

FCC Appendix RF Test Data for BLE

FCC ID : 2BM7C-GD-80

Company : Xiamen Deyin Technology Co.,Ltd

EUT : Thermal printer

Model Number : GD-80

Report No. : CTA25112402401

Reviewed By : Eric Wang

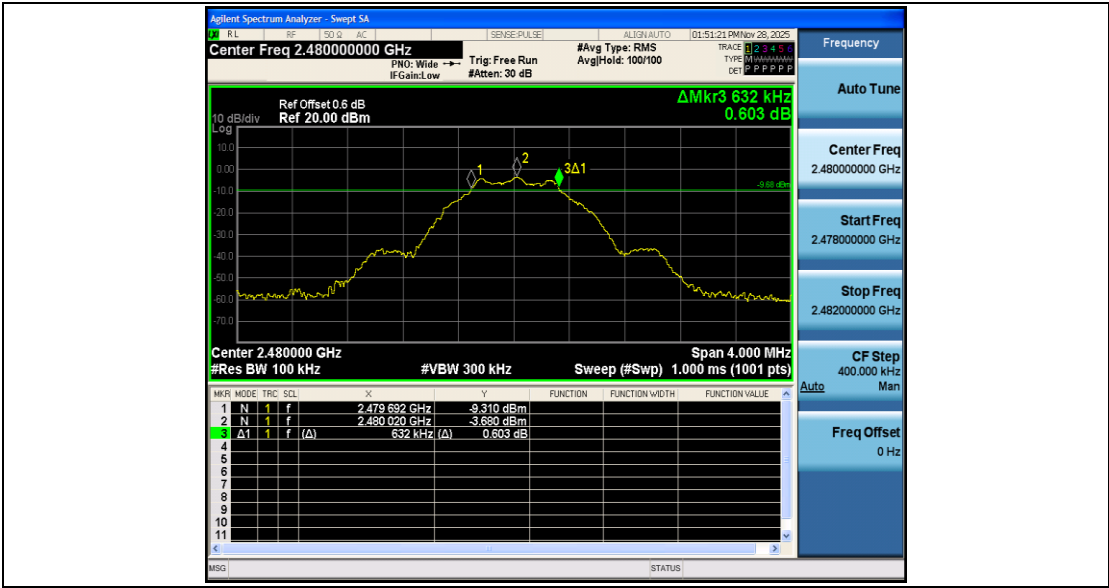
Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.652	2401.692	2402.344	0.5	PASS
		2440	0.632	2439.700	2440.332	0.5	PASS
		2480	0.632	2479.692	2480.324	0.5	PASS

Test Graphs



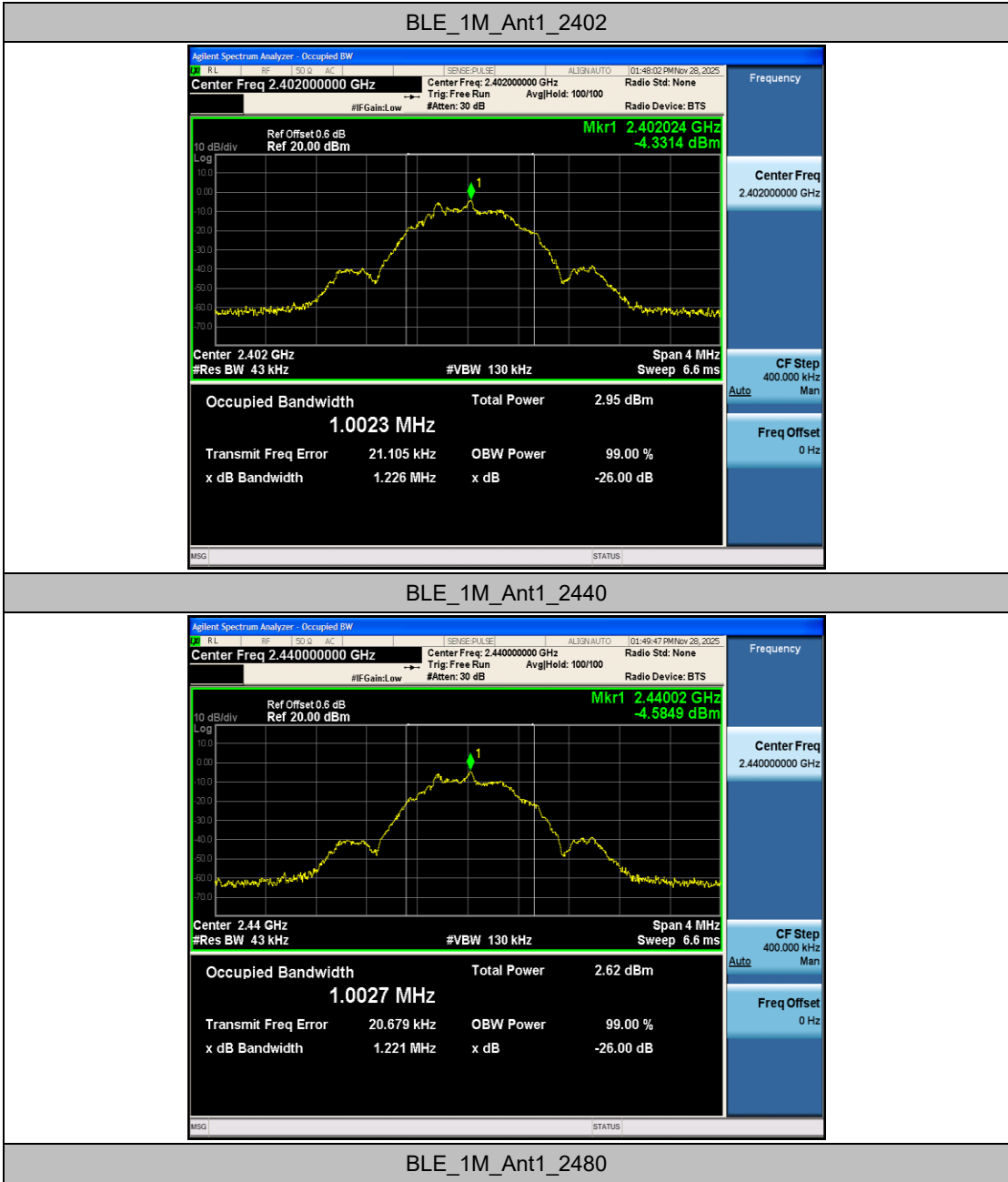


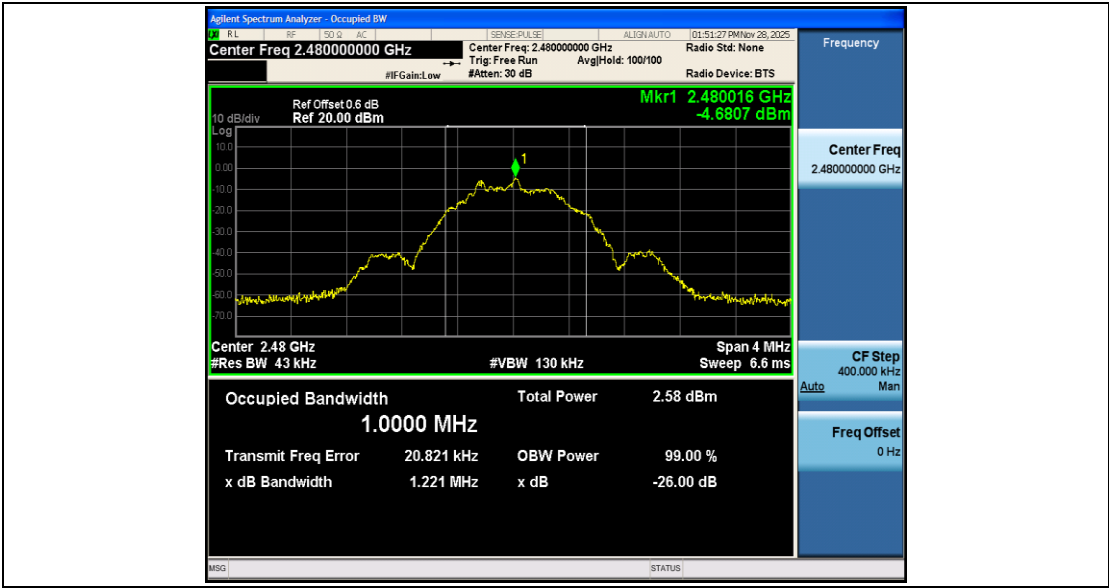
Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0023	2401.5200	2402.5223	---	---
		2440	1.0027	2439.5193	2440.5220	---	---
		2480	1.0000	2479.5208	2480.5208	---	---

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	-3.19	≤30	PASS
		2440	-3.53	≤30	PASS
		2480	-3.54	≤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	-19.12	≤8.00	PASS
		2440	-19.13	≤8.00	PASS
		2480	-19.42	≤8.00	PASS

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.40200000 GHz

Ref Offset 0.6 dB
Ref 10.00 dBm

Mkr1 2.401 990 2 GHz
-19.118 dBm

Frequency

Auto Tune

Center Freq
2.40200000 GHz

Start Freq
2.40151000 GHz

Stop Freq
2.402489000 GHz

CF Step
97.800 kHz
Auto Man

Freq Offset
0 Hz

Center 2.4020000 GHz

#Res BW 3.0 kHz

#VBW 10 kHz

Sweep (#Swp) 103.1 ms (1001 pts)

MSG (STATUS)

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.44000000 GHz

Ref Offset 0.6 dB
Ref 10.00 dBm

Mkr1 2.439 991 468 GHz
-19.134 dBm

Frequency

Auto Tune

Center Freq
2.44000000 GHz

Start Freq
2.439526000 GHz

Stop Freq
2.440474000 GHz

CF Step
94.800 kHz
Auto Man

Freq Offset
0 Hz

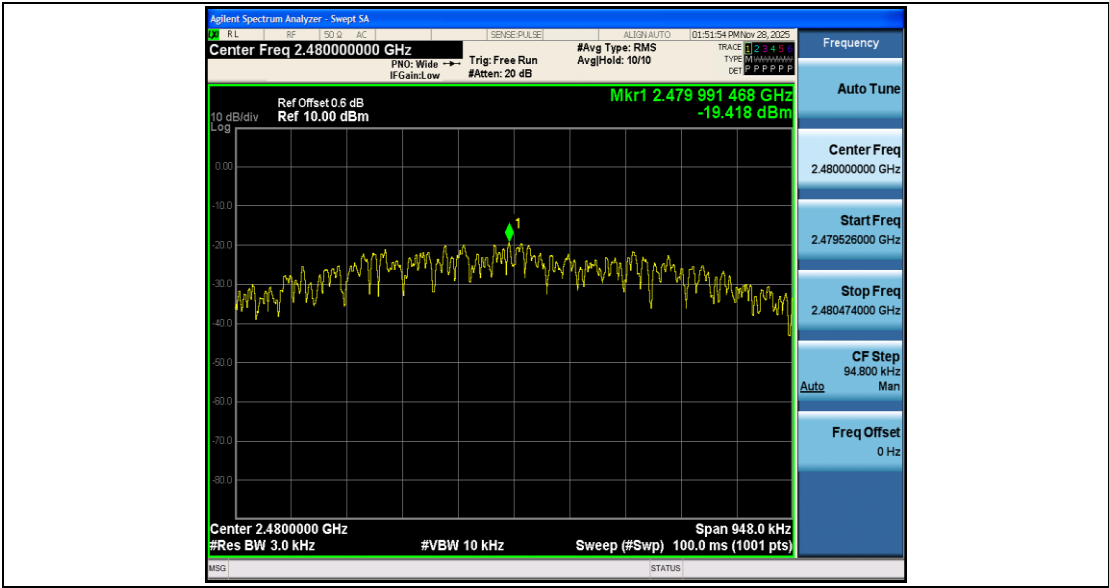
Center 2.4400000 GHz

#Res BW 3.0 kHz

#VBW 10 kHz

Sweep (#Swp) 100.0 ms (1001 pts)

MSG (STATUS)

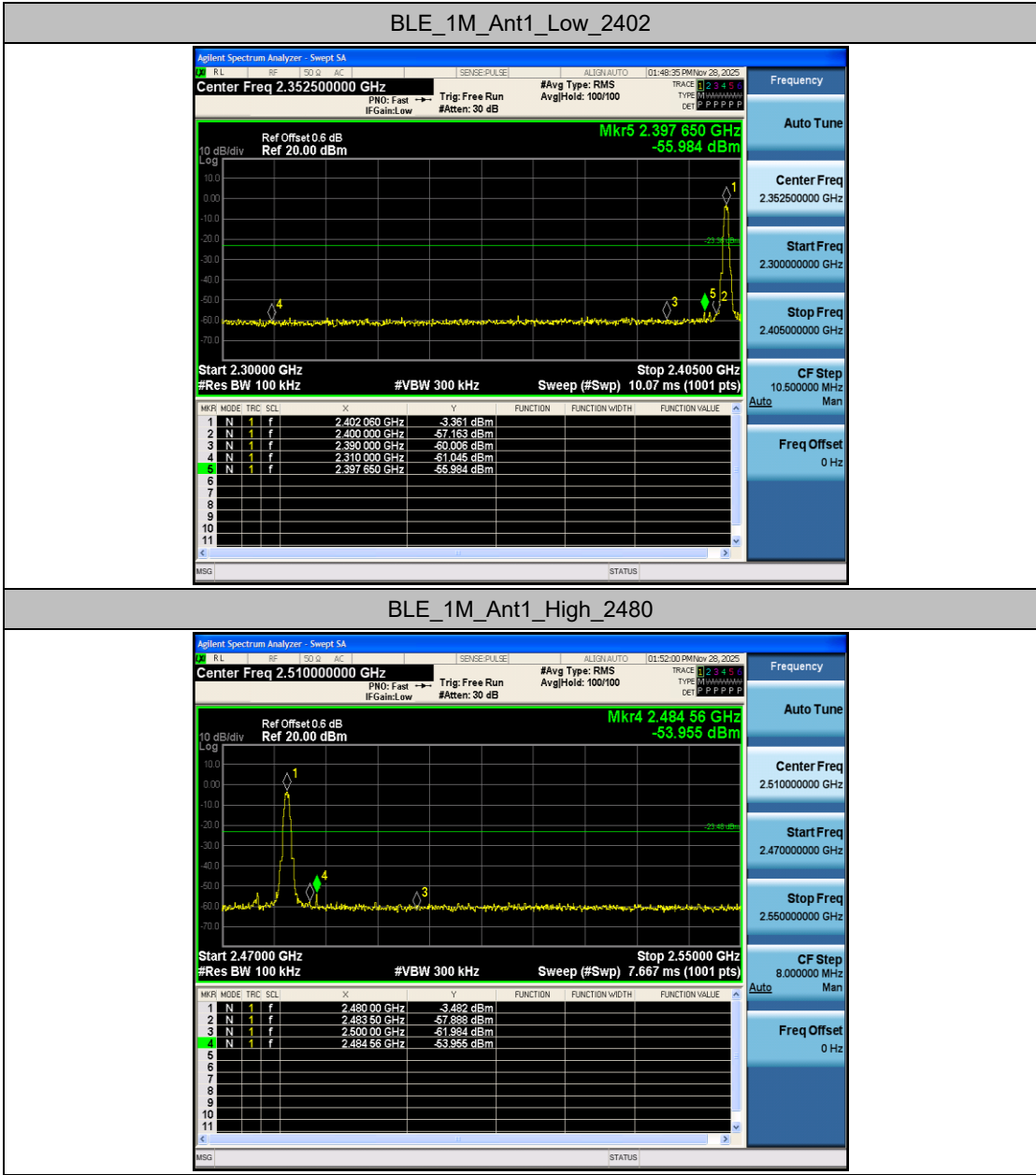


Appendix E: Band edge measurements

Test Result

TestMod e	Antenn a	ChNam e	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdic t
BLE_1M	Ant1	Low	2402	-3.36	-55.98	≤-23.36	PASS
		High	2480	-3.48	-53.96	≤-23.48	PASS

Test Graphs

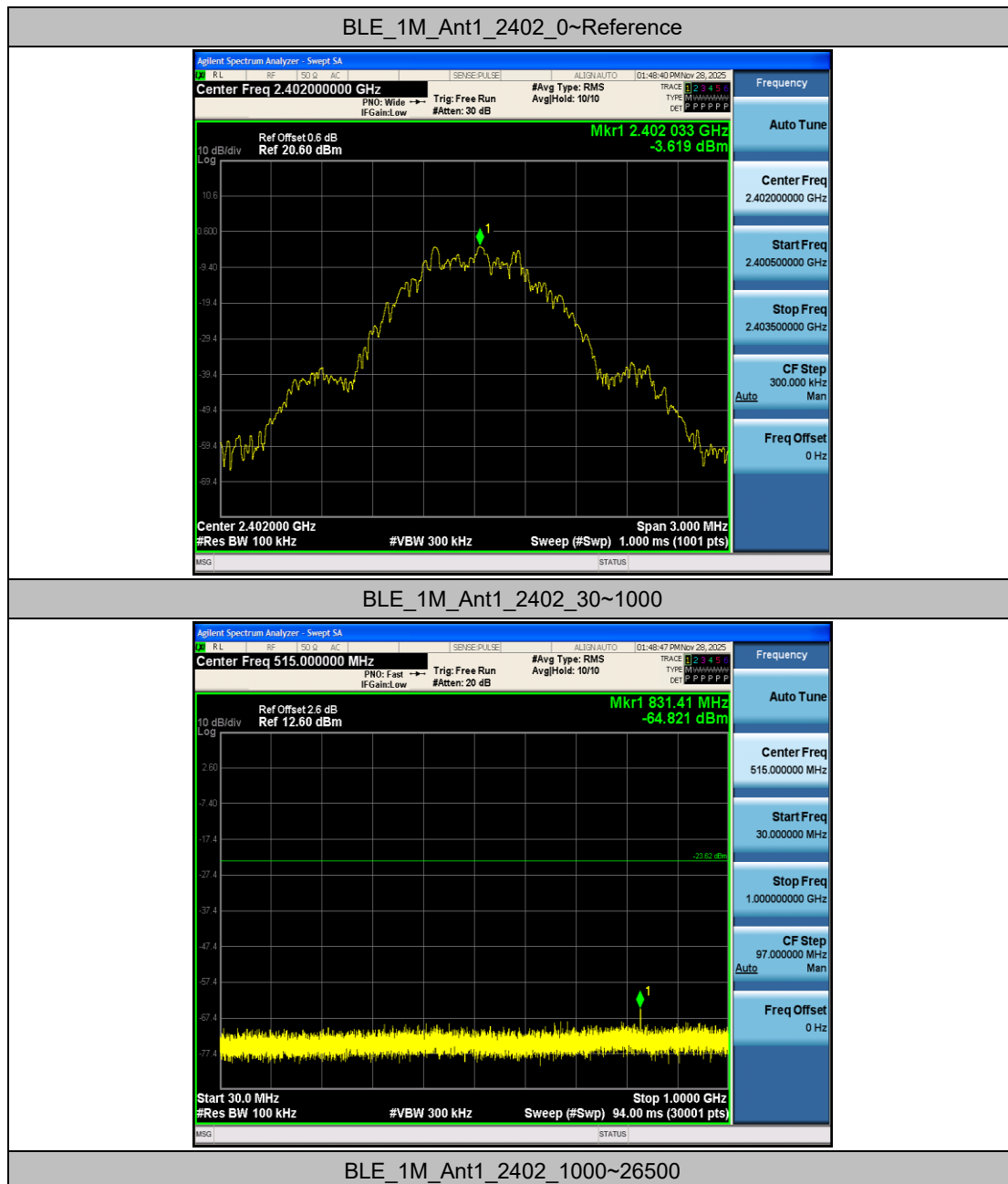


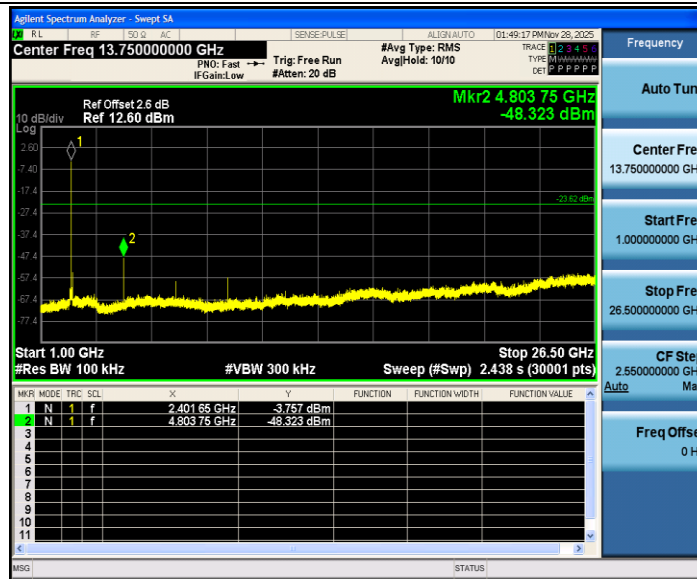
Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-3.62	-3.62	---	PASS
			30~1000	-3.62	-64.82	≤-23.62	PASS
			1000~26500	-3.62	-48.32	≤-23.62	PASS
		2440	Reference	-4.70	-4.70	---	PASS
			30~1000	-4.70	-67.75	≤-24.7	PASS
			1000~26500	-4.70	-46.61	≤-24.7	PASS
		2480	Reference	-4.40	-4.40	---	PASS
			30~1000	-4.40	-68.39	≤-24.4	PASS
			1000~26500	-4.40	-46.58	≤-24.4	PASS

Test Graphs

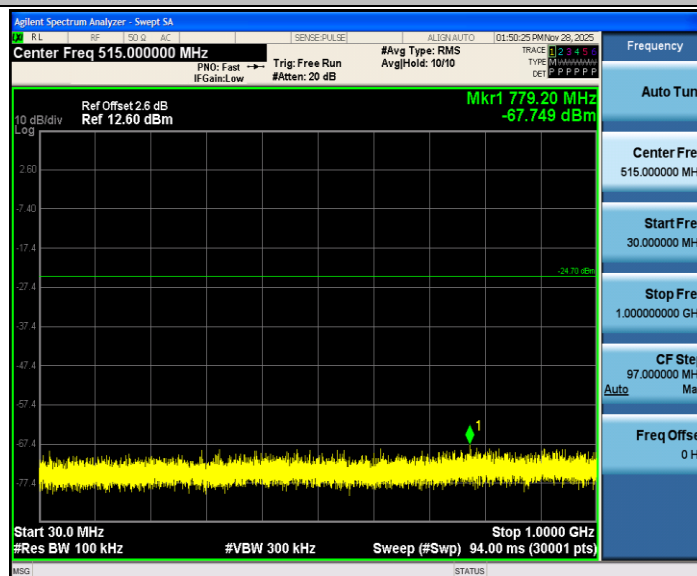




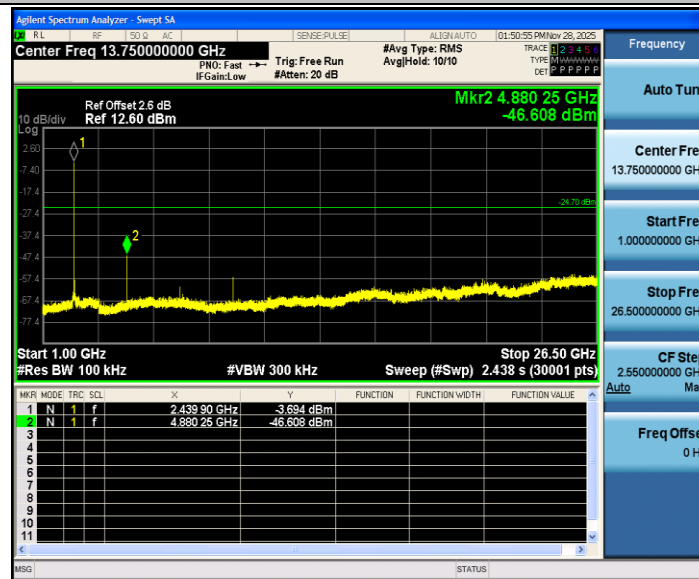
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



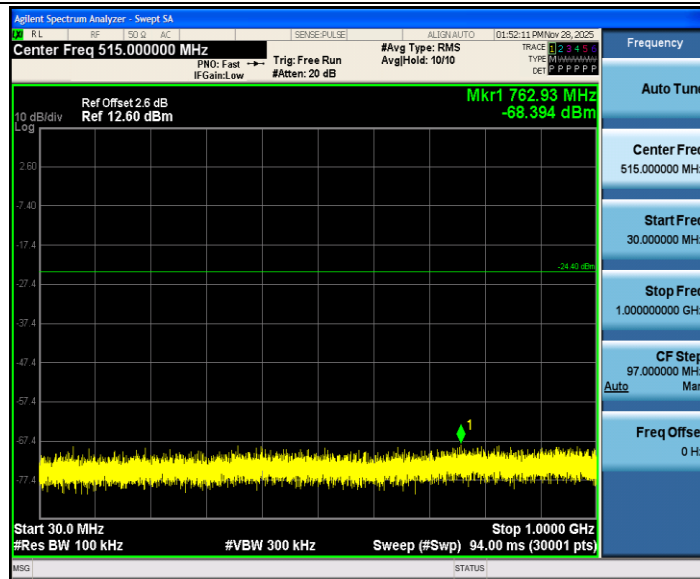
BLE_1M_Ant1_2440_1000~26500



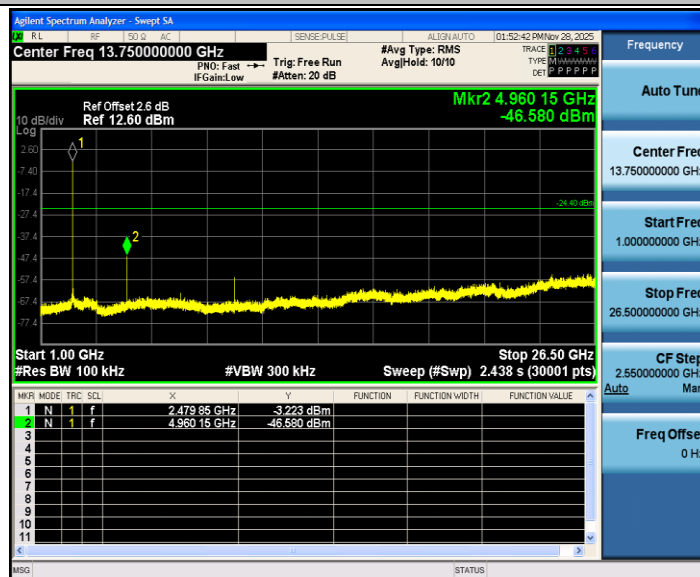
BLE_1M_Ant1_2480_0~Reference



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	---	---

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.402000000 GHz

Trig Delay 200.0 μ s

#Avg Type: RMS

Ref Offset 0.6 dB

Ref 20.00 dBm

Δ Mkr3 630.0 μ s

10.81 dB

Center 2.402000000 GHz

Res BW 8 MHz

#VBW 8.0 MHz

Sweep 5.000 ms (1001 pts)

Span 0 Hz

CF Step 8.0000000 MHz

Freq Offset 0 Hz

MNR	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	t	1.660 ms	-14.00 dBm			
2	A1	1	t	(A)	410.0 μ s (A)	9.93 dB		
3	A1	1	t	(A)	630.0 μ s (A)	10.81 dB		

BLE_1M_Ant1_2402

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.440000000 GHz

Trig Delay 200.0 μ s

#Avg Type: RMS

Ref Offset 0.6 dB

Ref 20.00 dBm

Δ Mkr3 630.0 μ s

10.99 dB

Center 2.440000000 GHz

Res BW 8 MHz

#VBW 8.0 MHz

Sweep 5.000 ms (1001 pts)

Span 0 Hz

CF Step 8.0000000 MHz

Freq Offset 0 Hz

MNR	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	t	1.660 ms	-14.52 dBm			
2	A1	1	t	(A)	410.0 μ s (A)	10.11 dB		
3	A1	1	t	(A)	630.0 μ s (A)	10.99 dB		

BLE_1M_Ant1_2440

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.480000000 GHz

Trig Delay 200.0 μ s

#Avg Type: RMS

Ref Offset 0.6 dB

Ref 20.00 dBm

Δ Mkr3 630.0 μ s

10.99 dB

Center 2.480000000 GHz

Res BW 8 MHz

#VBW 8.0 MHz

Sweep 5.000 ms (1001 pts)

Span 0 Hz

CF Step 8.0000000 MHz

Freq Offset 0 Hz

MNR	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	t	1.660 ms	-14.52 dBm			
2	A1	1	t	(A)	410.0 μ s (A)	10.11 dB		
3	A1	1	t	(A)	630.0 μ s (A)	10.99 dB		

BLE_1M_Ant1_2480

