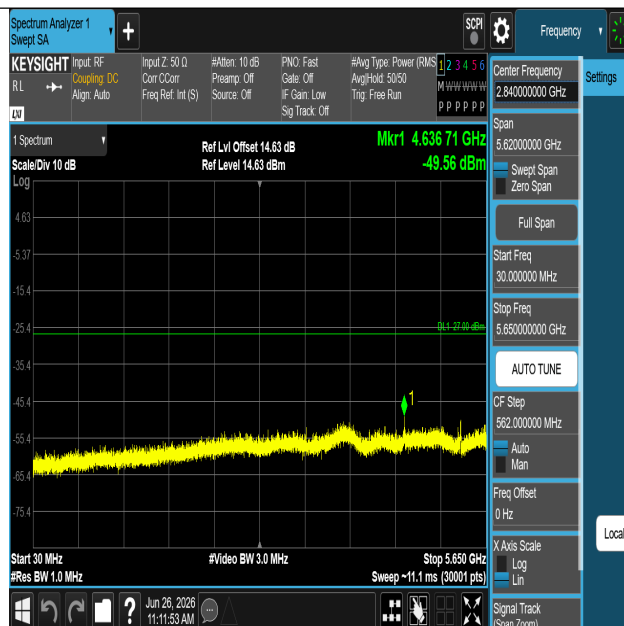
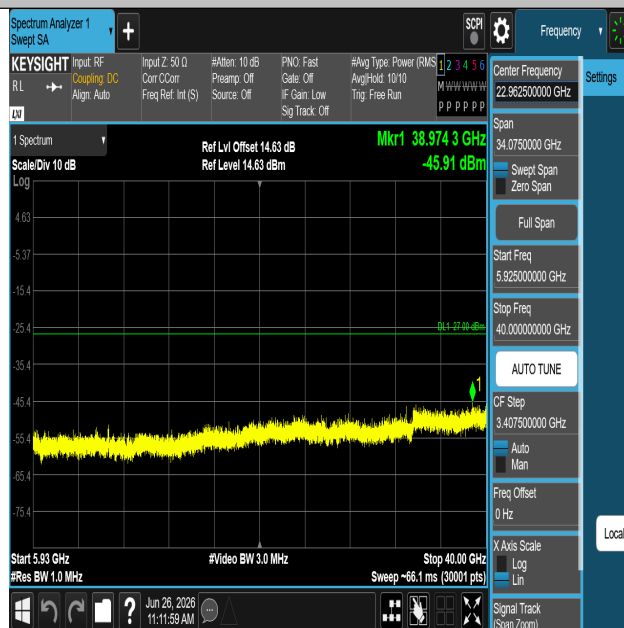




Report No.: PTC26052917601E-FC04



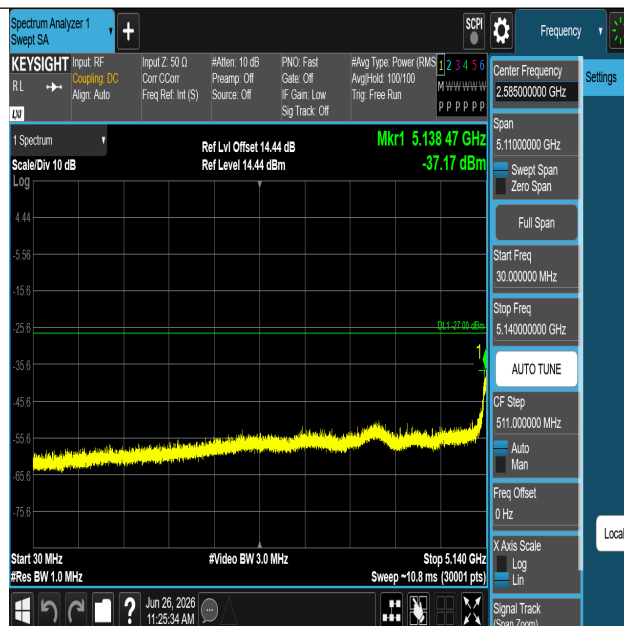
11AC40SISO-Ant1-5795-30~5650-PASS



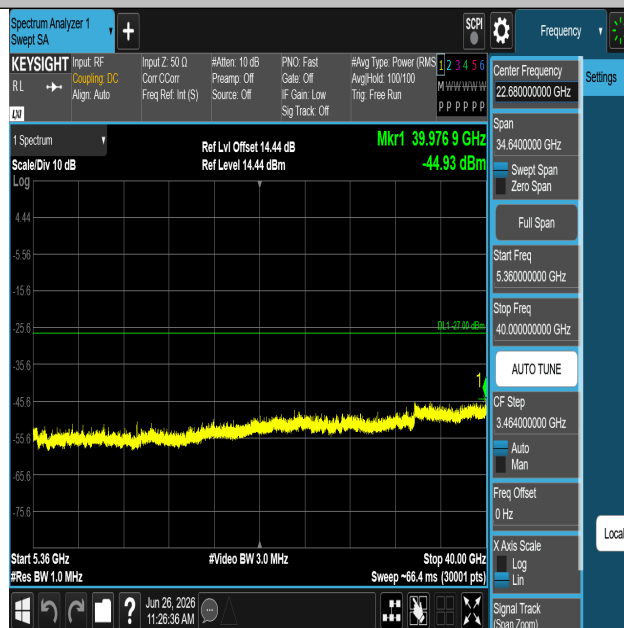
11AC40SISO-Ant1-5795-5925~40000-PASS



Report No.: PTC26052917601E-FC04



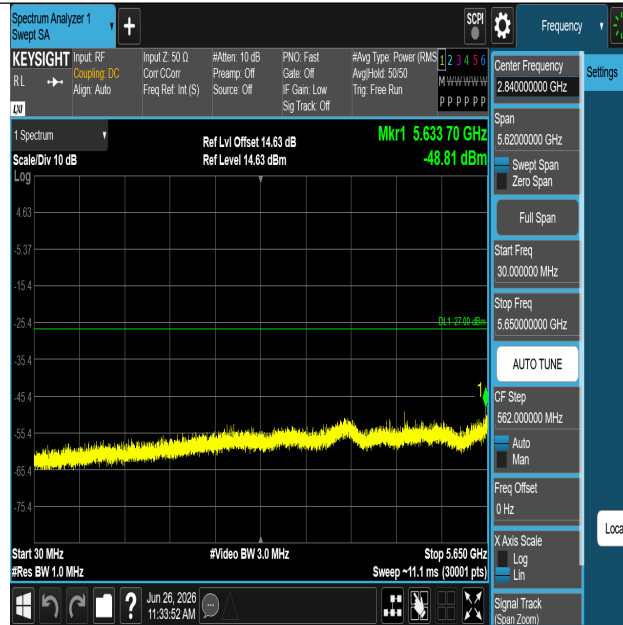
11AC80SISO-Ant1-5210-30~5140-PASS



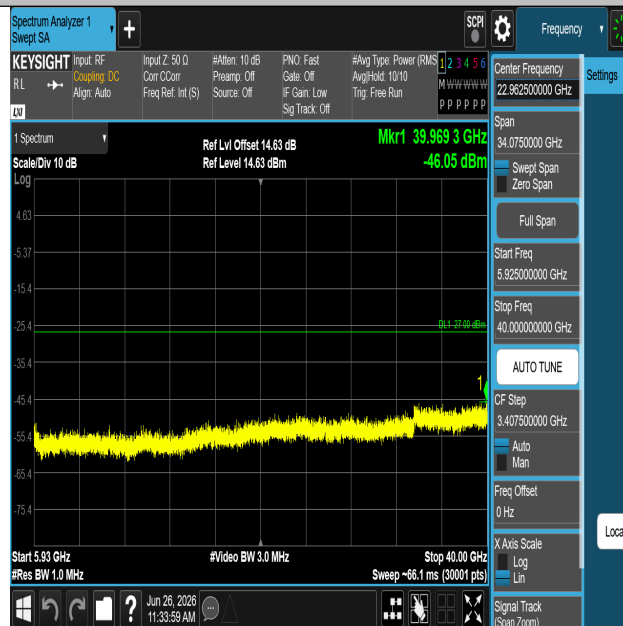
11AC80SISO-Ant1-5210-5360~40000-PASS



Report No.: PTC26052917601E-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	-29.59	≤ -27	PASS
11A	Ant1	High	5240	-33.16	≤ -27	PASS
11N20SISO	Ant1	Low	5180	-28.13	≤ -27	PASS
11N20SISO	Ant1	High	5240	-33.09	≤ -27	PASS
11N40SISO	Ant1	Low	5190	-27.88	≤ -27	PASS
11N40SISO	Ant1	High	5230	-33.46	≤ -27	PASS
11AC20SISO	Ant1	Low	5180	-29.74	≤ -27	PASS
11AC20SISO	Ant1	High	5240	-33.17	≤ -27	PASS
11AC40SISO	Ant1	Low	5190	-29.2	≤ -27	PASS
11AC40SISO	Ant1	High	5230	-33.59	≤ -27	PASS
11AC80SISO	Ant1	Low	5210	-28.3	≤ -27	PASS
11AC80SISO	Ant1	High	5210	-32.86	≤ -27	PASS



B4

TestMode	Antenna	ChName	Frequency[MHz]	FreqRange [MHz]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	Low	5745	5720~5725	-18.46	≤19.75	PASS
11A	Ant1	Low	5745	5700~5720	-21.84	≤15.21	PASS
11A	Ant1	Low	5745	5650~5700	-33.99	≤-26.62	PASS
11A	Ant1	Low	5745	5645~5650	-33.29	≤-27	PASS
11A	Ant1	High	5825	5850~5855	-28.74	≤15.73	PASS
11A	Ant1	High	5825	5855~5875	-29.4	≤15.28	PASS
11A	Ant1	High	5825	5875~5925	-35.09	≤-26.71	PASS
11A	Ant1	High	5825	5925~5935	-34.3	≤-27	PASS
11N20SISO	Ant1	Low	5745	5720~5725	-18.5	≤18.70	PASS
11N20SISO	Ant1	Low	5745	5700~5720	-23.03	≤14.98	PASS
11N20SISO	Ant1	Low	5745	5650~5700	-34.2	≤-26.96	PASS
11N20SISO	Ant1	Low	5745	5645~5650	-32.92	≤-27	PASS
11N20SISO	Ant1	High	5825	5850~5855	-26.86	≤15.73	PASS
11N20SISO	Ant1	High	5825	5855~5875	-25.33	≤15.09	PASS
11N20SISO	Ant1	High	5825	5875~5925	-34.15	≤-26.61	PASS
11N20SISO	Ant1	High	5825	5925~5935	-34.07	≤-27	PASS
11N40SISO	Ant1	Low	5755	5720~5725	-17.54	≤16.35	PASS
11N40SISO	Ant1	Low	5755	5700~5720	-16.75	≤15.43	PASS
11N40SISO	Ant1	Low	5755	5650~5700	-32.65	≤-24.81	PASS
11N40SISO	Ant1	Low	5755	5645~5650	-33.24	≤-27	PASS
11N40SISO	Ant1	High	5795	5850~5855	-35.2	≤16.41	PASS
11N40SISO	Ant1	High	5795	5855~5875	-34.3	≤10.39	PASS
11N40SISO	Ant1	High	5795	5875~5925	-34.39	≤-26.83	PASS
11N40SISO	Ant1	High	5795	5925~5935	-34.02	≤-27	PASS
11AC20SISO	Ant1	Low	5745	5720~5725	-19.41	≤15.82	PASS
11AC20SISO	Ant1	Low	5745	5700~5720	-22.57	≤14.95	PASS
11AC20SISO	Ant1	Low	5745	5650~5700	-33.31	≤-26.70	PASS
11AC20SISO	Ant1	Low	5745	5645~5650	-33.3	≤-27	PASS
11AC20SISO	Ant1	High	5825	5850~5855	-25.78	≤16.34	PASS
11AC20SISO	Ant1	High	5825	5855~5875	-25.5	≤14.82	PASS
11AC20SISO	Ant1	High	5825	5875~5925	-33.38	≤-26.11	PASS
11AC20SISO	Ant1	High	5825	5925~5935	-33.68	≤-27	PASS
11AC40SISO	Ant1	Low	5755	5720~5725	-16.99	≤20.35	PASS
11AC40SISO	Ant1	Low	5755	5700~5720	-19.69	≤15.16	PASS
11AC40SISO	Ant1	Low	5755	5650~5700	-35.11	≤-26.90	PASS
11AC40SISO	Ant1	Low	5755	5645~5650	-32.88	≤-27	PASS
11AC40SISO	Ant1	High	5795	5850~5855	-34.14	≤15.66	PASS
11AC40SISO	Ant1	High	5795	5855~5875	-33.77	≤10.16	PASS
11AC40SISO	Ant1	High	5795	5875~5925	-33.7	≤-25.12	PASS
11AC40SISO	Ant1	High	5795	5925~5935	-33.67	≤-27	PASS
11AC80SISO	Ant1	Low	5775	5720~5725	-29.93	≤15.65	PASS
11AC80SISO	Ant1	Low	5775	5700~5720	-25.61	≤15.35	PASS
11AC80SISO	Ant1	Low	5775	5650~5700	-32.87	≤-26.23	PASS
11AC80SISO	Ant1	Low	5775	5645~5650	-33.76	≤-27	PASS
11AC80SISO	Ant1	High	5775	5850~5855	-34.1	≤15.84	PASS
11AC80SISO	Ant1	High	5775	5855~5875	-32.19	≤11.54	PASS
11AC80SISO	Ant1	High	5775	5875~5925	-35.51	≤-26.46	PASS
11AC80SISO	Ant1	High	5775	5925~5935	-34.6	≤-27	PASS

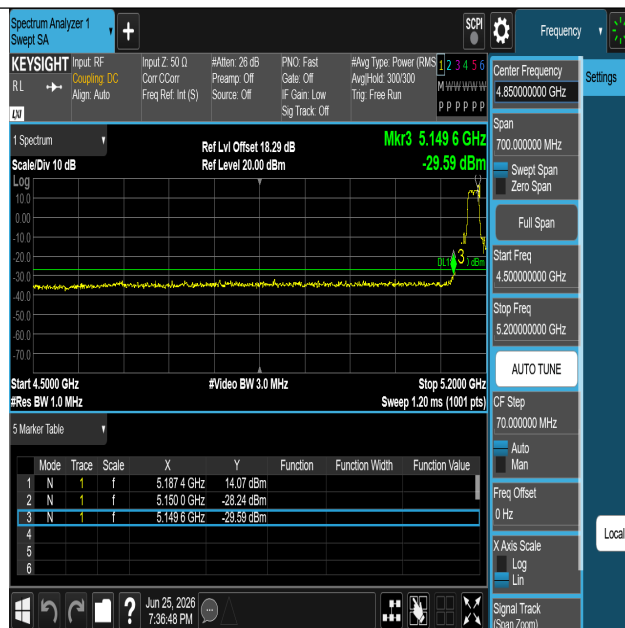
Note: The Max. Level has been corrected by the cable loss and antenna gain.



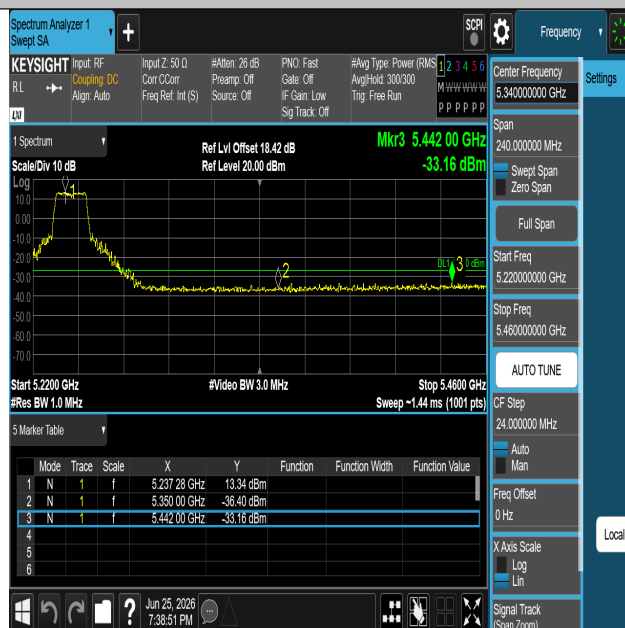
Report No.: PTC26052917601E-FC04



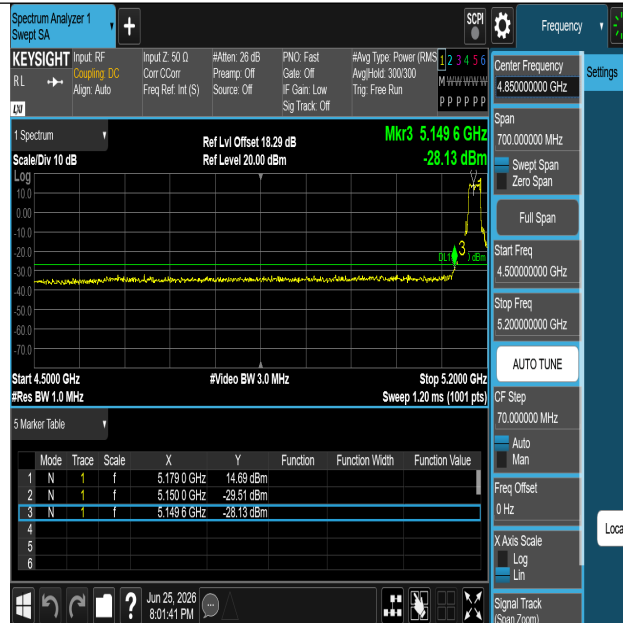
Test plots :



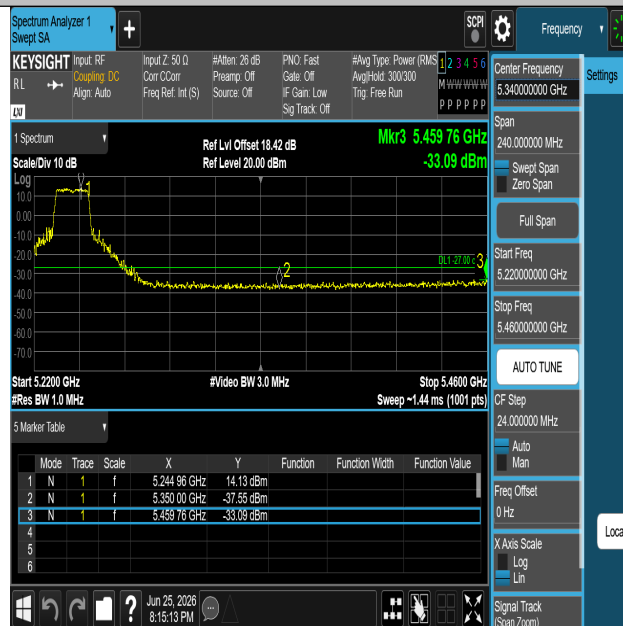
11A-Ant1-5180-PASS



11A-Ant1-5240-PASS



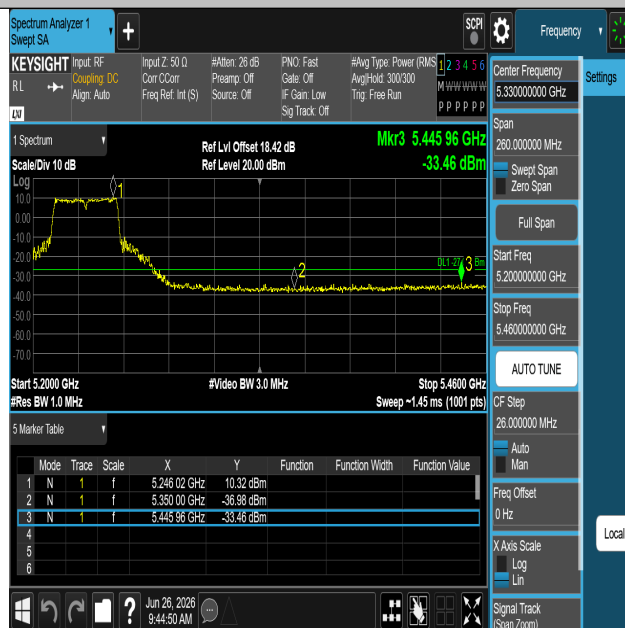
11N20SISO-Ant1-5180-PASS



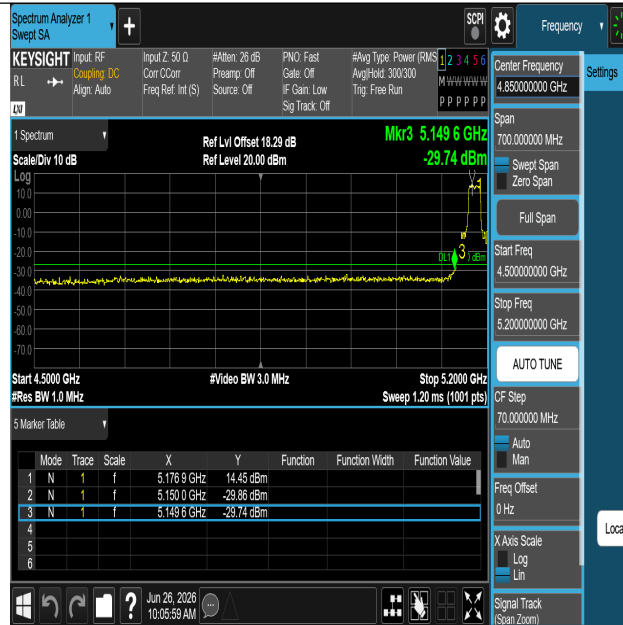
11N20SISO-Ant1-5240-PASS



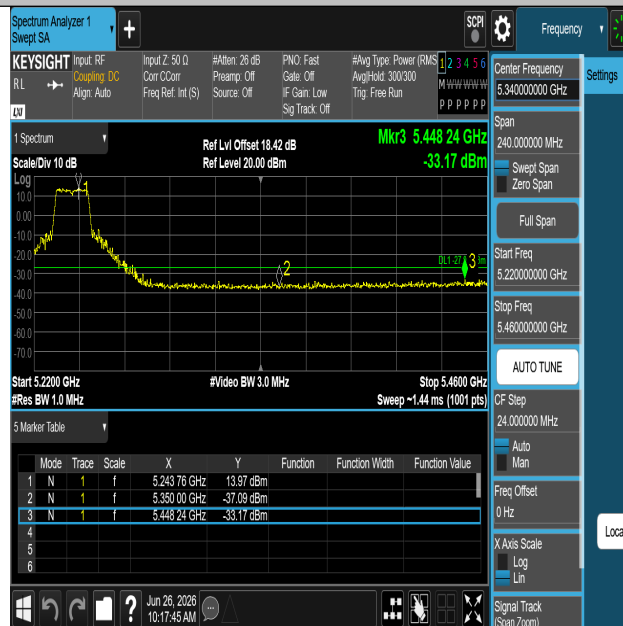
11N40SISO-Ant1-5190-PASS



11N40SISO-Ant1-5230-PASS



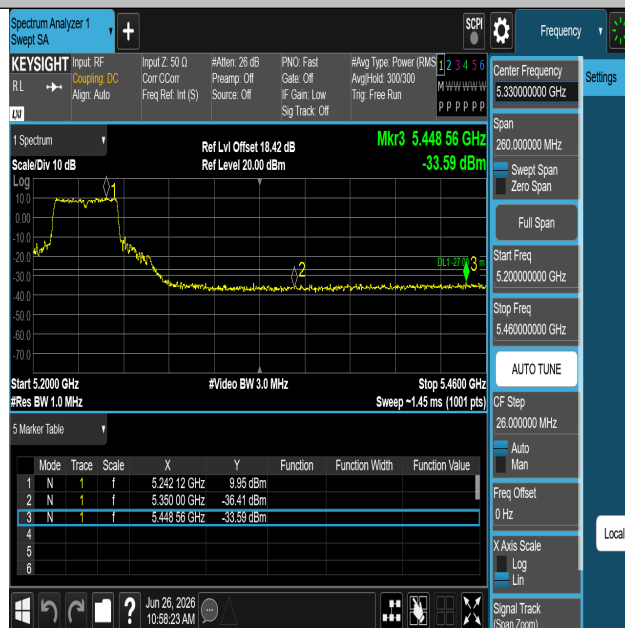
11AC20SISO-Ant1-5180-PASS



11AC20SISO-Ant1-5240-PASS



11AC40SISO-Ant1-5190-PASS



11AC40SISO-Ant1-5230-PASS



11AC80SISO-Ant1-5210-PASS



11AC80SISO-Ant1-5210-PASS



Test Graphs B4



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

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	48.24	6.53	54.77	68.2	13.43	H	Peak
2	5150	32.46	6.53	38.99	54	15.01	H	Average
3	5150	50.88	6.53	57.41	68.2	10.79	V	Peak
4	5150	37.01	6.53	43.54	54	10.46	V	Average



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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	46.68	6.64	53.32	68.2	14.88	H	Peak
2	5850	37.80	6.64	44.44	54	9.56	H	Average
3	5850	45.58	6.64	52.22	68.2	15.98	V	Peak
4	5850	37.17	6.64	43.81	54	10.19	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 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.
Test Limit	: 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).

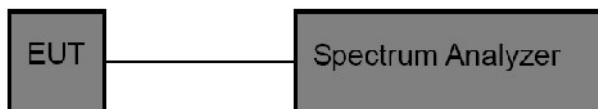
The following procedure shall be used for measuring (99 %) power bandwidth:

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	17.251	5171.3833	5188.6343	---	---
11A	Ant1	5200	17.180	5191.4225	5208.6025	---	---
11A	Ant1	5240	17.158	5231.4384	5248.5964	---	---
11A	Ant1	5745	17.168	5736.3944	5753.5624	---	---
11A	Ant1	5785	17.136	5776.4613	5793.5973	---	---
11A	Ant1	5825	17.001	5816.5042	5833.5052	---	---
11N20SISO	Ant1	5180	17.838	5171.0972	5188.9352	---	---
11N20SISO	Ant1	5200	17.904	5191.0719	5208.9759	---	---
11N20SISO	Ant1	5240	17.876	5231.0730	5248.9490	---	---
11N20SISO	Ant1	5745	17.889	5736.0658	5753.9548	---	---
11N20SISO	Ant1	5785	17.858	5776.1002	5793.9582	---	---
11N20SISO	Ant1	5825	17.841	5816.0902	5833.9312	---	---
11N40SISO	Ant1	5190	36.560	5171.7161	5208.2761	---	---
11N40SISO	Ant1	5230	36.623	5211.7445	5248.3675	---	---
11N40SISO	Ant1	5755	36.622	5736.6680	5773.2900	---	---
11N40SISO	Ant1	5795	36.602	5776.7050	5813.3070	---	---
11AC20SISO	Ant1	5180	17.831	5171.0937	5188.9247	---	---
11AC20SISO	Ant1	5200	17.868	5191.0719	5208.9399	---	---
11AC20SISO	Ant1	5240	17.867	5231.0678	5248.9348	---	---
11AC20SISO	Ant1	5745	17.892	5736.0373	5753.9293	---	---
11AC20SISO	Ant1	5785	17.853	5776.1117	5793.9647	---	---
11AC20SISO	Ant1	5825	17.855	5816.1020	5833.9570	---	---
11AC40SISO	Ant1	5190	36.642	5171.7019	5208.3439	---	---
11AC40SISO	Ant1	5230	36.564	5211.8112	5248.3752	---	---
11AC40SISO	Ant1	5755	36.619	5736.7002	5773.3192	---	---
11AC40SISO	Ant1	5795	36.585	5776.7791	5813.3641	---	---
11AC80SISO	Ant1	5210	75.815	5172.1924	5248.0074	---	---
11AC80SISO	Ant1	5775	75.628	5737.2879	5812.9159	---	---



Test Graphs:



11A-Ant1-5180



11A-Ant1-5200



11A-Ant1-5240



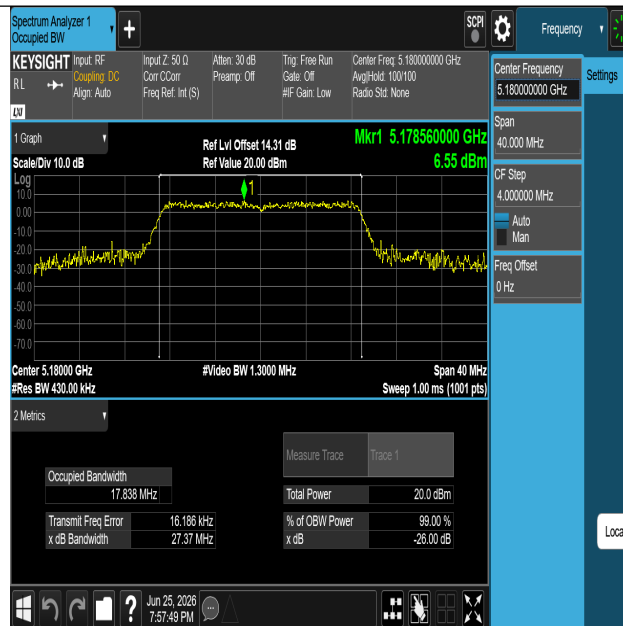
11A-Ant1-5745



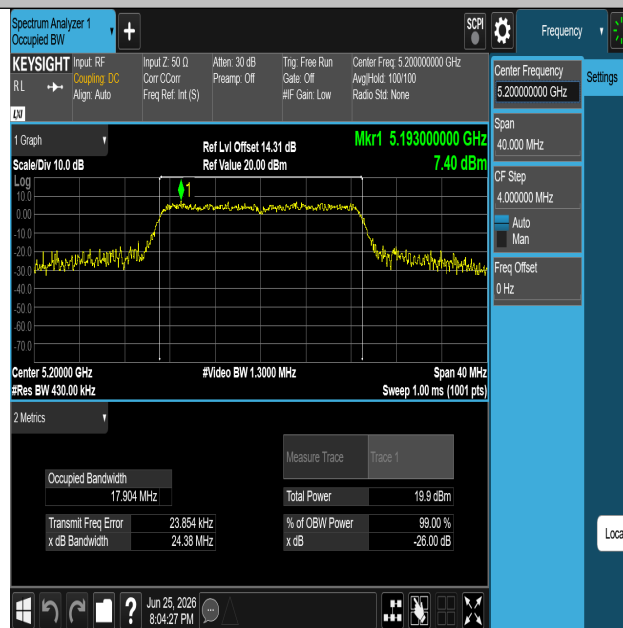
11A-Ant1-5785



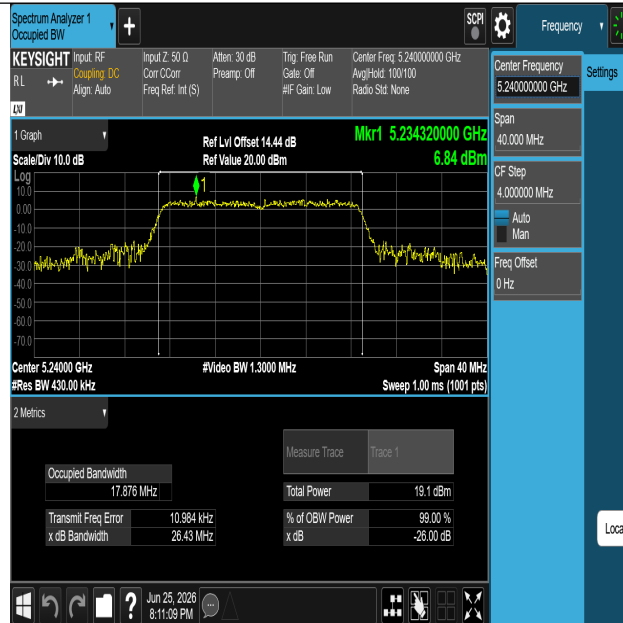
11A-Ant1-5825



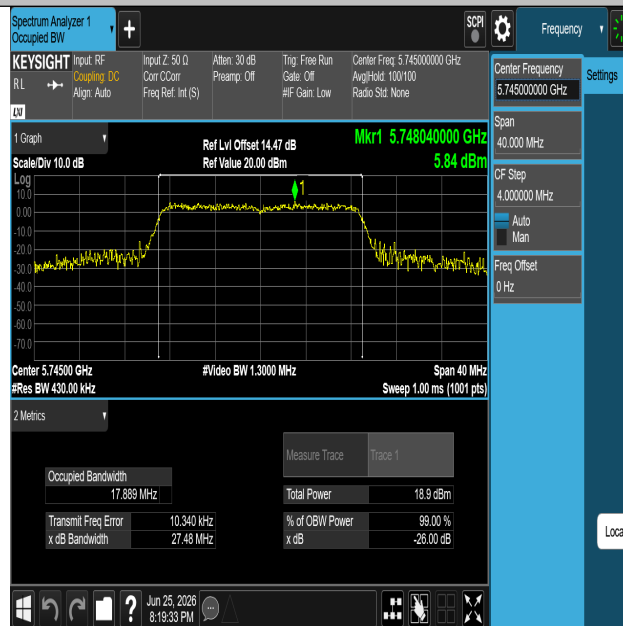
11N20SISO-Ant1-5180



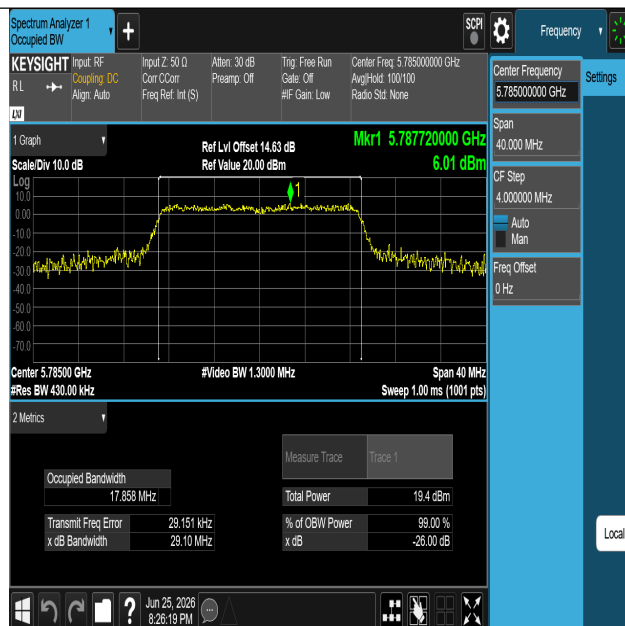
11N20SISO-Ant1-5200



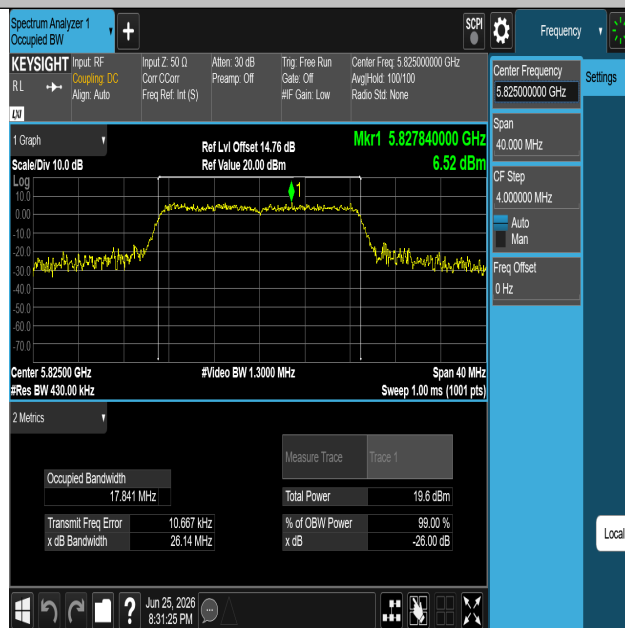
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11N20SISO-Ant1-5745



11N20SISO-Ant1-5785



11N20SISO-Ant1-5825



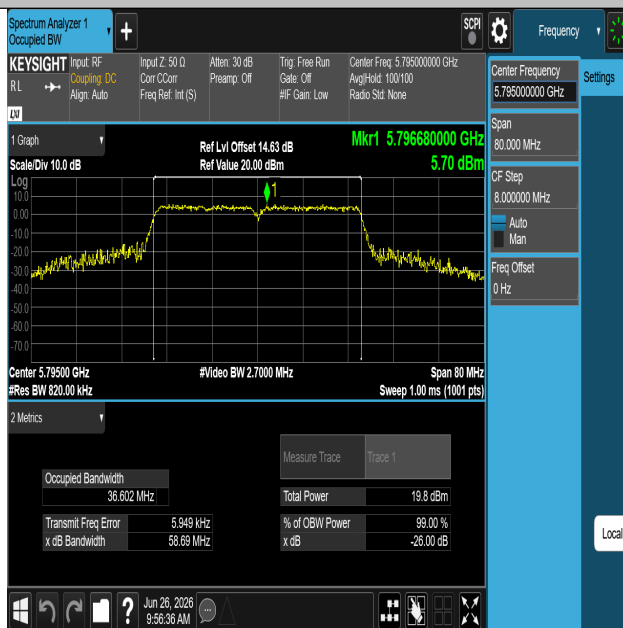
11N40SISO-Ant1-5190



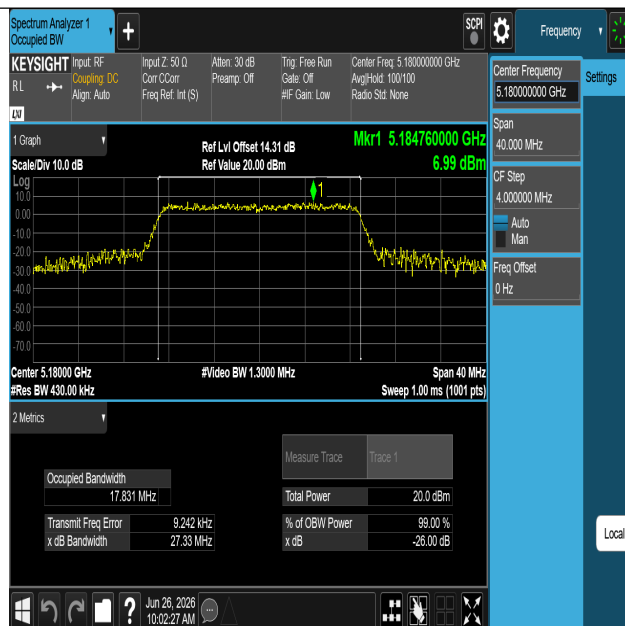
11N40SISO-Ant1-5230



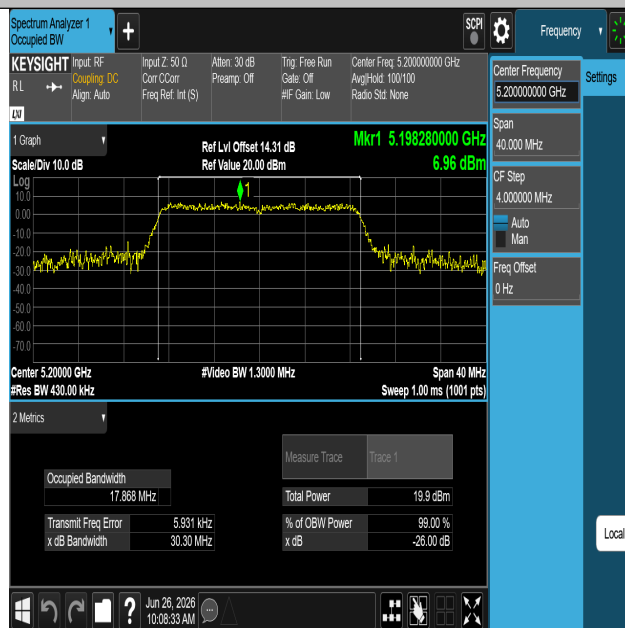
11N40SISO-Ant1-5755



11N40SISO-Ant1-5795



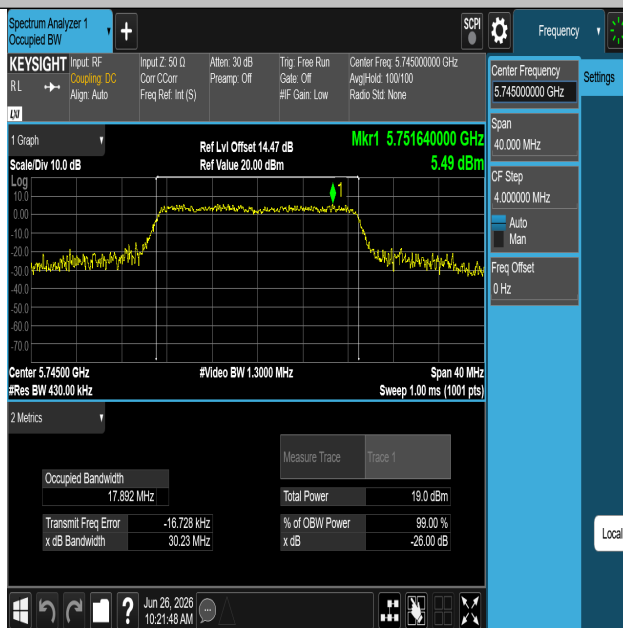
11AC20SISO-Ant1-5180



11AC20SISO-Ant1-5200



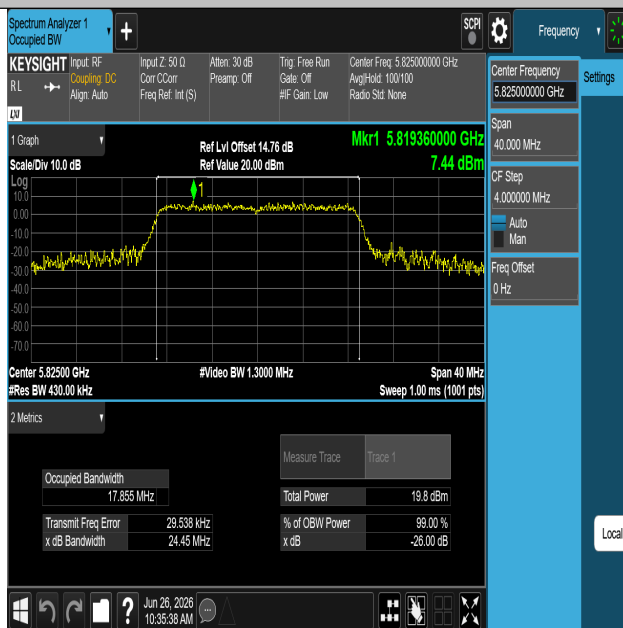
11AC20SISO-Ant1-5240



11AC20SISO-Ant1-5745



11AC20SISO-Ant1-5785



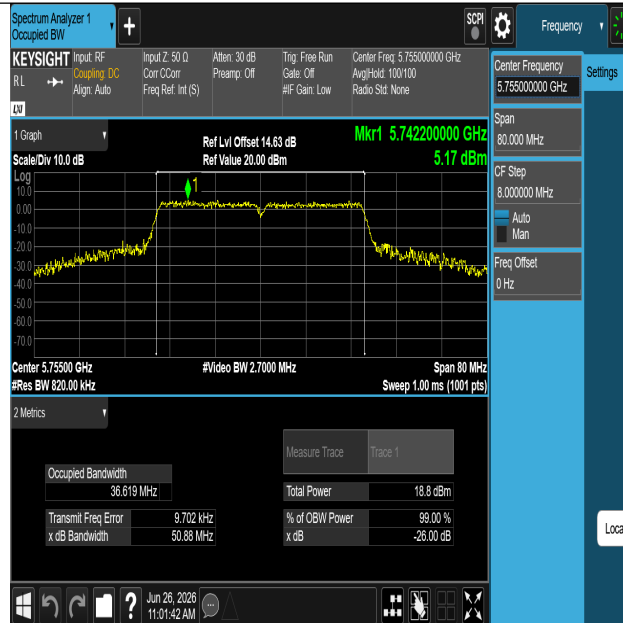
11AC20SISO-Ant1-5825



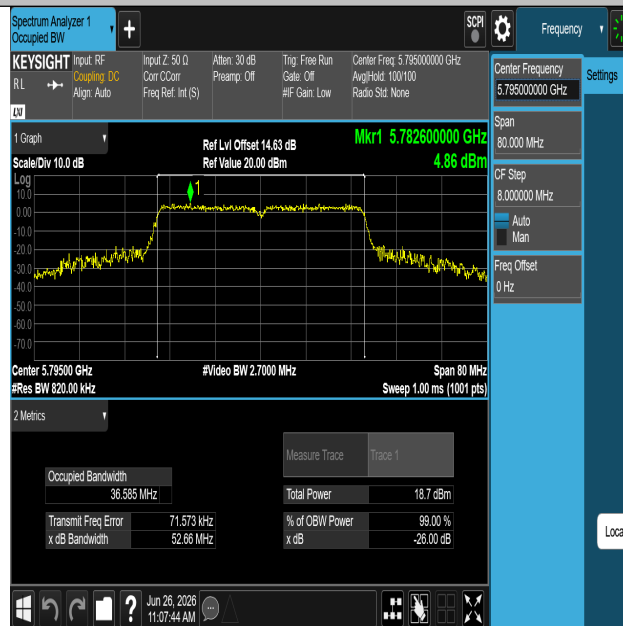
11AC40SISO-Ant1-5190



11AC40SISO-Ant1-5230



11AC40SISO-Ant1-5755



11AC40SISO-Ant1-5795



11AC80SISO-Ant1-5210



11AC80SISO-Ant1-5775



26 dB emission bandwidth:

TestMode	Antenna	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	24.760	5165.960	5190.720	---	---
11A	Ant1	5200	25.840	5186.520	5212.360	---	---
11A	Ant1	5240	27.040	5224.680	5251.720	---	---
11A	Ant1	5745	22.440	5735.160	5757.600	---	---
11A	Ant1	5785	24.560	5772.960	5797.520	---	---
11A	Ant1	5825	26.680	5810.440	5837.120	---	---
11N20SISO	Ant1	5180	24.320	5169.400	5193.720	---	---
11N20SISO	Ant1	5200	27.040	5188.200	5215.240	---	---
11N20SISO	Ant1	5240	23.840	5229.680	5253.520	---	---
11N20SISO	Ant1	5745	25.120	5733.560	5758.680	---	---
11N20SISO	Ant1	5785	25.040	5771.760	5796.800	---	---
11N20SISO	Ant1	5825	26.080	5812.440	5838.520	---	---
11N40SISO	Ant1	5190	50.960	5164.080	5215.040	---	---
11N40SISO	Ant1	5230	50.640	5204.160	5254.800	---	---
11N40SISO	Ant1	5755	51.840	5727.160	5779.000	---	---
11N40SISO	Ant1	5795	49.520	5769.080	5818.600	---	---
11AC20SISO	Ant1	5180	27.400	5166.720	5194.120	---	---
11AC20SISO	Ant1	5200	23.080	5188.000	5211.080	---	---
11AC20SISO	Ant1	5240	20.560	5230.040	5250.600	---	---
11AC20SISO	Ant1	5745	21.920	5733.640	5755.560	---	---
11AC20SISO	Ant1	5785	23.680	5772.680	5796.360	---	---
11AC20SISO	Ant1	5825	26.480	5812.120	5838.600	---	---
11AC40SISO	Ant1	5190	44.720	5168.000	5212.720	---	---
11AC40SISO	Ant1	5230	48.080	5207.840	5255.920	---	---
11AC40SISO	Ant1	5755	51.760	5729.240	5781.000	---	---
11AC40SISO	Ant1	5795	43.280	5773.720	5817.000	---	---
11AC80SISO	Ant1	5210	86.720	5167.120	5253.840	---	---
11AC80SISO	Ant1	5775	83.200	5734.680	5817.880	---	---



26 dB emission bandwidth Test Graphs:



11A-Ant1-5180



11A-Ant1-5200



11A-Ant1-5240



11A-Ant1-5745