

APPENDIX B: TEST RESULTS OF BLUETOOTH (LOW ENERGY)

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APPENDIX B.1: CONDUCTED POWER SPECTRAL DENSITY

Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_125K	Ant1	2402	3.76	≤8.00	PASS
		2440	3.88	≤8.00	PASS
		2480	3.75	≤8.00	PASS
BLE_1M	Ant1	2402	-7.11	≤8.00	PASS
		2440	-7	≤8.00	PASS
		2480	-7.09	≤8.00	PASS
BLE_2M	Ant1	2402	-8.87	≤8.00	PASS
		2440	-8.47	≤8.00	PASS
		2480	-8.53	≤8.00	PASS
BLE_500K	Ant1	2402	3.59	≤8.00	PASS
		2440	3.79	≤8.00	PASS
		2480	3.66	≤8.00	PASS

Test Graphs



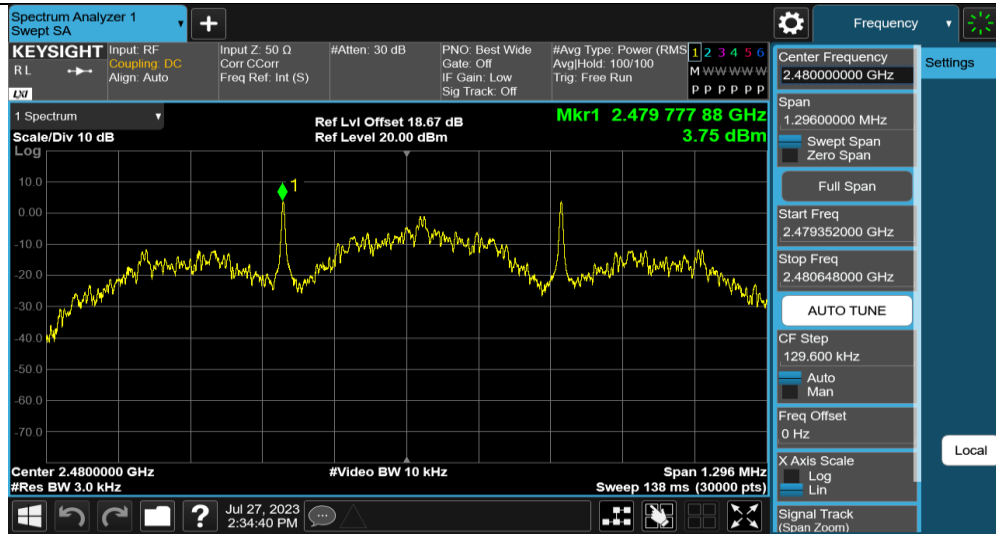
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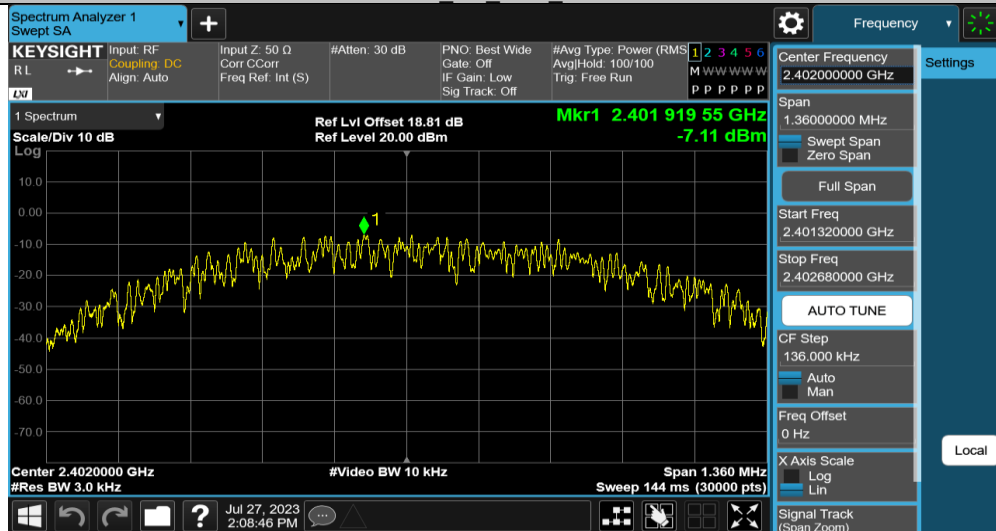
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BLE 1M Ant1 2402



BLE 1M Ant1 2440



BLE 1M Ant1 2480

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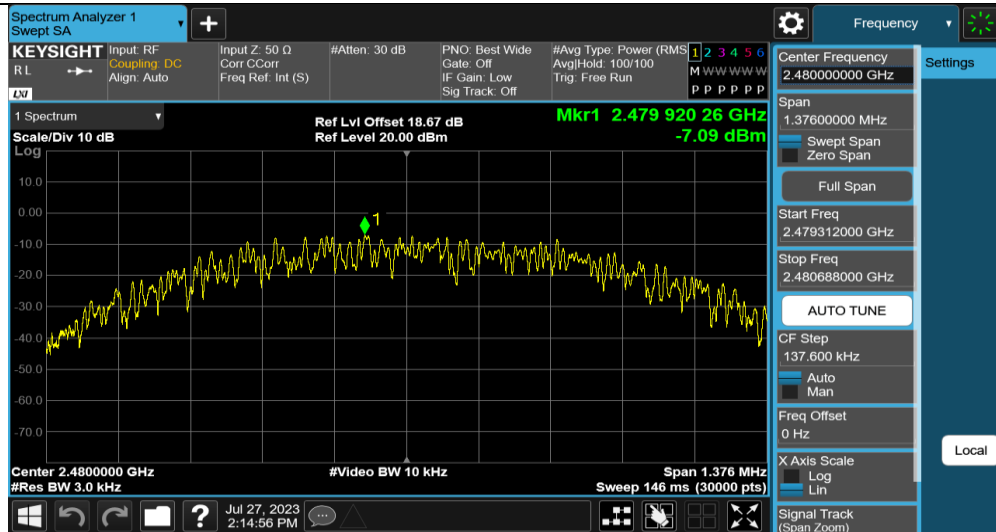
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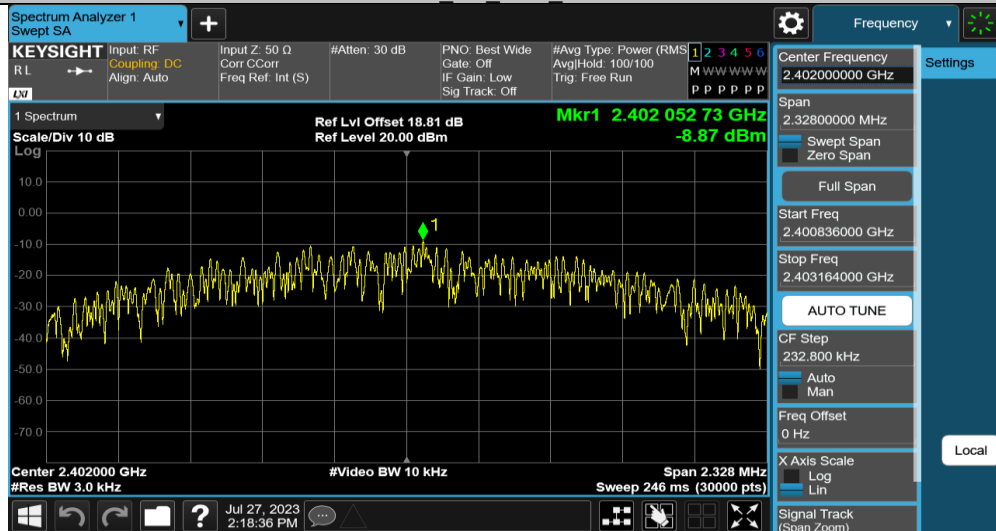


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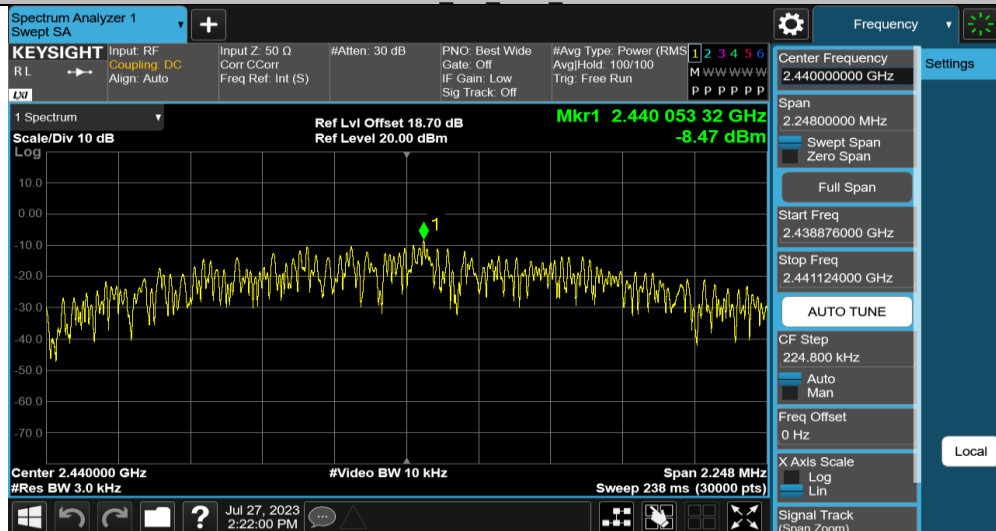
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BLE 2M Ant1 2402



BLE 2M Ant1 2440



BLE 2M Ant1 2480

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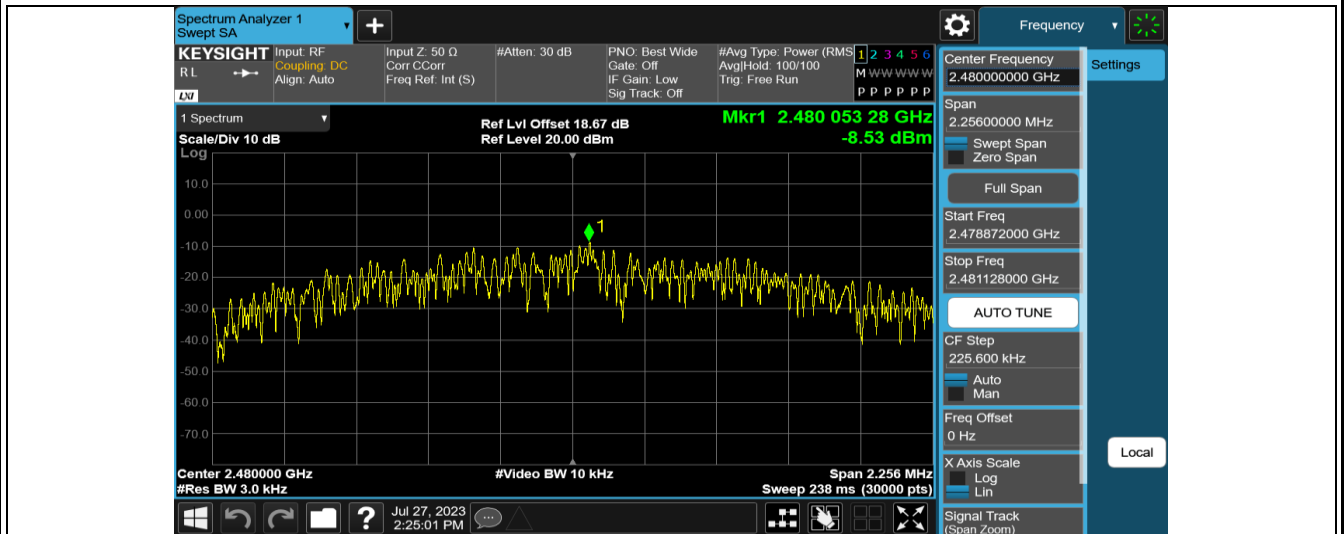
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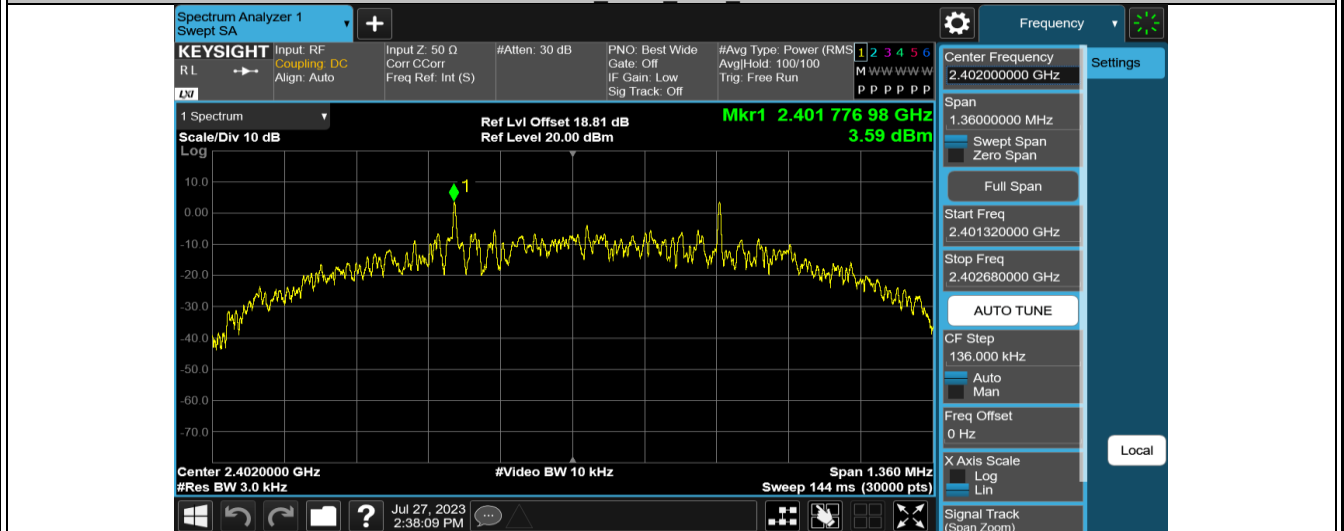


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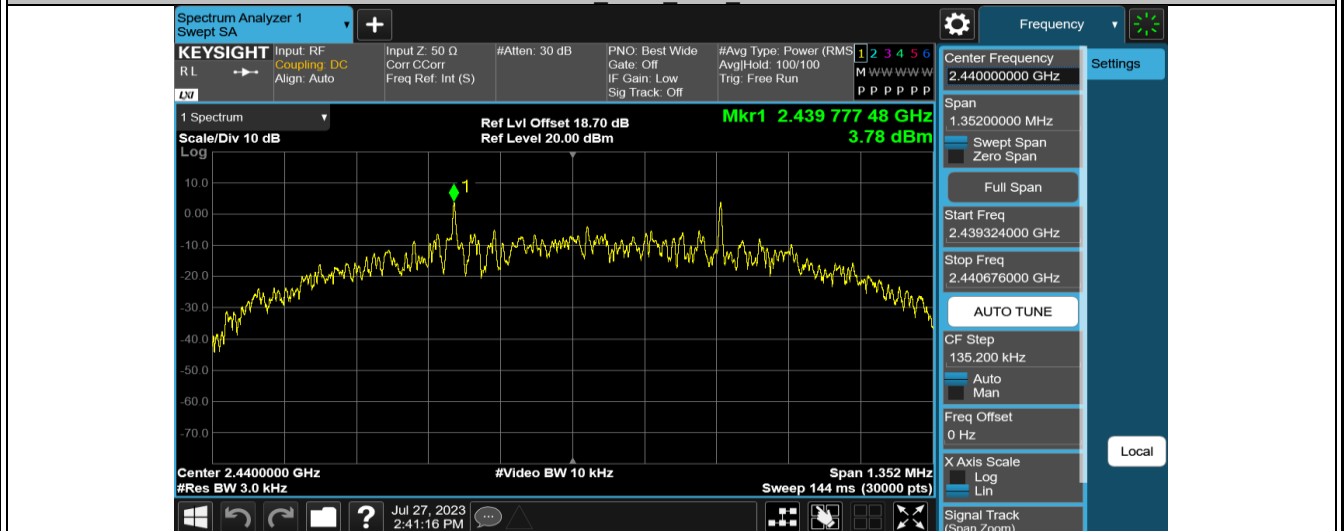
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BLE 500K Ant1 2402



BLE 500K Ant1 2440



BLE 500K Ant1 2480

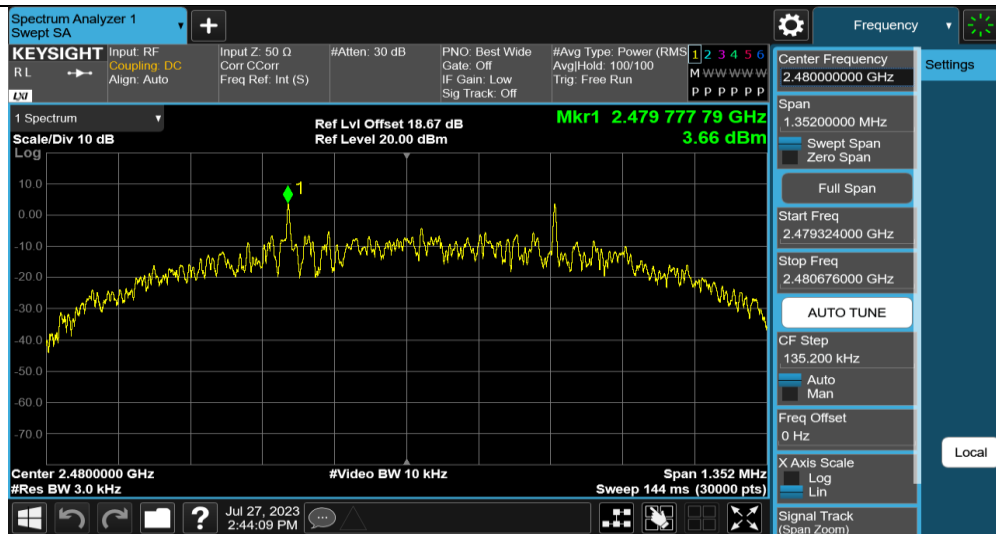
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APPENDIX B.2: 6dB BANDWIDTH

Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_125K	Ant1	2402	0.712	2401.672	2402.384	0.5	PASS
		2440	0.712	2439.676	2440.388	0.5	PASS
		2480	0.648	2479.708	2480.356	0.5	PASS
BLE_1M	Ant1	2402	0.680	2401.688	2402.368	0.5	PASS
		2440	0.692	2439.684	2440.376	0.5	PASS
		2480	0.688	2479.688	2480.376	0.5	PASS
BLE_2M	Ant1	2402	1.164	2401.444	2402.608	0.5	PASS
		2440	1.124	2439.464	2440.588	0.5	PASS
		2480	1.128	2479.472	2480.600	0.5	PASS
BLE_500K	Ant1	2402	0.680	2401.696	2402.376	0.5	PASS
		2440	0.676	2439.700	2440.376	0.5	PASS
		2480	0.676	2479.696	2480.372	0.5	PASS

Test Graphs



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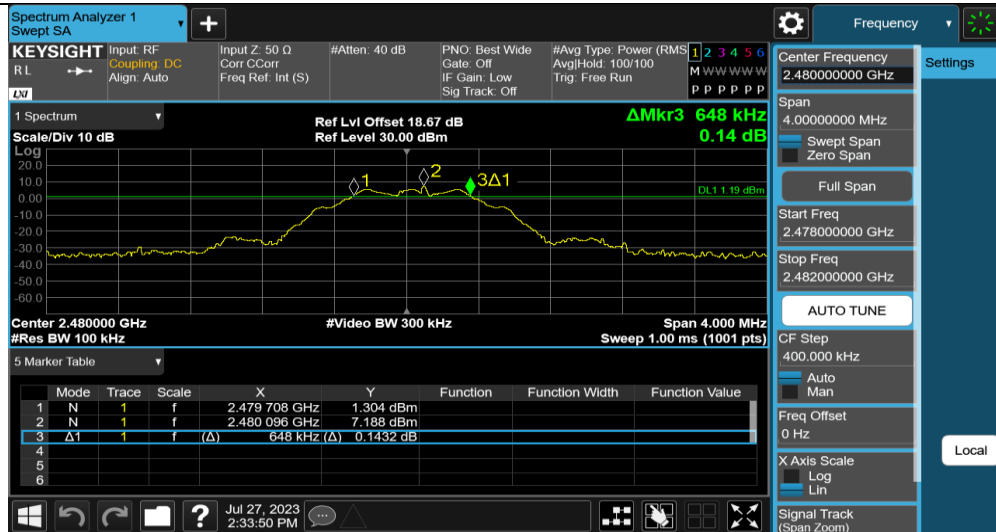
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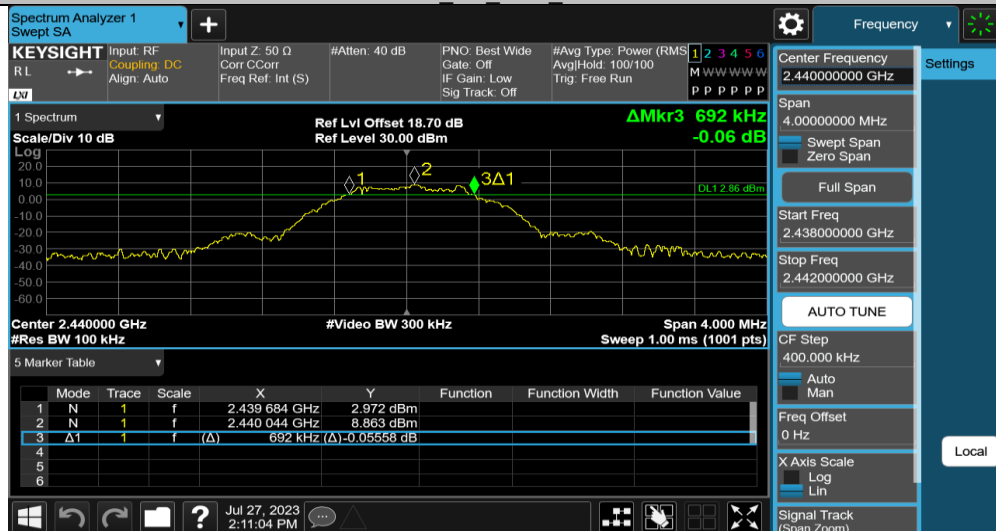
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BLE 1M Ant1 2440



BLE 1M Ant1 2480

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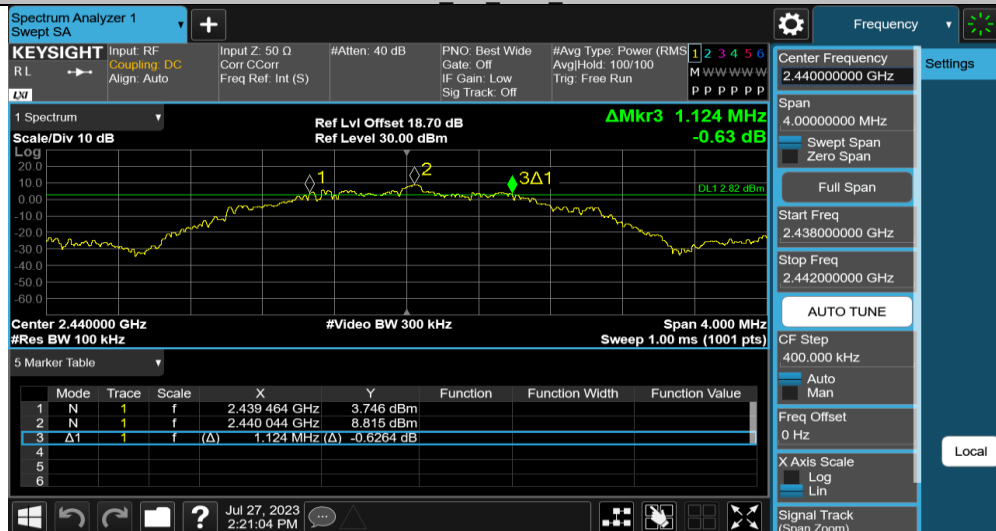
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BLE 2M Ant1 2402



BLE 2M Ant1 2440



BLE 2M Ant1 2480

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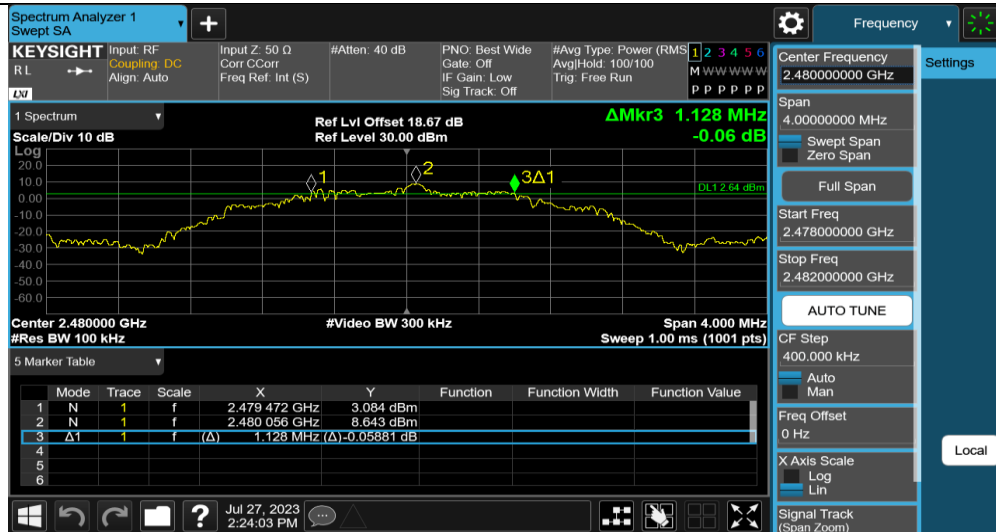
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BLE 500K Ant1 2440



BLE 500K Ant1 2480

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APPENDIX B.3: 99% BANDWIDTH

Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_125K	Ant1	2402	1.0736	2401.4927	2402.5663	---	---
		2440	1.0791	2439.4900	2440.5691	---	---
		2480	1.0775	2479.4912	2480.5687	---	---
BLE_1M	Ant1	2402	1.0495	2401.5140	2402.5635	---	---
		2440	1.0496	2439.5151	2440.5647	---	---
		2480	1.0521	2479.5130	2480.5651	---	---
BLE_2M	Ant1	2402	2.0382	2401.0300	2403.0682	---	---
		2440	2.0164	2439.0516	2441.0680	---	---
		2480	2.0384	2479.0283	2481.0667	---	---
BLE_500K	Ant1	2402	1.0495	2401.5092	2402.5587	---	---
		2440	1.0424	2439.5095	2440.5519	---	---
		2480	1.0447	2479.5075	2480.5522	---	---

Test Graphs



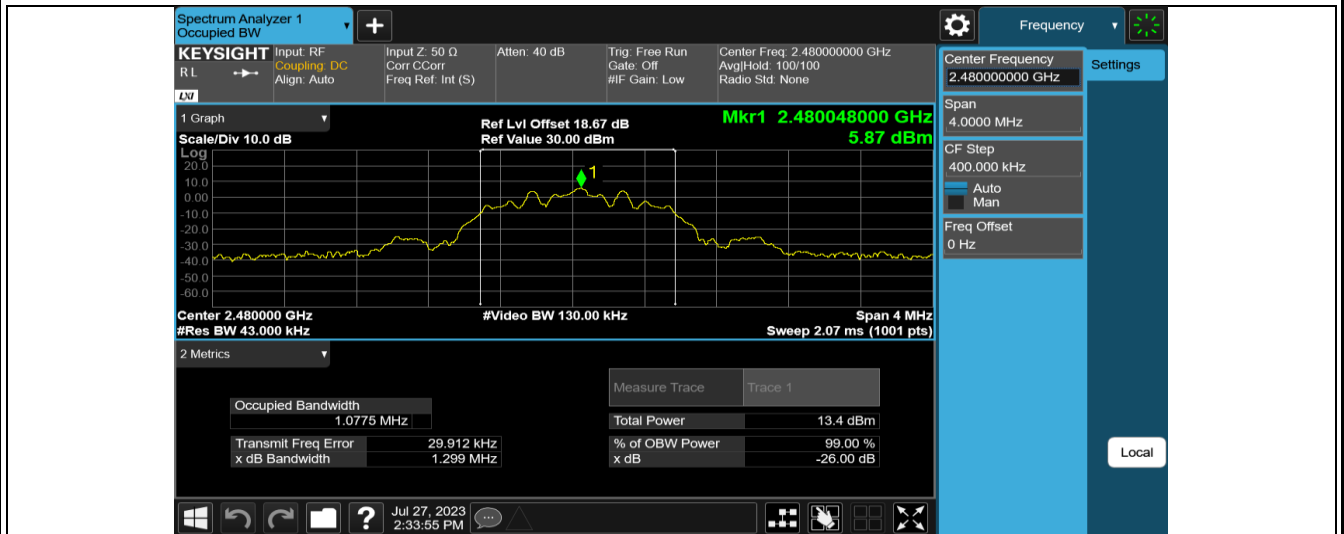
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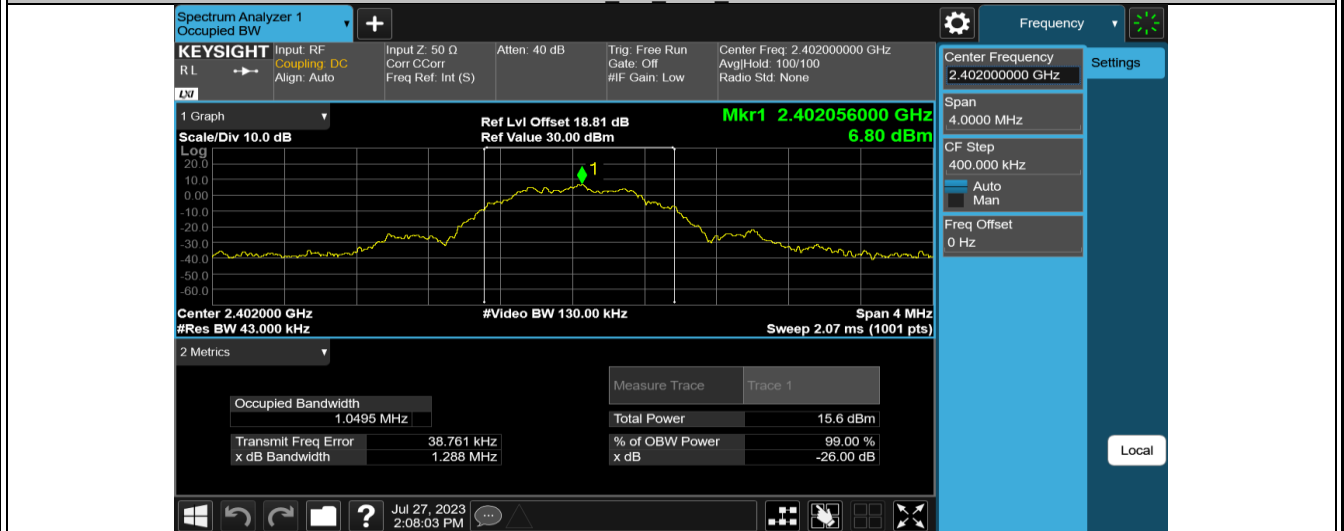
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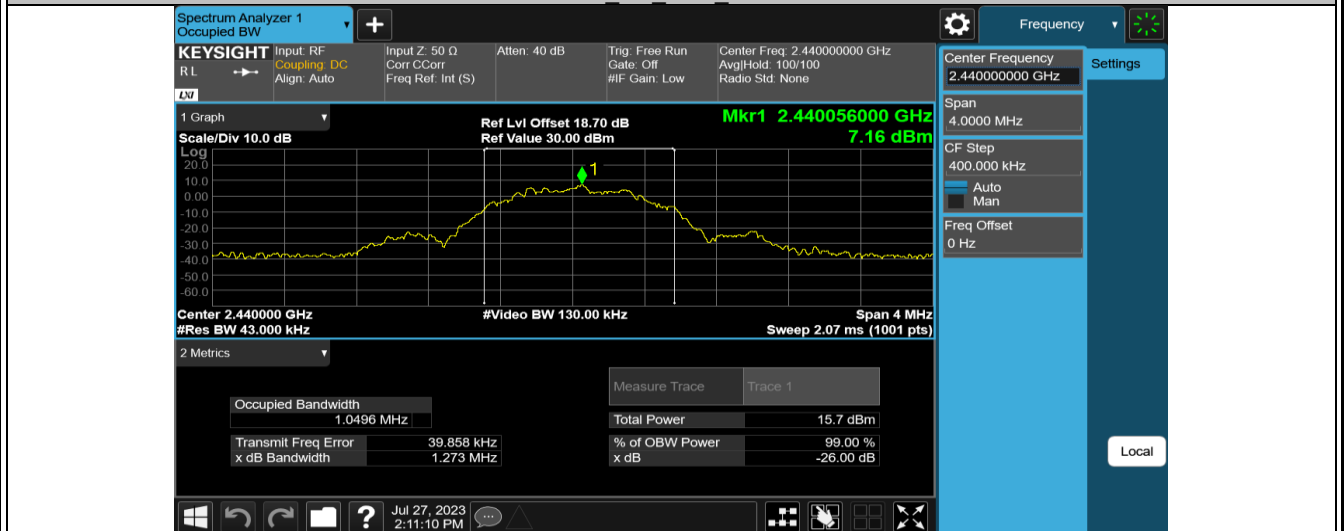
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BLE 1M Ant1 2440



BLE 1M Ant1 2480

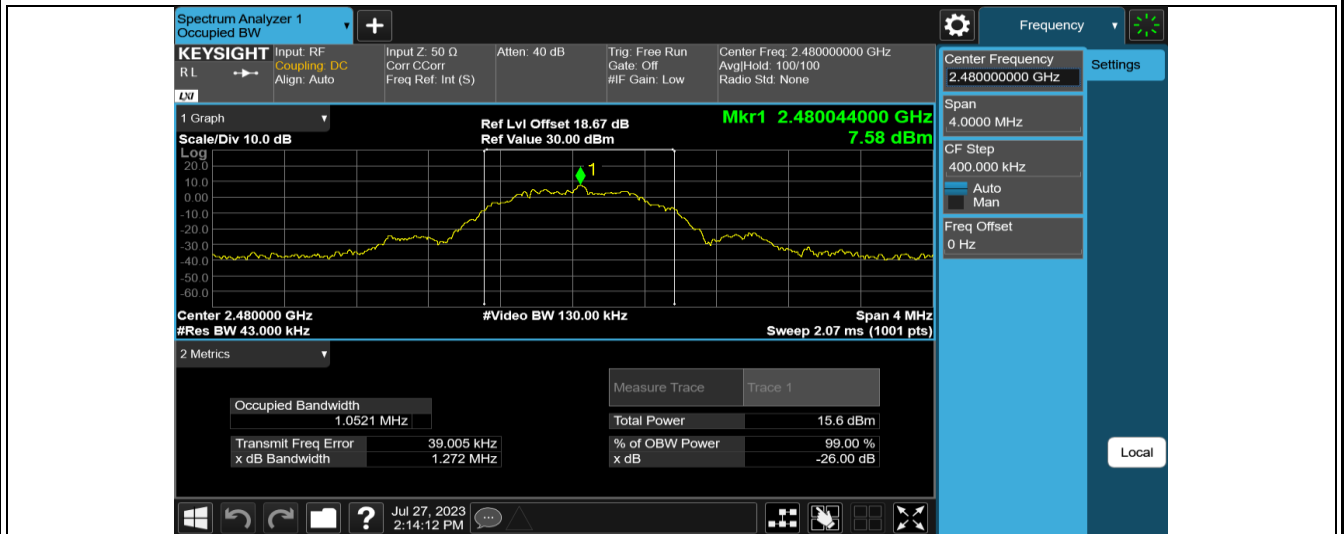
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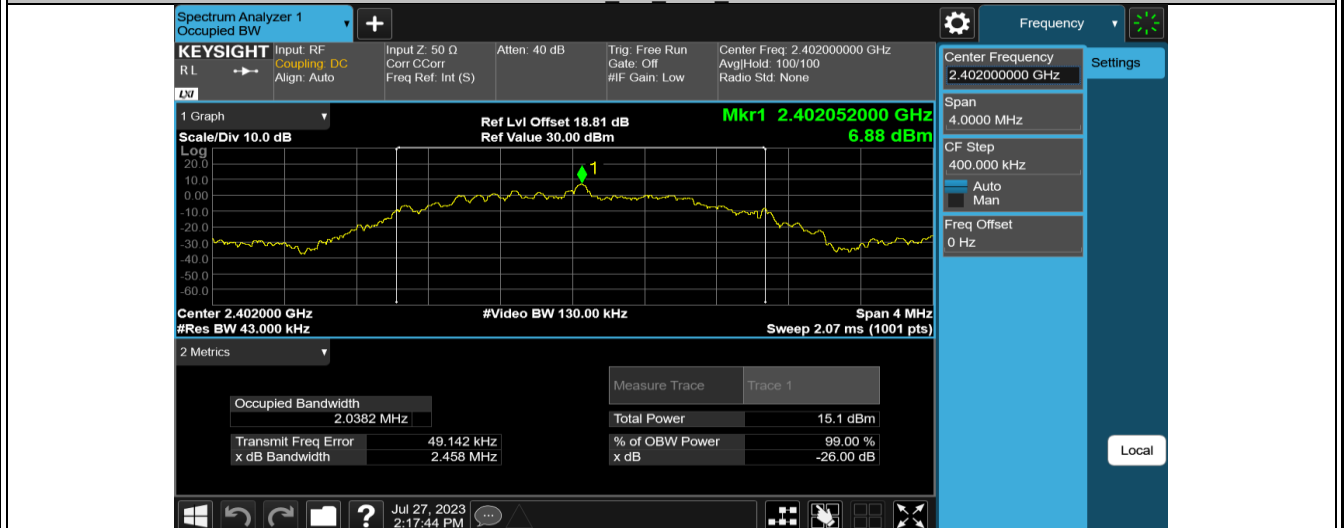
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BLE 2M Ant1 2440



BLE 2M Ant1 2480

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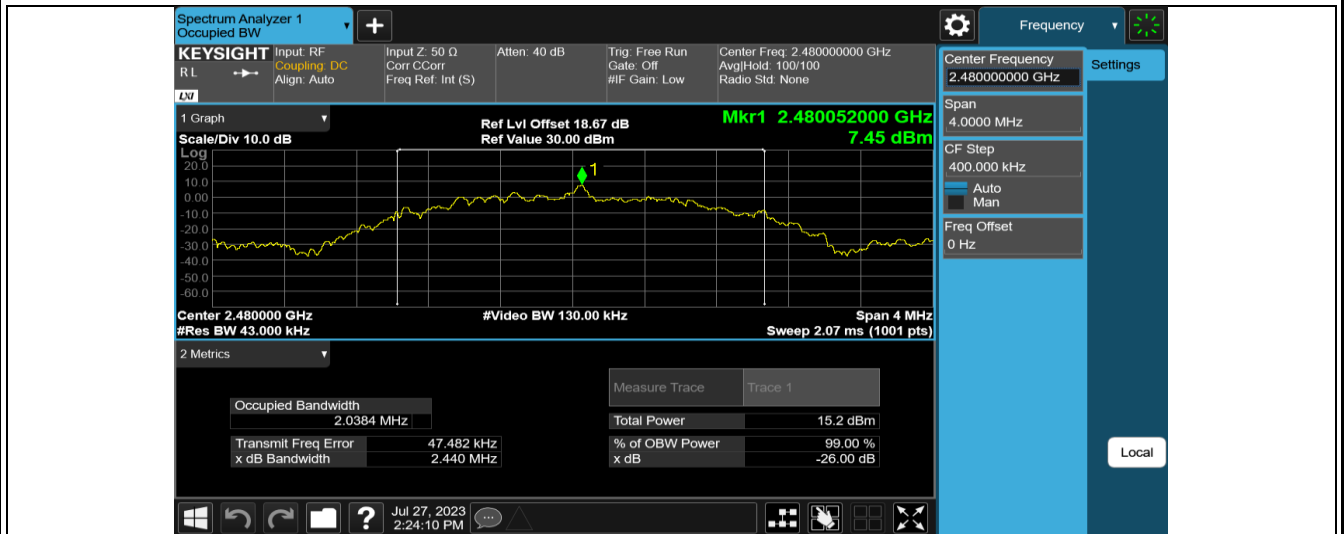
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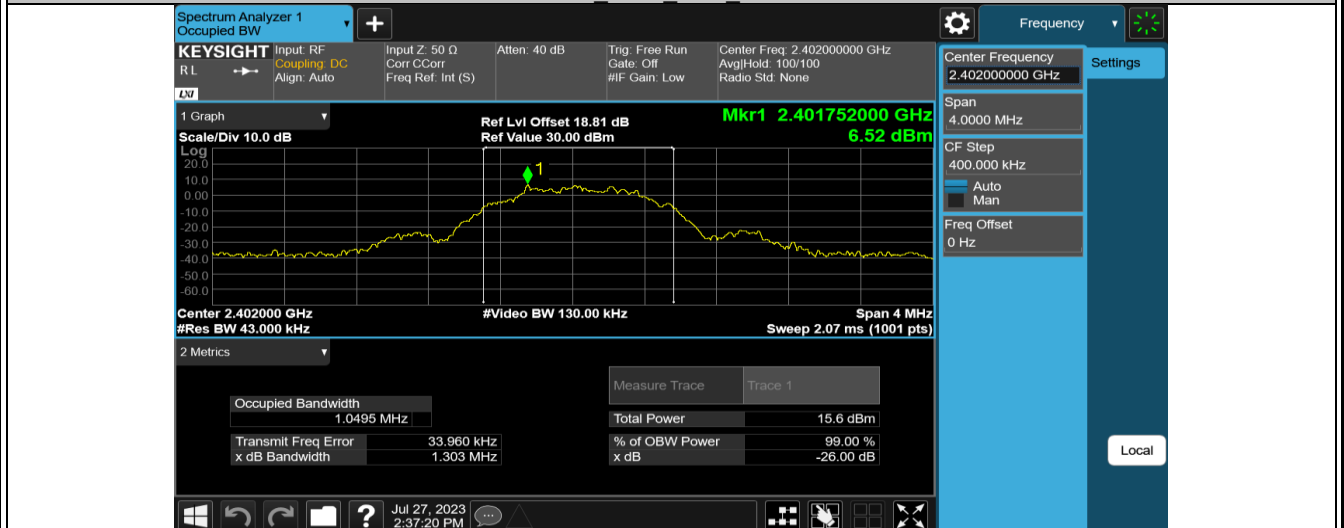
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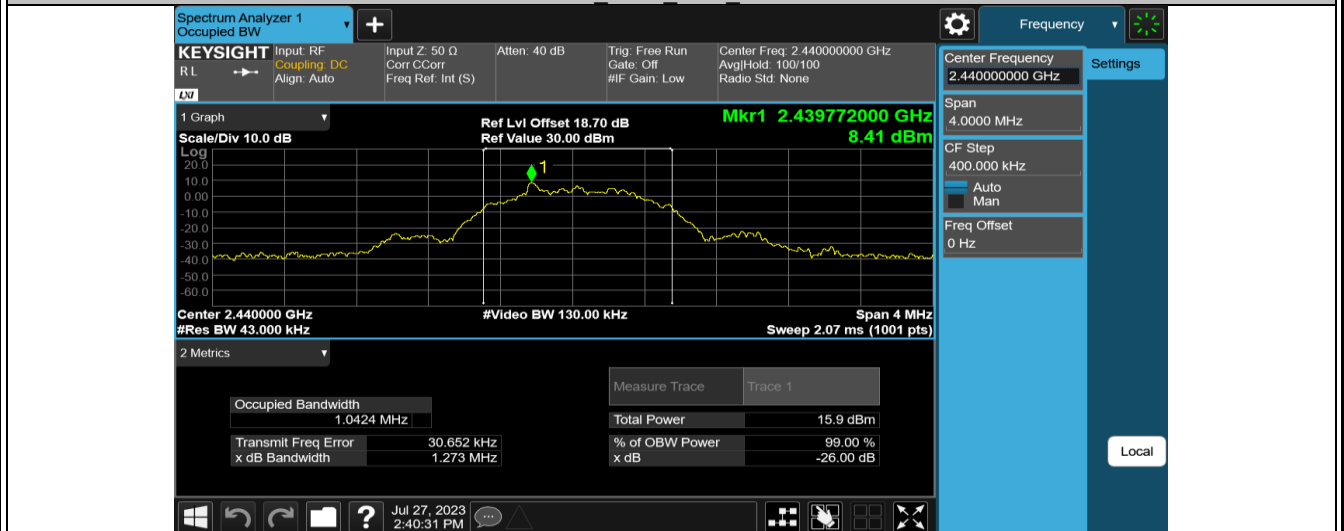
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BLE 500K Ant1 2440



BLE 500K Ant1 2480

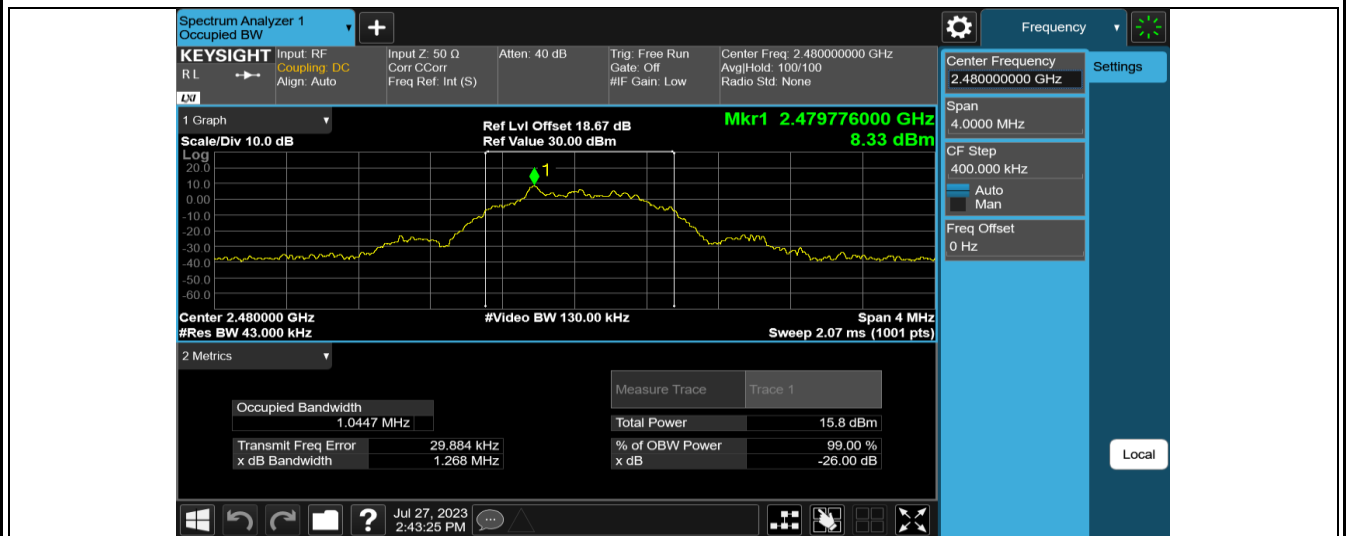
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APPENDIX B.4: CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100 kHz BANDWIDTH

Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_125K	Ant1	2402	Reference	7.62	7.62	---	PASS
			30~1000	7.62	-40.84	≤-12.38	PASS
			1000~26500	7.62	-31.55	≤-12.38	PASS
		2440	Reference	9.20	9.20	---	PASS
			30~1000	9.20	-40.79	≤-10.8	PASS
			1000~26500	9.20	-31.11	≤-10.8	PASS
		2480	Reference	9.17	9.17	---	PASS
			30~1000	9.17	-40.63	≤-10.83	PASS
			1000~26500	9.17	-31.71	≤-10.83	PASS
BLE_1M	Ant1	2402	Reference	9.38	9.38	---	PASS
			30~1000	9.38	-40.9	≤-10.62	PASS
			1000~26500	9.38	-31.37	≤-10.62	PASS
		2440	Reference	9.60	9.60	---	PASS
			30~1000	9.60	-39.66	≤-10.4	PASS
			1000~26500	9.60	-31.26	≤-10.4	PASS
		2480	Reference	9.56	9.56	---	PASS
			30~1000	9.56	-40.93	≤-10.44	PASS
			1000~26500	9.56	-31.14	≤-10.44	PASS
BLE_2M	Ant1	2402	Reference	9.46	9.46	---	PASS
			30~1000	9.46	-40.54	≤-10.54	PASS
			1000~26500	9.46	-31.38	≤-10.54	PASS
		2440	Reference	9.64	9.64	---	PASS
			30~1000	9.64	-40.74	≤-10.36	PASS
			1000~26500	9.64	-31.61	≤-10.36	PASS
		2480	Reference	9.55	9.55	---	PASS
			30~1000	9.55	-40.35	≤-10.45	PASS
			1000~26500	9.55	-31.59	≤-10.45	PASS
BLE_500K	Ant1	2402	Reference	9.72	9.72	---	PASS
			30~1000	9.72	-40.87	≤-10.28	PASS
			1000~26500	9.72	-31.83	≤-10.28	PASS
		2440	Reference	9.63	9.63	---	PASS
			30~1000	9.63	-40.96	≤-10.37	PASS
			1000~26500	9.63	-31.06	≤-10.37	PASS
		2480	Reference	9.71	9.71	---	PASS
			30~1000	9.71	-40.74	≤-10.29	PASS
			1000~26500	9.71	-31.7	≤-10.29	PASS

Test Graphs



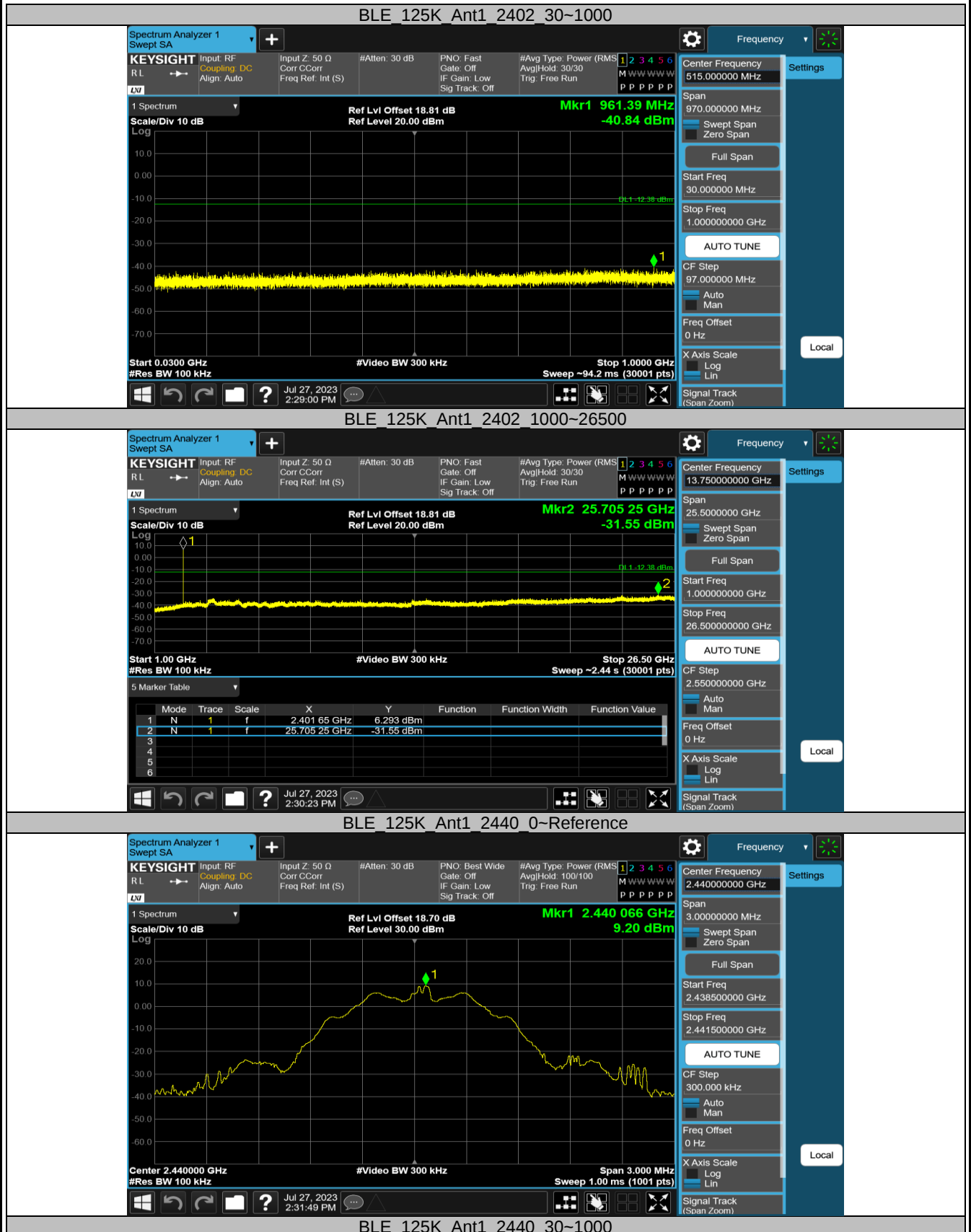
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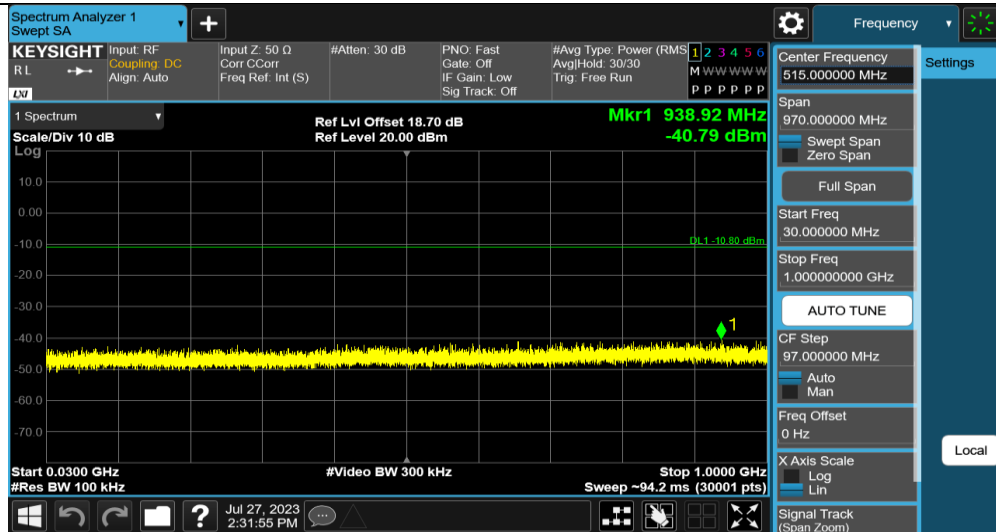
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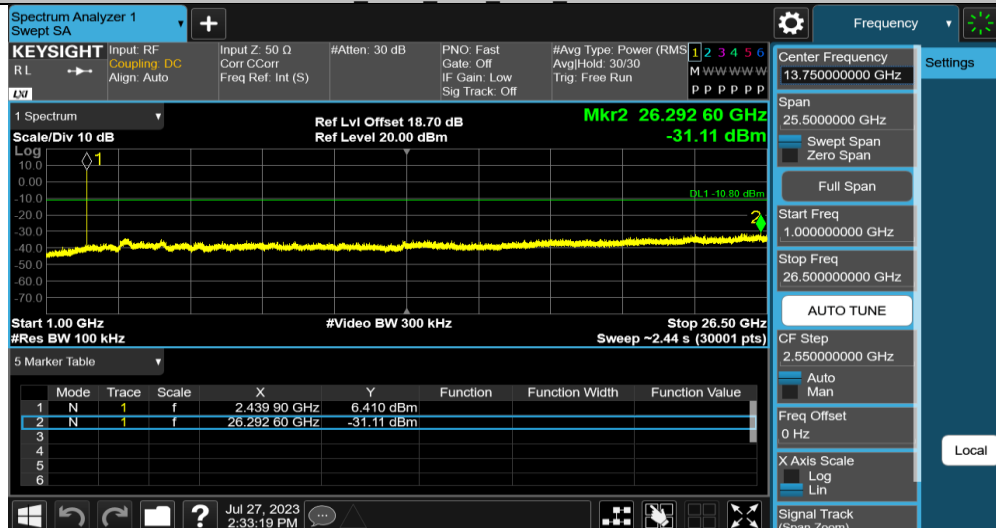
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BLE_125K_Ant1_2440_1000-26500



BLE_125K_Ant1_2480_0-Reference



BLE_125K_Ant1_2480_30-1000

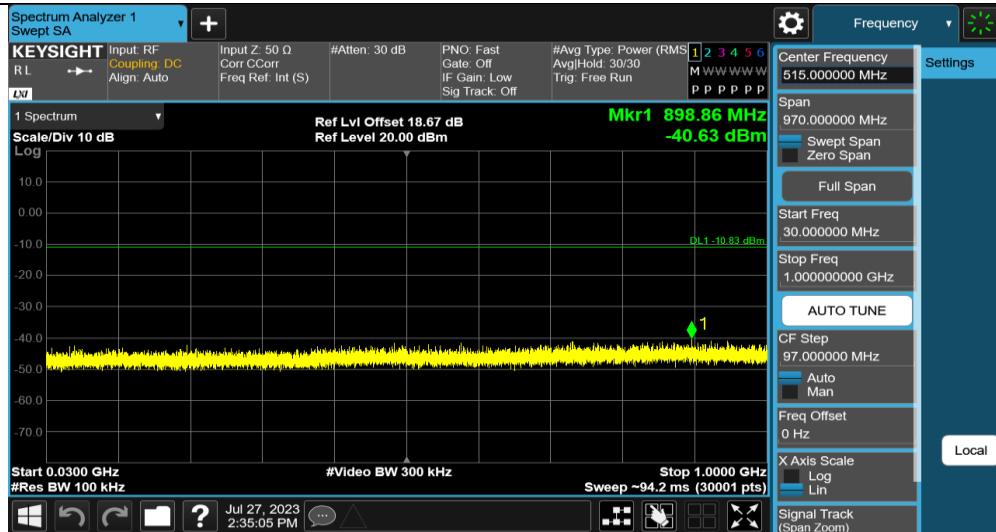
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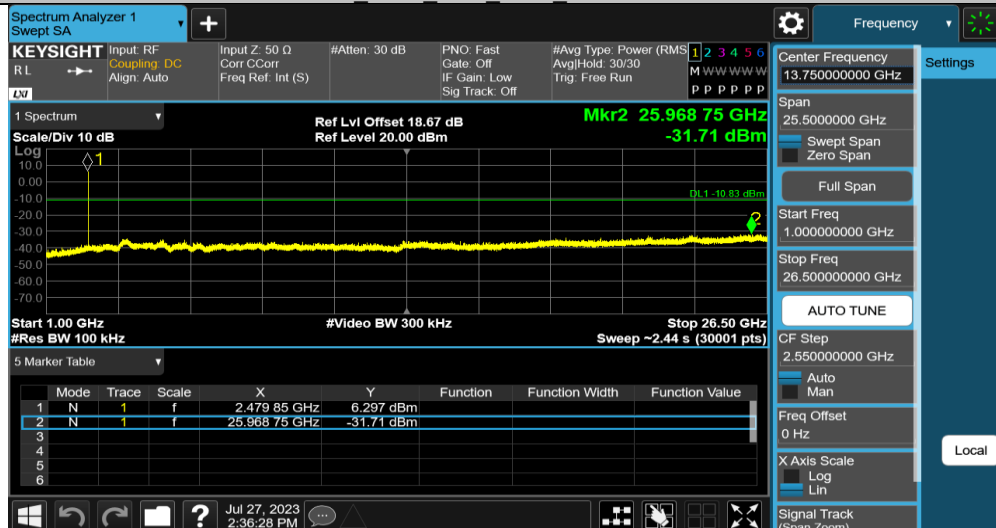
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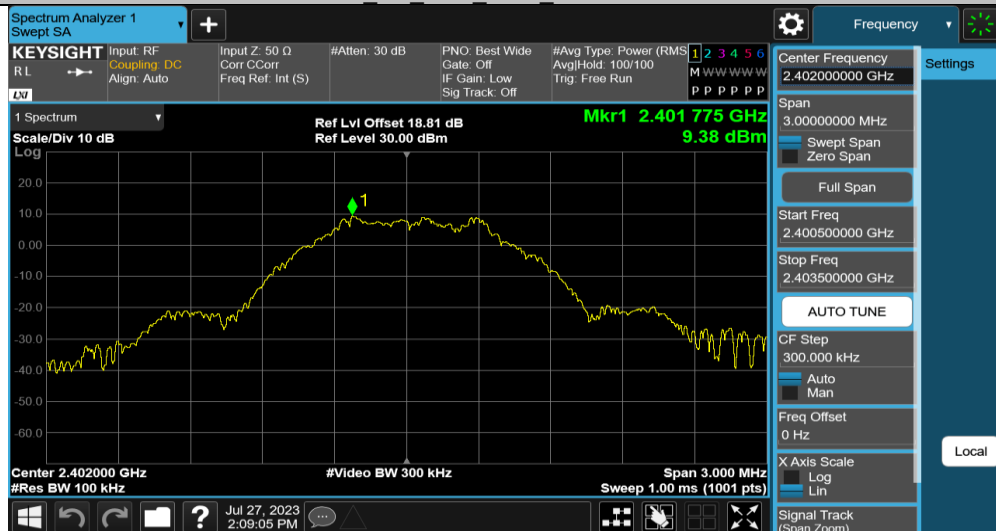
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BLE 125K Ant1 2480 1000-26500



BLE 1M Ant1 2402 0-Reference



BLE 1M Ant1 2402 30-1000