

FCC Appendix RF Test Data for BLE

FCC ID : 2BV82-MR-22GA

Company : shenzhenshifulutongdianzimaoyiyouxiangongsi

EUT : Remote control

Model Number : MR-22GA

Report No. : CTA26051301701

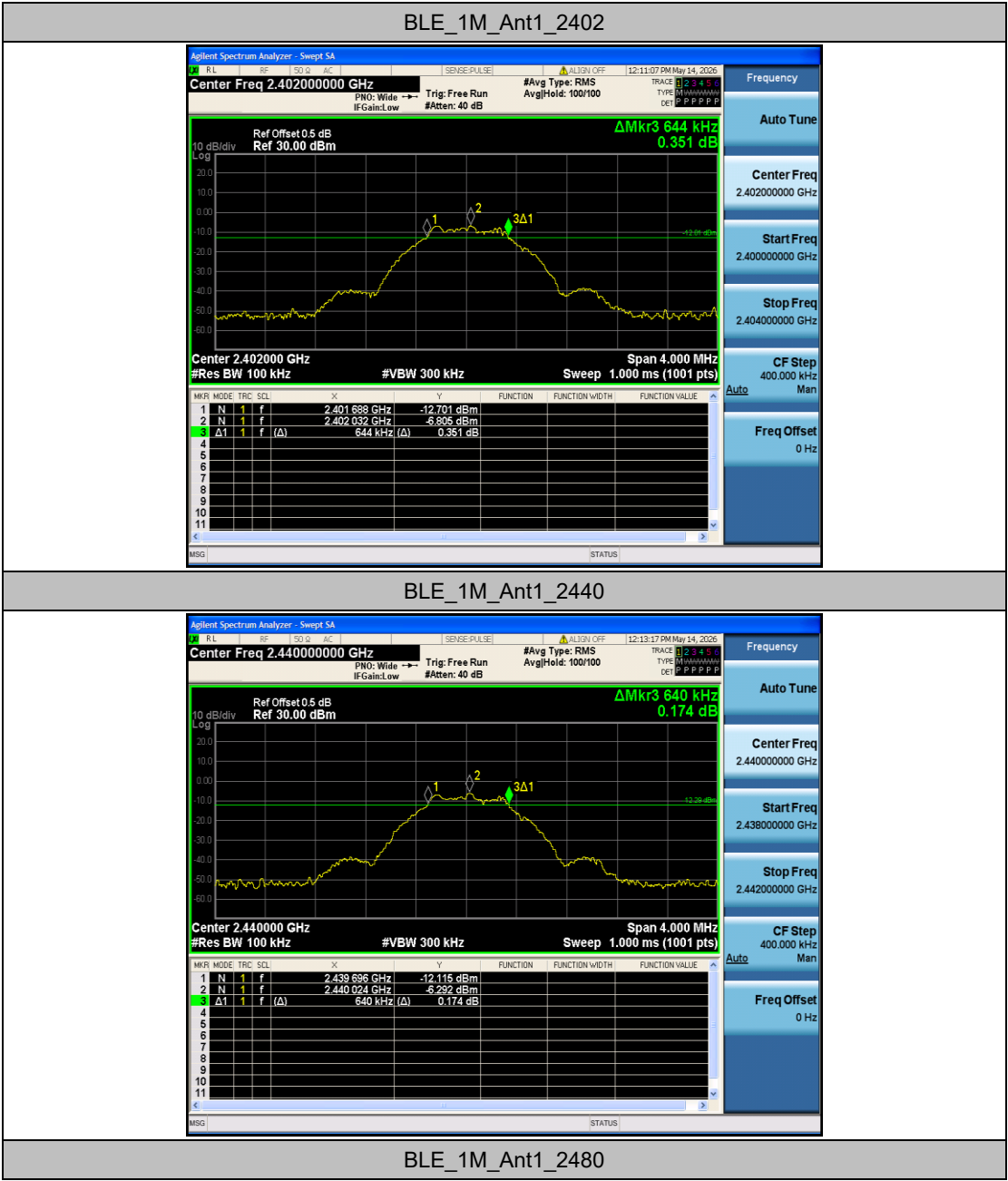
Reviewed By : Eric Wang

Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.644	2401.688	2402.332	0.5	PASS
		2440	0.640	2439.696	2440.336	0.5	PASS
		2480	0.636	2479.696	2480.332	0.5	PASS

Test Graphs



BLE_1M_Ant1_2440

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.440000000 GHz

Ref Offset 0.5 dB
Ref 30.00 dBm

10 dB/div
Log

Span 4.000 MHz

Center 2.440000 GHz

#Res BW 100 kHz

#VBW 300 kHz

Sweep 1.000 ms (1001 pts)

Trig: Free Run

#Att: 40 dB

#Avg Type: RMS

Avg/Hold: 100/100

12:13:17 PM May 14, 2026

Frequency

Auto Tune

Center Freq
2.440000000 GHz

Start Freq
2.438000000 GHz

Stop Freq
2.442000000 GHz

CF Step
400.000 kHz

Man

Freq Offset
0 Hz

MSG

STATUS

1

2

3Δ1

ΔMkr3 640 kHz
0.174 dB

1

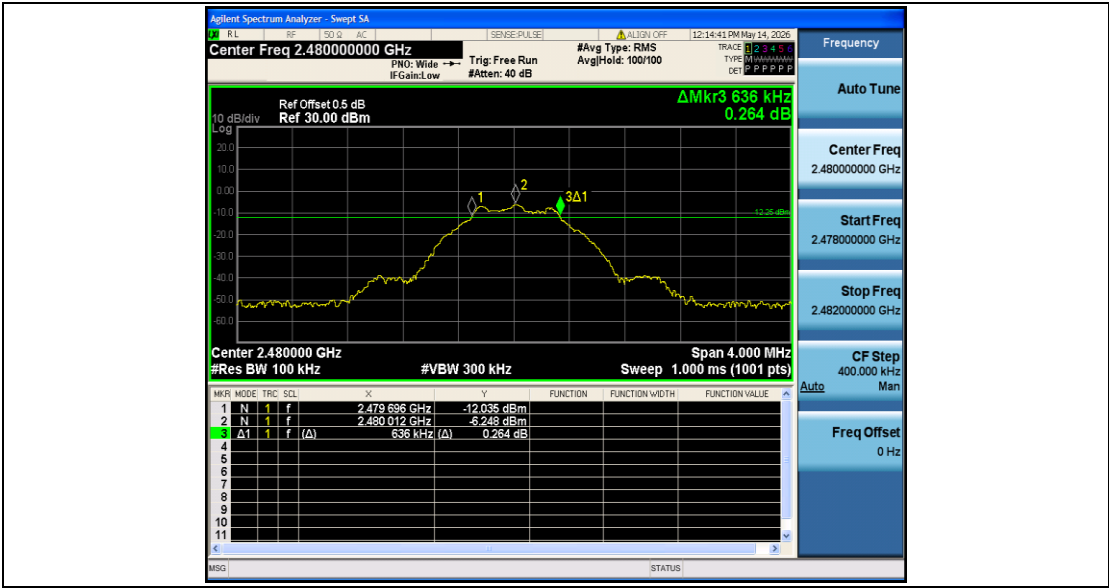
2

3Δ1

ΔMkr3 640 kHz
0.174 dB

MR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.439696 GHz	-12.115 dBm			
2	N	1	f	2.440024 GHz	-5.292 dBm			
Δ1	Δ	1	f (Δ)	640 kHz (Δ)	0.174 dB			

BLE_1M_Ant1_2480



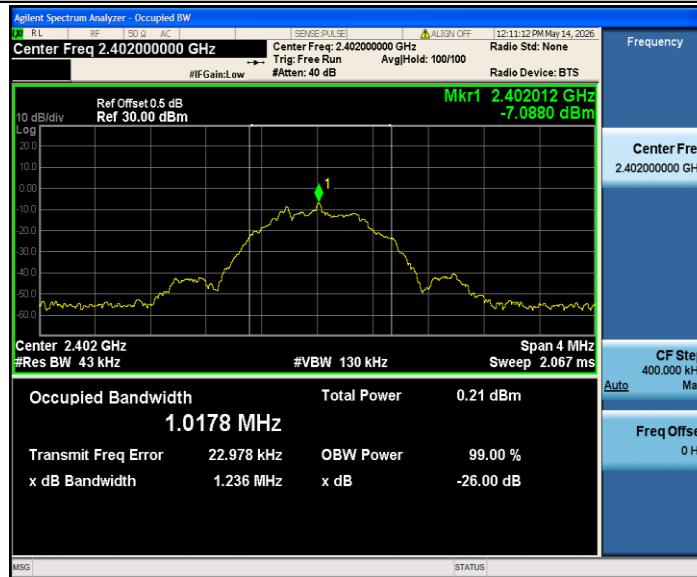
Appendix B: Occupied Channel Bandwidth

Test Result

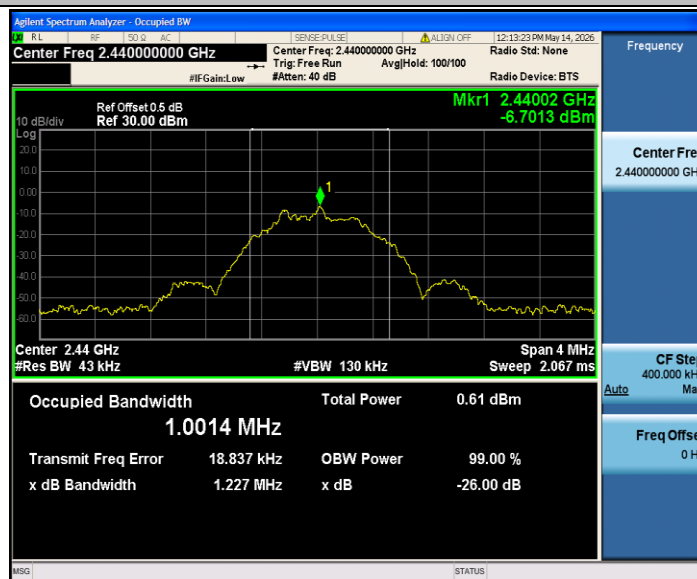
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0178	2401.5141	2402.5319	---	---
		2440	1.0014	2439.5181	2440.5195	---	---
		2480	1.0123	2479.5177	2480.5300	---	---

Test Graphs

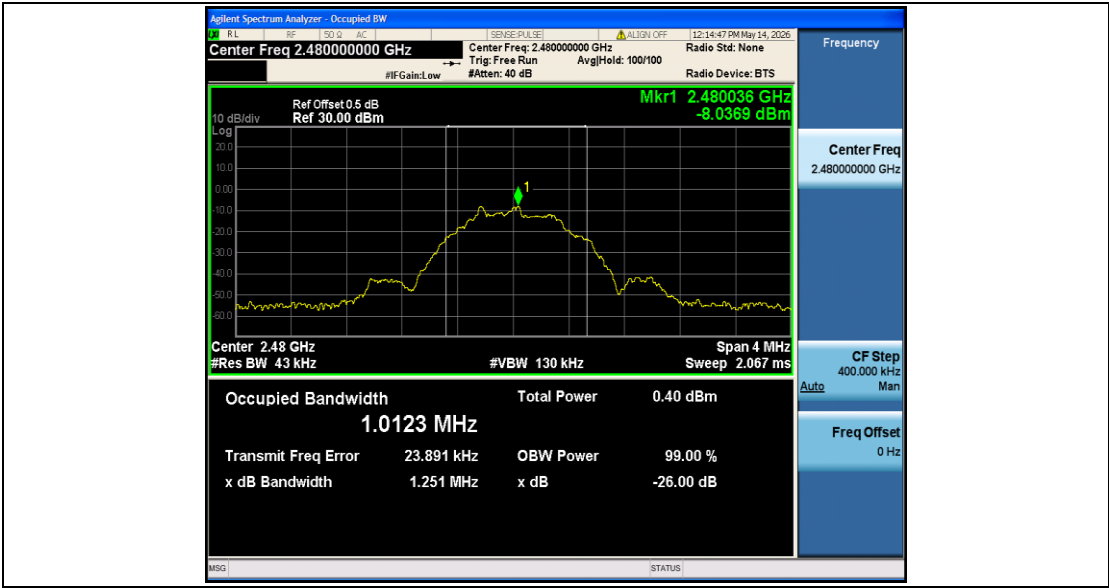
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



Appendix C: Maximum conducted output power

Test Result

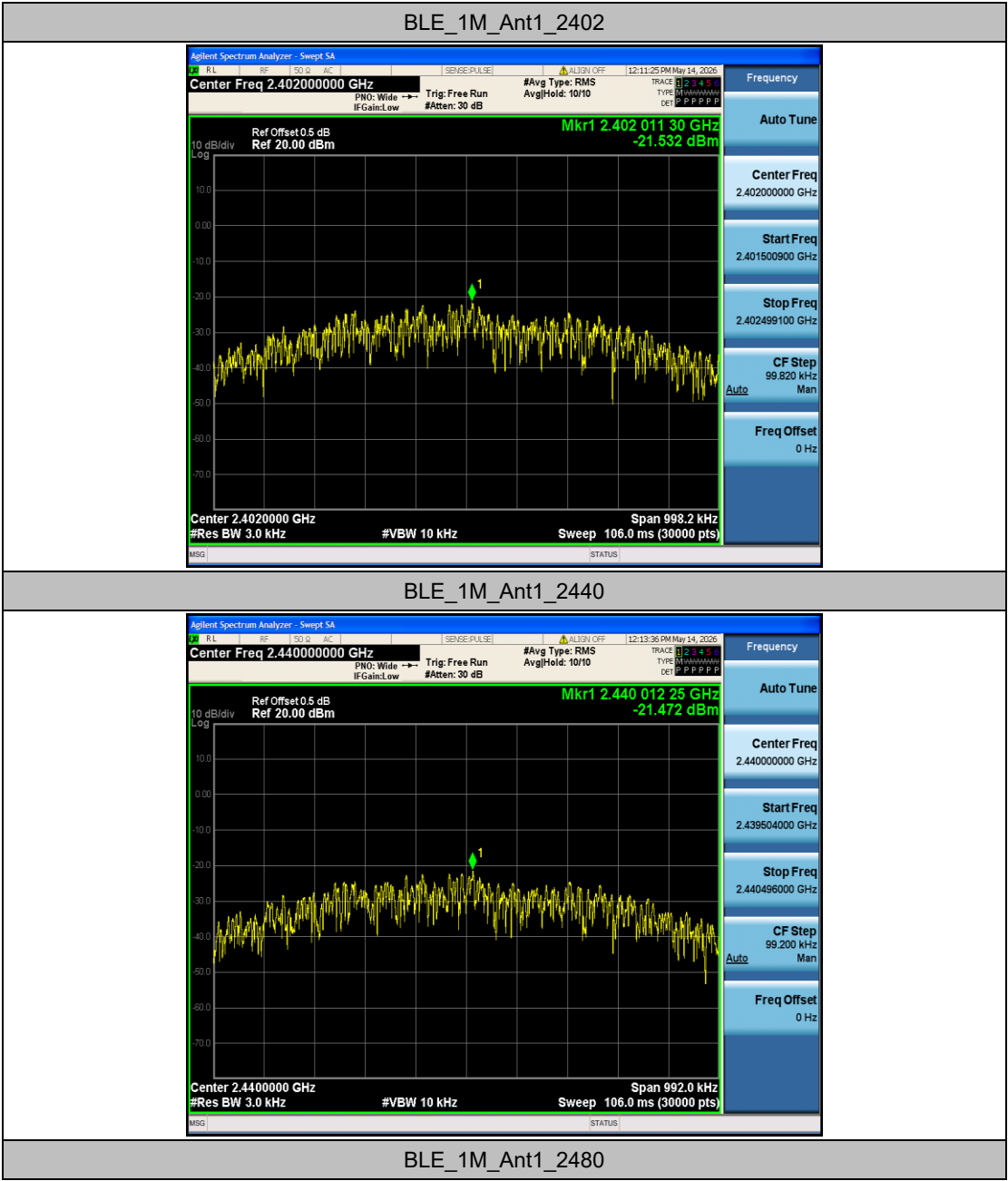
TestMode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-3.08	≤30	PASS
		2440	-3.43	≤30	PASS
		2480	-3.21	≤30	PASS

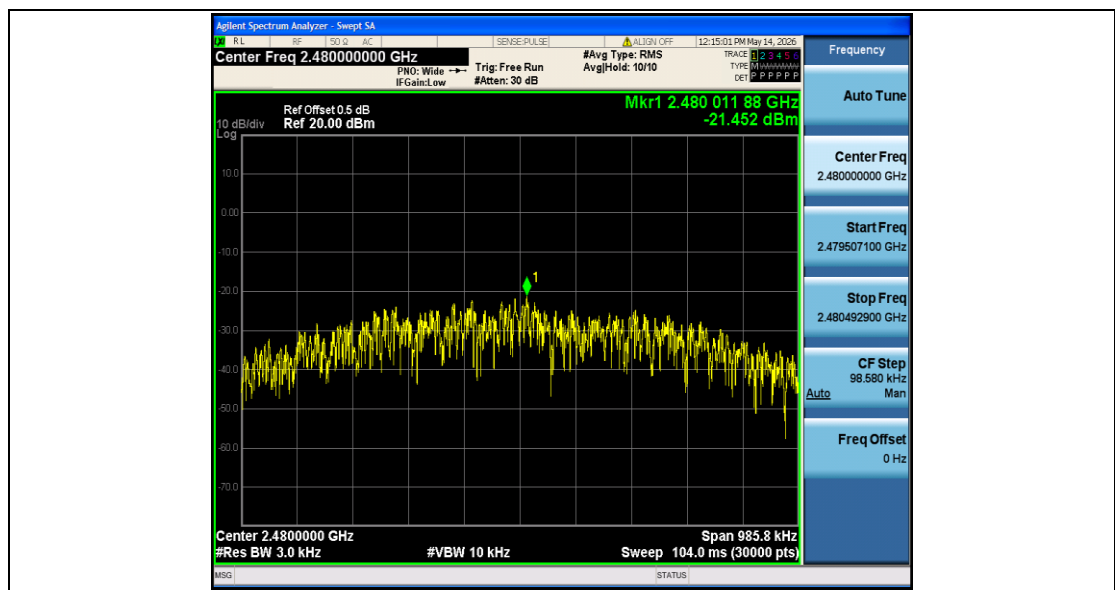
Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-21.53	≤8.00	PASS
		2440	-21.47	≤8.00	PASS
		2480	-21.45	≤8.00	PASS

Test Graphs



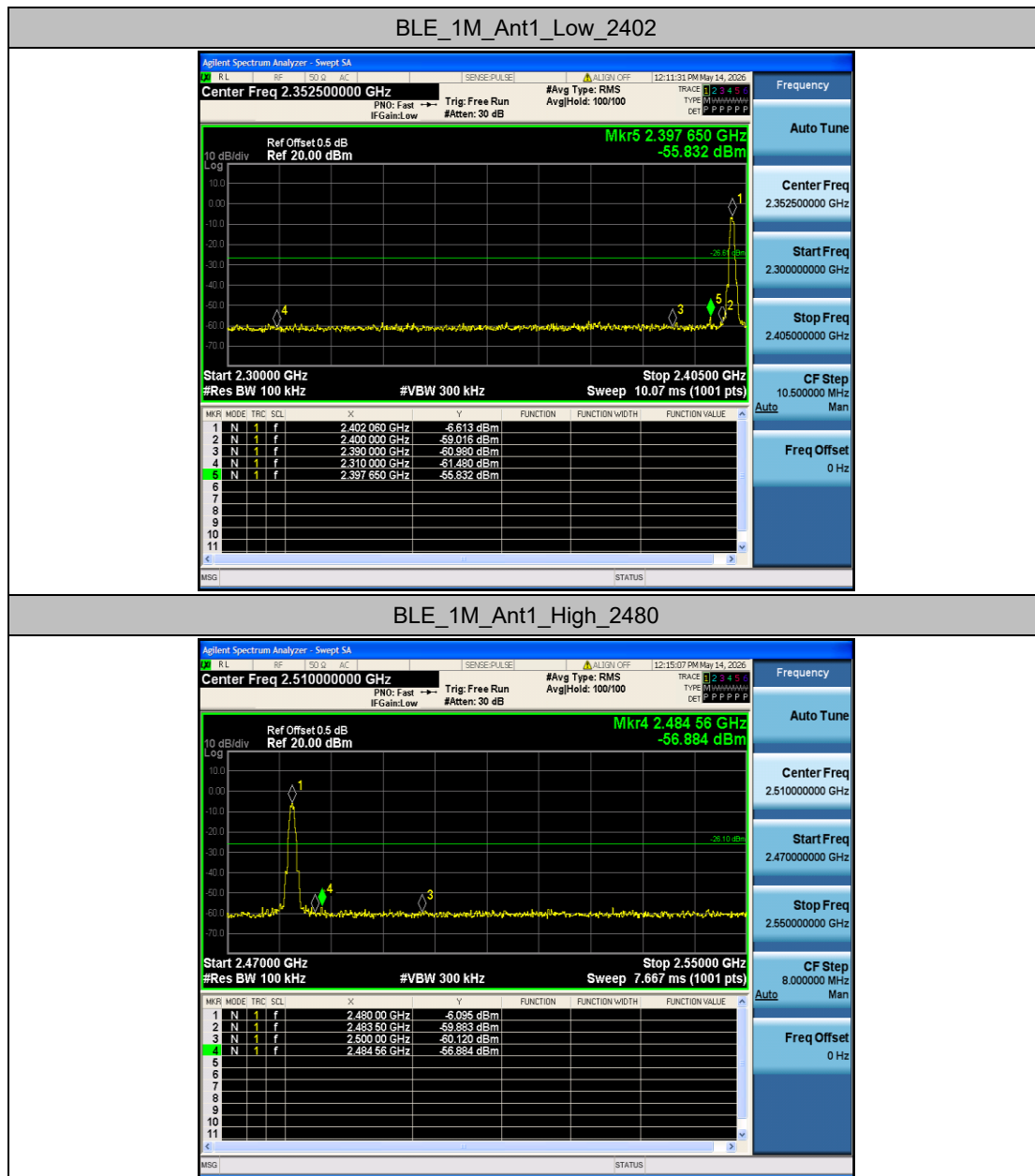


Appendix E: Band edge measurements

Test Result

TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-6.61	-55.83	≤-26.61	PASS
		High	2480	-6.10	-56.88	≤-26.1	PASS

Test Graphs

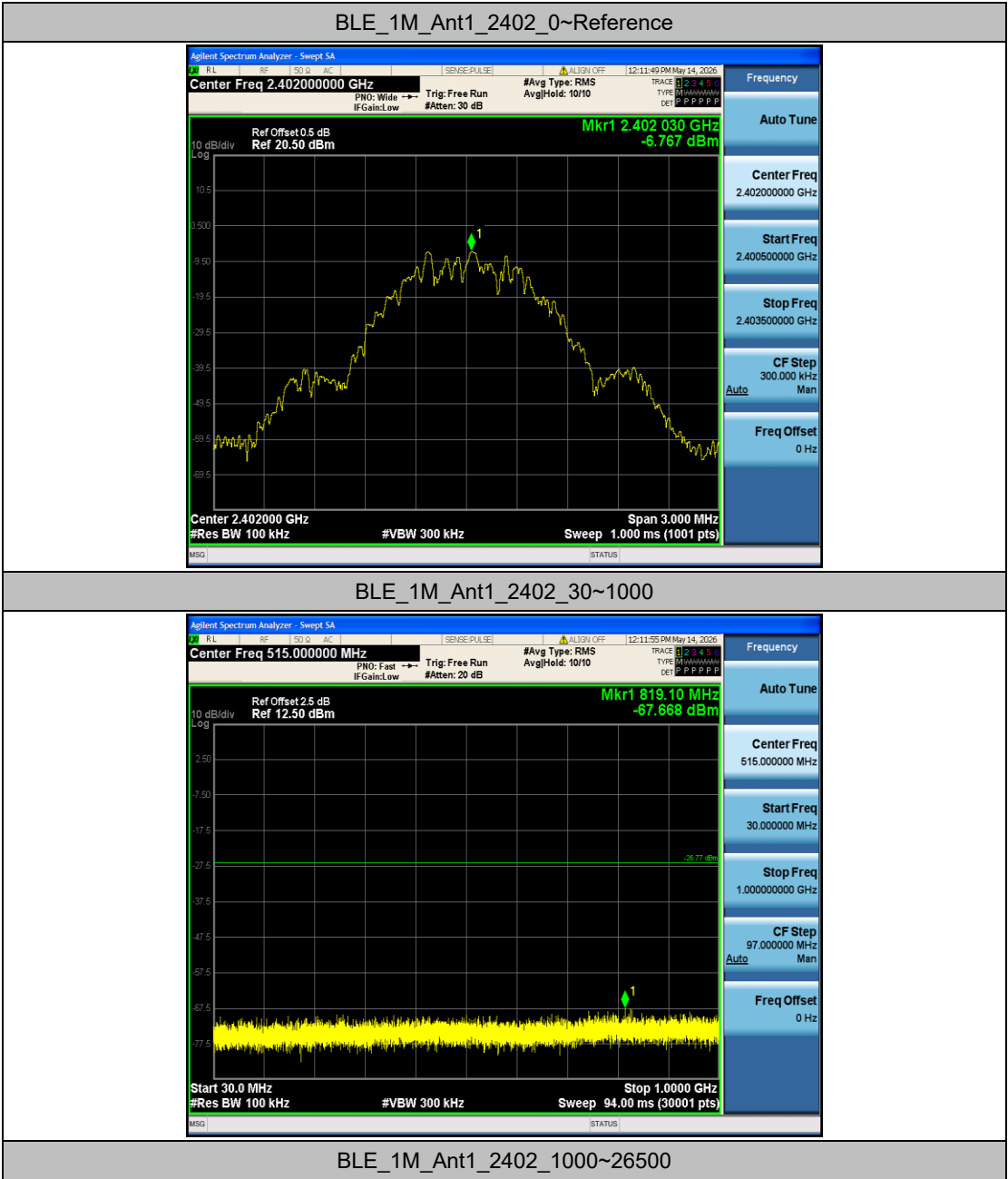


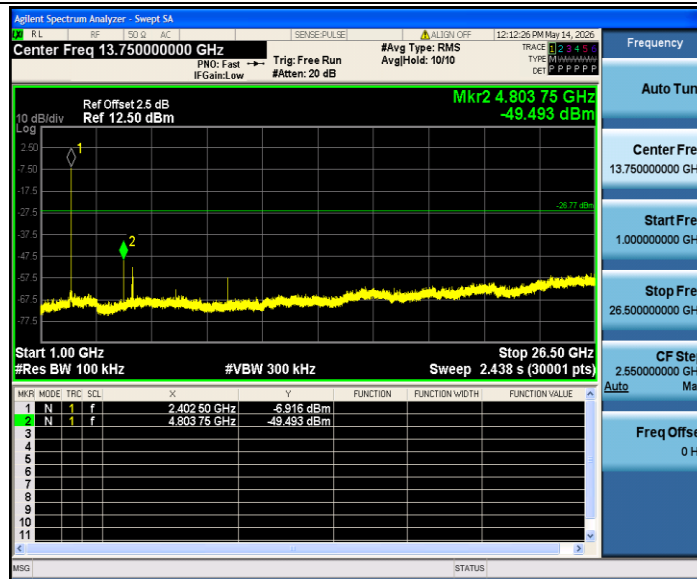
Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-6.77	-6.77	---	PASS
			30~1000	-6.77	-67.67	≤ -26.77	PASS
			1000~26500	-6.77	-49.49	≤ -26.77	PASS
		2440	Reference	-7.82	-7.82	---	PASS
			30~1000	-7.82	-68.05	≤ -27.82	PASS
			1000~26500	-7.82	-51.2	≤ -27.82	PASS
		2480	Reference	-6.31	-6.31	---	PASS
			30~1000	-6.31	-68.41	≤ -26.31	PASS
			1000~26500	-6.31	-50.59	≤ -26.31	PASS

Test Graphs

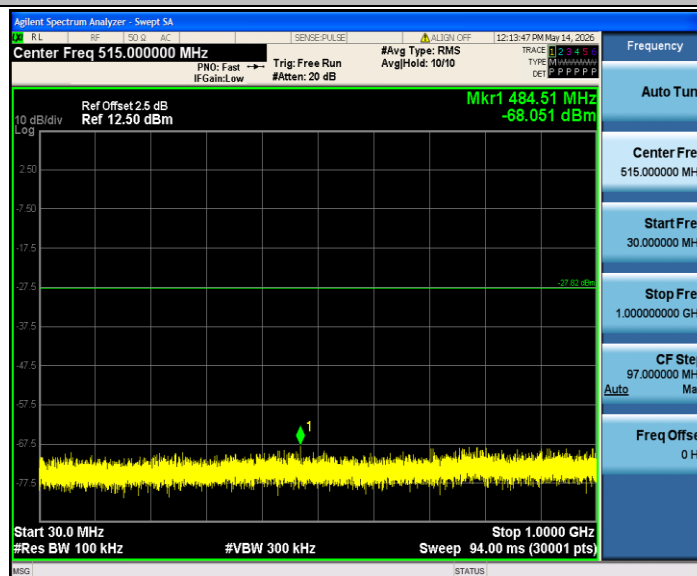




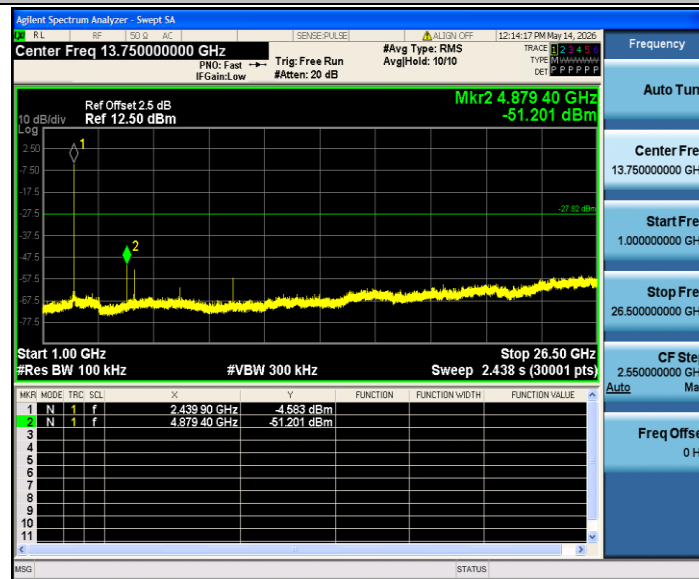
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



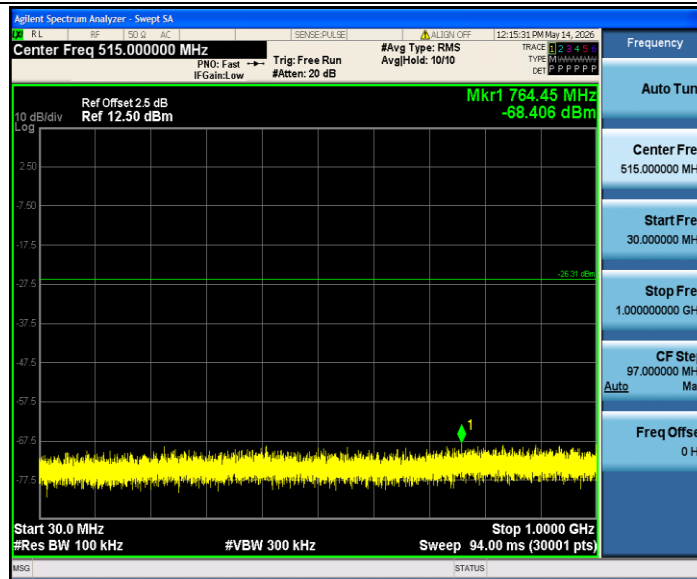
BLE_1M_Ant1_2440_1000~26500



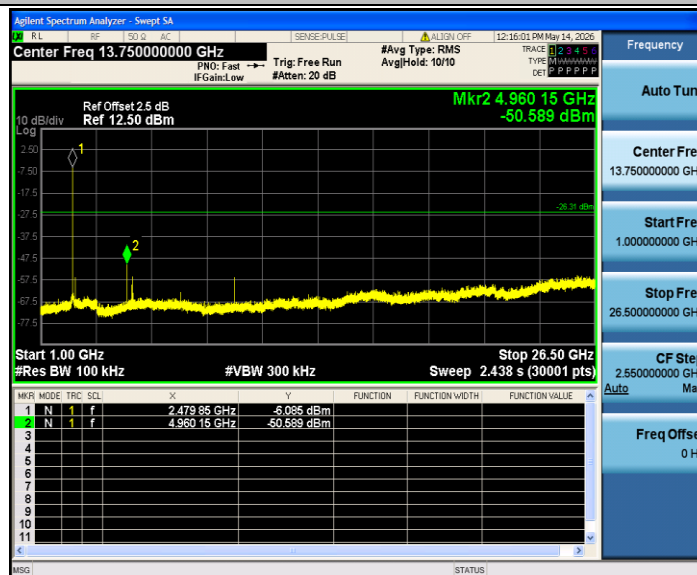
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

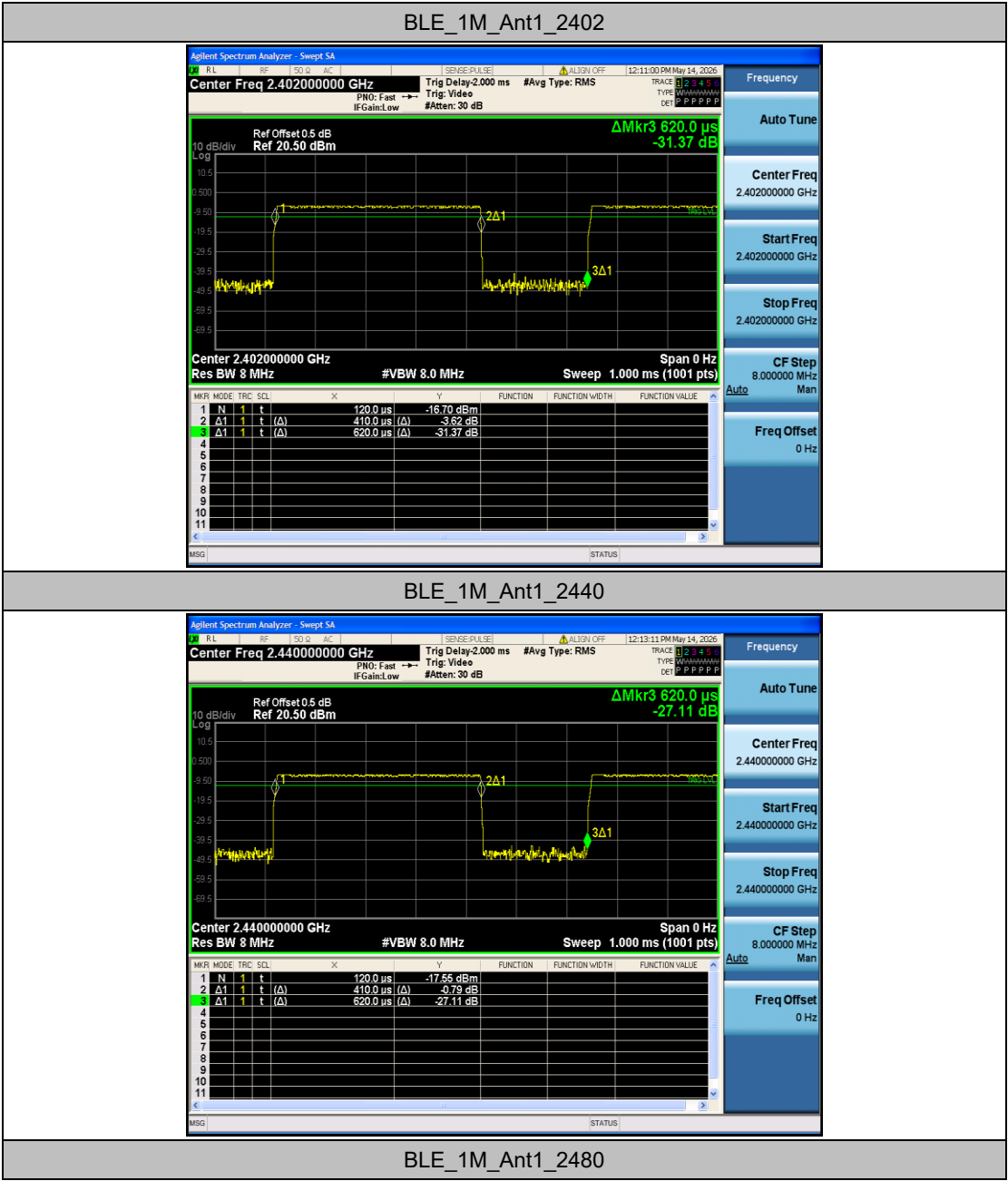


Appendix G: Duty Cycle

Test Result

TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	0.41	0.62	0.6613	66.13	1.80	---	---
		2440	0.41	0.62	0.6613	66.13	1.80	---	---
		2480	0.41	0.62	0.6613	66.13	1.80	---	---

Test Graphs



BLE_1M_Ant1_2440

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.440000000 GHz

Ref Offset 0.5 dB
Ref 20.50 dBm

10 dB/div
Log

ΔMkr3 620.0 μs
-27.11 dB

Center 2.440000000 GHz
Res BW 8 MHz

#VBW 8.0 MHz

Sweep 1.000 ms (1001 pts)

Span 0 Hz

CF Step 8.000000 MHz

Freq Offset 0 Hz

Auto Tune

Center Freq 2.440000000 GHz

Start Freq 2.440000000 GHz

Stop Freq 2.440000000 GHz

CF Step 8.000000 MHz

Freq Offset 0 Hz

Auto

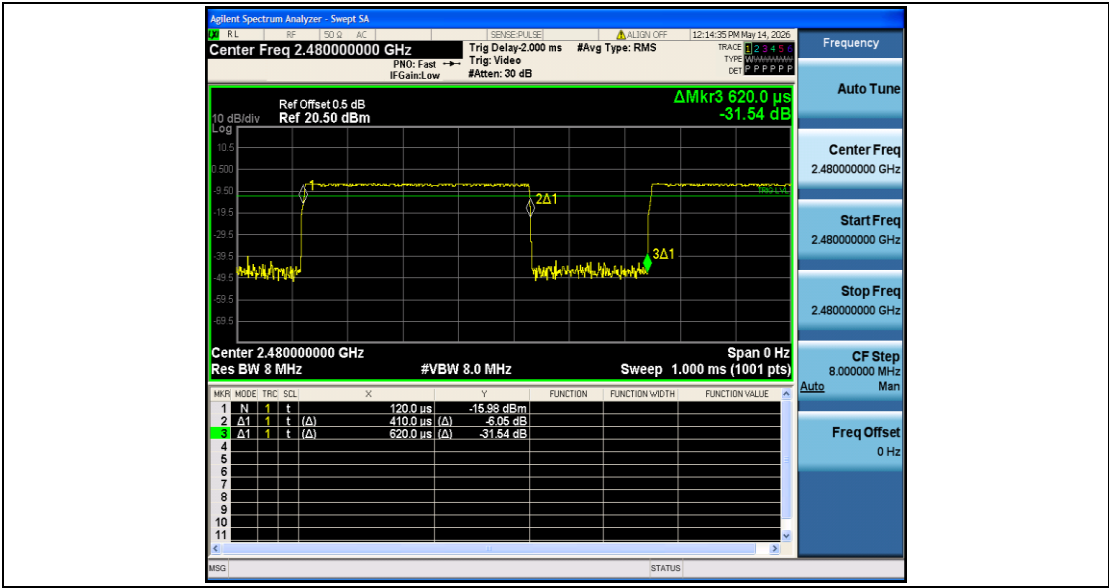
Man

MSG

STATUS

MkR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	t	120.0 μs	-17.55 dBm			
2	Δ1	1	t (Δ)	410.0 μs (Δ)	-0.79 dB			
3	Δ1	1	t (Δ)	620.0 μs (Δ)	-27.11 dB			

BLE_1M_Ant1_2480



Appendix H: Emissions in Restricted Bands

Test Result

TestMod e	Antenn a	ChNam e	Freq(MH z)	Detector	Freq [MHz]	Result [dBm]	Gain [dB]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-59.75	2.00	1.80	39.25	≤54	PASS
				AV	2362.790	-58.56	2.00	1.80	40.44	≤54	PASS
				AV	2390.000	-59.2	2.00	1.80	39.80	≤54	PASS
				Peak	2310.000	-51.67	2.00	0.00	45.53	≤74	PASS
				Peak	2350.295	-48.28	2.00	0.00	48.92	≤74	PASS
				Peak	2390.000	-49.74	2.00	0.00	47.46	≤74	PASS
		High	2480	AV	2483.500	-58.24	2.00	1.80	40.76	≤54	PASS
				AV	2484.400	-58.13	2.00	1.80	40.87	≤54	PASS
				AV	2500.000	-58.76	2.00	1.80	40.24	≤54	PASS
				Peak	2483.500	-49.34	2.00	0.00	47.86	≤74	PASS
				Peak	2484.480	-47.66	2.00	0.00	49.54	≤74	PASS
				Peak	2500.000	-51.6	2.00	0.00	45.60	≤74	PASS

Note:

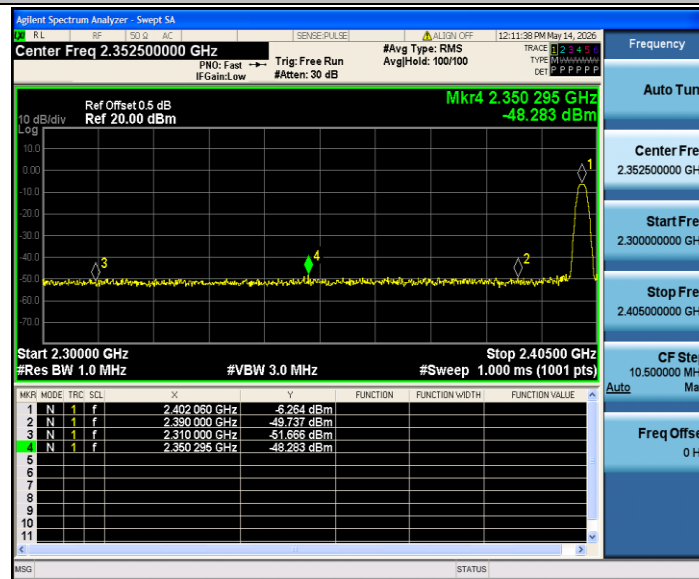
1. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

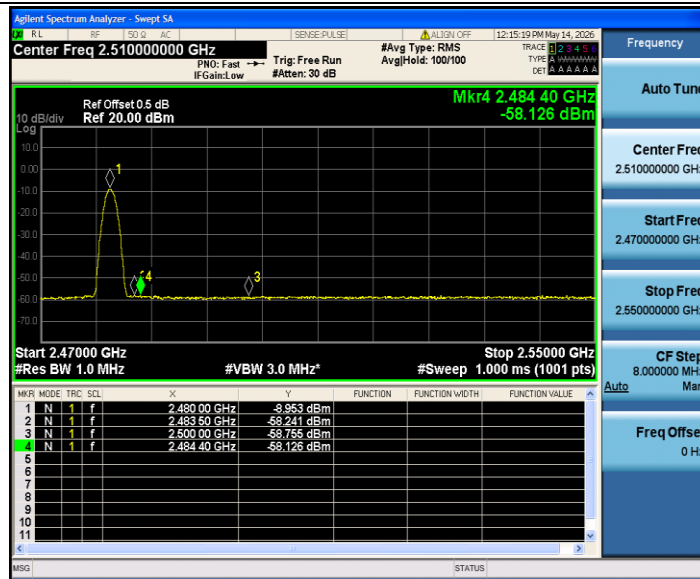
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

