TEST REPORT

Application No.:	KSCR2603000562AT
Applicant:	Baolong Huf Shanghai Electronics Co., Ltd.
Address of Applicant:	No. Building 3, Lane 1099, Zhangjing Road, Dongjing Town, Songjiang District, Shanghai City, P.R. China
Manufacturer:	Baolong Huf Shanghai Electronics Co., Ltd.
Address of Manufacturer:	No. Building 3, Lane 1099, Zhangjing Road, Dongjing Town, Songjiang District, Shanghai City, P.R. China
Equipment Under Test (EUT):	
EUT Name:	TPMS SENSOR
Model No.:	TMSS6A4
Trade Mark:	BH SENS
Standard(s) :	Article 2 paragraph 1 of item 8
Test Method:	Test method temporarily defined by TAC
Date of Receipt:	2026-03-18
Date of Test:	2026-03-20 to 2026-04-03
Date of Issue:	2026-04-09
Test Result:	**Pass***

* In the configuration tested, the EUT complied with the standards specified above.

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Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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Revision Record			
Version	**Description**	***Date***	***Remark***
00	Original	2026-04-09	/

Authorized for issue by:				
Tested By		Bruce . Li **Bruce-WP_Li /Project Engineer**		
Approved By		Terry Hou **Terry Hou /Reviewer**		

複製禁止

2 Test Summary

Test	Test Requirement	Result
Operating frequency band	Article 2 paragraph 1 of item 8	PASS
Frequency Tolerance	Article 2 paragraph 1 of item 8	PASS
Occupied Bandwidth	Article 2 paragraph 1 of item 8	PASS
Antenna Power	Article 2 paragraph 1 of item 8	PASS
Spurious Emission or Unwanted Emission Strength	Article 2 paragraph 1 of item 8	PASS
RF accessibility	Article 2 paragraph 1 of item 8	PASS
Secondary Radiated Emissions	Article 2 paragraph 1 of item 8	PASS
Transmission time control	Article 2 paragraph 1 of item 8	PASS

Remark:
EUT: In this whole report EUT means Equipment Under Test.
Tx: In this whole report Tx (or tx) means Transmitter.
Rx: In this whole report Rx (or rx) means Receiver.
RF: In this whole report RF means Radio Frequency.

複製禁止

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4 General Information

4.1 Details of E.U.T.

Power supply:	DC 3.0V
Test Voltage:	DC 3.0V
Operation Frequency:	433.92MHz
Number of Channels:	1
Modulation Type:	FSK
Antenna Type:	Monopole Antenna
Antenna Gain	-25dBi (Provided by the manufacturer)
Operation Type:	Manually Operated Transmitter
SN:	8B09D4C6
Software version number:	V1.0
Hardware version number:	V02

4.2 Power level setting using in test:

Frequency (MHz)	FSK
433.92	Default

4.3 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
TPMS Smart Tool	BH SENS	Smar Tool	/

4.4 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	8.4×10^{-8}
2	Timeout	2s
3	Duty Cycle	0.37%
4	Occupied Bandwidth	3%
5	RF Conducted Power	0.6dB
6	RF Power Density	2.9dB
7	Conducted Spurious Emissions	0.75dB
8	RF Radiated Power	5.2dB (Below 1GHz)
		5.9dB (Above 1GHz)
9	Radiated Spurious Emission Test	4.2dB (Below 30MHz)
		4.5dB (30MHz-1GHz)
		5.1dB (1GHz-18GHz)
		5.4dB (Above 18GHz)
10	Temperature Test	1°C
11	Humidity Test	3%
12	Supply Voltages	1.5%
13	Time	3%

Note: The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

4.5 Test Location

All tests were performed at:

Compliance Certification Services (Kunshan) Inc.

No.10 Weiye Rd, Innovation park, Eco&Tec, Development Zone, Kunshan City, Jiangsu, China.

Tel: +86 512 5735 5888 Fax: +86 512 5737 0818

No tests were sub-contracted.

Note:

1. SGS is not responsible for wrong test results due to incorrect information (e.g., max. internal working frequency, antenna gain, cable loss, etc) is provided by the applicant. (If applicable).
2. SGS is not responsible for the authenticity, integrity and the validity of the conclusion based on results of the data provided by applicant. (If applicable).
3. Sample source: sent by customer.

4.6 Test Facility

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

• A2LA (Certificate No. 2541.01)

Compliance Certification Services (Kunshan) Inc. is accredited by the American Association for Laboratory Accreditation (A2LA).

• FCC (Designation Number: CN1172)

Compliance Certification Services (Kunshan) Inc. has been recognized as an accredited testing laboratory.

• ISED (CAB Identifier: CN0072)

Compliance Certification Services (Kunshan) Inc. has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory.

Company Number: 2324E

• VCCI (Member No:1938)

The 3m and 10m Semi-anechoic chamber and Shielded Room of Compliance Certification Services (Kunshan) Inc. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-20134, R-11600, C-11707, T-11499, G-10216 respectively.

4.7 Deviation from Standards

None

4.8 Abnormalities from Standard Conditions

None

5 Equipment List

Item	Equipment	Manufacturer	Model	Serial No.	Inventory No	Cal Date	Cal. Due Date	Cal body	Certifier
1	Spectrum Analyzer	Keysight	N9020A	MY55370209	KUS1911E004-2	07/09/2025	07/08/2026	SGS	(c)
2	Spectrum Analyzer	Keysight	N9020A	MY53420174	KUS2001M001-2	07/09/2025	07/08/2026	SGS	(c)
3	Spectrum Analyzer	Keysight	N9030B	MY61330164	KSEM021-1	12/17/2025	12/16/2026	SGS	(c)
4	Signal Generator	R&S	SMBV100B	103571	KSEM032	12/17/2025	12/16/2026	SGS	(c)
5	Signal Generator	R&S	SMW200A	110074	KSEM020-1	07/09/2025	07/08/2026	SGS	(c)
6	Signal Generator	Agilent	N5182A	MY50142015	KUS2001M001-1	07/08/2025	07/07/2026	SGS	(c)
7	Radio Communication Test Station	Anritsu	MT8000A	6262012849	KSEM001-1	07/09/2025	07/08/2026	SGS	(c)
8	Radio Communication Analyzer	Anritsu	MT8821C	6201692222	KSEM002-1	12/17/2025	12/16/2026	SGS	(c)
9	Universal Radio Communication Tester	R&S	CMW500	159275	KUS1911E004-1	07/08/2025	07/07/2026	SGS	(c)
10	Temp. / Humidity Chamber	TERCHY	MHK-120AK	X30109	KS301190	07/15/2025	07/14/2026	SGS	(c)
11	Temperature & Humidity Recorder	Renke Control	RS-WS-N01-6J	1032844	KSEM024-5	12/30/2025	12/29/2026	SGS	(c)
12	Bilog Antenna（30MHz-1GHz）	TESEQ	CBL 6112D	36996	KUS1806E005	07/12/2025	07/11/2026	SGS	(c)
13	Spectrum Analyzer	R&S	FSV40	101493	KUS1806E003	07/09/2025	07/08/2026	SGS	(c)

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

Notice: Calibration duration for above equipments is 1 year.

6 Radio Spectrum Technical Requirement

6.1 Radio Technical Requirements Specification

Table 1: Radio Technical Requirements Specification for 433MHz (Item 8 of Article 2-1)

Items	Technical standard
Assigned frequency or designated frequency	Frequencies above 433.795 MHz and below 434.045 MHz
Communication method	One-way method, simplex method, duplex method
Antenna power	Less than 1mW
Tolerance of frequency ($\times 10^{-6}$)	Within the specified frequency band
Occupied Bandwidth	250 kHz or less
Spurious Emission or Unwanted Emission Strength	(1) 433.795 MHz or lower: 250nW/100kHz or less (2) Above 433.795 MHz and below 434.045 MHz: Excluding Designated Frequency bands. (3) 434.045 MHz above and below 1 GHz: 250nW/100kHz or less (4) Above 1GHz: 1uW/1MHz or less Note: Unwanted Emission Strength shall be the value of Equivalent Isotropic Radiated Power.
Limit of secondary radiated emissions	(1) Below 1GHz: 4nW/100kHz or less (2) Above 1GHz: 4nW/1MHz or less Note: The limit of Secondary Radiated Emission Strength shall be the value of Equivalent Isotropic Radiated Power.
Cabinet	It is housed in a single enclosure, and the high-frequency section and modulation section, excluding the antenna, cannot be easily opened.
Transmission Time Control	(1) Total Transmission Time per Hour: 360s or less,Periodic transmission. (2) The radio wave shall cease its emission within 1 s after it is emitted, and no further transmission shall be made until a Transmission Suspend Time of 1 ms has elapsed after the Transmission Suspend Time has elapsed.

6.2 E.U.T. test conditions

Environment:

Temperature:	5.0 -35.0 °C
Humidity:	45-85 % RH
Atmospheric Pressure:	99.8 -101.0 kPa

Power supply:

Test Voltage: rated voltage and ±10% of the rated voltage.

The product is supplied by DC 3.0V. All measurement has been rated by only rated voltage DC 3.0V. Since it was confirmed that the fluctuation in the input voltage to the test equipment' s wireless circuitry was ±1% or less when the input voltage from the external power source to the test equipment fluctuated by ±10%, measurements were taken using only the rated voltage.

Test frequencies:

If the EUT can be set to 3 of more different (carrier) frequencies in 1 allocated band, testing shall be performed using the Lowest, Middle and the Highest frequency (L, M and H). If there are 2 or fewer frequencies, testing shall be performed with the available frequencies.

EUT channels and frequencies list:

FSK Frequency (MHz)
433.92

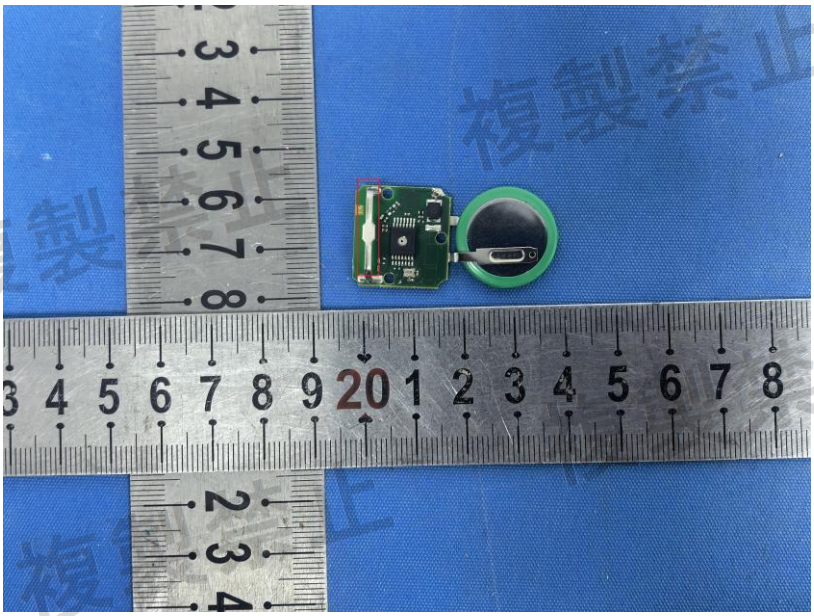
6.3 Antenna Requirement

Standard requirement

Applicable for equipment with an antenna terminal, including testing terminals) If an antenna connector is available, all relevant tests will be carried out conducted. If not, tests will be carried out in an anechoic room or with a suitable test-fixture.

Result:

The antenna is Monopole Antenna and no consideration of replacement.



6.4 Frequency Tolerance

Test Requirement: Item 8 of Article 2-1

Within the specified frequency band

Test Method: Test method temporarily defined by TAC

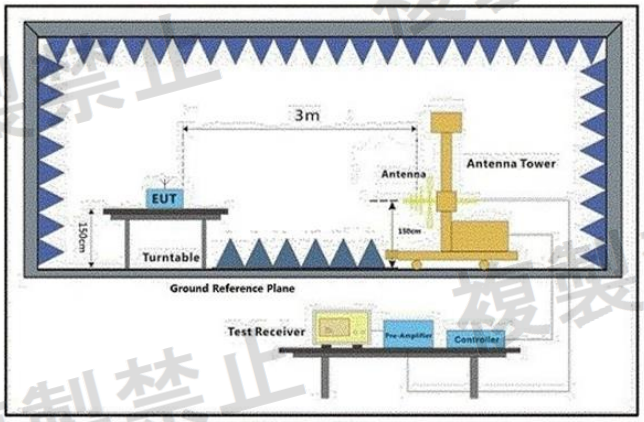
Test Status: Test the EUT in transmitting mode without modulation.

Operating Environment:

Temperature: 24.5 °C Humidity: 50.6 % RH Atmospheric Pressure: 1001 mbar

Test mode: TX mode_Keep the EUT in continuously transmitting mode.

Test Configuration:



30MHz-1GHz

Test Procedure:

1. Test Conditions:

   Spectrum Analyzer is used for measurement.

2. EUT conditions:

   Modulation/Spread/Hopping OFF, CW Tx. Or modulation on, record the 10dB down point. Then calculate the centre frequency.

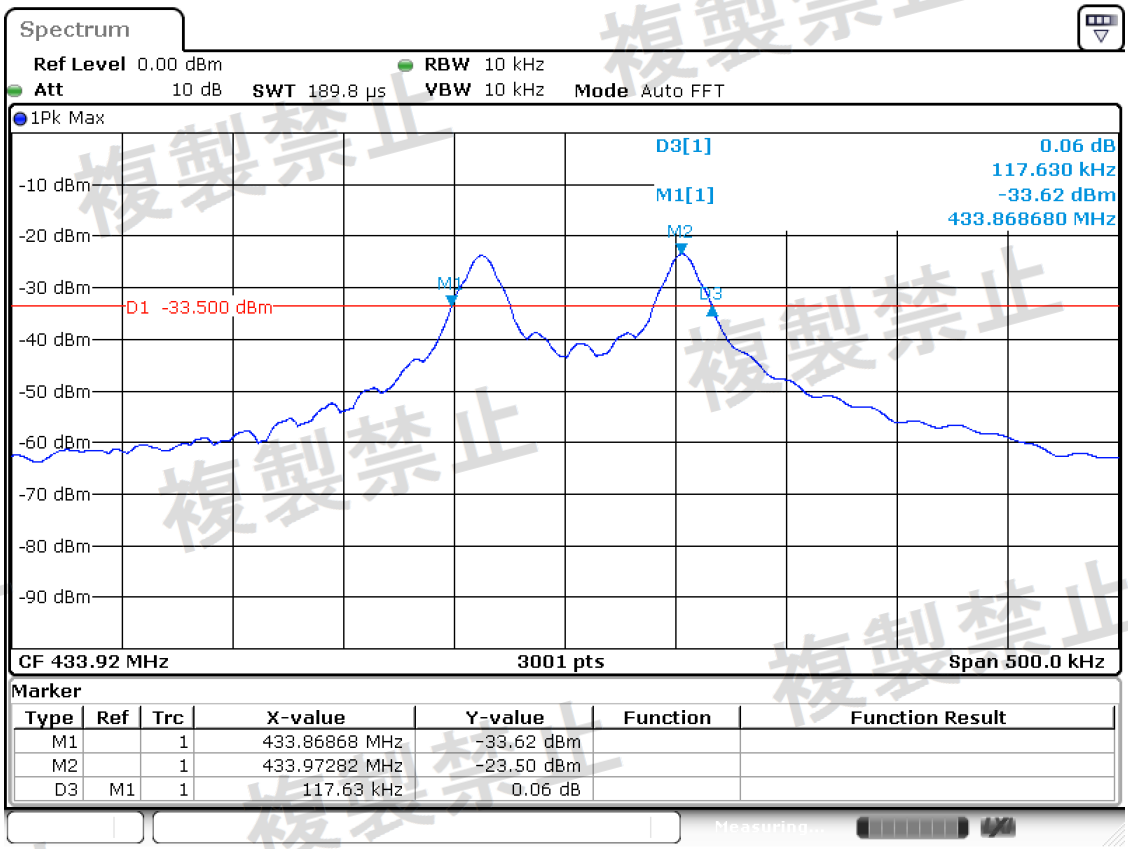
3. Spectrum Analyzer conditions:

   Frequency: Test Frequency
   Span 500KHz
   RBW 10 kHz (Modulation On),
   VBW 10 kHz (Modulation On),
   Sweep Time Auto
   Detector mode Positive peak
   Indication mode Max hold

Test Result:

Test Voltage	Frequency (MHz)	Test Result		Limit	Verdict
		Lower frequency (MHz)	Upper frequency (MHz)		
Normal	433.92	433.86868	433.97282	within the frequency range specified in the technical standards (433.795 to 434.045 MHz)	Pass

Test Voltage: Normal; Modulation: FSK; Frequency: 433.92MHz



6.5 Antenna Power

Test Requirement: Item 8 of Article 2-1

Test Method: Test method temporarily defined by TAC

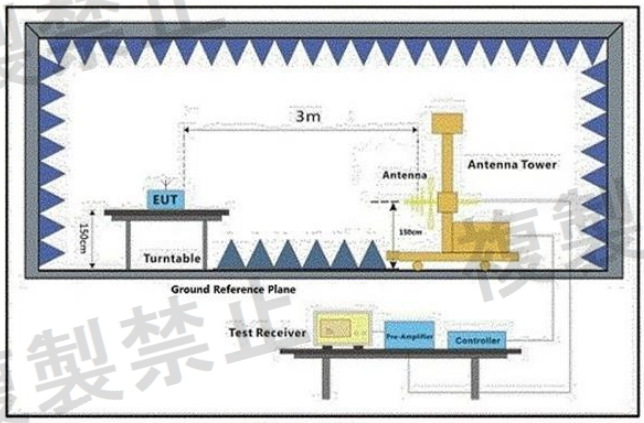
Test Status: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

Following channel(s) was (were) selected for the final test as listed below.

Operating Environment: 24.8°C Humidity: 50. % RH Atmospheric Pressure: 1001 mbar

Test mode: TX mode_Keep the EUT in continuously transmitting mode.

Test Configuration:



30MHz-1GHz

Test Procedure:

1. Test Conditions:
   Spectrum Analyzer is used for measurement.

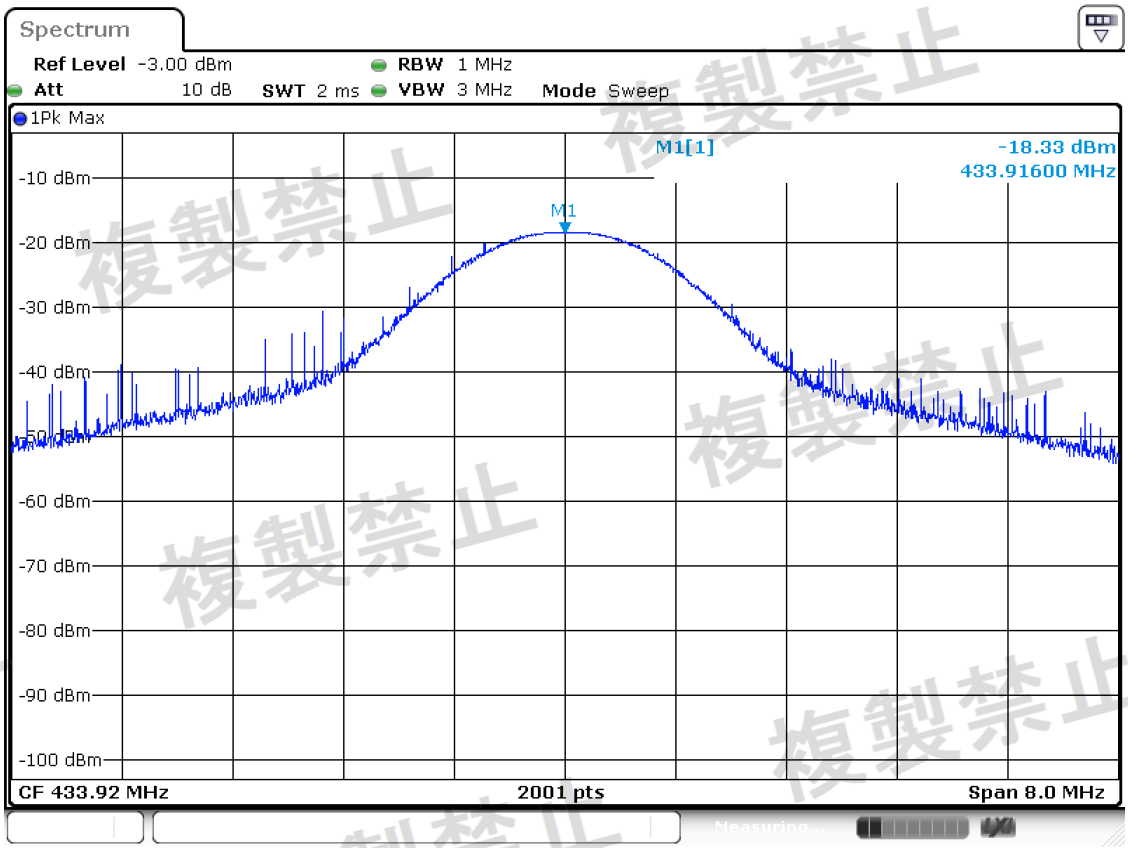
2. EUT conditions:
   Modulation/Spread/Hopping ON, Modulation Tx
   For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.

3. Spectrum Analyzer conditions:
   Frequency: Test Frequency
   Span 5 MHz
   RBW 1 MHz
   VBW 3 MHz
   Sweep Time Auto
   detector mode Positive peak
   Indication mode Max hold

Test Result:

Test Voltage	Frequency (MHz)	EIRP (dBm)	EIRP (mW)		Nominal Power (mW)	Tolerance (%)		Verdict
			Measured	Limit		Measured	Limit	
Normal	433.92	-18.33	0.01469	1	0.01470	-0.068	20	Pass

Test Voltage: Normal; Modulation: FSK; Frequency: 433.92MHz



6.6 Occupied Bandwidth

Test Requirement: Item 8 of Article 2-1

Test Method: Test method temporarily defined by TAC

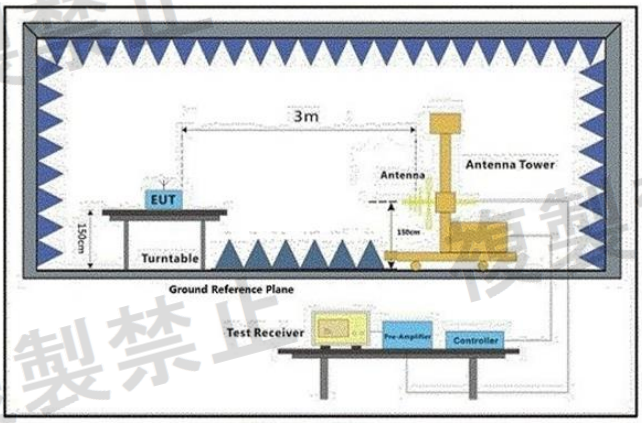
Test Status: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

Following channel(s) was (were) selected for the final test as listed below.

Operating Environment: 2.8°C Humidity: 50.6 % RH Atmospheric Pressure: 1001 mbar

Test mode TX mode_Keep the EUT in continuously transmitting mode.

Test Configuration:



30MHz-1GHz

Test Procedure:

1. Test Conditions:
   Spectrum Analyzer is used for measurement.

2. EUT conditions:
   Modulation/Spread/Hopping ON, Modulation Tx

3. Spectrum Analyzer conditions:
   Frequency: Test Frequency
   Span 500 KHz
   RBW 2kHz
   VBW 2kHz
   Sweep Time Auto
   detector mode RMS
   Indication mode Max hold

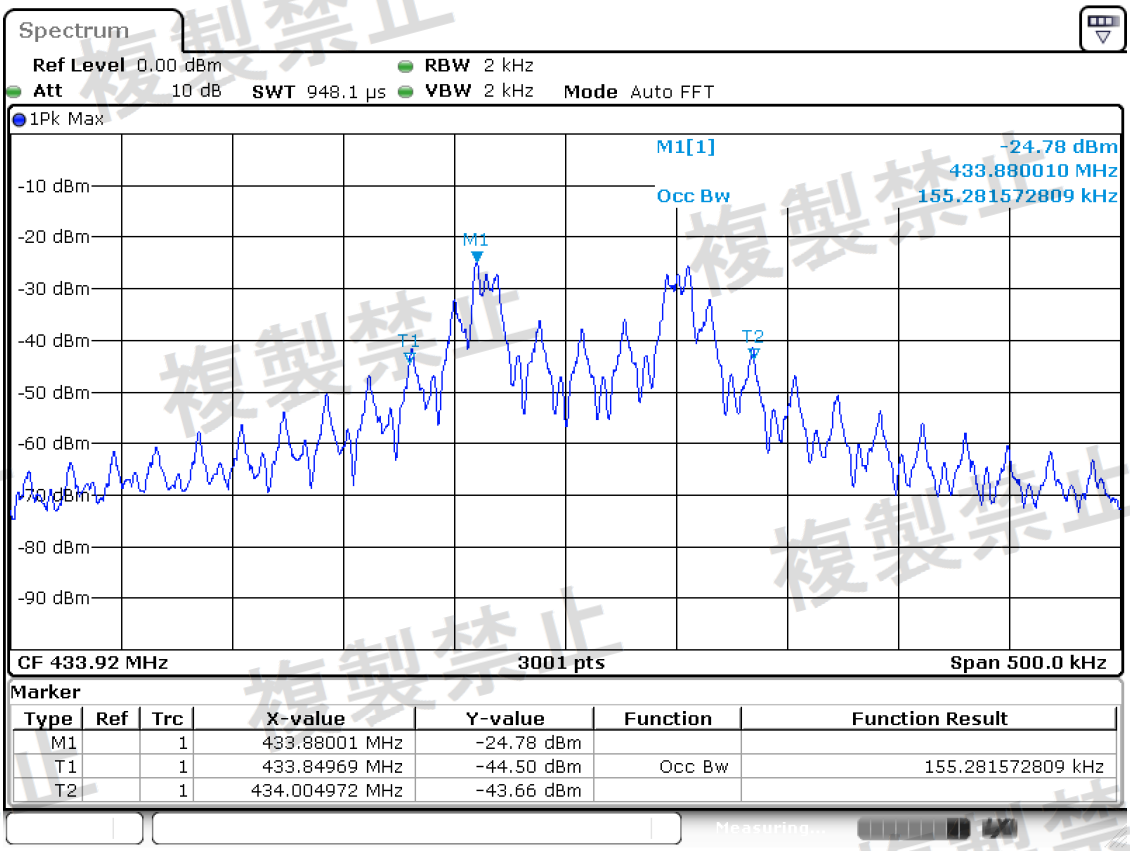
Test Result:

Test Voltage	Modulation	Centre Frequency (MHz)	99% Occupied Bandwidth (kHz)	Limit (kHz)	Verdict
Normal	FSK	433.927331	155.282	250	Pass

Note 1: 99% Occupied Bandwidth result is Upper Frequency- Lower Frequency (434.004972MHz-433.84969MHz=0.155282MHz)

Note 2: Centre Frequency is (Upper Frequency + Lower Frequency)/2, (434.004972MHz-433.84969MHz)/2=433.927331MHz)

Test Voltage: Normal; Modulation: FSK; Frequency: 433.92MHz



6.7 Spurious Emission or Unwanted Emission Strength

Test Requirement: Item 8 of Article 2-1

(1) 433.795 MHz or lower: 250nW/100kHz or less
(2) Above 433.795 MHz and below 434.045 MHz: Excluding Designated Frequency bands.
(3) 434.045 MHz above and below 1 GHz: 250nW/100kHz or less
(4) Above 1GHz: 1uW/1MHz or less

Note: Unwanted Emission Strength shall be the value of Equivalent Isotropic Radiated Power.

Test Method: Test method temporarily defined by TAC

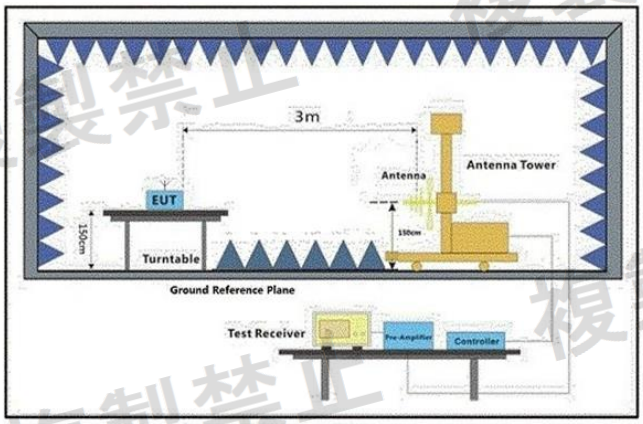
Test Status: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

Following channel(s) was (were) selected for the final test as listed below.

Operating Environment: 25.8°C Humidity: 50.6 % RH Atmospheric Pressure: 1001 mbar

Test mode TX mode_Keep the EUT in continuously transmitting mode.

Test Configuration:



30MHz-1GHz

Test Procedure:

1. Test Conditions:

   Spectrum Analyzer is used for measurement.

2. EUT conditions:

   Modulation/Spread/Hopping ON, Modulation Tx

   For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.

3. Spectrum Analyzer conditions:

   Step 1

   All spurious are measured from 30 MHz to 3GHz by peak mode.

   Step 2

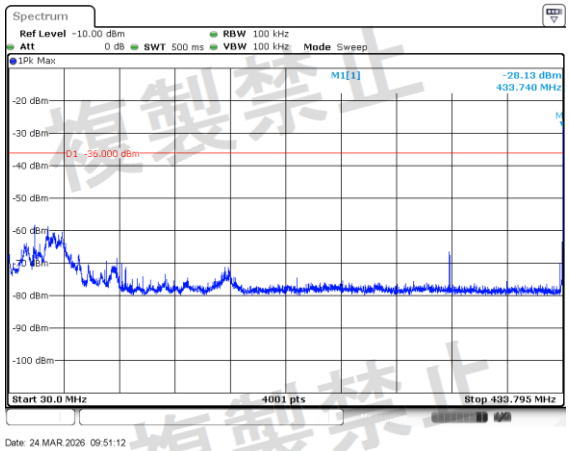
   IF the value measured by Step1 is 2 dB or less, measure in average mode.

Test Result:

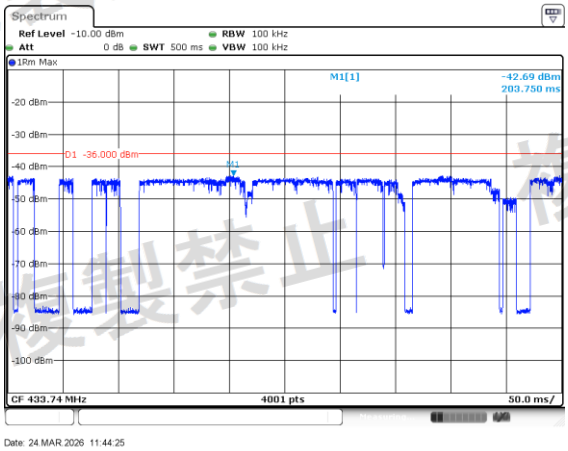
Test Voltage	Modulation	Frequency (MHz)	Frequency Range (MHz)	Test Result				Limit	Verdict
				Frequency (MHz)	Detector	EIRP			
Normal	FSK	433.92	30-433.795	433.74	Peak	-28.13 dBm/100KHz	1538 nW/100kHz	250nW/100kHz	Pass
			30-433.795	433.74	AV	-42.69 dBm/100KHz	53.83 nW/100kHz	250nW/100kHz	Pass
			434.045-1000	434.115	Peak	-26.24 dBm/100KHz	2377 nW/100kHz	250nW/100kHz	Pass
			434.045-1000	434.115	AV	-41.31 dBm/100KHz	73.96 nW/100kHz	250nW/100kHz	Pass
			1000-3000	2807.2	Peak	-56.70 dBm/MHz	2.138 uW/MHz	1uW/MHz	Pass

Modulation: FSK

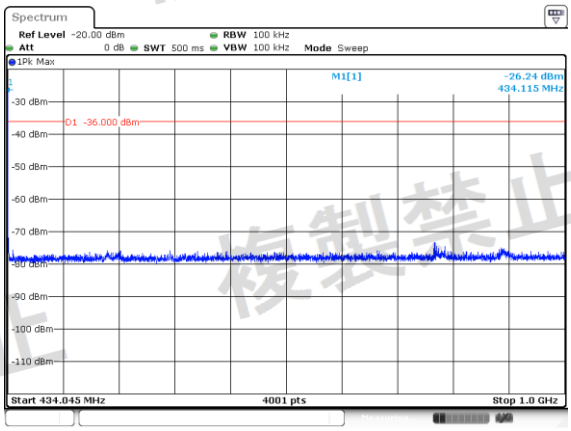
Test Voltage: Normal; Frequency: 433.92MHz



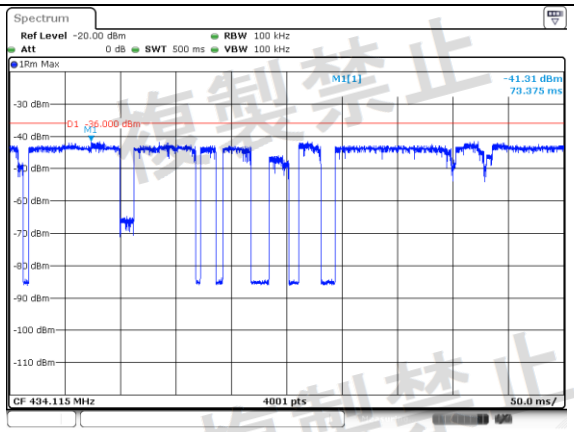
Test Voltage: Normal; Frequency: 433.92MHz



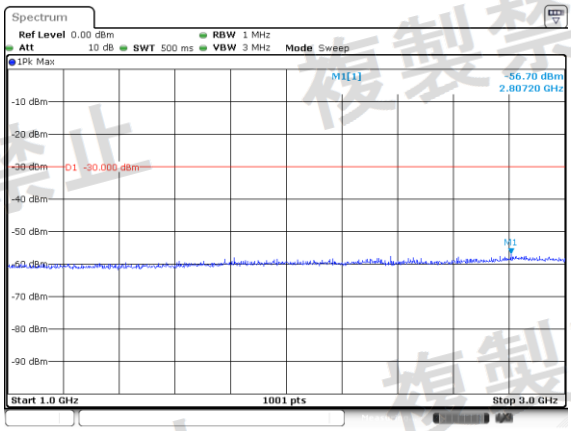
Test Voltage: Normal; Frequency: 433.92MHz



Test Voltage: Normal; Frequency: 433.92MHz



Test Voltage: Normal; Frequency: 433.92MHz



6.8 Limit of secondary radiated emissions

Test Requirement: Item 8 of Article 2-1
(1) Below 1GHz: 4nW/100kHz or less
(2) Above 1GHz: 4nW/1MHz or less

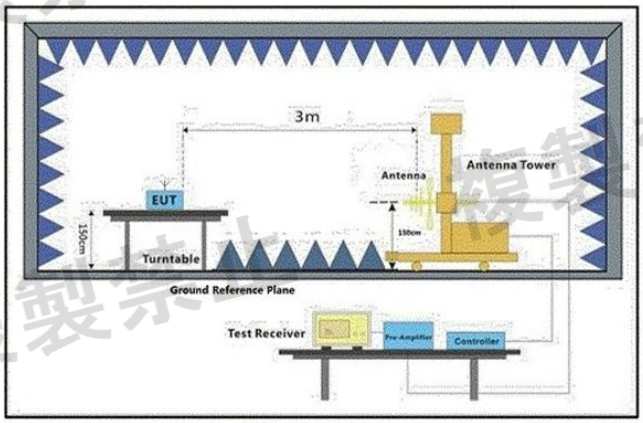
Test Method: Test method temporarily defined by TAC

Test Status: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
Following channel(s) was (were) selected for the final test as listed below.

Operating Environment: 25.8°C Humidity: 50.6 % RH Atmospheric Pressure: 1001 mbar

Test mode TX mode_Keep the EUT in continuously transmitting mode.

Test Configuration:



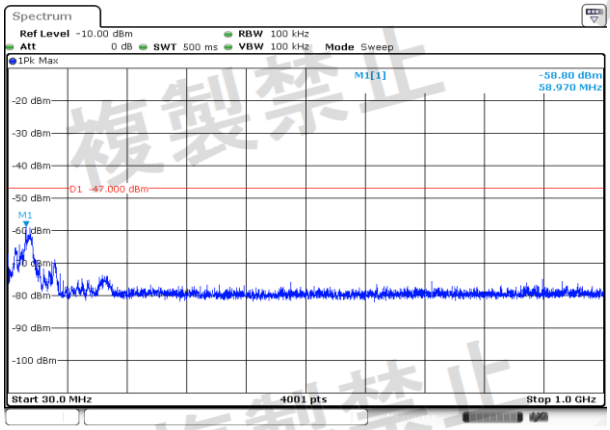
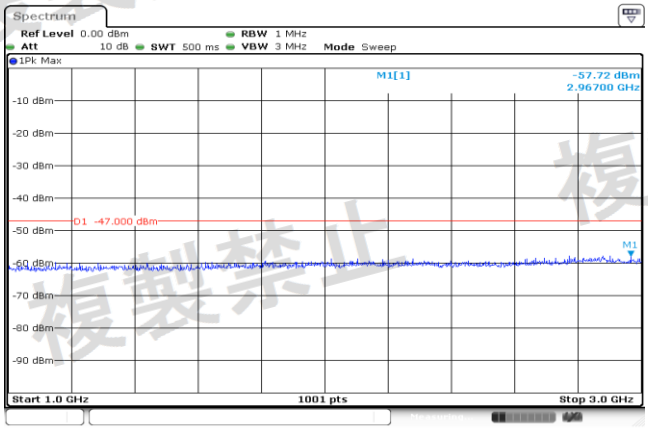
30MHz-1GHz

Test Procedure:

1. Test Conditions:
   Spectrum Analyzer is used for measurement.
2. Spectrum Analyzer conditions:
   Step 1
   All spurious are measured from 30 MHz to 6GHz by peak mode.
   Step 2
   IF the value measured by Step1 is 2 dB or less, measure in average mode.

Test Voltage	Modulation	Frequency (MHz)	Frequency Range (MHz)	Test Result				Limit	Verdict
				Frequency (MHz)	Detector	EIRP			
Normal	FSK	433.92	30-1000	58.97	Peak	-58.80 dBm/100KHz	1.318 nW/100kHz	4nW/100kHz	Pass
			1000-3000	2967	Peak	-57.72 dBm/MHz	1.690 nW/MHz	4nW/MHz	Pass

Modulation: FSK

Test Voltage: Low; Frequency: 433.92MHz	Test Voltage: Low; Frequency: 433.92MHz
	

6.9 Transmission time control

Test Requirement: Item 8 of Article 2-1

Transmission Time: -

Transmission Suspend Time: -

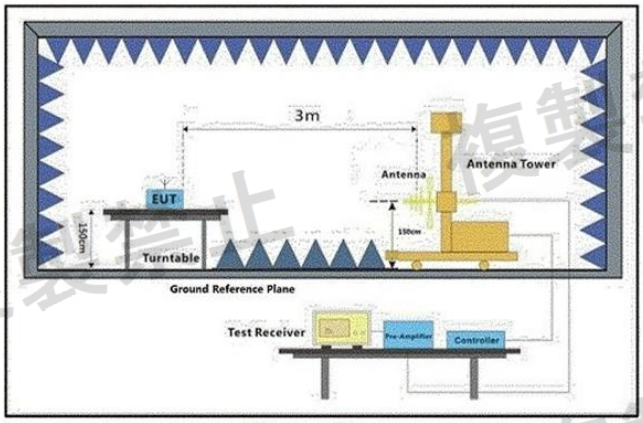
Total Transmission Time per Hour: 360s or less

Periodic transmission

The radio wave shall cease its emission within 1 s after it is emitted, and no further transmission shall be made until a Transmission Suspend Time of 1 ms has elapsed after the Transmission Suspend Time has elapsed.

Test Method: Test method temporarily defined by TAC

Test Status: Keep the EUT in normal operation mode



30MHz-1GHz

Operating Environment: 25.8°C Humidity: 50.6 % RH Atmospheric Pressure: 1001 mbar

Test mode TX mode_Keep the EUT in continuously transmitting mode.

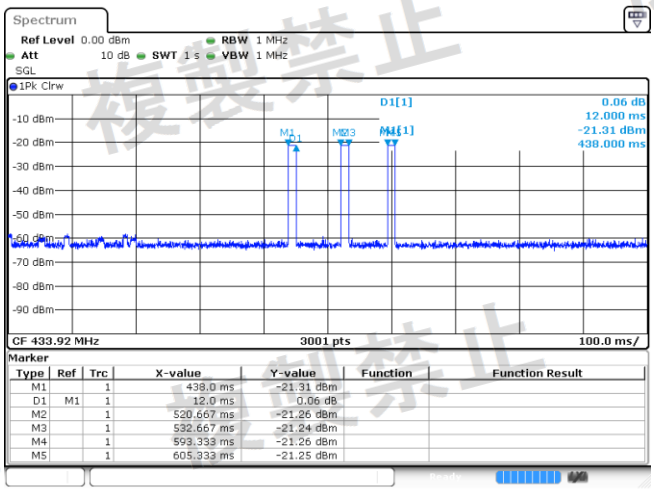
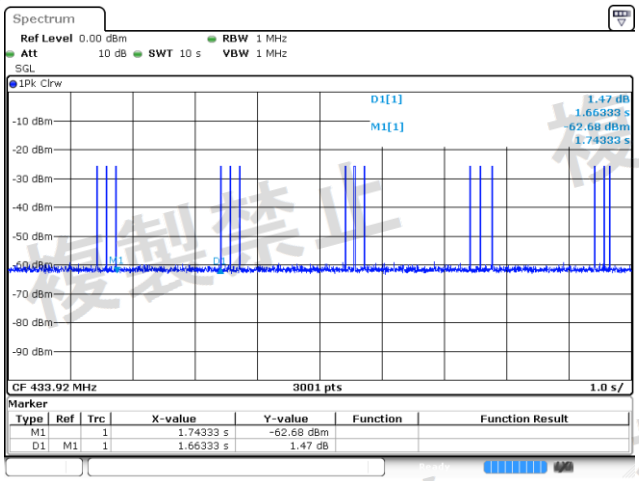
Test Configuration:

1. Test Conditions:
   Spectrum Analyzer is used for measurement.
2. Spectrum Analyzer conditions:
   Center frequency = the test frequency. RBW = 1MHz, VBW = 1MHz, Span = 0

Measurement data:

Test Voltage	Modulation	Frequency (MHz)	ON Time (s)	OFF Time (s)		Total Time (s)		Verdict
			Measured	Measured	Limit	Measured	Limit	
Normal	FSK	433.92	0.036	1.66	≥ 1	70.92	< 360/h	Pass

Modulation: FSK

Test Voltage: Normal; Frequency: 433.92MHz	Test Voltage: Normal; Frequency: 433.92MHz
	

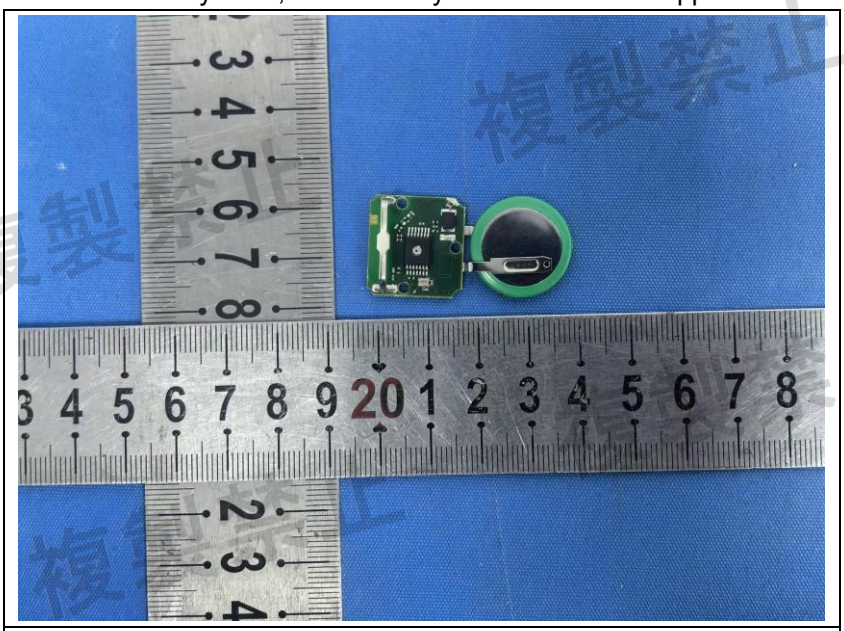
6.10 RF accessibility

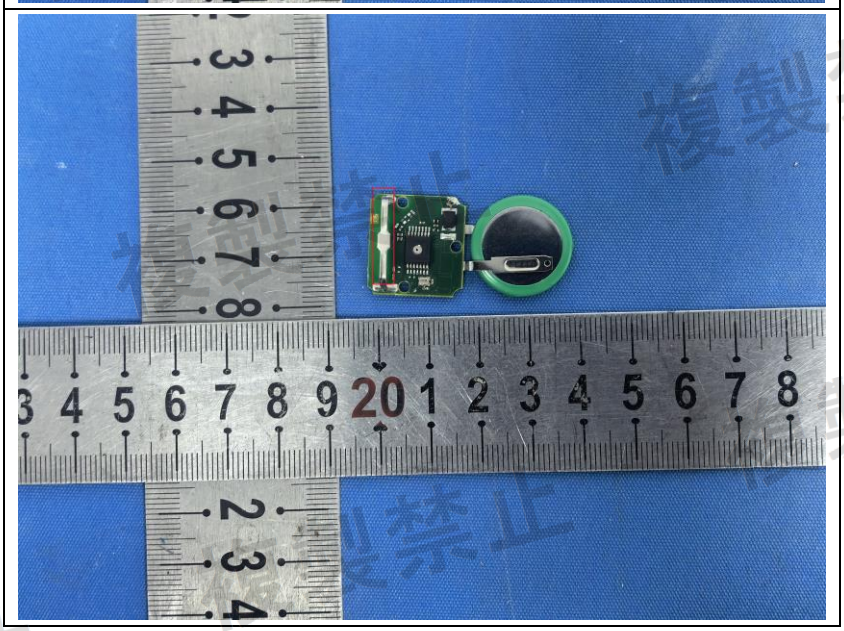
Standard requirement

Article 49-14, Paragraph 1, Item 5, (b)

It is housed in a one housing, and the high-frequency section and modulation section, excluding the antenna, cannot be easily opened.

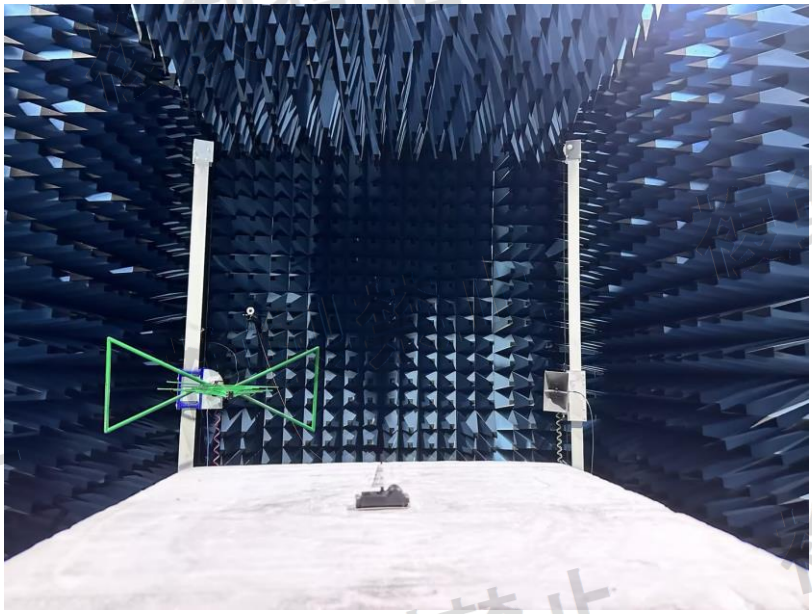
The RF circuits are molded by resin, which is very difficult to be de-capped without special measures.





7 Test Setup Photo

Test Setup



8 EUT Constructional Details (EUT Photos)

Refer to Appendix - Photographs of EUT Constructional Details for KSCR2603000562AT

- End of the Report -