



Appendix B for BT LE Test Data

Product Name: Android Media Player

Test Model: KRC-ANBOX

Environmental Conditions

Temperature:	23.4°C
Relative Humidity:	52.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Jerry Chu
Supervised by:	Can Kun





B.1 Frequency Error

Test Result

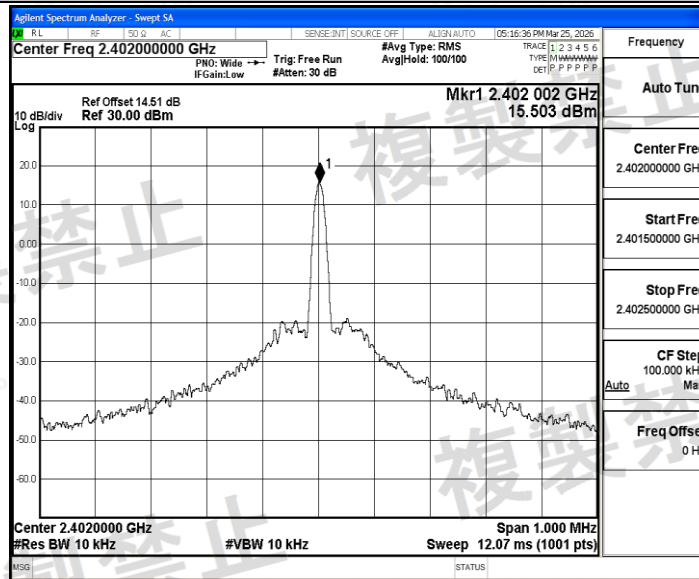
TestCondition	TestMode	Antenna	Frequency[MHz]	Result[ppm]	Limit[ppm]	Verdict
NTNV	Frequency Error	Ant1	2402	0.83264	±50	PASS
			2440	0.81967	±50	PASS
			2480	0.40323	±50	PASS



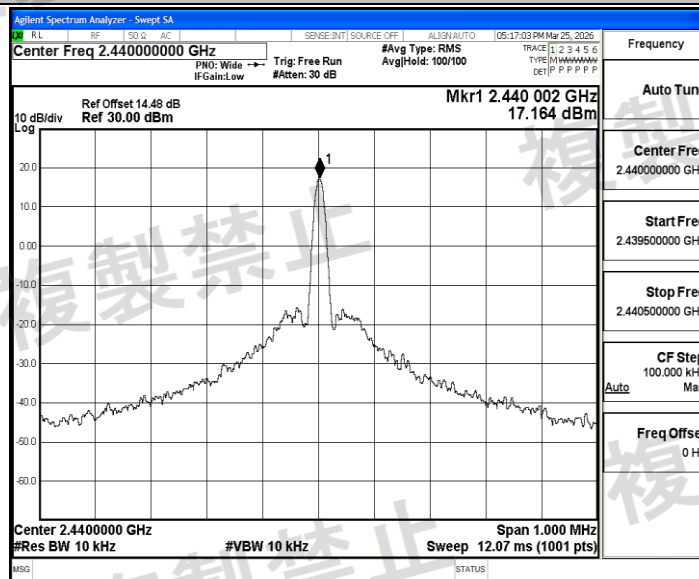


Test Graphs

NTNV_Ant1_2402

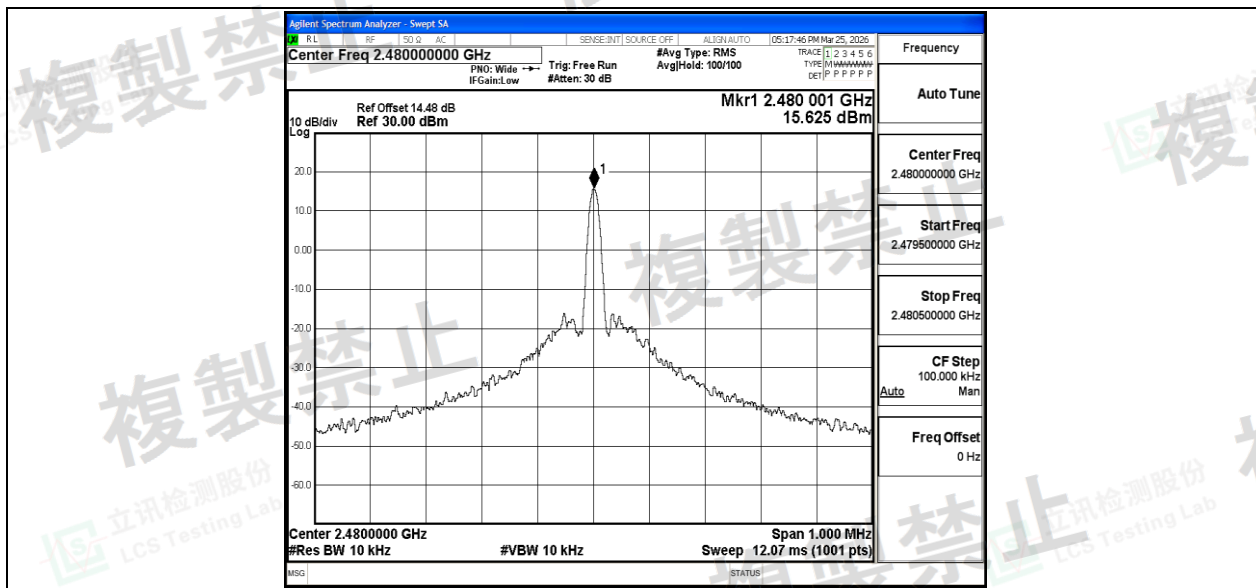


NTNV_Ant1_2440



NTNV_Ant1_2480







B.2 Antenna Power & EIRP

Test Result

Antenna Power							
TestCondition	TestMode	Antenna	Frequency[MHz]	Result [dBm]	Result [mW]	Limit [mW]	Verdict
NTNV	BLE_1M	Ant1	2402	1.12	1.2942	≤10	PASS
			2440	1.53	1.4223	≤10	PASS
			2480	1.80	1.5136	≤10	PASS
NTNV	BLE_2M	Ant1	2402	1.89	1.5453	≤10	PASS
			2440	1.45	1.3964	≤10	PASS
			2480	1.84	1.5276	≤10	PASS

Tolerance								
Test Condition	Test Mode	Antenna	Frequency[MHz]	Power (mW)	Rated Power (mW)	Result (%)	Limit (%)	Verdict
NTNV	BLE_1M	Ant1	2402	1.2942	1.5	-13.72	+20	PASS
			2440	1.4223	1.5	-5.18	+20	PASS
			2480	1.5136	1.5	0.91	+20	PASS
NTNV	BLE_2M	Ant1	2402	1.5453	1.5	3.02	+20	PASS
			2440	1.3964	1.5	-6.91	+20	PASS
			2480	1.5276	1.5	1.84	+20	PASS

EIRP								
TestCondition	TestMode	Antenna	Frequency[MHz]	Measured Power (dBm/MHz)	Antenna gain (dBi)	EIRP (dBm)	Limit (dBm)	Verdict
NTNV	BLE_1M	Ant1	2402	1.12	6.1	7.22	≤12.14	PASS
			2440	1.53	6.1	7.63	≤12.14	PASS
			2480	1.80	6.1	7.9	≤12.14	PASS
NTNV	BLE_1M	Ant1	2402	1.89	6.1	7.99	≤12.14	PASS
			2440	1.45	6.1	7.55	≤12.14	PASS
			2480	1.84	6.1	7.94	≤12.14	PASS





B.3 Occupied Bandwidth

Test Result

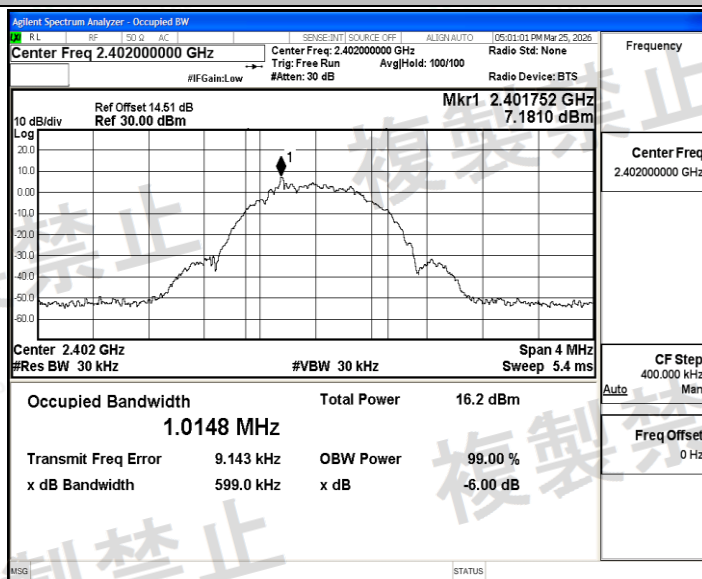
TestCondition	TestMode	Antenna	Frequency[MHz]	Result [MHz]	Limit [MHz]	Verdict
NTNV	BLE_1M	Ant1	2402	1.015	≤26	PASS
			2440	1.017	≤26	PASS
			2480	1.017	≤26	PASS
	BLE_2M	Ant1	2402	2.023	≤26	PASS
			2440	2.017	≤26	PASS
			2480	2.029	≤26	PASS



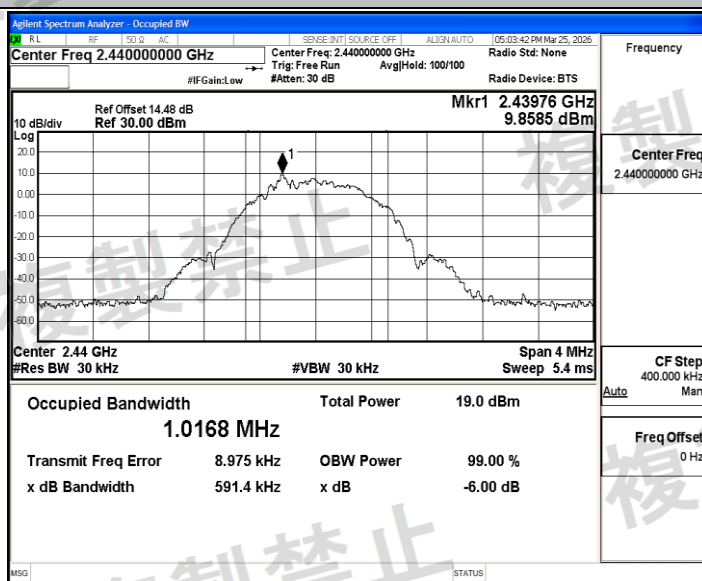


Test Graphs

NTNV_BLE_1M_Ant1_2402

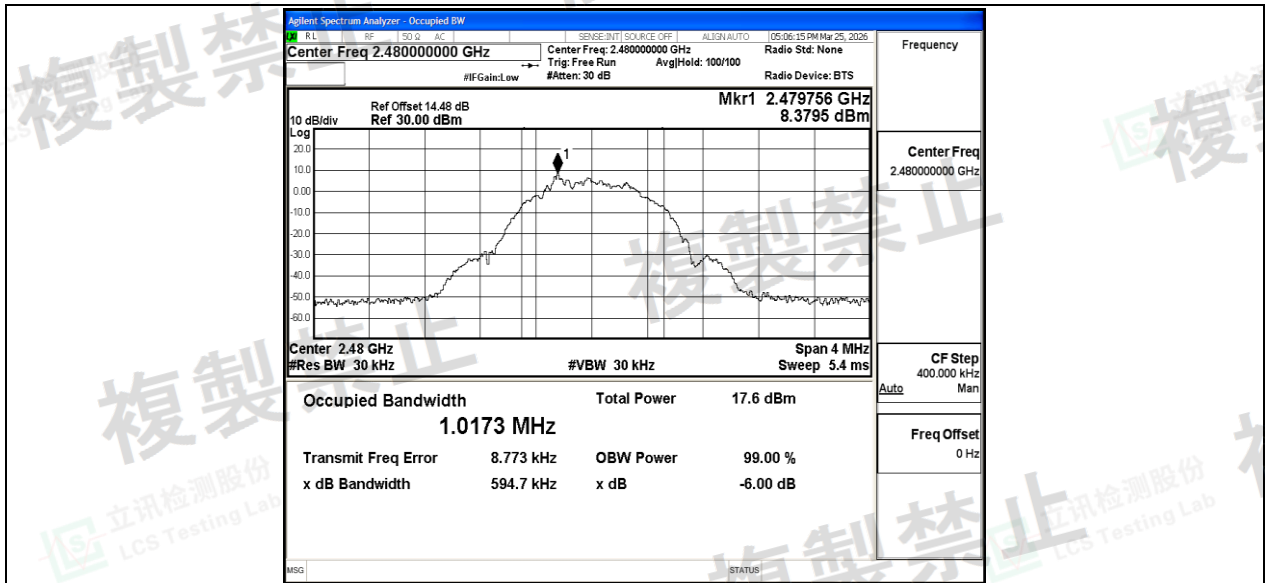


NTNV_BLE_1M_Ant1_2440

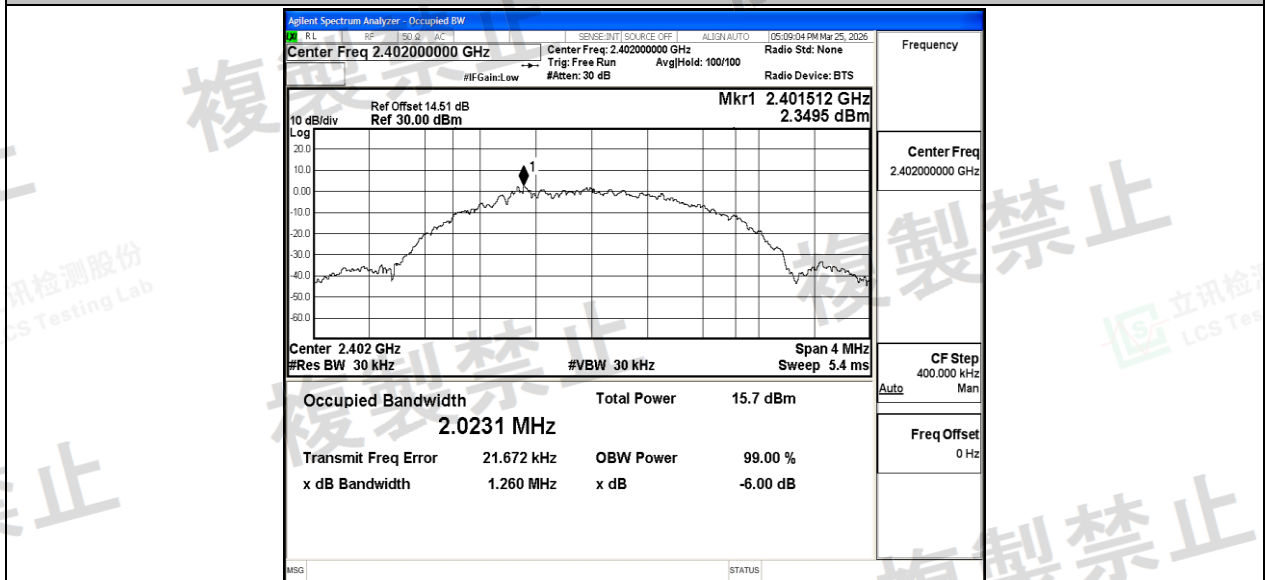


NTNV_BLE_1M_Ant1_2480

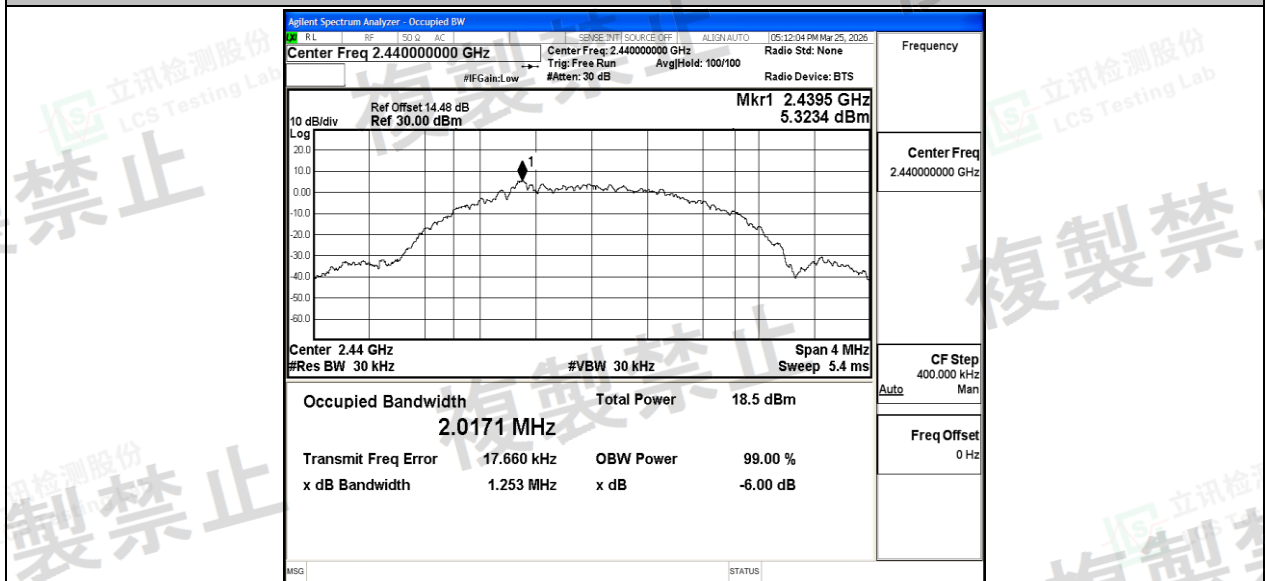


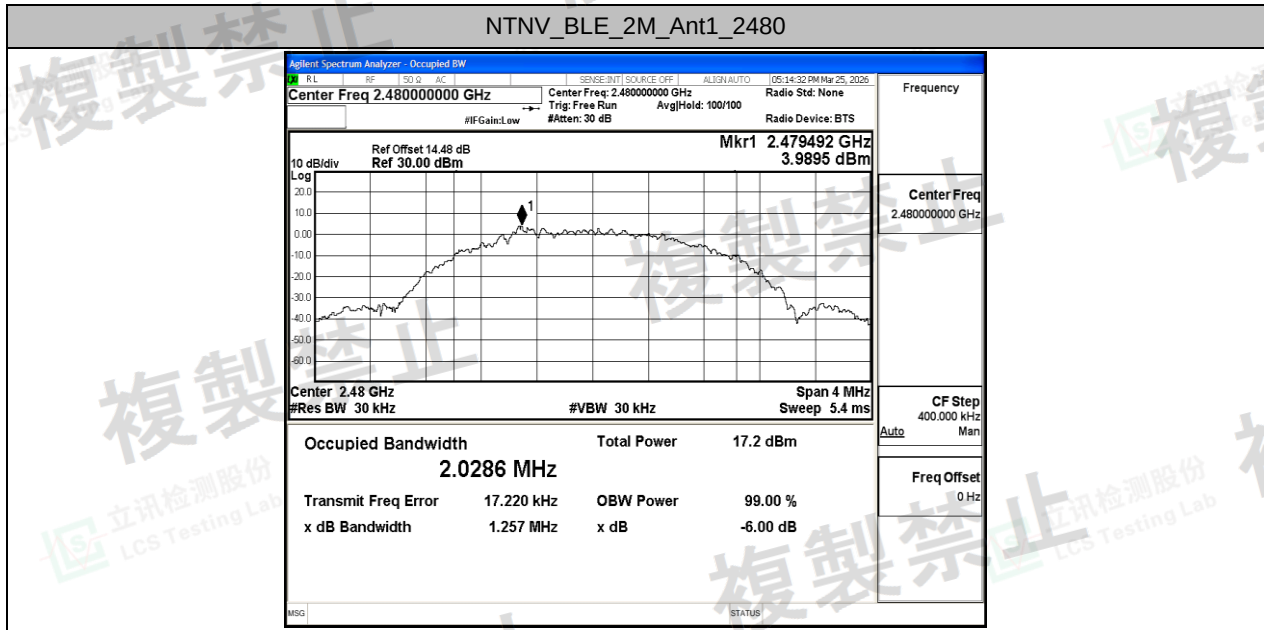


NTNV_BLE_2M_Ant1_2402



NTNV_BLE_2M_Ant1_2440







B.4 Spread Bandwidth

Test Result

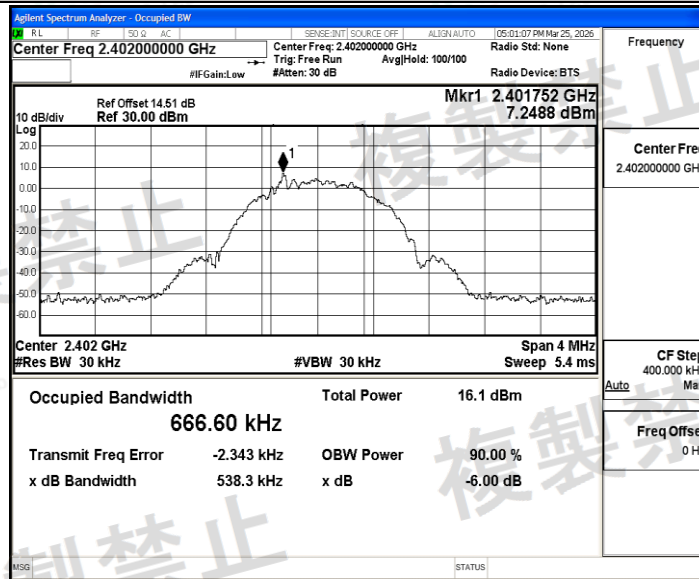
TestCondition	TestMode	Antenna	Frequency[MHz]	Result [MHz]	Limit [MHz]	Verdict
NTNV	BLE_1M	Ant1	2402	0.667	---	PASS
			2440	0.666	---	PASS
			2480	0.659	---	PASS
	BLE_2M	Ant1	2402	1.341	---	PASS
			2440	1.340	---	PASS
			2480	1.337	---	PASS



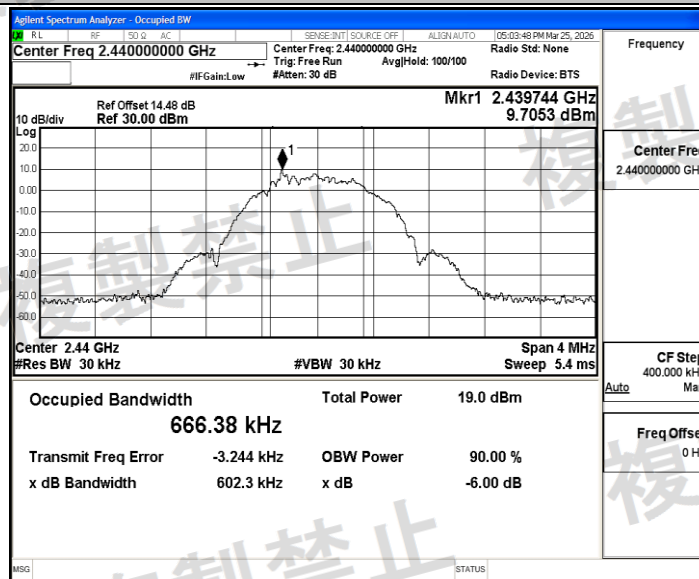


Test Graphs

NTNV_BLE_1M_Ant1_2402

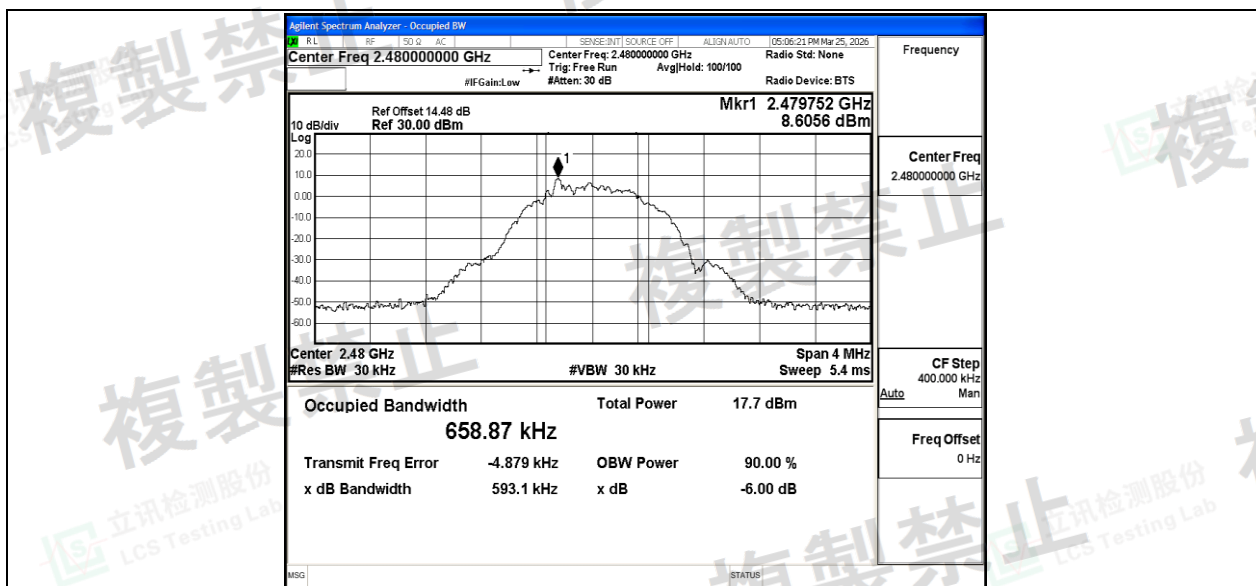


NTNV_BLE_1M_Ant1_2440

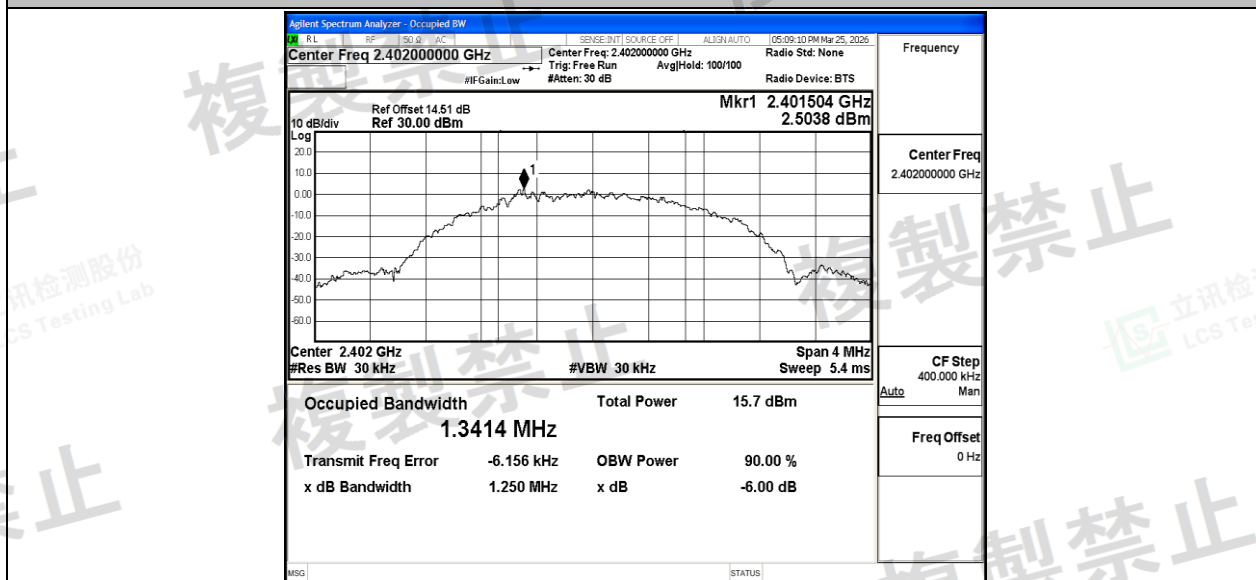


NTNV_BLE_1M_Ant1_2480

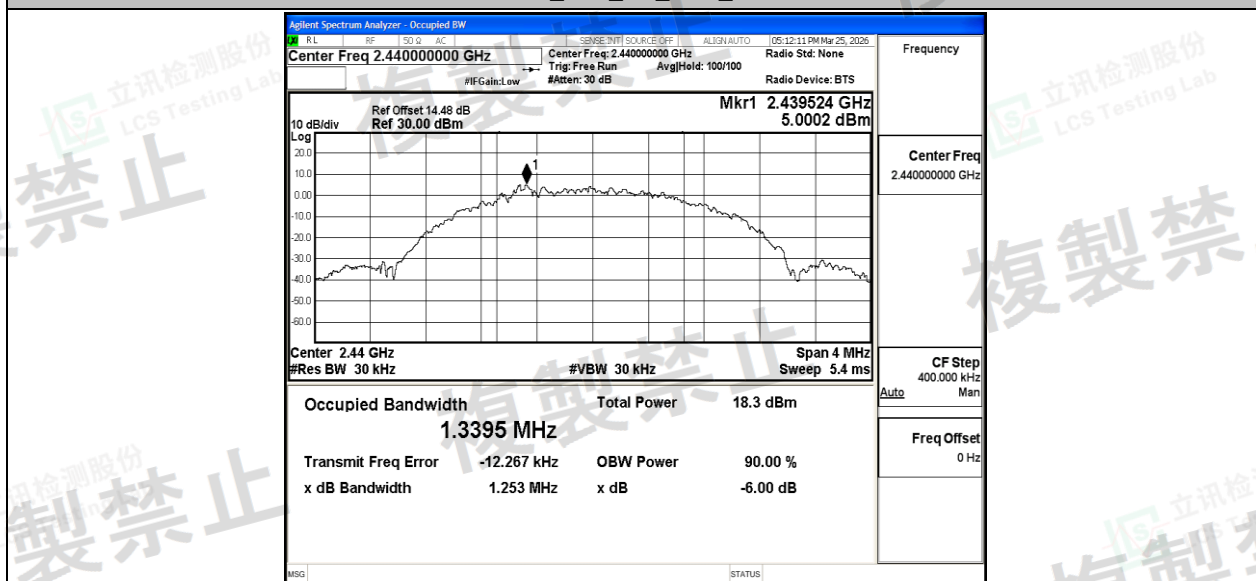


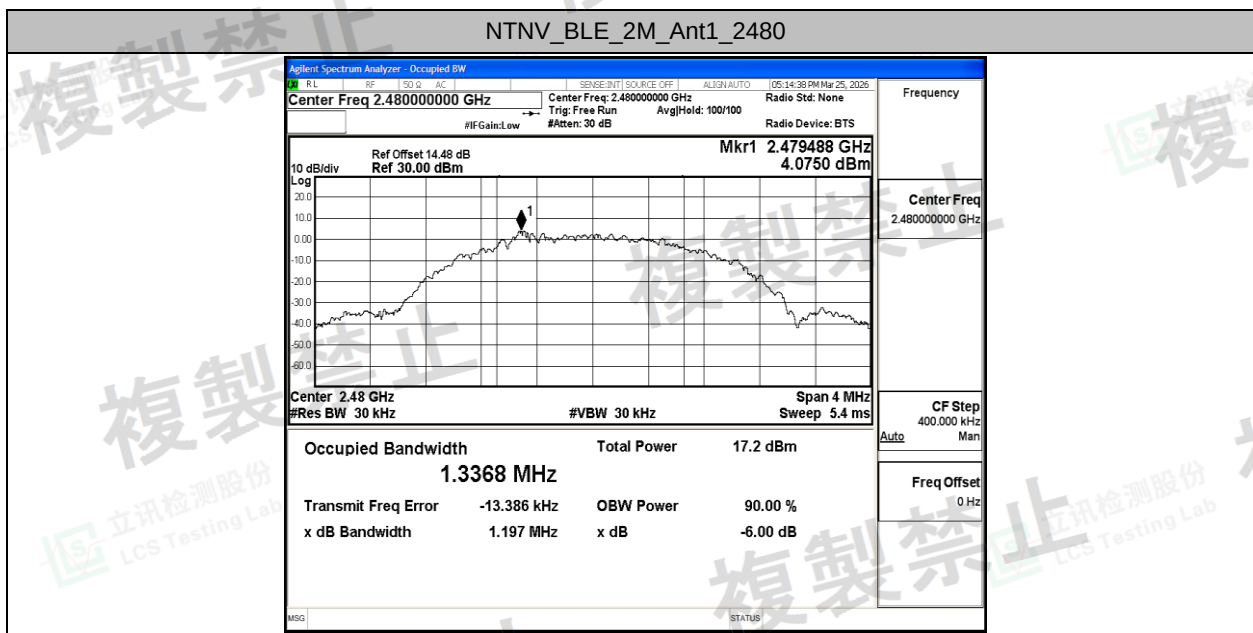


NTNV_BLE_2M_Ant1_2402



NTNV_BLE_2M_Ant1_2440







B.5 Spurious Emission of TX

Test Result

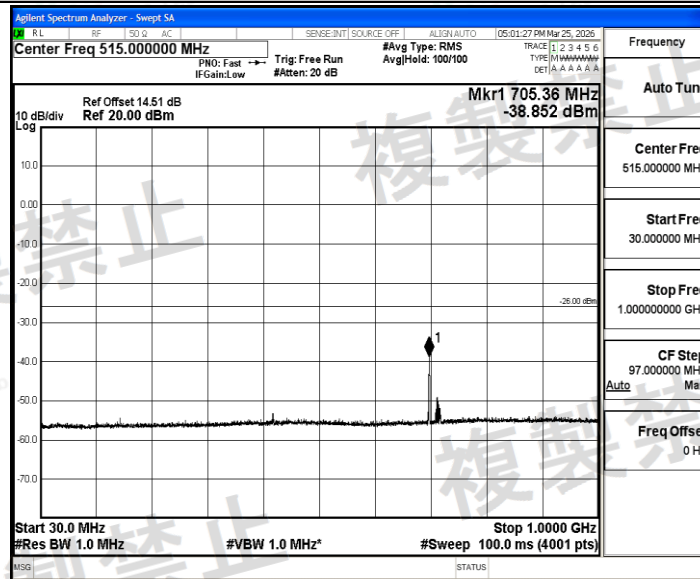
TestCondition	TestMode	Antenna	Frequency [MHz]	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	BLE_1 M	Ant1	2402	30~1000	-38.85	≤-26	0.13032	≤2.5	PASS
				1000~2387	-52.74	≤-26	0.00532	≤2.5	PASS
				2387~2400	-33.58	≤-16	0.43853	≤25	PASS
				2483.5~2496.5	-43.29	≤-16	0.04688	≤25	PASS
				2496.5~13000	-45.56	≤-26	0.02780	≤2.5	PASS
			2440	30~1000	-53.99	≤-26	0.00399	≤2.5	PASS
				1000~2387	-44.68	≤-26	0.03404	≤2.5	PASS
				2387~2400	-43.43	≤-16	0.04539	≤25	PASS
				2483.5~2496.5	-43.19	≤-16	0.04797	≤25	PASS
				2496.5~13000	-41.54	≤-26	0.07015	≤2.5	PASS
			2480	30~1000	-53.41	≤-26	0.00456	≤2.5	PASS
				1000~2387	-45.23	≤-26	0.02999	≤2.5	PASS
				2387~2400	-43.46	≤-16	0.04508	≤25	PASS
				2483.5~2496.5	-43.20	≤-16	0.04786	≤25	PASS
				2496.5~13000	-45.18	≤-26	0.03034	≤2.5	PASS
	BLE_2 M	Ant1	2402	30~1000	-53.72	≤-26	0.00425	≤2.5	PASS
				1000~2387	-49.46	≤-26	0.01132	≤2.5	PASS
				2387~2400	-17.87	≤-16	16.33052	≤25.1	PASS
				2483.5~2496.5	-43.21	≤-16	0.04775	≤25	PASS
				2496.5~13000	-42.46	≤-26	0.05675	≤2.5	PASS
			2440	30~1000	-37.23	≤-26	0.18923	≤2.5	PASS
				1000~2387	-52.69	≤-26	0.00538	≤2.5	PASS
				2387~2400	-43.37	≤-16	0.04603	≤25	PASS
				2483.5~2496.5	-43.31	≤-16	0.04667	≤25	PASS
				2496.5~13000	-45.65	≤-26	0.02723	≤2.5	PASS
			2480	30~1000	-53.62	≤-26	0.00435	≤2.5	PASS
				1000~2387	-46.76	≤-26	0.02109	≤2.5	PASS
				2387~2400	-43.18	≤-16	0.04808	≤25	PASS
				2483.5~2496.5	-42.94	≤-16	0.05082	≤25	PASS
				2496.5~13000	-45.72	≤-26	0.02679	≤2.5	PASS



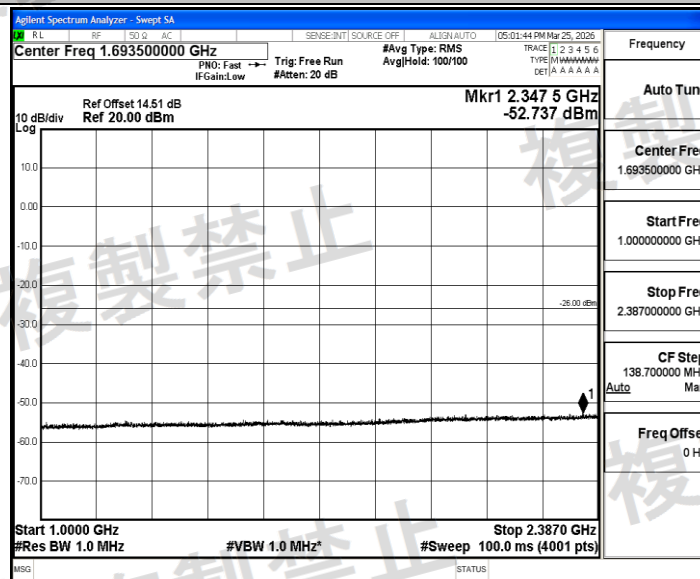


Test Graphs

NTNV_BLE_1M_Ant1_2402_30~1000

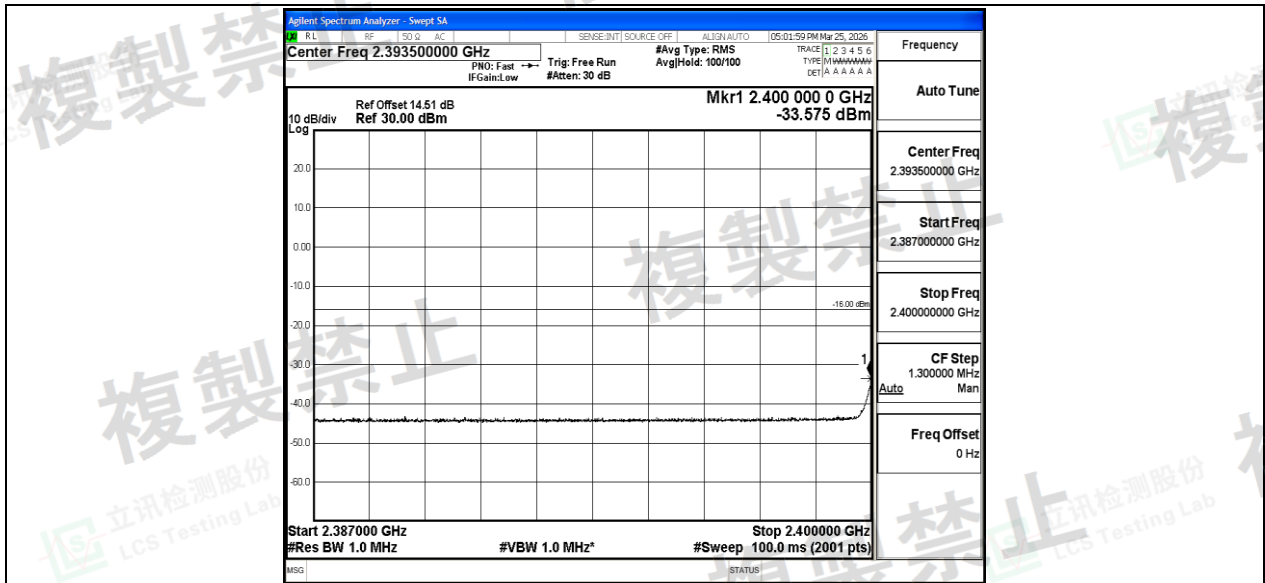


NTNV_BLE_1M_Ant1_2402_1000~2387

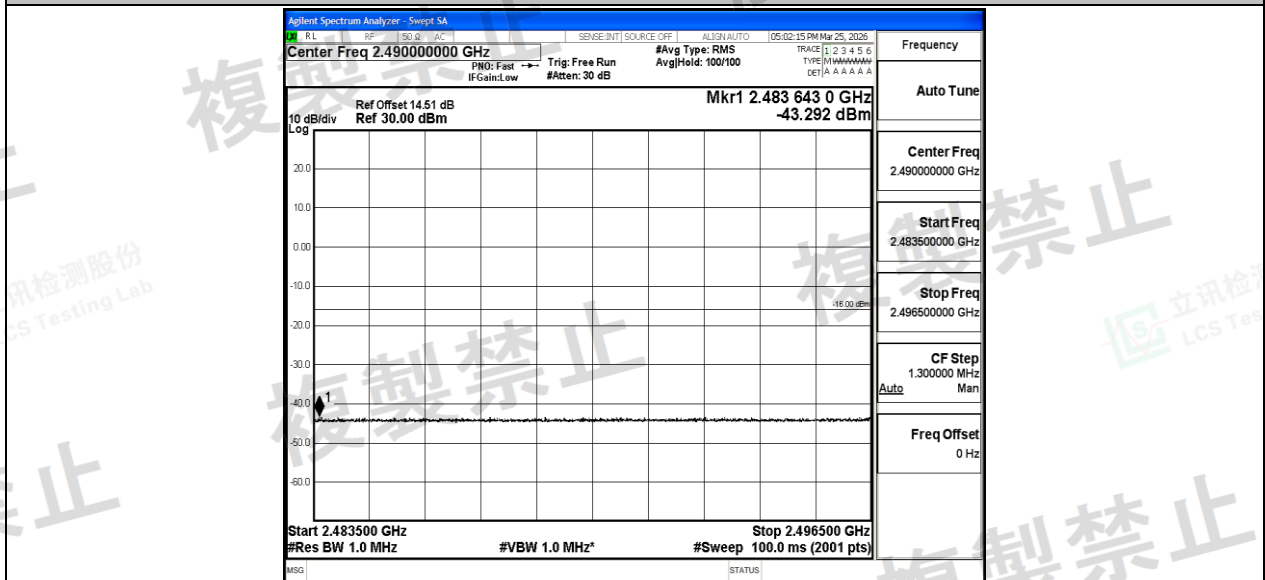


NTNV_BLE_1M_Ant1_2402_2387~2400

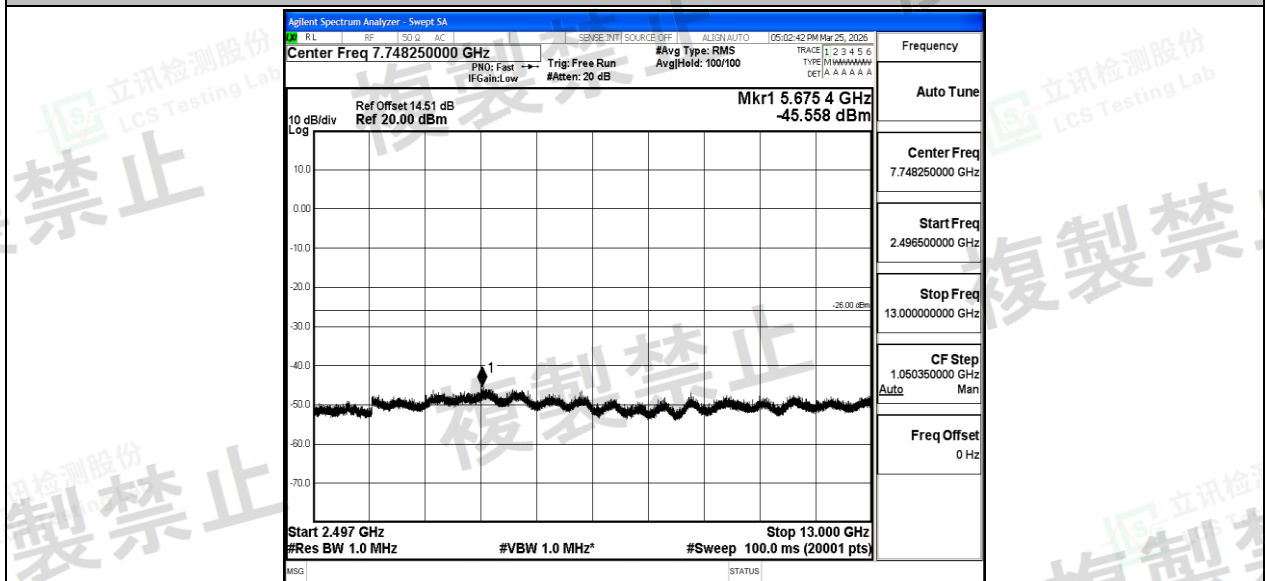




NTNV_BLE_1M_Ant1_2402_2483.5~2496.5

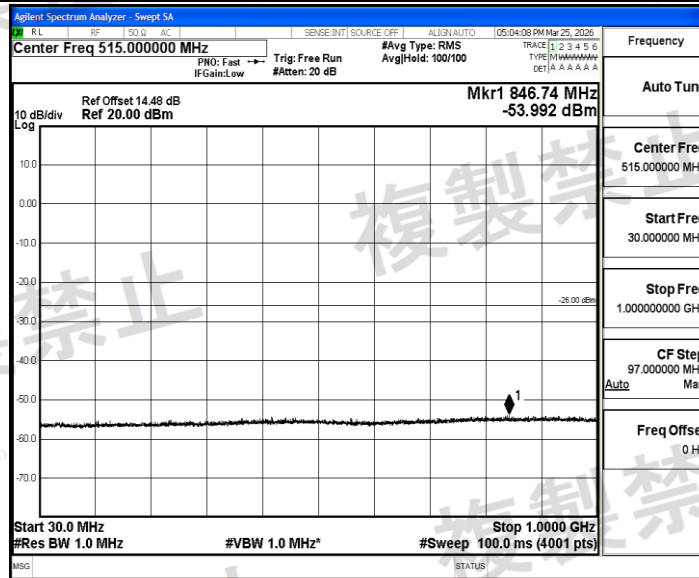


NTNV_BLE_1M_Ant1_2402_2496.5~13000

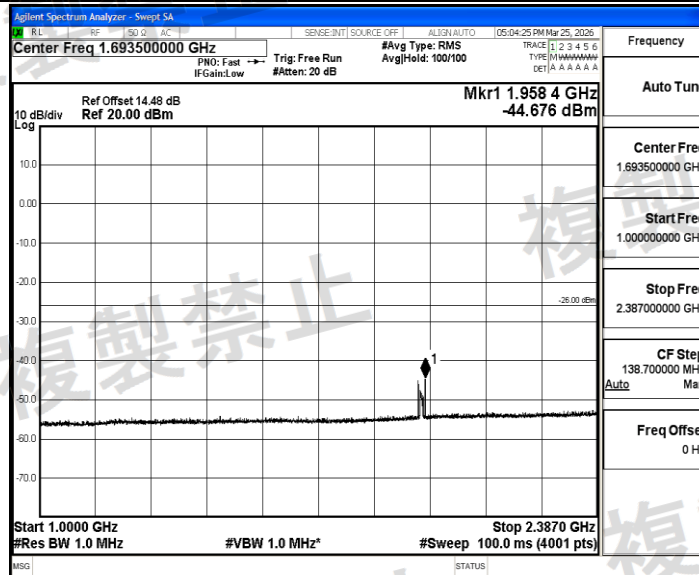




NTNV_BLE_1M_Ant1_2440_30~1000

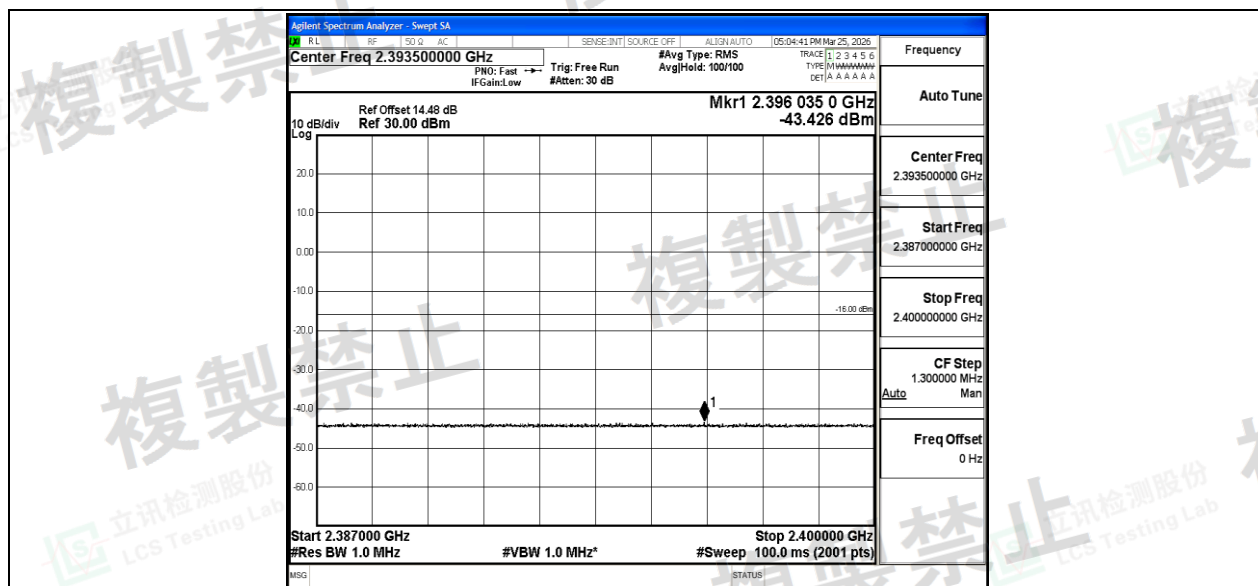


NTNV_BLE_1M_Ant1_2440_1000~2387

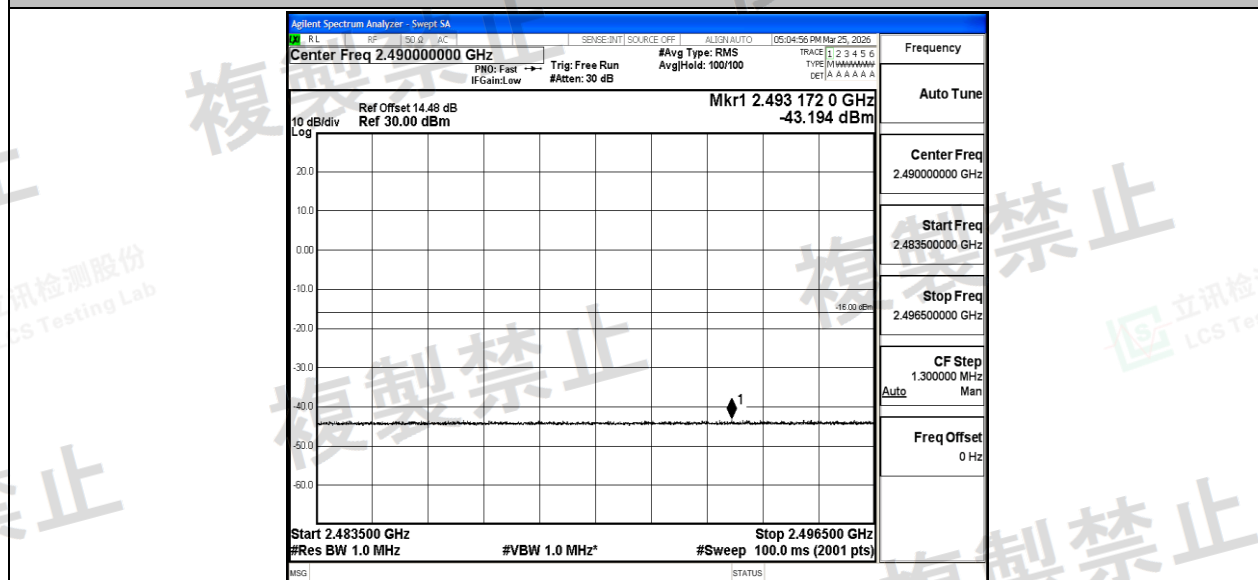


NTNV_BLE_1M_Ant1_2440_2387~2400

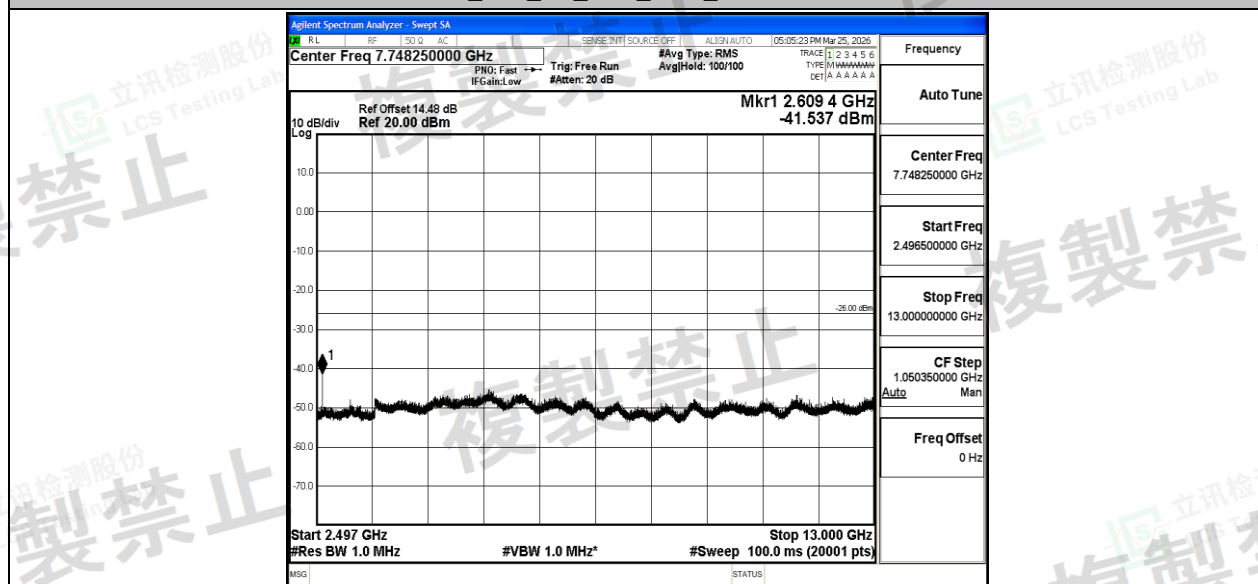




NTNV_BLE_1M_Ant1_2440_2483.5~2496.5

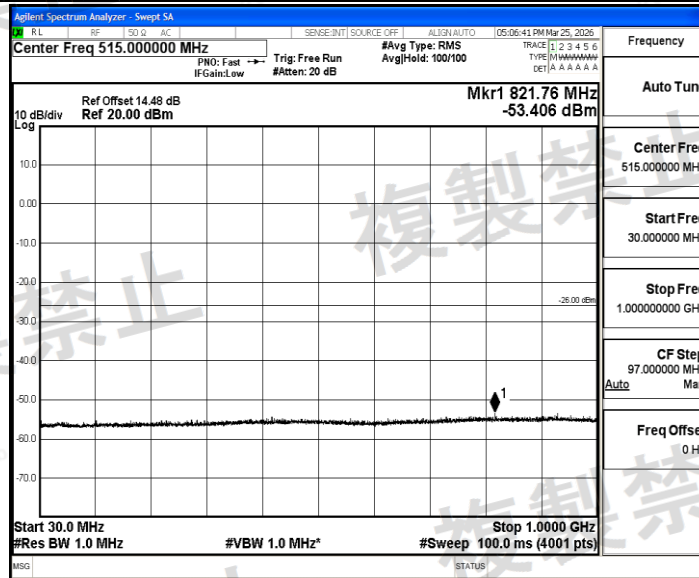


NTNV_BLE_1M_Ant1_2440_2496.5~13000

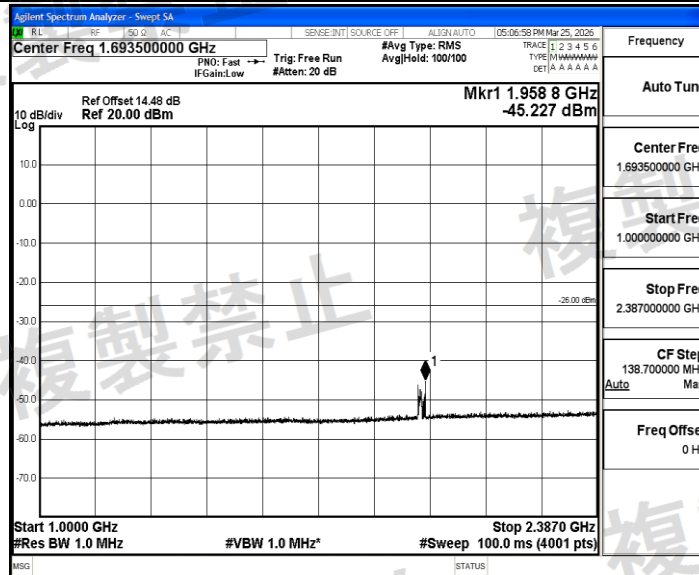




NTNV_BLE_1M_Ant1_2480_30~1000

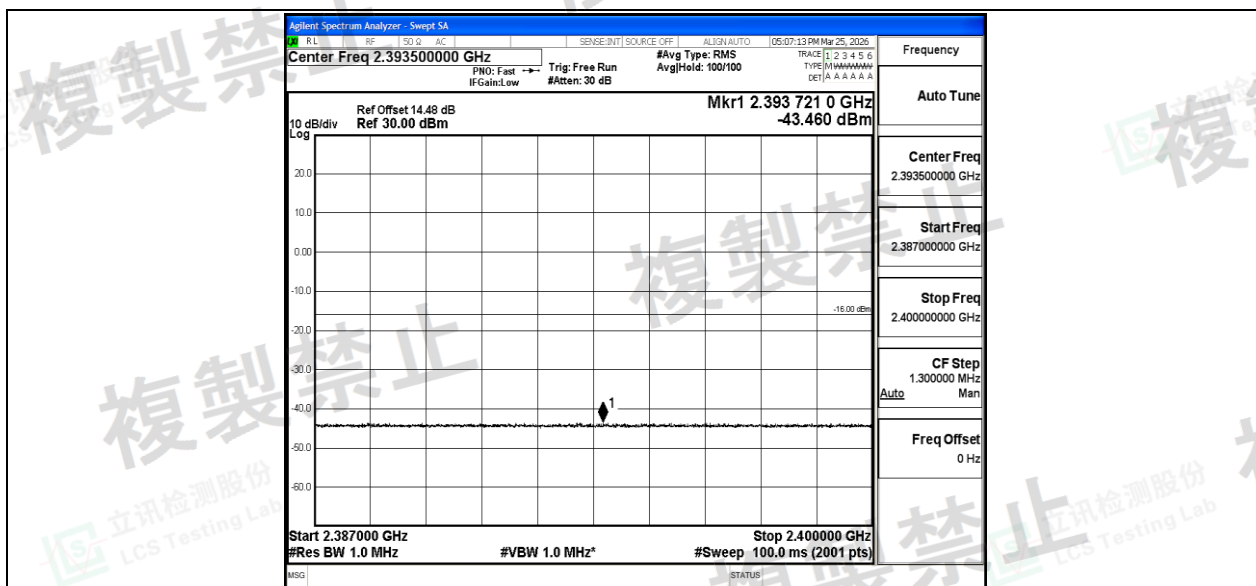


NTNV_BLE_1M_Ant1_2480_1000~2387

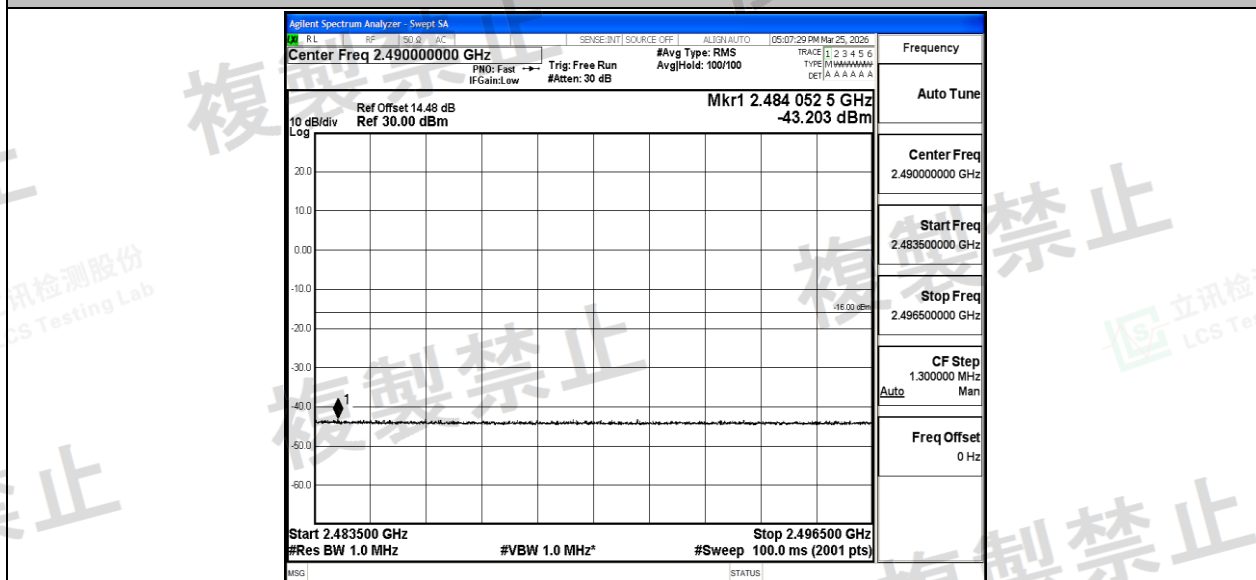


NTNV_BLE_1M_Ant1_2480_2387~2400

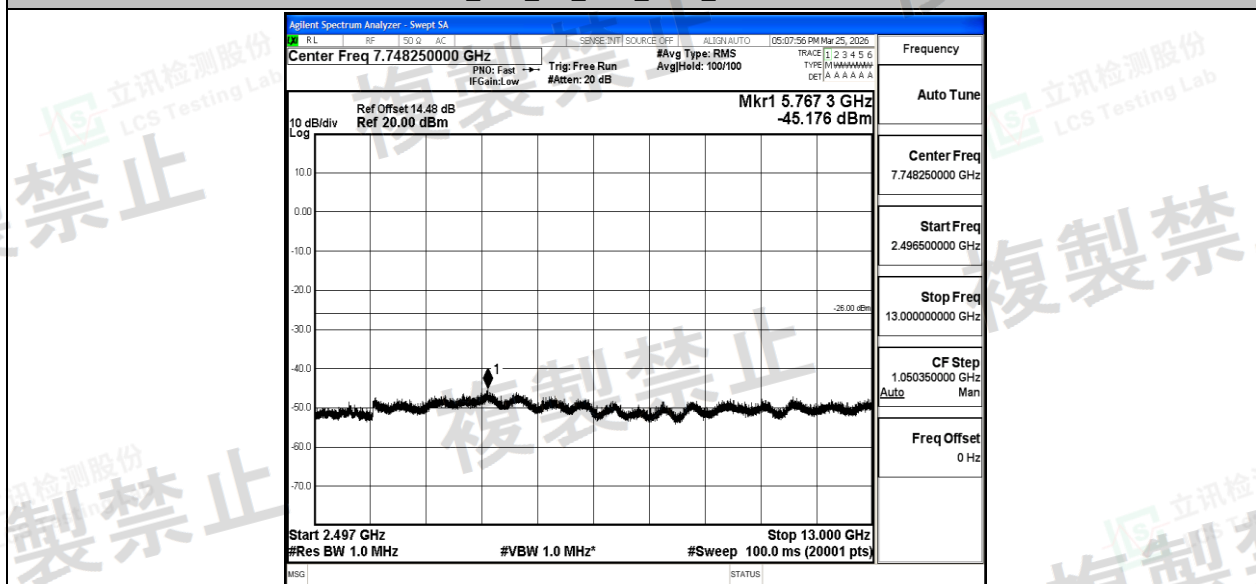




NTNV_BLE_1M_Ant1_2480_2483.5~2496.5

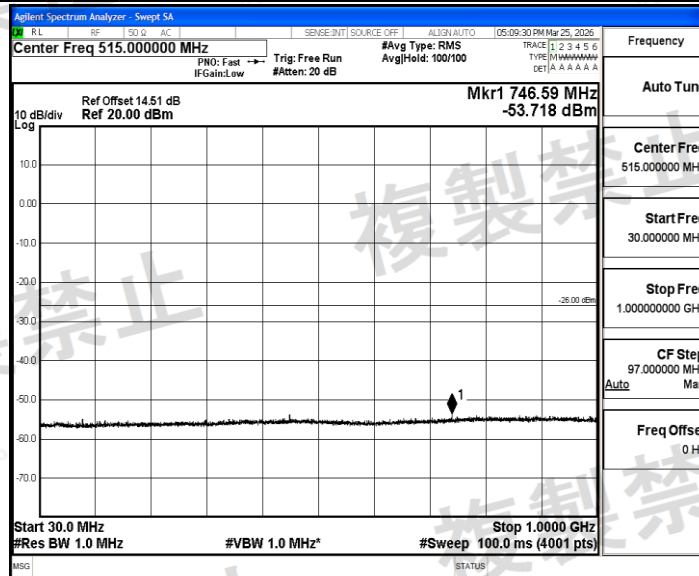


NTNV_BLE_1M_Ant1_2480_2496.5~13000

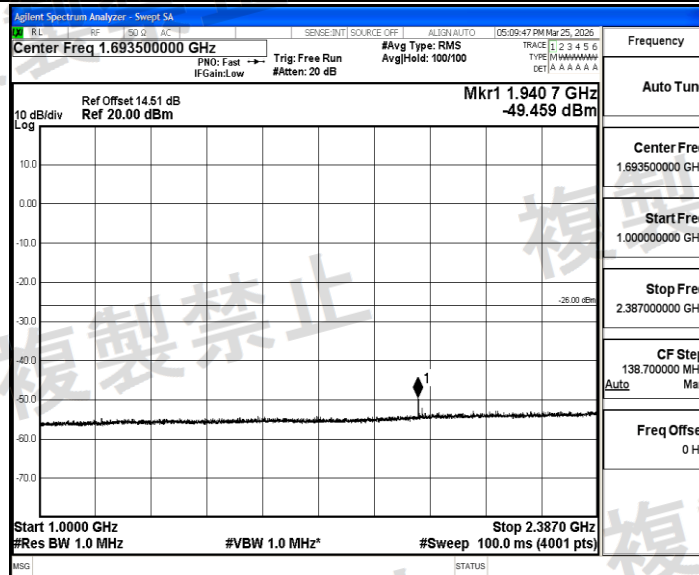




NTNV_BLE_2M_Ant1_2402_30~1000

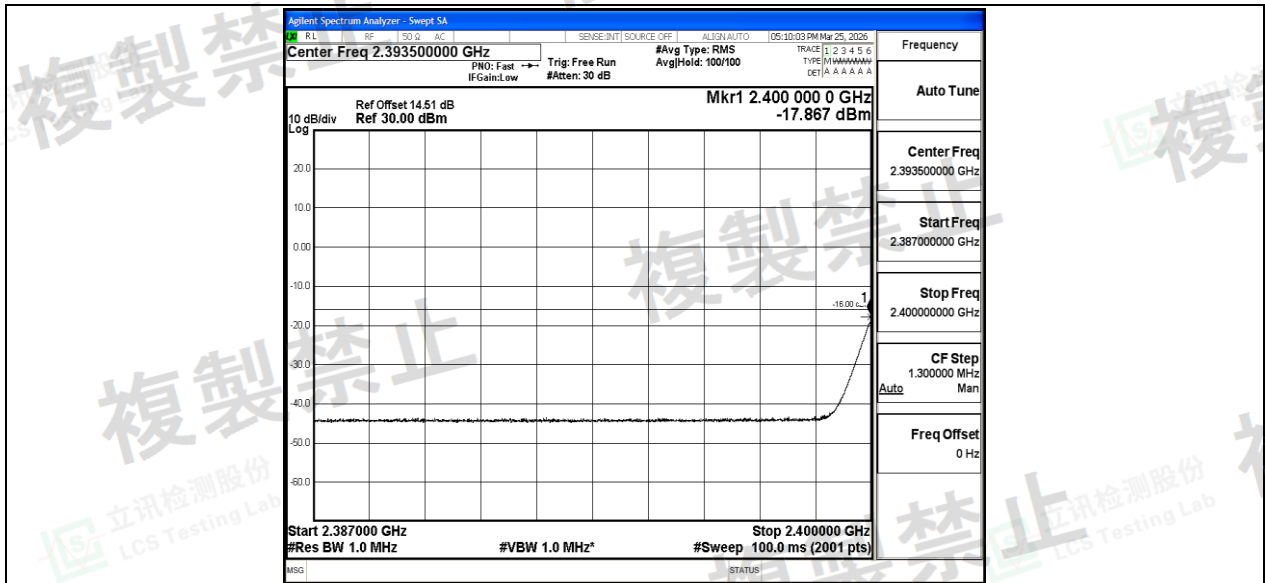


NTNV_BLE_2M_Ant1_2402_1000~2387

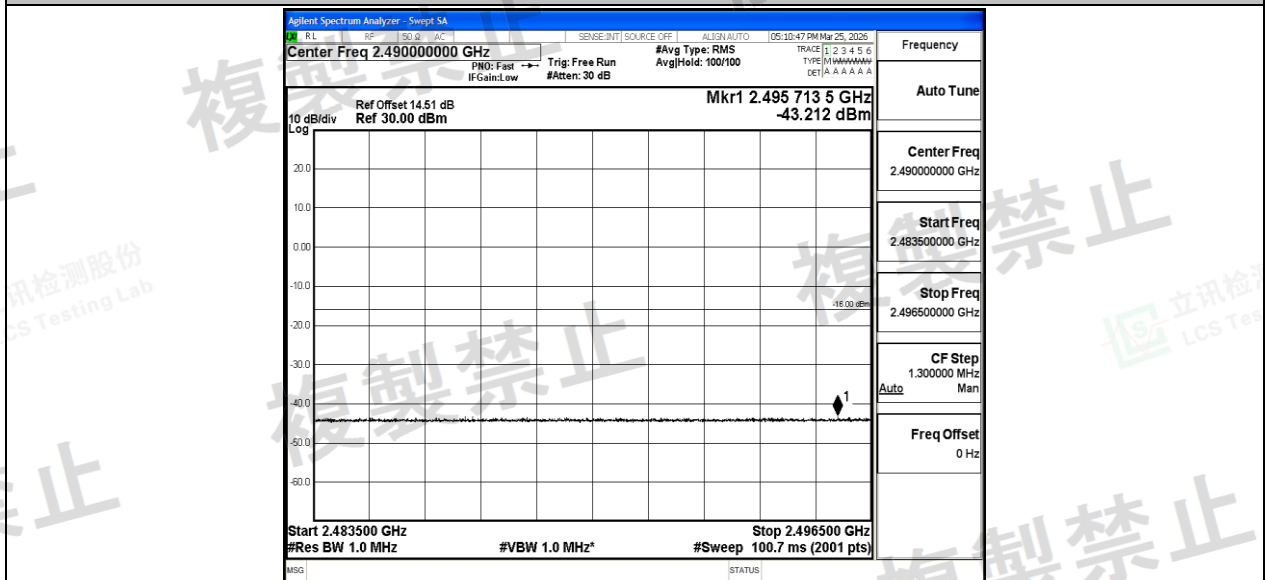


NTNV_BLE_2M_Ant1_2402_2387~2400

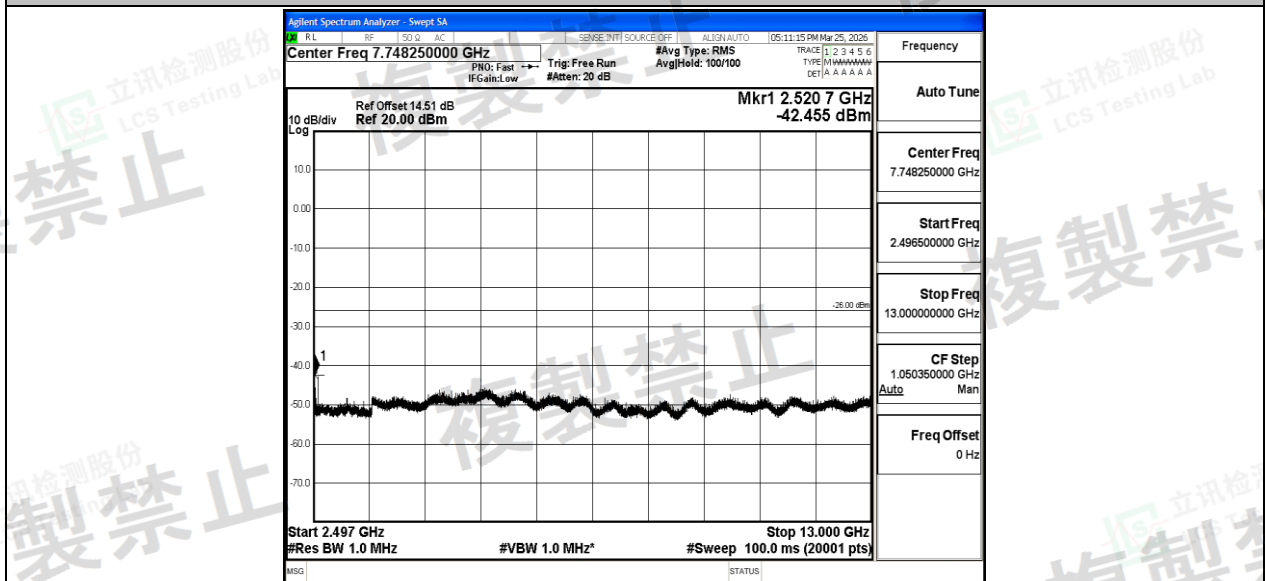




NTNV_BLE_2M_Ant1_2402_2483.5~2496.5

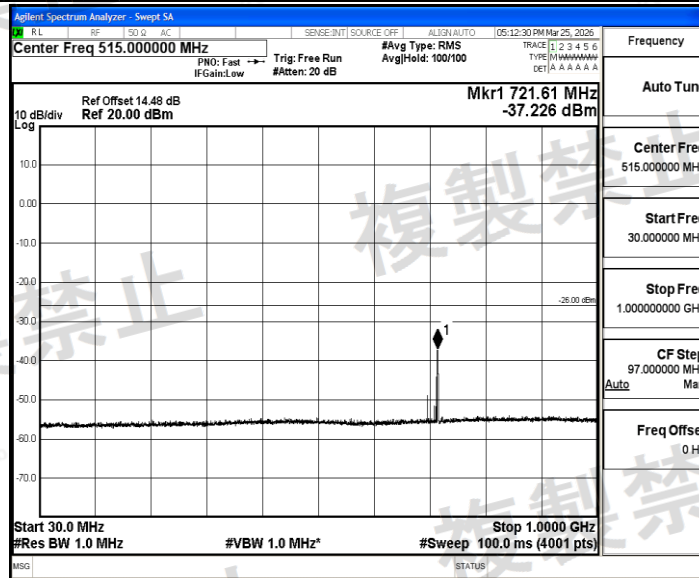


NTNV_BLE_2M_Ant1_2402_2496.5~13000

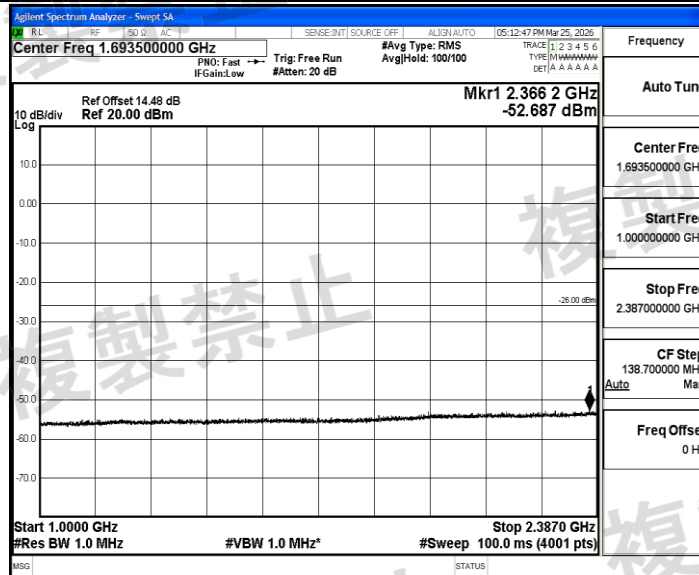




NTNV_BLE_2M_Ant1_2440_30~1000

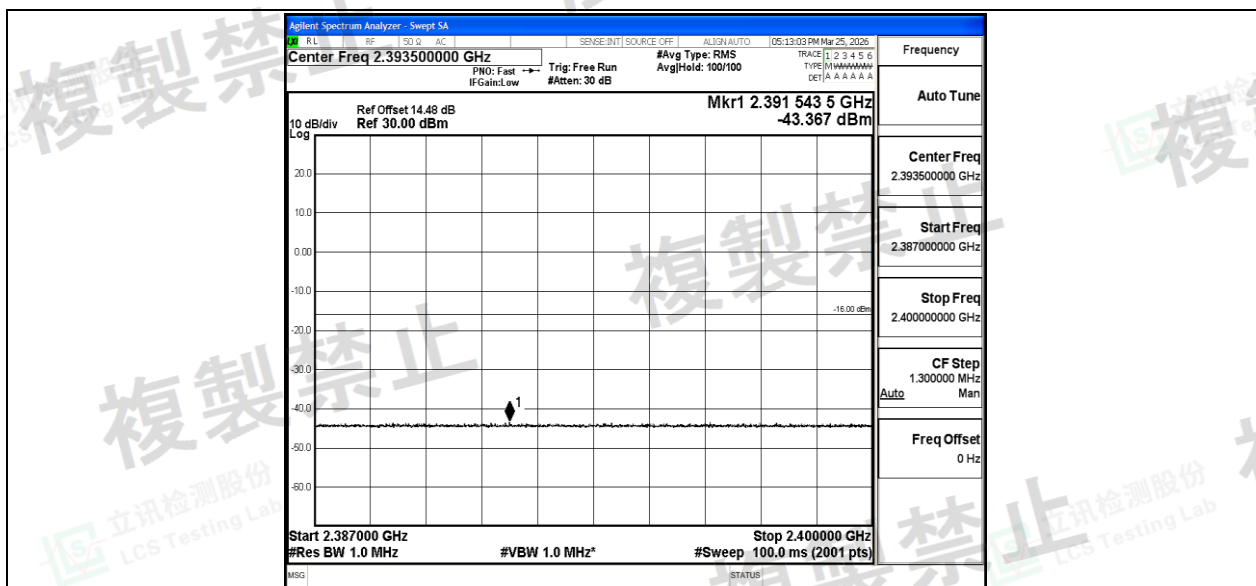


NTNV_BLE_2M_Ant1_2440_1000~2387

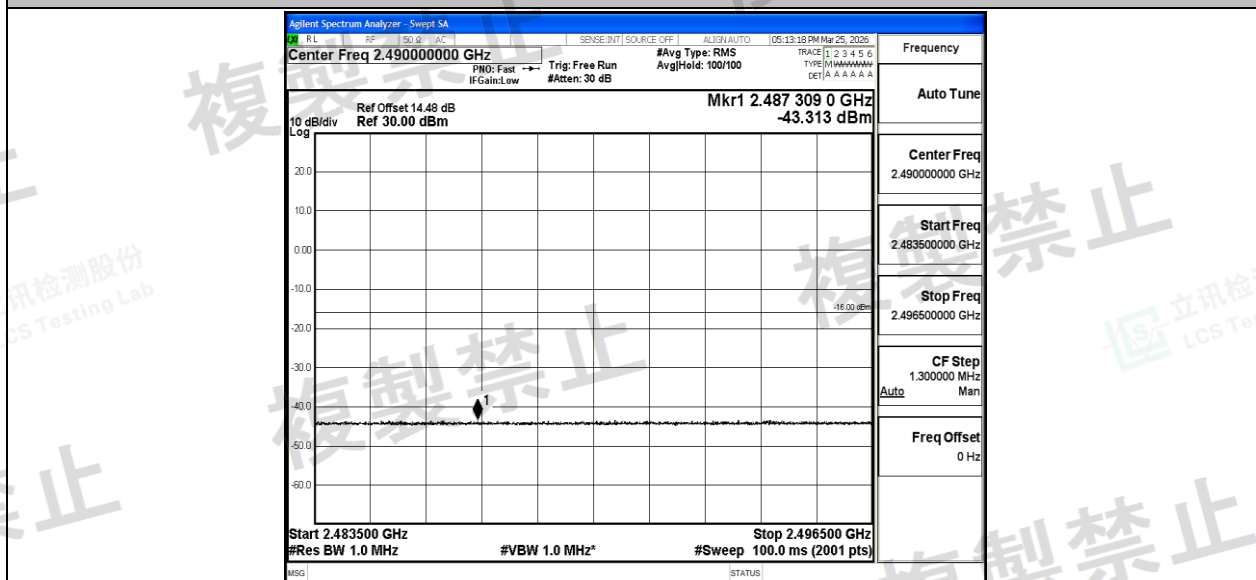


NTNV_BLE_2M_Ant1_2440_2387~2400

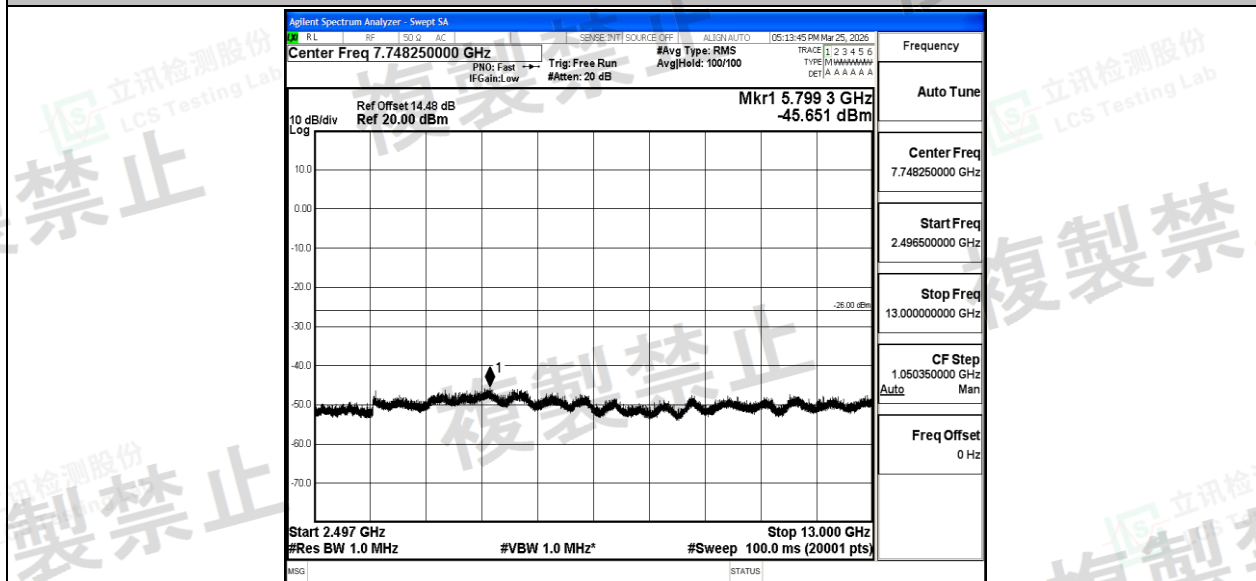




NTNV_BLE_2M_Ant1_2440_2483.5~2496.5

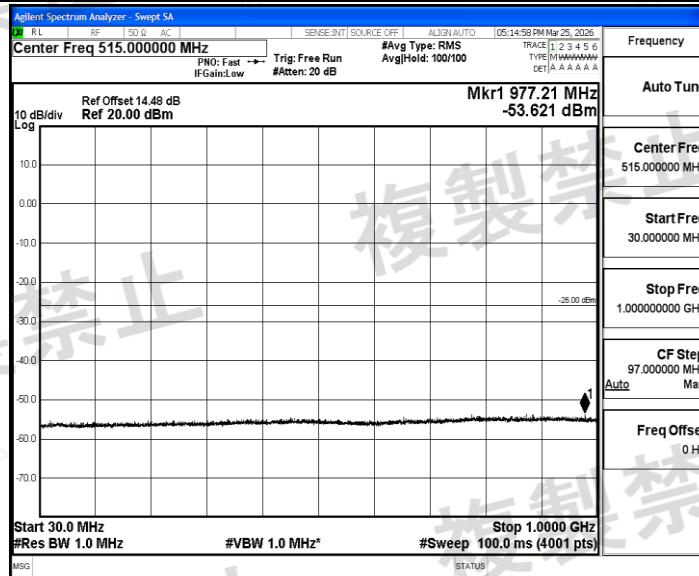


NTNV_BLE_2M_Ant1_2440_2496.5~13000

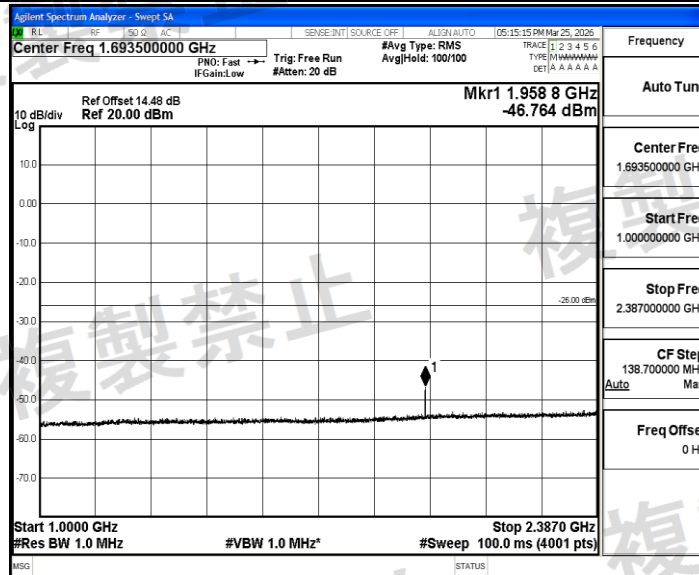




NTNV_BLE_2M_Ant1_2480_30~1000

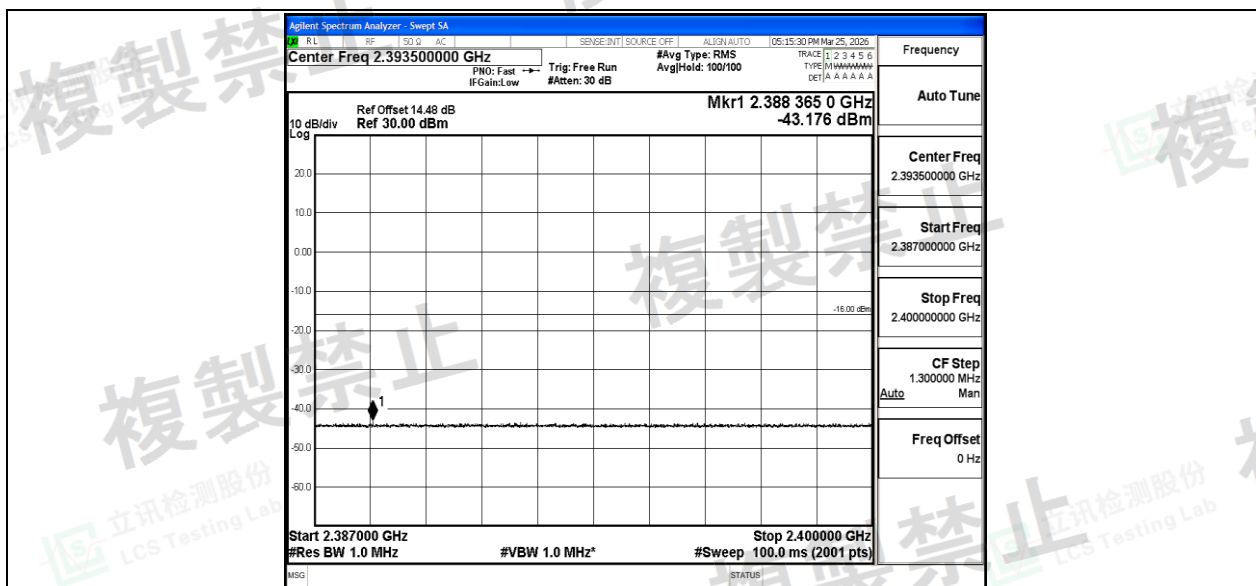


NTNV_BLE_2M_Ant1_2480_1000~2387

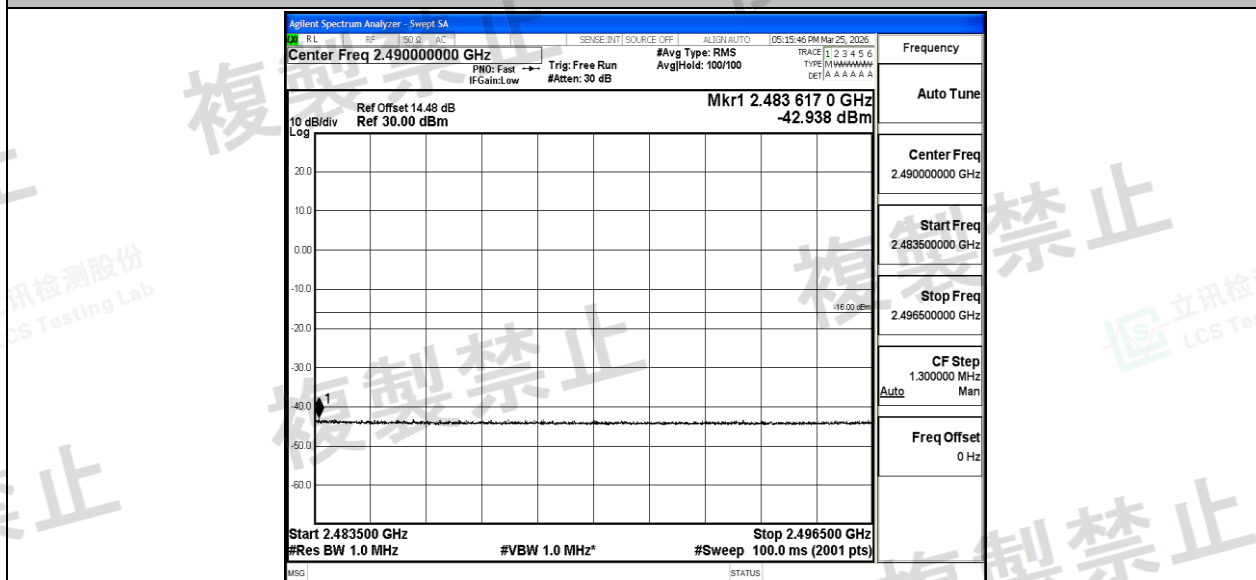


NTNV_BLE_2M_Ant1_2480_2387~2400

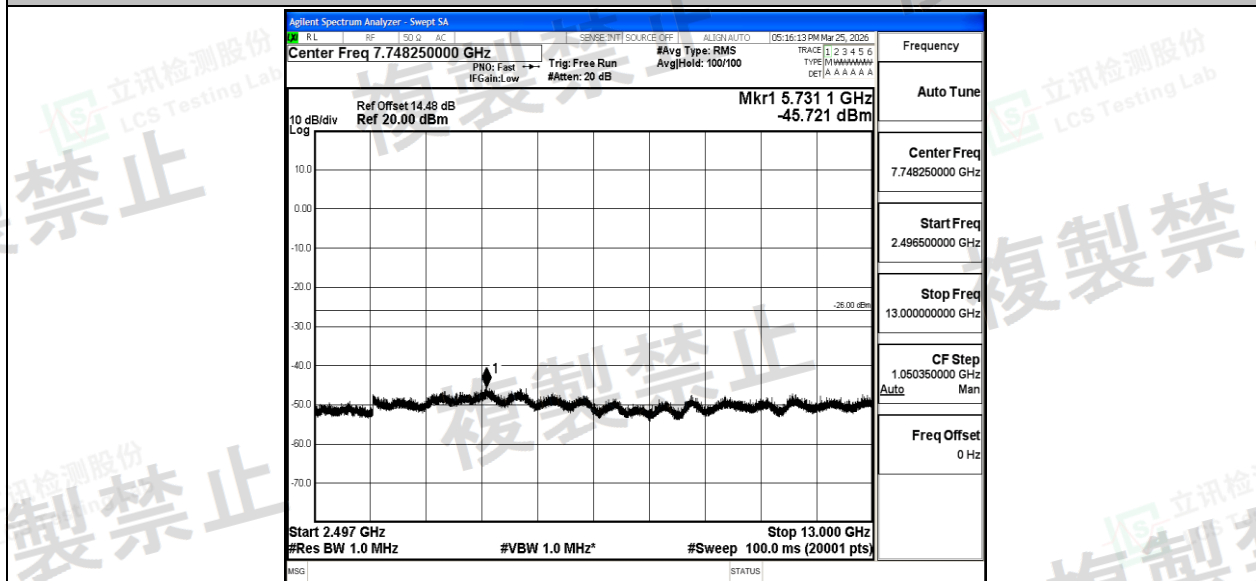




NTNV_BLE_2M_Ant1_2480_2483.5~2496.5



NTNV_BLE_2M_Ant1_2480_2496.5~13000





B.6 Spurious Emission of RX

Test Result

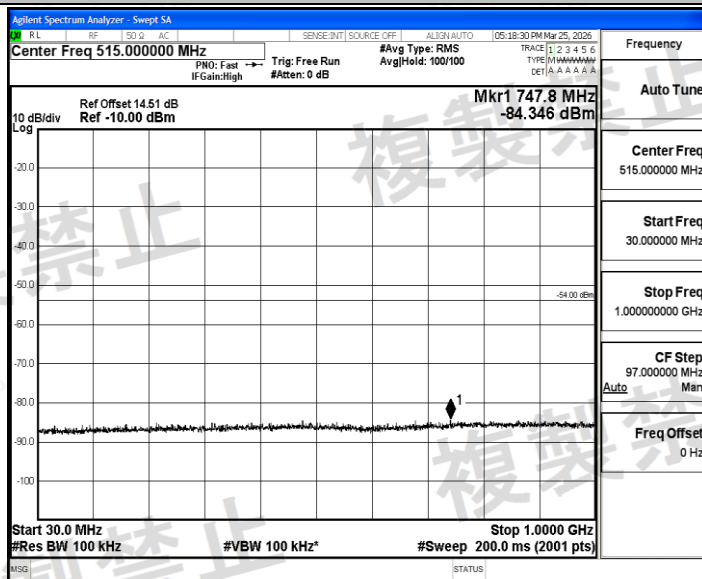
TestCondition	TestMode	Antenna	Frequency[MHz]	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
NTNV	BLE_1M	Ant1	2402	30~1000	-84.35	≤-54	0.00367	≤4	PASS
				1000~12500	-66.33	≤-47	0.23281	≤20	PASS
			2440	30~1000	-84.14	≤-54	0.00385	≤4	PASS
				1000~12500	-67.1	≤-47	0.19498	≤20	PASS
			2480	30~1000	-84.2	≤-54	0.00380	≤4	PASS
				1000~12500	-66.65	≤-47	0.21627	≤20	PASS
	BLE_2M	Ant1	2402	30~1000	-84.27	≤-54	0.00374	≤4	PASS
				1000~12500	-67.04	≤-47	0.19770	≤20	PASS
			2440	30~1000	-84.4	≤-54	0.00363	≤4	PASS
				1000~12500	-66.87	≤-47	0.20559	≤20	PASS
			2480	30~1000	-84.24	≤-54	0.00377	≤4	PASS
				1000~12500	-66.91	≤-47	0.20370	≤20	PASS



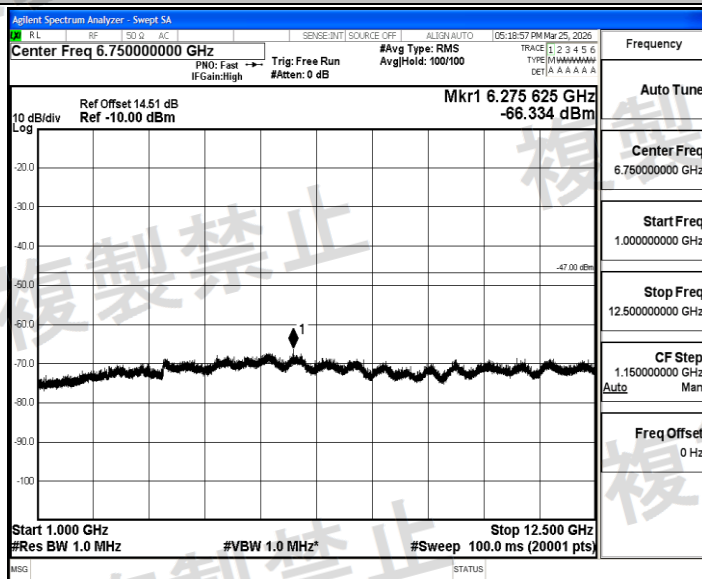


Test Graphs

NTNV_BLE_1M_Ant1_2402_30~1000

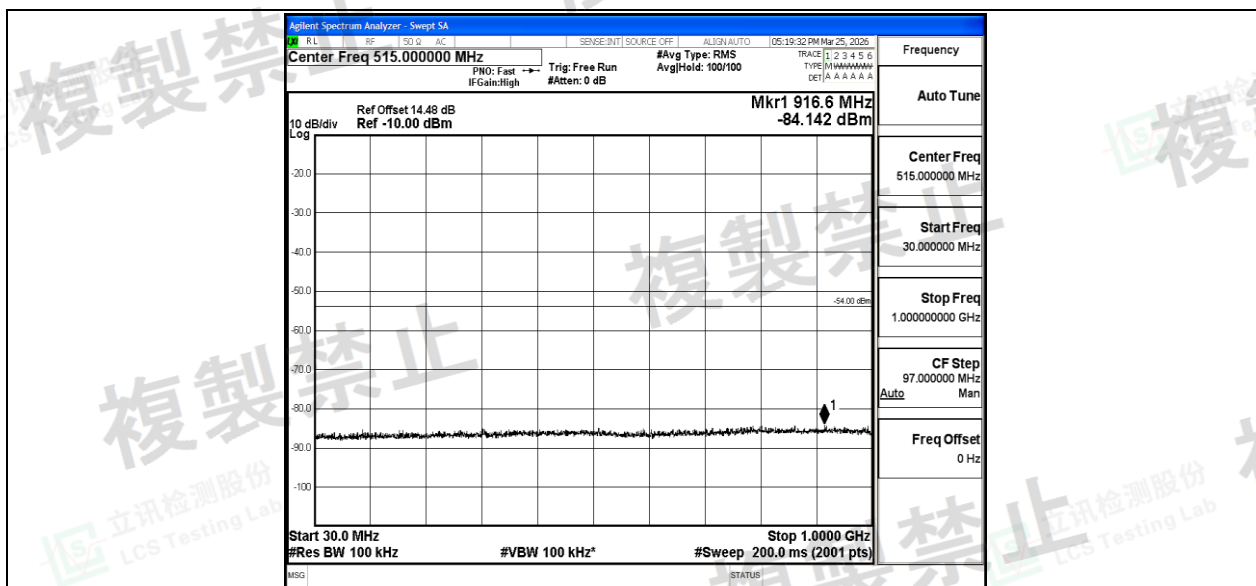


NTNV_BLE_1M_Ant1_2402_1000~12500

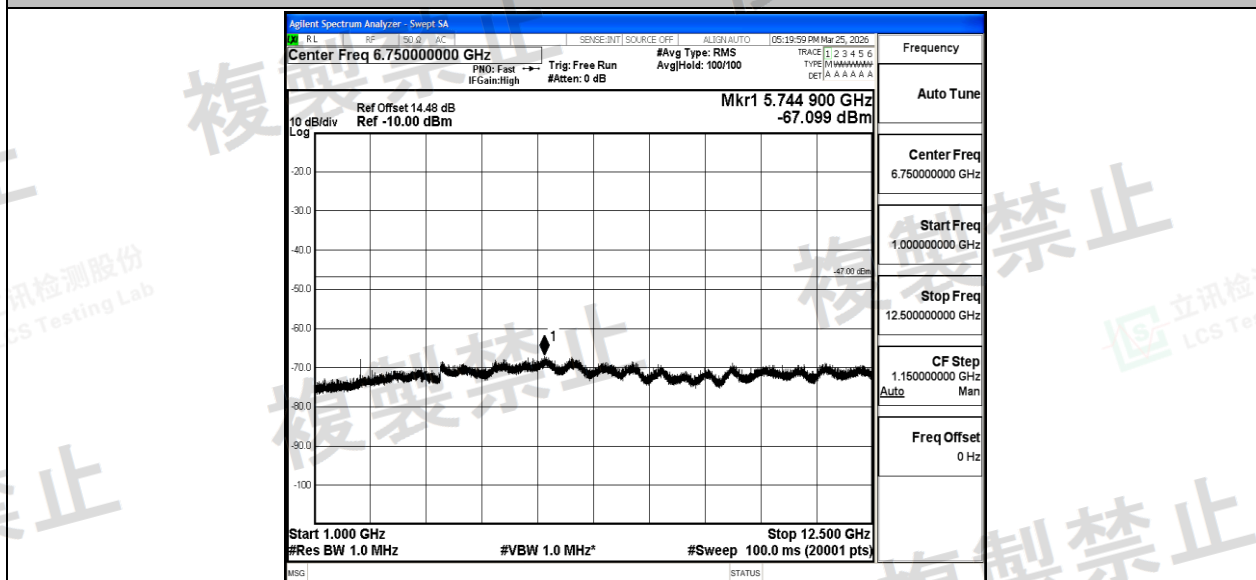


NTNV_BLE_1M_Ant1_2440_30~1000

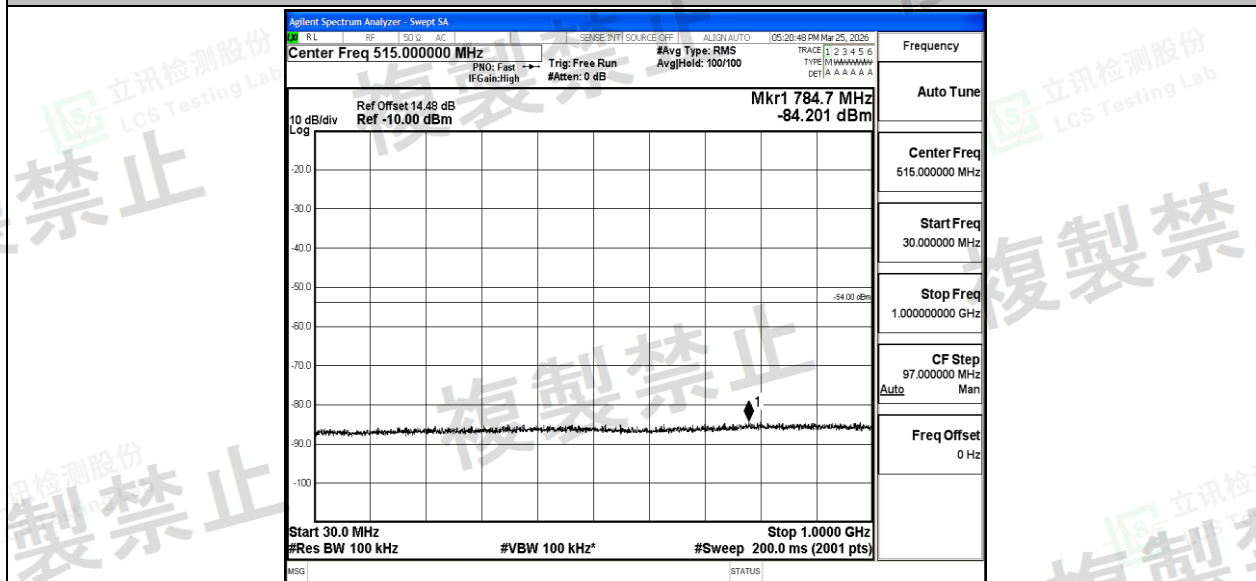




NTNV_BLE_1M_Ant1_2440_1000~12500

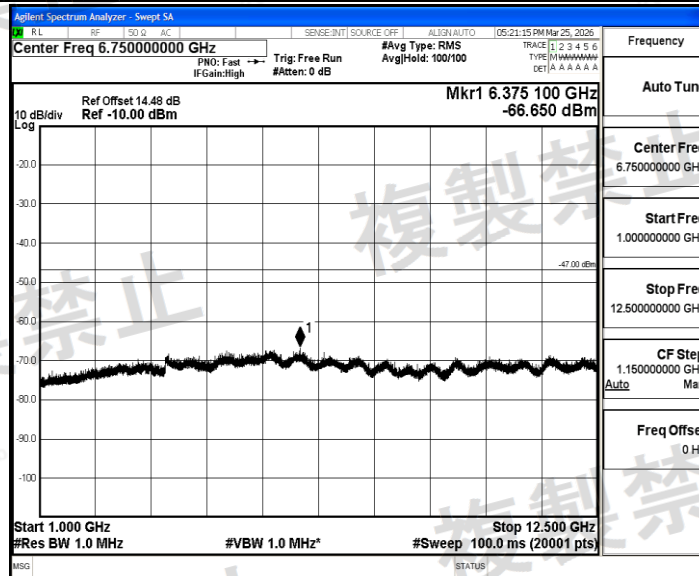


NTNV_BLE_1M_Ant1_2480_30~1000

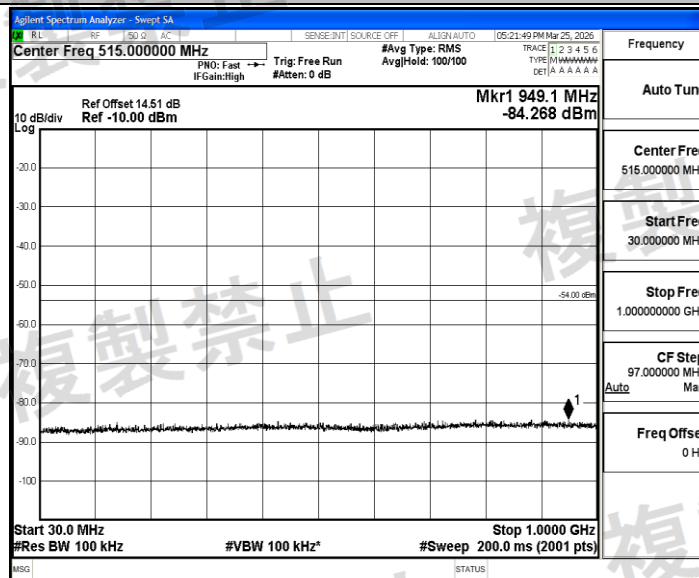




NTNV_BLE_1M_Ant1_2480_1000~12500

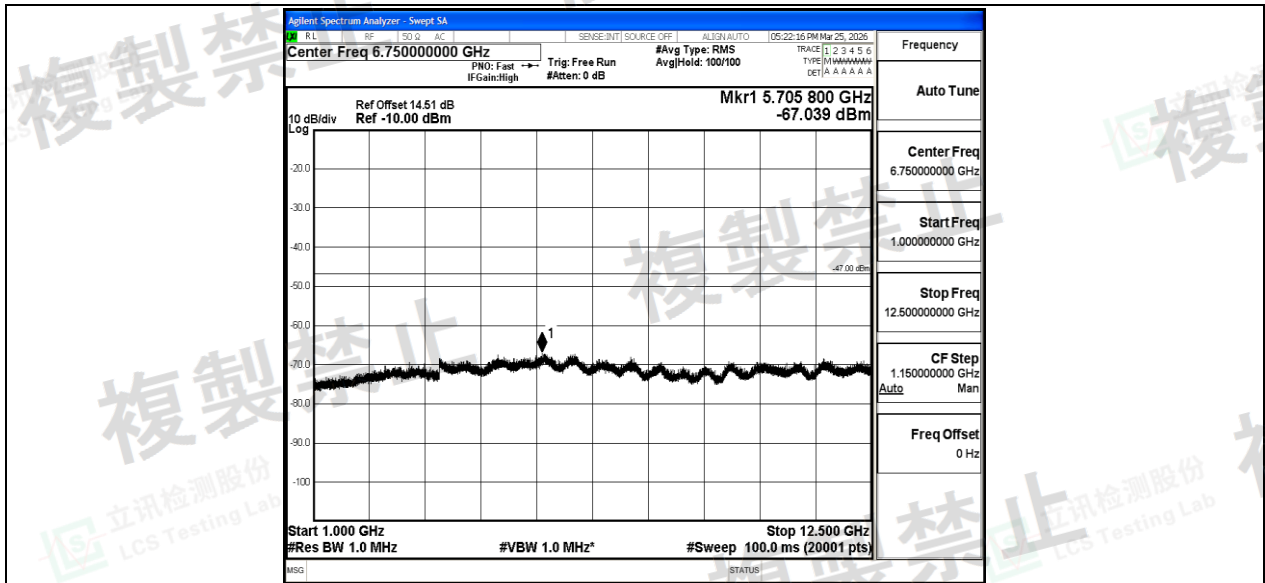


NTNV_BLE_2M_Ant1_2402_30~1000

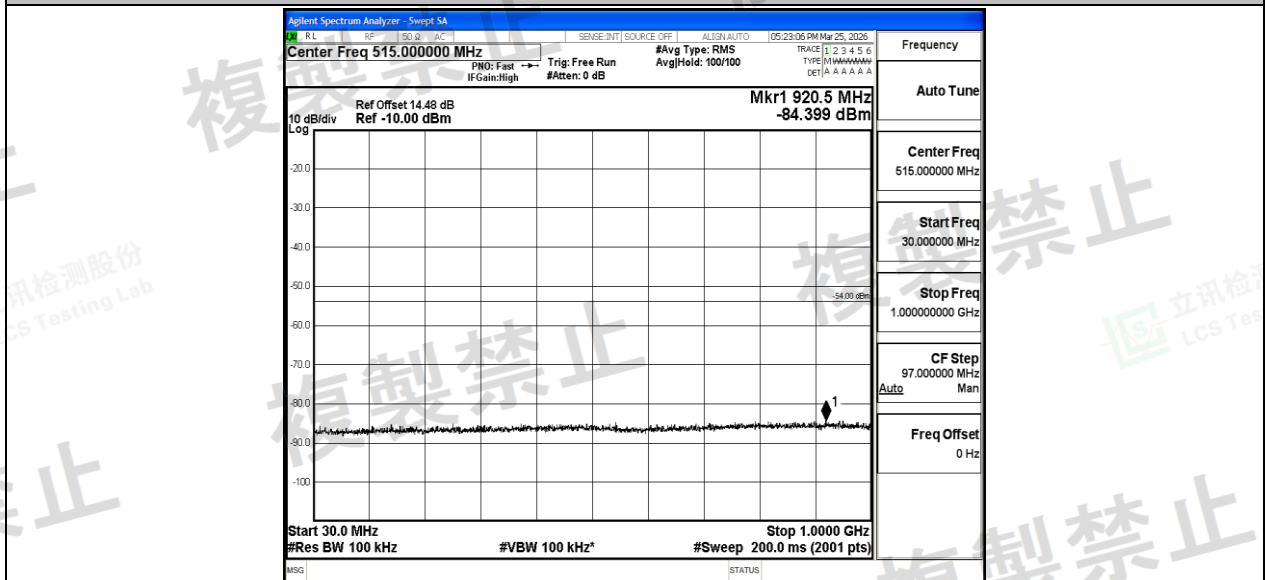


NTNV_BLE_2M_Ant1_2402_1000~12500

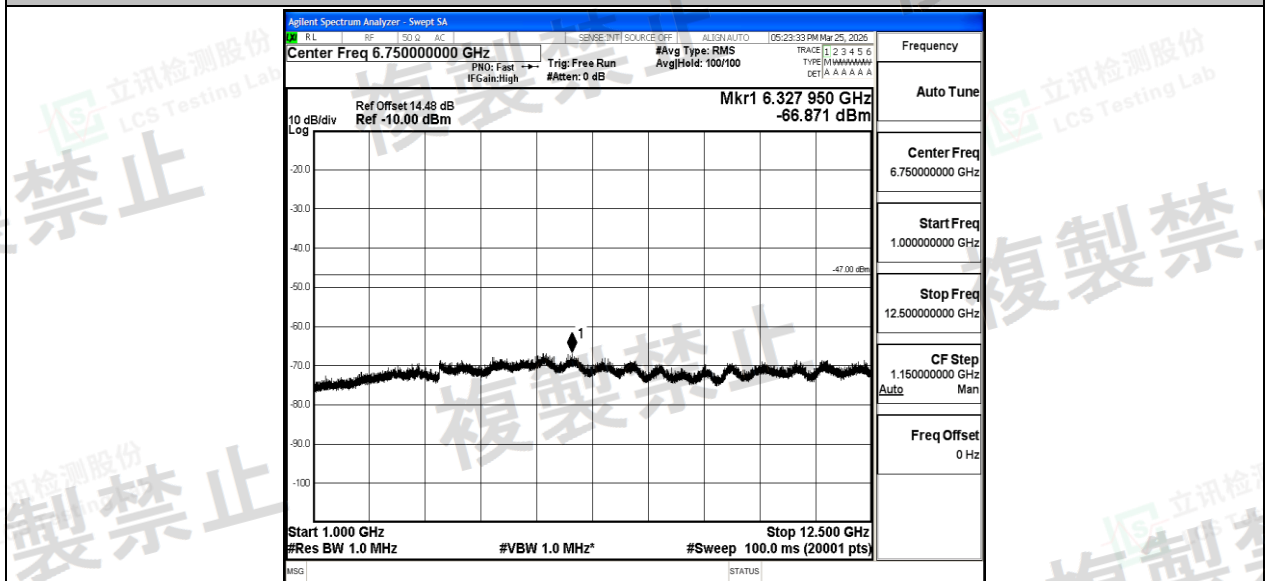




NTNV_BLE_2M_Ant1_2440_30~1000

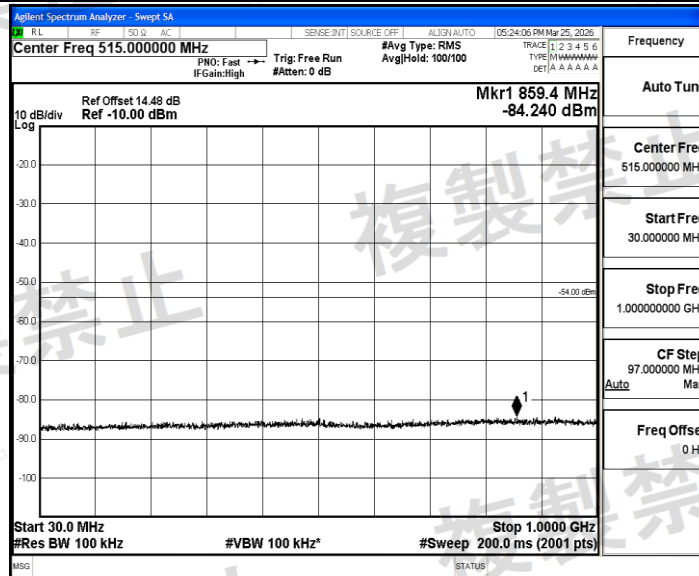


NTNV_BLE_2M_Ant1_2440_1000~12500





NTNV_BLE_2M_Ant1_2480_30~1000



NTNV_BLE_2M_Ant1_2480_1000~12500

