
FCC Appendix RF Test Data for BLE

FCC ID : 2BVSH-BFT-02C

Company : Shenzhen Bafang Technology Co., Ltd.

EUT : MOBILE PHONE CAGE

Model Number : BFT-02C

Report No. : CTA26041102601

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	0.648	2401.692	2402.340	0.5	PASS
		2440	0.636	2439.692	2440.328	0.5	PASS
		2480	0.648	2479.692	2480.340	0.5	PASS

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.402000000 GHz

Ref Offset 0.5 dB
Ref 30.00 dBm

Span 4.000 MHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1.000 ms (1001 pts)

ΔMkr3 648 kHz
0.025 dB

Frequency

Auto Tune

Center Freq
2.402000000 GHz

Start Freq
2.400000000 GHz

Stop Freq
2.404000000 GHz

CF Step
400.000 kHz
Man

Auto

Freq Offset
0 Hz

MNR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.401 692 GHz	-3.432 dBm			
2	N	1	f	2.402 020 GHz	-3.425 dBm			
3	Δ1	1	f (Δ)	648 kHz (Δ)	0.025 dB			

MSG (STATUS)

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.440000000 GHz

Ref Offset 0.5 dB
Ref 30.00 dBm

Span 4.000 MHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1.000 ms (1001 pts)

ΔMkr3 636 kHz
-0.069 dB

Frequency

Auto Tune

Center Freq
2.440000000 GHz

Start Freq
2.438000000 GHz

Stop Freq
2.442000000 GHz

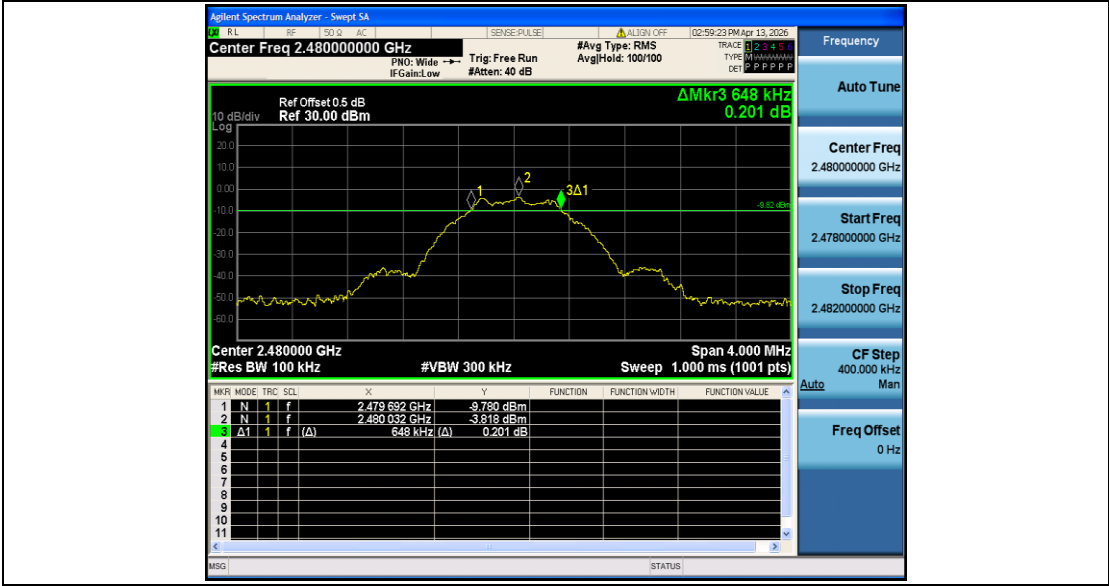
CF Step
400.000 kHz
Man

Auto

Freq Offset
0 Hz

MNR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.439 692 GHz	-3.328 dBm			
2	N	1	f	2.440 024 GHz	-3.642 dBm			
3	Δ1	1	f (Δ)	636 kHz (Δ)	-0.069 dB			

MSG (STATUS)



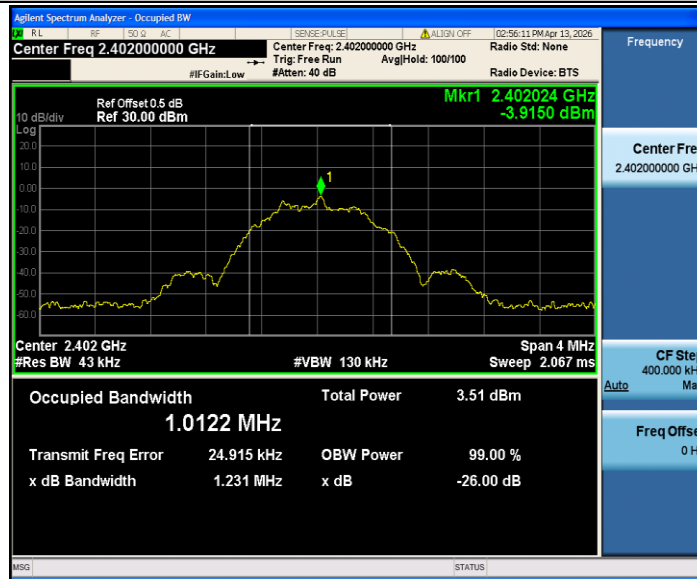
Appendix B: Occupied Channel Bandwidth

Test Result

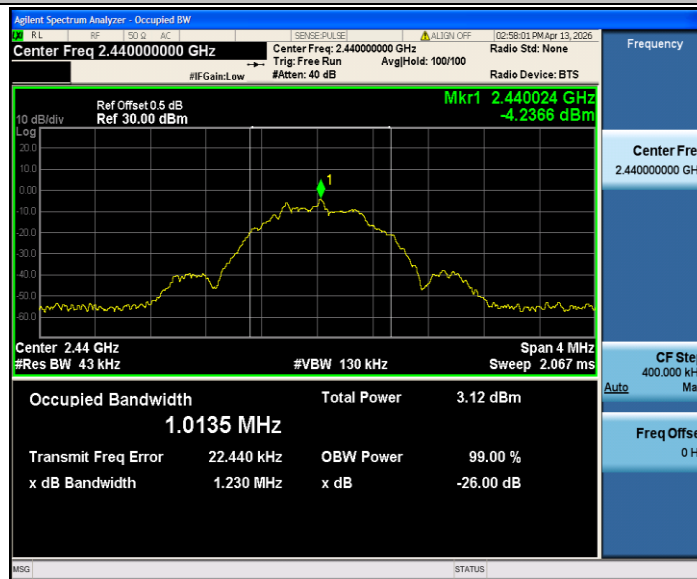
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0122	2401.5188	2402.5310	---	---
		2440	1.0135	2439.5157	2440.5292	---	---
		2480	1.0091	2479.5170	2480.5261	---	---

Test Graphs

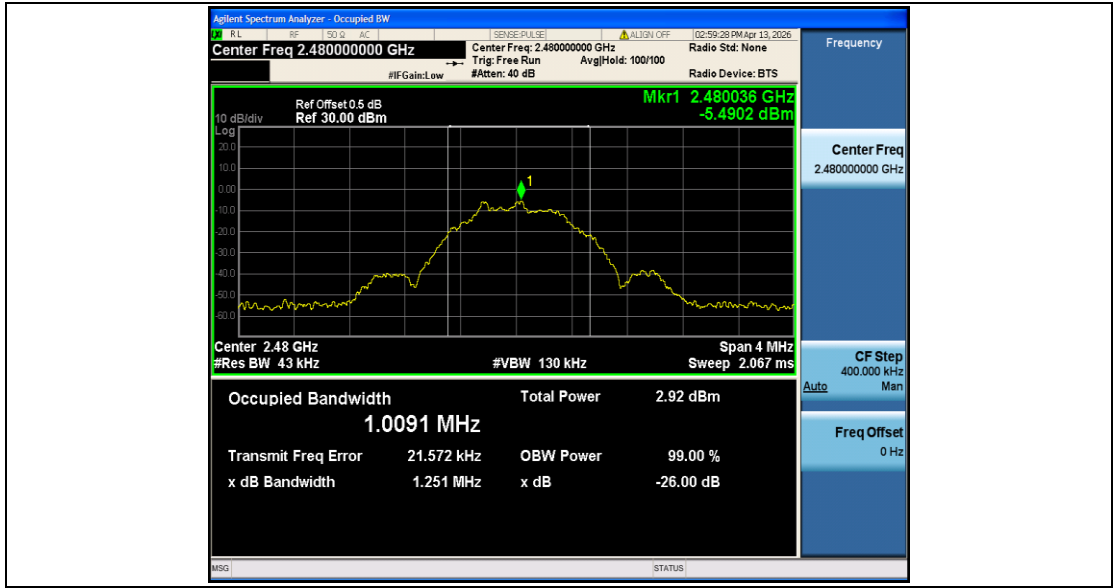
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



Appendix C: Maximum conducted output power

Test Result Peak

TestMode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-3.13	≤30	PASS
		2440	-3.46	≤30	PASS
		2480	-3.57	≤30	PASS

Appendix D: Maximum power spectral density

Test Result

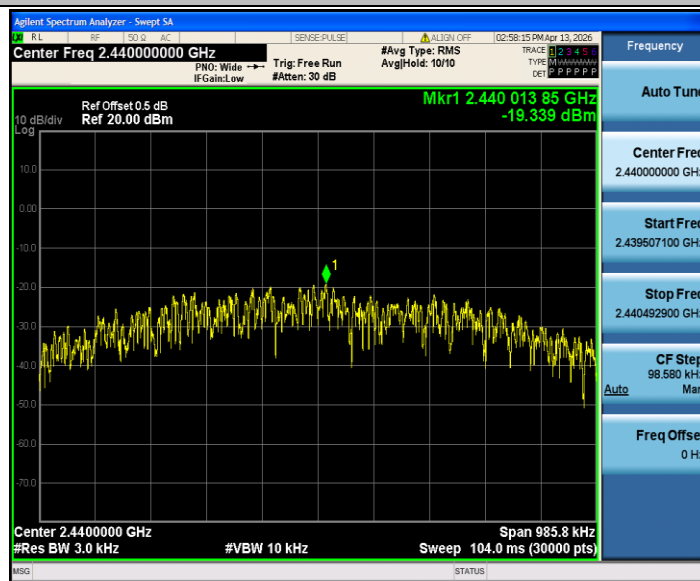
TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-19.03	≤8.00	PASS
		2440	-19.34	≤8.00	PASS
		2480	-19.41	≤8.00	PASS

Test Graphs

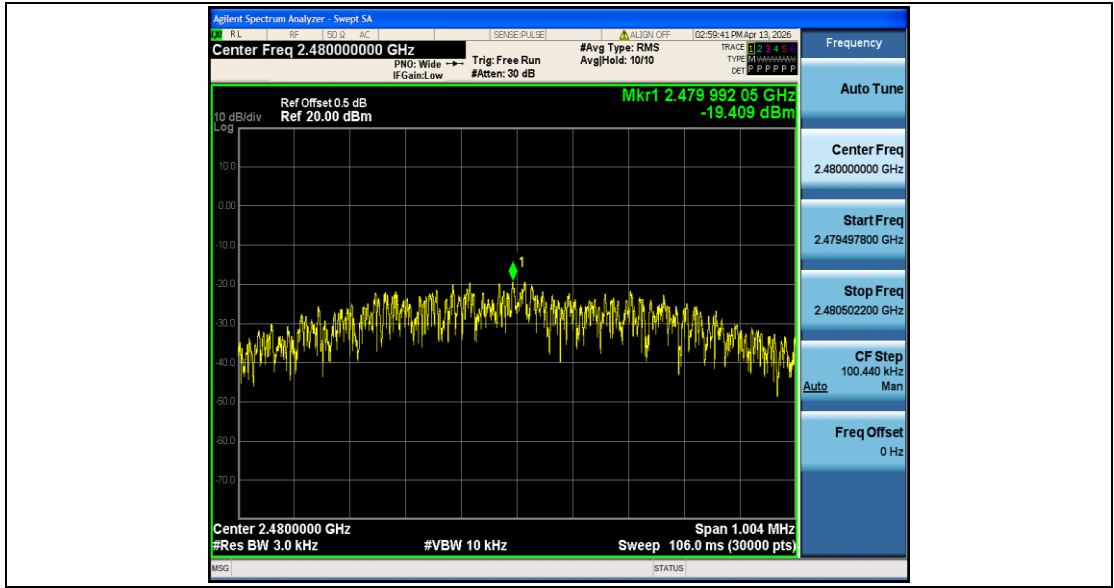
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



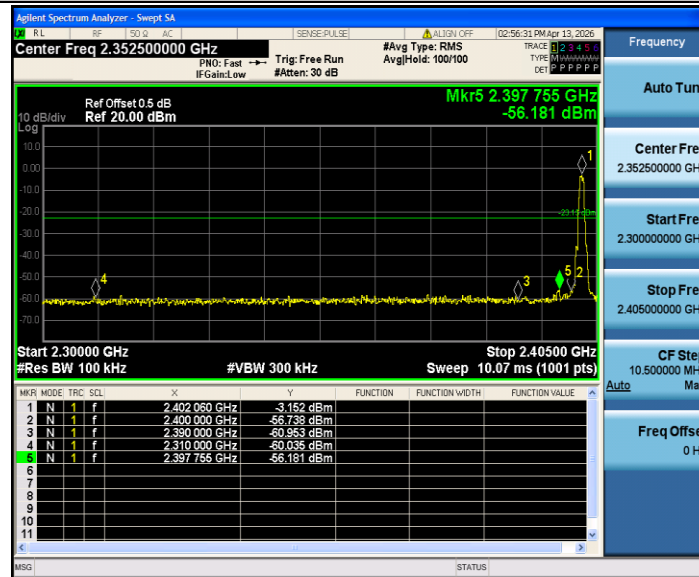
Appendix E: Band edge measurements

Test Result

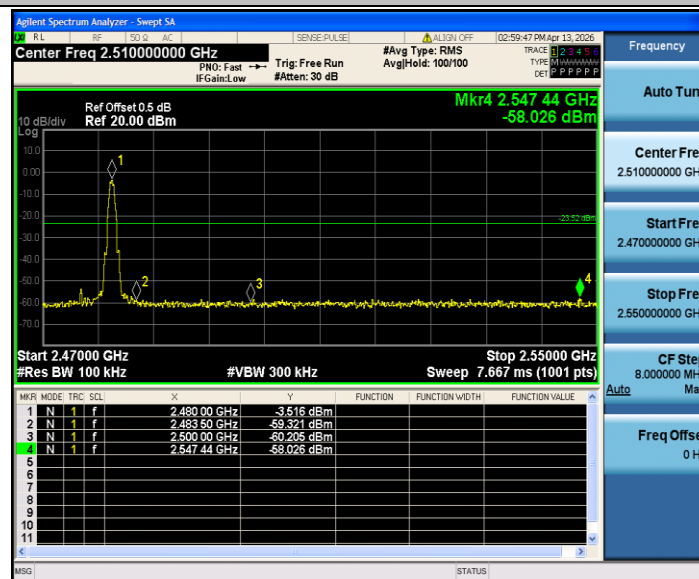
TestMode	Antenna	Channel	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-3.15	-56.18	≤-23.15	PASS
		High	2480	-3.52	-58.03	≤-23.52	PASS

Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480



Appendix F: Conducted Spurious Emission

Test Result

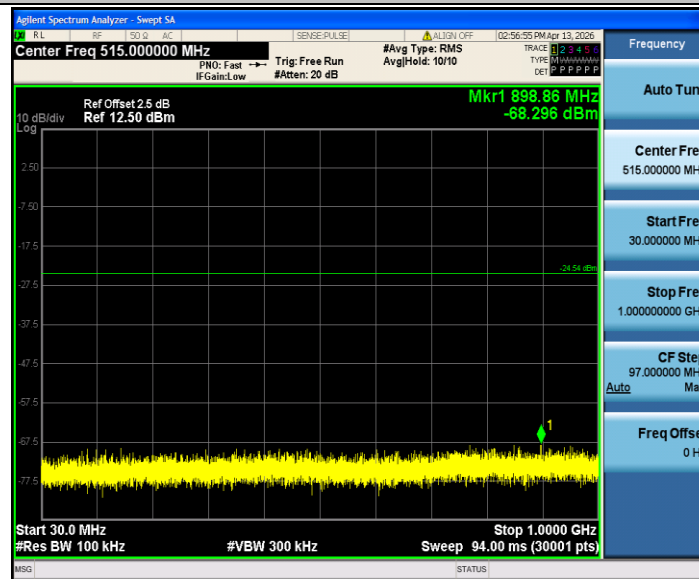
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-4.54	-4.54	---	PASS
			30~1000	-4.54	-68.3	≤-24.54	PASS
			1000~26500	-4.54	-47.34	≤-24.54	PASS
		2440	Reference	-5.51	-5.51	---	PASS
			30~1000	-5.51	-67.58	≤-25.51	PASS
			1000~26500	-5.51	-48.47	≤-25.51	PASS
		2480	Reference	-4.92	-4.92	---	PASS
			30~1000	-4.92	-67.6	≤-24.92	PASS
			1000~26500	-4.92	-46.37	≤-24.92	PASS

Test Graphs

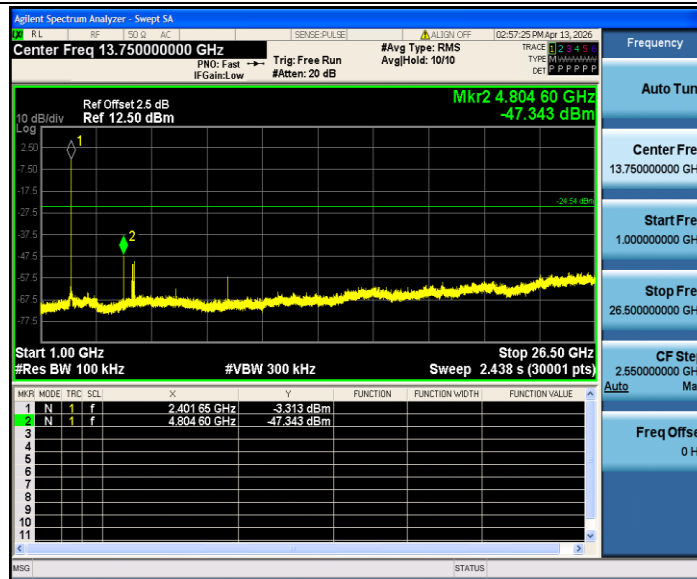
BLE_1M_Ant1_2402_0~Reference



BLE_1M_Ant1_2402_30~1000



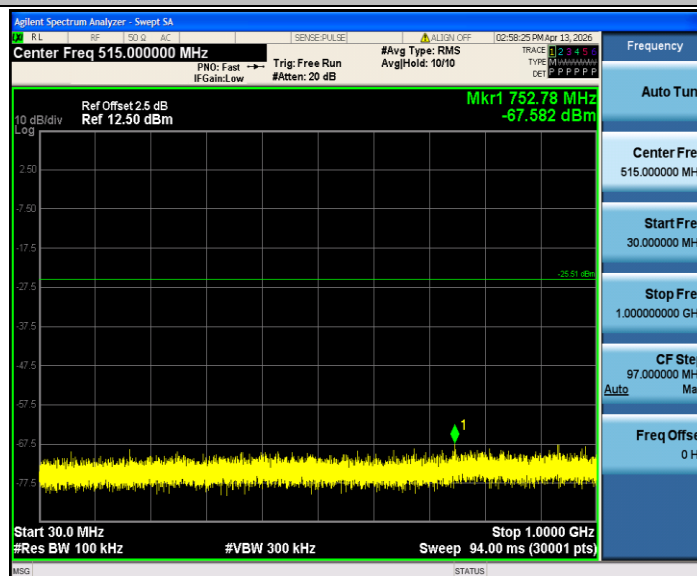
BLE_1M_Ant1_2402_1000~26500



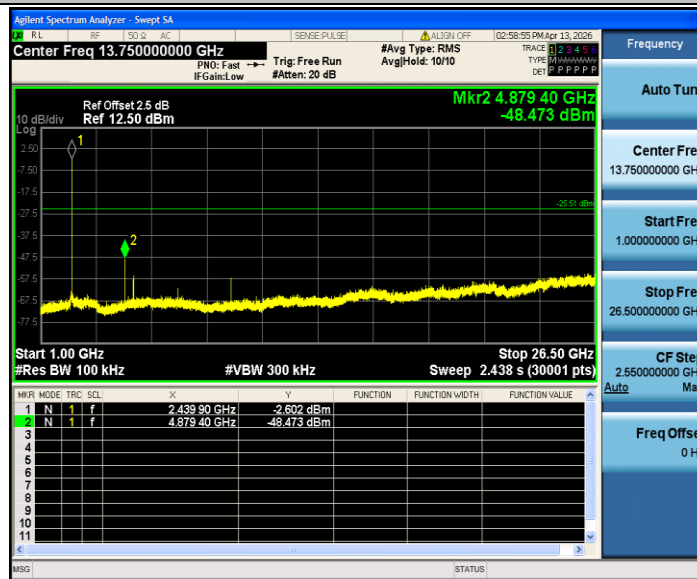
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



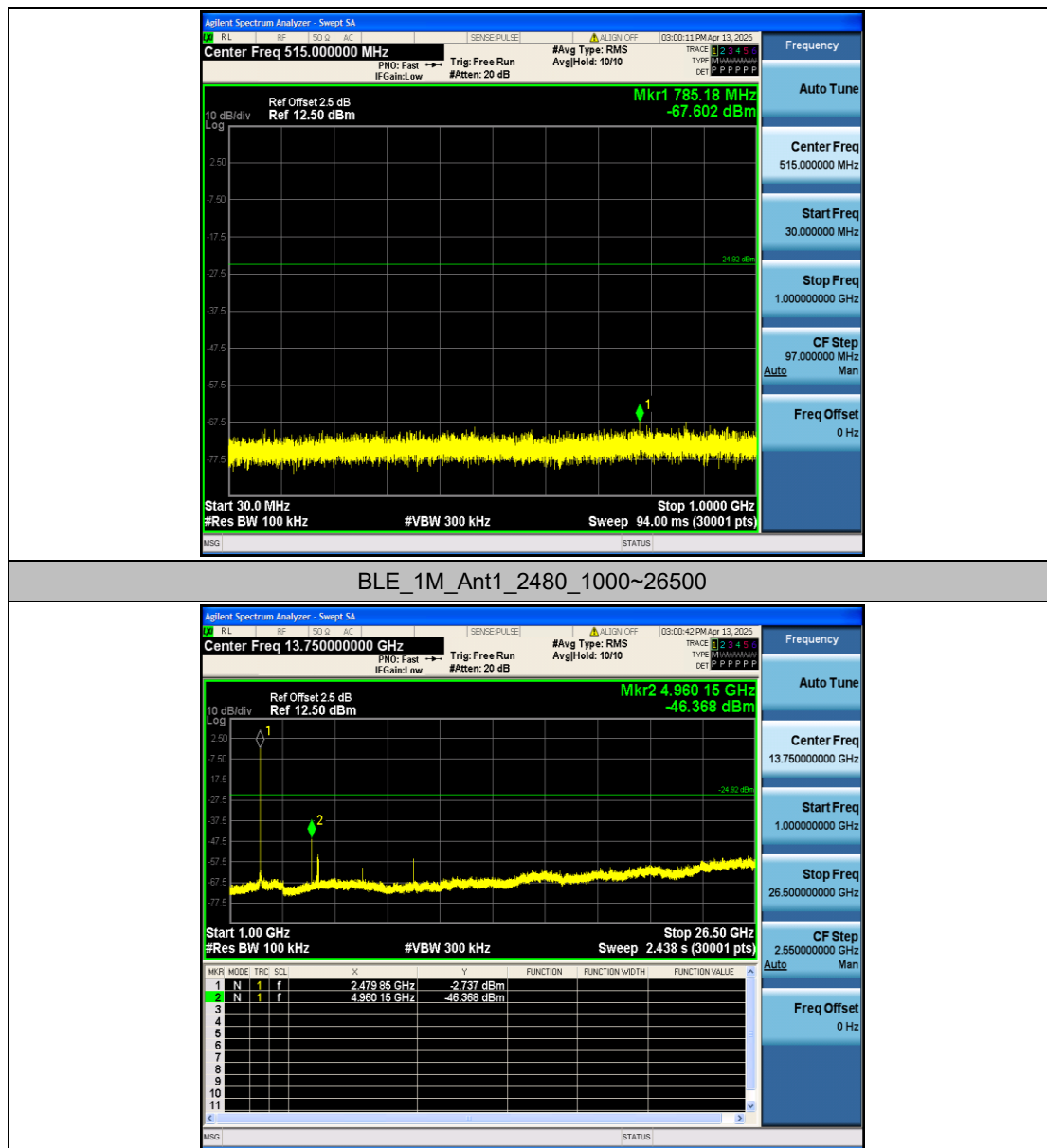
BLE_1M_Ant1_2440_1000~26500



BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



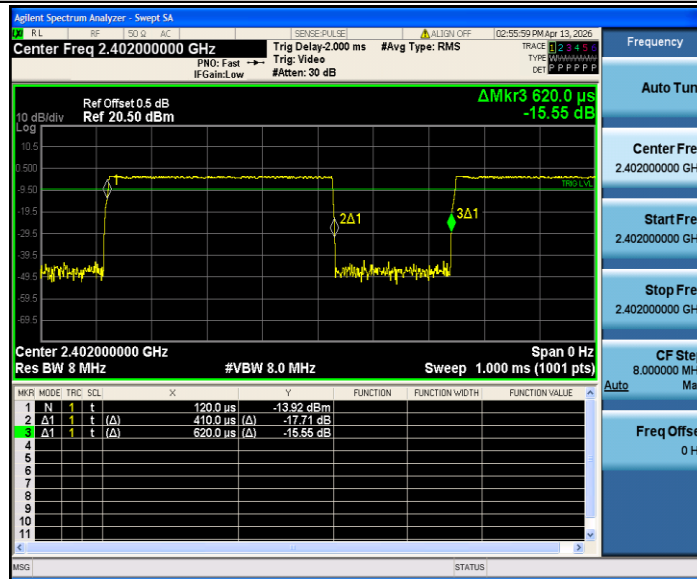
Appendix G: Duty Cycle

Test Result

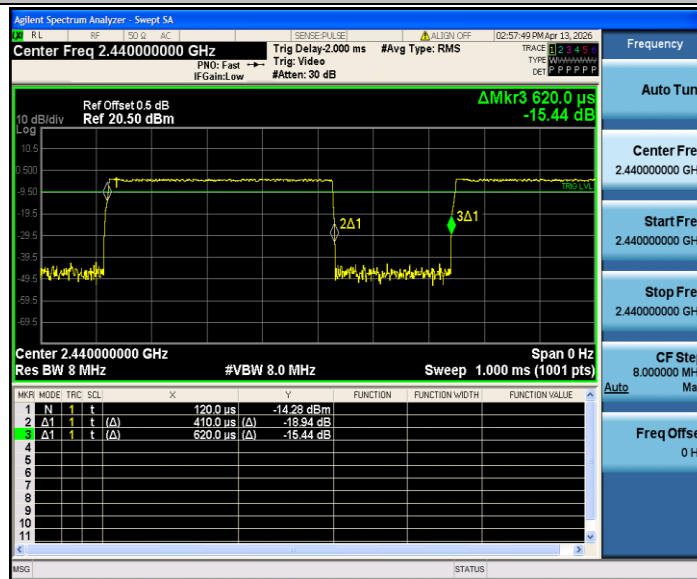
TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	0.41	0.62	0.6613	66.13	1.80	---	---
		2440	0.41	0.62	0.6613	66.13	1.80	---	---
		2480	0.41	0.62	0.6613	66.13	1.80	---	---

Test Graphs

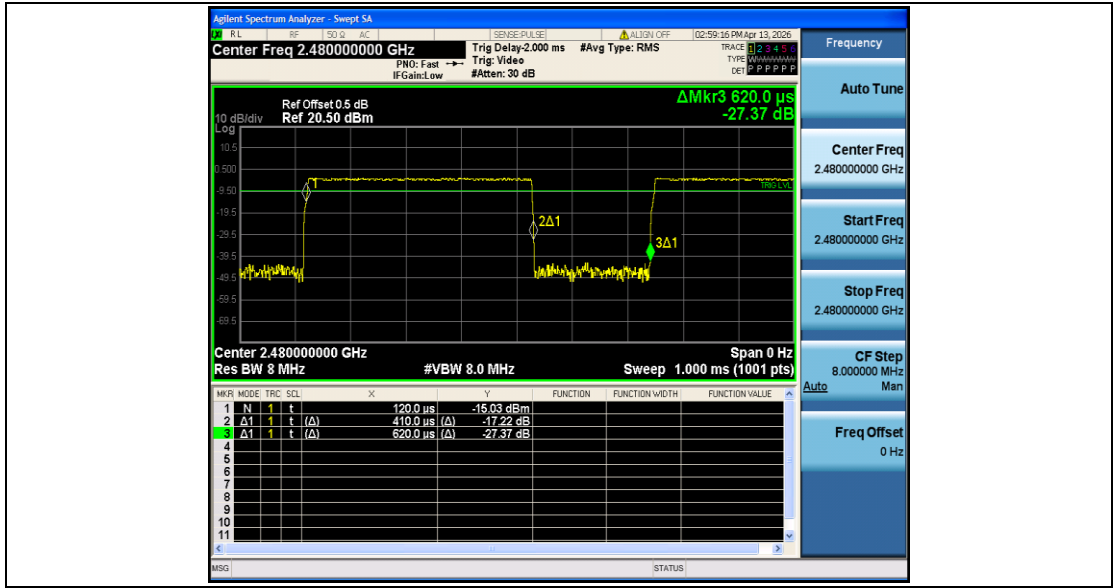
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



Appendix H: Emissions in Restricted Bands

Test Result

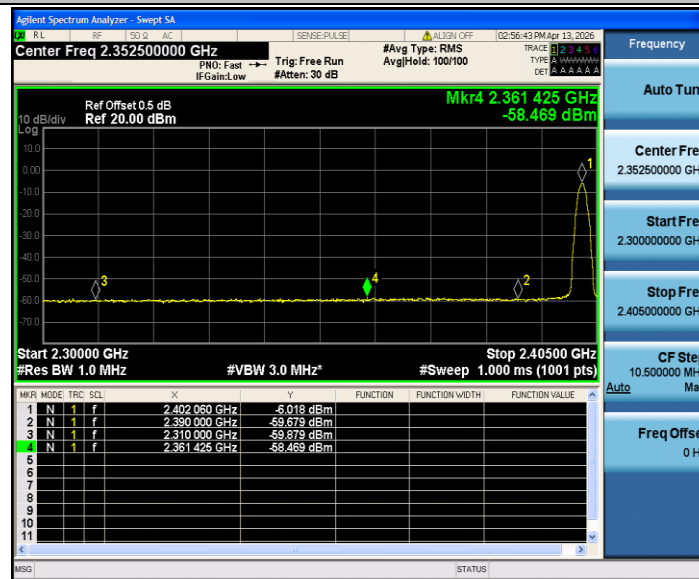
TestMode	Antenna	ChName	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Gain [dB]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-59.88	2.00	1.80	39.12	≤54	PASS
				AV	2361.425	-58.47	2.00	1.80	40.53	≤54	PASS
				AV	2390.000	-59.68	2.00	1.80	39.32	≤54	PASS
				Peak	2310.000	-52.04	2.00	0.00	45.16	≤74	PASS
				Peak	2362.790	-48.82	2.00	0.00	48.38	≤74	PASS
				Peak	2390.000	-49.86	2.00	0.00	47.34	≤74	PASS
		High	2480	AV	2483.500	-58.32	2.00	1.80	40.68	≤54	PASS
				AV	2484.800	-57.74	2.00	1.80	41.26	≤54	PASS
				AV	2500.000	-59.4	2.00	1.80	39.60	≤54	PASS
				Peak	2483.500	-50.25	2.00	0.00	46.95	≤74	PASS
				Peak	2484.160	-48.02	2.00	0.00	49.18	≤74	PASS
				Peak	2500.000	-51.33	2.00	0.00	45.87	≤74	PASS

Note:

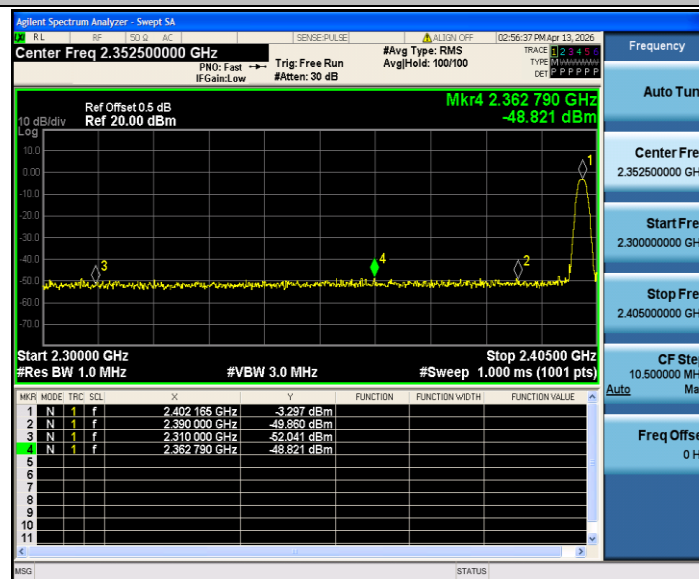
The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

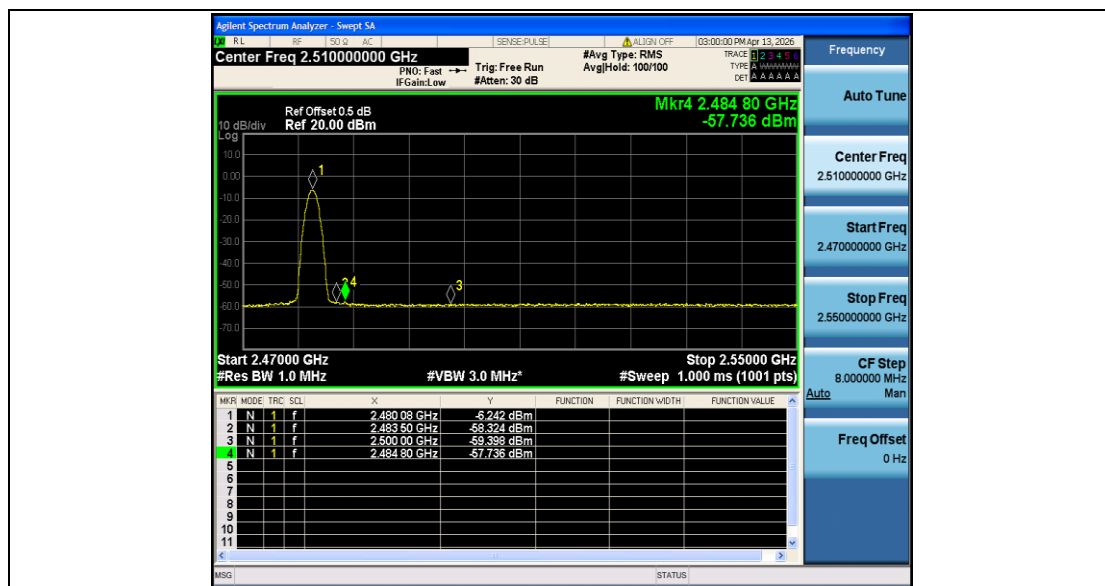
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

