

Appendix RF Test Data for BT

FCC ID : 2ASJK-QU2

Company: : Guangzhou Pearl River Amason Digital Musical
Instrument Co., Ltd.

EUT : PEARL RIVER INTELLIGENT PIANO SILENT
SYSTEM

Model Number : QU2

Report No. : CTA25051502002

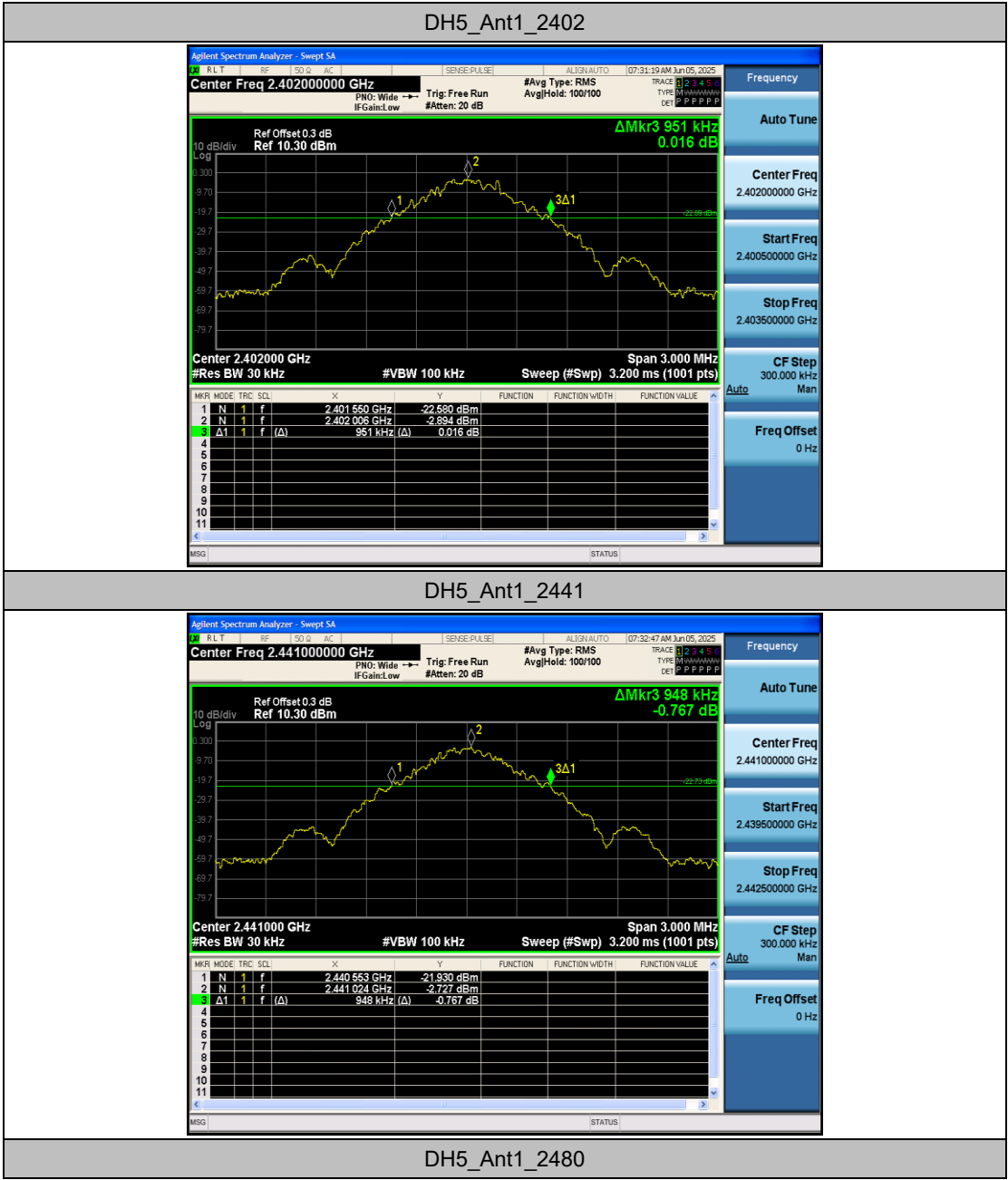
Reviewed By : Eric Wang

Appendix A: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.951	2401.550	2402.501	---	---
		2441	0.948	2440.553	2441.501	---	---
		2480	0.942	2479.553	2480.495	---	---
2DH5	Ant1	2402	1.308	2401.355	2402.663	---	---
		2441	1.281	2440.379	2441.660	---	---
		2480	1.284	2479.379	2480.663	---	---

Test Graphs





2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480

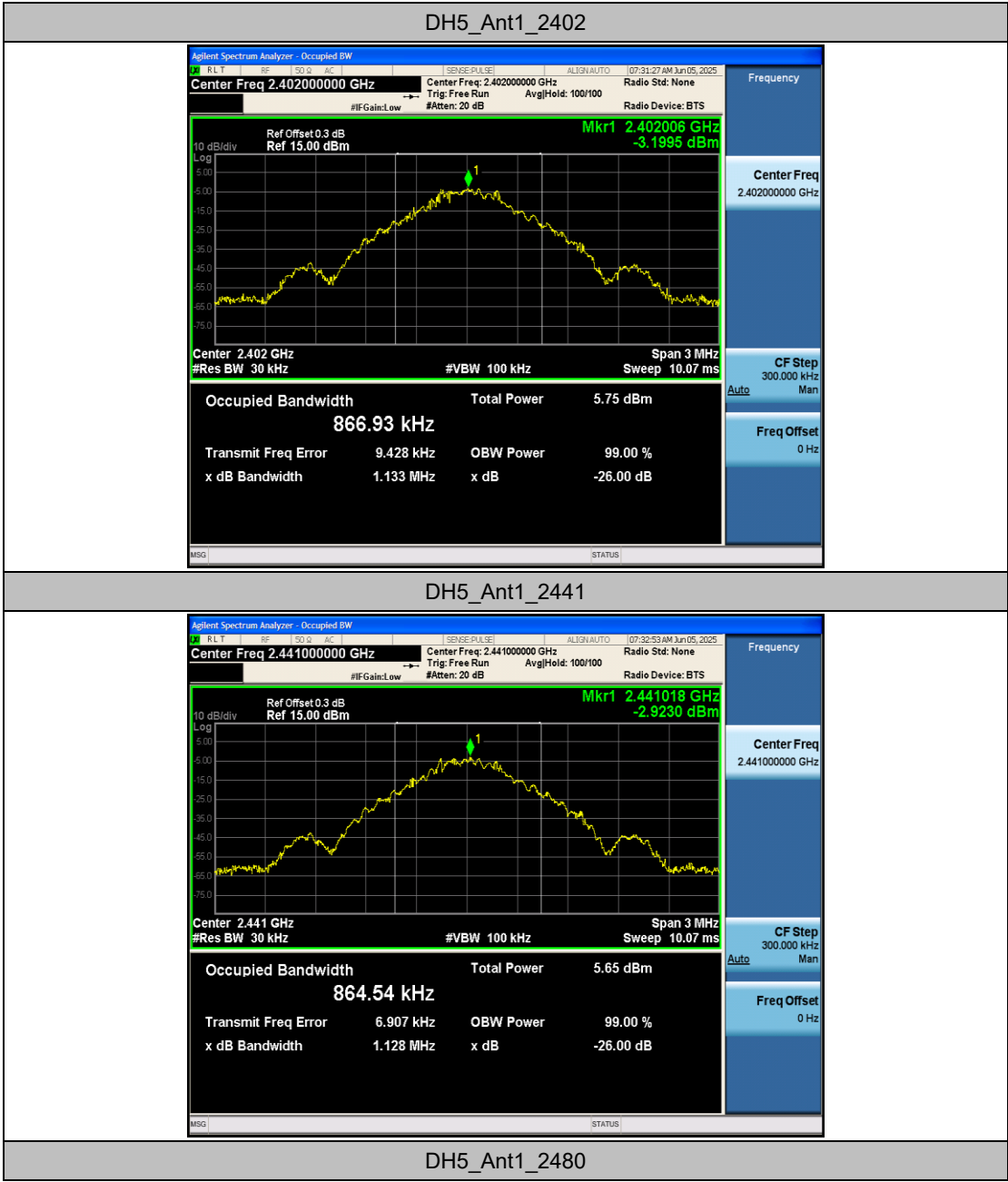


Appendix B: Occupied Channel Bandwidth

Test Result

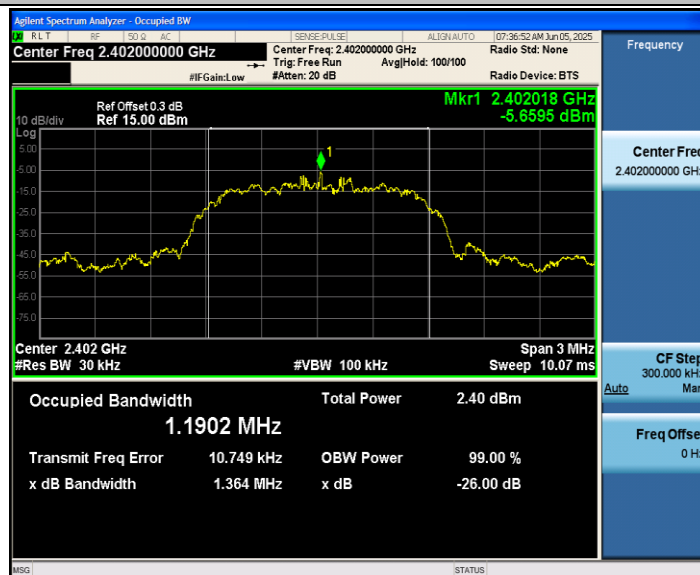
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.86693	2401.5760	2402.4429	---	---
		2441	0.86454	2440.5746	2441.4392	---	---
		2480	0.86900	2479.5739	2480.4429	---	---
2DH5	Ant1	2402	1.1902	2401.4157	2402.6059	---	---
		2441	1.1907	2440.4157	2441.6064	---	---
		2480	1.1890	2479.4175	2480.6065	---	---

Test Graphs

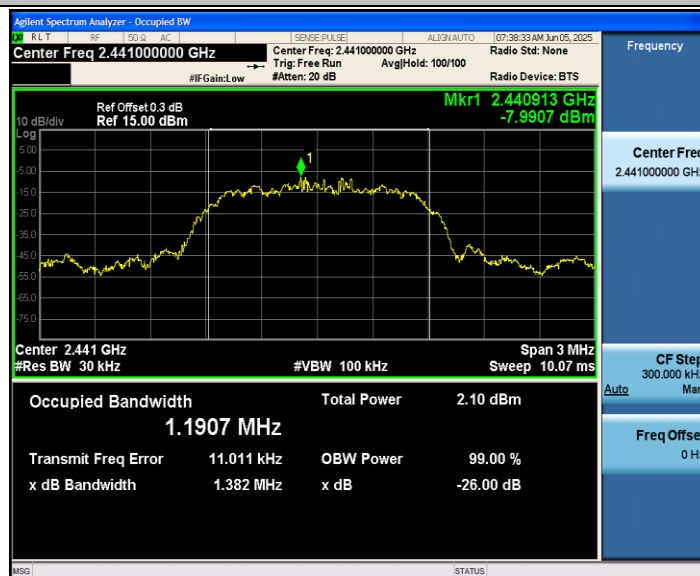




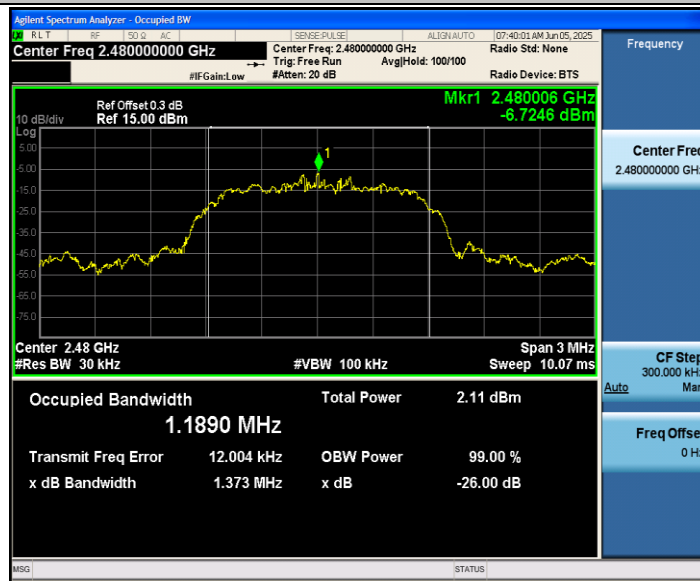
2DH5_Ant1_2402



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	-0.16	≤20.97	PASS
		2441	-0.45	≤20.97	PASS
		2480	-0.54	≤20.97	PASS
2DH5	Ant1	2402	-0.99	≤20.97	PASS
		2441	-1.23	≤20.97	PASS
		2480	-1.35	≤20.97	PASS

Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.176	≥ 0.951	PASS
2DH5	Ant1	Hop	0.992	≥ 0.872	PASS

Test Graphs

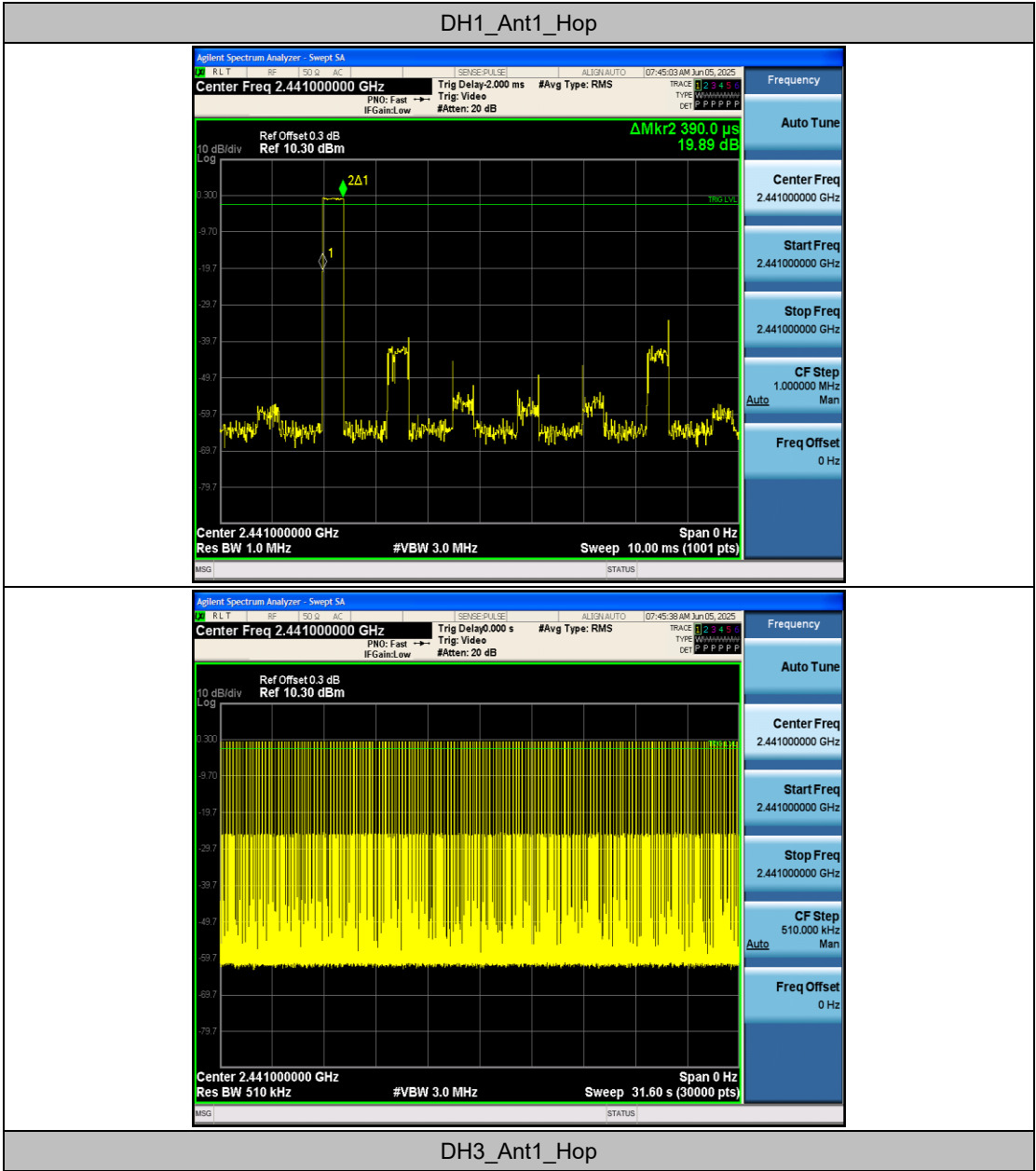


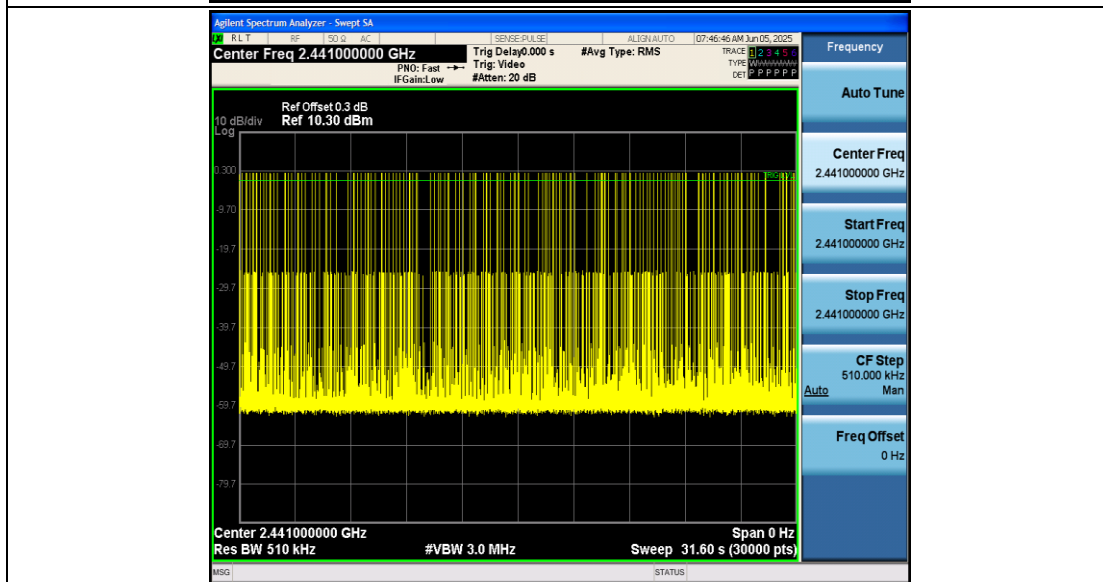
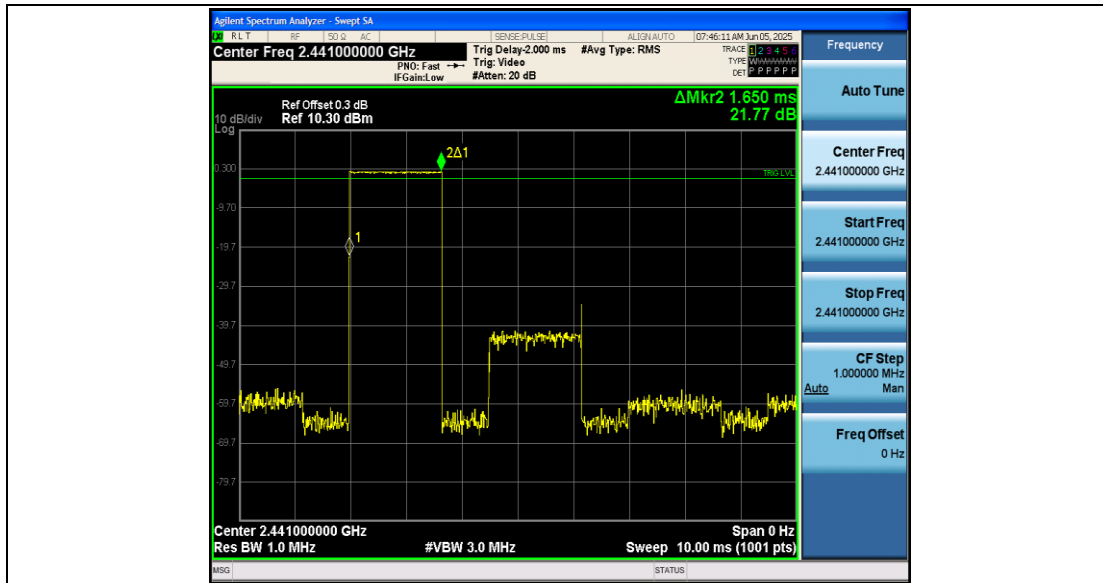
Appendix E: Time of occupancy

Test Result

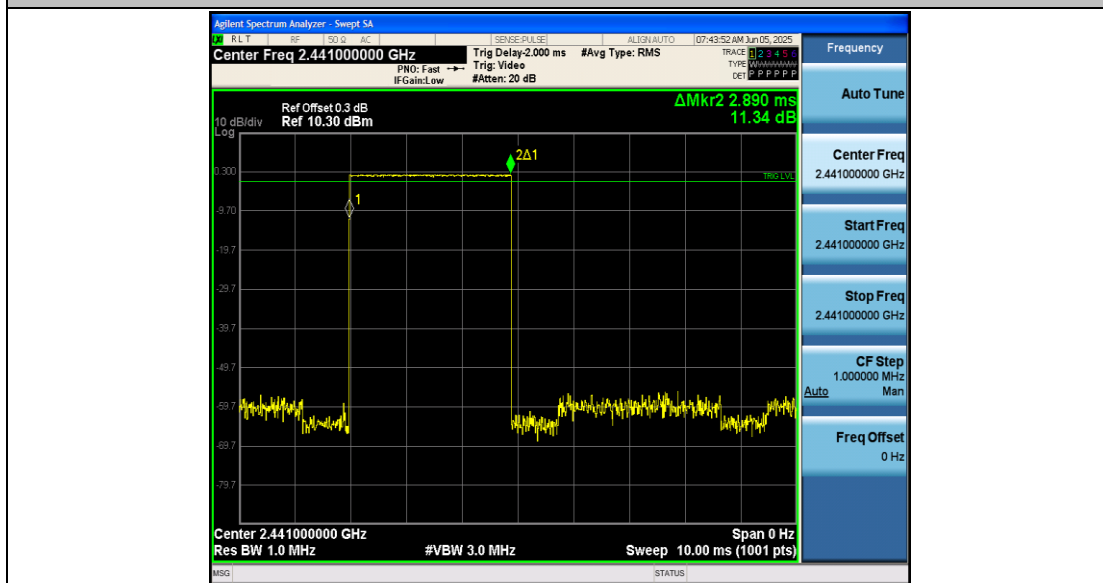
TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.390	314	0.122	≤0.4	PASS
DH3	Ant1	Hop	1.650	161	0.266	≤0.4	PASS
DH5	Ant1	Hop	2.890	107	0.309	≤0.4	PASS
2DH1	Ant1	Hop	0.400	316	0.126	≤0.4	PASS
2DH3	Ant1	Hop	1.650	157	0.259	≤0.4	PASS
2DH5	Ant1	Hop	2.900	100	0.29	≤0.4	PASS

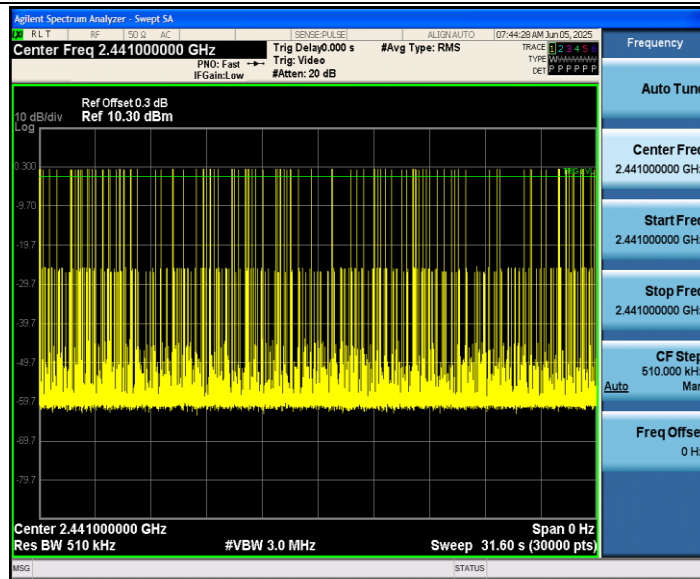
Test Graphs



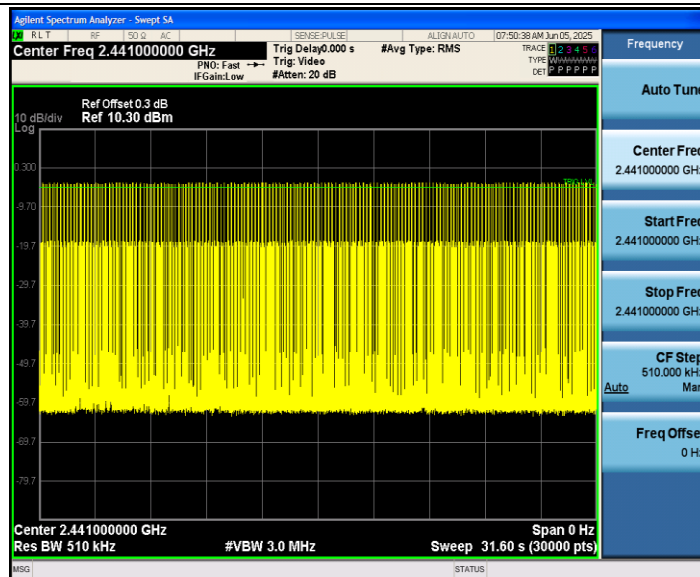
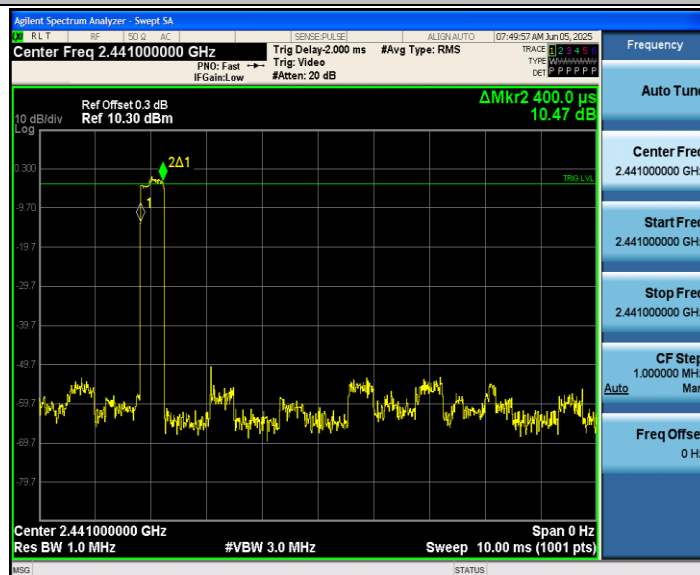


DH5_Ant1_Hop

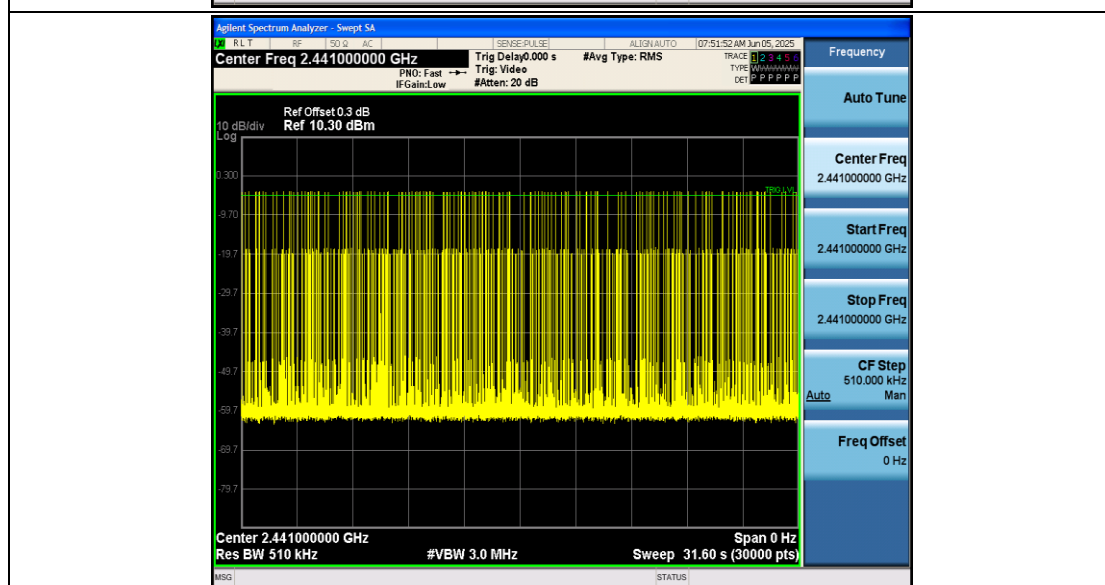




2DH1_Ant1_Hop

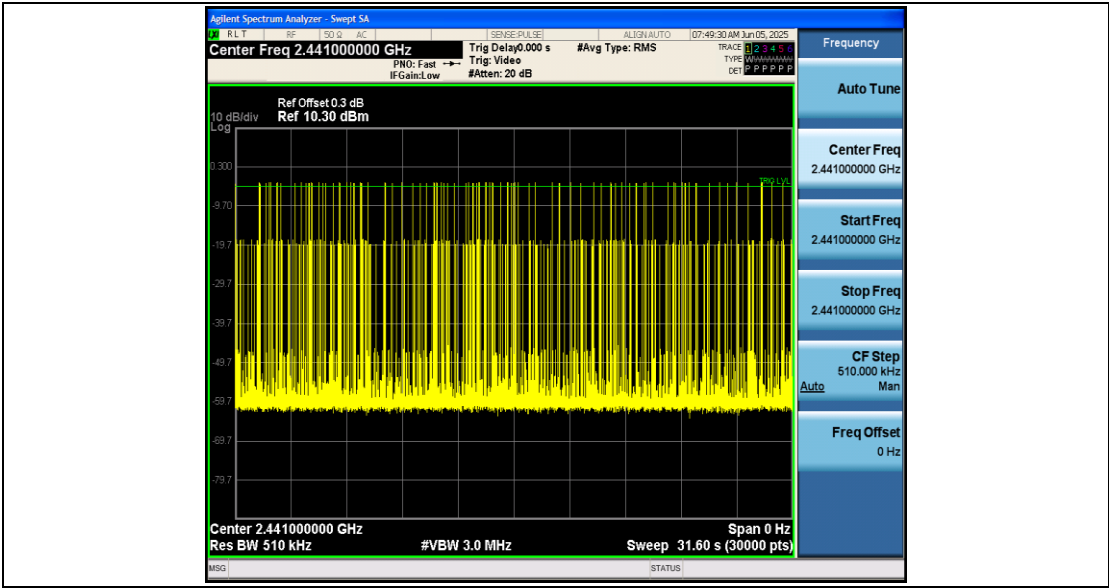


2DH3_Ant1_Hop



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

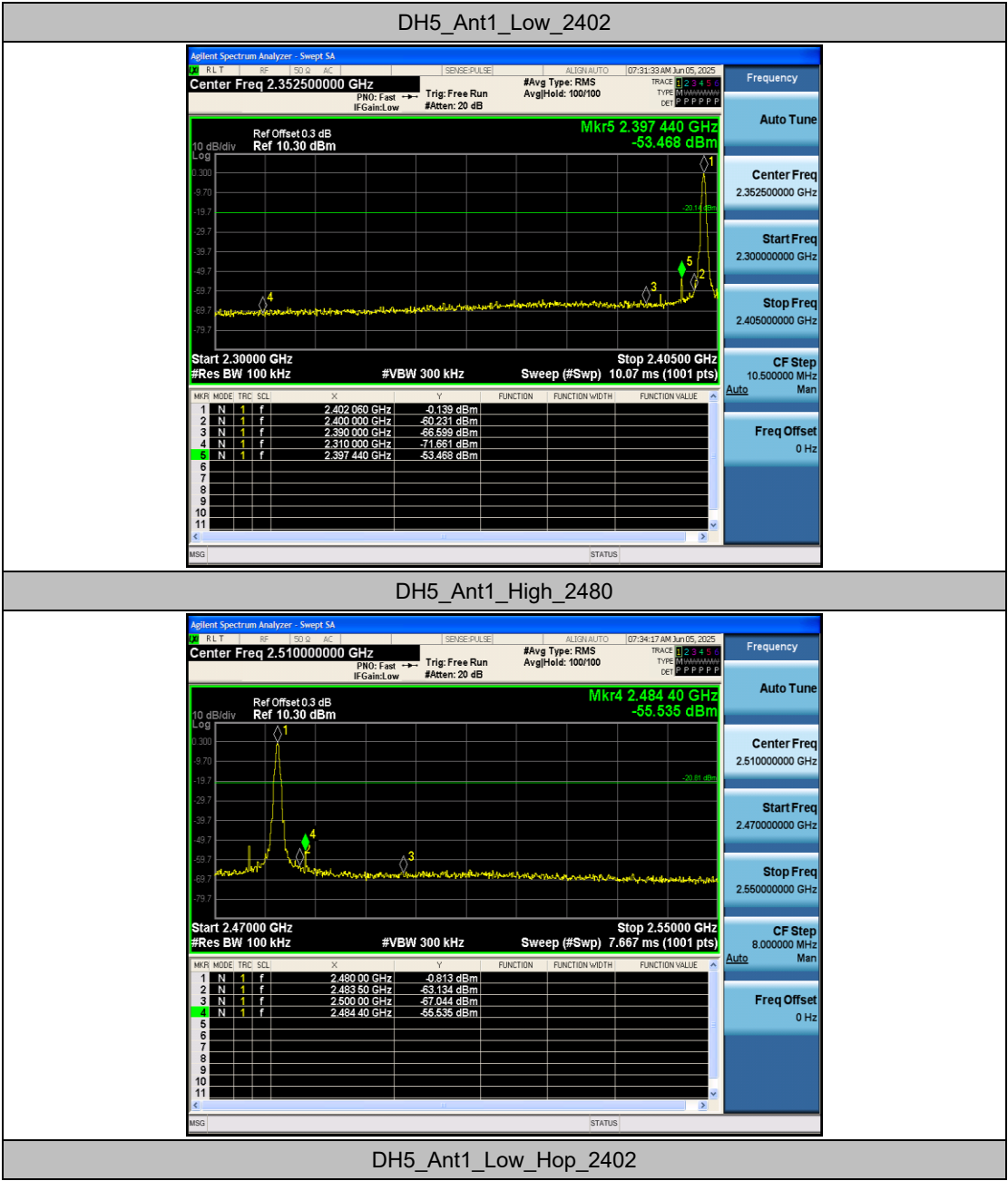


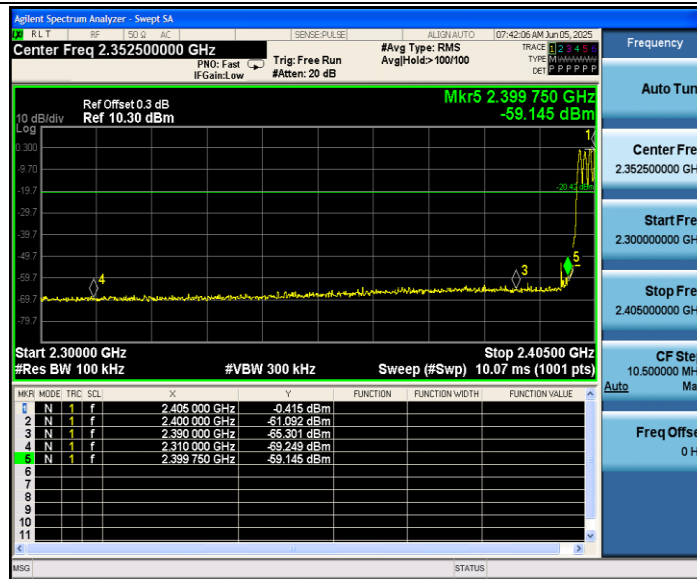
Appendix G: Band edge measurements

Test Result

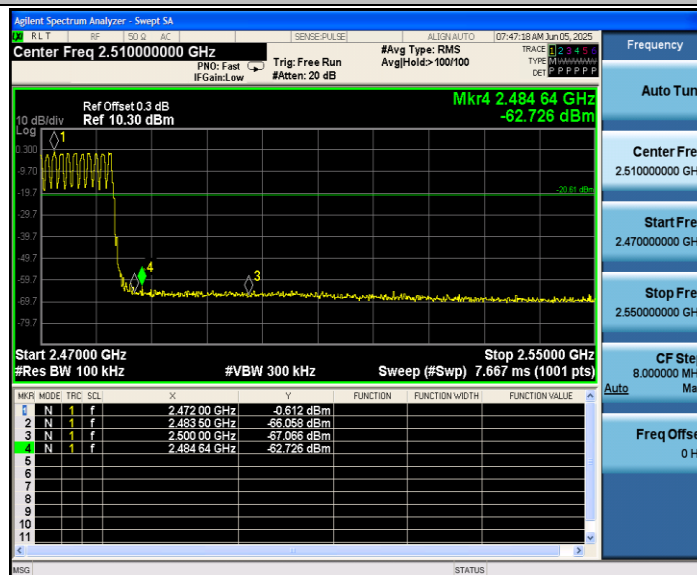
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-0.14	-53.47	≤-20.14	PASS
		High	2480	-0.81	-55.54	≤-20.81	PASS
		Low	Hop_2402	-0.42	-59.15	≤-20.42	PASS
		High	Hop_2480	-0.61	-62.73	≤-20.61	PASS
2DH5	Ant1	Low	2402	-4.75	-55.79	≤-24.75	PASS
		High	2480	-4.19	-61.35	≤-24.19	PASS
		Low	Hop_2402	-4.33	-56.86	≤-24.33	PASS
		High	Hop_2480	-5.35	-63.98	≤-25.35	PASS

Test Graphs

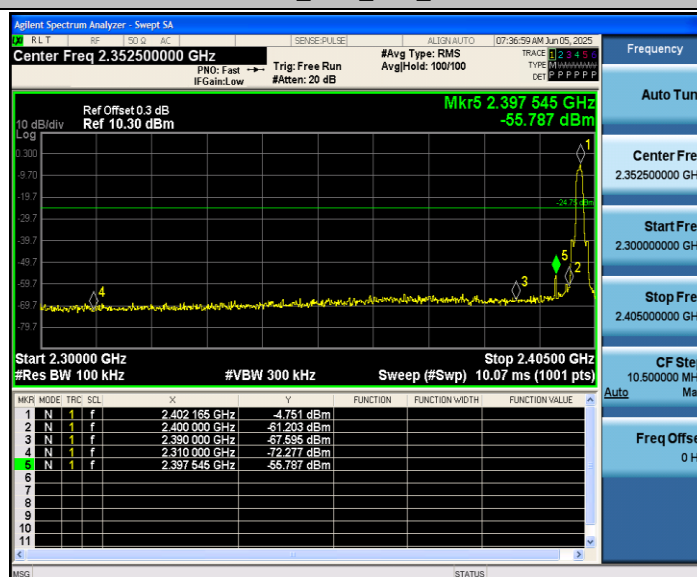




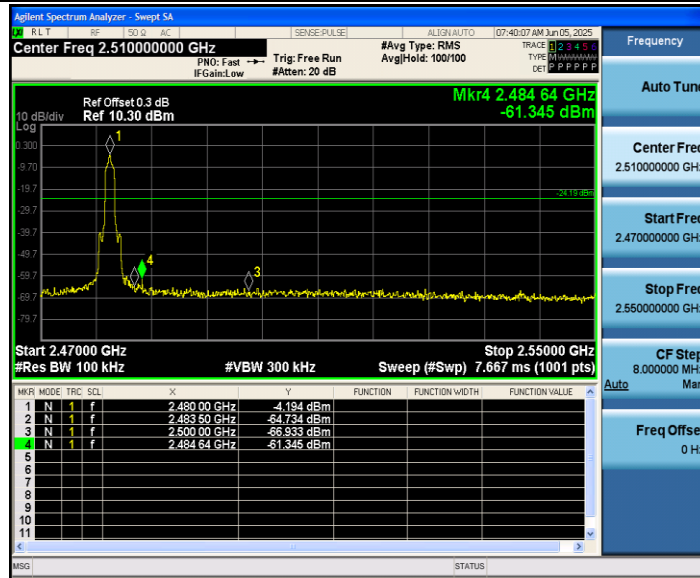
DH5_Ant1_High_Hop_2480



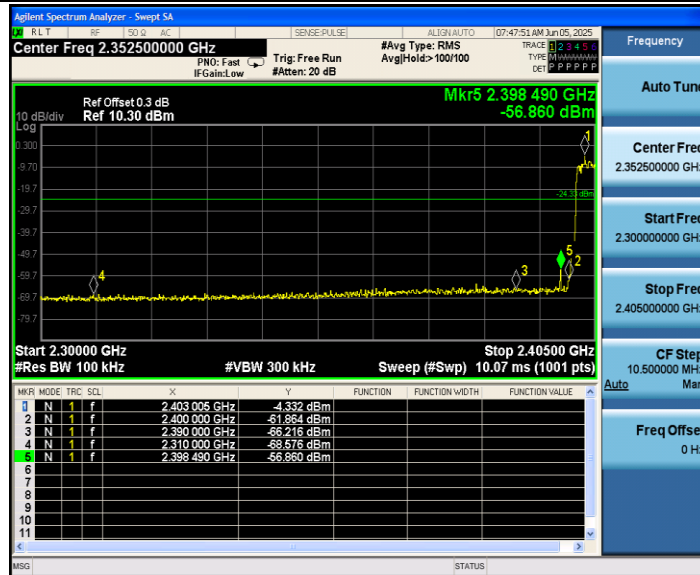
2DH5_Ant1_Low_2402



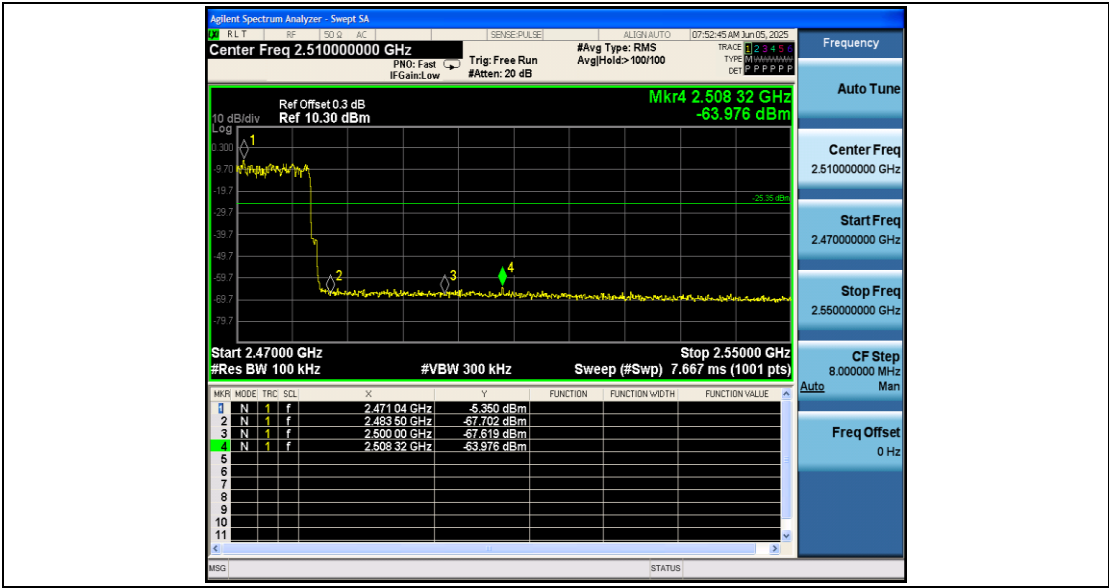
2DH5_Ant1_High_2480



2DH5_Ant1_Low_Hop_2402



2DH5_Ant1_High_Hop_2480

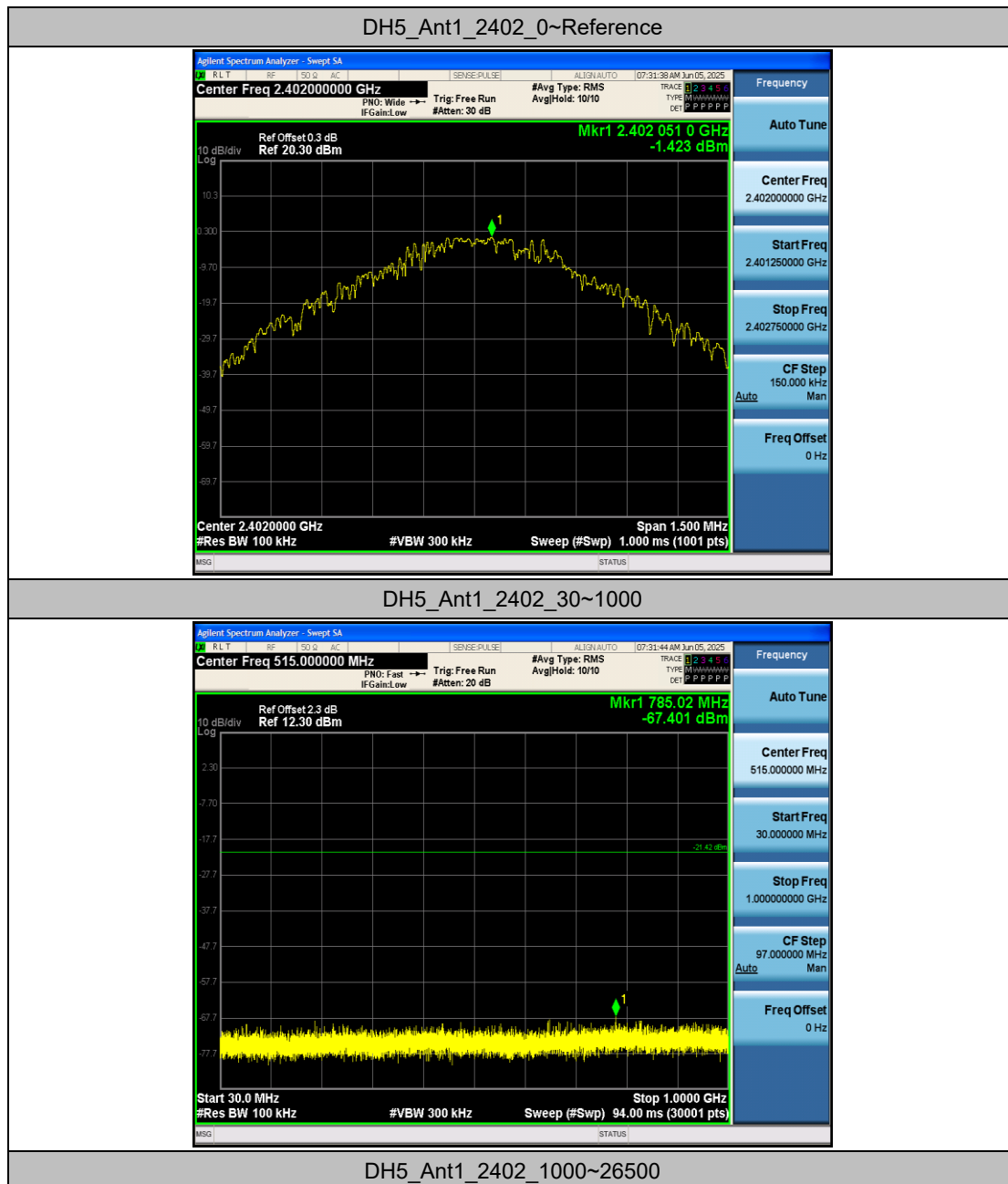


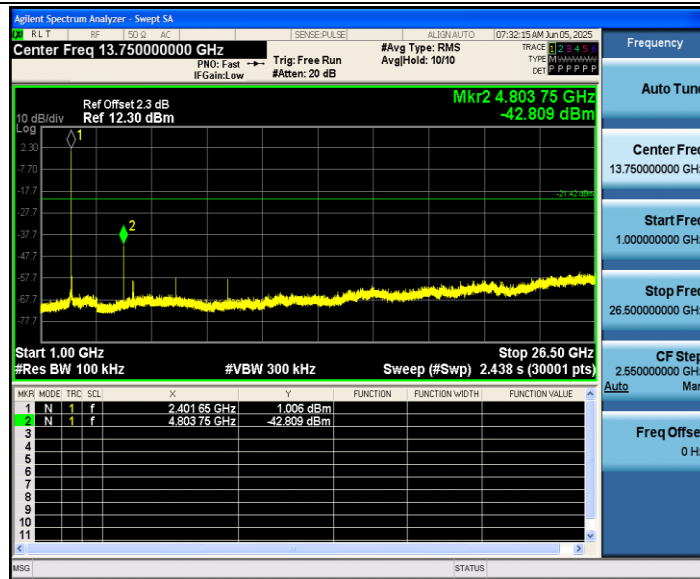
Appendix H: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-1.42	-1.42	---	PASS
			30~1000	-1.42	-67.4	≤-21.42	PASS
			1000~26500	-1.42	-42.81	≤-21.42	PASS
		2441	Reference	-1.45	-1.45	---	PASS
			30~1000	-1.45	-67.51	≤-21.45	PASS
			1000~26500	-1.45	-41.96	≤-21.45	PASS
		2480	Reference	-1.50	-1.50	---	PASS
			30~1000	-1.50	-35.79	≤-21.5	PASS
			1000~26500	-1.50	-43.05	≤-21.5	PASS
2DH5	Ant1	2402	Reference	-6.89	-6.89	---	PASS
			30~1000	-6.89	-67.78	≤-26.89	PASS
			1000~26500	-6.89	-49.05	≤-26.89	PASS
		2441	Reference	-5.29	-5.29	---	PASS
			30~1000	-5.29	-67.49	≤-25.29	PASS
			1000~26500	-5.29	-49.57	≤-25.29	PASS
		2480	Reference	-4.89	-4.89	---	PASS
			30~1000	-4.89	-67.93	≤-24.89	PASS
			1000~26500	-4.89	-48.34	≤-24.89	PASS

Test Graphs

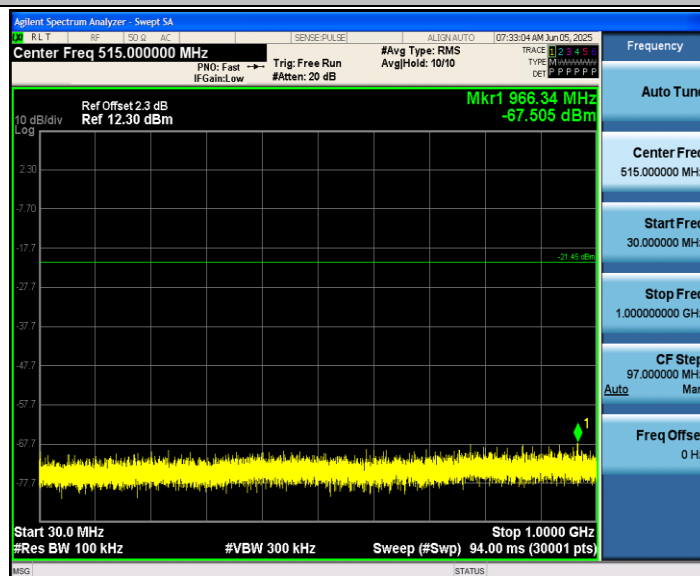




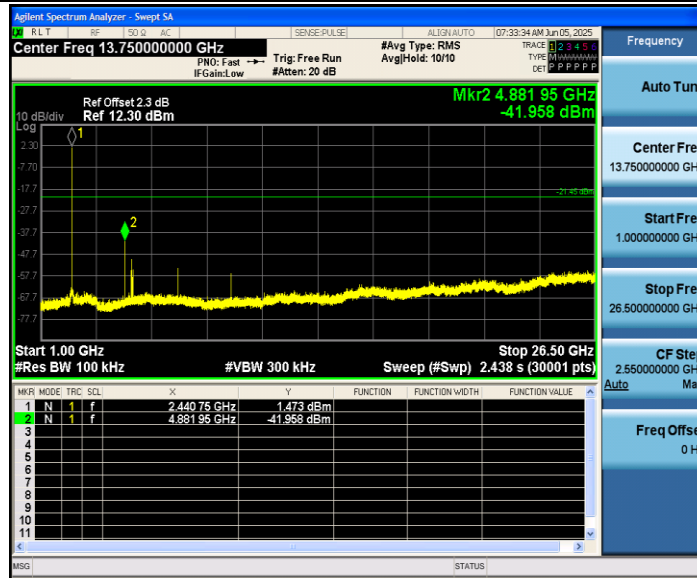
DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000



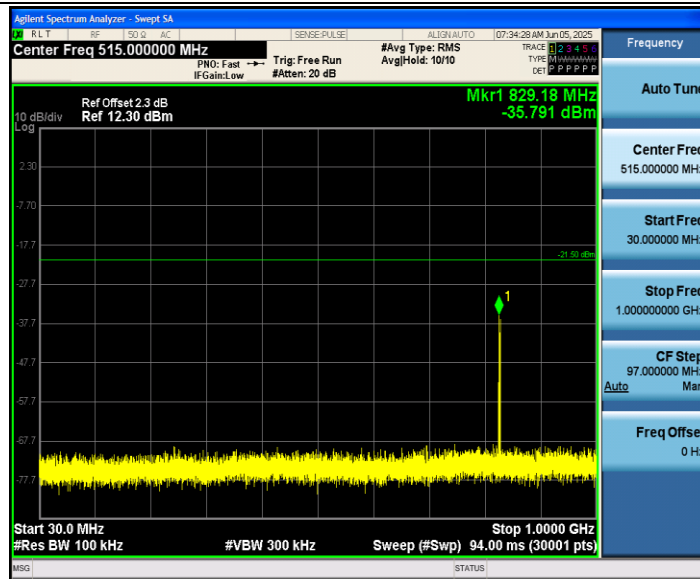
DH5_Ant1_2441_1000~26500



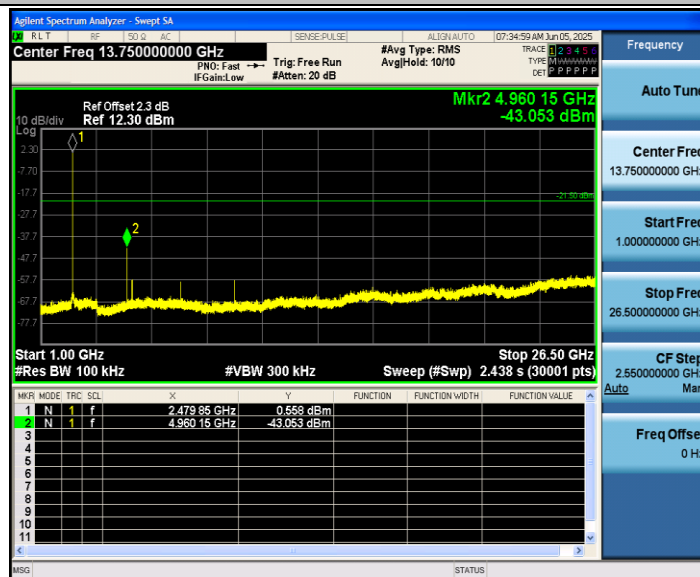
DH5_Ant1_2480_0~Reference



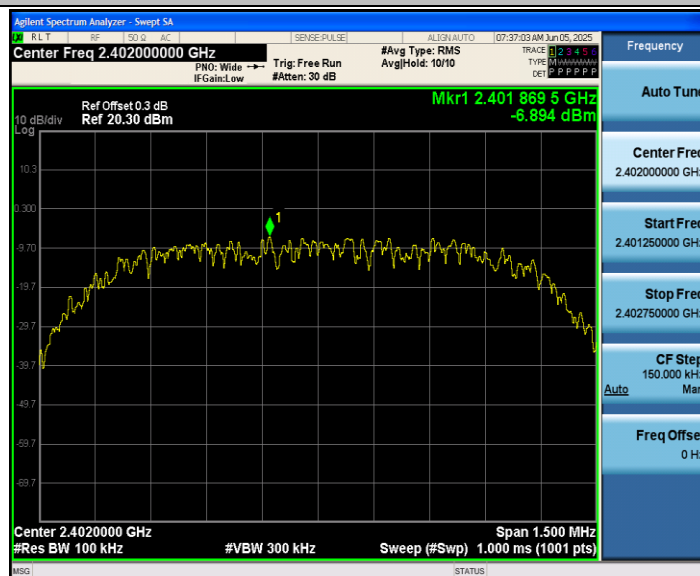
DH5_Ant1_2480_30~1000



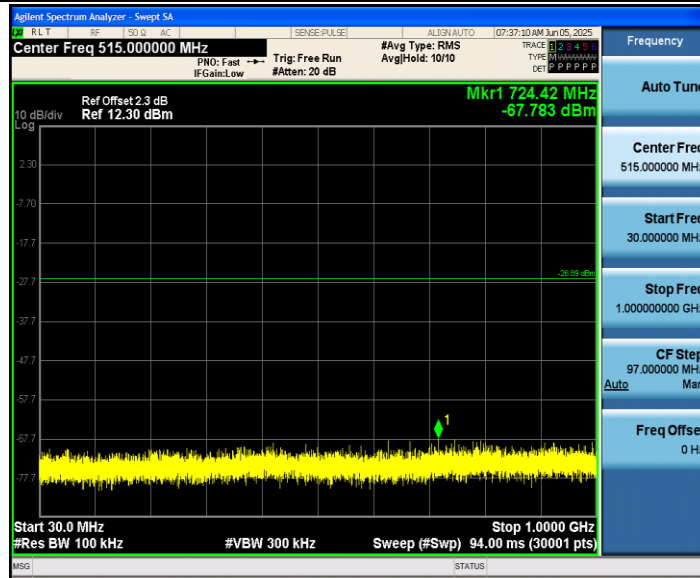
DH5_Ant1_2480_1000~26500



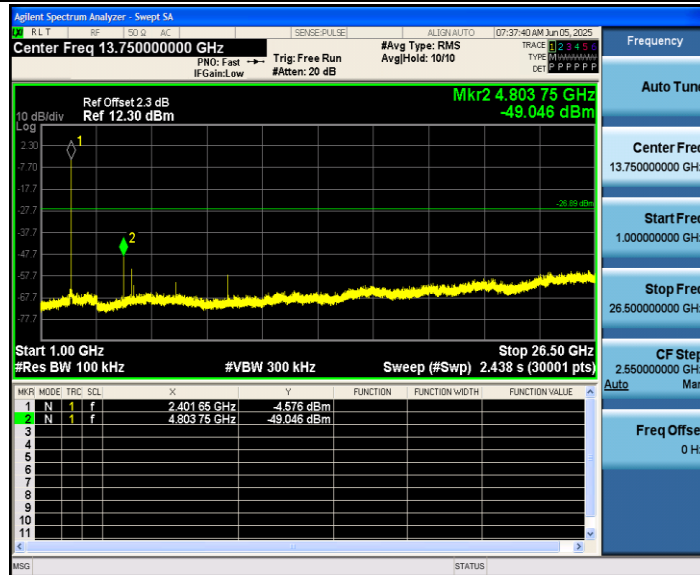
2DH5_Ant1_2402_0~Reference



2DH5_Ant1_2402_30~1000



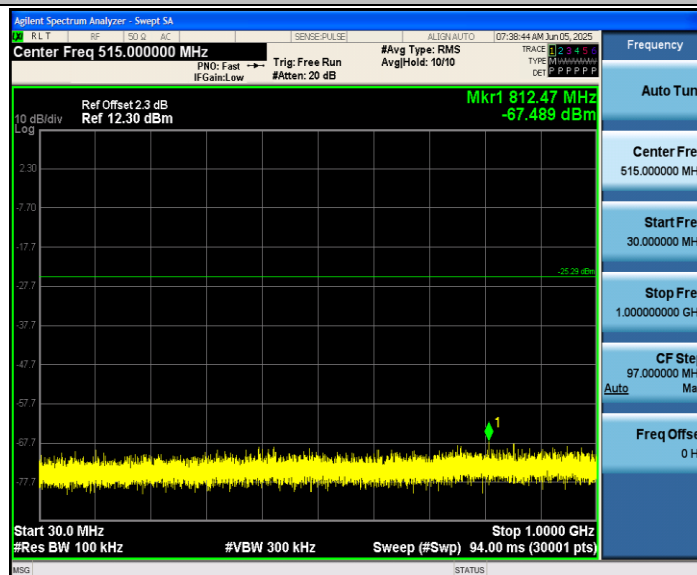
2DH5_Ant1_2402_1000~26500



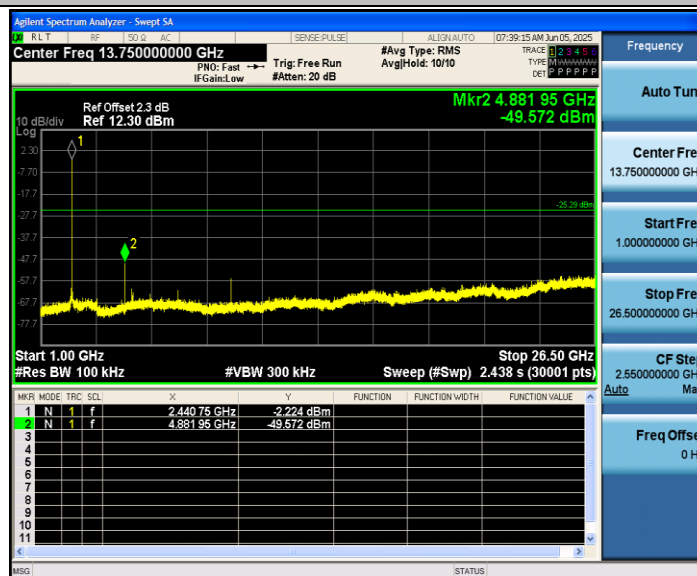
2DH5_Ant1_2441_0~Reference



2DH5_Ant1_2441_30~1000



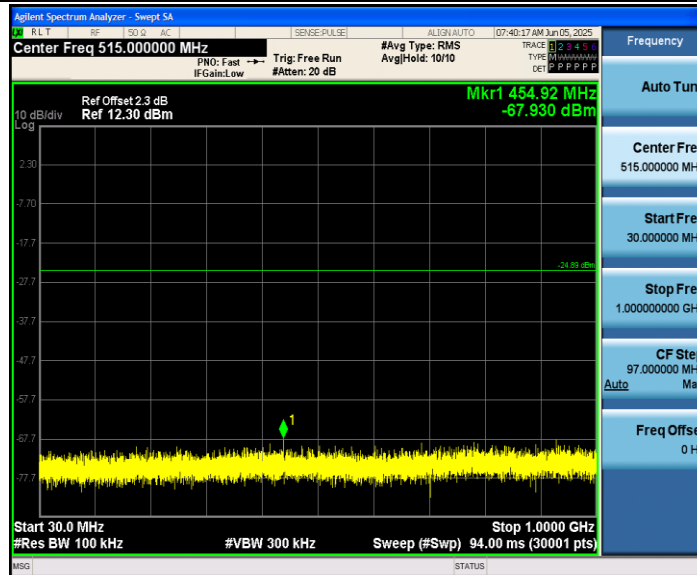
2DH5_Ant1_2441_1000~26500



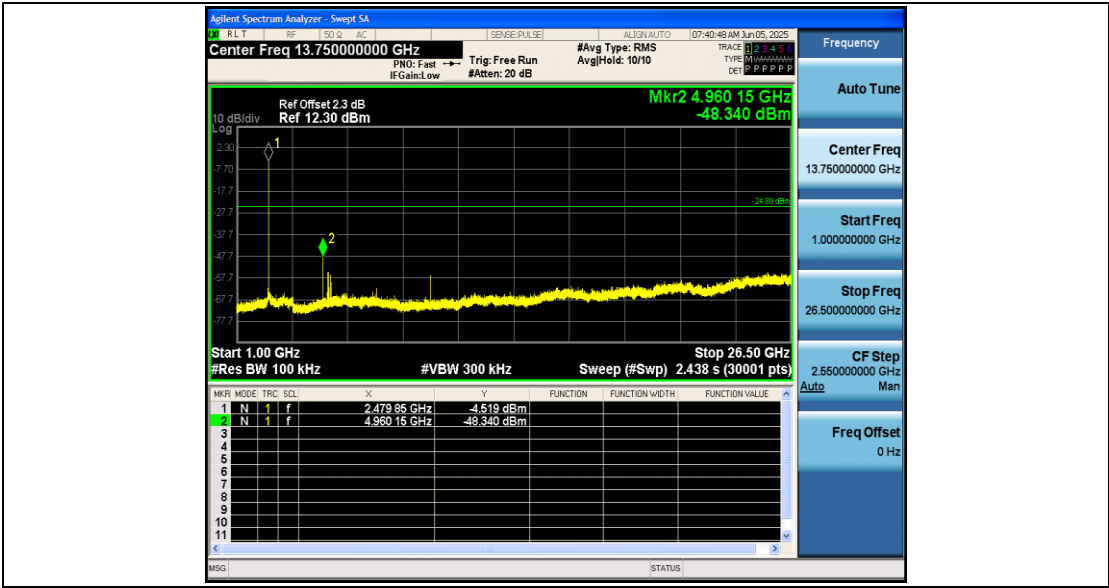
2DH5_Ant1_2480_0~Reference



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	2.92	3.75	77.87	1.09	---	---
		2441	2.92	3.75	77.87	1.09	---	---
		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	---	---

Figure 10 shows two screenshots of the Agilent Spectrum Analyzer interface, displaying the results of a sweep SA measurement. The top screenshot is for DH5_Ant1_2402, showing a center frequency of 2.402000000 GHz, a span of 0 Hz, and a resolution bandwidth of 8 MHz. The bottom screenshot is for DH5_Ant1_2441, showing a center frequency of 2.441000000 GHz, a span of 0 Hz, and a resolution bandwidth of 8 MHz. Both screenshots show a plot of power (dBm) versus frequency (GHz) with a sweep range of 5.000 ms (1001 pts). The plots show a signal at the center frequency, with a peak level of approximately -24.11 dBm for DH5_Ant1_2402 and -24.84 dBm for DH5_Ant1_2441. The plots also show a noise floor at approximately -24.03 dBm. The right side of the interface displays various measurement parameters and settings, including Frequency, Auto Tune, Center Freq, Start Freq, Stop Freq, CF Step, Freq Offset, and various measurement functions (MNR, MODE, TRIG, SCL, X, Y, FUNCTION, FUNCTION WIDTH, FUNCTION VALUE).

DH5_Ant1_2402

Agilent Spectrum Analyzer - Sweep SA

Center Freq 2.402000000 GHz

Ref Offset 0.3 dB

Ref 20.00 dBm

Trig Delay: 200.0 μ s

Trig: Video

#Avg Type: RMS

IF Gain: Low

#Atten: 30 dB

Span 0 Hz

Res BW 8 MHz

#VBW 8.0 MHz

Sweep 5.000 ms (1001 pts)

Auto Tune

Center Freq 2.402000000 GHz

Start Freq 2.402000000 GHz

Stop Freq 2.402000000 GHz

CF Step 8.000000 MHz

Freq Offset 0 Hz

Auto

Man

MNR	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	t		180.0 μ s	-24.11 dBm		
2	A1	1	t	(A)	2.920 ms (A)	-24.03 dB		
3	A1	1	t	(A)	3.750 ms (A)	0.09 dB		

DH5_Ant1_2441

Agilent Spectrum Analyzer - Sweep SA

Center Freq 2.441000000 GHz

Ref Offset 0.3 dB

Ref 20.00 dBm

Trig Delay: 200.0 μ s

Trig: Video

#Avg Type: RMS

IF Gain: Low

#Atten: 30 dB

Span 0 Hz

Res BW 8 MHz

#VBW 8.0 MHz

Sweep 5.000 ms (1001 pts)

Auto Tune

Center Freq 2.441000000 GHz

Start Freq 2.441000000 GHz

Stop Freq 2.441000000 GHz

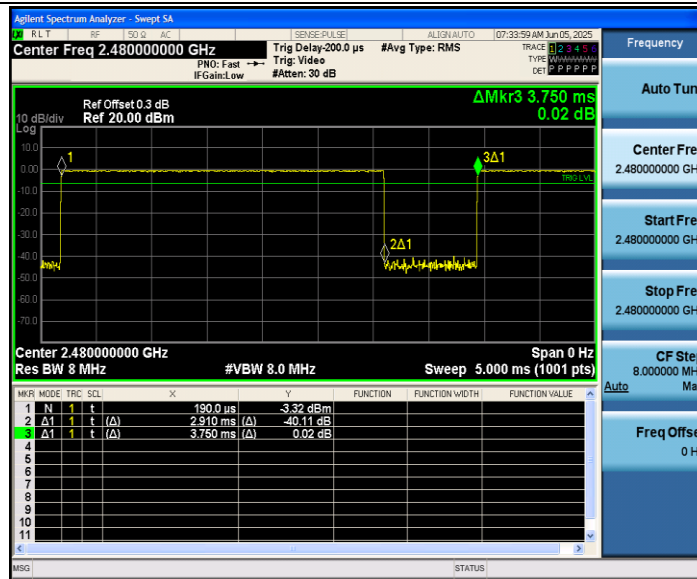
CF Step 8.000000 MHz

Freq Offset 0 Hz

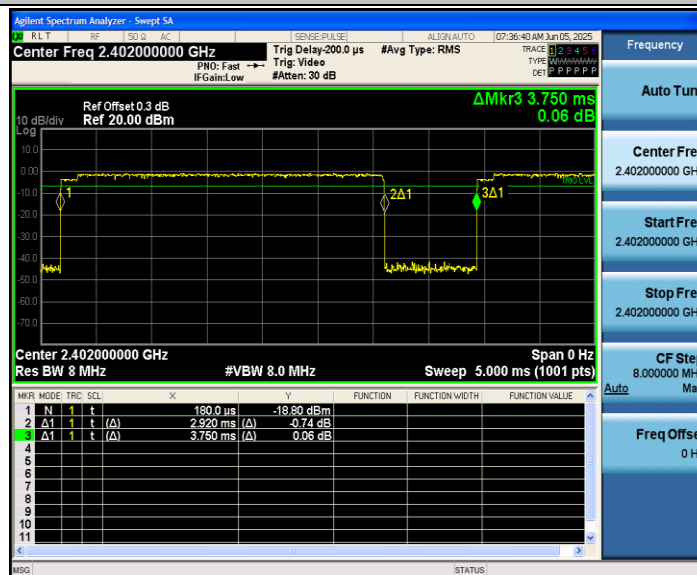
Auto

Man

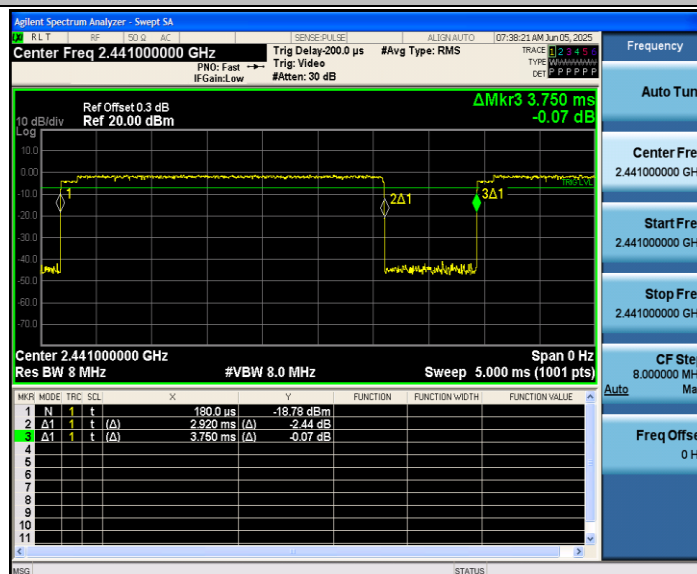
MNR	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	t		180.0 μ s	-18.75 dBm		
2	A1	1	t	(A)	2.920 ms (A)	-24.84 dB		
3	A1	1	t	(A)	3.750 ms (A)	0.62 dB		



2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480

