

FCC Appendix RF Test Data for BT

FCC ID : 2BFX6-QB16

Company : Wuyi Jinheng Household goods Co., Ltd

EUT : Game boxing disc

Model Number : QB16

Report No. : CTA26072702901

Reviewed By : Eric Wang

Appendix A: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.948	2401.550	2402.498	---	---
		2441	0.942	2440.547	2441.489	---	---
		2480	0.939	2479.550	2480.489	---	---
2DH5	Ant1	2402	1.314	2401.352	2402.666	---	---
		2441	1.278	2440.379	2441.657	---	---
		2480	1.341	2479.340	2480.681	---	---

DH5_Ant1_2402

Agilent Spectrum Analyzer - Sweep SA

Center Freq 2.402000000 GHz

Ref Offset 0.5 dB
Ref 30.00 dBm

Trig: Free Run
#Aver: 40 dB

#Avg Type: RMS
AvgHold: 100/100

Span 3.000 MHz
Sweep 3.200 ms (1001 pts)

#Res BW 30 kHz
#VBW 100 kHz

ΔMkr3 948 kHz
-0.228 dB

Mkr	Mode	Trig	SOL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.401550 GHz	-25.695 dBm			
2	N	1	f	2.402021 GHz	-5.221 dBm			
3	Δ1	1	f (Δ)	948 kHz (Δ)	-0.228 dB			

DH5_Ant1_2441

Agilent Spectrum Analyzer - Sweep SA

Center Freq 2.441000000 GHz

Ref Offset 0.5 dB
Ref 30.00 dBm

Trig: Free Run
#Aver: 40 dB

#Avg Type: RMS
AvgHold: 100/100

Span 3.000 MHz
Sweep 3.200 ms (1001 pts)

#Res BW 30 kHz
#VBW 100 kHz

ΔMkr3 942 kHz
-0.124 dB

Mkr	Mode	Trig	SOL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.440547 GHz	-26.607 dBm			
2	N	1	f	2.441000 GHz	-6.052 dBm			
3	Δ1	1	f (Δ)	942 kHz (Δ)	-0.124 dB			



2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480

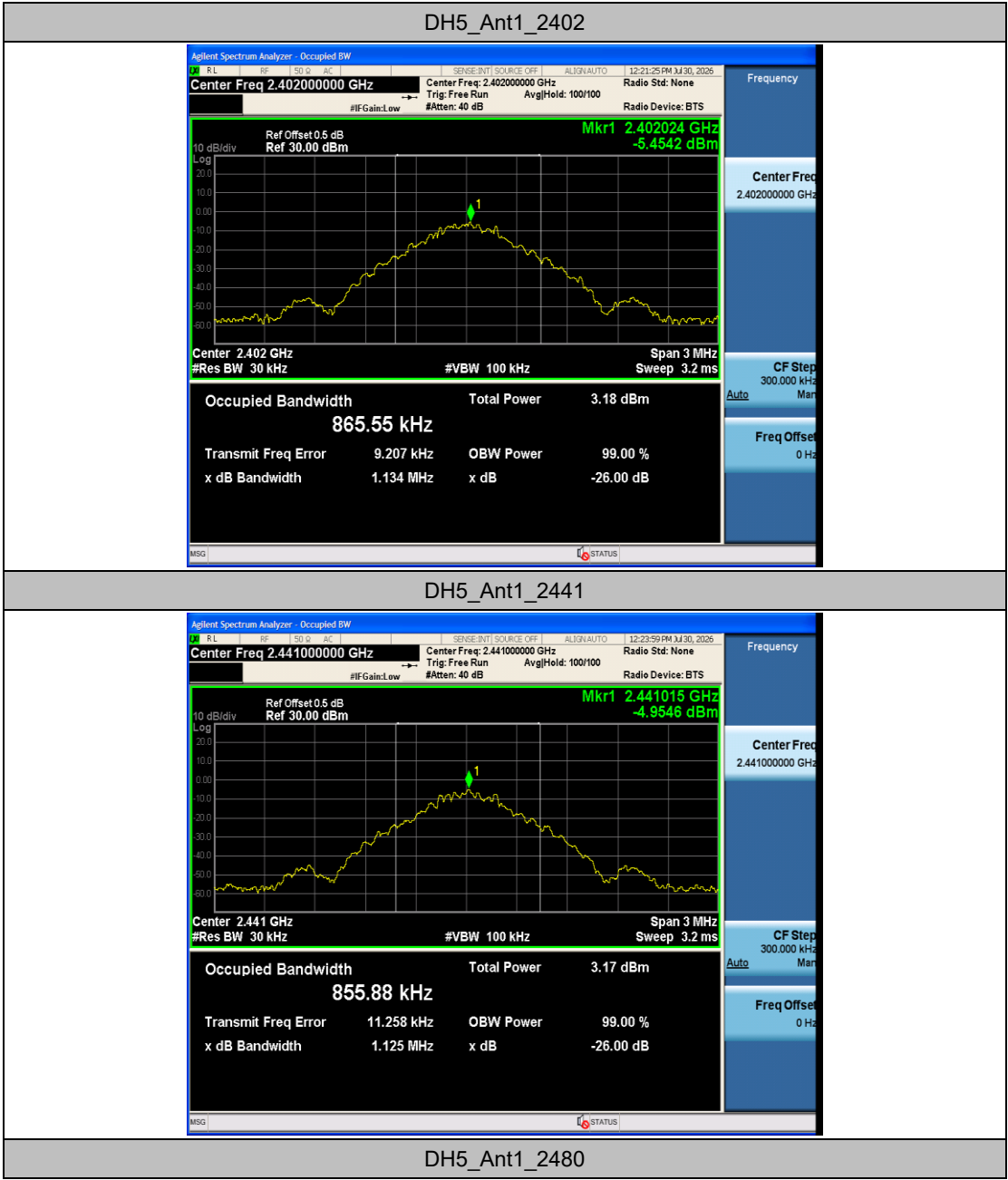


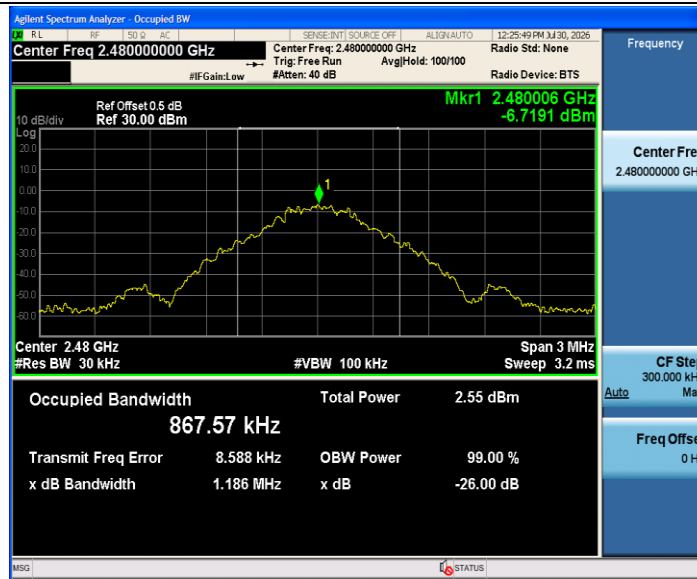
Appendix B: Occupied Channel Bandwidth

Test Result

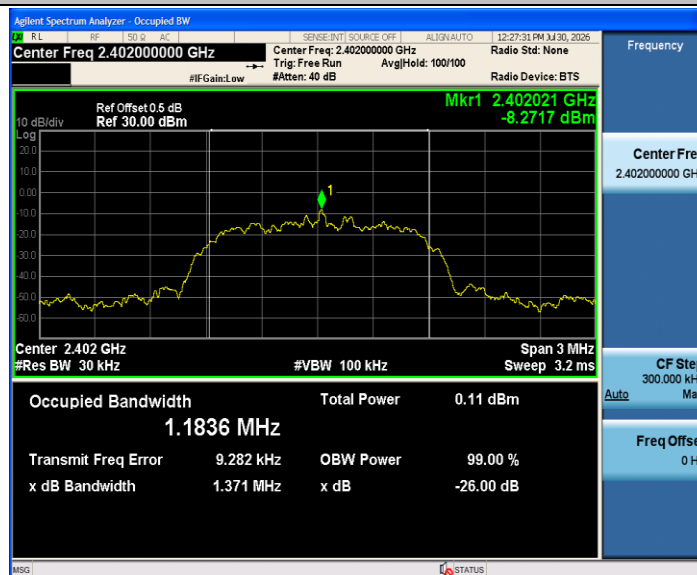
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.86555	2401.5764	2402.4420	---	---
		2441	0.85588	2440.5833	2441.4392	---	---
		2480	0.86757	2479.5748	2480.4424	---	---
2DH5	Ant1	2402	1.1836	2401.4175	2402.6011	---	---
		2441	1.1829	2440.4200	2441.6029	---	---
		2480	1.1896	2479.4169	2480.6065	---	---

Test Graphs





2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



Appendix C: Maximum conducted output power

Test Result Peak

Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	-3.36	≤20.97	PASS
		2441	-3.41	≤20.97	PASS
		2480	-3.68	≤20.97	PASS
2DH5	Ant1	2402	-4.13	≤20.97	PASS
		2441	-4.19	≤20.97	PASS
		2480	-4.41	≤20.97	PASS

Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.032	≥ 0.948	PASS
2DH5	Ant1	Hop	1.188	≥ 0.894	PASS

Test Graphs



Appendix E: Time of occupancy

Test Result

TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.407	319	0.13	≤0.4	PASS
DH3	Ant1	Hop	1.662	163	0.271	≤0.4	PASS
DH5	Ant1	Hop	2.910	107	0.311	≤0.4	PASS
2DH1	Ant1	Hop	0.415	315	0.131	≤0.4	PASS
2DH3	Ant1	Hop	1.667	171	0.285	≤0.4	PASS
2DH5	Ant1	Hop	2.916	105	0.306	≤0.4	PASS

Agilent Spectrum Analyzer - Sweep SA

Center Freq 2.441000000 GHz

Trig Delay: 2.000 ms

#Avg Type: RMS

Ref Offset 0.5 dB

Ref 30.00 dBm

ΔMkr2 407.0 μs

21.06 dB

2Δ1

1

Center 2.441000000 GHz

Res BW 1.0 MHz

#VBW 3.0 MHz

Sweep 10.13 ms (8000 pts)

Frequency

Auto Tune

Center Freq 2.441000000 GHz

Start Freq 2.441000000 GHz

Stop Freq 2.441000000 GHz

CF Step 1.000000 MHz

Auto

Freq Offset 0 Hz

Agilent Spectrum Analyzer - Sweep SA

Center Freq 2.441000000 GHz

Trig Delay: 0.000 s

#Avg Type: RMS

Ref Offset 0.5 dB

Ref 30.00 dBm

Center 2.441000000 GHz

Res BW 510 kHz

#VBW 3.0 MHz

Sweep 31.60 s (30000 pts)

Frequency

Auto Tune

Center Freq 2.441000000 GHz

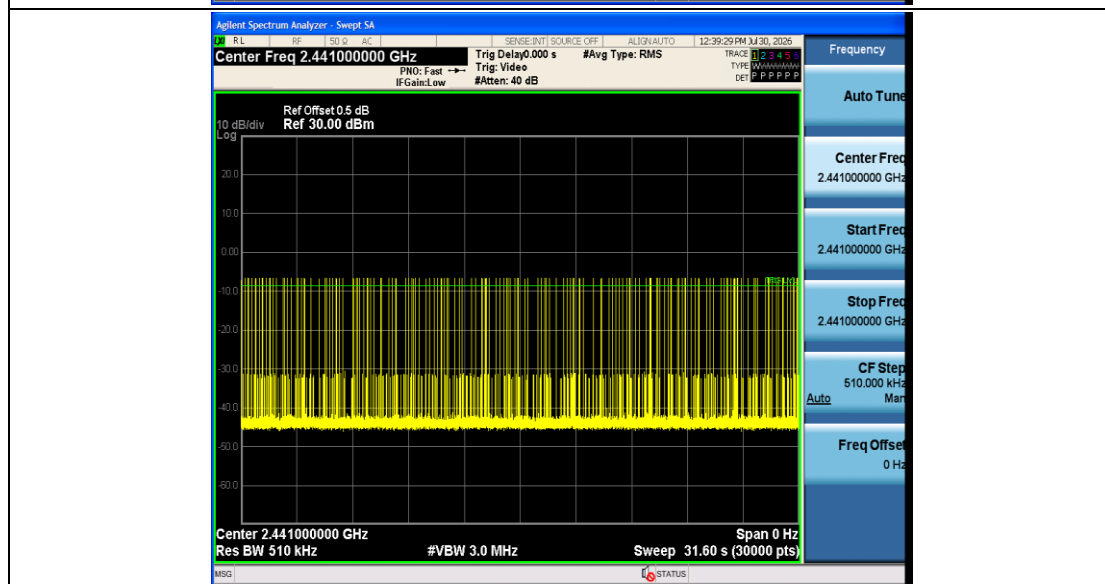
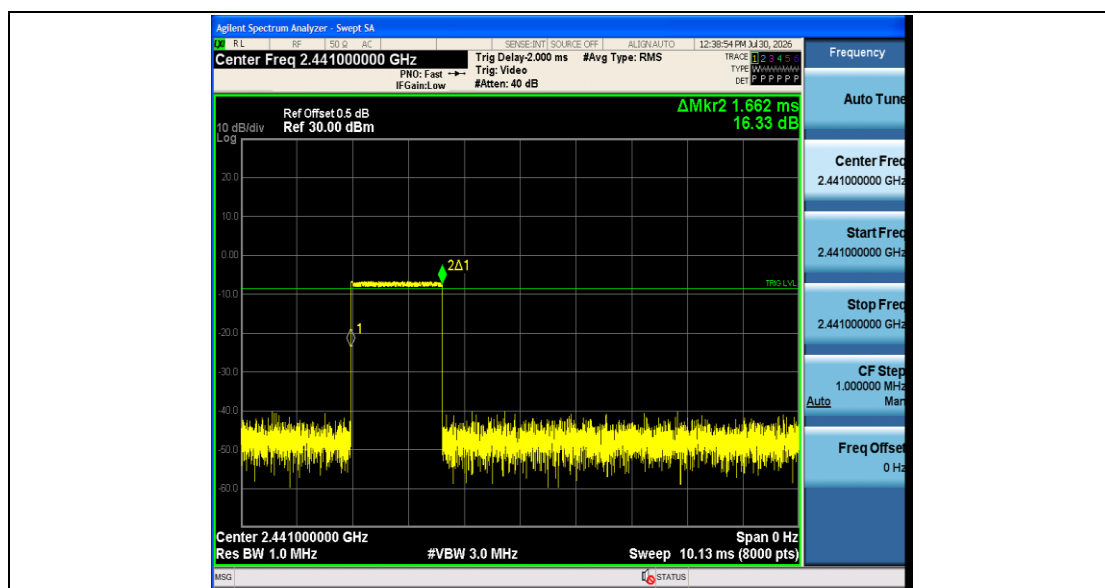
Start Freq 2.441000000 GHz

Stop Freq 2.441000000 GHz

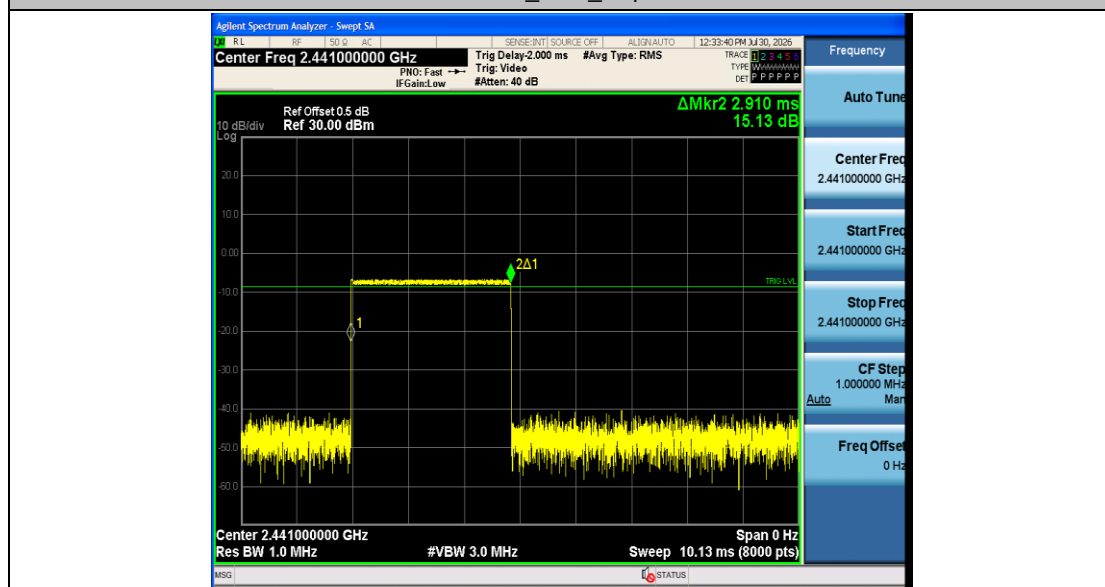
CF Step 510.000 kHz

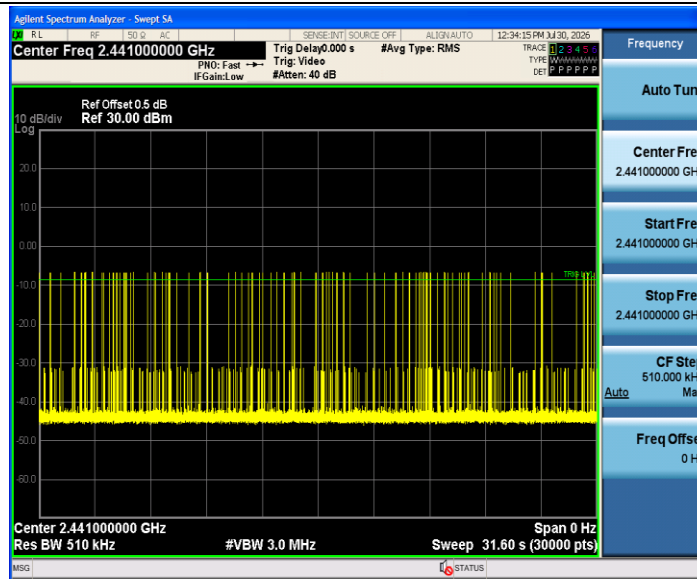
Auto

Freq Offset 0 Hz

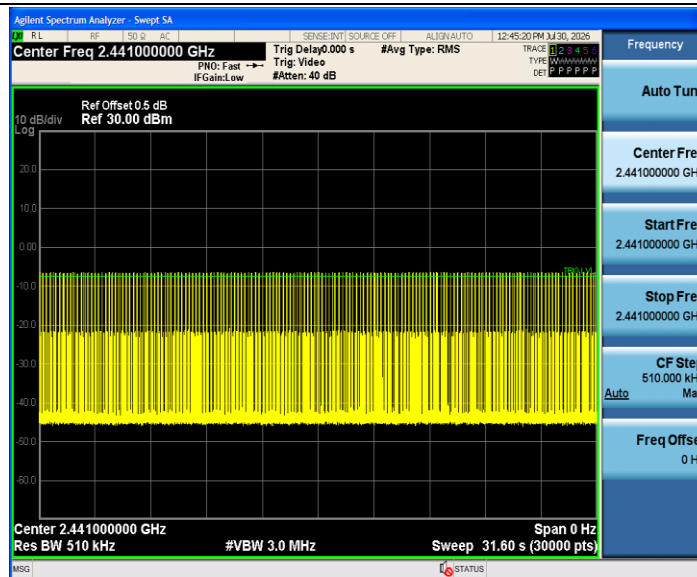
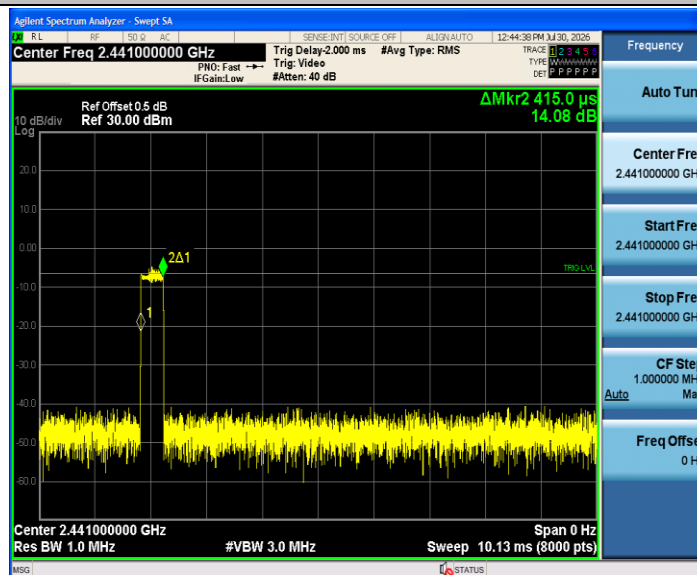


DH5_Ant1_Hop

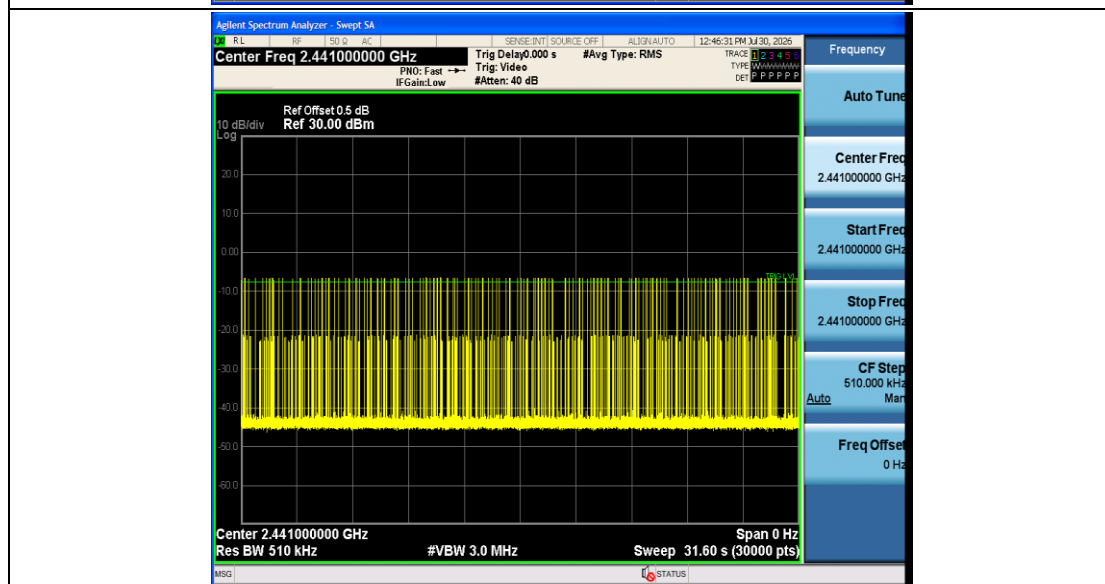
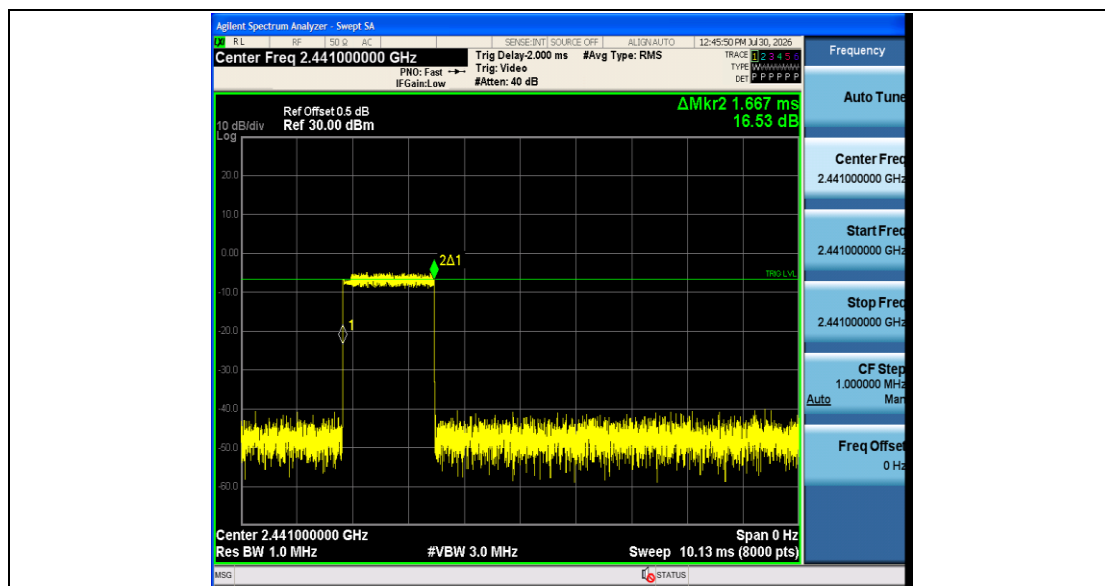




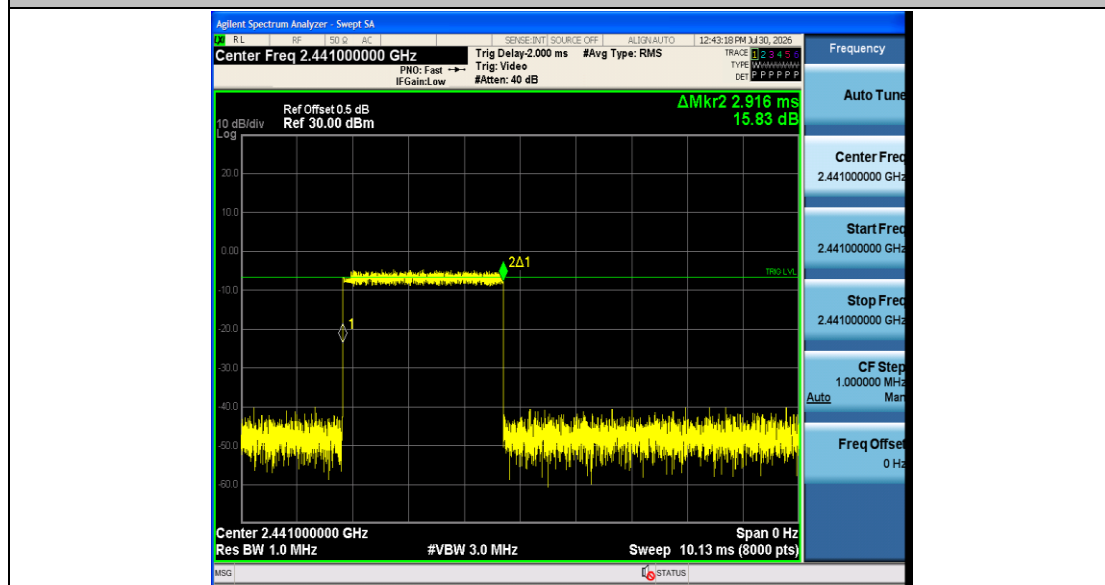
2DH1_Ant1_Hop

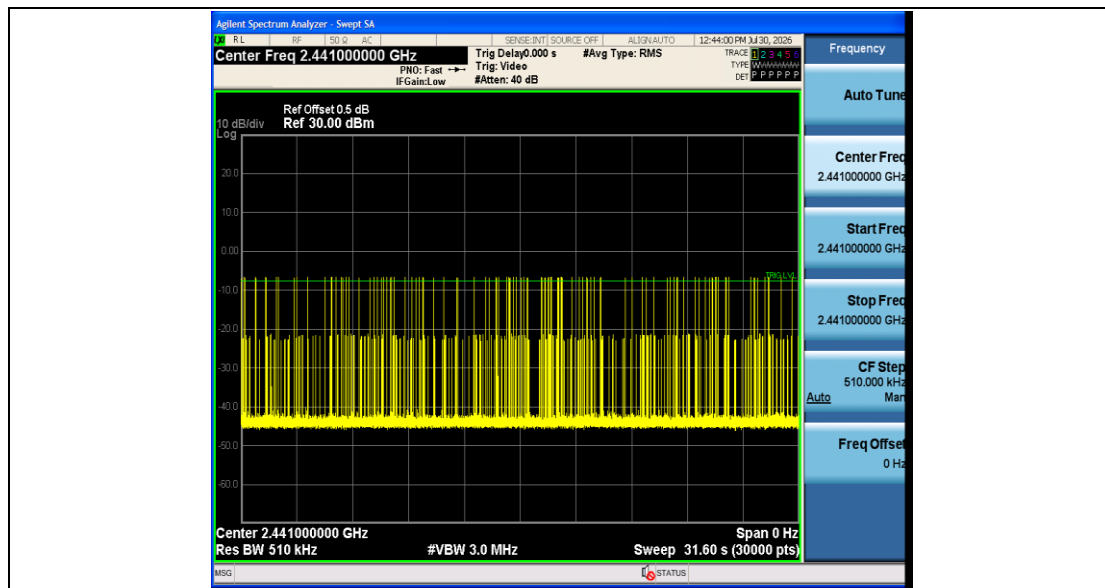


2DH3_Ant1_Hop



2DH5_Ant1_Hop



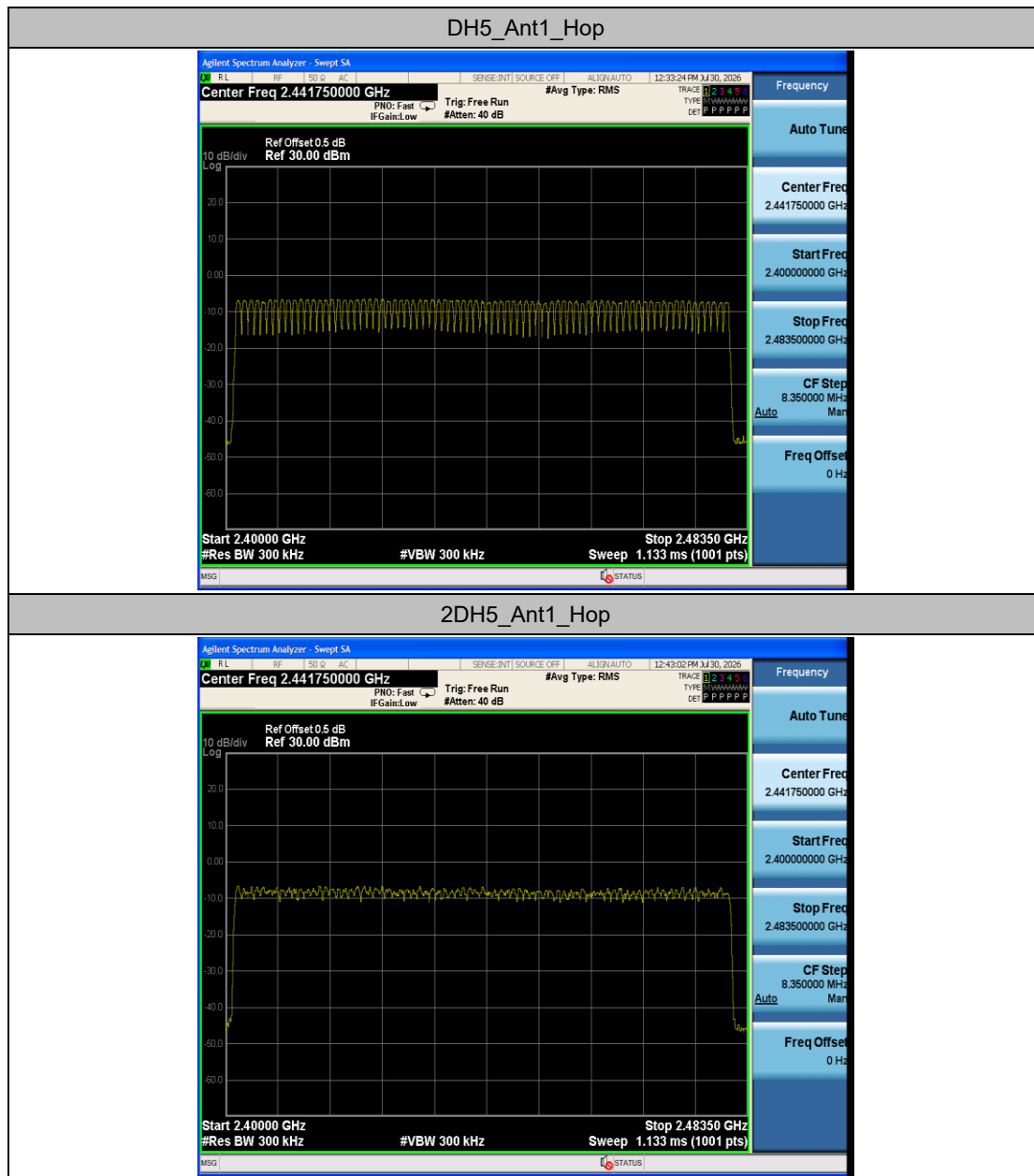


Appendix F: Number of hopping channels

Test Result

TestMode	Antenna	Freq(MHz)	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS

Test Graphs

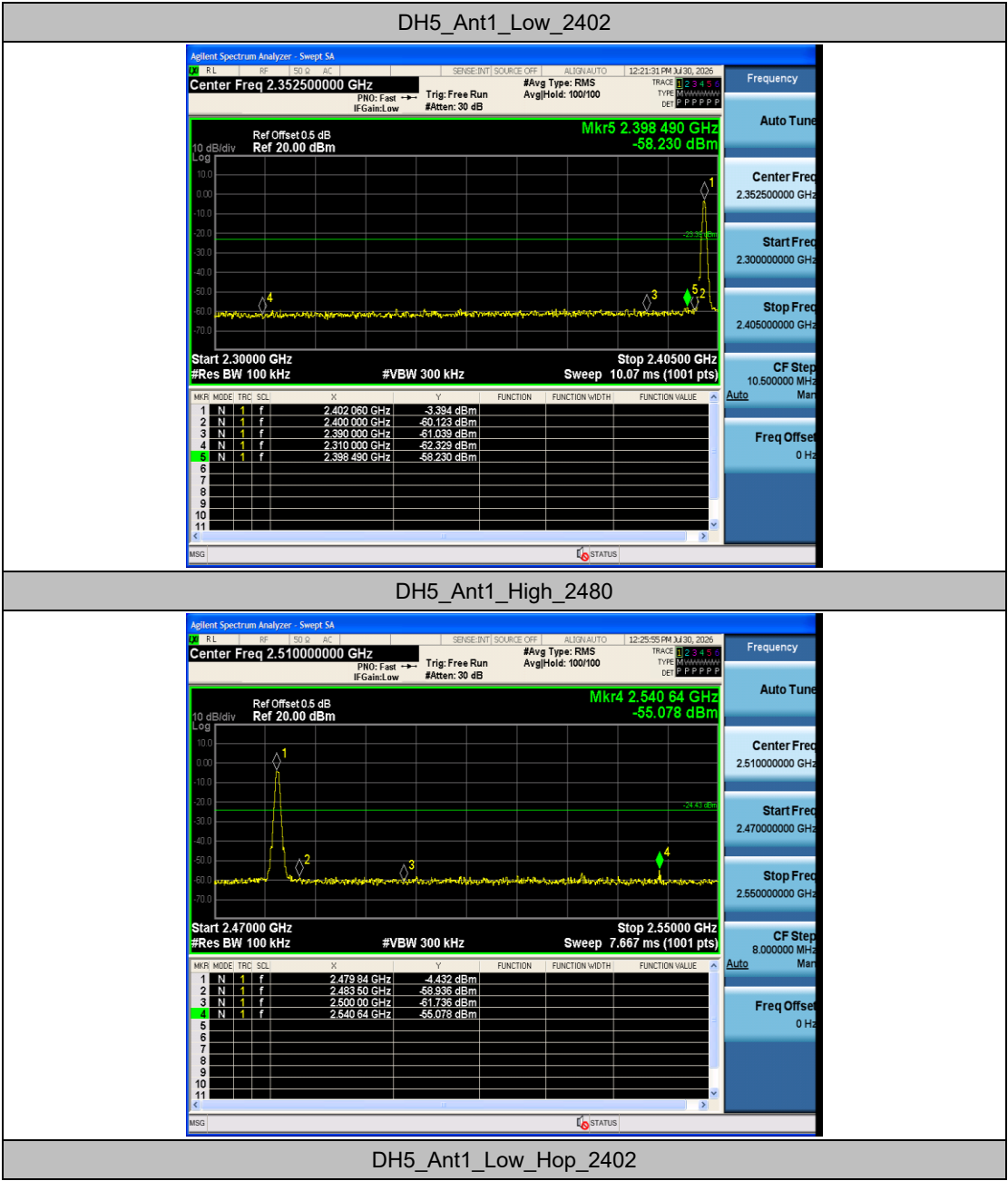


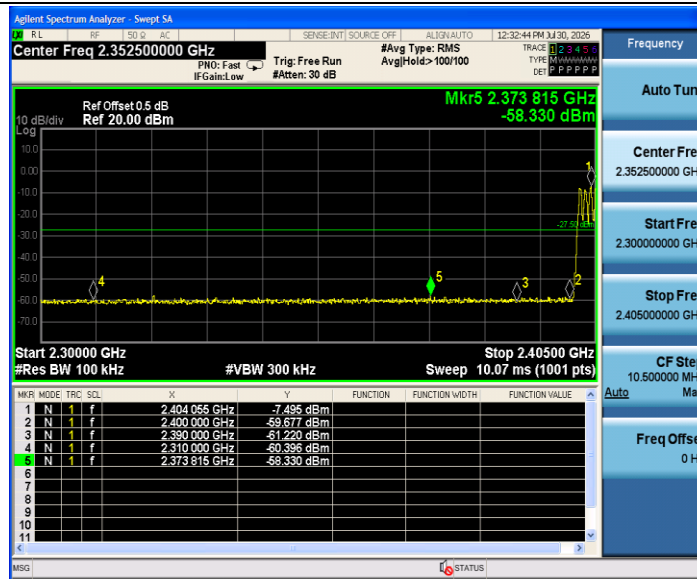
Appendix G: Band edge measurements

Test Result

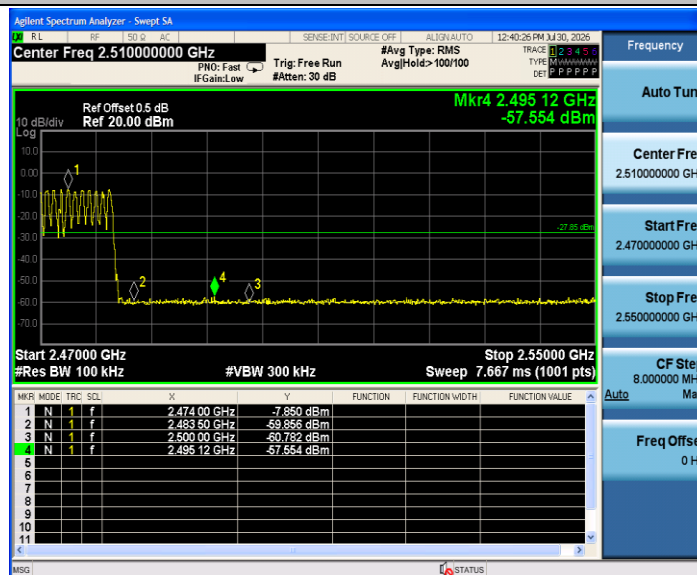
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-3.39	-58.23	≤ -23.39	PASS
		High	2480	-4.43	-55.08	≤ -24.43	PASS
		Low	Hop_2402	-7.50	-58.33	≤ -27.5	PASS
		High	Hop_2480	-7.85	-57.55	≤ -27.85	PASS
2DH5	Ant1	Low	2402	-6.82	-57.56	≤ -26.82	PASS
		High	2480	-8.28	-58.22	≤ -28.28	PASS
		Low	Hop_2402	-10.09	-58.14	≤ -30.09	PASS
		High	Hop_2480	-8.42	-57.39	≤ -28.42	PASS

Test Graphs

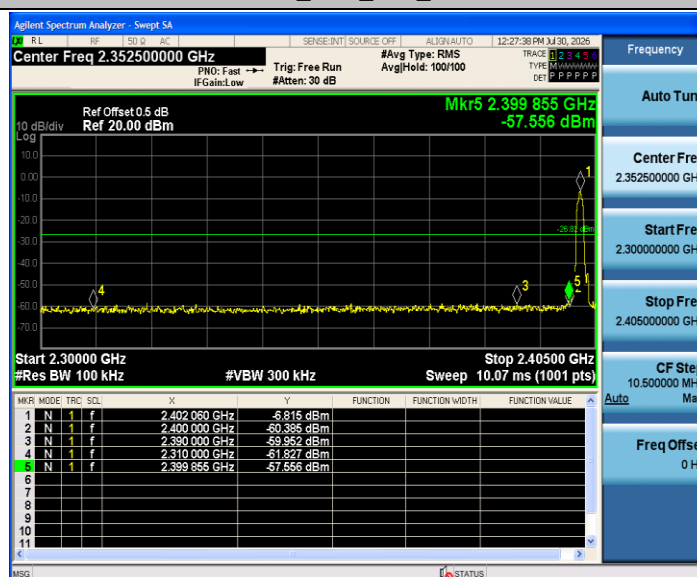




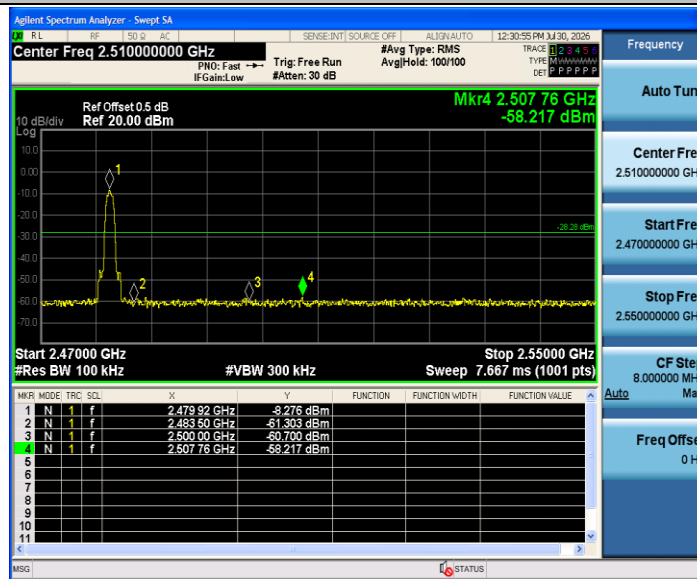
DH5_Ant1_High_Hop_2480



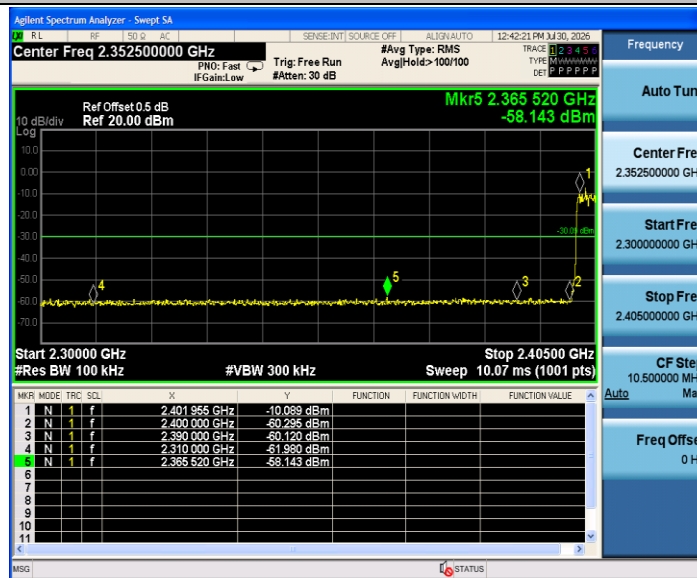
2DH5_Ant1_Low_2402



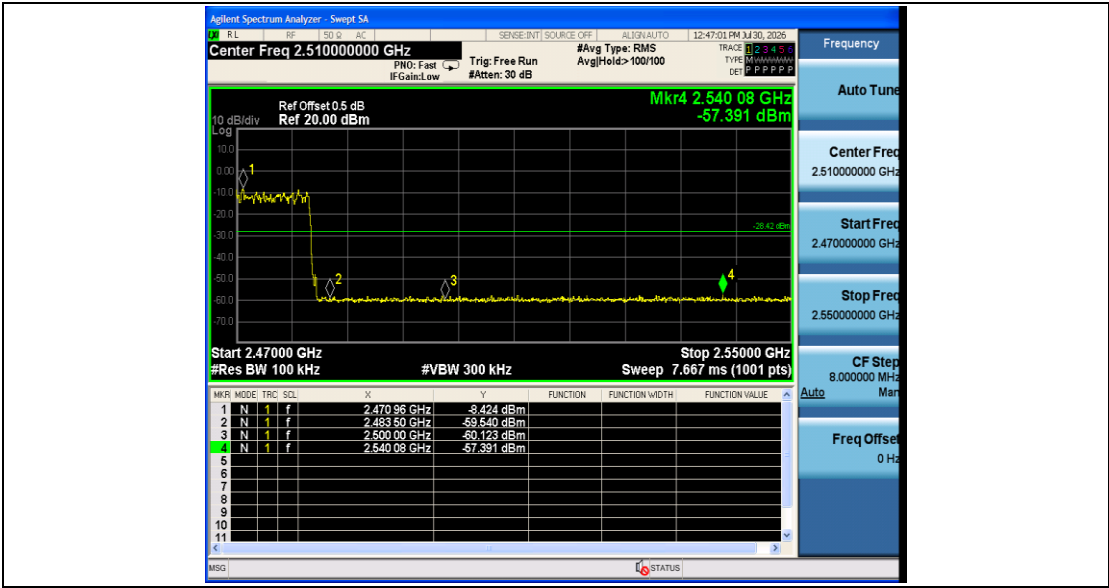
2DH5_Ant1_High_2480



2DH5_Ant1_Low_Hop_2402



2DH5_Ant1_High_Hop_2480

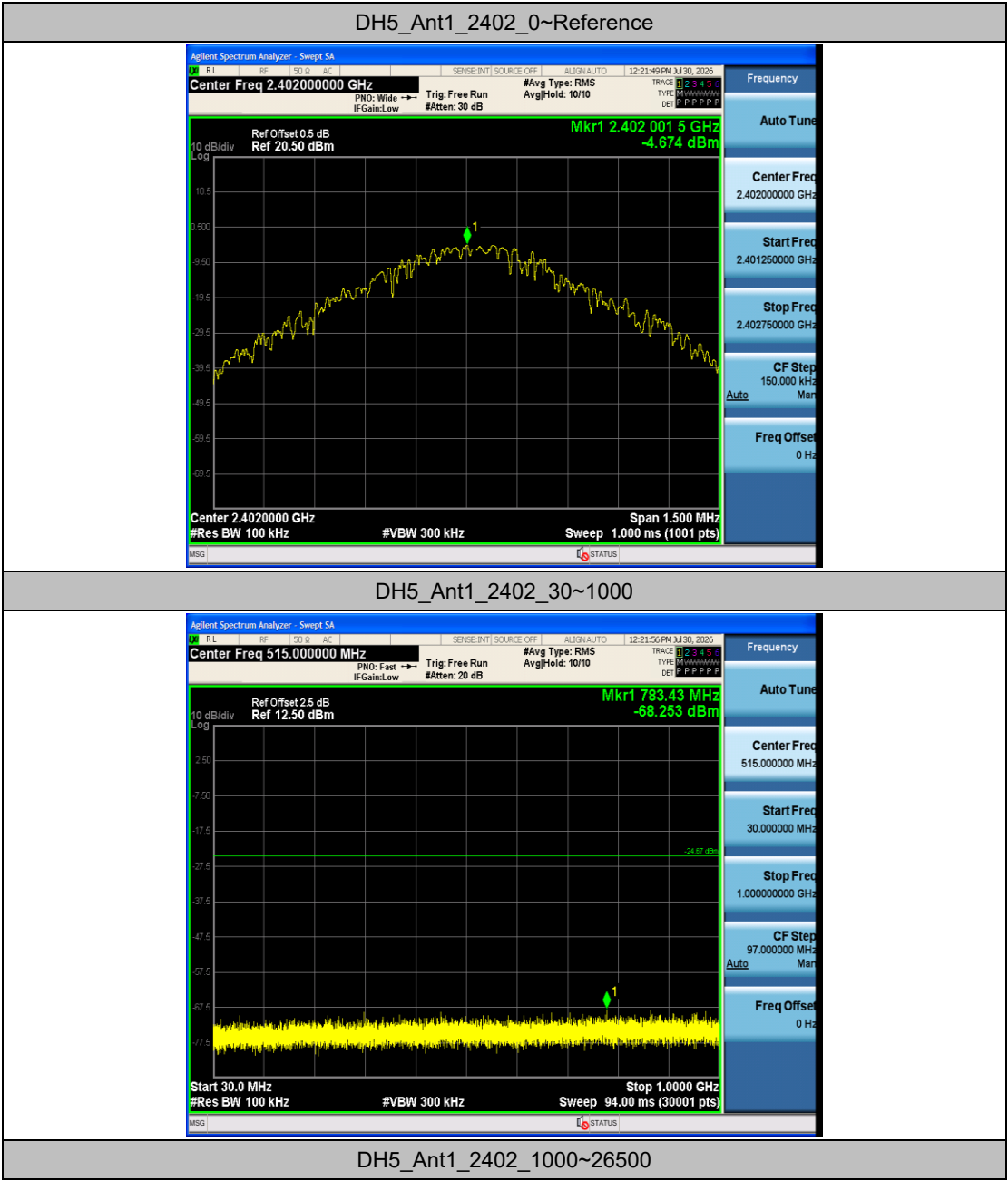


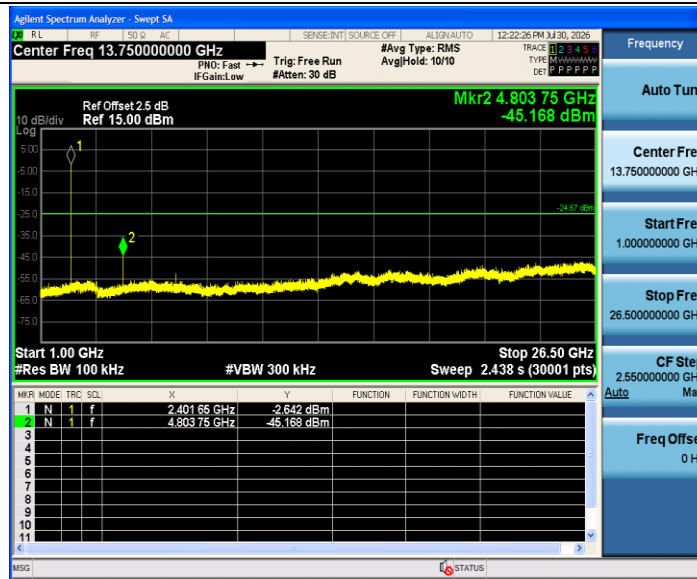
Appendix H: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-4.67	-4.67	---	PASS
			30~1000	-4.67	-68.25	≤-24.67	PASS
			1000~26500	-4.67	-45.17	≤-24.67	PASS
		2441	Reference	-4.12	-4.12	---	PASS
			30~1000	-4.12	-68.37	≤-24.12	PASS
			1000~26500	-4.12	-44.55	≤-24.12	PASS
		2480	Reference	-4.53	-4.53	---	PASS
			30~1000	-4.53	-68.3	≤-24.53	PASS
			1000~26500	-4.53	-46.69	≤-24.53	PASS
2DH5	Ant1	2402	Reference	-9.82	-9.82	---	PASS
			30~1000	-9.82	-68.93	≤-29.82	PASS
			1000~26500	-9.82	-46.92	≤-29.82	PASS
		2441	Reference	-10.56	-10.56	---	PASS
			30~1000	-10.56	-68.65	≤-30.56	PASS
			1000~26500	-10.56	-47.04	≤-30.56	PASS
		2480	Reference	-8.70	-8.70	---	PASS
			30~1000	-8.70	-68.43	≤-28.7	PASS
			1000~26500	-8.70	-46.82	≤-28.7	PASS

Test Graphs

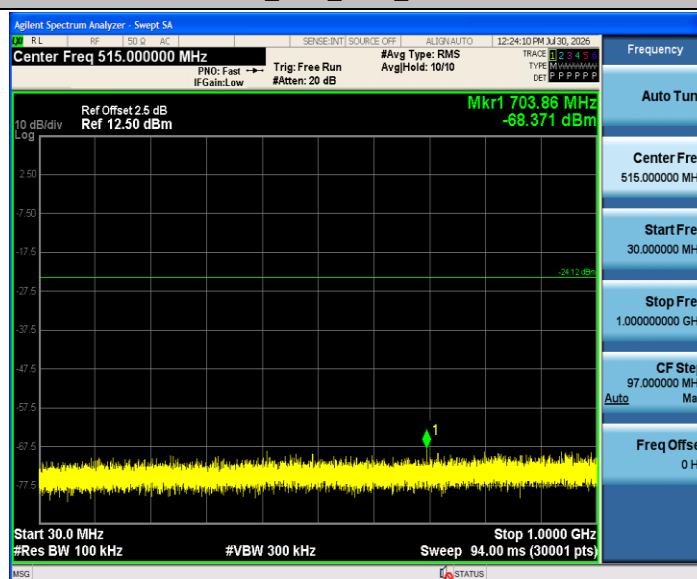




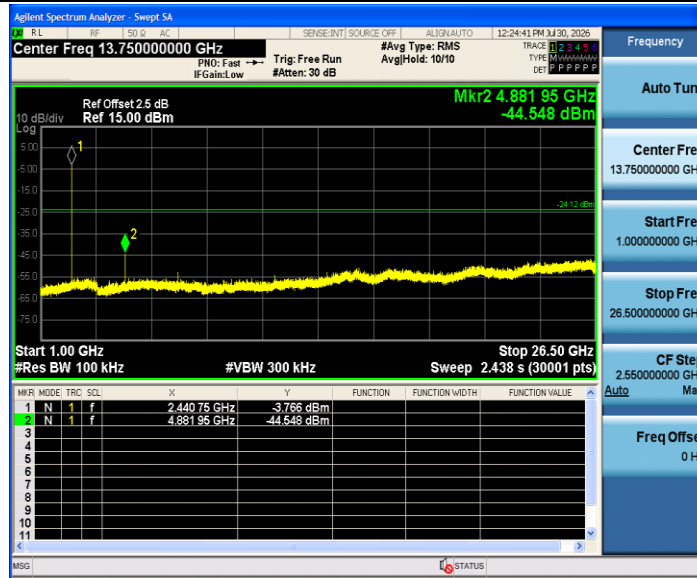
DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000



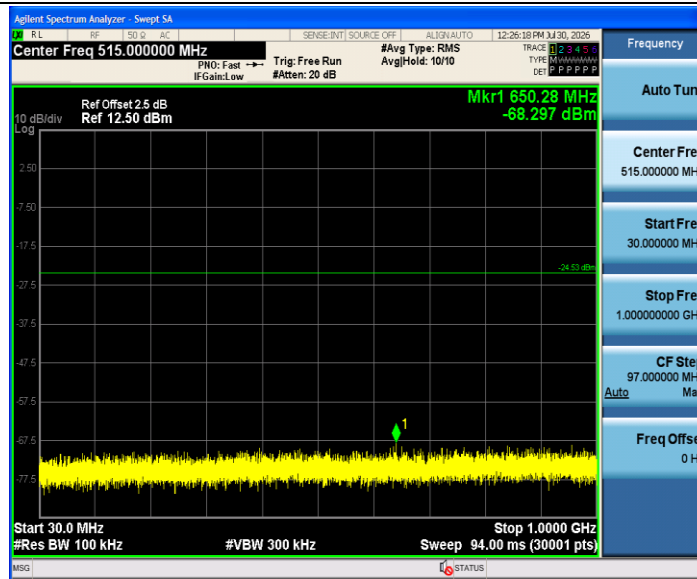
DH5_Ant1_2441_1000~26500



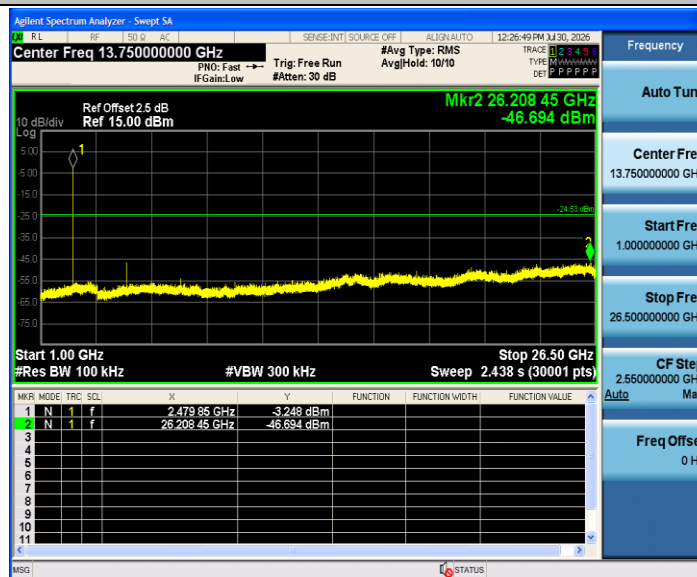
DH5_Ant1_2480_0~Reference



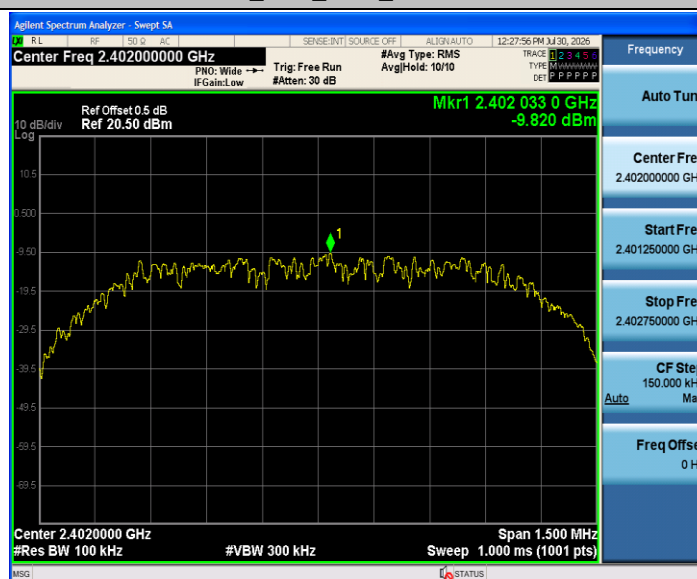
DH5_Ant1_2480_30~1000



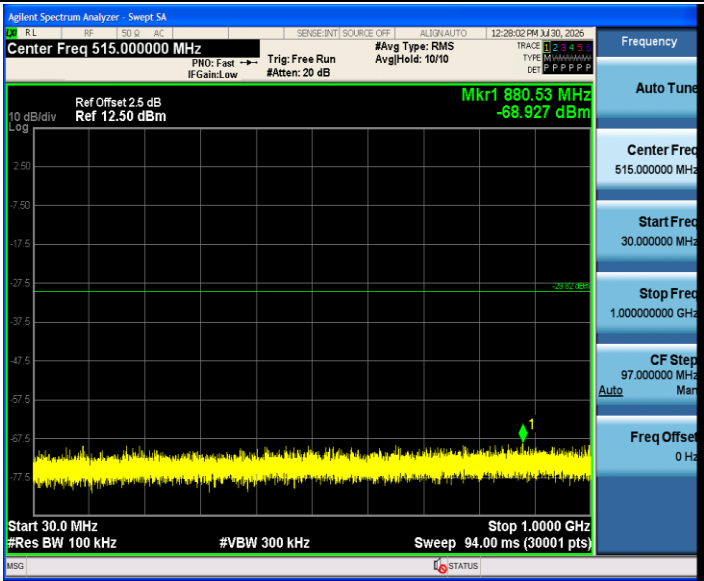
DH5_Ant1_2480_1000~26500



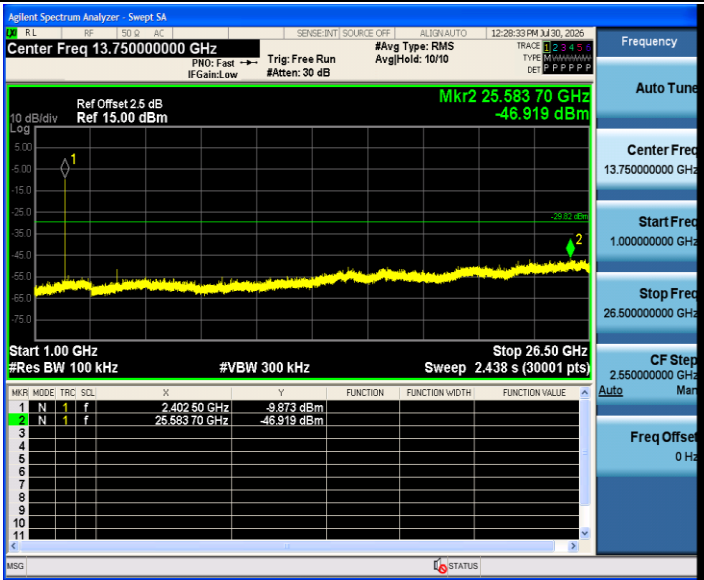
2DH5_Ant1_2402_0~Reference



2DH5_Ant1_2402_30~1000



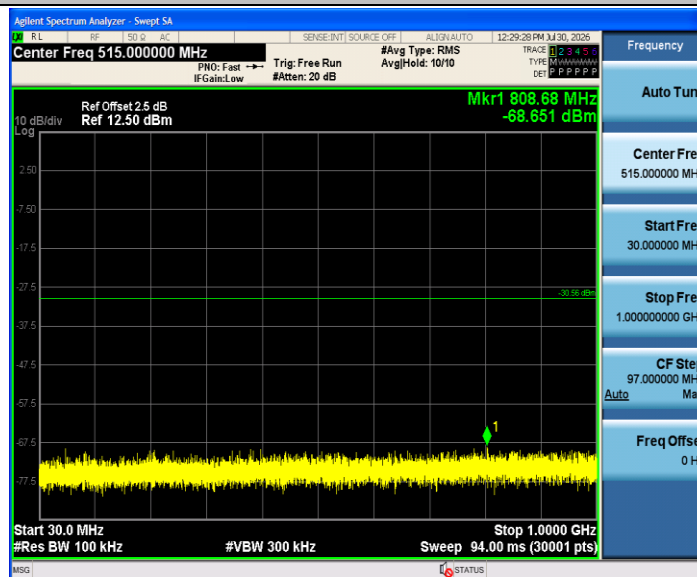
2DH5_Ant1_2402_1000~26500



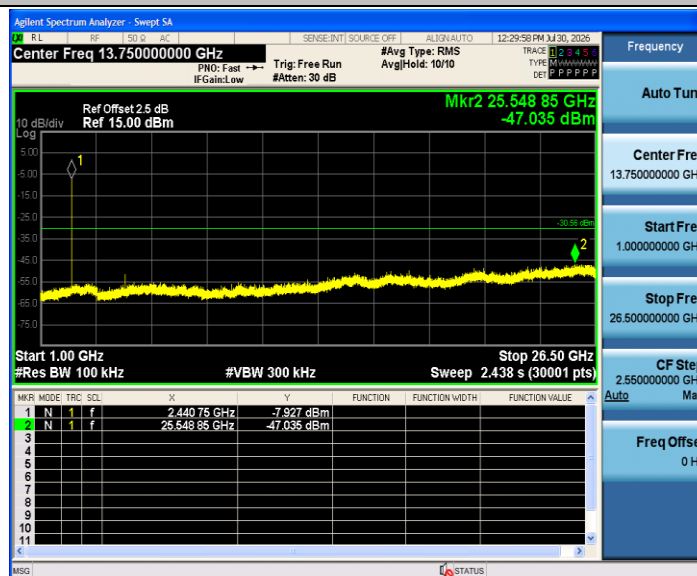
2DH5_Ant1_2441_0~Reference



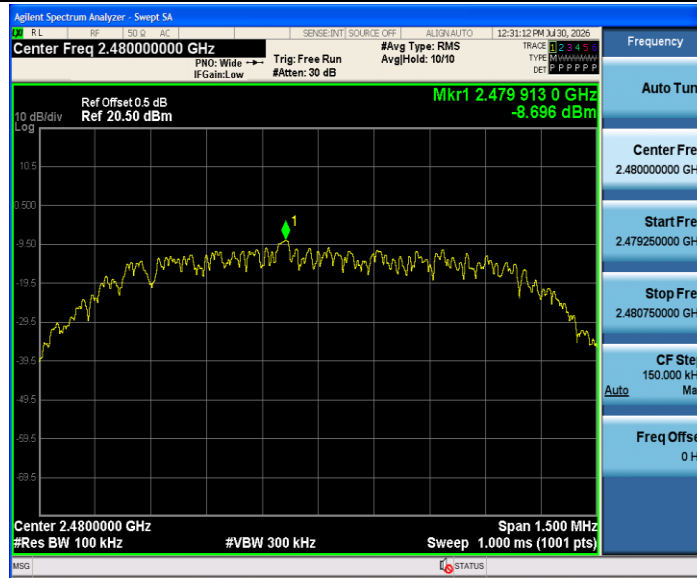
2DH5_Ant1_2441_30~1000



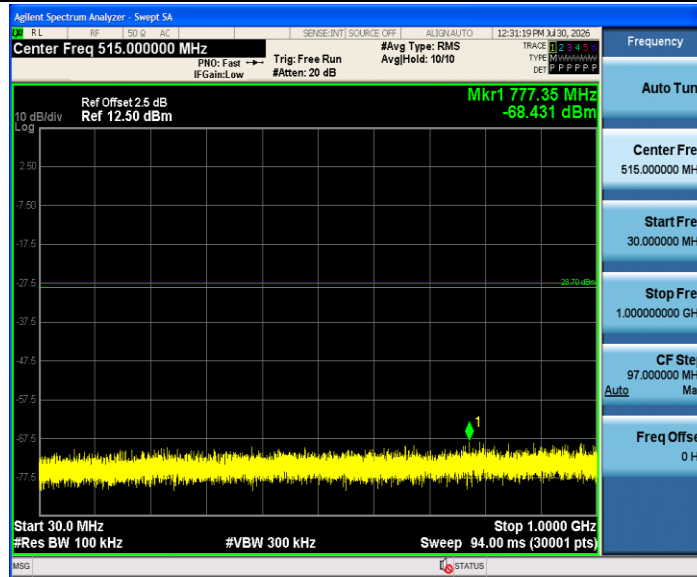
2DH5_Ant1_2441_1000~26500



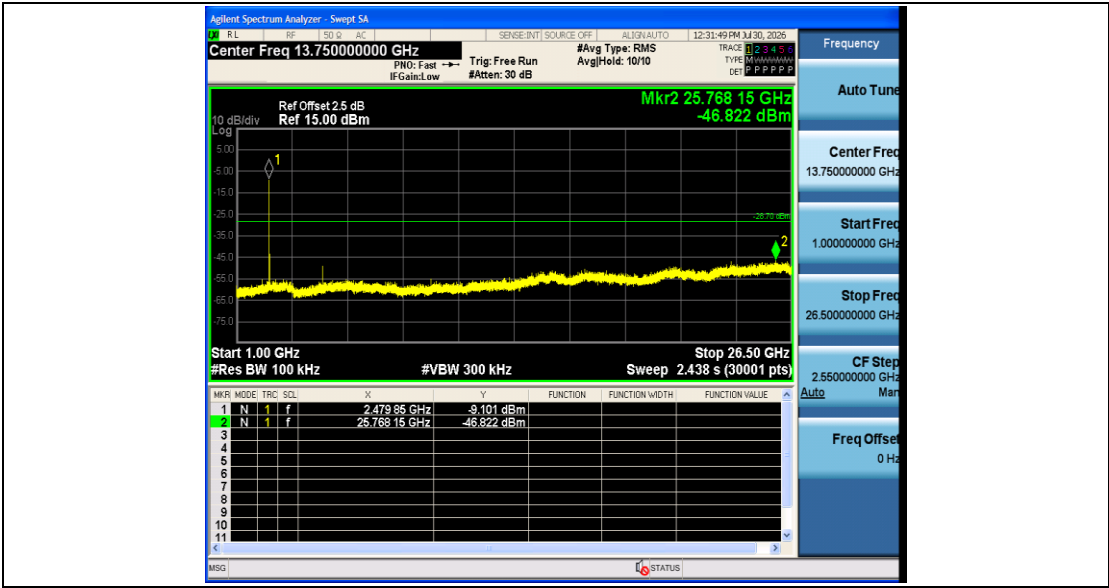
2DH5_Ant1_2480_0~Reference



2DH5_Ant1_2480_30~1000



2DH5_Ant1_2480_1000~26500



Appendix I: Duty Cycle

Test Result

TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	DC [%]	xFactor	Limit	Verdict
DH5	Ant1	2402	2.91	3.75	77.60	1.10	---	---
		2441	2.91	3.75	77.60	1.10	---	---
		2480	2.91	3.75	77.60	1.10	---	---
2DH5	Ant1	2402	2.92	3.75	77.87	1.09	---	---
		2441	2.92	3.75	77.87	1.09	---	---
		2480	2.92	3.75	77.87	1.09	---	---