

FCC Appendix RF Test Data for BLE

Company: : **SHENZHEN YOWEXA MEASUREMENT TECHNOLOGY
CO.,LTD**

EUT : **Automotive Paint Meter**

Model Number : **EC-570S**

Report No. : **CTA25061600401**

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	0.652	2401.684	2402.336	0.5	PASS
		2440	0.636	2439.700	2440.336	0.5	PASS
		2480	0.632	2479.696	2480.328	0.5	PASS

BLE_1M_Ant1_2402

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.402000000 GHz

Ref Offset 0.8 dB
Ref 20.00 dBm

ΔMkr3 652 kHz
0.114 dB

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	2.401894 GHz	-9.280 dBm			
2	N	1	f	2.402024 GHz	-3.554 dBm			
3	Δ1	1	f (Δ)	652 kHz (Δ)	0.114 dB			

BLE_1M_Ant1_2440

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.440000000 GHz

Ref Offset 0.8 dB
Ref 20.00 dBm

ΔMkr3 636 kHz
-0.031 dB

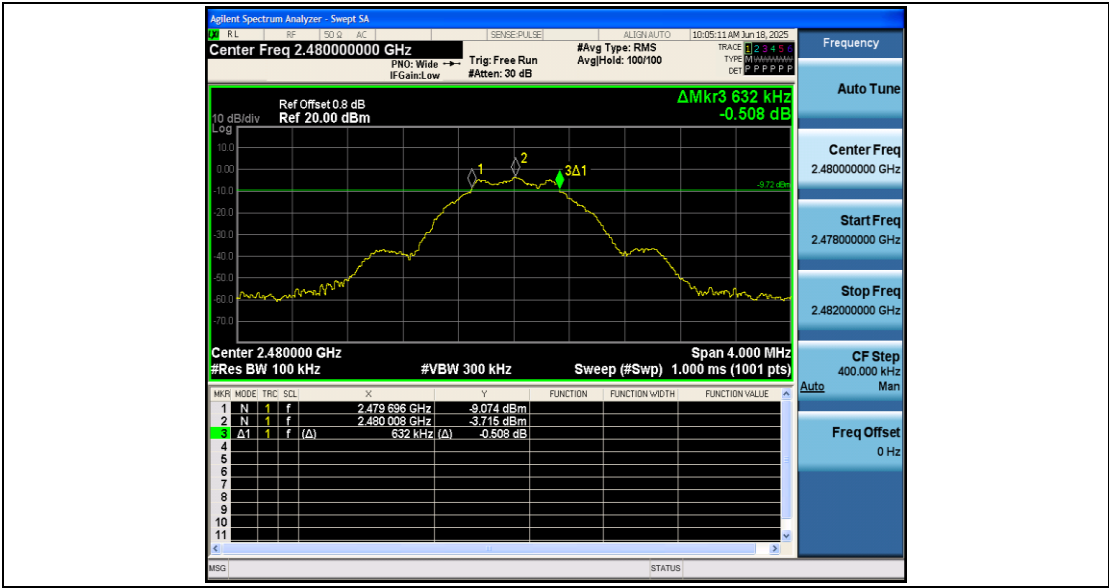
Center 2.440000 GHz

#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	-9.040 dBm			
2	N	1	f	2.440016 GHz	-3.520 dBm			
3	Δ1	1	f (Δ)	636 kHz (Δ)	-0.031 dB			

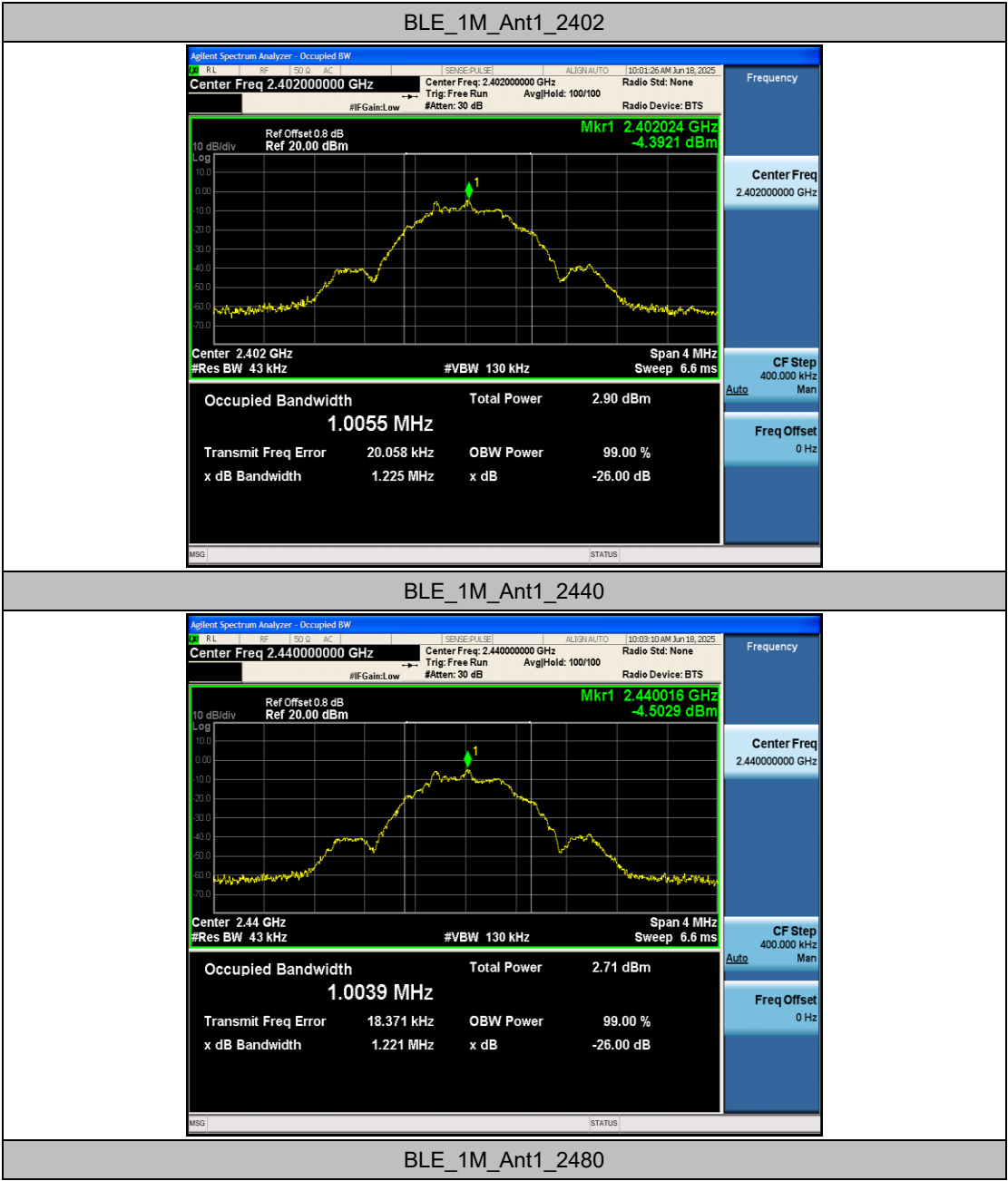


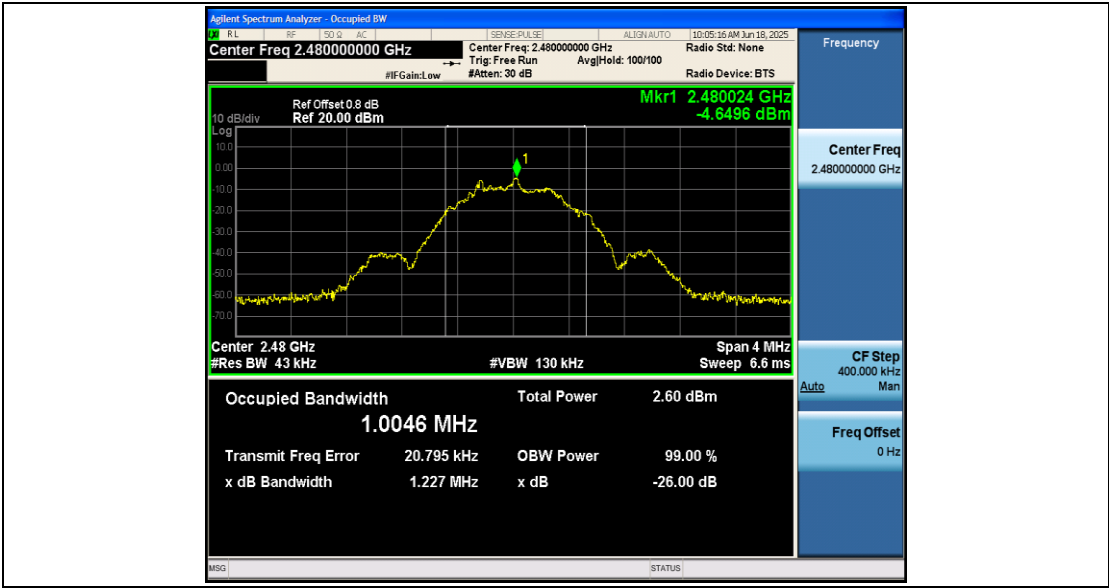
Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0055	2401.5173	2402.5228	---	---
		2440	1.0039	2439.5164	2440.5203	---	---
		2480	1.0046	2479.5185	2480.5231	---	---

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	-3.09	≤30	PASS
		2440	-3.42	≤30	PASS
		2480	-3.46	≤30	PASS

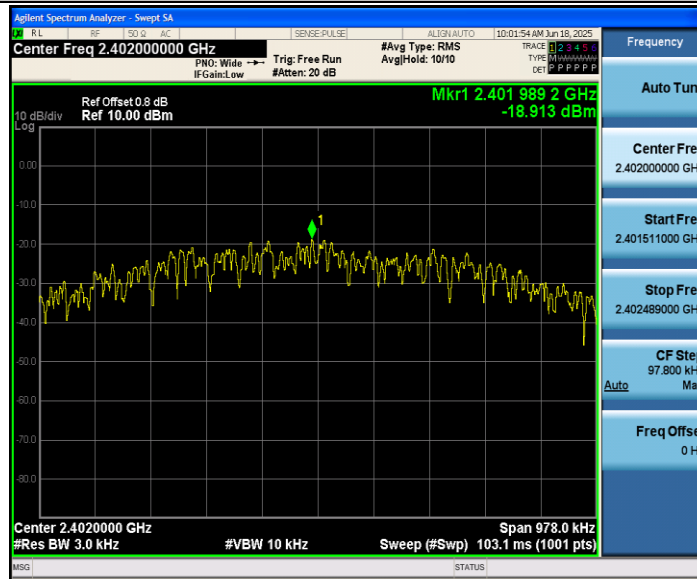
Appendix D: Maximum power spectral density

Test Result

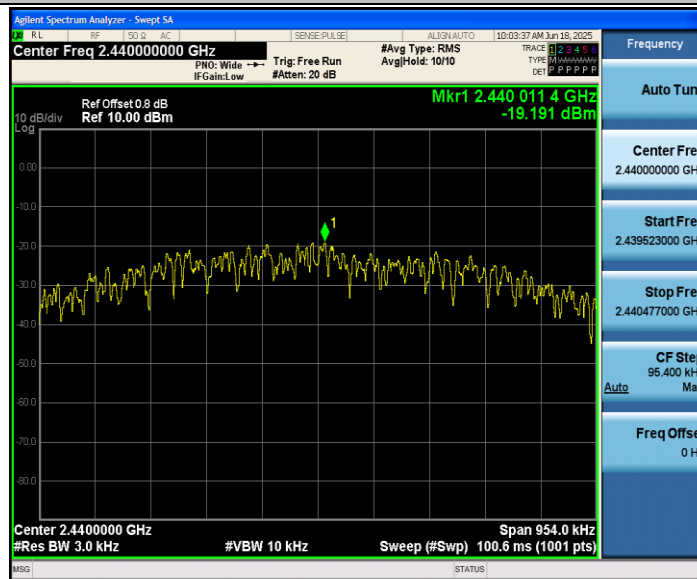
TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-18.91	≤8.00	PASS
		2440	-19.19	≤8.00	PASS
		2480	-19.27	≤8.00	PASS

Test Graphs

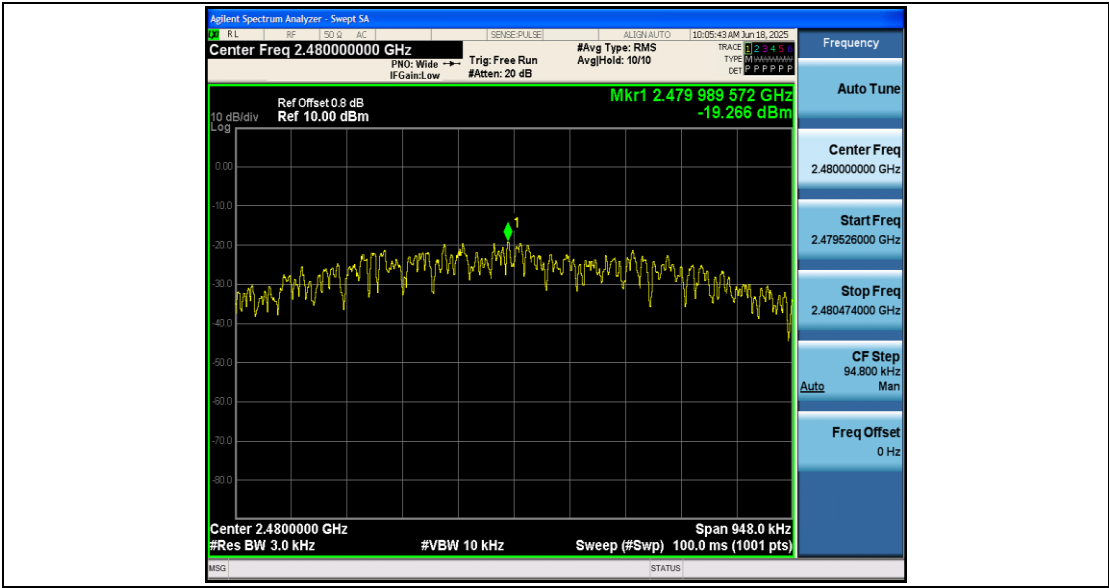
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

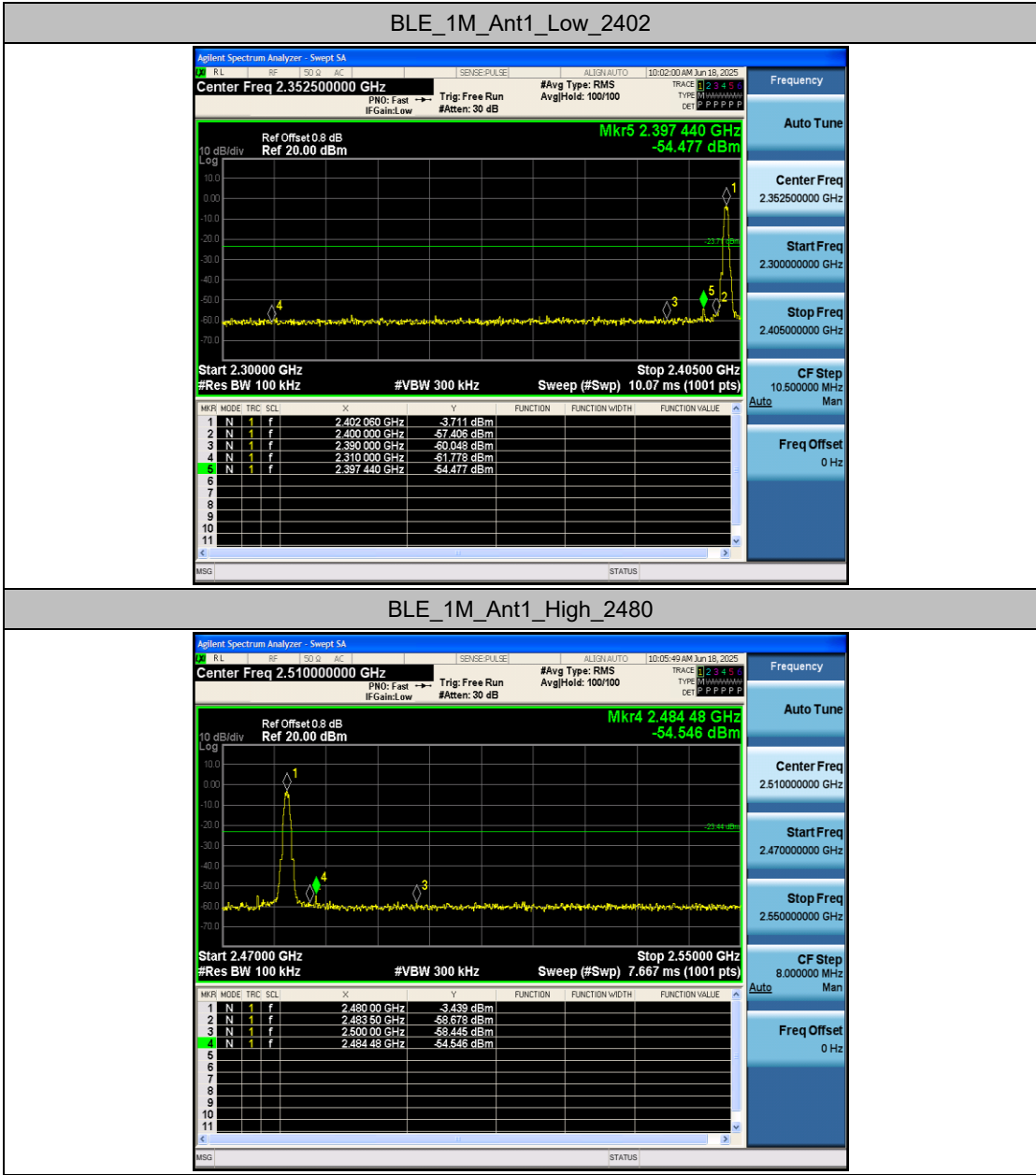


Appendix E: Band edge measurements

Test Result

TestMode	Antenna	Channel	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-3.71	-54.48	≤-23.71	PASS
		High	2480	-3.44	-54.55	≤-23.44	PASS

Test Graphs

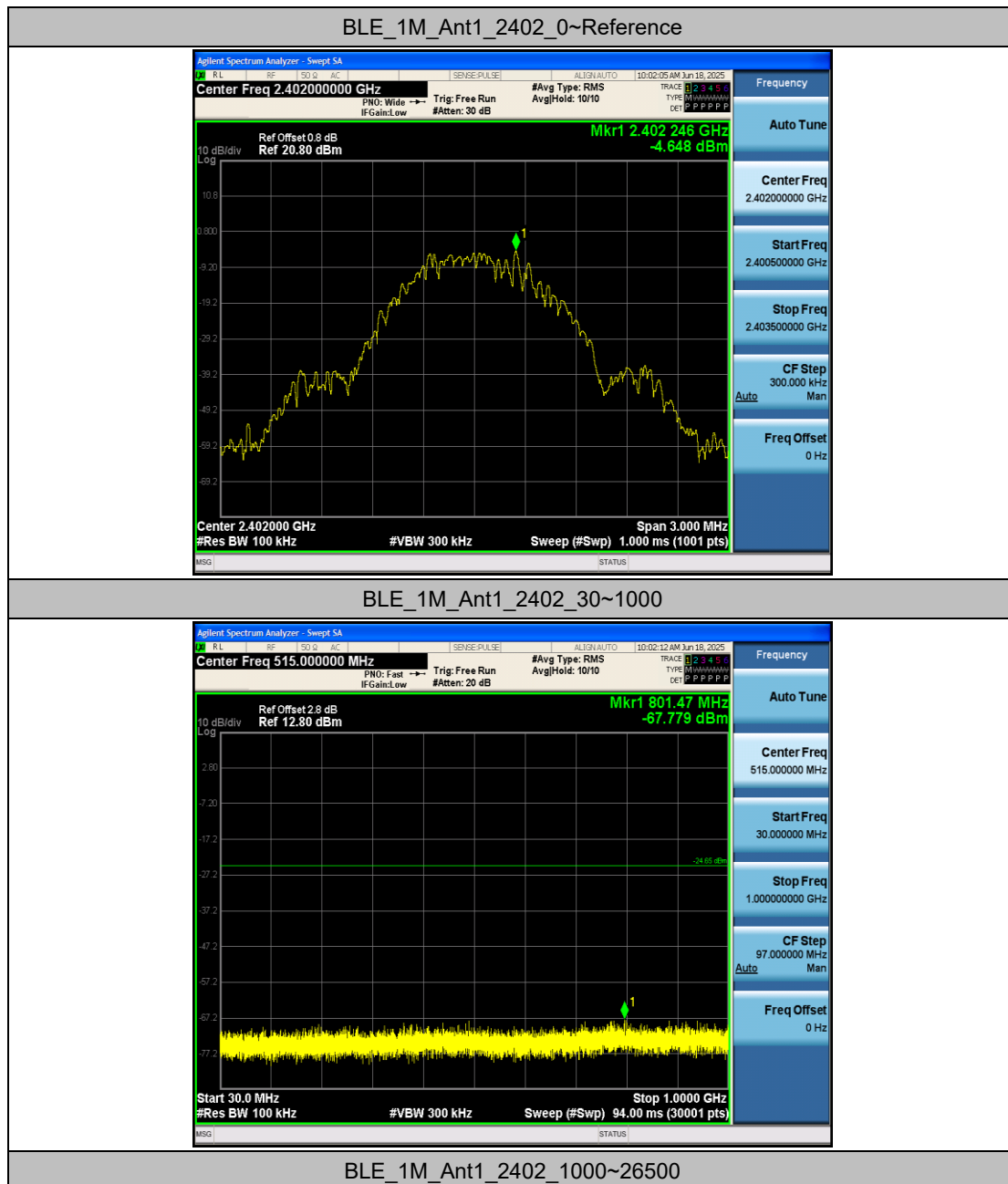


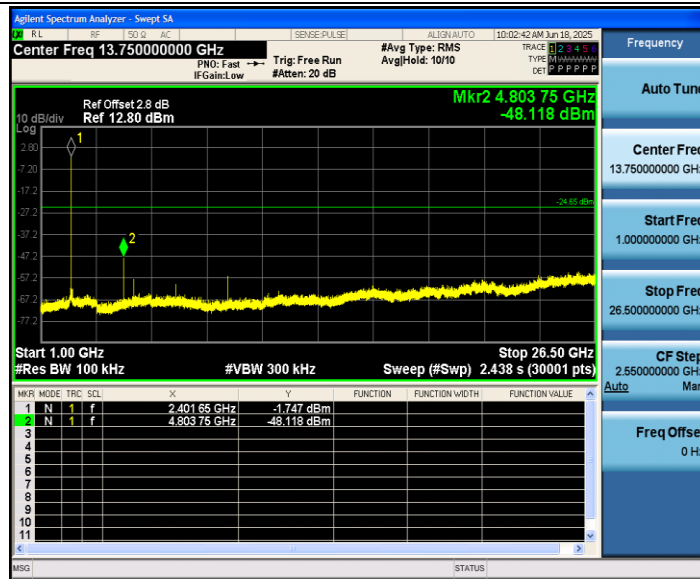
Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-4.65	-4.65	---	PASS
			30~1000	-4.65	-67.78	≤-24.65	PASS
			1000~26500	-4.65	-48.12	≤-24.65	PASS
		2440	Reference	-5.93	-5.93	---	PASS
			30~1000	-5.93	-68.01	≤-25.93	PASS
			1000~26500	-5.93	-48.53	≤-25.93	PASS
		2480	Reference	-5.26	-5.26	---	PASS
			30~1000	-5.26	-67.84	≤-25.26	PASS
			1000~26500	-5.26	-49	≤-25.26	PASS

Test Graphs

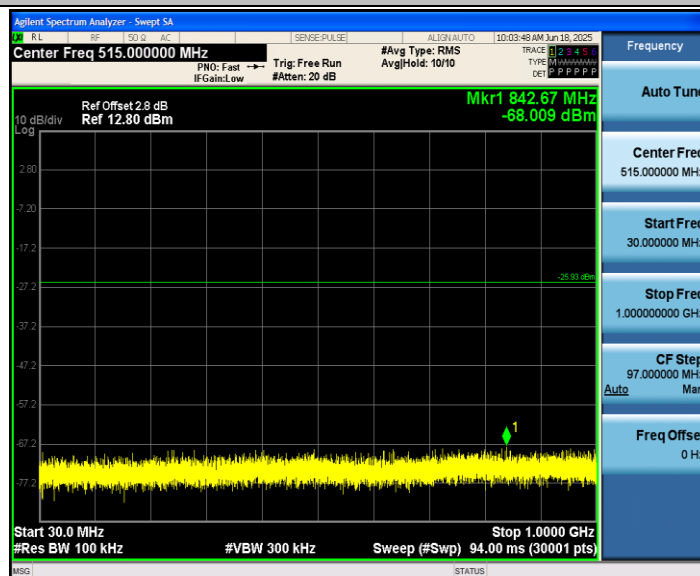




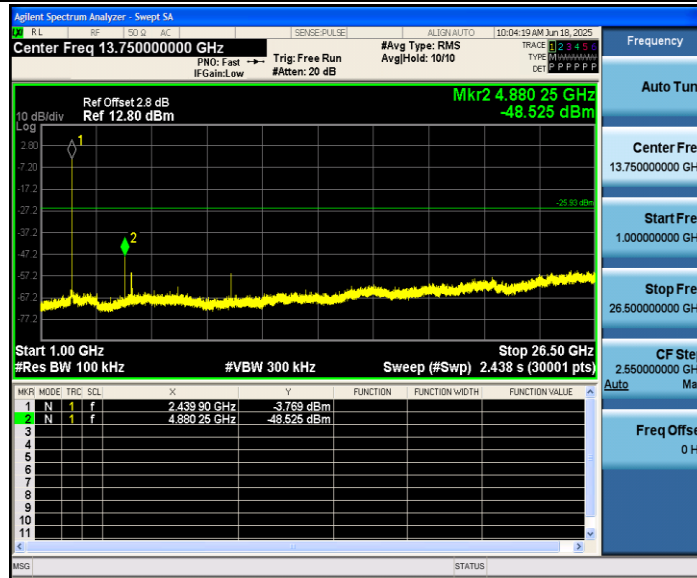
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



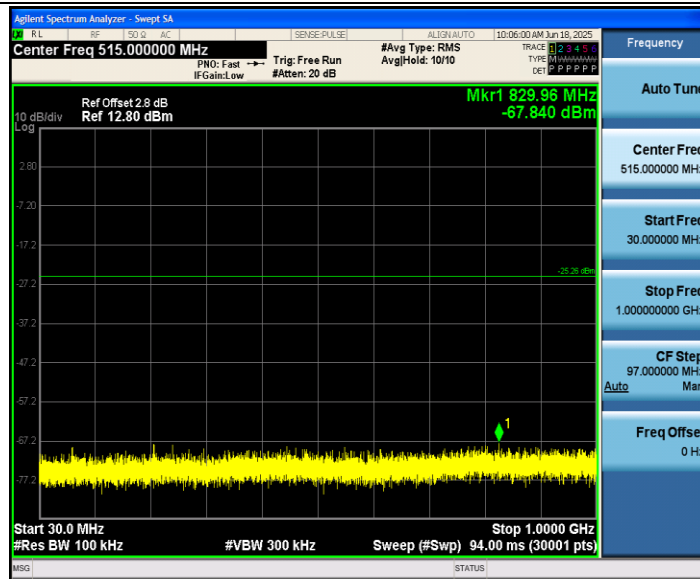
BLE_1M_Ant1_2440_1000~26500



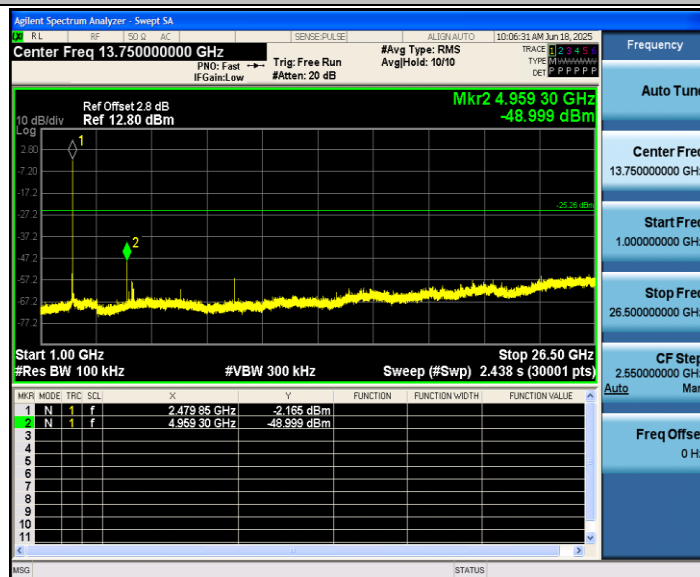
BLE_1M_Ant1_2480_0~Reference



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

