

FCC Appendix RF Test Data for BLE

FCC ID : 2BSTP-WT16

Company : Shenzhen Qitaishan Science & Technology Co., Ltd.

EUT : Signal detector

Model Number : WT16

Report No. : CTA25110701701

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	0.632	2401.700	2402.332	0.5	PASS
		2440	0.628	2439.692	2440.320	0.5	PASS
		2480	0.644	2479.692	2480.336	0.5	PASS

BLE_1M_Ant1_2402

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.402000000 GHz

Ref Offset 0.5 dB
Ref 20.00 dBm

Trig: Free Run
#Atten: 30 dB

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

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

ΔMkr3 632 kHz
0.088 dB

MNR	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.401700 GHz	-9.349 dBm			
2	N	1	f	2.402000 GHz	-3.750 dBm			
3	Δ	1	f (Δ)	632 kHz (Δ)	0.088 dB			

BLE_1M_Ant1_2440

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.440000000 GHz

Ref Offset 0.5 dB
Ref 20.00 dBm

Trig: Free Run
#Atten: 30 dB

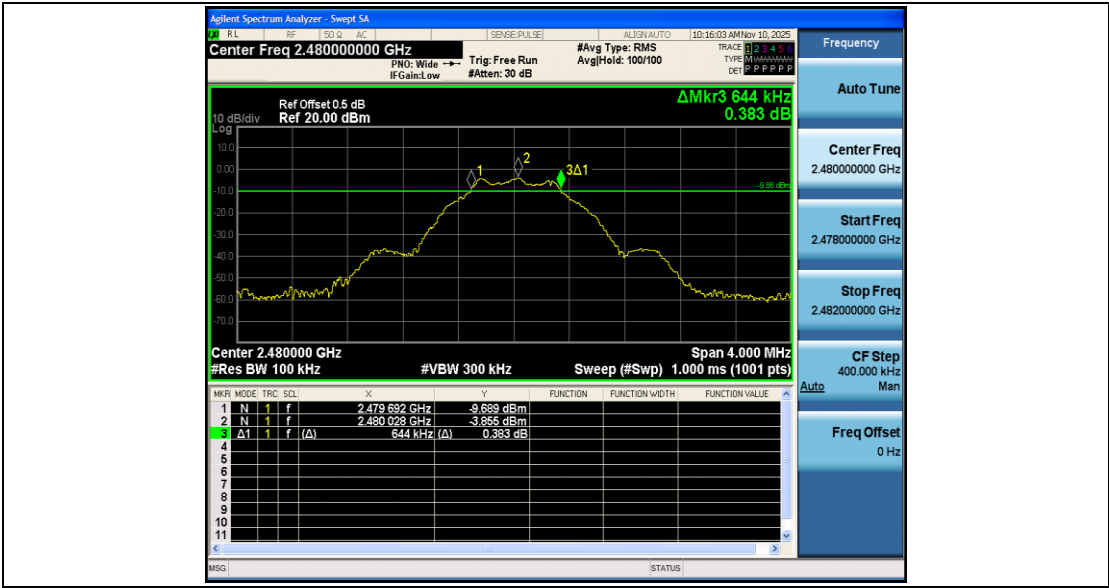
#Avg Type: RMS
Avg/Hold: 100/100

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

ΔMkr3 628 kHz
-0.177 dB

MNR	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.439692 GHz	-9.698 dBm			
2	N	1	f	2.440000 GHz	-3.896 dBm			
3	Δ	1	f (Δ)	628 kHz (Δ)	-0.177 dB			

BLE_1M_Ant1_2480

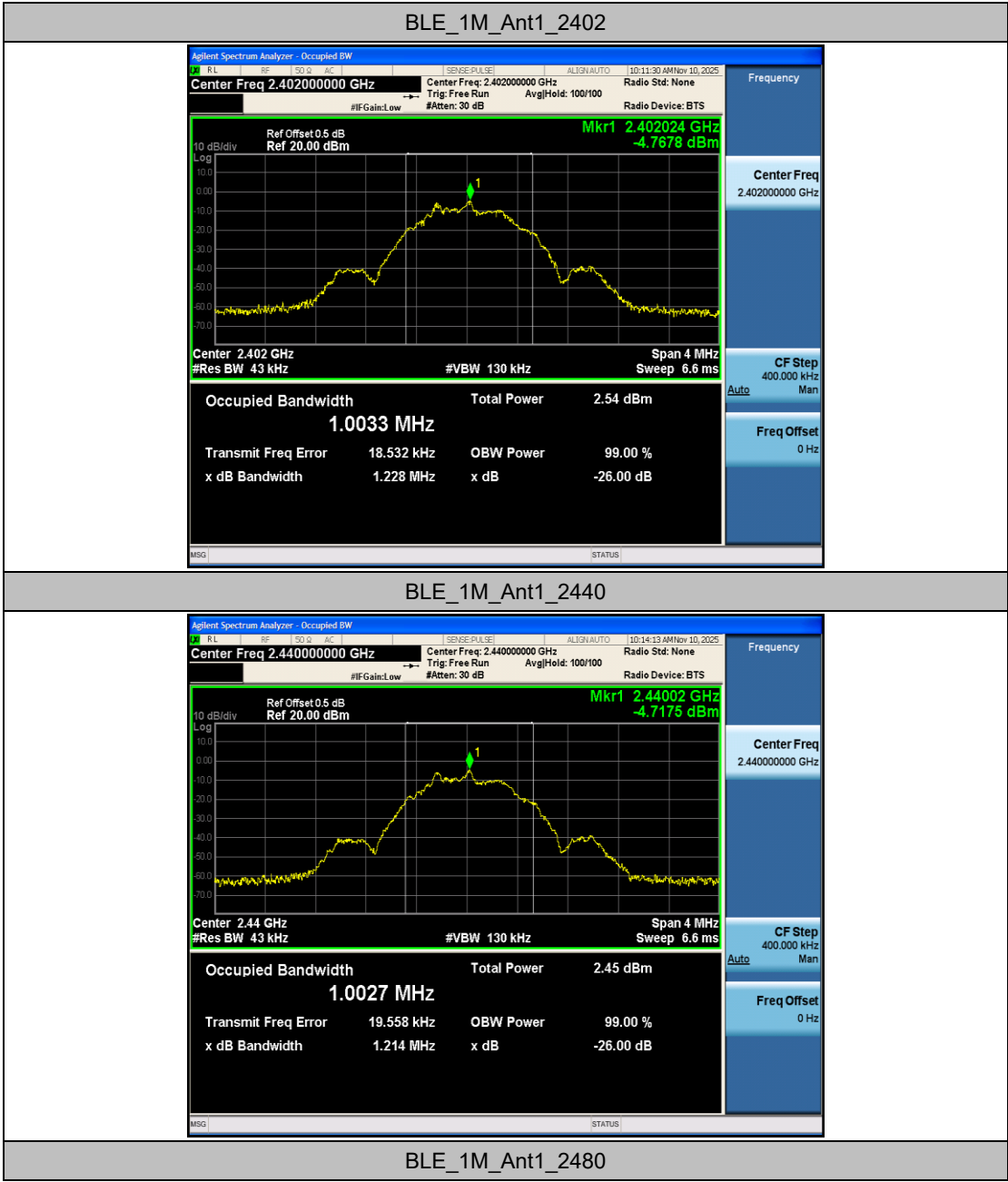


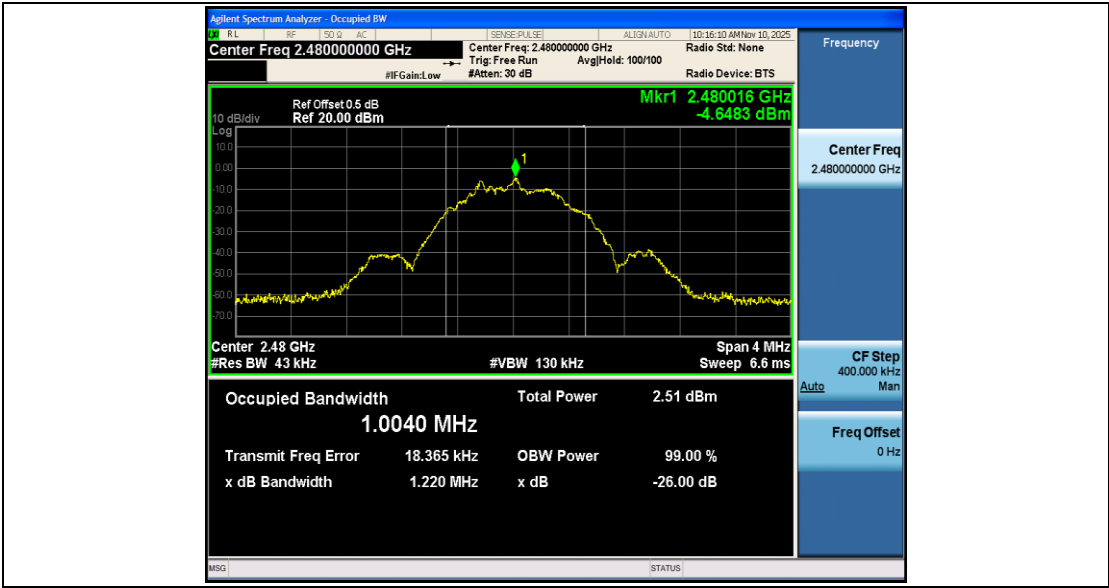
Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0033	2401.5169	2402.5202	---	---
		2440	1.0027	2439.5182	2440.5209	---	---
		2480	1.0040	2479.5164	2480.5204	---	---

Test Graphs





Appendix C: Maximum conducted output power

Test Result Peak

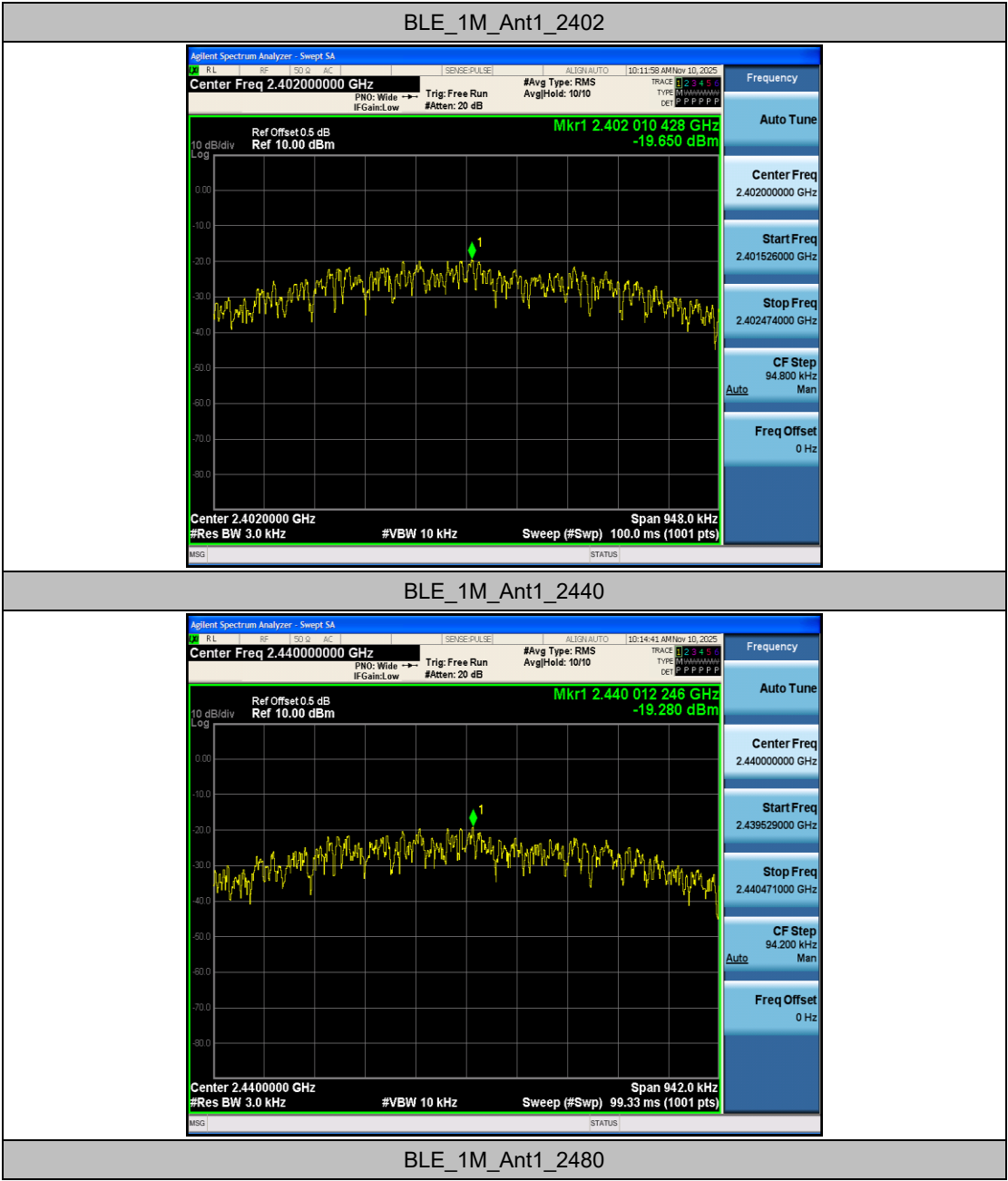
TestMode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-3.54	≤30	PASS
		2440	-3.68	≤30	PASS
		2480	-3.62	≤30	PASS

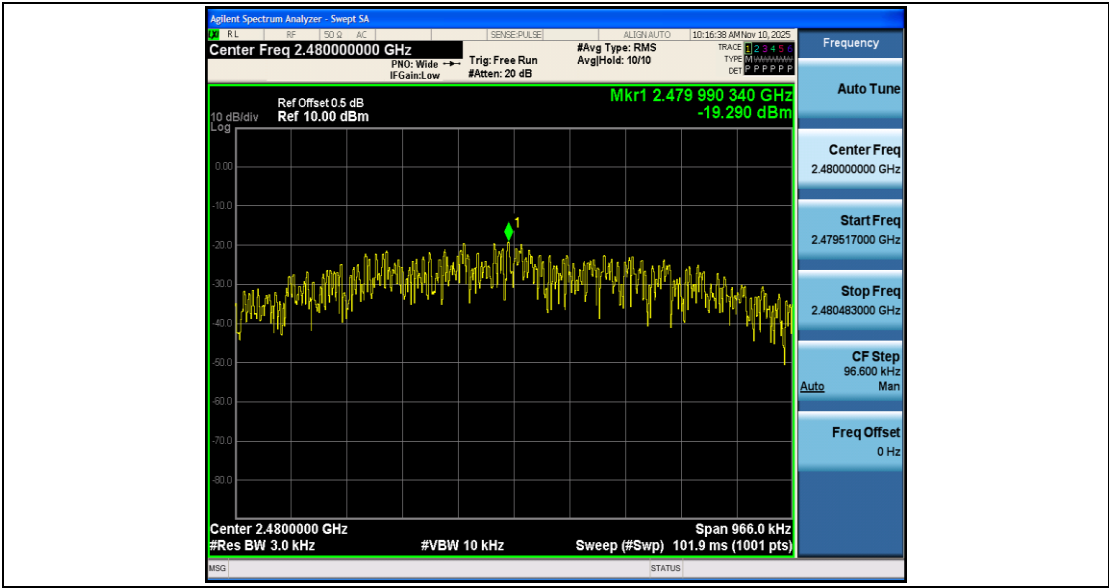
Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-19.65	≤8.00	PASS
		2440	-19.28	≤8.00	PASS
		2480	-19.29	≤8.00	PASS

Test Graphs



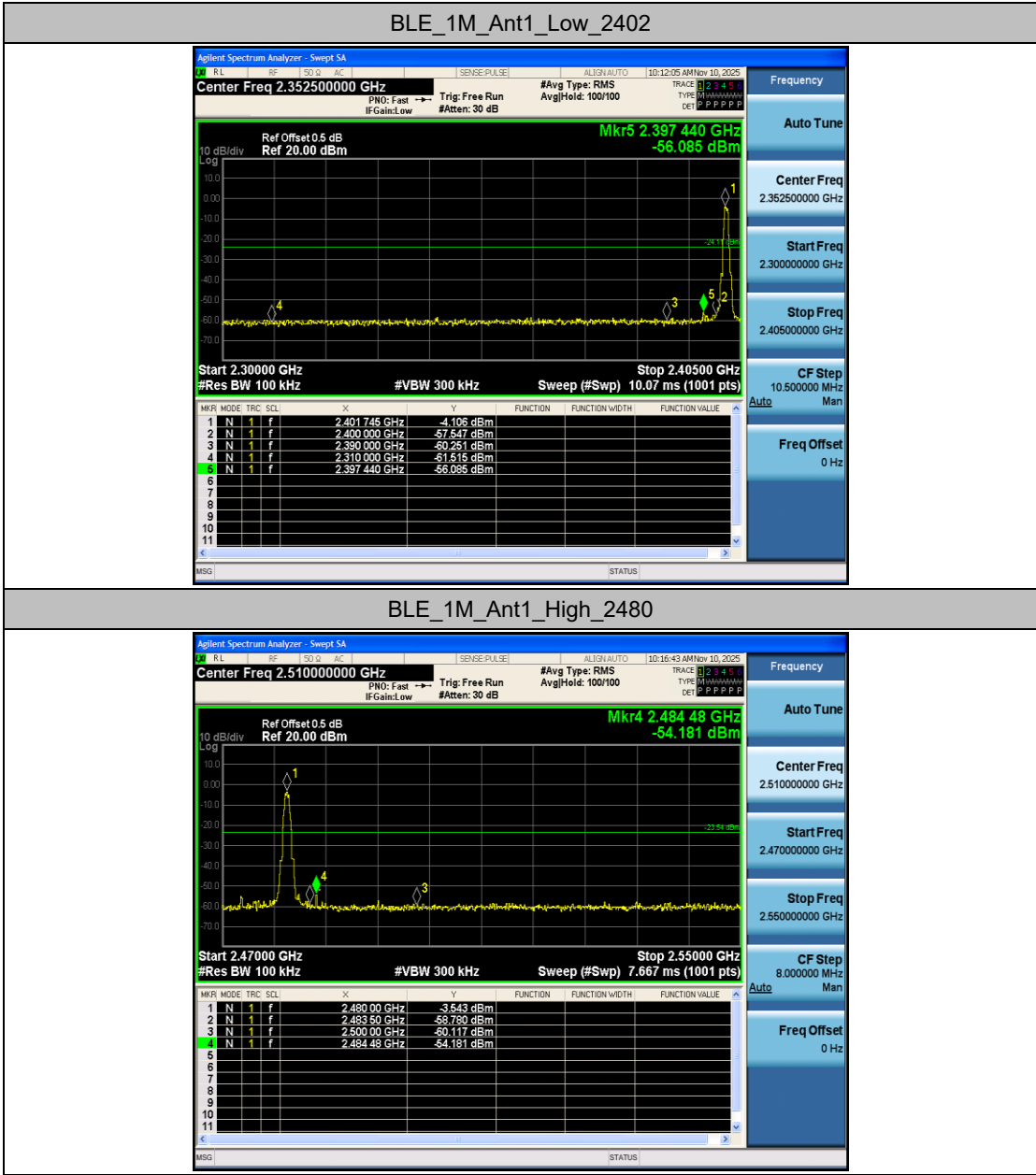


Appendix E: Band edge measurements

Test Result

TestMode	Antenna	Channel	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-4.11	-56.09	≤-24.11	PASS
		High	2480	-3.54	-54.18	≤-23.54	PASS

Test Graphs

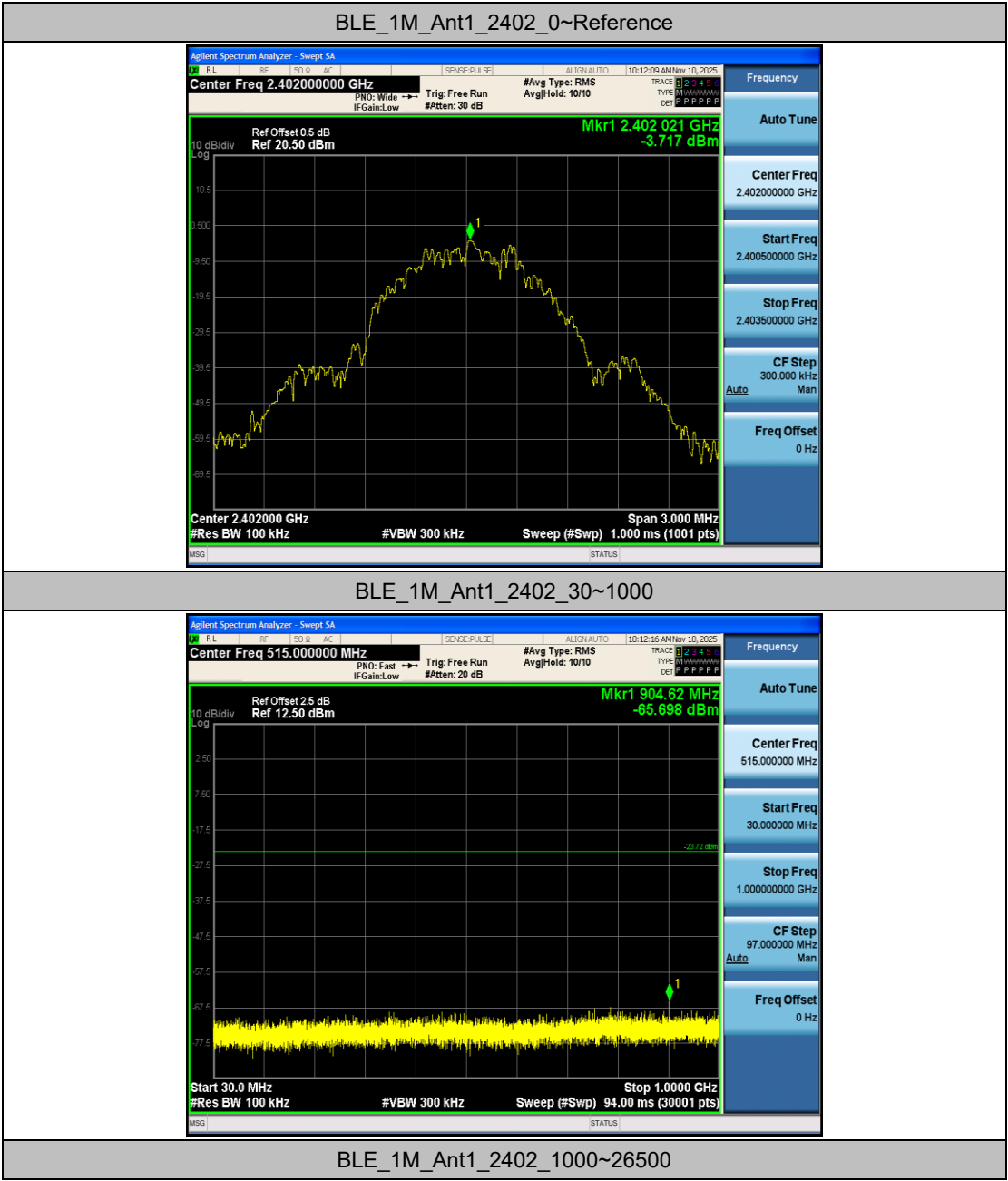


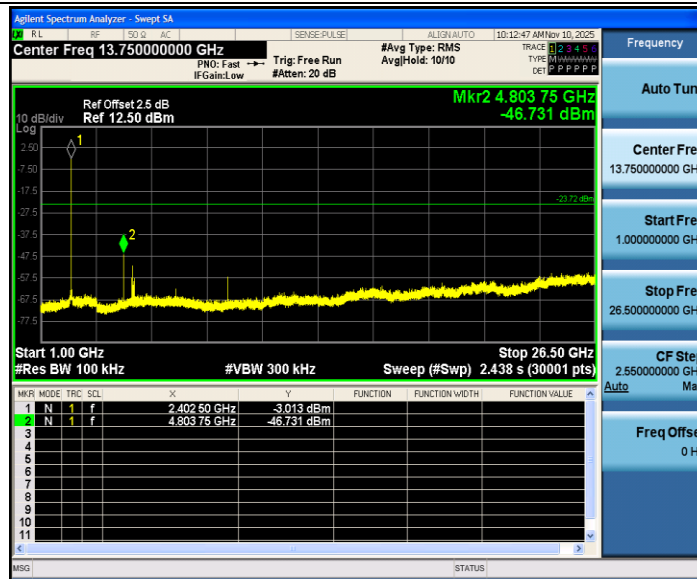
Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-3.72	-3.72	---	PASS
			30~1000	-3.72	-65.7	≤-23.72	PASS
			1000~26500	-3.72	-46.73	≤-23.72	PASS
		2440	Reference	-5.42	-5.42	---	PASS
			30~1000	-5.42	-67.38	≤-25.42	PASS
			1000~26500	-5.42	-50.15	≤-25.42	PASS
		2480	Reference	-4.29	-4.29	---	PASS
			30~1000	-4.29	-67.69	≤-24.29	PASS
			1000~26500	-4.29	-45.58	≤-24.29	PASS

Test Graphs

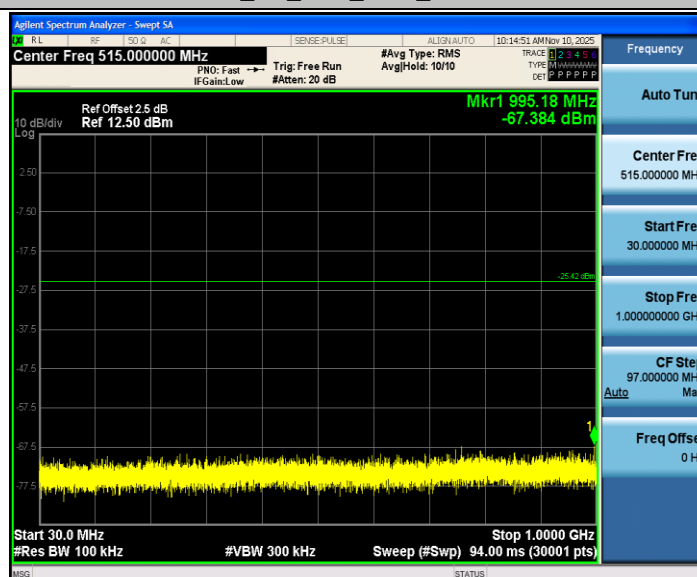




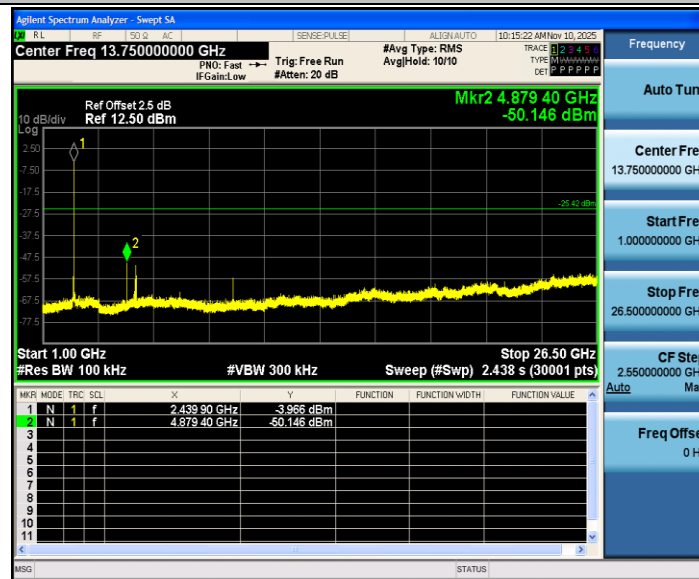
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



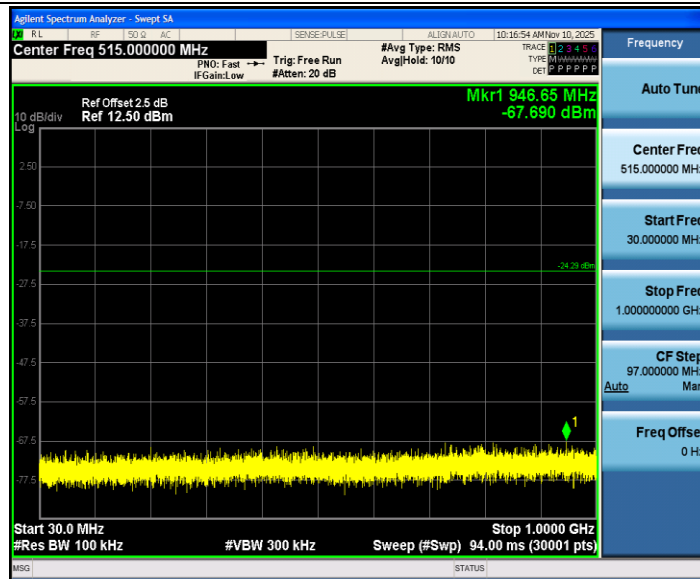
BLE_1M_Ant1_2440_1000~26500



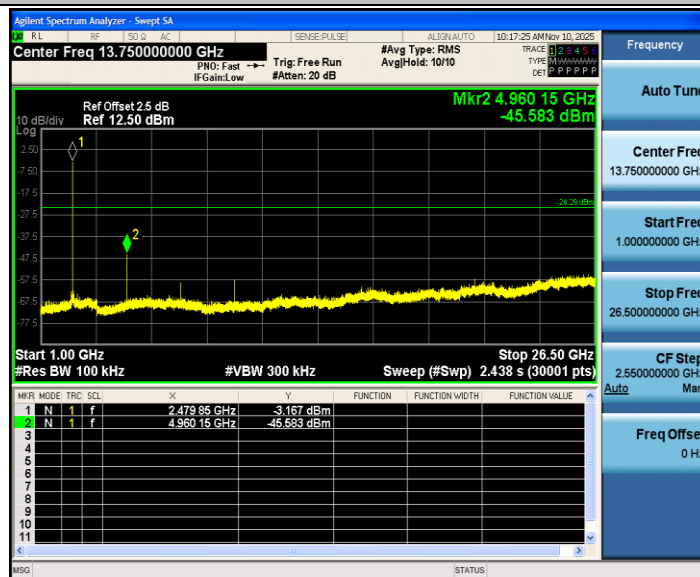
BLE_1M_Ant1_2480_0~Reference



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

