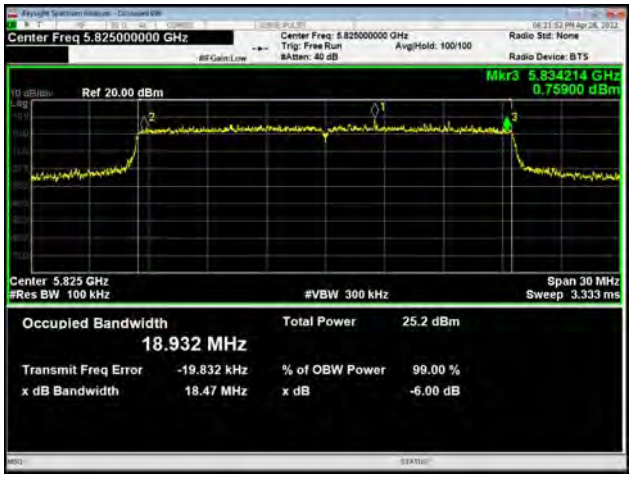
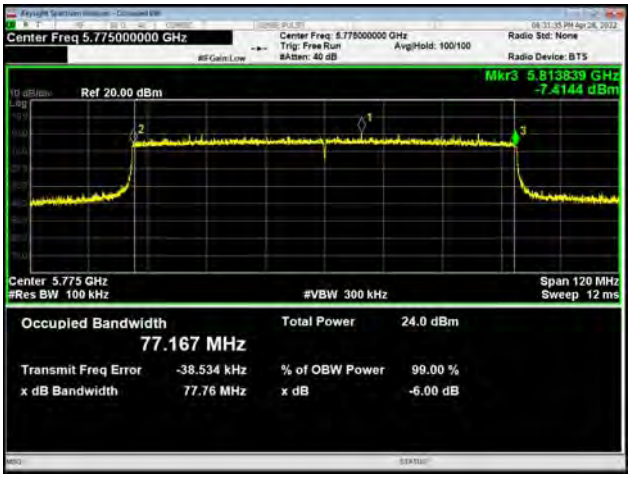
U-NII-3, 802.11ax HE20 Carrier frequency (MHz): 5825	U-NII-3, 802.11ax HE80 Carrier frequency (MHz): 5775
	

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5.2. Average Power Output

Ambient condition

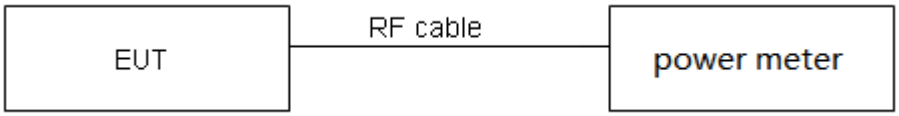
Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Methods of Measurement

During the process of the testing, The EUT was connected to the average power meter through an external attenuator and a known loss cable. The EUT is max power transmission with proper modulation. We use Maximum average Conducted Output Power Level Method in KDB789033 for this test

The conducted Power is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically.

Test Setup



Limits

Rule FCC Part 15.407(a)(1)(2)(3)
(1) For the band 5.15-5.25 GHz.
(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).
(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23

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dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(3)For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U= 0.44 dB.

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Test Results

Mode	T_{on} (ms)	$T_{(on+off)}$ (ms)	Duty cycle	Duty cycle correction Factor(dB)
802.11a	2.10	2.12	0.99	0.00
802.11n HT20	1.00	1.00	1.00	0.00
802.11n HT40	1.00	1.00	1.00	0.00
802.11ac VHT20	1.00	1.00	1.00	0.00
802.11ac VHT40	1.00	1.00	1.00	0.00
802.11ac VHT80	2.10	2.13	0.99	0.00
802.11ax HE20	1.00	1.00	1.00	0.00
802.11ax HE40	1.00	1.00	1.00	0.00
802.11ax HE80	1.00	1.00	1.00	0.00
Note: when Duty cycle≥0.98, Duty cycle correction Factor not required.				

SISO Antenna 1 Power Index											
Channel	802.11a	802.11n HT20	802.11ac VHT20	802.11ax HE20	Channel	802.11n HT40	802.11ac VHT40	802.11ax HE40	Channel	802.11ac VHT80	802.11ax HE80
CH36	19.50	19.00	18.50	18.50	CH38	18.00	18.00	18.00	CH42	18.00	17.50
CH40	19.50	19.00	18.50	18.50	CH46	18.00	16.50	18.00	/	/	/
CH48	19.50	19.00	18.50	18.50	/	/	/	/	/	/	/
CH52	19.50	19.00	18.50	18.50	CH54	18.00	16.00	18.00	CH58	18.00	17.50
CH60	19.50	19.00	18.50	18.50	CH62	18.00	18.00	18.00	/	/	/
CH64	19.50	19.00	18.50	18.50	/	/	/	/	/	/	/
CH100	19.50	19.00	18.50	18.50	CH102	18.00	18.00	18.00	CH106	18.00	17.50
CH116	19.50	19.00	18.50	18.50	CH110	18.00	16.50	16.50	CH138	18.00	17.50
CH140	19.50	19.00	18.50	18.50	CH134	18.00	18.00	18.00	/	/	/
CH144	19.50	19.00	18.50	18.50	CH142	18.00	18.00	18.00	/	/	/
CH149	19.50	19.00	18.50	18.50	CH151	18.00	18.00	18.00	CH155	13.00	17.50
CH157	19.50	19.00	13.00	18.50	CH159	18.00	18.00	18.00	/	/	/
CH165	19.50	19.00	18.50	18.50	/	/	/	/	/	/	/

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SISO Antenna 2 Power Index											
Channel	802.11a	802.11n HT20	802.11ac VHT20	802.11ax HE20	Channel	802.11n HT40	802.11ac VHT40	802.11ax HE40	Channel	802.11ac VHT80	802.11ax HE80
CH36	19.50	19.00	18.50	18.50	CH38	18.00	18.00	18.00	CH42	18.00	17.50
CH40	19.50	19.00	18.50	18.50	CH46	18.00	18.00	15.00	/	/	/
CH48	19.50	19.00	18.50	18.50	/	/	/	/	/	/	/
CH52	19.50	19.00	16.00	18.50	CH54	18.00	18.00	15.00	CH58	18.00	17.50
CH60	19.50	19.00	16.00	18.50	CH62	18.00	18.00	18.00	/	/	/
CH64	19.50	19.00	16.00	18.50	/	/	/	/	/	/	/
CH100	19.50	19.00	18.50	18.50	CH102	18.00	18.00	18.00	CH106	18.00	17.50
CH116	19.50	19.00	18.50	18.50	CH110	14.00	18.00	18.00	CH138	18.00	17.50
CH140	19.50	19.00	18.50	18.50	CH134	18.00	18.00	18.00	/	/	/
CH144	19.50	19.00	18.50	18.50	CH142	18.00	18.00	18.00	/	/	/
CH149	19.50	15.00	15.00	18.50	CH151	18.00	16.00	15.00	CH155	18.00	17.50
CH157	19.50	19.00	18.50	18.50	CH159	16.00	16.00	18.00	/	/	/
CH165	19.50	19.00	18.50	18.50	/	/	/	/	/	/	/

MIMO Antenna 1&2 Power Index										
Channel	802.11n HT20	802.11ac VHT20	802.11ax HE20	Channel	802.11n HT40	802.11ac VHT40	802.11ax HE40	Channel	802.11ac VHT80	802.11ax HE80
CH36	19.00	18.50	18.50	CH38	18.00	18.00	18.00	CH42	18.00	17.50
CH40	19.00	18.50	18.50	CH46	18.00	18.00	18.00	/	/	/
CH48	19.00	18.50	18.50	/	/	/	/	/	/	/
CH52	19.00	18.50	18.50	CH54	18.00	18.00	18.00	CH58	17.50	17.50
CH60	19.00	18.50	18.50	CH62	18.00	18.00	18.00	/	/	/
CH64	19.00	18.50	18.50	/	/	/	/	/	/	/
CH100	15.00	18.50	16.00	CH102	18.00	18.00	18.00	CH106	18.00	17.50
CH116	15.00	18.50	16.00	CH110	18.00	18.00	17.00	CH138	18.00	17.50
CH140	19.00	18.50	18.50	CH134	18.00	18.00	16.50	/	/	/
CH144	19.00	18.50	18.50	CH142	18.00	18.00	18.00	/	/	/
CH149	19.00	18.50	18.50	CH151	18.00	18.00	18.00	CH155	18.00	11.00
CH157	19.00	18.50	18.50	CH159	18.00	18.00	11.00	/	/	/
CH165	19.00	18.50	18.50	/	/	/	/	/	/	/

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Test Mode		Channel/Frequency (MHz)	B=26 dB bandwidth (MHz)	Limit 11 dBm + 10 log B (dBm)	Final Limit(dBm)
U-NII-2A	802.11a	52/5260	19.36	23.87<24	23.87
		60/5300	18.85	23.75<24	23.75
		64/5320	19.10	23.81<24	23.81
	802.11n HT20	52/5260	19.94	24.00	24.00
		60/5300	20.39	24.09>24	24.00
		64/5320	20.25	24.06>24	24.00
	802.11n HT40	54/5270	39.34	26.95>24	24.00
		62/5310	39.03	26.91>24	24.00
	802.11ac VHT20	52/5260	20.75	24.17>24	24.00
		60/5300	20.36	24.09>24	24.00
		64/5320	20.41	24.10>24	24.00
	802.11ac VHT40	54/5270	39.33	26.95>24	24.00
		62/5310	39.25	26.94>24	24.00
	802.11ac VHT80	58/5290	79.57	30.01>24	24.00
	802.11ax HE20	52/5260	22.07	24.44>24	24.00
		60/5300	21.01	24.22>24	24.00
		64/5320	20.86	24.19>24	24.00
	802.11ax HE40	54/5270	39.69	26.99>24	24.00
		62/5310	39.99	27.02>24	24.00
	802.11ax HE80	58/5290	79.84	30.02>24	24.00
U-NII-2C	802.11a	100/5500	21.11	24.25>24	24.00
		116/5580	21.18	24.26>24	24.00
		140/5700	22.66	24.55>24	24.00
		144/5720	25.14	25.00>24	24.00
	802.11n HT20	100/5500	21.53	24.33>24	24.00
		116/5580	20.85	24.19>24	24.00
		140/5700	22.24	24.47>24	24.00
		144/5720	25.70	25.10>24	24.00
	802.11n HT40	102/5510	39.34	26.95>24	24.00
		110/5550	39.05	26.92>24	24.00
		134/5670	39.29	26.94>24	24.00
		142/5710	39.67	26.98>24	24.00
	802.11ac VHT20	100/5500	21.42	24.31>24	24.00
		116/5580	20.99	24.22>24	24.00
		140/5700	23.77	24.76>24	24.00

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		144/5720	22.85	24.59>24	24.00
	802.11ac VHT40	102/5510	39.45	26.96>24	24.00
		110/5550	39.18	26.93>24	24.00
		134/5670	38.92	26.90>24	24.00
		142/5710	39.57	26.97>24	24.00
	802.11ac VHT80	106/5530	79.61	30.01>24	24.00
		138/5690	79.80	30.02>24	24.00
	802.11ax HE20	100/5500	23.15	24.65>24	24.00
		116/5580	22.04	24.43>24	24.00
		140/5700	22.21	24.47>24	24.00
		144/5720	24.78	24.94>24	24.00
	802.11ax HE40	102/5510	39.75	26.99>24	24.00
		110/5550	40.06	27.03>24	24.00
		134/5670	40.08	27.03>24	24.00
		142/5710	40.16	27.04>24	24.00
	802.11ax HE80	106/5530	80.95	30.08>24	24.00
		138/5690	80.51	30.06>24	24.00
Note: 250mW=24dBm					

Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor

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SISO Antenna 1

U-NII-1

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	36/5180	19.08	19.08	24.00	PASS
	40/5200	19.31	19.31	24.00	PASS
	48/5240	19.06	19.06	24.00	PASS
802.11n HT20	36/5180	18.81	18.81	24.00	PASS
	40/5200	18.80	18.80	24.00	PASS
	48/5240	18.61	18.61	24.00	PASS
802.11n HT40	38/5190	17.62	17.62	24.00	PASS
	46/5230	17.47	17.47	24.00	PASS
802.11ac VHT20	36/5180	18.38	18.38	24.00	PASS
	40/5200	18.38	18.38	24.00	PASS
	48/5240	18.20	18.20	24.00	PASS
802.11ac VHT40	38/5190	17.58	17.58	24.00	PASS
	46/5230	16.11	16.11	24.00	PASS
802.11ac VHT80	42/5210	17.34	17.34	24.00	PASS
802.11ax HE20	36/5180	18.40	18.40	24.00	PASS
	40/5200	18.36	18.36	24.00	PASS
	48/5240	18.20	18.20	24.00	PASS
802.11ax HE40	38/5190	17.53	17.53	24.00	PASS
	46/5230	17.33	17.33	24.00	PASS
802.11ax HE80	42/5210	17.41	17.41	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

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U-NII-2A

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	52/5260	18.84	18.84	23.87	PASS
	60/5300	19.15	19.15	23.75	PASS
	64/5320	19.45	19.45	23.81	PASS
802.11n HT20	52/5260	18.02	18.02	24.00	PASS
	60/5300	18.36	18.36	24.00	PASS
	64/5320	18.63	18.63	24.00	PASS
802.11n HT40	54/5270	17.40	17.40	24.00	PASS
	62/5310	17.79	17.79	24.00	PASS
802.11ac VHT20	52/5260	17.59	17.59	24.00	PASS
	60/5300	17.94	17.94	24.00	PASS
	64/5320	18.20	18.20	24.00	PASS
802.11ac VHT40	54/5270	16.03	16.03	24.00	PASS
	62/5310	17.88	17.88	24.00	PASS
802.11ac VHT80	58/5290	17.28	17.28	24.00	PASS
802.11ax HE20	52/5260	17.60	17.60	24.00	PASS
	60/5300	17.96	17.96	24.00	PASS
	64/5320	18.20	18.20	24.00	PASS
802.11ax HE40	54/5270	17.28	17.28	24.00	PASS
	62/5310	17.79	17.79	24.00	PASS
802.11ax HE80	58/5290	16.96	16.96	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

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U-NII-2C

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	100/5500	18.50	18.50	24.00	PASS
	116/5580	18.61	18.61	24.00	PASS
	140/5700	19.11	19.11	24.00	PASS
	144/5720	18.91	18.91	24.00	PASS
802.11n HT20	100/5500	18.15	18.15	24.00	PASS
	116/5580	18.29	18.29	24.00	PASS
	140/5700	18.90	18.90	24.00	PASS
	144/5720	18.87	18.87	24.00	PASS
802.11n HT40	102/5510	17.27	17.27	24.00	PASS
	110/5550	17.13	17.13	24.00	PASS
	134/5670	17.89	17.89	24.00	PASS
	142/5710	17.75	17.75	24.00	PASS
802.11ac VHT20	100/5500	17.73	17.73	24.00	PASS
	116/5580	17.24	17.24	24.00	PASS
	140/5700	18.34	18.34	24.00	PASS
	144/5720	18.23	18.23	24.00	PASS
802.11ac VHT40	102/5510	17.49	17.49	24.00	PASS
	110/5550	16.40	16.40	24.00	PASS
	134/5670	17.89	17.89	24.00	PASS
	142/5710	17.96	17.96	24.00	PASS
802.11ac VHT80	106/5530	17.12	17.12	24.00	PASS
	138/5690	17.89	17.89	24.00	PASS
802.11ax HE20	100/5500	17.70	17.70	24.00	PASS
	116/5580	16.97	16.97	24.00	PASS
	140/5700	18.27	18.27	24.00	PASS
	144/5720	18.17	18.17	24.00	PASS
802.11ax HE40	102/5510	17.23	17.23	24.00	PASS
	110/5550	16.26	16.26	24.00	PASS
	134/5670	17.89	17.89	24.00	PASS
	142/5710	17.54	17.54	24.00	PASS
802.11ax HE80	106/5530	17.18	17.18	24.00	PASS
	138/5690	17.40	17.40	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

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U-NII-3

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	149/5745	19.09	19.09	30.00	PASS
	157/5785	19.24	19.24	30.00	PASS
	165/5825	19.02	19.02	30.00	PASS
802.11n HT20	149/5745	18.56	18.56	30.00	PASS
	157/5785	18.83	18.83	30.00	PASS
	165/5825	18.68	18.68	30.00	PASS
802.11n HT40	151/5755	17.75	17.75	30.00	PASS
	159/5795	17.79	17.79	30.00	PASS
802.11ac VHT20	149/5745	18.25	18.25	30.00	PASS
	157/5785	12.93	12.93	30.00	PASS
	165/5825	18.22	18.22	30.00	PASS
802.11ac VHT40	151/5755	17.72	17.72	30.00	PASS
	159/5795	17.77	17.77	30.00	PASS
802.11ac VHT80	155/5775	12.65	12.65	30.00	PASS
802.11ax HE20	149/5745	18.19	18.19	30.00	PASS
	157/5785	18.32	18.32	30.00	PASS
	165/5825	18.21	18.21	30.00	PASS
802.11ax HE40	151/5755	17.64	17.64	30.00	PASS
	159/5795	17.68	17.68	30.00	PASS
802.11ax HE80	155/5775	17.19	17.19	30.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

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SISO Antenna 2

U-NII-1

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	36/5180	19.08	19.08	24.00	PASS
	40/5200	19.03	19.03	24.00	PASS
	48/5240	19.09	19.09	24.00	PASS
802.11n HT20	36/5180	18.73	18.73	24.00	PASS
	40/5200	18.64	18.64	24.00	PASS
	48/5240	15.34	15.34	24.00	PASS
802.11n HT40	38/5190	17.47	17.47	24.00	PASS
	46/5230	17.49	17.49	24.00	PASS
802.11ac VHT20	36/5180	18.23	18.23	24.00	PASS
	40/5200	18.16	18.16	24.00	PASS
	48/5240	18.19	18.19	24.00	PASS
802.11ac VHT40	38/5190	17.54	17.54	24.00	PASS
	46/5230	17.51	17.51	24.00	PASS
802.11ac VHT80	42/5210	17.38	17.38	24.00	PASS
802.11ax HE20	36/5180	18.22	18.22	24.00	PASS
	40/5200	18.13	18.13	24.00	PASS
	48/5240	18.19	18.19	24.00	PASS
802.11ax HE40	38/5190	17.40	17.40	24.00	PASS
	46/5230	14.03	14.03	24.00	PASS
802.11ax HE80	42/5210	17.43	17.43	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

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U-NII-2A

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	52/5260	19.18	19.18	23.87	PASS
	60/5300	19.30	19.30	23.75	PASS
	64/5320	19.40	19.40	23.81	PASS
802.11n HT20	52/5260	18.73	18.73	24.00	PASS
	60/5300	18.84	18.84	24.00	PASS
	64/5320	18.92	18.92	24.00	PASS
802.11n HT40	54/5270	17.66	17.66	24.00	PASS
	62/5310	17.81	17.81	24.00	PASS
802.11ac VHT20	52/5260	15.31	15.31	24.00	PASS
	60/5300	15.41	15.41	24.00	PASS
	64/5320	15.46	15.46	24.00	PASS
802.11ac VHT40	54/5270	17.62	17.62	24.00	PASS
	62/5310	17.78	17.78	24.00	PASS
802.11ac VHT80	58/5290	17.37	17.37	24.00	PASS
802.11ax HE20	52/5260	18.29	18.29	24.00	PASS
	60/5300	18.41	18.41	24.00	PASS
	64/5320	18.46	18.46	24.00	PASS
802.11ax HE40	54/5270	14.77	14.77	24.00	PASS
	62/5310	17.68	17.68	24.00	PASS
802.11ax HE80	58/5290	17.43	17.43	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

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U-NII-2C

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	100/5500	18.67	18.67	24.00	PASS
	116/5580	19.21	19.21	24.00	PASS
	140/5700	19.09	19.09	24.00	PASS
	144/5720	19.06	19.06	24.00	PASS
802.11n HT20	100/5500	18.12	18.12	24.00	PASS
	116/5580	18.57	18.57	24.00	PASS
	140/5700	18.54	18.54	24.00	PASS
	144/5720	18.45	18.45	24.00	PASS
802.11n HT40	102/5510	17.50	17.50	24.00	PASS
	110/5550	13.98	13.98	24.00	PASS
	134/5670	17.57	17.57	24.00	PASS
	142/5710	17.80	17.80	24.00	PASS
802.11ac VHT20	100/5500	17.87	17.87	24.00	PASS
	116/5580	18.03	18.03	24.00	PASS
	140/5700	18.03	18.03	24.00	PASS
	144/5720	18.03	18.03	24.00	PASS
802.11ac VHT40	102/5510	17.50	17.50	24.00	PASS
	110/5550	17.43	17.43	24.00	PASS
	134/5670	17.62	17.62	24.00	PASS
	142/5710	17.81	17.81	24.00	PASS
802.11ac VHT80	106/5530	17.18	17.18	24.00	PASS
	138/5690	17.35	17.35	24.00	PASS
802.11ax HE20	100/5500	17.89	17.89	24.00	PASS
	116/5580	18.03	18.03	24.00	PASS
	140/5700	18.03	18.03	24.00	PASS
	144/5720	17.99	17.99	24.00	PASS
802.11ax HE40	102/5510	17.40	17.40	24.00	PASS
	110/5550	17.28	17.28	24.00	PASS
	134/5670	17.52	17.52	24.00	PASS
	142/5710	17.73	17.73	24.00	PASS
802.11ax HE80	106/5530	17.24	17.24	24.00	PASS
	138/5690	17.34	17.34	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

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U-NII-3

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	149/5745	18.79	18.79	30.00	PASS
	157/5785	19.02	19.02	30.00	PASS
	165/5825	19.43	19.43	30.00	PASS
802.11n HT20	149/5745	14.97	14.97	30.00	PASS
	157/5785	18.27	18.27	30.00	PASS
	165/5825	18.88	18.88	30.00	PASS
802.11n HT40	151/5755	17.35	17.35	30.00	PASS
	159/5795	15.33	15.33	30.00	PASS
802.11ac VHT20	149/5745	14.98	14.98	30.00	PASS
	157/5785	17.87	17.87	30.00	PASS
	165/5825	18.16	18.16	30.00	PASS
802.11ac VHT40	151/5755	15.11	15.11	30.00	PASS
	159/5795	15.33	15.33	30.00	PASS
802.11ac VHT80	155/5775	17.12	17.12	30.00	PASS
802.11ax HE20	149/5745	17.88	17.88	30.00	PASS
	157/5785	17.93	17.93	30.00	PASS
	165/5825	18.19	18.19	30.00	PASS
802.11ax HE40	151/5755	15.00	15.00	30.00	PASS
	159/5795	17.51	17.51	30.00	PASS
802.11ax HE80	155/5775	17.23	17.23	30.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

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MIMO

U-NII-1

Mode	Channel/ Frequency (MHz)	Antenna 1		Antenna 2		Total Power (dBm)	Limit (dBm)	Conclusion
		Average Power Measured (dBm)	Average Power with duty factor (dBm)	Average Power Measured (dBm)	Average Power with duty factor (dBm)			
802.11n HT20	36/5180	18.70	18.70	18.24	18.24	21.49	24.00	PASS
	40/5200	18.74	18.74	18.02	18.02	21.41	24.00	PASS
	48/5240	18.79	18.79	18.36	18.36	21.59	24.00	PASS
802.11n HT40	36/5180	17.99	17.99	17.52	17.52	20.77	24.00	PASS
	40/5200	18.07	18.07	17.54	17.54	20.82	24.00	PASS
802.11ac VHT20	48/5240	18.22	18.22	17.83	17.83	21.04	24.00	PASS
	38/5190	18.24	18.24	17.62	17.62	20.95	24.00	PASS
	46/5230	18.33	18.33	17.86	17.86	21.11	24.00	PASS
802.11ac VHT40	36/5180	17.97	17.97	17.50	17.50	20.75	24.00	PASS
	40/5200	18.03	18.03	17.54	17.54	20.80	24.00	PASS
802.11ac VHT80	48/5240	17.87	17.87	17.23	17.23	20.57	24.00	PASS
802.11ax HE20	38/5190	18.25	18.25	17.87	17.87	21.07	24.00	PASS
	46/5230	18.29	18.29	17.64	17.64	20.99	24.00	PASS
	42/5210	18.39	18.39	17.89	17.89	21.16	24.00	PASS
802.11ax HE40	36/5180	17.92	17.92	17.38	17.38	20.67	24.00	PASS
	40/5200	17.98	17.98	17.42	17.42	20.72	24.00	PASS
802.11ax HE80	48/5240	17.50	17.50	17.33	17.33	20.43	24.00	PASS

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1), The Total Power =$10\log(10^{(\text{Power antenna1 in dBm}/10)}+10^{(\text{Power antenna2 in dBm}/10)})$.

2. Direction gain calculation according to KDB662911 D01 Multiple Transmitter Output v02r01 F)2)d)(ii): If antenna gains are not equal, If all transmit signals are completely uncorrelated, then Directional gain = $10\log[(10^{G1/10}+10^{G2/10})/N_{ANT}]$ dBi = $10\log[(10^{-2.4/10}+10^{0/10})/2]$ = -1.036dBi < 6dBi. So the limit is 24dBm.

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U-NII-2A

Mode	Channel/ Frequency (MHz)	Antenna 1		Antenna 2		Total Power (dBm)	Limit (dBm)	Conclusion
		Average Power Measured (dBm)	Average Power with duty factor (dBm)	Average Power Measured (dBm)	Average Power with duty factor (dBm)			
802.11n HT20	52/5260	18.74	18.74	18.38	18.38	21.57	24.00	PASS
	60/5300	18.83	18.83	18.48	18.48	21.67	24.00	PASS
	64/5320	18.95	18.95	18.33	18.33	21.66	24.00	PASS
802.11n HT40	54/5270	18.00	18.00	17.58	17.58	20.81	24.00	PASS
	62/5310	18.11	18.11	17.76	17.76	20.95	24.00	PASS
802.11ac VHT20	52/5260	18.30	18.30	17.95	17.95	21.14	24.00	PASS
	60/5300	18.43	18.43	18.03	18.03	21.24	24.00	PASS
	64/5320	18.56	18.56	17.91	17.91	21.26	24.00	PASS
802.11ac VHT40	54/5270	17.98	17.98	17.56	17.56	20.79	24.00	PASS
	62/5310	18.12	18.12	17.75	17.75	20.95	24.00	PASS
802.11ac VHT80	58/5290	17.03	17.03	16.16	16.16	19.63	24.00	PASS
802.11ax HE20	52/5260	18.33	18.33	17.97	17.97	21.16	24.00	PASS
	60/5300	18.44	18.44	18.09	18.09	21.28	24.00	PASS
	64/5320	18.56	18.56	17.95	17.95	21.28	24.00	PASS
802.11ax HE40	54/5270	17.93	17.93	17.46	17.46	20.71	24.00	PASS
	62/5310	18.04	18.04	17.64	17.64	20.85	24.00	PASS
802.11ax HE80	58/5290	17.10	17.10	16.22	16.22	19.69	24.00	PASS

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1), The Total Power =$10\log(10^{(\text{Power antenna1 in dBm/10})}+10^{(\text{Power antenna2 in dBm/10})})$.

2. Direction gain calculation according to KDB662911 D01 Multiple Transmitter Output v02r01 F)2)d)(ii): If antenna gains are not equal, If all transmit signals are completely uncorrelated, then Directional gain = $10\log[(10^{G1/10} + 10^{G2/10})/N_{ANT}]$ dBi = $10\log[(10^{-2.4/10} + 10^{0/10})/2]$ = -1.036dBi < 6dBi. So the limit is 24dBm.

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U-NII-2C

Mode	Channel/ Frequency (MHz)	Antenna 1		Antenna 2		Total Power (dBm)	Limit (dBm)	Conclusion
		Average Power Measured (dBm)	Average Power with duty factor (dBm)	Average Power Measured (dBm)	Average Power with duty factor (dBm)			
802.11n HT20	100/5500	14.64	14.64	14.44	14.44	17.55	24.00	PASS
	116/5580	14.84	14.84	14.44	14.44	17.65	24.00	PASS
	140/5700	18.00	18.00	18.48	18.48	21.26	24.00	PASS
	144/5720	17.86	17.86	18.50	18.50	21.20	24.00	PASS
802.11n HT40	102/5510	17.32	17.32	17.35	17.35	20.35	24.00	PASS
	110/5550	17.25	17.25	17.37	17.37	20.32	24.00	PASS
	134/5670	17.30	17.30	18.09	18.09	20.72	24.00	PASS
	142/5710	17.48	17.48	18.10	18.10	20.81	24.00	PASS
802.11ac VHT20	100/5500	17.75	17.75	17.70	17.70	20.74	24.00	PASS
	116/5580	18.18	18.18	17.79	17.79	21.00	24.00	PASS
	140/5700	18.00	18.00	18.45	18.45	21.24	24.00	PASS
	144/5720	17.87	17.87	18.48	18.48	21.20	24.00	PASS
802.11ac VHT40	102/5510	17.31	17.31	17.36	17.36	20.35	24.00	PASS
	110/5550	17.24	17.24	17.33	17.33	20.30	24.00	PASS
	134/5670	17.32	17.32	18.05	18.05	20.71	24.00	PASS
	142/5710	17.49	17.49	18.12	18.12	20.83	24.00	PASS
802.11ac VHT80	106/5530	17.09	17.09	17.04	17.04	20.08	24.00	PASS
	138/5690	17.10	17.10	17.77	17.77	20.46	24.00	PASS
802.11ax HE20	100/5500	15.66	15.66	15.49	15.49	18.59	24.00	PASS
	116/5580	15.78	15.78	15.39	15.39	18.60	24.00	PASS
	140/5700	17.96	17.96	18.58	18.58	21.29	24.00	PASS
	144/5720	17.90	17.90	18.48	18.48	21.21	24.00	PASS
802.11ax HE40	102/5510	17.26	17.26	17.26	17.26	20.27	24.00	PASS
	110/5550	16.82	16.82	16.71	16.71	19.78	24.00	PASS
	134/5670	15.84	15.84	16.33	16.33	19.10	24.00	PASS
	142/5710	17.43	17.43	17.95	17.95	20.71	24.00	PASS
802.11ax HE80	106/5530	17.13	17.13	17.04	17.04	20.10	24.00	PASS
	138/5690	17.11	17.11	17.78	17.78	20.47	24.00	PASS

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1), The Total Power $=10\log(10^{(\text{Power antenna1 in dBm}/10)}+10^{(\text{Power antenna2 in dBm}/10)})$.

2. Direction gain calculation according to KDB662911 D01 Multiple Transmitter Output v02r01 F)2)d)(ii): If antenna gains are not equal, If all transmit signals are completely uncorrelated, then Directional gain $= 10\log[(10^{G1/10} + 10^{G2/10})/N_{ANT}]$ dBi $= 10\log[(10^{-2.4/10} + 10^{0/10})/2] = -1.036$dBi < 6dBi. So the limit is 24dBm.

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U-NII-3

Mode	Channel/ Frequency (MHz)	Antenna 1		Antenna 2		Total Power (dBm/ 500kHz)	Limit (dBm/ 500kHz)	Conclusion
		Average Power Measured (dBm/ 470kHz)	Average Power with duty factor (dBm/ 500kHz)	Average Power Measured (dBm/ 470kHz)	Average Power with duty factor (dBm/ 500kHz)			
802.11n HT20	149/5745	18.65	18.65	18.75	18.75	21.71	30.00	PASS
	157/5785	18.95	18.95	18.76	18.76	21.87	30.00	PASS
	165/5825	19.11	19.11	18.69	18.69	21.92	30.00	PASS
802.11n HT40	149/5745	17.74	17.74	17.89	17.89	20.83	30.00	PASS
	157/5785	17.98	17.98	17.81	17.81	20.91	30.00	PASS
802.11ac VHT20	165/5825	18.15	18.15	18.19	18.19	21.18	30.00	PASS
	151/5755	18.35	18.35	18.20	18.20	21.29	30.00	PASS
	159/5795	18.55	18.55	18.20	18.20	21.39	30.00	PASS
802.11ac VHT40	149/5745	17.74	17.74	17.89	17.89	20.83	30.00	PASS
	157/5785	18.04	18.04	17.84	17.84	20.95	30.00	PASS
802.11ac VHT80	165/5825	17.65	17.65	17.76	17.76	20.72	30.00	PASS
802.11ax HE20	151/5755	18.16	18.16	18.31	18.31	21.25	30.00	PASS
	159/5795	18.33	18.33	18.23	18.23	21.29	30.00	PASS
	155/5775	18.53	18.53	18.20	18.20	21.38	30.00	PASS
802.11ax HE40	149/5745	17.69	17.69	17.86	17.86	20.79	30.00	PASS
	157/5785	10.58	10.58	10.65	10.65	13.63	30.00	PASS
802.11ax HE80	165/5825	10.49	10.49	10.88	10.88	13.70	30.00	PASS

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1), The Total Power $=10\log(10^{(\text{Power antenna1 in dBm/10})}+10^{(\text{Power antenna2 in dBm/10})})$.

2. Direction gain calculation according to KDB662911 D01 Multiple Transmitter Output v02r01 F)2)d)(ii): If antenna gains are not equal, If all transmit signals are completely uncorrelated, then Directional gain = $10\log[(10^{G1/10}+10^{G2/10})/N_{ANT}]$ dBi = $10\log[(10^{-2.4/10}+10^{0/10})/2]$ = -1.036dBi < 6dBi. So the limit is 30dBm.

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5.3. Frequency Stability

Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

1. Frequency stability with respect to ambient temperature

a) Supply the EUT with a nominal ac voltage or install a new or fully charged battery in the EUT. If possible, a dummy load shall be connected to the EUT because an antenna near the metallic walls of an environmental test chamber could affect the output frequency of the EUT. If the EUT is equipped with a permanently attached, adjustable-length antenna, then the EUT shall be placed in the center of the chamber with the antenna adjusted to the shortest length possible. Turn ON the EUT and tune it to one of the number of frequencies shown in 5.6.

b) Couple the unlicensed wireless device output to the measuring instrument by connecting an antenna to the measuring instrument with a suitable length of coaxial cable and placing the measuring antenna near the EUT (e.g., 15 cm away), or by connecting a dummy load to the measuring instrument, through an attenuator if necessary.

c) Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument but is strong enough to allow measurement of the operating or fundamental frequency of the EUT).

d) Turn the EUT OFF and place it inside the environmental temperature chamber. For devices that have oscillator heaters, energize only the heater circuit.

e) Set the temperature control on the chamber to the highest specified in the regulatory requirements for the type of device and allow the oscillator heater and the chamber temperature to stabilize.

f) While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized. Four measurements in total are made.

g) Measure the frequency at each of frequencies specified in 5.6.

h) Switch OFF the EUT but do not switch OFF the oscillator heater.

i) Lower the chamber temperature by not more that 10°C, and allow the temperature inside the chamber to stabilize.

j) Repeat step f) through step i) down to the lowest specified temperature.

2. Frequency stability when varying supply voltage

Unless otherwise specified, these tests shall be made at ambient room temperature (+15°C to +25 °C). An antenna shall be connected to the antenna output terminals of the EUT if possible. If the EUT is equipped with or uses an adjustable-length antenna, then it shall be fully extended.

a) Supply the EUT with nominal voltage or install a new or fully charged battery in the EUT. Turn ON the EUT and couple its output to a frequency counter or other frequency-measuring instrument.

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b) Tune the EUT to one of the number of frequencies required in 5.6. Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument but is strong enough to allow measurement of the operating or fundamental frequency of the EUT).
c) Measure the frequency at each of the frequencies specified in 5.6.
d) Repeat the above procedure at 85% and 115% of the nominal supply voltage.

Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U= 936Hz

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Test Results

Voltage (V)	Temperature (°C)	U-NII-1 Test Results			
		5200MHz			
		1min	2min	5min	10min
3.89	-20	5200.008264	5199.99926	5199.992919	5199.989734
3.89	-10	5200.00288	5199.993899	5199.984922	5199.989184
3.89	0	5200.000028	5199.989561	5199.975258	5199.983613
3.89	10	5199.991025	5199.981579	5199.974524	5199.981978
3.89	20	5199.987432	5199.977178	5199.971355	5199.973865
3.89	30	5199.985119	5199.969851	5199.967453	5199.967324
3.89	40	5199.975325	5199.967503	5199.96405	5199.96289
3.89	55	5199.970198	5199.96433	5199.958037	5199.959423
3.7	20	5199.961361	5199.963942	5199.957898	5199.950965
4.45	20	5199.954464	5199.954935	5199.952406	5199.945822
Max. ΔMHz		-0.045536246	-0.045064505	-0.047593849	-0.054178386
PPM		-8.756970305	-8.66625103	-9.152663305	-10.41892046

Voltage (V)	Temperature (°C)	U-NII-2A Test Results			
		5300MHz			
		1min	2min	5min	10min
3.89	-20	5300.002073	5299.999068	5299.99586	5299.995207
3.89	-10	5299.995175	5299.998109	5299.994152	5299.990556
3.89	0	5299.992443	5299.988565	5299.98827	5299.982103
3.89	10	5299.987528	5299.982892	5299.979621	5299.980952
3.89	20	5299.981161	5299.980385	5299.969924	5299.976656
3.89	30	5299.979022	5299.978328	5299.968639	5299.967411
3.89	40	5299.973988	5299.974632	5299.960783	5299.962603
3.89	55	5299.971311	5299.972355	5299.952418	5299.962212
3.7	20	5299.969339	5299.9699	5299.951793	5299.96158
4.45	20	5299.959797	5299.96246	5299.9418	5299.954352
Max. ΔMHz		-0.040203092	-0.037540487	-0.058200214	-0.045648488
PPM		-7.58548898	-7.08311067	-10.98117243	-8.612922267

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Voltage (V)	Temperature (°C)	U-NII-2C Test Results			
		5580MHz			
		1min	2min	5min	10min
3.89	-20	5579.993973	5579.986539	5579.983463	5579.979435
3.89	-10	5579.988858	5579.977834	5579.980804	5579.974385
3.89	0	5579.983941	5579.968319	5579.973378	5579.974275
3.89	10	5579.981113	5579.965934	5579.96519	5579.973658
3.89	20	5579.976385	5579.959279	5579.957133	5579.968809
3.89	30	5579.9687	5579.957703	5579.948415	5579.965692
3.89	40	5579.96201	5579.951496	5579.938545	5579.95576
3.89	55	5579.95612	5579.948315	5579.93261	5579.947833
3.7	20	5579.947369	5579.942286	5579.925144	5579.946004
4.45	20	5579.940418	5579.93588	5579.922441	5579.938805
3.89	-20	5579.993973	5579.986539	5579.983463	5579.979435
Max. ΔMHz		-0.059581606	-0.064120043	-0.077558631	-0.061195383
PPM		-10.67770719	-11.49104712	-13.89939617	-10.9669146

Voltage (V)	Temperature (°C)	U-NII-3 Test Results			
		5785MHz			
		1min	2min	5min	10min
3.89	-20	5785.001246	5784.992993	5784.992488	5784.987891
3.89	-10	5784.997419	5784.988112	5784.984838	5784.985027
3.89	0	5784.991363	5784.978162	5784.97786	5784.976933
3.89	10	5784.987445	5784.968245	5784.968697	5784.970972
3.89	20	5784.985146	5784.96263	5784.966108	5784.97097
3.89	30	5784.979503	5784.962264	5784.962762	5784.970227
3.89	40	5784.977131	5784.959324	5784.956823	5784.96582
3.89	55	5784.970366	5784.954738	5784.949193	5784.96269
3.7	20	5784.962382	5784.948057	5784.940898	5784.962104
4.45	20	5784.954413	5784.939368	5784.933856	5784.956913
3.89	-20	5785.001246	5784.992993	5784.992488	5784.987891
Max. ΔMHz		-0.045586602	-0.060632245	-0.066143557	-0.043087131
PPM		-7.880138658	-10.48094124	-11.43363128	-7.448077885

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5.4. Power Spectral Density

Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

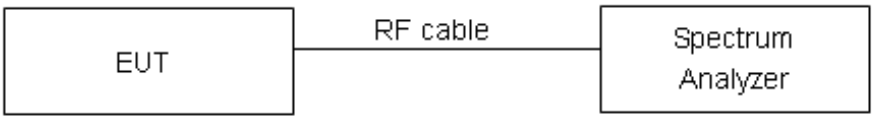
Method of Measurement

The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable.

Set RBW = 1MHz, VBW =3MHz for the band 5.150-5.250GHz, 5.250-5.350GHz, 5.470-5.725GHz.
Set RBW = 470kHz, VBW =1.5MHz for the band 5.725-5.850GHz

The conducted PSD is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically.

Test setup



Limits

Rule FCC Part 15.407(a)(1)/ Part 15.407(a)(2) / Part 15.407(a)(3)
For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500kHz band. If transmittingantennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the

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amount in dB that the directional gain of the antenna exceeds 6 dBi.

Frequency Bands/MHz	Limits
5150-5250	11dBm/MHz
5.25-5.35 GHz and 5.47-5.725 GHz	11dBm/MHz
5725-5850	30dBm/500kHz

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U= 0.75dB.

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Test Results:

Note: Power Spectral Density =Read Value+Duty cycle correction factor

SISO Antenna 1

U-NII-1

Mode	Channel Number	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11a	36/5180	8.58	8.58	11	PASS
	40/5200	8.75	8.75	11	PASS
	48/5240	8.66	8.66	11	PASS
802.11n HT20	36/5180	8.21	8.21	11	PASS
	40/5200	8.04	8.04	11	PASS
	48/5240	7.8	7.80	11	PASS
802.11n HT40	38/5190	3.9	3.90	11	PASS
	46/5230	3.79	3.79	11	PASS
802.11ac VHT20	36/5180	7.67	7.67	11	PASS
	40/5200	7.66	7.66	11	PASS
	48/5240	7.52	7.52	11	PASS
802.11ac VHT40	38/5190	4.06	4.06	11	PASS
	46/5230	2.42	2.42	11	PASS
802.11ac VHT80	42/5210	0.4	0.40	11	PASS
802.11ax HE20	36/5180	7.63	7.63	11	PASS
	40/5200	7.64	7.64	11	PASS
	48/5240	7.45	7.45	11	PASS
802.11ax HE40	38/5190	3.67	3.67	11	PASS
	46/5230	3.39	3.39	11	PASS
802.11ax HE80	42/5210	0.64	0.64	11	PASS

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U-NII-2A

Mode	Channel Number	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11a	52/5260	8.34	8.34	11	PASS
	60/5300	8.61	8.61	11	PASS
	64/5320	8.90	8.90	11	PASS
802.11n HT20	52/5260	7.32	7.32	11	PASS
	60/5300	7.63	7.63	11	PASS
	64/5320	8.04	8.04	11	PASS
802.11n HT40	54/5270	3.76	3.76	11	PASS
	62/5310	4.46	4.46	11	PASS
802.11ac VHT20	52/5260	6.77	6.77	11	PASS
	60/5300	7.21	7.21	11	PASS
	64/5320	7.58	7.58	11	PASS
802.11ac VHT40	54/5270	2.26	2.26	11	PASS
	62/5310	4.01	4.01	11	PASS
802.11ac VHT80	58/5290	0.31	0.31	11	PASS
802.11ax HE20	52/5260	6.73	6.73	11	PASS
	60/5300	6.99	6.99	11	PASS
	64/5320	7.27	7.27	11	PASS
802.11ax HE40	54/5270	3.63	3.63	11	PASS
	62/5310	3.76	3.76	11	PASS
802.11ax HE80	58/5290	0.13	0.13	11	PASS

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U-NII-2C

Mode	Channel Number	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11a	100/5500	7.81	7.81	11	PASS
	116/5580	7.94	7.94	11	PASS
	140/5700	8.76	8.76	11	PASS
	144/5720	8.64	8.64	11	PASS
802.11n HT20	100/5500	7.33	7.33	11	PASS
	116/5580	7.50	7.50	11	PASS
	140/5700	8.23	8.23	11	PASS
	144/5720	7.94	7.94	11	PASS
802.11n HT40	102/5510	3.59	3.59	11	PASS
	110/5550	3.50	3.50	11	PASS
	134/5670	4.11	4.11	11	PASS
	142/5710	4.16	4.16	11	PASS
802.11ac VHT20	100/5500	6.95	6.95	11	PASS
	116/5580	6.62	6.62	11	PASS
	140/5700	7.48	7.48	11	PASS
	144/5720	7.45	7.45	11	PASS
802.11ac VHT40	102/5510	3.84	3.84	11	PASS
	110/5550	2.51	2.51	11	PASS
	134/5670	4.45	4.45	11	PASS
	142/5710	4.50	4.50	11	PASS
802.11ac VHT80	106/5530	0.30	0.30	11	PASS
	138/5690	1.04	1.04	11	PASS
802.11ax HE20	100/5500	7.04	7.04	11	PASS
	116/5580	5.89	5.89	11	PASS
	140/5700	7.35	7.35	11	PASS
	144/5720	7.64	7.64	11	PASS
802.11ax HE40	102/5510	3.43	3.43	11	PASS
	110/5550	2.59	2.59	11	PASS
	134/5670	4.15	4.15	11	PASS
	142/5710	3.83	3.83	11	PASS
802.11ax HE80	106/5530	0.27	0.27	11	PASS
	138/5690	1.42	1.42	11	PASS

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U-NII-3

Mode	Channel Number	Read Value (dBm/470kHz)	Power Spectral Density (dBm/500kHz)	Limit (dBm/500kHz)	Conclusion
802.11a	149/5745	5.21	5.48	30	PASS
	157/5785	5.43	5.70	30	PASS
	165/5825	5.59	5.86	30	PASS
802.11n HT20	149/5745	4.82	5.09	30	PASS
	157/5785	4.96	5.23	30	PASS
	165/5825	4.83	5.10	30	PASS
802.11n HT40	151/5755	1.05	1.32	30	PASS
	159/5795	0.68	0.95	30	PASS
802.11ac VHT20	149/5745	4.25	4.52	30	PASS
	157/5785	-1.00	-0.73	30	PASS
	165/5825	4.25	4.52	30	PASS
802.11ac VHT40	151/5755	0.71	0.98	30	PASS
	159/5795	0.79	1.06	30	PASS
802.11ac VHT80	155/5775	-7.32	-7.05	30	PASS
802.11ax HE20	149/5745	4.09	4.36	30	PASS
	157/5785	4.39	4.66	30	PASS
	165/5825	4.31	4.58	30	PASS
802.11ax HE40	151/5755	0.55	0.82	30	PASS
	159/5795	0.61	0.88	30	PASS
802.11ax HE80	155/5775	-2.43	-2.16	30	PASS
Note: PSD=Read Value+Duty cycle correction factor +10*LOG(500/470) correction factor					

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SISO Antenna 2

U-NII-1

Mode	Channel Number	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11a	36/5180	8.85	8.85	11	PASS
	40/5200	8.65	8.65	11	PASS
	48/5240	8.38	8.38	11	PASS
802.11n HT20	36/5180	8.07	8.07	11	PASS
	40/5200	7.96	7.96	11	PASS
	48/5240	4.76	4.76	11	PASS
802.11n HT40	38/5190	3.83	3.83	11	PASS
	46/5230	3.92	3.92	11	PASS
802.11ac VHT20	36/5180	7.57	7.57	11	PASS
	40/5200	7.29	7.29	11	PASS
	48/5240	7.35	7.35	11	PASS
802.11ac VHT40	38/5190	3.80	3.80	11	PASS
	46/5230	3.82	3.82	11	PASS
802.11ac VHT80	42/5210	0.58	0.58	11	PASS
802.11ax HE20	36/5180	7.23	7.23	11	PASS
	40/5200	7.10	7.10	11	PASS
	48/5240	7.29	7.29	11	PASS
802.11ax HE40	38/5190	3.53	3.53	11	PASS
	46/5230	0.15	0.15	11	PASS
802.11ax HE80	42/5210	0.52	0.52	11	PASS

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U-NII-2A

Mode	Channel Number	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11a	52/5260	8.80	8.80	11	PASS
	60/5300	8.84	8.84	11	PASS
	64/5320	9.09	9.09	11	PASS
802.11n HT20	52/5260	8.01	8.01	11	PASS
	60/5300	7.91	7.91	11	PASS
	64/5320	8.14	8.14	11	PASS
802.11n HT40	54/5270	3.91	3.91	11	PASS
	62/5310	4.02	4.02	11	PASS
802.11ac VHT20	52/5260	4.65	4.65	11	PASS
	60/5300	4.64	4.64	11	PASS
	64/5320	4.75	4.75	11	PASS
802.11ac VHT40	54/5270	3.84	3.84	11	PASS
	62/5310	4.19	4.19	11	PASS
802.11ac VHT80	58/5290	0.52	0.52	11	PASS
802.11ax HE20	52/5260	7.39	7.39	11	PASS
	60/5300	7.46	7.46	11	PASS
	64/5320	7.90	7.90	11	PASS
802.11ax HE40	54/5270	0.79	0.79	11	PASS
	62/5310	3.85	3.85	11	PASS
802.11ax HE80	58/5290	0.59	0.59	11	PASS

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U-NII-2C

Mode	Channel Number	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11a	100/5500	8.18	8.18	11	PASS
	116/5580	8.22	8.22	11	PASS
	140/5700	8.55	8.55	11	PASS
	144/5720	8.56	8.56	11	PASS
802.11n HT20	100/5500	7.60	7.60	11	PASS
	116/5580	7.67	7.67	11	PASS
	140/5700	7.81	7.81	11	PASS
	144/5720	7.92	7.92	11	PASS
802.11n HT40	102/5510	4.03	4.03	11	PASS
	110/5550	0.28	0.28	11	PASS
	134/5670	3.78	3.78	11	PASS
	142/5710	3.98	3.98	11	PASS
802.11ac VHT20	100/5500	7.20	7.20	11	PASS
	116/5580	7.18	7.18	11	PASS
	140/5700	7.34	7.34	11	PASS
	144/5720	7.38	7.38	11	PASS
802.11ac VHT40	102/5510	3.71	3.71	11	PASS
	110/5550	3.76	3.76	11	PASS
	134/5670	3.73	3.73	11	PASS
	142/5710	4.20	4.20	11	PASS
802.11ac VHT80	106/5530	0.56	0.56	11	PASS
	138/5690	0.52	0.52	11	PASS
802.11ax HE20	100/5500	6.90	6.90	11	PASS
	116/5580	7.15	7.15	11	PASS
	140/5700	7.30	7.30	11	PASS
	144/5720	7.02	7.02	11	PASS
802.11ax HE40	102/5510	3.47	3.47	11	PASS
	110/5550	3.38	3.38	11	PASS
	134/5670	3.87	3.87	11	PASS
	142/5710	3.75	3.75	11	PASS
802.11ax HE80	106/5530	0.51	0.51	11	PASS
	138/5690	0.58	0.58	11	PASS

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U-NII-3

Mode	Channel Number	Read Value (dBm/470kHz)	Power Spectral Density (dBm/500kHz)	Limit (dBm/500kHz)	Conclusion
802.11a	149/5745	5.26	5.53	30	PASS
	157/5785	5.55	5.82	30	PASS
	165/5825	5.91	6.18	30	PASS
802.11n HT20	149/5745	1.07	1.34	30	PASS
	157/5785	4.74	5.01	30	PASS
	165/5825	5.27	5.54	30	PASS
802.11n HT40	151/5755	0.79	1.06	30	PASS
	159/5795	-1.55	-1.28	30	PASS
802.11ac VHT20	149/5745	1.17	1.44	30	PASS
	157/5785	4.13	4.40	30	PASS
	165/5825	4.61	4.88	30	PASS
802.11ac VHT40	151/5755	-1.60	-1.33	30	PASS
	159/5795	-1.56	-1.29	30	PASS
802.11ac VHT80	155/5775	-2.69	-2.42	30	PASS
802.11ax HE20	149/5745	3.91	4.18	30	PASS
	157/5785	4.08	4.35	30	PASS
	165/5825	4.36	4.63	30	PASS
802.11ax HE40	151/5755	-1.90	-1.63	30	PASS
	159/5795	0.85	1.12	30	PASS
802.11ax HE80	155/5775	-2.37	-2.10	30	PASS
Note: PSD=Read Value+Duty cycle correction factor +10*LOG(500/470) correction factor					

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MIMO

U-NII-1

Mode	Channel/ Frequency (MHz)	Power Spectral Density					Limit (dBm /MHz)	Conclusion
		Antenna 1		Antenna 2		Total Power (dBm/MHz)		
		Read Value (dBm/MHz)	PSD (dBm/MHz)	Read Value (dBm/MHz)	PSD (dBm/MHz)			
802.11n HT20	36/5180	7.86	7.86	7.49	7.49	10.69	11.00	PASS
	40/5200	7.98	7.98	7.19	7.19	10.61	11.00	PASS
	48/5240	8.11	8.11	7.49	7.49	10.82	11.00	PASS
802.11n HT40	38/5190	4.46	4.46	3.77	3.77	7.14	11.00	PASS
	46/5230	4.28	4.28	3.78	3.78	7.05	11.00	PASS
802.11ac VHT20	36/5180	7.55	7.55	7.17	7.17	10.37	11.00	PASS
	40/5200	7.51	7.51	6.93	6.93	10.24	11.00	PASS
	48/5240	7.84	7.84	7.30	7.30	10.59	11.00	PASS
802.11ac VHT40	38/5190	3.77	3.77	3.13	3.13	6.47	11.00	PASS
	46/5230	3.99	3.99	3.17	3.17	6.61	11.00	PASS
802.11ac VHT80	42/5210	0.90	0.90	0.28	0.28	3.61	11.00	PASS
802.11ax HE20	36/5180	7.24	7.24	7.10	7.10	10.18	11.00	PASS
	40/5200	7.29	7.29	6.67	6.67	10.00	11.00	PASS
	48/5240	7.40	7.40	7.18	7.18	10.30	11.00	PASS
802.11ax HE40	38/5190	4.02	4.02	3.49	3.49	6.77	11.00	PASS
	46/5230	4.01	4.01	3.98	3.98	7.01	11.00	PASS
802.11ax HE80	42/5210	1.10	1.10	0.47	0.47	3.81	11.00	PASS

Note: 1. Power Spectral Density =Read Value+Duty cycle correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),

the power spectral density=$10\log(10^{(\text{PSD antenna 1 in dBm/10})}+10^{(\text{PSD antenna 2 in dBm/10})}$

3. Direction gain calculation according to KDB662911 D01 Multiple Transmitter Output v02r01 F)2)d)(ii): If antenna gains are not equal, If all transmit signals are completely uncorrelated, then

Directional gain = $10\log[(10^{G1/10} + 10^{G2/10})/N_{ANT}]$ dBi = $10\log[(10^{-2.4/10} + 10^{0/10})/2]$ = -1.036dBi < 6dBi. So the limit is 30dBm.

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U-NII-2A

Mode	Channel/ Frequency (MHz)	Power Spectral Density					Limit (dBm/MHz)	Conclusion
		Antenna 1		Antenna 2		Total Power (dBm /MHz)		
		Read Value (dBm/MHz)	PSD (dBm/MHz)	Read Value (dBm/MHz)	PSD (dBm/MHz)			
802.11n HT20	52/5260	8.13	8.13	7.74	7.74	10.95	11.00	PASS
	60/5300	8.04	8.04	7.73	7.73	10.90	11.00	PASS
	64/5320	8.17	8.17	7.68	7.68	10.94	11.00	PASS
802.11n HT40	54/5270	4.12	4.12	3.82	3.82	6.98	11.00	PASS
	62/5310	4.47	4.47	4.07	4.07	7.28	11.00	PASS
802.11ac VHT20	52/5260	7.55	7.55	7.22	7.22	10.40	11.00	PASS
	60/5300	7.61	7.61	7.21	7.21	10.42	11.00	PASS
	64/5320	8.07	8.07	7.13	7.13	10.64	11.00	PASS
802.11ac VHT40	54/5270	4.54	4.54	4.17	4.17	7.37	11.00	PASS
	62/5310	4.57	4.57	3.92	3.92	7.27	11.00	PASS
802.11ac VHT80	58/5290	0.03	0.03	-0.72	-0.72	2.68	11.00	PASS
802.11ax HE20	52/5260	7.27	7.27	7.23	7.23	10.26	11.00	PASS
	60/5300	7.55	7.55	7.01	7.01	10.30	11.00	PASS
	64/5320	7.85	7.85	6.88	6.88	10.40	11.00	PASS
802.11ax HE40	54/5270	4.30	4.30	3.78	3.78	7.06	11.00	PASS
	62/5310	4.13	4.13	3.92	3.92	7.04	11.00	PASS
802.11ax HE80	58/5290	0.37	0.37	-0.81	-0.81	2.83	11.00	PASS

Note: 1. Power Spectral Density =Read Value+Duty cycle correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),
the power spectral density=$10\log(10^{(\text{PSD antenna 1 in dBm/10})}+10^{(\text{PSD antenna 2 in dBm/10})}$

3. Direction gain calculation according to KDB662911 D01 Multiple Transmitter Output v02r01 F)2)d)(ii): If antenna gains are not equal, If all transmit signals are completely uncorrelated, then
Directional gain = $10\log[(10^{G1/10}+10^{G2/10})/N_{ANT}]$ dBi = $10\log[(10^{-2.4/10}+10^{0/10})/2]$ = -1.036dBi < 6dBi. So the limit is 30dBm.

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U-NII-2C

Mode	Channel/ Frequency (MHz)	Power Spectral Density					Limit (dBm)	Conclusion
		Antenna 1		Antenna 2		Total Power (dBm /MHz)		
		Read Value (dBm)	Power Spectral Density (dBm)	Read Value (dBm)	Power Spectral Density (dBm)			
802.11n HT20	100/5500	3.97	3.97	3.78	3.78	6.89	11.00	PASS
	116/5580	4.39	4.39	3.67	3.67	7.06	11.00	PASS
	140/5700	7.35	7.35	7.73	7.73	10.55	11.00	PASS
	144/5720	7.22	7.22	7.88	7.88	10.57	11.00	PASS
802.11n HT40	102/5510	3.55	3.55	3.80	3.80	6.69	11.00	PASS
	110/5550	3.59	3.59	3.37	3.37	6.49	11.00	PASS
	134/5670	3.48	3.48	4.27	4.27	6.90	11.00	PASS
	142/5710	4.04	4.04	4.57	4.57	7.32	11.00	PASS
802.11ac VHT20	100/5500	7.12	7.12	6.90	6.90	10.02	11.00	PASS
	116/5580	7.48	7.48	6.82	6.82	10.17	11.00	PASS
	140/5700	7.71	7.71	7.79	7.79	10.76	11.00	PASS
	144/5720	7.26	7.26	7.85	7.85	10.58	11.00	PASS
802.11ac VHT40	102/5510	3.72	3.72	3.57	3.57	6.66	11.00	PASS
	110/5550	3.70	3.70	3.46	3.46	6.59	11.00	PASS
	134/5670	3.73	3.73	4.10	4.10	6.93	11.00	PASS
	142/5710	3.86	3.86	4.37	4.37	7.13	11.00	PASS
802.11ac VHT80	106/5530	0.56	0.56	0.16	0.16	3.37	11.00	PASS
	138/5690	0.82	0.82	0.63	0.63	3.74	11.00	PASS
802.11ax HE20	100/5500	4.80	4.80	4.53	4.53	7.68	11.00	PASS
	116/5580	4.88	4.88	4.37	4.37	7.64	11.00	PASS
	140/5700	6.84	6.84	7.64	7.64	10.27	11.00	PASS
	144/5720	6.95	6.95	7.76	7.76	10.38	11.00	PASS
802.11ax HE40	102/5510	3.43	3.43	3.33	3.33	6.39	11.00	PASS
	110/5550	2.39	2.39	2.35	2.35	5.38	11.00	PASS
	134/5670	1.87	1.87	2.49	2.49	5.20	11.00	PASS
	142/5710	3.63	3.63	4.46	4.46	7.08	11.00	PASS
802.11ax HE80	106/5530	0.38	0.38	0.25	0.25	3.33	11.00	PASS
	138/5690	0.61	0.61	0.76	0.76	3.70	11.00	PASS

Note: 1. Power Spectral Density =Read Value+Duty cycle correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),

the power spectral density=$10\log(10^{(\text{PSD antenna 1 in dBm/10})}+10^{(\text{PSD antenna 2 in dBm/10})}$

3. Direction gain calculation according to KDB662911 D01 Multiple Transmitter Output v02r01 F)2)d)(ii): If antenna gains are not equal, If all transmit signals are completely uncorrelated, then

Directional gain = $10\log[(10^{G1/10}+10^{G2/10})/N_{ANT}]$ dBi = $10\log[(10^{-2.4/10}+10^{0/10})/2]$ = -1.036dBi < 6dBi. So the limit is 30dBm.

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U-NII-3

Mode	Channel/ Frequency (MHz)	Power Spectral Density					Limit (dBm/ 500kHz)	Conclusion
		Antenna 1		Antenna 2		Total Power Spectral Density (dBm/ 500kHz)		
		Read Value (dBm/ 470kHz)	Power Spectral Density (dBm/ 500kHz)	Read Value (dBm/ 470kHz)	Power Spectral Density (dBm/ 500kHz)			
802.11n HT20	149/5745	5.61	5.88	6.05	6.32	9.12	30.00	PASS
	157/5785	6.03	6.30	5.96	6.23	9.28	30.00	PASS
	165/5825	6.38	6.65	6.15	6.42	9.55	30.00	PASS
802.11n HT40	151/5755	2.66	2.93	2.97	3.24	6.10	30.00	PASS
	159/5795	-6.21	-5.94	-6.08	-5.81	-2.86	30.00	PASS
802.11ac VHT20	149/5745	5.57	5.84	6.00	6.27	9.07	30.00	PASS
	157/5785	6.40	6.67	6.18	6.45	9.57	30.00	PASS
	165/5825	6.30	6.57	6.06	6.33	9.46	30.00	PASS
802.11ac VHT40	151/5755	3.16	3.43	3.12	3.39	6.42	30.00	PASS
	159/5795	3.29	3.56	3.21	3.48	6.53	30.00	PASS
802.11ac VHT80	155/5775	-0.19	0.08	-0.25	0.02	3.06	30.00	PASS
802.11ax HE20	149/5745	-3.14	-2.87	-3.70	-3.43	-0.13	30.00	PASS
	157/5785	5.97	6.24	5.77	6.04	9.15	30.00	PASS
	165/5825	5.96	6.23	6.00	6.27	9.26	30.00	PASS
802.11ax HE40	151/5755	2.66	2.93	2.94	3.21	6.08	30.00	PASS
	159/5795	-6.11	-5.84	-5.91	-5.64	-2.73	30.00	PASS
802.11ax HE80	155/5775	-9.70	-9.43	-9.48	-9.21	-6.31	30.00	PASS

Note: 1. Power Spectral Density = Read Value+Duty cycle correction factor +10*LOG(500/470)

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),

the power spectral density=$10\log(10^{(\text{PSD antenna 1 in dBm/10})}+10^{(\text{PSD antenna 2 in dBm/10})}$

3. Direction gain calculation according to KDB662911 D01 Multiple Transmitter Output v02r01 F)2)d)(ii): If antenna gains are not equal, If all transmit signals are completely uncorrelated, then

Directional gain = $10\log[(10^{G1/10} + 10^{G2/10})/N_{ANT}]$ dBi = $10\log[(10^{-2.4/10} + 10^{0/10})/2]$ = -1.036dBi < 6dBi. So the limit is 30dBm.

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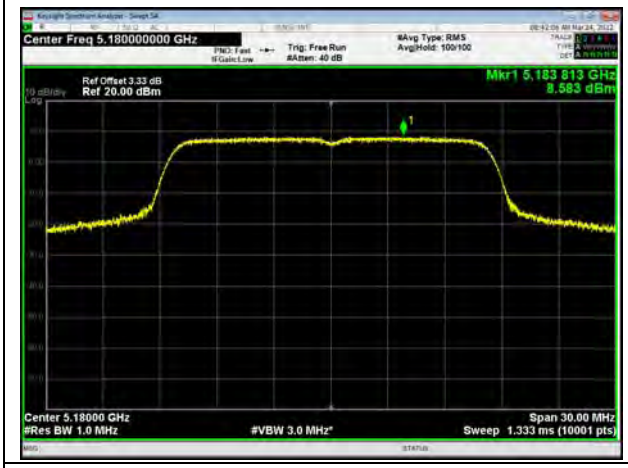
SISO Antenna 1

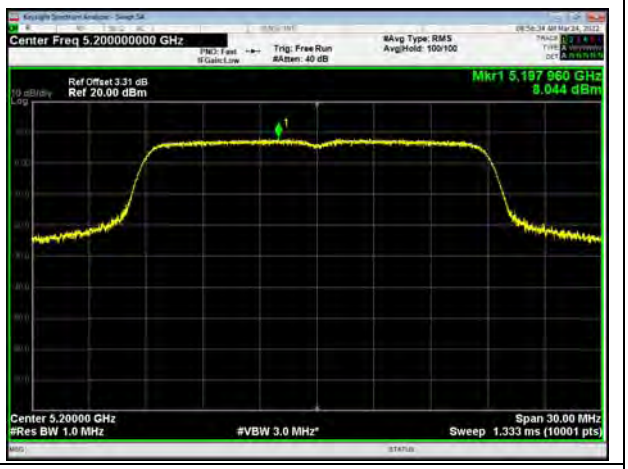
U-NII-1, 802.11a, Channel No.: 36



U-NII-1, 802.11n HT20, Channel No.: 36

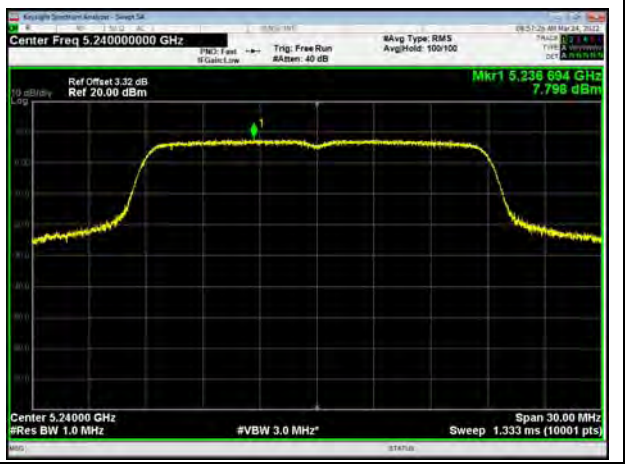
U-NII-1, 802.11a, Channel No.: 40

U-NII-1, 802.11n HT20, Channel No.: 40



U-NII-1, 802.11a, Channel No.: 48

U-NII-1, 802.11n HT20, Channel No.: 48



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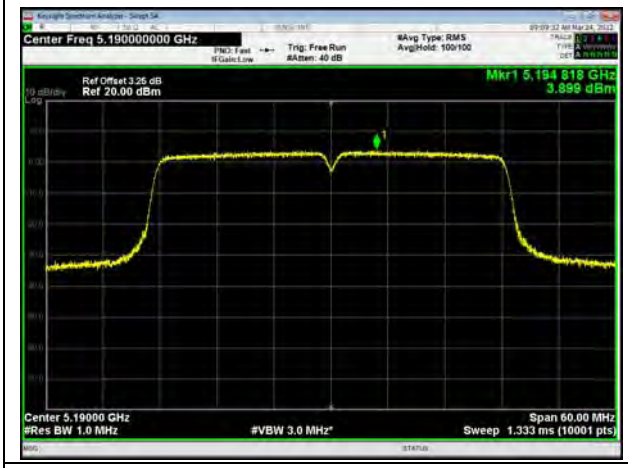
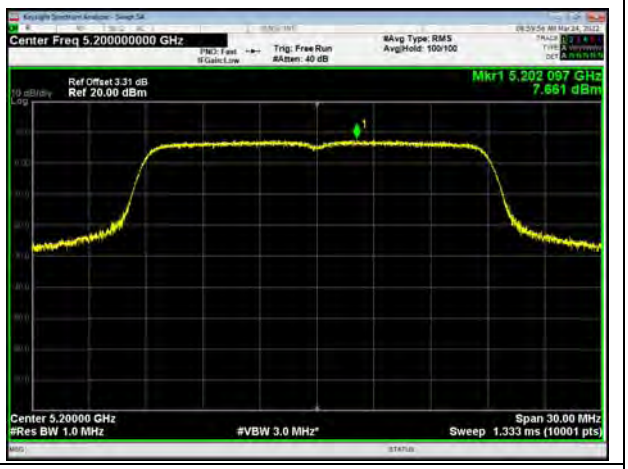
U-NII-1, 802.11n HT40, Channel No.: 38



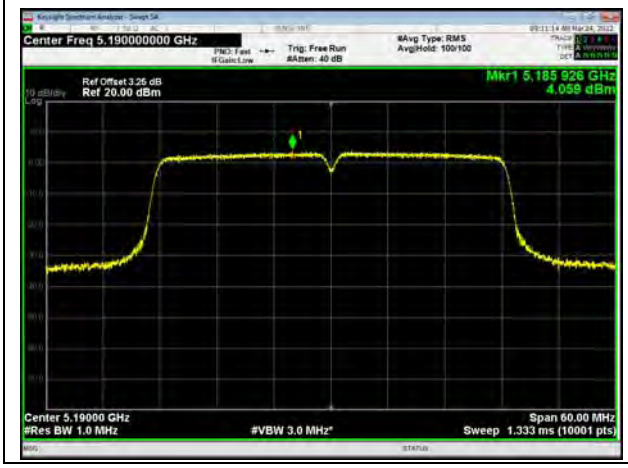
U-NII-1, 802.11ac VHT20, Channel No.: 36

U-NII-1, 802.11n HT40, Channel No.: 46

U-NII-1, 802.11ac VHT20, Channel No.: 40



U-NII-1, 802.11ac VHT40, Channel No.: 38



U-NII-1, 802.11ac VHT20, Channel No.: 48

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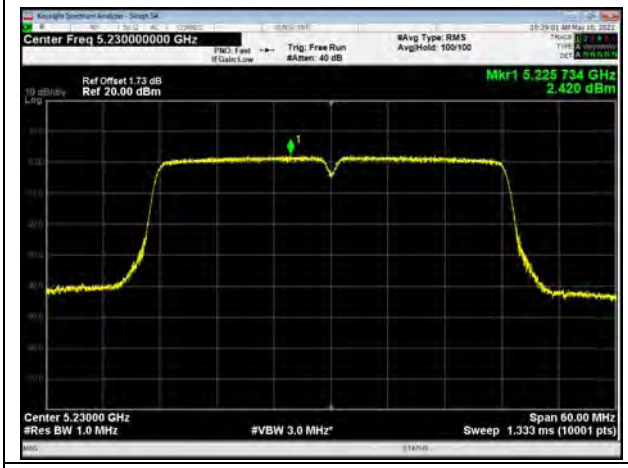
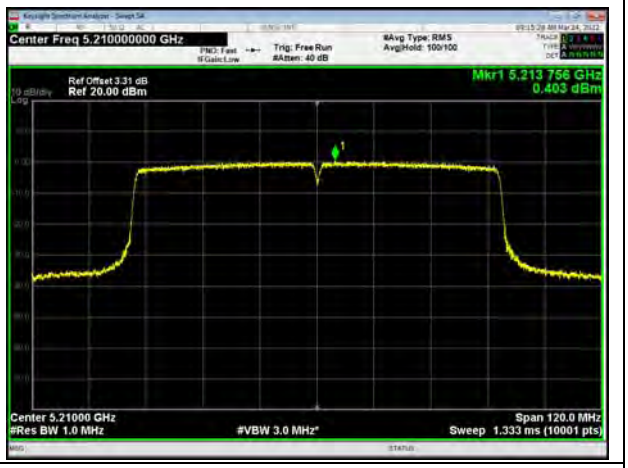
U-NII-1, 802.11ac VHT40, Channel No.: 46



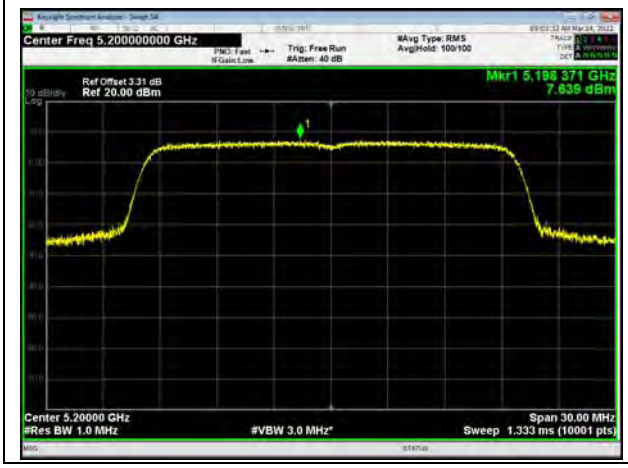
U-NII-1, 802.11ac VHT80, Channel No.: 42



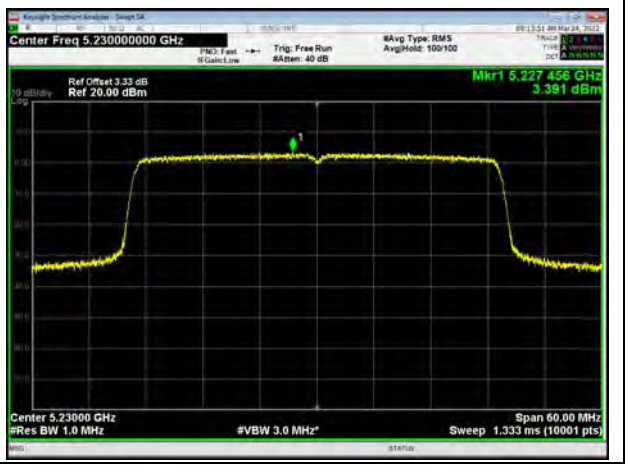
U-NII-1, 802.11ax HE20, Channel No.: 36

U-NII-1, 802.11ax HE40, Channel No.: 38

U-NII-1, 802.11ax HE20, Channel No.: 40



U-NII-1, 802.11ax HE40, Channel No.: 46



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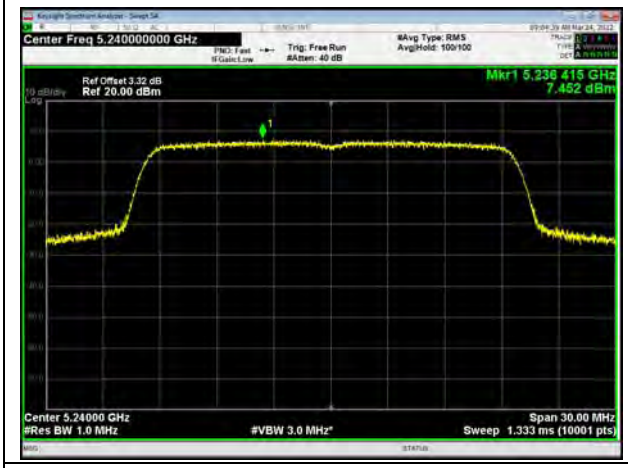
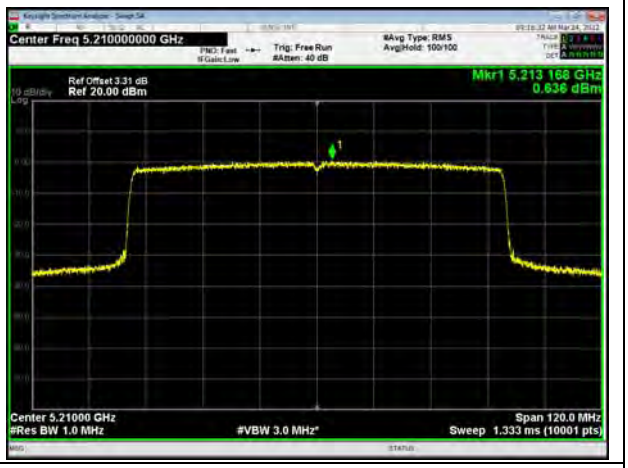
U-NII-1, 802.11ax HE20, Channel No.: 48



U-NII-1, 802.11ax HE80, Channel No.: 42



U-NII-2A, 802.11a, Channel No.: 52

U-NII-2A, 802.11n HT20, Channel No.: 52

U-NII-2A, 802.11a, Channel No.: 60

U-NII-2A, 802.11n HT20, Channel No.: 60

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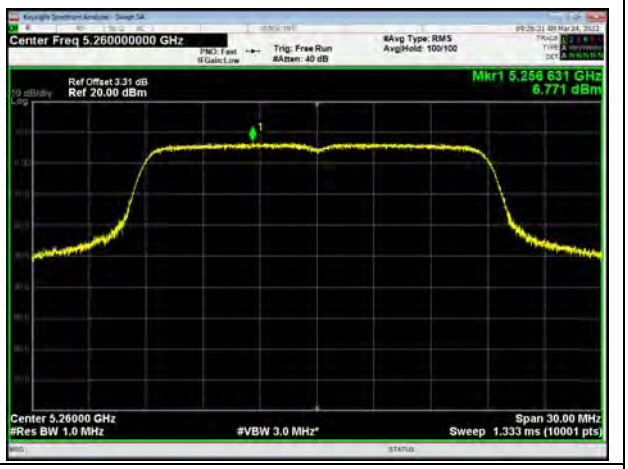
U-NII-2A, 802.11a, Channel No.: 64

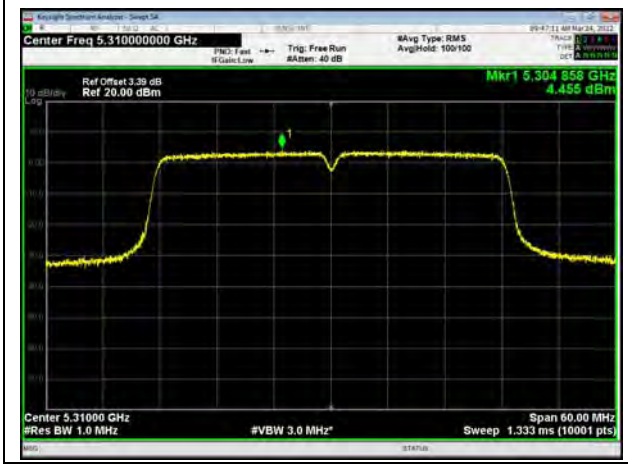
U-NII-2A, 802.11n HT20, Channel No.: 64

U-NII-2A, 802.11n HT40, Channel No.: 54

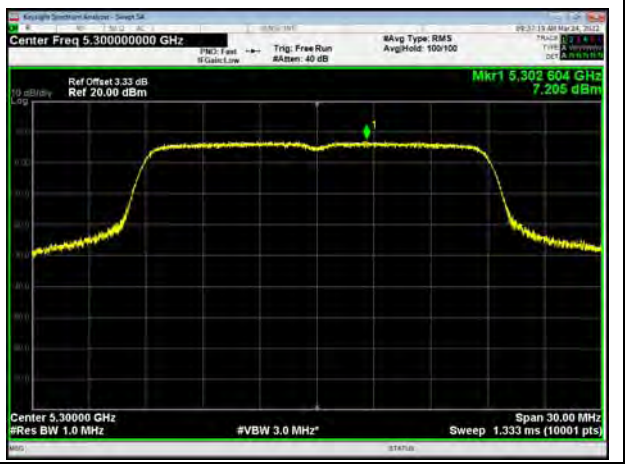
U-NII-2A, 802.11ac VHT20, Channel No.:52



U-NII-2A, 802.11n HT40, Channel No.: 62



U-NII-2A, 802.11ac VHT20, Channel No.: 60



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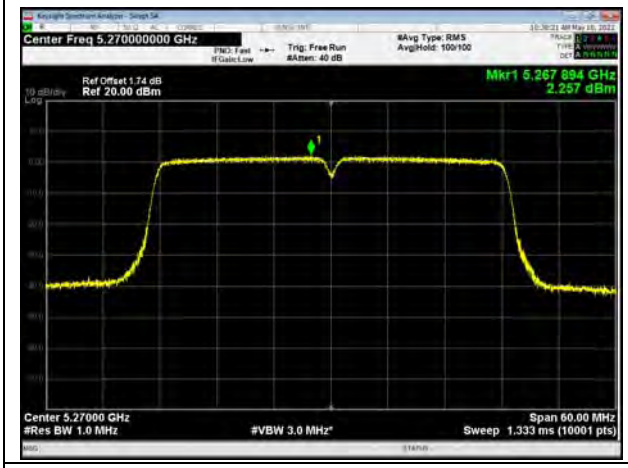
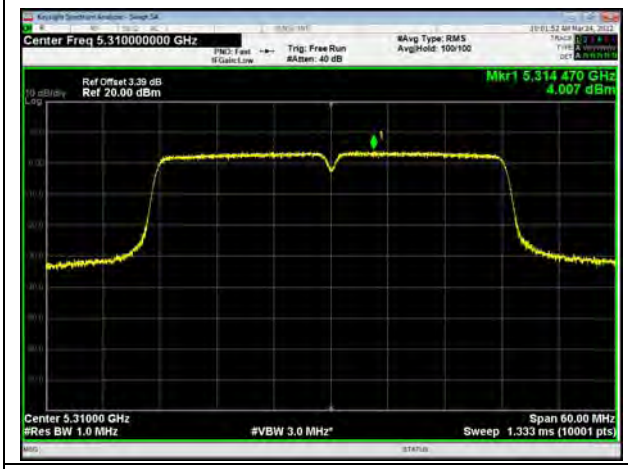
U-NII-2A, 802.11ac VHT40, Channel No.: 54



U-NII-2A, 802.11ac VHT20, Channel No.: 64

U-NII-2A, 802.11ac VHT40, Channel No.: 62



U-NII-2A, 802.11ac VHT80, Channel No.: 58

U-NII-2A, 802.11ax HE20, Channel No.:52

U-NII-2A, 802.11ax HE40, Channel No.: 54

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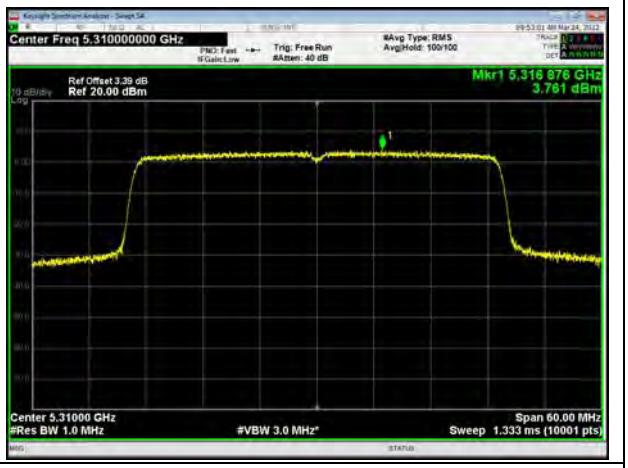
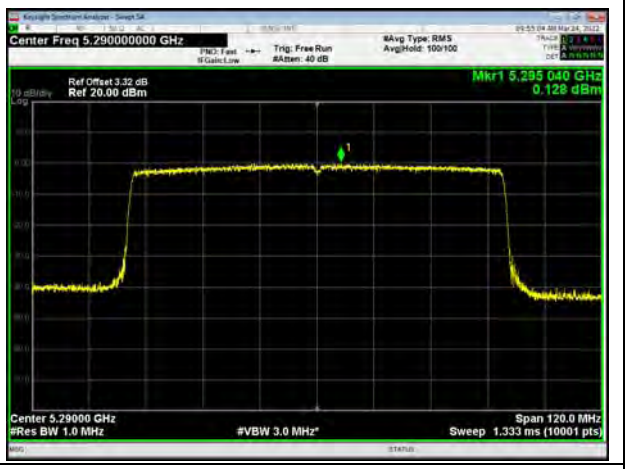
U-NII-2A, 802.11ax HE20, Channel No.: 60

U-NII-2A, 802.11ax HE40, Channel No.: 62

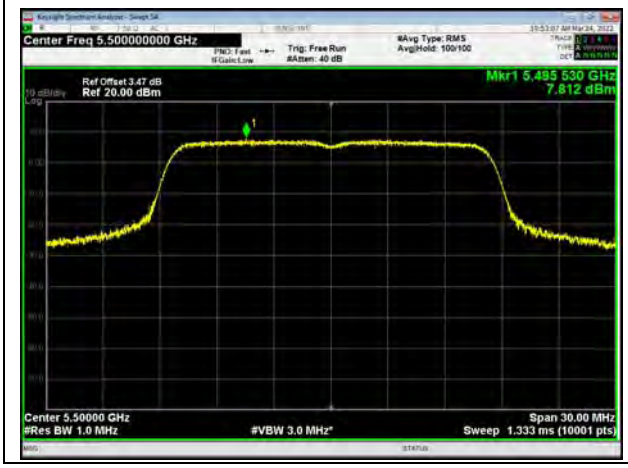


U-NII-2A, 802.11ax HE20, Channel No.: 64

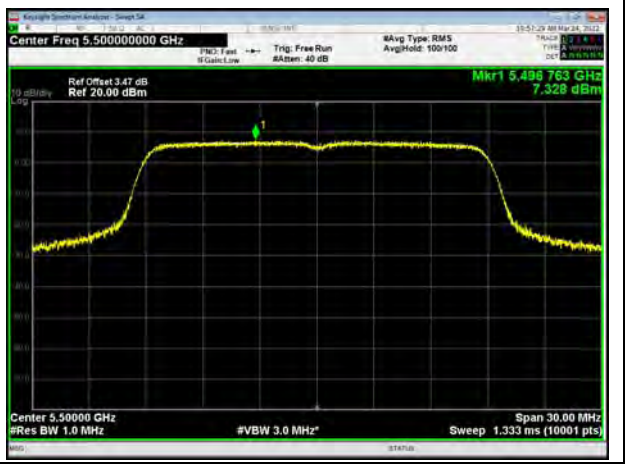
U-NII-2A, 802.11ax HE80, Channel No.: 58



U-NII-2C, 802.11a, Channel No.: 100



U-NII-2C, 802.11n HT20, Channel No.: 100



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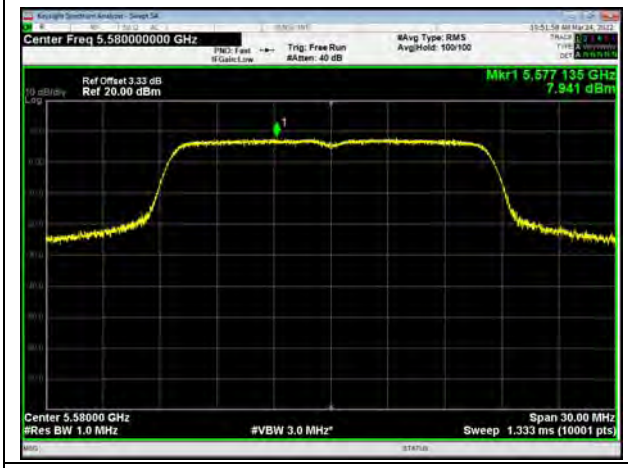
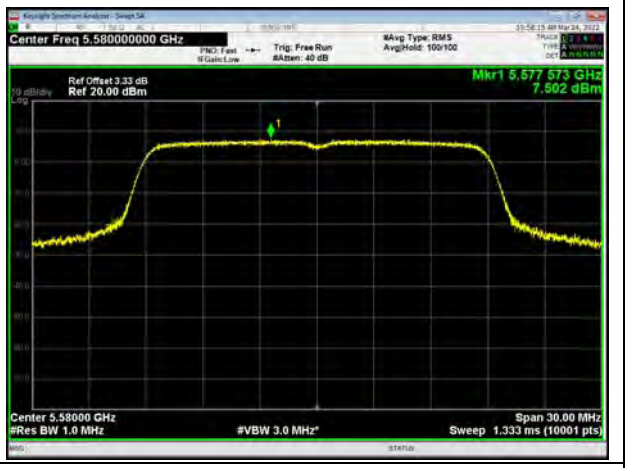
U-NII-2C, 802.11a, Channel No.: 116

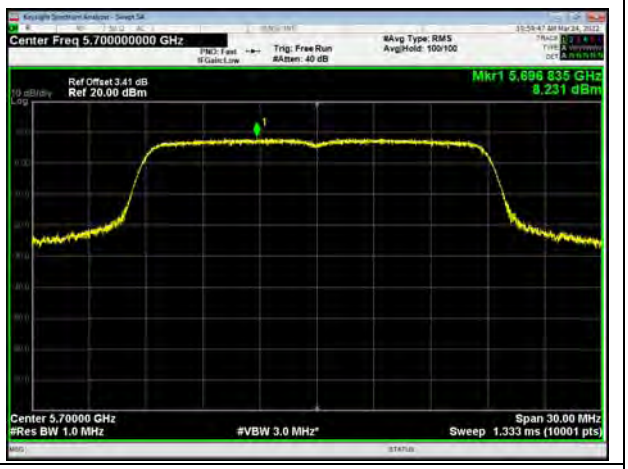


U-NII-2C, 802.11n HT20, Channel No.: 116

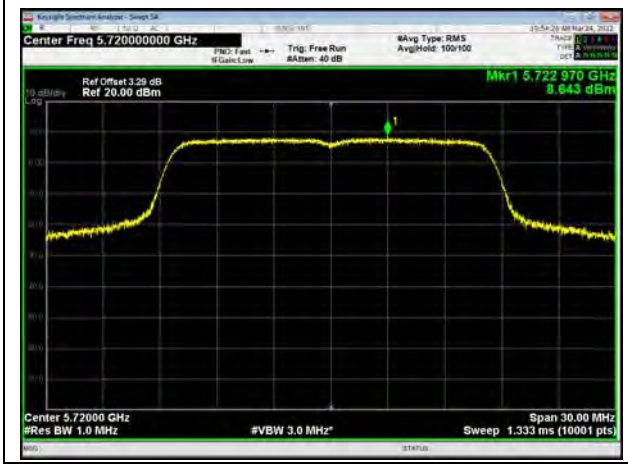


U-NII-2C, 802.11a, Channel No.: 140

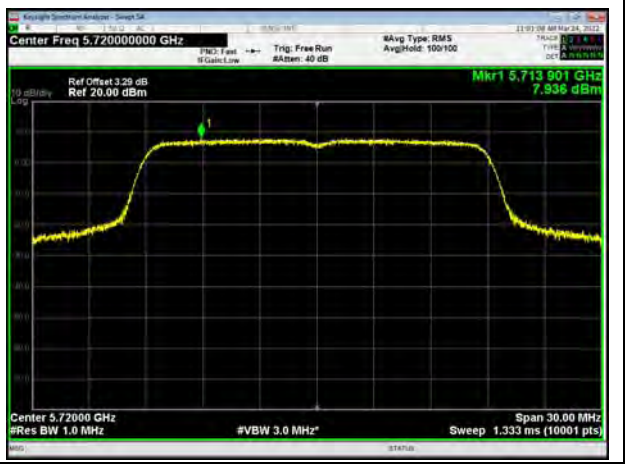
U-NII-2C, 802.11n HT20, Channel No.: 140



U-NII-2C, 802.11a, Channel No.: 144



U-NII-2C, 802.11n HT20, Channel No.: 144



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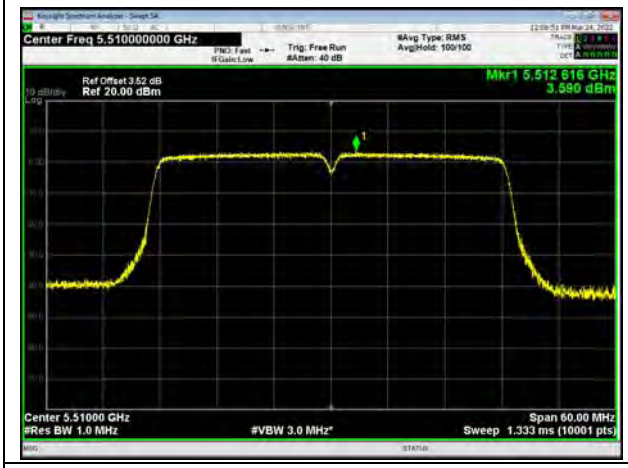
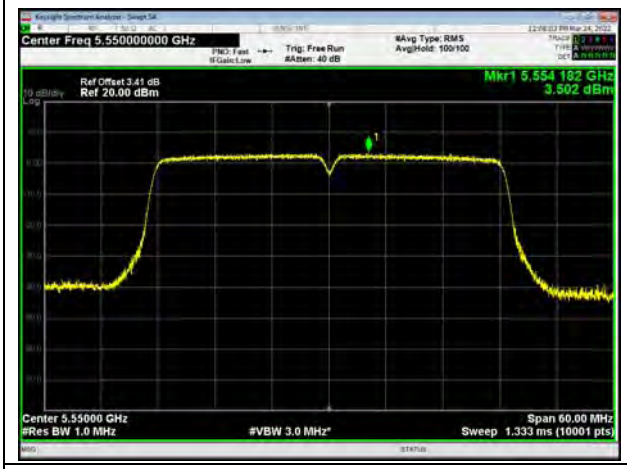
U-NII-2C, 802.11n HT40, Channel No.: 102

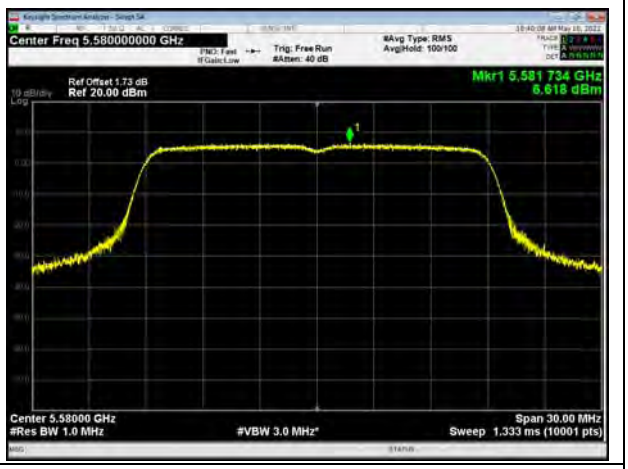


U-NII-2C, 802.11ac VHT20, Channel No.: 100

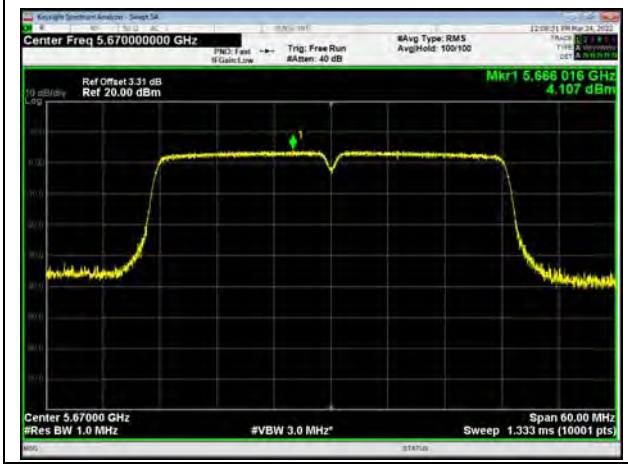
U-NII-2C, 802.11n HT40, Channel No.: 110



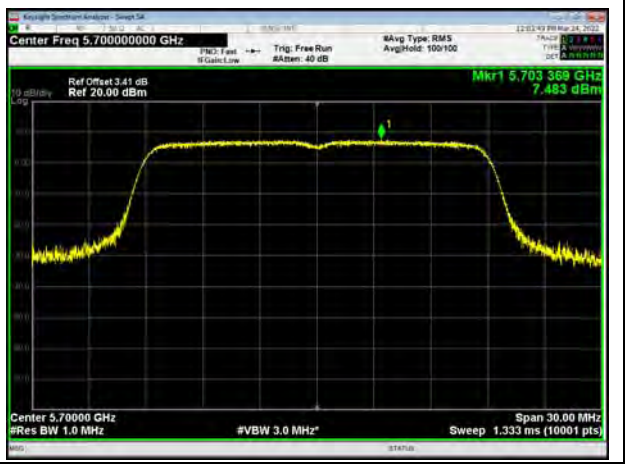
U-NII-2C, 802.11ac VHT20, Channel No.: 116



U-NII-2C, 802.11n HT40, Channel No.: 134



U-NII-2C, 802.11ac VHT20, Channel No.: 140



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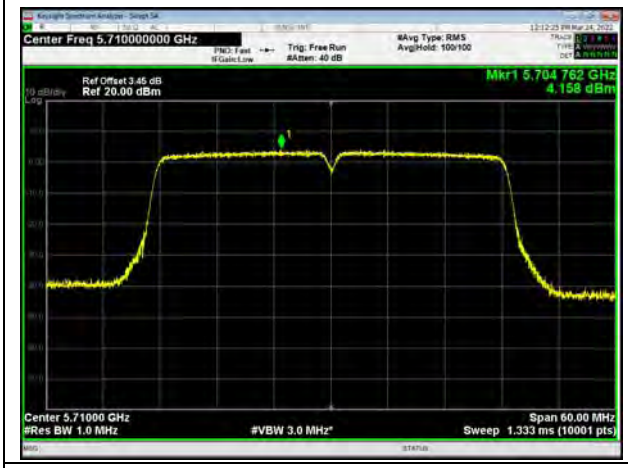
U-NII-2C, 802.11n HT40, Channel No.: 142

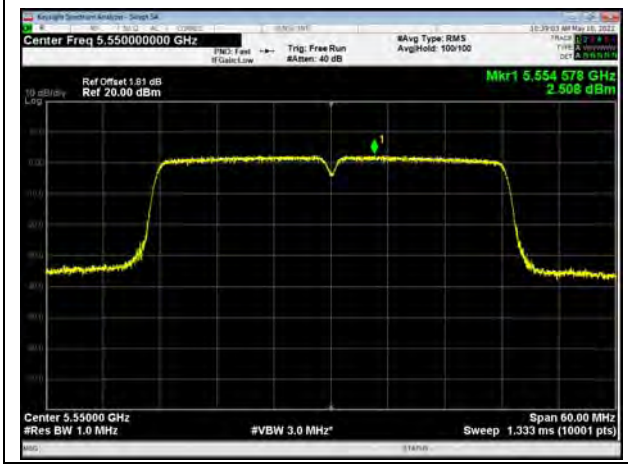


U-NII-2C, 802.11ac VHT20, Channel No.: 144

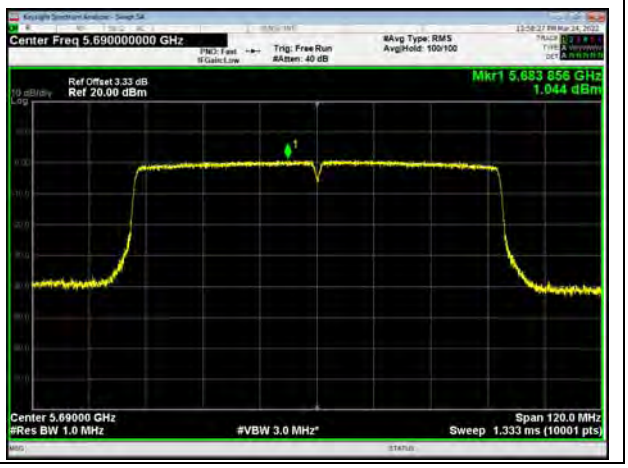
U-NII-2C, 802.11ac VHT40, Channel No.: 102

U-NII-2C, 802.11ac VHT80, Channel No.: 106

U-NII-2C, 802.11ac VHT40, Channel No.: 110



U-NII-2C, 802.11ac VHT80, Channel No.: 138



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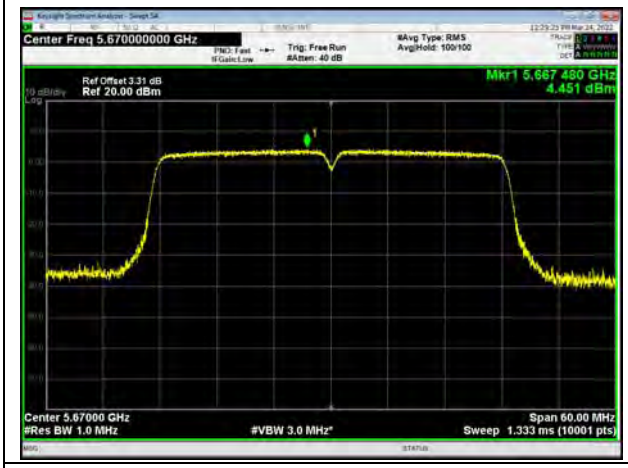
U-NII-2C, 802.11ac VHT40, Channel No.: 134

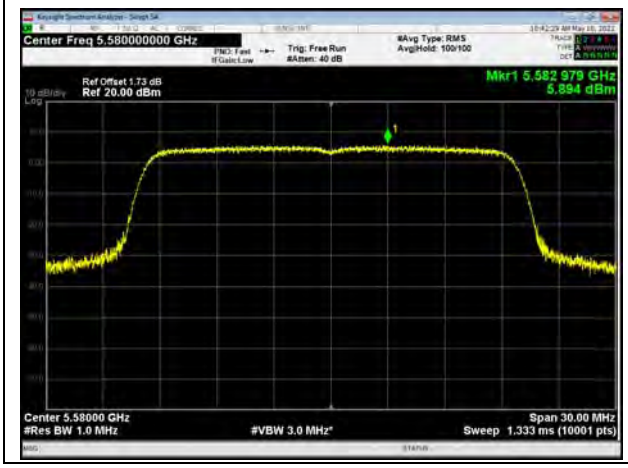


U-NII-2C, 802.11ac VHT40, Channel No.: 142

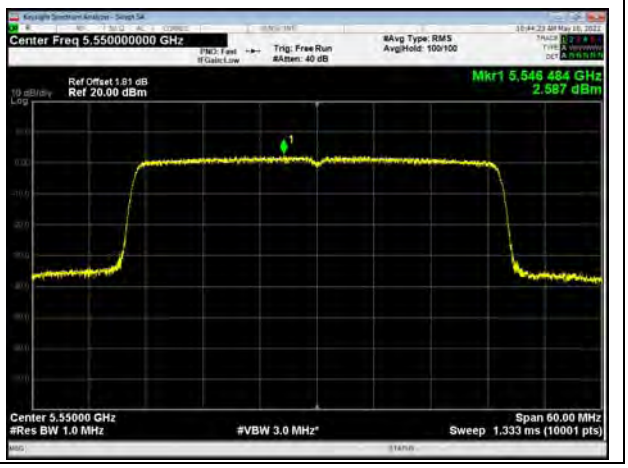
U-NII-2C, 802.11ax HE20, Channel No.: 100

U-NII-2C, 802.11ax HE40, Channel No.: 102

U-NII-2C, 802.11ax HE20, Channel No.: 116



U-NII-2C, 802.11ax HE40, Channel No.: 110



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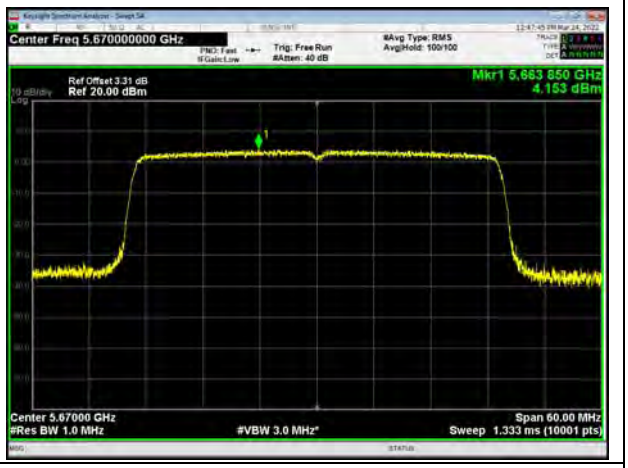
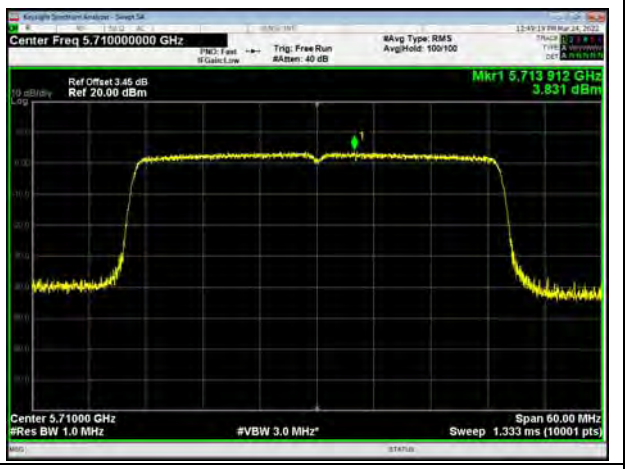
U-NII-2C, 802.11ax HE20, Channel No.: 140

U-NII-2C, 802.11ax HE40, Channel No.: 134

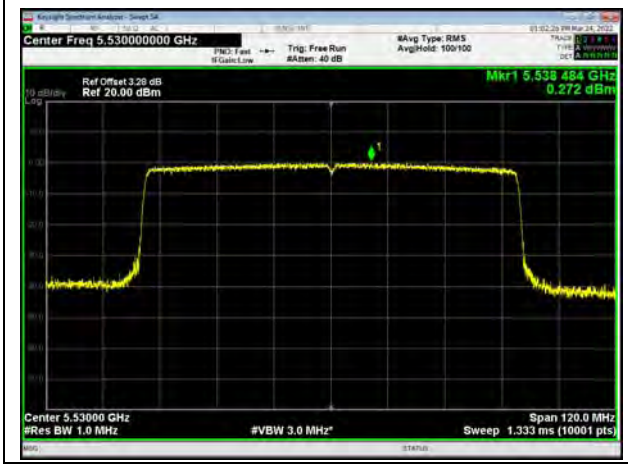


U-NII-2C, 802.11ax HE20, Channel No.: 144

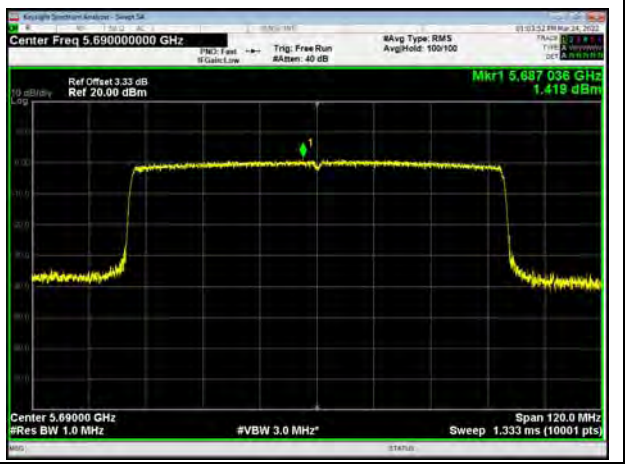
U-NII-2C, 802.11ax HE40, Channel No.: 142



U-NII-2C, 802.11ax HE80, Channel No.: 106



U-NII-2C, 802.11ax HE80, Channel No.: 138



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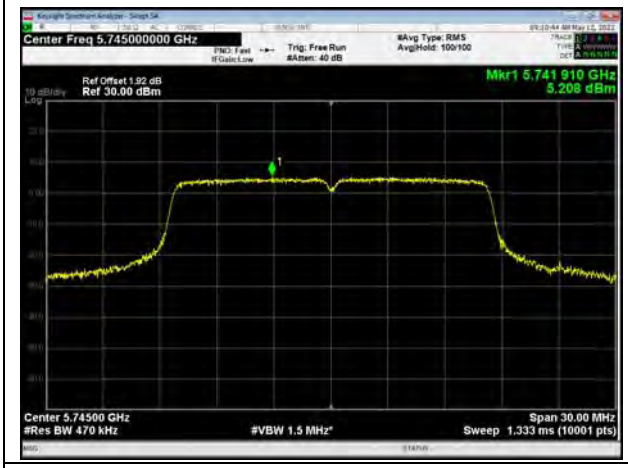
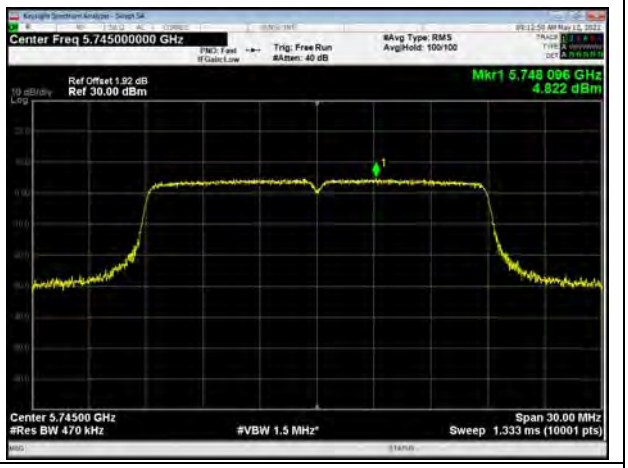
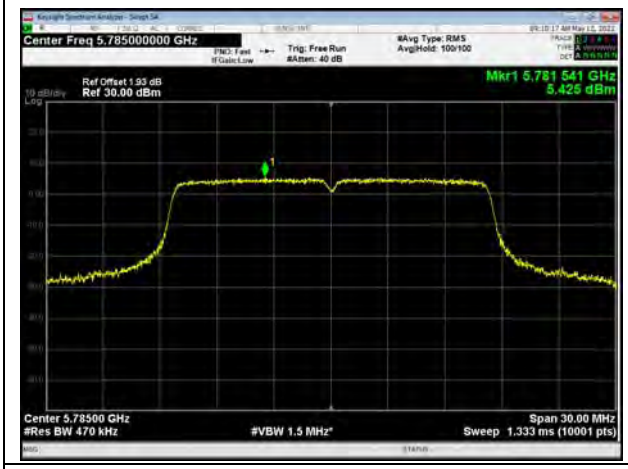
U-NII-3, 802.11a, Channel No.: 149



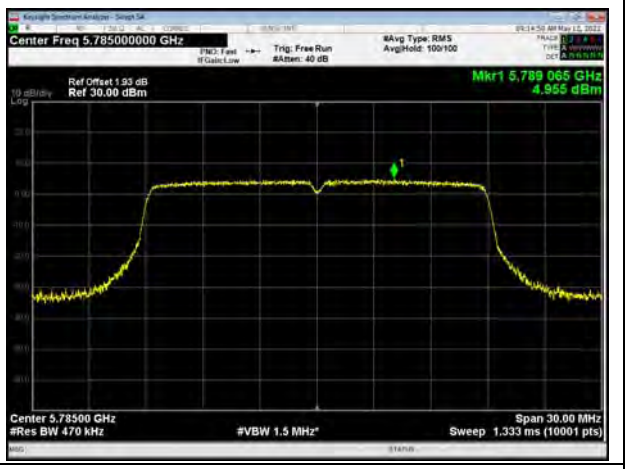
U-NII-3, 802.11n HT20, Channel No.: 149



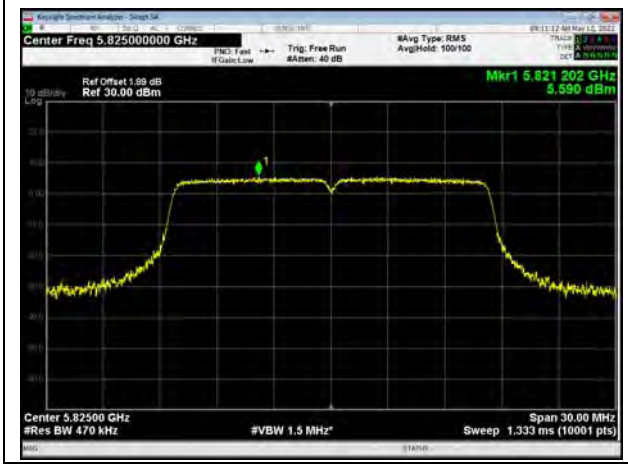
U-NII-3, 802.11a, Channel No.: 157



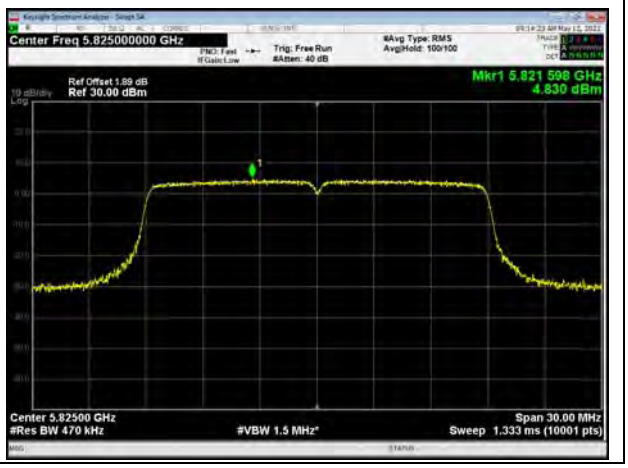
U-NII-3, 802.11n HT20, Channel No.: 157



U-NII-3, 802.11a, Channel No.: 165



U-NII-3, 802.11n HT20, Channel No.: 165



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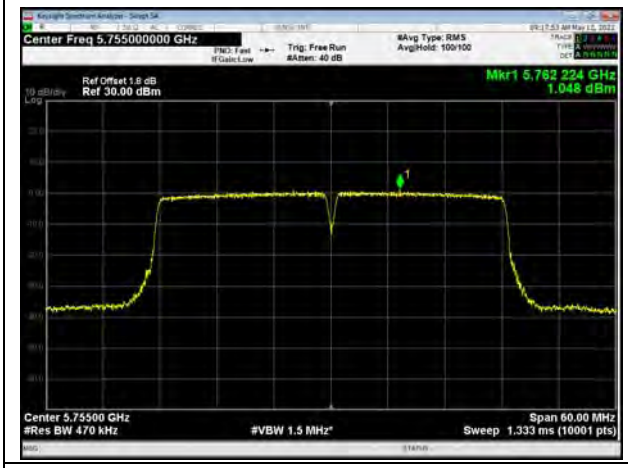
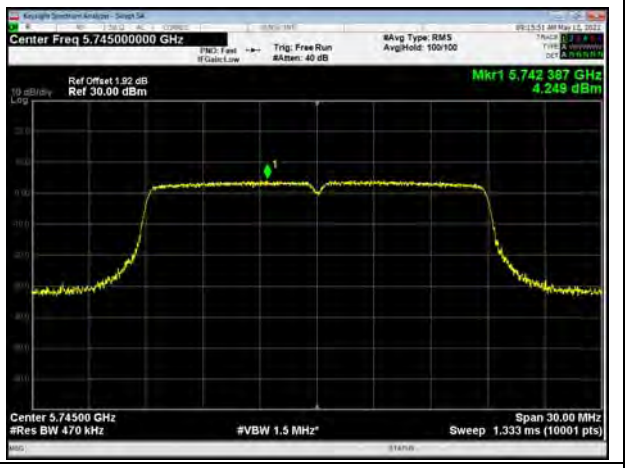
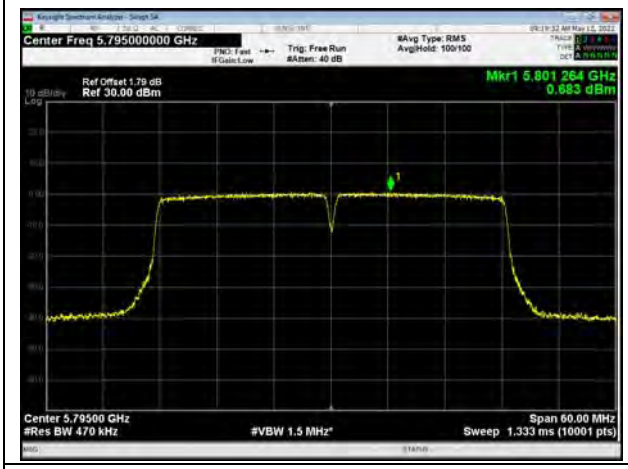
U-NII-3, 802.11n HT40, Channel No.: 151



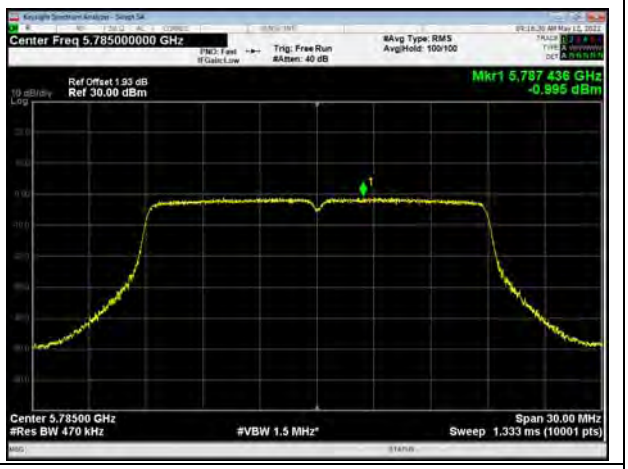
U-NII-3, 802.11ac VHT20, Channel No.: 149



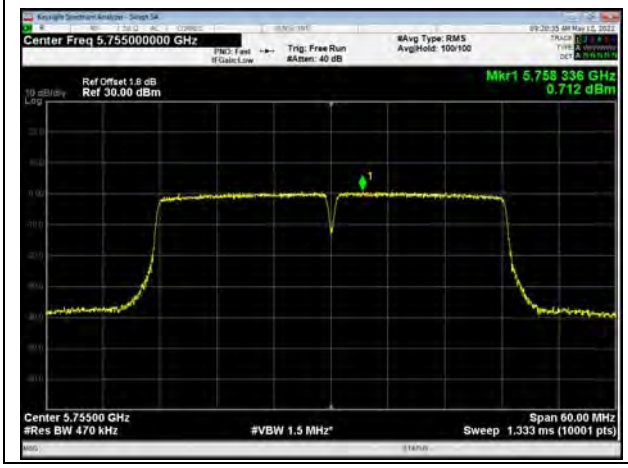
U-NII-3, 802.11n HT40, Channel No.: 159



U-NII-3, 802.11ac VHT20, Channel No.: 157



U-NII-3, 802.11ac VHT40, Channel No.: 151



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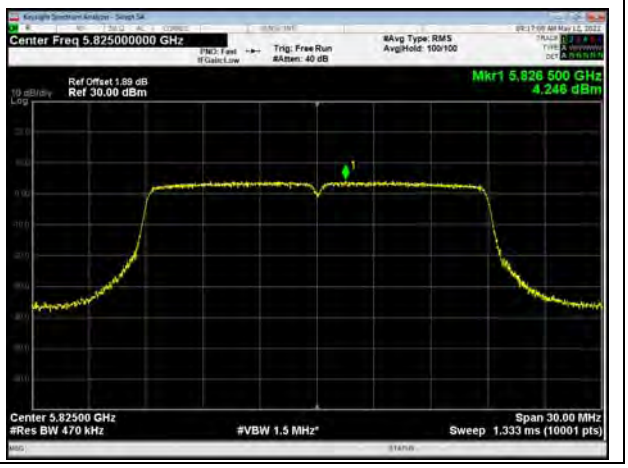

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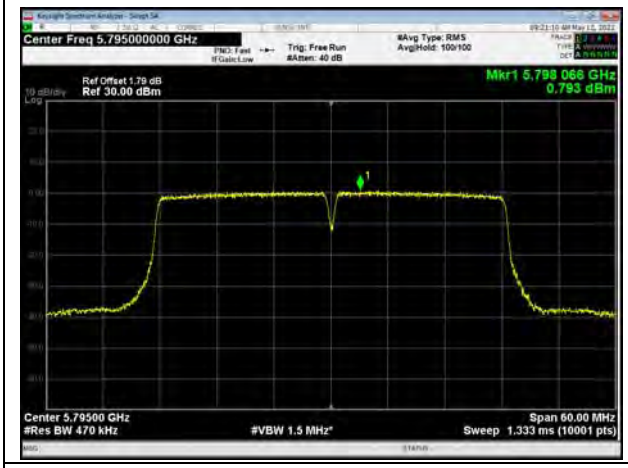
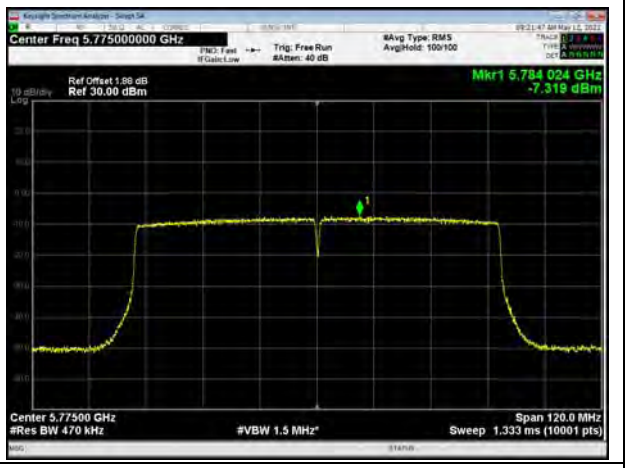
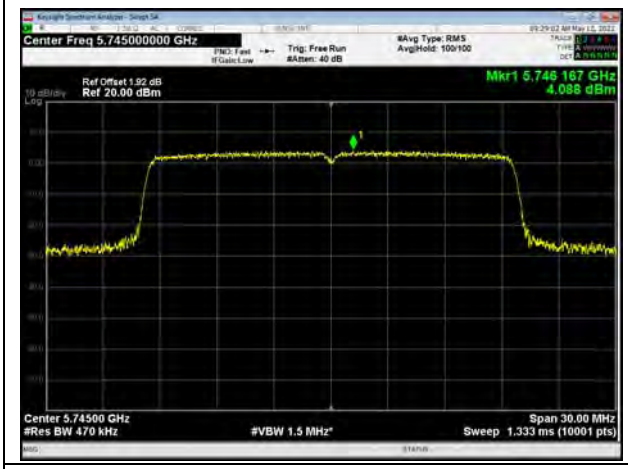
U-NII-3, 802.11ac VHT40, Channel No.: 159



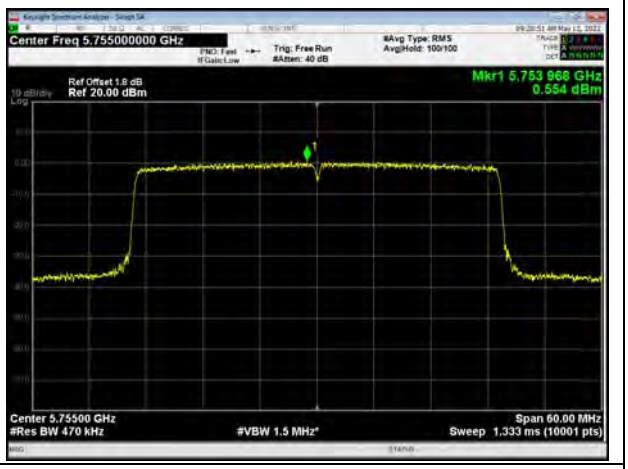
U-NII-3, 802.11ac VHT80, Channel No.: 155



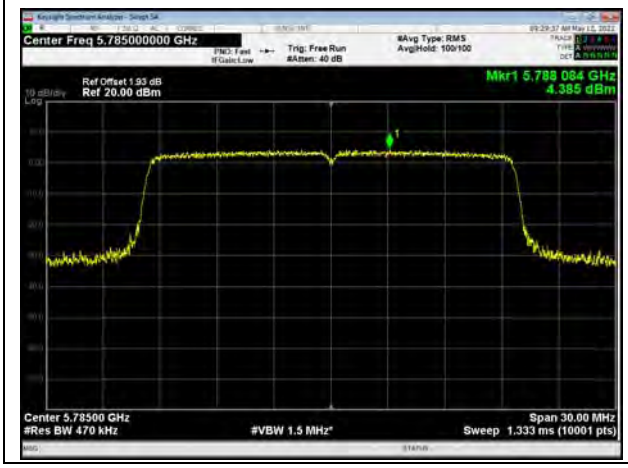
U-NII-3, 802.11ax HE20, Channel No.: 149



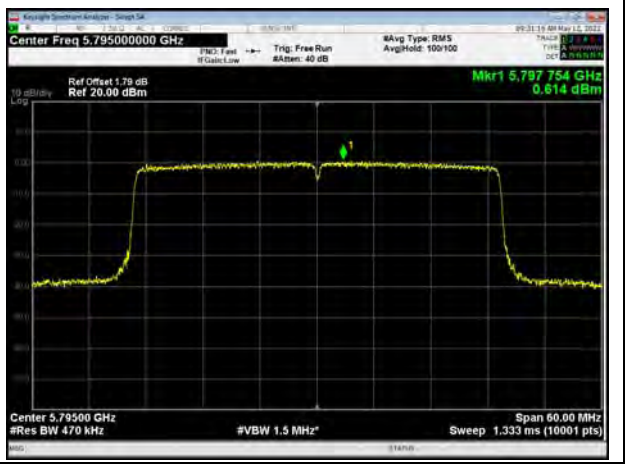
U-NII-3, 802.11ax HE40, Channel No.: 151



U-NII-3, 802.11ax HE20, Channel No.: 157



U-NII-3, 802.11ax HE40, Channel No.: 159



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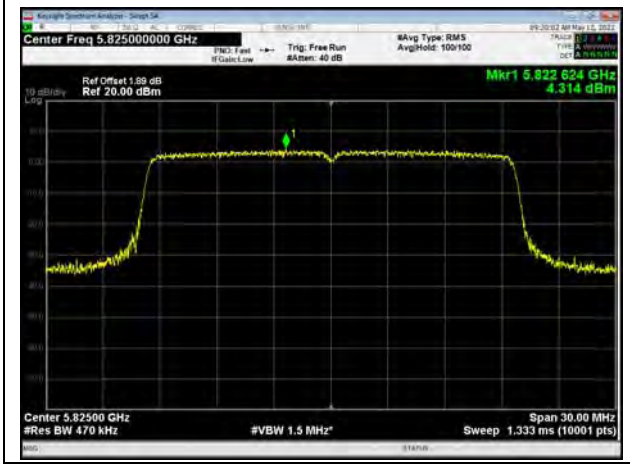
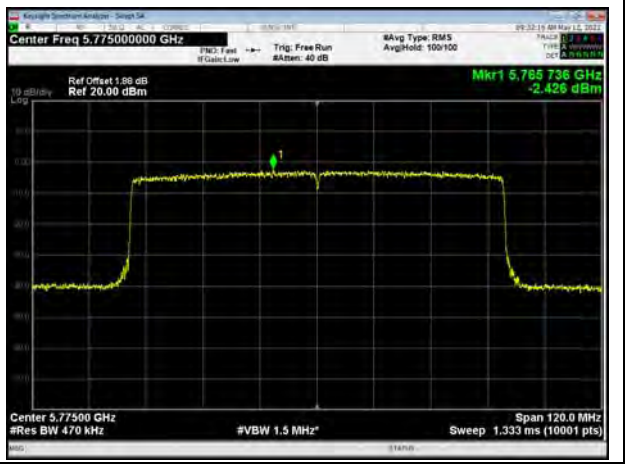
U-NII-3, 802.11ax HE20, Channel No.: 165	U-NII-3, 802.11ax HE80, Channel No.: 155
	

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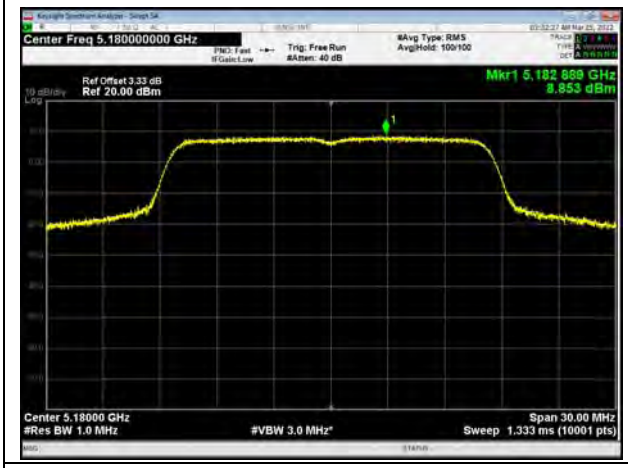
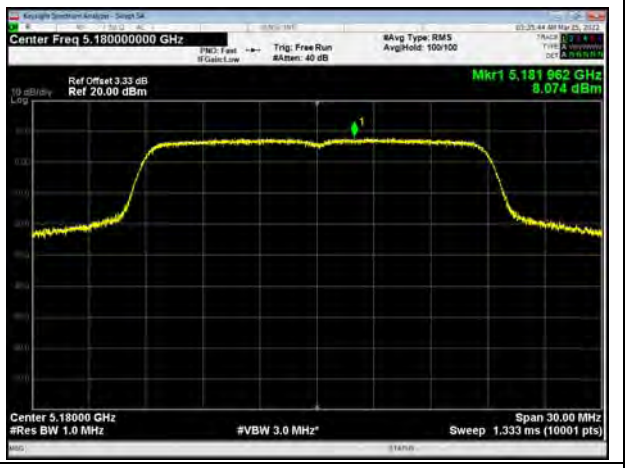
SISO Antenna 2

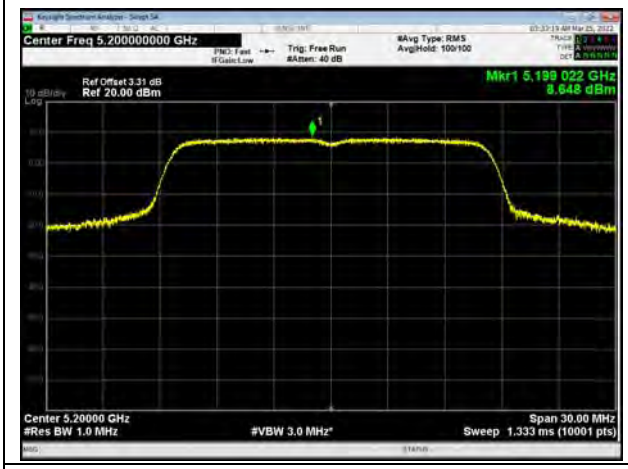
U-NII-1, 802.11a, Channel No.: 36



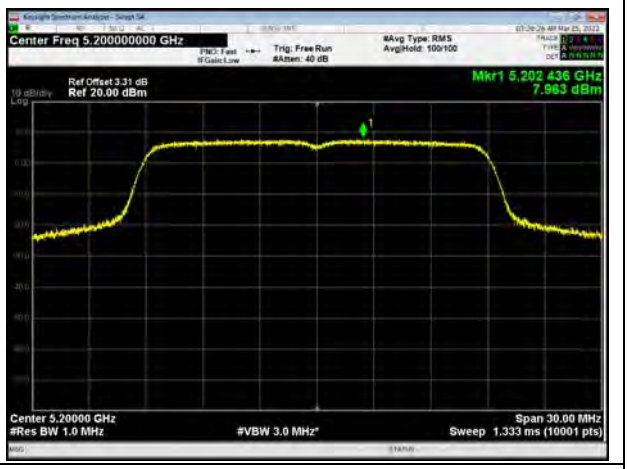
U-NII-1, 802.11n HT20, Channel No.: 36



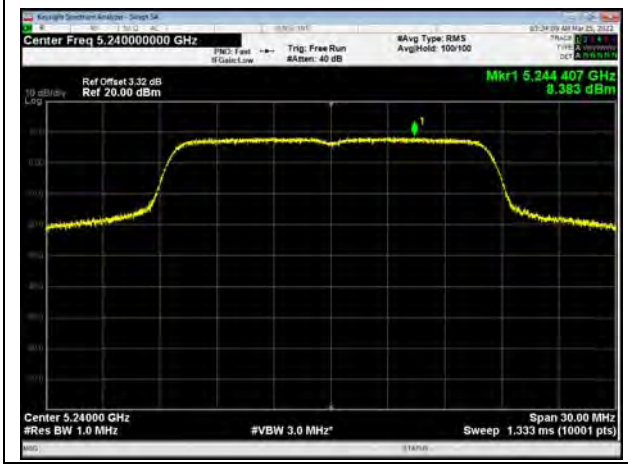
U-NII-1, 802.11a, Channel No.: 40



U-NII-1, 802.11n HT20, Channel No.: 40



U-NII-1, 802.11a, Channel No.: 48



U-NII-1, 802.11n HT20, Channel No.: 48

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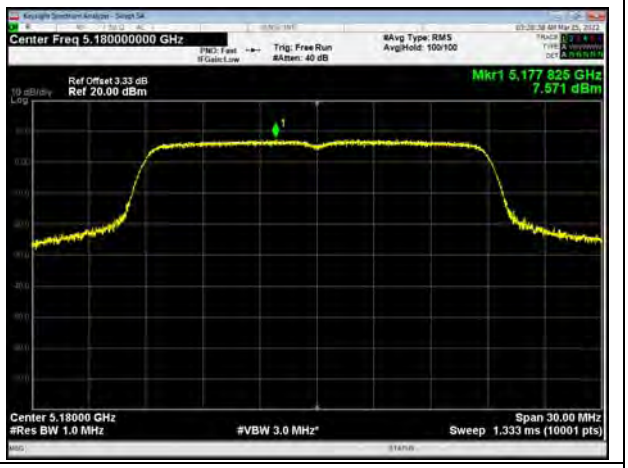
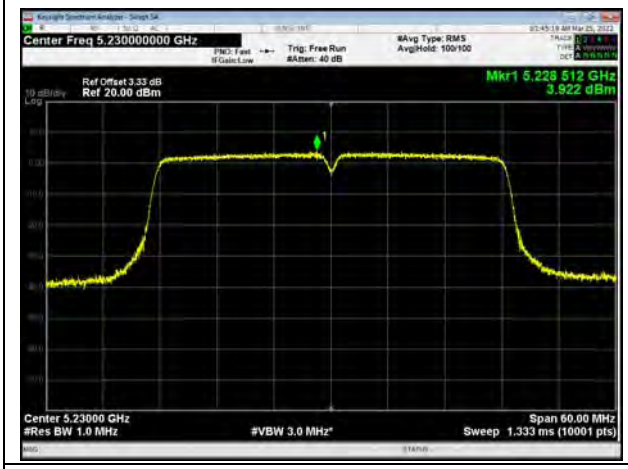
U-NII-1, 802.11n HT40, Channel No.: 38

U-NII-1, 802.11ac VHT20, Channel No.: 36



U-NII-1, 802.11n HT40, Channel No.: 46



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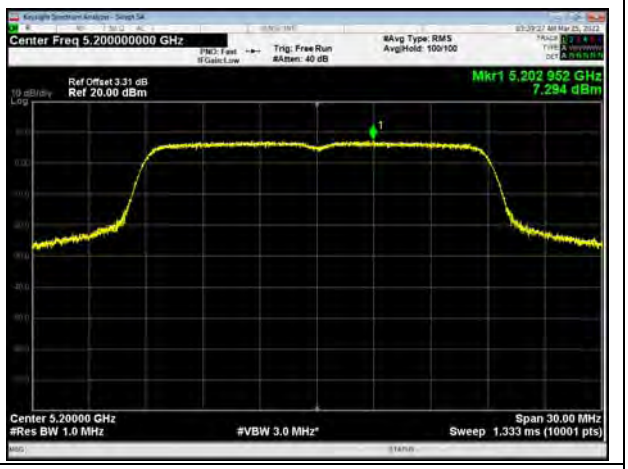

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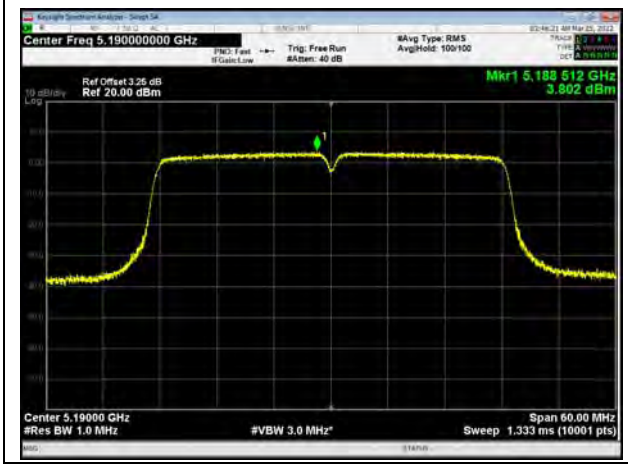

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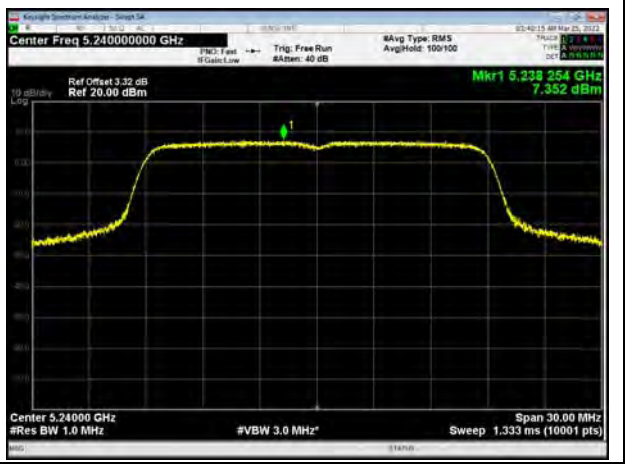

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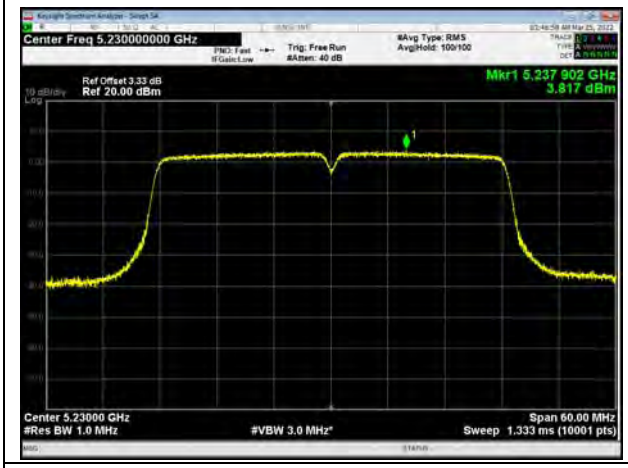
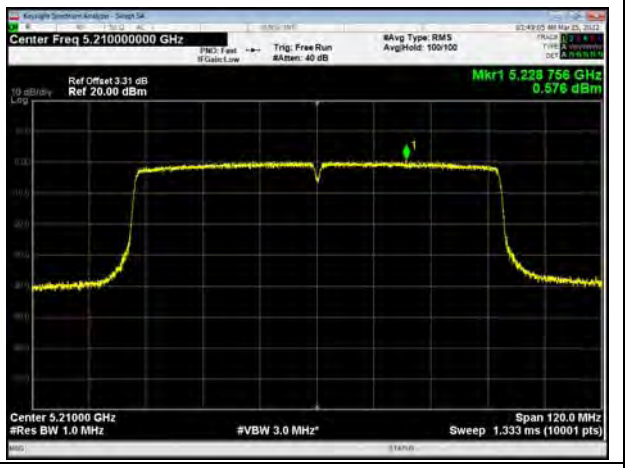
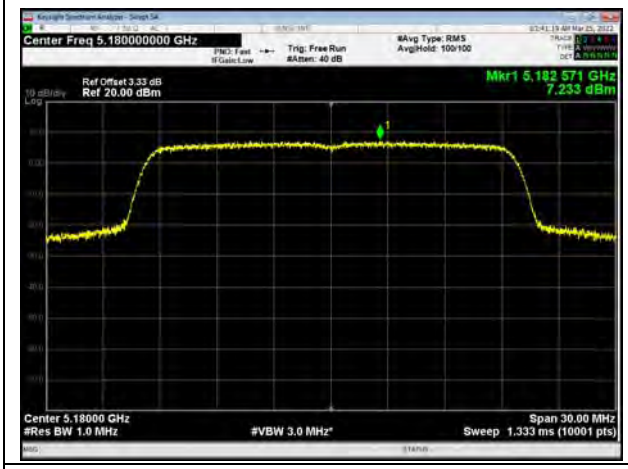
U-NII-1, 802.11ac VHT40, Channel No.: 46



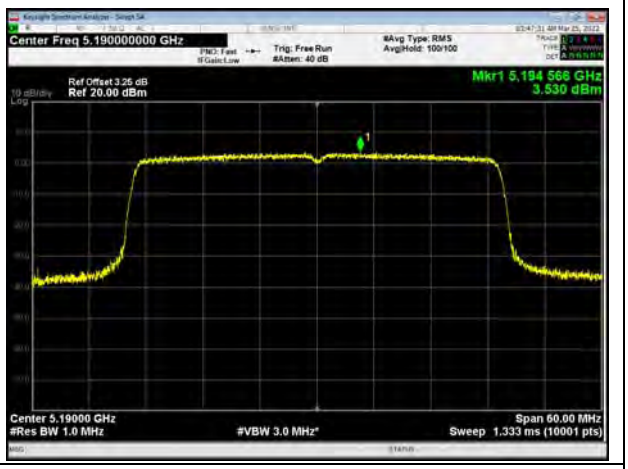
U-NII-1, 802.11ac VHT80, Channel No.: 42



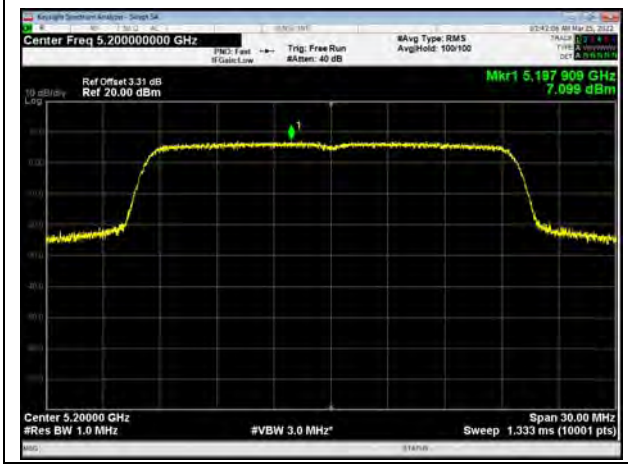
U-NII-1, 802.11ax HE20, Channel No.: 36



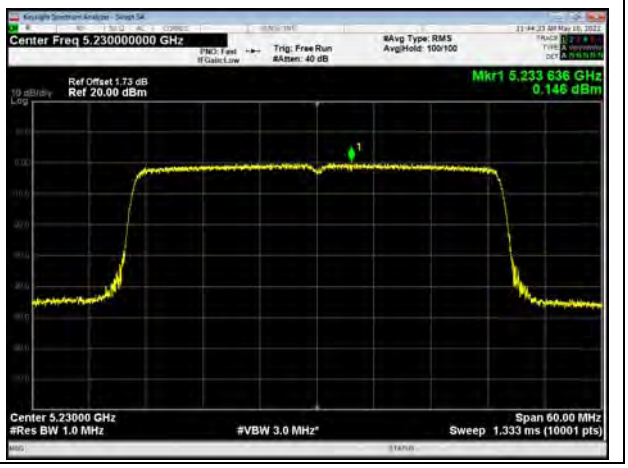
U-NII-1, 802.11ax HE40, Channel No.: 38



U-NII-1, 802.11ax HE20, Channel No.: 40



U-NII-1, 802.11ax HE40, Channel No.: 46



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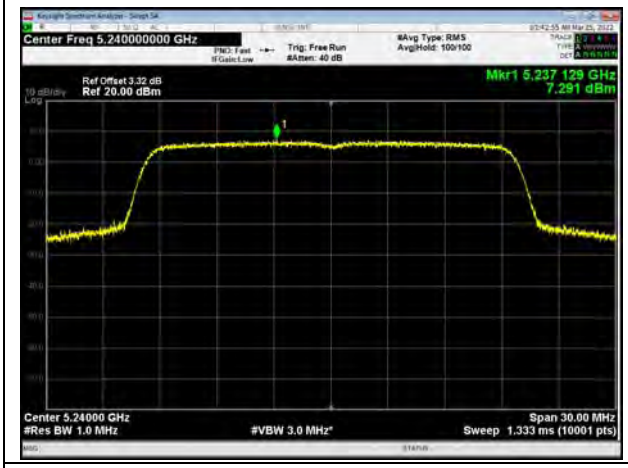
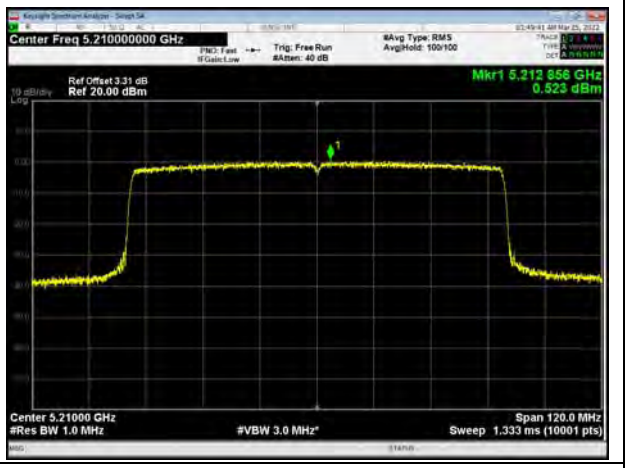
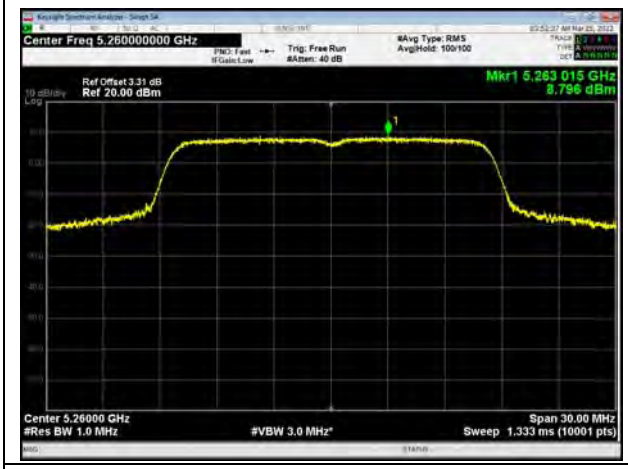
U-NII-1, 802.11ax HE20, Channel No.: 48



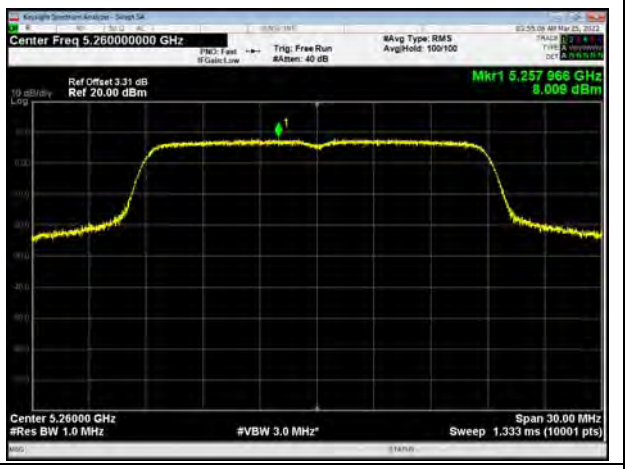
U-NII-1, 802.11ax HE80, Channel No.: 42



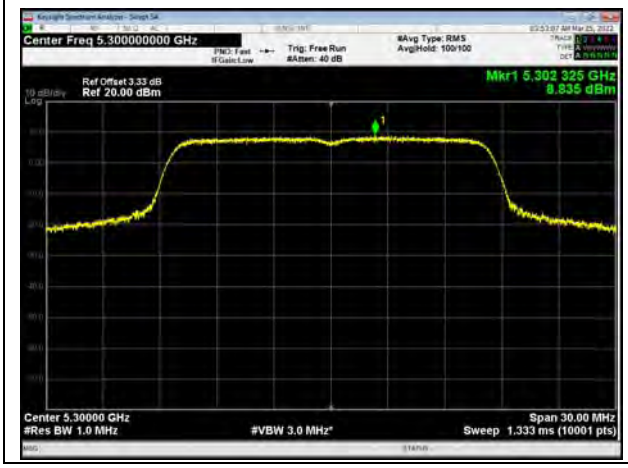
U-NII-2A, 802.11a, Channel No.: 52



U-NII-2A, 802.11n HT20, Channel No.: 52



U-NII-2A, 802.11a, Channel No.: 60



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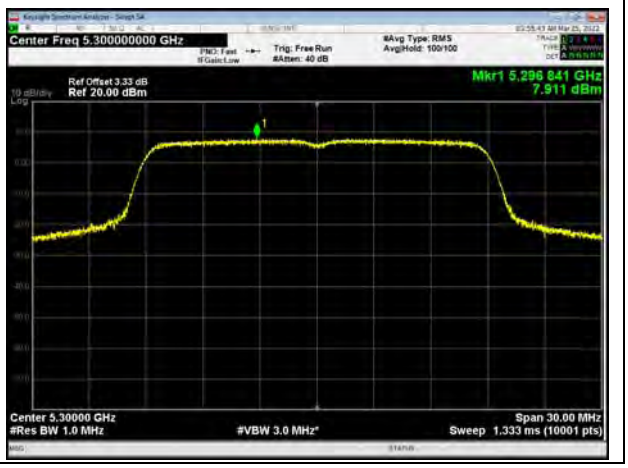

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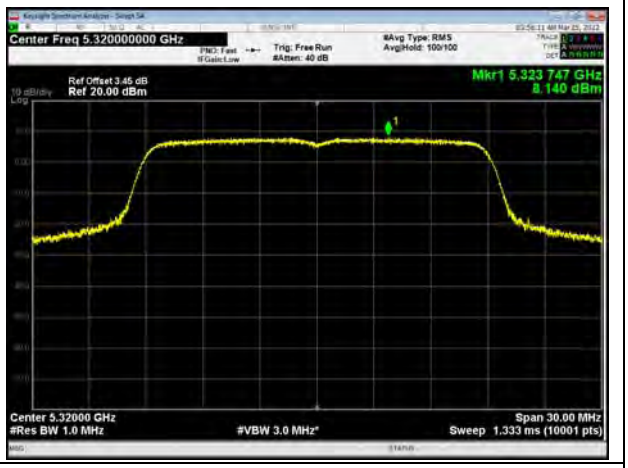
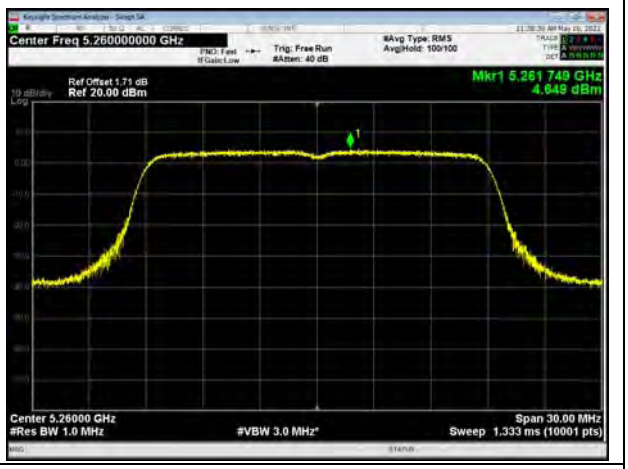
U-NII-2A, 802.11a, Channel No.: 64

U-NII-2A, 802.11n HT20, Channel No.: 64

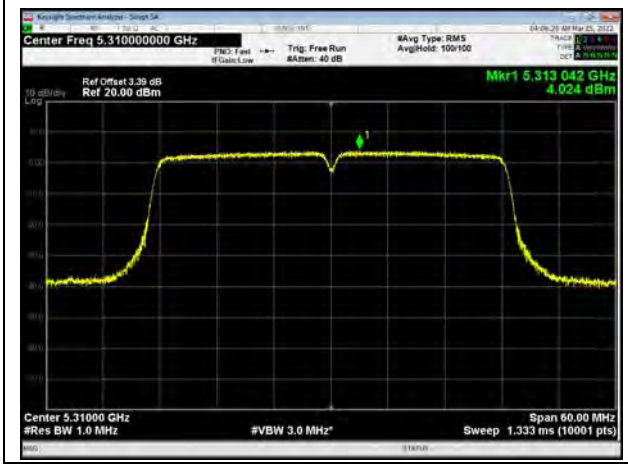


U-NII-2A, 802.11n HT40, Channel No.: 54

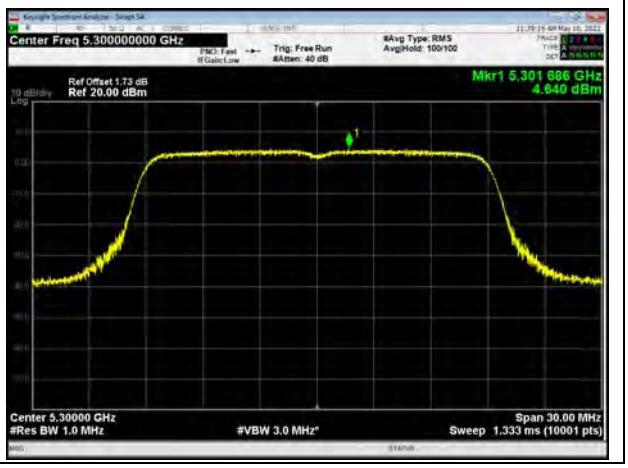
U-NII-2A, 802.11ac VHT20, Channel No.:52



U-NII-2A, 802.11n HT40, Channel No.: 62



U-NII-2A, 802.11ac VHT20, Channel No.: 60



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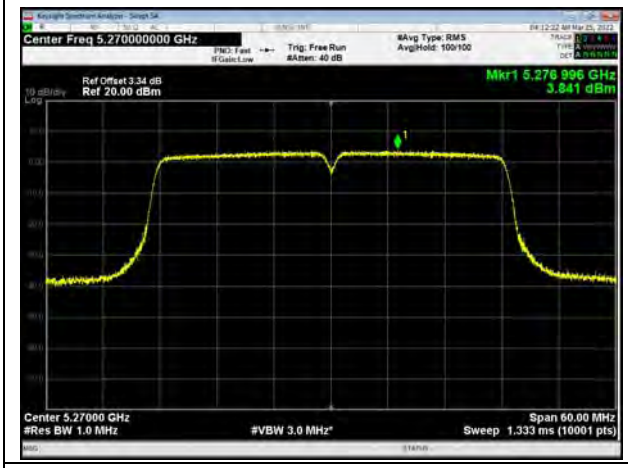
U-NII-2A, 802.11ac VHT40, Channel No.: 54



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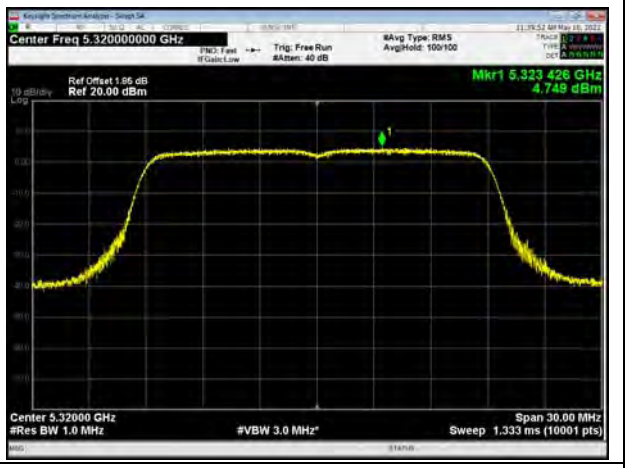
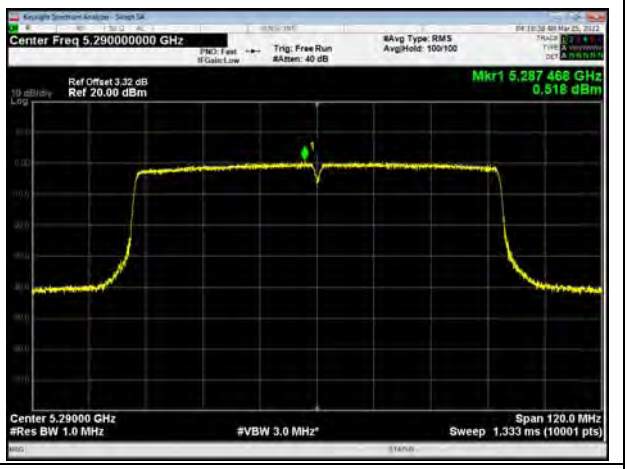


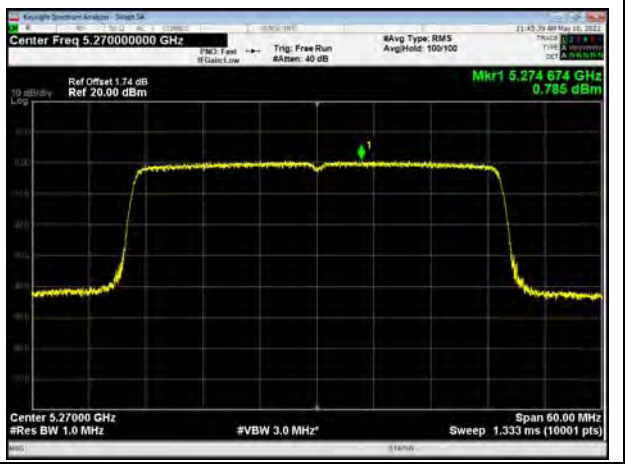
U-NII-2A, 802.11ac VHT40, Channel No.: 62

U-NII-2A, 802.11ac VHT80, Channel No.: 58



U-NII-2A, 802.11ax HE20, Channel No.:52

U-NII-2A, 802.11ax HE40, Channel No.: 54



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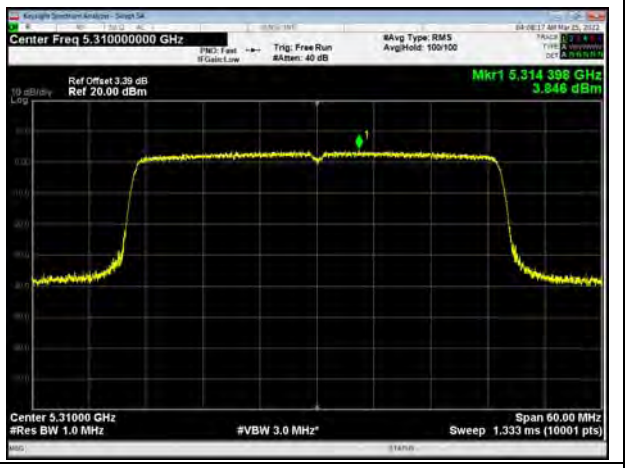
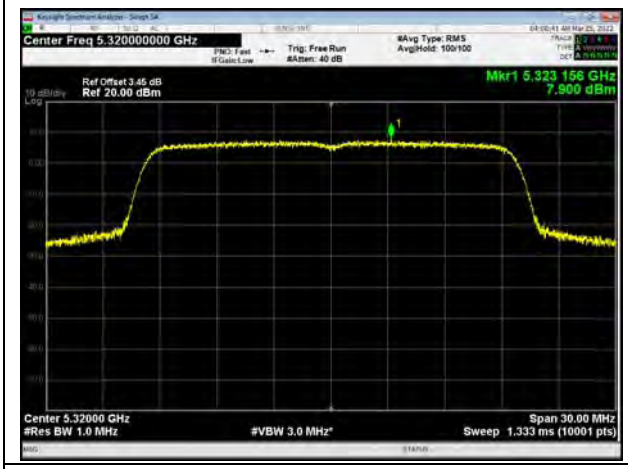
U-NII-2A, 802.11ax HE20, Channel No.: 60

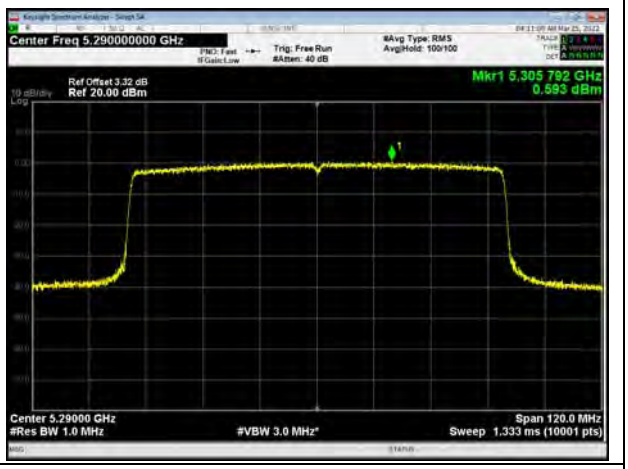
U-NII-2A, 802.11ax HE40, Channel No.: 62



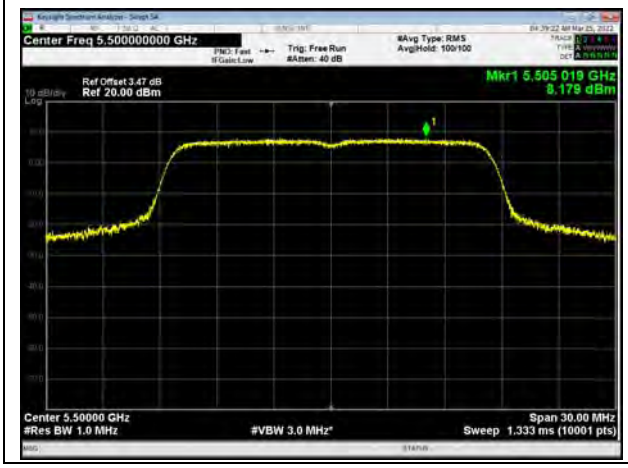
U-NII-2A, 802.11ax HE20, Channel No.: 64



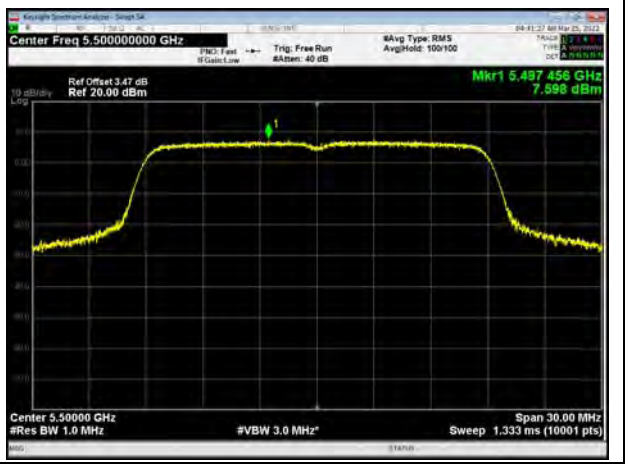
U-NII-2A, 802.11ax HE80, Channel No.: 58



U-NII-2C, 802.11a, Channel No.: 100



U-NII-2C, 802.11n HT20, Channel No.: 100



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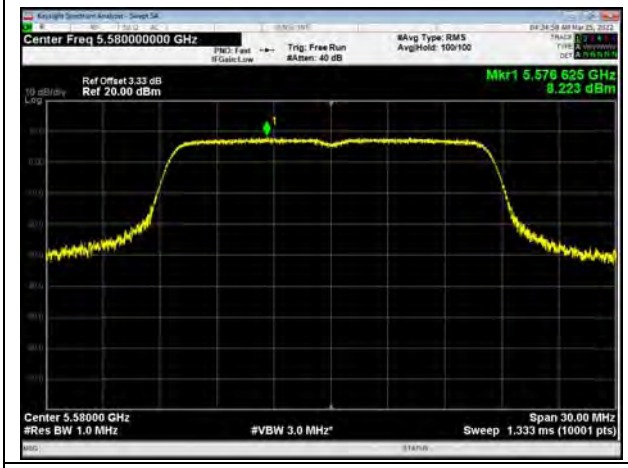
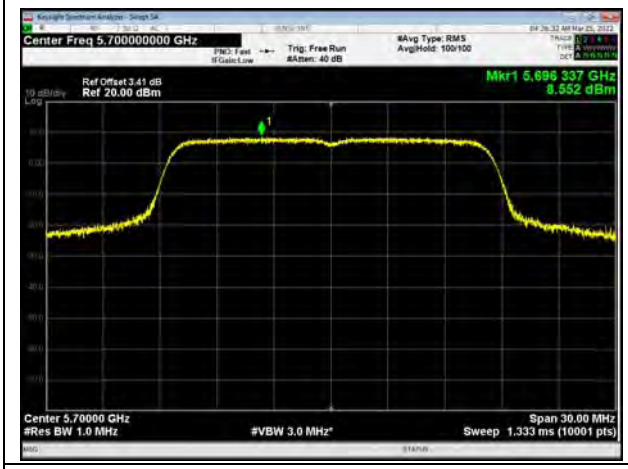
U-NII-2C, 802.11a, Channel No.: 116

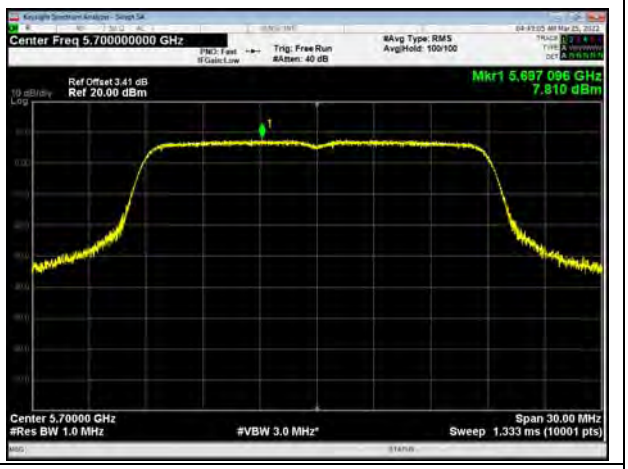


U-NII-2C, 802.11n HT20, Channel No.: 116

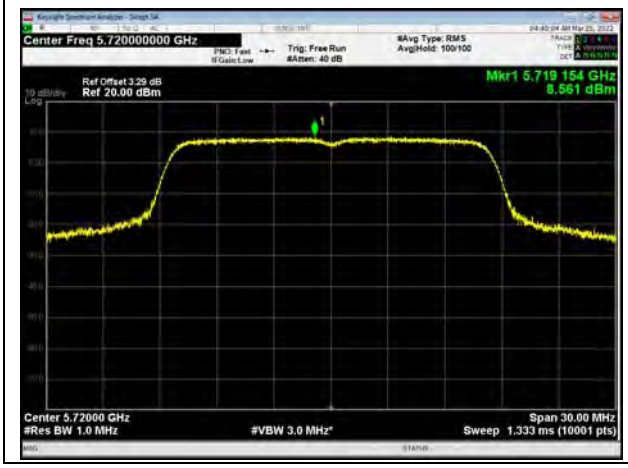
U-NII-2C, 802.11a, Channel No.: 140



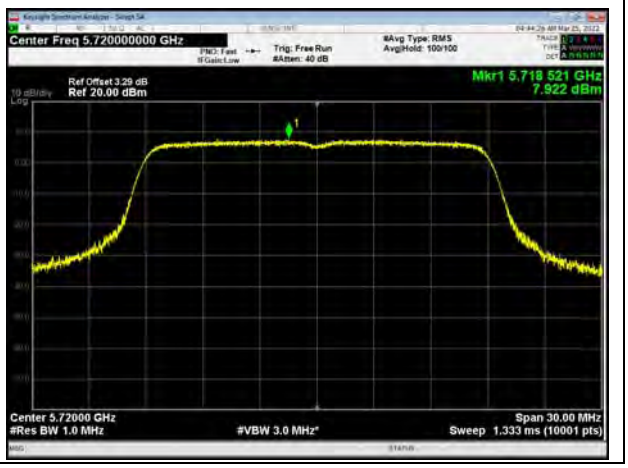
U-NII-2C, 802.11n HT20, Channel No.: 140



U-NII-2C, 802.11a, Channel No.: 144



U-NII-2C, 802.11n HT20, Channel No.: 144



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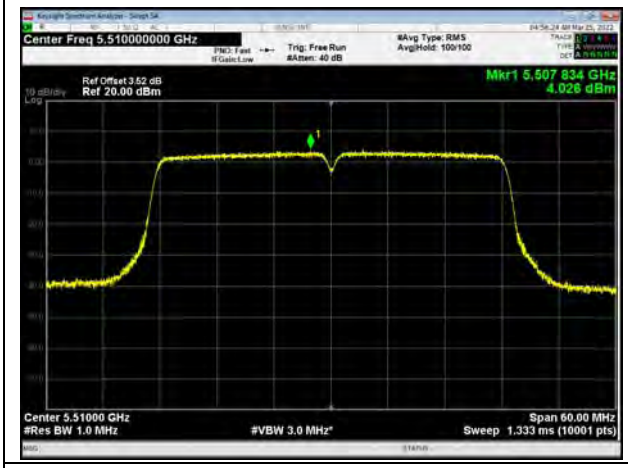
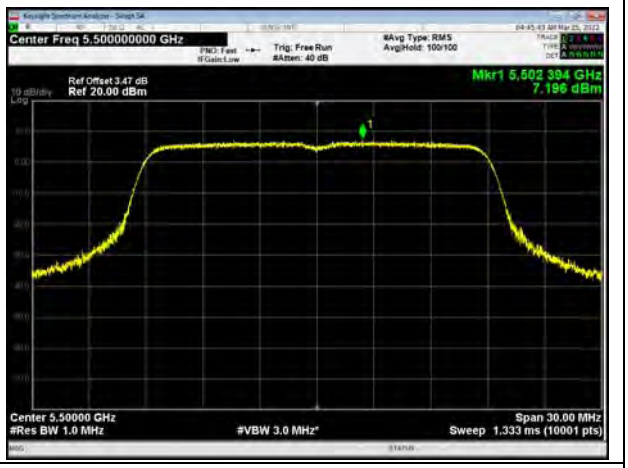
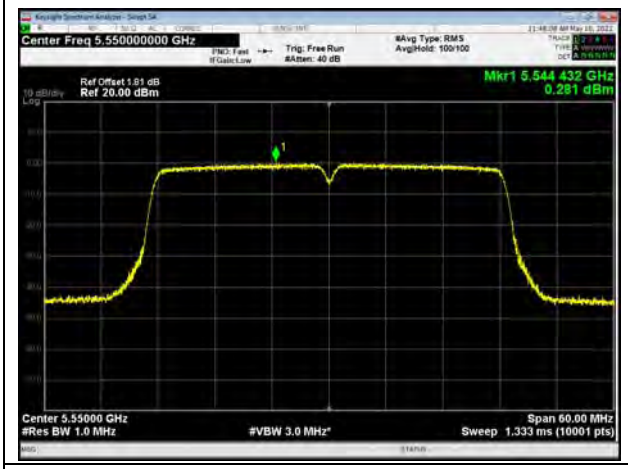
U-NII-2C, 802.11n HT40, Channel No.: 102



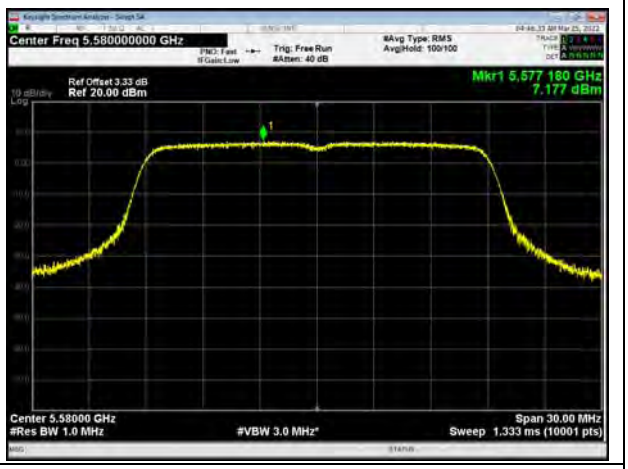
U-NII-2C, 802.11ac VHT20, Channel No.: 100



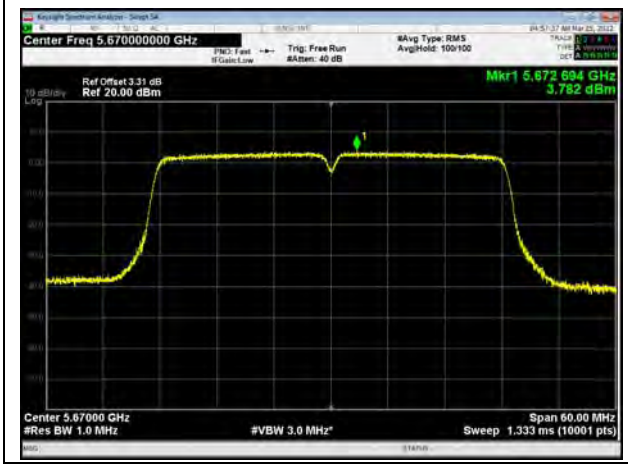
U-NII-2C, 802.11n HT40, Channel No.: 110



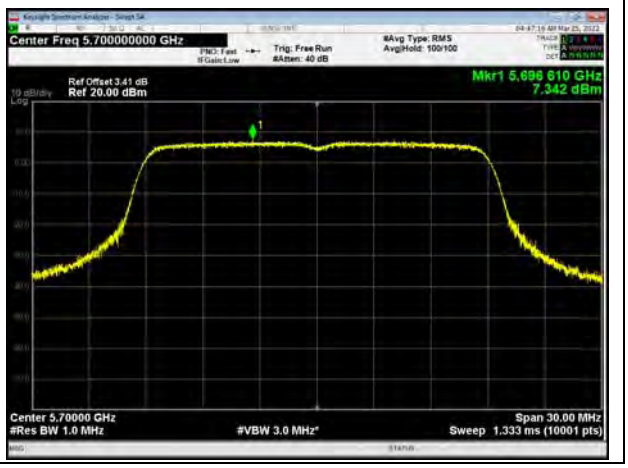
U-NII-2C, 802.11ac VHT20, Channel No.: 116



U-NII-2C, 802.11n HT40, Channel No.: 134



U-NII-2C, 802.11ac VHT20, Channel No.: 140



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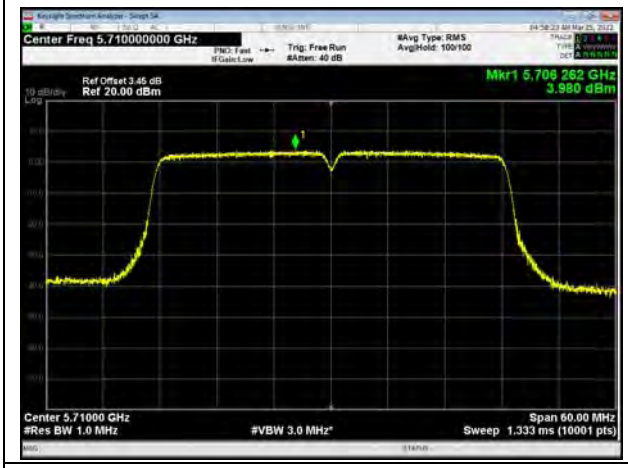
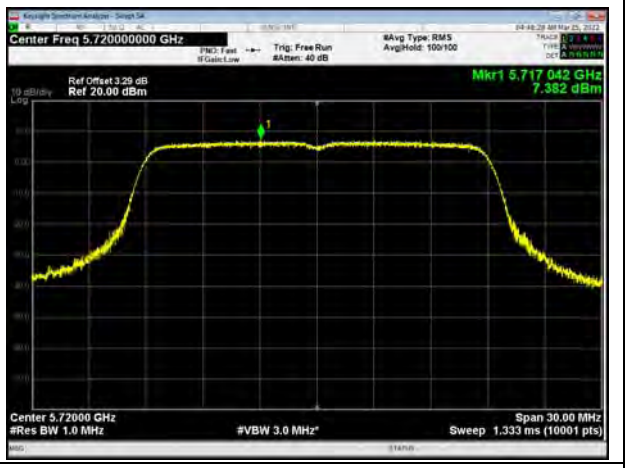
U-NII-2C, 802.11n HT40, Channel No.: 142

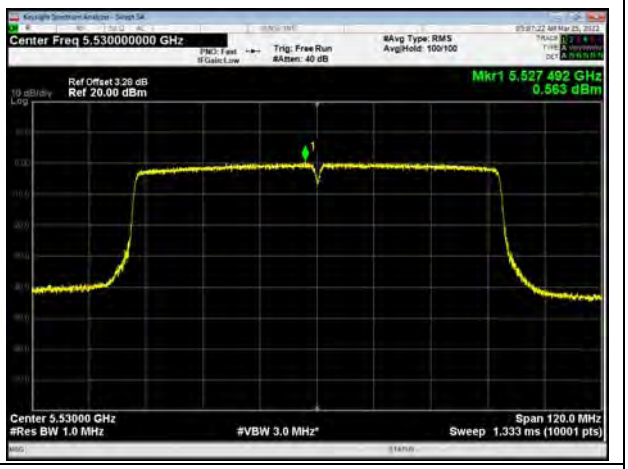


U-NII-2C, 802.11ac VHT20, Channel No.: 144



U-NII-2C, 802.11ac VHT40, Channel No.: 102

U-NII-2C, 802.11ac VHT80, Channel No.: 106



U-NII-2C, 802.11ac VHT40, Channel No.: 110

U-NII-2C, 802.11ac VHT80, Channel No.: 138

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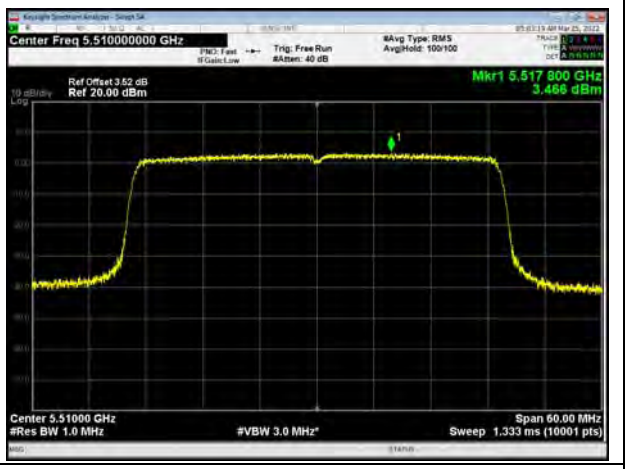
U-NII-2C, 802.11ac VHT40, Channel No.: 134

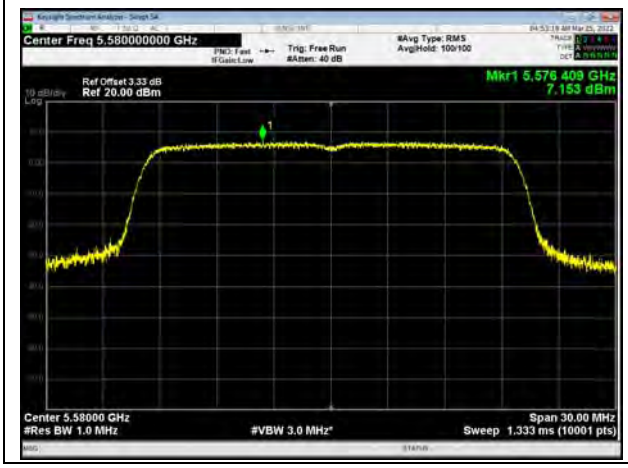
U-NII-2C, 802.11ac VHT40, Channel No.: 142

U-NII-2C, 802.11ax HE20, Channel No.: 100

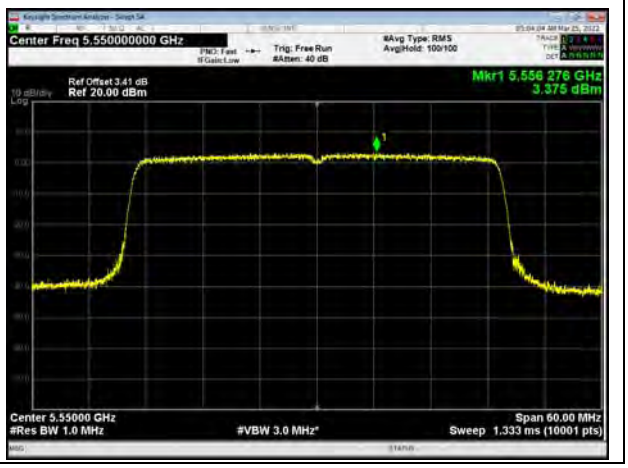
U-NII-2C, 802.11ax HE40, Channel No.: 102



U-NII-2C, 802.11ax HE20, Channel No.: 116



U-NII-2C, 802.11ax HE40, Channel No.: 110



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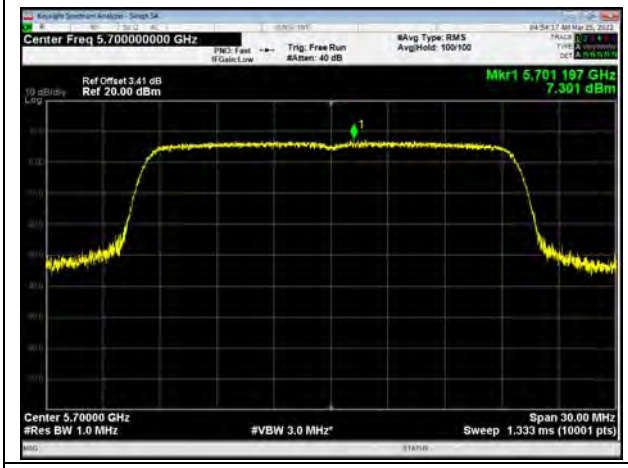
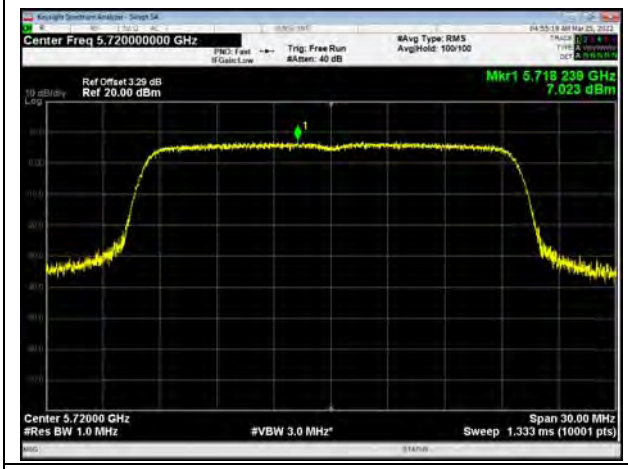
U-NII-2C, 802.11ax HE20, Channel No.: 140

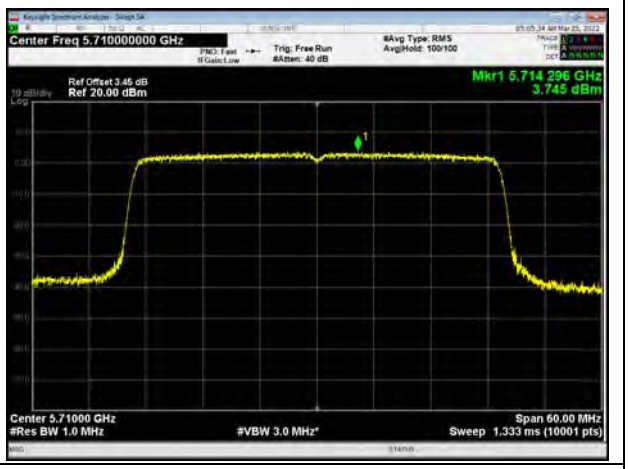


U-NII-2C, 802.11ax HE40, Channel No.: 134

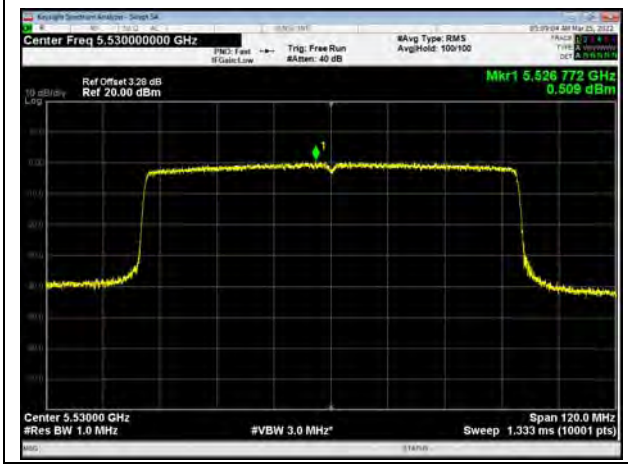
U-NII-2C, 802.11ax HE20, Channel No.: 144



U-NII-2C, 802.11ax HE40, Channel No.: 142



U-NII-2C, 802.11ax HE80, Channel No.: 106



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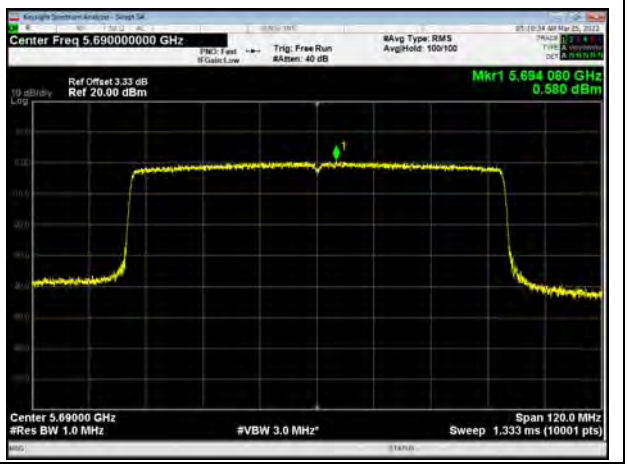

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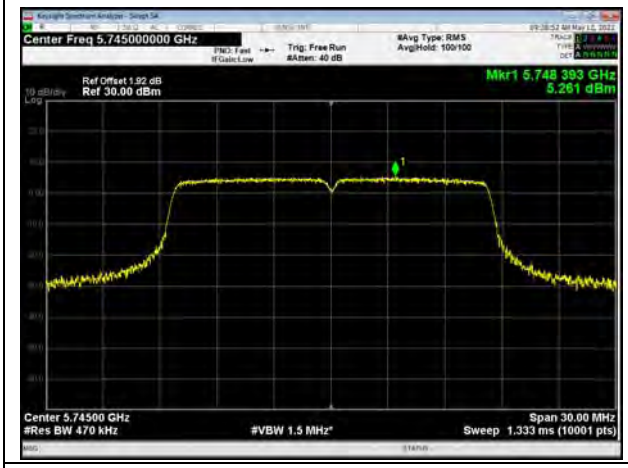
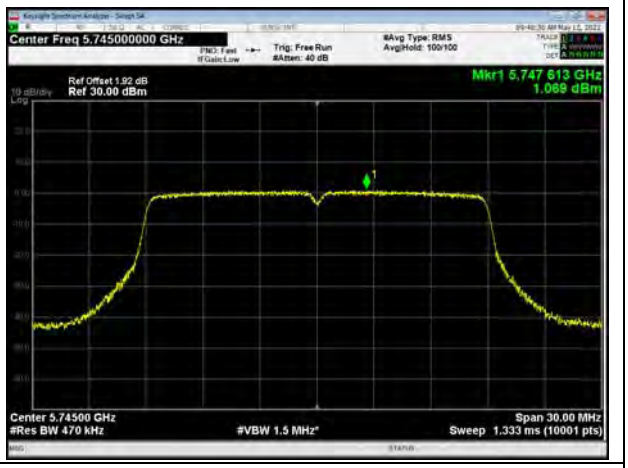
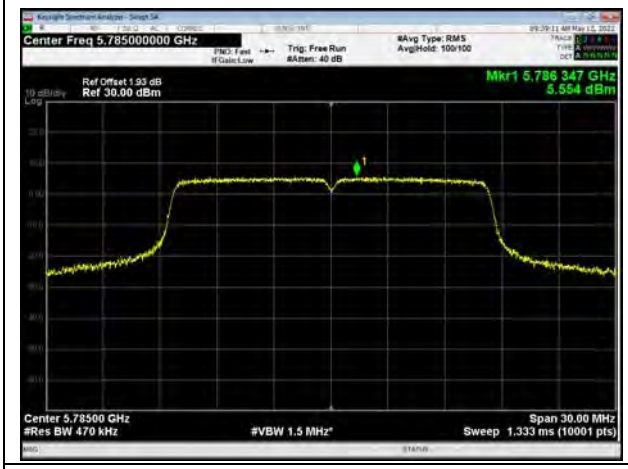
U-NII-3, 802.11a, Channel No.: 149



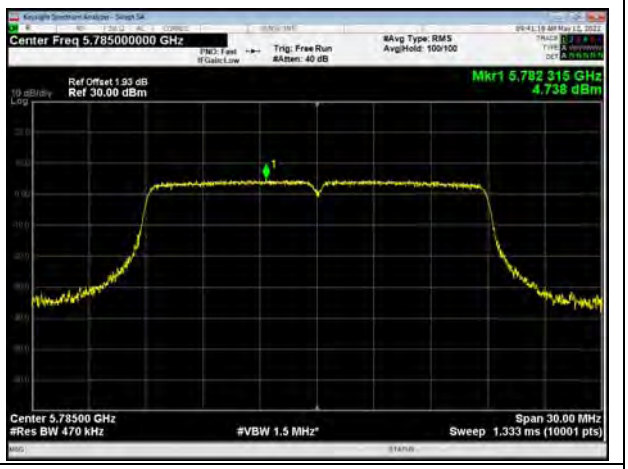
U-NII-3, 802.11n HT20, Channel No.: 149



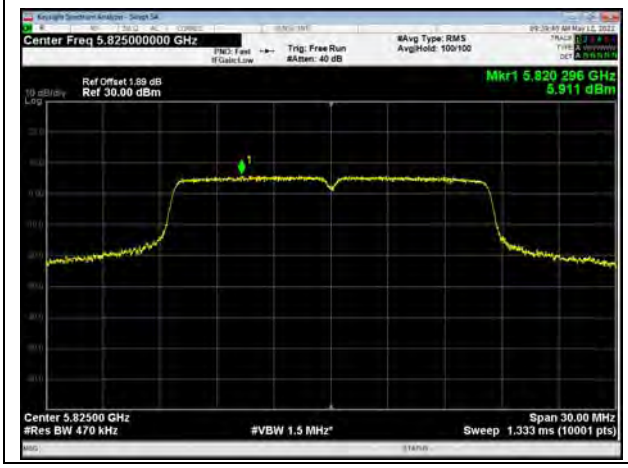
U-NII-3, 802.11a, Channel No.: 157



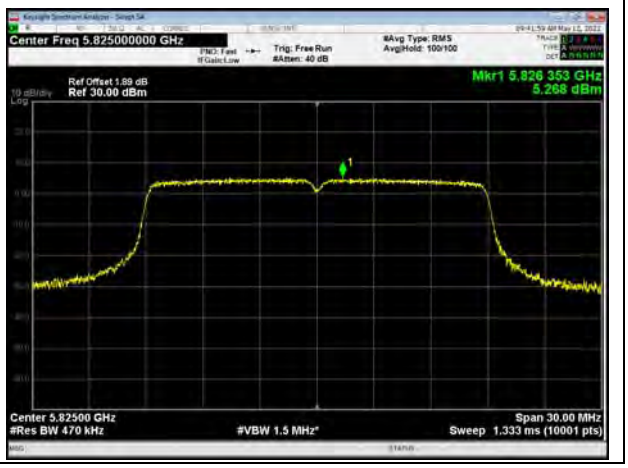
U-NII-3, 802.11n HT20, Channel No.: 157



U-NII-3, 802.11a, Channel No.: 165



U-NII-3, 802.11n HT20, Channel No.: 165



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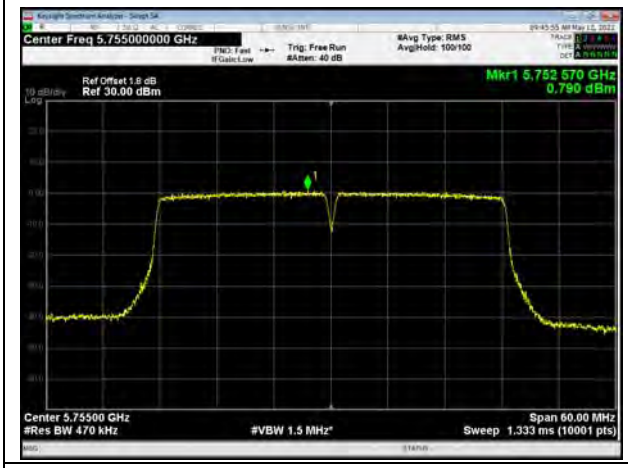
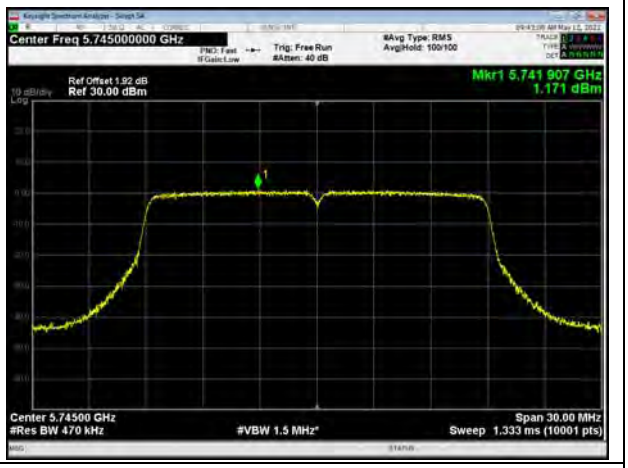
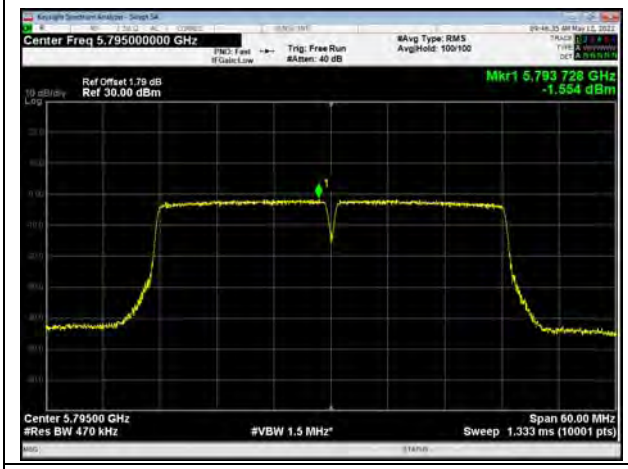
U-NII-3, 802.11n HT40, Channel No.: 151



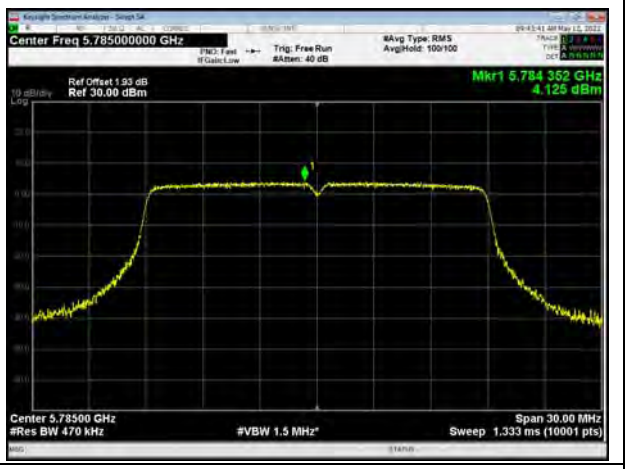
U-NII-3, 802.11ac VHT20, Channel No.: 149



U-NII-3, 802.11n HT40, Channel No.: 159



U-NII-3, 802.11ac VHT20, Channel No.: 157



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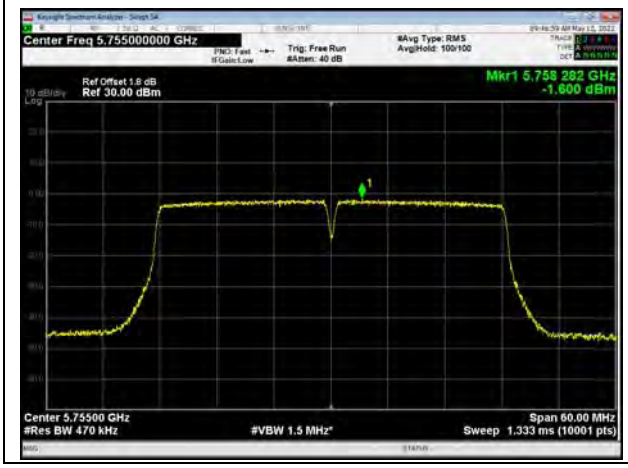

U-NII-3, 802.11ac VHT20, Channel No.: 165

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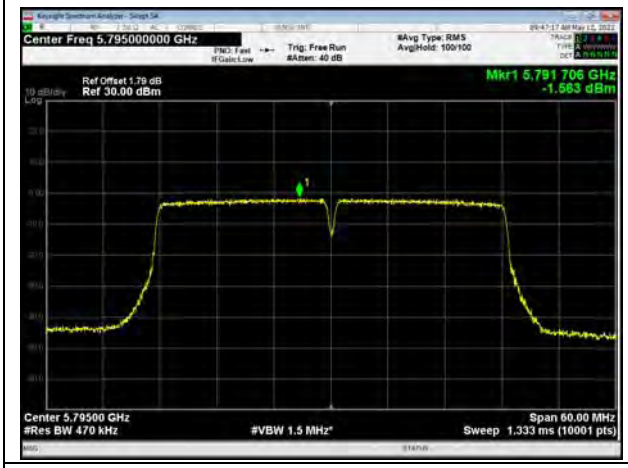
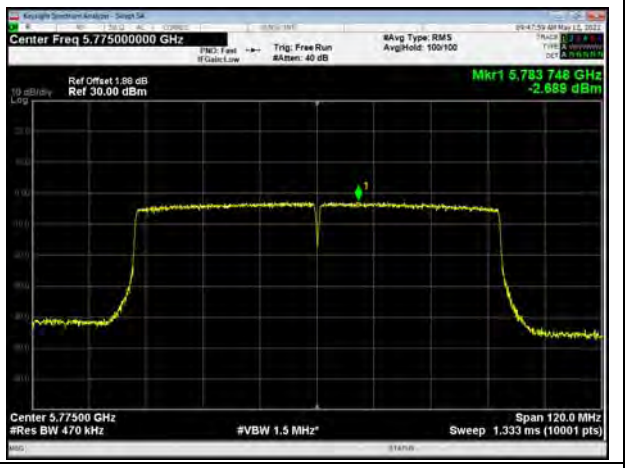
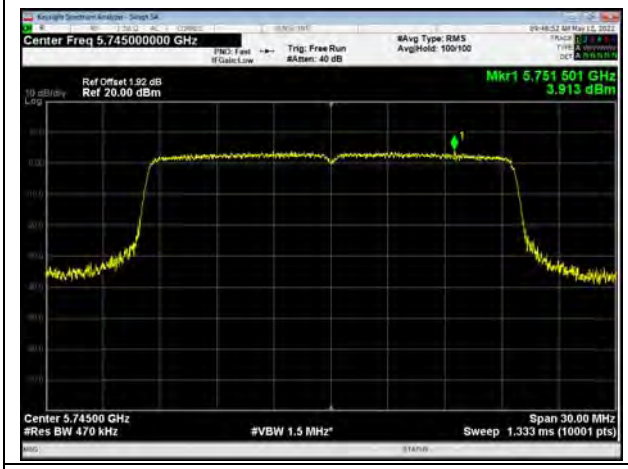
U-NII-3, 802.11ac VHT40, Channel No.: 159



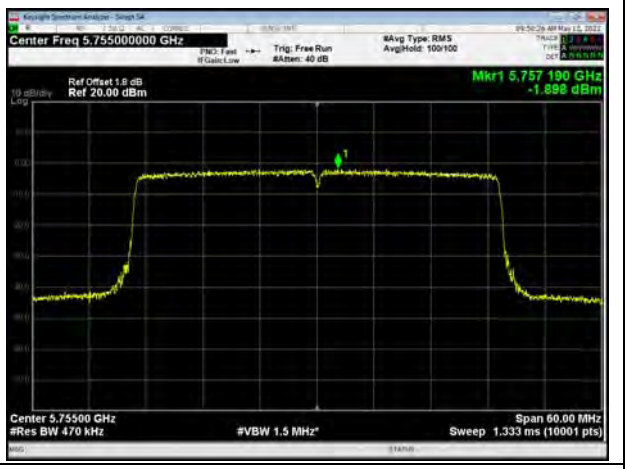
U-NII-3, 802.11ac VHT80, Channel No.: 155



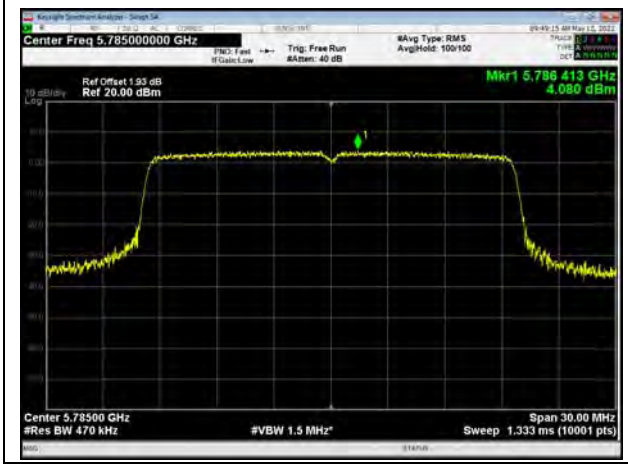
U-NII-3, 802.11ax HE20, Channel No.: 149



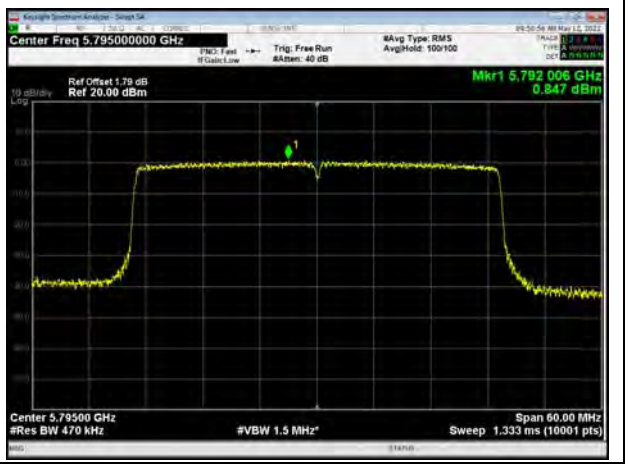
U-NII-3, 802.11ax HE40, Channel No.: 151



U-NII-3, 802.11ax HE20, Channel No.: 157



U-NII-3, 802.11ax HE40, Channel No.: 159



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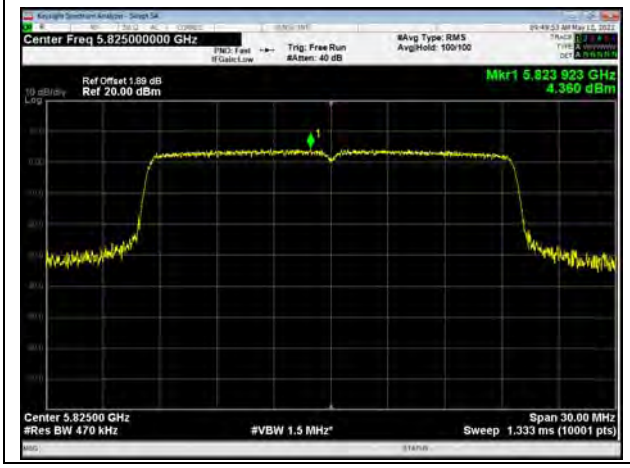
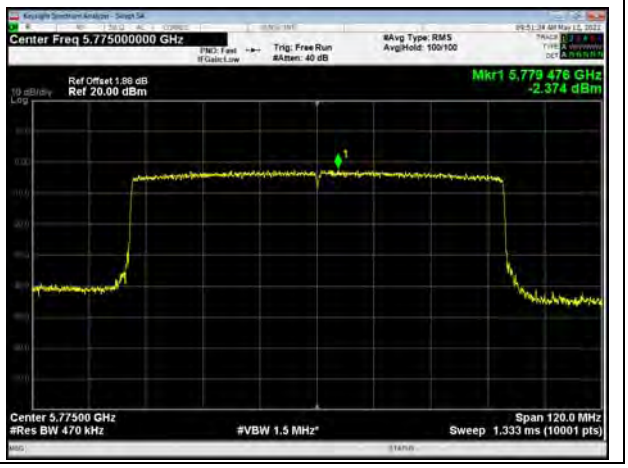
U-NII-3, 802.11ax HE20, Channel No.: 165	U-NII-3, 802.11ax HE80, Channel No.: 155
	

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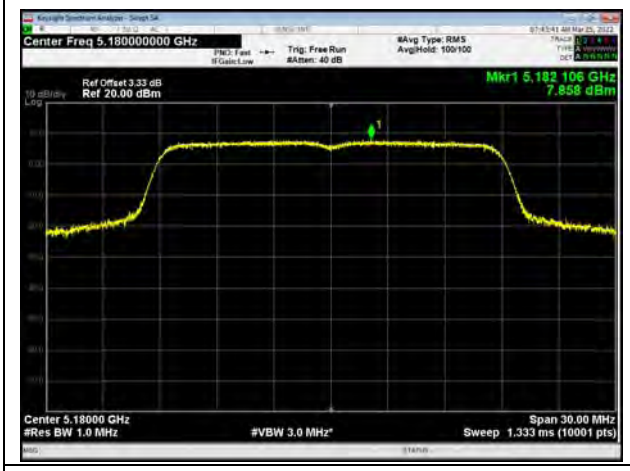
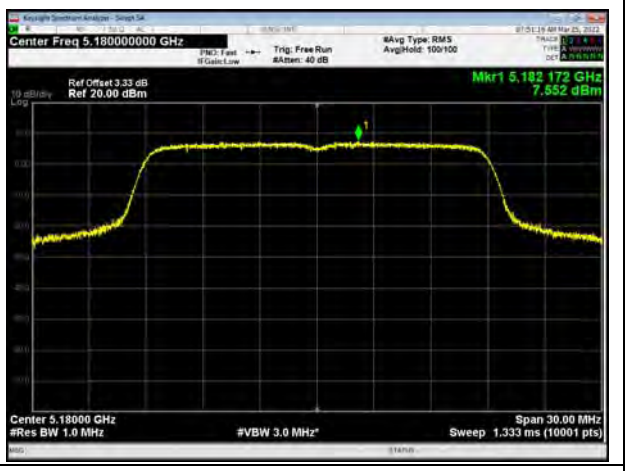
MIMO

Antenna 1

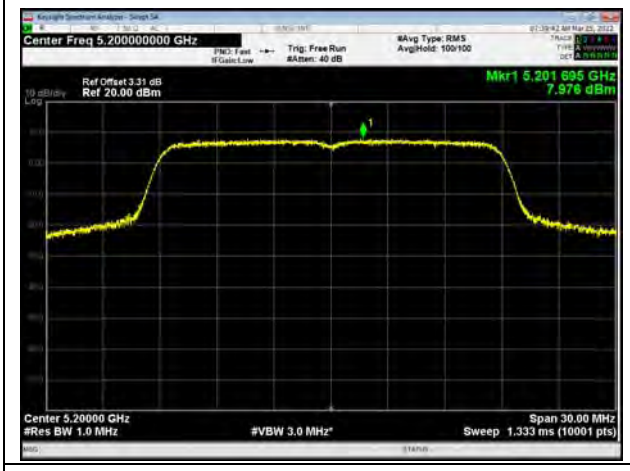
U-NII-1, 802.11n HT20, Channel No.: 36



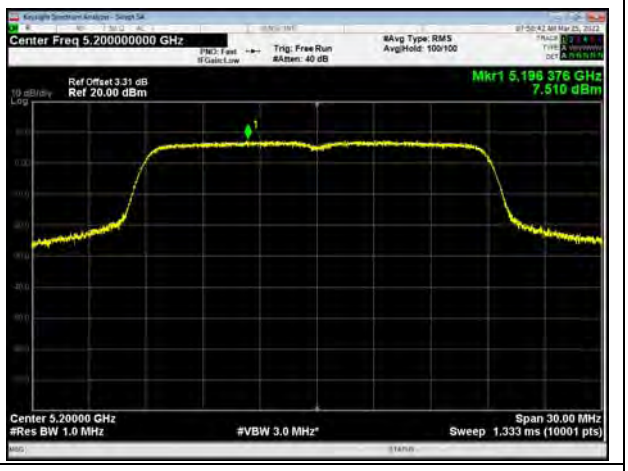
U-NII-1, 802.11ac VHT20, Channel No.: 36



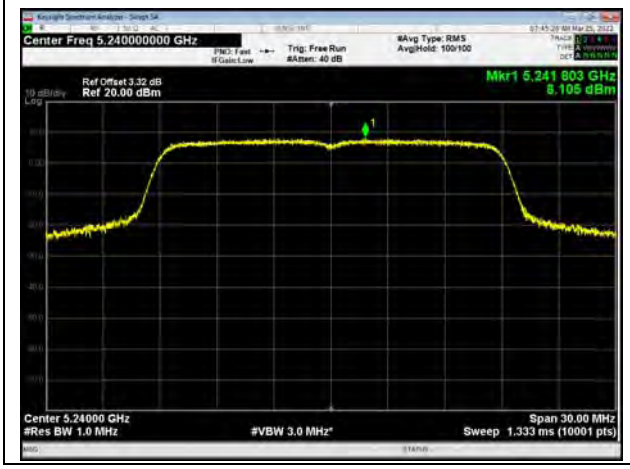
U-NII-1, 802.11n HT20, Channel No.: 40



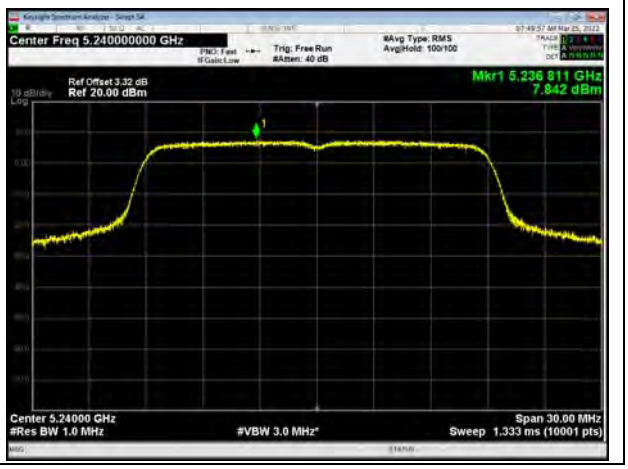
U-NII-1, 802.11ac VHT20, Channel No.: 40



U-NII-1, 802.11n HT20, Channel No.: 48



U-NII-1, 802.11ac VHT20, Channel No.: 48



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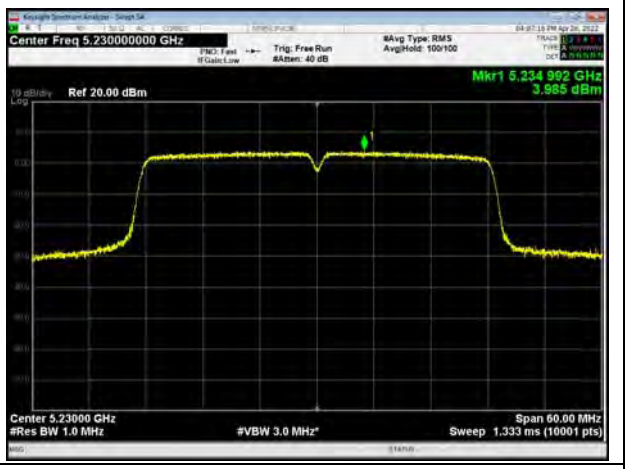
U-NII-1, 802.11n HT40, Channel No.: 38

U-NII-1, 802.11ac VHT40, Channel No.: 38

U-NII-1, 802.11n HT40, Channel No.: 46

U-NII-1, 802.11ac VHT40, Channel No.: 46



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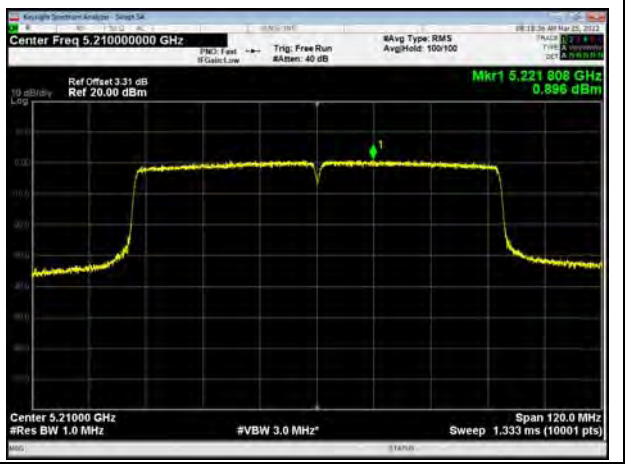
U-NII-1, 802.11ac VHT80, Channel No.: 42



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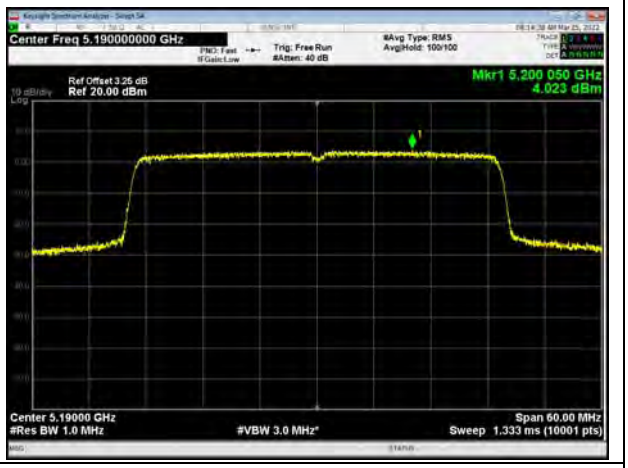
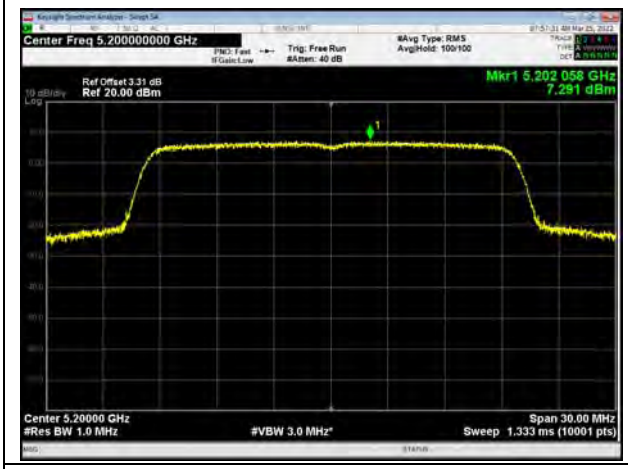
U-NII-1, 802.11ax HE20, Channel No.: 36

U-NII-1, 802.11ax HE40, Channel No.: 38



U-NII-1, 802.11ax HE20, Channel No.: 40



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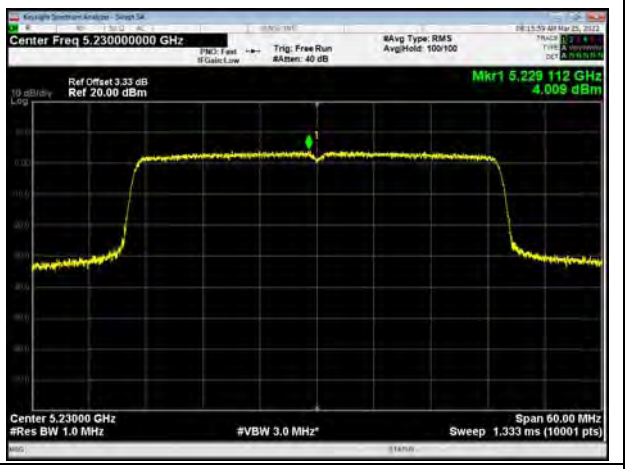
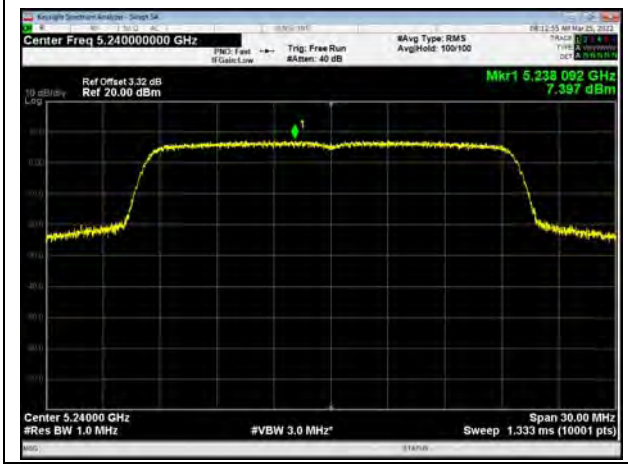
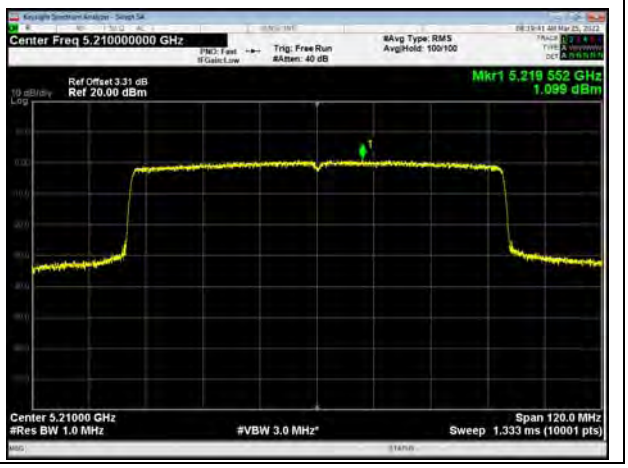


U-NII-1, 802.11ax HE20, Channel No.: 48



U-NII-1, 802.11ax HE80, Channel No.: 42



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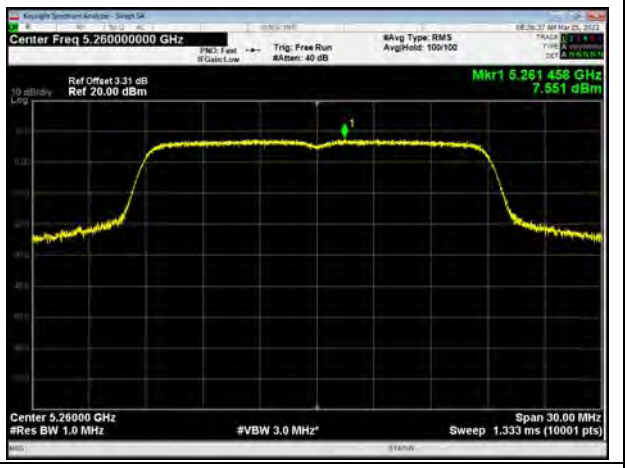
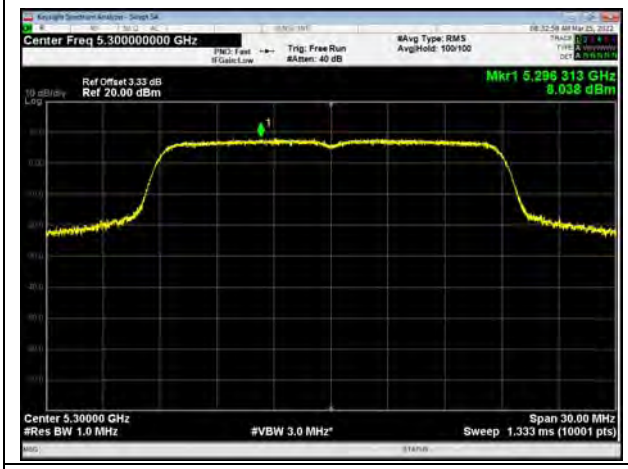
U-NII-2A, 802.11n HT20, Channel No.: 52

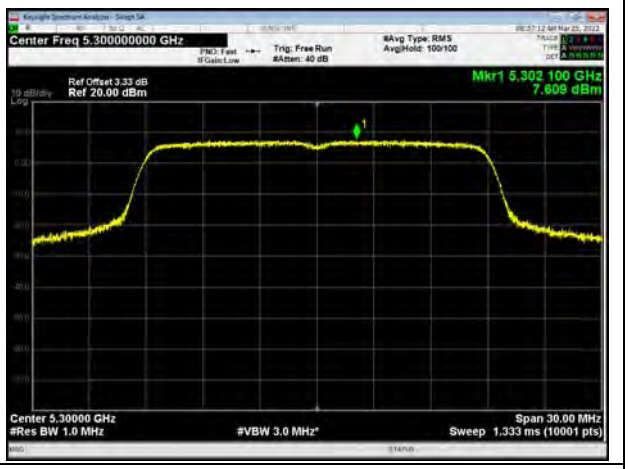
U-NII-2A, 802.11ac VHT20, Channel No.:52



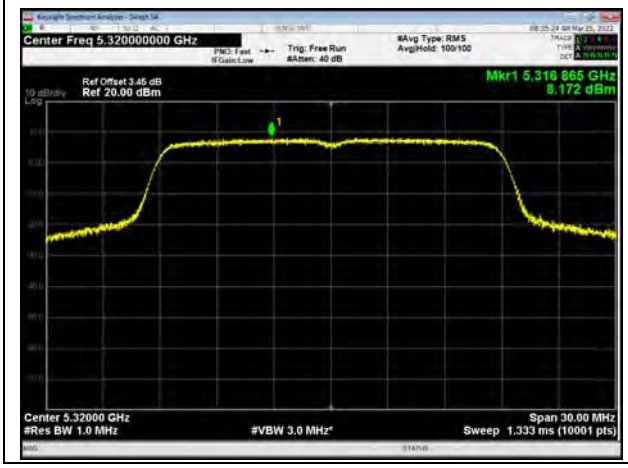
U-NII-2A, 802.11n HT20, Channel No.: 60



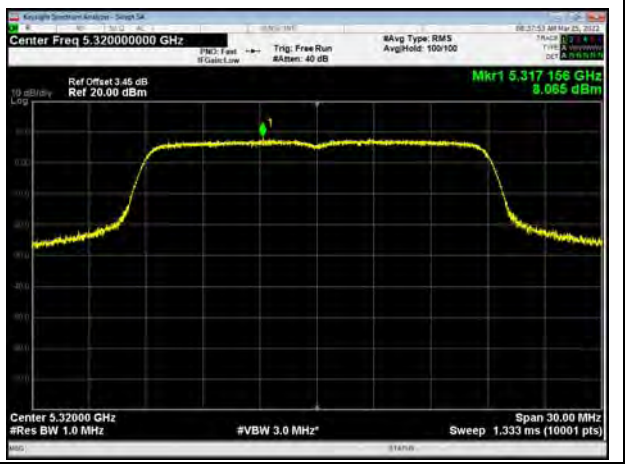
U-NII-2A, 802.11ac VHT20, Channel No.: 60



U-NII-2A, 802.11n HT20, Channel No.: 64



U-NII-2A, 802.11ac VHT20, Channel No.: 64



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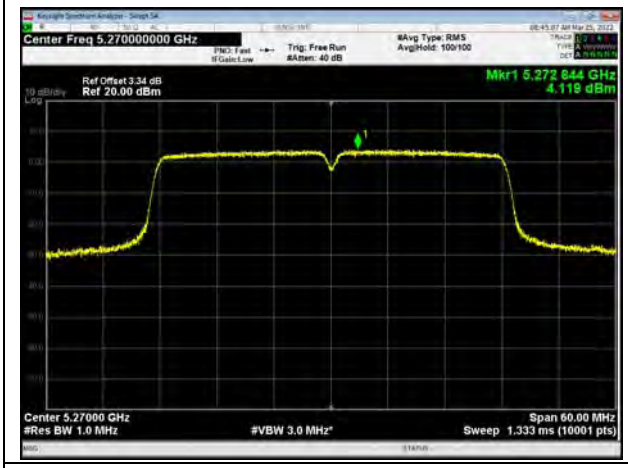
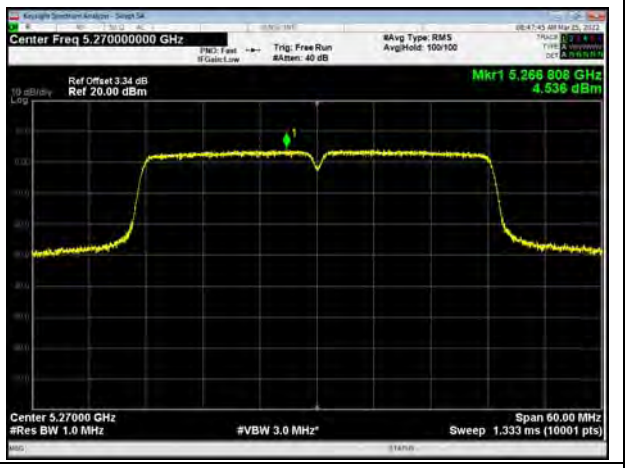
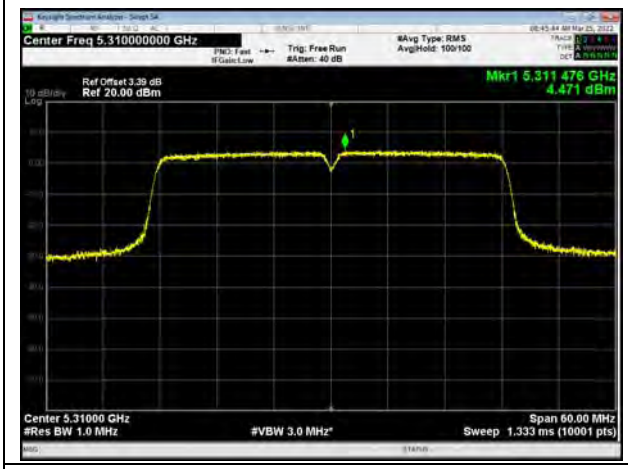
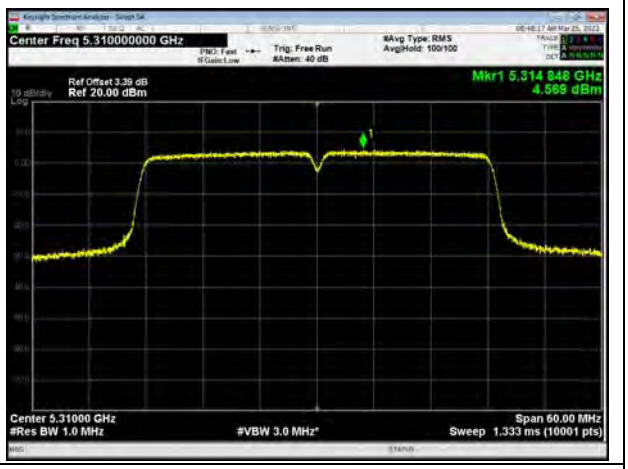
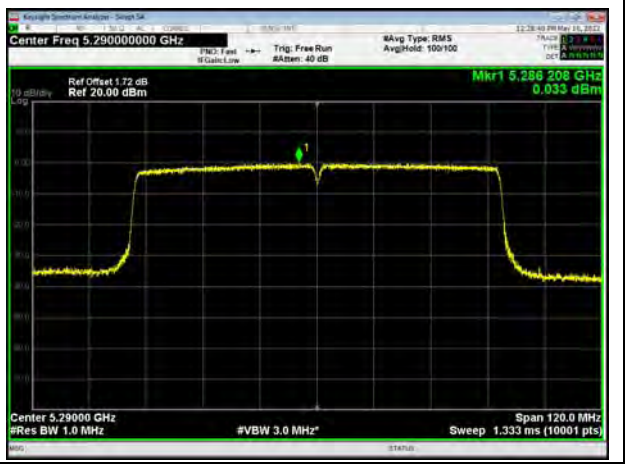
U-NII-2A, 802.11n HT40, Channel No.: 54	U-NII-2A, 802.11ac VHT40, Channel No.: 54
	
U-NII-2A, 802.11n HT40, Channel No.: 62	U-NII-2A, 802.11ac VHT40, Channel No.: 62
	
/	U-NII-2A, 802.11ac VHT80, Channel No.: 58
	

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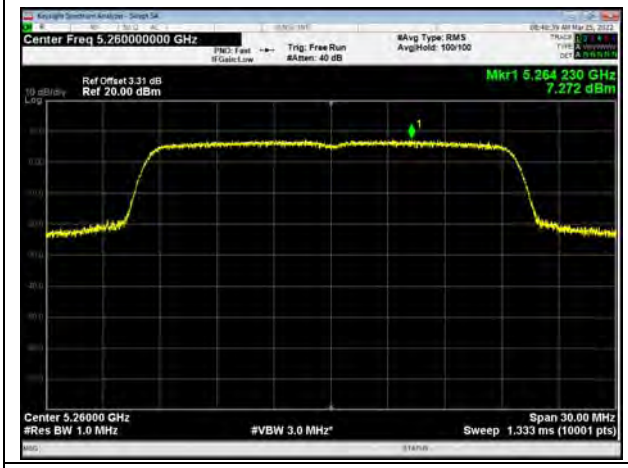
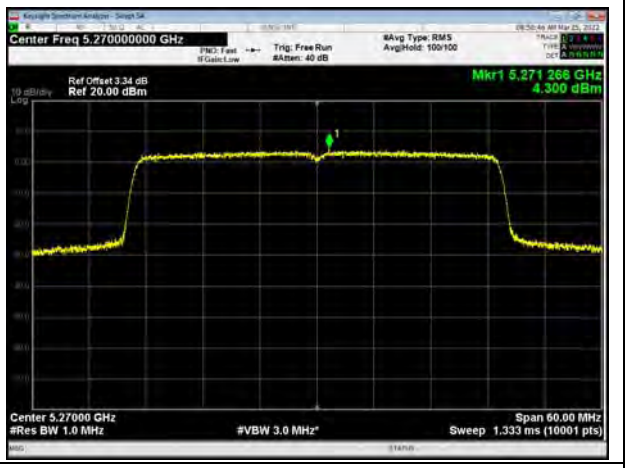
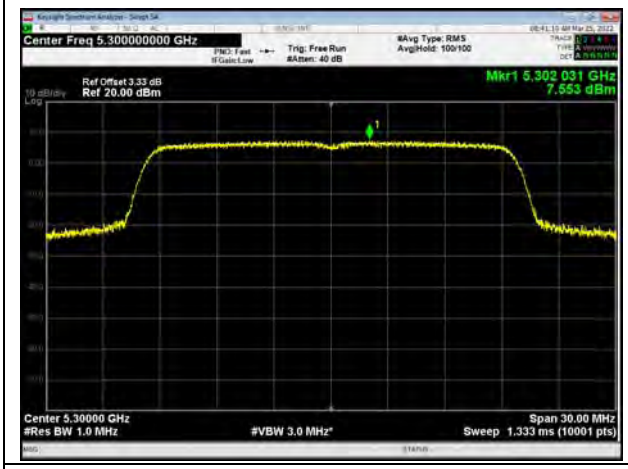
U-NII-2A, 802.11ax HE20, Channel No.:52



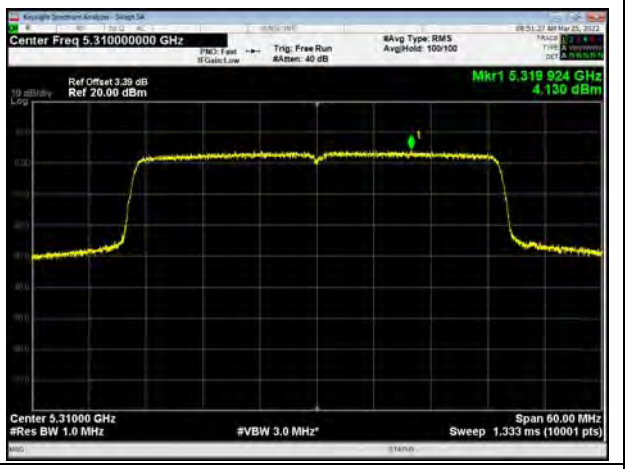
U-NII-2A, 802.11ax HE40, Channel No.: 54



U-NII-2A, 802.11ax HE20, Channel No.: 60

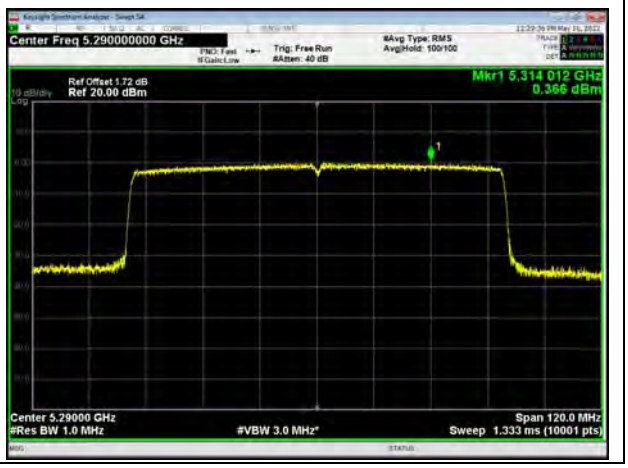


U-NII-2A, 802.11ax HE40, Channel No.: 62



U-NII-2A, 802.11ax HE20, Channel No.: 64

U-NII-2A, 802.11ax HE80, Channel No.: 58



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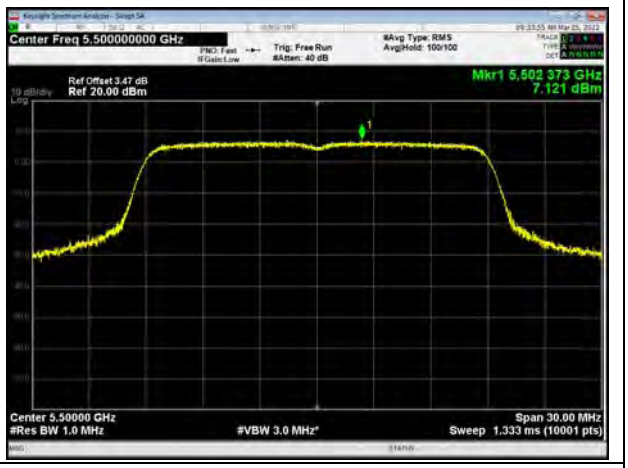
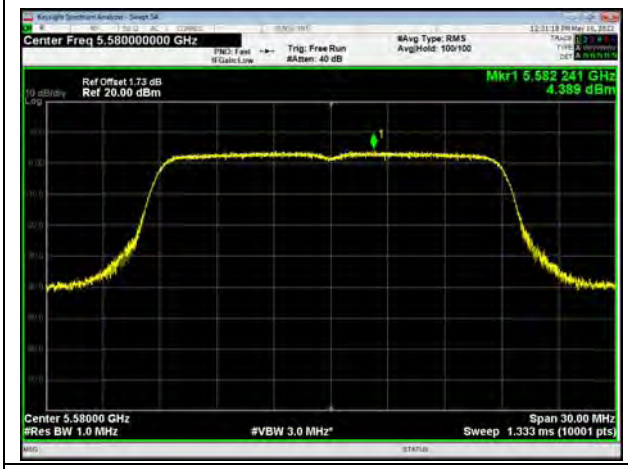
U-NII-2C, 802.11n HT20, Channel No.: 100

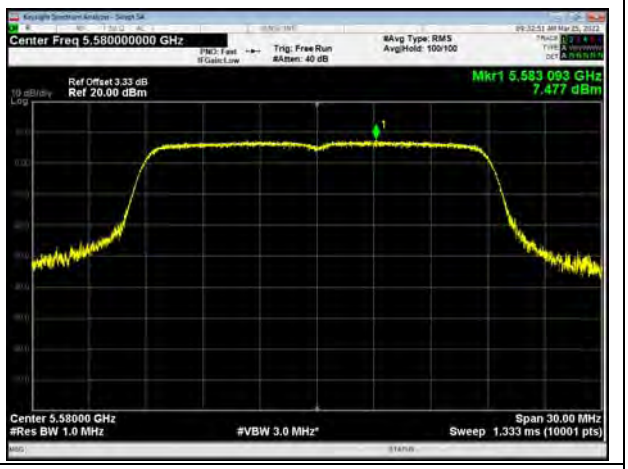
U-NII-2C, 802.11ac VHT20, Channel No.: 100



U-NII-2C, 802.11n HT20, Channel No.: 116

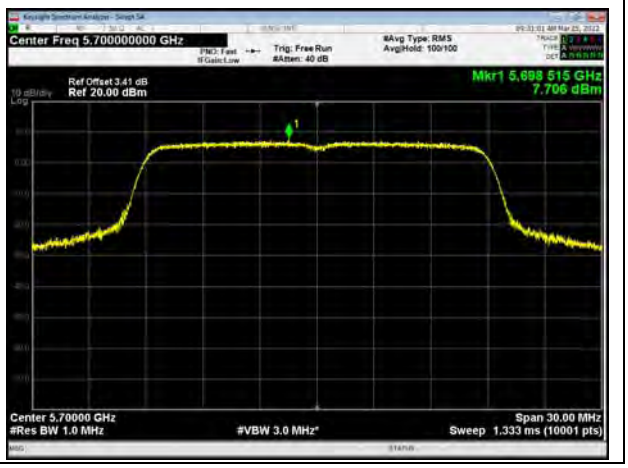


U-NII-2C, 802.11ac VHT20, Channel No.: 116



U-NII-2C, 802.11n HT20, Channel No.: 140

U-NII-2C, 802.11ac VHT20, Channel No.: 140



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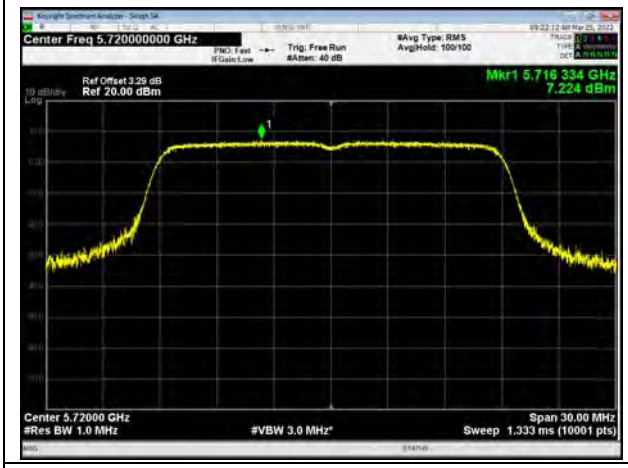
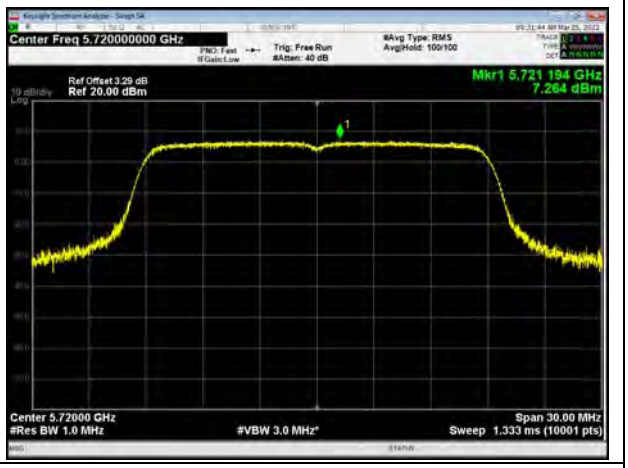
U-NII-2C, 802.11n HT20, Channel No.: 144

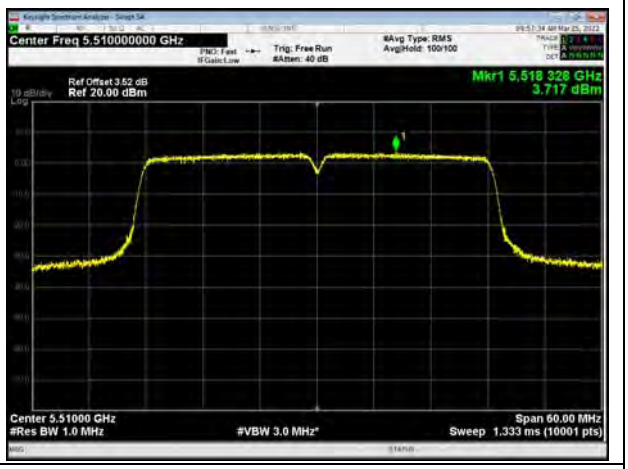


U-NII-2C, 802.11ac VHT20, Channel No.: 144



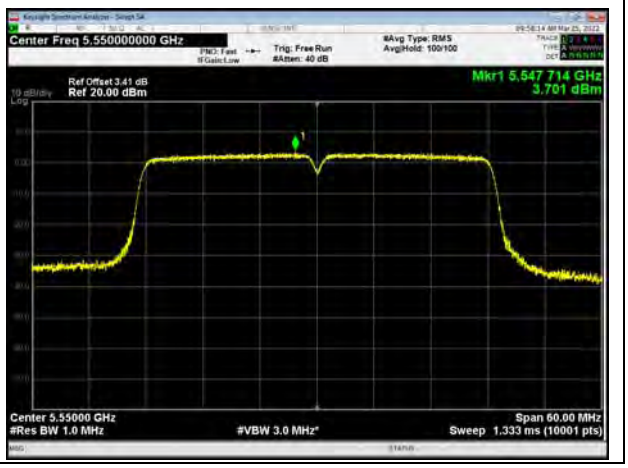
U-NII-2C, 802.11n HT40, Channel No.: 102

U-NII-2C, 802.11ac VHT40, Channel No.: 102



U-NII-2C, 802.11n HT40, Channel No.: 110

U-NII-2C, 802.11ac VHT40, Channel No.: 110



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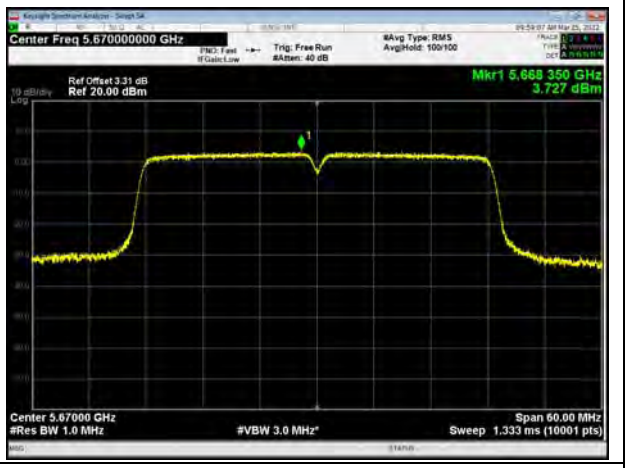
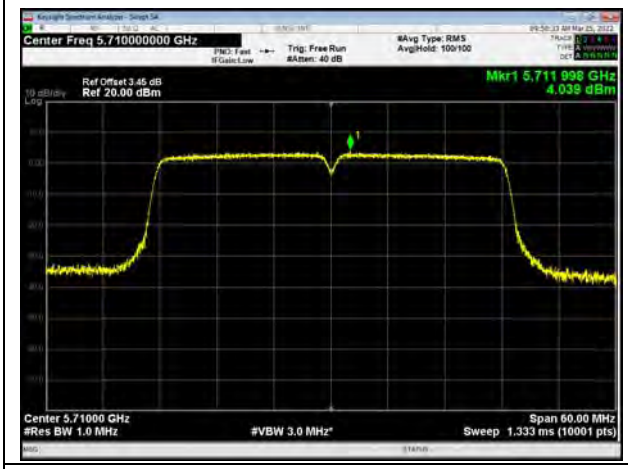
U-NII-2C, 802.11n HT40, Channel No.: 134

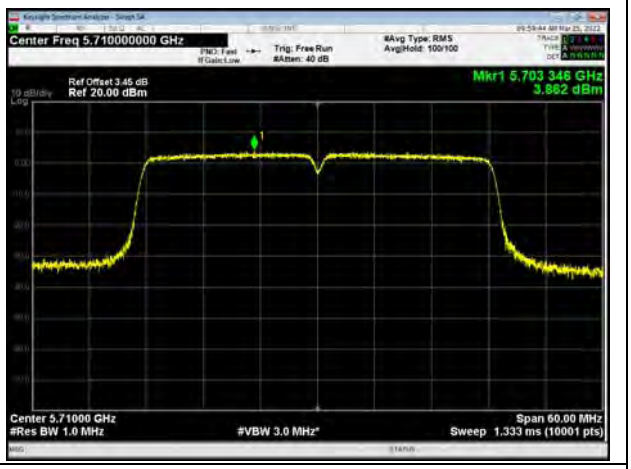
U-NII-2C, 802.11ac VHT40, Channel No.: 134



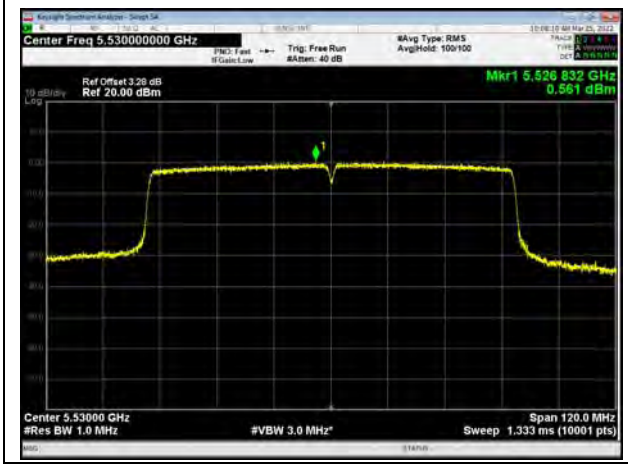
U-NII-2C, 802.11n HT40, Channel No.: 142



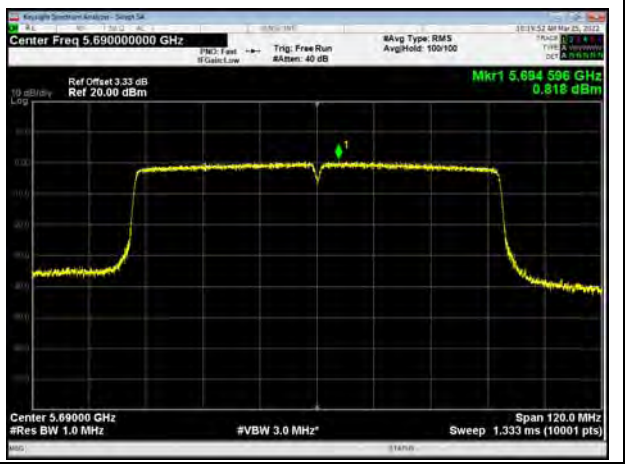
U-NII-2C, 802.11ac VHT40, Channel No.: 142



U-NII-2C, 802.11ac VHT80, Channel No.: 106



U-NII-2C, 802.11ac VHT80, Channel No.: 138



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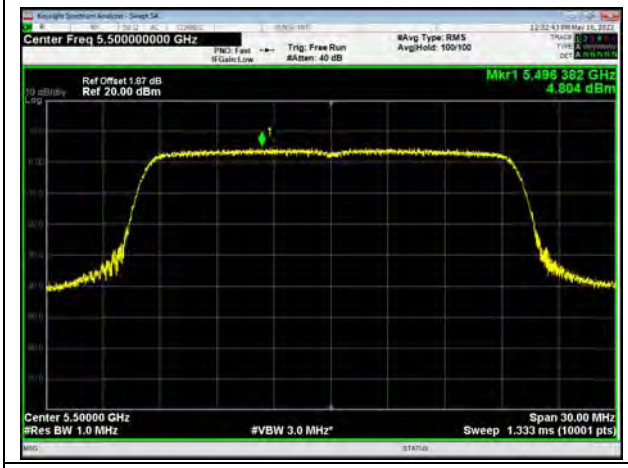
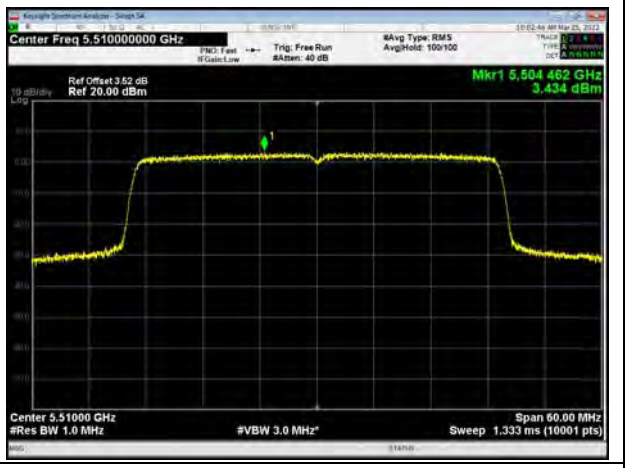
U-NII-2C, 802.11ax HE20, Channel No.: 100



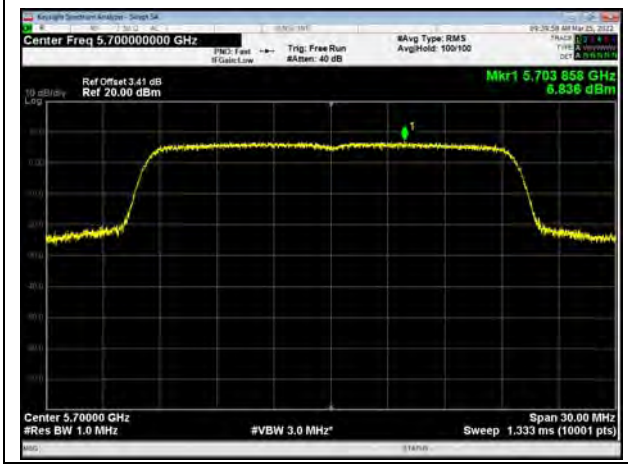
U-NII-2C, 802.11ax HE40, Channel No.: 102



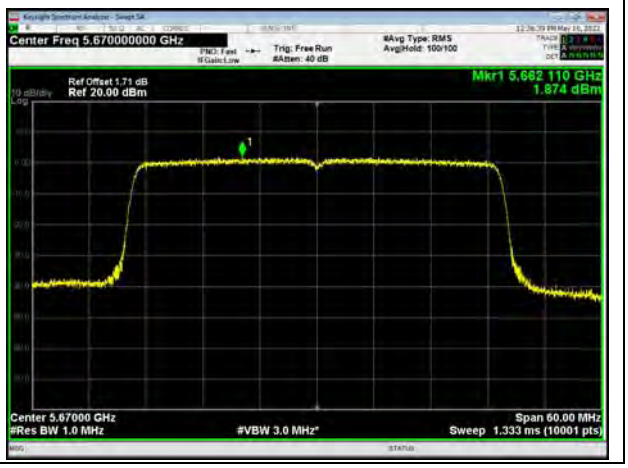
U-NII-2C, 802.11ax HE20, Channel No.: 116

U-NII-2C, 802.11ax HE40, Channel No.: 110

U-NII-2C, 802.11ax HE20, Channel No.: 140



U-NII-2C, 802.11ax HE40, Channel No.: 134



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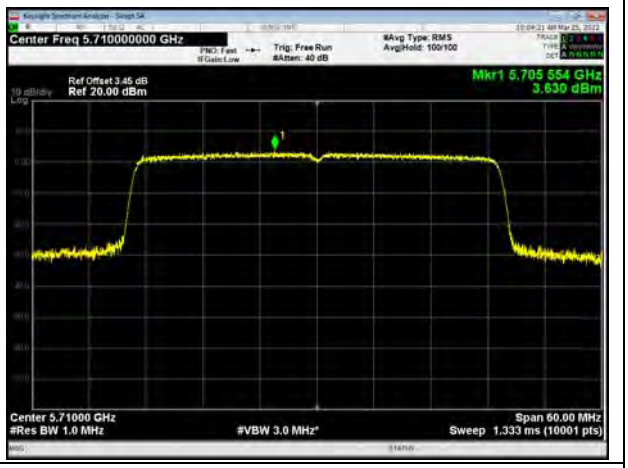
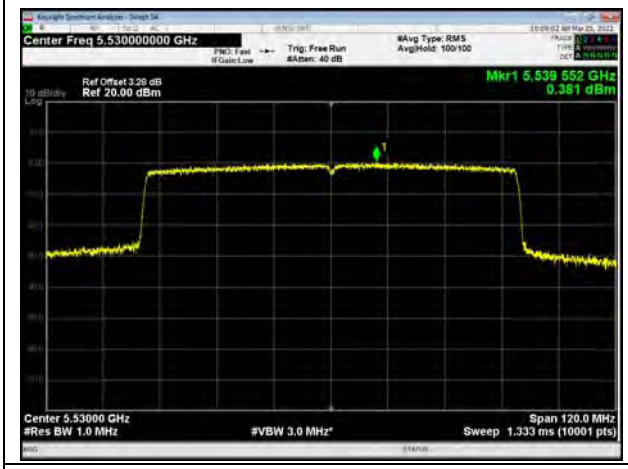
U-NII-2C, 802.11ax HE20, Channel No.: 144

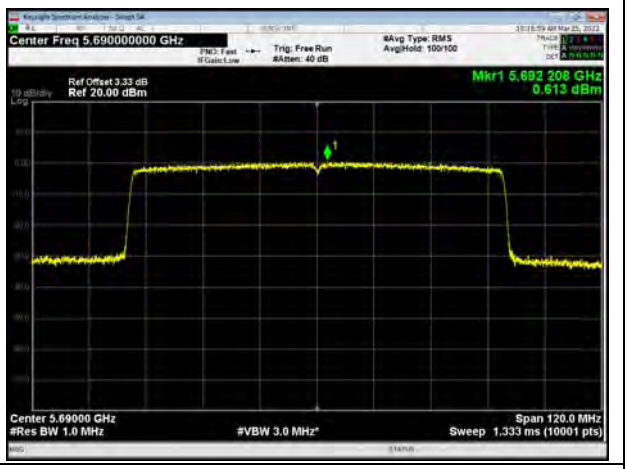
U-NII-2C, 802.11ax HE40, Channel No.: 142



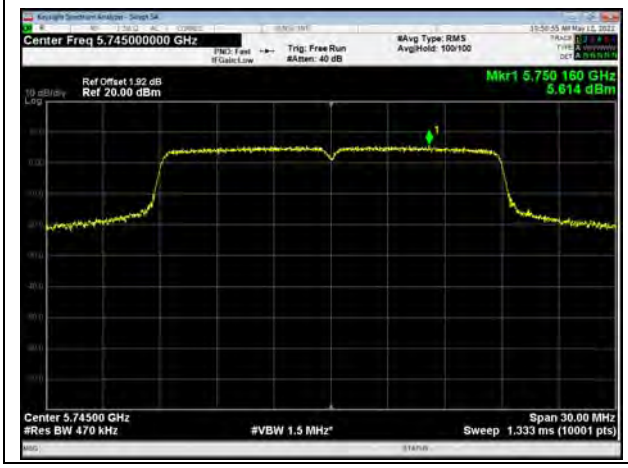
U-NII-2C, 802.11ax HE80, Channel No.: 106



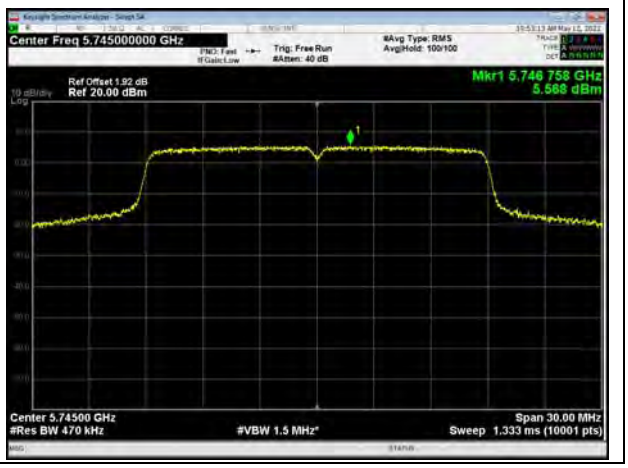
U-NII-2C, 802.11ax HE80, Channel No.: 138



U-NII-3, 802.11n HT20, Channel No.: 149



U-NII-3, 802.11ac VHT20, Channel No.: 149



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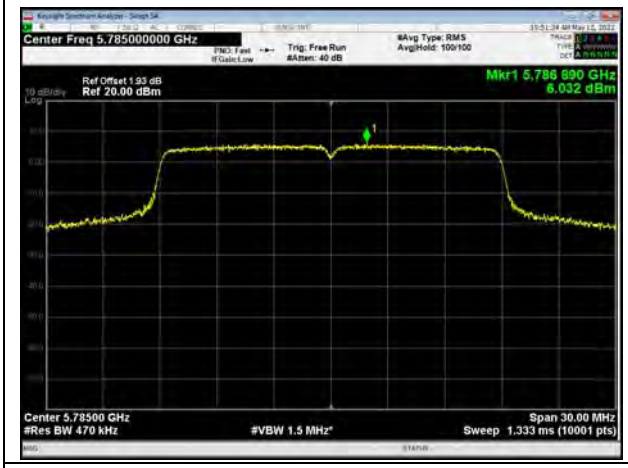
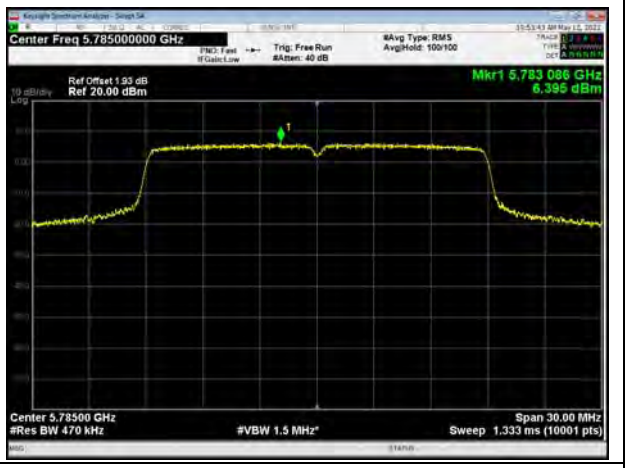
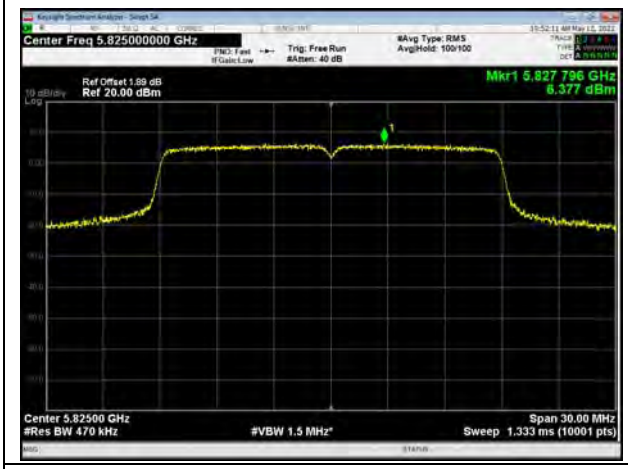
U-NII-3, 802.11n HT20, Channel No.: 157



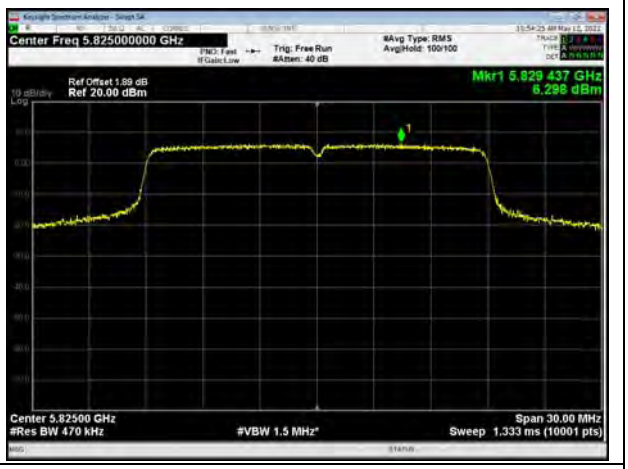
U-NII-3, 802.11ac VHT20, Channel No.: 157



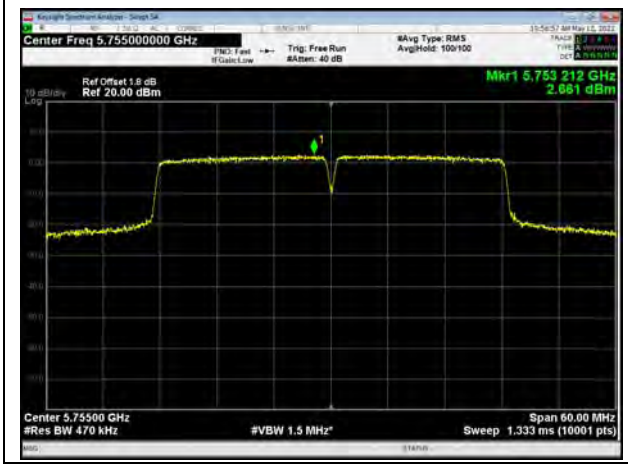
U-NII-3, 802.11n HT20, Channel No.: 165



U-NII-3, 802.11ac VHT20, Channel No.: 165



U-NII-3, 802.11n HT40, Channel No.: 151



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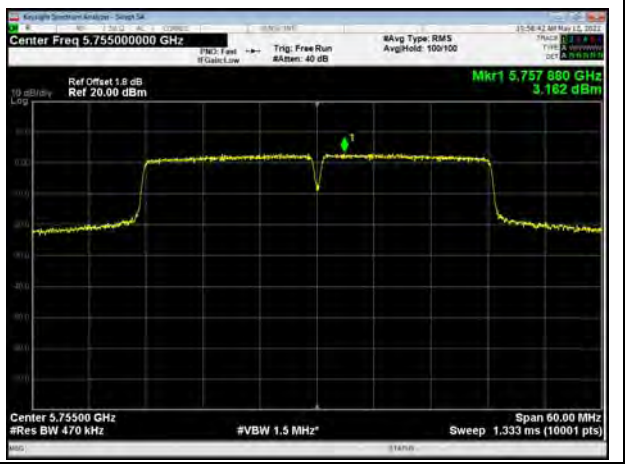

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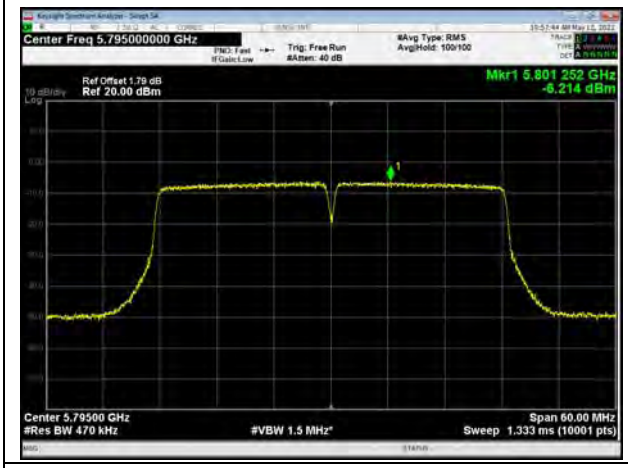
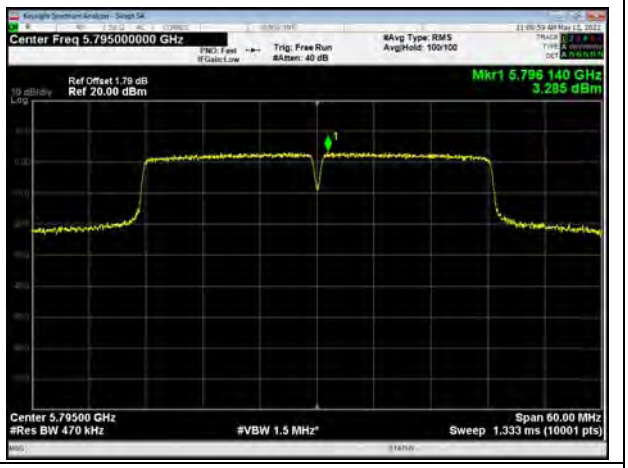
U-NII-3, 802.11n HT40, Channel No.: 159



U-NII-3, 802.11ac VHT40, Channel No.: 159



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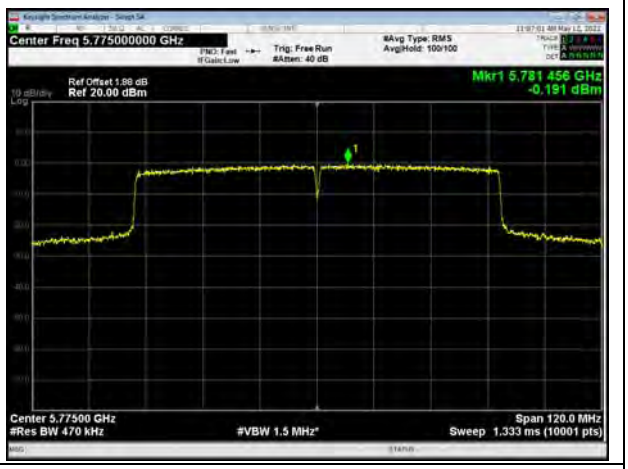
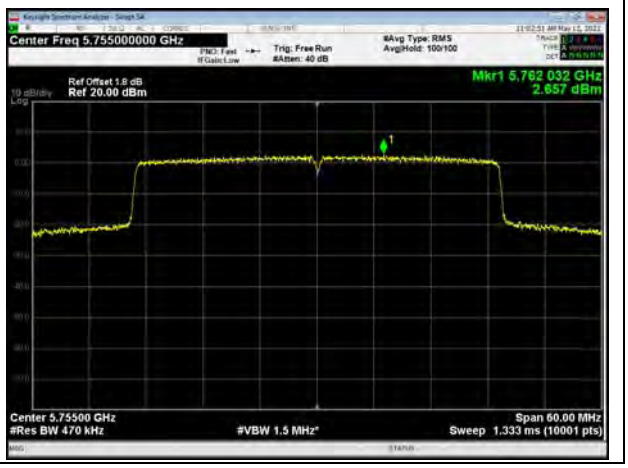
U-NII-3, 802.11ac VHT80, Channel No.: 155



U-NII-3, 802.11ax HE20, Channel No.: 149

U-NII-3, 802.11ax HE40, Channel No.: 151



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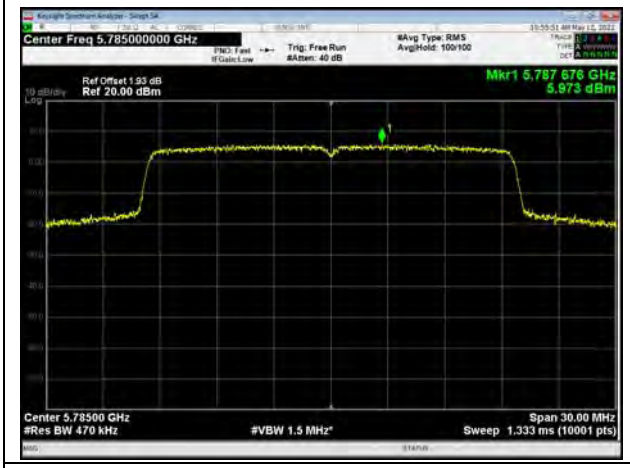
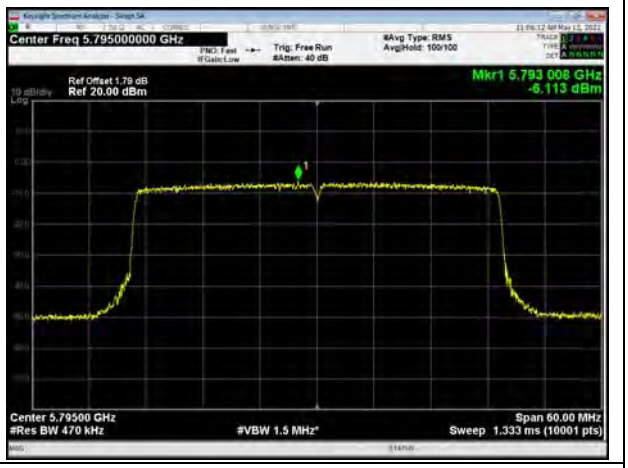
U-NII-3, 802.11ax HE20, Channel No.: 157



U-NII-3, 802.11ax HE40, Channel No.: 159



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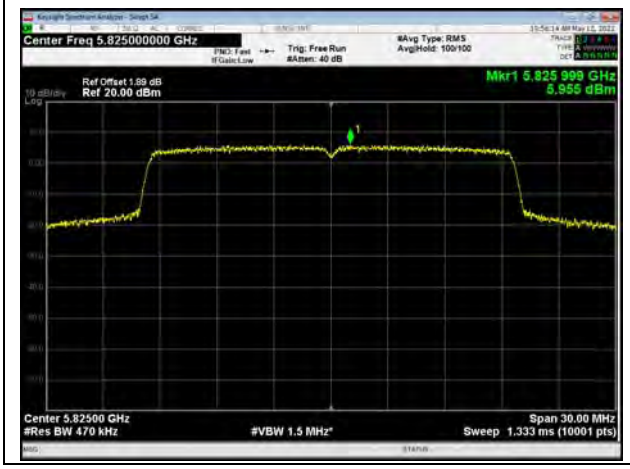
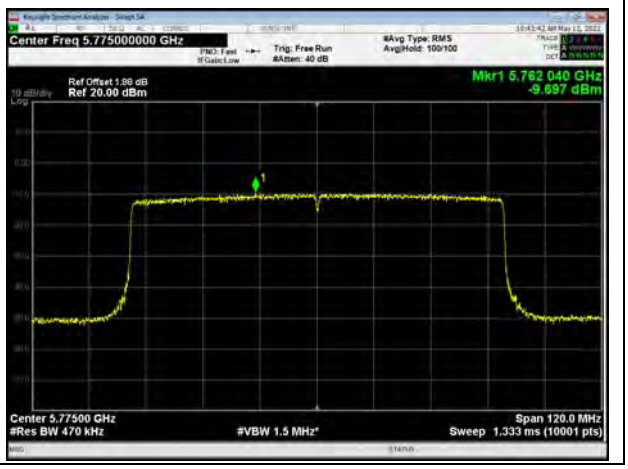


U-NII-3, 802.11ax HE80, Channel No.: 155



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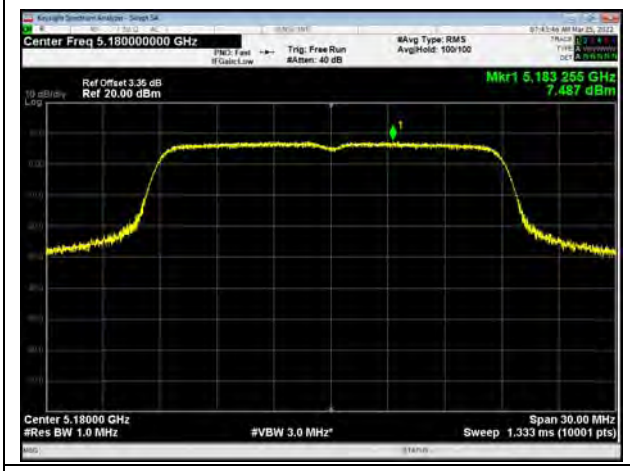
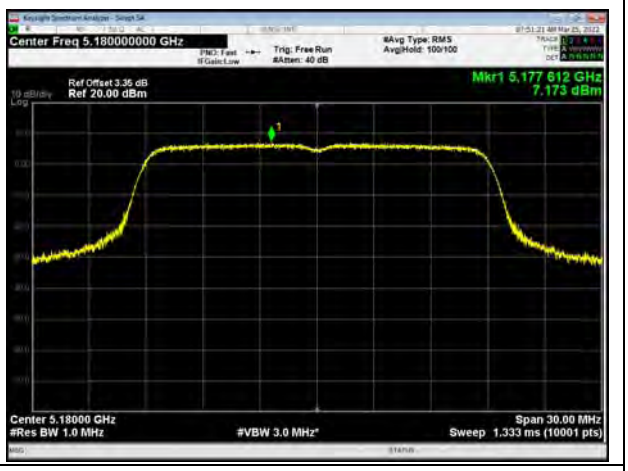
MIMO

Antenna 2

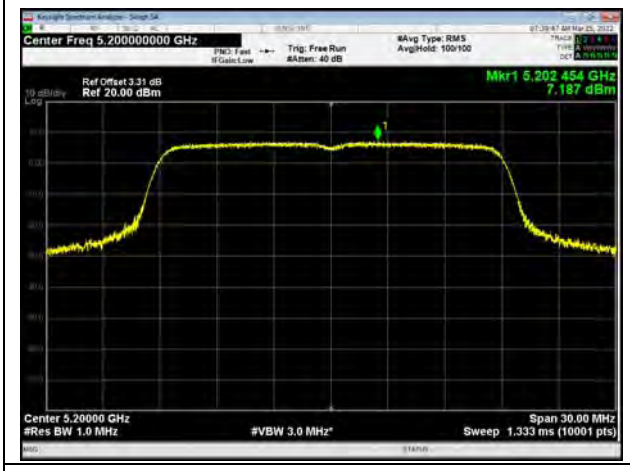
U-NII-1, 802.11n HT20, Channel No.: 36



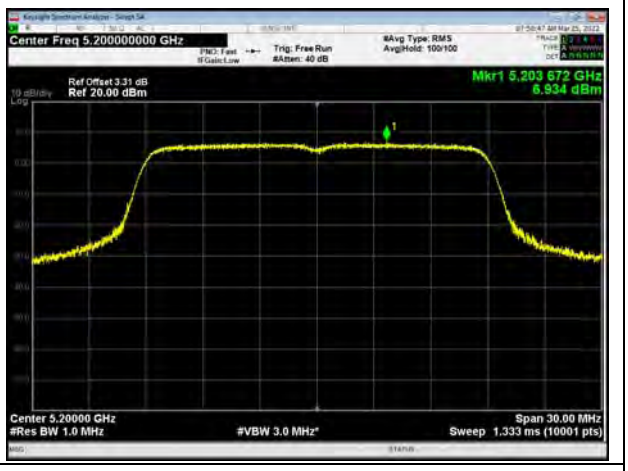
U-NII-1, 802.11ac VHT20, Channel No.: 36



U-NII-1, 802.11n HT20, Channel No.: 40

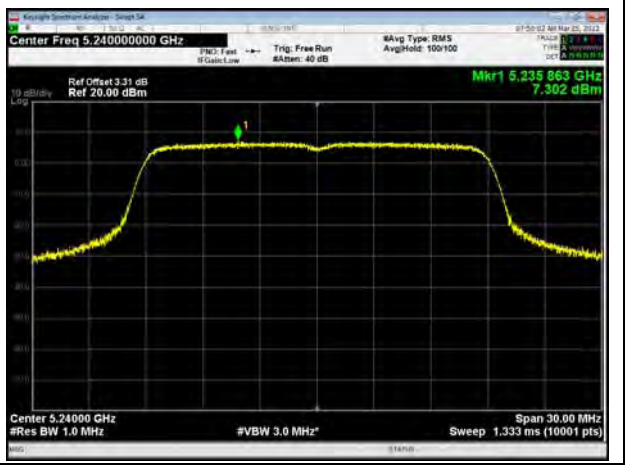


U-NII-1, 802.11ac VHT20, Channel No.: 40



U-NII-1, 802.11n HT20, Channel No.: 48

U-NII-1, 802.11ac VHT20, Channel No.: 48



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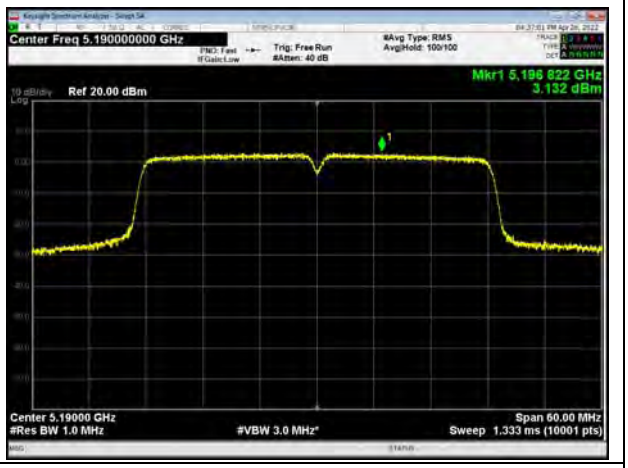
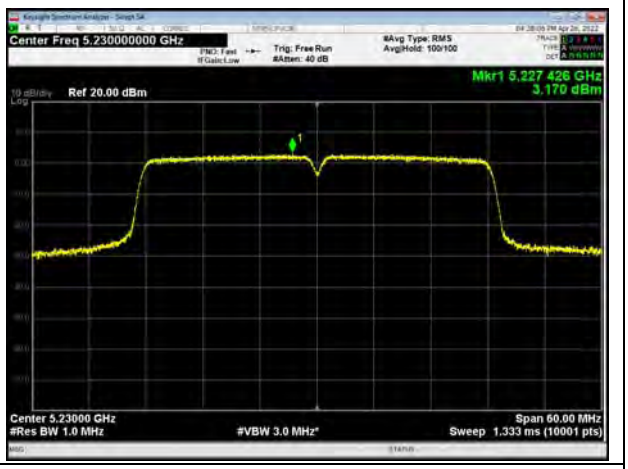
U-NII-1, 802.11n HT40, Channel No.: 38

U-NII-1, 802.11ac VHT40, Channel No.: 38



U-NII-1, 802.11n HT40, Channel No.: 46

U-NII-1, 802.11ac VHT40, Channel No.: 46



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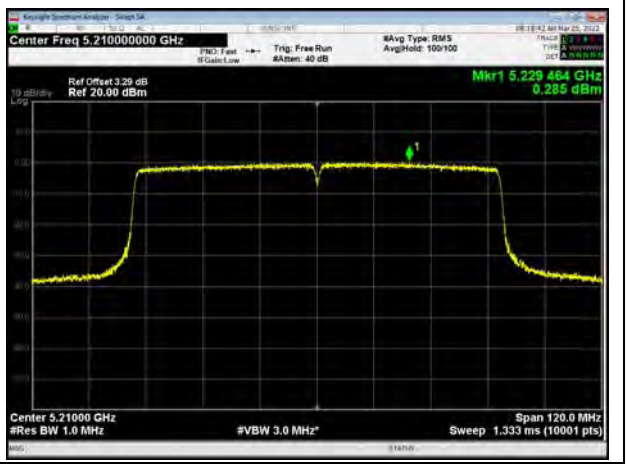
U-NII-1, 802.11ac VHT80, Channel No.: 42



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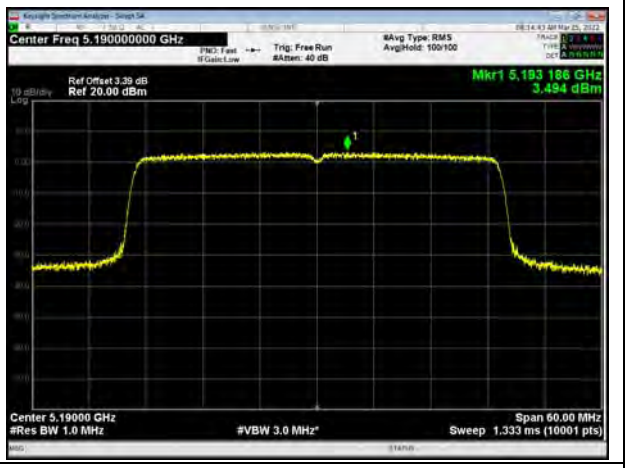
U-NII-1, 802.11ax HE20, Channel No.: 36

U-NII-1, 802.11ax HE40, Channel No.: 38



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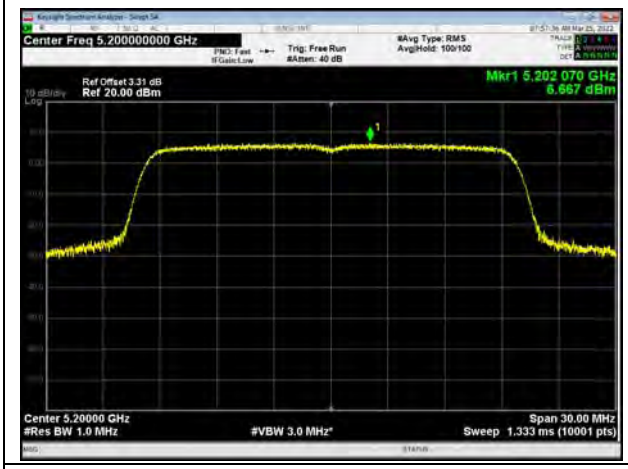
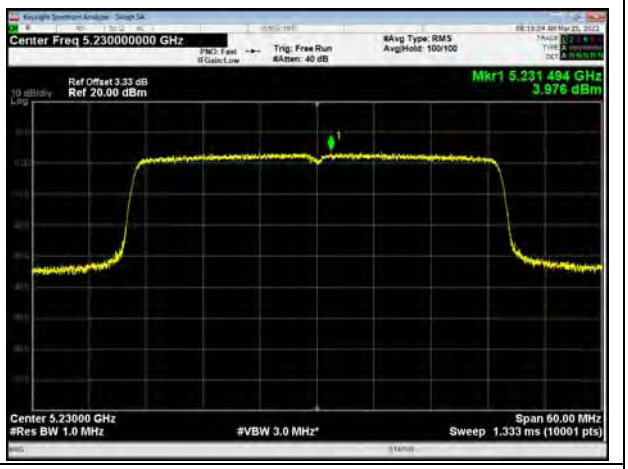


U-NII-1, 802.11ax HE40, Channel No.: 46



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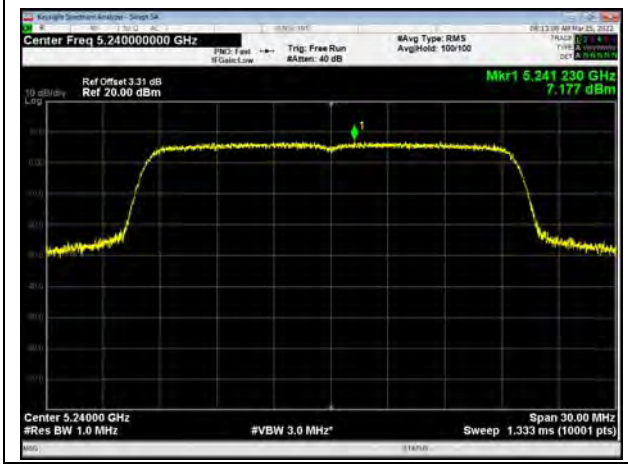
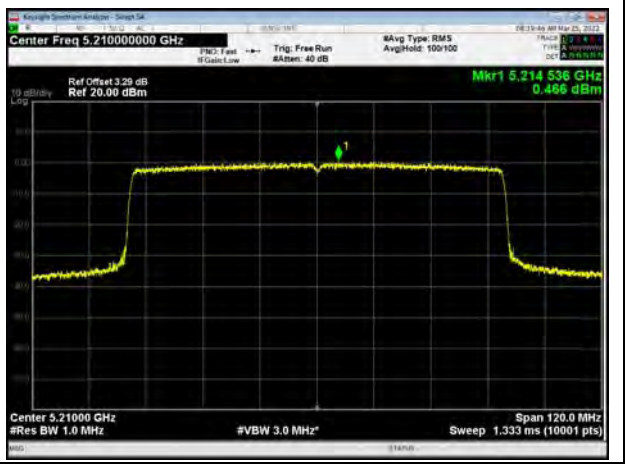


U-NII-1, 802.11ax HE80, Channel No.: 42



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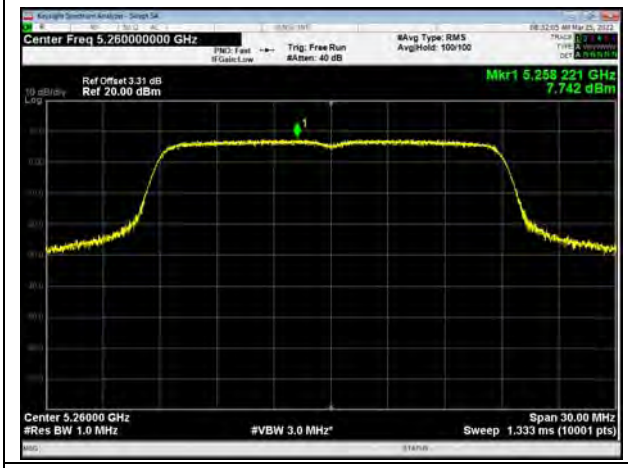
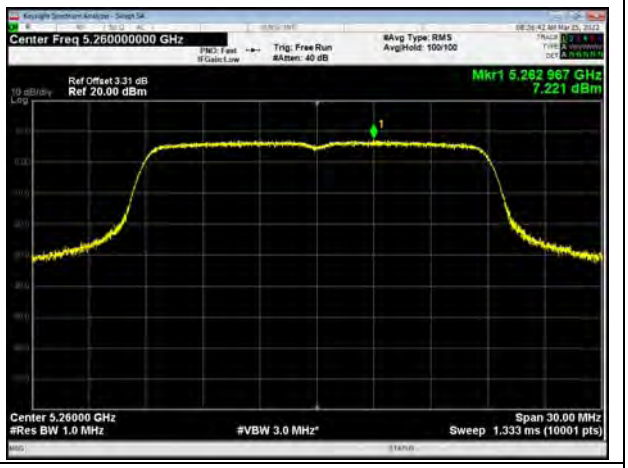
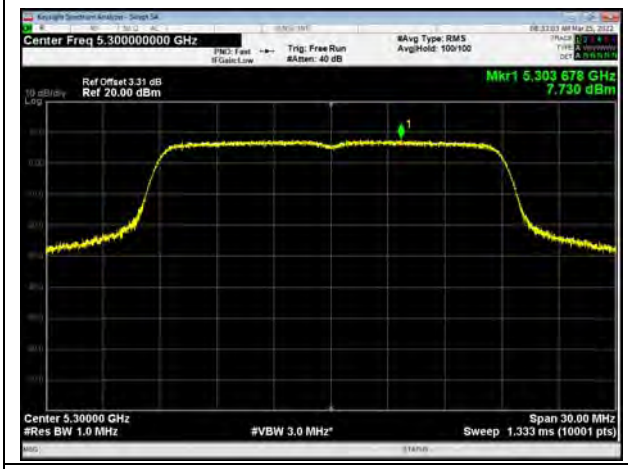
U-NII-2A, 802.11n HT20, Channel No.: 52



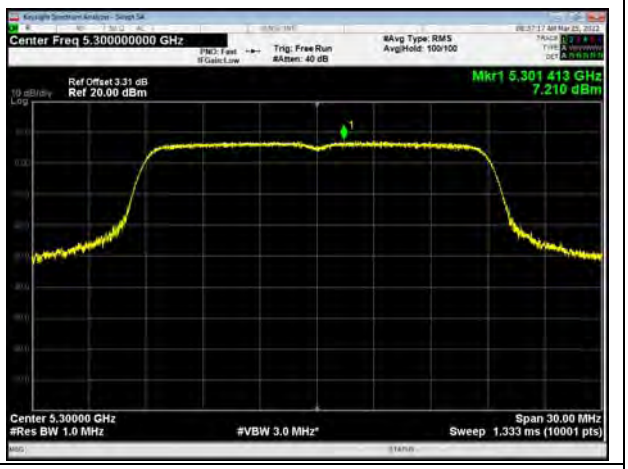
U-NII-2A, 802.11ac VHT20, Channel No.:52



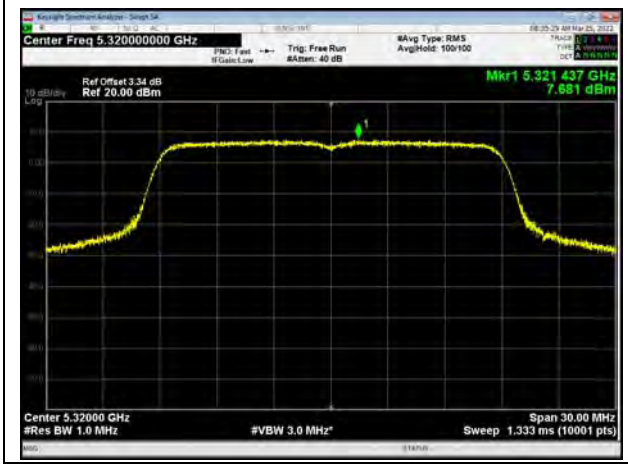
U-NII-2A, 802.11n HT20, Channel No.: 60



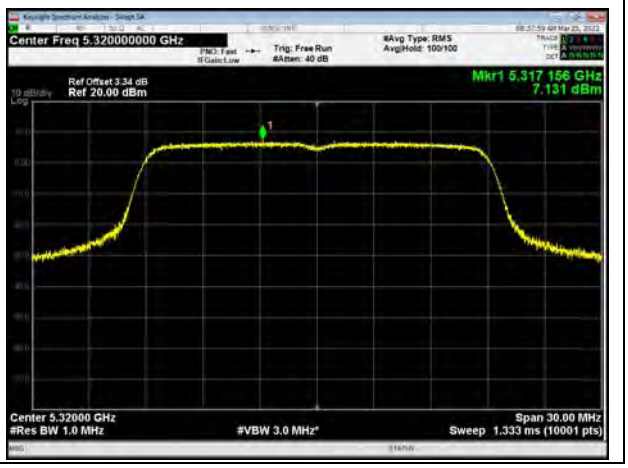
U-NII-2A, 802.11ac VHT20, Channel No.: 60



U-NII-2A, 802.11n HT20, Channel No.: 64



U-NII-2A, 802.11ac VHT20, Channel No.: 64



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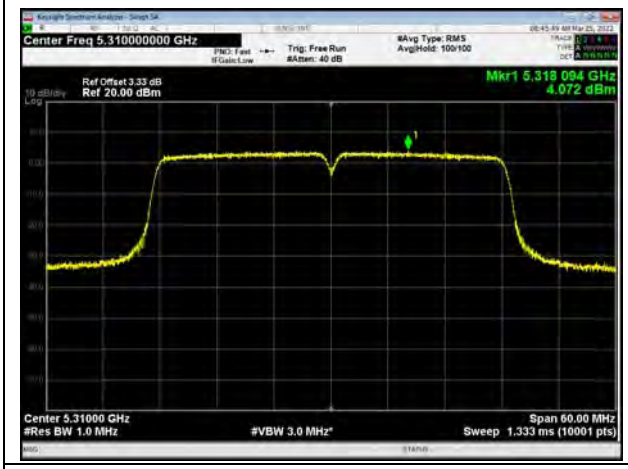
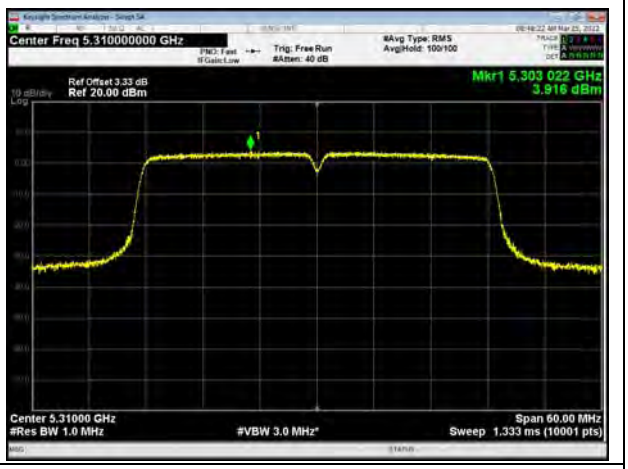
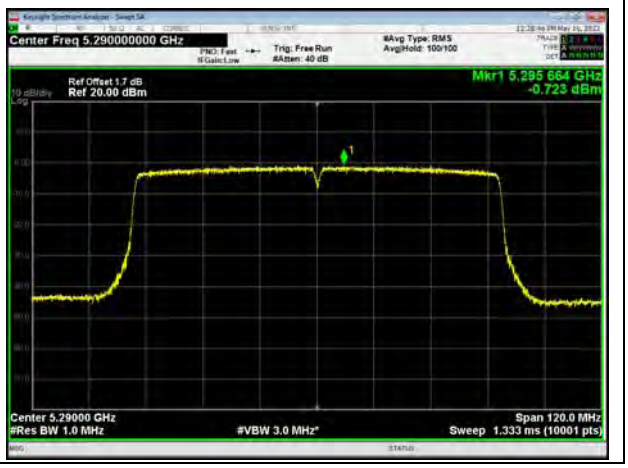
U-NII-2A, 802.11n HT40, Channel No.: 54	U-NII-2A, 802.11ac VHT40, Channel No.: 54
U-NII-2A, 802.11n HT40, Channel No.: 62	U-NII-2A, 802.11ac VHT40, Channel No.: 62
	
/	U-NII-2A, 802.11ac VHT80, Channel No.: 58
	

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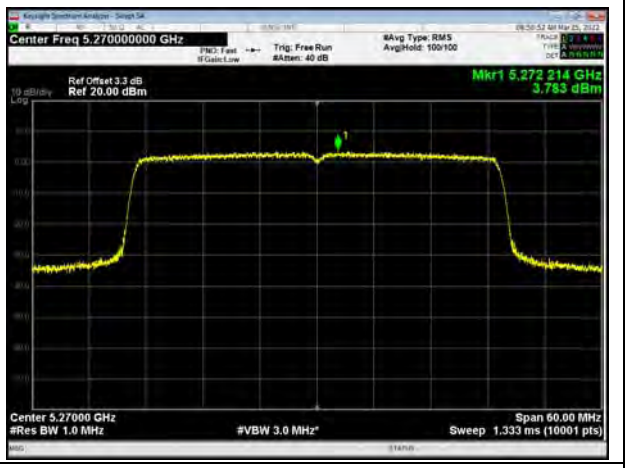
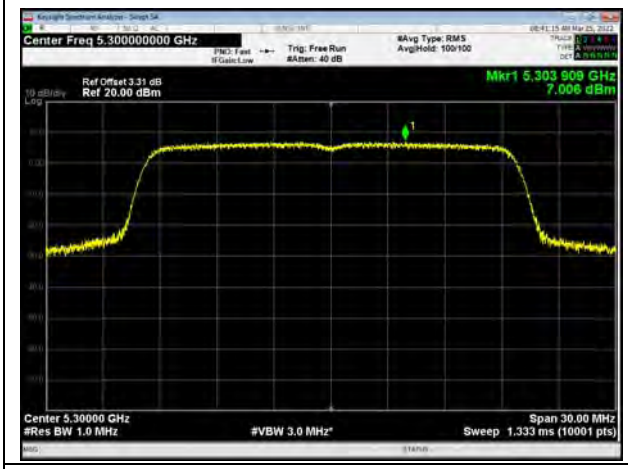
U-NII-2A, 802.11ax HE20, Channel No.:52

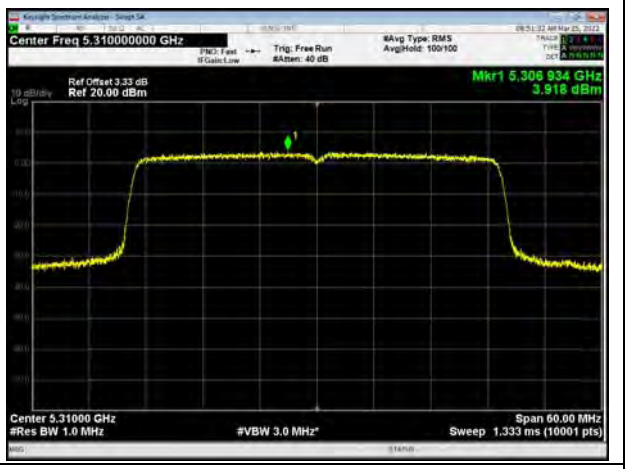
U-NII-2A, 802.11ax HE40, Channel No.: 54



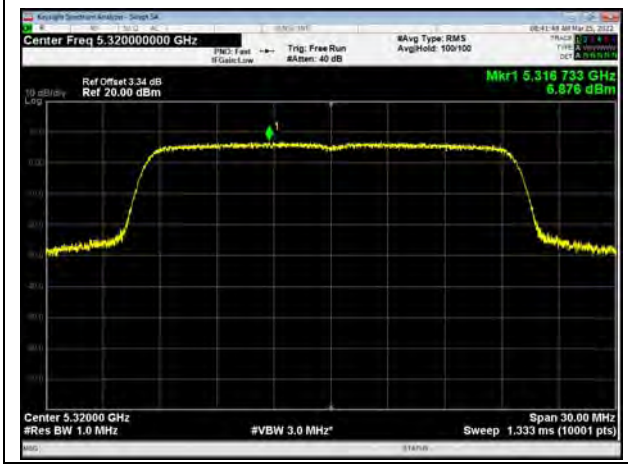
U-NII-2A, 802.11ax HE20, Channel No.: 60



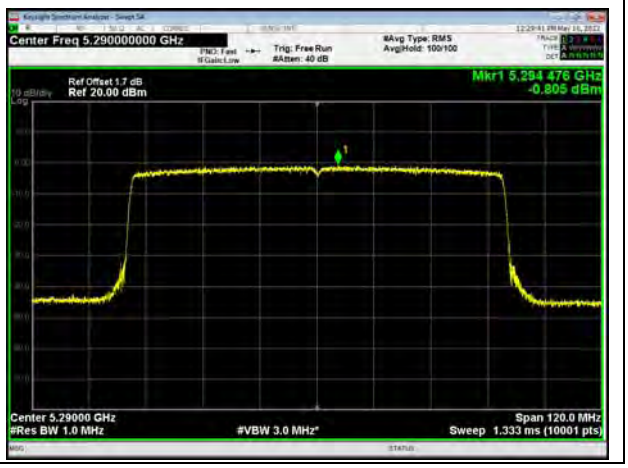
U-NII-2A, 802.11ax HE40, Channel No.: 62



U-NII-2A, 802.11ax HE20, Channel No.: 64



U-NII-2A, 802.11ax HE80, Channel No.: 58



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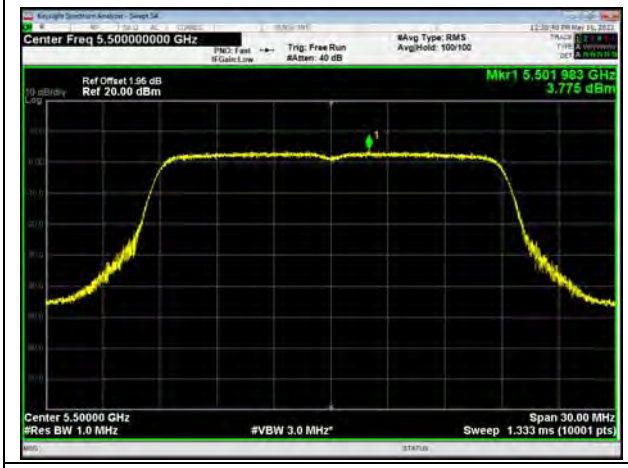
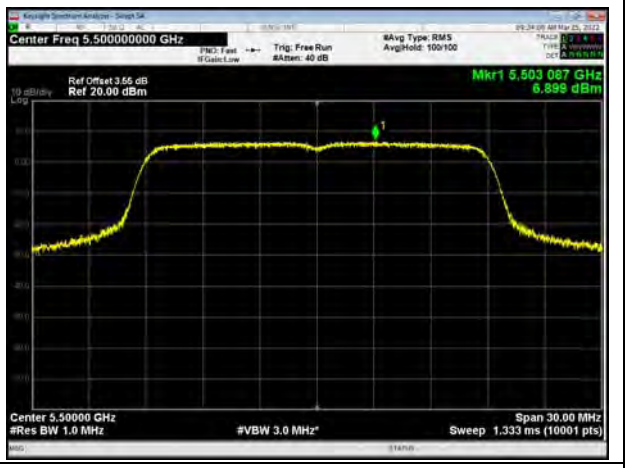
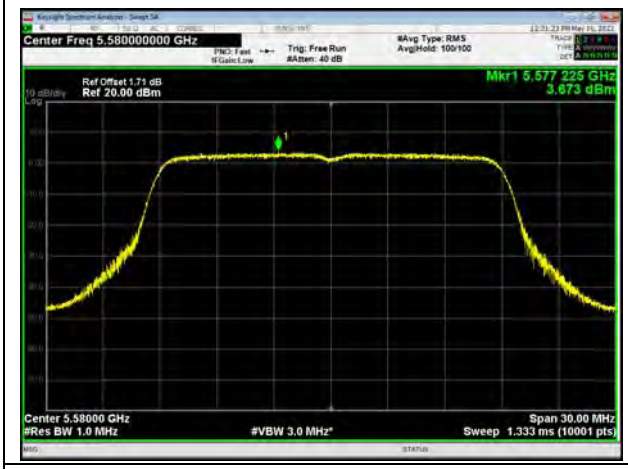
U-NII-2C, 802.11n HT20, Channel No.: 100



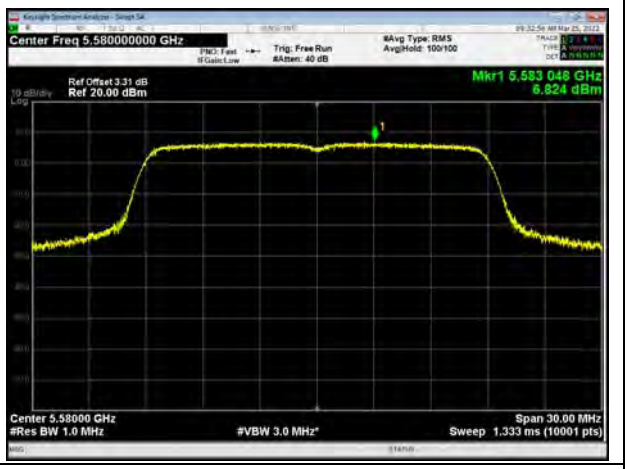
U-NII-2C, 802.11ac VHT20, Channel No.: 100



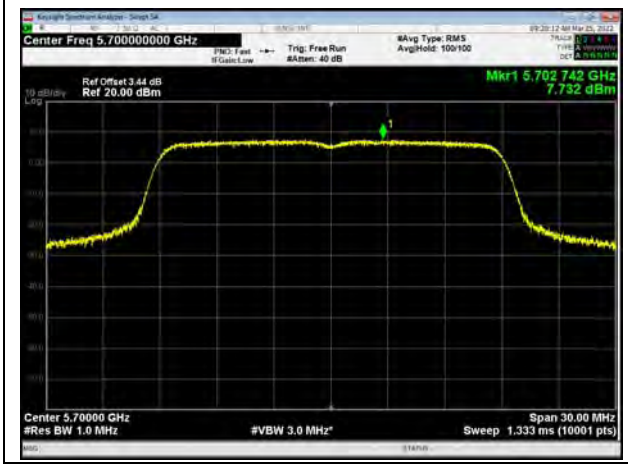
U-NII-2C, 802.11n HT20, Channel No.: 116



U-NII-2C, 802.11ac VHT20, Channel No.: 116



U-NII-2C, 802.11n HT20, Channel No.: 140



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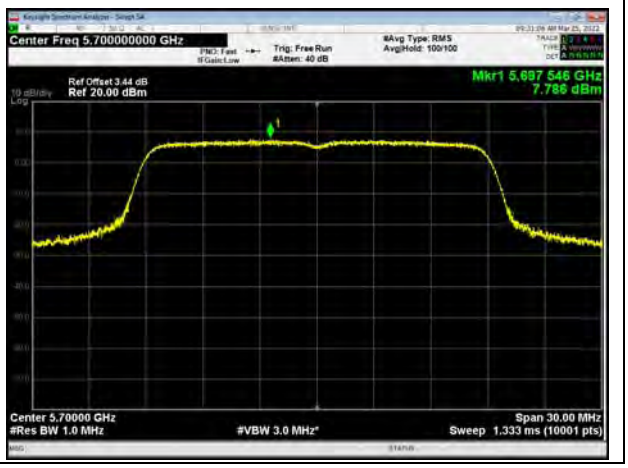

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