



802.11ax20

Test Mode:5240					Test channel: High			
Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10480	45.82	39.34	5.36	31.25	59.27	68.23	-8.96	V
17520	43.49	39.72	7.85	30.63	60.43	68.23	-7.80	V
20960	44.28	37.65	8.56	34.95	55.54	68.23	-12.69	V
10480	46.90	39.34	5.36	31.25	60.35	68.23	-7.88	H
17520	45.14	39.72	7.85	30.63	62.08	68.23	-6.15	H
20960	46.01	37.65	8.56	34.95	57.27	68.23	-10.96	H
Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10480	33.58	39.34	5.36	31.25	47.03	54	-6.97	V
17520	29.26	39.72	7.85	30.63	46.20	54	-7.80	V
20960	30.13	37.65	8.56	34.95	41.39	54	-12.61	V
10480	32.36	39.34	5.36	31.25	45.81	54	-8.19	H
17520	26.91	39.72	7.85	30.63	43.85	54	-10.15	H
20960	29.34	37.65	8.56	34.95	40.60	54	-13.40	H



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Test Mode: 5745					Test channel: Lowest			
Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
11490	47.92	39.65	5.42	31.75	61.24	68.23	-6.99	V
17235	42.05	41.28	7.32	30.96	59.69	68.23	-8.54	V
22980	43.79	37.12	8.85	35.25	54.51	68.23	-13.72	V
11490	49.24	39.65	5.42	31.75	62.56	68.23	-5.67	H
17235	43.98	41.28	7.32	30.96	61.62	68.23	-6.61	H
22980	44.14	37.12	8.85	35.25	54.86	68.23	-13.37	H
Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
11490	32.42	39.65	5.42	31.75	45.74	54	-8.26	V
17235	29.90	41.28	7.32	30.96	47.54	54	-6.46	V
22980	29.32	37.12	8.85	35.25	40.04	54	-13.96	V
11490	31.83	39.65	5.42	31.75	45.15	54	-8.85	H
17235	28.72	41.28	7.32	30.96	46.36	54	-7.64	H
22980	29.00	37.12	8.85	35.25	39.72	54	-14.28	H



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Test Mode:5785					Test channel: Middle			
Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
11570	48.47	39.84	5.42	31.75	61.98	68.23	-6.25	V
17355	44.49	42.02	7.32	30.96	62.87	68.23	-5.36	V
23140	45.02	37.32	8.85	35.25	55.94	68.23	-12.29	V
11570	48.38	39.84	5.42	31.75	61.89	68.23	-6.34	H
17355	42.23	42.02	7.32	30.96	60.61	68.23	-7.62	H
23140	43.15	37.32	8.85	35.25	54.07	68.23	-14.16	H
Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
11570	33.21	39.84	5.42	31.75	46.72	54	-7.28	V
17355	29.24	42.02	7.32	30.96	47.62	54	-6.38	V
23140	28.76	37.32	8.85	35.25	39.68	54	-14.32	V
11570	34.89	39.84	5.42	31.75	48.40	54	-5.60	H
17355	29.54	42.02	7.32	30.96	47.92	54	-6.08	H
23140	29.55	37.32	8.85	35.25	40.47	54	-13.53	H



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Test Mode:5825					Test channel: High			
Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
11650	48.63	39.80	5.42	31.75	62.10	68.23	-6.13	V
17475	44.45	42.13	7.32	30.96	62.94	68.23	-5.29	V
23300	45.77	37.60	8.85	35.25	56.97	68.23	-11.26	V
11650	49.22	39.80	5.42	31.75	62.69	68.23	-5.54	H
17475	44.17	42.13	7.32	30.96	62.66	68.23	-5.57	H
23300	45.07	37.60	8.85	35.25	56.27	68.23	-11.96	H
Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
11650	34.69	34.96	5.42	31.75	43.32	54	-10.68	V
17475	28.79	36.74	7.32	30.96	41.89	54	-12.11	V
23300	30.08	39.14	8.85	35.25	42.82	54	-11.18	V
11650	33.42	34.02	5.42	31.75	41.11	54	-12.89	H
17475	28.75	36.57	7.32	30.96	41.68	54	-12.32	H
23300	28.40	37.60	8.85	35.25	39.60	54	-14.40	H



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Test Mode:5190					Test channel: High			
Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10380	47.68	39.04	5.42	31.75	60.39	68.23	-7.84	V
15570	44.75	39.64	7.32	30.96	60.75	68.23	-7.48	V
20760	44.94	37.89	8.85	35.25	56.43	68.23	-11.80	V
10380	49.47	39.04	5.42	31.75	62.18	68.23	-6.05	H
15570	44.95	39.64	7.32	30.96	60.95	68.23	-7.28	H
20760	45.04	37.89	8.85	35.25	56.53	68.23	-11.70	H
Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10380	35.92	39.04	5.42	31.75	48.63	54	-5.37	V
15570	28.88	39.64	7.32	30.96	44.88	54	-9.12	V
20760	28.10	37.89	8.85	35.25	39.59	54	-14.41	V
10380	33.37	39.04	5.42	31.75	46.08	54	-7.92	H
15570	28.42	39.64	7.32	30.96	44.42	54	-9.58	H
20760	28.81	37.89	8.85	35.25	40.30	54	-13.70	H



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Test Mode:5230					Test channel: High			
Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
10460	47.62	39.28	5.42	31.75	60.57	68.23	-7.66	V
15690	44.60	39.79	7.32	30.96	60.75	68.23	-7.48	V
20920	45.21	37.70	8.85	35.25	56.51	68.23	-11.72	V
10460	48.99	39.28	5.42	31.75	61.94	68.23	-6.29	H
15690	44.39	39.79	7.32	30.96	60.54	68.23	-7.69	H
20920	45.14	37.70	8.85	35.25	56.44	68.23	-11.79	H
Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.
11650	35.45	39.28	5.42	31.75	48.40	54	-5.60	V
17475	28.90	39.79	7.32	30.96	45.05	54	-8.95	V
23300	28.04	37.70	8.85	35.25	39.34	54	-14.66	V
11650	33.05	39.28	5.42	31.75	46.00	54	-8.00	H
17475	28.42	39.79	7.32	30.96	44.57	54	-9.43	H
23300	29.08	37.70	8.85	35.25	40.38	54	-13.62	H

Note:

1. The testing has been conformed to 40GHz.
2. All other emissions more than 30dB below the limit.
3. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
Emission Level = Reading + Factor
Margin=Emission Level-Limit
4. X-Axis, Y-Axis and Z-Axis were investigated. The results above show only the worst case.



Undesirable emission

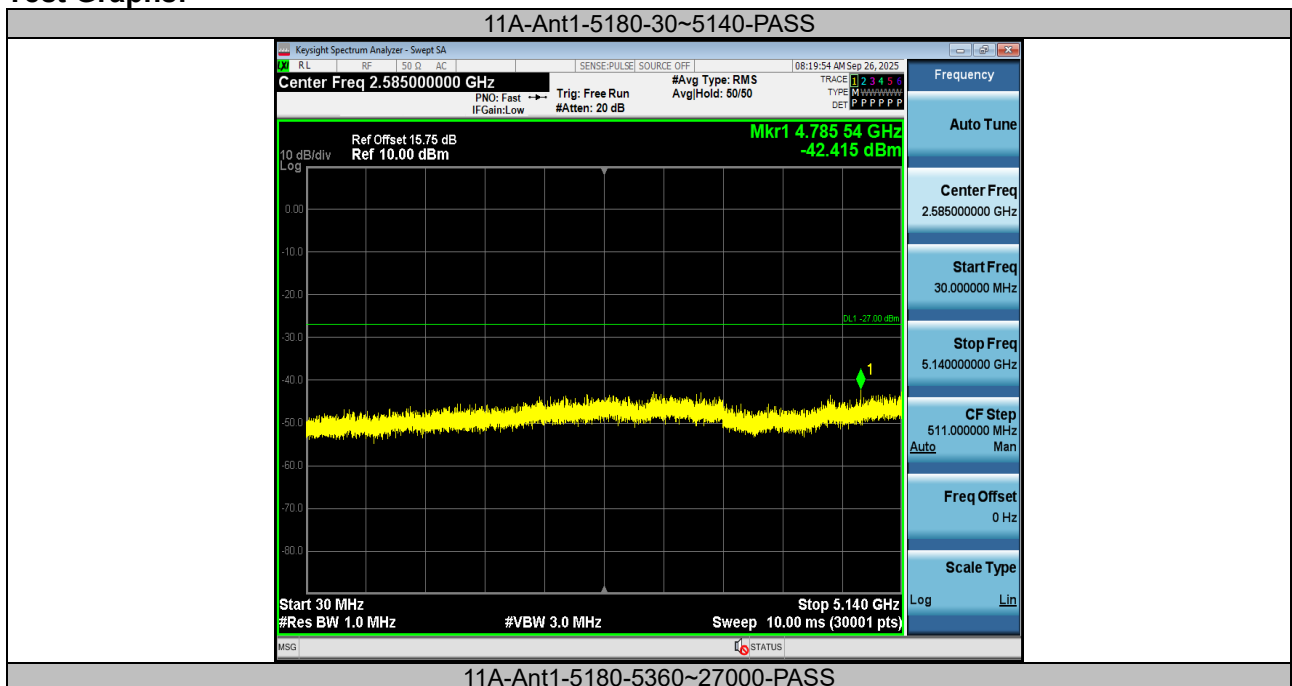
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	Max. Fre [MHz]	Max. Level [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	30~5140	4785.54	-42.42	≤-27	PASS
11A	Ant1	5180	5360~27000	26409.23	-35.63	≤-27	PASS
11A	Ant1	5200	30~5140	2573.59	-41.67	≤-27	PASS
11A	Ant1	5200	5360~27000	24763.15	-36.91	≤-27	PASS
11A	Ant1	5240	30~5140	3107.92	-42.08	≤-27	PASS
11A	Ant1	5240	5360~27000	26879.54	-36.6	≤-27	PASS
11A	Ant1	5745	30~5650	4928.39	-42.89	≤-27	PASS
11A	Ant1	5745	5925~27000	26711.27	-33.84	≤-27	PASS
11A	Ant1	5785	30~5650	5500.88	-42.32	≤-27	PASS
11A	Ant1	5785	5925~27000	26654.37	-32.91	≤-27	PASS
11A	Ant1	5825	30~5650	5605.41	-42.94	≤-27	PASS
11A	Ant1	5825	5925~27000	26063.57	-33.46	≤-27	PASS
11N20SISO	Ant1	5180	30~5140	5031.67	-42.8	≤-27	PASS
11N20SISO	Ant1	5180	5360~27000	26818.95	-37.02	≤-27	PASS
11N20SISO	Ant1	5200	30~5140	4160.58	-31.97	≤-27	PASS
11N20SISO	Ant1	5200	5360~27000	26730.94	-36.68	≤-27	PASS
11N20SISO	Ant1	5240	30~5140	5101.33	-41.86	≤-27	PASS
11N20SISO	Ant1	5240	5360~27000	26618.41	-36.6	≤-27	PASS
11N20SISO	Ant1	5745	30~5650	5476.15	-42.73	≤-27	PASS
11N20SISO	Ant1	5745	5925~27000	26837.72	-33.08	≤-27	PASS
11N20SISO	Ant1	5785	30~5650	5098.49	-42.34	≤-27	PASS
11N20SISO	Ant1	5785	5925~27000	26832.1	-33.8	≤-27	PASS
11N20SISO	Ant1	5825	30~5650	5253.04	-42.12	≤-27	PASS
11N20SISO	Ant1	5825	5925~27000	26683.88	-33.27	≤-27	PASS
11N40SISO	Ant1	5190	30~5140	4151.56	-39.08	≤-27	PASS
11N40SISO	Ant1	5190	5360~27000	25751.37	-36.79	≤-27	PASS
11N40SISO	Ant1	5230	30~5140	3027.7	-42.34	≤-27	PASS
11N40SISO	Ant1	5230	5360~27000	25234.9	-36.21	≤-27	PASS
11N40SISO	Ant1	5755	30~5650	2611.27	-43.16	≤-27	PASS
11N40SISO	Ant1	5755	5925~27000	26839.83	-33.85	≤-27	PASS
11N40SISO	Ant1	5795	30~5650	5552.02	-42.96	≤-27	PASS
11N40SISO	Ant1	5795	5925~27000	26567.96	-34.06	≤-27	PASS
11AC20SISO	Ant1	5180	30~5140	3021.56	-42.11	≤-27	PASS
11AC20SISO	Ant1	5180	5360~27000	26836.98	-37.14	≤-27	PASS
11AC20SISO	Ant1	5200	30~5140	3175.21	-42.61	≤-27	PASS
11AC20SISO	Ant1	5200	5360~27000	26723.01	-36.7	≤-27	PASS
11AC20SISO	Ant1	5240	30~5140	3048.48	-42.56	≤-27	PASS
11AC20SISO	Ant1	5240	5360~27000	26693.43	-36.64	≤-27	PASS
11AC20SISO	Ant1	5745	30~5650	5486.08	-43.18	≤-27	PASS
11AC20SISO	Ant1	5745	5925~27000	26758.34	-34.13	≤-27	PASS
11AC20SISO	Ant1	5785	30~5650	3061.24	-42.22	≤-27	PASS
11AC20SISO	Ant1	5785	5925~27000	26755.53	-33.58	≤-27	PASS
11AC20SISO	Ant1	5825	30~5650	5405.53	-42.66	≤-27	PASS
11AC20SISO	Ant1	5825	5925~27000	26558.83	-33.95	≤-27	PASS
11AC40SISO	Ant1	5190	30~5140	3168.73	-42.42	≤-27	PASS
11AC40SISO	Ant1	5190	5360~27000	26846.36	-36.91	≤-27	PASS
11AC40SISO	Ant1	5230	30~5140	2624.01	-41.51	≤-27	PASS
11AC40SISO	Ant1	5230	5360~27000	26675.4	-36.01	≤-27	PASS
11AC40SISO	Ant1	5755	30~5650	3075.48	-43.23	≤-27	PASS
11AC40SISO	Ant1	5755	5925~27000	26400.07	-33.47	≤-27	PASS
11AC40SISO	Ant1	5795	30~5650	5605.23	-42.57	≤-27	PASS
11AC40SISO	Ant1	5795	5925~27000	26652.26	-33.21	≤-27	PASS
11AX20SISO	Ant1	5180	30~5140	2449.24	-42.51	≤-27	PASS



11AX20SISO	Ant1	5180	5360~27000	26760.52	-36.44	≤-27	PASS
11AX20SISO	Ant1	5200	30~5140	4987.21	-42.22	≤-27	PASS
11AX20SISO	Ant1	5200	5360~27000	26532.58	-36.34	≤-27	PASS
11AX20SISO	Ant1	5240	30~5140	4192.27	-32.21	≤-27	PASS
11AX20SISO	Ant1	5240	5360~27000	26028.36	-35.63	≤-27	PASS
11AX20SISO	Ant1	5745	30~5650	5293.13	-42.73	≤-27	PASS
11AX20SISO	Ant1	5745	5925~27000	26718.3	-32.94	≤-27	PASS
11AX20SISO	Ant1	5785	30~5650	5607.48	-42.59	≤-27	PASS
11AX20SISO	Ant1	5785	5925~27000	26512.47	-32.89	≤-27	PASS
11AX20SISO	Ant1	5825	30~5650	5297.81	-41.87	≤-27	PASS
11AX20SISO	Ant1	5825	5925~27000	26908.68	-32.82	≤-27	PASS
11AX40SISO	Ant1	5190	30~5140	2791.44	-41.88	≤-27	PASS
11AX40SISO	Ant1	5190	5360~27000	26808.85	-36.11	≤-27	PASS
11AX40SISO	Ant1	5230	30~5140	3582.47	-42.04	≤-27	PASS
11AX40SISO	Ant1	5230	5360~27000	25035.81	-36.69	≤-27	PASS
11AX40SISO	Ant1	5755	30~5650	5282.45	-42.49	≤-27	PASS
11AX40SISO	Ant1	5755	5925~27000	26645.24	-34.11	≤-27	PASS
11AX40SISO	Ant1	5795	30~5650	5633.33	-42.27	≤-27	PASS
11AX40SISO	Ant1	5795	5925~27000	25294.33	-33.77	≤-27	PASS

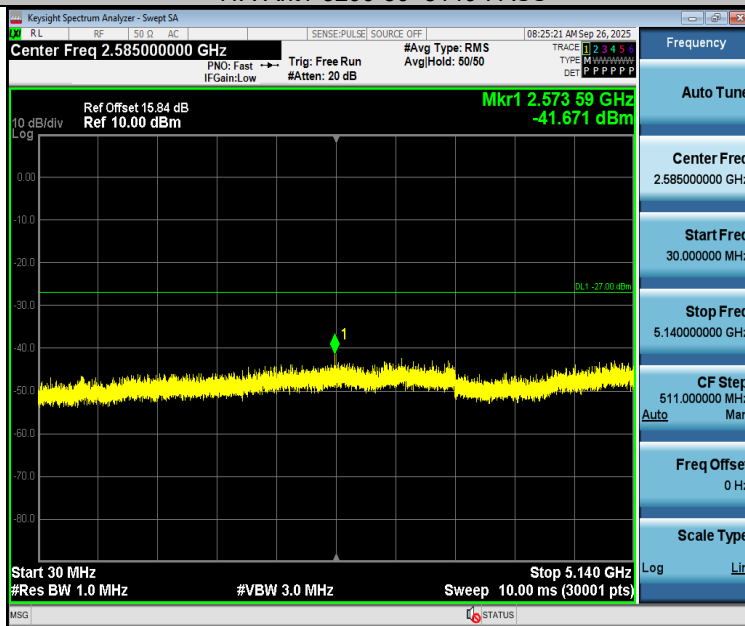
Note: 27~40GHz at least have 20dB margin. No recording in the test report.

Test Graphs:





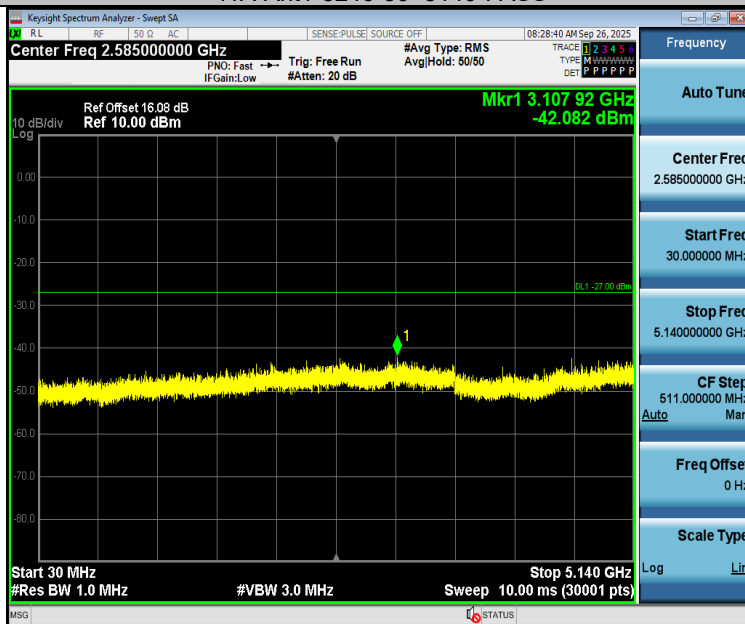
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11A-Ant1-5200-5360~27000-PASS



11A-Ant1-5240-30~5140-PASS



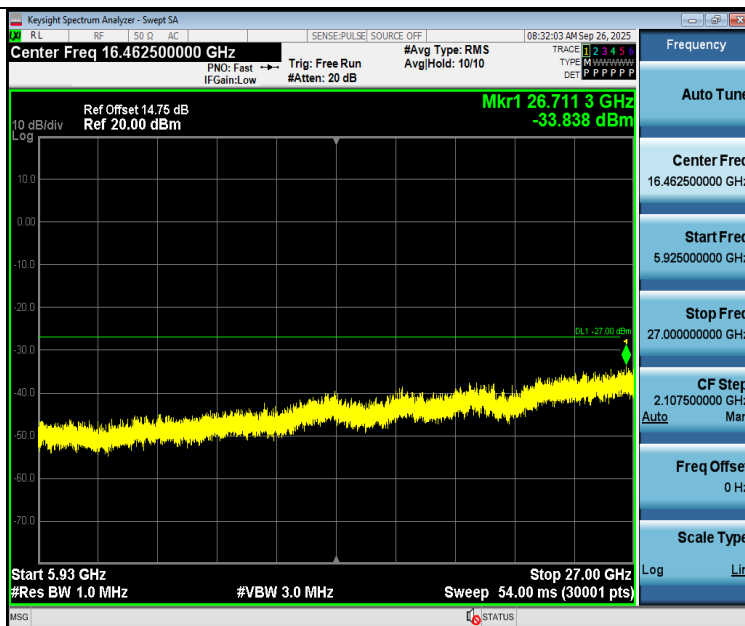
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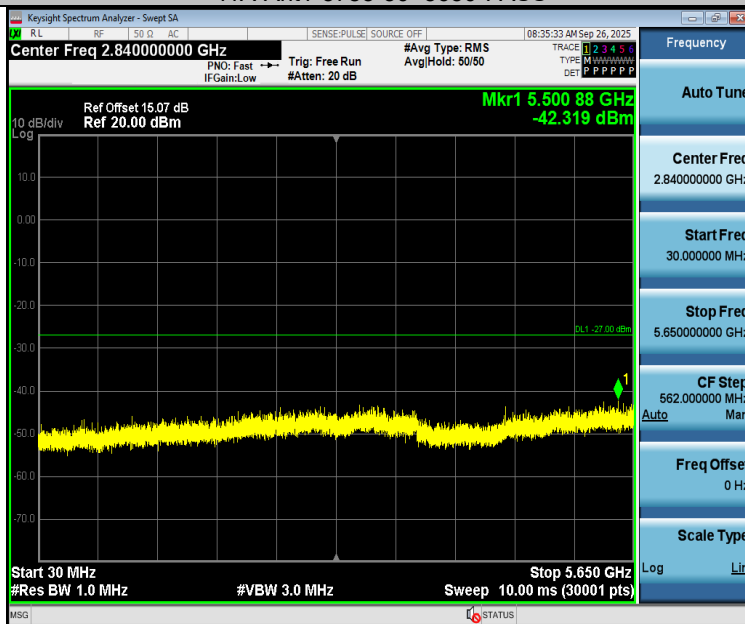
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11A-Ant1-5745-5925~27000-PASS



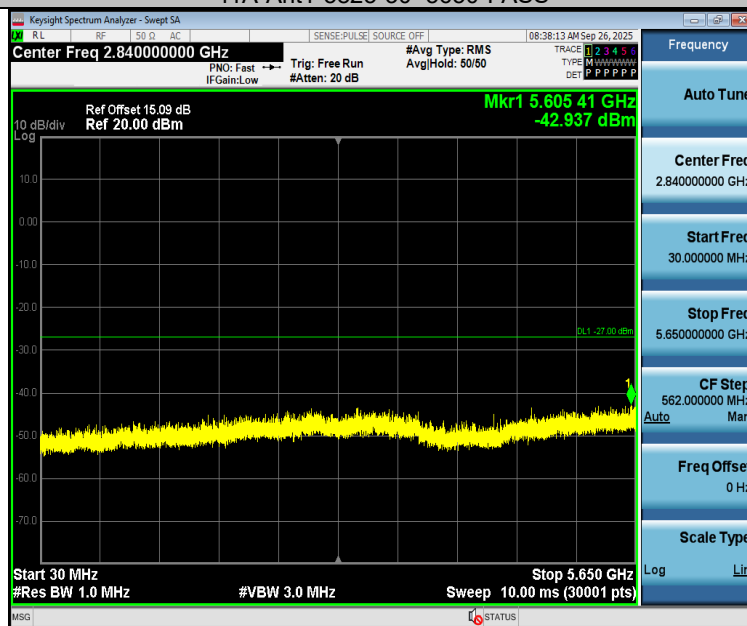
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11A-Ant1-5785-5925~27000-PASS



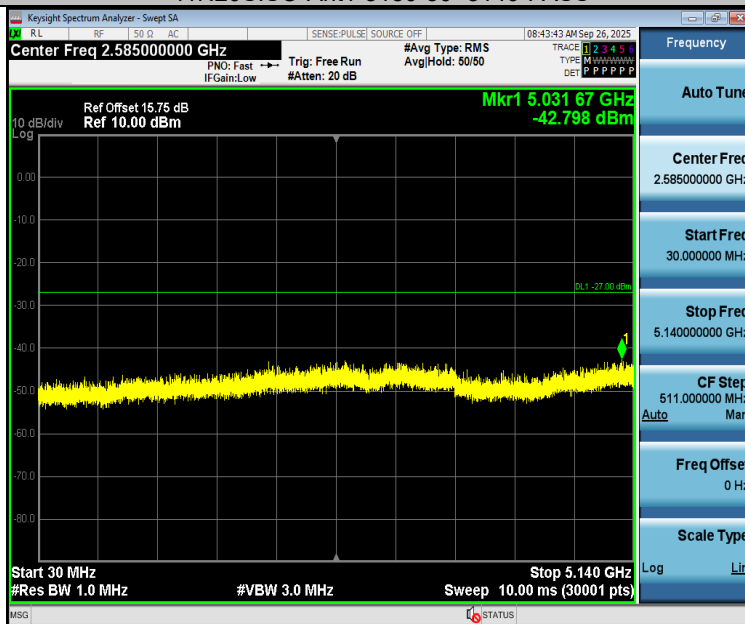
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11A-Ant1-5825-5925~27000-PASS



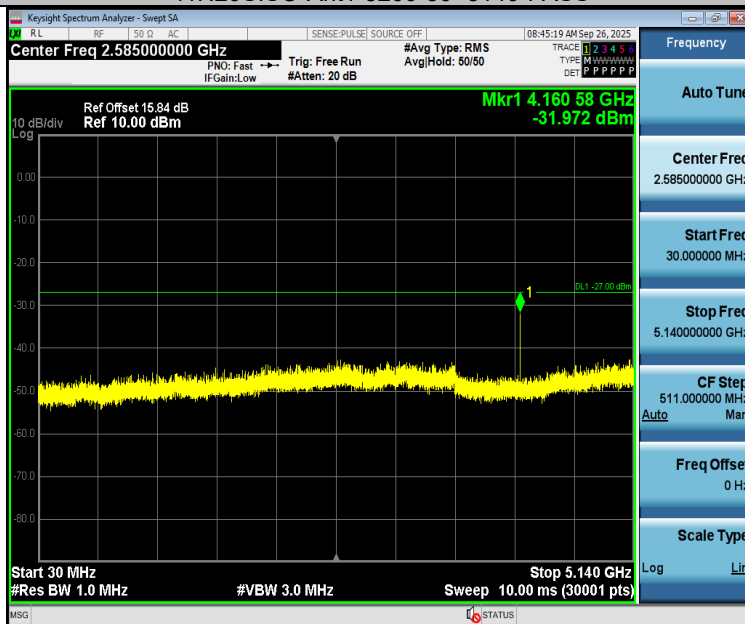
11N20SISO-Ant1-5180-30~5140-PASS



11N20SISO-Ant1-5180-5360~27000-PASS



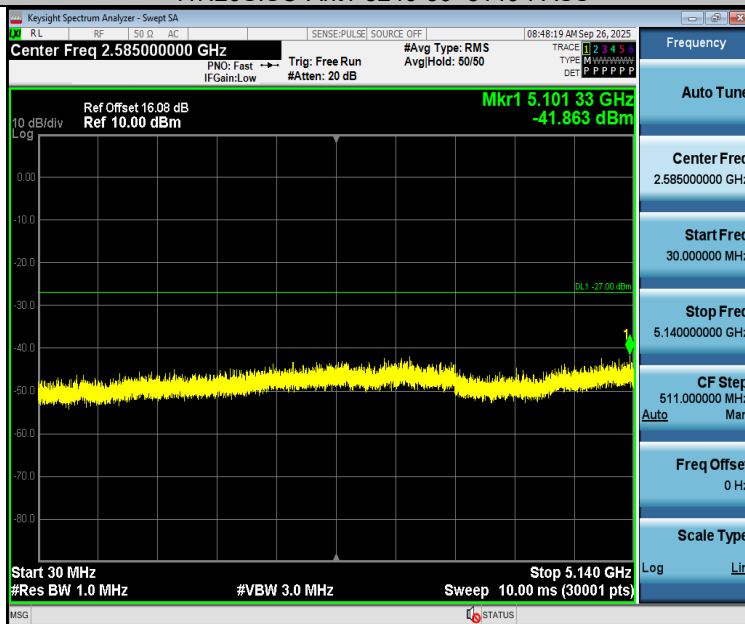
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11N20SISO-Ant1-5200-5360~27000-PASS



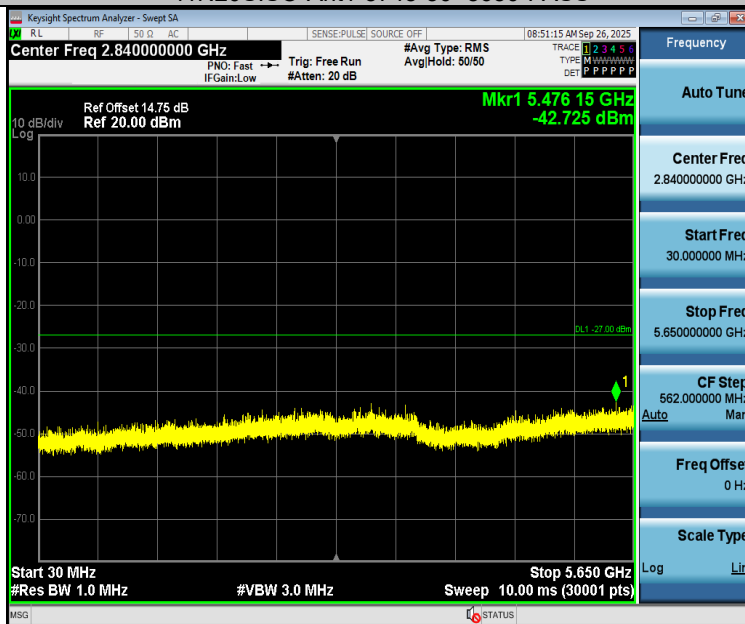
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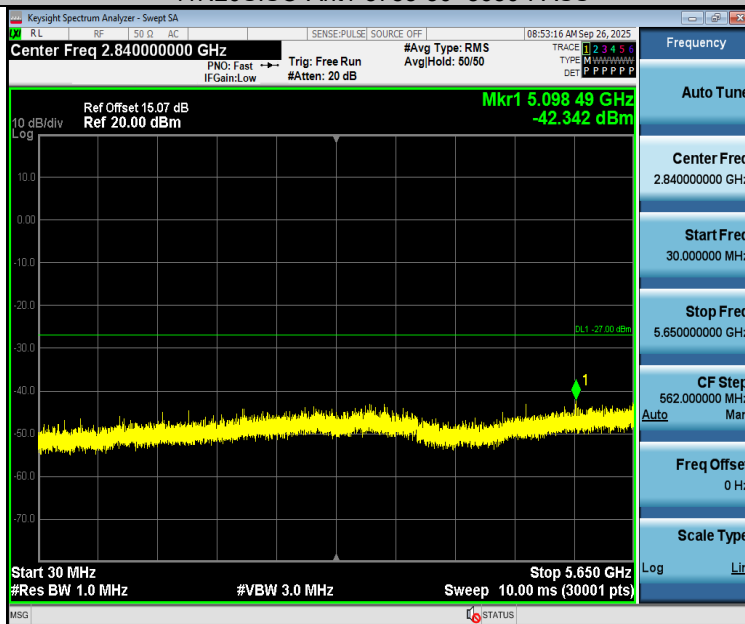
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11N20SISO-Ant1-5745-5925~27000-PASS



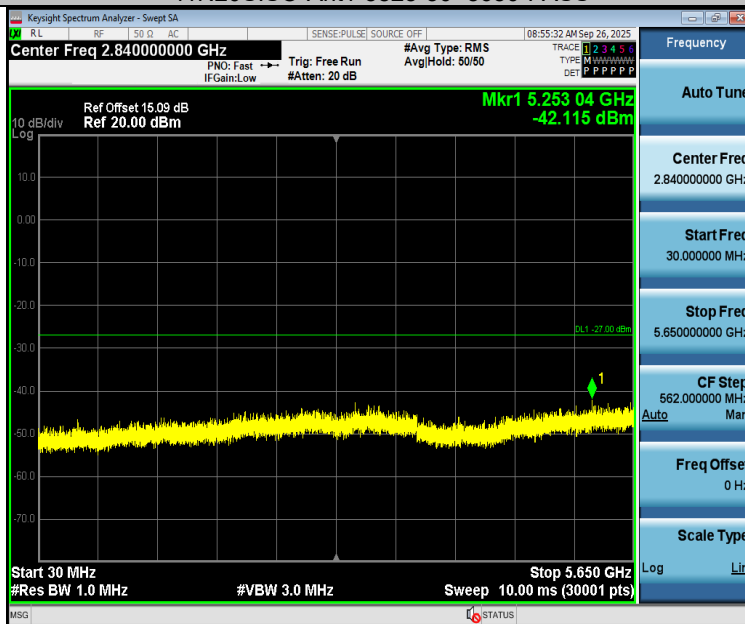
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11N20SISO-Ant1-5785-5925~27000-PASS



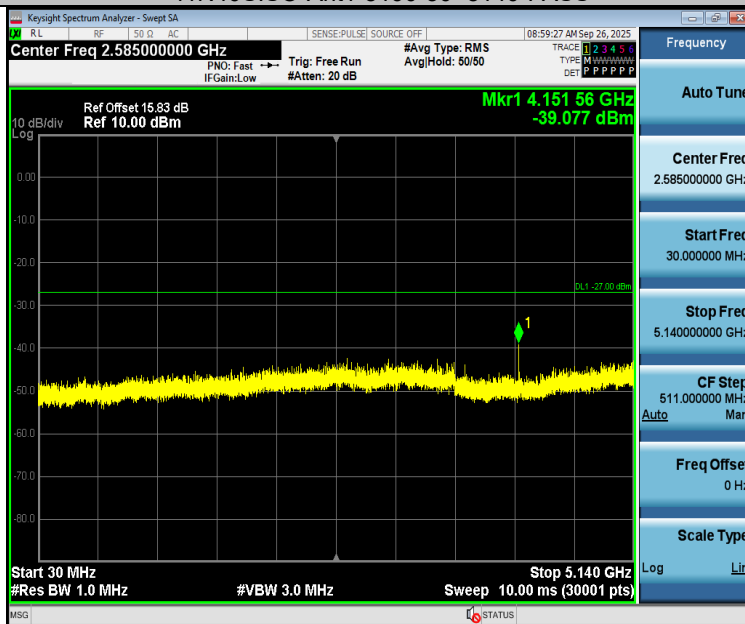
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11N20SISO-Ant1-5825-5925~27000-PASS



11N40SISO-Ant1-5190-30~5140-PASS



11N40SISO-Ant1-5190-5360~27000-PASS



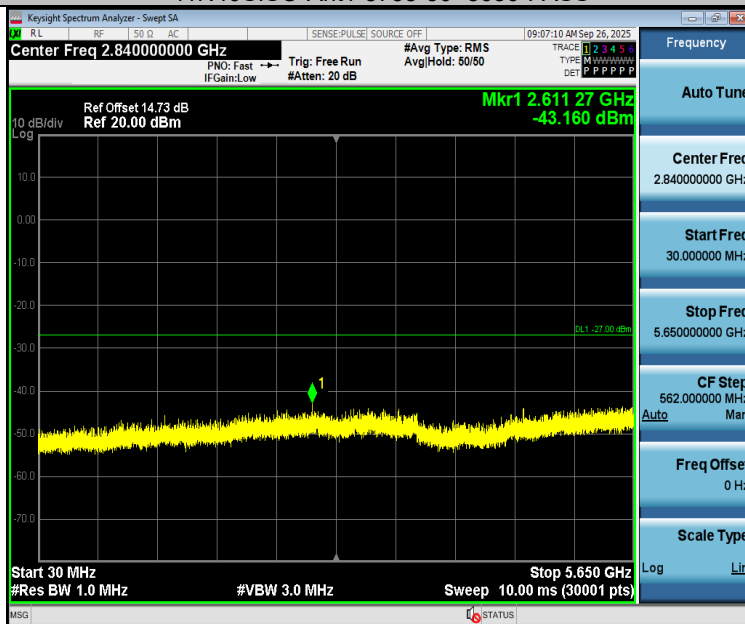
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11N40SISO-Ant1-5230-5360~27000-PASS



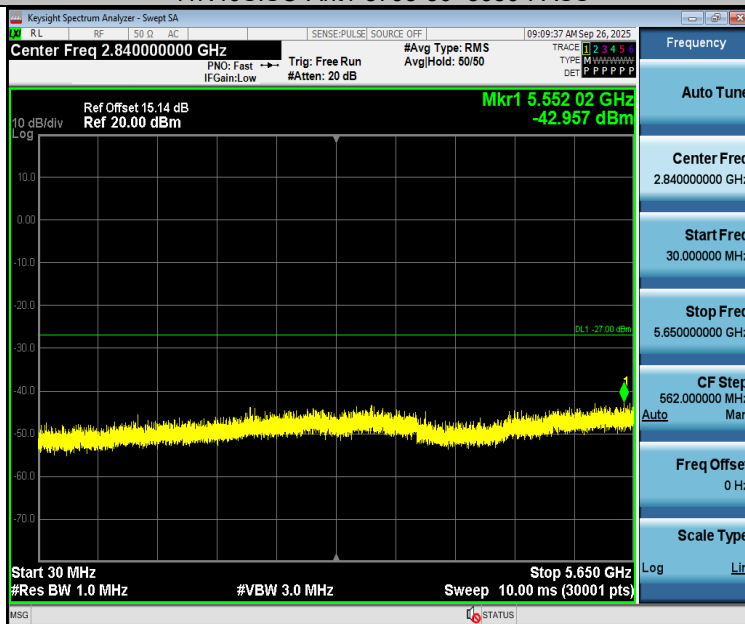
11N40SISO-Ant1-5755-30~5650-PASS



11N40SISO-Ant1-5755-5925~27000-PASS



11N40SISO-Ant1-5795-30~5650-PASS



11N40SISO-Ant1-5795-5925~27000-PASS



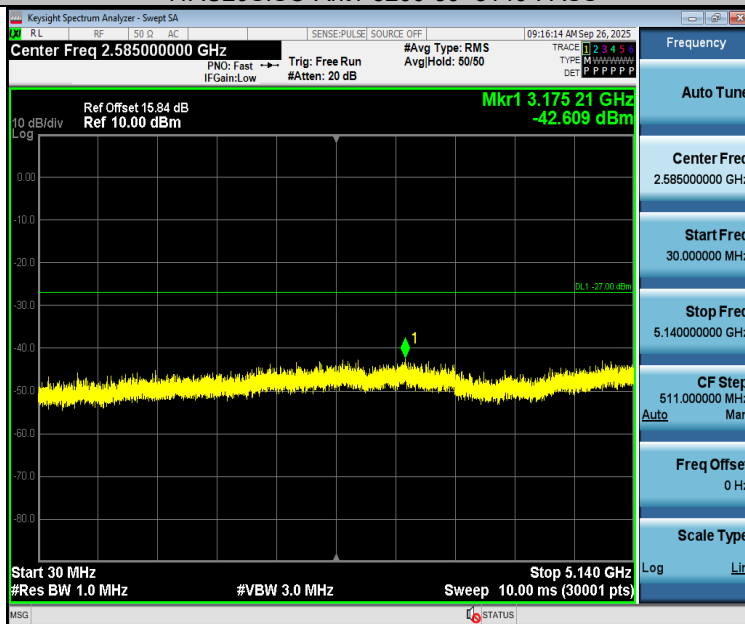
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11AC20SISO-Ant1-5180-5360~27000-PASS



11AC20SISO-Ant1-5200-30~5140-PASS



11AC20SISO-Ant1-5200-5360~27000-PASS



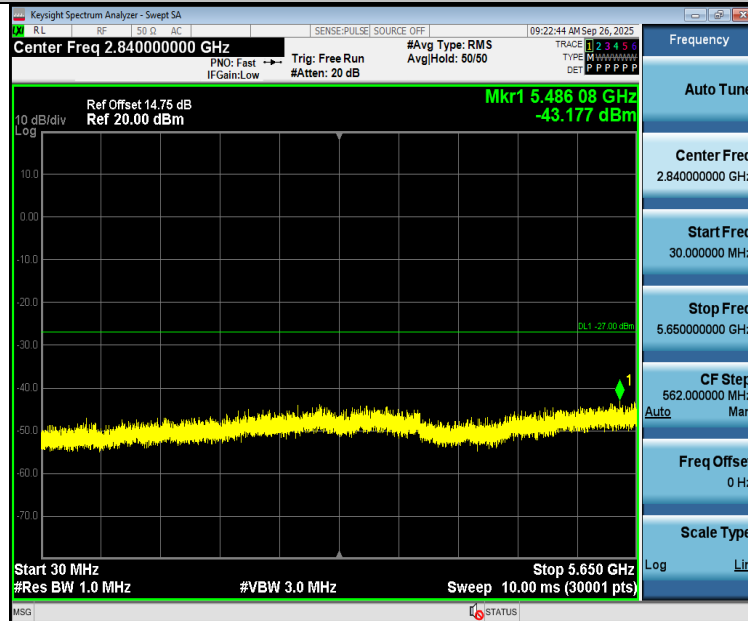
11AC20SISO-Ant1-5240-30~5140-PASS



11AC20SISO-Ant1-5240-5360~27000-PASS



11AC20SISO-Ant1-5745-30~5650-PASS



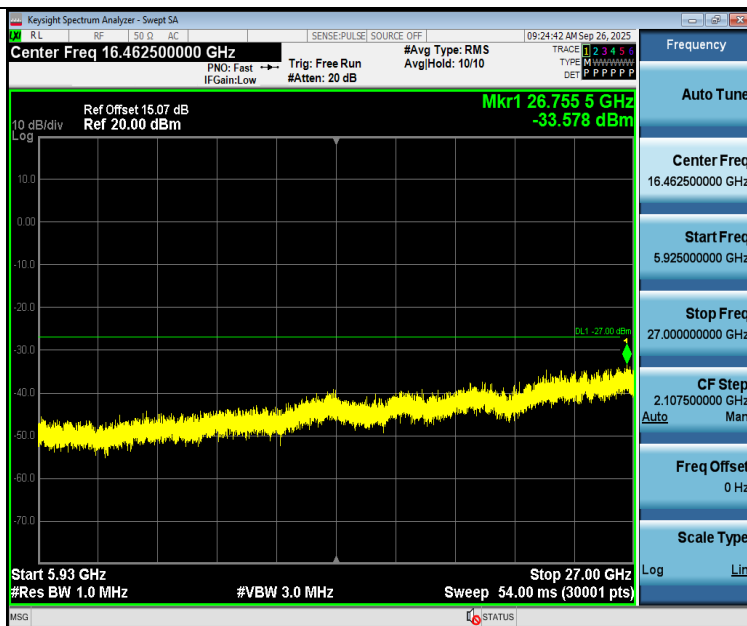
11AC20SISO-Ant1-5745-5925~27000-PASS



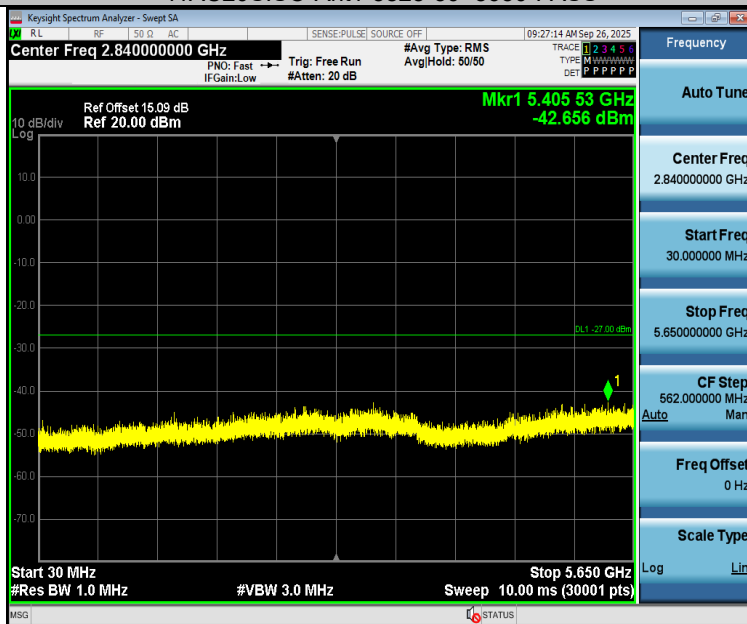
11AC20SISO-Ant1-5785-30~5650-PASS



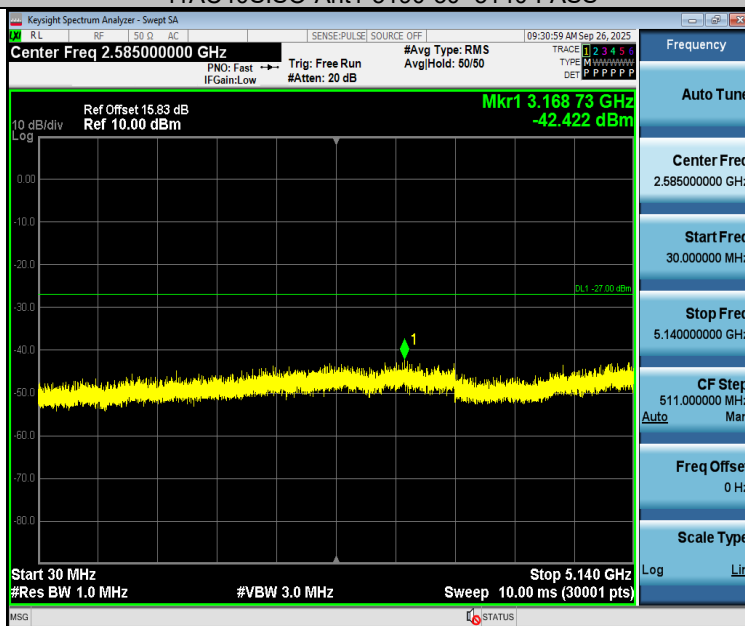
11AC20SISO-Ant1-5785-5925~27000-PASS



11AC20SISO-Ant1-5825-30~5650-PASS



11AC20SISO-Ant1-5825-5925~27000-PASS





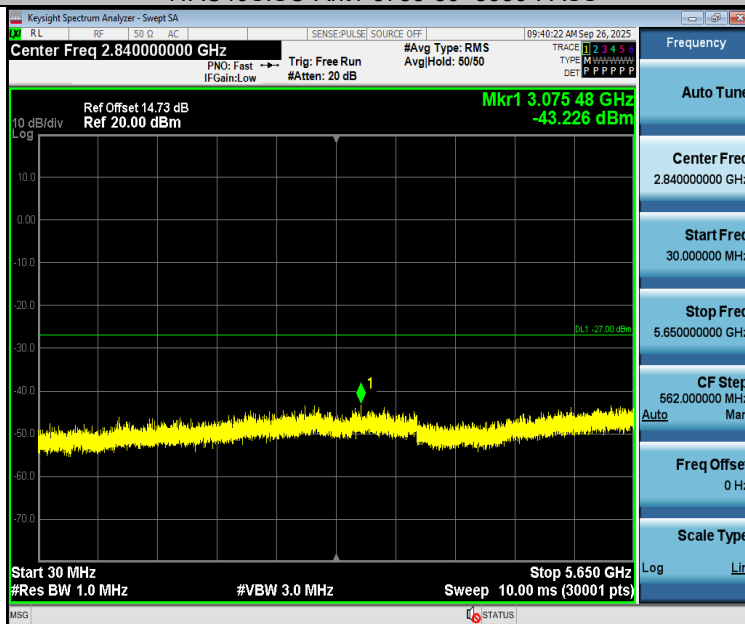
11AC40SISO-Ant1-5230-30~5140-PASS



11AC40SISO-Ant1-5230-5360~27000-PASS



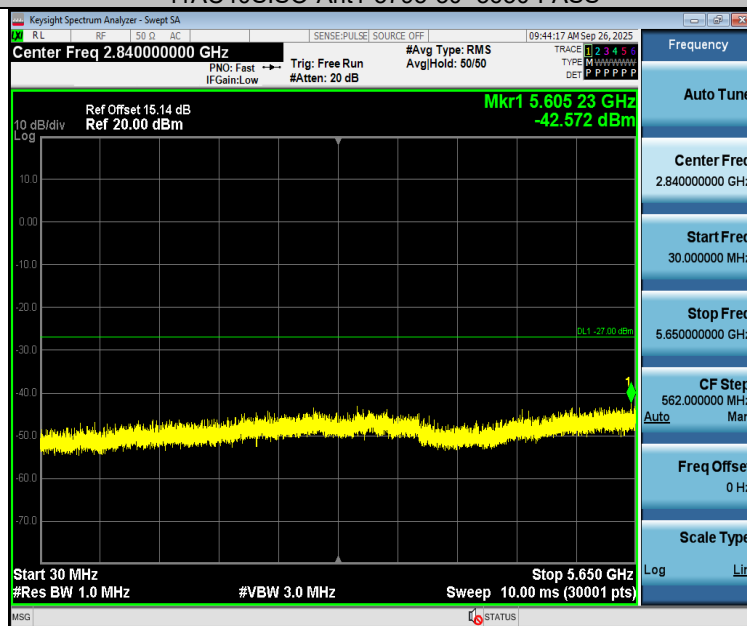
11AC40SISO-Ant1-5755-30~5650-PASS



11AC40SISO-Ant1-5755-5925~27000-PASS



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



11AC40SISO-Ant1-5795-5925~27000-PASS



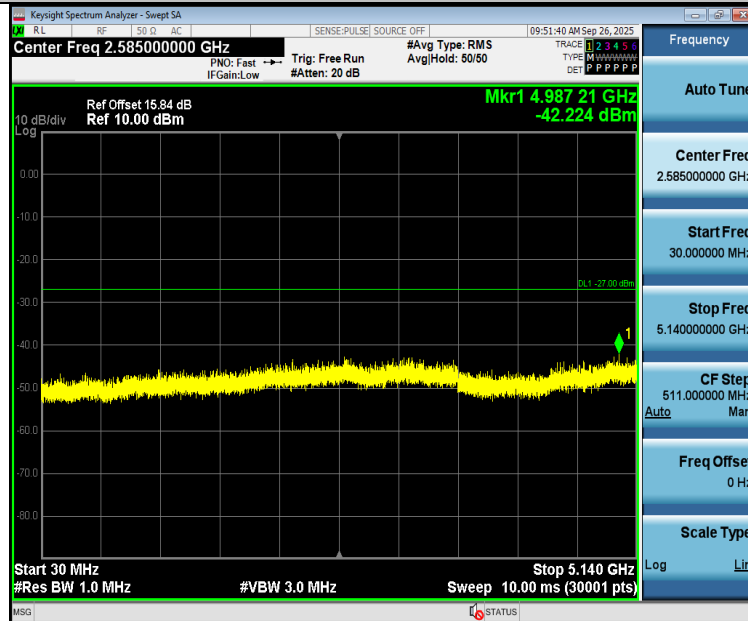
11AX20SISO-Ant1-5180-30~5140-PASS



11AX20SISO-Ant1-5180-5360~27000-PASS



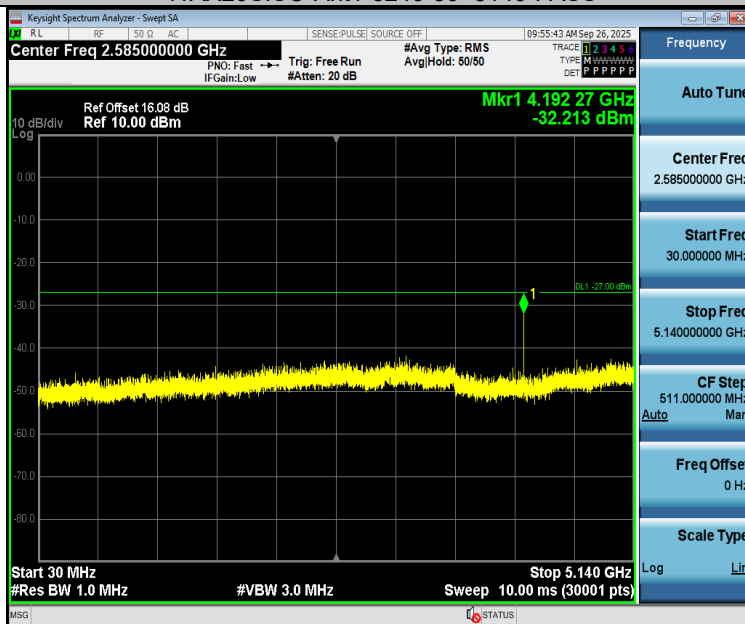
11AX20SISO-Ant1-5200-30~5140-PASS



11AX20SISO-Ant1-5200-5360~27000-PASS



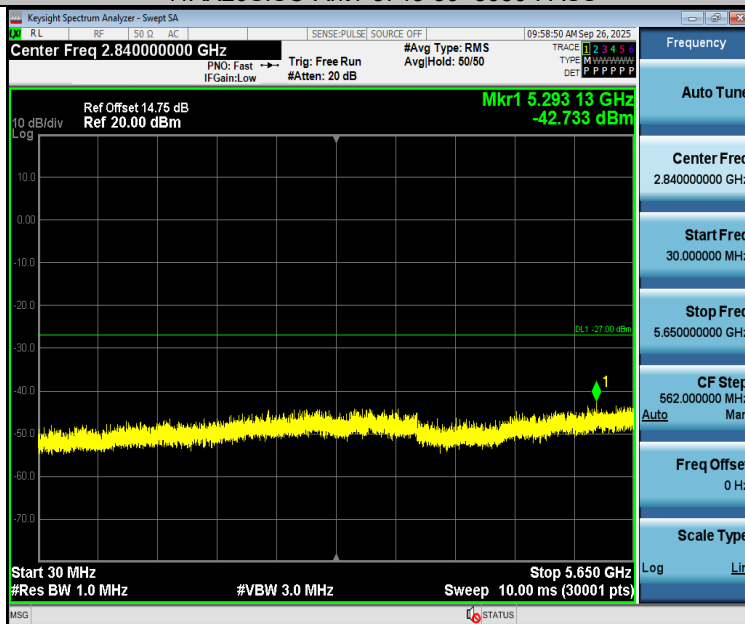
11AX20SISO-Ant1-5240-30~5140-PASS



11AX20SISO-Ant1-5240-5360~27000-PASS



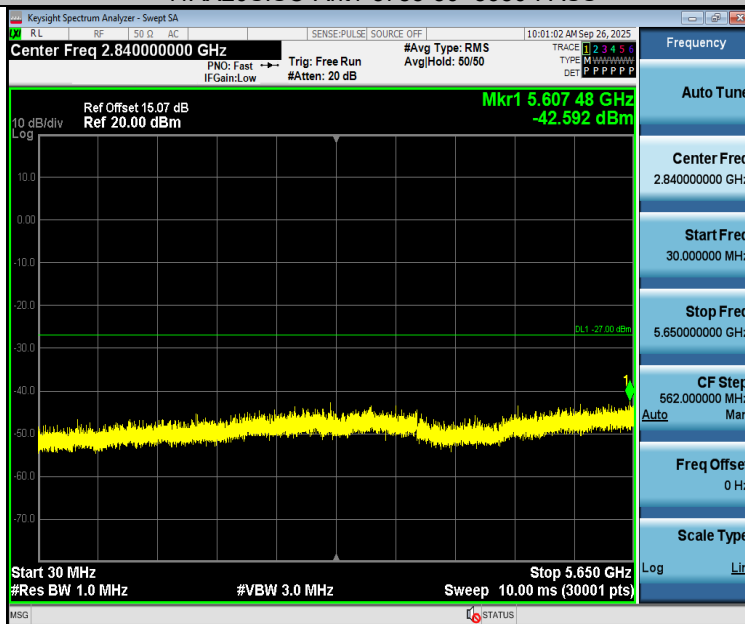
11AX20SISO-Ant1-5745-30~5650-PASS



11AX20SISO-Ant1-5745-5925~27000-PASS



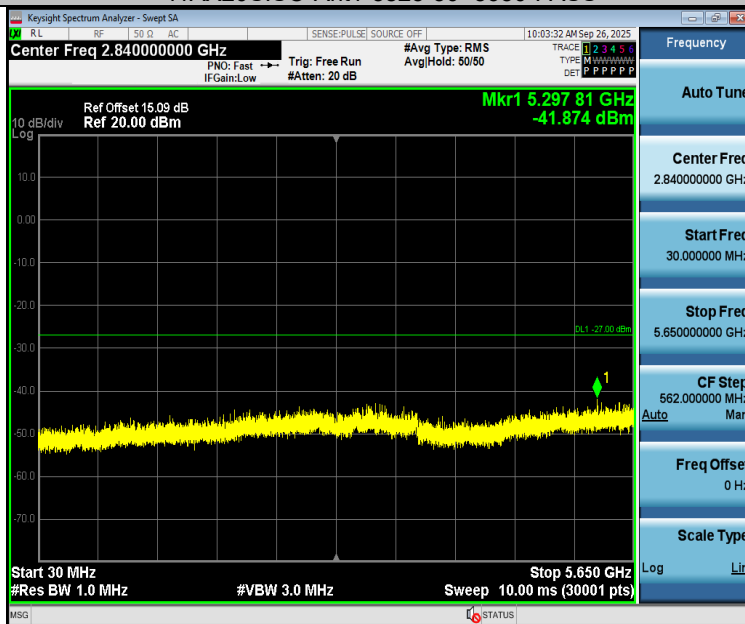
11AX20SISO-Ant1-5785-30~5650-PASS



11AX20SISO-Ant1-5785-5925~27000-PASS



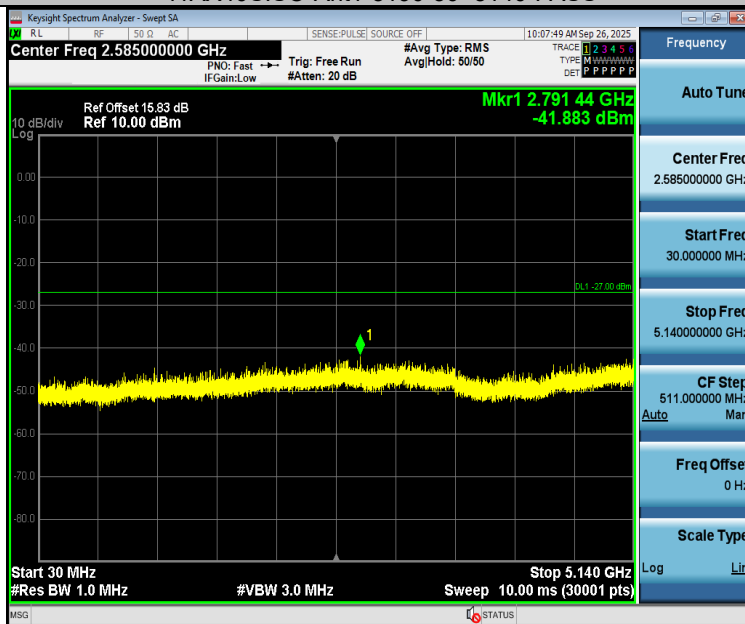
11AX20SISO-Ant1-5825-30~5650-PASS



11AX20SISO-Ant1-5825-5925~27000-PASS



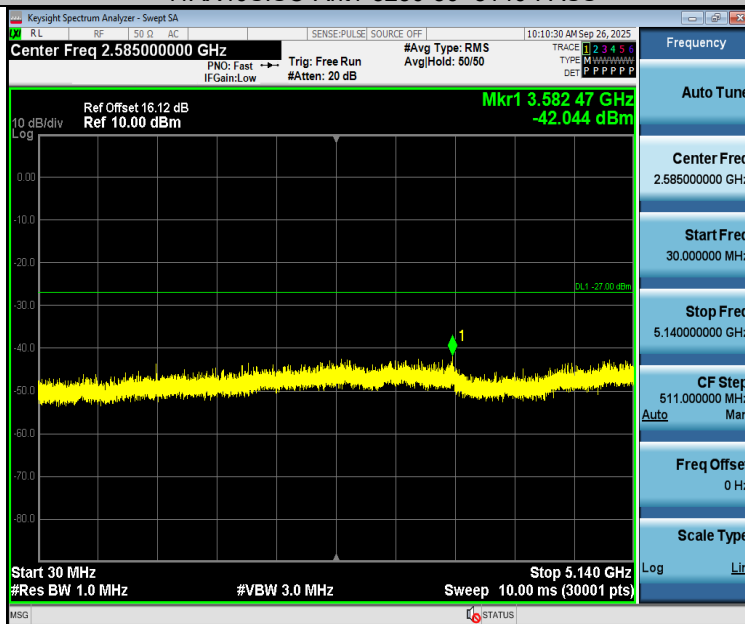
11AX40SISO-Ant1-5190-30~5140-PASS



11AX40SISO-Ant1-5190-5360~27000-PASS



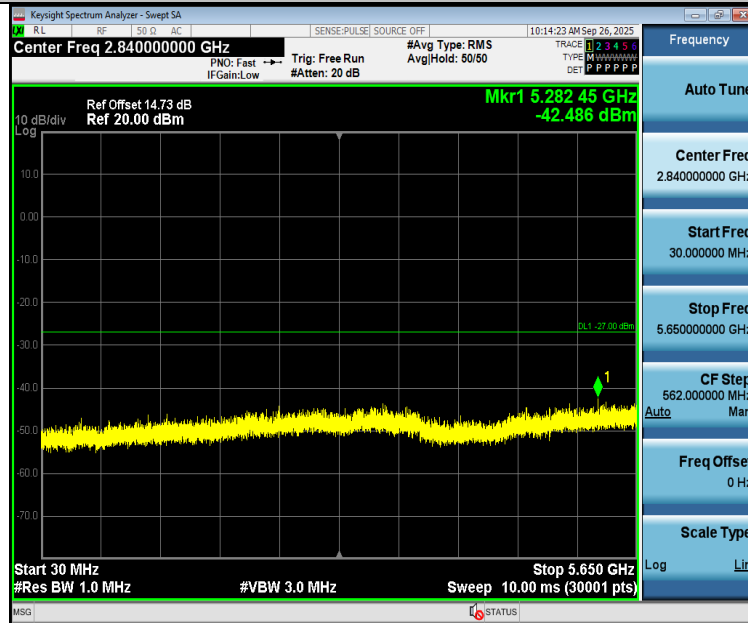
11AX40SISO-Ant1-5230-30~5140-PASS



11AX40SISO-Ant1-5230-5360~27000-PASS



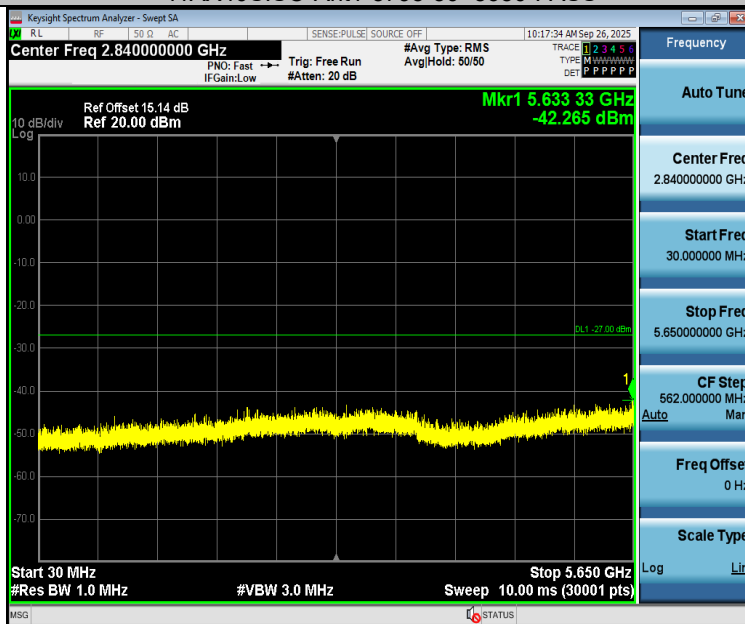
11AX40SISO-Ant1-5755-30~5650-PASS



11AX40SISO-Ant1-5755-5925~27000-PASS



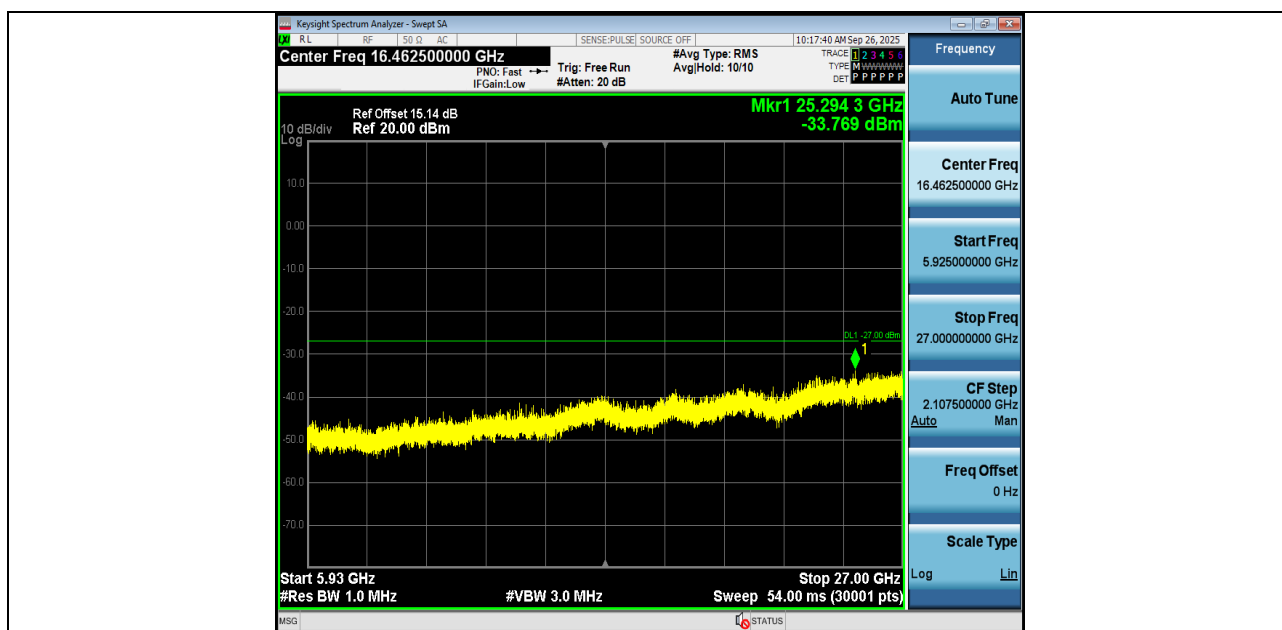
11AX40SISO-Ant1-5795-30~5650-PASS



11AX40SISO-Ant1-5795-5925~27000-PASS



Report No.: PTC25081412901E-FC02



Note: 27~40GHz at least have 20dB margin. No recording in the test report.



6.6 Band edge measurements

Test Result:

TestMode	Antenna	ChName	Frequency[MHz]	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	Low	5180	-39.6	≤-27	PASS
11A	Ant1	High	5240	-40.31	≤-27	PASS
11N20SISO	Ant1	Low	5180	-39.26	≤-27	PASS
11N20SISO	Ant1	High	5240	-39.56	≤-27	PASS
11N40SISO	Ant1	Low	5190	-37.58	≤-27	PASS
11N40SISO	Ant1	High	5230	-39.74	≤-27	PASS
11AC20SISO	Ant1	Low	5180	-39.36	≤-27	PASS
11AC20SISO	Ant1	High	5240	-40	≤-27	PASS
11AC40SISO	Ant1	Low	5190	-37.09	≤-27	PASS
11AC40SISO	Ant1	High	5230	-39.87	≤-27	PASS
11AX20SISO	Ant1	Low	5180	-39.27	≤-27	PASS
11AX20SISO	Ant1	High	5240	-40.11	≤-27	PASS
11AX40SISO	Ant1	Low	5190	-38.86	≤-27	PASS
11AX40SISO	Ant1	High	5230	-39.48	≤-27	PASS

TestMode	Antenna	ChName	Frequency[M Hz]	FreqRange [MHz]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	Low	5745	5720~5725	-39.34	≤25.26	PASS
11A	Ant1	Low	5745	5700~5720	-40.24	≤15.59	PASS
11A	Ant1	Low	5745	5650~5700	-41.06	≤5.30	PASS
11A	Ant1	Low	5745	5760~5650	-41.66	≤-27	PASS
11A	Ant1	High	5825	5850~5855	-42.31	≤21.33	PASS
11A	Ant1	High	5825	5855~5875	-41.34	≤12.06	PASS
11A	Ant1	High	5825	5875~5925	-41.41	≤-12.47	PASS
11A	Ant1	High	5825	5925~5935	-41.28	≤-27	PASS
11N20SIS O	Ant1	Low	5745	5720~5725	-38.47	≤20.54	PASS
11N20SIS O	Ant1	Low	5745	5700~5720	-41.05	≤15.11	PASS
11N20SIS O	Ant1	Low	5745	5650~5700	-40.67	≤-9.34	PASS
11N20SIS O	Ant1	Low	5745	5760~5650	-42.32	≤-27	PASS
11N20SIS O	Ant1	High	5825	5850~5855	-41.32	≤18.26	PASS
11N20SIS O	Ant1	High	5825	5855~5875	-40.25	≤11.42	PASS
11N20SIS O	Ant1	High	5825	5875~5925	-41.05	≤9.71	PASS
11N20SIS O	Ant1	High	5825	5925~5935	-41.93	≤-27	PASS
11N40SIS O	Ant1	Low	5755	5720~5725	-39.83	≤26.82	PASS
11N40SIS O	Ant1	Low	5755	5700~5720	-38.95	≤14.90	PASS
11N40SIS O	Ant1	Low	5755	5650~5700	-41.44	≤-9.12	PASS
11N40SIS O	Ant1	Low	5755	5780~5650	-42.59	≤-27	PASS



11N40SIS O	Ant1	High	5795	5850~5855	-41.95	≤25.81	PASS
11N40SIS O	Ant1	High	5795	5855~5875	-41.71	≤11.47	PASS
11N40SIS O	Ant1	High	5795	5875~5925	-41.78	≤-8.00	PASS
11N40SIS O	Ant1	High	5795	5925~5935	-41.93	≤-27	PASS
11AC20SIS O	Ant1	Low	5745	5720~5725	-37.8	≤26.30	PASS
11AC20SIS O	Ant1	Low	5745	5700~5720	-39.95	≤12.15	PASS
11AC20SIS O	Ant1	Low	5745	5650~5700	-41.56	≤-26.19	PASS
11AC20SIS O	Ant1	Low	5745	5760~5650	-41.94	≤-27	PASS
11AC20SIS O	Ant1	High	5825	5850~5855	-41.42	≤20.72	PASS
11AC20SIS O	Ant1	High	5825	5855~5875	-41.17	≤15.58	PASS
11AC20SIS O	Ant1	High	5825	5875~5925	-41.54	≤0.22	PASS
11AC20SIS O	Ant1	High	5825	5925~5935	-41.57	≤-27	PASS
11AC40SIS O	Ant1	Low	5755	5720~5725	-37.56	≤20.35	PASS
11AC40SIS O	Ant1	Low	5755	5700~5720	-38.33	≤15.50	PASS
11AC40SIS O	Ant1	Low	5755	5650~5700	-41.01	≤-7.82	PASS
11AC40SIS O	Ant1	Low	5755	5780~5650	-41.68	≤-27	PASS
11AC40SIS O	Ant1	High	5795	5850~5855	-41.48	≤16.79	PASS
11AC40SIS O	Ant1	High	5795	5855~5875	-41.12	≤12.95	PASS
11AC40SIS O	Ant1	High	5795	5875~5925	-41.45	≤-2.62	PASS
11AC40SIS O	Ant1	High	5795	5925~5935	-41.89	≤-27	PASS
11AX20SIS O	Ant1	Low	5745	5720~5725	-35.84	≤26.04	PASS
11AX20SIS O	Ant1	Low	5745	5700~5720	-37.95	≤14.92	PASS
11AX20SIS O	Ant1	Low	5745	5650~5700	-41.49	≤-7.55	PASS
11AX20SIS O	Ant1	Low	5745	5760~5650	-42.69	≤-27	PASS
11AX20SIS O	Ant1	High	5825	5850~5855	-40.05	≤16.72	PASS
11AX20SIS O	Ant1	High	5825	5855~5875	-41.36	≤14.48	PASS
11AX20SIS O	Ant1	High	5825	5875~5925	-41.1	≤-11.67	PASS
11AX20SIS O	Ant1	High	5825	5925~5935	-41.98	≤-27	PASS
11AX40SIS	Ant1	Low	5755	5720~5725	-39.04	≤23.43	PASS

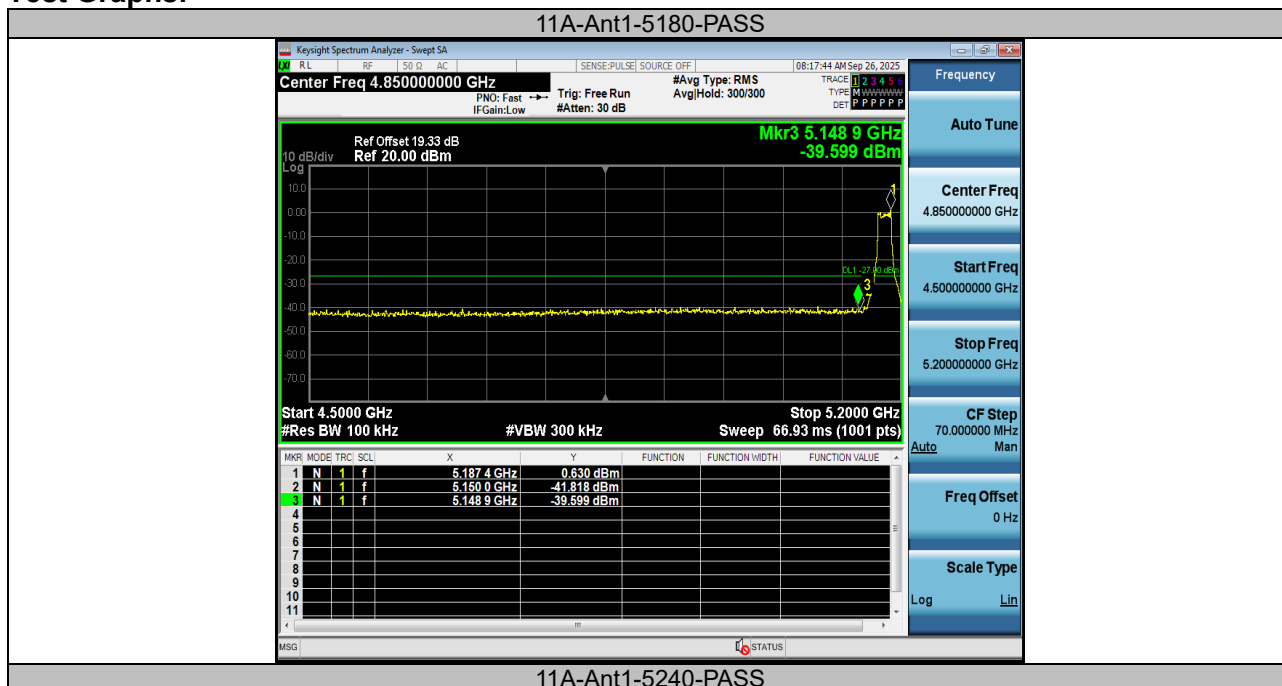


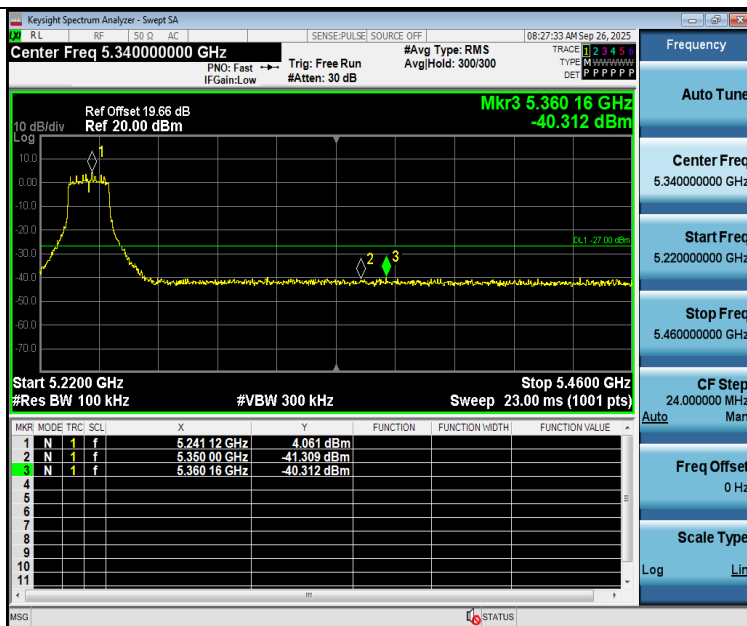
O							
11AX40SIS	Ant1	Low	5755	5700~5720	-38.45	≤14.90	PASS
O							
11AX40SIS	Ant1	Low	5755	5650~5700	-41.24	≤5.96	PASS
O							
11AX40SIS	Ant1	Low	5755	5780~5650	-41.98	≤-27	PASS
O							
11AX40SIS	Ant1	High	5795	5850~5855	-41.65	≤22.05	PASS
O							
11AX40SIS	Ant1	High	5795	5855~5875	-40.75	≤13.13	PASS
O							
11AX40SIS	Ant1	High	5795	5875~5925	-40.97	≤1.16	PASS
O							
11AX40SIS	Ant1	High	5795	5925~5935	-42.29	≤-27	PASS

Note: 1.27~40GHz at least have 20dB margin. No recording in the test report.

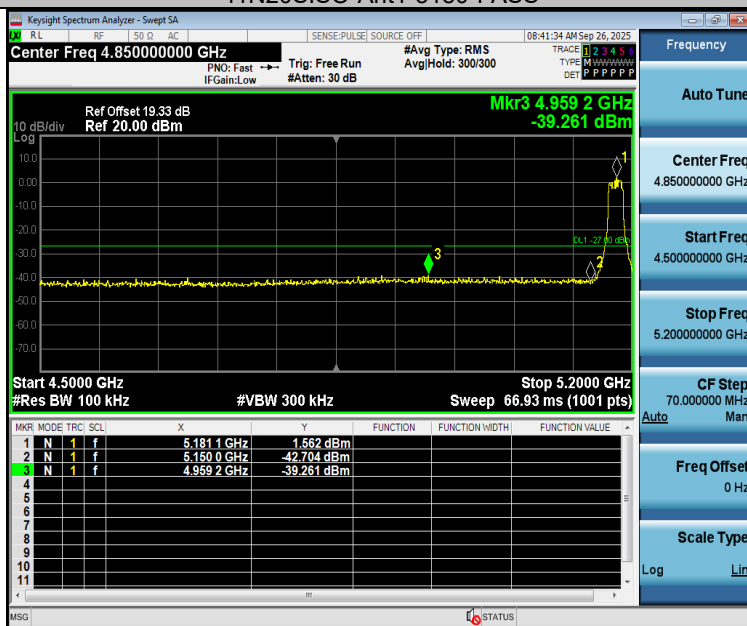
2. The Max. Level has been corrected by the cable loss and antenna gain.

Test Graphs:

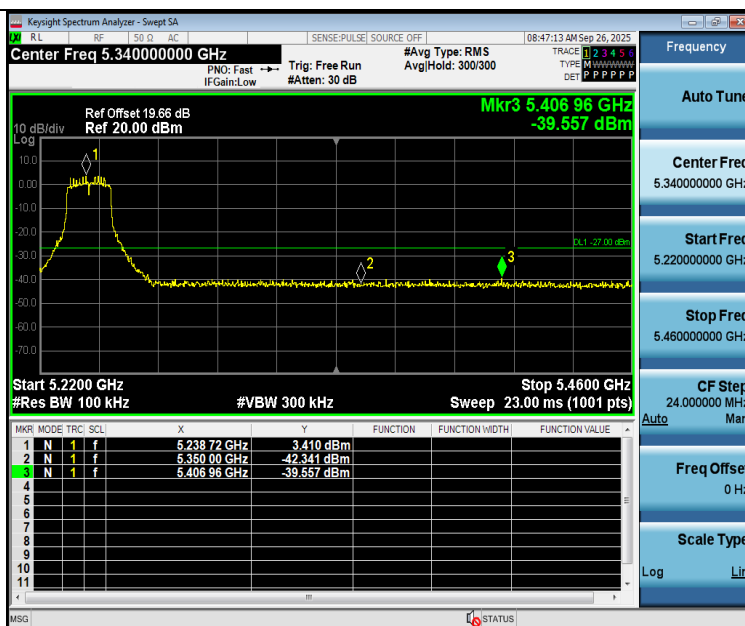




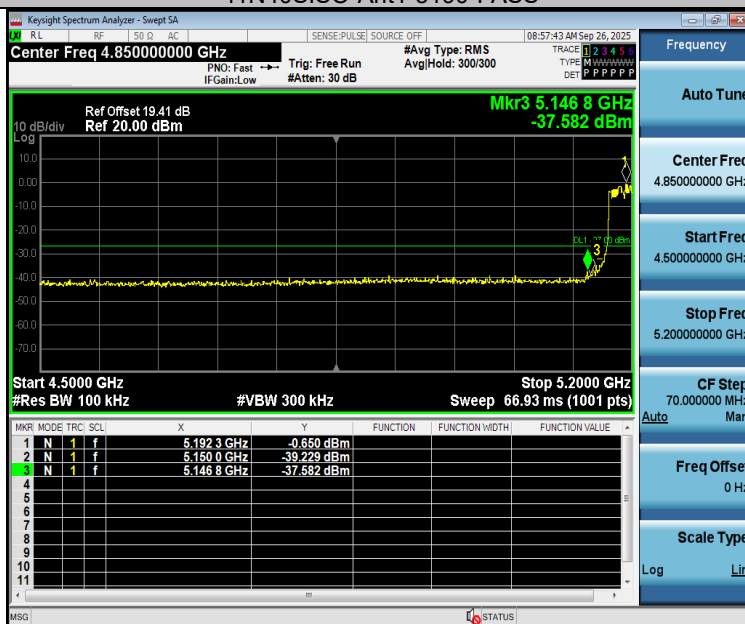
11N20SISO-Ant1-5180-PASS



11N20SISO-Ant1-5240-PASS



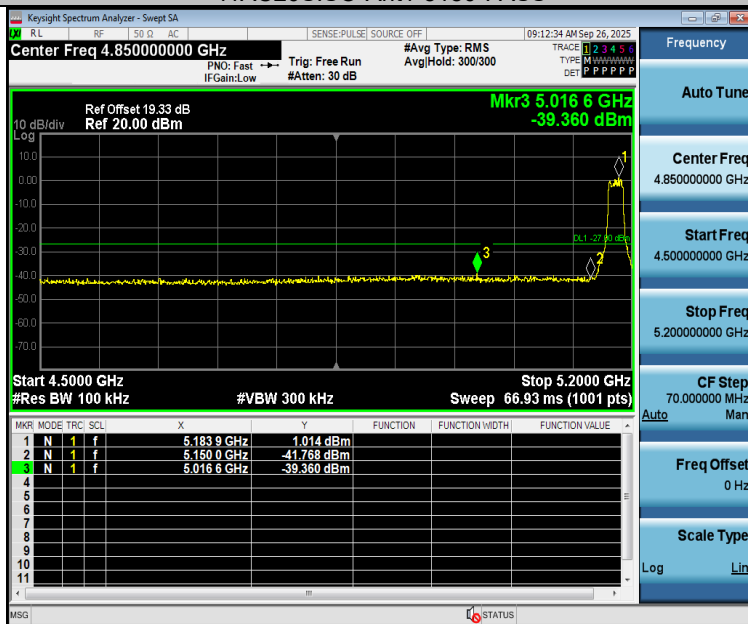
11N40SISO-Ant1-5190-PASS



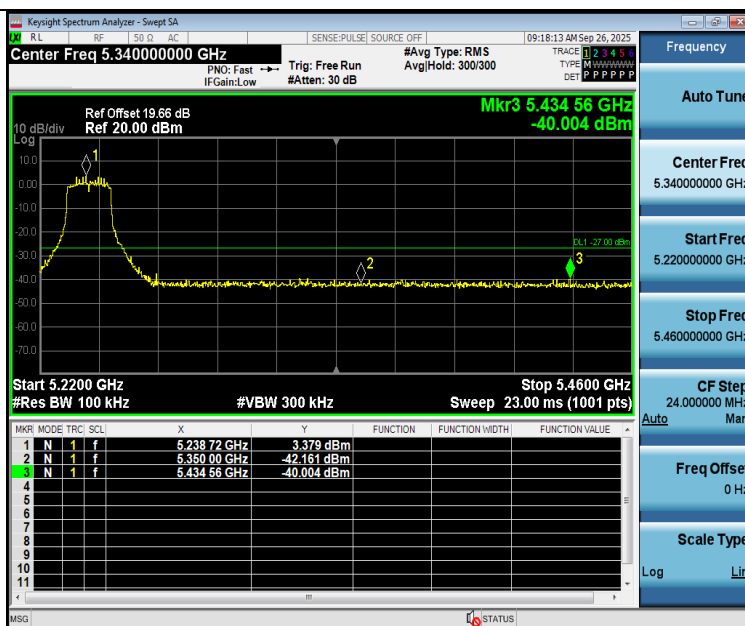
11N40SISO-Ant1-5230-PASS



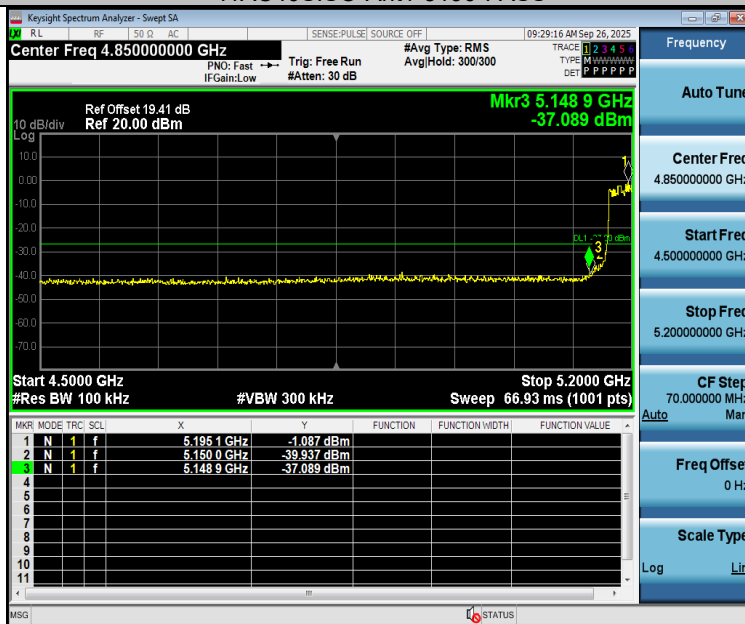
11AC20SISO-Ant1-5180-PASS



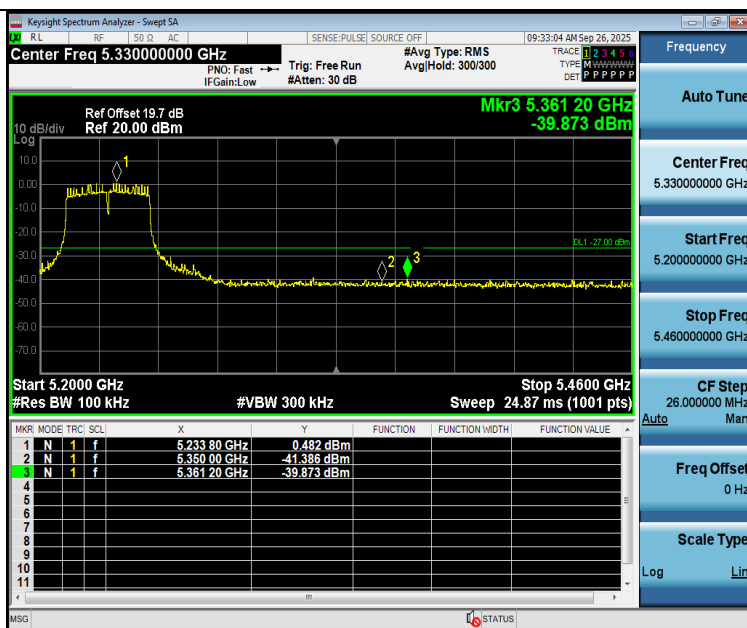
11AC20SISO-Ant1-5240-PASS



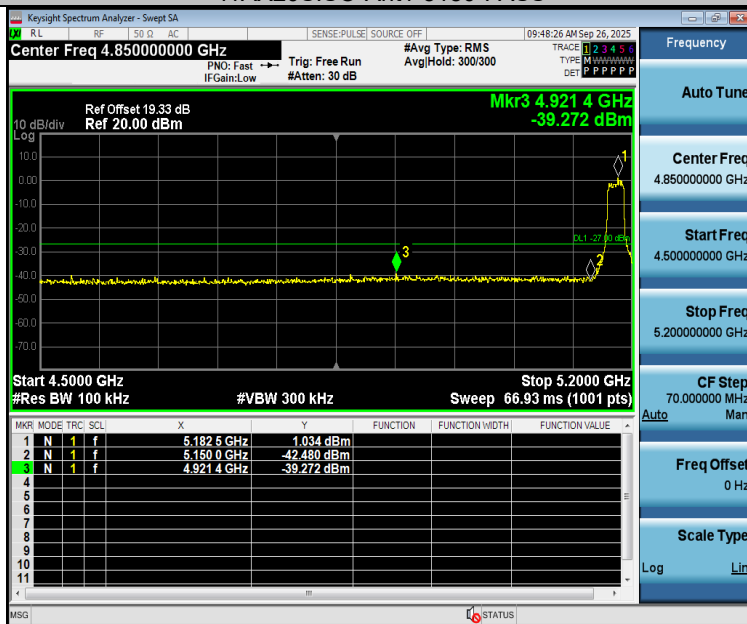
11AC40SISO-Ant1-5190-PASS



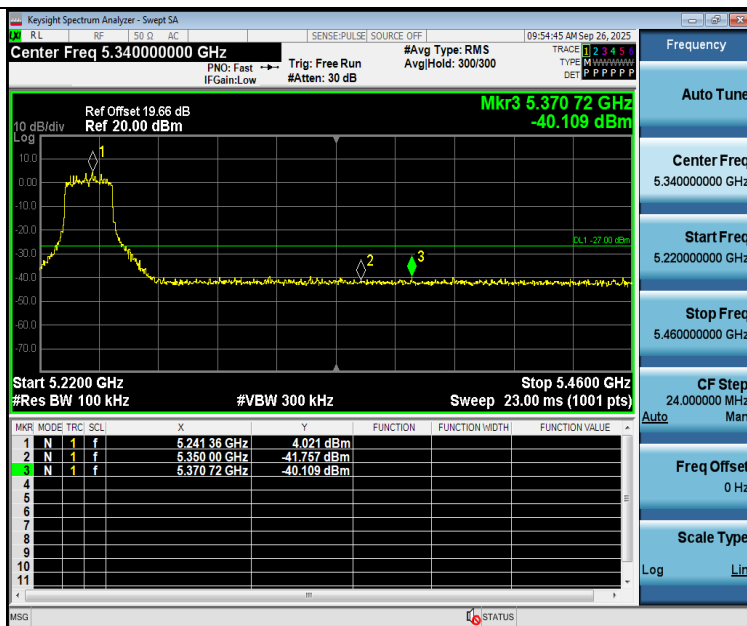
11AC40SISO-Ant1-5230-PASS



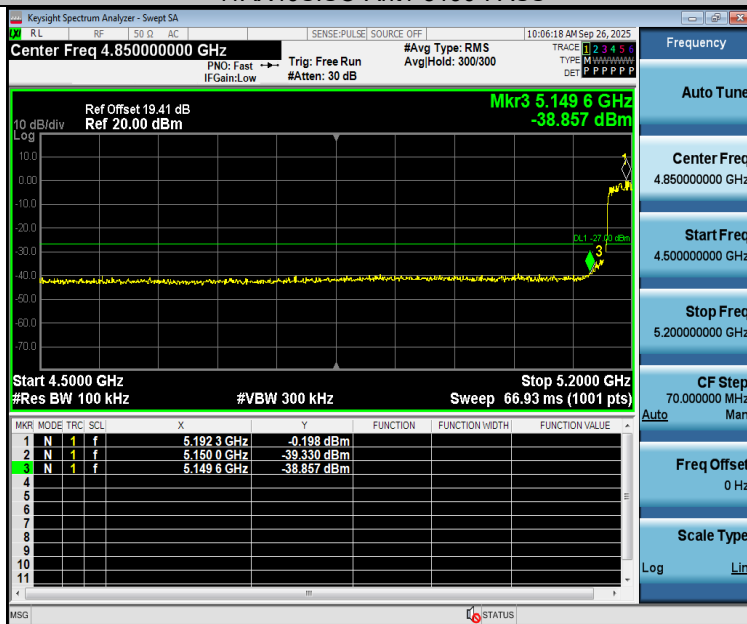
11AX20SISO-Ant1-5180-PASS



11AX20SISO-Ant1-5240-PASS



11AX40SISO-Ant1-5190-PASS



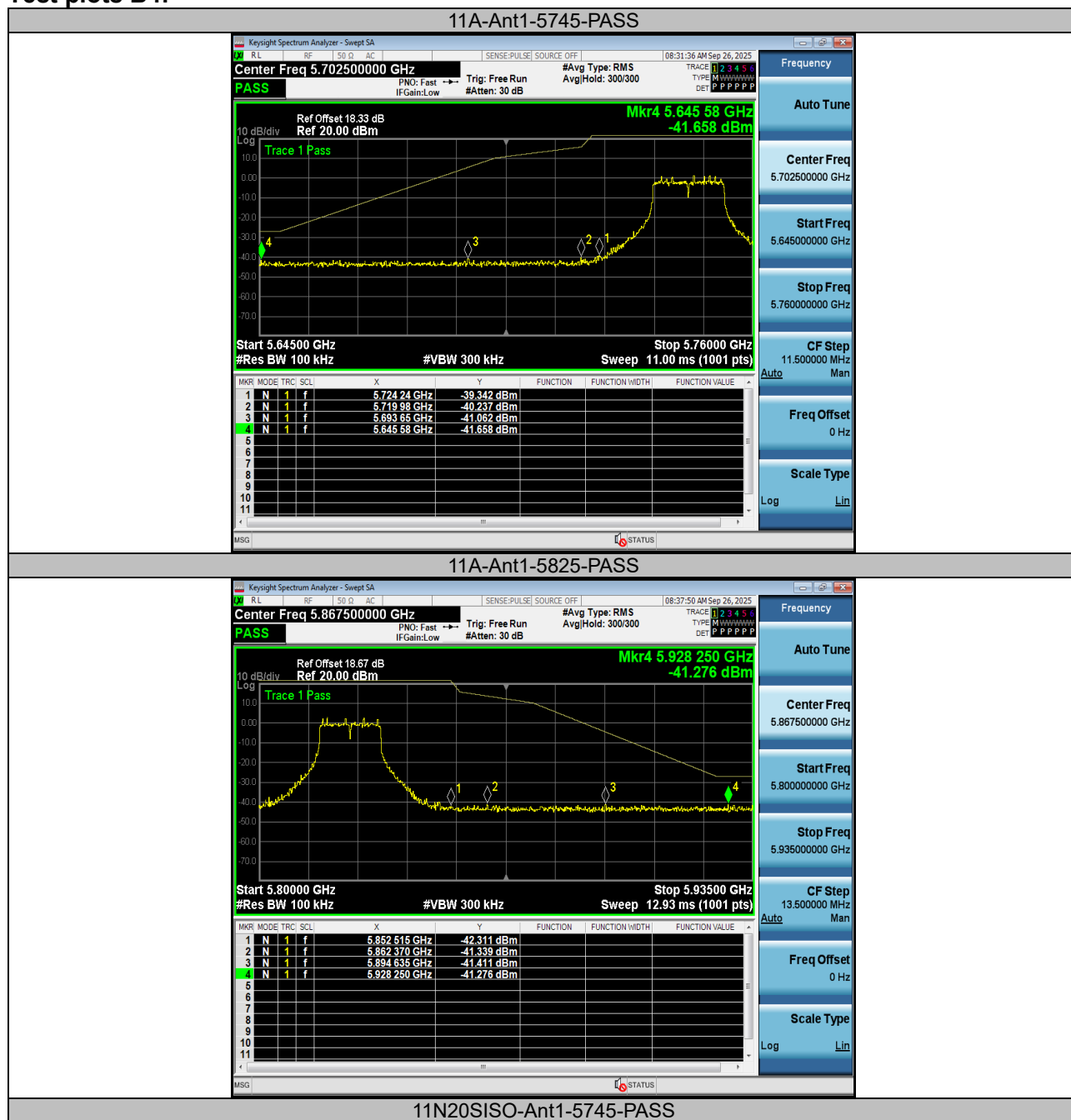
11AX40SISO-Ant1-5230-PASS

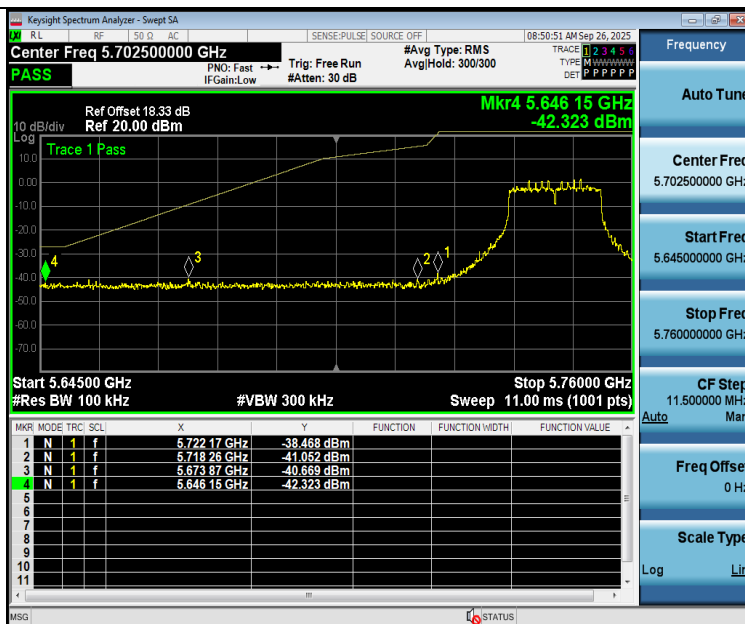


Note: 27~40GHz at least have 20dB margin. No recording in the test report.

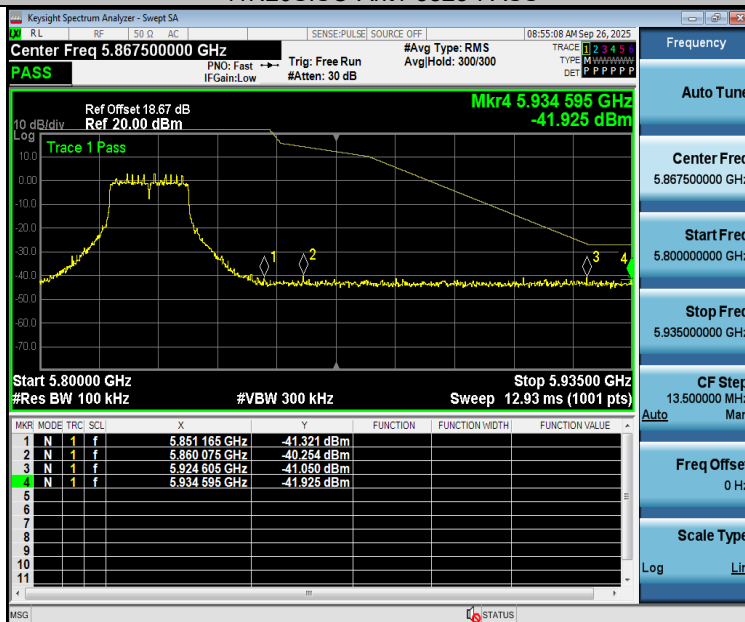


Test plots B4:





11N20SISO-Ant1-5825-PASS



11N40SISO-Ant1-5755-PASS



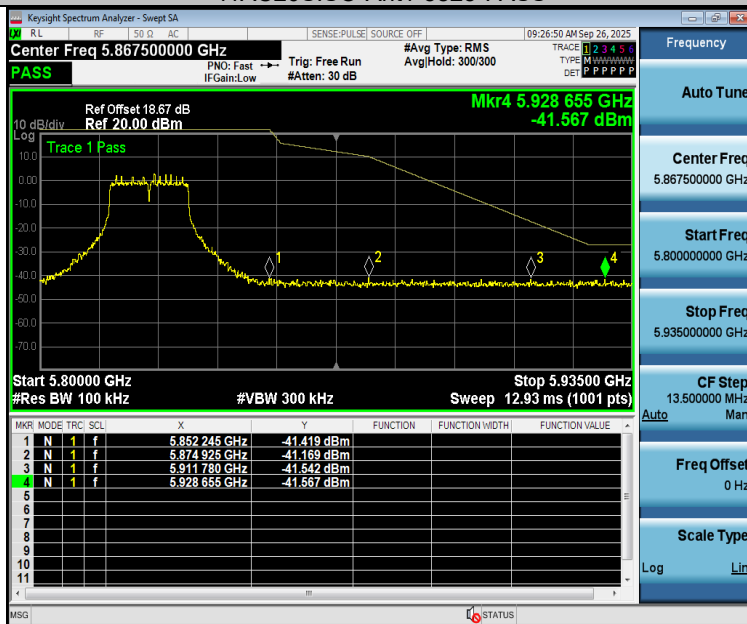
11N40SISO-Ant1-5795-PASS



11AC20SISO-Ant1-5745-PASS



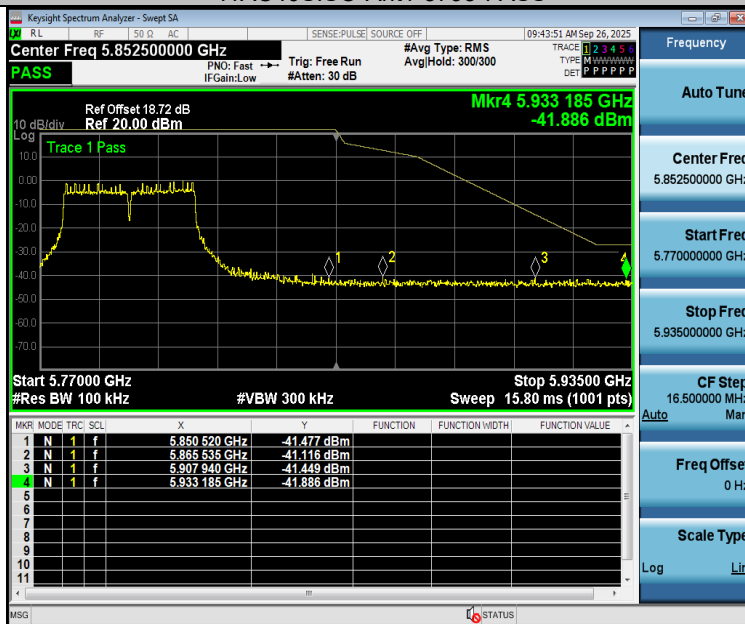
11AC20SISO-Ant1-5825-PASS



11AC40SISO-Ant1-5755-PASS



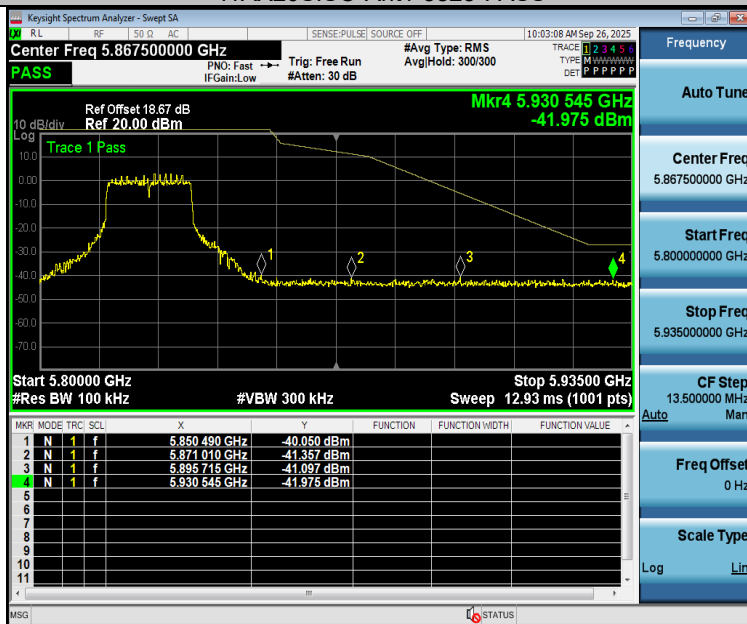
11AC40SISO-Ant1-5795-PASS



11AX20SISO-Ant1-5745-PASS



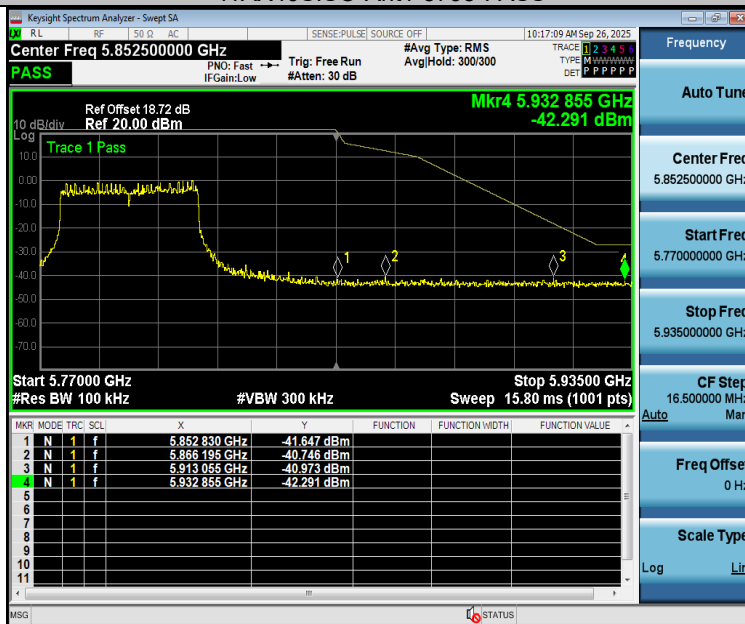
11AX20SISO-Ant1-5825-PASS



11AX40SISO-Ant1-5755-PASS



11AX40SISO-Ant1-5795-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	50.04	6.53	56.57	68.23	11.66	H	Peak
2	5150	40.13	6.53	46.66	54	7.34	H	Average
3	5150	49.54	6.53	56.07	68.23	12.16	V	Peak
4	5150	38.4	6.53	44.93	54	9.07	V	Average

Worst case mode:		802.11a(6Mbps)		Test channel:		48		
NO.	Freq. [MHz]	level [dBμV/m]	Factor [dB]	Emission level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector Type
1	5350	50.09	6.56	56.65	68.23	11.58	H	Peak
2	5350	39.87	6.56	46.43	54	7.57	H	Average
3	5350	49.98	6.56	56.54	68.23	11.69	V	Peak
4	5350	38.34	6.56	44.9	54	9.1	V	Average

Worst case mode:		802.11a(6Mbps)		Test channel:		149		
NO.	Freq. [MHz]	level [dBμV/m]	Factor [dB]	Emission level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector Type
1	5460	38.6	6.58	45.18	68.23	23.05	H	Peak
2	5460	37.91	6.58	44.49	54	9.51	H	Average
3	5460	38.65	6.58	45.23	68.23	23	V	Peak
4	5460	38.44	6.58	45.02	54	8.98	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	49.66	6.64	56.3	68.23	11.93	H	Peak
2	5850	39.71	6.64	46.35	54	7.65	H	Average
3	5850	48.80	6.64	55.44	68.23	12.79	V	Peak
4	5850	37.66	6.64	44.3	54	9.7	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).

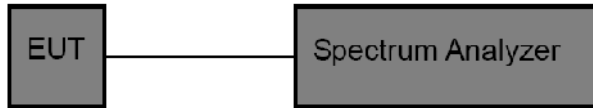
The following procedure shall be used for measuring (99 %) power bandwidth:

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.

26 dB emission bandwidth:

TestMode	Antenna	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	24.760	5167.960	5192.720	---	---
11A	Ant1	5200	25.240	5186.800	5212.040	---	---
11A	Ant1	5240	24.080	5227.200	5251.280	---	---
11A	Ant1	5745	25.080	5733.000	5758.080	---	---
11A	Ant1	5785	24.480	5772.800	5797.280	---	---
11A	Ant1	5825	24.160	5813.000	5837.160	---	---
11N20SISO	Ant1	5180	27.240	5166.720	5193.960	---	---
11N20SISO	Ant1	5200	25.480	5187.320	5212.800	---	---
11N20SISO	Ant1	5240	24.800	5227.920	5252.720	---	---
11N20SISO	Ant1	5745	24.720	5733.000	5757.720	---	---
11N20SISO	Ant1	5785	27.080	5771.680	5798.760	---	---
11N20SISO	Ant1	5825	25.400	5812.480	5837.880	---	---
11N40SISO	Ant1	5190	45.840	5167.600	5213.440	---	---
11N40SISO	Ant1	5230	44.720	5208.720	5253.440	---	---
11N40SISO	Ant1	5755	46.480	5732.120	5778.600	---	---
11N40SISO	Ant1	5795	45.120	5773.400	5818.520	---	---
11AC20SISO	Ant1	5180	25.600	5167.640	5193.240	---	---
11AC20SISO	Ant1	5200	25.640	5187.560	5213.200	---	---
11AC20SISO	Ant1	5240	25.400	5228.120	5253.520	---	---
11AC20SISO	Ant1	5745	26.640	5731.320	5757.960	---	---
11AC20SISO	Ant1	5785	25.640	5772.520	5798.160	---	---
11AC20SISO	Ant1	5825	25.440	5812.240	5837.680	---	---
11AC40SISO	Ant1	5190	46.160	5167.440	5213.600	---	---
11AC40SISO	Ant1	5230	45.200	5207.120	5252.320	---	---
11AC40SISO	Ant1	5755	45.600	5732.040	5777.640	---	---
11AC40SISO	Ant1	5795	45.680	5772.600	5818.280	---	---
11AX20SISO	Ant1	5180	25.560	5167.720	5193.280	---	---
11AX20SISO	Ant1	5200	23.600	5188.440	5212.040	---	---
11AX20SISO	Ant1	5240	25.000	5227.520	5252.520	---	---
11AX20SISO	Ant1	5745	24.640	5733.040	5757.680	---	---
11AX20SISO	Ant1	5785	25.960	5772.800	5798.760	---	---
11AX20SISO	Ant1	5825	25.920	5813.320	5839.240	---	---
11AX40SISO	Ant1	5190	42.880	5168.320	5211.200	---	---



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11AX40SISO	Ant1	5230	44.080	5208.480	5252.560	---	---
11AX40SISO	Ant1	5755	44.960	5733.320	5778.280	---	---
11AX40SISO	Ant1	5795	45.680	5773.560	5819.240	---	---



minimum 6 dB bandwidth:

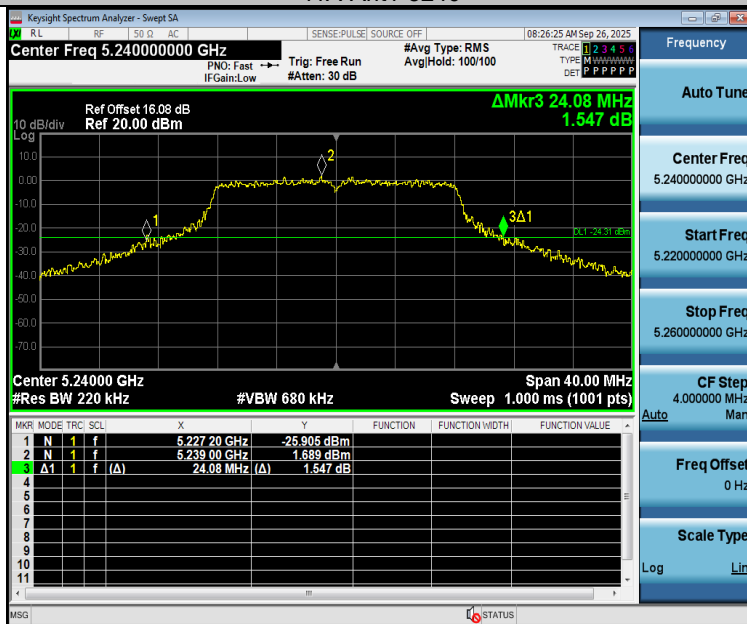
TestMode	Antenna	Frequency[MHz]	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	16.320	5736.800	5753.120	0.5	PASS
11A	Ant1	5785	16.360	5776.800	5793.160	0.5	PASS
11A	Ant1	5825	16.360	5816.800	5833.160	0.5	PASS
11N20SISO	Ant1	5745	17.600	5736.200	5753.800	0.5	PASS
11N20SISO	Ant1	5785	17.640	5776.160	5793.800	0.5	PASS
11N20SISO	Ant1	5825	17.720	5816.080	5833.800	0.5	PASS
11N40SISO	Ant1	5755	36.320	5736.840	5773.160	0.5	PASS
11N40SISO	Ant1	5795	36.320	5776.840	5813.160	0.5	PASS
11AC20SISO	Ant1	5745	17.560	5736.200	5753.760	0.5	PASS
11AC20SISO	Ant1	5785	17.600	5776.160	5793.760	0.5	PASS
11AC20SISO	Ant1	5825	17.600	5816.160	5833.760	0.5	PASS
11AC40SISO	Ant1	5755	36.320	5736.840	5773.160	0.5	PASS
11AC40SISO	Ant1	5795	36.320	5776.840	5813.160	0.5	PASS
11AX20SISO	Ant1	5745	19.000	5735.440	5754.440	0.5	PASS
11AX20SISO	Ant1	5785	19.000	5775.480	5794.480	0.5	PASS
11AX20SISO	Ant1	5825	19.000	5815.480	5834.480	0.5	PASS
11AX40SISO	Ant1	5755	37.920	5736.120	5774.040	0.5	PASS
11AX40SISO	Ant1	5795	37.680	5776.200	5813.880	0.5	PASS

Test Graphs:

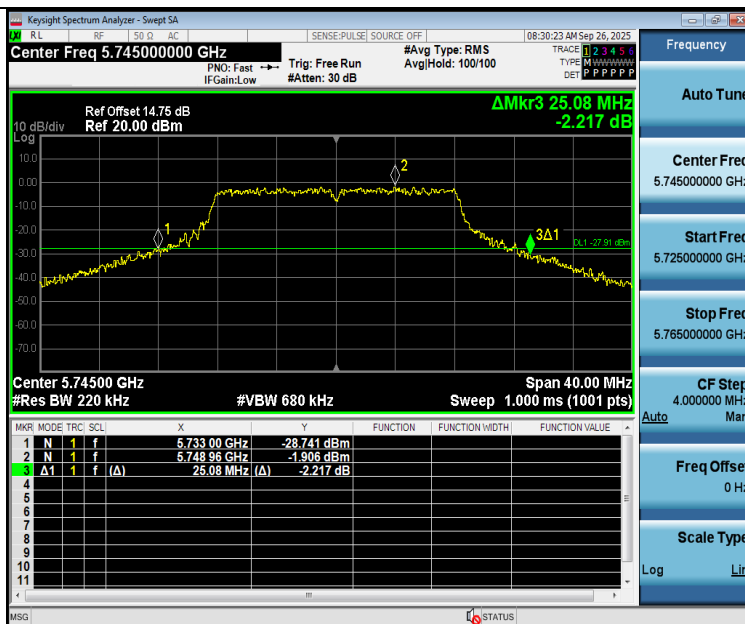




11A-Ant1-5240



11A-Ant1-5745



11A-Ant1-5785



11A-Ant1-5825