



4, Songju-ro 236beon-gil, Yangji-myeon, Cheoin-gu, Yongin-si, Gyeonggi-do,
17159, Korea

Tel: +82-31-323-6008 Fax: +82-31-323-6010

<http://www.ltalab.com>

JAPAN MIC Test Report

Dates of Tests: Oct 28 2025 ~ Nov 27, 2025

Test Site : LTA CO., LTD

Model No.

NKP01-BK

APPLICANT

Nice K Co., Ltd.

Manufacturing Description : Bluetooth Speaker
Manufacturer : ShenZhen DeHuiDa Intelligent Tech Co., Ltd.
Model name : NKP01-BK
Variant Model name : NKP01-WH
Test Device Serial No.: : Identical prototype
Standard : Article 2, Paragraph 1, item 19
Frequency Range : 2402 MHz ~ 2480 MHz
Data of issue : Nov 28, 2025

This test report is issued under the authority of:

The test was supervised by:

Eun-Hwan Jung, Manager

In-Sun Lee, Test Engineer

Revision history

Revision	Date of issue	Description	Revised by
--	Nov 28 ,2025	Initial	-

TABLE OF CONTENTS

1.	Applicant Information-----	4
2.	Summary of test results-----	5
3.	Frequency tolerance-----	6
4.	Occupied bandwidth (99%) & Spread Bandwidth (90%)-----	9
5.	Antenna power-----	16
6.	Unwanted emission strength-----	19
7.	RX spurious emission-----	37
8.	Interference prevention function-----	40
9.	CONSTRUCTION PROTECTION CONFIRMATION METHOD-----	41
	Test Photo -----	43
	APPENDIX -----	44
	APPENDIX TEST EQUIPMENT USED FOR TESTS-----	44

1. Applicant Information**1.1. Details of applicant**

Applicant : Nice K Co., Ltd.
 Address : B303, 16 Heungan-daero 427 beon-gil, Dongan-gu, Anyang-si,
 Gyeonggi-do, Republic of Korea
 Contact Person : BonHam Gu
 TEL / FAX : +82-10-5061-5233/ +82-31-696-9899

1.2. Manufacturer Information

Manufacturer : ShenZhen DeHuiDa Intelligent Tech Co., Ltd.
 Address : Dehuida Industrial Park, No.121, Xikeng Road, Guanlan Street. Baoan
 District, Shenzhen, China
 TEL / FAX : +86-13612825651/ N/A

1.3. EUT Description

Kind of product	Bluetooth Speaker
Model name	NKP01-BK
Serial Number	N/A
Power supply	DC 3.7 V
Frequency range	2 402 MHz ~ 2 480 MHz (BT)
RF output power	0.002 5 W
Modulation technique	GFSK, $\pi/4$ -DQPSK, 8DPSK
Number of channels	79 ch(BR,EDR), 40 ch(LE1M,LE2M).
Antenna gain	PCB Pattern Ant Max Gain : -0.58 dBi

Test Conditions	Voltage(V)
Normal Voltage	VNOR 3.70
Low Voltage	VNOR 3.33
High Voltage	VNOR 4.07

2. Summary of Test results

The EUT has been tested according to the following specifications

Section in Radio equipment regulations	Description of Test	Results
RE 5 Table No. 1	Frequency Tolerance	C
RE 6 Table No. 2	Occupied Bandwidth (99%) & Spread Bandwidth (90%)	C
RE 14, RE 49.20	Antenna power	C
RE 7	Unwanted emission strength	C
RE 24	RX spurious emission	C
RLE 6-2, RE 9-4	Interference Prevention Function	C

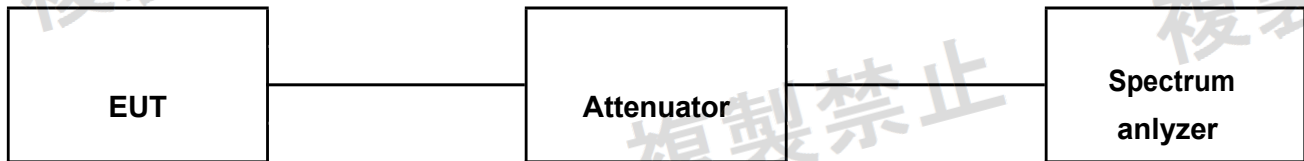
Note 1: C=Complies NC=Not Complies NT=Not Tested NA=Not Applicable

Standard: Article 2, Paragraph 1, item 19.

MIC Notice Number 88, Annex 43

3 Frequency tolerance

3.1 Test setup



3.2 Limit

$\pm 50 \times 10^{-6}$ (50 ppm or below)

3.3 Test procedure

The transmitter output is connected to the Spectrum analyzer	
Setting the spectrum analyzer is as follows.	
Center frequency	Operating frequency
Resolution BW	10 kHz
Video BW	10 kHz
Span	1 MHz
Sweep time	Auto
Detector mode	Positive peak
Trace mode	Max. hold

3.4 Test results

Ambient temperature: 23℃ Relative humidity: 49% R.H

Test mode : BDR

Test voltage	Test Frequency	Measured value (MHz)	Tolerance (ppm)	Result	Limit
Normal Voltage	Low frequency	2402.011	4.47	Pass	± 50 ppm
	Middle frequency	2440.013	5.43	Pass	
	High frequency	2480.011	4.54	Pass	
Low Voltage	Low frequency	2402.002	0.71	Pass	
	Middle frequency	2440.002	0.66	Pass	
	High frequency	2480.003	1.17	Pass	
High Voltage	Low frequency	2402.009	3.86	Pass	
	Middle frequency	2440.016	6.37	Pass	
	High frequency	2480.006	2.51	Pass	

Test mode : EDR

Test voltage	Test Frequency	Measured value (MHz)	Tolerance (ppm)	Result	Limit
Normal Voltage	Low frequency	2402.011	4.49	Pass	± 50 ppm
	Middle frequency	2440.006	2.39	Pass	
	High frequency	2480.017	6.78	Pass	
Low Voltage	Low frequency	2402.002	0.71	Pass	
	Middle frequency	2440.002	0.66	Pass	
	High frequency	2480.003	1.17	Pass	
High Voltage	Low frequency	2402.012	4.95	Pass	
	Middle frequency	2440.007	2.68	Pass	
	High frequency	2480.006	2.50	Pass	

Test mode : LE1M

Test voltage	Test Frequency	Measured value (MHz)	Tolerance (ppm)	Result	Limit
Normal Voltage	Low frequency	2402.007	2.98	Pass	± 50 ppm
	Middle frequency	2440.008	3.39	Pass	
	High frequency	2480.011	4.57	Pass	
Low Voltage	Low frequency	2402.003	1.04	Pass	
	Middle frequency	2440.003	1.35	Pass	
	High frequency	2480.002	0.97	Pass	
High Voltage	Low frequency	2402.006	2.65	Pass	
	Middle frequency	2440.013	5.34	Pass	
	High frequency	2480.015	5.92	Pass	

Test mode : LE2M

Test voltage	Test Frequency	Measured value (MHz)	Tolerance (ppm)	Result	Limit
Normal Voltage	Low frequency	2402.016	6.63	Pass	± 50 ppm
	Middle frequency	2440.012	4.74	Pass	
	High frequency	2480.010	3.85	Pass	
Low Voltage	Low frequency	2402.003	1.04	Pass	
	Middle frequency	2440.003	1.35	Pass	
	High frequency	2480.002	0.97	Pass	
High Voltage	Low frequency	2402.016	6.50	Pass	
	Middle frequency	2440.007	2.76	Pass	
	High frequency	2480.011	4.53	Pass	

* Remark

$$FT \text{ (ppm)} = [(Measured \text{ value (MHz)} - Operating \text{ frequency (MHz)}) / Operating \text{ frequency (MHz)}] \times 10^6$$

4. Occupied bandwidth (99%) & Spread Bandwidth (90%)

4.1 Test setup



4.2 Limit

Occupied Bandwidth (99%):	26 MHz or less
Spread Bandwidth (90%)	500 kHz more

4.3 Test procedure

The transmitter output is connected to the Spectrum analyzer	
Setting the spectrum analyzer is as follows.	
Center frequency	Operating frequency
Resolution BW	300 KHz
Video BW	300 KHz
Span	5 MHz
Sweep time	Auto
Detector mode	Positive peak
Trace mode	Max. hold

4.4 Test results

Ambient temperature: 23 °C Relative humidity: 49% R.H.

Test mode : BDR

Test voltage	2,402 MHz	2,440 MHz	2,480 MHz	Result	Limit
	99% (MHz)	99% (MHz)	99% (MHz)		
Normal Voltage	1.07	1.09	1.09	Pass	26 MHz or less
Low Voltage	1.07	1.09	1.09	Pass	
High Voltage	1.08	1.09	1.08	Pass	
Test voltage	90% (MHz)	90% (MHz)	90% (MHz)		
Normal Voltage	0.67	0.69	0.67	Pass	500 kHz or more
Low Voltage	0.67	0.69	0.67	Pass	
High Voltage	0.67	0.69	0.67	Pass	

Test mode : EDR

Test voltage	2,402 MHz	2,440 MHz	2,480 MHz	Result	Limit
	99% (MHz)	99% (MHz)	99% (MHz)		
Normal Voltage	1.49	1.50	1.49	Pass	26 MHz or less
Low Voltage	1.49	1.50	1.48	Pass	
High Voltage	1.48	1.50	1.49	Pass	
Test voltage	90% (MHz)	90% (MHz)	90% (MHz)		
Normal Voltage	1.06	1.06	1.05	Pass	500 kHz or more
Low Voltage	1.05	1.06	1.06	Pass	
High Voltage	1.06	1.07	1.05	Pass	

Test mode : LE1M

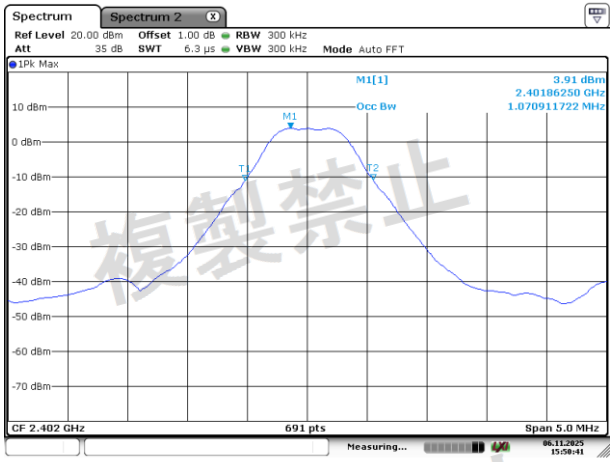
Test voltage	2,402 MHz	2,440 MHz	2,480 MHz	Result	Limit
	99% (MHz)	99% (MHz)	99% (MHz)		
Normal Voltage	1.24	1.25	1.24	Pass	26 MHz or less
Low Voltage	1.24	1.25	1.24	Pass	
High Voltage	1.25	1.25	1.24	Pass	
Test voltage	90% (MHz)	90% (MHz)	90% (MHz)		
Normal Voltage	0.83	0.82	0.83	Pass	500 kHz or more
Low Voltage	0.82	0.82	0.83	Pass	
High Voltage	0.83	0.83	0.83	Pass	

Test mode : LE2M

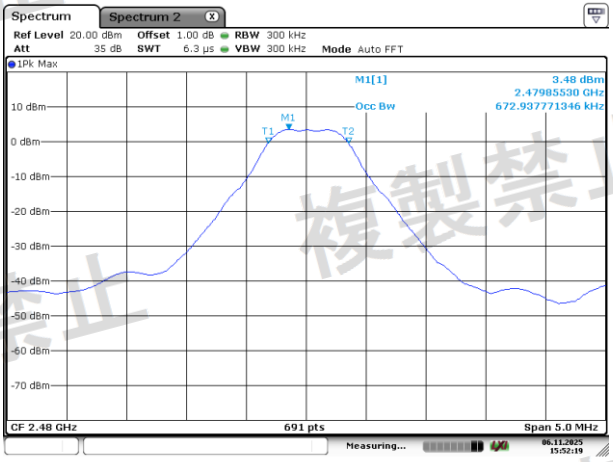
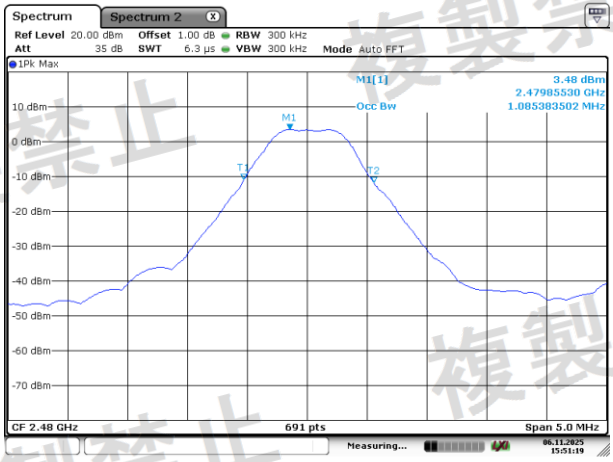
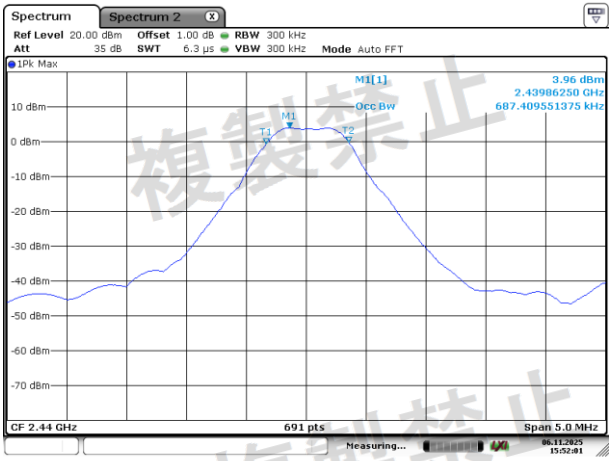
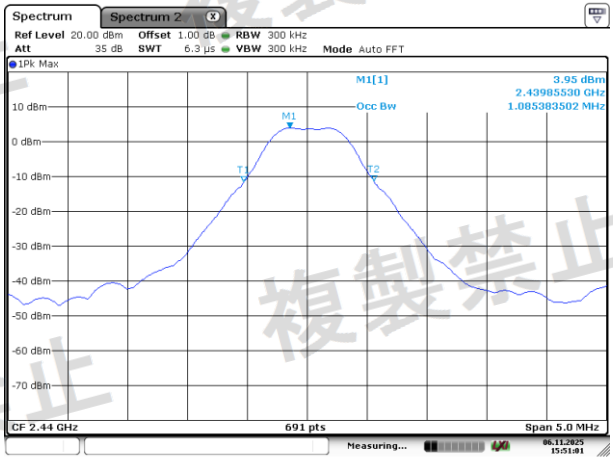
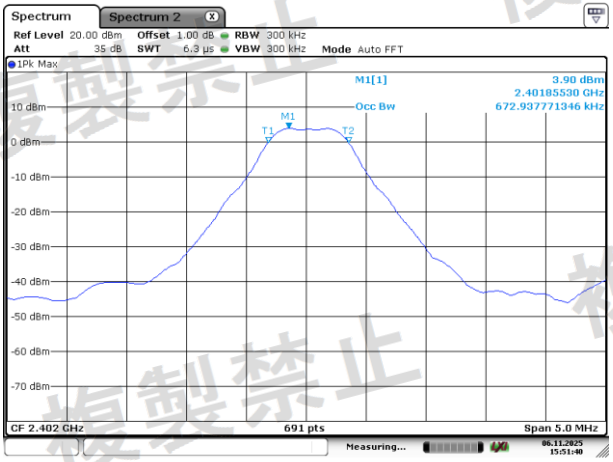
Test voltage	2,402 MHz	2,440 MHz	2,480 MHz	Result	Limit
	99% (MHz)	99% (MHz)	99% (MHz)		
Normal Voltage	2.16	2.14	2.15	Pass	26 MHz or less
Low Voltage	2.16	2.14	2.15	Pass	
High Voltage	2.16	2.14	2.16	Pass	
Test voltage	90% (MHz)	90% (MHz)	90% (MHz)		
Normal Voltage	1.36	1.36	1.36	Pass	500 kHz or more
Low Voltage	1.36	1.36	1.36	Pass	
High Voltage	1.37	1.36	1.37	Pass	

Test Mode : BDR / Low, Middle, High (Nomal Voltage)

99 % OBW



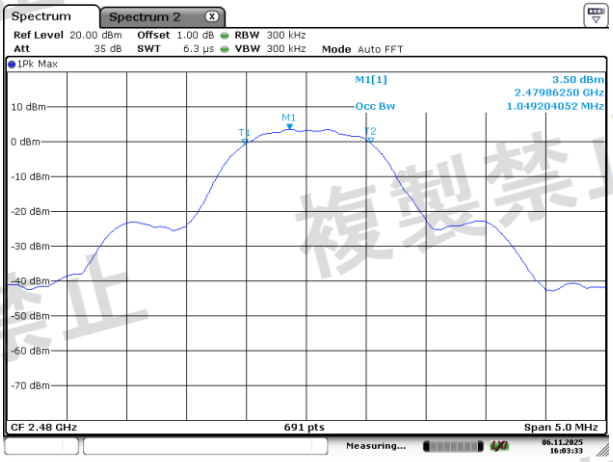
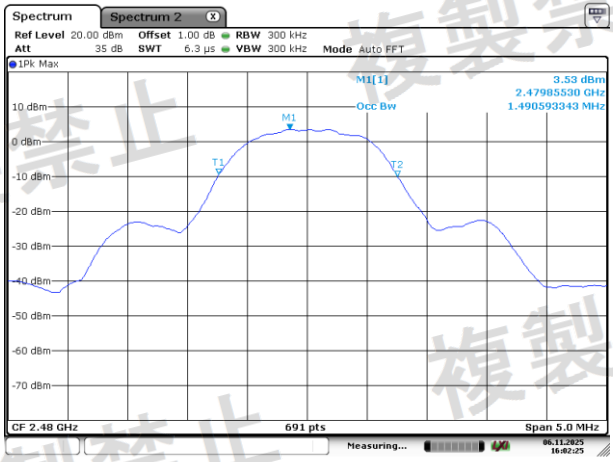
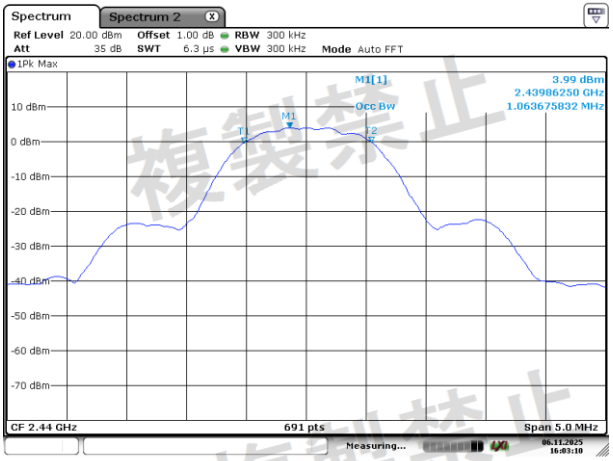
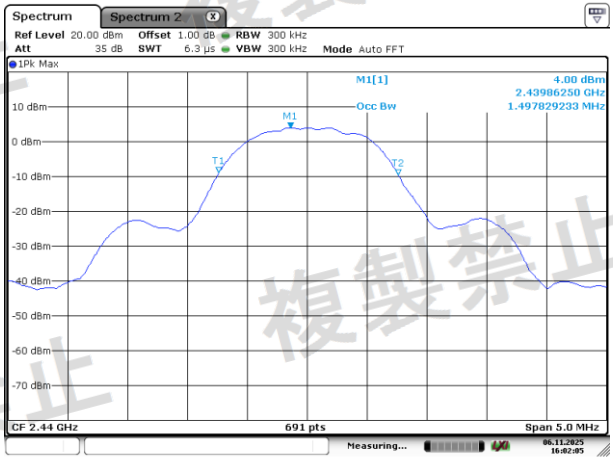
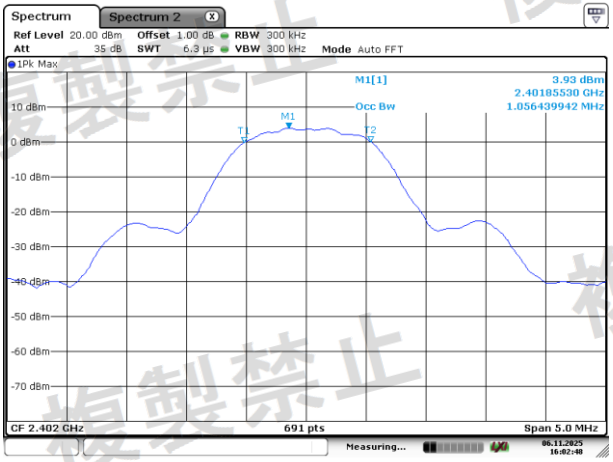
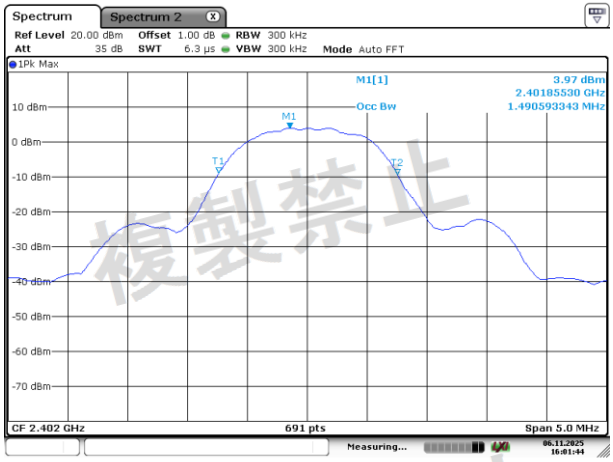
90 % OBW



Test Mode : EDR / Low, Middle, High (Nomal Voltage)

99 % OBW

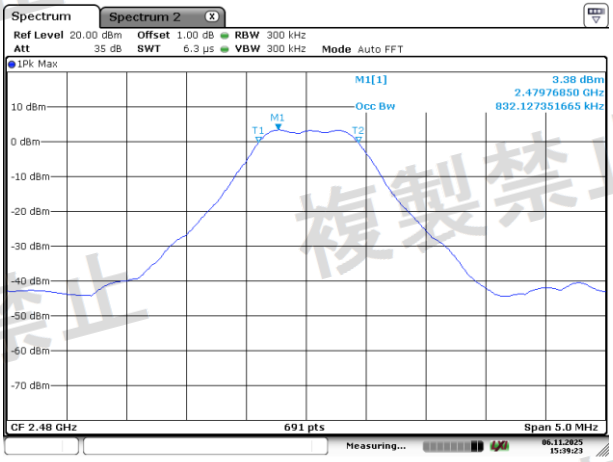
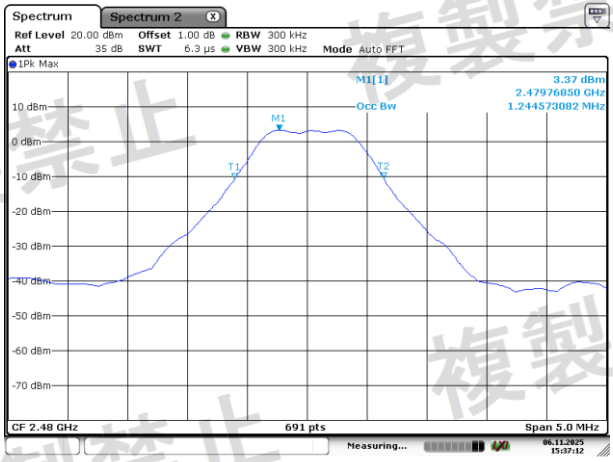
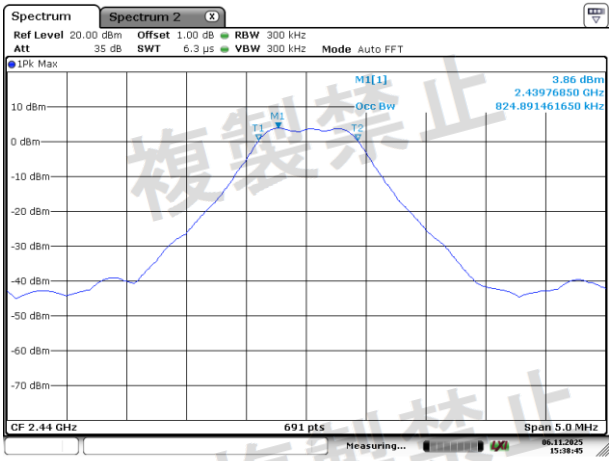
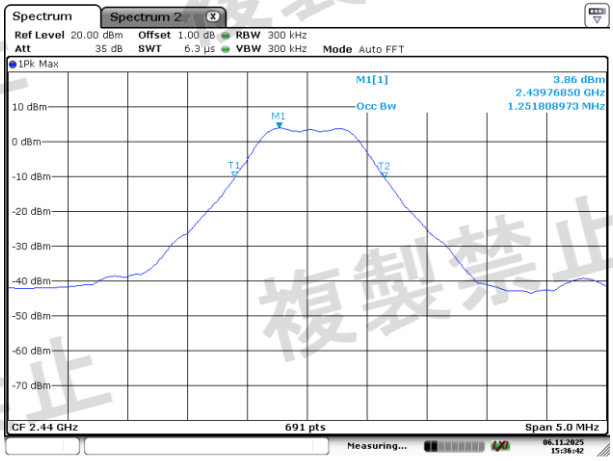
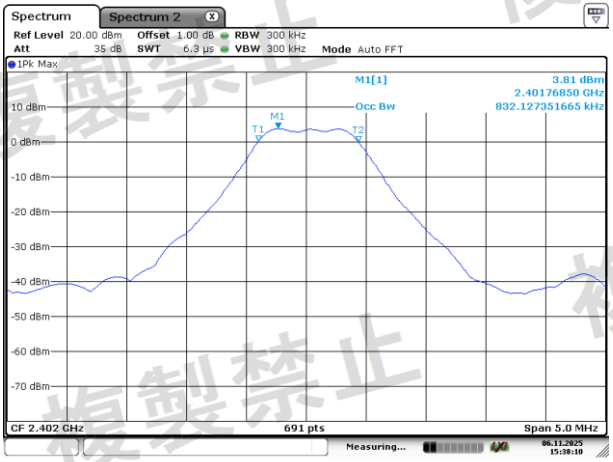
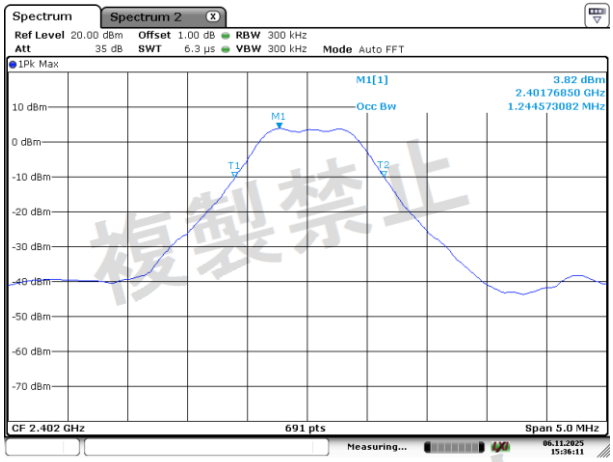
90 % OBW



Test Mode : LE1M / Low, Middle, High (Nomal Voltage)

99 % OBW

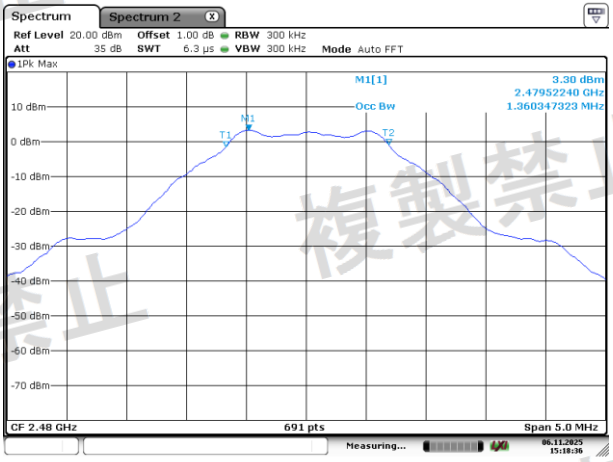
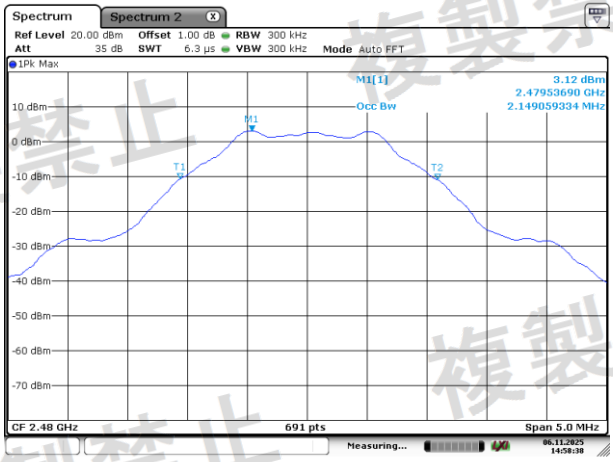
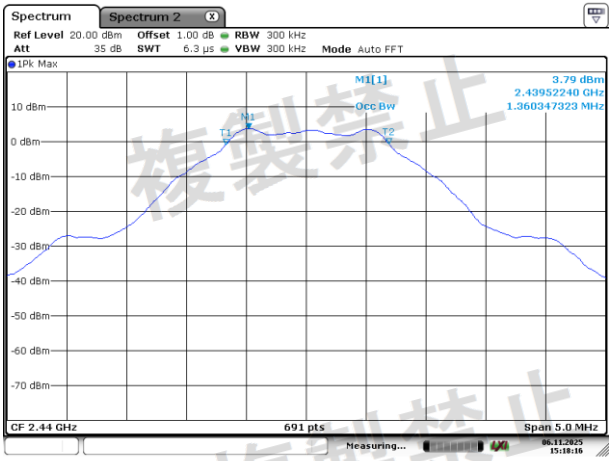
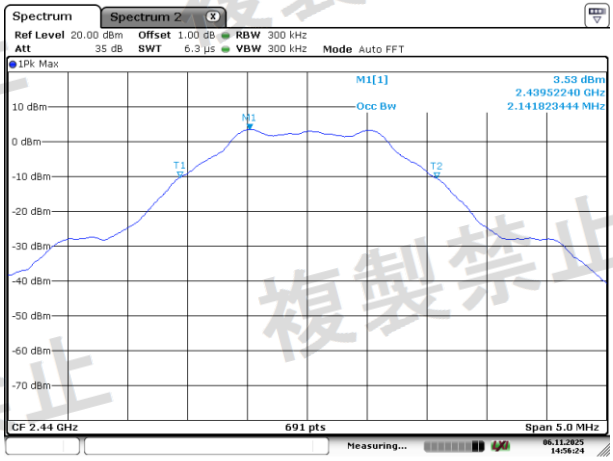
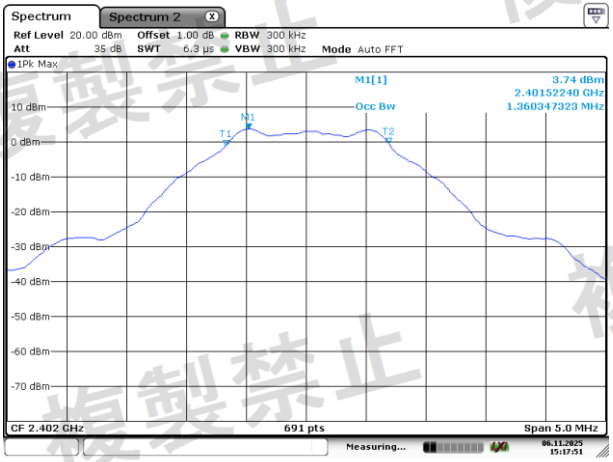
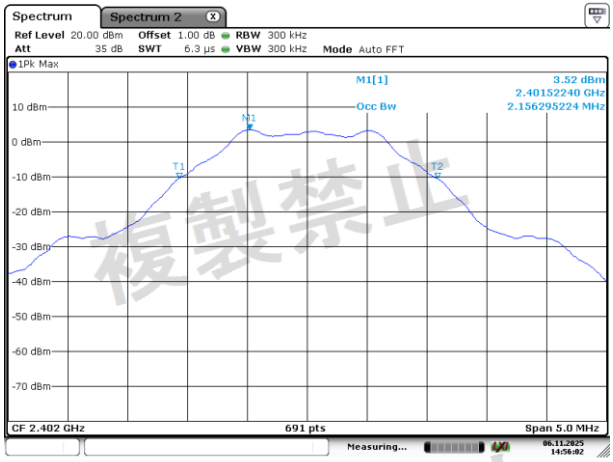
90 % OBW



Test Mode : LE2M / Low, Middle, High (Nomal Voltage)

99 % OBW

90 % OBW



5. Antenna power

5.1 Test setup



5.2 Limit

Output power: 0.01 W or Below

Output power tolerance: Maximum +20 %, Minimum -80 %

5.3 Test procedure

1. The transmitter output is connected to the Spectrum Analyzer
2. Setting the EUT is operating frequency.

5.4 Test results

Ambient temperature: 23 °C Relative humidity: 49% R.H.

Test mode : BDR

Result : Pass

Test voltage (DC)	Frequency (MHz)	Measure value	Power tolerance(%)
		(mW)	
Normal Voltage	2 402	2.49	-0.37
	2 440	2.53	1.05
	2 480	2.26	-9.71
Low Voltage	2 402	2.48	-0.90
	2 440	2.51	0.24
	2 480	2.24	-10.24
High Voltage	2 402	2.50	-0.03
	2 440	2.54	1.57
	2 480	2.25	-9.96
Declared power(W)		0.002 5 (0.000 5 ~ 0.003 0)	
Antenna gain(dBi)		-0.58 dBi	
Limit		-80 ~ 20 %	

Test mode : EDR

Result : Pass

Test voltage (DC)	Frequency (MHz)	Measure value	Power tolerance(%)
		(mW)	
Normal Voltage	2 402	2.66	6.30
	2 440	2.69	7.46
	2 480	2.41	-3.54
Low Voltage	2 402	2.63	5.21
	2 440	2.65	6.18
	2 480	2.39	-4.49
High Voltage	2 402	2.66	6.48
	2 440	2.67	6.92
	2 480	2.42	-3.22
Declared power(W)		0.002 5 (0.000 5 ~ 0.003 0)	
Antenna gain(dBi)		-0.58 dBi	
Limit		-80 ~ 20 %	

Test mode : LE1M

Result : Pass

Test voltage (DC)	Frequency (MHz)	Measure value	Power tolerance(%)
		(mW)	
Normal Voltage	2 402	2.45	-1.90
	2 440	2.47	-1.02
	2 480	2.49	-0.57
Low Voltage	2 402	2.43	-2.94
	2 440	2.45	-1.81
	2 480	2.45	-1.81
High Voltage	2 402	2.45	-2.03
	2 440	2.49	-0.47
	2 480	2.49	-0.58
Declared power(W)		0.002 5 (0.000 5 ~ 0.003 0)	
Antenna gain(dBi)		-0.58 dBi	
Limit		-80 ~ 20 %	

Test mode : LE2M

Result : Pass

Test voltage (DC)	Frequency (MHz)	Measure value	Power tolerance(%)
		(mW)	
Normal Voltage	2 402	2.42	-3.06
	2 440	2.43	-2.63
	2 480	2.19	-12.34
Low Voltage	2 402	2.39	-4.27
	2 440	2.42	-3.38
	2 480	2.16	-13.49
High Voltage	2 402	2.40	-3.90
	2 440	2.45	-2.03
	2 480	2.18	-12.92
Declared power(W)		0.002 5 (0.000 5 ~ 0.003 0)	
Antenna gain(dBi)		-0.58 dBi	
Limit		-80 ~ 20 %	

Remark: Power tolerance (%) = {[Output power- Declared power] ÷ Declared power} ×100

6. Unwanted emission strength

6.1 Test setup



6.2 Limit

Item	Limits
	(See Article 7, Table 3 of the Ordinance Regulating Radio Equipment)
TX	$\leq 2.5 \mu\text{W/MHz} (-26 \text{ dBm/MHz})$ ($30\text{MHz} \leq f \leq 1000\text{MHz}$)
Spurious	$\leq 2.5 \mu\text{W/MHz}$ ($1000\text{MHz} \leq f < 2387\text{MHz}$; $2496.5\text{MHz} < f$)
Emission	$\leq 25 \mu\text{W/MHz} (-16 \text{ dBm/MHz})$ ($2387\text{MHz} \leq f < 2400\text{MHz}$) and ($2483.5\text{MHz} < f \leq 2496.5\text{MHz}$)
Measurement range: 30MHz - 5 th harmonics	

6.3 Test procedure

1. Connect transmitter output to the spectrum analyzer input port.
2. The EUT should be transmitting at hopping mode
3. Unwanted emission strength is measured by following setting:
4. Set the spectrum analyzer RBW: 1 MHz (above 1 GHz), 1 MHz (below 1 GHz), VBW: same as RBW
Sweep time : auto, Start : 30 MHz, Stop : 1 000 MHz. Sweep mode: single and mark highest level.
5. Set the spectrum analyzer RBW: 1 MHz, VBW: 1 MHz, Sweep time: auto, Start: 1 000 MHz, Stop: 2 387 MHz Sweep mode: single and mark highest level.
6. Set the spectrum analyzer RBW: 1 MHz, VBW: 1 MHz, Sweep time: auto, Start: 2 387 MHz, Stop: 2 400 MHz Sweep mode: single and mark highest level.
7. Set the spectrum analyzer RBW: 1 MHz, VBW: 1 MHz, Sweep time: auto, Start: 2 483.5 MHz, Stop: 2 496.5 MHz Sweep mode: single and mark highest level.
8. Set the spectrum analyzer RBW: 1 MHz, VBW: 1 MHz, Sweep time: auto, Start: 2 496.5 MHz, Stop: 26 GHz Sweep mode: single and mark highest level.
9. Detector mode: Peak mode.

6.4 Test results

Ambient temperature: 23℃ Relative humidity: 49% R.H.

Result : Pass

mode : BDR

Voltage	Frequency	Frequency Range	Result			Limit
V	MHz	MHz	MHz	dBm	μW/MHz	μW/MHz
-10 % (DC 3.33 V)	2402	30 ~ 2387	2377.61	-46.70	0.0214	2.5
		2387 ~ 2400	2400.03	-18.15	15.3081	25
		2483.5 ~ 2496.5	2497.03	-56.86	0.0021	25
		2496.5 ~ 12500	4803.22	-37.63	0.1727	2.5
	2440	30 ~ 2387	2248.62	-47.32	0.0185	2.5
		2387 ~ 2400	2392.48	-49.08	0.0124	25
		2483.5 ~ 2496.5	2488.62	-49.29	0.0118	25
		2496.5 ~ 12500	4881.29	-36.75	0.2112	2.5
	2480	30 ~ 2387	2286.74	-48.32	0.0147	2.5
		2387 ~ 2400	2399.88	-58.09	0.0016	25
		2483.5 ~ 2496.5	2483.56	-41.38	0.0727	25
		2496.5 ~ 12500	4958.96	-36.68	0.2147	2.5
0 % (DC 3.70 V)	2402	30 ~ 2387	2378.94	-46.43	0.0206	2.5
		2387 ~ 2400	2399.90	-33.07	14.3219	25
		2483.5 ~ 2496.5	2496.92	-58.18	0.0019	25
		2496.5 ~ 12500	4804.46	-37.29	0.1614	2.5
	2440	30 ~ 2387	2374.78	-52.79	0.0178	2.5
		2387 ~ 2400	2392.13	-53.92	0.0114	25
		2483.5 ~ 2496.5	2487.97	-56.57	0.0113	25
		2496.5 ~ 12500	4879.99	-35.91	0.1968	2.5
	2480	30 ~ 2387	2286.72	-48.64	0.0137	2.5
		2387 ~ 2400	2399.86	-58.43	0.0014	25
		2483.5 ~ 2496.5	2483.51	-41.58	0.0695	25
		2496.5 ~ 12500	4958.90	-36.85	0.2065	2.5
+10 % (DC 4.07 V)	2402	30 ~ 2387	2377.59	-46.63	0.0217	2.5
		2387 ~ 2400	2400.05	-18.29	14.8390	25
		2483.5 ~ 2496.5	2497.00	-56.89	0.0020	25
		2496.5 ~ 12500	4803.26	-37.59	0.1743	2.5
	2440	30 ~ 2387	2248.59	-47.36	0.0183	2.5
		2387 ~ 2400	2392.47	-49.31	0.0117	25
		2483.5 ~ 2496.5	2488.61	-49.23	0.0119	25
		2496.5 ~ 12500	4881.30	-36.69	0.2142	2.5
	2480	30 ~ 2387	2286.76	-48.56	0.0139	2.5
		2387 ~ 2400	2399.89	-58.20	0.0015	25
		2483.5 ~ 2496.5	2483.57	-41.37	0.0729	25
		2496.5 ~ 12500	4958.96	-36.50	0.2239	2.5

Result : Pass

mode : EDR

Voltage	Frequency	Frequency Range	Result			Limit
V	MHz	MHz	MHz	dBm	μW/MHz	μW/MHz
-10 % (DC 3.33 V)	2402	30 ~ 2387	2385.57	-43.75	0.0421	2.5
		2387 ~ 2400	2400.03	-21.31	7.3942	25
		2483.5 ~ 2496.5	2496.84	-57.85	0.0016	25
		2496.5 ~ 12500	4804.48	-37.06	0.1967	2.5
	2440	30 ~ 2387	2296.62	-53.25	0.0047	2.5
		2387 ~ 2400	2392.36	-53.36	0.0046	25
		2483.5 ~ 2496.5	2487.72	-56.65	0.0022	25
		2496.5 ~ 12500	4879.63	-35.15	0.3058	2.5
	2480	30 ~ 2387	2352.62	-42.60	0.0550	2.5
		2387 ~ 2400	2399.97	-57.86	0.0016	25
		2483.5 ~ 2496.5	2483.59	-41.11	0.0775	25
		2496.5 ~ 12500	4960.63	-36.28	0.2354	2.5
0 % (DC 3.70 V)	2402	30 ~ 2387	2385.53	-44.09	0.0390	2.5
		2387 ~ 2400	2399.98	-21.62	6.8865	25
		2483.5 ~ 2496.5	2496.82	-58.03	0.0016	25
		2496.5 ~ 12500	4804.46	-37.31	0.1858	2.5
	2440	30 ~ 2387	2296.60	-53.59	0.0044	2.5
		2387 ~ 2400	2392.33	-53.50	0.0045	25
		2483.5 ~ 2496.5	2487.69	-56.90	0.0020	25
		2496.5 ~ 12500	4879.57	-35.40	0.2884	2.5
	2480	30 ~ 2387	2352.59	-42.73	0.0533	2.5
		2387 ~ 2400	2399.94	-57.99	0.0016	25
		2483.5 ~ 2496.5	2483.54	-41.48	0.0711	25
		2496.5 ~ 12500	4960.59	-36.61	0.2183	2.5
+10 % (DC 4.07 V)	2402	30 ~ 2387	2385.58	-43.99	0.0399	2.5
		2387 ~ 2400	2400.04	-21.45	7.1671	25
		2483.5 ~ 2496.5	2496.83	-57.91	0.0016	25
		2496.5 ~ 12500	4804.48	-37.12	0.1942	2.5
	2440	30 ~ 2387	2296.64	-53.26	0.0047	2.5
		2387 ~ 2400	2392.39	-53.29	0.0047	25
		2483.5 ~ 2496.5	2487.71	-56.55	0.0022	25
		2496.5 ~ 12500	4879.62	-35.22	0.3006	2.5
	2480	30 ~ 2387	2352.61	-42.41	0.0574	2.5
		2387 ~ 2400	2399.99	-57.70	0.0017	25
		2483.5 ~ 2496.5	2483.59	-41.31	0.0740	25
		2496.5 ~ 12500	4960.63	-36.44	0.2269	2.5

Result : Pass

mode : LE1M

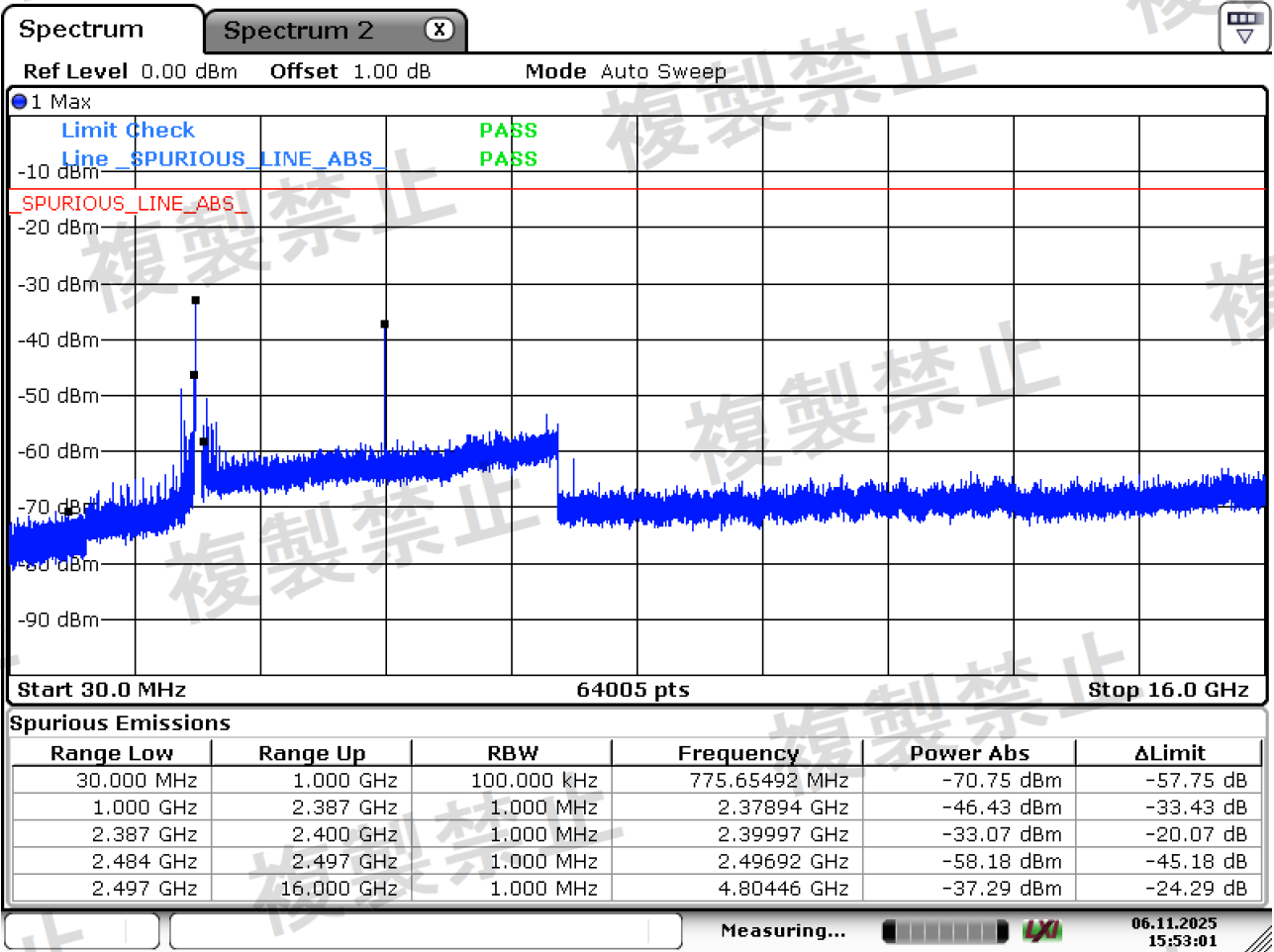
Voltage	Frequency	Frequency Range	Result			Limit
V	MHz	MHz	MHz	dBm	μW/MHz	μW/MHz
-10 % (DC 3.33 V)	2402	30 ~ 2387	2377.92	-45.61	0.0275	2.5
		2387 ~ 2400	2400.06	-29.80	1.0462	25
		2483.5 ~ 2496.5	2496.99	-55.70	0.0027	25
		2496.5 ~ 12500	4803.65	-36.92	0.2032	2.5
	2440	30 ~ 2387	2313.46	-44.57	0.0349	2.5
		2387 ~ 2400	2392.25	-49.13	0.0122	25
		2483.5 ~ 2496.5	2488.34	-49.28	0.0118	25
		2496.5 ~ 12500	4879.59	-35.78	0.2640	2.5
	2480	30 ~ 2387	2353.68	-44.59	0.0348	2.5
		2387 ~ 2400	2399.78	-58.17	0.0015	25
		2483.5 ~ 2496.5	2483.72	-41.62	0.0689	25
		2496.5 ~ 12500	4959.78	-35.72	0.2676	2.5
0 % (DC 3.70 V)	2402	30 ~ 2387	2377.90	-45.83	0.0261	2.5
		2387 ~ 2400	2400.00	-29.90	1.0233	25
		2483.5 ~ 2496.5	2496.97	-56.01	0.0025	25
		2496.5 ~ 12500	4803.62	-37.09	0.1954	2.5
	2440	30 ~ 2387	2313.41	-44.86	0.0327	2.5
		2387 ~ 2400	2392.23	-49.26	0.0119	25
		2483.5 ~ 2496.5	2488.30	-49.62	0.0109	25
		2496.5 ~ 12500	4879.57	-36.03	0.2495	2.5
	2480	30 ~ 2387	2353.63	-44.89	0.0324	2.5
		2387 ~ 2400	2399.77	-58.28	0.0015	25
		2483.5 ~ 2496.5	2483.69	-41.90	0.0646	25
		2496.5 ~ 12500	4959.74	-36.08	0.2466	2.5
+10 % (DC 4.07 V)	2402	30 ~ 2387	2377.94	-45.63	0.0273	2.5
		2387 ~ 2400	2400.04	-29.64	1.0873	25
		2483.5 ~ 2496.5	2497.03	-55.81	0.0026	25
		2496.5 ~ 12500	4803.64	-36.92	0.2030	2.5
	2440	30 ~ 2387	2313.44	-44.49	0.0355	2.5
		2387 ~ 2400	2392.26	-48.90	0.0129	25
		2483.5 ~ 2496.5	2488.35	-49.30	0.0117	25
		2496.5 ~ 12500	4879.58	-35.89	0.2574	2.5
	2480	30 ~ 2387	2353.68	-44.73	0.0336	2.5
		2387 ~ 2400	2399.82	-58.17	0.0015	25
		2483.5 ~ 2496.5	2483.71	-41.77	0.0665	25
		2496.5 ~ 12500	4959.78	-35.95	0.2543	2.5

Result : Pass

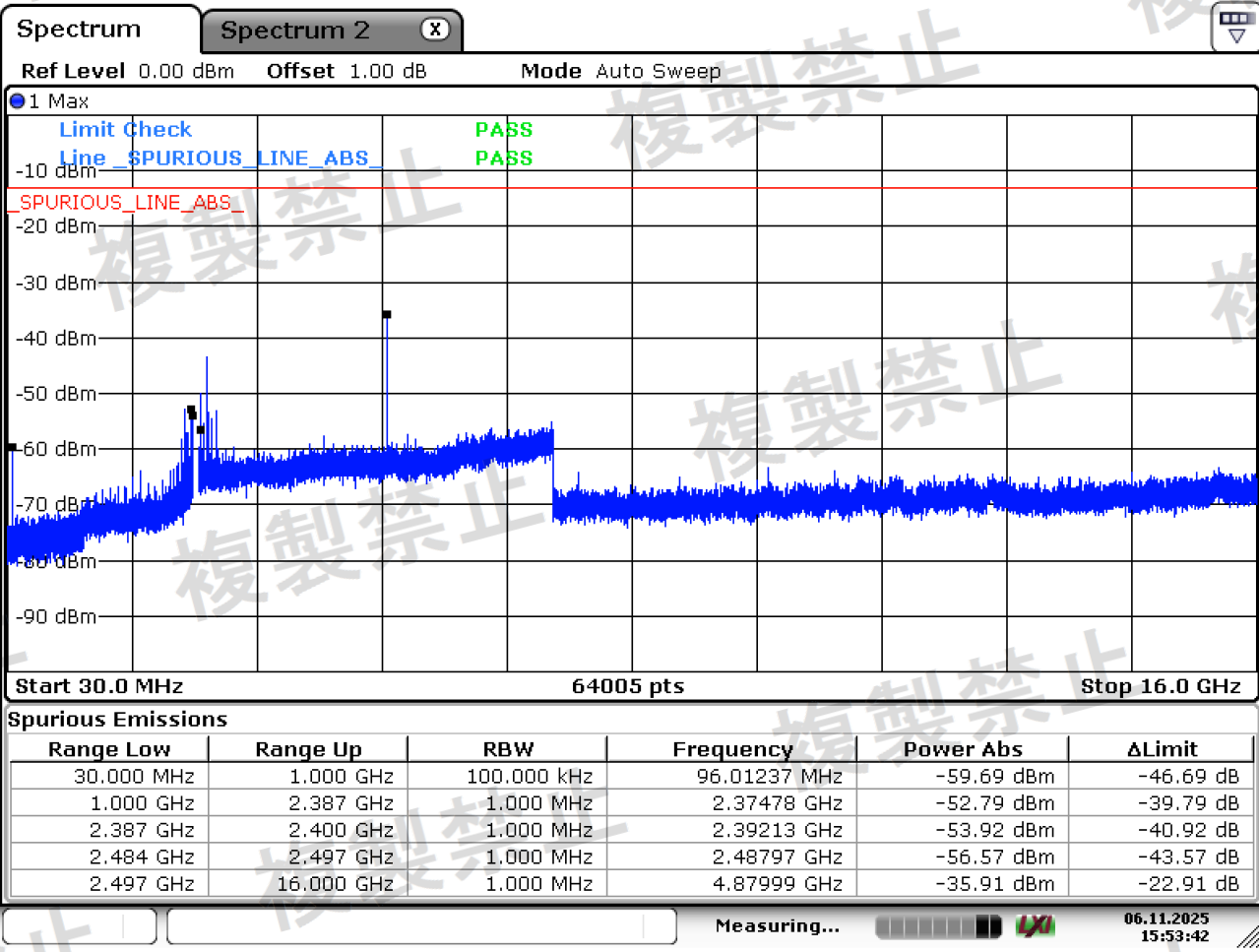
mode : LE2M

Voltage	Frequency	Frequency Range	Result			Limit
V	MHz	MHz	MHz	dBm	μW/MHz	μW/MHz
-10 % (DC 3.33 V)	2402	30 ~ 2387	2377.61	-46.70	0.0214	2.5
		2387 ~ 2400	2400.03	-18.15	15.3081	25
		2483.5 ~ 2496.5	2497.03	-56.86	0.0021	25
		2496.5 ~ 12500	4803.22	-37.63	0.1727	2.5
	2440	30 ~ 2387	2248.62	-47.32	0.0185	2.5
		2387 ~ 2400	2392.48	-49.08	0.0124	25
		2483.5 ~ 2496.5	2488.62	-49.29	0.0118	25
		2496.5 ~ 12500	4881.29	-36.75	0.2112	2.5
	2480	30 ~ 2387	2286.74	-48.32	0.0147	2.5
		2387 ~ 2400	2399.88	-58.09	0.0016	25
		2483.5 ~ 2496.5	2483.56	-41.38	0.0727	25
		2496.5 ~ 12500	4958.96	-36.68	0.2147	2.5
0 % (DC 3.70 V)	2402	30 ~ 2387	2377.55	-46.87	0.0206	2.5
		2387 ~ 2400	2400.00	-18.44	14.3219	25
		2483.5 ~ 2496.5	2496.97	-57.11	0.0019	25
		2496.5 ~ 12500	4803.20	-37.92	0.1614	2.5
	2440	30 ~ 2387	2248.58	-47.49	0.0178	2.5
		2387 ~ 2400	2392.44	-49.45	0.0114	25
		2483.5 ~ 2496.5	2488.57	-49.46	0.0113	25
		2496.5 ~ 12500	4881.26	-37.06	0.1968	2.5
	2480	30 ~ 2387	2286.72	-48.64	0.0137	2.5
		2387 ~ 2400	2399.86	-58.43	0.0014	25
		2483.5 ~ 2496.5	2483.51	-41.58	0.0695	25
		2496.5 ~ 12500	4958.90	-36.85	0.2065	2.5
+10 % (DC 4.07 V)	2402	30 ~ 2387	2377.59	-46.63	0.0217	2.5
		2387 ~ 2400	2400.05	-18.29	14.8390	25
		2483.5 ~ 2496.5	2497.00	-56.89	0.0020	25
		2496.5 ~ 12500	4803.26	-37.59	0.1743	2.5
	2440	30 ~ 2387	2248.59	-47.36	0.0183	2.5
		2387 ~ 2400	2392.47	-49.31	0.0117	25
		2483.5 ~ 2496.5	2488.61	-49.23	0.0119	25
		2496.5 ~ 12500	4881.30	-36.69	0.2142	2.5
	2480	30 ~ 2387	2286.76	-48.56	0.0139	2.5
		2387 ~ 2400	2399.89	-58.20	0.0015	25
		2483.5 ~ 2496.5	2483.57	-41.37	0.0729	25
		2496.5 ~ 12500	4958.96	-36.50	0.2239	2.5

Test Mode : BDR / CH1 (Nomal Voltage)



Test Mode : BDR / CH19 (Nomal Voltage)



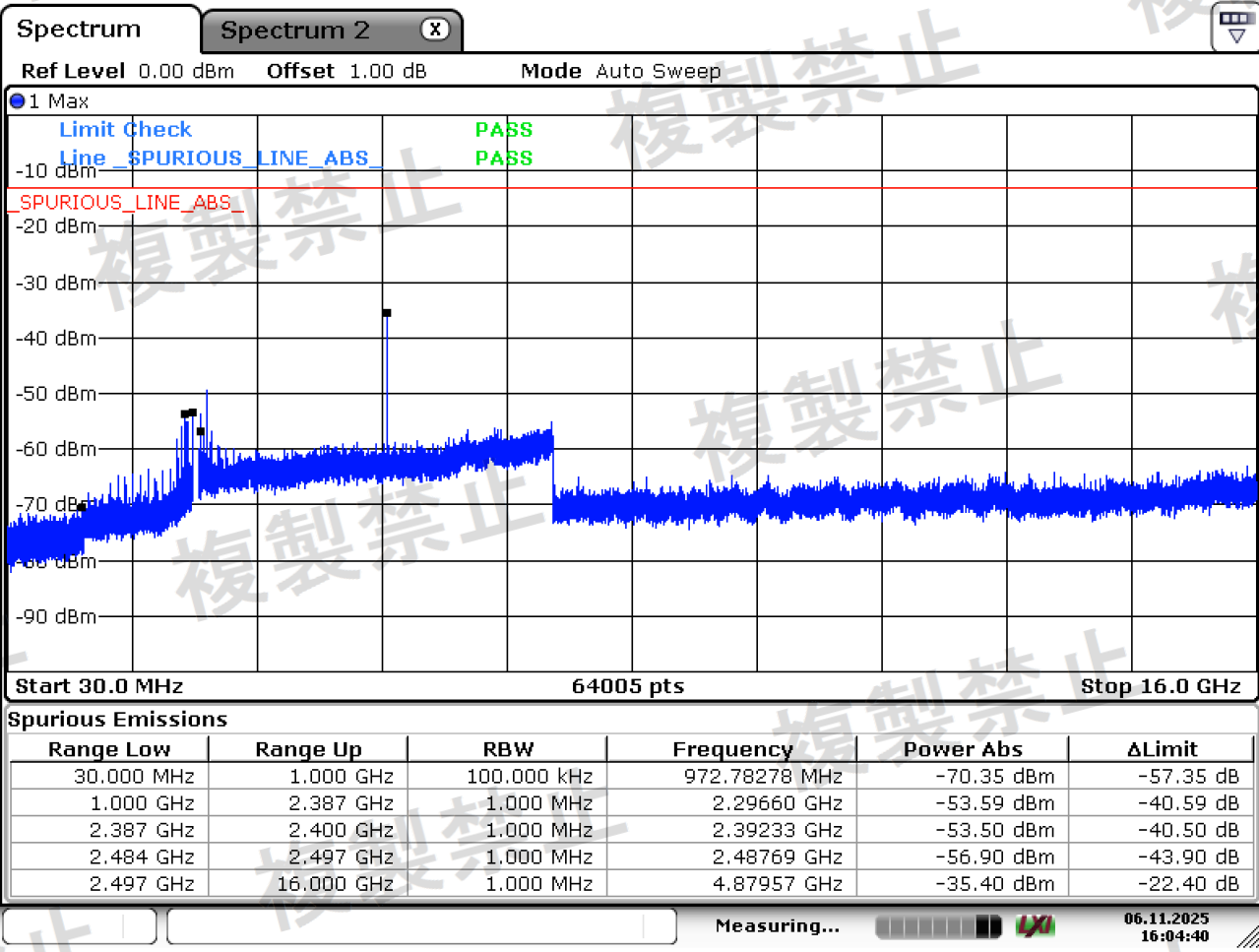
複製禁



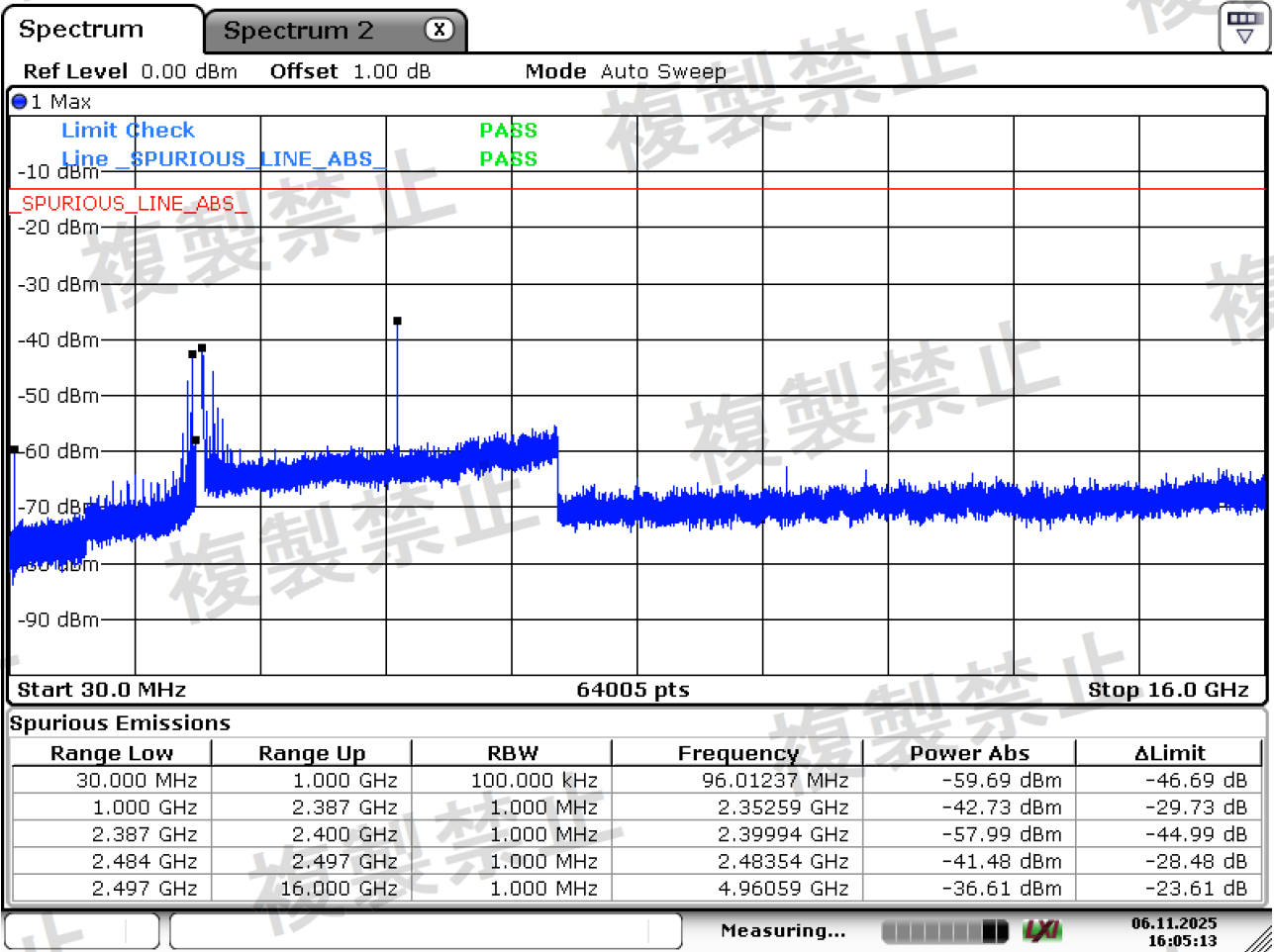
複製禁



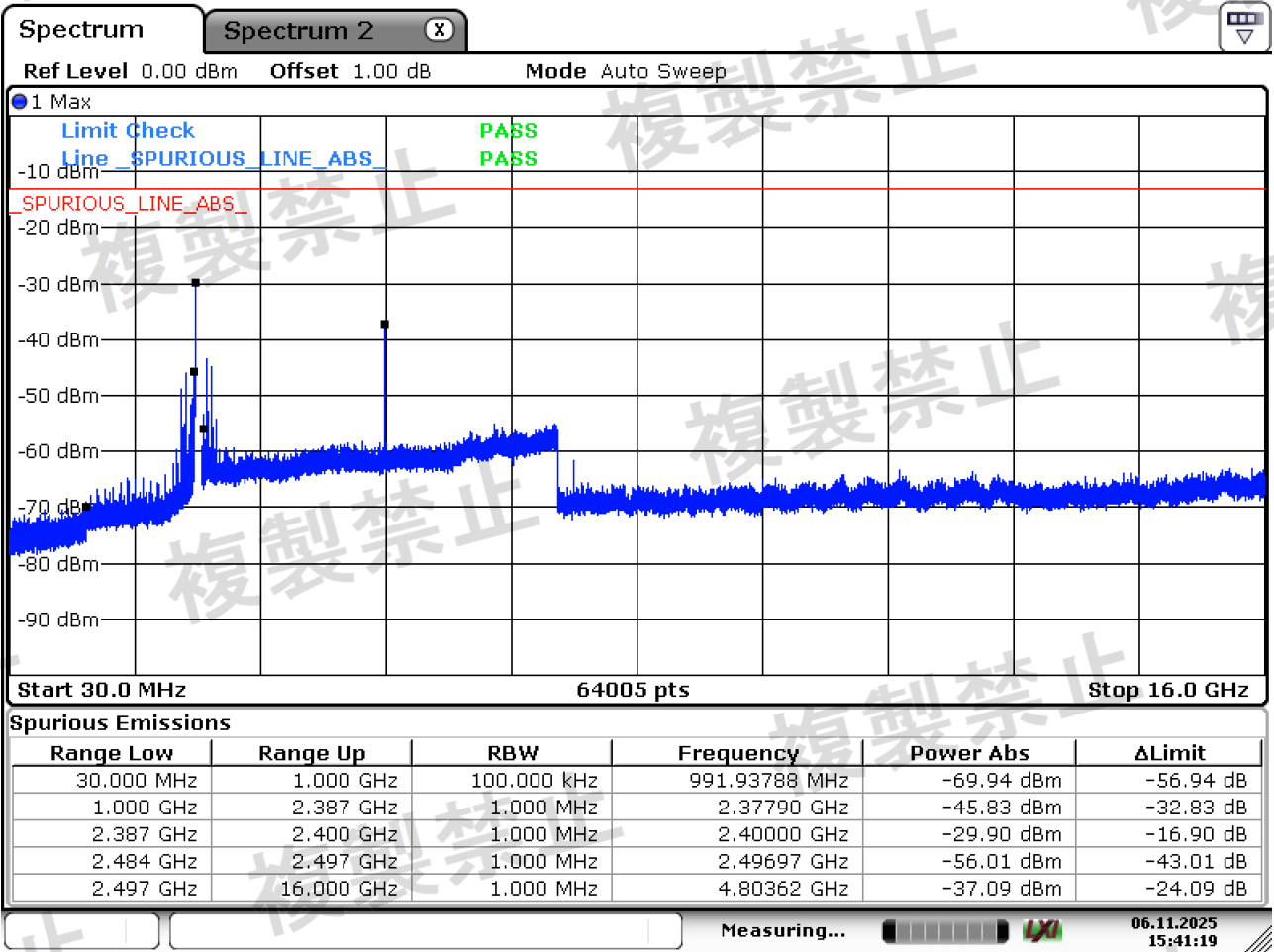
Test Mode : EDR / CH38 (Nomal Voltage)



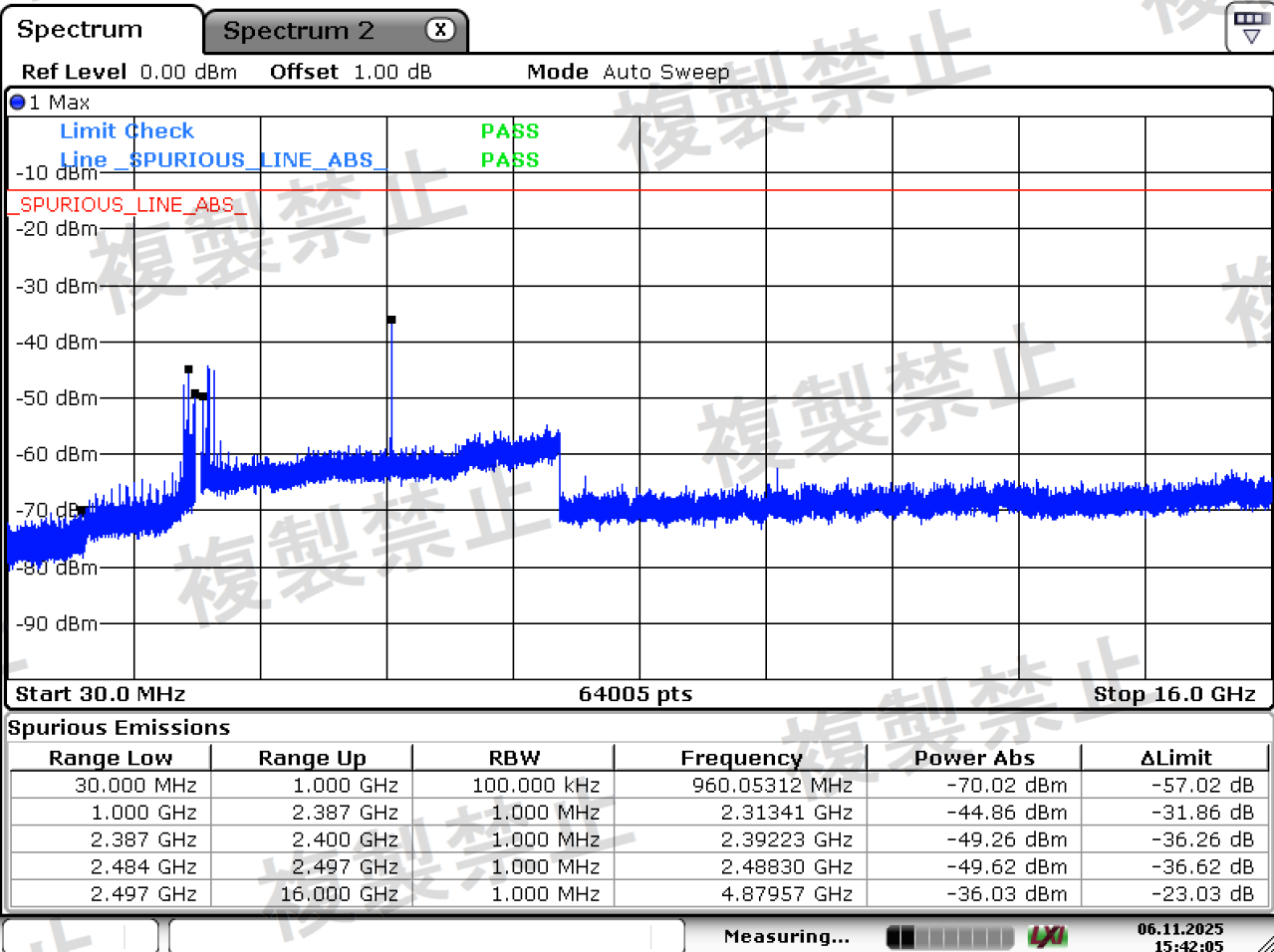
Test Mode : EDR / CH78 (Nomal Voltage)



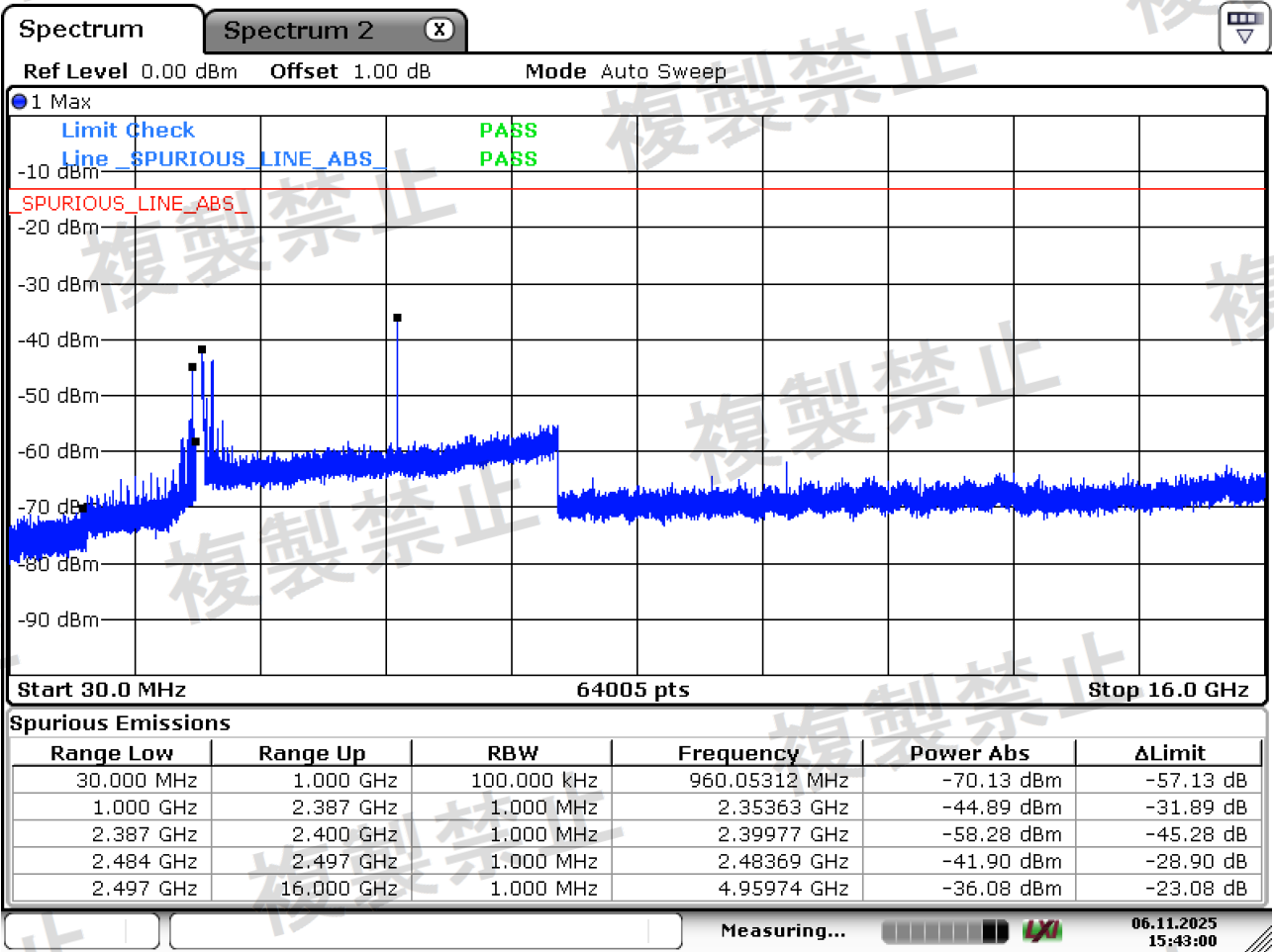
Test Mode : LE1M / CH1 (Nomal Voltage)



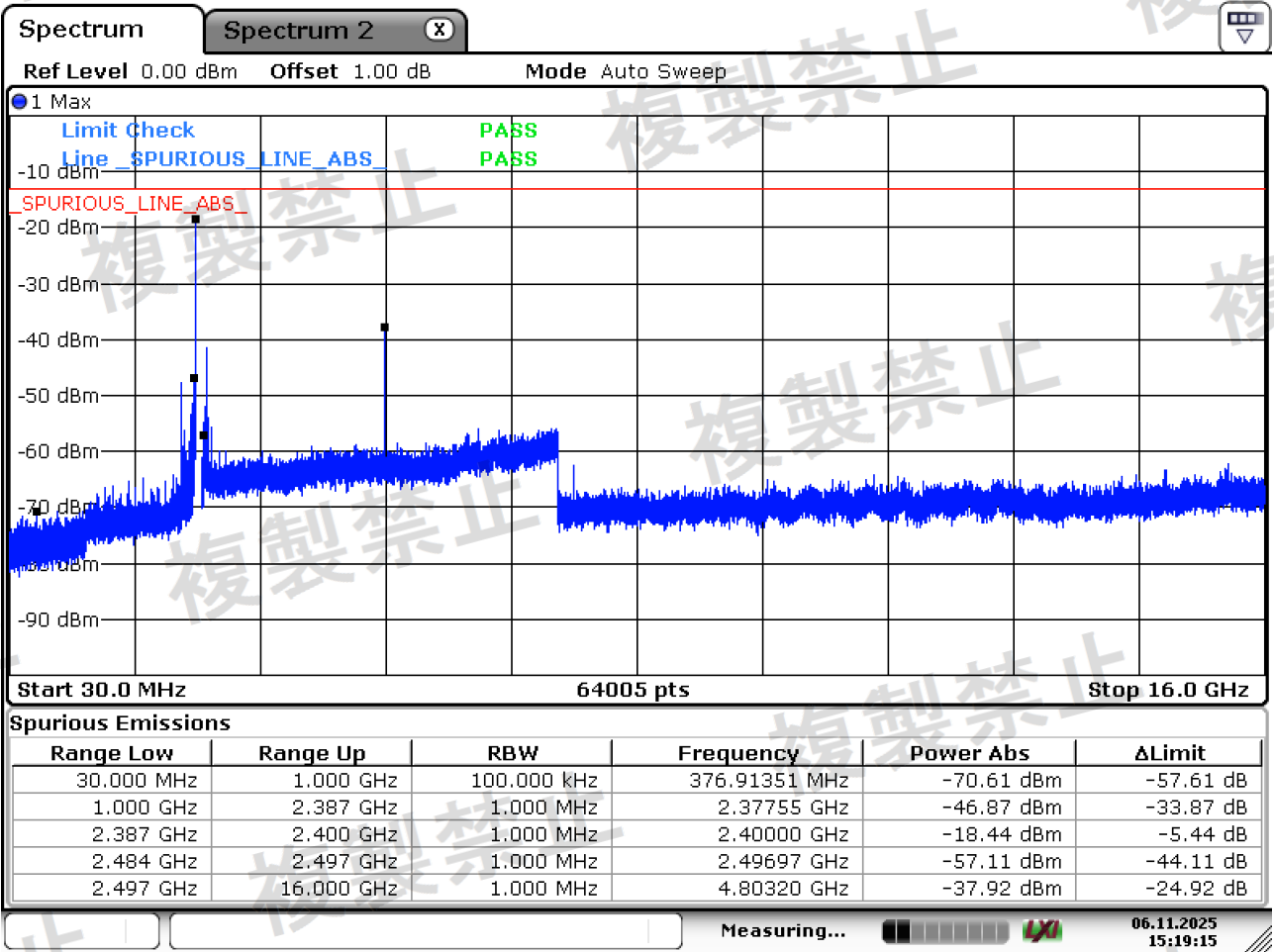
Test Mode : LE1M / CH19 (Nomal Voltage)



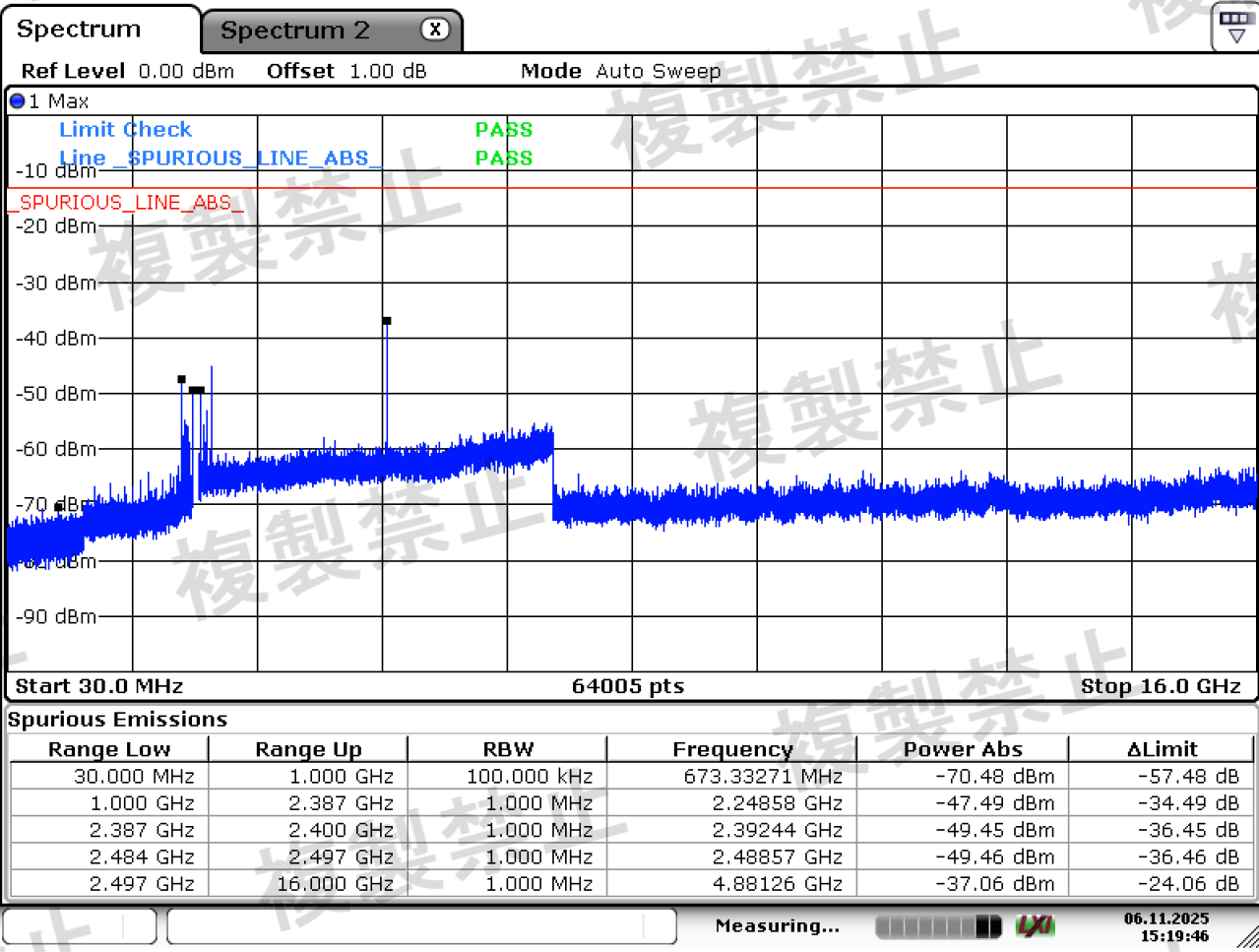
Test Mode : LE1M / CH39 (Nomal Voltage)



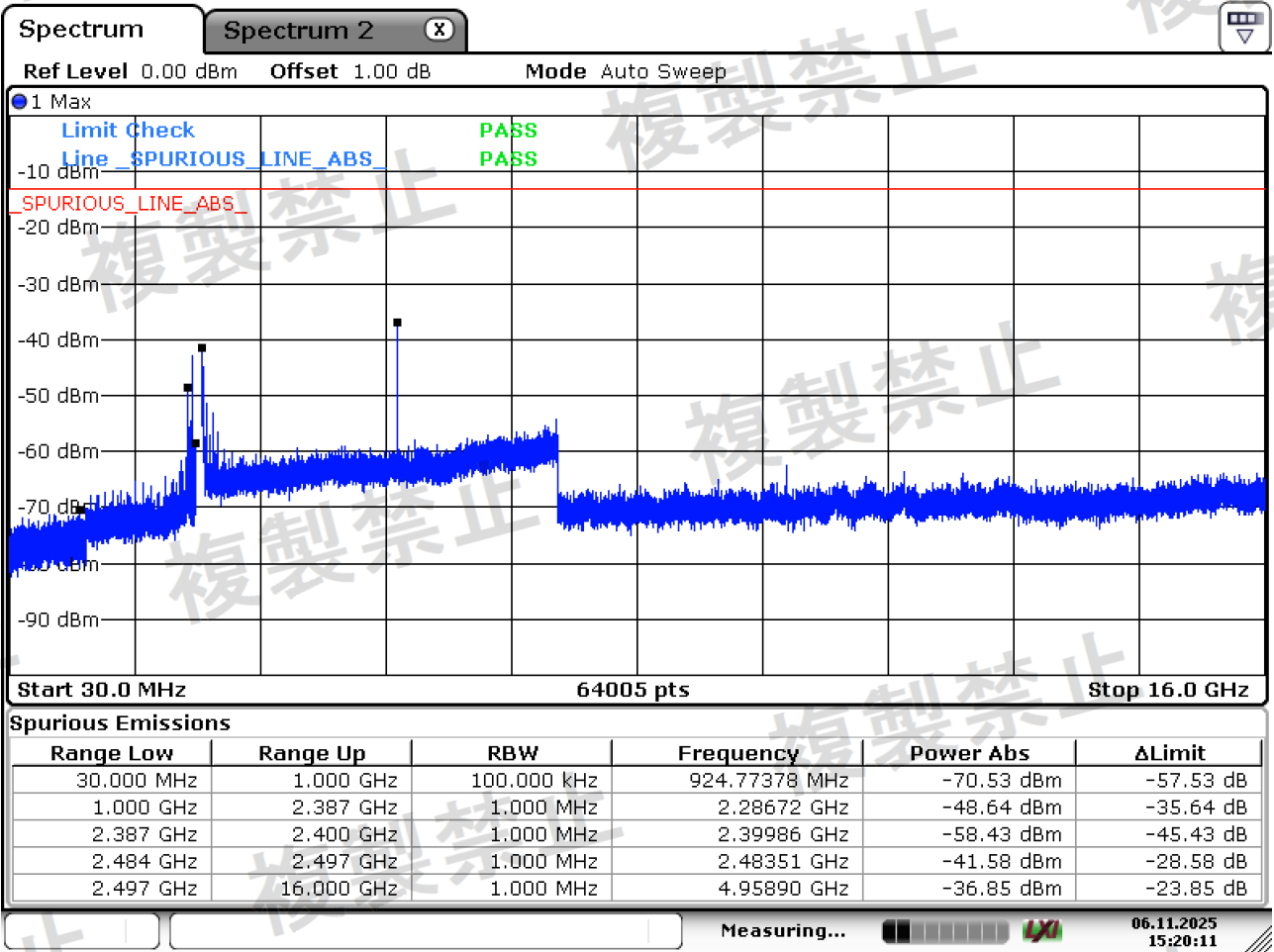
Test Mode : LE2M / CH1 (Nomal Voltage)



Test Mode : LE2M / CH19 (Nomal Voltage)



Test Mode : LE2M / CH39 (Nomal Voltage)



7. RX spurious emission

7.1 Test setup



7.2 Limit

Below 1 GHz: 4 nW (- 54 dBm) or less

Above 1 GHz: 20 nW (- 47 dBm) or less

7.3 Test procedure

1. Connecy transmitter output to the spectrum analyzer input port
2. The EUT should be transmitting at low, middle and high channel.
3. RX spurious emission is measured by following setting:
4. Set the spectrum analyzer RBW: 100 kHz, VBW: 100 kHz, Sweep: Auto, Start: 30 MHz, Stop: 1 000 MHz
Max hold view, mark highest level.
5. Set the spectrum analyzer RBW: 1 MHz, VBW: 1 MHz, Sweep: Auto, Start: 1 000 MHz, Stop: 12.5 GHz.
Max hold view, mark highest level.
6. Detector mode: Peak mode

7.4 Test results

Ambient temperature: 23℃ Relative humidity: 49% R.H

Test mode : BDR

Voltage	Measurement Frequency	Frequency Range	Result			Limit
V	MHz	MHz	MHz	dBm	nW	nW
Normal Voltage	2402	30 ~ 1000	192.03	-72.29	0.059	4
		1000 ~ 12750	6761.88	-71.26	0.075	20
	2440	30 ~ 1000	192.00	-71.14	0.077	4
		1000 ~ 12750	6619.76	-71.08	0.078	20
	2480	30 ~ 1000	144.02	-75.22	0.030	4
		1000 ~ 12750	6987.63	-71.16	0.077	20

Test mode : EDR

Voltage	Measurement Frequency	Frequency Range	Result			Limit
V	MHz	MHz	MHz	dBm	nW	nW
Normal Voltage	2402	30 ~ 1000	192.00	-71.93	0.059	4
		1000 ~ 12750	6684.63	-70.42	0.075	20
	2440	30 ~ 1000	144.02	-75.69	0.077	4
		1000 ~ 12750	6578.89	-70.44	0.078	20
	2480	30 ~ 1000	192.00	-71.41	0.030	4
		1000 ~ 12750	6981.25	-72.15	0.077	20

Test mode : LE1M

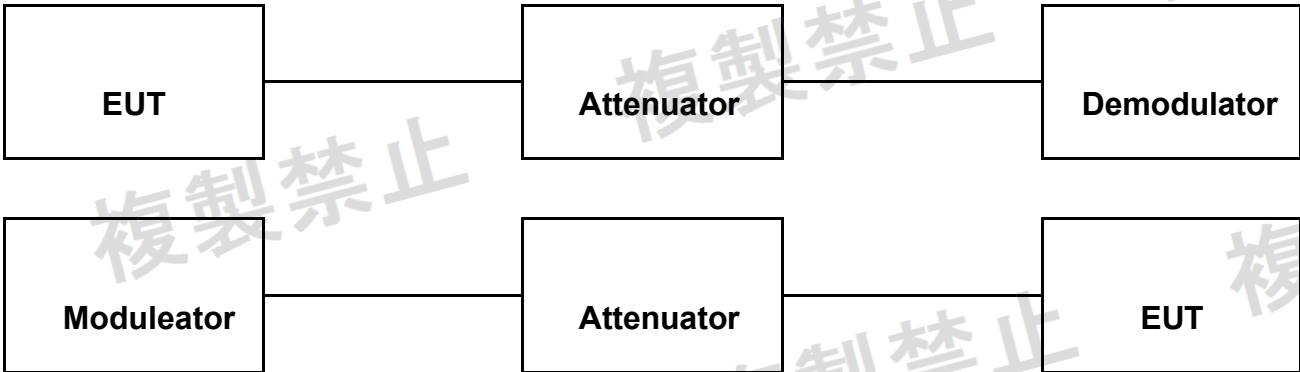
Voltage	Measurement Frequency	Frequency Range	Result			Limit
V	MHz	MHz	MHz	dBm	nW	nW
Normal Voltage	2402	30 ~ 1000	96.00	-58.56	0.059	4
		1000 ~ 12750	2151.78	-61.79	0.075	20
	2440	30 ~ 1000	96.00	-58.60	0.077	4
		1000 ~ 12750	2149.90	-60.97	0.078	20
	2480	30 ~ 1000	96.00	-58.56	0.030	4
		1000 ~ 12750	2151.78	-61.10	0.077	20

Test mode : LE2M

Voltage	Measurement Frequency	Frequency Range	Result			Limit
V	MHz	MHz	MHz	dBm	nW	nW
Normal Voltage	2402	30 ~ 1000	96.00	-58.58	1.387	4
		1000 ~ 12750	2154.78	-61.80	0.661	20
	2440	30 ~ 1000	96.00	-58.52	1.406	4
		1000 ~ 12750	2147.28	-61.60	0.692	20
	2480	30 ~ 1000	96.00	-58.58	1.387	4
		1000 ~ 12750	2155.90	-60.46	0.899	20

8 Interference prevention function

8.1 Test Setup



8.2 Limit

Radio equipment used mainly on the same premises and automatically transmits or receives identification code

8.3 Test results

Ambient temperature: 23℃ Relative humidity: 49% R.H.

Test Power:	Normal Voltage
Test Mode:	BDR
Test Result:	Good (identification code: [F8:27:93:10:4B:5F])

9. CONSTRUCTION PROTECTION CONFIRMATION METHOD

9.1 Limit

(See Article 49-20, Item1-a of the Ordinance Regulating Radio Equipment)

The high-frequency section and modulation section of the radio equipment except for the antenna system shall not be capable of being opened easily.

9.2 CONFIRMATION METHOD

The RF and modulation portions are protected against illegal modification as following method:

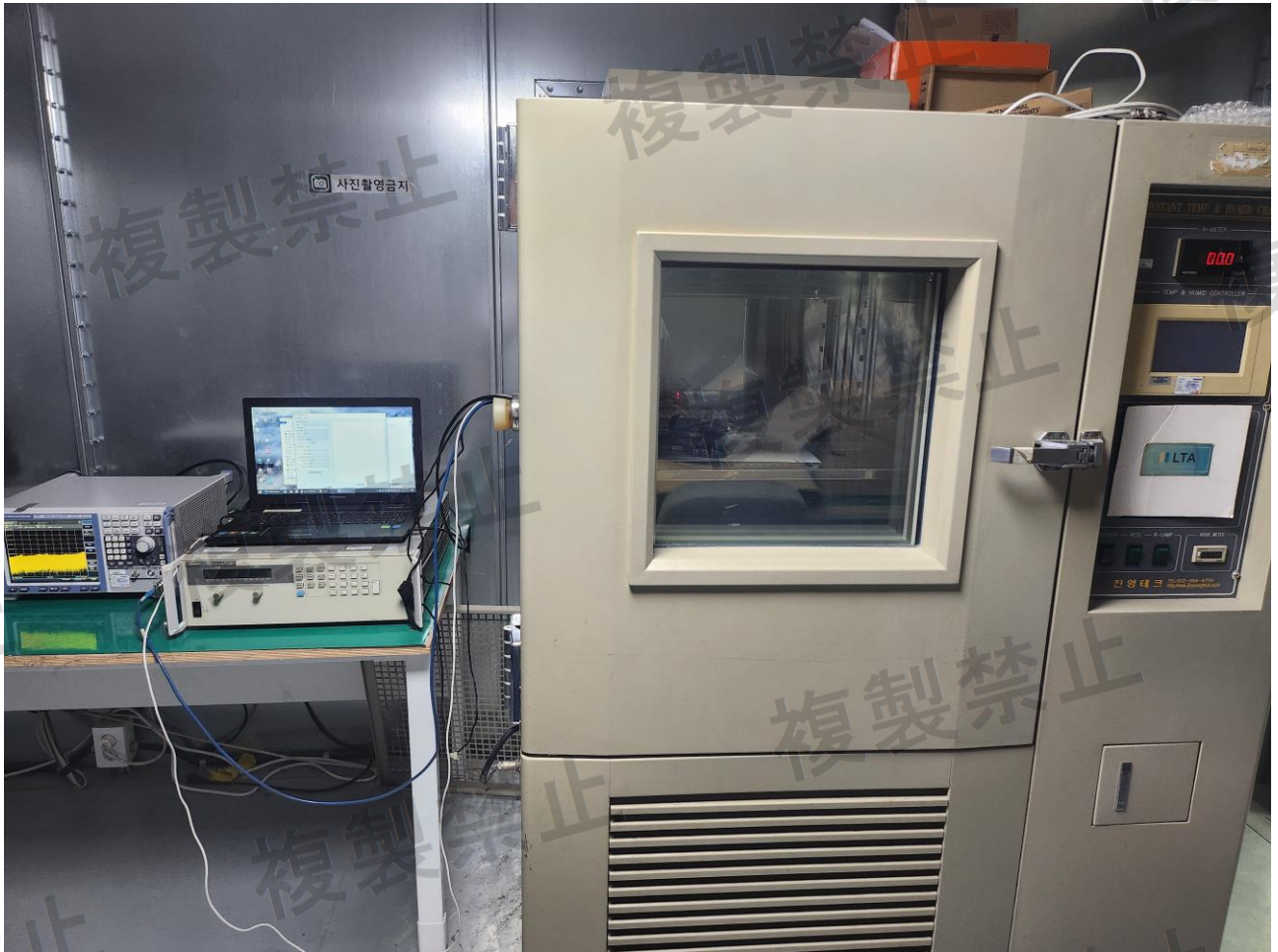
Tick the appropriate box	
	1. Sealed with special screws.
	2. Plastic chassis is being welded using ultrasonic waves.
O	3. Chassis is glued using a special adhesive.
	4. Metal covers are spot-fused.
	5. Cover is specially interlocked.
	6. RF and Modulation components are covered with shielding case and this shielding case is soldered.
	7. Shield case is welded at RF and modulation parts, and ID-ROM is welded using the BGA Method.
	8. Shield case is welded at RF and modulation parts, and ID-ROM is glued at its lead with a special adhesive
	9. Shield case is welded at RF and modulation parts, and ID-ROM is glued with a non-transparent laminating agent.
	10. RF and Modulation parts are mounted on PCB with surface mount technology, and there is no any adjustable part on PCB or adjustable parts are not exposed.

Measurement Uncertainty

For the test methods, according to the present document, the measurement uncertainty figures shall be calculated in accordance with ETSI TR 100 028-1 [1], ETSI TS 103 051 [2] and ETSI TS 103 052 [3] and shall correspond to an expansion factor (coverage factor) $k = 1,96$ or $k = 2$ (which provide confidence levels of respectively 95 % and 95,45 % in the case where the distributions characterizing the actual measurement uncertainties are normal (Gaussian)).

Parameter	Uncertainty
Occupied Bandwidth	± 0.348 MHz
RF output power, conducted	± 0.120 dB
Power Spectral Density, conducted	± 0.120 dB
Unwanted Emissions, conducted	± 0.350 dB
All emissions, radiated	± 6 dB
Temperature	± 0.5 °C
Supply voltages	± 8.7 mV
Time	± 0.0003 s

Test Photo



APPENDIX

TEST EQUIPMENT USED FOR TESTS

Calibration was conducted by HCT, a nationally accredited calibration laboratory in Korea.

	Use	Description	Model No.	Serial No.	Manufacturer	Cal. Date	Next Cal. Date
1	■	SIGNAL ANALYZER (10 Hz ~ 40 GHz)	FSV40	101259	R&S	2025-03-06	2026-03-06
2	■	VECTOR SIGNAL GENERATOR	SMBV100A	255081	HP	2025-03-08	2026-03-07
3		SYNTHESIZED CW GENERATOR	83711B	US34490456	HP	2025-03-08	2026-03-07
4		Attenuator (3 dB)	8491A	37822	HP	2025-08-19	2026-08-19
5		Attenuator (10 dB)	8491A	63196	HP	2025-08-19	2026-08-19
6		EMI Test Receiver (~7 GHz)	ESC17	100722	R&S	2025-08-18	2026-08-18
7		RF Amplifier (~1.3 GHz)	8447D OPT 010	2944A07684	HP	—	N/A
8		RF Amplifier (1~26.5 GHz)	8449B	3008A02126	HP	2025-03-05	2026-03-05
9		Horn Antenna (1~18 GHz)	3115	00114105	ETS	2025-03-10	2026-03-10
10		DRG Horn (Small)	3116B	81109	ETS-Lindgren	2024-03-08	2026-03-08
11		DRG Horn (Small)	3116B	133350	ETS-Lindgren	2024-03-08	2026-03-08
12		TRILOG Antenna	VULB 9160	9160-3237	SCHWARZBEC K	2024-03-08	2026-03-08
13		Temp.Humidity Data Logger	SK-L200TH II A	00801	SATO	2025-03-08	2026-03-07
14		Splitter (SMA)	ZFSC-2-2500	SF61780032 6	Mini-Circuits	2025-03-08	2026-03-07
15	■	DC Power Supply	6674A	3637A01657	Agilent	2025-03-08	2026-03-07
17		Power Meter	EPM-441A	GB32481702	HP	2025-03-08	2026-03-07
18		Power Sensor	8481A	3318A94972	HP	2025-08-18	2026-08-18
19		Audio Analyzer	8903B	3729A18901	HP	2025-08-18	2026-08-18
20		Modulation Analyzer	8901B	3749A05878	HP	2025-08-19	2026-08-19
21	■	TEMP & HUMIDITY Chamber	YJ-500	LTAS06041	JinYoung Tech	2025-03-05	2026-03-05
22		Stop Watch	HS-3	812Q08R	CASIO	2024-03-14	2026-03-14
23		LISN	KNW-407	8-1430-1	Kyoritsu	2025-03-08	2026-03-07