FCC Appendix RF Test Data

FCC ID : **2APVY-GK86-1**

Company: : **SHANTOU CITY CHENGHAI JINGWEI INDUSTRIAL, CO., LTD.**

EUT : **BOXING TARGET**

Model Number : **GK86-1**

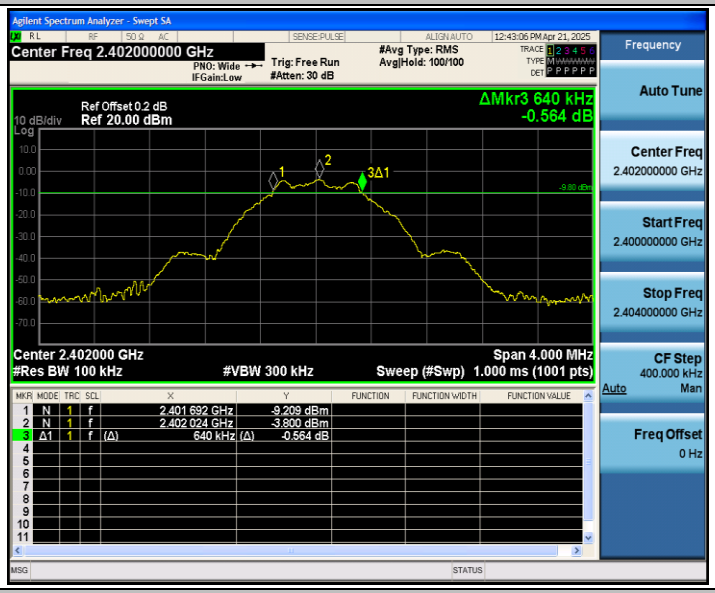
Reviewed By : **Eric Wang**

Appendix A: DTS Bandwidth

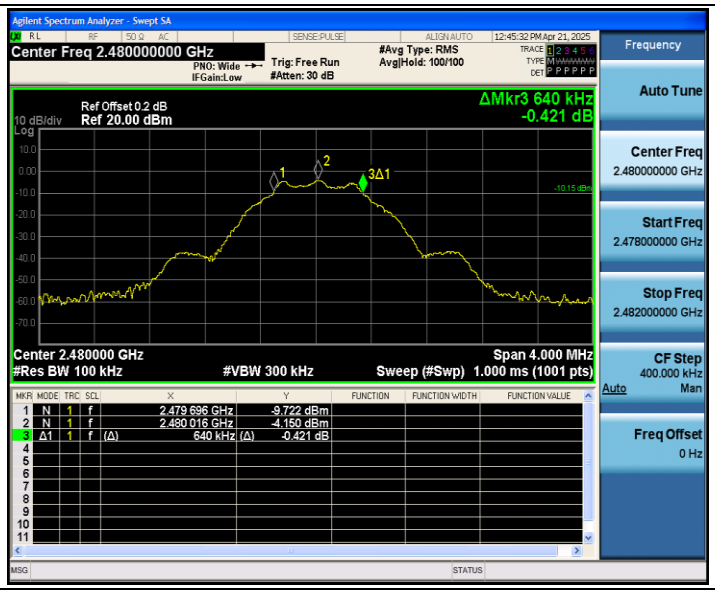
Test Result

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	0.648	2439.688	2440.336	0.5	PASS
		2480	0.640	2479.696	2480.336	0.5	PASS

Test Graphs

BLE_1M_Ant1_2402

BLE_1M_Ant1_2440

BLE_1M_Ant1_2480


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.480000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 100/100
12:45:32 PM Apr 21, 2025
Frequency
Ref Offset 0.2 dB
10 dB/div
Ref 20.00 dBm
ΔMkr3 640 kHz
-0.421 dB
-10.15 dBm
Center 2.480000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 4.000 MHz
Sweep (#Swp) 1.000 ms (1001 pts)
1 N 1 f 2.479 696 GHz -9.722 dBm
2 N 1 f 2.480 016 GHz -4.150 dBm
3 Δ1 1 f (Δ) 640 kHz (Δ) -0.421 dB
Auto Tune
Center Freq
2.480000000 GHz
Start Freq
2.478000000 GHz
Stop Freq
2.482000000 GHz
CF Step
400.000 kHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

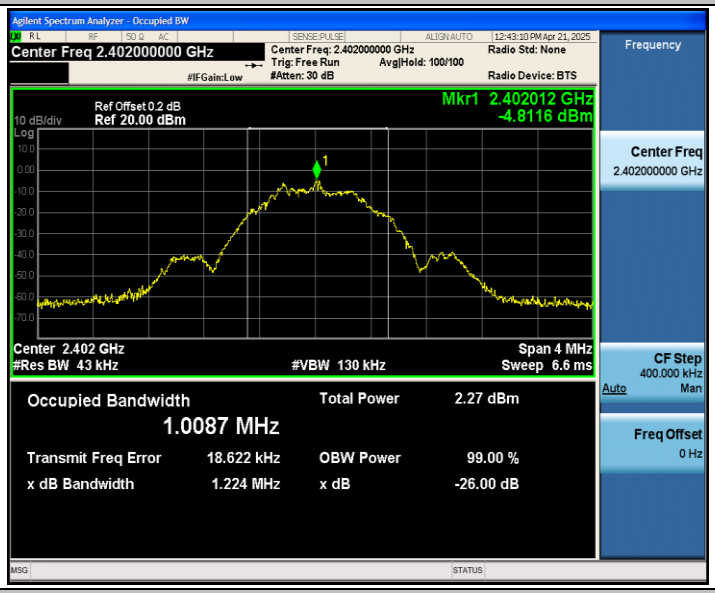
Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0087	2401.5143	2402.5230	---	---
		2440	1.0080	2439.5154	2440.5234	---	---
		2480	1.0055	2479.5167	2480.5222	---	---

Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440

BLE_1M_Ant1_2480


Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.480000000 GHz
Center Freq: 2.480000000 GHz
Trig: Free Run
Avg|Hold: 100/100
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
12:45:36 PM Apr 21, 2025
Frequency
Ref Offset 0.2 dB
10 dB/div
Ref 20.00 dBm
Mkr1 2.480016 GHz
-5.0393 dBm
Center 2.48 GHz
#Res BW 43 kHz
#VBW 130 kHz
Span 4 MHz
Sweep 6.6 ms
Occupied Bandwidth
1.0055 MHz
Total Power 2.12 dBm
Transmit Freq Error 19.427 kHz
OBW Power 99.00 %
x dB Bandwidth 1.219 MHz
x dB -26.00 dB
Center Freq
2.480000000 GHz
CF Step
400.000 kHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

Appendix C: Maximum conducted output power

Test Result Peak

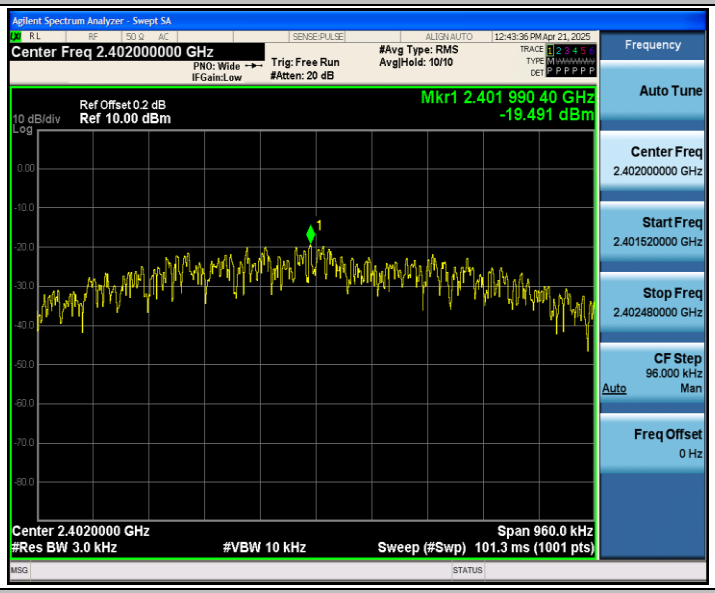
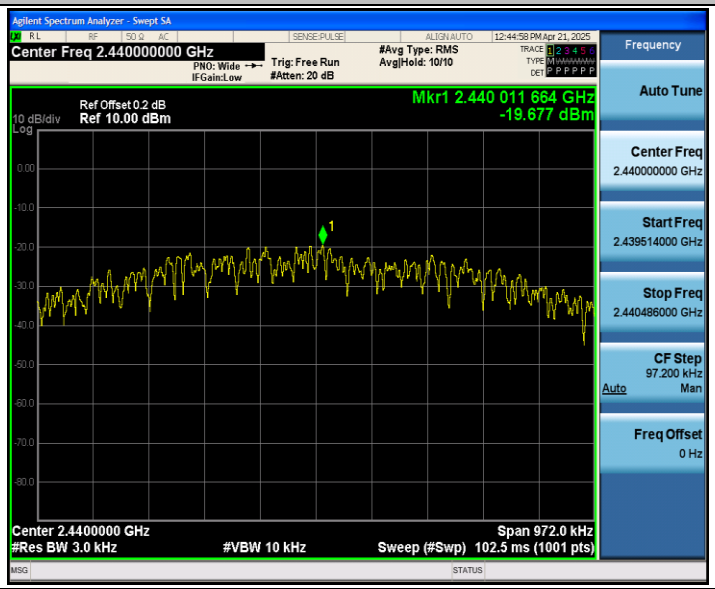
TestMode	Antenna	Freq(MHz)	Conducted Peak Powert[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-3.63	≤30	PASS
		2440	-3.95	≤30	PASS
		2480	-4.00	≤30	PASS

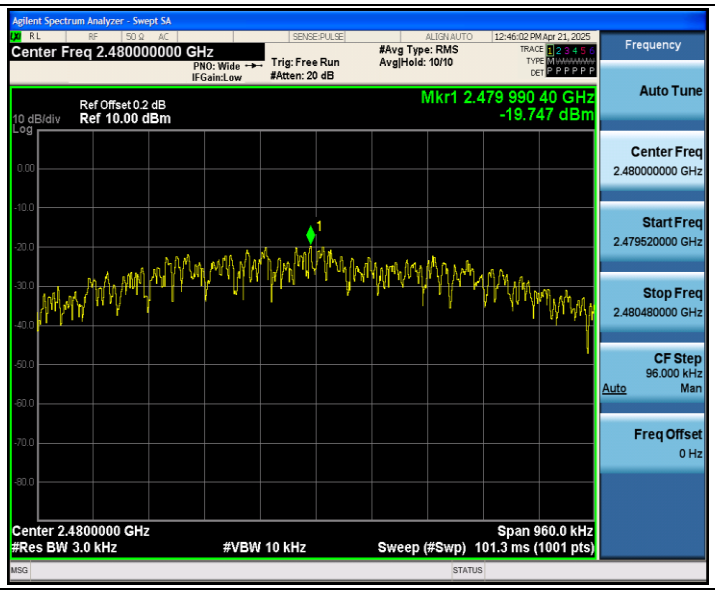
Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-19.49	≤8.00	PASS
		2440	-19.68	≤8.00	PASS
		2480	-19.75	≤8.00	PASS

Test Graphs

BLE_1M_Ant1_2402

BLE_1M_Ant1_2440

BLE_1M_Ant1_2480

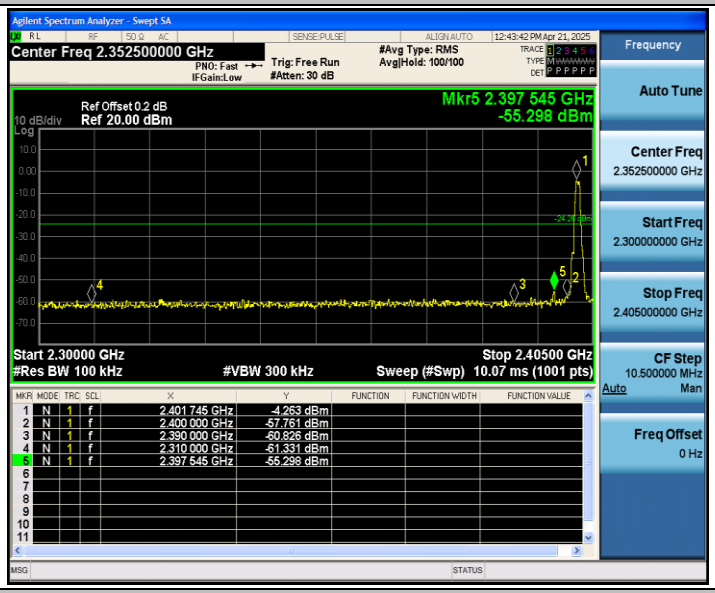
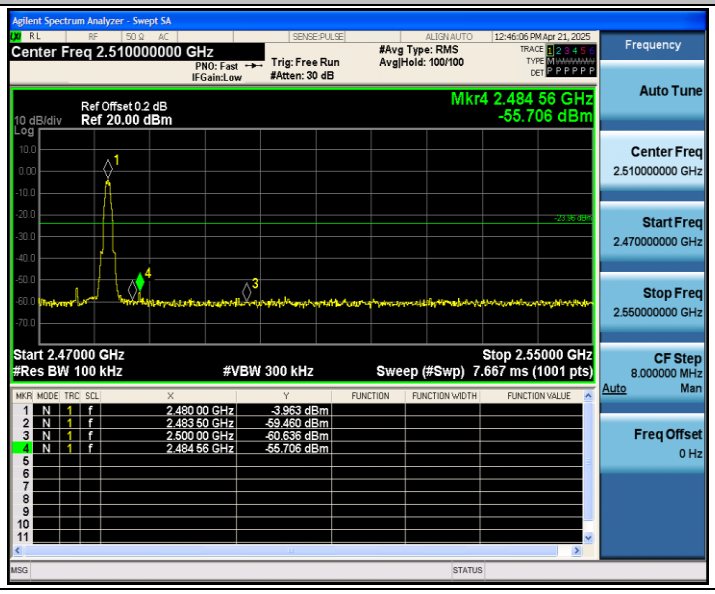

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.480000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 20 dB
#Avg Type: RMS
Avg|Hold: 10/10
12:46:02 PM Apr 21, 2025
Ref Offset 0.2 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr1 2.479 990 40 GHz
-19.747 dBm
Center 2.4800000 GHz
#Res BW 3.0 kHz
#VBW 10 kHz
Span 960.0 kHz
Sweep (#Swp) 101.3 ms (1001 pts)
Frequency
Auto Tune
Center Freq
2.480000000 GHz
Start Freq
2.479520000 GHz
Stop Freq
2.480480000 GHz
CF Step
96.000 kHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

Appendix E: Band edge measurements

Test Result

TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-4.26	-55.3	≤-24.26	PASS
		High	2480	-3.96	-55.71	≤-23.96	PASS

Test Graphs

BLE_1M_Ant1_Low_2402

BLE_1M_Ant1_High_2480


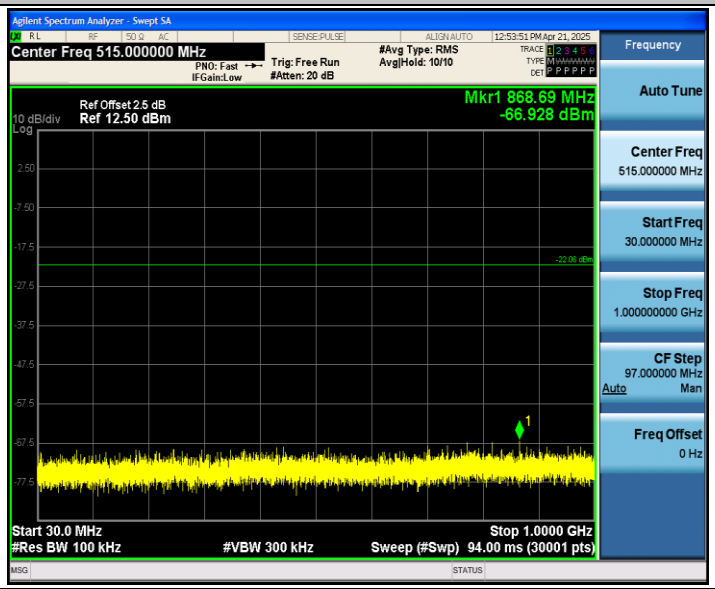
Appendix F: Conducted Spurious Emission

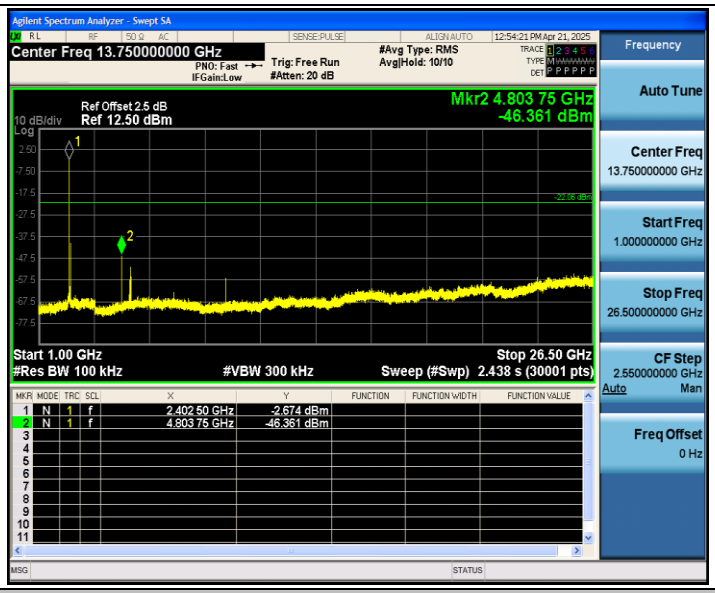
Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-2.06	-2.06	---	PASS
			30~1000	-2.06	-66.93	≤-22.06	PASS
			1000~26500	-2.06	-46.36	≤-22.06	PASS
		2440	Reference	-2.47	-2.47	---	PASS
			30~1000	-2.47	-68.1	≤-22.47	PASS
			1000~26500	-2.47	-49.16	≤-22.47	PASS
		2480	Reference	-2.43	-2.43	---	PASS
			30~1000	-2.43	-68.26	≤-22.43	PASS
			1000~26500	-2.43	-49.71	≤-22.43	PASS

Test Graphs

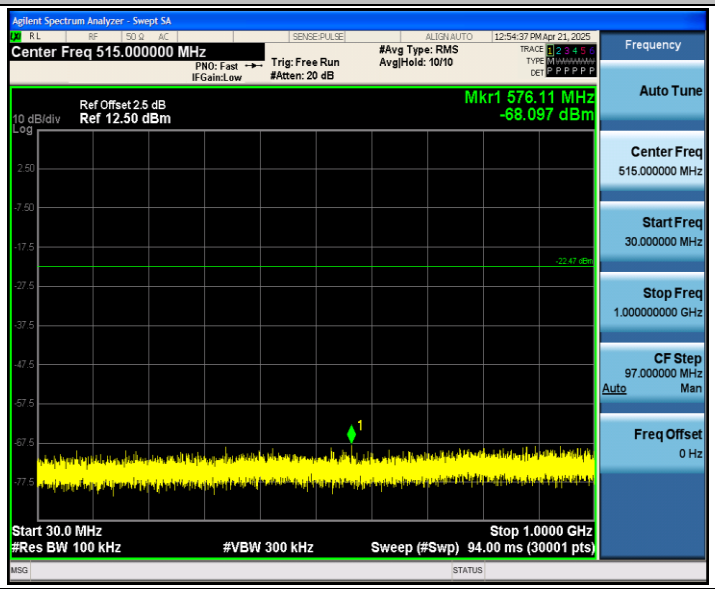
BLE_1M_Ant1_2402_0~Reference

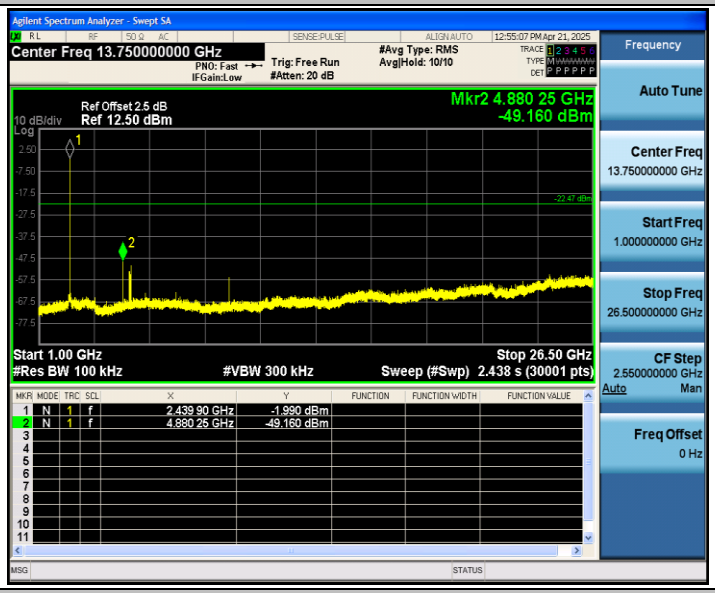
BLE_1M_Ant1_2402_30~1000

BLE_1M_Ant1_2402_1000~26500



BLE_1M_Ant1_2440_0~Reference

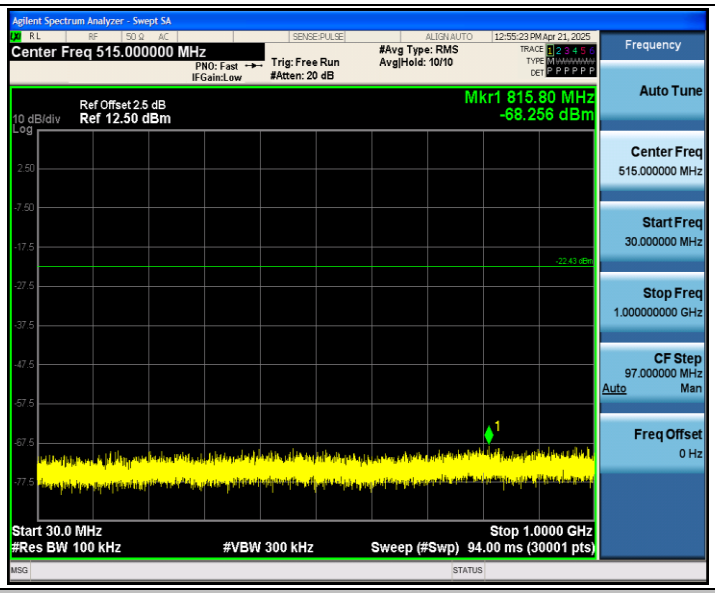
BLE_1M_Ant1_2440_30~1000



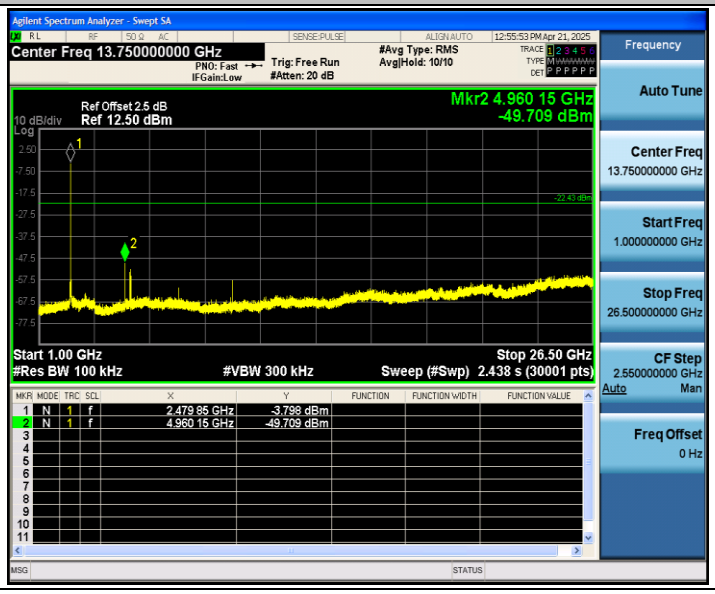
BLE_1M_Ant1_2440_1000~26500


BLE_1M_Ant1_2480_0~Reference


BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

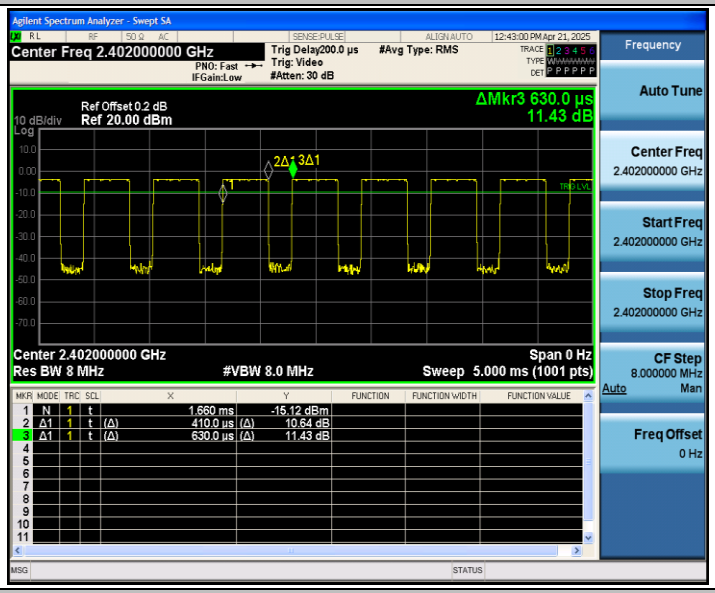
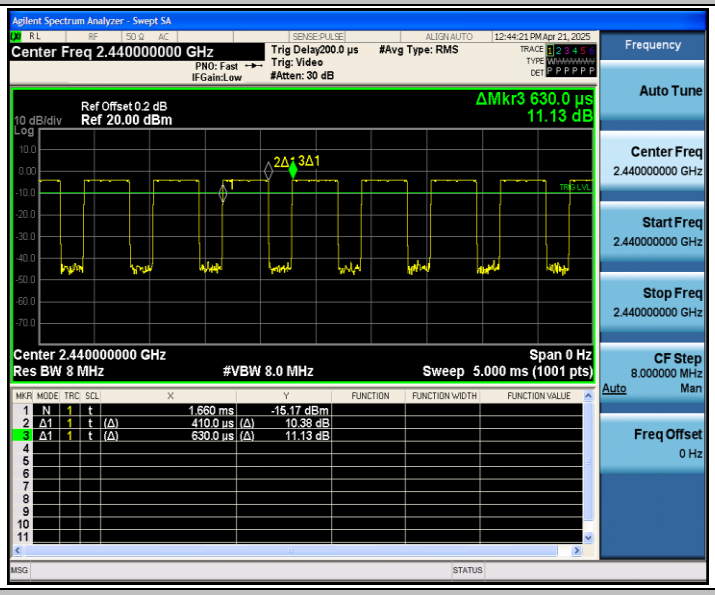


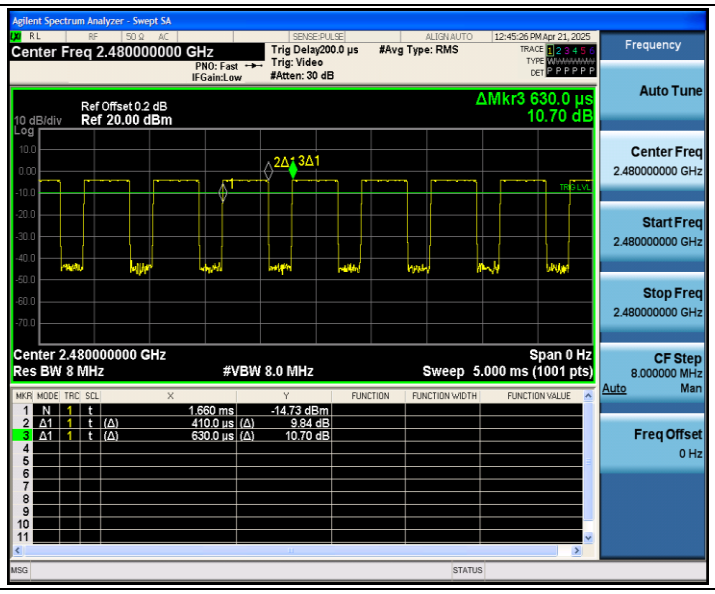
Appendix G: Duty Cycle

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


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.480000000 GHz
PNO: Fast
IFGain:Low
Trig Delay 200.0 µs
Trig: Video
#Avg Type: RMS
#Atten: 30 dB
12:45:26 PM Apr 21, 2025
Frequency
Auto Tune
Ref Offset 0.2 dB
10 dB/div
Ref 20.00 dBm
ΔMkr3 630.0 µs
10.70 dB
Center Freq
2.480000000 GHz
Start Freq
2.480000000 GHz
Stop Freq
2.480000000 GHz
Center 2.480000000 GHz
Res BW 8 MHz
#VBW 8.0 MHz
Span 0 Hz
Sweep 5.000 ms (1001 pts)
CF Step
8.000000 MHz
Auto
Man
Freq Offset
0 Hz
1 N 1 t 1.660 ms -14.73 dBm
2 Δ1 1 t (Δ) 410.0 µs (Δ) 9.84 dB
3 Δ1 1 t (Δ) 630.0 µs (Δ) 10.70 dB
MSG
STATUS