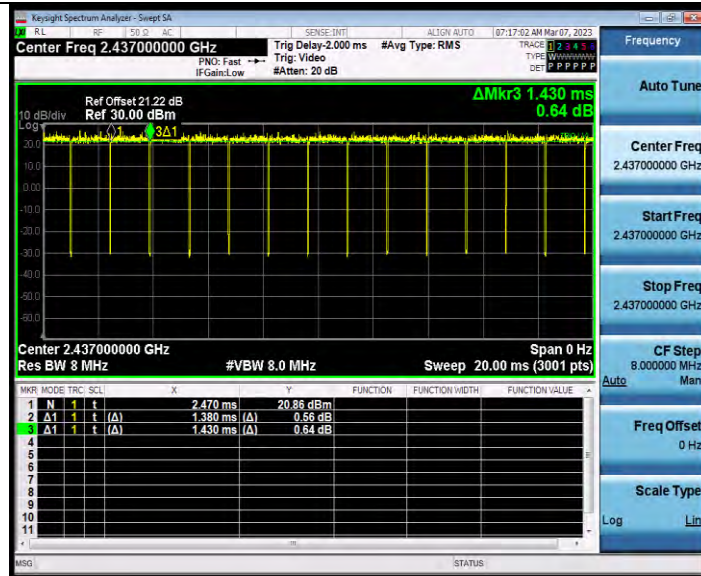


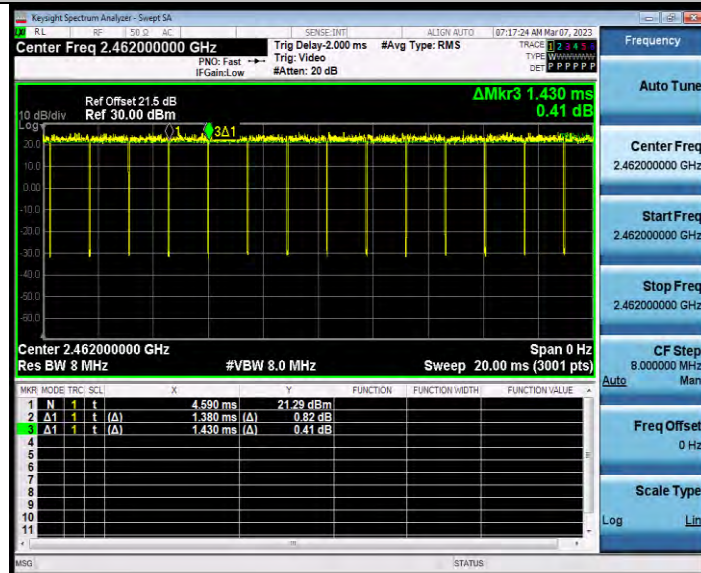


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11G_Ant1_2462

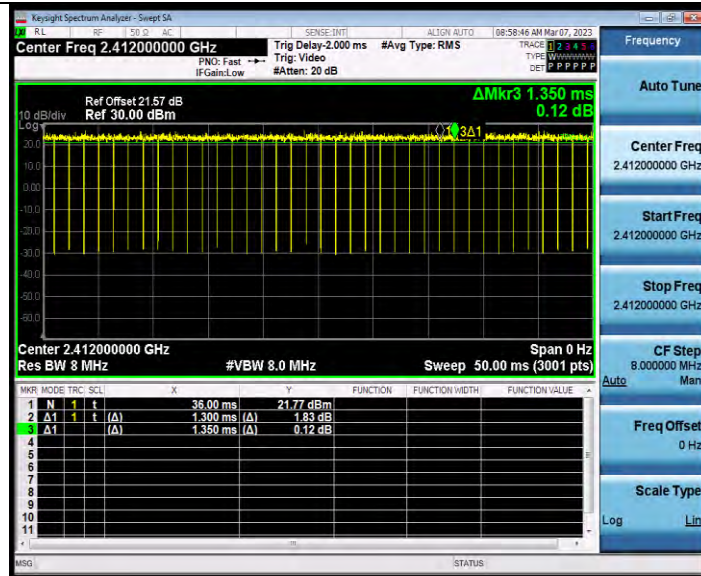


11N20SISO_Ant1_2412

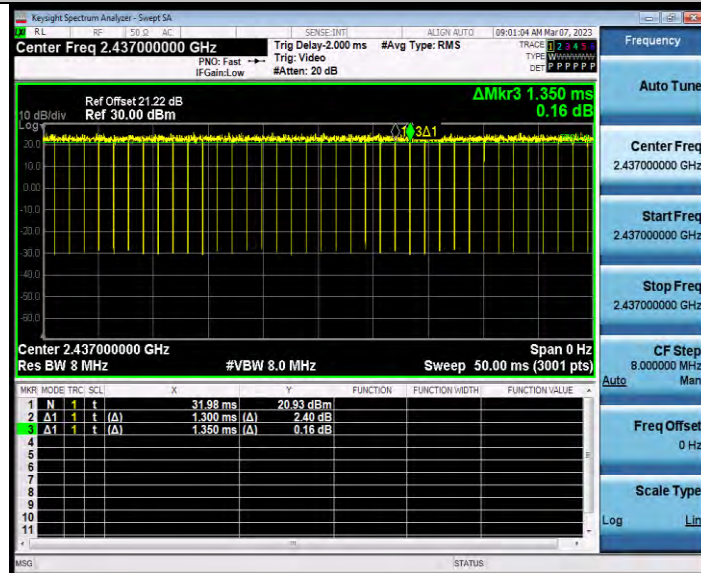


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Test Report No.: W7L-P23030004RF02



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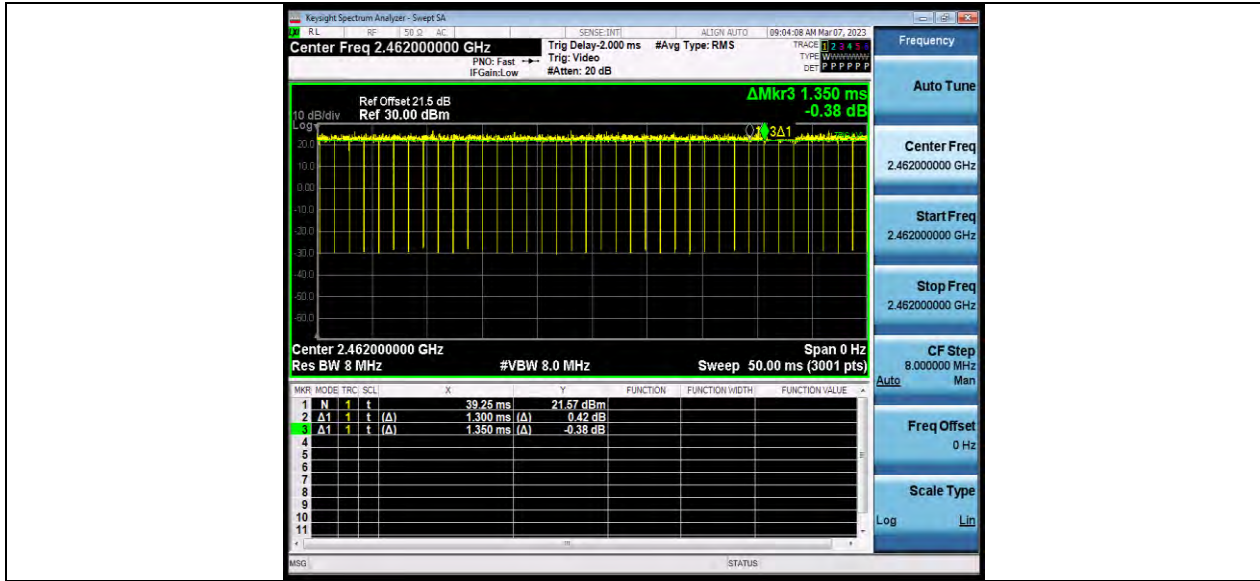


11N20SISO_Ant1_2462



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7 APPENDIX 2 BLE DTS BANDWIDTH TEST RESULT

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.700	2401.648	2402.348	0.5	PASS
		2440	0.664	2439.664	2440.328	0.5	PASS
		2480	0.656	2479.664	2480.320	0.5	PASS
BLE_2M	Ant1	2402	1.240	2401.344	2402.584	0.5	PASS
		2440	1.212	2439.352	2440.564	0.5	PASS
		2480	1.216	2479.360	2480.576	0.5	PASS
BLE_125K	Ant1	2402	0.680	2401.660	2402.340	0.5	PASS
		2440	0.680	2439.660	2440.340	0.5	PASS
		2480	0.680	2479.660	2480.340	0.5	PASS
BLE_500K	Ant1	2402	0.720	2401.636	2402.356	0.5	PASS
		2440	0.676	2439.672	2440.348	0.5	PASS
		2480	0.660	2479.672	2480.332	0.5	PASS



TEST GRAPHS

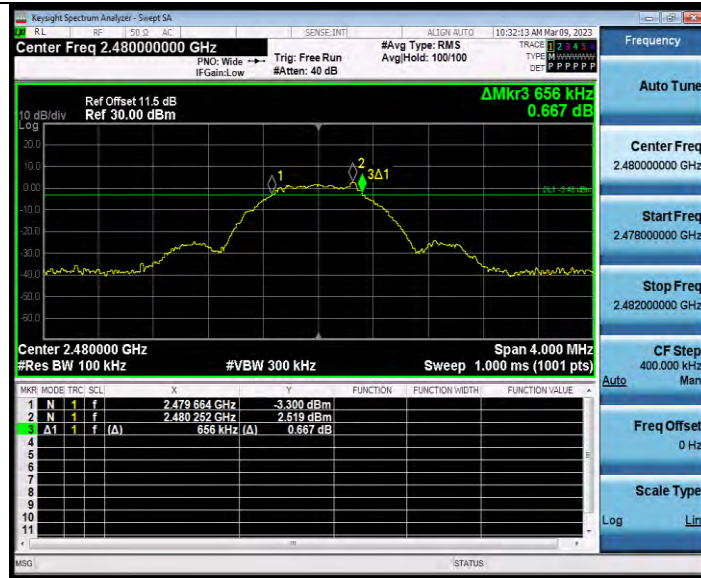
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



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BLE_2M_Ant1_2480

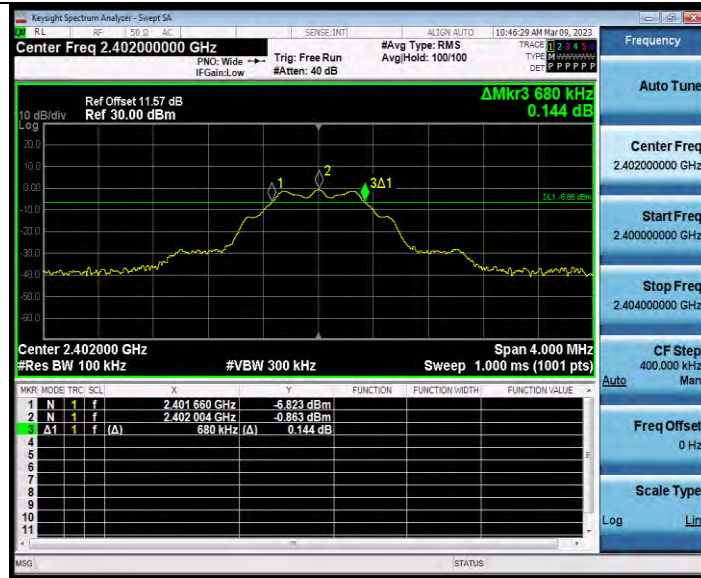


BLE_125K_Ant1_2402

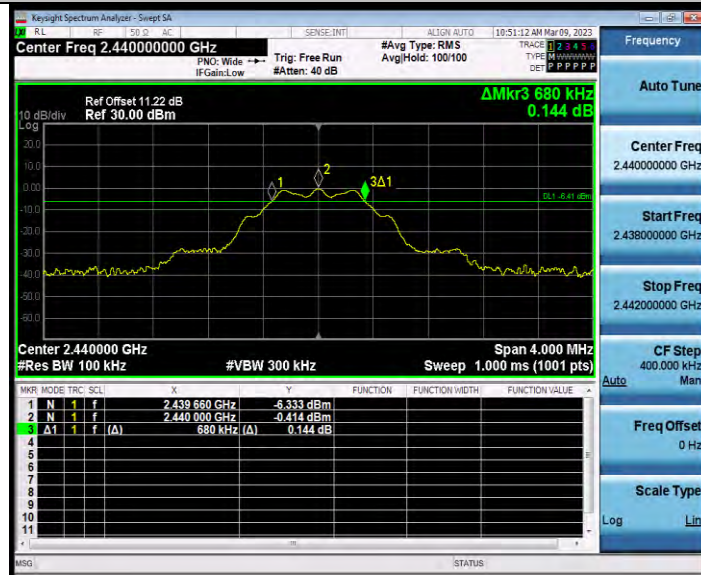


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BLE_125K_Ant1_2440

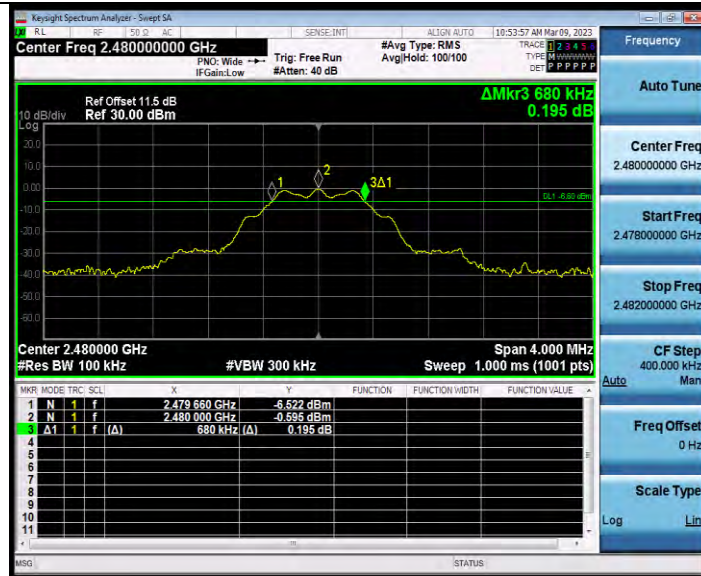


BLE_125K_Ant1_2480



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Test Report No.: W7L-P23030004RF02



BLE_500K_Ant1_2402

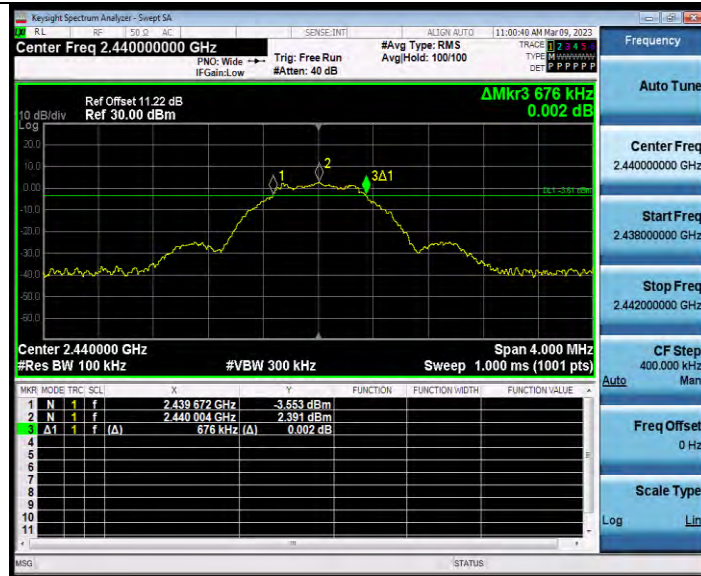


BLE_500K_Ant1_2440



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Test Report No.: W7L-P23030004RF02



BLE_500K_Ant1_2480





OCCUPIED CHANNEL BANDWIDTH

TEST RESULT

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0409	2401.4835	2402.5244	---	---
		2440	1.0340	2439.4881	2440.5221	---	---
		2480	1.0322	2479.4874	2480.5196	---	---
BLE_2M	Ant1	2402	2.0677	2400.9794	2403.0471	---	---
		2440	2.0873	2438.9753	2441.0626	---	---
		2480	2.0539	2478.9831	2481.0370	---	---
BLE_125K	Ant1	2402	1.0598	2401.4715	2402.5313	---	---
		2440	1.0579	2439.4729	2440.5308	---	---
		2480	1.0550	2479.4726	2480.5276	---	---
BLE_500K	Ant1	2402	1.0307	2401.4849	2402.5156	---	---
		2440	1.0338	2439.4865	2440.5203	---	---
		2480	1.0310	2479.4845	2480.5155	---	---



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Test Report No.: W7L-P23030004RF02

TEST GRAPHS

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



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Test Report No.: W7L-P23030004RF02



BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



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Test Report No.: W7L-P23030004RF02



BLE_2M_Ant1_2480



BLE_125K_Ant1_2402



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Test Report No.: W7L-P23030004RF02



BLE_125K_Ant1_2440



BLE_125K_Ant1_2480



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Test Report No.: W7L-P23030004RF02



BLE_500K_Ant1_2402



BLE_500K_Ant1_2440



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Test Report No.: W7L-P23030004RF02



BLE_500K_Ant1_2480





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	1.09	1.6	1.45	≤30.00	-2.1	0.62	≤36	PASS	Default
		2440	2.28	2.72	1.87	≤30.00	-0.98	0.80	≤36	PASS	Default
		2480	1.93	2.12	1.63	≤30.00	-1.58	0.70	≤36	PASS	Default
BLE_2M	Ant1	2402	1.59	1.74	1.49	≤30.00	-1.96	0.64	≤36	PASS	Default
		2440	2.54	2.76	1.89	≤30.00	-0.94	0.81	≤36	PASS	Default
		2480	1.85	2.17	1.65	≤30.00	-1.53	0.70	≤36	PASS	Default
BLE_125k	Ant1	2402	1.25	1.58	1.44	≤30.00	-2.12	0.61	≤36	PASS	Default
		2440	2.43	2.73	1.87	≤30.00	-0.97	0.80	≤36	PASS	Default
		2480	1.73	2.13	1.63	≤30.00	-1.57	0.70	≤36	PASS	Default
BLE_500K	Ant1	2402	1.12	1.59	1.44	≤30.00	-2.11	0.62	≤36	PASS	Default
		2440	2.31	2.73	1.87	≤30.00	-0.97	0.80	≤36	PASS	Default
		2480	1.67	2.17	1.65	≤30.00	-1.53	0.70	≤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	-13.77	≤8.00	PASS
		2440	-13.22	≤8.00	PASS
		2480	-13.28	≤8.00	PASS
BLE_2M	Ant1	2402	-16.1	≤8.00	PASS
		2440	-15.57	≤8.00	PASS
		2480	-15.65	≤8.00	PASS
BLE_125K	Ant1	2402	-3.79	≤8.00	PASS
		2440	-3.42	≤8.00	PASS
		2480	-3.52	≤8.00	PASS
BLE_500K	Ant1	2402	-3.91	≤8.00	PASS
		2440	-3.46	≤8.00	PASS
		2480	-3.48	≤8.00	PASS

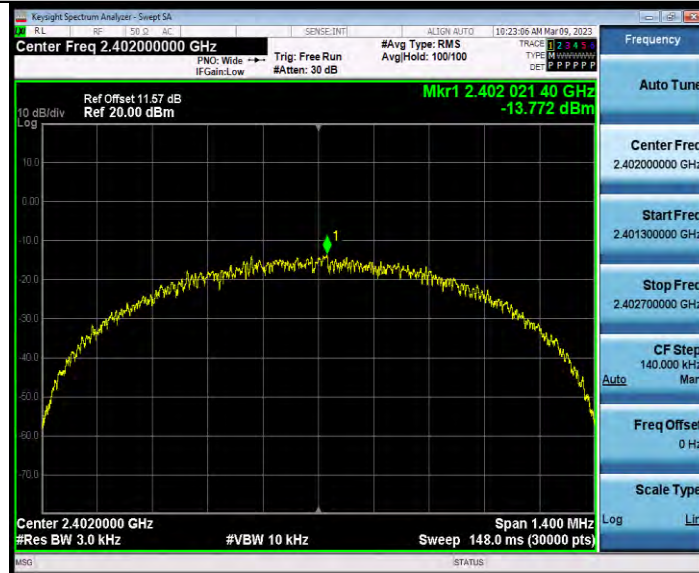


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TEST GRAPHS

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440

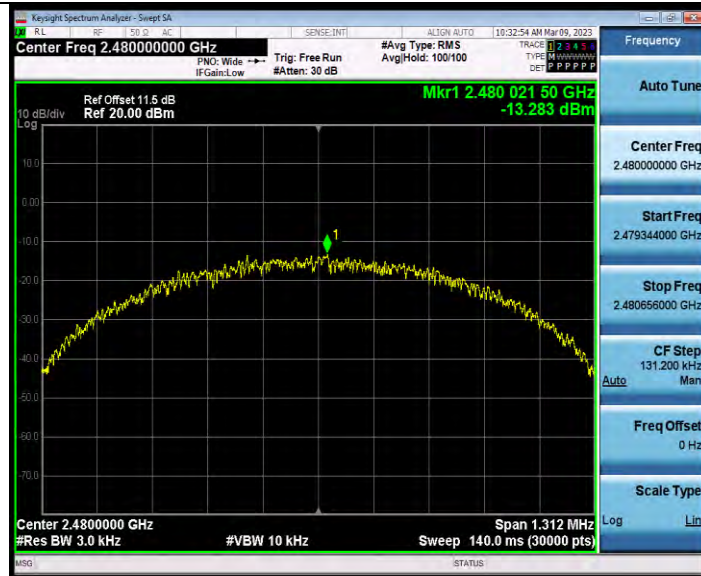


BLE_1M_Ant1_2480



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BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



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Test Report No.: W7L-P23030004RF02



BLE_2M_Ant1_2480



BLE_125K_Ant1_2402



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Test Report No.: W7L-P23030004RF02



BLE_125K_Ant1_2440



BLE_125K_Ant1_2480

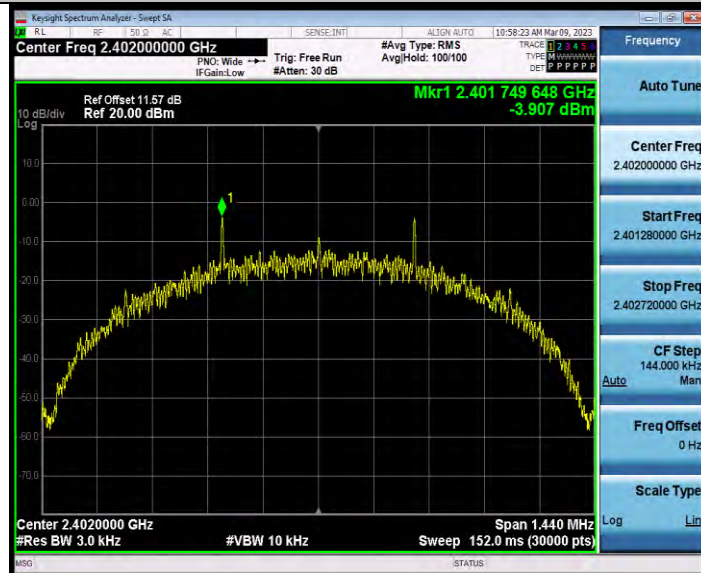


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BLE_500K_Ant1_2402



BLE_500K_Ant1_2440

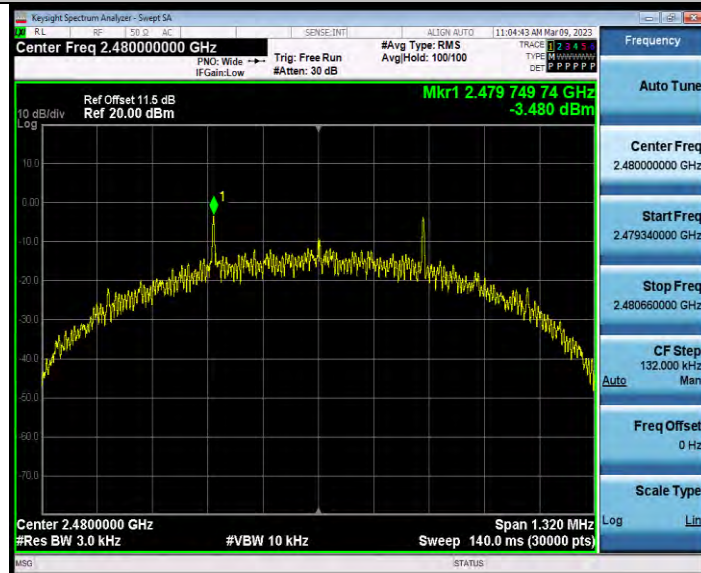


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BLE_500K_Ant1_2480





BAND EDGE MEASUREMENTS

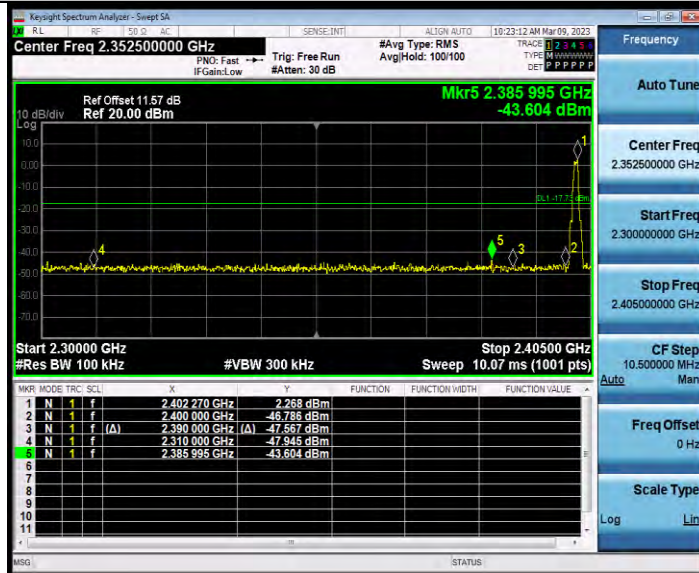
TEST RESULT

TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	2.27	-43.6	≤-17.73	PASS
		High	2480	2.01	-43.92	≤-17.99	PASS
BLE_2M	Ant1	Low	2402	1.88	-26.87	≤-18.12	PASS
		High	2480	0.65	-44.28	≤-19.36	PASS
BLE_125K	Ant1	Low	2402	-0.84	-44.81	≤-20.84	PASS
		High	2480	-0.55	-43.99	≤-20.55	PASS
BLE_500K	Ant1	Low	2402	1.96	-44.34	≤-18.05	PASS
		High	2480	2.30	-43.5	≤-17.7	PASS

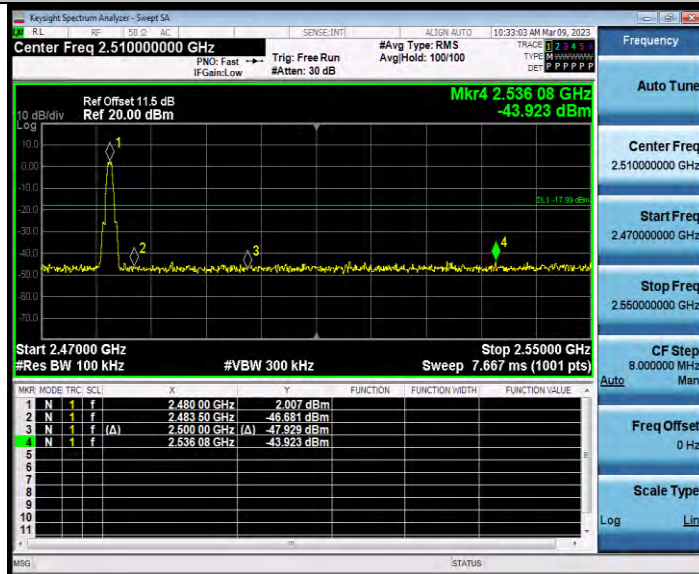


TEST GRAPHS

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480

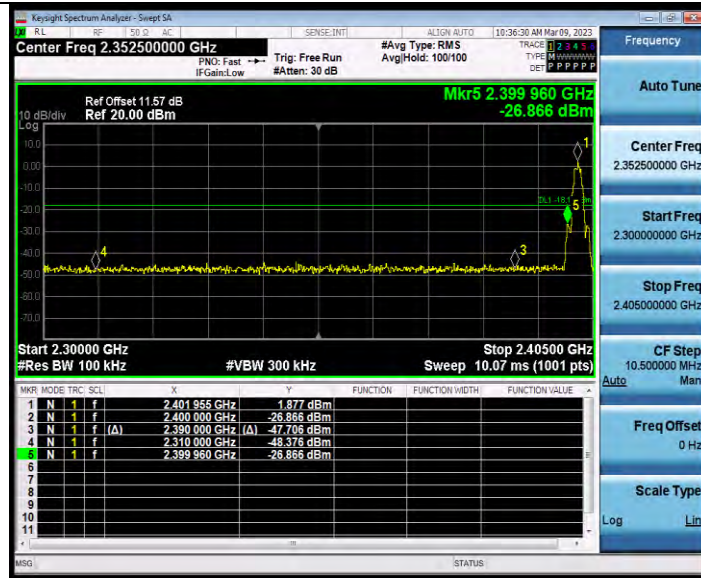


BLE_2M_Ant1_Low_2402

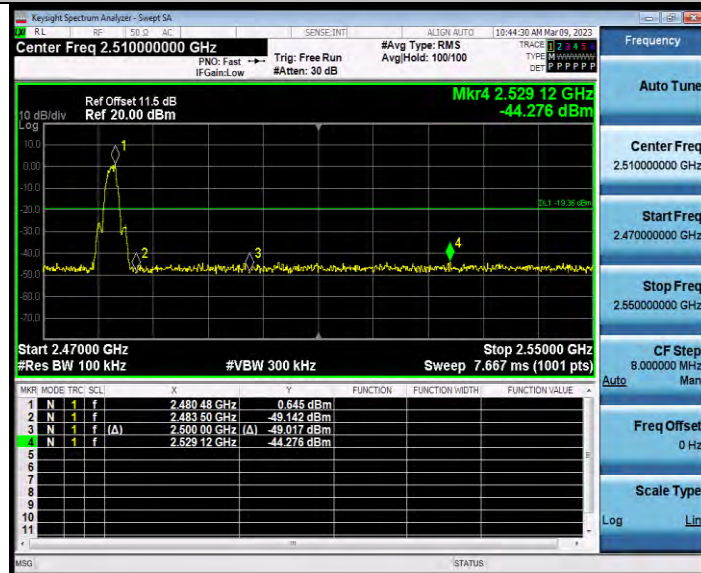


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Test Report No.: W7L-P23030004RF02



BLE_2M_Ant1_High_2480

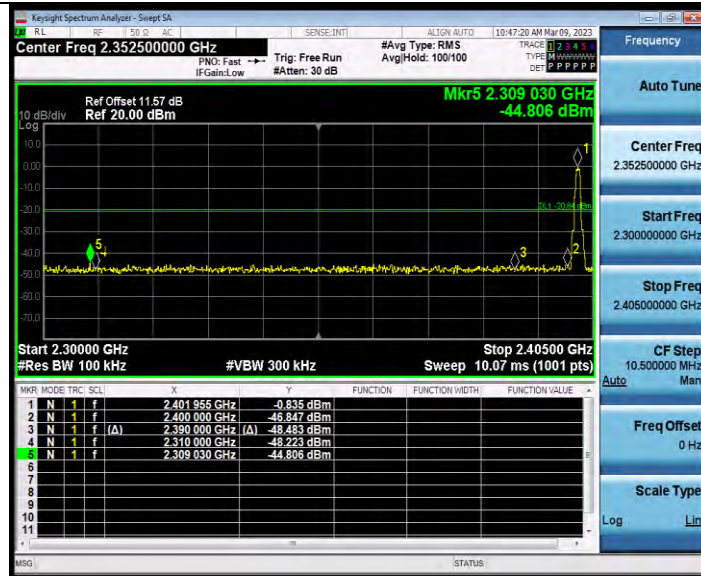


BLE_125K_Ant1_Low_2402

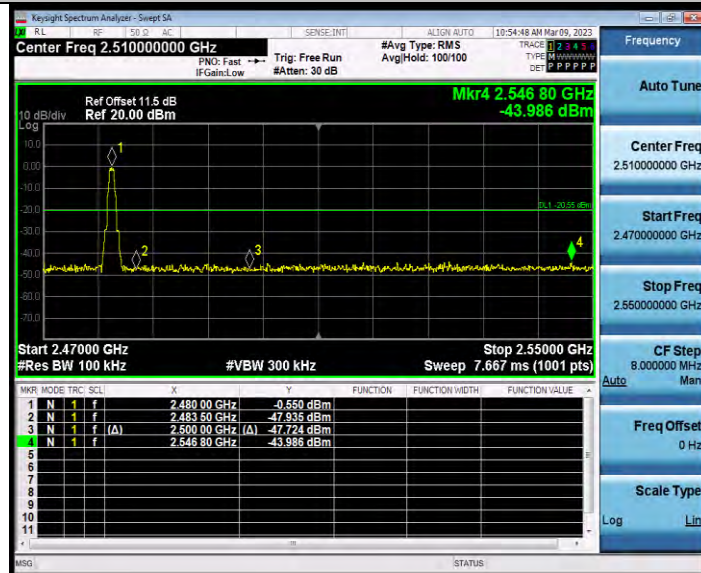


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Test Report No.: W7L-P23030004RF02



BLE_125K_Ant1_High_2480

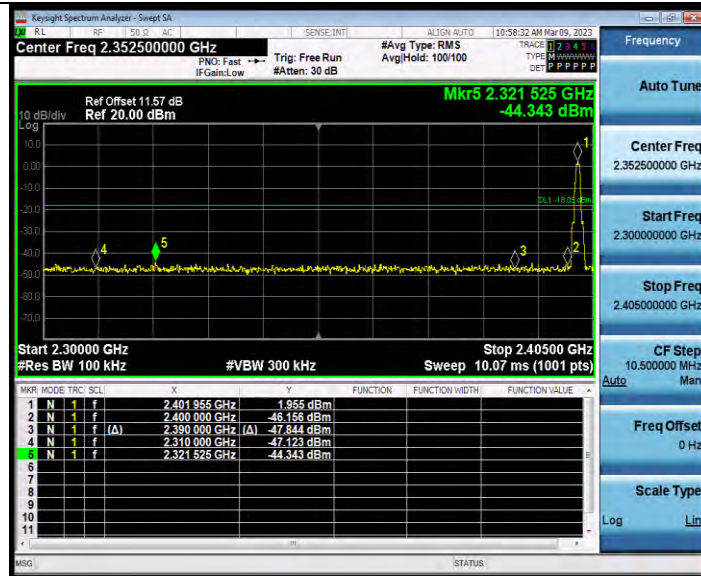


BLE_500K_Ant1_Low_2402

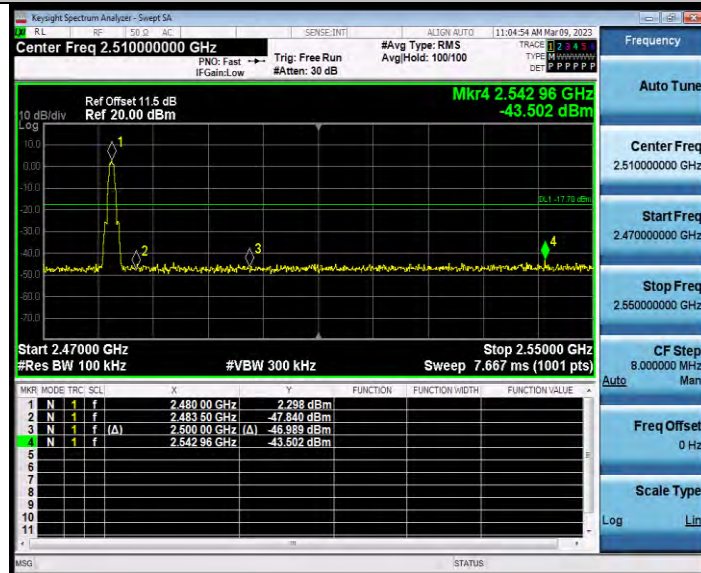


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BLE_500K_Ant1_High_2480





CONDUCTED SPURIOUS EMISSION

TEST RESULT

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	0.86	0.86	---	PASS
			30~1000	0.86	-53.58	≤-19.14	PASS
			1000~26500	0.86	-34.06	≤-19.14	PASS
		2440	Reference	1.94	1.94	---	PASS
			30~1000	1.94	-54.04	≤-18.06	PASS
			1000~26500	1.94	-33.69	≤-18.06	PASS
		2480	Reference	2.24	2.24	---	PASS
			30~1000	2.24	-50.92	≤-17.76	PASS
			1000~26500	2.24	-34.85	≤-17.76	PASS
BLE_2M	Ant1	2402	Reference	1.31	1.31	---	PASS
			30~1000	1.31	-52.85	≤-18.69	PASS
			1000~26500	1.31	-34.29	≤-18.69	PASS
		2440	Reference	-0.99	-0.99	---	PASS
			30~1000	-0.99	-53.64	≤-20.99	PASS
			1000~26500	-0.99	-34.55	≤-20.99	PASS
		2480	Reference	-0.59	-0.59	---	PASS
			30~1000	-0.59	-53.77	≤-20.59	PASS
			1000~26500	-0.59	-33.17	≤-20.59	PASS
BLE_125K	Ant1	2402	Reference	-0.88	-0.88	---	PASS
			30~1000	-0.88	-52.57	≤-20.88	PASS
			1000~26500	-0.88	-34.21	≤-20.88	PASS
		2440	Reference	-0.48	-0.48	---	PASS
			30~1000	-0.48	-53.15	≤-20.48	PASS
			1000~26500	-0.48	-34.36	≤-20.48	PASS
		2480	Reference	-0.58	-0.58	---	PASS
			30~1000	-0.58	-52.65	≤-20.58	PASS
			1000~26500	-0.58	-33.86	≤-20.58	PASS
BLE_500K	Ant1	2402	Reference	0.90	0.90	---	PASS
			30~1000	0.90	-53.49	≤-19.1	PASS



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			1000~26500	0.90	-34.07	≤-19.1	PASS
		2440	Reference	2.11	2.11	---	PASS
			30~1000	2.11	-53.18	≤-17.89	PASS
			1000~26500	2.11	-34.38	≤-17.89	PASS
		2480	Reference	1.42	1.42	---	PASS
			30~1000	1.42	-52.57	≤-18.58	PASS
			1000~26500	1.42	-33.99	≤-18.58	PASS



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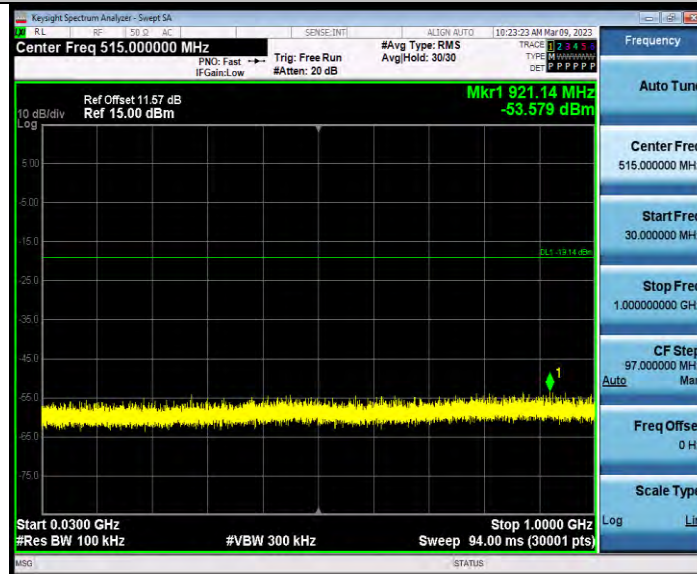
Test Report No.: W7L-P23030004RF02

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.: W7L-P23030004RF02



BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



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Test Report No.: W7L-P23030004RF02



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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Test Report No.: W7L-P23030004RF02



BLE_2M_Ant1_2402_0~Reference



BLE_2M_Ant1_2402_30~1000



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Test Report No.: W7L-P23030004RF02



BLE_2M_Ant1_2402_1000~26500



BLE_2M_Ant1_2440_0~Reference



**BUREAU
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Test Report No.: W7L-P23030004RF02



BLE_2M_Ant1_2440_30~1000



BLE_2M_Ant1_2440_1000~26500



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Test Report No.: W7L-P23030004RF02



BLE_2M_Ant1_2480_0~Reference

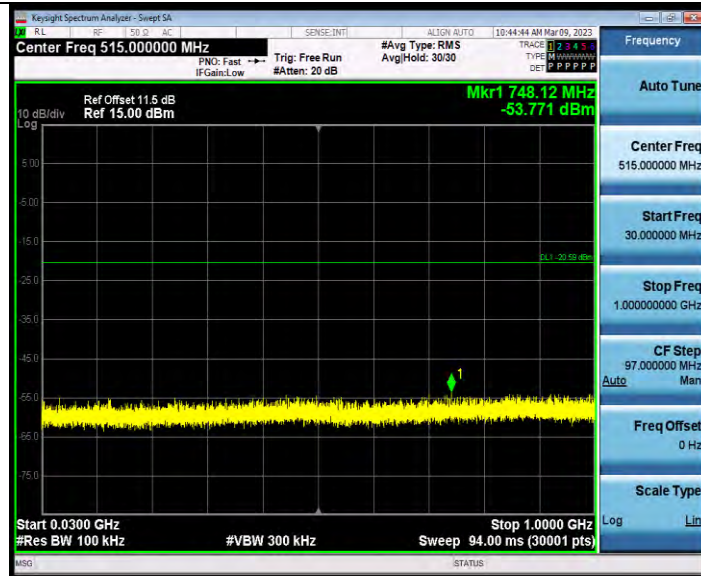


BLE_2M_Ant1_2480_30~1000



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Test Report No.: W7L-P23030004RF02



BLE_2M_Ant1_2480_1000~26500



BLE_125K_Ant1_2402_0~Reference

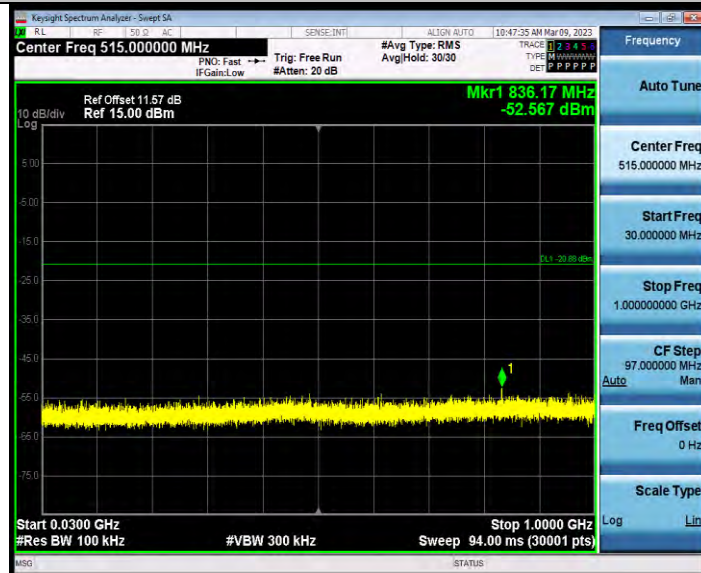


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Test Report No.: W7L-P23030004RF02



BLE_125K_Ant1_2402_30~1000



BLE_125K_Ant1_2402_1000~26500



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Test Report No.: W7L-P23030004RF02



BLE_125K_Ant1_2440_0~Reference



BLE_125K_Ant1_2440_30~1000



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Test Report No.: W7L-P23030004RF02



BLE_125K_Ant1_2440_1000~26500



BLE_125K_Ant1_2480_0~Reference

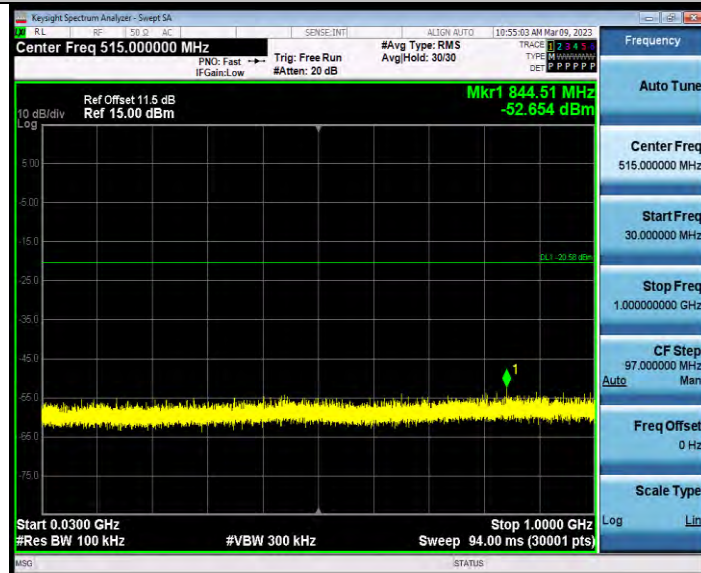


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Test Report No.: W7L-P23030004RF02



BLE_125K_Ant1_2480_30~1000



BLE_125K_Ant1_2480_1000~26500



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Test Report No.: W7L-P23030004RF02



BLE_500K_Ant1_2402_0~Reference



BLE_500K_Ant1_2402_30~1000

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BLE_500K_Ant1_2402_1000~26500



BLE_500K_Ant1_2440_0~Reference



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Test Report No.: W7L-P23030004RF02



BLE_500K_Ant1_2440_30~1000



BLE_500K_Ant1_2440_1000~26500



BUREAU VERITAS

Test Report No.: W7L-P23030004RF02



BLE_500K_Ant1_2480_0~Reference



BLE_500K_Ant1_2480_30~1000



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Test Report No.: W7L-P23030004RF02



BLE_500K_Ant1_2480_1000~26500





DUTY CYCLE TEST RESULT

TestMode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]
BLE_1M	Ant1	2402	2.14	2.50	85.60	0.68
		2440	2.12	2.50	84.80	0.72
		2480	2.12	2.50	84.80	0.72
BLE_2M	Ant1	2402	1.06	1.88	56.38	2.49
		2440	1.06	1.88	56.38	2.49
		2480	1.06	1.88	56.38	2.49
BLE_125K	Ant1	2402	17.04	17.52	97.26	0.12
		2440	17.04	17.52	97.26	0.12
		2480	17.04	17.52	97.26	0.12
BLE_500K	Ant1	2402	4.54	5.00	90.80	0.42
		2440	4.56	5.00	91.20	0.40
		2480	4.54	5.00	90.80	0.42

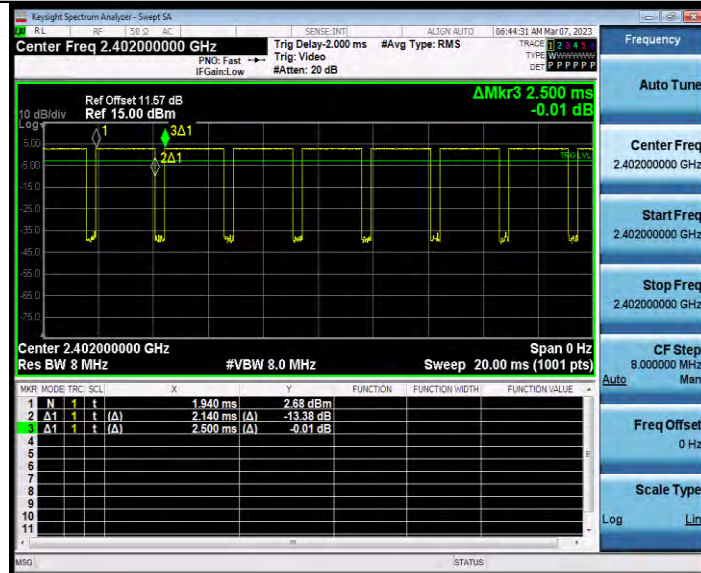


BUREAU VERITAS

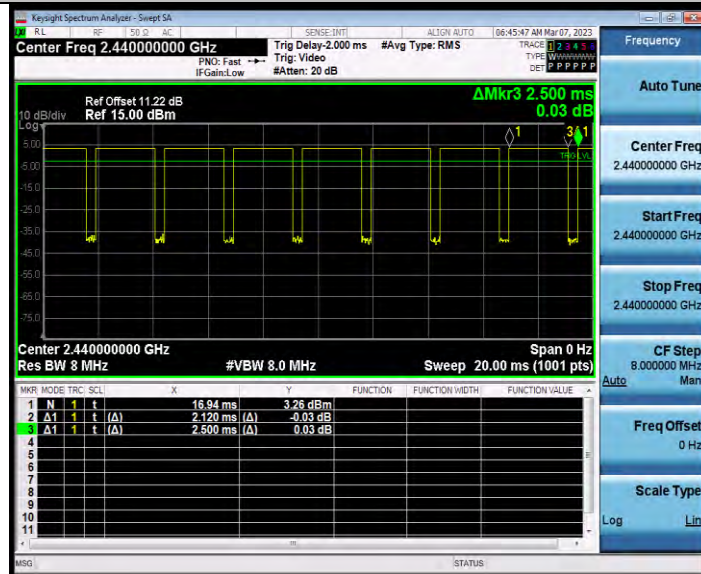
Test Report No.: W7L-P23030004RF02

TEST GRAPHS

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440

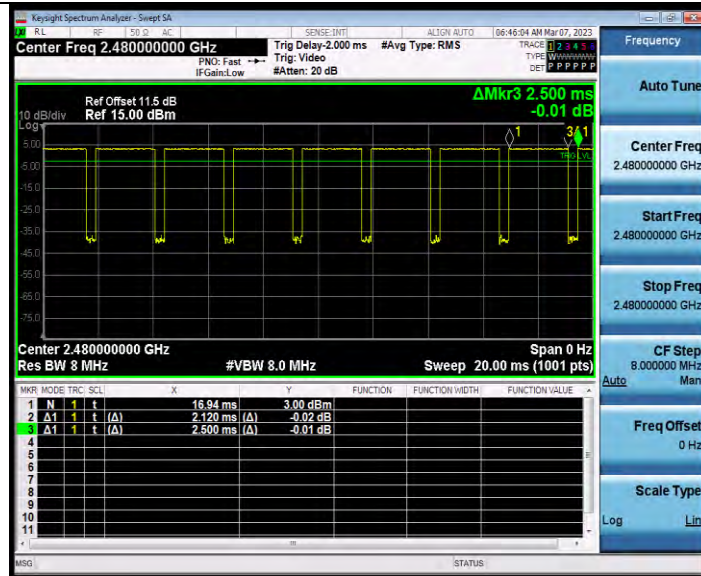


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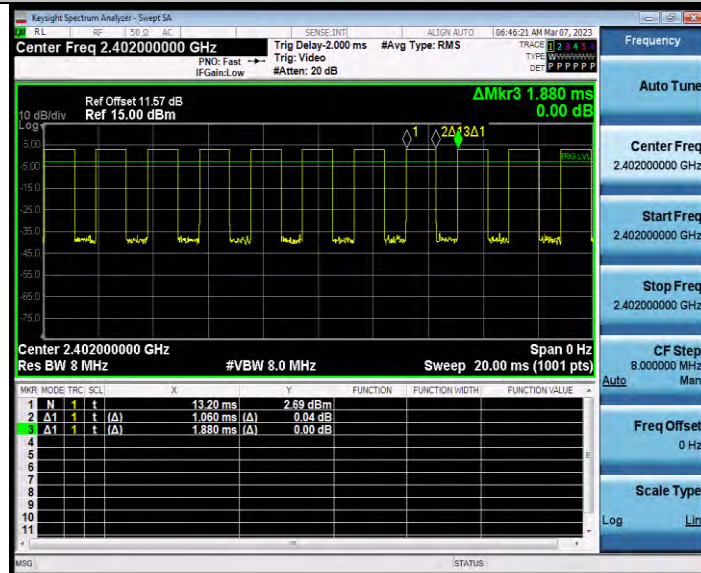


BUREAU VERITAS

Test Report No.: W7L-P23030004RF02



BLE_2M_Ant1_2402

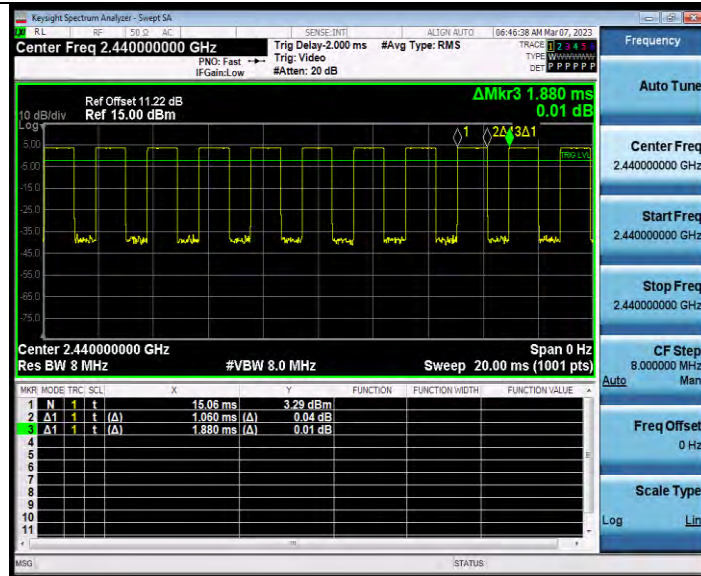


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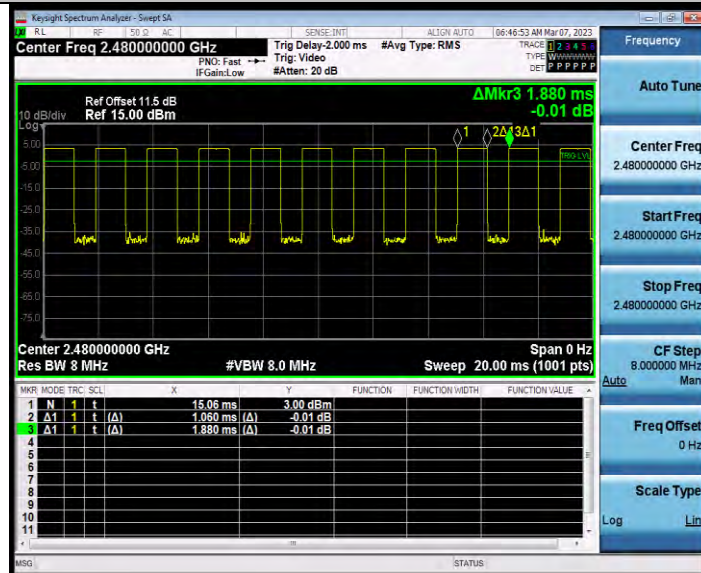


BUREAU VERITAS

Test Report No.: W7L-P23030004RF02



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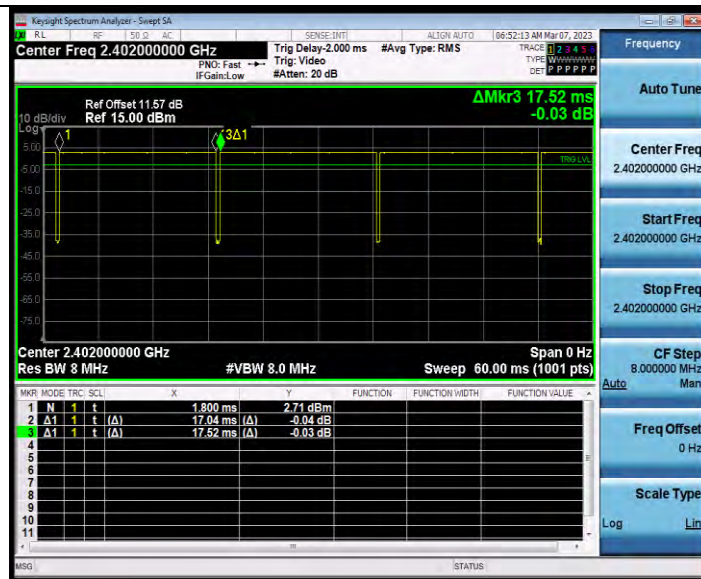


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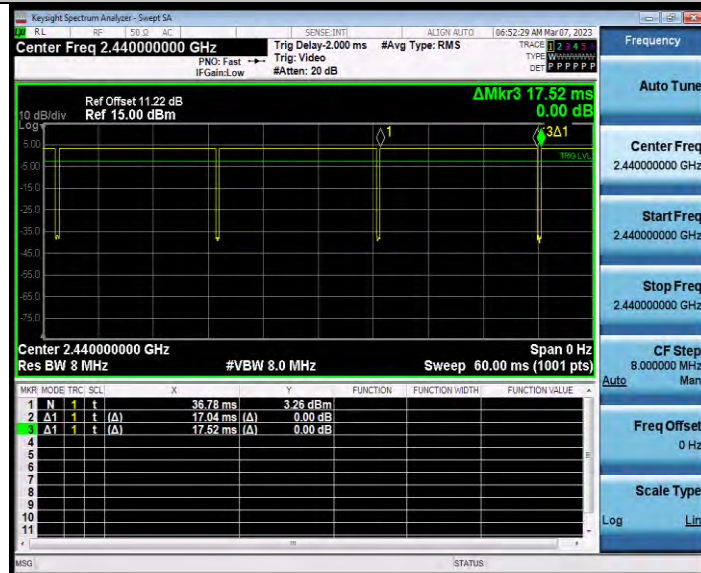


**BUREAU
VERITAS**

Test Report No.: W7L-P23030004RF02



BLE_125K_Ant1_2440

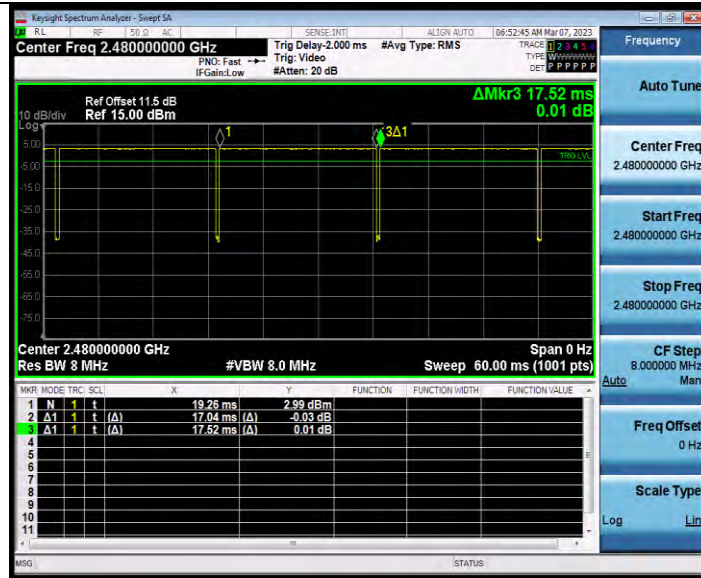


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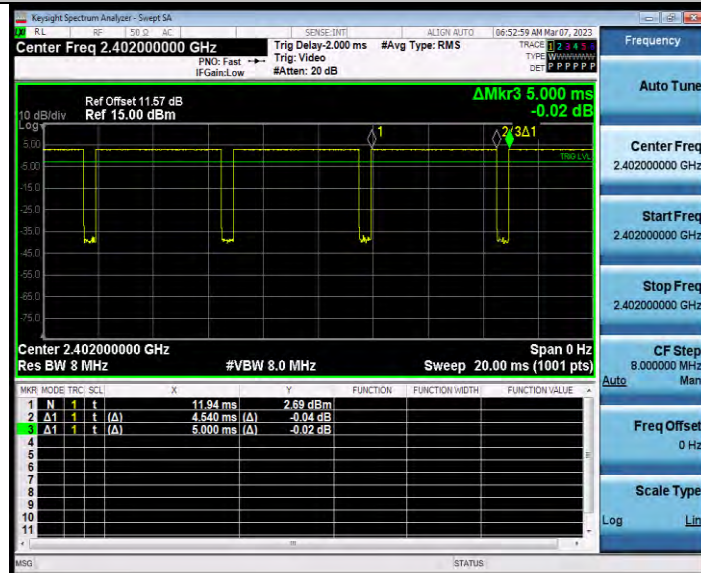


BUREAU VERITAS

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BLE_500K_Ant1_2402

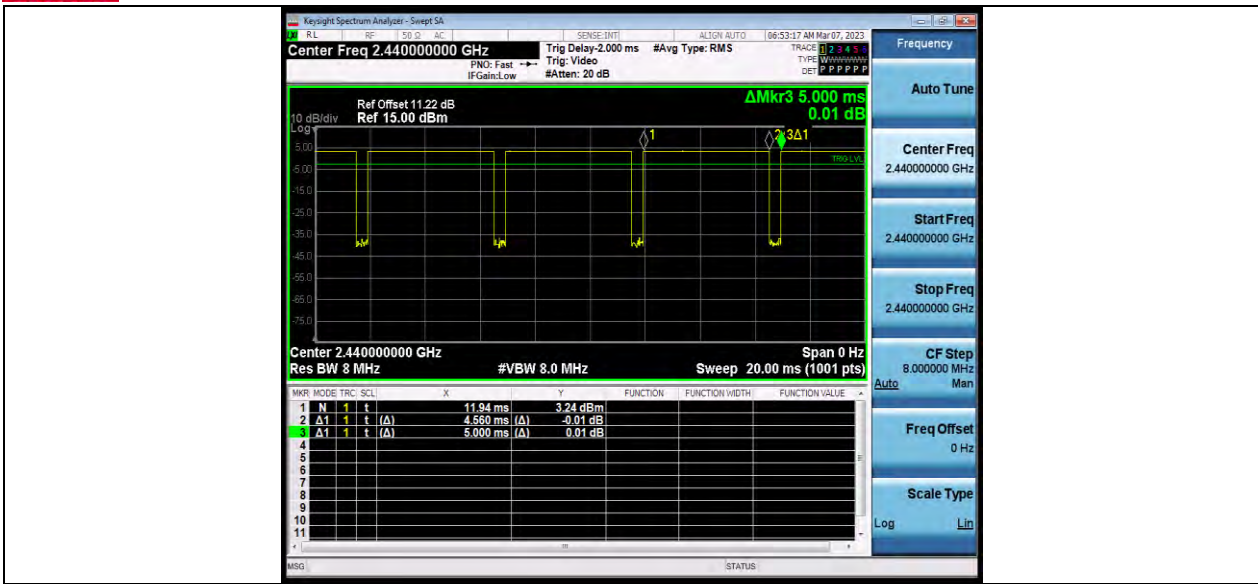


BLE_500K_Ant1_2440

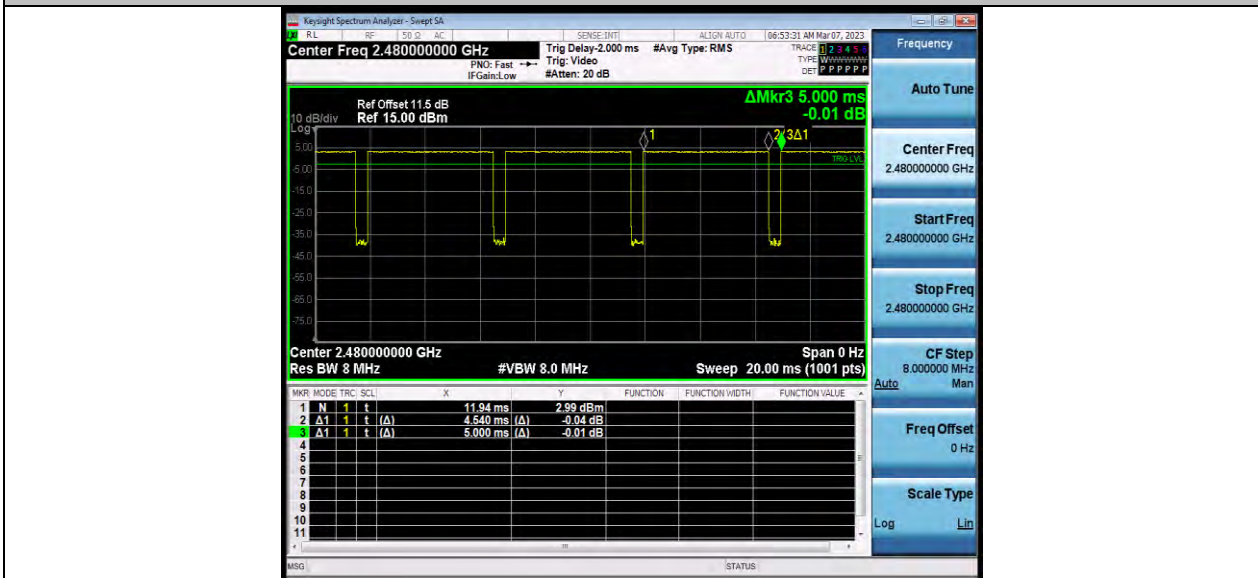


BUREAU VERITAS

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BLE_500K_Ant1_2480



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