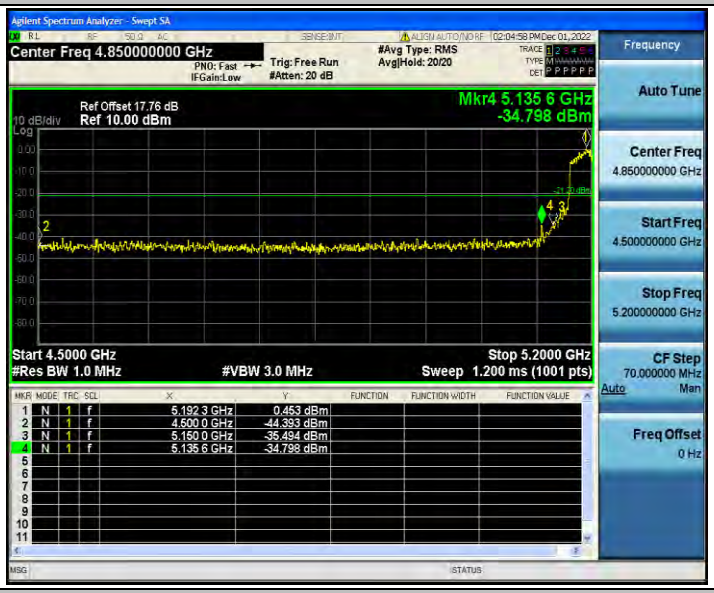
11AC40SISO_Ant2_Low_5190_Peak

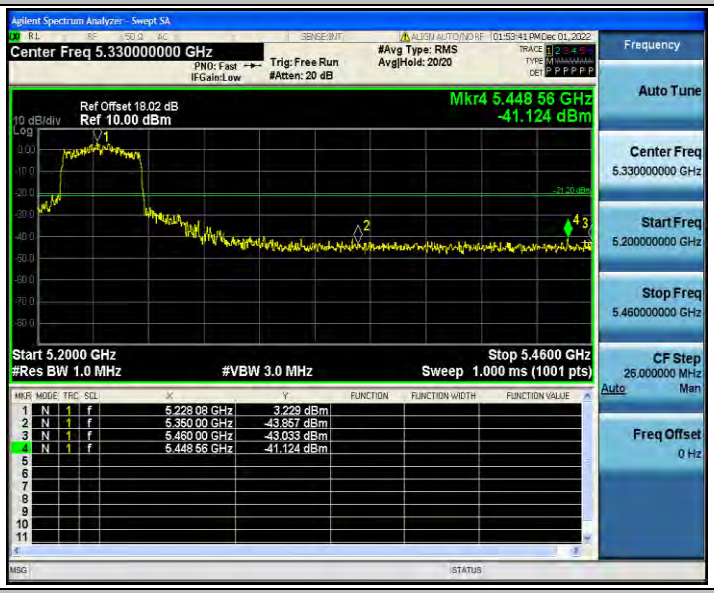


11AC40SISO_Ant1_High_5230_AV

11AC40SISO_Ant1_High_5230_Peak

11AC40SISO_Ant2_High_5230_AV

11AC40SISO_Ant2_High_5230_Peak



11AC40SISO_Ant1_Low_5755_Peak

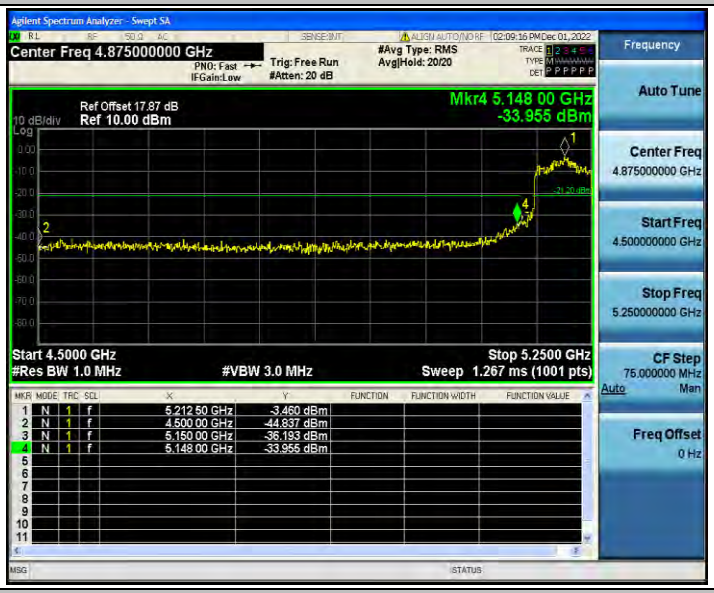
11AC40SISO_Ant2_Low_5755_Peak

11AC40SISO_Ant1_High_5795_Peak

11AC40SISO_Ant2_High_5795_Peak

11AC80SISO_Ant1_Low_5210_AV

11AC80SISO_Ant1_Low_5210_Peak



11AC80SISO_Ant2_Low_5210_AV

11AC80SISO_Ant2_Low_5210_Peak

11AC80SISO_Ant1_High_5210_AV

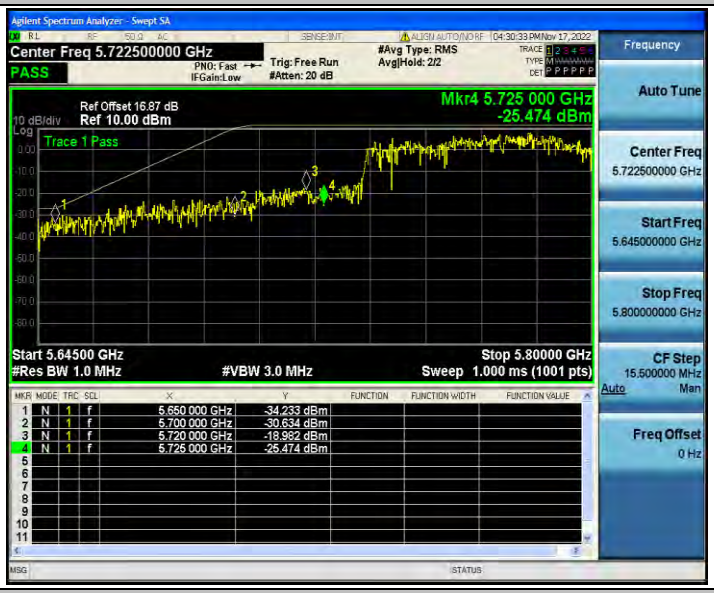
11AC80SISO_Ant1_High_5210_Peak

11AC80SISO_Ant2_High_5210_AV

11AC80SISO_Ant2_High_5210_Peak

11AC80SISO_Ant1_Low_5775_Peak

11AC80SISO_Ant2_Low_5775_Peak



11AC80SISO_Ant1_High_5775_Peak

11AC80SISO_Ant2_High_5775_Peak

4.4 BANDWIDTH TEST

4.4.1 Applied procedures / Limit

The bandwidth at 26 dB down from the highest in-band spectral density is measured with a spectrum analyzer connected to the antenna terminal while the EUT is operating at its maximum power control level, as defined in KDB 789033, at the appropriate frequencies. The spectrum analyzer's bandwidth measurement function is configured to measure the 26 dB bandwidth.
The 26 dB bandwidth is used to determine the conducted power limits.
There is no limit bandwidth for U-NII-1, U-NII-2-A and U-NII-2-C.
The minimum of 6dB Bandwidth measurement is 0.5 MHz for U-NII-3

4.4.2 Test procedure

26 dB BANDWID PROCEDURES

a. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01

b. Set RBW = approximately 1% of the emission bandwidth.

c. Trace mode = max hold

d. Detector = Peak

e. Measure the maximum width of the emission that is 26 dB down from the peak 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%

6 dB BANDWID PROCEDURES

a. Set resolution bandwidth (RBW) = 100 kHz

b. Set the video bandwidth (VBW) ≥ 3 x RBW, Detector = Peak.

c. Trace mode = max hold.

d. Sweep = auto couple.

e. Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission

99% BANDWID PROCEDURES

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 ⩾ 3 • 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.

4.4.3 Deviation from standard

No deviation.

4.4.4 Test setup

4.4.5 Test results

TestMode	Antenna	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	20.920	5169.480	5190.400	---	---
	Ant2	5180	20.800	5169.480	5190.280	---	---
	Ant1	5220	20.920	5209.440	5230.360	---	---
	Ant2	5220	21.440	5209.160	5230.600	---	---
	Ant1	5240	21.600	5229.080	5250.680	---	---
	Ant2	5240	26.240	5225.360	5251.600	---	---
	Ant1	5745	21.400	5734.240	5755.640	---	---
	Ant2	5745	24.800	5730.960	5755.760	---	---
	Ant1	5785	21.280	5774.280	5795.560	---	---
	Ant2	5785	21.320	5774.280	5795.600	---	---
	Ant1	5825	21.040	5814.560	5835.600	---	---
	Ant2	5825	21.320	5814.320	5835.640	---	---
11N20SISO	Ant1	5180	21.120	5169.400	5190.520	---	---
	Ant2	5180	25.720	5165.240	5190.960	---	---
	Ant1	5220	21.680	5209.000	5230.680	---	---
	Ant2	5220	22.560	5208.080	5230.640	---	---
	Ant1	5240	25.000	5226.160	5251.160	---	---
	Ant2	5240	25.200	5225.400	5250.600	---	---
	Ant1	5745	25.840	5730.200	5756.040	---	---
	Ant2	5745	35.880	5725.160	5761.040	---	---
	Ant1	5785	24.480	5771.560	5796.040	---	---
	Ant2	5785	31.000	5768.440	5799.440	---	---
	Ant1	5825	21.680	5814.240	5835.920	---	---
	Ant2	5825	31.320	5809.560	5840.880	---	---
11N40SISO	Ant1	5190	39.600	5170.160	5209.760	---	---
	Ant2	5190	42.800	5166.880	5209.680	---	---
	Ant1	5230	49.120	5200.800	5249.920	---	---
	Ant2	5230	40.960	5208.560	5249.520	---	---
	Ant1	5755	65.360	5717.320	5782.680	---	---
	Ant2	5755	66.240	5717.320	5783.560	---	---
	Ant1	5795	58.480	5762.040	5820.520	---	---
	Ant2	5795	61.120	5763.320	5824.440	---	---
11AC20SISO	Ant1	5180	21.360	5169.280	5190.640	---	---
	Ant2	5180	22.560	5168.040	5190.600	---	---
	Ant1	5220	21.680	5209.000	5230.680	---	---

	Ant2	5220	23.600	5206.920	5230.520	---	---
	Ant1	5240	25.760	5225.160	5250.920	---	---
	Ant2	5240	21.920	5228.960	5250.880	---	---
	Ant1	5745	28.760	5727.480	5756.240	---	---
	Ant2	5745	33.080	5726.320	5759.400	---	---
	Ant1	5785	24.240	5772.720	5796.960	---	---
	Ant2	5785	28.800	5770.120	5798.920	---	---
	Ant1	5825	22.600	5814.200	5836.800	---	---
	Ant2	5825	29.240	5809.800	5839.040	---	---
11AC40SISO	Ant1	5190	39.520	5170.240	5209.760	---	---
	Ant2	5190	40.000	5169.520	5209.520	---	---
	Ant1	5230	45.840	5204.000	5249.840	---	---
	Ant2	5230	39.360	5210.000	5249.360	---	---
	Ant1	5755	66.080	5716.680	5782.760	---	---
	Ant2	5755	62.560	5717.320	5779.880	---	---
	Ant1	5795	49.520	5768.520	5818.040	---	---
	Ant2	5795	69.680	5757.320	5827.000	---	---
11AC80SISO	Ant1	5210	81.600	5168.880	5250.480	---	---
	Ant2	5210	94.080	5157.040	5251.120	---	---
	Ant1	5775	118.560	5711.160	5829.720	---	---
	Ant2	5775	125.280	5705.720	5831.000	---	---

11A_Ant1_5180

11A_Ant2_5180

11A_Ant1_5220

11A_Ant2_5220

11A_Ant1_5240

11A_Ant2_5240

11A_Ant1_5745

11A_Ant2_5745

11A_Ant1_5785

11A_Ant2_5785

11A_Ant1_5825

11A_Ant2_5825

11N20SISO_Ant1_5180

11N20SISO_Ant2_5180

11N20SISO_Ant1_5220

11N20SISO_Ant2_5220

11N20SISO_Ant1_5240

11N20SISO_Ant2_5240

11N20SISO_Ant1_5745

11N20SISO_Ant2_5745

11N20SISO_Ant1_5785

11N20SISO_Ant2_5785

11N20SISO_Ant1_5825

11N20SISO_Ant2_5825

11N40SISO_Ant1_5190

11N40SISO_Ant2_5190

11N40SISO_Ant1_5230

11N40SISO_Ant2_5230

11N40SISO_Ant1_5755

11N40SISO_Ant2_5755

11N40SISO_Ant1_5795

11N40SISO_Ant2_5795

11AC20SISO_Ant1_5180

11AC20SISO_Ant2_5180

11AC20SISO_Ant1_5220

11AC20SISO_Ant2_5220

11AC20SISO_Ant1_5240

11AC20SISO_Ant2_5240

11AC20SISO_Ant1_5745

11AC20SISO_Ant2_5745

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_5755

11AC40SISO_Ant2_5755

11AC40SISO_Ant1_5795

11AC40SISO_Ant2_5795

11AC80SISO_Ant1_5210

11AC80SISO_Ant2_5210

11AC80SISO_Ant1_5775

11AC80SISO_Ant2_5775

Occupied channel bandwidth

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	17.199	5171.3632	5188.5622	---	---
	Ant2	5180	17.210	5171.3580	5188.5680	---	---
	Ant1	5220	17.170	5211.3706	5228.5406	---	---
	Ant2	5220	17.395	5211.1632	5228.5582	---	---
	Ant1	5240	17.366	5231.1611	5248.5271	---	---
	Ant2	5240	18.644	5230.2024	5248.8464	---	---
	Ant1	5745	17.551	5736.0866	5753.6376	---	---
	Ant2	5745	18.368	5735.4616	5753.8296	---	---
	Ant1	5785	17.629	5776.1191	5793.7481	---	---
	Ant2	5785	17.581	5776.1780	5793.7590	---	---
	Ant1	5825	17.346	5816.3319	5833.6779	---	---
	Ant2	5825	17.534	5816.2566	5833.7906	---	---
11N20SISO	Ant1	5180	18.301	5170.8162	5189.1172	---	---
	Ant2	5180	18.218	5170.7851	5189.0031	---	---
	Ant1	5220	18.385	5210.7386	5229.1236	---	---
	Ant2	5220	17.998	5210.9071	5228.9051	---	---
	Ant1	5240	18.796	5230.3785	5249.1745	---	---
	Ant2	5240	18.163	5230.7651	5248.9281	---	---

	Ant1	5745	18.918	5735.3051	5754.2231	---	---
	Ant2	5745	19.109	5735.0687	5754.1777	---	---
	Ant1	5785	18.615	5775.6209	5794.2359	---	---
	Ant2	5785	18.377	5775.7454	5794.1224	---	---
	Ant1	5825	18.449	5815.8046	5834.2536	---	---
	Ant2	5825	18.545	5815.7050	5834.2500	---	---
11N40SISO	Ant1	5190	36.445	5171.7126	5208.1576	---	---
	Ant2	5190	36.513	5171.6525	5208.1655	---	---
	Ant1	5230	36.704	5211.5613	5248.2653	---	---
	Ant2	5230	36.443	5211.6639	5248.1069	---	---
	Ant1	5755	38.490	5735.0168	5773.5068	---	---
	Ant2	5755	37.148	5736.3490	5773.4970	---	---
	Ant1	5795	36.890	5776.4699	5813.3599	---	---
	Ant2	5795	36.950	5776.4760	5813.4260	---	---
11AC20SISO	Ant1	5180	18.255	5170.8134	5189.0684	---	---
	Ant2	5180	18.003	5170.9260	5188.9290	---	---
	Ant1	5220	18.368	5210.7595	5229.1275	---	---
	Ant2	5220	18.099	5210.8476	5228.9466	---	---
	Ant1	5240	18.900	5230.2675	5249.1675	---	---
	Ant2	5240	18.050	5230.8648	5248.9148	---	---
	Ant1	5745	19.203	5735.0494	5754.2524	---	---
	Ant2	5745	18.690	5735.4473	5754.1373	---	---
	Ant1	5785	18.553	5775.6187	5794.1717	---	---
	Ant2	5785	18.331	5775.7427	5794.0737	---	---
	Ant1	5825	18.438	5815.7568	5834.1948	---	---
	Ant2	5825	18.392	5815.7870	5834.1790	---	---
11AC40SISO	Ant1	5190	36.514	5171.7431	5208.2571	---	---
	Ant2	5190	36.579	5171.6654	5208.2444	---	---
	Ant1	5230	36.746	5211.4458	5248.1918	---	---
	Ant2	5230	36.532	5211.6147	5248.1467	---	---
	Ant1	5755	39.464	5734.0313	5773.4953	---	---
	Ant2	5755	37.313	5736.1892	5773.5022	---	---
	Ant1	5795	36.884	5776.4946	5813.3786	---	---
	Ant2	5795	36.996	5776.4203	5813.4163	---	---
11AC80SISO	Ant1	5210	75.510	5172.2137	5247.7237	---	---
	Ant2	5210	75.554	5172.1145	5247.6685	---	---
	Ant1	5775	76.316	5736.7065	5813.0225	---	---

	Ant2	5775	76.262	5736.7756	5813.0376	---	---

11A_Ant1_5180

11A_Ant2_5180

11A_Ant1_5220

11A_Ant2_5220

11A_Ant1_5240

11A_Ant2_5240

11A_Ant1_5745

11A_Ant2_5745

11A_Ant1_5785

11A_Ant2_5785

11A_Ant1_5825

11A_Ant2_5825

11N20SISO_Ant1_5180

11N20SISO_Ant2_5180

11N20SISO_Ant1_5220

11N20SISO_Ant2_5220

11N20SISO_Ant1_5240

11N20SISO_Ant2_5240

11N20SISO_Ant1_5745

11N20SISO_Ant2_5745

11N20SISO_Ant1_5785

11N20SISO_Ant2_5785

11N20SISO_Ant1_5825

11N20SISO_Ant2_5825

11N40SISO_Ant1_5190

11N40SISO_Ant2_5190

11N40SISO_Ant1_5230

11N40SISO_Ant2_5230

11N40SISO_Ant1_5755

11N40SISO_Ant2_5755

11N40SISO_Ant1_5795

11N40SISO_Ant2_5795

11AC20SISO_Ant1_5180

11AC20SISO_Ant2_5180

11AC20SISO_Ant1_5220

11AC20SISO_Ant2_5220

11AC20SISO_Ant1_5240

11AC20SISO_Ant2_5240

11AC20SISO_Ant1_5745

11AC20SISO_Ant2_5745

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_5755

11AC40SISO_Ant2_5755

11AC40SISO_Ant1_5795

11AC40SISO_Ant2_5795

11AC80SISO_Ant1_5210

11AC80SISO_Ant2_5210

11AC80SISO_Ant1_5775

11AC80SISO_Ant2_5775

6dB bandwidth

TestMode	Antenna	Frequency[MHz]	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	16.280	5736.840	5753.120	0.5	PASS
	Ant2	5745	16.280	5736.840	5753.120	0.5	PASS
	Ant1	5785	16.320	5776.840	5793.160	0.5	PASS
	Ant2	5785	16.280	5776.840	5793.120	0.5	PASS

	Ant1	5825	16.040	5817.080	5833.120	0.5	PASS
	Ant2	5825	16.040	5817.080	5833.120	0.5	PASS
11N20SISO	Ant1	5745	17.520	5736.200	5753.720	0.5	PASS
	Ant2	5745	17.560	5736.200	5753.760	0.5	PASS
	Ant1	5785	16.720	5776.640	5793.360	0.5	PASS
	Ant2	5785	17.520	5776.200	5793.720	0.5	PASS
	Ant1	5825	16.760	5816.600	5833.360	0.5	PASS
	Ant2	5825	17.560	5816.200	5833.760	0.5	PASS
11N40SISO	Ant1	5755	36.000	5736.840	5772.840	0.5	PASS
	Ant2	5755	36.320	5736.840	5773.160	0.5	PASS
	Ant1	5795	36.080	5777.000	5813.080	0.5	PASS
	Ant2	5795	36.240	5776.840	5813.080	0.5	PASS
11AC20SISO	Ant1	5745	17.520	5736.200	5753.720	0.5	PASS
	Ant2	5745	17.560	5736.200	5753.760	0.5	PASS
	Ant1	5785	17.160	5776.240	5793.400	0.5	PASS
	Ant2	5785	17.520	5776.200	5793.720	0.5	PASS
	Ant1	5825	17.560	5816.200	5833.760	0.5	PASS
	Ant2	5825	17.560	5816.200	5833.760	0.5	PASS
11AC40SISO	Ant1	5755	36.000	5736.840	5772.840	0.5	PASS
	Ant2	5755	36.320	5736.840	5773.160	0.5	PASS
	Ant1	5795	36.000	5776.840	5812.840	0.5	PASS
	Ant2	5795	35.920	5776.840	5812.760	0.5	PASS
11AC80SISO	Ant1	5775	75.200	5737.400	5812.600	0.5	PASS
	Ant2	5775	75.200	5737.400	5812.600	0.5	PASS