

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

Product Name: Driver Monitoring System

Trade Mark: N/A

Test Model: AIS

FCC ID: 2BADP-AIS1

Environmental Conditions

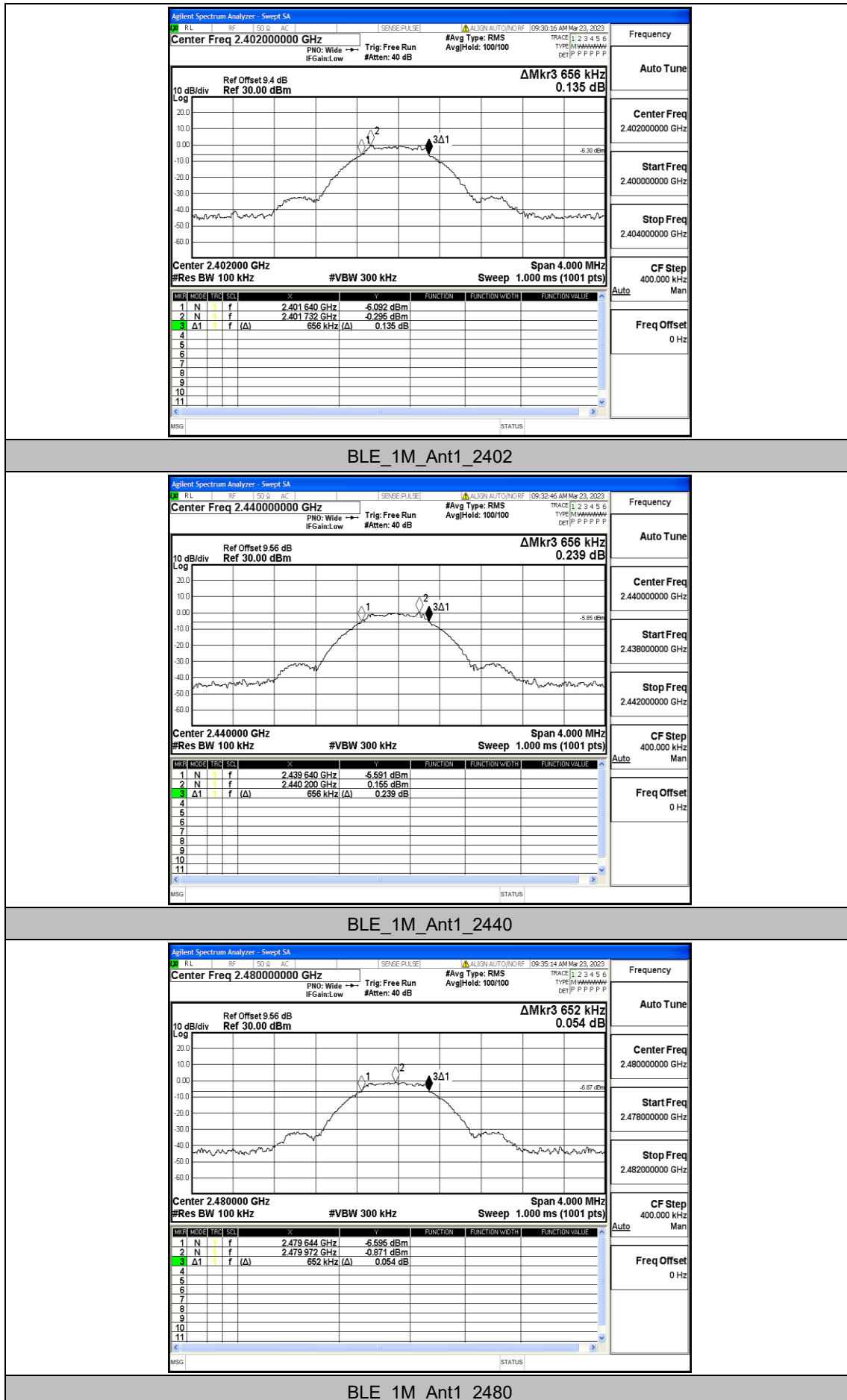
Temperature:	25.5°C
Relative Humidity:	55%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.656	2401.640	2402.296	0.5	PASS
		2440	0.656	2439.640	2440.296	0.5	PASS
		2480	0.652	2479.644	2480.296	0.5	PASS

Test Graphs

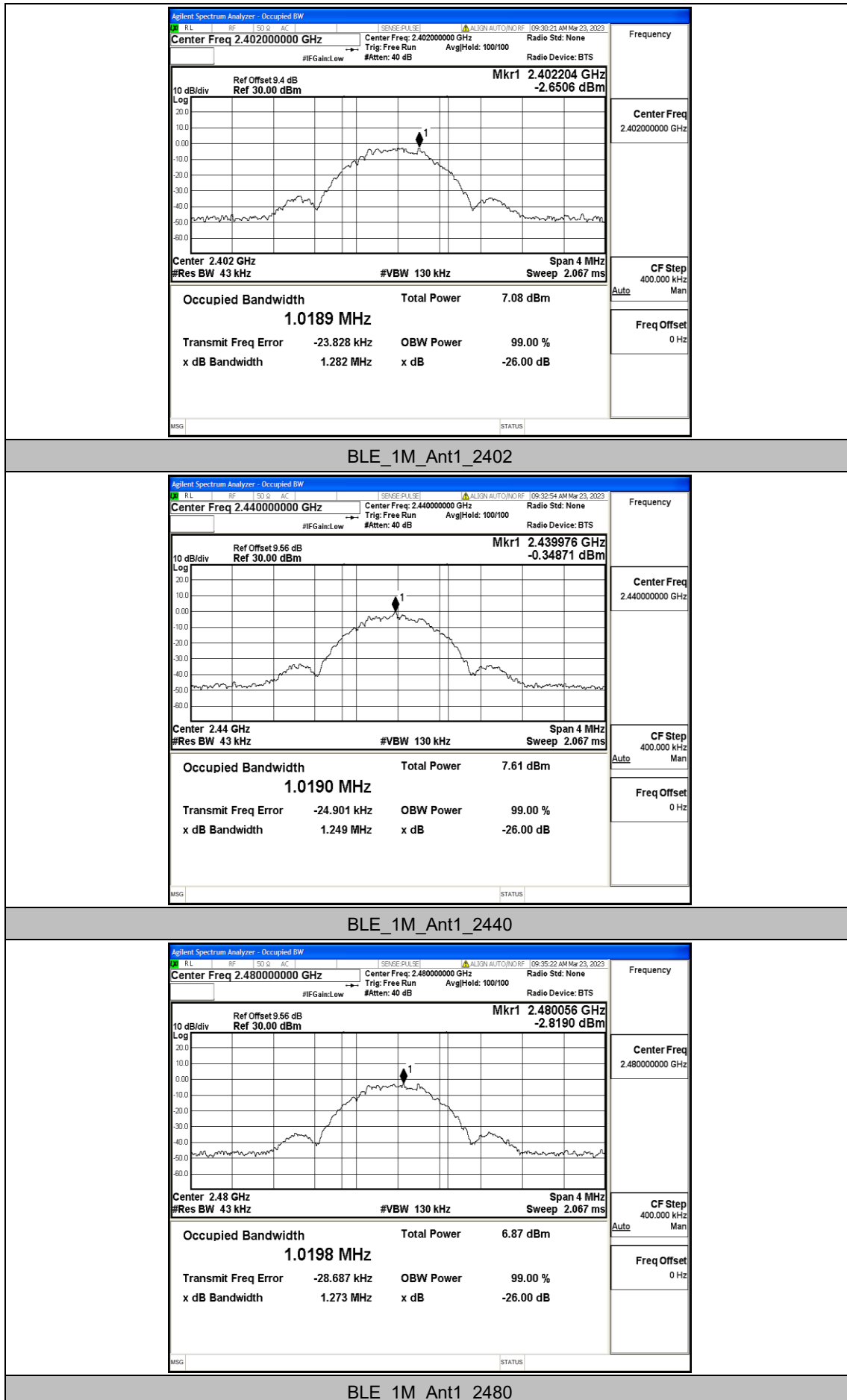


Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0189	2401.4667	2402.4856	---	---
		2440	1.0190	2439.4656	2440.4846	---	---
		2480	1.0198	2479.4614	2480.4812	---	---

Test Graphs

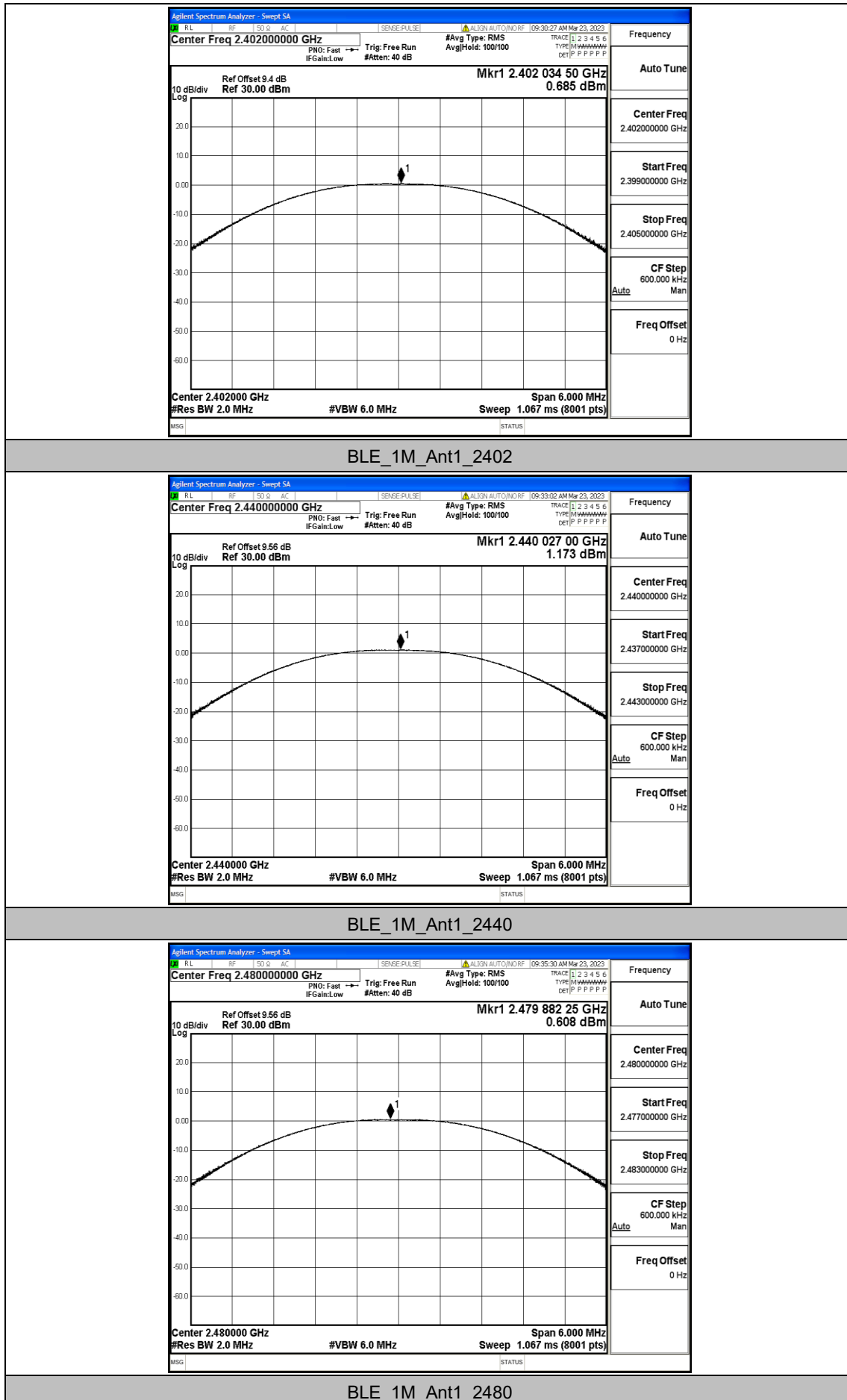


Appendix C: Maximum Peak conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0.69	≤30	PASS
		2440	1.17	≤30	PASS
		2480	0.61	≤30	PASS

Test Graphs

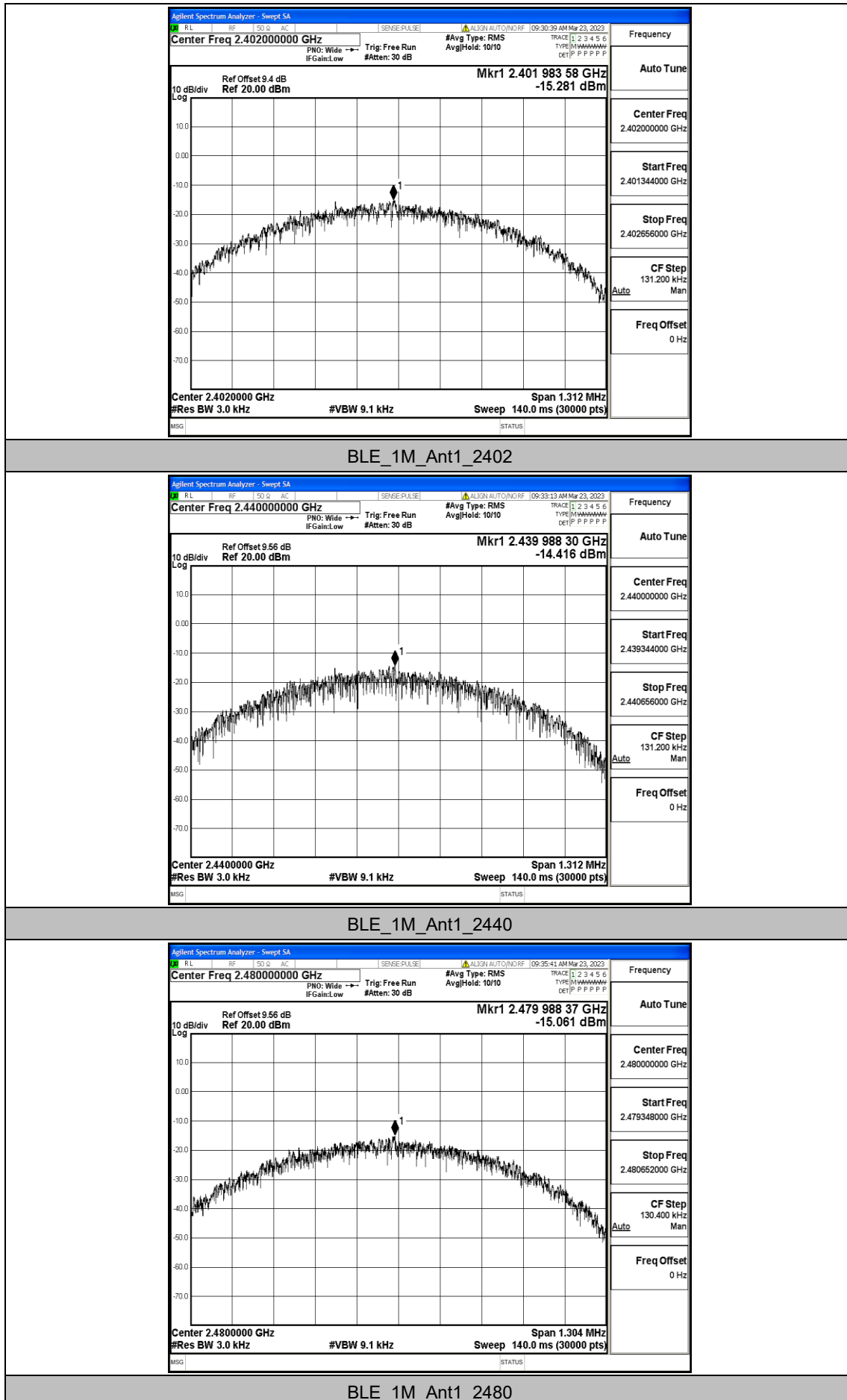


Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-15.28	≤8.00	PASS
		2440	-14.42	≤8.00	PASS
		2480	-15.06	≤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	-0.08	-50.37	≤-20.08	PASS
		High	2480	0.70	-49.07	≤-19.3	PASS

Agilent Spectrum Analyzer - Sweep SA

RL RF SO G AC SENSE PULSE ALIGN AUTO IN/OUTF 09:30:51 AM Mar 23, 2023

Center Freq 2.352500000 GHz PNO: Fast IF Gain: Low Trig: Free Run Att: 30 dB #Avg Type: RMS AvgHold: 300/300 TYPE: AWWWWWW DET: P P P P P P

Ref Offset 9.4 dB Mkr5 2.372 135 GHz Ref 20.00 dB -50.374 dBm

10 dBm/Div Log

Start 2.30000 GHz #Res BW 100 kHz #VBW 300 kHz Stop 2.40500 GHz Sweep 10.07 ms (1001 pts)

MFR	MODE	FREQ	SCN	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	f	f	2.401955 GHz	-0.081 dBm			
2	N	f	f	2.400000 GHz	-52.280 dBm			
3	N	f	f	2.390000 GHz	-53.170 dBm			
4	N	f	f	2.310000 GHz	-52.234 dBm			
5	N	f	f	2.372135 GHz	-50.374 dBm			
6								
7								
8								
9								
10								
11								

MSG (STATUS)

Frequency Auto Tune Center Freq 2.352500000 GHz Start Freq 2.300000000 GHz Stop Freq 2.405000000 GHz CF Step 10.500000 MHz Mar Freq Offset 0 Hz

[illegible]

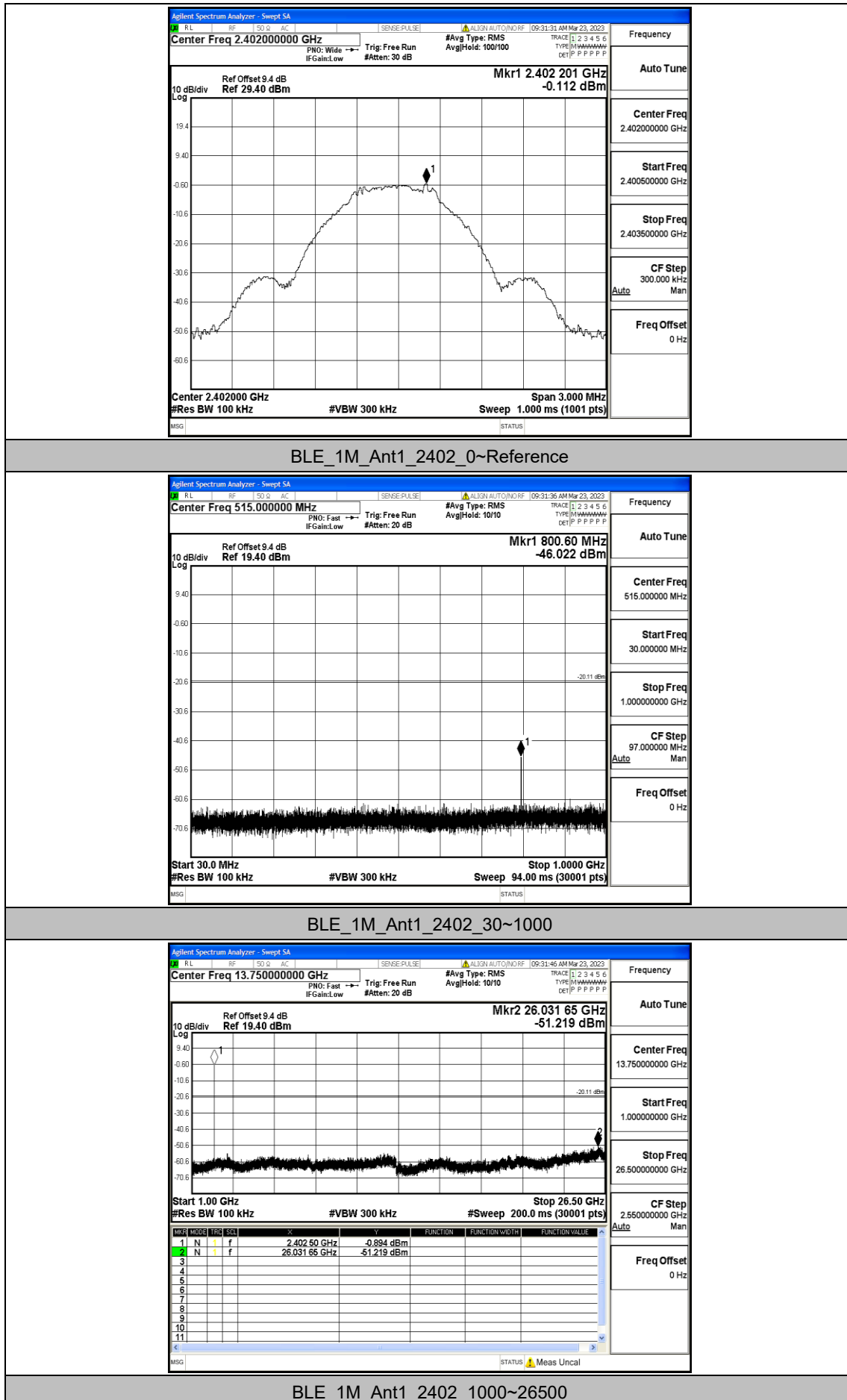
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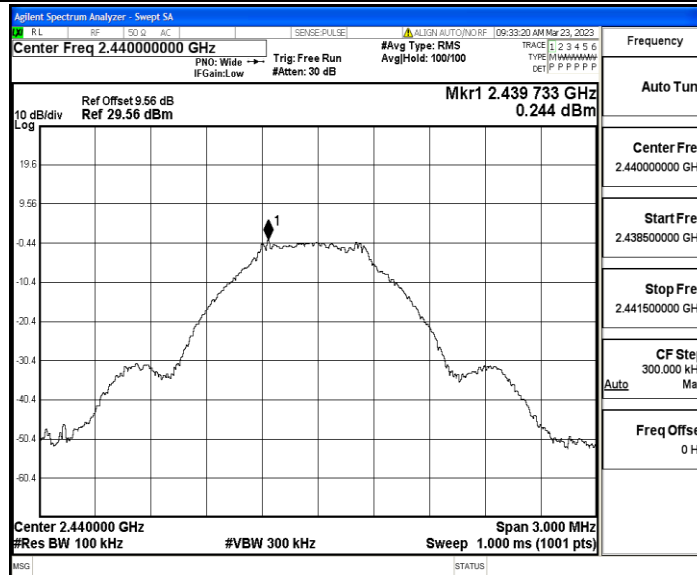
Appendix F: Conducted Spurious Emission

Test Result

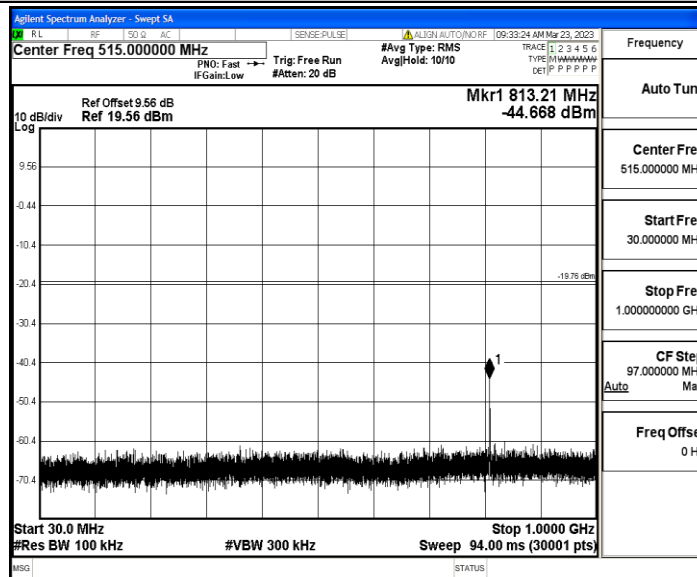
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-0.11	-0.11	---	PASS
			30~1000	-0.11	-46.02	≤-20.11	PASS
			1000~26500	-0.11	-51.22	≤-20.11	PASS
		2440	Reference	0.24	0.24	---	PASS
			30~1000	0.24	-44.67	≤-19.76	PASS
			1000~26500	0.24	-50.8	≤-19.76	PASS
		2480	Reference	-0.85	-0.85	---	PASS
			30~1000	-0.85	-43.72	≤-20.85	PASS
			1000~26500	-0.85	-51.06	≤-20.85	PASS

Test Graphs

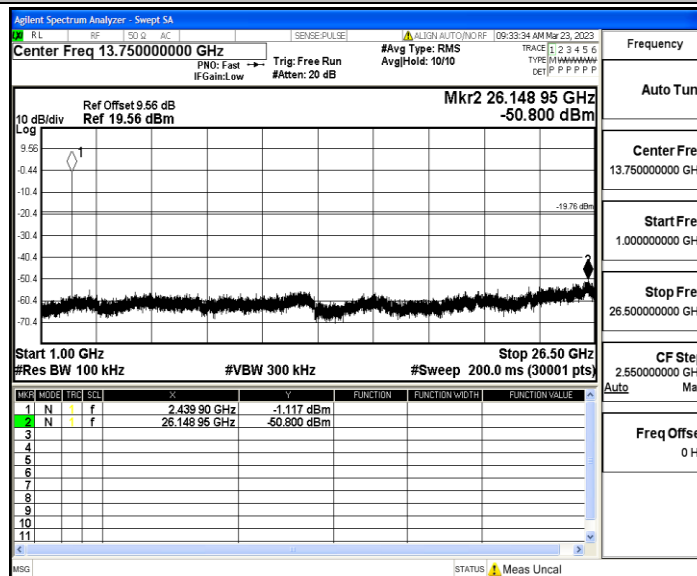




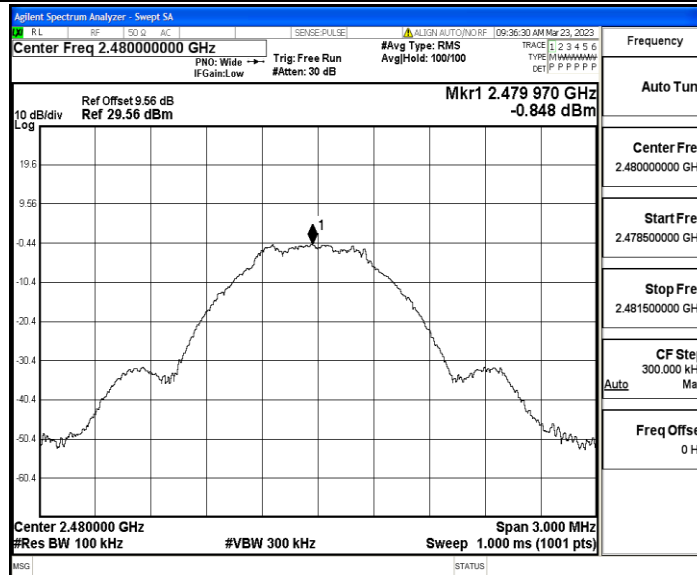
BLE_1M_Ant1_2440_0~Reference



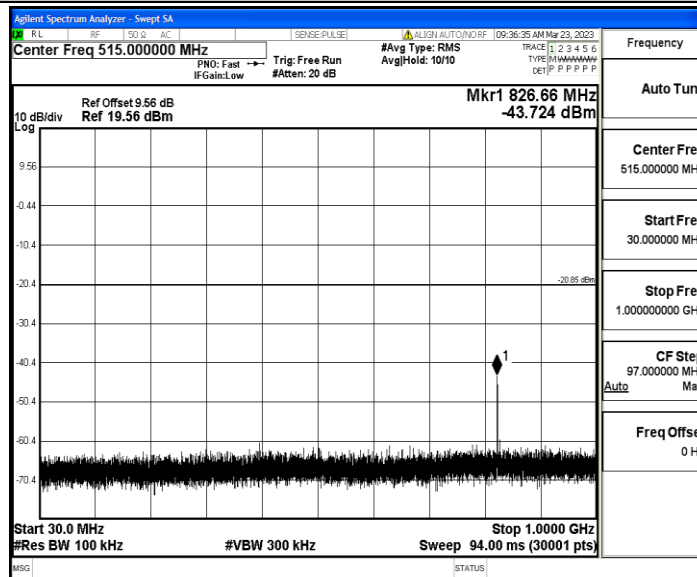
BLE_1M_Ant1_2440_30~1000



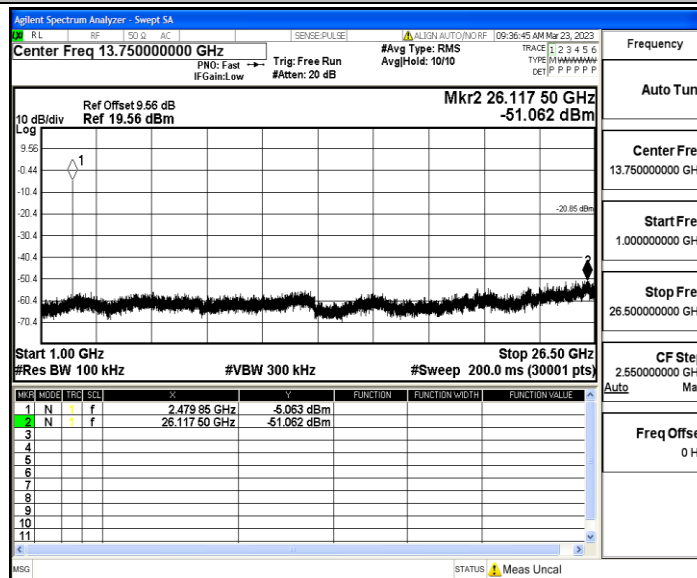
BLE_1M_Ant1_2440_1000~26500



BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



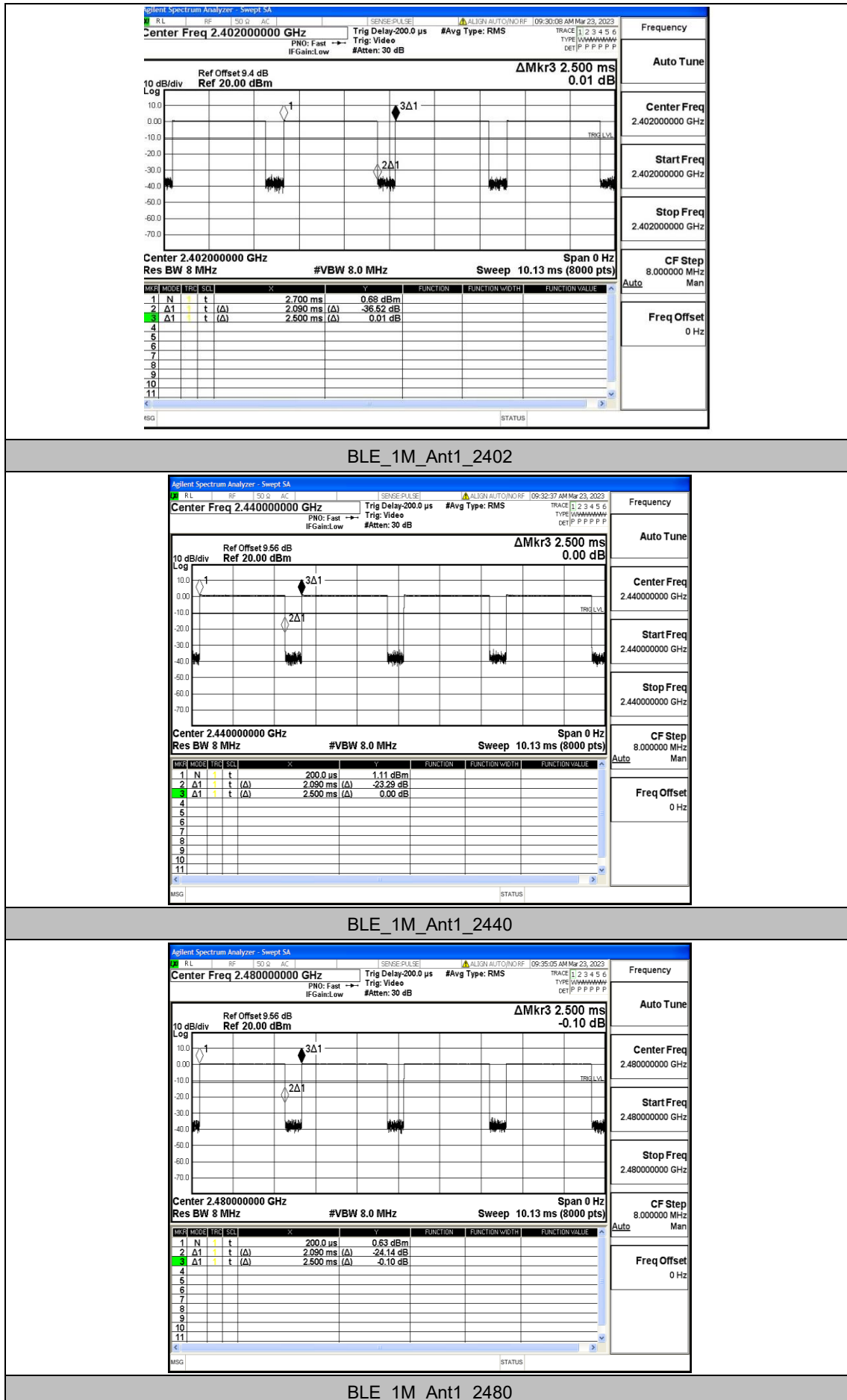
BLE_1M_Ant1_2480_1000~26500

Appendix G: Duty Cycle

Test Result

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T[kHz]
BLE_1M	Ant1	2402	2.09	2.50	83.60	0.48
		2440	2.09	2.50	83.60	0.48
		2480	2.09	2.50	83.60	0.48

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	-47.59	≤-41.20	PASS
				AV	2385.575	-47.14	≤-41.20	PASS
				AV	2390.000	-47.41	≤-41.20	PASS
				Peak	2310.000	-40.51	≤-21.20	PASS
				Peak	2342.420	-36.57	≤-21.20	PASS
				Peak	2390.000	-39.79	≤-21.20	PASS
		High	2480	AV	2483.500	-46.38	≤-41.20	PASS
				AV	2483.520	-46.38	≤-41.20	PASS
				AV	2500.000	-46.63	≤-41.20	PASS
				Peak	2483.500	-38.79	≤-21.20	PASS
				Peak	2489.920	-36.61	≤-21.20	PASS
				Peak	2500.000	-38.78	≤-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

