

FCC Appendix RF Test Data for BLE

FCC ID : 2A8W5-S7PRIME

Company : BAODE INTERNATIONAL LIMITED

EUT : Smart Media Player

Model Number : S7 Prime

Report No. : CTA25120301201

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	0.628	2401.708	2402.336	0.5	PASS
		2440	0.644	2439.692	2440.336	0.5	PASS
		2480	0.636	2479.696	2480.332	0.5	PASS

Agilent Spectrum Analyzer - Sweep SA

Center Freq 2.402000000 GHz

Ref Offset 0.3 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
0.447 dB

Log

10 dB/div

0.00

10.0

20.0

30.0

40.0

50.0

60.0

70.0

Center 2.402000 GHz

#Res BW 100 kHz

#VBW 300 kHz

Span 4.000 MHz

Sweep (#Swp) 1.000 ms (1001 pts)

MNR	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.401708 GHz	-9.825 dBm			
2	N	1	f	2.402028 GHz	-3.842 dBm			
3	Δ	1	f (Δ)	628 kHz (Δ)	0.447 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

MSO

STATUS

BLE_1M_Ant1_2402

Agilent Spectrum Analyzer - Sweep SA

Center Freq 2.440000000 GHz

Ref Offset 0.3 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 644 kHz
0.046 dB

Log

10 dB/div

0.00

10.0

20.0

30.0

40.0

50.0

60.0

70.0

Center 2.440000 GHz

#Res BW 100 kHz

#VBW 300 kHz

Span 4.000 MHz

Sweep (#Swp) 1.000 ms (1001 pts)

MNR	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.439692 GHz	-9.873 dBm			
2	N	1	f	2.440020 GHz	-3.920 dBm			
3	Δ	1	f (Δ)	644 kHz (Δ)	0.046 dB			

Frequency

Auto Tune

Center Freq
2.440000000 GHz

Start Freq
2.438000000 GHz

Stop Freq
2.442000000 GHz

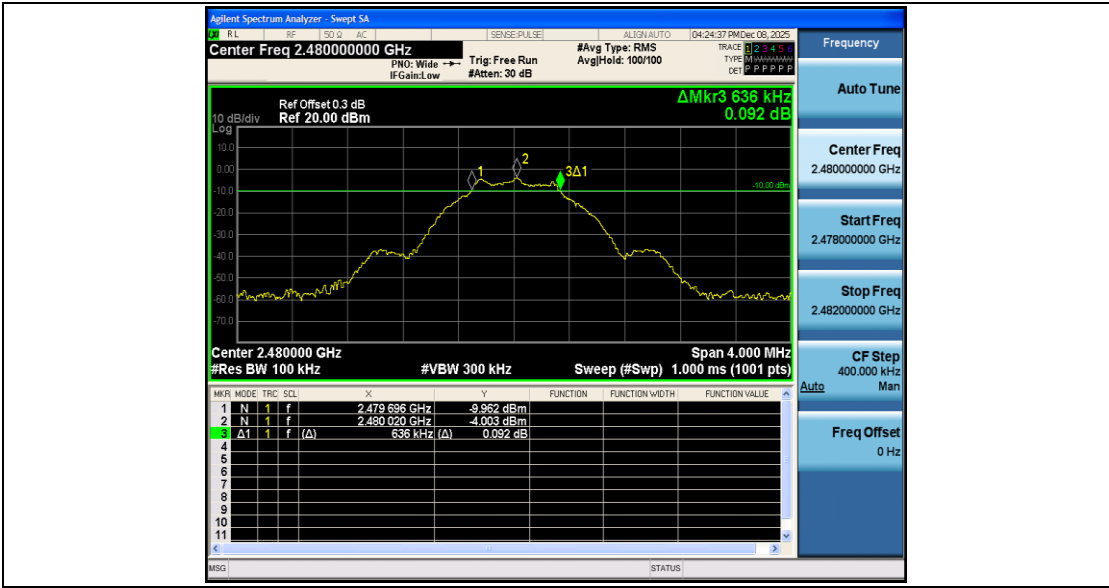
CF Step
400.000 kHz
Man

Freq Offset
0 Hz

MSO

STATUS

BLE_1M_Ant1_2440



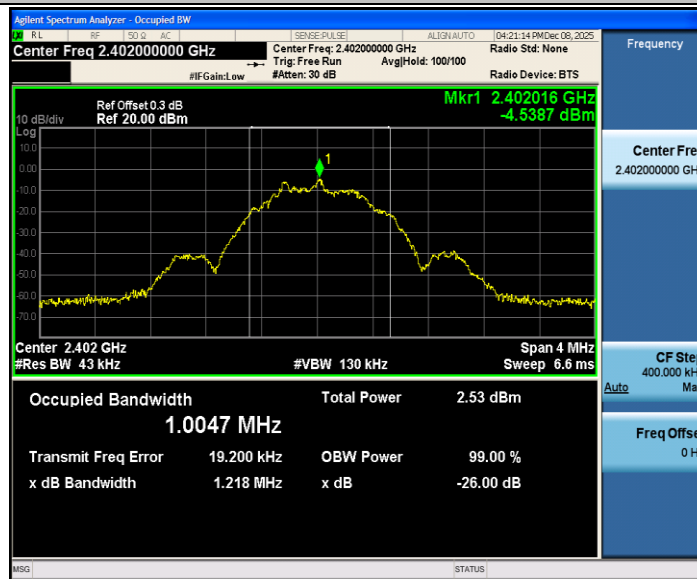
Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0047	2401.5169	2402.5216	---	---
		2440	1.0020	2439.5188	2440.5208	---	---
		2480	1.0024	2479.5188	2480.5212	---	---

Test Graphs

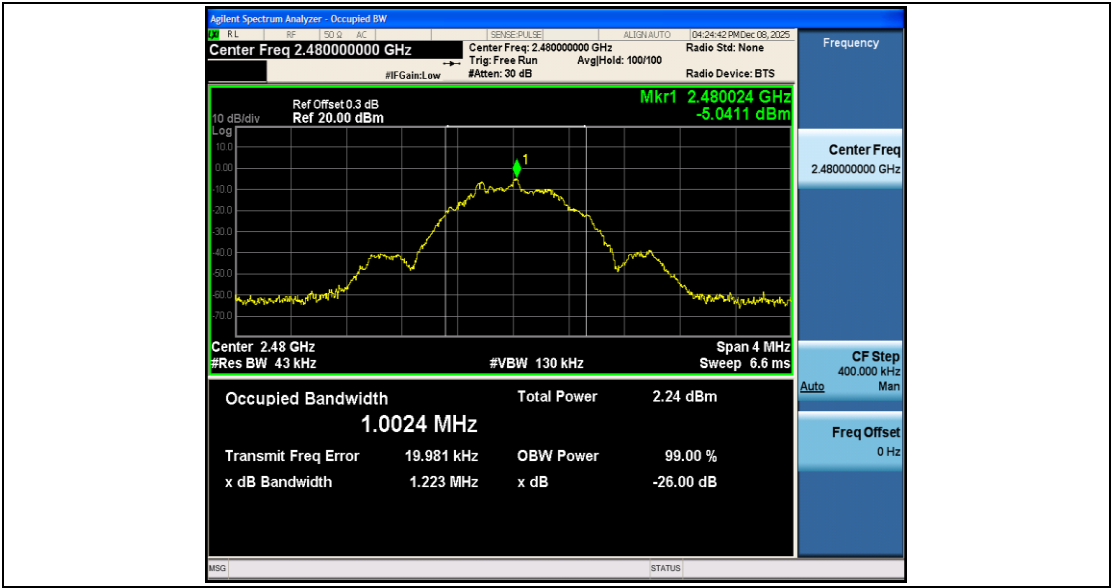
BLE_1M_Ant1_2402



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	-3.52	≤30	PASS
		2440	-3.83	≤30	PASS
		2480	-3.89	≤30	PASS

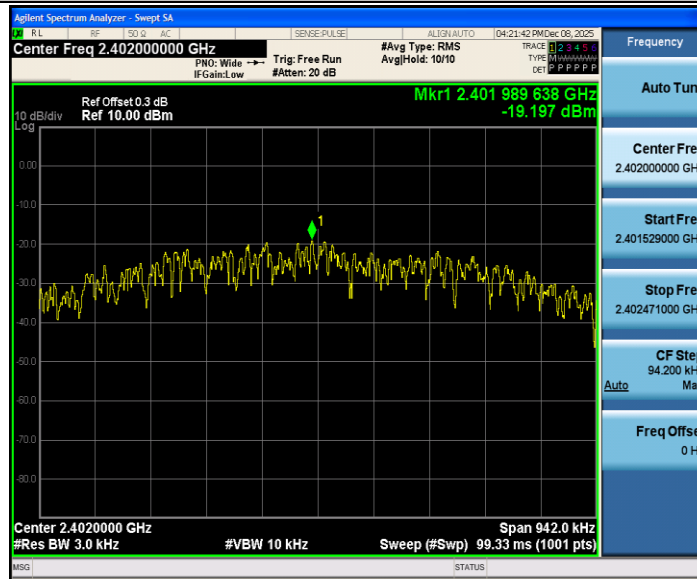
Appendix D: Maximum power spectral density

Test Result

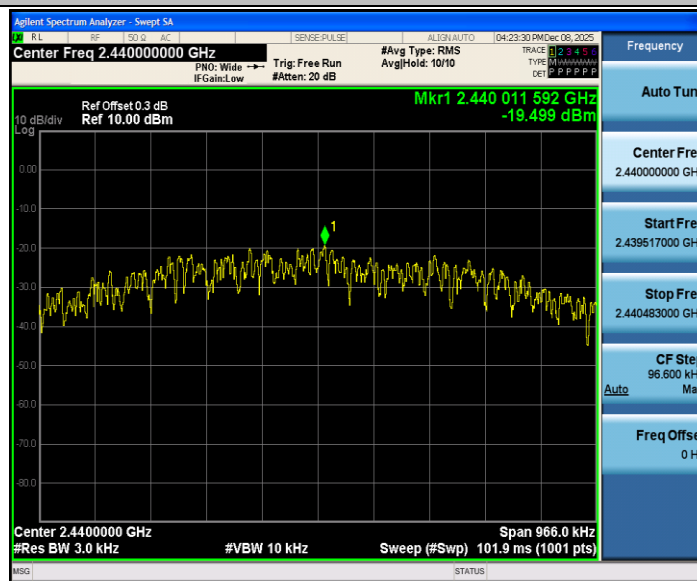
TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-19.20	≤8.00	PASS
		2440	-19.50	≤8.00	PASS
		2480	-19.59	≤8.00	PASS

Test Graphs

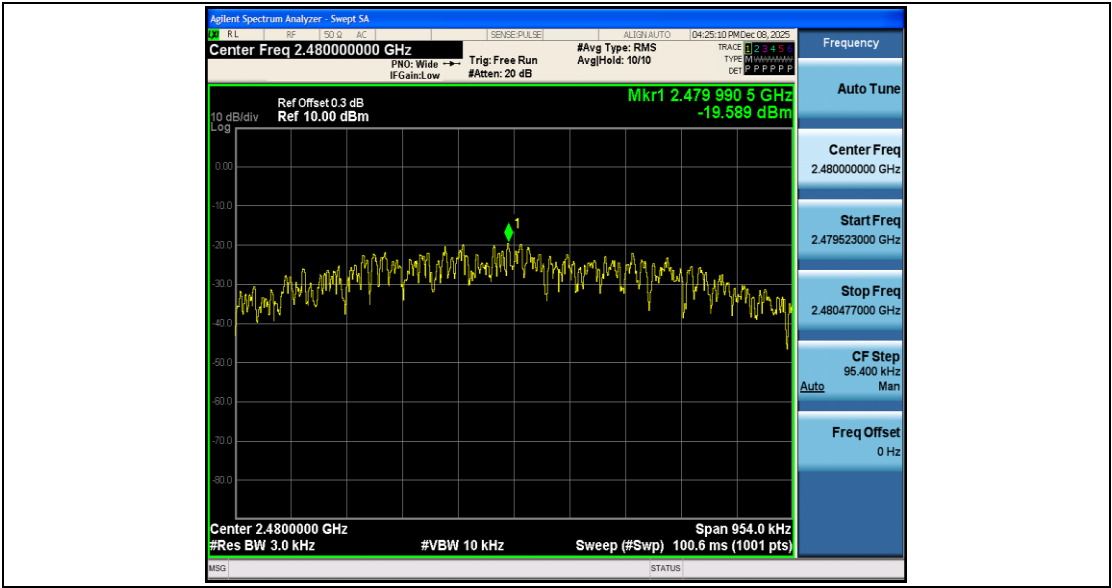
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



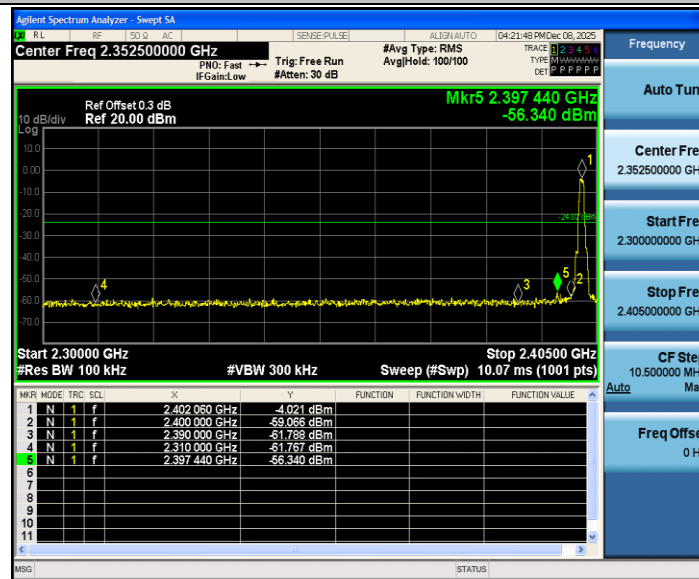
Appendix E: Band edge measurements

Test Result

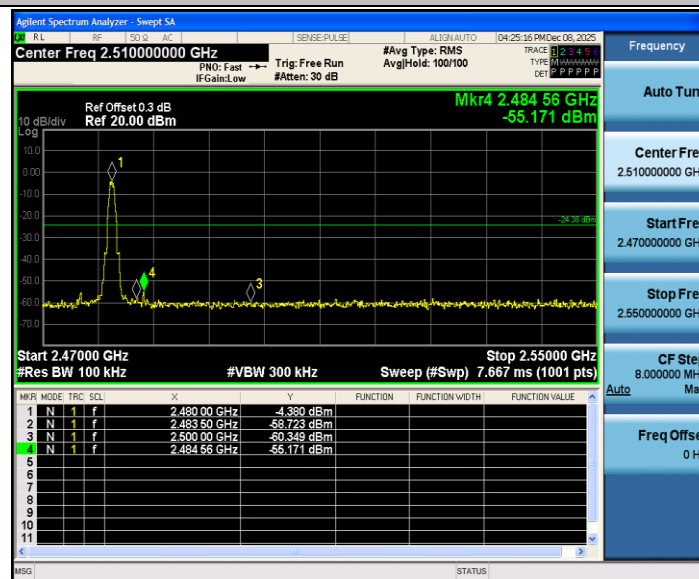
TestMode	Antenna	Channel	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-4.02	-56.34	≤-24.02	PASS
		High	2480	-4.38	-55.17	≤-24.38	PASS

Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480

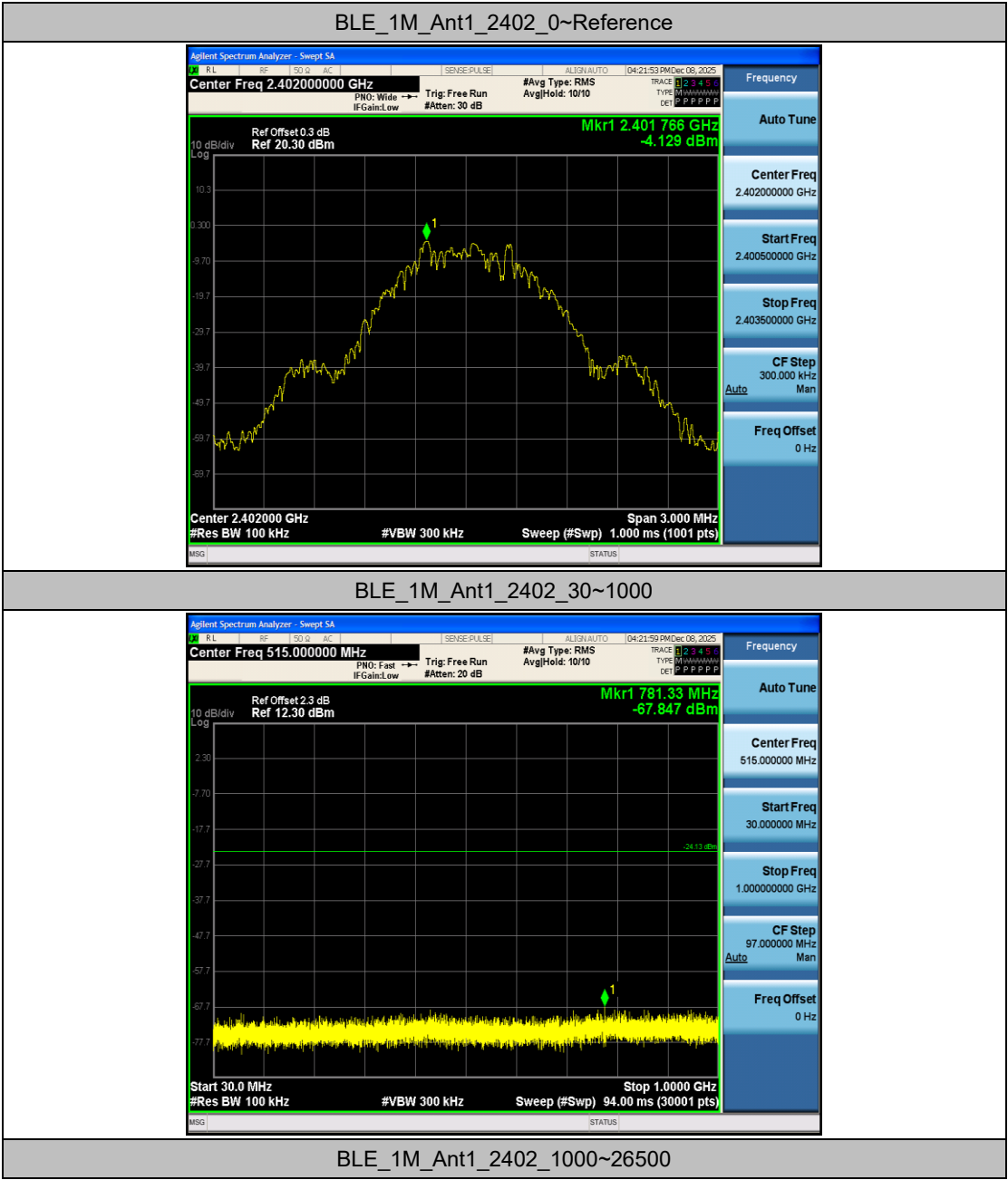


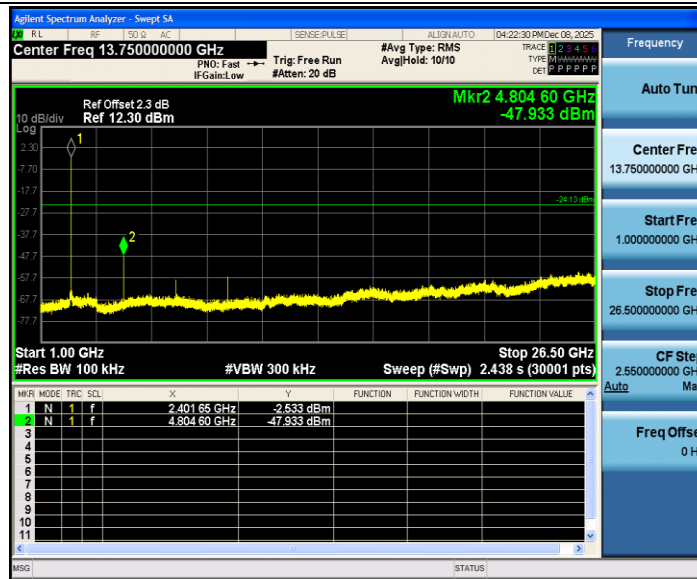
Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-4.13	-4.13	---	PASS
			30~1000	-4.13	-67.85	≤-24.13	PASS
			1000~26500	-4.13	-47.93	≤-24.13	PASS
		2440	Reference	-5.89	-5.89	---	PASS
			30~1000	-5.89	-68.59	≤-25.89	PASS
			1000~26500	-5.89	-47.55	≤-25.89	PASS
		2480	Reference	-4.80	-4.80	---	PASS
			30~1000	-4.80	-67.99	≤-24.8	PASS
			1000~26500	-4.80	-50.31	≤-24.8	PASS

Test Graphs

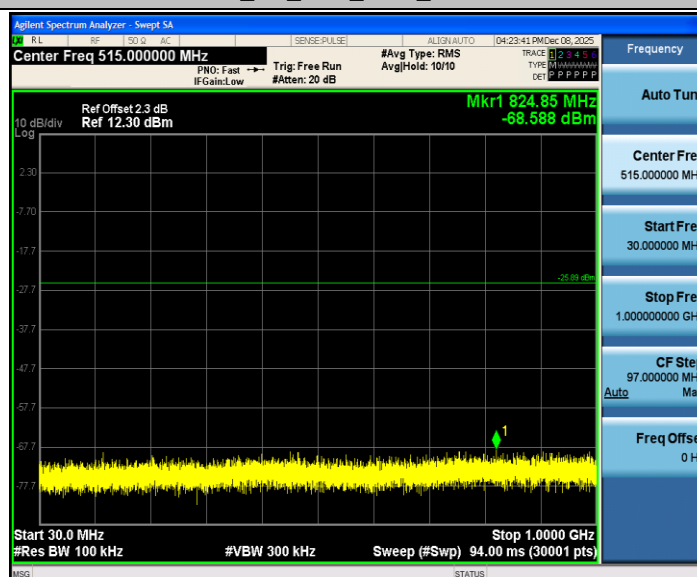




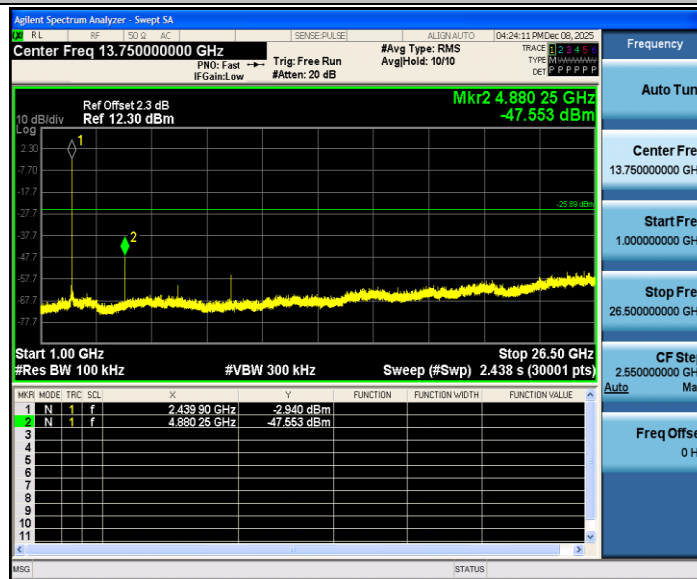
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



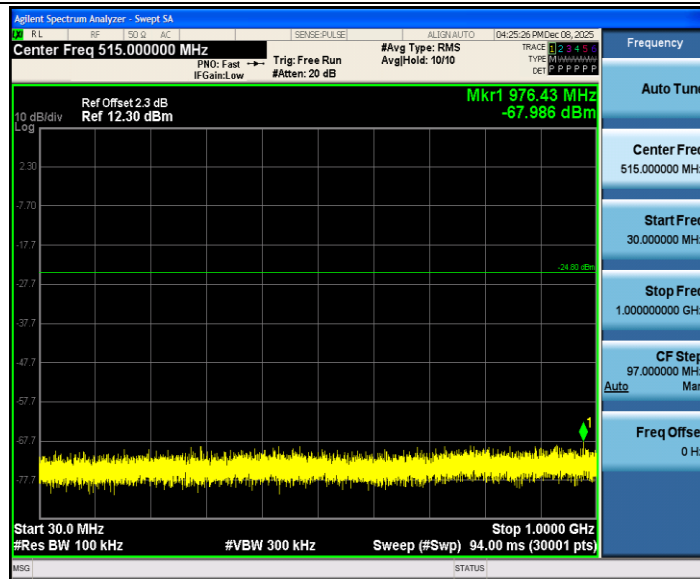
BLE_1M_Ant1_2440_1000~26500



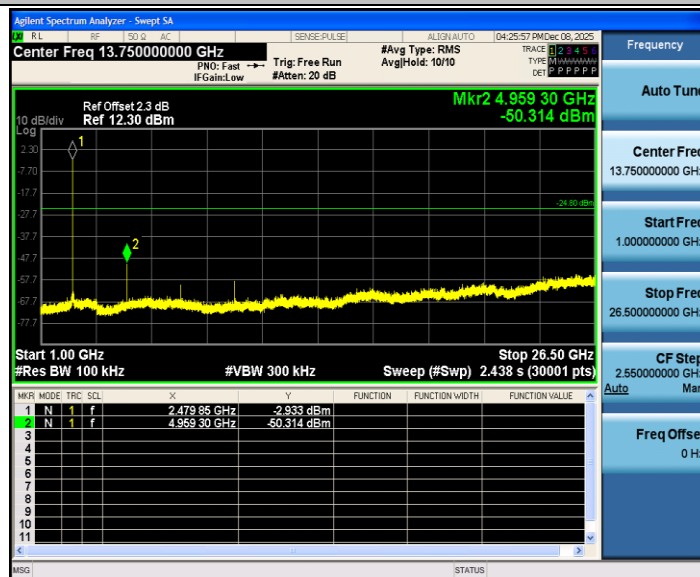
BLE_1M_Ant1_2480_0~Reference



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

