



Shenzhen CTA Testing Technology Co., Ltd.

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

TEST REPORT

Ordinance Article 2 paragraph 1 item (19)

Report Reference No.....: CTA25042300201

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Date of issue.....: Apr. 29, 2025

Testing Laboratory Name: Shenzhen CTA Testing Technology Co., Ltd.

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

Applicant's name: F.R.C. Co., Ltd.

Address: 2-3-8 Kisonishi, Machida-shi, Tokyo 194-0037 Japan

Test specification

Standard: Ordinance Article 2 paragraph 1 item (19)

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Test item description: Smart camera

Trade Mark: N/A

Manufacturer: Shenzhen Hiseeu Technolgy Co.,Ltd

Model/Type reference.....: NX-S45R

Listed Models: Refer to page 2

Frequency.....: From 2402MHz-2480MHz

Modulation: GFSK, $\pi/4$ DQPSK, 8DPSK

Ratings: DC 3.7V From battery

DC 5.0V From the Solar Panel or Type-C Port

Result.....: **PASS**

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TEST REPORT

Equipment under Test : Smart camera

Model /Type : NX-S45R

Listed Models : NX-A51, NX-A52, NX-A32R, NX-A53R, NX-A54R, NX-A55R,
NX-A56R, NX-A41R, NX-S41, NX-S42, NX-S43, NX-S44R,
NX-A31, NX-S46R, NX-S31R

Model difference : The PCB board, circuit, structure and internal of these models are the same, Only model number and colour is different for these model.

Applicant : F.R.C. Co., Ltd.

Address : 2-3-8 Kisonishi, Machida-shi, Tokyo 194-0037 Japan

Manufacturer : Shenzhen Hiseeu Technolgy Co.,Ltd

Address : K411, Jinhetian Business Center, No. 359, Longhuan 3rd Road,
Longhua District, Shenzhen, Guangdong, China

Test Result:

PASS

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

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1 SUMMARY

1.1 Test Standards

The tests were performed according to following standards:

[ARIB STD-T66](#): Second-Generation Low-Power Data Communication System/Wireless LAN System
[MIC Notice No.88 Appendix No. 43](#): 2.4 GHz band wide-band low-power data communication system

1.2 Test Description

ARIB STD-T66 Version 3.7/2014		
ARIB STD-T66	Test Description	Test Results
3.2 (2)	Antenna Power	Complies
3.2 (3)	Tolerances for Antenna Power	Complies
3.2 (4)	Frequency Tolerance	Complies
3.2 (5)	Transmission Rate	Complies
3.2 (7)	Occupied Frequency Bandwidth	Complies
3.2 (8)	Spread Bandwidth	Complies
3.2 (11)	Dwell Time	Complies
3.2 (6)	Spurious Emissions	Complies
3.6	Transmission Antenna Gain (EIRP Antenna Power)	Complies
3.6	Transmission Radiated Angle Width (3dB Beam width)	N/A
/	Interference prevention function	Complies
/	Carrier Sensing function	N/A
Receiver Parameters		
3.3 (1)	Secondary Radiated Emissions	Complies
(1) N/A is an abbreviation for Not Applicable.		

Note: 1: "N/A" denotes test is not applicable in this Test Report

2: MIC Public Notice 88:2004, annex 1 and annex 43

3: MIC Ordinance Regulating Radio Equipment Section 4.17 of Article 49.20

4: Referenced in the standard ARIB STD-T66

1.3 the test laboratory

1.3.1 Address of the test laboratory

Shenzhen CTA Testing Technology Co., Ltd.

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

1.3.2 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

FCC-Registration No.: 517856 Designation Number: CN1318

Shenzhen CTA Testing Technology Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

A2LA-Lab Cert. No.: 6534.01

Shenzhen CTA Testing Technology Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.10 and CISPR 16-1-4:2

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1.4 Measurement Uncertainty

For the test methods, according to the present document, the measurement uncertainty figures shall be calculated in accordance with TR100028-1 [2] and shall correspond to an expansion factor (coverage factor) $K=1.96$ or $K=2$ (which provide confidence levels of respectively 95% and 95.5% in the case where the distributions characterizing the actual measurement uncertainties are normal).

Parameter	Uncertainty
Frequency error / 99%&90% bandwidth	$\pm 1.62 \times 10^{-6}$
Total RF power, conducted	$\pm 0.8\text{dB}$
Spurious emissions, conducted	$\pm 0.8\text{dB}$
DC and low frequency voltages	$\pm 0.05\%$
Humidity	$\pm 5\%$
Temperature	$\pm 1^\circ\text{C}$

2 GENERAL INFORMATION

2.1 General Remarks

Date of receipt of test sample	:	Apr. 23, 2025
Testing commenced on	:	Apr. 23, 2025
Testing concluded on	:	Apr. 29, 2025

2.2 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Voltage	Normal Voltage	DC 3.7V
	High Voltage	DC 4.2V
	Low Voltage	DC 3.4V
Other	Normal Temperature	25°C
	Relative Humidity	55 %
	Air Pressure	989 hPa

Note: As the EUT was powered by DC 3.7V From battery and DC 5.0V From external circuit, and with the voltage stabilizing circuit used, the chip voltage received floating not exceed $\pm 1\%$ of nominal condition when working on extreme voltage, so all test performed at nominal voltage only.

2.3 General Description of EUT

Product Name:	Smart camera
Model/Type reference:	NX-S45R
Power supply:	DC 3.7V From battery DC 5.0V From the Solar Panel or Type-C Port
Bluetooth	
Supported type:	Supported Bluetooth BR/EDR
Bluetooth version:	5.0
Modulation:	GFSK, $\pi/4$ DQPSK, 8DPSK
Operation frequency:	2402MHz~2480MHz
Channel number:	79
Channel separation:	1MHz
Rated power:	0.000070 W/MHz
Antenna type:	External antenna
Antenna Gain:	2.26 dBi
Software version:	V1.0
Hardware Version:	V1.0

Note: For more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

2.4 Description of Test Modes

The EUT has been tested under typical operating condition. The Applicant provides communication tools software to control the EUT for staying in continuous transmitting and receiving mode for testing.

Operation Frequency List:

Channel	Frequency (MHz)
0	2402
1	2403
⋮	⋮
38	2440
39	2441
40	2442
⋮	⋮
77	2479
78	2480

Note: Test performed at the lowest/middle/highest frequencies selected in the list above for EUT supported while working on specified mode.

2.5 Measurement Instruments List

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Institution	Calibration Date	Calibration Due Date
1	Spectrum Analyzer	Agilent	N9020A	MY53281423	LISAI	2024/08/03	2025/08/02
2	Signal generator	Agilent	N5182A	MY46240709	LISAI	2024/08/03	2025/08/02
3	Power Meter	Agilent	U2021X	MY47410295	LISAI	2024/08/03	2025/08/02
4	DC Power Supply	Agilent	E3642A	N/A	LISAI	2024/08/03	2025/08/02
5	Oscilloscope	Tektronix	TDS3012	B021220	LISAI	2024/08/03	2025/08/02
6	Spectrum Analyzer	R&S	FSU	200311	LISAI	2024/08/03	2025/08/02

Calibration by the calibration agencies listed in the table correspond to paragraph 4 (ii) (c) of Article 24-2 in the Radio Law".

LiSai-Guangzhou LiSai Calibration and Testing Co.,LTD.

2.6 Table for Parameters of Test Software Setting

During testing, Channel & Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

Power Parameters:

Test Software Version	Bluetooth MP Tool		
Frequency	2402MHz	2441MHz	2480MHz
Bluetooth V5.0	Default	Default	Default

2.7 Description of Test Modes

Tested channel, Frequency and Modulation Information		
CH0	2402MHz	GFSK(1Mbps), $\pi/4$ -DQPSK(2Mbps), 8-DPSK(3Mbps)
CH39	2441MHz	GFSK(1Mbps), $\pi/4$ -DQPSK(2Mbps), 8-DPSK(3Mbps)
CH78	2480MHz	GFSK(1Mbps), $\pi/4$ -DQPSK(2Mbps), 8-DPSK(3Mbps)
Hopping Mode	GFSK(1Mbps), $\pi/4$ -DQPSK(2Mbps), 8-DPSK(3Mbps)	

Note: According exploratory test, EUT has maximum output power for GFSK modulation,

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All the test modes were tested, but only the worst case was recorded in this report.

2.8 Test Voltage

POWER SUPPLY VOLTAGE FLUCTUATION TEST

Voltage Fluctuation Test	Normal Voltage	High Voltage +10% of Normal Voltage	Low Voltage -10% of Normal Voltage
Input To EUT	DC 3.70V	DC 4.20V	DC 3.40V
Output To RF Module	DC 3.30V	DC 3.30V	DC 3.30V
Voltage Variation(%)	--	--	--

Note:

Voltage Variation (%)

= (Output high or Low Voltage - Output Normal Voltage) / Output Normal Voltage * 100

During the input supply voltage to the EUT from the external power source is varied by +/- 10%, if output voltage had been confirmed that the fluctuation of power supply to the RF circuit of EUT (excluding power source) is equal to or less than +/-1%. Exempt extremely high and low supply voltage condition test, EUT only operated in normal voltage to test all regulations.

The sample power supply was confirmed that input voltage variation at the radio unit in the radio equipment to be tested is less than +1% against a variation of +10% at the input voltage from the external power supply to the radio equipment, and the radio equipment was designed so as to be operated in a specified voltage variation limit within +10%, Radio can only tested at rated voltage.

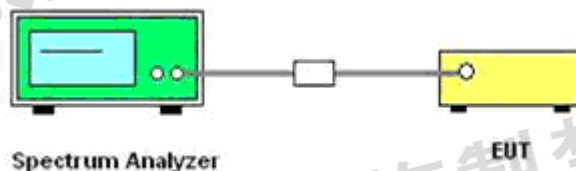
3 Test conditions and Results

3.1 Frequency Error

LIMIT

Tolerance of frequency shall be $\pm 50 \times 10^{-6}$.

TEST CONFIGURATION



TEST PROCEDURE

The EUT was directly connected to the spectrum analyser and antenna output port as show in the block diagram as TEST CONFIGURATION shows.

EUT Condition: non-modulation

Spectrum Condition:

Frequency: test frequency

Span: 300 KHz

RBW: 10 KHz

VBW: 10 KHz

Sweep time: Auto

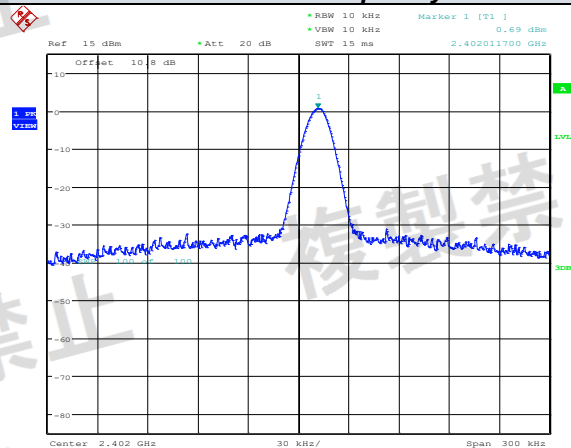
Detector mode: Positive peak

Indication mode: max hold

TEST RESULTS

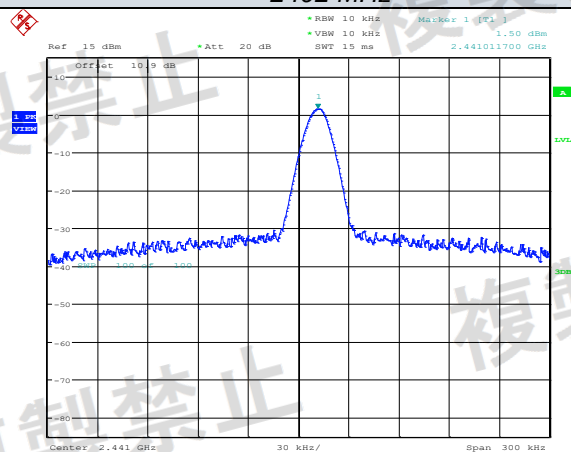
Test Condition	Frequency (MHz)	Read (MHz)	Deviation (MHz)	Tolerance (ppm)	Limit (ppm)	Result
Non-modulation	2402	2402.0117	0.0117	4.8709	+/- 50.00	Pass
	2441	2441.0117	0.0117	4.7931		
	2480	2480.0114	0.0114	4.5968		

Test Plots of Frequency Error



Date: 27.APR.2025 14:20:07

2402 MHz



Date: 27.APR.2025 14:20:39

2441 MHz



Date: 27.APR.2025 14:21:15

2480 MHz

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3.2 Antenna Output Power and Output Power Tolerance

LIMIT

- $\leq 3 \text{ mW /MHz}$ (FHSS from 2402-2480 MHz)
- $\leq 10 \text{ mW/MHz}$ (OFDM, DSSS from 2400-2483.5 MHz)
- $\leq 10 \text{ mW}$ (other from 2400-2483.5 MHz)

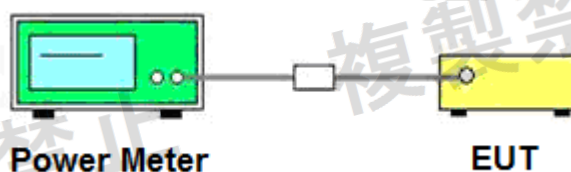
The Output Power Tolerance must be within +20%.

E.i.r.p:

- $\leq 6.91 \text{ dBm/MHz}$ (FHSS)

Note: E.I.R.P will not be applied to the transmission antenna which has a gain of 2.14dBi or less.

TEST CONFIGURATION



TEST PROCEDURE

1. The EUT was placed on a table which is 0.8m above ground plane.
2. The EUT was directly connected to the Power meter.
3. EUT have transmitted continuous maximum power of hopping mode (For FHSS Device);
4. The Antenna Power Density (PD) is equal to the:
 $PD = \text{Average value} / (\text{Duty Cycle} * \text{Spreading bandwidth});$
5. Antenna Power Error is definition that actual measure antenna power tolerance within +20% power range that base on manufacturer declare the conducted power density.

TEST RESULTS

Mode	Packet	Declared power	Measured Value	Result	Tolerance	Limit
		(W/MHz)	(dBm)	(W/MHz)	/	/
Tx (1Mbps)	DH5	0.00007	5.97	0.000072	2.86%	+20%
Tx (2Mbps)	2DH5	0.00007	5.77	0.000068	-2.86%	+20%
Tx (3Mbps)	3DH5	0.00007	5.69	0.000067	-4.29%	+20%
Conclusion: PASS						

EIRP

Mode	Packet	Measured Value	Antenna Gain	EIRP	Limit	Result
		(dBm)	(dBi)	(dBm/MHz)	(dBm/MHz)	
Tx (1Mbps)	DH5	5.97	2.26	-9.167	6.91	Pass
Tx (2Mbps)	2DH5	5.77	2.26	-9.416	6.91	Pass
Tx (3Mbps)	3DH5	5.69	2.26	-9.477	6.91	Pass

Note: $EIRP(\text{dBm/MHz}) = (\text{Average value} + \text{Gain}) / (\text{Duty Cycle} * \text{Spreading bandwidth})$

RBW 1 MHz
VBW 1 MHz
SWT 10 ms

Ref 15 dBm
Att 20 dB

Delta 2 [T1]
-10.000000 μs
Delta 1 [T1]
1.340000 ms
2.900000 ms

Marker 1 [T1]
-11.80 dBm
-10.000000 μs

ARG -6.2 dBm

1.00 GHz
1.00 GHz

Center 2.402 GHz
1 ms/

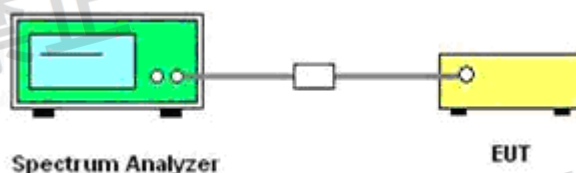
Date: 27.APR.2025 13:24:32

3.3 Occupied Bandwidth and Spreading Bandwidth

LIMIT

- Occupied bandwidth: FH $\leq$ 83.5 MHz; OFDM $\leq$ 38 MHz, DS $\leq$ 26 MHz; Others $\leq$ 26 MHz
- Spread Bandwidth: $\geq$ 500 kHz (FH, DS)
- Spread factor $>$ 5.

TEST CONFIGURATION



TEST PROCEDURE

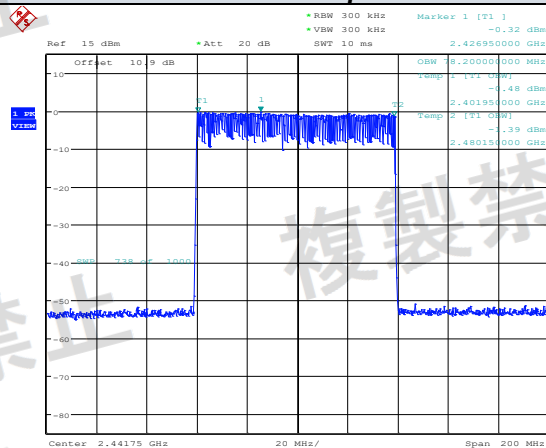
1. Setting of SA is following as follow:
 - RBW: under 3% of OBW
 - VBW: = RBW
 - Sweep time: Auto
 - Sweep Mode: Continuous sweep
 - Detect mode: Positive peak
 - Trace mode: Max hold
2. EUT have transmitted the maximum modulation signal and fixed channelize. SA set to 99% of occupied bandwidth to measure occupied bandwidth.
3. EUT have transmitted the maximum modulation signal and fixed channelize. SA set to 90% of occupied bandwidth to measure spread bandwidth.
4. Spread Factor=Spread Bandwidth/modulation rate. The modulation rate: MR=1Mbps (declare by client)

TEST RESULTS

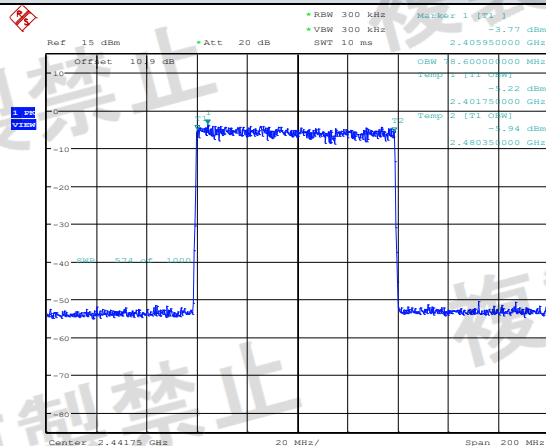
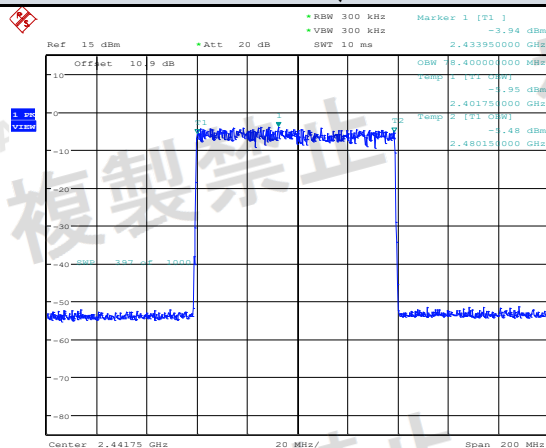
Test Result of Occupied Bandwidth

Type	Channel (MHz)	Occupied Bandwidth (MHz)	Limit (MHz)	Result
GFSK	2402-2480	78.200	<83.5	Pass
$\pi/4$ DQPSK	2402-2480	78.600		
8DPSK	2402-2480	78.400		

Test Plots of Occupied Bandwidth



GFSK

 $\pi/4$ DQPSK

8DPSK

Test Result of Spectrum Bandwidth

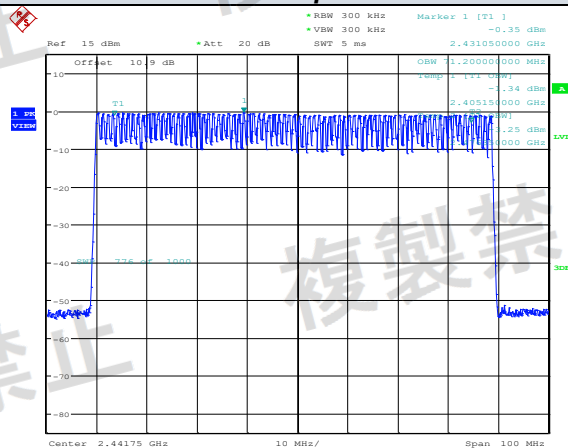
Type	Channel (MHz)	Spread Bandwidth (MHz)	Limit (MHz)	Result
GFSK	2402-2480	71.200	<83.5	Pass
$\pi/4$ DQPSK	2402-2480	72.000		
8DPSK	2402-2480	71.700		

Test Result of Spread Spectrum Factor

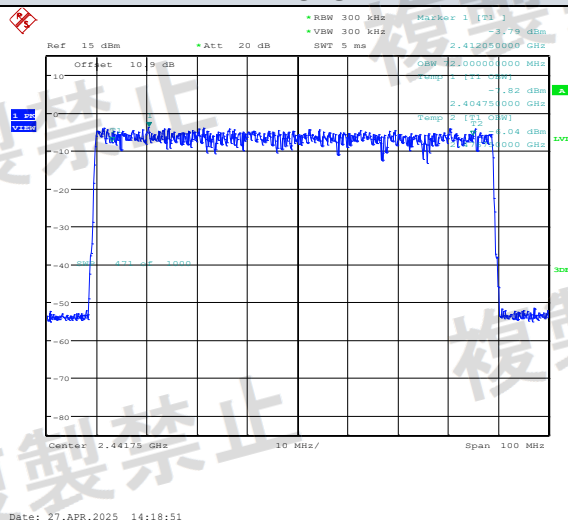
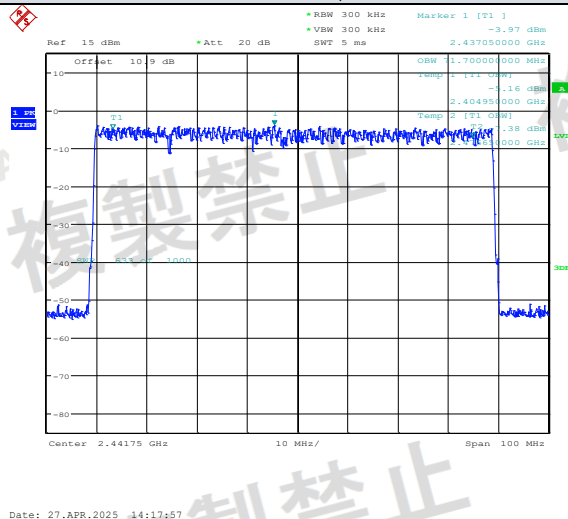
Mode	CH	Result (MHz)	Modulation Rate (MHz)	Spread Factor	Limit
Hopping (1Mbps)	All	71.200	1	71.200	≥ 5
Hopping (2Mbps)	All	72.000	2	36.000	≥ 5
Hopping (3Mbps)	All	71.700	3	23.900	≥ 5

Note: Spread Factor=Spread Bandwidth/modulation rate.

Test Plots of Spread Bandwidth



GFSK

 $\pi/4$ DQPSK

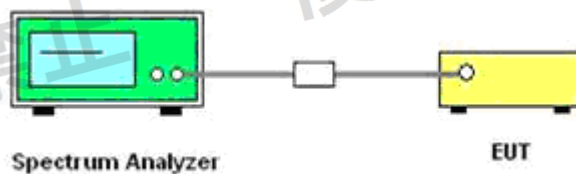
8DPSK

3.4 Dwell Time

LIMIT

Frequency dwell time (time during which radio waves continue to be emitted at a specified frequency) of a transmitting equipment using the FH system shall be 0.4 seconds or less.

TEST CONFIGURATION



TEST PROCEDURE

The EUT was directly connected to the spectrum analyser and antenna output port as show in the block diagram as TEST CONFIGURATION shows.

EUT Condition: modulation

Spectrum Condition:

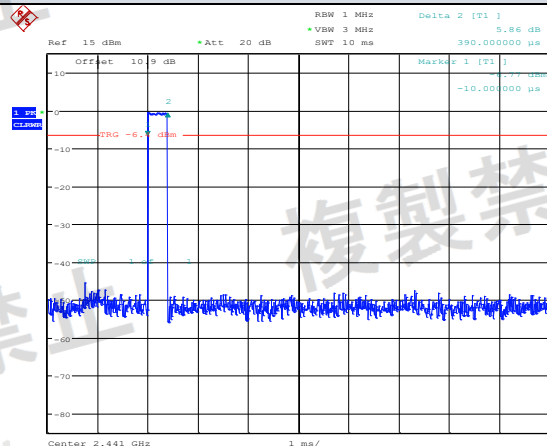
- Frequency: test channel
- Span=0MHz
- RBW: 1MHz
- VBW: 3MHz
- Sweep time: Auto
- Detector mode: Positive peak

TEST RESULTS

Worst test result of Low Channel for GFSK (1Mbps) Modulation					
Type	Number of hops in 31.6S	transmission time of 1 burst (ms)	Dwell time (second)	Limit (second)	Result
DH1	316	0.39	0.123	0.4	Pass
DH3	158	1.65	0.261		
DH5	99	2.90	0.287		

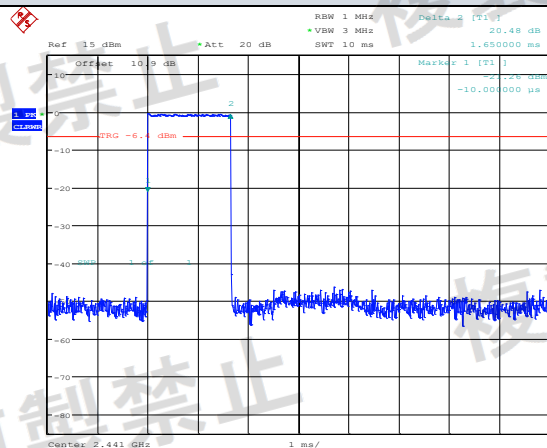
Note: Dwell time= Pulse Time Number of hops in 31.6S;
Measured all types and recorded worst case at GFSK (1M) modulation;

Test Plots of Dwell Time



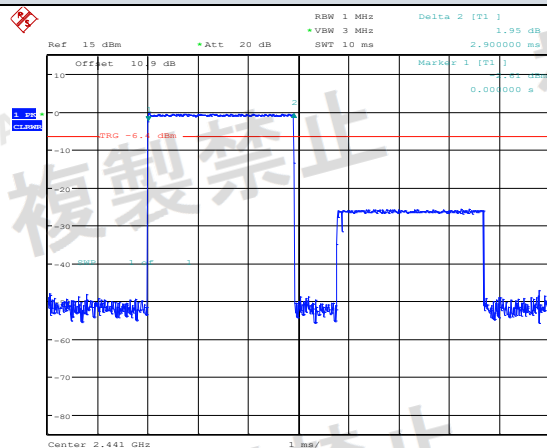
Date: 27.APR.2025 13:43:35

DH1



Date: 27.APR.2025 13:44:44

DH3



Date: 27.APR.2025 13:42:55

DH5

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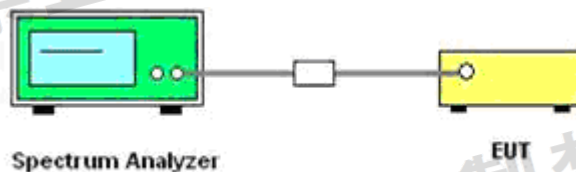
3.5 Unwanted Emission Strength

LIMIT

Permissible mean power of spurious emission of each frequency supplied to a feeder, that is, mean power of spurious emission in the 1 MHz bandwidth at frequency f other than frequency band used shall be as follows:

- a. $2,387\text{MHz} \leq f \leq 2,400\text{MHz}$ and $2,483.5\text{MHz} < f \leq 2,496.5\text{MHz}$ $25 \mu\text{W}$ or less
- b. $2,387\text{MHz} > f$ and $2,496.5\text{MHz} < f$ $2.5 \mu\text{W}$ or less

TEST CONFIGURATION



TEST PROCEDURE

The EUT was directly connected to the spectrum analyser and antenna output port as show in the block diagram as TEST CONFIGURATION shows.

EUT Condition: modulation

Spectrum Condition:

Frequency: 30MHz-13GHz

RBW: 100 KHz (30MHz-1GHz), 1MHz (1GHz-13GHz)

VBW: 300 KHz (30MHz-1GHz), 3MHz (1GHz-13GHz)

Sweep time: Auto

Detector mode: Positive peak

Indication mode: max hold

TEST RESULTS

Test Condition	Test Mode	Antenna	Freq(MHz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Verdict
NTNV	DH5	Ant1	2402	30~1000	484.45	-50.62	≤-26	0.00867	≤2.5	PASS
				1000~2387	2373.13	-49.66	≤-26	0.01081	≤2.5	PASS
				2387~2400	2399.99	-23.61	≤-16	4.35512	≤25	PASS
				2483.5~2496.5	2493.11	-39.00	≤-16	0.12589	≤25	PASS
				2496.5~13000	4803.59	-45.33	≤-26	0.02931	≤2.5	PASS
			2441	30~1000	347.68	-51.11	≤-26	0.00774	≤2.5	PASS
				1000~2387	2332.91	-48.96	≤-26	0.01271	≤2.5	PASS
				2387~2400	2394.15	-39.25	≤-16	0.11885	≤25	PASS
				2483.5~2496.5	2484.01	-38.63	≤-16	0.13709	≤25	PASS
				2496.5~13000	4881.32	-45.24	≤-26	0.02992	≤2.5	PASS
	2DH5	Ant1	2480	30~1000	331.67	-51.32	≤-26	0.00738	≤2.5	PASS
				1000~2387	2312.80	-50.01	≤-26	0.00998	≤2.5	PASS
				2387~2400	2392.37	-39.01	≤-16	0.12560	≤25	PASS
				2483.5~2496.5	2483.68	-37.69	≤-16	0.17022	≤25	PASS
				2496.5~13000	4960.10	-43.78	≤-26	0.04188	≤2.5	PASS
			2402	30~1000	113.42	-50.79	≤-26	0.00834	≤2.5	PASS
				1000~2387	2370.01	-48.75	≤-26	0.01334	≤2.5	PASS
				2387~2400	2400.00	-22.25	≤-16	5.95662	≤25	PASS
				2483.5~2496.5	2491.33	-39.21	≤-16	0.11995	≤25	PASS
				2496.5~13000	4804.12	-49.60	≤-26	0.01096	≤2.5	PASS
	3DH5	Ant1	2441	30~1000	532.46	-50.87	≤-26	0.00818	≤2.5	PASS
				1000~2387	2298.93	-49.83	≤-26	0.01040	≤2.5	PASS
				2387~2400	2399.66	-38.40	≤-16	0.14454	≤25	PASS
				2483.5~2496.5	2495.69	-38.79	≤-16	0.13213	≤25	PASS
				2496.5~13000	4881.84	-49.56	≤-26	0.01107	≤2.5	PASS
			2480	30~1000	942.53	-50.74	≤-26	0.00843	≤2.5	PASS
				1000~2387	2363.42	-50.23	≤-26	0.00948	≤2.5	PASS
				2387~2400	2393.77	-39.13	≤-16	0.12218	≤25	PASS
				2483.5~2496.5	2483.53	-37.28	≤-16	0.18707	≤25	PASS
				2496.5~13000	4960.10	-46.74	≤-26	0.02118	≤2.5	PASS
	3DH5	Ant1	2402	30~1000	206.78	-50.95	≤-26	0.00804	≤2.5	PASS
				1000~2387	2212.93	-49.79	≤-26	0.0105	≤2.5	PASS

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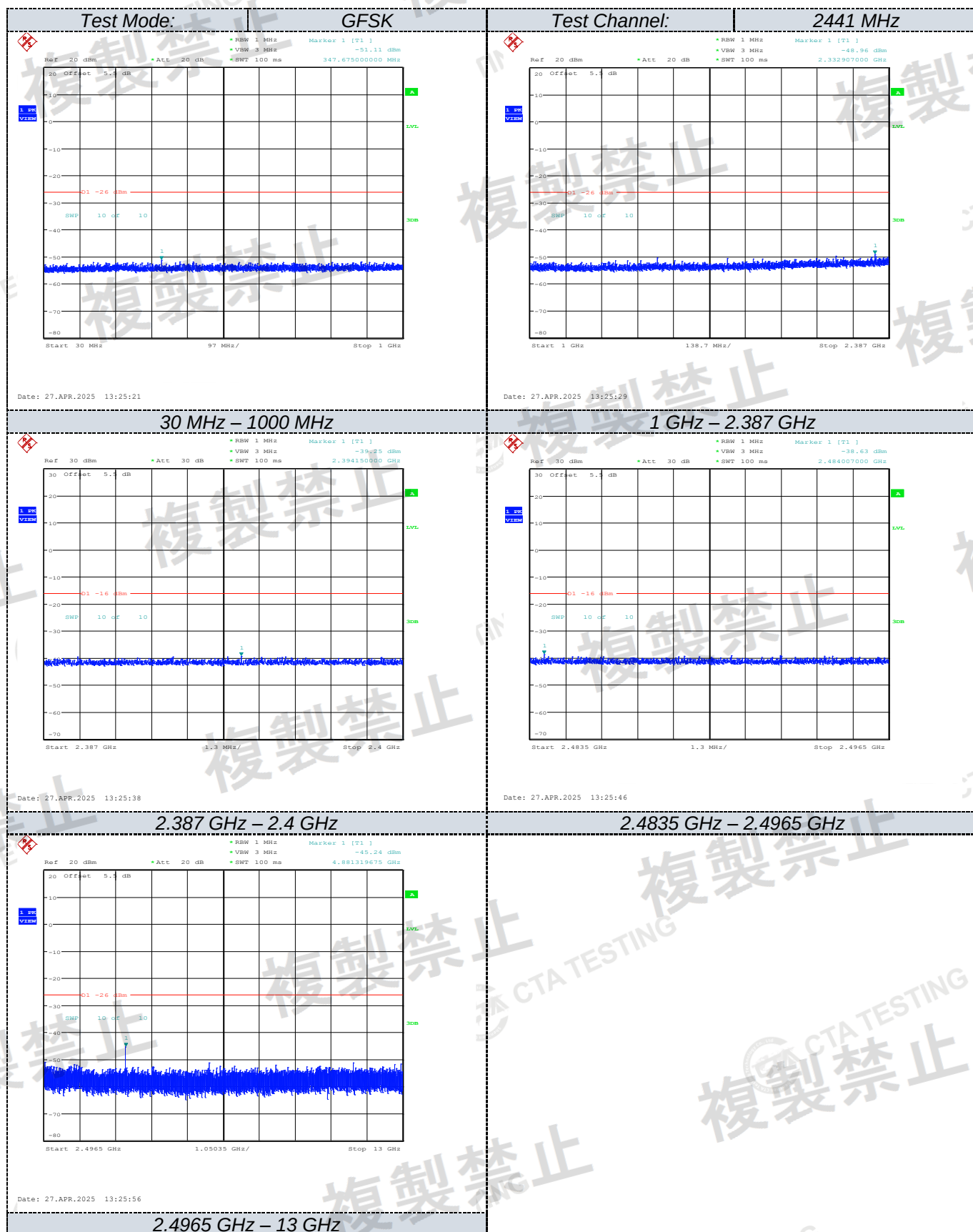
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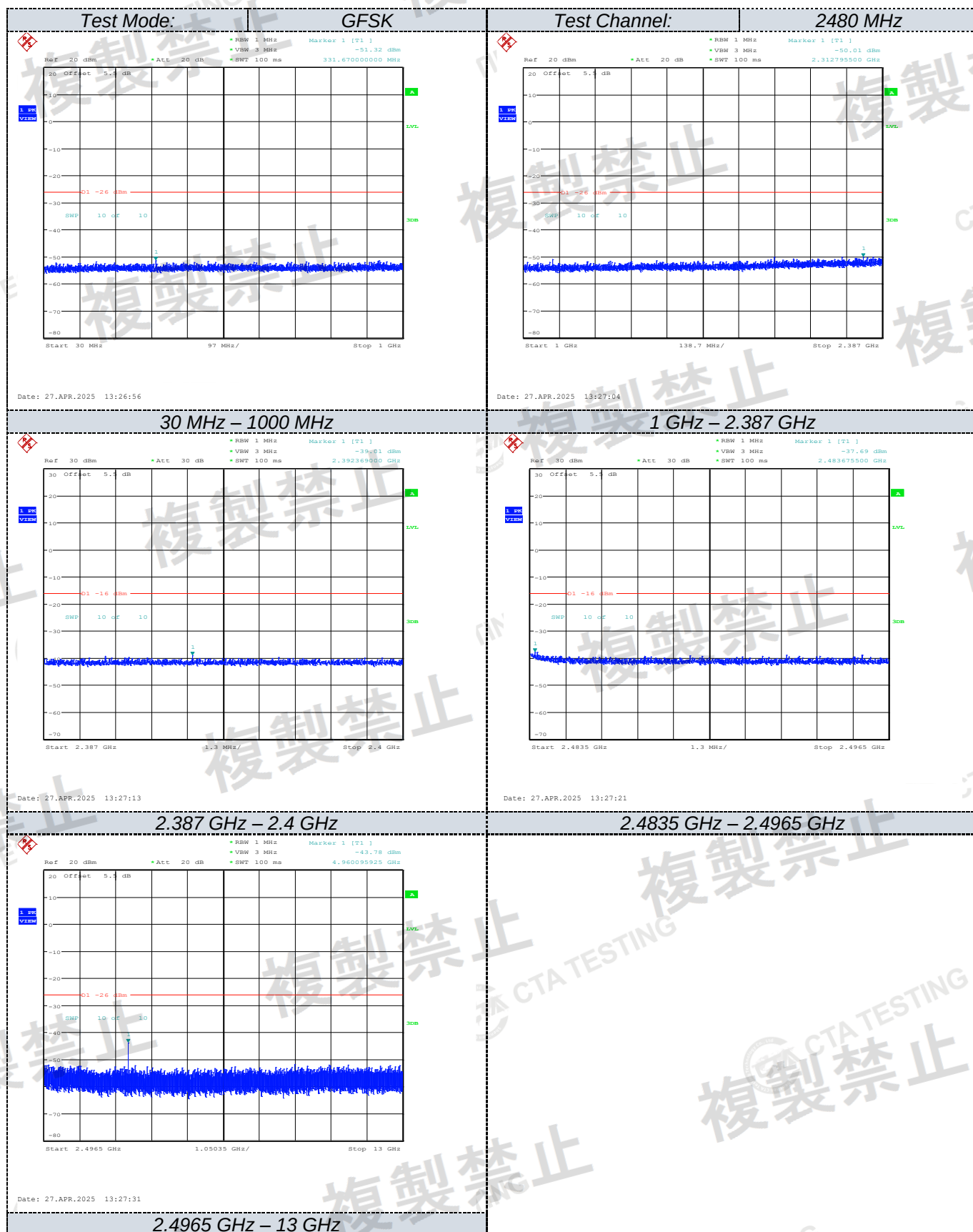
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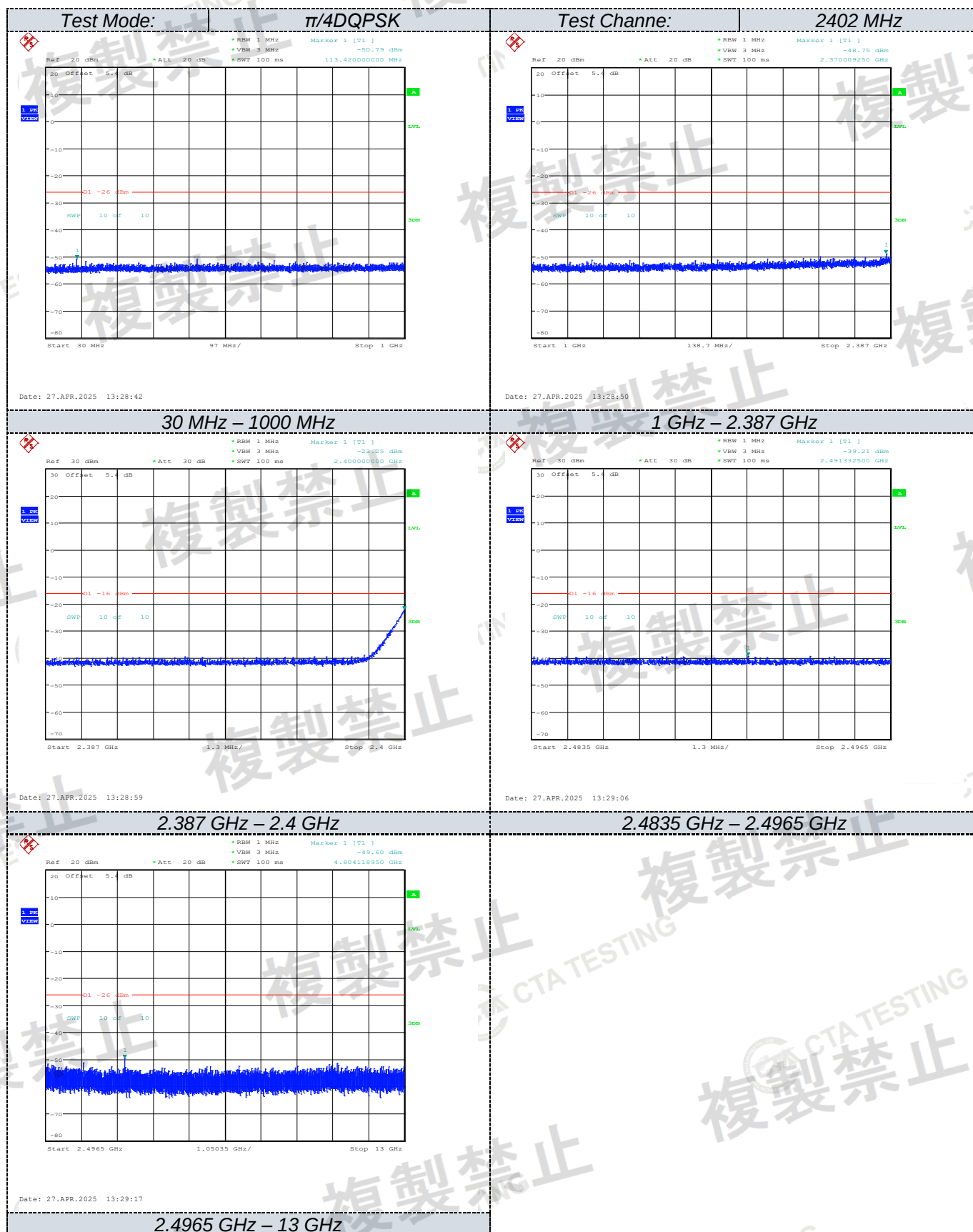
							0		
			2387~2400	2399.99	-22.29	≤-16	5.9020 1	≤25	PASS
			2483.5~2496.5	2485.07	-39.16	≤-16	0.1213 4	≤25	PASS
			2496.5~13000	4804.12	-48.38	≤-26	0.0145 2	≤2.5	PASS
		2441	30~1000	157.07	-50.43	≤-26	0.0090 6	≤2.5	PASS
			1000~2387	2339.15	-49.84	≤-26	0.0103 8	≤2.5	PASS
			2387~2400	2390.45	-38.78	≤-16	0.1324 3	≤25	PASS
			2483.5~2496.5	2489.87	-38.65	≤-16	0.1364 6	≤25	PASS
			2496.5~13000	4882.37	-48.28	≤-26	0.0148 6	≤2.5	PASS
		2480	30~1000	862.50	-51.13	≤-26	0.0077 1	≤2.5	PASS
			1000~2387	2319.38	-49.43	≤-26	0.0114 0	≤2.5	PASS
			2387~2400	2390.18	-39.38	≤-16	0.1153 5	≤25	PASS
			2483.5~2496.5	2494.51	-38.24	≤-16	0.1499 7	≤25	PASS
			2496.5~13000	4959.05	-47.56	≤-26	0.0175 4	≤2.5	PASS

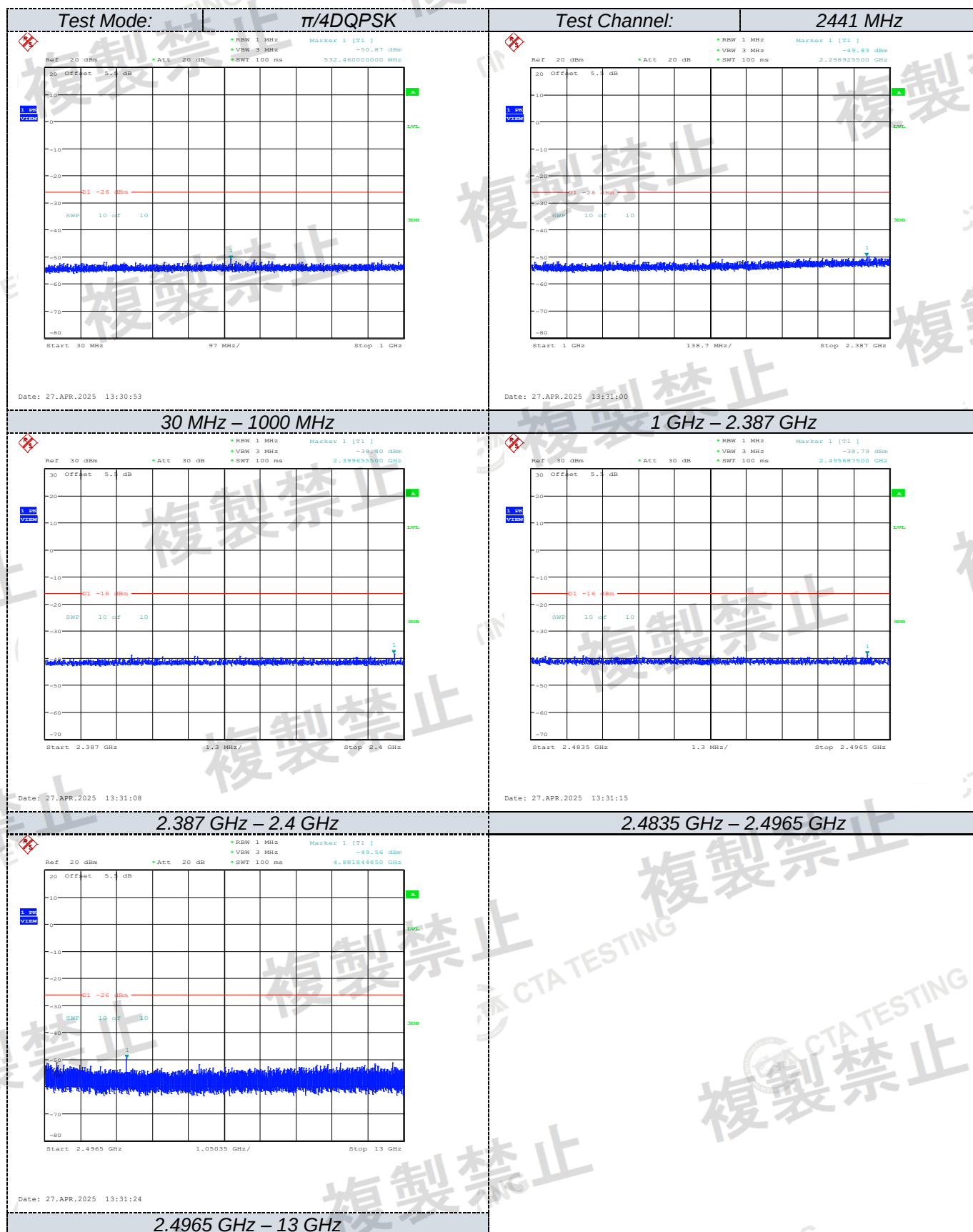


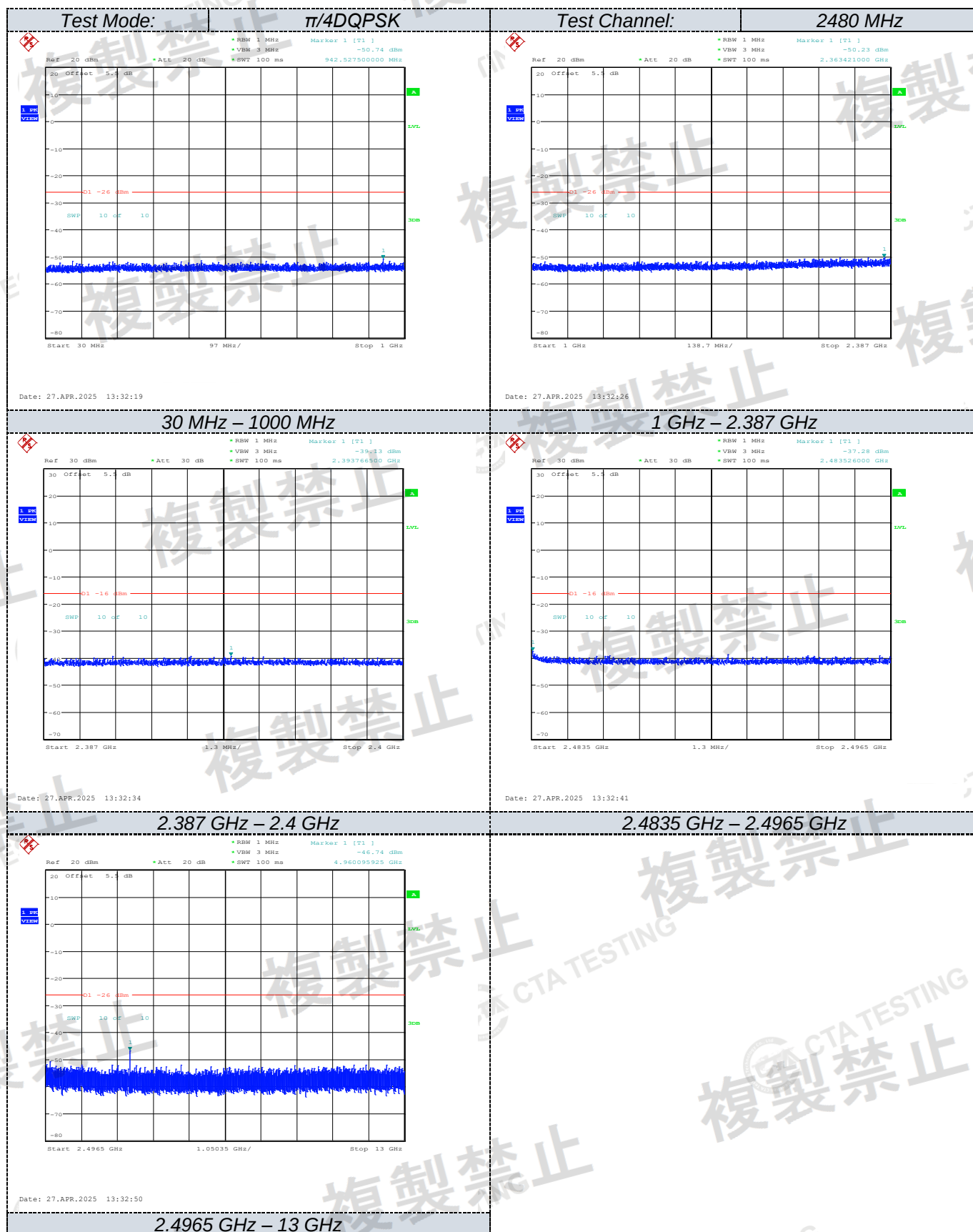
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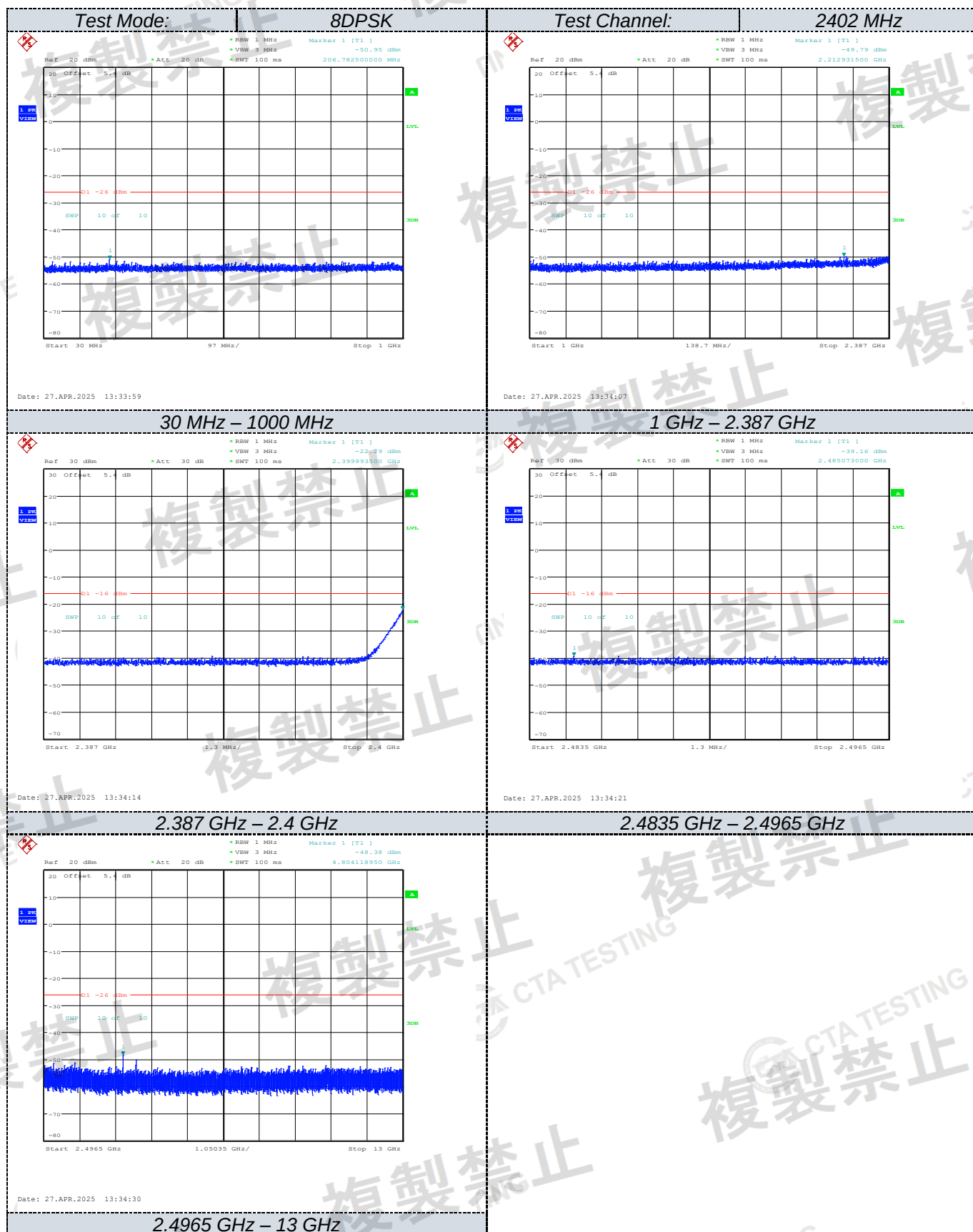


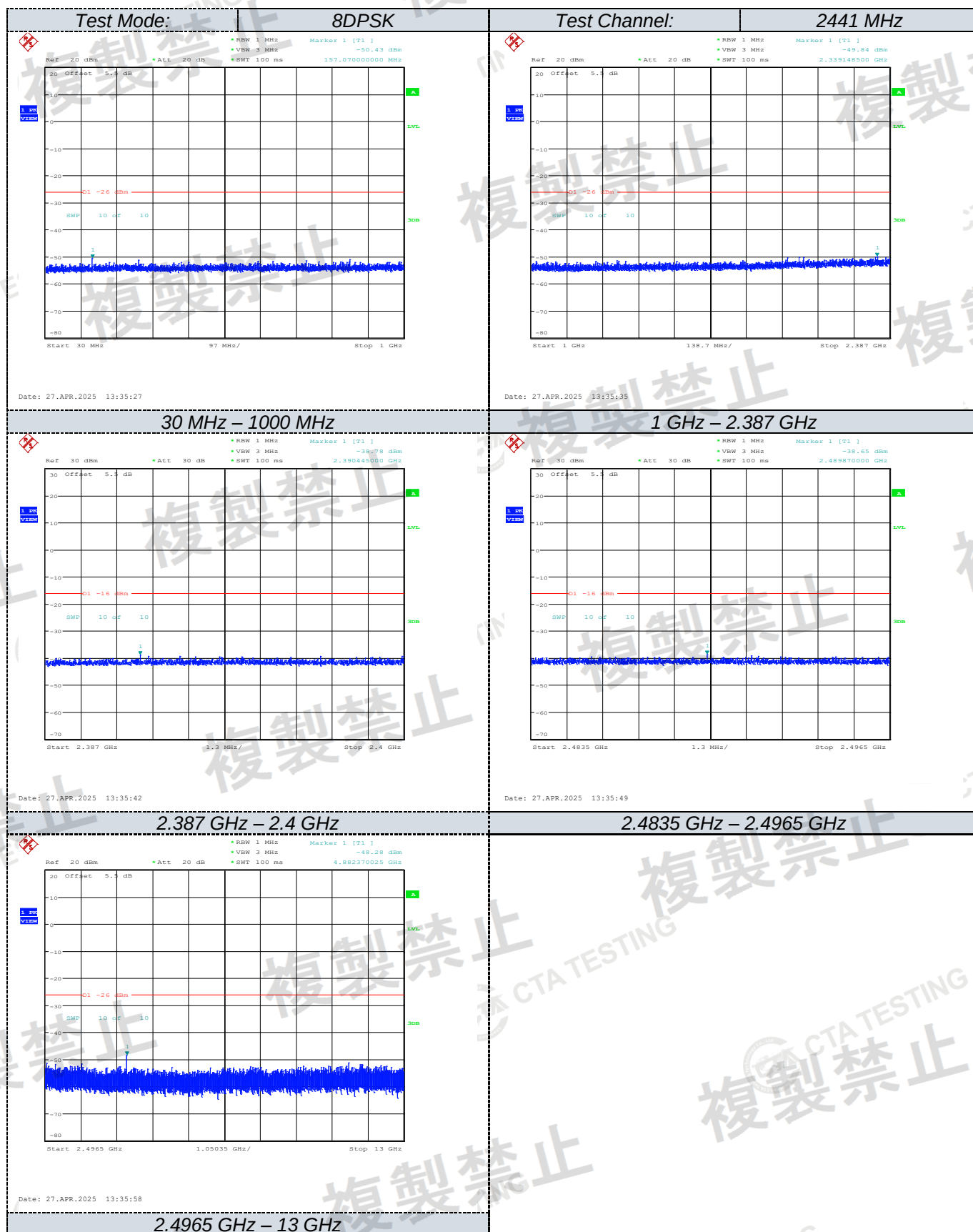


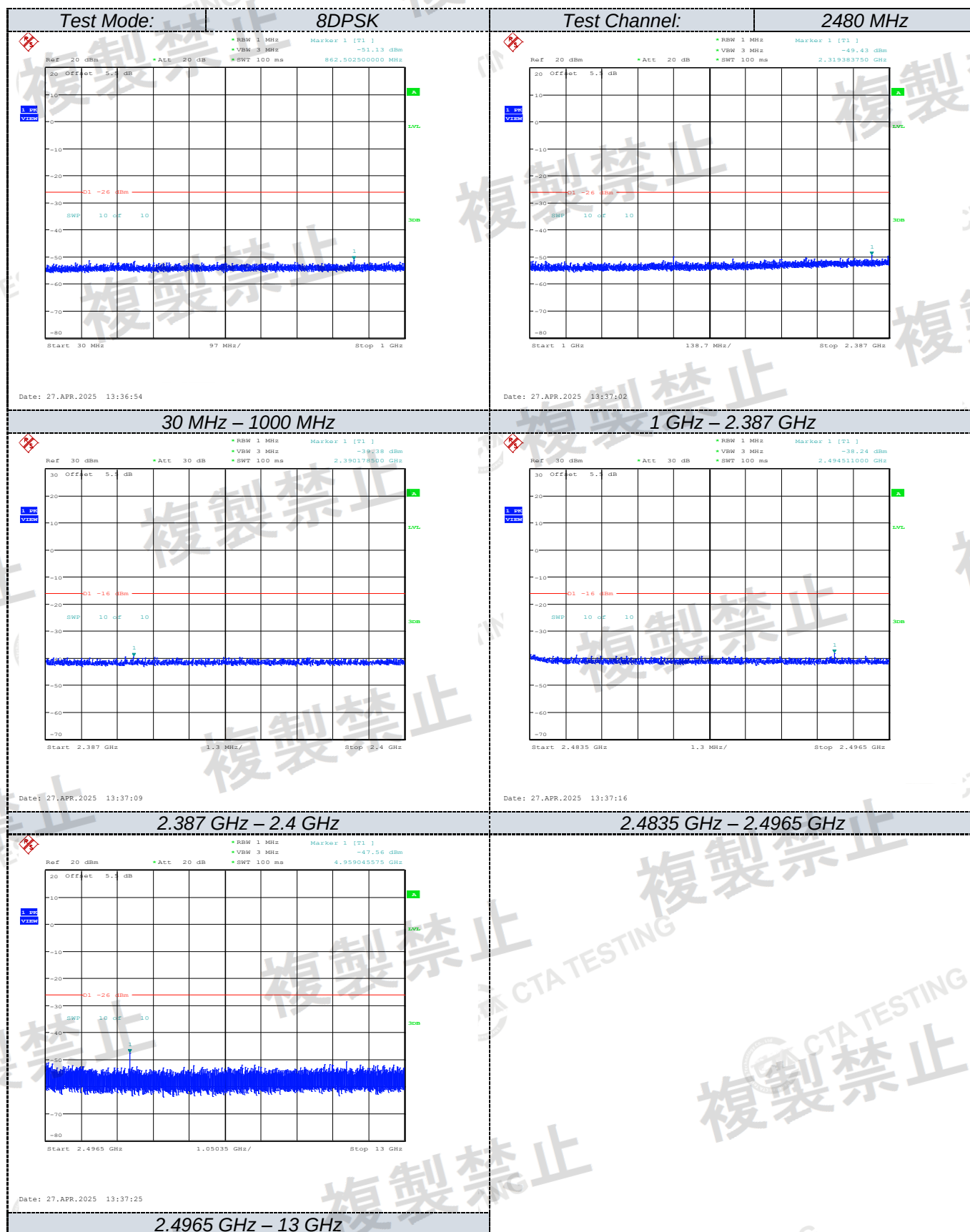










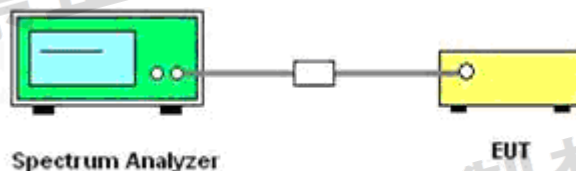


3.6 Secondary Radiated Emission Strength

LIMIT

The limit on secondary emissions radiated from the receiving equipment within which the function of other radio equipment will not be impaired shall be, in terms of the power of a dummy antenna circuit that has the same electrical constant as the receiving antenna, 4nW or less at a frequency below 1 GHz and 20 nW or less at a frequency of 1 GHz or higher as measured using the circuit.

TEST CONFIGURATION



TEST PROCEDURE

The EUT was directly connected to the spectrum analyser and antenna output port as show in the block diagram as TEST CONFIGURATION shows.

EUT Condition: modulation

Spectrum Condition:

Frequency: 30MHz-13GHz

RBW: 100 KHz (30MHz-1GHz), 1MHz (1GHz-13GHz)

VBW: 300 KHz (30MHz-1GHz), 3MHz (1GHz-13GHz)

Sweep time: Auto

Detector mode: Positive peak

Indication mode: max hold

TEST RESULTS

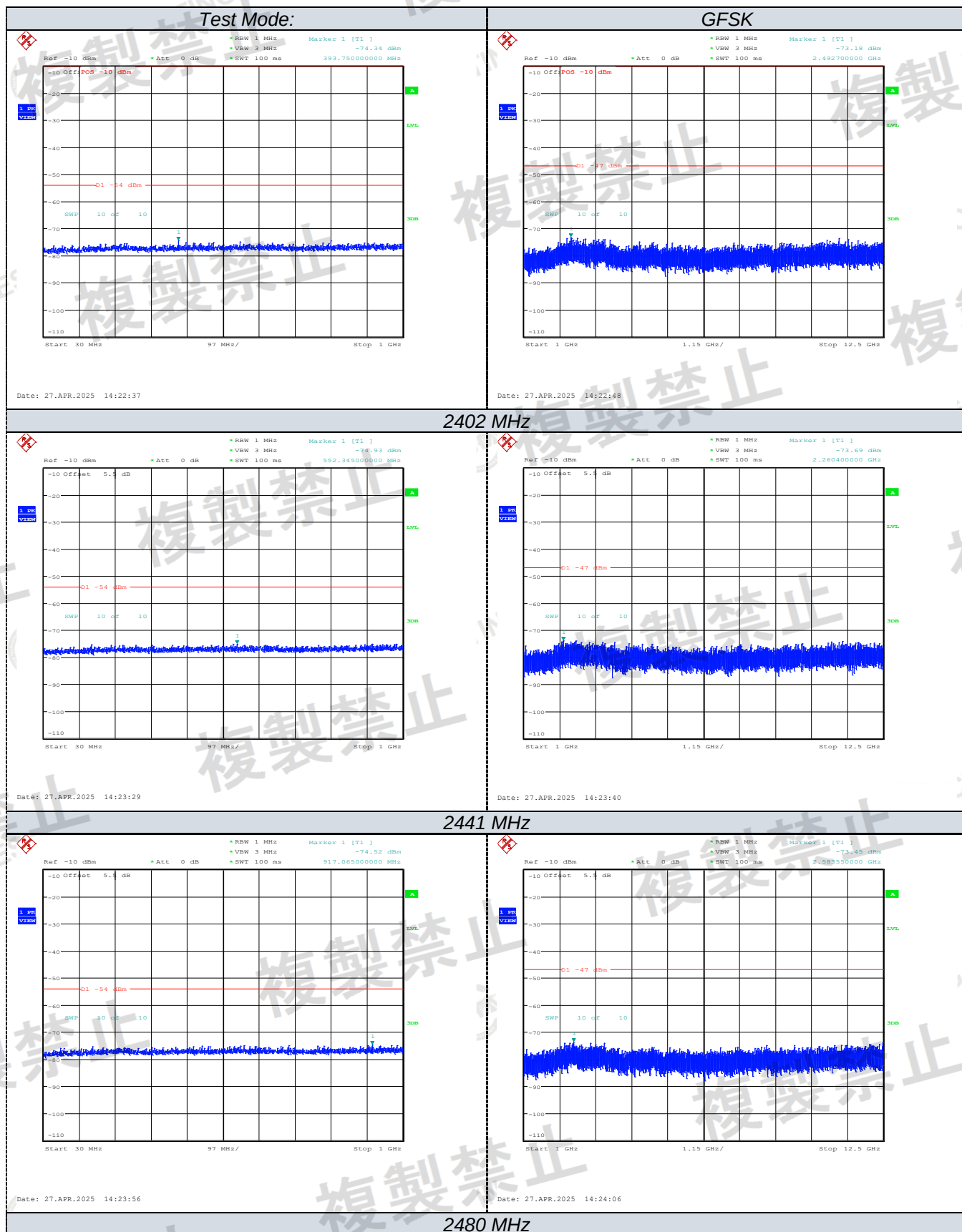
Test Condition	Test Mode	Antenna	Freq(MHz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
NTNV	DH5	Ant1	2402	30~1000	393.75	-74.34	≤-54	0.03681	≤4	PASS
				1000~12500	2492.70	-73.18	≤-47	0.04808	≤20	PASS
			2441	30~1000	552.35	-74.93	≤-54	0.03214	≤4	PASS
				1000~12500	2260.40	-73.69	≤-47	0.04276	≤20	PASS
			2480	30~1000	917.07	-74.52	≤-54	0.03532	≤4	PASS
				1000~12500	2583.55	-73.45	≤-47	0.04519	≤20	PASS
	2DH5	Ant1	2402	30~1000	740.53	-74.69	≤-54	0.03396	≤4	PASS
				1000~12500	3267.80	-73.06	≤-47	0.04943	≤20	PASS
			2441	30~1000	887.00	-74.32	≤-54	0.03698	≤4	PASS
				1000~12500	2706.03	-73.24	≤-47	0.04742	≤20	PASS
			2480	30~1000	466.99	-73.66	≤-54	0.04305	≤4	PASS
				1000~12500	2936.60	-73.51	≤-47	0.04457	≤20	PASS
	3DH5	Ant1	2402	30~1000	840.92	-74.49	≤-54	0.03556	≤4	PASS

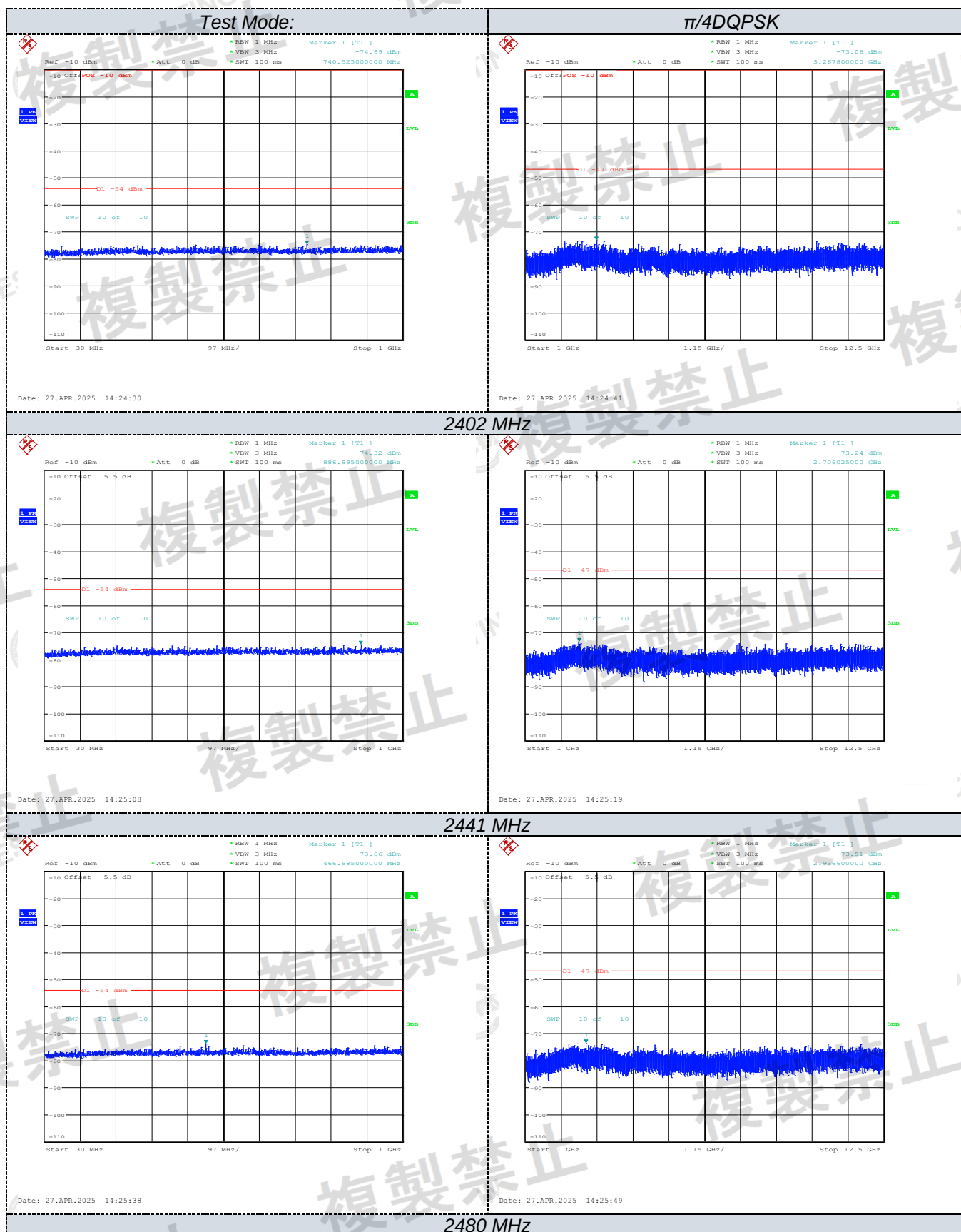
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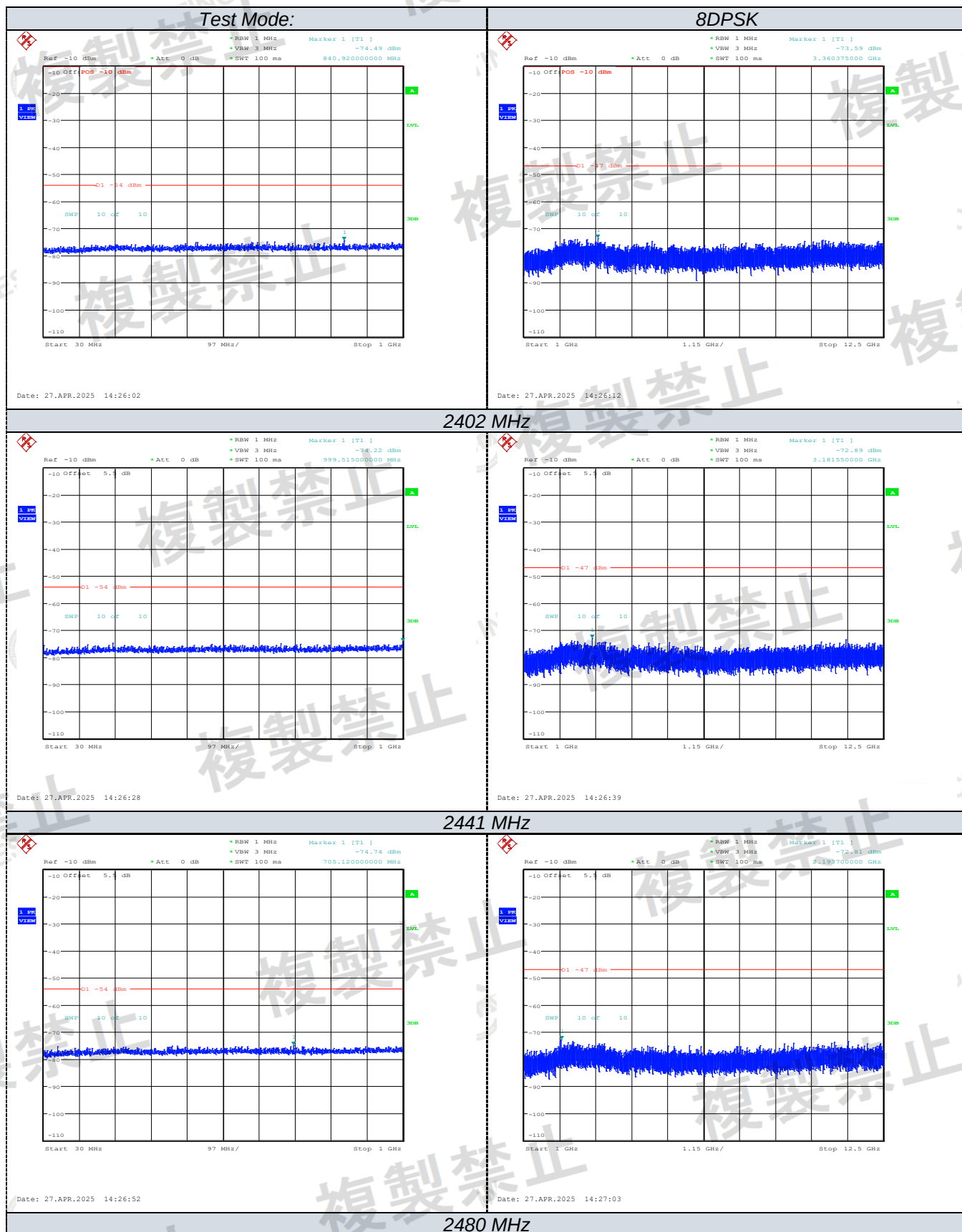
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			1000~12500	3360.3 8	-73.59	≤-47	0.0437 5	≤20	PASS
		2441	30~1000	999.52	-74.22	≤-54	0.0378 4	≤4	PASS
			1000~12500	3181.5 5	-72.89	≤-47	0.0514 0	≤20	PASS
		2480	30~1000	705.12	-74.74	≤-54	0.0335 7	≤4	PASS
			1000~12500	2193.7 0	-72.81	≤-47	0.0523 6	≤20	PASS







3.7 Construction Protection Method

REQUIREMENT

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

CONFIRMATION METHOD

Our products apply for RF certification in Japan. The high frequency part and modulation part use SMT technology, which is not easy to change. (The chip has more than 12 chip pins, and the pin distance is less than 1.5mm.)



3.8 Interference Prevention Function

REQUIREMENT

Clarify the one automatically to transmit and to receive identification code with the wireless equipment of the wireless station used in the same premises.

Item	Limits
Identification code	≥ 48 bits

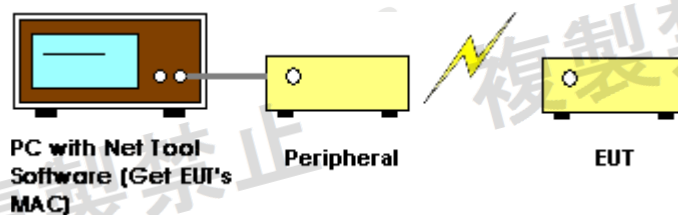
CONFIRMATION METHOD

A communication link was made where the ID code is correct (Identical).

TEST PROCEDURE

- In the case that the EUT has the function of automatically transmitting the identification code: a. Transmit the predetermined identification codes from EUT. b. Check the transmitted identification codes with the demodulator.
- In the case of receiving the identification code: a. Transmit the predetermined identification codes from the counterpart. b. Check if communication is normal. c. Transmit the other signals than predetermined ID codes from the counterpart. d. check if the EUT stops the transmission, or if it displays that identification codes are different from the predetermined ones.

TEST CONFIGURATION



TEST RESULTS

PASS

MAC: C2: A1: 4B: E6: 3D: 5A

3.9 Carrier Sensing Function

LIMIT

Item	Limits
Carrier Sense	Good – EUT stop RF transmission signal after carrier inject to EUT. (On $22.79+Gr-20*\log(f)$ [dBm] (Gr: dBi; f: MHz) or 100mV/m)

INSTRUMENTS SETTING

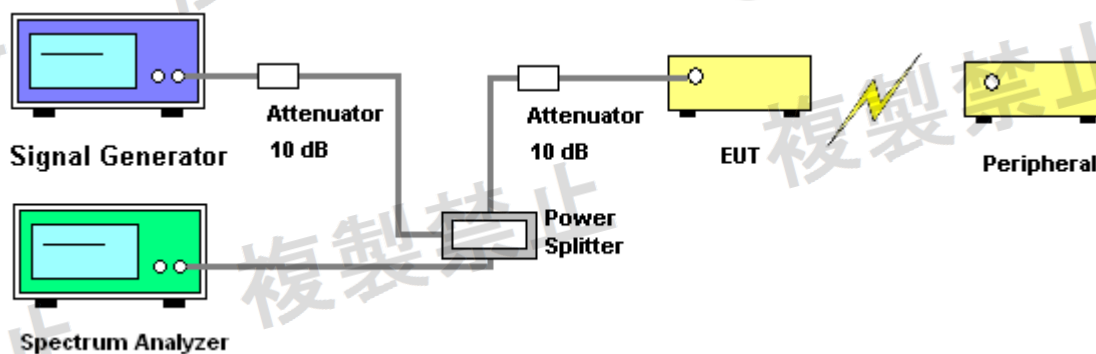
The following table is the setting of spectrum analyser and receiver.

Spectrum Parameter	Setting
Attenuation	Auto
RB / VB	1 MHz
Span	0 MHz
Sweep	Continuous
Detector	Peak
Trigger mode	Video

TEST PROCEDURE

1. SSG adjusted the frequency as same as the EUT transmitted signal and emitted the absence of modulation from SSG and power level is (On $22.79+Gr-20*\log(f)$ [dBm] (Gr: dBi; f: MHz). Then turn off the RF signal of SSG.
2. EUT have transmitted the maximum modulation signal and fixed channelize.
3. Setting of SA is following as: RB: 1MHz / VB: 1MHz / SPAN: 50MHz / AT: 10dB / Ref: 0dBm / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak.
4. SSG RF Signal On.
5. EUT shall be stop the transmitted any signal and SSG RF Signal Off. Then EUT will be continuous transmitted signal.

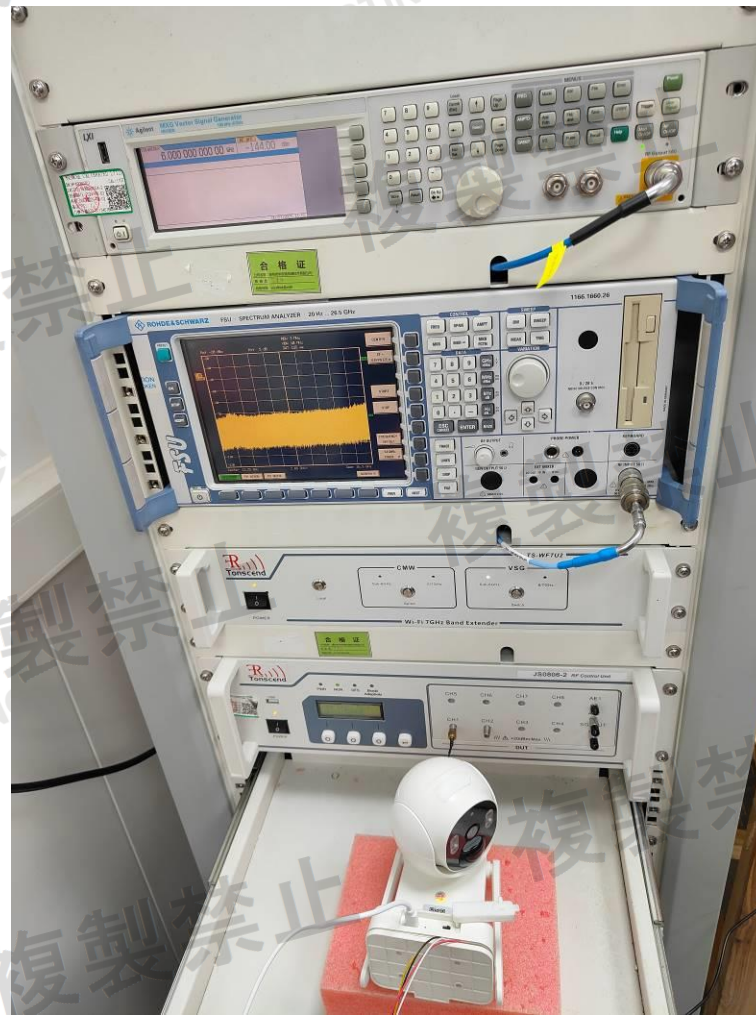
TEST CONFIGURATION



TEST RESULTS

Not Applicable.

4 Test Setup Photos of the EUT



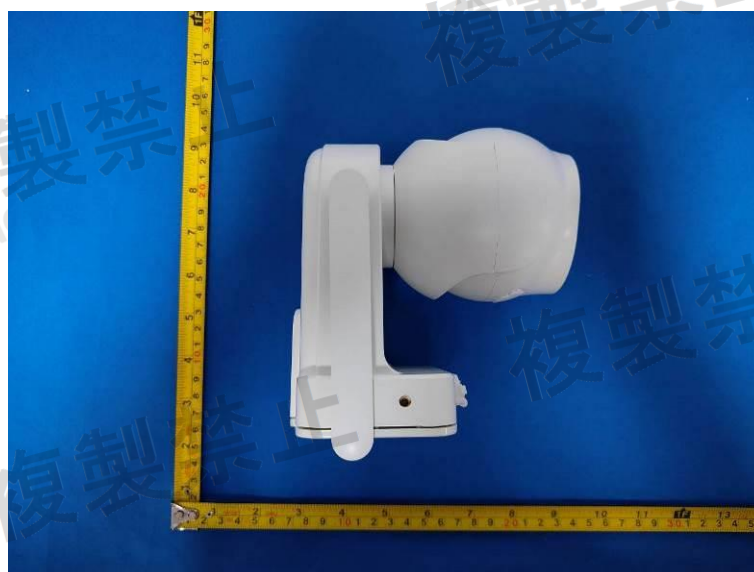
5 Photos of the EUT



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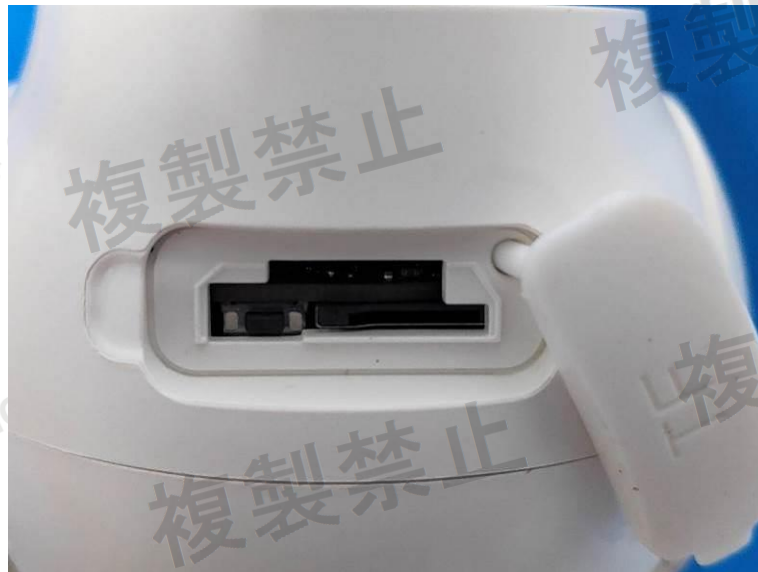
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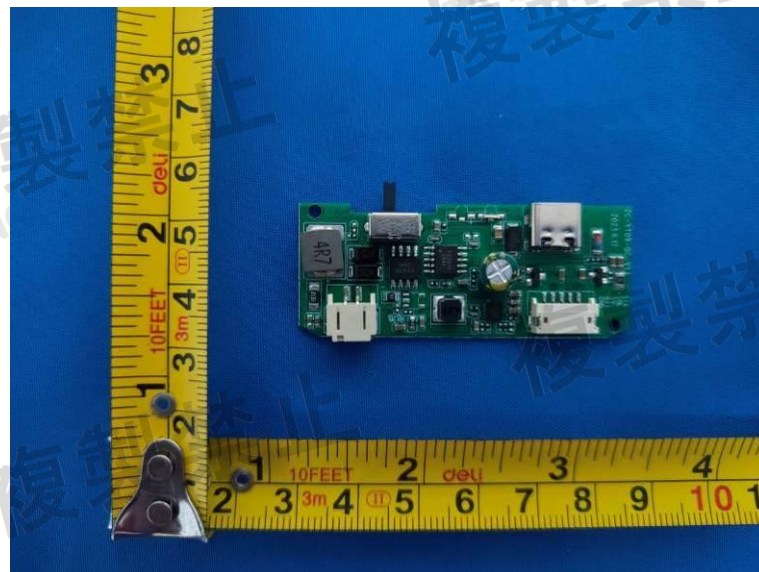
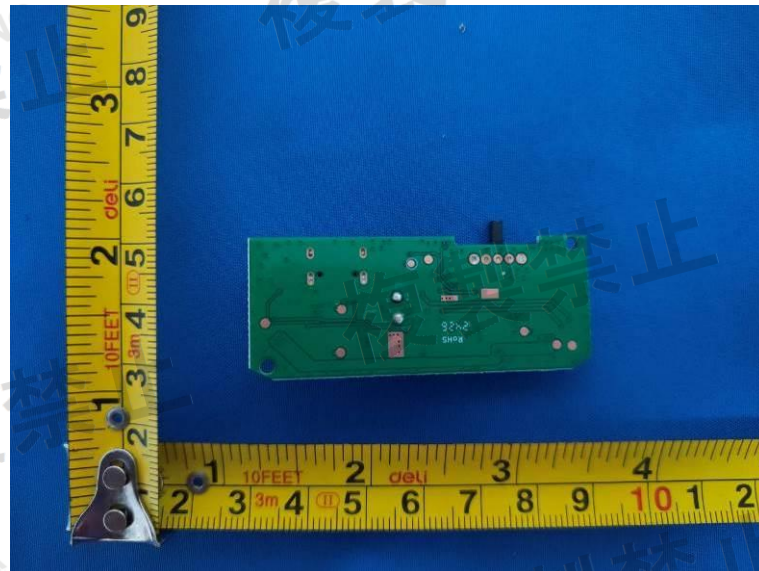


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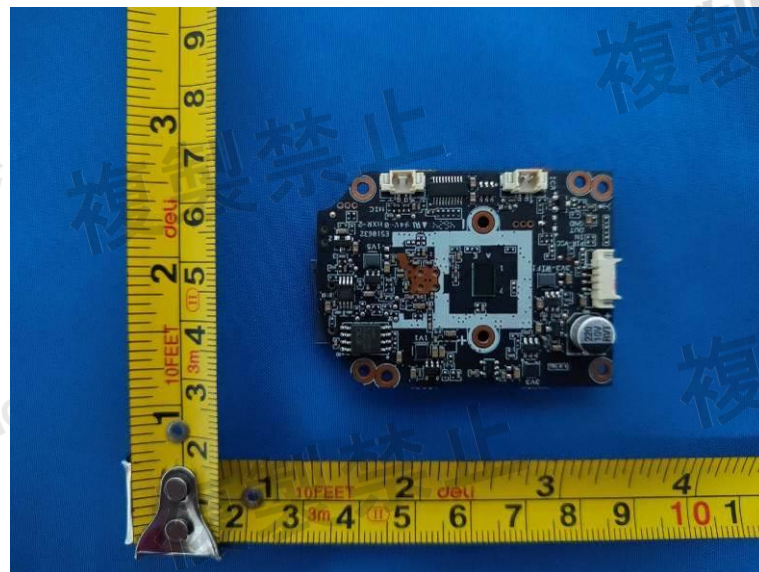
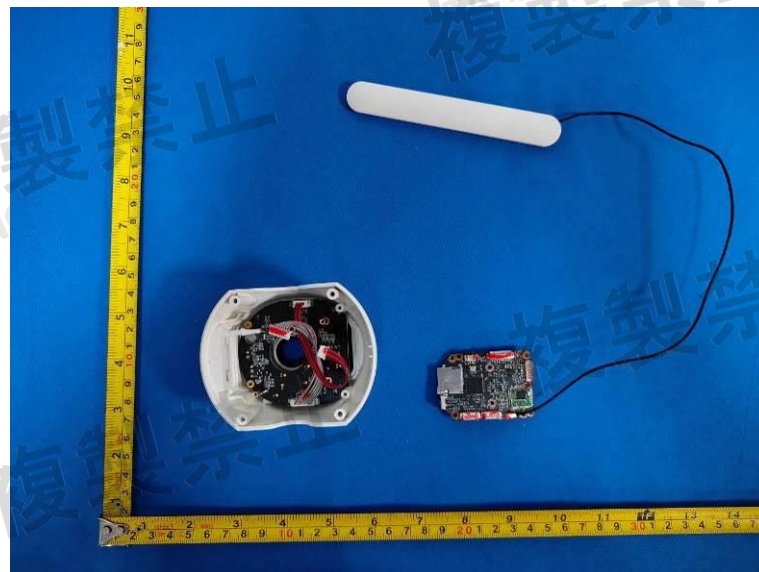




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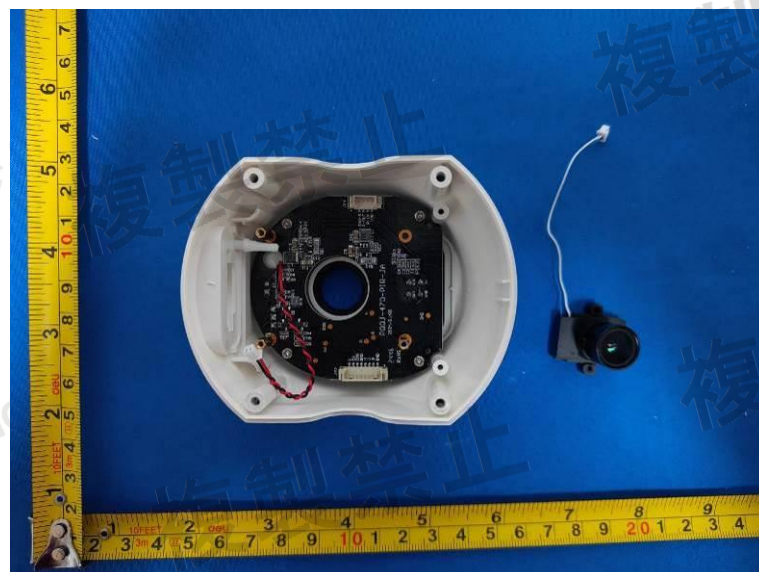
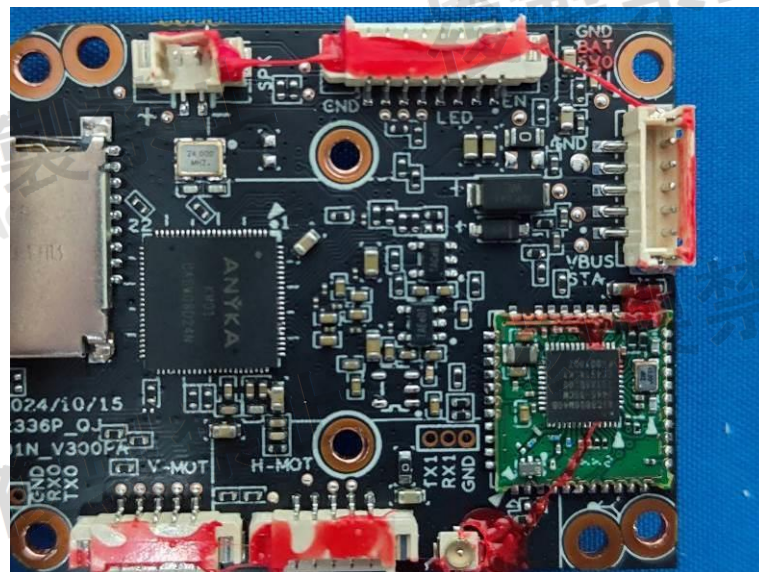
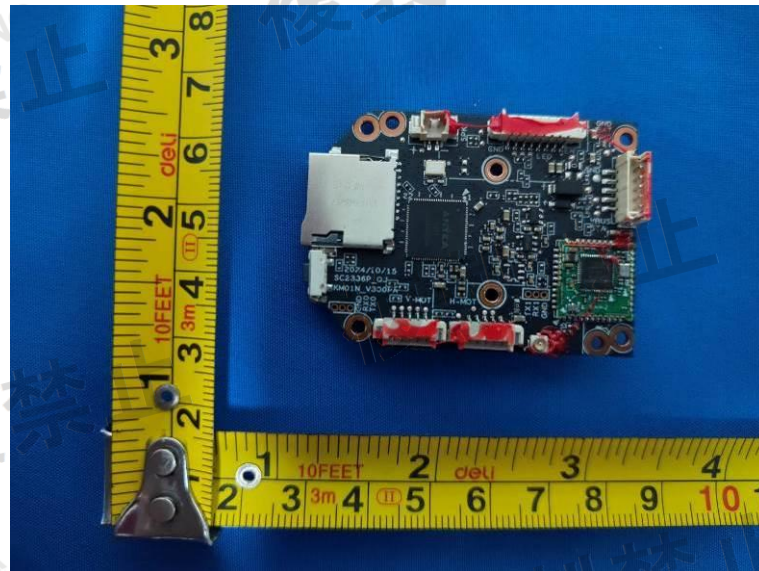
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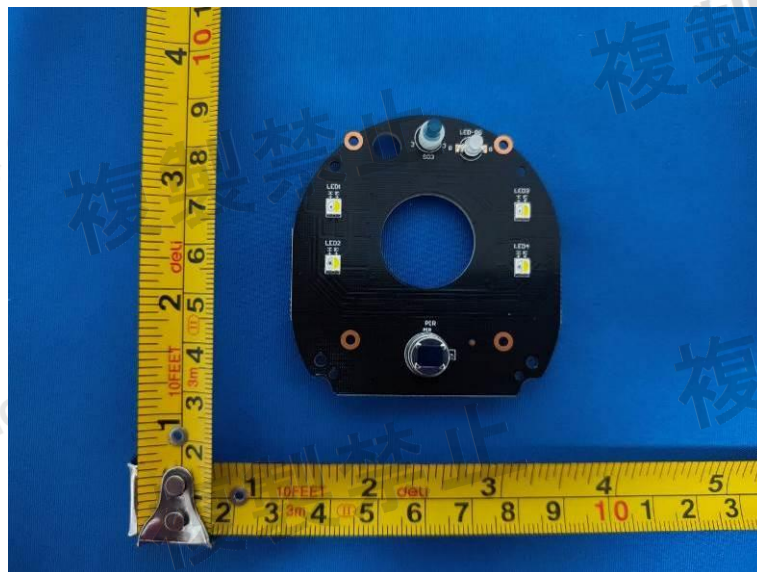
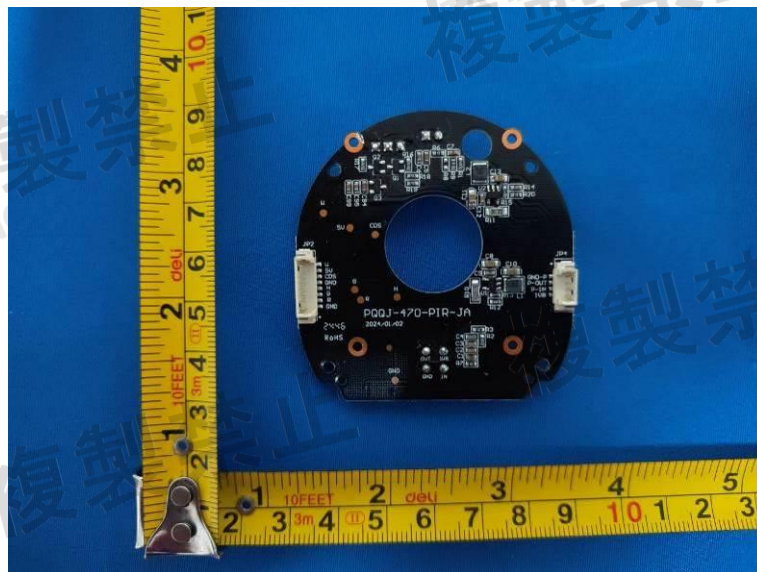
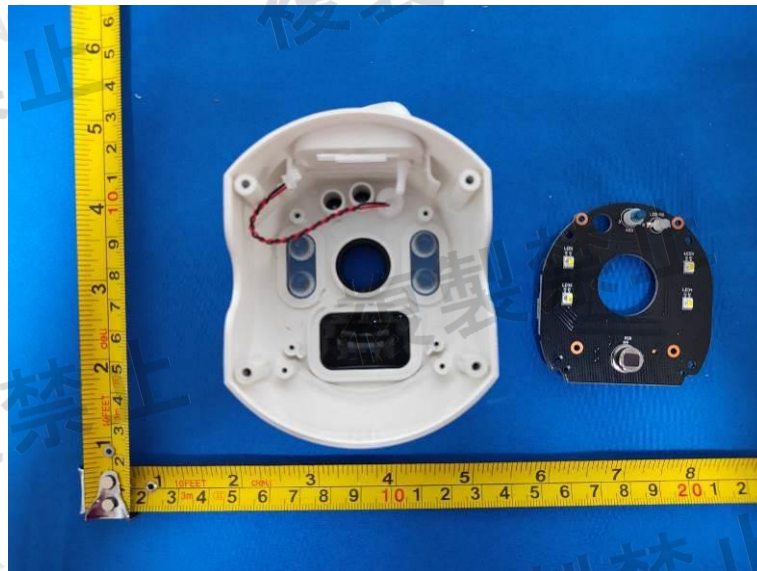
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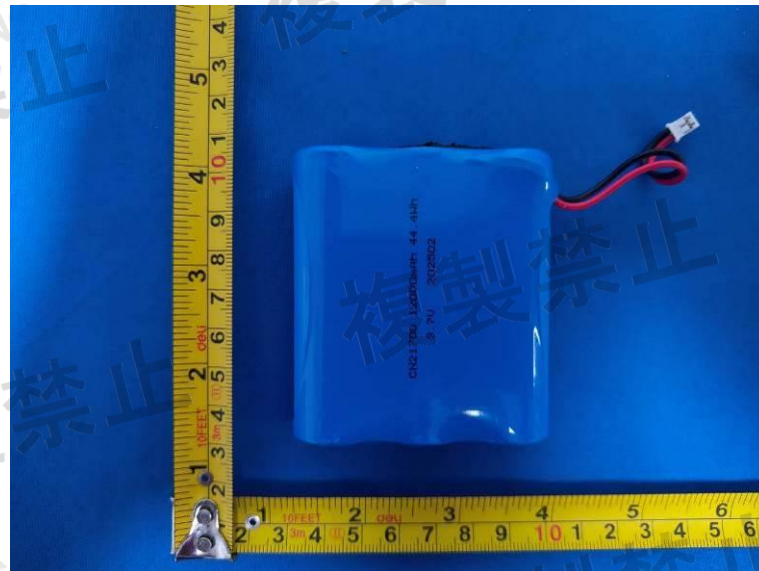


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