

TEST REPORT

Reference No...... : WTD25D11316005W002
Applicant..... : Shenzhen Sybran Technology Co.,Ltd.
Address..... : 804, Bldg 5A, Block C, Chuangzhiyuncheng Phase II, Xingke 1st Rd,
Xili St Nanshan, Shenzhen, China
Manufacturer..... : Shenzhen Sybran Technology Co.,Ltd.
Address..... : 804, Bldg 5A, Block C, Chuangzhiyuncheng Phase II, Xingke 1st Rd,
Xili St Nanshan, Shenzhen, China
Product..... : CODE27 Companion Hub
Model(s)..... : SyBran-01
Standards..... : Article 2 Paragraph 1 of Item 19,
MIC Notice No.88 Appendix No.43
Date of Receipt Sample.... : 2025-11-28
Date of Test..... : 2025-12-02 to 2025-12-30
Date of Issue..... : 2026-01-27
Test Result..... : **Pass**

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company.

The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

Prepared By:

Waltek Testing Group Co., Ltd.

Address: No. 77, Houjie Section, Guantai Road, Houjie Town, Dongguan City, Guangdong, China

Tel: +86-769-2267 6998

Fax: +86-769-2267 6828

Compiled by:

Frank Yin

Frank Yin / Project Engineer

Approved by:

Deval Qin

Deval Qin / Designated Reviewer



2 Contents

	Page
1 COVER PAGE	1
2 CONTENTS	2
3 REVISION HISTORY	3
4 GENERAL INFORMATION	4
4.1 General Description of E.U.T.	4
4.2 Details of E.U.T.	4
4.3 Channel List.....	5
4.4 General condition	6
4.5 Test Equipments list	8
4.6 Measurement Uncertainty	8
5 TEST SUMMARY	9
6 MEASUREMENTS OF TRANSMITTING EQUIPMENT.....	10
6.1 Antenna Power and Antenna Power Tolerances	10
6.2 Frequency Tolerance	12
6.3 Occupied Frequency Bandwidth	14
6.4 Spread Bandwidth	16
6.5 Dwell Time.....	18
6.6 Spurious Emission Intensity	23
7 MEASUREMENTS OF RECEIVING EQUIPMENT	30
7.1 Secondary Radiated Emissions	30
8 MEASUREMENTS OF TELECOMMUNICATIONS CIRCUIT CONNECTION EQUIPMENT.....	33
8.1 Interference prevention function.....	33
9 TEST SETUP VIEW.....	35
10 PHOTOGRAPHS - CONSTRUCTIONAL DETAILS	36

3 Revision History

Test Report No.	Date of Receipt Sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTD25D11316005W002	2025-11-28	2025-12-02 to 2025-12-30	2026-01-27	Original	-	Valid

4 General Information

4.1 General Description of E.U.T.

Product:		CODE27 Companion Hub
Model(s):		SyBran-01
Model Description:		There are two hardware configurations for this model: configuration A and configuration B, the only difference being the cable specifications.
Hardware version:		YT-921 V_1.2
Software version:		rk3588s_yt921-userdebug 12 SQ3A.220705.003.A1 eng.dj 20260119.111702
Radio type:		Bluetooth
Bluetooth	Version:	5.0
	Modulation:	GFSK, $\pi/4$ DQPSK, 8DPSK
	Frequency range:	2402-2480MHz
	Output power:	0.085mW/MHz
	Antenna installation:	FPC Antenna
	Antenna gain:	2.56dBi
	Note: #: The antenna gain is provided by the applicant, and the applicant should be responsible for its authenticity, WALTERK lab has not verified the authenticity of its information.	

4.2 Details of E.U.T.

Power Supply Technical: DC 20V

AC Adapter: Model: A869-200325C-JP1
INPUT: 100-240V~ 50/60Hz 1.7A
OUTPUT:
DC 5V 3A
DC 9V 3A
DC 12V 3A
DC 15V 3A
DC 20V 3.25A
Manufacturer: Dongguan Aohal Technology Co.,Ltd.

4.3 Channel List

Hopping Frequencies List

Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
0	2402	1	2403	2	2404	3	2405
4	2406	5	2407	6	2408	7	2409
8	2410	9	2411	10	2412	11	2413
12	2414	13	2415	14	2416	15	2417
16	2418	17	2419	18	2420	19	2421
20	2422	21	2423	22	2424	23	2425
24	2426	25	2427	26	2428	27	2429
28	2430	29	2431	30	2432	31	2433
32	2434	33	2435	34	2436	35	2437
36	2438	37	2439	38	2440	39	2441
40	2442	41	2443	42	2444	43	2445
44	2446	45	2447	46	2448	47	2449
48	2450	49	2451	50	2452	51	2453
52	2454	53	2455	54	2456	55	2457
56	2458	57	2459	58	2460	59	2461
60	2462	61	2463	62	2464	63	2465
64	2466	65	2467	66	2468	67	2469
68	2470	69	2471	70	2472	71	2473
72	2474	73	2475	74	2476	75	2477
76	2478	77	2479	78	2480	-	-

4.4 General condition

Ambient Condition: 23.1 °C 54.6 %RH

4.4.1 Environmental condition of test site

Voltage fluctuation

1. In the case of a characteristic test in the technical regulations conformity certification

The power supply supplies the voltage rating.

2. Other cases

The power supply supplies the voltage rating and the voltage rating $\pm 10\%$. However, when it can be confirmed that the change of the input voltage to the wireless part circuit of the testing machine is $\pm 1\%$ or less when the input voltage to the testing machine from the external source changes at $\pm 10\%$, examines it only by the voltage rating.

4.4.2 Test Mode

All test mode(s) and condition(s) mentioned were considered and evaluated respectively by performing full tests, the worst data were recorded and reported.

Have been confirmed the fluctuation of power supply to the RF circuit of EUT (excluding power source) is equal to or less than $\pm 1\%$ when the power supply to the product varies at $\pm 10\%$ by Manufacturer.

DC Input	RF_IC Input	Rate of fluctuation(%)
18V	3.3V	0.0
20V	3.3V	0.0
22V	3.3V	0.0

Note: The EUT has two hardware configurations, which do not affect the voltage input and parameters of the RF circuit.

Modulation	Data Packet	Test mode	Low channel	Middle channel	Upper channel
GFSK	DH1/DH3/DH5	Transmitting	2402MHz	2441MHz	2480MHz
		Receiving	2402MHz	2441MHz	2480MHz
		Hopping	2402MHz	2441MHz	2480MHz
		Normal	2402MHz	2441MHz	2480MHz
$\pi/4$ DQPSK	2-DH1/2-DH3/2-DH5	Transmitting	2402MHz	2441MHz	2480MHz
		Receiving	2402MHz	2441MHz	2480MHz
		Hopping	2402MHz	2441MHz	2480MHz
		Normal	2402MHz	2441MHz	2480MHz
8DPSK	3-DH1/3-DH3/3-DH5	Transmitting	2402MHz	2441MHz	2480MHz
		Receiving	2402MHz	2441MHz	2480MHz
		Hopping	2402MHz	2441MHz	2480MHz
		Normal	2402MHz	2441MHz	2480MHz

Note:

Three data packets were tested under each modulation.

The report only shows the worst-case (1-DH5, 2-DH5, 3-DH5)

4.5 Test Equipments list

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Calibration Date	Calibration Due Date
1	EXA Signal Analyzer	Malaysia Keysight	N9010A	MY50520207	2025-04-19	2026-04-18
2	Spectrum Analyzer	R&S	FSL6	100959	2025-04-19	2026-04-18
3	DC power supply	Agilent	E3640A	MY40006693	2025-04-19	2026-04-18
4	Temperature & Humidity Chamber	Agilent	TH-1P-B	WIT-05121302	2025-11-14	2026-11-13
5	Temperature/ Humidity Meter	Agilent	ZC1-2	TR7-TH	2025-05-29	2026-05-28
6.	EXG Analog Signal Generator	Malaysia Keysight	N5171B	MY53050845	2025-07-04	2026-07-03
7.	USB Wideband Power Sensor	Keysight	U2021XA	SG5440003	2025-04-19	2026-04-18
8.	Universal Radio Communication Tester	R&S	CMW 500	127818	2025-04-19	2026-04-18
9.	Attenuator	ShangHai HuaXiang	TS2-6dB-1G-A	20070707	2025-01-10	2026-01-09

Remark:

- (a) Calibration conducted by the National Institute of Information and Communications Technology (NICT) in Japan (hereinafter referred to as "NICT") or a designated calibration agency under Article 102-18 paragraph (1) in JRL.
- (b) Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Act (Act No. 51 of 1992).
- (c) Calibration conducted in countries except Japan, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1).
- (d) Calibration, etc. conducted by using measuring instruments and other equipment listed in the right column of appended table No. 3, which shall have been given any type of calibration, etc. listed above from (a) to (c) From JRL Article 24-2, paragraph 4, Item 2
1. All Equipments Calibration use the calibration method (c).
 2. All Equipments Calibration in GUANG ZHOU GRG METROLOGY&TEST CO., LTD./ No.163.Pingyun Rd, West of HuangPu Ave. Guangzhou, Guangdong, China.
 3. Regarding the measuring device, Article 24-2, Paragraph 4 of the Radio Law.

4.6 Measurement Uncertainty

Parameter	Uncertainty
Radio Frequency	$\pm 1 \times 10^{-7}$ Hz
RF Power	± 0.42 dB
RF Power Density	± 0.7 dB
Conducted Spurious Emissions	± 2.76 dB (9kHz~26500MHz)
Confidence interval: 95%. Confidence factor: k=2	

5 Test Summary

Test Item	Result
Transmitting equipment	
Antenna Power	PASS
Tolerances for Antenna Power	PASS
Frequency Tolerance	PASS
Transmission Rate	PASS
Occupied Frequency Bandwidth	PASS
Spread Bandwidth	PASS
Process Gain	N/A
Number of Carriers	N/A
Dwell Time	PASS
Spurious emission intensity	PASS
Half-power beam width	Note1
Receiving equipment	
Secondary Radiated Emissions	PASS
Controlling equipment	
Interference prevention function	PASS
N/A is an abbreviation for Not Applicable. Note1 means the Max EIRP is -8.13dBm/MHz (antenna power dBm/MHz + antenna gain dBi) that is less than 6.91dBm/MHz, the test is not applicable.	

6 Measurements of Transmitting Equipment

6.1 Antenna Power and Antenna Power Tolerances

6.1.1 Test Requirement

Radio Law of Japan item 19 of Article 2 Paragraph 1.

6.1.2 Limit

a. The antenna power of a transmitting equipment (with a frequency band of 2,427 - 2,470.75 MHz, for spread spectrum systems using FH systems, hybrid systems of DS and FH, or hybrid systems of FH and OFDM) shall be such that the mean power within a bandwidth of 1 MHz is 3 mW or less in the case of modulation using a standard coding test signal with the same transmission rate as that of the modulation signal.

b. The antenna power of a transmitting equipment using a spread spectrum system other than any of those in “a” and the OFDM system shall be such that the mean power within a bandwidth of 1 MHz is 10 mW or less in the case of modulation using a standard coding test signal with the same transmission rate as that of the modulation signal.

c. The antenna power of a transmitting equipment using systems other than any of those in “a” or “b” shall be 10 mW or less.

Upper limit of the tolerance for antenna power shall be 20%.

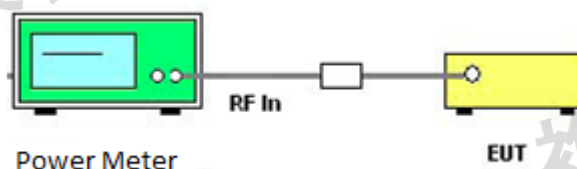
6.1.3 Measuring Instruments and setting

Please refer to section 4 in this report. The following table is the setting of the spectrum.

6.1.4 Test Procedures

1. Measure the total power by the Power Meter in a state of hopping mode.
 2. Calculate the mean power per 1MHz by dividing the reading level by spread bandwidth.
- $$\text{Output power Density (mW/MHz)} = \text{Total power (mW)} / \text{spread bandwidth(MHz)}$$

6.1.5 Test Setup Layout



6.1.6 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

6.1.7 Test Result

Modulation	Total Power (dBm)	Spread Bandwidth (MHz)	Average Burst Power (dBm/MHz)	Test Result (mW/MHz)	Limit (mW/MHz)	Declared Antenna Power (mW/MHz)	Tolerance (%)
GFSK	7.83	71.2	-10.69	0.085	*	0.085	0.00
$\pi/4$ DQPSK	5.76	72	-12.81	0.052	*	0.085	-38.60
8DPSK	5.79	72	-12.78	0.053	*	0.085	-38.18

“*”: The limit is 3mW/MHz for 2427~2470.75MHz and 10mW/MHz for 2400~2483.5MHz except 2427~2470.75MHz

Note:

The Max EIRP is -8.13dBm/MHz (antenna power dBm/MHz + antenna gain dBi) that is less than 6.91dBm/MHz.

6.2 Frequency Tolerance

6.2.1 Test Requirement

Radio Law of Japan item 19 of Article 2 Paragraph 1.

6.2.2 Limit

According to Radio Law of Japan item 19 of Article 2 Paragraph 1, Clause 3.2 (4), the Tolerance of frequency: $\pm 50 \times 10^{-6}$.

6.2.3 Measuring Instruments and setting

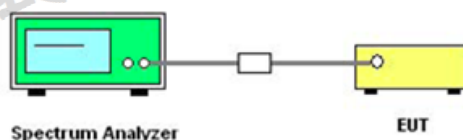
Please refer to section 4 in this report. The following table is the setting of the spectrum.

Spectrum Parameter	Setting
Span Frequency	500 KHz
RB/VB	10 kHz / 10 kHz

6.2.4 Test Procedures

- 1 Frequency accuracy of SA shall be less than 10% of limits tolerance (5ppm)
- 2 Setting of SA is following as: RB:10kHz / VB:10kHz / SPAN: 100KHz
- 3 Center Frequency: The center frequency of testing for EUT
- 4 Sweep time: Auto
- 5 Detect mode: Positive peak
- 6 EUT have transmitted absence of modulation signal and fixed channelize. f is using the mark cursor to mark the peak frequency value, f_c is declaring of channel frequency. Then the frequency error formula is $(f_c - f) / f_c \times 10^6 \text{ ppm}$ and the limit is less than $\pm 50 \text{ ppm}$

6.2.5 Test Setup Layout



6.2.6 Test Deviation

There is no deviation with the original standard.

6.2.7 EUT Operation during Test

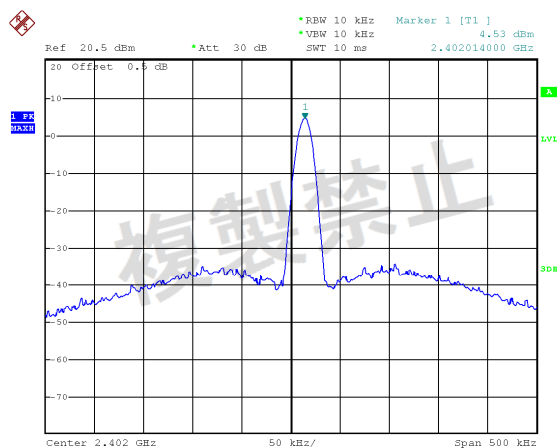
The EUT was placed on the test table and programmed in un-modulation function.

6.2.8 Test Result

Mode	Channel (MHz)	Result (MHz)	Tolerance (kHz)	Tolerance (ppm)	Limit
Non-modulation of Basic Bluetooth	2402	2402.014	+14	+5.83	±50
	2441	2441.007	+7	+2.87	±50
	2480	2480.001	+1	+0.40	±50

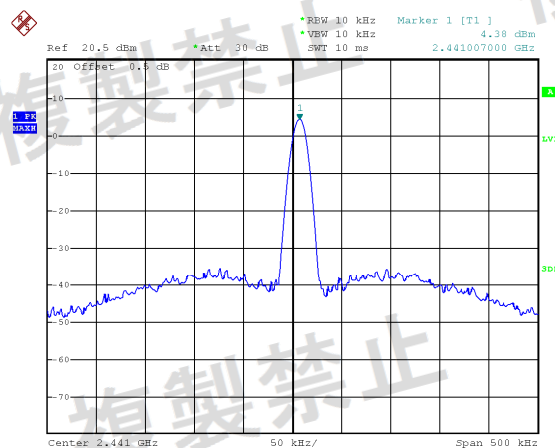
Test Plots

Channel 2402MHz



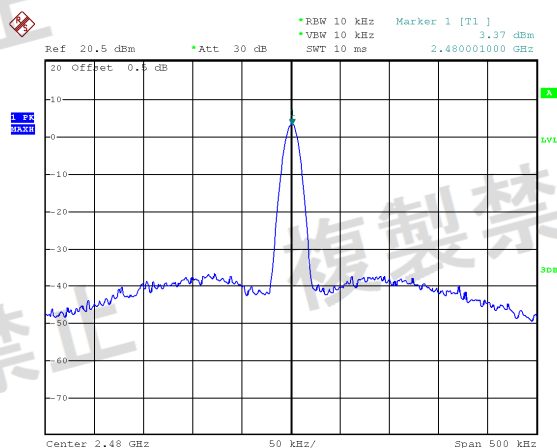
Date: 25.DEC.2025 10:09:47

Channel 2441MHz



Date: 25.DEC.2025 10:10:17

Channel 2480MHz



Date: 25.DEC.2025 10:10:53

6.3 Occupied Frequency Bandwidth

6.3.1 Test Requirement

Radio Law of Japan item 19 of Article 2 Paragraph 1.

6.3.2 Limit

According to Radio Law of Japan item 19 of Article 2 Paragraph 1, permissible value for occupied bandwidth using the FH system, a hybrid system combining DS and FH systems, or a hybrid system combining FH and OFDM systems shall be 83.5 MHz or less, while necessary bandwidth (minimum occupied bandwidth sufficient to ensure information transmission of required quality at a required transmission rate for the system used under specified conditions for a given emission type) using a system other than any of the above shall be 26 MHz or less.

6.3.3 Measuring Instruments and setting

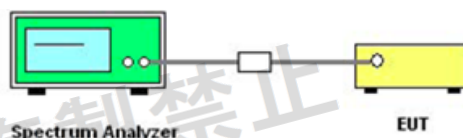
Please refer to section 4 in this report. The following table is the setting of the spectrum.

Spectrum Parameter	Setting
Span Frequency	2 to 3.5 times the limit
RB/VB	1MHz

6.3.4 Test Procedures

- 1 Setting of SA is following as: RB/VB:1MHz
SPAN: 2 to 3.5 times the limit
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 (For DSSS or OFDM Device) or continuous maximum power of hopping mode (For FHSS Device). SA set to 99% of occupied bandwidth to measure occupied bandwidth. The limit is less than 26MHz (For DSSS or OFDM Device) or 83.5MHz (For FHSS Device).

6.3.5 Test Setup Layout



6.3.6 Test Deviation

There is no deviation with the original standard.

Waltek Testing Group Co., Ltd.

<http://www.waltek.com.cn>

6.3.7 EUT Operation during Test

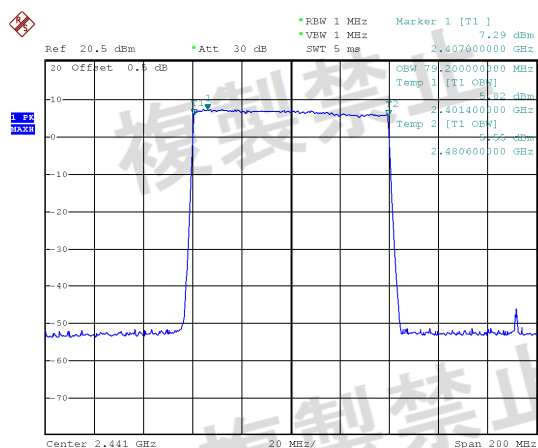
The EUT was programmed to be in continuously transmitting mode.

6.3.8 Test Result

Modulation	Result of Hopping mode(MHz)	Limit (MHz)
GFSK (Hopping)	79.2	< 83.5
$\pi/4$ DQPSK(Hopping)	79.2	< 83.5
8DPSK (Hopping)	79.2	< 83.5

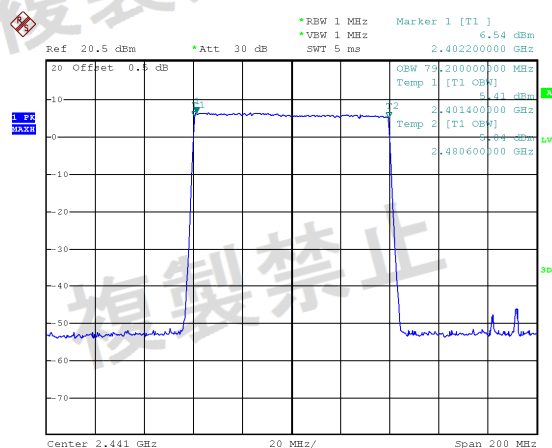
Test Plots

GFSK



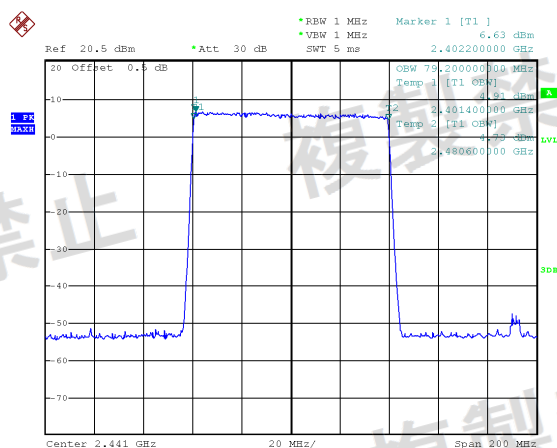
Date: 25.DEC.2025 09:23:22

$\pi/4$ DQPSK



Date: 25.DEC.2025 09:26:43

8DPSK



Date: 25.DEC.2025 09:27:56

6.4 Spread Bandwidth

6.4.1 Test Requirement

Radio Law of Japan item 19 of Article 2 Paragraph 1.

6.4.2 Limit

N/A

6.4.3 Measuring Instruments and setting

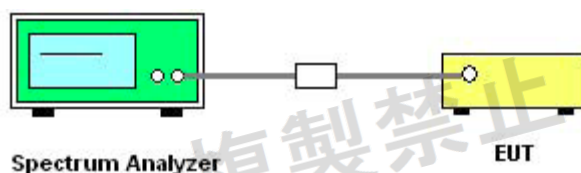
Please refer to section 4 in this report. The following table is the setting of the spectrum.

Spectrum Parameter	Setting
Span Frequency	2 to 3.5 times the limit
RB/VB	1MHz

6.4.4 Test Procedures

- 1 Setting of SA is following as:
RB/VB: 1MHz
SPAN: 2 to 3.5 times the limit
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 (For DSSS or OFDM Device) or continuous maximum power of hopping mode (For FHSS Device). SA set to 99% of occupied bandwidth to measure occupied bandwidth. The limit is less than 26MHz (For DSSS or OFDM Device) or 83.5MHz (For FHSS Device).
- 3 SA set to 90% of occupied bandwidth to measure Spread Spectrum Bandwidth.
- 4 Spread Spectrum Factor = Spread Spectrum Bandwidth / modulation rate of EUT.

6.4.5 Test Setup Layout



6.4.6 Test Deviation

There is no deviation with the original standard.

6.4.7 EUT Operation during Test

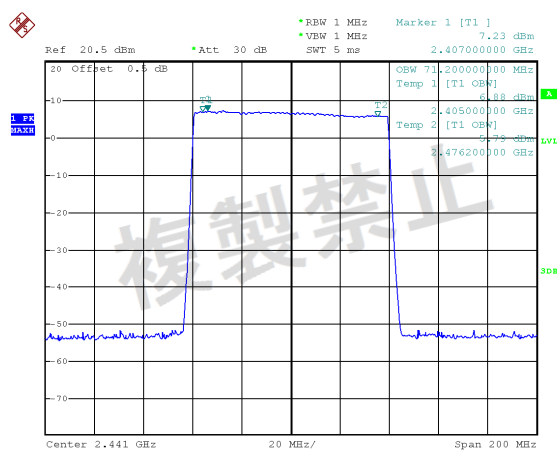
The EUT was programmed to be in continuously transmitting mode.

6.4.8 Test Result

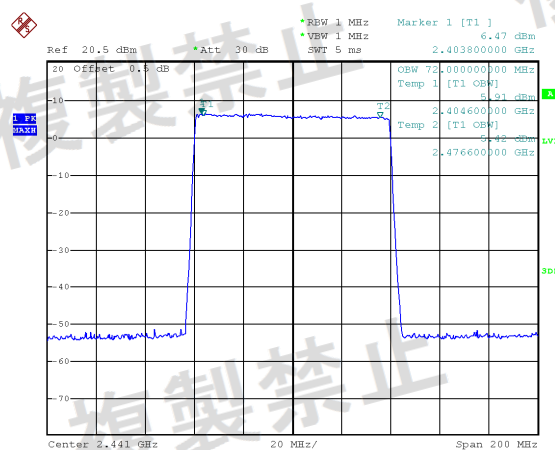
Modulation	Result (MHz)
GFSK (Hopping)	71.2
$\pi/4$ DQPSK (Hopping)	72.0
8DPSK (Hopping)	72.0

Test Plots

GFSK

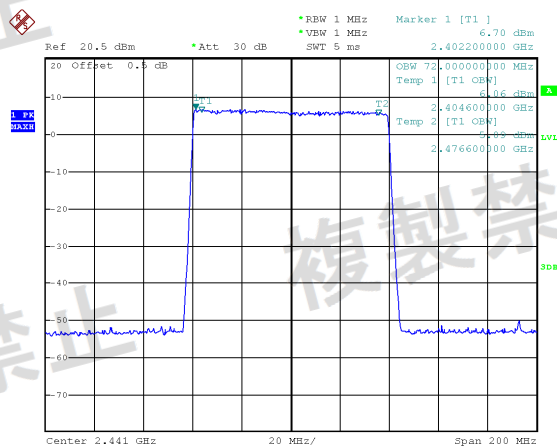


Date: 25.DEC.2025 09:30:59

 $\pi/4$ DQPSK

Date: 25.DEC.2025 09:32:13

8DPSK



Date: 25.DEC.2025 09:29:31

6.5 Dwell Time

6.5.1 Test Requirement

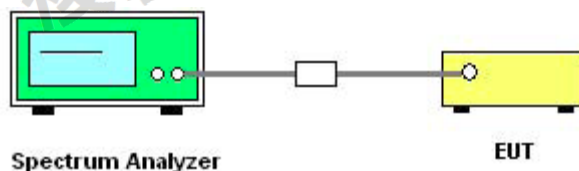
Radio Law of Japan item 19 of Article 2 Paragraph 1.

6.5.2 Limit

According to Radio Law of Japan item 19 of Article 2 Paragraph 1, 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. When a simple FH system (except hybrid system) is used, total frequency dwell time at an arbitrary frequency within the time period obtained by multiplying 0.4 seconds by the process gain shall be 0.4 seconds or less.

Dwell time= dwell time=[(0.4◇SBW)/79]◇duty cycle

6.5.3 Test Setup



6.5.4 Test Procedures

1. Connect the EUT to SA by BT function;
2. EUT have transmitted the maximum modulation signal and fixed Channelize.
3. Setting of SA is following as:
RBW: 1MHz
VBW: 1MHz
Span = 0Hz
Sweep time: 5ms
Sweep Mode: Single sweep
Detect mode: RMS
Trace mode: Max hold.
4. Press the Sweep Button, and captured at least on burst by SA;
5. Use the delta function to marker the burst length
6. When the trace completed, saved the plots;
7. Repeat above steps for applicable test frequencies and Channel Bandwidth.

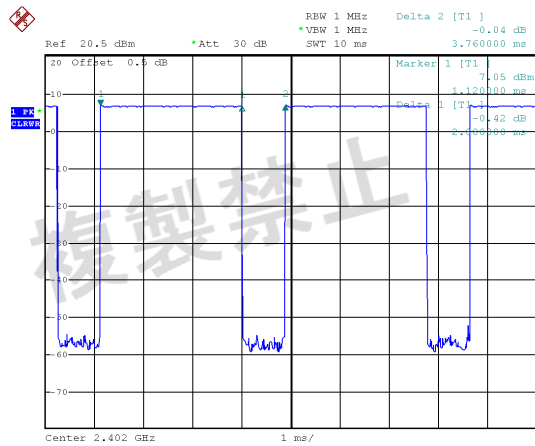
6.5.5 Test Result

Modulation	Data Packet	Channel	Duty Cycle	Spreading Rate	Dwell Time(s)	Limits(s)
GFSK	DH5	low	0.77	71.2	0.28	0.4
		middle	0.77	71.2	0.28	0.4
		high	0.77	71.2	0.28	0.4
$\pi/4$ DQPSK	2DH5	low	0.77	72	0.28	0.4
		middle	0.77	72	0.28	0.4
		high	0.77	72	0.28	0.4
8DPSK	3DH5	low	0.77	72	0.28	0.4
		middle	0.77	72	0.28	0.4
		high	0.77	72	0.28	0.4

Remark: only the worst data were recorded.

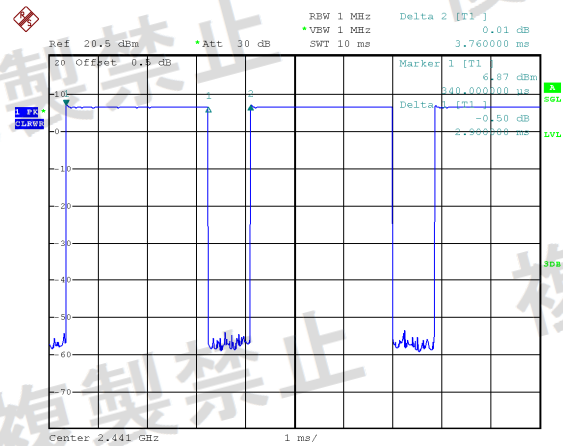
Test Plots GFSK Mode

Channel 2402MHz



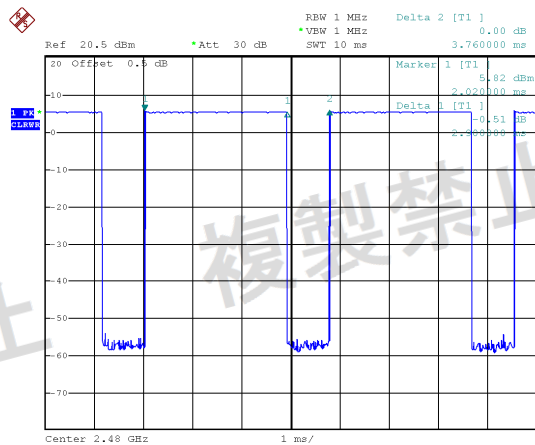
Date: 25.DEC.2025 09:35:37

Channel 2441MHz



Date: 25.DEC.2025 09:36:21

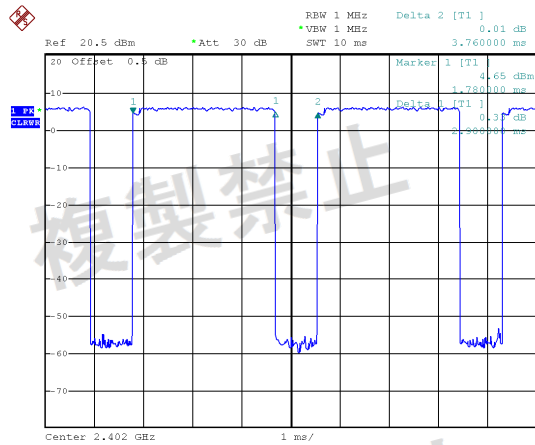
Channel 2480MHz



Date: 25.DEC.2025 09:37:07

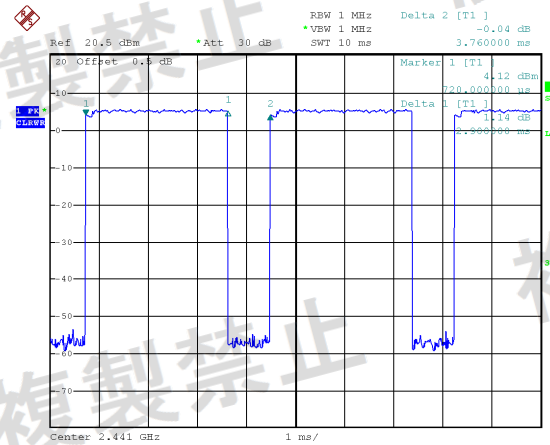
Test Plots $\pi/4$ DQPSK Mode

Channel 2402MHz



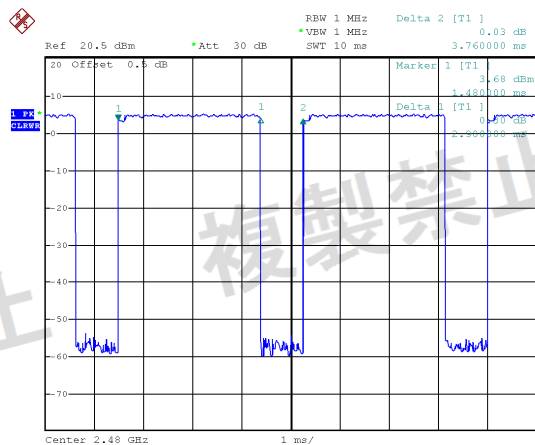
Date: 25.DEC.2025 09:38:30

Channel 2441MHz



Date: 25.DEC.2025 09:39:08

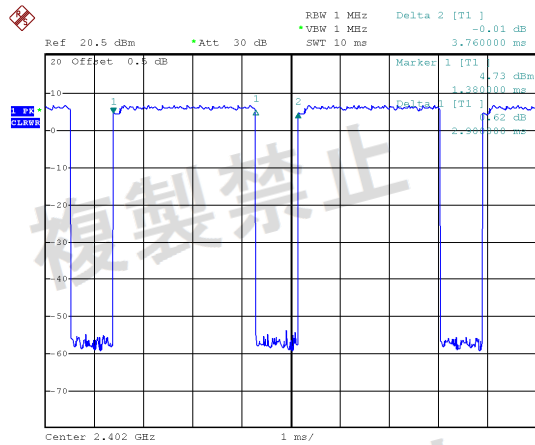
Channel 2480MHz



Date: 25.DEC.2025 09:39:49

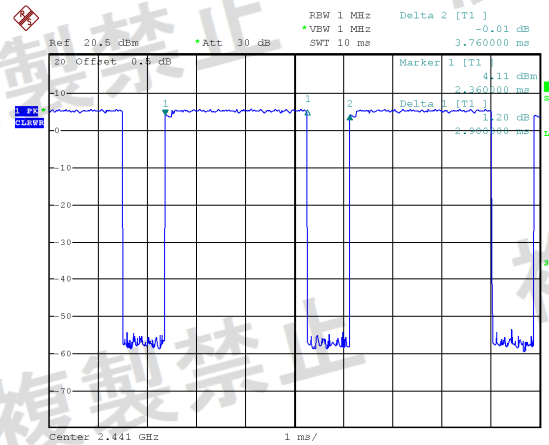
Test Plots 8DPSK Mode

Channel 2402MHz



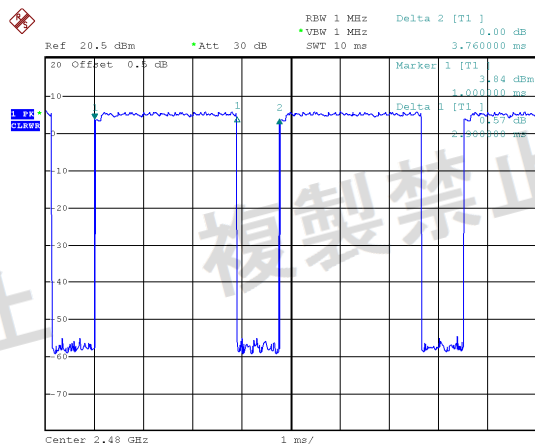
Date: 25.DEC.2025 09:41:40

Channel 2441MHz



Date: 25.DEC.2025 09:42:28

Channel 2480MHz



Date: 25.DEC.2025 09:43:12

6.6 Spurious Emission Intensity

6.6.1 Test Requirement

Radio Law of Japan item 19 of Article 2 Paragraph 1.

6.6.2 Limit

According to Radio Law of Japan item 19 of Article 2 Paragraph 1, 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 μW or less b. $2,387\text{MHz} > f$ and $2,496.5\text{MHz} < f$ 2.5 μW or less.

6.6.3 Measuring Instruments and setting

Please refer to section 4 in this report. The following table is the setting of the spectrum.

Spectrum Parameter	Setting
Attenuation	Auto
RB/VB	100KHz(below 1GHz);1MHz(Above 1GHz)
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

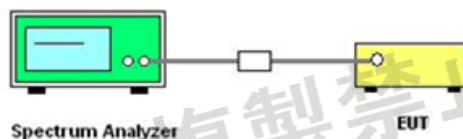
6.6.4 Test Procedures

- 1 EUT have transmitted the maximum modulation signal and fixed channelize.
- 2 Setting of SA is following as: RB/VB: 100KHz(below 1GHz);1MHz(Above 1GHz) / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold
- 3 Setting of SA is following as 30MHz and stop frequency 2387MHz Then to mark peak reading value + cable loss shall be less than 2.5 μW .
- 4 SA adjusted to start frequency 2387MHz and stop frequency 2400MHz. Then to mark peak reading value + cable loss shall be less than 25 μW .
- 5 SA adjusted to start frequency 2483.5MHz and stop frequency 2496.5MHz Then to mark peak reading value + cable loss shall be less than 25 μW
- 6 SA adjusted to start frequency 2496.5MHz and stop frequency 12500MHz Then to mark peak reading value + cable loss shall be less than 2.5 μW
- 7 If the result value is over the requirement, take total sum of 1MHz band centered at the spur frequency like ACLP measurement as result value.

Waltek Testing Group Co., Ltd.

<http://www.waltek.com.cn>

6.6.5 Test Setup Layout



6.6.6 Test Deviation

There is no deviation with the original standard.

6.6.7 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

6.6.8 Test Result

Modulation	Channel	Test Mode	Test Result
GFSK	Low	Transmitting	PASS
	Middle	Transmitting	PASS
	High	Transmitting	PASS
$\pi/4$ DQPSK	Low	Transmitting	PASS
	Middle	Transmitting	PASS
	High	Transmitting	PASS
8DPSK	Low	Transmitting	PASS
	Middle	Transmitting	PASS
	High	Transmitting	PASS
Remark: Only the worst modulation GFSK were reported.			

Modulation	Test Mode	Test Result
GFSK	Hopping	PASS
$\pi/4$ DQPSK	Hopping	PASS
8DPSK	Hopping	PASS
Remark: Only the worst modulation GFSK were reported.		

Test mode: Transmitting

Modulation	Channel	Band (GHz)	Frequency (GHz)	Max Value (dBm)	Max Value ($\mu\text{W}/\text{MHz}$)	Limit ($\mu\text{W}/\text{MHz}$)
GFSK (Normal)	Low	0.03-1	0.10566	-46.24	0.24*	2.5
		1-2.387	2.381452	-51.98	0.01	2.5
		2.387-2.4	2.4000	-17.75	16.79	25
		2.4835-2.4965	2.484748	-51.65	0.01	25
		2.4965-12.5	3.29678	-40.40	0.09	2.5
	Middle	0.03-1	0.33264	-47.21	0.19*	2.5
		1-2.387	2.037476	-52.33	0.01	2.5
		2.387-2.4	2.398284	-52.15	0.01	25
		2.4835-2.4965	2.490962	-51.60	0.01	25
		2.4965-12.5	11.439629	-40.96	0.08	2.5
	High	0.03-1	0.79242	-47.81	0.17*	2.5
		1-2.387	1.621376	-52.30	0.01	2.5
		2.387-2.4	2.38726	-51.55	0.01	25
		2.4835-2.4965	2.483500	-34.64	0.34	25
		2.4965-12.5	3.29678	-40.53	0.09	2.5

“*”: The measurement result is dBm/100kHz, which converted to $\mu\text{W}/100\text{kHz}$, and then converted to $\mu\text{W}/\text{MHz}$.

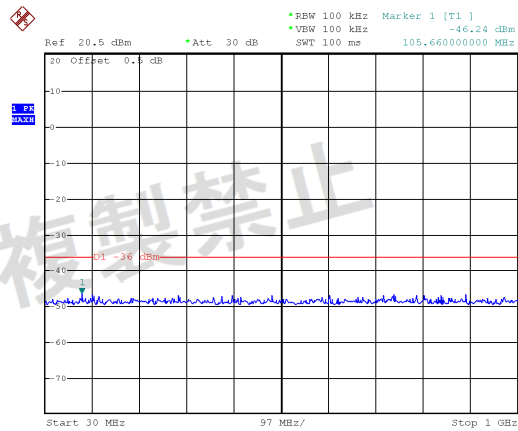
Test mode: Hopping

Modulation	Band (GHz)	Frequency (GHz)	Max Value (dBm)	Max Value ($\mu\text{W}/\text{MHz}$)	Limit ($\mu\text{W}/\text{MHz}$)
GFSK	0.03-1	0.161920	-47.52	0.18*	2.5
	1-2.387	1.083220	-51.67	0.01	2.5
	2.387-2.4	2.400000	-25.28	2.96	25
	2.4835-2.4965	2.483500	-34.03	0.40	25
	2.4965-12.5	3.29678	-39.96	0.10	2.5

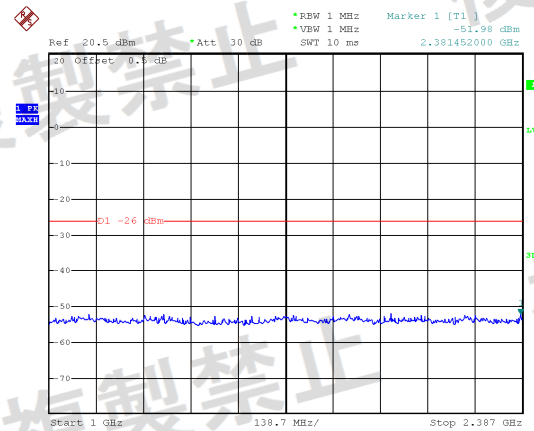
“*”: The measurement result is dBm/100kHz, which converted to $\mu\text{W}/100\text{kHz}$, and then converted to $\mu\text{W}/\text{MHz}$.

Test Plots

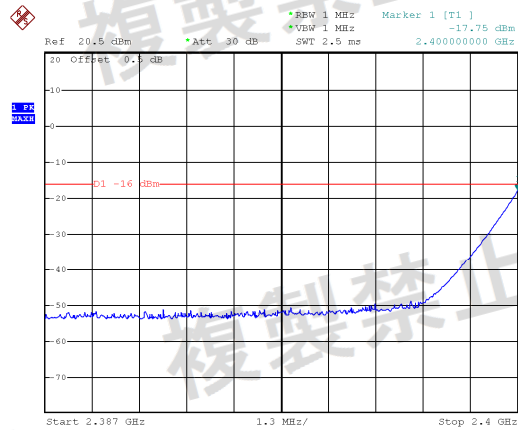
GFSK Transmitting Mode Low channel



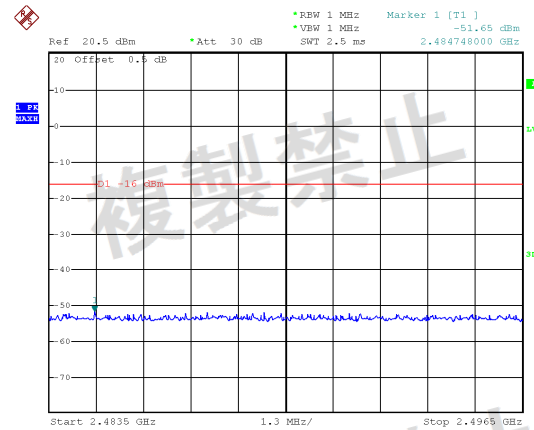
Date: 25.DEC.2025 10:14:43



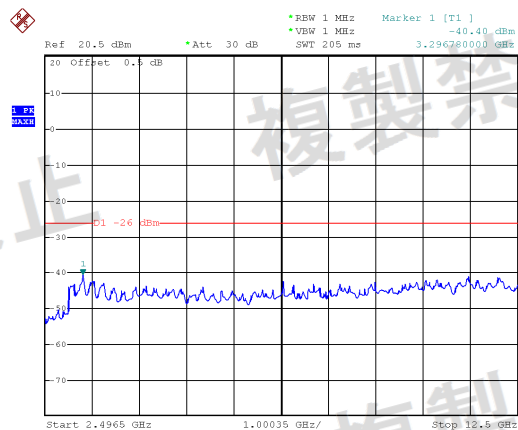
Date: 25.DEC.2025 12:03:40



Date: 25.DEC.2025 12:12:43

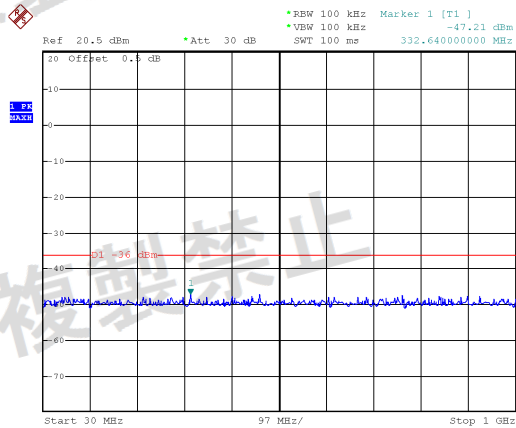


Date: 25.DEC.2025 12:23:05

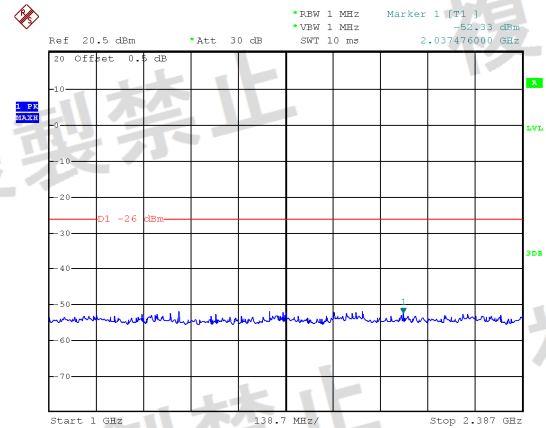


Date: 25.DEC.2025 12:27:52

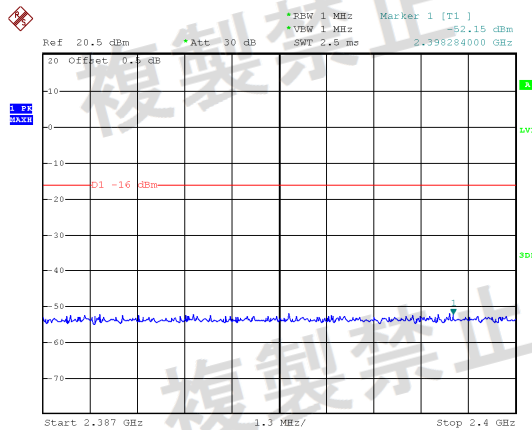
GFSK Transmitting Mode Middle channel



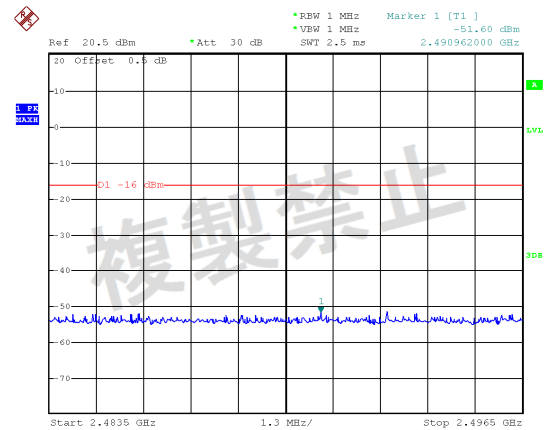
Date: 25.DEC.2025 10:15:06



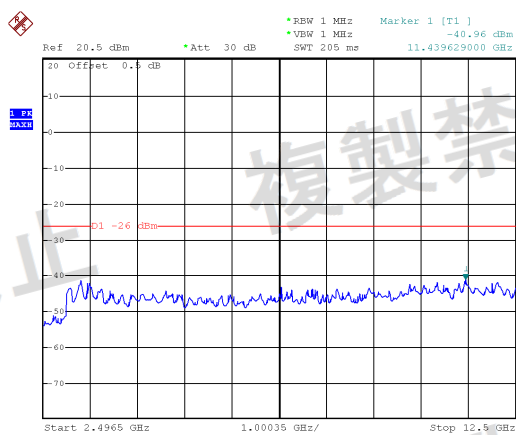
Date: 25.DEC.2025 12:04:02



Date: 25.DEC.2025 12:13:16

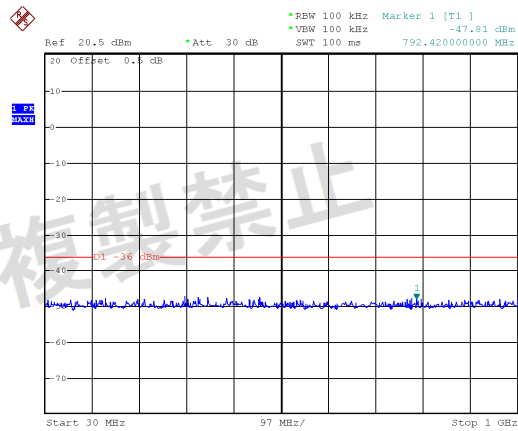


Date: 25.DEC.2025 12:23:24

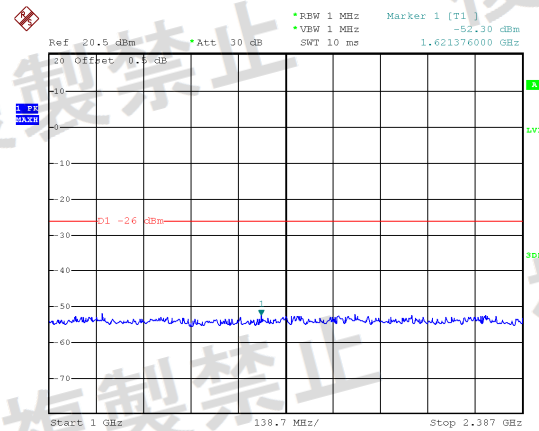


Date: 25.DEC.2025 12:28:12

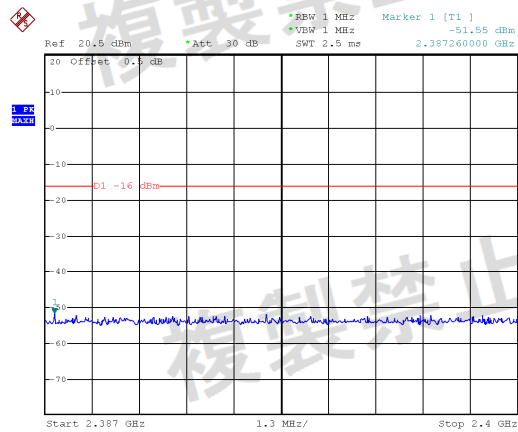
GFSK Transmitting Mode High channel



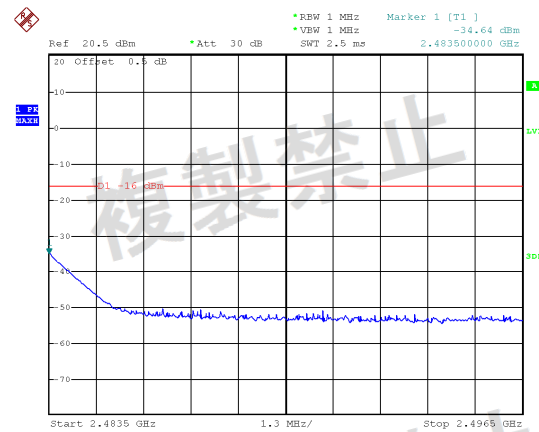
Date: 25.DEC.2025 10:15:21



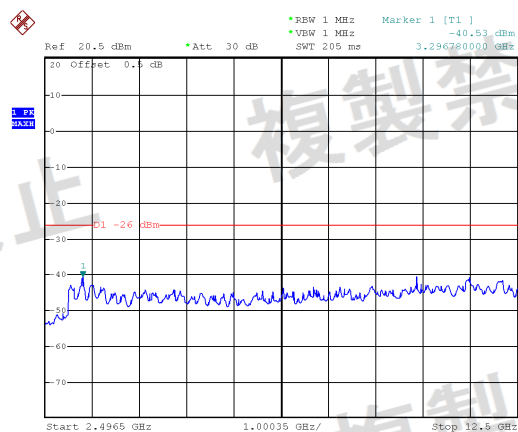
Date: 25.DEC.2025 12:04:20



Date: 25.DEC.2025 12:13:32

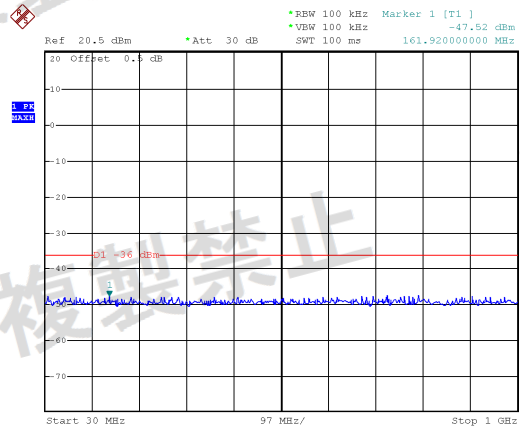


Date: 25.DEC.2025 12:23:55

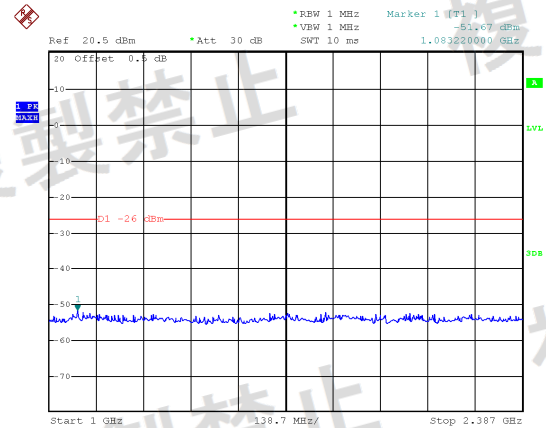


Date: 25.DEC.2025 12:28:34

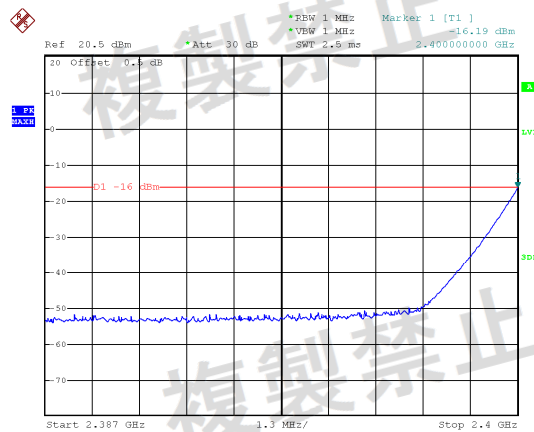
GFSK Hopping mode



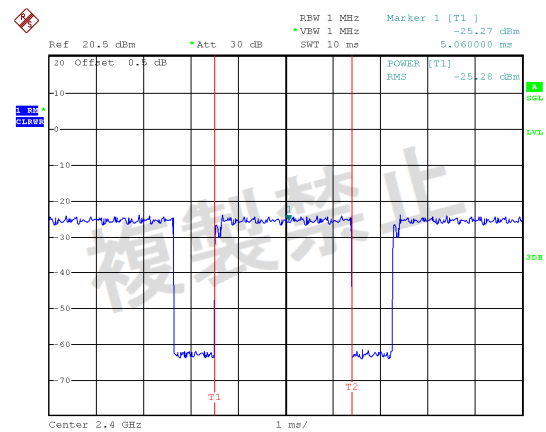
Date: 25.DEC.2025 12:00:35



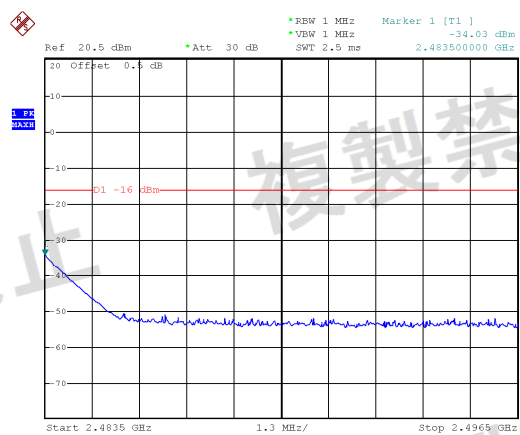
Date: 25.DEC.2025 12:05:37



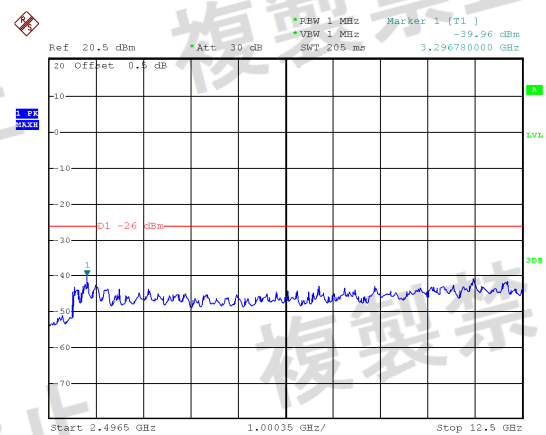
Date: 25.DEC.2025 12:18:26



Date: 30.DEC.2025 13:20:42



Date: 25.DEC.2025 12:27:04



Date: 25.DEC.2025 12:30:31

7 Measurements of Receiving Equipment

7.1 Secondary Radiated Emissions

7.1.1 Test Requirement

Radio Law of Japan item 19 of Article 2 Paragraph 1.

7.1.2 Limit

According to Radio Law of Japan item 19 of Article 2 Paragraph 1, 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, 4 nW 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.

7.1.3 Measuring Instruments and Setting

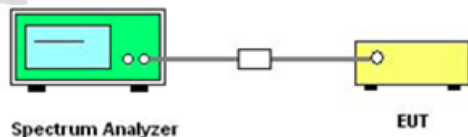
Please refer to section 4 in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
RB/VB	100 kHz (below 1GHz emissions) / 1 MHz (above 1GHz emissions)
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

7.1.4 Test Procedures

- 1 EUT has the continuous reception mode and fixed only one channelize.
- 2 Setting of SA is following as RB / VB: 100 kHz (below 1GHz emissions) / 1 MHz (above 1GHz emissions) / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold
- 3 SA set RB: 100kHz and VB: 100kHz. Then adjust to start frequency 30MHz and stop frequency 1000MHz. Search to mark peak reading value + cable loss shall be less than 4nW
- 4 SA set RB: 1MHz and VB: 1MHz. Then adjust to start frequency 1000MHz and stop frequency 12500MHz. Search to mark peak reading value + cable loss shall be less than 20nW
- 5 If power level of lower emissions are more than 1/10 of limit (0.4nW for $f < 1\text{GHz}$, 2nW for $f \geq 1\text{GHz}$), all those are to be indicated in the 2nd and 3rd lines. If others are 1/10 or less more of the limit, no necessary to be indicated

7.1.5 Test Setup Layout



7.1.6 Test Deviation

There is no deviation with the original standard.

7.1.7 EUT Operation during Test

The EUT was programmed to be in receiving mode.

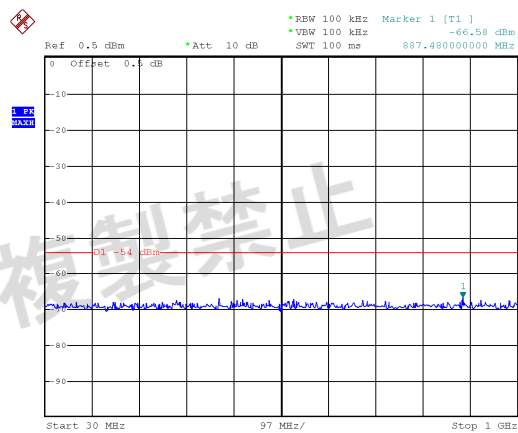
7.1.8 Test Result

Modulation	Channel	Test Mode	Test Result
GFSK(Normal)	Low	Receiving	PASS
	Middle	Receiving	PASS
	High	Receiving	PASS
$\pi/4$ DQPSK (Normal)	Low	Receiving	PASS
	Middle	Receiving	PASS
	High	Receiving	PASS
8DPSK(Normal)	Low	Receiving	PASS
	Middle	Receiving	PASS
	High	Receiving	PASS
Remark: Only the worst modulation GFSK (Normal) were reported.			

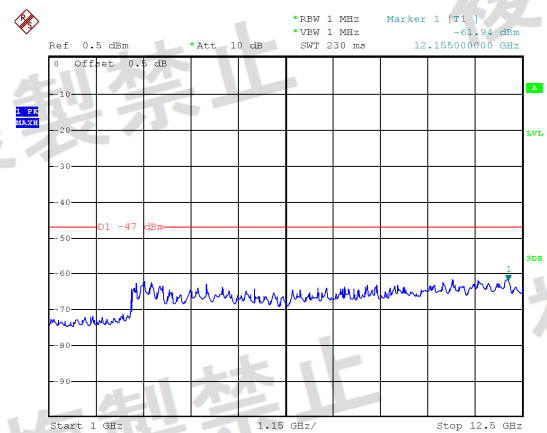
Modulation	Channel	Band (GHz)	Frequency (GHz)	Max Value (dBm)	Max Value (nW)	Limit (nW)
GFSK (Normal)	Low	0.03-1	0.88748	-66.58	0.22	4
		1-12.5	12.155	-61.94	0.64	20
	Middle	0.03-1	0.78466	-66.62	0.22	4
		1-12.5	11.465	-60.58	0.87	20
	High	0.03-1	0.76526	-67.30	0.19	4
		1-12.5	11.465	-60.58	0.87	20

Test plots

GFSK (Normal) Mode Low channel

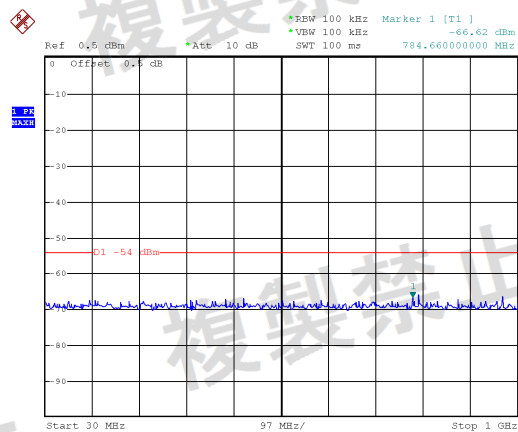


Date: 25.DEC.2025 12:35:07

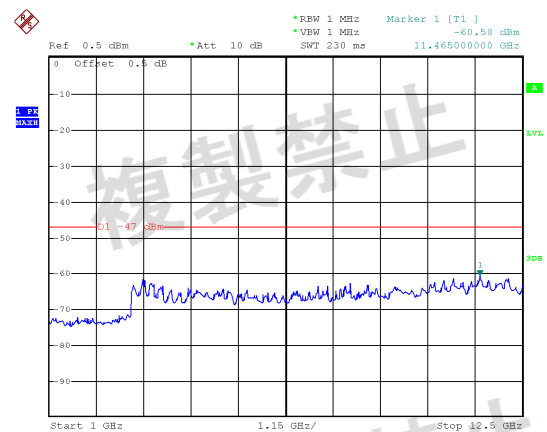


Date: 25.DEC.2025 12:38:35

GFSK (Normal) Mode Middle channel

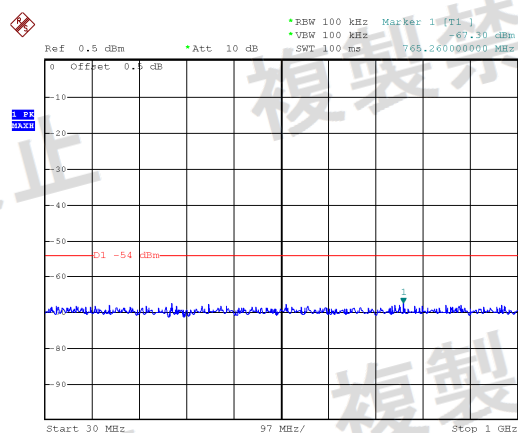


Date: 25.DEC.2025 12:35:36

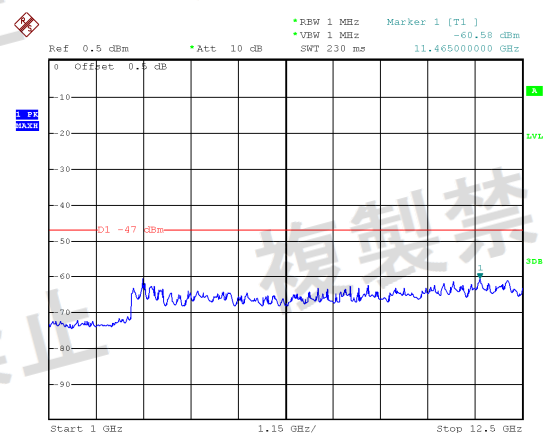


Date: 25.DEC.2025 12:39:06

GFSK (Normal) Mode High channel



Date: 25.DEC.2025 12:35:49



Date: 25.DEC.2025 12:39:23

8 Measurements of Telecommunications circuit connection equipment

8.1 Interference prevention function

8.1.1 Test Requirement

Radio Law of Japan item 19 of Article 2 Paragraph 1.

8.1.2 Conditions etc. of test equipment

- (1) The demodulator shall be able to demodulate the transmitting signal from the radio equipment and display contents of the identification code.
- (2) The opposite equipment shall be able to transmit the identification code as same as the transmitting signal from the radio equipment

8.1.3 Test Procedure

- (1) The radio equipment with automatic transmitting function of identification code A. Transmit the assigned identification code from the radio equipment. B. Confirm the identification code received by the demodulator.
- (2) The radio equipment with automatic receiving function of identification code A. Transmit the assigned identification code from the opposite equipment.

8.1.4 Test Setup Layout



8.1.5 Test Deviation

There is no deviation with the original standard.

8.1.6 EUT Operation during Test

The EUT was programmed to be in normal operation mode.

8.1.7 Test Result

Item	Modulation	Test mode	Results
Identification code	GFSK(Normal)	Normal Operation	PASS
Identification code	$\pi/4$ DQPSK (Normal)	Normal Operation	PASS
Identification code	8DPSK(Normal)	Normal Operation	PASS

EUT BD Address: 40:d9:5a:6a:97:25

9 Test Setup View



10 Photographs - Constructional Details

Note: Please refer to appendix: Appendix-SyBran-01-Photos.

===== End of Report =====