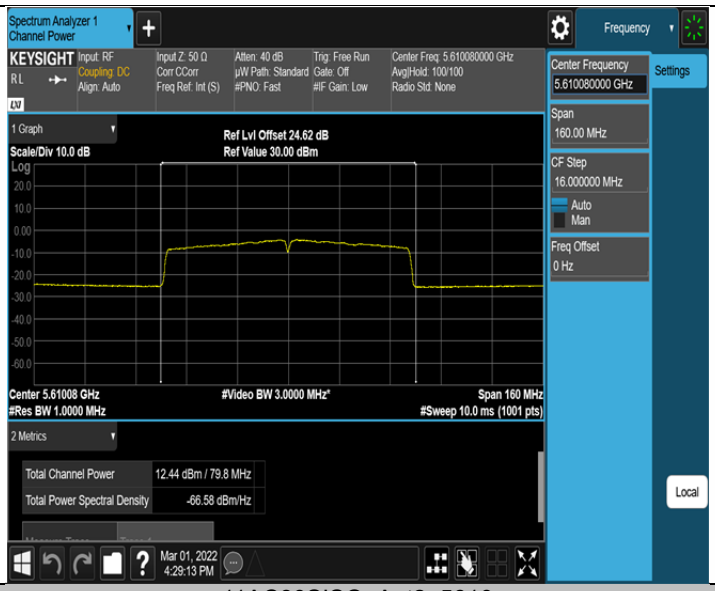

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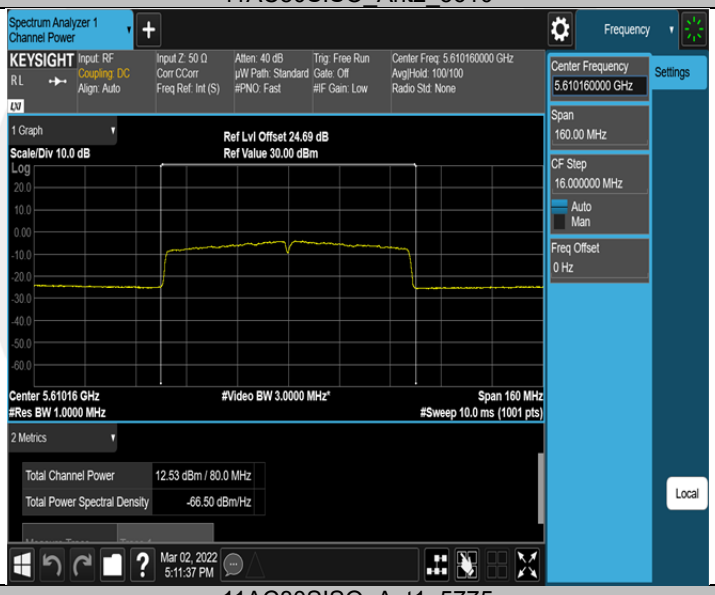

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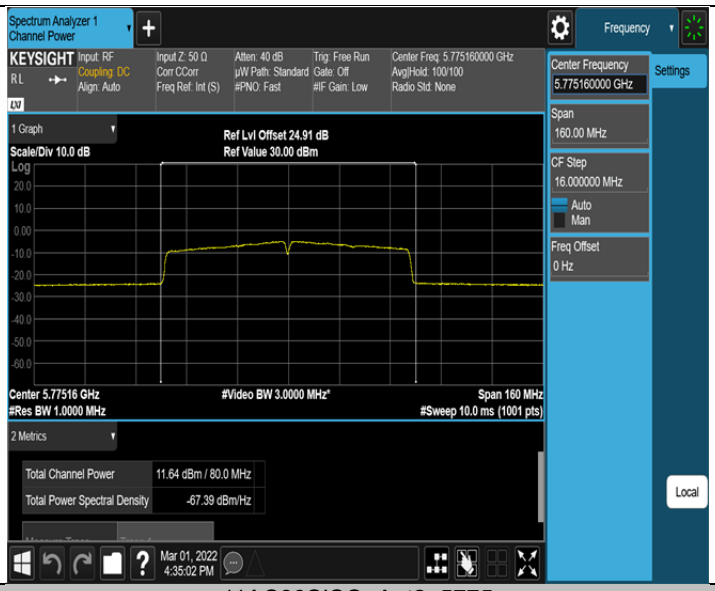

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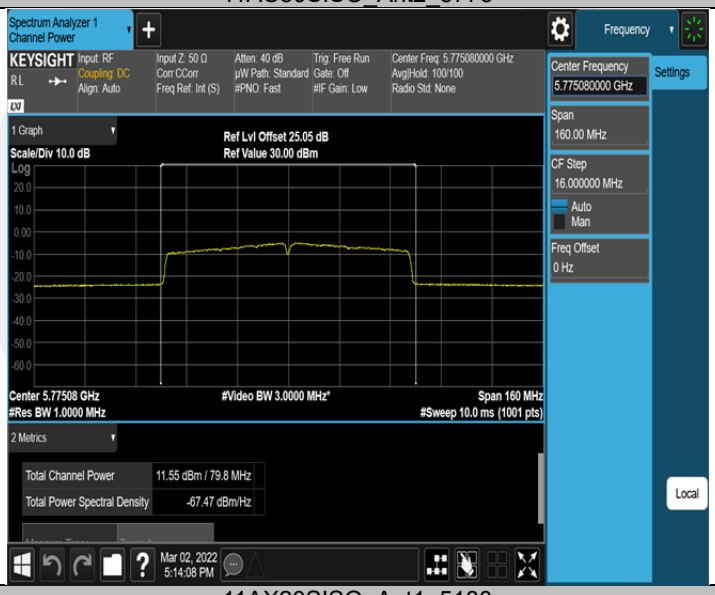

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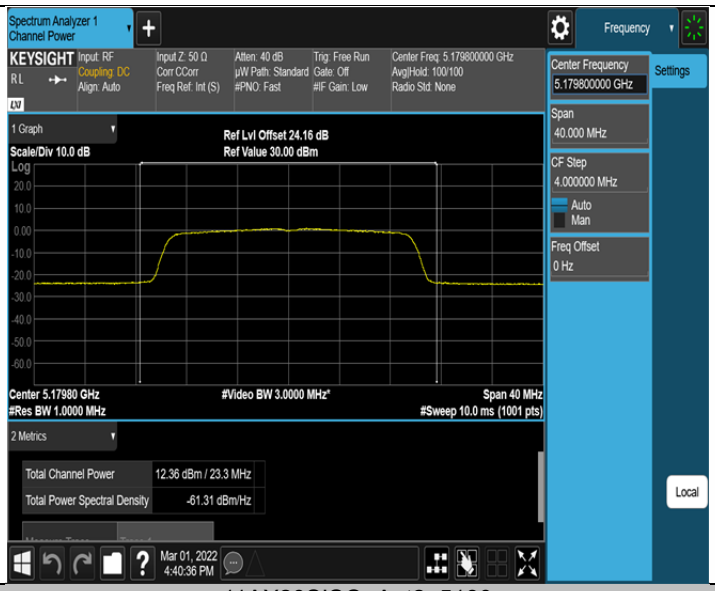

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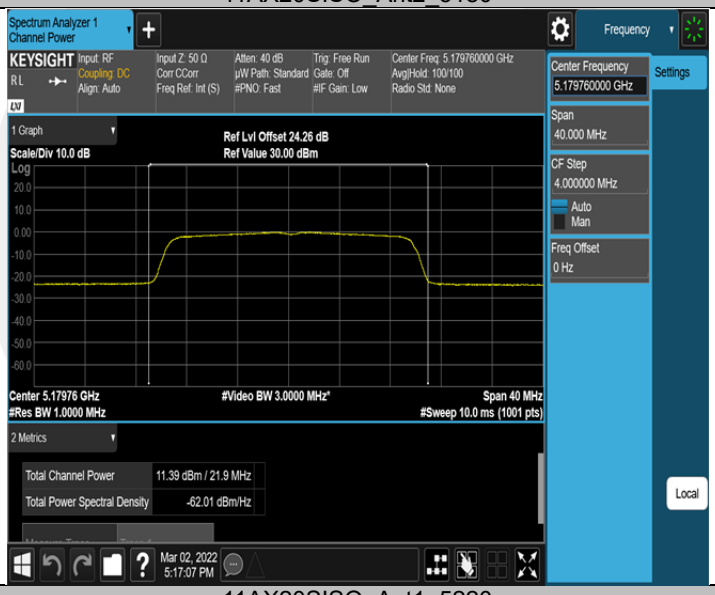

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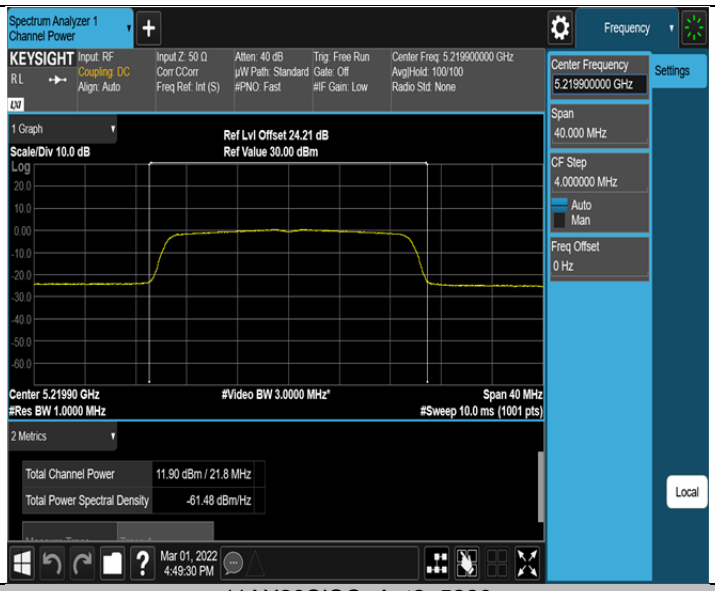

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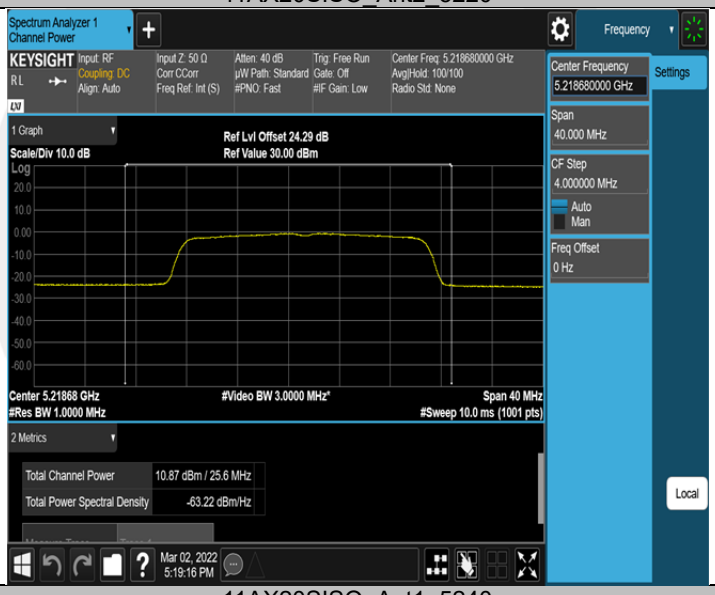

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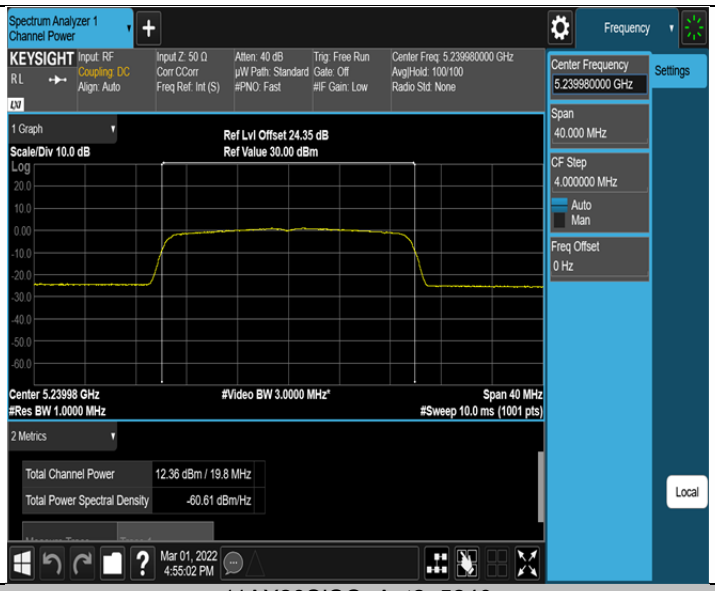

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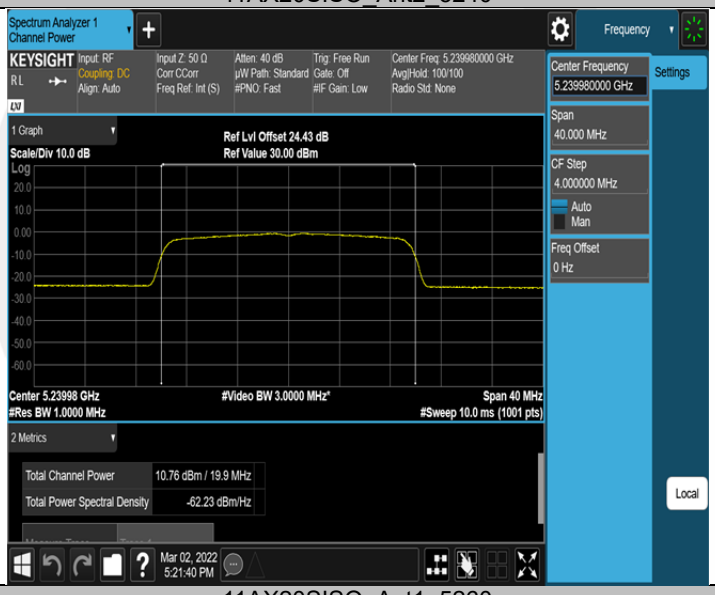

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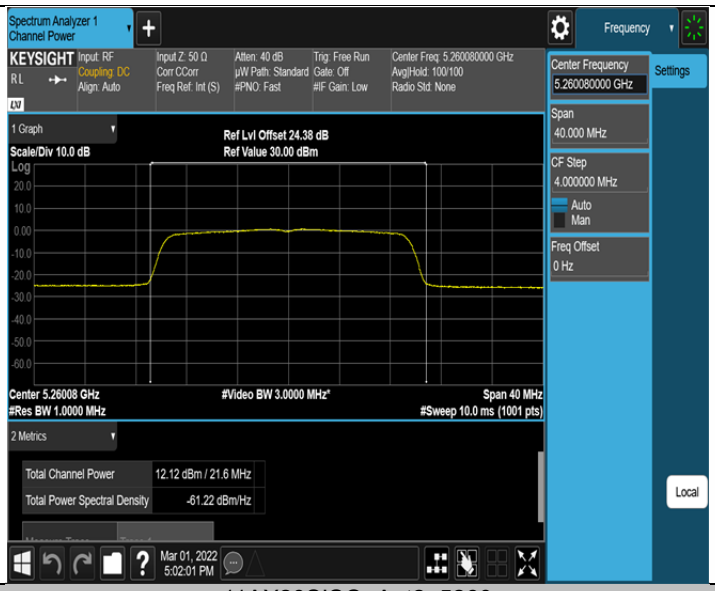

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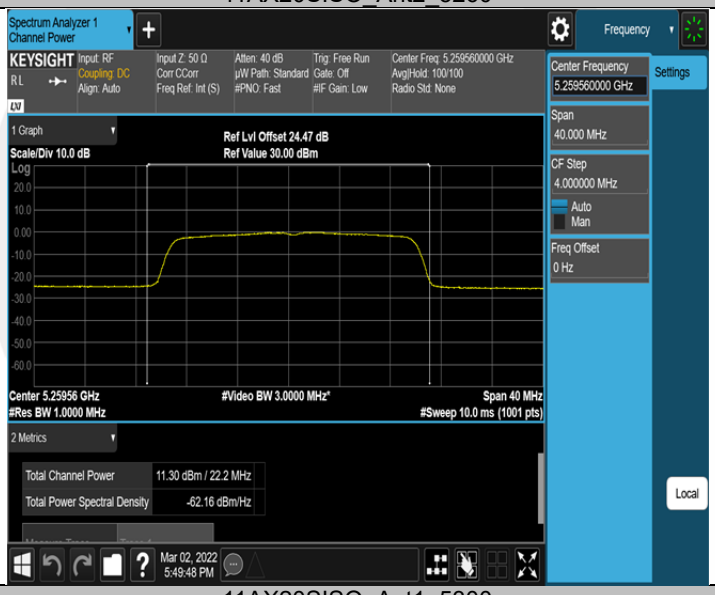

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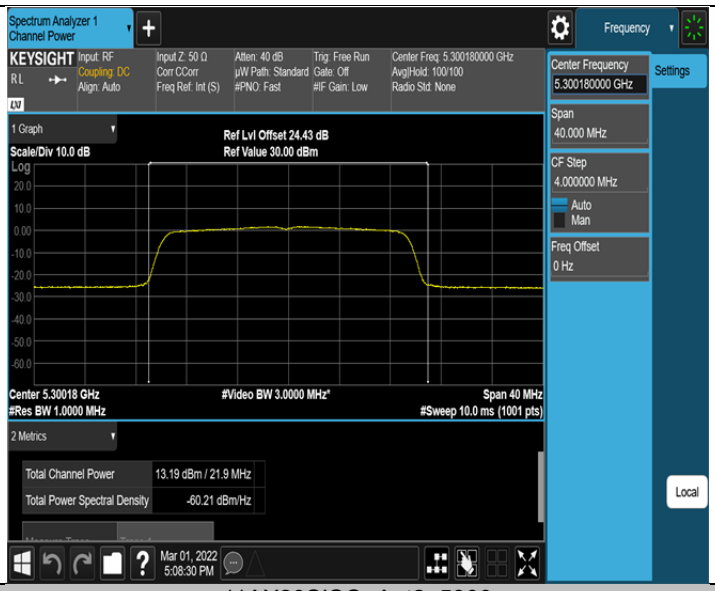

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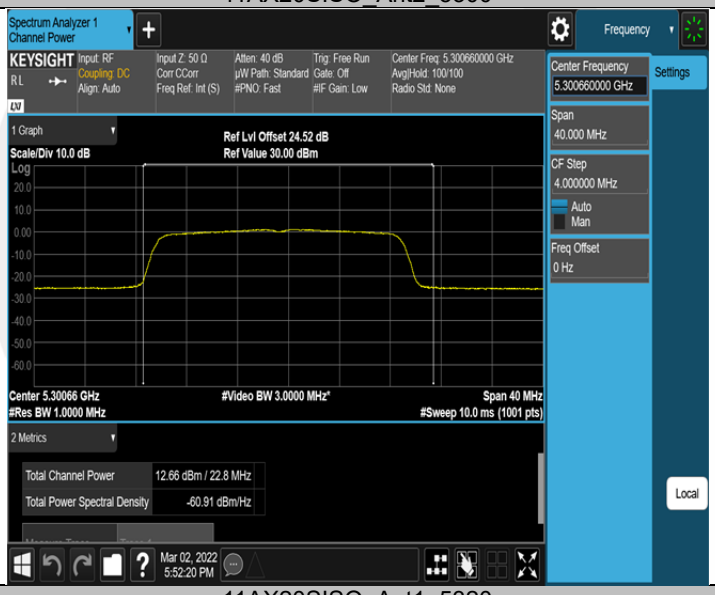

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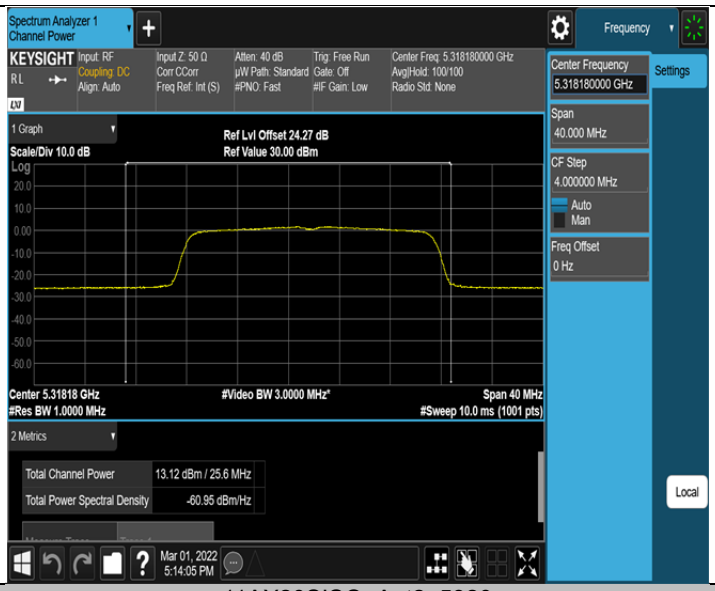

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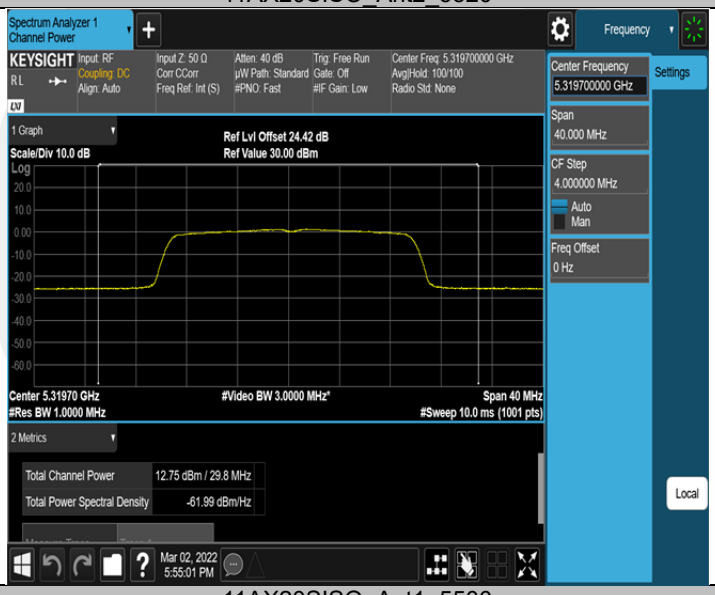

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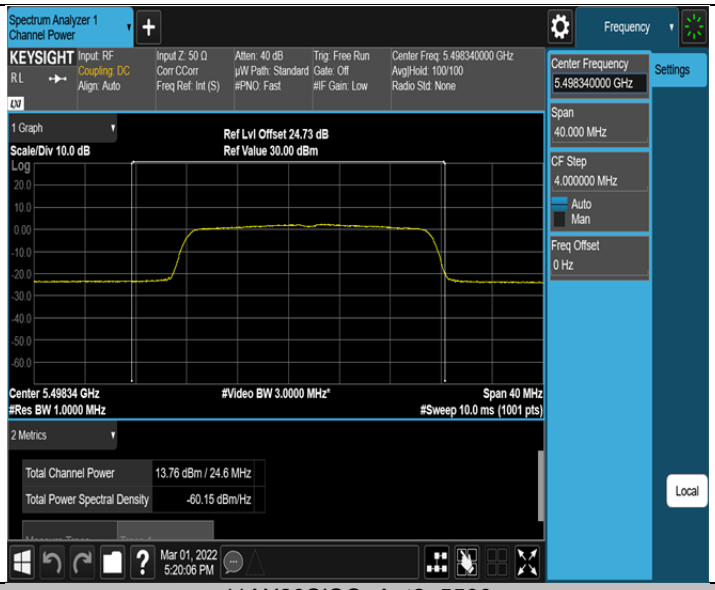

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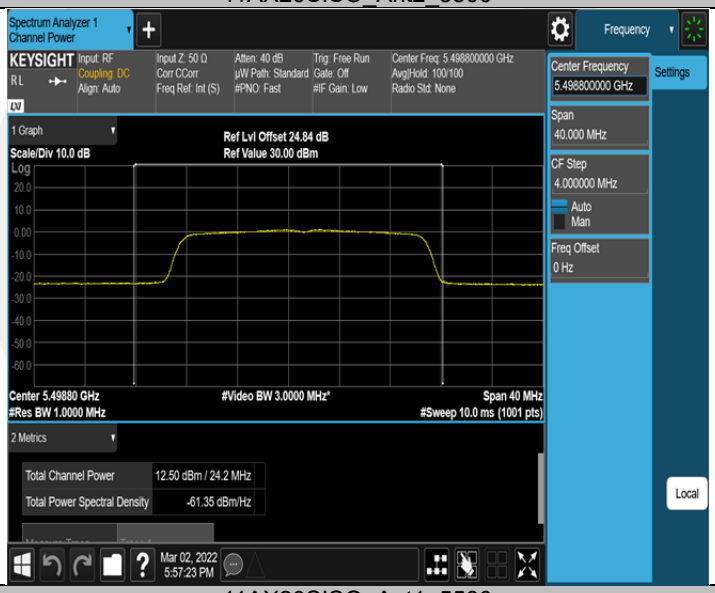

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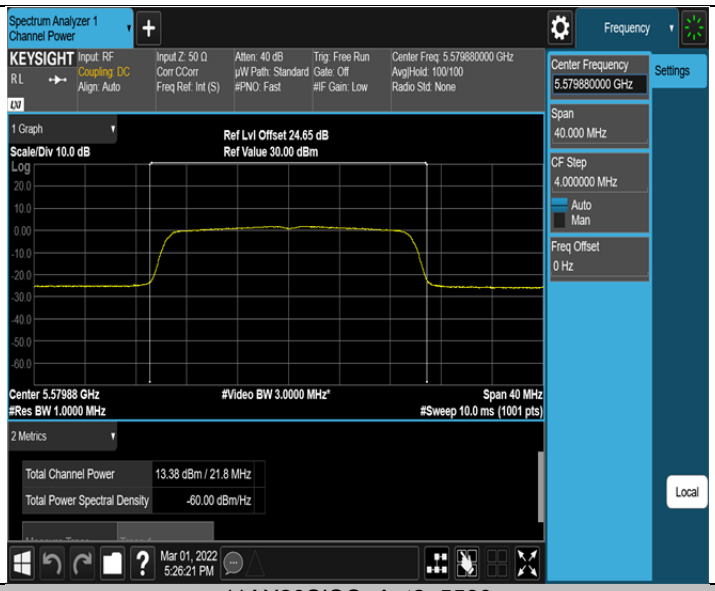

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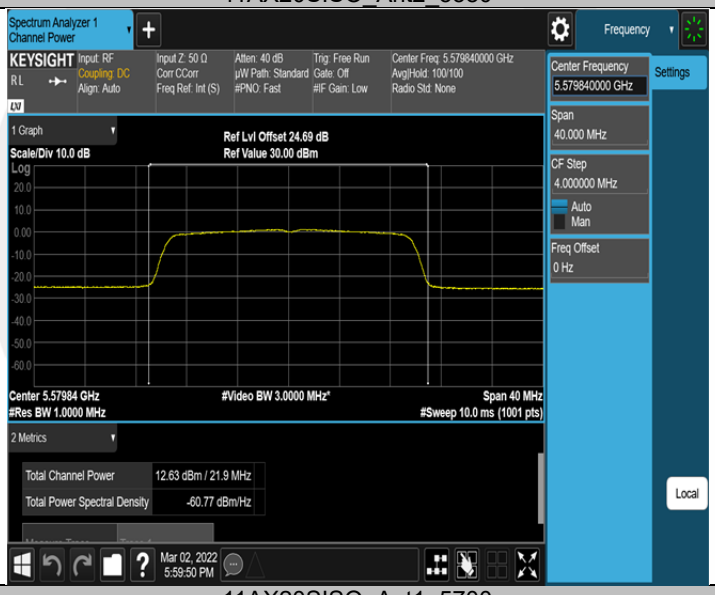

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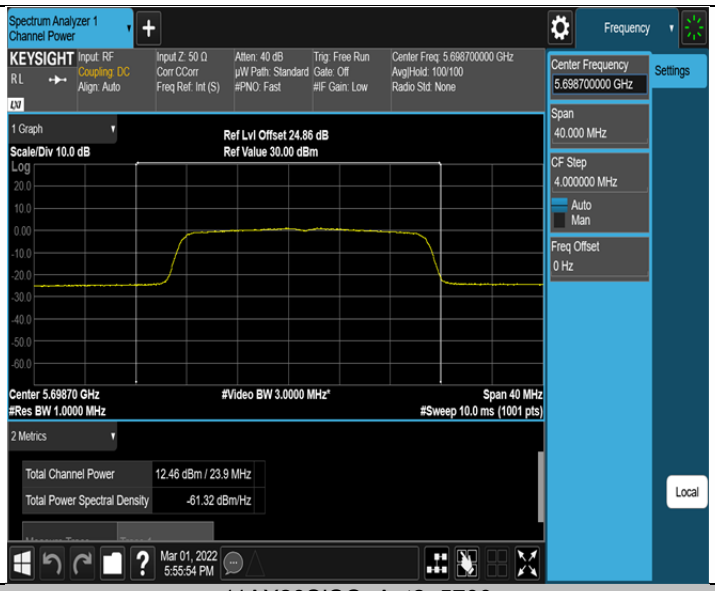

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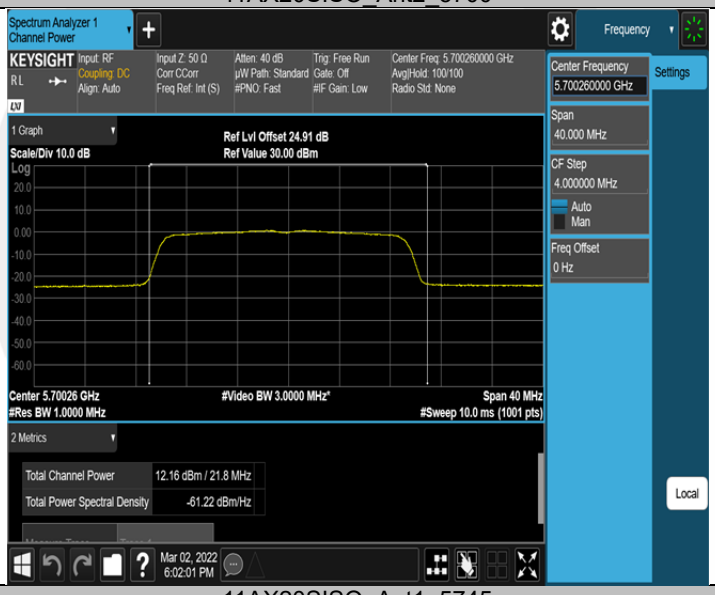

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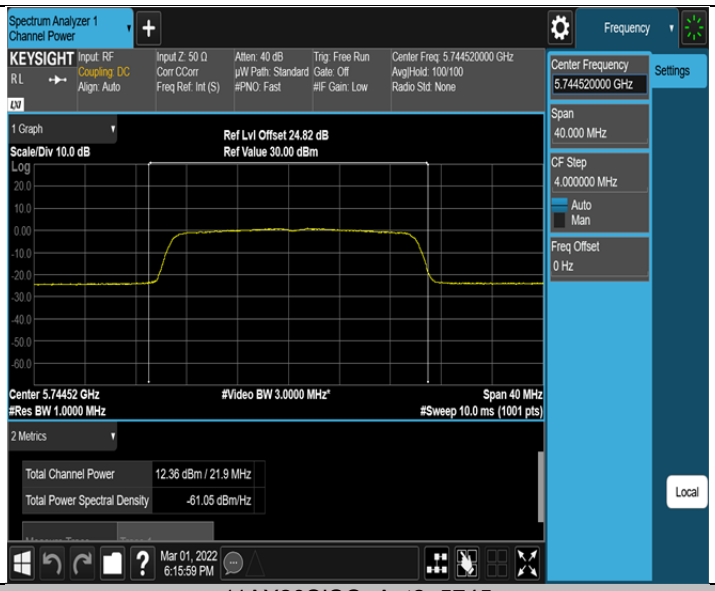

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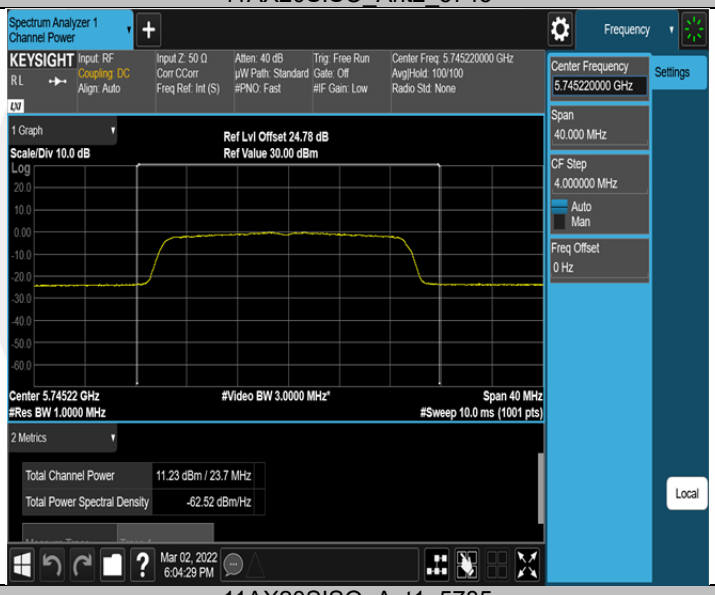

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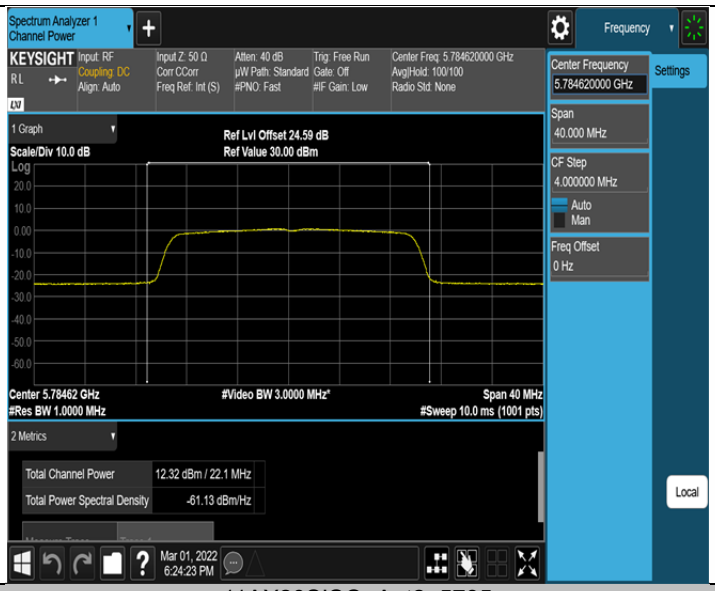

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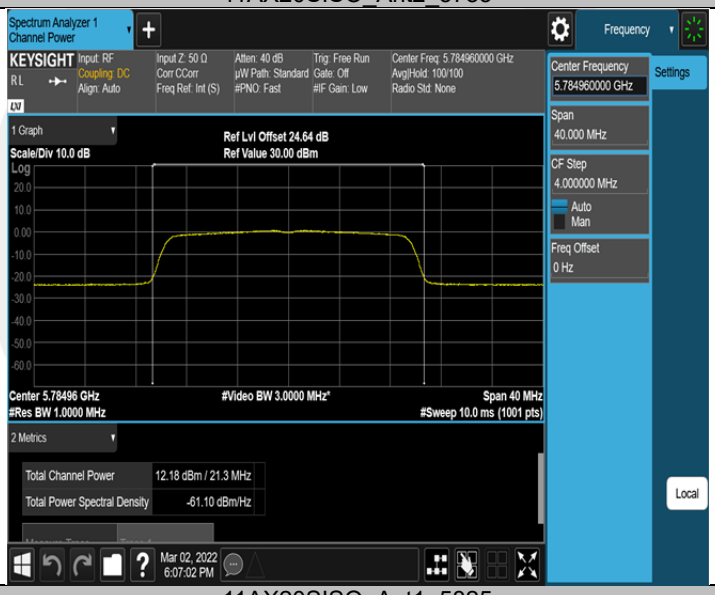

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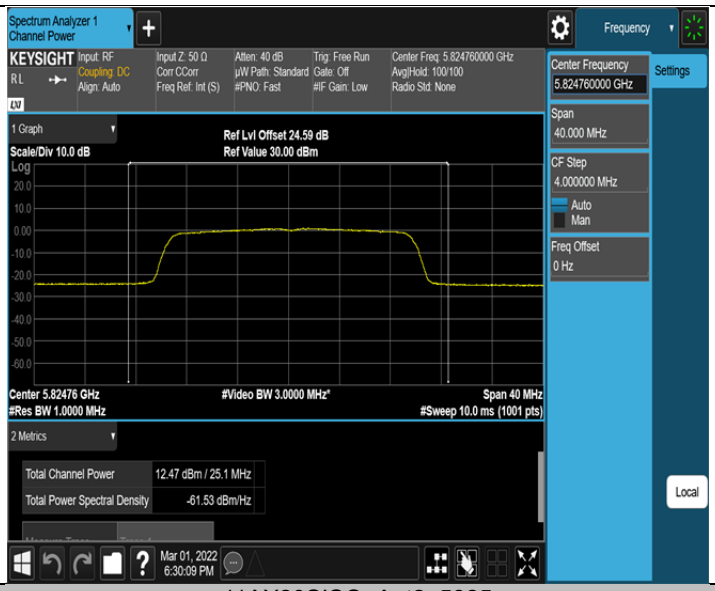

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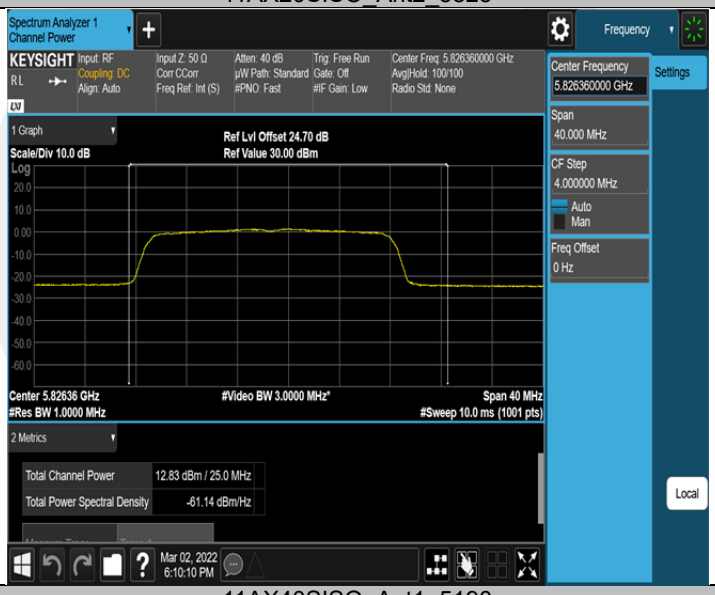

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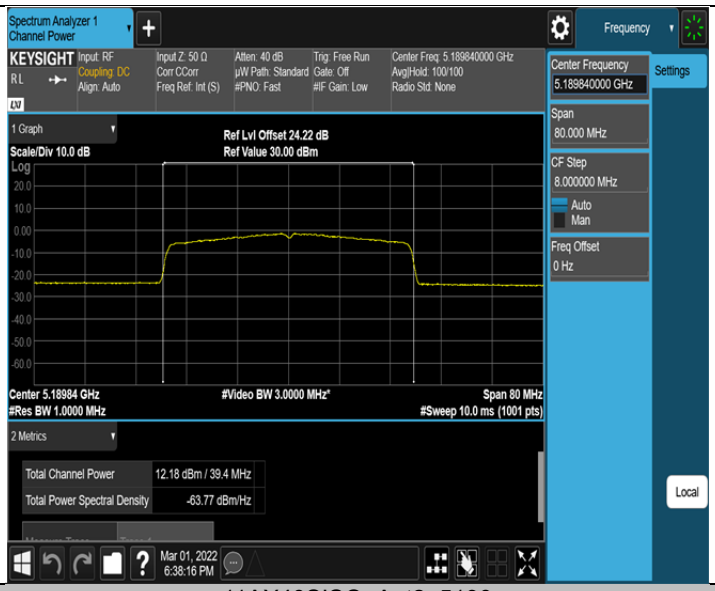

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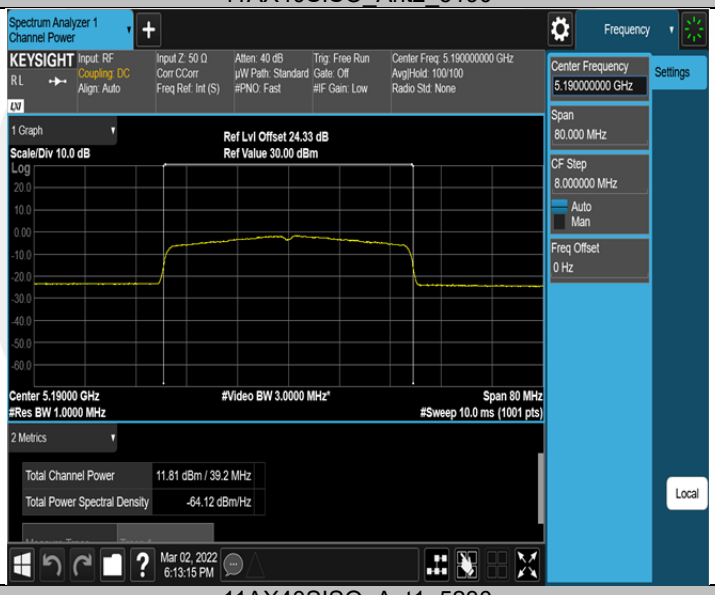

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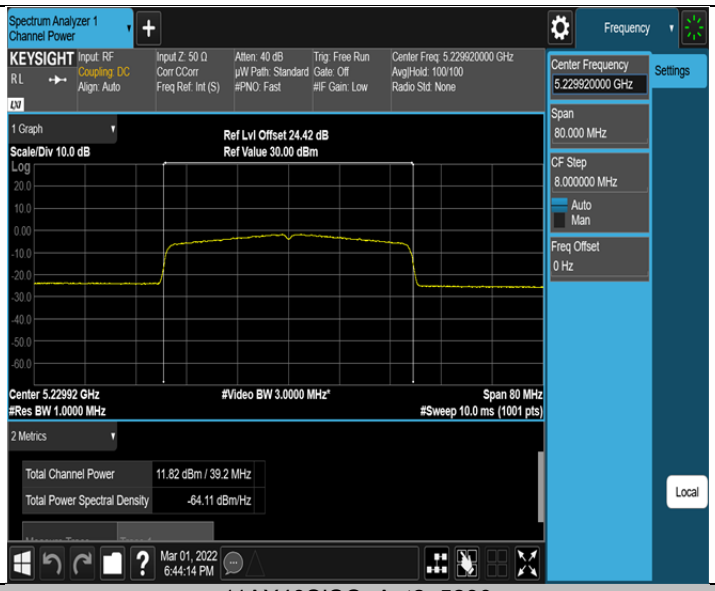

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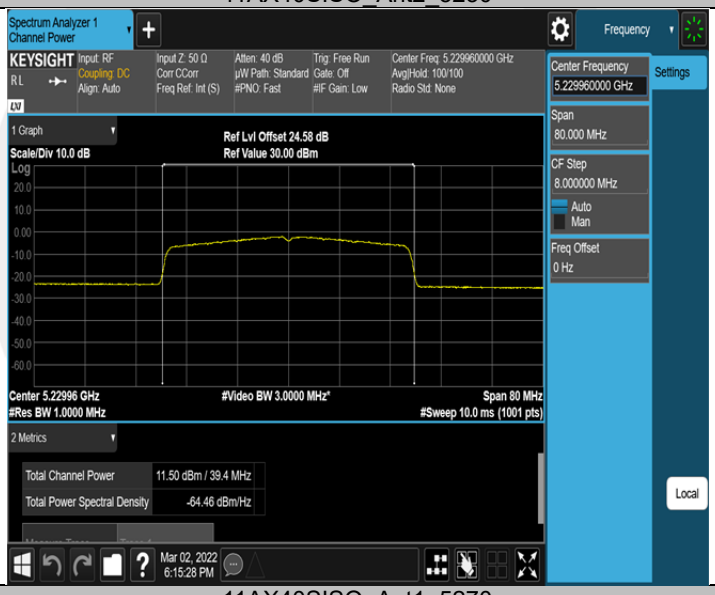

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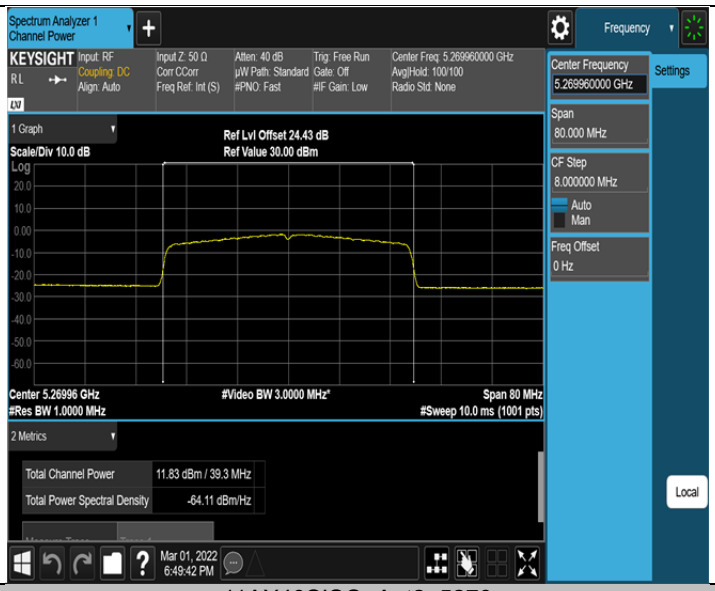

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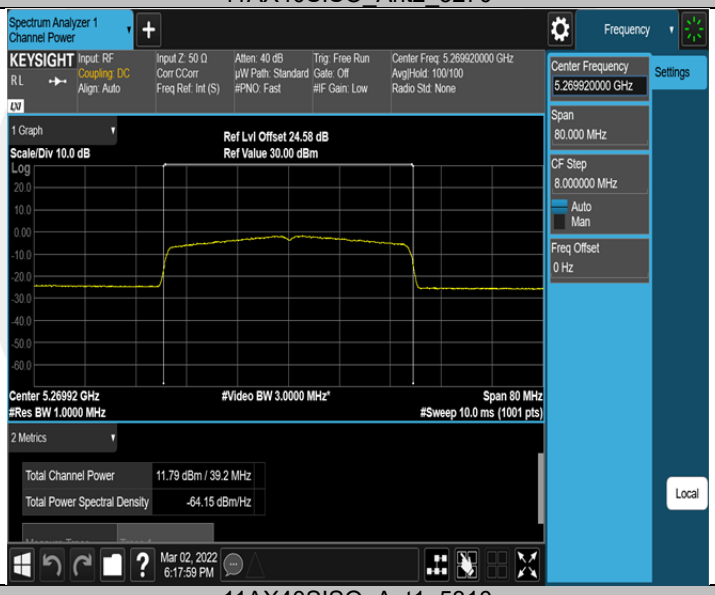

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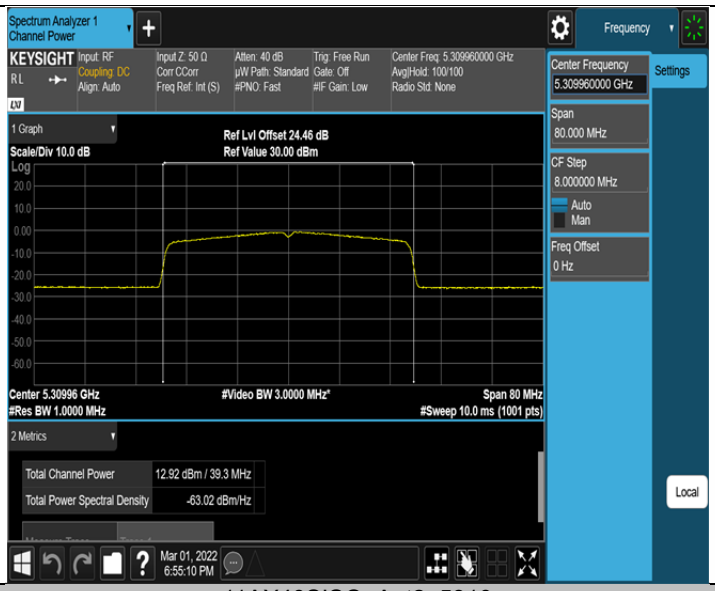

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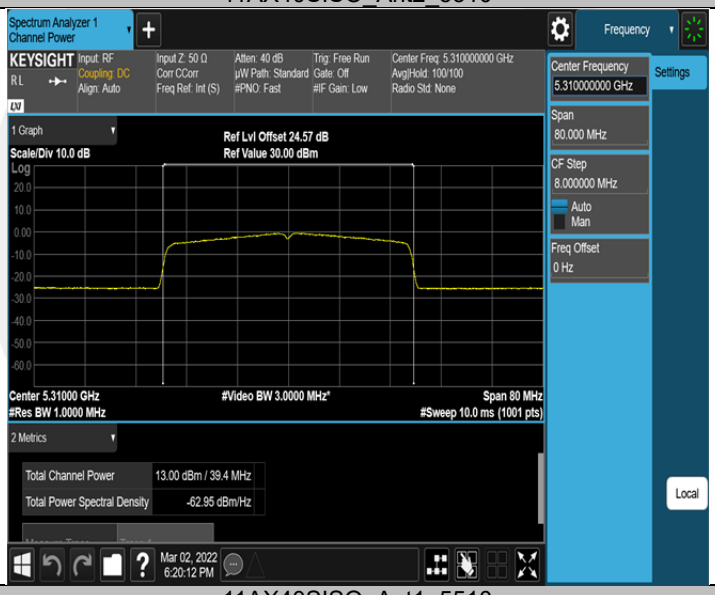

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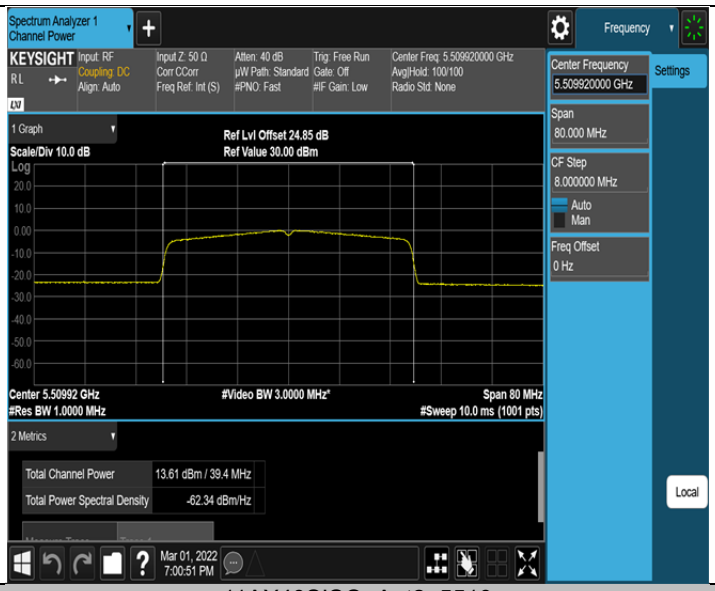

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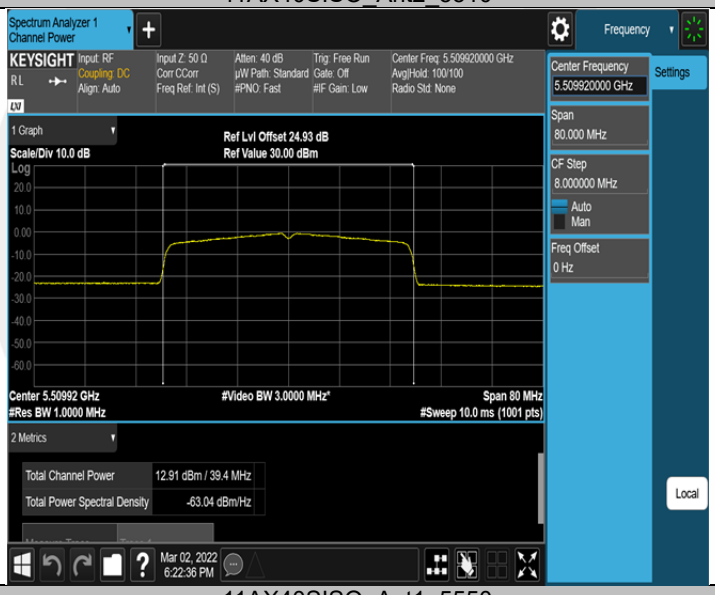

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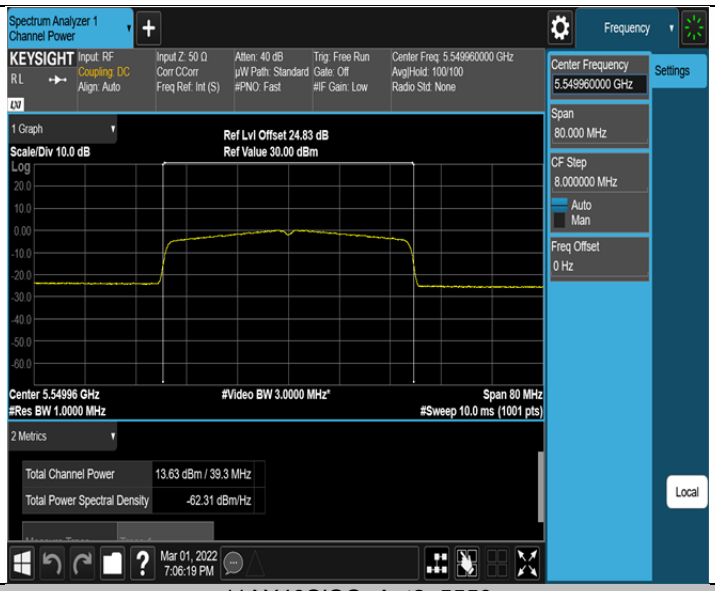

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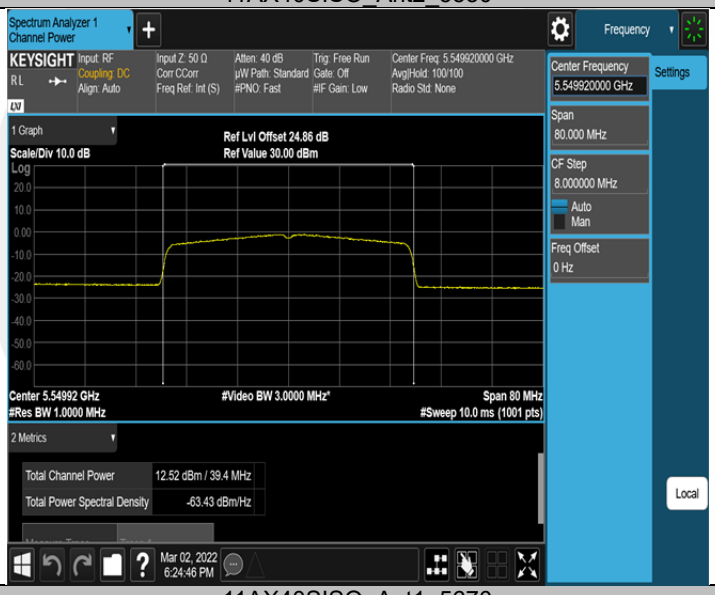

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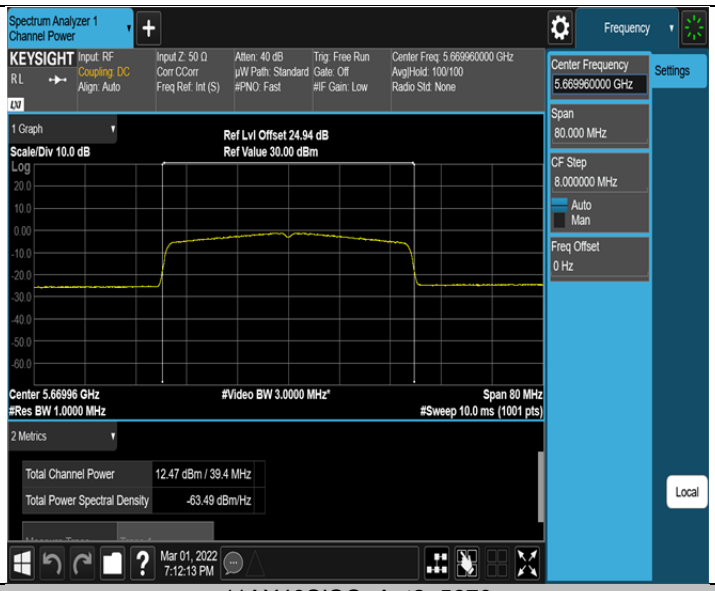

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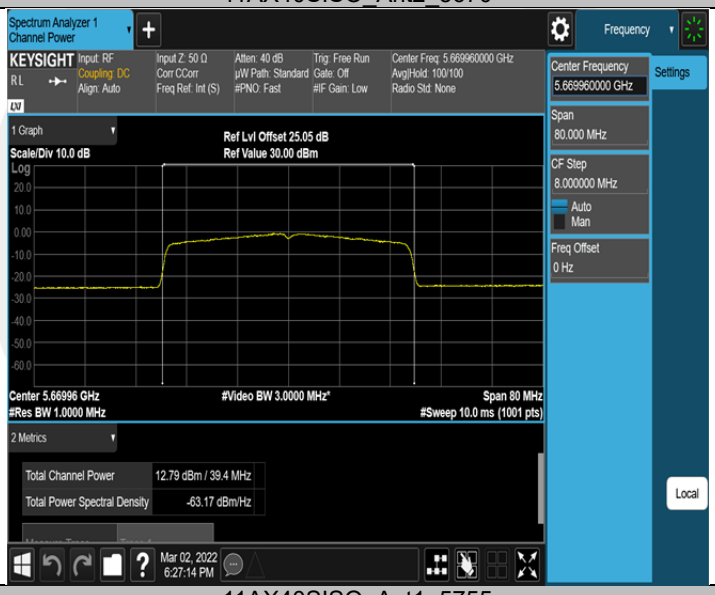

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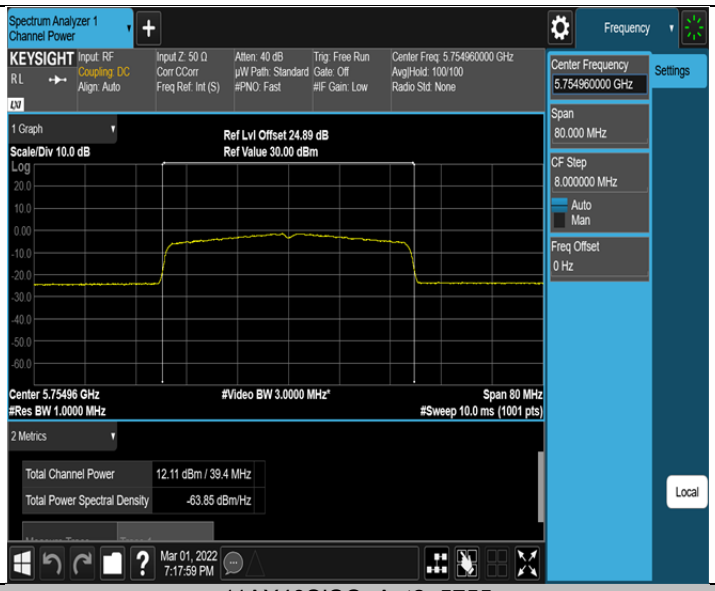

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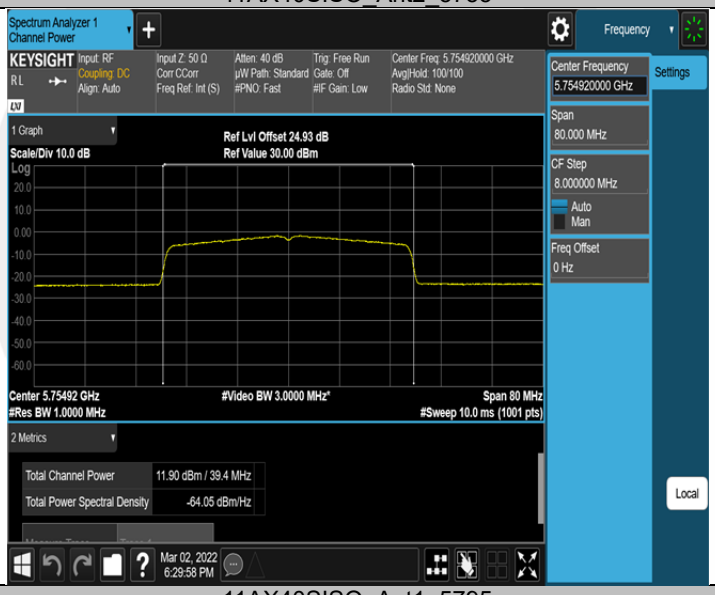

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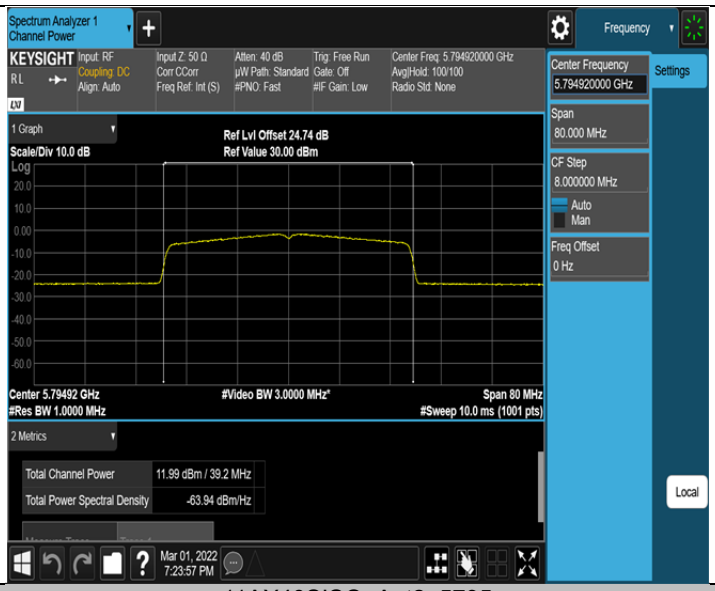

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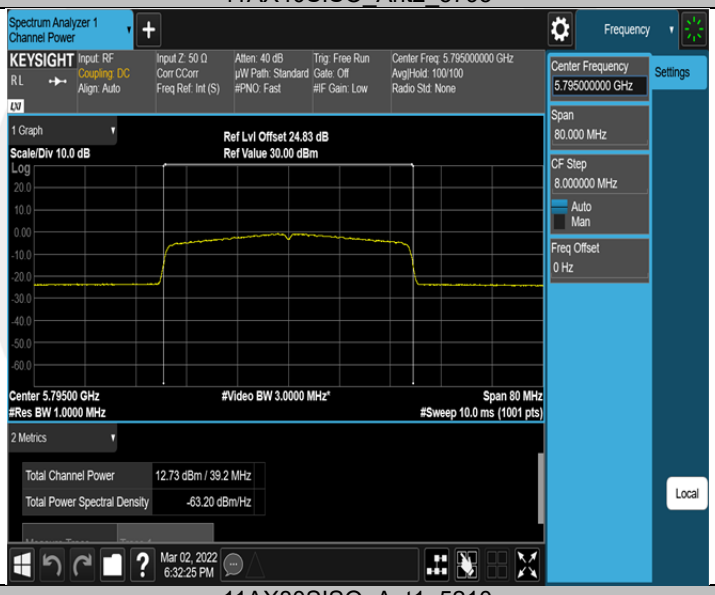

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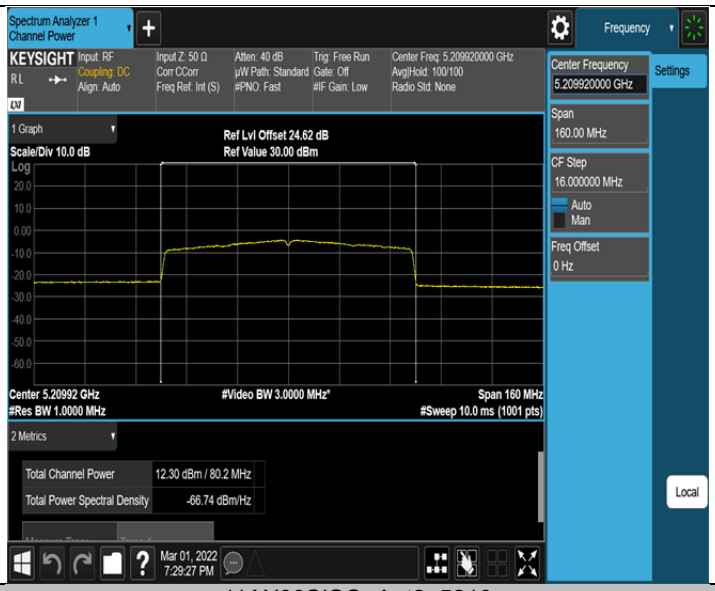

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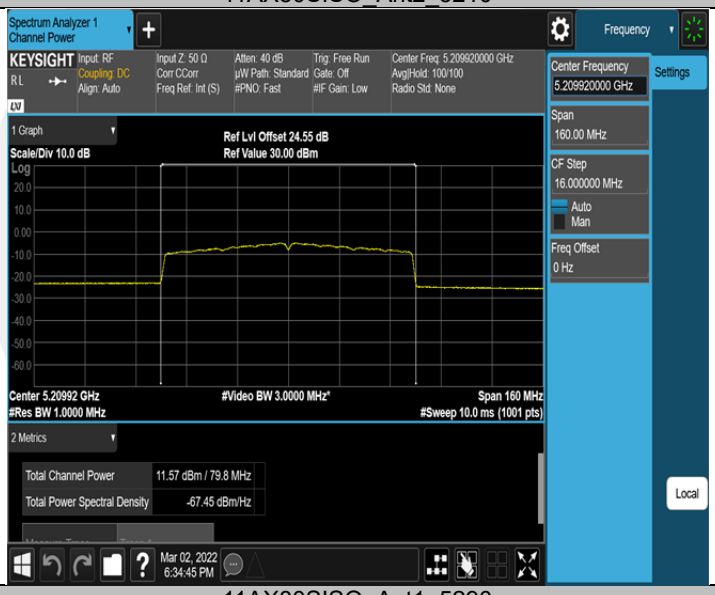

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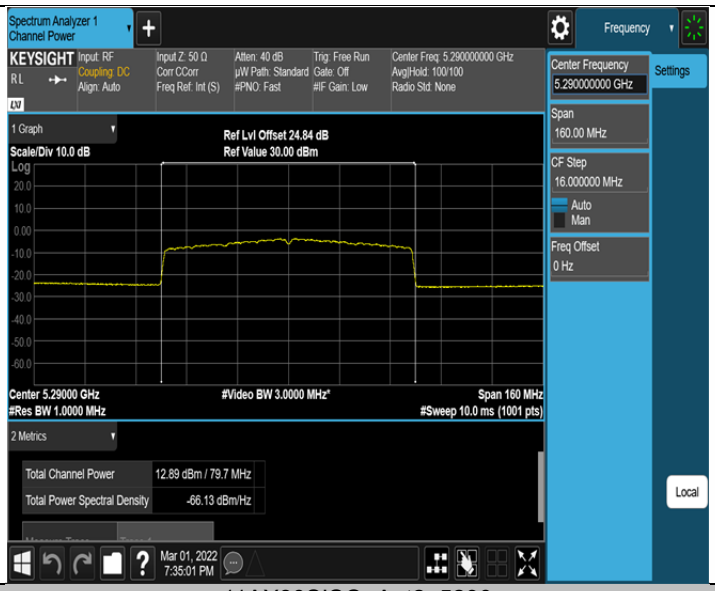

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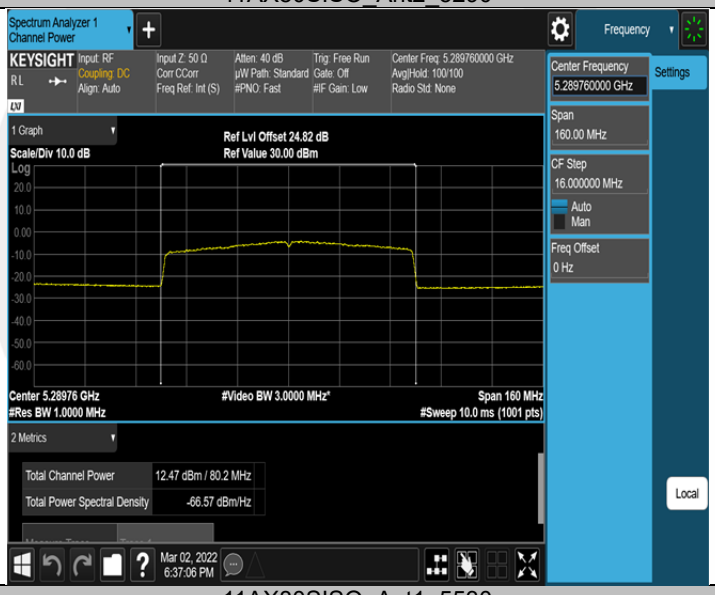

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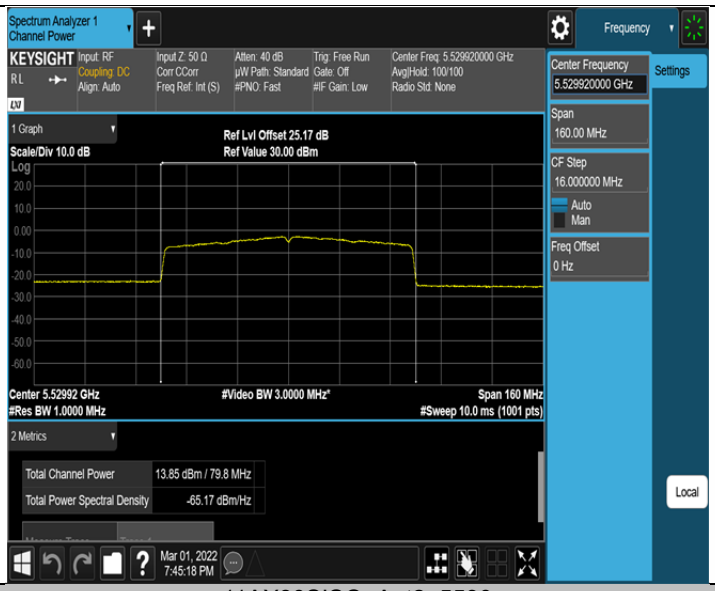

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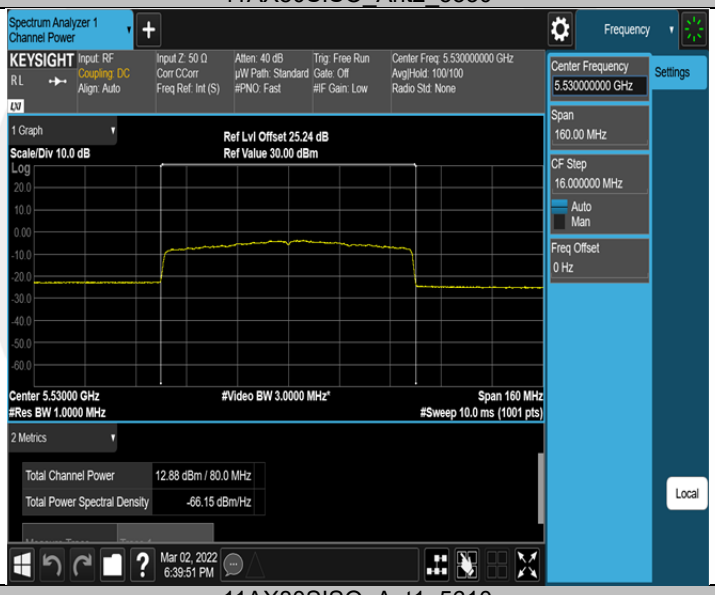

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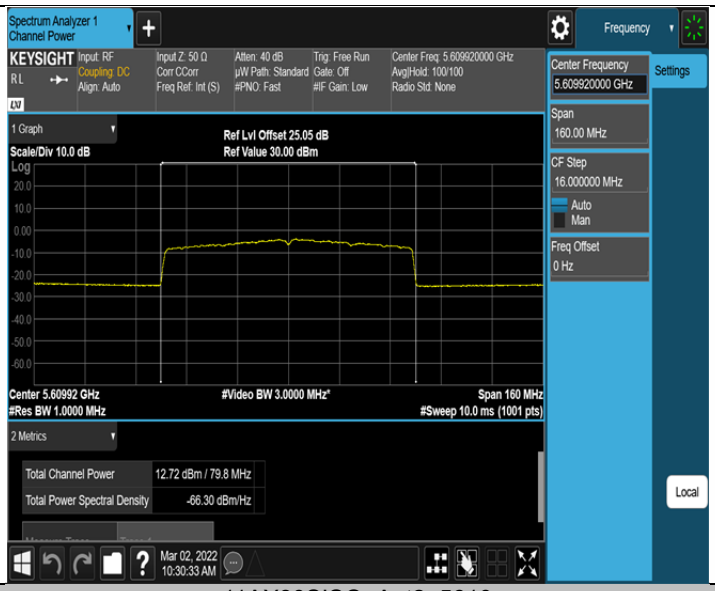

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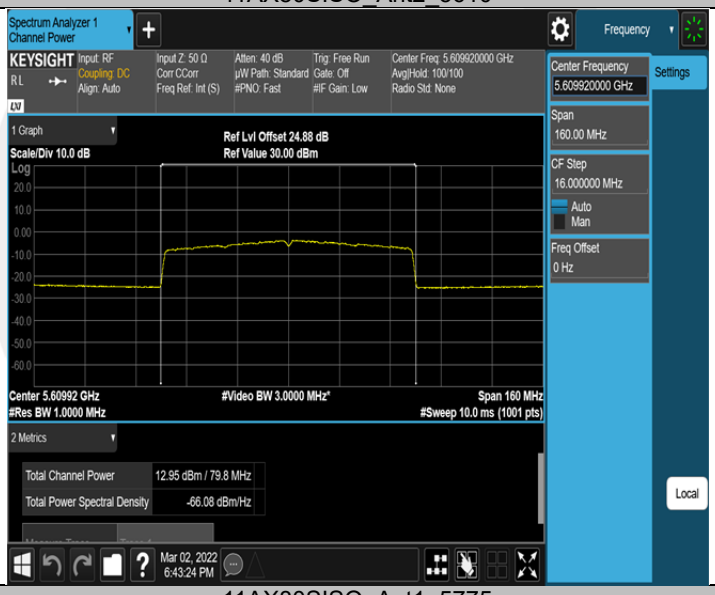

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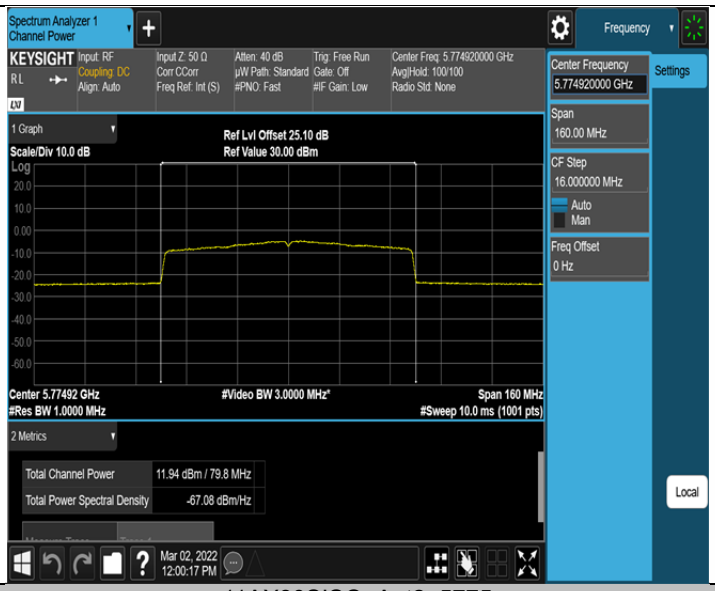

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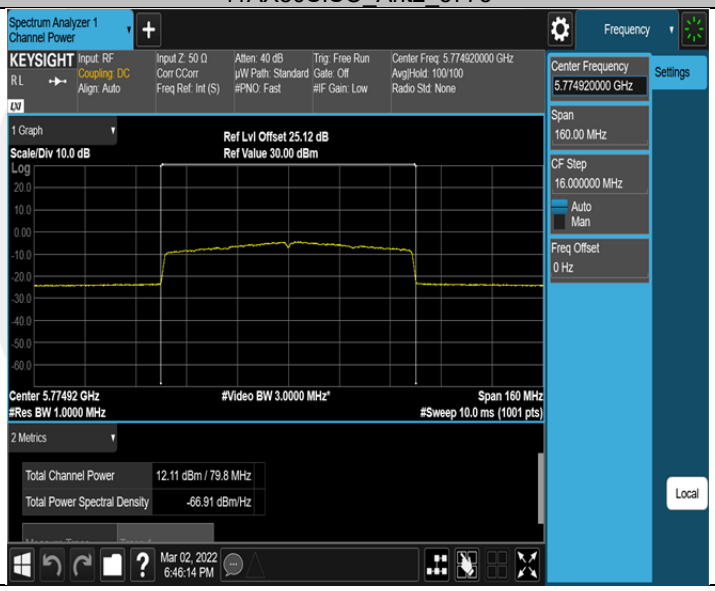

8.3 MAXIMUM PEAK POWER DENSITY

8.3.1 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(F)
According to RSS 247 6.2

8.3.2 Conformance Limit

FCC Limit:

■ For the band 5.15-5.25 GHz,

(a) (1) (i) For an outdoor access point, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, 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) (ii) For an indoor access point, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, 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, 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 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 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, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, 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

(b) (2) The maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, 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)The maximum power spectral density shall not exceed 30 dBm in any 500-kHz band provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, 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

IC Limit:

■ Frequency band 5150-5250 MHz
The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

■ Frequency band 5250-5350 MHz
The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

■ Frequency bands 5470-5600 MHz and 5650-5725 MHz
The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

■ Frequency band 5725-5850 MHz

The output 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, the output 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 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.

8.3.3 Test Configuration

Test according to clause 6.1 radio frequency test setup

8.3.4 Test Procedure

Methods refer to FCC KDB 789033

For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, "provided that the measured power is integrated over the full reference bandwidth" to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 KHz bandwidth, the following adjustments to the procedures apply:

a) Set RBW ≥ 1/T, where T is defined in section II.B.l.a).

b) Set VBW ≥ 3 RBW.

c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10log(500kHz/RBW) to the measured result, whereas RBW (< 500 KHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.

d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add 10log(1MHz/RBW) to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.

e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 KHz for the sections

5.c) and 5.d) above, since RBW=100 KHZ is available on nearly all spectrum analyzers.

8.3.5 Test Results

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

Note: N/A

TestMode	Antenna	Frequency[MHz]	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	1.69	≤11.00	PASS
	Ant2	5180	0.38	≤11.00	PASS
	Ant1	5220	1.24	≤11.00	PASS
	Ant2	5220	-0.11	≤11.00	PASS
	Ant1	5240	1.85	≤11.00	PASS
	Ant2	5240	-0.11	≤11.00	PASS
	Ant1	5260	1.43	≤11.00	PASS
	Ant2	5260	0.43	≤11.00	PASS
	Ant1	5300	2.49	≤11.00	PASS
	Ant2	5300	1.77	≤11.00	PASS
	Ant1	5320	2.42	≤11.00	PASS
	Ant2	5320	1.87	≤11.00	PASS
	Ant1	5500	2.09	≤11.00	PASS
	Ant2	5500	1.45	≤11.00	PASS
	Ant1	5580	2.33	≤11.00	PASS
	Ant2	5580	1.69	≤11.00	PASS
	Ant1	5700	1.45	≤11.00	PASS
	Ant2	5700	1.22	≤11.00	PASS
	Ant1	5745	-1.57	≤30.00	PASS
	Ant2	5745	-1.89	≤30.00	PASS
	Ant1	5785	-1.69	≤30.00	PASS
	Ant2	5785	-1.74	≤30.00	PASS
	Ant1	5825	-1.11	≤30.00	PASS
	Ant2	5825	-0.53	≤30.00	PASS
11N20SISO	Ant1	5180	1.15	≤11.00	PASS
	Ant2	5180	0.11	≤11.00	PASS
	Ant1	5220	0.80	≤11.00	PASS
	Ant2	5220	-0.36	≤11.00	PASS
	Ant1	5240	1.31	≤11.00	PASS
	Ant2	5240	-0.02	≤11.00	PASS
	Ant1	5260	1.10	≤11.00	PASS
	Ant2	5260	0.22	≤11.00	PASS
	Ant1	5300	2.01	≤11.00	PASS
	Ant2	5300	1.59	≤11.00	PASS
	Ant1	5320	1.99	≤11.00	PASS
	Ant2	5320	1.52	≤11.00	PASS
	Ant1	5500	2.62	≤11.00	PASS
	Ant2	5500	1.10	≤11.00	PASS
	Ant1	5580	2.24	≤11.00	PASS
	Ant2	5580	1.48	≤11.00	PASS
	Ant1	5700	1.16	≤11.00	PASS
	Ant2	5700	0.95	≤11.00	PASS
	Ant1	5745	-1.46	≤30.00	PASS
	Ant2	5745	-2.57	≤30.00	PASS
	Ant1	5785	-1.83	≤30.00	PASS
	Ant2	5785	-1.95	≤30.00	PASS
	Ant1	5825	-1.41	≤30.00	PASS
	Ant2	5825	-0.88	≤30.00	PASS

11N40SISO	Ant1	5190	-1.11	≤11.00	PASS
	Ant2	5190	-1.57	≤11.00	PASS
	Ant1	5230	-1.33	≤11.00	PASS
	Ant2	5230	-1.95	≤11.00	PASS
	Ant1	5270	-1.21	≤11.00	PASS
	Ant2	5270	-1.38	≤11.00	PASS
	Ant1	5310	-0.20	≤11.00	PASS
	Ant2	5310	-0.25	≤11.00	PASS
	Ant1	5510	0.21	≤11.00	PASS
	Ant2	5510	-0.59	≤11.00	PASS
	Ant1	5550	0.34	≤11.00	PASS
	Ant2	5550	-1.14	≤11.00	PASS
	Ant1	5670	-0.58	≤11.00	PASS
	Ant2	5670	-0.58	≤11.00	PASS
	Ant1	5755	-4.39	≤30.00	PASS
	Ant2	5755	-4.43	≤30.00	PASS
	Ant1	5795	-4.19	≤30.00	PASS
	Ant2	5795	-3.35	≤30.00	PASS
11AC20SISO	Ant1	5180	1.25	≤11.00	PASS
	Ant2	5180	0.20	≤11.00	PASS
	Ant1	5220	0.75	≤11.00	PASS
	Ant2	5220	-0.29	≤11.00	PASS
	Ant1	5240	1.37	≤11.00	PASS
	Ant2	5240	0.05	≤11.00	PASS
	Ant1	5260	1.04	≤11.00	PASS
	Ant2	5260	0.49	≤11.00	PASS
	Ant1	5300	2.06	≤11.00	PASS
	Ant2	5300	1.52	≤11.00	PASS
	Ant1	5320	2.03	≤11.00	PASS
	Ant2	5320	1.61	≤11.00	PASS
	Ant1	5500	2.56	≤11.00	PASS
	Ant2	5500	1.15	≤11.00	PASS
	Ant1	5580	2.23	≤11.00	PASS
	Ant2	5580	1.44	≤11.00	PASS
	Ant1	5700	1.21	≤11.00	PASS
	Ant2	5700	0.90	≤11.00	PASS
	Ant1	5745	-1.71	≤30.00	PASS
	Ant2	5745	-2.26	≤30.00	PASS
	Ant1	5785	-1.60	≤30.00	PASS
	Ant2	5785	-1.68	≤30.00	PASS
	Ant1	5825	-1.36	≤30.00	PASS
	Ant2	5825	-0.97	≤30.00	PASS
11AC40SISO	Ant1	5190	-1.18	≤11.00	PASS
	Ant2	5190	-1.41	≤11.00	PASS
	Ant1	5230	-1.43	≤11.00	PASS
	Ant2	5230	-1.96	≤11.00	PASS
	Ant1	5270	-1.26	≤11.00	PASS
	Ant2	5270	-1.43	≤11.00	PASS
	Ant1	5310	-0.28	≤11.00	PASS
	Ant2	5310	-0.22	≤11.00	PASS
	Ant1	5510	0.17	≤11.00	PASS
	Ant2	5510	-0.50	≤11.00	PASS
	Ant1	5550	0.26	≤11.00	PASS
	Ant2	5550	-0.71	≤11.00	PASS
	Ant1	5670	-0.91	≤11.00	PASS
	Ant2	5670	-0.47	≤11.00	PASS
	Ant1	5755	-4.49	≤30.00	PASS
	Ant2	5755	-4.00	≤30.00	PASS
	Ant1	5795	-4.40	≤30.00	PASS
	Ant2	5795	-3.88	≤30.00	PASS
11AC80SISO	Ant1	5210	-4.81	≤11.00	PASS

	Ant2	5210	-5.08	≤11.00	PASS
	Ant1	5290	-3.99	≤11.00	PASS
	Ant2	5290	-4.09	≤11.00	PASS
	Ant1	5530	-2.94	≤11.00	PASS
	Ant2	5530	-3.75	≤11.00	PASS
	Ant1	5610	-4.10	≤11.00	PASS
	Ant2	5610	-3.87	≤11.00	PASS
	Ant1	5775	-7.70	≤30.00	PASS
	Ant2	5775	-7.41	≤30.00	PASS
11AX20SISO	Ant1	5180	0.85	≤11.00	PASS
	Ant2	5180	-0.03	≤11.00	PASS
	Ant1	5220	0.39	≤11.00	PASS
	Ant2	5220	-0.49	≤11.00	PASS
	Ant1	5240	1.04	≤11.00	PASS
	Ant2	5240	-0.45	≤11.00	PASS
	Ant1	5260	0.76	≤11.00	PASS
	Ant2	5260	0.00	≤11.00	PASS
	Ant1	5300	1.82	≤11.00	PASS
	Ant2	5300	1.42	≤11.00	PASS
	Ant1	5320	1.77	≤11.00	PASS
	Ant2	5320	1.50	≤11.00	PASS
	Ant1	5500	2.20	≤11.00	PASS
	Ant2	5500	1.05	≤11.00	PASS
	Ant1	5580	1.96	≤11.00	PASS
	Ant2	5580	1.28	≤11.00	PASS
	Ant1	5700	0.94	≤11.00	PASS
	Ant2	5700	0.79	≤11.00	PASS
	Ant1	5745	-1.98	≤30.00	PASS
	Ant2	5745	-2.99	≤30.00	PASS
	Ant1	5785	-2.09	≤30.00	PASS
	Ant2	5785	-2.16	≤30.00	PASS
	Ant1	5825	-1.86	≤30.00	PASS
	Ant2	5825	-1.14	≤30.00	PASS
11AX40SISO	Ant1	5190	-1.35	≤11.00	PASS
	Ant2	5190	-1.73	≤11.00	PASS
	Ant1	5230	-1.64	≤11.00	PASS
	Ant2	5230	-1.97	≤11.00	PASS
	Ant1	5270	-1.63	≤11.00	PASS
	Ant2	5270	-1.65	≤11.00	PASS
	Ant1	5310	-0.61	≤11.00	PASS
	Ant2	5310	-0.31	≤11.00	PASS
	Ant1	5510	-0.04	≤11.00	PASS
	Ant2	5510	-0.60	≤11.00	PASS
	Ant1	5550	0.14	≤11.00	PASS
	Ant2	5550	-0.97	≤11.00	PASS
	Ant1	5670	-0.98	≤11.00	PASS
	Ant2	5670	-0.58	≤11.00	PASS
	Ant1	5755	-4.34	≤30.00	PASS
	Ant2	5755	-4.58	≤30.00	PASS
	Ant1	5795	-4.43	≤30.00	PASS
	Ant2	5795	-3.62	≤30.00	PASS
11AX80SISO	Ant1	5210	-4.31	≤11.00	PASS
	Ant2	5210	-5.00	≤11.00	PASS
	Ant1	5290	-3.64	≤11.00	PASS
	Ant2	5290	-3.94	≤11.00	PASS
	Ant1	5530	-2.81	≤11.00	PASS
	Ant2	5530	-3.73	≤11.00	PASS
	Ant1	5610	-3.71	≤11.00	PASS
	Ant2	5610	-3.54	≤11.00	PASS
	Ant1	5775	-7.38	≤30.00	PASS
	Ant2	5775	-7.07	≤30.00	PASS