



Appendix B

RF Test Data for BLE V5.0(DTS) (Conducted Measurement)

Product Name: Alarm Clock Speaker Dock

Trade Mark: EZVALO

Test Model: CSD01

Environmental Conditions

Temperature:	22.6℃
Relative Humidity:	53.7%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Li
Supervised by:	Li Huan



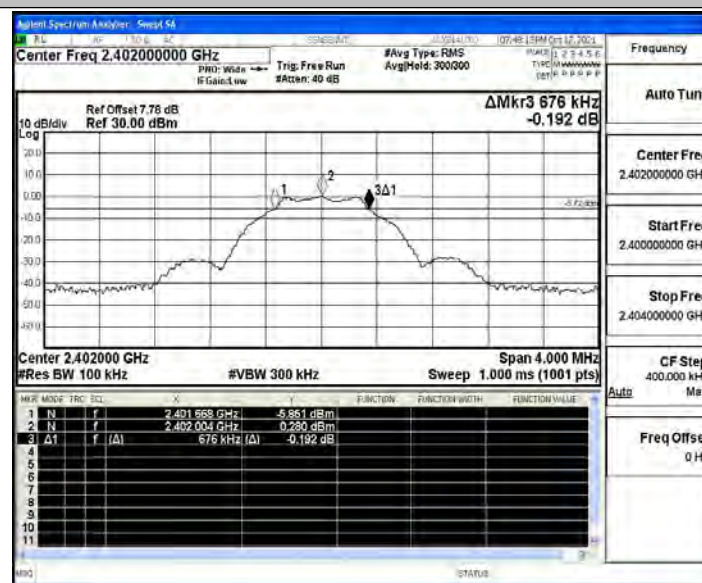
B.1 DTS Bandwidth

Test Result

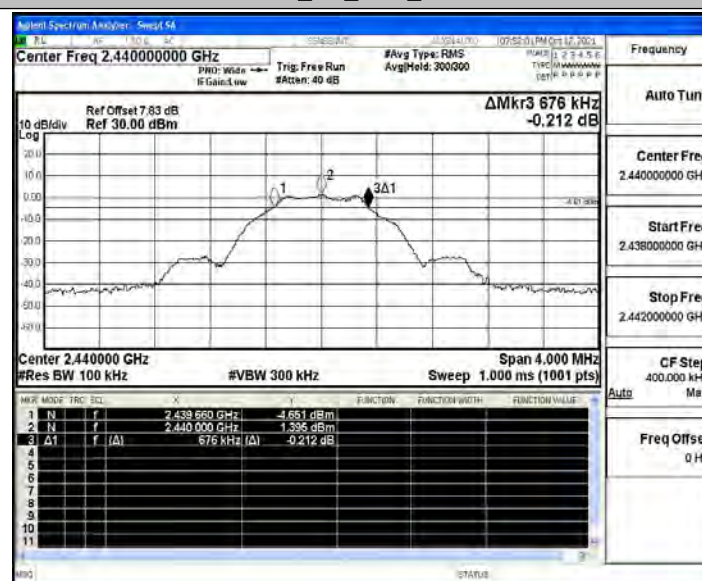
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.676	2401.668	2402.344	≥0.5	PASS
		2440	0.676	2439.660	2440.336	≥0.5	PASS
		2480	0.684	2479.656	2480.340	≥0.5	PASS

Test Graphs

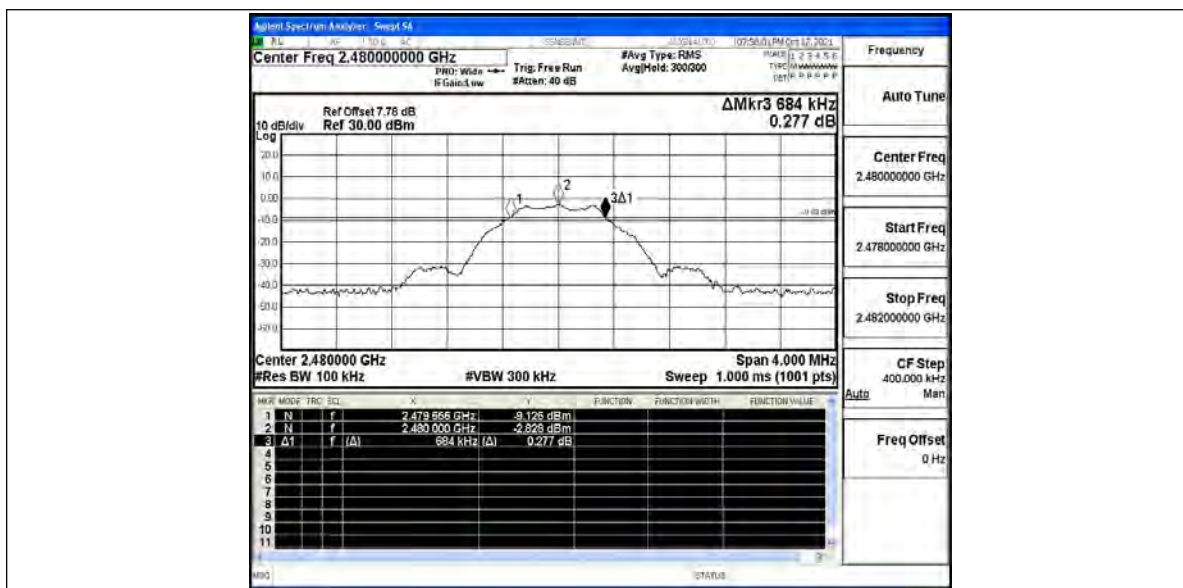
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480





B.2: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0388	2401.490	2402.529	---	PASS
		2440	1.0367	2439.491	2440.527	---	PASS
		2480	1.0419	2479.487	2480.529	---	PASS

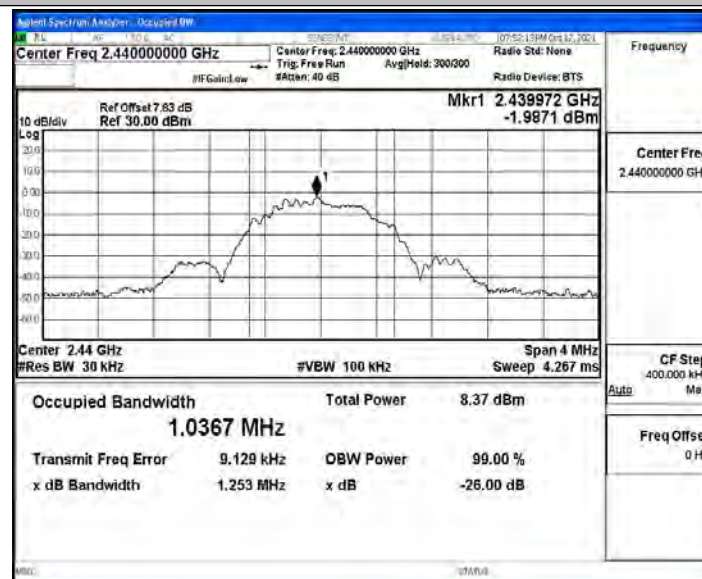


Test Graphs

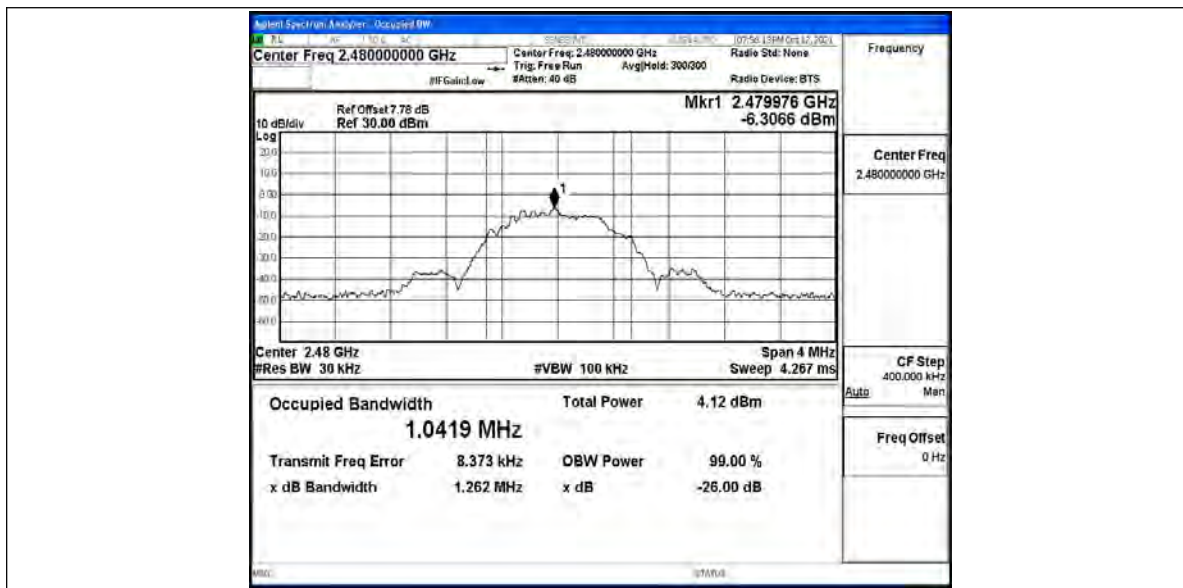
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480





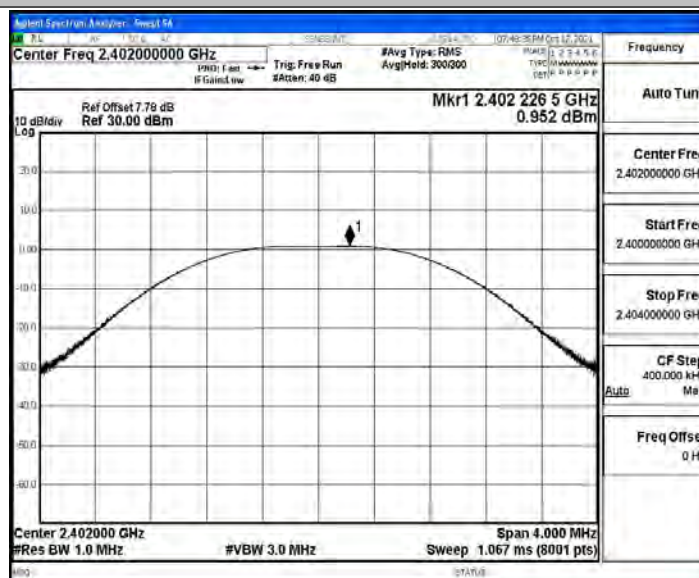
B.3 Maximum conducted output power

Test Result

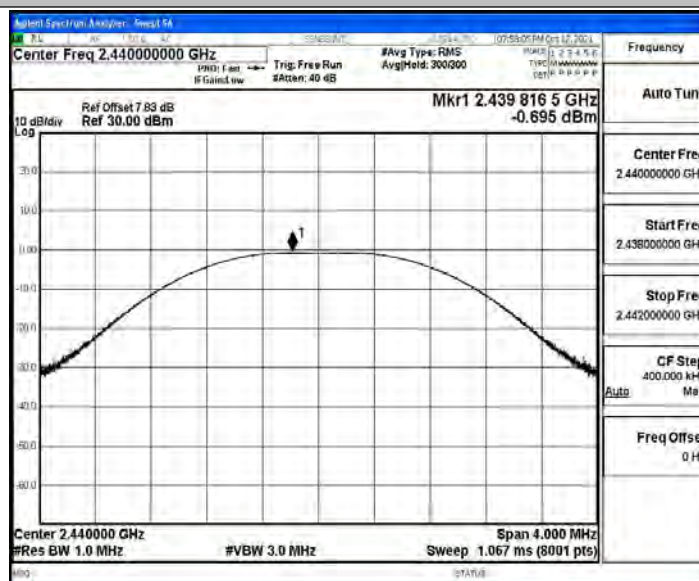
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0.95	≤30	PASS
		2440	-0.7	≤30	PASS
		2480	0.67	≤30	PASS

Test Graphs

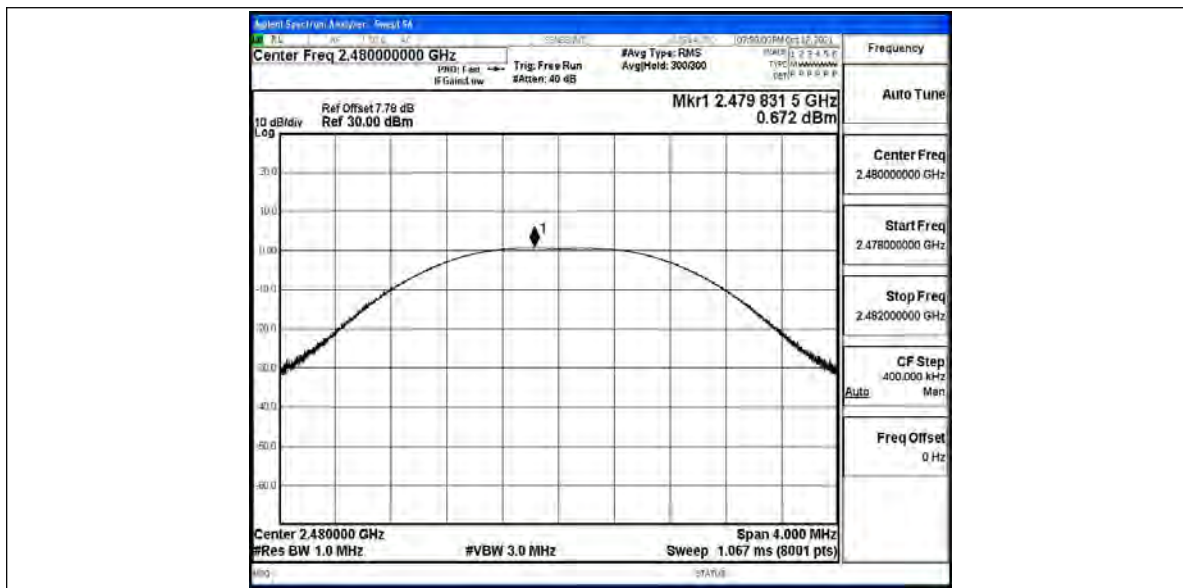
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480





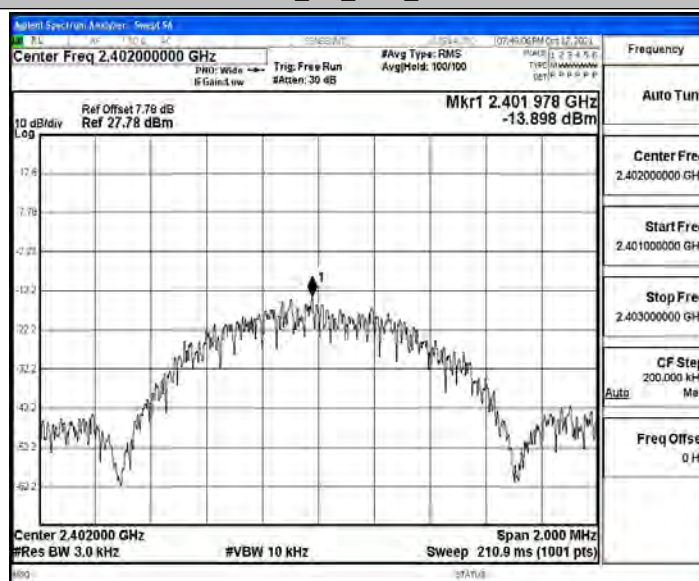
B.4 Maximum power spectral density

Test Result

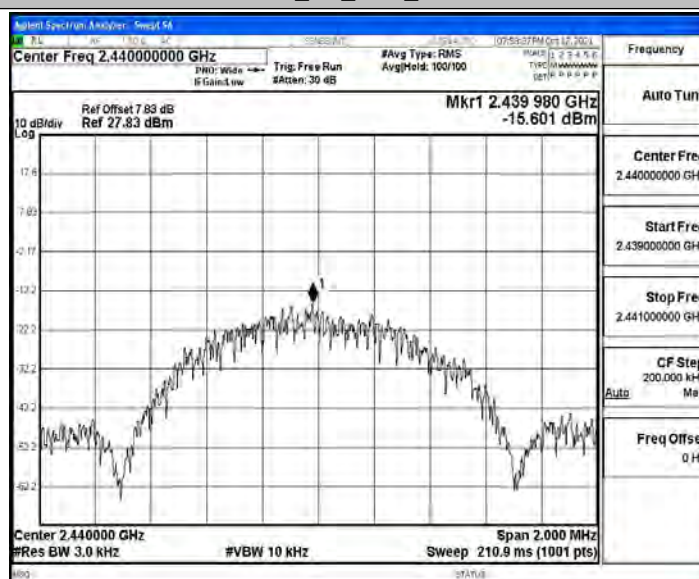
TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-13.9	≤8	PASS
		2440	-15.6	≤8	PASS
		2480	-14.08	≤8	PASS

Test Graphs

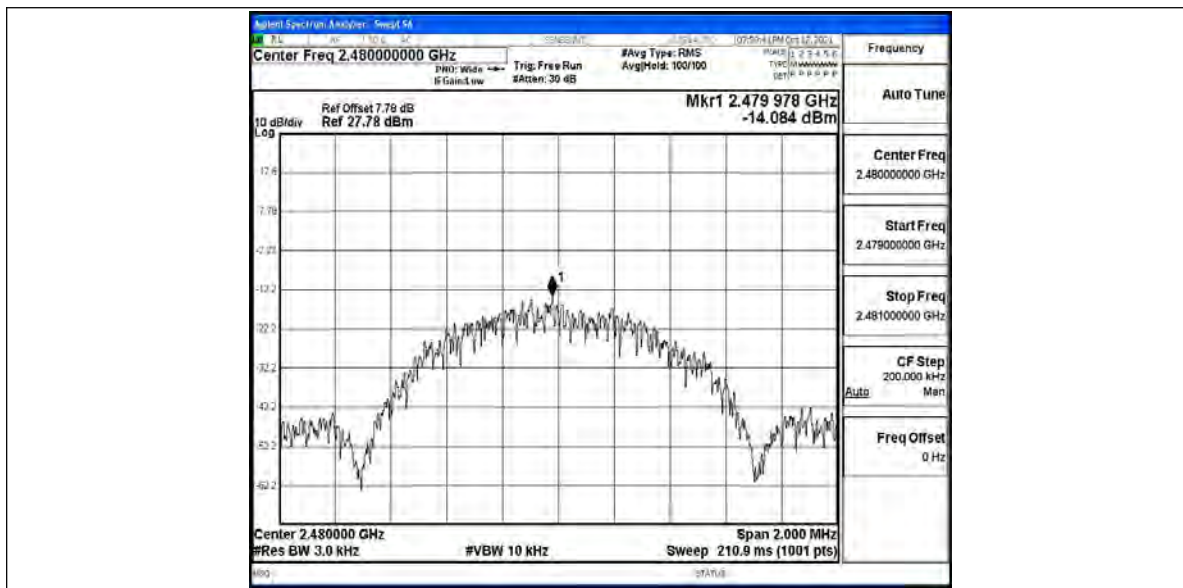
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



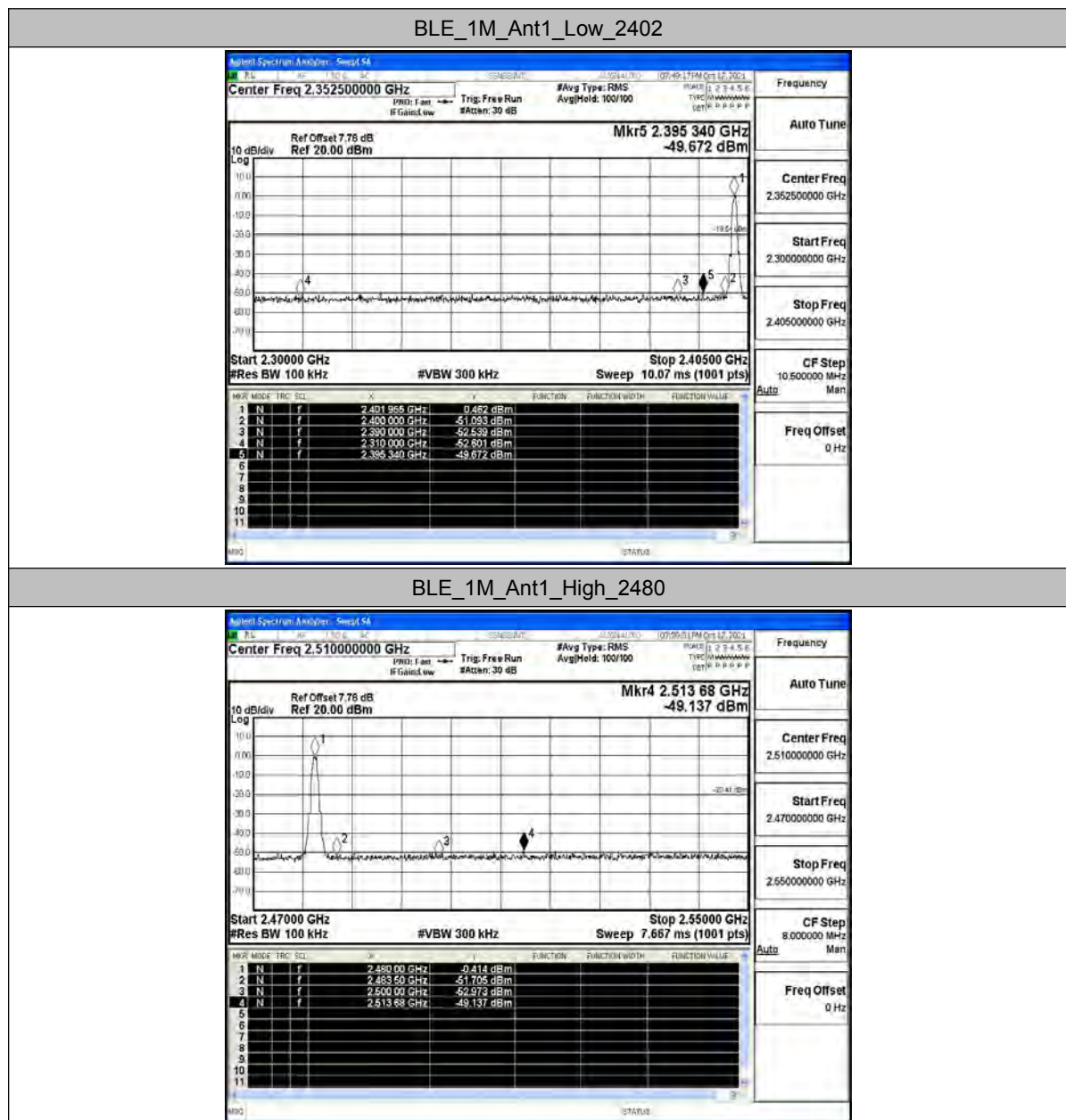


B.5 Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.46	-49.67	≤-19.54	PASS
		High	2480	-0.41	-49.14	≤-20.41	PASS

Test Graphs



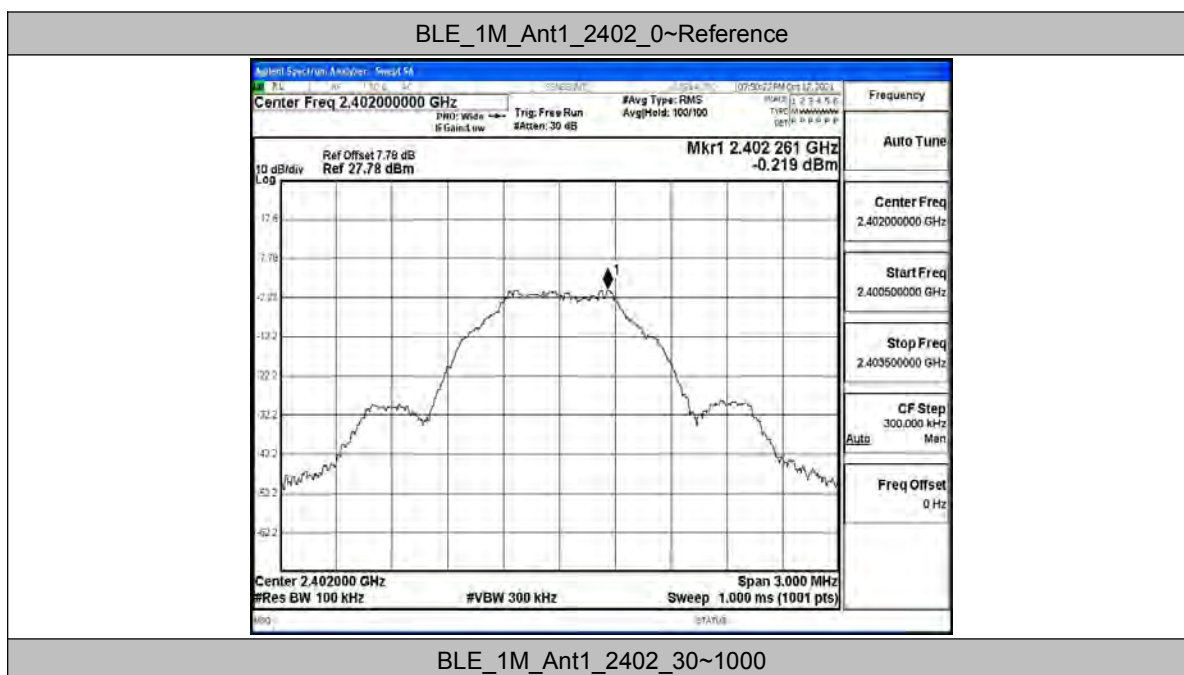


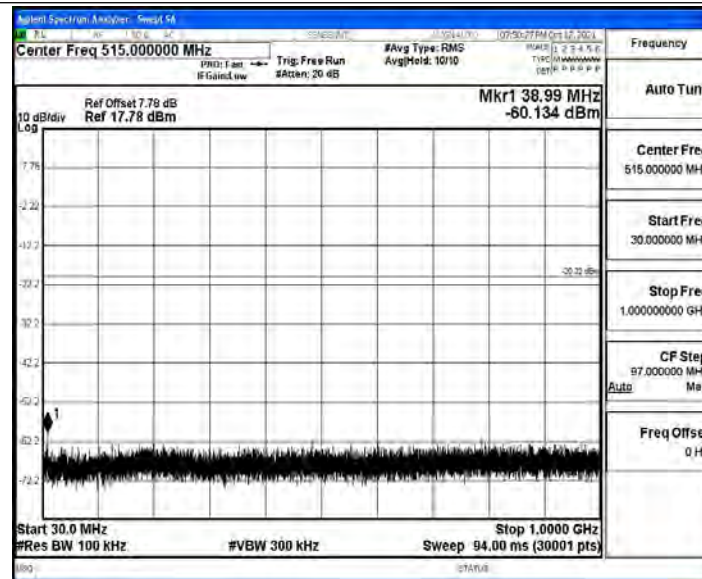
B.6 Conducted Spurious Emission

Test Result

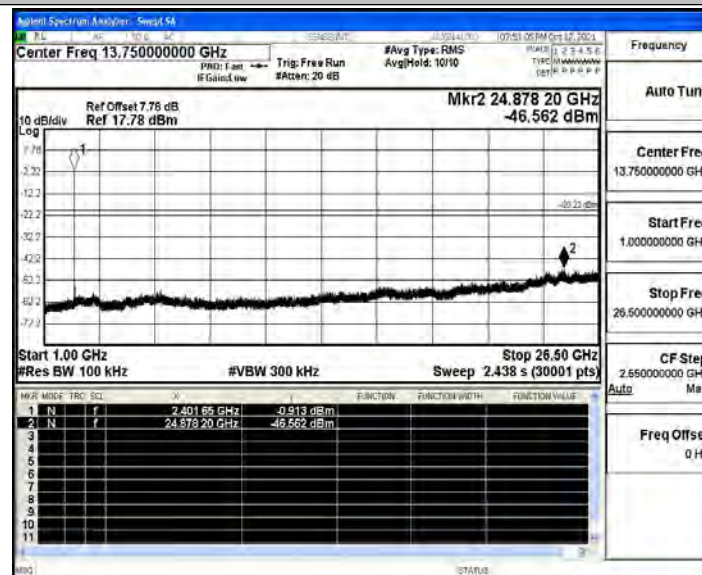
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-0.22	-0.22	---	PASS
			30~1000	-0.22	-60.13	≤ -20.22	PASS
			1000~26500	-0.22	-46.56	≤ -20.22	PASS
		2440	Reference	1.36	1.36	---	PASS
			30~1000	1.36	-61.79	≤ -18.64	PASS
			1000~26500	1.36	-47.79	≤ -18.64	PASS
		2480	Reference	-0.37	-0.37	---	PASS
			30~1000	-0.37	-61.99	≤ -20.37	PASS
			1000~26500	-0.37	-48.11	≤ -20.37	PASS

Test Graphs

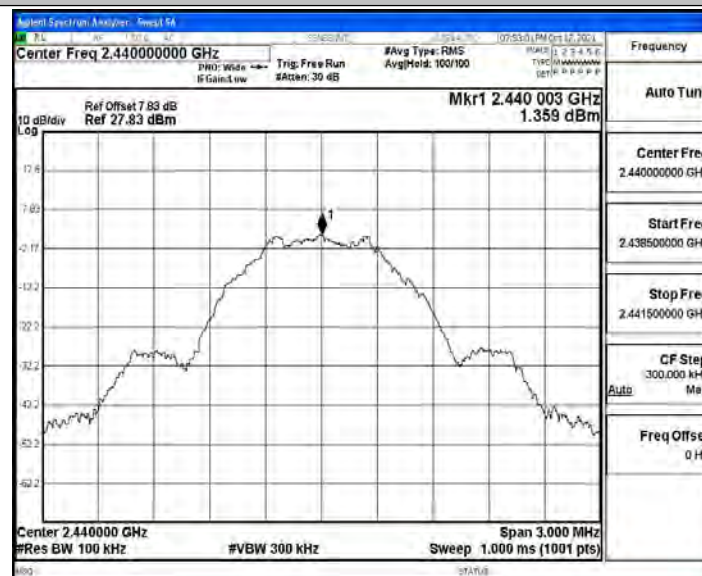




BLE_1M_Ant1_2402_1000~26500

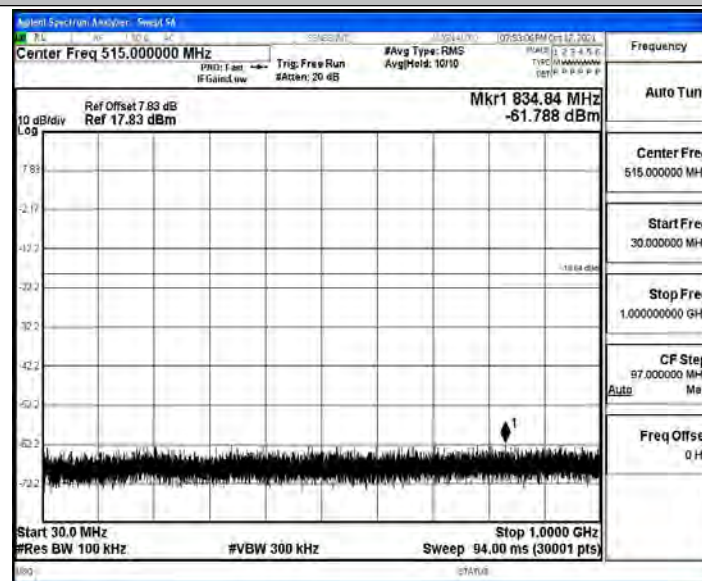


BLE_1M_Ant1_2440_0~Reference

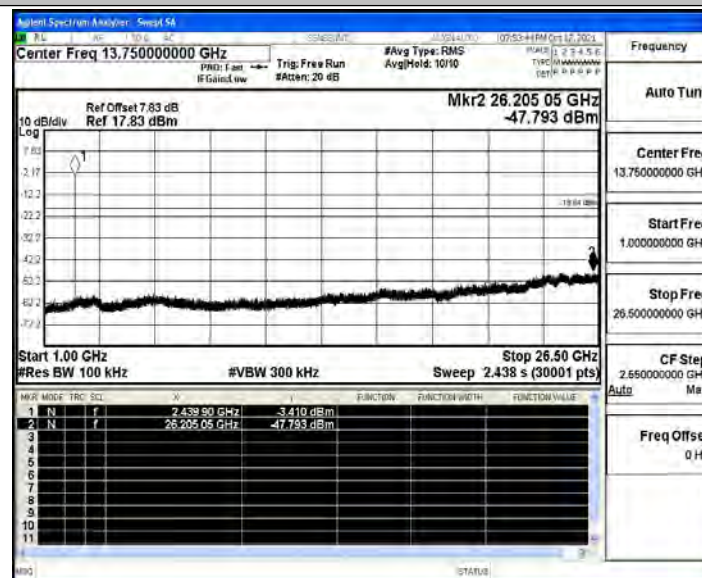




BLE_1M_Ant1_2440_30~1000



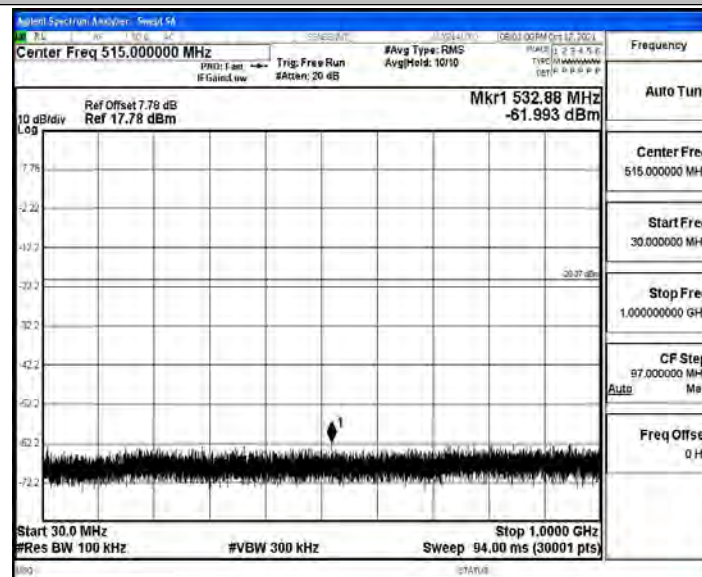
BLE_1M_Ant1_2440_1000~26500



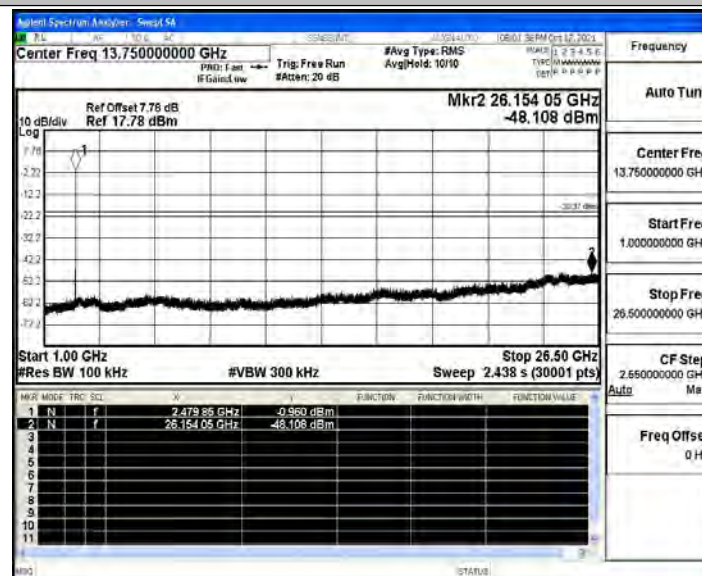
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500





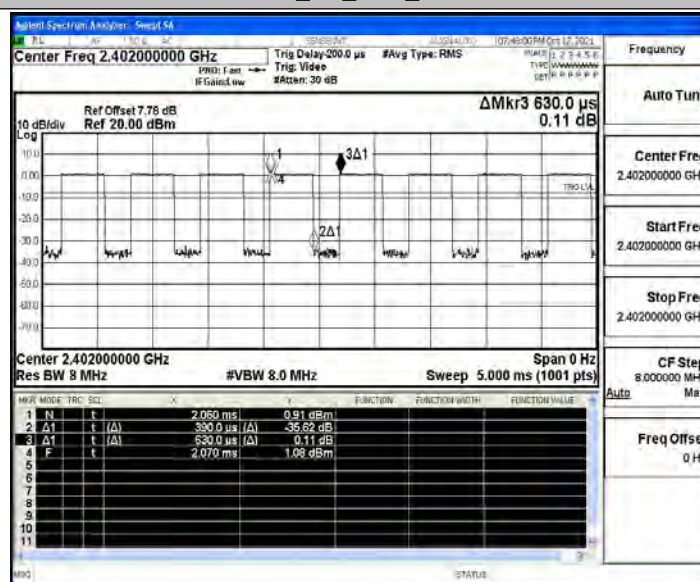
B.7 Duty Cycle

Test Result

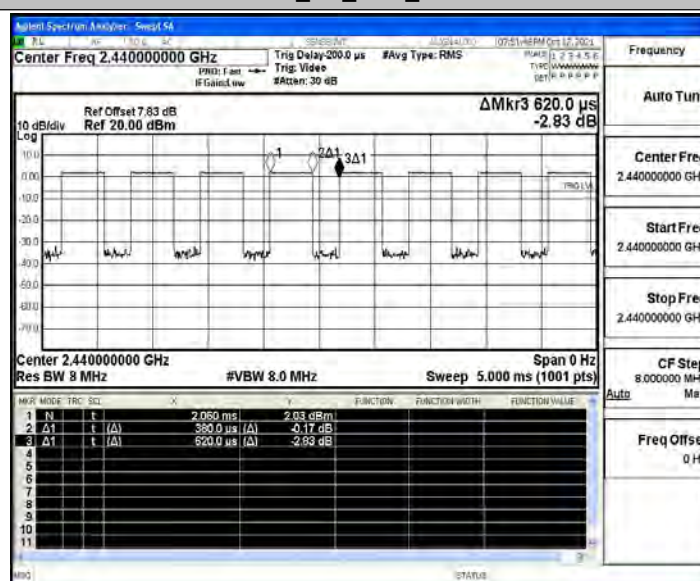
TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Minimum VBW(KHz)	Limit	Verdict
BLE_1M	Ant1	2402	0.39	0.63	0.6190	61.90	2.08	2.56	---	PASS
		2440	0.38	0.62	0.6129	61.29	2.13	2.63	---	PASS
		2480	0.38	0.63	0.6032	60.32	2.20	2.63	---	PASS

Test Graphs

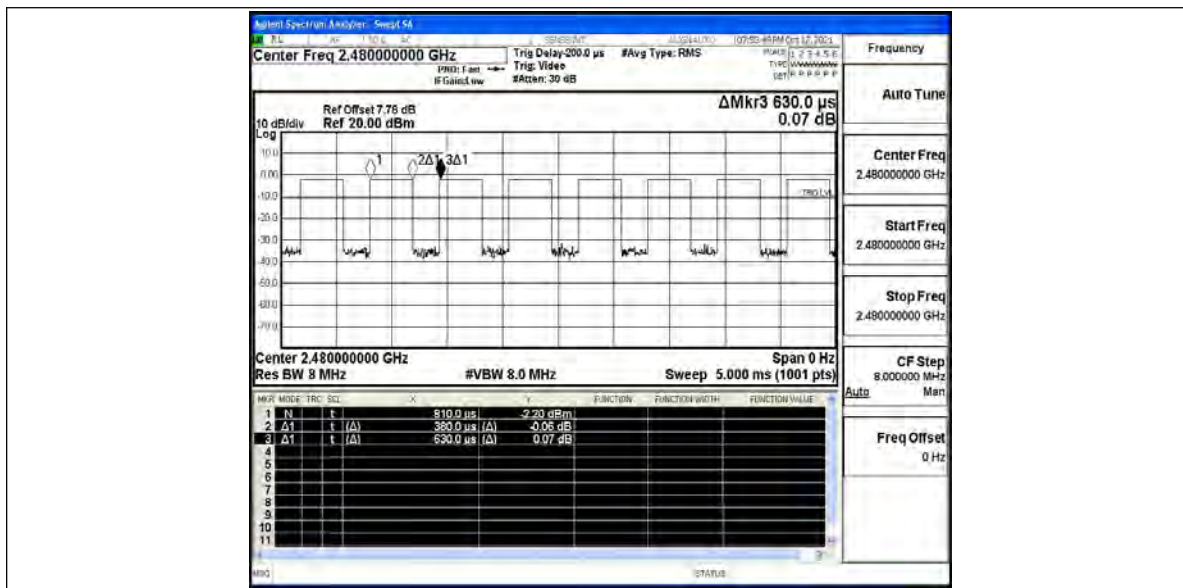
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480





B.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	-48.31	≤-41.20	46.89	≤54	PASS
				AV	2368.565	-47.46	≤-41.20	47.74	≤54	PASS
				AV	2390.000	-47.92	≤-41.20	47.28	≤54	PASS
				Peak	2310.000	-41.01	≤-21.20	54.19	≤74	PASS
				Peak	2363.630	-38.59	≤-21.20	56.61	≤74	PASS
				Peak	2390.000	-43.21	≤-21.20	51.99	≤74	PASS
		High	2480	AV	2483.500	-47.05	≤-41.20	48.15	≤54	PASS
				AV	2483.520	-47.05	≤-41.20	48.15	≤54	PASS
				AV	2500.000	-47.39	≤-41.20	47.81	≤54	PASS
				Peak	2483.500	-42.3	≤-21.20	52.90	≤74	PASS
				Peak	2497.520	-38.87	≤-21.20	56.33	≤74	PASS
				Peak	2500.000	-41.77	≤-21.20	53.43	≤74	PASS

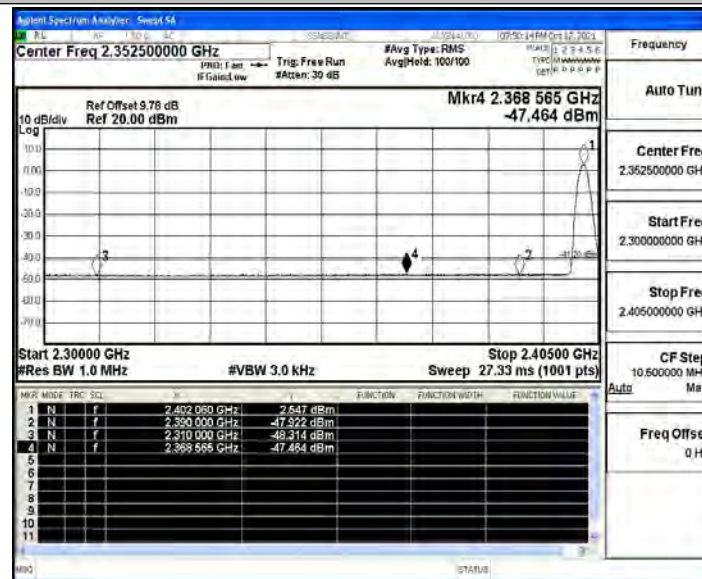
Note:

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.

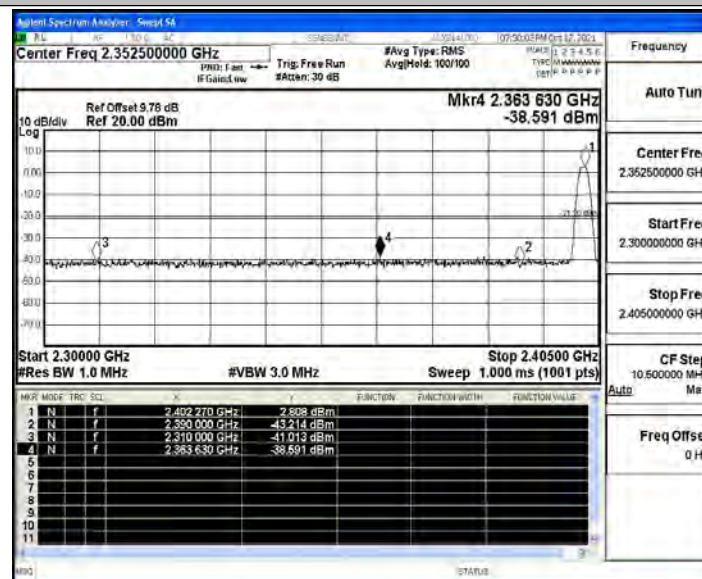


Test Graphs

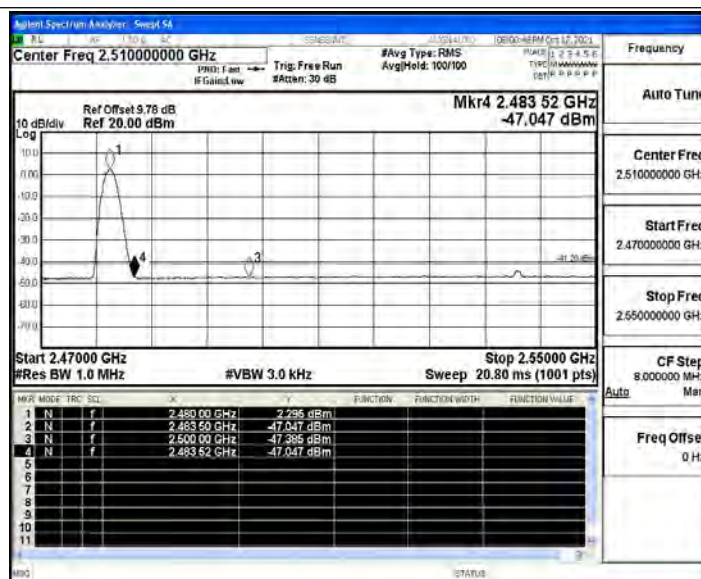
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

