



Appendix A

RF Test Data for BT LE V5.2 (DTS) (Conducted Measurement)

Product Name: 3-Axis Smartphone Stabilizer

Test Model: SMART Xpro

Environmental Conditions

Temperature:	23.5℃
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	 Mark Chen
Supervised by:	 Li Huan



A.1 DTS Bandwidth

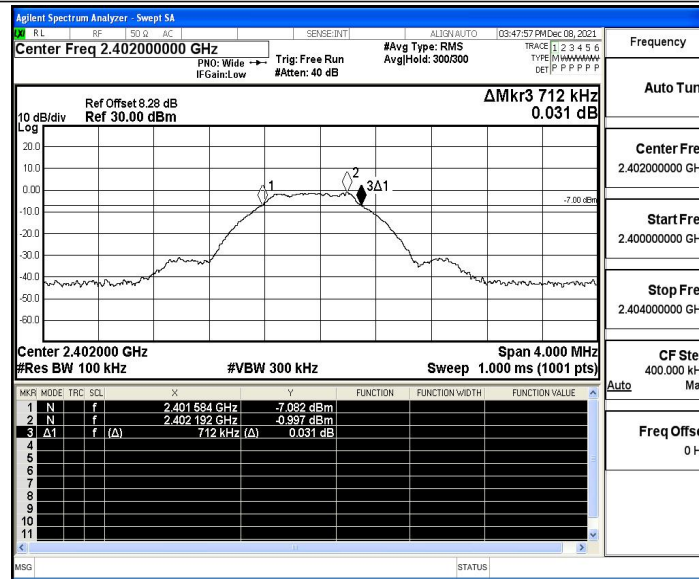
Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.712	2401.584	2402.296	≥0.5	PASS
		2440	0.716	2439.584	2440.300	≥0.5	PASS
		2480	0.692	2479.592	2480.284	≥0.5	PASS

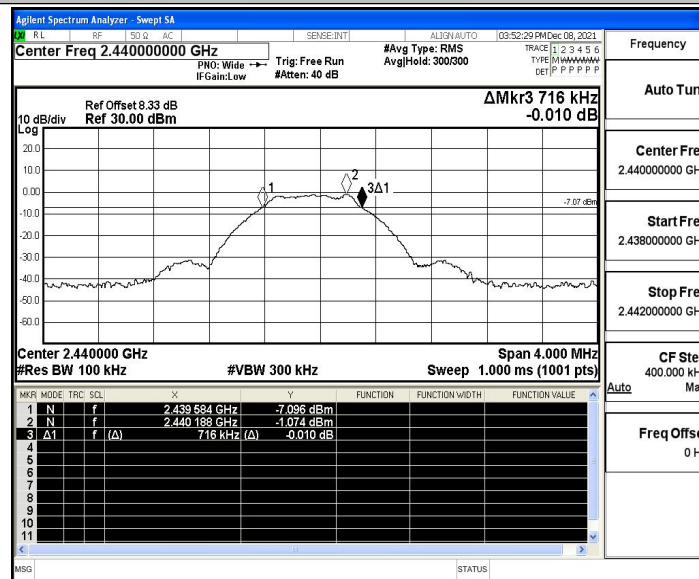


Test Graphs

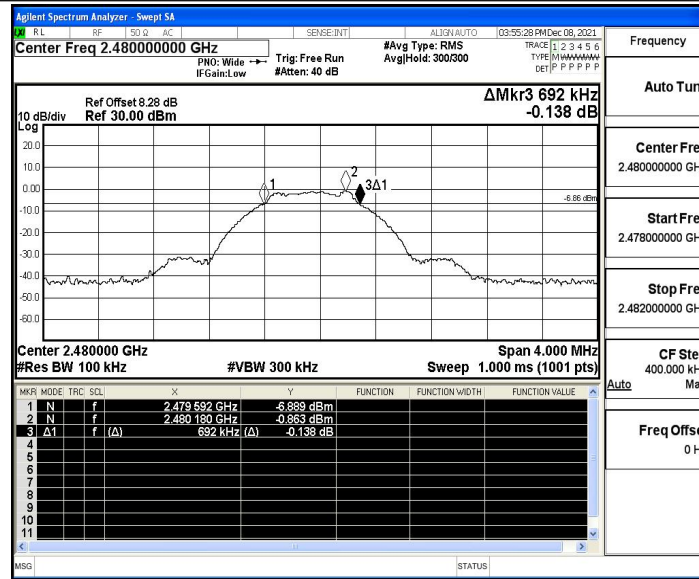
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480





A.2 Maximum peak conducted output power

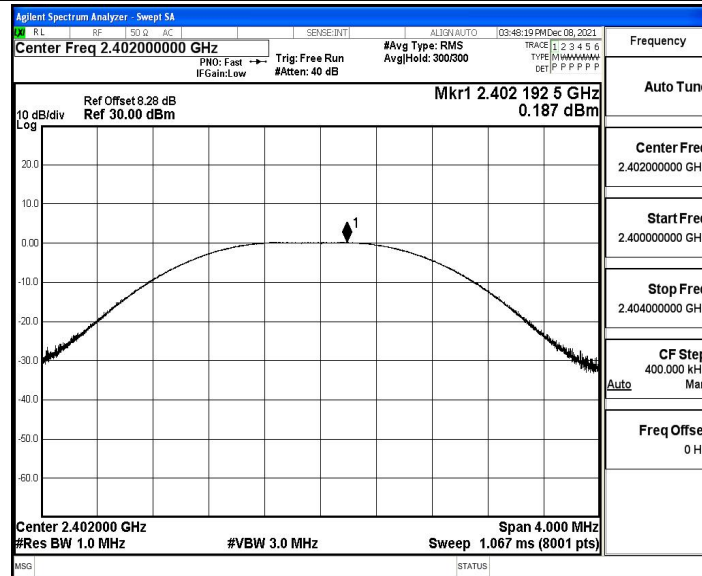
Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0.19	≤30	PASS
		2440	0.13	≤30	PASS
		2480	0.29	≤30	PASS

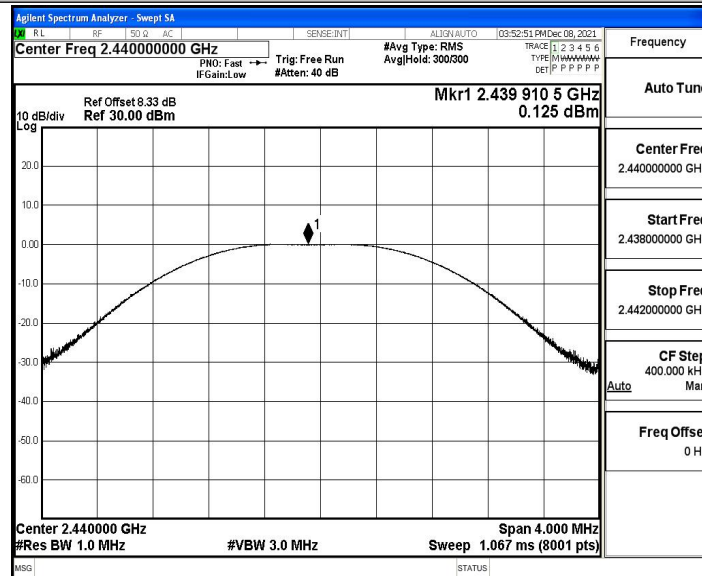


Test Graphs

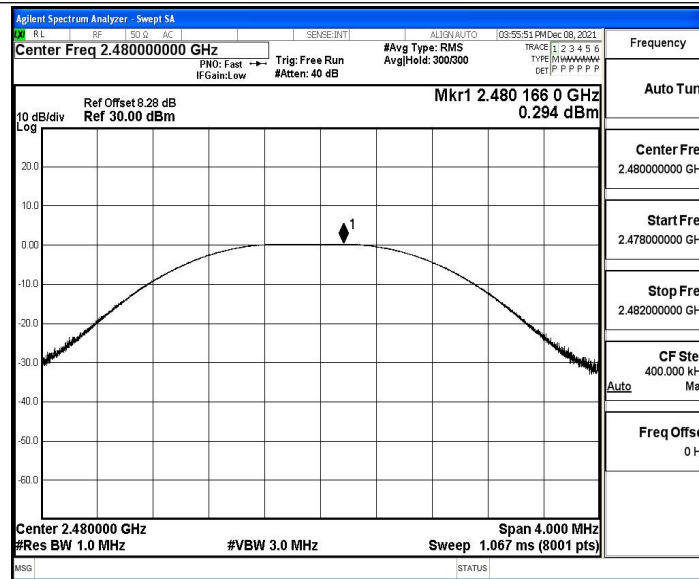
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480





A.3 Maximum power spectral density

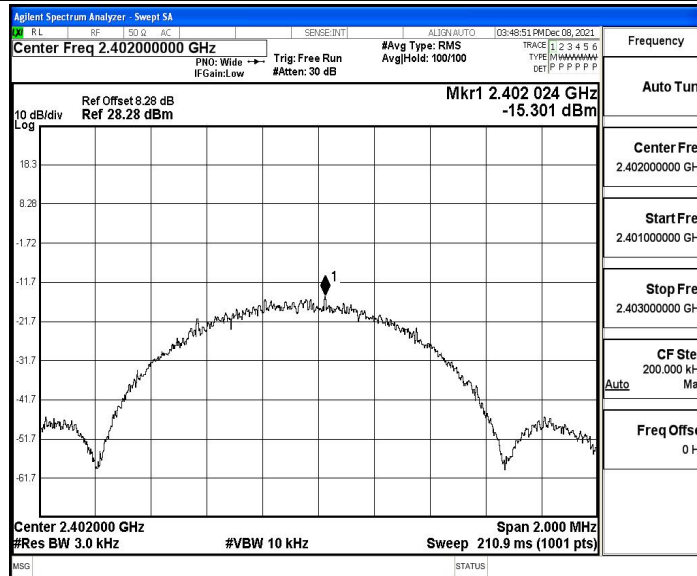
Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-15.3	≤8	PASS
		2440	-15.38	≤8	PASS
		2480	-15.3	≤8	PASS

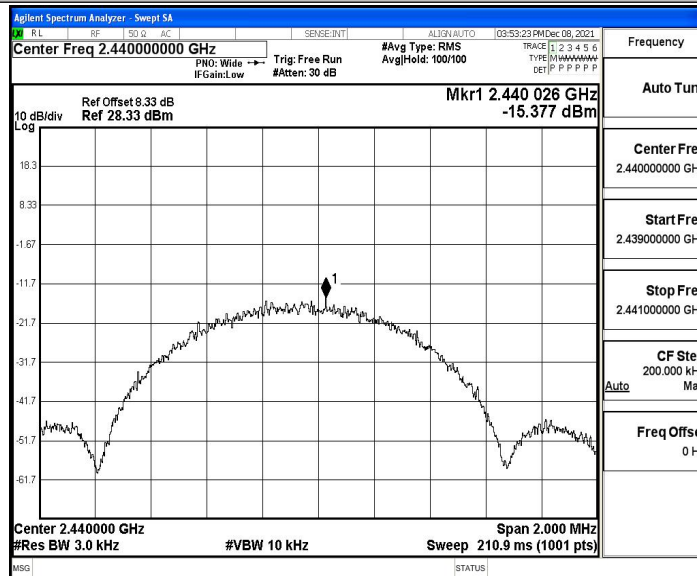


Test Graphs

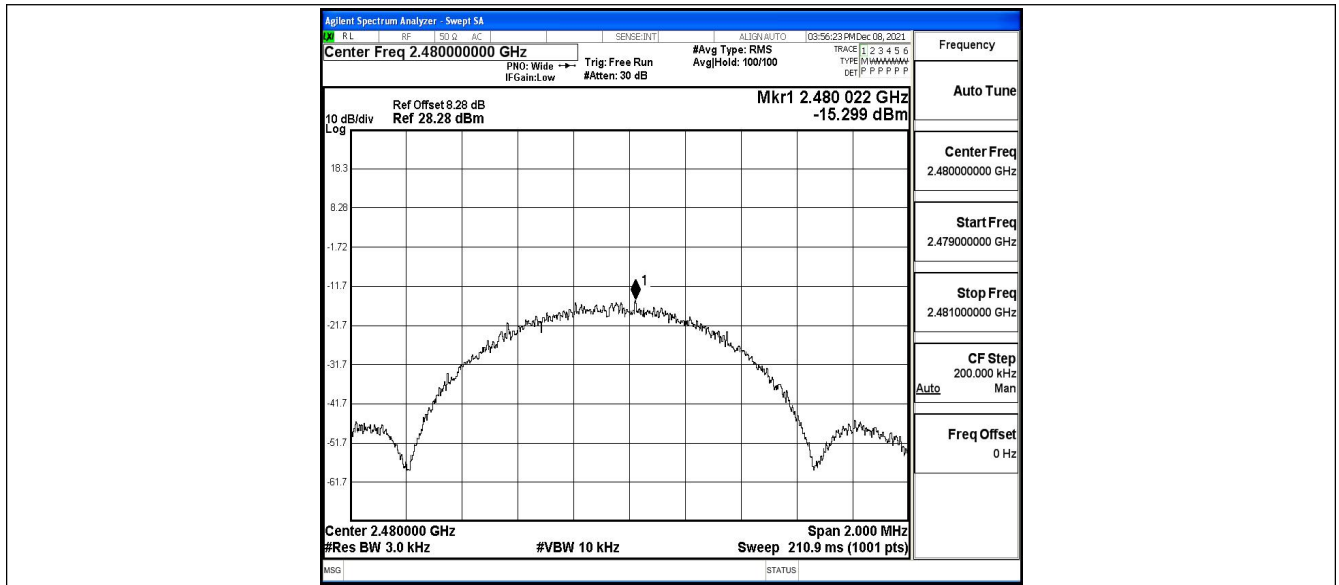
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480





A.4 Band edge measurements

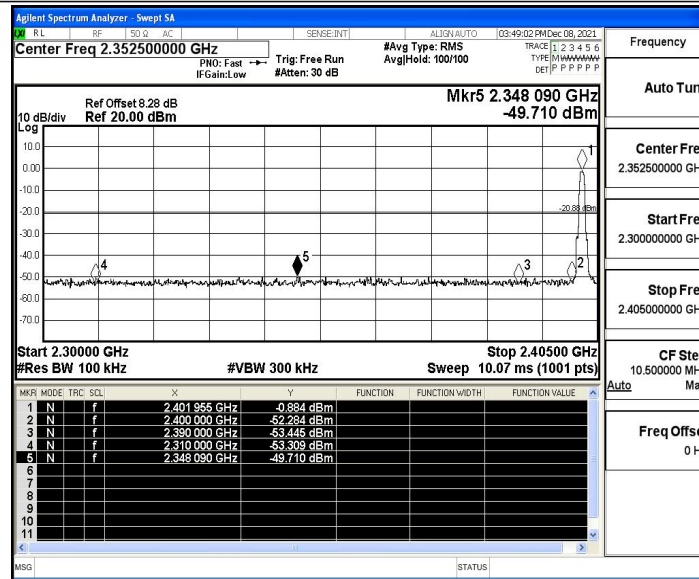
Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-0.88	-49.71	≤-20.88	PASS
		High	2480	-0.59	-47.94	≤-20.59	PASS

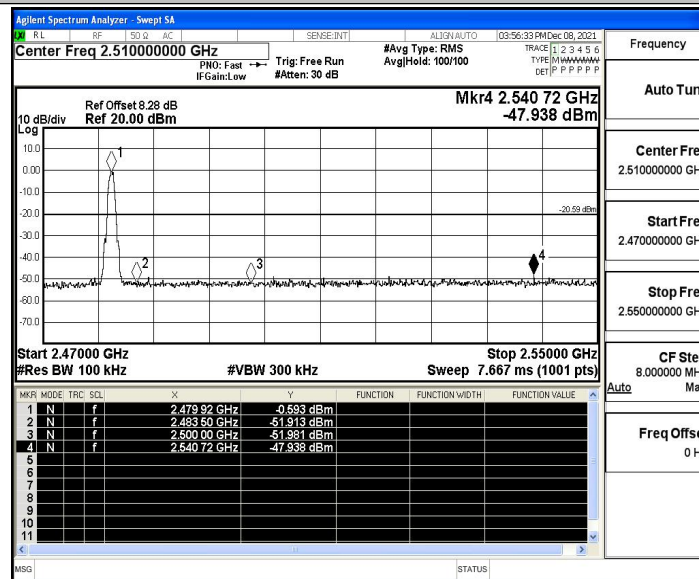


Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480





A.5 Conducted Spurious Emission

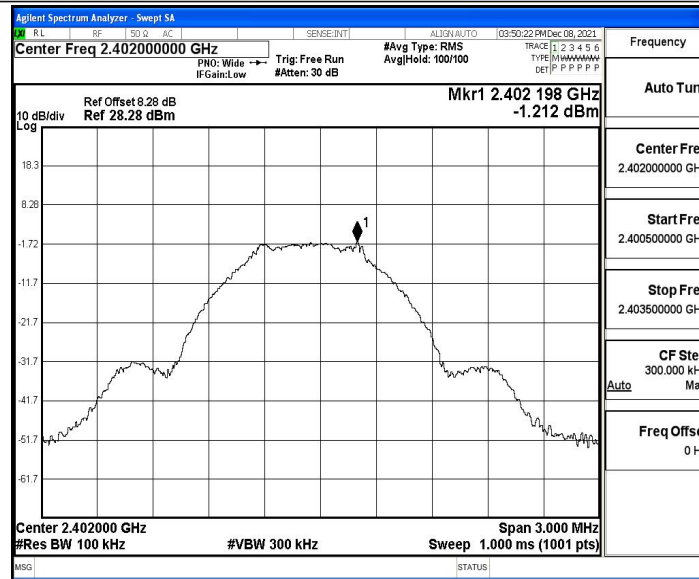
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-1.21	-1.21	---	PASS
			30~1000	-1.21	-60.79	≤ -21.21	PASS
			1000~26500	-1.21	-47.02	≤ -21.21	PASS
		2440	Reference	-1.23	-1.23	---	PASS
			30~1000	-1.23	-61.05	≤ -21.23	PASS
			1000~26500	-1.23	-46.72	≤ -21.23	PASS
		2480	Reference	-0.96	-0.96	---	PASS
			30~1000	-0.96	-61.18	≤ -20.96	PASS
			1000~26500	-0.96	-46.5	≤ -20.96	PASS

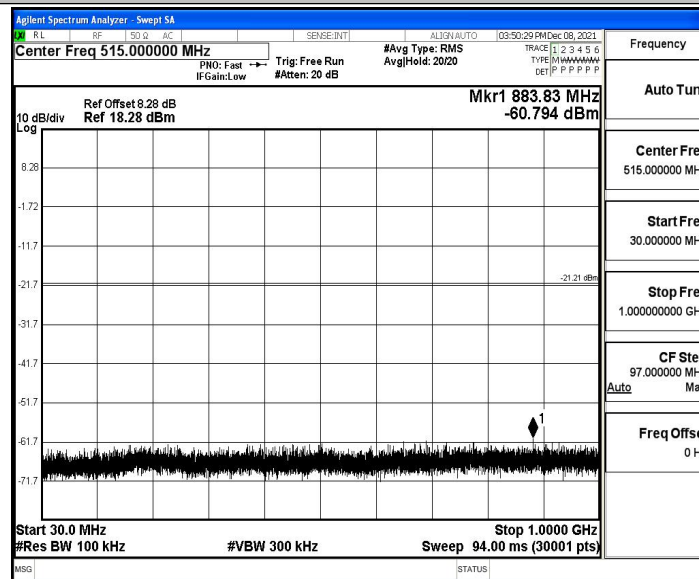


Test Graphs

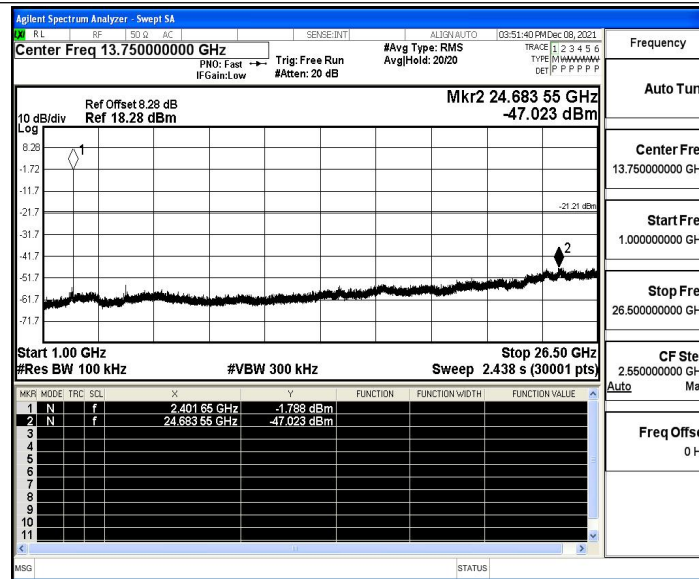
BLE_1M_Ant1_2402_0~Reference



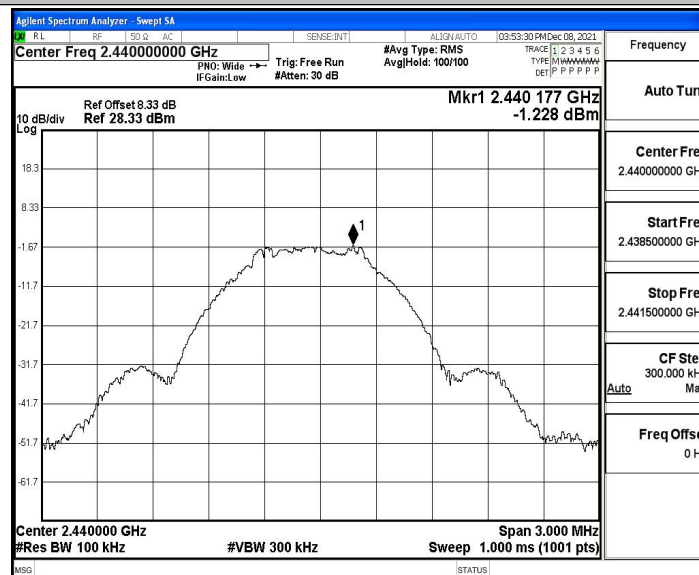
BLE_1M_Ant1_2402_30~1000



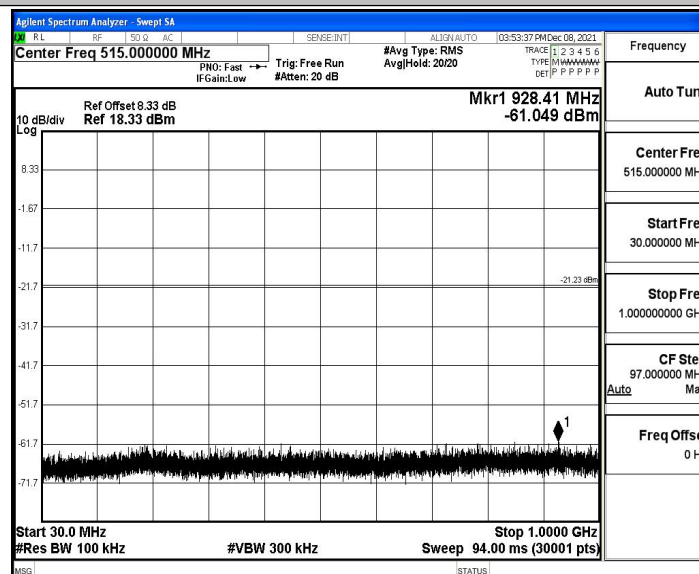
BLE_1M_Ant1_2402_1000~26500



BLE_1M_Ant1_2440_0~Reference

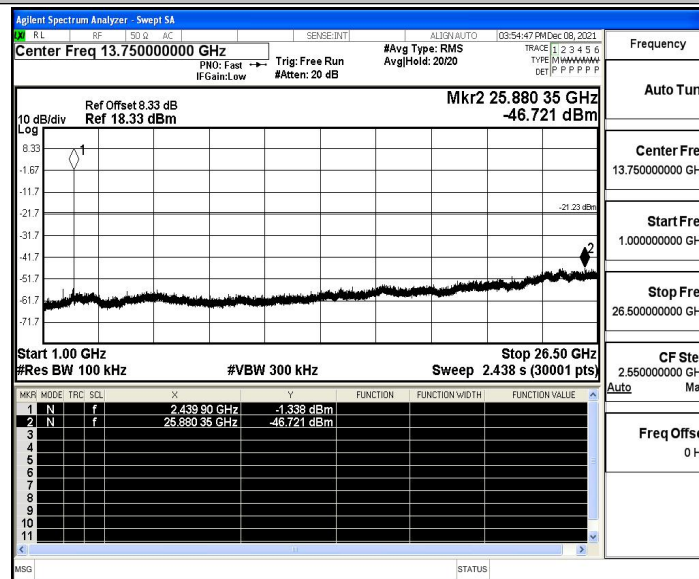


BLE_1M_Ant1_2440_30~1000

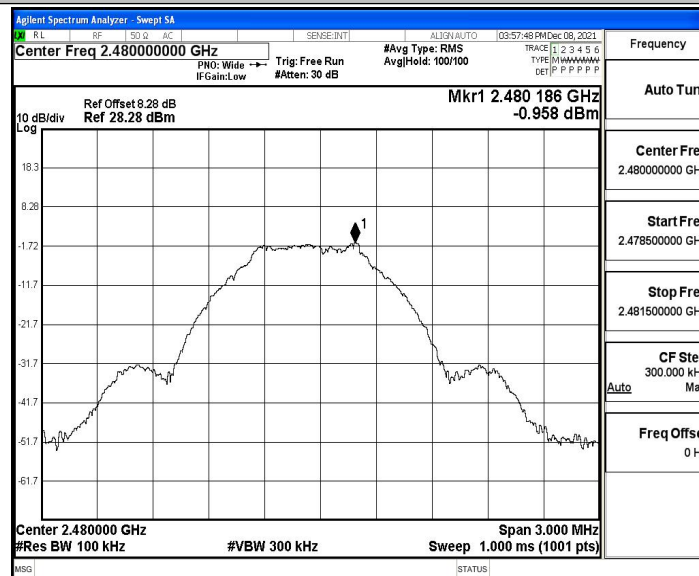




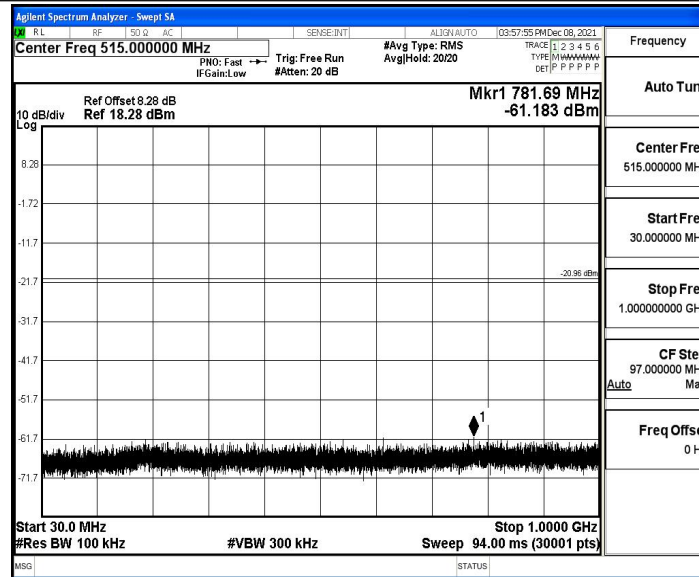
BLE_1M_Ant1_2440_1000~26500



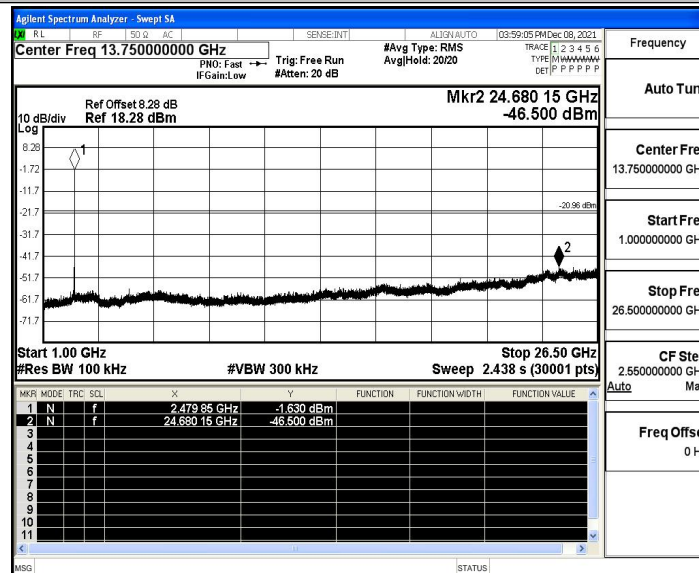
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500





A.6 Duty Cycle

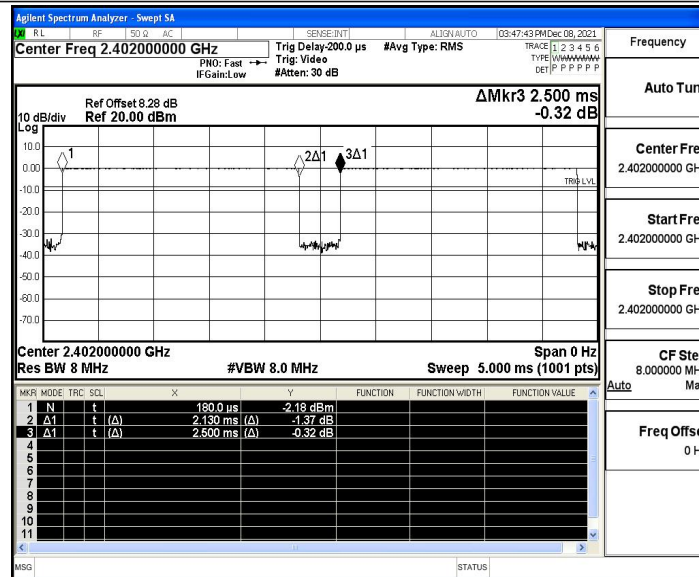
Test Result

TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	2.13	2.50	0.8520	85.20	0.70	---	PASS
		2440	2.12	2.50	0.8480	84.80	0.72	---	PASS
		2480	2.12	2.50	0.8480	84.80	0.72	---	PASS

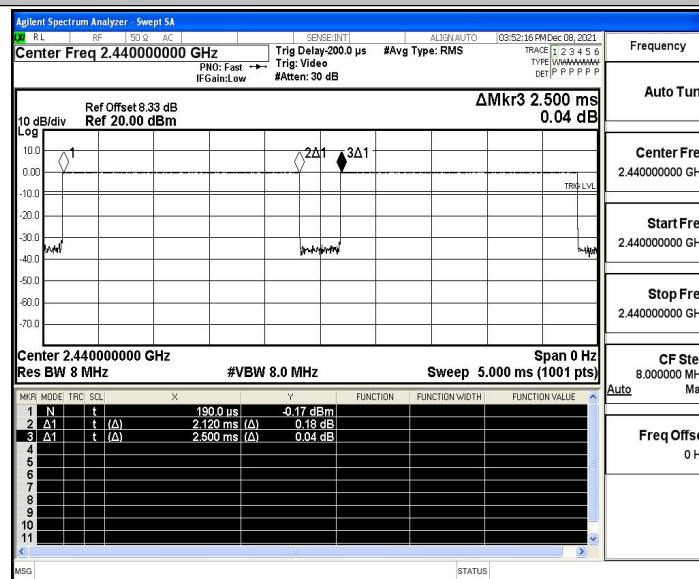


Test Graphs

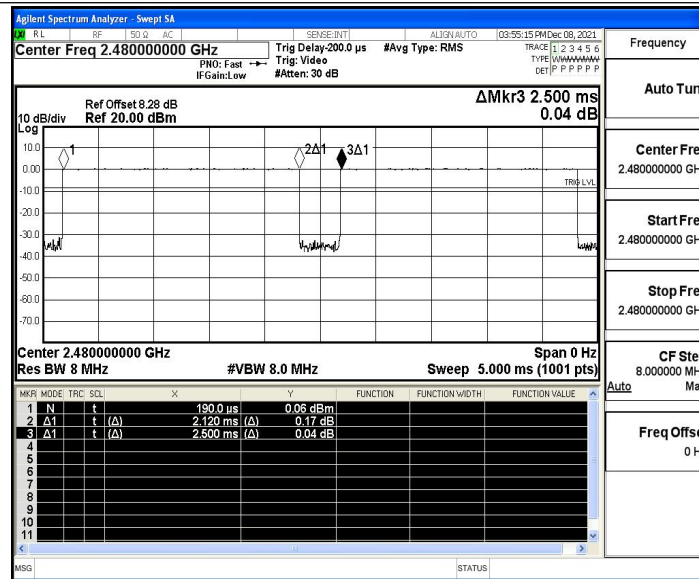
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480





A.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	-48.35	≤-41.20	46.85	≤54	PASS
				AV	2357.225	-47.63	≤-41.20	47.57	≤54	PASS
				AV	2390.000	-48.27	≤-41.20	46.93	≤54	PASS
				Peak	2310.000	-40.51	≤-21.20	54.69	≤74	PASS
				Peak	2384.420	-38.07	≤-21.20	57.13	≤74	PASS
				Peak	2390.000	-40.08	≤-21.20	55.12	≤74	PASS
		High	2480	AV	2483.500	-47.5	≤-41.20	47.70	≤54	PASS
				AV	2483.520	-47.5	≤-41.20	47.70	≤54	PASS
				AV	2500.000	-47.74	≤-41.20	47.46	≤54	PASS
				Peak	2483.500	-41.13	≤-21.20	54.07	≤74	PASS
				Peak	2497.280	-38.05	≤-21.20	57.15	≤74	PASS
				Peak	2500.000	-40.34	≤-21.20	54.86	≤74	PASS

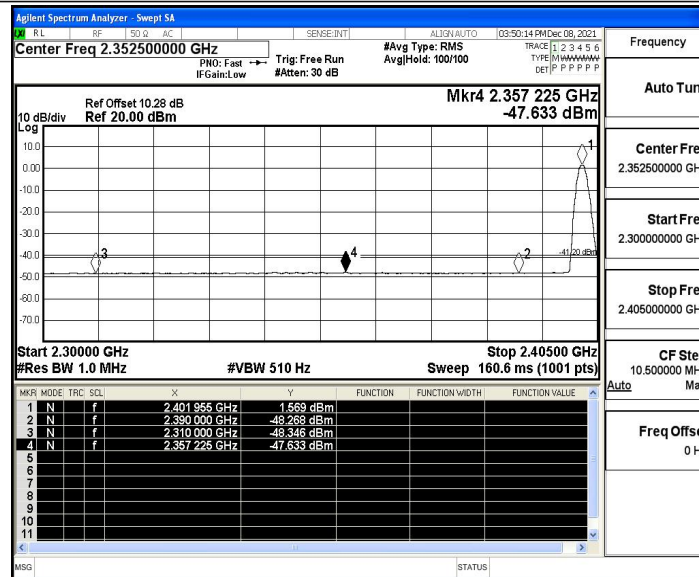
Note:

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.

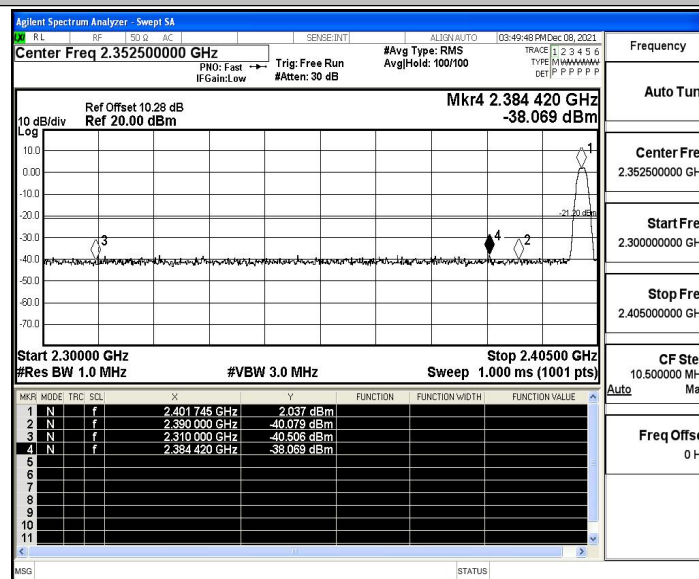


Test Graphs

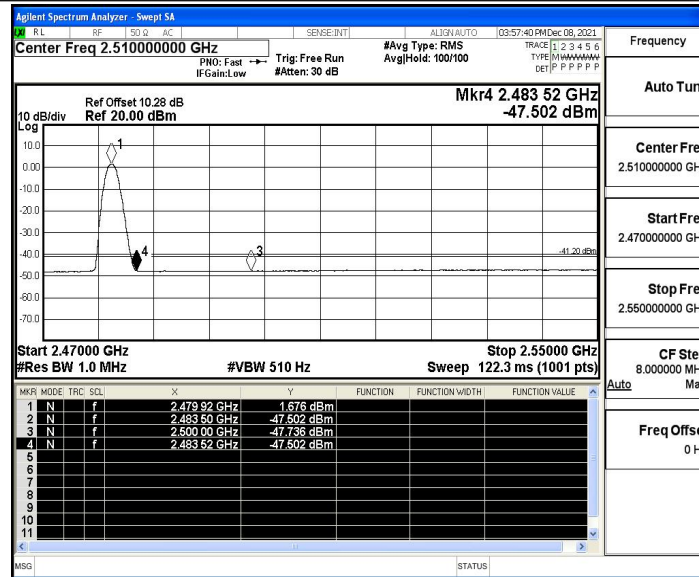
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

