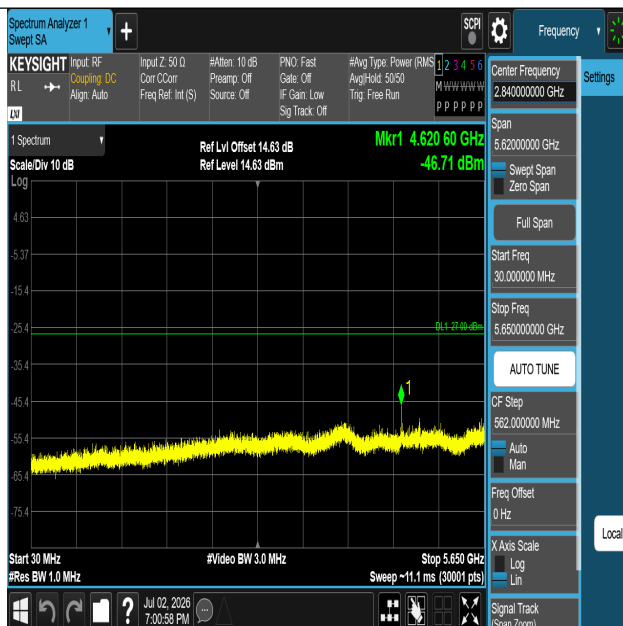
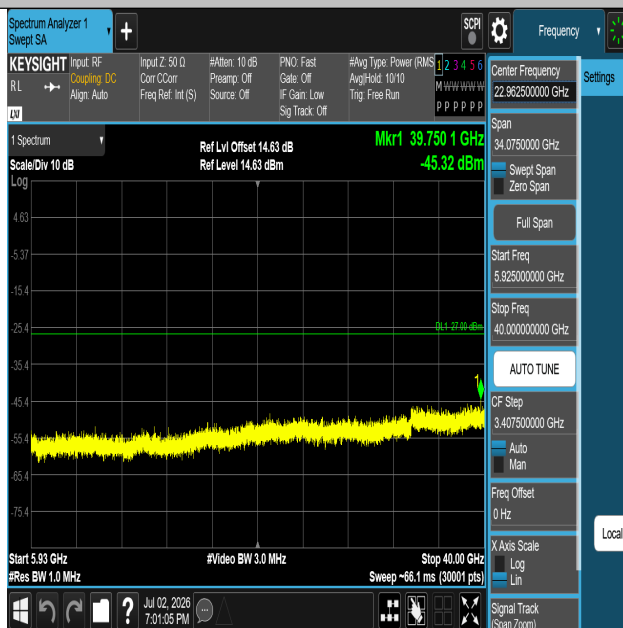




Report No.: PTC26052917301E-FC04



11AC80SISO-Ant1-5775-30~5650-PASS



11AC80SISO-Ant1-5775-5925~40000-PASS



6.6 Band edge measurements

Test Result:

B1:

TestMode	Antenna	ChName	Frequency[MHz]	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	Low	5180	-30.7	≤ -27	PASS
11A	Ant1	High	5240	-35.37	≤ -27	PASS
11N20SISO	Ant1	Low	5180	-33.2	≤ -27	PASS
11N20SISO	Ant1	High	5240	-34.5	≤ -27	PASS
11N40SISO	Ant1	Low	5190	-31.22	≤ -27	PASS
11N40SISO	Ant1	High	5230	-34.86	≤ -27	PASS
11AC20SISO	Ant1	Low	5180	-31.26	≤ -27	PASS
11AC20SISO	Ant1	High	5240	-34.51	≤ -27	PASS
11AC40SISO	Ant1	Low	5190	-29.04	≤ -27	PASS
11AC40SISO	Ant1	High	5230	-34.16	≤ -27	PASS
11AC80SISO	Ant1	Low	5210	-29.63	≤ -27	PASS
11AC80SISO	Ant1	High	5210	-35.01	≤ -27	PASS



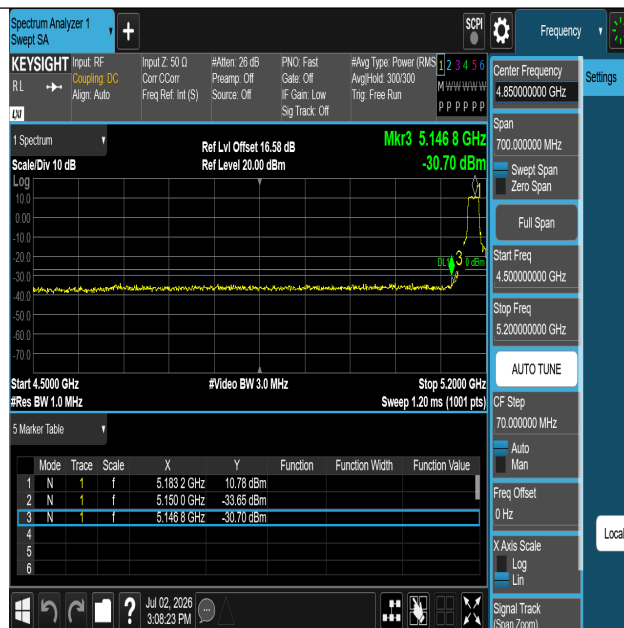
B4

TestMode	Antenna	ChName	Frequency[MHz]	FreqRange [MHz]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	Low	5745	5720~5725	-25.84	≤18.96	PASS
11A	Ant1	Low	5745	5700~5720	-29.07	≤15.56	PASS
11A	Ant1	Low	5745	5650~5700	-35.69	≤-26.87	PASS
11A	Ant1	Low	5745	5645~5650	-35.21	≤-27	PASS
11A	Ant1	High	5825	5850~5855	-28.51	≤16.65	PASS
11A	Ant1	High	5825	5855~5875	-29.31	≤14.75	PASS
11A	Ant1	High	5825	5875~5925	-35.98	≤-25.71	PASS
11A	Ant1	High	5825	5925~5935	-35.22	≤-27	PASS
11N20SISO	Ant1	Low	5745	5720~5725	-18.39	≤22.63	PASS
11N20SISO	Ant1	Low	5745	5700~5720	-23.95	≤15.53	PASS
11N20SISO	Ant1	Low	5745	5650~5700	-35.2	≤-26.45	PASS
11N20SISO	Ant1	Low	5745	5645~5650	-34.73	≤-27	PASS
11N20SISO	Ant1	High	5825	5850~5855	-29.81	≤16.03	PASS
11N20SISO	Ant1	High	5825	5855~5875	-28.92	≤15.31	PASS
11N20SISO	Ant1	High	5825	5875~5925	-36.24	≤-26.61	PASS
11N20SISO	Ant1	High	5825	5925~5935	-35.46	≤-27	PASS
11N40SISO	Ant1	Low	5755	5720~5725	-26.59	≤17.28	PASS
11N40SISO	Ant1	Low	5755	5700~5720	-25.3	≤15.05	PASS
11N40SISO	Ant1	Low	5755	5650~5700	-35.77	≤-26.10	PASS
11N40SISO	Ant1	Low	5755	5645~5650	-35.4	≤-27	PASS
11N40SISO	Ant1	High	5795	5850~5855	-37.98	≤15.66	PASS
11N40SISO	Ant1	High	5795	5855~5875	-34.91	≤11.91	PASS
11N40SISO	Ant1	High	5795	5875~5925	-36.7	≤-26.59	PASS
11N40SISO	Ant1	High	5795	5925~5935	-35.9	≤-27	PASS
11AC20SISO	Ant1	Low	5745	5720~5725	-25.53	≤16.34	PASS
11AC20SISO	Ant1	Low	5745	5700~5720	-25.9	≤15.18	PASS
11AC20SISO	Ant1	Low	5745	5650~5700	-35.35	≤-26.96	PASS
11AC20SISO	Ant1	Low	5745	5645~5650	-34.79	≤-27	PASS
11AC20SISO	Ant1	High	5825	5850~5855	-29.55	≤16.34	PASS
11AC20SISO	Ant1	High	5825	5855~5875	-30.54	≤14.75	PASS
11AC20SISO	Ant1	High	5825	5875~5925	-35.84	≤-26.51	PASS
11AC20SISO	Ant1	High	5825	5925~5935	-35.19	≤-27	PASS
11AC40SISO	Ant1	Low	5755	5720~5725	-25.54	≤17.58	PASS
11AC40SISO	Ant1	Low	5755	5700~5720	-24.7	≤15.50	PASS
11AC40SISO	Ant1	Low	5755	5650~5700	-34.32	≤-26.10	PASS
11AC40SISO	Ant1	Low	5755	5645~5650	-34.52	≤-27	PASS
11AC40SISO	Ant1	High	5795	5850~5855	-38.07	≤15.66	PASS
11AC40SISO	Ant1	High	5795	5855~5875	-36.7	≤10.43	PASS
11AC40SISO	Ant1	High	5795	5875~5925	-36.12	≤-26.83	PASS
11AC40SISO	Ant1	High	5795	5925~5935	-34.6	≤-27	PASS
11AC80SISO	Ant1	Low	5775	5720~5725	-29.17	≤15.65	PASS
11AC80SISO	Ant1	Low	5775	5700~5720	-34.43	≤10.14	PASS
11AC80SISO	Ant1	Low	5775	5650~5700	-34.85	≤-26.34	PASS
11AC80SISO	Ant1	Low	5775	5645~5650	-34.87	≤-27	PASS
11AC80SISO	Ant1	High	5775	5850~5855	-36.89	≤15.84	PASS
11AC80SISO	Ant1	High	5775	5855~5875	-35.95	≤10.50	PASS
11AC80SISO	Ant1	High	5775	5875~5925	-36.57	≤-26.32	PASS
11AC80SISO	Ant1	High	5775	5925~5935	-36.04	≤-27	PASS

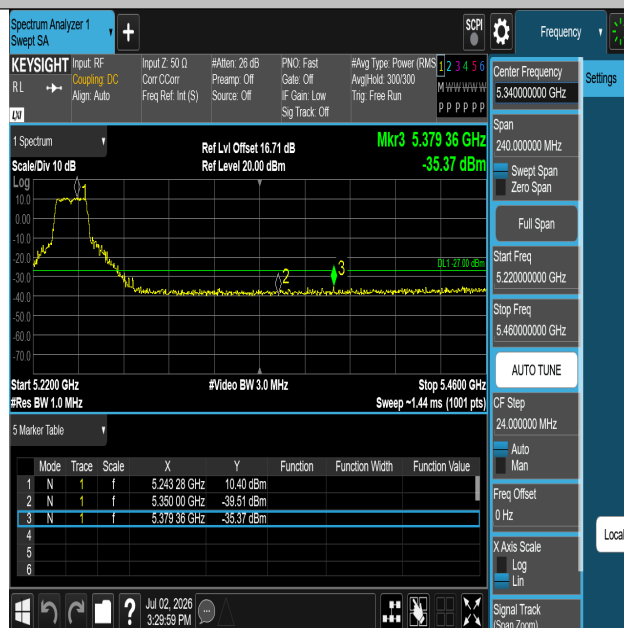
Note: The Max. Level has been corrected by the cable loss and antenna gain.



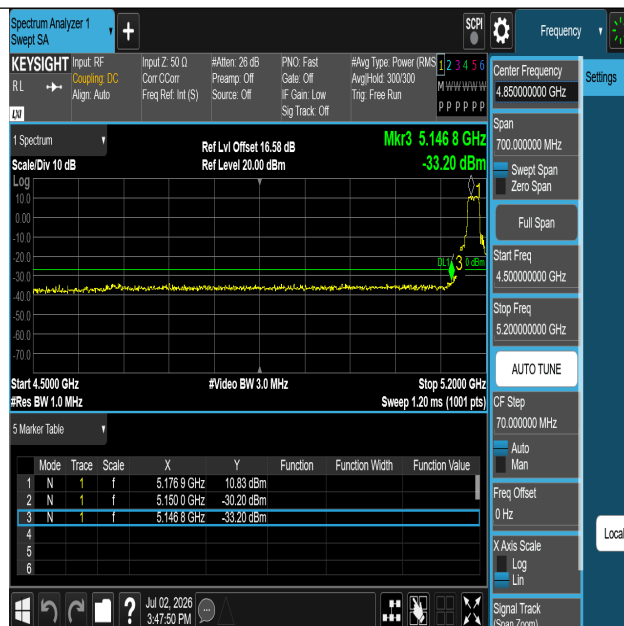
Test plots :



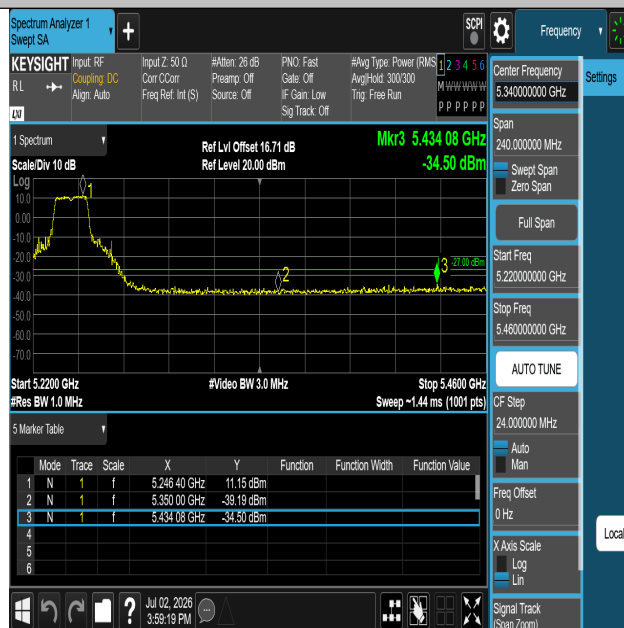
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11A-Ant1-5240-PASS



11N20SISO-Ant1-5180-PASS



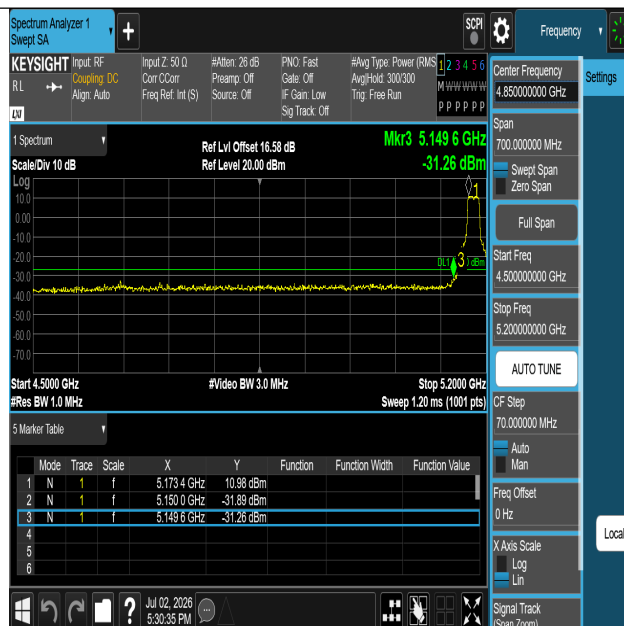
11N20SISO-Ant1-5240-PASS



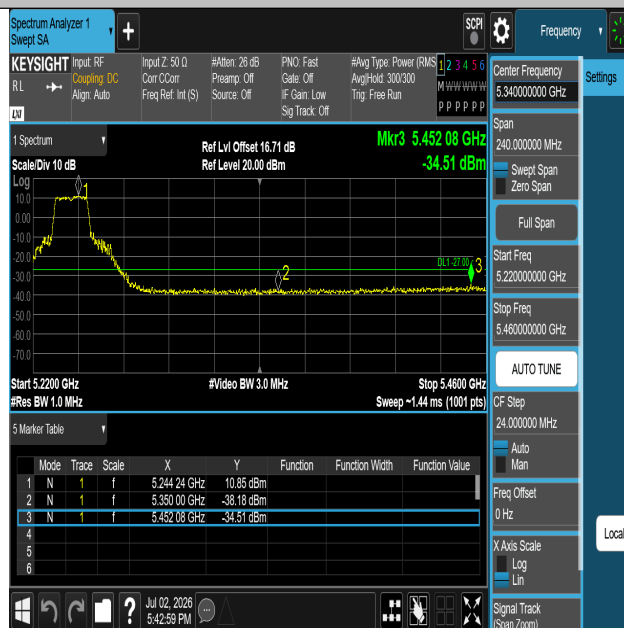
11N40SISO-Ant1-5190-PASS



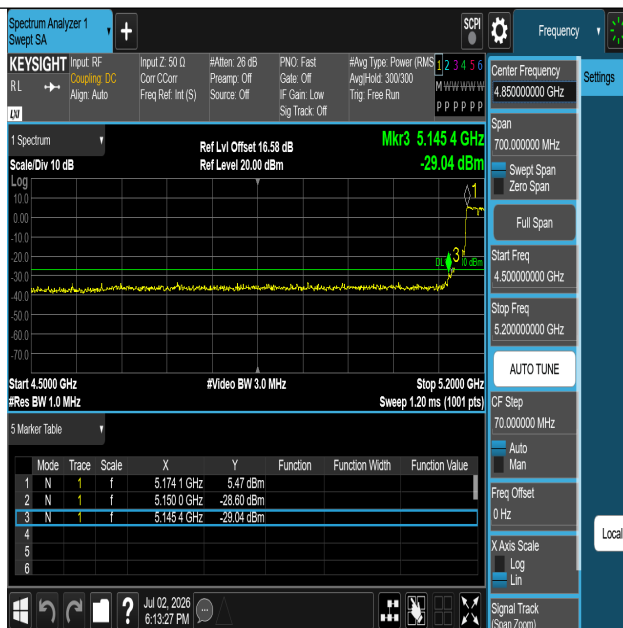
11N40SISO-Ant1-5230-PASS



11AC20SISO-Ant1-5180-PASS



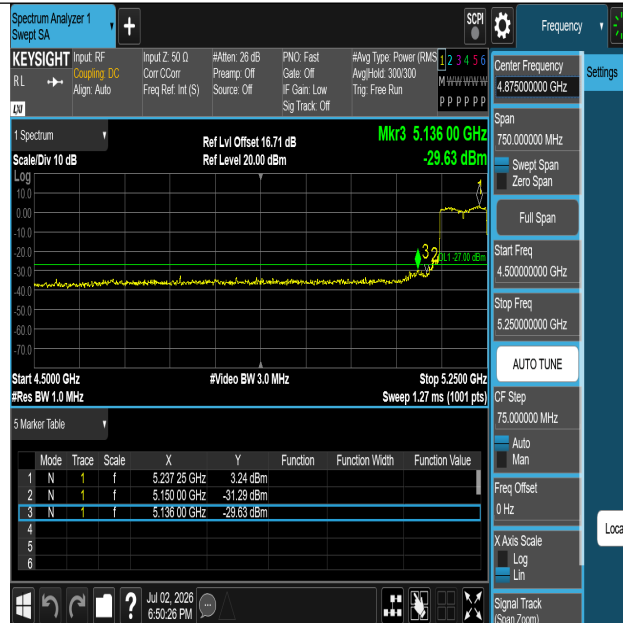
11AC20SISO-Ant1-5240-PASS



11AC40SISO-Ant1-5190-PASS



11AC40SISO-Ant1-5230-PASS



11AC80SISO-Ant1-5210-PASS



11AC80SISO-Ant1-5210-PASS



11A-Ant1-5745-PASS



11A-Ant1-5825-PASS



11N20SISO-Ant1-5745-PASS



11N20SISO-Ant1-5825-PASS



11N40SISO-Ant1-5755-PASS



11N40SISO-Ant1-5795-PASS



11AC20SISO-Ant1-5745-PASS



11AC20SISO-Ant1-5825-PASS



11AC40SISO-Ant1-5755-PASS



11AC40SISO-Ant1-5795-PASS



11AC80SISO-Ant1-5775-PASS



11AC80SISO-Ant1-5775-PASS

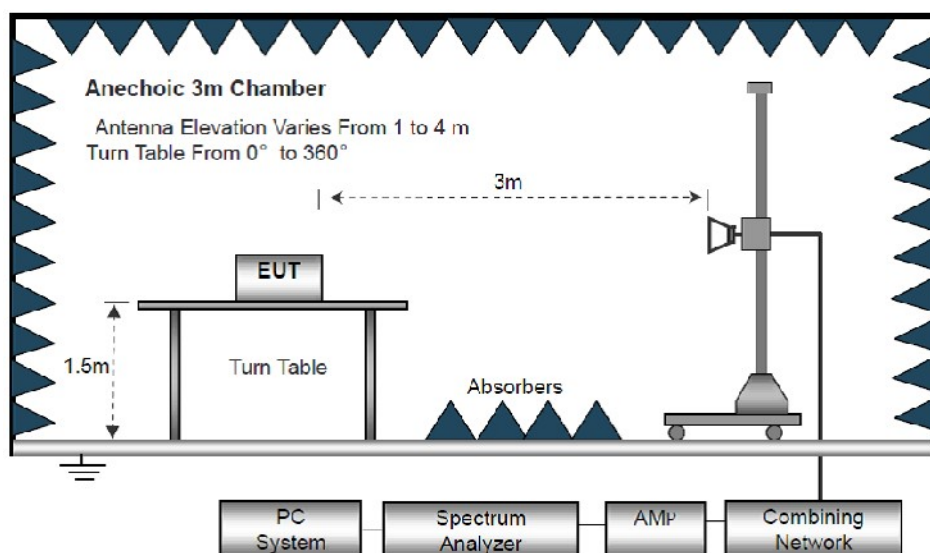
6.7 Restricted Band

Test Requirement : FCC Part15 E Section 15.407(b)

Test site : Measurement Distance: 3m

Test Limit :	Frequency	Limit (dBuV/m @3m)	Remark
	Above 1GHz	74	Peak Value
		54	Average Value

The test setup for Restricted Band



Test Procedure:

1. The EUT was placed on a styrofoam table which is 1.5m above ground plane.
2. EUT is set 3m away from the receiving antenna, which is moved from 1m to 4m to find out the maximum emissions. The spectrum was investigated from the lowest radio frequency signal generated in the device, without going below 9 kHz, up to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.



7. The radiation measurements are tested under 3-axes(X,Y,Z) position(X denotes lying on the table, Y denotes side stand and Z denotes vertical stand), After pre-test, It was found that the worse radiation emission was get at the X position. So the data shown was the X position only.

8. The test above 1GHz must be use the fully anechoic room, and the test below 1GHz use the half anechoic room

Test Result:

Worst case mode:		802.11a(6Mbps)		Test channel:		36		
NO.	Freq. [MHz]	level [dBμV/m]	Factor [dB]	Emission level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector Type
1	5150	45.22	6.53	51.75	68.2	16.45	H	Peak
2	5150	33.53	6.53	40.06	54	13.94	H	Average
3	5150	51.03	6.53	57.56	68.2	10.64	V	Peak
4	5150	39.52	6.53	46.05	54	7.95	V	Average

Worst case mode:		802.11a(6Mbps)		Test channel:		165		
NO.	Freq. [MHz]	level [dBμV/m]	Factor [dB]	Emission level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector Type
1	5850	47.09	6.64	53.73	68.2	14.47	H	Peak
2	5850	35.86	6.64	42.5	54	11.5	H	Average
3	5850	43.55	6.64	50.19	68.2	18.01	V	Peak
4	5850	38.12	6.64	44.76	54	9.24	V	Average

Note: Only recorded the worst case in the report.



7 Emission Bandwidth and Occupied Bandwidth

Test Requirement	: FCC CFR47 Part 15 Section 15.407(a)(e)
Test Method	: ANSI C63.10-2020
Test Limit	According to FCC §15.407(a), The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements in the 5.725-5.85 GHz band are made over a reference bandwidth of 500 kHz or the 26 dB emission bandwidth of the device, whichever is less. Measurements in the 5.15-5.25 GHz, 5.25-5.35 GHz, and the 5.47-5.725 GHz bands are made over a bandwidth of 1 MHz or the 26 dB emission bandwidth of the device, whichever is less. A narrower resolution bandwidth can be used, provided that the measured power is integrated over the full reference bandwidth. As per FCC §15.407(e): for equipment operating in the band 5725 – 5850 MHz, the minimum 6 dB bandwidth of U-NII devices shall be 500 kHz.

7.1 Test Procedure

According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01,
Emission Bandwidth (EBW)

a) Set RBW = approximately 1% of the emission bandwidth; b) Set the VBW > RBW; c) Detector = Peak; d) Trace mode = max hold; e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%; 99% Occupied Bandwidth

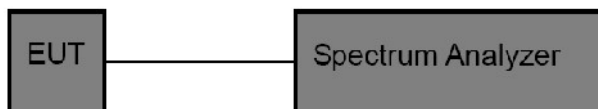
The 99% occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5 % of the total mean power of the given emission. Measurement of the 99% occupied bandwidth is required only as a condition for using the optional band-edge measurement techniques described in II.G.3.d). Measurements of 99% occupied bandwidth may also optionally be used in lieu of the EBW to define the minimum frequency range over which the spectrum is integrated when measuring maximum conducted output power as described in II.E. However, the EBW must be measured to determine bandwidth dependent limits on maximum conducted output power in accordance with 15.407(a).

The following procedure shall be used for measuring (99 %) power bandwidth:

1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1 % to 5 % of the OBW
4. Set $VBW \geq 3 \cdot RBW$
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99 % power bandwidth function of the instrument (if available).
7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency.

The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

7.2 Test setup



7.3 Test Result

PASS

Pre-scan has been conducted to determine the worst-case mode from all possible combinations between available modulations / data rates and antenna ports.

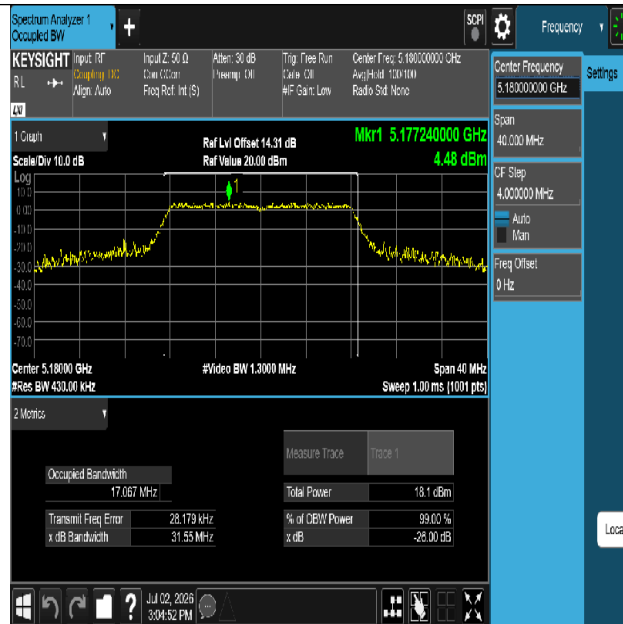
Following channel was selected for the final test as listed below.

99% occupied bandwidth:

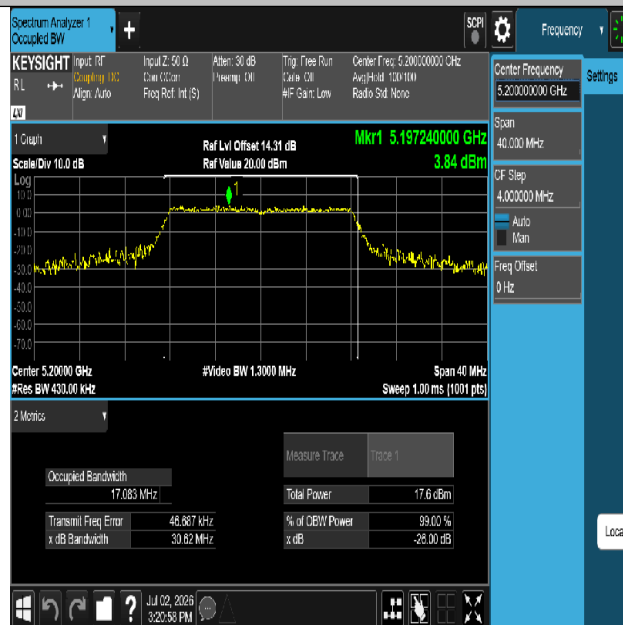
TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	17.067	5171.4947	5188.5617	---	---
11A	Ant1	5200	17.083	5191.5052	5208.5882	---	---
11A	Ant1	5240	16.962	5231.6135	5248.5755	---	---
11A	Ant1	5745	17.068	5736.5608	5753.6288	---	---
11A	Ant1	5785	17.052	5776.5403	5793.5923	---	---
11A	Ant1	5825	17.037	5816.5444	5833.5814	---	---
11N20SISO	Ant1	5180	17.971	5171.0169	5188.9879	---	---
11N20SISO	Ant1	5200	17.910	5191.0684	5208.9784	---	---
11N20SISO	Ant1	5240	17.920	5231.1198	5249.0398	---	---
11N20SISO	Ant1	5745	17.942	5736.1074	5754.0494	---	---
11N20SISO	Ant1	5785	17.922	5776.0701	5793.9921	---	---
11N20SISO	Ant1	5825	17.889	5816.0828	5833.9718	---	---
11N40SISO	Ant1	5190	36.479	5171.8179	5208.2969	---	---
11N40SISO	Ant1	5230	36.492	5211.9399	5248.4319	---	---
11N40SISO	Ant1	5755	36.380	5736.9507	5773.3307	---	---
11N40SISO	Ant1	5795	36.434	5776.9070	5813.3410	---	---
11AC20SISO	Ant1	5180	17.971	5171.0374	5189.0084	---	---
11AC20SISO	Ant1	5200	17.999	5191.0313	5209.0303	---	---
11AC20SISO	Ant1	5240	17.922	5231.1434	5249.0654	---	---
11AC20SISO	Ant1	5745	17.932	5736.1154	5754.0474	---	---
11AC20SISO	Ant1	5785	17.890	5776.0799	5793.9699	---	---
11AC20SISO	Ant1	5825	17.909	5816.1035	5834.0125	---	---
11AC40SISO	Ant1	5190	36.506	5171.7684	5208.2744	---	---
11AC40SISO	Ant1	5230	36.472	5211.9015	5248.3735	---	---
11AC40SISO	Ant1	5755	36.390	5736.9558	5773.3458	---	---
11AC40SISO	Ant1	5795	36.458	5776.8635	5813.3215	---	---
11AC80SISO	Ant1	5210	76.047	5172.1639	5248.2109	---	---
11AC80SISO	Ant1	5775	75.702	5737.4376	5813.1396	---	---



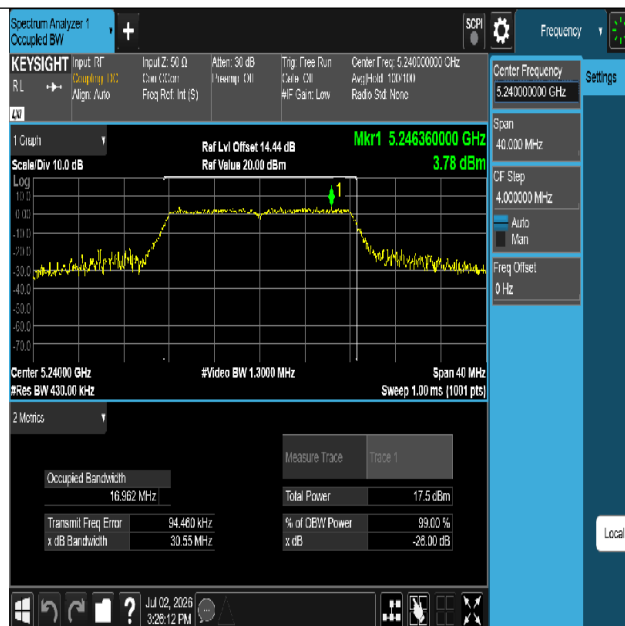
Test Graphs:



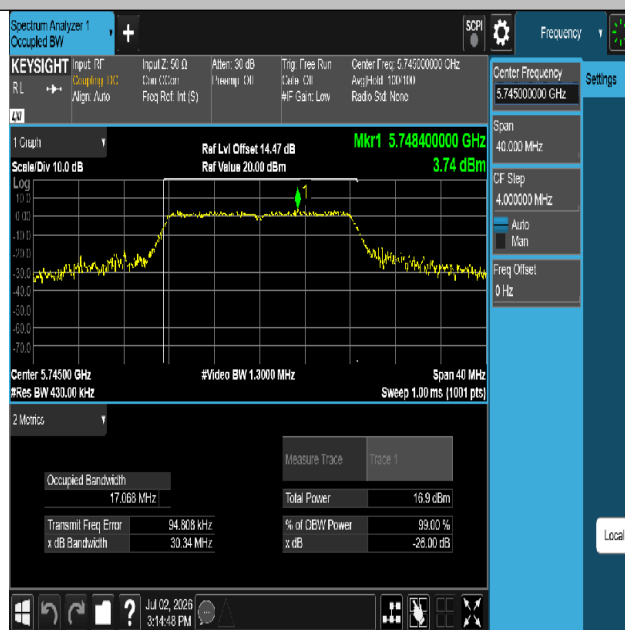
11A-Ant1-5180



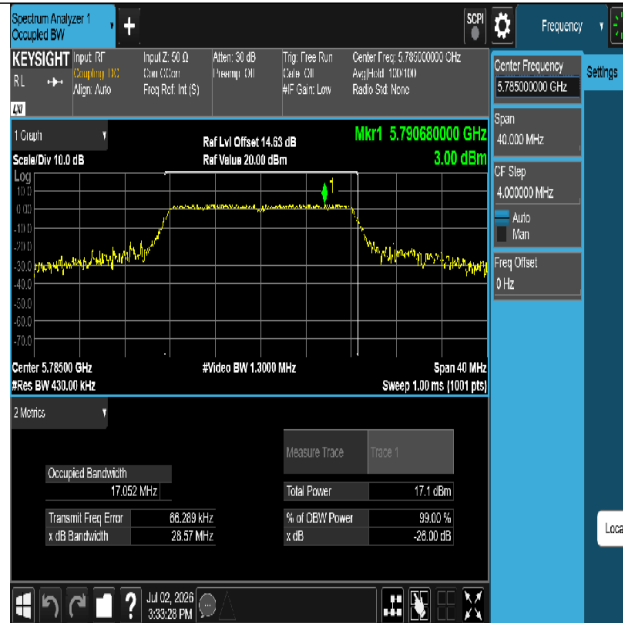
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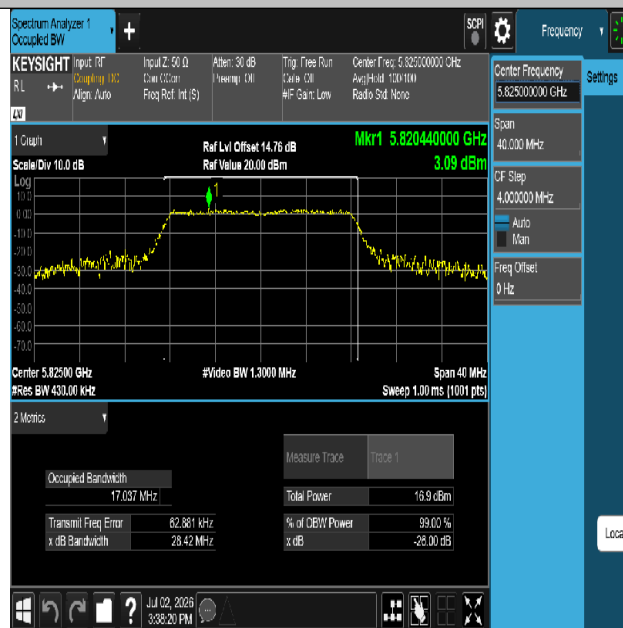
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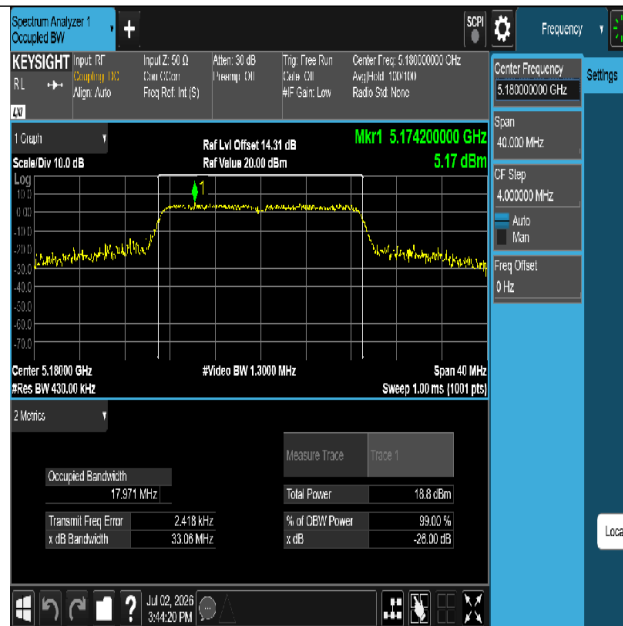
11A-Ant1-5745



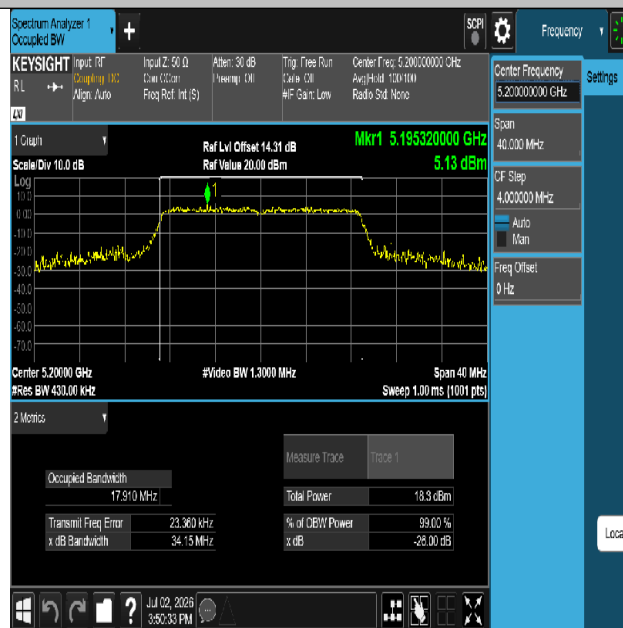
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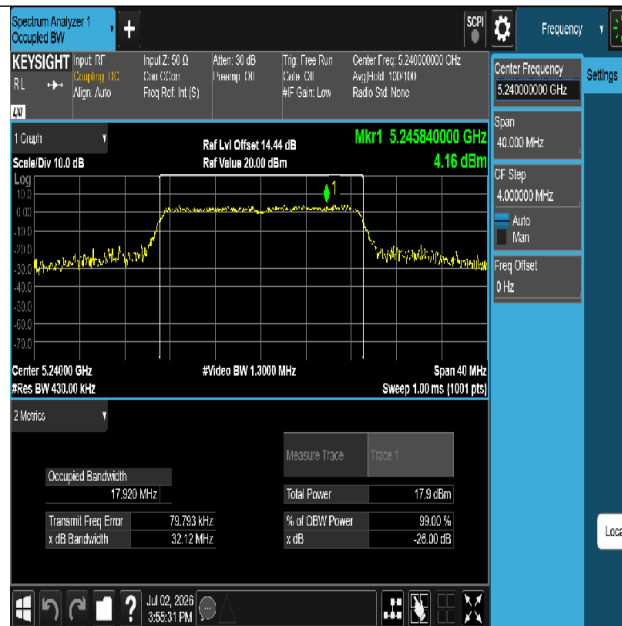
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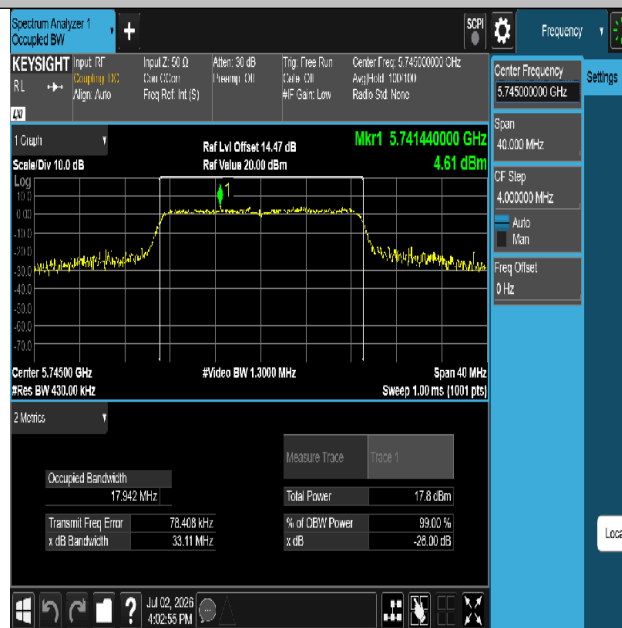
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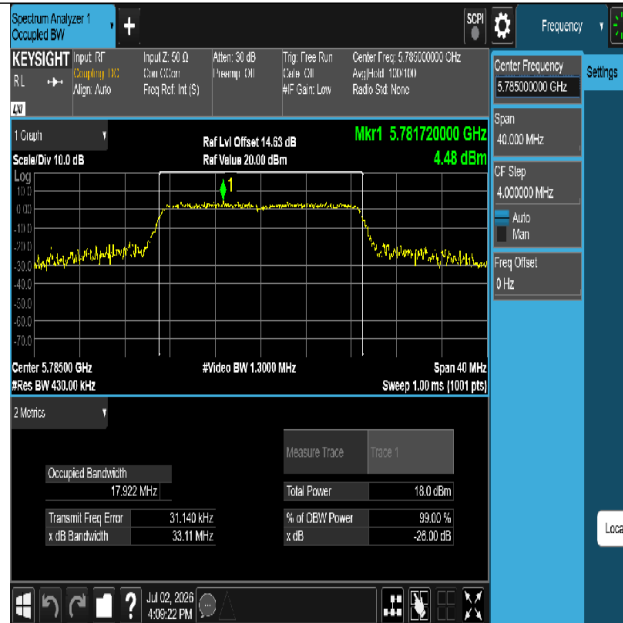
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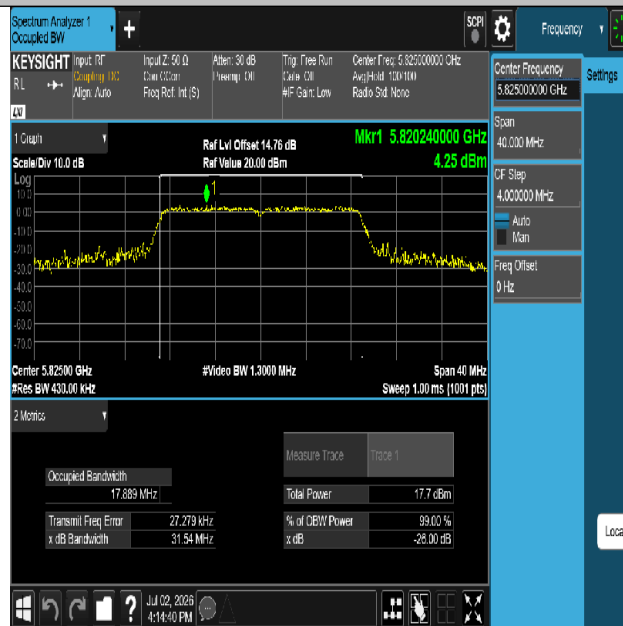
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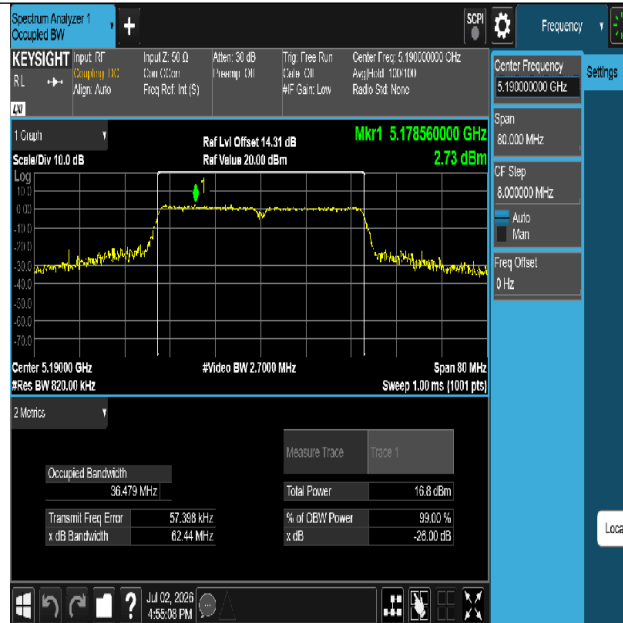
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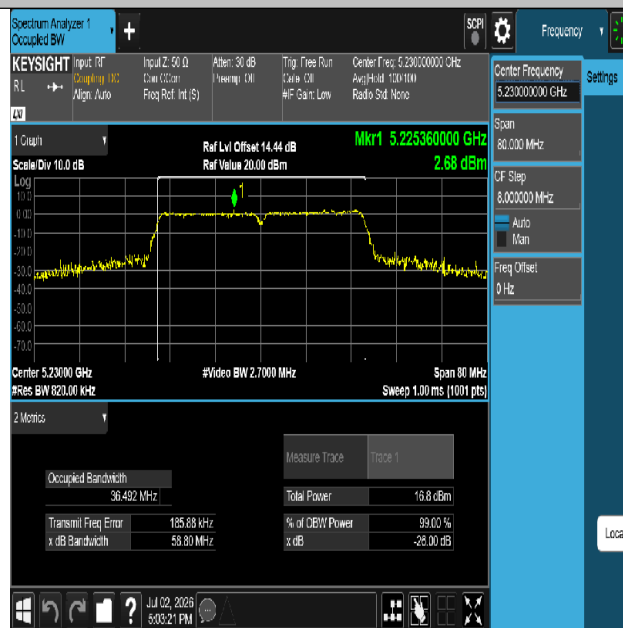
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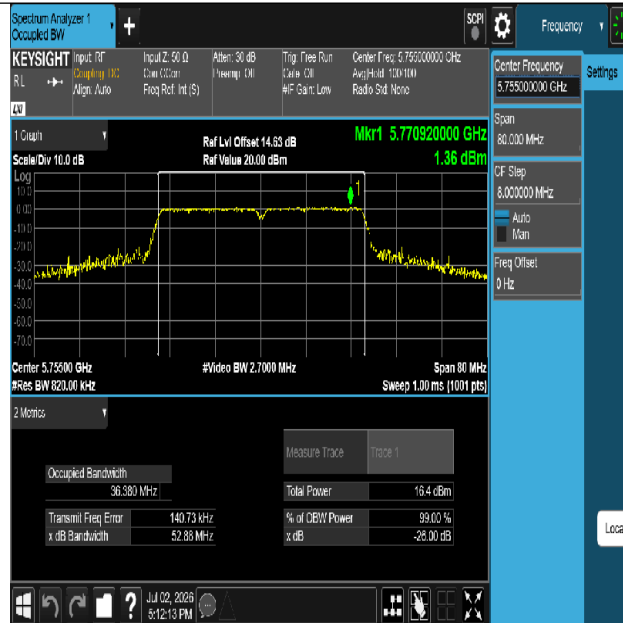
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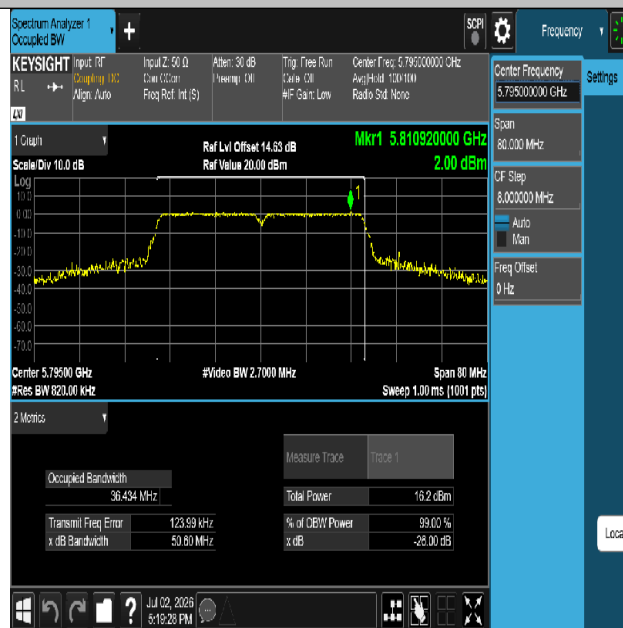
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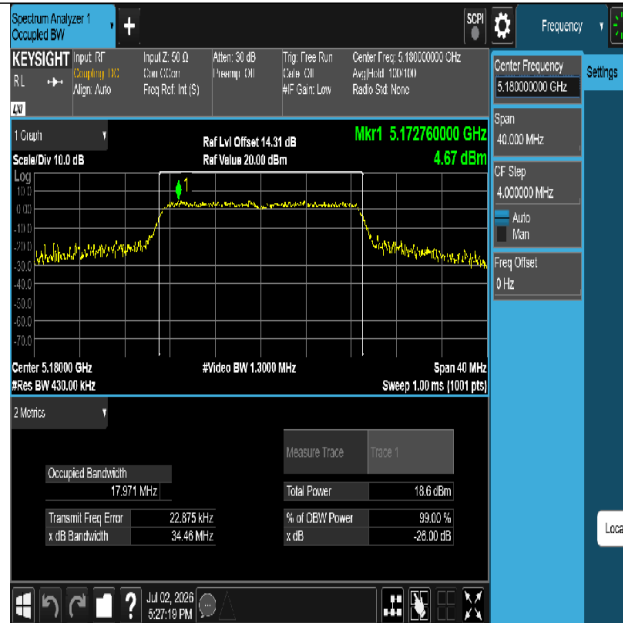
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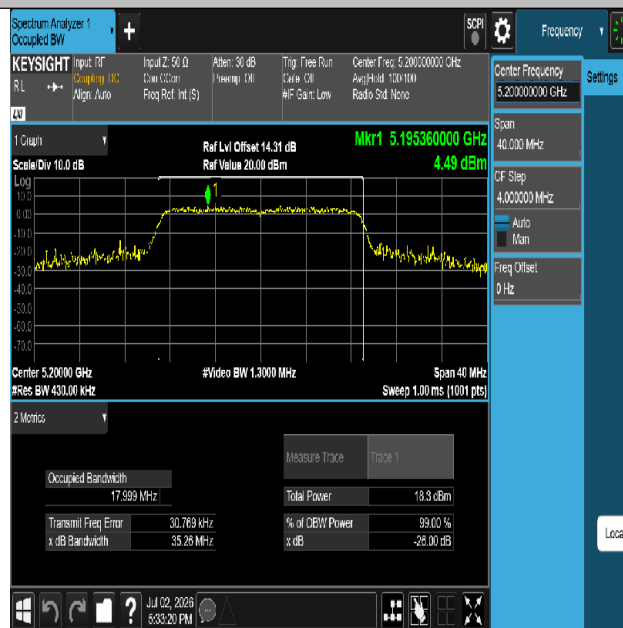
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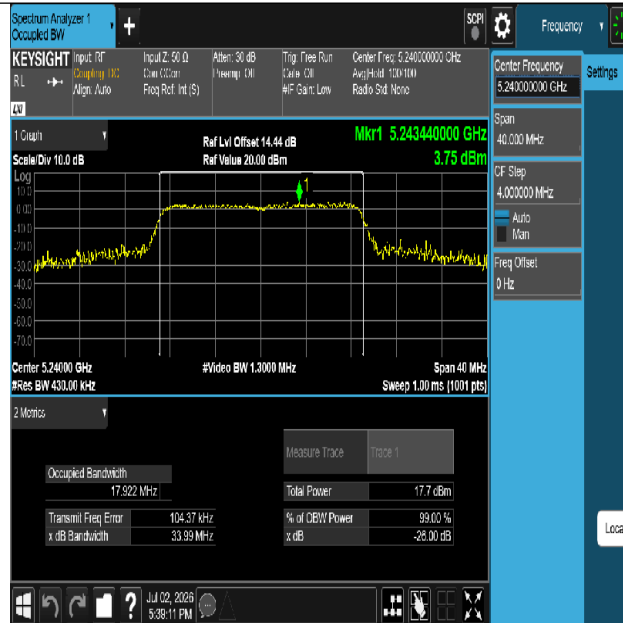
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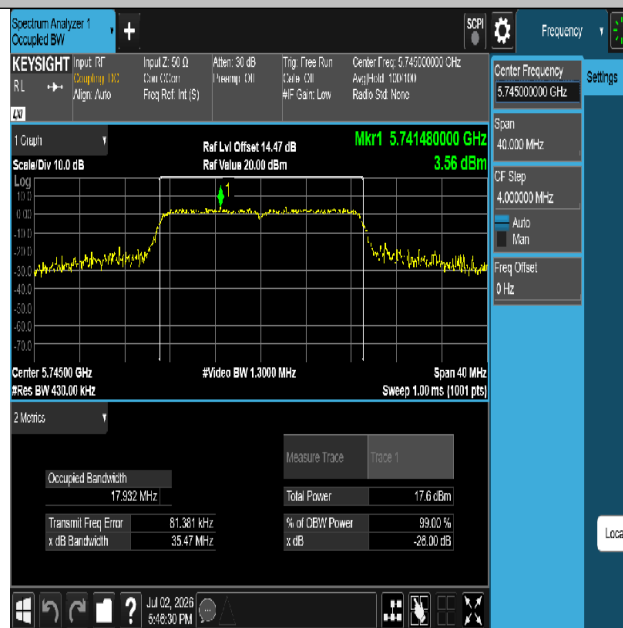
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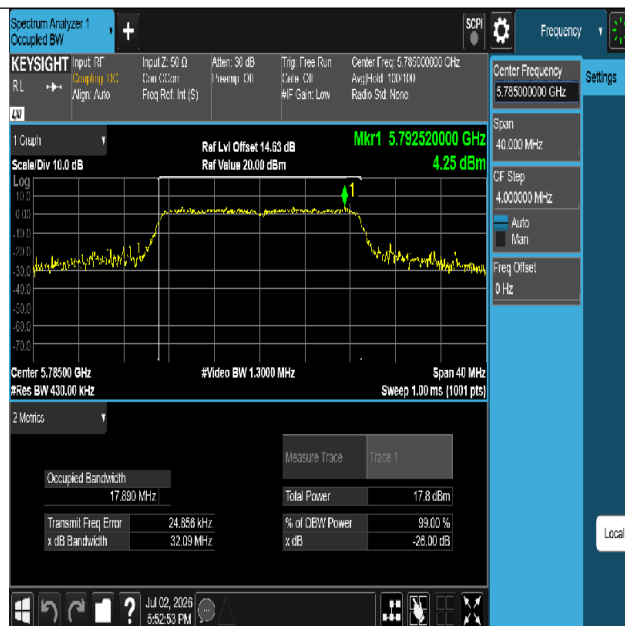
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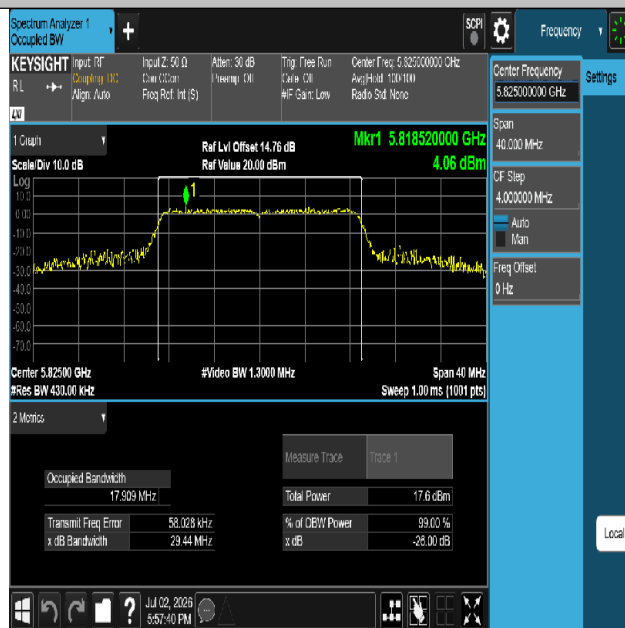
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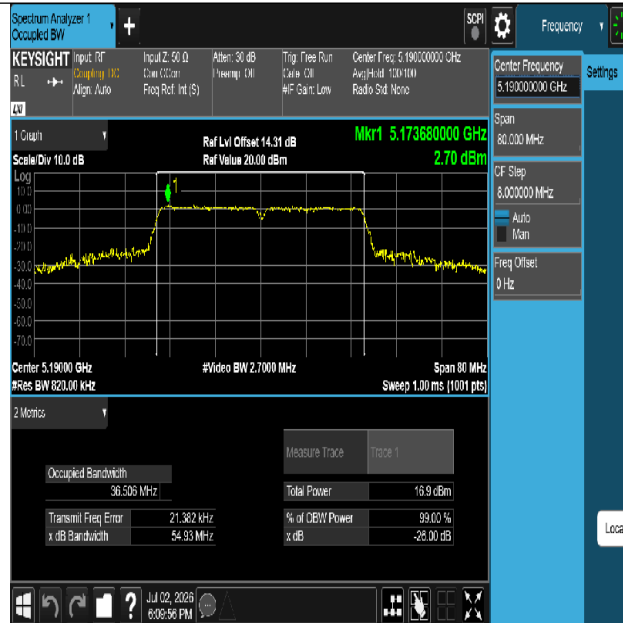
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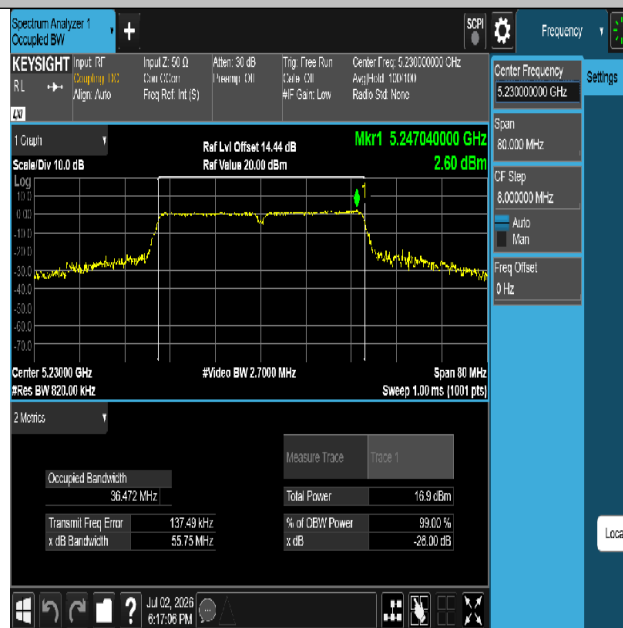
11AC20SISO-Ant1-5785



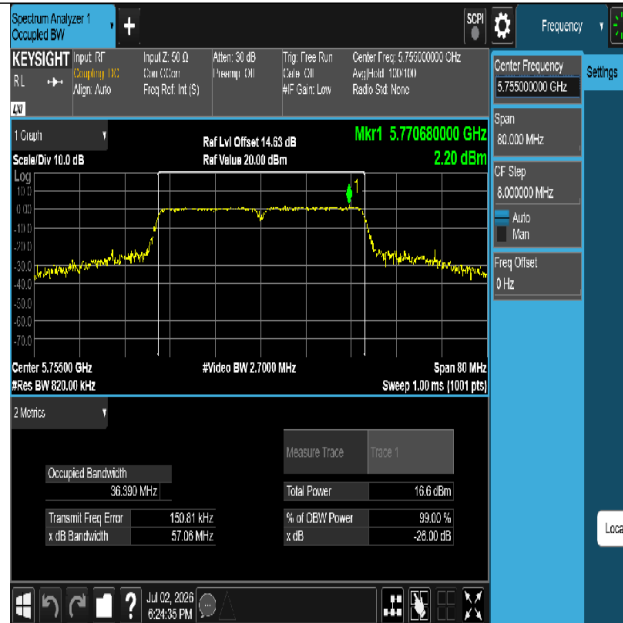
11AC20SISO-Ant1-5825



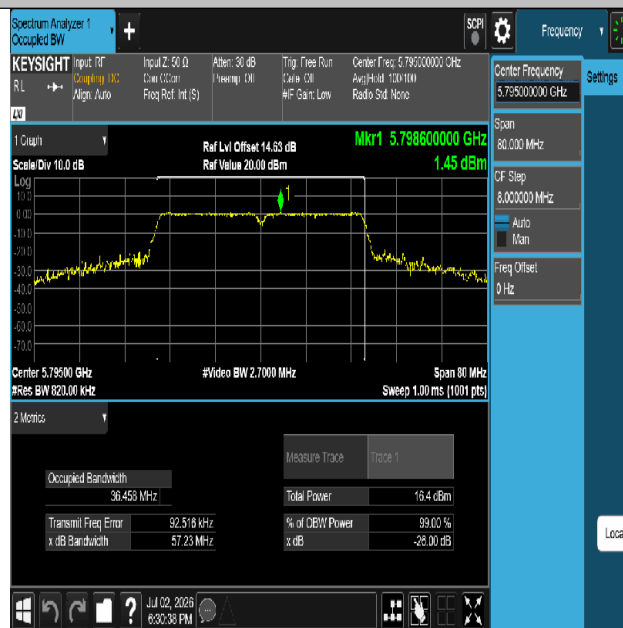
11AC40SISO-Ant1-5190



11AC40SISO-Ant1-5230



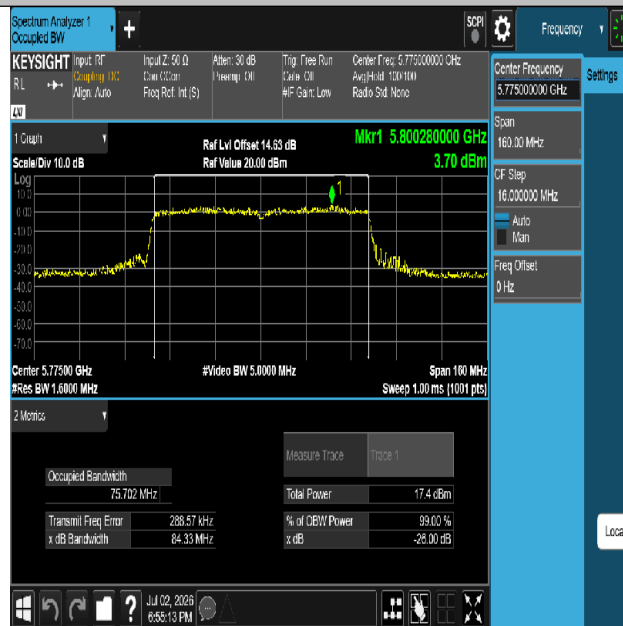
11AC40SISO-Ant1-5755



11AC40SISO-Ant1-5795



11AC80SISO-Ant1-5210



11AC80SISO-Ant1-5775



26 dB emission bandwidth:

TestMode	Antenna	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	25.320	5167.360	5192.680	---	---
11A	Ant1	5200	28.080	5186.560	5214.640	---	---
11A	Ant1	5240	24.560	5230.360	5254.920	---	---
11A	Ant1	5745	22.360	5733.120	5755.480	---	---
11A	Ant1	5785	25.600	5774.800	5800.400	---	---
11A	Ant1	5825	24.920	5812.760	5837.680	---	---
11N20SISO	Ant1	5180	25.840	5164.880	5190.720	---	---
11N20SISO	Ant1	5200	27.200	5185.440	5212.640	---	---
11N20SISO	Ant1	5240	27.800	5225.880	5253.680	---	---
11N20SISO	Ant1	5745	30.560	5730.160	5760.720	---	---
11N20SISO	Ant1	5785	27.160	5772.680	5799.840	---	---
11N20SISO	Ant1	5825	27.840	5810.760	5838.600	---	---
11N40SISO	Ant1	5190	48.480	5164.400	5212.880	---	---
11N40SISO	Ant1	5230	49.280	5205.920	5255.200	---	---
11N40SISO	Ant1	5755	42.800	5734.600	5777.400	---	---
11N40SISO	Ant1	5795	46.240	5774.520	5820.760	---	---
11AC20SISO	Ant1	5180	26.160	5166.440	5192.600	---	---
11AC20SISO	Ant1	5200	31.960	5182.280	5214.240	---	---
11AC20SISO	Ant1	5240	31.120	5226.600	5257.720	---	---
11AC20SISO	Ant1	5745	26.480	5731.880	5758.360	---	---
11AC20SISO	Ant1	5785	30.200	5770.600	5800.800	---	---
11AC20SISO	Ant1	5825	30.080	5812.240	5842.320	---	---
11AC40SISO	Ant1	5190	49.760	5164.560	5214.320	---	---
11AC40SISO	Ant1	5230	44.480	5207.040	5251.520	---	---
11AC40SISO	Ant1	5755	44.400	5733.240	5777.640	---	---
11AC40SISO	Ant1	5795	46.720	5772.120	5818.840	---	---
11AC80SISO	Ant1	5210	89.600	5165.200	5254.800	---	---
11AC80SISO	Ant1	5775	87.680	5731.960	5819.640	---	---

**26 dB emission bandwidth Test Graphs:**

11A-Ant1-5180



11A-Ant1-5200



11A-Ant1-5240



11A-Ant1-5745



11A-Ant1-5785



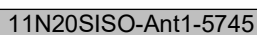
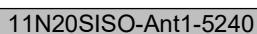
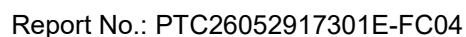
11A-Ant1-5825



11N20SISO-Ant1-5180

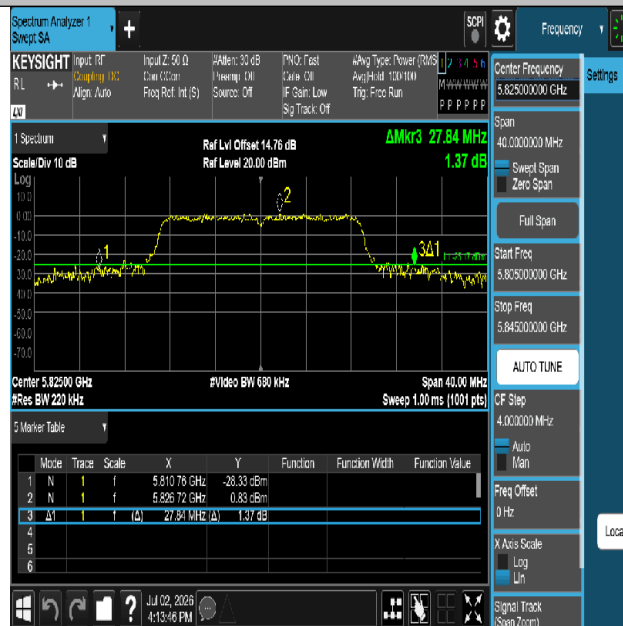


11N20SISO-Ant1-5200





11N20SISO-Ant1-5785



11N20SISO-Ant1-5825



11N40SISO-Ant1-5190



11N40SISO-Ant1-5230



11N40SISO-Ant1-5755



11N40SISO-Ant1-5795



11AC20SISO-Ant1-5180



11AC20SISO-Ant1-5200



11AC20SISO-Ant1-5240



11AC20SISO-Ant1-5745



11AC20SISO-Ant1-5785



11AC20SISO-Ant1-5825



11AC40SISO-Ant1-5190



11AC40SISO-Ant1-5230



11AC40SISO-Ant1-5755



11AC40SISO-Ant1-5795



11AC80SISO-Ant1-5210



11AC80SISO-Ant1-5775

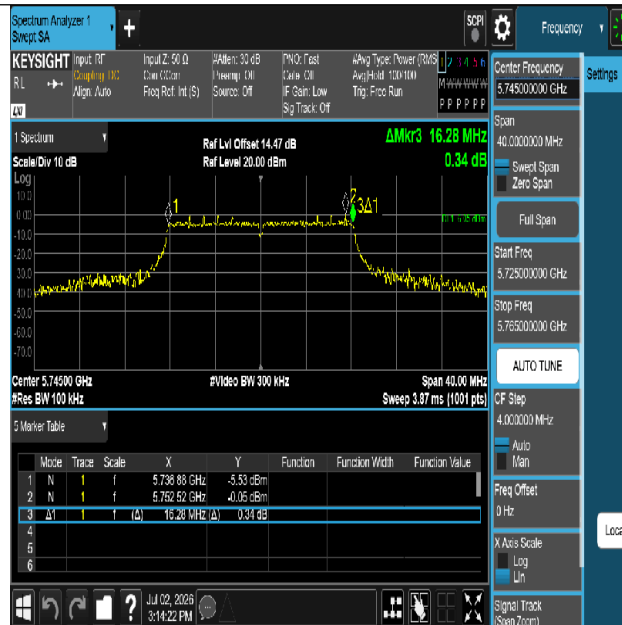


Minimum 6 dB bandwidth:

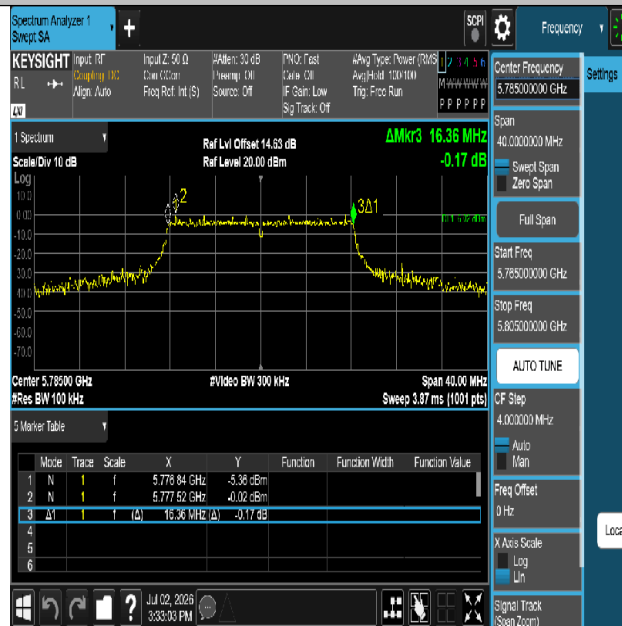
TestMode	Antenna	Frequency[MHz]	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	16.280	5736.880	5753.160	0.5	PASS
11A	Ant1	5785	16.360	5776.840	5793.200	0.5	PASS
11A	Ant1	5825	16.360	5816.840	5833.200	0.5	PASS
11N20SISO	Ant1	5745	17.320	5736.480	5753.800	0.5	PASS
11N20SISO	Ant1	5785	17.560	5776.240	5793.800	0.5	PASS
11N20SISO	Ant1	5825	17.560	5816.240	5833.800	0.5	PASS
11N40SISO	Ant1	5755	36.320	5736.840	5773.160	0.5	PASS
11N40SISO	Ant1	5795	36.080	5777.080	5813.160	0.5	PASS
11AC20SISO	Ant1	5745	16.920	5736.600	5753.520	0.5	PASS
11AC20SISO	Ant1	5785	17.560	5776.240	5793.800	0.5	PASS
11AC20SISO	Ant1	5825	17.360	5816.440	5833.800	0.5	PASS
11AC40SISO	Ant1	5755	36.080	5737.080	5773.160	0.5	PASS
11AC40SISO	Ant1	5795	36.320	5776.840	5813.160	0.5	PASS
11AC80SISO	Ant1	5775	75.200	5737.400	5812.600	0.5	PASS



Minimum 6 dB bandwidth Test Graphs:



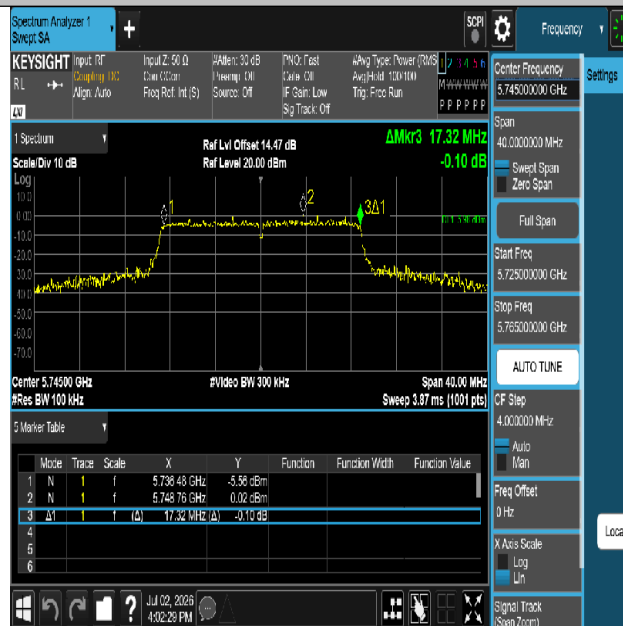
11A-Ant1-5745-PASS



11A-Ant1-5785-PASS



11A-Ant1-5825-PASS



11N20SISO-Ant1-5745-PASS



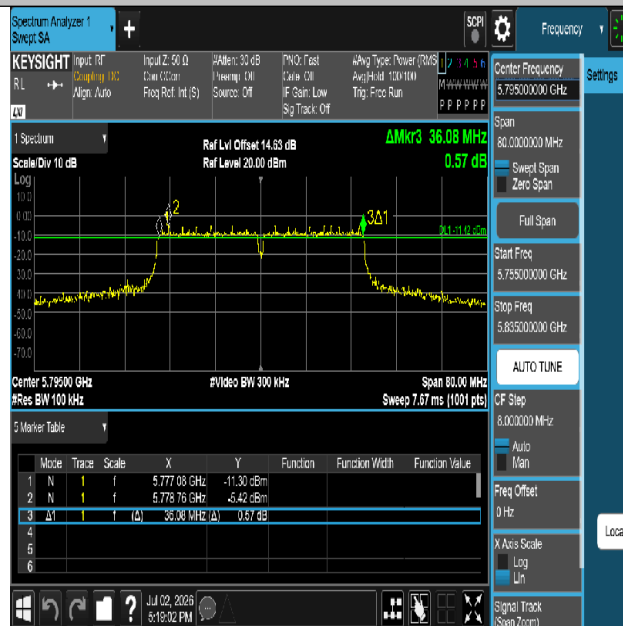
11N20SISO-Ant1-5785-PASS



11N20SISO-Ant1-5825-PASS



11N40SISO-Ant1-5755-PASS



11N40SISO-Ant1-5795-PASS