

Appendix for Bluetooth

Product Name: CA Essential USB Bluetooth Dongle

Model No: DG-003BT2

Appendix A: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.960	2401.538	2402.498	---	---
DH5	Ant1	2441	0.966	2440.535	2441.501	---	---
DH5	Ant1	2480	0.951	2479.541	2480.492	---	---
2DH5	Ant1	2402	1.284	2401.373	2402.657	---	---
2DH5	Ant1	2441	1.320	2440.346	2441.666	---	---
2DH5	Ant1	2480	1.314	2479.349	2480.663	---	---

Test Graphs



DH5-Ant1-2441

Keysight Spectrum Analyzer - Sweep SA

Center Freq 2.480000000 GHz

Ref Offset 12.07 dB
Ref 30.00 dBm

10 dB/div
Log

1

2

3

4

5

6

7

8

9

10

11

ΔMkr3 951 kHz
-0.319 dB

20.0

10.0

0.00

10.0

20.0

30.0

40.0

50.0

60.0

Center 2.480000 GHz

#Res BW 30 kHz

#VBW 100 kHz

Sweep 3.200 ms (1001 pts)

Span 3.000 MHz

MNR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.479 541 GHz	-26.074 dBm			
2	N	1	f	2.480 000 GHz	-5.005 dBm			
3	A1	1	f (A)	951 kHz (A)	-0.319 dB			

Frequency

Auto Tune

Center Freq
2.480000000 GHz

Start Freq
2.478500000 GHz

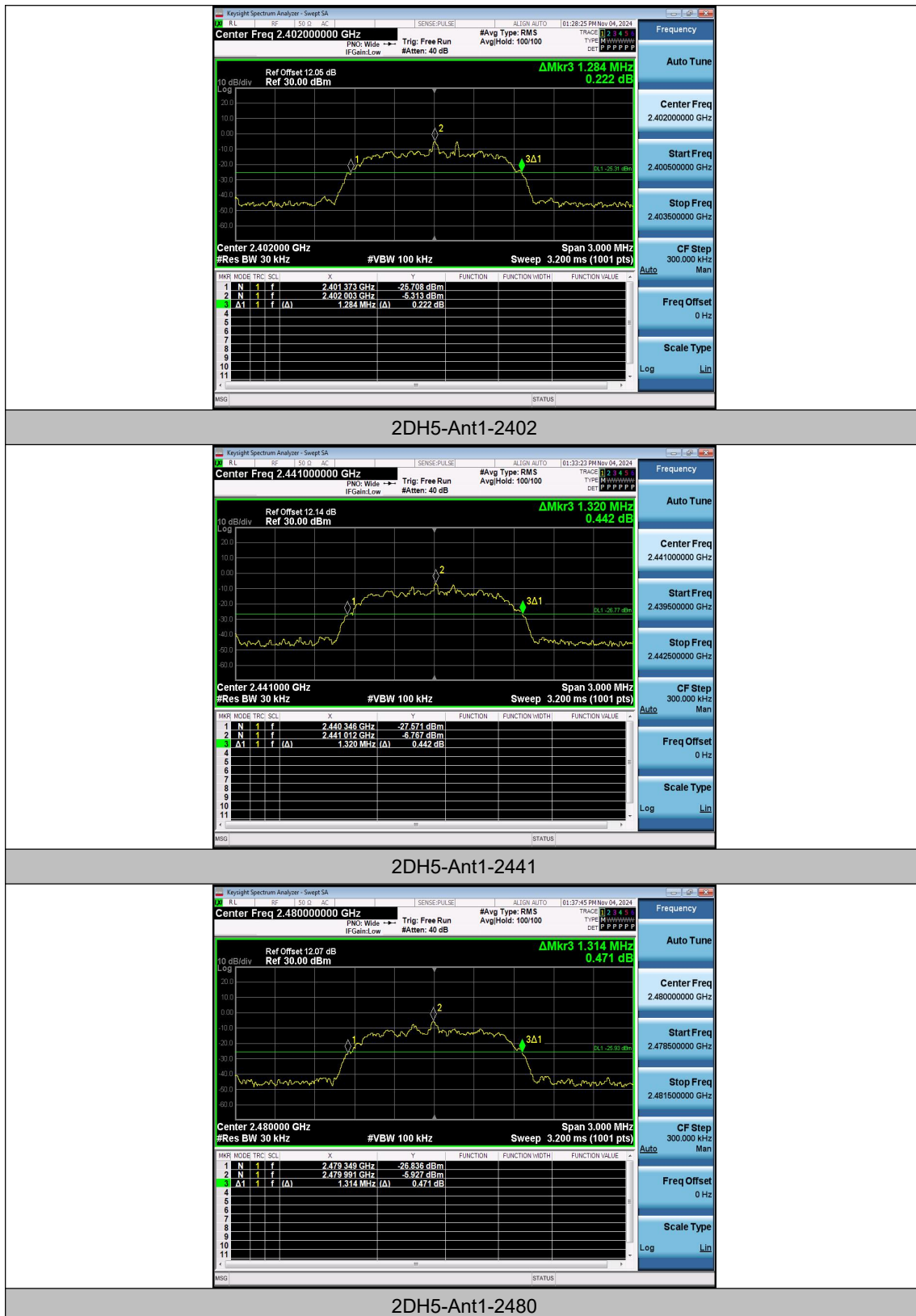
Stop Freq
2.481500000 GHz

CF Step
300.000 kHz
Man

Freq Offset
0 Hz

Scale Type
Log
Lin

DH5-Ant1-2480

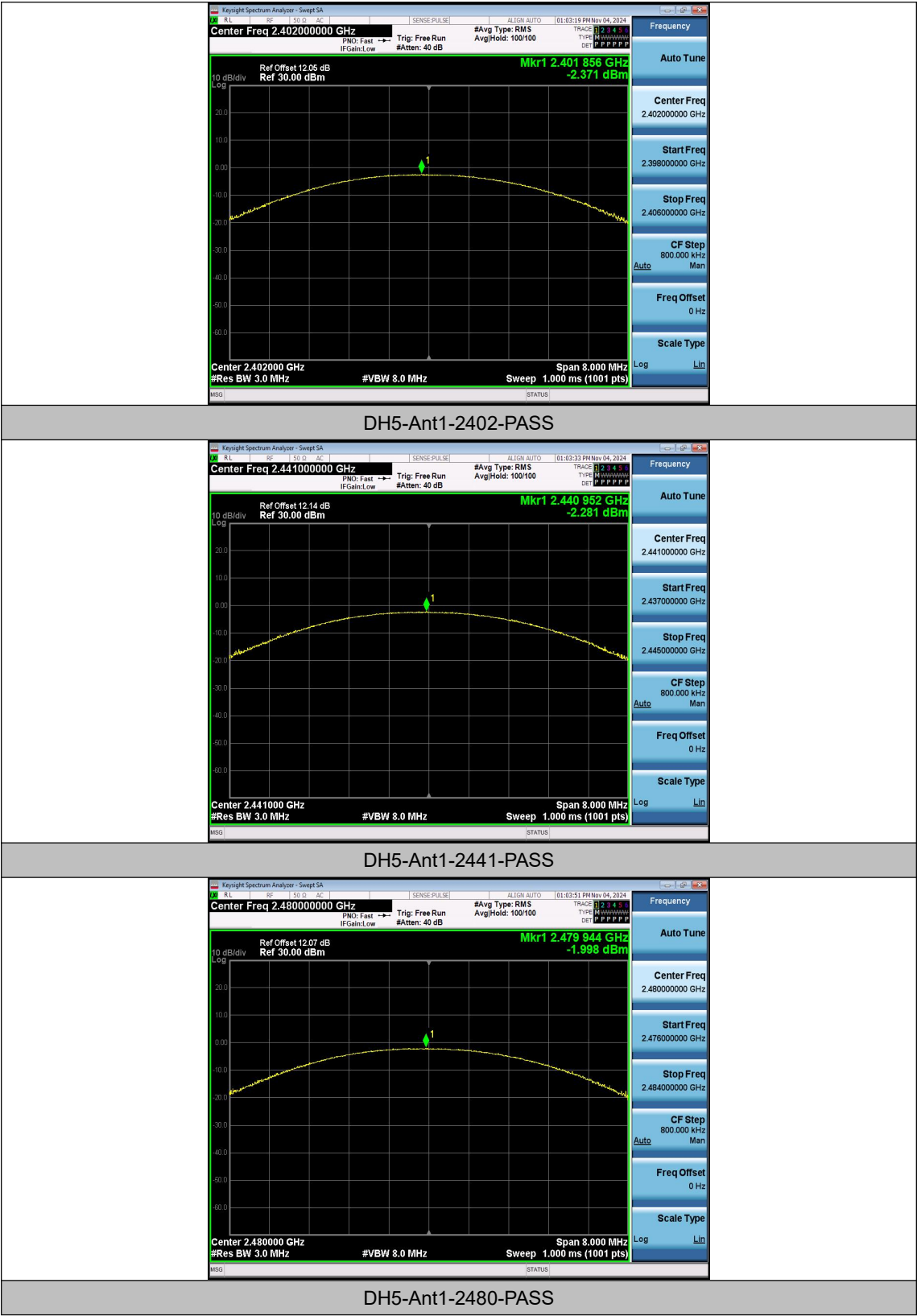


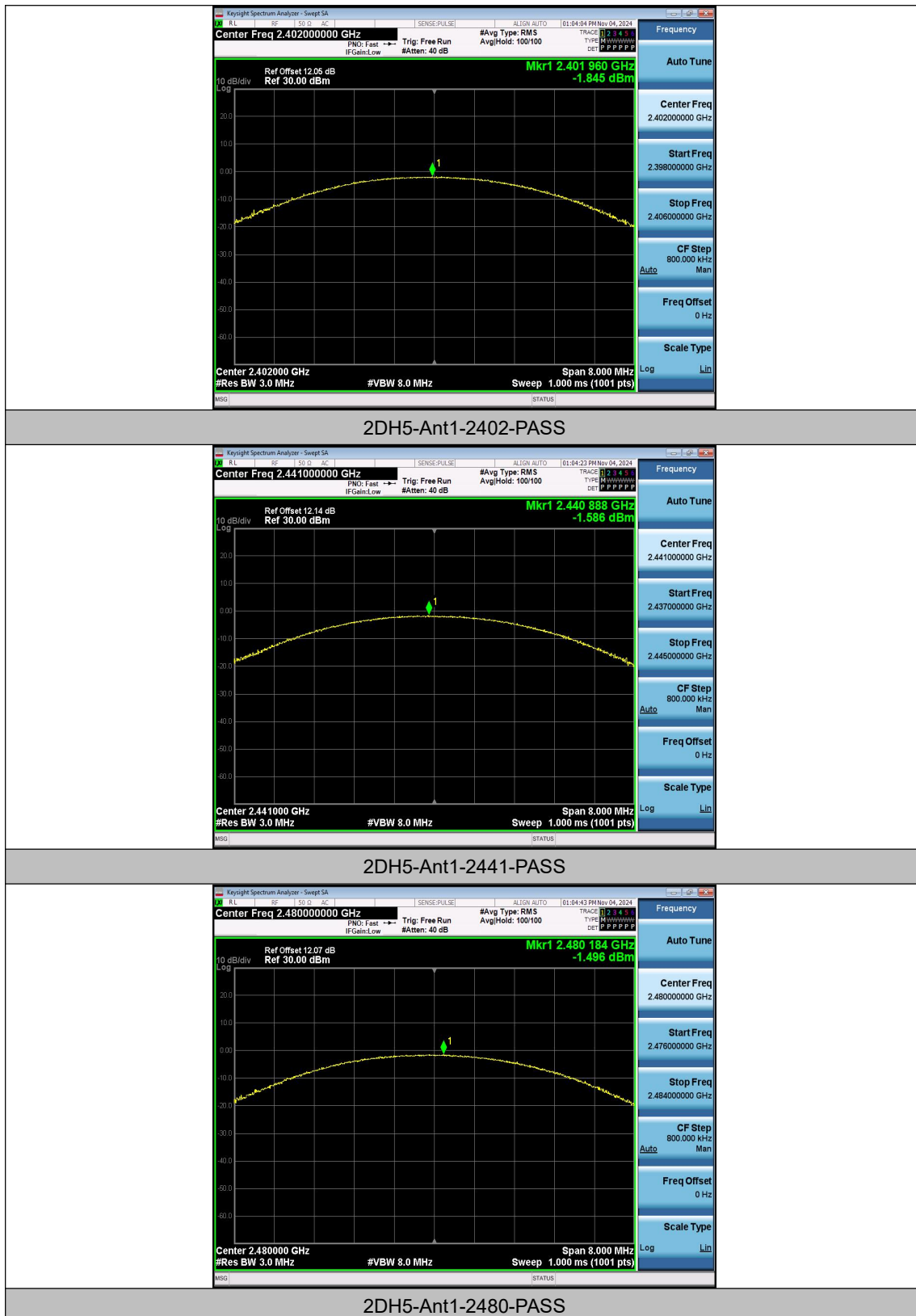
Appendix B: Maximum conducted output power

Test Result Peak

Test Mode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	-2.37	≤30	PASS
DH5	Ant1	2441	-2.28	≤30	PASS
DH5	Ant1	2480	-2.00	≤30	PASS
2DH5	Ant1	2402	-1.85	≤30	PASS
2DH5	Ant1	2441	-1.59	≤30	PASS
2DH5	Ant1	2480	-1.50	≤30	PASS

Test Graphs





Appendix C: Carrier frequency separation

Test Result

TestMode	Antenna	Frequency[MHz]	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.998	≥ 0.966	PASS
2DH5	Ant1	Hop	1.318	≥ 0.880	PASS

Test Graphs

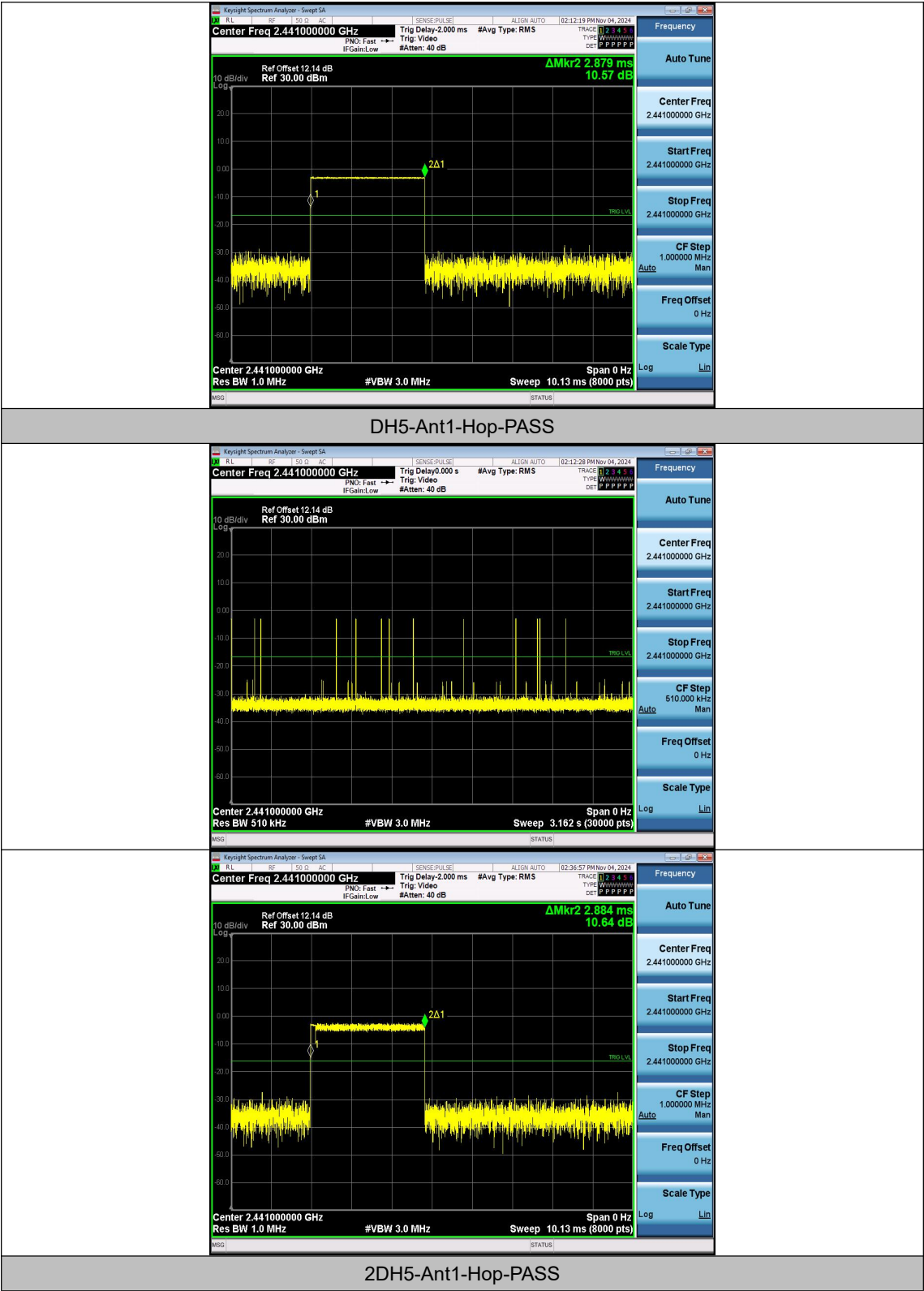


Appendix D: Time of occupancy

Test Result

TestMode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.879	130	0.374	≤0.4	PASS
2DH5	Ant1	Hop	2.884	80	0.231	≤0.4	PASS

Test Graphs

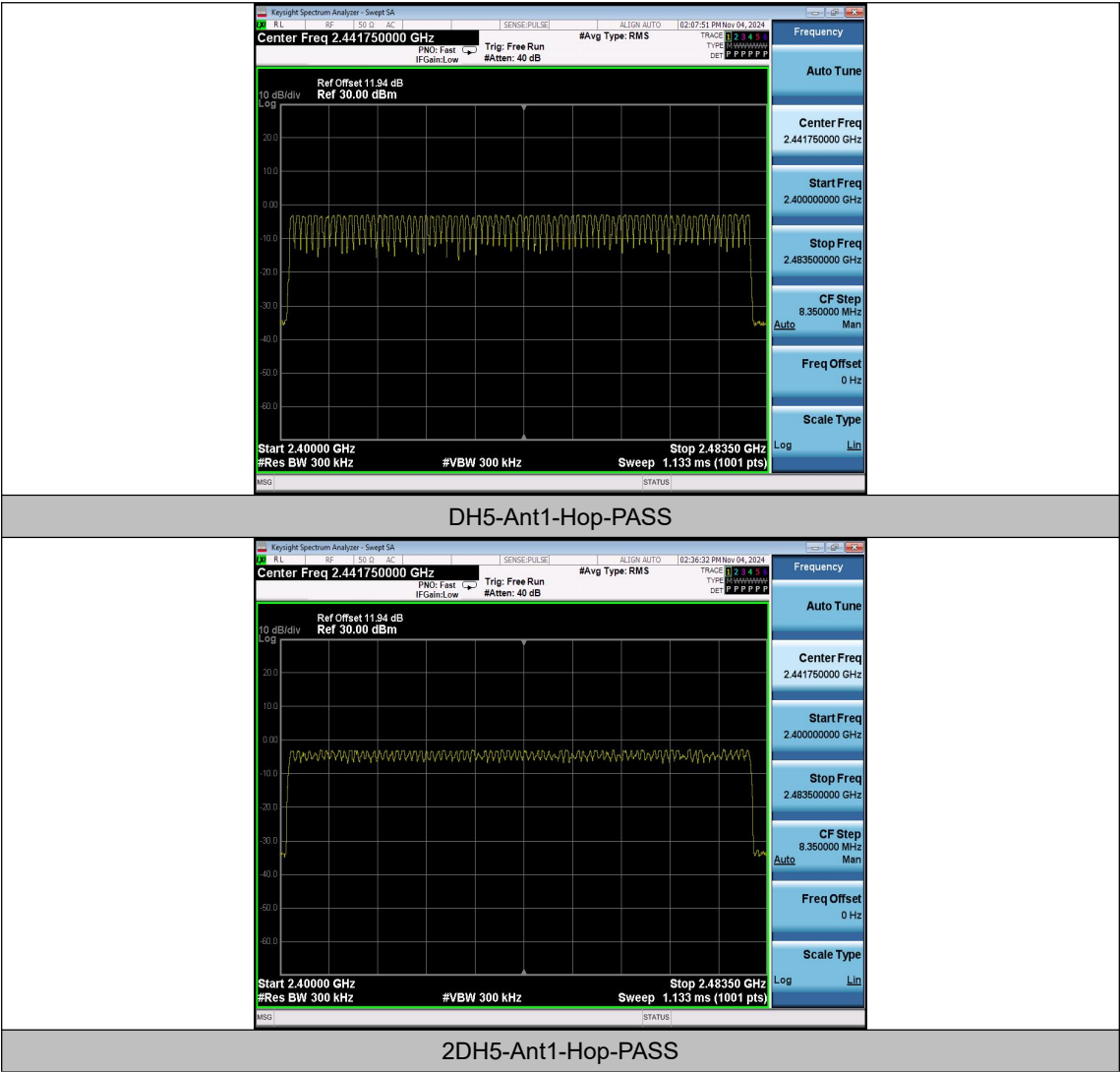


Appendix E: Number of hopping channels

Test Result

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

Test Graphs

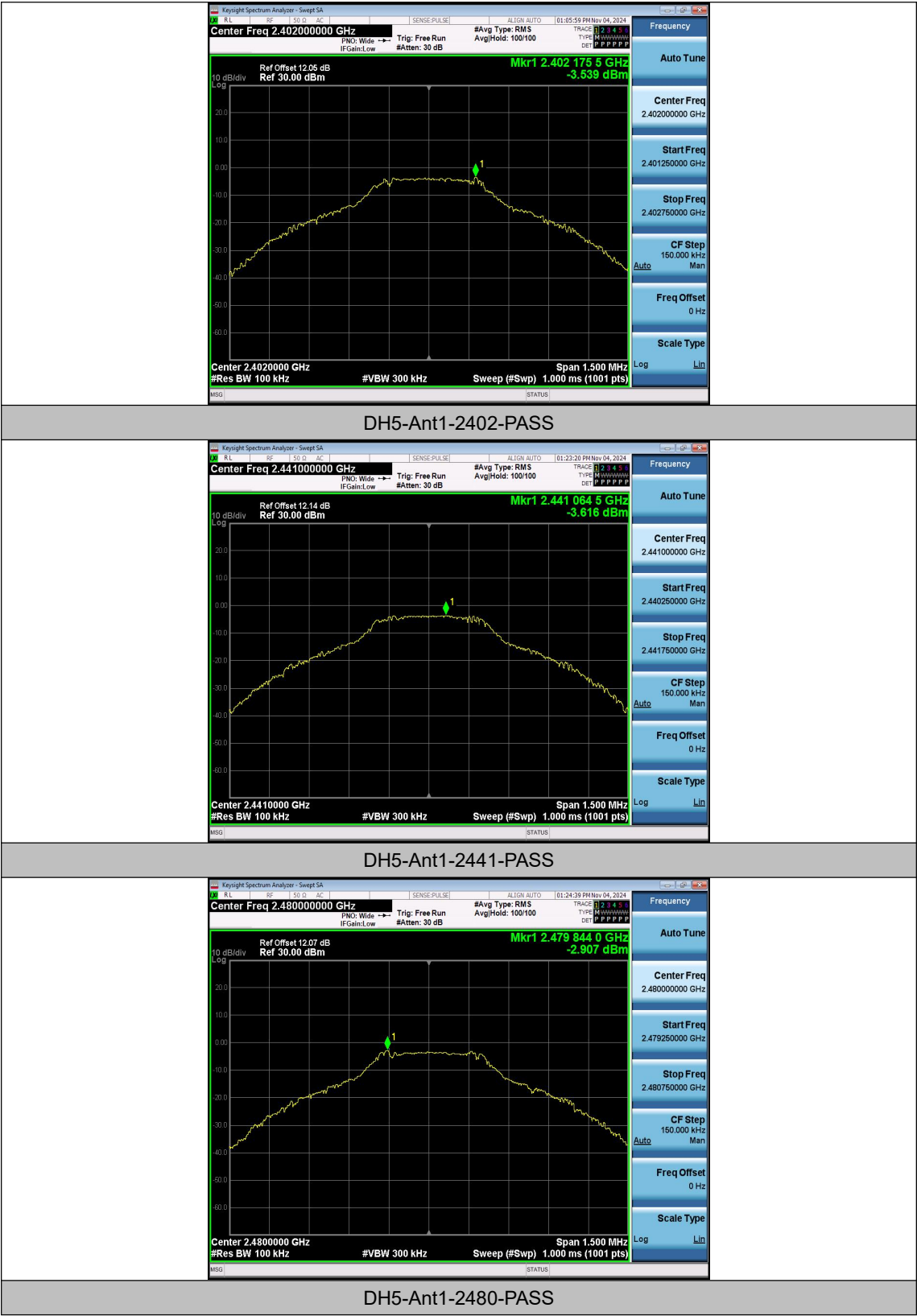


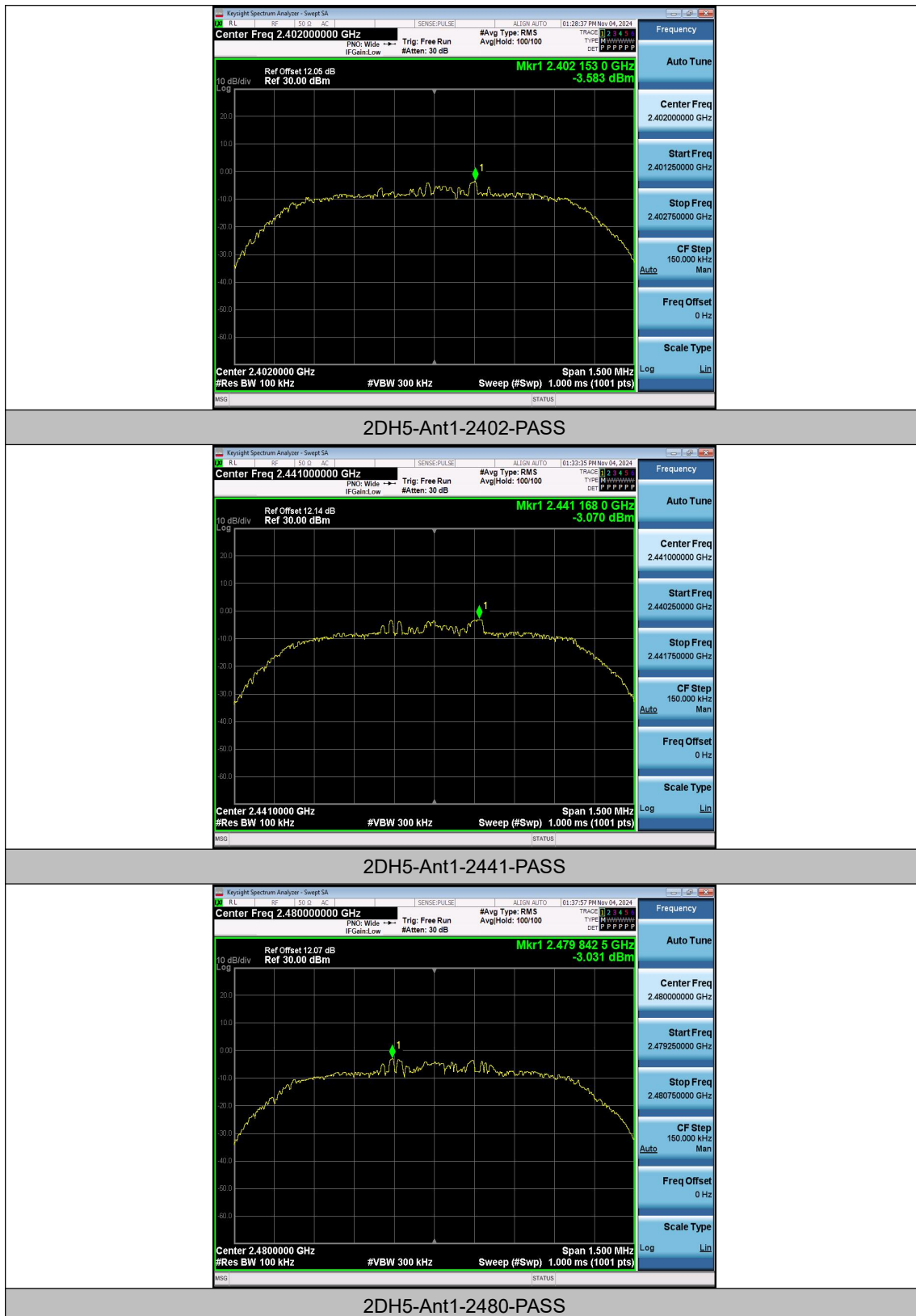
Appendix F: Reference level measurement

Test Result

TestMode	Antenna	Freq(MHz)	Max.Point[MHz]	Result[dBm]
DH5	Ant1	2402	2402.18	-3.54
DH5	Ant1	2441	2441.06	-3.62
DH5	Ant1	2480	2479.84	-2.91
2DH5	Ant1	2402	2402.15	-3.58
2DH5	Ant1	2441	2441.17	-3.07
2DH5	Ant1	2480	2479.84	-3.03

Test Graphs



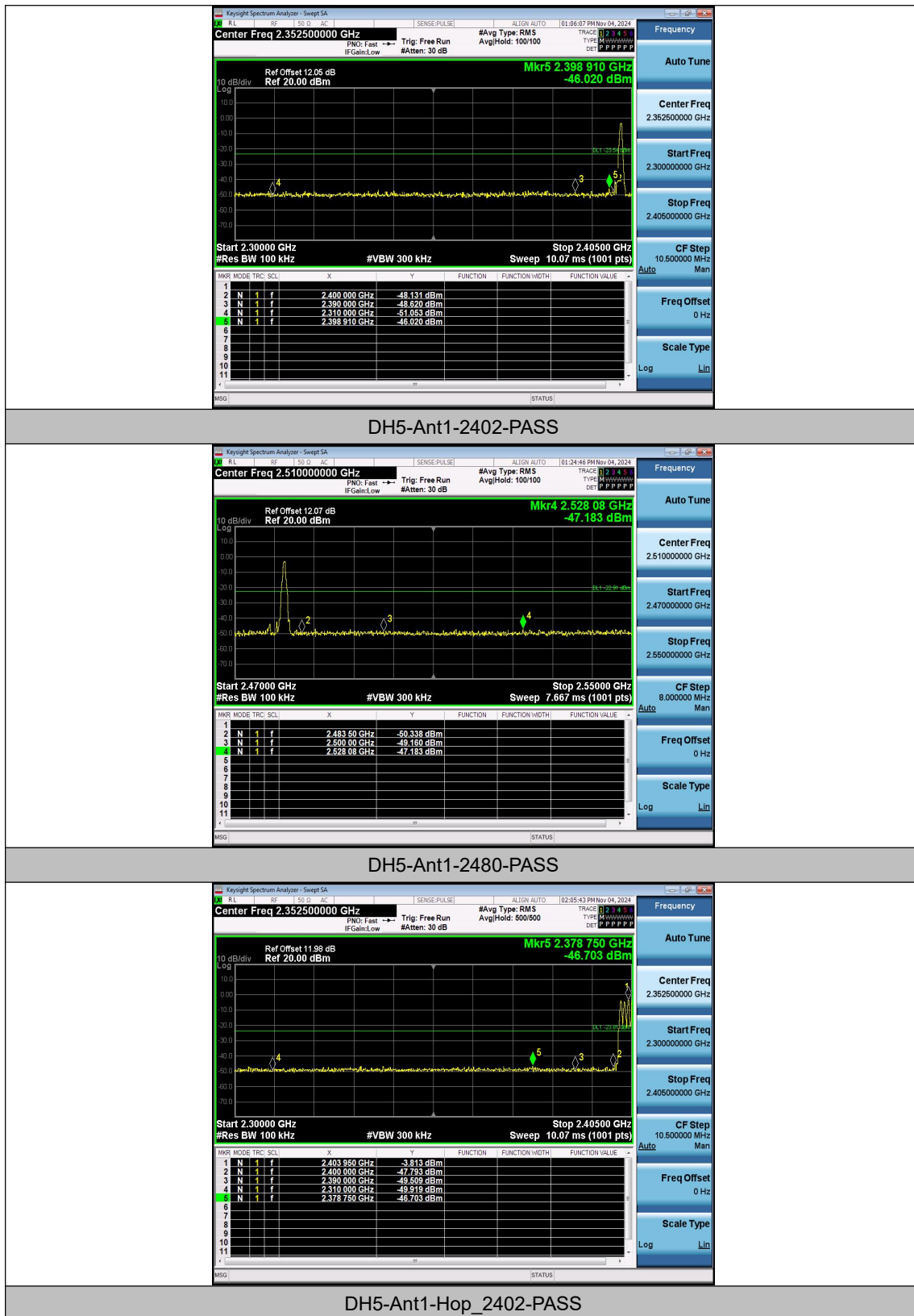


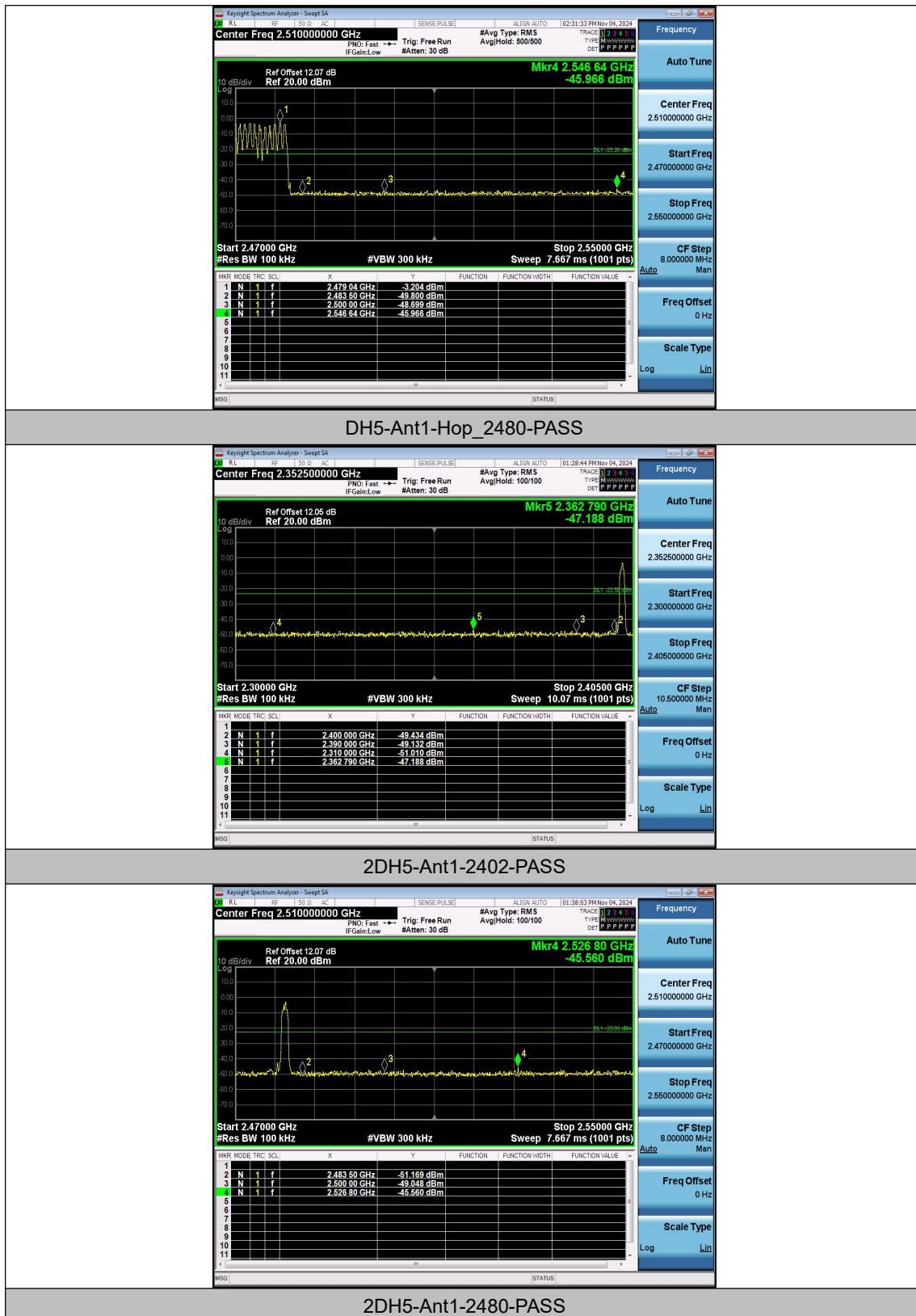
Appendix G: Band edge measurements

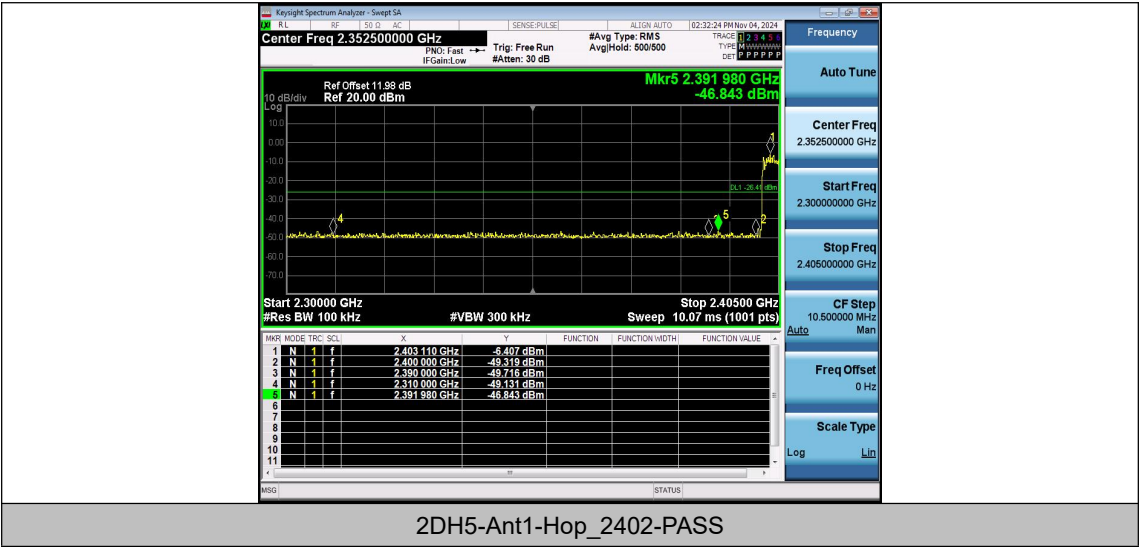
Test Result

TestMode	Antenna	ChName	Frequency[MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-3.54	-46.02	≤ -23.54	PASS
DH5	Ant1	High	2480	-2.91	-47.18	≤ -22.91	PASS
DH5	Ant1	Low	Hop_2402	-3.81	-46.7	≤ -23.81	PASS
DH5	Ant1	High	Hop_2480	-3.20	-45.97	≤ -23.2	PASS
2DH5	Ant1	Low	2402	-3.58	-47.19	≤ -23.58	PASS
2DH5	Ant1	High	2480	-3.03	-45.56	≤ -23.03	PASS
2DH5	Ant1	Low	Hop_2402	-6.41	-46.84	≤ -26.41	PASS
2DH5	Ant1	High	Hop_2480	-4.73	-46.5	≤ -24.73	PASS

Test Graphs







2DH5-Ant1-Hop_2402-PASS

Appendix H: Conducted Spurious Emission

Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	30~1000	-3.54	-55.7	≤-23.54	PASS
DH5	Ant1	2402	1000~26500	-3.54	-44.37	≤-23.54	PASS
DH5	Ant1	2441	30~1000	-3.62	-58.89	≤-23.62	PASS
DH5	Ant1	2441	1000~26500	-3.62	-43.89	≤-23.62	PASS
DH5	Ant1	2480	30~1000	-2.91	-58.74	≤-22.91	PASS
DH5	Ant1	2480	1000~26500	-2.91	-44	≤-22.91	PASS
2DH5	Ant1	2402	30~1000	-3.58	-53.12	≤-23.58	PASS
2DH5	Ant1	2402	1000~26500	-3.58	-44.03	≤-23.58	PASS
2DH5	Ant1	2441	30~1000	-3.07	-58.93	≤-23.07	PASS
2DH5	Ant1	2441	1000~26500	-3.07	-44.17	≤-23.07	PASS
2DH5	Ant1	2480	30~1000	-3.03	-59.07	≤-23.03	PASS
2DH5	Ant1	2480	1000~26500	-3.03	-44.64	≤-23.03	PASS

Test Graphs

