

RF Test Data for 5G Wi-Fi (Conducted Measurements)

General Description of EUT	
Product Name:	Indoor Full Hotspot US915
Test Model:	ED-IoTHotspot-Pi4-US
Sample ID:	20210928-19-02
Environmental Conditions	
Temperature:	23.8℃
Relative Humidity:	48%
Test Voltage:	AC 120V/60Hz
Test Engineer:	Huang jian ping
Note: For a more detailed features description, please refer to the report TB-FCC184224	

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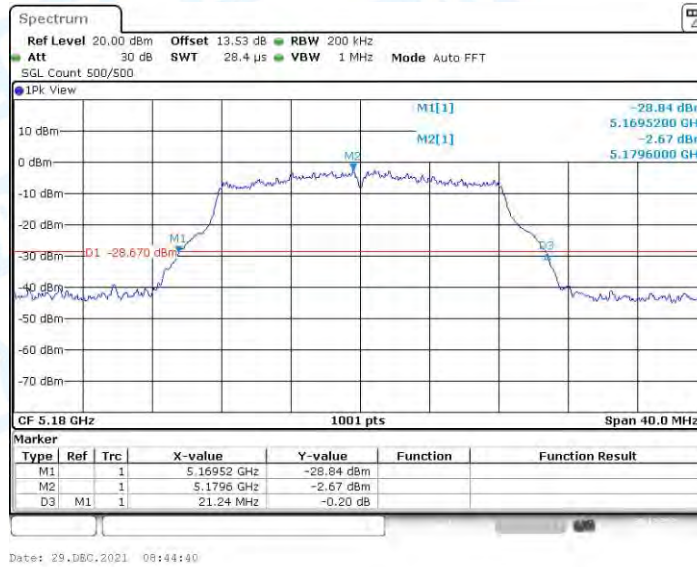
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1. Emission Bandwidth

1.1. Test Result

TestMode	Antenna	Channel	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	21.24	5169.52	5190.76	---	PASS
		5200	21.28	5189.20	5210.48	---	PASS
		5240	21.08	5229.36	5250.44	---	PASS
11N20SISO	Ant1	5180	26.40	5168.72	5195.12	---	PASS
		5200	30.24	5184.28	5214.52	---	PASS
		5240	26.44	5228.96	5255.40	---	PASS
11N40SISO	Ant1	5190	76.08	5152.16	5228.24	---	PASS
		5230	45.04	5209.92	5254.96	---	PASS
11AC20SISO	Ant1	5180	24.04	5169.20	5193.24	---	PASS
		5200	21.84	5189.20	5211.04	---	PASS
		5240	22.56	5228.68	5251.24	---	PASS
11AC40SISO	Ant1	5190	48.24	5170.24	5218.48	---	PASS
		5230	48.80	5210.16	5258.96	---	PASS
11AC80SISO	Ant1	5210	88.00	5169.20	5257.20	---	PASS

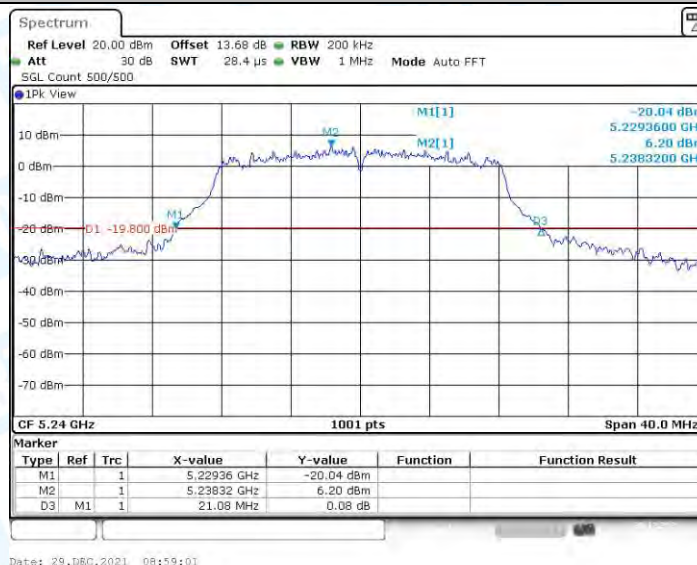
2.1. Test Graphs



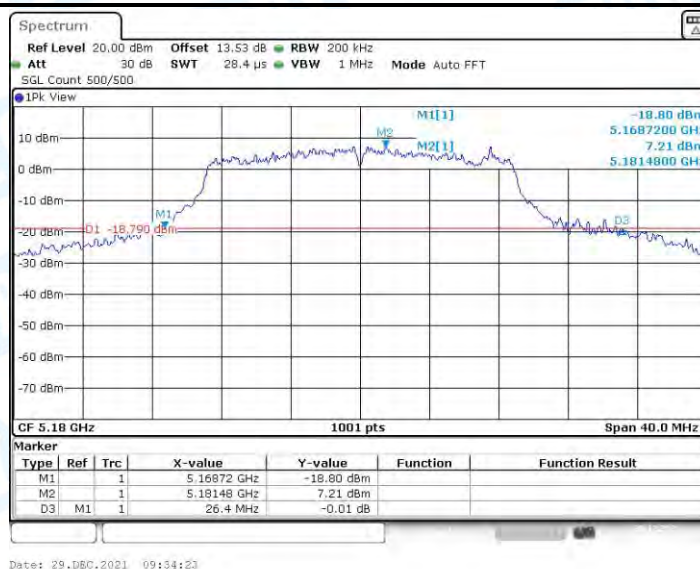
11A_Ant1_5180



11A_Ant1_5200



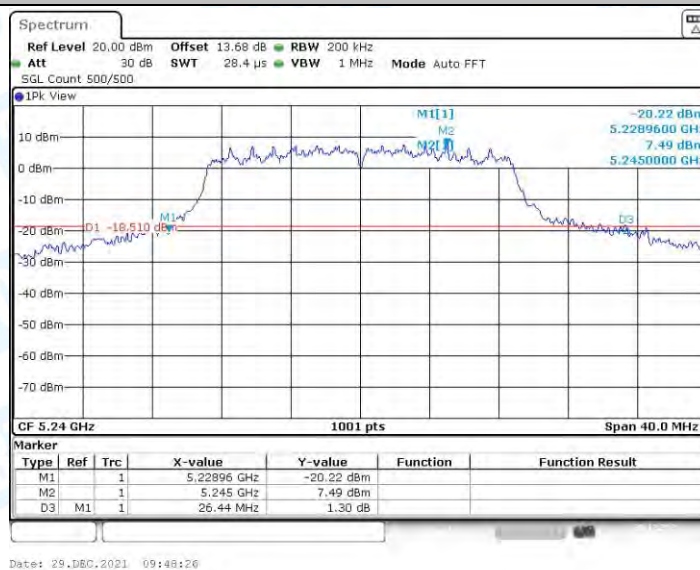
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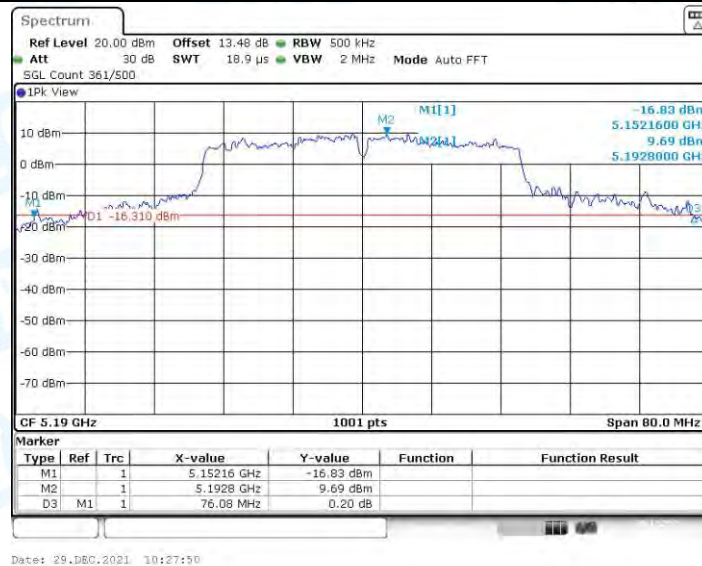
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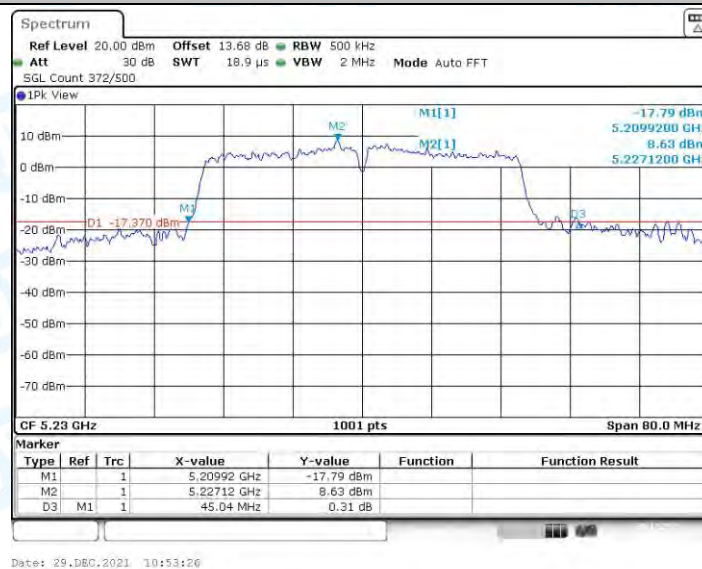
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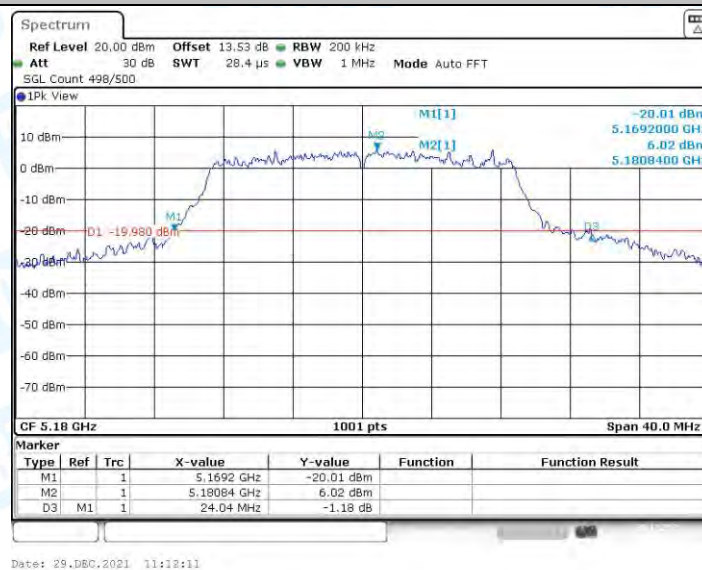
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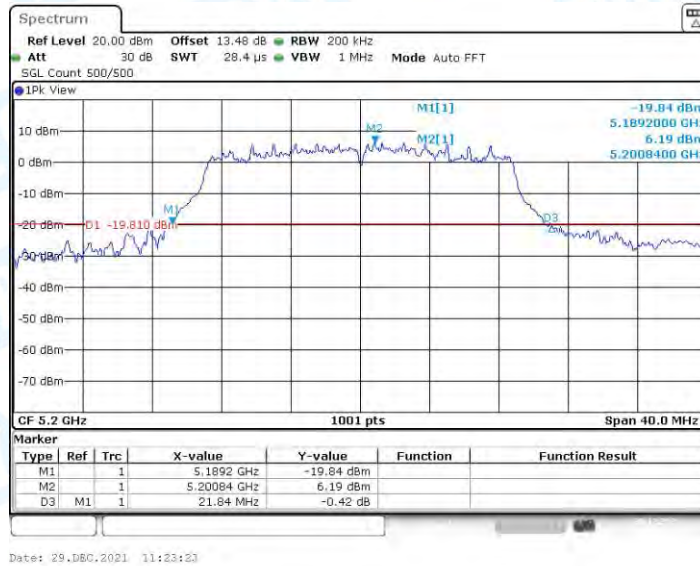
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11N40SISO_Ant1_5230



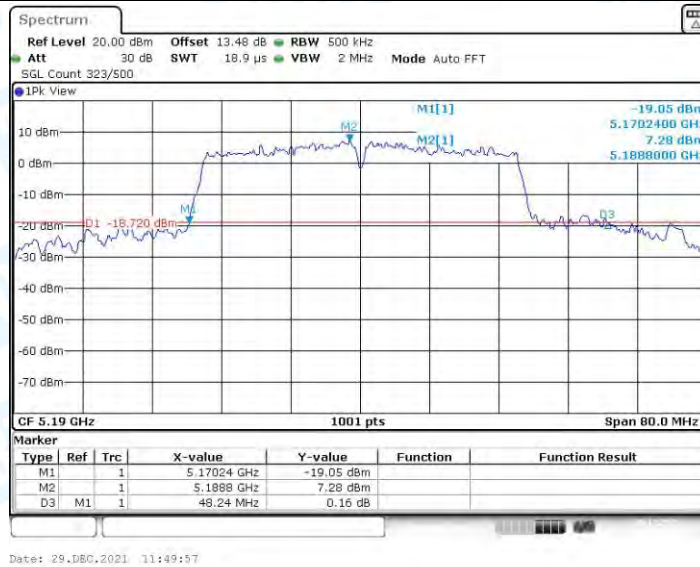
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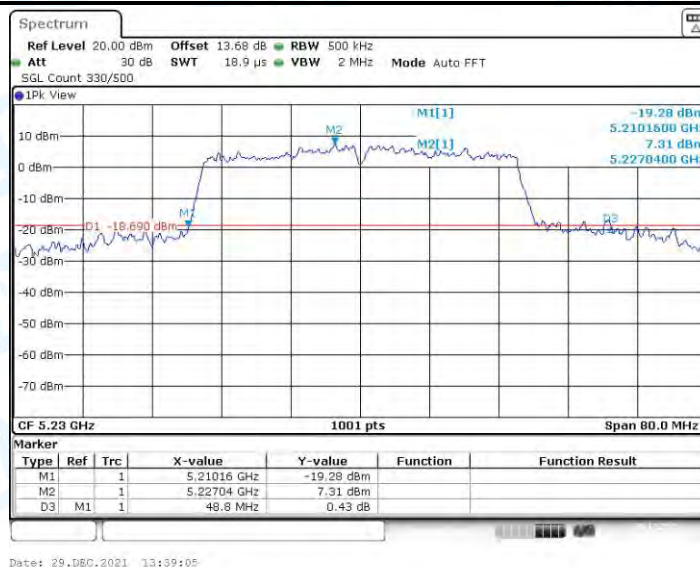
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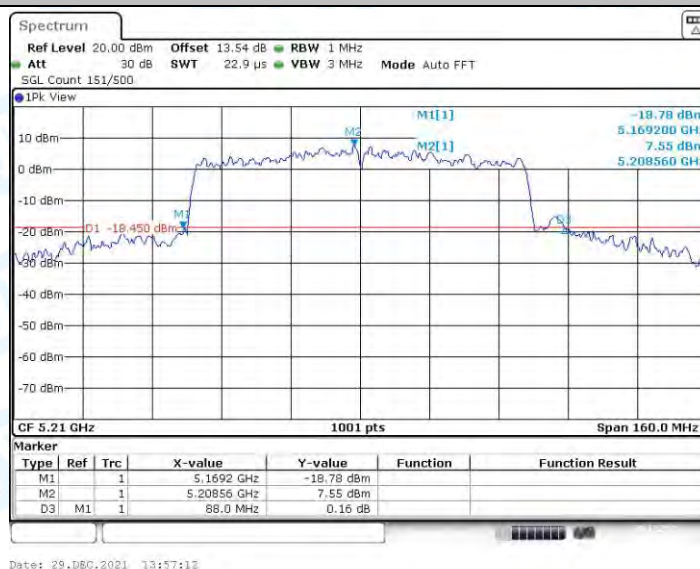
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11AC40SISO_Ant1_5190



11AC40SISO_Ant1_5230



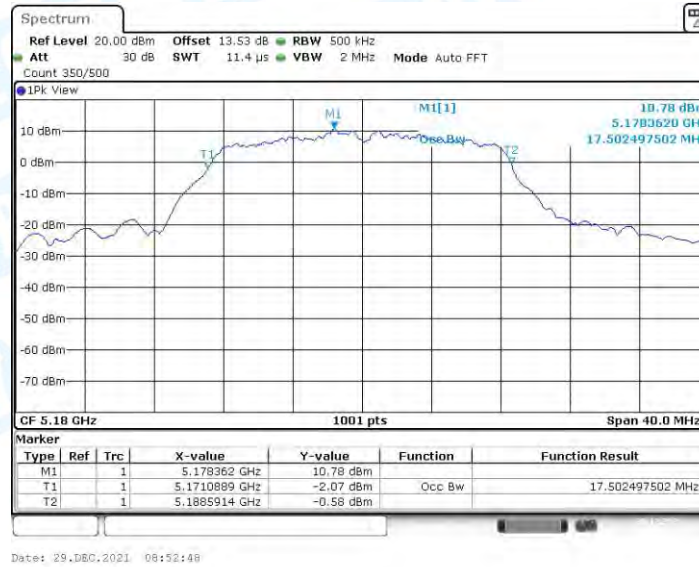
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2. Occupied channel bandwidth

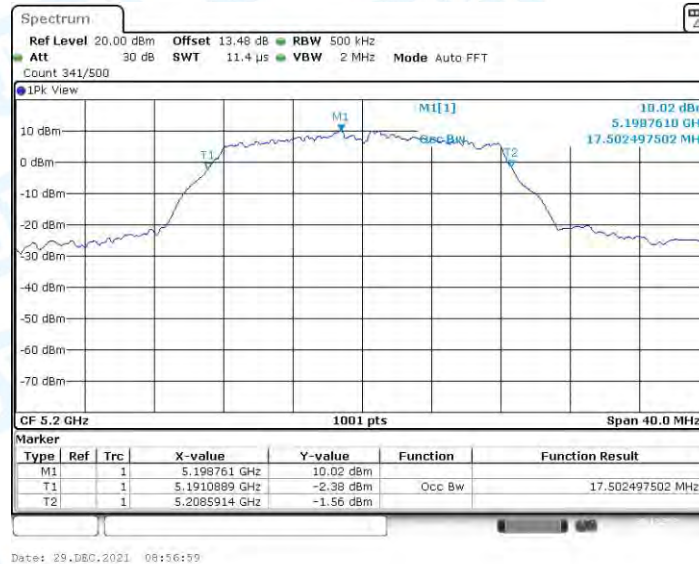
2.1. Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	17.502	5171.089	5188.591	---	PASS
		5200	17.502	5191.089	5208.591	---	PASS
		5240	17.143	5231.369	5248.511	---	PASS
		5745	17.423	5736.369	5753.791	---	PASS
		5785	31.449	5769.615	5801.064	---	PASS
		5825	31.249	5809.775	5841.024	---	PASS
11N20SISO	Ant1	5180	18.661	5170.649	5189.311	---	PASS
		5200	18.621	5190.689	5209.311	---	PASS
		5240	18.422	5230.969	5249.391	---	PASS
		5745	31.329	5729.815	5761.144	---	PASS
		5785	31.369	5769.535	5800.904	---	PASS
		5825	31.209	5809.775	5840.984	---	PASS
11N40SISO	Ant1	5190	40.44	5171.139	5211.578	---	PASS
		5230	36.843	5211.698	5248.541	---	PASS
		5755	62.577	5724.950	5787.527	---	PASS
		5795	64.735	5763.432	5828.167	---	PASS
11AC20SISO	Ant1	5180	18.382	5170.809	5189.191	---	PASS
		5200	18.342	5190.969	5209.311	---	PASS
		5240	18.541	5230.849	5249.391	---	PASS
		5745	31.568	5729.695	5761.264	---	PASS
		5785	31.608	5768.936	5800.544	---	PASS
		5825	32.088	5809.256	5841.344	---	PASS
11AC40SISO	Ant1	5190	36.843	5171.698	5208.541	---	PASS
		5230	36.763	5211.698	5248.462	---	PASS
		5755	60.819	5726.788	5787.607	---	PASS
		5795	62.098	5764.710	5826.808	---	PASS
11AC80SISO	Ant1	5210	76.563	5171.798	5248.362	---	PASS
		5775	114.765	5723.212	5837.977	---	PASS

2.2. Test Graphs



11A_Ant1_5180



11A_Ant1_5200



11A_Ant1_5240



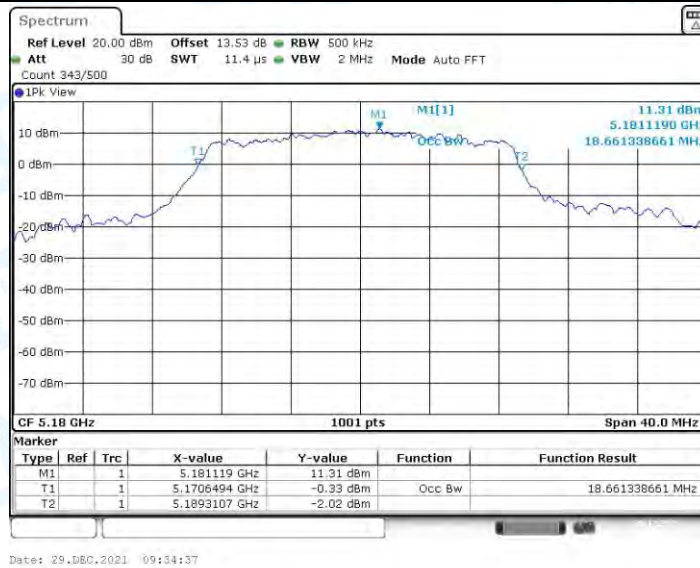
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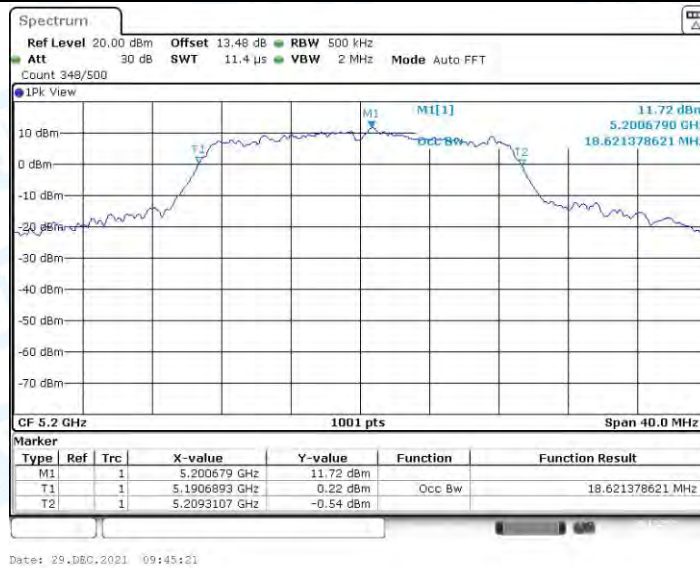
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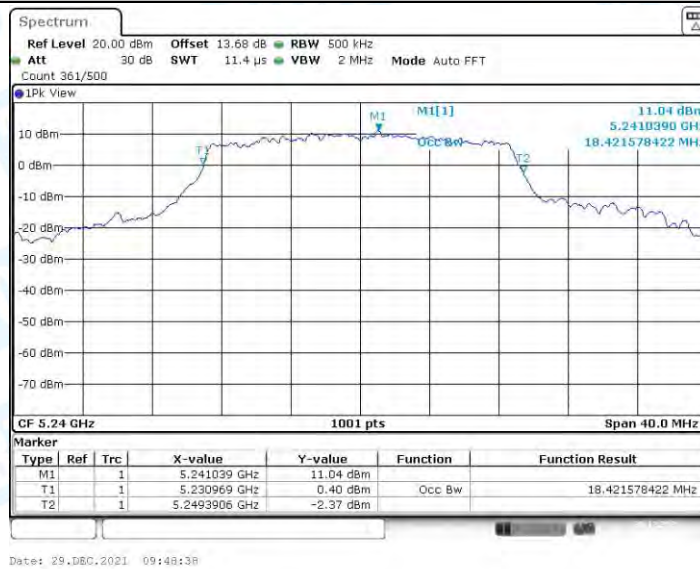
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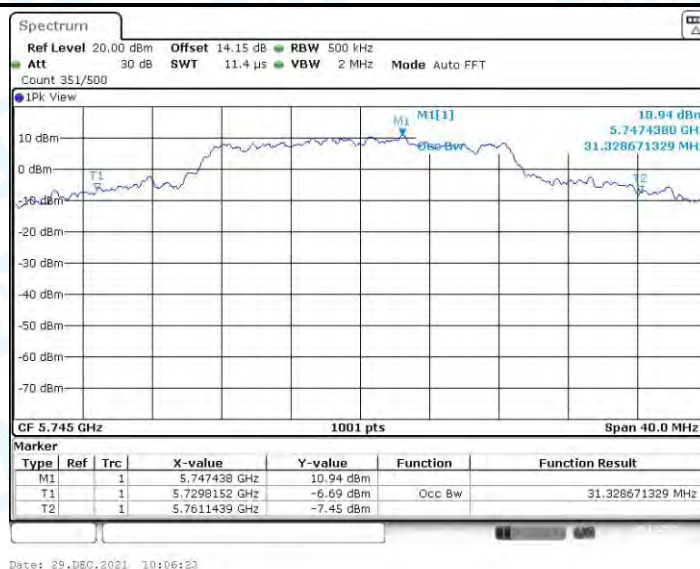
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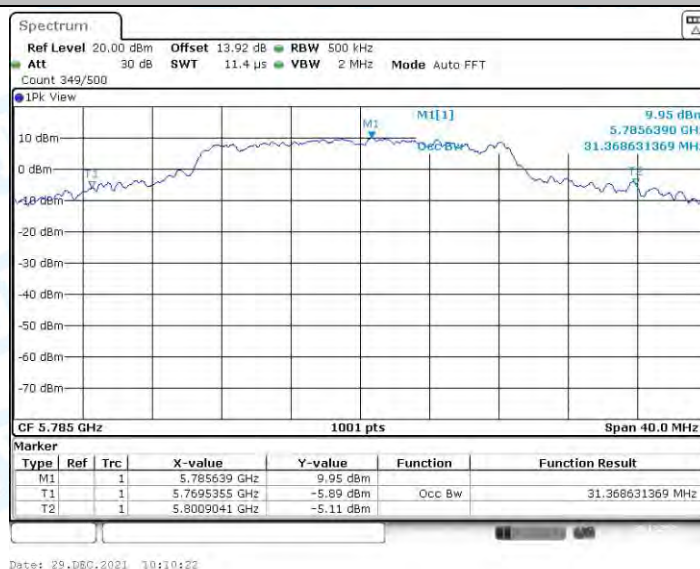
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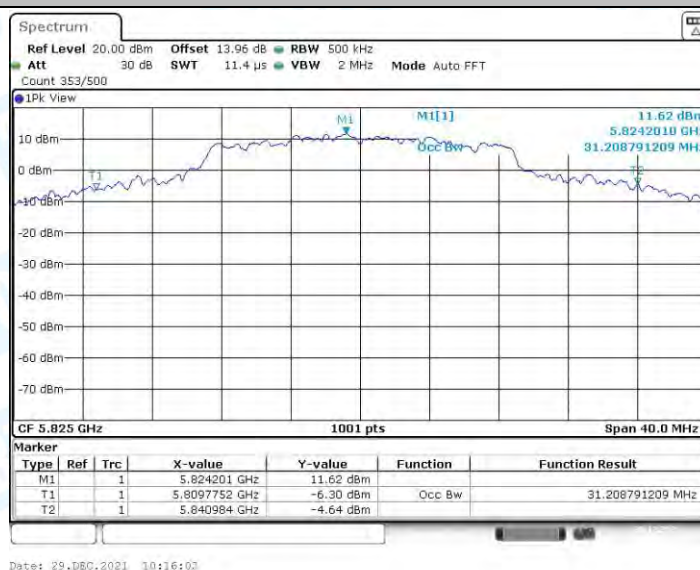
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11N20SISO_Ant1_5745



11N20SISO_Ant1_5785



11N20SISO_Ant1_5825



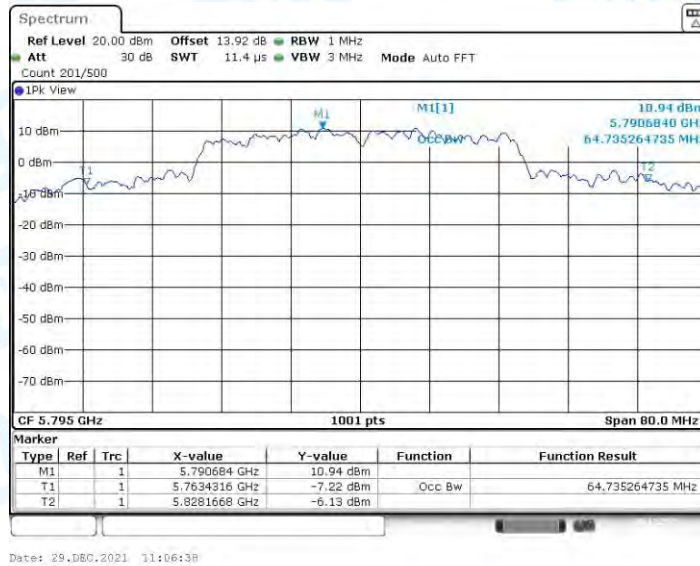
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11N40SISO_Ant1_5230



11N40SISO_Ant1_5755



11N40SISO_Ant1_5795



11AC20SISO_Ant1_5180



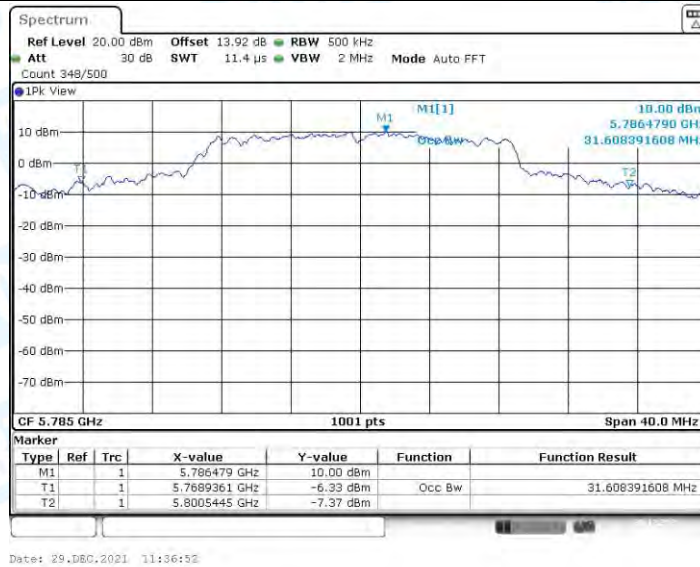
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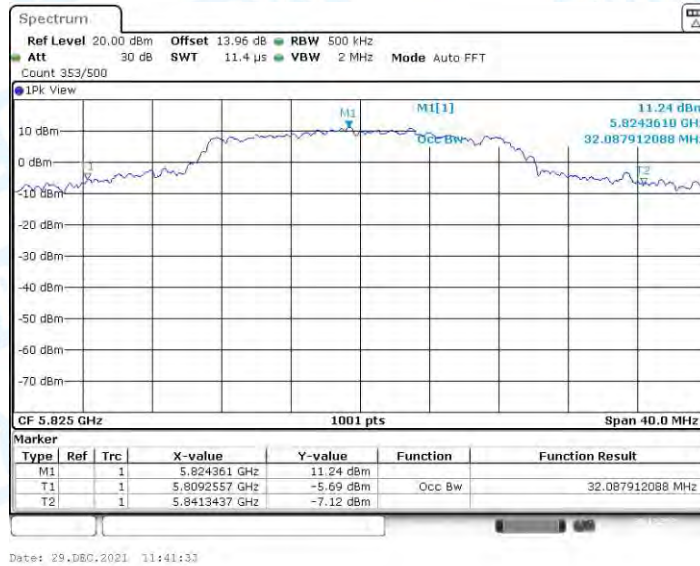
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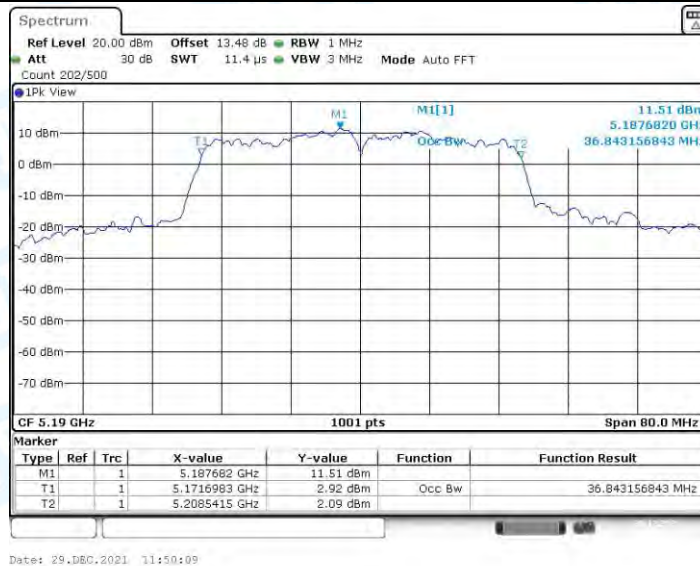
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11AC20SISO_Ant1_5785



11AC20SISO_Ant1_5825



11AC40SISO_Ant1_5190



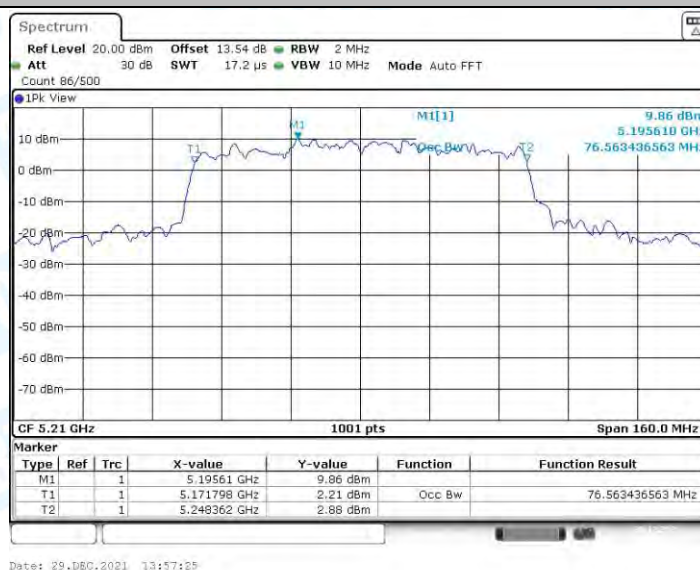
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11AC40SISO_Ant1_5755



11AC40SISO_Ant1_5795



11AC80SISO_Ant1_5210



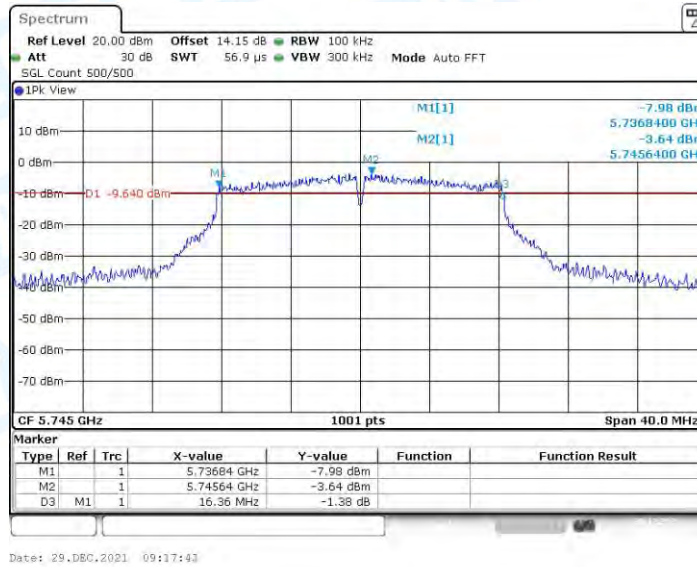
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3. Min emission bandwidth

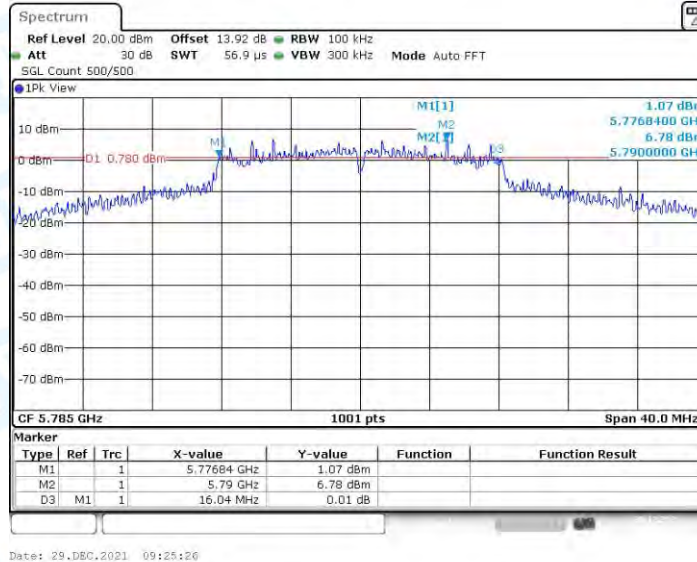
3.1. Test Result

TestMode	Antenna	Channel	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	16.36	5736.84	5753.20	0.5	PASS
		5785	16.04	5776.84	5792.88	0.5	PASS
		5825	16.40	5816.80	5833.20	0.5	PASS
11N20SISO	Ant1	5745	17.68	5736.20	5753.88	0.5	PASS
		5785	17.68	5776.16	5793.84	0.5	PASS
		5825	16.52	5816.64	5833.16	0.5	PASS
11N40SISO	Ant1	5755	35.84	5736.84	5772.68	0.5	PASS
		5795	36.08	5777.08	5813.16	0.5	PASS
11AC20SISO	Ant1	5745	15.64	5737.24	5752.88	0.5	PASS
		5785	17.72	5776.16	5793.88	0.5	PASS
		5825	16.92	5816.24	5833.16	0.5	PASS
11AC40SISO	Ant1	5755	35.84	5737.08	5772.92	0.5	PASS
		5795	36.40	5776.84	5813.24	0.5	PASS
11AC80SISO	Ant1	5775	75.20	5737.40	5812.60	0.5	PASS

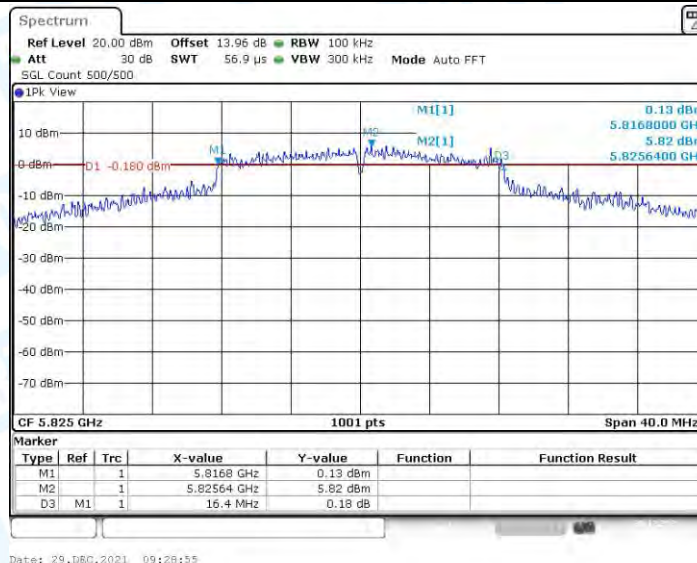
3.2. Test Graphs



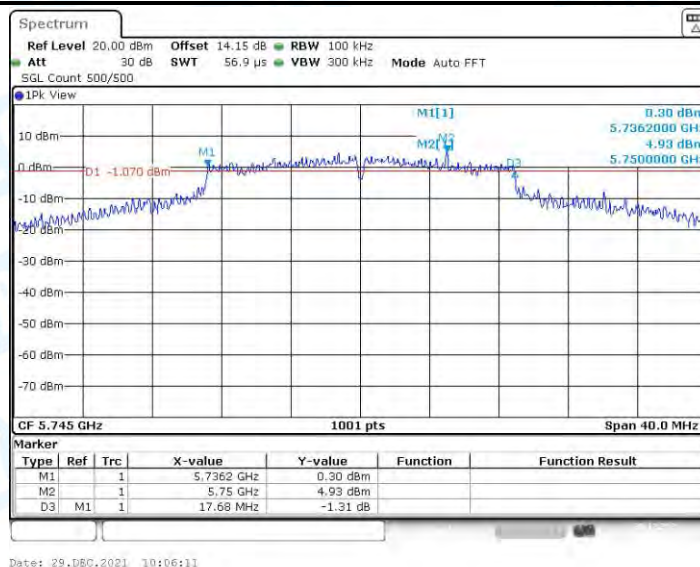
11A_Ant1_5745



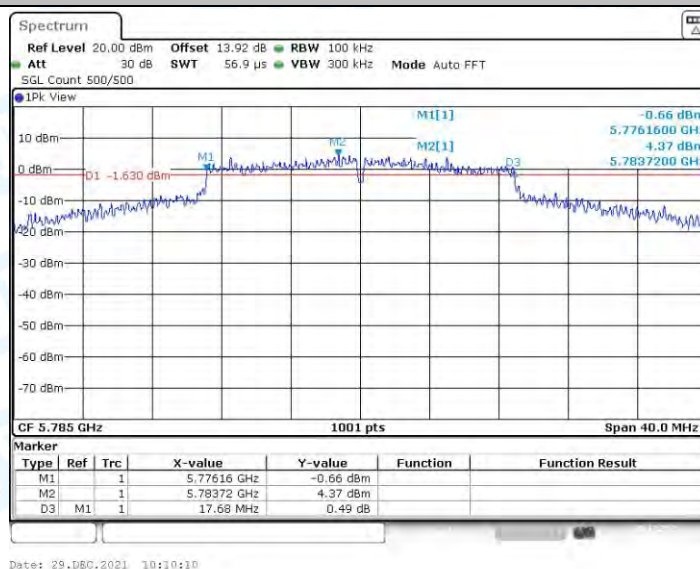
11A_Ant1_5785



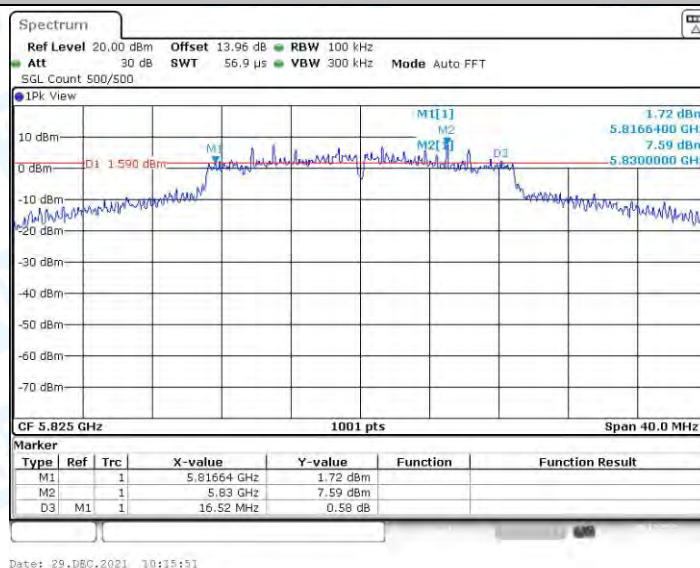
11A_Ant1_5825



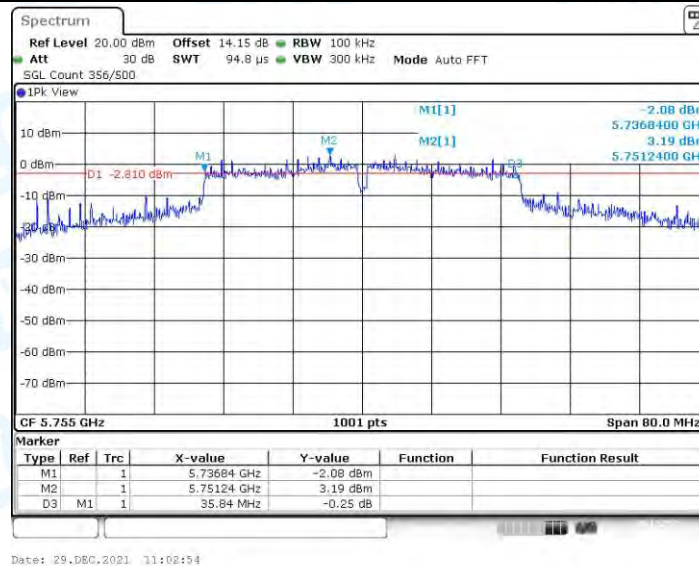
11N20SISO_Ant1_5745



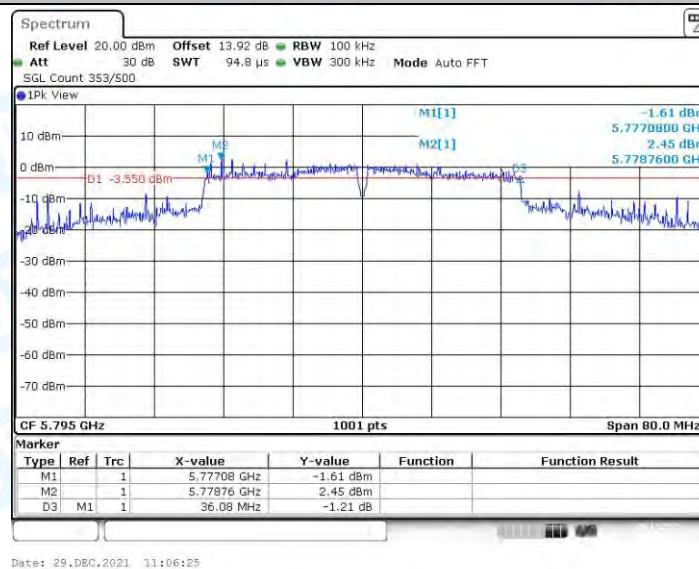
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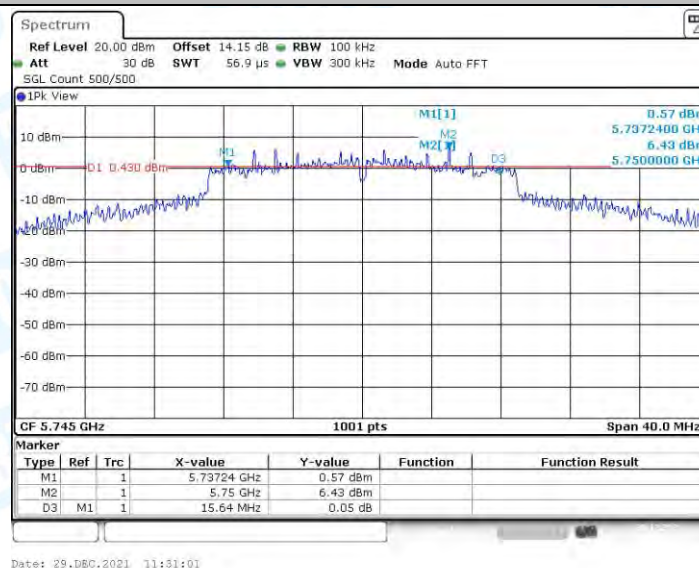
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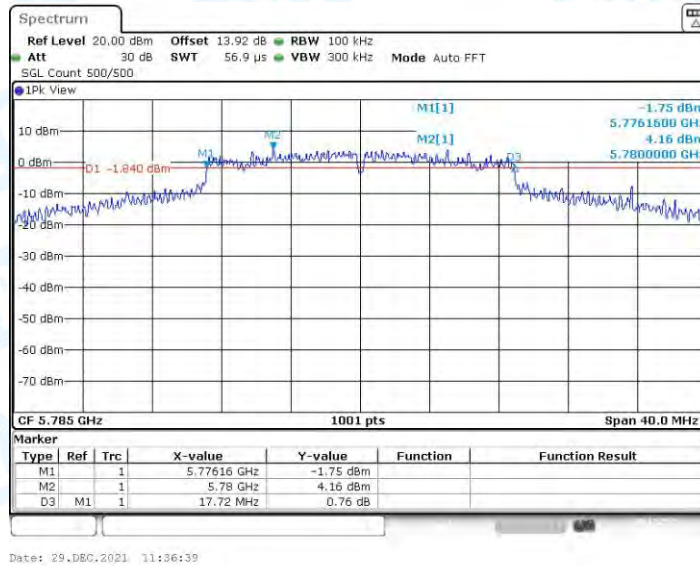
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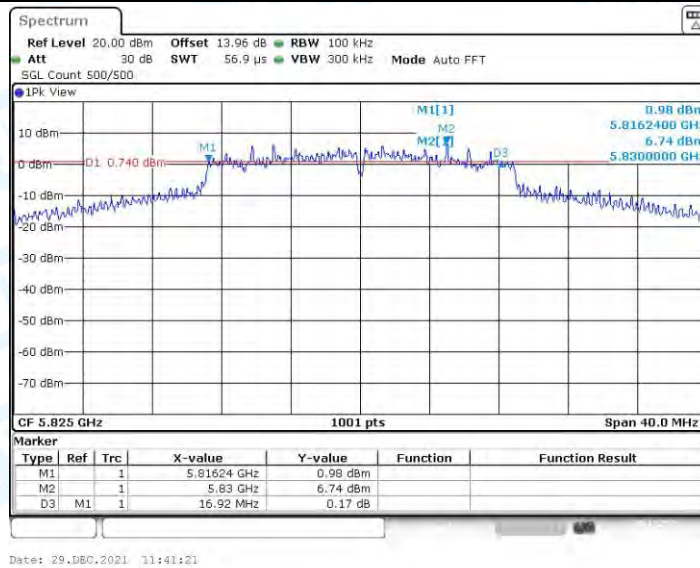
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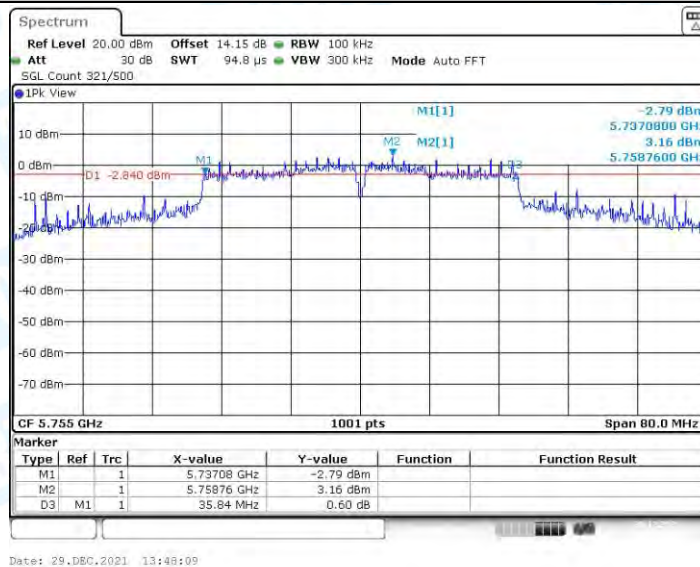
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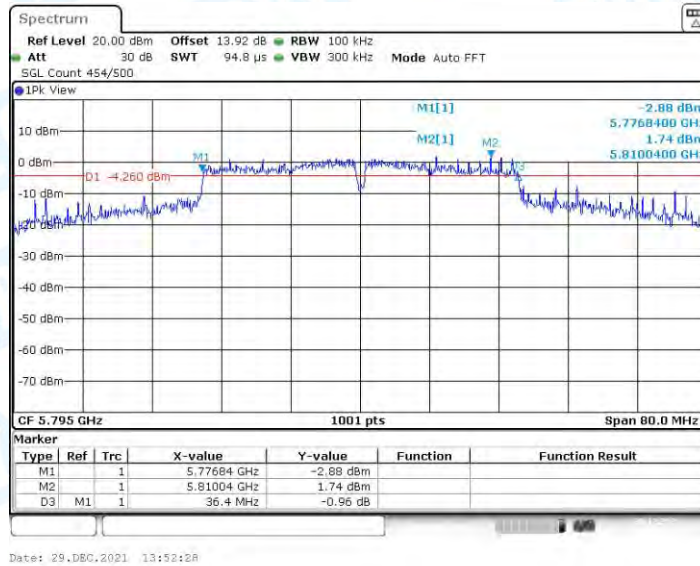
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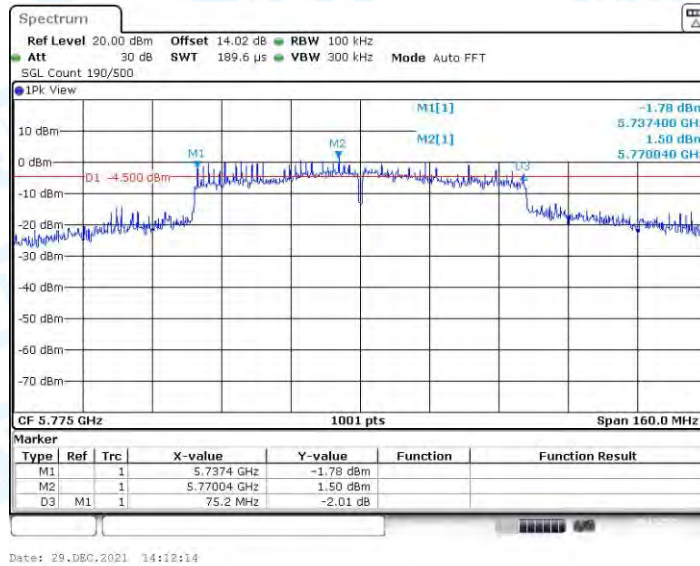
11AC20SISO_Ant1_5825



11AC40SISO_Ant1_5755



11AC40SISO_Ant1_5795



11AC80SISO_Ant1_5775

4. Maximum conducted output power

4.1. Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	5180	16.33	≤23.98	PASS
		5200	16.15	≤23.98	PASS
		5240	15.89	≤23.98	PASS
		5745	17.04	≤30	PASS
		5785	16.99	≤30	PASS
		5825	17.83	≤30	PASS
11N20SISO	Ant1	5180	17.64	≤23.98	PASS
		5200	17.53	≤23.98	PASS
		5240	17.38	≤23.98	PASS
		5745	16.59	≤30	PASS
		5785	16.83	≤30	PASS
		5825	17.60	≤30	PASS
11N40SISO	Ant1	5190	16.84	≤23.98	PASS
		5230	16.86	≤23.98	PASS
		5755	16.73	≤30	PASS
		5795	16.90	≤30	PASS
11AC20SISO	Ant1	5180	16.36	≤23.98	PASS
		5200	16.21	≤23.98	PASS
		5240	16.22	≤23.98	PASS
		5745	16.46	≤30	PASS
		5785	16.66	≤30	PASS
		5825	17.41	≤30	PASS
11AC40SISO	Ant1	5190	16.90	≤23.98	PASS
		5230	16.81	≤23.98	PASS
		5755	16.84	≤30	PASS
		5795	17.09	≤30	PASS
11AC80SISO	Ant1	5210	16.45	≤23.98	PASS
		5775	16.88	≤30	PASS

Note: The Duty Cycle Factor is compensated in the graph.

5. Maximum power spectral density

5.1. Test Result

TestMode	Antenna	Channel	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	6.17	≤11	PASS
		5200	6.11	≤11	PASS
		5240	5.86	≤11	PASS
		5745	4.08	≤30	PASS
		5785	3.98	≤30	PASS
		5825	4.63	≤30	PASS
11N20SISO	Ant1	5180	7.12	≤11	PASS
		5200	6.75	≤11	PASS
		5240	6.8	≤11	PASS
		5745	3.35	≤30	PASS
		5785	3.32	≤30	PASS
		5825	3.96	≤30	PASS
11N40SISO	Ant1	5190	3.86	≤11	PASS
		5230	3.16	≤11	PASS
		5755	1.06	≤30	PASS
		5795	0.7	≤30	PASS
11AC20SISO	Ant1	5180	5.45	≤11	PASS
		5200	5.37	≤11	PASS
		5240	6.34	≤11	PASS
		5745	3.42	≤30	PASS
		5785	3.36	≤30	PASS
		5825	4.28	≤30	PASS
11AC40SISO	Ant1	5190	3.35	≤11	PASS
		5230	3.55	≤11	PASS
		5755	0.43	≤30	PASS
		5795	0.95	≤30	PASS
11AC80SISO	Ant1	5210	0.89	≤11	PASS
		5775	-1.83	≤30	PASS

Note: 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.
2.The Duty Cycle Factor and RBW Factor is compensated in the graph.

5.2. Test Graphs



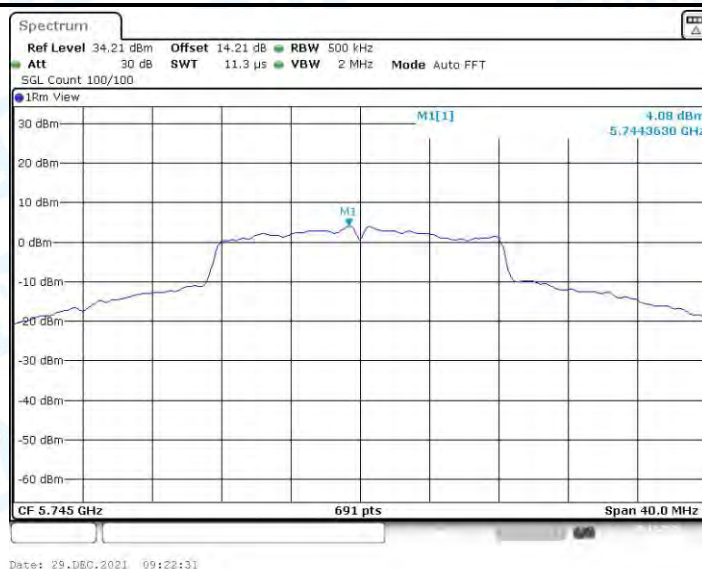
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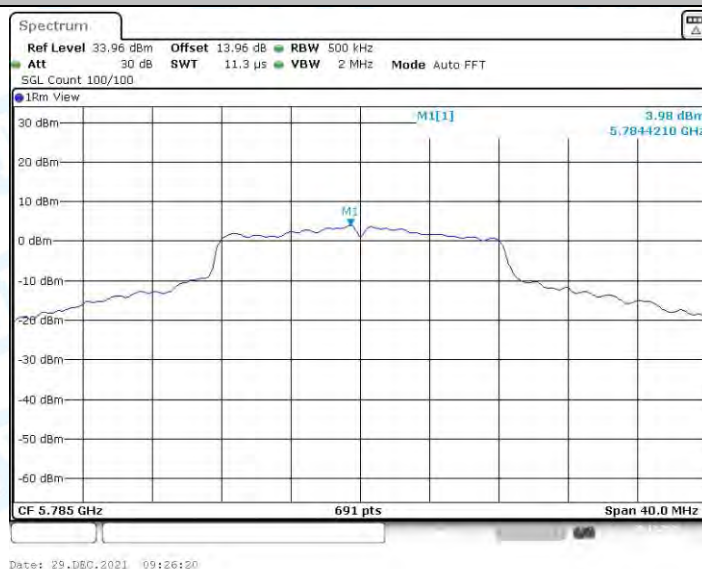
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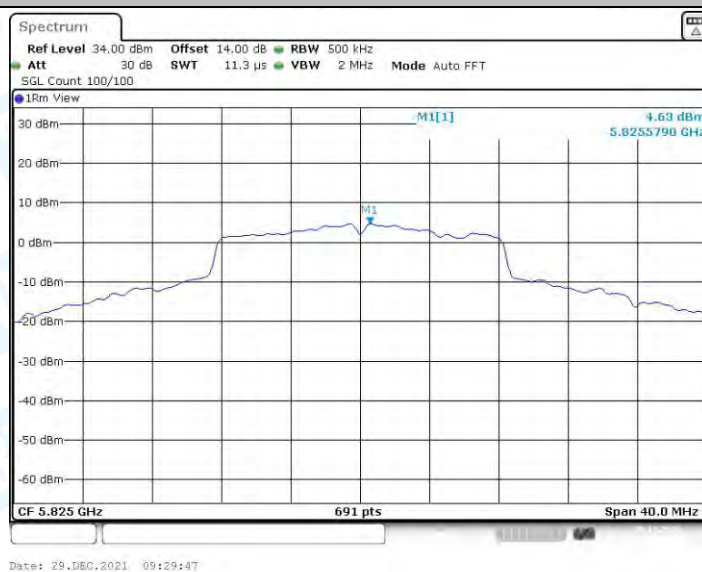
11A_Ant1_5240



11A_Ant1_5745



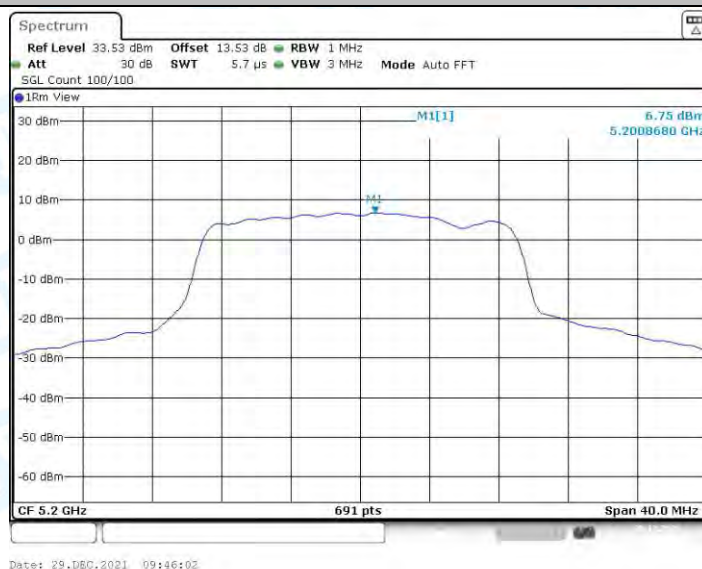
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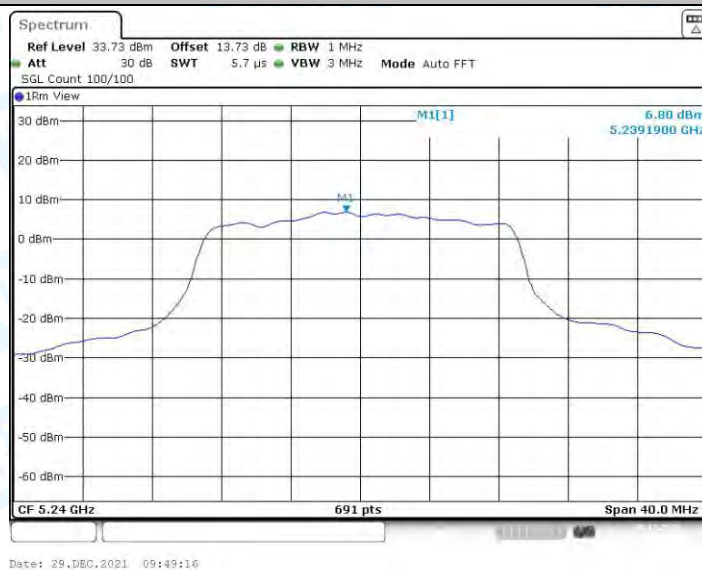
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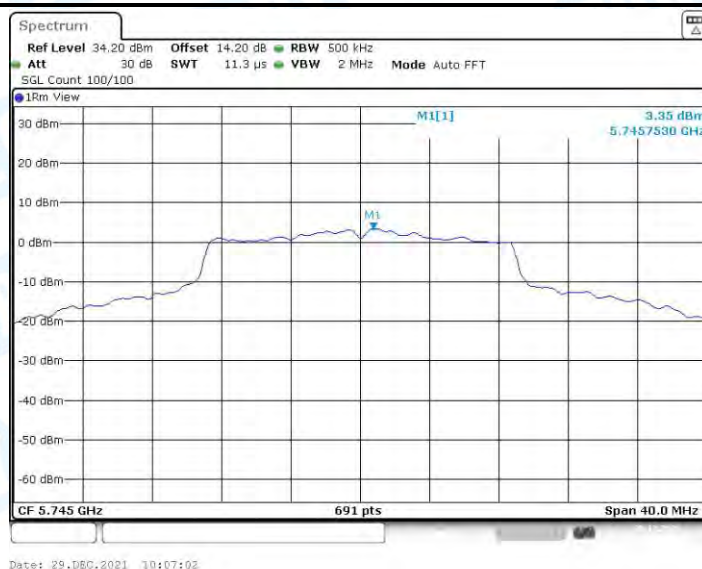
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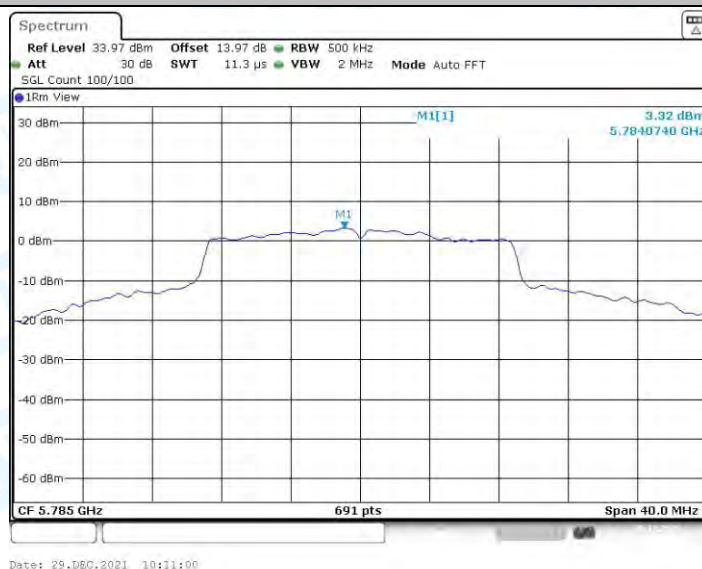
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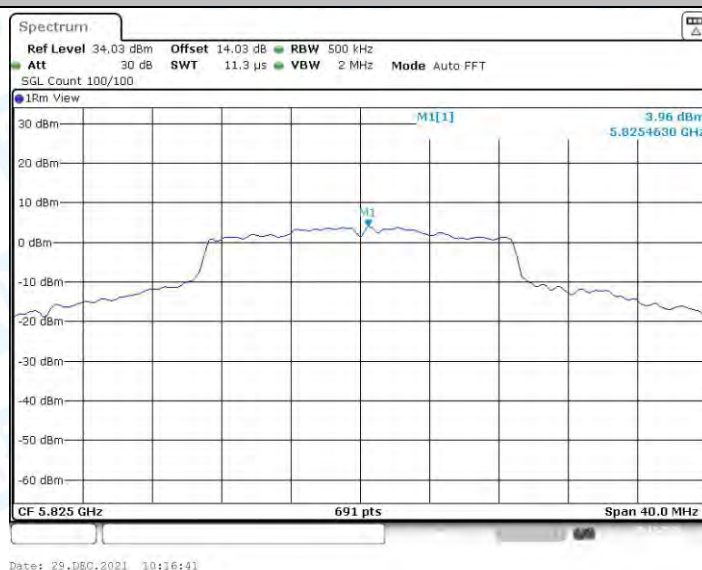
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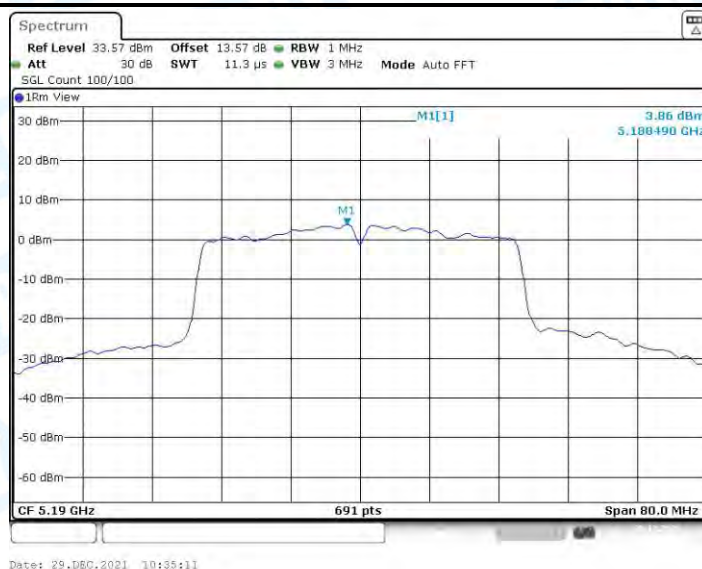
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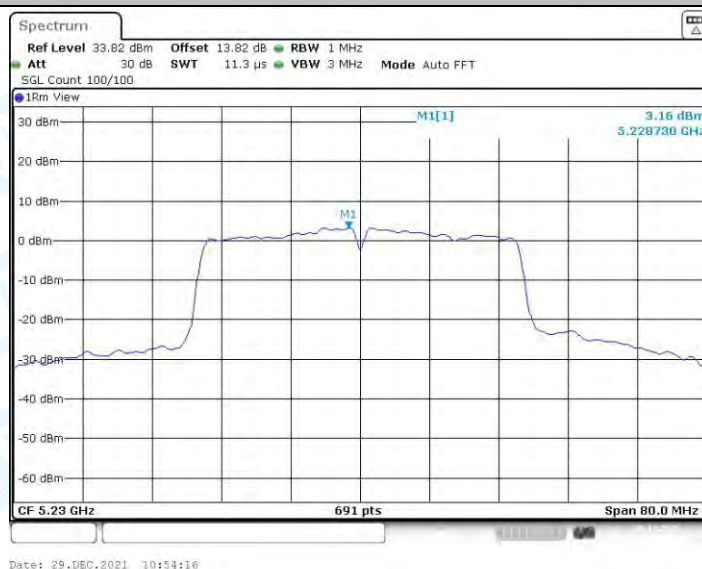
11N20SISO_Ant1_5785



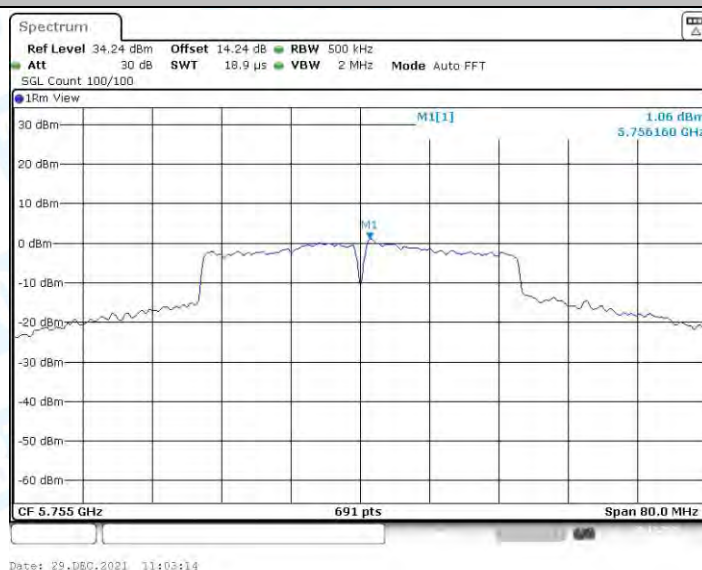
11N20SISO_Ant1_5825



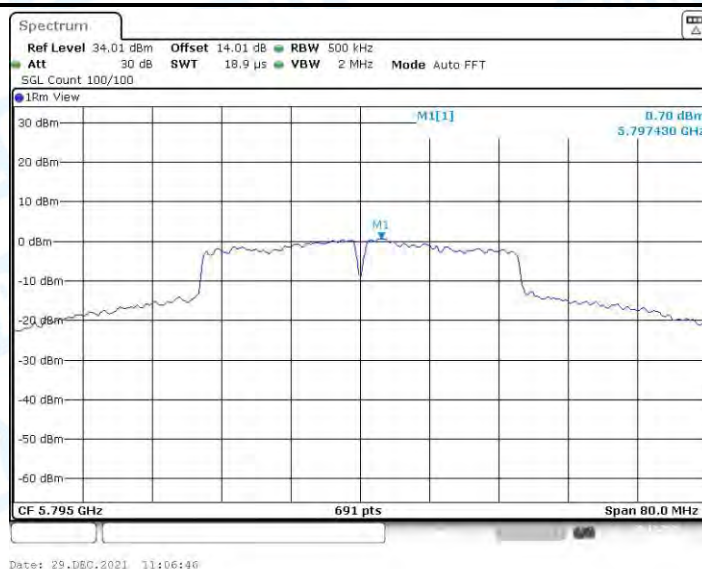
11N40SISO_Ant1_5190



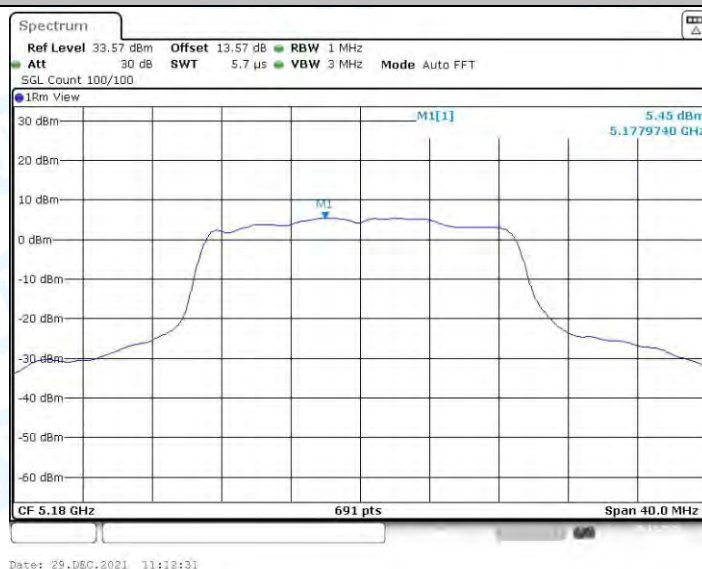
11N40SISO_Ant1_5230



11N40SISO_Ant1_5755



11N40SISO_Ant1_5795



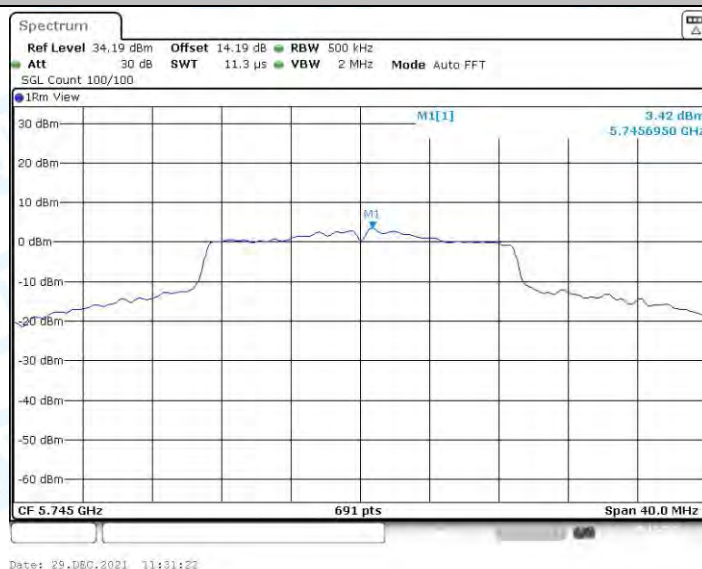
11AC20SISO_Ant1_5180



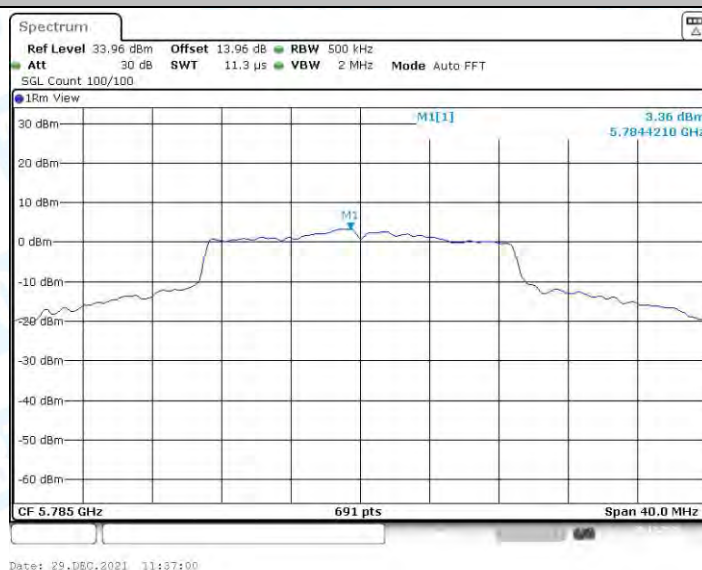
11AC20SISO_Ant1_5200



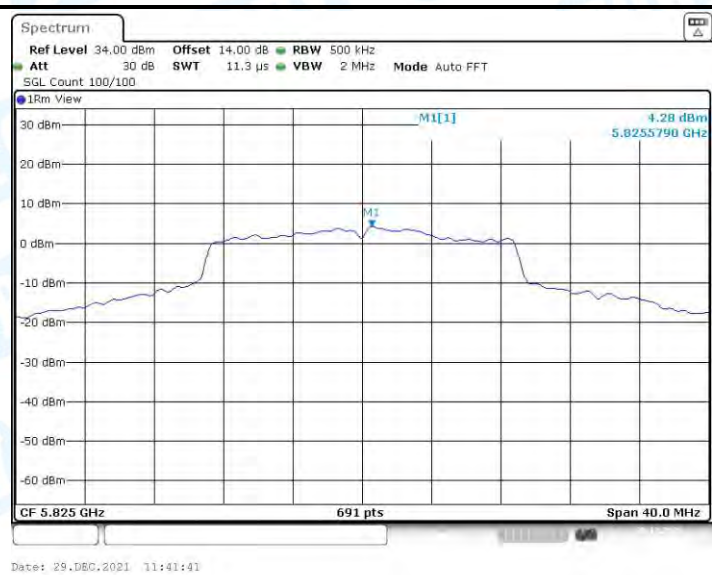
11AC20SISO_Ant1_5240



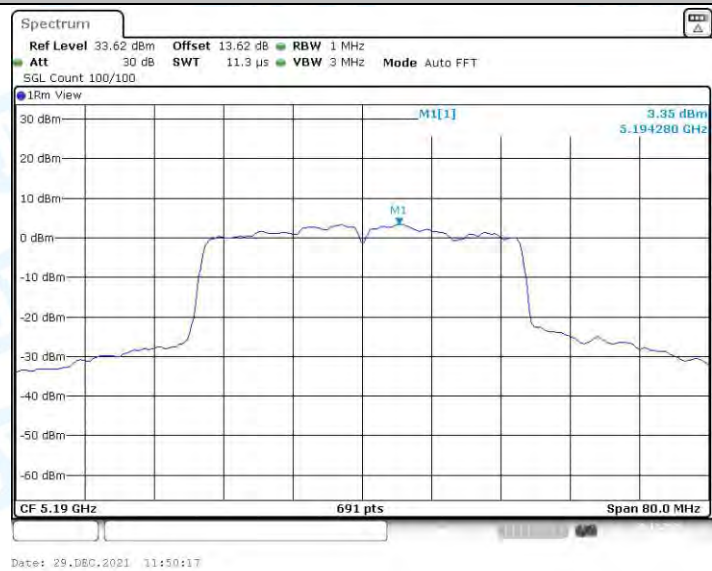
11AC20SISO_Ant1_5745



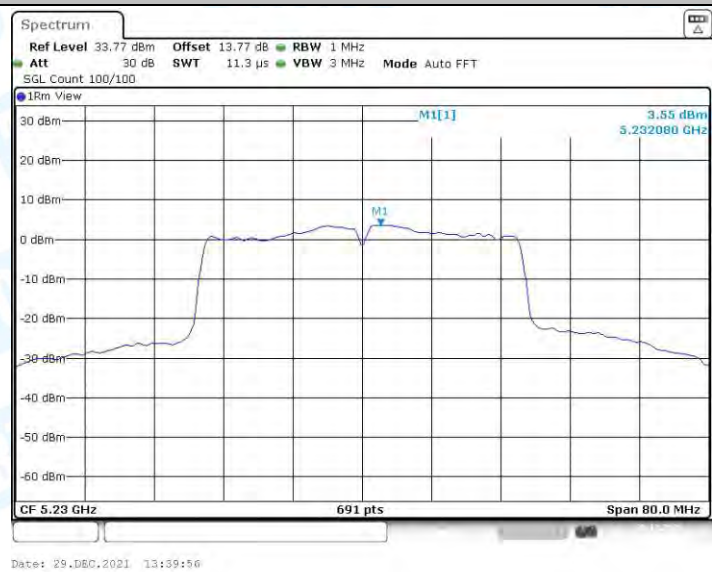
11AC20SISO_Ant1_5785



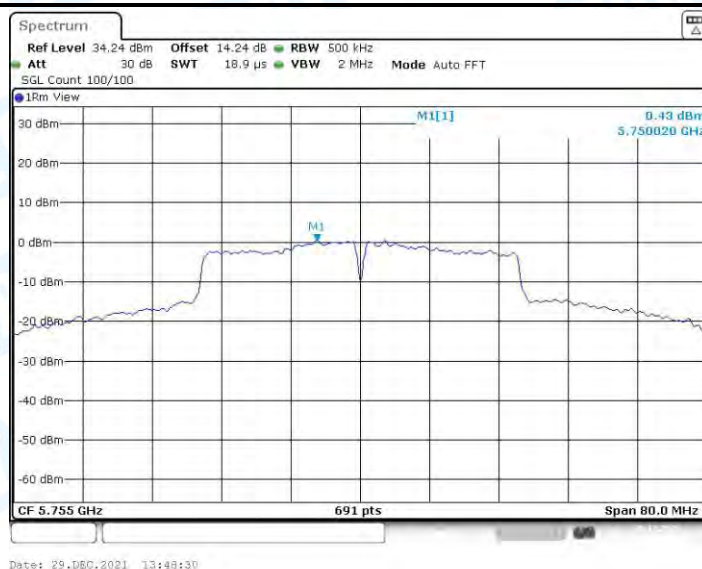
11AC20SISO_Ant1_5825



11AC40SISO_Ant1_5190



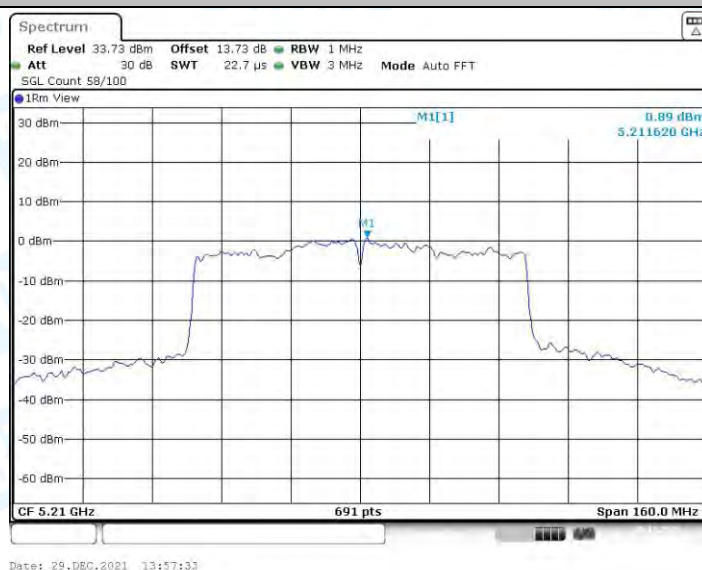
11AC40SISO_Ant1_5230



11AC40SISO_Ant1_5755



11AC40SISO_Ant1_5795



11AC80SISO_Ant1_5210



6. Emissions in Restricted Bands

6.1. Test Result

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	a	5180	Ant1	4500	-48.07	2.5	49.66	Peak	68.2	Pass
NVNT	a	5180	Ant1	4500	-57.95	2.5	39.78	Average	54	Pass
NVNT	a	5180	Ant1	5147.5	-30.44	2.5	67.29	Peak	68.2	Pass
NVNT	a	5180	Ant1	5149.6	-45.97	2.5	51.76	Average	54	Pass
NVNT	a	5180	Ant1	5150	-31.29	2.5	66.44	Peak	68.2	Pass
NVNT	a	5180	Ant1	5150	-45.42	2.5	52.31	Average	54	Pass
NVNT	a	5240	Ant1	5350	-45.31	2.5	52.42	Peak	68.2	Pass
NVNT	a	5240	Ant1	5350	-56.61	2.5	41.12	Average	54	Pass
NVNT	a	5240	Ant1	5458.08	-44.04	2.5	53.69	Peak	68.2	Pass
NVNT	a	5240	Ant1	5394.96	-56.25	2.5	41.48	Average	54	Pass
NVNT	a	5240	Ant1	5460	-48.02	2.5	49.71	Peak	68.2	Pass
NVNT	a	5240	Ant1	5460	-56.96	2.5	40.77	Average	54	Pass
NVNT	ac(VHT20)	5180	Ant1	4500	-47.85	2.5	49.88	Peak	68.2	Pass
NVNT	ac(VHT20)	5180	Ant1	4500	-57.93	2.5	39.8	Average	54	Pass
NVNT	ac(VHT20)	5180	Ant1	5142.6	-30.66	2.5	67.07	Peak	68.2	Pass
NVNT	ac(VHT20)	5180	Ant1	5149.6	-46.41	2.5	51.32	Average	54	Pass
NVNT	ac(VHT20)	5180	Ant1	5150	-30.74	2.5	66.99	Peak	68.2	Pass
NVNT	ac(VHT20)	5180	Ant1	5150	-45.76	2.5	51.97	Average	54	Pass
NVNT	ac(VHT20)	5240	Ant1	5350	-47.04	2.5	50.69	Peak	68.2	Pass
NVNT	ac(VHT20)	5240	Ant1	5350	-56.64	2.5	41.09	Average	54	Pass
NVNT	ac(VHT20)	5240	Ant1	5353.2	-43.47	2.5	54.26	Peak	68.2	Pass
NVNT	ac(VHT20)	5240	Ant1	5405.28	-56.28	2.5	41.45	Average	54	Pass
NVNT	ac(VHT20)	5240	Ant1	5460	-45.96	2.5	51.77	Peak	68.2	Pass
NVNT	ac(VHT20)	5240	Ant1	5460	-56.99	2.5	40.74	Average	54	Pass
NVNT	ac(VHT40)	5190	Ant1	4500	-47.99	2.5	49.74	Peak	68.2	Pass
NVNT	ac(VHT40)	5190	Ant1	4500	-57.93	2.5	39.8	Average	54	Pass
NVNT	ac(VHT40)	5190	Ant1	5148.97	-37.89	2.5	59.84	Peak	68.2	Pass
NVNT	ac(VHT40)	5190	Ant1	5149.7	-50.87	2.5	46.86	Average	54	Pass
NVNT	ac(VHT40)	5190	Ant1	5150	-38.18	2.5	59.55	Peak	68.2	Pass
NVNT	ac(VHT40)	5190	Ant1	5150	-50.41	2.5	47.32	Average	54	Pass
NVNT	ac(VHT40)	5230	Ant1	5350	-47.29	2.5	50.44	Peak	68.2	Pass
NVNT	ac(VHT40)	5230	Ant1	5350	-56.83	2.5	40.9	Average	54	Pass
NVNT	ac(VHT40)	5230	Ant1	5354.97	-43.89	2.5	53.84	Peak	68.2	Pass
NVNT	ac(VHT40)	5230	Ant1	5354.16	-56.76	2.5	40.97	Average	54	Pass
NVNT	ac(VHT40)	5230	Ant1	5460	-46.19	2.5	51.54	Peak	68.2	Pass
NVNT	ac(VHT40)	5230	Ant1	5460	-56.97	2.5	40.76	Average	54	Pass
NVNT	ac(VHT80)	5210	Ant1	5350	-46.99	2.5	50.74	Peak	68.2	Pass
NVNT	ac(VHT80)	5210	Ant1	5350	-56.54	2.5	41.19	Average	54	Pass
NVNT	ac(VHT80)	5210	Ant1	5434.26	-43.54	2.5	54.19	Peak	68.2	Pass
NVNT	ac(VHT80)	5210	Ant1	5350.11	-56.54	2.5	41.19	Average	54	Pass
NVNT	ac(VHT80)	5210	Ant1	5460	-46.91	2.5	50.82	Peak	68.2	Pass

NVNT	ac(VHT80)	5210	Ant1	5460	-56.84	2.5	40.89	Average	54	Pass
NVNT	n(HT20)	5180	Ant1	4500	-48.39	2.5	49.34	Peak	68.2	Pass
NVNT	n(HT20)	5180	Ant1	4500	-57.91	2.5	39.82	Average	54	Pass
NVNT	n(HT20)	5180	Ant1	5142.6	-31.31	2.5	66.42	Peak	68.2	Pass
NVNT	n(HT20)	5180	Ant1	5149.6	-46.43	2.5	51.3	Average	54	Pass
NVNT	n(HT20)	5180	Ant1	5150	-31.81	2.5	65.92	Peak	68.2	Pass
NVNT	n(HT20)	5180	Ant1	5150	-45.9	2.5	51.83	Average	54	Pass
NVNT	n(HT20)	5240	Ant1	5350	-46.57	2.5	51.16	Peak	68.2	Pass
NVNT	n(HT20)	5240	Ant1	5350	-56.64	2.5	41.09	Average	54	Pass
NVNT	n(HT20)	5240	Ant1	5351.76	-43.11	2.5	54.62	Peak	68.2	Pass
NVNT	n(HT20)	5240	Ant1	5394.48	-56.29	2.5	41.44	Average	54	Pass
NVNT	n(HT20)	5240	Ant1	5460	-46.29	2.5	51.44	Peak	68.2	Pass
NVNT	n(HT20)	5240	Ant1	5460	-56.96	2.5	40.77	Average	54	Pass
NVNT	n(HT40)	5190	Ant1	4500	-48.04	2.5	49.69	Peak	68.2	Pass
NVNT	n(HT40)	5190	Ant1	4500	-57.92	2.5	39.81	Average	54	Pass
NVNT	n(HT40)	5190	Ant1	5146.78	-38.91	2.5	58.82	Peak	68.2	Pass
NVNT	n(HT40)	5190	Ant1	5149.7	-50.9	2.5	46.83	Average	54	Pass
NVNT	n(HT40)	5190	Ant1	5150	-40.35	2.5	57.38	Peak	68.2	Pass
NVNT	n(HT40)	5190	Ant1	5150	-50.55	2.5	47.18	Average	54	Pass
NVNT	n(HT40)	5230	Ant1	5350	-46.48	2.5	51.25	Peak	68.2	Pass
NVNT	n(HT40)	5230	Ant1	5350	-56.85	2.5	40.88	Average	54	Pass
NVNT	n(HT40)	5230	Ant1	5434.35	-43.64	2.5	54.09	Peak	68.2	Pass
NVNT	n(HT40)	5230	Ant1	5373.87	-56.74	2.5	40.99	Average	54	Pass
NVNT	n(HT40)	5230	Ant1	5460	-47.08	2.5	50.65	Peak	68.2	Pass
NVNT	n(HT40)	5230	Ant1	5460	-56.97	2.5	40.76	Average	54	Pass

Note:

1. The Antenna Gain is compensated in the graph.
2. For transmitters operating in 5150-5350 GHz band and 5470-5725 GHz band: The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

6.2. Test Graphs

Test Graphs

Restrict Band NVNT a 5180MHz Ant1 Peak



Restrict Band NVNT a 5180MHz Ant1 Average



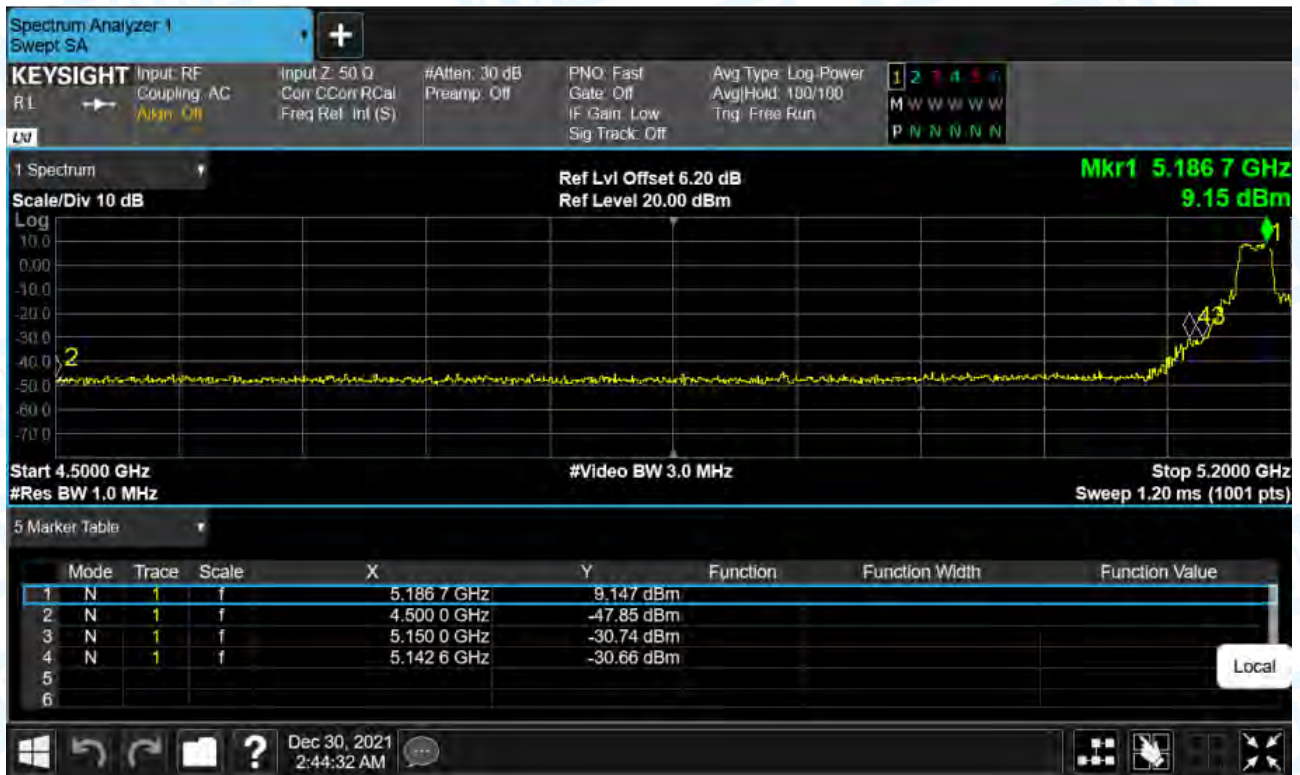
Restrict Band NVNT a 5240MHz Ant1 Peak



Restrict Band NVNT a 5240MHz Ant1 Average



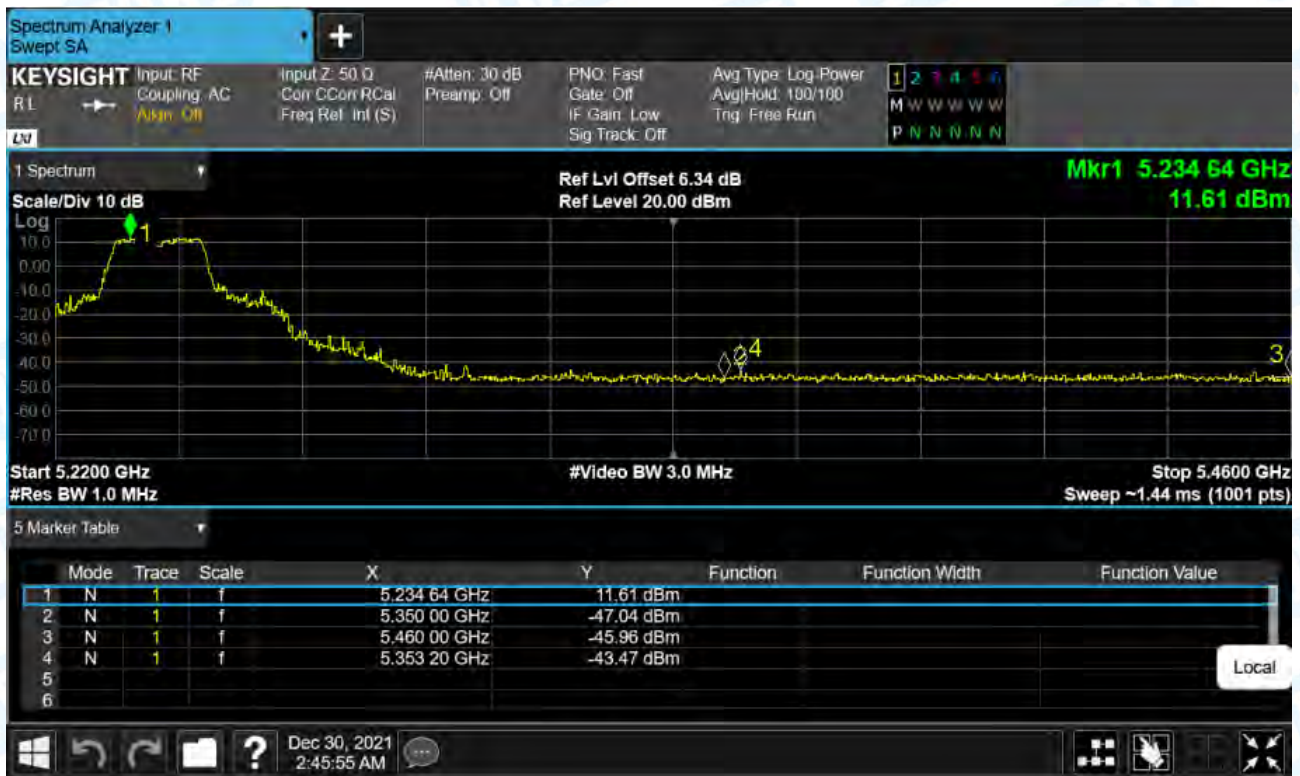
Restrict Band NVNT ac(VHT20) 5180MHz Ant1 Peak



Restrict Band NVNT ac(VHT20) 5180MHz Ant1 Average



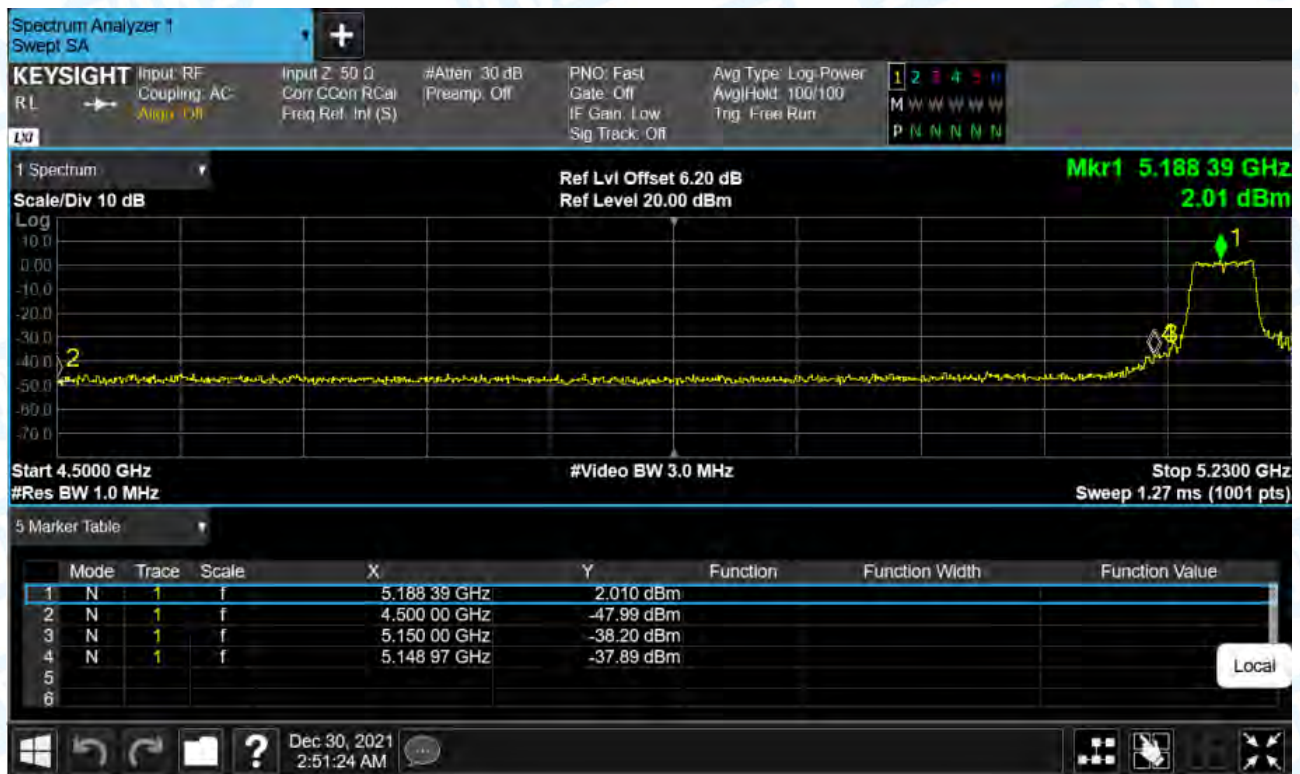
Restrict Band NVNT ac(VHT20) 5240MHz Ant1 Peak



Restrict Band NVNT ac(VHT20) 5240MHz Ant1 Average



Restrict Band NVNT ac(VHT40) 5190MHz Ant1 Peak



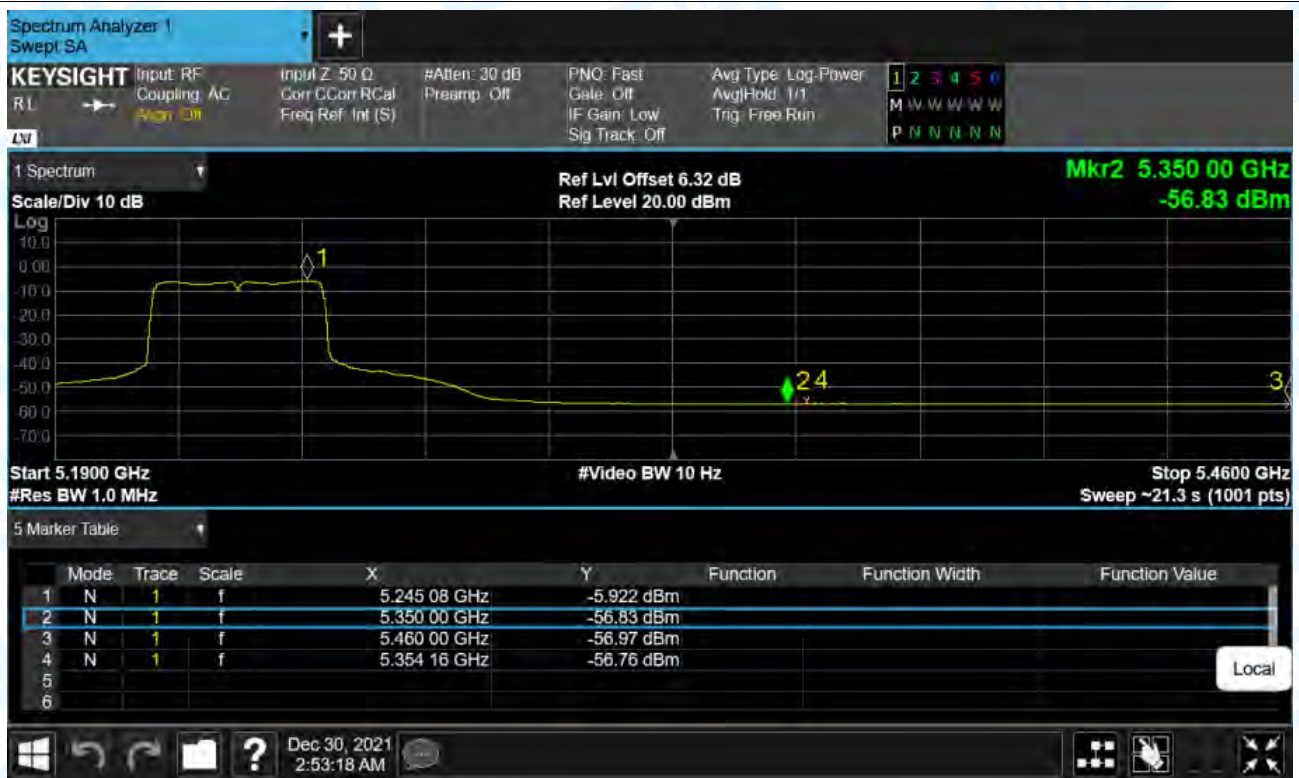
Restrict Band NVNT ac(VHT40) 5190MHz Ant1 Average



Restrict Band NVNT ac(VHT40) 5230MHz Ant1 Peak



Restrict Band NVNT ac(VHT40) 5230MHz Ant1 Average



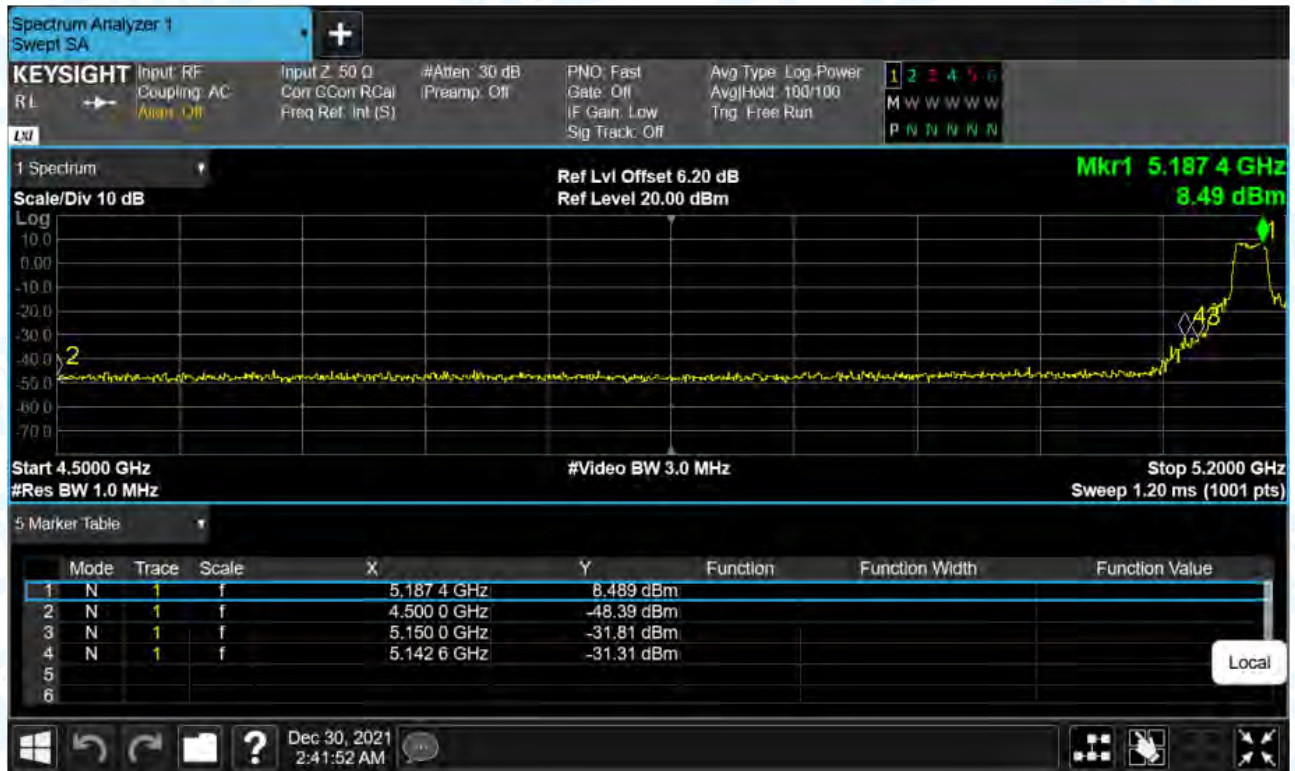
Restrict Band NVNT ac(VHT80) 5210MHz Ant1 Peak



Restrict Band NVNT ac(VHT80) 5210MHz Ant1 Average



Restrict Band NVNT n(HT20) 5180MHz Ant1 Peak



Restrict Band NVNT n(HT20) 5180MHz Ant1 Average



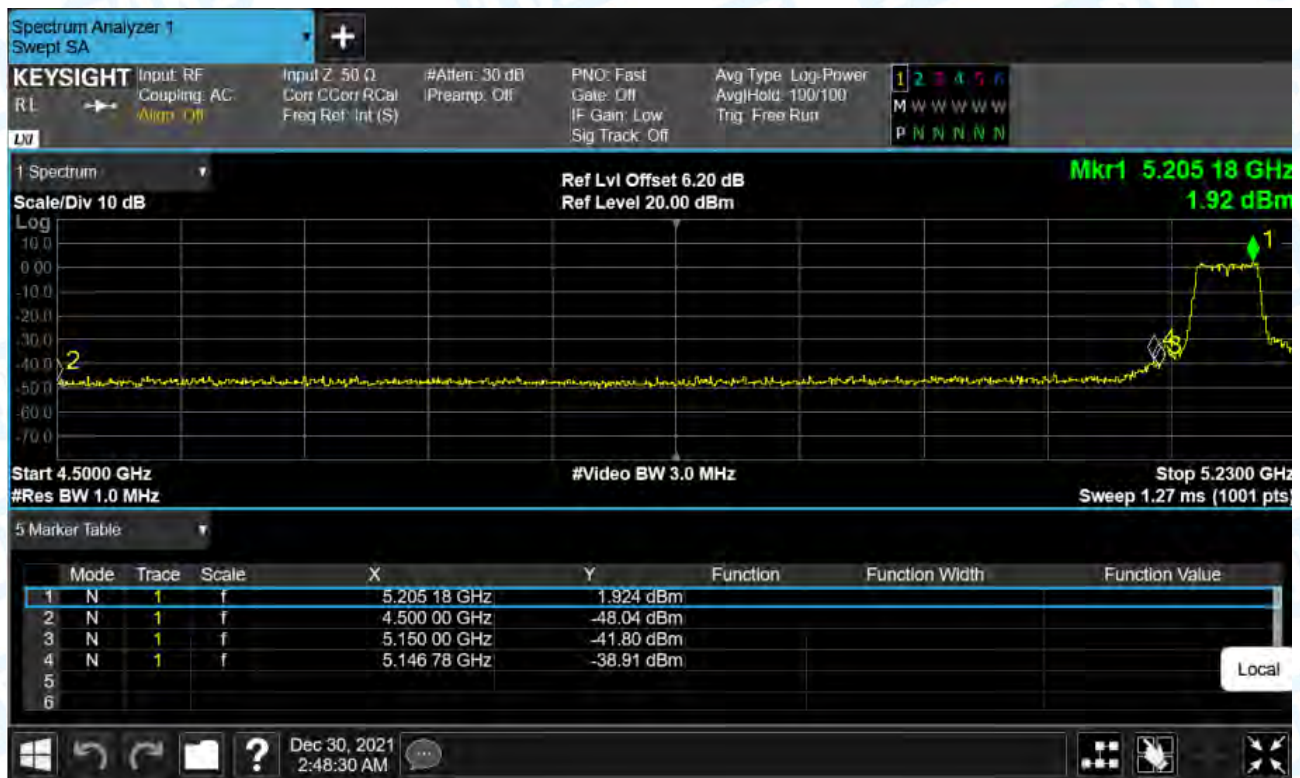
Restrict Band NVNT n(HT20) 5240MHz Ant1 Peak



Restrict Band NVNT n(HT20) 5240MHz Ant1 Average



Restrict Band NVNT n(HT40) 5190MHz Ant1 Peak



Restrict Band NVNT n(HT40) 5190MHz Ant1 Average



Restrict Band NVNT n(HT40) 5230MHz Ant1 Peak



Restrict Band NVNT n(HT40) 5230MHz Ant1 Average

