Appendix A

RF Test Data for BT(BLE) (Conducted Measurement)

Product Name: Portable speaker

Trade Mark: QFX

Test Model: BT-ZX1

FCC ID: 2AOMX-BTZX1

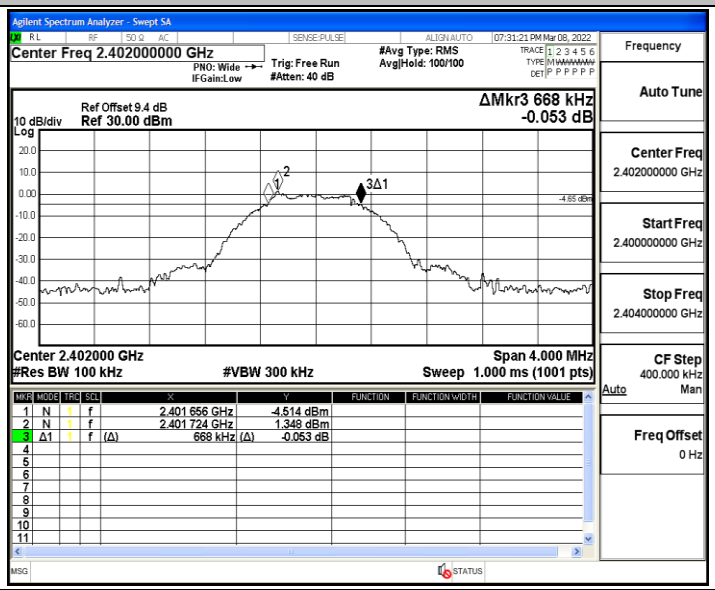
Environmental Conditions

Temperature:	22.8° C
Relative Humidity:	60%
ATM Pressure:	100.0 kPa
Test Engineer:	Nancy Li
Supervised by:	Hugo Chen
NOTE	N/A

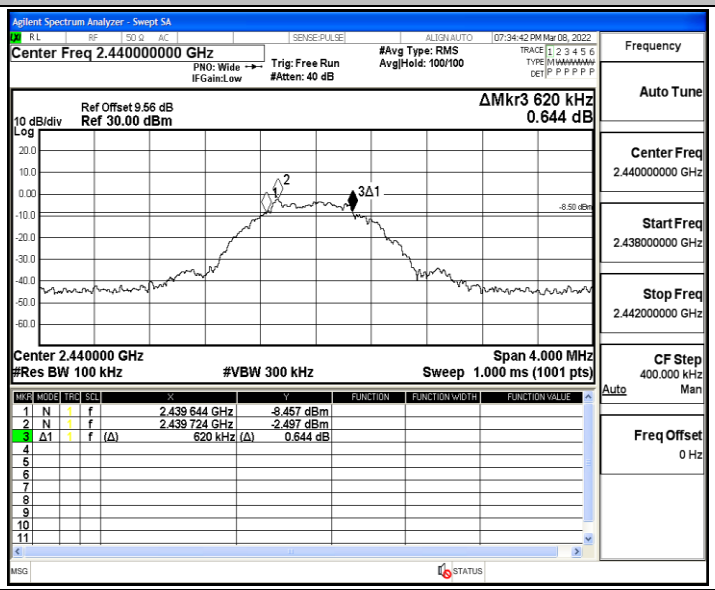
A.1. 6dB Bandwidth

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.668	2401.656	2402.324	0.5	PASS
		2440	0.620	2439.644	2440.264	0.5	PASS
		2480	0.720	2479.628	2480.348	0.5	PASS

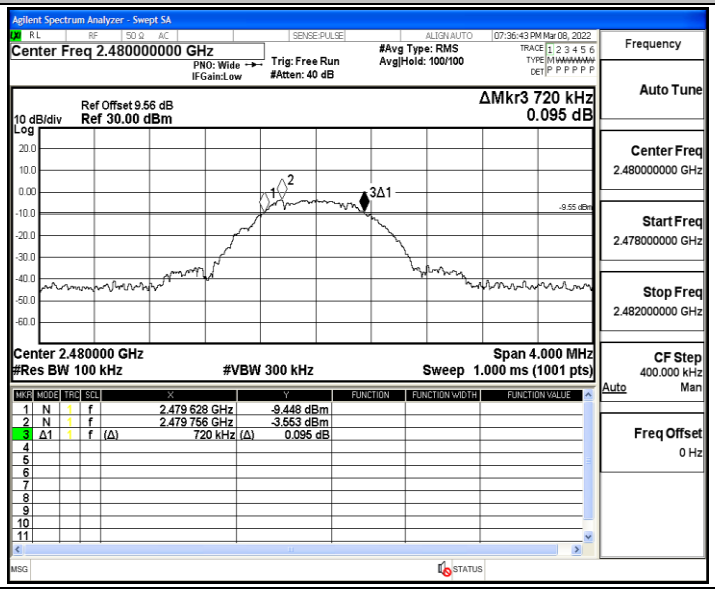
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



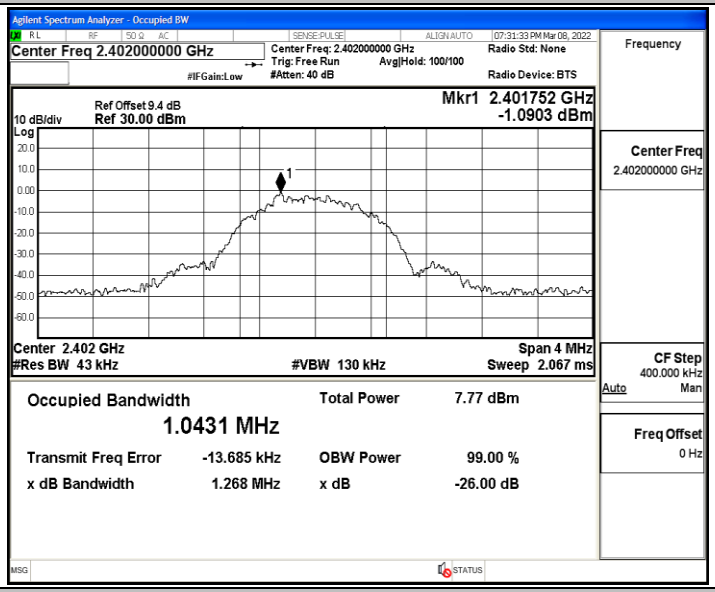
BLE_1M_Ant1_2480



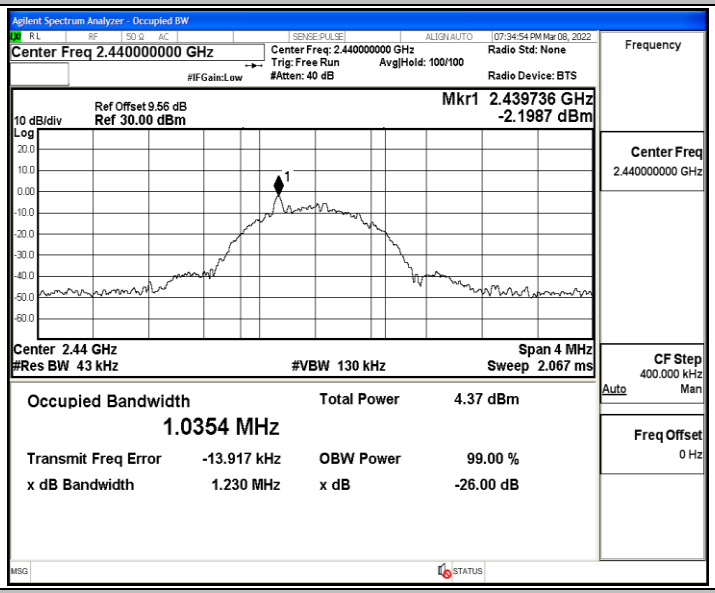
A.2. Occupied Bandwidth

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0431	2401.465	2402.508	---	---
		2440	1.0354	2439.468	2440.504	---	---
		2480	1.0501	2479.461	2480.511	---	---

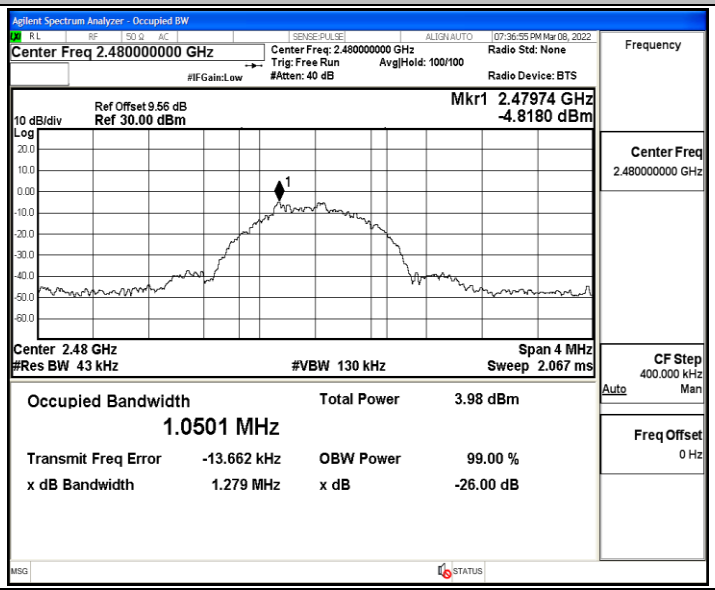
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



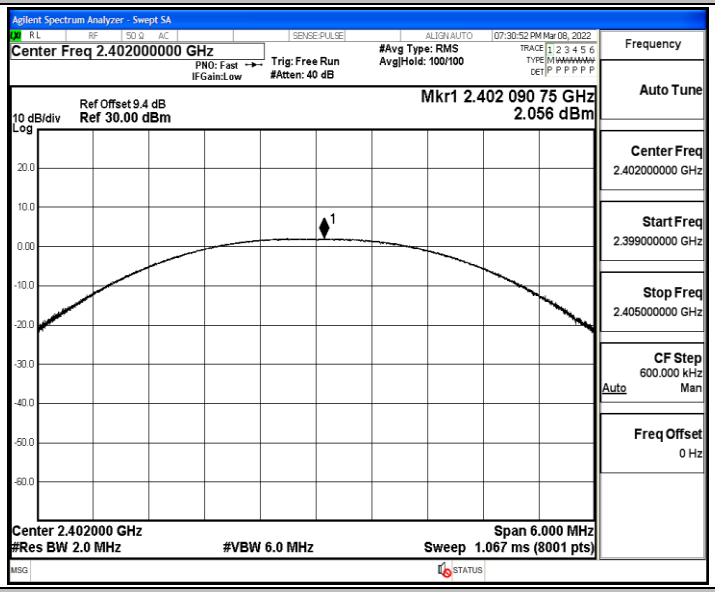
BLE_1M_Ant1_2480



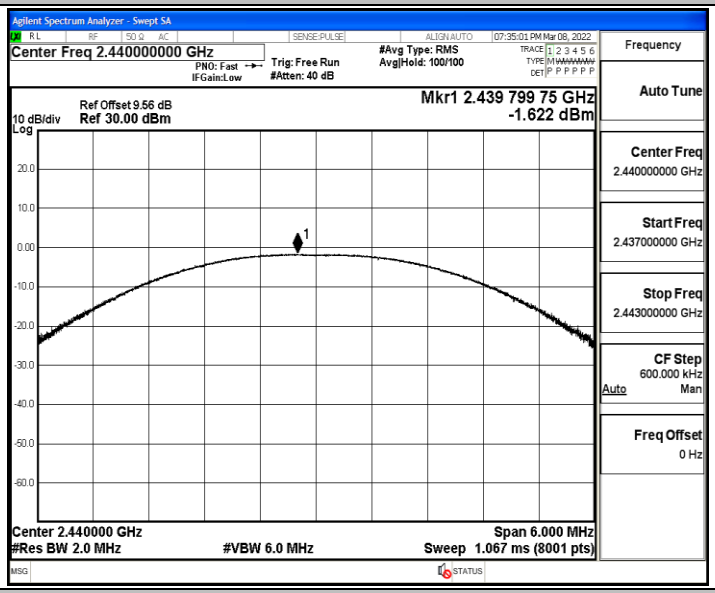
A.3. Maximum peak conducted output power

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	2.06	≤30	PASS
		2440	-1.62	≤30	PASS
		2480	-1.51	≤30	PASS

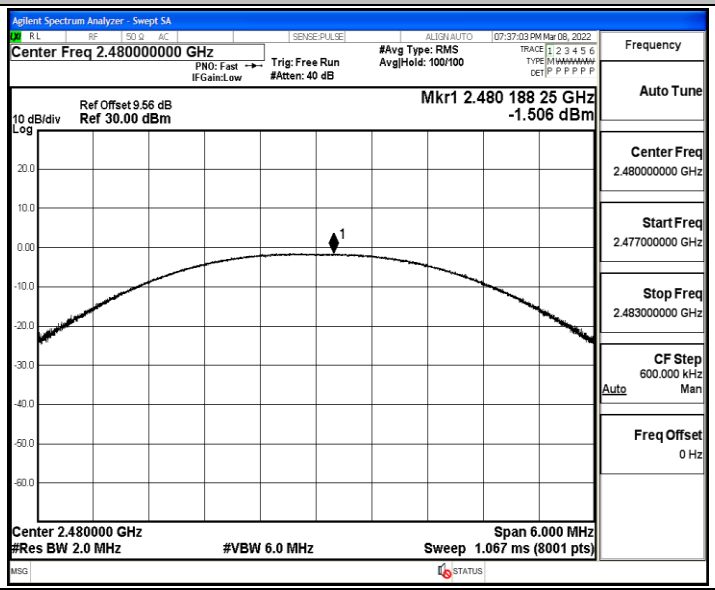
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



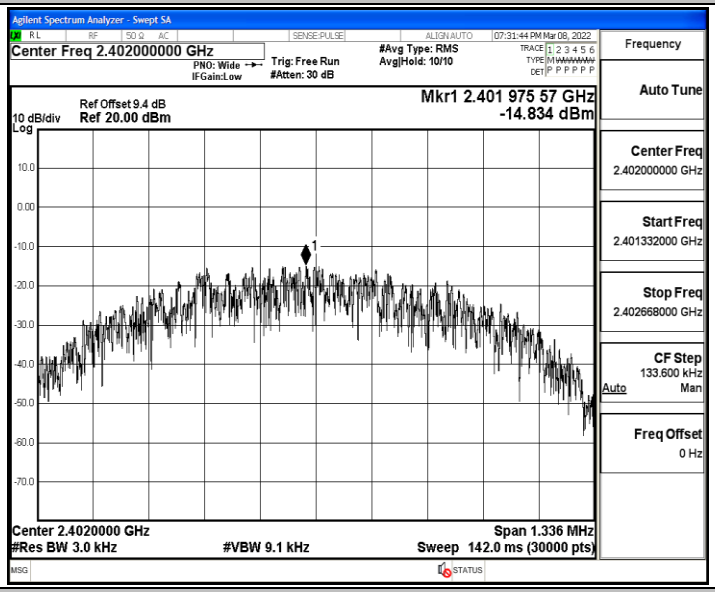
BLE_1M_Ant1_2480



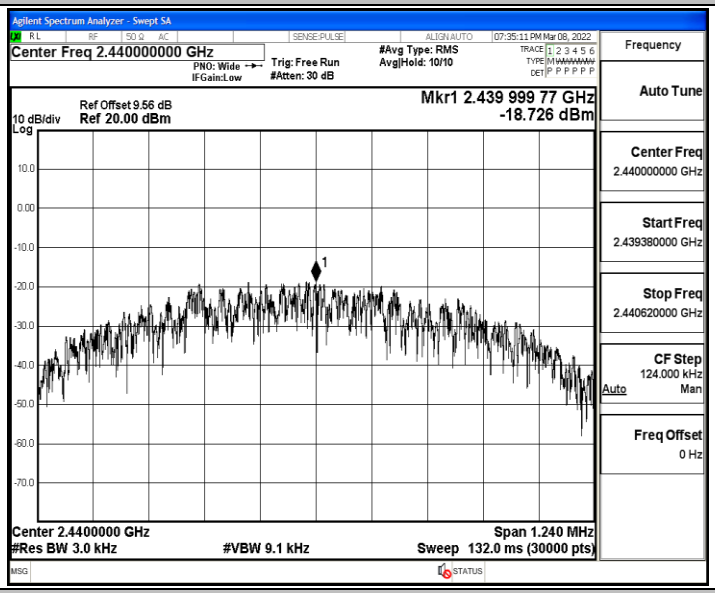
A.4. Maximum Peak power spectral density

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-14.83	≤8.00	PASS
		2440	-18.73	≤8.00	PASS
		2480	-18.12	≤8.00	PASS

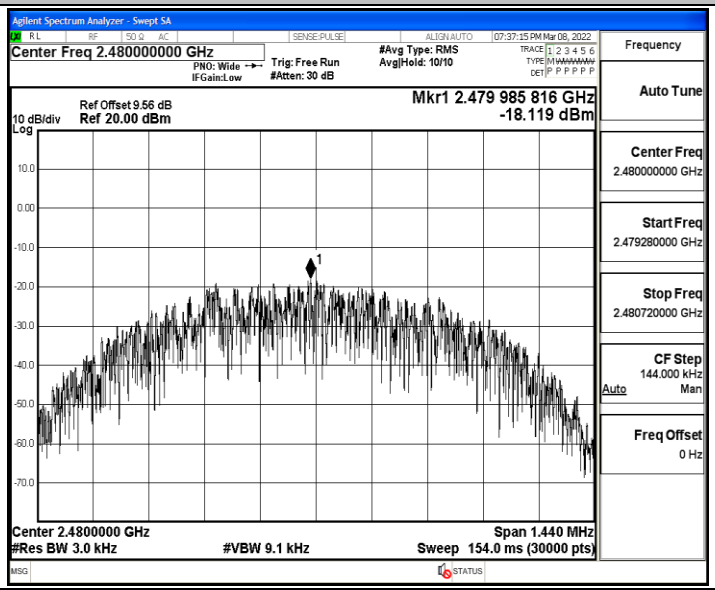
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



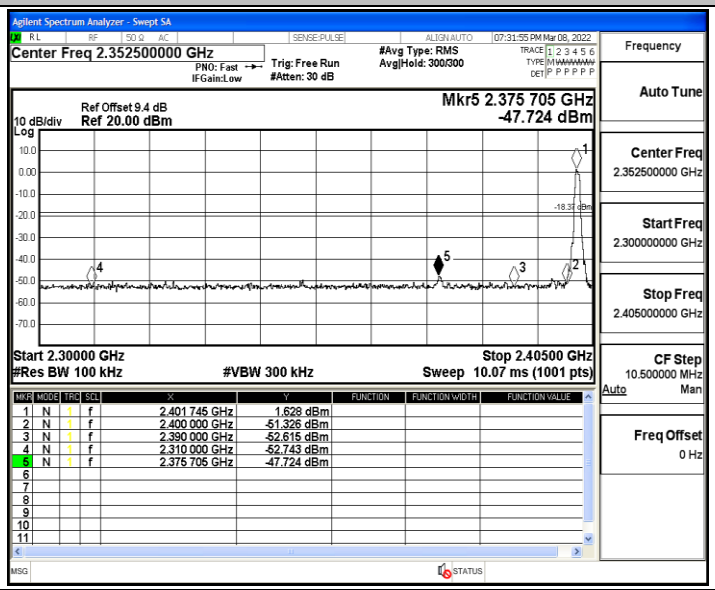
BLE_1M_Ant1_2480



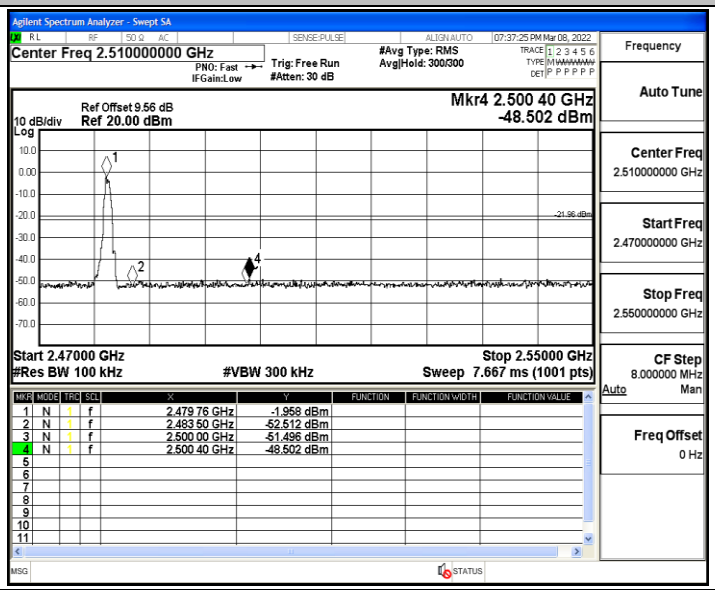
A.5. Band-edge for RF Conducted Emissions

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	1.63	-47.72	≤-18.37	PASS
		High	2480	-1.96	-48.5	≤-21.96	PASS

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480



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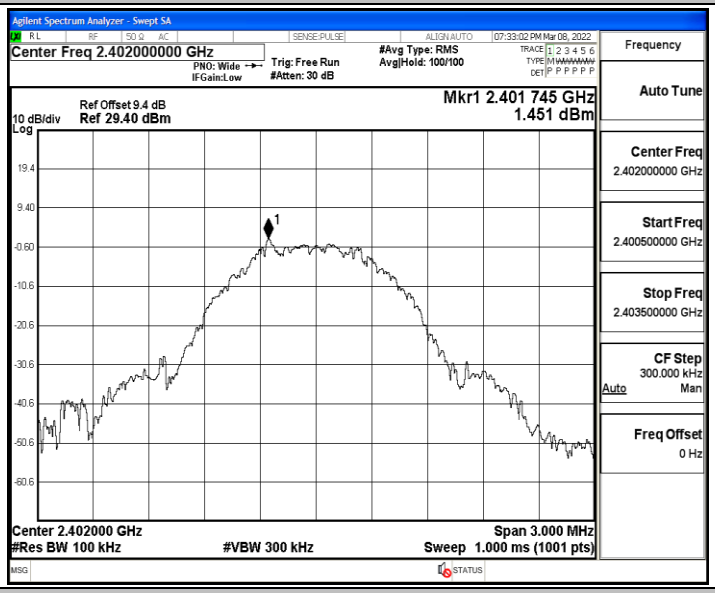
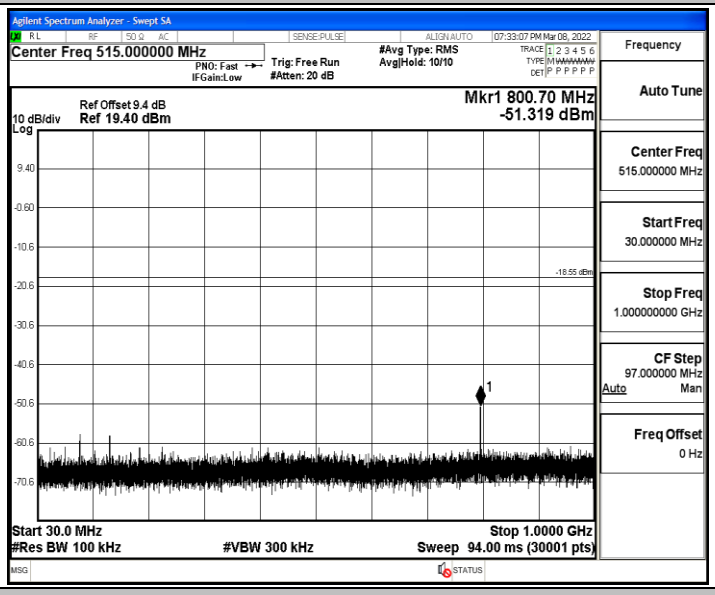
A.6. RF Conducted Spurious Emissions

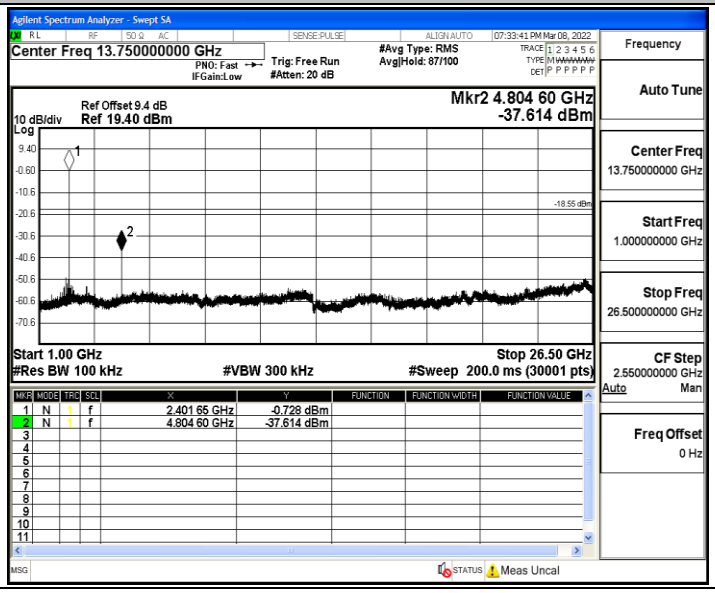
BLE_1M_Ant1_2402_0~Reference



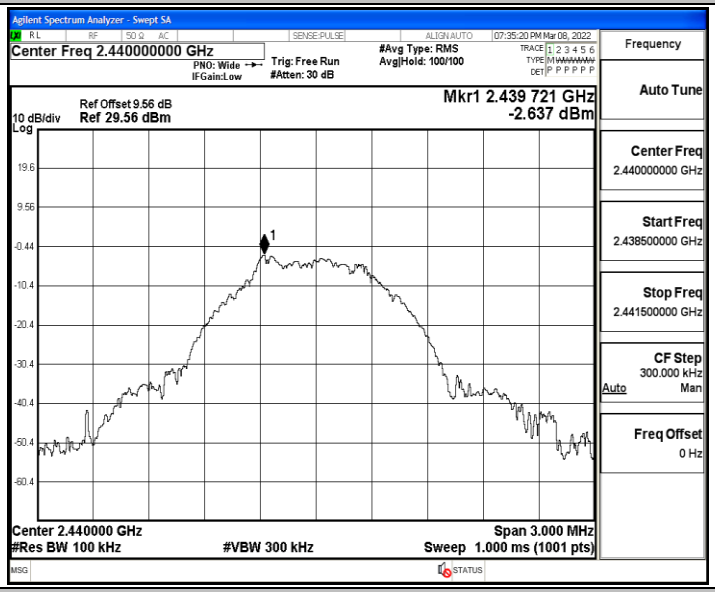
BLE_1M_Ant1_2402_30~1000



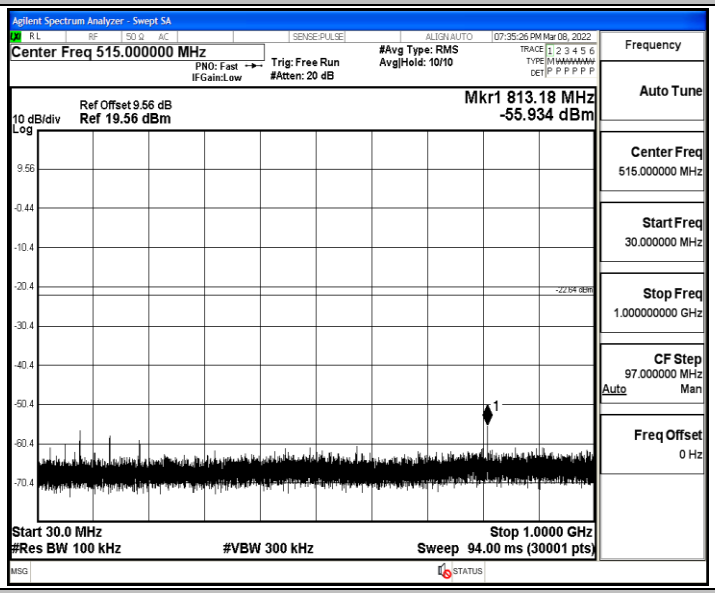
BLE_1M_Ant1_2402_1000~26500



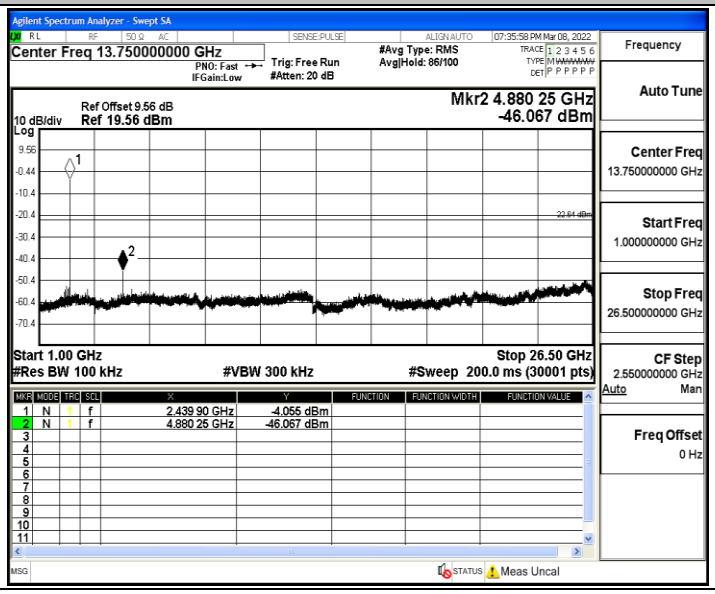
BLE_1M_Ant1_2440_0~Reference



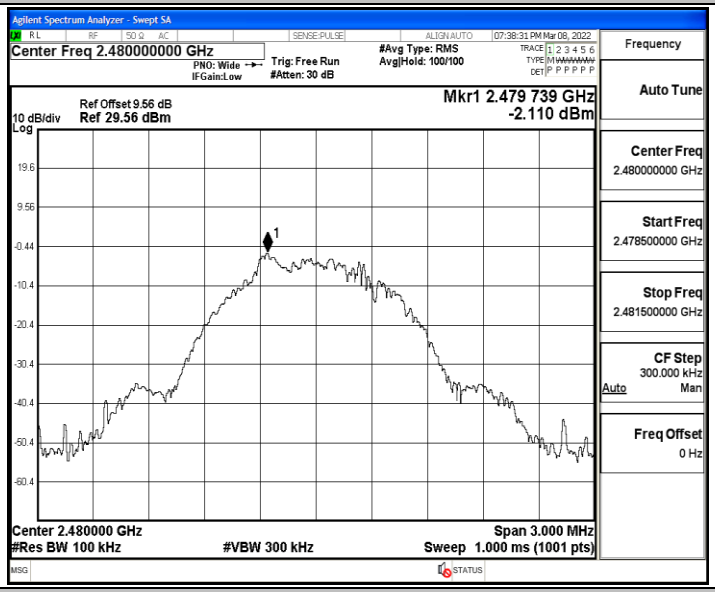
BLE_1M_Ant1_2440_30~1000



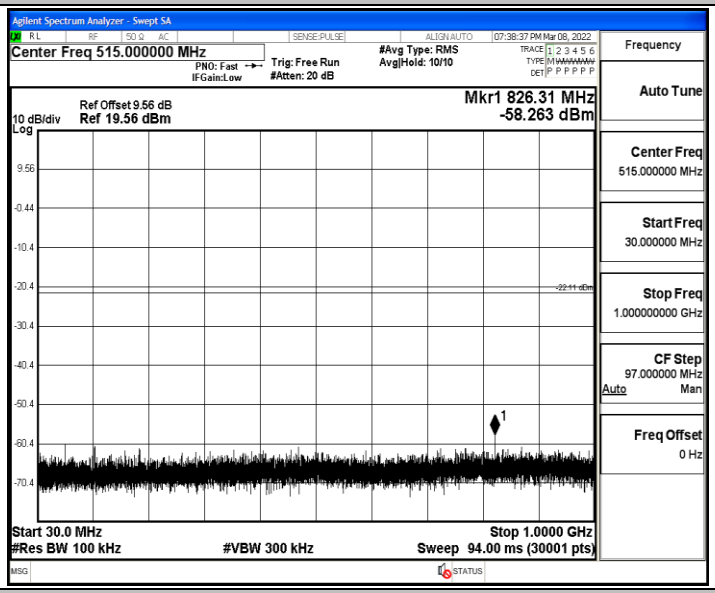
BLE_1M_Ant1_2440_1000~26500



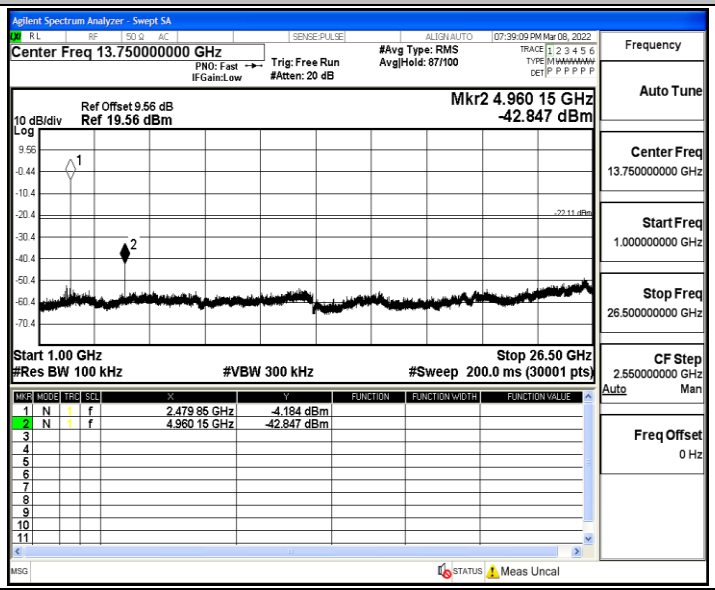
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



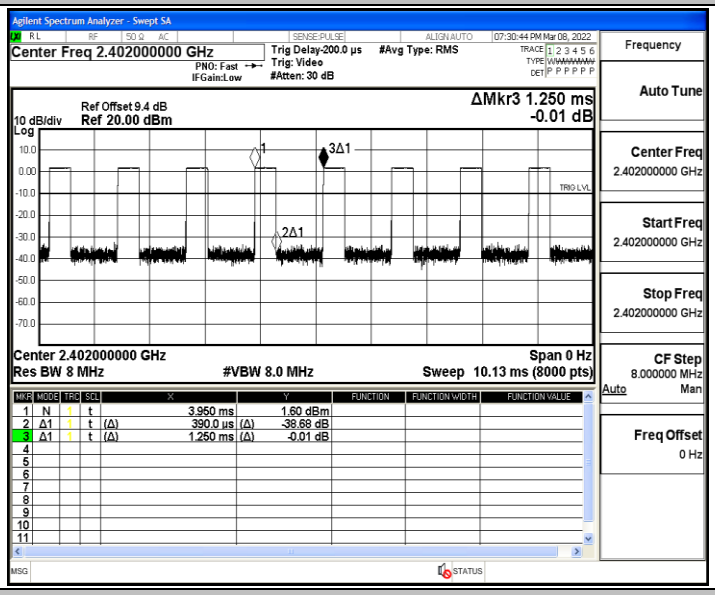
BLE_1M_Ant1_2480_1000~26500



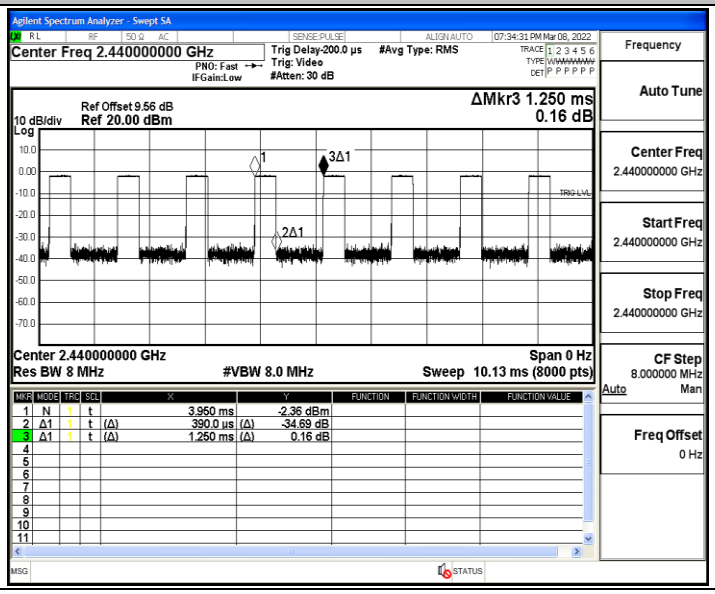
A.7. Duty Cycle

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T
BLE_1M	Ant1	2402	0.39	1.25	31.20	2.56
		2440	0.39	1.25	31.20	2.56
		2480	0.39	1.25	31.20	2.56

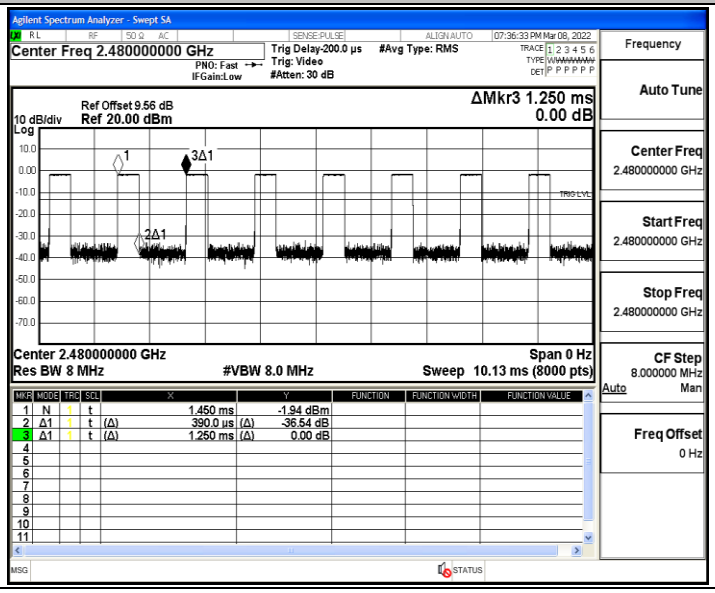
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

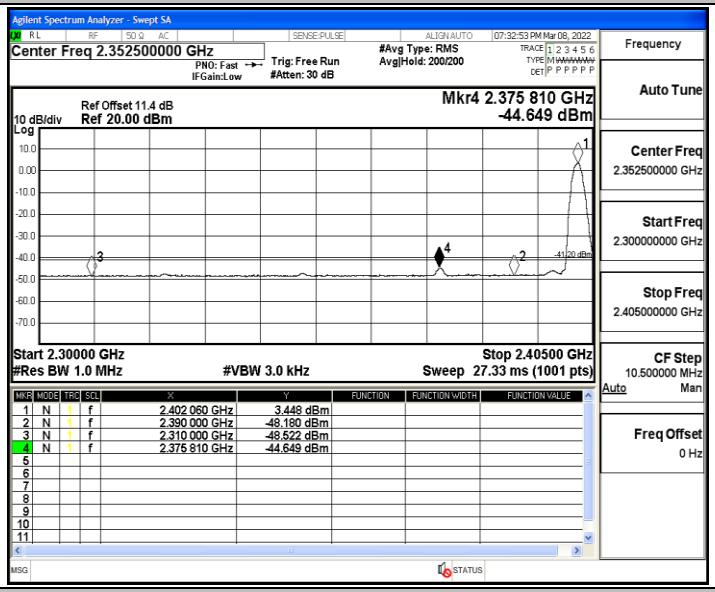


A.8. Restrict-band band-edge measurements

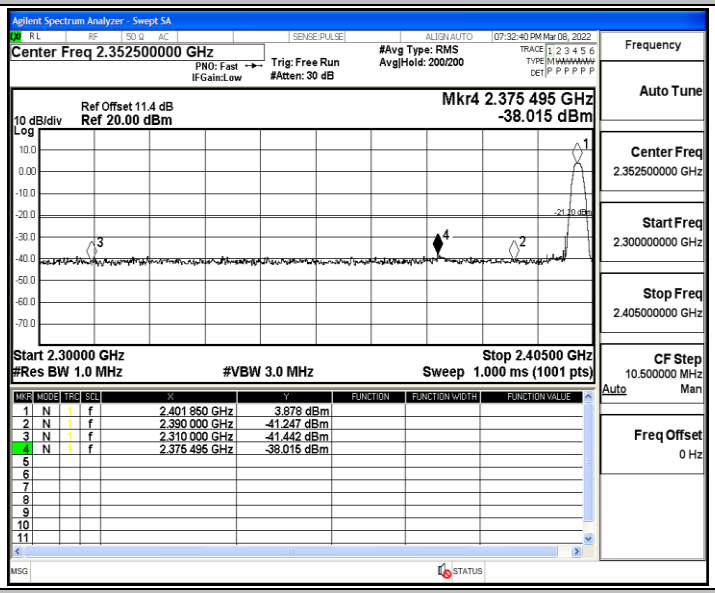
TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-48.52	≤-41.20	PASS
				AV	2375.810	-44.65	≤-41.20	PASS
				AV	2390.000	-48.18	≤-41.20	PASS
				Peak	2310.000	-41.44	≤-21.20	PASS
				Peak	2375.495	-38.01	≤-21.20	PASS
				Peak	2390.000	-41.25	≤-21.20	PASS
		High	2480	AV	2483.500	-47.44	≤-41.20	PASS
				AV	2484.560	-46.88	≤-41.20	PASS
				AV	2500.000	-47.15	≤-41.20	PASS
				Peak	2483.500	-41.48	≤-21.20	PASS
				Peak	2490.080	-38.67	≤-21.20	PASS
				Peak	2500.000	-40.89	≤-21.20	PASS

1. The Antenna Gain is compensated in the graph with 2dBi and Antenna Gain which is Higher.
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.

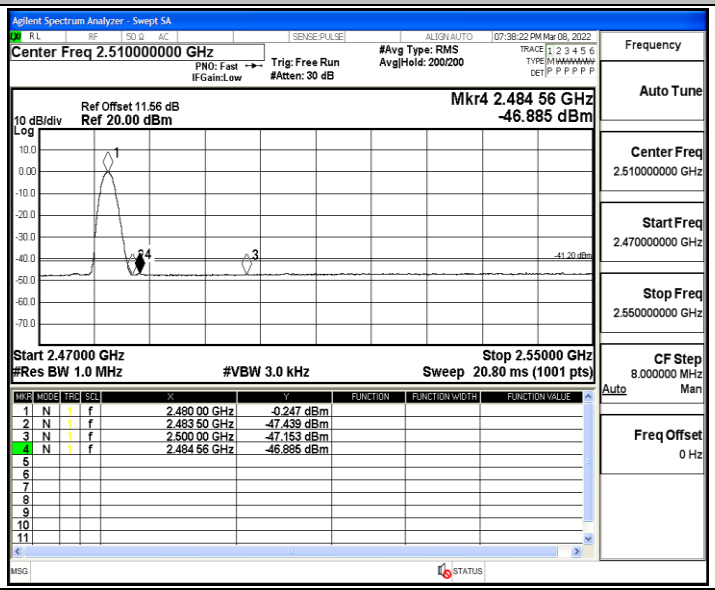
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak