



Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China

Appendix RF Test Data for BR-EDR

Company : HIFIMAN KUNSHAN TECHNOLOGY GROUP CO.,
LTD.

EUT : True Wireless Earbuds

Model Number : Svanar wireless 2-R

Report No. : CTA26072802002

Reviewed By : Eric Wang



Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China

Appendix A: Frequency_Error

Test Result

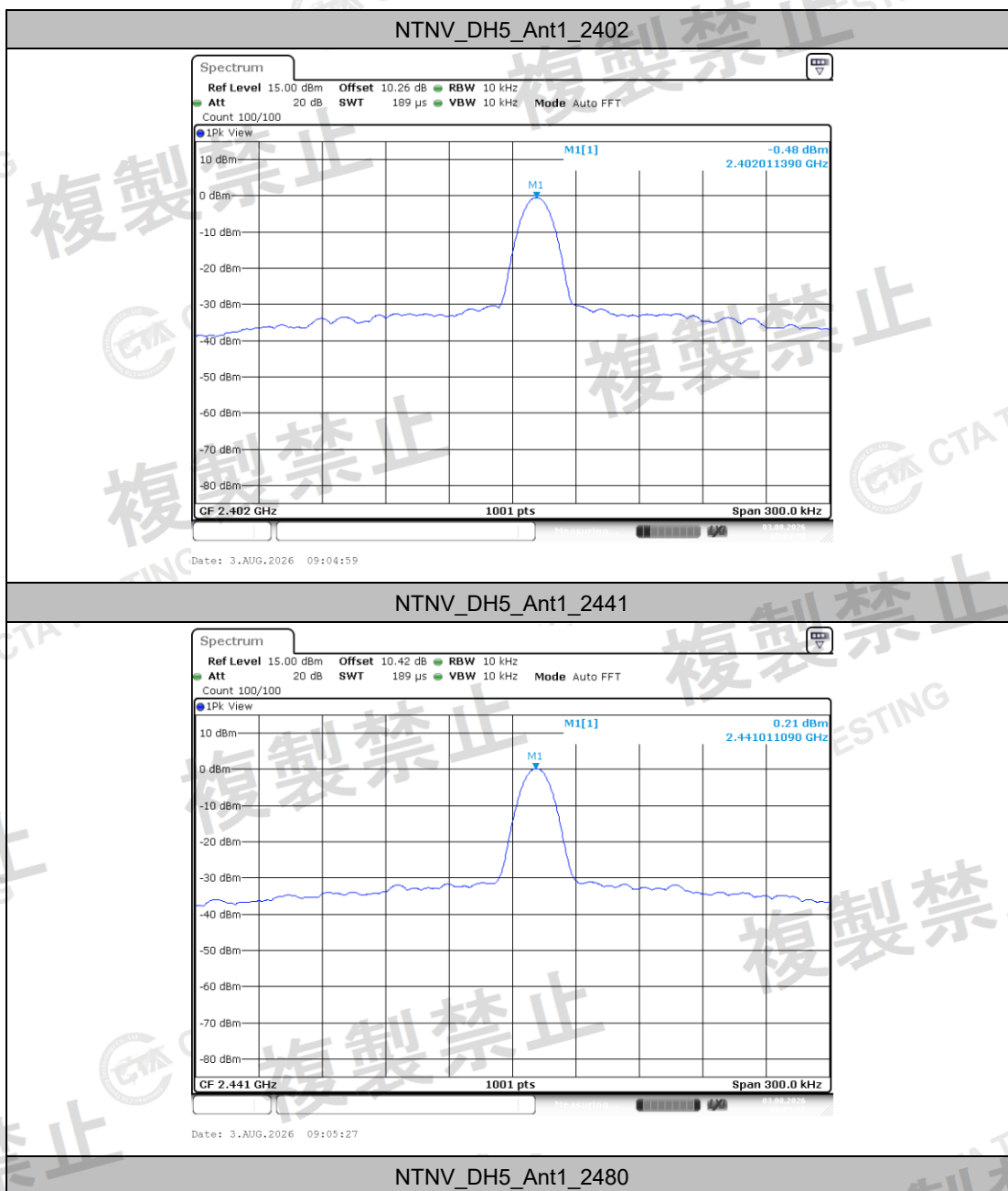
Test Condition	Test Mode	Antenna	Freq(MHz)	Result[ppm]	Limit[ppm]	Verdict
NTNV	DH5	Ant1	2402	4.74188	±50	PASS
			2441	4.54322	±50	PASS
			2480	4.47177	±50	PASS
	2DH5	Ant1	2402	4.49209	±50	PASS
			2441	4.42032	±50	PASS
			2480	4.47177	±50	PASS
	3DH5	Ant1	2402	4.36719	±50	PASS
			2441	4.42032	±50	PASS
			2480	4.35081	±50	PASS



Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China

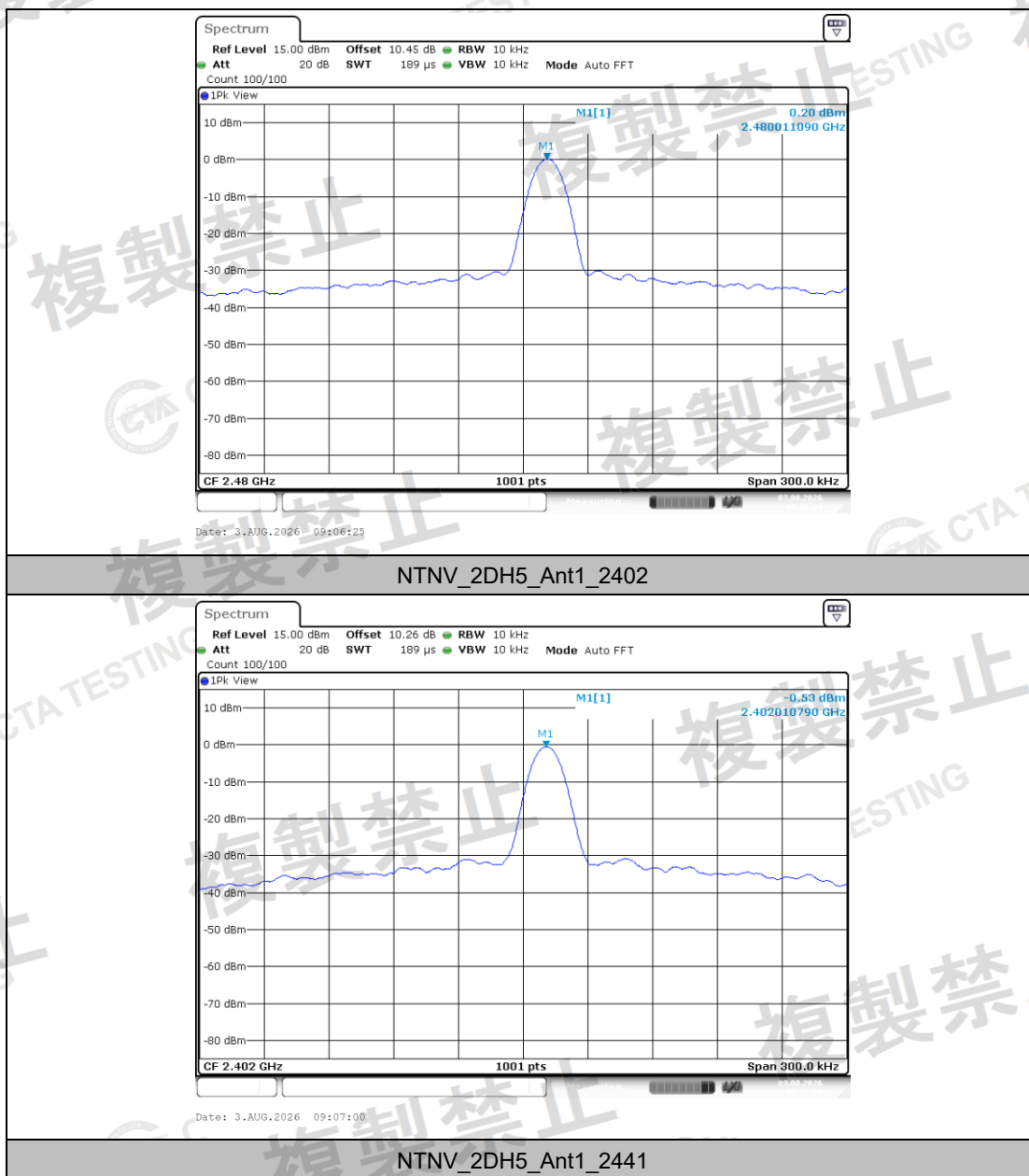
Test Graphs





Shenzhen CTA Testing Technology Co., Ltd.

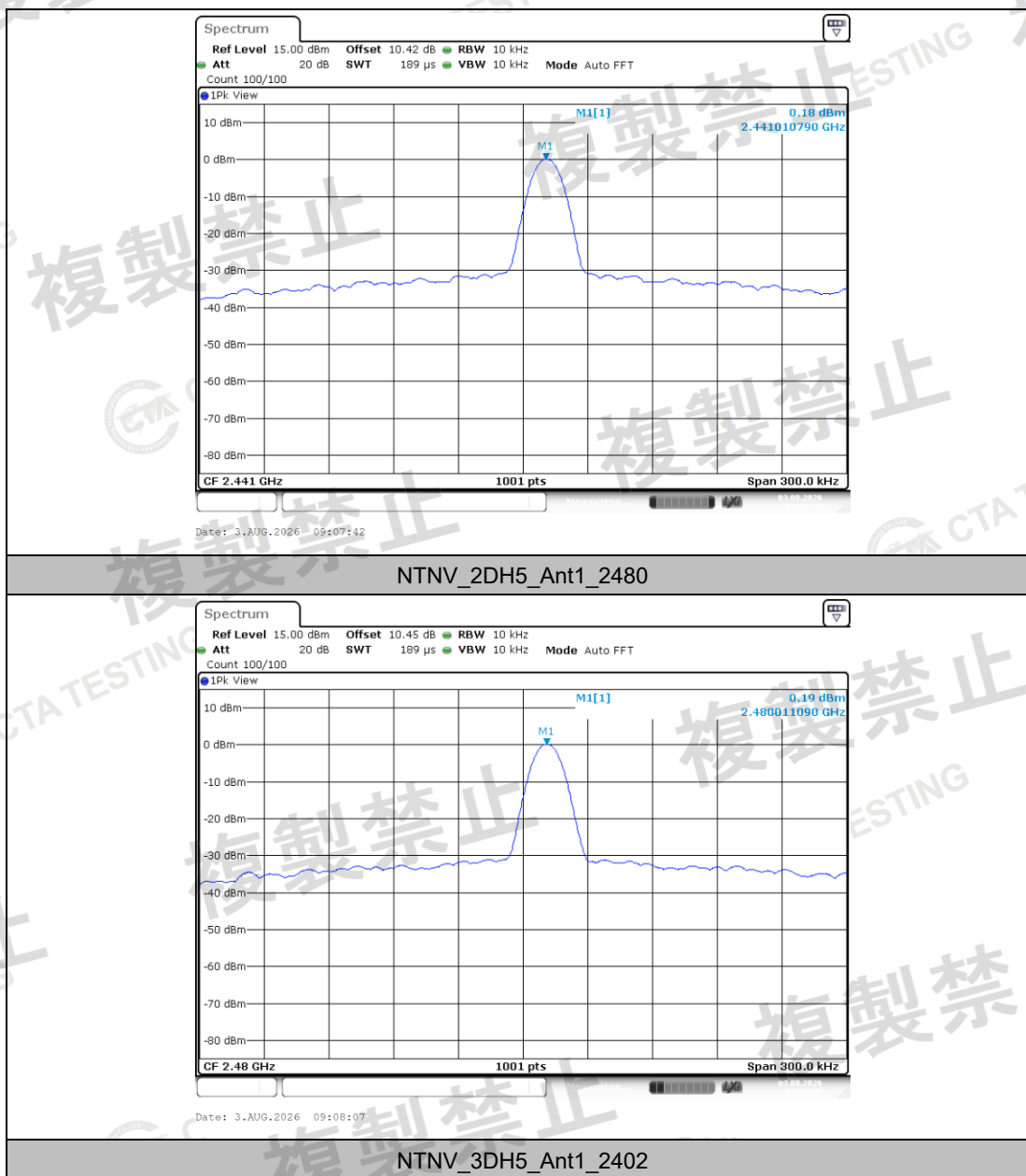
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

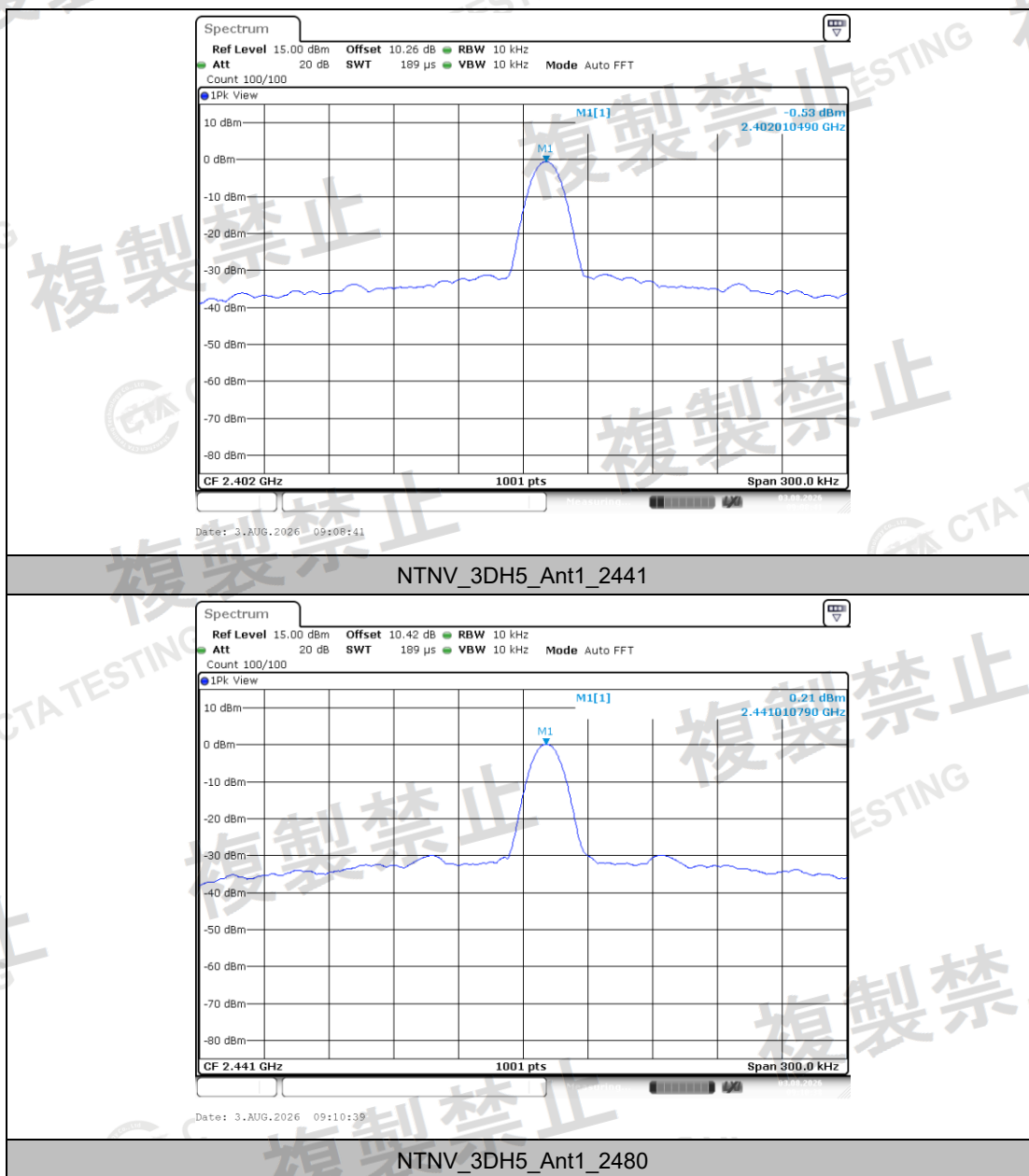
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

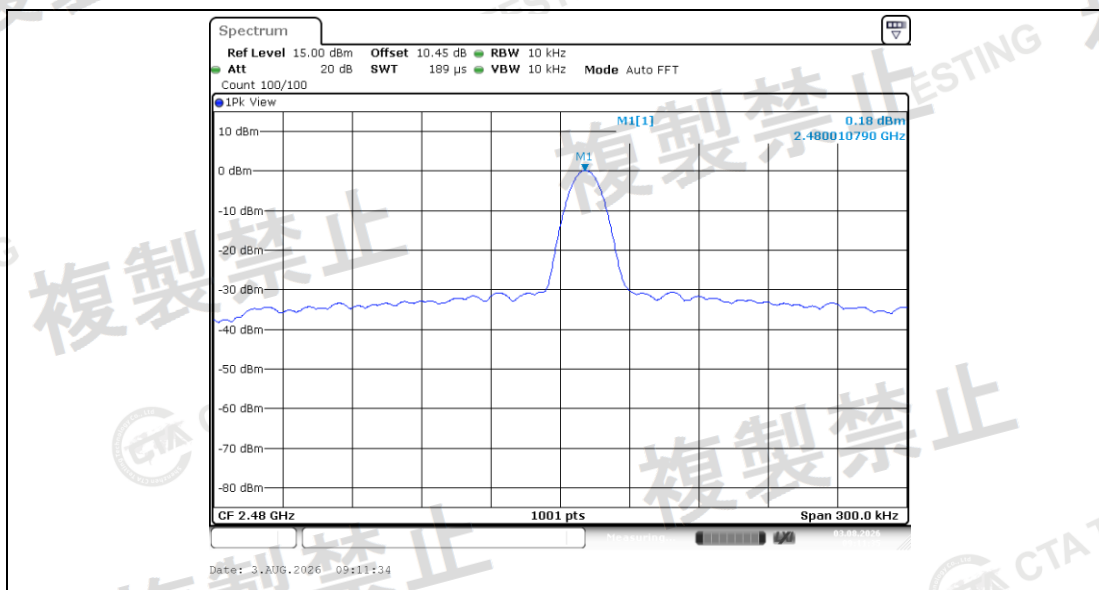
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China

Appendix B: Occupied Bandwidth

Test Result

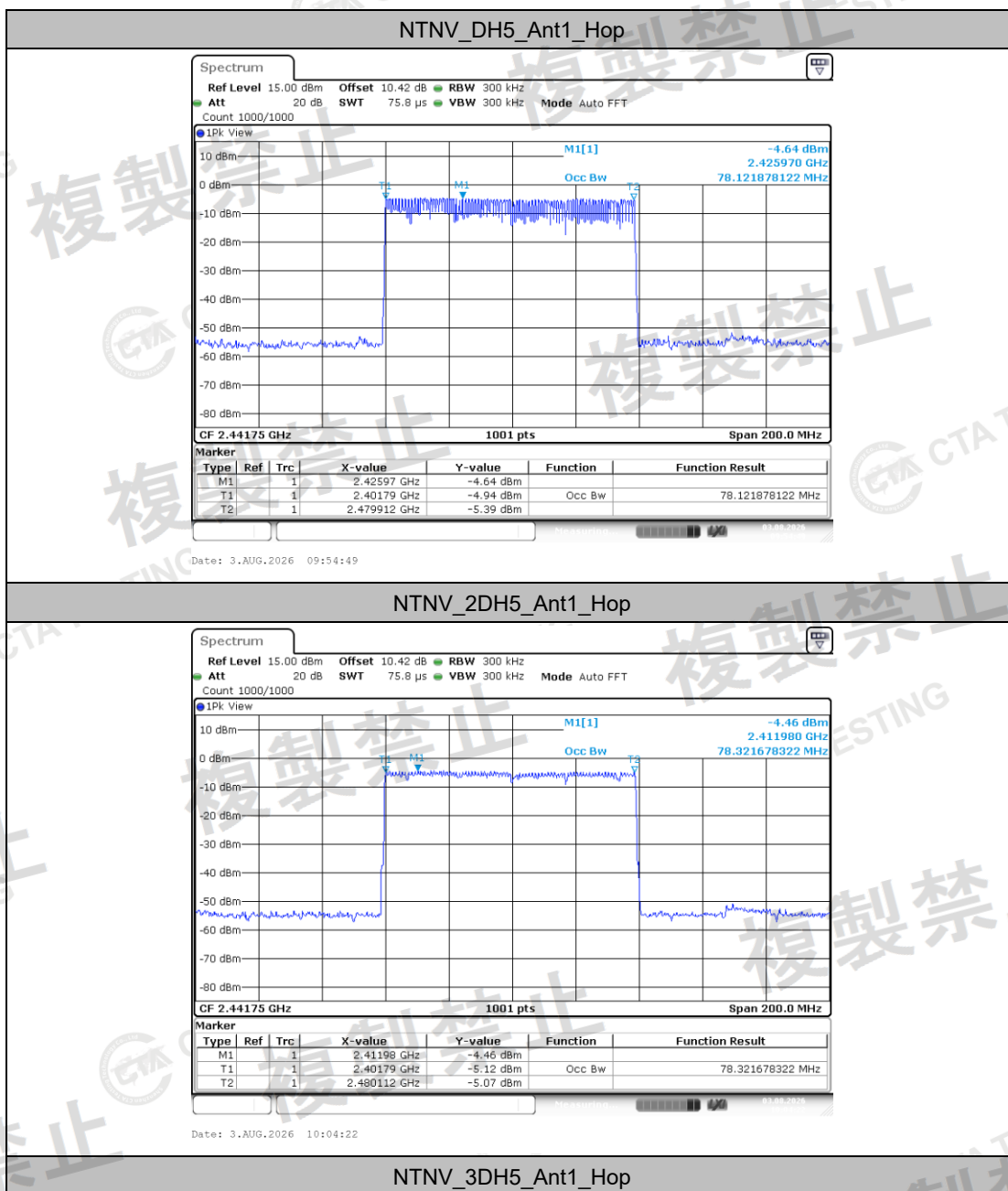
Test Condition	Test Mode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Verdict
NTNV	DH5	Ant1	Hop	78.122	≤83.5	PASS
	2DH5	Ant1	Hop	78.322	≤83.5	PASS
	3DH5	Ant1	Hop	78.322	≤83.5	PASS



Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China

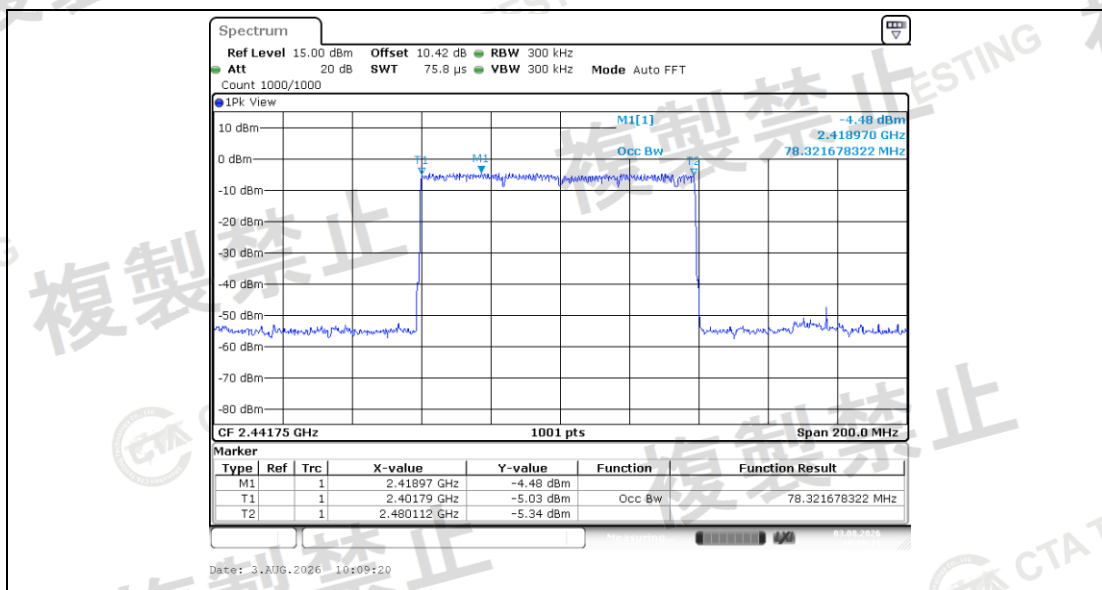
Test Graphs





Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China

Appendix C: Spread Bandwidth

Test Result

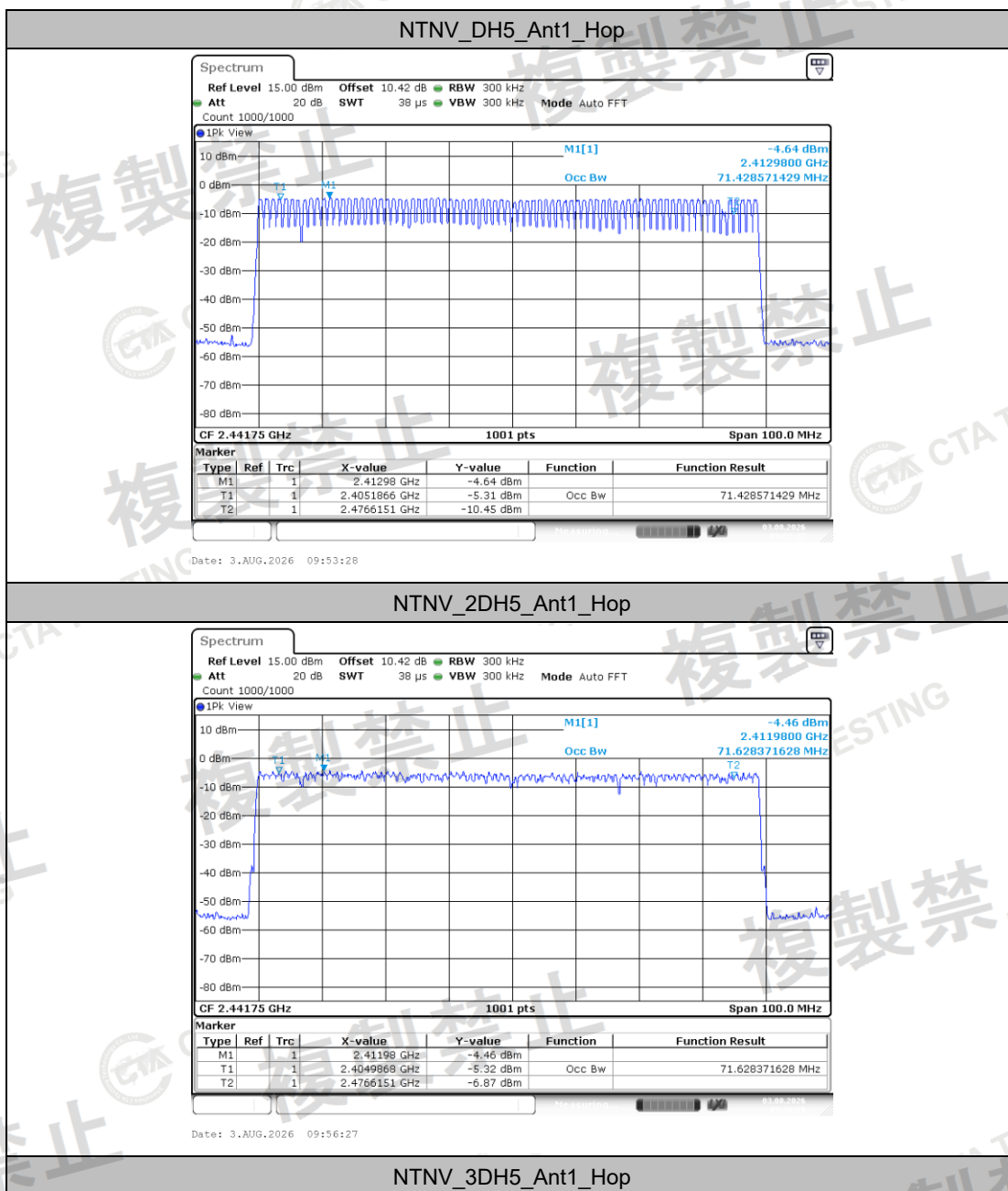
Test Condition	Test Mode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Spread Factor	Limit	Verdict
NTNV	DH5	Ant1	Hop	71.429	≥ 0.5	71.429	> 5	PASS
	2DH5	Ant1	Hop	71.628	≥ 0.5	71.628	> 5	PASS
	3DH5	Ant1	Hop	71.129	≥ 0.5	71.129	> 5	PASS



Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China

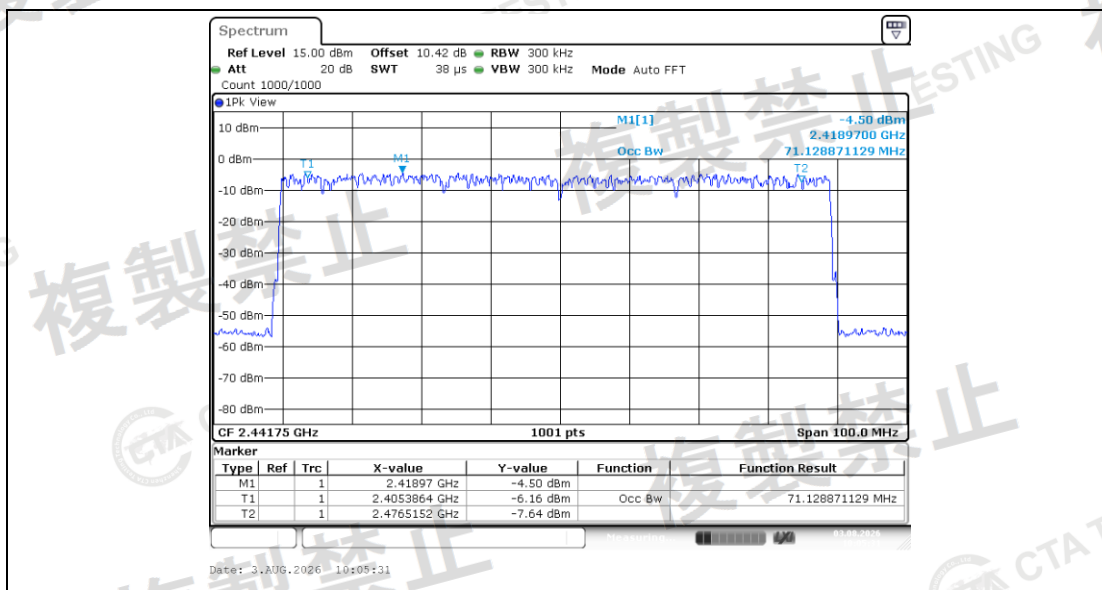
Test Graphs





Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China

Appendix D: Spurious Emission of TX

Test Result

Test Condition	Test Mode	Antenna	Freq(M Hz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	DH5	Ant1	2402	30~1000	974.30	-54.65	≤-26	0.00343	≤2.5	PASS
				1000~2387	2372.09	-52.85	≤-26	0.00519	≤2.5	PASS
				2387~2400	2400.00	-37.09	≤-16	0.19543	≤25	PASS
				2483.5~2496.5	2486.46	-43.49	≤-16	0.04477	≤25	PASS
				2496.5~13000	4803.59	-39.31	≤-26	0.11722	≤2.5	PASS
			2441	30~1000	981.81	-54.41	≤-26	0.00362	≤2.5	PASS
				1000~2387	2274.31	-53.68	≤-26	0.00429	≤2.5	PASS
				2387~2400	2389.33	-42.68	≤-16	0.05395	≤25	PASS
				2483.5~2496.5	2493.09	-42.79	≤-16	0.05260	≤25	PASS
				2496.5~13000	4881.84	-39.25	≤-26	0.11885	≤2.5	PASS
			2480	30~1000	833.65	-38.43	≤-26	0.14355	≤2.5	PASS
				1000~2387	2286.79	-53.44	≤-26	0.00453	≤2.5	PASS
				2387~2400	2399.17	-43.40	≤-16	0.04571	≤25	PASS
				2483.5~2496.5	2488.69	-42.97	≤-16	0.05047	≤25	PASS
				2496.5~13000	4959.57	-38.55	≤-26	0.13964	≤2.5	PASS
	2DH5	Ant1	2402	30~1000	981.57	-54.91	≤-26	0.00323	≤2.5	PASS
				1000~2387	2374.17	-52.49	≤-26	0.00564	≤2.5	PASS
				2387~2400	2399.99	-30.52	≤-16	0.88716	≤25	PASS
				2483.5~2496.5	2483.57	-43.73	≤-16	0.04236	≤25	PASS
				2496.5~13000	4803.59	-37.38	≤-26	0.18281	≤2.5	PASS
			2441	30~1000	905.91	-51.69	≤-26	0.00678	≤2.5	PASS
				1000~2387	2386.65	-53.74	≤-26	0.00423	≤2.5	PASS
				2387~2400	2394.18	-43.95	≤-16	0.04027	≤25	PASS
				2483.5~2496.5	2491.62	-43.50	≤-16	0.04467	≤25	PASS
				2496.5~13000	4881.84	-37.26	≤-26	0.18793	≤2.5	PASS
			2480	30~1000	905.67	-43.18	≤-26	0.04808	≤2.5	PASS
				1000~2387	2115.49	-53.52	≤-26	0.00445	≤2.5	PASS
				2387~2400	2394.00	-43.89	≤-16	0.04083	≤25	PASS
				2483.5~2496.5	2492.01	-43.06	≤-16	0.04943	≤25	PASS
				2496.5~13000	4959.57	-37.24	≤-26	0.18880	≤2.5	PASS
	3DH5	Ant1	2402	30~1000	930.40	-54.64	≤-26	0.00344	≤2.5	PASS
				1000~2387	2379.72	-52.85	≤-26	0.00519	≤2.5	PASS
				2387~2400	2400.00	-30.21	≤-16	0.95280	≤25	PASS
				2483.5~2496.5	2494.40	-43.21	≤-16	0.04775	≤25	PASS
				2496.5~13000	4804.12	-37.64	≤-26	0.17219	≤2.5	PASS



Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China

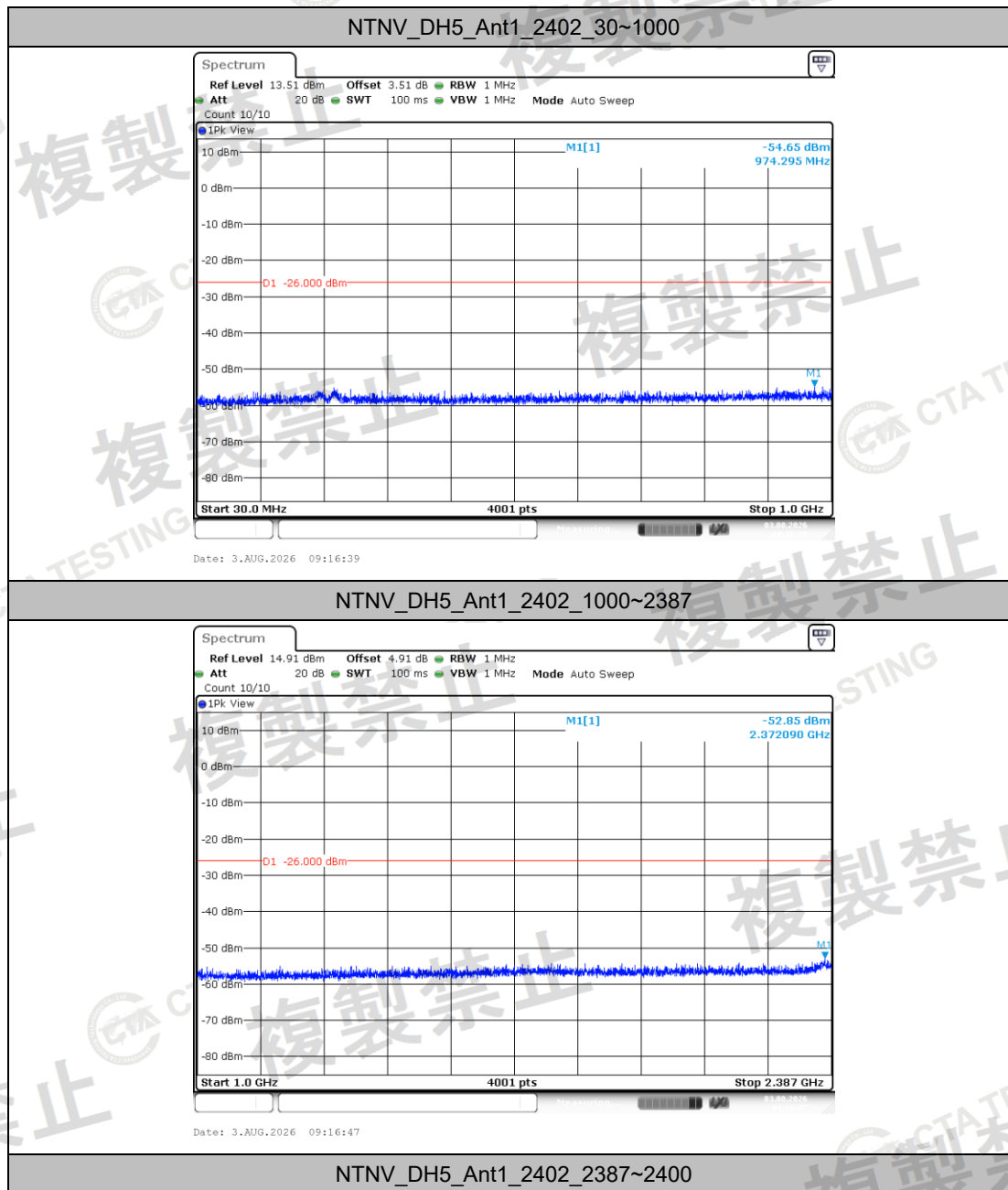
			2441	30~1000	888.94	-55.17	≤-26	0.00304	≤2.5	PASS
				1000~2387	1957.72	-53.90	≤-26	0.00407	≤2.5	PASS
				2387~2400	2395.89	-43.56	≤-16	0.04406	≤25	PASS
				2483.5~2496.5	2489.86	-43.60	≤-16	0.04365	≤25	PASS
				2496.5~13000	4881.84	-37.43	≤-26	0.18072	≤2.5	PASS
			2480	30~1000	238.55	-53.89	≤-26	0.00408	≤2.5	PASS
				1000~2387	1784.00	-53.59	≤-26	0.00438	≤2.5	PASS
				2387~2400	2388.25	-42.88	≤-16	0.05152	≤25	PASS
				2483.5~2496.5	2484.71	-42.82	≤-16	0.05224	≤25	PASS
				2496.5~13000	4960.10	-37.20	≤-26	0.19055	≤2.5	PASS



Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China

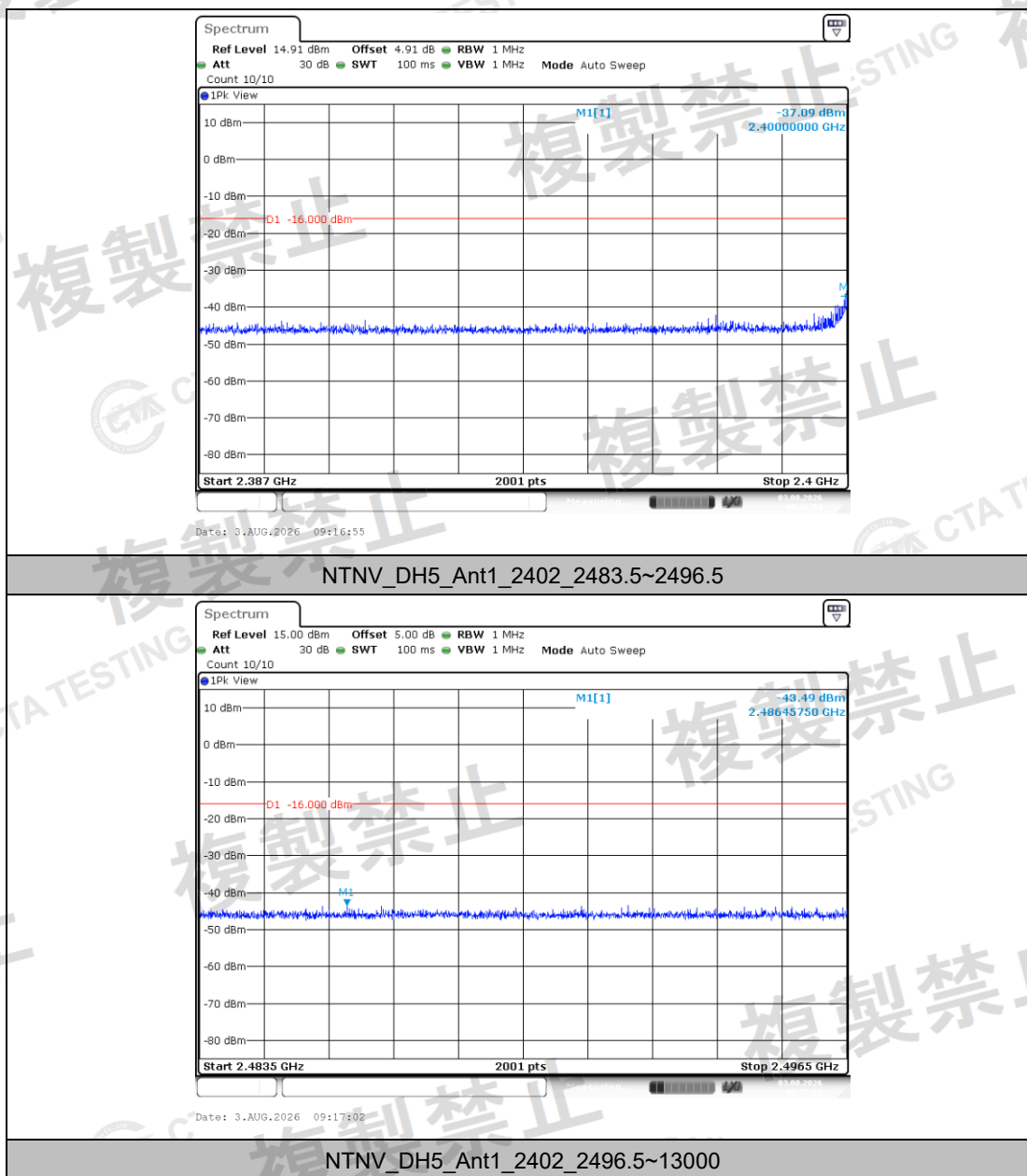
Test Graphs





Shenzhen CTA Testing Technology Co., Ltd.

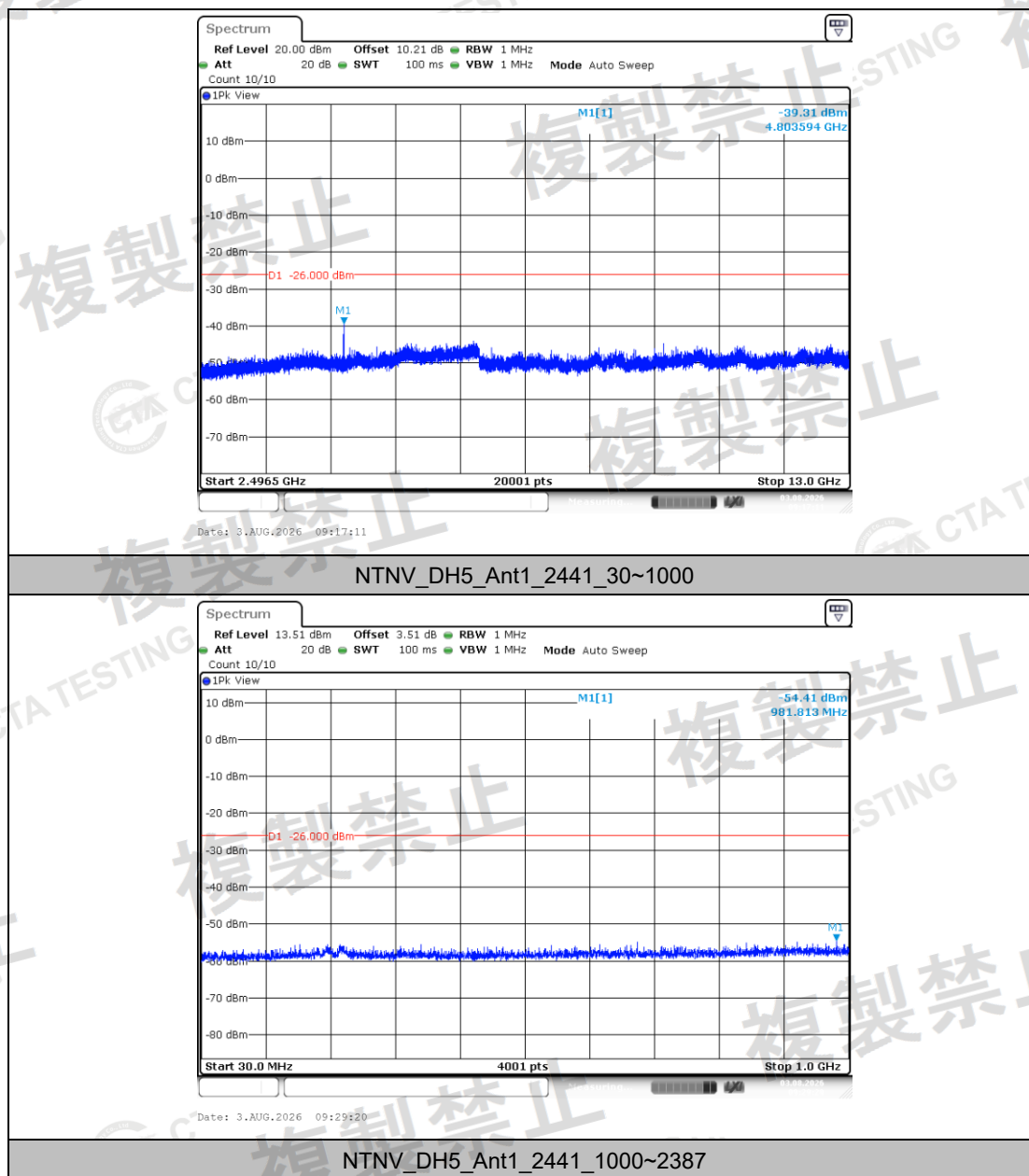
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

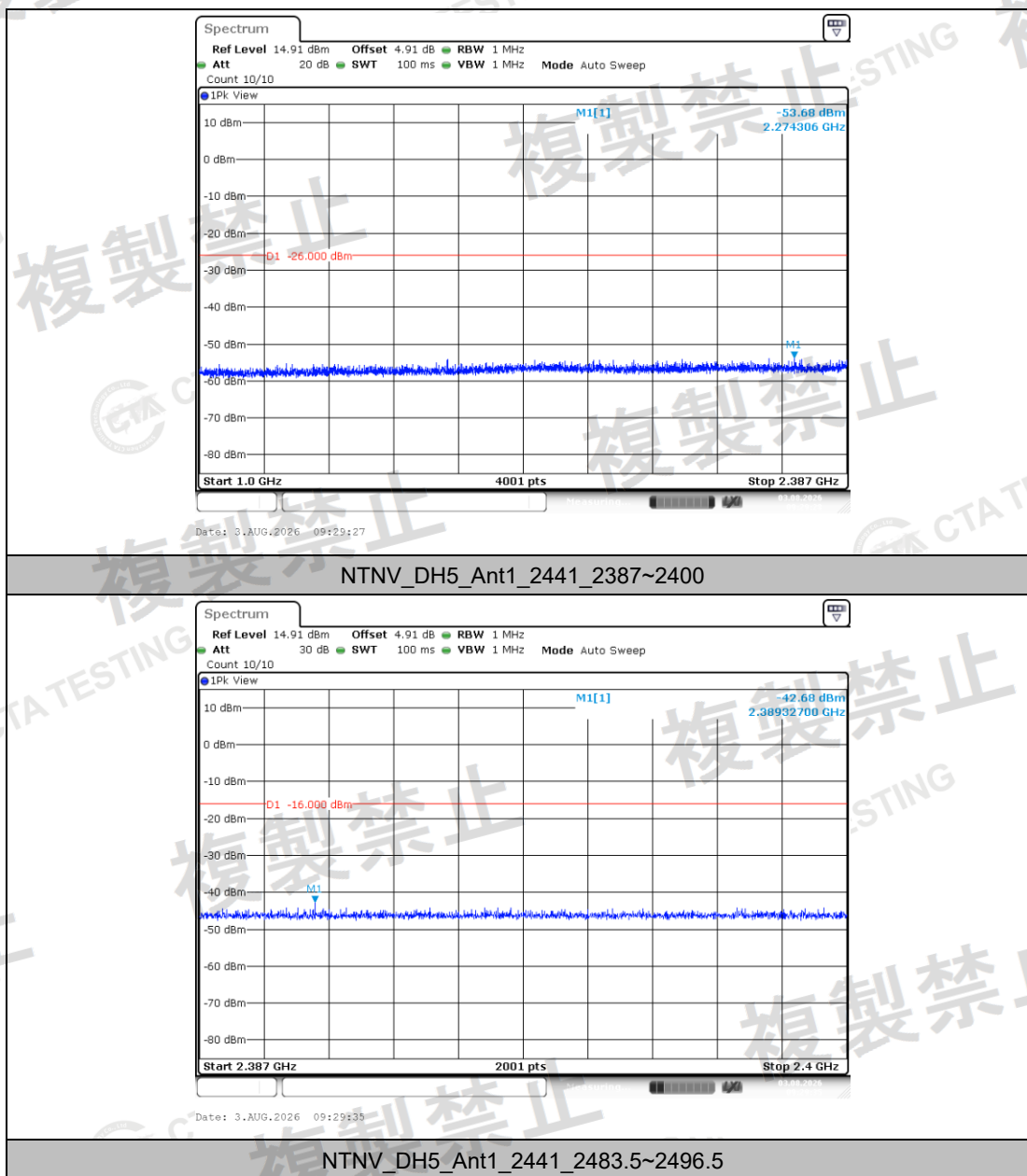
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

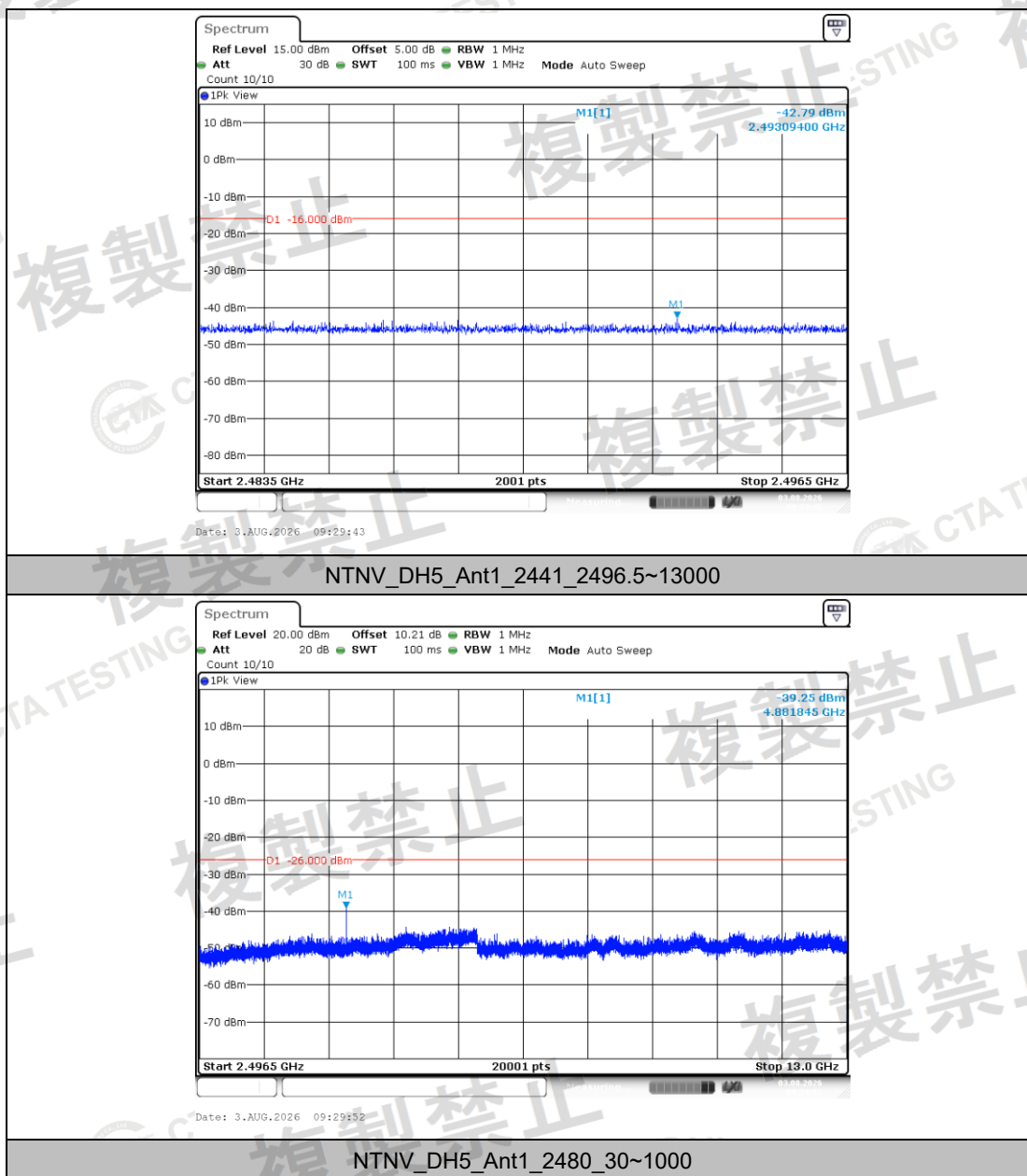
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

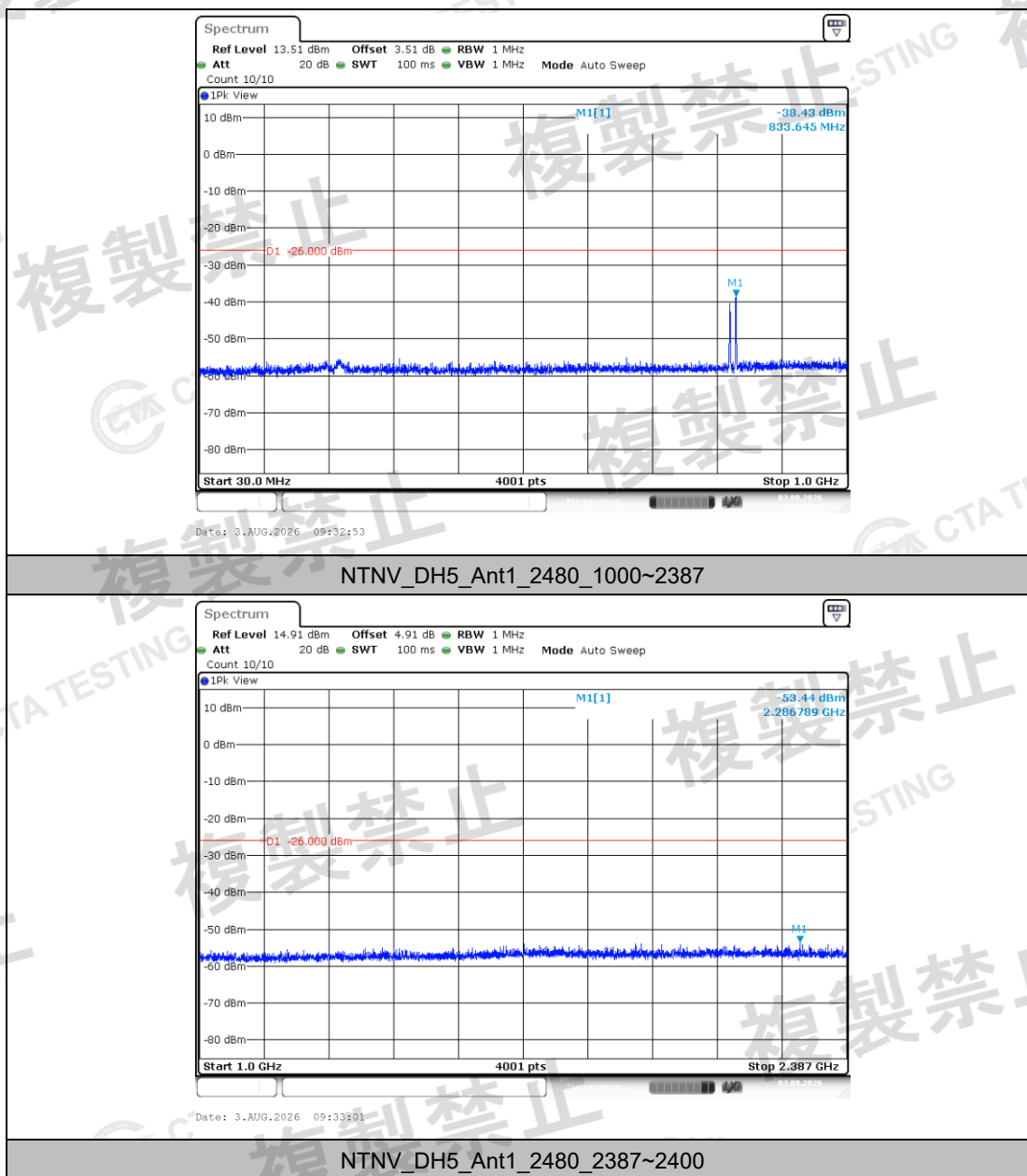
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

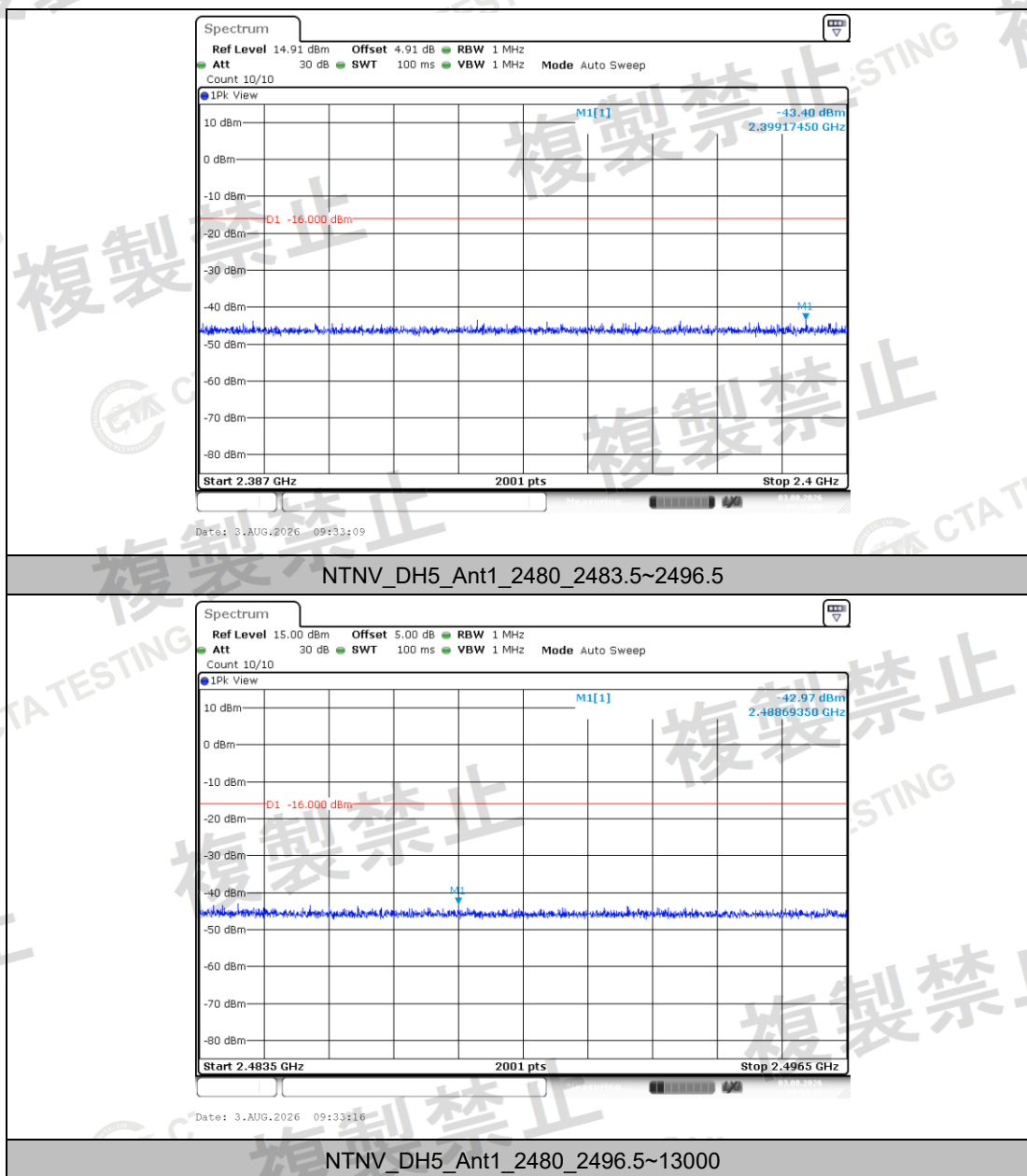
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

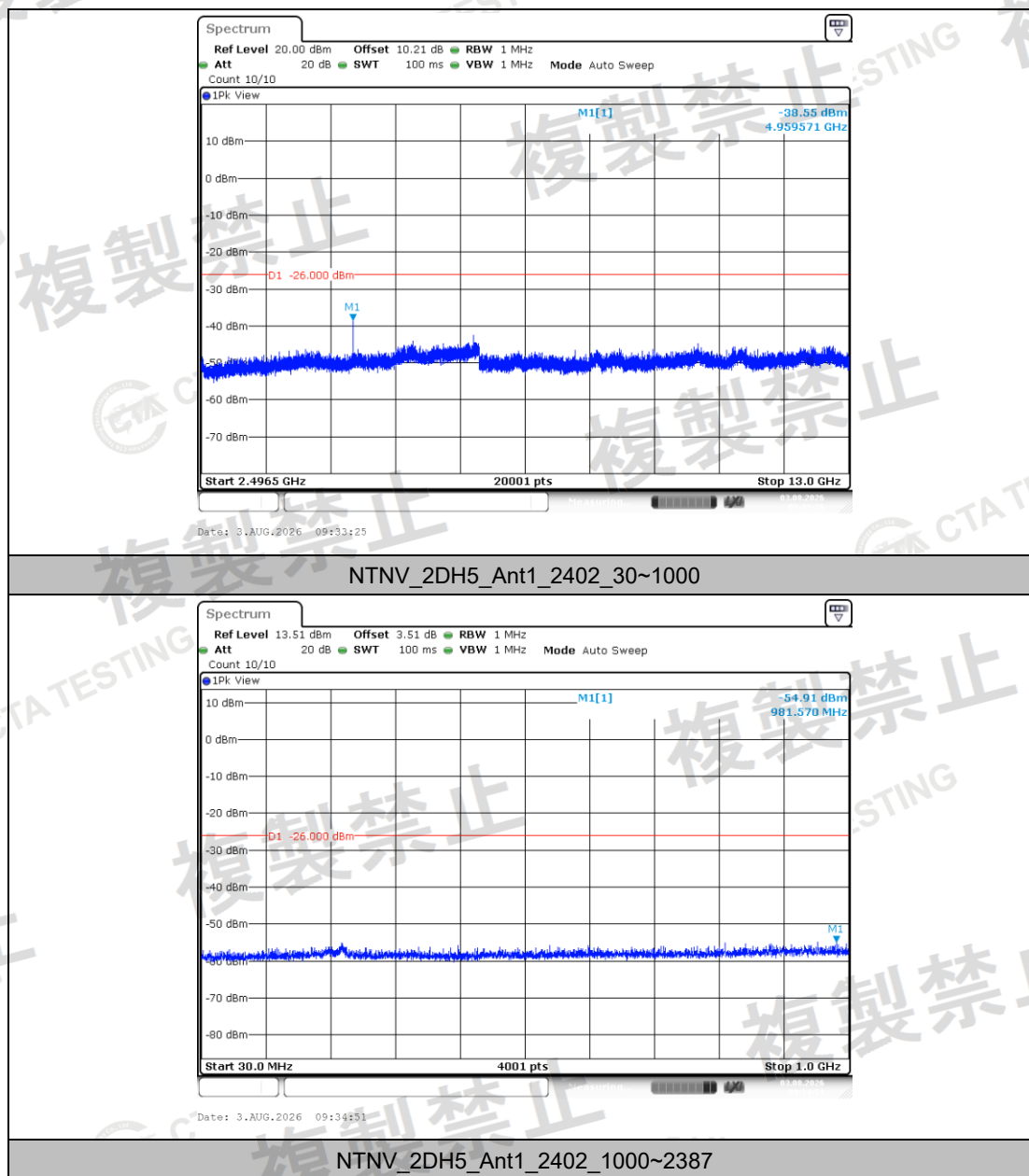
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

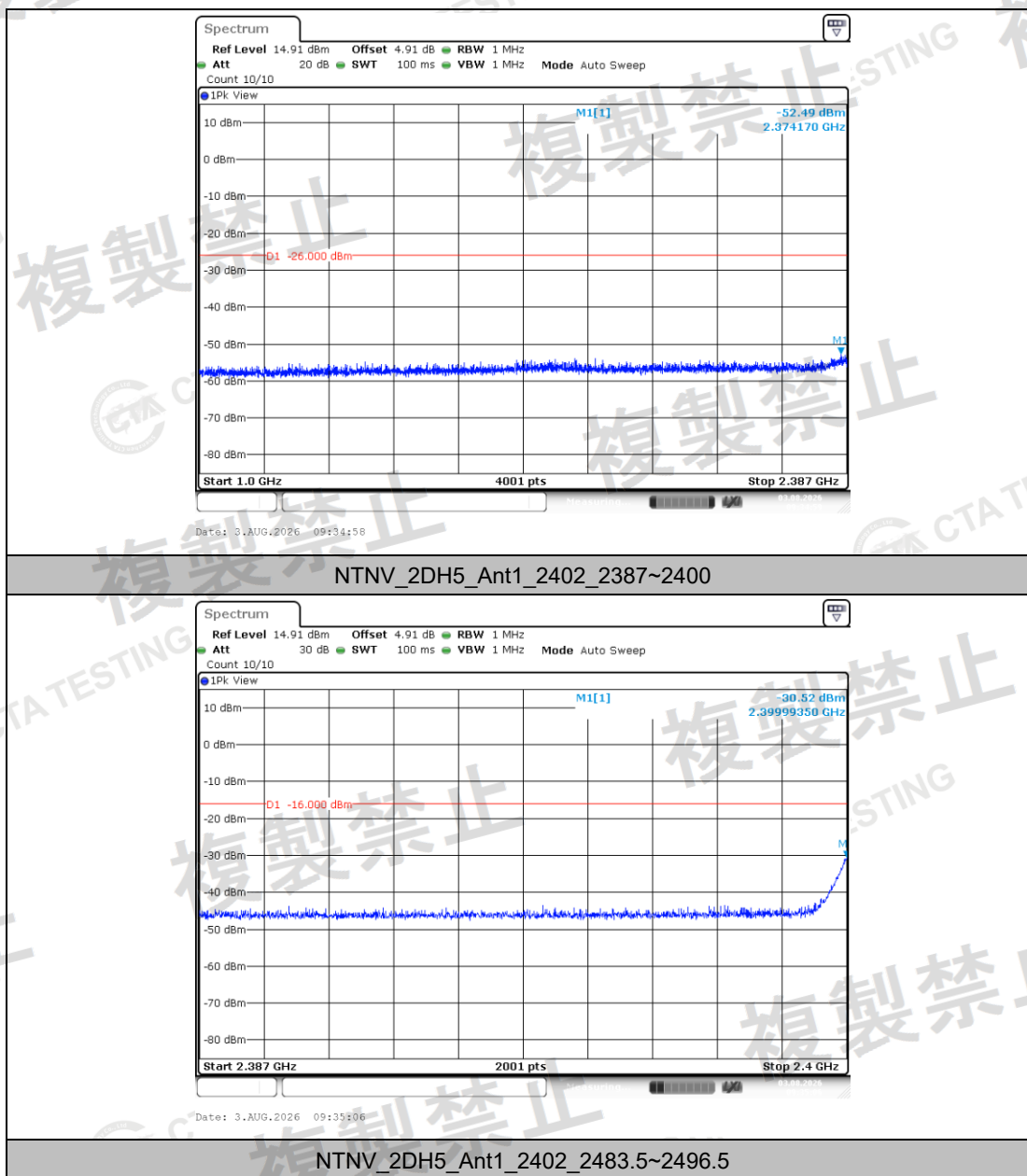
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

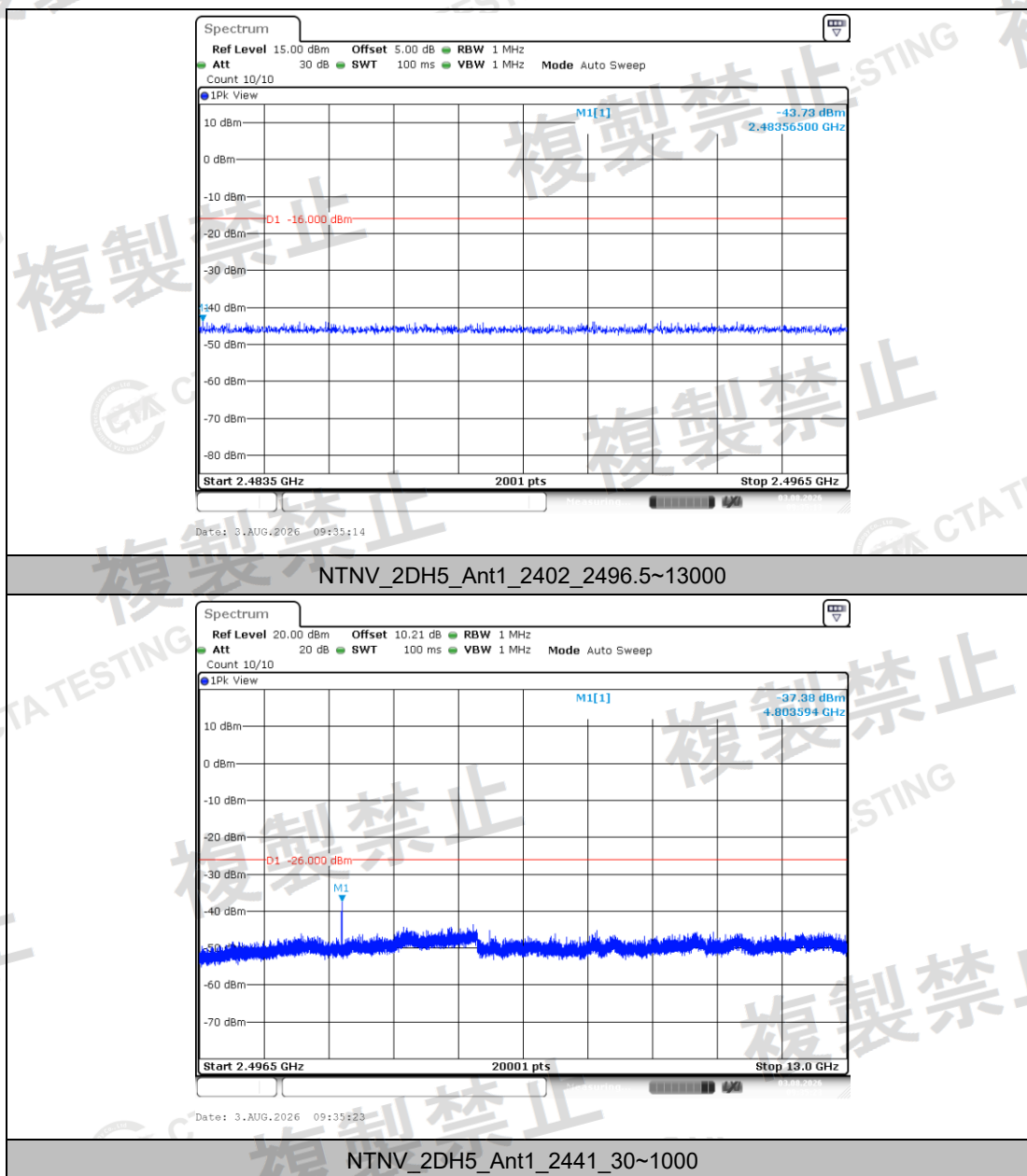
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

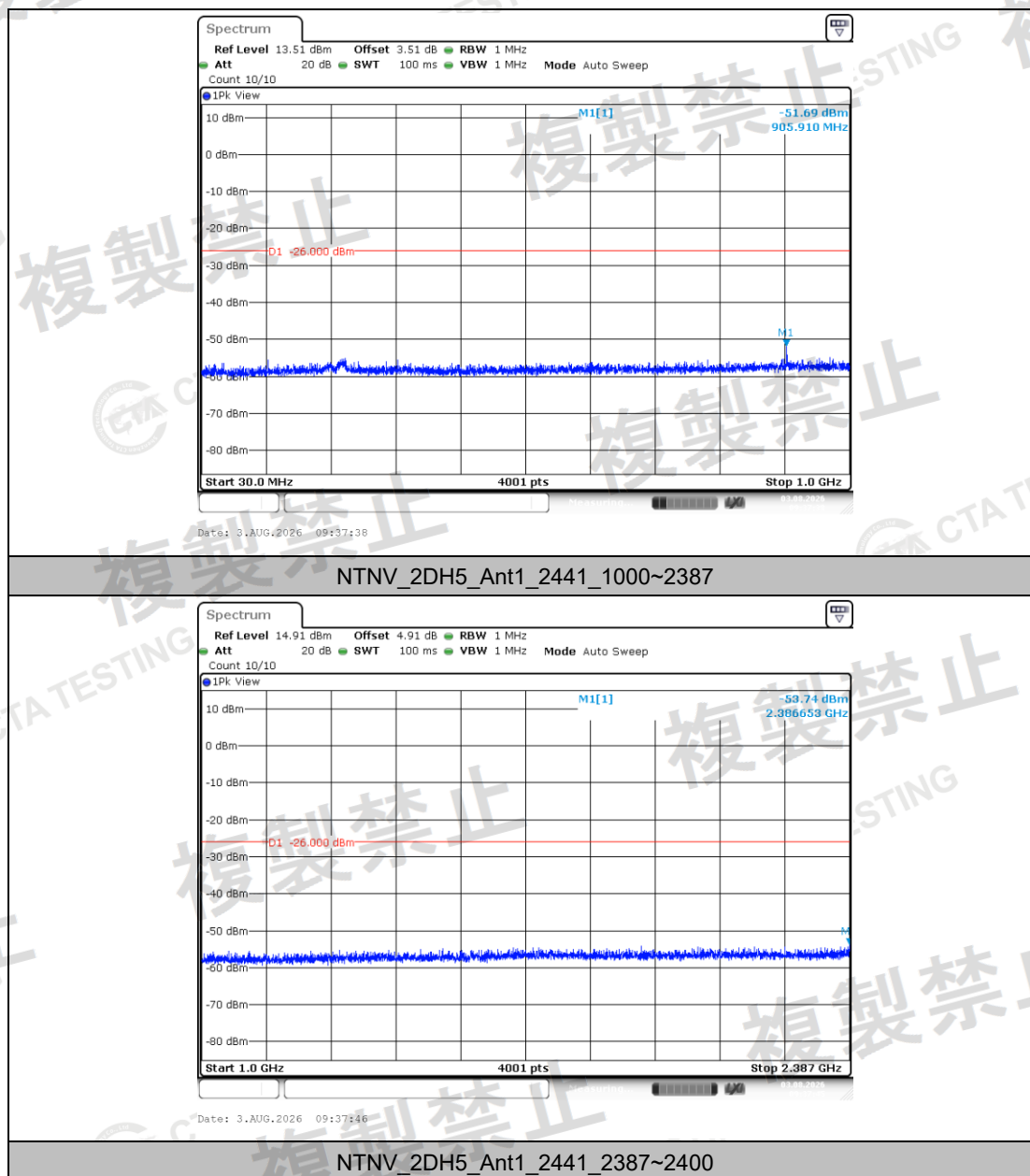
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

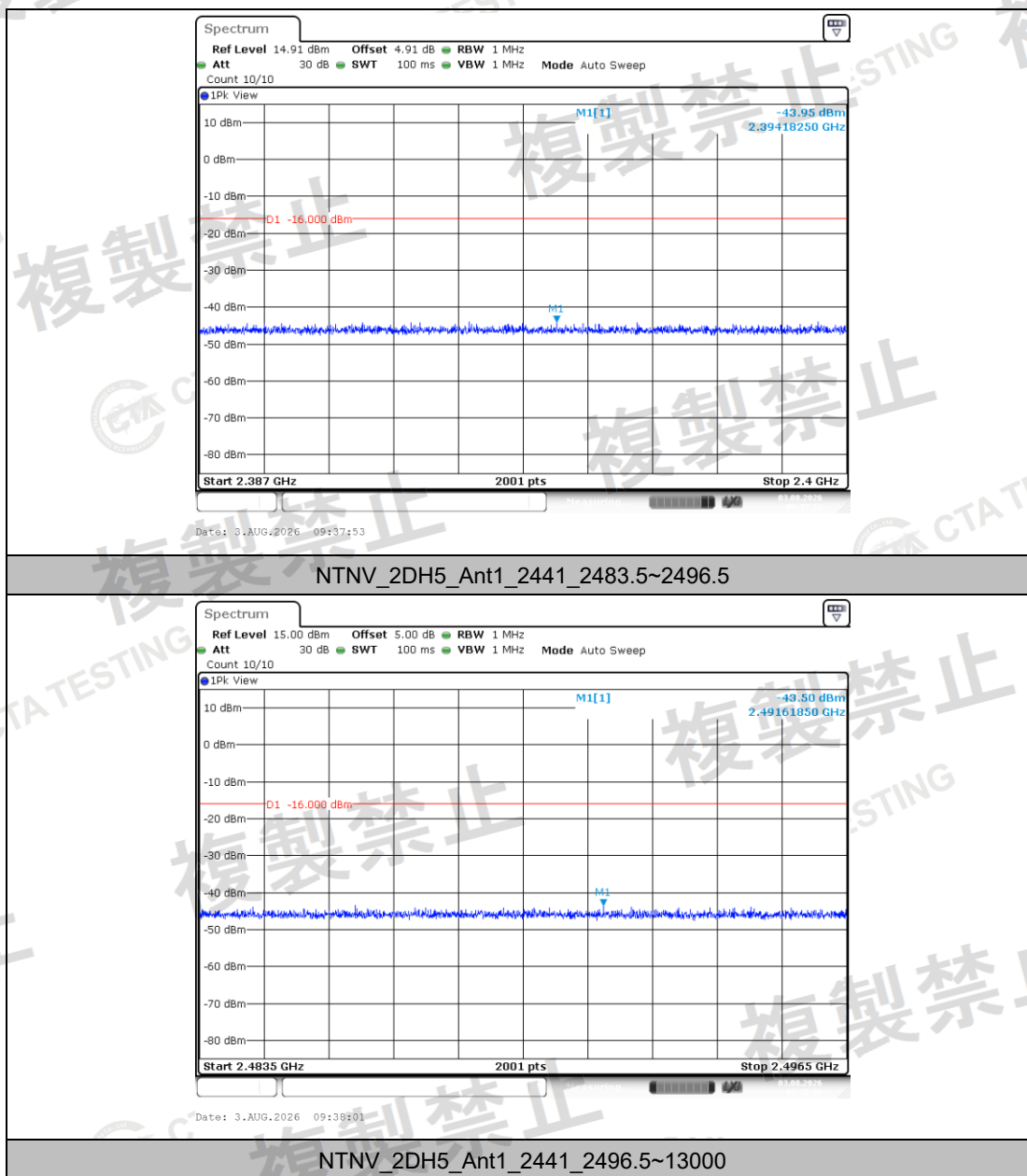
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

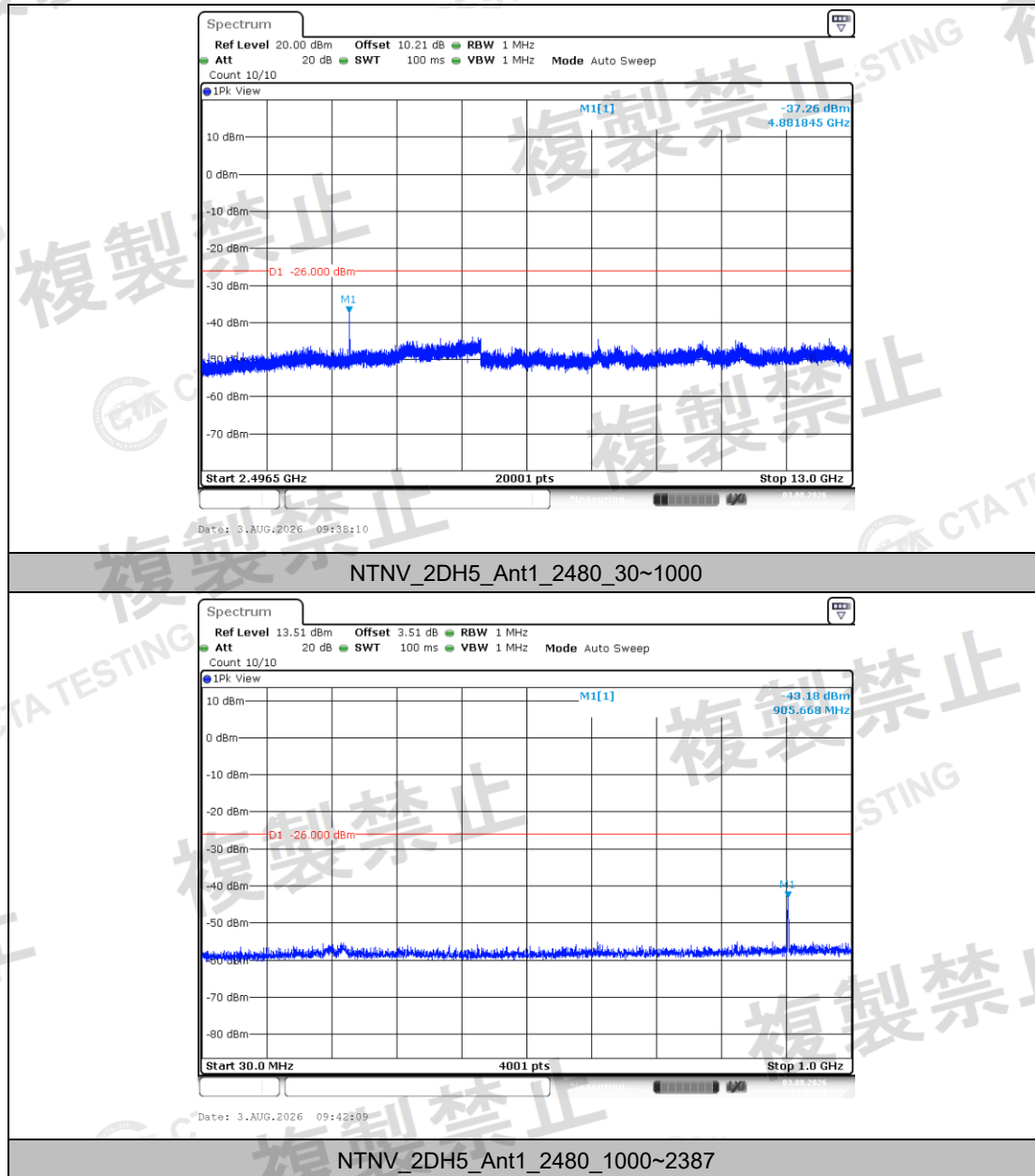
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

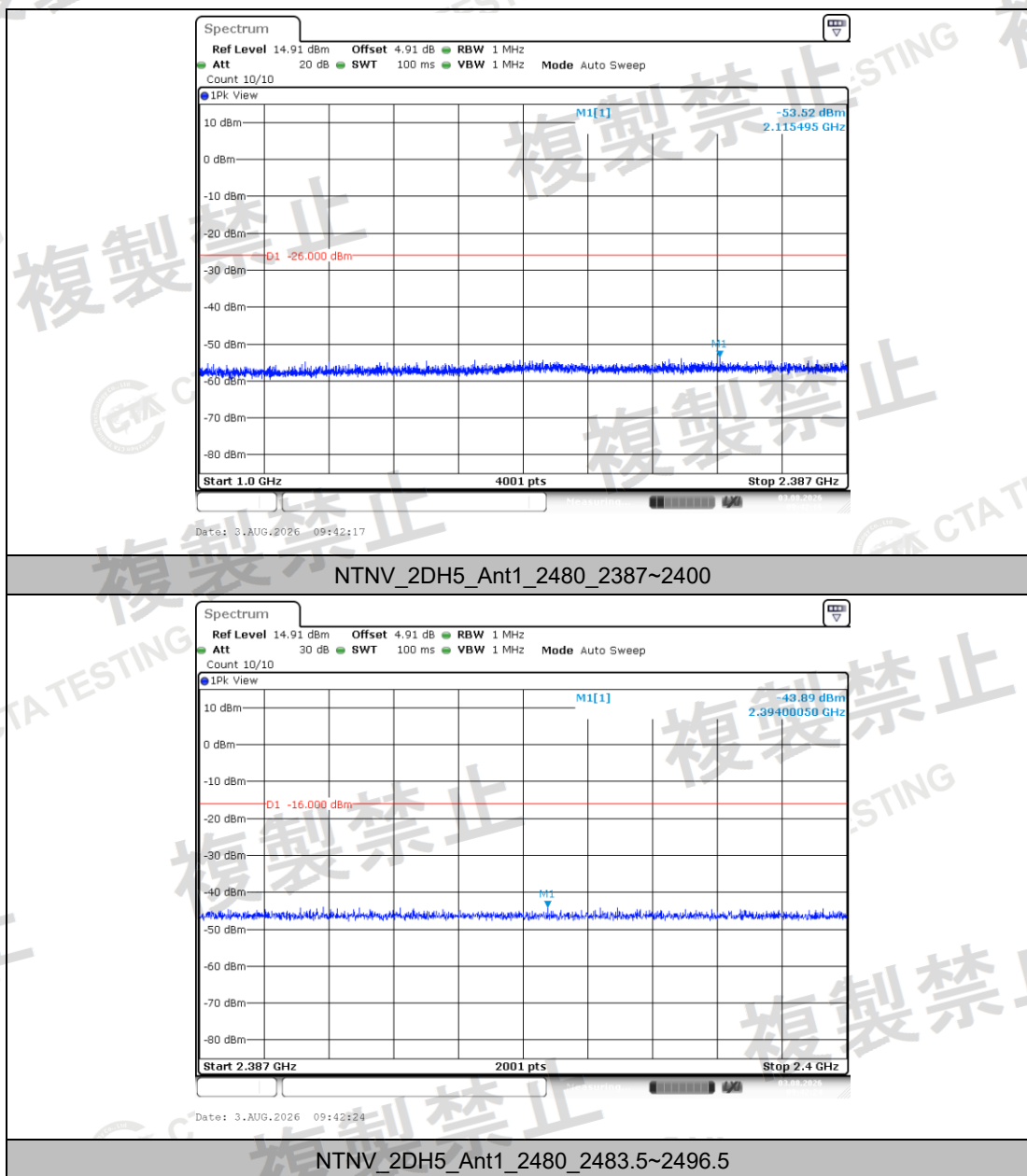
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

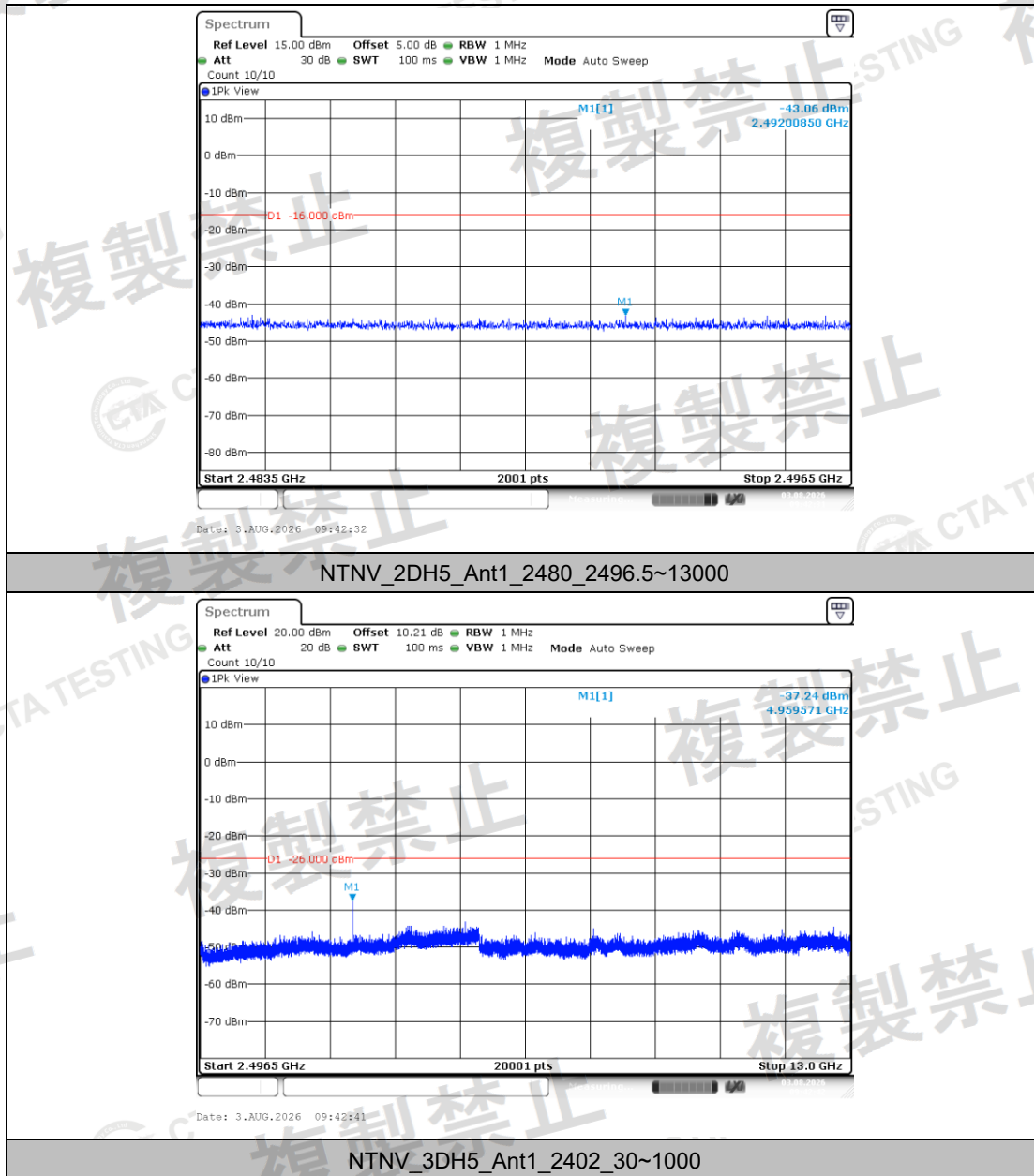
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

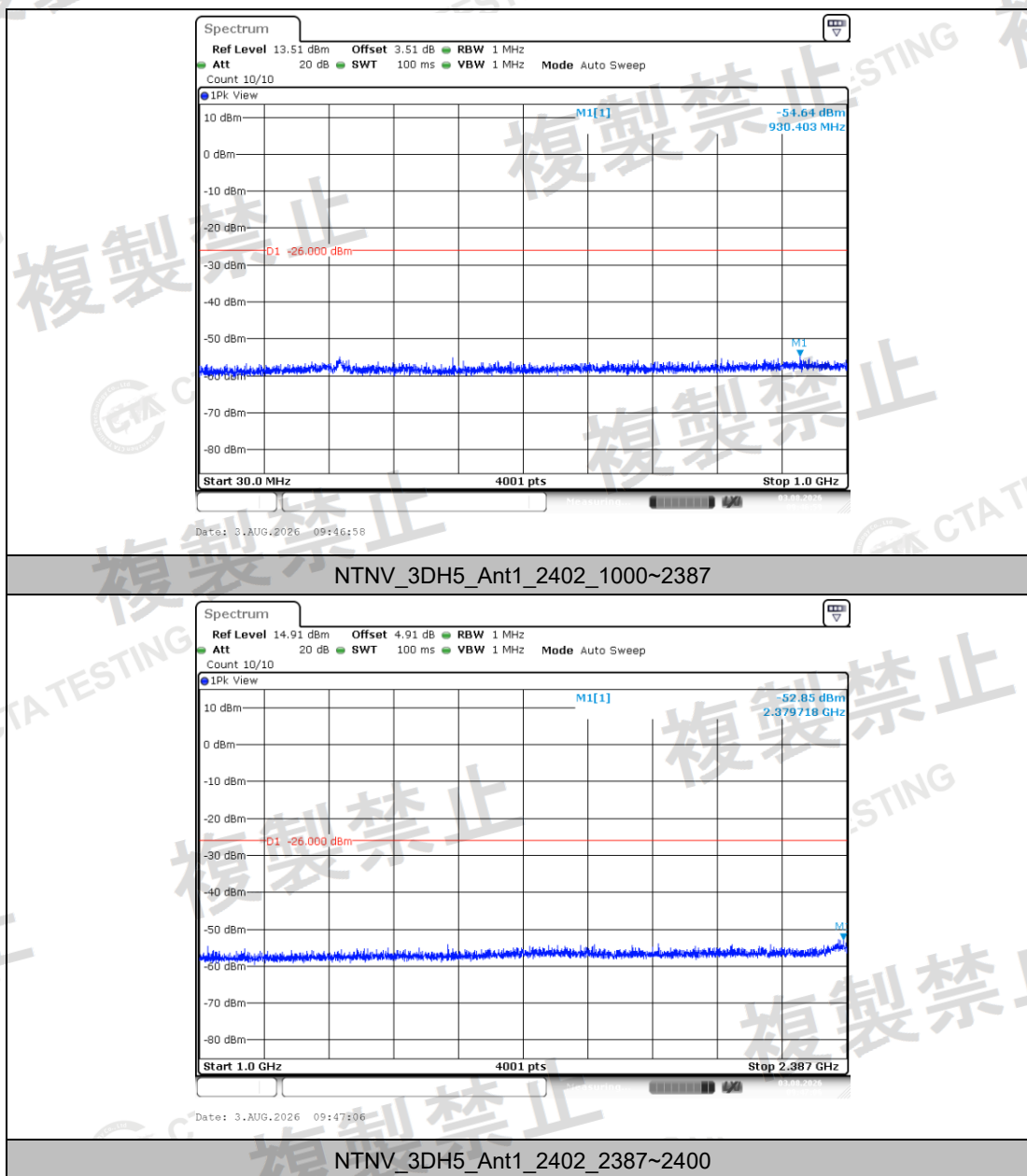
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

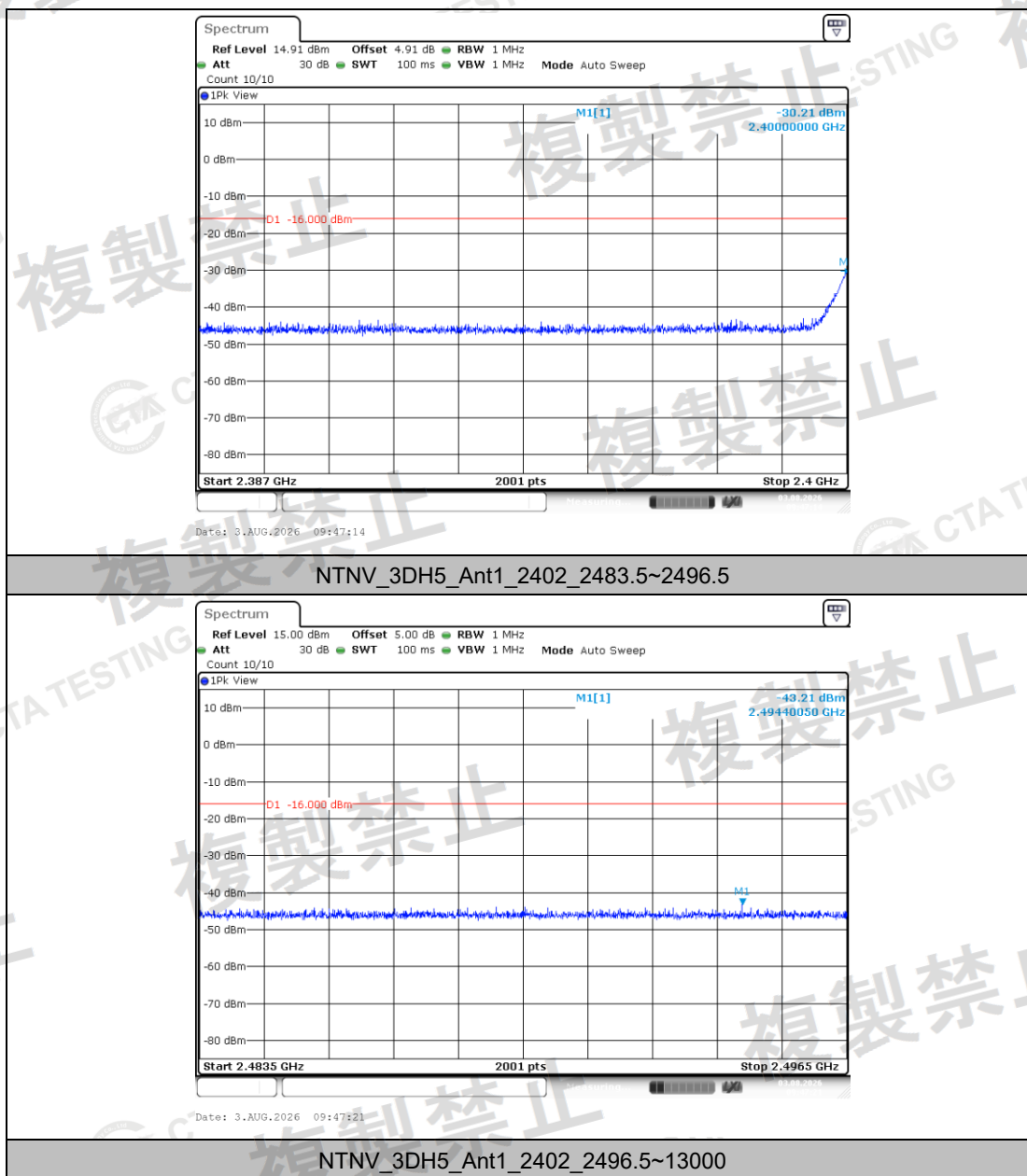
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

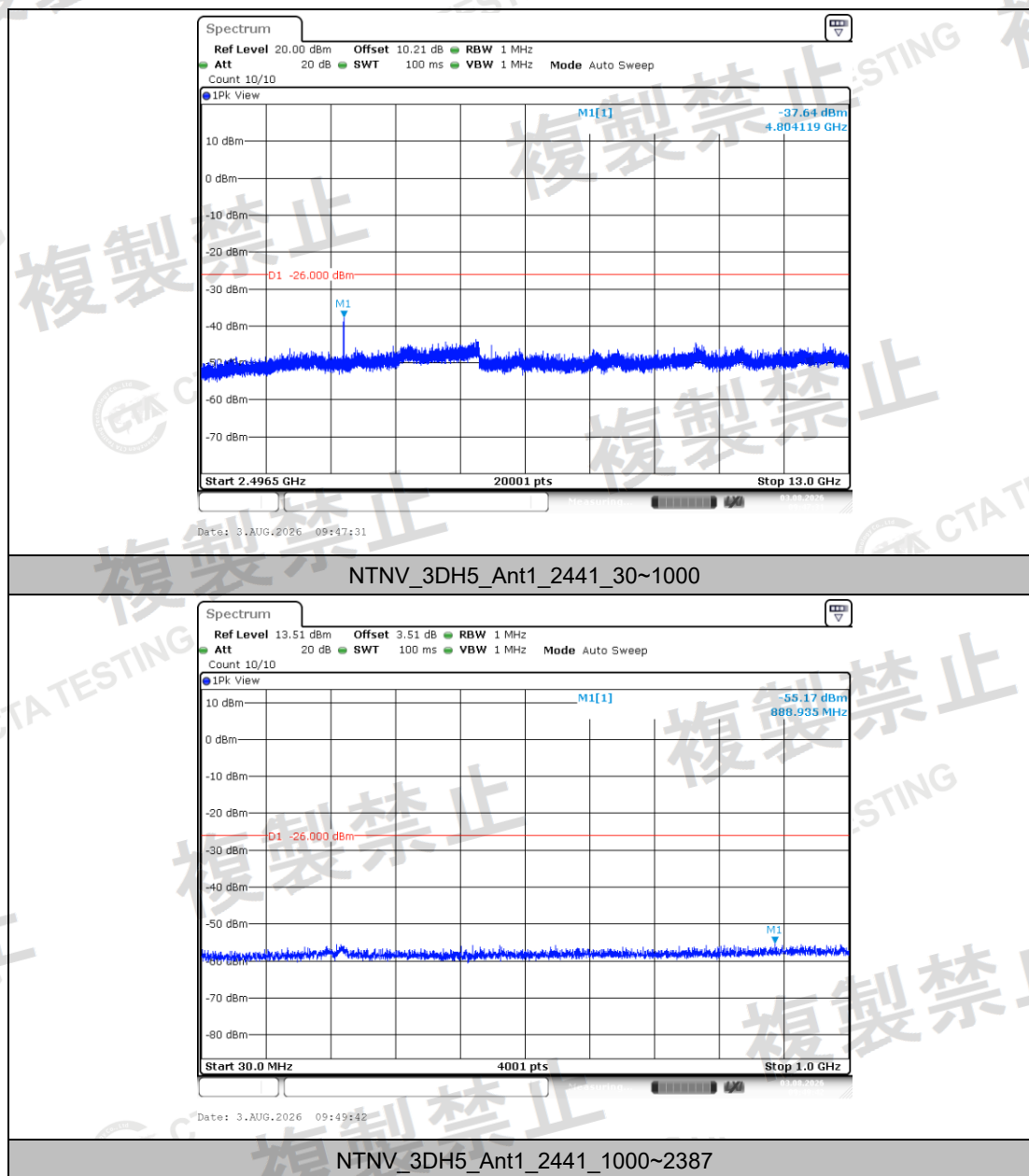
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

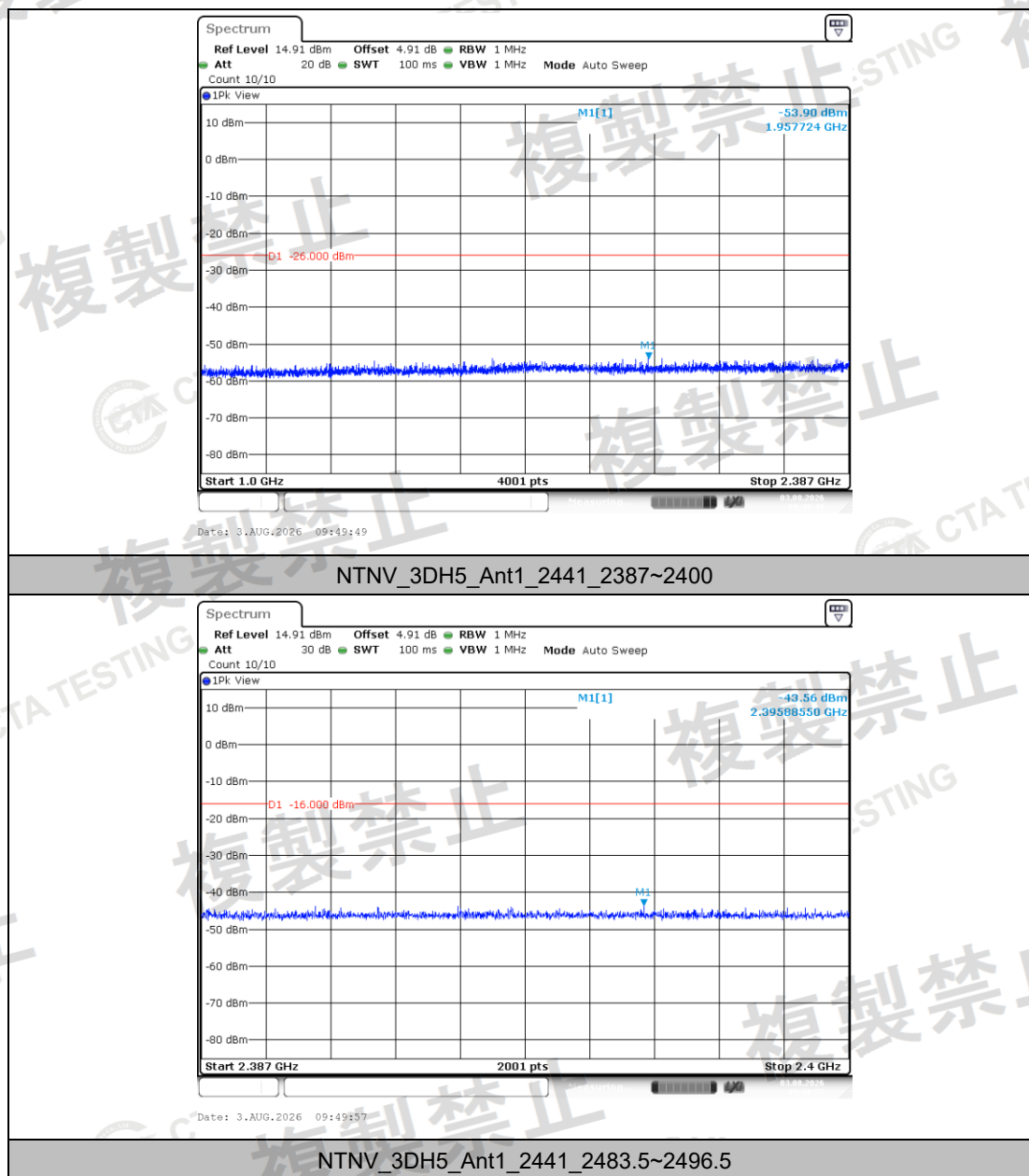
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

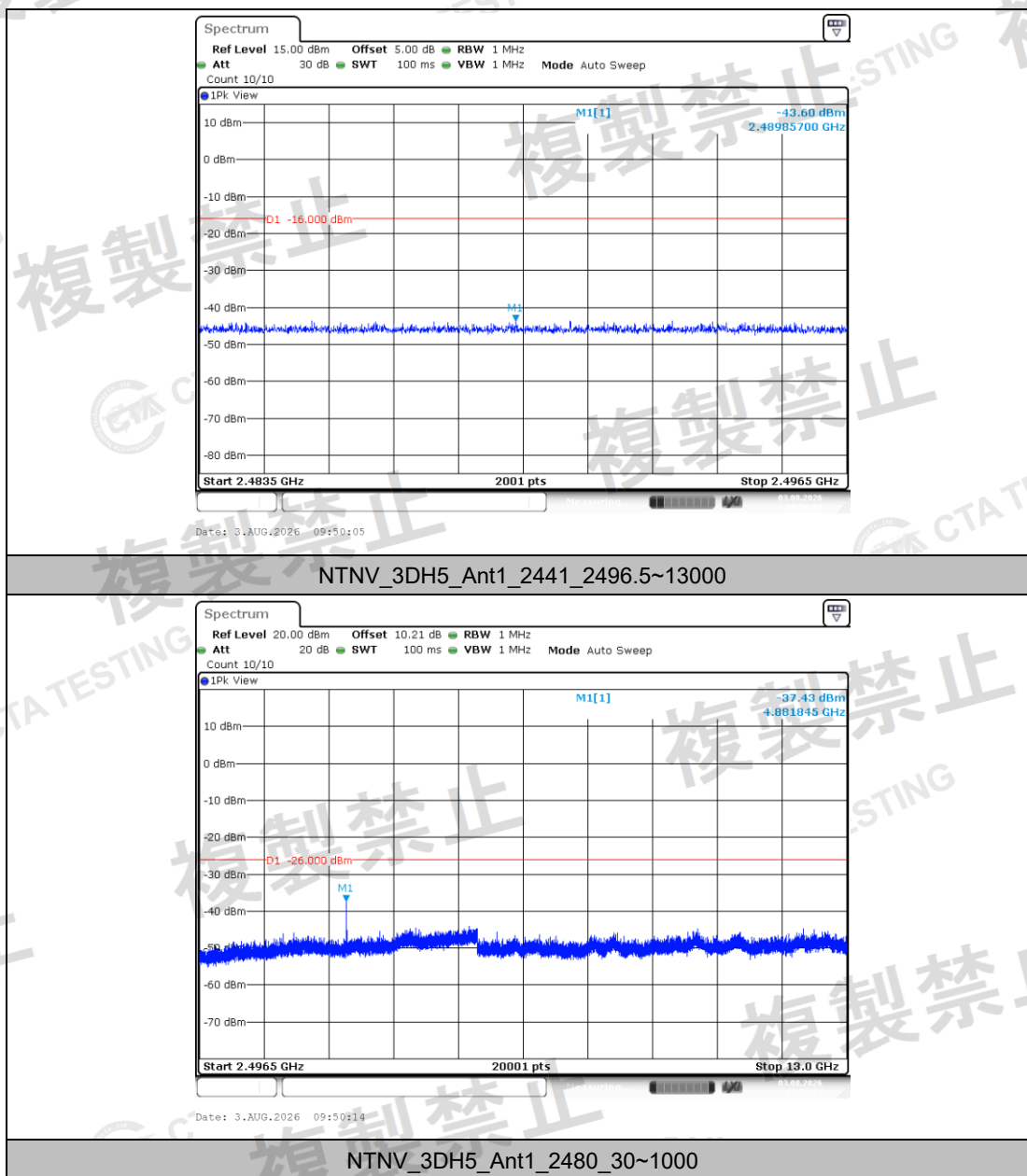
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

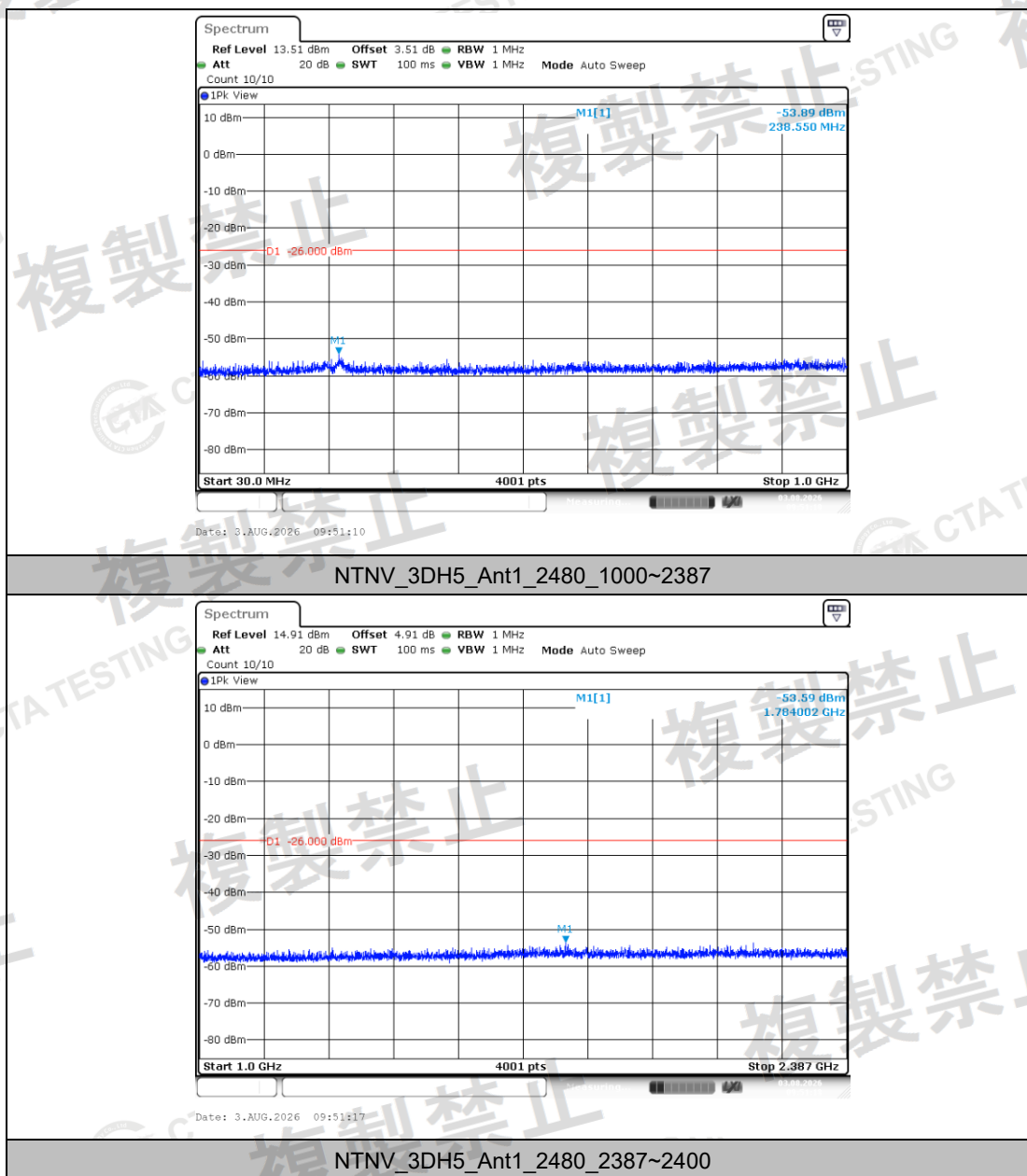
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

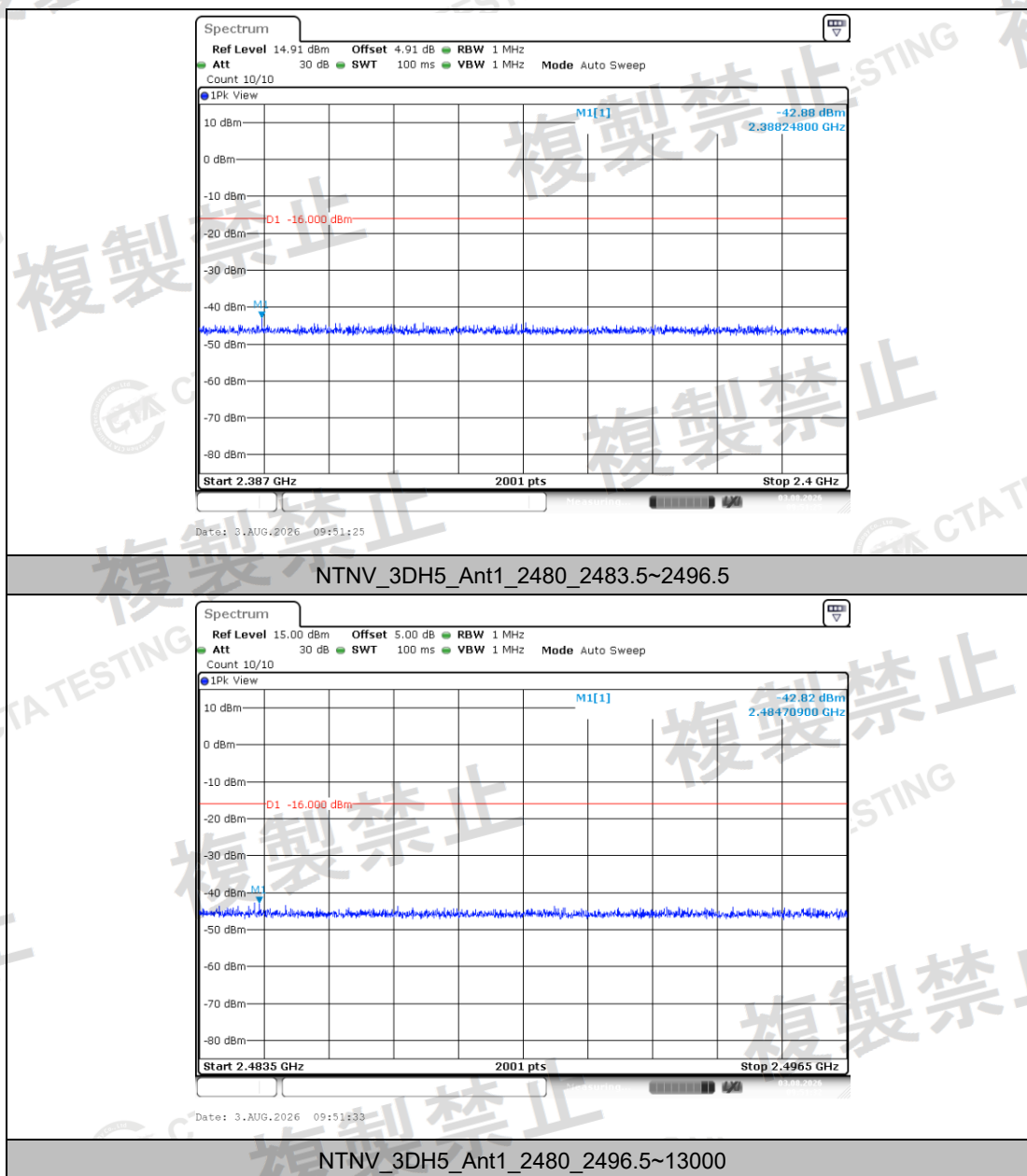
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

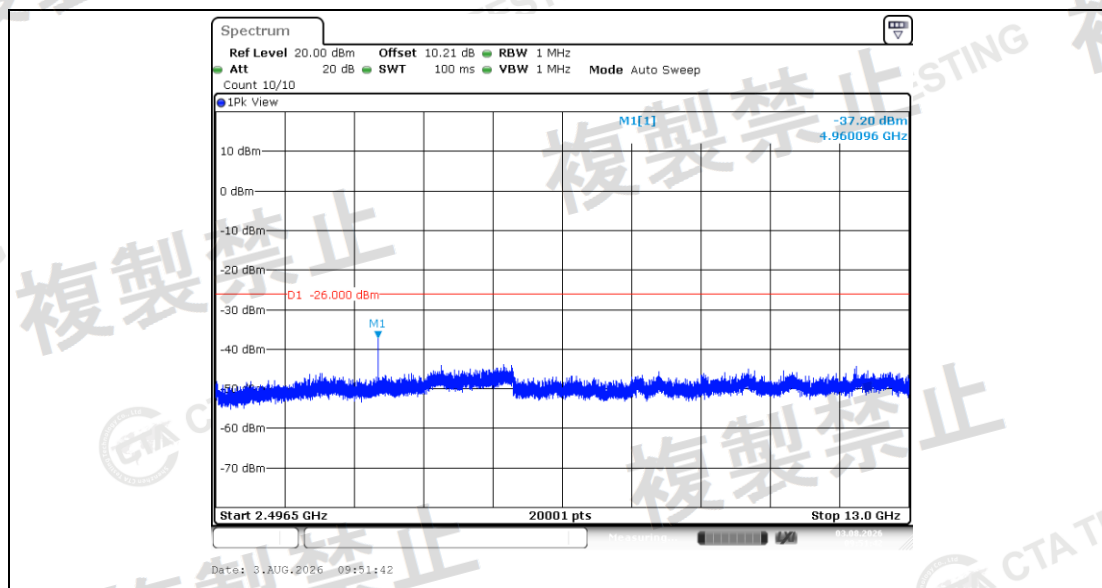
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China

Appendix E: Spurious Emission of RX

Test Result

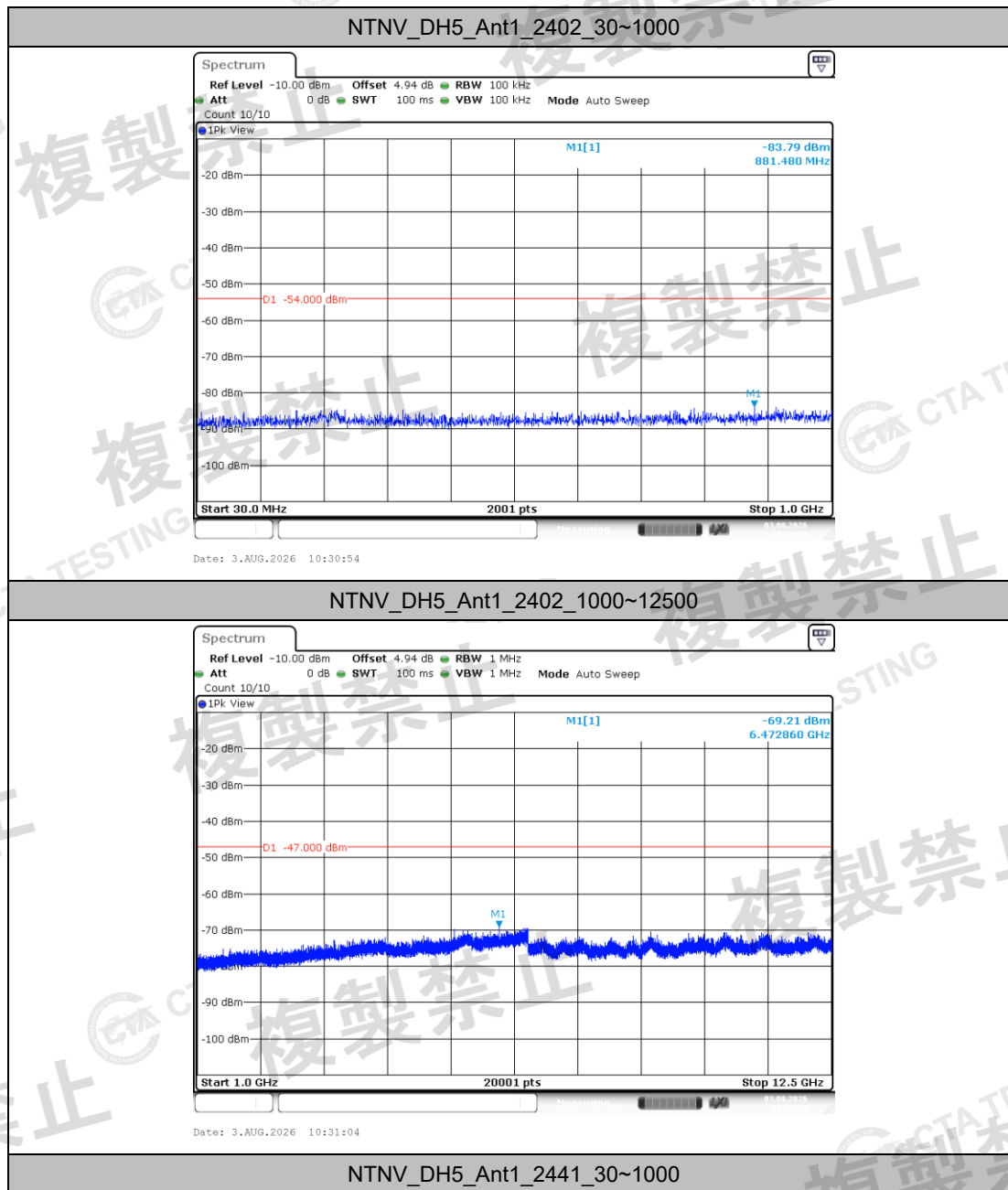
Test Condition	Test Mode	Antenna	Freq(M Hz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
NTNV	DH5	Ant1	2402	30~1000	881.48	-83.79	≤-54	0.00418	≤4	PASS
				1000~12500	6472.86	-69.21	≤-47	0.11995	≤20	PASS
			2441	30~1000	240.14	-83.08	≤-54	0.00492	≤4	PASS
				1000~12500	6641.91	-68.60	≤-47	0.13804	≤20	PASS
			2480	30~1000	960.01	-83.21	≤-54	0.00478	≤4	PASS
				1000~12500	6966.76	-69.04	≤-47	0.12474	≤20	PASS
	2DH5	Ant1	2402	30~1000	603.23	-83.83	≤-54	0.00414	≤4	PASS
				1000~12500	6895.47	-69.68	≤-47	0.10765	≤20	PASS
			2441	30~1000	843.18	-84.35	≤-54	0.00367	≤4	PASS
				1000~12500	6991.49	-69.46	≤-47	0.11324	≤20	PASS
			2480	30~1000	987.64	-83.03	≤-54	0.00498	≤4	PASS
				1000~12500	6736.78	-69.16	≤-47	0.12134	≤20	PASS
	3DH5	Ant1	2402	30~1000	235.29	-83.19	≤-54	0.00480	≤4	PASS
				1000~12500	6950.09	-68.33	≤-47	0.14689	≤20	PASS
			2441	30~1000	897.96	-83.84	≤-54	0.00413	≤4	PASS
				1000~12500	6983.44	-69.37	≤-47	0.11561	≤20	PASS
			2480	30~1000	235.78	-83.43	≤-54	0.00454	≤4	PASS
				1000~12500	6864.42	-69.37	≤-47	0.11561	≤20	PASS



Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China

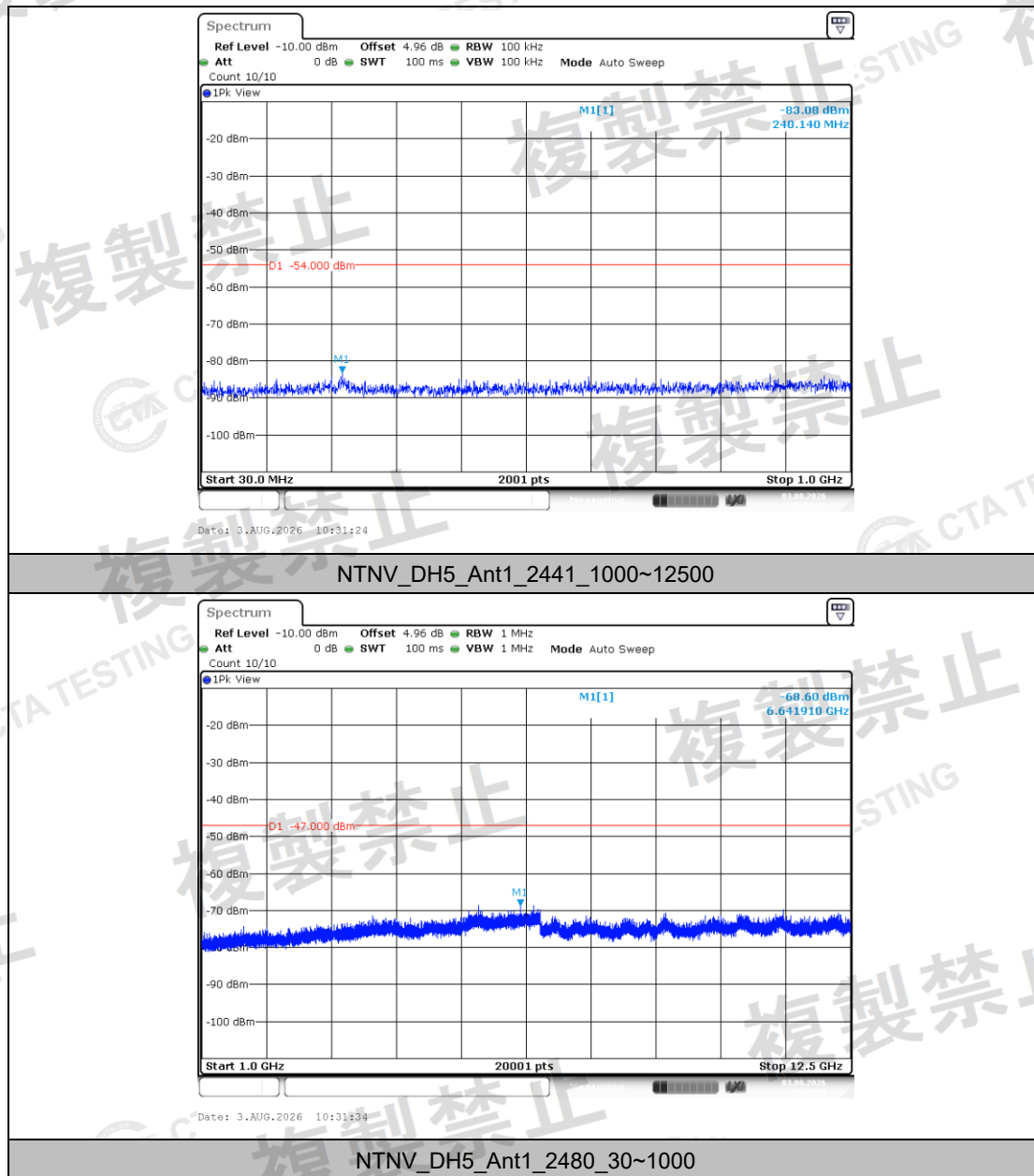
Test Graphs





Shenzhen CTA Testing Technology Co., Ltd.

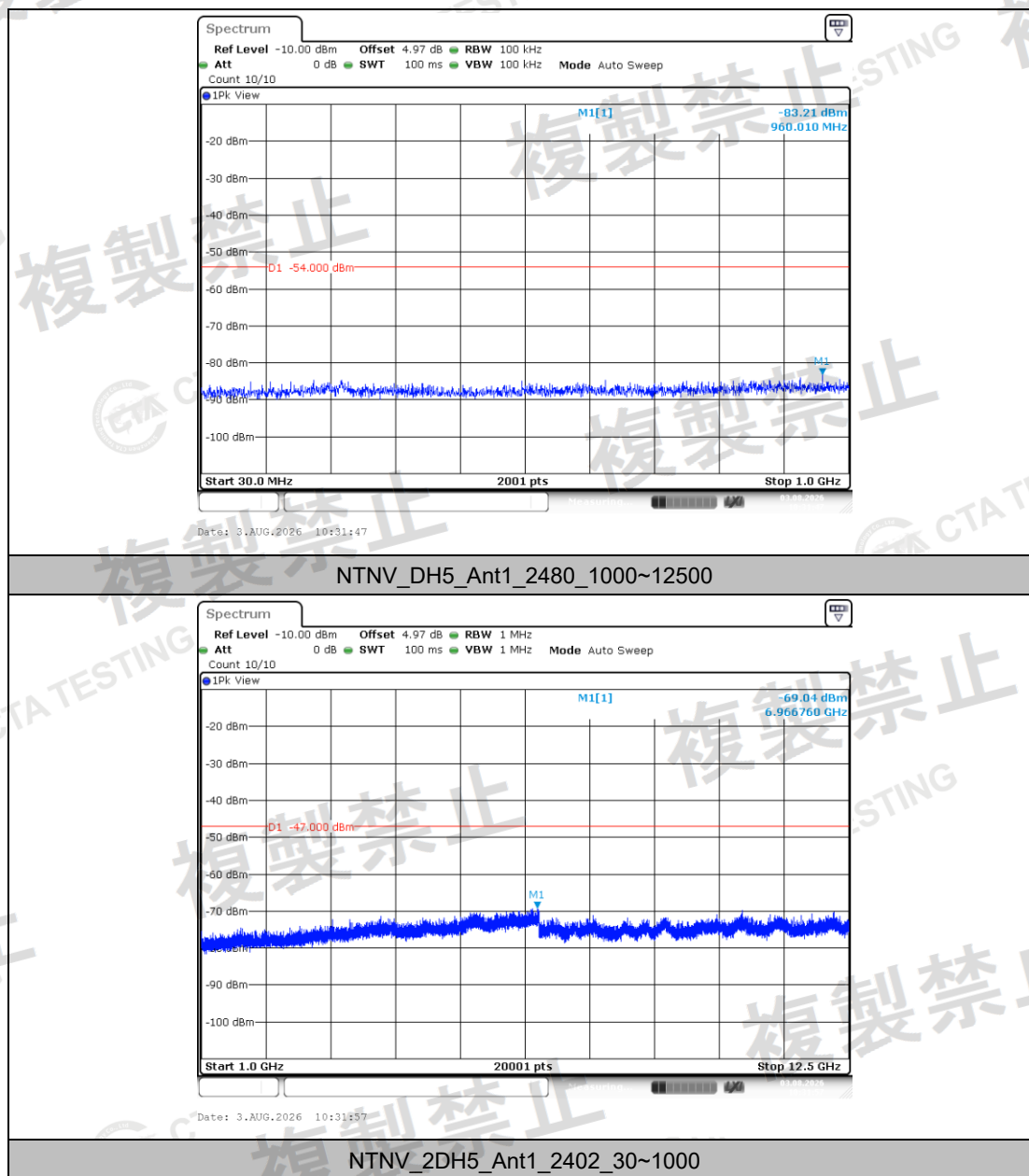
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

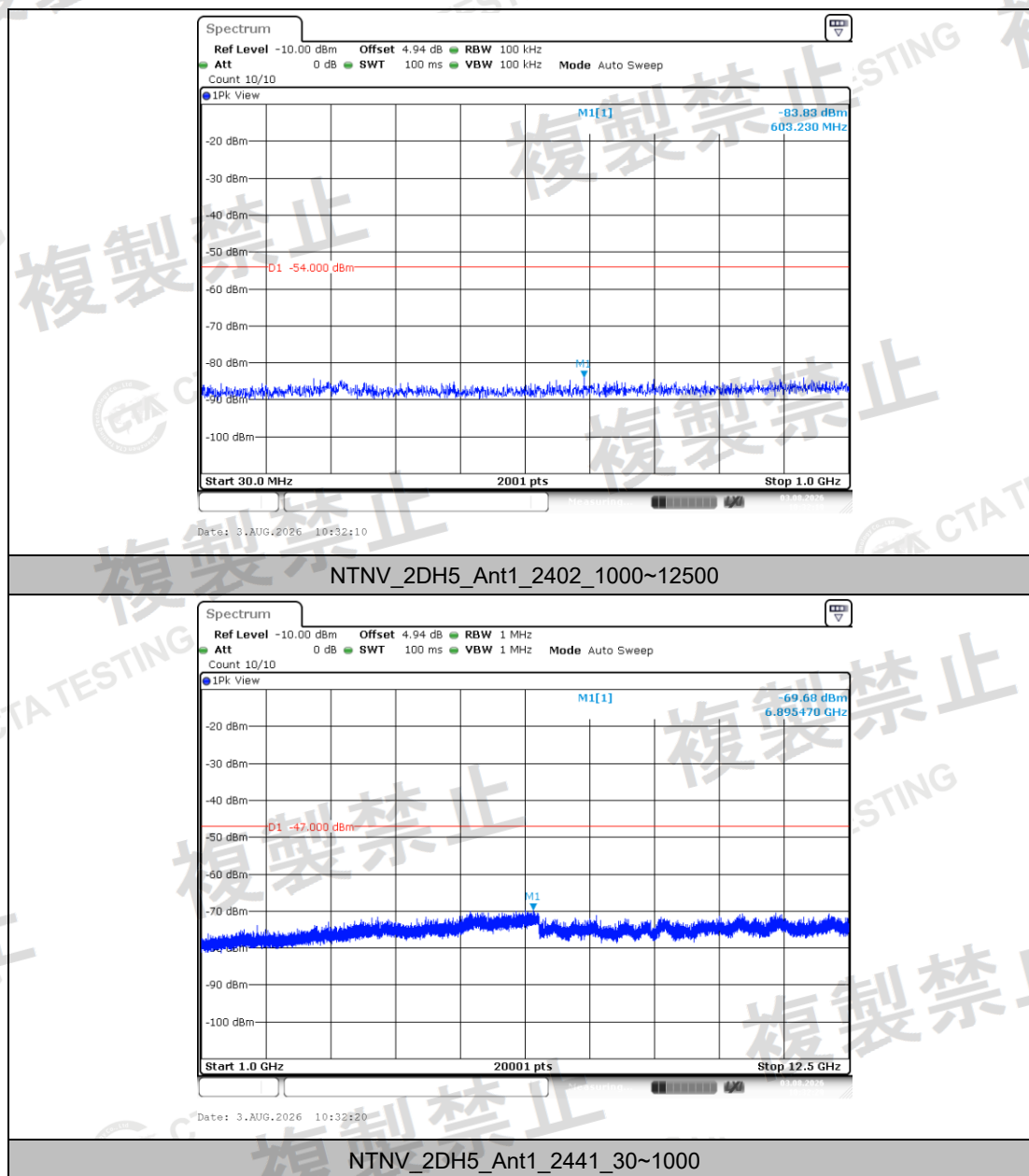
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

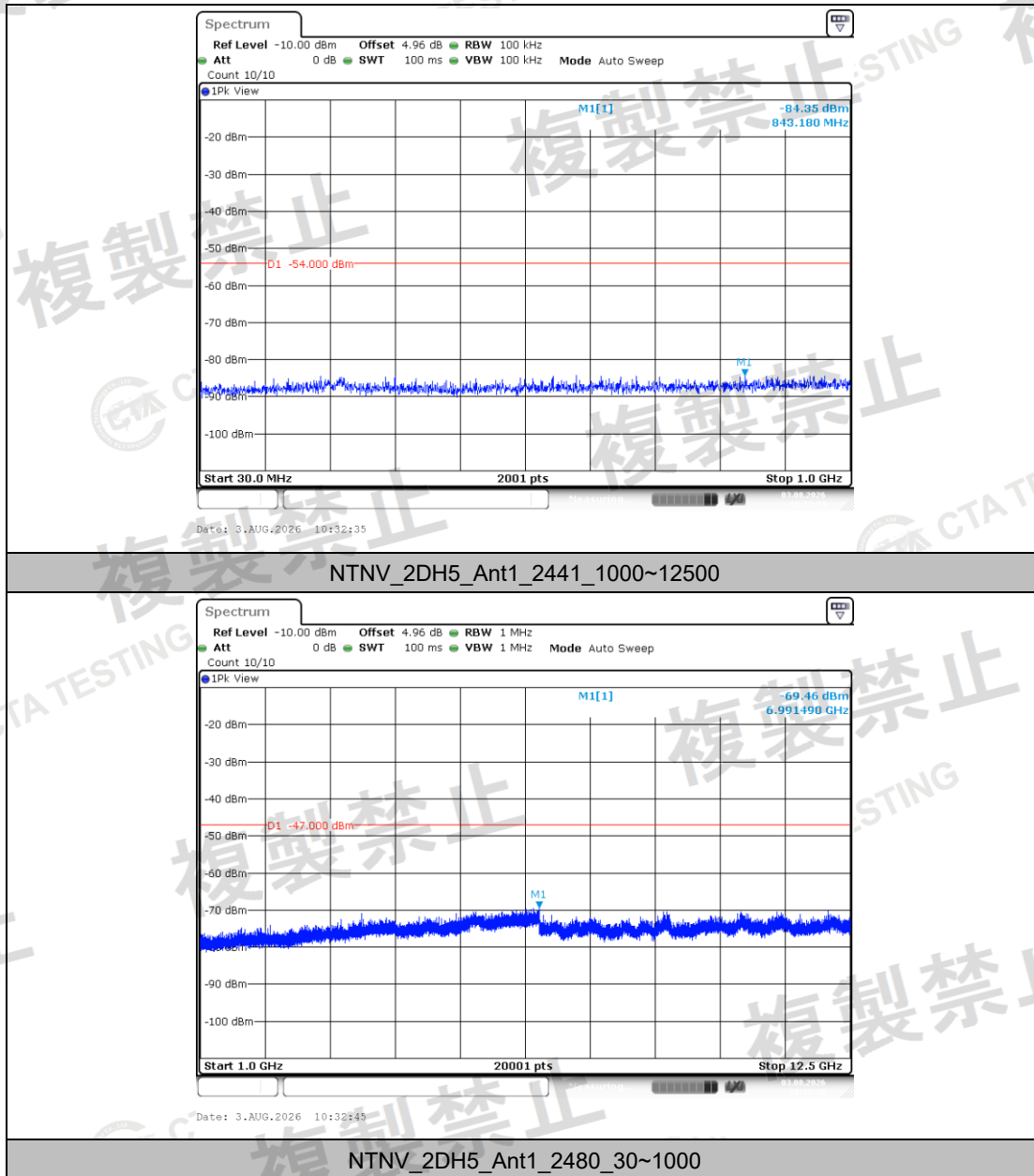
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

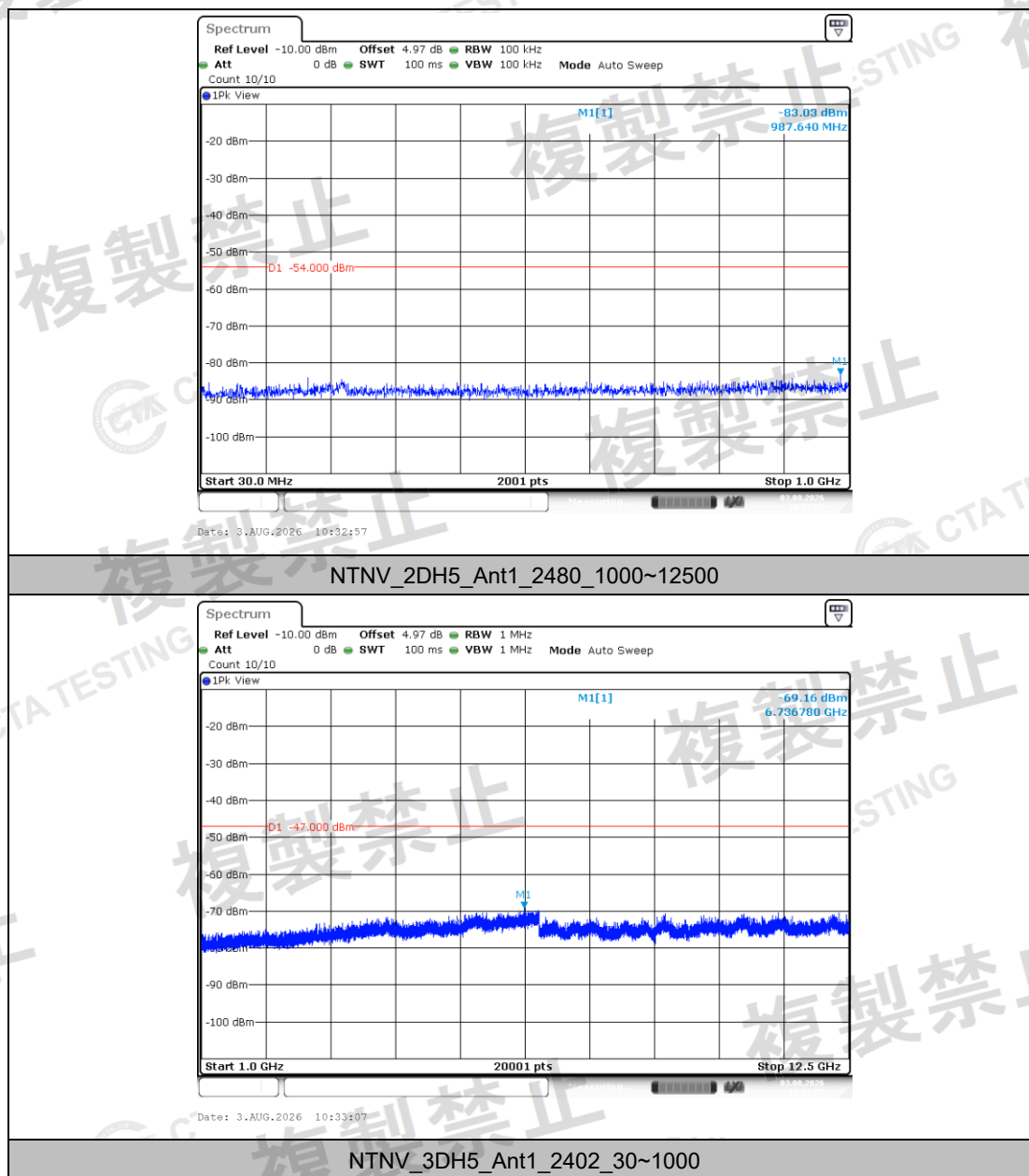
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

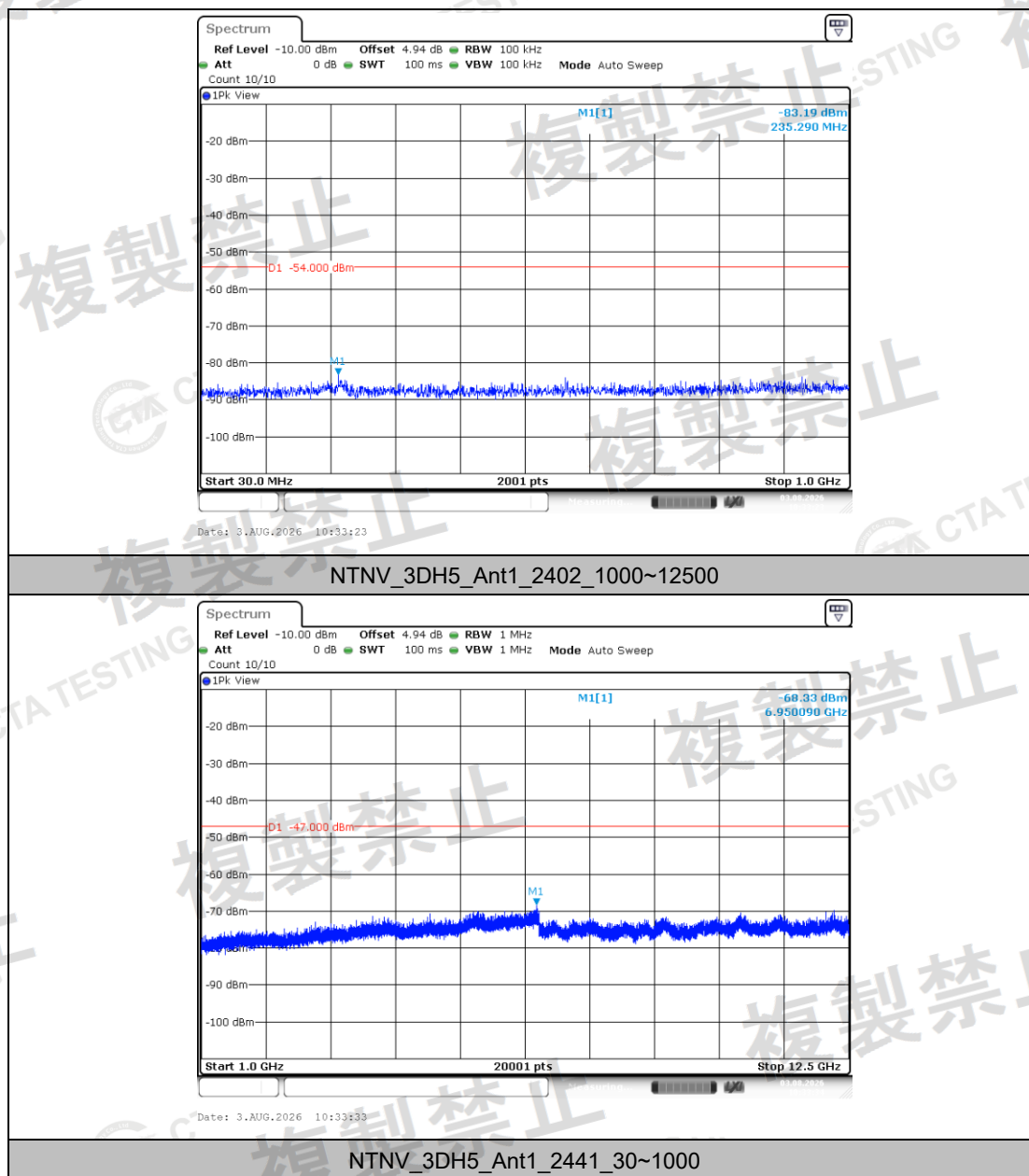
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

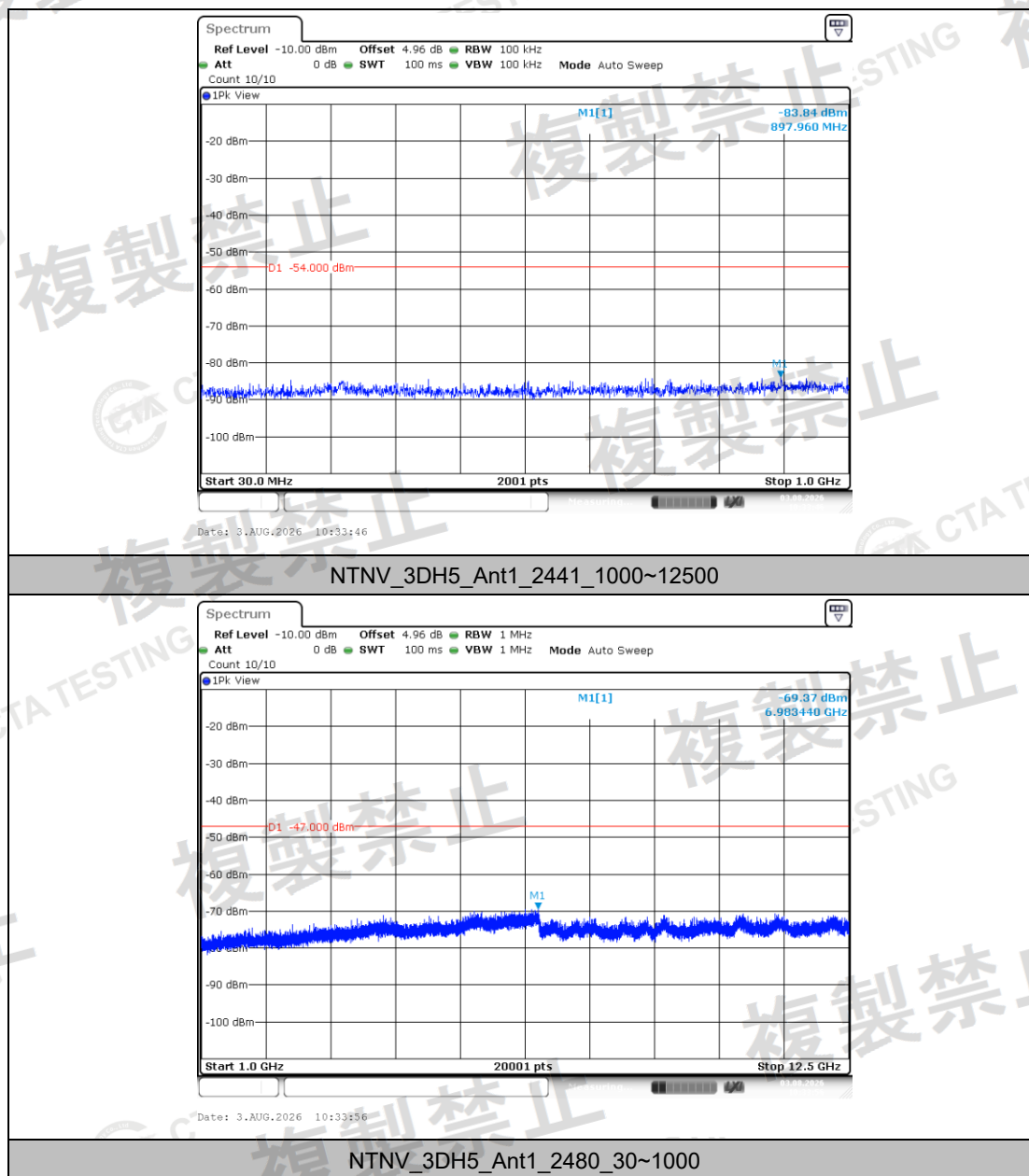
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

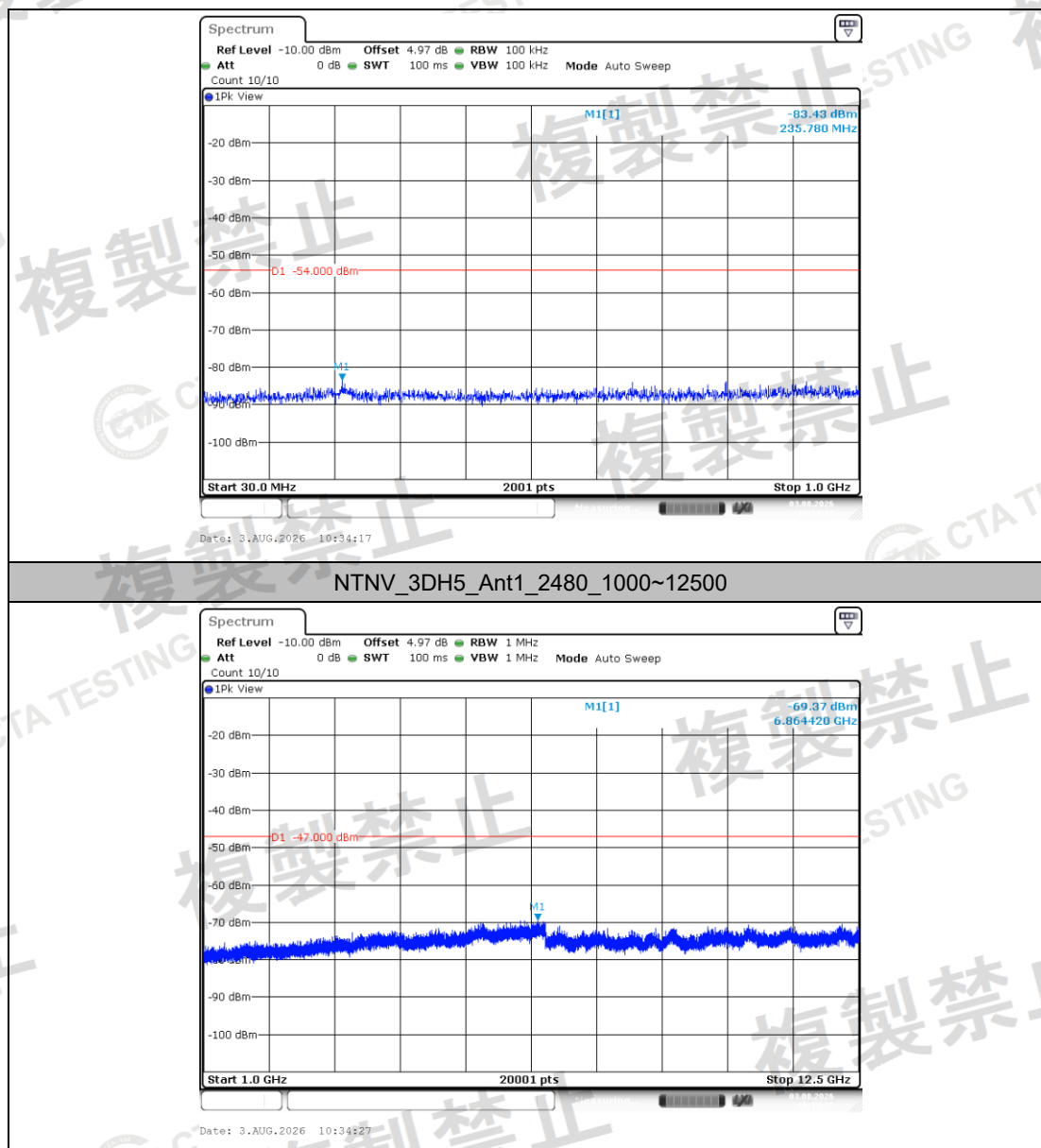
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China

Appendix F: Dwell Time

Test Result

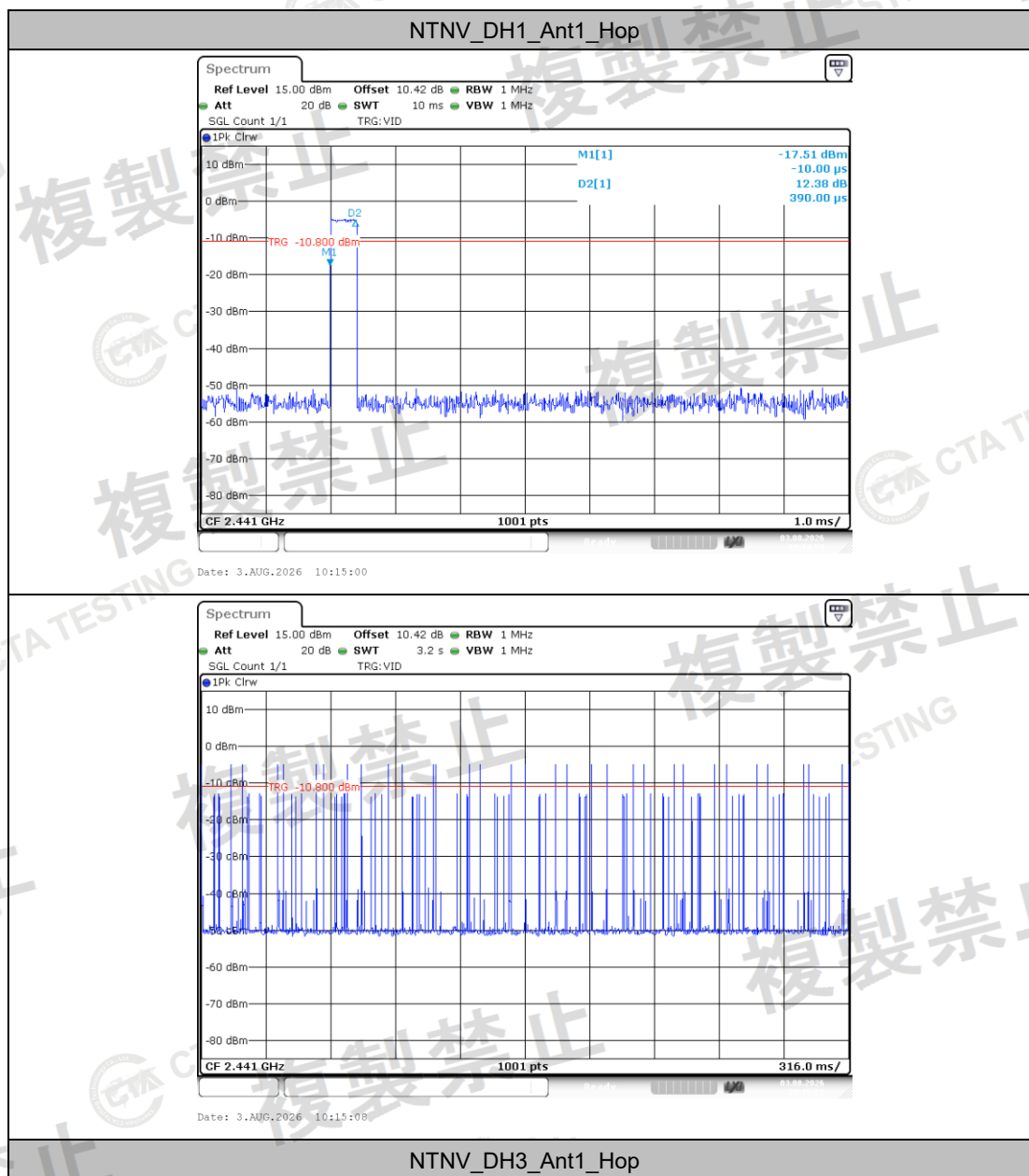
Test Condition	Test Mode	Antenna	Freq(M Hz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit [s]	Verdict
NTNV	DH1	Ant1	Hop	0.39	310	0.121	≤0.4	PASS
	DH3	Ant1	Hop	1.65	160	0.264	≤0.4	PASS
	DH5	Ant1	Hop	2.90	80	0.232	≤0.4	PASS
	2DH1	Ant1	Hop	0.40	290	0.116	≤0.4	PASS
	2DH3	Ant1	Hop	1.65	150	0.248	≤0.4	PASS
	2DH5	Ant1	Hop	2.90	120	0.348	≤0.4	PASS
	3DH1	Ant1	Hop	0.40	300	0.12	≤0.4	PASS
	3DH3	Ant1	Hop	1.64	160	0.262	≤0.4	PASS
	3DH5	Ant1	Hop	2.90	70	0.203	≤0.4	PASS



Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China

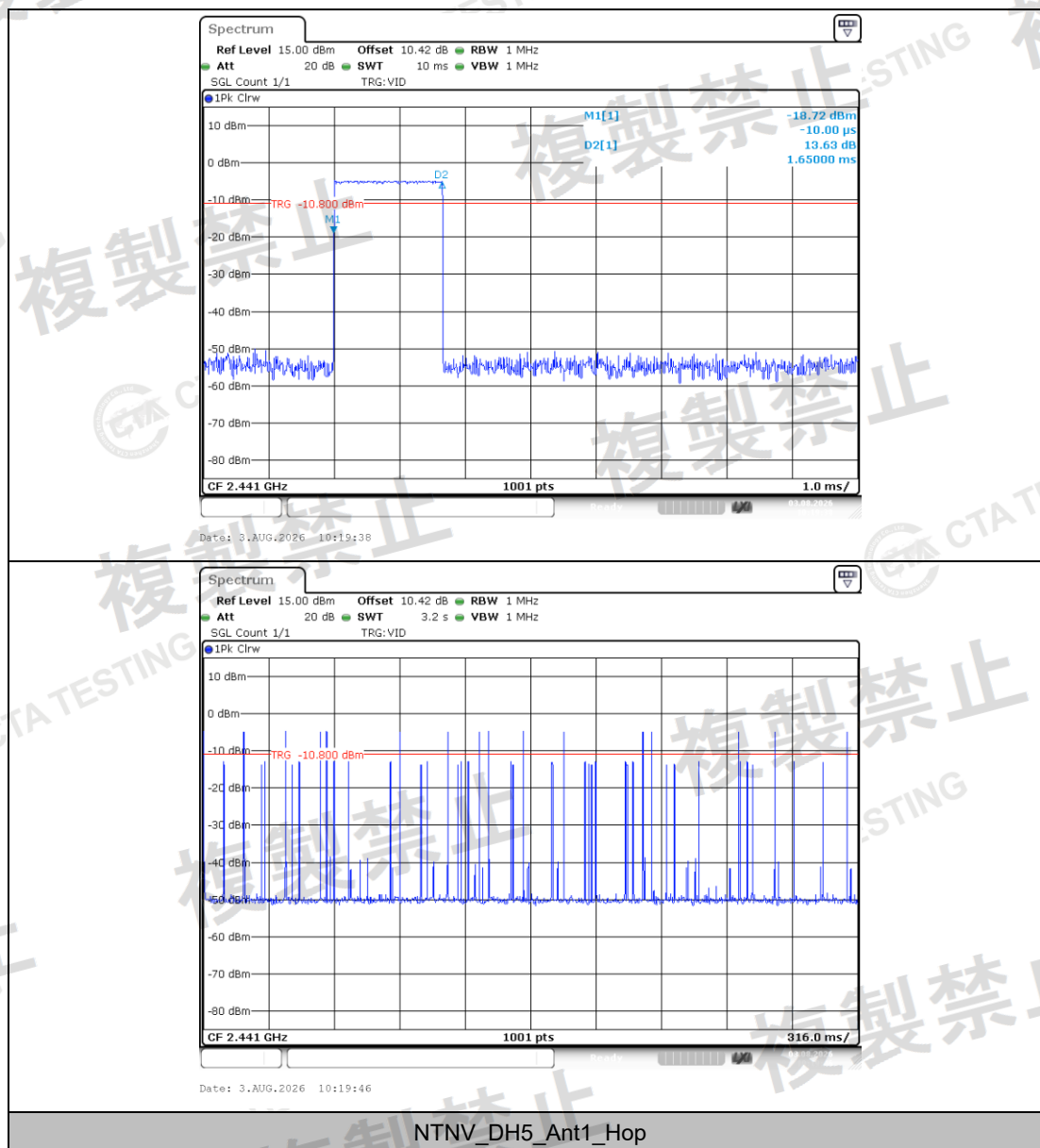
Test Graphs





Shenzhen CTA Testing Technology Co., Ltd.

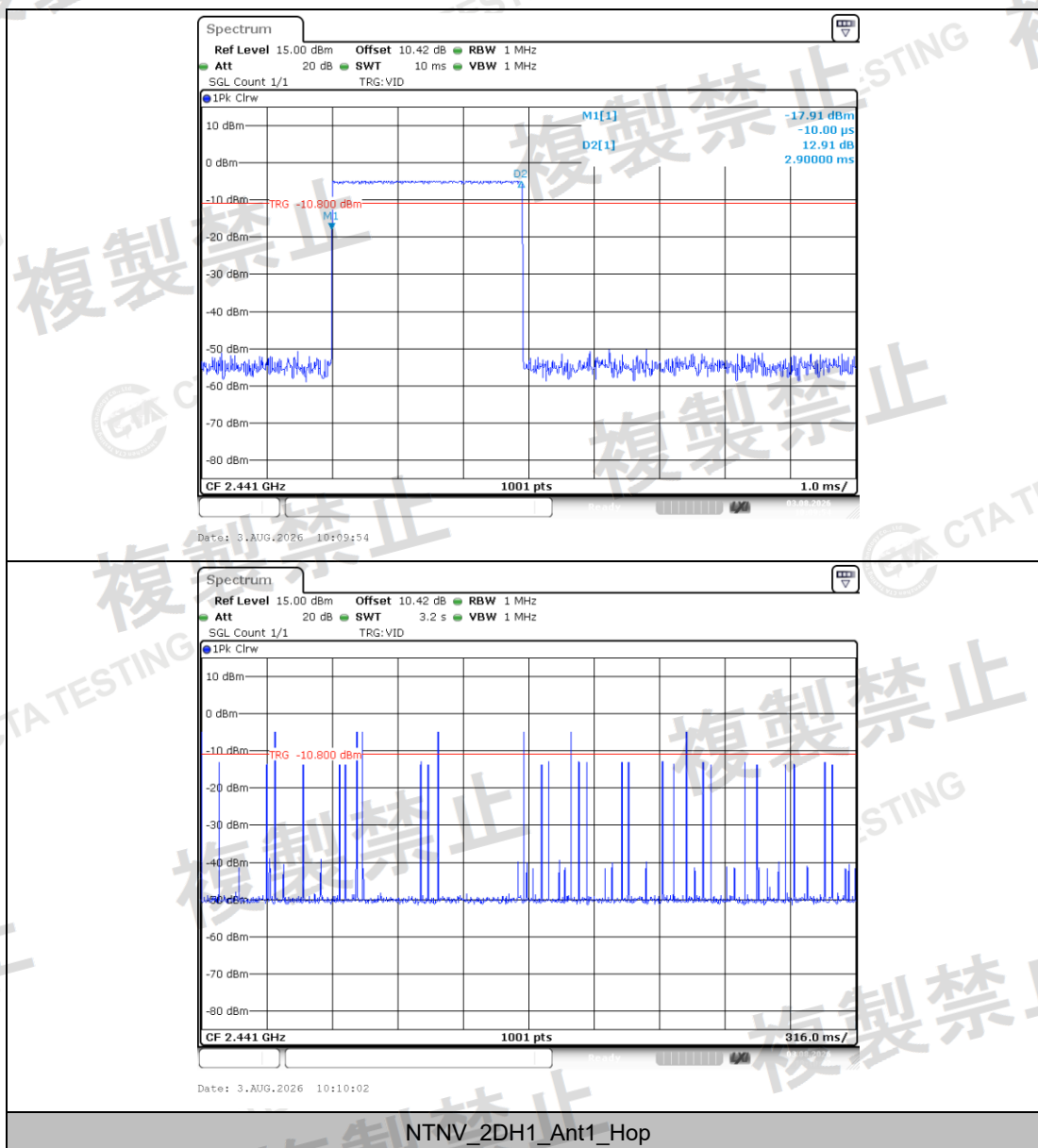
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

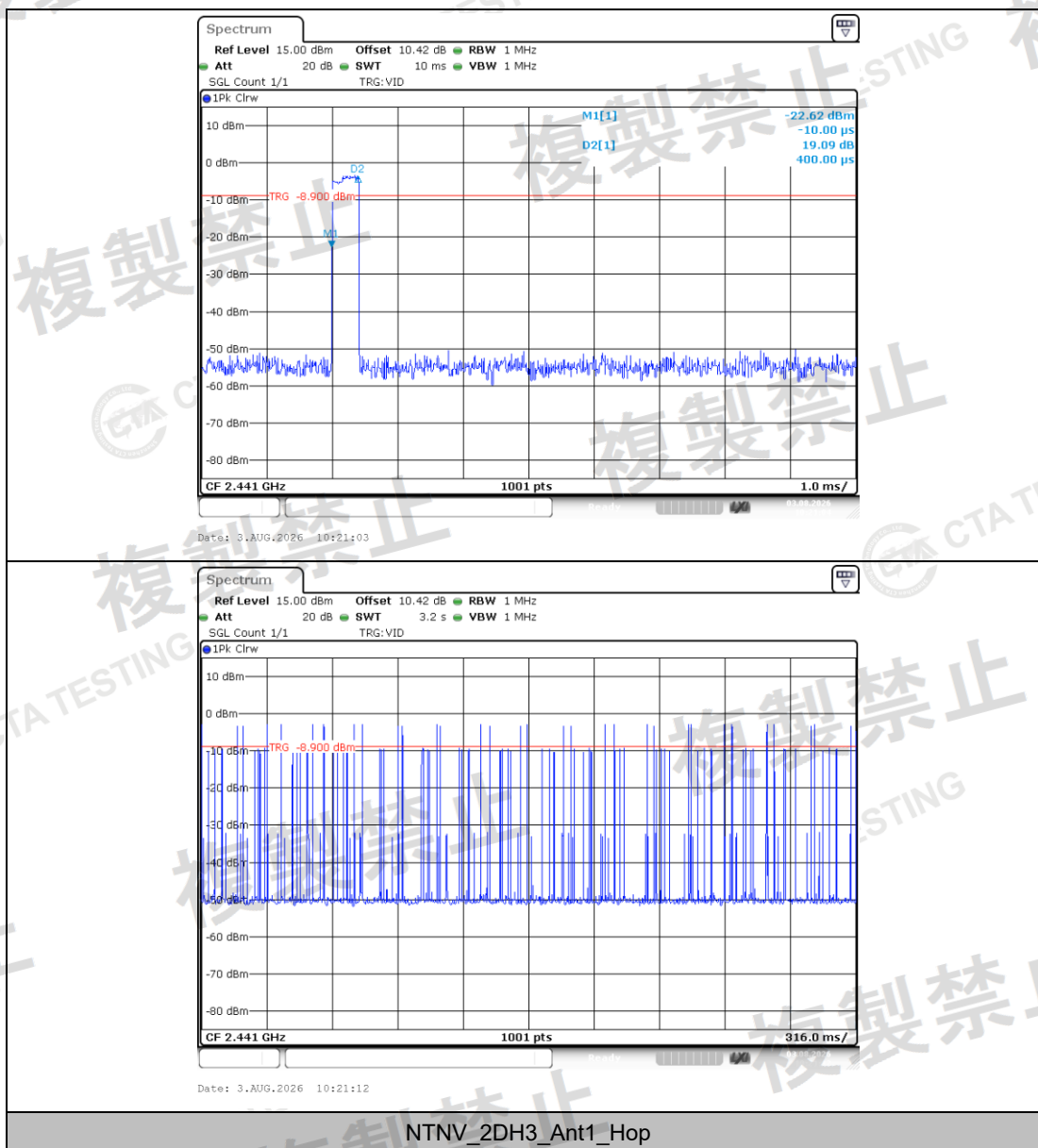
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

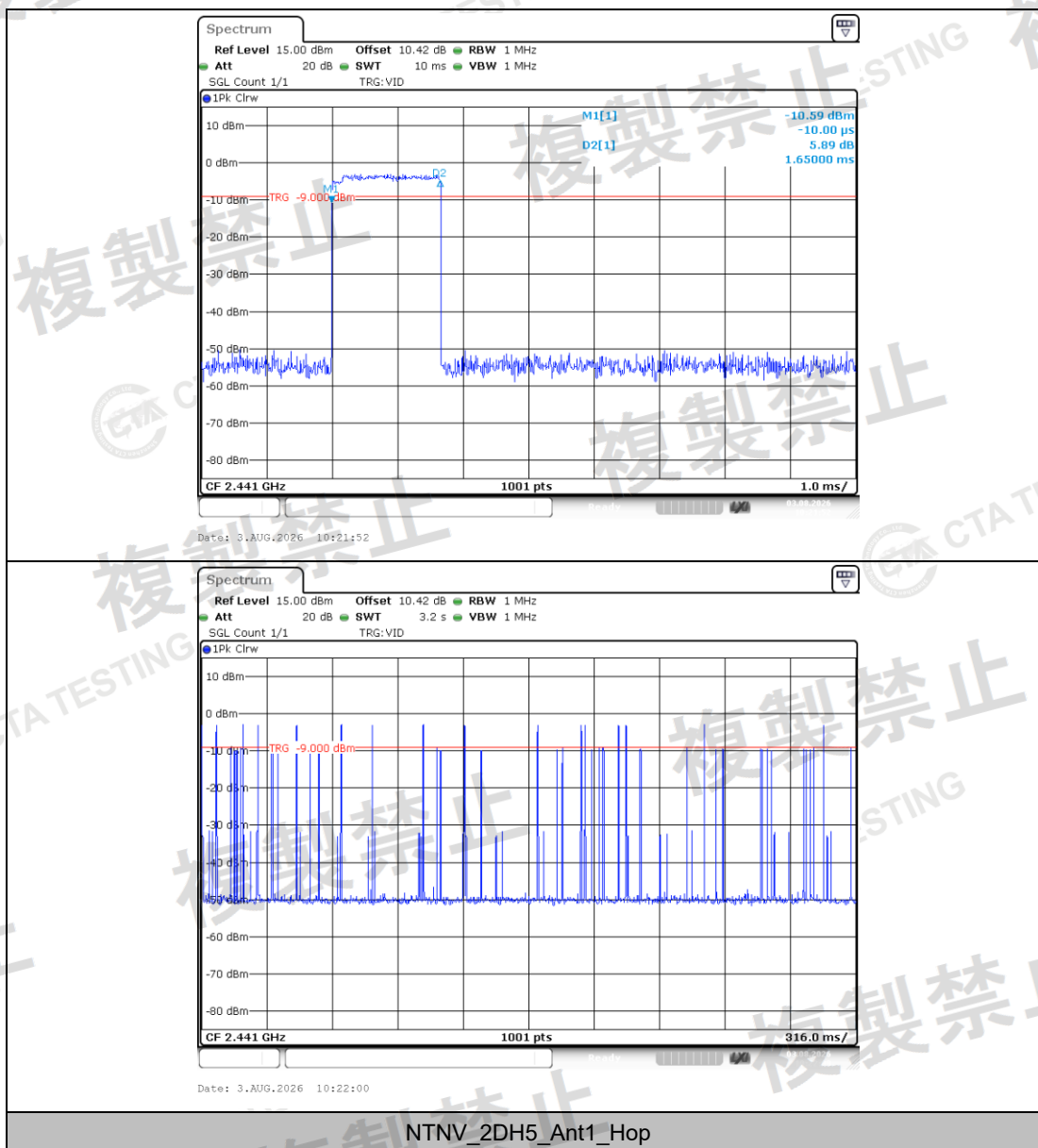
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

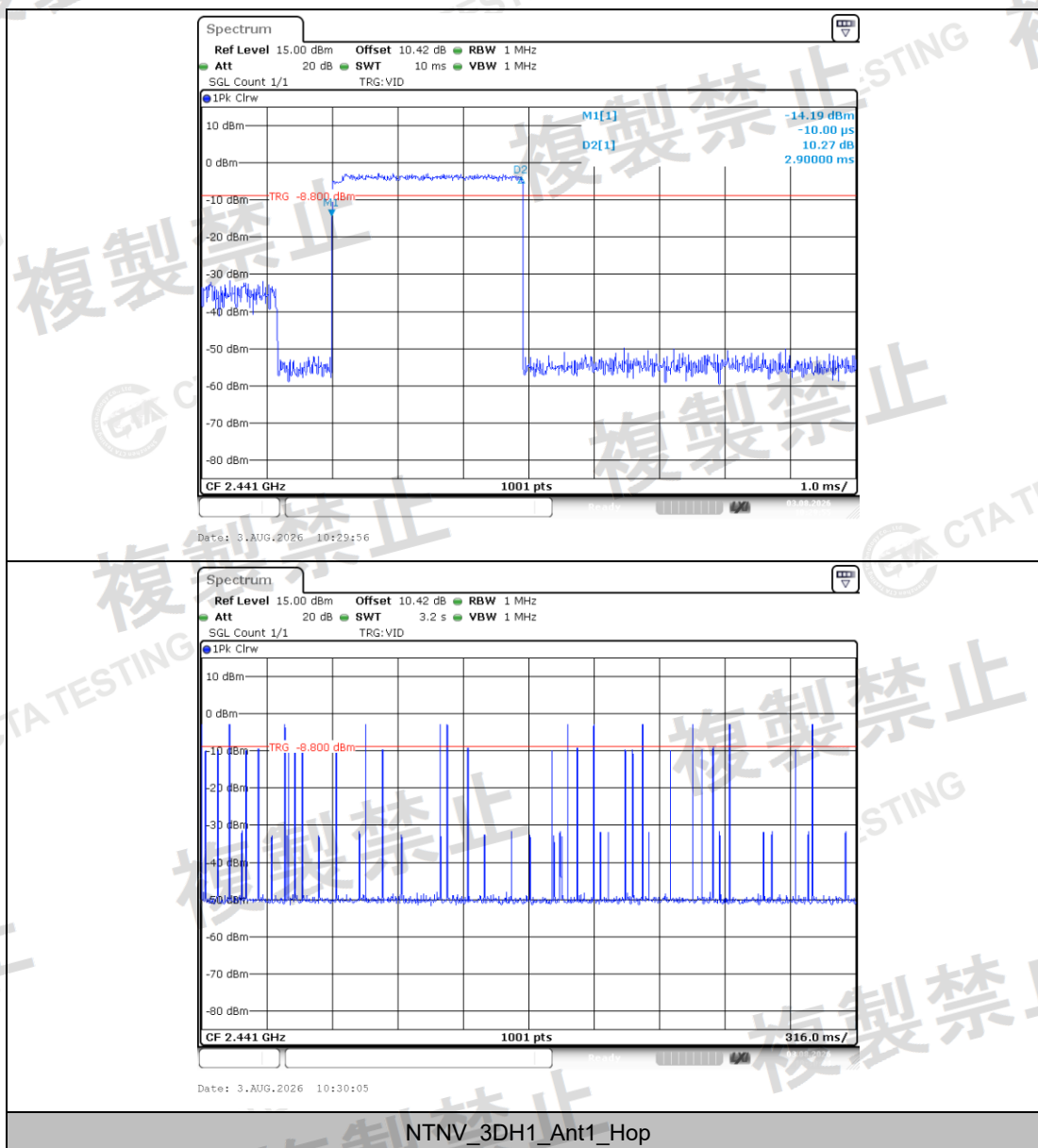
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

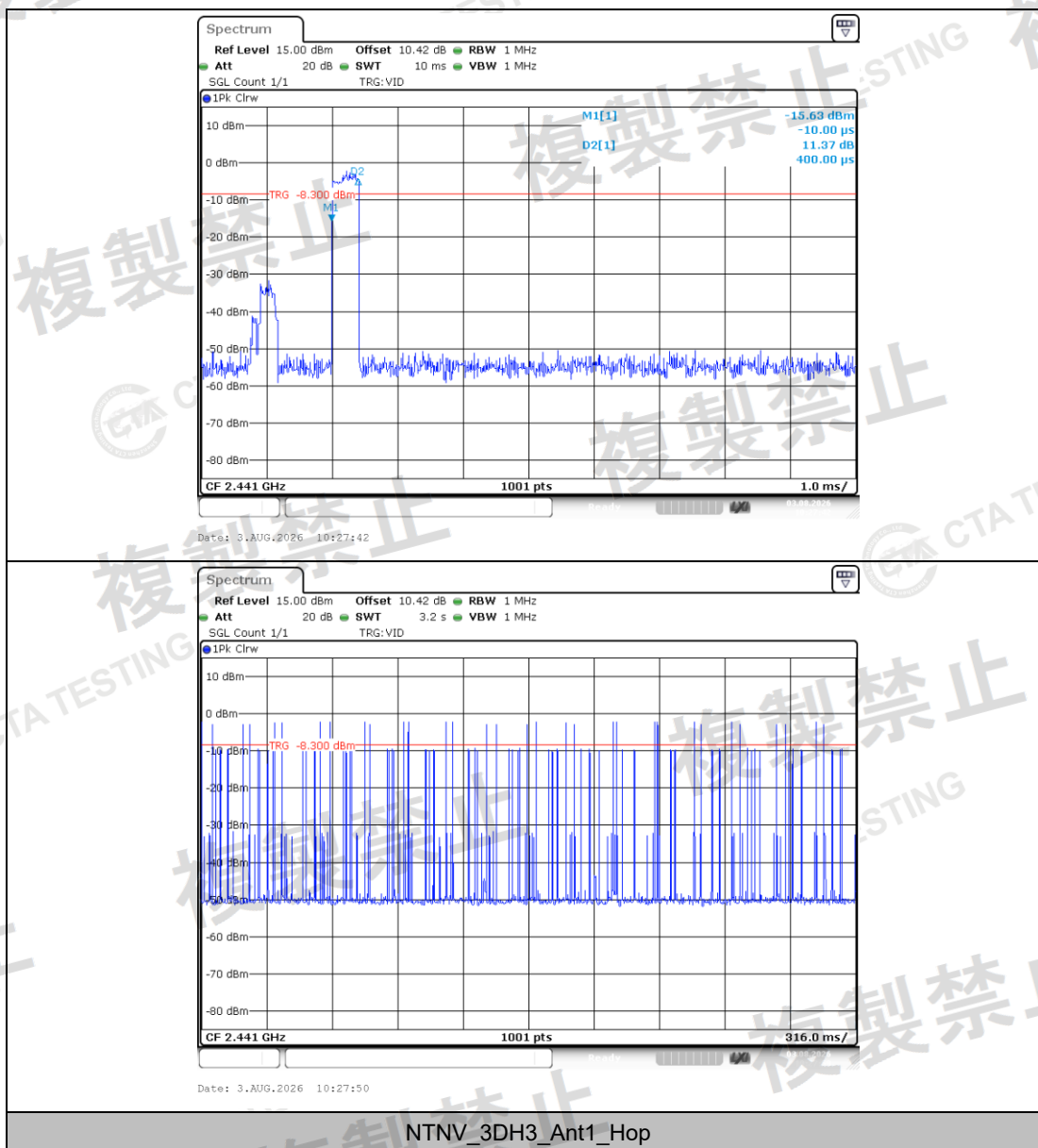
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

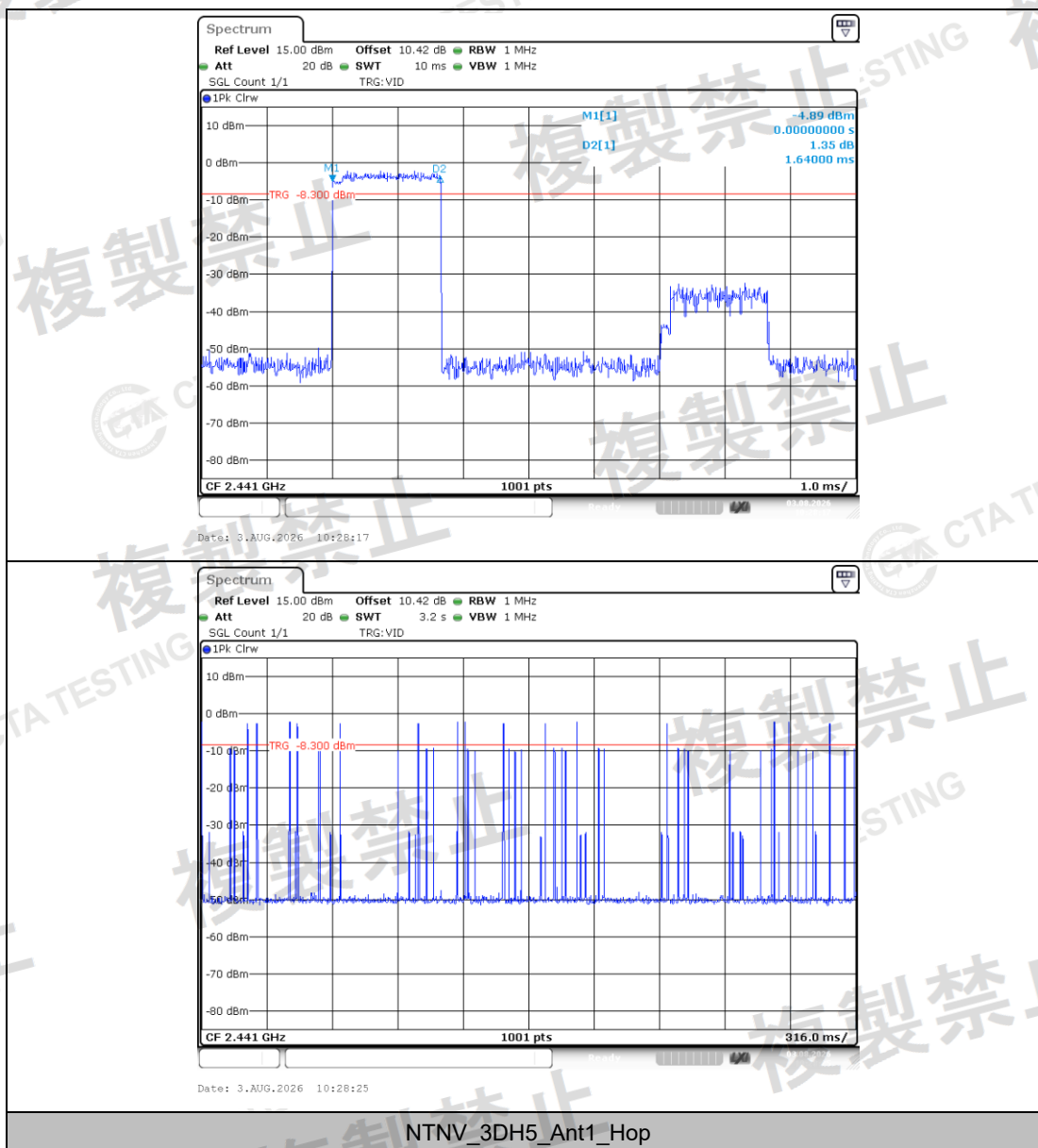
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China





Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China

