



Appendix A

RF Test Data for BT LE (Conducted Measurement)

Product Name: COUNTER SENSOR

Test Model: SC9124

Environmental Conditions

Temperature:	23.8 ° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Ling Zhu Ling Zhu
Supervised by:	Li Huan Li Huan





A.1 DTS Bandwidth

Test Result

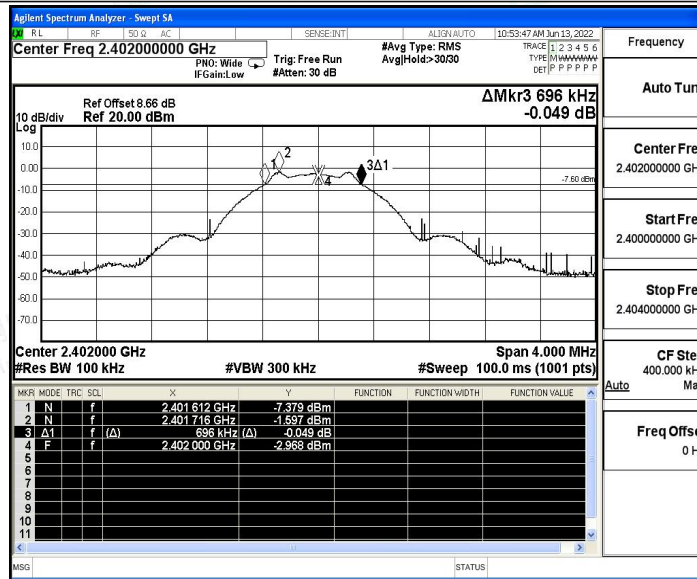
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.696	2401.612	2402.308	0.5	PASS
		2440	0.708	2439.604	2440.312	0.5	PASS
		2480	0.720	2479.600	2480.320	0.5	PASS



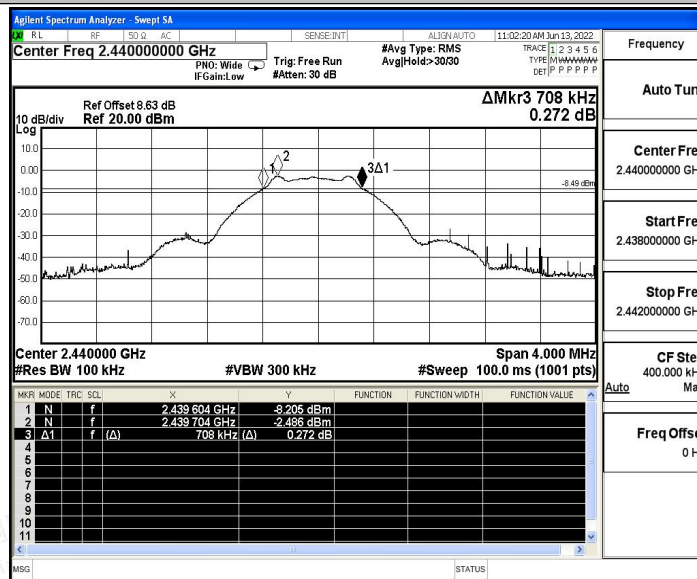


Test Graphs

BLE_1M_Ant1_2402

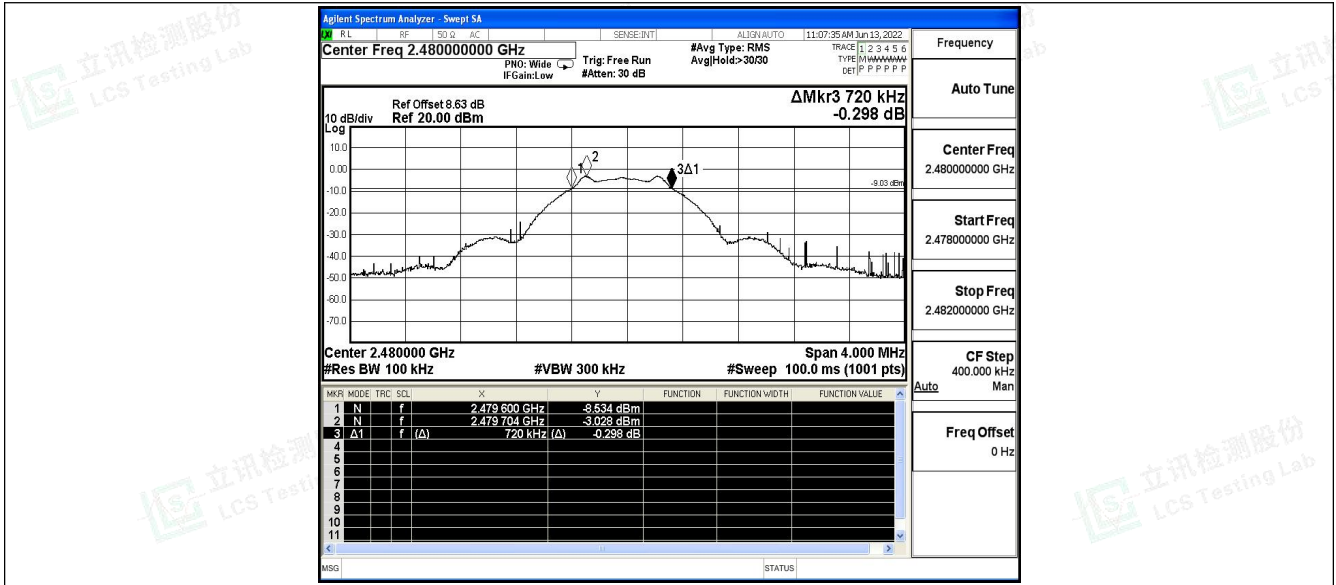


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480







A.2 Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0602	2401.433	2402.493	---	---
		2440	1.0631	2439.428	2440.492	---	---
		2480	1.0688	2479.428	2480.496	---	---

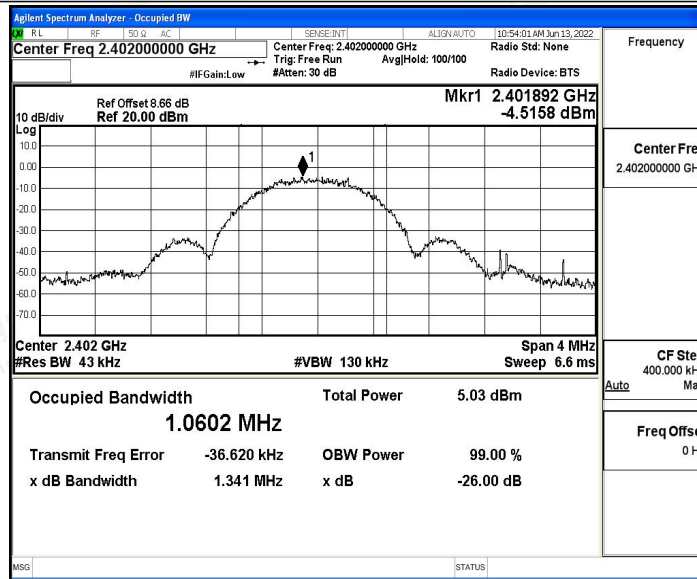


Shenzhen LCS Compliance Testing Laboratory Ltd.
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Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
Scan code to check authenticity

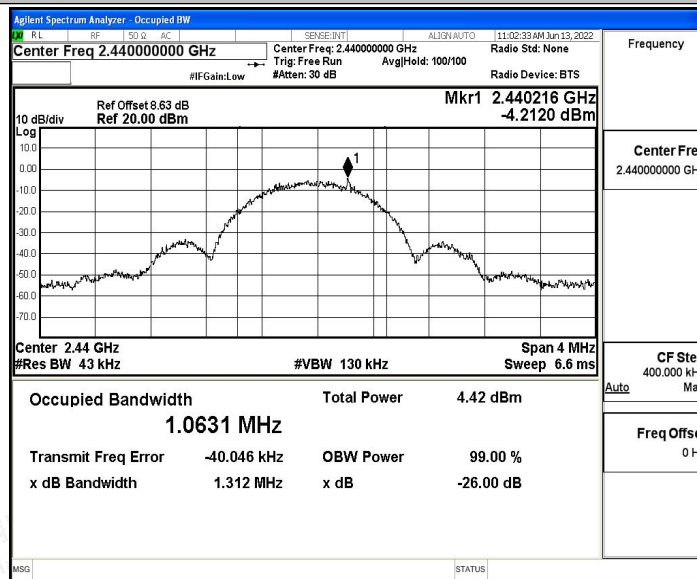


Test Graphs

BLE_1M_Ant1_2402

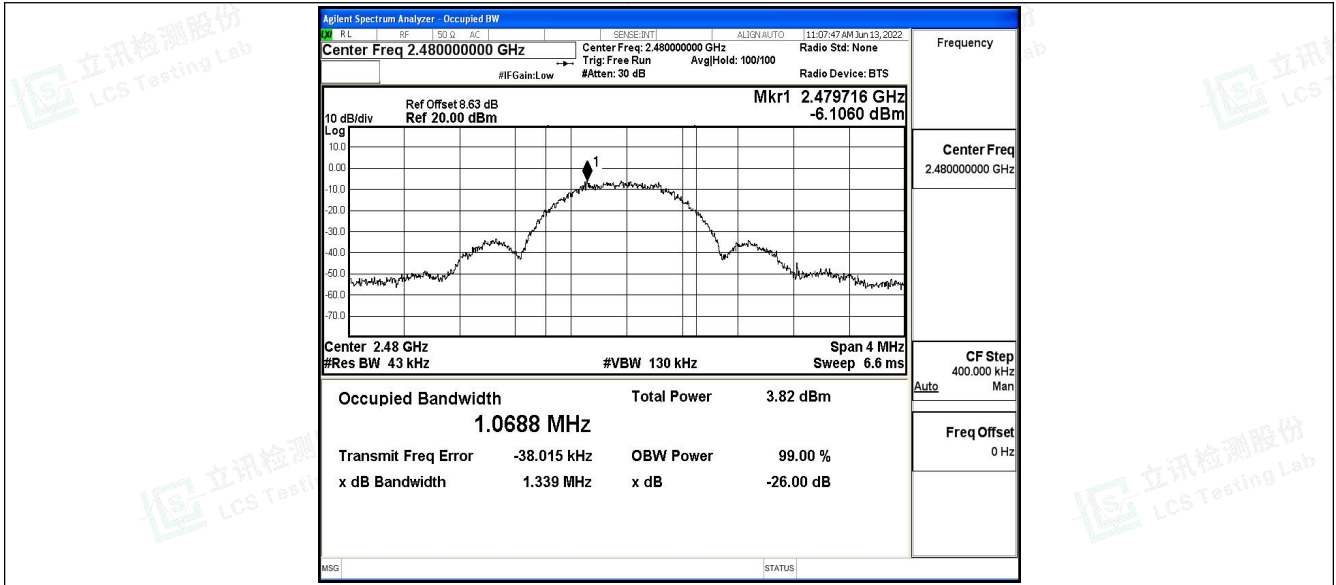


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480







A.3 Maximum peak conducted output power

Test Result

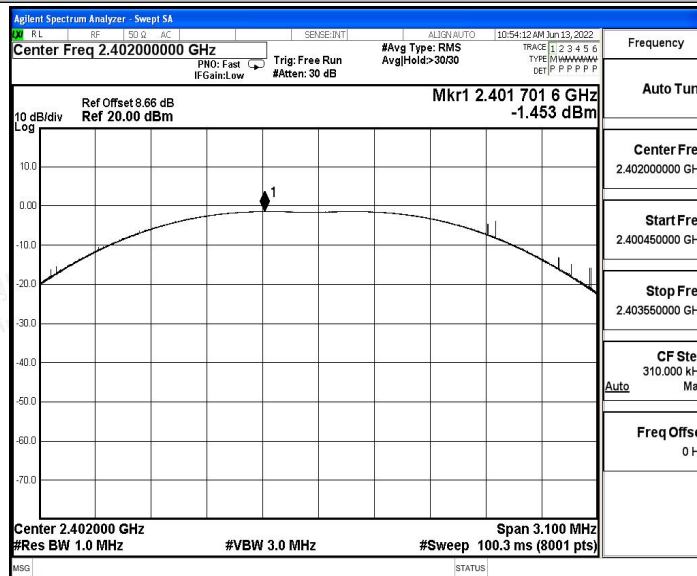
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-1.45	≤30	PASS
		2440	-2.21	≤30	PASS
		2480	-2.82	≤30	PASS



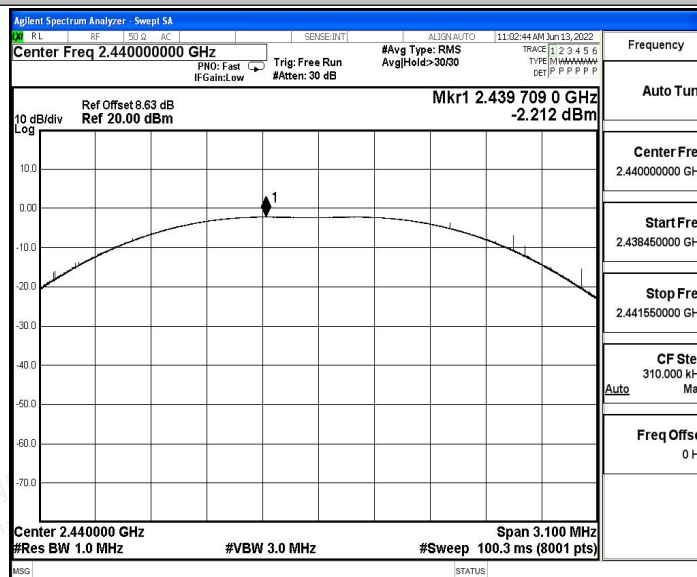


Test Graphs

BLE_1M_Ant1_2402

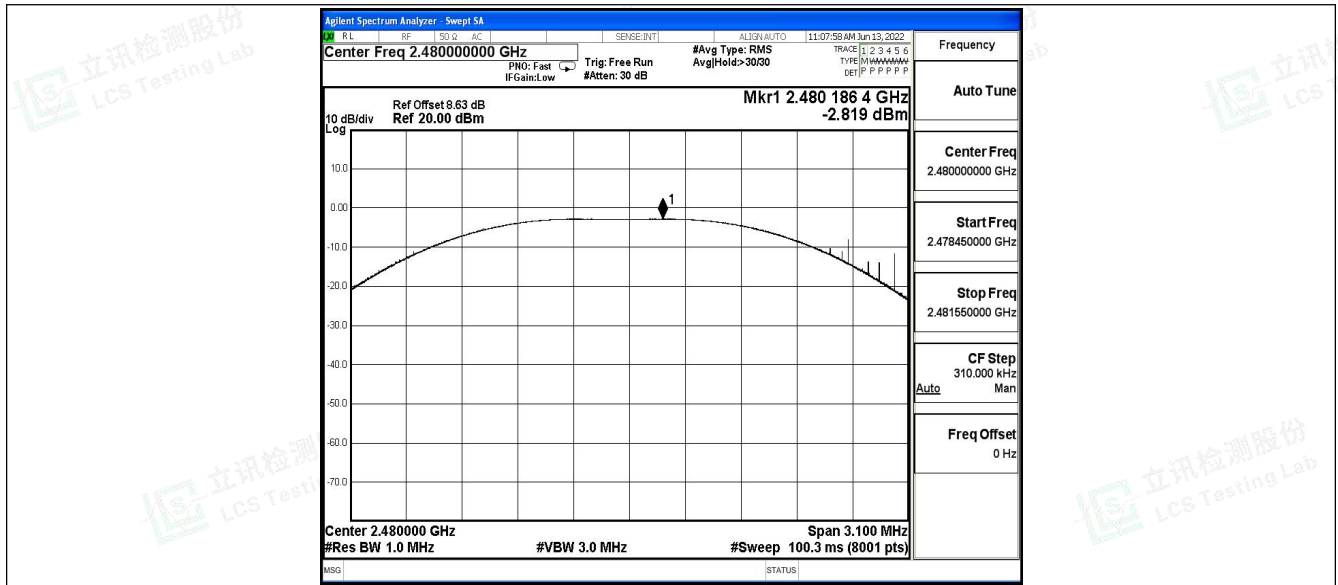


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480







A.4 Maximum power spectral density

Test Result

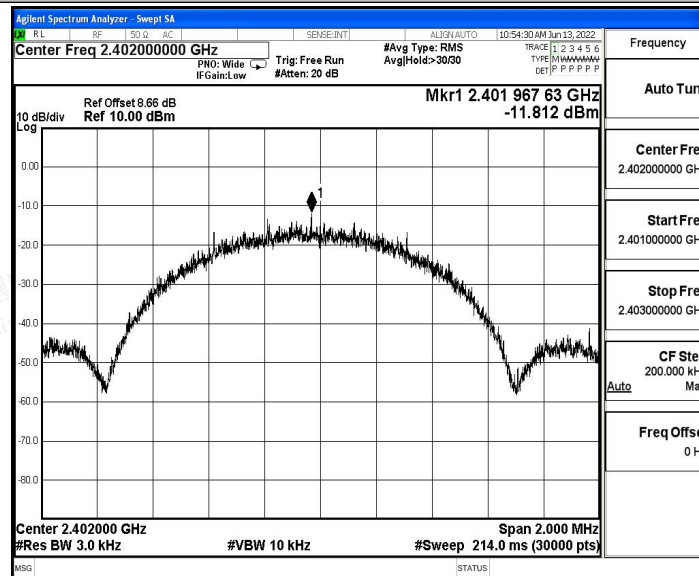
TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-11.81	≤8.00	PASS
		2440	-14.4	≤8.00	PASS
		2480	-15.28	≤8.00	PASS



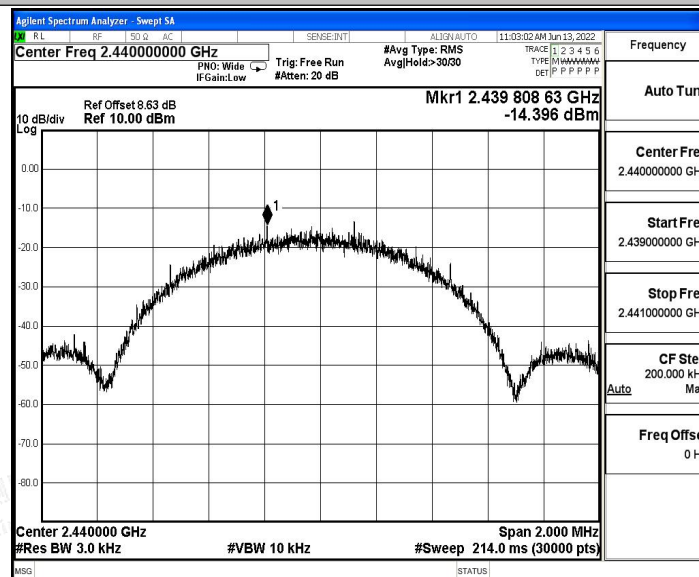


Test Graphs

BLE_1M_Ant1_2402

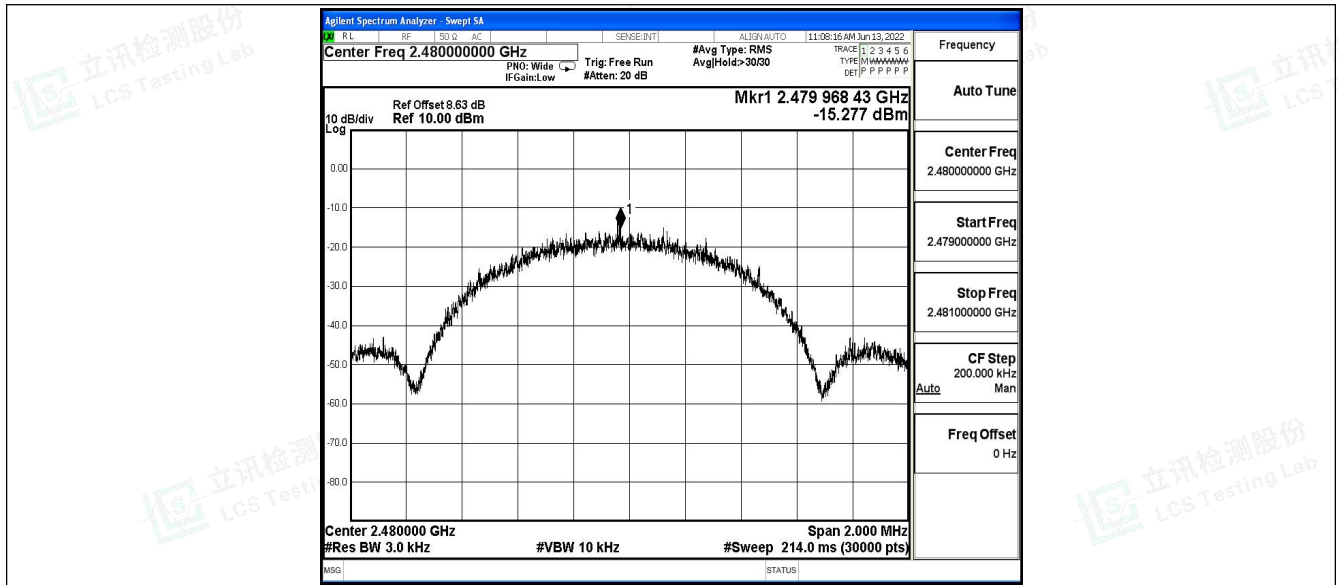


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480







A.5 Band edge measurements

Test Result

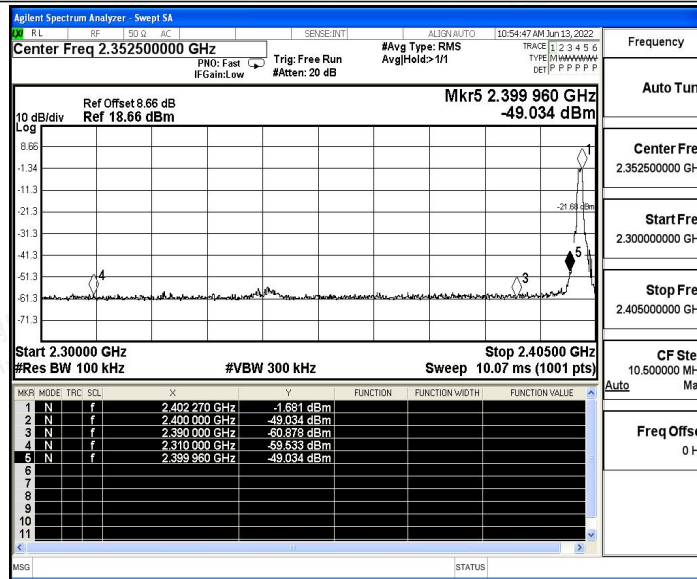
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-1.68	-49.03	≤-21.68	PASS
		High	2480	-3.24	-57.41	≤-23.24	PASS



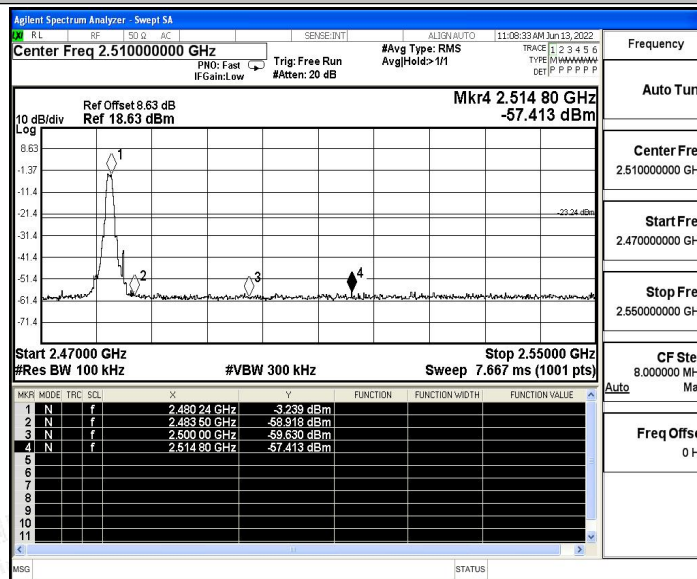


Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480





A.6 Conducted Spurious Emission

Test Result

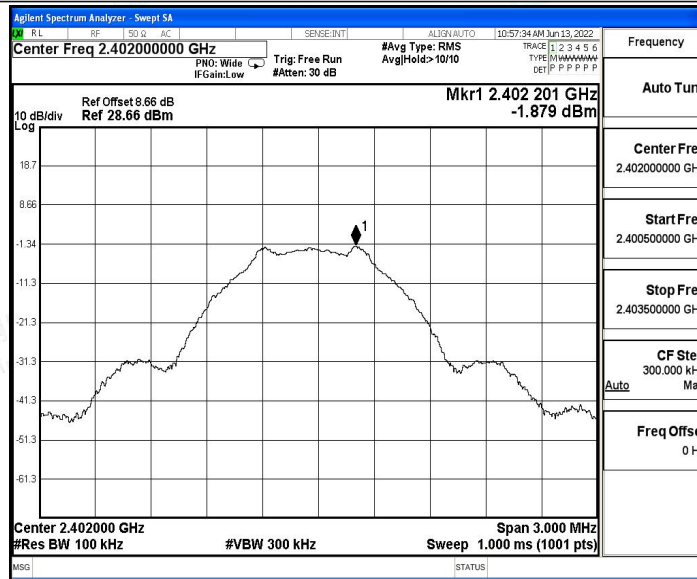
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-1.88	-1.88	---	PASS
			30~1000	-1.88	-53.62	≤-21.88	PASS
			1000~26500	-1.88	-44.23	≤-21.88	PASS
		2440	Reference	-2.48	-2.48	---	PASS
			30~1000	-2.48	-53.47	≤-22.48	PASS
			1000~26500	-2.48	-46.14	≤-22.48	PASS
		2480	Reference	-3.29	-3.29	---	PASS
			30~1000	-3.29	-54.26	≤-23.29	PASS
			1000~26500	-3.29	-46.51	≤-23.29	PASS



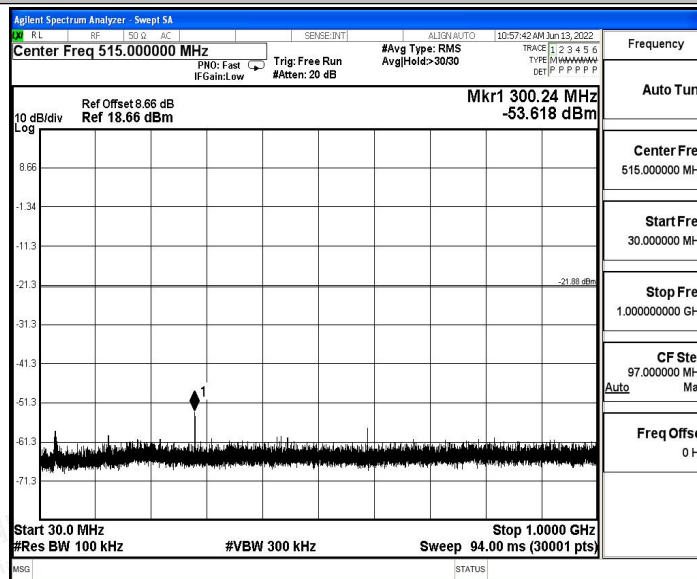


Test Graphs

BLE_1M_Ant1_2402_0~Reference

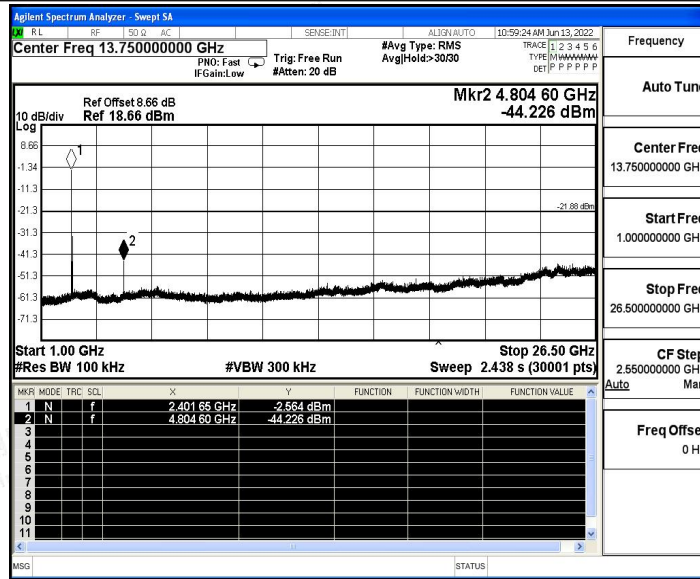


BLE_1M_Ant1_2402_30~1000

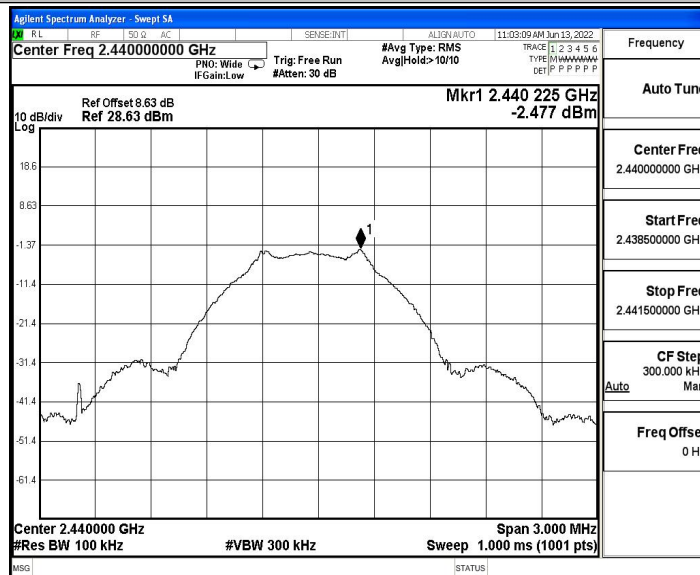


BLE_1M_Ant1_2402_1000~26500



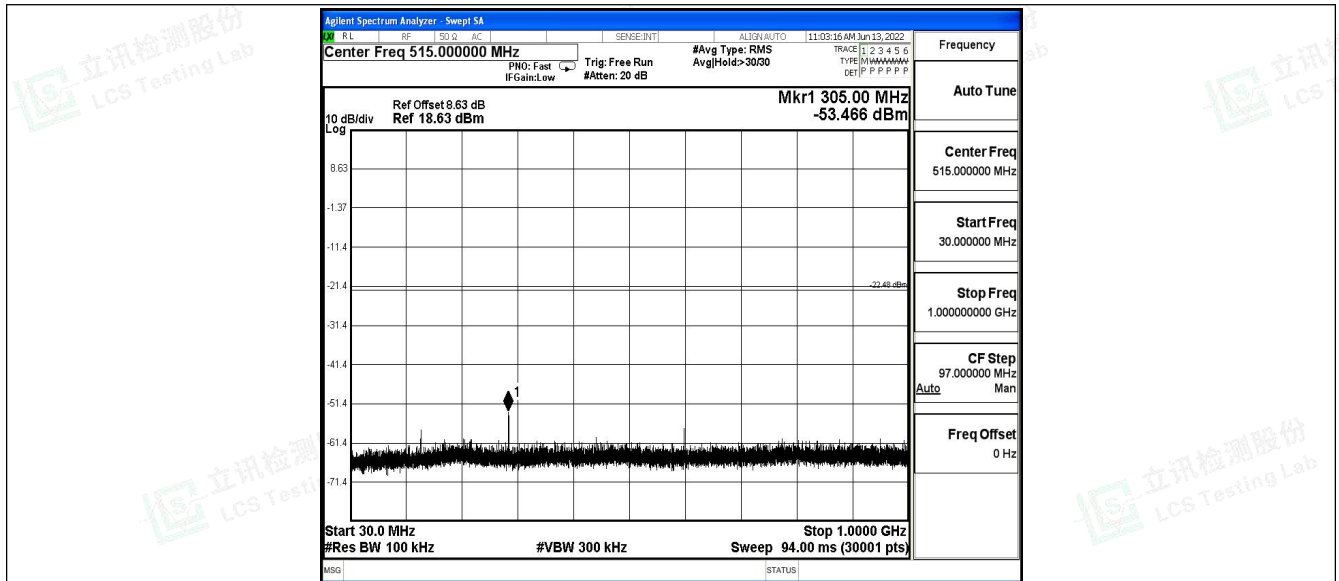


BLE_1M_Ant1_2440_0~Reference

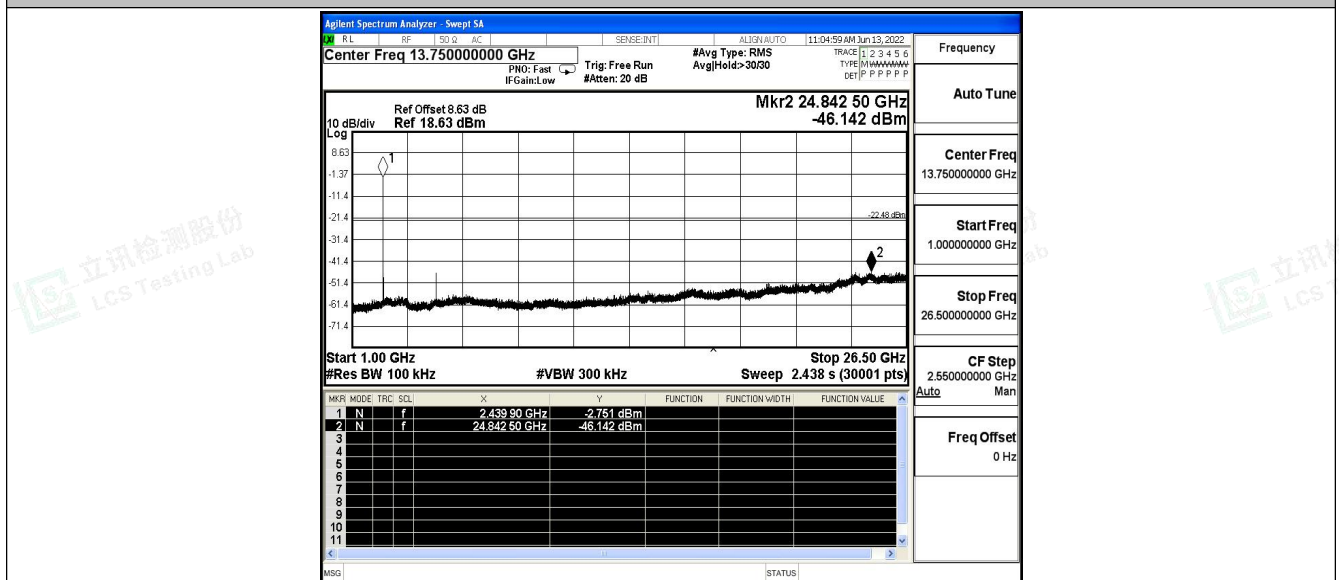


BLE_1M_Ant1_2440_30~1000



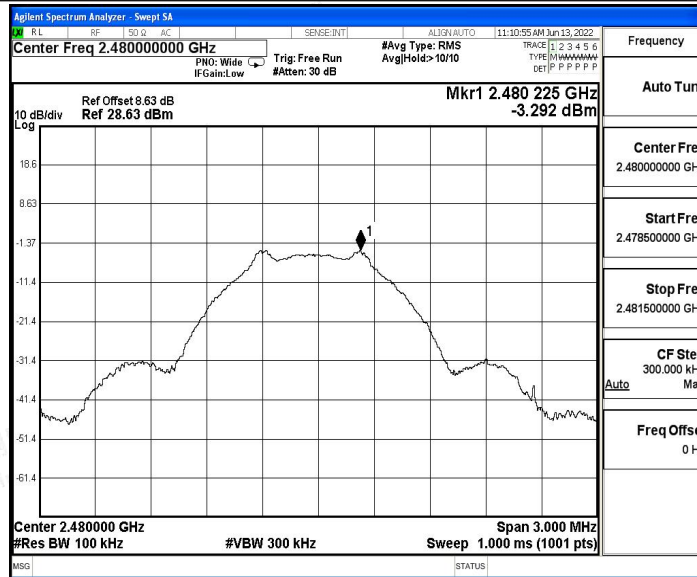


BLE_1M_Ant1_2440_1000~26500

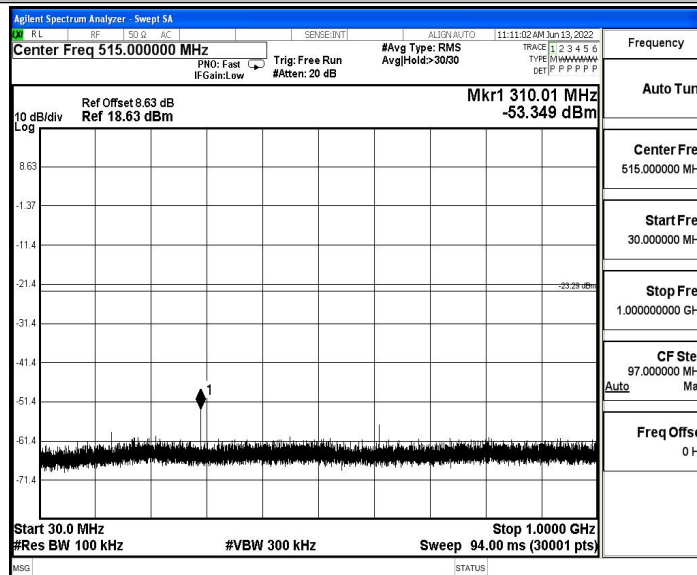


BLE_1M_Ant1_2480_0~Reference



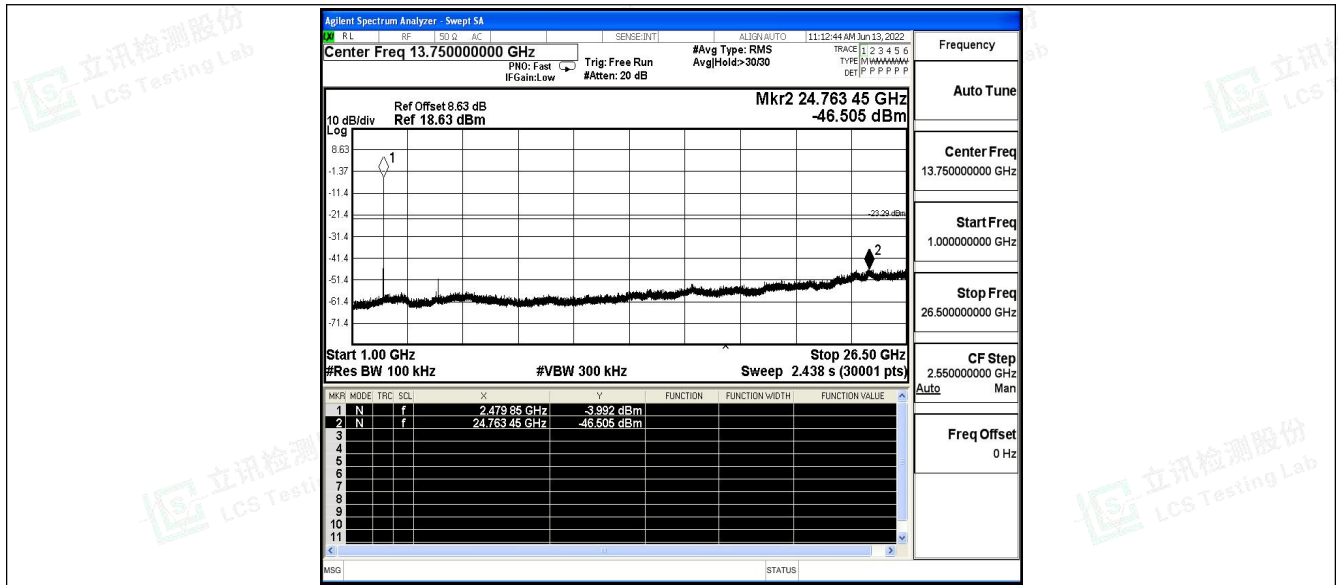


BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500







A.7 Duty Cycle

Test Result

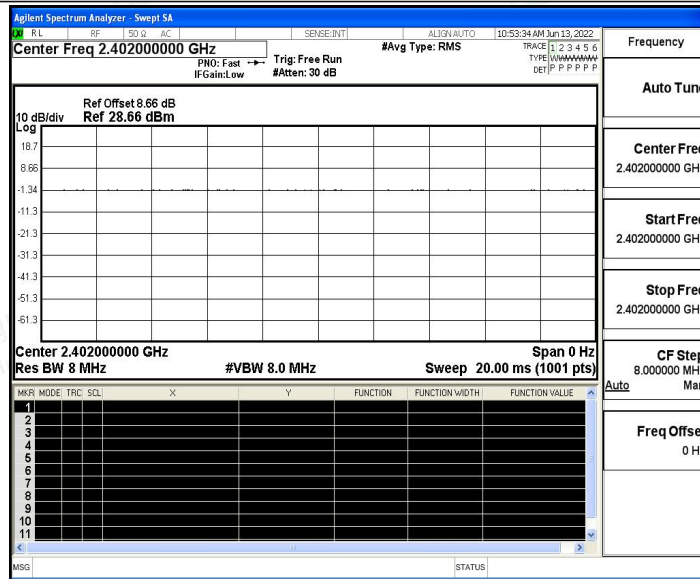
TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	1/T	Limit
BLE_1M	Ant1	2402	10.00	10.00	1.0000	100.00	0.00	0.10	---
		2440	15.00	15.00	1.0000	100.00	0.00	0.07	---
		2480	20.00	20.00	1.0000	100.00	0.00	0.05	---



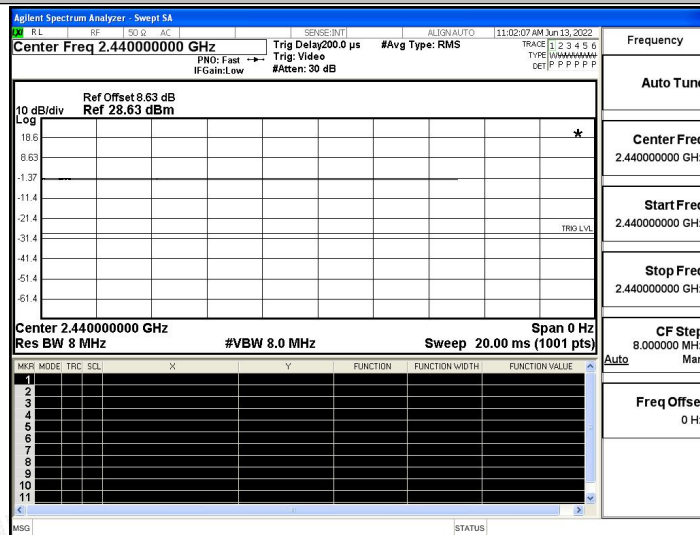


Test Graphs

BLE_1M_Ant1_2402

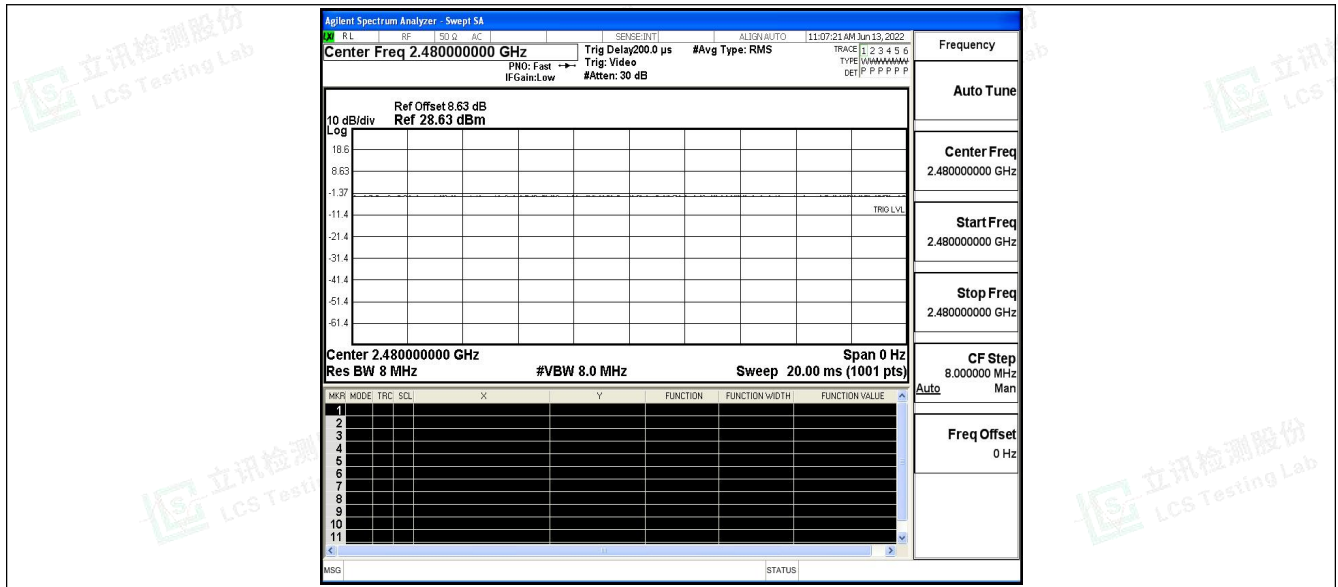


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480







A.8 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	-58.21	≤-41.20	36.99	≤54	PASS
				AV	2343.575	-55.84	≤-41.20	39.36	≤54	PASS
				AV	2390.000	-57.59	≤-41.20	37.61	≤54	PASS
				Peak	2310.000	-48.5	≤-21.20	46.70	≤74	PASS
				Peak	2343.365	-44.08	≤-21.20	51.12	≤74	PASS
				Peak	2390.000	-47.49	≤-21.20	47.71	≤74	PASS
		High	2480	AV	2483.500	-54.81	≤-41.20	40.39	≤54	PASS
				AV	2483.520	-54.81	≤-41.20	40.39	≤54	PASS
				AV	2500.000	-57.11	≤-41.20	38.09	≤54	PASS
				Peak	2483.500	-47.08	≤-21.20	48.12	≤74	PASS
				Peak	2485.200	-41.2	≤-21.20	54.00	≤74	PASS
				Peak	2500.000	-47.29	≤-21.20	47.91	≤74	PASS

Note:

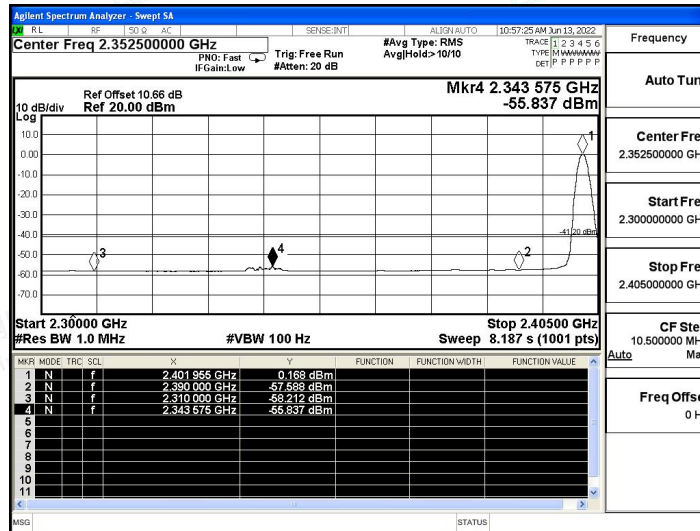
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



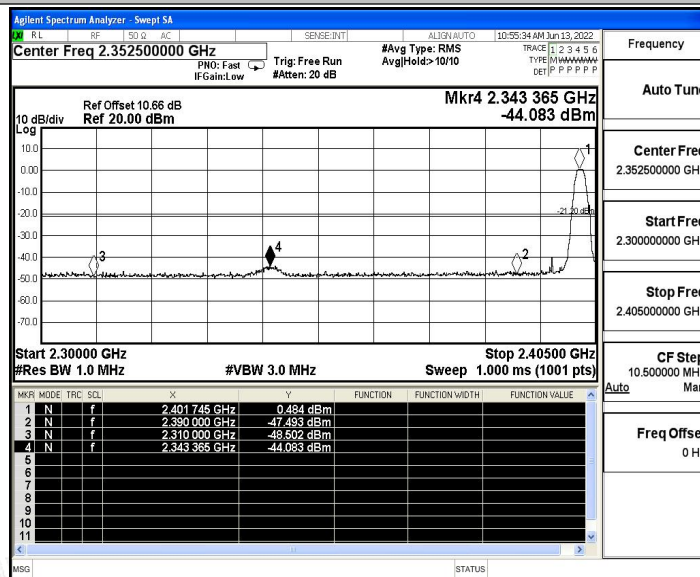


Test Graphs

BLE_1M_Ant1_Low_2402_AV

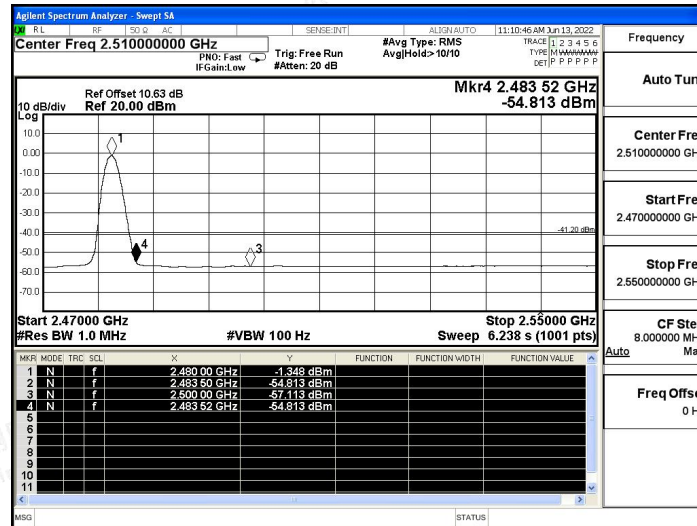


BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV





BLE_1M_Ant1_High_2480_Peak

