

FCC Appendix RF Test Data for BLE

FCC ID : 2BQZR-A1500

Company : Guangzhou Xiangyun Flavor Technology Co., Ltd.

EUT : Aroma diffuser

Model Number : A1500

Report No. : CTA25121500901

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	2401.692	2402.336	0.5	PASS
		2440	0.636	2439.700	2440.336	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 0.4 dB
Ref 20.00 dBm

Trig: Free Run
#Aver: 30 dB

#Avg Type: RMS
Avg/Hold: 100/100

Trace 1
Type: D
Det: P P P P P

Frequency

Auto Tune

Center Freq
2.402000000 GHz

Start Freq
2.400000000 GHz

Stop Freq
2.404000000 GHz

CF Step
400.000 kHz
Man

Freq Offset
0 Hz

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

ΔMkr3 644 kHz
-0.039 dB

Log

10 dB/div

1 2 3Δ1

Center 2.402000 GHz

#Res BW 100 kHz

#VBW 300 kHz

Sweep (#Swp) 1.000 ms (1001 pts)

MNR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.401692 GHz	-9.914 dBm			
2	N	1	f	2.402021 GHz	-9.497 dBm			
3	Δ1	1	f (Δ)	644 kHz (Δ)	-0.039 dB			

MSO

STATUS

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.440000000 GHz

Ref Offset 0.4 dB
Ref 20.00 dBm

Trig: Free Run
#Aver: 30 dB

#Avg Type: RMS
Avg/Hold: 100/100

Trace 1
Type: D
Det: P P P P P

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

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

ΔMkr3 636 kHz
-0.063 dB

Log

10 dB/div

1 2 3Δ1

Center 2.440000 GHz

#Res BW 100 kHz

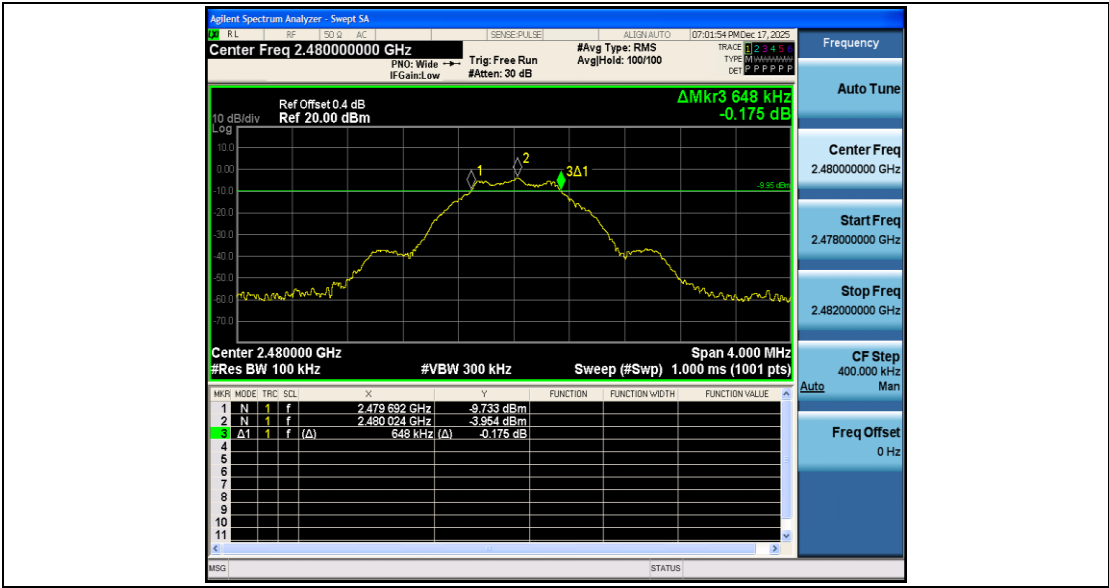
#VBW 300 kHz

Sweep (#Swp) 1.000 ms (1001 pts)

MNR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.439700 GHz	-9.616 dBm			
2	N	1	f	2.440020 GHz	-9.896 dBm			
3	Δ1	1	f (Δ)	636 kHz (Δ)	-0.063 dB			

MSO

STATUS



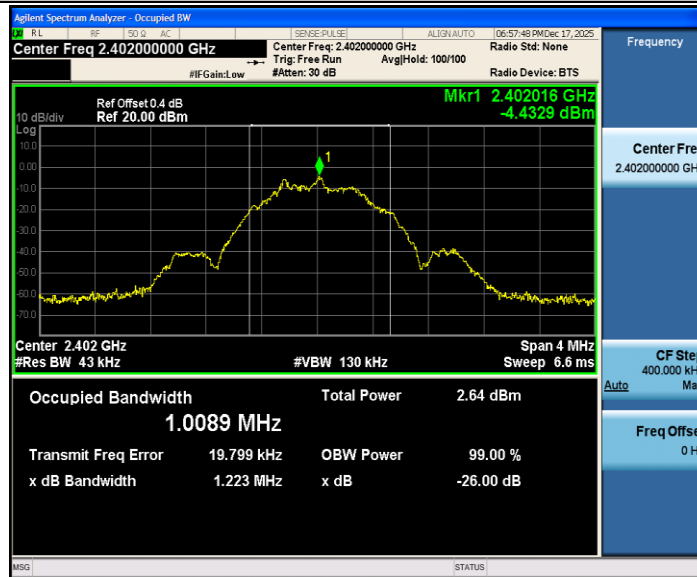
Appendix B: Occupied Channel Bandwidth

Test Result

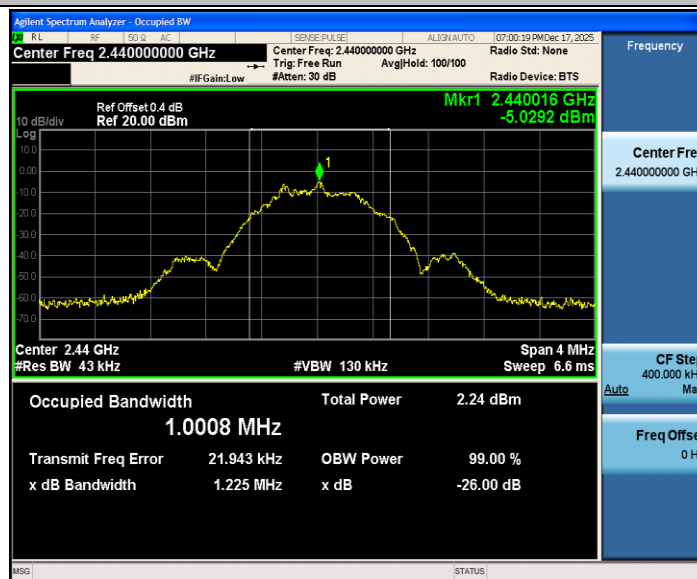
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0089	2401.5154	2402.5243	---	---
		2440	1.0008	2439.5215	2440.5223	---	---
		2480	1.0037	2479.5185	2480.5222	---	---

Test Graphs

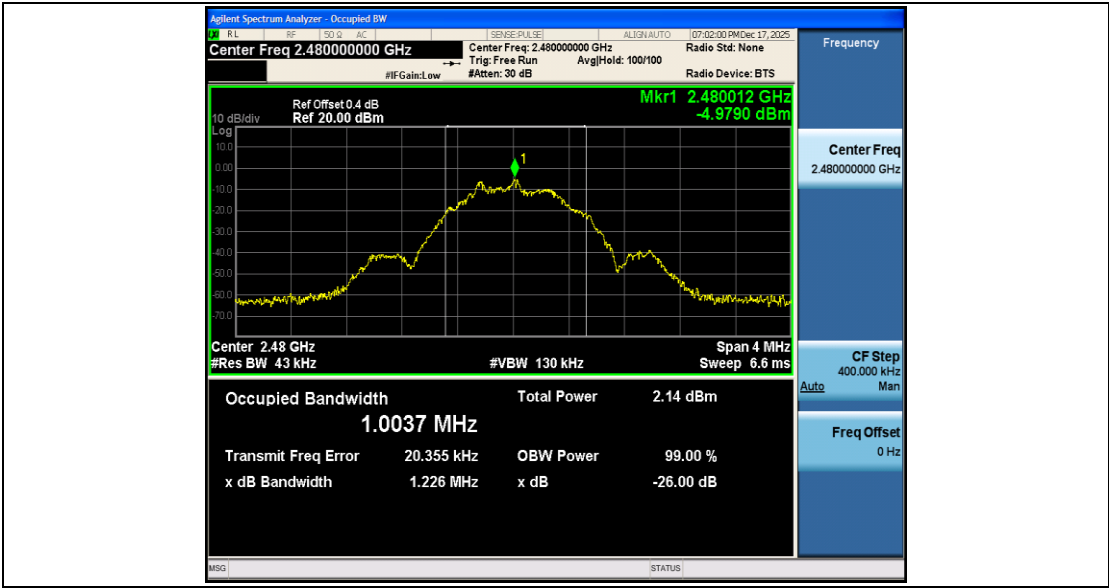
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



Appendix C: Maximum conducted output power

Test Result Peak

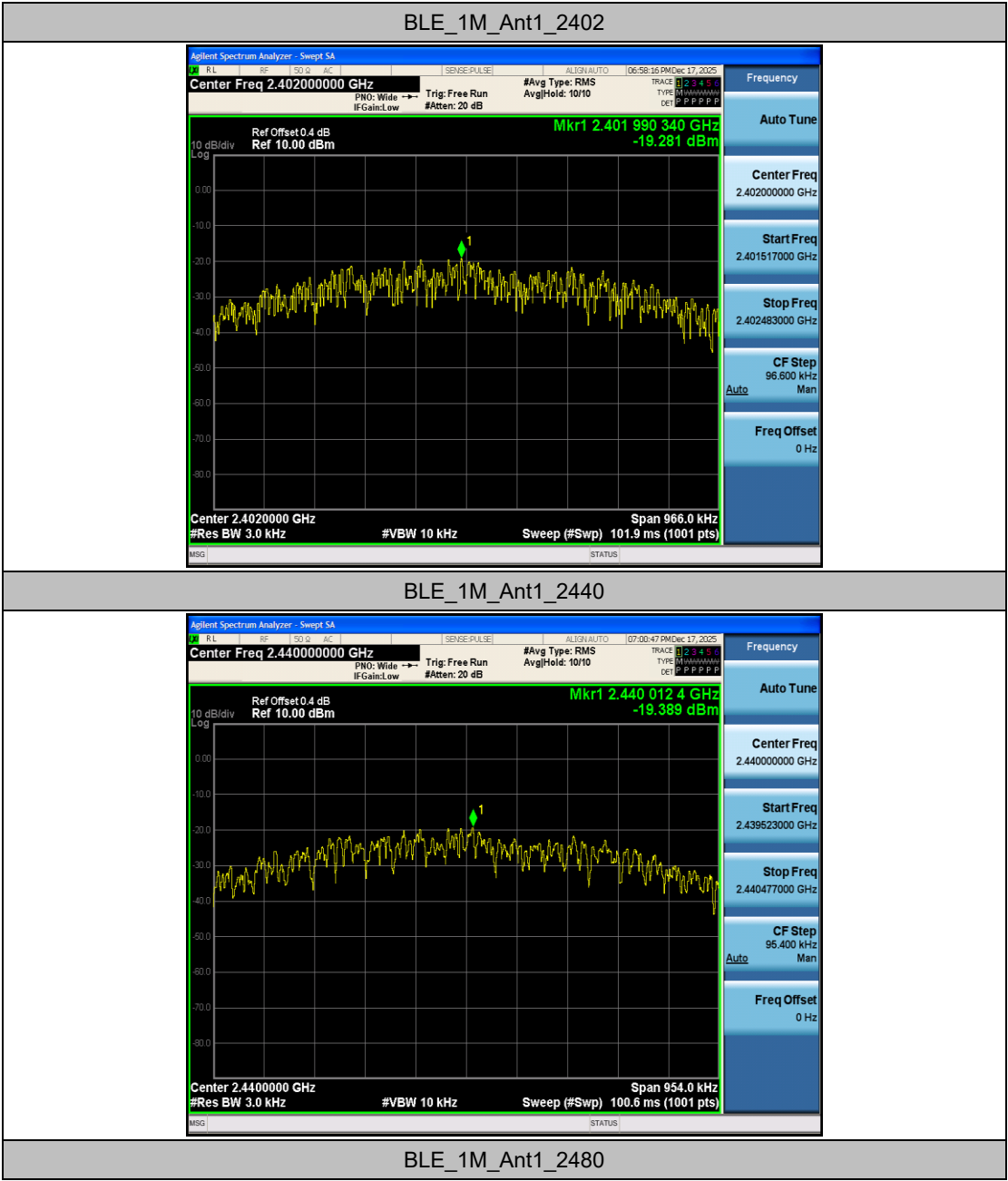
TestMode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-3.40	≤30	PASS
		2440	-3.73	≤30	PASS
		2480	-3.80	≤30	PASS

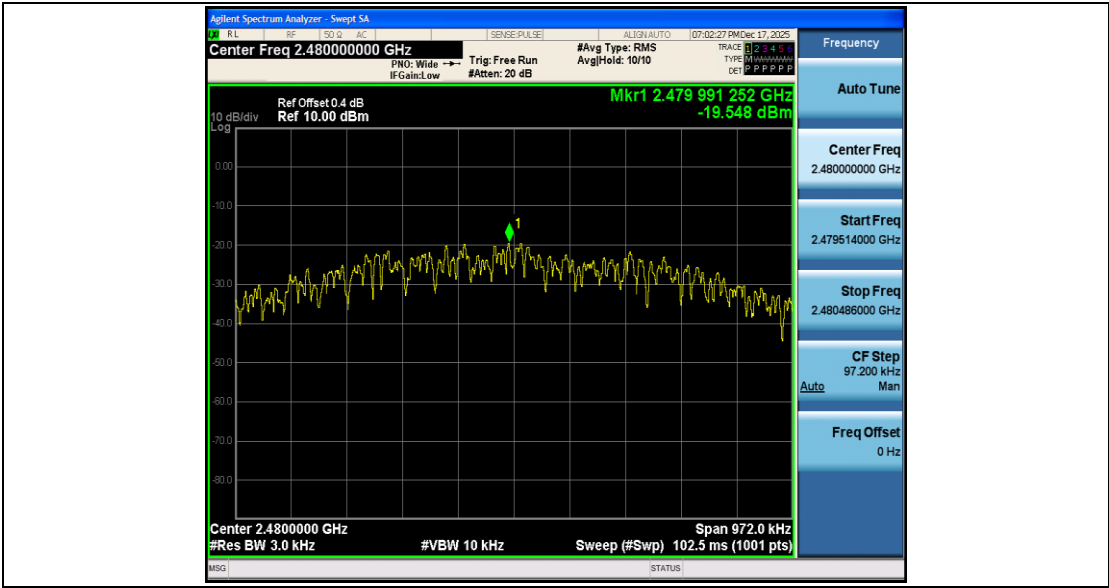
Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-19.28	≤8.00	PASS
		2440	-19.39	≤8.00	PASS
		2480	-19.55	≤8.00	PASS

Test Graphs





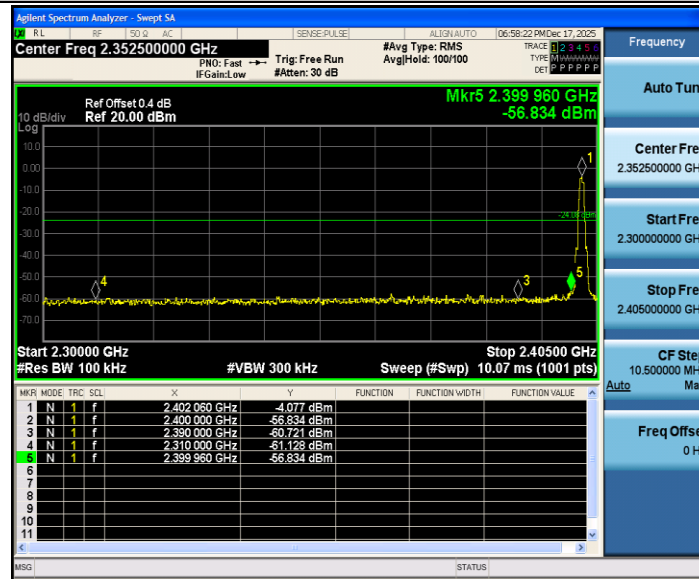
Appendix E: Band edge measurements

Test Result

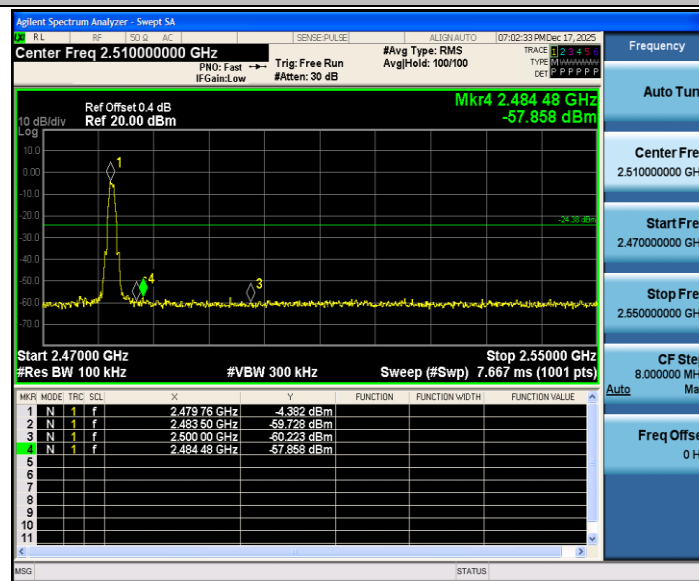
TestMod e	Antenn a	ChNam e	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdic t
BLE_1M	Ant1	Low	2402	-4.08	-56.83	≤-24.08	PASS
		High	2480	-4.38	-57.86	≤-24.38	PASS

Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480

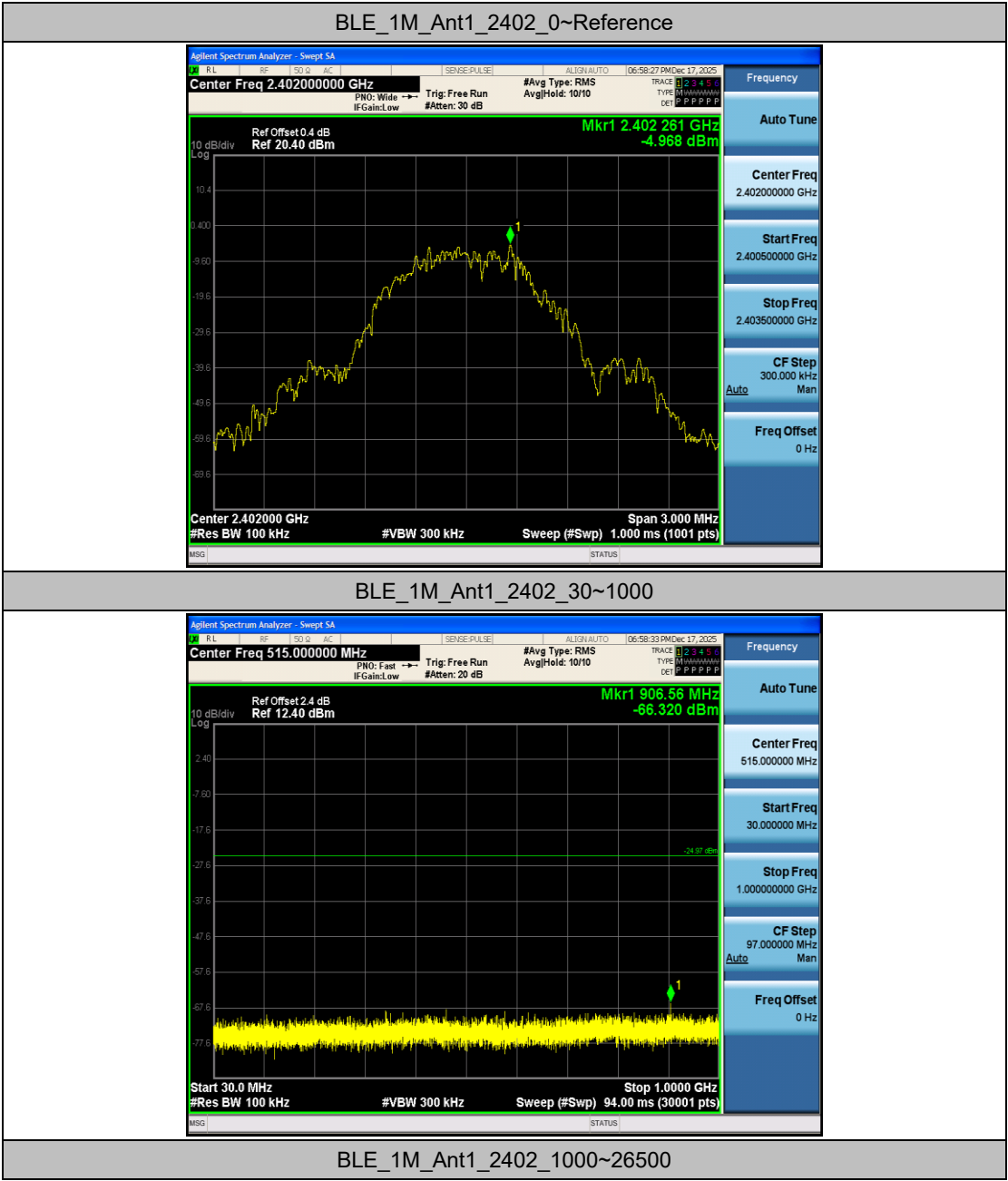


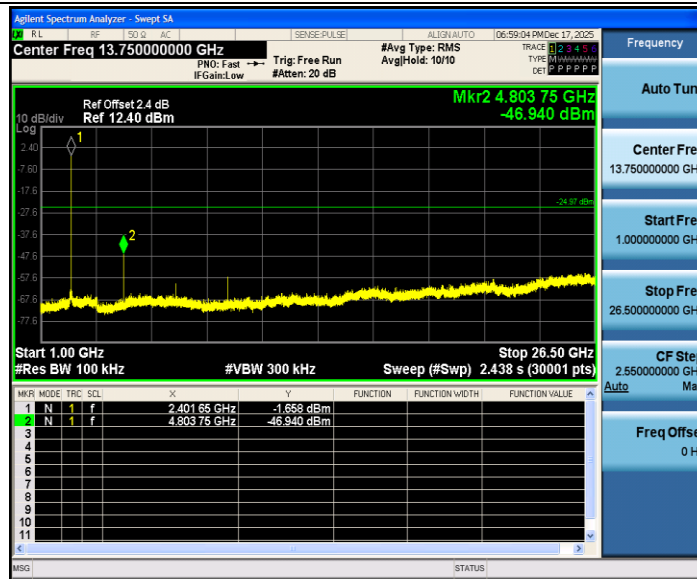
Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-4.97	-4.97	---	PASS
			30~1000	-4.97	-66.32	≤-24.97	PASS
			1000~26500	-4.97	-46.94	≤-24.97	PASS
		2440	Reference	-4.80	-4.80	---	PASS
			30~1000	-4.80	-67.93	≤-24.8	PASS
			1000~26500	-4.80	-48.24	≤-24.8	PASS
		2480	Reference	-4.01	-4.01	---	PASS
			30~1000	-4.01	-67	≤-24.01	PASS
			1000~26500	-4.01	-47.28	≤-24.01	PASS

Test Graphs

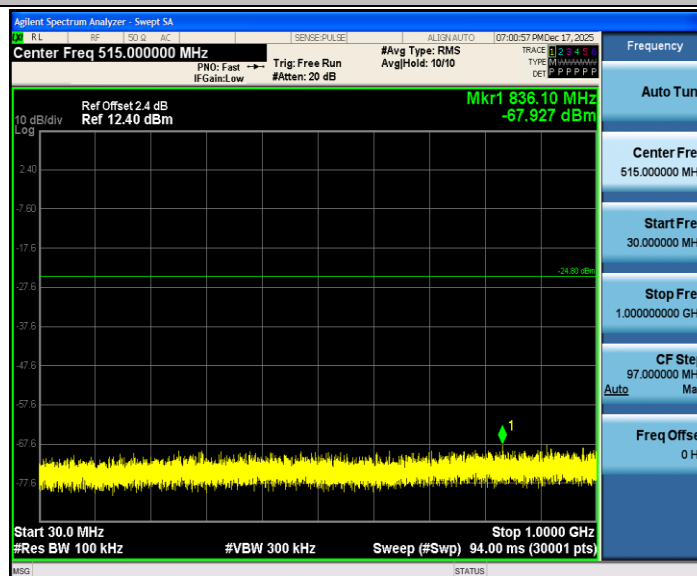




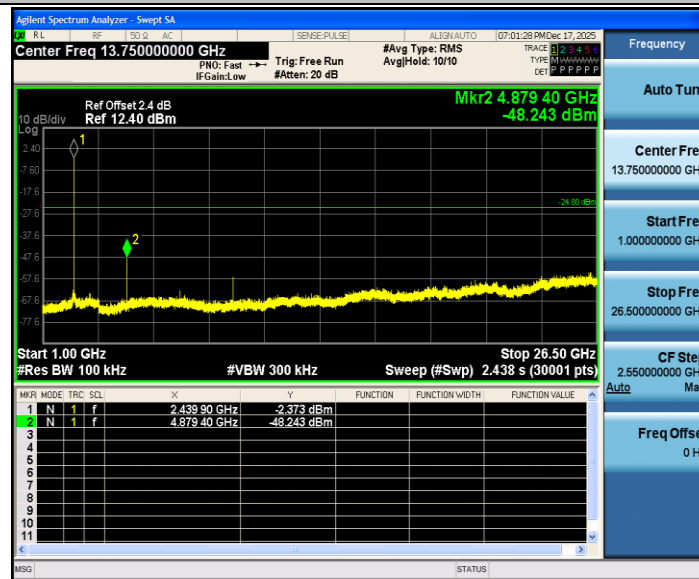
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



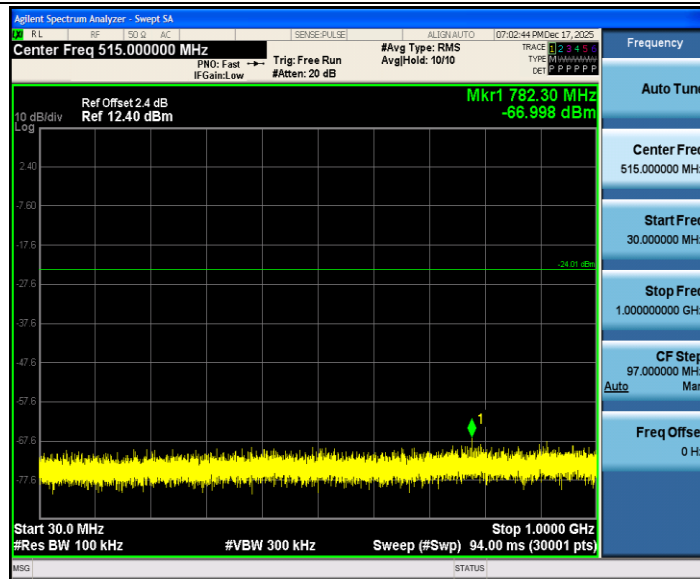
BLE_1M_Ant1_2440_1000~26500



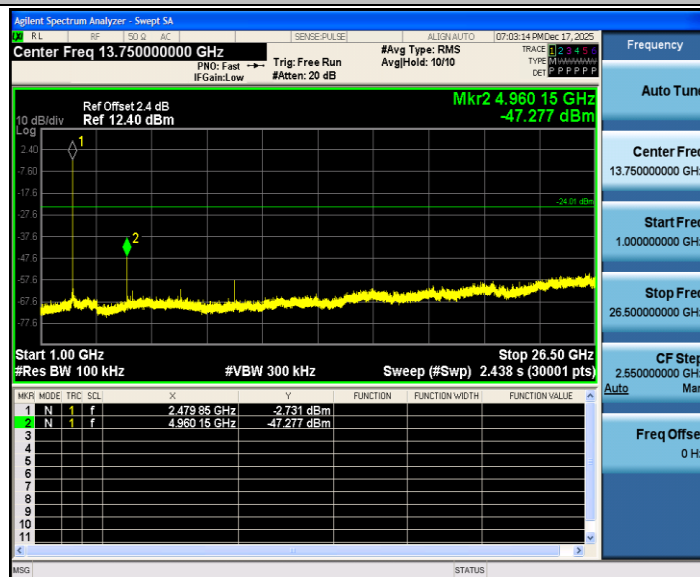
BLE_1M_Ant1_2480_0~Reference



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	0.63	0.6508	65.08	1.87	---	---
		2440	0.41	0.63	0.6508	65.08	1.87	---	---
		2480	0.41	0.63	0.6508	65.08	1.87	---	---

Test Graphs

