

**TEST REPORT**

Report Reference No..... : HTT2025051228-1

Compiled by

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Kevin Yang

Date of issue..... : Jun. 05, 2025

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

Address..... : 1F, B Building, Huafeng International Robotics Industrial Park,
Gushu, Xixiang Street, Bao'an District, Shenzhen

Applicant..... : EASTEND COMPANY Co.,Ltd

Address..... : 1-7-7, Hiranokita, Hirano-Ku, Osaka, Japan

Test specification

Standard..... : Ordinance Article 2 paragraph 1 item (19)

Test item description : Smart watch

Trade Mark..... : N/A

Shenzhen Mingyang Industrial Development Co., Ltd.
No. 5009A15, Dongsan Commercial Building, No.19 Longgang
Road, Pingnan Community, Longgang Street, Longgang District,
Shenzhen, China

Model/Type reference..... : EE03

Serial Model..... : N/A

Rating(s) : DC 3.8V From Battery and DC 5V From External circuit

Result..... : PASS





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TEST REPORT

Test Report No. : HTT2025051228-1

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Equipment under Test : Smart watch

Model Name : EE03

Serial Model : N/A

Trade Mark : N/A

Applicant : EASTEND COMPANY Co.,Ltd

Address : 1-7-7, Hiranokita, Hirano-Ku, Osaka, Japan

Manufactured by : Shenzhen Mingyang Industrial Development Co., Ltd.

Address : No. 5009A15, Dongsan Commercial Building, No.19 Longgang Road, Pingnan Community, Longgang Street, Longgang District, Shenzhen, 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		
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)	N/A
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. Test Facility

1.3.1 Address of the test laboratory

Shenzhen HTT Technology Co.,Ltd.

1F, B Building, Huafeng International Robotics Industrial Park, Gushu, Xixiang Street, Bao'an District, Shenzhen, China



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	$\pm 1.62 \cdot 10^{-6}$
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. Environmental conditions

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

Voltage	Normal Voltage	DC 3.30V
	High Voltage	DC 3.63V
	Low Voltage	DC 2.97V
Other	Normal Temperature	25°C
	Relative Humidity	55 %
	Air Pressure	989 hPa

Note: As the EUT was powered by DC 3.3V and with the voltage stabilizing circuit used of the EUT, the voltage floating to the chip not exceed $\pm 1\%$ of normal condition when supply with extreme voltage, so all test performed at normal voltage only.

2.2. General Description of EUT

Product Name:	Smart watch
Model/Type reference:	EE03
Date of sample receipt:	May. 29, 2025
Date of Test:	May. 29, 2025 ~ Jun. 05, 2025
Bluetooth	
Supported type:	Supported Bluetooth BR/EDR
Modulation:	GFSK, $\pi/4$ DQPSK, 8DPSK
Operation frequency:	2402MHz~2480MHz
Channel number:	79
Channel separation:	1MHz
Rated power:	GFSK: 0.007mW/MHz $\pi/4$ DQPSK: 0.003mW/MHz 8DPSK: 0.004mW/MHz
Antenna type:	Wire Antenna
Antenna Gain:	0.00 dBi
Firmware Version	04.98.01.00-7434
Hardware Version	7434

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



2.3. 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.

2.4. Measurement Instruments List

RF Conducted Test:							
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Institution	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Oscilloscope	TEK	TDS3012B	HTT-004	LISAI	April 22, 2025	April 21, 2026
2	MXA signal analyzer	Agilent	N9020A	HTT-E024	LISAI	April 22, 2025	April 21, 2026
3	EMI Test Receiver	R&S	ESCI 7	HTT-E022	LISAI	April 22, 2025	April 21, 2026
4	DC Power	Agilent	E3632A	HTT-E023	LISAI	April 22, 2025	April 21, 2026
5	Analog signal generator	Agilent	N5181A	HTT-E025	LISAI	April 22, 2025	April 21, 2026
6	Vector signal generator	Agilent	N5182A	HTT-E026	LISAI	April 22, 2025	April 21, 2026
7	USB RF Power Sensor	Keysight	U2021XA	HTT-E027	LISAI	April 22, 2025	April 21, 2026
8	Spectrum Analyzer	KEYSIGHT	FSP	HTT-E037	LISAI	April 22, 2025	April 21, 2026
9	RF Switch Box	Shongyi	RFSW3003328	HTT-E047	LISAI	April 22, 2025	April 21, 2026
10	Programmable Constant Temp & Humi Test Chamber	SERTEP	STP-HWS225 B	HTT-092	LISAI	April 22, 2025	April 21, 2026
11	Temperature and humidity meter	Anbiao	TH10R	HTT-074	LISAI	April 22, 2025	April 21, 2026

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.



2.5. 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	Default	Default	Default

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

2.7. 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 3.30V	DC 3.63V	DC 2.97V
Output To RF Module	DC 3.30V	DC 3.30V	DC 3.30V
Voltage Variation (%)	--	--	--

Note:

Voltage Variation (%)

$$= (\text{Output high or Low Voltage} - \text{Output Normal Voltage}) / \text{Output Normal Voltage} \times 100$$

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.



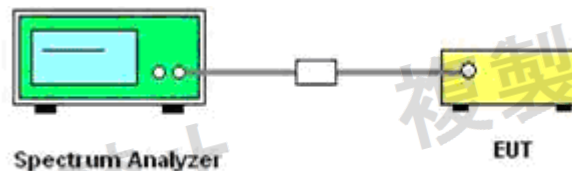
3. Test conditions and Results

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:

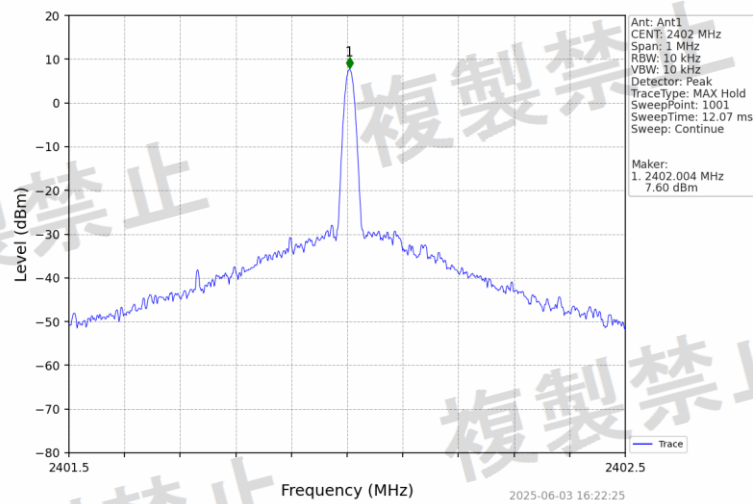
- Frequency: test frequency
- Span: 300 KHz
- RBW: 10 KHz
- VBW: 30 KHz
- Sweep time: Auto
- Detector mode: Positive peak
- Indication mode: max hold

TEST RESULTS

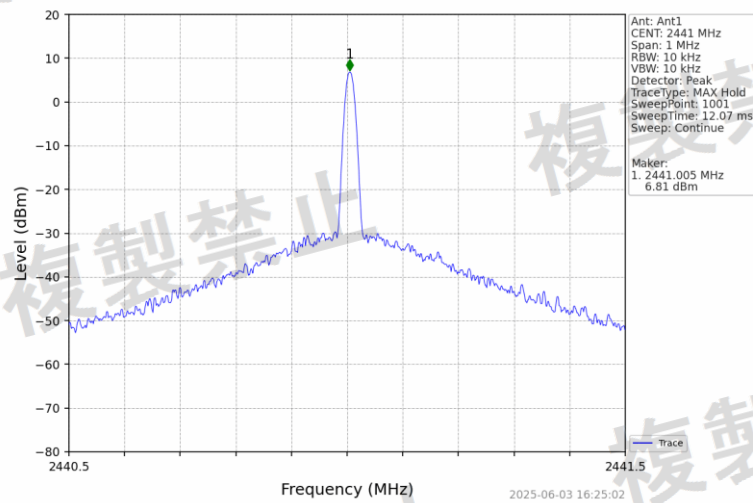
Ant1								
ENV	Mode	TX Type	Frequency (MHz)	Packet Type	Measured Frequency (MHz)	Tolerance (ppm)		Verdict
						Result	Limit	
NTNV	Carrier Wave	SISO	2402	DH5	2402.004	1.67	-50 to 50	Pass
			2441	DH5	2441.005	2.05	-50 to 50	Pass
			2480	DH5	2480.005	2.02	-50 to 50	Pass



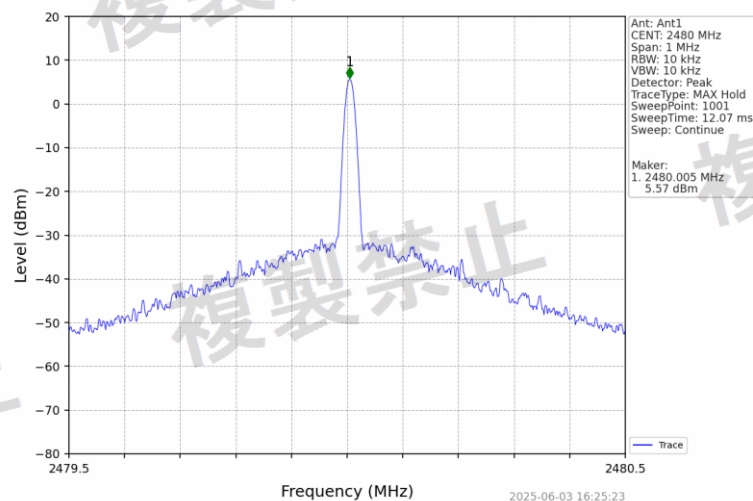
Test Plots of Frequency Error



2402 MHz



2441 MHz



2480 MHz



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)

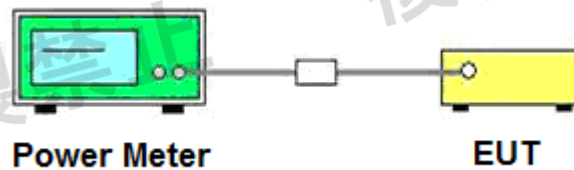
The Output Power Tolerance must be within +20%

E.i.r.p:

- $\leq 12.14 \text{ dBm/MHz}$ (OFDM, DS form 2400-2483.5 MHz)

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 between +20% power range that base on manufacturer declare the conducted power density.

TEST RESULTS

ENV	Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Antenna Power (mW/MHz)		Nominal Power (mW/MHz)	Tolerance (%)		Verdict
						Measured	Limit		Measured	Limit	
NTNV	GFSK	SISO	HOPP	DH5	1	0.007	≤ 3.00	0.007	0	+20	Pass
	Pi/4DQPSK	SISO	HOPP	2DH5	1	0.003	≤ 3.00	0.003	0	+20	Pass
	8DPSK	SISO	HOPP	3DH5	1	0.004	≤ 3.00	0.004	0	+20	Pass

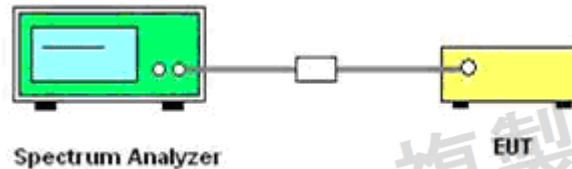


3.3. OCCUPIED BANDWIDTH AND SPREADING BANDWIDTH

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 fellow:
 - 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)

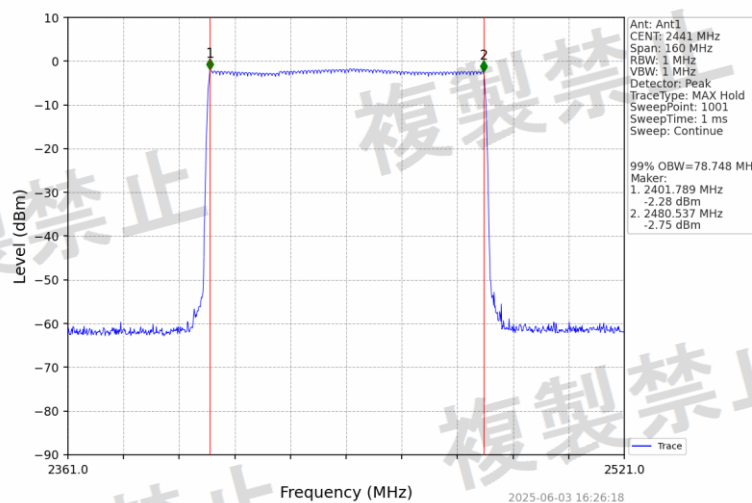
TEST RESULTS

Test Result of Occupied Bandwidth

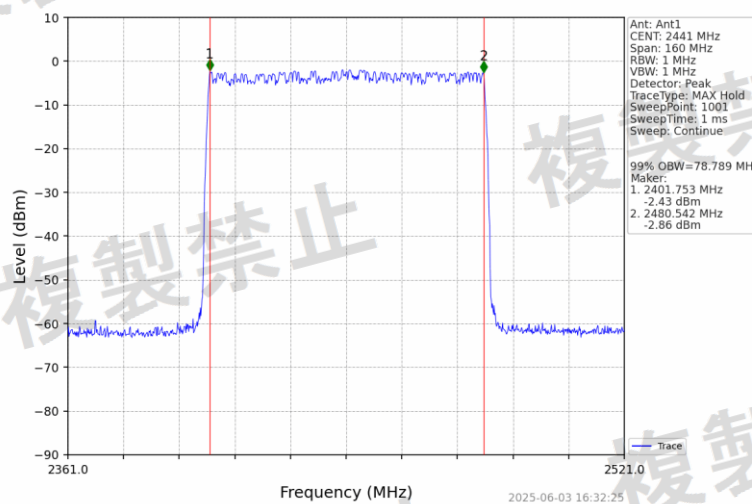
ENV	Mode	TX Type	Frequency (MHz)	Packet Type	99% Occupied Bandwidth (MHz)		Verdict
					ANT1	Limit	
NTNV	GFSK	SISO	HOPP	DH5	78.748	$\leq$ 83.5	Pass
	PI/4DQPSK	SISO	HOPP	2DH5	78.789	$\leq$ 83.5	Pass
	8DPSK	SISO	HOPP	3DH5	78.728	$\leq$ 83.5	Pass



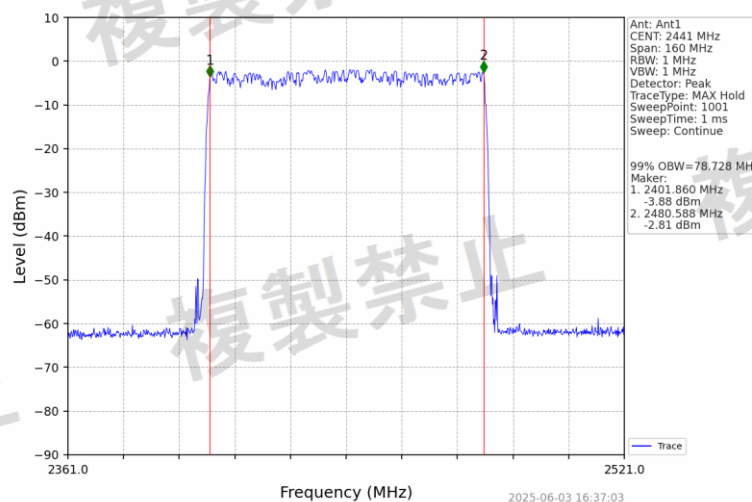
GFSK DH5 HOPP Ant1 NTN



PI4DQPSK 2DH5 HOPP Ant1 NTN



8DPSK 3DH5 HOPP Ant1 NTN





Test Result of Spectrum Bandwidth

ENV	Mode	TX Type	Frequency (MHz)	Packet Type	Spread Bandwidth (MHz)		Verdict
					ANT1	Limit	
NTNV	GFSK	SISO	HOPP	DH5	71.607	/	Only For Report
	Pi/4DQPSK	SISO	HOPP	2DH5	71.833	/	Only For Report
	8DPSK	SISO	HOPP	3DH5	72.264	/	Only For Report

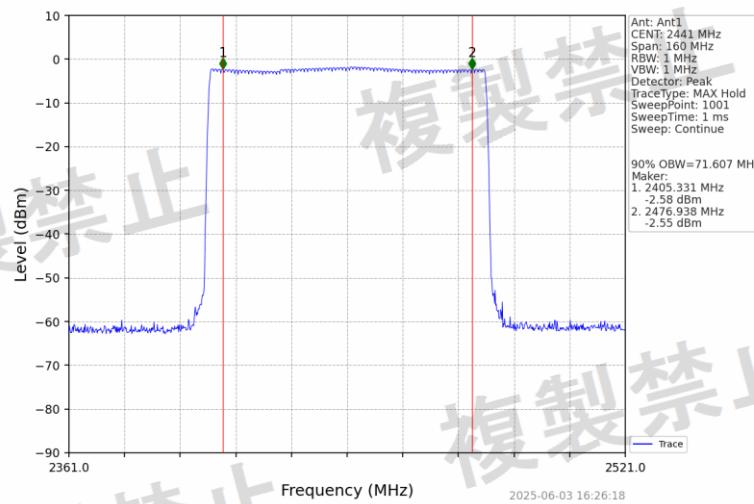
Test Result of Spread Spectrum Factor

ENV	Mode	TX Type	Frequency (MHz)	Packet Type	Spread Factor		Verdict
					ANT1	Limit	
NTNV	GFSK	SISO	HOPP	DH5	71.607	≥ 5	Only For Report
	Pi/4DQPSK	SISO	HOPP	2DH5	71.833	≥ 5	Only For Report
	8DPSK	SISO	HOPP	3DH5	72.264	≥ 5	Only For Report

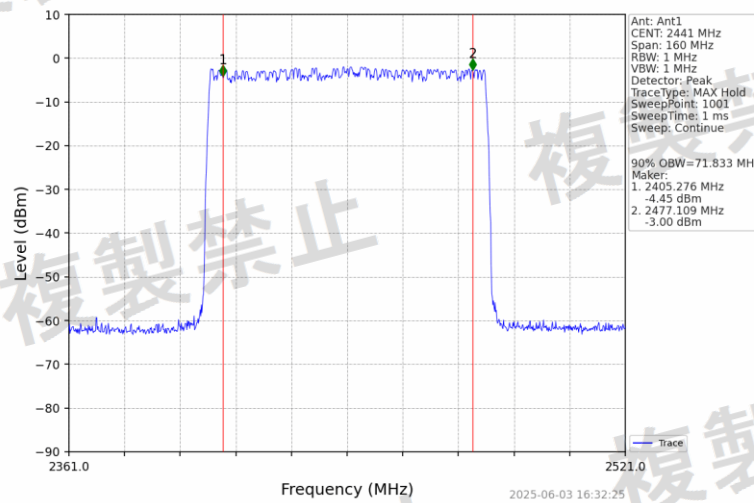
Note1: Spread Factor = Spread Bandwidth / Symbol Rate, For Bluetooth, Symbol Rate = 1



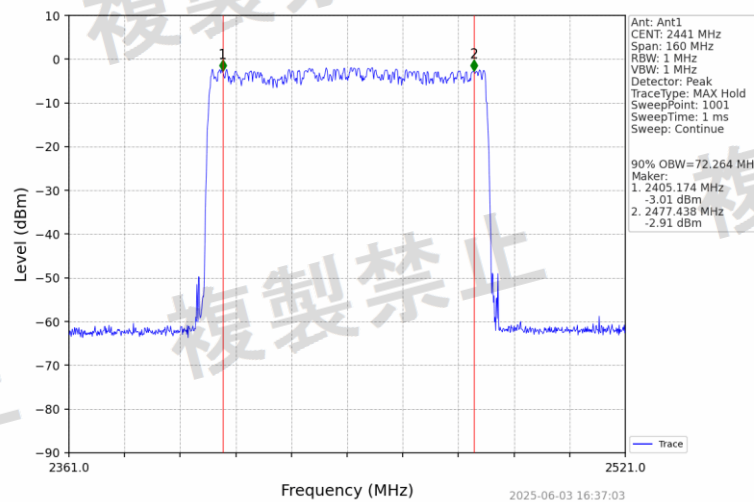
GFSK DH5 HOPP Ant1 NTN



PI4DQPSK 2DH5 HOPP Ant1 NTN



8DPSK 3DH5 HOPP Ant1 NTN



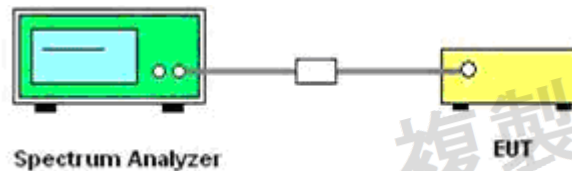


3.4. Dwell time

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: 1MHz
- Sweep time: Auto
- Detector mode: Positive peak

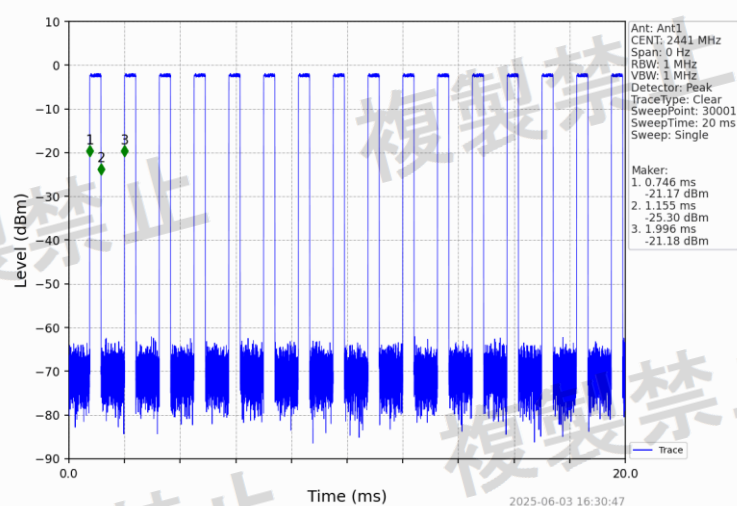
TEST RESULTS

Ant1											
ENV	Mode	TX Type	Frequency (MHz)	Packet Type	Spreading Rate	T_on (ms)	Period (ms)	Hopp Number	Dwell Time (ms)		Verdict
									Result	Limit	
NTNV	GFSK	SISO	2441	DH1	71.607	0.409	1.250	79	118.632	<=400	Pass
				DH3	71.607	1.666	2.500	79	241.615	<=400	Pass
				DH5	71.607	2.913	3.750	79	281.642	<=400	Pass
	Pi/4DQPSK	SISO	2441	2DH1	71.833	0.420	1.250	79	122.207	<=400	Pass
				2DH3	71.833	1.671	2.500	79	243.105	<=400	Pass
				2DH5	71.833	2.919	3.750	79	283.113	<=400	Pass
	8DPSK	SISO	2441	3DH1	72.264	0.420	1.250	79	122.940	<=400	Pass
				3DH3	72.264	1.669	2.500	79	244.271	<=400	Pass
				3DH5	72.264	2.920	3.750	79	284.909	<=400	Pass

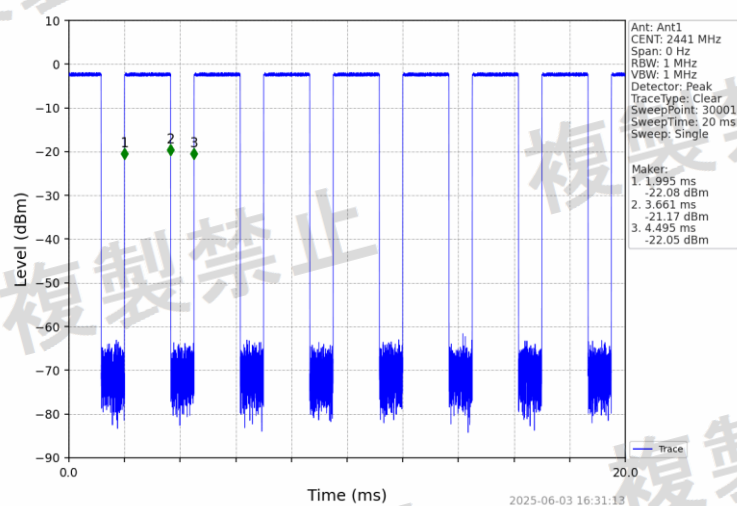
*Note: Dwell time= (400 x spreading rate x Ton) / (Period x 79)



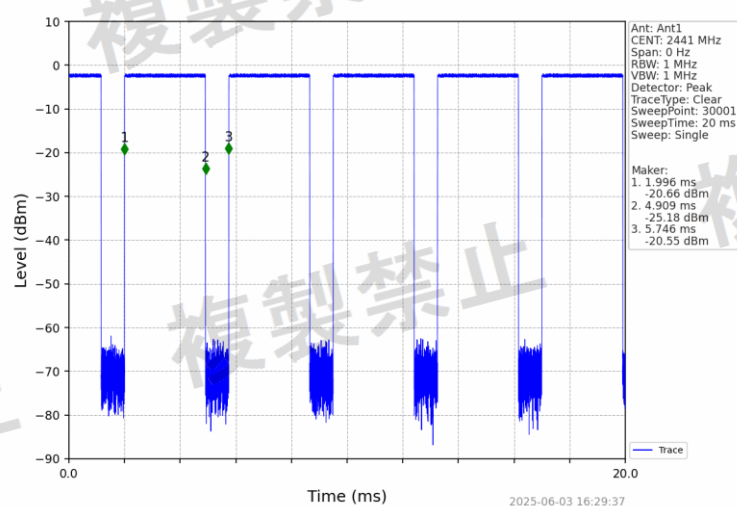
GFSK DH1 2441MHz Ant1 NTV



GFSK DH3 2441MHz Ant1 NTV

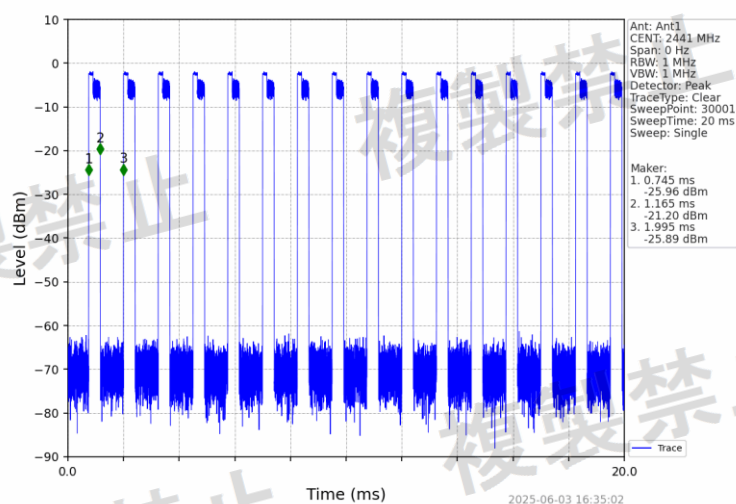


GFSK DH5 2441MHz Ant1 NTV

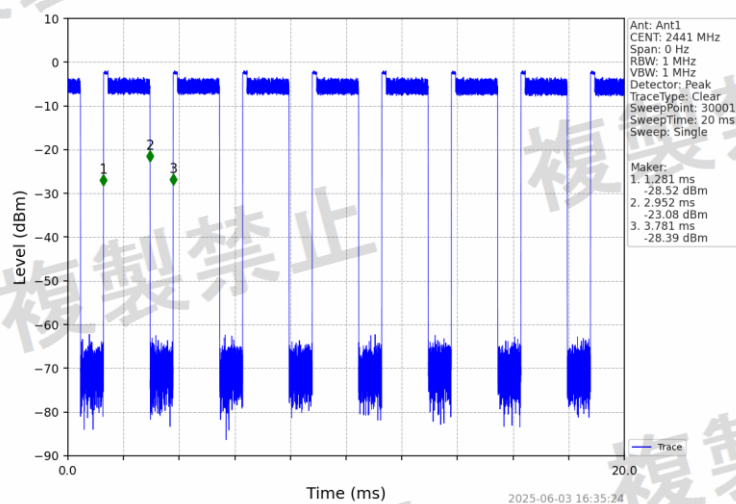




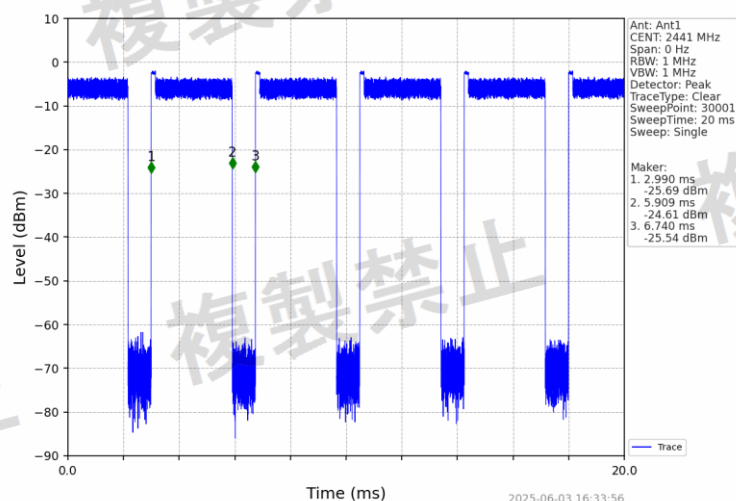
Pi/4DQPSK 2DH1 2441MHz Ant1 NTVN



Pi/4DQPSK 2DH3 2441MHz Ant1 NTVN

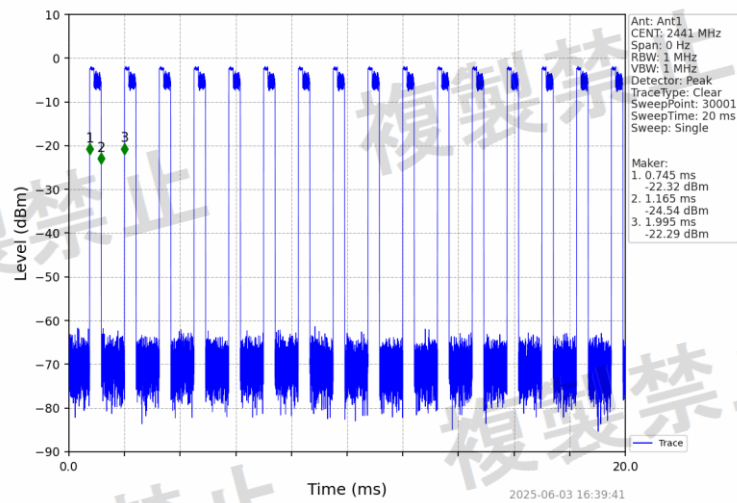


Pi/4DQPSK 2DH5 2441MHz Ant1 NTVN

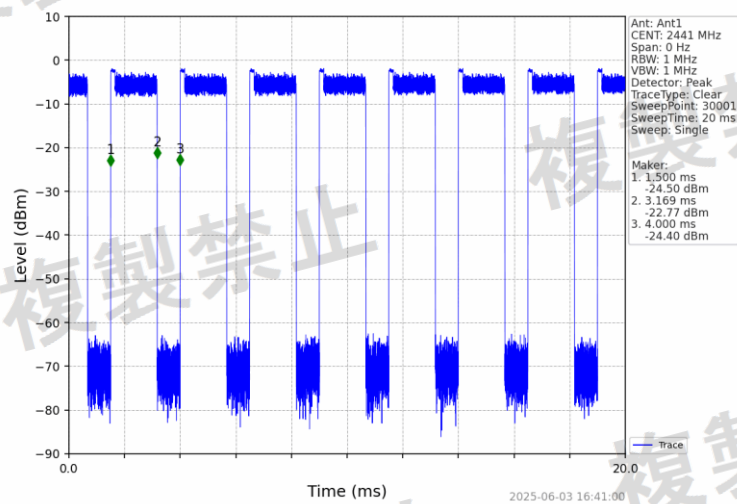




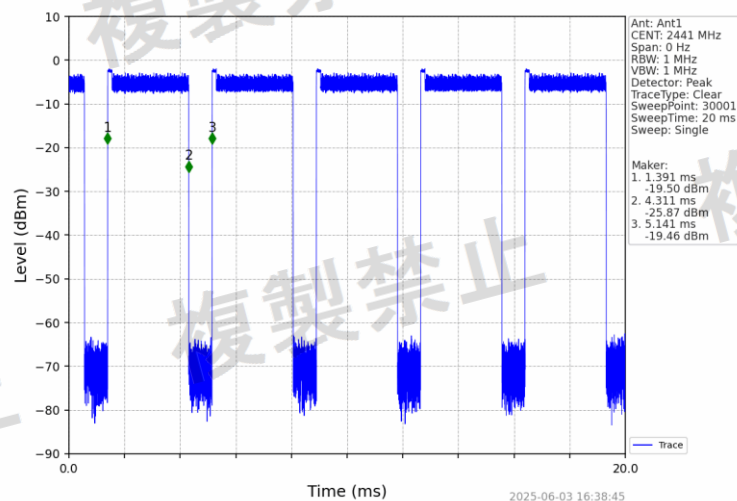
8DPSK 3DH1 2441MHz Ant1 NTN



8DPSK 3DH3 2441MHz Ant1 NTN



8DPSK 3DH5 2441MHz Ant1 NTN





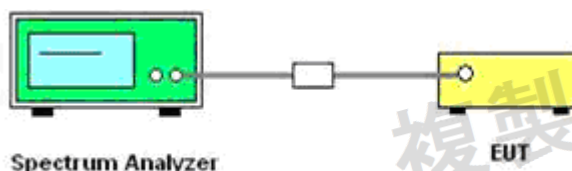
3.5. Unwanted Emission Strength

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

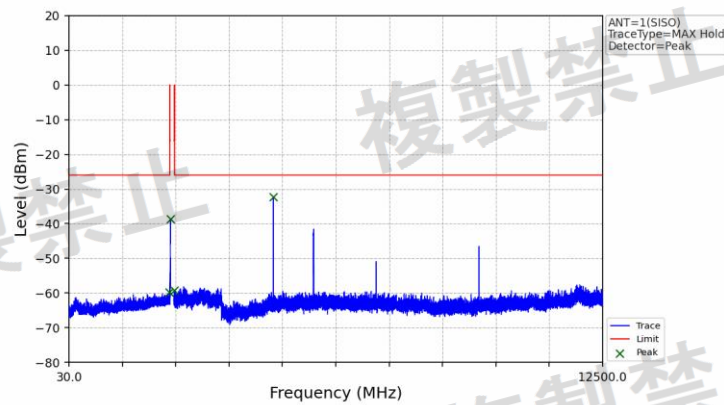
Spectrum Condition:

- Frequency: 30MHz-13GHz
- RBW: 100 KHz (30MHz-1GHz), 1MHz (1GHz-12.5GHz)
- VBW: 100 KHz (30MHz-1GHz), 1MHz (1GHz-12.5GHz)
- Sweep time: Auto
- Detector mode: Positive peak
- Indication mode: max hold

TEST RESULTS

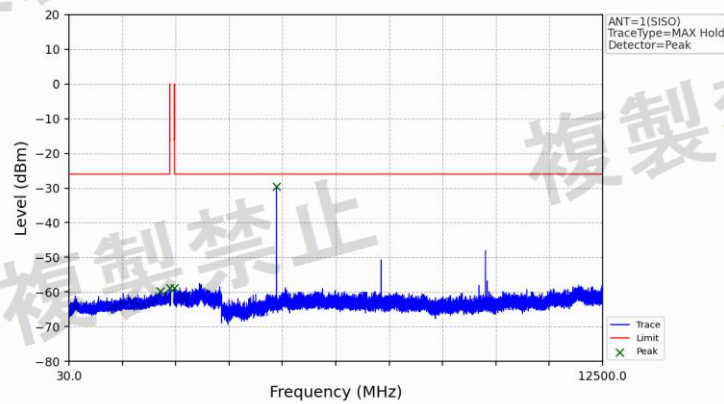


GFSK DH5_2402MHz_Ant1_NTNV



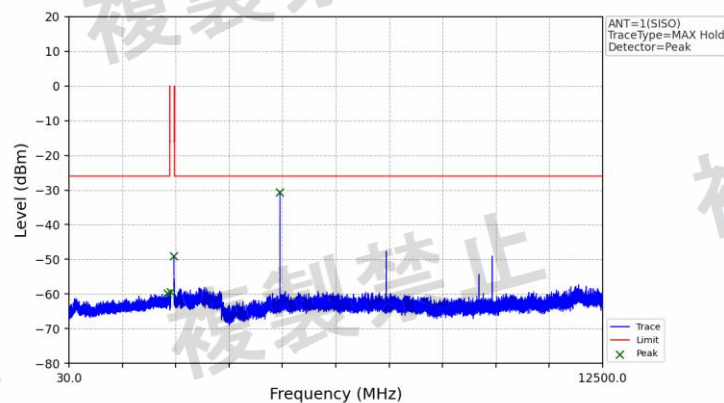
Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2371.000	-59.85	/	-26	Pass
2387	2400	1	1	2399.974	-38.69	/	-16	Pass
2483.5	2496.5	1	1	2494.667	-59.15	/	-16	Pass
2496.5	12500	1	1	4804.500	-32.20	/	-26	Pass

GFSK DH5_2441MHz_Ant1_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2162.500	-59.81	/	-26	Pass
2387	2400	1	1	2393.422	-58.93	/	-16	Pass
2483.5	2496.5	1	1	2489.233	-58.88	/	-16	Pass
2496.5	12500	1	1	4883.000	-29.59	/	-26	Pass

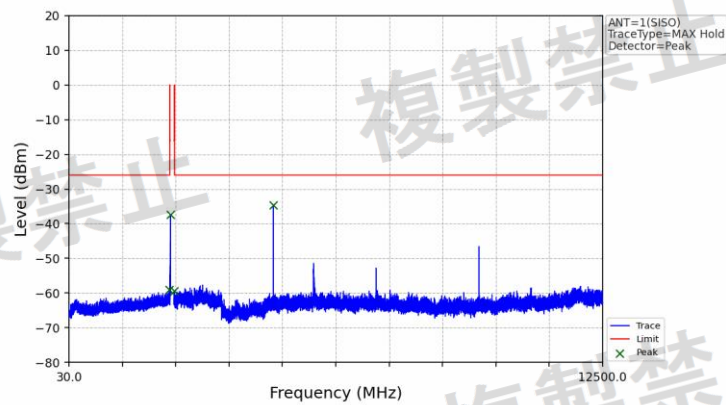
GFSK DH5_2480MHz_Ant1_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2326.500	-59.79	/	-26	Pass
2387	2400	1	1	2399.454	-59.43	/	-16	Pass
2483.5	2496.5	1	1	2483.526	-49.04	/	-16	Pass
2496.5	12500	1	1	4960.500	-30.55	/	-26	Pass

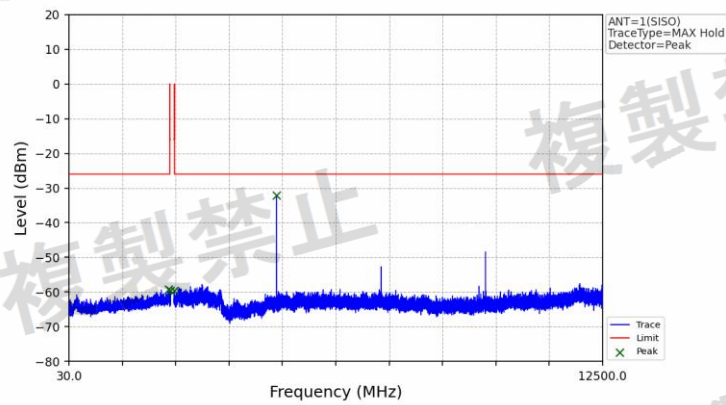


Pi/4DQPSK 2DH5 2402MHz Ant1 NTV



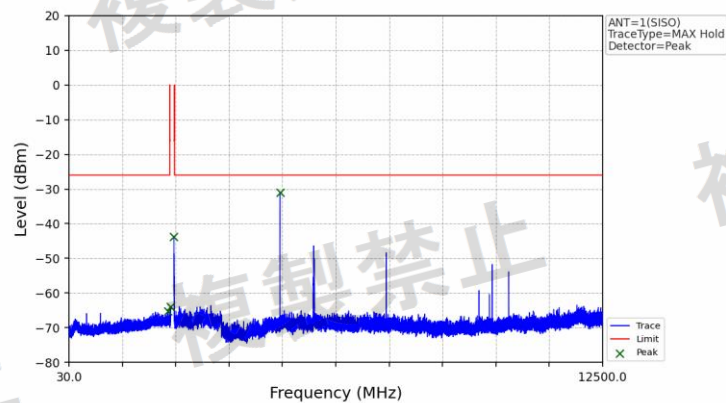
Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2376.000	-59.12	/	-26	Pass
2387	2400	1	1	2399.935	-37.43	/	-16	Pass
2483.5	2496.5	1	1	2492.418	-59.34	/	-16	Pass
2496.5	12500	1	1	4805.000	-34.70	/	-26	Pass

Pi/4DQPSK 2DH5 2441MHz Ant1 NTV



Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2365.000	-59.18	/	-26	Pass
2387	2400	1	1	2398.843	-59.65	/	-16	Pass
2483.5	2496.5	1	1	2489.818	-59.51	/	-16	Pass
2496.5	12500	1	1	4883.000	-32.16	/	-26	Pass

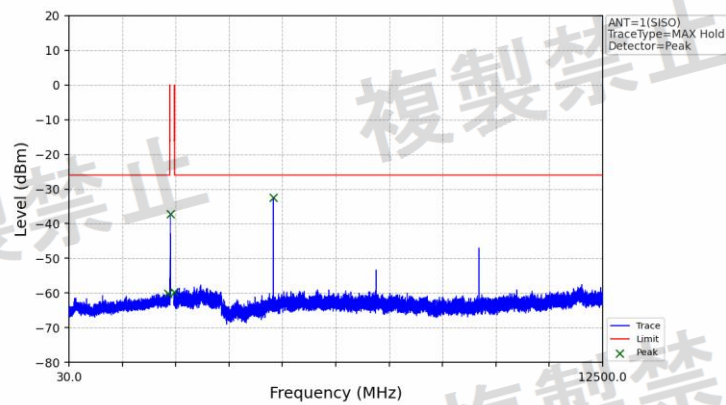
Pi/4DQPSK 2DH5 2480MHz Ant1 NTV



Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2346.000	-65.31	/	-26	Pass
2387	2400	1	1	2396.945	-64.00	/	-16	Pass
2483.5	2496.5	1	1	2483.513	-43.76	/	-16	Pass
2496.5	12500	1	1	4961.000	-30.95	/	-26	Pass

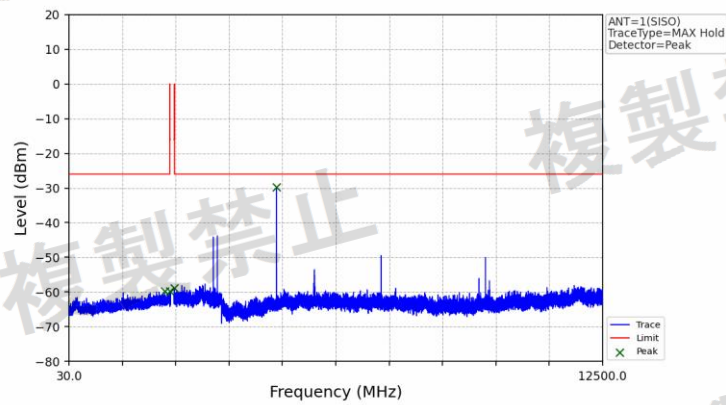


8DPSK 3DH5 2402MHz Ant1 NTN



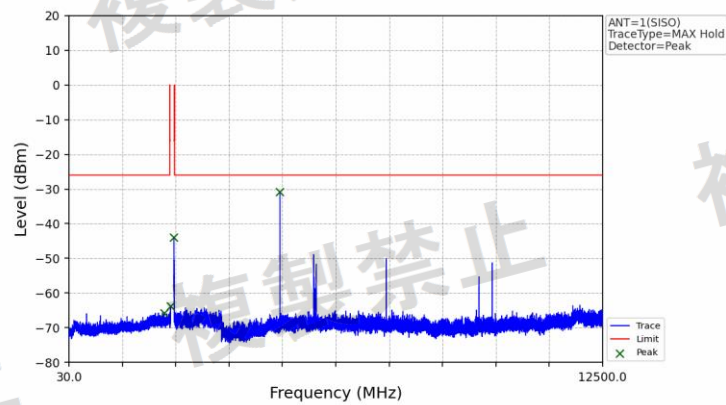
Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2339.500	-60.08	/	-26	Pass
2387	2400	1	1	2399.792	-37.25	/	-16	Pass
2483.5	2496.5	1	1	2491.404	-59.82	/	-16	Pass
2496.5	12500	1	1	4804.500	-32.44	/	-26	Pass

8DPSK 3DH5 2441MHz Ant1 NTN



Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2264.500	-59.85	/	-26	Pass
2387	2400	1	1	2393.071	-59.87	/	-16	Pass
2483.5	2496.5	1	1	2490.039	-58.96	/	-16	Pass
2496.5	12500	1	1	4882.500	-29.73	/	-26	Pass

8DPSK 3DH5 2480MHz Ant1 NTN



Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2255.500	-65.76	/	-26	Pass
2387	2400	1	1	2399.207	-63.75	/	-16	Pass
2483.5	2496.5	1	1	2483.773	-43.93	/	-16	Pass
2496.5	12500	1	1	4960.000	-30.85	/	-26	Pass

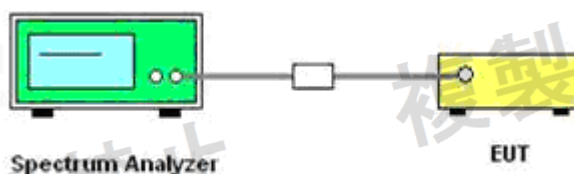


3.6. Secondary Radiated Emission Strength

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 20nW 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

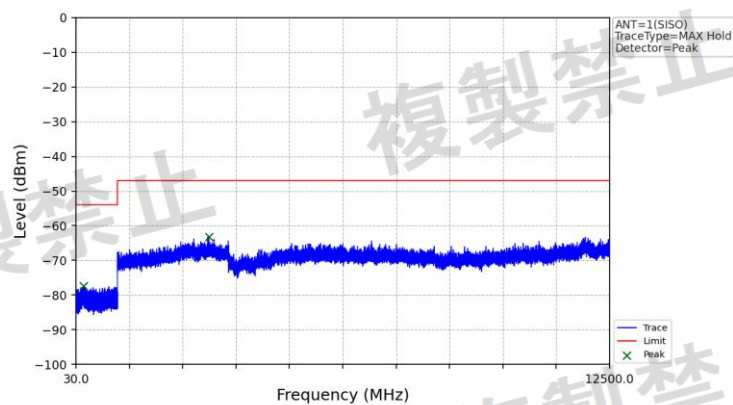
Spectrum Condition:

- Frequency: 30MHz-13GHz
- RBW: 100 KHz (30MHz-1GHz), 1MHz (1GHz-12.5GHz)
- VBW: 100 KHz (30MHz-1GHz), 1MHz (1GHz-12.5GHz)
- Sweep time: Auto
- Detector mode: Positive peak
- Indication mode: max hold

TEST RESULTS

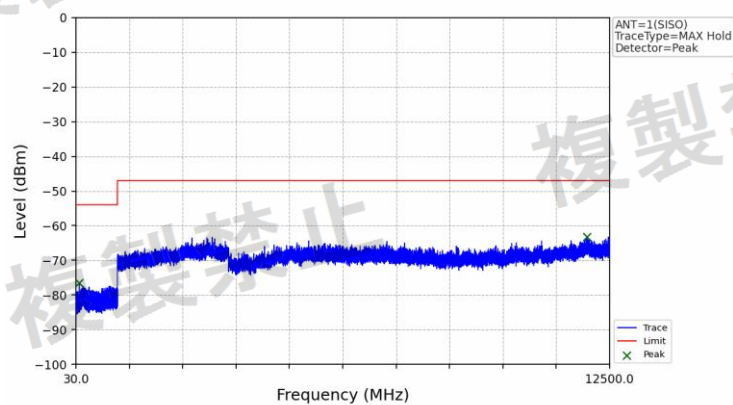


GFSK DH5_2402MHz_Ant1_NTNV



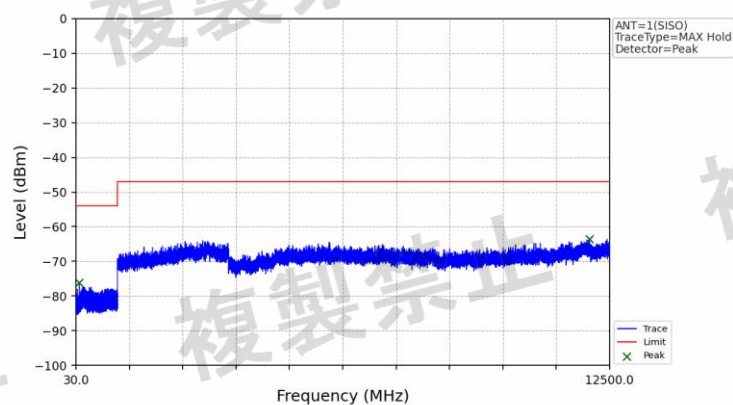
Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	211.850	-77.41	/	-54	Pass
1000	12500	1	1	3134.500	-63.18	/	-47	Pass

GFSK DH5_2441MHz_Ant1_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	110.050	-76.58	/	-54	Pass
1000	12500	1	1	11967.000	-63.22	/	-47	Pass

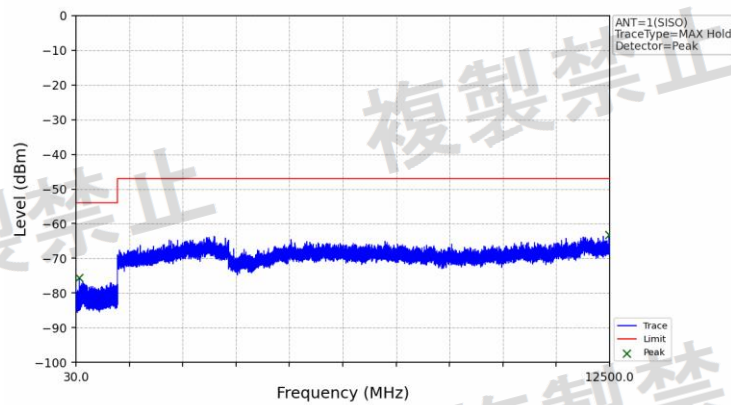
GFSK DH5_2480MHz_Ant1_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	110.000	-76.11	/	-54	Pass
1000	12500	1	1	12029.000	-63.62	/	-47	Pass

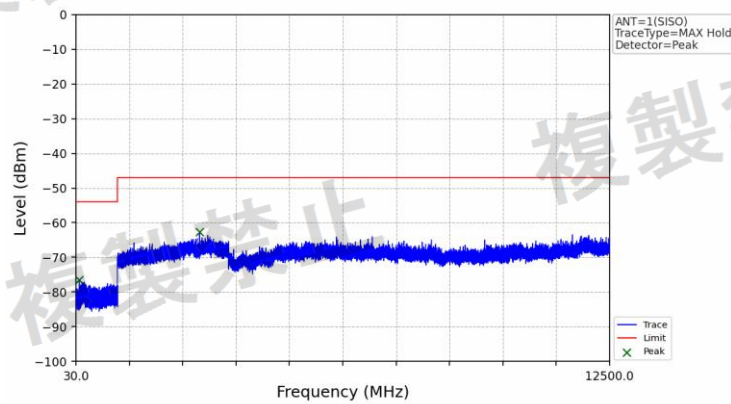


Pi/4DQPSK_2DH5_2402MHz_Ant1_NTNV



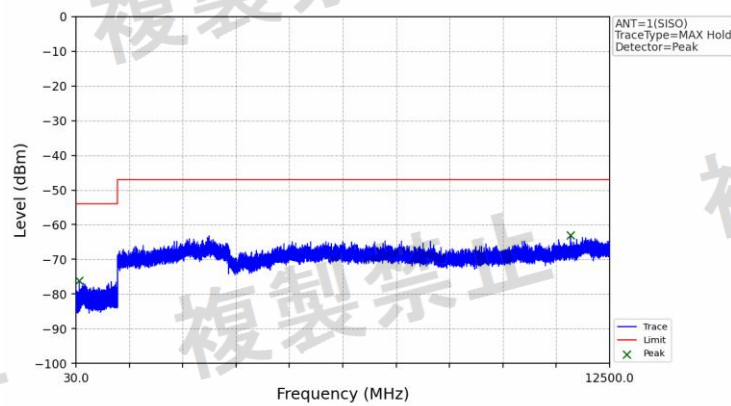
Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	110.000	-75.67	/	-54	Pass
1000	12500	1	1	12481.500	-63.19	/	-47	Pass

Pi/4DQPSK_2DH5_2441MHz_Ant1_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	110.000	-76.46	/	-54	Pass
1000	12500	1	1	2920.000	-62.75	/	-47	Pass

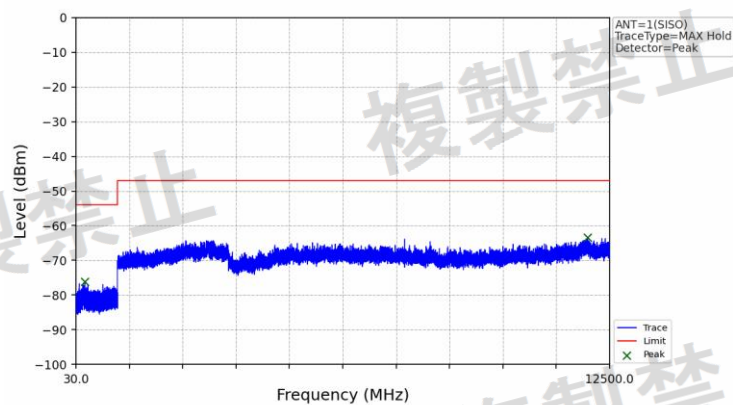
Pi/4DQPSK_2DH5_2480MHz_Ant1_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	110.000	-76.21	/	-54	Pass
1000	12500	1	1	11586.500	-63.01	/	-47	Pass

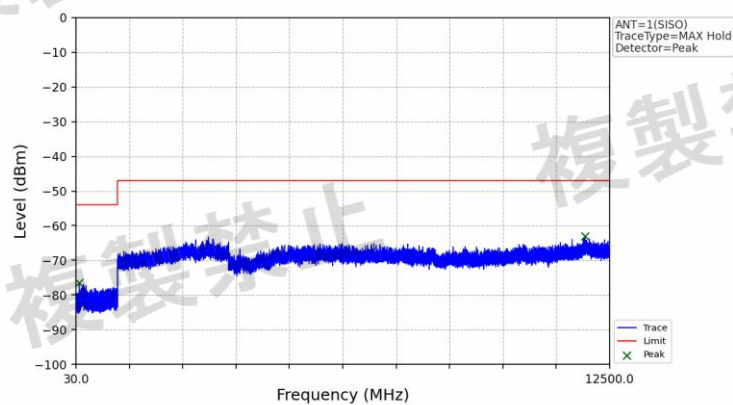


8DPSK 3DH5_2402MHz_Ant1_NTNV



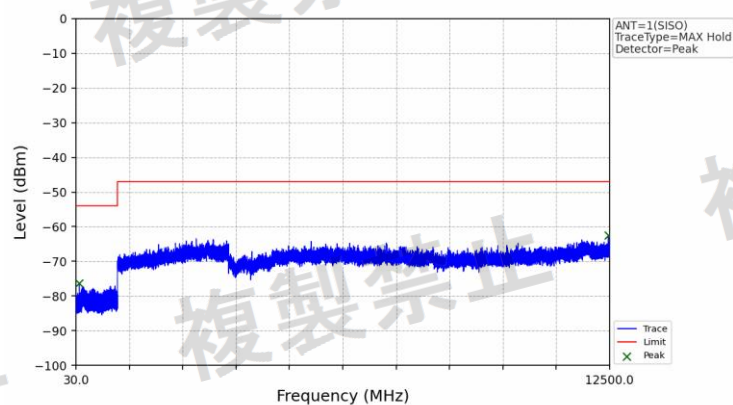
Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	241.300	-76.14	/	-54	Pass
1000	12500	1	1	11988.500	-63.46	/	-47	Pass

8DPSK 3DH5_2441MHz_Ant1_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	110.050	-76.54	/	-54	Pass
1000	12500	1	1	11923.500	-62.97	/	-47	Pass

8DPSK 3DH5_2480MHz_Ant1_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	110.000	-76.36	/	-54	Pass
1000	12500	1	1	12467.000	-62.43	/	-47	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

All high-frequency section and modulation section was packaged in one IC, it can not be easily open.



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

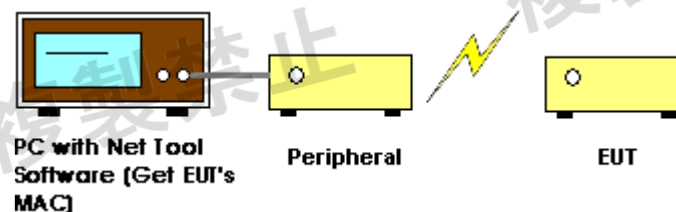
CONFIRMATION METHOD

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

TEST PROCEDURE

1. 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.
2. 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 Address: B2: 3D: 2C E0: 5B: 3A



3.9. Carrier Sensing Function

LIMIT

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

INSTRUMENTS SETTING

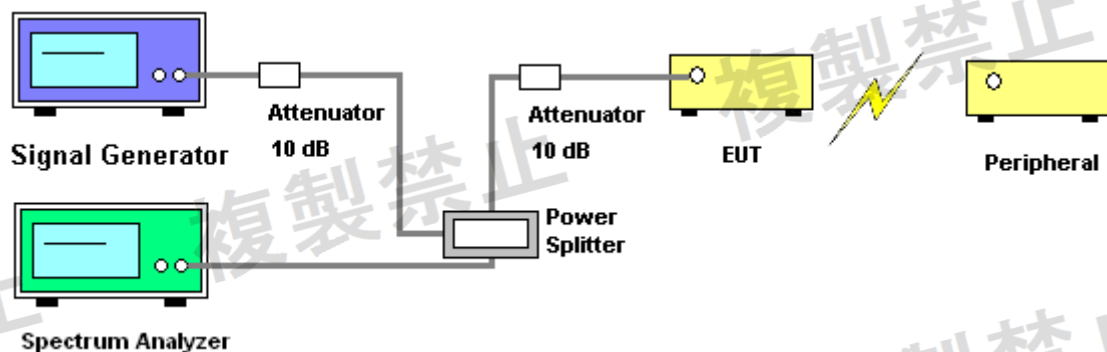
The following table is the setting of spectrum analyser and receiver.

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 $22.79 + Gr - 20 \cdot \log(f)$ [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

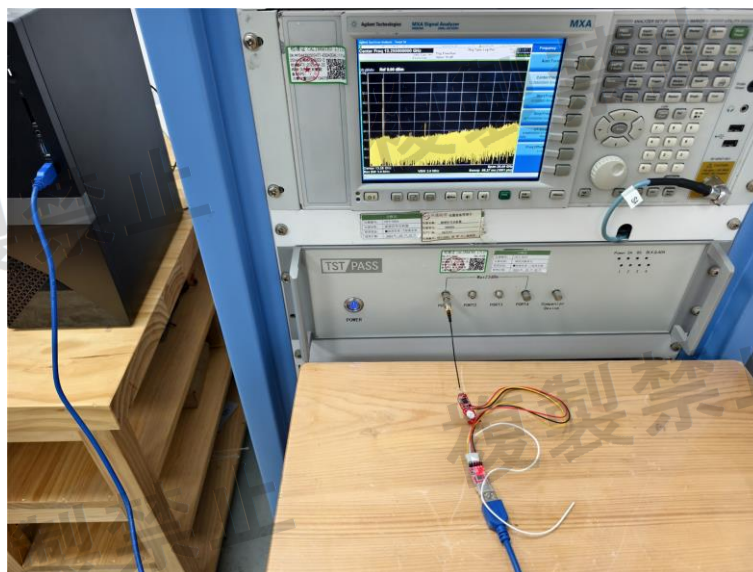
Not Applicable.



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3.10. Test Setup Photos of the EUT

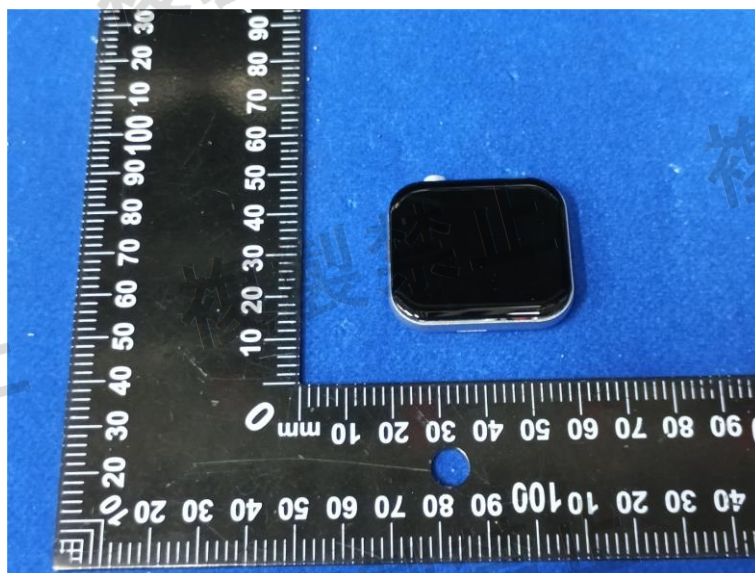
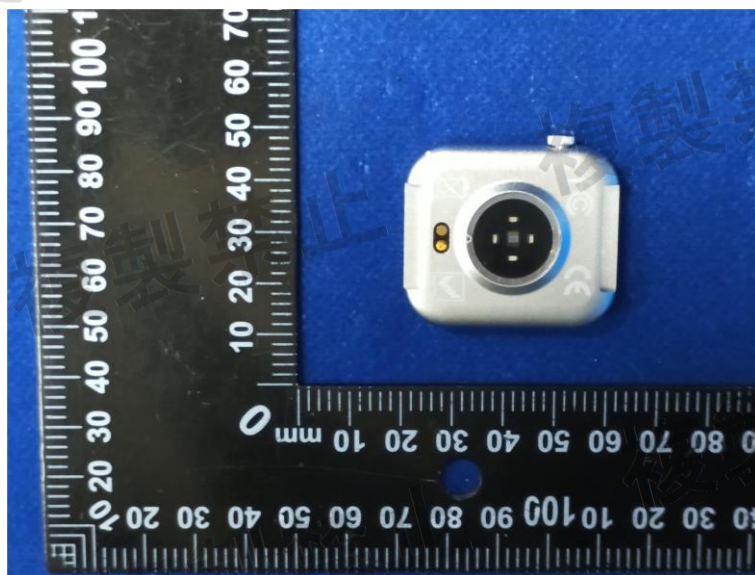
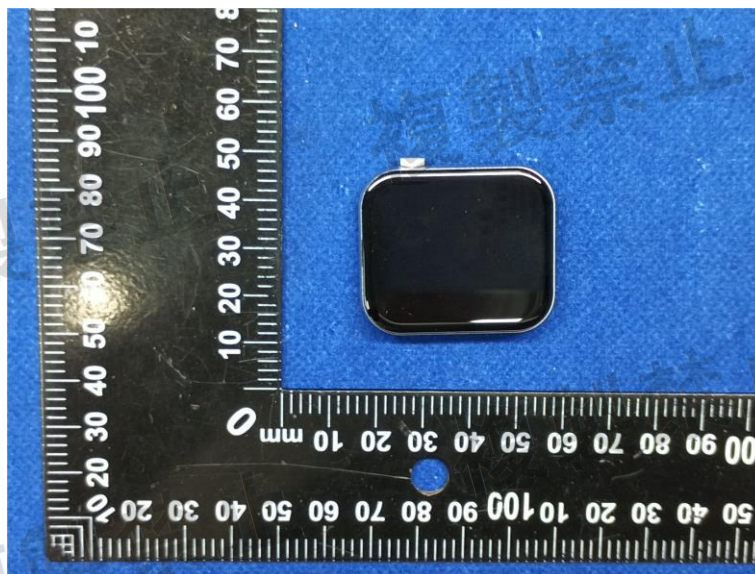


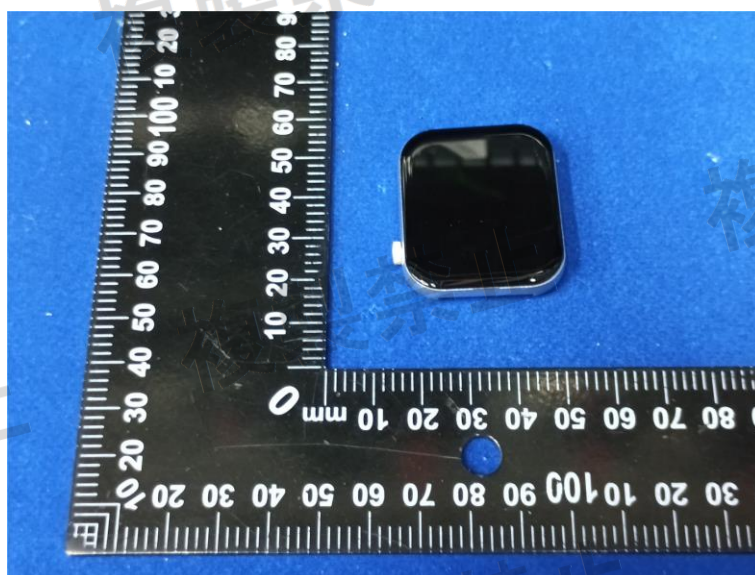
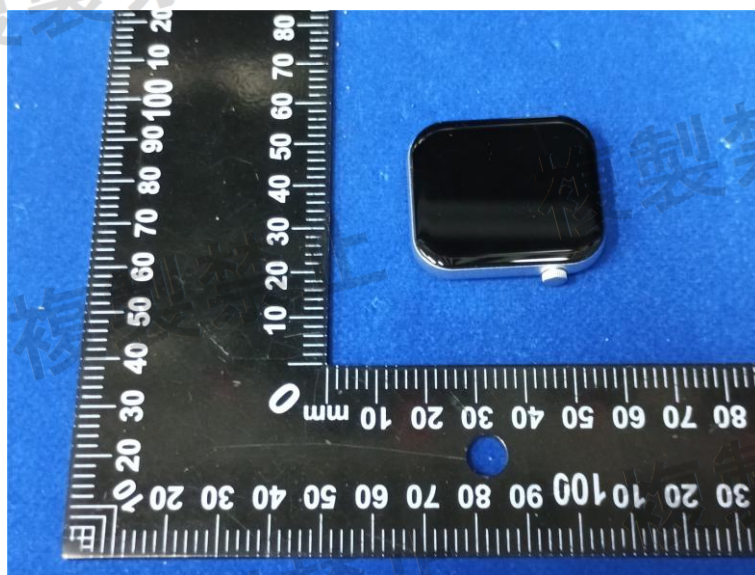
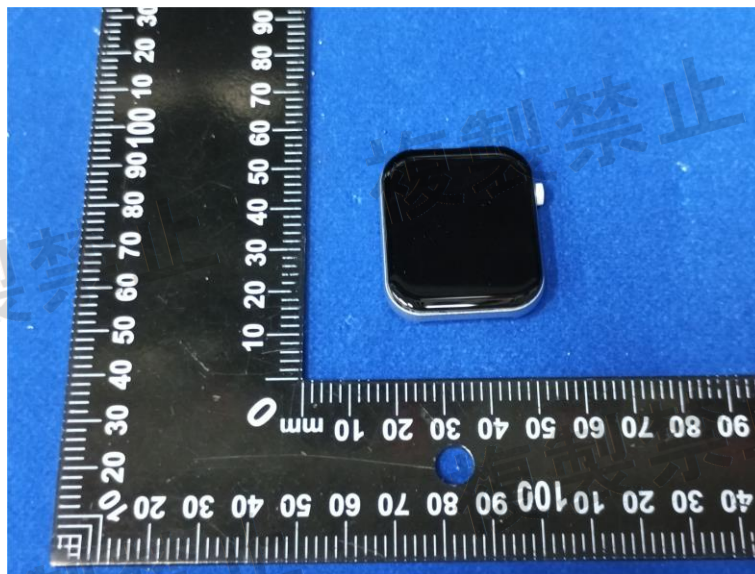


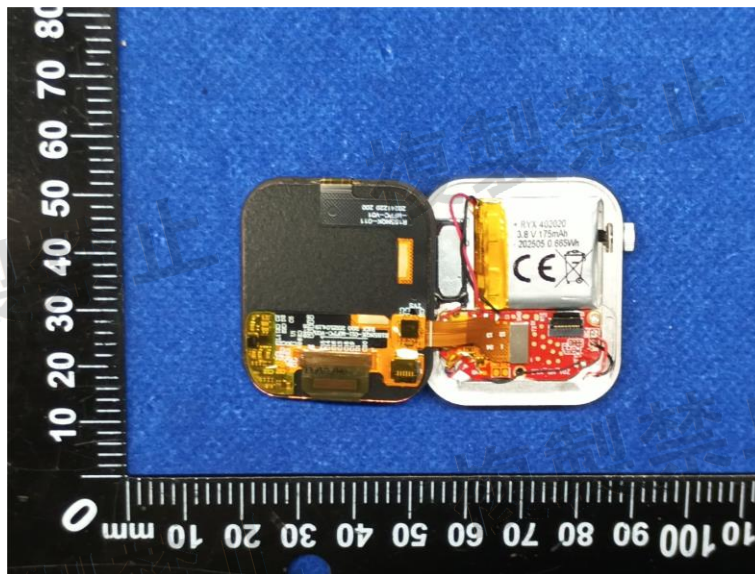
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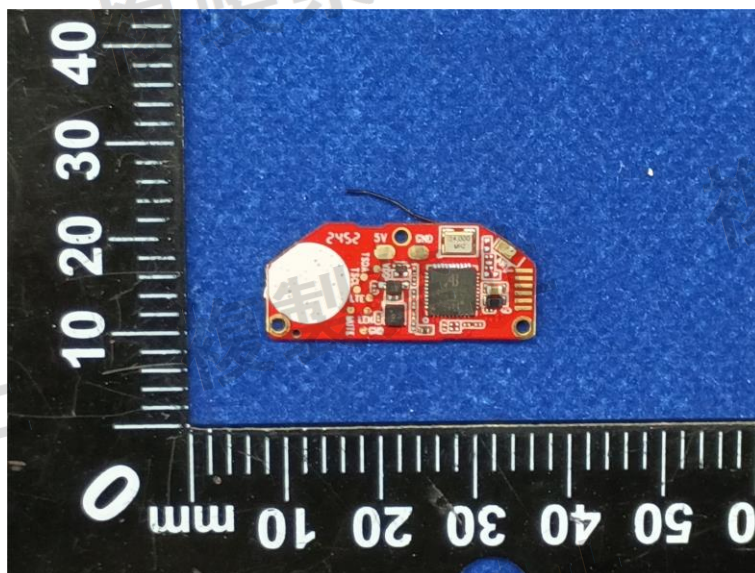
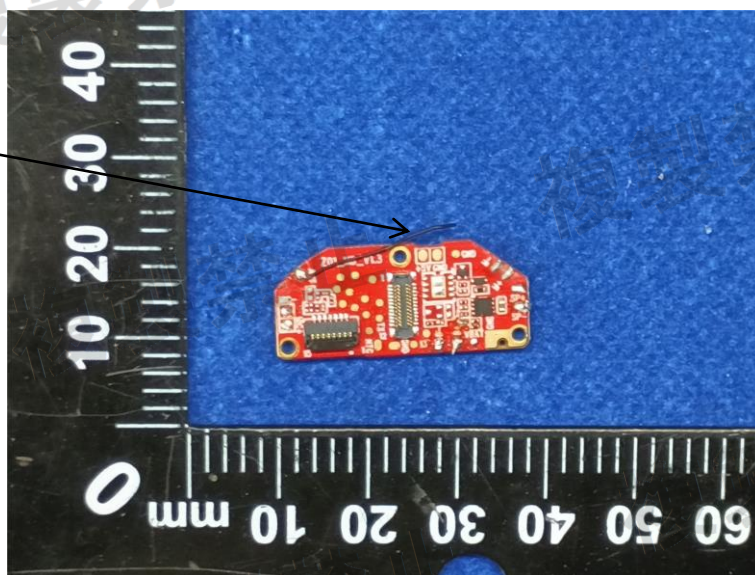
4. External and Internal Photos of the EUT

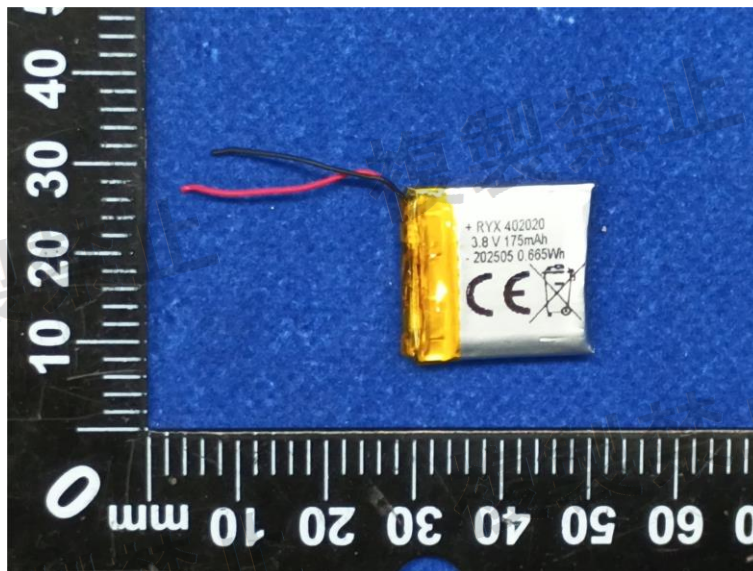






Antenna





*****THE END*****