Test Mode	Antenna	Frequency[MHz]	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	16.480	5736.760	5753.240	0.5	PASS
		5785	16.480	5776.760	5793.240	0.5	PASS
		5825	16.480	5816.680	5833.160	0.5	PASS
11N20SISO	Ant1	5745	17.000	5736.720	5753.720	0.5	PASS
		5785	17.600	5776.200	5793.800	0.5	PASS
		5825	17.680	5816.120	5833.800	0.5	PASS
11N40SISO	Ant1	5755	35.360	5737.160	5772.520	0.5	PASS
		5795	35.680	5776.840	5812.520	0.5	PASS
11AC20SISO	Ant1	5745	17.320	5736.440	5753.760	0.5	PASS
		5785	17.600	5776.200	5793.800	0.5	PASS
		5825	17.520	5816.200	5833.720	0.5	PASS
11AC40SISO	Ant1	5755	36.400	5736.760	5773.160	0.5	PASS
		5795	35.600	5777.240	5812.840	0.5	PASS
11AC80SISO	Ant1	5775	75.200	5737.400	5812.600	0.5	PASS

Emission Bandwidth		U-NII - 3	
Test Model	802.11a	Frequency(MHz)	5745

Emission Bandwidth		U-NII - 3	
Test Model	802.11a	Frequency(MHz)	5785

Emission Bandwidth		U-NII - 3	
Test Model	802.11a	Frequency(MHz)	5825

Emission Bandwidth		U-NII - 3	
Test Model	802.11n(HT20)	Frequency(MHz)	5745

Emission Bandwidth		U-NII - 3	
Test Model	802.11n(HT20)	Frequency(MHz)	5785

Emission Bandwidth		U-NII - 3	
Test Model	802.11n(HT20)	Frequency(MHz)	5825

Emission Bandwidth		U-NII - 3	
Test Model	802.11n(HT40)	Frequency(MHz)	5755

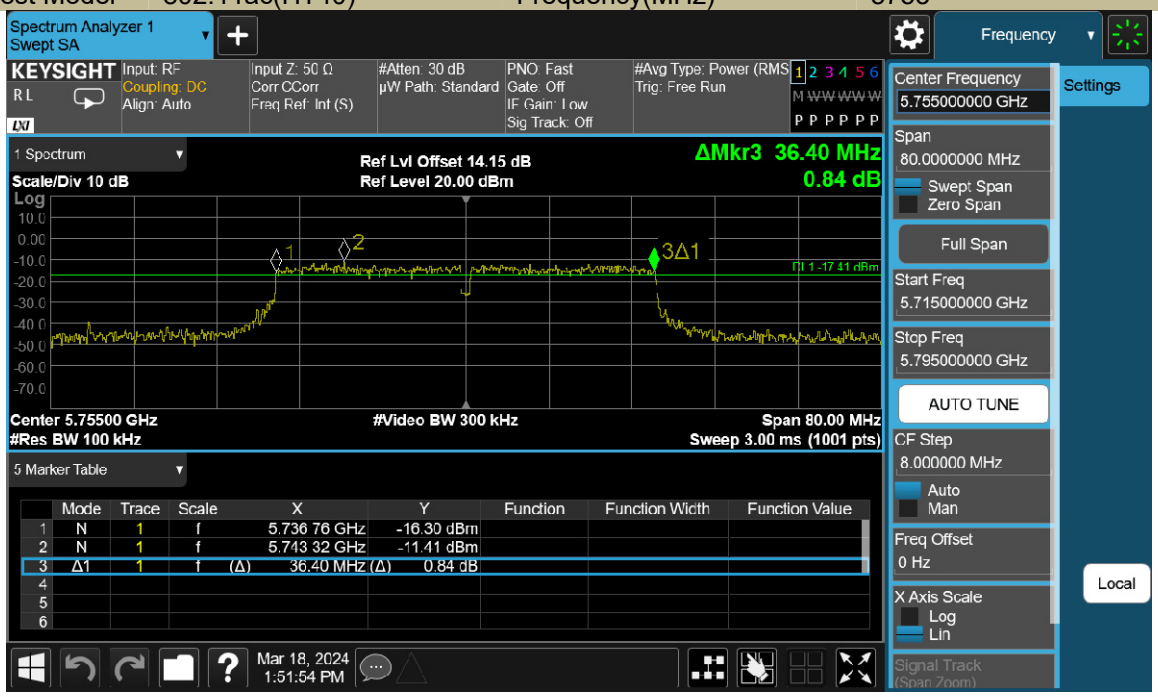
Emission Bandwidth		U-NII - 3	
Test Model	802.11n(HT40)	Frequency(MHz)	5795

Emission Bandwidth		U-NII - 3	
Test Model	802.11ac(HT20)	Frequency(MHz)	5745

Emission Bandwidth		U-NII - 3	
Test Model	802.11ac(HT20)	Frequency(MHz)	5785

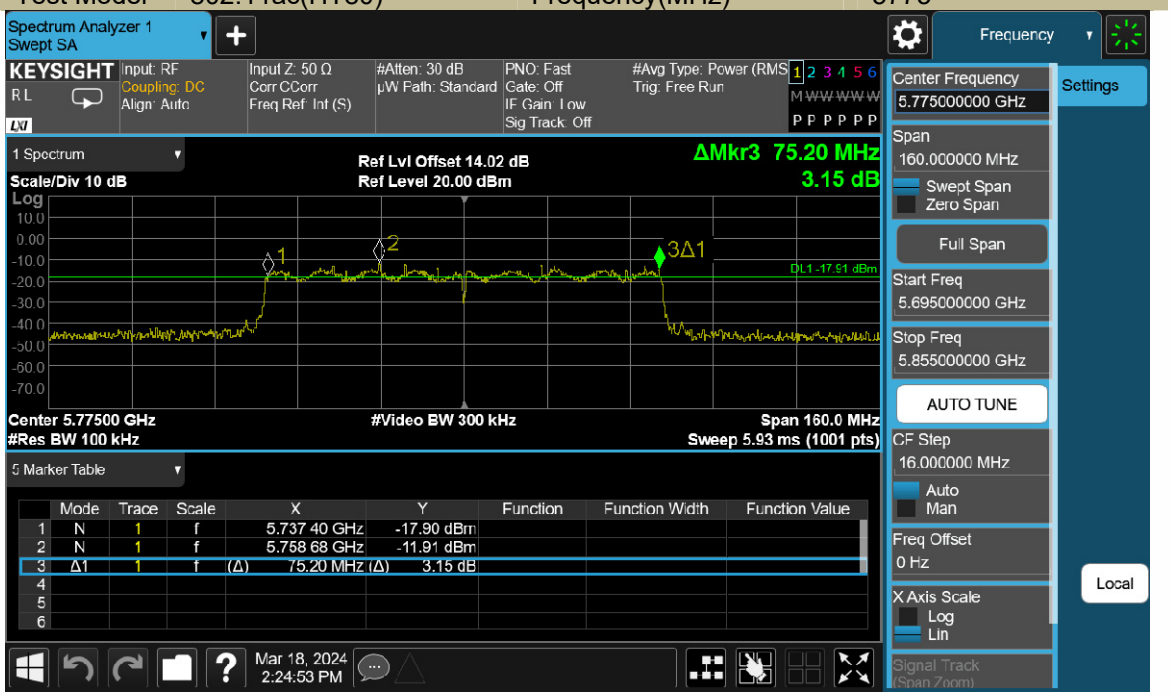
Emission Bandwidth		U-NII - 3	
Test Model	802.11ac(HT20)	Frequency(MHz)	5825

Emission Bandwidth		U-NII - 3	
Test Model	802.11ac(HT40)	Frequency(MHz)	5755



Emission Bandwidth		U-NII - 3	
Test Model	802.11ac(HT40)	Frequency(MHz)	5795

Emission Bandwidth		U-NII - 3	
Test Model	802.11ac(HT80)	Frequency(MHz)	5775



8.2 MAXIMUM CONDUCTED OUTPUT POWER

8.2.1 Applicable Standard

According to FCC Part 15.407(a)(1) for UNII Band I
According to FCC Part 15.407(a)(2) for UNII Band II-A and UNII Band II-C
According to FCC Part 15.407(a)(3) for UNII Band III
According to 789033 D02 Section II(E)

8.2.2 Conformance Limit

■ For the band 5.15-5.25 GHz,
(a) (1) (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. 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).
(a) (1) (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. 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.
(a) (1) (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. 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 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.
(a) (1) (iv) For mobile and portable 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. 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
(a) (2) 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.

■ For the band 5.725-5.85 GHz
(a) (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.

8.2.3 Test Configuration

Test according to clause 6.1 radio frequency test setup

8.2.4 Test Procedure

The following procedure shall be used for Maximum Conducted Output Power:
Set span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal.

1. Set RBW = 1 MHz

2. Set VBW > 3 MHz

3. Number of points in sweep > 2 x span / RBW. (This ensures that bin-to-bin spacing is< RBW/2, so that narrowband signals are not lost between frequency bins.)

4. Sweep time = auto.

5. Detector = power averaging (rms), if available. Otherwise, use sample detector mode

6. If transmit duty cycle < 98%, use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e, withno off intervals) or at duty cycle > 98%, and if each transmission is entirely at the maximumpower control level, then the trigger shall be set to “free run”.

7. Trace average at least 100 traces in power averaging (rms) mode.

8. Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument's band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the spectrum.

9. Adjust the measurement in dBm by adding [10 log (1 / D)], where D is the duty cycle (e.g. [10 log (1 / 0.25)], if the duty cycle is 25%.

8.2.5 Test Results

☒ 802.11a mode

Band	Channel Number	Channel Freq. (MHz)	Channel Power (dBm)	Duty Cycle (%)	DC Factor (dBm)	Conducted Output Power(dBm)	Limit (dBm)	Verdict
U-NII - 1	CH36	5180	10.85	91.96	0.36	11.21	23.98	Pass
	CH40	5200	10.86	93.64	0.29	11.15	23.98	Pass
	CH48	5240	11.69	92.38	0.34	12.03	23.98	Pass

☒ 802.11n-HT20

Band	Channel Number	Channel Freq. (MHz)	Channel Power (dBm)	Duty Cycle (%)	DC Factor (dBm)	Conducted Output Power(dBm)	Limit (dBm)	Verdict
U-NII - 1	CH36	5180	10.59	92.31	0.35	10.94	23.98	Pass
	CH40	5200	10.87	92.31	0.35	11.22	23.98	Pass
	CH48	5240	11.64	92.75	0.33	11.97	23.98	Pass

☒ 802.11n-HT40

Band	Channel Number	Channel Freq. (MHz)	Channel Power (dBm)	Duty Cycle (%)	DC Factor (dBm)	Conducted Output Power(dBm)	Limit (dBm)	Verdict
U-NII - 1	CH38	5190	10.90	84.68	0.72	11.62	23.98	Pass
	CH46	5230	11.73	85.59	0.68	12.41	23.98	Pass

☒ 802.11ac-HT20								
Band	Channel Number	Channel Freq. (MHz)	Channel Power (dBm)	Duty Cycle (%)	DC Factor (dBm)	Conducted Output Power(dBm)	Limit (dBm)	Verdict
U-NII - 1	CH36	5180	10.77	92.41	0.34	11.11	23.98	Pass
	CH40	5200	10.93	91.96	0.36	11.29	23.98	Pass
	CH48	5240	11.58	93.24	0.30	11.88	23.98	Pass

☒ 802.11ac-HT40								
Band	Channel Number	Channel Freq. (MHz)	Channel Power (dBm)	Duty Cycle (%)	DC Factor (dBm)	Conducted Output Power(dBm)	Limit (dBm)	Verdict
U-NII - 1	CH38	5190	10.75	85.59	0.68	11.43	23.98	Pass
	CH46	5230	11.69	87.16	0.60	12.29	23.98	Pass

☒ 802.11ac-HT80								
Band	Channel Number	Channel Freq. (MHz)	Channel Power (dBm)	Duty Cycle (%)	DC Factor (dBm)	Conducted Output Power(dBm)	Limit (dBm)	Verdict
U-NII - 1	CH42	5210	10.96	73.02	1.37	12.33	23.98	Pass

☒ 802.11a mode								
Band	Channel Number	Channel Freq. (MHz)	Channel Power (dBm)	Duty Cycle (%)	DC Factor (dBm)	Conducted Output Power(dBm)	Limit (dBm)	Verdict
U-NII - 3	CH149	5745	5.76	95.83	0.18	5.94	30	Pass
	CH157	5785	5.92	93.64	0.29	6.21	30	Pass
	CH165	5825	4.78	92.38	0.34	5.12	30	Pass

☒ 802.11n-HT20								
Band	Channel Number	Channel Freq. (MHz)	Channel Power (dBm)	Duty Cycle (%)	DC Factor (dBm)	Conducted Output Power(dBm)	Limit (dBm)	Verdict
U-NII - 3	CH149	5745	5.56	92.31	0.35	5.91	30	Pass
	CH157	5785	5.79	93.66	0.28	6.07	30	Pass
	CH165	5825	4.99	94.12	0.26	5.25	30	Pass

☒ 802.11n-HT40								
Band	Channel Number	Channel Freq. (MHz)	Channel Power (dBm)	Duty Cycle (%)	DC Factor (dBm)	Conducted Output Power(dBm)	Limit (dBm)	Verdict
U-NII - 3	CH151	5755	5.73	85.59	0.68	6.41	30	Pass
	CH159	5795	5.68	84.82	0.72	6.40	30	Pass

☒ 802.11ac-HT20								
Band	Channel Number	Channel Freq. (MHz)	Channel Power (dBm)	Duty Cycle (%)	DC Factor (dBm)	Conducted Output Power(dBm)	Limit (dBm)	Verdict
U-NII -	CH149	5745	5.86	91.47	0.39	6.25	30	Pass

3	CH157	5785	5.64	92.82	0.32	5.96	30	Pass
	CH165	5825	4.77	91.90	0.37	5.14	30	Pass

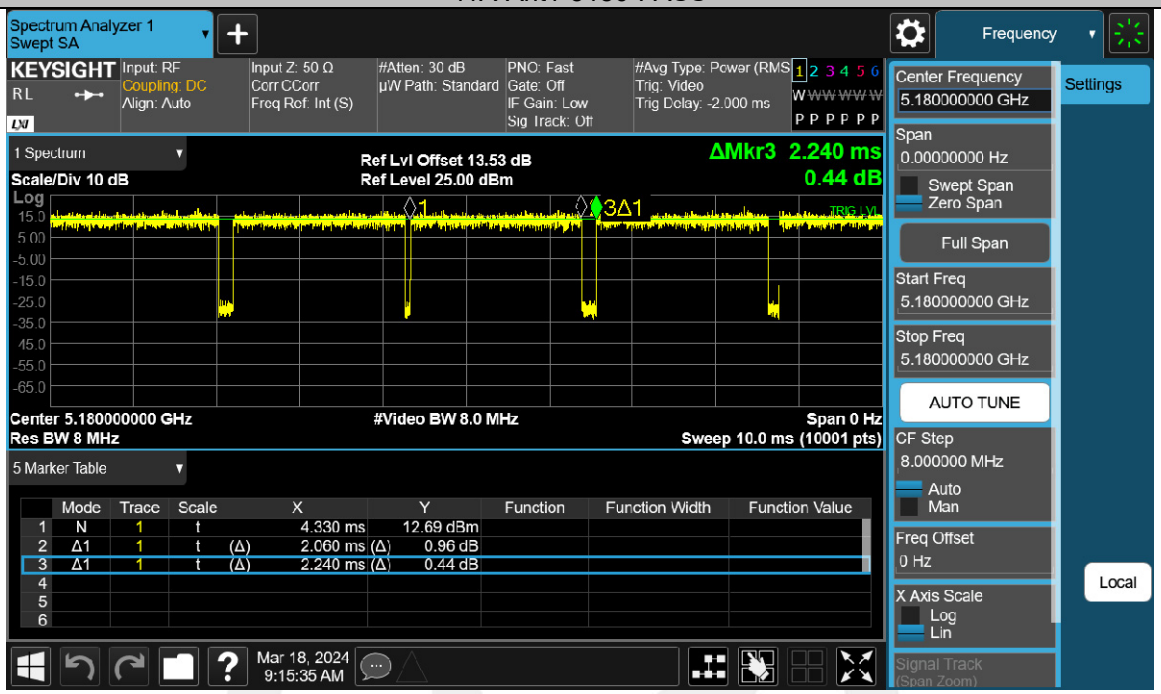
☒ 802.11ac-HT40

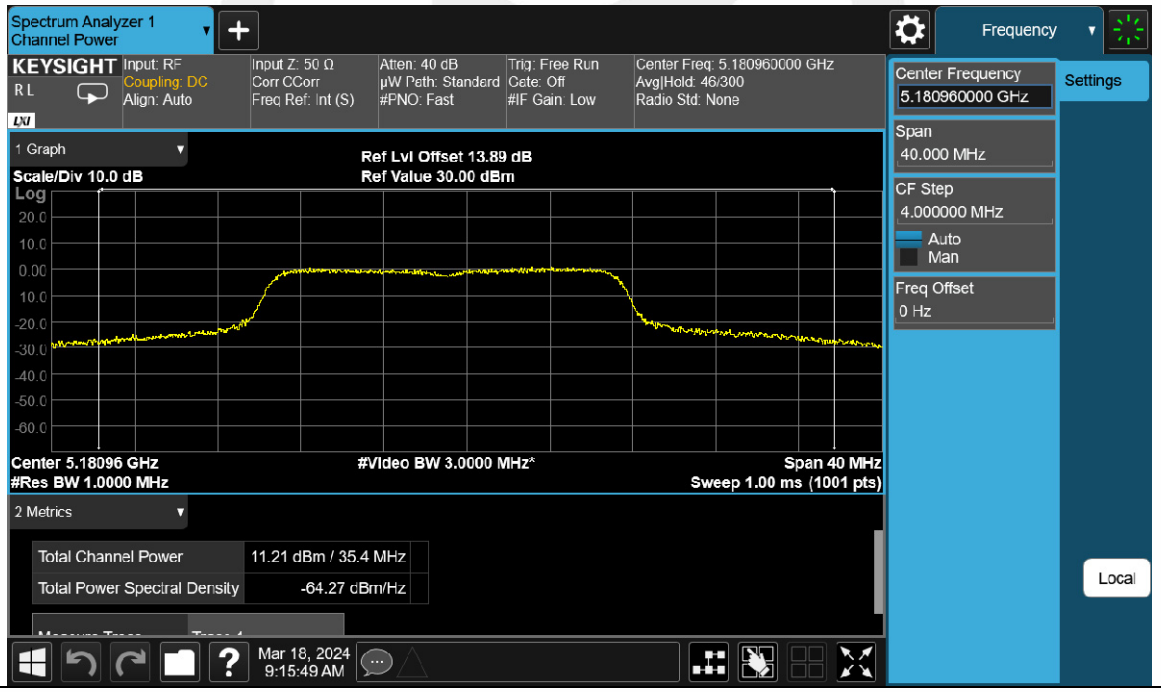
Band	Channel Number	Channel Freq. (MHz)	Channel Power (dBm)	Duty Cycle (%)	DC Factor (dBm)	Conducted Output Power(dBm)	Limit (dBm)	Verdict
U-NII - 3	CH151	5755	6.13	84.82	0.72	6.85	30	Pass
	CH159	5795	5.88	86.49	0.63	6.51	30	Pass

☒ 802.11ac-HT80

Band	Channel Number	Channel Freq. (MHz)	Channel Power (dBm)	Duty Cycle (%)	DC Factor (dBm)	Conducted Output Power(dBm)	Limit (dBm)	Verdict
U-NII - 3	CH155	5775	5.49	73.02	1.37	6.86	30	Pass

11A-Ant1-5180-PASS





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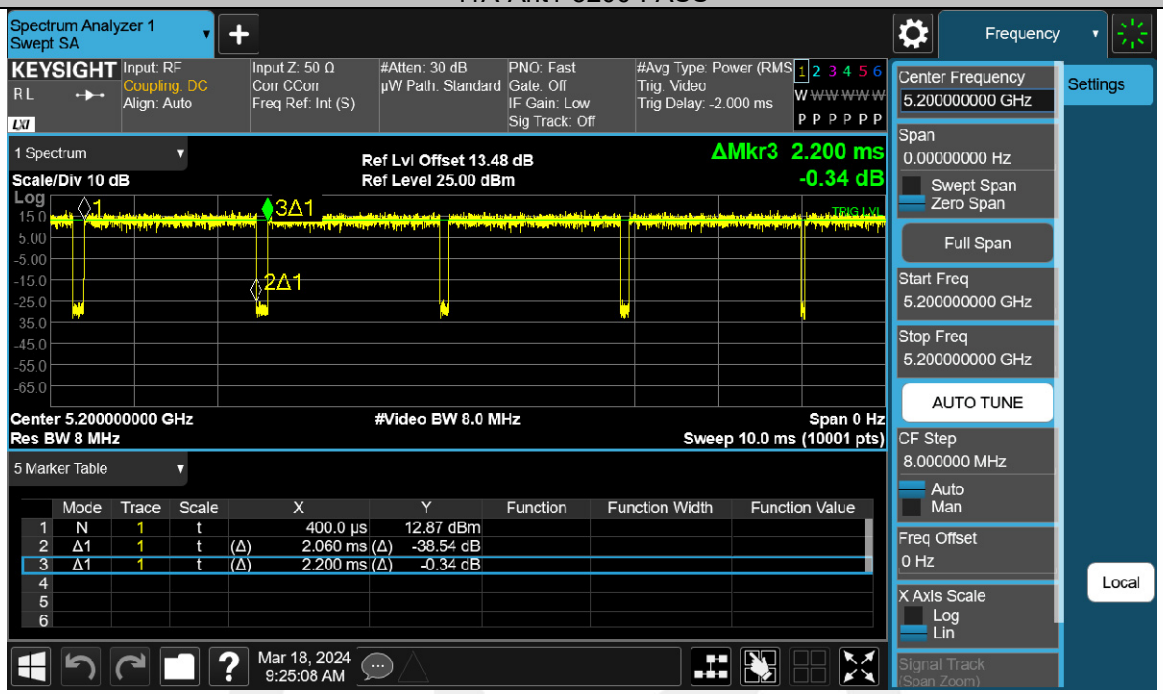

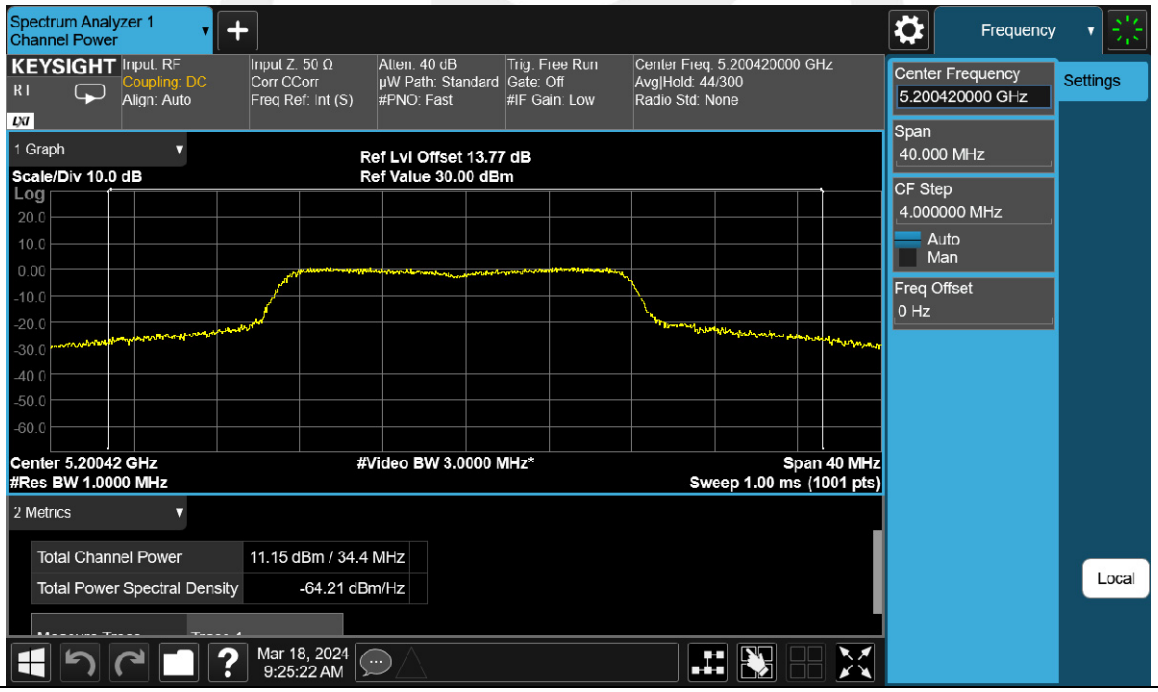
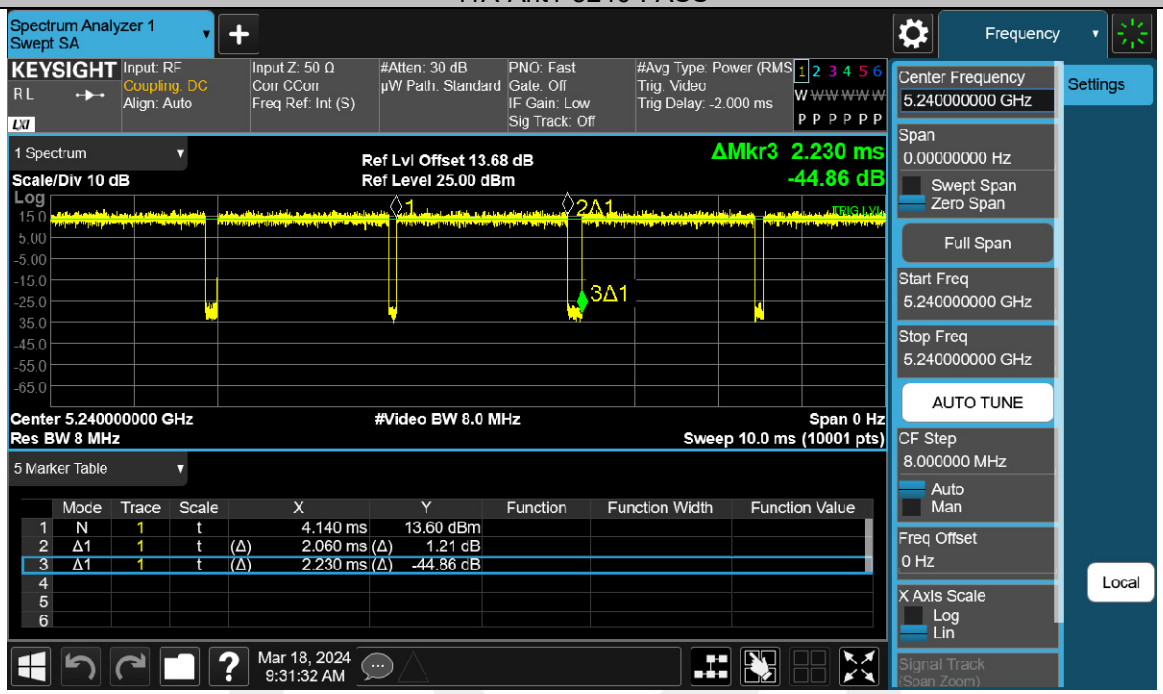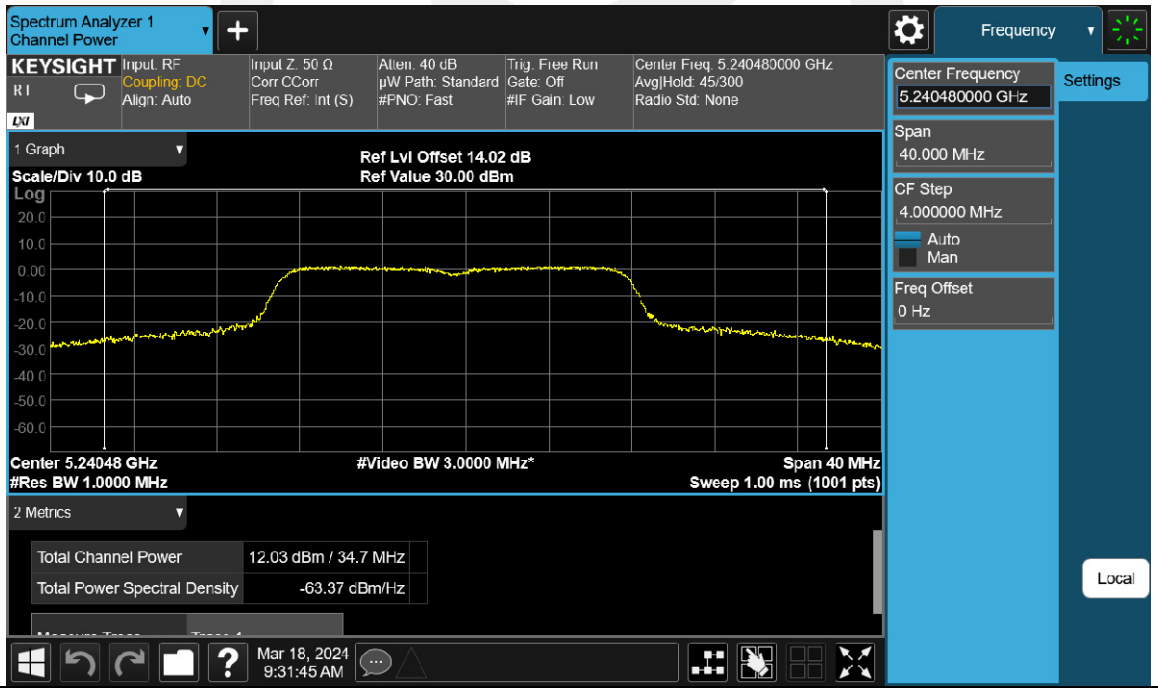
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