



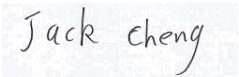
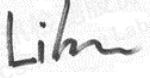
Appendix B

RF Test Data for BT LE (Conducted Measurement)

Product Name: Bluetooth Speaker

Test Model: OS-825

Environmental Conditions

Temperature:	23.5 ° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	 Jack Cheng
Supervised by:	 Li Huan





B.1 DTS Bandwidth

Test Result

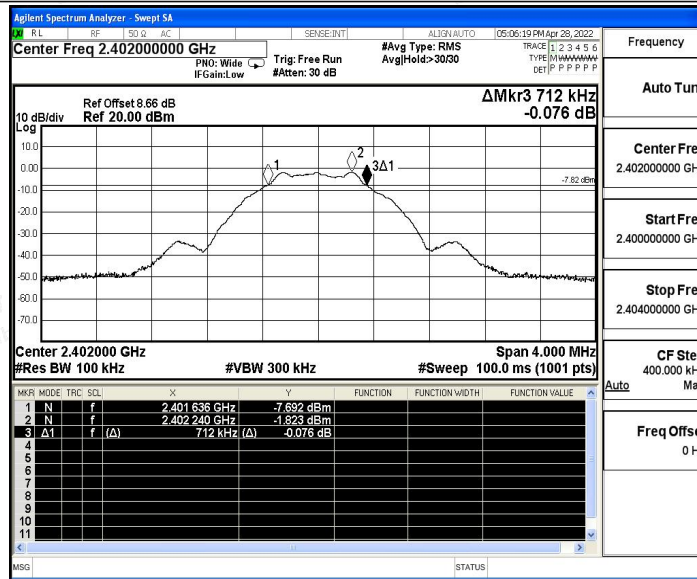
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.712	2401.636	2402.348	0.5	PASS
		2440	0.712	2439.636	2440.348	0.5	PASS
		2480	0.716	2479.636	2480.352	0.5	PASS



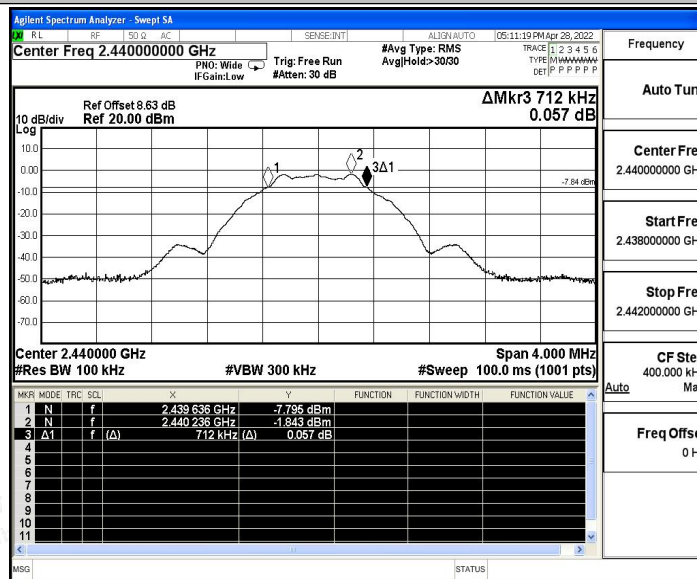


Test Graphs

BLE_1M_Ant1_2402

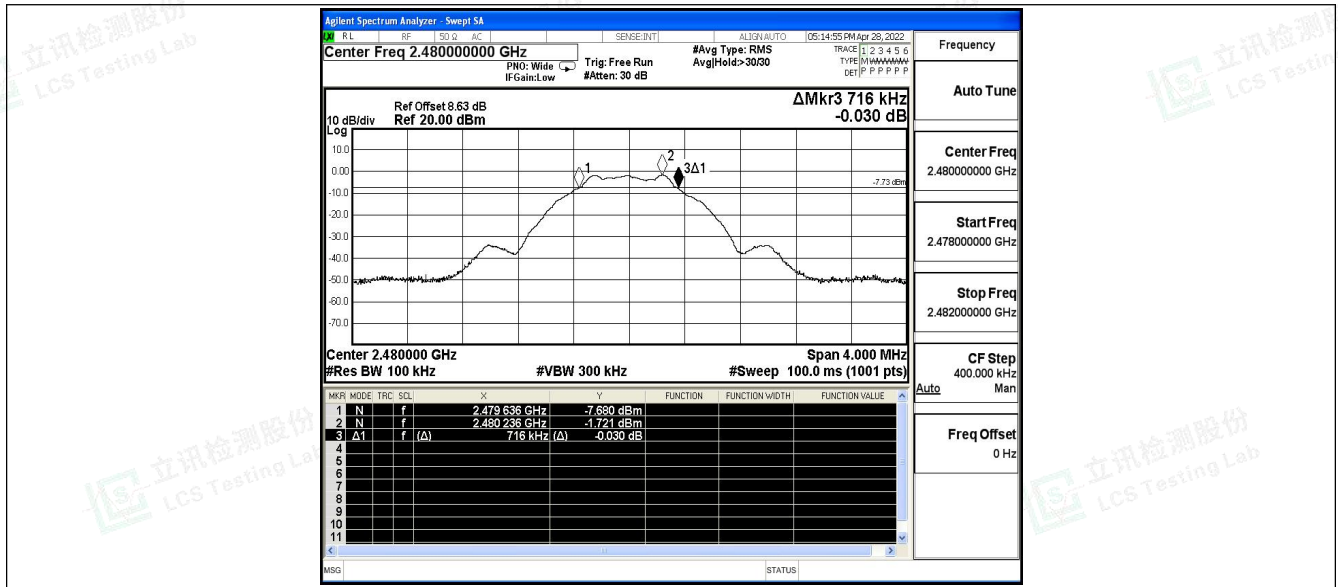


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480







B.2 Maximum conducted output power

Test Result

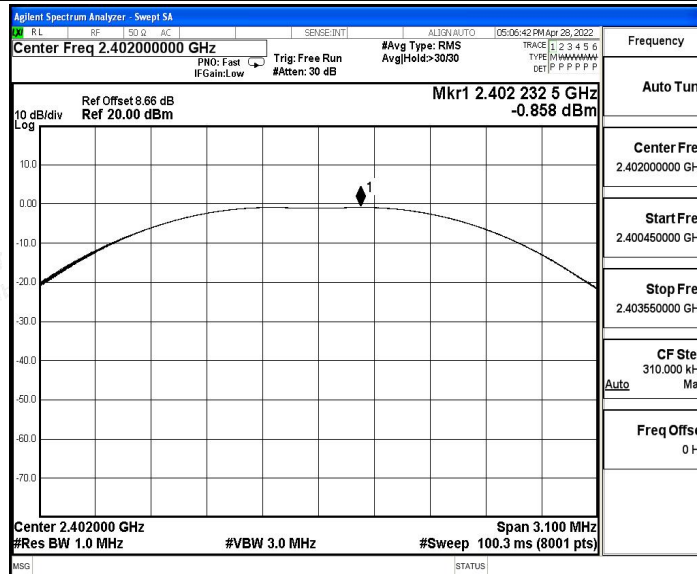
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-0.86	≤30	PASS
		2440	-0.88	≤30	PASS
		2480	-0.71	≤30	PASS



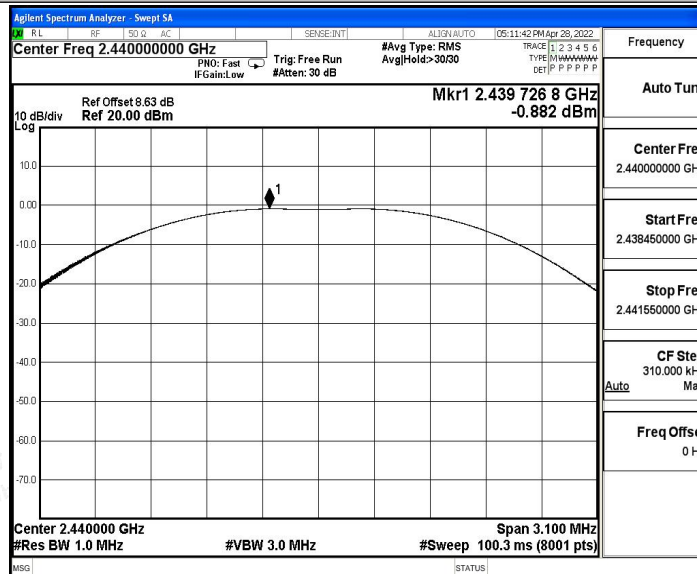


Test Graphs

BLE_1M_Ant1_2402

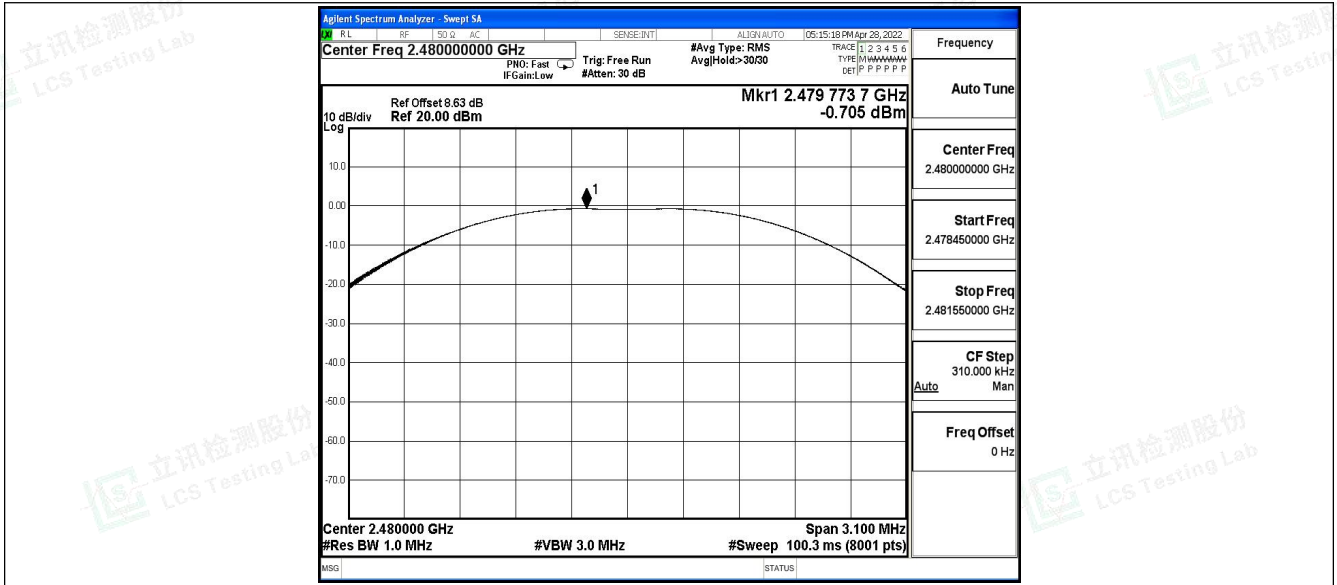


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480







B.3 Maximum power spectral density

Test Result

TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-15.98	≤8.00	PASS
		2440	-15.99	≤8.00	PASS
		2480	-15.83	≤8.00	PASS

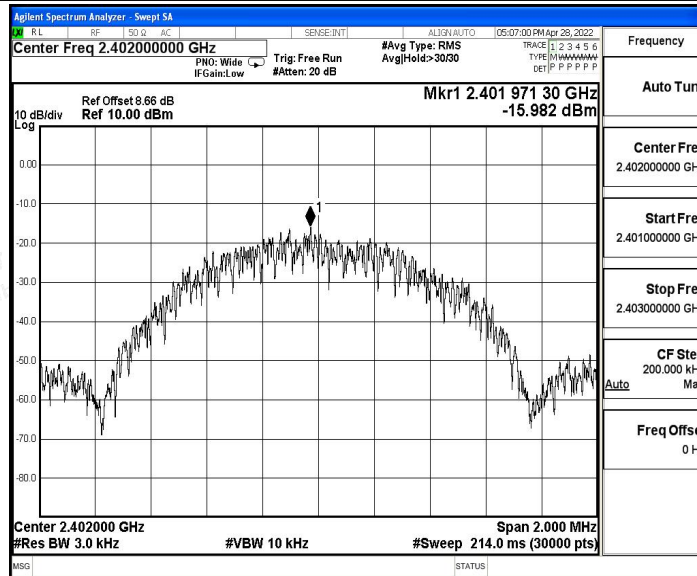


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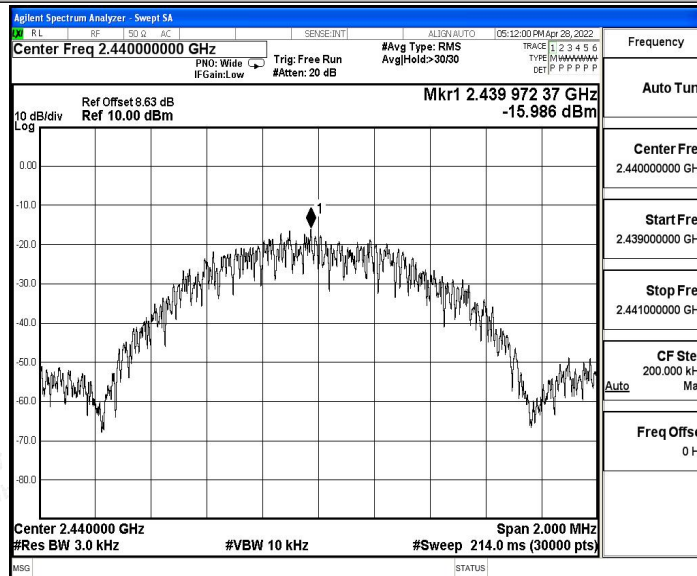


Test Graphs

BLE_1M_Ant1_2402

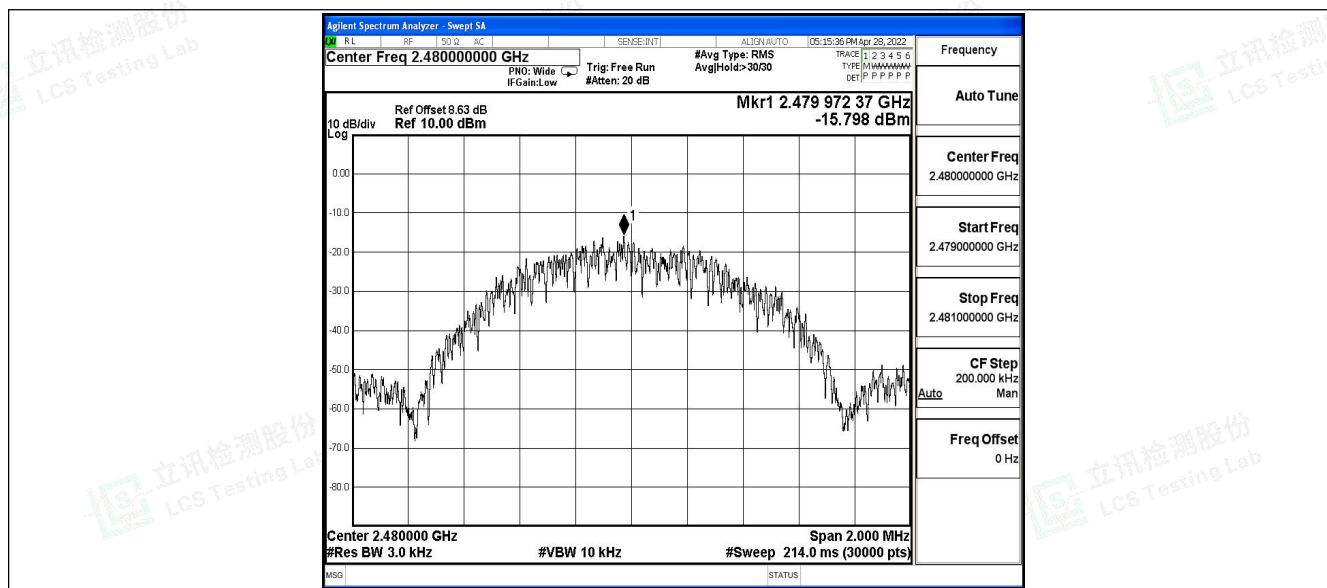


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480







B.4 Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-1.54	-48.97	≤ -21.54	PASS
		High	2480	-1.39	-47.14	≤ -21.39	PASS

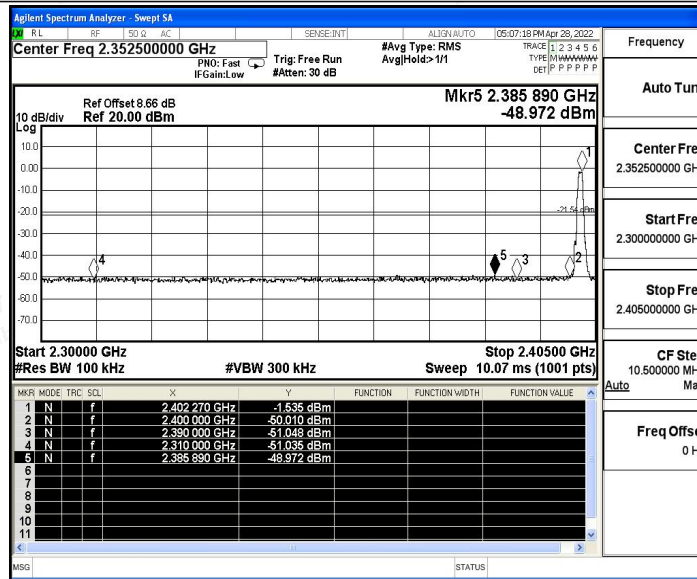


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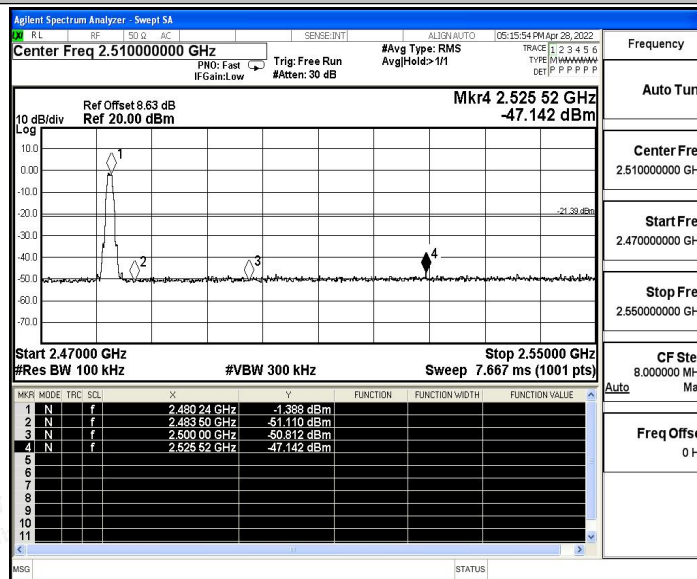


Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480



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B.5 Conducted Spurious Emission

Test Result

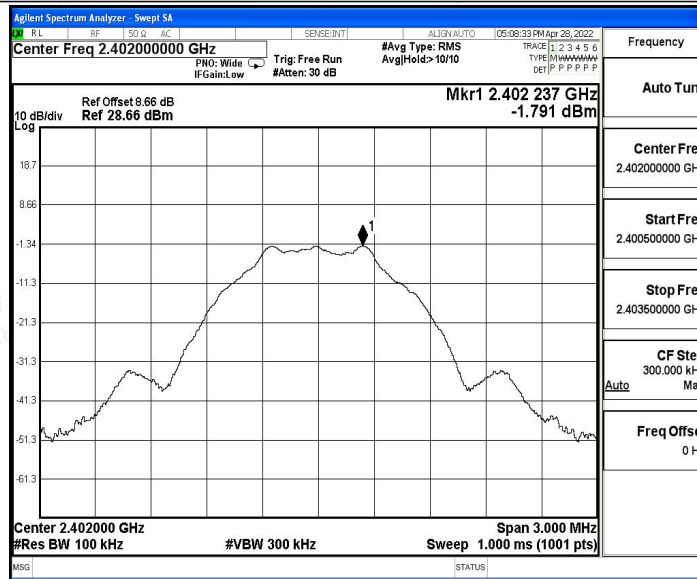
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-1.79	-1.79	---	PASS
			30~1000	-1.79	-60.49	≤ -21.79	PASS
			1000~26500	-1.79	-46.23	≤ -21.79	PASS
		2440	Reference	-1.81	-1.81	---	PASS
			30~1000	-1.81	-60.5	≤ -21.81	PASS
			1000~26500	-1.81	-46.14	≤ -21.81	PASS
		2480	Reference	-1.65	-1.65	---	PASS
			30~1000	-1.65	-60.39	≤ -21.65	PASS
			1000~26500	-1.65	-46.09	≤ -21.65	PASS



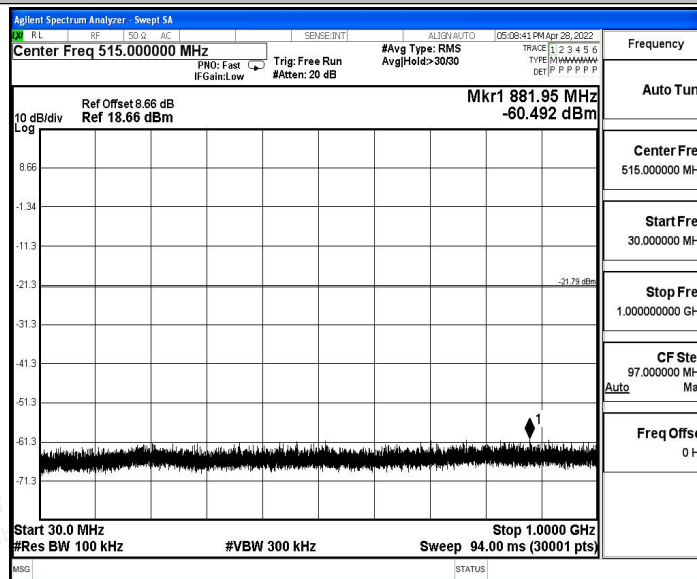


Test Graphs

BLE_1M_Ant1_2402_0~Reference

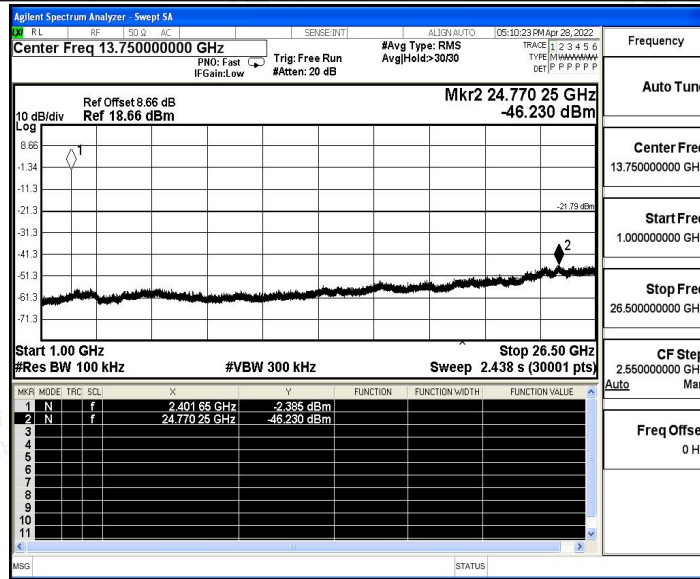


BLE_1M_Ant1_2402_30~1000

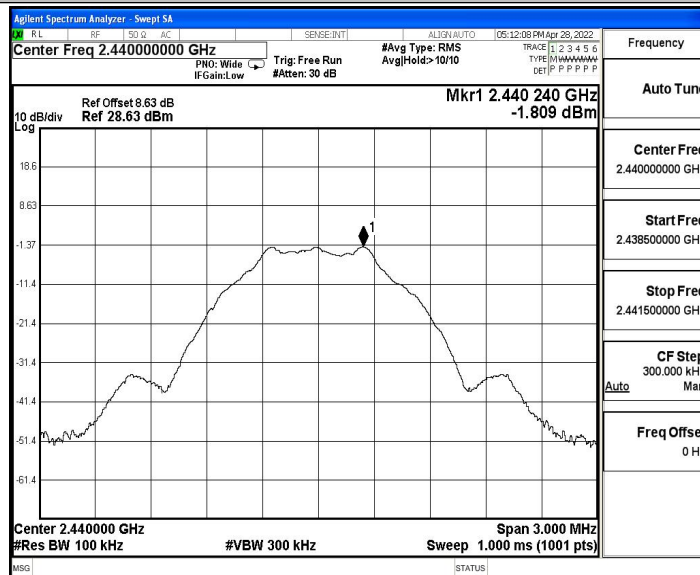


BLE_1M_Ant1_2402_1000~26500





BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000

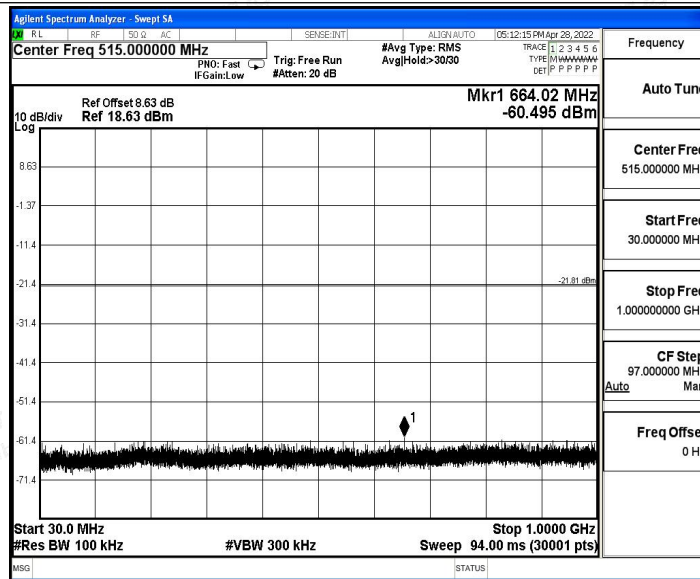


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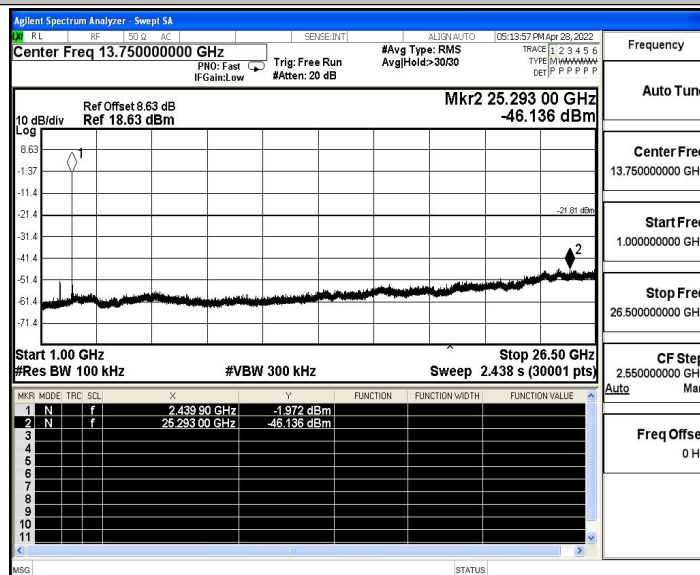
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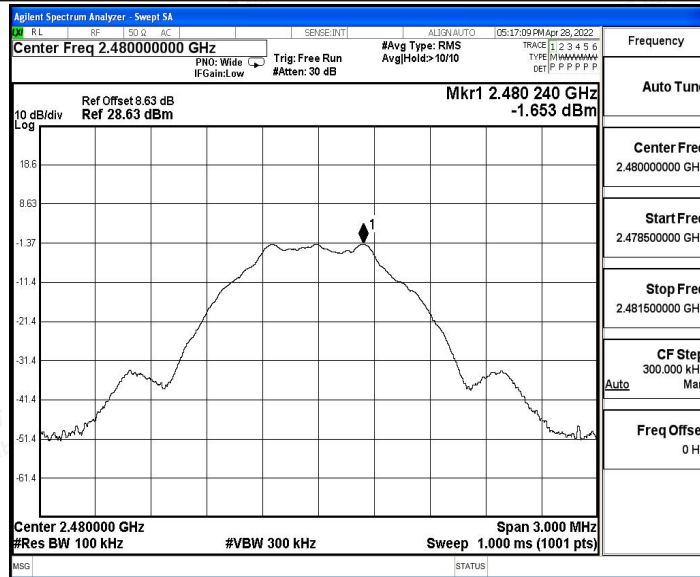


BLE_1M_Ant1_2440_1000~26500

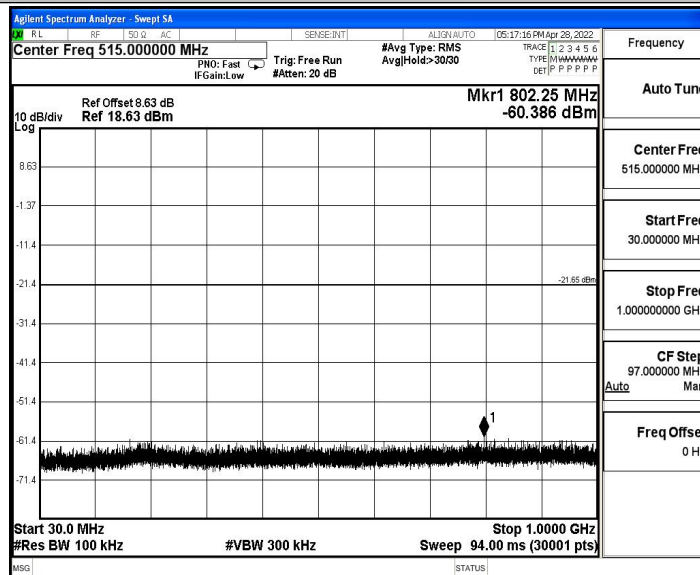


BLE_1M_Ant1_2480_0~Reference



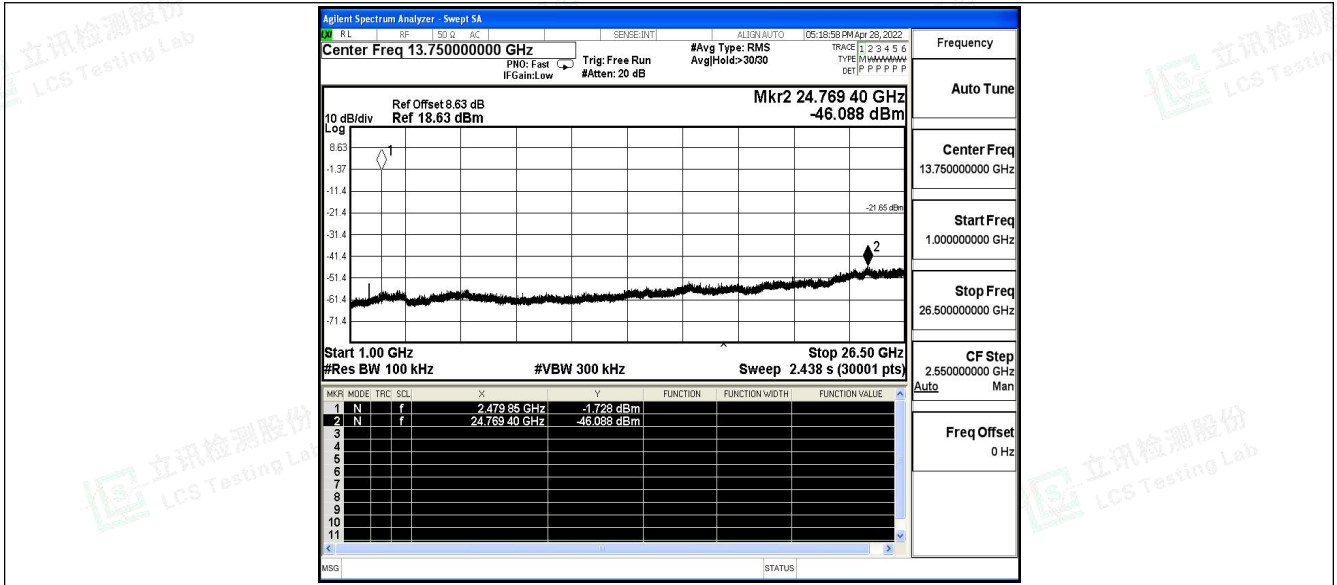


BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500







B.6 Duty Cycle

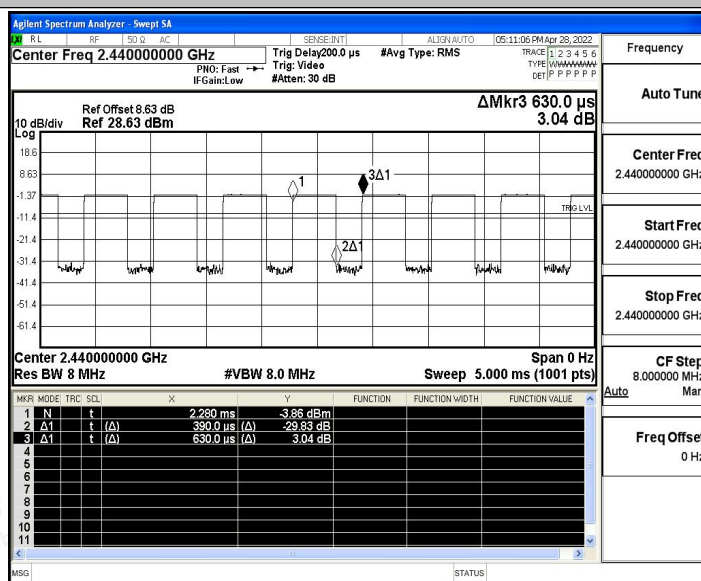
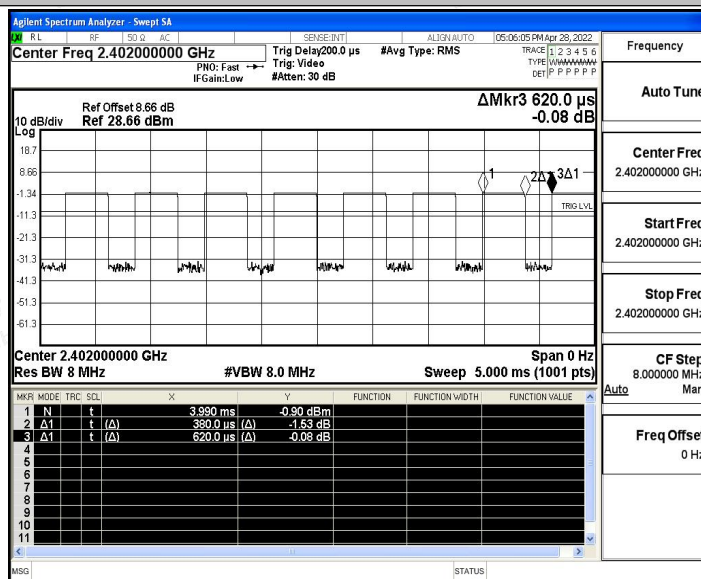
Test Result

TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	1/T (kHz)
BLE_1M	Ant1	2402	0.38	0.62	0.6129	61.29	2.13	2.63
		2440	0.39	0.63	0.6190	61.90	2.08	2.56
		2480	0.38	0.63	0.6032	60.32	2.20	2.63

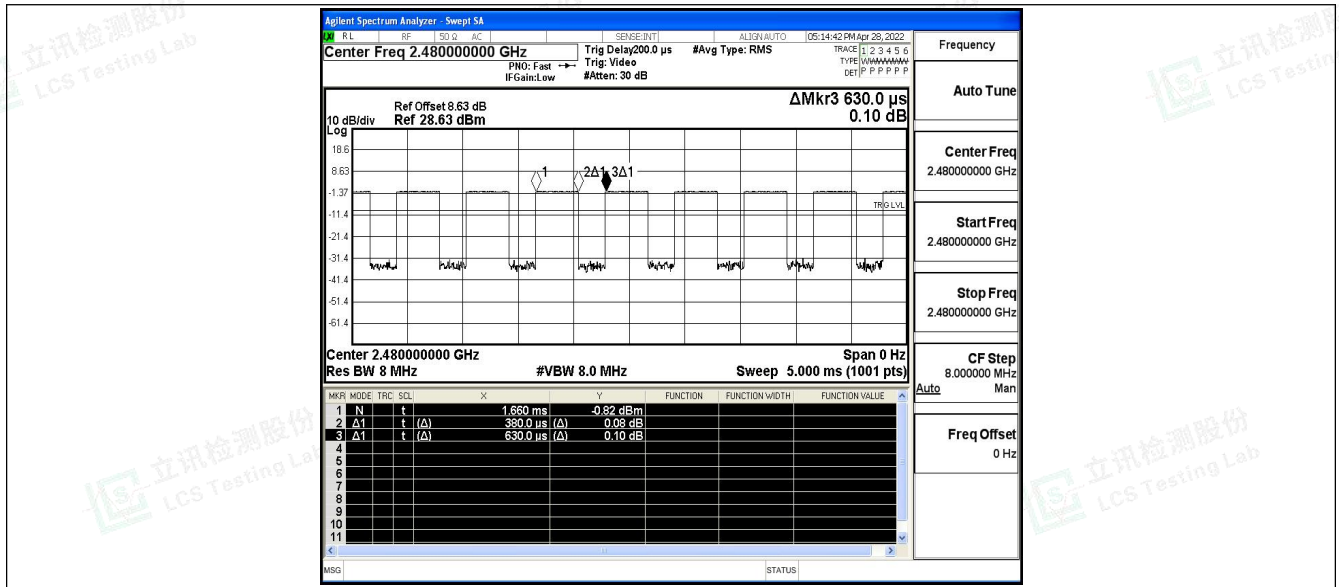




Test Graphs



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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_1M	Ant1	Low	2402	AV	2310.000	-47.48	≤-41.20	47.72	≤54	PASS
				AV	2382.110	-46.75	≤-41.20	48.45	≤54	PASS
				AV	2390.000	-47.3	≤-41.20	47.90	≤54	PASS
				Peak	2310.000	-38.48	≤-21.20	56.72	≤74	PASS
				Peak	2340.950	-36.73	≤-21.20	58.47	≤74	PASS
				Peak	2390.000	-38.47	≤-21.20	56.73	≤74	PASS
		High	2480	AV	2483.500	-46.31	≤-41.20	48.89	≤54	PASS
				AV	2499.920	-46.1	≤-41.20	49.10	≤54	PASS
				AV	2500.000	-46.37	≤-41.20	48.83	≤54	PASS
				Peak	2483.500	-37.53	≤-21.20	57.67	≤74	PASS
				Peak	2488.000	-36.64	≤-21.20	58.56	≤74	PASS
				Peak	2500.000	-37.54	≤-21.20	57.66	≤74	PASS

Note:

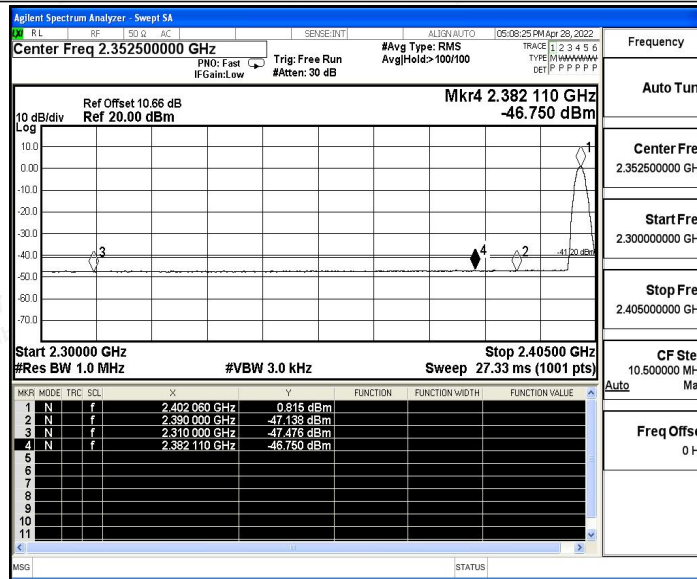
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



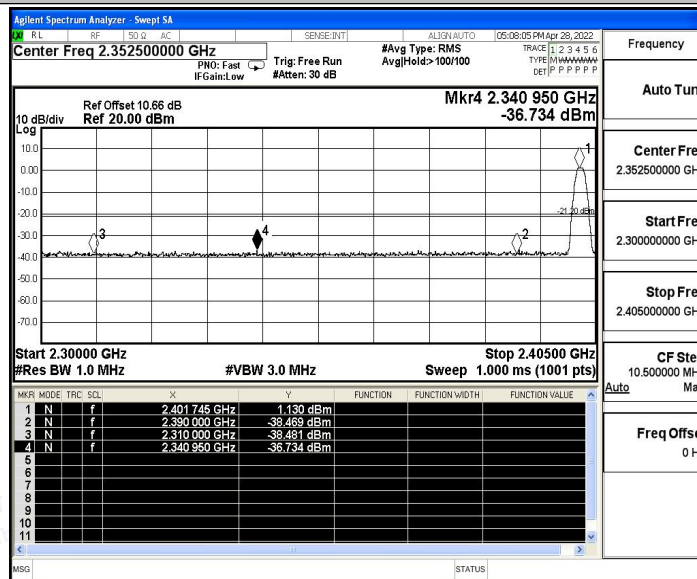


Test Graphs

BLE_1M_Ant1_Low_2402_AV

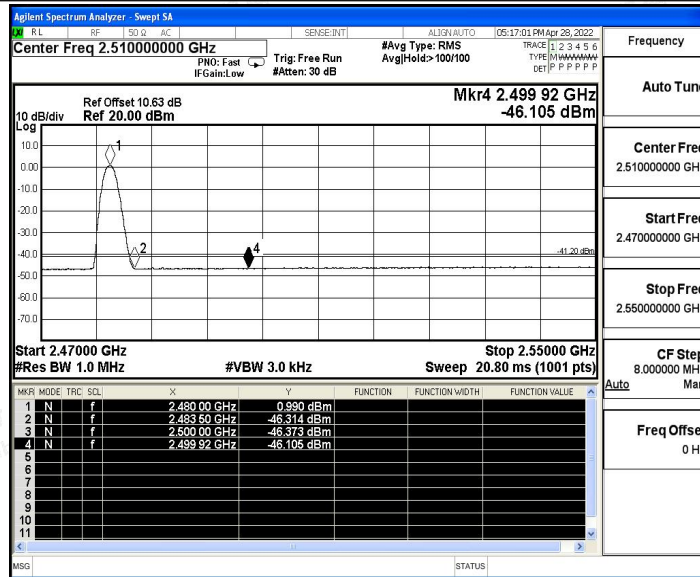


BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV





BLE_1M_Ant1_High_2480_Peak

