

FCC Appendix RF Test Data for BLE

FCC ID : 2BM7C-GD-85

Company : Xiamen Deyin Technology Co.,Ltd

EUT : Thermal printer

Model Number : GD-85

Report No. : CTA25091801801

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	0.640	2401.696	2402.336	0.5	PASS
		2440	0.656	2439.684	2440.340	0.5	PASS
		2480	0.652	2479.684	2480.336	0.5	PASS

Agilent Spectrum Analyzer - Sweep SA

Center Freq 2.402000000 GHz

Ref Offset 0.8 dB
Ref 20.00 dBm

Trig: Free Run
#Atten: 30 dB

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

Span 4.000 MHz
Sweep (#Swp) 1.000 ms (1001 pts)

ΔMkr3 640 kHz
-0.149 dB

10 dB/div
Log

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	2.401696 GHz	-9.123 dBm			
2	N	1	f	2.402021 GHz	-3.384 dBm			
3	Δ	1	f (Δ)	640 kHz (Δ)	-0.149 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

Freq Offset
0 Hz

BLE_1M_Ant1_2402

Agilent Spectrum Analyzer - Sweep SA

Center Freq 2.440000000 GHz

Ref Offset 0.8 dB
Ref 20.00 dBm

Trig: Free Run
#Atten: 30 dB

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

Span 4.000 MHz
Sweep (#Swp) 1.000 ms (1001 pts)

ΔMkr3 656 kHz
0.026 dB

10 dB/div
Log

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	2.439684 GHz	-9.798 dBm			
2	N	1	f	2.440028 GHz	-3.886 dBm			
3	Δ	1	f (Δ)	656 kHz (Δ)	0.026 dB			

Frequency

Auto Tune

Center Freq
2.440000000 GHz

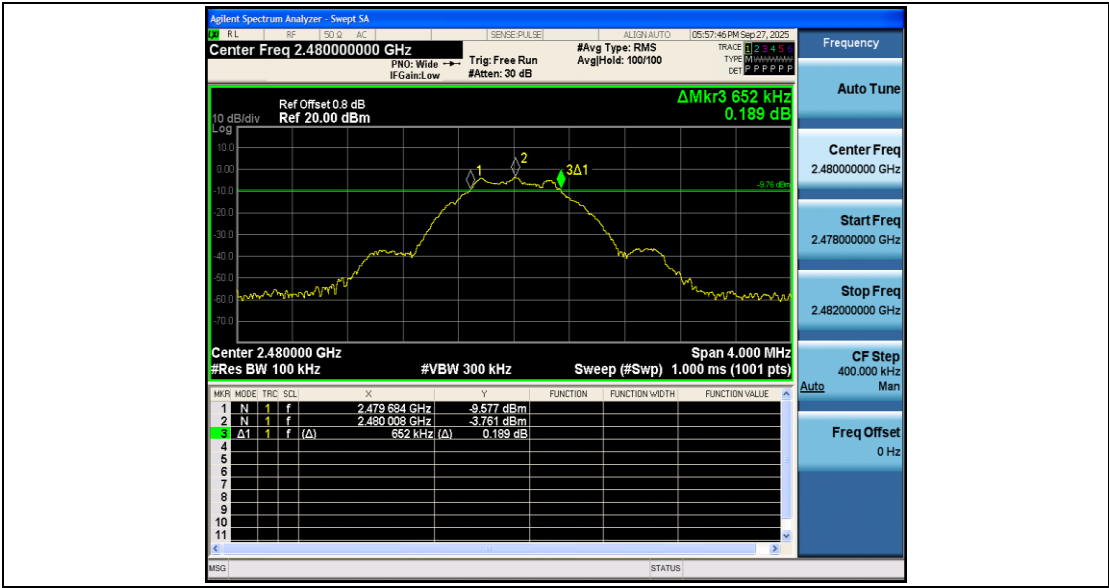
Start Freq
2.438000000 GHz

Stop Freq
2.442000000 GHz

CF Step
400.000 kHz
Man

Freq Offset
0 Hz

BLE_1M_Ant1_2440

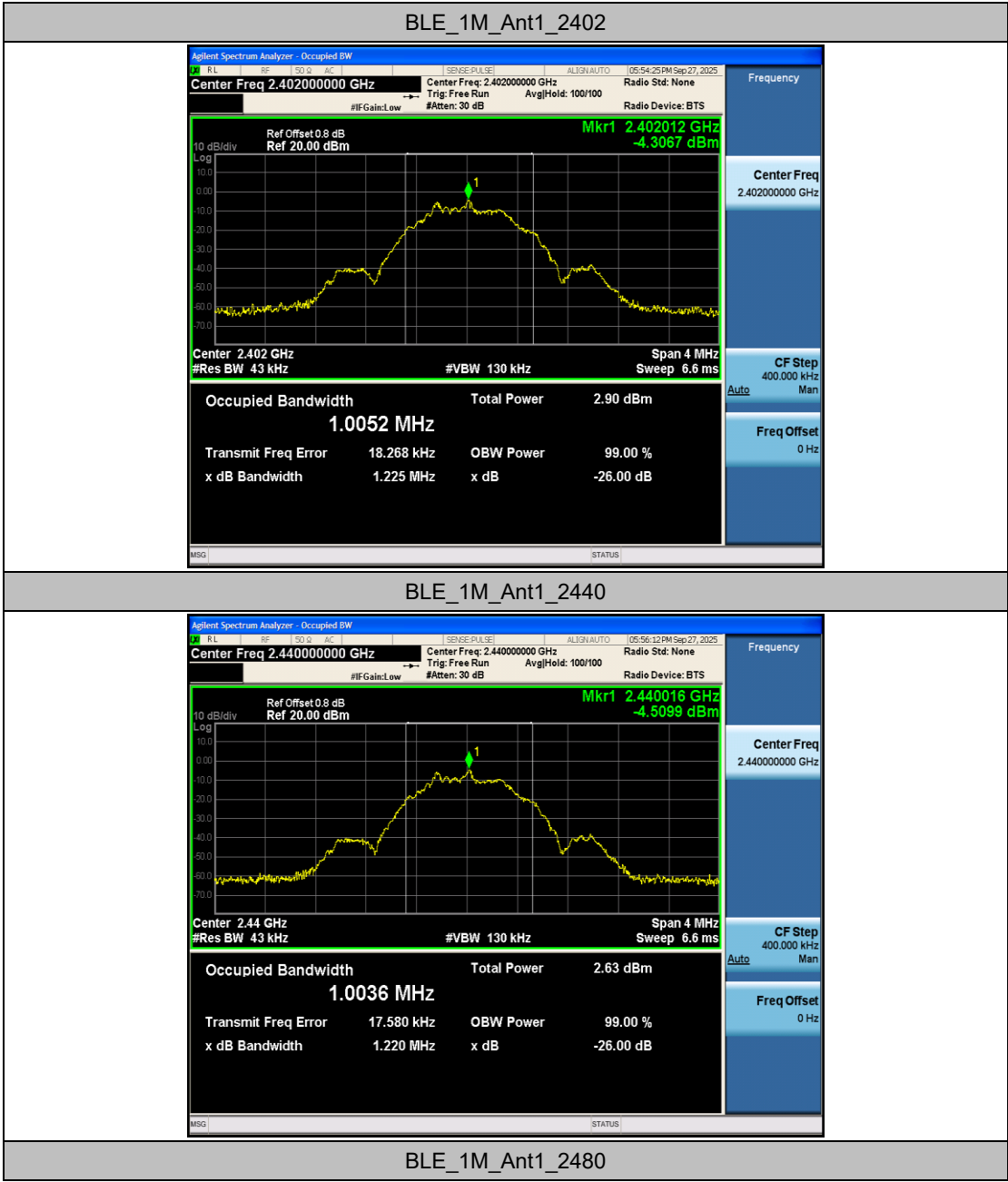


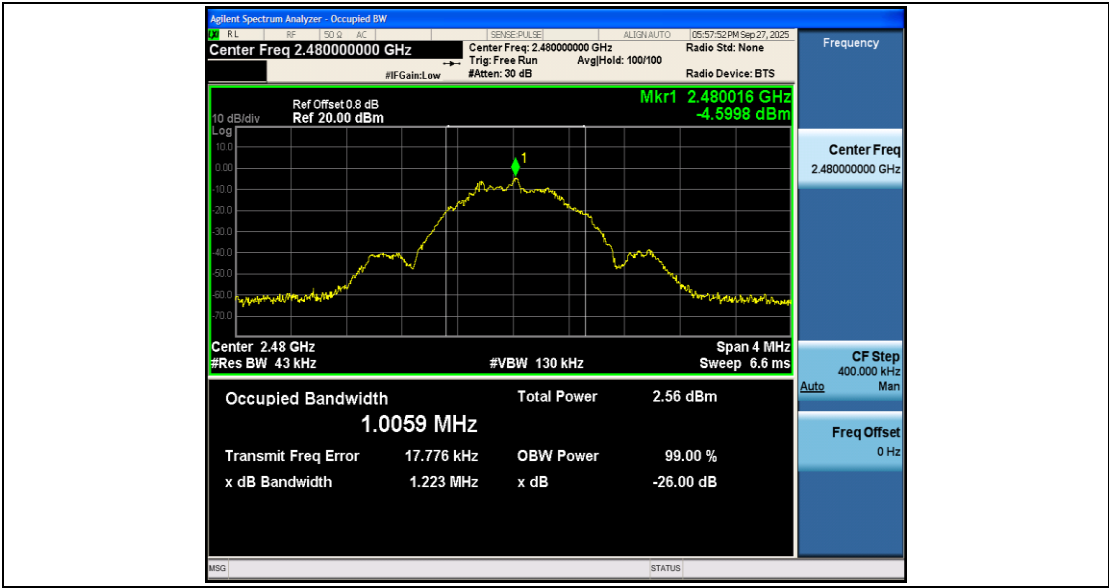
Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0052	2401.5157	2402.5209	---	---
		2440	1.0036	2439.5158	2440.5194	---	---
		2480	1.0059	2479.5148	2480.5207	---	---

Test Graphs





Appendix C: Maximum conducted output power

Test Result Peak

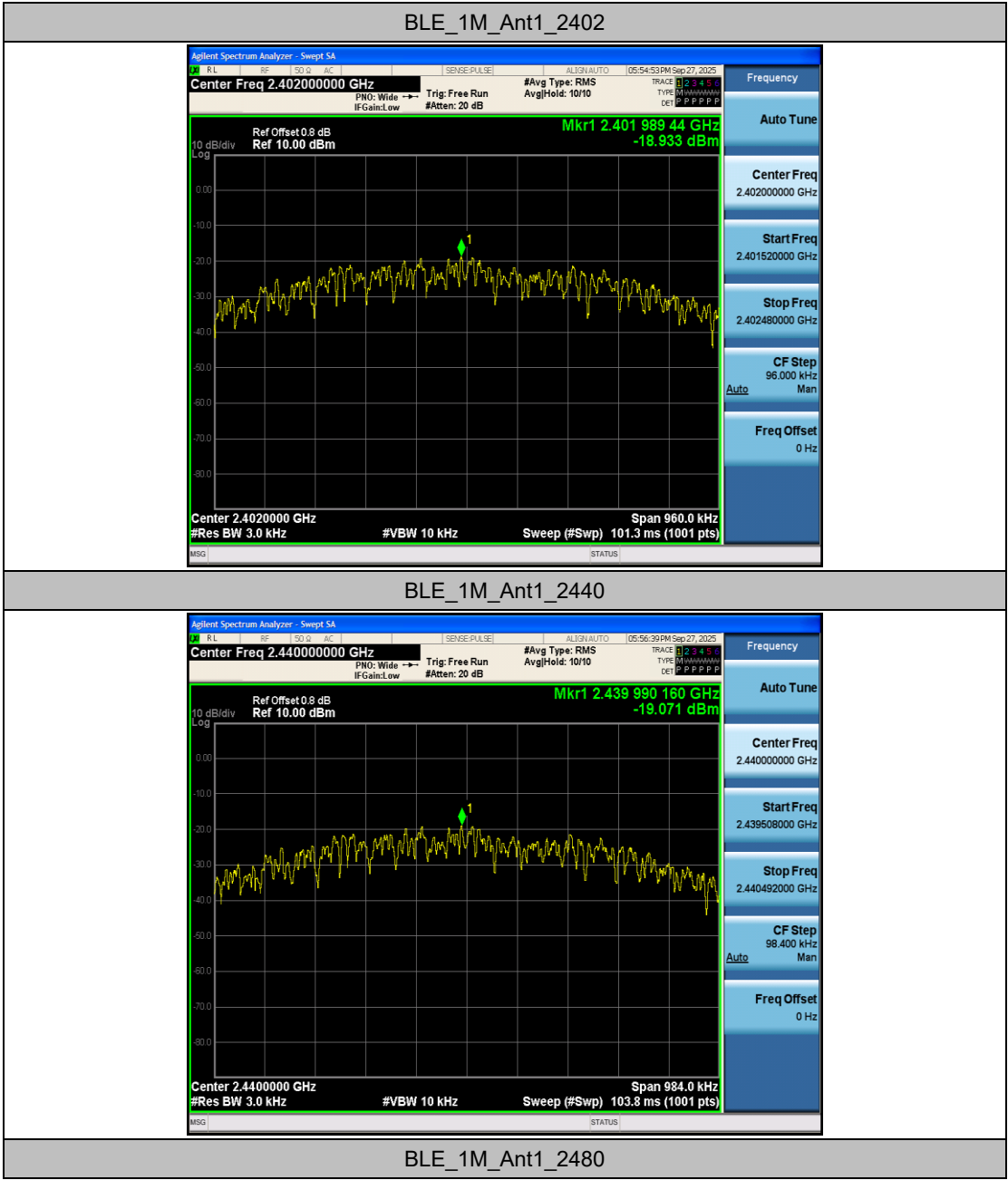
TestMode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-3.16	≤30	PASS
		2440	-3.45	≤30	PASS
		2480	-3.48	≤30	PASS

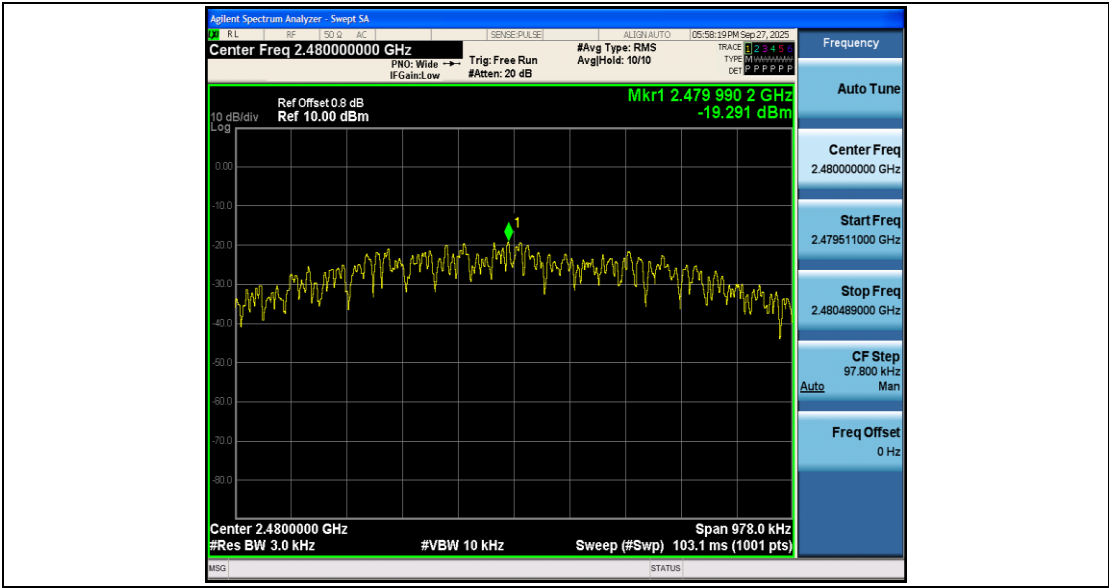
Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-18.93	≤8.00	PASS
		2440	-19.07	≤8.00	PASS
		2480	-19.29	≤8.00	PASS

Test Graphs



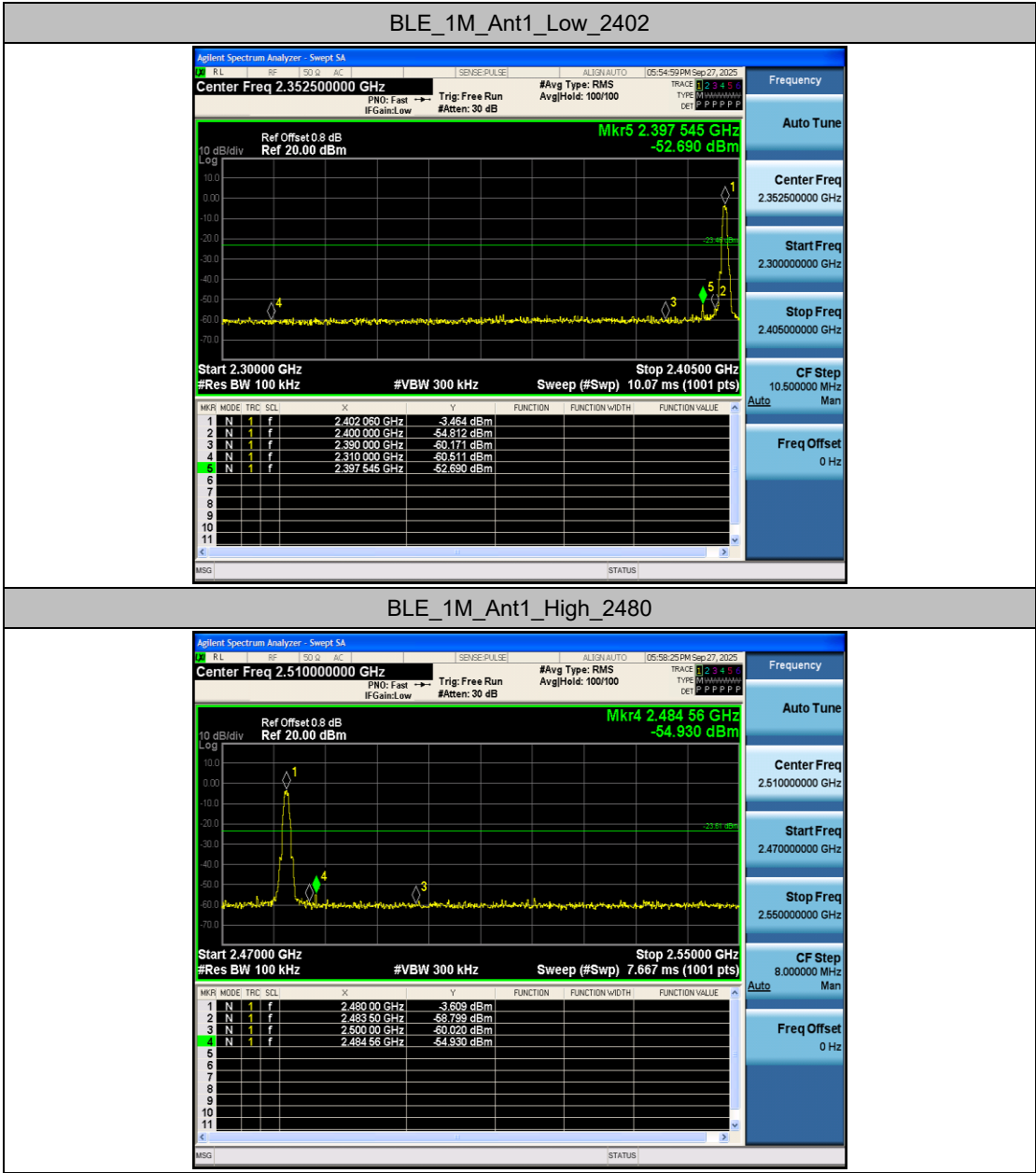


Appendix E: Band edge measurements

Test Result

TestMod e	Antenn a	ChNam e	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdic t
BLE_1M	Ant1	Low	2402	-3.46	-52.69	≤-23.46	PASS
		High	2480	-3.61	-54.93	≤-23.61	PASS

Test Graphs

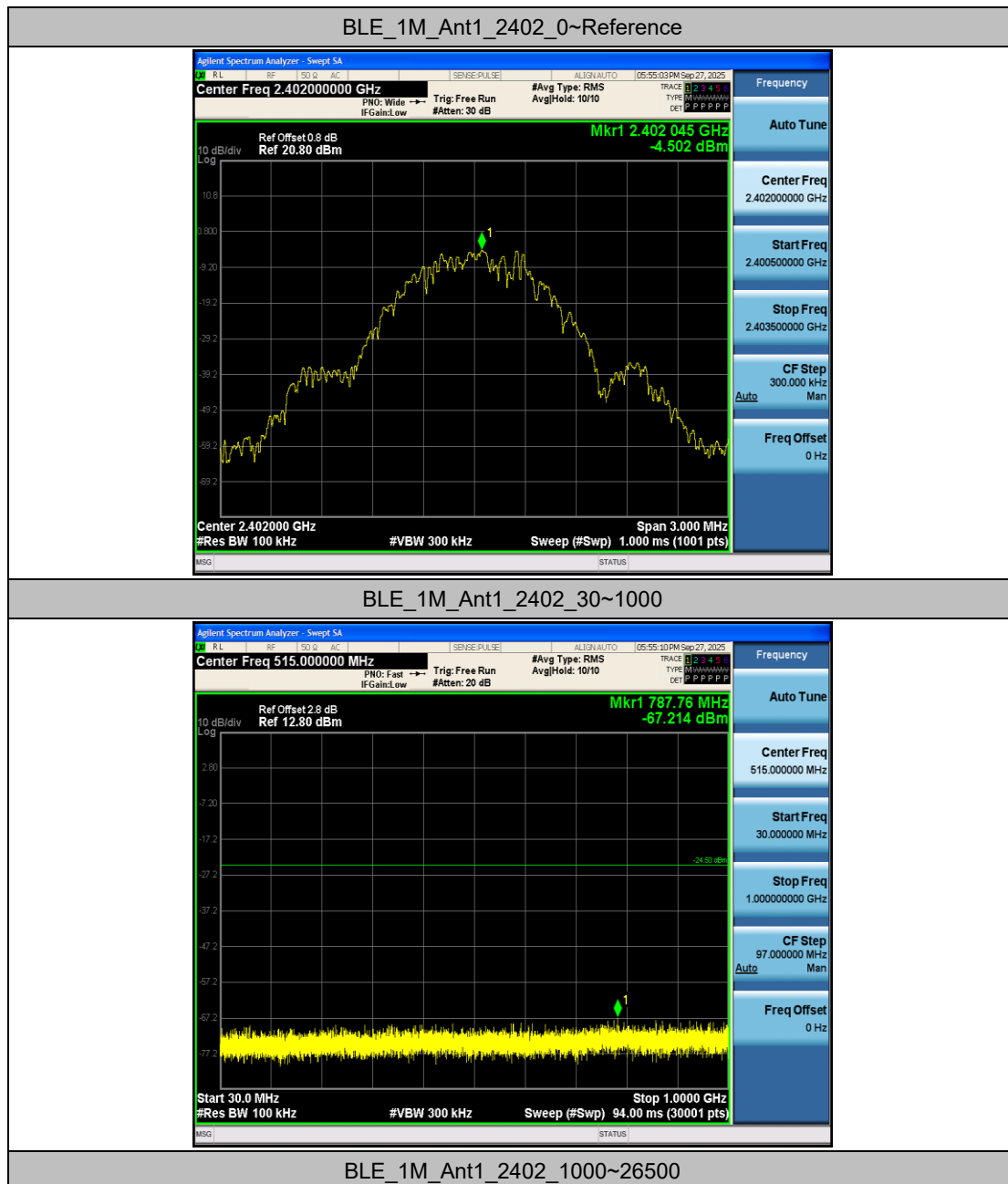


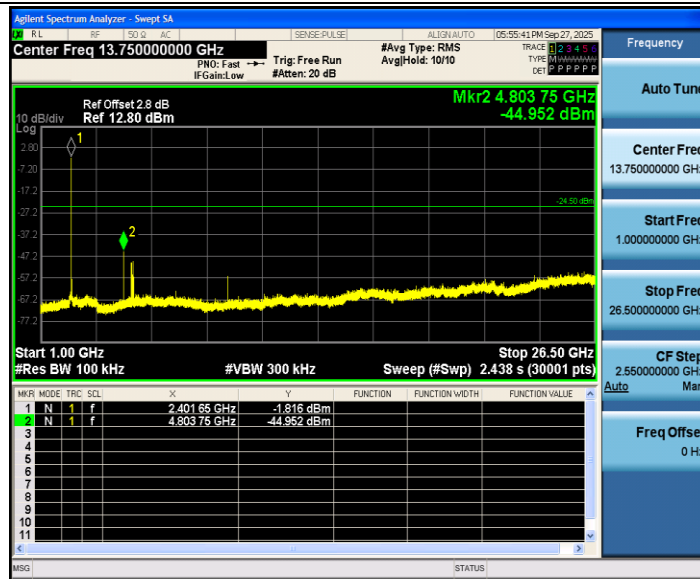
Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-4.50	-4.50	---	PASS
			30~1000	-4.50	-67.21	≤-24.5	PASS
			1000~26500	-4.50	-44.95	≤-24.5	PASS
		2440	Reference	-4.15	-4.15	---	PASS
			30~1000	-4.15	-67.58	≤-24.15	PASS
			1000~26500	-4.15	-46.1	≤-24.15	PASS
		2480	Reference	-4.15	-4.15	---	PASS
			30~1000	-4.15	-67.68	≤-24.15	PASS
			1000~26500	-4.15	-48.21	≤-24.15	PASS

Test Graphs

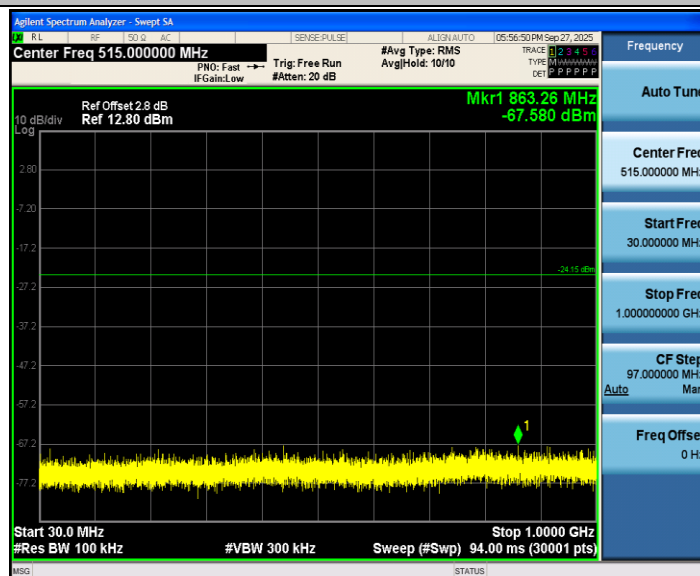




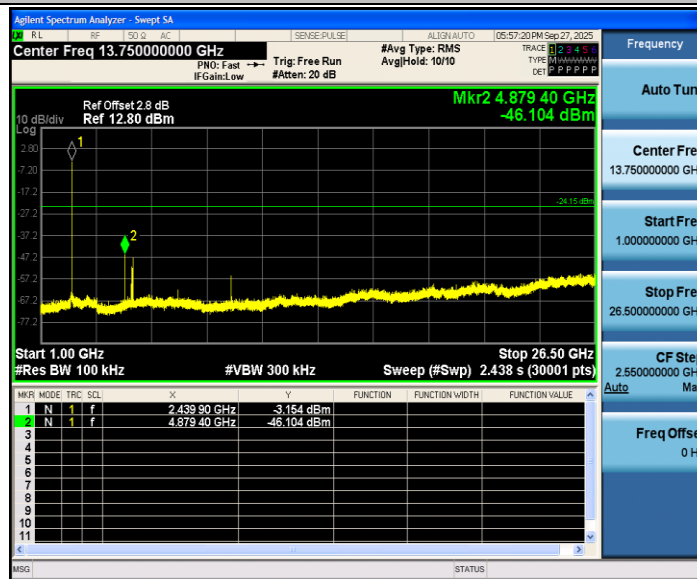
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



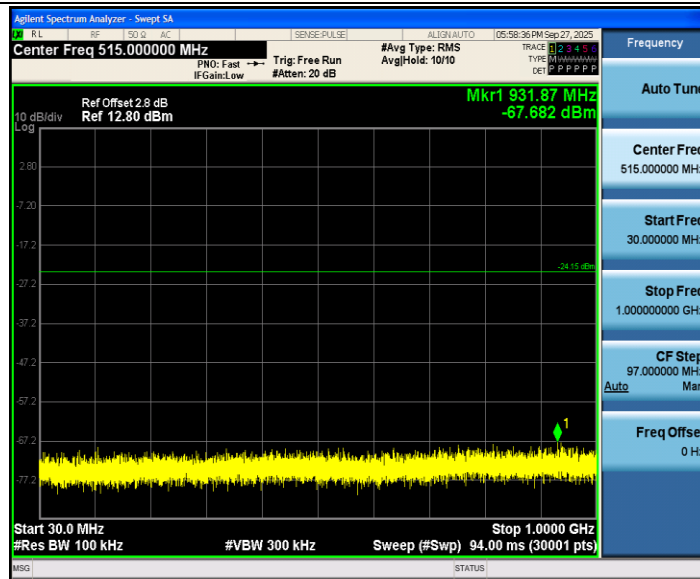
BLE_1M_Ant1_2440_1000~26500



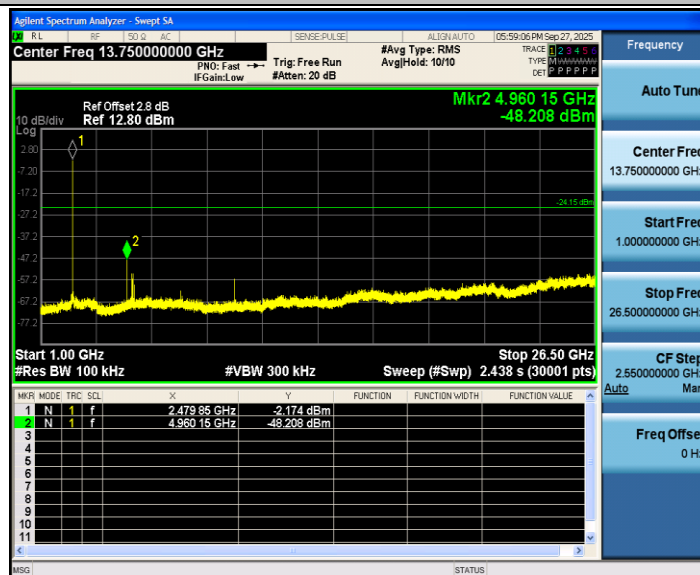
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500



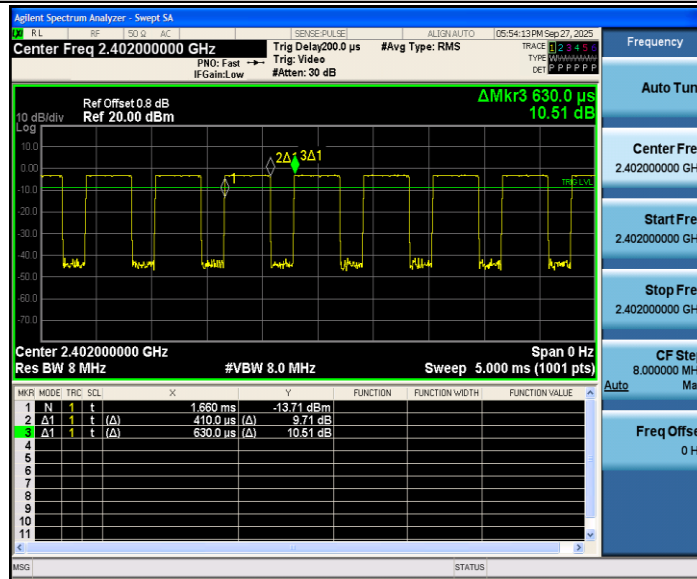
Appendix G: Duty Cycle

Test Result

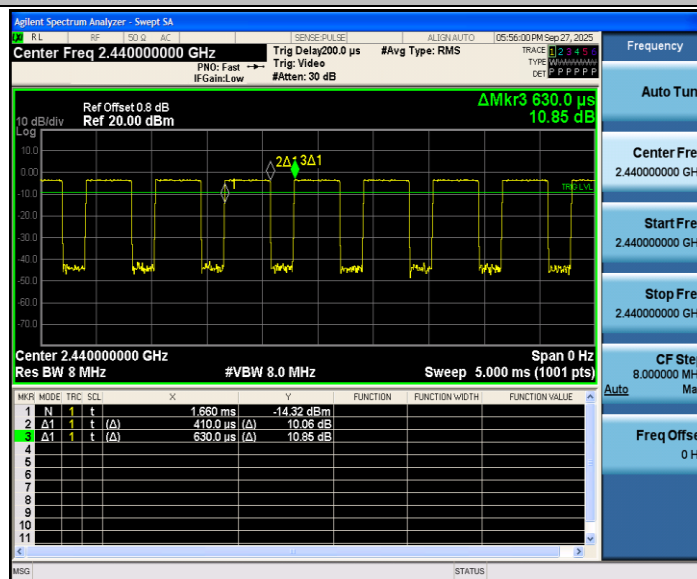
TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	0.41	0.63	0.6508	65.08	1.87	---	---
		2440	0.41	0.63	0.6508	65.08	1.87	---	---
		2480	0.41	0.63	0.6508	65.08	1.87	---	---

Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

