

Dynascan Technology Corp.

TEST REPORT

Model:

68301,68303

REPORT NUMBER

260100226THC-001

ISSUE DATE

May 06, 2026

PAGES

27

DOCUMENT CONTROL NUMBER

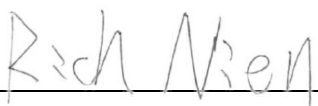
GFT-OP-10h (28-Nov-2018)

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Radio Spectrum TEST REPORT

Applicant:	Dynascan Technology Corp. 6F., No. 88, Wenmao Rd., Guishan Dist., Taoyuan City 333001, Taiwan
Product:	EPAPER DISPLAY
Model No.:	68301,68303
Test Standard:	ARIB STD-T66 version 3.8 (No. 88 of MIC, 2004, Annex 43)
Test By:	Intertek Testing Services Taiwan Ltd., Hsinchu Laboratory No. 17, Ln. 246, Niupu S. Rd., Xiangshan Dist, Hsinchu City 300075, Taiwan


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Revision History

Report No.	Issue Date	Revision Summary
260100226THC-001	May 06, 2026	Original report

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1. General Information

1.1 Identification of the EUT

Product:	EPAPER DISPLAY
Model No.:	68301
Operating Frequency:	2402 MHz ~ 2480 MHz
Channel Number:	40 channels
Frequency of Each Channel:	2402+ 2k, k=0 ~ 39
Rating:	DC 5V from USB-C Charger
Sample receiving date:	2025/12/02
Sample condition:	Workable
Test Date(s):	2026/03/13 ~ 2026/03/27

1.2 Additional information about the EUT

The customer confirmed the models listed as below were series model to model 68301 (EUT), the difference between main model and series model are listed as below.

Model Number	Protective Glass
68301	V
68303	X

1.3 Adapter information

The EUT will be supplied with a power supply from below list:

No.	Model no.	Specification
USB-C Charger	A1C030AC	I/P: 100-240V~ 50/60Hz, 1.2A O/P: 5.0V=3.0A 15.0W/ 9.0V=3.0A 27.0W/ 12.0V=2.5A 30.0W/ 15.0V=2.0A 30.0W/ 20.0V=1.5A 30.0W

1.4 Rated power declaration

Technology	Rated Conducted Power (mW)
BLE 1M/2M	7.08

1.5 Antenna description

Antenna Gain : 1.82 dBi
 Antenna Type : FPC Antenna
 Connector Type : I-Pex
 Remark: Antenna information provided by the client.

1.6 Assemble

The radio facility should be enclosed in one chassis which is not easily opened. However, an exception applies where the HPHPT prescribes otherwise

☐	Sealed with special screws.
☐	Plastic chassis is being welded using ultrasonic waves.
☐	Chassis is glued using a special adhesive.
☐	Metal covers are spot-fused.
☒	Cover is specially interlocked.
☐	RF and Modulation components are covered with shielding case and this shielding case is soldered.
☐	Shield case is welded at RF and modulation parts, and ID-ROM is welded using the BGA Method.
☐	Shield case is welded at RF and modulation parts, and ID-ROM is glued at its lead with a special adhesive.
☐	Shield case is welded at RF and modulation parts, and ID-ROM is glued with a non-transparent laminating agent.
☐	Other: Applicant hereby declares that the structure of the high frequency and modulation part of the radio, except antenna system in the applying device is designed not to be tampered with or modify by the end user.
☐	other

1.7 Voltage fluctuation:

It has been confirmed that the fluctuation of the input voltage to the circuit of the RF circuit when the input voltage from an external power supply to the EUT fluctuates by $\pm 10\%$ is within $\pm 1\%$, measurement could be performed only for the rated voltage.

EUT input Voltage	RF circuit Voltage	Deviation
100Vac	DC 3.27V	
AC 110V(+10%)	DC 3.27V	0%
AC 90V(-10%)	DC 3.27V	0%

2. Test Summary

Test items	Mode	Channel	Antenna	Result
Frequency Tolerance	Single Tone	0 / 19 / 39	Chain0	Pass
Antenna Power	BLE 1M/2M	0 / 19 / 39	Chain0	Pass
	BLE 1M/2M	0 / 19 / 39	Chain0	
	BLE 1M/2M	0 / 19 / 39	Chain0	
Spurious Emission Intensity	BLE 1M/2M	0 / 19 / 39	Chain0	Pass
	BLE 1M/2M	0 / 19 / 39	Chain0	
	BLE 1M/2M	0 / 19 / 39	Chain0	
Secondary Radiated Emissions	BLE 1M/2M	0 / 19 / 39	Chain0	Pass
	BLE 1M/2M	0 / 19 / 39	Chain0	
	BLE 1M/2M	0 / 19 / 39	Chain0	
Occupied Bandwidth	BLE 1M/2M	0 / 19 / 39	Chain0	Pass
	BLE 1M/2M	0 / 19 / 39	Chain0	
	BLE 1M/2M	0 / 19 / 39	Chain0	

Note: Please note that the test results with statement of conformity, the decision rules which are based on: Safety Testing: the specification, standard or IEC Guide 115.

Other Testing: the specification, standard and not taking into account the measurement uncertainty.

3. Test Specifications

3.1 Standards

Radio equipment stipulated in the certification ordinance Article 2, Item (19) Appendix 43, B-1 (2) and Item 19 of Article 2 Paragraph 1.

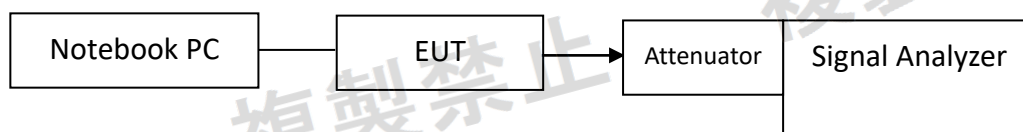
3.2 Mode of operation during the test

Connected to Notebook PC via USB Cable , executing 「CMD」 and enter Commands to select different frequency and modulation.

3.3 Peripherals equipment

Peripherals	Brand	Model No.	Serial No.	Description of Data Cable
Notebook PC	HP	HP ProBook 440 G3	5CD8021S9H	Type-C Cable 1.5m

3.4 Test Set-up



4. Frequency Tolerance

4.1 Limit of Frequency Tolerance

Frequency Tolerance shall be $\pm 50\text{ppm}$.

4.1 Test method

Test method: According to Notification No. 88 of MIC, 2004, Annex 43

1. Set spectrum analyzer as below

Frequency=Test Frequency

Span=1MHz

RBW=10kHz

VBW=RBW

Detector=Peak

Sweep time=Auto

Trace=Maxhold

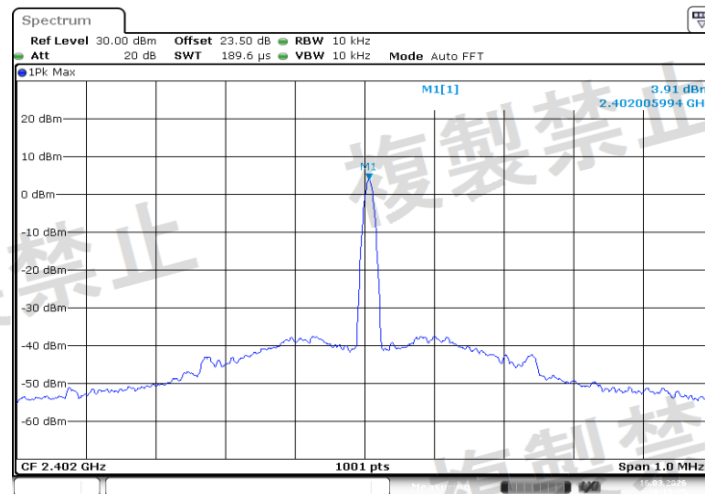
2. Use peak search function to find the max value and record it.

4.3 Test Result for Frequency Tolerance

Date	2026/03/16
Temperature (°C)	24
Humidity (%)	56

Test Voltage				
100Vac/ 50Hz				
Channel	Frequency (MHz)	Carrier Frequency (MHz)	Frequency Deviation (PPM)	Limit (PPM)
0	2402	2402.01	2.50	±50
19	2440	2440.00	-0.41	±50
39	2480	2479.99	-3.22	±50

Chain0 : Frequency Tolerance @ 2402MHz



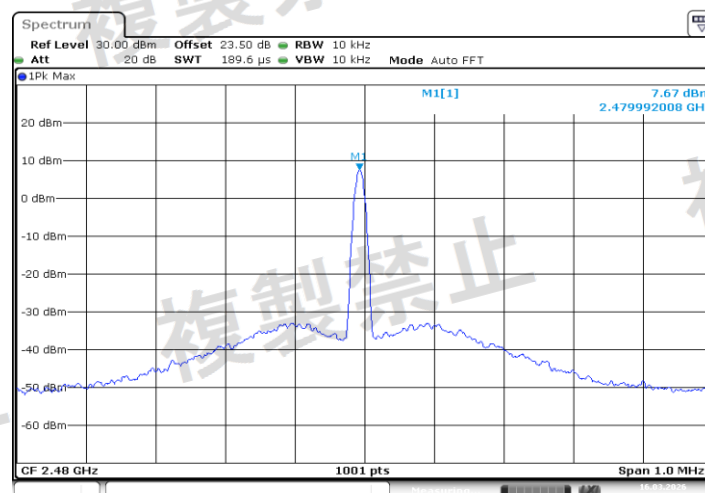
Date: 16 MAR 2026 10:15:26

Chain0 : Frequency Tolerance @ 2440MHz



Date: 16 MAR 2026 10:16:44

Chain0 : Frequency Tolerance @ 2480MHz



Date: 16 MAR 2026 10:18:24

5. Antenna Power

5.1 Limit of Antenna Power

Mode	Limit	Tolerance
DSSS	10mW/MHz	+20% , -80%
OFDM(20MHz)	10mW/MHz	+20% , -80%
OFDM(40MHz)	5mW/MHz	+20% , -80%
FHSS	3mW/MHz	+20% , -80%
Others	10mW	+20% , -80%

5.2 Test method

Test method: According to Notification No. 88 of MIC, 2004, Annex 43

Using the gate function of power meter to measure burst power.

5.3 Test Result for Antenna Power

Date	2026/03/13
Temperature (°C)	23
Humidity (%)	67

Test Voltage									
AC 110V/ 50Hz									
Mode	Channel	Frequency (MHz)	Antenna Power (mW)	Limit (mW)	Tolerance (%)	Limit	Antenna gain (dBi)	E.I.R.P (dBm)	Limit (dBm)
BLE 1M	0	2402	2.82	10	-60.19	+20% ~ -80%	1.82	6.32	12.14
	19	2440	5.01	10	-29.21	+20% ~ -80%	1.82	8.82	12.14
	39	2480	7.08	10	0.00	+20% ~ -80%	1.82	10.32	12.14
BLE 2M	0	2402	2.75	10	-61.10	+20% ~ -80%	1.82	6.22	12.14
	19	2440	4.17	10	-41.12	+20% ~ -80%	1.82	8.02	12.14
	39	2480	6.31	10	-10.87	+20% ~ -80%	1.82	9.82	12.14

6. Spurious Emission Intensity**6.1 Limit of Spurious Emission Intensity & Test Procedures**

Frequency Range	Limit
$\leq 2387\text{MHz}$	2.5uW/MHz
2387MHz-2400MHz	25uW/MHz
2483.5MHz-2496.5MHz	25uW/MHz
$\geq 2496.5\text{MHz}$	2.5uW/MHz

6.2 Test method

Test method: According to Notification No. 88 of MIC, 2004, Annex 43

Set spectrum analyzer as below

Frequency=30MHz-2400MHz,2483.5MHz-13GHz

RBW=1MHz

VBW=RBW

Sweep time=Auto

Detector=Peak

Trace=Maxhold

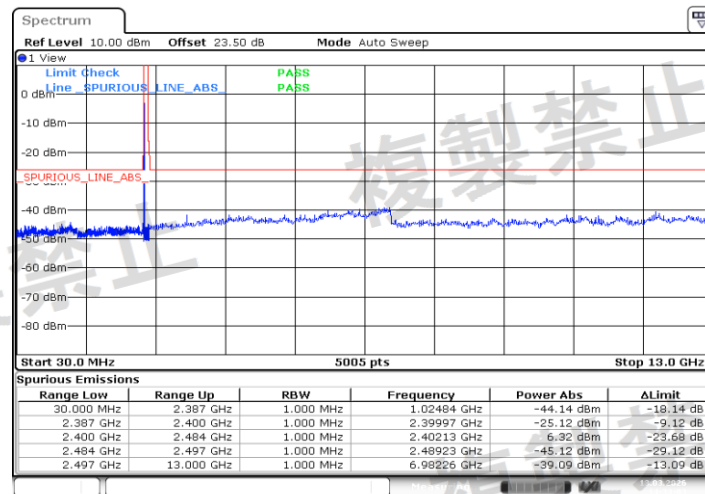
TEST REPORT

6.3 Test Result for Spurious Emission Intensity

Date	2026/03/13
Temperature (°C)	23
Humidity (%)	67

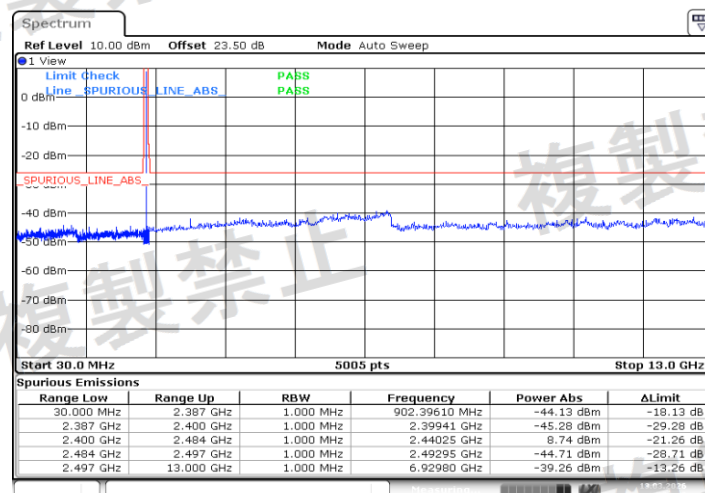
Test Voltage							
100Vac/ 50Hz							
Mode	Channel	Frequency (MHz)	Frequency Range	Frequency (MHz)	Measure Level (dBm/MHz)	Measure Level (uW/MHz)	Limit (uW/MHz)
BLE 1M	0	2402	30-2387 MHz	1024.84	-44.14	0.04	2.5
			2387-2400 MHz	2399.97	-25.12	3.08	25
			2483.5-2496.5 MHz	2489.23	-45.12	0.03	25
			2496.5-13000 MHz	6982.26	-39.09	0.12	2.5
	19	2440	30-2387 MHz	902.40	-44.13	0.04	2.5
			2387-2400 MHz	2399.41	-45.28	0.03	25
			2483.5-2496.5 MHz	2492.95	-44.71	0.03	25
			2496.5-13000 MHz	6929.80	-39.26	0.12	2.5
	39	2480	30-2387 MHz	2268.09	-44.70	0.03	2.5
			2387-2400 MHz	2392.20	-45.61	0.03	25
			2483.5-2496.5 MHz	2483.66	-45.06	0.03	25
			2496.5-13000 MHz	6898.32	-38.70	0.13	2.5
BLE 2M	0	2402	30-2387 MHz	1578.18	-43.54	0.04	2.5
			2387-2400 MHz	2399.99	-18.15	15.31	25
			2483.5-2496.5 MHz	2490.17	-43.95	0.04	25
			2496.5-13000 MHz	6824.87	-39.47	0.11	2.5
	19	2440	30-2387 MHz	2326.96	-44.24	0.04	2.5
			2387-2400 MHz	2396.36	-44.69	0.03	25
			2483.5-2496.5 MHz	2492.42	-44.89	0.03	25
			2496.5-13000 MHz	5870.00	-39.02	0.13	2.5
	39	2480	30-2387 MHz	318.44	-43.97	0.04	2.5
			2387-2400 MHz	2397.25	-44.64	0.03	25
			2483.5-2496.5 MHz	2483.81	-44.41	0.04	25
			2496.5-13000 MHz	6898.32	-39.56	0.11	2.5

Chain0 : Spurious Emission Intensity @ BLE 1M Mode Ch 0



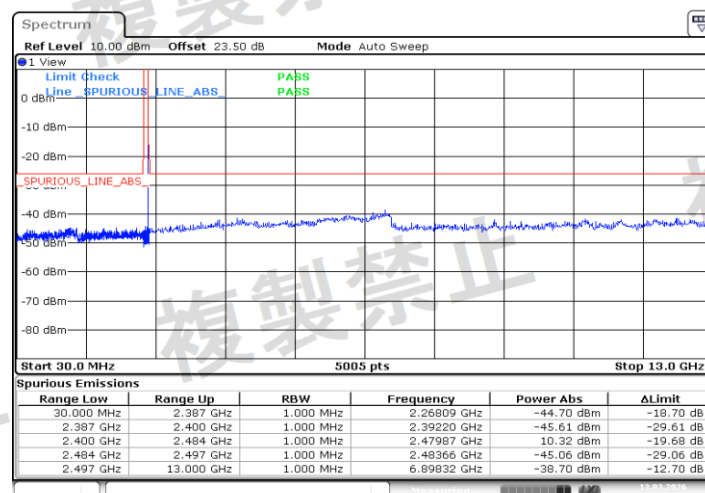
Date: 13 MAR 2026 14:33:04

Chain0 : Spurious Emission Intensity @ BLE 1M Mode Ch 19



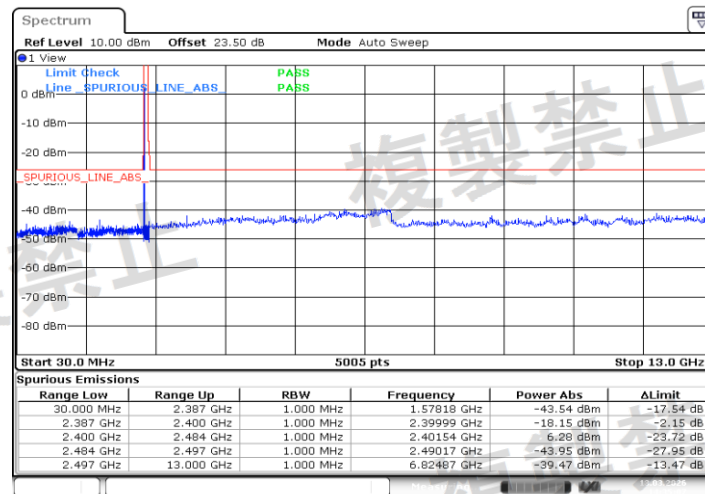
Date: 13 MAR 2026 14:33:43

Chain0 : Spurious Emission Intensity @ BLE 1M Mode Ch 39



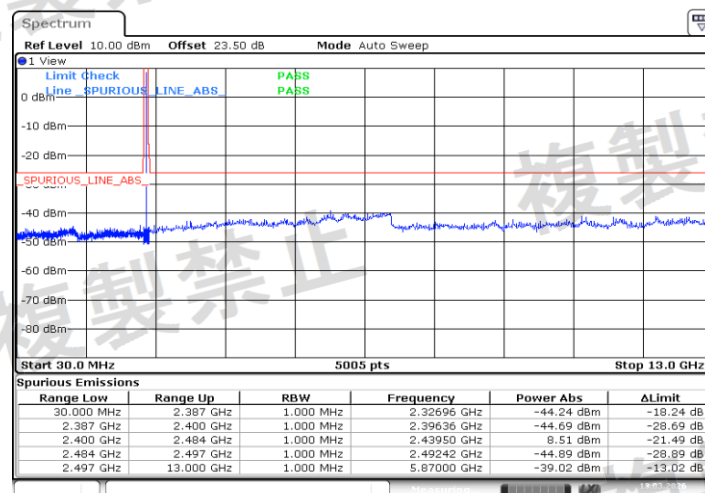
Date: 13 MAR 2026 14:34:10

Chain0 : Spurious Emission Intensity @ BLE 2M Mode Ch 0



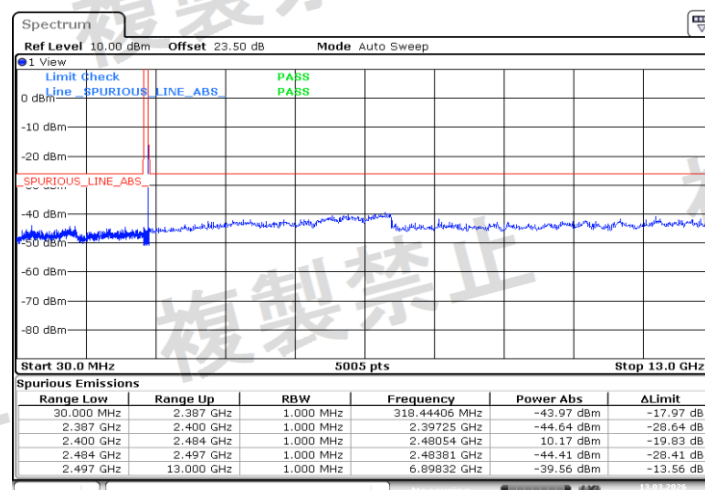
Date: 13 MAR 2026 14:35:07

Chain0 : Spurious Emission Intensity @ BLE 2M Mode Ch 19



Date: 13 MAR 2026 14:35:32

Chain0 : Spurious Emission Intensity @ BLE 2M Mode Ch 39



Date: 13 MAR 2026 14:36:05

7. Secondary Radiated Emissions

7.1 Limit of Secondary Radiated Emissions & Test Procedures

Frequency Range	Limit
<1000MHz	4nW
≥1000MHz	20nW

7.2 Test method

Test method: According to Notification No. 88 of MIC, 2004, Annex 43

- Set spectrum analyzer as below
 Frequency: 30MHz to 13GHz
 RBW=100 kHz for 1 GHz ↓ , 1 MHz for 1 GHz ↑
 VBW=RBW
 Sweep time=Auto
 Detector=Peak
- Set spectrum analyzer for final measurement as below
 Center frequency: Secondary emission frequency
 Span: 0Hz
 RBW=100 kHz for 1 GHz ↓ , 1 MHz for 1 GHz ↑
 VBW=RBW
 Sweep time=Auto
Detector: Sample

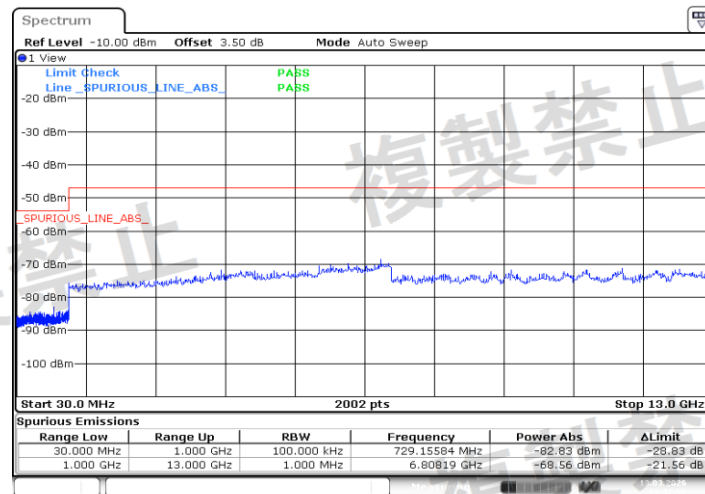
TEST REPORT

7.3 Test Result for Secondary Radiated Emissions

Date	2026/03/13
Temperature (°C)	23
Humidity (%)	67

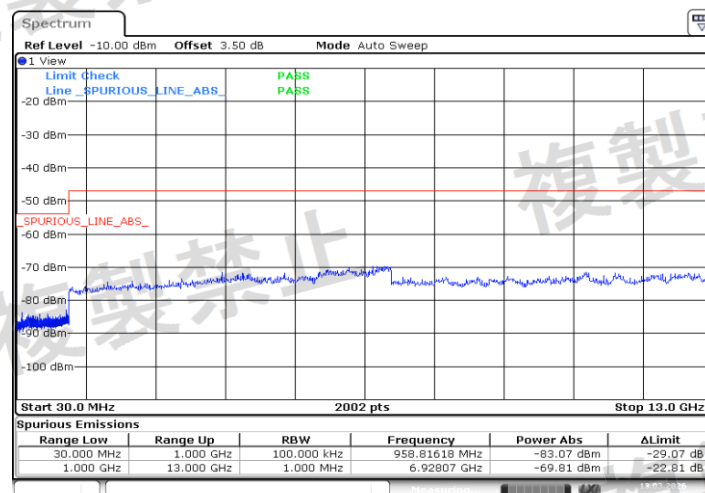
Test Voltage							
100Vac/ 50Hz							
Mode	Channel	Frequency (MHz)	Frequency Range	Frequency (MHz)	Measure Level (dBm)	Measure Level (nW)	Limit (nW)
BLE 1M	0	2402	30-1000 MHz	729.16	-82.83	0.005	4
			1000-13000 MHz	6808.19	-68.56	0.139	20
	19	2440	30-1000 MHz	958.82	-83.07	0.005	4
			1000-13000 MHz	6928.07	-69.81	0.104	20
	39	2480	30-1000 MHz	413.25	-83.87	0.004	4
			1000-13000 MHz	6244.76	-69.43	0.114	20
BLE 2M	0	2402	30-1000 MHz	282.43	-83.57	0.004	4
			1000-13000 MHz	6988.01	-69.12	0.122	20
	19	2440	30-1000 MHz	924.90	-82.87	0.005	4
			1000-13000 MHz	6976.02	-70.01	0.100	20
	39	2480	30-1000 MHz	903.58	-83.43	0.005	4
			1000-13000 MHz	6880.12	-69.59	0.110	20

Chain0 : Secondary Radiated Emission @ BLE 1M Mode Ch 0



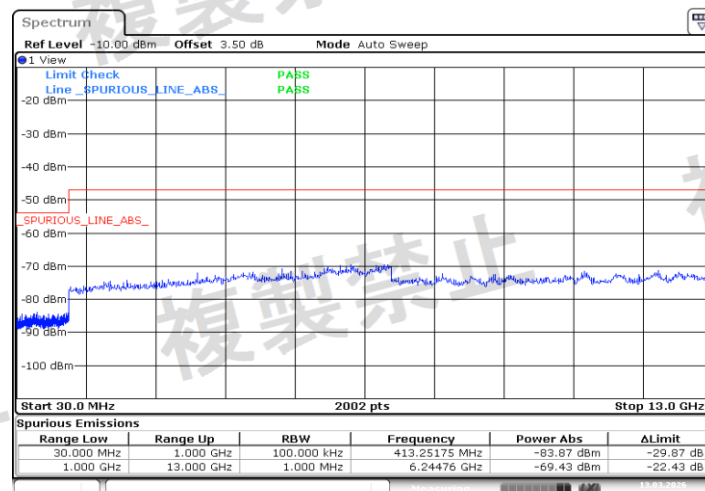
Date: 13 MAR 2026 14:42:57

Chain0 : Secondary Radiated Emission @ BLE 1M Mode Ch 19



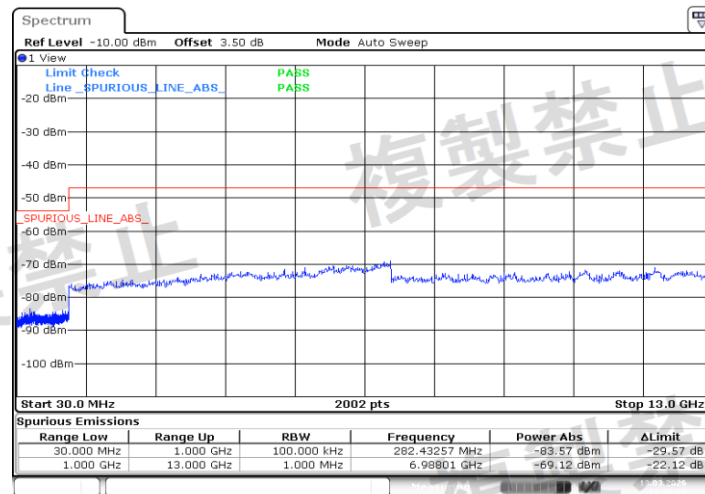
Date: 13 MAR 2026 14:44:59

Chain0 : Secondary Radiated Emission @ BLE 1M Mode Ch 39



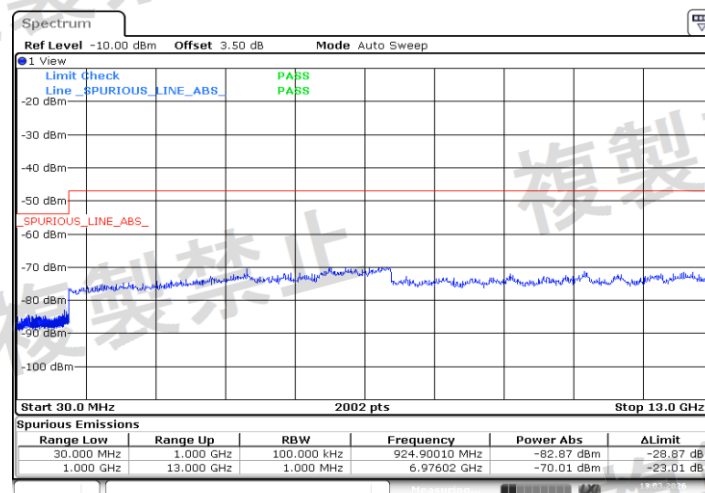
Date: 13 MAR 2026 14:45:37

Chain0 : Secondary Radiated Emission @ BLE 2M Mode Ch 0



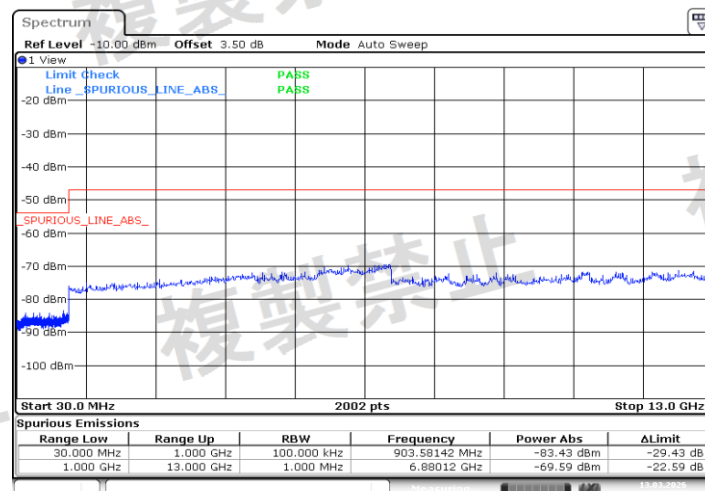
Date: 13 MAR 2026 14:46:23

Chain0 : Secondary Radiated Emission @ BLE 2M Mode Ch 19



Date: 13 MAR 2026 14:46:45

Chain0 : Secondary Radiated Emission @ BLE 2M Mode Ch 39



Date: 13 MAR 2026 14:49:53

8. Occupied Bandwidth**8.1 Limit of Occupied Bandwidth**

Mode	Limit(MHz)
DSSS	26
OFDM(20MHz)	26
OFDM(40MHz)	38
FHSS	83.5
Others	26

8.2 Test method

Test method: According to Notification No. 88 of MIC, 2004, Annex 43

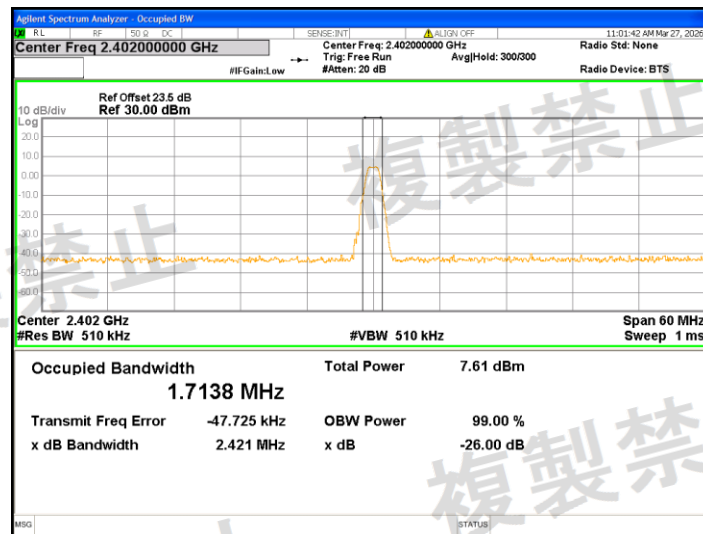
1. Set spectrum analyzer as below
Frequency=Test Frequency
Span=3MHz
RBW=below 3% the limit
VBW=RBW
Detector=Peak
Sweep time=Auto
Trace=Maxhold
2. Using the OCB(99%) function of spectrum analyzer to measure value.

8.3 Test Result for Occupied Bandwidth

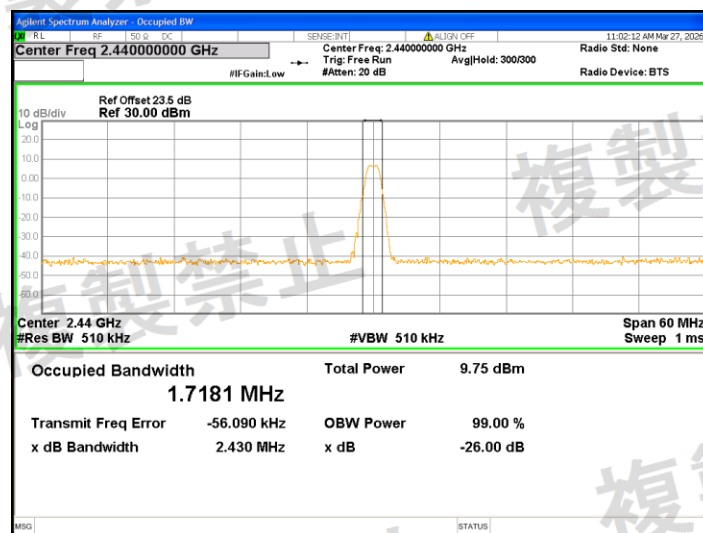
Date	2026/03/27
Temperature (°C)	25
Humidity (%)	54

Test Voltage				
100Vac/ 50Hz				
Mode	Channel	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
BLE 1M	0	2402	1.71	26
	19	2440	1.72	26
	39	2480	1.71	26
BLE 2M	0	2402	2.37	26
	19	2440	2.36	26
	39	2480	2.36	26

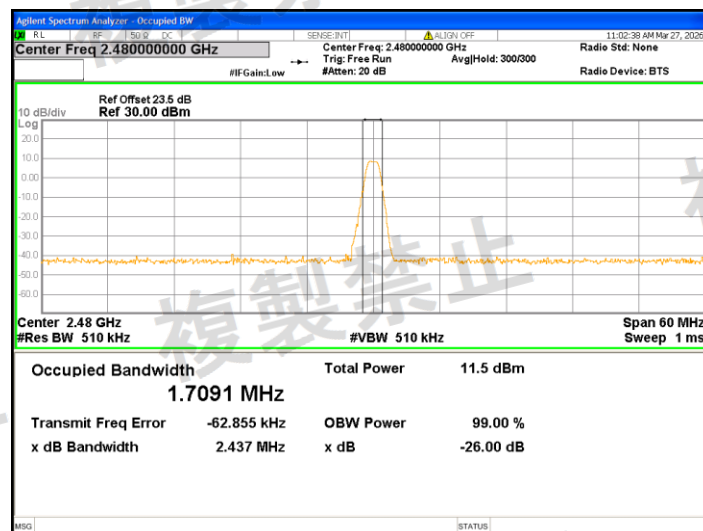
Chain0 : Occupied Bandwidth @ BLE 1M Mode Ch 0



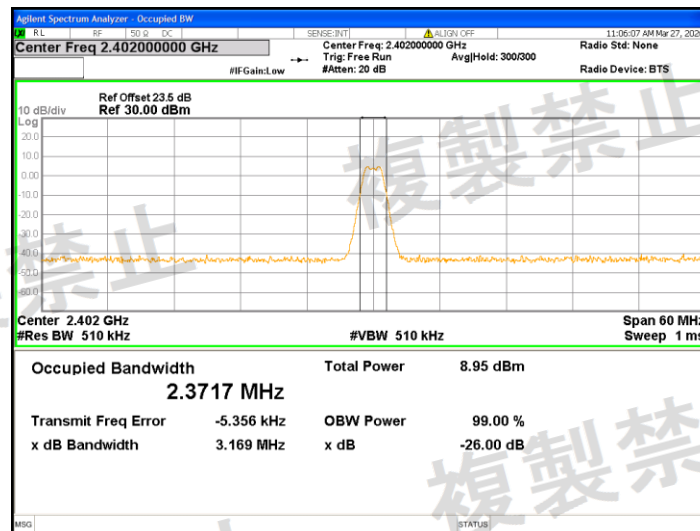
Chain0 : Occupied Bandwidth @ BLE 1M Mode Ch 19



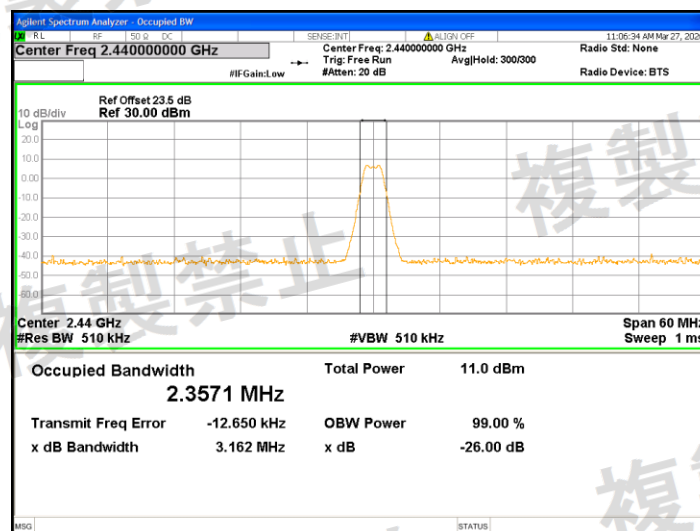
Chain0 : Occupied Bandwidth @ BLE 1M Mode Ch 39



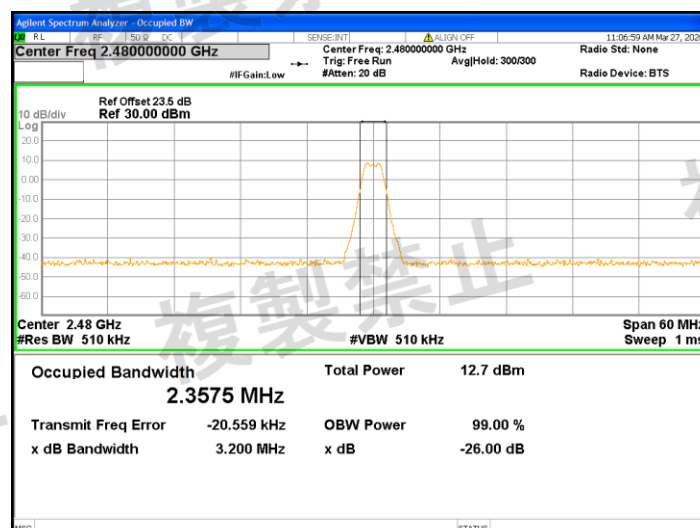
Chain0 : Occupied Bandwidth @ BLE 2M Mode Ch 0



Chain0 : Occupied Bandwidth @ BLE 2M Mode Ch 19



Chain0 : Occupied Bandwidth @ BLE 2M Mode Ch 39



9. Interference Prevention Function

9.1 Test method

Test method: According to Notification No. 88 of MIC, 2004, Annex 43

9.2 Test Result for Interference Prevention Function

Date	2026/03/27
Temperature (°C)	25
Humidity (%)	54

Test Voltage		
DC1.5V		
Mode	MAC Address	Result
Normal link	22:22:6C:6E:01:00	Good

Appendix A: Test Equipment

Test Equipment	Brand	Model No.	Serial No.	Calibration Date	Next Calibration Date	Calibration Body	Calibration Method
Signal Analyzer	R&S	FSV40	101532	2025/06/11	2026/06/10	ETC	c
Signal Analyzer	Agilent	N9030A	MY51380492	2026/01/20	2027/01/19	ETC	c
Power Meter	Anritsu	ML2495A	0844001	2025/11/28	2026/11/27	ETC	c
Power Sensor	Anritsu	MA2491A	031543	2025/11/28	2026/11/27	ITRI	c
20dB Attenuator	PE	PE7001-20	N/A	2025/05/22	2026/05/21	Intertek	c

Calibration Method:

- Calibration conducted by the National Institute of Information and Communications Technology (NICT) (hereinafter referred to as "NICT") or a designated calibration agency under Article 102-18 paragraph (1)
- Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Law (Law No. 51 of 1992)
- Calibration conducted in foreign countries, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1)
- Calibration conducted by using measuring instruments and other equipment listed in the right column of Table No. 3 attached hereto, which shall have been given any of calibration, etc. listed above from a) to c)