

Appendix RF Test Data for BLE

FCC ID : 2BRMD-S32

Company : Guangzhou Lotson International Trading Co., Ltd.

EUT : Scent Diffuser

Model Number : S32

Report No. : CTA25062100401

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	2401.692	2402.332	0.5	PASS
		2440	0.640	2439.692	2440.332	0.5	PASS
		2480	0.640	2479.692	2480.332	0.5	PASS

Test Graphs



BLE_1M_Ant1_2440

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.440000000 GHz

Ref Offset 0.9 dB
Ref 20.00 dBm

10 dB/div
Log

Span 4.000 MHz

Center 2.440000 GHz

#Res BW 100 kHz

#VBW 300 kHz

Sweep (#Swp) 1.000 ms (1001 pts)

Trig: Free Run

#Att: 30 dB

#Avg Type: RMS

Avg/Hold: 100/100

07:07:09 PM Jul 10, 2025

Frequency

Auto Tune

Center Freq
2.440000000 GHz

Start Freq
2.438000000 GHz

Stop Freq
2.442000000 GHz

CF Step
400.000 kHz
Man

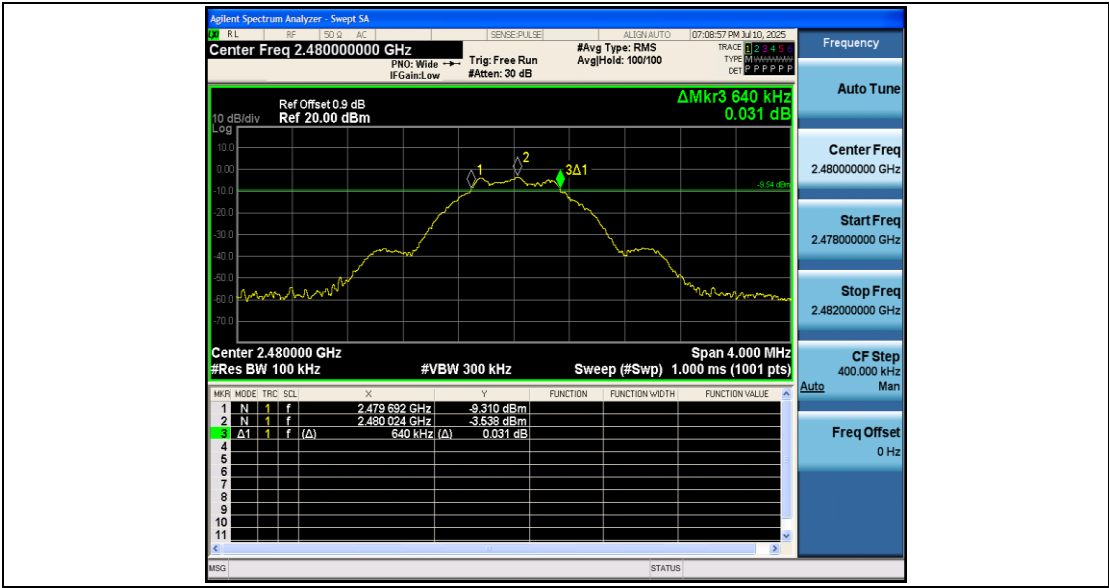
Freq Offset
0 Hz

MSG

STATUS

MARK	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.439692 GHz	-9.385 dBm			
2	N	1	f	2.440020 GHz	-3.416 dBm			
3	Δ	1	f (Δ)	640 kHz (Δ)	0.208 dB			

BLE_1M_Ant1_2480



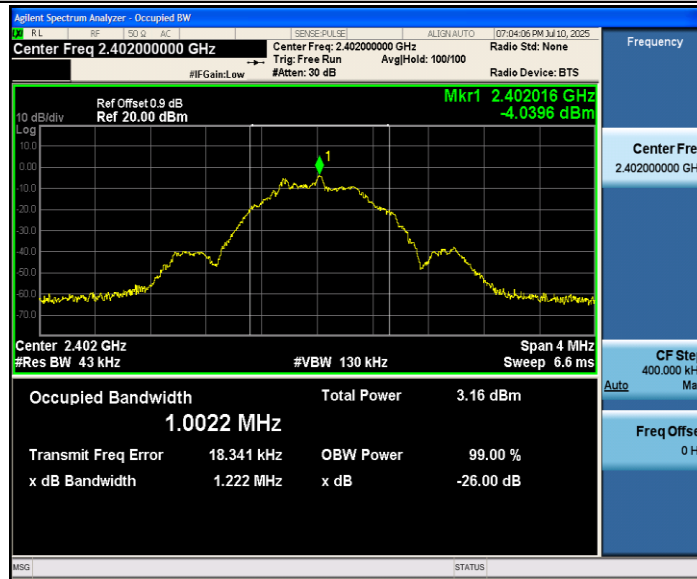
Appendix B: Occupied Channel Bandwidth

Test Result

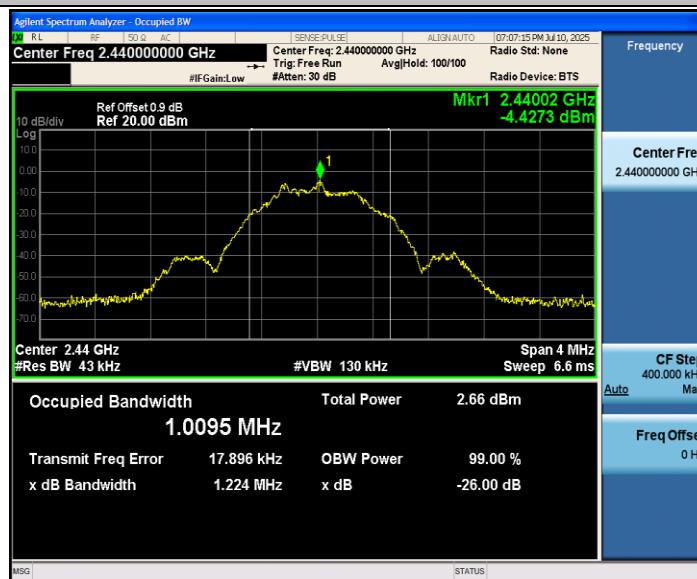
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0022	2401.5172	2402.5194	---	---
		2440	1.0095	2439.5132	2440.5227	---	---
		2480	1.0014	2479.5179	2480.5193	---	---

Test Graphs

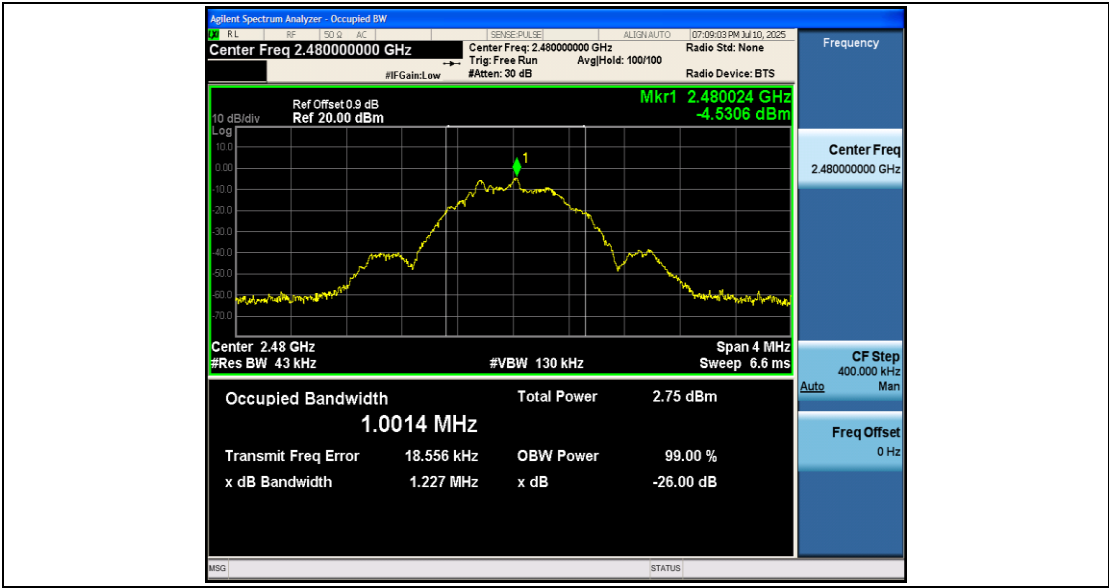
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



Appendix C: Maximum conducted output power

Test Result Peak

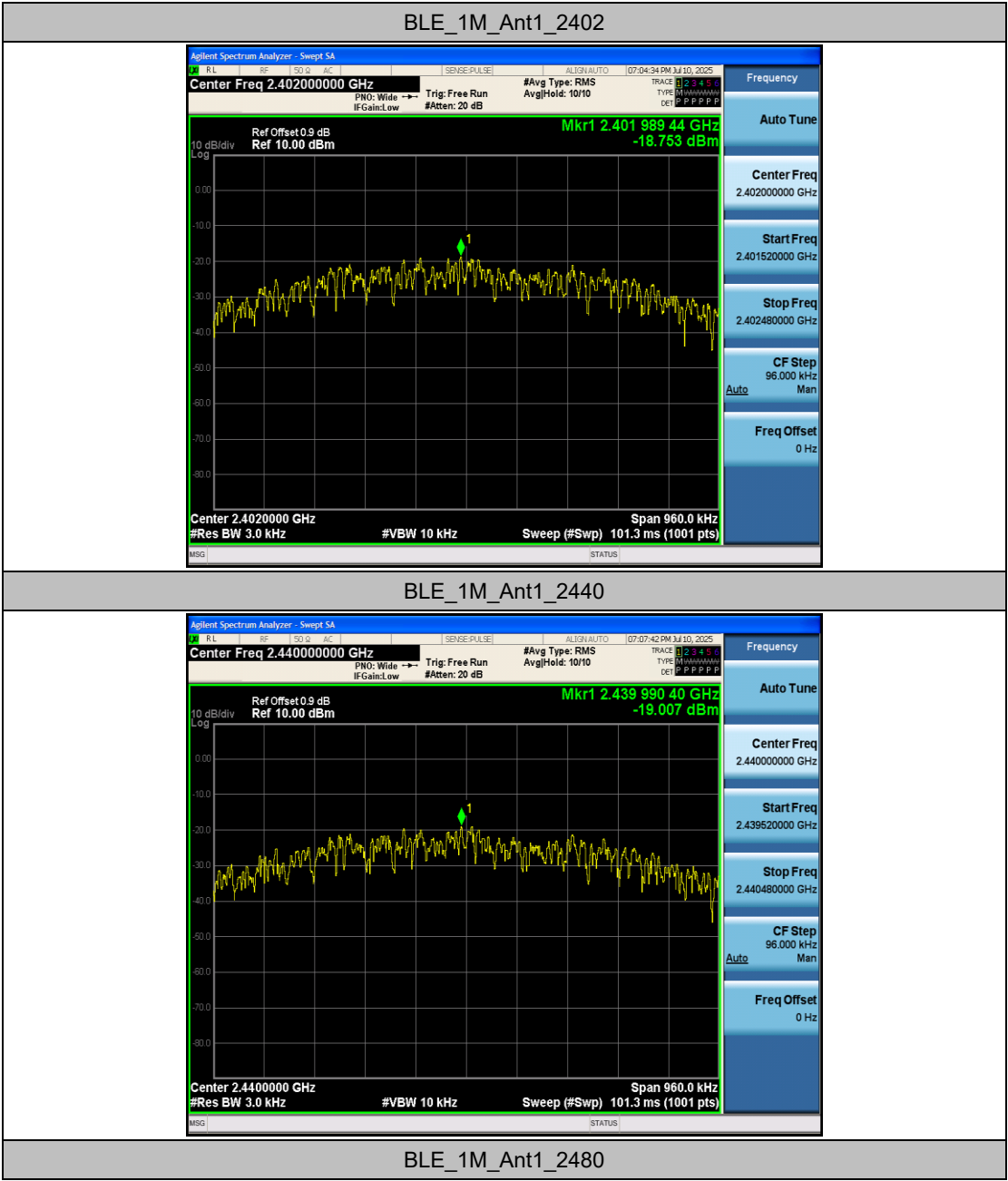
TestMode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-3.00	≤30	PASS
		2440	-3.33	≤30	PASS
		2480	-3.37	≤30	PASS

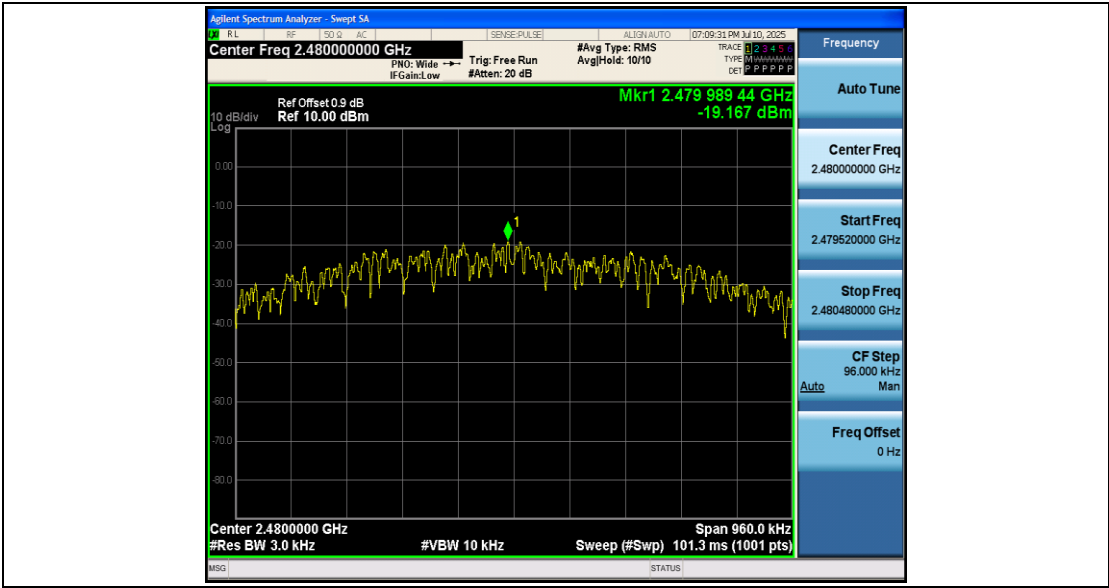
Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-18.75	≤8.00	PASS
		2440	-19.01	≤8.00	PASS
		2480	-19.17	≤8.00	PASS

Test Graphs



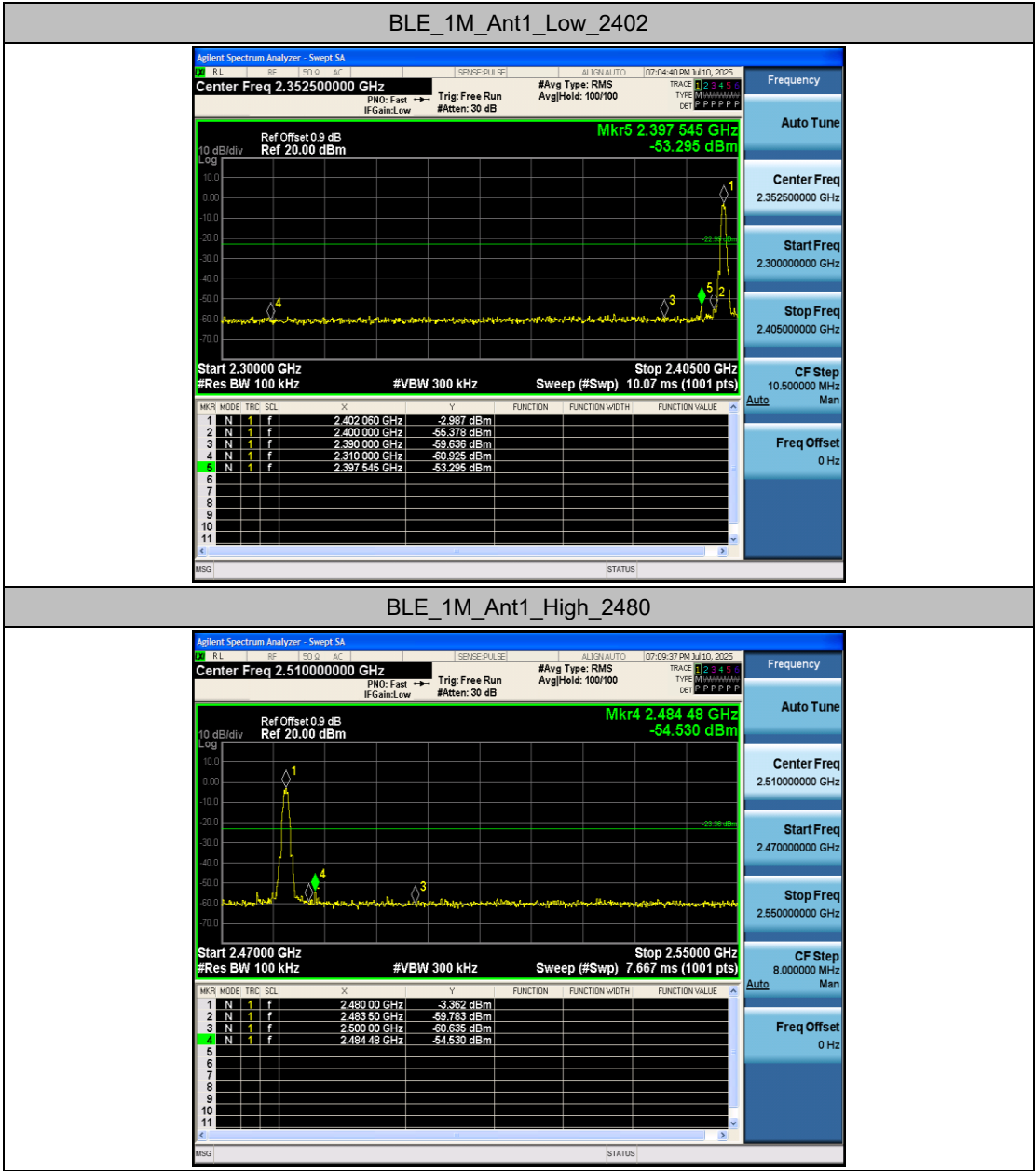


Appendix E: Band edge measurements

Test Result

TestMode	Antenna	Channel	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-2.99	-53.3	≤-22.99	PASS
		High	2480	-3.36	-54.53	≤-23.36	PASS

Test Graphs

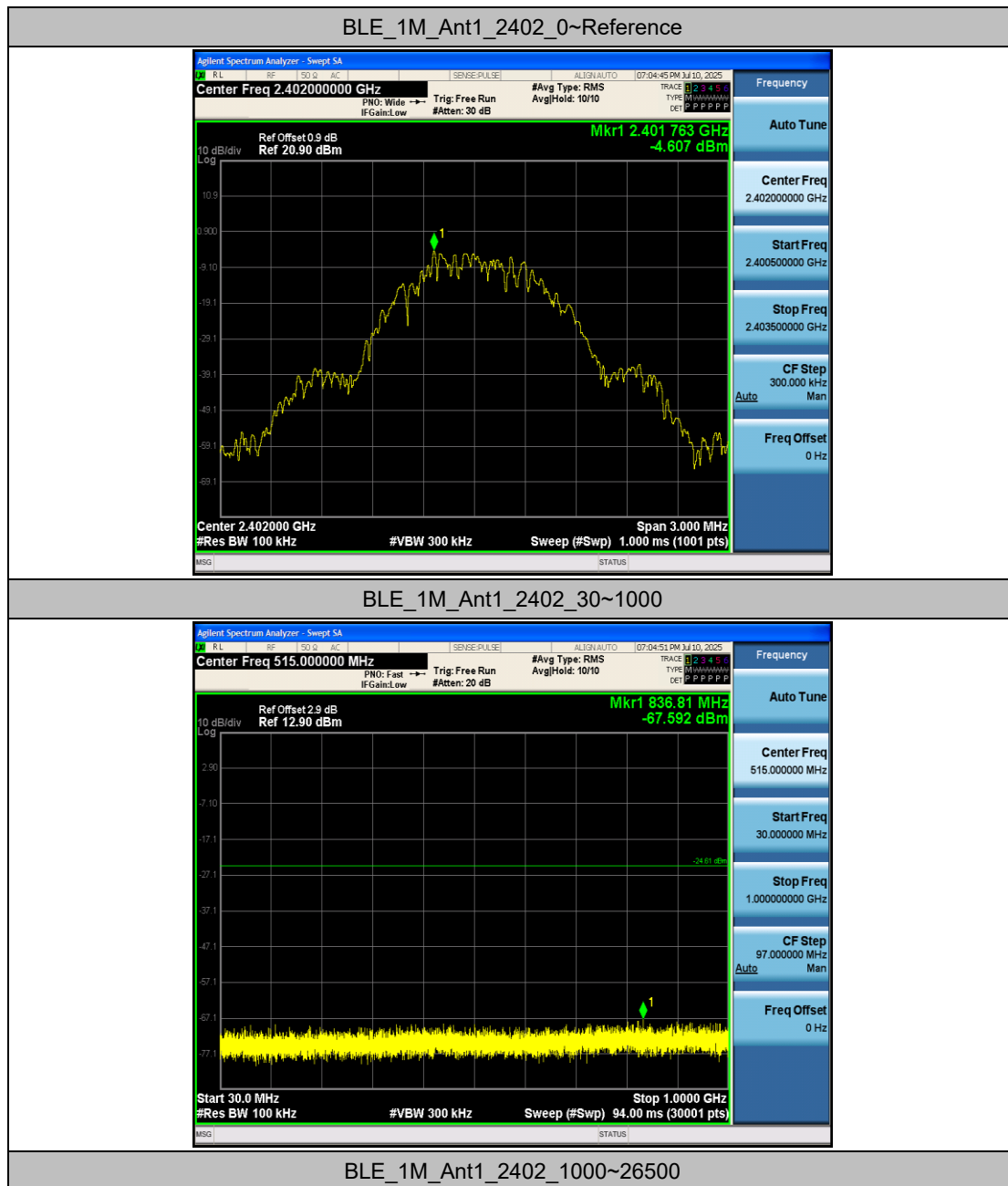


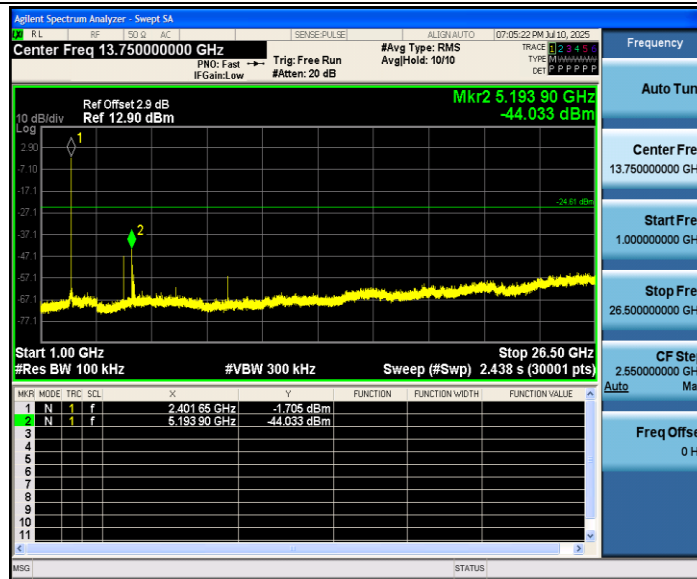
Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-4.61	-4.61	---	PASS
			30~1000	-4.61	-67.59	≤-24.61	PASS
			1000~26500	-4.61	-44.03	≤-24.61	PASS
		2440	Reference	-4.00	-4.00	---	PASS
			30~1000	-4.00	-66.37	≤-24	PASS
			1000~26500	-4.00	-46.75	≤-24	PASS
		2480	Reference	-5.29	-5.29	---	PASS
			30~1000	-5.29	-67.6	≤-25.29	PASS
			1000~26500	-5.29	-47.49	≤-25.29	PASS

Test Graphs

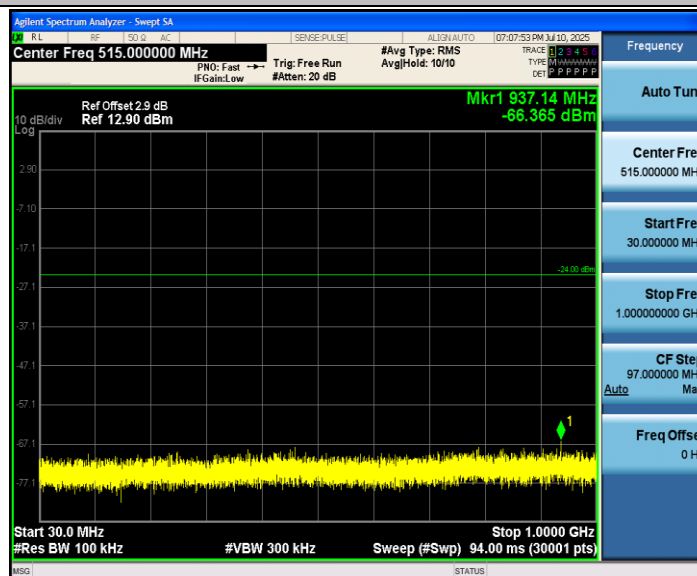




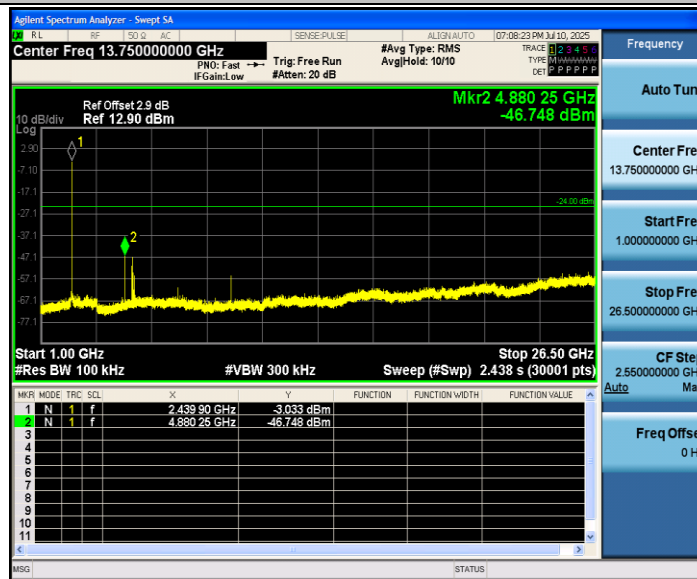
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



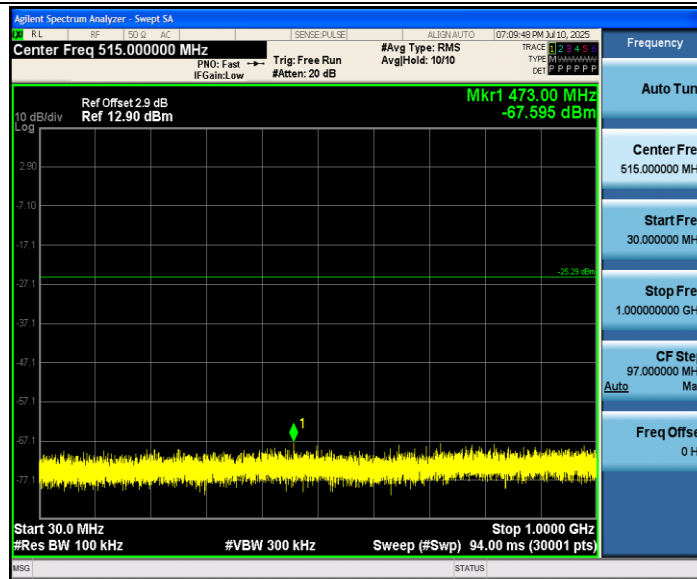
BLE_1M_Ant1_2440_1000~26500



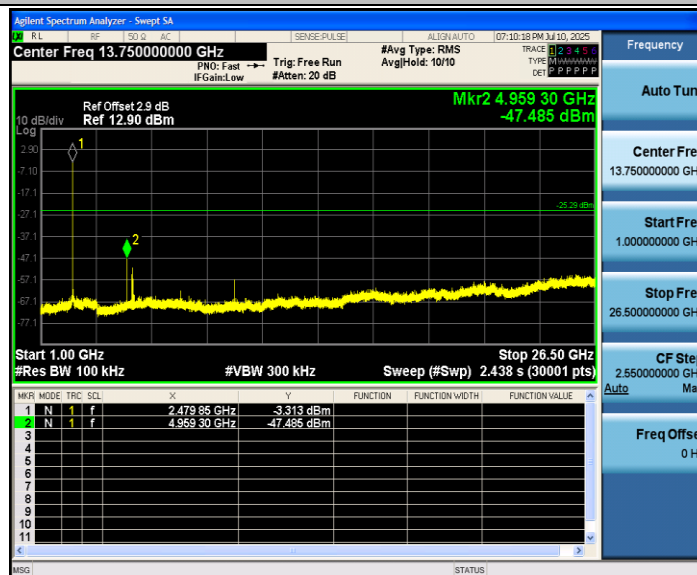
BLE_1M_Ant1_2480_0~Reference



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

