FCC Appendix RF Test Data for BLE

FCC ID	**:**	**2BTWB-L05028**
Company	**:**	**Guangzhou Dongfu E-commerce Co., Ltd.**
EUT	**:**	**Colorful Floor Lamp**
Model Number	**:**	**L05028**
Report No.	**:**	**CTA25121902301**
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	0.640	2439.692	2440.332	0.5	PASS
		2480	0.656	2479.688	2480.344	0.5	PASS

Test Graphs

BLE_1M_Ant1_2402

BLE_1M_Ant1_2440

BLE_1M_Ant1_2480

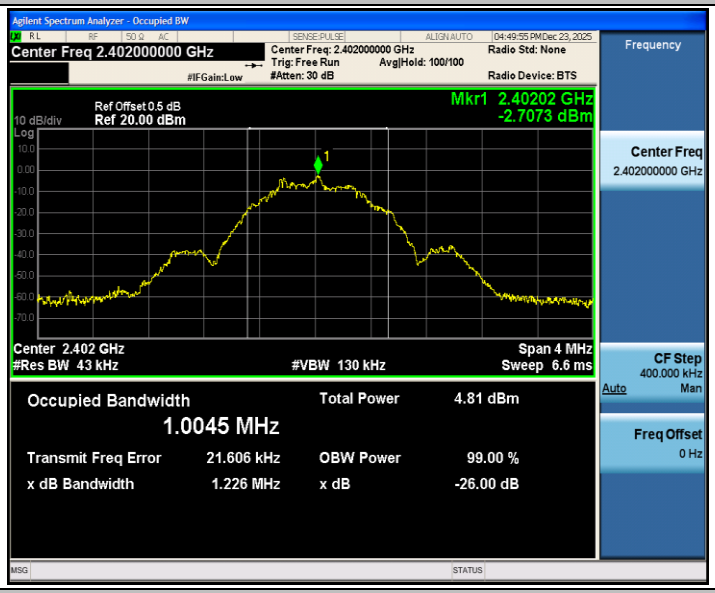
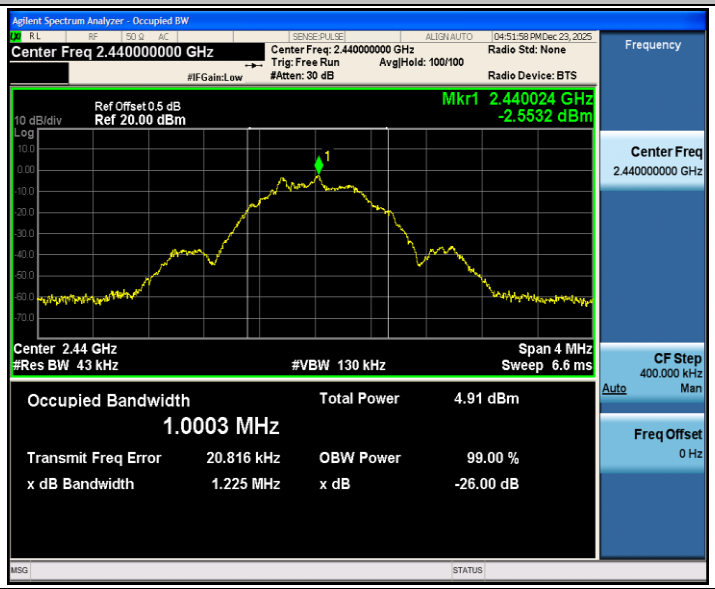

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.480000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 100/100
04:55:35 PM Dec 23, 2025
Ref Offset 0.5 dB
10 dB/div
Ref 20.00 dBm
ΔMkr3 656 kHz
-0.251 dB
Center 2.480000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 4.000 MHz
Sweep (#Swp) 1.000 ms (1001 pts)
1 N 1 f 2.479 688 GHz -6.789 dBm
2 N 1 f 2.480 012 GHz -1.061 dBm
3 Δ1 1 f (Δ) 656 kHz (Δ) -0.251 dB
Frequency
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

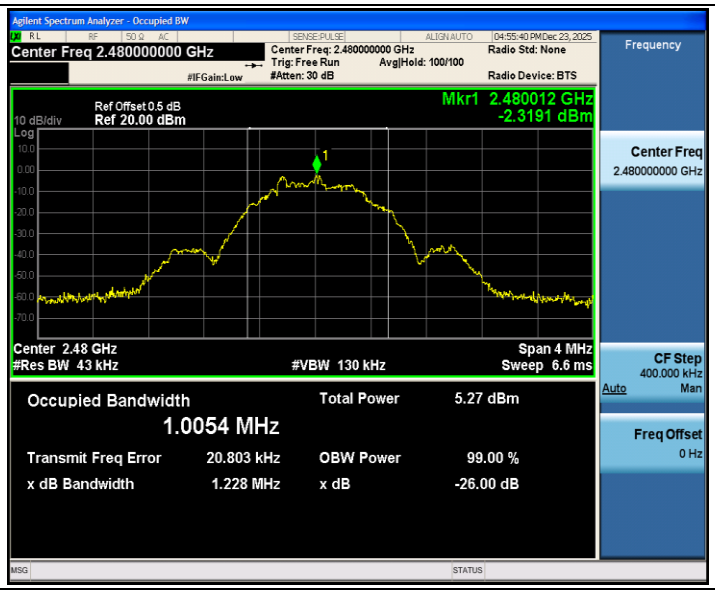
Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0045	2401.5194	2402.5239	---	---
		2440	1.0003	2439.5207	2440.5210	---	---
		2480	1.0054	2479.5181	2480.5235	---	---

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
Frequency
Ref Offset 0.5 dB
10 dB/div
Ref 20.00 dBm
Mkr1 2.480012 GHz
-2.3191 dBm
Center 2.48 GHz
#Res BW 43 kHz
#VBW 130 kHz
Span 4 MHz
Sweep 6.6 ms
Occupied Bandwidth
1.0054 MHz
Total Power 5.27 dBm
Transmit Freq Error 20.803 kHz
OBW Power 99.00 %
x dB Bandwidth 1.228 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	-1.32	≤30	PASS
		2440	-1.25	≤30	PASS
		2480	-0.84	≤30	PASS

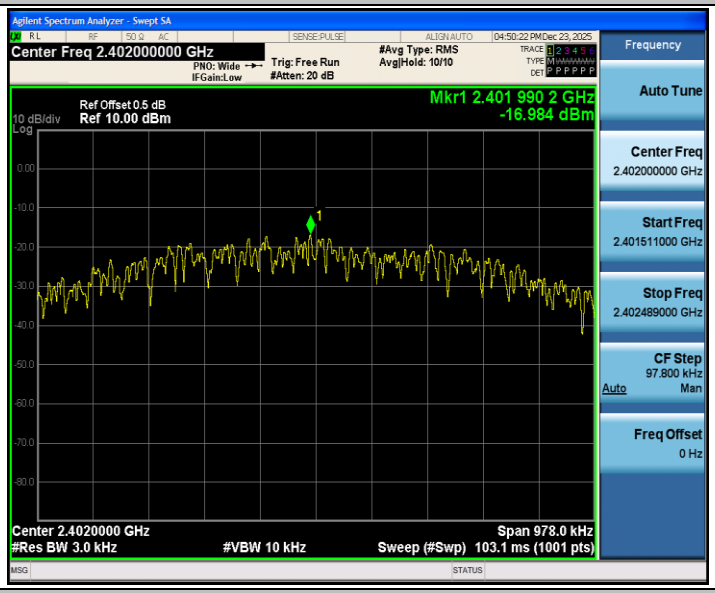
Appendix D: Maximum power spectral density

Test Result

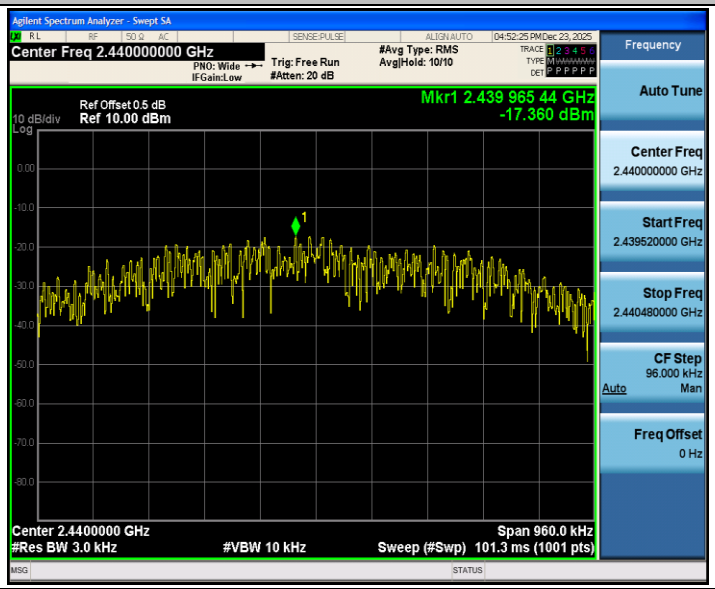
TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-16.98	≤8.00	PASS
		2440	-17.36	≤8.00	PASS
		2480	-16.34	≤8.00	PASS

Test Graphs

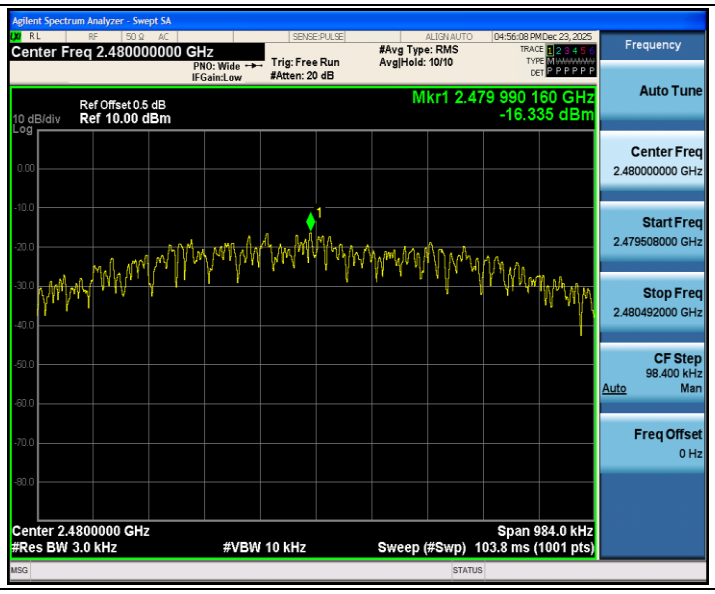
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

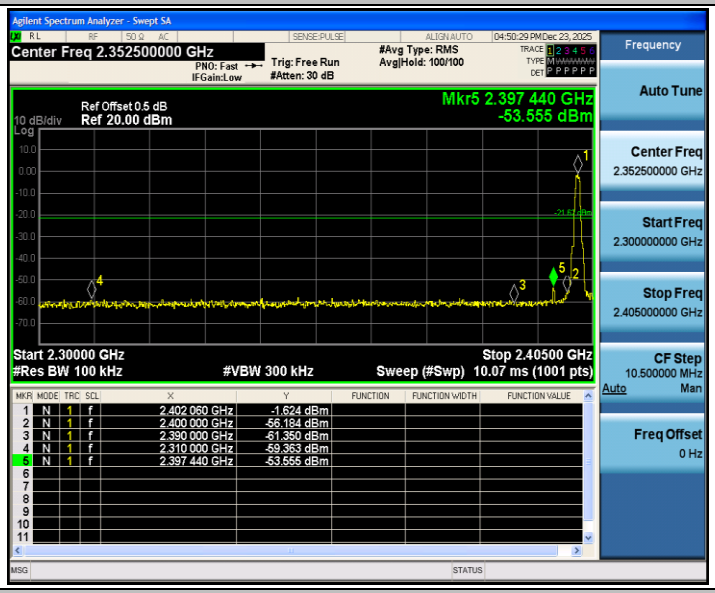
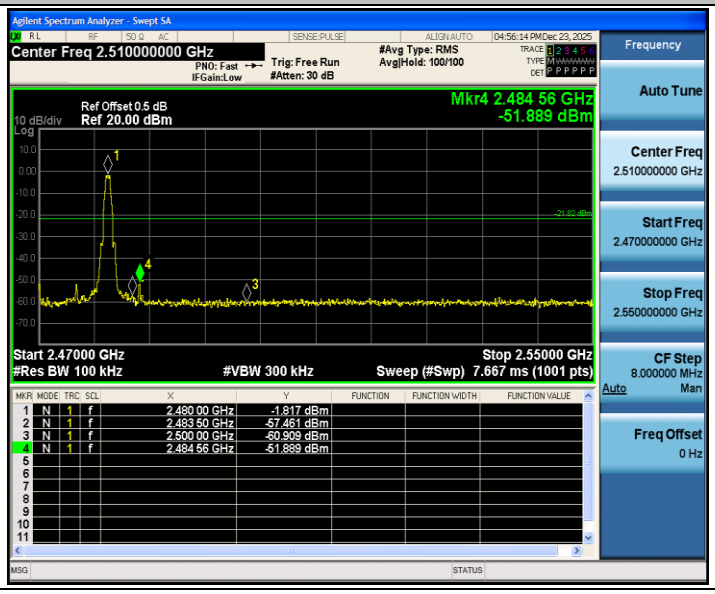

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.480000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 20 dB
#Avg Type: RMS
Avg|Hold: 10/10
04:56:08 PM Dec 23, 2025
Ref Offset 0.5 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr1 2.479 990 160 GHz
-16.335 dBm
Center 2.4800000 GHz
#Res BW 3.0 kHz
#VBW 10 kHz
Span 984.0 kHz
Sweep (#Swp) 103.8 ms (1001 pts)
Frequency
Auto Tune
Center Freq
2.480000000 GHz
Start Freq
2.479508000 GHz
Stop Freq
2.480492000 GHz
CF Step
98.400 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	-1.62	-53.56	≤-21.62	PASS
		High	2480	-1.82	-51.89	≤-21.82	PASS

Test Graphs

BLE_1M_Ant1_Low_2402

BLE_1M_Ant1_High_2480


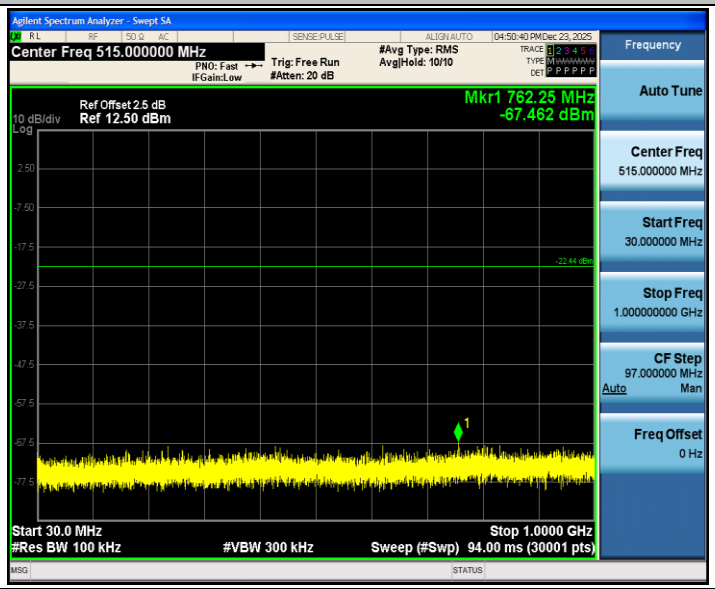
Appendix F: Conducted Spurious Emission

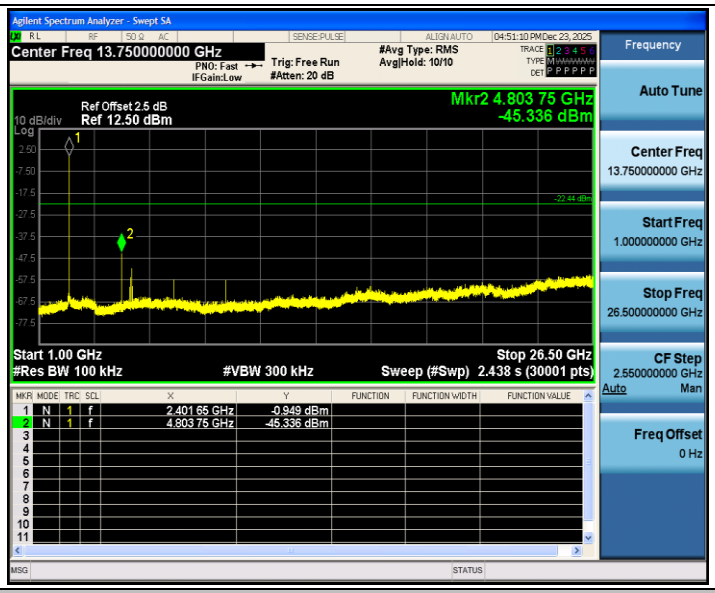
Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-2.44	-2.44	---	PASS
			30~1000	-2.44	-67.46	≤-22.44	PASS
			1000~26500	-2.44	-45.34	≤-22.44	PASS
		2440	Reference	-2.92	-2.92	---	PASS
			30~1000	-2.92	-67.88	≤-22.92	PASS
			1000~26500	-2.92	-44.36	≤-22.92	PASS
		2480	Reference	-2.00	-2.00	---	PASS
			30~1000	-2.00	-68.05	≤-22	PASS
			1000~26500	-2.00	-42.62	≤-22	PASS

Test Graphs

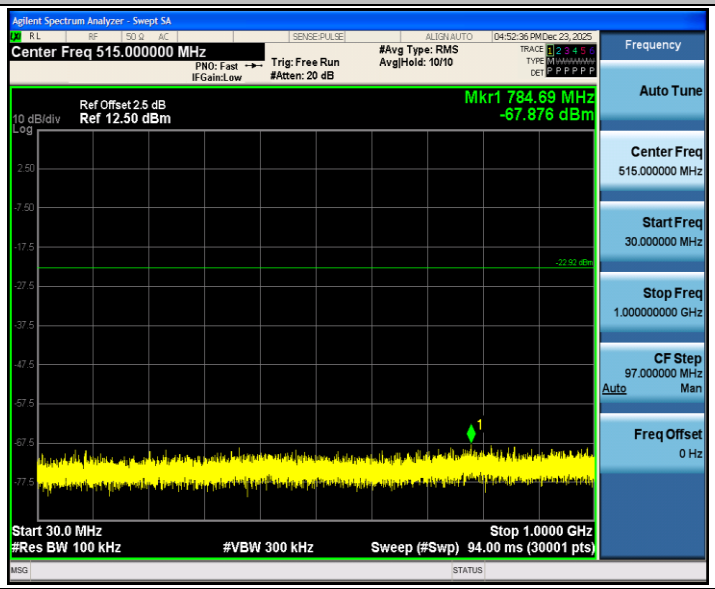
BLE_1M_Ant1_2402_0~Reference

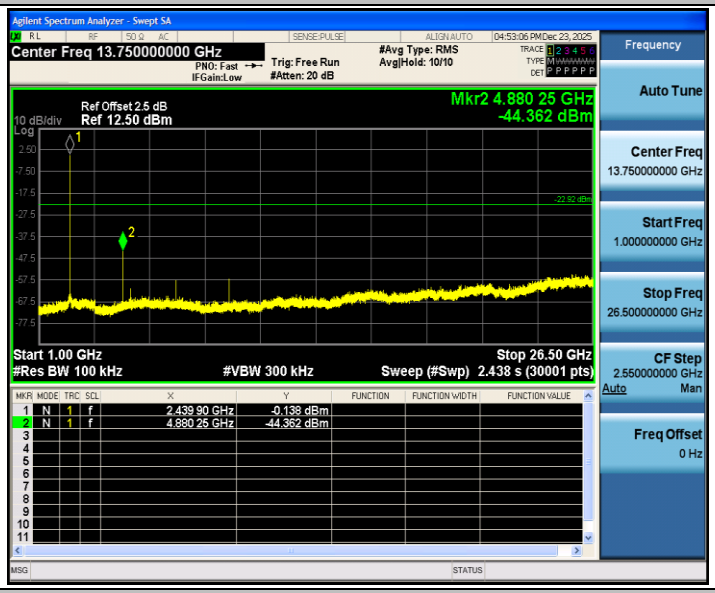
BLE_1M_Ant1_2402_30~1000

BLE_1M_Ant1_2402_1000~26500



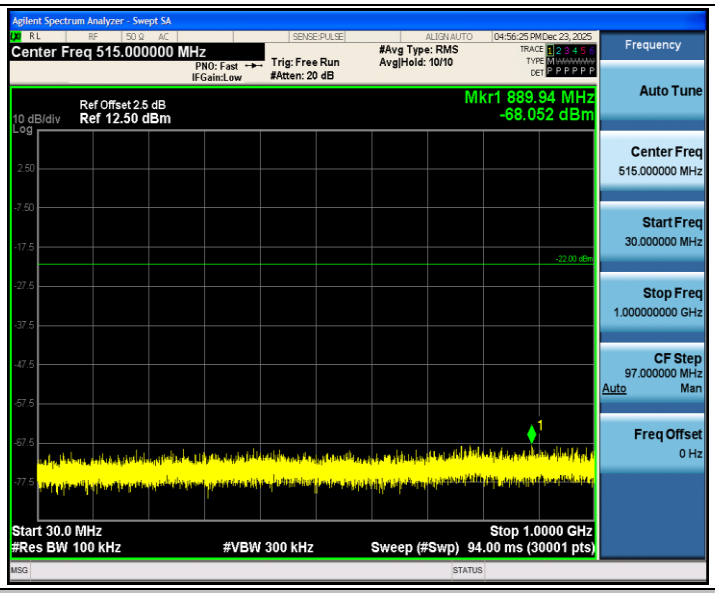
BLE_1M_Ant1_2440_0~Reference

BLE_1M_Ant1_2440_30~1000

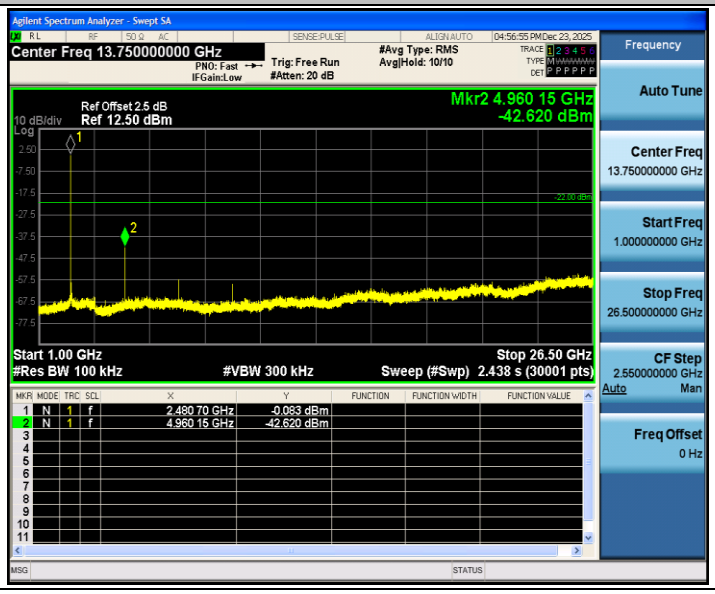


BLE_1M_Ant1_2440_1000~26500

BLE_1M_Ant1_2480_0~Reference

BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500



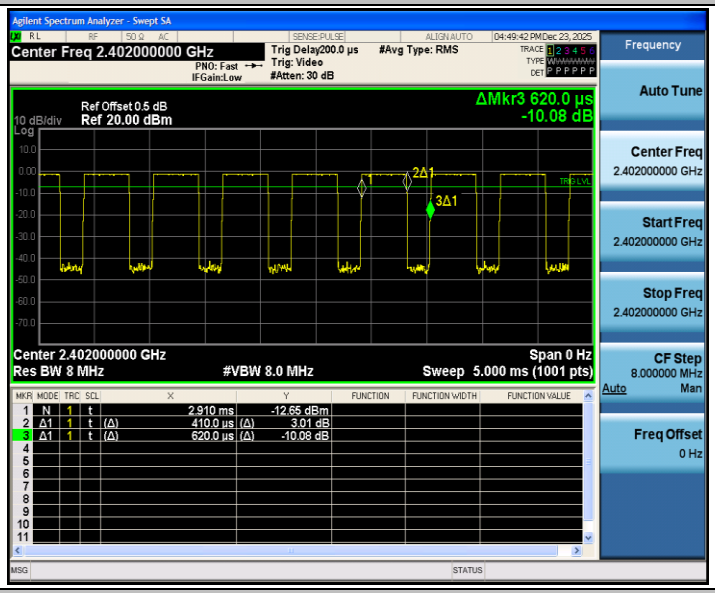
Appendix G: Duty Cycle

Test Result

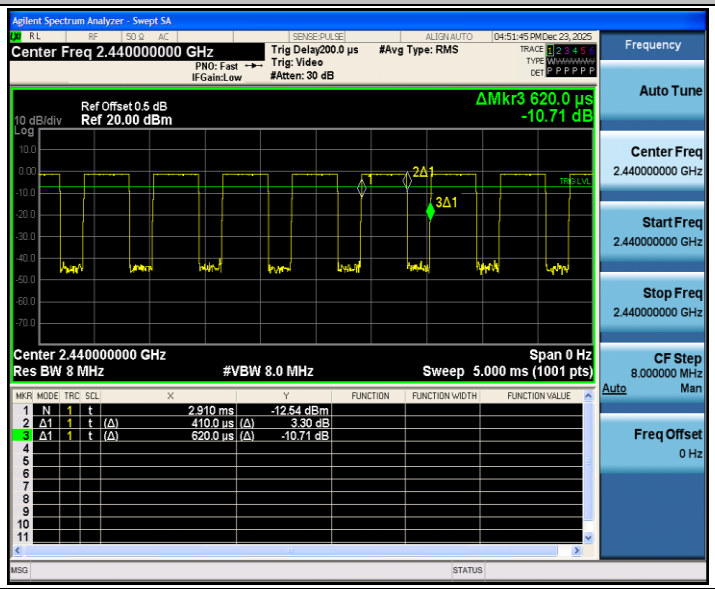
TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	0.41	0.62	0.6613	66.13	1.80	---	---
		2440	0.41	0.62	0.6613	66.13	1.80	---	---
		2480	0.41	0.62	0.6613	66.13	1.80	---	---

Test Graphs

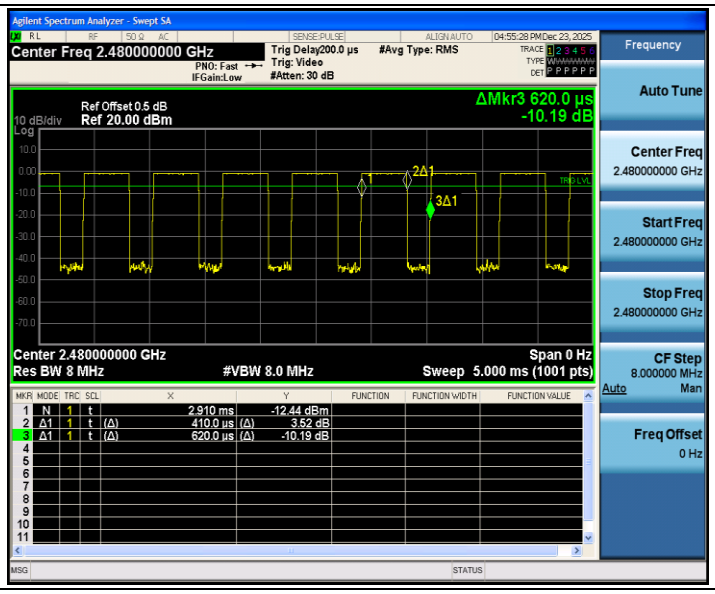
BLE_1M_Ant1_2402



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
#Atten: 30 dB
#Avg Type: RMS
04:55:28 PM Dec 23, 2025
Frequency
Ref Offset 0.5 dB
10 dB/div
Ref 20.00 dBm
ΔMkr3 620.0 µs
-10.19 dB
2Δ1
3Δ1
Center 2.480000000 GHz
Res BW 8 MHz
#VBW 8.0 MHz
Span 0 Hz
Sweep 5.000 ms (1001 pts)
1 N 1 t 2.910 ms -12.44 dBm
2 Δ1 1 t (Δ) 410.0 µs (Δ) 3.52 dB
3 Δ1 1 t (Δ) 620.0 µs (Δ) -10.19 dB
Auto Tune
Center Freq
2.480000000 GHz
Start Freq
2.480000000 GHz
Stop Freq
2.480000000 GHz
CF Step
8.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS