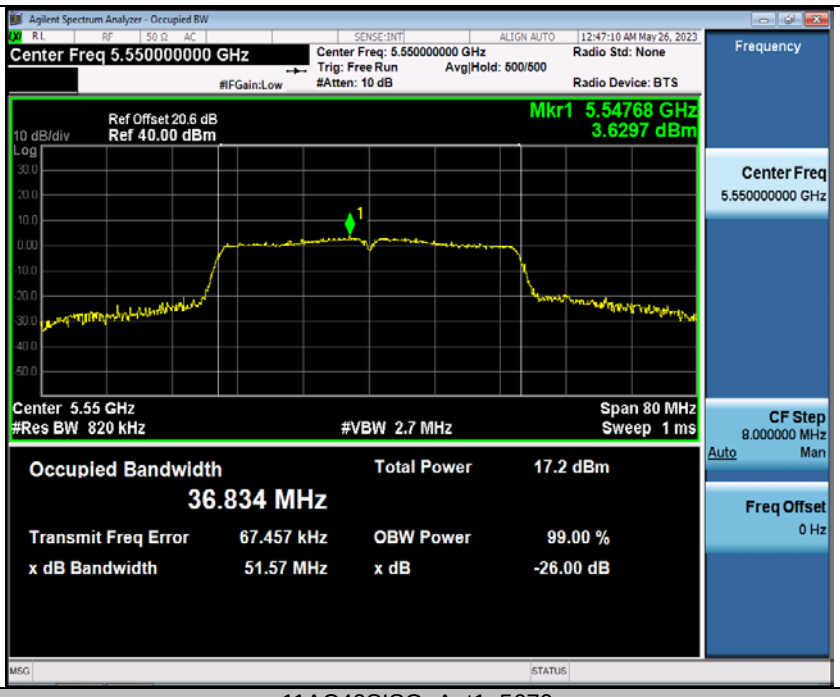
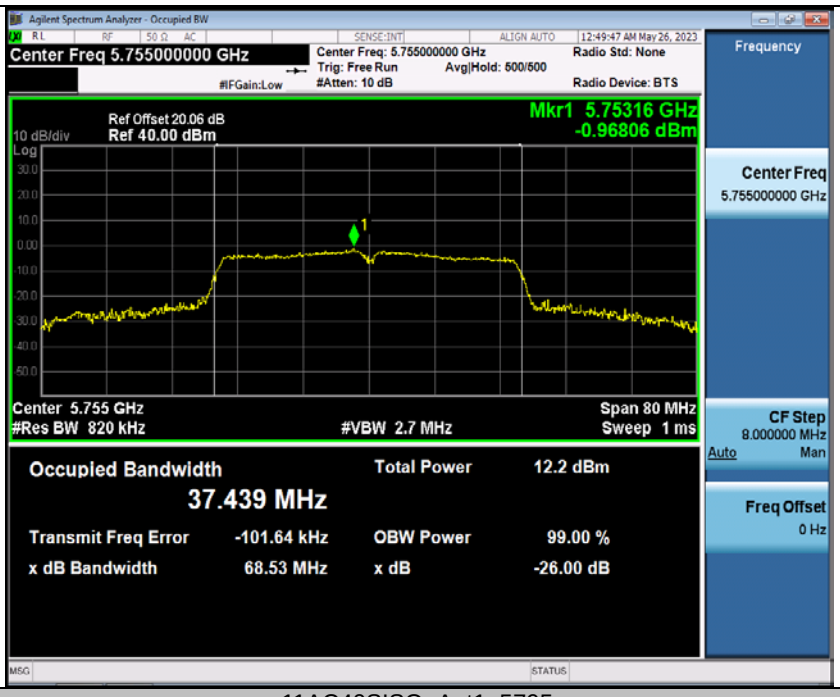


11AC40SISO_Ant1_5670

11AC40SISO_Ant1_5755



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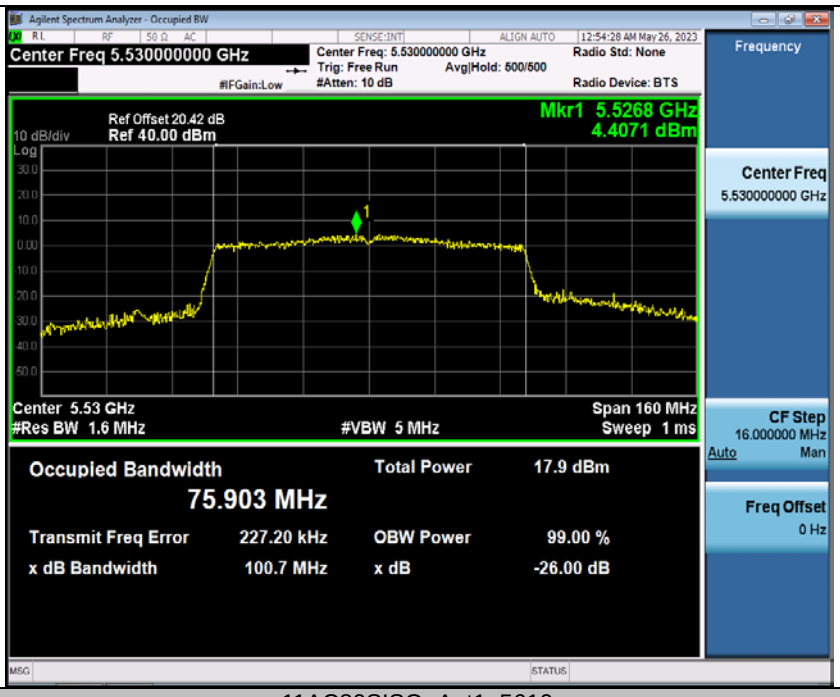
11AC80SISO_Ant1_5210

11AC80SISO_Ant1_5290

11AC80SISO_Ant1_5530



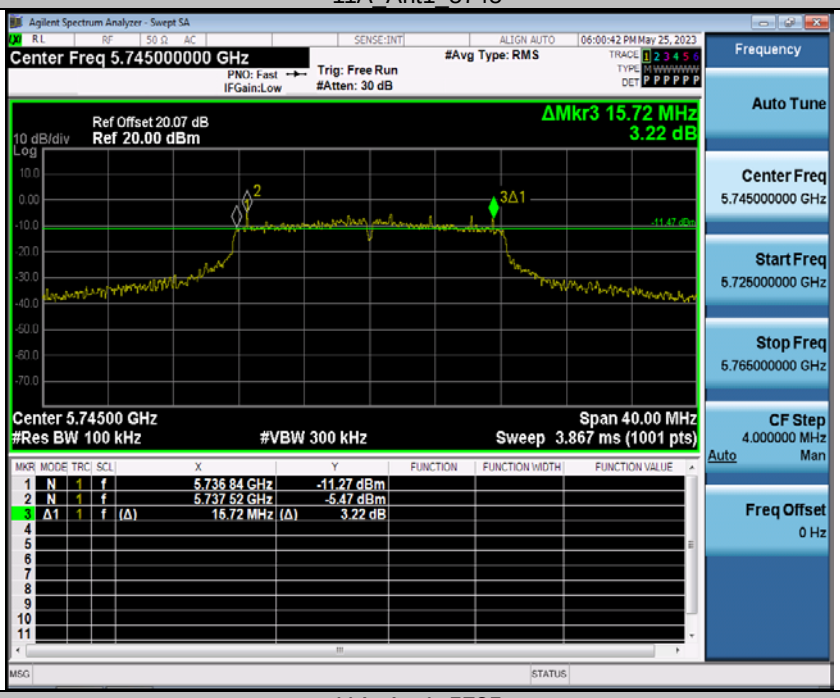
11AC80SISO_Ant1_5610

11AC80SISO_Ant1_5775

Agilent Spectrum Analyzer - Occupied BW
Center Freq 5.775000000 GHz
Center Freq: 5.775000000 GHz
Trig: Free Run
Avg|Hold: 500/500
#Atten: 10 dB
Radio Std: None
Radio Device: BTS
Ref Offset 20 dB
10 dB/div
Ref 40.00 dBm
Mkr1 5.7726 GHz
-0.83361 dBm
Center 5.775 GHz
#Res BW 1.6 MHz
#VBW 5 MHz
Span 160 MHz
Sweep 1 ms
Occupied Bandwidth
76.395 MHz
Total Power 12.9 dBm
Transmit Freq Error -271.18 kHz
OBW Power 99.00 %
x dB Bandwidth 127.8 MHz
x dB -26.00 dB
Frequency
Center Freq
5.775000000 GHz
CF Step
16.000000 MHz
Auto Man
Freq Offset
0 Hz

TestMode	Antenna	Frequency[MHz]	6db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	15.720	5736.840	5752.560	0.5	PASS
		5785	16.320	5776.840	5793.160	0.5	PASS
		5825	16.320	5816.840	5833.160	0.5	PASS
11N20SISO	Ant1	5745	17.040	5736.480	5753.520	0.5	PASS
		5785	17.160	5776.200	5793.360	0.5	PASS
		5825	17.520	5816.240	5833.760	0.5	PASS
11N40SISO	Ant1	5755	35.600	5737.160	5772.760	0.5	PASS
		5795	35.760	5776.840	5812.600	0.5	PASS
11AC20SISO	Ant1	5745	16.160	5736.480	5752.640	0.5	PASS
		5785	17.400	5776.200	5793.600	0.5	PASS
		5825	17.160	5816.240	5833.400	0.5	PASS
11AC40SISO	Ant1	5755	35.680	5736.840	5772.520	0.5	PASS
		5795	35.760	5776.840	5812.600	0.5	PASS
11AC80SISO	Ant1	5775	75.200	5737.400	5812.600	0.5	PASS

11A_Ant1_5745



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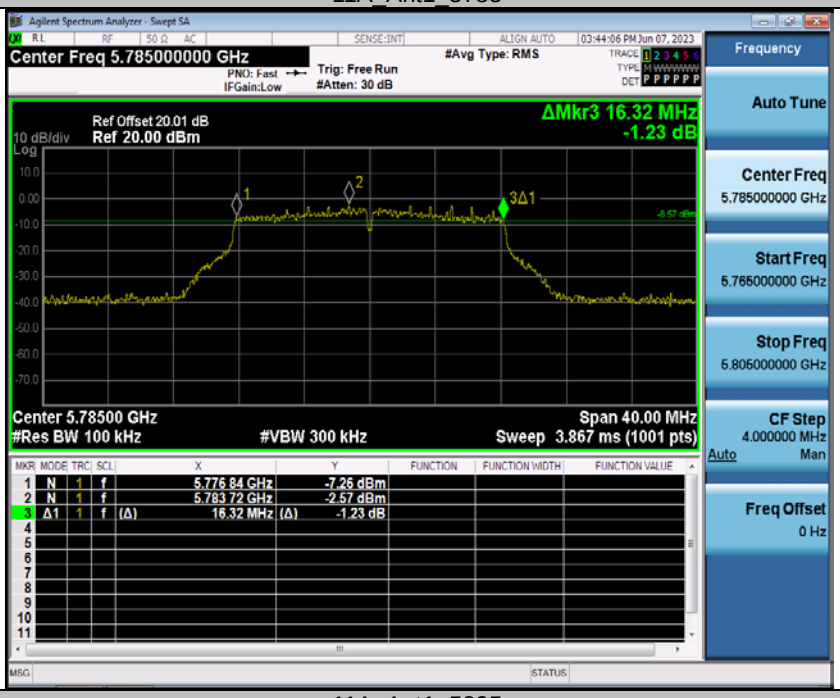

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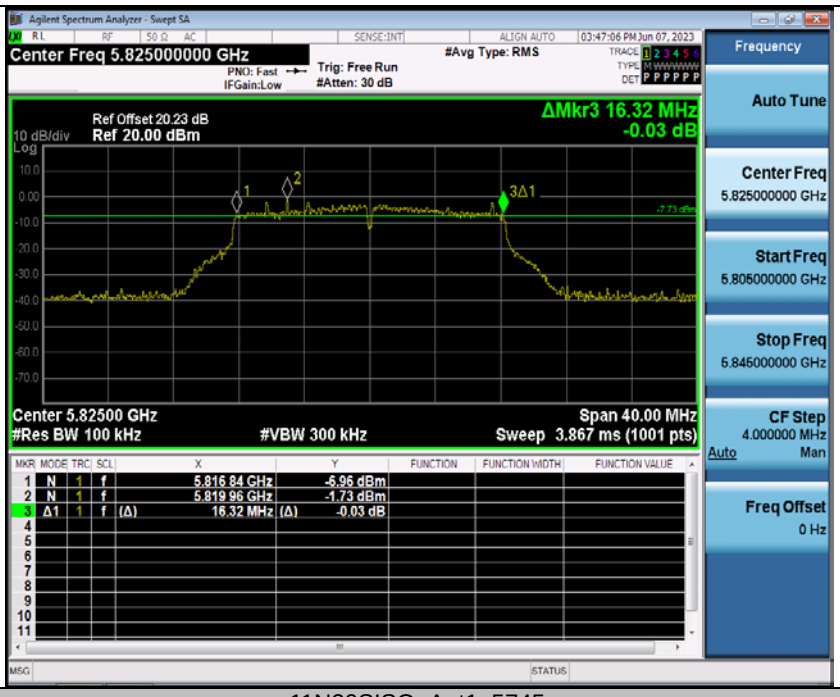

11N20SISO_Ant1_5745

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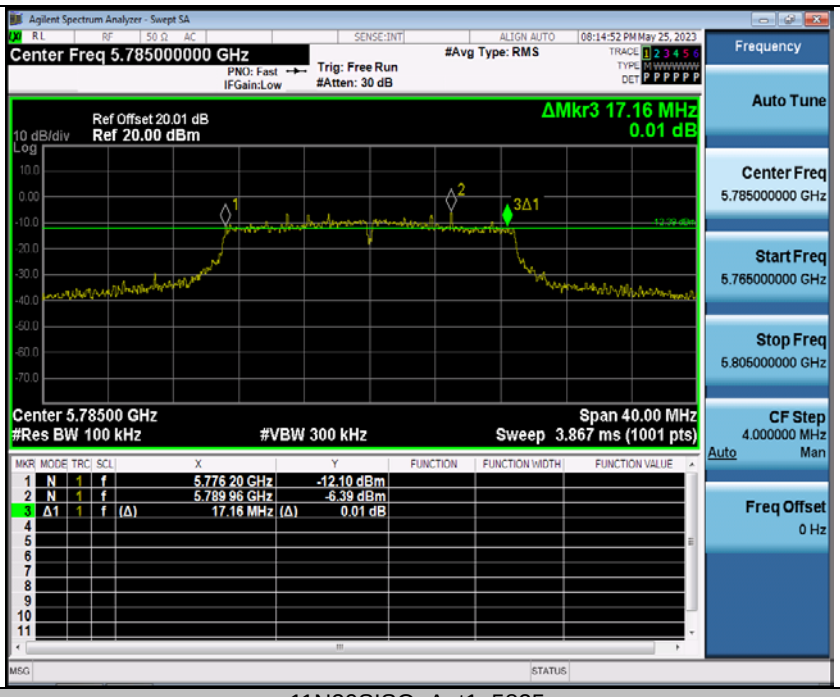

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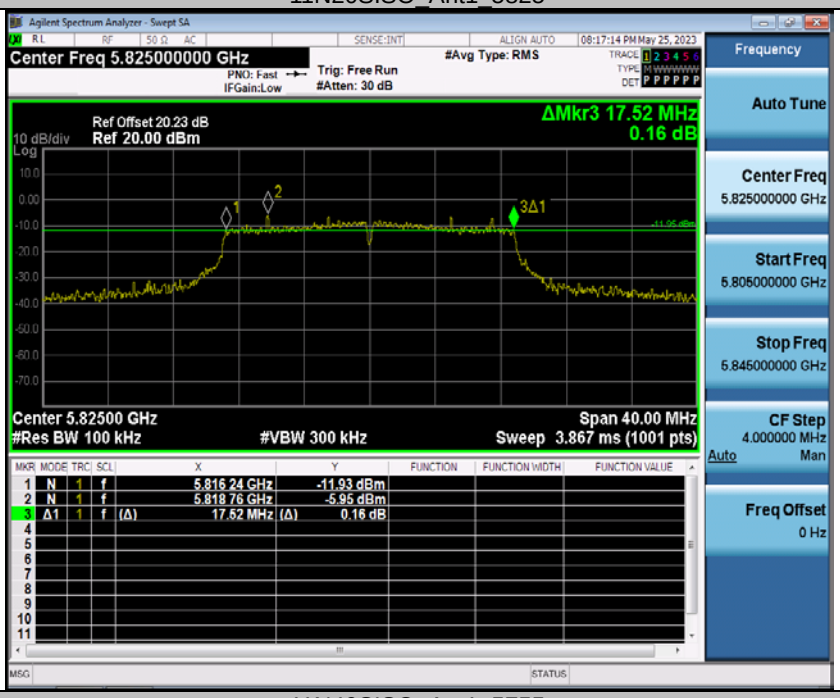

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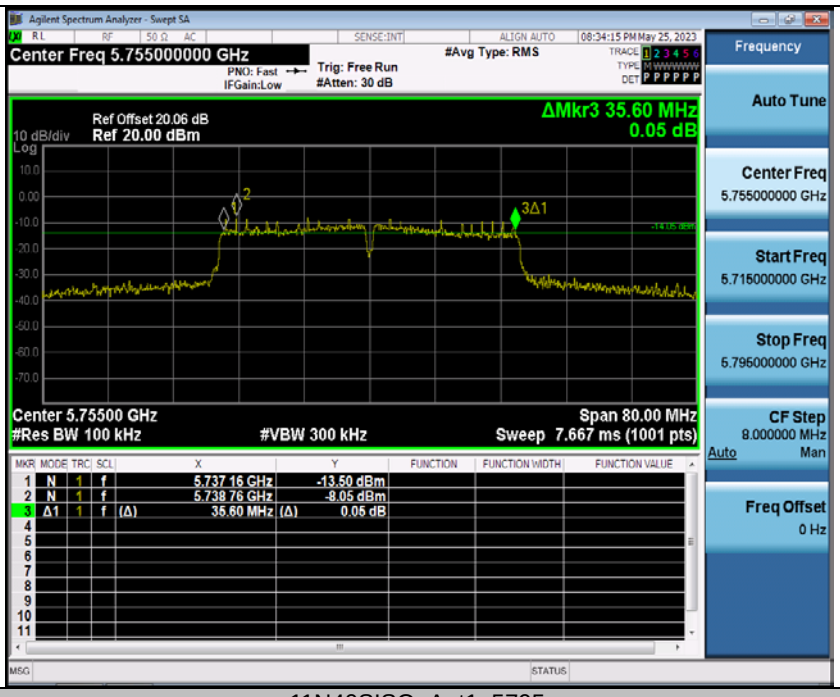

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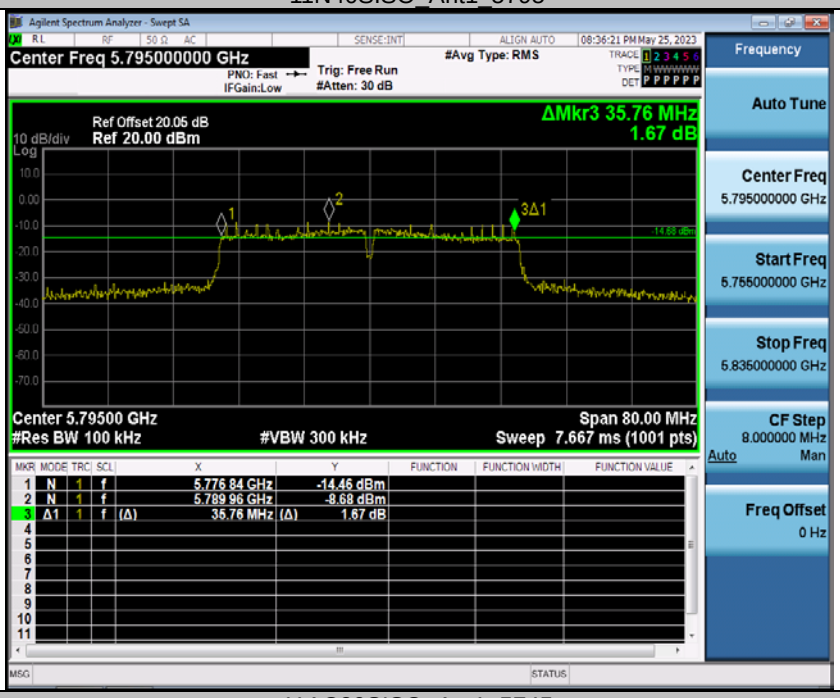

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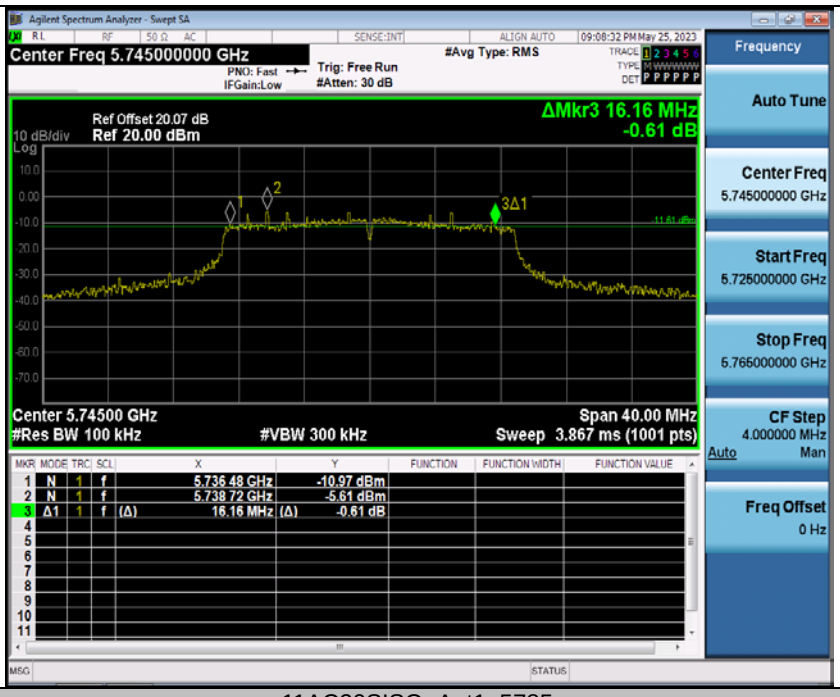

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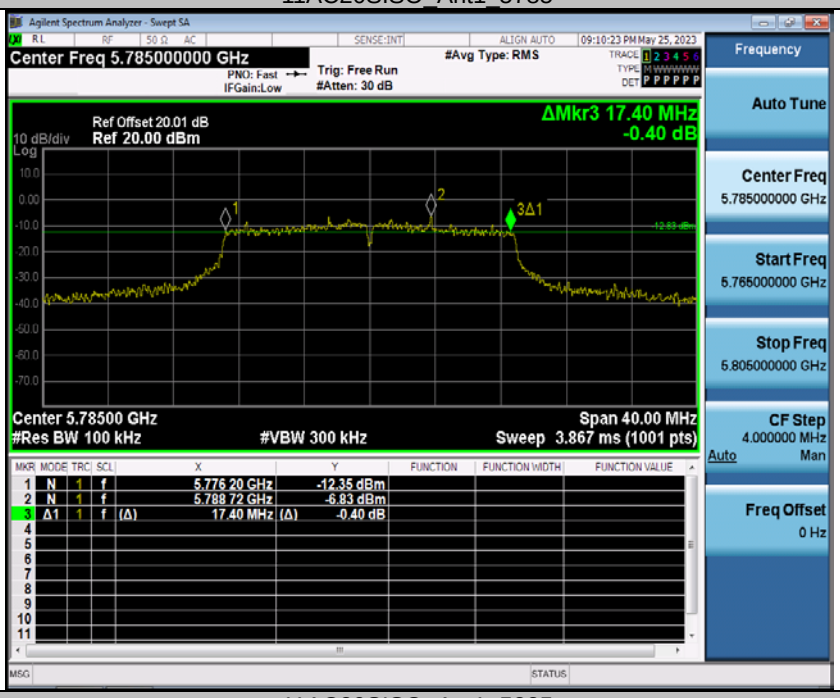

11AC20SISO_Ant1_5825

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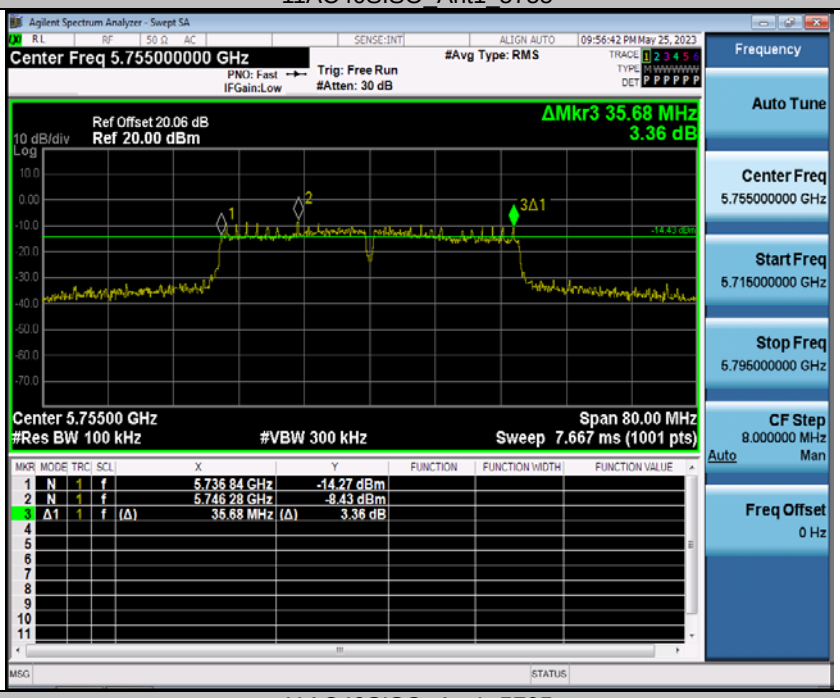

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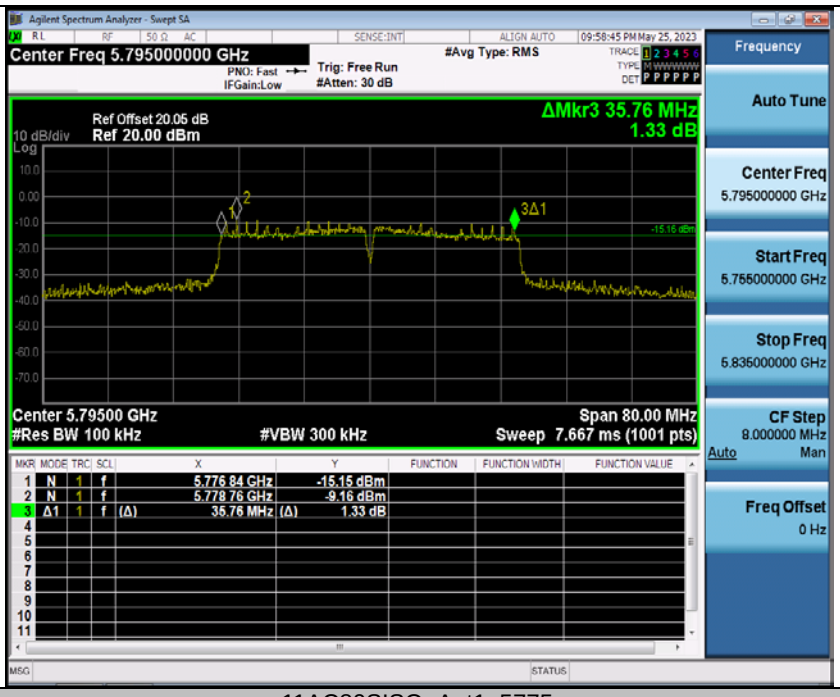

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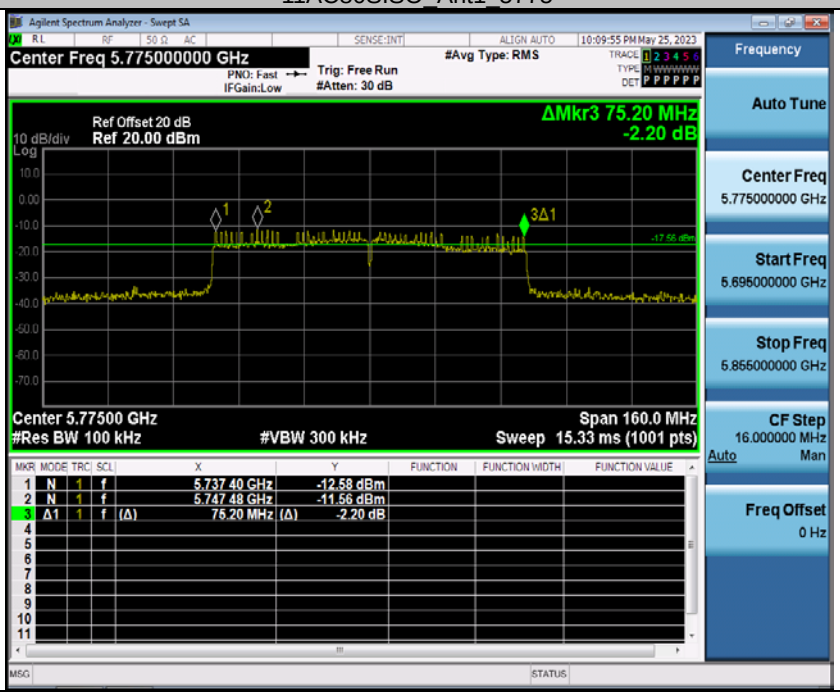


8.2 MAXIMUM CONDUCTED OUTPUT POWER

8.2.1 Applicable Standard

According to FCC Part 15.407(a)(1) for UNIIBand I
According to FCC Part 15.407(a)(2) for UNIIBand II-A and UNIIBand II-C
According to FCC Part 15.407(a)(3) for UNIIBand III
According to 789033 D02 Section II(E)
According to RSS 247, 6.2

8.2.2 Conformance Limit

FCC Limit:

- For the band 5.15-5.25 GHz

(a)(1) (i) For an outdoor access point, 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, the maximum conducted output power 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, 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, the maximum conducted output power 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 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. 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 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 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, the maximum conducted output power 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. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power 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 conducted output power over the frequency band of operation shall not exceed 1 W. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power 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 maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 $\log_{10}$B, dBm, whichever power is less. B is the 99% emission bandwidth in megahertz.

■ Frequency band 5250-5350 MHz

The maximum conducted output power shall not exceed 250 mW or 11 + 10 $\log_{10}$B, dBm, whichever is less.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 $\log_{10}$B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

■ Frequency bands 5470-5600 MHz and 5650-5725 MHz

The maximum conducted output power shall not exceed 250 mW or 11 + 10 $\log_{10}$B, dBm, whichever is less.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 $\log_{10}$B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

■ Frequency band 5725-5850 MHz

The maximum conducted output power shall not exceed 1 W. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power 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-multipointsystems, omnidirectional applications and multiple collocated transmitters transmitting the same information.

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

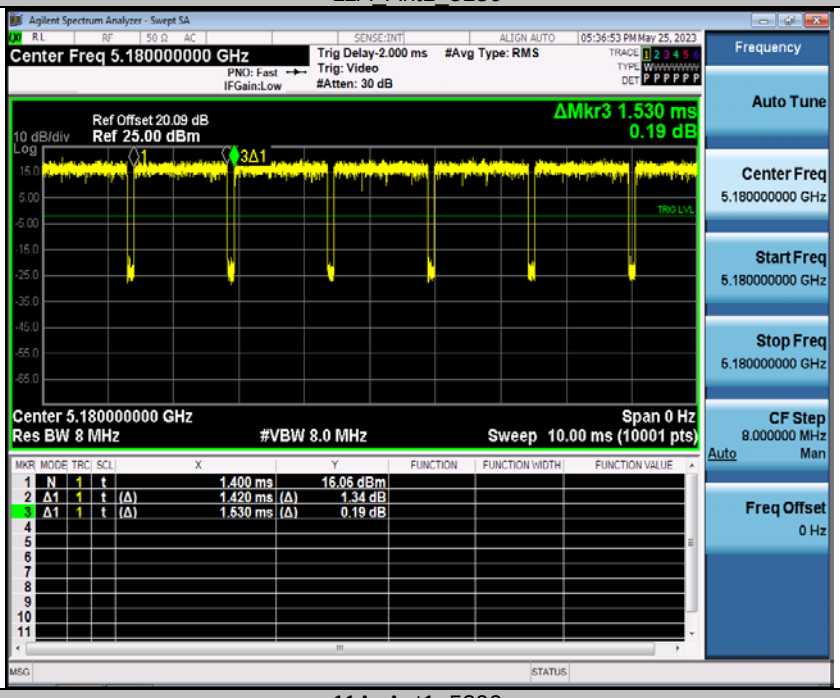
Temperature:	25 ˚C
Relative Humidity:	45%
ATM Pressure:	1011 mbar

Note: N/A

TestMode	Antenna	Frequency[MHz]	TransmissionDuration [ms]	Transmission Period [ms]	Duty Cycle [%]
11A	Ant1	5180	1.42	1.53	92.81
		5200	1.42	1.53	92.81
		5240	1.43	1.53	93.46
		5260	1.42	1.53	92.81
		5280	1.42	1.53	92.81
		5320	1.43	1.53	93.46
		5500	1.42	1.53	92.81
		5580	1.43	1.53	93.46
		5700	1.42	1.53	92.81
		5745	1.42	1.53	92.81
		5785	1.43	1.53	93.46
		5825	1.43	1.53	93.46
11N20SISO	Ant1	5180	1.92	2.02	95.05
		5200	1.92	2.02	95.05
		5240	1.92	2.02	95.05
		5260	1.92	2.03	94.58
		5280	1.92	2.02	95.05
		5320	1.92	2.03	94.58
		5500	1.92	2.02	95.05
		5580	1.92	2.02	95.05
		5700	1.92	2.03	94.58
		5745	1.92	2.02	95.05
		5785	1.92	2.02	95.05
		5825	1.92	2.03	94.58
11N40SISO	Ant1	5190	0.94	1.04	90.38
		5230	0.94	1.04	90.38
		5270	0.95	1.05	90.48
		5310	0.94	1.04	90.38
		5510	0.94	1.04	90.38
		5550	0.95	1.05	90.48
		5670	0.94	1.05	89.52
		5755	0.94	1.04	90.38
		5795	0.94	1.15	81.74
11AC20SISO	Ant1	5180	1.34	1.44	93.06
		5200	1.35	1.45	93.10
		5240	1.34	1.44	93.06
		5260	1.34	1.44	93.06
		5280	1.34	1.44	93.06
		5320	1.34	1.44	93.06
		5500	1.35	1.45	93.10
		5580	1.34	1.45	92.41
		5700	1.35	1.45	93.10
		5745	1.34	1.44	93.06
		5785	1.35	1.45	93.10
		5825	1.35	1.45	93.10
11AC40SISO	Ant1	5190	0.67	0.77	87.01
		5230	0.67	0.77	87.01
		5270	0.67	0.77	87.01
		5310	0.67	0.77	87.01
		5510	0.67	0.77	87.01
		5550	0.67	0.77	87.01

		5670	0.66	0.77	85.71
		5755	0.67	0.77	87.01
		5795	0.67	0.87	77.01
11AC80SISO	Ant1	5210	0.33	0.43	76.74
		5290	0.33	0.43	76.74
		5530	0.33	0.43	76.74
		5610	0.33	0.53	62.26
		5775	0.33	0.53	62.26

11A_Ant1_5180



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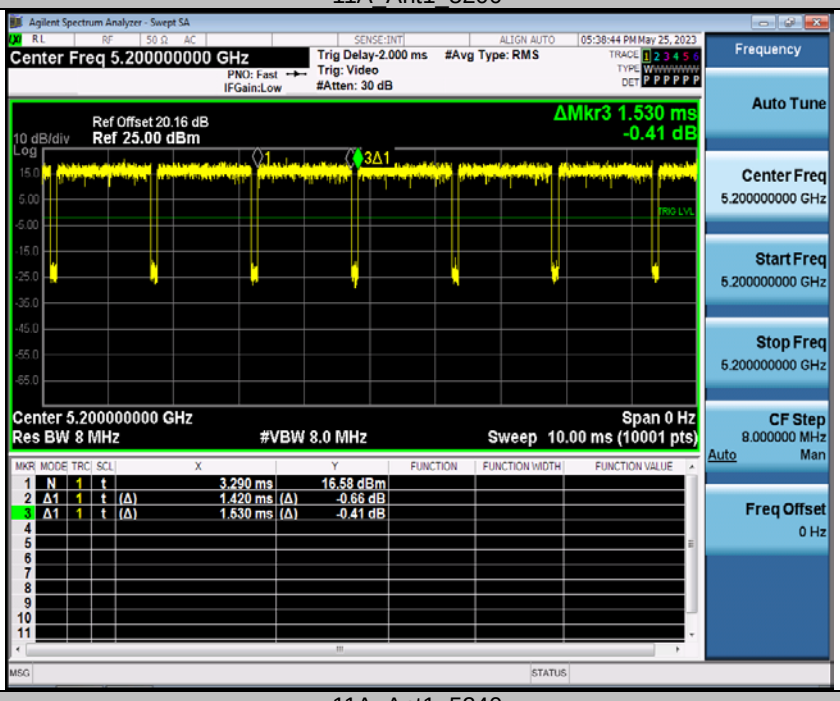

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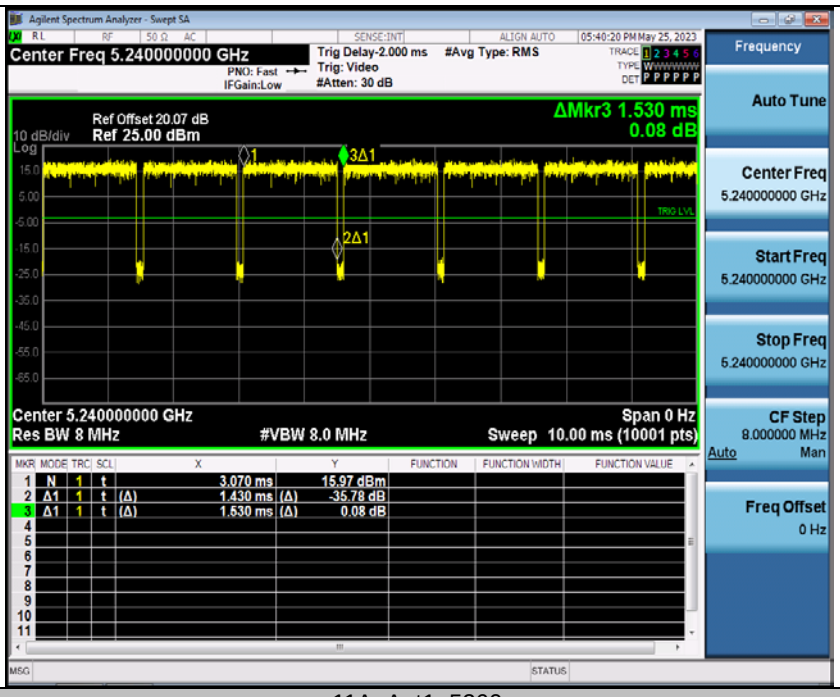

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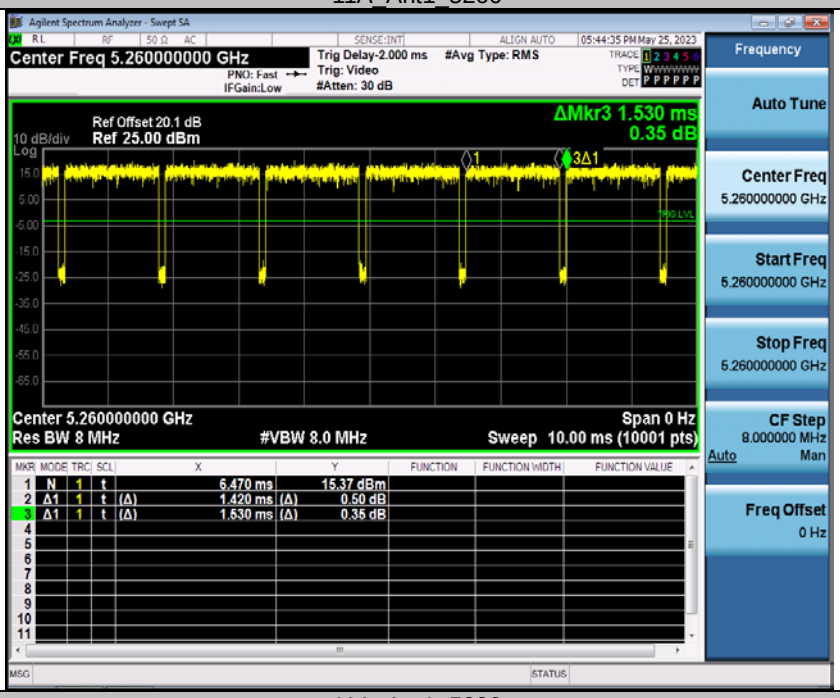

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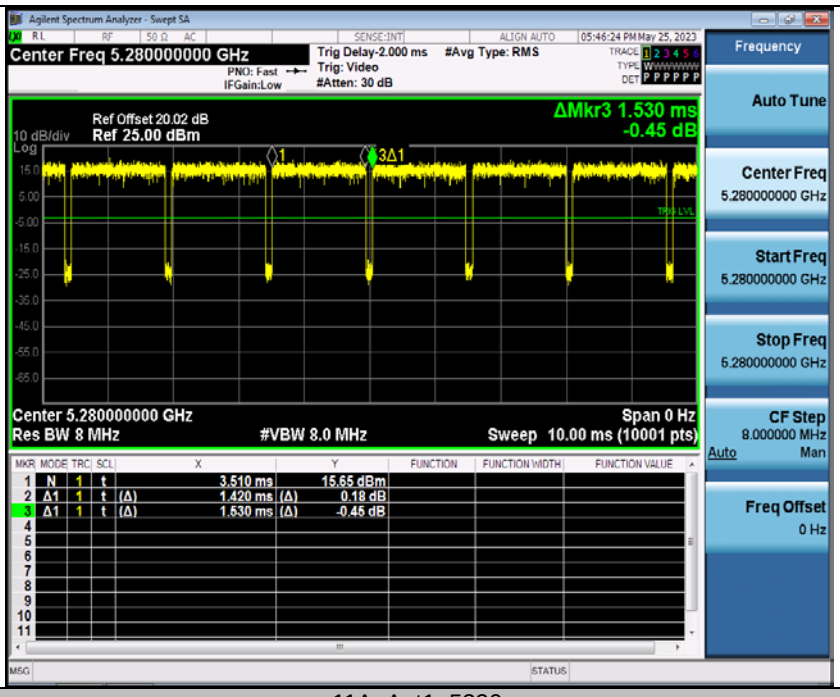

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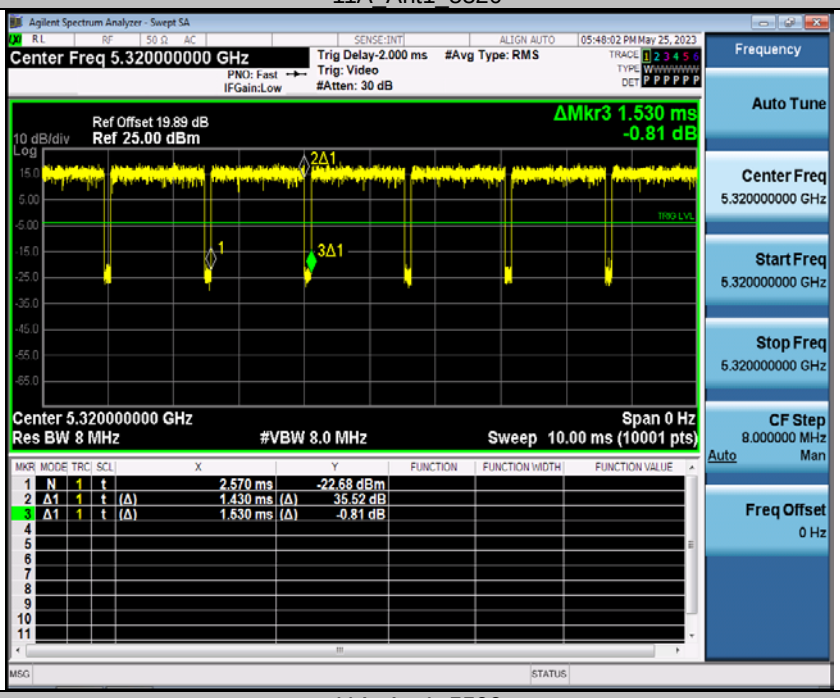

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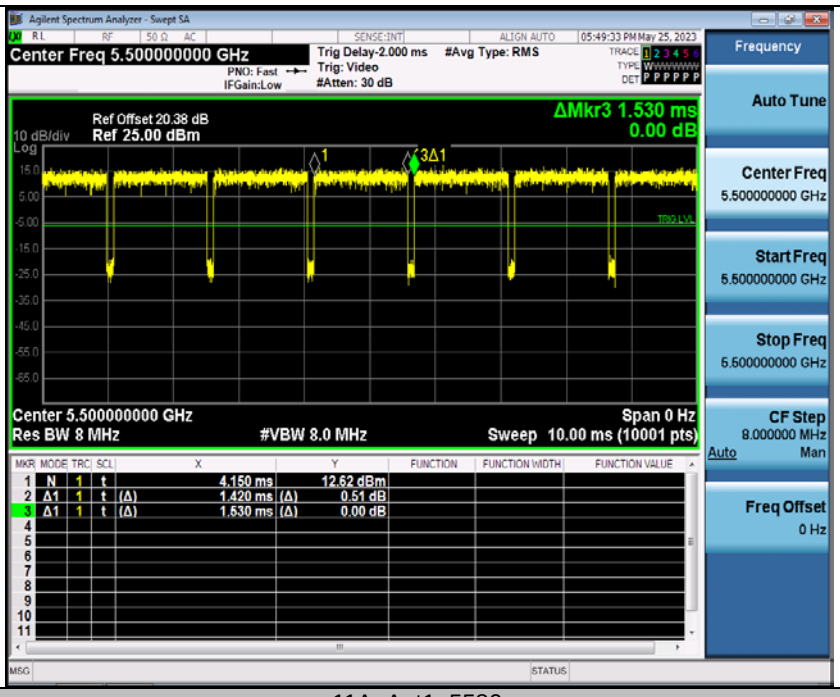

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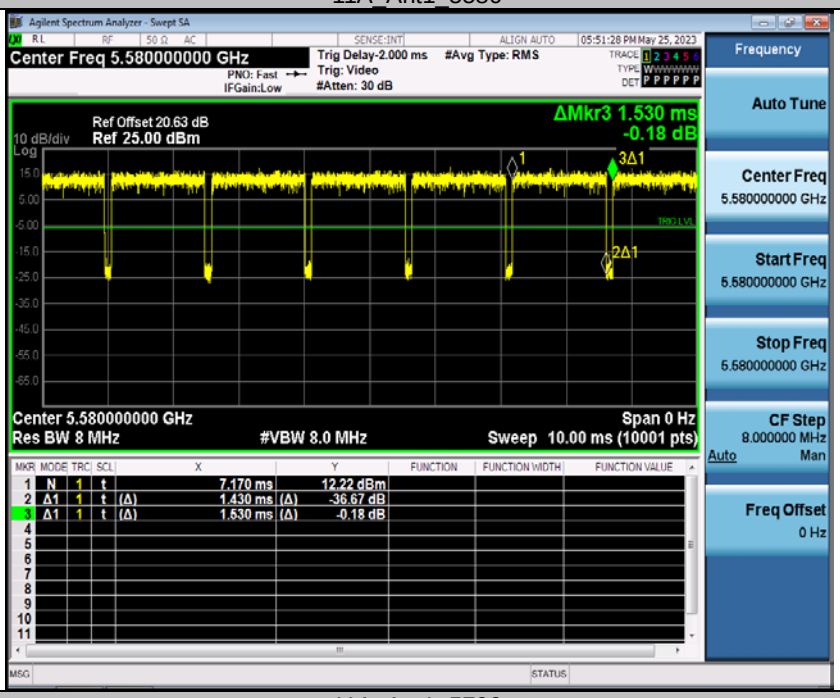

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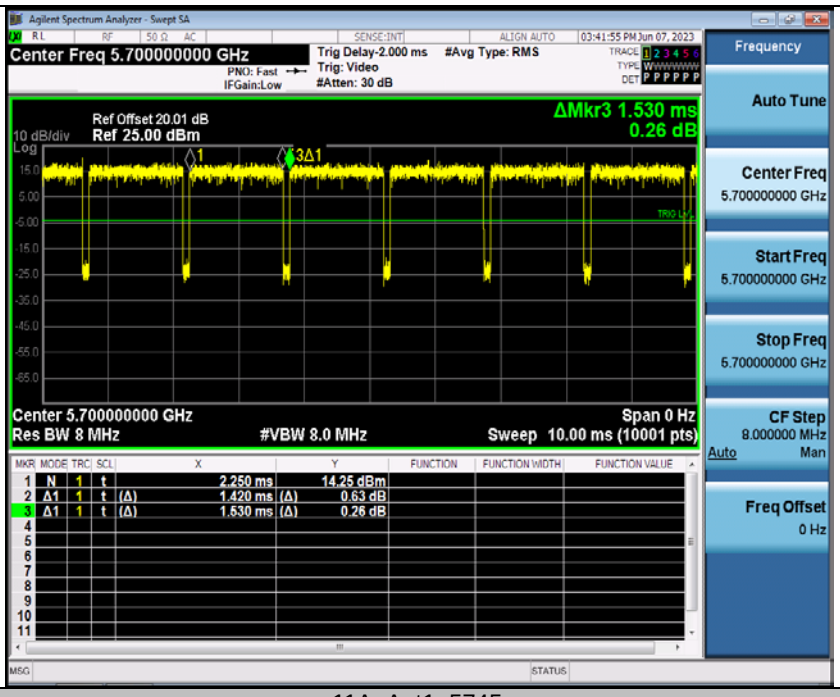

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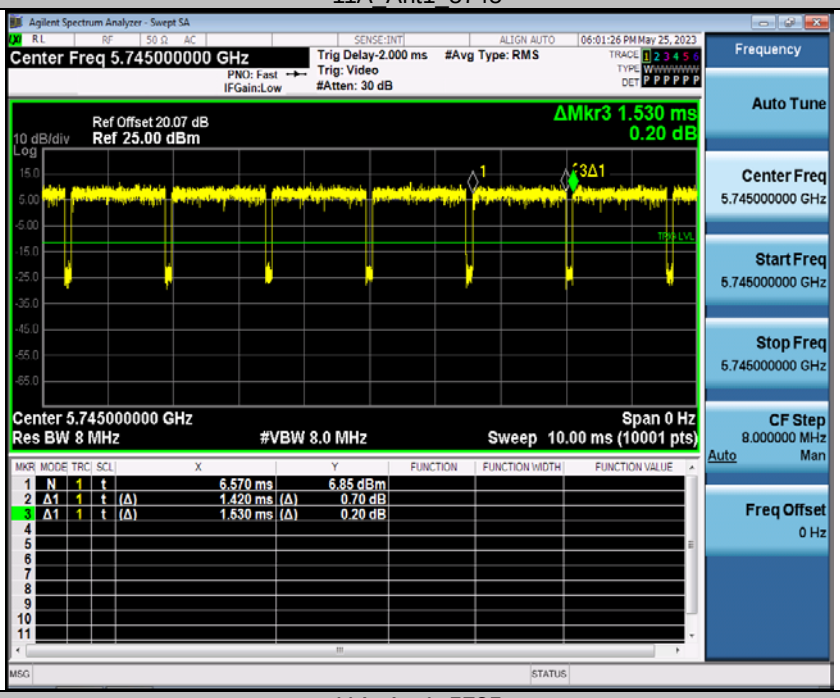

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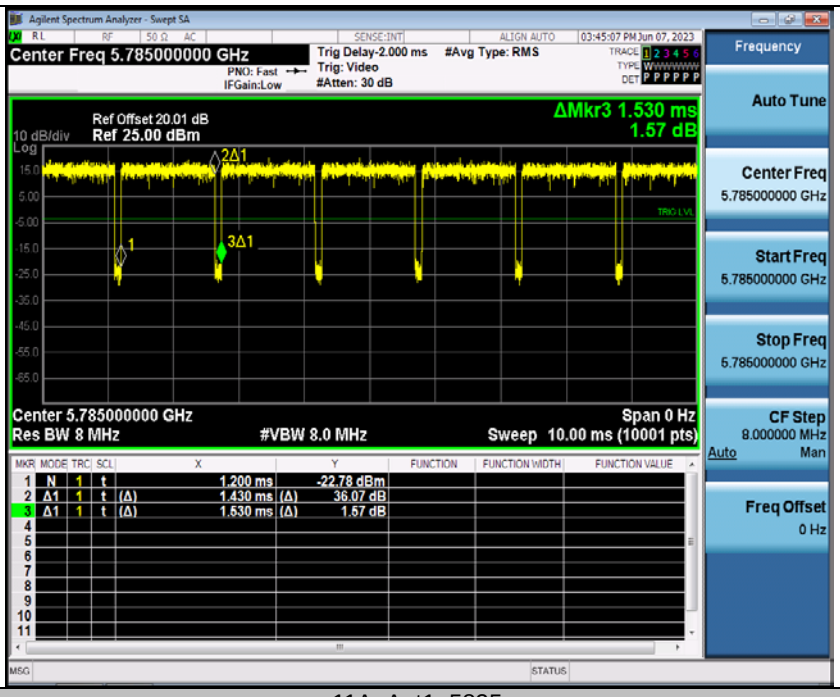

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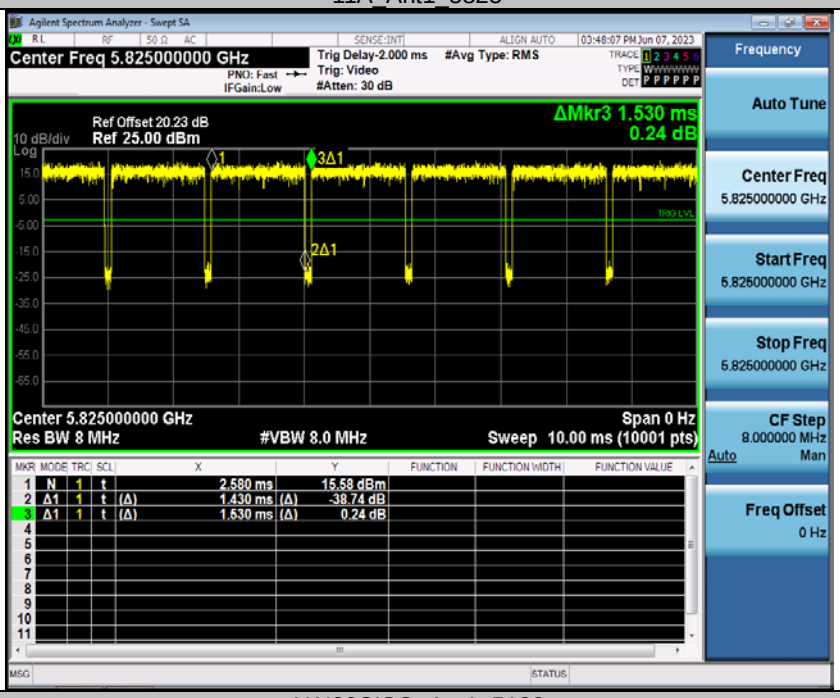

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