



Appendix B

RF Test Data for BLE (Conducted Measurement)

Product Name: USB Bluetooth Dongle

Test Model: 06H

Environmental Conditions

Temperature:	23.5 ° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	 Joker Hu
Supervised by:	 Li huan



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B.1 DTS Bandwidth

Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE	Ant	2402	0.712	2401.624	2402.336	0.5	PASS
		2440	0.712	2439.628	2440.340	0.5	PASS
		2480	0.712	2479.628	2480.340	0.5	PASS



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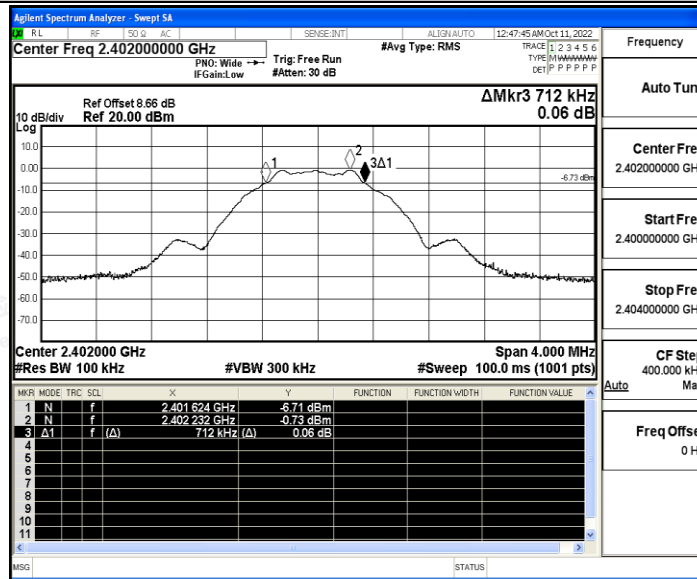
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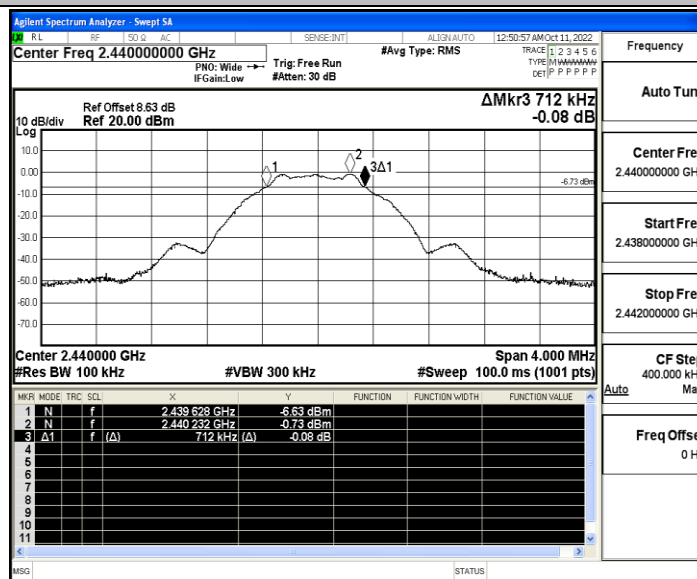


Test Graphs

BLE_Ant_2402



BLE_Ant_2440



BLE_Ant_2480

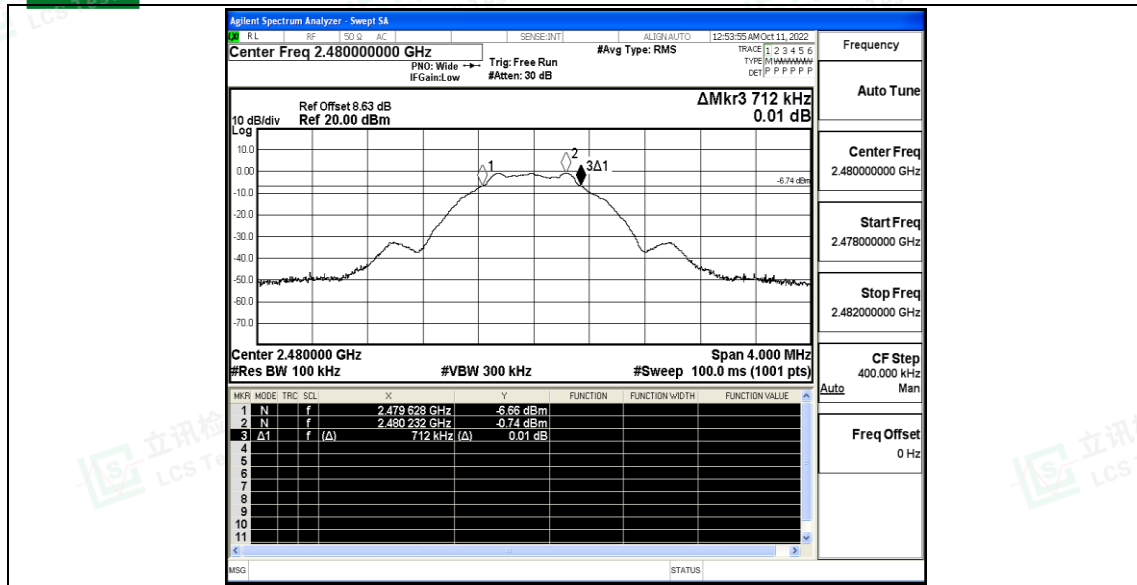


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B.2 Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant	2402	0.23	≤30	PASS
		2440	0.23	≤30	PASS
		2480	0.23	≤30	PASS



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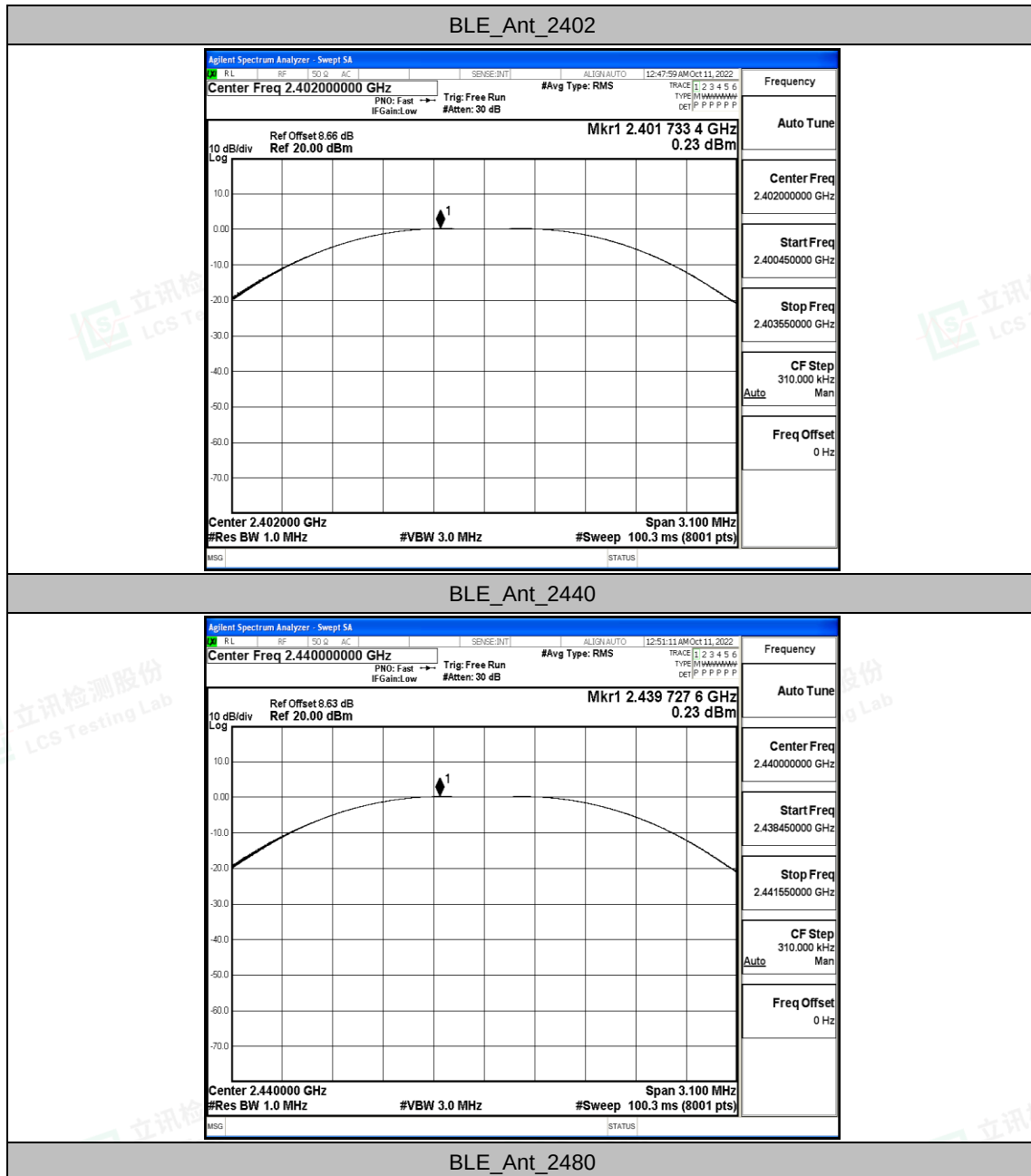
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Test Graphs

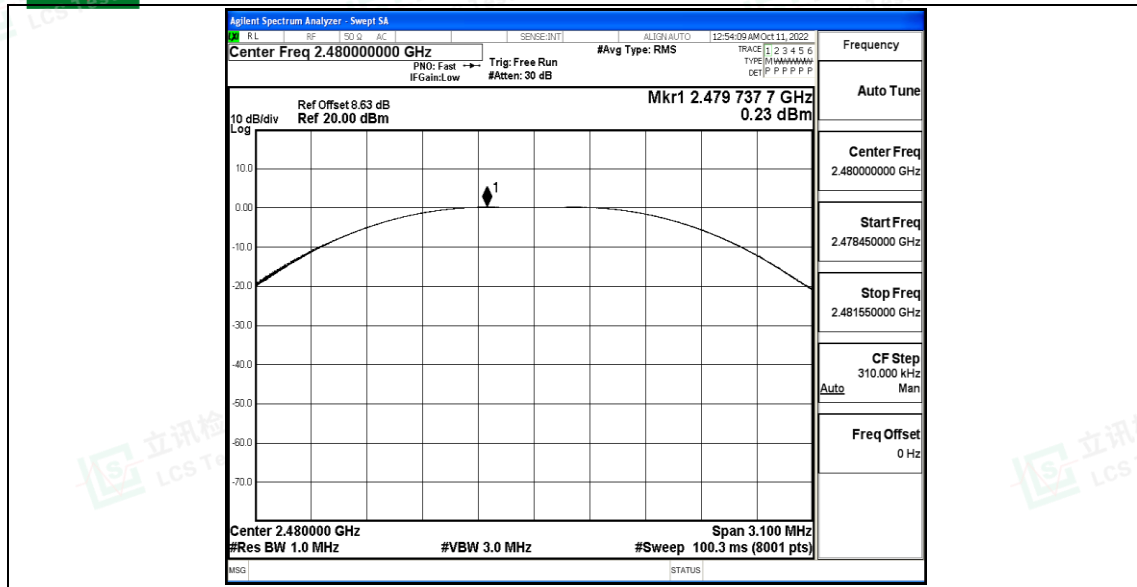


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B.3 Maximum power spectral density

Test Result

TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE	Ant	2402	-14.84	≤8.00	PASS
		2440	-14.9	≤8.00	PASS
		2480	-14.88	≤8.00	PASS



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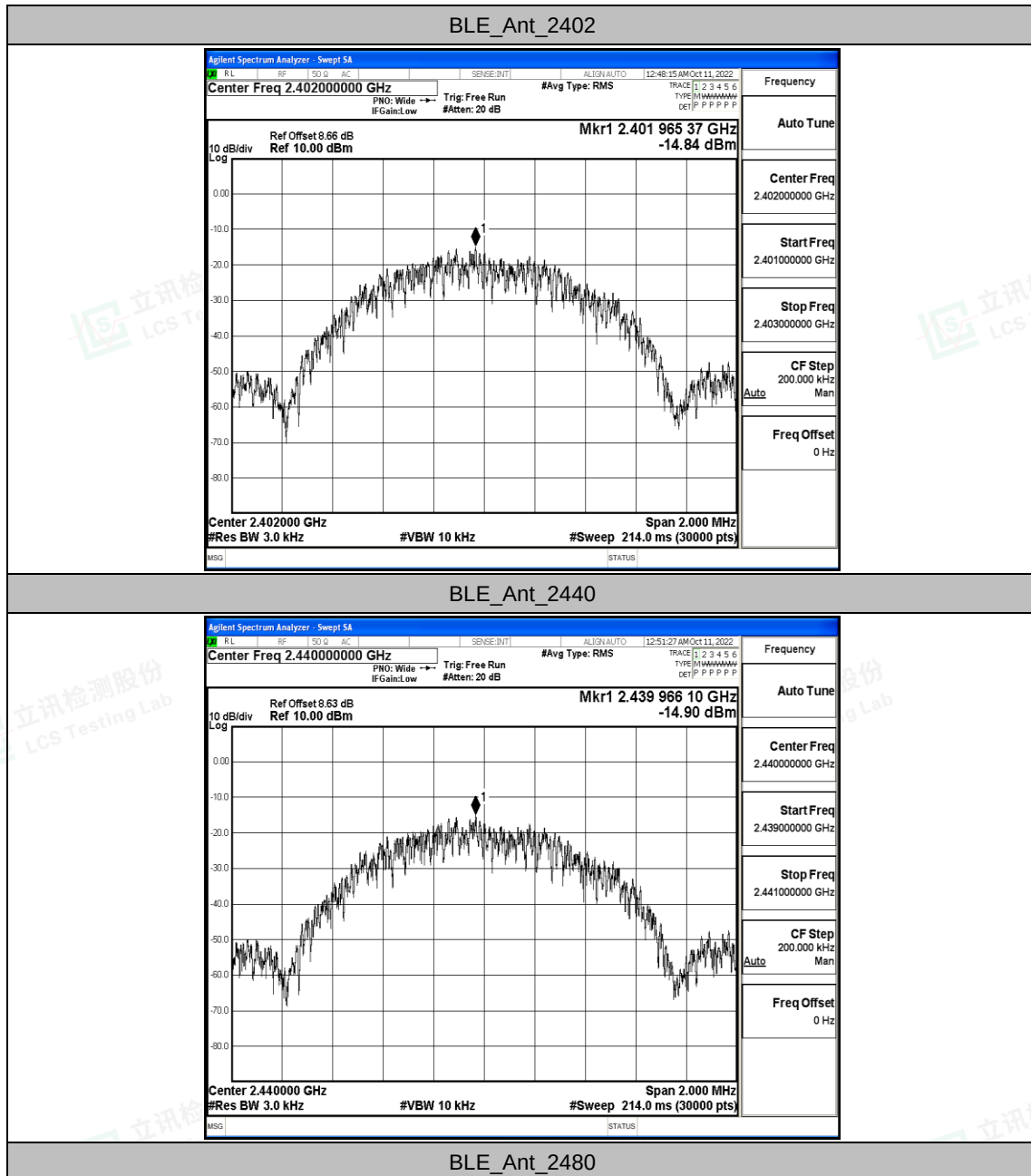
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Test Graphs

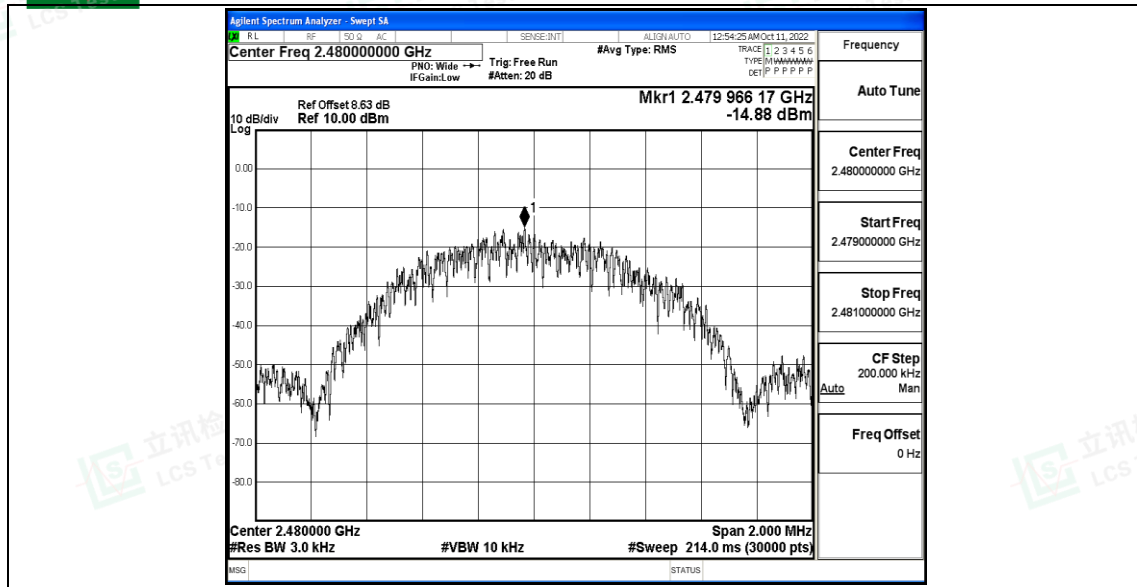


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B.4 Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant	Low	2402	-0.51	-57.71	≤-20.51	PASS
		High	2480	-0.61	-58.43	≤-20.61	PASS



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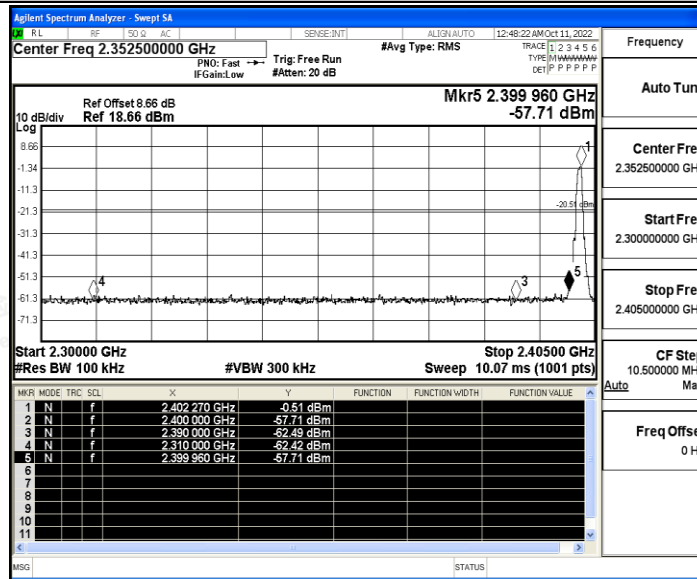
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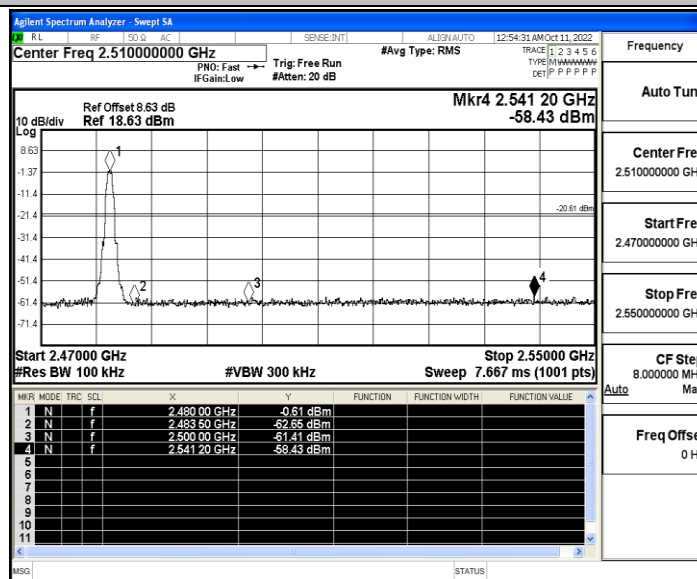


Test Graphs

BLE_Ant_Low_2402



BLE_Ant_High_2480



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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	-1.16	-1.16	---	PASS
			30~1000	-1.16	-60.44	≤-21.16	PASS
			1000~26500	-1.16	-46.49	≤-21.16	PASS
		2440	Reference	-1.21	-1.21	---	PASS
			30~1000	-1.21	-60.12	≤-21.21	PASS
			1000~26500	-1.21	-46.16	≤-21.21	PASS
		2480	Reference	-0.81	-0.81	---	PASS
			30~1000	-0.81	-60.55	≤-20.81	PASS
			1000~26500	-0.81	-46.01	≤-20.81	PASS



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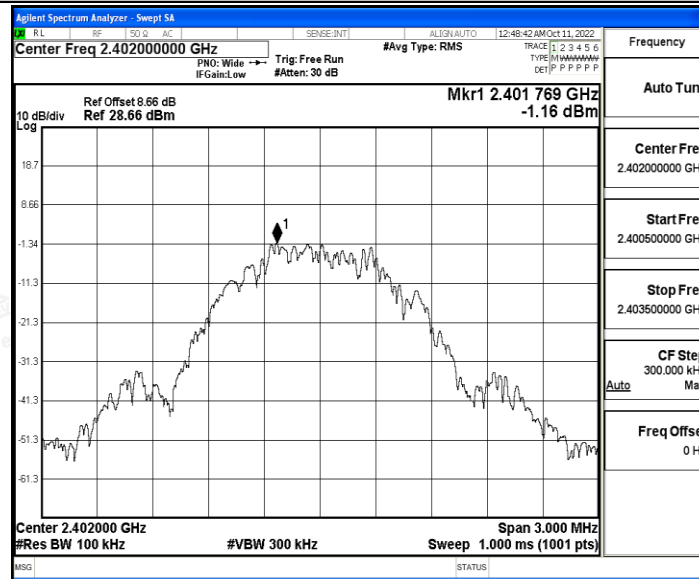
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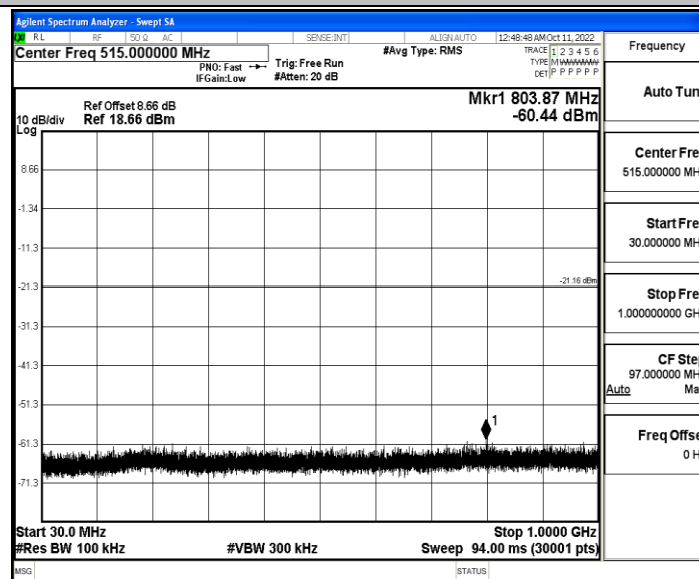


Test Graphs

BLE_Ant_2402_0~Reference



BLE_Ant_2402_30~1000



BLE_Ant_2402_1000~26500

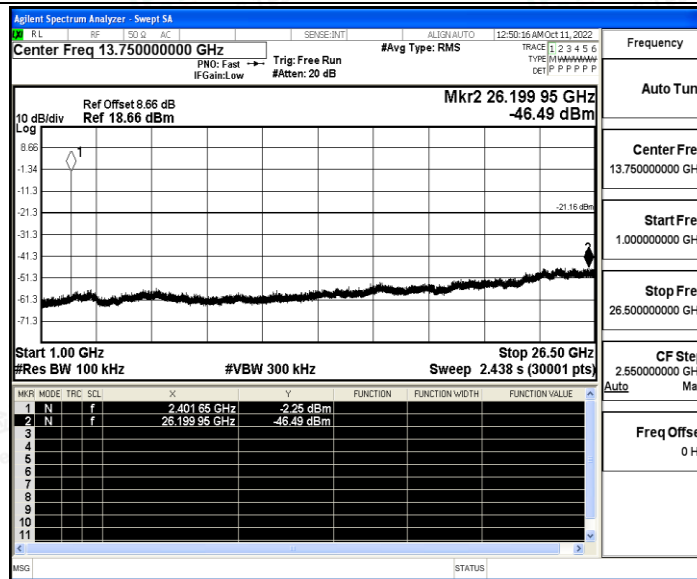


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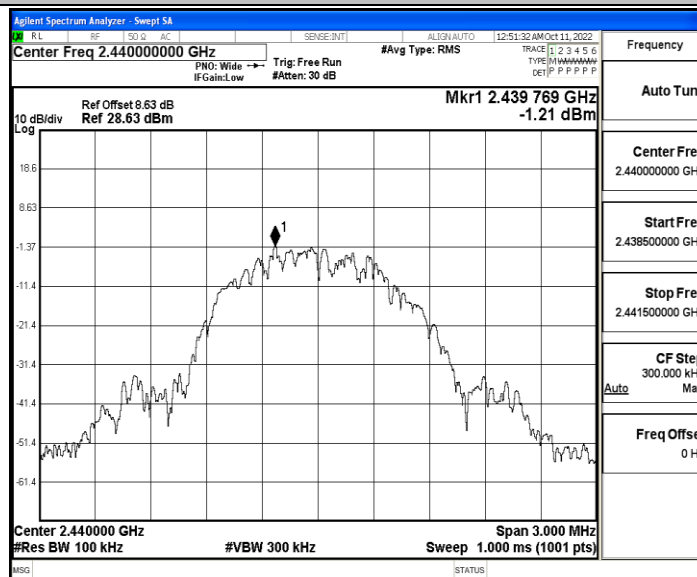
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BLE_Ant_2440_0~Reference



BLE_Ant_2440_30~1000

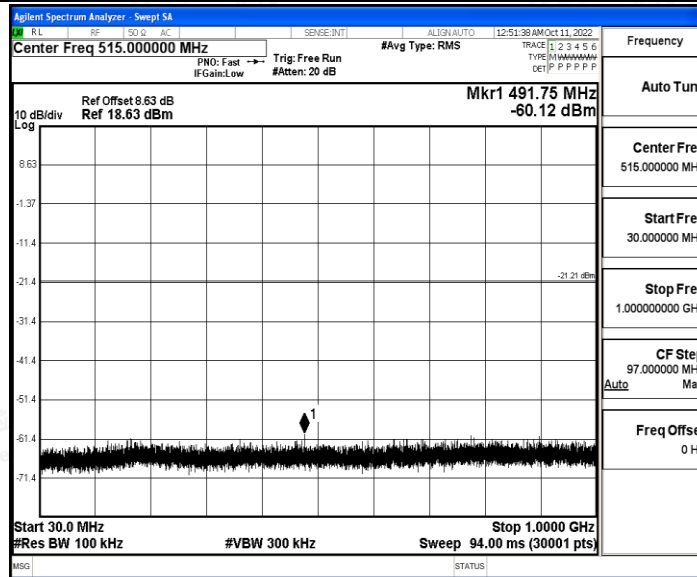


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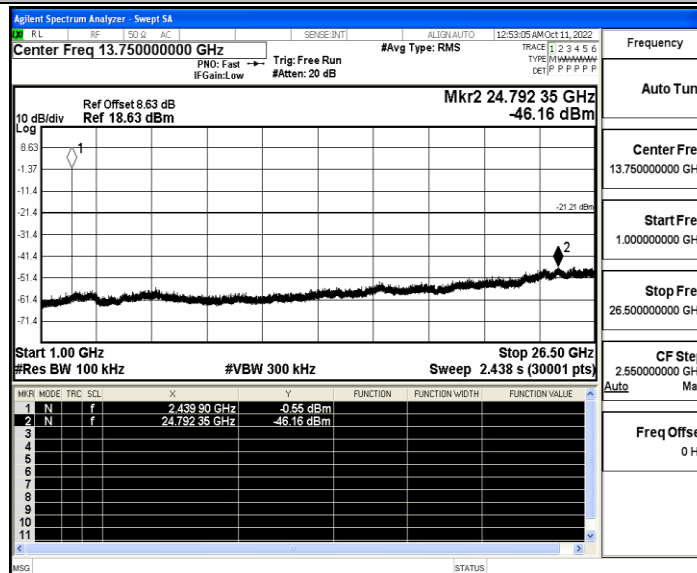
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BLE_Ant_2440_1000~26500



BLE_Ant_2480_0~Reference

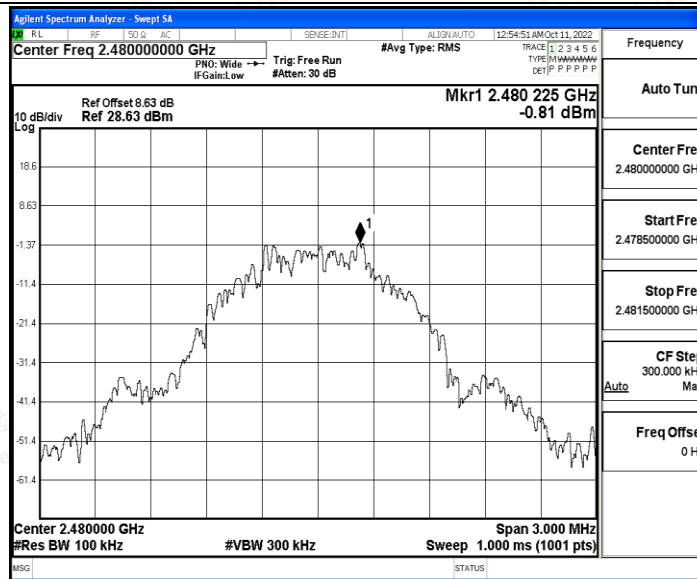


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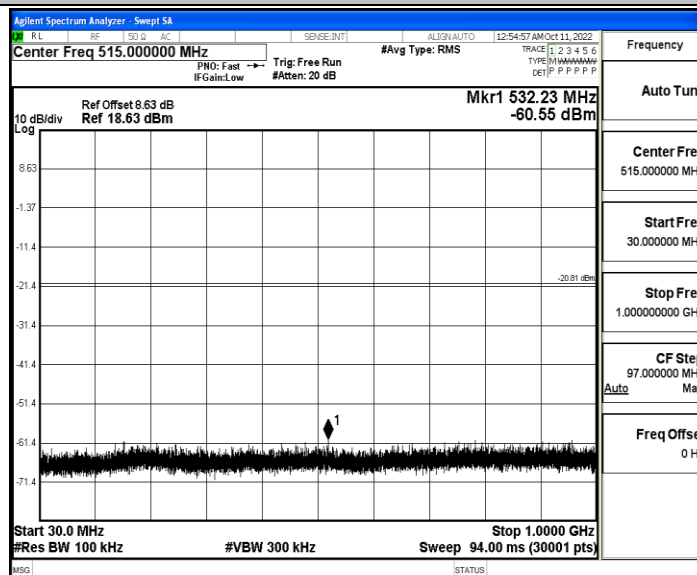
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BLE_Ant_2480_30~1000



BLE_Ant_2480_1000~26500

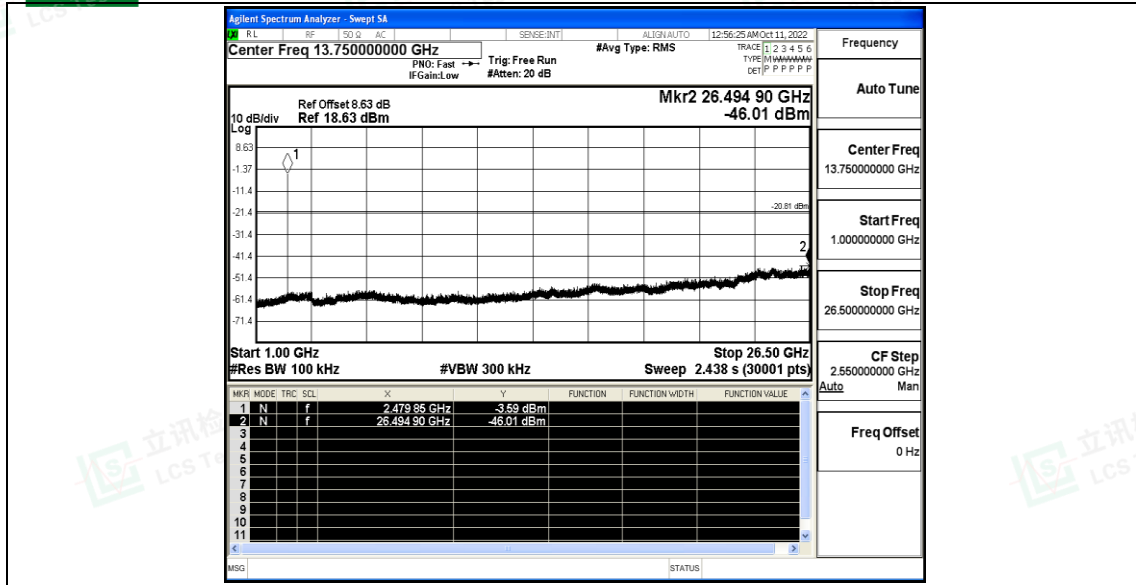


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B.6 Duty Cycle

Test Result

TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	1/T	Limit	Verdict
BLE	Ant	2402	0.39	0.63	0.6190	61.90	2.08	2.56	---	PASS
		2440	0.38	0.63	0.6032	60.32	2.20	2.63	---	PASS
		2480	0.39	0.63	0.6190	61.90	2.08	2.56	---	PASS



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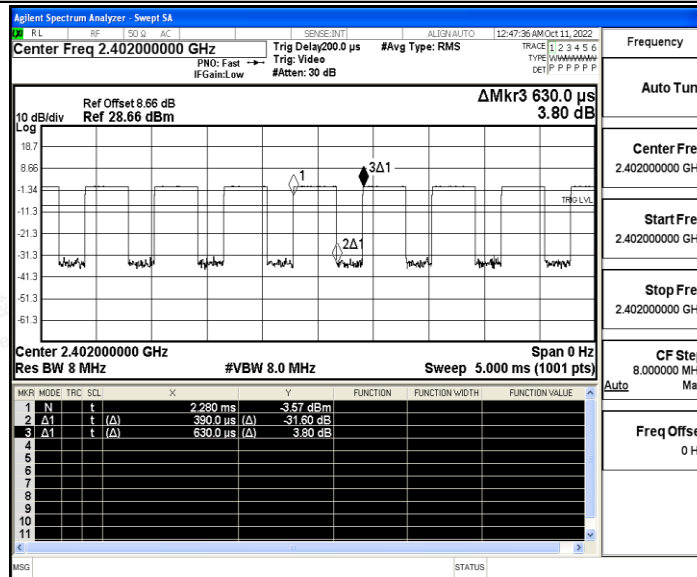
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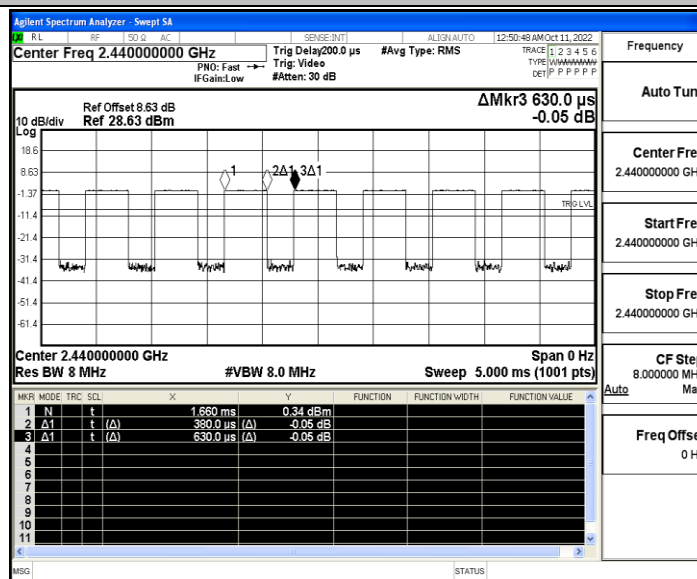


Test Graphs

BLE_Ant_2402



BLE_Ant_2440



BLE_Ant_2480

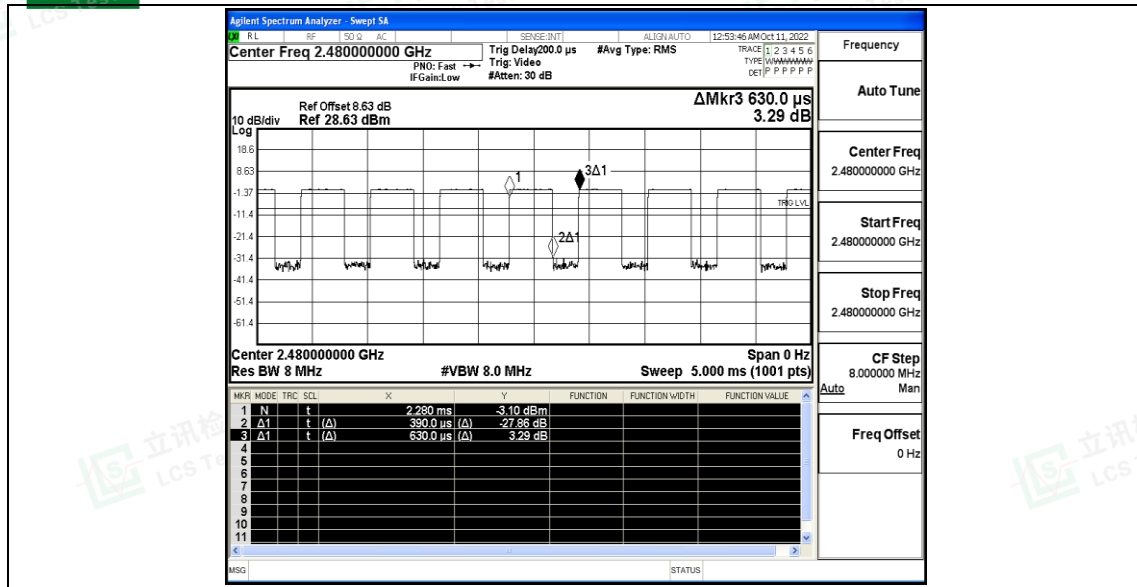


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B.7 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE	Ant	Low	2402	AV	2310.000	-57.4	≤-41.20	37.80	≤54	PASS
				AV	2388.095	-56.49	≤-41.20	38.71	≤54	PASS
				AV	2390.000	-56.77	≤-41.20	38.43	≤54	PASS
				Peak	2310.000	-49.71	≤-21.20	45.49	≤74	PASS
				Peak	2373.605	-46.57	≤-21.20	48.63	≤74	PASS
				Peak	2390.000	-50.98	≤-21.20	44.22	≤74	PASS
		High	2480	AV	2483.500	-53.18	≤-41.20	42.02	≤54	PASS
				AV	2483.520	-53.18	≤-41.20	42.02	≤54	PASS
				AV	2500.000	-56.4	≤-41.20	38.80	≤54	PASS
				Peak	2483.500	-48.88	≤-21.20	46.32	≤74	PASS
				Peak	2498.080	-46.99	≤-21.20	48.21	≤74	PASS
				Peak	2500.000	-49.01	≤-21.20	46.19	≤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.



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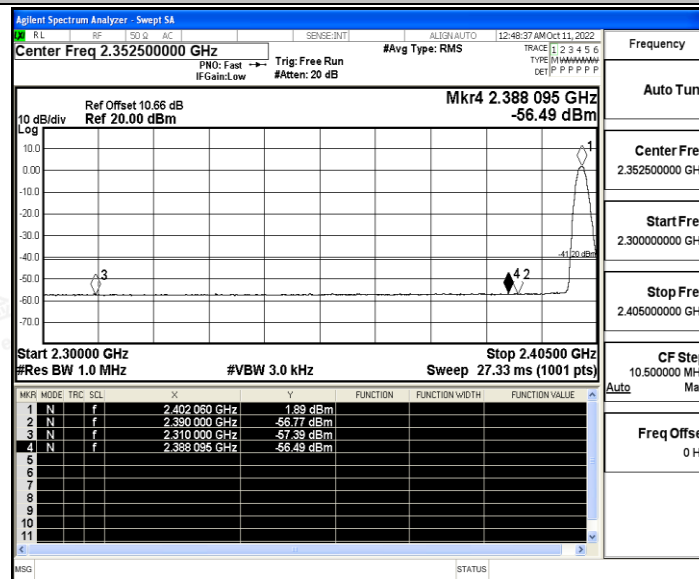
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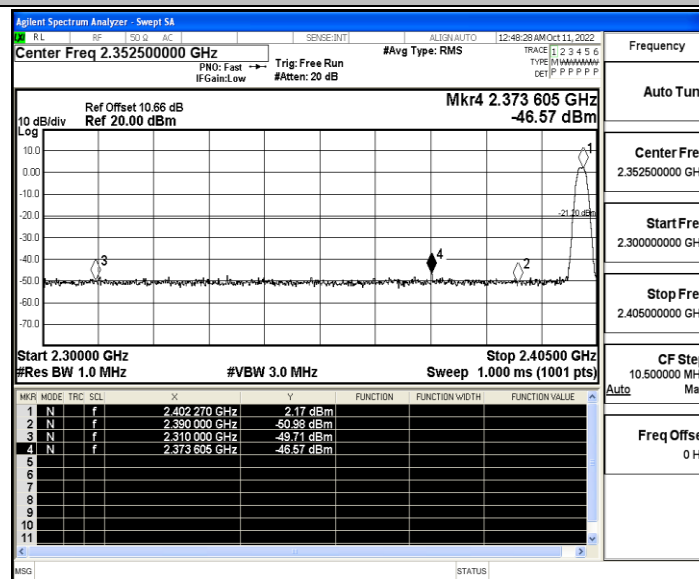


Test Graphs

BLE_Ant_Low_2402_AV



BLE_Ant_Low_2402_Peak



BLE_Ant_High_2480_AV

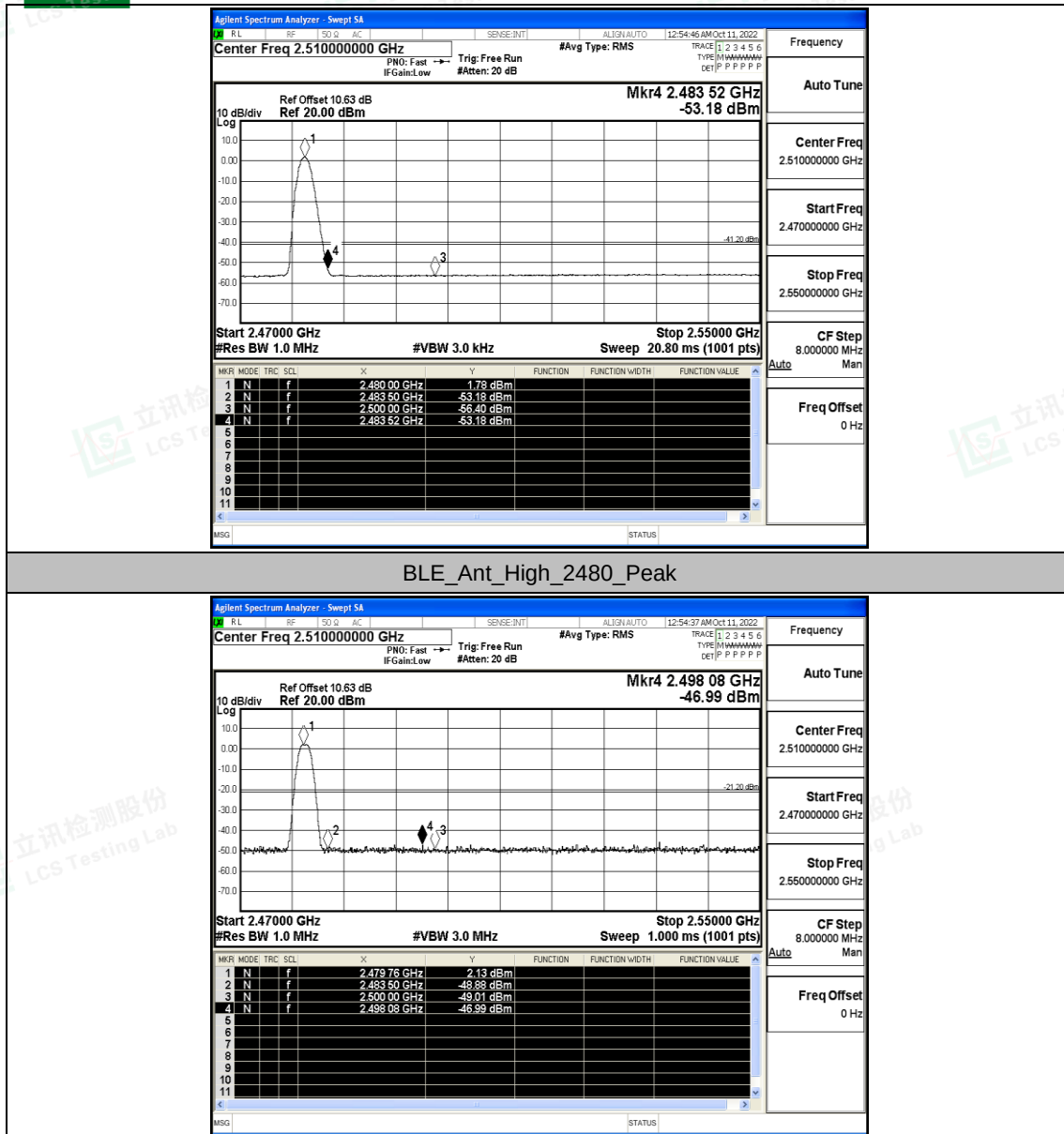


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