



Appendix A for 2.4G Test Data

Product Name: Wireless Security Camera

Test Model: MTW-INC400IR

Environmental Conditions

Temperature:	21.8° C
Relative Humidity:	52.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Luo
Supervised by:	Nick Peng



Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity



A.1 Frequency Error

Test Result

TestCondition	TestMode	Antenna	Frequency [MHz]	Result[ppm]	Limit[ppm]	Verdict
NTNV	16QAM	Ant	2406	0.41563	±50	PASS
			2439	0.41000	±50	PASS
			2475	0.40404	±50	PASS
NTNV	QPSK	Ant	2406	0.00000	±50	PASS
			2439	0.00000	±50	PASS
			2475	0.00000	±50	PASS
NTNV	BPSK	Ant	2406	0.00000	±50	PASS
			2439	0.00000	±50	PASS
			2475	0.00000	±50	PASS



Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China

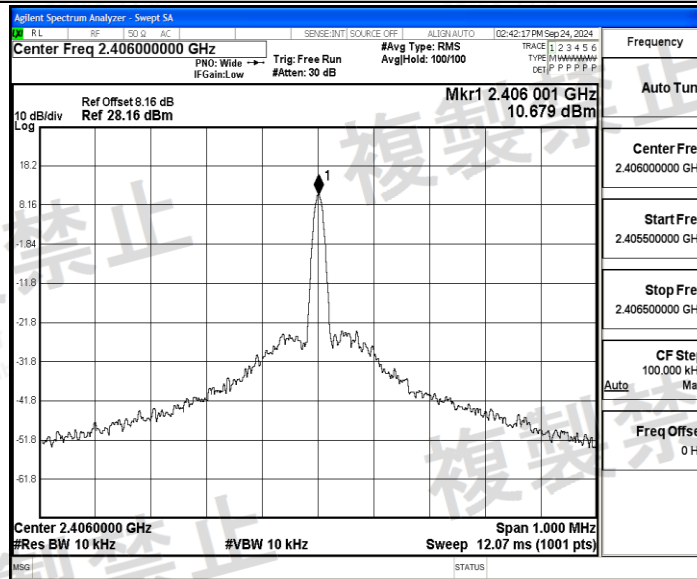
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity

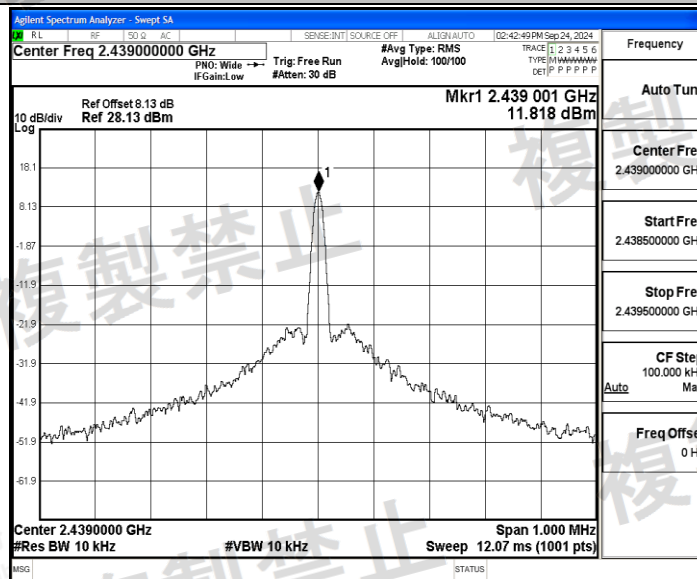


Test Graphs

NTNV_16QAM_Ant_2406

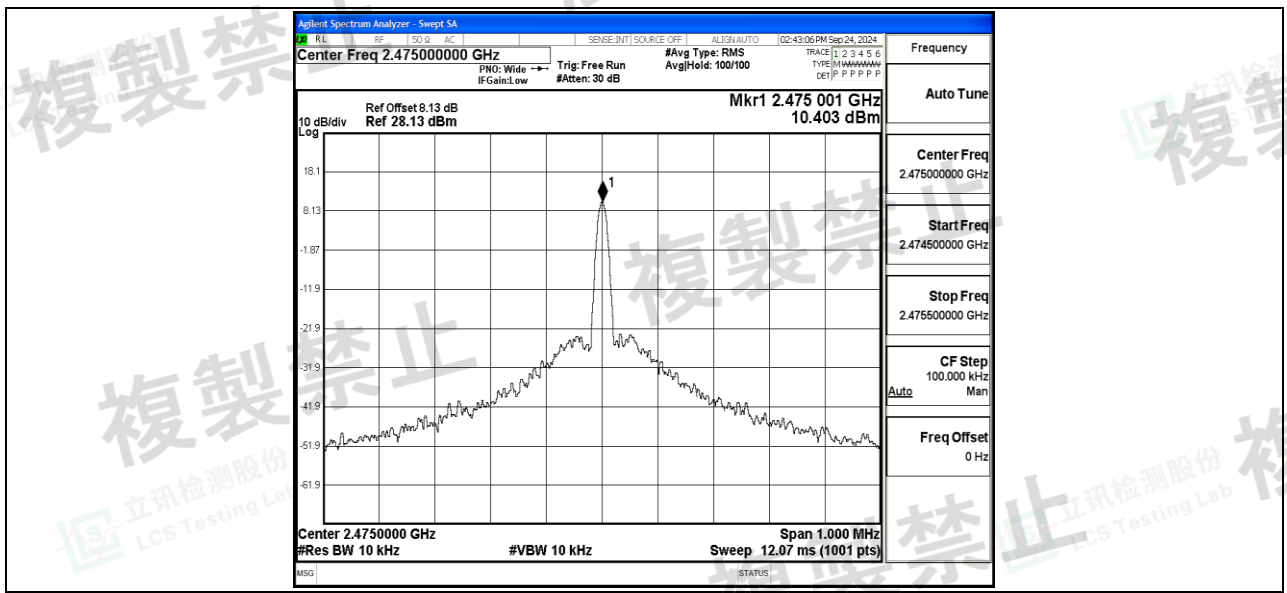


NTNV_16QAM_Ant_2439



NTNV_16QAM_Ant_2475

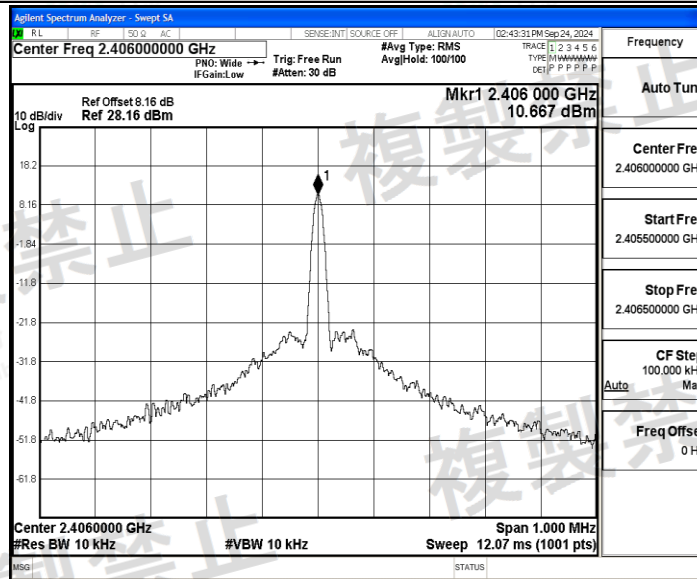




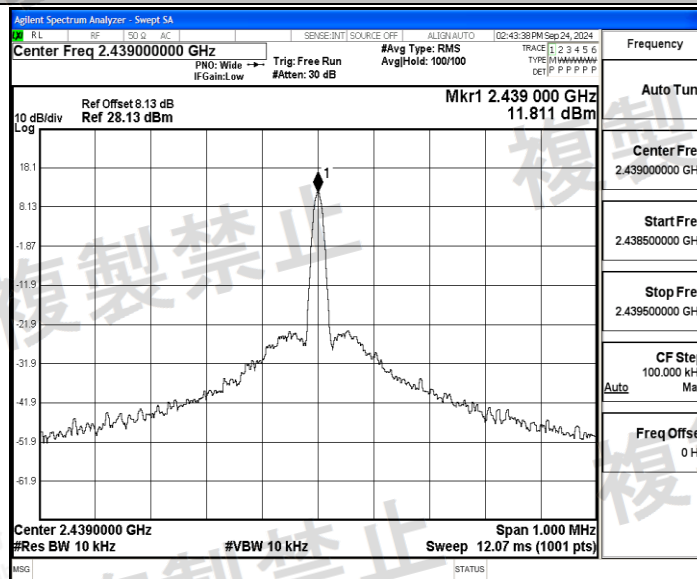


Test Graphs

NTNV_QPSK_Ant_2406



NTNV_QPSK_Ant_2439



NTNV_QPSK_Ant_2475

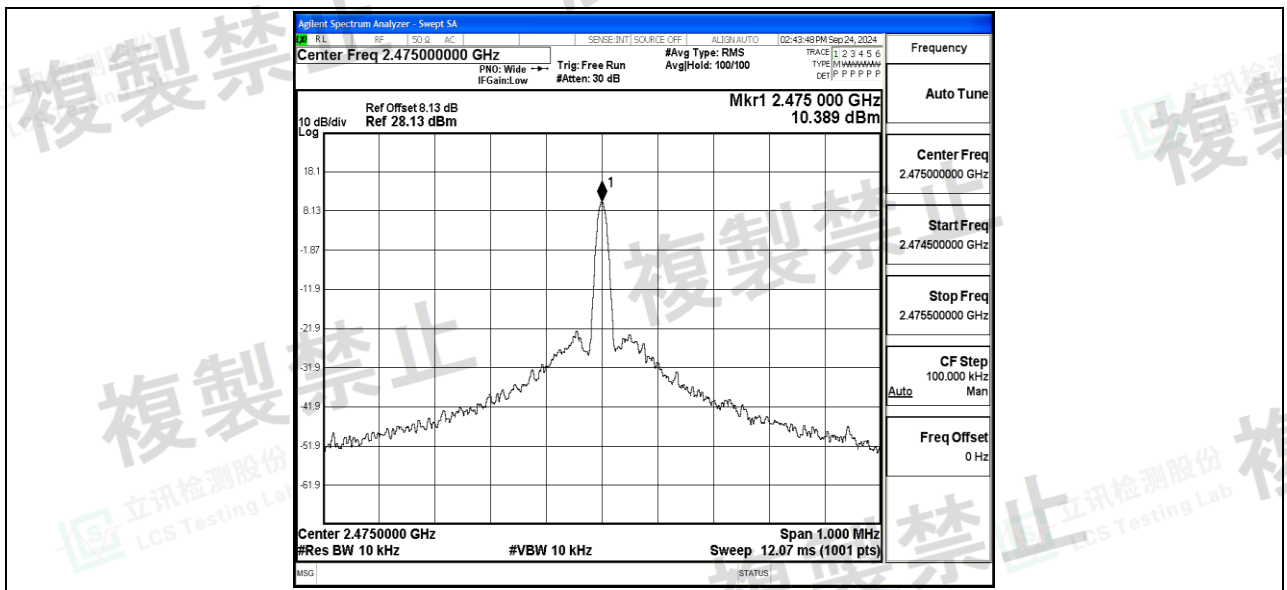


Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

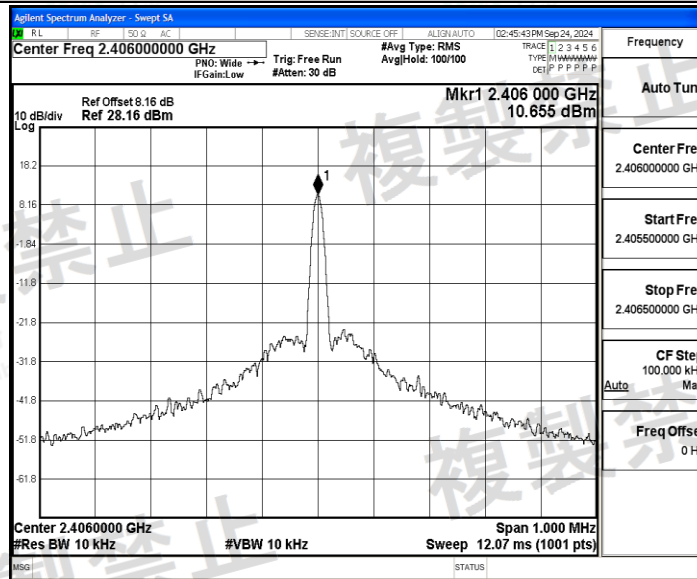
Scan code to check authenticity



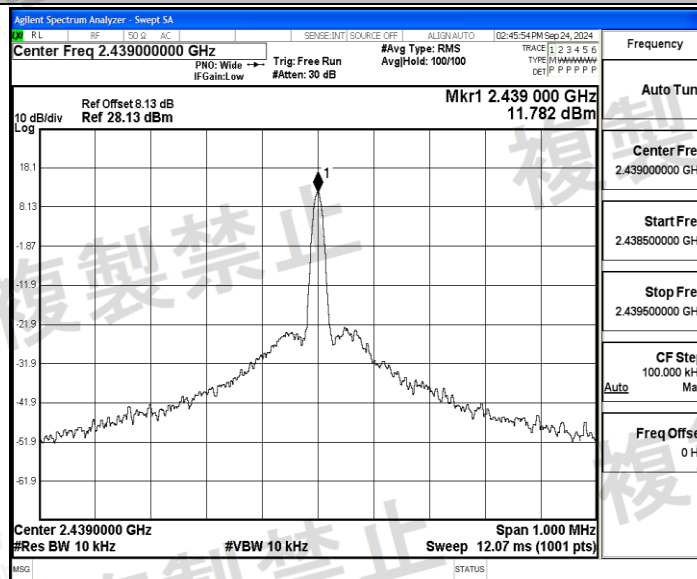


Test Graphs

NTNV_BPSK_Ant_2406

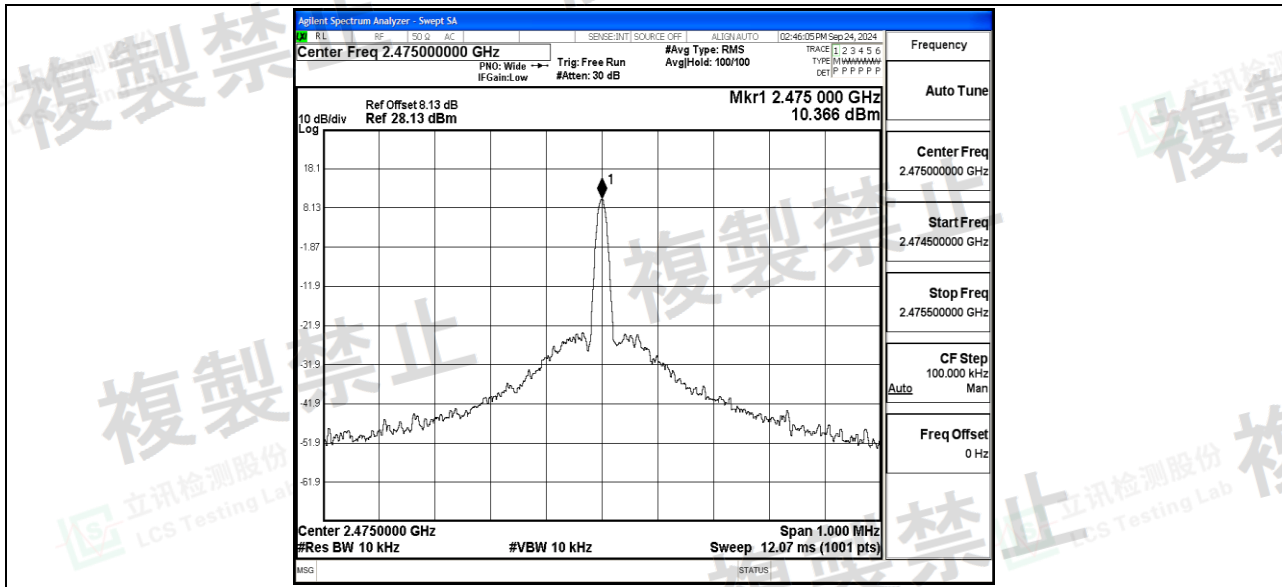


NTNV_BPSK_Ant_2439



NTNV_BPSK_Ant_2475





Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity



A.2 Antenna Power & E.I.R.P

Test Result

Antenna Power							
TestCondition	TestMode	Antenna	Frequency[MHz]	Result (dBm/MHz)	Result (mW/MHz)	Limit (mW/MHz)	Verdict
NTNV	16QAM	Ant	2406	8.25	6.6834	≤10	PASS
			2439	8.36	6.8549	≤10	PASS
			2475	8.23	6.6527	≤10	PASS
NTNV	QPSK	Ant	2406	8.59	7.2277	≤10	PASS
			2439	8.55	7.1614	≤10	PASS
			2475	8.33	6.8077	≤10	PASS
NTNV	BPSK	Ant	2406	8.23	6.6527	≤10	PASS
			2439	8.23	6.6527	≤10	PASS
			2475	8.36	6.8549	≤10	PASS

Tolerance								
Test Condition	Test Mode	Antenna	Frequency[MHz]	Power (mW/MHz)	RatedPower (mW/MHz)	Result (%)	Limit (%)	Verdict
NTNV	16QAM	Ant	2406	6.6834	7	-4.52	+20	PASS
			2439	6.8549	7	-2.07	+20	PASS
			2475	6.6527	7	-4.96	+20	PASS
NTNV	QPSK	Ant	2406	7.2277	7	3.25	+20	PASS
			2439	7.1614	7	2.31	+20	PASS
			2475	6.8077	7	-2.75	+20	PASS
NTNV	BPSK	Ant	2406	6.6527	7	-4.96	+20	PASS
			2439	6.6527	7	-4.96	+20	PASS
			2475	6.8549	7	-2.07	+20	PASS





EIRP								
Test Condition	Test Mode	Antenna	Frequency [MHz]	Measured Power (dBm/MHz)	Antenna gain (dBi)	EIRP (dBm/MHz)	Limit (dBm/MHz)	Verdict
NTNV	16QAM	Ant	2412	8.25	3.0	11.25	≤12.14	PASS
			2442	8.36	3.0	11.36	≤12.14	PASS
			2472	8.23	3.0	11.23	≤12.14	PASS
NTNV	QPSK	Ant	2412	8.59	3.0	11.59	≤12.14	PASS
			2442	8.55	3.0	11.55	≤12.14	PASS
			2472	8.33	3.0	11.33	≤12.14	PASS
NTNV	BPSK	Ant	2412	8.23	3.0	11.23	≤12.14	PASS
			2442	8.23	3.0	11.23	≤12.14	PASS
			2472	8.36	3.0	11.36	≤12.14	PASS





A.3 Occupied Bandwidth

Test Result

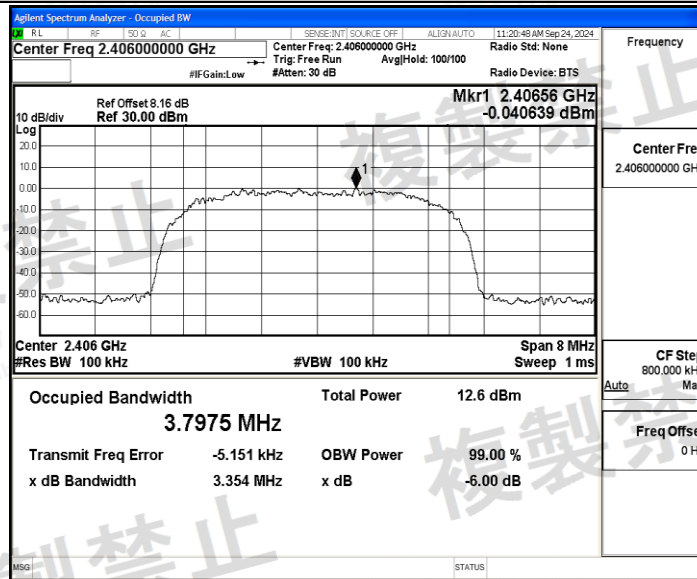
TestCondition	TestMode	Antenna	Frequency [MHz]	Result [MHz]	Limit [MHz]	Verdict
NTNV	16QAM	Ant	2406	3.798	≤26	PASS
			2439	3.838	≤26	PASS
			2475	3.805	≤26	PASS
NTNV	QPSK	Ant	2406	3.816	≤26	PASS
			2439	3.836	≤26	PASS
			2475	3.835	≤26	PASS
NTNV	BPSK	Ant	2406	3.802	≤26	PASS
			2439	3.820	≤26	PASS
			2475	3.804	≤26	PASS



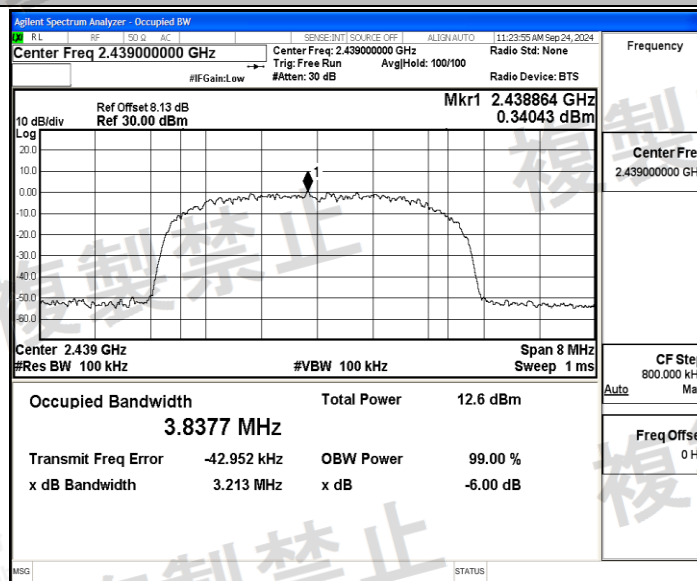


Test Graphs

NTNV_16QAM_Ant_2406

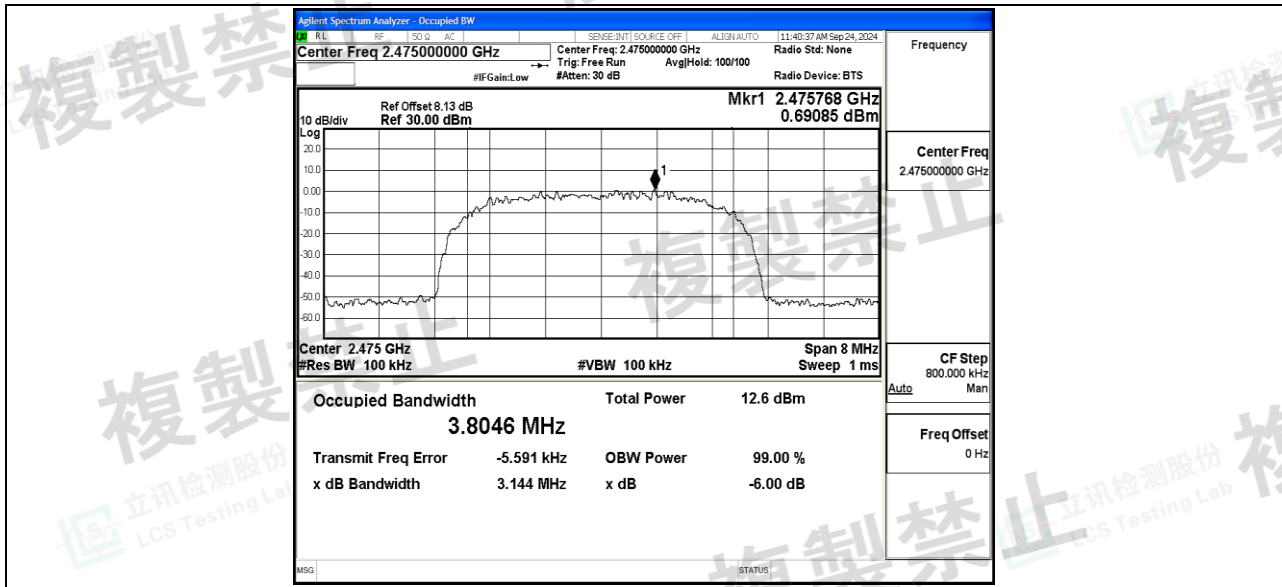


NTNV_16QAM_Ant_2439



NTNV_16QAM_Ant_2475

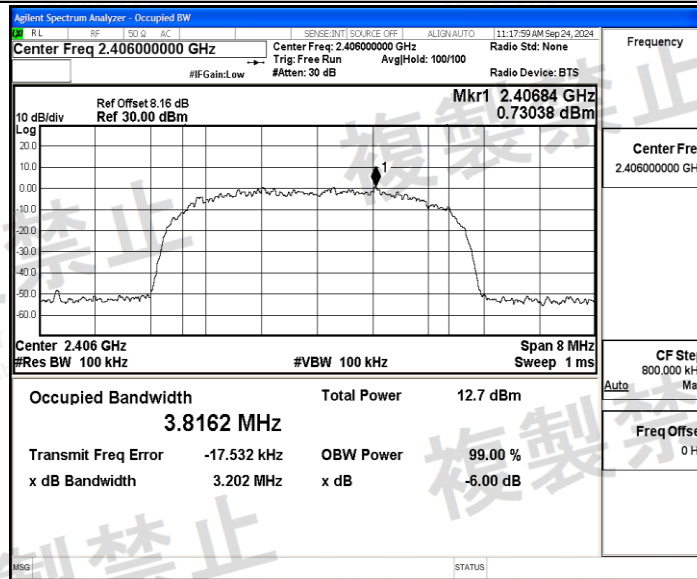




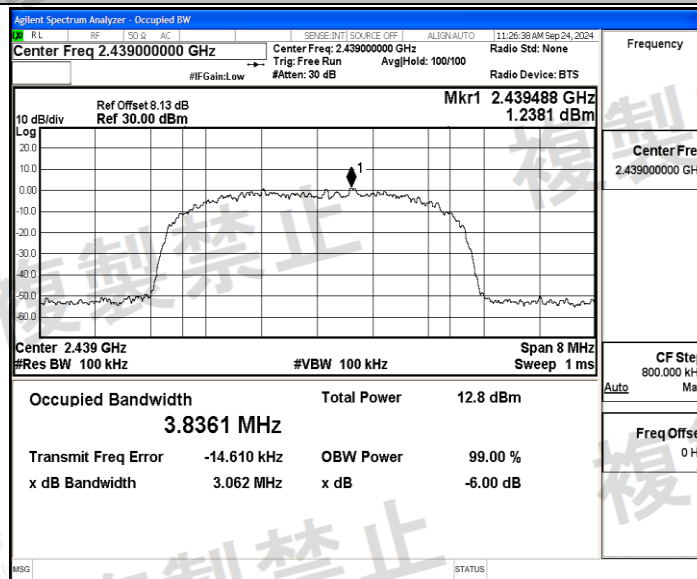


Test Graphs

NTNV_QPSK_Ant_2406

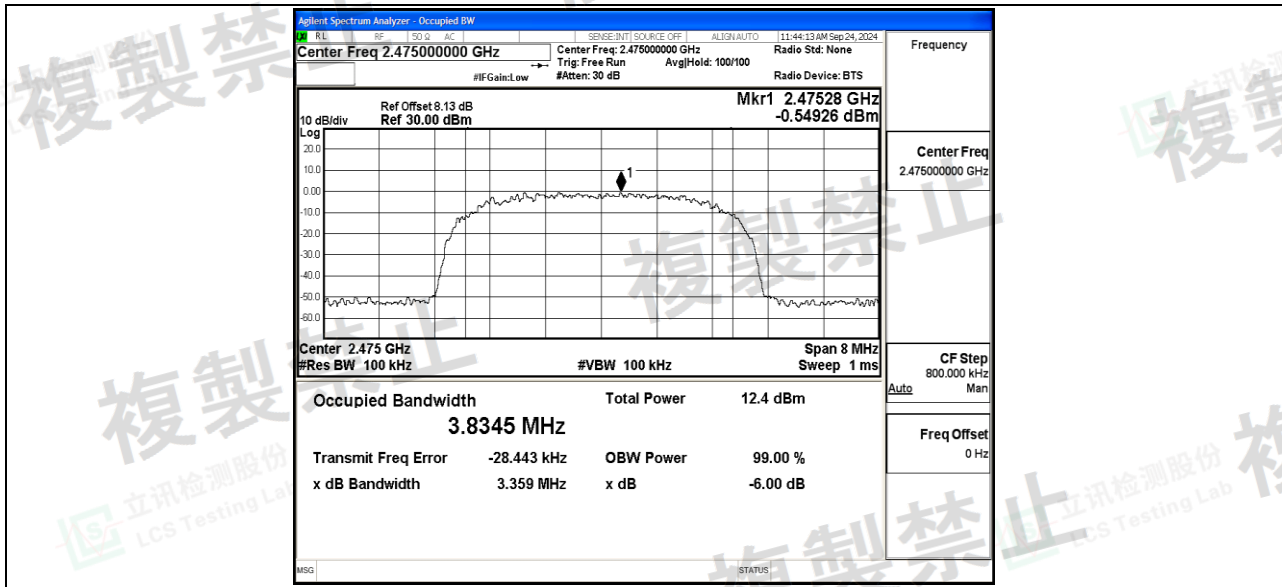


NTNV_QPSK_Ant_2439

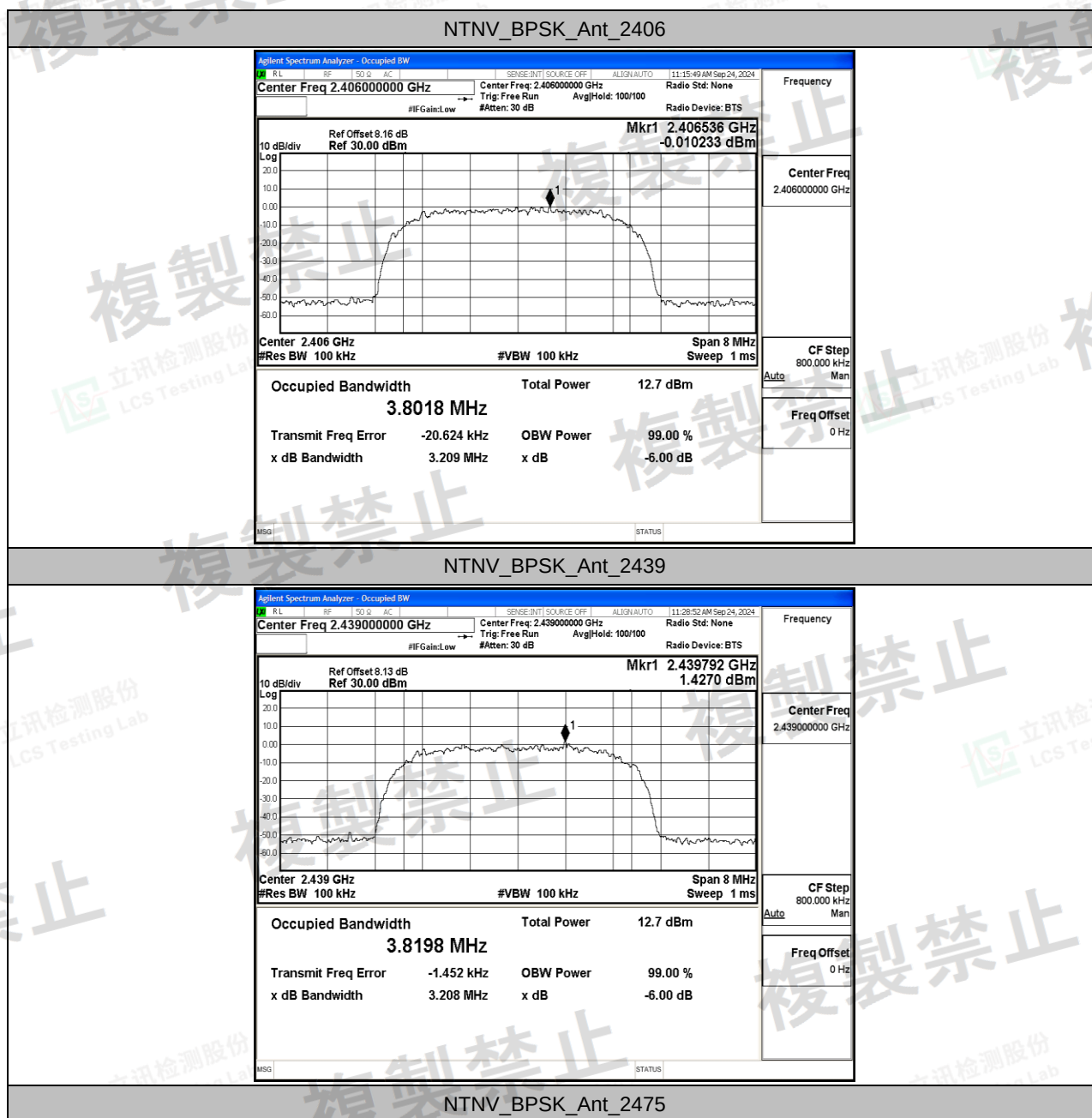


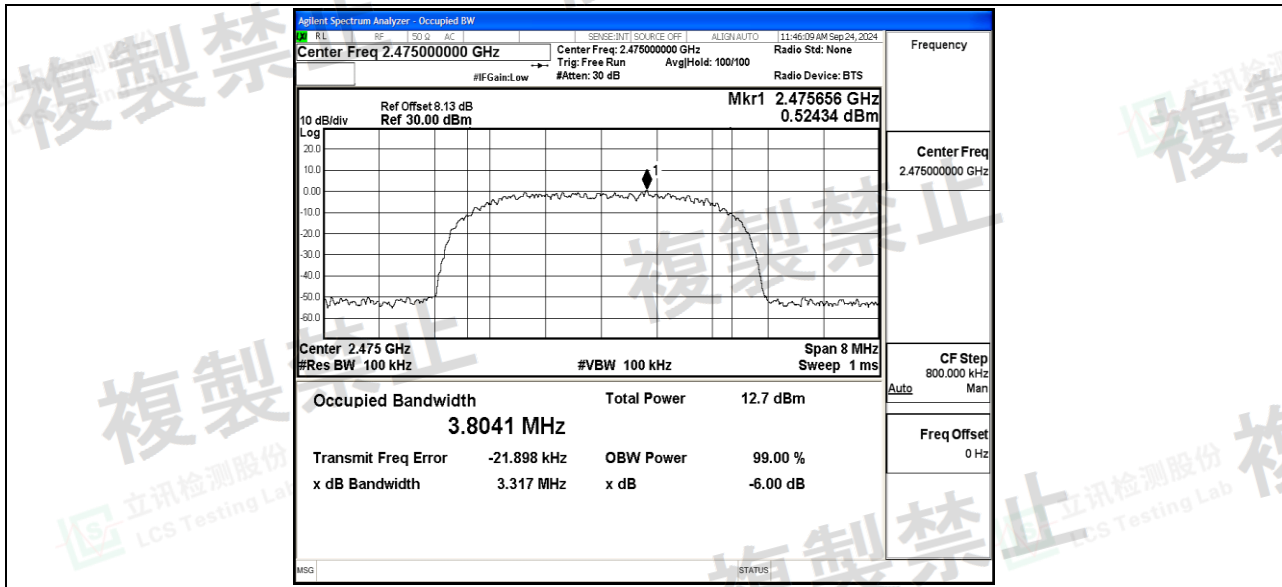
NTNV_QPSK_Ant_2475





Test Graphs







A.4 Spread Bandwidth

Test Result

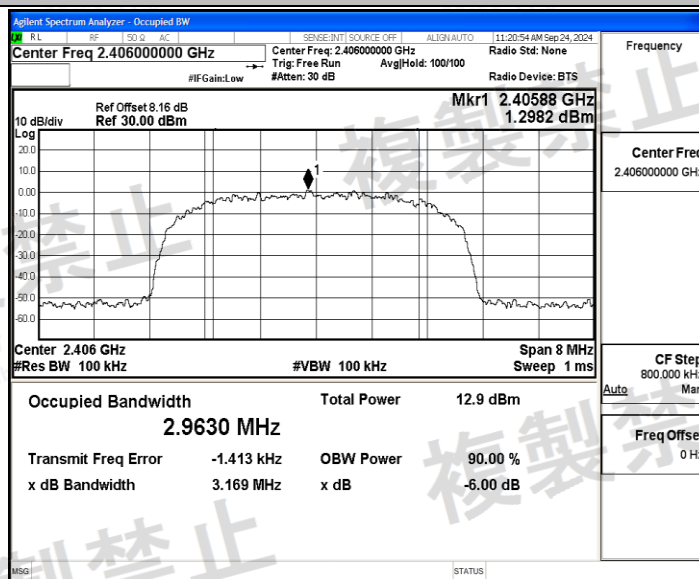
TestCondition	TestMode	Antenna	Frequency [MHz]	Result [MHz]	Limit [MHz]	Verdict
NTNV	16QAM	Ant	2406	2.963	----	PASS
			2439	2.927	----	PASS
			2475	2.980	----	PASS
NTNV	QPSK	Ant	2406	2.925	----	PASS
			2439	2.953	----	PASS
			2475	2.955	----	PASS
NTNV	BPSK	Ant	2406	2.914	----	PASS
			2439	3.017	----	PASS
			2475	2.979	----	PASS



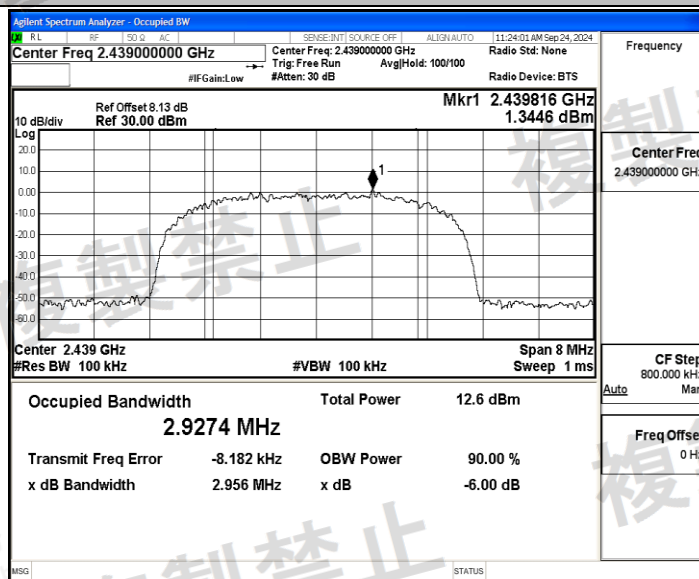


Test Graphs

NTNV_16QAM_Ant_2406



NTNV_16QAM_Ant_2439



NTNV_16QAM_Ant_2475

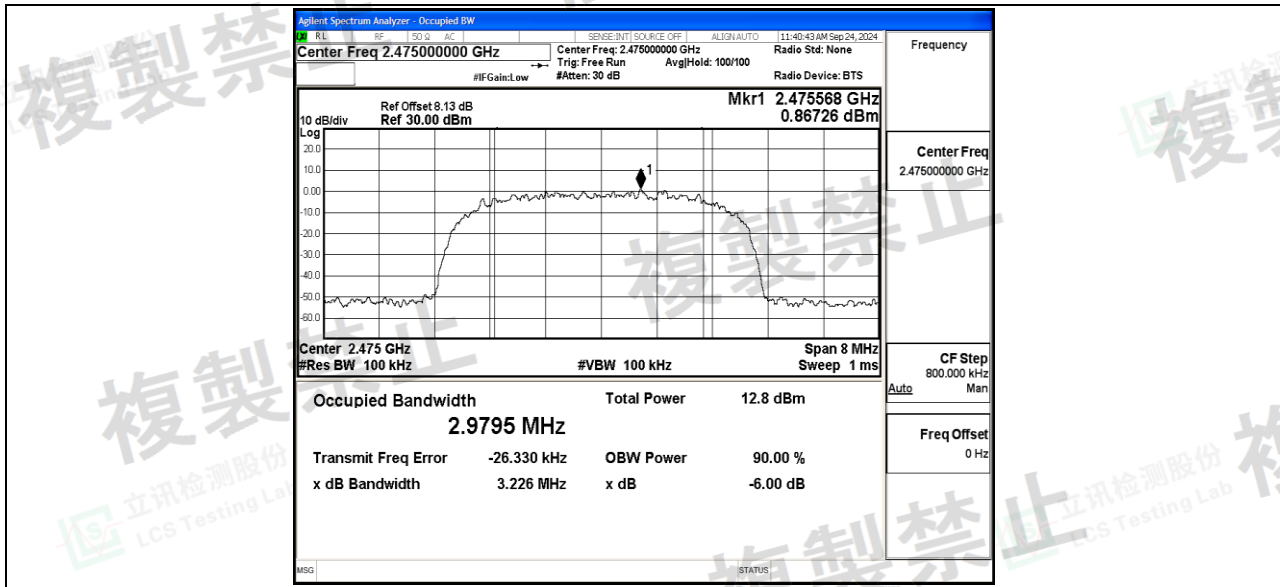


Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity





Test Graphs

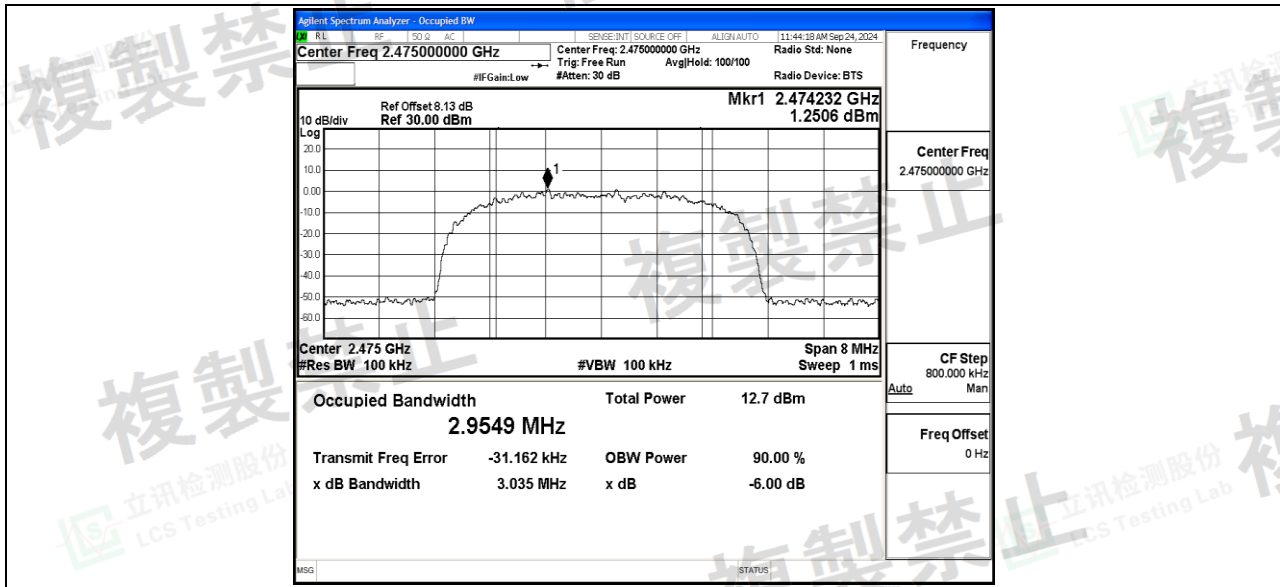


Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

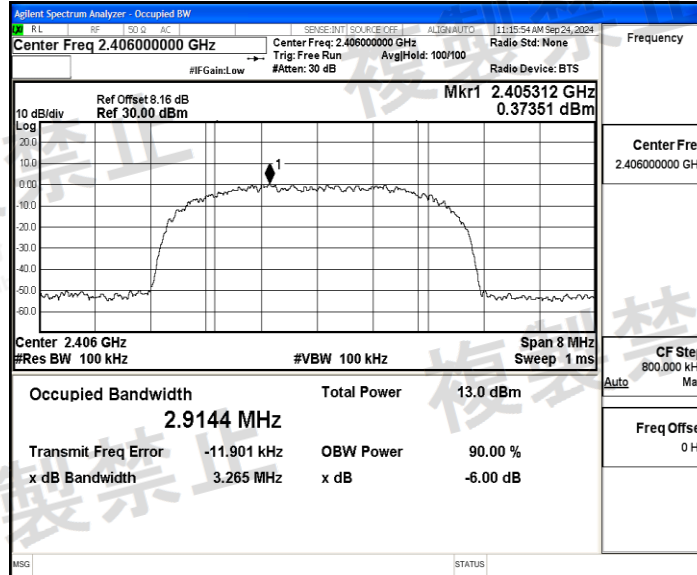
Scan code to check authenticity



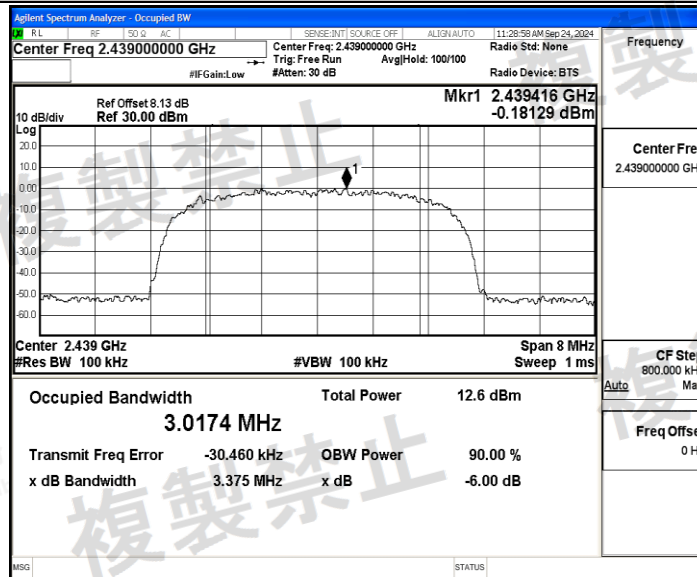


Test Graphs

NTNV_BPSK_Ant_2406



NTNV_BPSK_Ant_2439



NTNV_BPSK_Ant_2475

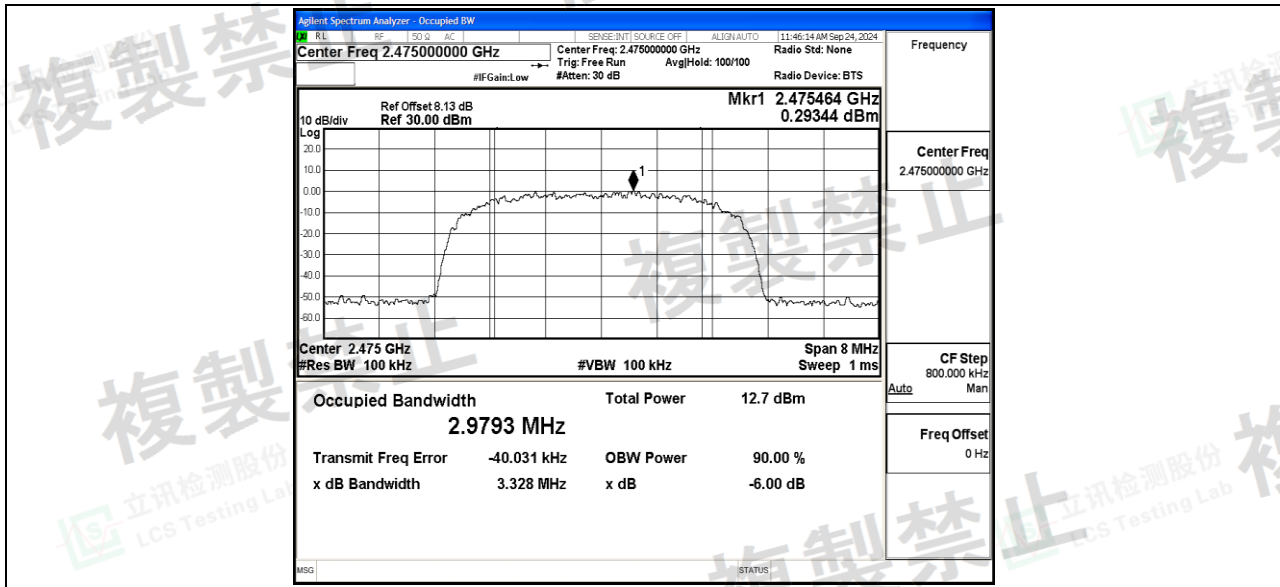


Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity





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	16QAM	Ant	2406	30~1000	-43.94	≤-26	0.04036	≤2.5	PASS
				1000~2387	-48.07	≤-26	0.01560	≤2.5	PASS
				2387~2400	-49.17	≤-16	0.01211	≤25	PASS
				2483.5~2496.5	-49.61	≤-16	0.01094	≤25	PASS
				2496.5~13000	-39.63	≤-26	0.10889	≤2.5	PASS
			2439	30~1000	-59.81	≤-26	0.00104	≤2.5	PASS
				1000~2387	-58.73	≤-26	0.00134	≤2.5	PASS
				2387~2400	-49.23	≤-16	0.01194	≤25	PASS
				2483.5~2496.5	-49.25	≤-16	0.01189	≤25	PASS
				2496.5~13000	-39.42	≤-26	0.11429	≤2.5	PASS
			2475	30~1000	-45.11	≤-26	0.03083	≤2.5	PASS
				1000~2387	-52.73	≤-26	0.00533	≤2.5	PASS
				2387~2400	-49.59	≤-16	0.01099	≤25	PASS
				2483.5~2496.5	-49.45	≤-16	0.01135	≤25	PASS
				2496.5~13000	-40.32	≤-26	0.09290	≤2.5	PASS
NTNV	QPSK	Ant	2406	30~1000	-59.70	≤-26	0.00107	≤2.5	PASS
				1000~2387	-50.16	≤-26	0.00964	≤2.5	PASS
				2387~2400	-49.48	≤-16	0.01127	≤25	PASS
				2483.5~2496.5	-49.37	≤-16	0.01156	≤25	PASS
				2496.5~13000	-39.43	≤-26	0.11402	≤2.5	PASS
			2439	30~1000	-59.66	≤-26	0.00108	≤2.5	PASS
				1000~2387	-58.69	≤-26	0.00135	≤2.5	PASS
				2387~2400	-49.57	≤-16	0.01104	≤25	PASS
				2483.5~2496.5	-49.56	≤-16	0.01107	≤25	PASS
				2496.5~13000	-37.55	≤-26	0.17579	≤2.5	PASS
			2475	30~1000	-50.35	≤-26	0.00923	≤2.5	PASS
				1000~2387	-53.76	≤-26	0.00421	≤2.5	PASS
				2387~2400	-49.69	≤-16	0.01074	≤25	PASS
				2483.5~2496.5	-49.35	≤-16	0.01161	≤25	PASS
				2496.5~13000	-39.99	≤-26	0.10023	≤2.5	PASS
NTNV	BPSK	Ant	2406	30~1000	-41.89	≤-26	0.06471	≤2.5	PASS
				1000~2387	-58.78	≤-26	0.00132	≤2.5	PASS
				2387~2400	-49.34	≤-16	0.01164	≤25	PASS
				2483.5~2496.5	-49.46	≤-16	0.01132	≤25	PASS
				2496.5~13000	-40.25	≤-26	0.09441	≤2.5	PASS
			2439	30~1000	-59.53	≤-26	0.00111	≤2.5	PASS



Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China

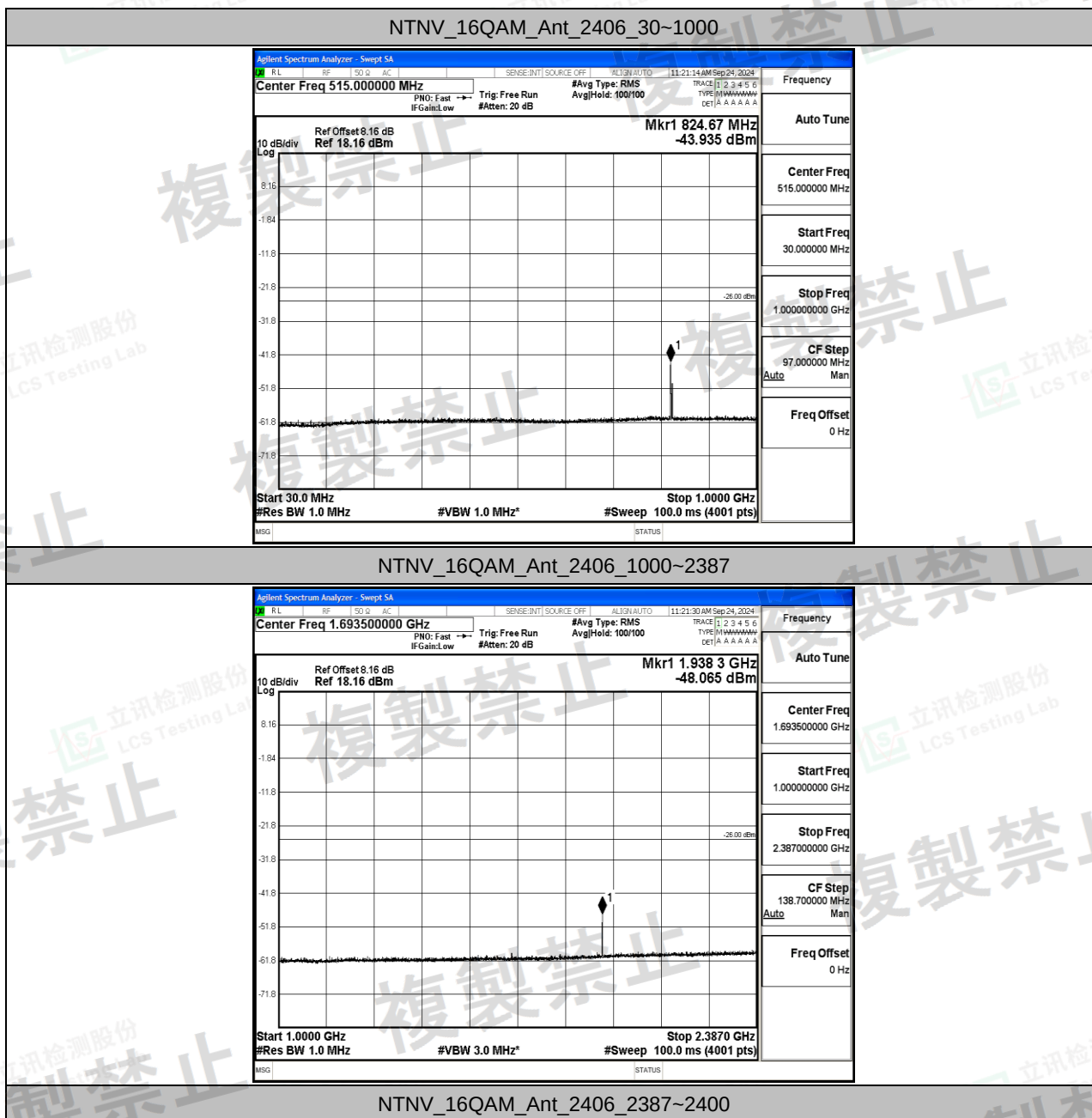
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

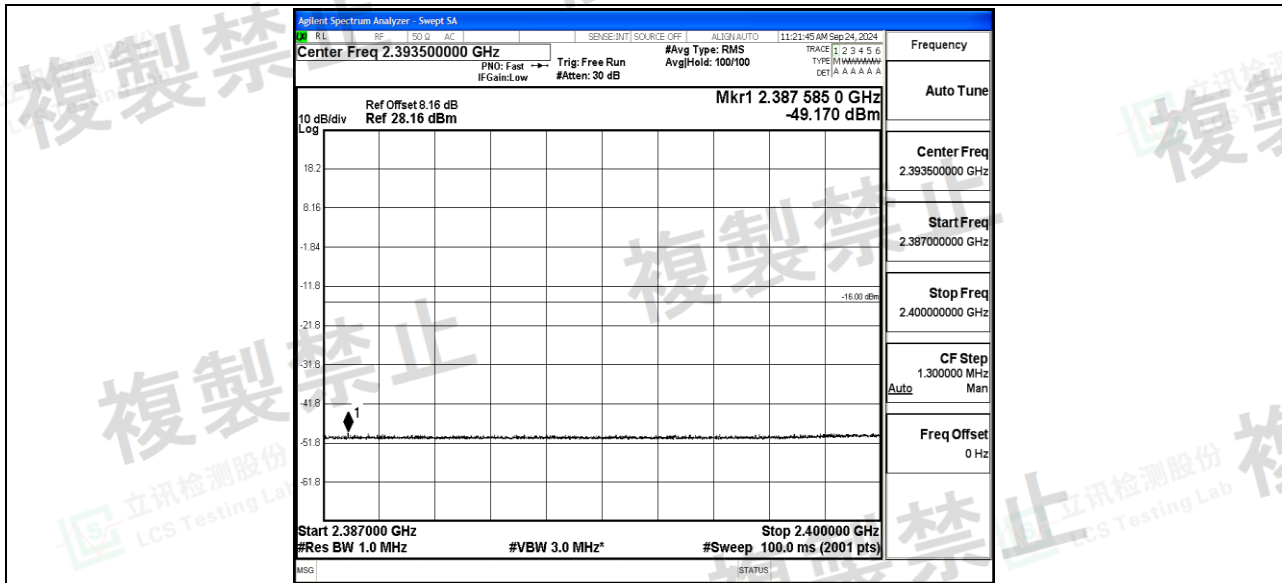
Scan code to check authenticity



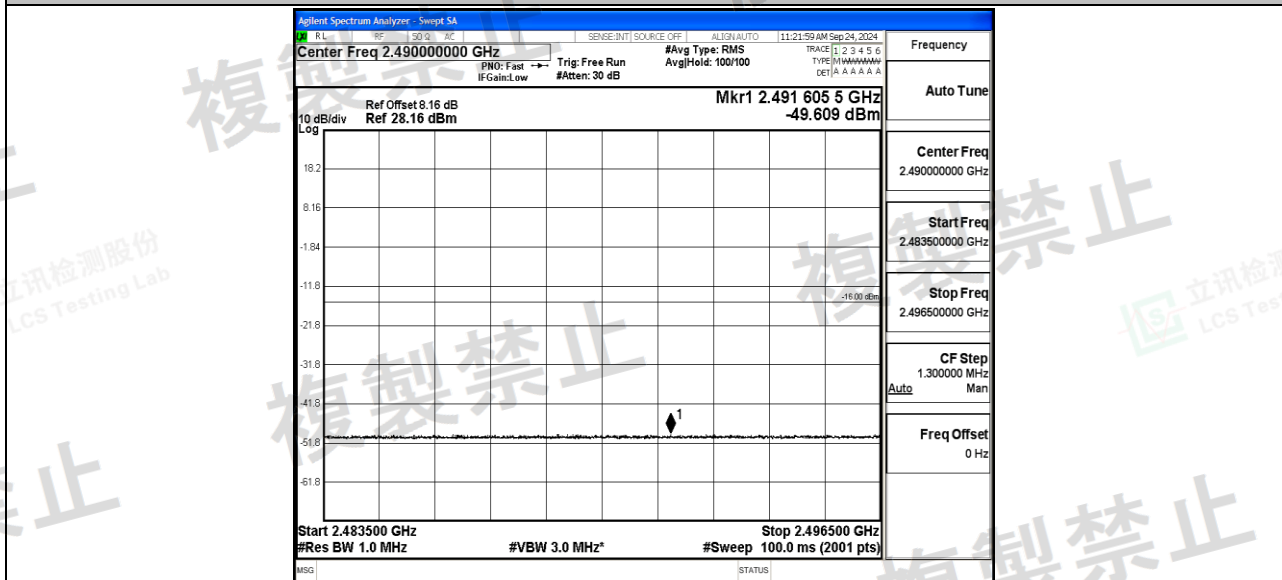
			1000~2387	-58.71	≤-26	0.00135	≤2.5	PASS
			2387~2400	-49.44	≤-16	0.01138	≤25	PASS
			2483.5~2496.5	-49.53	≤-16	0.01114	≤25	PASS
			2496.5~13000	-39.66	≤-26	0.10814	≤2.5	PASS
		2475	30~1000	-42.28	≤-26	0.05916	≤2.5	PASS
			1000~2387	-52.97	≤-26	0.00505	≤2.5	PASS
			2387~2400	-49.71	≤-16	0.01069	≤25	PASS
			2483.5~2496.5	-49.54	≤-16	0.01112	≤25	PASS
			2496.5~13000	-39.91	≤-26	0.10209	≤2.5	PASS

Test Graphs



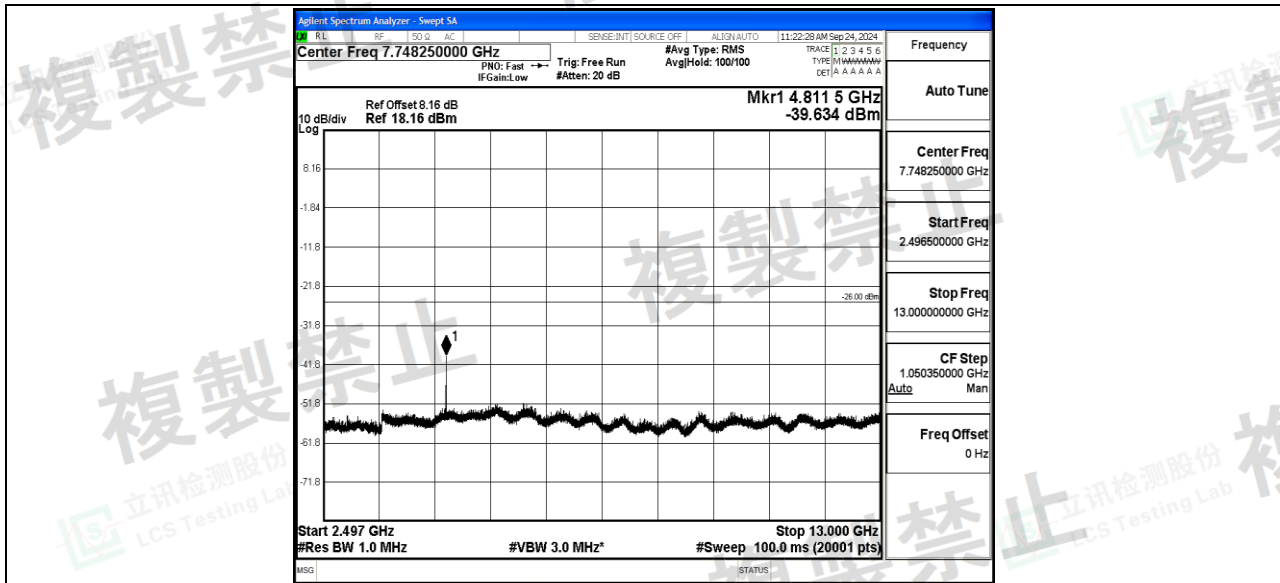


NTNV_16QAM_Ant_2406_2483.5~2496.5

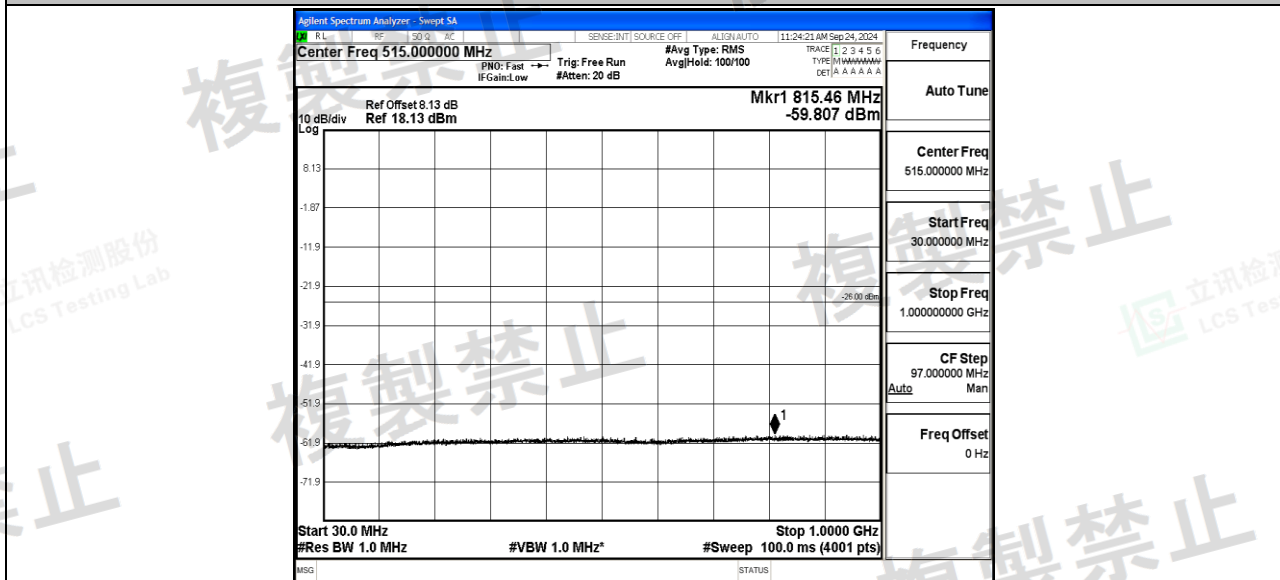


NTNV_16QAM_Ant_2406_2496.5~13000



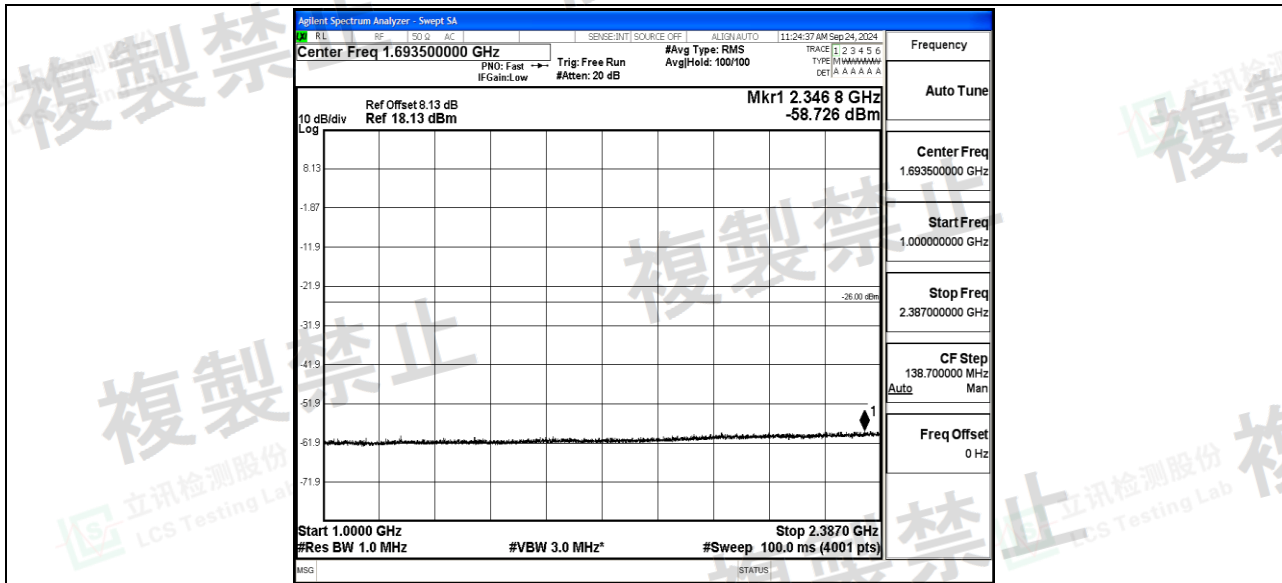


NTNV_16QAM_Ant_2439_30~1000

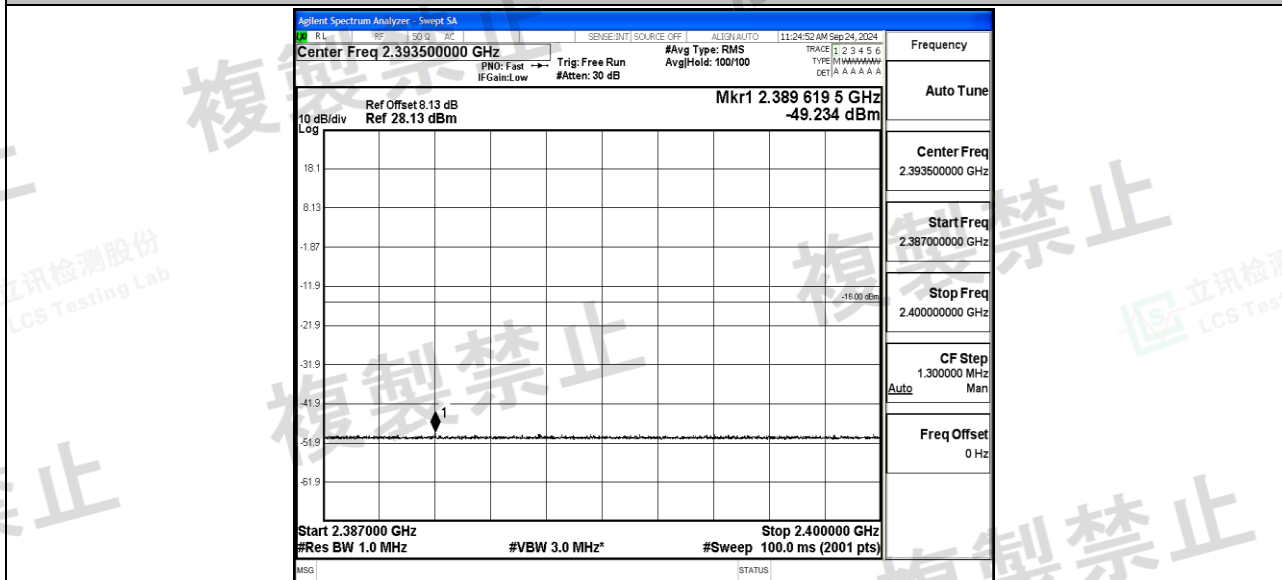


NTNV_16QAM_Ant_2439_1000~2387



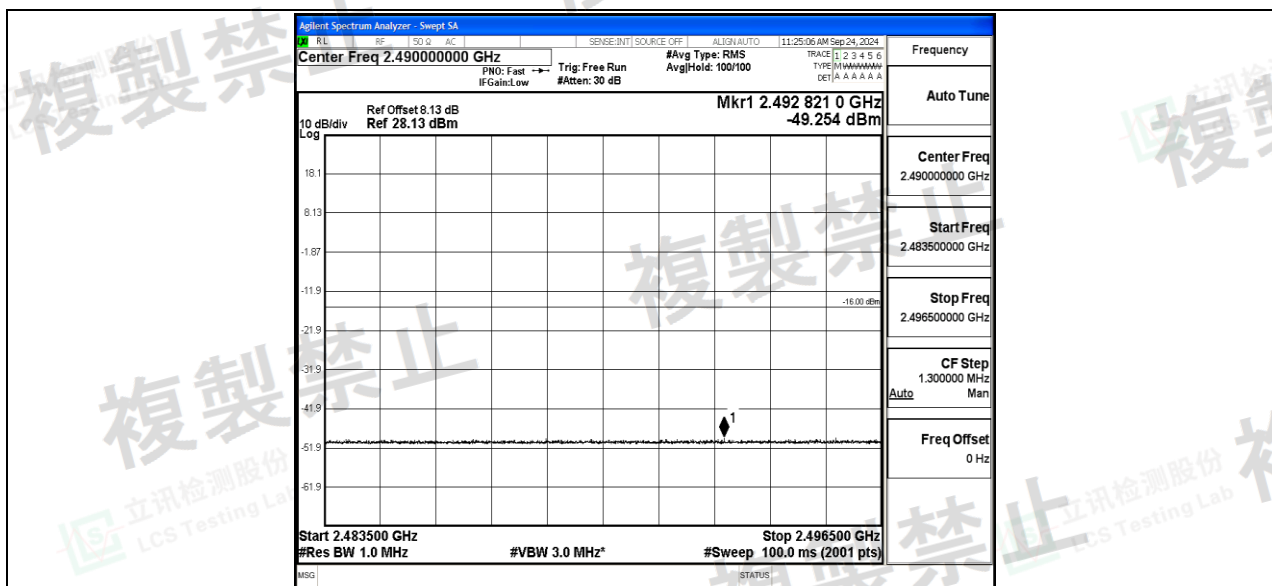


NTNV_16QAM_Ant_2439_2387~2400

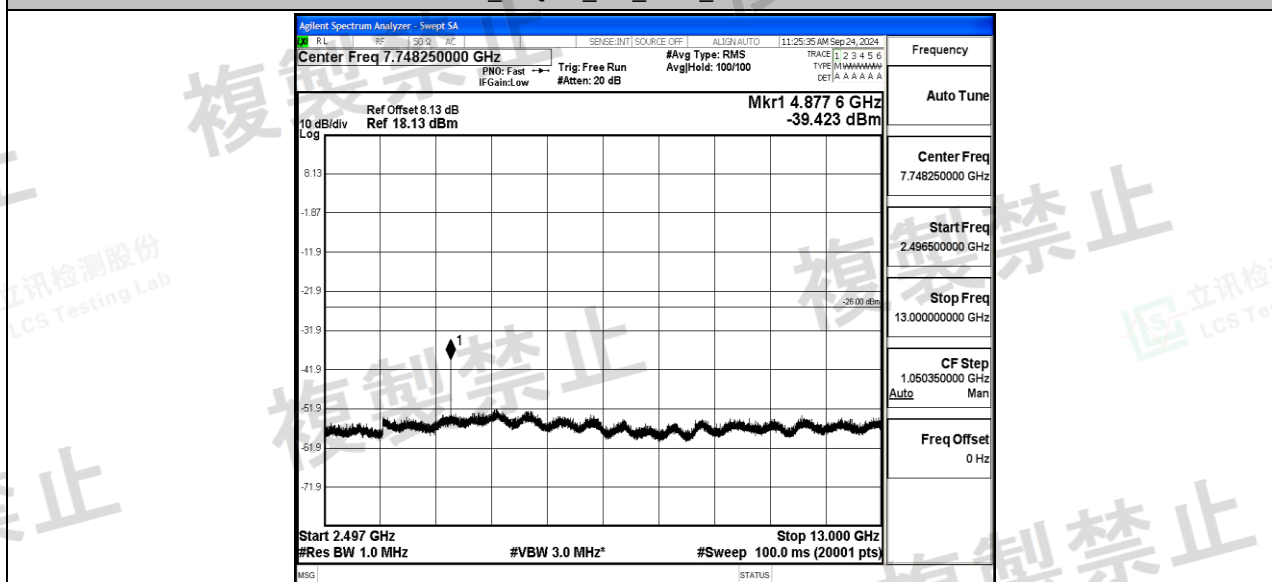


NTNV_16QAM_Ant_2439_2483.5~2496.5



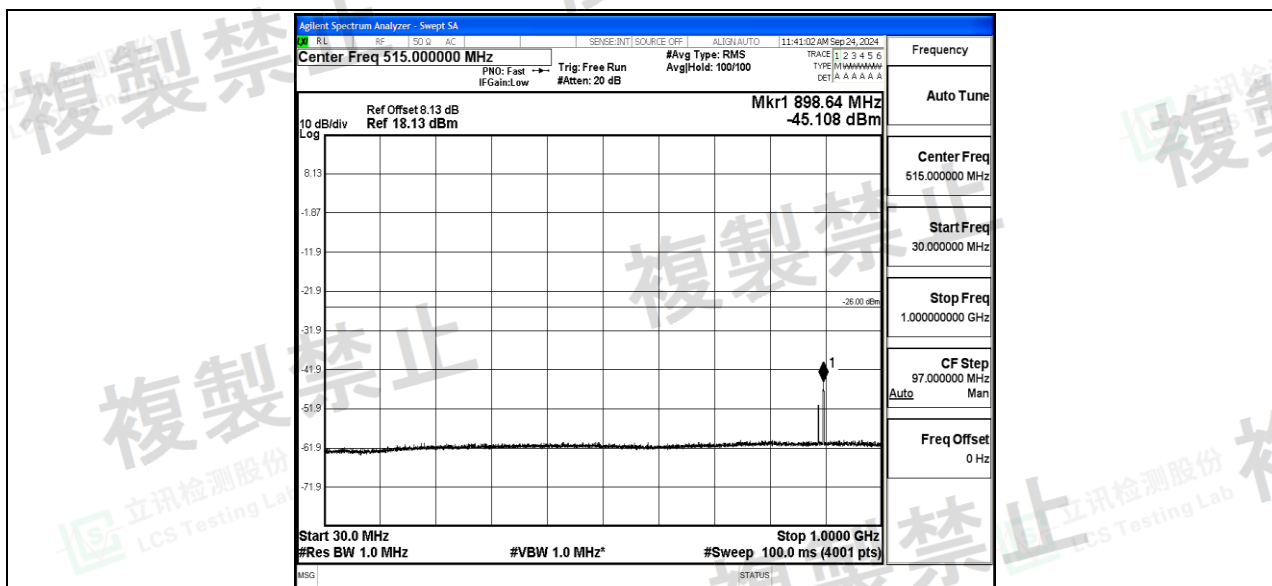


NTNV_16QAM_Ant_2439_2496.5~13000

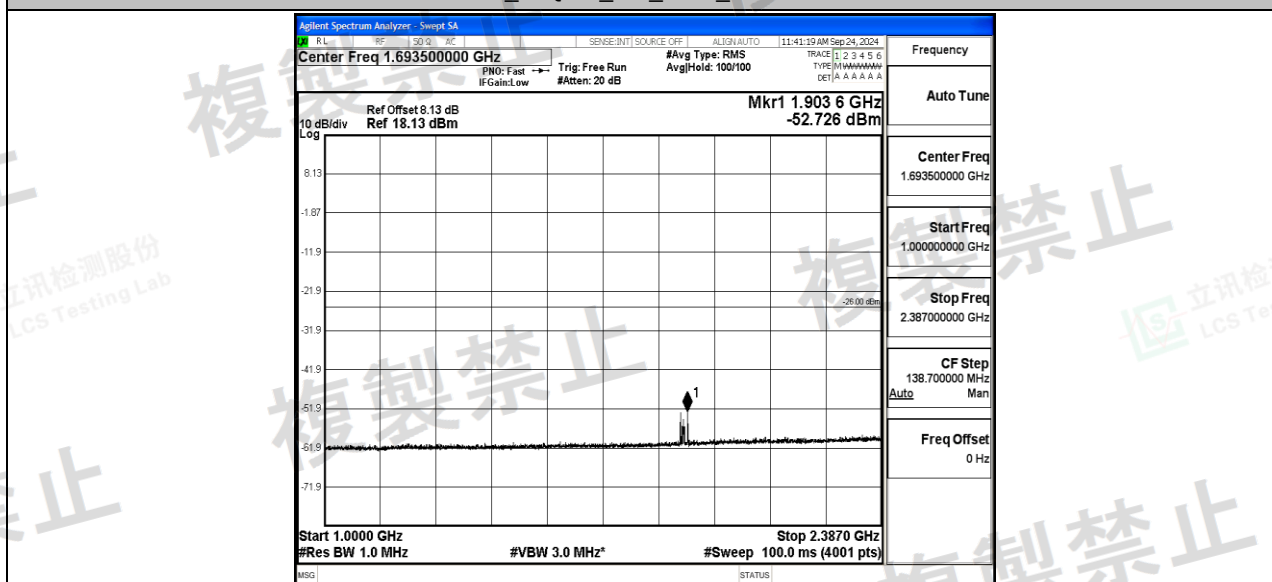


NTNV_16QAM_Ant_2475_30~1000



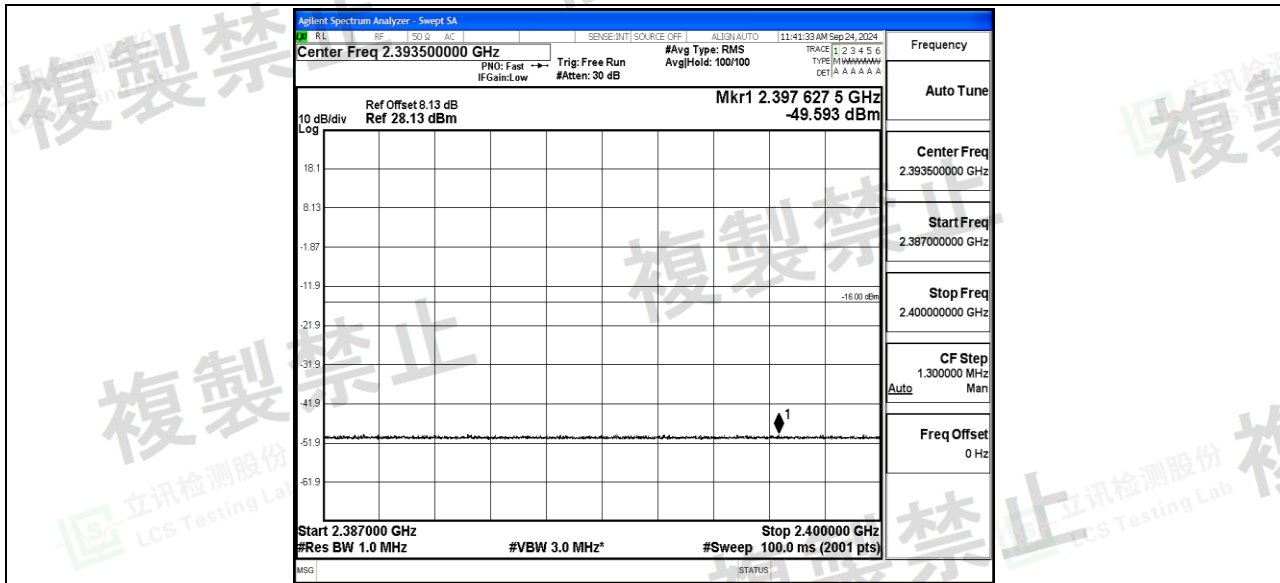


NTNV_16QAM_Ant_2475_1000~2387

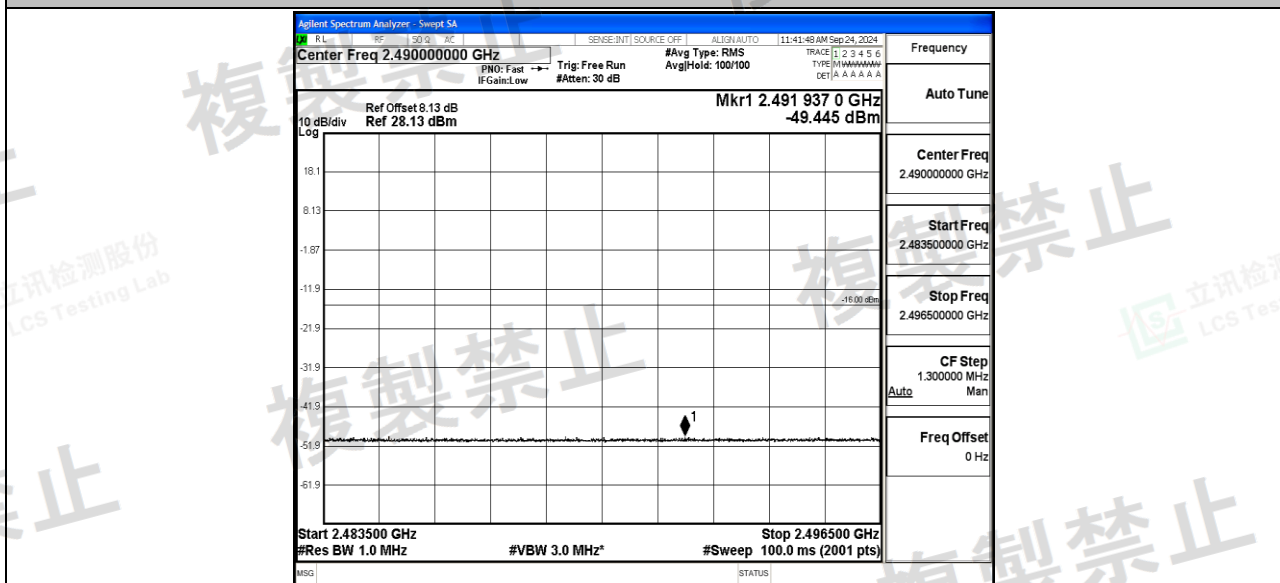


NTNV_16QAM_Ant_2475_2387~2400



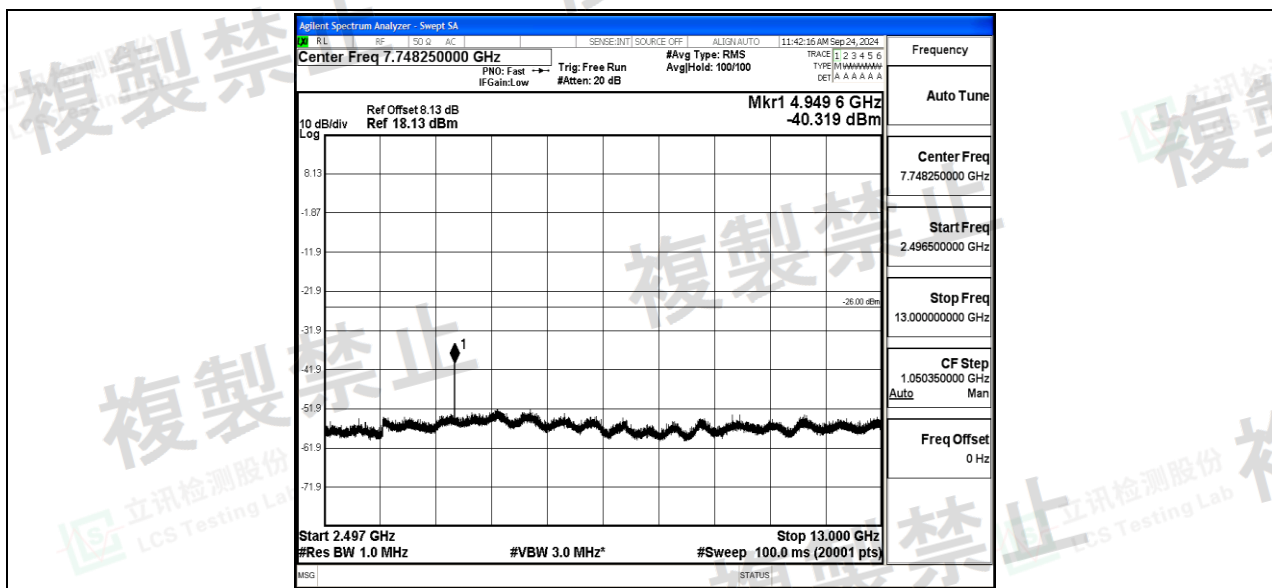


NTNV_16QAM_Ant_2475_2483.5~2496.5



NTNV_16QAM_Ant_2475_2496.5~13000

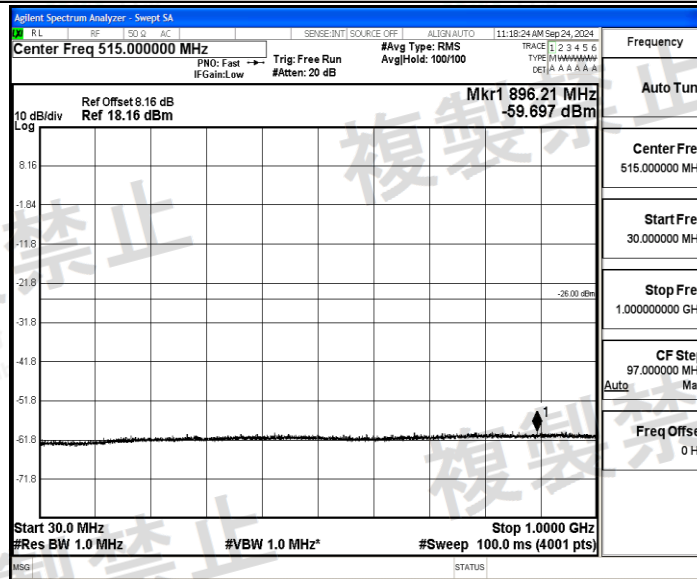




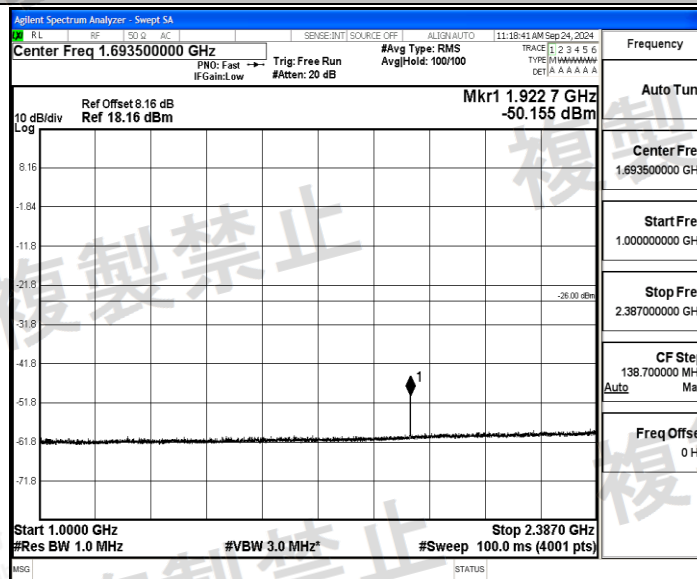


Test Graphs

NTNV_QPSK_Ant_2406_30~1000

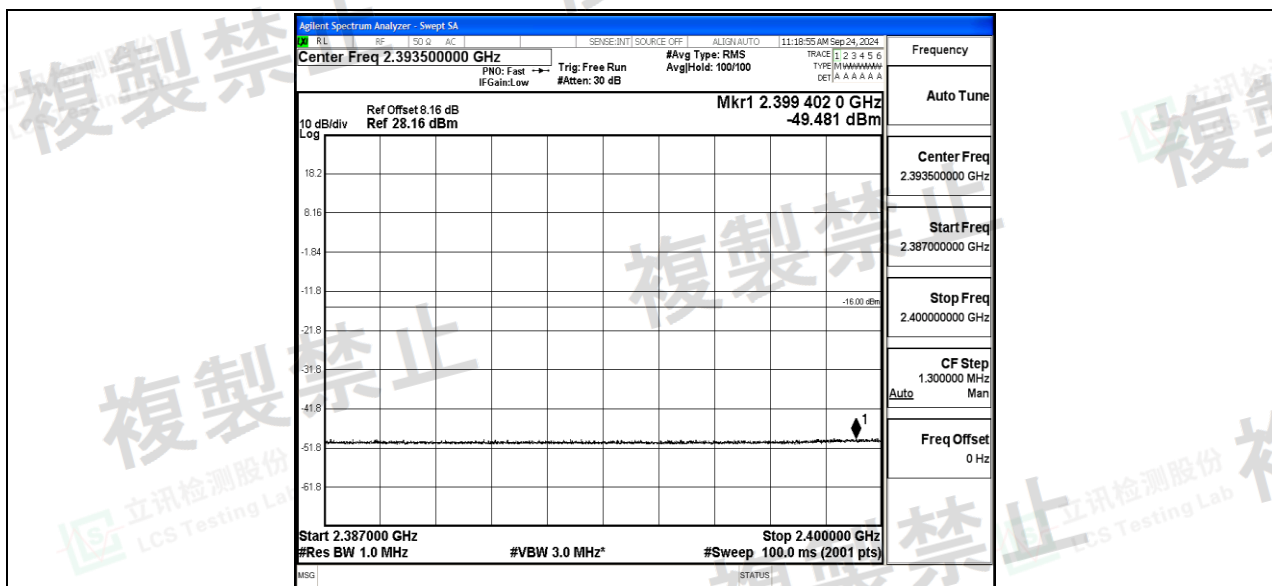


NTNV_QPSK_Ant_2406_1000~2387

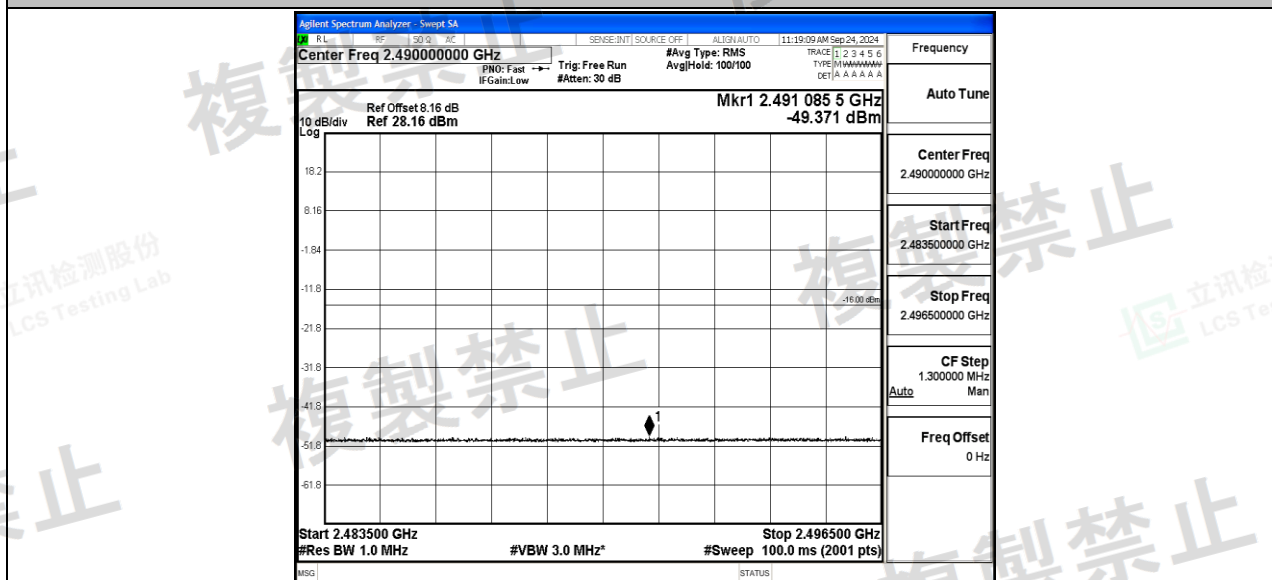


NTNV_QPSK_Ant_2406_2387~2400



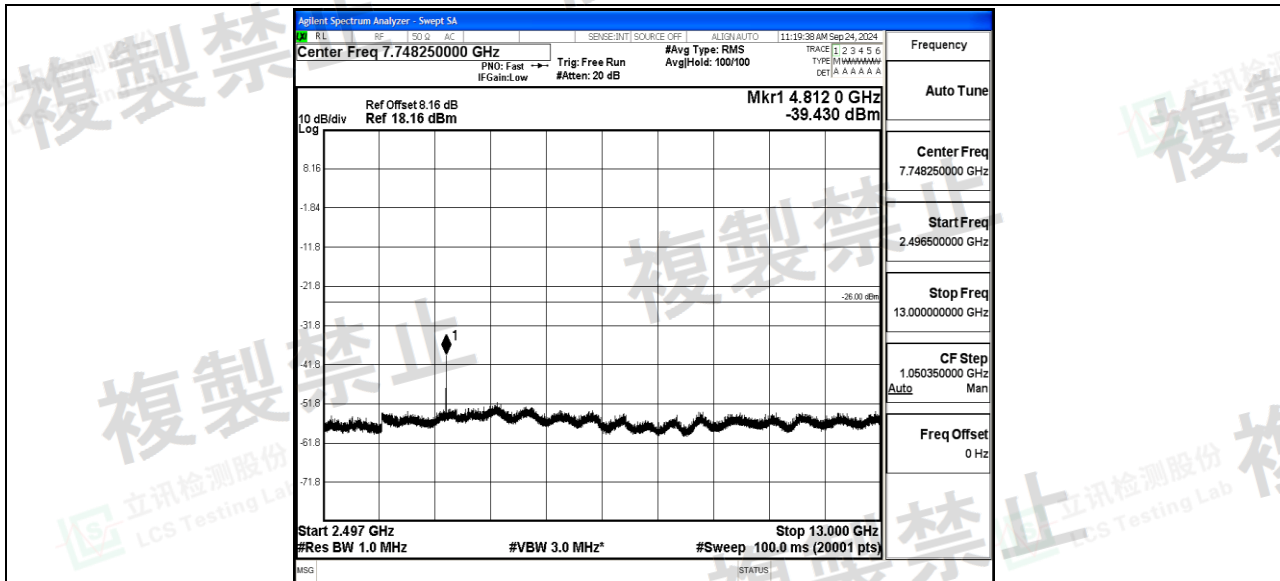


NTNV_QPSK_Ant_2406_2483.5~2496.5

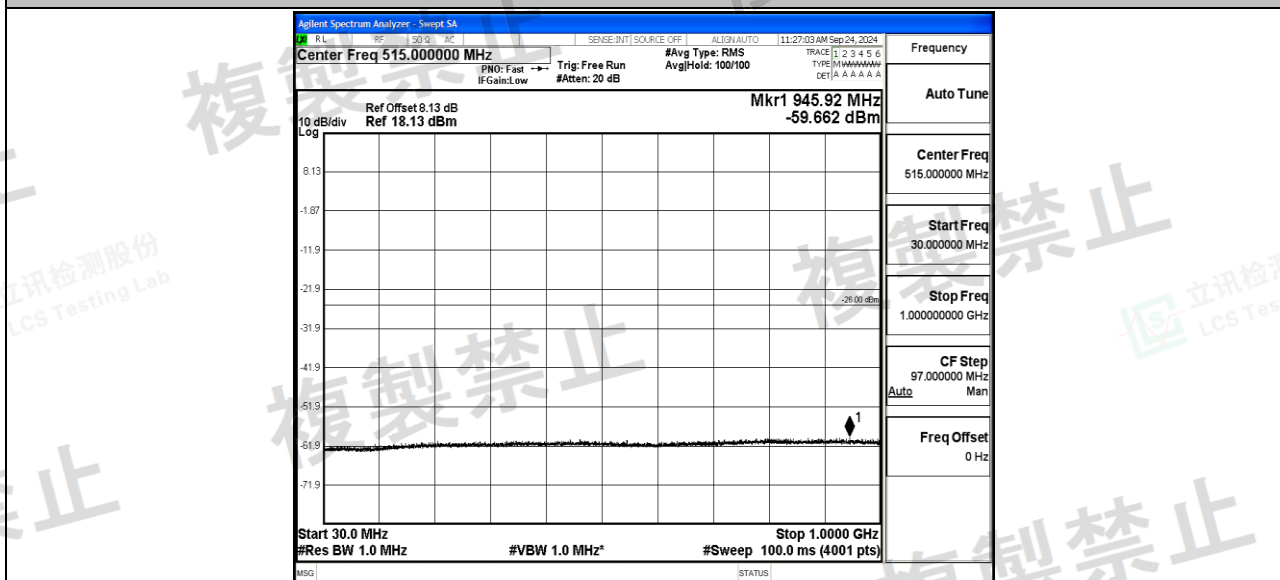


NTNV_QPSK_Ant_2406_2496.5~13000



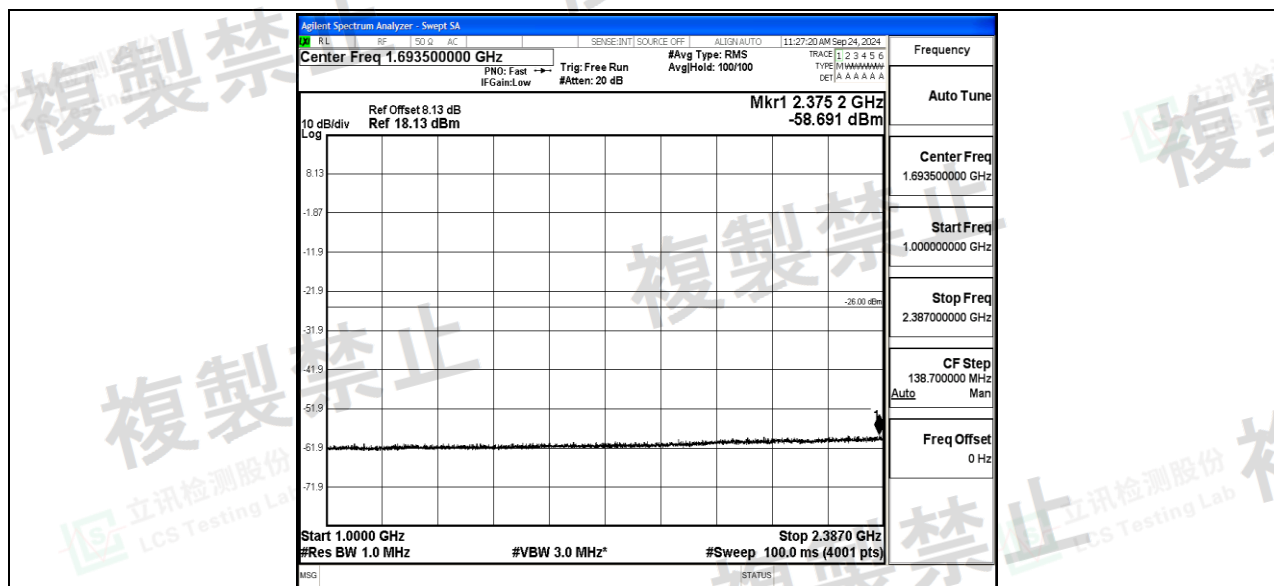


NTNV_QPSK_Ant_2439_30~1000

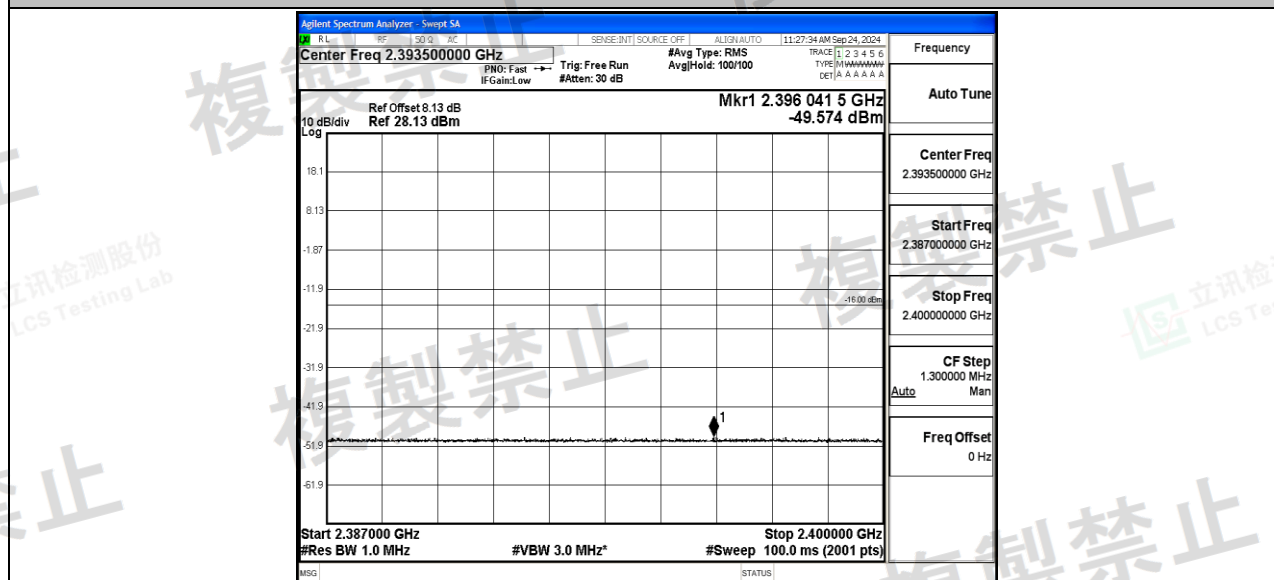


NTNV_QPSK_Ant_2439_1000~2387



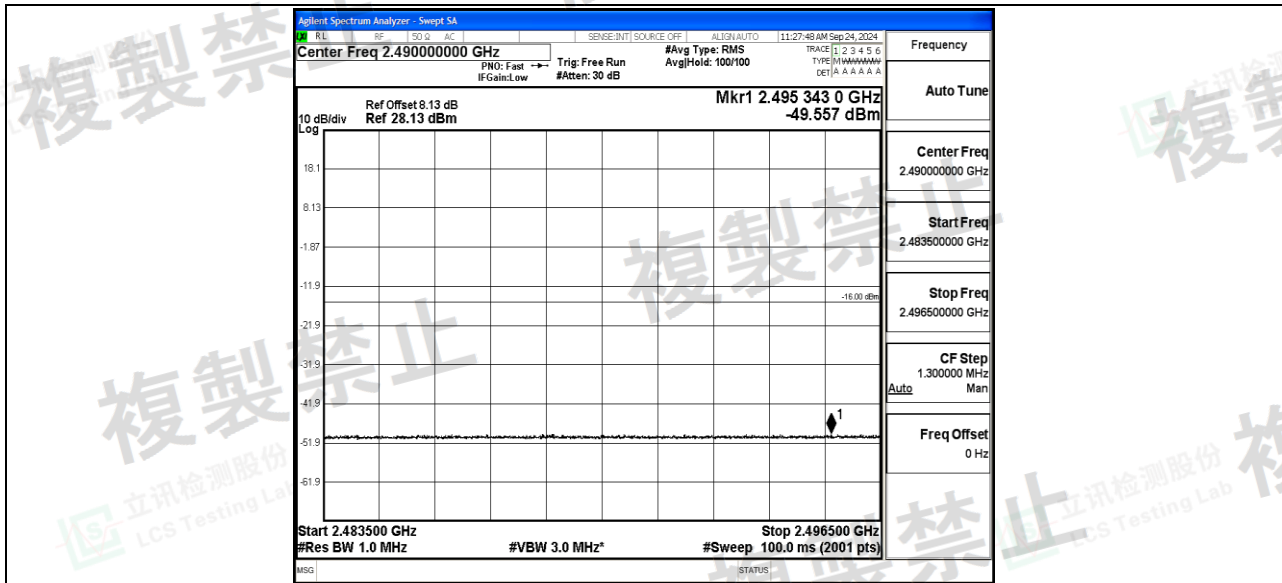


NTNV_QPSK_Ant_2439_2387~2400

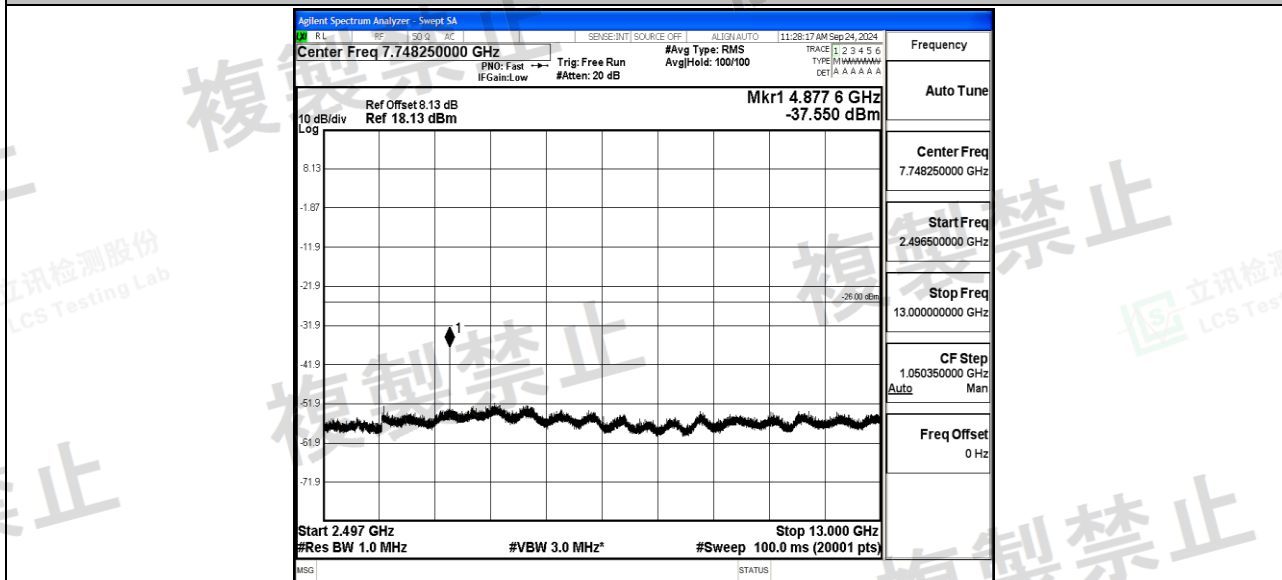


NTNV_QPSK_Ant_2439_2483.5~2496.5



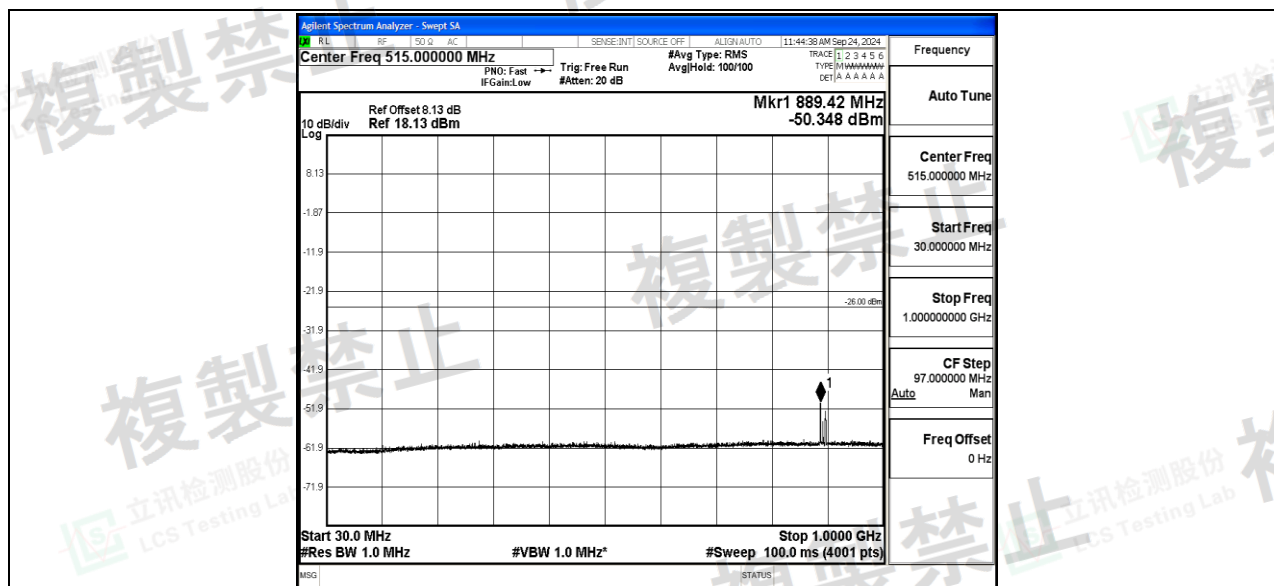


NTNV_QPSK_Ant_2439_2496.5~13000

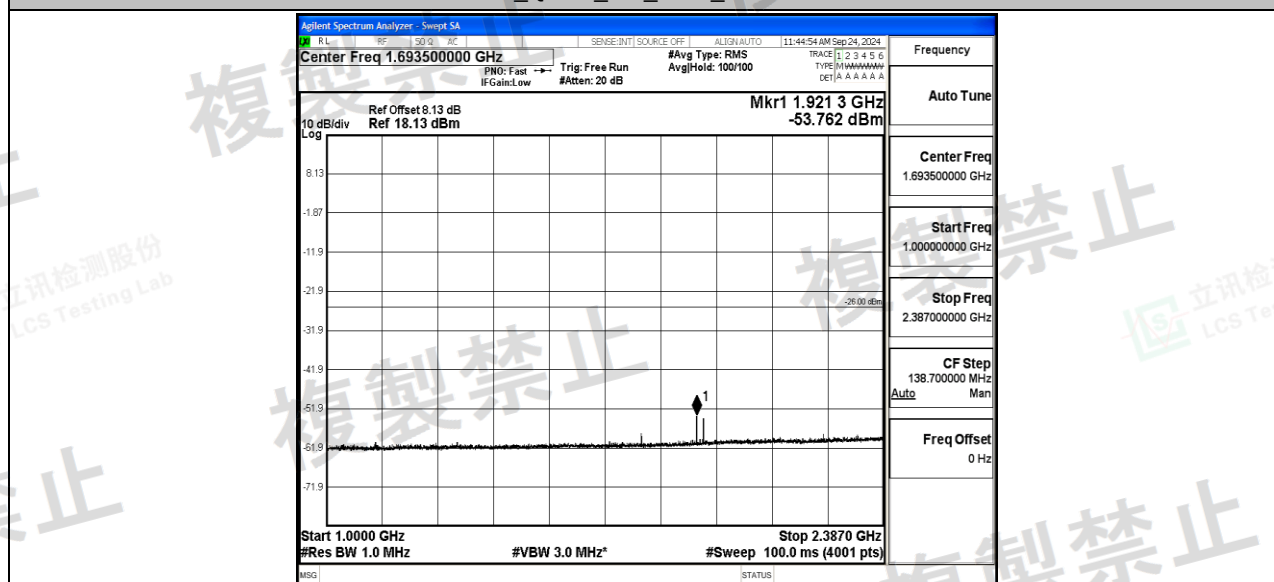


NTNV_QPSK_Ant_2475_30~1000



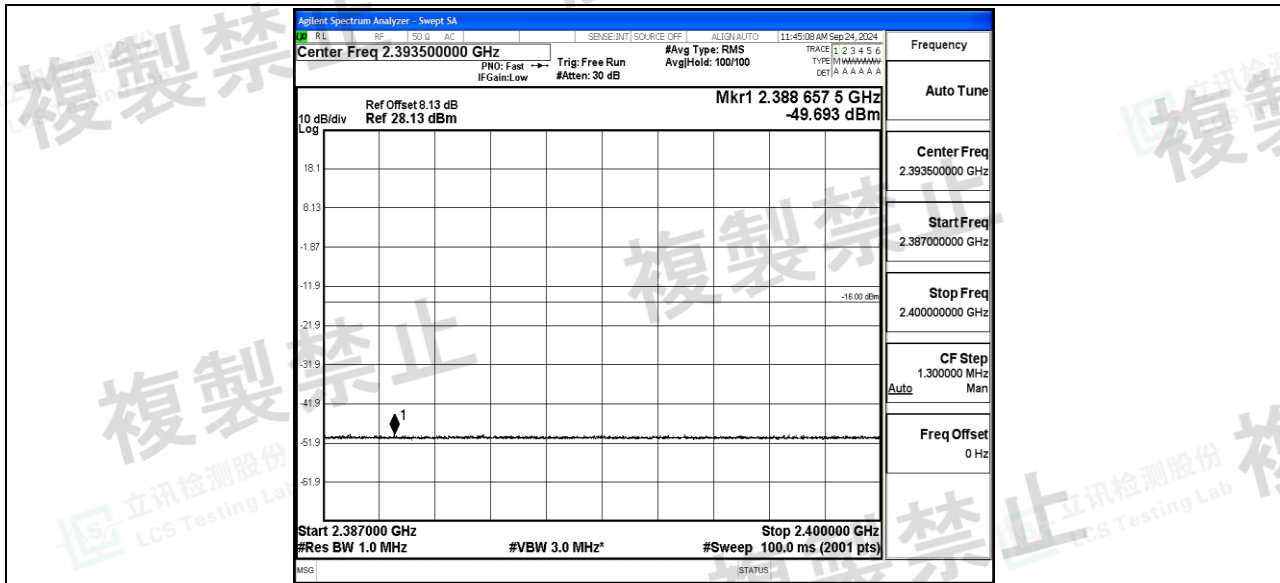


NTNV_QPSK_Ant_2475_1000~2387

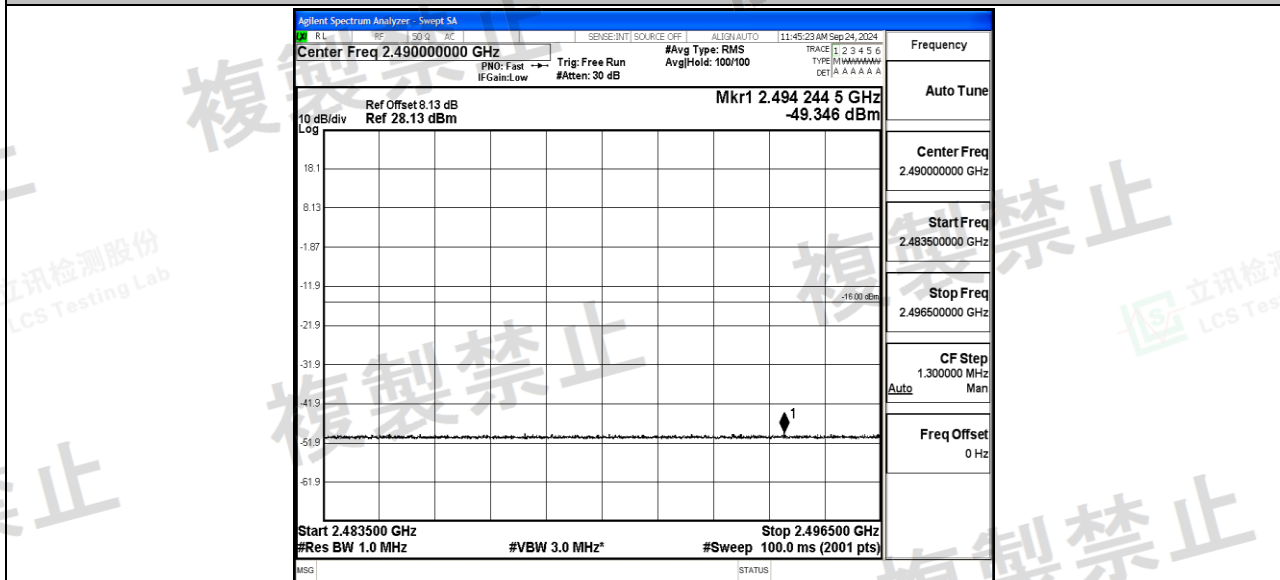


NTNV_QPSK_Ant_2475_2387~2400





NTNV_QPSK_Ant_2475_2483.5~2496.5



NTNV_QPSK_Ant_2475_2496.5~13000

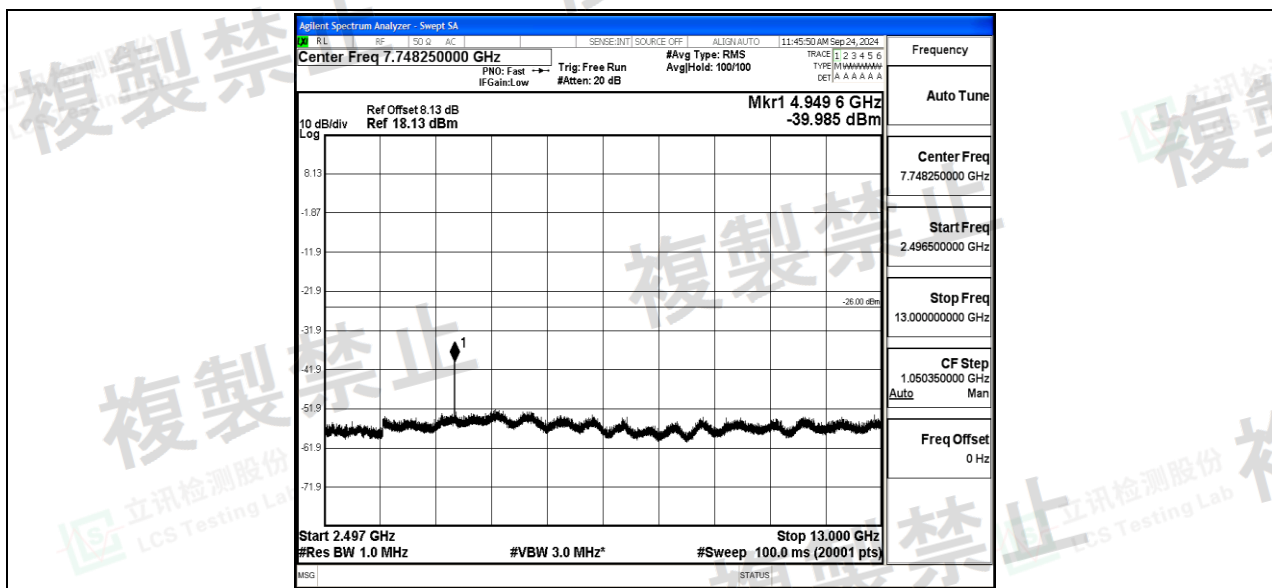


Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

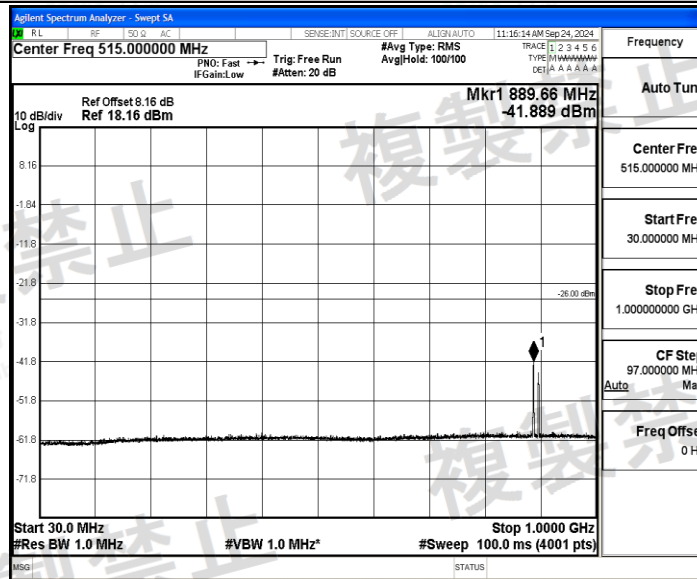
Scan code to check authenticity



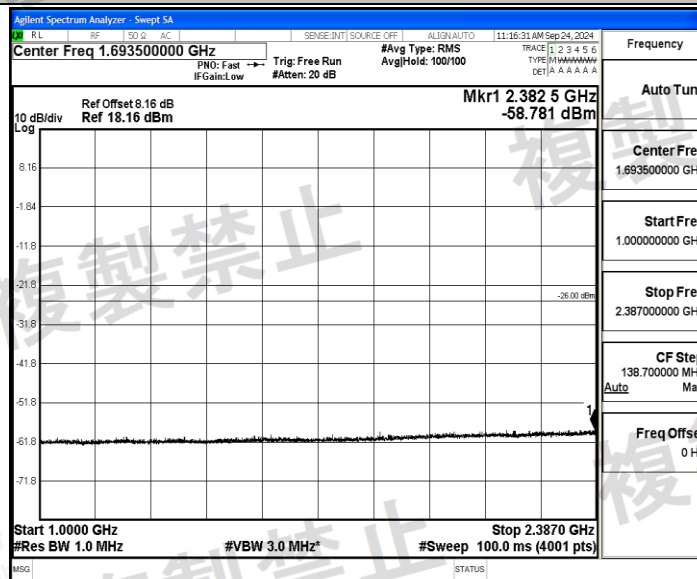


Test Graphs

NTNV_BPSK_Ant_2406_30~1000

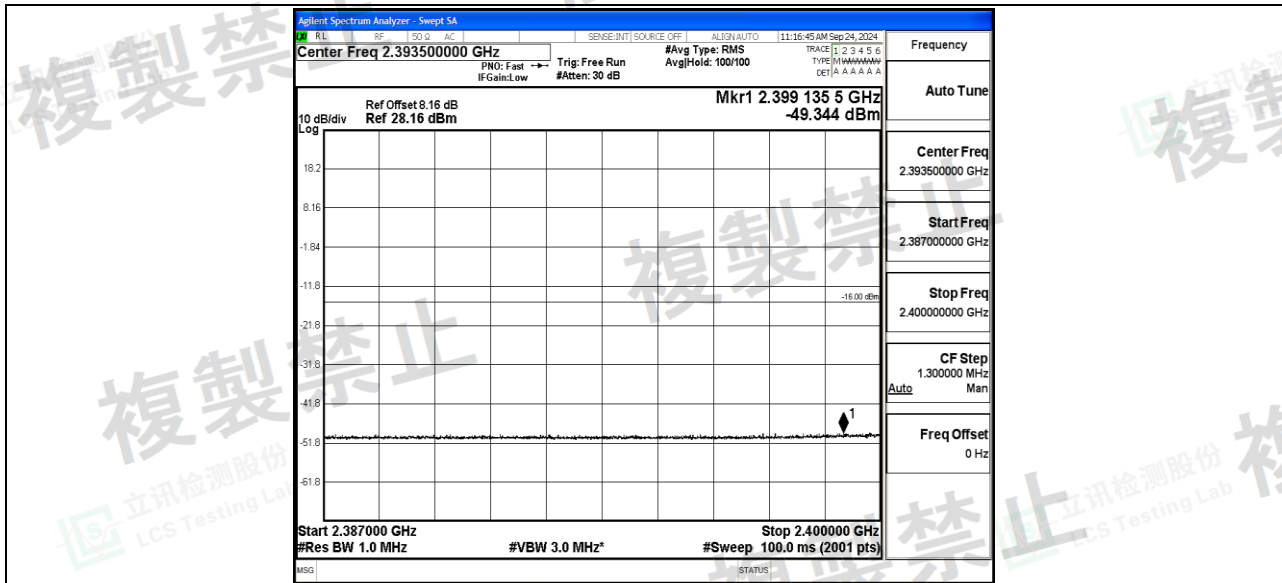


NTNV_BPSK_Ant_2406_1000~2387

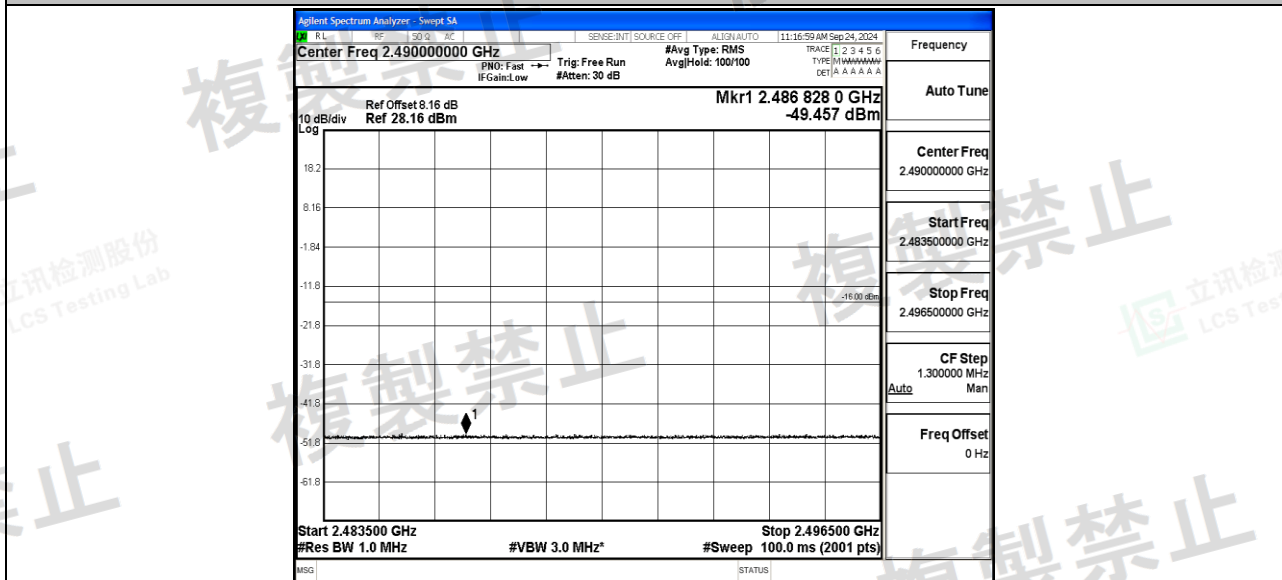


NTNV_BPSK_Ant_2406_2387~2400





NTNV_BPSK_Ant_2406_2483.5~2496.5



NTNV_BPSK_Ant_2406_2496.5~13000

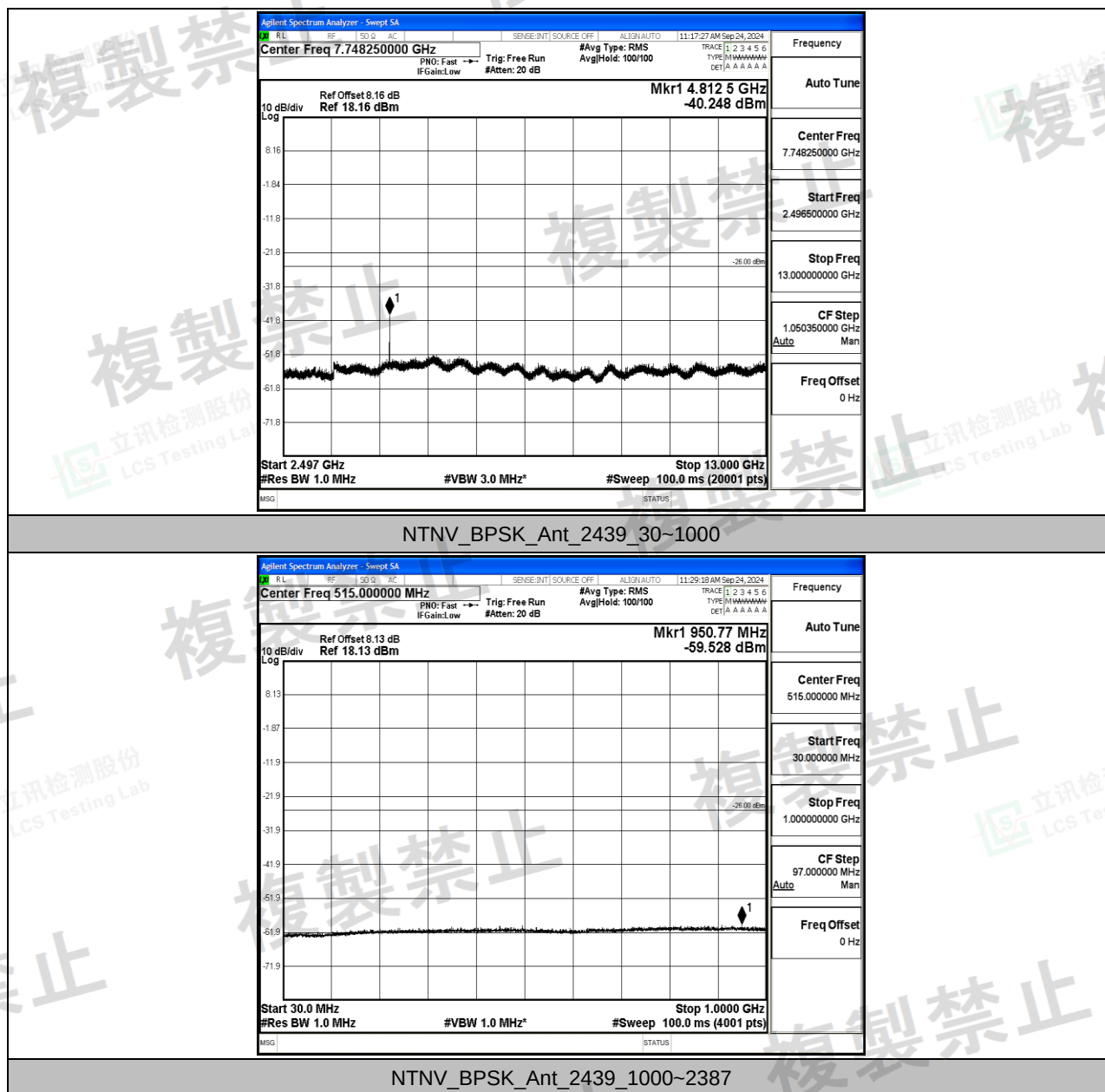


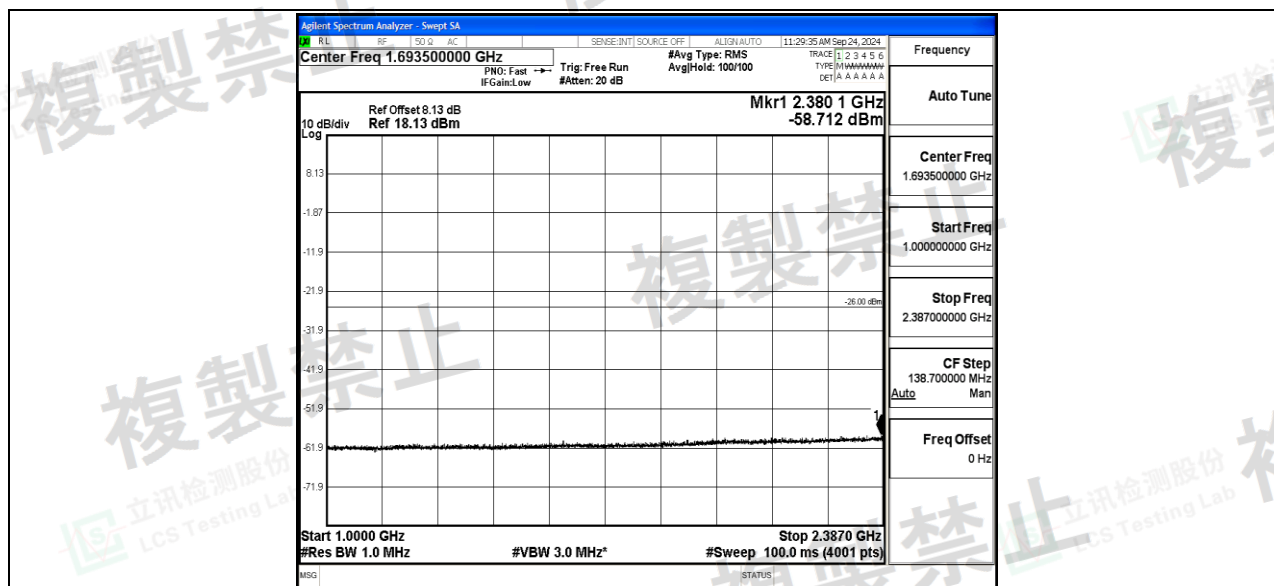
Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China

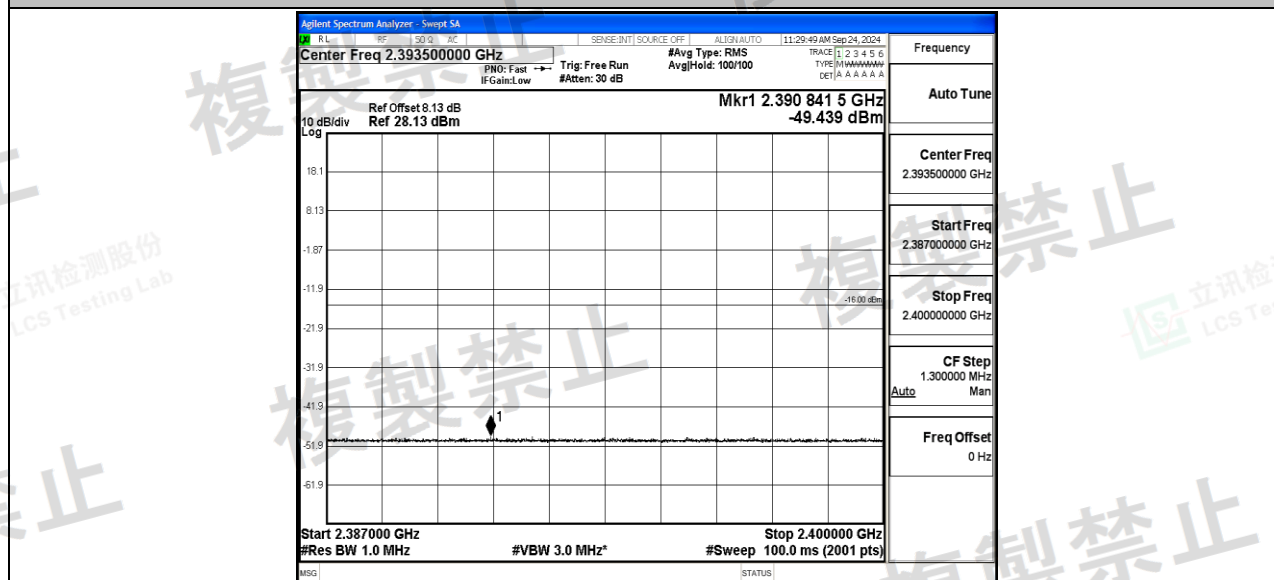
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity



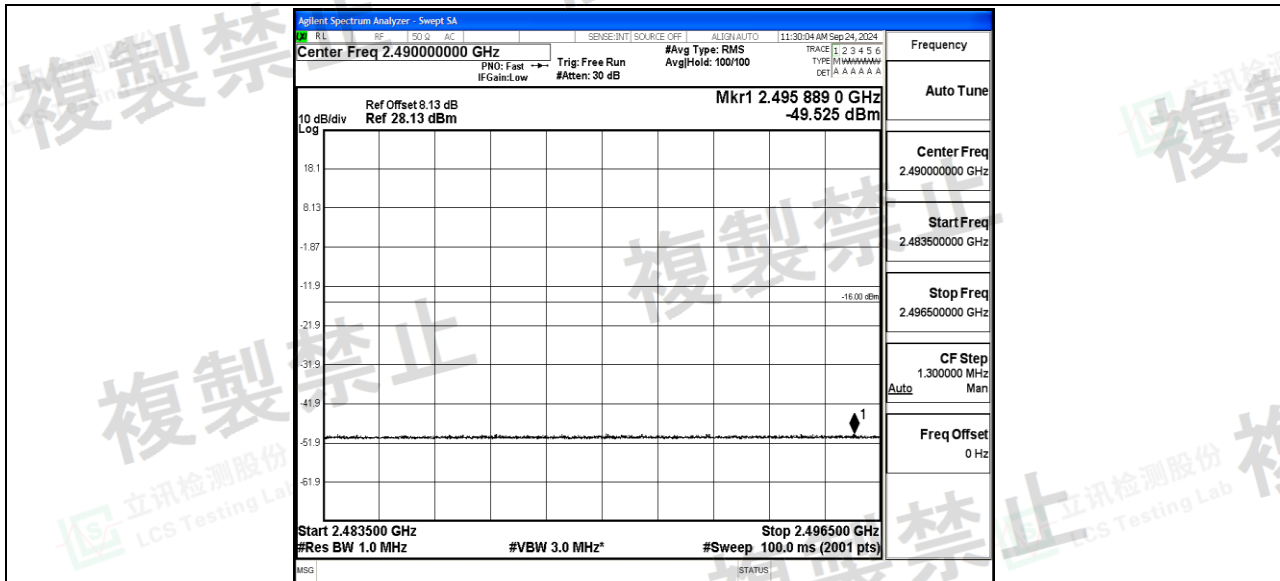


NTNV_BPSK_Ant_2439_2387~2400

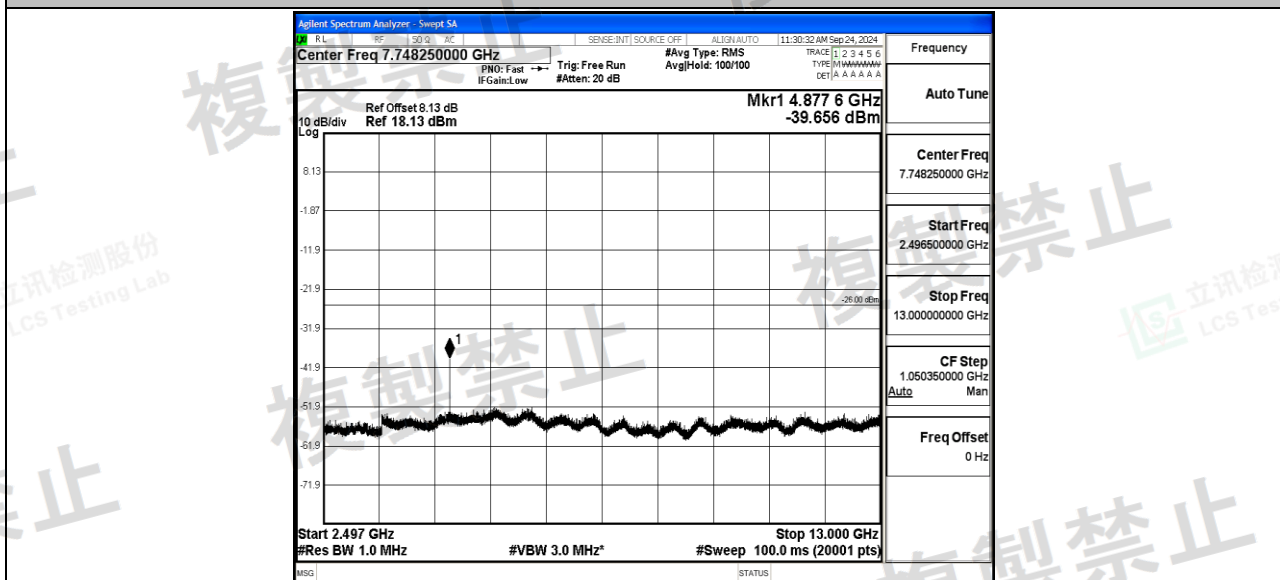


NTNV_BPSK_Ant_2439_2483.5~2496.5





NTNV_BPSK_Ant_2439_2496.5~13000



NTNV_BPSK_Ant_2475_30~1000

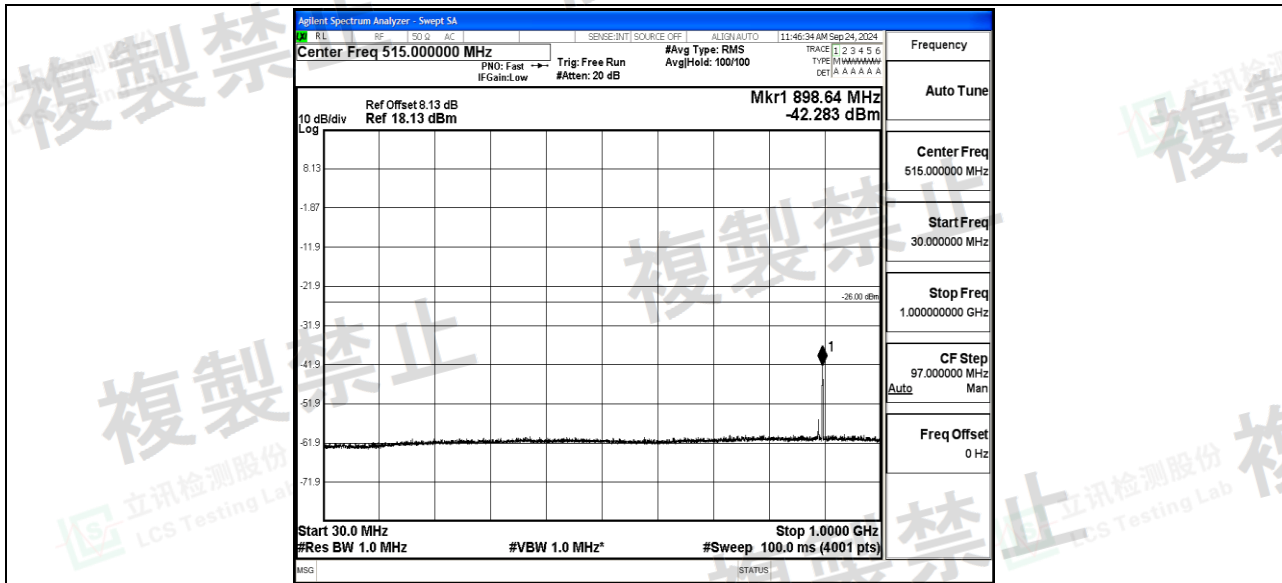


Shenzhen LCS Compliance Testing Laboratory Ltd.

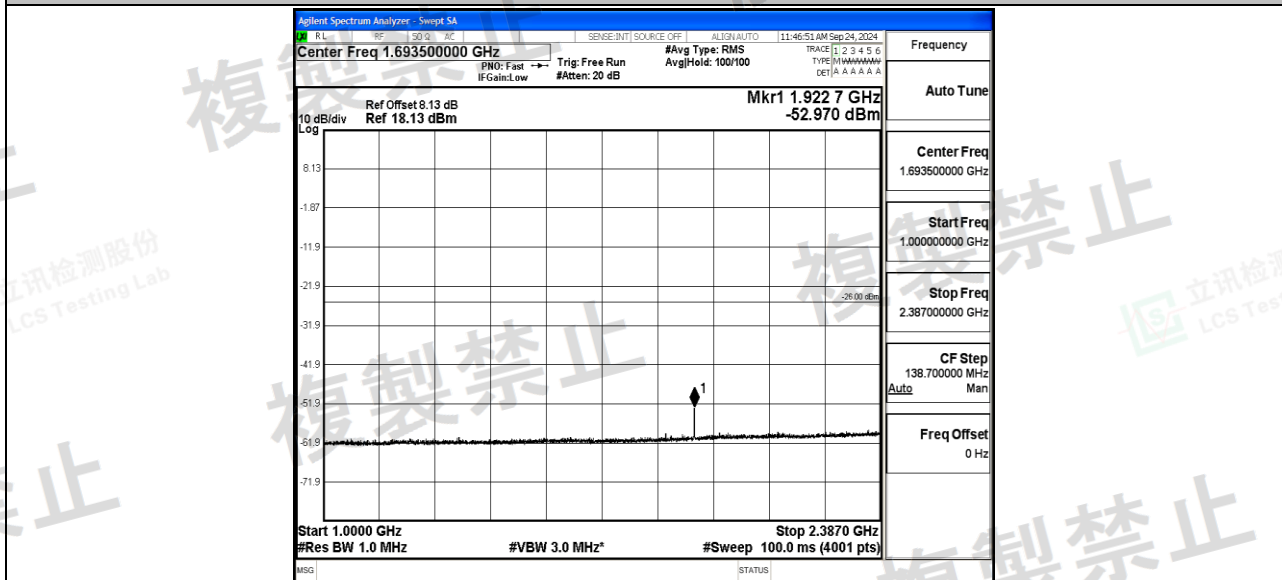
Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity

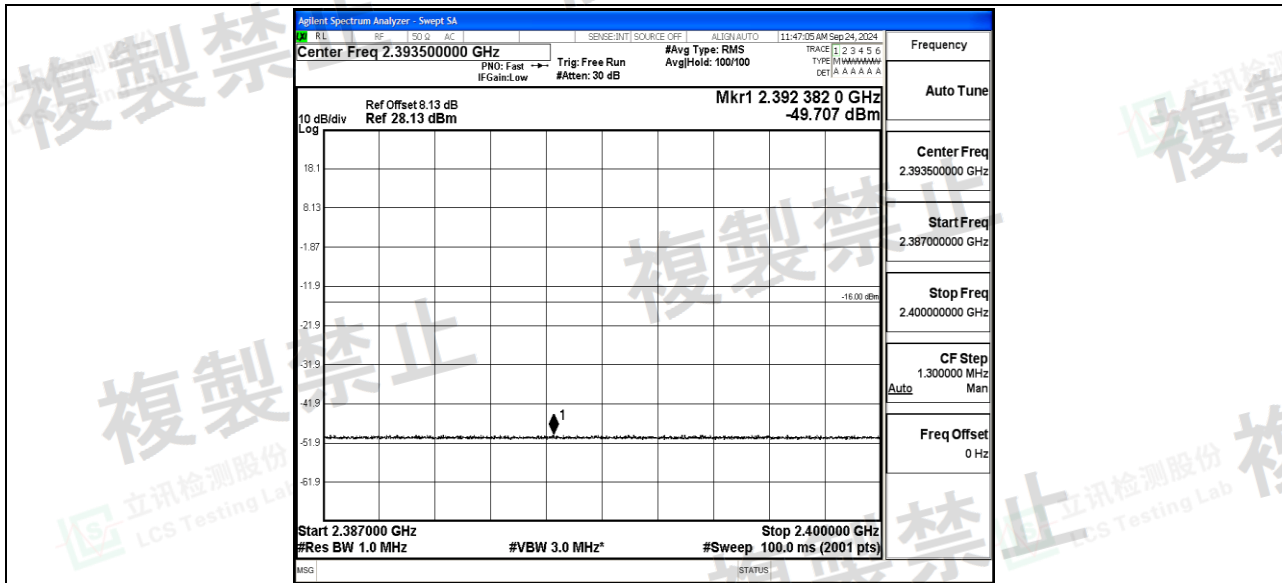


NTNV_BPSK_Ant_2475_1000~2387

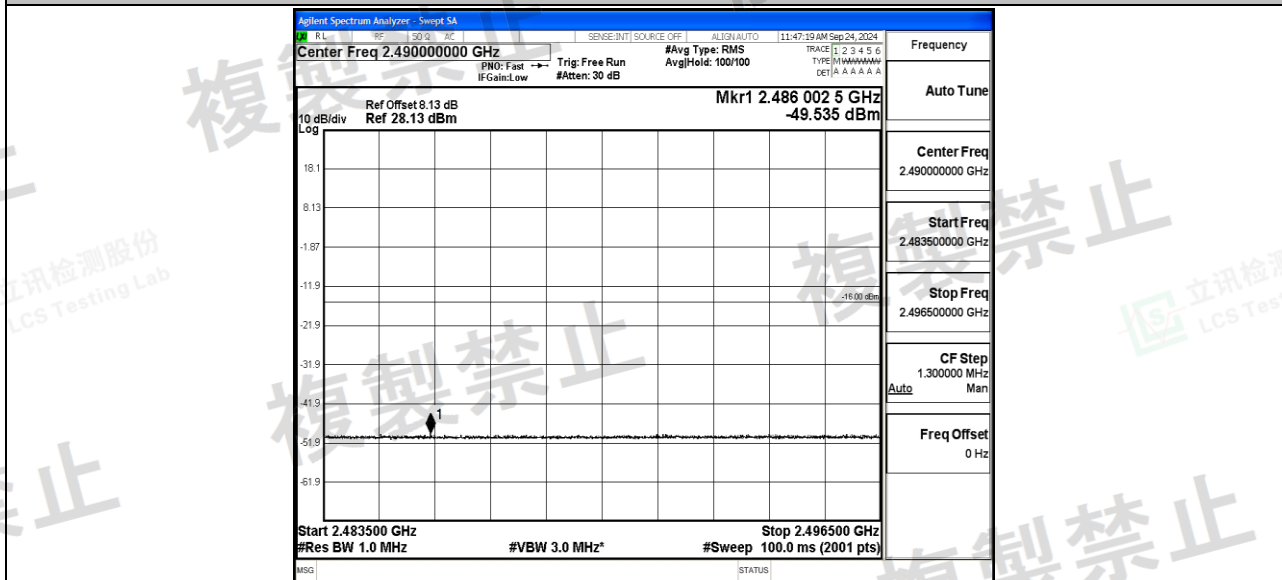


NTNV_BPSK_Ant_2475_2387~2400





NTNV_BPSK_Ant_2475_2483.5~2496.5



NTNV_BPSK_Ant_2475_2496.5~13000

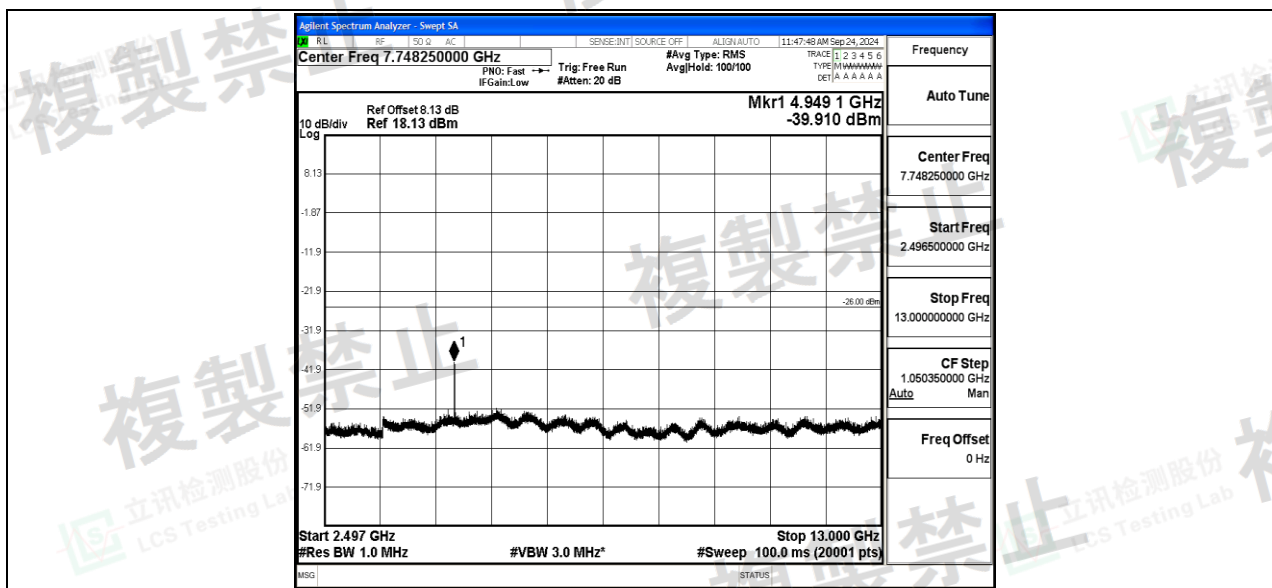


Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity



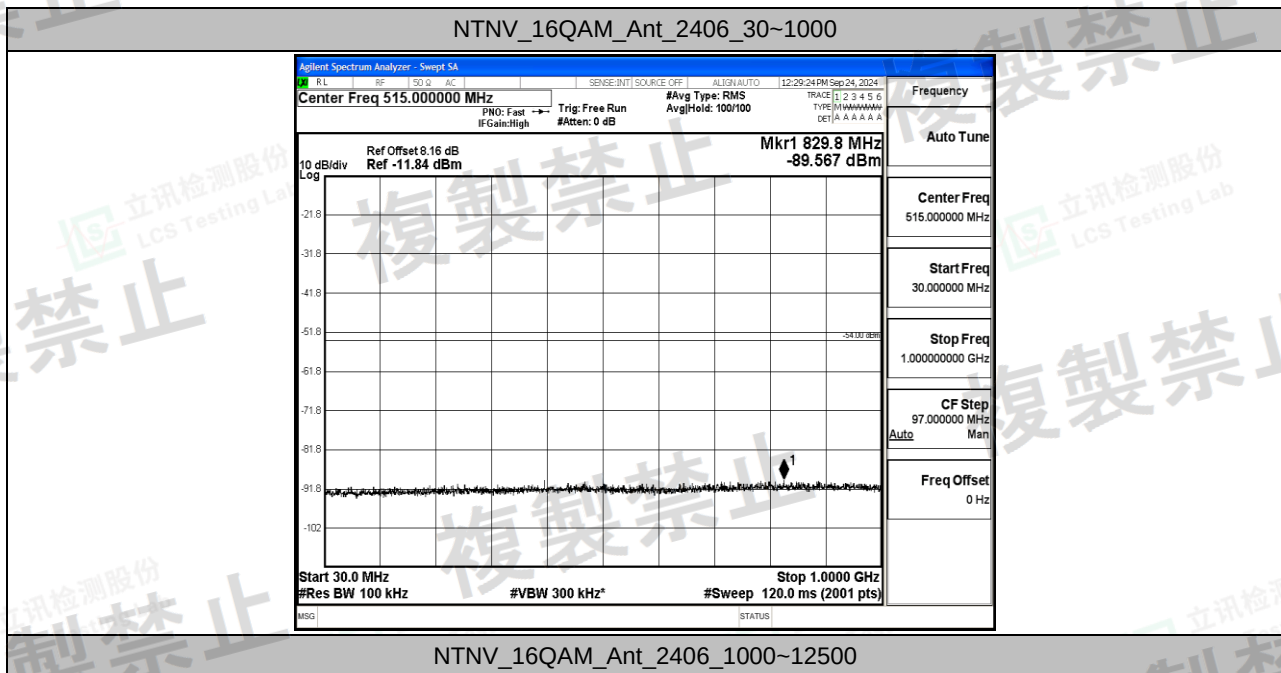


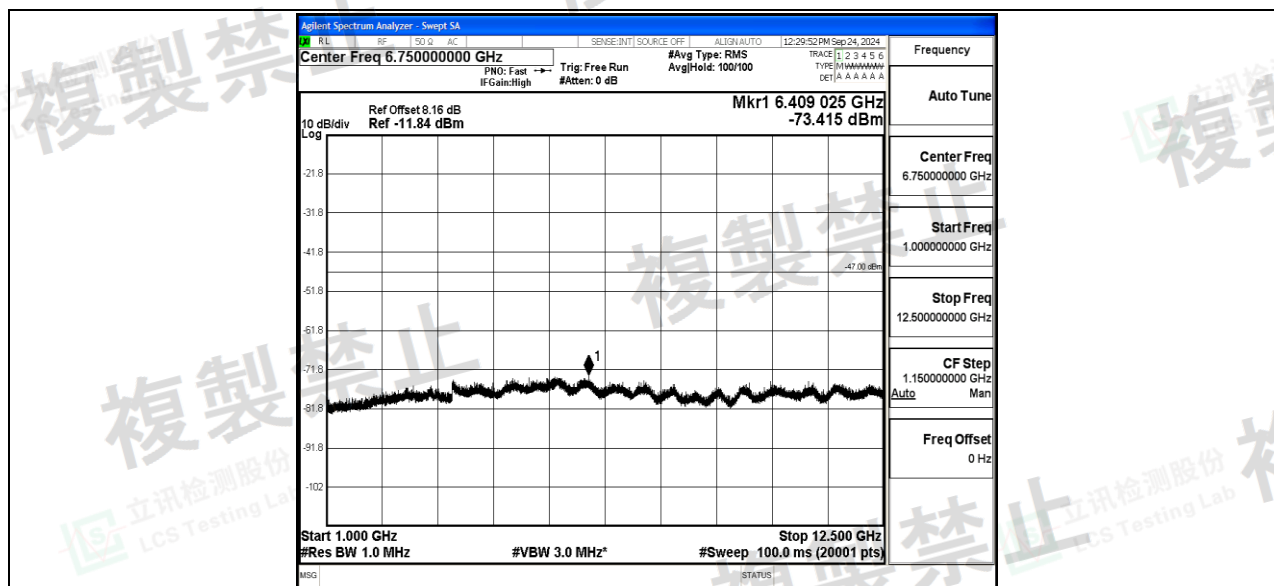
A.6 Spurious Emission of RX

Test Result

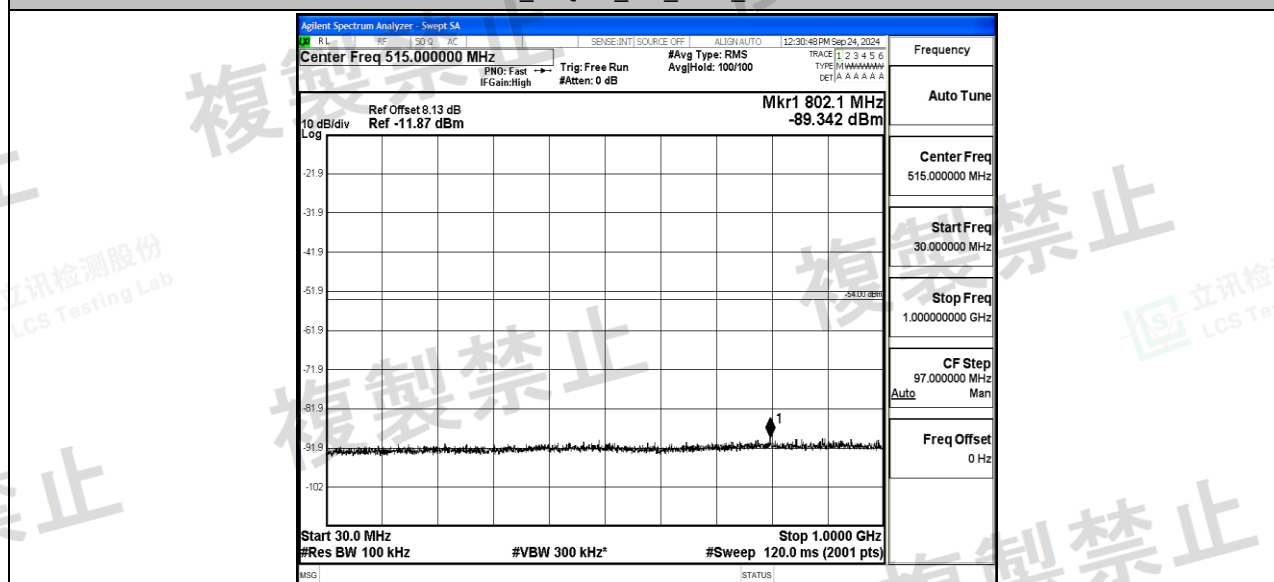
TestCondition	TestMode	Antenna	Frequency [MHz]	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
NTNV	16QAM	Ant	2406	30~1000	-89.57	≤-54	0.00110	≤4	PASS
				1000~12500	-73.42	≤-47	0.04550	≤20	PASS
			2439	30~1000	-89.34	≤-54	0.00116	≤4	PASS
				1000~12500	-73.55	≤-47	0.04416	≤20	PASS
			2475	30~1000	-89.53	≤-54	0.00111	≤4	PASS
				1000~12500	-73.22	≤-47	0.04764	≤20	PASS
NTNV	QPSK	Ant	2406	30~1000	-89.13	≤-54	0.00122	≤4	PASS
				1000~12500	-73.01	≤-47	0.05000	≤20	PASS
			2439	30~1000	-89.29	≤-54	0.00118	≤4	PASS
				1000~12500	-73.01	≤-47	0.05000	≤20	PASS
			2475	30~1000	-89.57	≤-54	0.00110	≤4	PASS
				1000~12500	-72.77	≤-47	0.05284	≤20	PASS
NTNV	BPSK	Ant	2406	30~1000	-89.47	≤-54	0.00113	≤4	PASS
				1000~12500	-72.66	≤-47	0.05420	≤20	PASS
			2439	30~1000	-89.74	≤-54	0.00106	≤4	PASS
				1000~12500	-73.41	≤-47	0.04560	≤20	PASS
			2475	30~1000	-89.47	≤-54	0.00113	≤4	PASS
				1000~12500	-73.45	≤-47	0.04519	≤20	PASS

Test Graphs



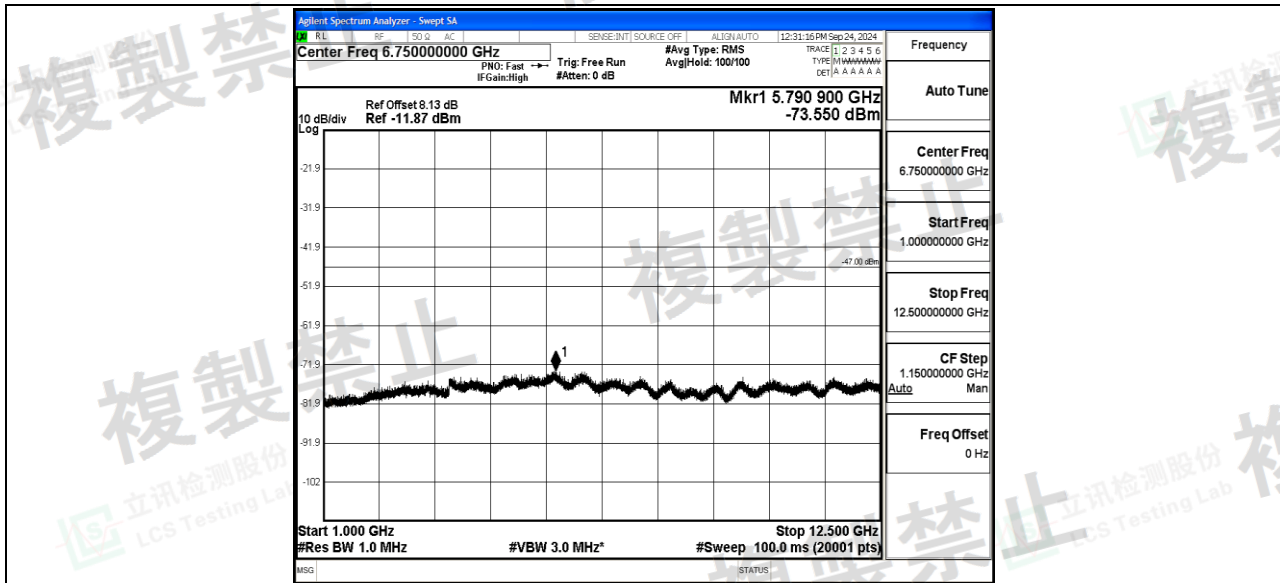


NTNV_16QAM_Ant_2439_30~1000

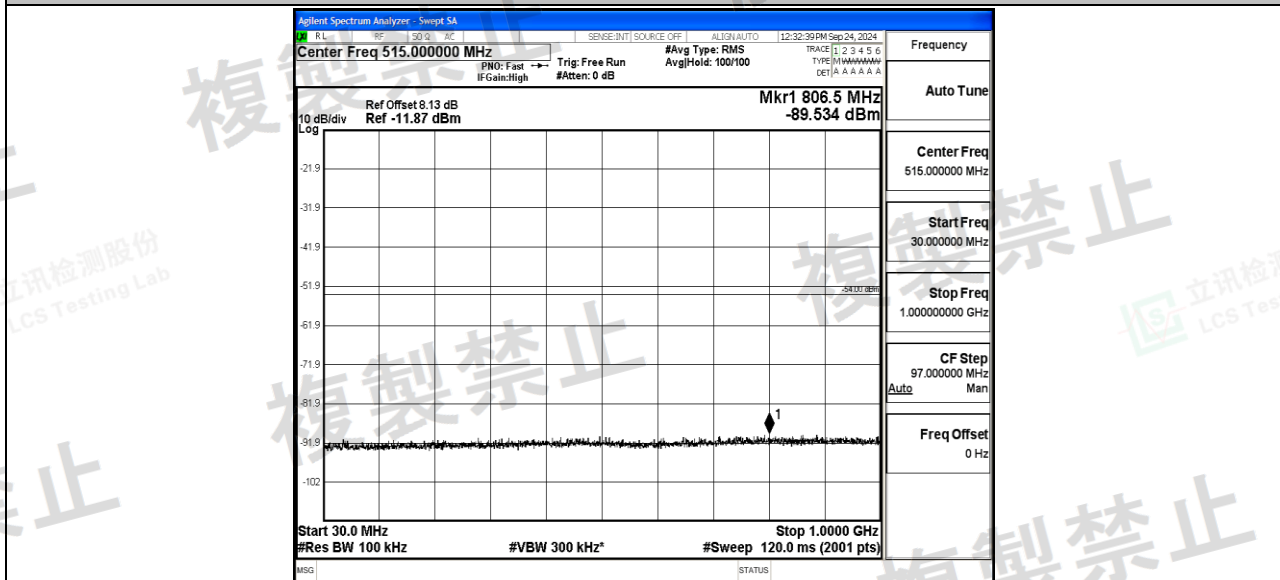


NTNV_16QAM_Ant_2439_1000~12500



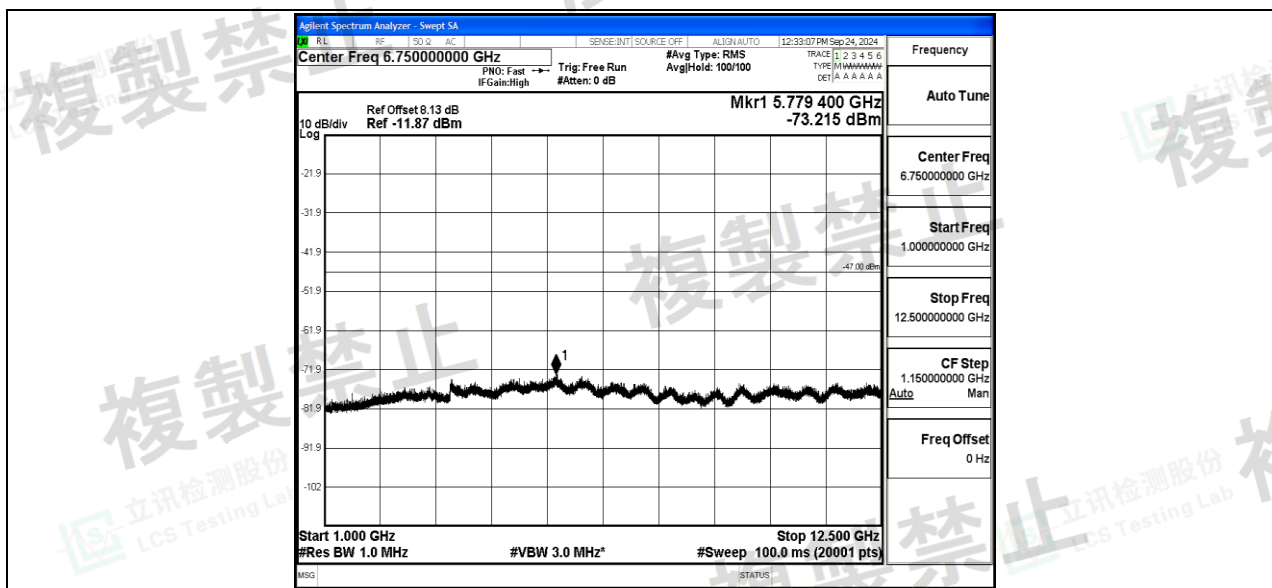


NTNV_16QAM_Ant_2475_30~1000



NTNV_16QAM_Ant_2475_1000~12500

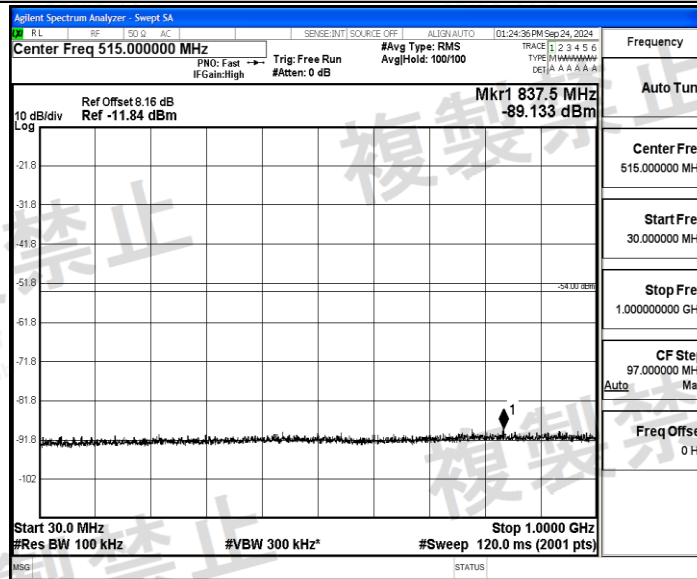




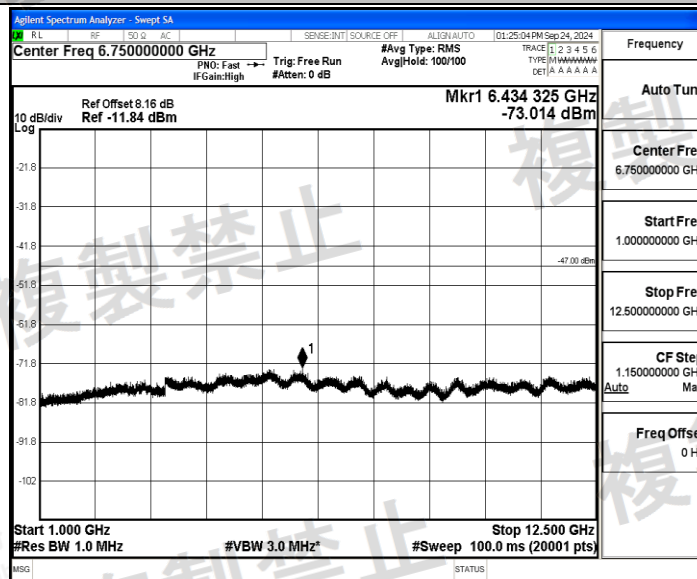


Test Graphs

NTNV_QPSK_Ant_2406_30~1000



NTNV_QPSK_Ant_2406_1000~12500



NTNV_QPSK_Ant_2439_30~1000

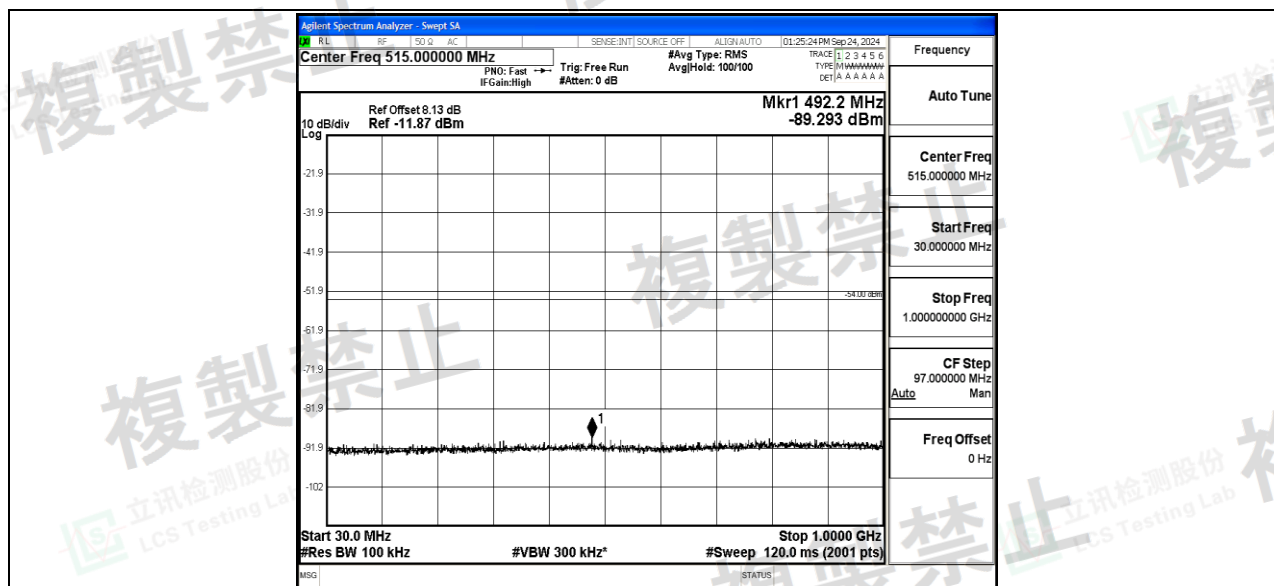


Shenzhen LCS Compliance Testing Laboratory Ltd.

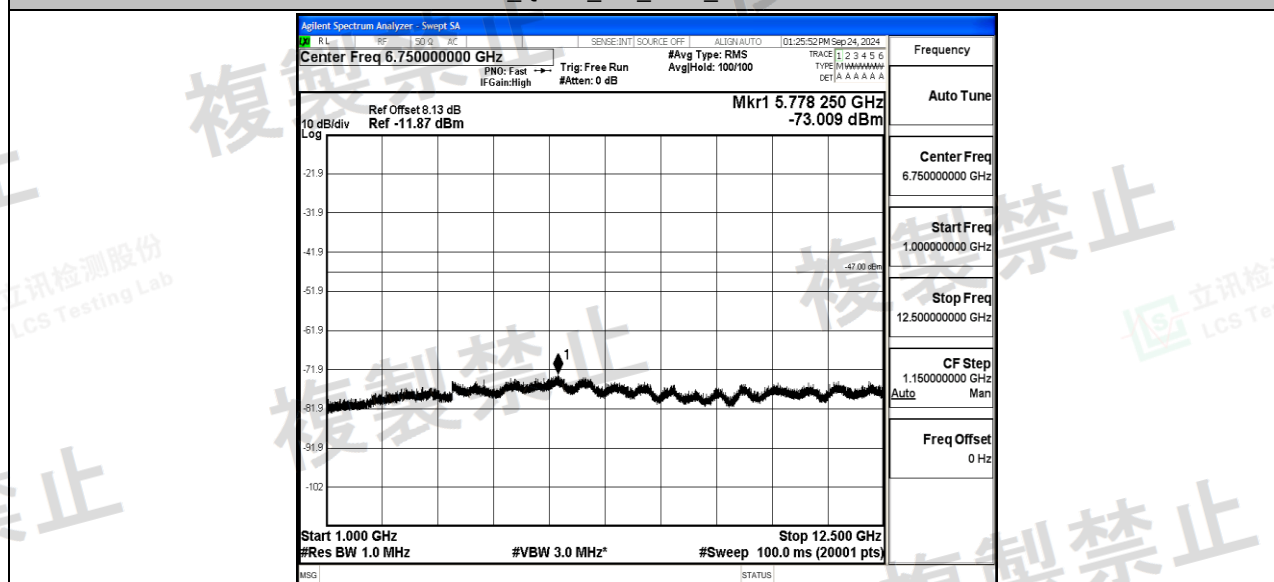
Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity

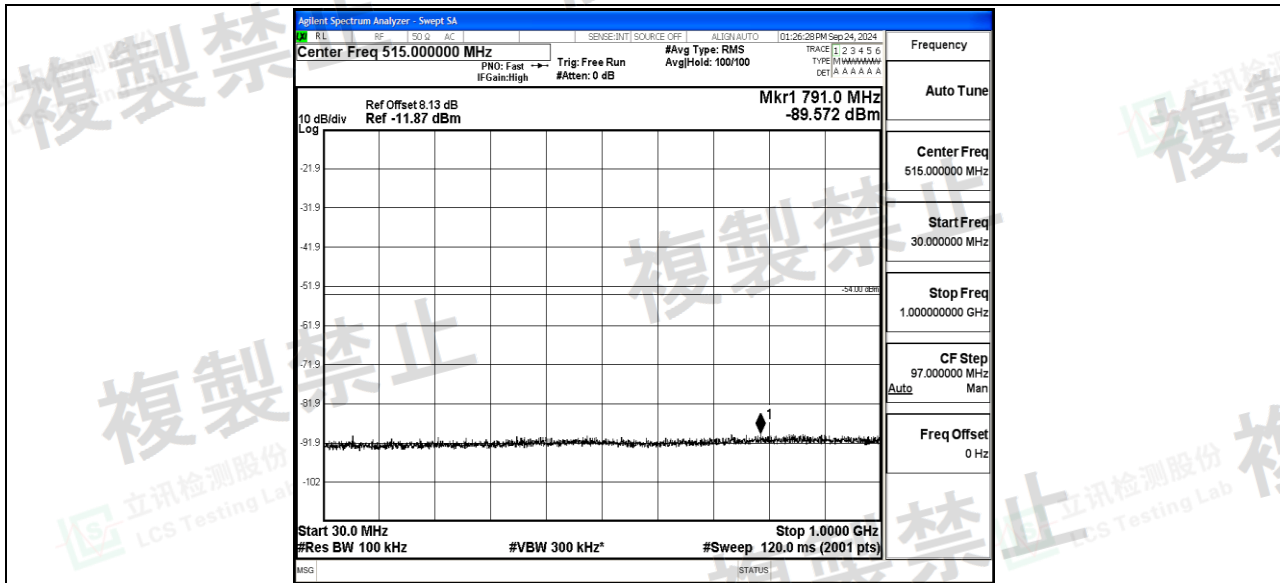


NTNV_QPSK_Ant_2439_1000~12500

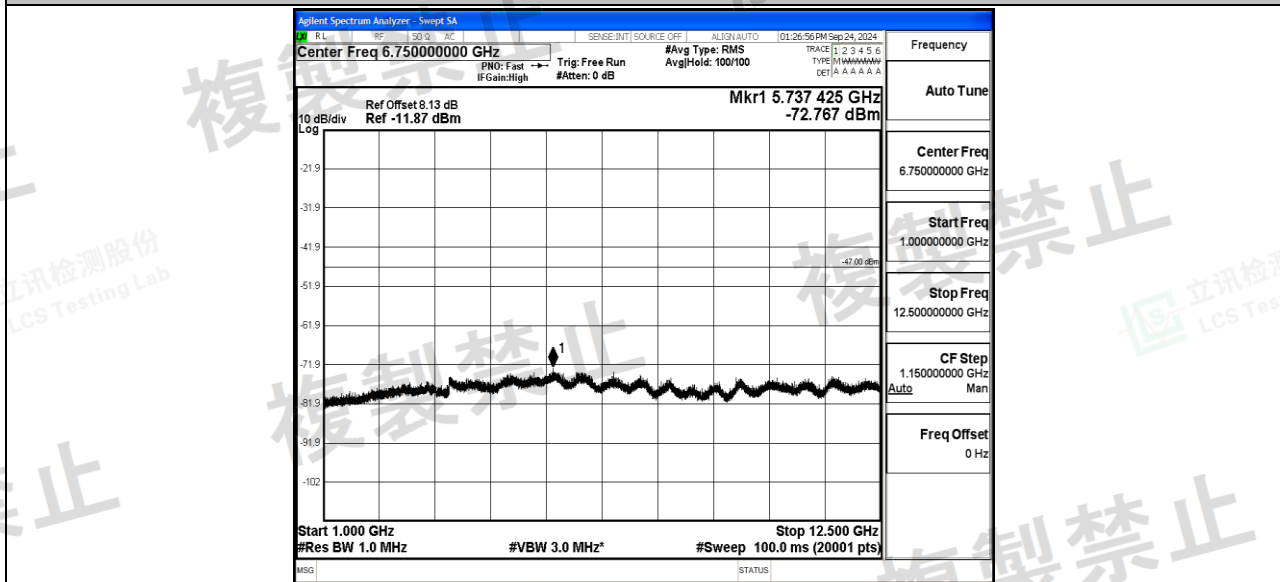


NTNV_QPSK_Ant_2475_30~1000





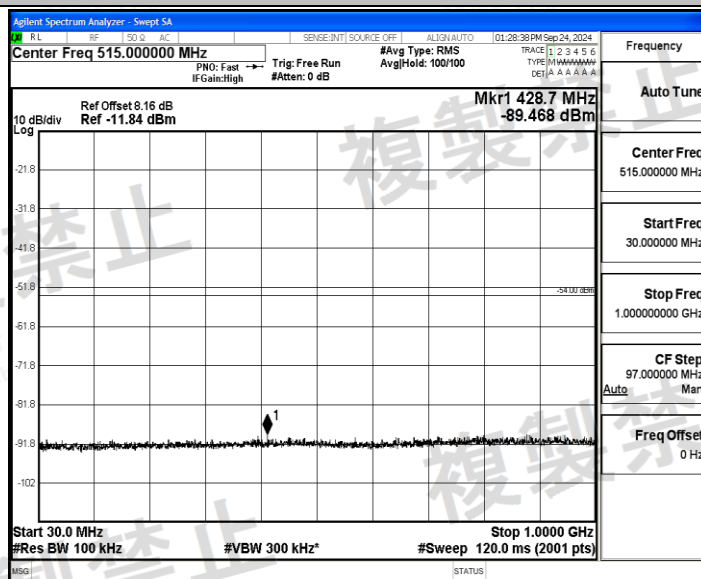
NTNV_QPSK_Ant_2475_1000~12500



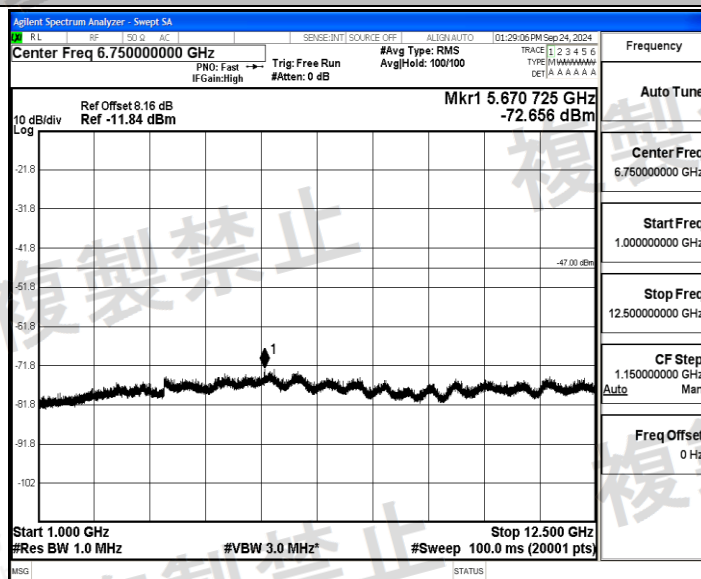


Test Graphs

NTNV_BPSK_Ant_2406_30~1000



NTNV_BPSK_Ant_2406_1000~12500



NTNV_BPSK_Ant_2439_30~1000

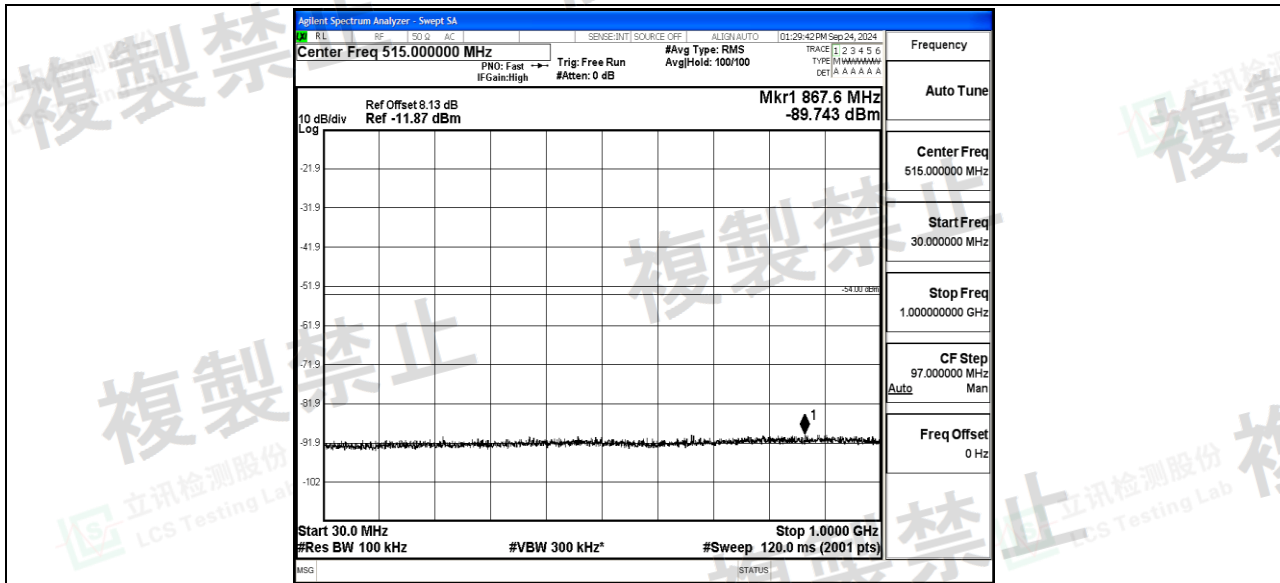


Shenzhen LCS Compliance Testing Laboratory Ltd.

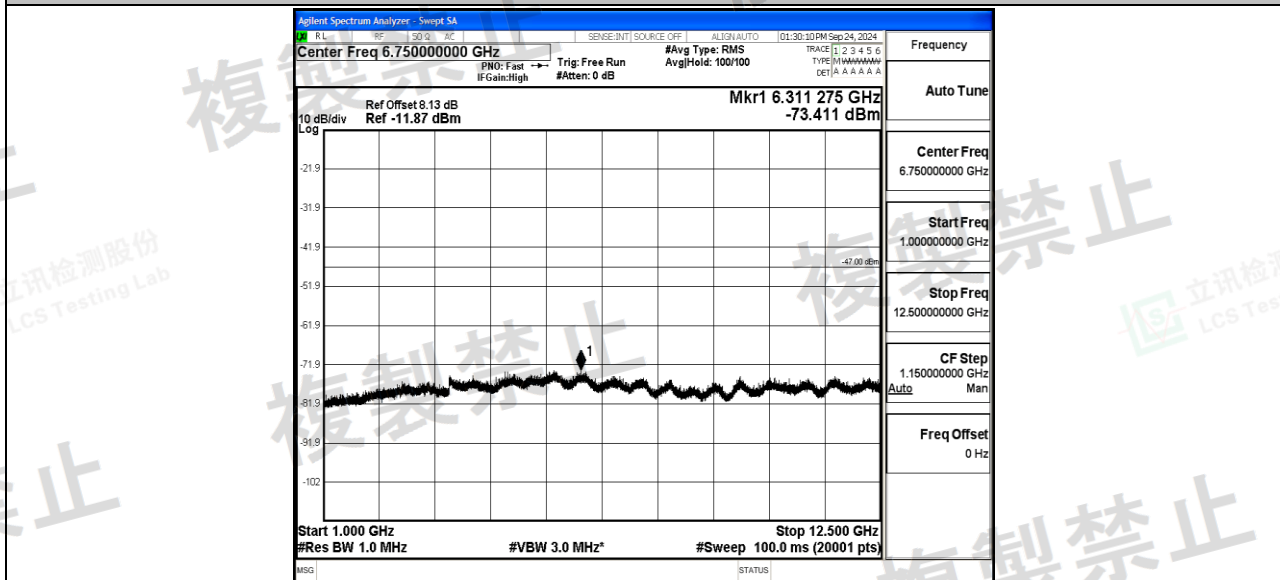
Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity



NTNV_BPSK_Ant_2439_1000~12500



NTNV_BPSK_Ant_2475_30~1000



