

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

Product Name: Smart Linux Gateway

Trade Mark: Dusun

Test Model: DSGW-091

FCC ID: 2AUXBDSGW-091

Environmental Conditions

Temperature:	22.7℃
Relative Humidity:	56%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

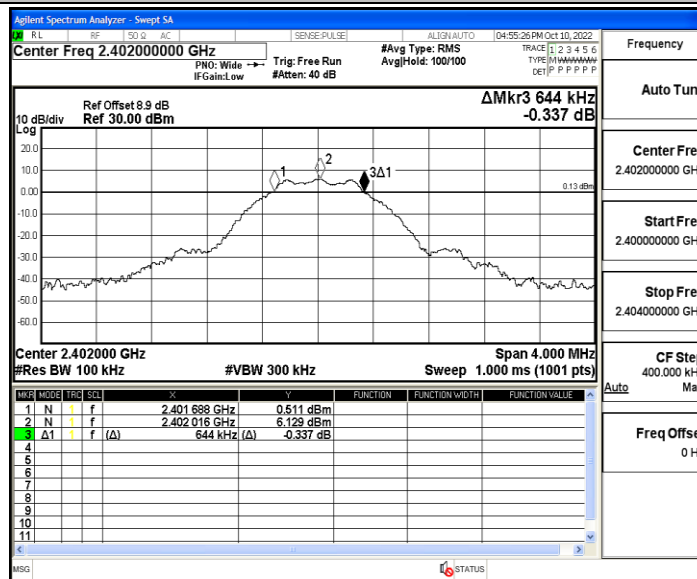
Appendix A: DTS Bandwidth

Test Result

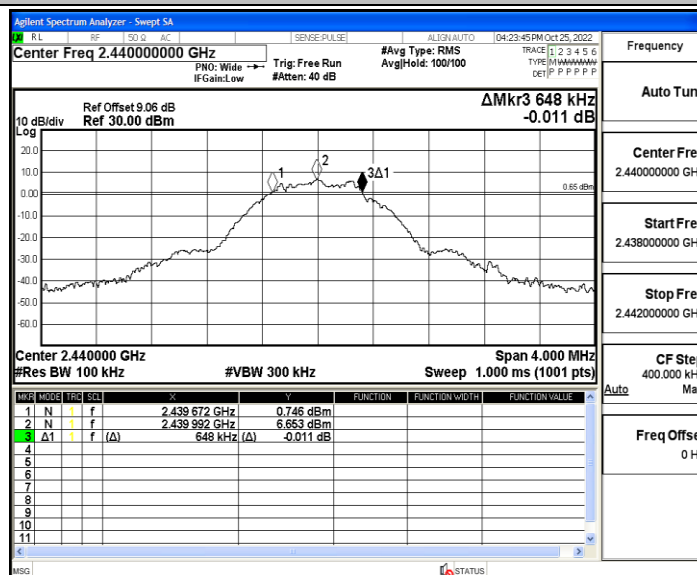
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.644	2401.688	2402.332	0.5	PASS
		2440	0.648	2439.672	2440.320	0.5	PASS
		2480	0.624	2479.692	2480.316	0.5	PASS

Test Graphs

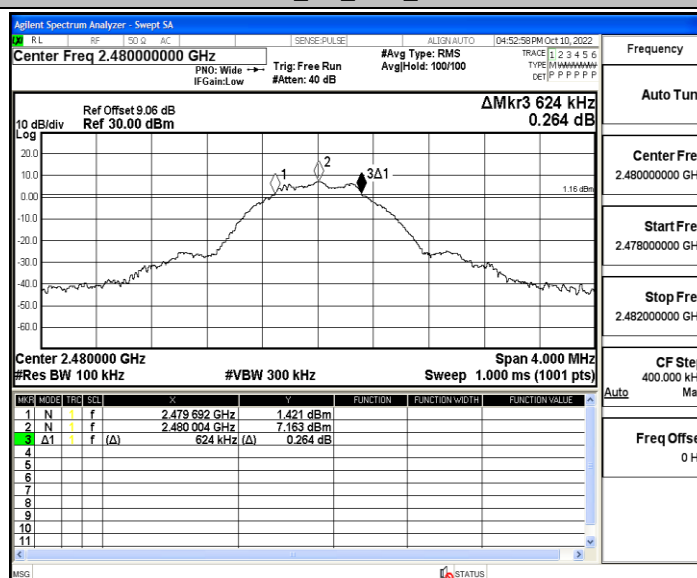
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



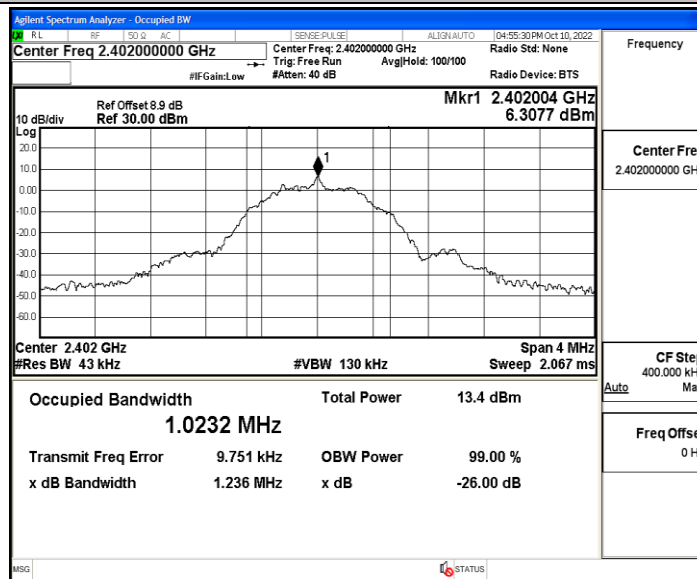
Appendix B: Occupied Channel Bandwidth

Test Result

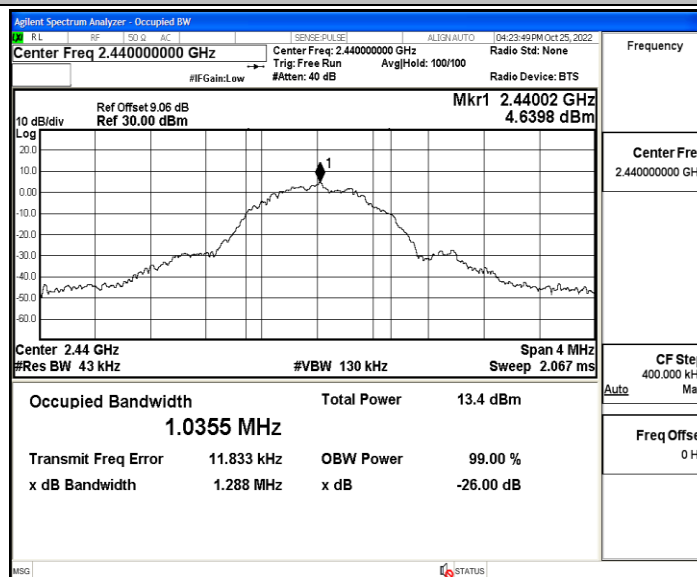
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0232	2401.4982	2402.5214	---	---
		2440	1.0355	2439.4941	2440.5296	---	---
		2480	1.0216	2479.4991	2480.5207	---	---

Test Graphs

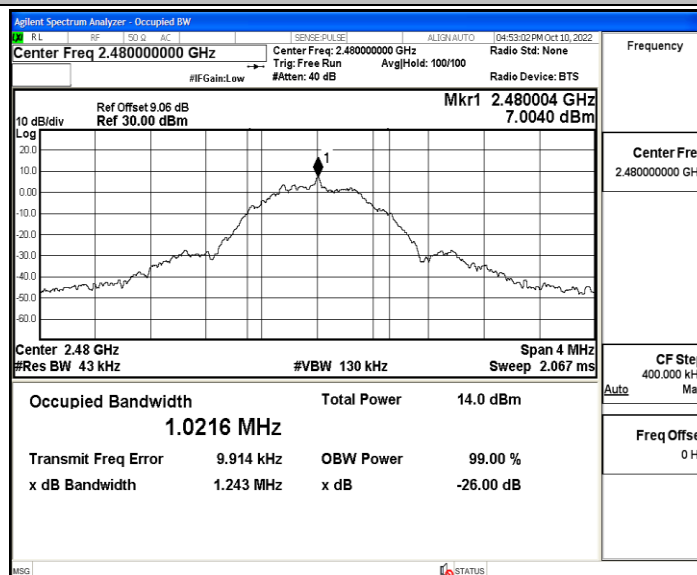
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

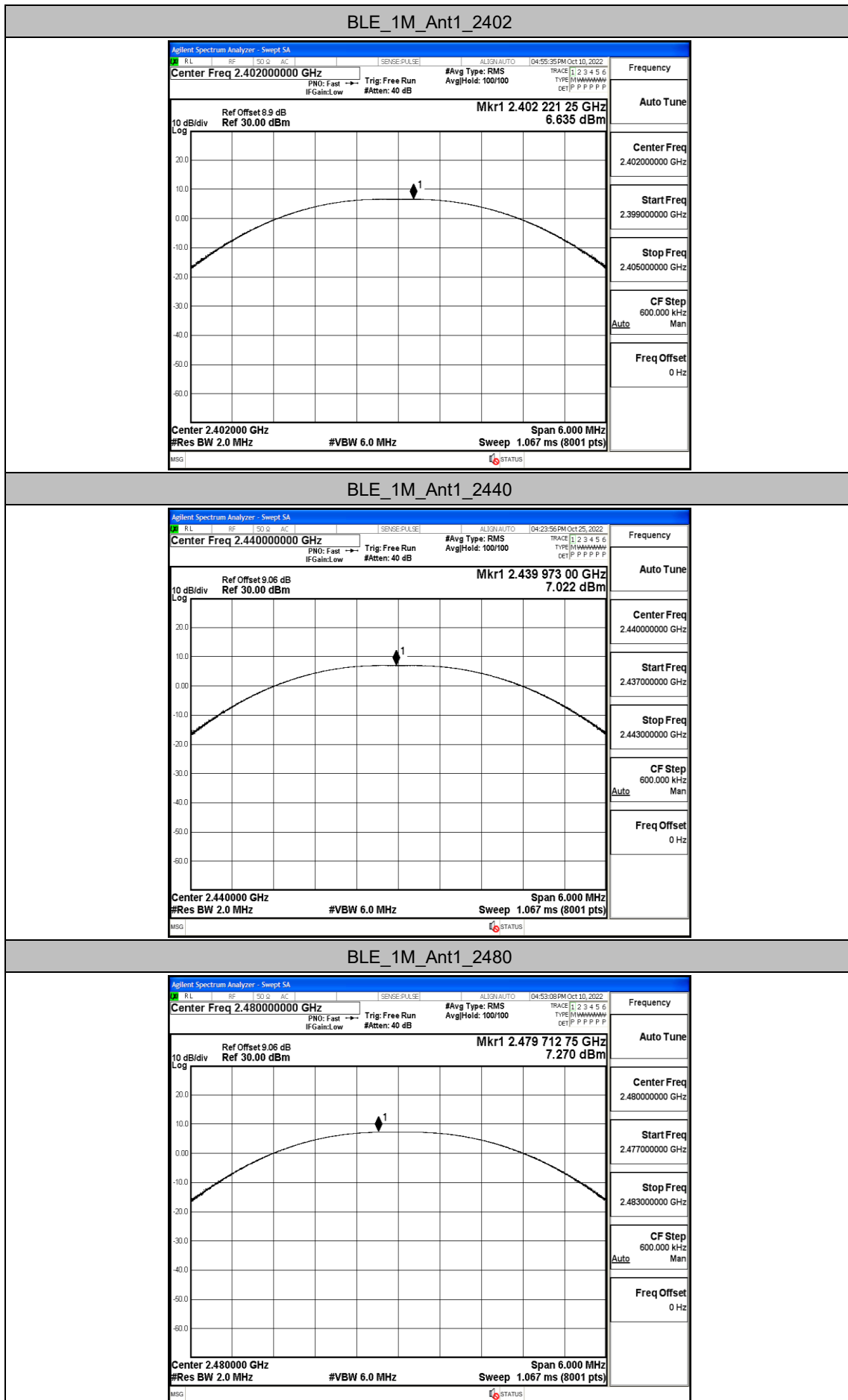


Appendix C: Maximum Peak conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	6.64	≤30	PASS
		2440	7.02	≤30	PASS
		2480	7.27	≤30	PASS

Test Graphs

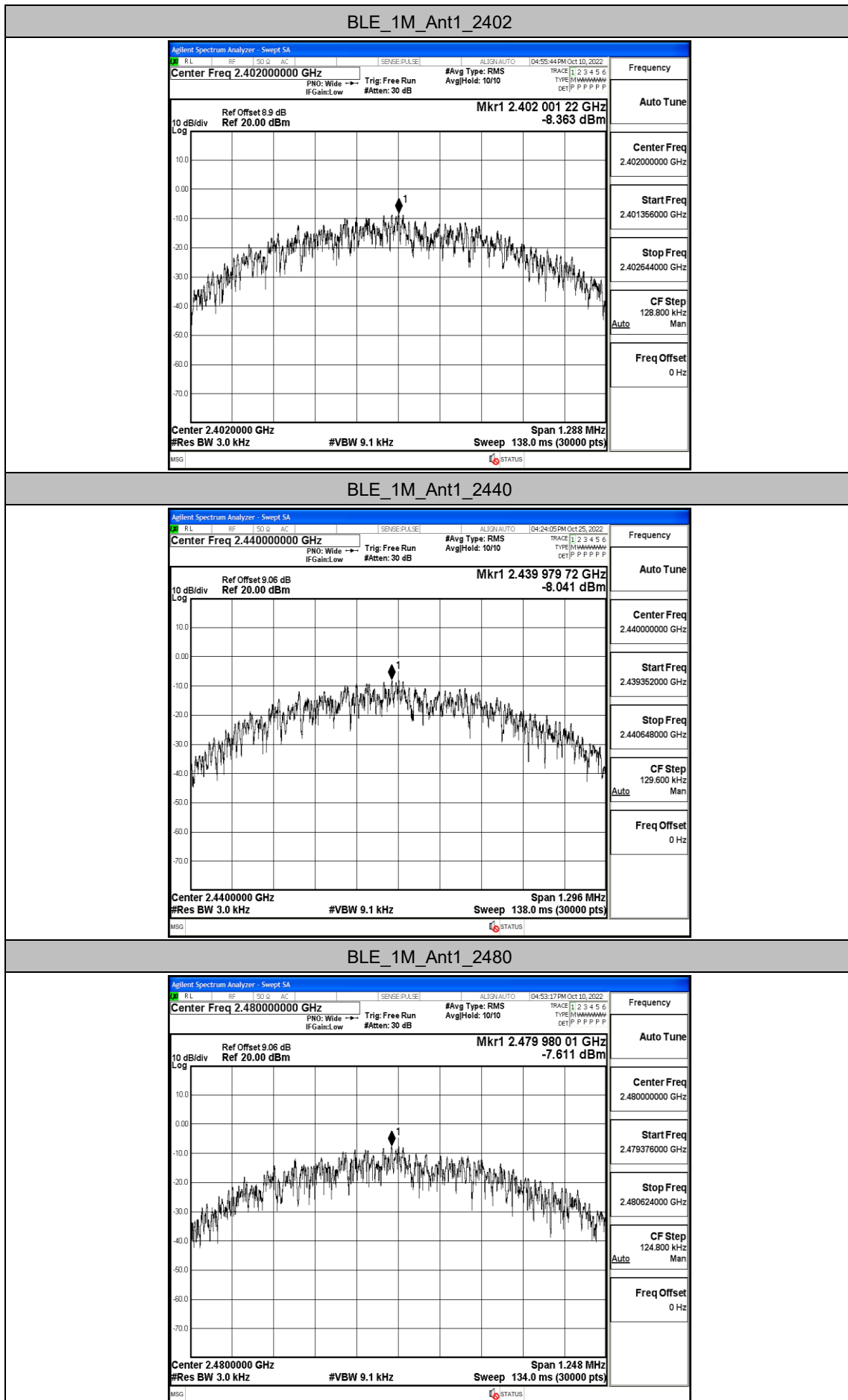


Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-8.36	≤8.00	PASS
		2440	-8.04	≤8.00	PASS
		2480	-7.61	≤8.00	PASS

Test Graphs

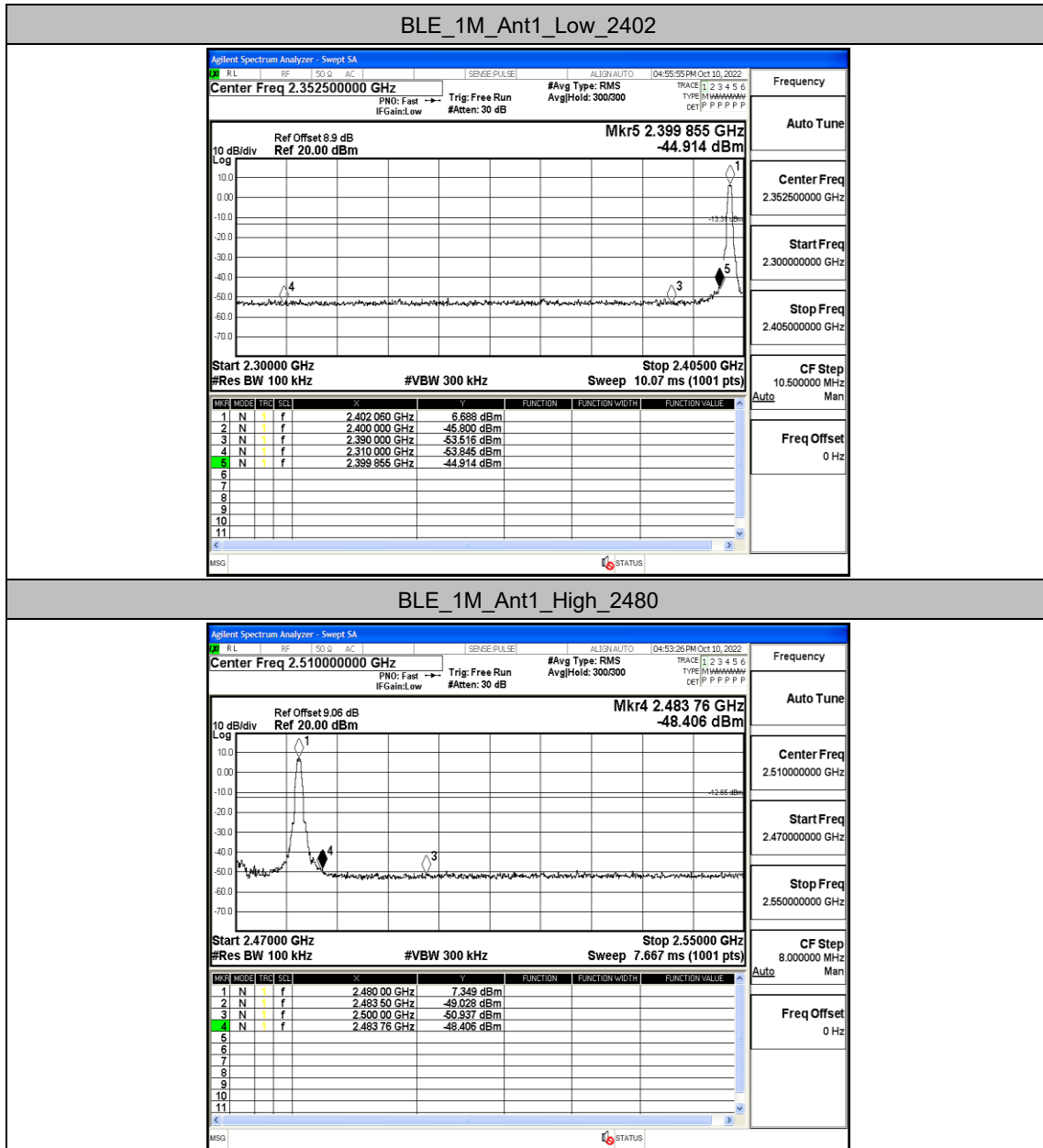


Appendix E: Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	6.69	-44.91	≤-13.31	PASS
		High	2480	7.35	-48.41	≤-12.65	PASS

Test Graphs



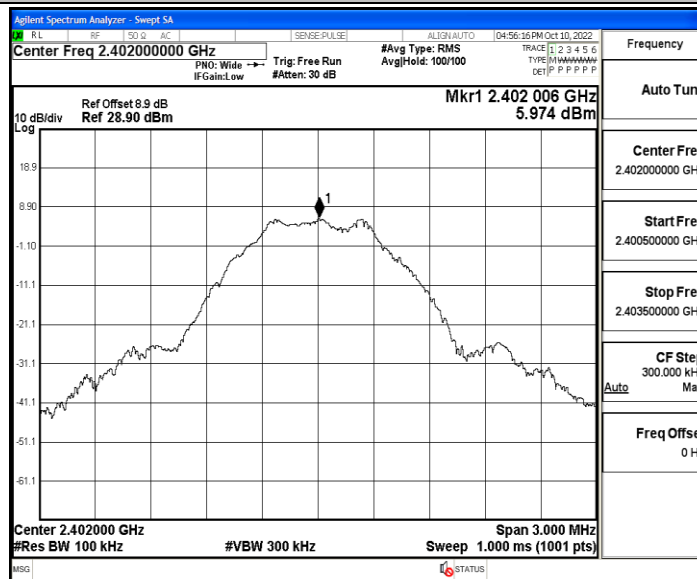
Appendix F: Conducted Spurious Emission

Test Result

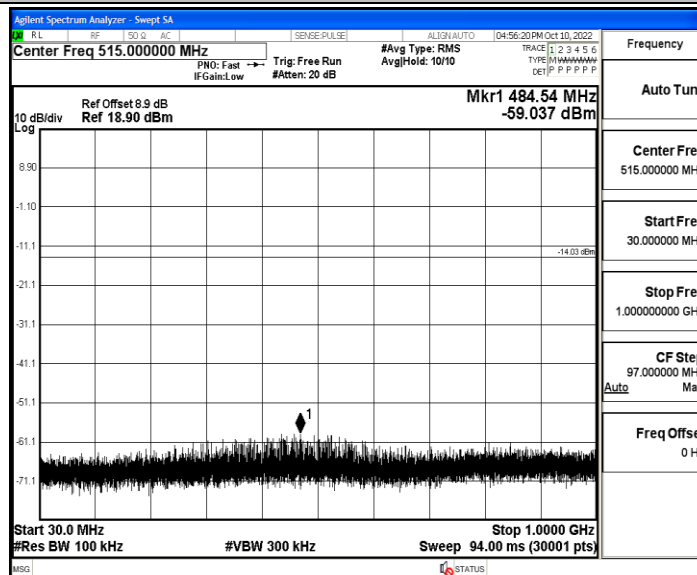
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	5.97	5.97	---	PASS
			30~1000	5.97	-59.04	≤-14.03	PASS
			1000~26500	5.97	-51.67	≤-14.03	PASS
		2440	Reference	6.91	6.91	---	PASS
			30~1000	6.91	-58.47	≤-13.09	PASS
			1000~26500	6.91	-50.44	≤-13.09	PASS
		2480	Reference	6.94	6.94	---	PASS
			30~1000	6.94	-58.91	≤-13.06	PASS
			1000~26500	6.94	-51.03	≤-13.06	PASS

Test Graphs

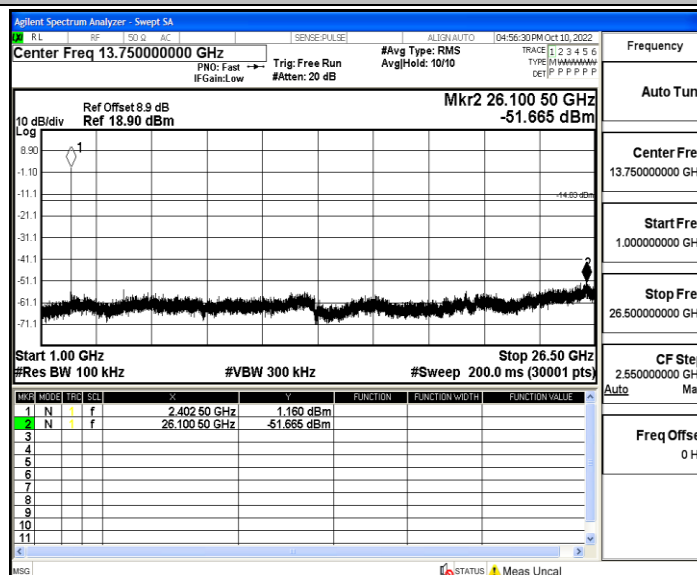
BLE_1M_Ant1_2402_0~Reference



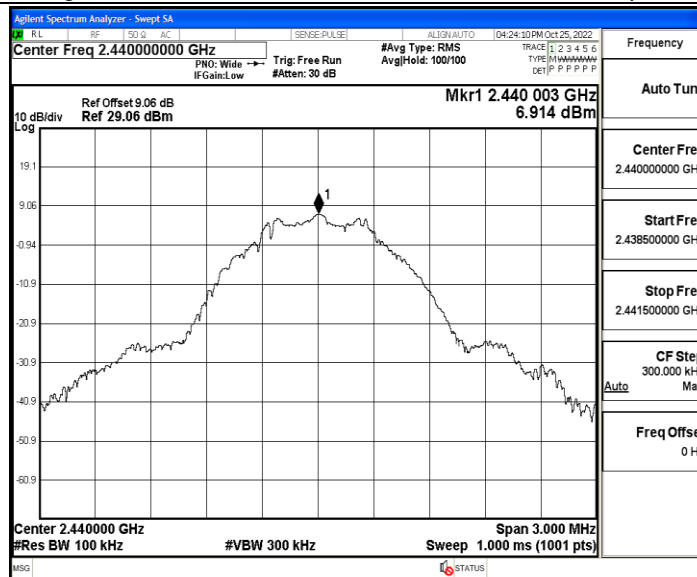
BLE_1M_Ant1_2402_30~1000



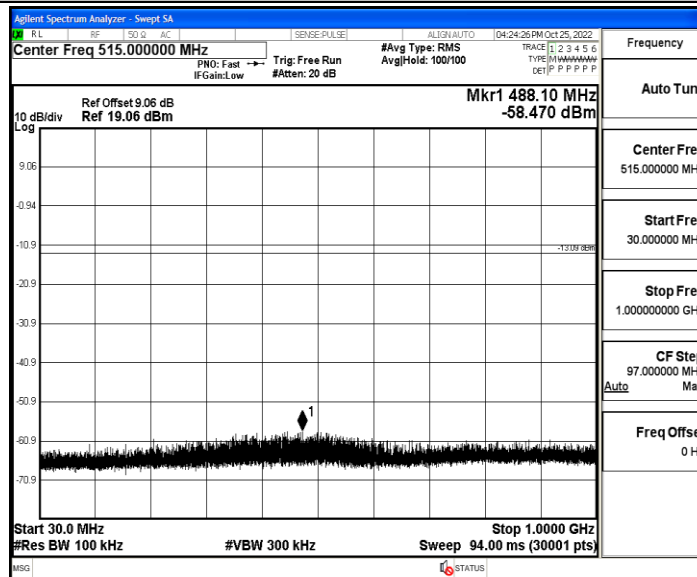
BLE_1M_Ant1_2402_1000~26500



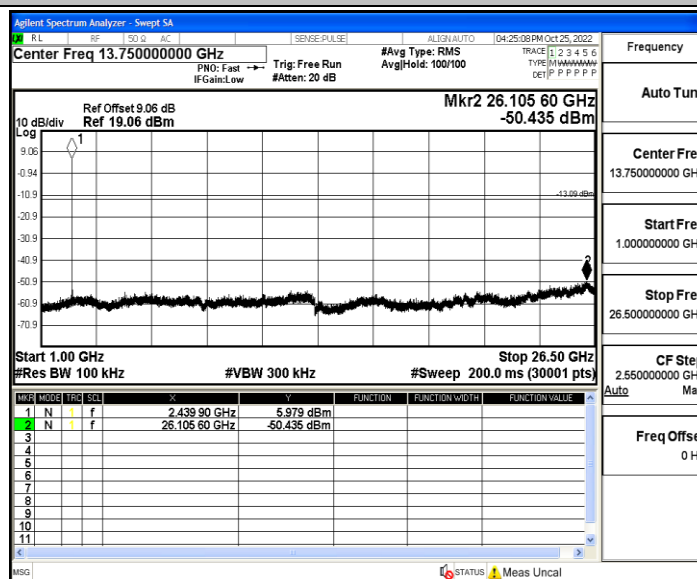
BLE_1M_Ant1_2440_0~Reference



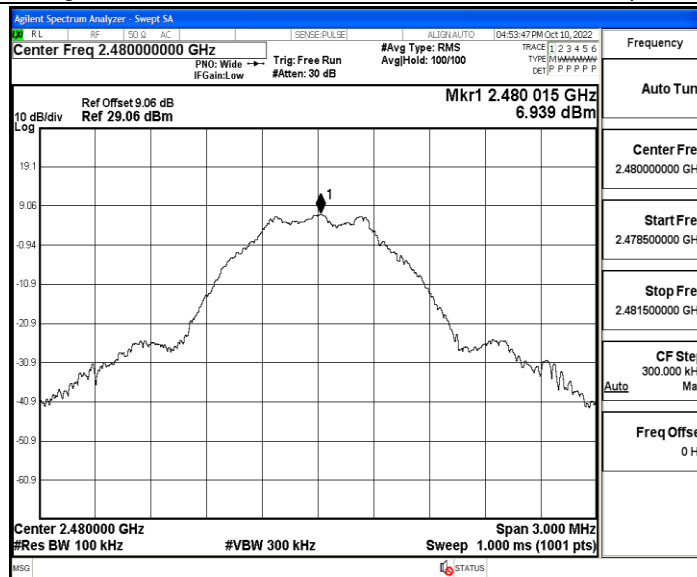
BLE_1M_Ant1_2440_30~1000



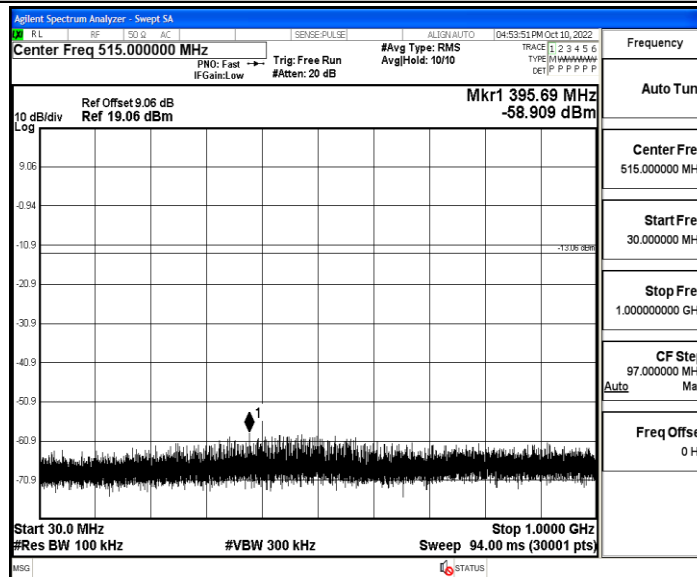
BLE_1M_Ant1_2440_1000~26500



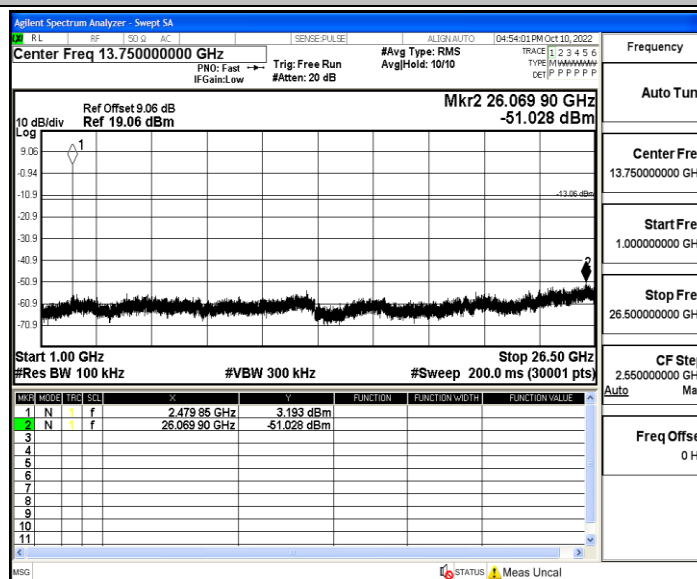
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

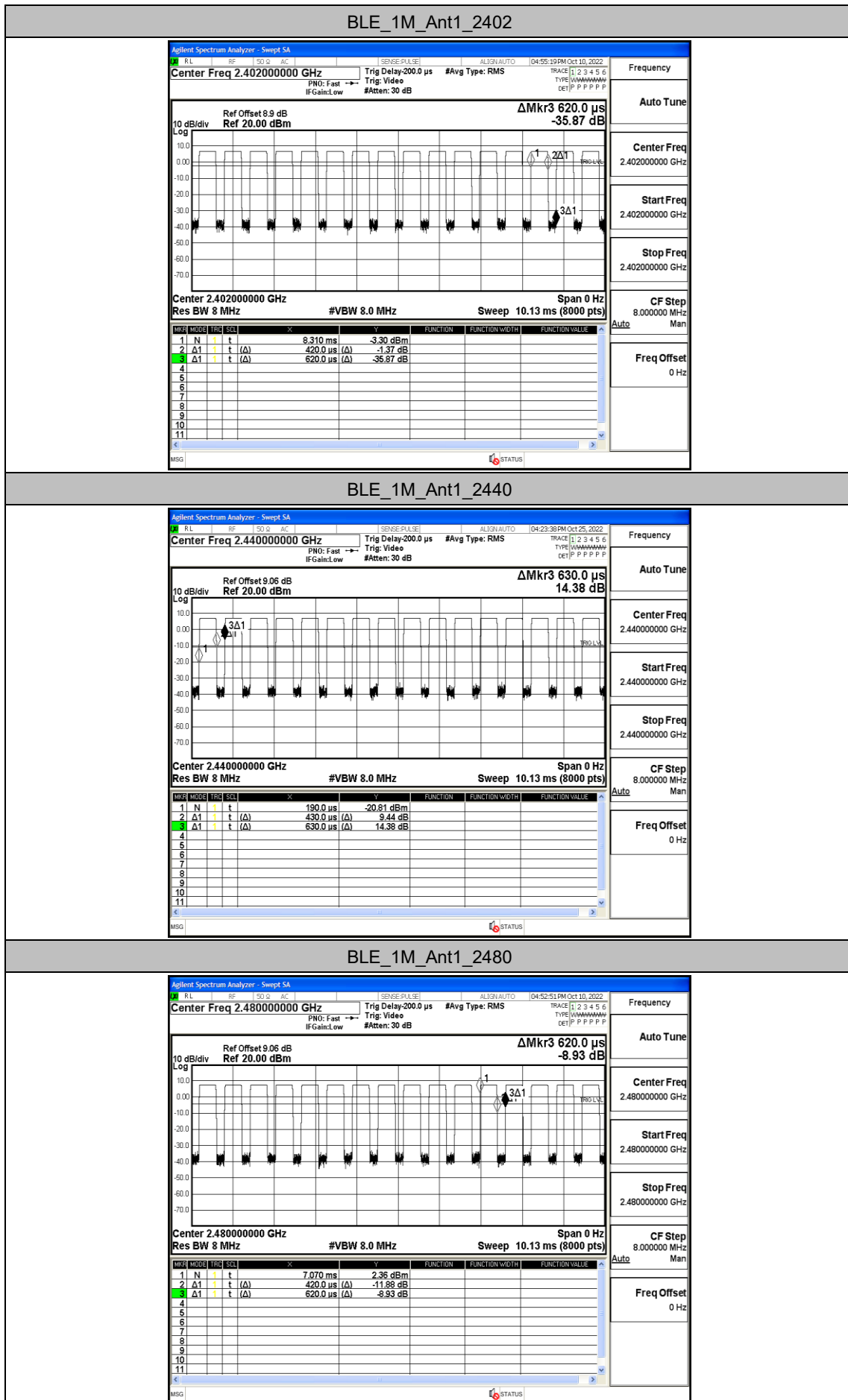


Appendix G: Duty Cycle

Test Result

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T[kHz]
BLE_1M	Ant1	2402	0.42	0.62	67.74	2.38
		2440	0.43	0.63	68.25	2.33
		2480	0.42	0.62	67.74	2.38

Test Graphs



Appendix H: Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-49.1	≤-41.20	PASS
				AV	2363.630	-47.47	≤-41.20	PASS
				AV	2390.000	-48.24	≤-41.20	PASS
				Peak	2310.000	-40.16	≤-21.20	PASS
				Peak	2334.020	-39.63	≤-21.20	PASS
				Peak	2390.000	-42.73	≤-21.20	PASS
		High	2480	AV	2483.500	-44.64	≤-41.20	PASS
				AV	2483.520	-44.64	≤-41.20	PASS
				AV	2500.000	-57.55	≤-41.20	PASS
				Peak	2483.500	-40.42	≤-21.20	PASS
				Peak	2483.600	-38.59	≤-21.20	PASS
				Peak	2500.000	-51.44	≤-21.20	PASS

Note:

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.

Test Graphs

