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Test Report No.: PSU-NQN2407300316RF02



11N40SISO_Ant1_2437_30~1000



11N40SISO_Ant1_2437_1000~26500



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Test Report No.: PSU-NQN2407300316RF02



11N40SISO_Ant1_2452_0~Reference



11N40SISO_Ant1_2452_30~1000



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11N40SISO_Ant1_2452_1000~26500





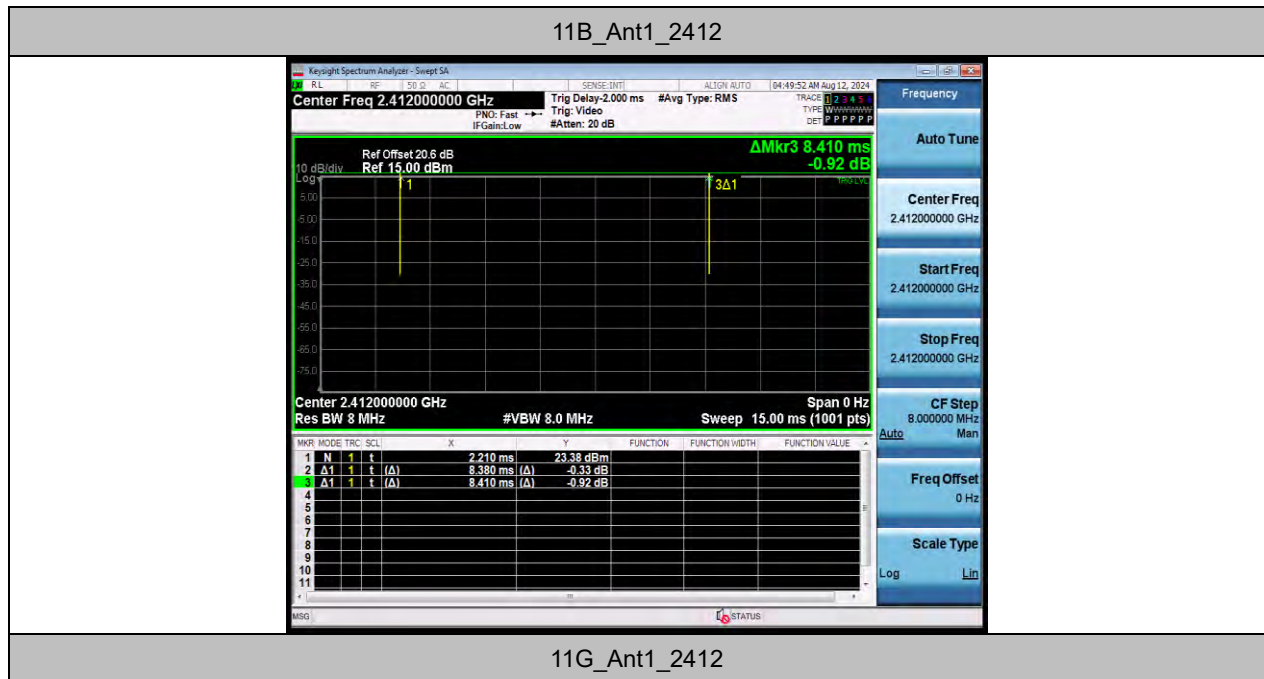
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Test Report No.: PSU-NQN2407300316RF02

DUTY CYCLE TEST RESULT

TestMode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Factor
11B	Ant1	2412	8.38	8.41	99.64	0.02
11G	Ant1	2412	1.39	1.43	97.20	0.12
11N20SISO	Ant1	2412	1.30	1.34	97.01	0.13
11N40SISO	Ant1	2422	0.65	0.69	94.20	0.26

TEST GRAPHS



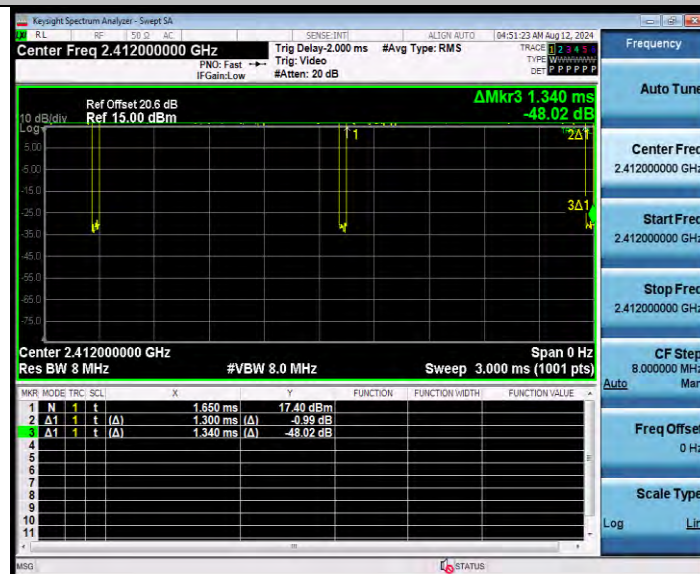


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11N20SISO_Ant1_2412

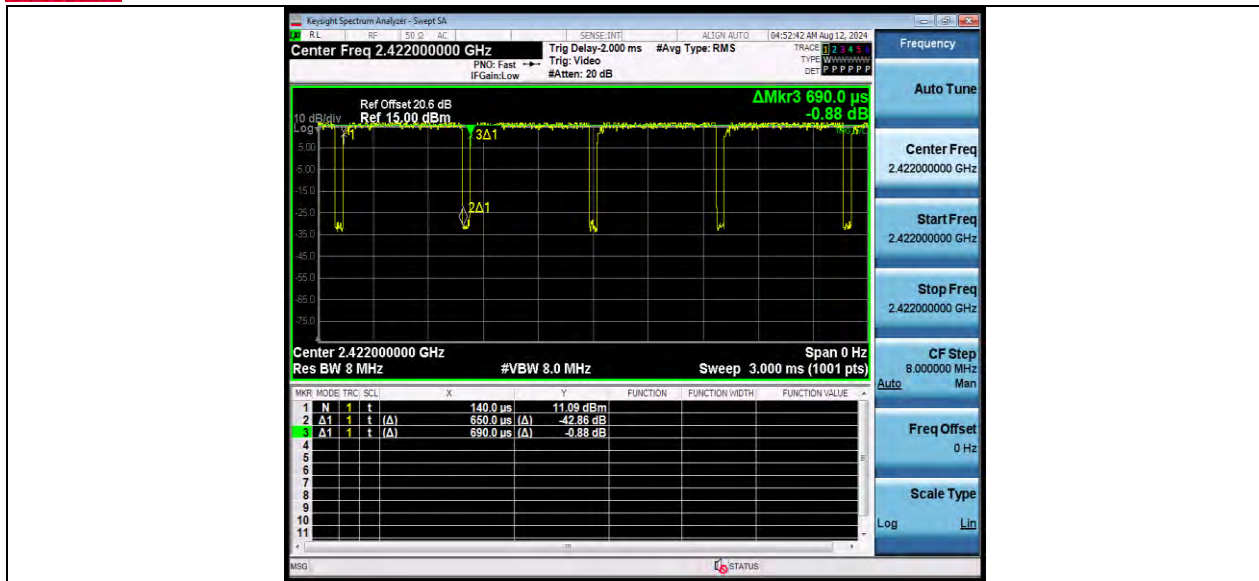


11N40SISO_Ant1_2422



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BLE

DTS BANDWIDTH

TEST RESULT

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.660	2401.676	2402.336	0.5	PASS
		2440	0.652	2439.684	2440.336	0.5	PASS
		2480	0.684	2479.668	2480.352	0.5	PASS
BLE_2M	Ant1	2404	1.244	2403.352	2404.596	0.5	PASS
		2440	1.120	2439.444	2440.564	0.5	PASS
		2478	1.128	2477.452	2478.580	0.5	PASS
BLE_125K	Ant1	2402	0.676	2401.664	2402.340	0.5	PASS
		2440	0.676	2439.668	2440.344	0.5	PASS
		2480	0.680	2479.664	2480.344	0.5	PASS
BLE_500K	Ant1	2402	0.664	2401.676	2402.340	0.5	PASS
		2440	0.652	2439.688	2440.340	0.5	PASS
		2480	0.668	2479.676	2480.344	0.5	PASS



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TEST GRAPHS

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



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BLE_2M_Ant1_2404



BLE_2M_Ant1_2440



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BLE_2M_Ant1_2478

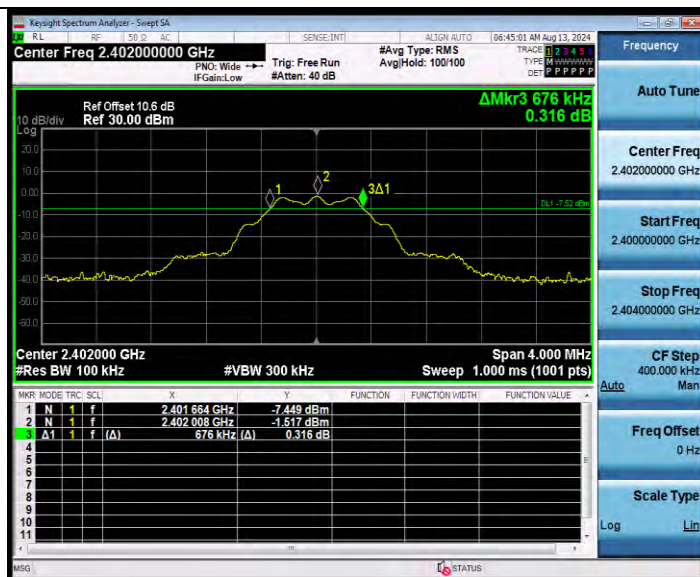


BLE_125K_Ant1_2402



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Test Report No.: PSU-NQN2407300316RF02



BLE_125K_Ant1_2440



BLE_125K_Ant1_2480



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BLE_500K_Ant1_2402



BLE_500K_Ant1_2440



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BLE_500K_Ant1_2480





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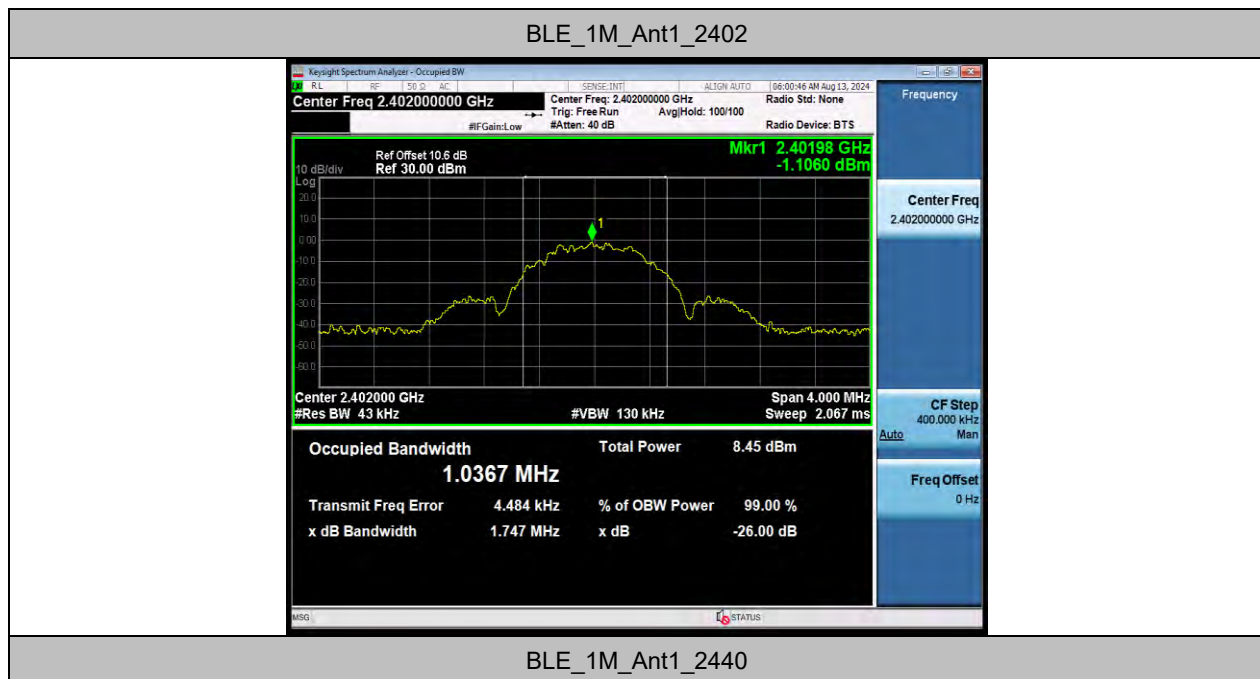
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OCCUPIED CHANNEL BANDWIDTH

TEST RESULT

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0367	2401.4861	2402.5228	---	---
		2440	1.0307	2439.4910	2440.5217	---	---
		2480	1.0346	2479.4896	2480.5242	---	---
BLE_2M	Ant1	2404	2.0685	2402.9859	2405.0544	---	---
		2440	2.0758	2438.9859	2441.0617	---	---
		2478	2.0619	2476.9871	2479.0490	---	---
BLE_125K	Ant1	2402	1.0538	2401.4762	2402.5300	---	---
		2440	1.0529	2439.4750	2440.5279	---	---
		2480	1.0548	2479.4747	2480.5295	---	---
BLE_500K	Ant1	2402	1.0404	2401.4808	2402.5212	---	---
		2440	1.0130	2439.5007	2440.5137	---	---
		2480	1.0348	2479.4883	2480.5231	---	---

TEST GRAPHS





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BLE_1M_Ant1_2480



BLE_2M_Ant1_2404



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BLE_2M_Ant1_2440



BLE_2M_Ant1_2478



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Test Report No.: PSU-NQN2407300316RF02



BLE_125K_Ant1_2402



BLE_125K_Ant1_2440



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Test Report No.: PSU-NQN2407300316RF02



BLE_125K_Ant1_2480



BLE_500K_Ant1_2402



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BLE_500K_Ant1_2440



BLE_500K_Ant1_2480



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MAXIMUM CONDUCTED OUTPUT POWER

TEST RESULT

TestMode	Antenna	Channel	Average power [dBm]	Peak power [dBm]	Peak power [mw]	Conducted Limit [dBm]	EIRP [dBm]	EIRP [mw]	EIRP Limit [dBm]	Verdict	Power Setting
BLE_1M	Ant1	2402	2.11	2.63	1.83	≤30	2.39	1.73	≤36	PASS	Default
		2440	3.21	3.69	2.34	≤30	3.45	2.21	≤36	PASS	Default
		2480	2.46	2.96	1.98	≤30	2.72	1.87	≤36	PASS	Default
BLE_2M	Ant1	2404	2	2.73	1.87	≤30	2.49	1.77	≤36	PASS	Default
		2440	3.3	3.71	2.35	≤30	3.47	2.22	≤36	PASS	Default
		2478	2.69	3.04	2.01	≤30	2.8	1.91	≤36	PASS	Default
BLE_125k	Ant1	2402	2.24	2.64	1.84	≤30	2.4	1.74	≤36	PASS	Default
		2440	3.33	3.68	2.33	≤30	3.44	2.21	≤36	PASS	Default
		2480	2.6	2.97	1.98	≤30	2.73	1.87	≤36	PASS	Default
BLE_500K	Ant1	2402	2.11	2.63	1.83	≤30	2.39	1.73	≤36	PASS	Default
		2440	3.2	3.68	2.33	≤30	3.44	2.21	≤36	PASS	Default
		2480	2.46	2.96	1.98	≤30	2.72	1.87	≤36	PASS	Default
Note:EIRP=Peak Power+Gain											

**MAXIMUM POWER SPECTRAL DENSITY****TEST RESULT**

TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-14.22	≤8.00	PASS
		2440	-13.78	≤8.00	PASS
		2480	-13.73	≤8.00	PASS
BLE_2M	Ant1	2404	-16.73	≤8.00	PASS
		2440	-16.17	≤8.00	PASS
		2478	-16.03	≤8.00	PASS
BLE_125K	Ant1	2402	-4.40	≤8.00	PASS
		2440	-3.92	≤8.00	PASS
		2480	-3.91	≤8.00	PASS
BLE_500K	Ant1	2402	-4.43	≤8.00	PASS
		2440	-4.06	≤8.00	PASS
		2480	-3.93	≤8.00	PASS



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TEST GRAPHS

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440

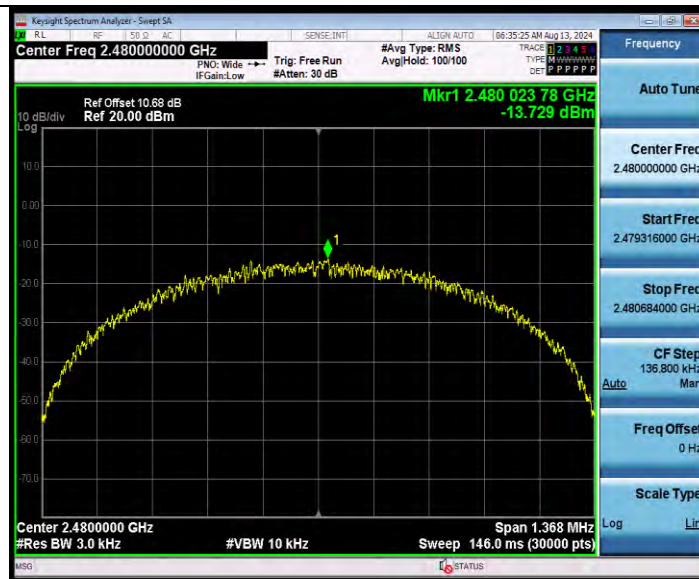


BLE_1M_Ant1_2480



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BLE_2M_Ant1_2404



BLE_2M_Ant1_2440



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Test Report No.: PSU-NQN2407300316RF02



BLE_2M_Ant1_2478



BLE_125K_Ant1_2402



Test Report No.: PSU-NQN2407300316RF02



BLE_125K_Ant1_2440



BLE_125K_Ant1_2480



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Test Report No.: PSU-NQN2407300316RF02



BLE_500K_Ant1_2402



BLE_500K_Ant1_2440

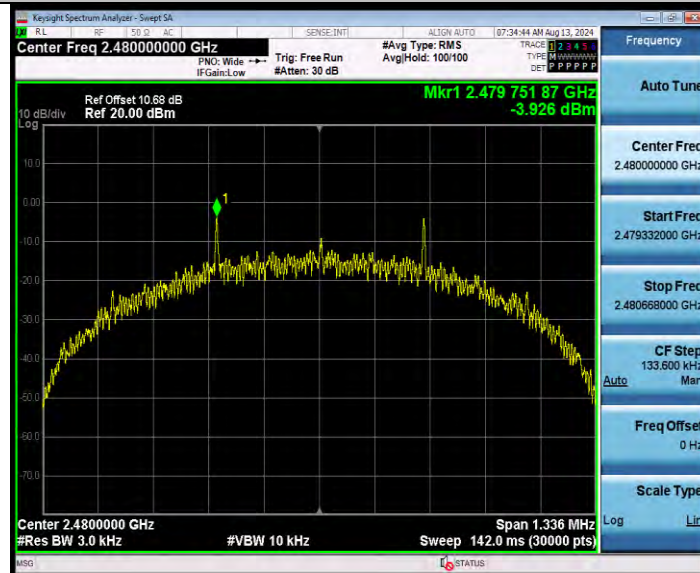


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BLE_500K_Ant1_2480



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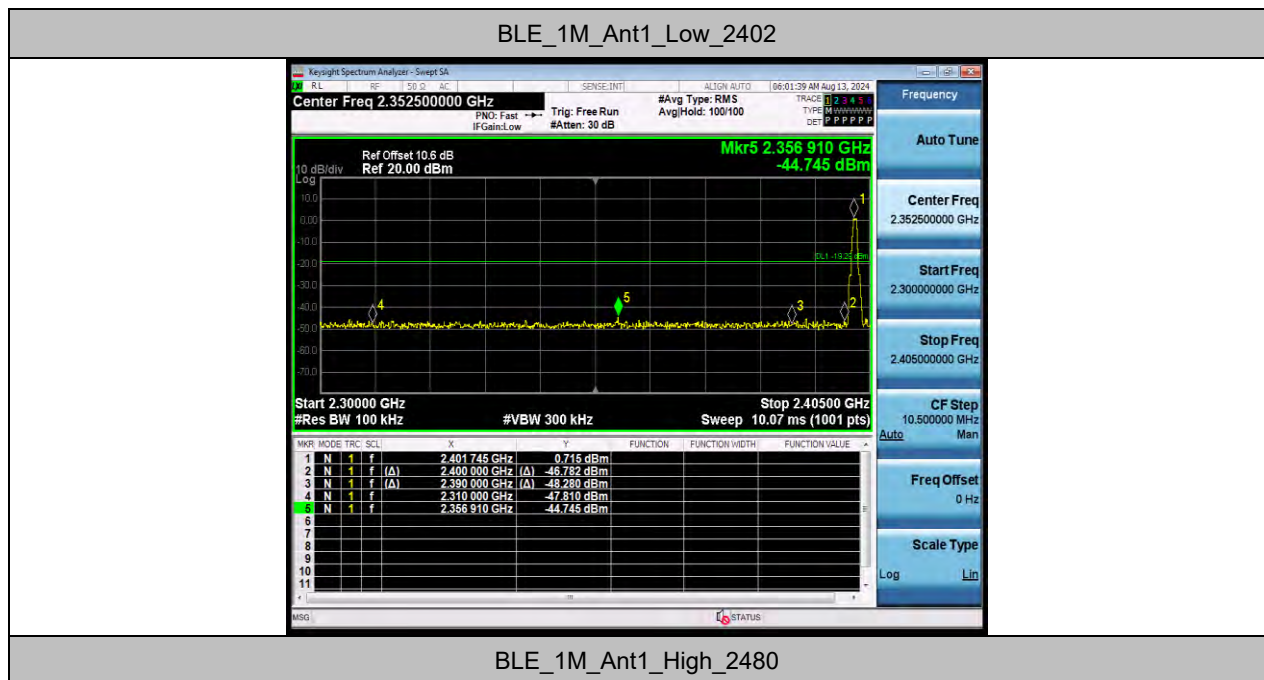


BAND EDGE MEASUREMENTS

TEST RESULT

TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.72	-44.75	≤-19.29	PASS
		High	2480	1.18	-44.79	≤-18.82	PASS
BLE_2M	Ant1	Low	2404	-0.53	-45.06	≤-20.53	PASS
		High	2478	0.17	-44.4	≤-19.83	PASS
BLE_125K	Ant1	Low	2402	-1.57	-45.49	≤-21.57	PASS
		High	2480	-1.05	-44.87	≤-21.05	PASS
BLE_500K	Ant1	Low	2402	1.07	-45.8	≤-18.93	PASS
		High	2480	1.98	-45.3	≤-18.02	PASS

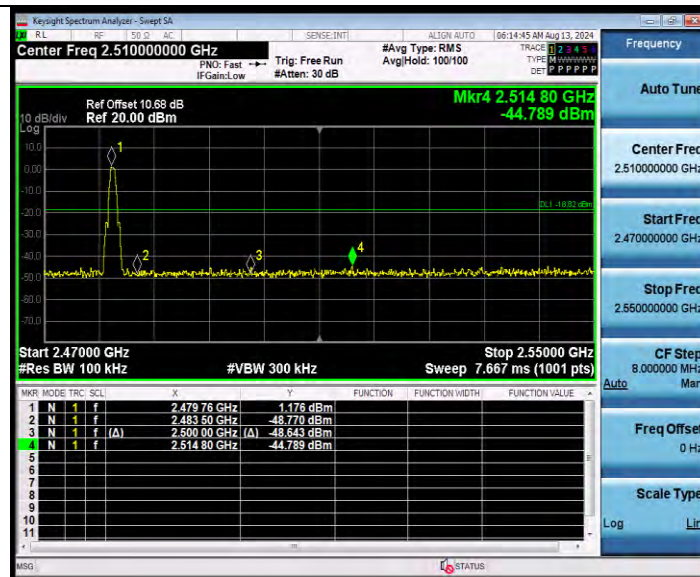
TEST GRAPHS



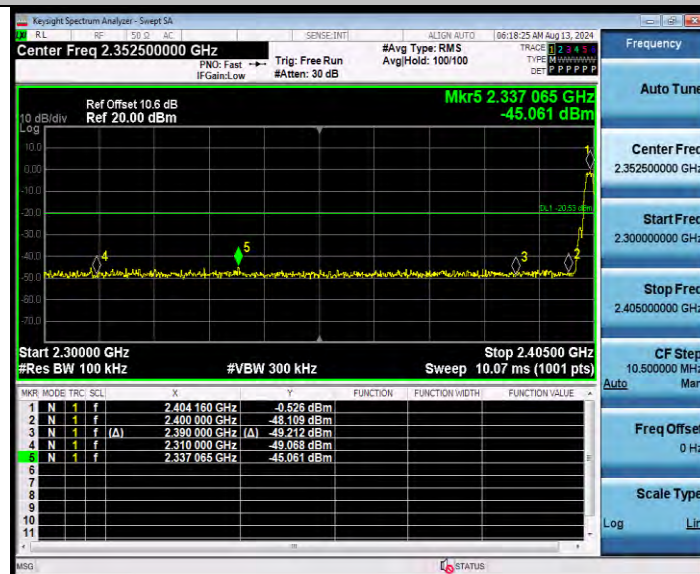


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BLE_2M_Ant1_Low_2404

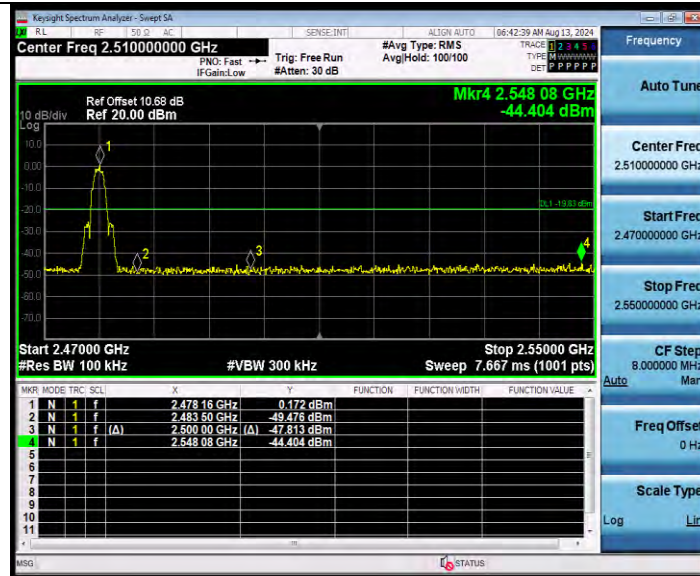


BLE_2M_Ant1_High_2478

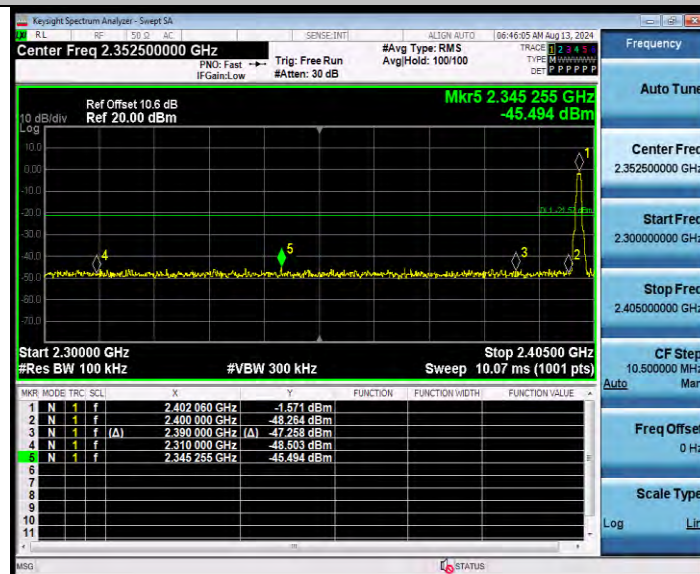


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BLE_125K_Ant1_Low_2402

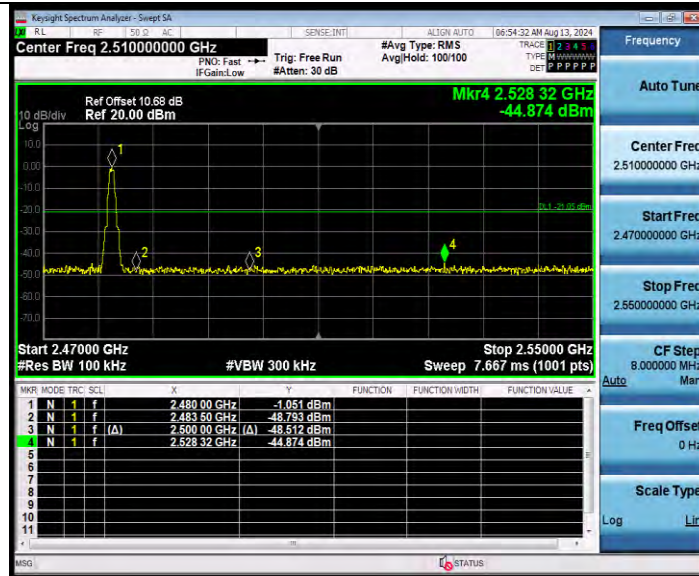


BLE_125K_Ant1_High_2480

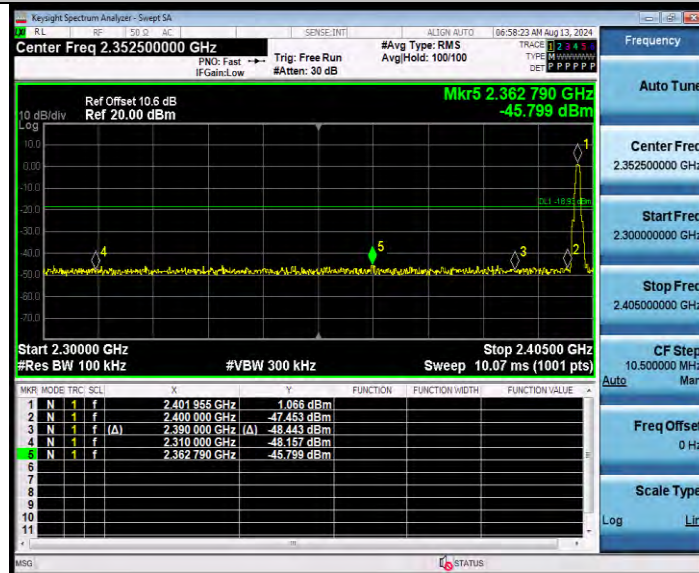


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BLE_500K_Ant1_Low_2402



BLE_500K_Ant1_High_2480

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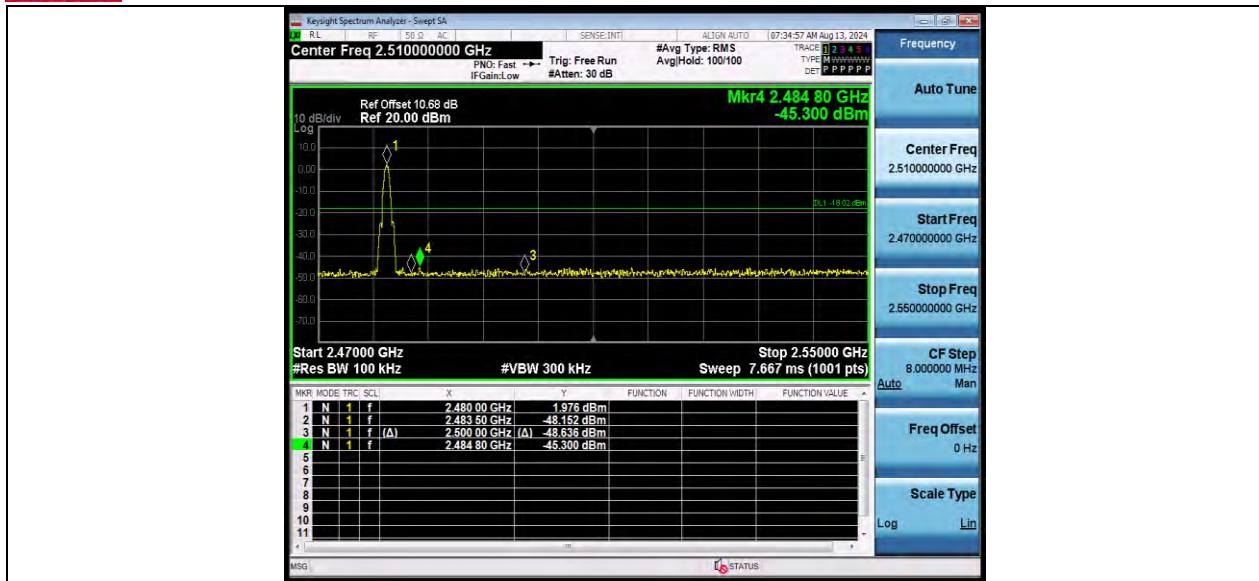
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CONDUCTED SPURIOUS EMISSION

TEST RESULT

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	0.02	0.02	---	PASS
			30~1000	0.02	-64.15	≤-19.98	PASS
			1000~26500	0.02	-45.19	≤-19.98	PASS
		2440	Reference	0.70	0.70	---	PASS
			30~1000	0.70	-64.04	≤-19.3	PASS
			1000~26500	0.70	-45.7	≤-19.3	PASS
		2480	Reference	0.93	0.93	---	PASS
			30~1000	0.93	-63.58	≤-19.07	PASS
			1000~26500	0.93	-45.46	≤-19.07	PASS
BLE_2M	Ant1	2404	Reference	0.03	0.03	---	PASS
			30~1000	0.03	-64.17	≤-19.97	PASS
			1000~26500	0.03	-44.74	≤-19.97	PASS
		2440	Reference	-2.05	-2.05	---	PASS
			30~1000	-2.05	-64.14	≤-22.05	PASS
			1000~26500	-2.05	-45.2	≤-22.05	PASS
		2478	Reference	-0.39	-0.39	---	PASS
			30~1000	-0.39	-63.34	≤-20.39	PASS
			1000~26500	-0.39	-45.32	≤-20.39	PASS
BLE_125K	Ant1	2402	Reference	-1.61	-1.61	---	PASS
			30~1000	-1.61	-63.73	≤-21.61	PASS
			1000~26500	-1.61	-45.33	≤-21.61	PASS
		2440	Reference	-1.11	-1.11	---	PASS
			30~1000	-1.11	-64.55	≤-21.11	PASS
			1000~26500	-1.11	-44.85	≤-21.11	PASS
		2480	Reference	-1.13	-1.13	---	PASS
			30~1000	-1.13	-48.48	≤-21.13	PASS
			1000~26500	-1.13	-44.54	≤-21.13	PASS
BLE_500K	Ant1	2402	Reference	0.20	0.20	---	PASS
			30~1000	0.20	-62.89	≤-19.8	PASS



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			1000~26500	0.20	-45.1	≤ -19.8	PASS
		2440	Reference	1.02	1.02	---	PASS
			30~1000	1.02	-63.64	≤ -18.98	PASS
			1000~26500	1.02	-45.49	≤ -18.98	PASS
		2480	Reference	1.62	1.62	---	PASS
			30~1000	1.62	-63.74	≤ -18.38	PASS
			1000~26500	1.62	-45.61	≤ -18.38	PASS



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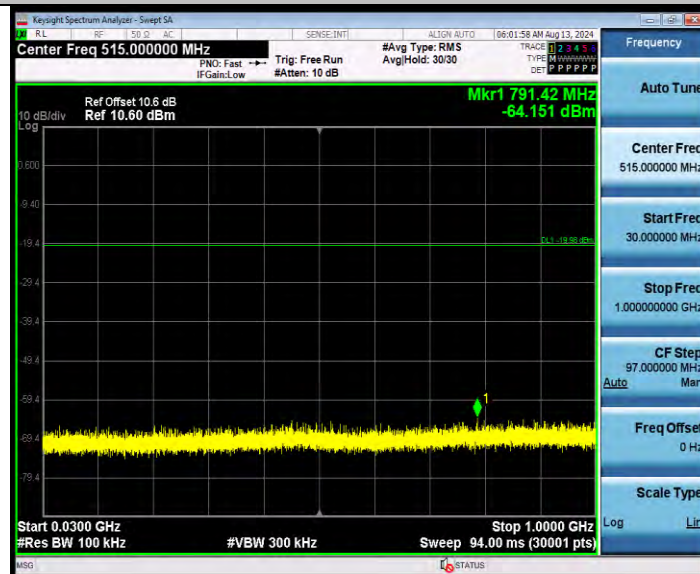
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TEST GRAPHS

BLE_1M_Ant1_2402_0~Reference



BLE_1M_Ant1_2402_30~1000



BLE_1M_Ant1_2402_1000~26500



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Test Report No.: PSU-NQN2407300316RF02



BLE_1M_Ant1_2440_0~Reference

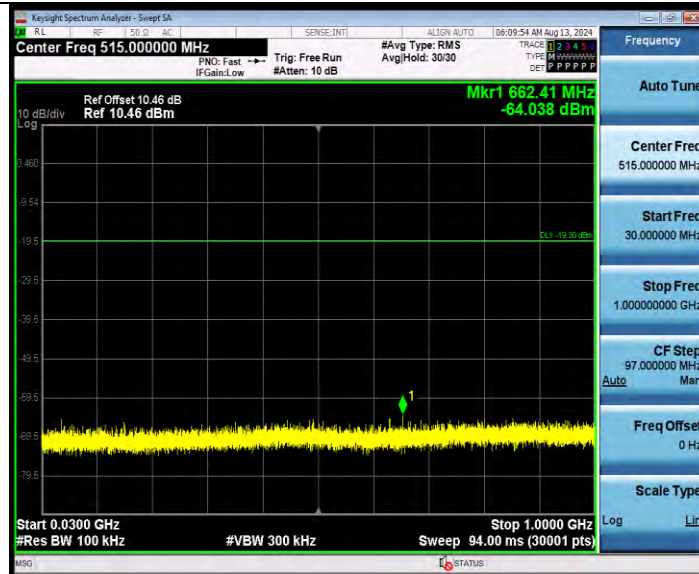


BLE_1M_Ant1_2440_30~1000



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BLE_1M_Ant1_2440_1000~26500



BLE_1M_Ant1_2480_0~Reference



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BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500



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BLE_2M_Ant1_2404_0~Reference

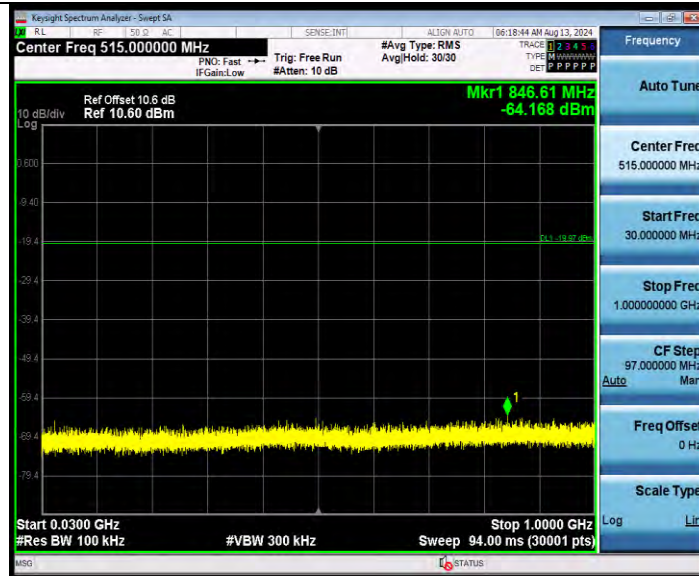


BLE_2M_Ant1_2404_30~1000



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BLE_2M_Ant1_2404_1000~26500



BLE_2M_Ant1_2440_0~Reference

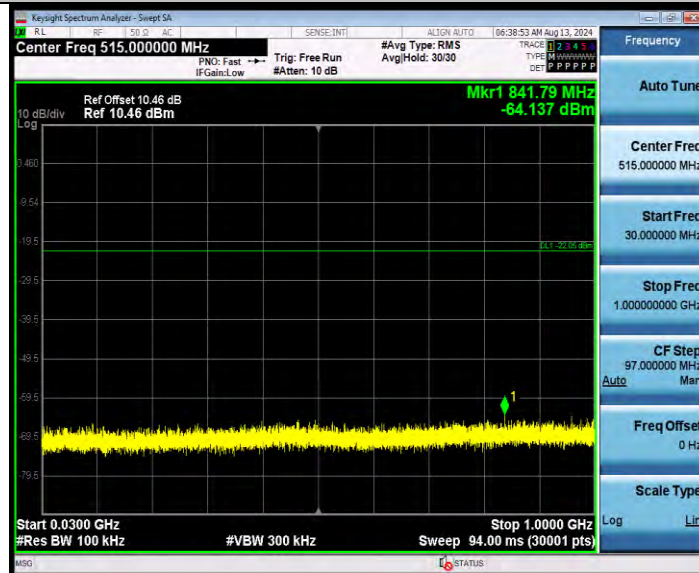


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BLE_2M_Ant1_2440_30~1000



BLE_2M_Ant1_2440_1000~26500



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BLE_2M_Ant1_2478_0~Reference



BLE_2M_Ant1_2478_30~1000

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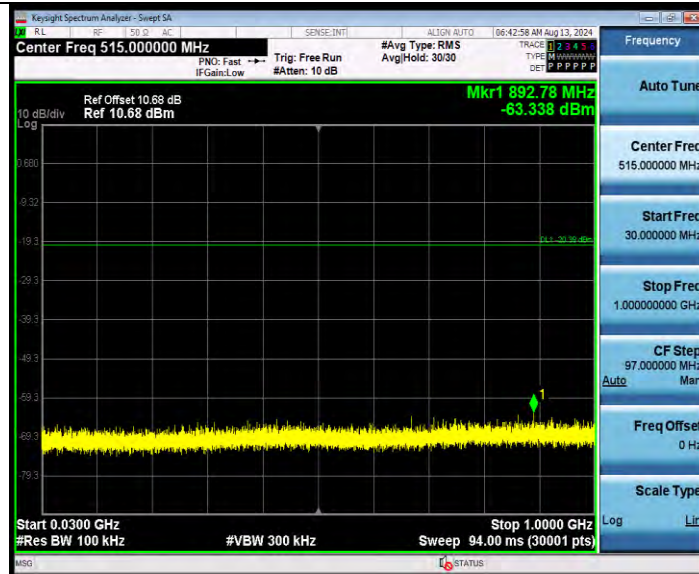
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BLE_2M_Ant1_2478_1000~26500



BLE_125K_Ant1_2402_0~Reference



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BLE_125K_Ant1_2402_30~1000



BLE_125K_Ant1_2402_1000~26500



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BLE_125K_Ant1_2440_0~Reference

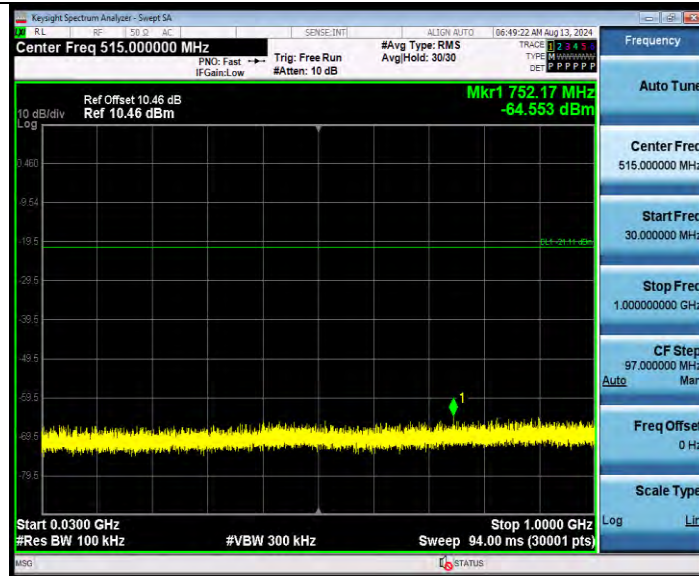


BLE_125K_Ant1_2440_30~1000



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BLE_125K_Ant1_2440_1000~26500



BLE_125K_Ant1_2480_0~Reference

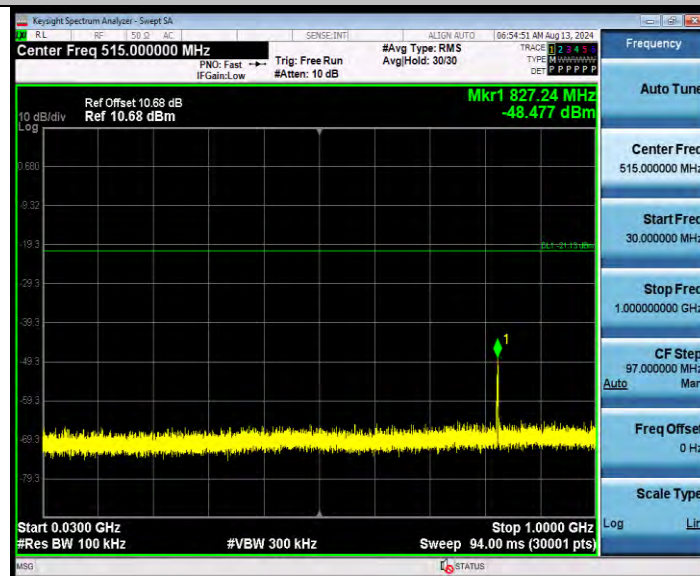


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BLE_125K_Ant1_2480_30~1000



BLE_125K_Ant1_2480_1000~26500



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Test Report No.: PSU-NQN2407300316RF02



BLE_500K_Ant1_2402_0~Reference



BLE_500K_Ant1_2402_30~1000

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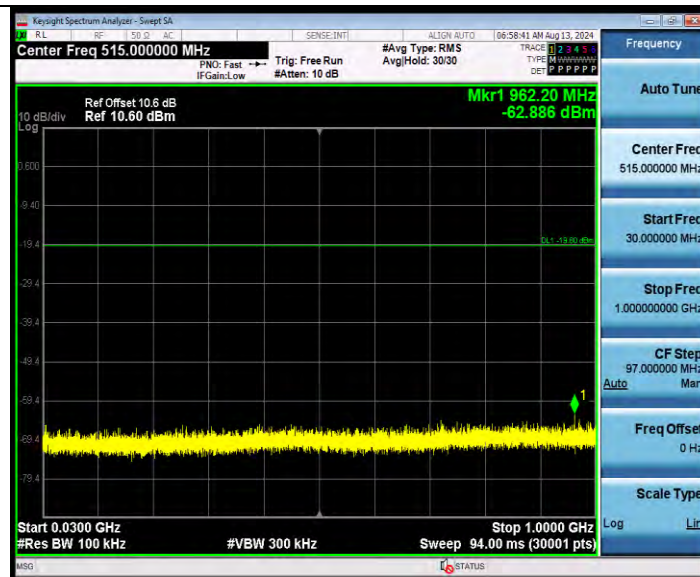
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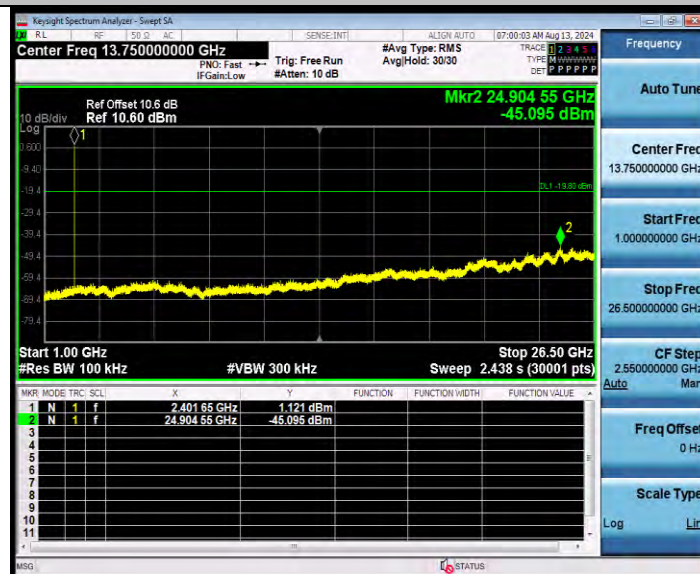


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BLE_500K_Ant1_2402_1000~26500



BLE_500K_Ant1_2440_0~Reference



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Test Report No.: PSU-NQN2407300316RF02



BLE_500K_Ant1_2440_30~1000



BLE_500K_Ant1_2440_1000~26500



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Test Report No.: PSU-NQN2407300316RF02



BLE_500K_Ant1_2480_0~Reference

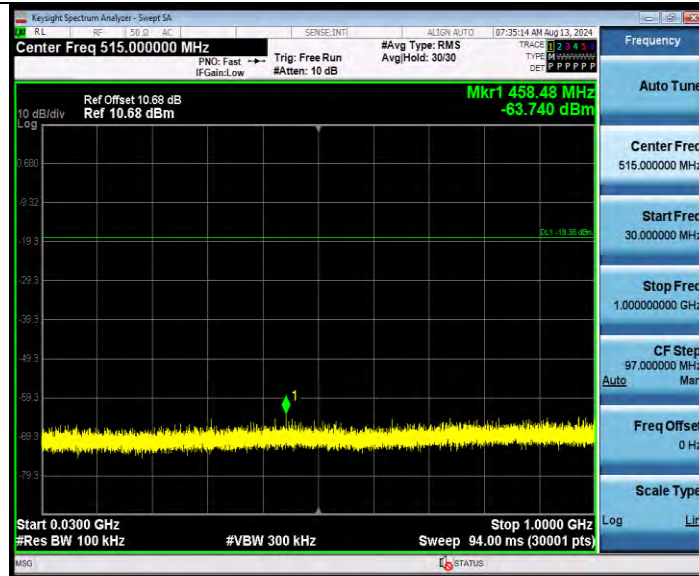


BLE_500K_Ant1_2480_30~1000



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BLE_500K_Ant1_2480_1000~26500



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DUTY CYCLE

TEST RESULT

TestMode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]
BLE_1M	Ant1	2402	2.13	2.52	84.52	0.73
		2440	2.13	2.52	84.52	0.73
		2480	2.13	2.52	84.52	0.73
BLE_2M	Ant1	2404	1.05	1.86	56.45	2.48
		2440	1.08	1.89	57.14	2.43
		2478	1.08	1.89	57.14	2.43
BLE_125K	Ant1	2402	17.05	17.50	97.43	0.11
		2440	17.05	17.50	97.43	0.11
		2480	17.05	17.50	97.43	0.11
BLE_500K	Ant1	2402	4.53	4.98	90.96	0.41
		2440	4.53	4.98	90.96	0.41
		2480	4.53	4.98	90.96	0.41

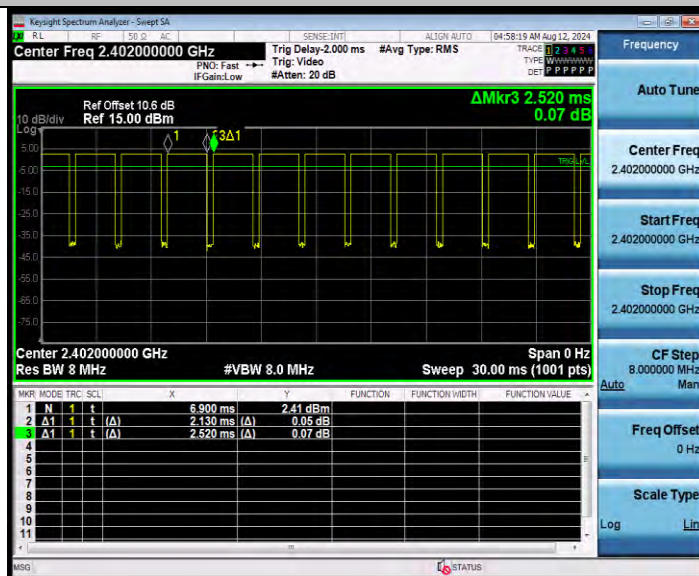


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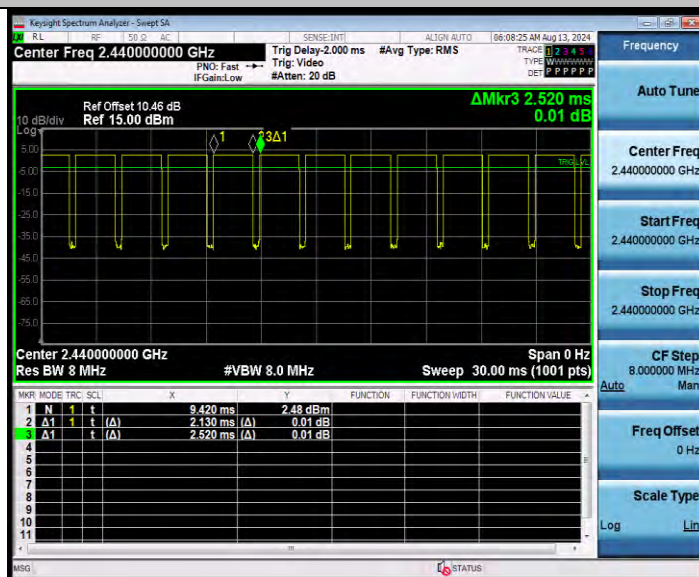
Test Report No.: PSU-NQN2407300316RF02

TEST GRAPHS

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440

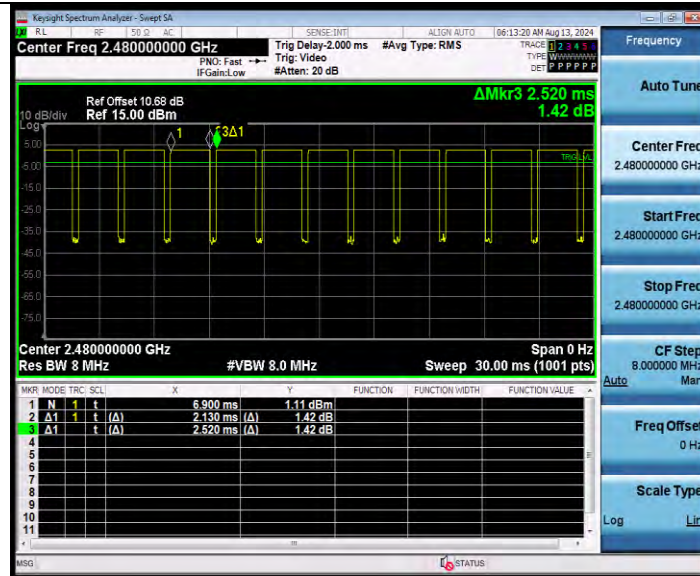


BLE_1M_Ant1_2480

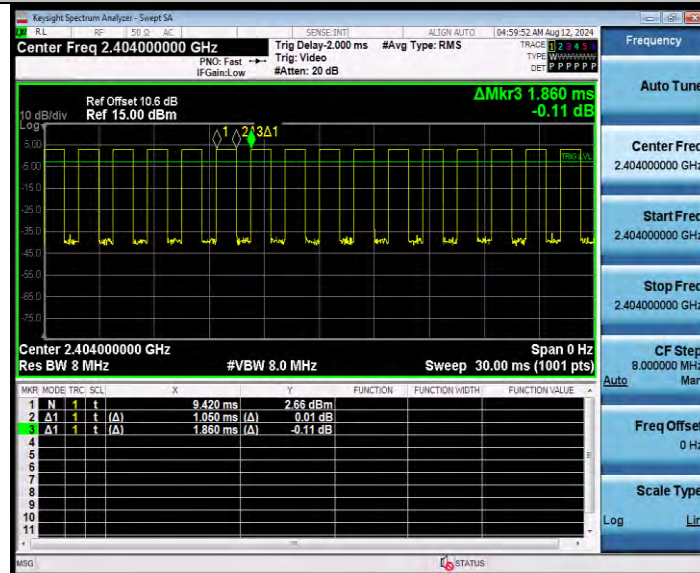


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BLE_2M_Ant1_2404

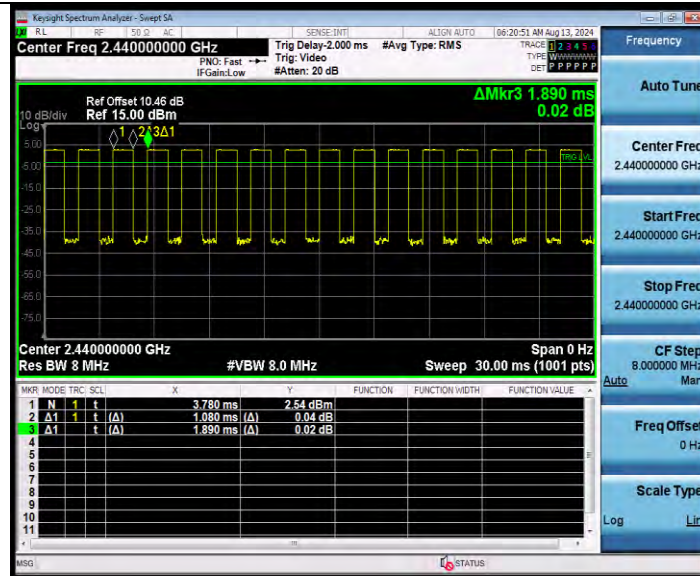


BLE_2M_Ant1_2440

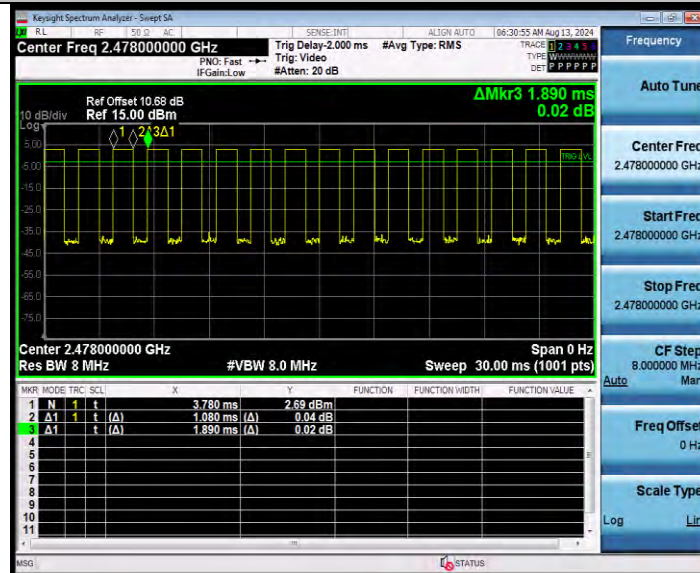


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BLE_2M_Ant1_2478

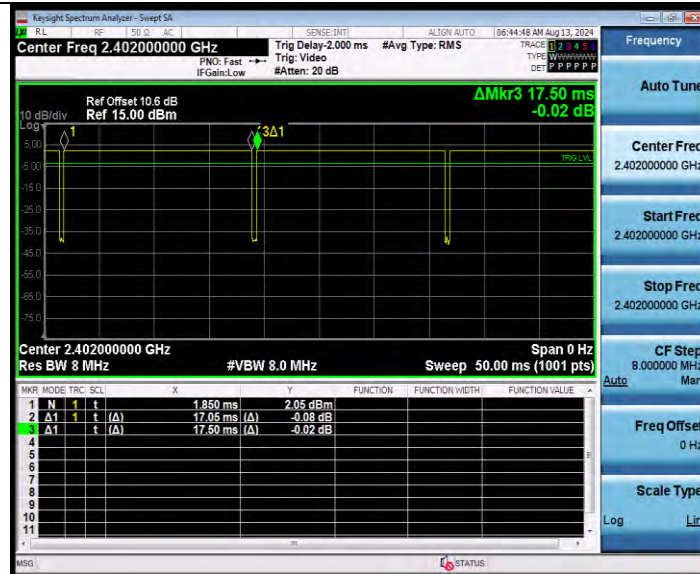


BLE_125K_Ant1_2402

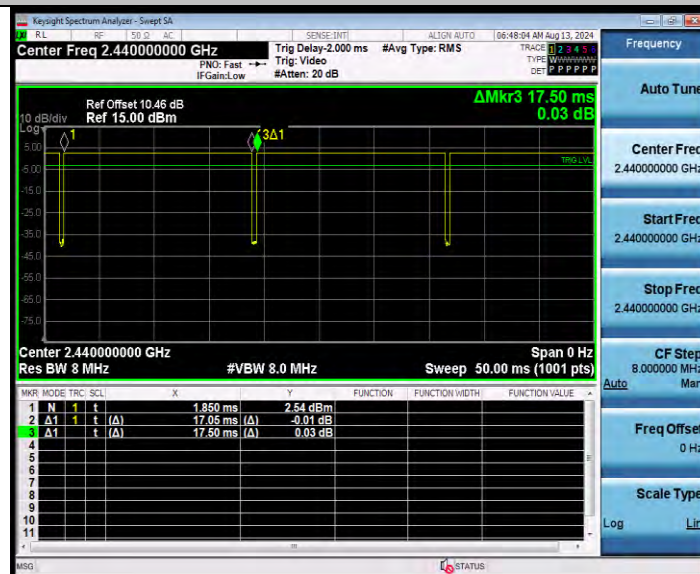


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Test Report No.: PSU-NQN2407300316RF02



BLE_125K_Ant1_2440

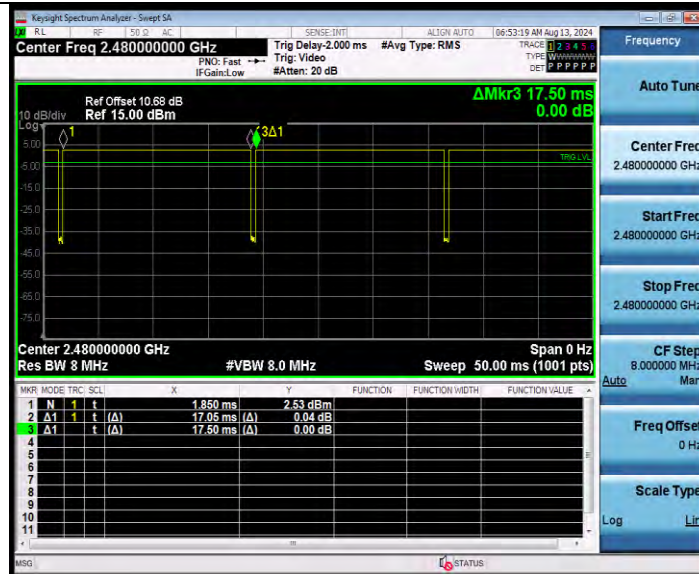


BLE_125K_Ant1_2480

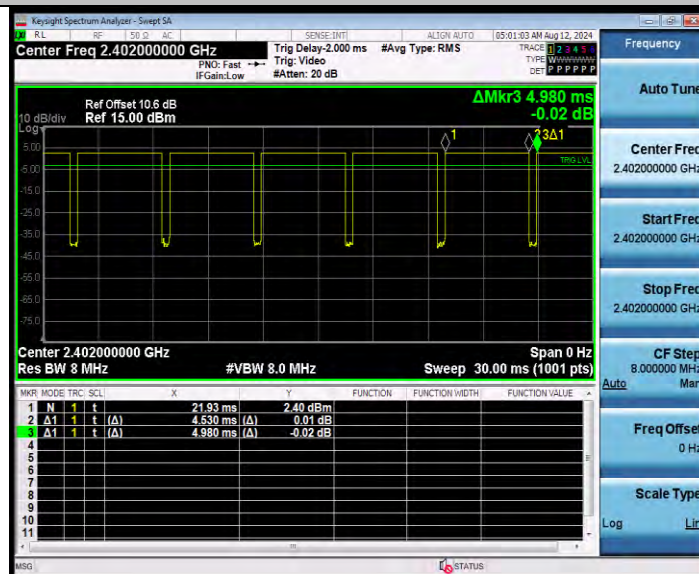


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Test Report No.: PSU-NQN2407300316RF02



BLE_500K_Ant1_2402

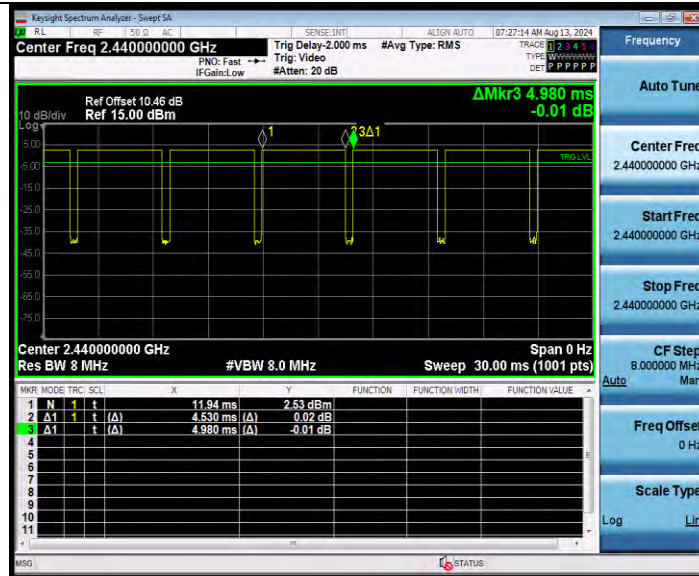


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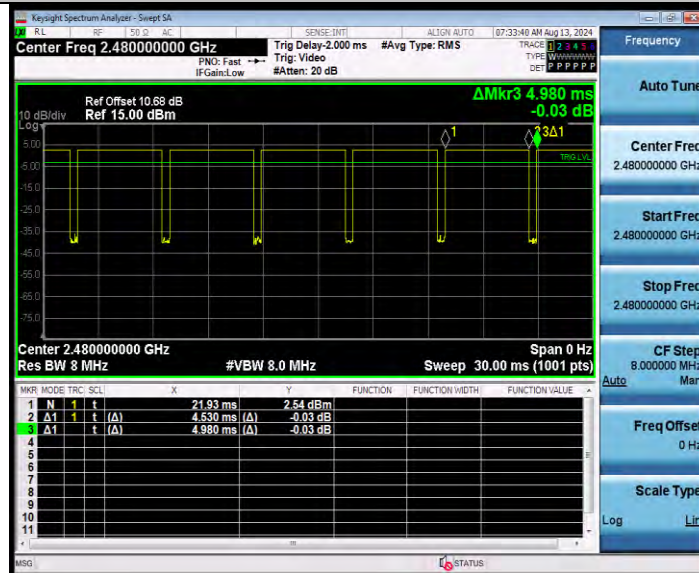


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BLE_500K_Ant1_2480



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