



JAPAN RADIO TEST REPORT

Applicant : Stone Co., Ltd.

Address : 8F., No. 89, Sec. 4, Chongxin Rd., Sanchong Dist.,
New Taipei City 241, Taiwan

Equipment : Human Presence Detection

Model No. : OTD-DAL-000

Trade Name : OTVerse

Output Power : 1Mbps: 7.177943 mW
2Mbps: 6.295062 mW

Carrier Sense : ☐Yes ☒No

I HEREBY CERTIFY THAT:

The sample was received on Dec. 04, 2025 and the testing was completed on Dec. 17, 2025 at CerpPASS Technology Corp. The test result refers exclusively to the test presented test model / sample. Without written approval of CerpPASS Technology Corp., the test report shall not be reproduced except in full.

Approved by:

Mark Liao / Supervisor

Laboratory Accreditation:

CerpPASS Technology Corporation Test Laboratory





Contents

1. Summary of Test Procedure and Test Results	4
1.1 Applicable Standards	4
2. Test Configuration of Equipment under Test	5
2.1 Feature of Equipment under Test	5
2.2 Carrier Frequency of Channels	5
2.3 Test Mode and Test Software	6
2.4 Description of Test System	6
2.5 General Information of Test	7
2.6 Measurement Uncertainty	7
3. Test Equipment and Ancillaries Used for Tests	8
4. Transmitter Parameters	9
4.1 Frequency Error	9
4.2 Occupied Bandwidth	10
4.3 RF Output Power Tolerance	12
4.4 Spurious Emissions	13
4.5 Interference Prevention Function	21
4.6 Carrier Sensing Function	22
5. Receiver Parameters	23
5.1 Spurious Emissions	23
6. Angular Width of Principal Radiation	28
6.1 Test Result	28
7. Power Supply Voltage Fluctuation Test	29
8. Construction Protection Confirmation	30



History of this test report

Report No.	Issued Date	Description
25070428-TRMIC01	Jan. 08, 2026	Original



1. Summary of Test Procedure and Test Results

1.1 Applicable Standards

“MIC Notification No. 88, Appendix No. 43”

TELEC-T401 (2023-11):

- Item 19 of Article 2

Description	Result
Frequency Error	Pass
Occupied Bandwidth	Pass
RF Output Power Tolerance	Pass
Spurious Emissions (TX)	Pass
Spurious Emissions (RX)	Pass
Interference Prevention Function	Pass
Angular Width of Principal Radiation	Pass
Construction Protection Confirmation	Pass

*The lab has reduced the uncertainty risk factor from test equipment, environment and staff technicians which according to the standard on contract. Therefore, the test result will only be determined by standard requirement, measurement uncertainty evaluation is not considered.

* The following reference test guidance is not within the scope of accreditation of TAF.

-“MIC Notification No. 88, Appendix No. 43”

- Item 19 of Article 2



2. Test Configuration of Equipment under Test

2.1 Feature of Equipment under Test

Operation Frequency Range	2400MHz-2483.5MHz
Center Frequency Range	802.11b/g/n: 2412MHz-2472MHz BLE: 2402MHz-2480MHz
Modulation Type	2.4GHz: 802.11b: CCK, DQPSK, DBPSK 802.11g/n: BPSK, QPSK, 16QAM, 64QAM BLE: GFSK
Modulation Technology	2.4GHz: DSSS, OFDM BLE: DTS
Data Rate	2.4GHz: 802.11b: 1, 2, 5.5, 11Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0 – MCS7, HT20 BLE: GFSK: 1Mbps, GFSK: 2Mbps
Antenna Type	PIFA Antenna
Antenna Gain	2.7 dBi

Note: For more details, please refer to the User's manual of the EUT.

2.2 Carrier Frequency of Channels

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
*00	2402	14	2430	28	2458
01	2404	15	2432	29	2460
02	2406	16	2434	30	2462
03	2408	17	2436	31	2464
04	2410	18	2438	32	2466
05	2412	*19	2440	33	2468
06	2414	20	2442	34	2470
07	2416	21	2444	35	2472
08	2418	22	2446	36	2474
09	2420	23	2448	37	2476
10	2422	24	2450	38	2478
11	2424	25	2452	*39	2480
12	2426	26	2454	--	--
13	2428	27	2456	--	--

Note: Channels remarked * are selected to perform test.



2.3 Test Mode and Test Software

- a. An executive program, "EspRFTTestTool Ver.: v3.6" was executed to transmit and receive data via Bluetooth.
- b. The following test modes were performed for the test:

Test Mode	Operating Description
Test Mode 1	GFSK (1Mbps)
Test Mode 2	GFSK (2Mbps)

Modulation Type	TX CONFIGURATION
GFSK (1Mbps)	1TX
GFSK (2Mbps)	1TX

2.4 Description of Test System

RF Conducted				
Equipment	Brand	Model	Length/Type	Power cord/Length/Type
Notebook	Lenovo	L440	N/A	Adapter / 1.8m / NS
Test Fixture	ONEPING TECHNOLOGIES CO., LTD	OP-1012-PBAM04D1	N/A	N/A
USB Cable	kolin	KEX-DLCP07	1.5m/NS	N/A



2.5 General Information of Test

Organization	CerpPASS Technology Corp.		
Test Site	CerpPASS Technology Corporation Test Laboratory Address: No.10, Ln. 2, Lianfu St., Luzhu Dist., Taoyuan City 33848, Taiwan (R.O.C.) Tel: +886-3-3226-888 Fax: +886-3-3226-881		
	FCC	TW1439, TW1079	
	IC	4934E-1, 4934E-2	
	Test Condition	Normal Voltage: 5 V Extreme Voltage: 5.5 V and 4.5 V	

Test Item	Test Site	Test Period	Environmental Conditions	Tested by
RF Conducted	RFCON02-NK	2025/12/17	25°C / 47%	Bart Tsai

2.6 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

Measurement Item	Uncertainty
Output power	±1.1dB
Unwanted Emissions Strength	±2.0dB
Bandwidth	±6.5%
Frequency tolerance	±0.31kHz
Dwell Time	±3.5%



3. Test Equipment and Ancillaries Used for Tests

Test Item	RF Conducted						
Test Site	RFCON01-NK						
Instrument	Manufacturer	Model No	Serial No	Calibration Date	Valid Date	Calibration authority	Calibration method
Spectrum Analyzer	R&S	FSP 40	100047	2025/03/03	2026/03/02	ETC	C
Attenuator	KEYSIGHT	8491B	MY39250703	2025/02/12	2026/02/11	ETC	C
Cable-0.5m (1G-26.5G)	HUBER SUHNER	SUCOFLE X 102	28422/2	2025/06/06	2026/06/05	ETC	C
Power Meter	Anritsu	ML2495A	1224005	2025/02/12	2026/02/11	ETC	C
Power Sensor	Anritsu	MA2411B	1207295	2025/02/12	2026/02/11	ETC	C
Switch Box	Theda	1-4	TW5451159	NA	NA	N/A	N/A

Note: Calibration Method

- a) : Calibration conducted by the National Institute of Information and Communications Technology(NICT) or a designated calibration agency under Article 102-18 paragraph (1).
- b) : Calibration conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Law (Law No. 51 of 1992) Japan Calibration Service System.
- c) : Calibration conducted in foreign countries, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1).
- d) : Calibration conducted by using other equipment that listed above from a) to c).



4. Transmitter Parameters

4.1 Frequency Error

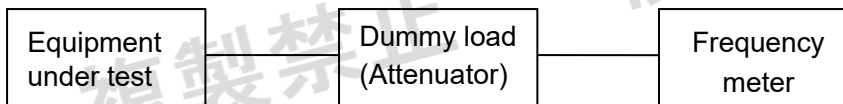
4.1.1 Test Limit

Limits: $\pm 50 \times 10^{-6}$, 50ppm

4.1.2 Test Procedures

According to Notification No. 88 of MIC, 2004, Annex 43, Test item frequency error measuring procedures.

4.1.3 Test Setup



4.1.4 Test Result and Data

BLE (GFSK-1Mbps/2Mbps)					
Test Conditions					
Voltage	Test Frequency	MHz	2402	2440	2480
Vnom	Measured Frequency	MHz	2401.9828	2439.9824	2479.9817
Vnom	Frequency Error	ppm	-7.16	-7.21	-7.38



4.2 Occupied Bandwidth

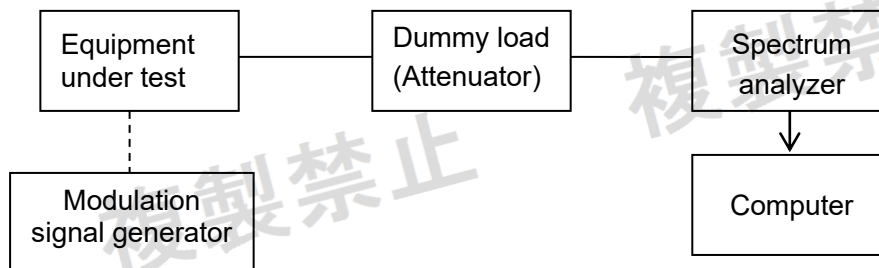
4.2.1 Test Limit

Modulation type	Occupied Band Width
FHSS、FHSS+DSSS、FHSS+OFDM	< 83.5 MHz
DSSS	< 26 MHz
OFDM	< 26 MHz 26 -40MHz
Other	< 26 MHz

4.2.2 Test Procedures

According to Notification No. 88 of MIC, 2004, Annex 43, test item occupied bandwidth and spreading bandwidth, measuring procedures.

4.2.3 Test Setup



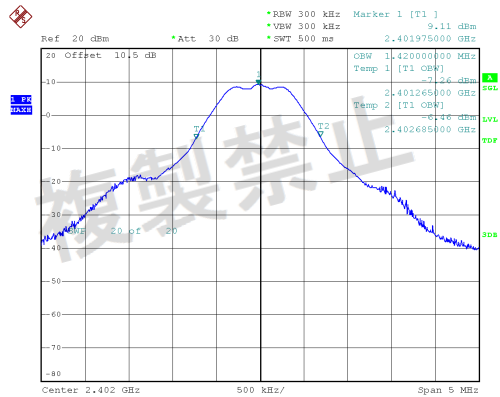
4.2.4 Test Result and Data

BLE (GFSK-1Mbps)					
Test Conditions					
Voltage	Test Frequency	MHz	2402	2440	2480
Vnom	Occupied Bandwidth	MHz	1.42	1.44	1.44

BLE (GFSK-2Mbps)					
Test Conditions					
Voltage	Test Frequency	MHz	2402	2440	2480
Vnom	Occupied Bandwidth	MHz	2.24	2.25	2.25

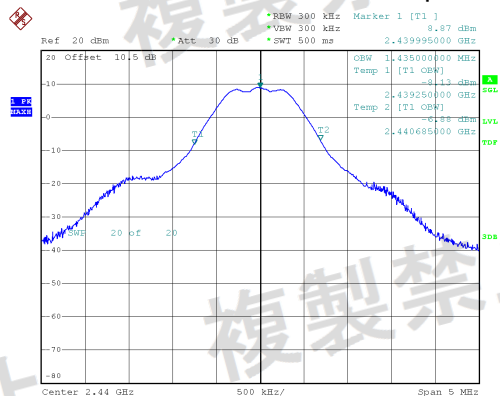


Vnom
Modulation Standard: GFSK-1Mbps, CH00



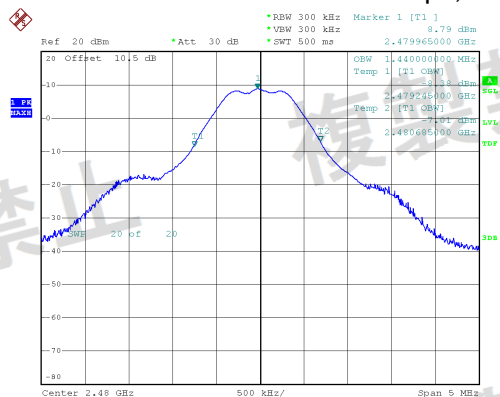
Date: 17.DEC.2025 13:16:06

Modulation Standard: GFSK-1Mbps, CH19



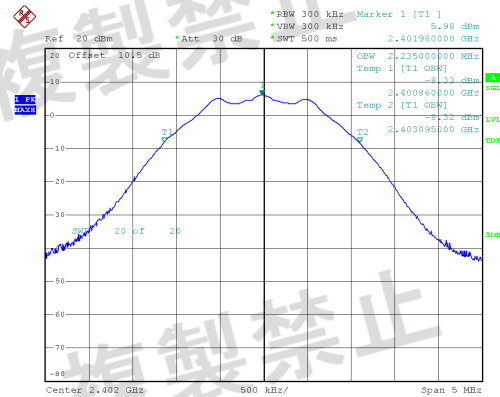
Date: 17.DEC.2025 13:22:09

Modulation Standard: GFSK-1Mbps, CH39



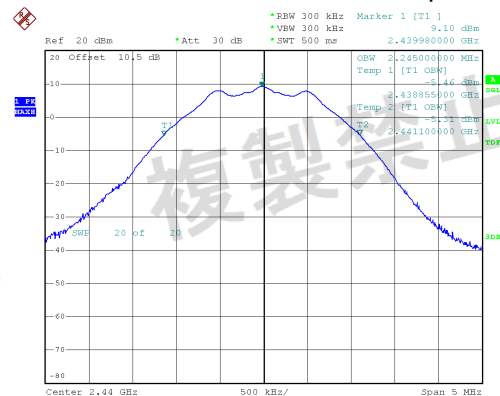
Date: 17.DEC.2025 13:26:24

Vnom
Modulation Standard: GFSK-2Mbps, CH00



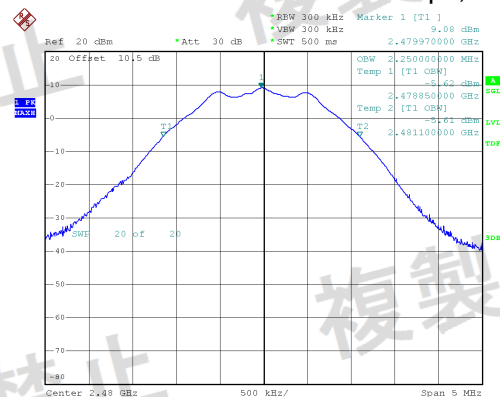
Date: 17.DEC.2025 13:55:53

Modulation Standard: GFSK-2Mbps, CH19



Date: 17.DEC.2025 13:59:31

Modulation Standard: GFSK-2Mbps, CH39



Date: 17.DEC.2025 14:03:28



4.3 RF Output Power Tolerance

4.3.1 Test Limit

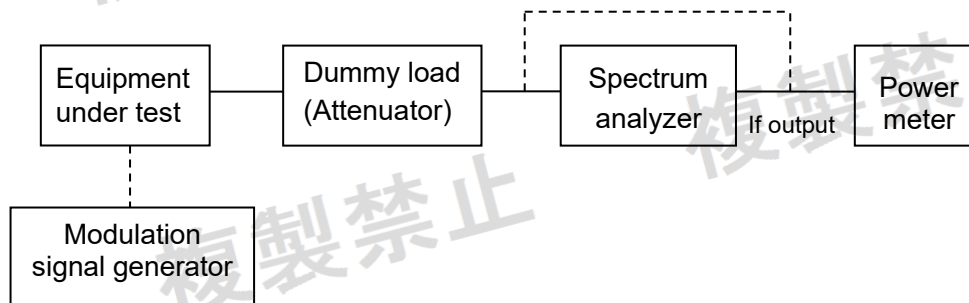
1. tolerance: +20 %
2. output power:

Modulation type	Occupied Band Width	output power
FHSS、FHSS+DSSS、FHSS+OFDM	< 83.5 MHz	< 10mW/MHz
DSSS	< 26 MHz	< 10mW/MHz
OFDM	< 26 MHz	< 10mW/MHz
	26 -40MHz	< 5mW/MHz
Other	< 26 MHz	< 10mW

4.3.2 Test Procedure

According to Notification No. 88 of MIC, 2004, Annex 43, test item antenna power error measuring procedure.

4.3.3 Test Setup



4.3.4 Declared Rated Power

1Mbps: 7.177943 mW
2Mbps: 6.295062 mW

4.3.5 Test Result and Data

BLE (GFSK-1Mbps)					
Test Conditions					
Voltage	Test Frequency	MHz	2402	2440	2480
Vnom	Antenna Power	mW	7.177943	6.950243	6.870684
Vnom	Antenna Power Error	%	0.00	-3.17	-4.28

BLE (GFSK-2Mbps)					
Test Conditions					
Voltage	Test Frequency	MHz	2402	2440	2480
Vnom	Antenna Power	mW	3.326596	6.208690	6.295062
Vnom	Antenna Power Error	%	-47.16	-1.37	0.00



4.4 Spurious Emissions

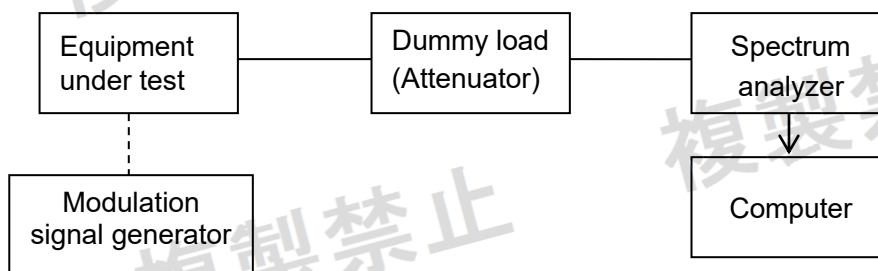
4.4.1 Test Limit

	Frequency Band (For 2400 ~ 2483.5 MHz)	Limit
*1	<2387MHz	2.5 μ W/MHz
*2	2387MHz ~ 2400MHz	25 μ W/MHz
*3	2483.5MHz ~ 2496.5MHz	25 μ W/MHz
*4	>2496.5MHz	2.5 μ W/MHz

4.4.2 Test Procedure

According to Notification No. 88 of MIC, 2004, Annex 43 Spurious and unwanted emission intensity measuring procedure.

4.4.3 Test Setup





4.4.4 Test Result and Data

BLE (GFSK-1Mbps)

Test Conditions						
Voltage	Frequency Band	Test Frequency	MHz	2402	2440	2480
Vnom	30 MHz~ 2387 MHz	Unwanted Emission Frequency	MHz	2383.46	2367.85	2386.12
Vnom	2387 MHz~ 2400 MHz		MHz	2400.00	2387.08	2388.54
Vnom	2483.5 MHz~ 2496.5 MHz		MHz	2494.76	2494.89	2483.50
Vnom	2496.5 MHz~ 12500 MHz		MHz	3201.75	3253.01	3305.53
Vnom	30 MHz~ 2387 MHz	Unwanted Emission Intensity	μW/MHz	0.0214	0.0201	0.0159
Vnom	2387 MHz~ 2400 MHz		μW/MHz	20.6538	0.0241	0.0221
Vnom	2483.5 MHz~ 2496.5 MHz		μW/MHz	0.0257	0.0269	1.3366
Vnom	2496.5 MHz~ 12500 MHz		μW/MHz	0.0675	0.0638	0.0650

BLE (GFSK-2Mbps)

Test Conditions						
Voltage	Frequency Band	Test Frequency	MHz	2402	2440	2480
Vnom	30 MHz~ 2387 MHz	Unwanted Emission Frequency	MHz	1737.35	2369.32	2351.94
Vnom	2387 MHz~ 2400 MHz		MHz	2400.00	2392.50	2398.33
Vnom	2483.5 MHz~ 2496.5 MHz		MHz	2491.77	2485.88	2483.51
Vnom	2496.5 MHz~ 12500 MHz		MHz	3203.00	3253.01	3306.78
Vnom	30 MHz~ 2387 MHz	Unwanted Emission Intensity	μW/MHz	0.0524	0.0156	0.0148
Vnom	2387 MHz~ 2400 MHz		μW/MHz	22.0800	0.0258	0.0218
Vnom	2483.5 MHz~ 2496.5 MHz		μW/MHz	0.0152	0.0304	2.4266
Vnom	2496.5 MHz~ 12500 MHz		μW/MHz	0.0519	0.0703	0.0597

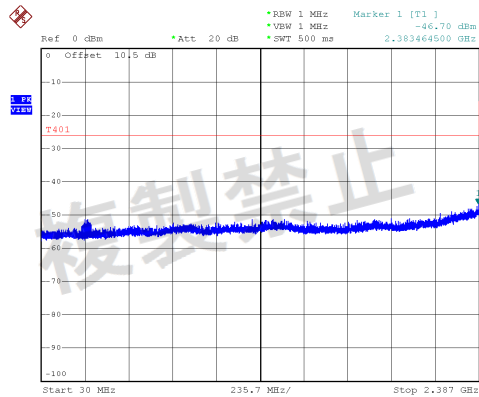
*The test result calculated as follows:

$$\mu W = 10^{(\text{Measurement Value(dBm)} / 10)} * 1000$$

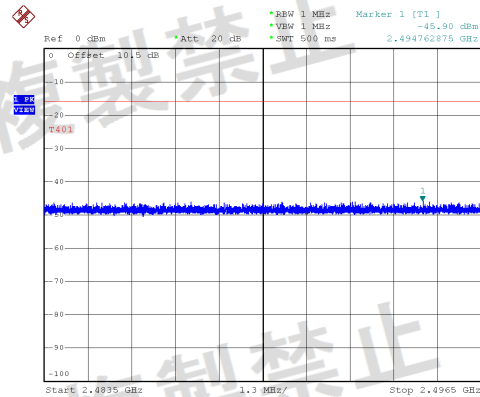


Vnom

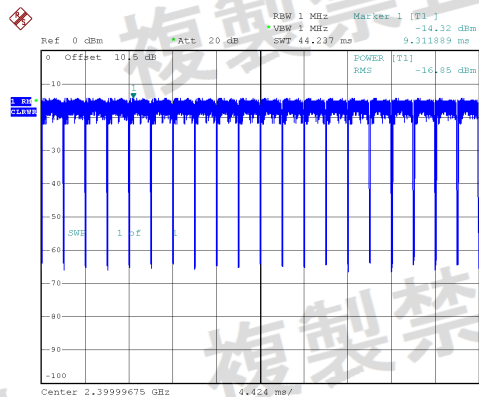
Modulation Standard: GFSK-1Mbps, CH00



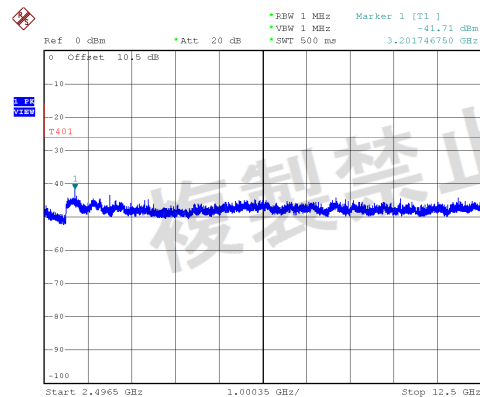
Date: 17.DEC.2025 13:16:49



Date: 17.DEC.2025 13:18:08



Date: 17.DEC.2025 13:17:43

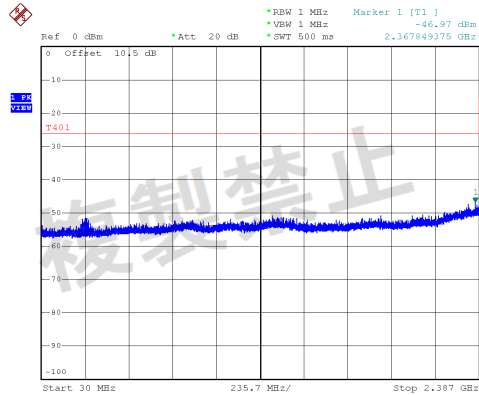


Date: 17.DEC.2025 13:18:43

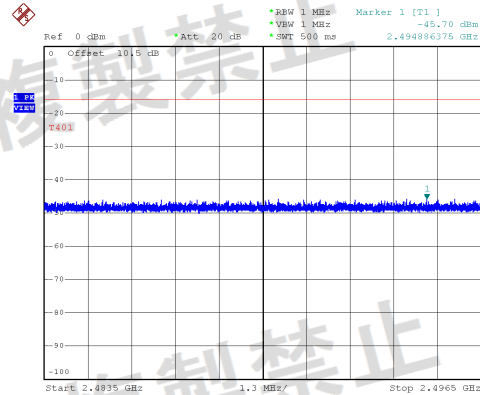


Vnom

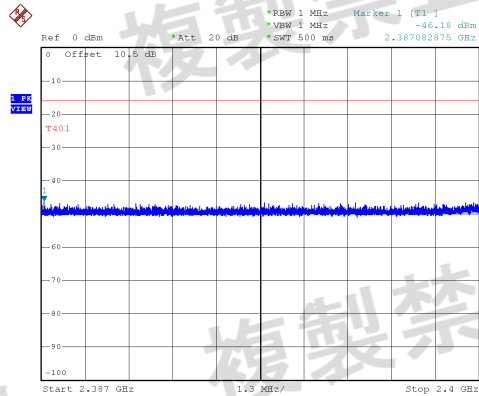
Modulation Standard: GFSK-1Mbps, CH19



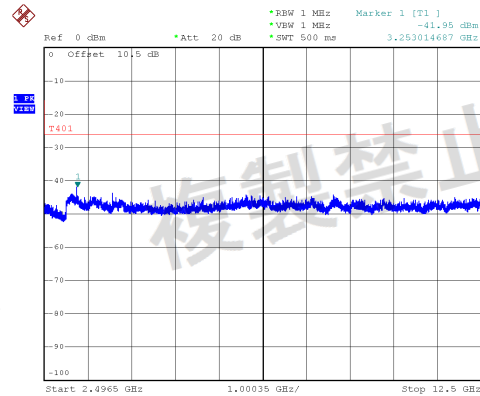
Date: 17.DEC.2025 13:22:52



Date: 17.DEC.2025 13:24:25



Date: 17.DEC.2025 13:23:23

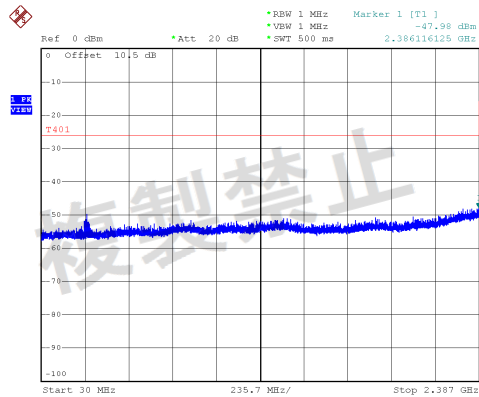


Date: 17.DEC.2025 13:25:00

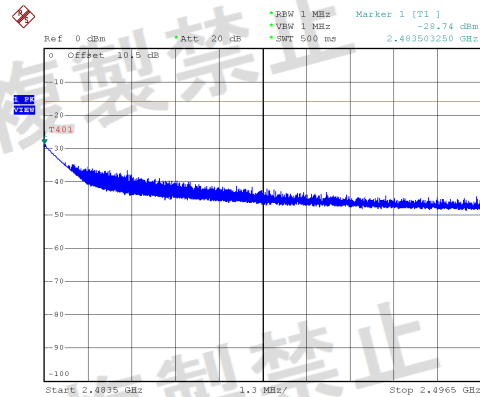


Vnom

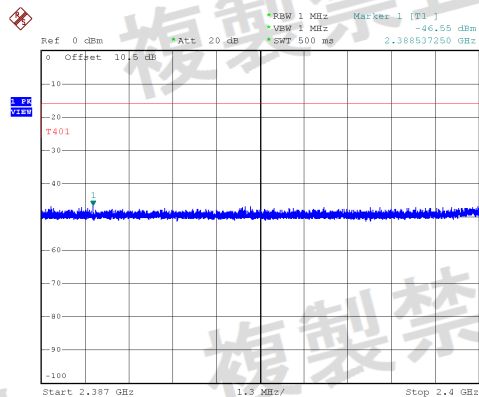
Modulation Standard: GFSK-1Mbps, CH39



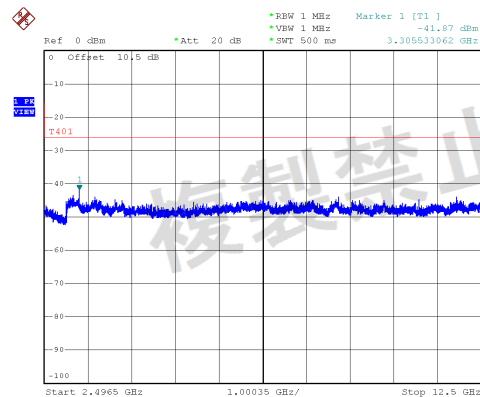
Date: 17.DEC.2025 13:27:07



Date: 17.DEC.2025 13:28:31



Date: 17.DEC.2025 13:27:42

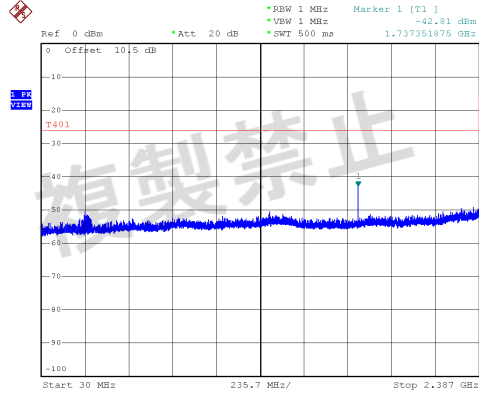


Date: 17.DEC.2025 13:29:39

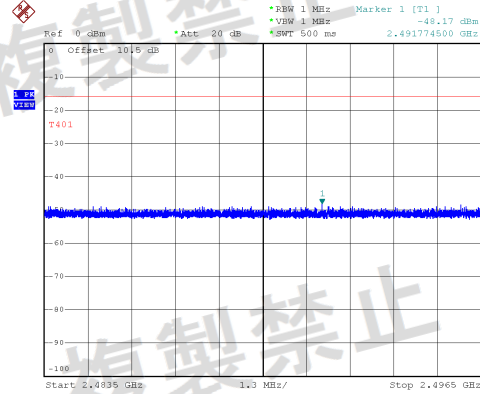


Vnom

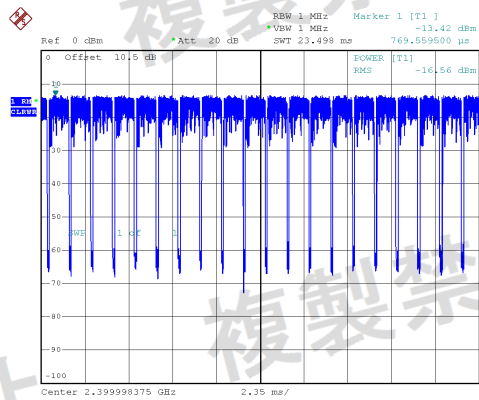
Modulation Standard: GFSK-2Mbps, CH00



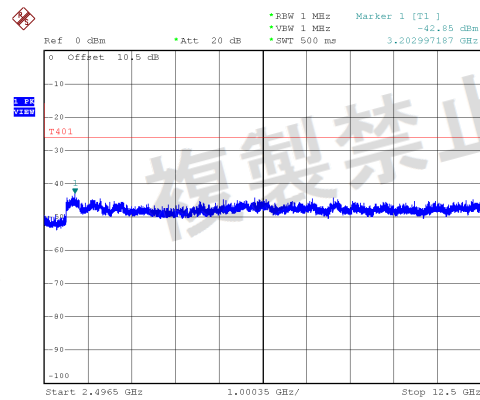
Date: 17.DEC.2025 13:56:36



Date: 17.DEC.2025 13:57:12



Date: 17.DEC.2025 13:54:39

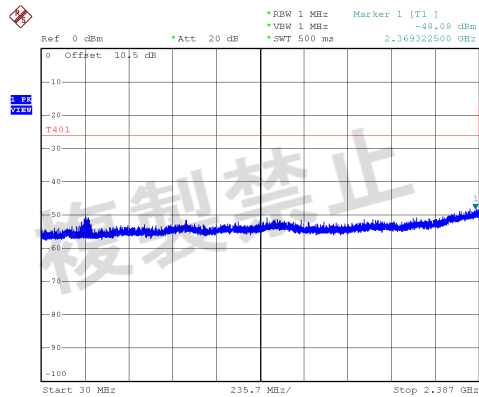


Date: 17.DEC.2025 13:57:47

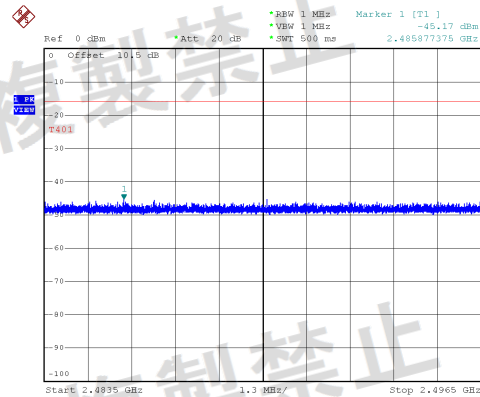


Vnom

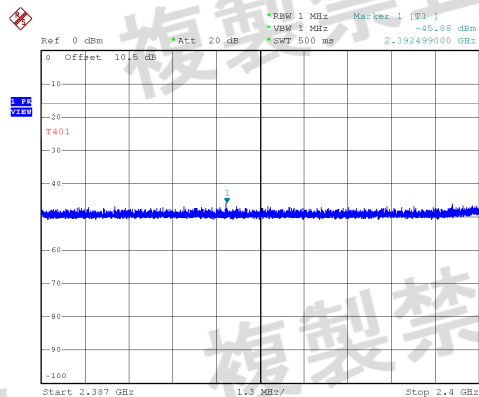
Modulation Standard: GFSK-2Mbps, CH19



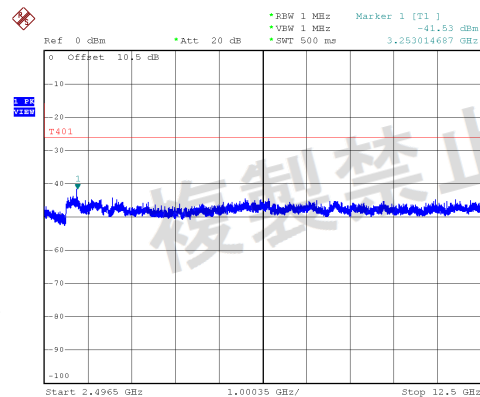
Date: 17.DEC.2025 14:00:14



Date: 17.DEC.2025 14:01:25



Date: 17.DEC.2025 14:00:50

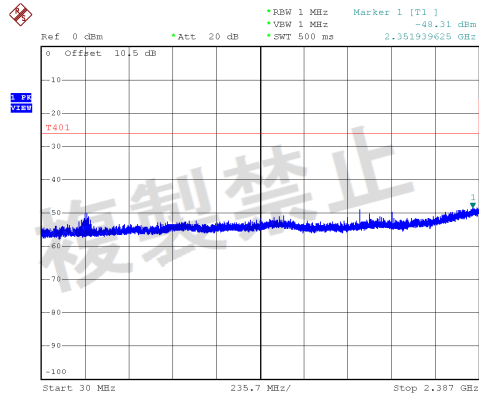


Date: 17.DEC.2025 14:02:01

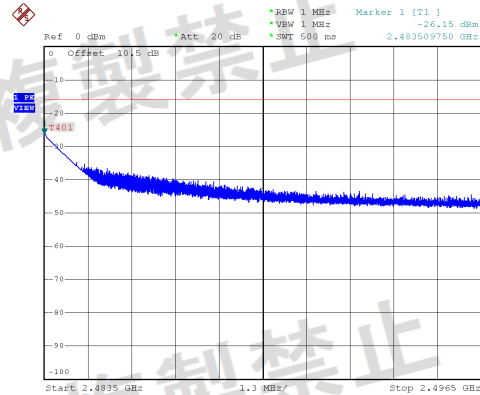


Vnom

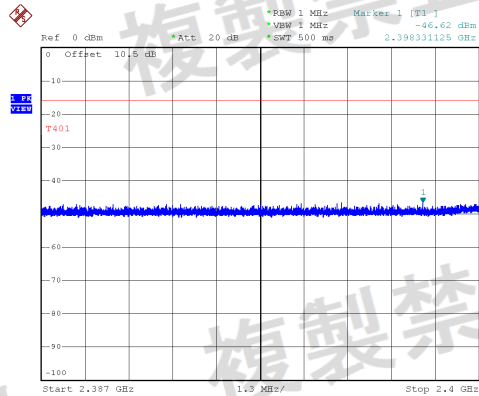
Modulation Standard: GFSK-2Mbps, CH39



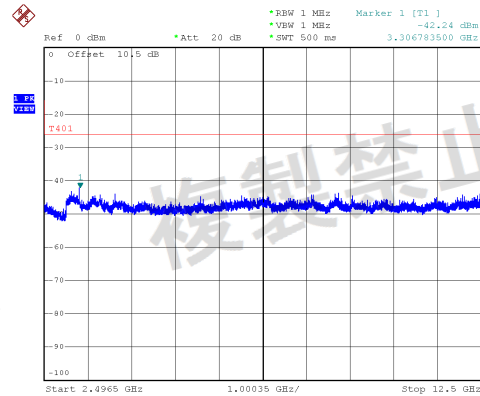
Date: 17.DEC.2025 14:04:10



Date: 17.DEC.2025 14:05:21



Date: 17.DEC.2025 14:04:46



Date: 17.DEC.2025 14:05:57



4.5 Interference Prevention Function

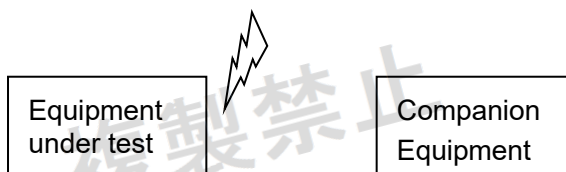
4.5.1 Test Limit

Identification code ≥ 48 bits

4.5.2 Test Procedures

1. Set EUT under operation mode and link up with companion equipment
2. Check communication status between EUT and companion equipment is normal
3. Confirm the MAC address of EUT

4.5.3 Test Setup



4.5.4 Test Result

ID Code	MAC Address : 08:3A:8D:5A:38:36
Result: PASS	



4.6 Carrier Sensing Function

4.6.1 Test Result

Not applicable.



5. Receiver Parameters

5.1 Spurious Emissions

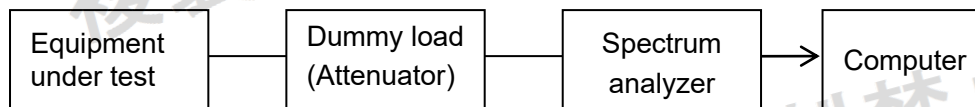
5.1.1 Test Limit

Frequency Band	Limit
<1GHz	4nW
1GHz ~ 12.5GHz	20nW

5.1.2 Test Procedures

According to Notification No. 88 of MIC, 2004, Annex 43 Limit of secondary radiated emissions measuring procedure.

5.1.3 Test Setup



5.1.4 Test Result and Data

BLE (GFSK-1Mbps)

Test Conditions						
Voltage	Frequency Band	Test Frequency	MHz	2402	2440	2480
Vnom	30 MHz~ 1000 MHz	Spurious Emission Frequency	MHz	934.65	859.96	986.91
Vnom	1000 MHz~ 12500 MHz		MHz	1853.88	3255.44	1861.06
Vnom	30 MHz~ 1000 MHz	Spurious Emission Intensity	nW	0.0290	0.0308	0.0270
Vnom	1000 MHz~ 12500 MHz		nW	1.3428	0.6998	0.6095

BLE (GFSK-2Mbps)

Test Conditions						
Voltage	Frequency Band	Test Frequency	MHz	2402	2440	2480
Vnom	30 MHz~ 1000 MHz	Spurious Emission Frequency	MHz	934.53	515.61	562.53
Vnom	1000 MHz~ 12500 MHz		MHz	3205.13	3255.44	1856.75
Vnom	30 MHz~ 1000 MHz	Spurious Emission Intensity	nW	0.0265	0.0437	0.0253
Vnom	1000 MHz~ 12500 MHz		nW	0.8035	0.7907	0.6761

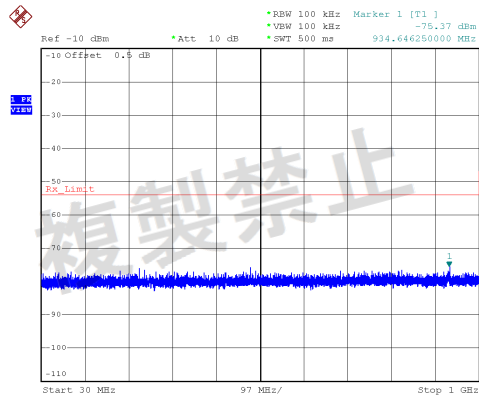
*The test result calculated as follows:

$$\text{nW} = 10^{(\text{Measurement Value(dBm)} / 10)} * 1000000$$



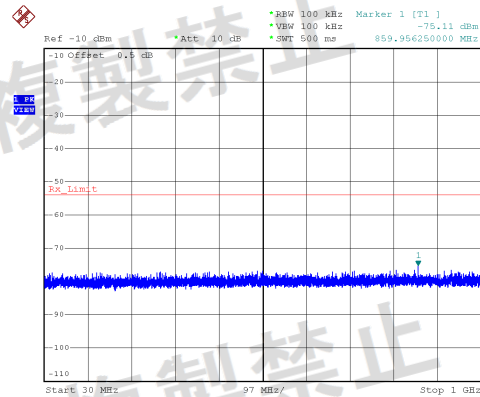
Vnom

Modulation Standard: GFSK-1Mbps, CH00

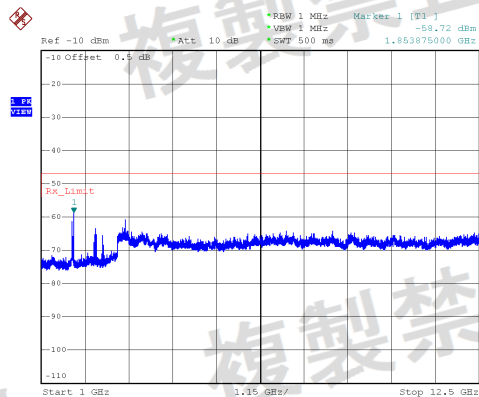


Date: 17.DEC.2025 13:33:09

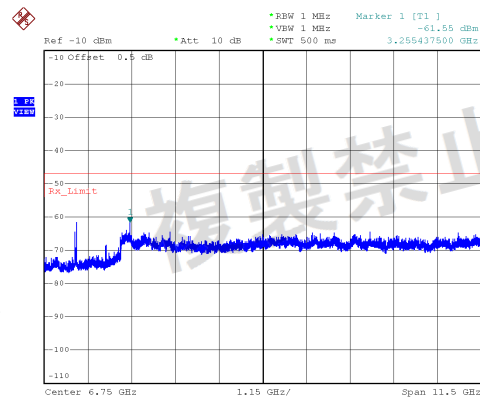
Modulation Standard: GFSK-1Mbps, CH19



Date: 17.DEC.2025 13:34:28



Date: 17.DEC.2025 13:33:44

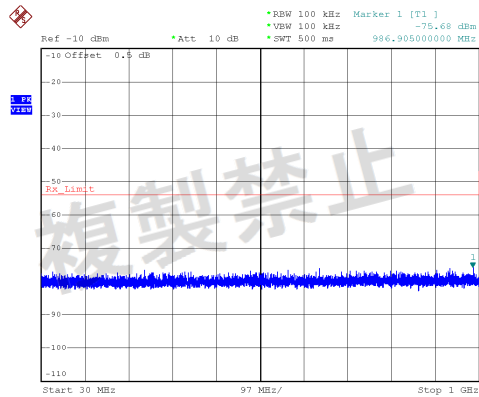


Date: 17.DEC.2025 13:35:30

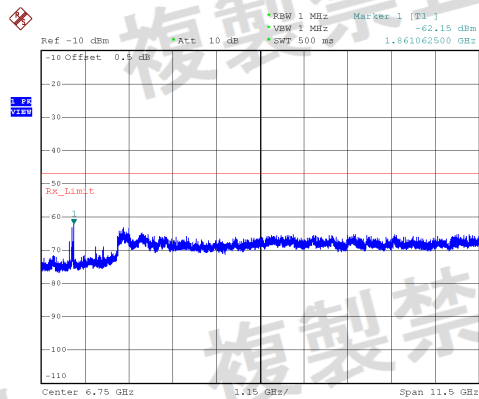


Vnom

Modulation Standard: GFSK-1Mbps, CH39



Date: 17.DEC.2025 13:36:27

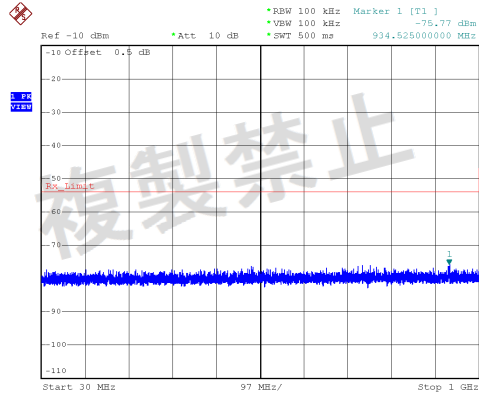


Date: 17.DEC.2025 13:37:03



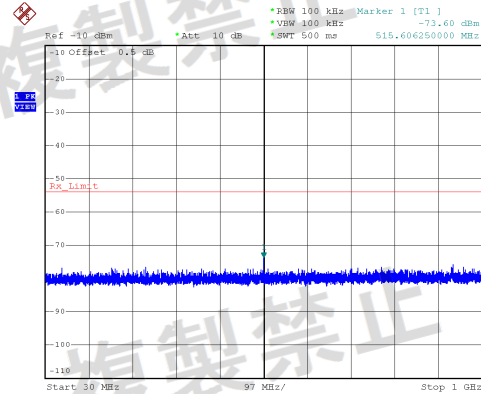
Vnom

Modulation Standard: GFSK-2Mbps, CH00

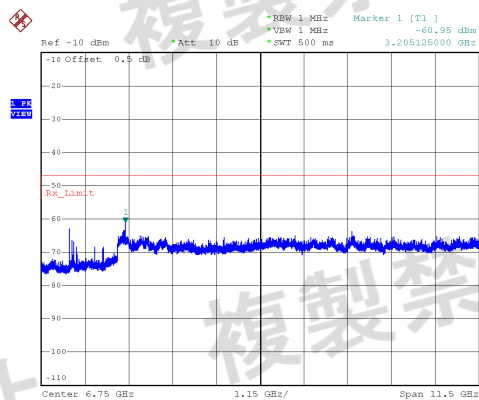


Date: 17.DEC.2025 14:08:19

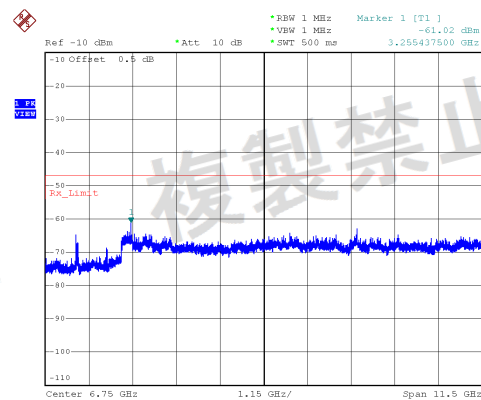
Modulation Standard: GFSK-2Mbps, CH19



Date: 17.DEC.2025 14:09:52



Date: 17.DEC.2025 14:09:16

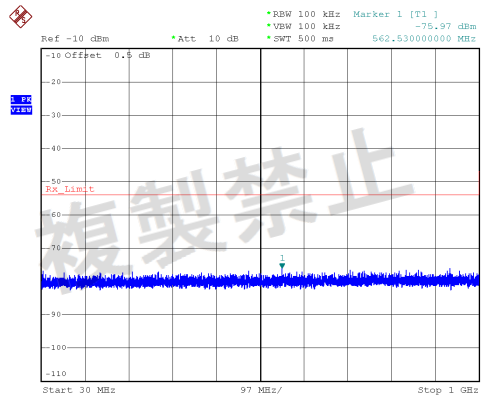


Date: 17.DEC.2025 14:10:49

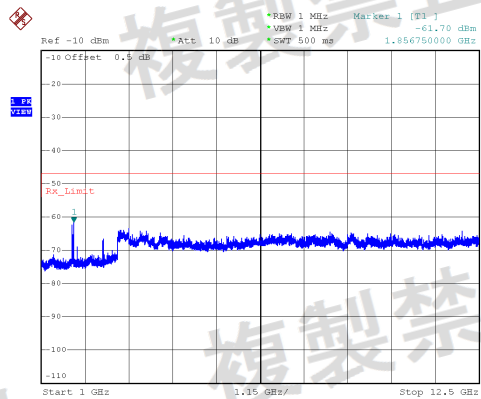


Vnom

Modulation Standard: GFSK-2Mbps, CH39



Date: 17.DEC.2025 14:16:47



Date: 17.DEC.2025 14:12:00



6. Angular Width of Principal Radiation

6.1 Test Result

Antenna Type	PIFA Antenna
Antenna Gain	2.70
Cable Loss (dB)	0.50
EIRP (dBm)	11.26
Half Power Beam Angles (deg)	360.00
Limit of E.I.R.P (dBm)	12.14
Result	Pass



7. Power Supply Voltage Fluctuation Test

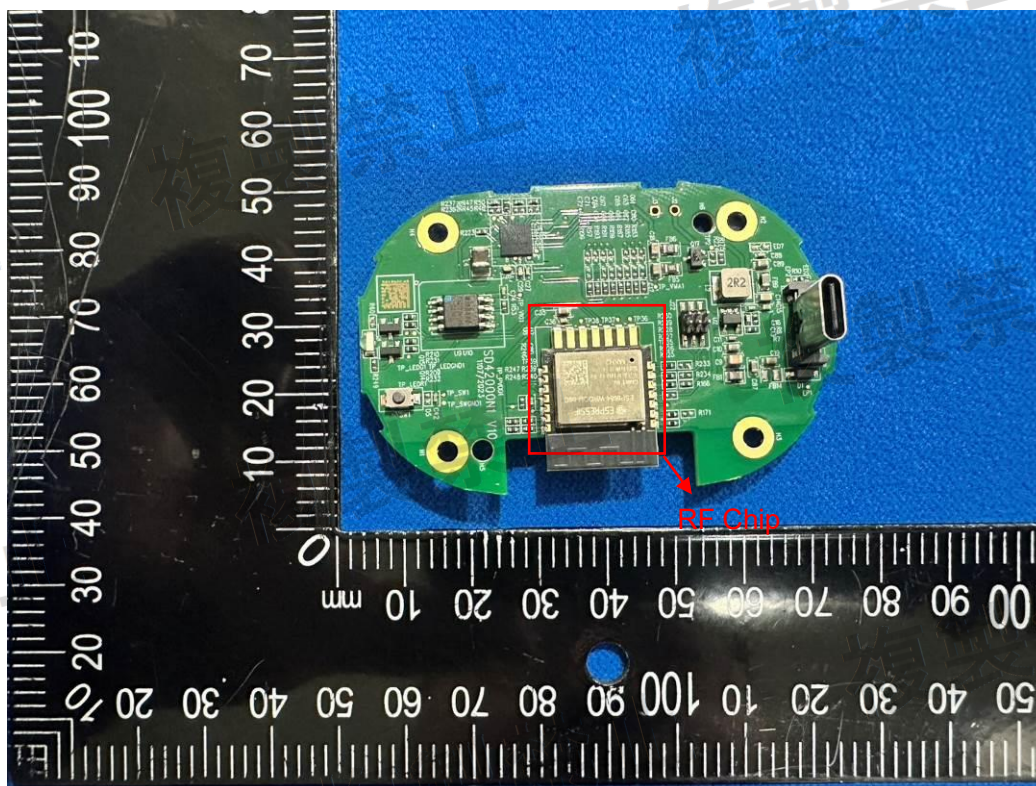
Voltage Fluctuation Test	Normal Voltage	High Voltage + 10% of Normal Voltage	Low Voltage - 10% of Normal Voltage
Input DC Power	5	5.5	4.5
Output DC Power	3.428	3.435	3.417
Voltage Variation (%)	-	0.20%	-0.32%

Note: Voltage Variation(%)=(Output High or Low Voltage - Output Normal Voltage)/Output Normal Voltage X 100 During the 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 tests ,EUT only operated in normal voltage to test all regulations.



8. Construction Protection Confirmation

The Radio Equipment:
☐ Use Special Screw
☒ Metal Shielding is Soldered
☐ Use Ball Grid Array (BGA)
☐ The RF part is covered by glue.
☐ The shell is covered by glue.
☐ Ultrasonic Welding
Module/Chip:
☐ RF module/Chip Pins > 20 and Chip Pins distance < 1.5 mm



-----THE END OF REPORT-----