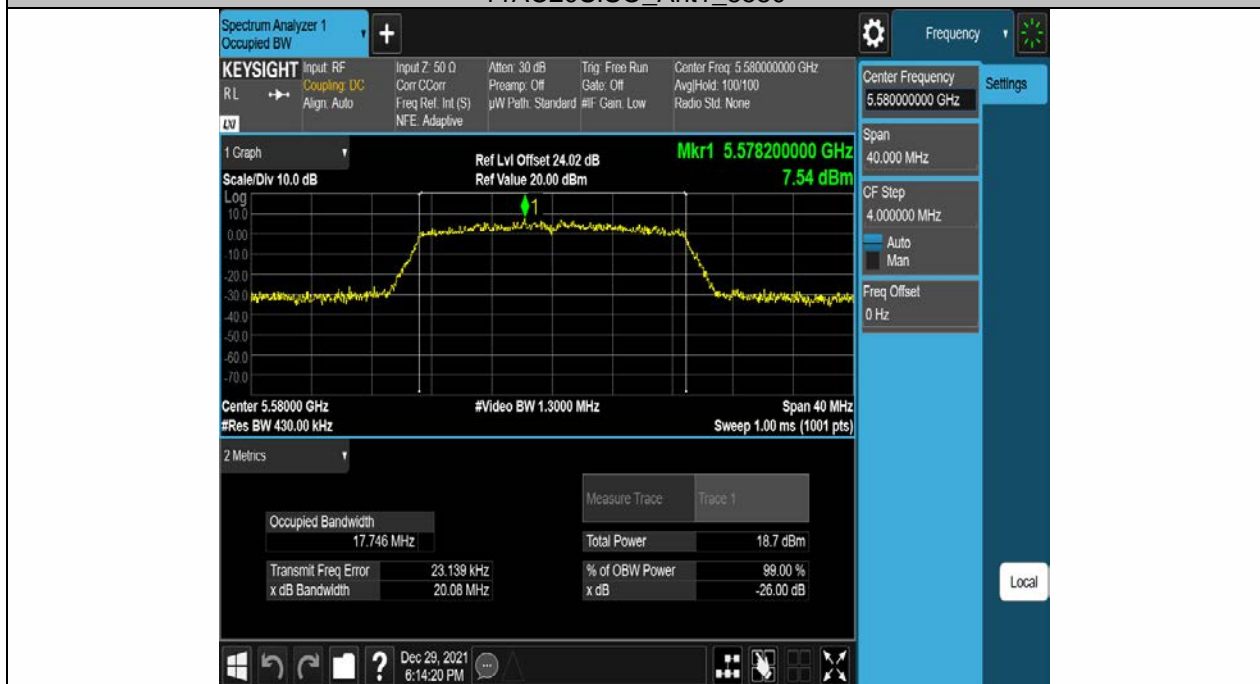




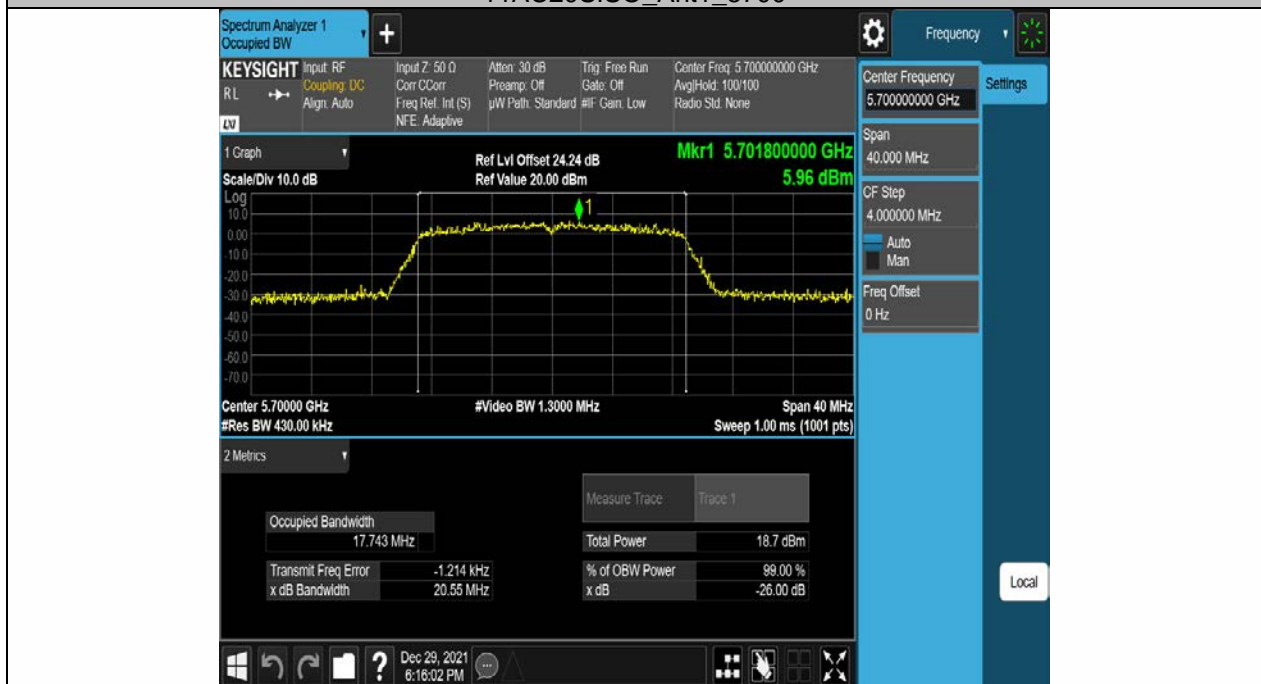
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11AC20SISO_Ant2_5580



11AC20SISO_Ant1_5700



11AC20SISO_Ant2_5700



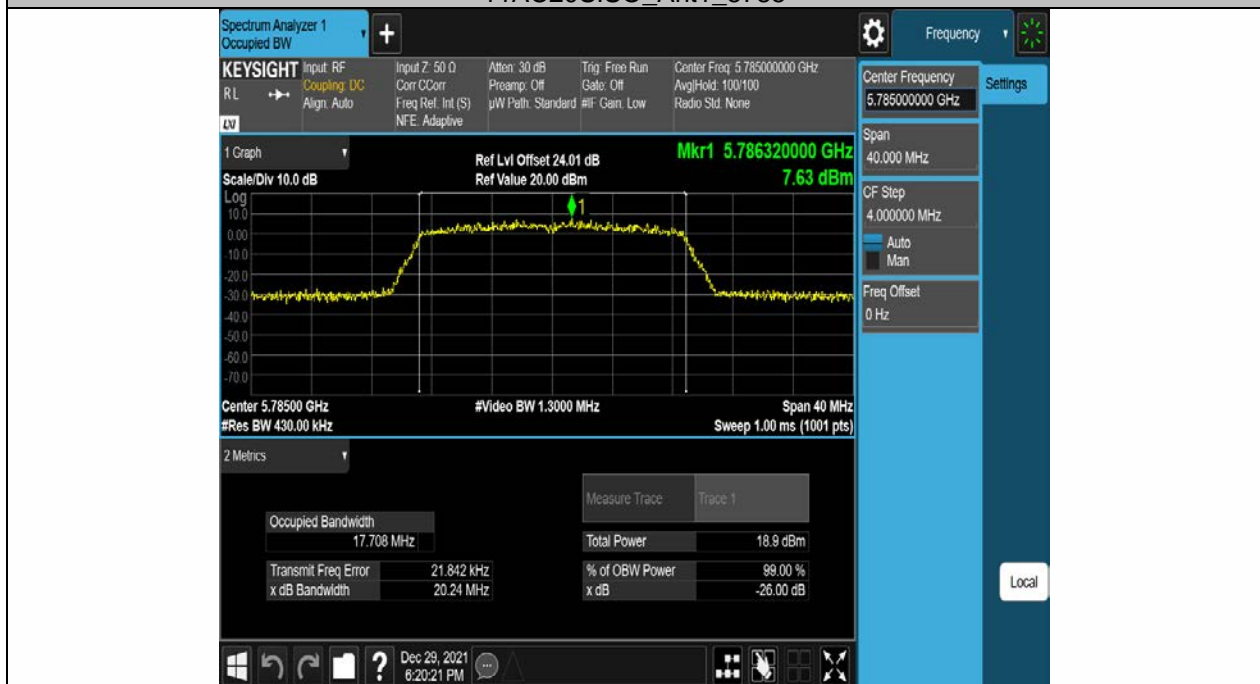
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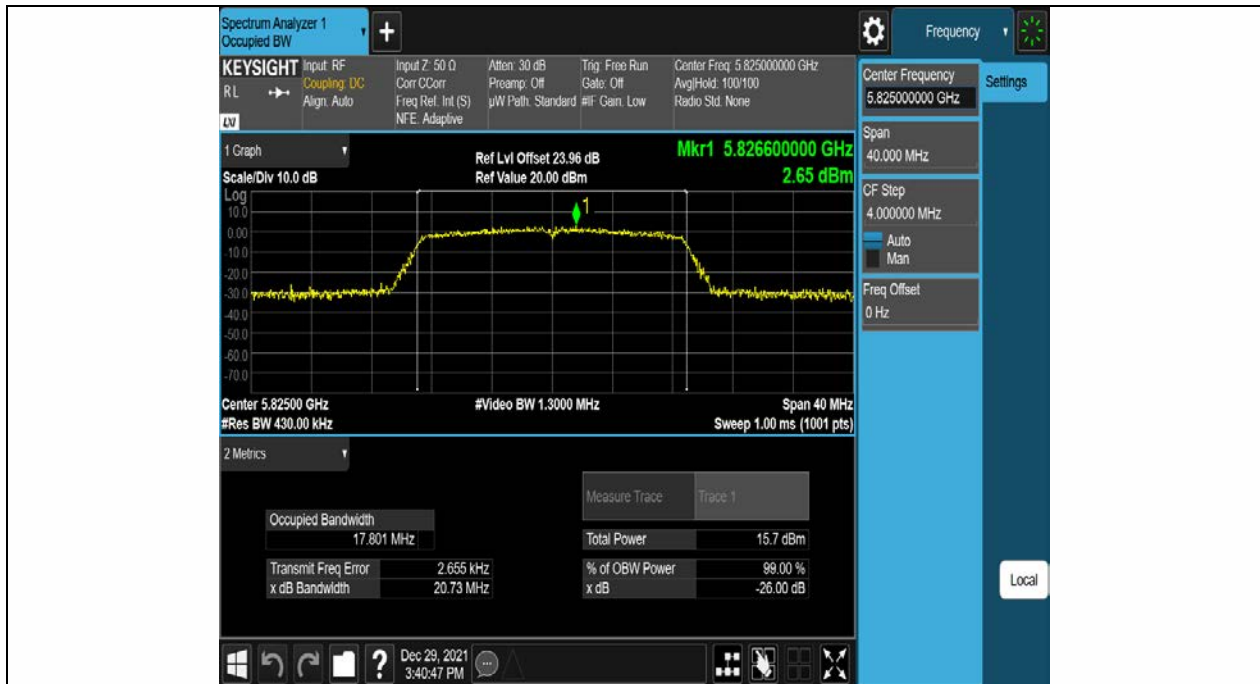
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11AC20SISO_Ant1_5785



11AC20SISO_Ant2_5785



11AC20SISO_Ant1_5825



11AC20SISO_Ant2_5825



11AC40SISO_Ant1_5190



11AC40SISO_Ant2_5190



11AC40SISO_Ant1_5230



11AC40SISO_Ant2_5230



11AC40SISO_Ant1_5270



11AC40SISO_Ant2_5270



11AC40SISO_Ant1_5310



11AC40SISO_Ant2_5310



11AC40SISO_Ant1_5510



11AC40SISO_Ant2_5510



11AC40SISO_Ant1_5550



11AC40SISO_Ant2_5550



11AC40SISO_Ant1_5670



11AC40SISO_Ant2_5670

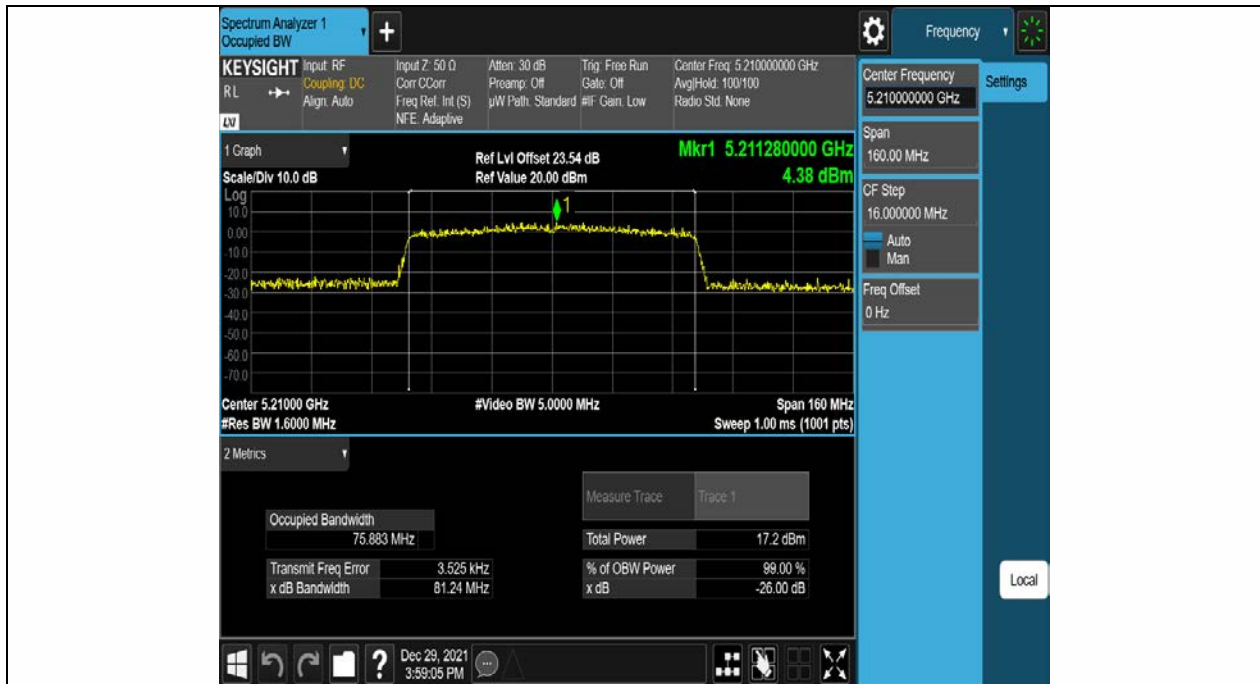


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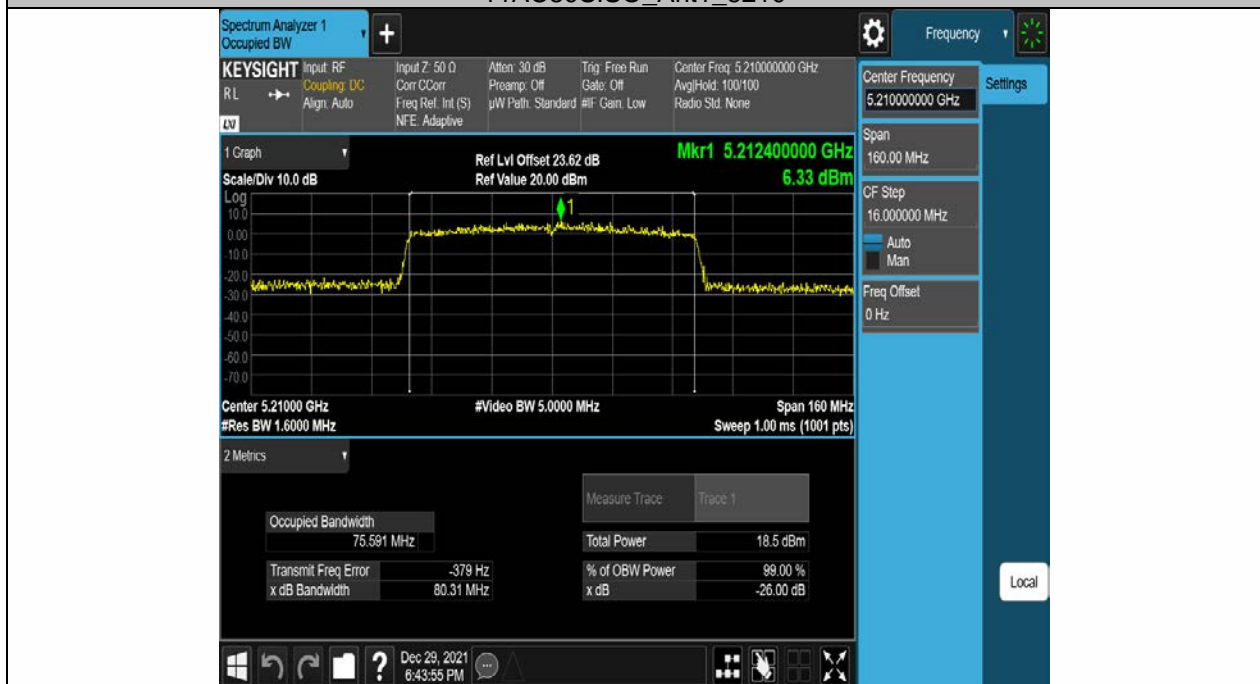


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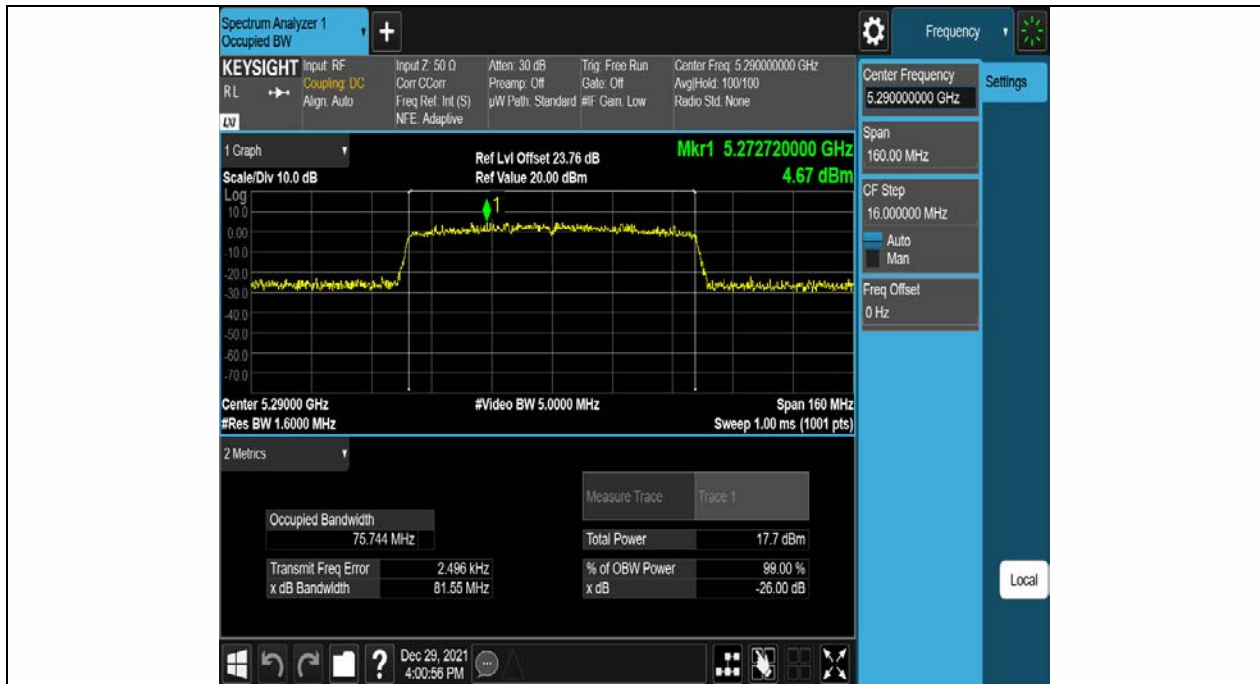




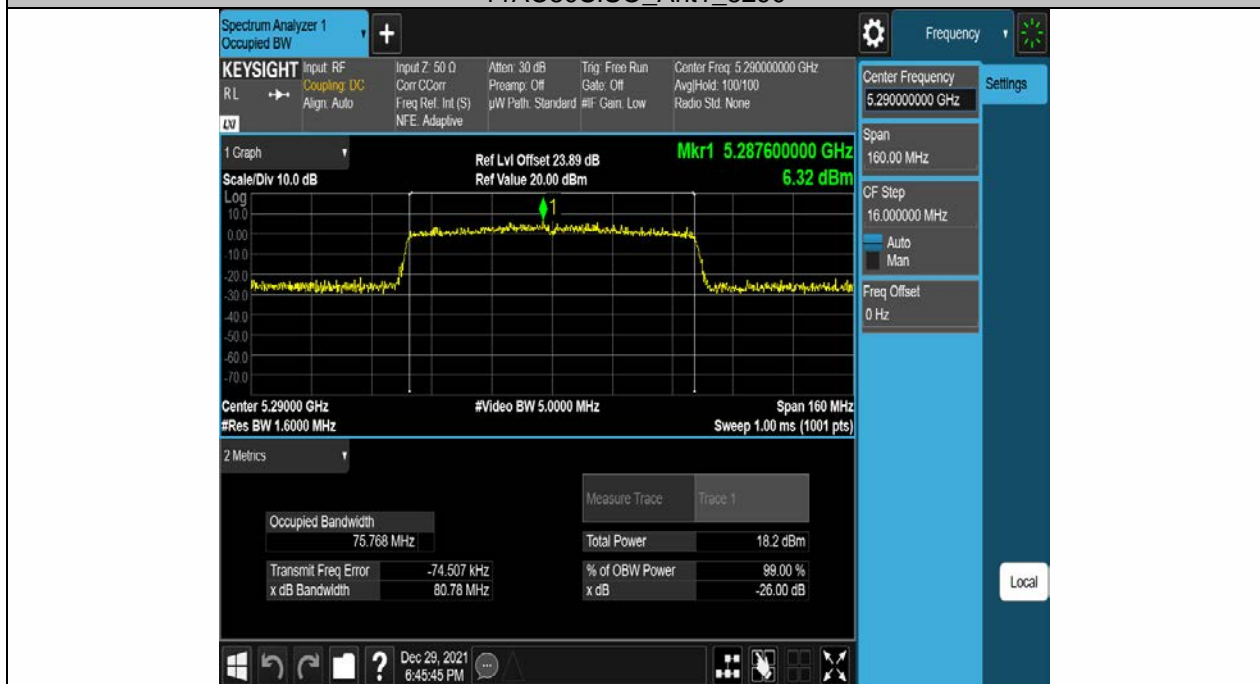
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11AC80SISO_Ant2_5210



11AC80SISO_Ant1_5290



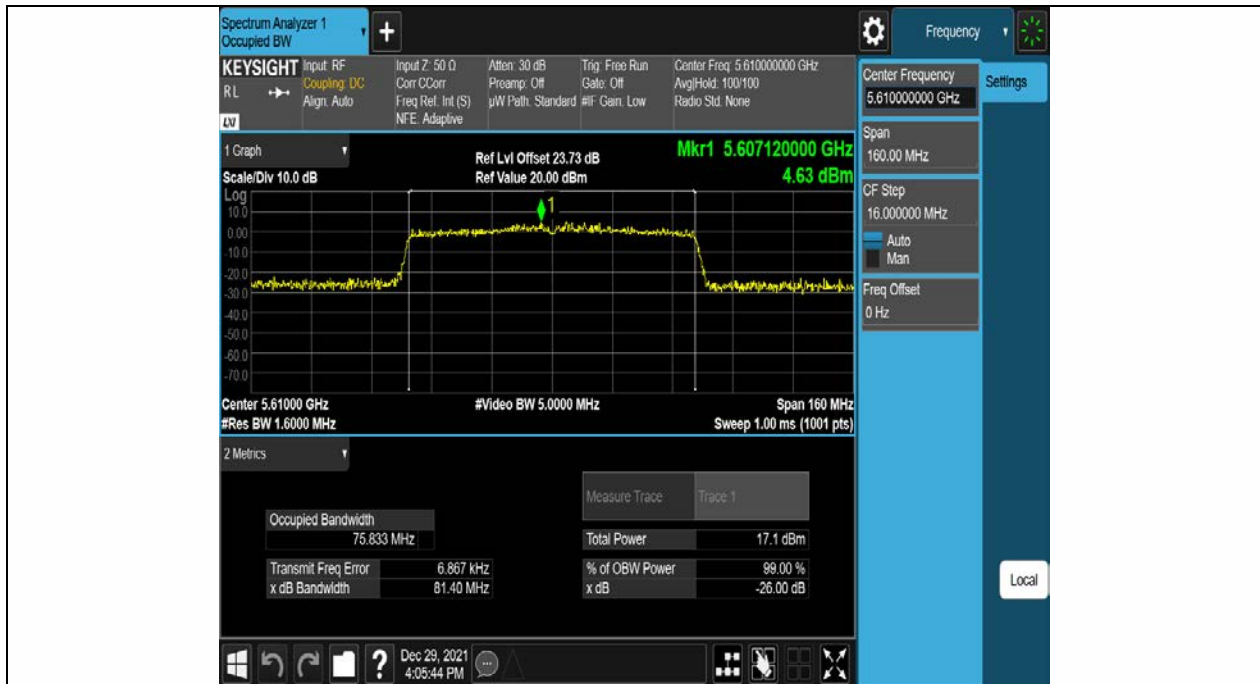
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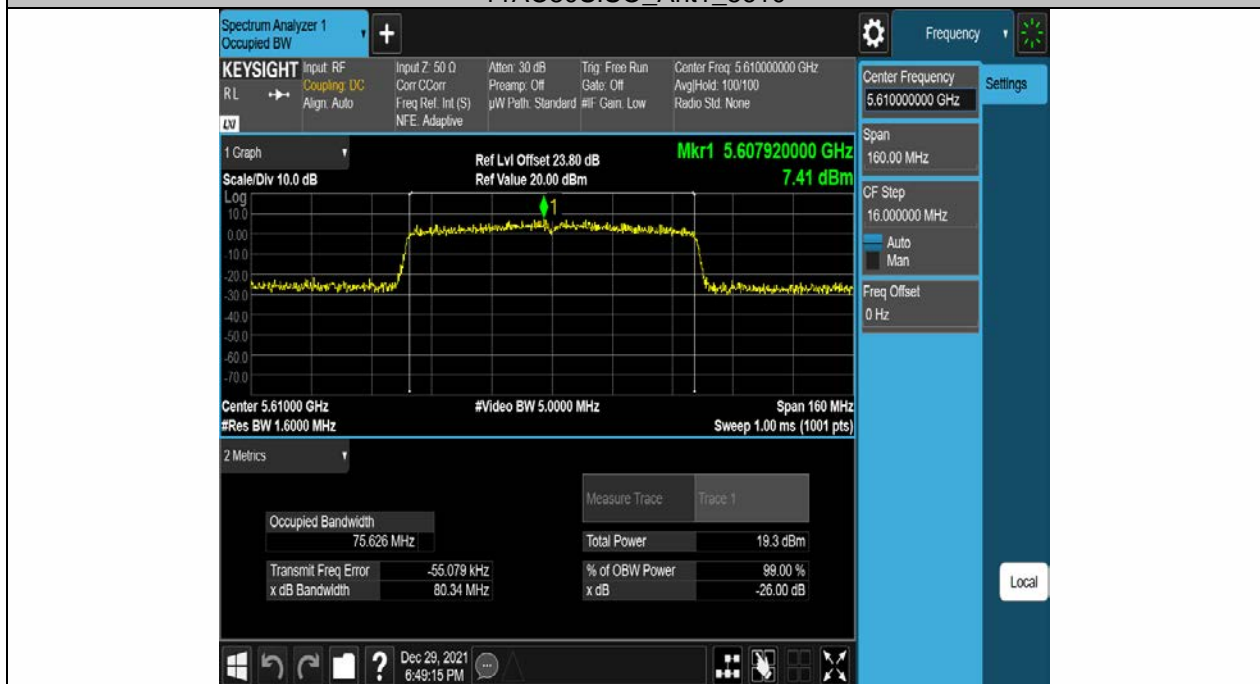
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11AC80SISO_Ant2_5530



11AC80SISO_Ant1_5610



11AC80SISO_Ant2_5610



11AC80SISO_Ant1_5775



11AC80SISO_Ant2_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. 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).

(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. 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.

(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. 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 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 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

(a) (2) The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, 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. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. 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

8.2.3 Test Configuration

Test according to clause 6.1 radio frequency test setup

8.2.4 Test Procedure

The maximum average conducted output power can be measured using Method PM-G (Measurement using a gated RF average power meter):

Measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

- a. The Transmitter output (antenna port) was connected to the power meter.
- b. Turn on the EUT and power meter and then record the power value.
- c. Repeat above procedures on all channels needed to be tested.

8.2.5 Test Results

Temperature:	25° C
Relative Humidity:	45%
ATM Pressure:	1011 mbar

Test Result Channel Power

For 802.11a

Test Mode	Antenna	Frequency[MHz]	Duty Cycle [%]	DC Factor [dBm]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	96.53	0.15	10.56	≤23.98	PASS
	Ant2	5180	96.53	0.15	11.05	≤23.98	PASS
	Ant1	5220	96.53	0.15	10.57	≤23.98	PASS
	Ant2	5220	96.50	0.15	11.20	≤23.98	PASS
	Ant1	5240	96.53	0.15	10.72	≤23.98	PASS
	Ant2	5240	96.50	0.15	11.11	≤23.98	PASS
	Ant1	5260	96.50	0.15	10.80	≤23.98	PASS
	Ant2	5260	96.53	0.15	11.02	≤23.98	PASS
	Ant1	5300	96.53	0.15	10.62	≤23.98	PASS
	Ant2	5300	97.22	0.12	10.57	≤23.98	PASS
	Ant1	5320	96.53	0.15	10.47	≤23.98	PASS
	Ant2	5320	96.53	0.15	10.36	≤23.98	PASS
	Ant1	5500	96.53	0.15	10.71	≤23.98	PASS
	Ant2	5500	96.53	0.15	12.31	≤23.98	PASS
	Ant1	5580	97.20	0.12	10.46	≤23.98	PASS
	Ant2	5580	96.50	0.15	12.21	≤23.98	PASS
	Ant1	5700	96.53	0.15	10.83	≤23.98	PASS
	Ant2	5700	97.22	0.12	12.42	≤23.98	PASS
	Ant1	5745	96.55	0.15	10.68	≤30	PASS
	Ant2	5745	96.50	0.15	12.35	≤30	PASS
	Ant1	5785	96.53	0.15	10.99	≤30	PASS
	Ant2	5785	97.20	0.12	12.08	≤30	PASS
	Ant1	5825	96.53	0.15	10.47	≤30	PASS
	Ant2	5825	96.53	0.15	11.91	≤30	PASS

For 802.11N(HT20)

Test Mode	Antenna	Frequency[MHz]	Duty Cycle [%]	DC Factor [dBm]	Result [dBm]	Limit [dBm]	Verdict
11N20SISO	Ant1	5180	97.01	0.13	10.44	≤23.98	PASS
	Ant2	5180	96.30	0.16	10.94	≤23.98	PASS
	Ant1	5220	97.01	0.13	10.45	≤23.98	PASS
	Ant2	5220	96.30	0.16	10.98	≤23.98	PASS
	Ant1	5240	96.30	0.16	10.54	≤23.98	PASS
	Ant2	5240	96.30	0.16	10.78	≤23.98	PASS
	Ant1	5260	96.30	0.16	10.57	≤23.98	PASS
	Ant2	5260	96.30	0.16	10.95	≤23.98	PASS
	Ant1	5300	96.27	0.17	10.49	≤23.98	PASS
	Ant2	5300	96.30	0.16	10.42	≤23.98	PASS
	Ant1	5320	96.30	0.16	10.31	≤23.98	PASS
	Ant2	5320	96.30	0.16	10.03	≤23.98	PASS
	Ant1	5500	96.30	0.16	10.54	≤23.98	PASS
	Ant2	5500	96.30	0.16	11.95	≤23.98	PASS
	Ant1	5580	97.01	0.13	10.33	≤23.98	PASS
	Ant2	5580	96.32	0.16	12.20	≤23.98	PASS
	Ant1	5700	97.01	0.13	10.65	≤23.98	PASS
	Ant2	5700	96.27	0.17	12.26	≤23.98	PASS
	Ant1	5745	96.27	0.17	10.48	≤30	PASS
	Ant2	5745	96.30	0.16	12.18	≤30	PASS
Ant1	5785	96.30	0.16	9.74	≤30	PASS	
Ant2	5785	96.30	0.16	12.06	≤30	PASS	
Ant1	5825	97.01	0.13	9.21	≤30	PASS	
Ant2	5825	96.30	0.16	12.00	≤30	PASS	

For 802.11N(HT40)

Test Mode	Antenna	Frequency[MHz]	Duty Cycle [%]	DC Factor [dBm]	Result [dBm]	Limit [dBm]	Verdict
11N40SISO	Ant1	5190	92.86	0.32	10.60	≤23.98	PASS
	Ant2	5190	94.20	0.26	11.23	≤23.98	PASS
	Ant1	5230	92.86	0.32	10.70	≤23.98	PASS
	Ant2	5230	94.20	0.26	11.11	≤23.98	PASS
	Ant1	5270	94.20	0.26	10.65	≤23.98	PASS
	Ant2	5270	94.20	0.26	10.55	≤23.98	PASS
	Ant1	5310	94.20	0.26	10.46	≤23.98	PASS
	Ant2	5310	94.20	0.26	10.14	≤23.98	PASS
	Ant1	5510	94.20	0.26	10.87	≤23.98	PASS
	Ant2	5510	94.20	0.26	12.58	≤23.98	PASS
	Ant1	5550	94.20	0.26	10.64	≤23.98	PASS
	Ant2	5550	94.20	0.26	12.73	≤23.98	PASS
	Ant1	5670	92.75	0.33	11.07	≤23.98	PASS
	Ant2	5670	94.20	0.26	12.23	≤23.98	PASS
	Ant1	5755	92.86	0.32	10.53	≤30	PASS
	Ant2	5755	92.86	0.32	12.17	≤30	PASS
	Ant1	5795	94.20	0.26	10.93	≤30	PASS
	Ant2	5795	94.12	0.26	12.09	≤30	PASS

For 802.11AC(HT20)

Test Mode	Antenna	Frequency[MHz]	Duty Cycle [%]	DC Factor [dBm]	Result [dBm]	Limit [dBm]	Verdict
11AC20SISO	Ant1	5180	94.44	0.25	10.35	≤23.98	PASS
	Ant2	5180	93.15	0.31	10.52	≤23.98	PASS
	Ant1	5220	94.44	0.25	10.85	≤23.98	PASS
	Ant2	5220	94.44	0.25	10.90	≤23.98	PASS
	Ant1	5240	93.15	0.31	10.84	≤23.98	PASS
	Ant2	5240	93.15	0.31	10.68	≤23.98	PASS
	Ant1	5260	93.15	0.31	10.95	≤23.98	PASS
	Ant2	5260	94.44	0.25	10.56	≤23.98	PASS
	Ant1	5300	94.44	0.25	10.54	≤23.98	PASS
	Ant2	5300	94.44	0.25	10.18	≤23.98	PASS
	Ant1	5320	94.44	0.25	11.30	≤23.98	PASS
	Ant2	5320	94.44	0.25	10.72	≤23.98	PASS
	Ant1	5500	93.15	0.31	11.47	≤23.98	PASS
	Ant2	5500	94.44	0.25	12.13	≤23.98	PASS
	Ant1	5580	93.15	0.31	11.07	≤23.98	PASS
	Ant2	5580	94.44	0.25	12.01	≤23.98	PASS
	Ant1	5700	94.44	0.25	11.53	≤23.98	PASS
	Ant2	5700	94.44	0.25	11.92	≤23.98	PASS
	Ant1	5745	93.15	0.31	11.59	≤30	PASS
	Ant2	5745	93.15	0.31	11.82	≤30	PASS
Ant1	5785	93.15	0.31	10.23	≤30	PASS	
Ant2	5785	93.15	0.31	11.90	≤30	PASS	
Ant1	5825	94.44	0.25	9.70	≤30	PASS	
Ant2	5825	94.44	0.25	11.86	≤30	PASS	

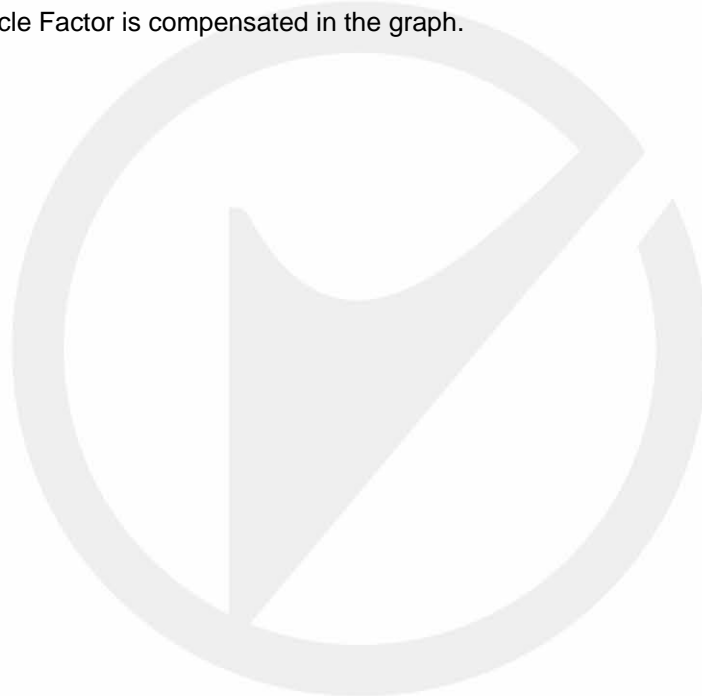
For 802.11AC(HT40)

Test Mode	Antenna	Frequency[MHz]	Duty Cycle [%]	DC Factor [dBm]	Result [dBm]	Limit [dBm]	Verdict
11AC40SISO	Ant1	5190	89.74	0.47	10.67	≤23.98	PASS
	Ant2	5190	87.50	0.58	10.93	≤23.98	PASS
	Ant1	5230	87.50	0.58	11.03	≤23.98	PASS
	Ant2	5230	87.50	0.58	10.95	≤23.98	PASS
	Ant1	5270	87.50	0.58	11.01	≤23.98	PASS
	Ant2	5270	89.74	0.47	10.20	≤23.98	PASS
	Ant1	5310	87.50	0.58	10.73	≤23.98	PASS
	Ant2	5310	87.50	0.58	10.51	≤23.98	PASS
	Ant1	5510	87.50	0.58	11.11	≤23.98	PASS
	Ant2	5510	89.74	0.47	12.38	≤23.98	PASS
	Ant1	5550	87.50	0.58	10.99	≤23.98	PASS
	Ant2	5550	89.74	0.47	12.74	≤23.98	PASS
	Ant1	5670	87.50	0.58	11.14	≤23.98	PASS
	Ant2	5670	89.74	0.47	11.93	≤23.98	PASS
	Ant1	5755	89.74	0.47	10.94	≤30	PASS
	Ant2	5755	89.74	0.47	11.96	≤30	PASS
	Ant1	5795	89.74	0.47	10.15	≤30	PASS
	Ant2	5795	89.74	0.47	12.01	≤30	PASS

For 802.11ac(HT80)

Test Mode	Antenna	Frequency[MHz]	Duty Cycle [%]	DC Factor [dBm]	Result [dBm]	Limit [dBm]	Verdict
11AC80SISO	Ant1	5210	79.17	1.01	10.93	≤23.98	PASS
	Ant2	5210	82.61	0.83	11.44	≤23.98	PASS
	Ant1	5290	82.61	0.83	10.71	≤23.98	PASS
	Ant2	5290	82.61	0.83	10.83	≤23.98	PASS
	Ant1	5530	82.61	0.83	11.18	≤23.98	PASS
	Ant2	5530	82.61	0.83	12.88	≤23.98	PASS
	Ant1	5610	78.26	1.06	10.23	≤23.98	PASS
	Ant2	5610	82.61	0.83	11.63	≤23.98	PASS
	Ant1	5775	78.26	1.06	10.69	≤30	PASS
	Ant2	5775	82.61	0.83	12.01	≤30	PASS

Note: The Duty Cycle Factor is compensated in the graph.



For 2T2R

Band	Operating mode	Channel Number	Channel Freq. (MHz)	Conducted Output Power(dBm)	Limit (dBm)	Verdict
U-NII – 1	802.11n-HT20	CH36	5180	13.71	≤23.98	Pass
		CH40	5220	13.73	≤23.98	Pass
		CH48	5240	13.67	≤23.98	Pass
	802.11ac(HT20)	CH36	5180	13.45	≤23.98	Pass
		CH40	5220	13.89	≤23.98	Pass
		CH48	5240	13.77	≤23.98	Pass
	802.11n-HT40	CH38	5190	13.94	≤23.98	Pass
		CH46	5230	13.92	≤23.98	Pass
	802.11ac(HT40)	CH38	5190	13.81	≤23.98	Pass
		CH46	5230	14.00	≤23.98	Pass
	802.11ac(HT80)	CH42	5210	14.20	≤23.98	Pass

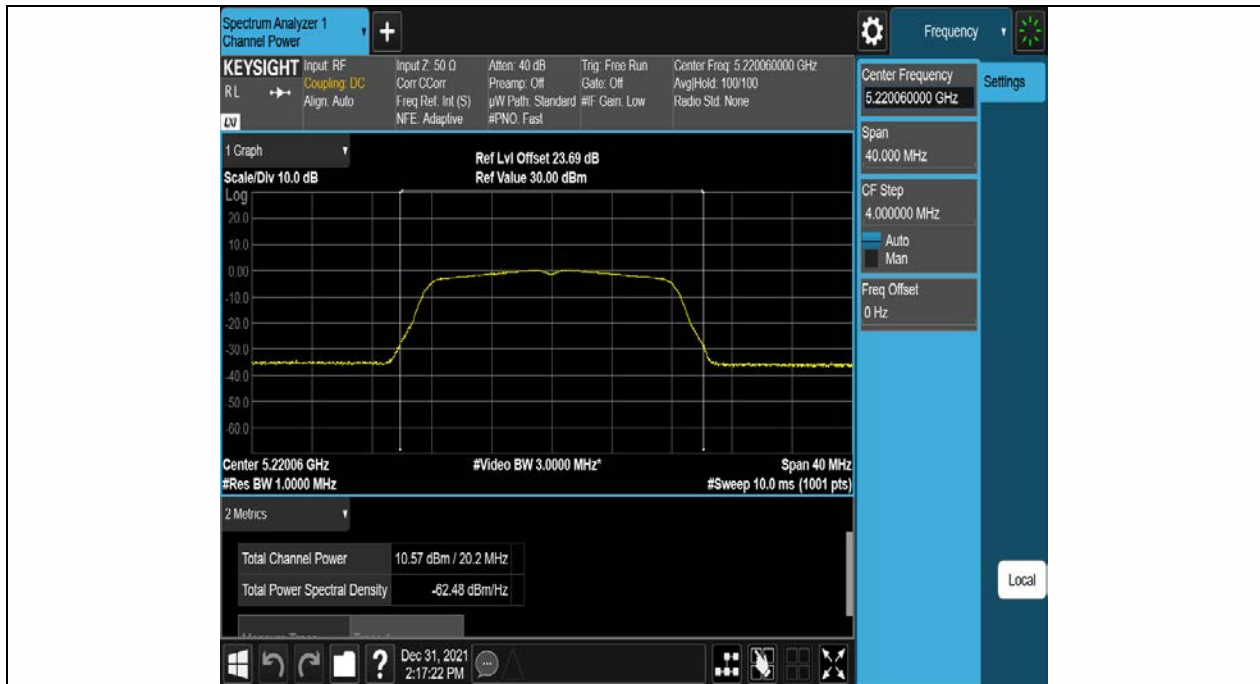
Band	Operating mode	Channel Number	Channel Freq. (MHz)	Conducted Output Power(dBm)	Limit (dBm)	Verdict
U-NII – 2A	802.11n-HT20	CH52	5260	13.77	≤23.98	Pass
		CH56	5300	13.47	≤23.98	Pass
		CH64	5320	13.18	≤23.98	Pass
	802.11ac(HT20)	CH52	5260	13.77	≤23.98	Pass
		CH56	5300	13.37	≤23.98	Pass
		CH64	5320	14.03	≤23.98	Pass
	802.11n-HT40	CH54	5270	13.61	≤23.98	Pass
		CH62	5310	13.31	≤23.98	Pass
	802.11ac(HT40)	CH54	5270	13.63	≤23.98	Pass
		CH62	5310	13.63	≤23.98	Pass
	802.11ac(HT80)	CH58	5290	13.78	≤23.98	Pass

Band	Operating mode	Channel Number	Channel Freq. (MHz)	Conducted Output Power(dBm)	Limit (dBm)	Verdict
U-NII – 2C	802.11n-HT20	CH100	5500	14.31	≤23.98	Pass
		CH116	5580	14.38	≤23.98	Pass
		CH140	5700	14.54	≤23.98	Pass
	802.11ac(HT20)	CH100	5500	14.82	≤23.98	Pass
		CH116	5580	14.58	≤23.98	Pass
		CH140	5700	14.74	≤23.98	Pass
	802.11n-HT40	CH102	5510	14.82	≤23.98	Pass
		CH134	5670	14.70	≤23.98	Pass
	802.11ac(HT40)	CH102	5510	14.80	≤23.98	Pass
		CH134	5670	14.56	≤23.98	Pass
	802.11ac(HT80)	CH106	5530	15.12	≤23.98	Pass

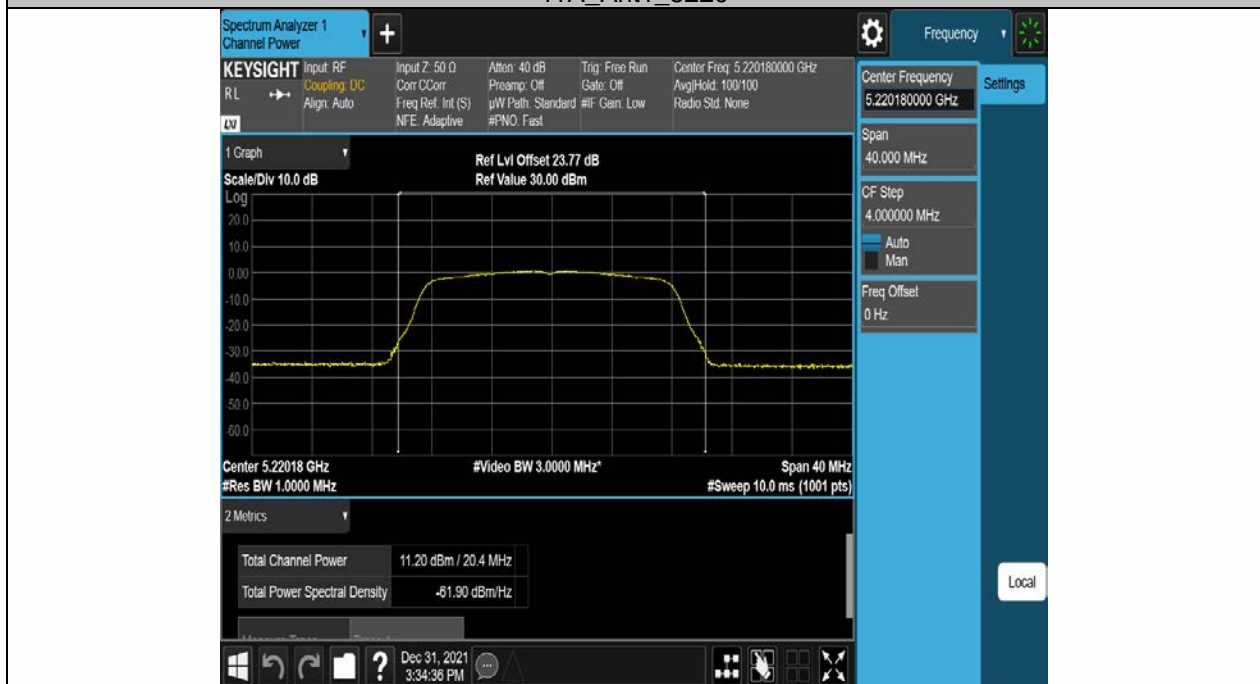
Band	Operating mode	Channel Number	Channel Freq. (MHz)	Conducted Output Power(dBm)	Limit (dBm)	Verdict
U-NII – 3	802.11n-HT20	CH149	5745	14.42	≤30	Pass
		CH157	5785	14.06	≤30	Pass
		CH165	5825	13.84	≤30	Pass
	802.11ac(HT20)	CH149	5745	14.72	≤30	Pass
		CH157	5785	14.16	≤30	Pass
		CH165	5825	13.92	≤30	Pass
	802.11n-HT40	CH151	5755	14.44	≤30	Pass
		CH159	5795	14.56	≤30	Pass
	802.11ac(HT40)	CH151	5755	14.49	≤30	Pass
		CH159	5795	14.19	≤30	Pass
	802.11ac(HT80)	CH155	5775	14.41	≤30	Pass

Test Graphs Channel Power

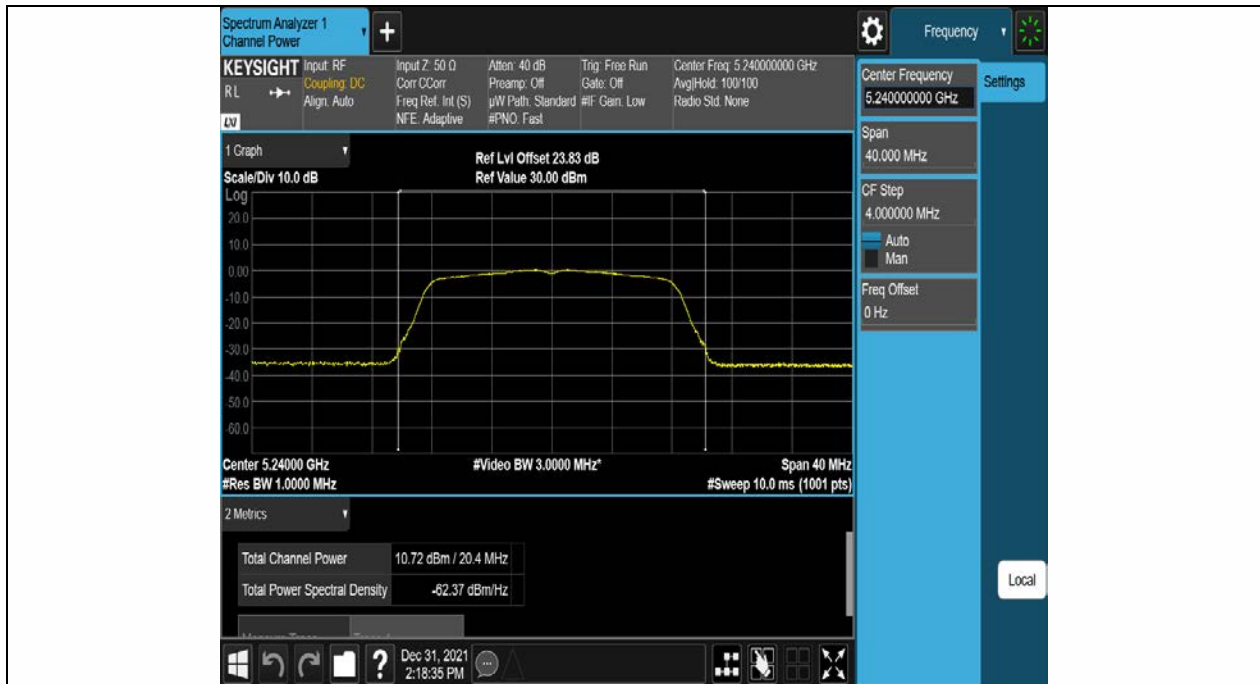




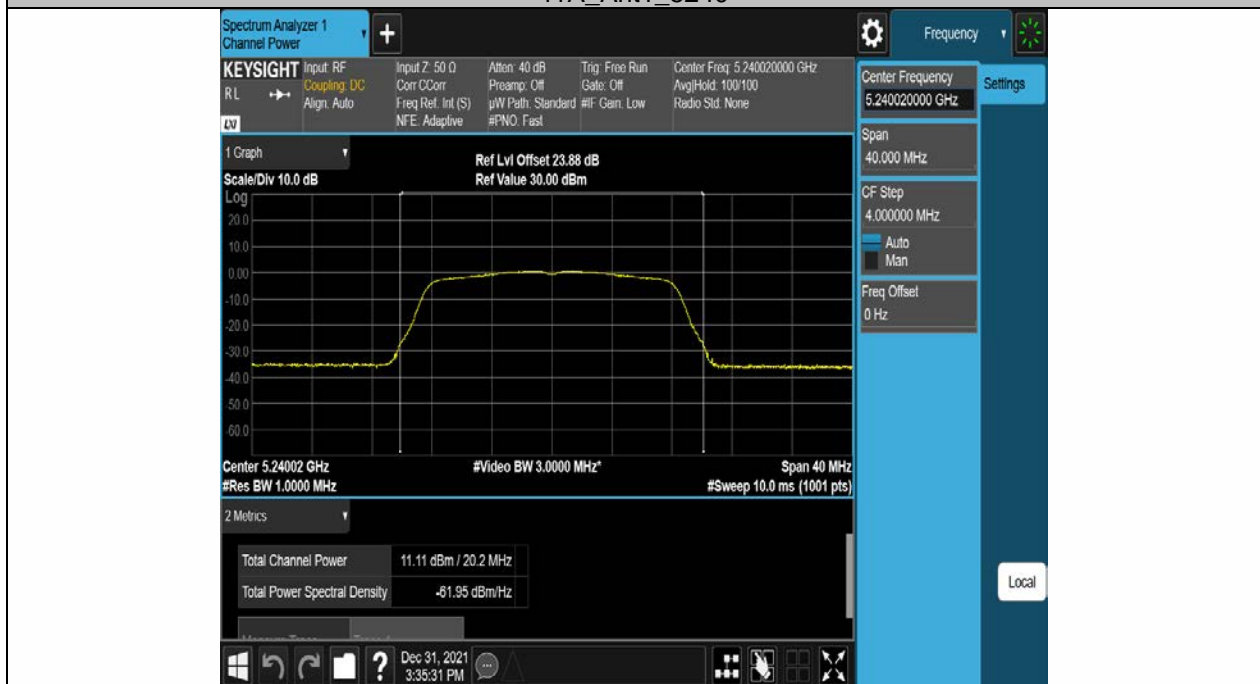
11A_Ant1_5220



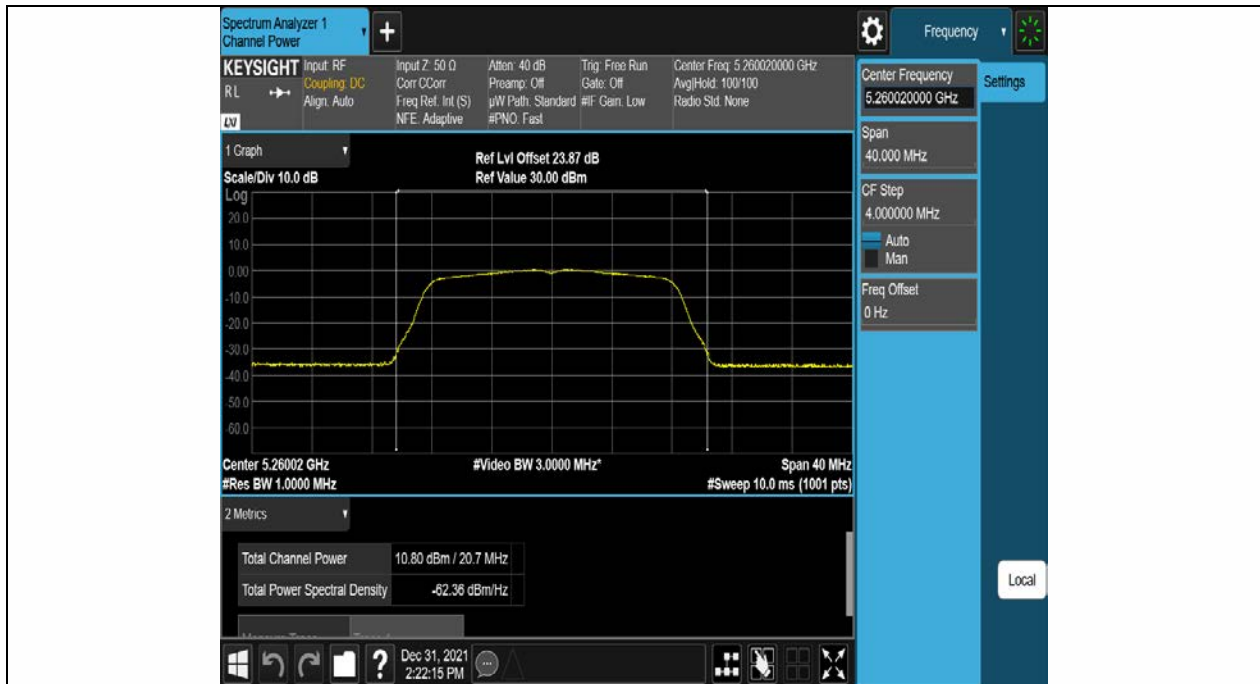
11A_Ant2_5220



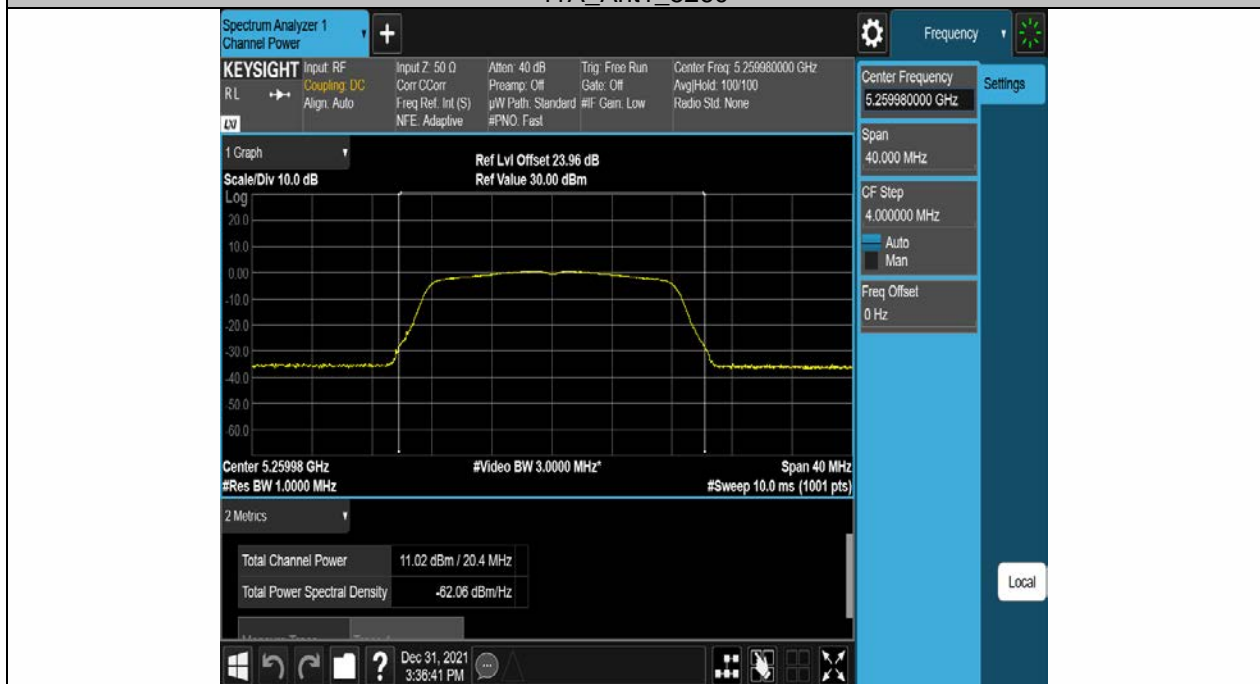
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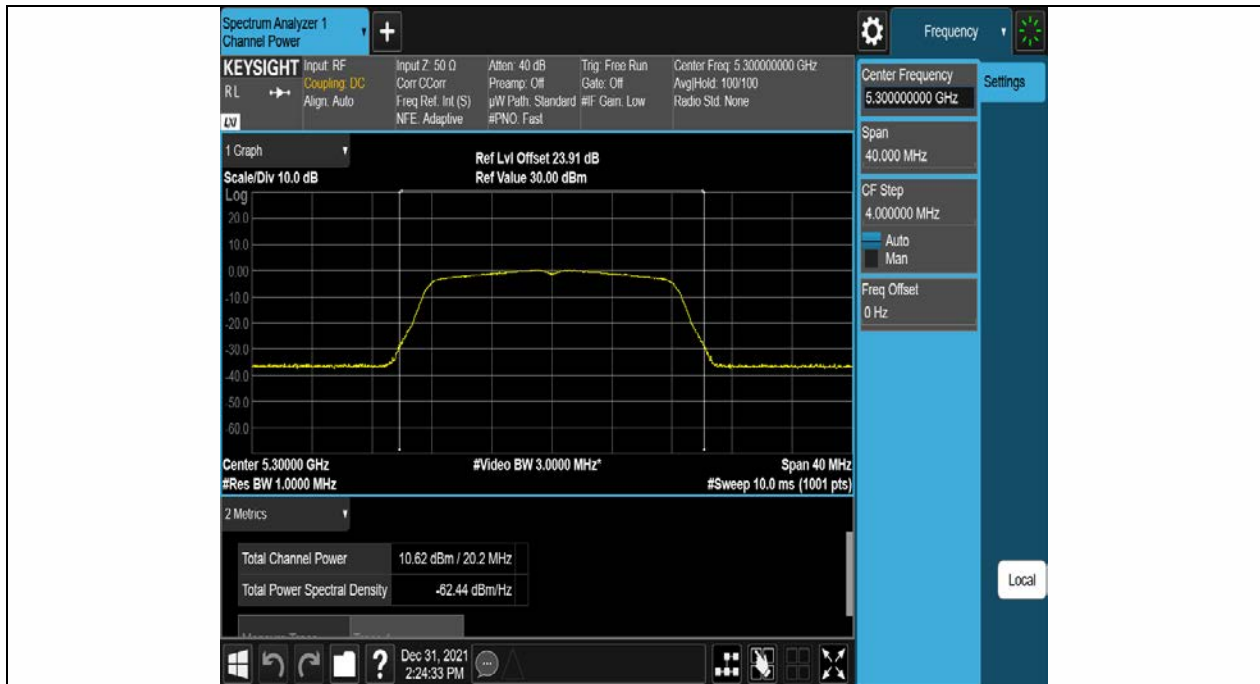
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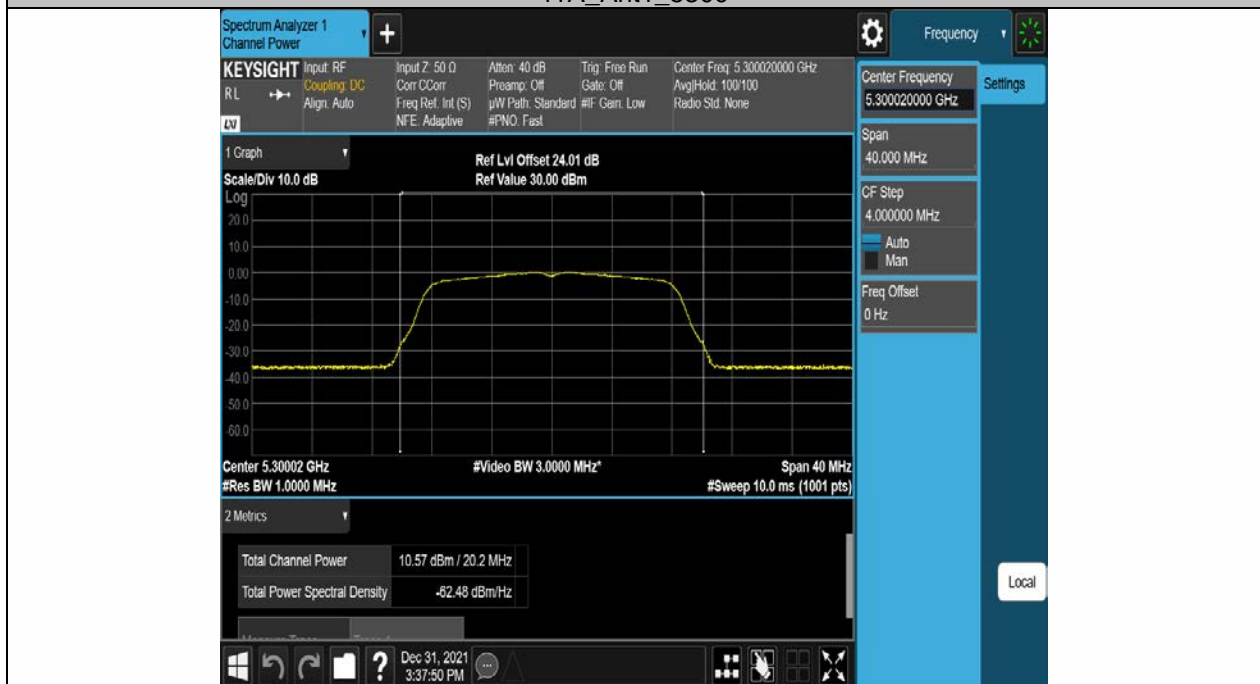
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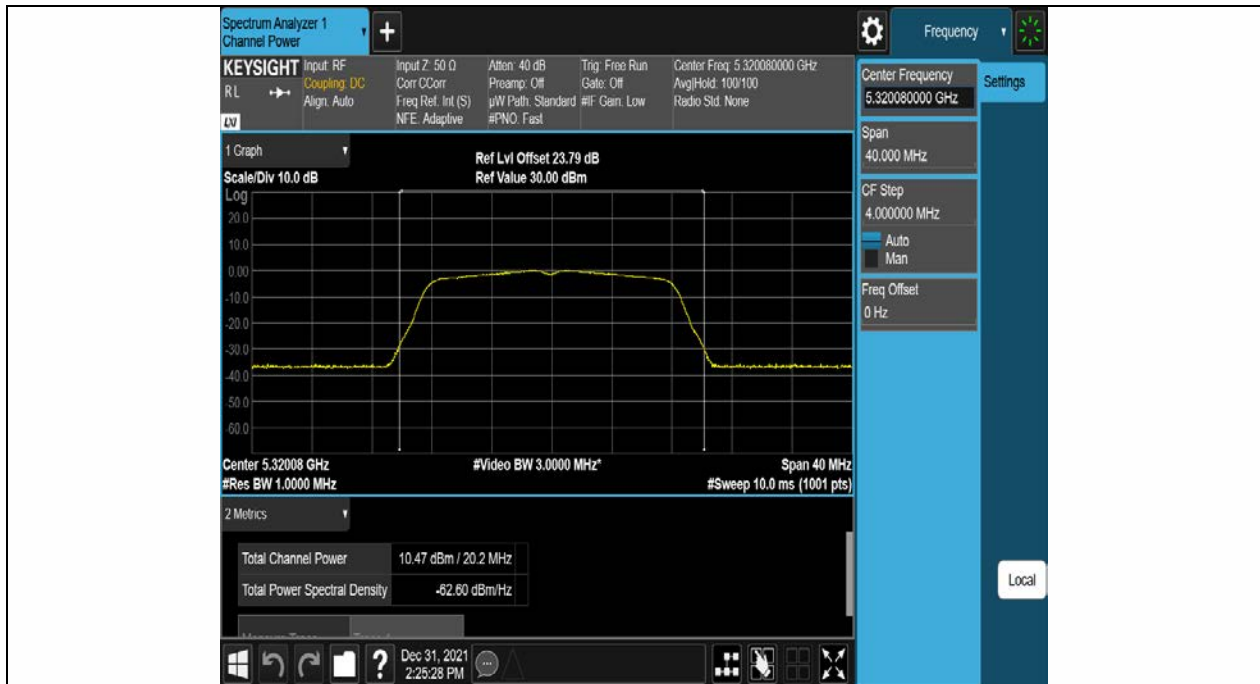
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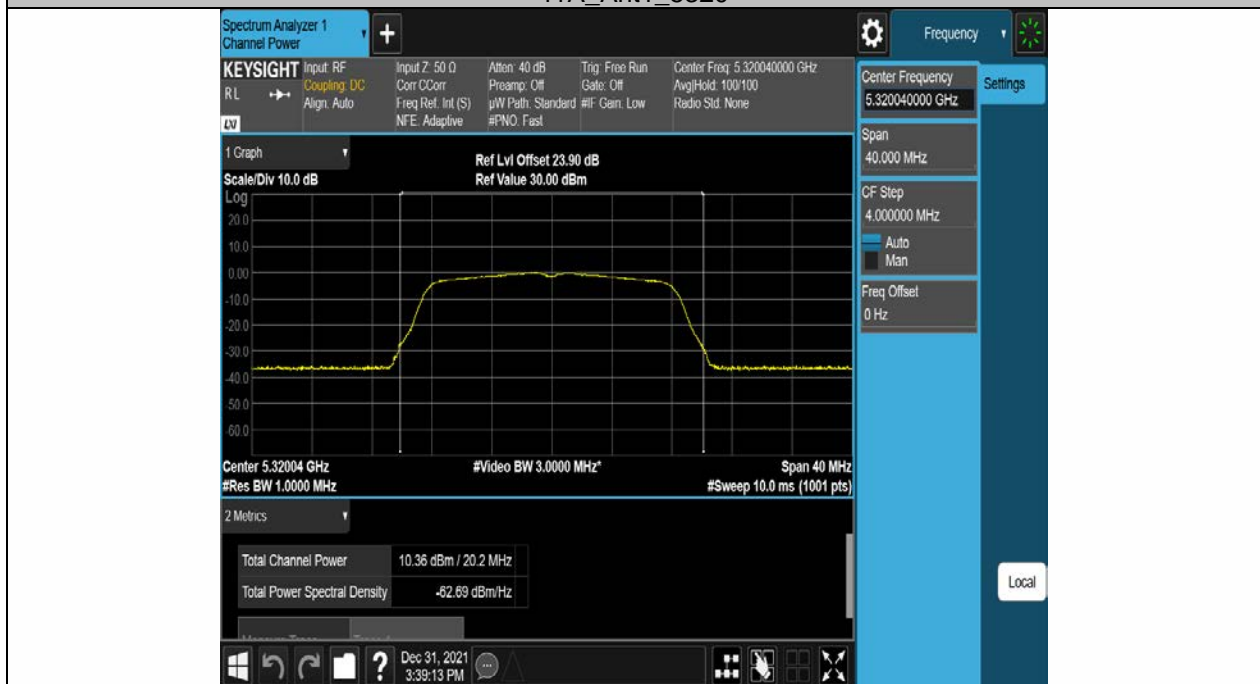
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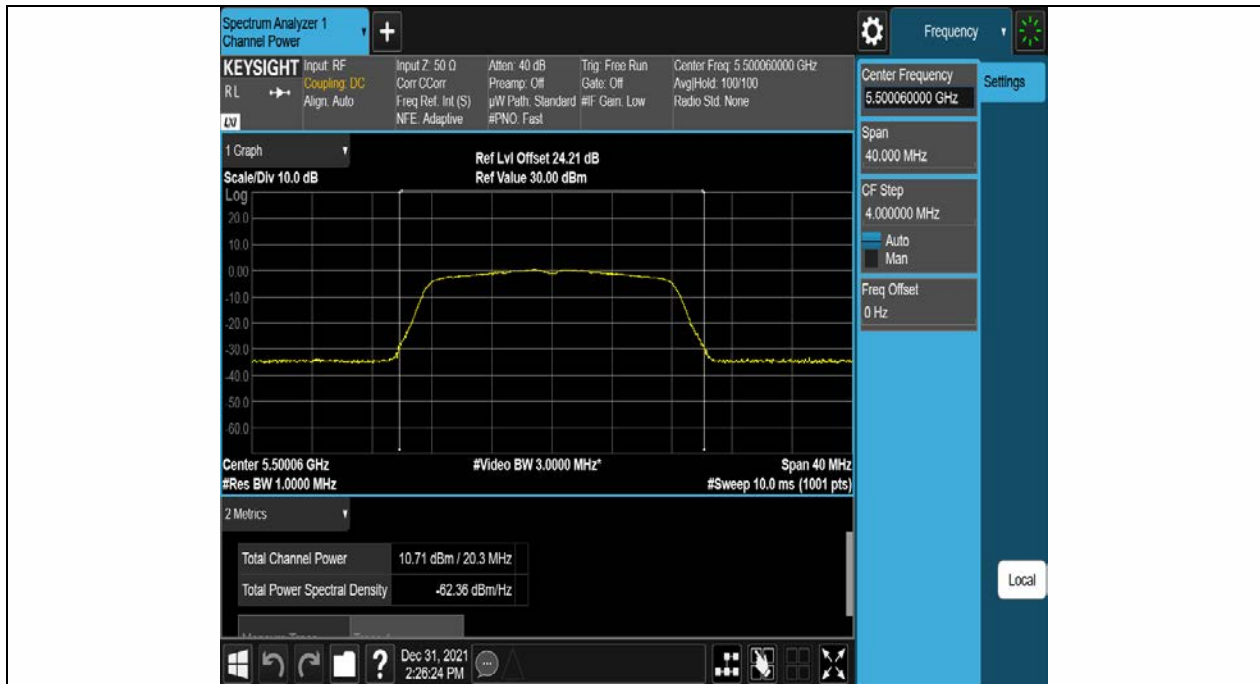
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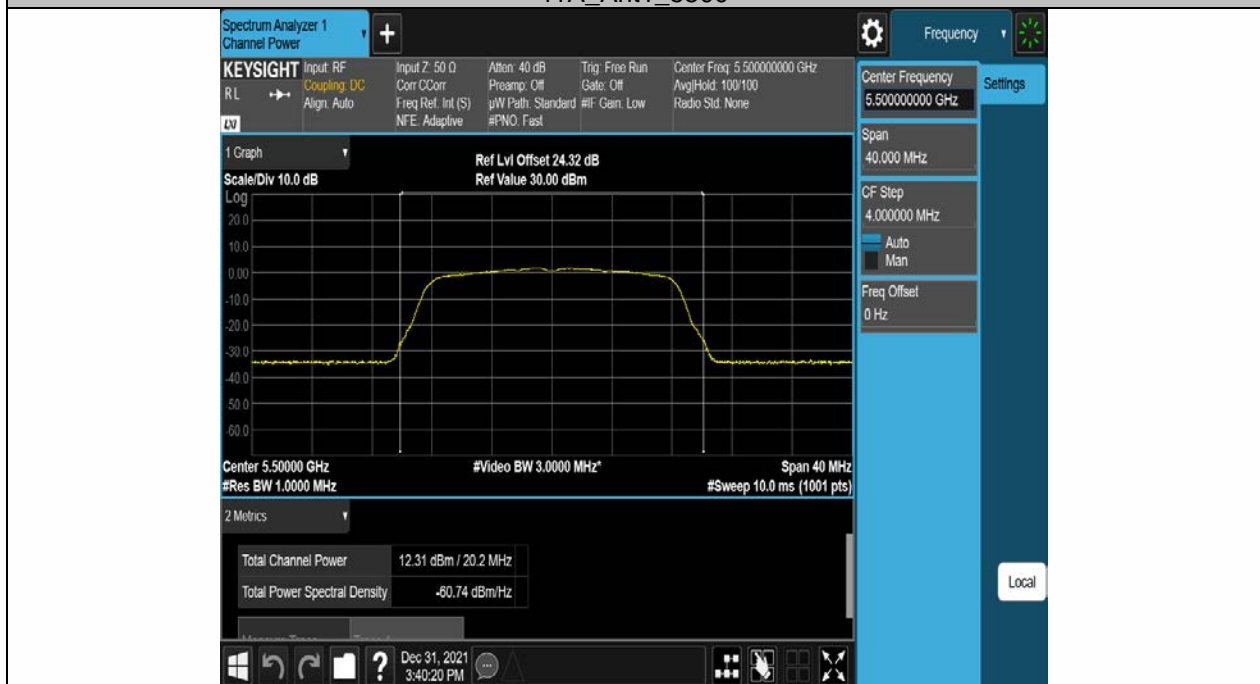
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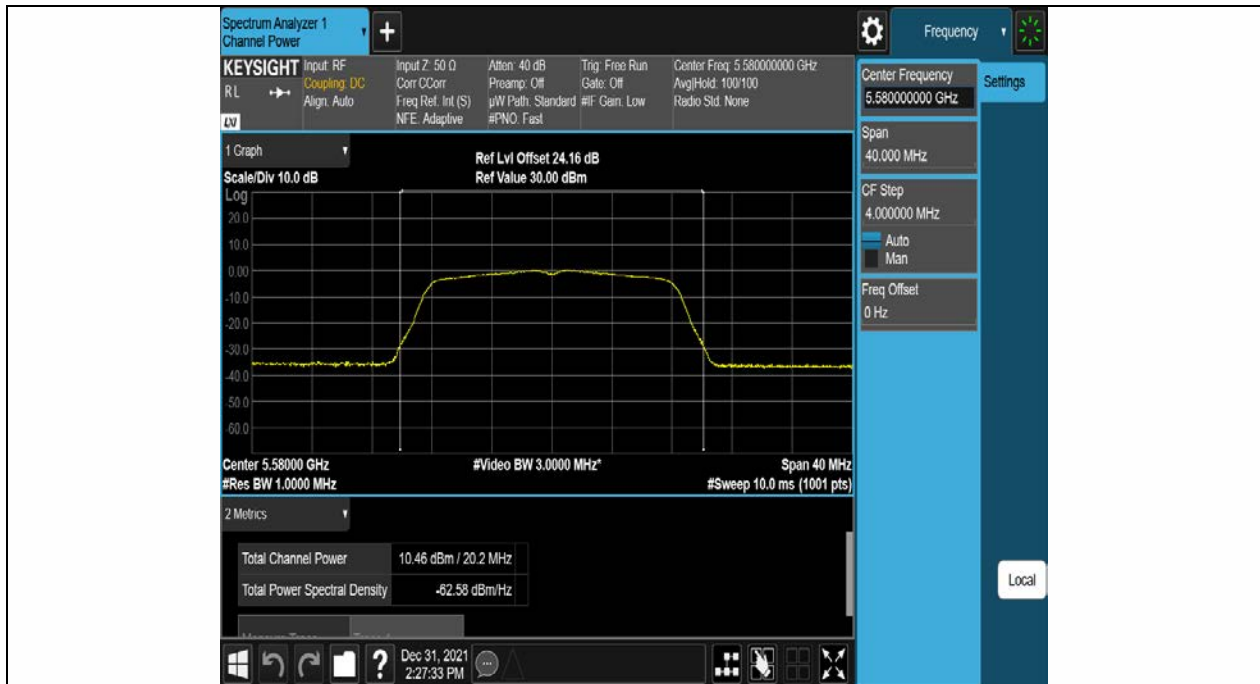
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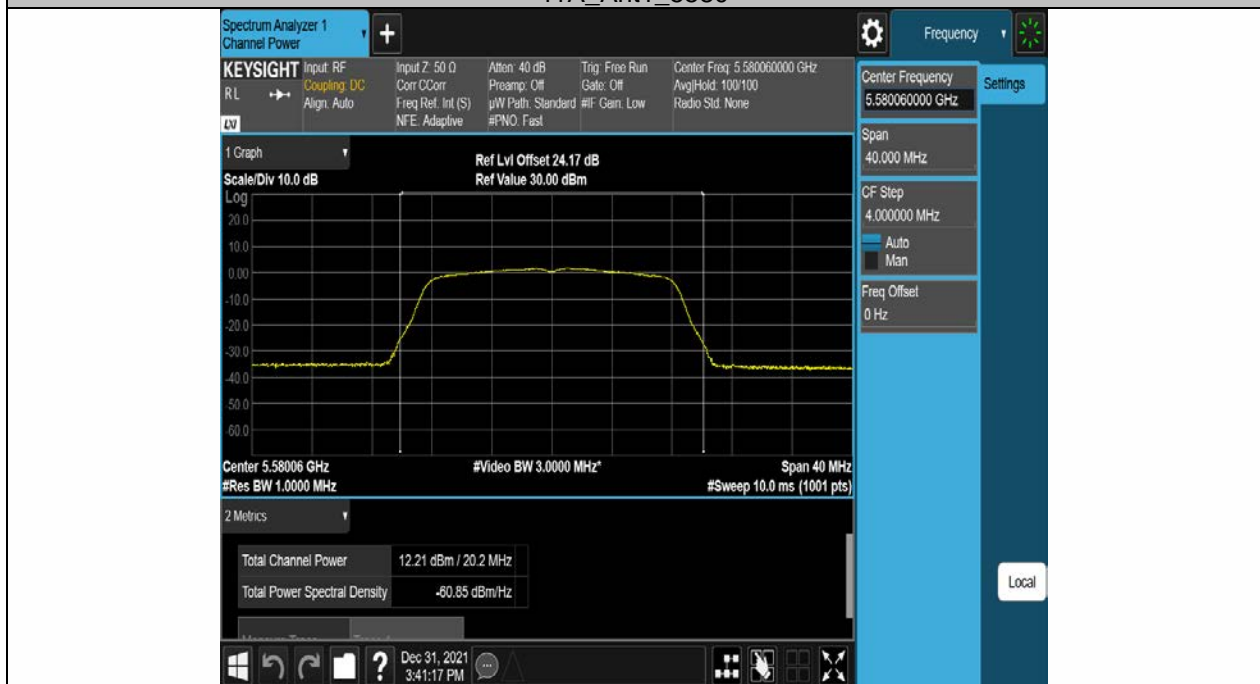
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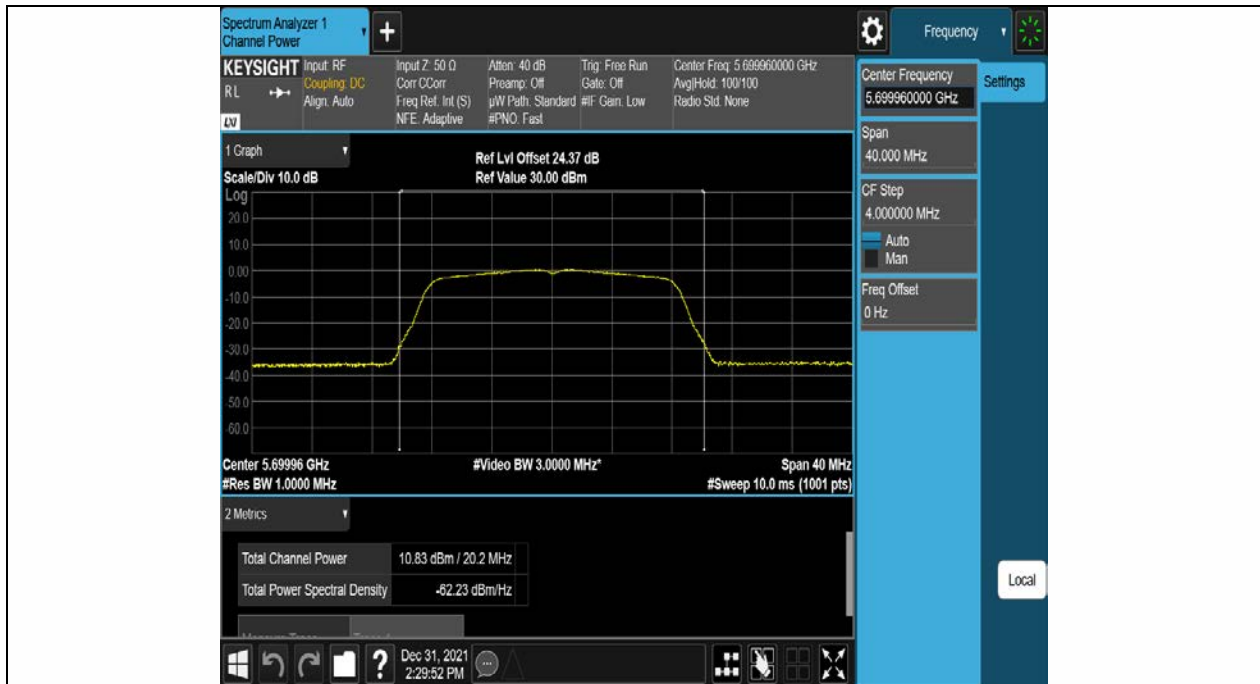
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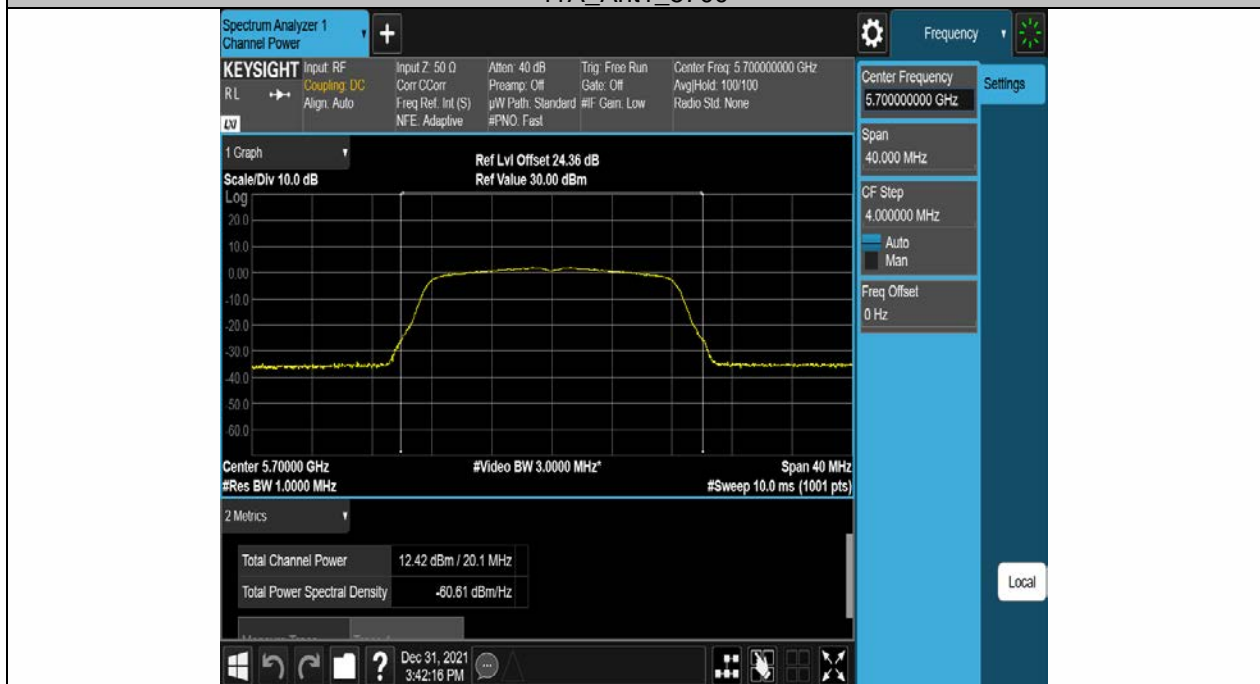
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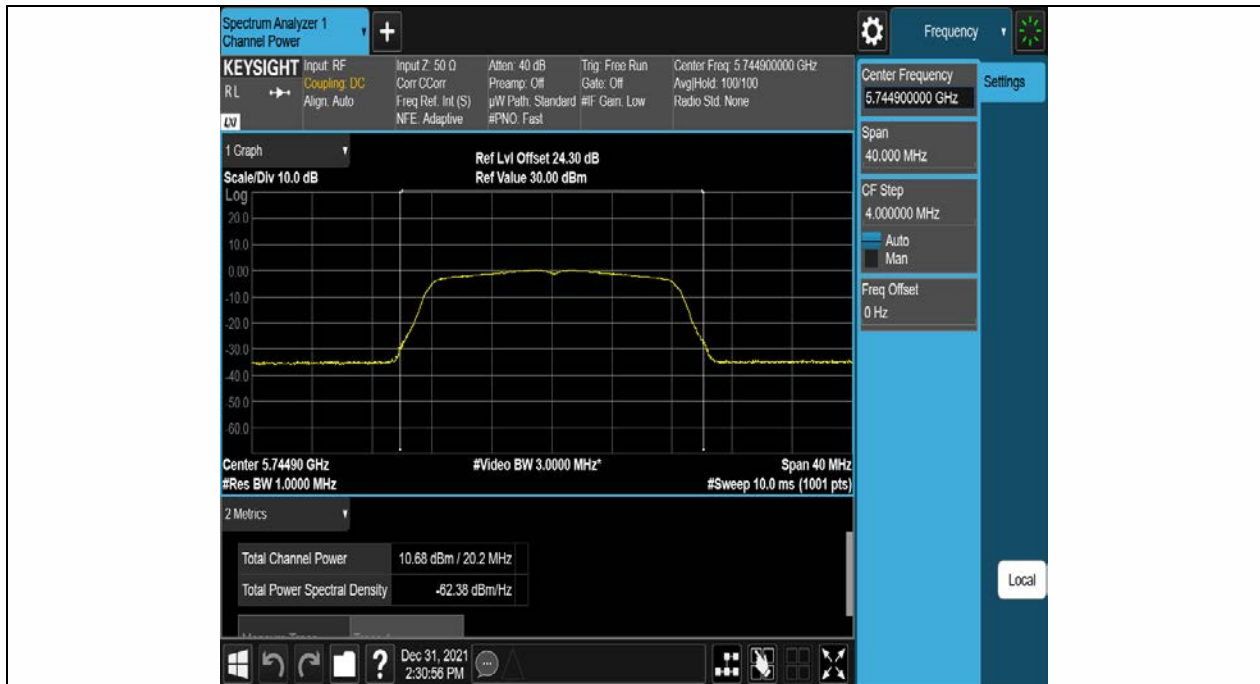
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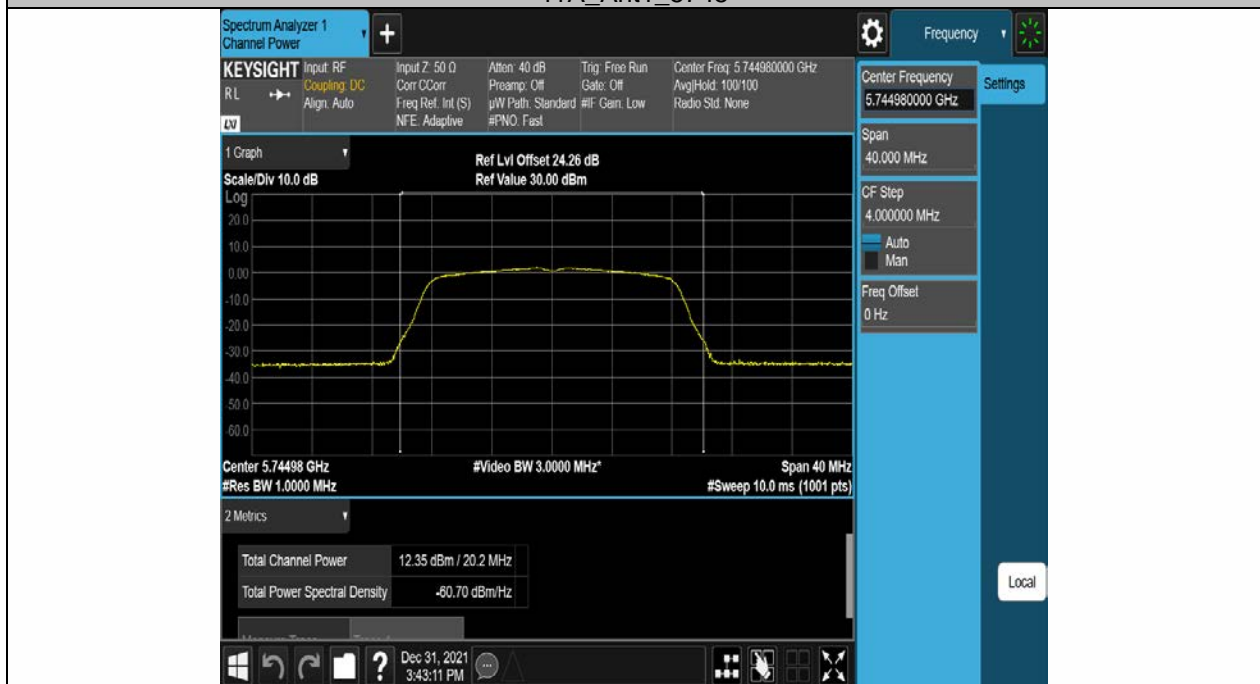
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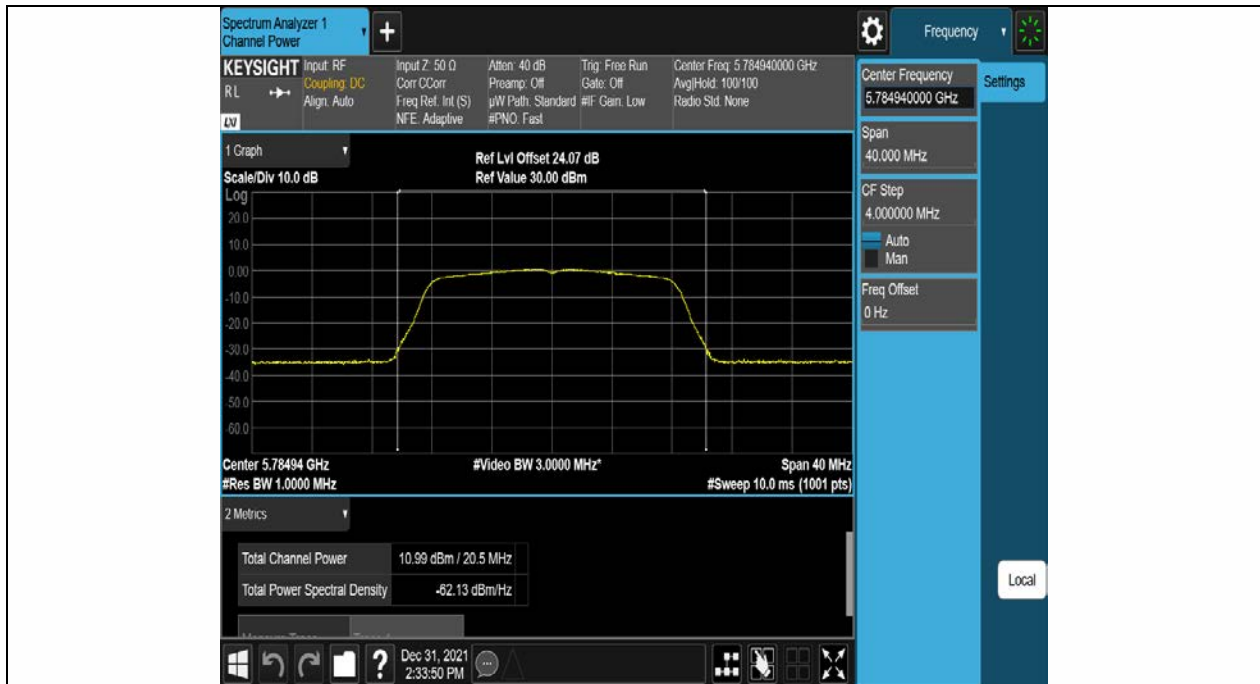
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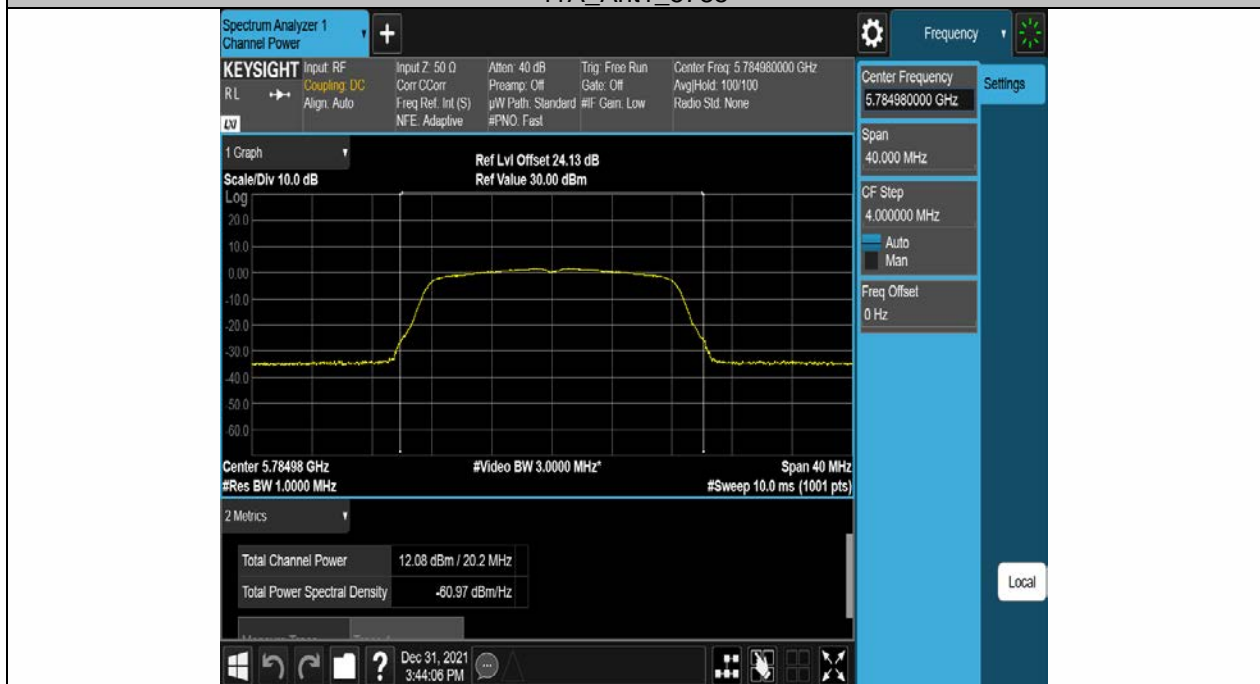
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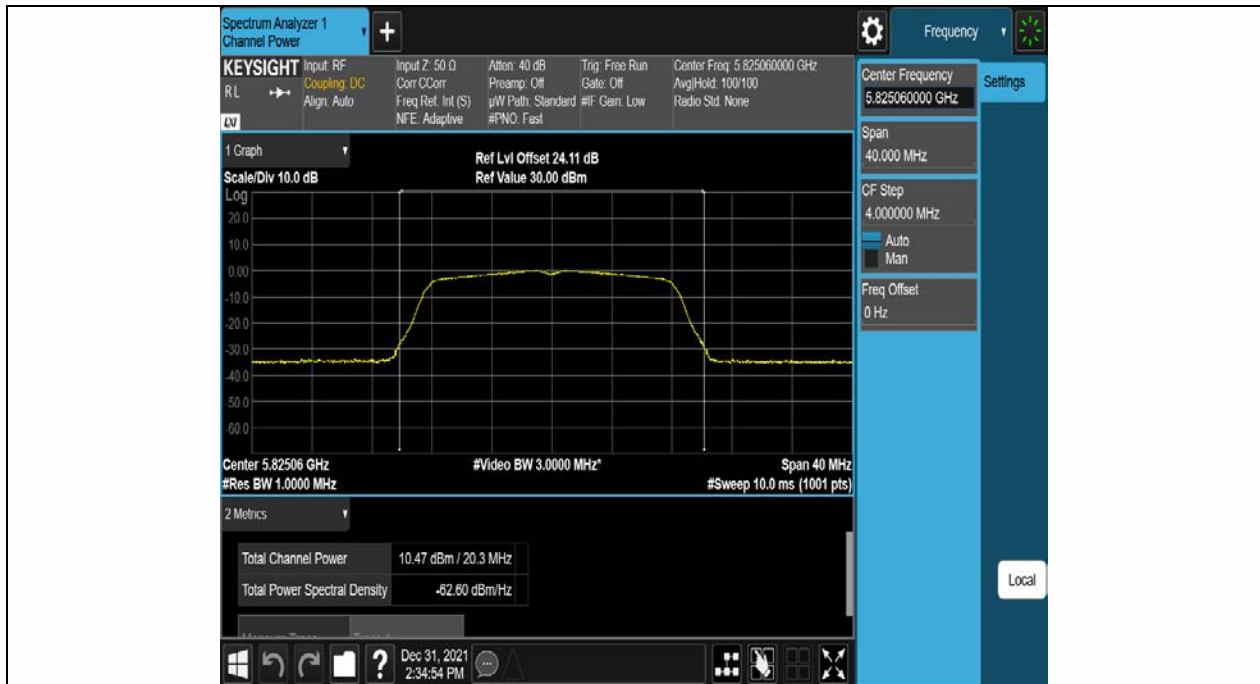
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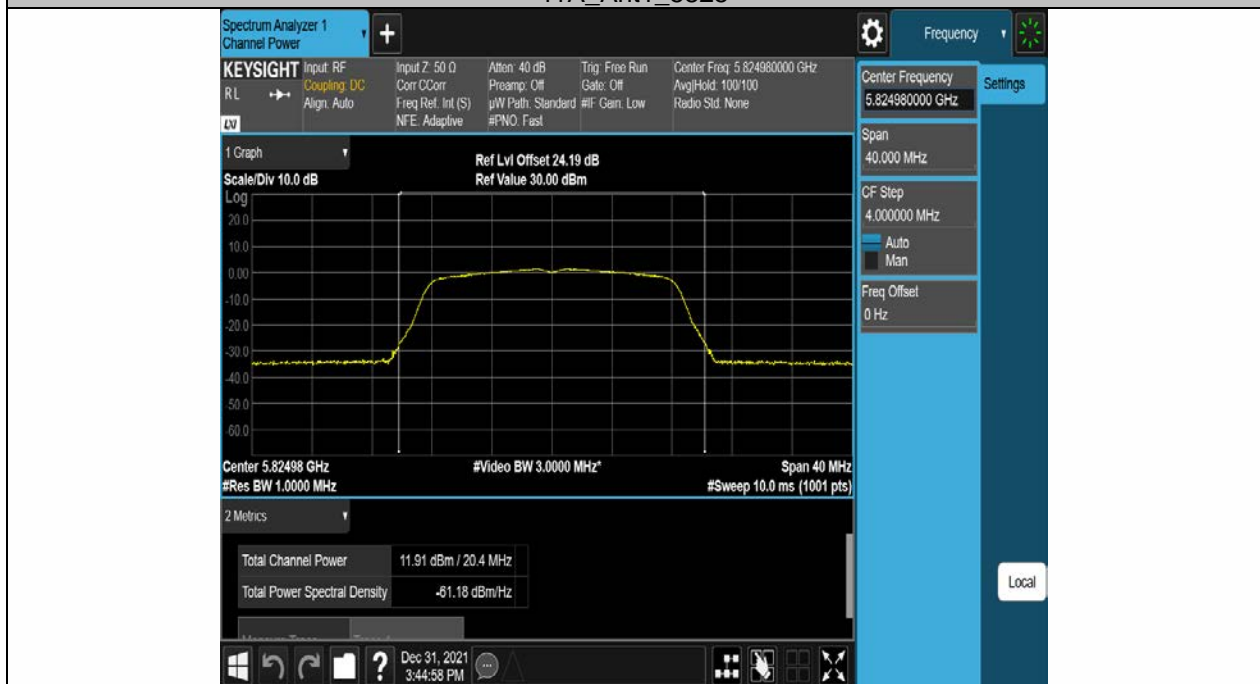
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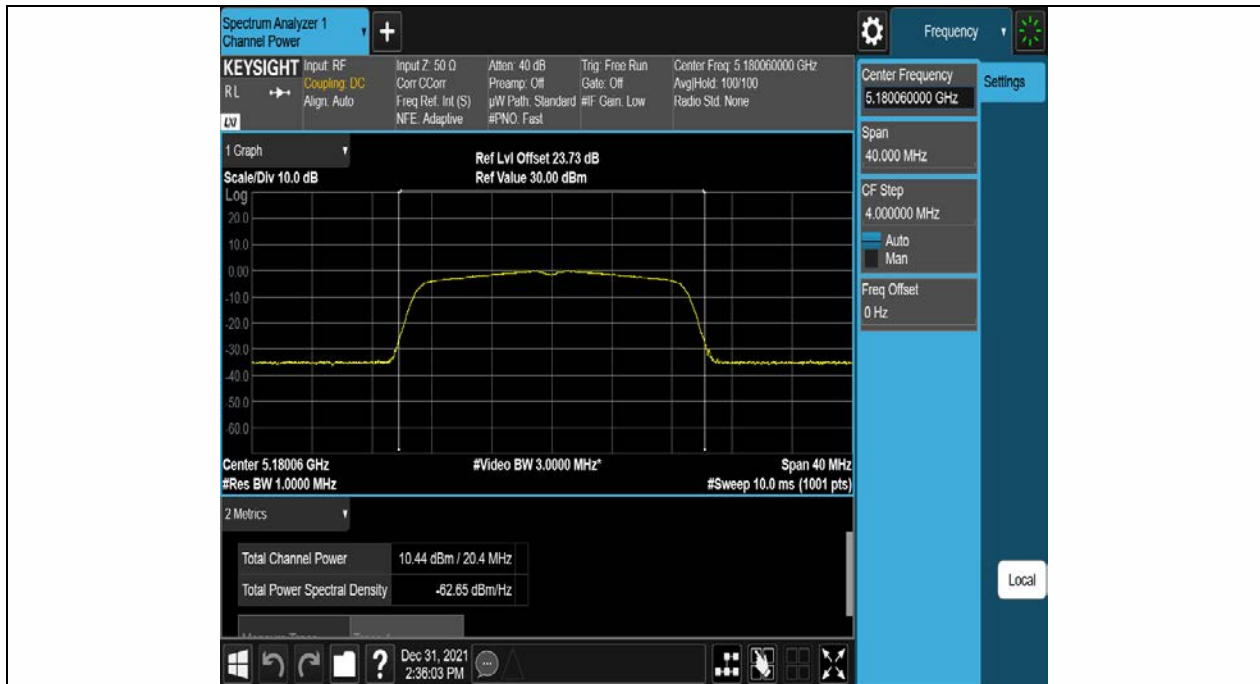
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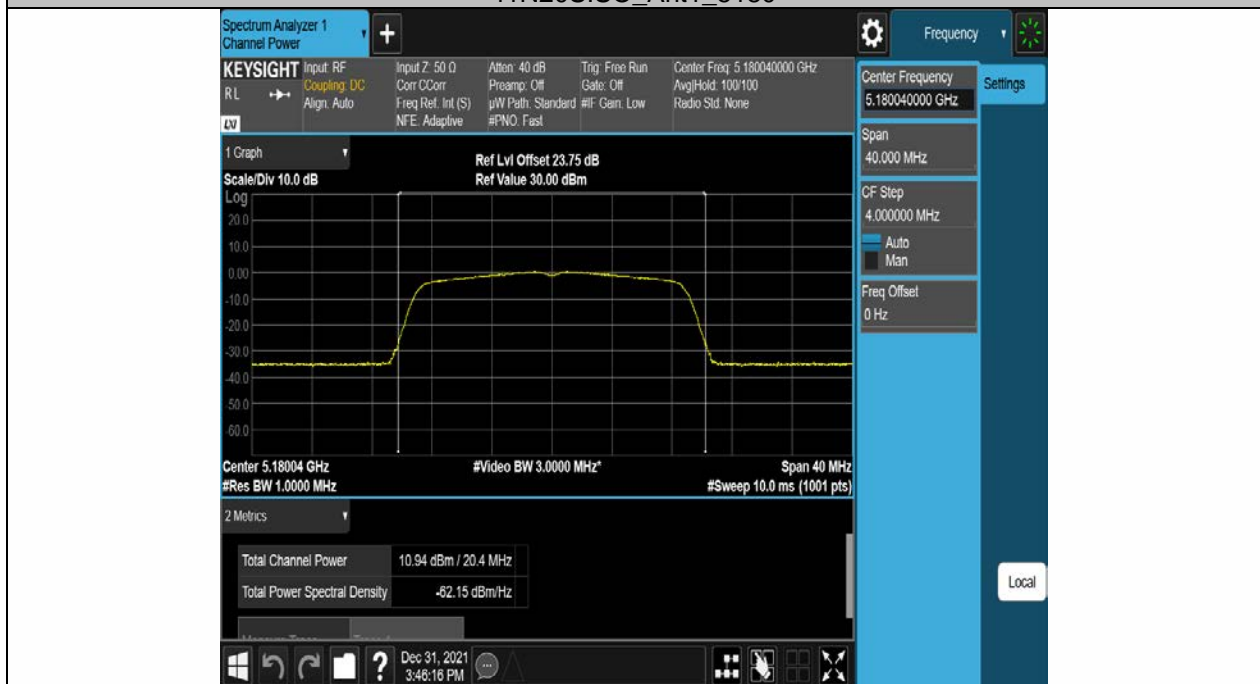
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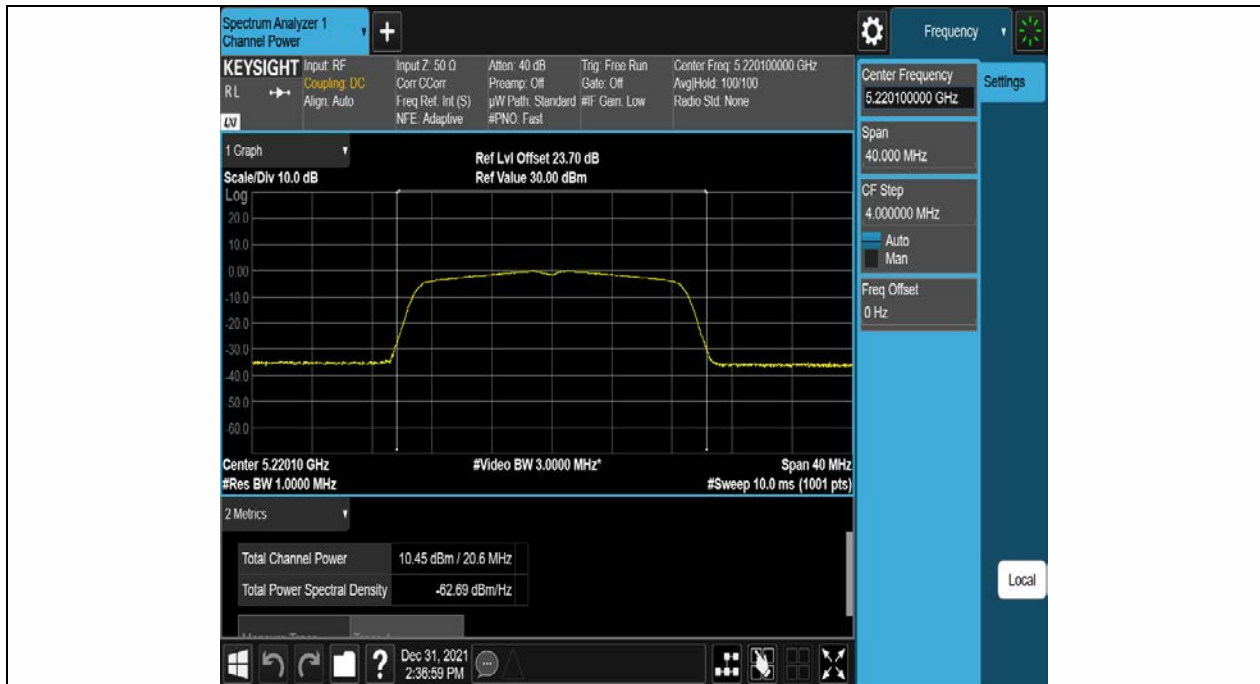
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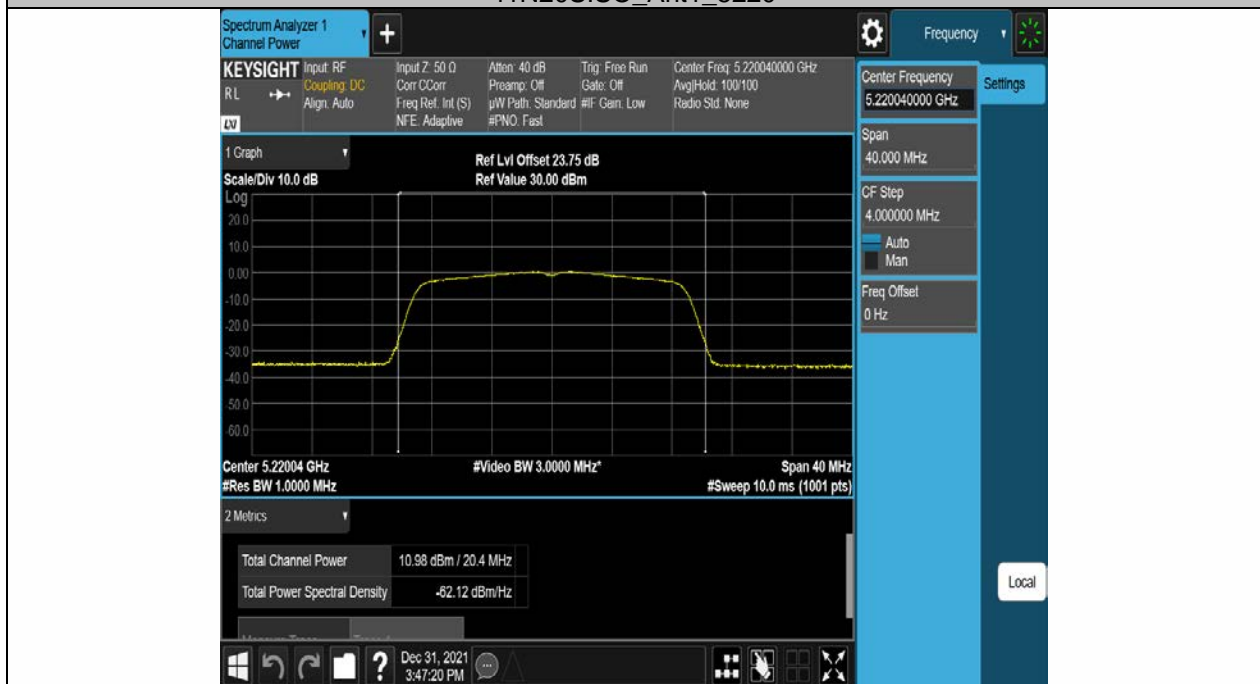
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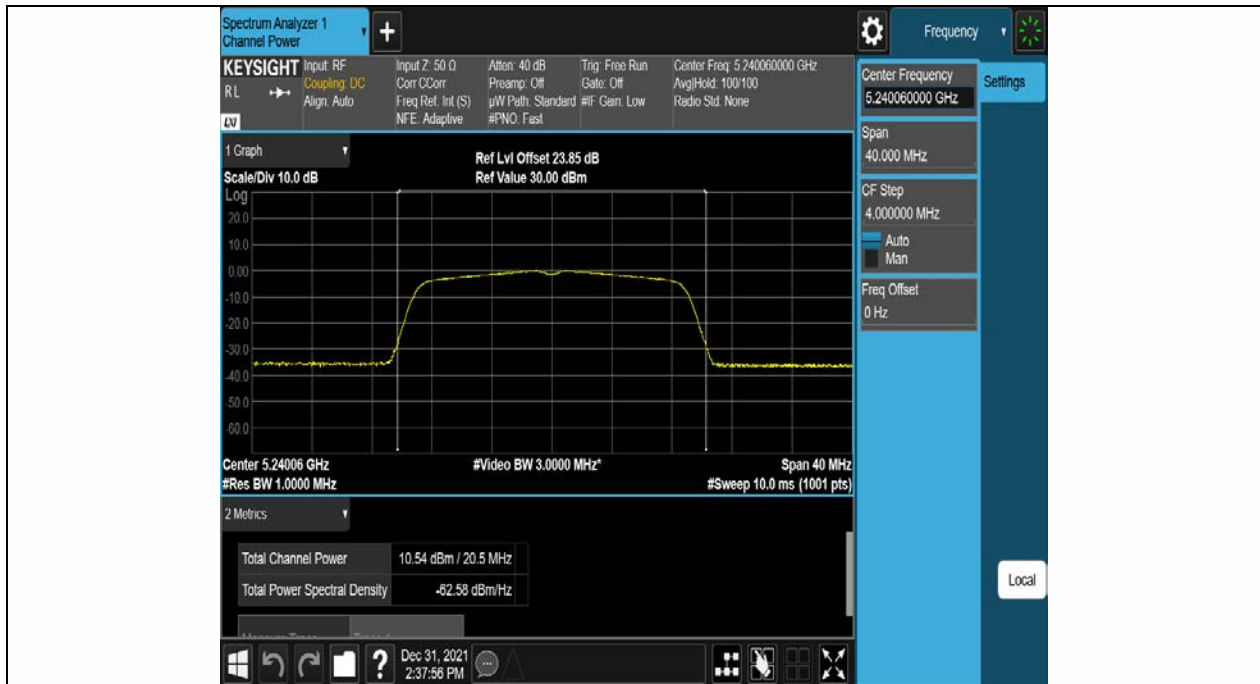
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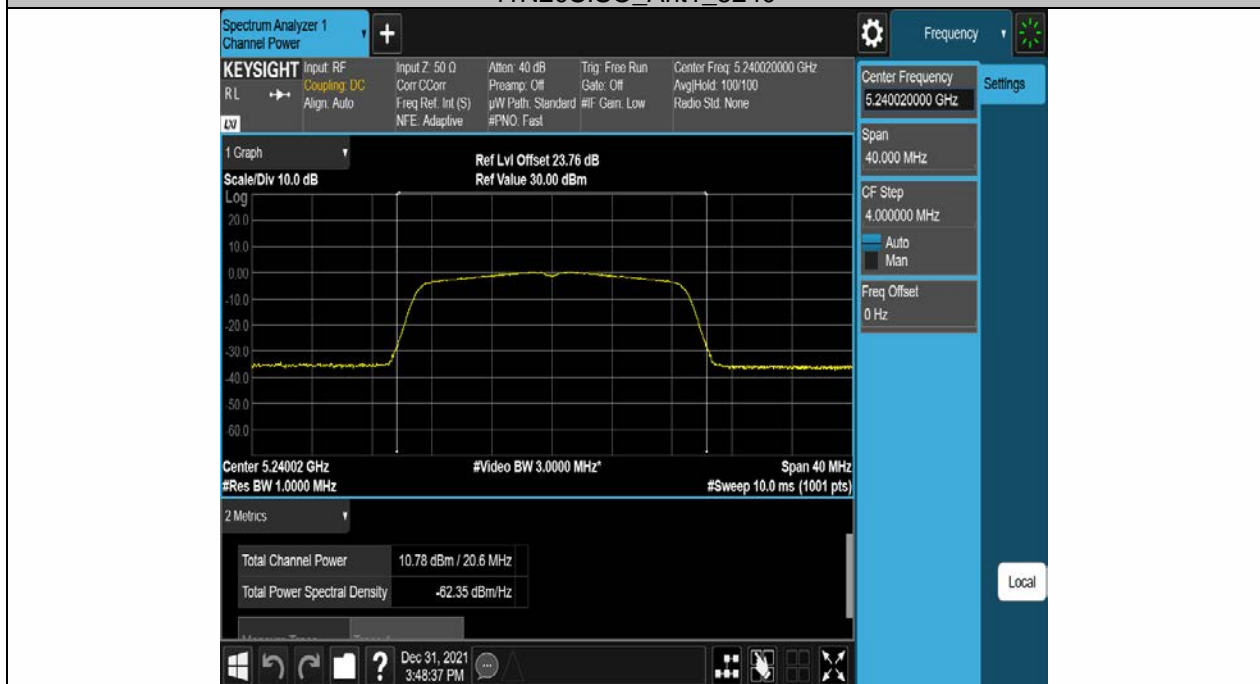
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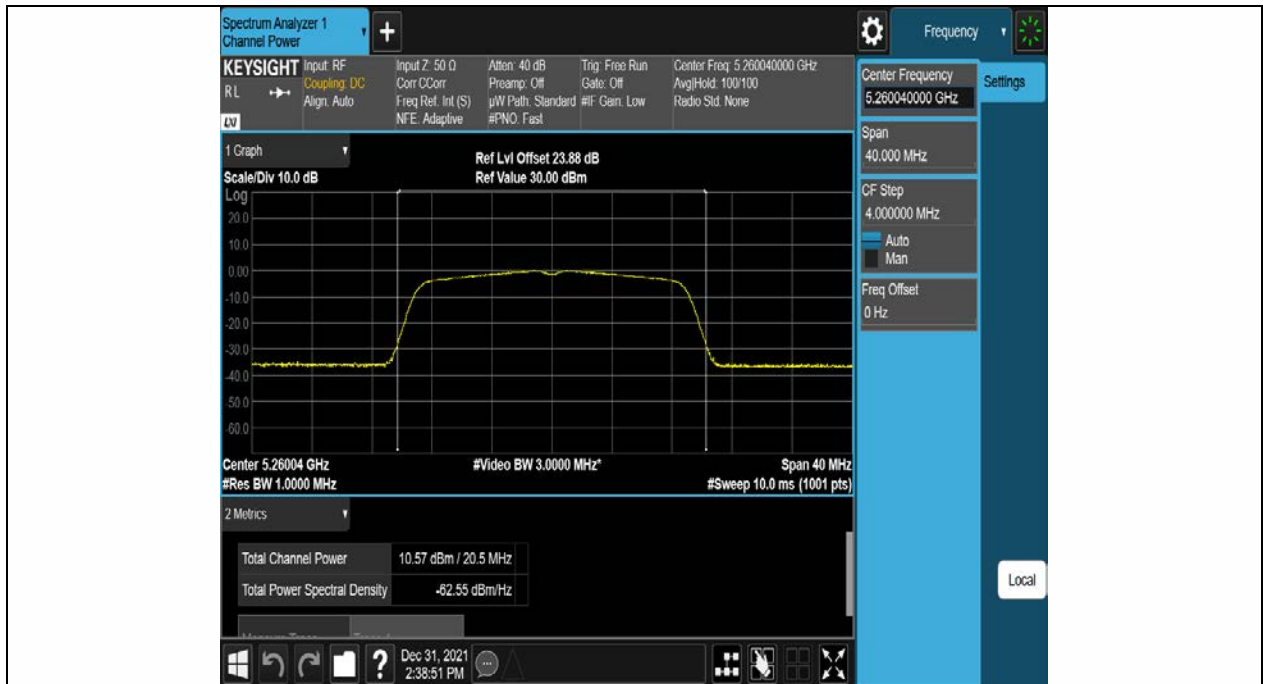
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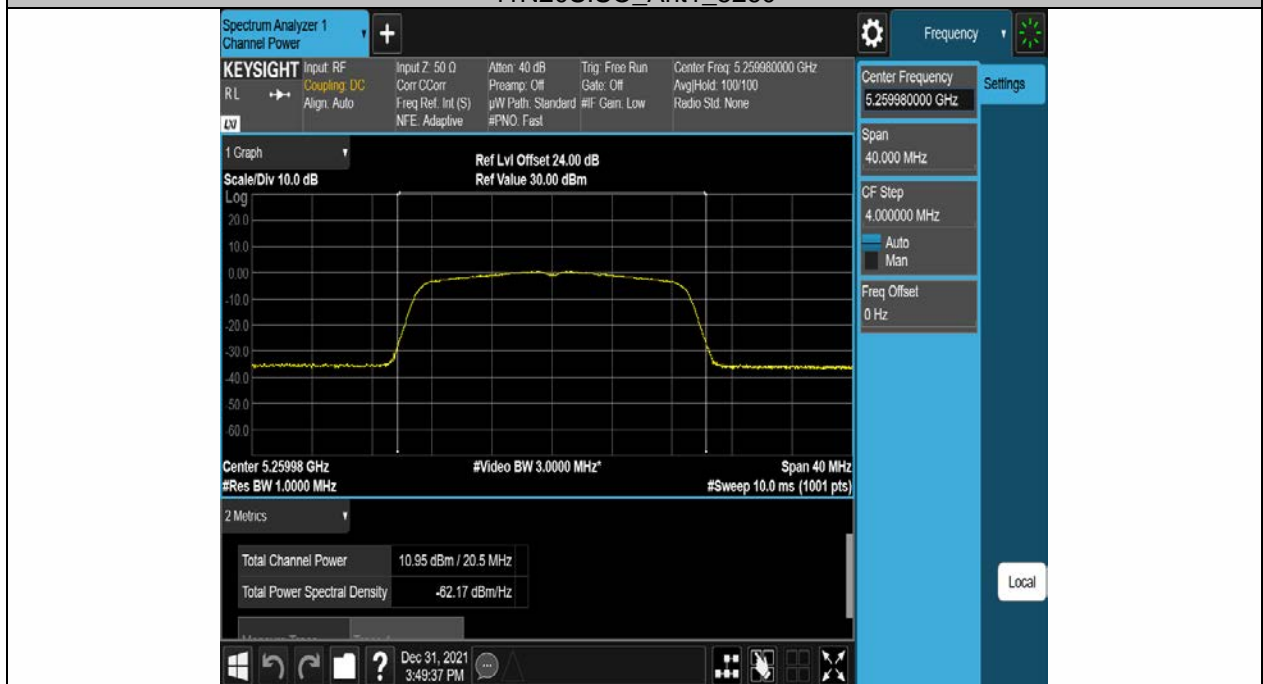
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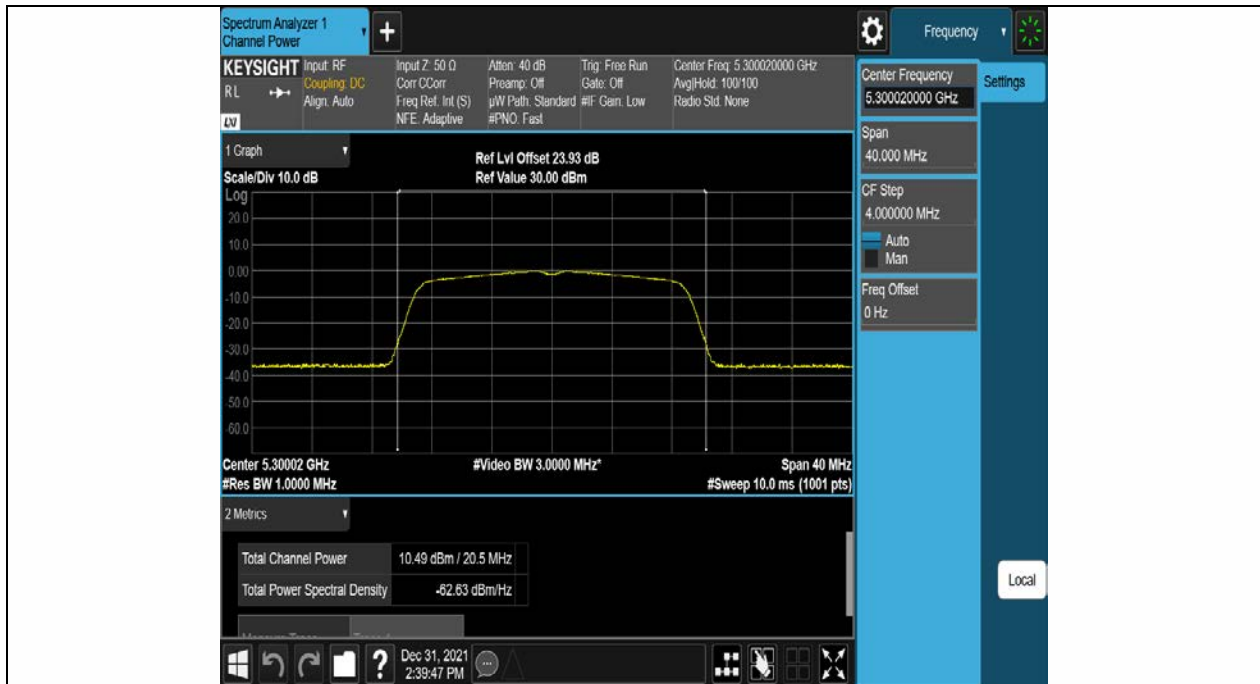
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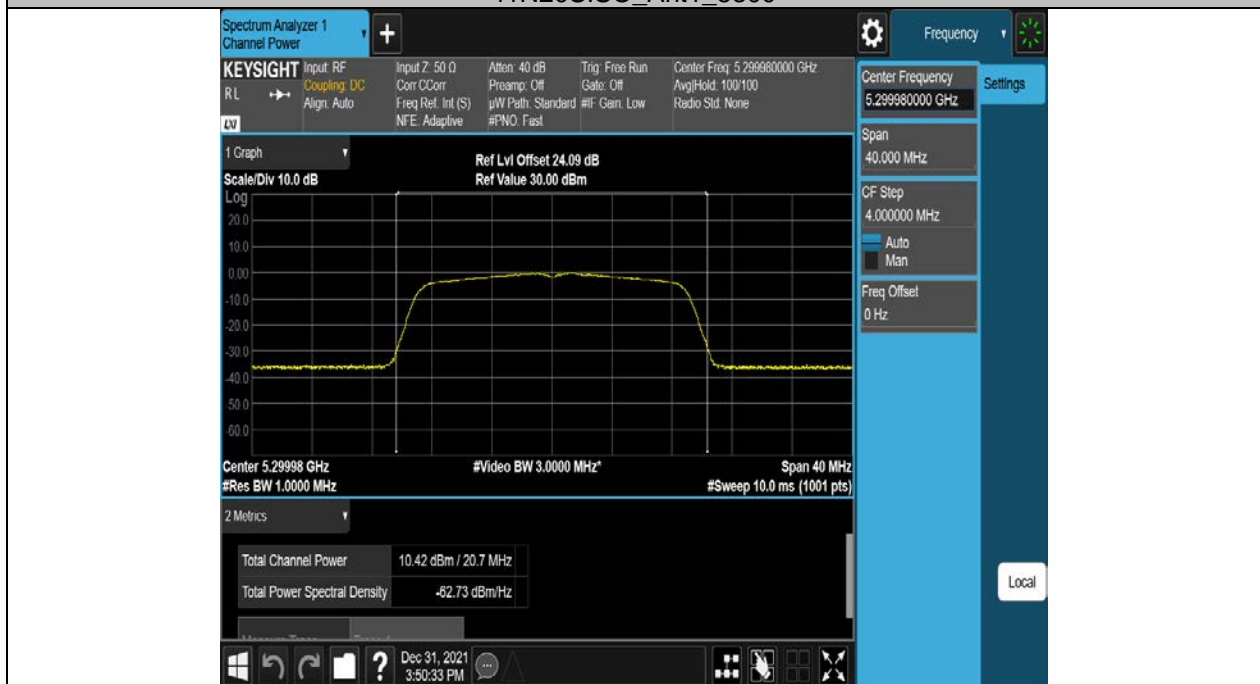
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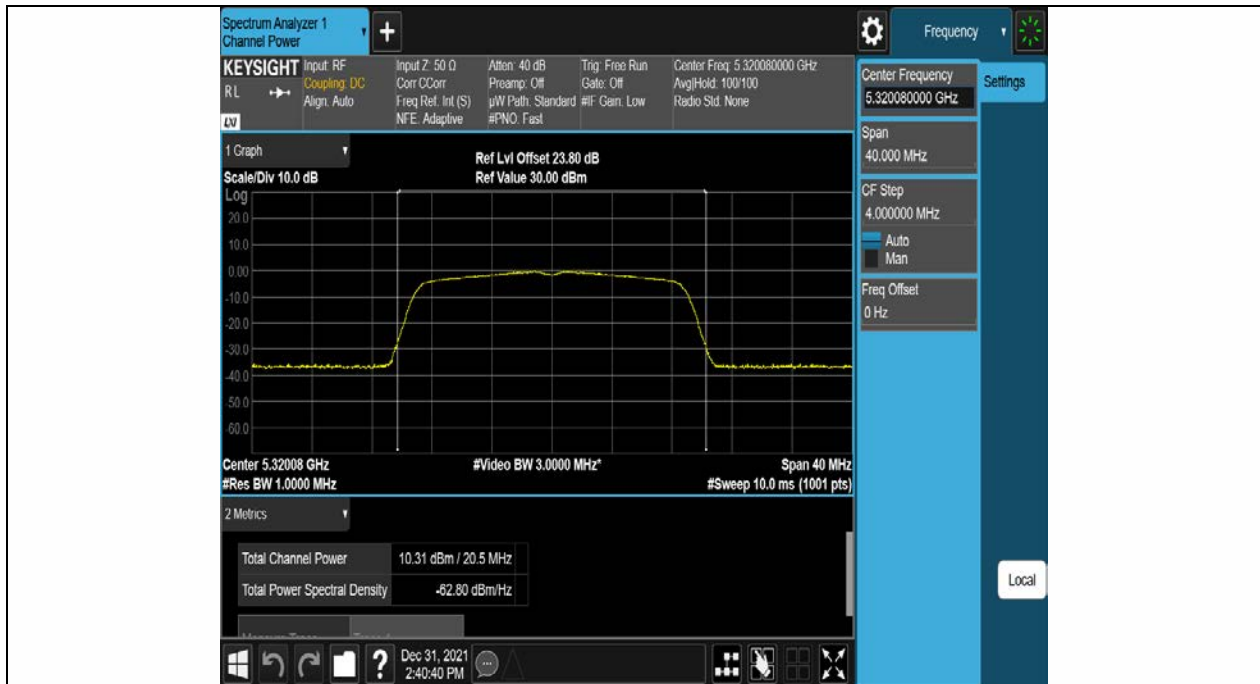
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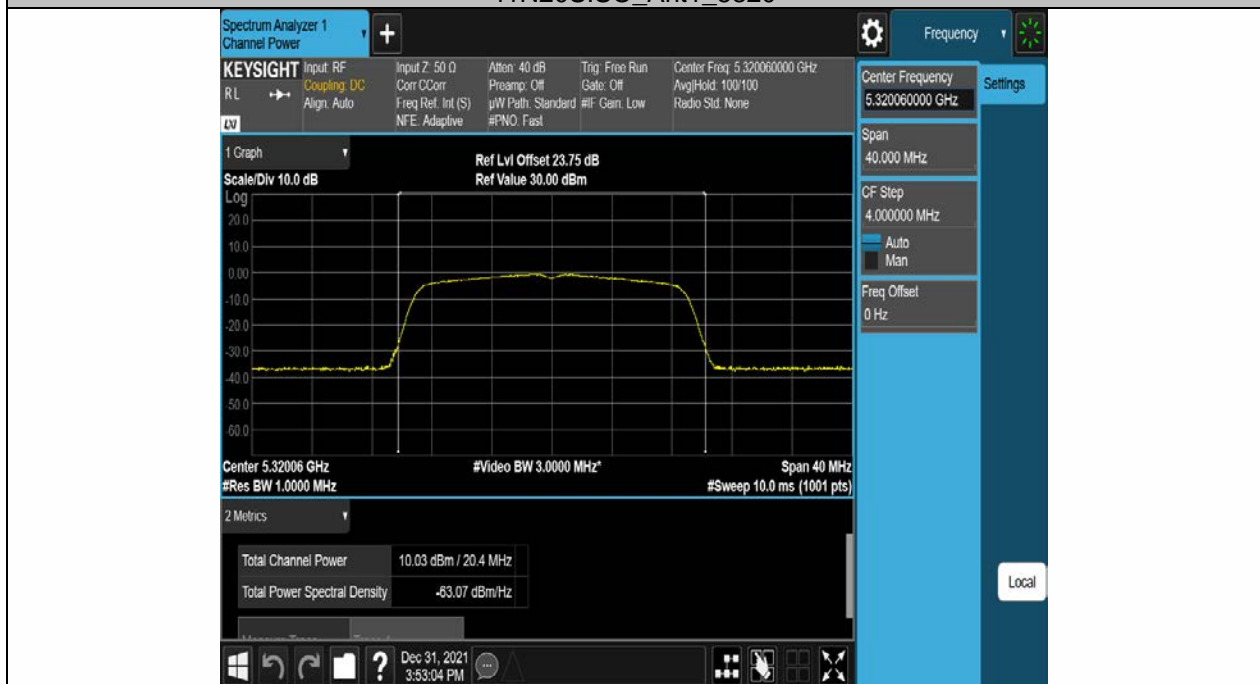
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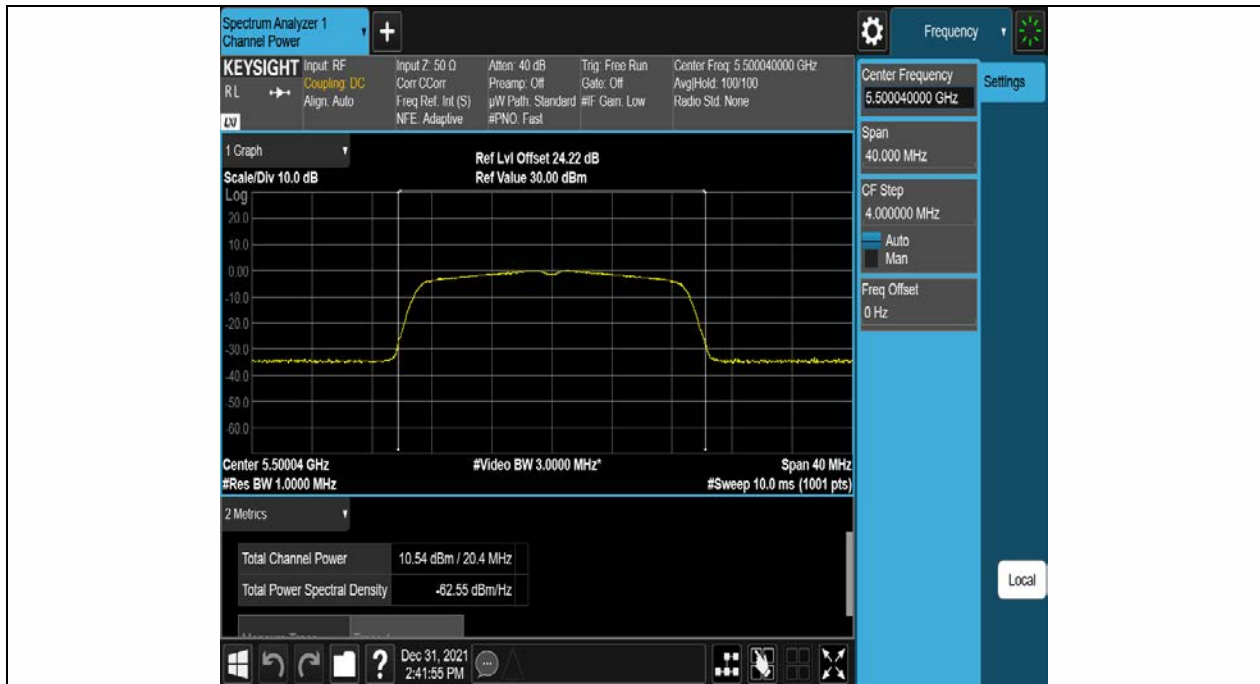
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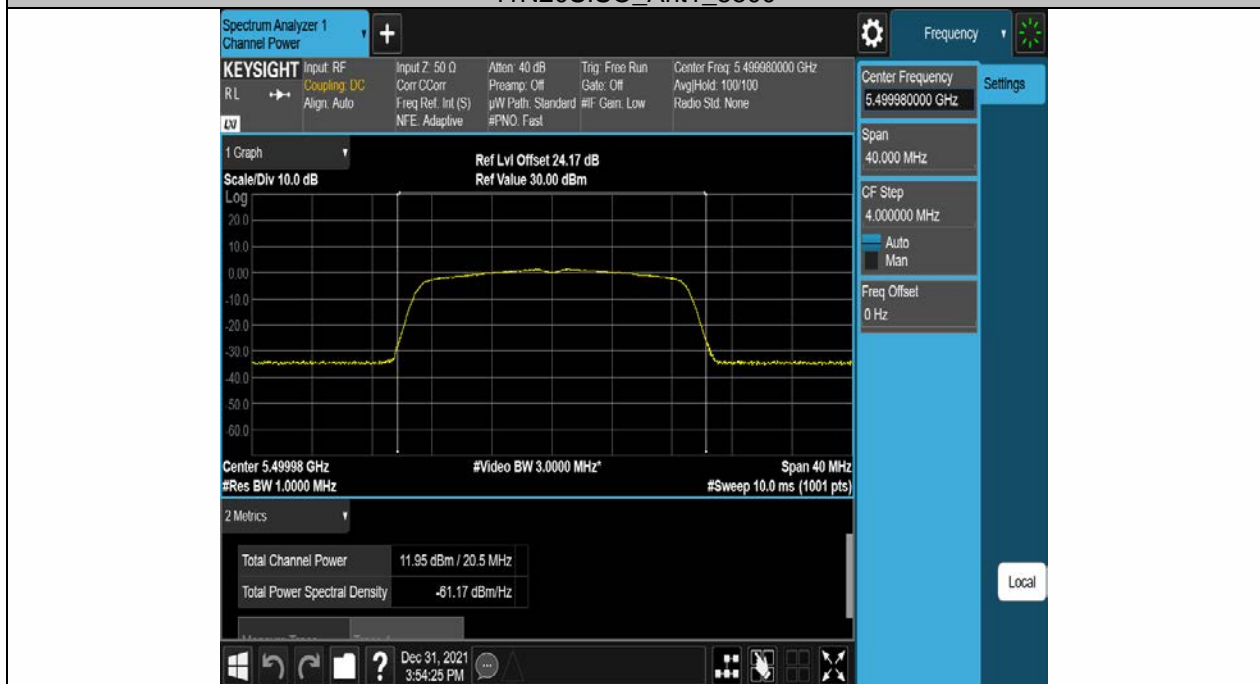
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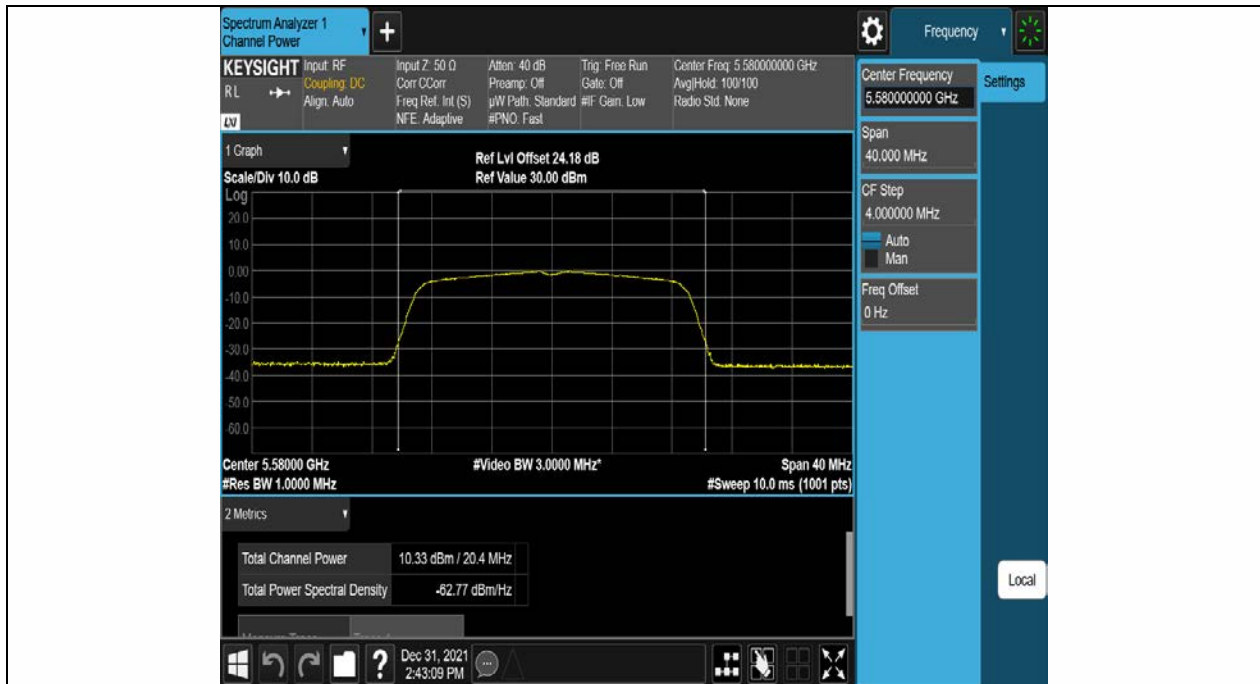
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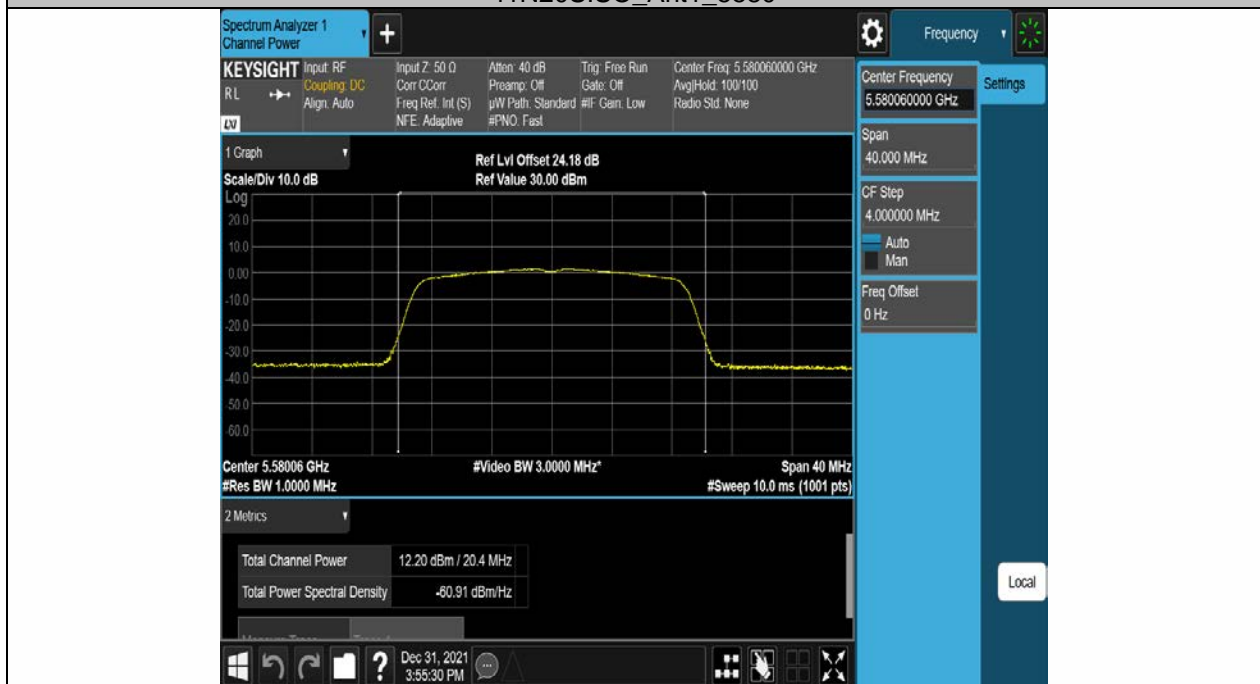
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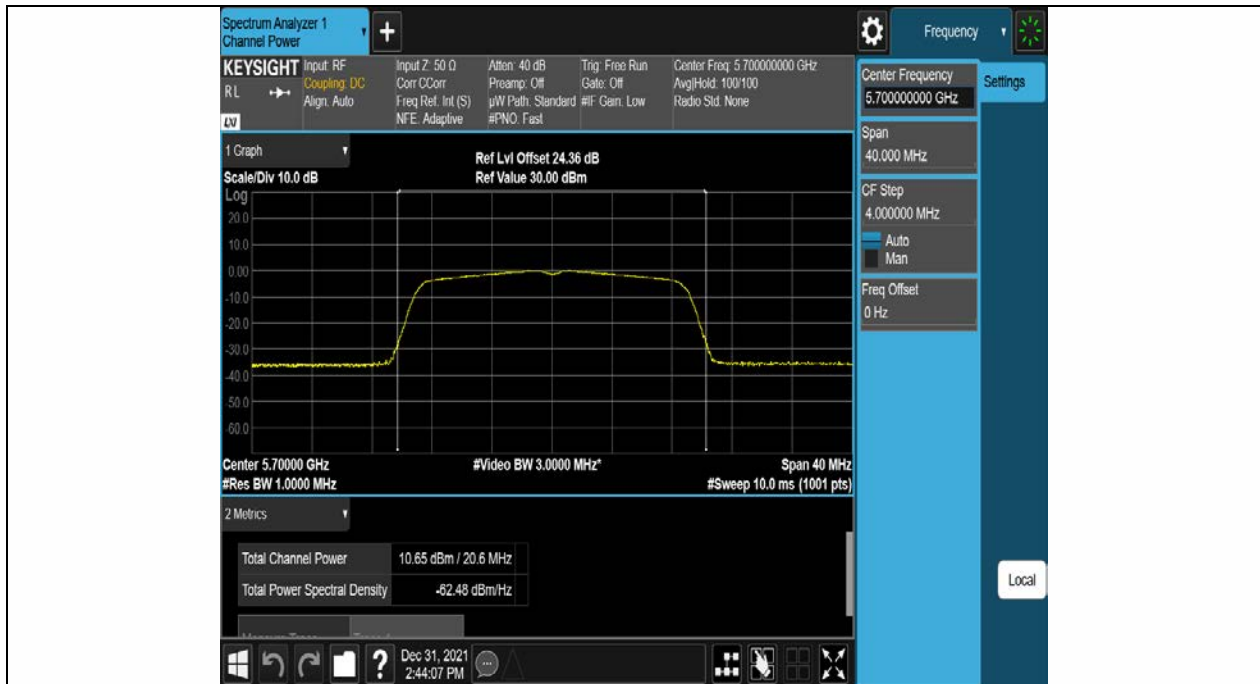
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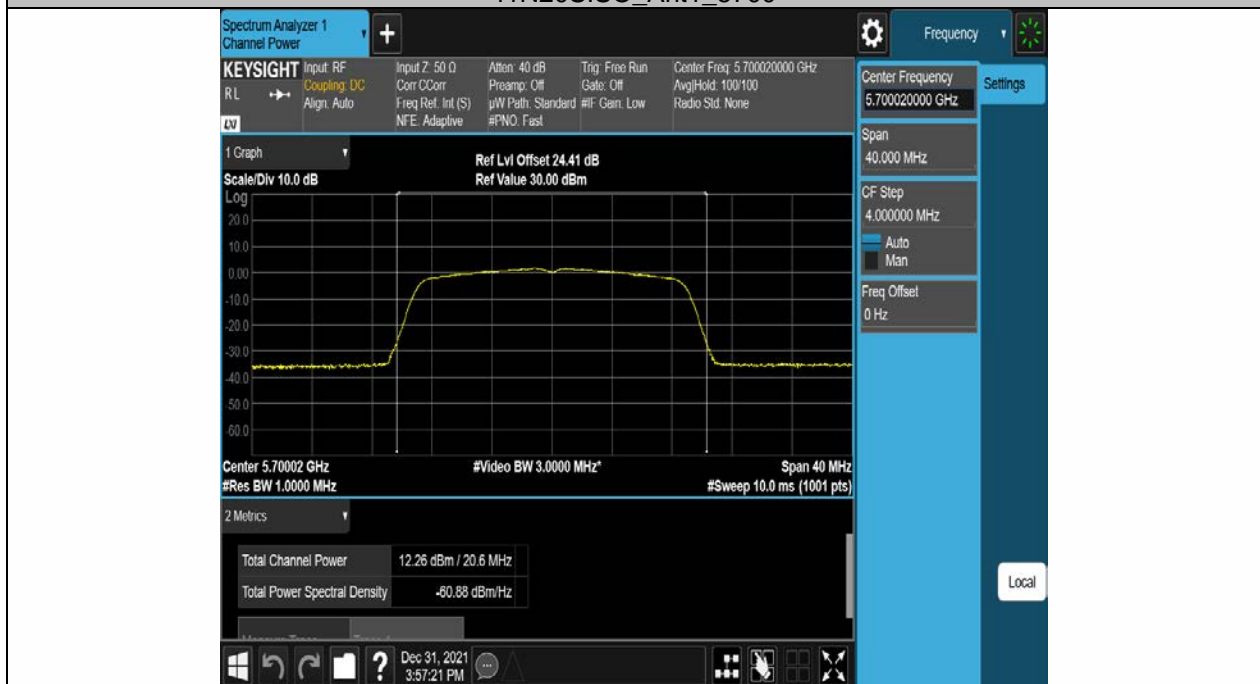
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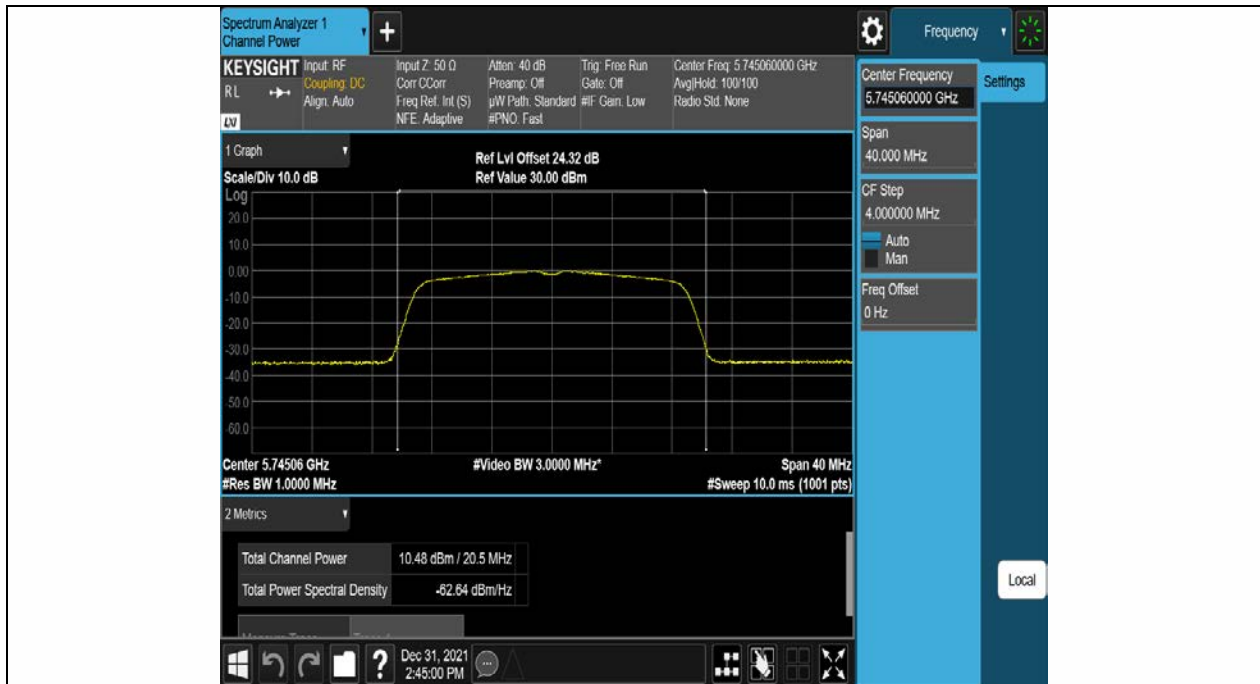
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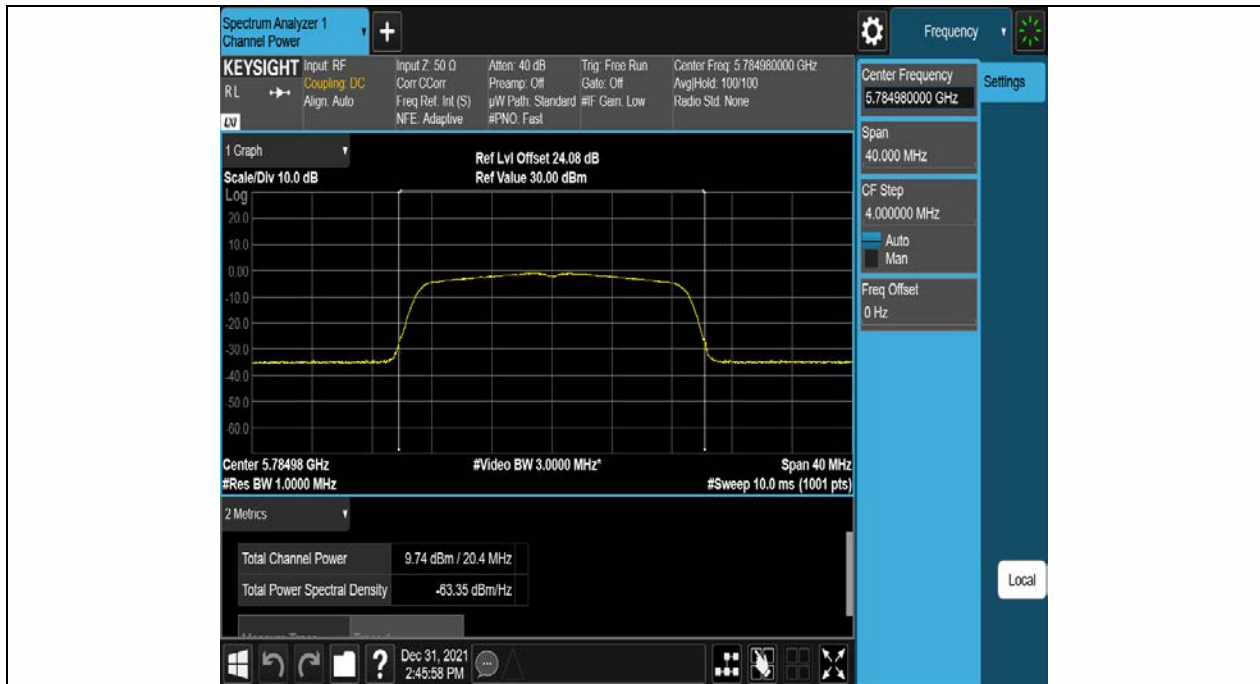
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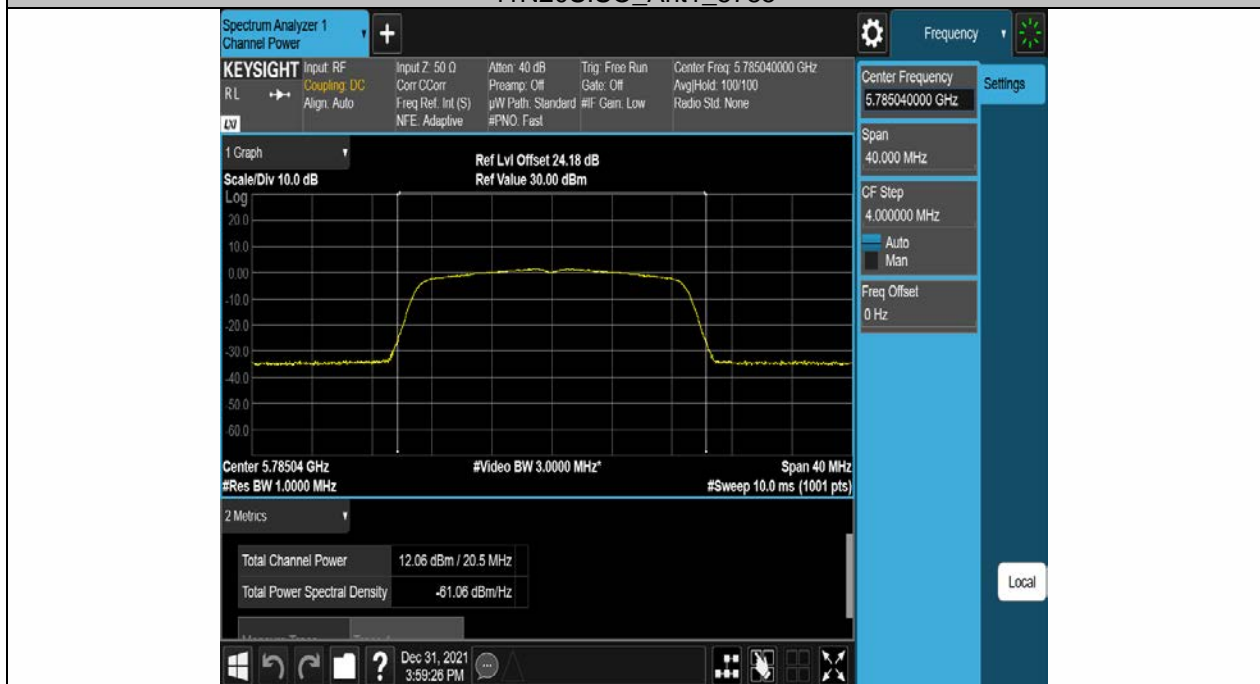
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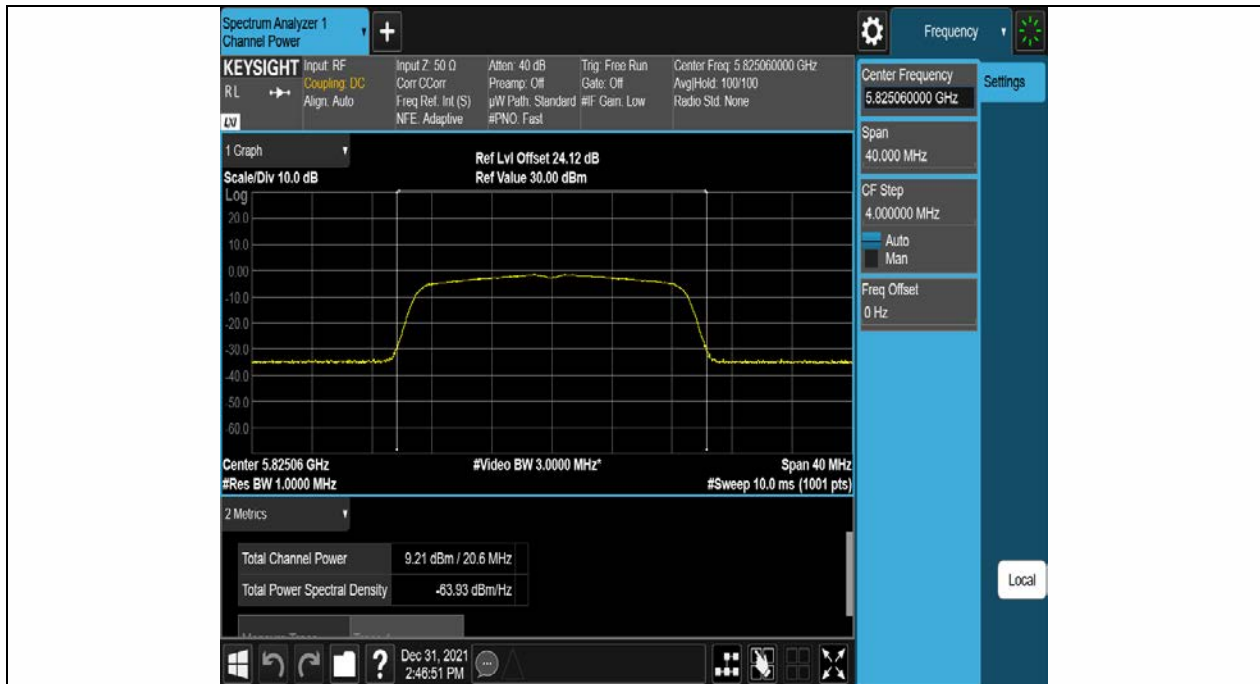
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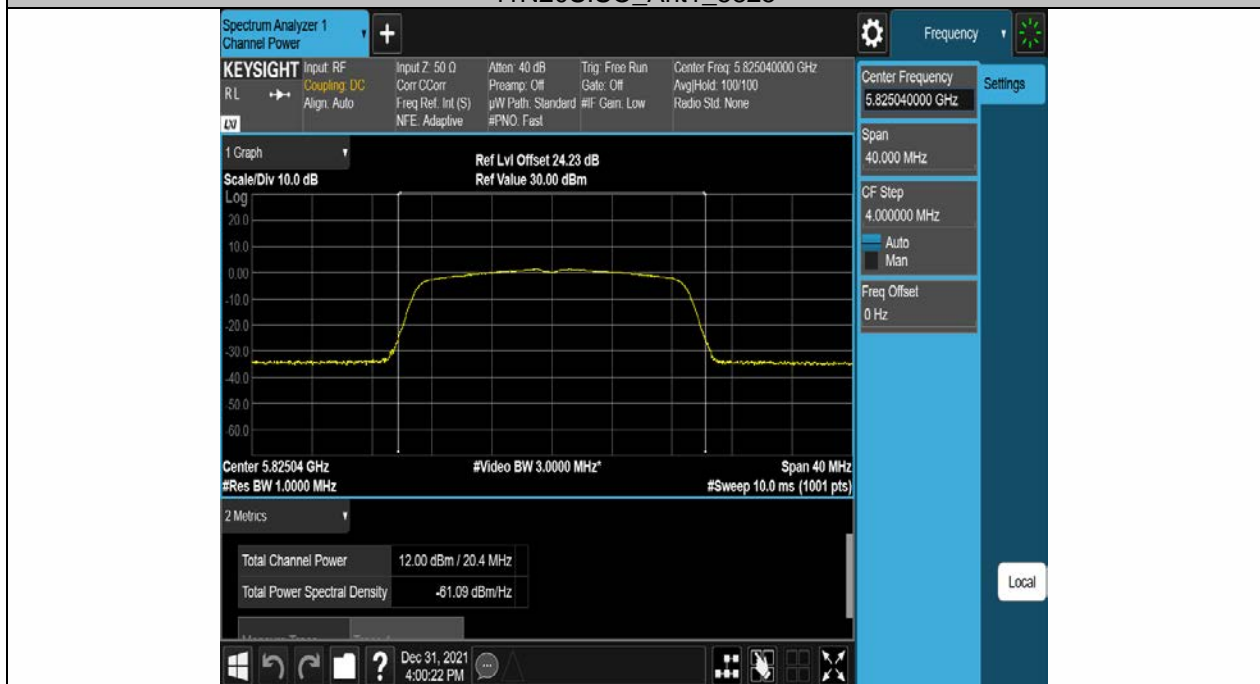
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11N20SISO_Ant2_5785



11N20SISO_Ant1_5825



11N20SISO_Ant2_5825