

Appendix A for BT Test Data

Product Name: AI Translator Earbuds

Test Model: A9EB

Environmental Conditions

Temperature:	23.2° C
Relative Humidity:	52.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Zhang hai
Supervised by:	Fengliu Tang

A.1 Frequency_Error

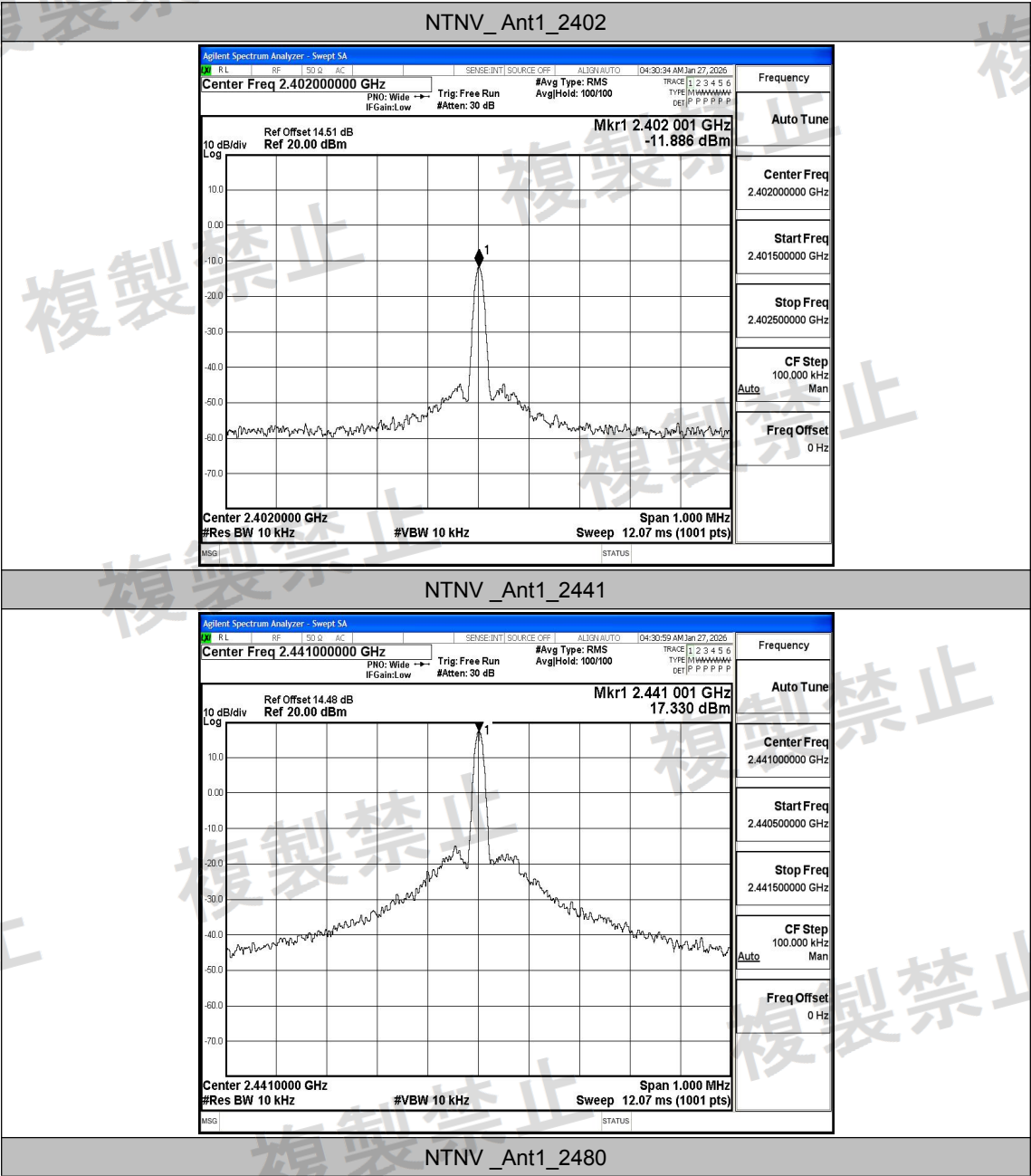
Test Result

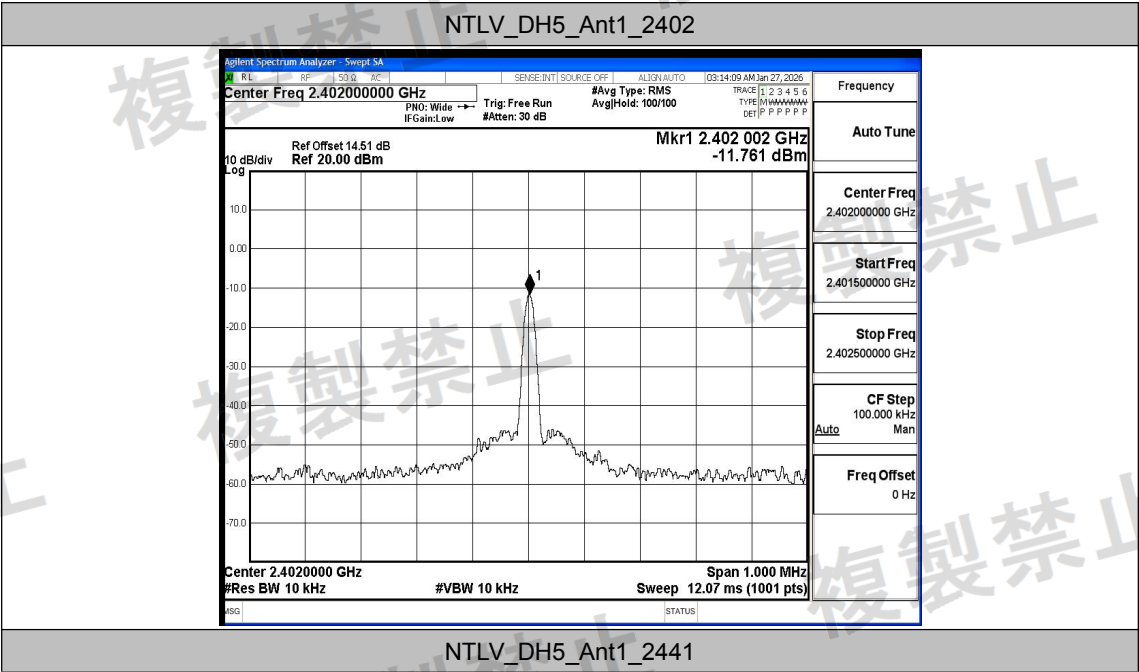
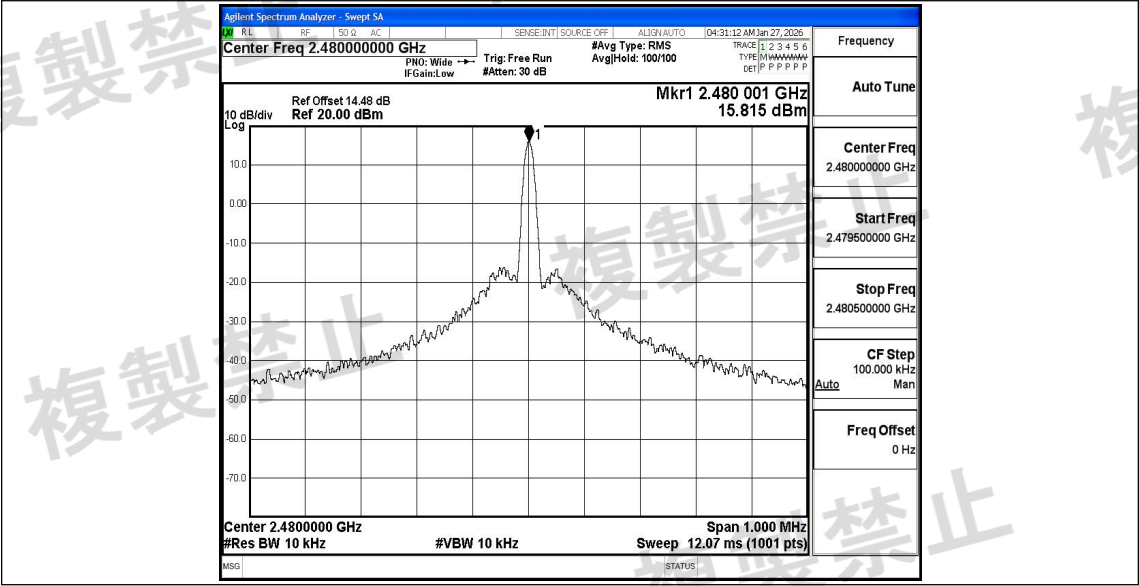
TestCondition	TestMode	Antenna	Frequency [MHz]	Result[ppm]	Limit[ppm]	Verdict
NTNV	Frequency_Error	Ant1	2402	0.41632	±50	PASS
			2441	0.40967	±50	PASS
			2480	0.40323	±50	PASS

TestCondition	TestMode	Antenna	Channel	Result[ppm]	Limit[ppm]	Verdict
NTLV	Frequency_Error	Ant1	2402	0.83264	±50	PASS
			2441	0.81934	±50	PASS
			2480	0.80645	±50	PASS

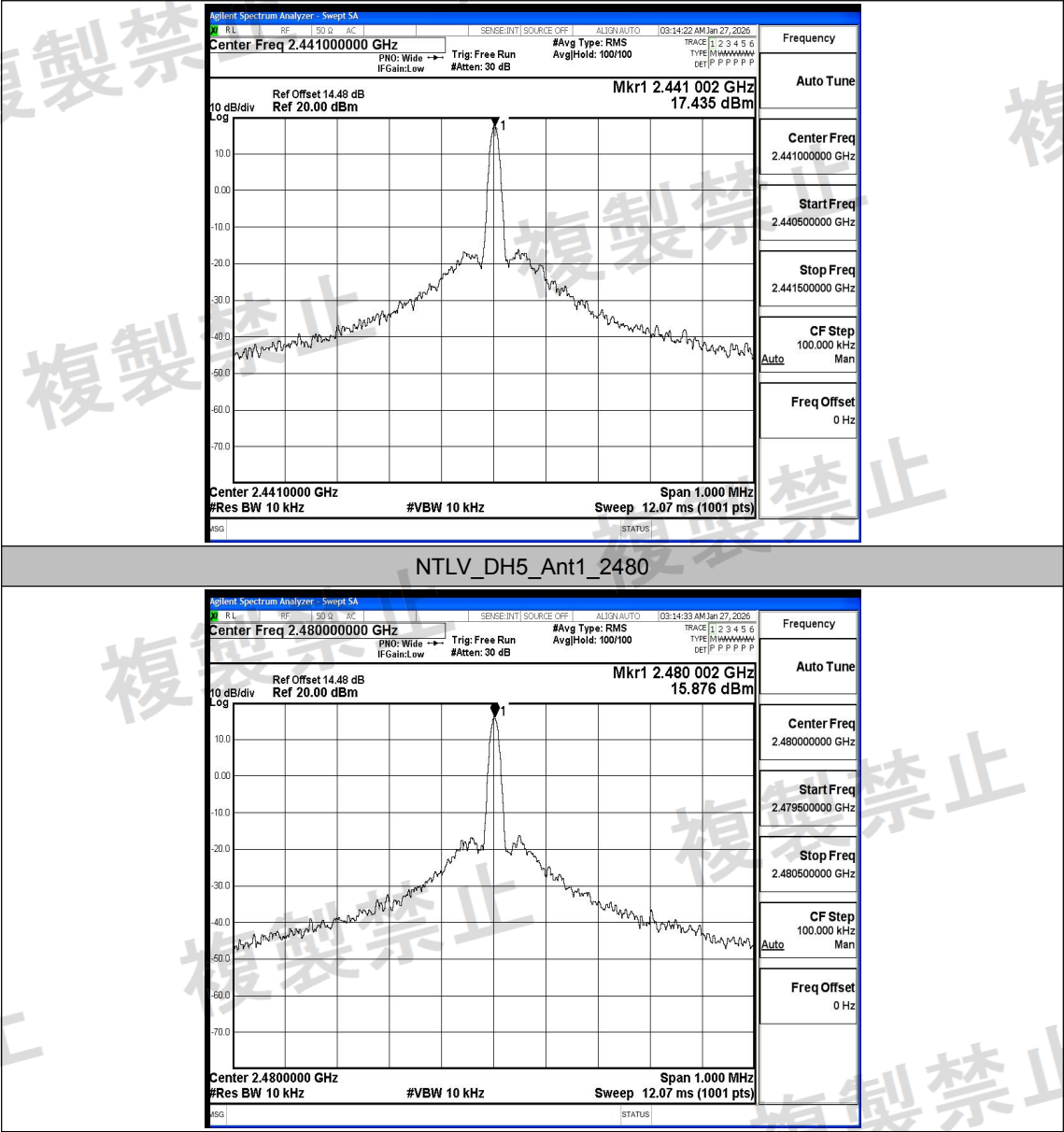
TestCondition	TestMode	Antenna	Channel	Result[ppm]	Limit[ppm]	Verdict
NTHV	Frequency_Error	Ant1	2402	0.00000	±50	PASS
			2441	0.00000	±50	PASS
			2480	0.00000	±50	PASS

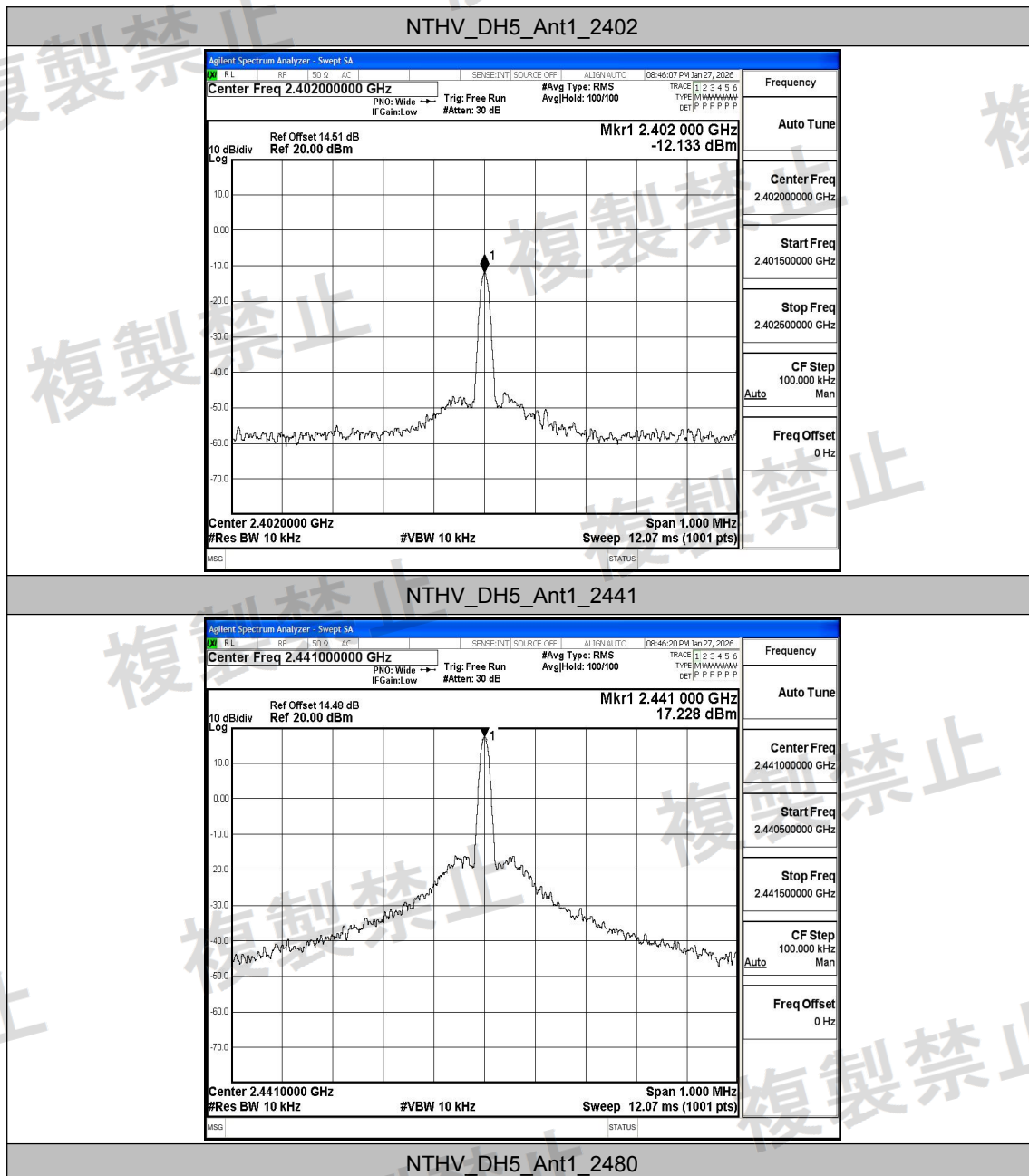
Test Graphs





NTLV_DH5_Ant1_2441

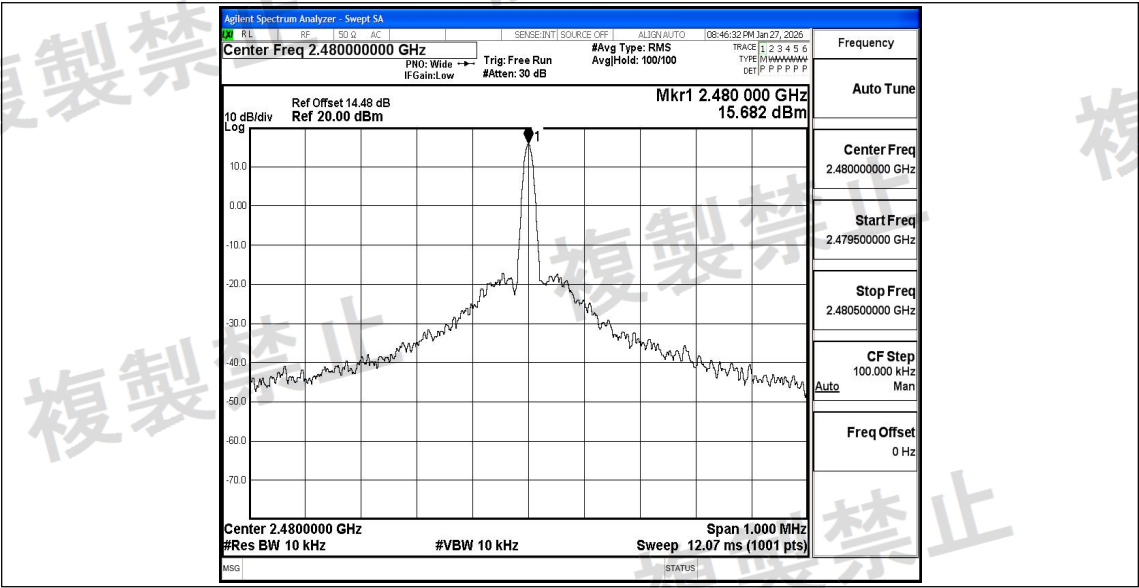




Guangzhou LCS Compliance Testing Laboratory Ltd.

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.2 Antenna Power

Test Result

Test Voltage				Normal Voltage			
Mode	Declared power	Average Result	Average Result	Result	Limit	Tolerance	Limit
	(mW/MHz)	(dBm)	(mW)	(mW/MHz)	(mW/MHz)	/	/
Hopping-Tx (1Mbps)	0.02	-0.69	0.853	0.016	3	-20.00	+20%
Hopping-Tx (2Mbps)	0.02	-0.18	0.959	0.018	3	-10.00	+20%
Conclusion: PASS							

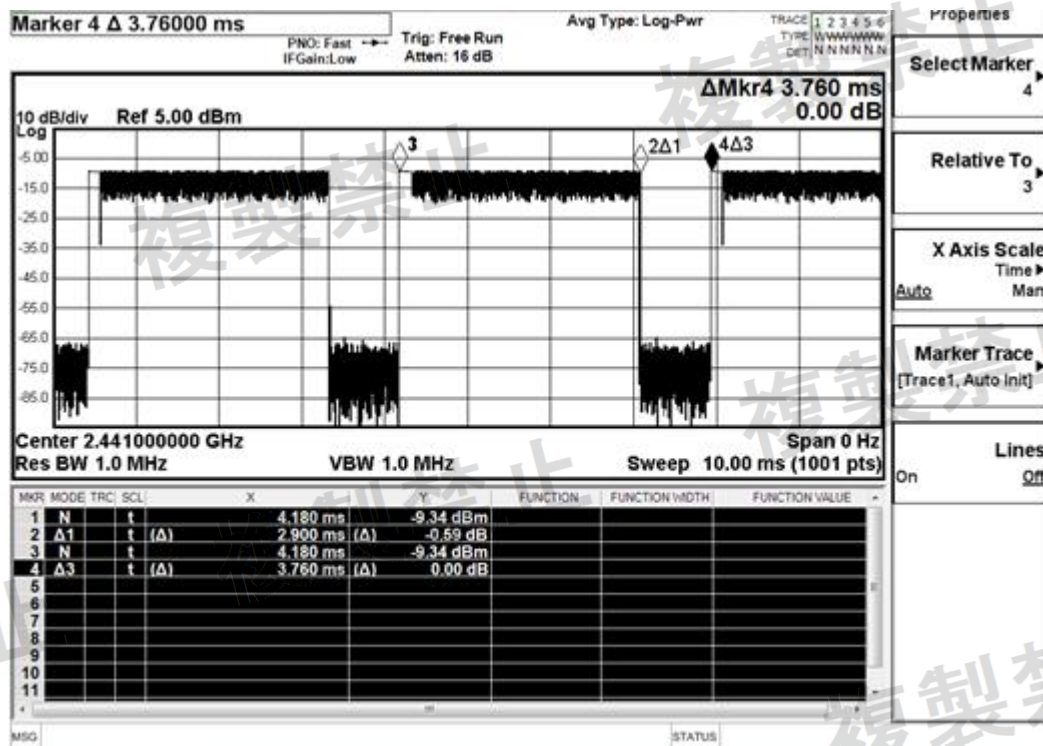
Result power= Average value / (Duty Cycle * Spreading bandwidth)

BT ANTenna power Result = Measured Power / Spreading bandwidth

Spread Bandwidth (DH5) = 68.881MHz, Spread Bandwidth (2DH5) = 68.946MHz,

Duty cycle=77.1%

Duty cycle= [Ton/ (Ton+Toff)]*100%=2.900/3.760*100%=77.1%



Test Voltage				Low Voltage			
Mode	Declared power	Average Result	Average Result	Result	Limit	Tolerance	Limit
	(mW/MHz)	(dBm)	(mW)	(mW/MHz)	(mW/MHz)	/	/
Hopping-Tx (1Mbps)	0.02	-0.75	0.84	0.016	3	-20.00	+20%
Hopping-Tx (2Mbps)	0.02	-0.26	0.94	0.018	3	-10.00	+20%
Conclusion: PASS							

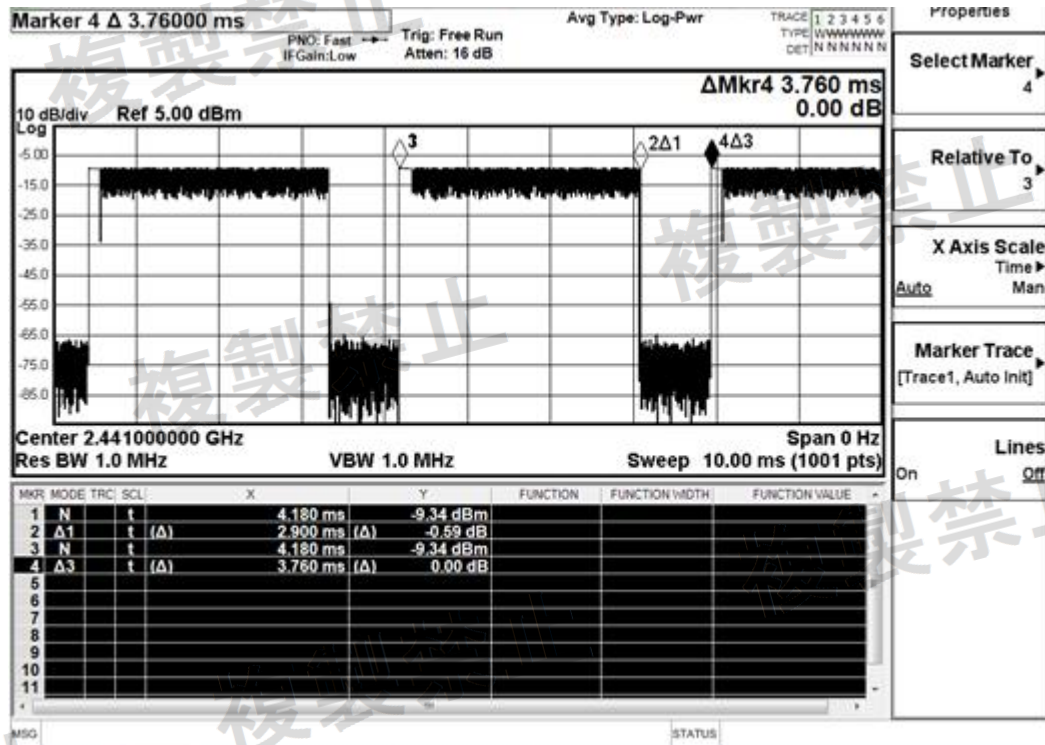
Result power= Average value / (Duty Cycle * Spreading bandwidth)

BT ANTenna power Result = Measured Power / Spreading bandwidth

Spread Bandwidth (DH5) = 69.045MHz, Spread Bandwidth (2DH5) = 69.311MHz,

Duty cycle=77.1%

Duty cycle= [Ton/ (Ton+Toff)]*100%=2.900/3.760*100%=77.1%



Test Voltage				High Voltage			
Mode	Declared power	Average Result	Average Result	Result	Limit	Tolerance	Limit
	(mW/MHz)	(dBm)	(mW)	(mW/MHz)	(mW/MHz)	/	/
Hopping-Tx (1Mbps)	0.02	-0.75	0.84	0.016	3	-20.00	+20%
Hopping-Tx (2Mbps)	0.02	-0.21	0.95	0.018	3	-10.00	+20%
Conclusion: PASS							

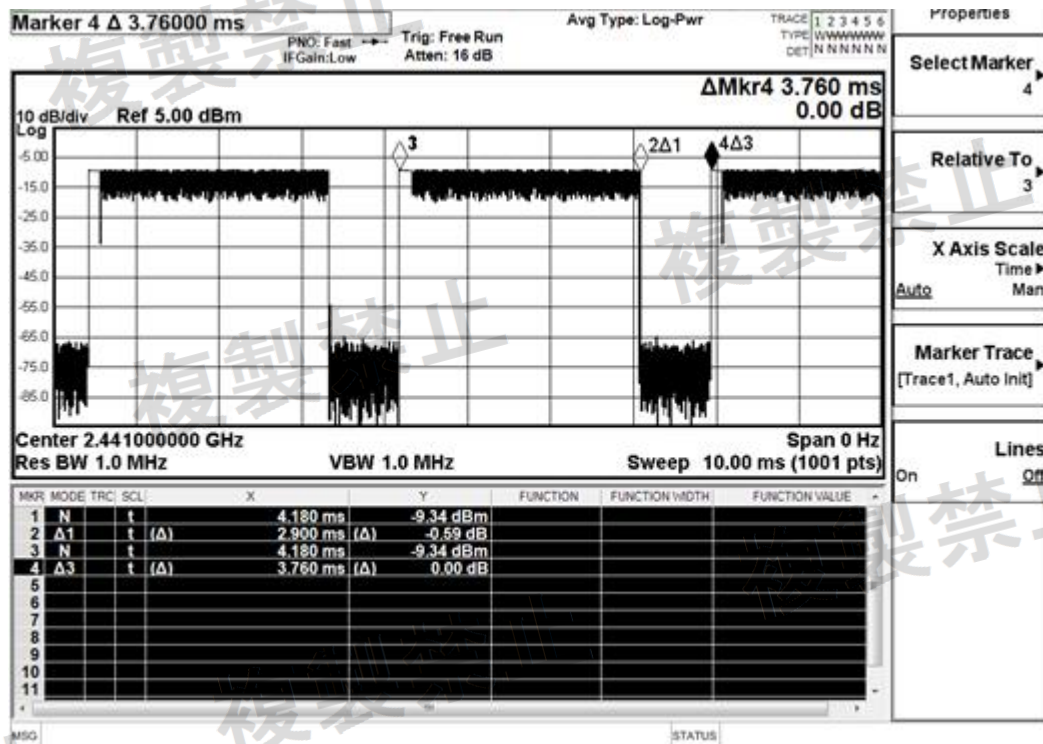
Result power= Average value / (Duty Cycle * Spreading bandwidth)

BT ANTenna power Result = Measured Power / Spreading bandwidth

Spread Bandwidth (DH5) = 68.967MHz, Spread Bandwidth (2DH5) = 69.053MHz,

Duty cycle=77.1%

Duty cycle= [Ton/ (Ton+Toff)]*100%=2.900/3.760*100%=77.1%



A.3 Occupied Bandwidth

Test Result

TestCondition	TestMode	Antenna	Frequency [MHz]	Result [MHz]	Limit [MHz]	Verdict
NTNV	DH5	Ant1	2402	0.857	≤83.5	PASS
			2441	0.860	≤83.5	PASS
			2480	0.864	≤83.5	PASS
	2DH5	Ant1	2402	1.185	≤83.5	PASS
			2441	1.184	≤83.5	PASS
			2480	1.184	≤83.5	PASS

TestCondition	TestMode	Antenna	Frequency [MHz]	Result [MHz]	Limit [MHz]	Verdict
NTNV	DH5	Ant1	Hop	78.429	≤83.5	PASS
	2DH5	Ant1	Hop	78.410	≤83.5	PASS

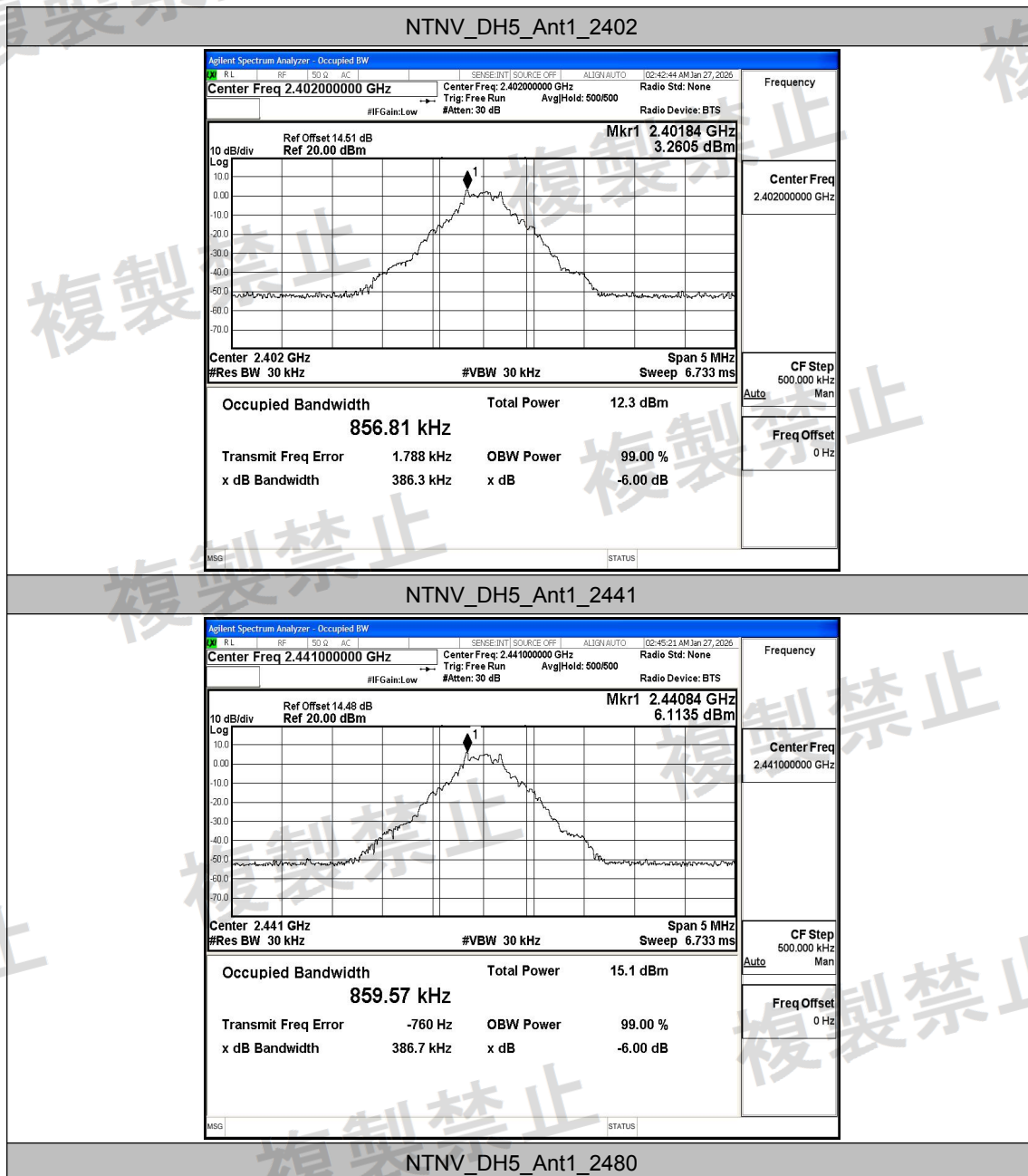
TestCondition	TestMode	Antenna	Channel	Result [MHz]	Limit [MHz]	Verdict
NTLV	DH5	Ant1	2402	0.861	≤83.5	PASS
			2441	0.860	≤83.5	PASS
			2480	0.863	≤83.5	PASS
	2DH5	Ant1	2402	1.184	≤83.5	PASS
			2441	1.184	≤83.5	PASS
			2480	1.183	≤83.5	PASS

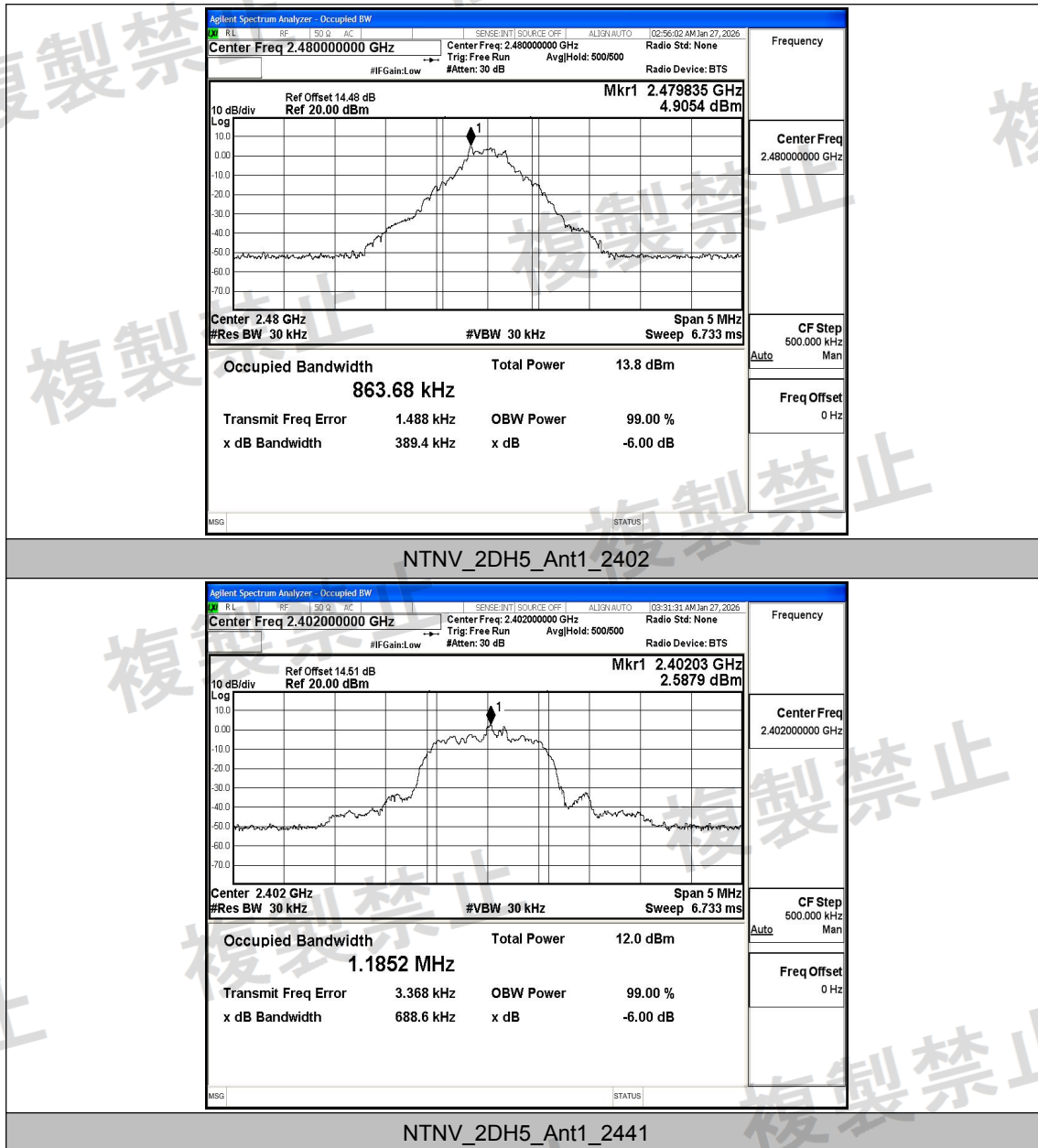
TestCondition	TestMode	Antenna	Channel	Result [MHz]	Limit [MHz]	Verdict
NTLV	DH5	Ant1	Hop	78.424	≤83.5	PASS
	2DH5	Ant1	Hop	78.369	≤83.5	PASS

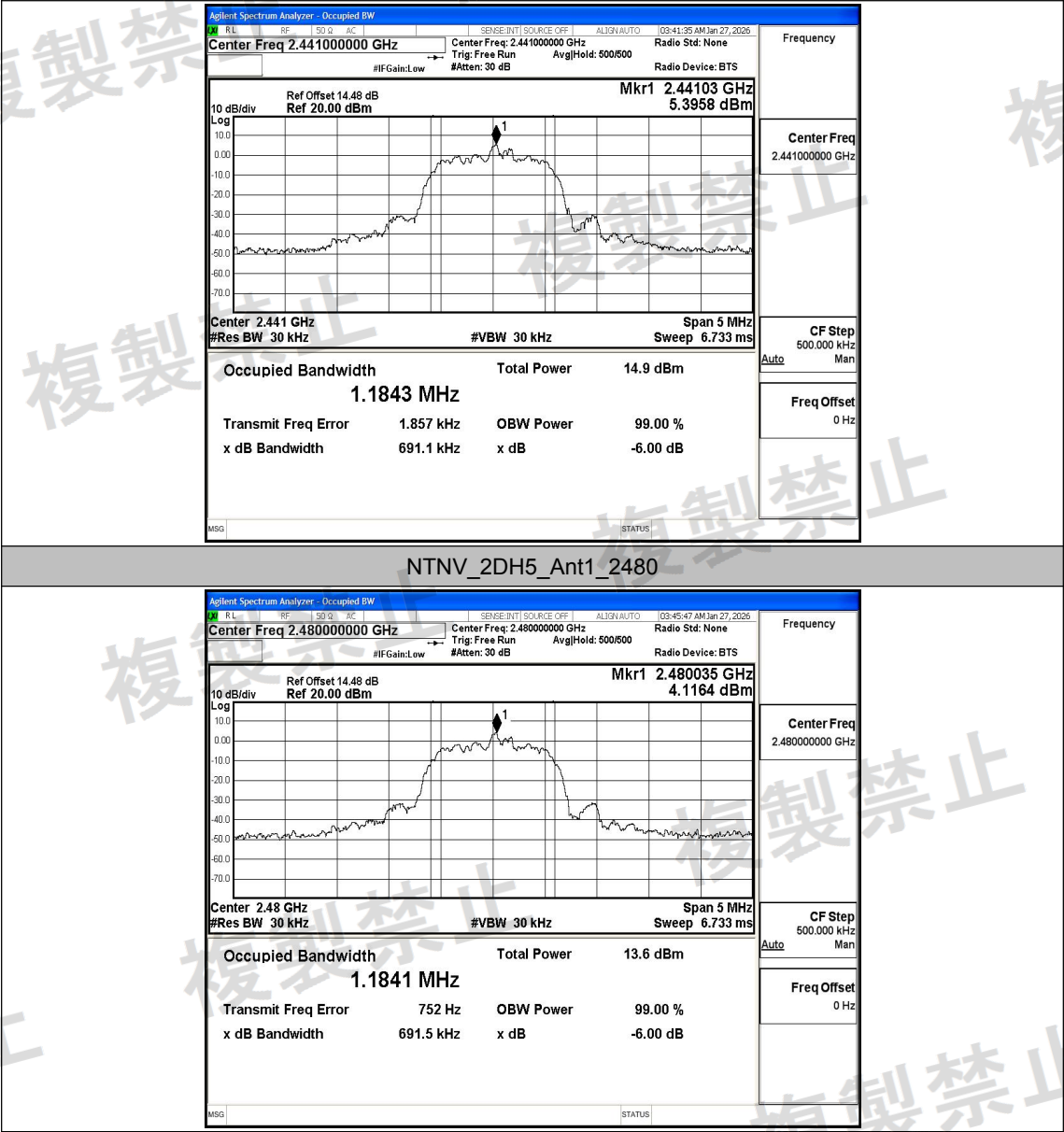
TestCondition	TestMode	Antenna	Channel	Result [MHz]	Limit [MHz]	Verdict
NTHV	DH5	Ant1	2402	0.861	≤83.5	PASS
			2441	0.864	≤83.5	PASS
			2480	0.865	≤83.5	PASS
	2DH5	Ant1	2402	1.184	≤83.5	PASS
			2441	1.181	≤83.5	PASS
			2480	1.185	≤83.5	PASS

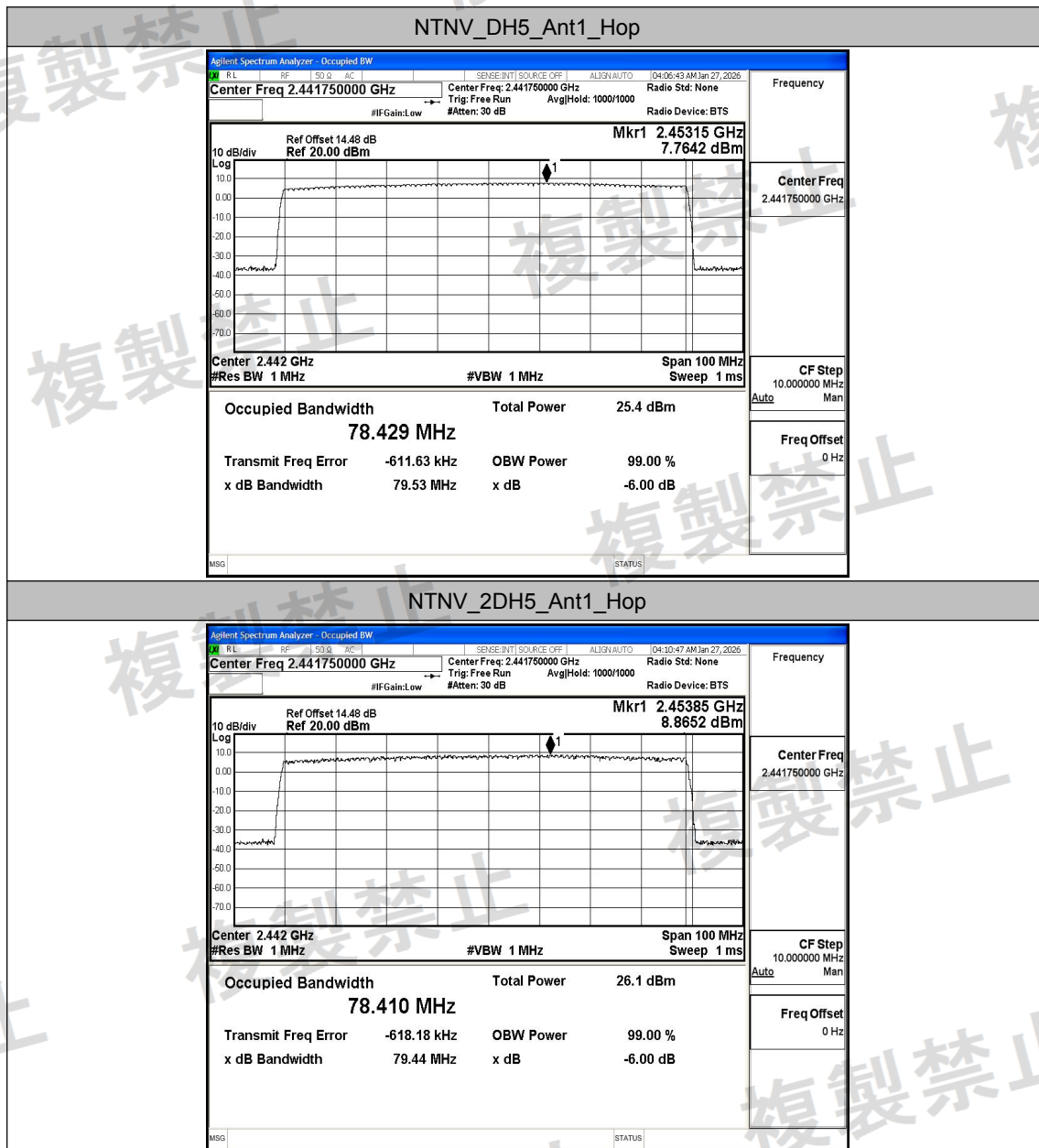
TestCondition	TestMode	Antenna	Channel	Result [MHz]	Limit [MHz]	Verdict
NTHV	DH5	Ant1	Hop	78.423	≤83.5	PASS
	2DH5	Ant1	Hop	78.520	≤83.5	PASS

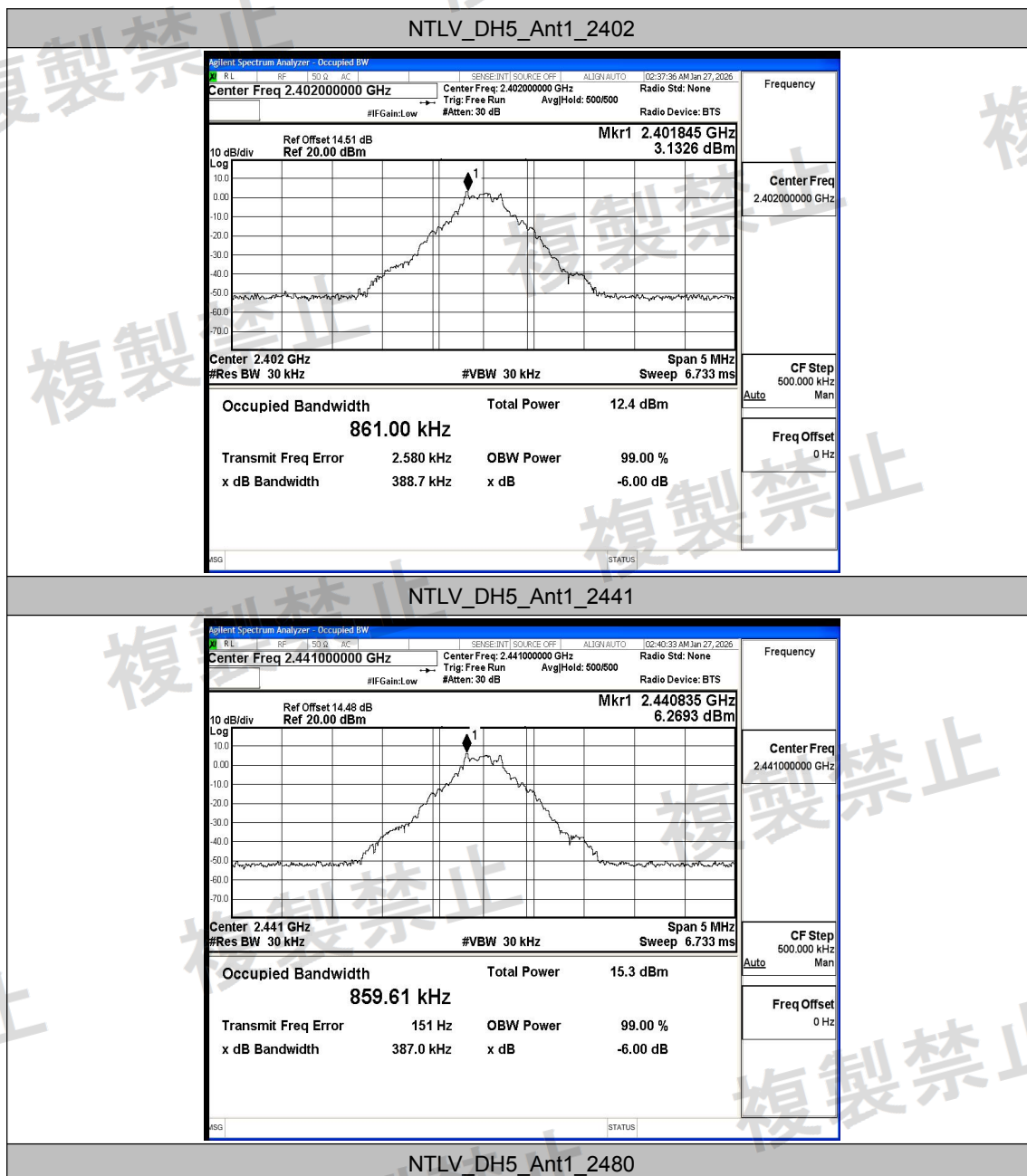
Test Graphs

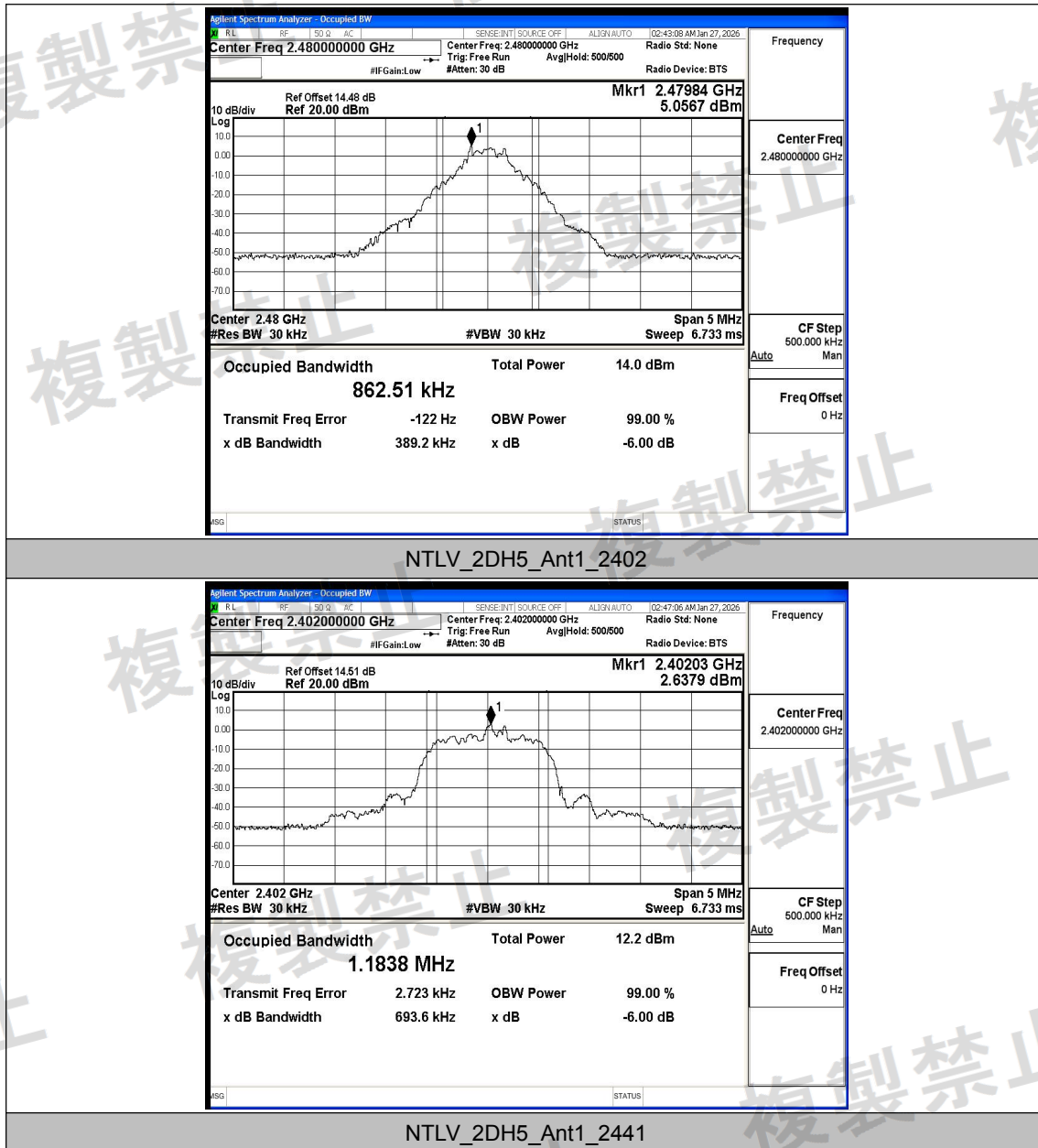


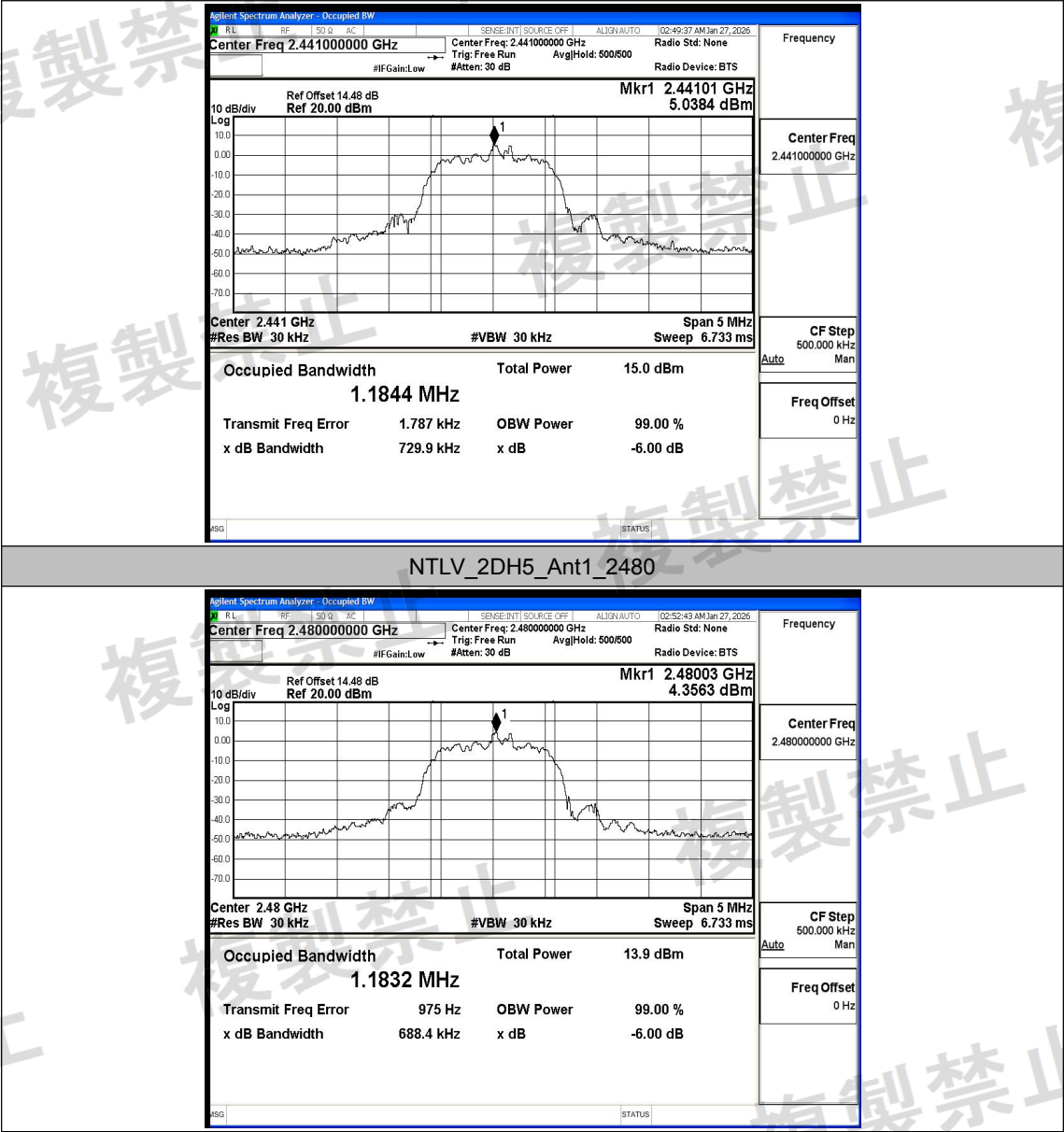


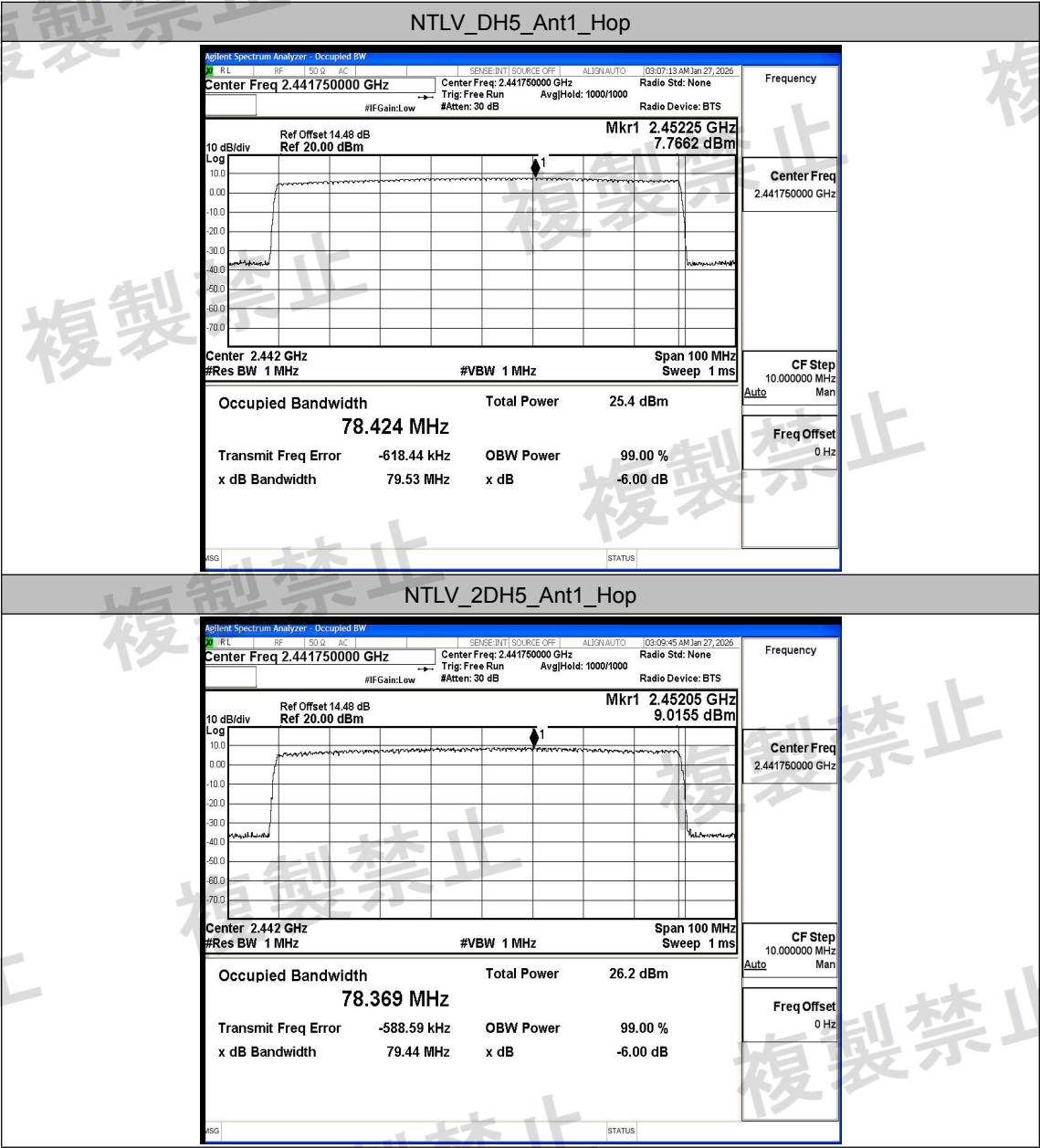


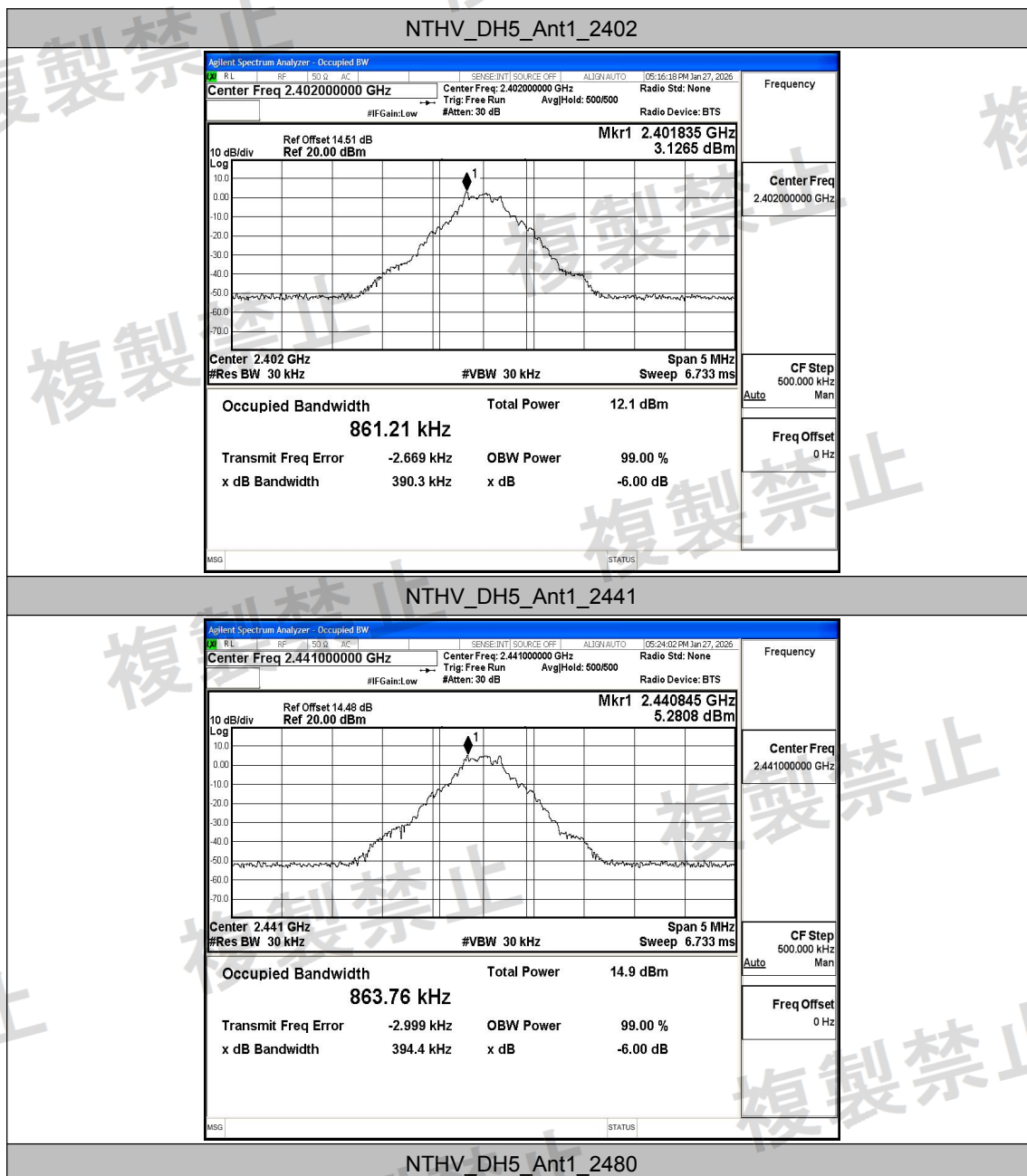


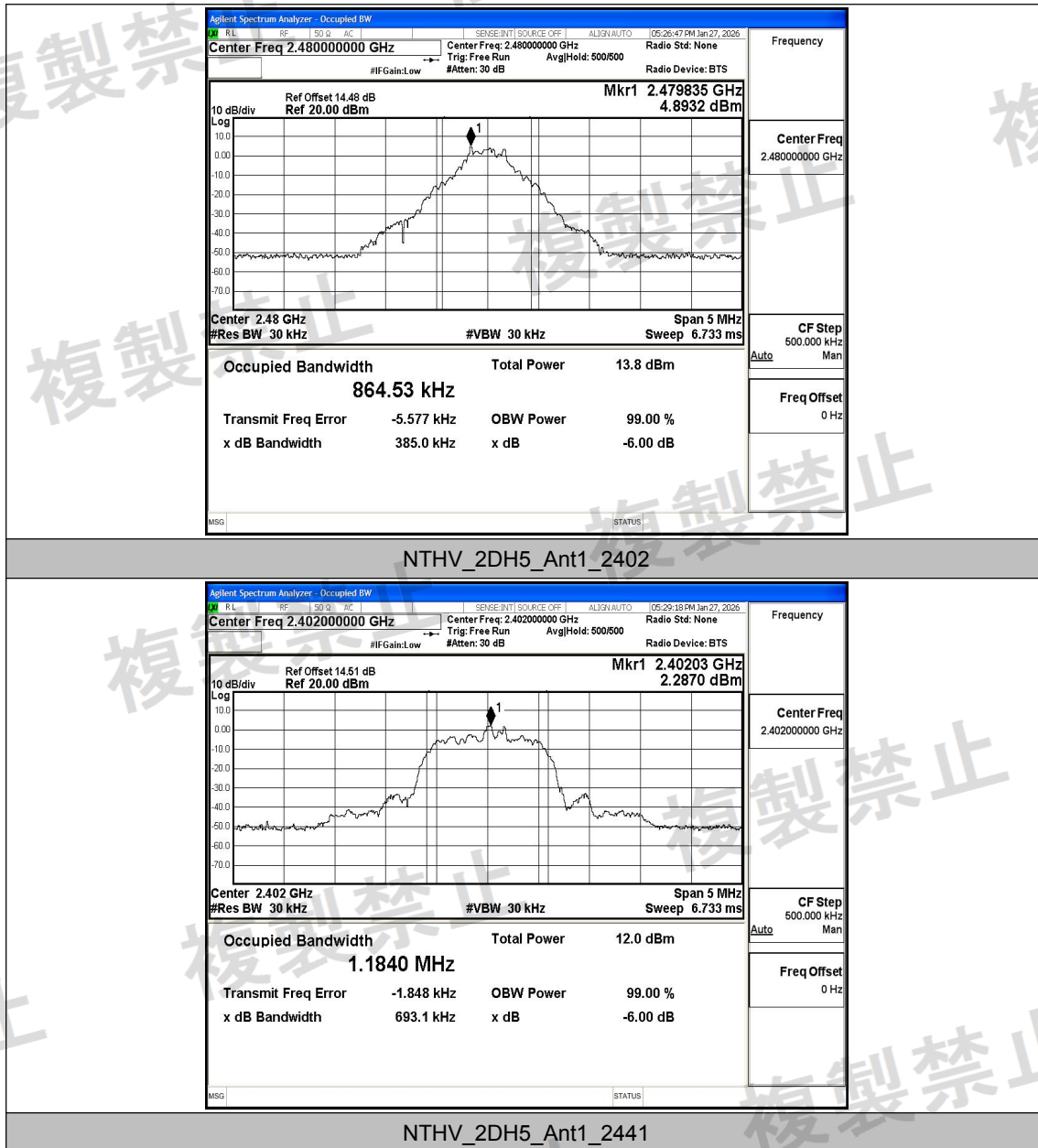


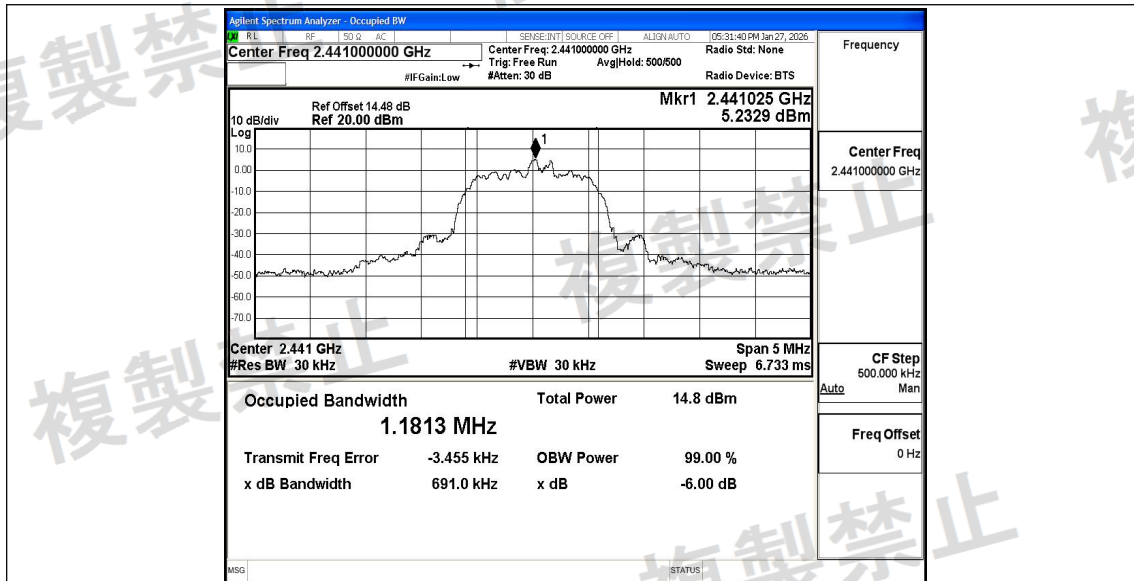




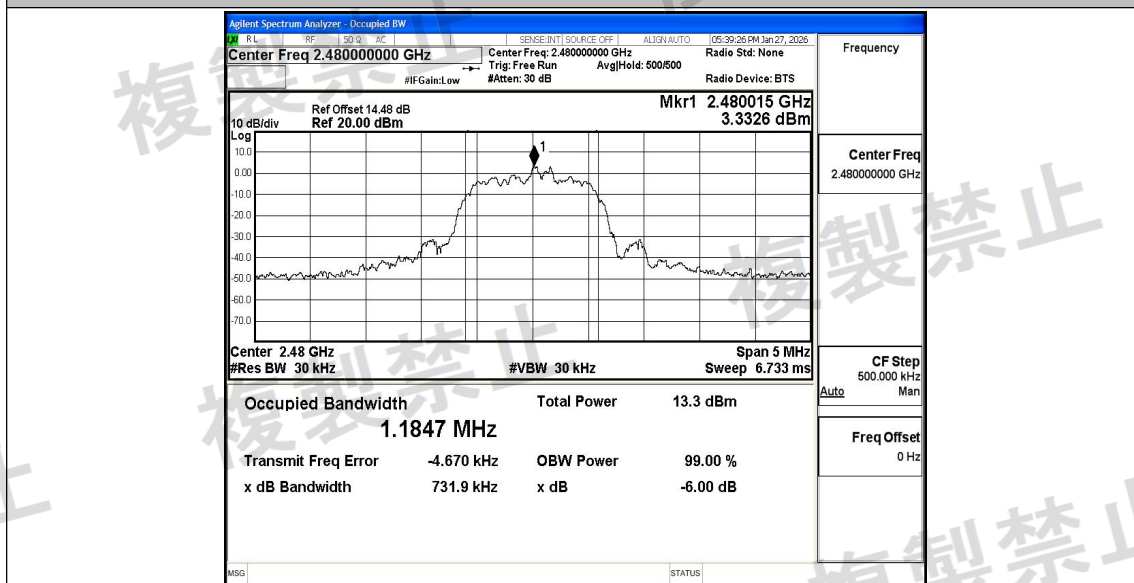








NTHV_2DH5_Ant1_2480



NTHV_DH5_Ant1_Hop



A.4 Spread Bandwidth

Test Result

TestCondition	TestMode	Antenna	Frequency [MHz]	Result [MHz]	Limit [MHz]	Verdict
NTNV	DH5	Ant1	Hop	68.881	---	PASS
	2DH5	Ant1	Hop	68.946	---	PASS

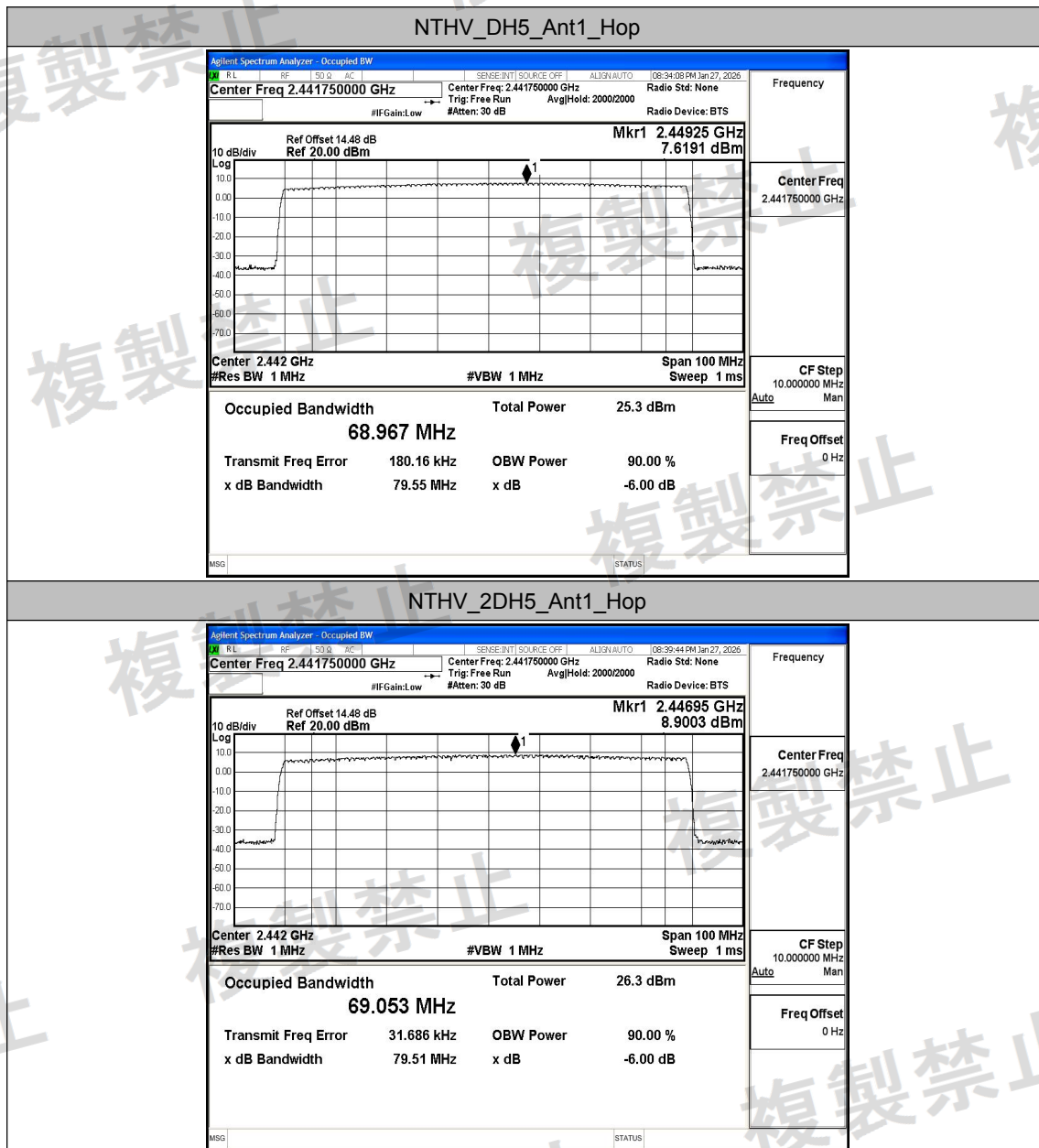
TestCondition	TestMode	Antenna	Channel	Result [MHz]	Limit [MHz]	Verdict
NTLV	DH5	Ant1	Hop	69.045	≥0.5	PASS
	2DH5	Ant1	Hop	69.311	≥0.5	PASS

TestCondition	TestMode	Antenna	Channel	Result [MHz]	Limit [MHz]	Verdict
NTHV	DH5	Ant1	Hop	68.967	≥0.5	PASS
	2DH5	Ant1	Hop	69.053	≥0.5	PASS

Test Graphs







A.5 Spurious Emission of TX

Test Result

TestCondition	TestMode	Antenna	Frequency [MHz]	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	DH5	Ant1	2402	30~1000	-53.49	≤-26	0.00448	≤2.5	PASS
				1000~2387	-52.78	≤-26	0.00527	≤2.5	PASS
				2387~2400	-40.60	≤-16	0.08710	≤25	PASS
				2483.5~2496.5	-43.28	≤-16	0.04699	≤25	PASS
				2496.5~13000	-45.59	≤-26	0.02761	≤2.5	PASS
			2441	30~1000	-53.78	≤-26	0.00419	≤2.5	PASS
				1000~2387	-52.89	≤-26	0.00514	≤2.5	PASS
				2387~2400	-43.48	≤-16	0.04487	≤25	PASS
				2483.5~2496.5	-43.09	≤-16	0.04909	≤25	PASS
				2496.5~13000	-45.70	≤-26	0.02692	≤2.5	PASS
			2480	30~1000	-53.83	≤-26	0.00414	≤2.5	PASS
				1000~2387	-52.93	≤-26	0.00509	≤2.5	PASS
				2387~2400	-43.53	≤-16	0.04436	≤25	PASS
				2483.5~2496.5	-43.50	≤-16	0.04467	≤25	PASS
				2496.5~13000	-44.80	≤-26	0.03311	≤2.5	PASS
	2DH5	Ant1	2402	30~1000	-53.94	≤-26	0.00404	≤2.5	PASS
				1000~2387	-52.68	≤-26	0.00540	≤2.5	PASS
				2387~2400	-32.57	≤-16	0.55335	≤25	PASS
				2483.5~2496.5	-43.17	≤-16	0.04819	≤25	PASS
				2496.5~13000	-45.46	≤-26	0.02844	≤2.5	PASS
			2441	30~1000	-52.72	≤-26	0.00535	≤2.5	PASS
				1000~2387	-52.59	≤-26	0.00551	≤2.5	PASS
				2387~2400	-43.39	≤-16	0.04581	≤25	PASS
				2483.5~2496.5	-43.37	≤-16	0.04603	≤25	PASS
				2496.5~13000	-44.51	≤-26	0.03540	≤2.5	PASS
			2480	30~1000	-52.82	≤-26	0.00522	≤2.5	PASS
				1000~2387	-52.85	≤-26	0.00519	≤2.5	PASS
				2387~2400	-43.54	≤-16	0.04426	≤25	PASS
				2483.5~2496.5	-43.33	≤-16	0.04645	≤25	PASS
				2496.5~13000	-45.62	≤-26	0.02742	≤2.5	PASS

TestCondition	TestMode	Antenna	Channel	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTLV	DH5	Ant1	2402	30~1000	-53.90	≤-26	0.00407	≤2.5	PASS
				1000~2387	-52.59	≤-26	0.00551	≤2.5	PASS
				2387~2400	-40.15	≤-16	0.09661	≤25	PASS
				2483.5~2496.5	-43.31	≤-16	0.04667	≤25	PASS
				2496.5~13000	-45.70	≤-26	0.02692	≤2.5	PASS
			2441	30~1000	-54.00	≤-26	0.00398	≤2.5	PASS
				1000~2387	-52.70	≤-26	0.00537	≤2.5	PASS
				2387~2400	-43.35	≤-16	0.04624	≤25	PASS
				2483.5~2496.5	-43.18	≤-16	0.04808	≤25	PASS
				2496.5~13000	-40.37	≤-26	0.09183	≤2.5	PASS
			2480	30~1000	-54.04	≤-26	0.00394	≤2.5	PASS
				1000~2387	-52.76	≤-26	0.00530	≤2.5	PASS
				2387~2400	-43.34	≤-16	0.04634	≤25	PASS
				2483.5~2496.5	-43.21	≤-16	0.04775	≤25	PASS
				2496.5~13000	-45.66	≤-26	0.02716	≤2.5	PASS
	2DH5	Ant1	2402	30~1000	-53.68	≤-26	0.00429	≤2.5	PASS
				1000~2387	-45.84	≤-26	0.02606	≤2.5	PASS
				2387~2400	-31.92	≤-16	0.64269	≤25	PASS
				2483.5~2496.5	-43.25	≤-16	0.04732	≤25	PASS
				2496.5~13000	-45.83	≤-26	0.02612	≤2.5	PASS
			2441	30~1000	-53.93	≤-26	0.00405	≤2.5	PASS
				1000~2387	-47.60	≤-26	0.01738	≤2.5	PASS
				2387~2400	-43.48	≤-16	0.04487	≤25	PASS
				2483.5~2496.5	-43.14	≤-16	0.04853	≤25	PASS
				2496.5~13000	-45.80	≤-26	0.02630	≤2.5	PASS
			2480	30~1000	-53.75	≤-26	0.00422	≤2.5	PASS
				1000~2387	-52.57	≤-26	0.00553	≤2.5	PASS
				2387~2400	-43.30	≤-16	0.04677	≤25	PASS
				2483.5~2496.5	-43.26	≤-16	0.04721	≤25	PASS
				2496.5~13000	-45.29	≤-26	0.02958	≤2.5	PASS

TestCondition	TestMode	Antenna	Channel	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTHV	DH5	Ant1	2402	30~1000	-53.75	≤-26	0.00422	≤2.5	PASS
				1000~2387	-52.97	≤-26	0.00505	≤2.5	PASS
				2387~2400	-39.93	≤-16	0.10162	≤25	PASS
				2483.5~2496.5	-43.08	≤-16	0.04920	≤25	PASS
				2496.5~13000	-45.63	≤-26	0.02735	≤2.5	PASS
			2441	30~1000	-53.39	≤-26	0.00458	≤2.5	PASS
				1000~2387	-47.12	≤-26	0.01941	≤2.5	PASS
				2387~2400	-43.41	≤-16	0.04560	≤25	PASS
				2483.5~2496.5	-43.52	≤-16	0.04446	≤25	PASS
				2496.5~13000	-44.90	≤-26	0.03236	≤2.5	PASS
			2480	30~1000	-54.17	≤-26	0.00383	≤2.5	PASS
				1000~2387	-52.31	≤-26	0.00587	≤2.5	PASS
				2387~2400	-43.22	≤-16	0.04764	≤25	PASS
				2483.5~2496.5	-43.46	≤-16	0.04508	≤25	PASS
				2496.5~13000	-44.79	≤-26	0.03319	≤2.5	PASS
	2DH5	Ant1	2402	30~1000	-53.81	≤-26	0.00416	≤2.5	PASS
				1000~2387	-48.33	≤-26	0.01469	≤2.5	PASS
				2387~2400	-32.30	≤-16	0.58884	≤25	PASS
				2483.5~2496.5	-43.36	≤-16	0.04613	≤25	PASS
				2496.5~13000	-45.92	≤-26	0.02559	≤2.5	PASS
			2441	30~1000	-53.73	≤-26	0.00424	≤2.5	PASS
				1000~2387	-48.17	≤-26	0.01524	≤2.5	PASS
				2387~2400	-43.54	≤-16	0.04426	≤25	PASS
				2483.5~2496.5	-43.14	≤-16	0.04853	≤25	PASS
				2496.5~13000	-45.88	≤-26	0.02582	≤2.5	PASS
			2480	30~1000	-53.88	≤-26	0.00409	≤2.5	PASS
				1000~2387	-52.32	≤-26	0.00586	≤2.5	PASS
				2387~2400	-43.34	≤-16	0.04634	≤25	PASS
				2483.5~2496.5	-43.06	≤-16	0.04943	≤25	PASS
				2496.5~13000	-45.72	≤-26	0.02679	≤2.5	PASS

Test Graphs

