



Appendix B

RF Test Data for BT LE (Conducted Measurement)

Product Name: An air drum set

Test Model: GRA2

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Joker Hu
Supervised by:	Jack Cheng





B.1 DTS Bandwidth

Test Result

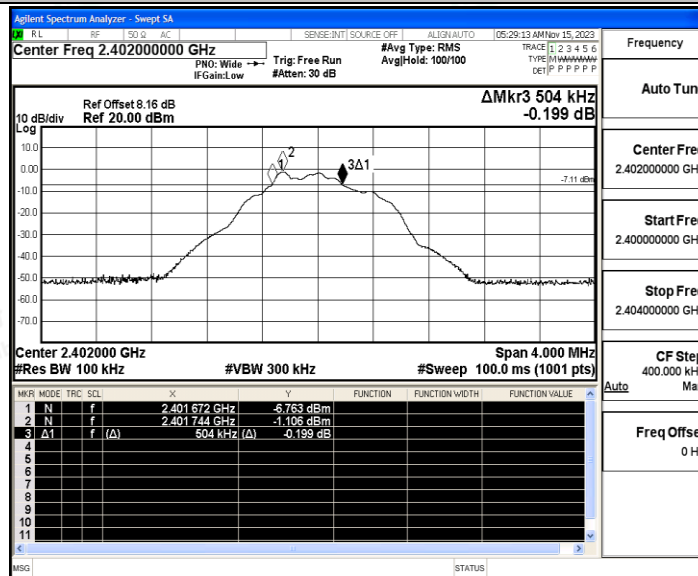
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE	Ant	2402	0.504	2401.672	2402.176	0.5	PASS
		2440	0.504	2439.668	2440.172	0.5	PASS
		2480	0.504	2479.672	2480.176	0.5	PASS



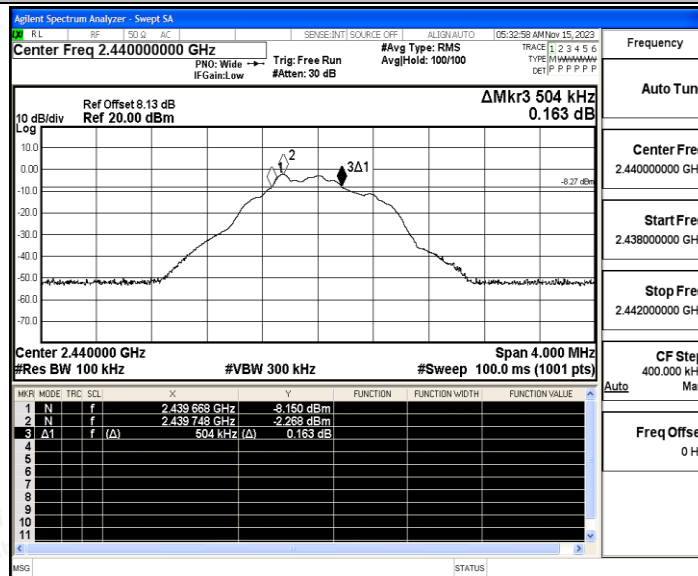


Test Graphs

BLE_Ant_2402



BLE_Ant_2440



BLE_Ant_2480

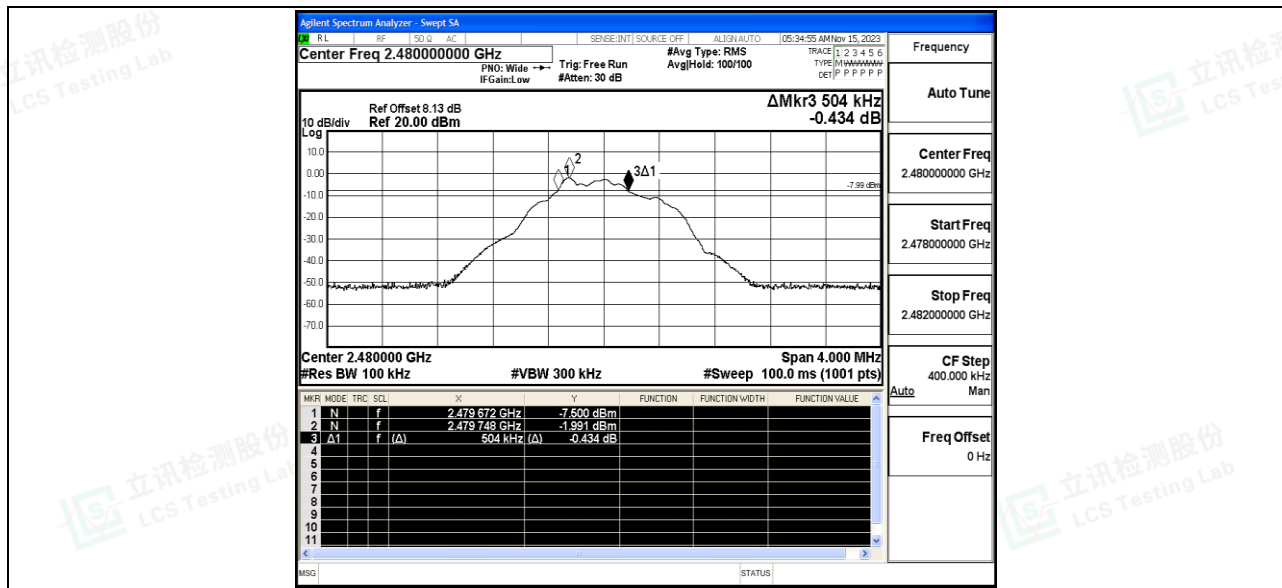


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B.2 Maximum conducted output power

Test Result

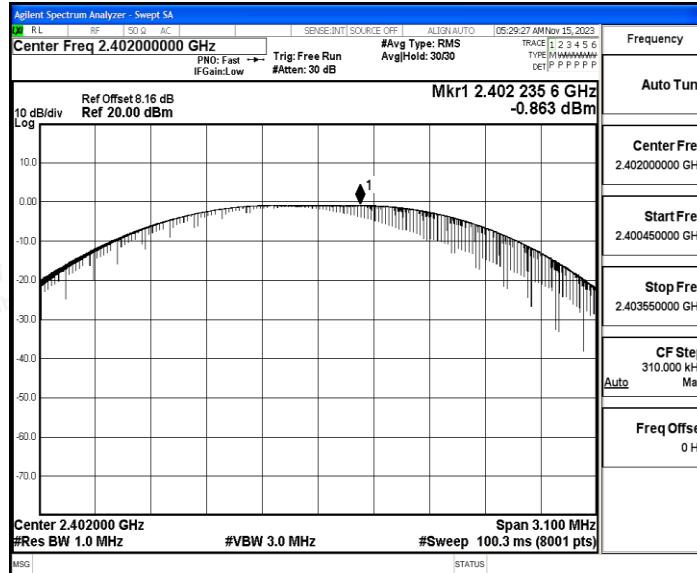
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant	2402	-0.86	≤30	PASS
		2440	-1.99	≤30	PASS
		2480	-1.75	≤30	PASS



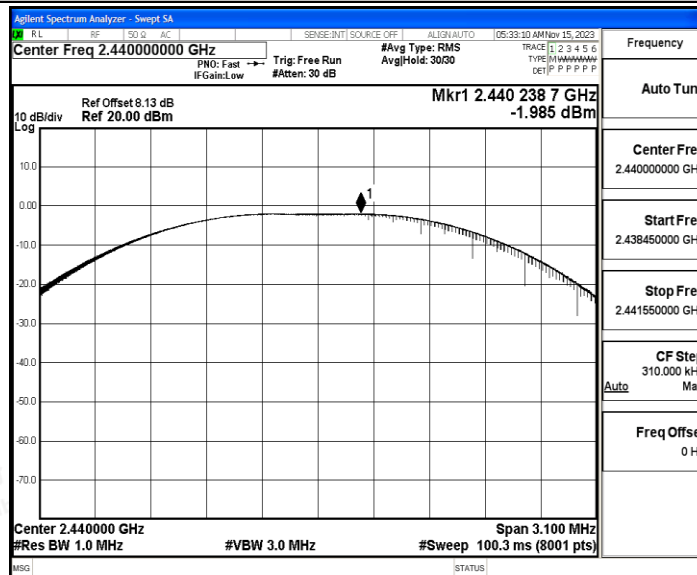


Test Graphs

BLE_Ant_2402



BLE_Ant_2440



BLE_Ant_2480

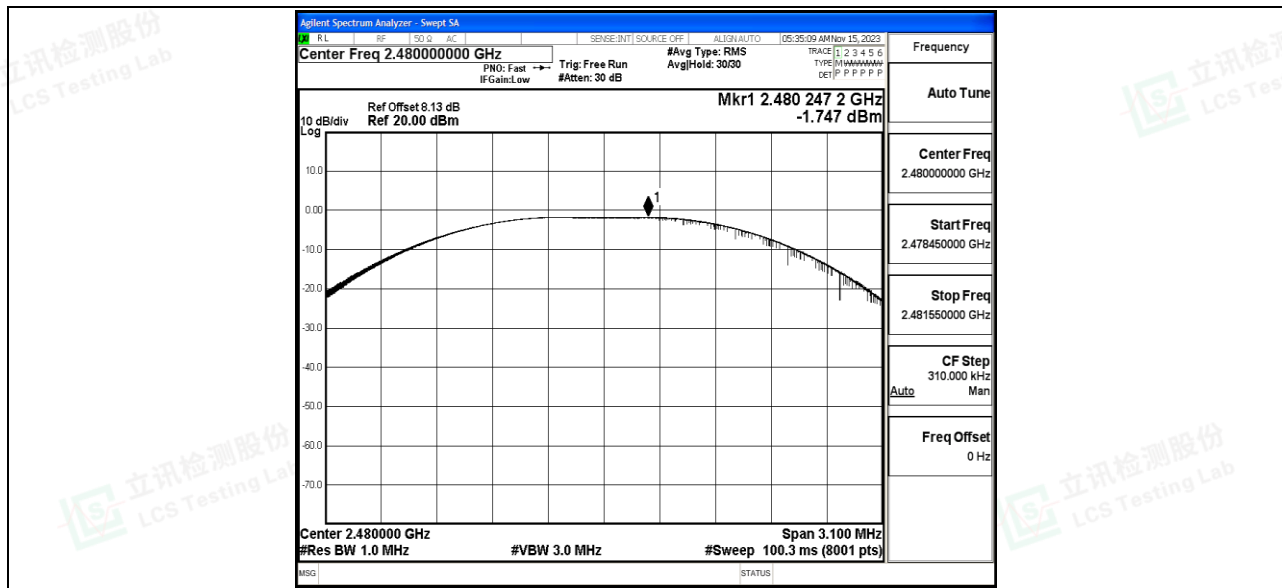


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B.3 Maximum power spectral density

Test Result

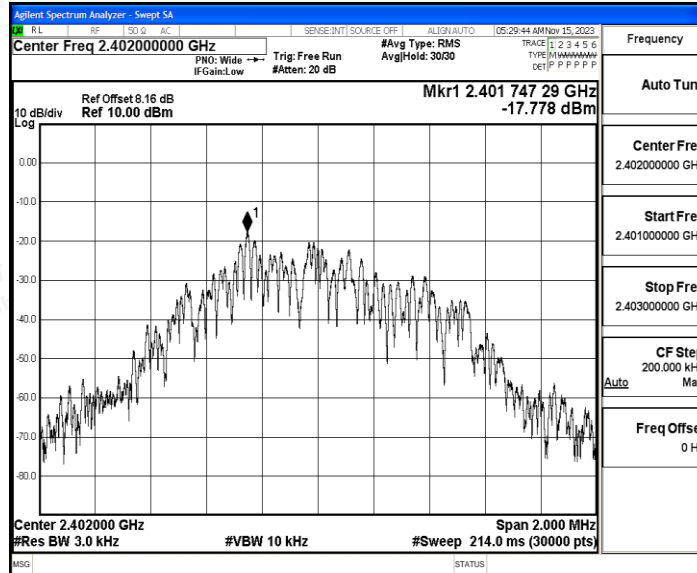
TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE	Ant	2402	-17.78	≤8.00	PASS
		2440	-18.94	≤8.00	PASS
		2480	-18.66	≤8.00	PASS



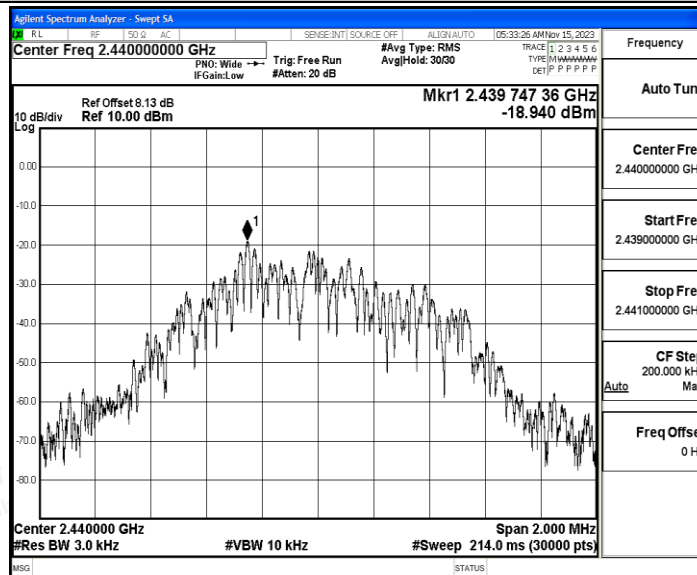


Test Graphs

BLE_Ant_2402



BLE_Ant_2440



BLE_Ant_2480

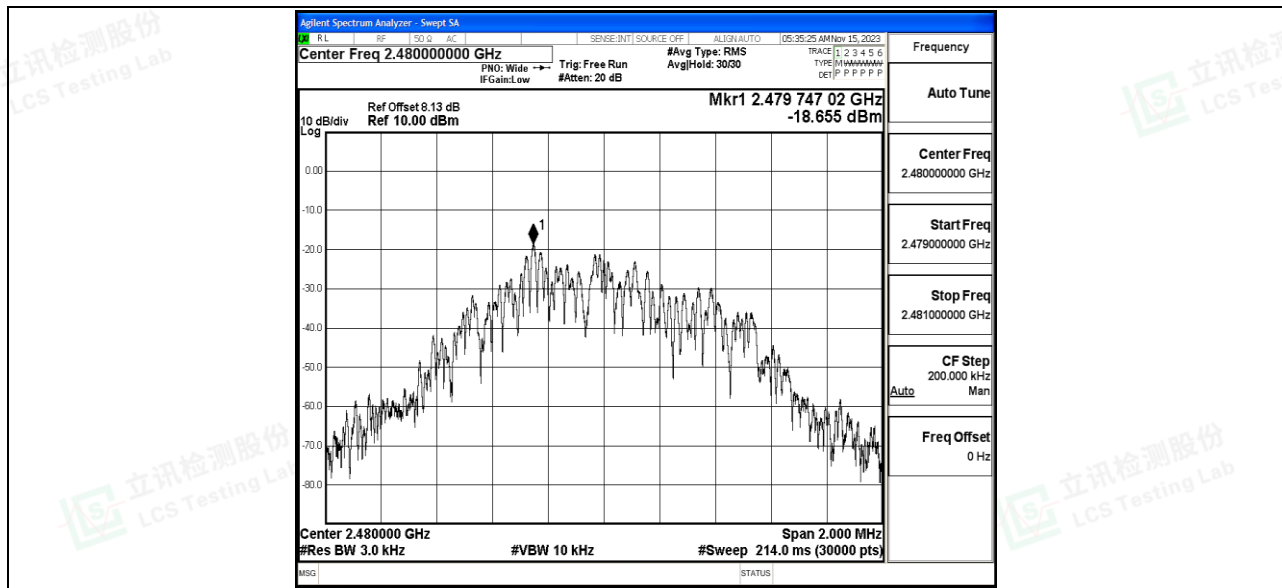


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B.4 Band edge measurements

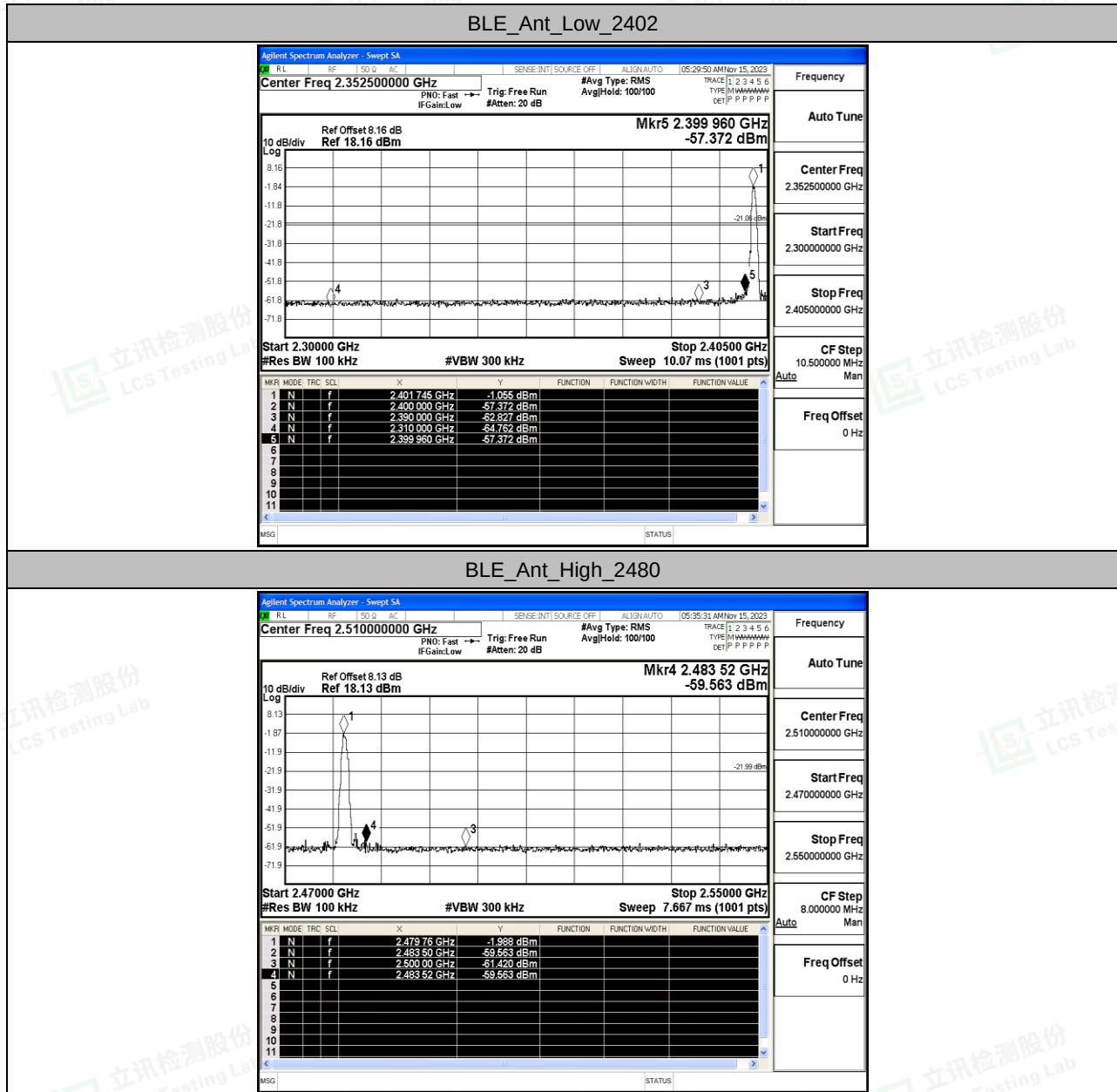
Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant	Low	2402	-1.06	-57.37	≤ -21.06	PASS
		High	2480	-1.99	-59.56	≤ -21.99	PASS





Test Graphs



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B.5 Conducted Spurious Emission

Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant	2402	Reference	-1.11	-1.11	---	PASS
			30~1000	-1.11	-61.35	≤ -21.11	PASS
			1000~26500	-1.11	-49.55	≤ -21.11	PASS
		2440	Reference	-2.26	-2.26	---	PASS
			30~1000	-2.26	-61.24	≤ -22.26	PASS
			1000~26500	-2.26	-48.74	≤ -22.26	PASS
		2480	Reference	-2.01	-2.01	---	PASS
			30~1000	-2.01	-61.39	≤ -22.01	PASS
			1000~26500	-2.01	-49.23	≤ -22.01	PASS



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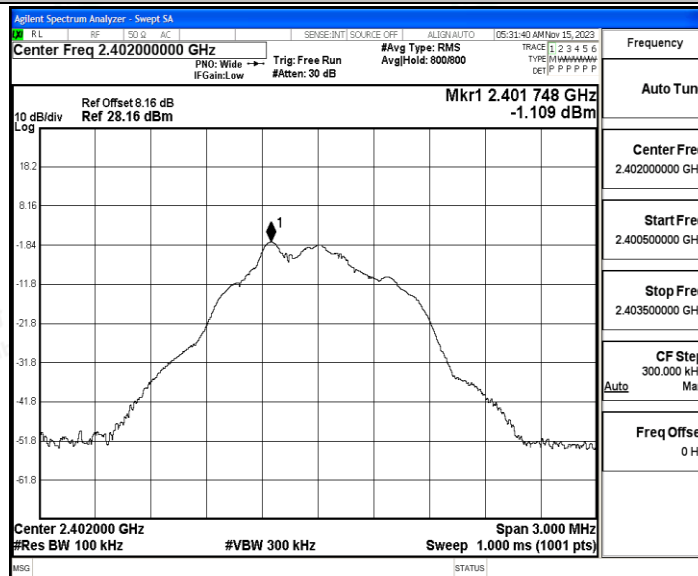
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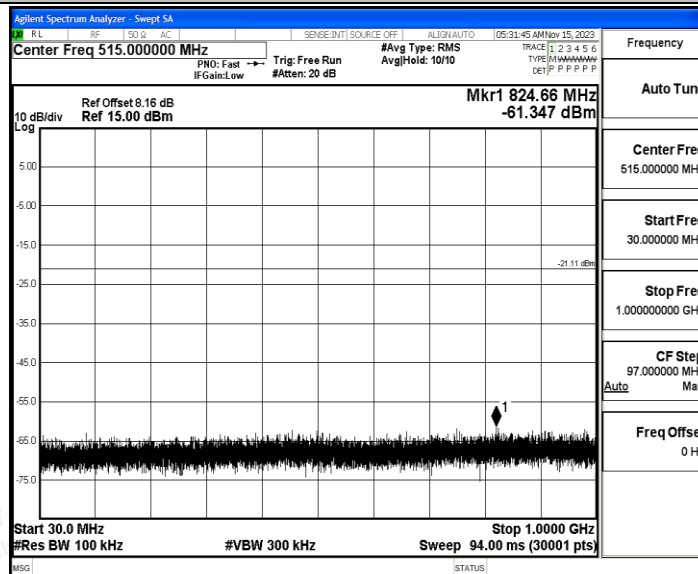


Test Graphs

BLE_Ant_2402_0~Reference



BLE_Ant_2402_30~1000



BLE_Ant_2402_1000~26500



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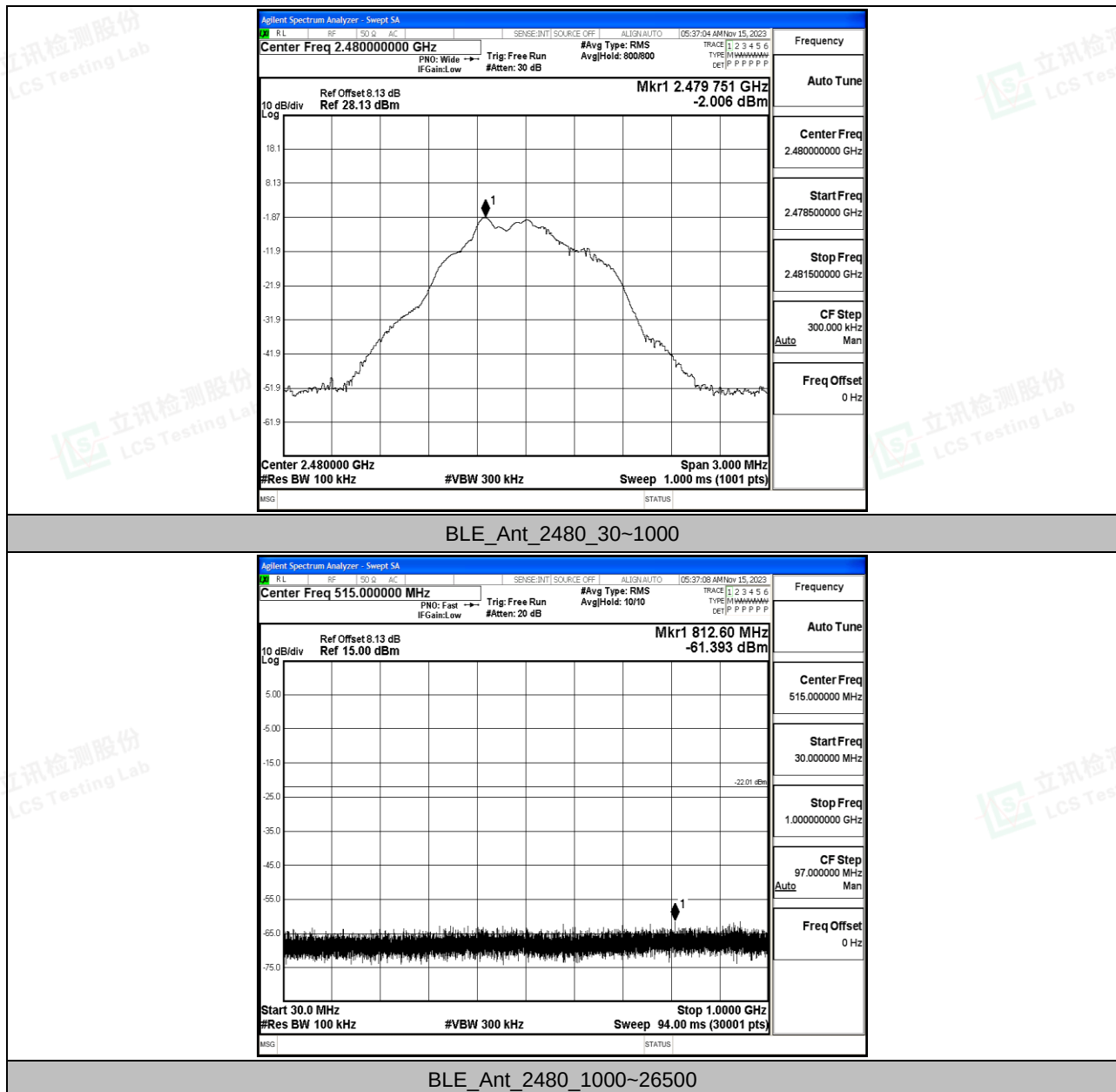


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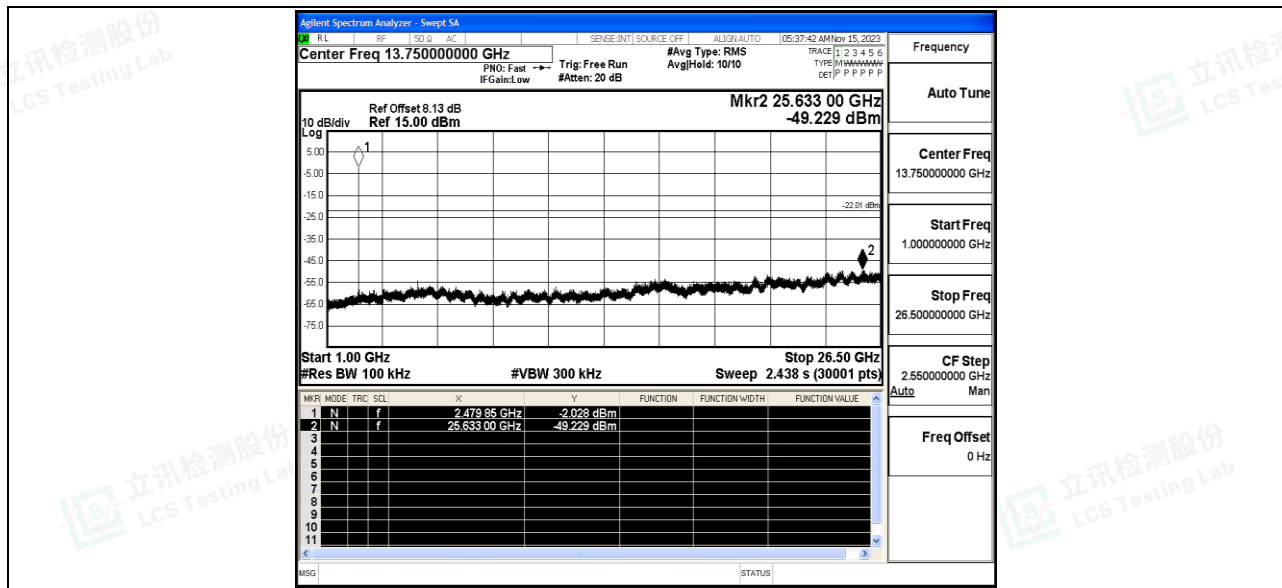


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B.6 Duty Cycle

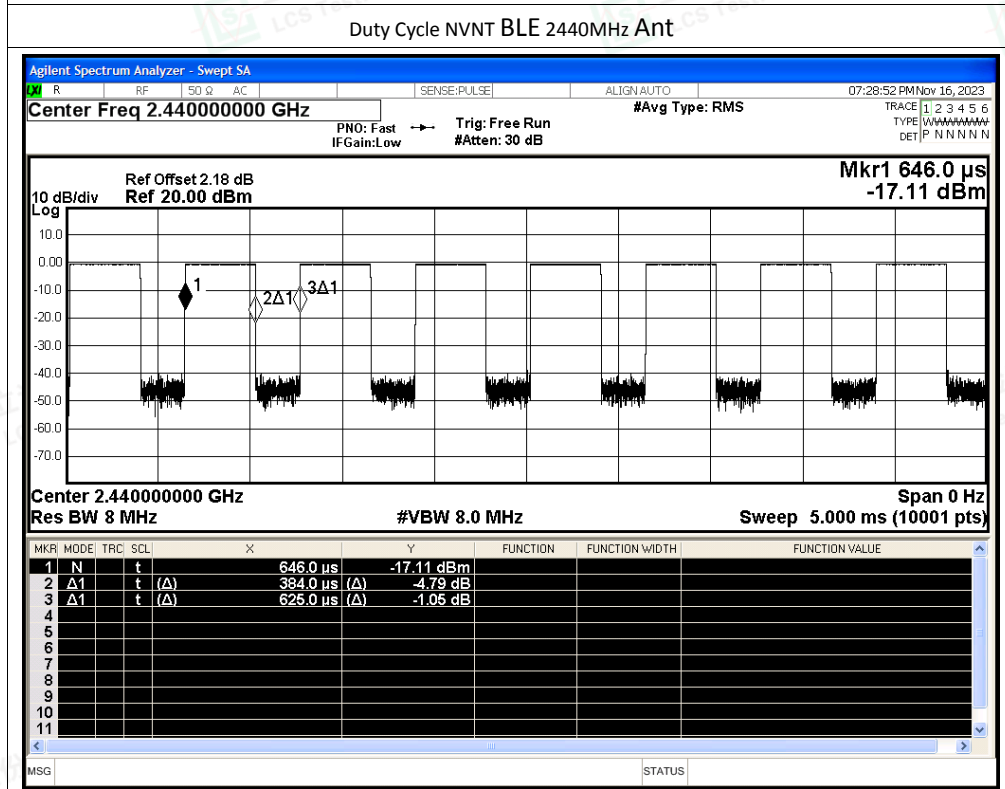
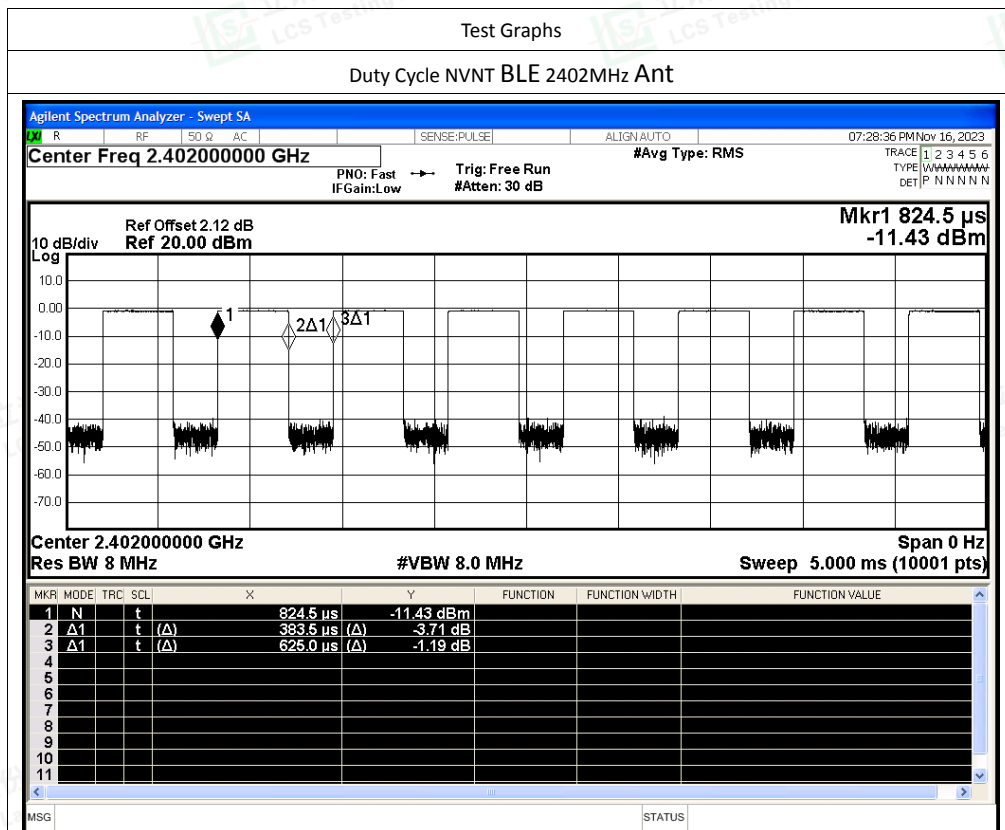
Test Result

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE	2402	Ant	61.36	2.12	2.61
NVNT	BLE	2440	Ant	61.44	2.12	2.6
NVNT	BLE	2480	Ant	61.39	2.12	2.6





Test Graphs

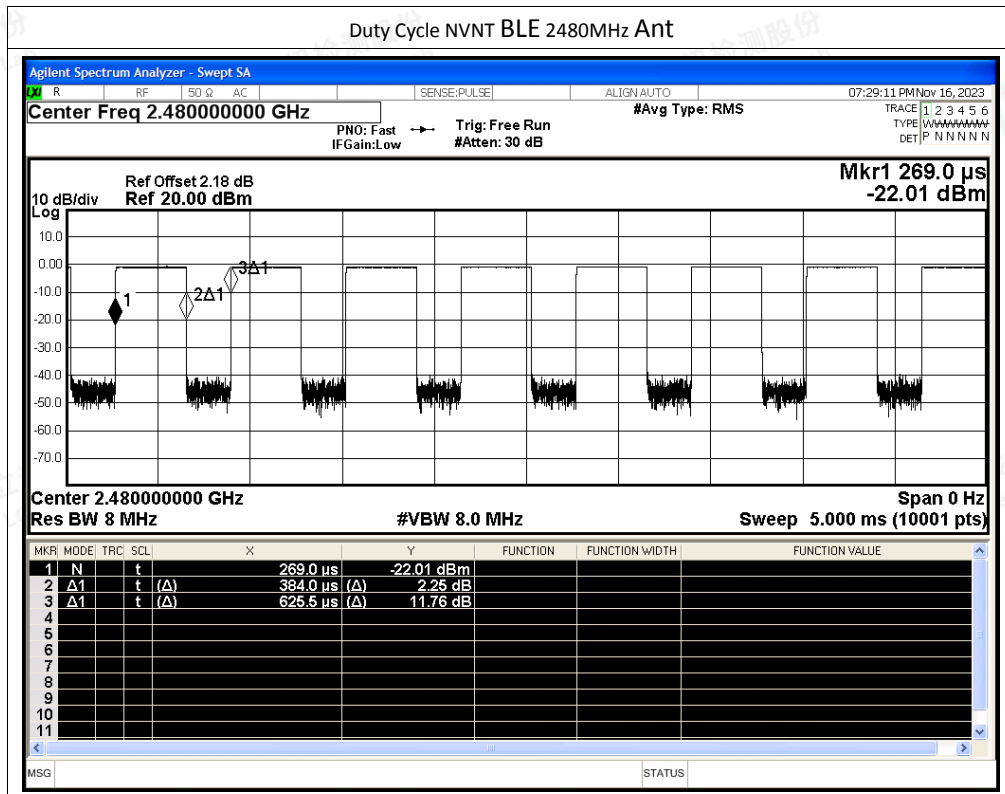


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B.7 Emissions in Restricted Bands

Test Result

TestM ode	Antenna	ChNam e	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE	Ant	Low	2402	AV	2310.000	-59.55	≤-41.20	35.65	≤54	PASS
				AV	2389.670	-59.14	≤-41.20	36.06	≤54	PASS
				AV	2390.000	-59.16	≤-41.20	36.04	≤54	PASS
				Peak	2310.000	-55.36	≤-21.20	39.84	≤74	PASS
				Peak	2380.535	-49.98	≤-21.20	45.22	≤74	PASS
				Peak	2390.000	-52.52	≤-21.20	42.68	≤74	PASS
		High	2480	AV	2483.500	-58.6	≤-41.20	36.60	≤54	PASS
				AV	2483.520	-58.6	≤-41.20	36.60	≤54	PASS
				AV	2500.000	-59.08	≤-41.20	36.12	≤54	PASS
				Peak	2483.500	-54.16	≤-21.20	41.04	≤74	PASS
				Peak	2485.680	-39.95	≤-21.20	55.25	≤74	PASS
				Peak	2500.000	-54.6	≤-21.20	40.60	≤74	PASS

Note:

1. The Antenna Gain is compensated in the graph.
2. 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.





Test Graphs

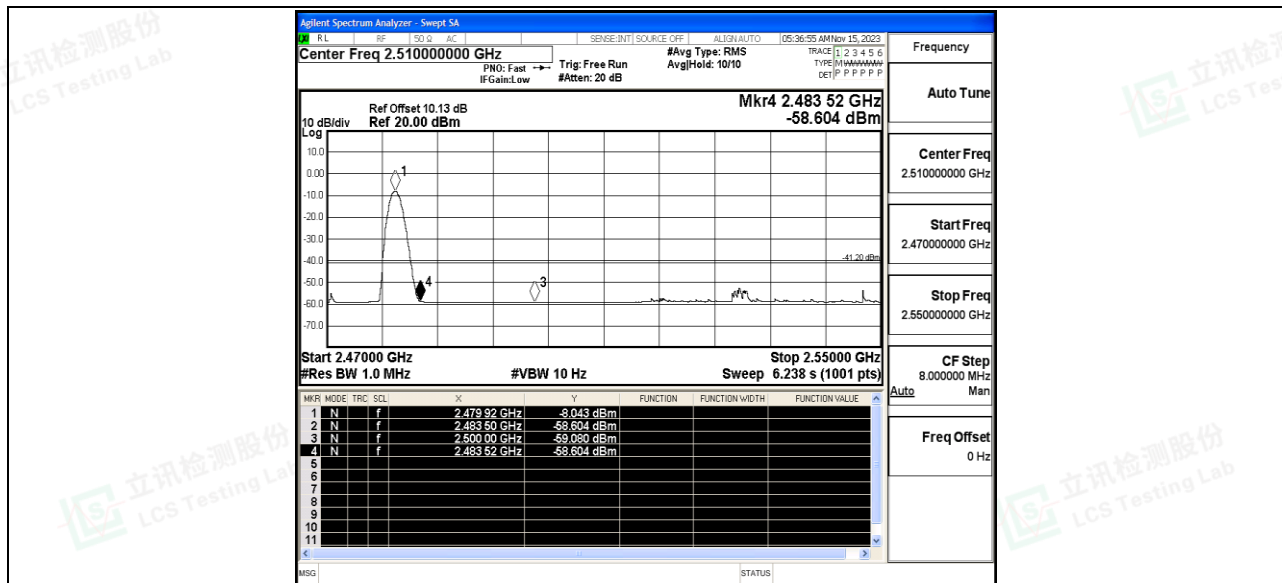


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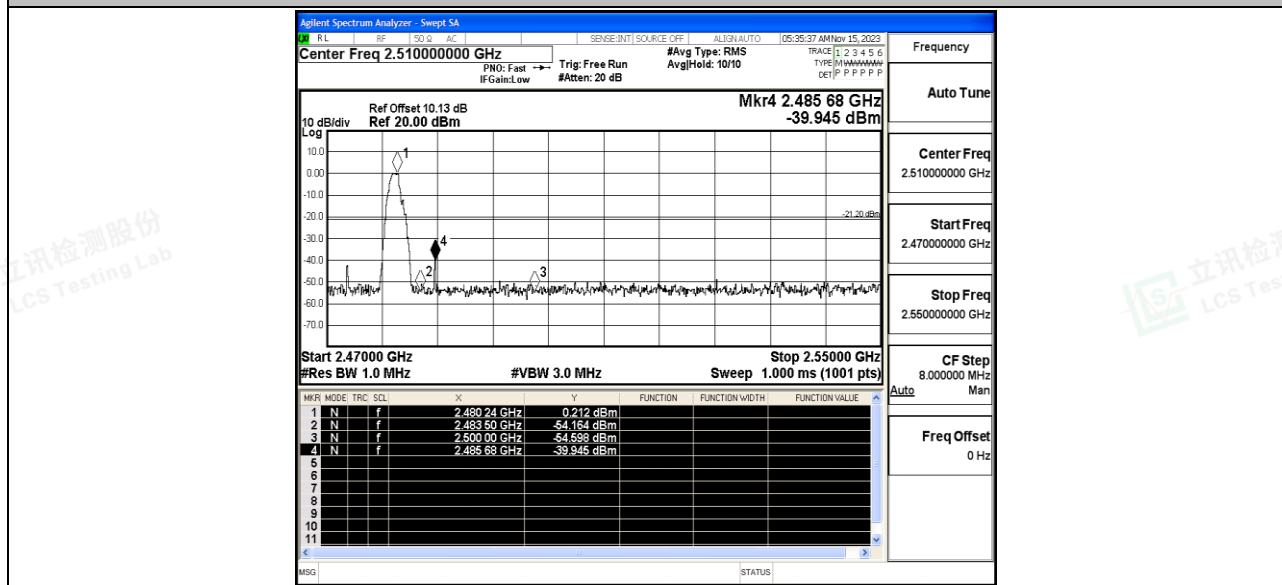
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BLE_Ant_High_2480_Peak



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