

Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: SecondBrain VoicePad

Test Model: GSA021

Environmental Conditions

Temperature:	24.4°C
Relative Humidity:	53.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Zhang hai
Supervised by:	Fengliu Tang

A.1 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.975	2401.535	2402.510	---	---
		2441	0.990	2440.523	2441.513	---	---
		2480	0.990	2479.529	2480.519	---	---
2DH5	Ant1	2402	1.293	2401.388	2402.681	---	---
		2441	1.290	2440.388	2441.678	---	---
		2480	1.308	2479.367	2480.675	---	---
3DH5	Ant1	2402	1.293	2401.376	2402.669	---	---
		2441	1.296	2440.376	2441.672	---	---
		2480	1.296	2479.376	2480.672	---	---

DH5_Ant1_2402

Center Freq 2.40200000 GHz
 Ref Offset 11.18 dB
 Ref 30.00 dBm
 ΔMkr3 975 kHz
 -0.358 dB

10 dB/div
 Log

Center 2.402000 GHz
 #Res BW 30 kHz
 #VBW 100 kHz
 Span 3.000 MHz
 #Sweep 20.00 ms (1001 pts)

N	Mode	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	f		2.401535 GHz	-21.653 dBm			
2	N	f		2.402012 GHz	-1.517 dBm			
3	Δ1	f	(Δ)	975 kHz (Δ)	-0.358 dB			

Frequency
 Auto Tune
 Center Freq 2.40200000 GHz
 Start Freq 2.400500000 GHz
 Stop Freq 2.403500000 GHz
 CF Step 300.000 kHz
 Auto
 Freq Offset 0 Hz

DH5_Ant1_2441

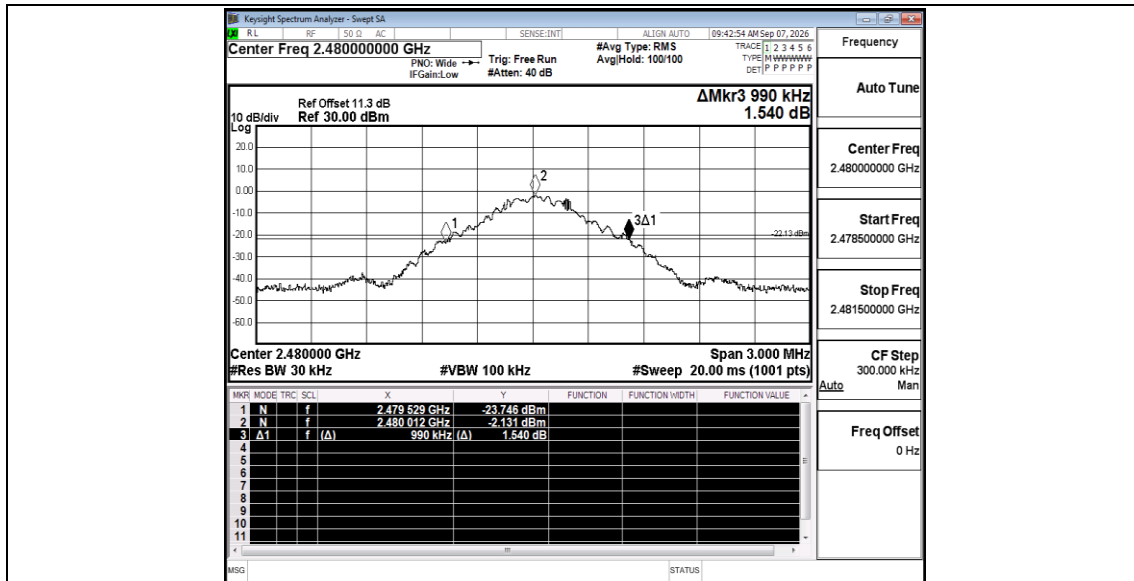
Center Freq 2.441000000 GHz
 Ref Offset 11.2 dB
 Ref 30.00 dBm
 ΔMkr3 990 kHz
 0.548 dB

10 dB/div
 Log

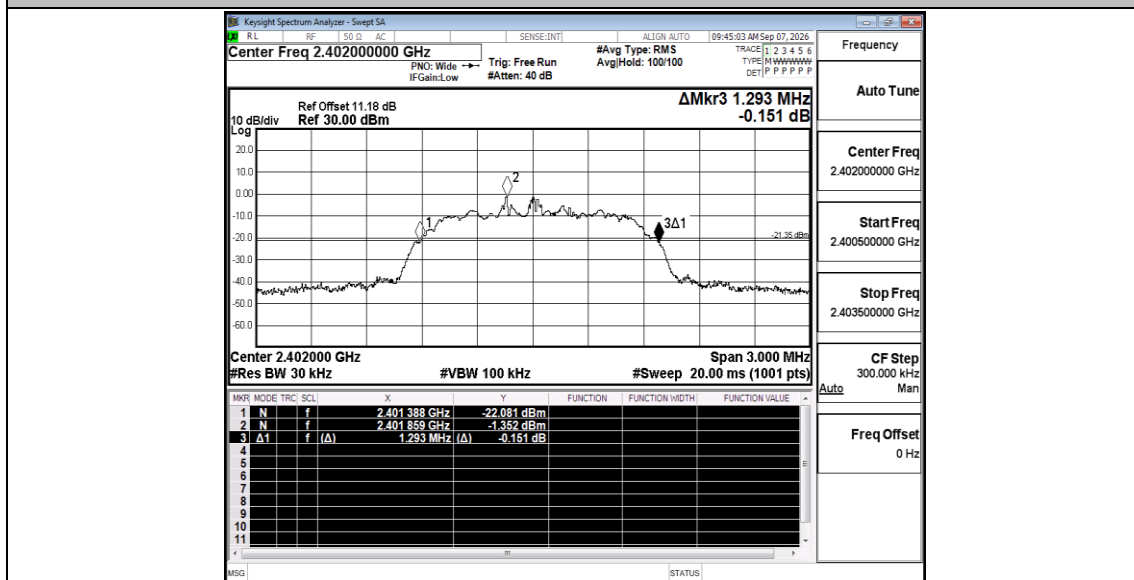
Center 2.441000 GHz
 #Res BW 30 kHz
 #VBW 100 kHz
 Span 3.000 MHz
 #Sweep 20.00 ms (1001 pts)

N	Mode	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	f		2.440523 GHz	-22.502 dBm			
2	N	f		2.441015 GHz	-1.715 dBm			
3	Δ1	f	(Δ)	990 kHz (Δ)	0.548 dB			

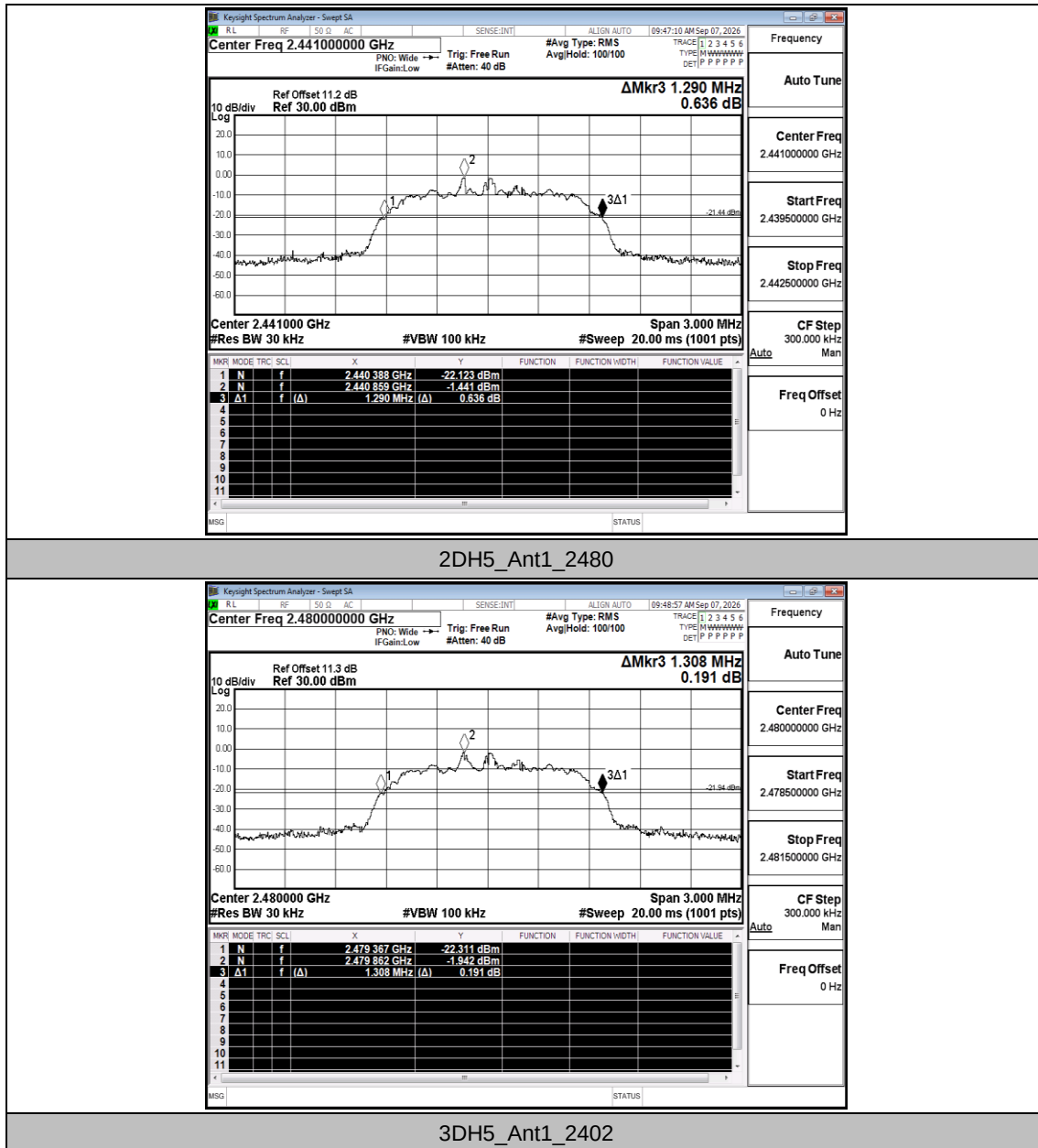
Frequency
 Auto Tune
 Center Freq 2.441000000 GHz
 Start Freq 2.439500000 GHz
 Stop Freq 2.442500000 GHz
 CF Step 300.000 kHz
 Auto
 Freq Offset 0 Hz

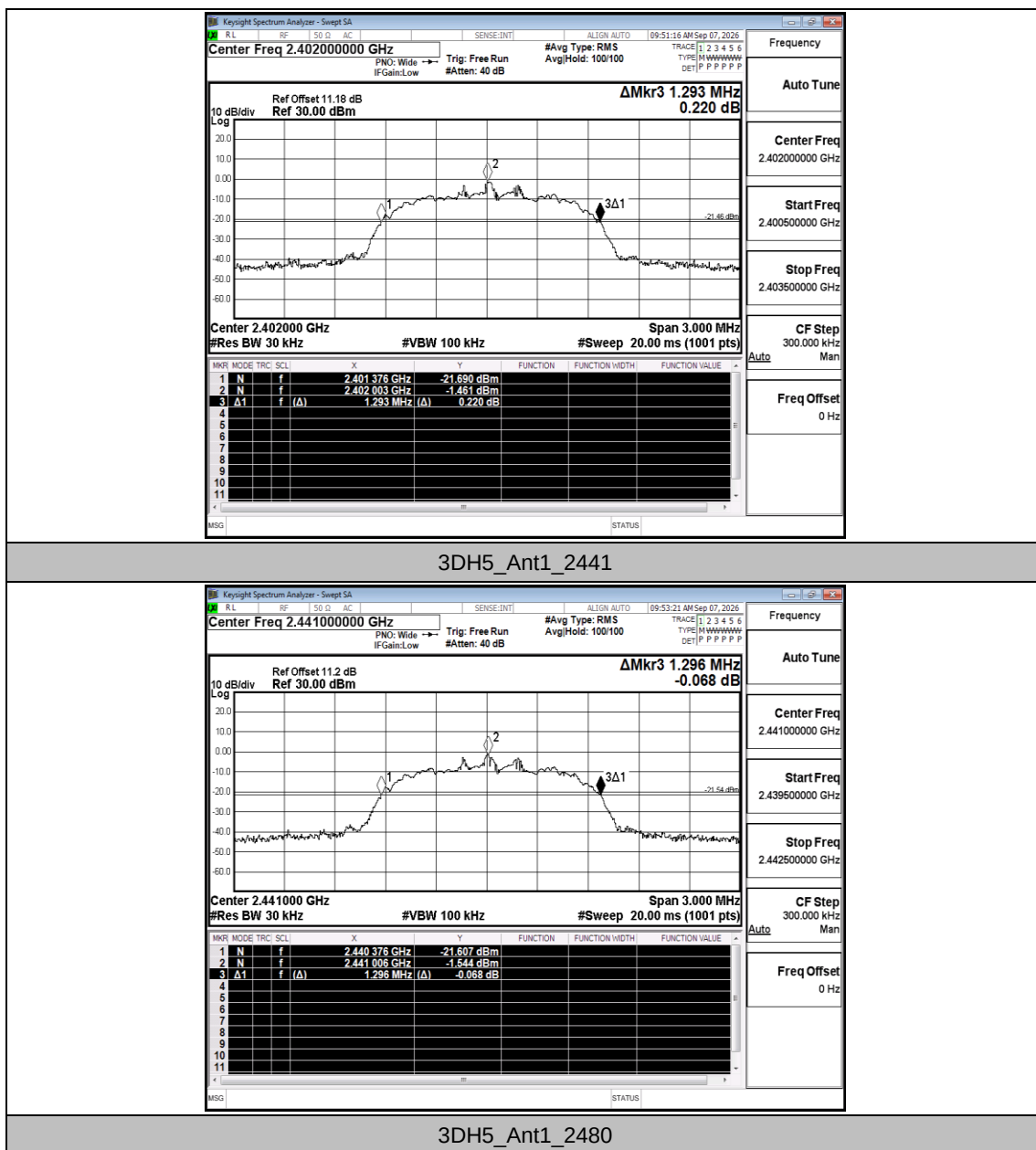


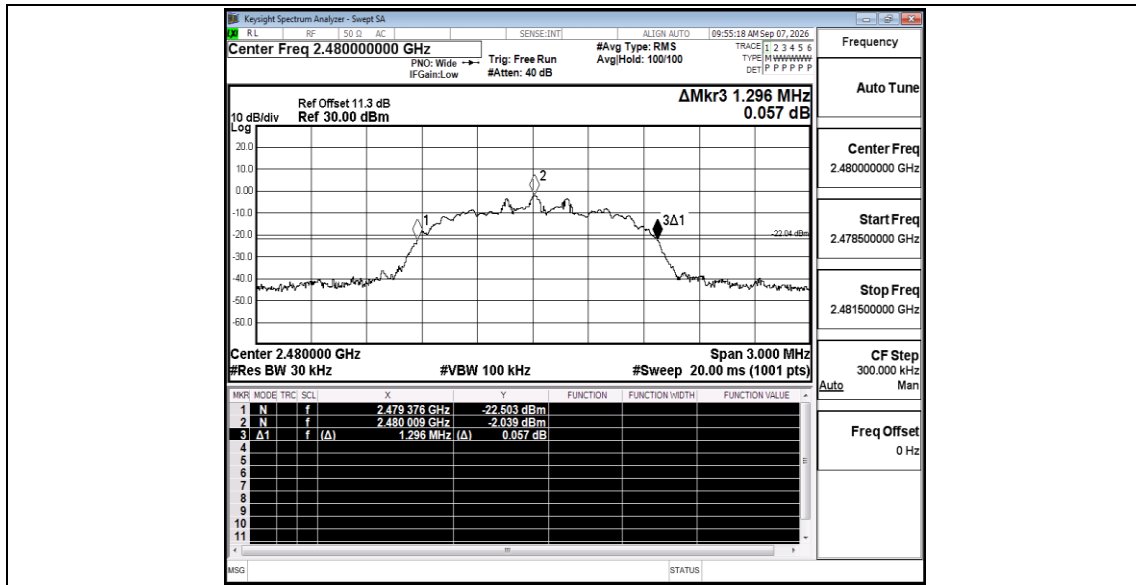
2DH5_Ant1_2402



2DH5_Ant1_2441





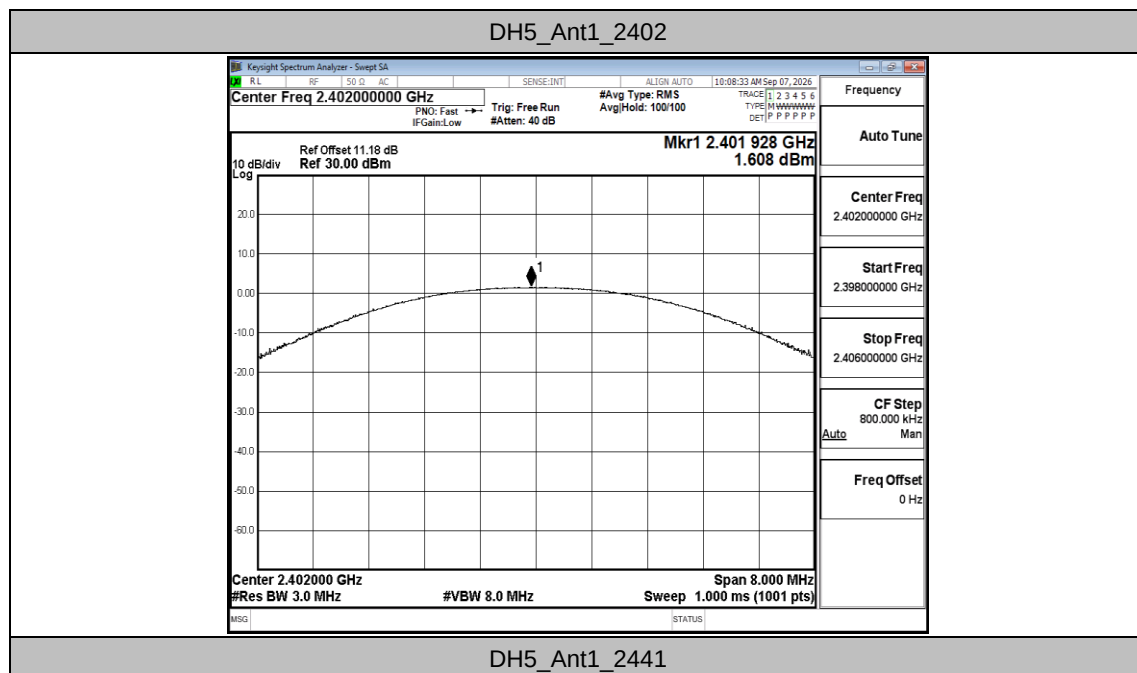


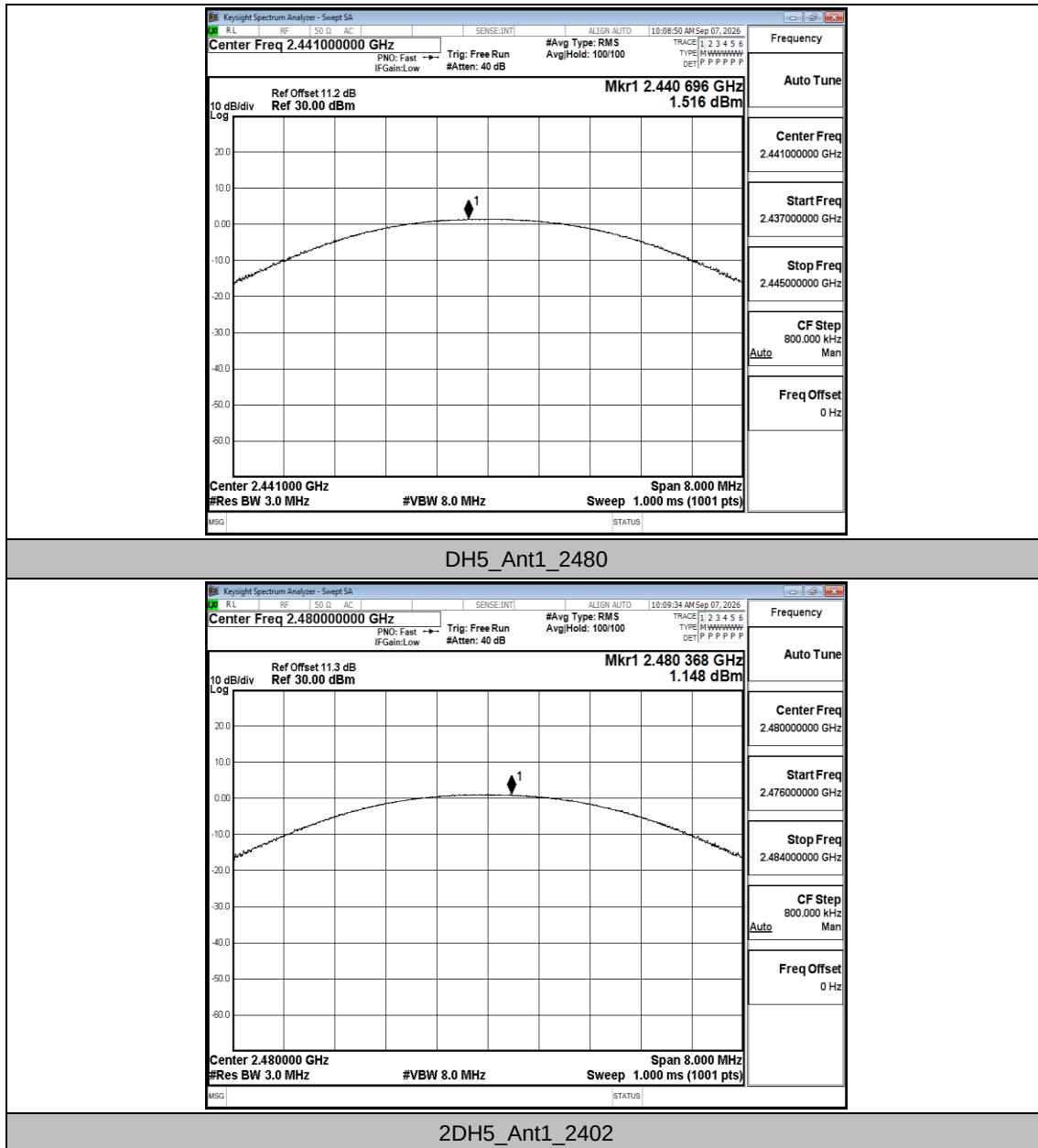
A.2 Maximum Peak conducted output power

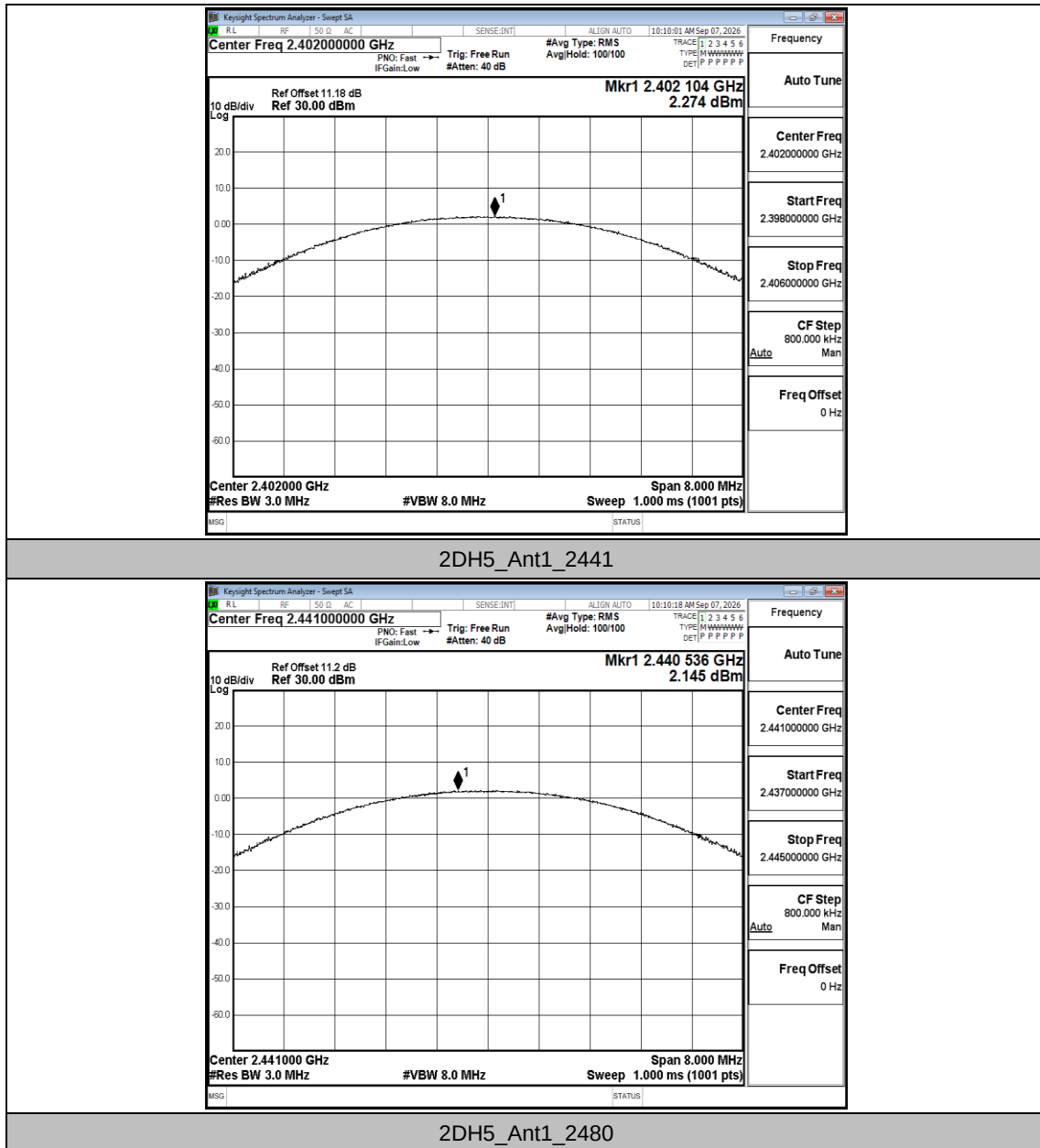
Test Result

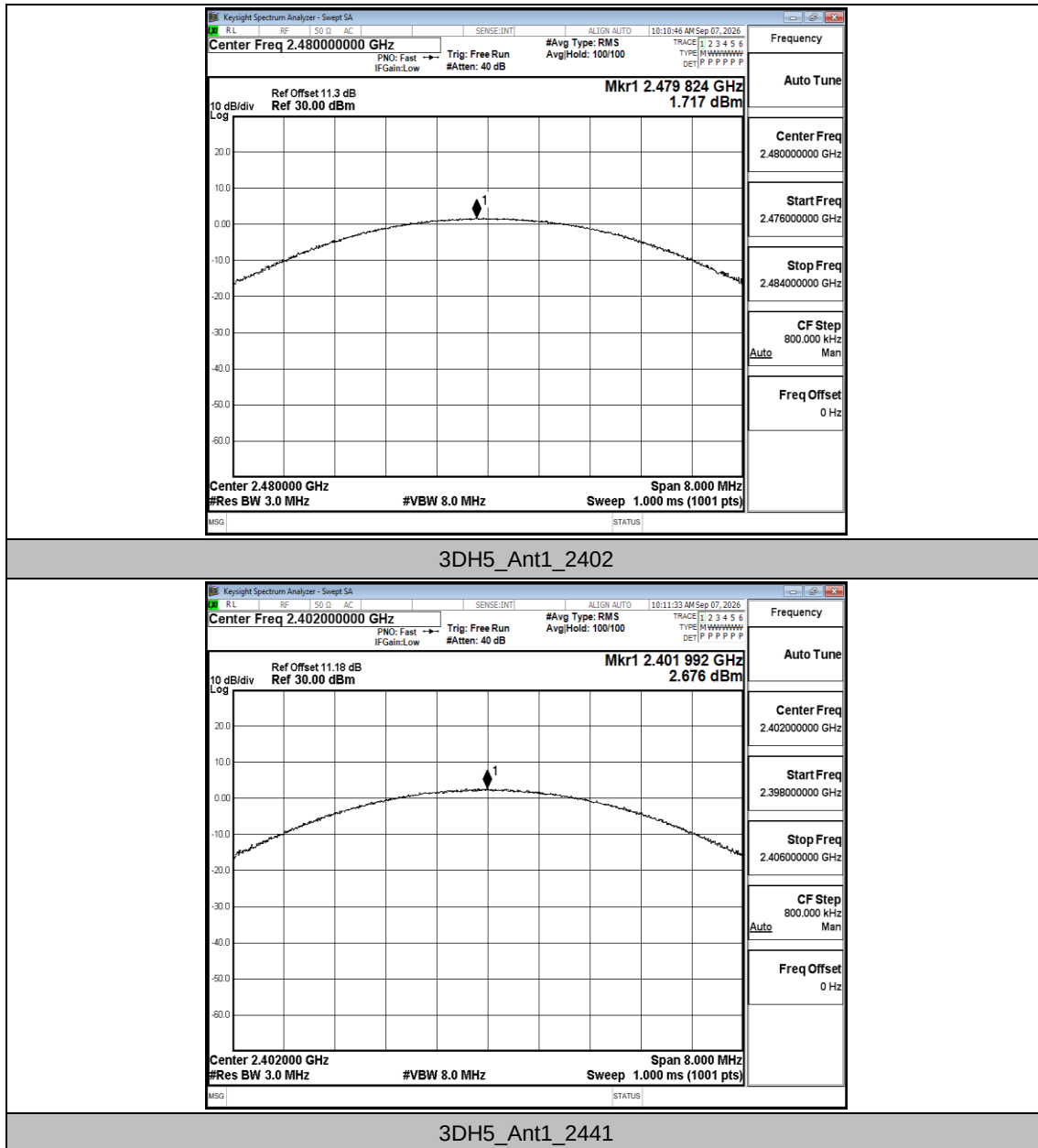
Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	1.61	≤20.97	PASS
		2441	1.52	≤20.97	PASS
		2480	1.15	≤20.97	PASS
2DH5	Ant1	2402	2.27	≤20.97	PASS
		2441	2.15	≤20.97	PASS
		2480	1.72	≤20.97	PASS
3DH5	Ant1	2402	2.68	≤20.97	PASS
		2441	2.52	≤20.97	PASS
		2480	2.10	≤20.97	PASS

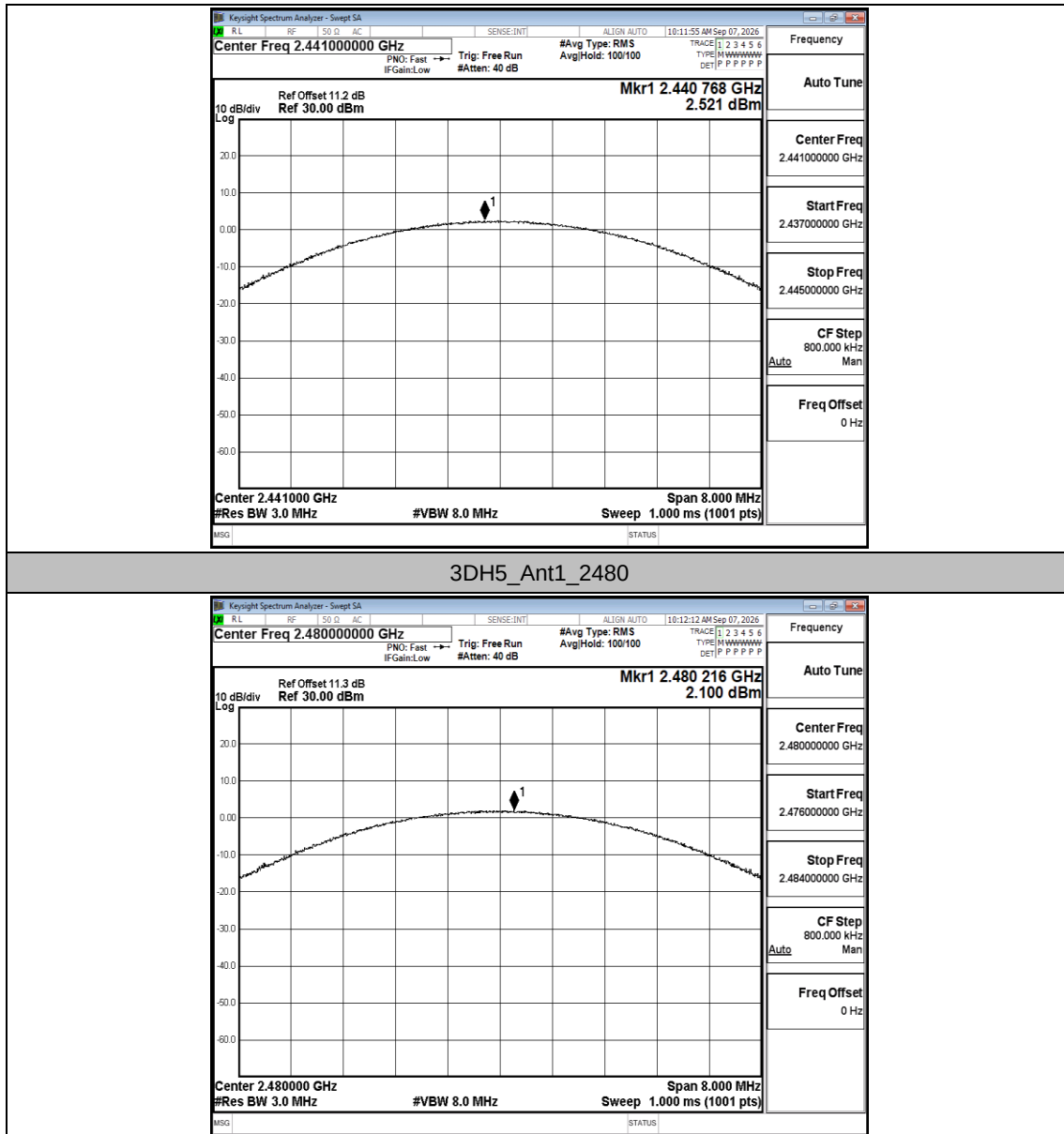
Test Graphs









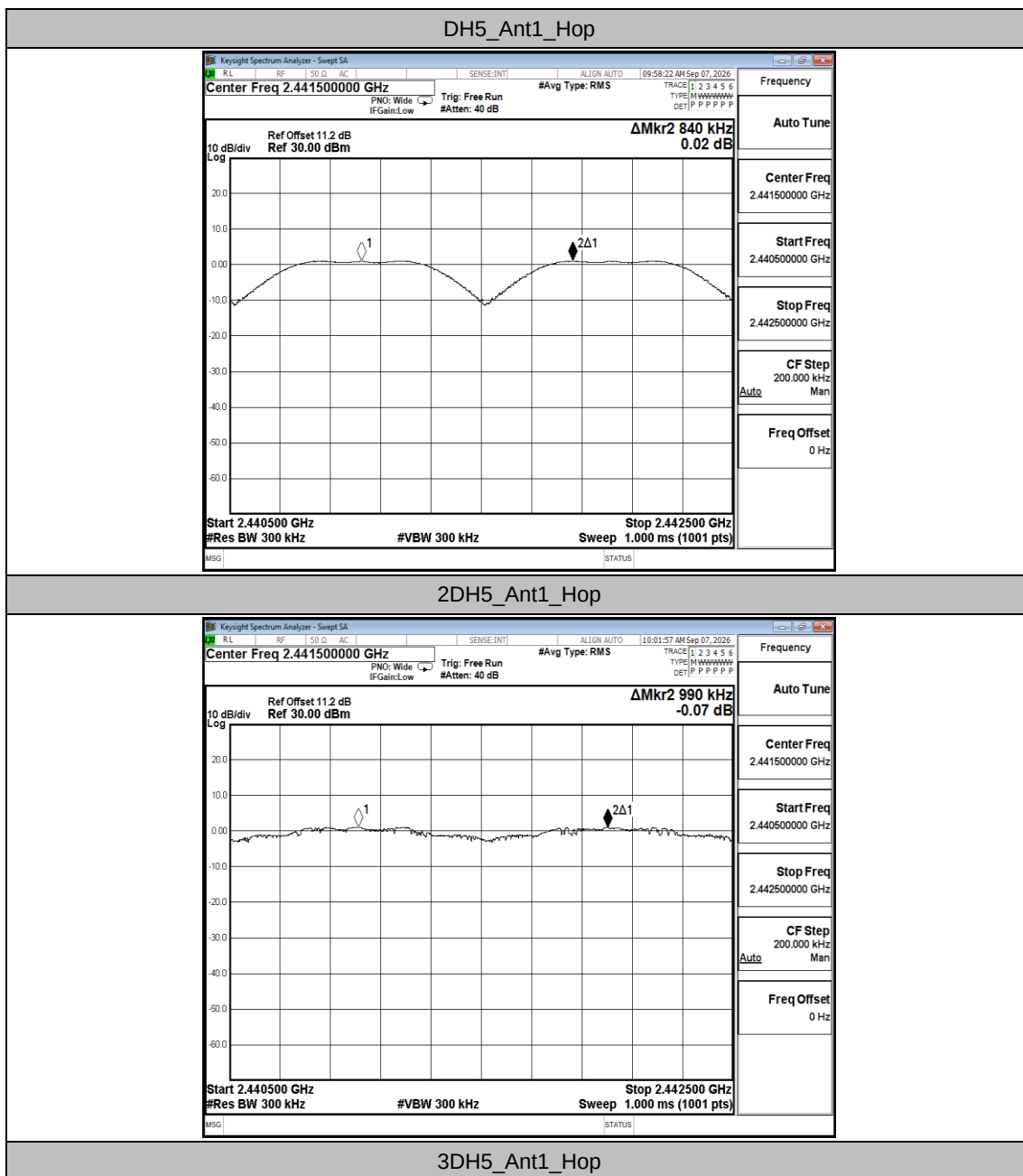


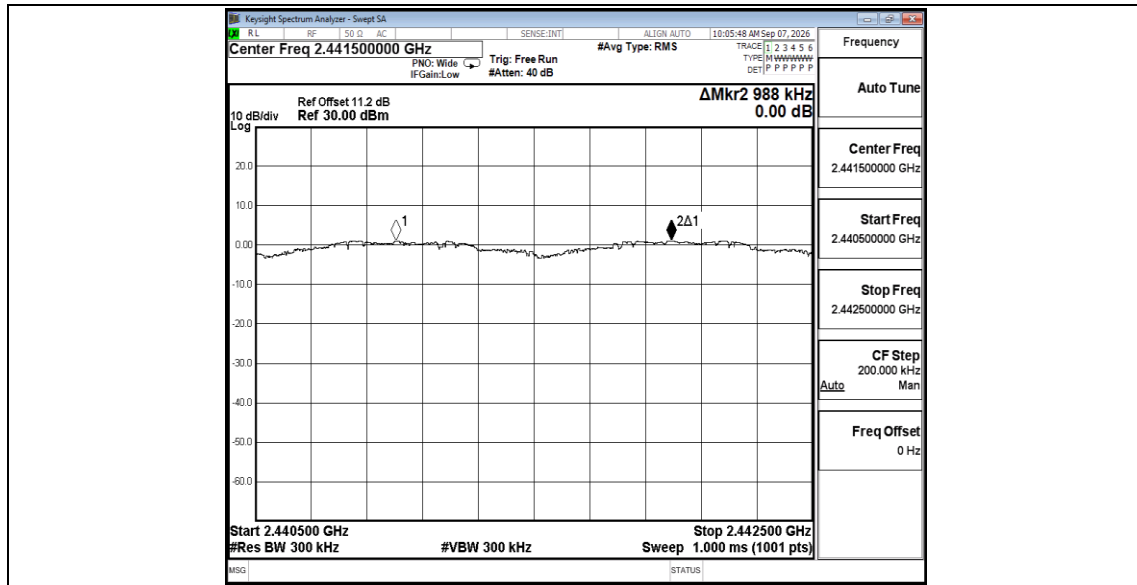
A.3 Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.84	≥0.660	PASS
2DH5	Ant1	Hop	0.99	≥0.872	PASS
3DH5	Ant1	Hop	0.988	≥0.864	PASS

Test Graphs



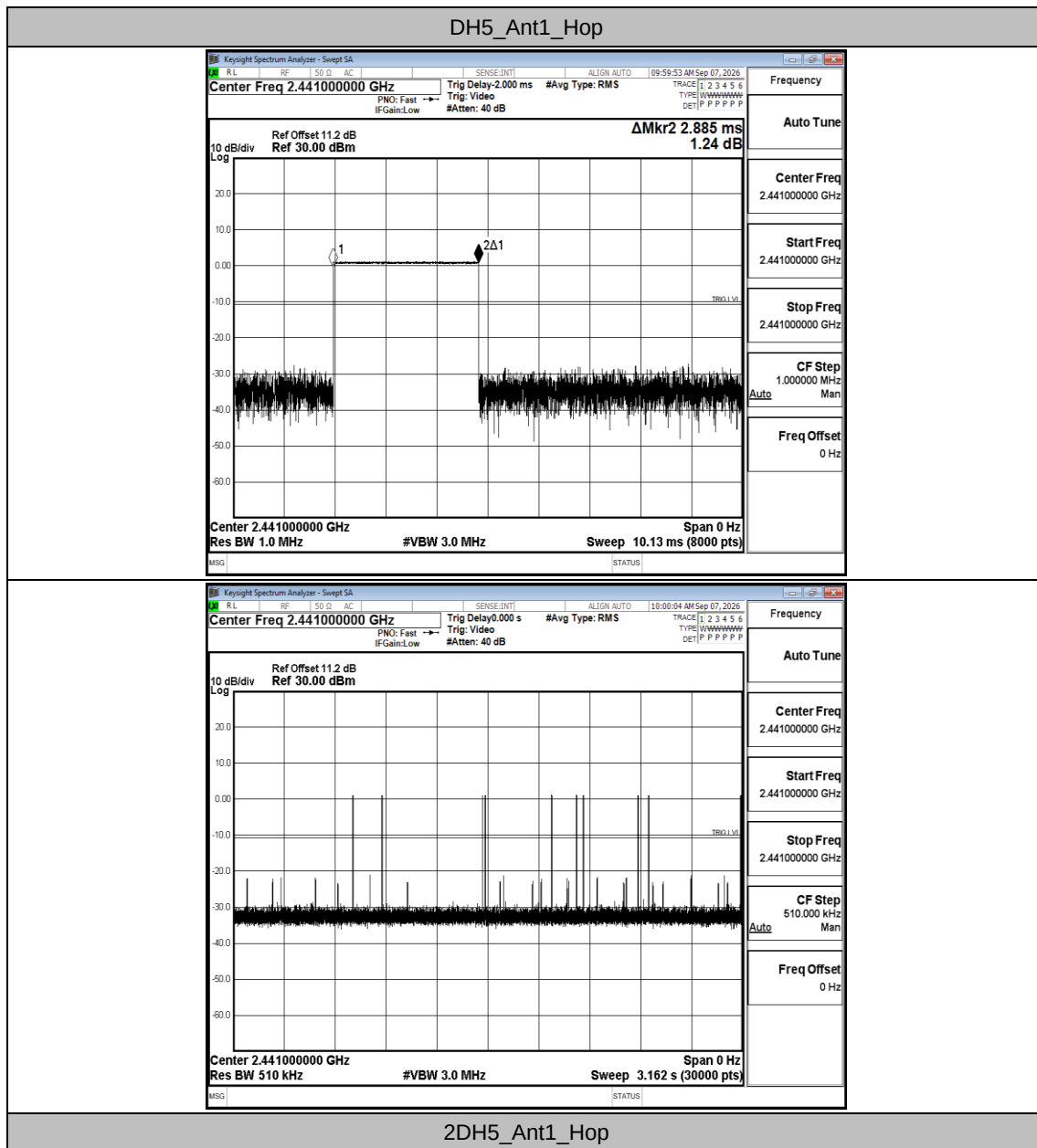


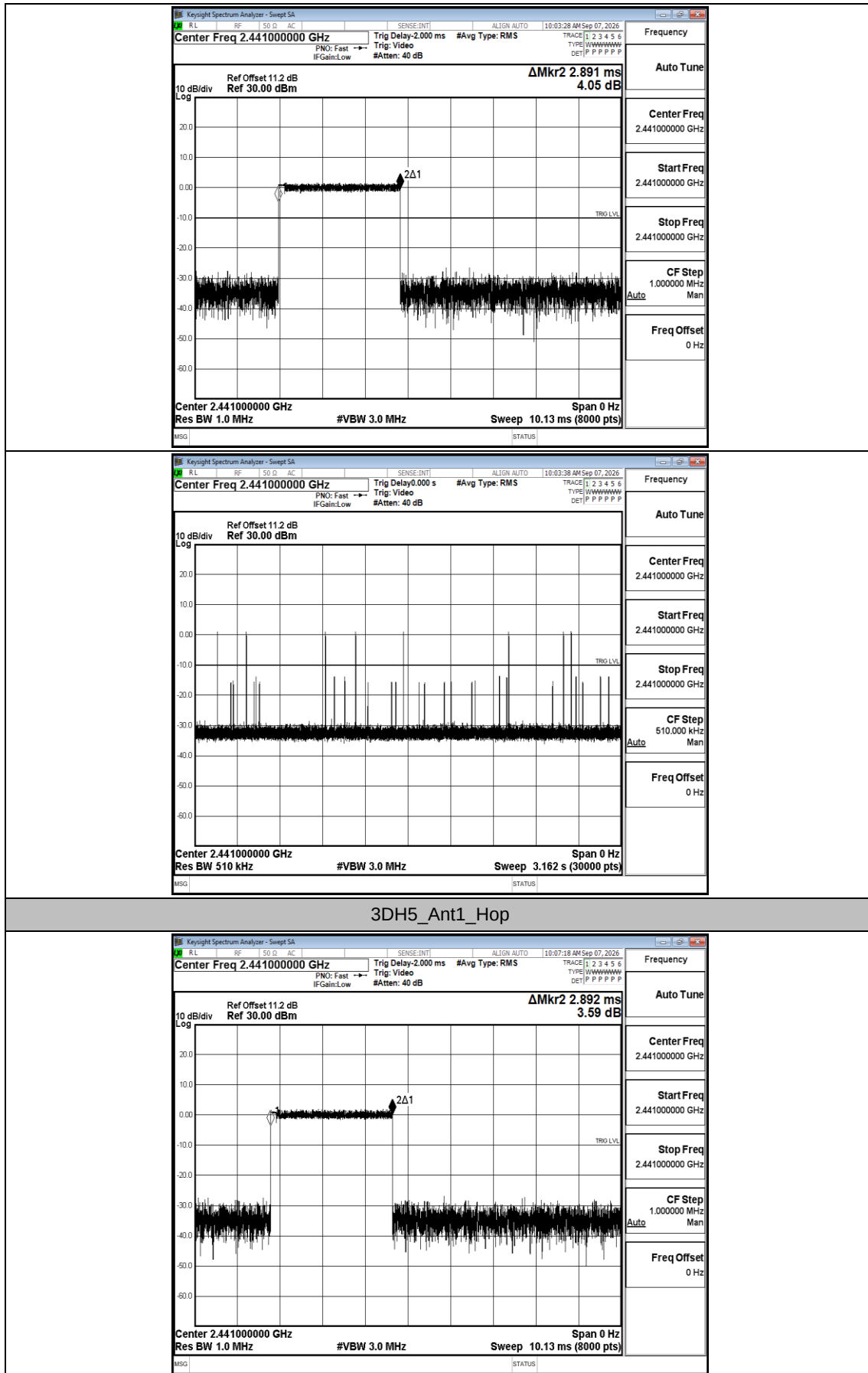
A.4 Time of occupancy

Test Result

TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.885	110	0.317	≤0.4	PASS
2DH5	Ant1	Hop	2.891	90	0.26	≤0.4	PASS
3DH5	Ant1	Hop	2.892	110	0.318	≤0.4	PASS

Test Graphs

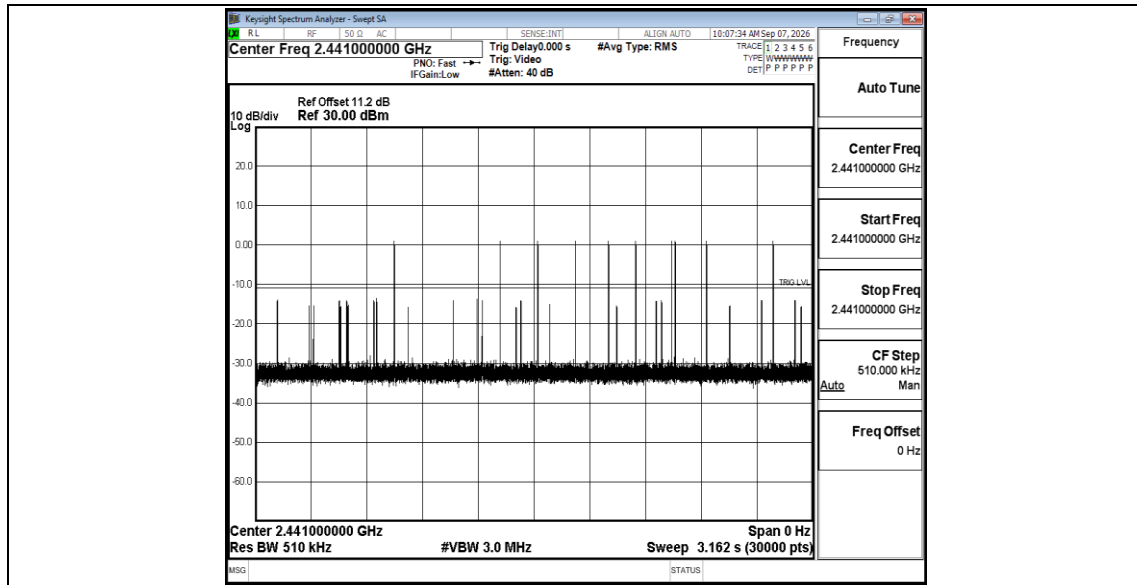




Guangzhou LCS Compliance Testing Laboratory Ltd.

Add: No.44-1, Qianfeng North Road, Shiqi, Panyu District, Guangzhou, Guangdong, China

Tel: +(86) 020-39166689 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

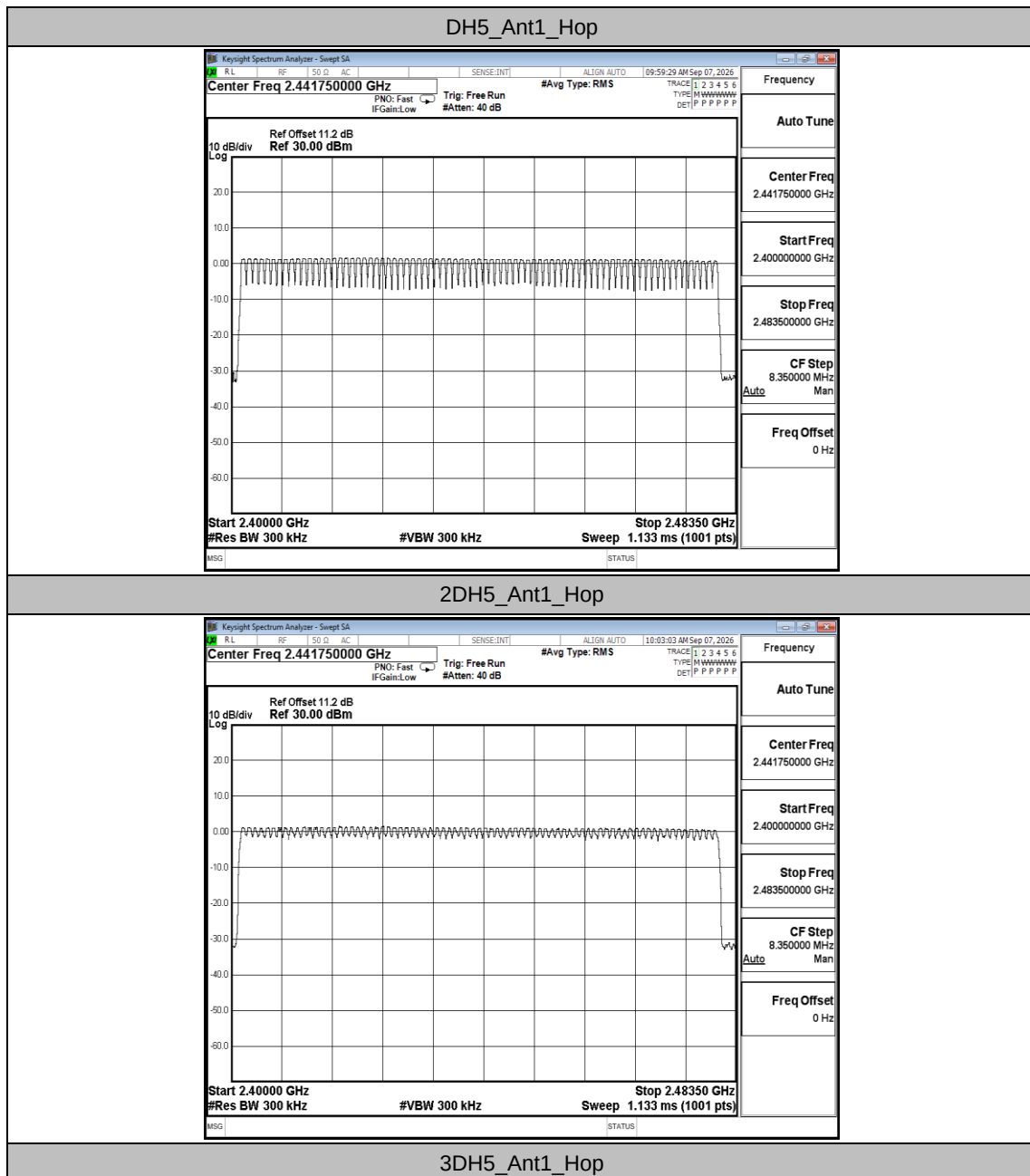


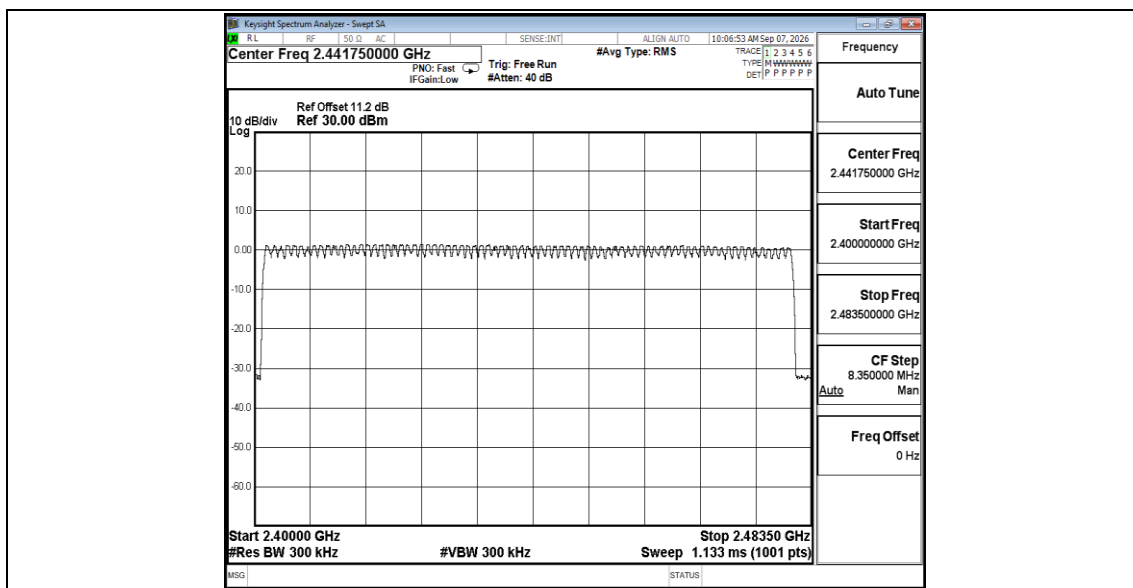
A.5 Number of hopping channels

Test Result

TestMode	Antenna	Freq(MHz)	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS

Test Graphs



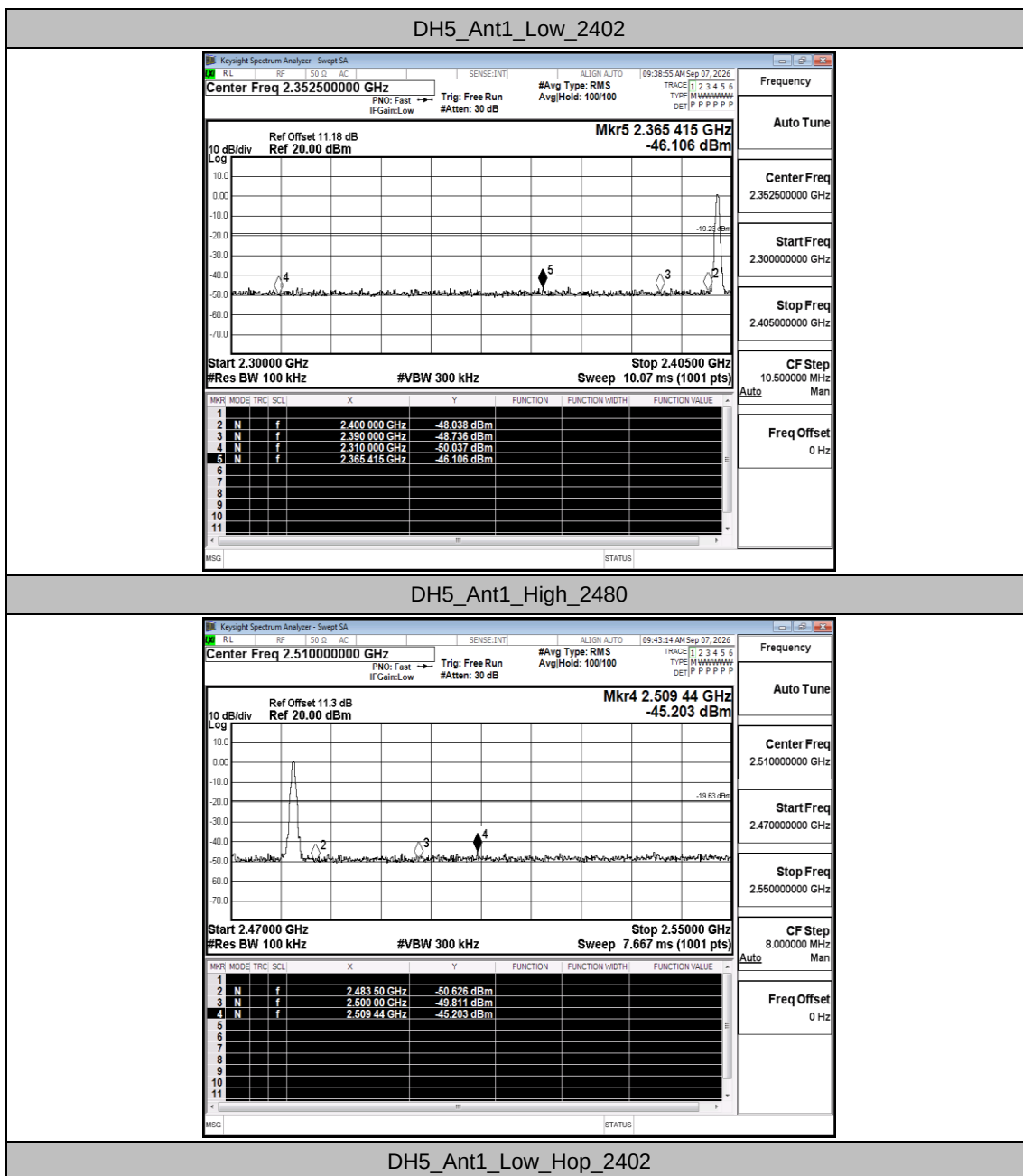


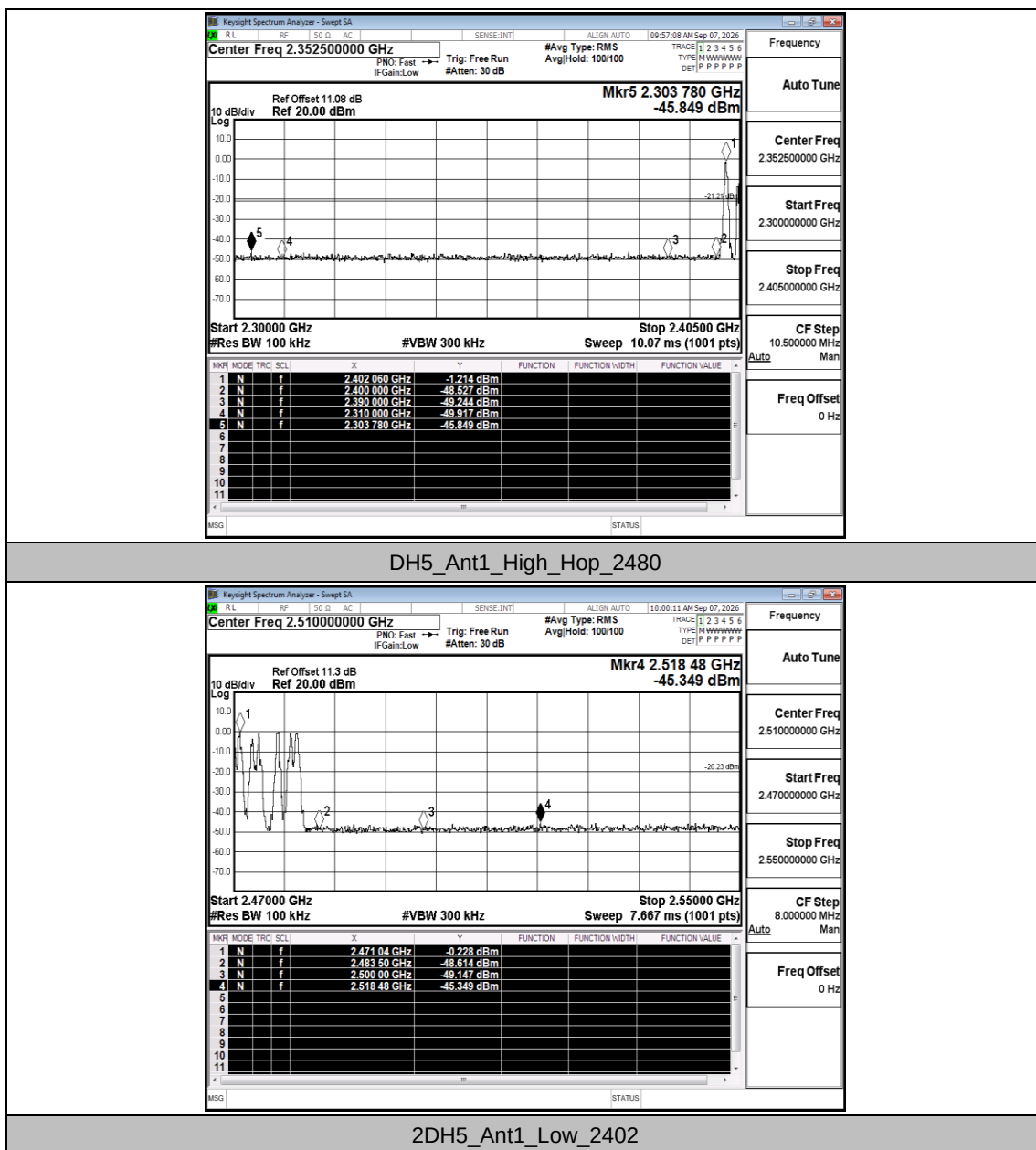
A.6 Band edge measurements

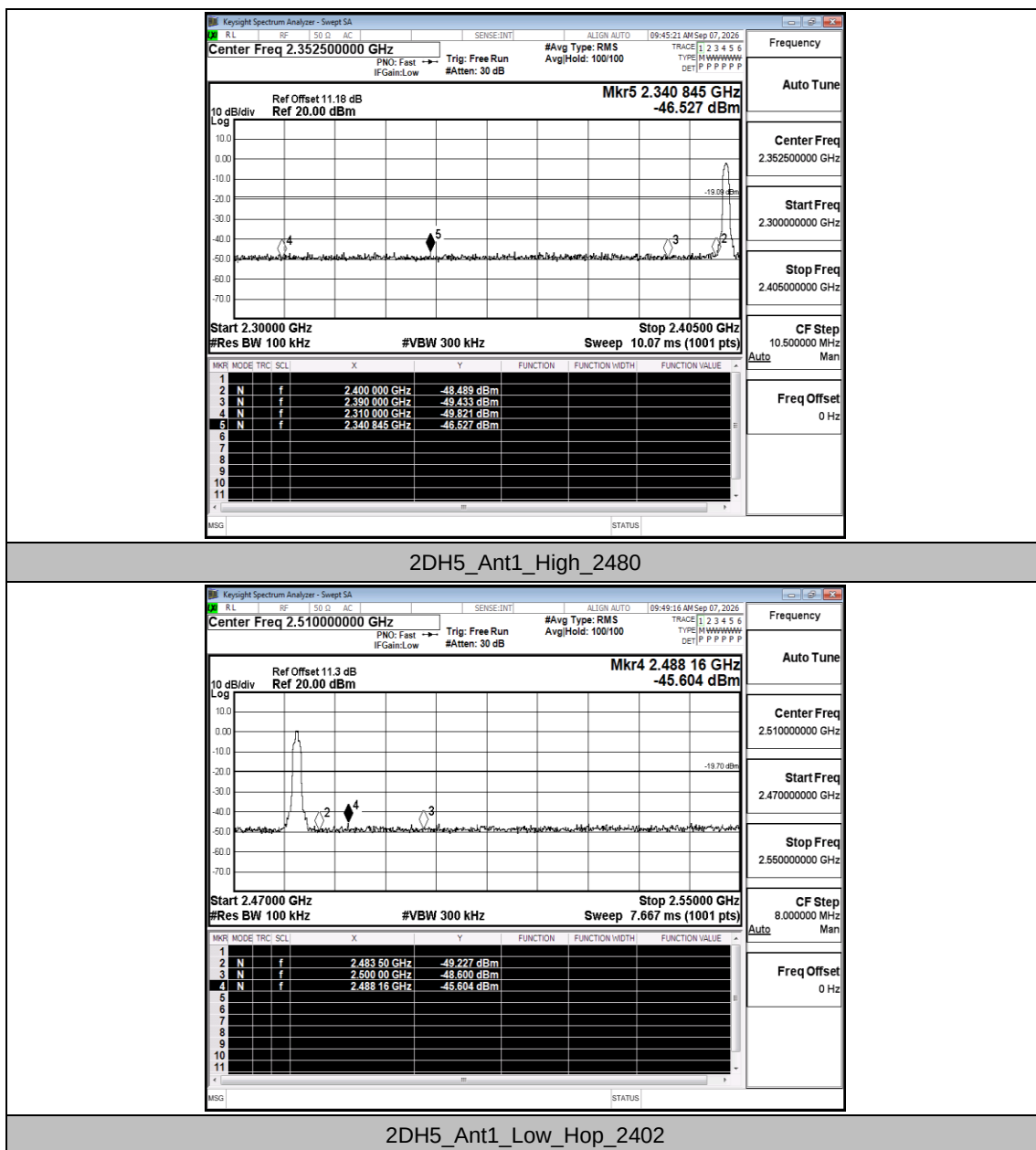
Test Result

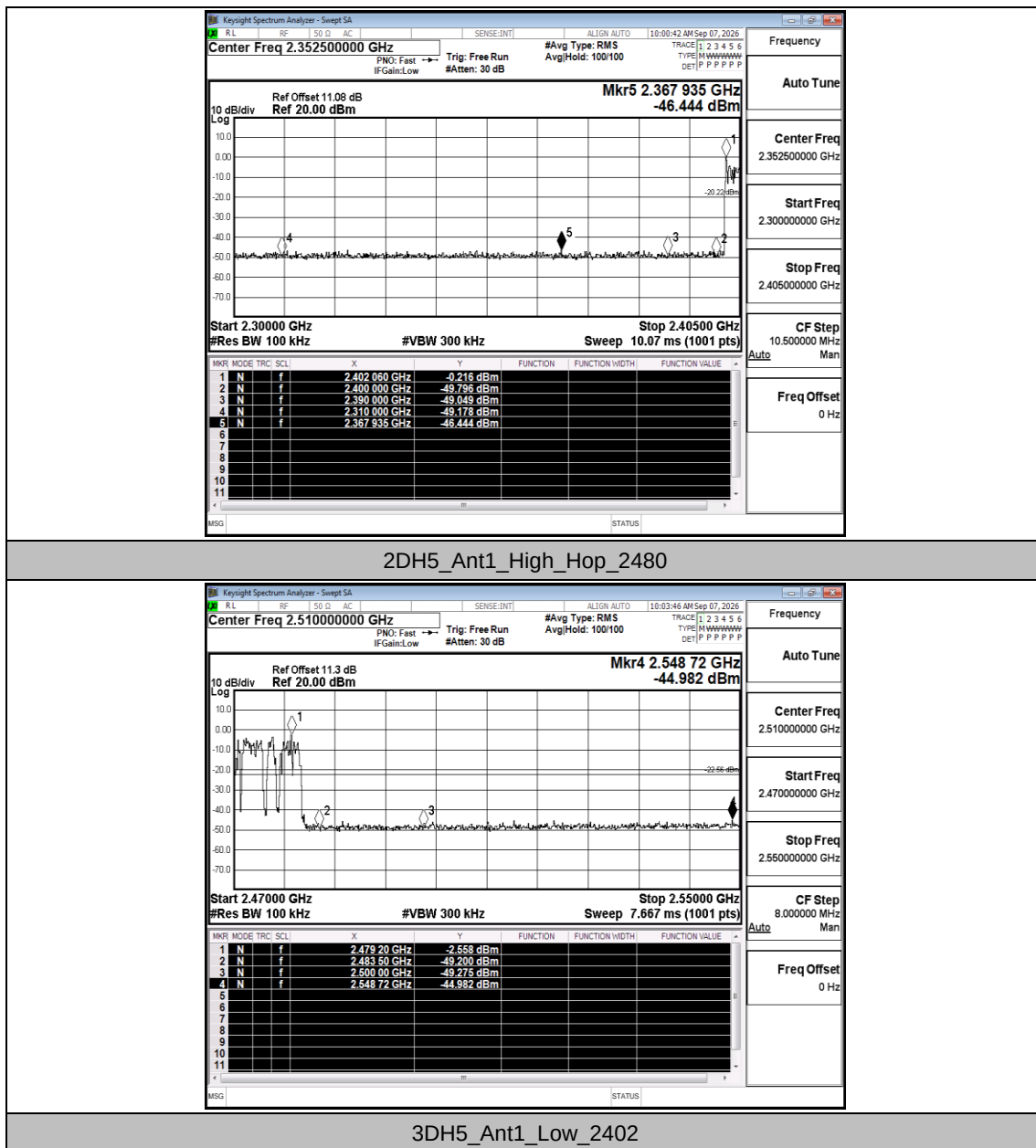
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	0.77	-46.11	≤ -19.23	PASS
		High	2480	0.37	-45.2	≤ -19.63	PASS
		Low	Hop_2402	-1.21	-45.85	≤ -21.21	PASS
		High	Hop_2480	-0.23	-45.35	≤ -20.23	PASS
2DH5	Ant1	Low	2402	0.91	-46.53	≤ -19.09	PASS
		High	2480	0.30	-45.6	≤ -19.7	PASS
		Low	Hop_2402	-0.22	-46.44	≤ -20.22	PASS
		High	Hop_2480	-2.56	-44.98	≤ -22.56	PASS
3DH5	Ant1	Low	2402	0.46	-46.4	≤ -19.54	PASS
		High	2480	-1.84	-45.58	≤ -21.84	PASS
		Low	Hop_2402	-3.56	-45.92	≤ -23.56	PASS
		High	Hop_2480	-2.75	-45.51	≤ -22.75	PASS

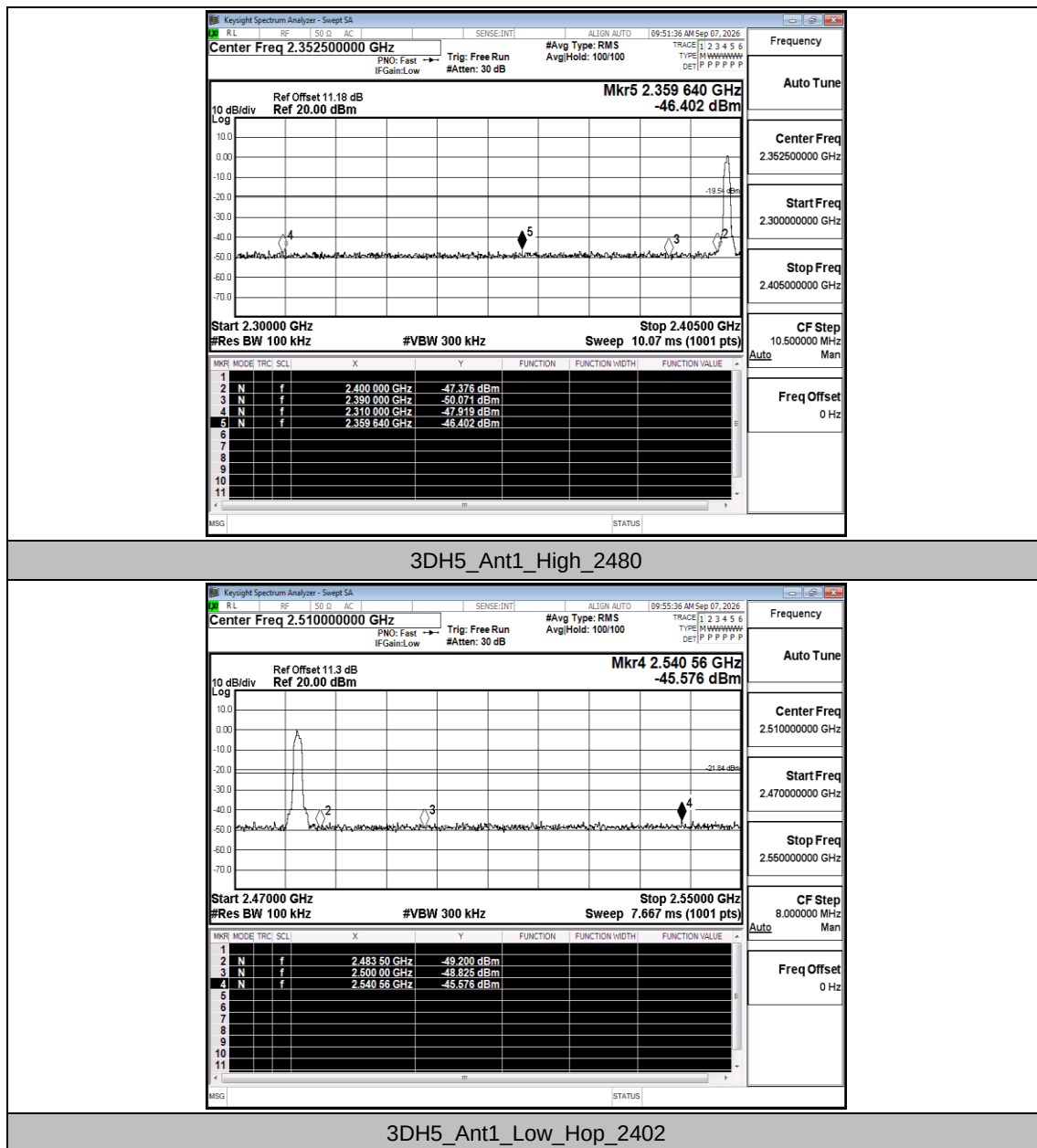
Test Graphs

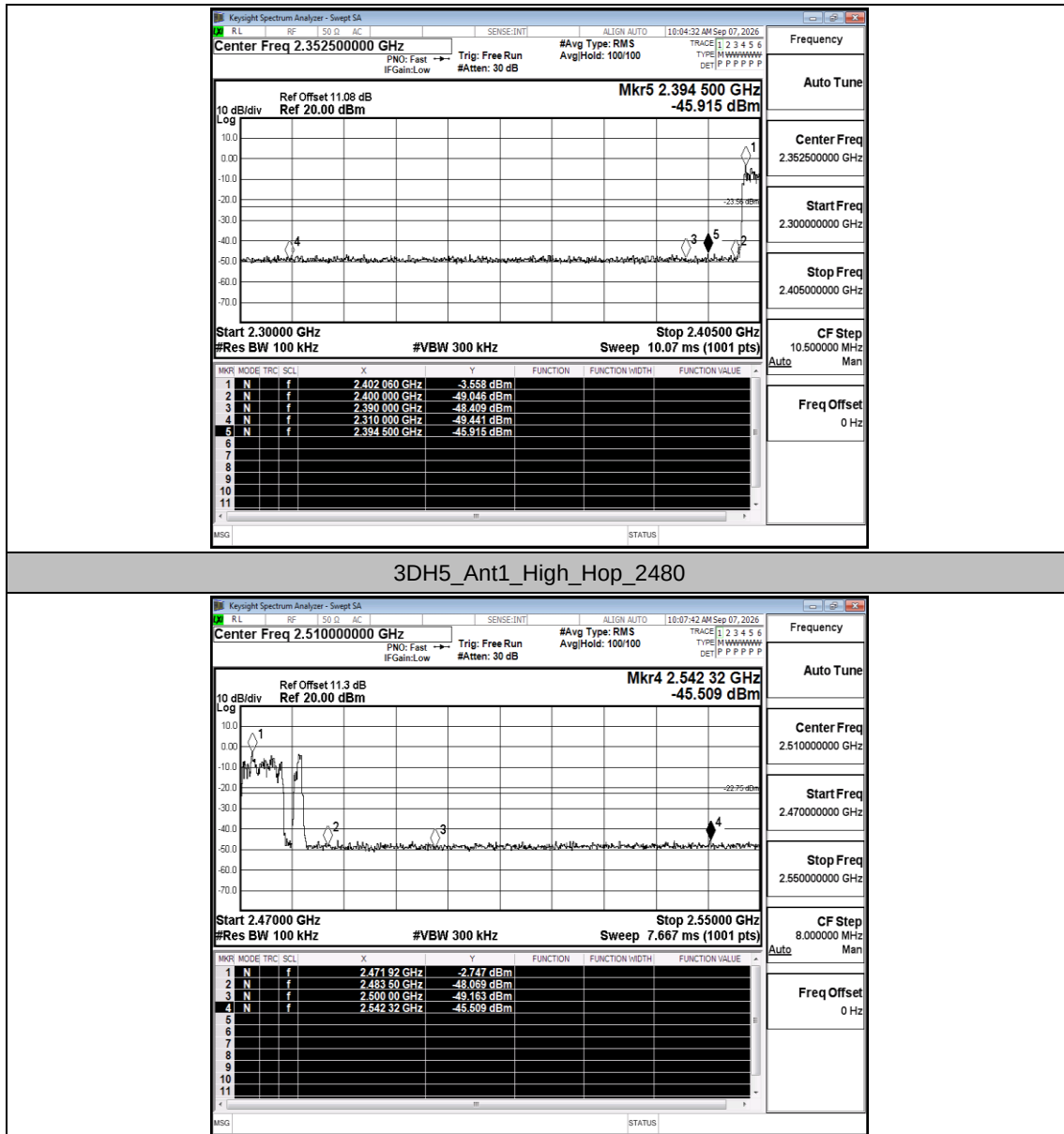










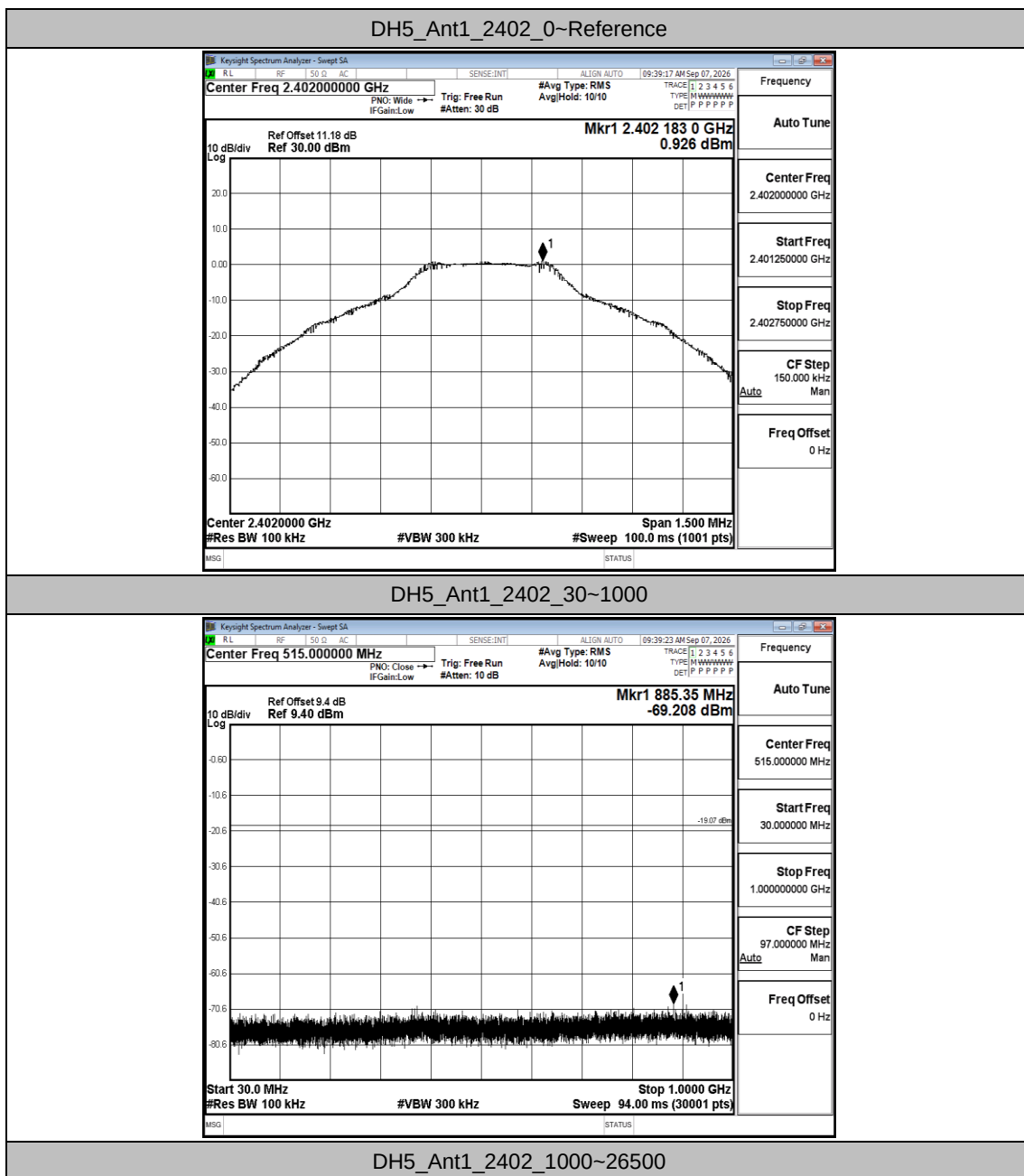


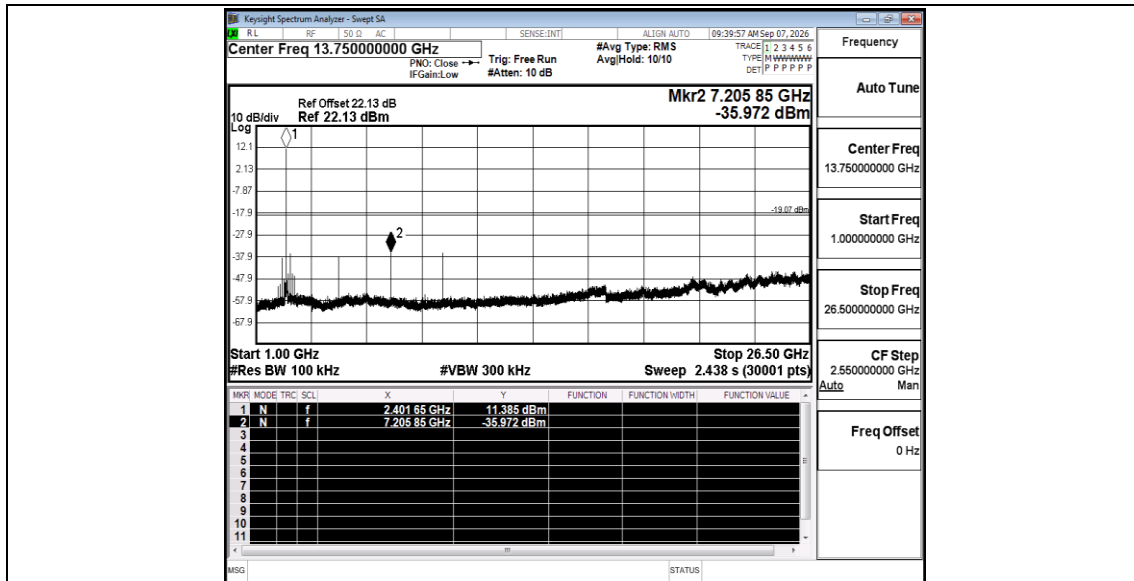
A.7 Conducted Spurious Emission

Test Result

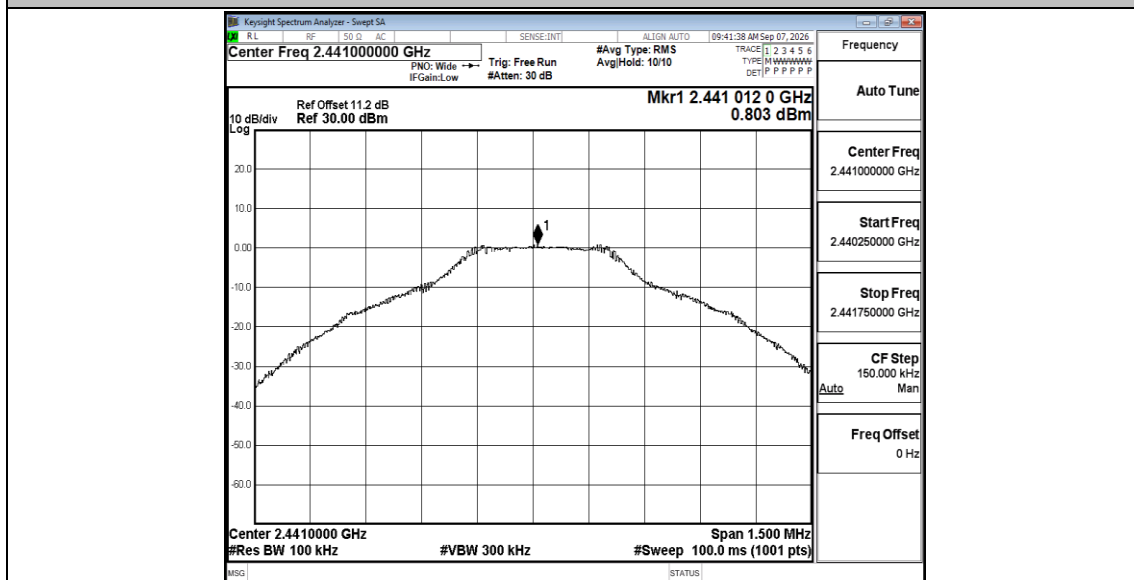
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	0.93	0.93	---	PASS
			30~1000	0.93	-69.21	≤-19.07	PASS
			1000~26500	0.93	-35.97	≤-19.07	PASS
		2441	Reference	0.80	0.80	---	PASS
			30~1000	0.80	-70.09	≤-19.2	PASS
			1000~26500	0.80	-35.92	≤-19.2	PASS
		2480	Reference	0.37	0.37	---	PASS
			30~1000	0.37	-69.87	≤-19.63	PASS
			1000~26500	0.37	-34.81	≤-19.63	PASS
2DH5	Ant1	2402	Reference	0.97	0.97	---	PASS
			30~1000	0.97	-69.92	≤-19.03	PASS
			1000~26500	0.97	-35.75	≤-19.03	PASS
		2441	Reference	0.83	0.83	---	PASS
			30~1000	0.83	-69.67	≤-19.17	PASS
			1000~26500	0.83	-37.45	≤-19.17	PASS
		2480	Reference	0.41	0.41	---	PASS
			30~1000	0.41	-69.34	≤-19.59	PASS
			1000~26500	0.41	-37.94	≤-19.59	PASS
3DH5	Ant1	2402	Reference	0.95	0.95	---	PASS
			30~1000	0.95	-69.74	≤-19.05	PASS
			1000~26500	0.95	-35.56	≤-19.05	PASS
		2441	Reference	0.84	0.84	---	PASS
			30~1000	0.84	-69.07	≤-19.16	PASS
			1000~26500	0.84	-36.4	≤-19.16	PASS
		2480	Reference	0.41	0.41	---	PASS
			30~1000	0.41	-69.66	≤-19.59	PASS
			1000~26500	0.41	-37.6	≤-19.59	PASS

Test Graphs





DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000

