Appendix A

RF Test Data for BLE (Conducted Measurement)

Product Name: Korescale G2

Test Model: 30744

Environmental Conditions

Temperature:	21.2 ° C
Relative Humidity:	52.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Carl Fu
Supervised by:	Li Huan

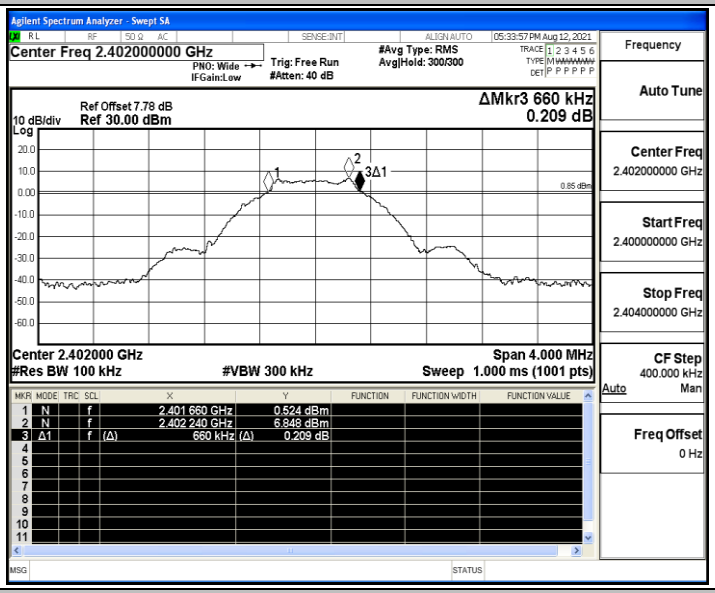
A.1 DTS Bandwidth

Test Result

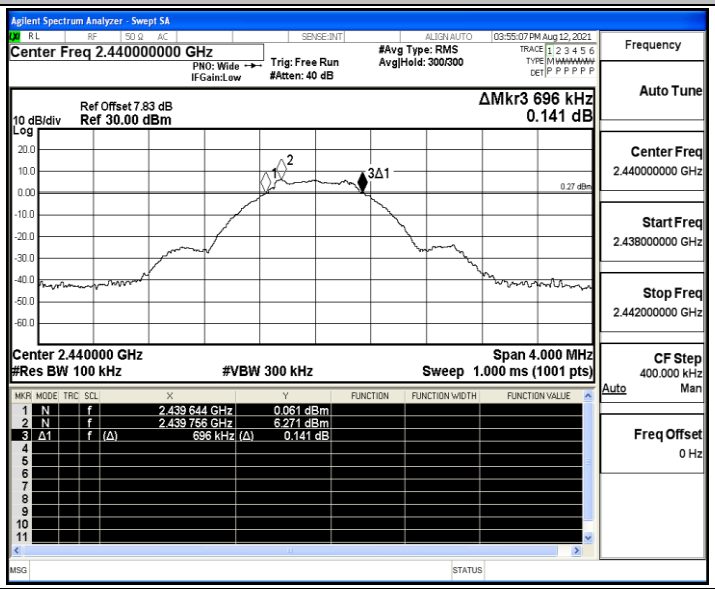
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.660	2401.660	2402.320	≥0.5	PASS
		2440	0.696	2439.644	2440.340	≥0.5	PASS
		2480	0.672	2479.664	2480.336	≥0.5	PASS
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_2M	Ant1	2402	1.420	2401.304	2402.724	≥0.5	PASS
		2440	1.332	2439.328	2440.660	≥0.5	PASS
		2480	1.456	2479.260	2480.716	≥0.5	PASS

Test Graphs

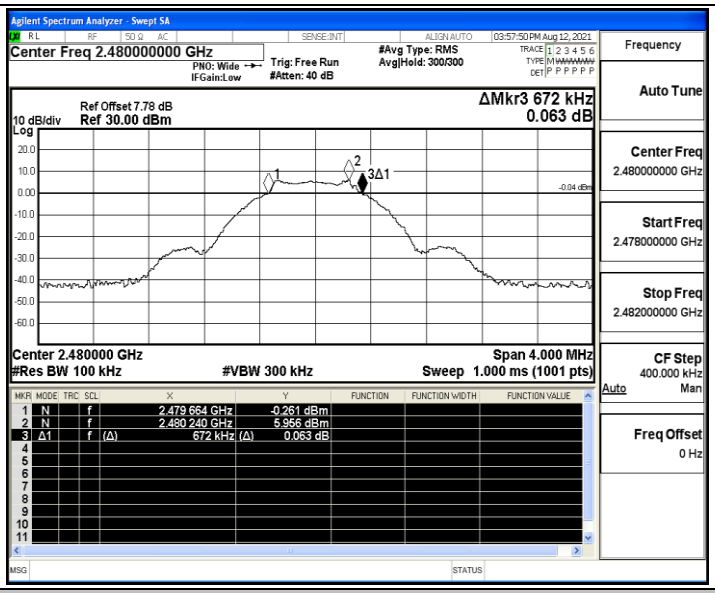
BLE_1M_Ant1_2402



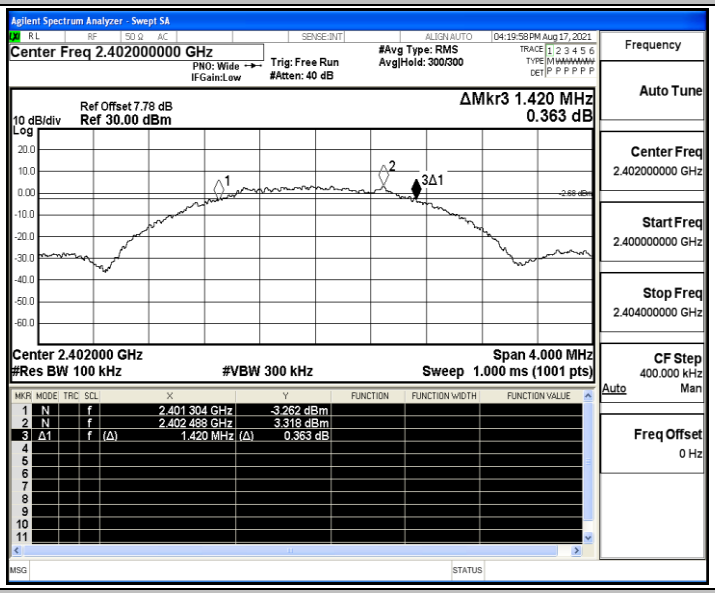
BLE_1M_Ant1_2440



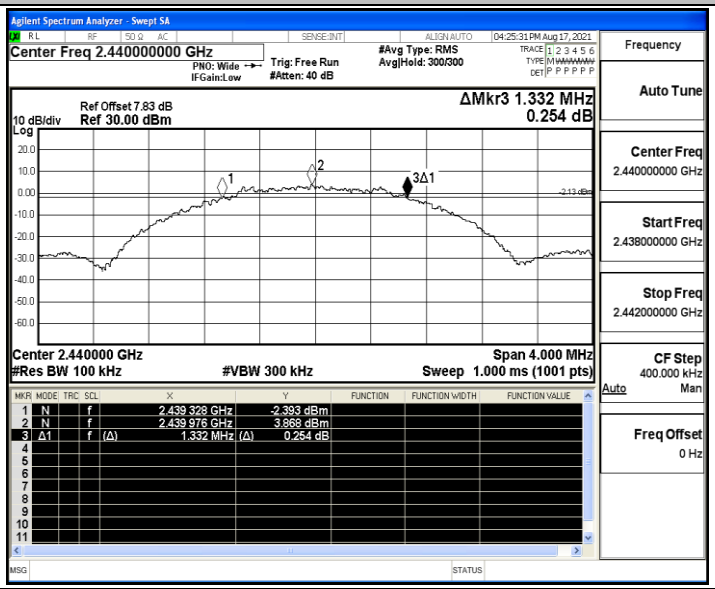
BLE_1M_Ant1_2480

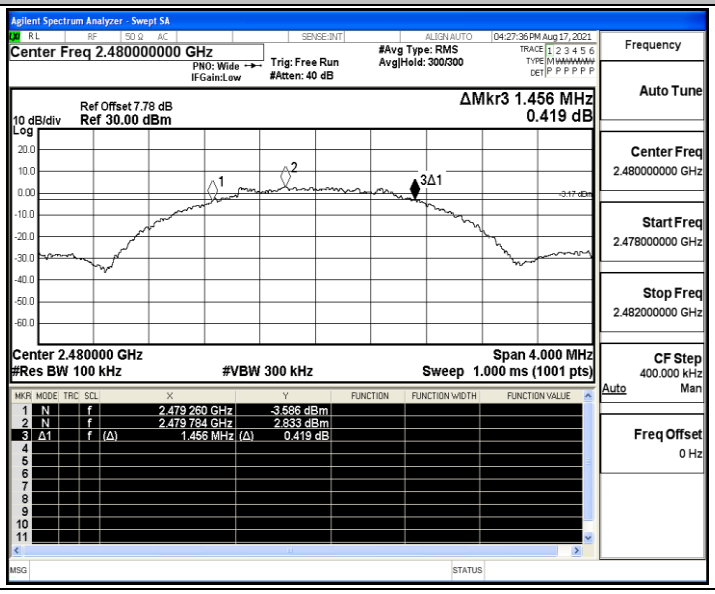


BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480


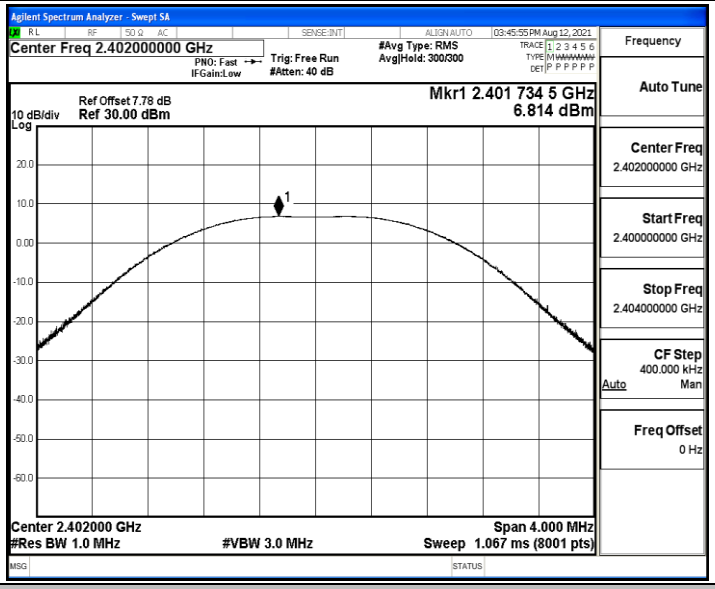
A.2 Maximum conducted output power

Test Result

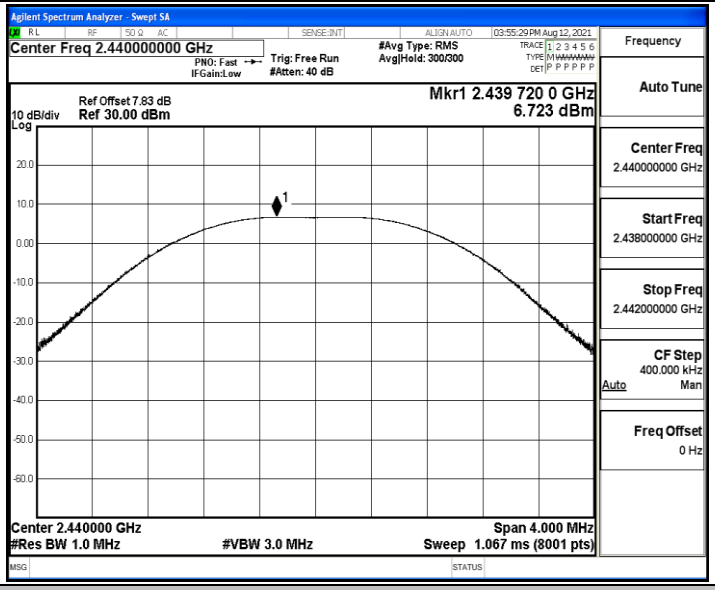
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	6.81	≤30	PASS
		2440	6.72	≤30	PASS
		2480	6.43	≤30	PASS
BLE_2M	Ant1	2402	5.51	≤30	PASS
		2440	5.50	≤30	PASS
		2480	5.24	≤30	PASS

Test Graphs

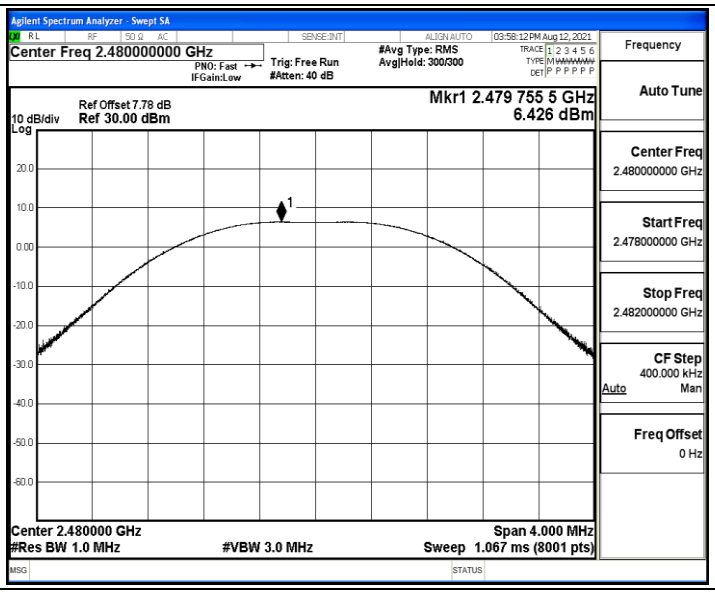
BLE_1M_Ant1_2402



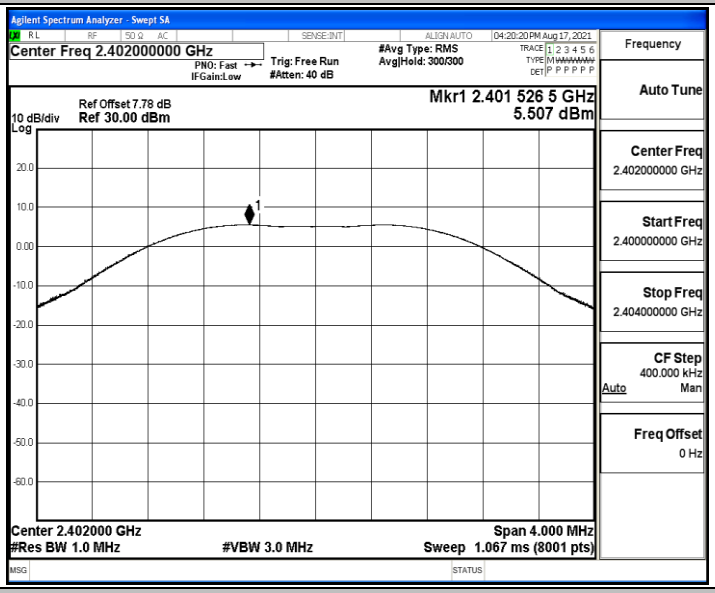
BLE_1M_Ant1_2440



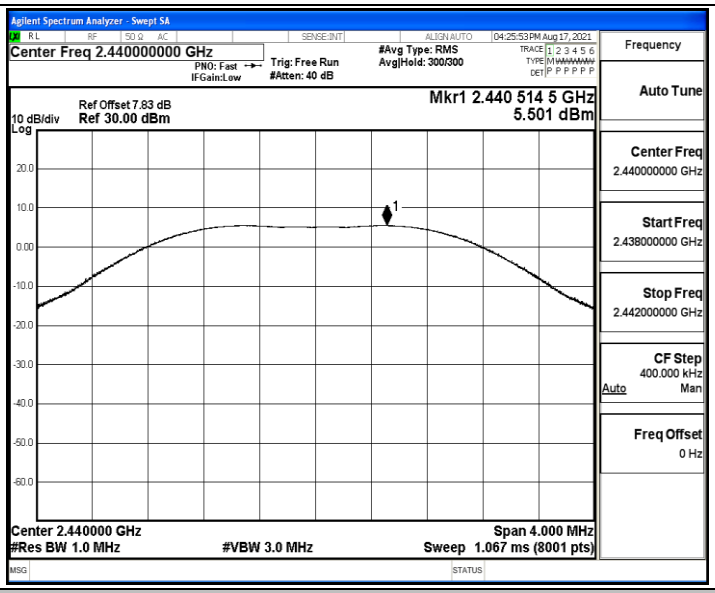
BLE_1M_Ant1_2480



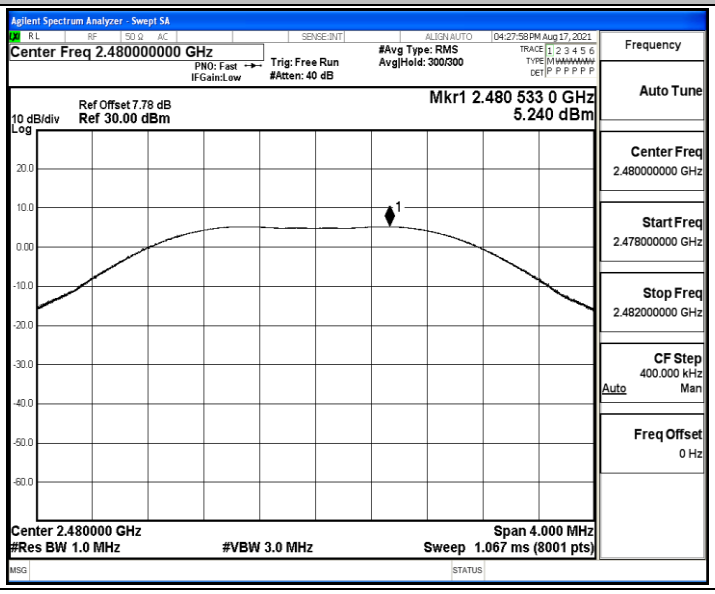
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



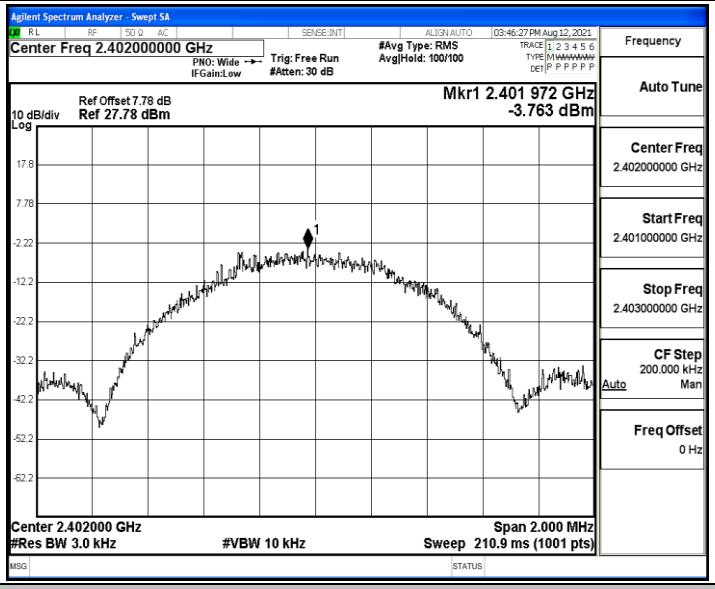
A.3 Maximum power spectral density

Test Result

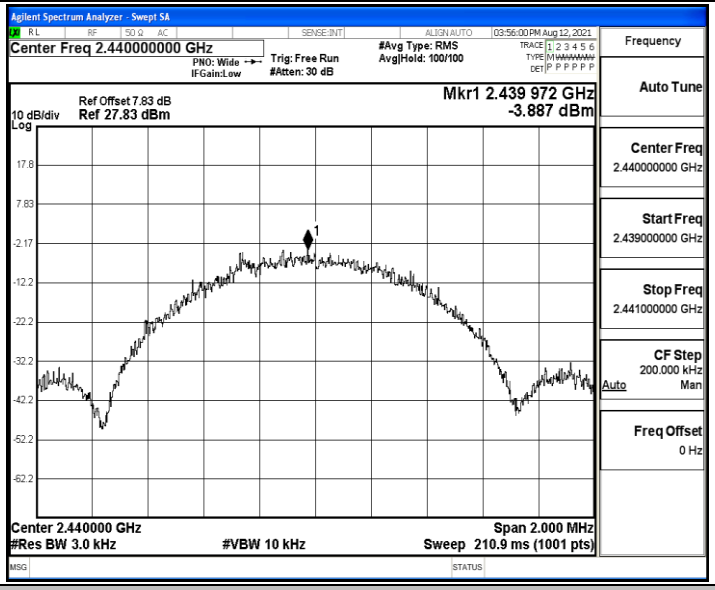
TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-3.76	≤8	PASS
		2440	-3.89	≤8	PASS
		2480	-3.84	≤8	PASS
BLE_2M	Ant1	2402	-8.86	≤8	PASS
		2440	-9.38	≤8	PASS
		2480	-9.49	≤8	PASS

Test Graphs

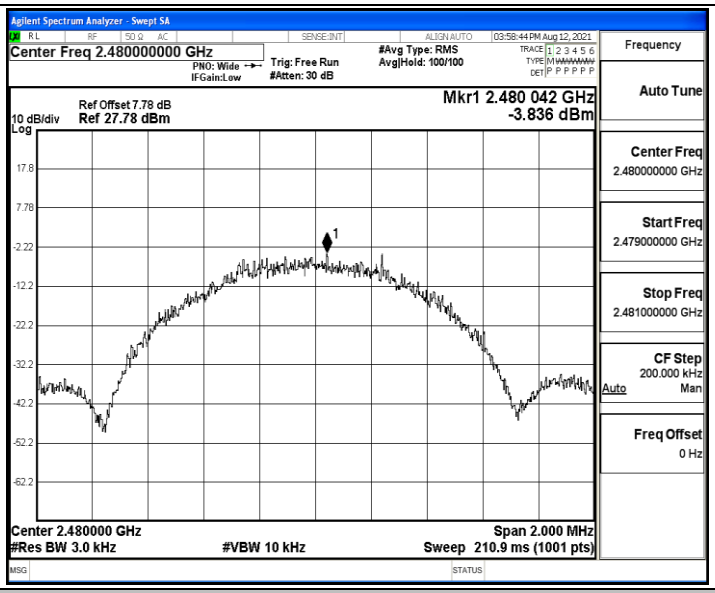
BLE_1M_Ant1_2402



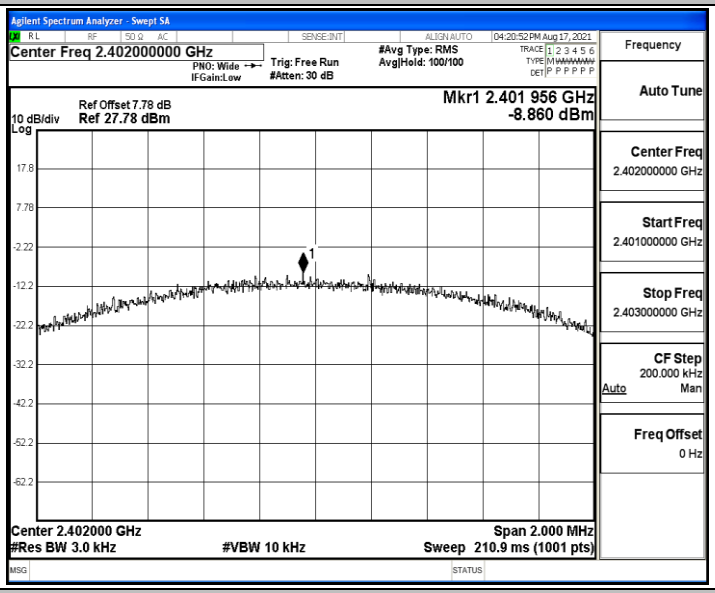
BLE_1M_Ant1_2440



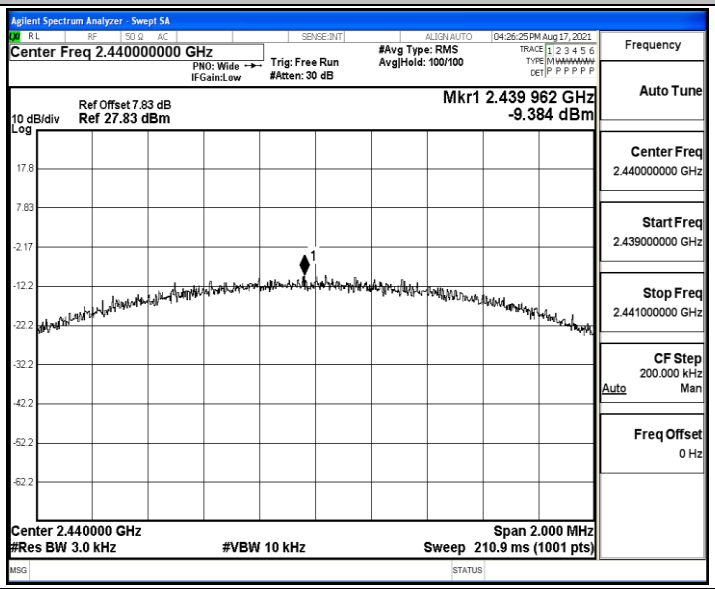
BLE_1M_Ant1_2480

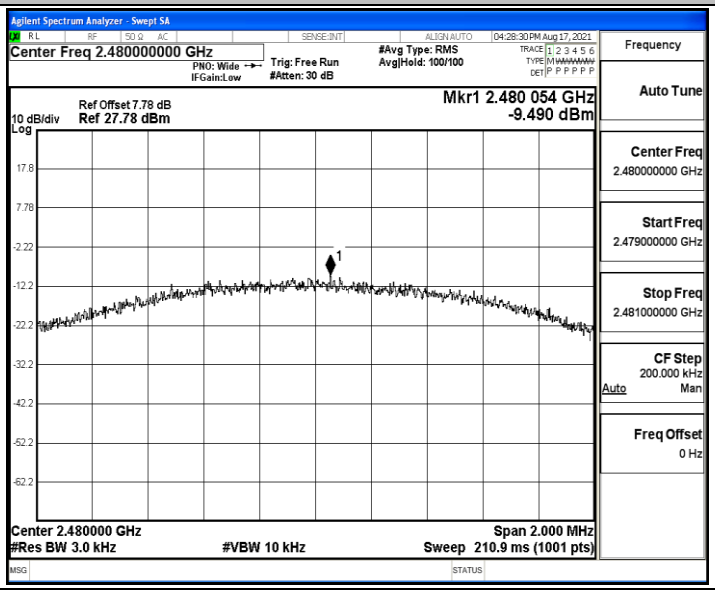


BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480


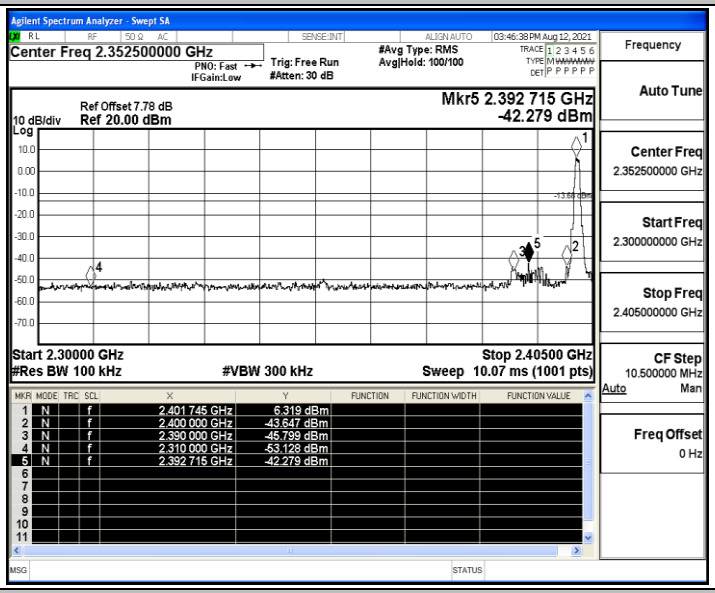
A.4 Band edge measurements

Test Result

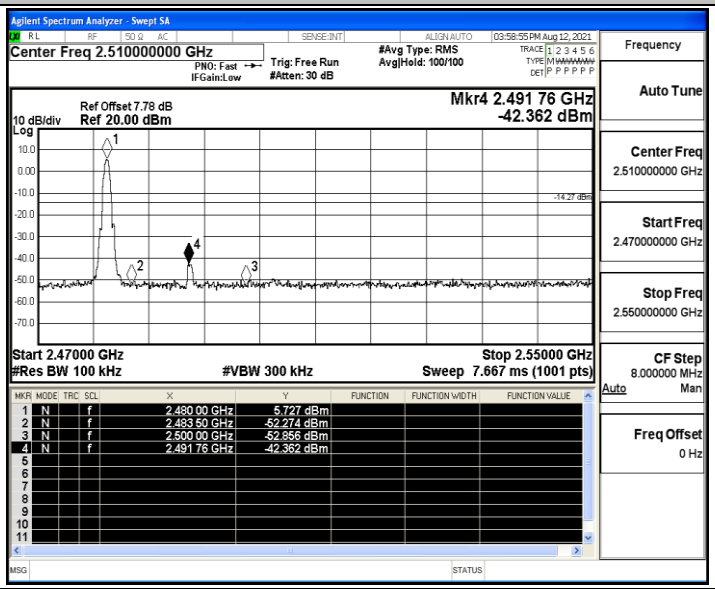
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	6.32	-49.87	≤-23.02	PASS
		High	2480	5.73	-49.16	≤-23.57	PASS
BLE_2M	Ant1	Low	2402	3.10	-29.52	≤-16.9	PASS
		High	2480	3.76	-43.95	≤-16.24	PASS

Test Graphs

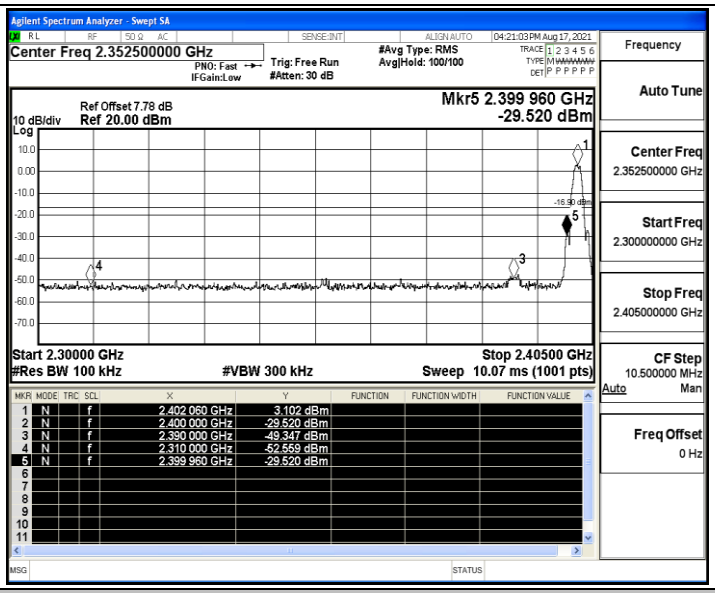
BLE_1M_Ant1_Low_2402



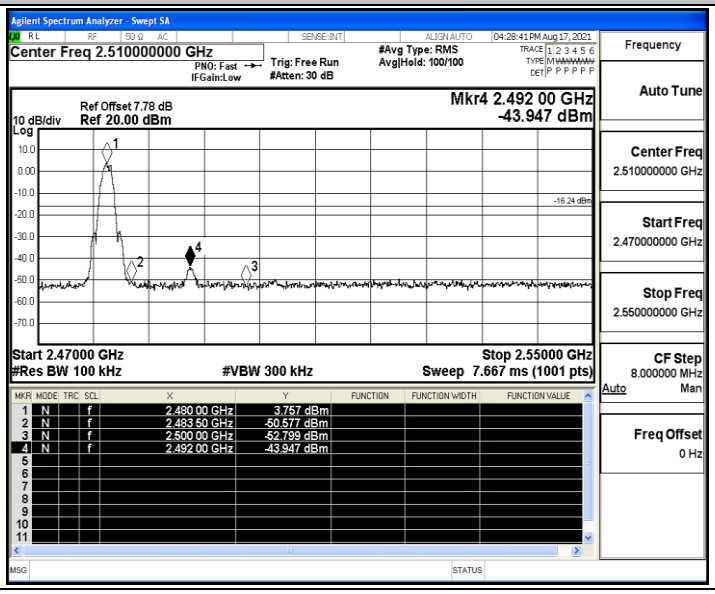
BLE_1M_Ant1_High_2480



BLE_2M_Ant1_Low_2402



BLE_2M_Ant1_High_2480



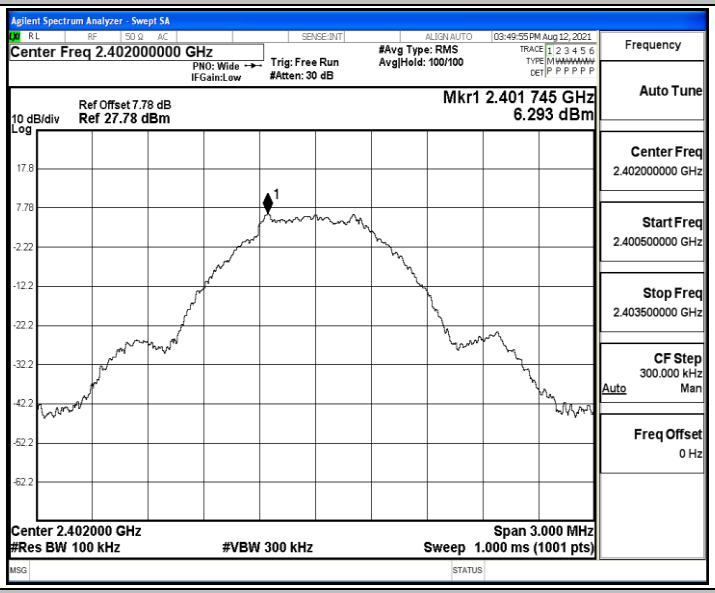
A.5 Conducted Spurious Emission

Test Result

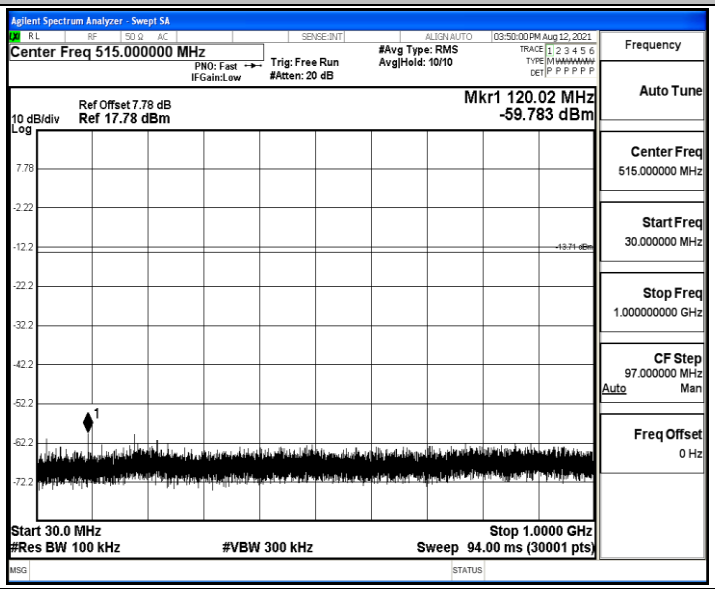
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	6.29	6.29	---	PASS
			30~1000	6.29	-59.78	≤-13.71	PASS
			1000~26500	6.29	-32.71	≤-13.71	PASS
		2440	Reference	5.60	5.60	---	PASS
			30~1000	5.60	-60.33	≤-14.4	PASS
			1000~26500	5.60	-35.68	≤-14.4	PASS
		2480	Reference	5.58	5.58	---	PASS
			30~1000	5.58	-61.15	≤-14.43	PASS
			1000~26500	5.58	-35.2	≤-14.43	PASS
BLE_2M	Ant1	2402	Reference	3.41	3.41	---	PASS
			30~1000	3.41	-54.93	≤-16.59	PASS
			1000~26500	3.41	-34.97	≤-16.59	PASS
		2440	Reference	3.22	3.22	---	PASS
			30~1000	3.22	-55.15	≤-16.78	PASS
			1000~26500	3.22	-36.57	≤-16.78	PASS
		2480	Reference	2.89	2.89	---	PASS
			30~1000	2.89	-56.32	≤-17.12	PASS
			1000~26500	2.89	-38.11	≤-17.12	PASS

Test Graphs

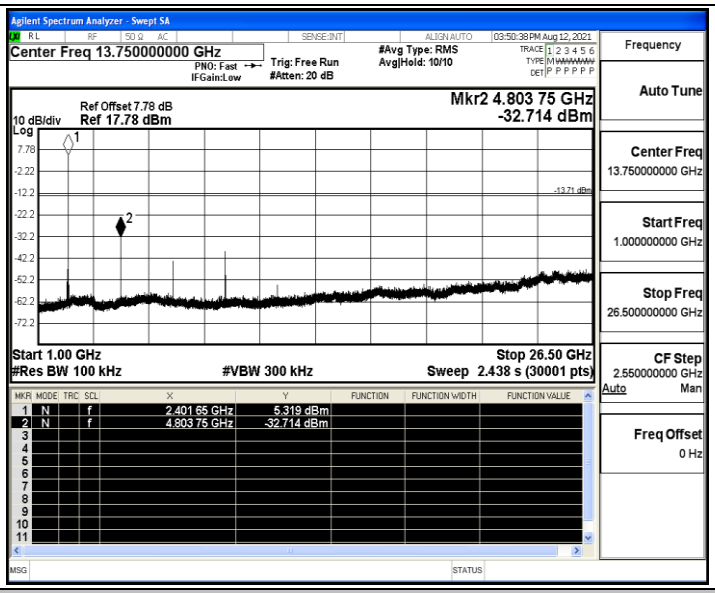
BLE_1M_Ant1_2402_0~Reference



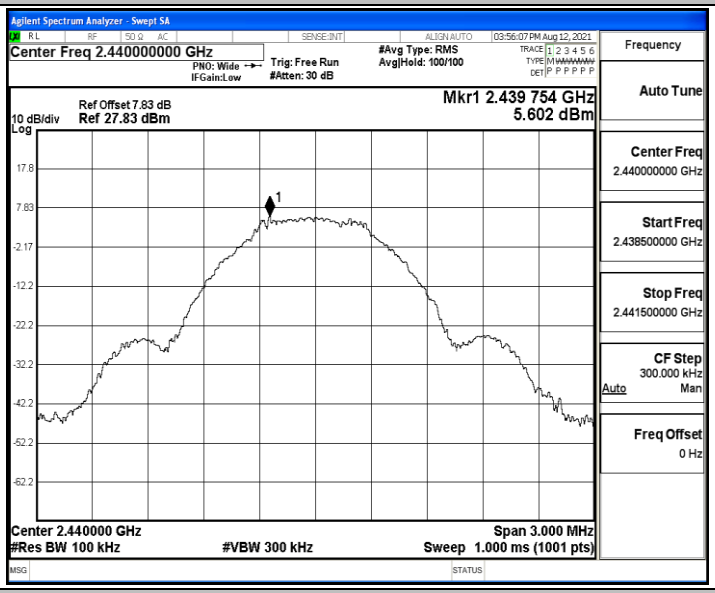
BLE_1M_Ant1_2402_30~1000



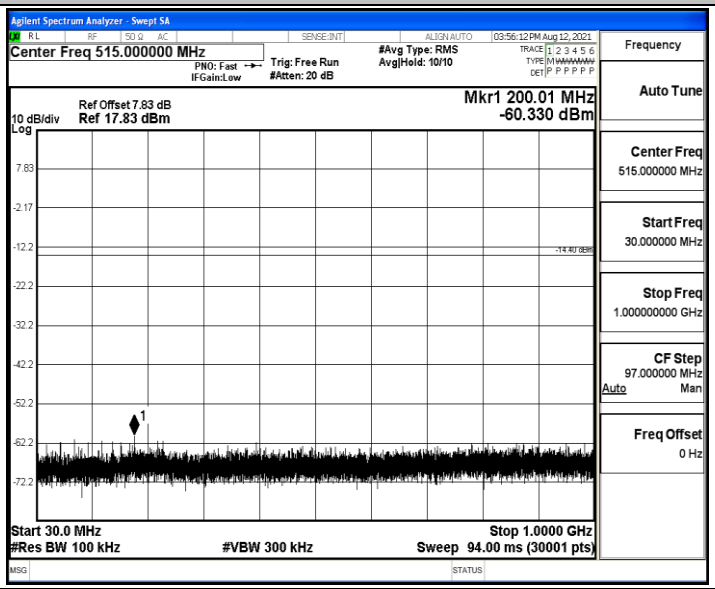
BLE_1M_Ant1_2402_1000~26500



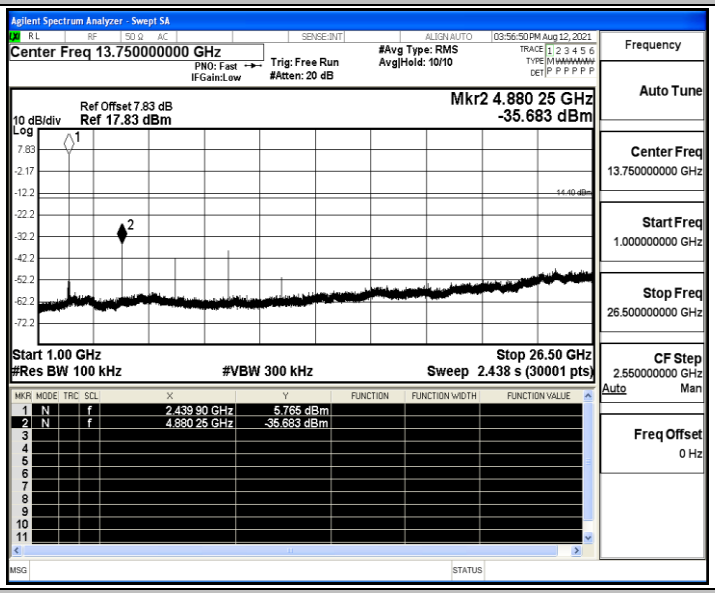
BLE_1M_Ant1_2440_0~Reference



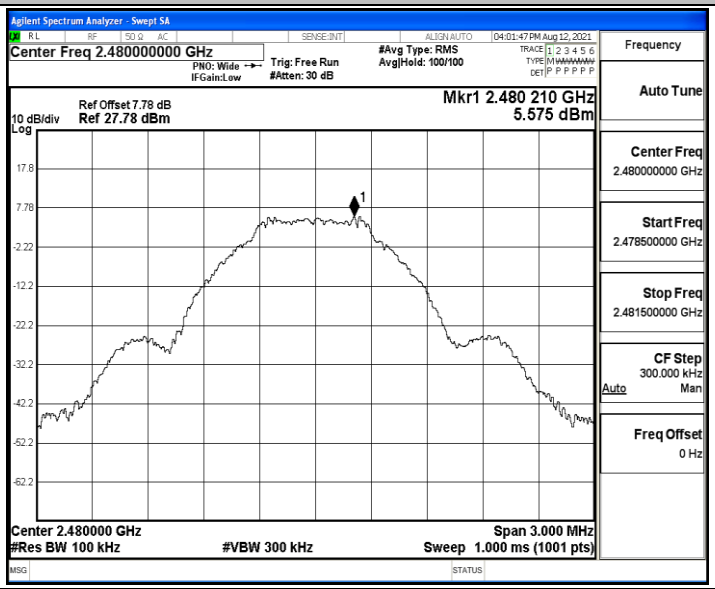
BLE_1M_Ant1_2440_30~1000



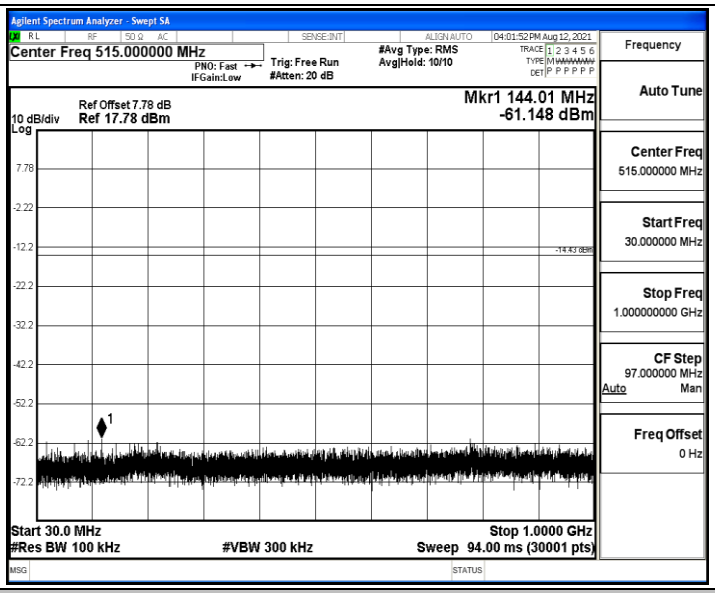
BLE_1M_Ant1_2440_1000~26500



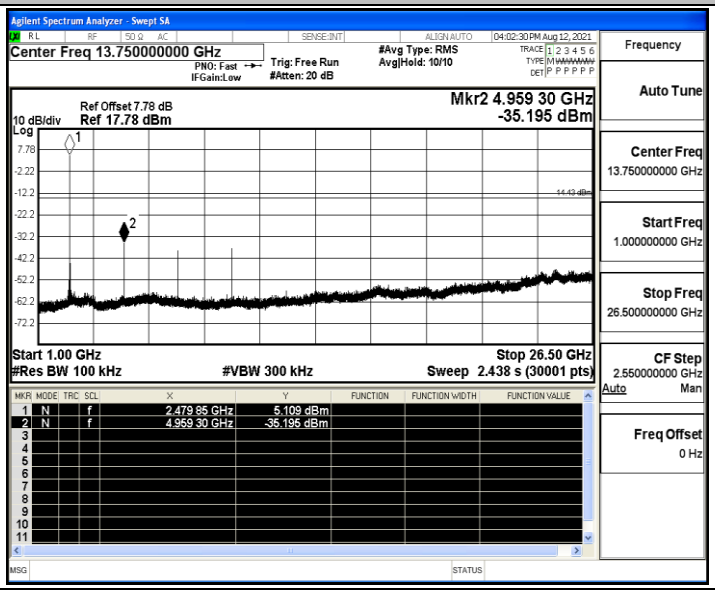
BLE_1M_Ant1_2480_0~Reference



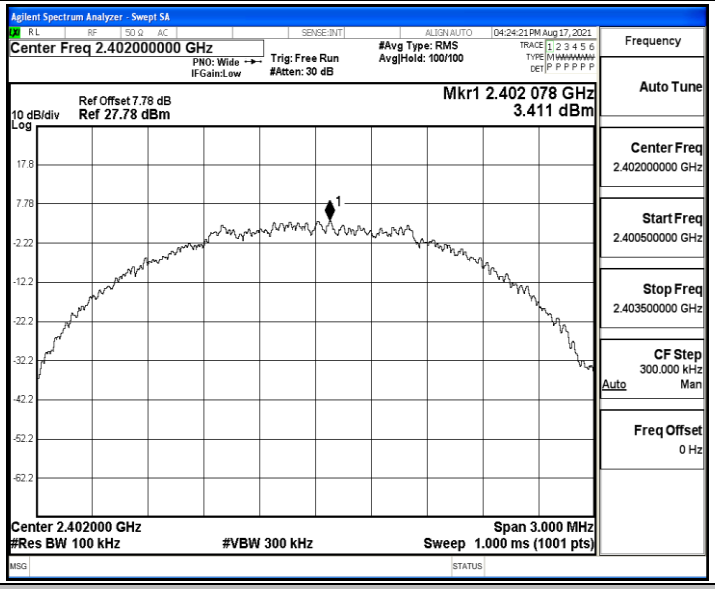
BLE_1M_Ant1_2480_30~1000



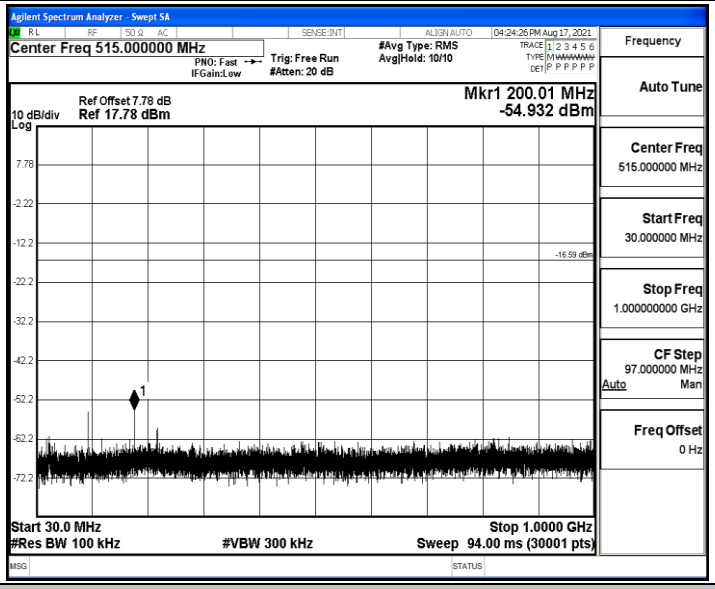
BLE_1M_Ant1_2480_1000~26500



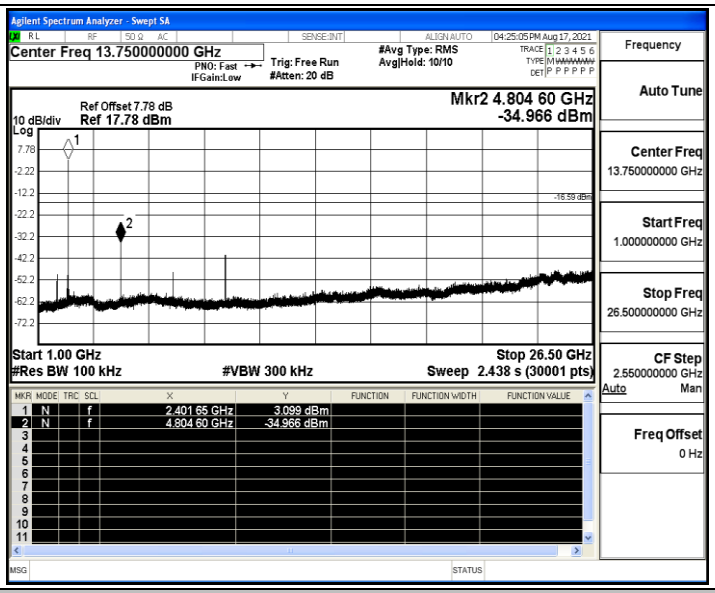
BLE_2M_Ant1_2402_0~Reference



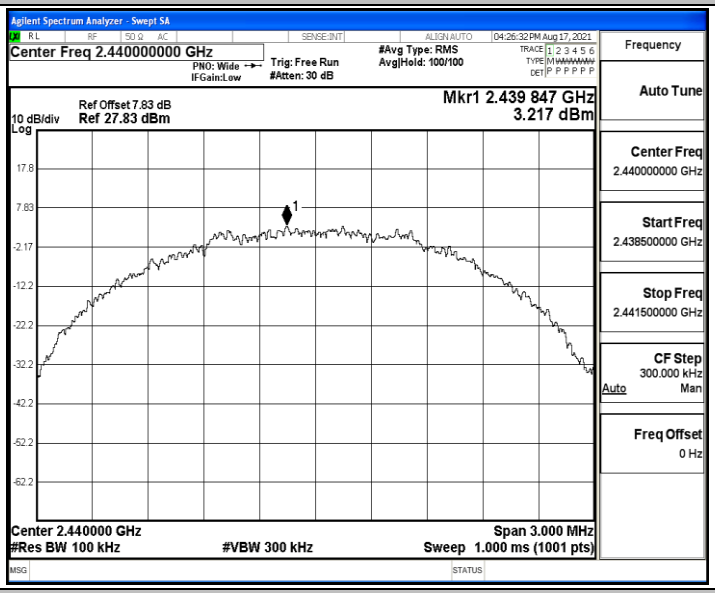
BLE_2M_Ant1_2402_30~1000



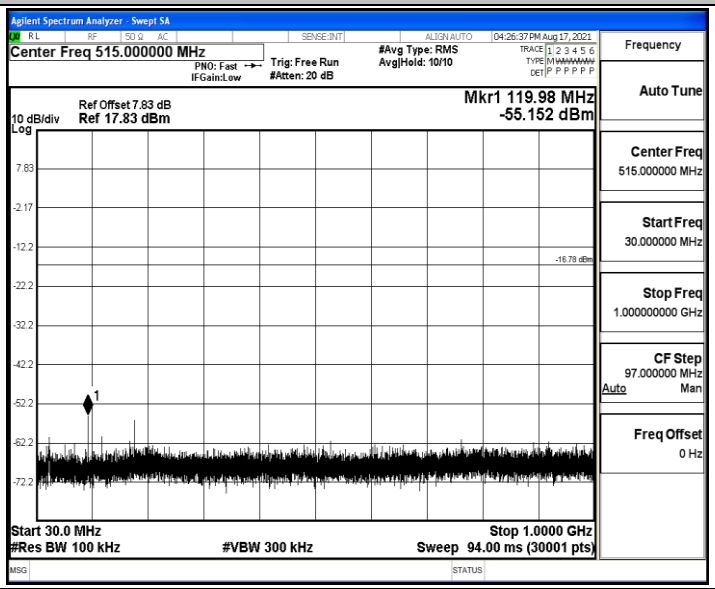
BLE_2M_Ant1_2402_1000~26500



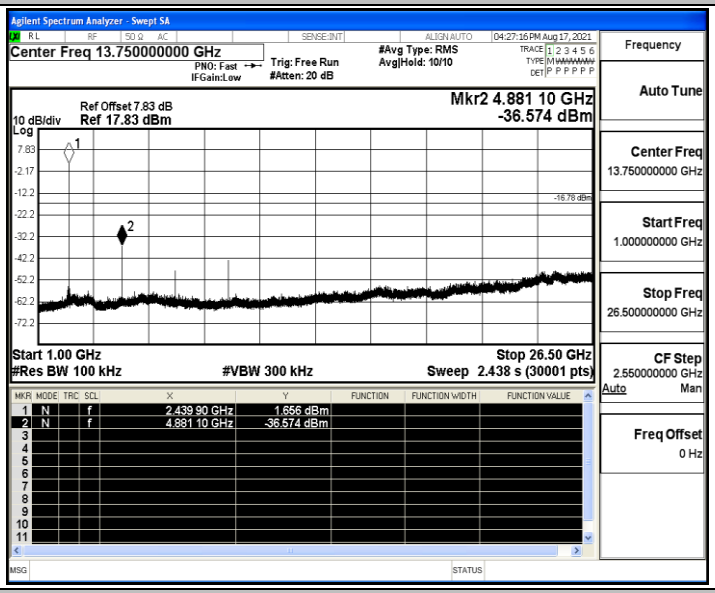
BLE_2M_Ant1_2440_0~Reference



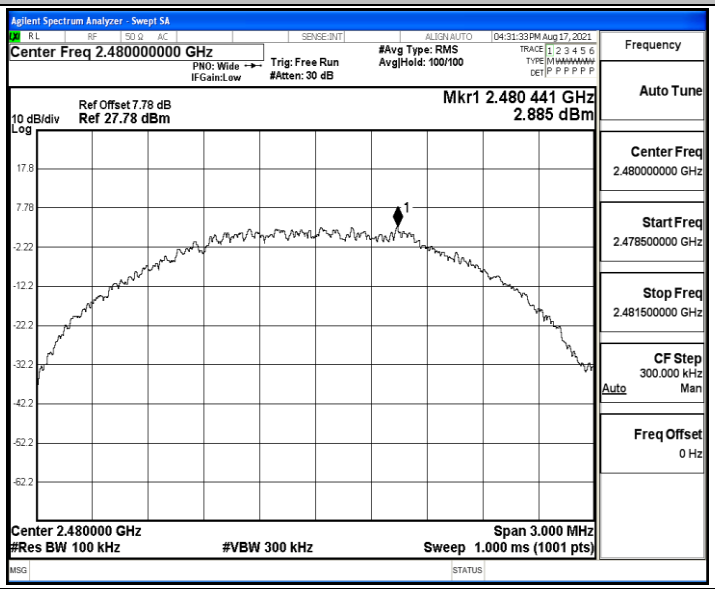
BLE_2M_Ant1_2440_30~1000



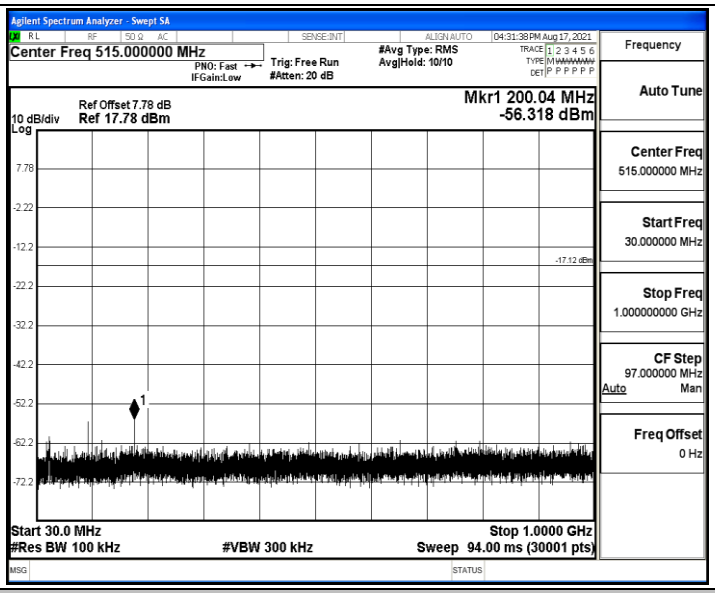
BLE_2M_Ant1_2440_1000~26500



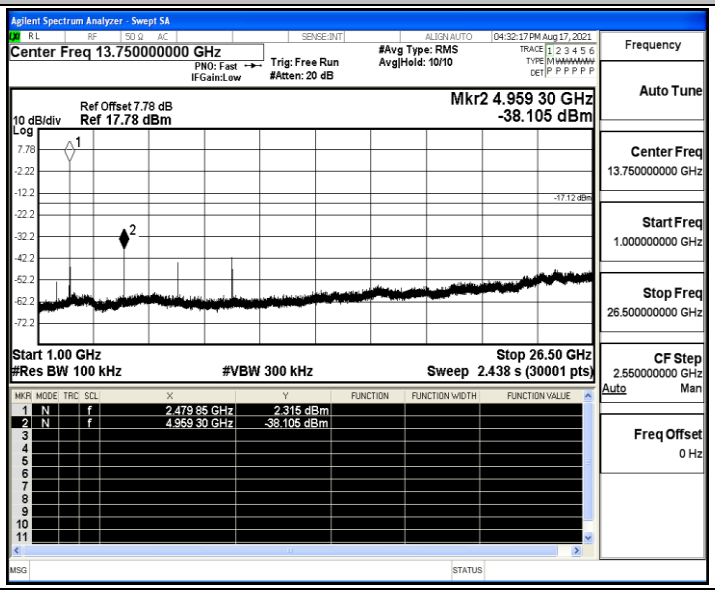
BLE_2M_Ant1_2480_0~Reference



BLE_2M_Ant1_2480_30~1000



BLE_2M_Ant1_2480_1000~26500



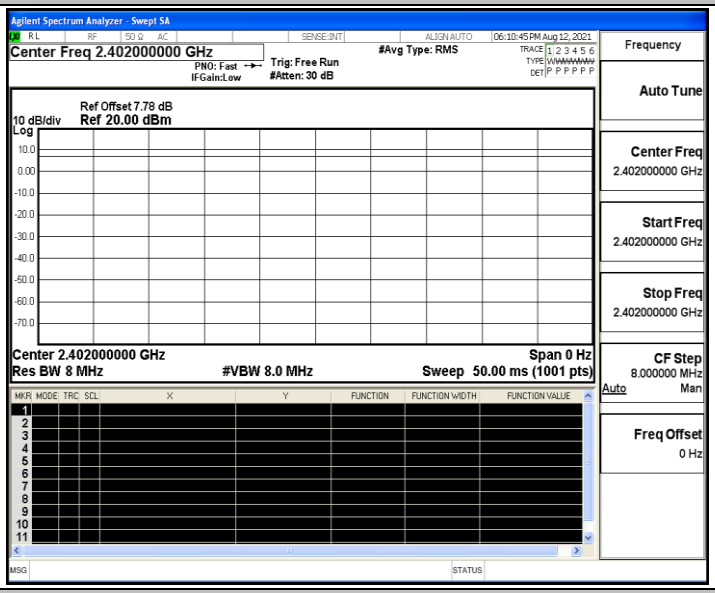
A.6 Duty Cycle

Test Result

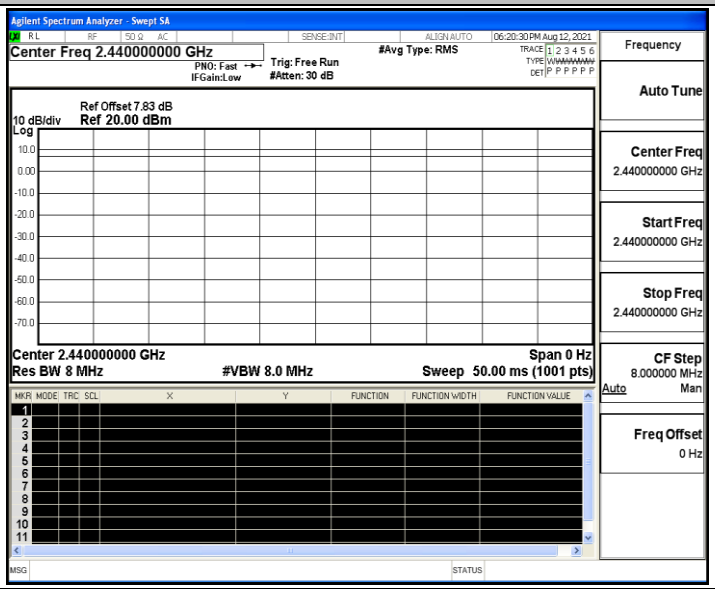
TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	50.00	50.00	1.0000	100.00	0.00	---	PASS
		2440	50.00	50.00	1.0000	100.00	0.00	---	PASS
		2480	50.00	50.00	1.0000	100.00	0.00	---	PASS
BLE_2M	Ant1	2402	50.00	50.00	1.0000	100.00	0.00	---	PASS
		2440	50.00	50.00	1.0000	100.00	0.00	---	PASS
		2480	50.00	50.00	1.0000	100.00	0.00	---	PASS

Test Graphs

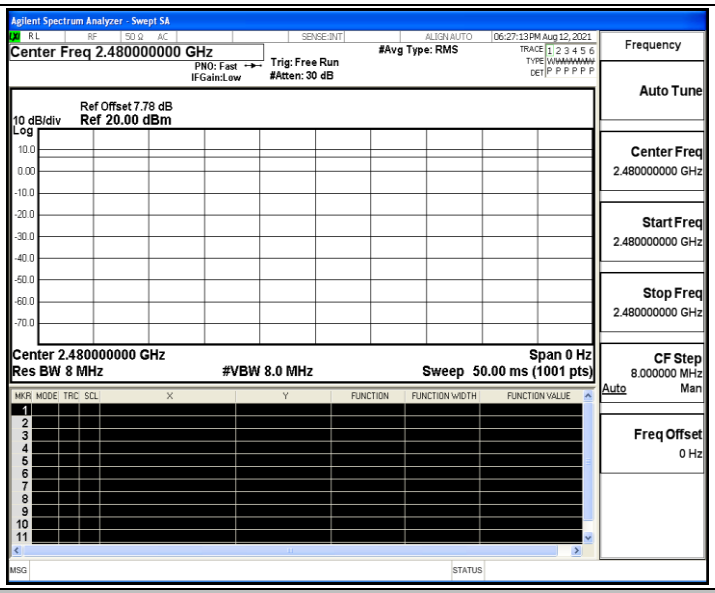
BLE_1M_Ant1_2402



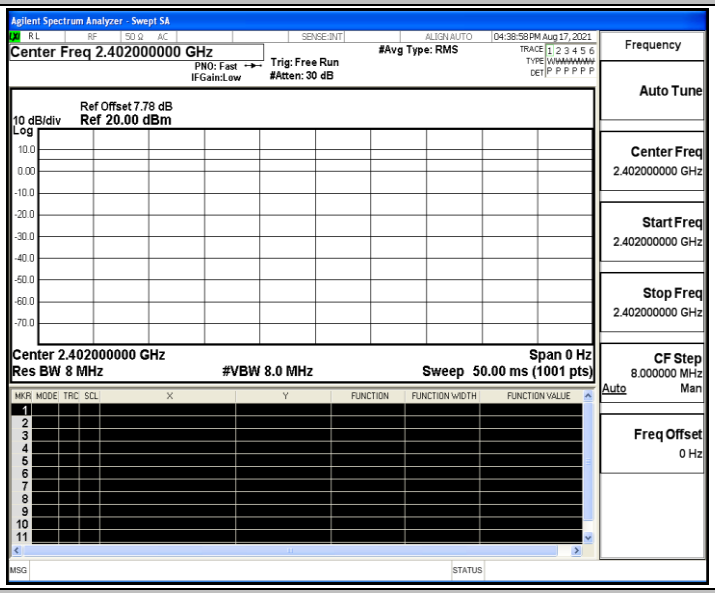
BLE_1M_Ant1_2440



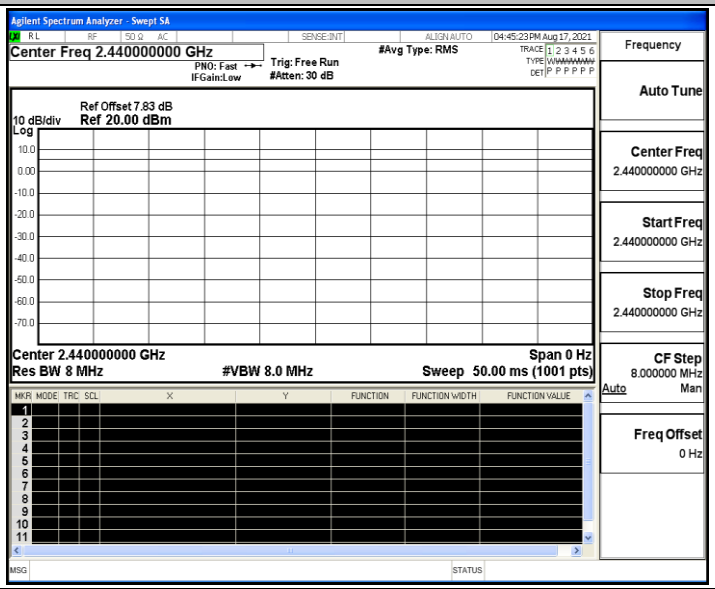
BLE_1M_Ant1_2480

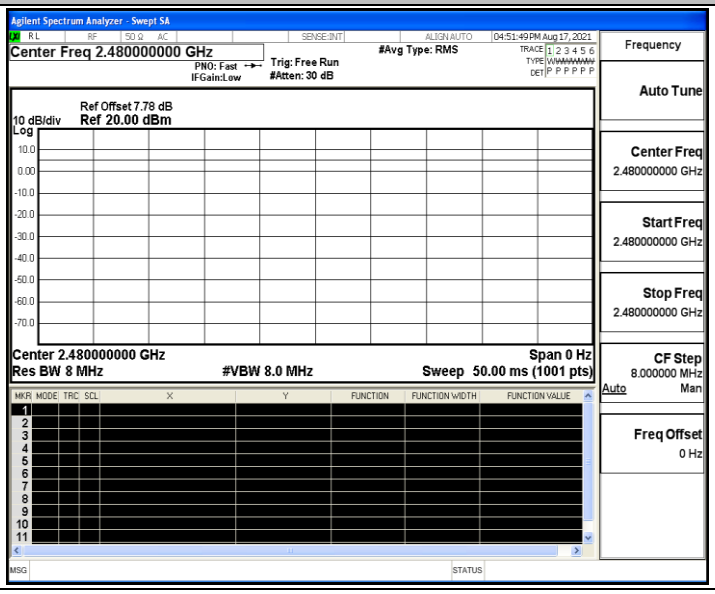


BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480


A.7 Emissions in Restricted Bands

Test Result

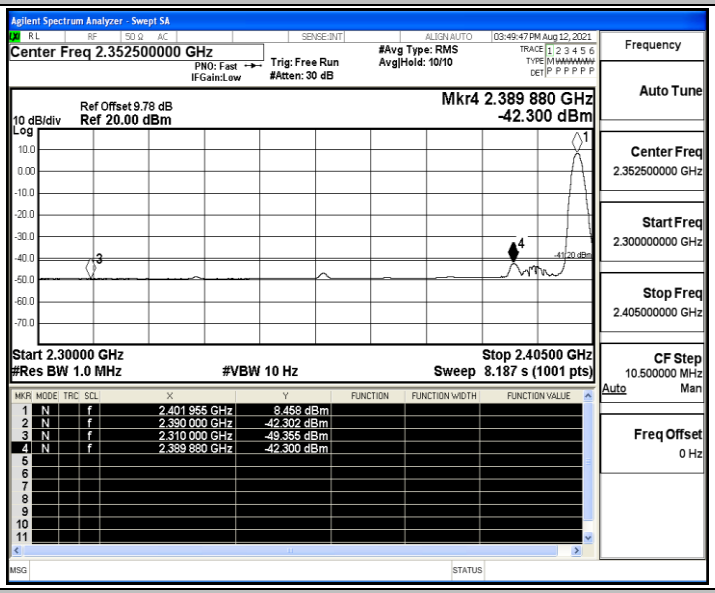
Test Mode	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Low	2402	AV	2310.000	-49.36	≤-41.20	45.84	≤54	PASS
			AV	2389.880	-42.3	≤-41.20	52.90	≤54	PASS
			AV	2390.000	-42.3	≤-41.20	52.90	≤54	PASS
			Peak	2310.000	-46.29	≤-21.20	48.91	≤74	PASS
			Peak	2389.880	-37.33	≤-21.20	57.87	≤74	PASS
			Peak	2390.000	-40.02	≤-21.20	55.18	≤74	PASS
	High	2480	AV	2483.500	-47.67	≤-41.20	47.53	≤54	PASS
			AV	2483.520	-47.67	≤-41.20	47.53	≤54	PASS
			AV	2500.000	-48.51	≤-41.20	46.69	≤54	PASS
			Peak	2483.500	-43.48	≤-21.20	51.72	≤74	PASS
			Peak	2493.520	-39.49	≤-21.20	55.71	≤74	PASS
			Peak	2500.000	-42.32	≤-21.20	52.88	≤74	PASS
BLE_2M	Low	2402	AV	2310.000	-49.37	≤-41.20	45.83	≤54	PASS
			AV	2389.985	-44.95	≤-41.20	50.25	≤54	PASS
			AV	2390.000	-44.95	≤-41.20	50.25	≤54	PASS
			Peak	2310.000	-44.12	≤-21.20	51.08	≤74	PASS
			Peak	2389.985	-38.02	≤-21.20	57.18	≤74	PASS
			Peak	2390.000	-39.81	≤-21.20	55.39	≤74	PASS
	High	2480	AV	2483.500	-41.82	≤-41.20	53.38	≤54	PASS
			AV	2483.520	-41.54	≤-41.20	53.66	≤54	PASS
			AV	2500.000	-48.43	≤-41.20	46.77	≤54	PASS
			Peak	2483.500	-39.09	≤-21.20	56.11	≤74	PASS
			Peak	2487.200	-35.65	≤-21.20	59.55	≤74	PASS
			Peak	2500.000	-44.5	≤-21.20	50.70	≤74	PASS

Note：

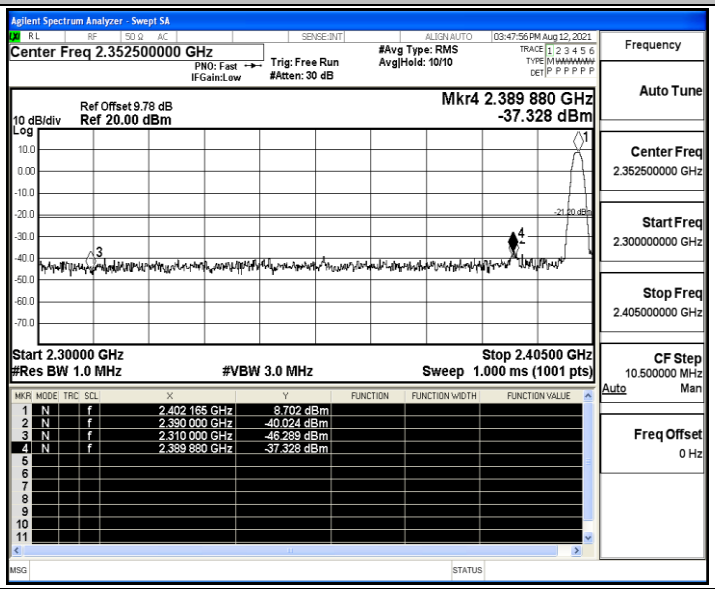
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

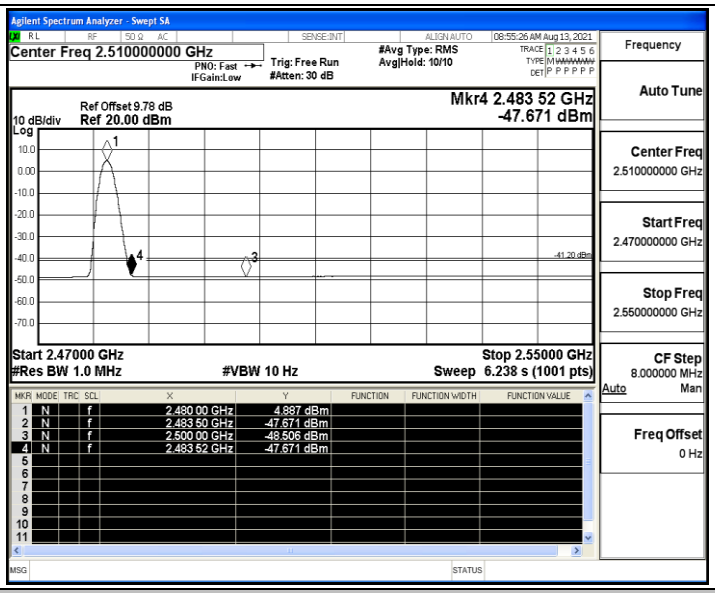
BLE_1M_Ant1_Low_2402_AV



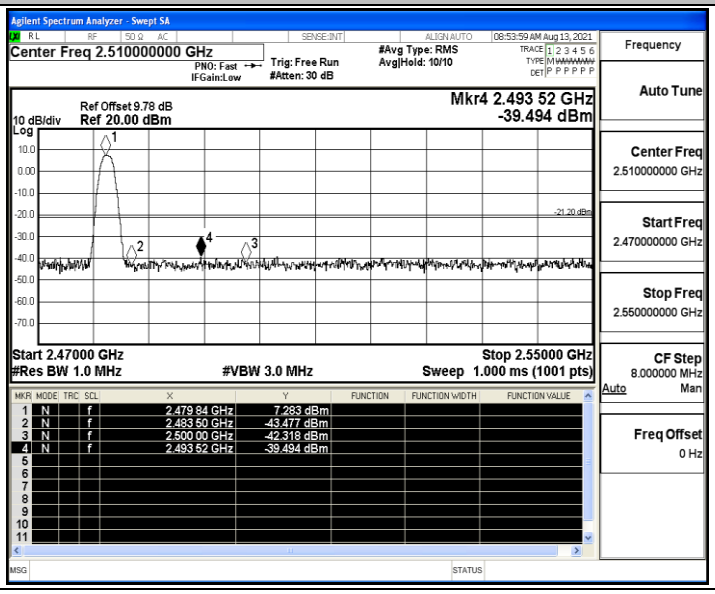
BLE_1M_Ant1_Low_2402_Peak



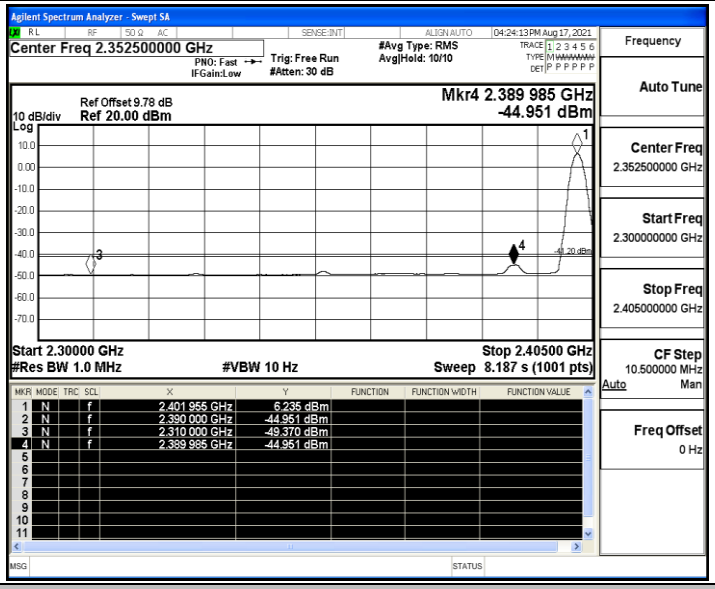
BLE_1M_Ant1_High_2480_AV



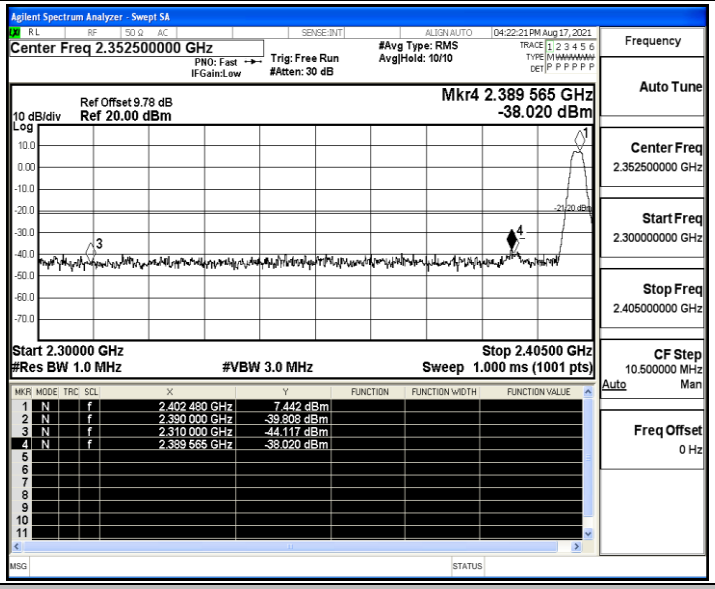
BLE_1M_Ant1_High_2480_Peak



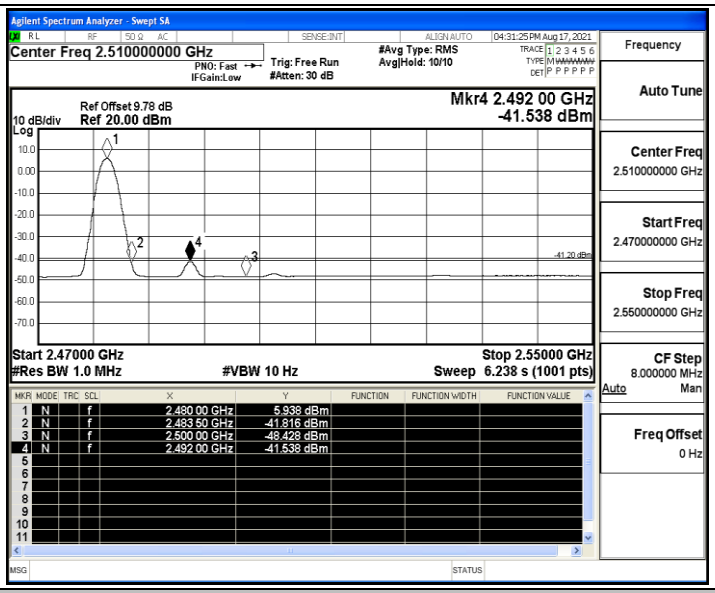
BLE_2M_Ant1_Low_2402_AV



BLE_2M_Ant1_Low_2402_Peak



BLE_2M_Ant1_High_2480_AV



BLE_2M_Ant1_High_2480_Peak