

JAPAN MIC TEST REPORT

For

Akubela Co., Ltd.

9/F, No.56 Guanri Road, Software Park II, Xiamen 361009, China

Tested Model: MIR-MC100

Report Type: Original Report	Product Type: Smart Door and Window Sensor
Report Number: 2507X78799E-RF-01	
Report Date: 2025-11-14	
Reviewed By: Ash Lin	
Approved By: Miles Chen	
Test Laboratory: Bay Area Compliance Laboratories Corp.(Fujian) 4th Floor, No. 65, Siming Industrial Park, Meixi Road, Tong'an District, Xiamen City, Fujian Province Tel: +86-592-3200111 www.baclcorp.com.cn	

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DOCUMENT REVISION HISTORY

Number of Revision	Report No.	Version	Issue Date	Description
0	2507X78799E-RF-01	R1V1	2025-11-14	Initial Release

GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

Product Name:	Smart Door and Window Sensor
Test Model:	MIR-MC100
Trade Name:	akubela
Power Supply:	DC 3V
RF output power	6 mW
RF Function:	Zigbee
Operating Band/Frequency:	2405-2480MHz
Modulation Type:	OQPSK
Emission Type:	G1D
★ Maximum Antenna Gain:	4.3 dBi
EUT Received Status:	Good
Note: 1. The maximum antenna gain is provided by the manufacturer. 2. All measurement and test data in this report was gathered from production sample serial number: 3AHS-2 (Assigned by the BACL (Fujian). The EUT supplied by the applicant was received on 2025-09-22.)	

Objective

The objective of this current document is to demonstrate the EUT, as equipment type in Certification Ordinance Article 2-1-19 of Specific Radio Equipment Specified in Article 38-2-2 Paragraph 1 Item 1 of the Radio Low, compliant with Article 49-20 of Radio equipment regulations.

Test Methodology

All measurements contained in this report were conducted with technical regulations of MIC Notice No.88 of 2004, Appendix No.43 (latest version: MIC Notice No.365 of 2020).

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Fujian) to collect test data is located on the Unit 302, No. 902, Meifeng South Road, Tong'an District, Xiamen City.

Measurement Uncertainty

Item	$U_{\text{lab}} = 2 u_c(y)$ (Confidence of 95%)
Occupied Bandwidth	2%
spreading bandwidth	2%
Frequency Error	$0.085 \times 10^{-6} \text{ MHz}$
Transmitter Conducted Power(Conducted RF power)	$\pm 1.49 \text{ dB}$
Conducted Spurious Emission	$\pm 2.92 \text{ dB}$
Duty Cycle	1%
Temperature	$\pm 1^\circ \text{C}$
Humidity	$\pm 5\%$
Voltage (DC)	$\pm 0.4\%$

Note: Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.

EUT TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in engineering mode, which was provided by manufacturer. 16 channels are provided as below table:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
11	2405	19	2445
12	2410	20	2450
13	2415	21	2455
14	2420	22	2460
15	2425	23	2465
16	2430	24	2470
17	2435	25	2475
18	2440	26	2480

For lowest, middle and highest channel, EUT was tested with channel 11, 18 and 26.

★The extreme voltage test conditions, which were declared by the manufacturer, and the normal conditions are as below:

NV, Normal Voltage (Vdc): 3

LV, Low Voltage (Vdc): 2.7

HV, High Voltage (Vdc): 3.3

Equipment Modifications

No modification was made to the EUT tested.

★EUT Exercise Software

Software "sscom5.13.1" was used during test, which was provided by manufacturer, the maximum power was configured as below:

Mode	Channel	Frequency (MHz)	Power level
Zigbee	Low	2405	7
	Middle	2440	7
	High	2480	7

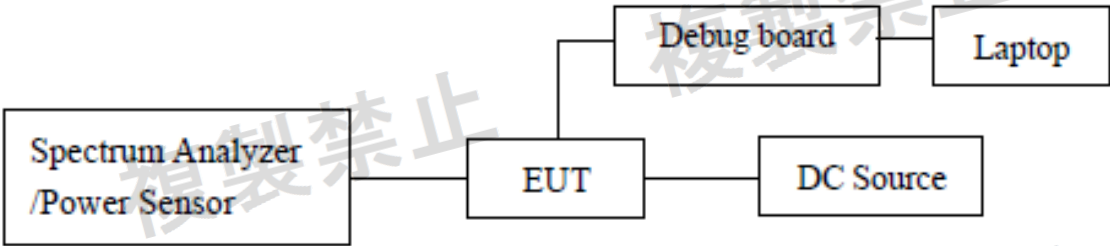
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Unknown	Debug board	Unknown	Unknown
Lenovo	Laptop	T480	PF1P5K4F
MAISHENG	DC Source	MS-606DS	2023115703
Unknown	Smart Gateway	JMWZG1	Unknown

Support Cable List and Details

Cable Description	Length (m)	From / Port	To
Dupont Cable	0.15	EUT	Debug board
USB cable	1	Debug board	Laptop
Power cable	1	EUT	DC Source

Configuration of Test Setup



TEST EQUIPMENT LIST AND DETAILS

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date	Calibration Agency	Calibration Method ^{Note}
Spectrum Analyzer	Rohde & Schwarz	FSU	100405	2025/02/20	2026/02/19	BACL Metrology	C
USB Wideband Power Sensor	Boonton	55318	8934	2025/2/20	2026/2/19	BACL Metrology	C
Multimeter	Deli	DL8490	23930192	2025/2/20	2026/2/19	BACL Metrology	C
Coaxial Cable	Lianxun	RF113	N/A	Each time	N/A	BACL (Fujian)	D

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Fujian) attests that all calibrations have been performed in accordance to requirements, traceable to National Primary Standards and International System of Units (SI).

Note:

- A. Calibration conducted by the National Institute of Information and Communications Technology (NICT) (hereinafter referred to as "NICT") or a designated calibration agency under Article 102-18 paragraph (1).
- B. Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Law (Law No. 51 of 1992).
- 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 measuring instruments and other equipment which shall have been given any of calibration, etc. listed above from a) to c)

SUMMARY OF TEST RESULTS

Certification Ordinance Article 2-1-19 Conducted with: MIC Notice No.88 Appendix No.43 Rules Section	Description of Test	Result
1	Frequency Error	Compliant
2	Occupied Bandwidth	Compliant
3	Transmitter Spurious Emission and Unwanted Emission Intensity	Compliant
4	Antenna Output Power and Output Power Tolerance	Compliant
5	Receiver Spurious Emission and Unwanted Emission Intensity	Compliant
6	Carrier sense capability	Not Applicable (See Note 1)
7	Transmission Antenna Gain	Not Applicable (See Note 2)
8	Transmission Radiation Angle Width	Not Applicable (See Note 2)
9	Interference Prevention Function	Compliant
10	Frequency Hopping Dwell Time	Not Applicable (See Note 3)
11	Construction Protection Confirmation	Compliant

Note:

- 1: The OBW of EUT is less than 26 MHz.
- 2: This item not applicable when the EIRP less than the limit.
- 3: Testing is only required for FHSS system devices.

FREQUENCY ERROR

Limit

Within $\pm 50\text{ppm}$.

Test Procedure

Set the EUT to the measurement frequency without modulation.

Setting of SA is following as: Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: MAX Hold.
Record the peak spot frequency.

If the EUT can't set at un-modulation mode, measure the 10dBc center frequency.

Test Data

Test Mode:	Transmitting	Test Date:	2025-10-26
Temperature:	24.1°C	ATM Pressure:	99.9kPa
Humidity:	52%	Test Engineer:	Apollo Luo

Test Result: Compliant

Test Condition	Mode	Channel	F _c (MHz)	F _L (MHz)	F _H (MHz)	F ₀ (MHz)	Result (ppm)	Limit (ppm)
NV	Zigbee	Low	2405	2404.04	2405.98	2405.01	4.16	≤50
		Middle	2440	2439.04	2440.98	2440.01	4.10	
		High	2480	2479.04	2480.98	2480.01	4.03	
LV	Zigbee	Low	2405	2404.04	2405.98	2405.01	4.16	≤50
		Middle	2440	2439.04	2440.98	2440.01	4.10	
		High	2480	2479.04	2480.98	2480.01	4.03	
HV	Zigbee	Low	2405	2404.04	2405.98	2405.01	4.16	≤50
		Middle	2440	2439.04	2440.98	2440.01	4.10	
		High	2480	2479.04	2480.98	2480.01	4.03	

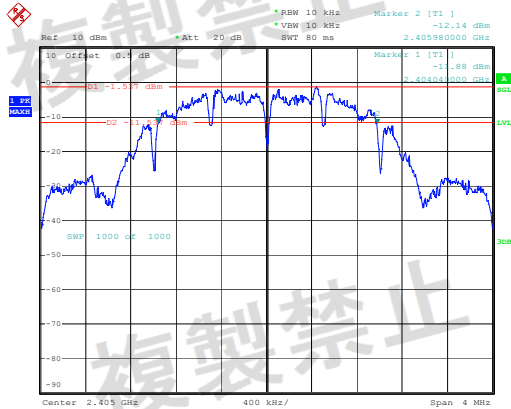
Note:

$Tolerance = (F_0 - F_c) / F_c * 10^6$, where $F_0 = (F_L + F_H) / 2$

F_L is the lower edge of the 10dBc center frequency

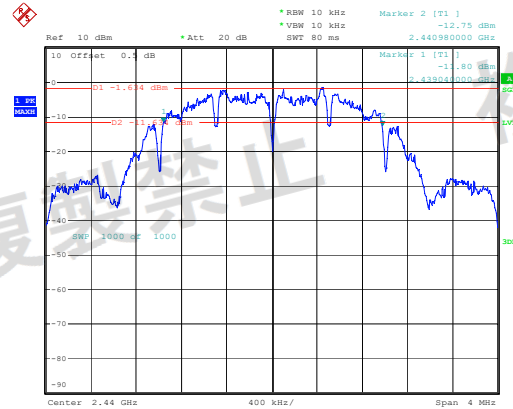
F_H is the upper edge of the 10dBc center frequency

NV, Low Channel



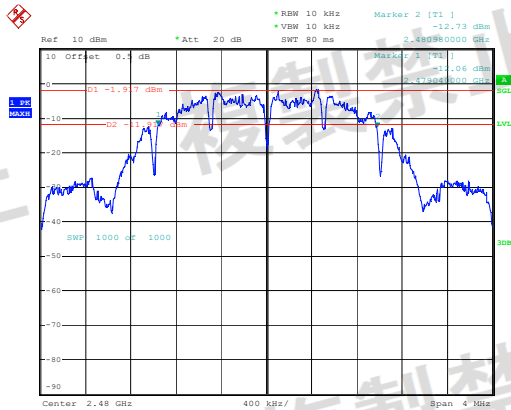
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Date: 26.OCT.2025 16:12:34

NV, Middle Channel



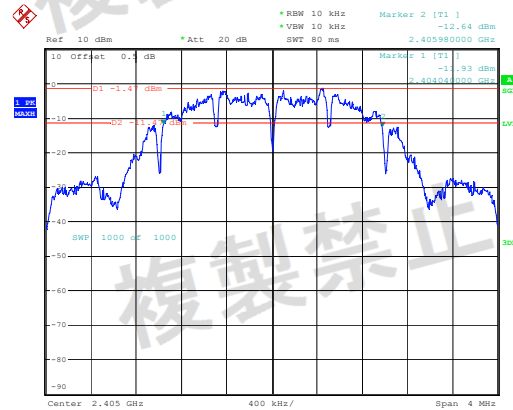
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NV, High Channel



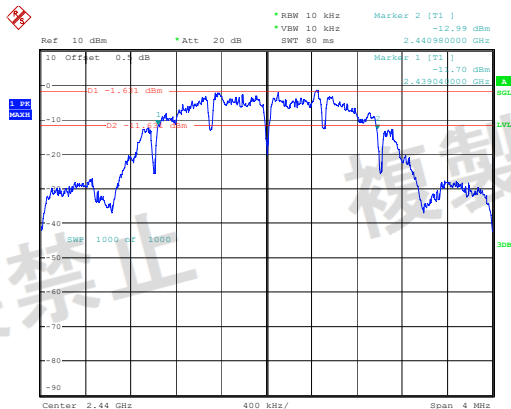
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Date: 26.OCT.2025 16:23:29

LV, Low Channel



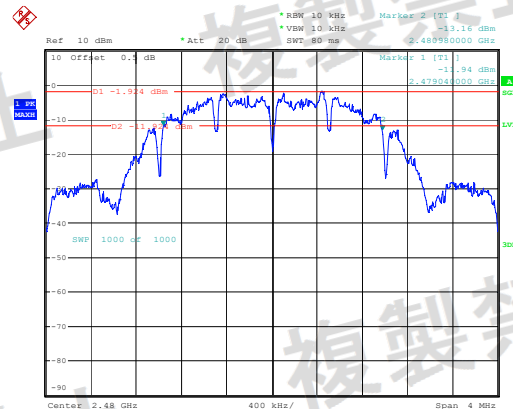
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Date: 26.OCT.2025 16:01:16

LV, Middle Channel



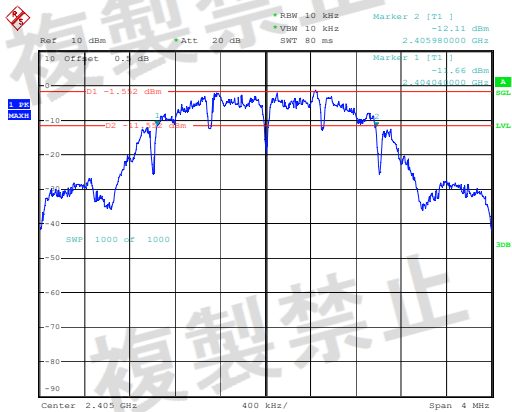
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Date: 26.OCT.2025 15:55:21

LV, High Channel



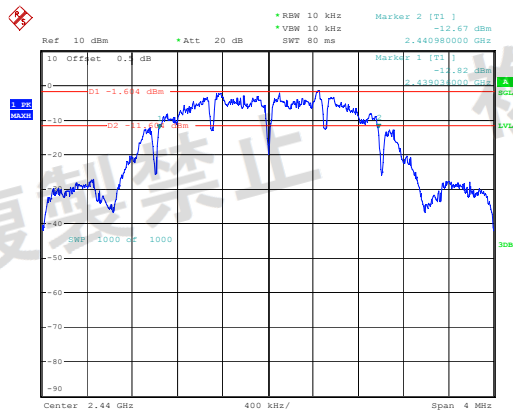
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Date: 26.OCT.2025 16:05:03

HV, Low Channel



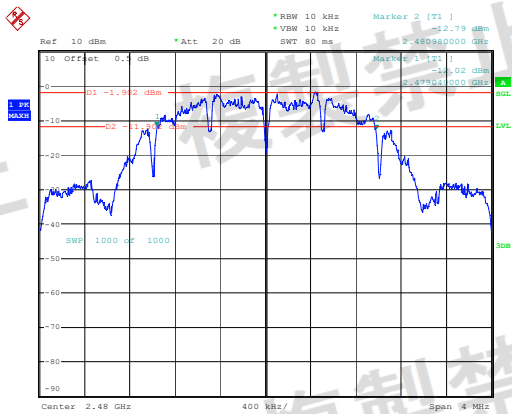
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Date: 26.OCT.2025 16:30:44

HV, Middle Channel



ProjectNo.:2507X78799E-RF Tester:Apollo Luo
Date: 26.OCT.2025 16:37:20

HV, High Channel



ProjectNo.:2507X78799E-RF Tester:Apollo Luo
Date: 26.OCT.2025 16:45:58

OCCUPIED BANDWIDTH

Limit

- Occupied bandwidth: ≤ 26 MHz

Test Procedure

- Setting of SA is following as: RB: 30 kHz/VB: 30 kHz / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold
- EUT have transmitted the maximum modulation signal and fixed channelize. SA set to 99% of occupied bandwidth to measure occupied bandwidth.

Test Data

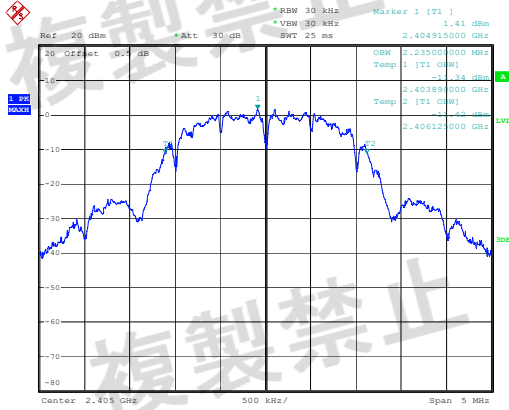
Test Mode:	Transmitting	Test Date:	2025-10-26
Temperature:	24.1°C	ATM Pressure:	99.9kPa
Humidity:	52%	Test Engineer:	Apollo Luo

Test Result: Compliant

Test Condition	Occupied bandwidth (MHz)				
	Mode	Low Channel	Middle Channel	High Channel	Limit
NV	Zigbee	2.235	2.240	2.240	≤ 26
LV	Zigbee	2.235	2.235	2.240	≤ 26
HV	Zigbee	2.235	2.240	2.245	≤ 26

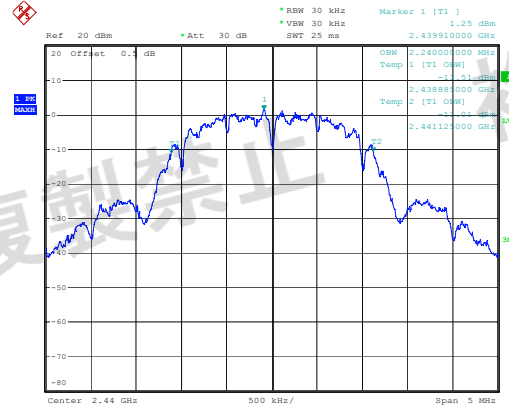
Please refer to the plots for normal voltage test.

NV, Low Channel



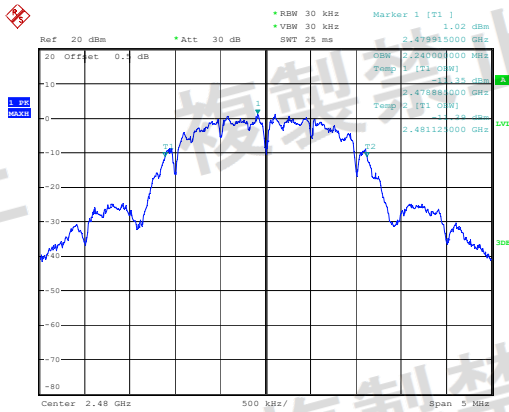
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NV, Middle Channel



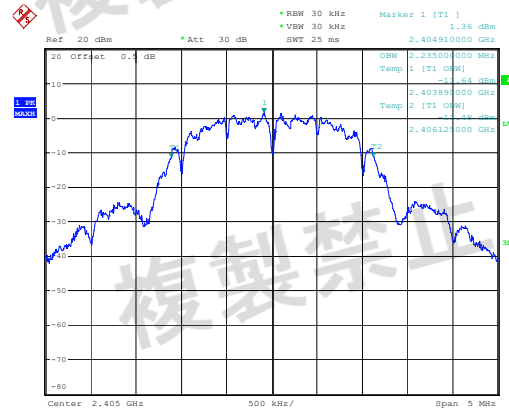
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Date: 26.OCT.2025 16:18:53

NV, High Channel



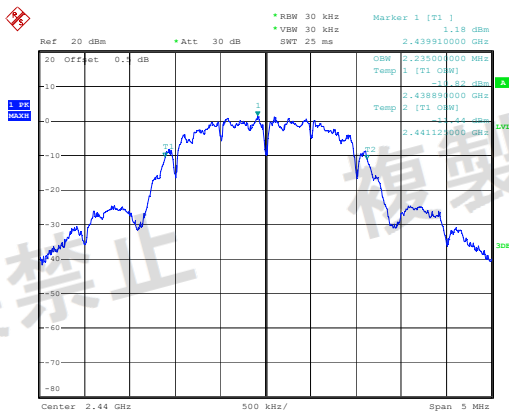
ProjectNo.:2507X78799E-RF Tester:Apollo Luo
Date: 26.OCT.2025 16:24:01

LV, Low Channel



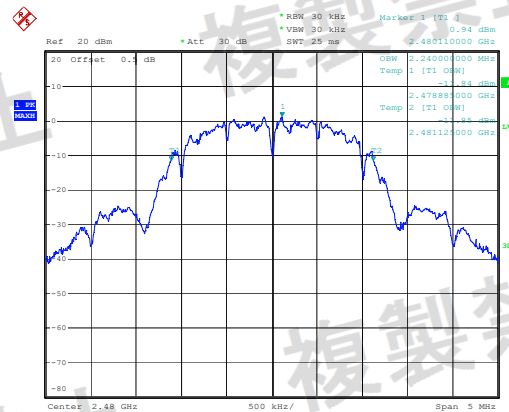
ProjectNo.:2507X78799E-RF Tester:Apollo Luo
Date: 26.OCT.2025 16:01:34

LV, Middle Channel



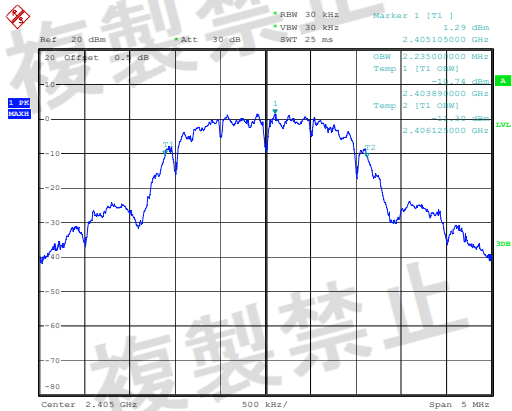
ProjectNo.:2507X78799E-RF Tester:Apollo Luo
Date: 26.OCT.2025 15:55:47

LV, High Channel



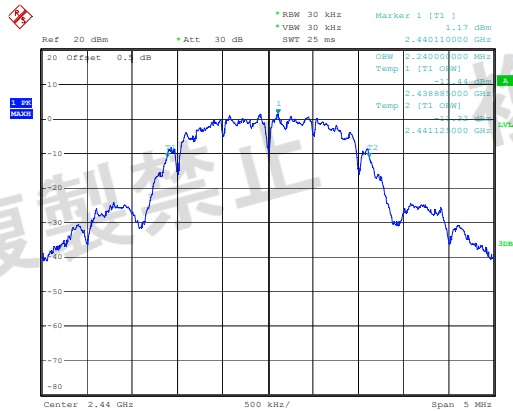
ProjectNo.:2507X78799E-RF Tester:Apollo Luo
Date: 26.OCT.2025 16:05:31

HV, Low Channel



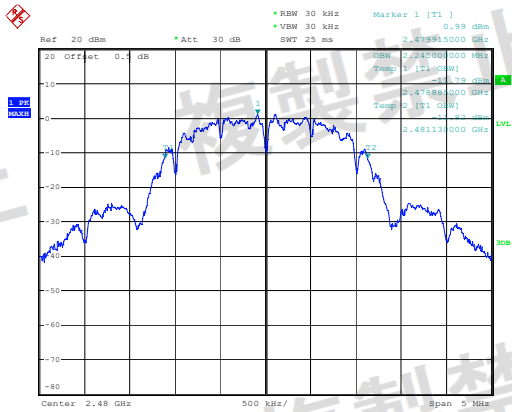
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Date: 26.OCT.2025 16:31:11

HV, Middle Channel



ProjectNo.:2507X78799E-RF Tester:Apollo Luo
Date: 26.OCT.2025 16:37:50

HV, High Channel



ProjectNo.:2507X78799E-RF Tester:Apollo Luo
Date: 26.OCT.2025 16:46:51

TRANSMITTER SPURIOUS EMISSION STRENGTH AND UNWANTED EMISSION INTENSITY

Limit

- $30\text{MHz} \leq f < 2387\text{ MHz}: \leq 2.5\mu\text{W}/\text{MHz}$
- $2387\text{ MHz} \leq f \leq 2400\text{ MHz}: \leq 25\mu\text{W}/\text{MHz};$
- $2483.5\text{ MHz} < f \leq 2496.5\text{ MHz}: \leq 25\mu\text{W}/\text{MHz}$
- $2496.5\text{ MHz} < f \leq 12500\text{MHz}: \leq 2.5\mu\text{W}/\text{MHz}$

Test Procedure

❖ Conditions of Application Equipment (EUT)

- The modulation state shall be in continuously transmitting mode.

❖ Spectrum Analyzer Conditions

- Setting of SA start 30MHz and stop frequency 1000MHz, RB: 100kHz/VB: 100kHz, Sweep time: Auto. Sweep mode: continuous sweep .Detect mode: Positive peak/Trace mode: max hold. Then to mark peak. reading value + cable loss shall be less than $0.25\mu\text{W}/100\text{kHz}$.
- Setting of SA start 1000MHz and stop frequency 2387MHz, RB: 1MHz/VB: 1MHz, Sweep time: Auto. Sweep mode: continuous sweep .Detect mode: Positive peak/Trace mode: max hold. Then to mark peak. reading value + cable loss shall be less than $2.5\mu\text{W}/\text{MHz}$.
- Setting of SA start 2387MHz and stop frequency 2400MHz, RB: 1MHz/VB: 1MHz, Sweep time: Auto. Sweep mode: continuous sweep .Detect mode: Positive peak/Trace mode: max hold. Then to mark peak. reading value + cable loss shall be less than $25\mu\text{W}/\text{MHz}$.
- Setting of SA start 2483.5MHz and stop frequency 2496.5MHz, RB: 1MHz/VB: 1MHz, Sweep time: Auto. Sweep mode: continuous sweep .Detect mode: Positive peak/Trace mode: max hold. Then to mark peak. reading value + cable loss shall be less than $25\mu\text{W}/\text{MHz}$.
- Setting of SA start 2496.5MHz and stop frequency 12500MHz, RB: 1MHz/VB: 1MHz, Sweep time: Auto. Sweep mode: continuous sweep .Detect mode: Positive peak/Trace mode: max hold. Then to mark peak. reading value + cable loss shall be less than $2.5\mu\text{W}/\text{MHz}$.

If above test over the limit, the below test procedure should be used:

Step 1:

- Center the frequency which was want to investigate, search the peak frequency.

Step 2:

- Center frequency: Searched Frequency
- Span: 0Hz
- RBW: 1MHz(Above 1GHz), VBW: Same as RBW.
- Sweep time: Auto(Minimum time to ensure measurement accuracy. *In case of burst wave, one burst shall be included per data point) Data points: 400 points or more. Sweep mode: Single Sweep.
- Detection Mode: Sample

Test Data

Test Mode:	Transmitting	Test Date:	2025-10-27
Temperature:	24.7°C	ATM Pressure:	100.1kPa
Humidity:	56%	Test Engineer:	Apollo Luo

Test Result: Compliant

Test Condition	Mode	Test Band (RBW)	Measurements			Limit (μW/RBW)	Result
			Frequency	Reading			
			(MHz)	(dBm/RBW)	(μW/RBW)		
NV	Low Channel	Band I (100kHz)	90.14	-52.37	0.006	0.25	PASS
		Band II (1MHz)	1921.66	-43.00	0.050	2.5	PASS
		Band III (1MHz)	2399.96	-38.77	0.133	25	PASS
		Band IV (1MHz)	2494.97	-46.47	0.023	25	PASS
		Band V (1MHz)	4812.31	-30.24	0.946	2.5	PASS
	Middle Channel	Band I (100kHz)	234.67	-53.00	0.005	0.25	PASS
		Band II (1MHz)	1933.45	-42.14	0.061	2.5	PASS
		Band III (1MHz)	2394.01	-47.73	0.017	25	PASS
		Band IV (1MHz)	2486.05	-47.10	0.019	25	PASS
		Band V (1MHz)	7323.19	-28.69	1.352	2.5	PASS
	High Channel	Band I (100kHz)	622.19	-53.14	0.005	0.25	PASS
		Band II (1MHz)	2272.57	-47.74	0.017	2.5	PASS
		Band III (1MHz)	2395.73	-47.82	0.017	25	PASS
		Band IV (1MHz)	2483.53	-36.47	0.225	25	PASS
		Band V (1MHz)	7443.23	-37.36	0.184	2.5	PASS
LV	Low Channel	Band I (100kHz)	57.16	-53.32	0.005	0.25	PASS
		Band II (1MHz)	1928.60	-46.97	0.020	2.5	PASS
		Band III (1MHz)	2399.80	-38.71	0.135	25	PASS
		Band IV (1MHz)	2495.25	-47.50	0.018	25	PASS
		Band V (1MHz)	4812.31	-30.26	0.942	2.5	PASS
	Middle Channel	Band I (100kHz)	588.72	-53.46	0.005	0.25	PASS
		Band II (1MHz)	2248.99	-48.38	0.015	2.5	PASS
		Band III (1MHz)	2396.83	-47.56	0.018	25	PASS
		Band IV (1MHz)	2493.50	-47.45	0.018	25	PASS
		Band V (1MHz)	7323.19	-28.78	1.324	2.5	PASS
	High Channel	Band I (100kHz)	114.39	-53.29	0.005	0.25	PASS
		Band II (1MHz)	1946.63	-46.99	0.020	2.5	PASS
		Band III (1MHz)	2395.76	-47.85	0.016	25	PASS
		Band IV (1MHz)	2483.51	-36.45	0.226	25	PASS
		Band V (1MHz)	7443.23	-37.41	0.182	2.5	PASS

Test Condition	Mode	Test Band (RBW)	Measurements			Limit (μW/RBW)	Result
			Frequency	Reading			
				(MHz)	(dBm/RBW)		
HV	Low Channel	Band I (100kHz)	690.09	-53.03	0.005	0.25	PASS
		Band II (1MHz)	2251.07	-48.30	0.015	2.5	PASS
		Band III (1MHz)	2399.86	-38.29	0.148	25	PASS
		Band IV (1MHz)	2493.28	-46.95	0.020	25	PASS
		Band V (1MHz)	4812.31	-30.27	0.940	2.5	PASS
	Middle Channel	Band I (100kHz)	797.27	-53.47	0.004	0.25	PASS
		Band II (1MHz)	2287.14	-47.68	0.017	2.5	PASS
		Band III (1MHz)	2399.21	-47.82	0.017	25	PASS
		Band IV (1MHz)	2490.12	-46.51	0.022	25	PASS
		Band V (1MHz)	7323.19	-28.51	1.409	2.5	PASS
	High Channel	Band I (100kHz)	893.79	-52.87	0.005	0.25	PASS
		Band II (1MHz)	2260.09	-47.82	0.017	2.5	PASS
		Band III (1MHz)	2396.53	-47.88	0.016	25	PASS
		Band IV (1MHz)	2483.50	-36.45	0.226	25	PASS
		Band V (1MHz)	7443.23	-37.29	0.187	2.5	PASS

Note:

Band I: 30MHz~1000MHz

Band II: 1000MHz~2387MHz

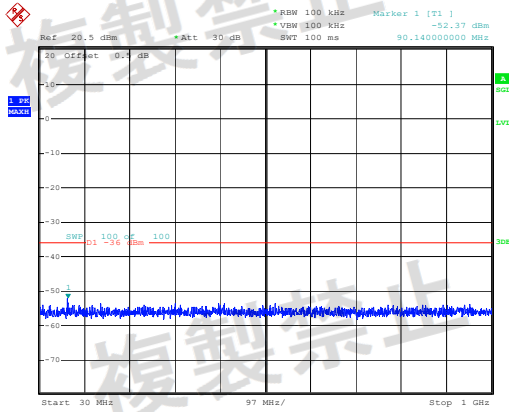
Band III: 2387MHz~2400MHz

Band IV: 2483.5MHz~2496.5MHz

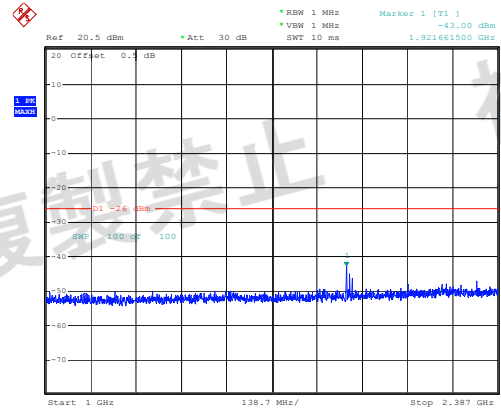
Band V: 2496.5MHz~12500MHz

Please refer to the below plots for normal voltage test.

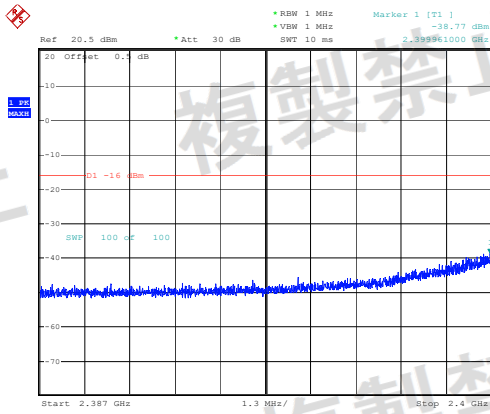
NV, Low Channel



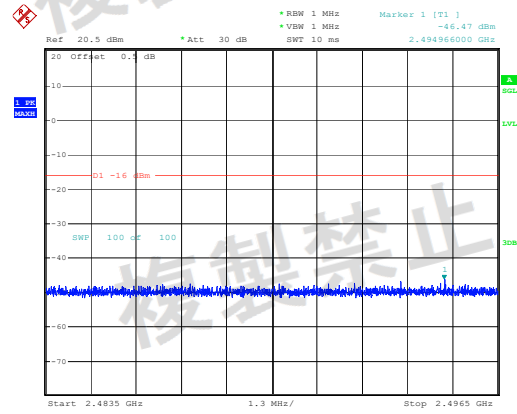
ProjectNo.:2507X78799E-RF Tester:Apollo Luo
Date: 27.OCT.2025 08:54:39



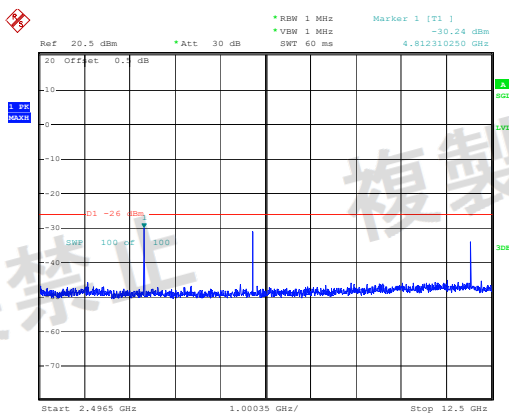
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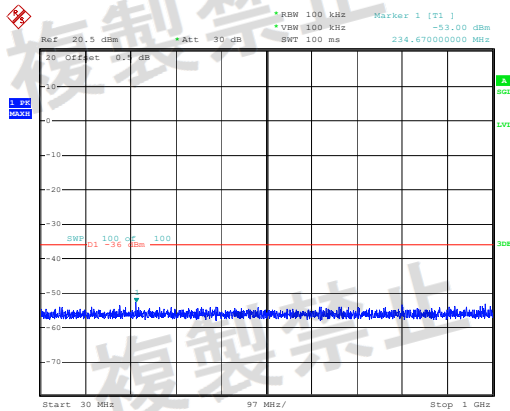


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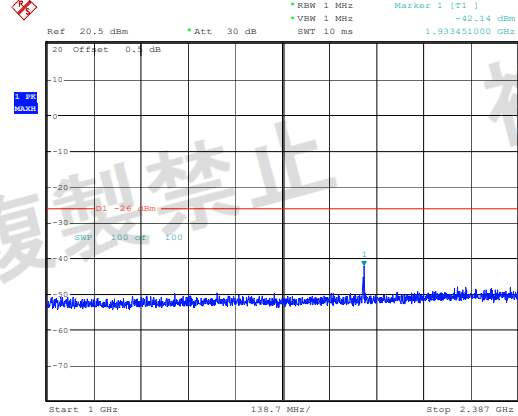


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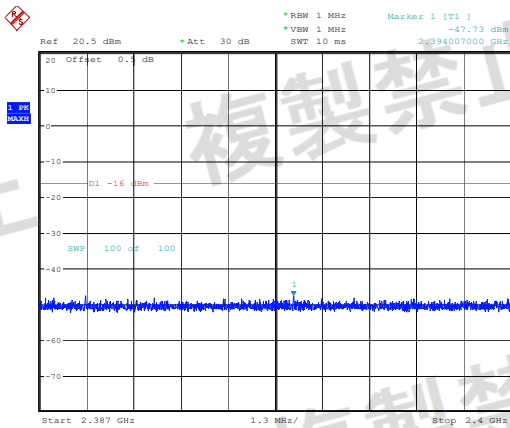
NV, Middle Channel



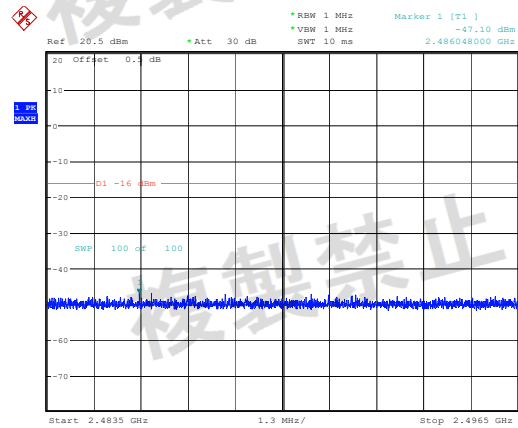
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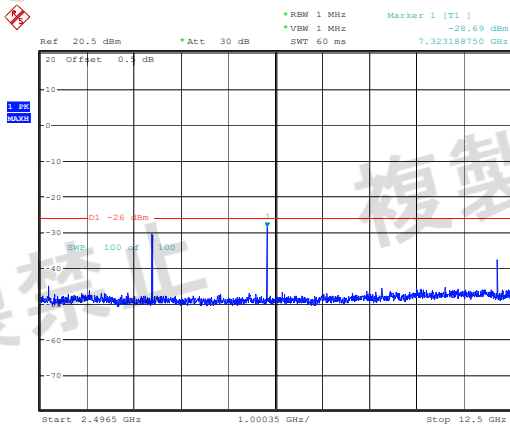
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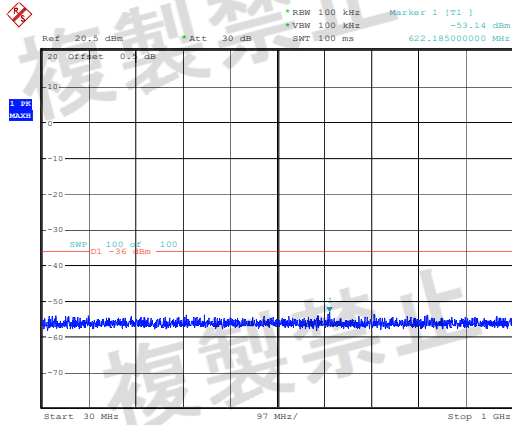


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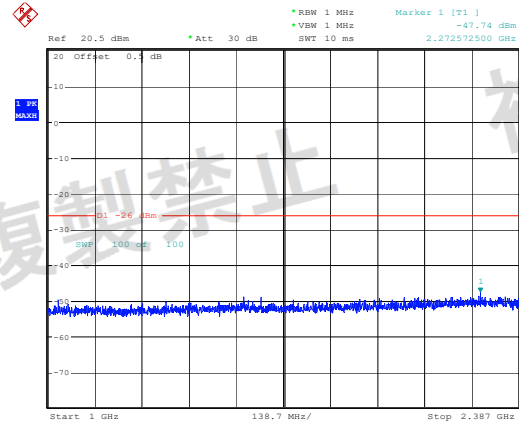


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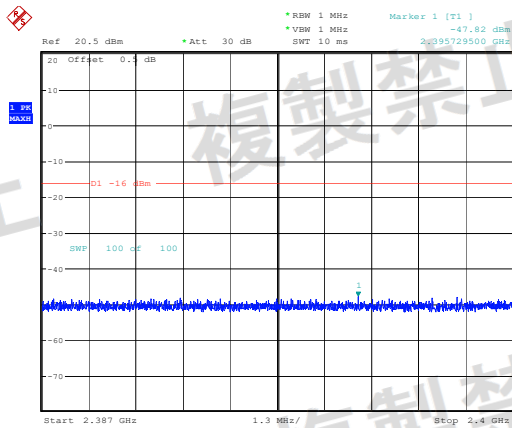
NV, High Channel



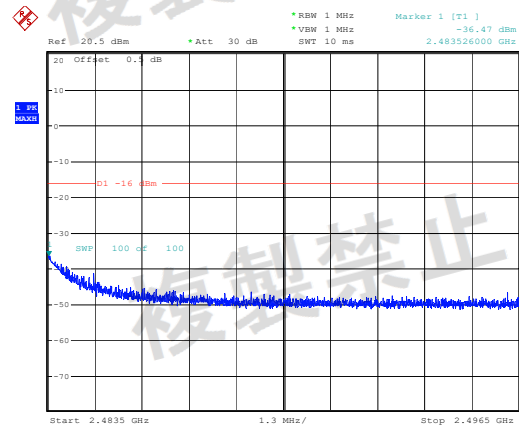
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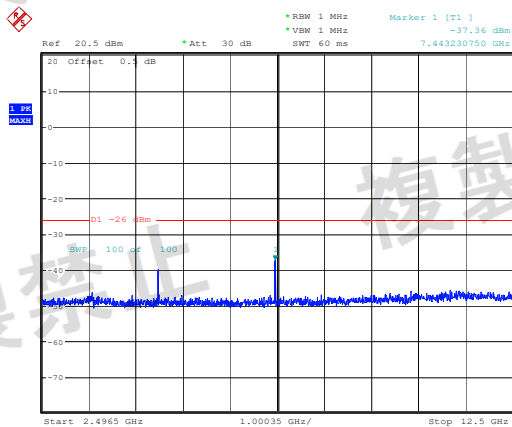
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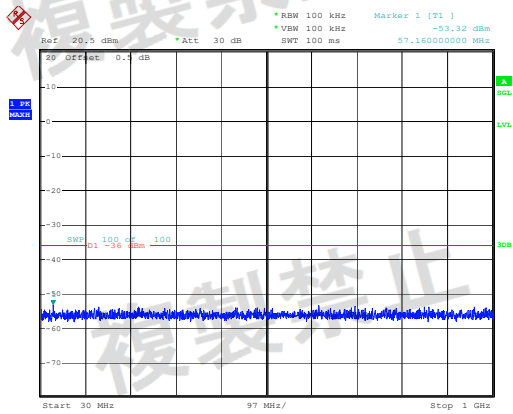


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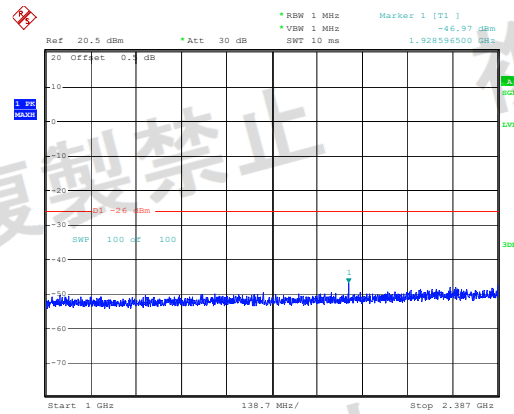


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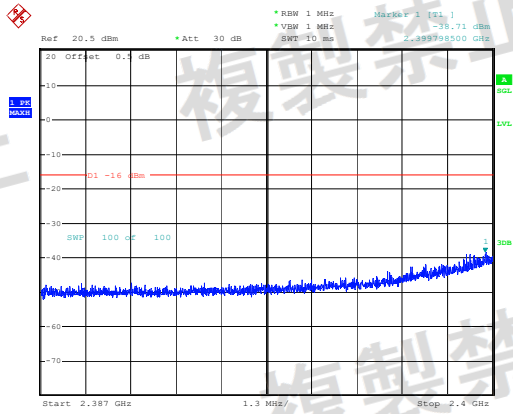
LV, Low Channel



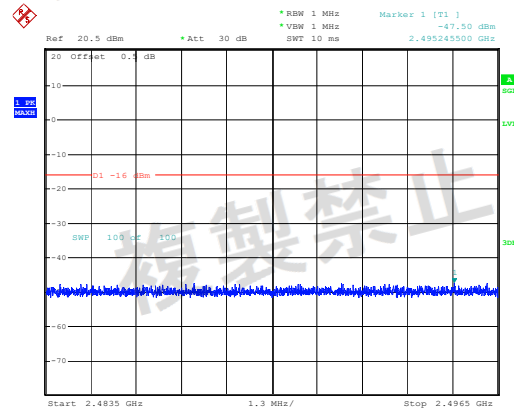
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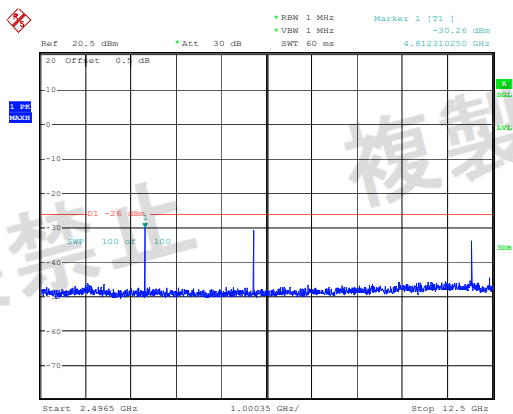
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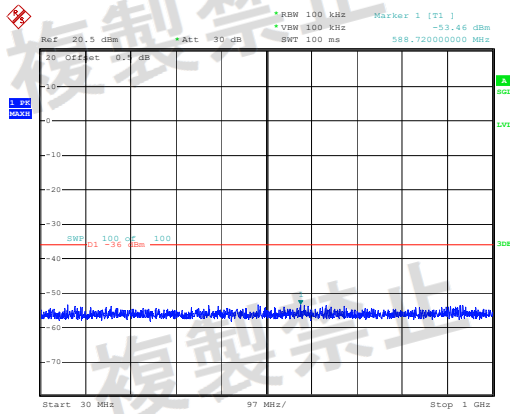


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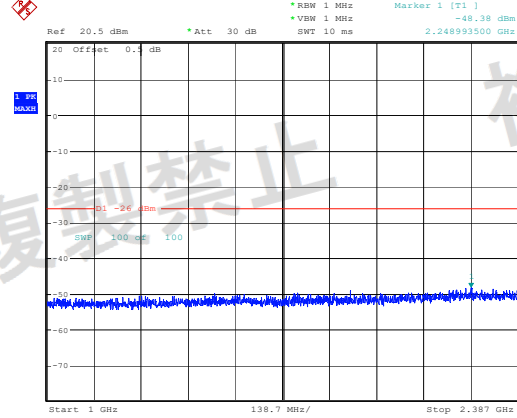


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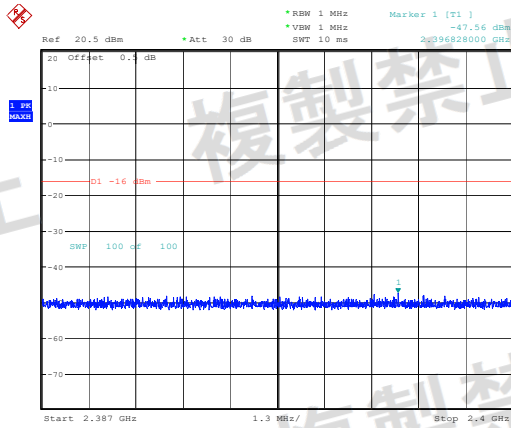
LV, Middle Channel



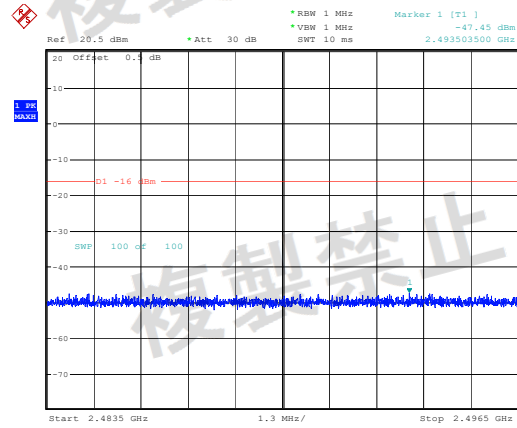
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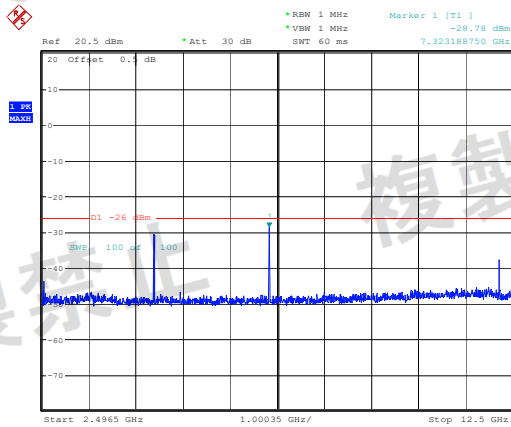
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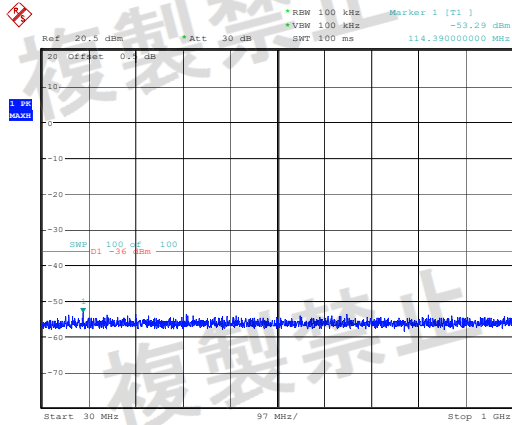


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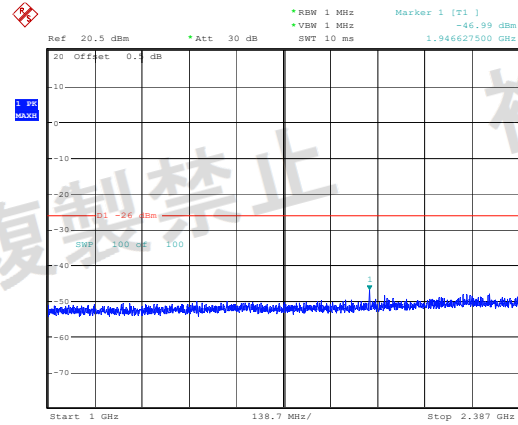


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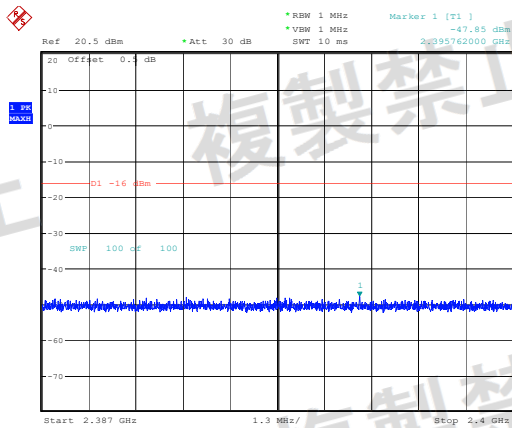
LV, High Channel



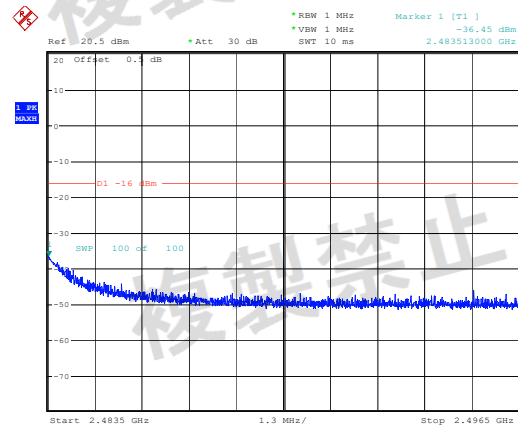
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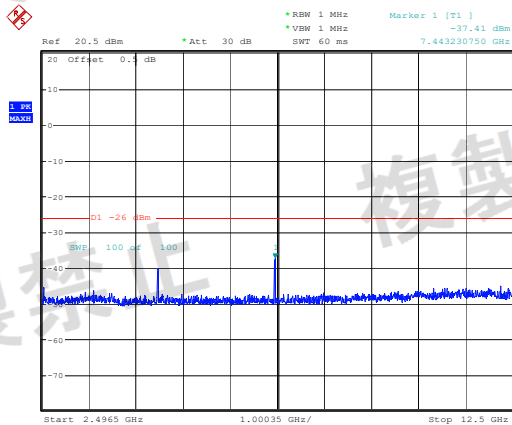
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Date: 27.OCT.2025 09:06:02



ProjectNo.:2507X78799E-RF Tester:Apollo Luo
Date: 27.OCT.2025 09:06:14

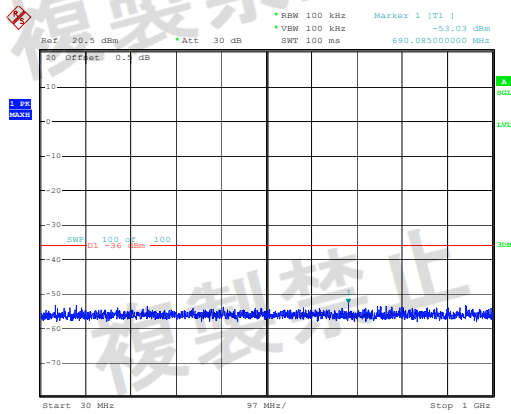


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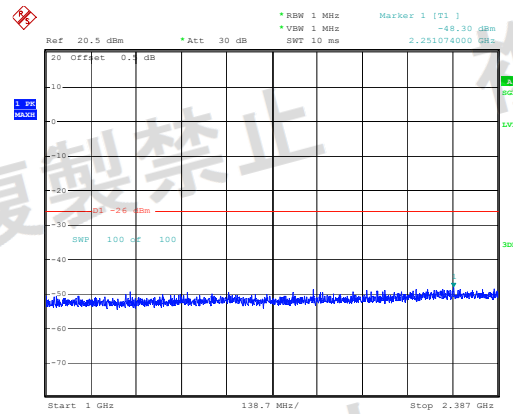


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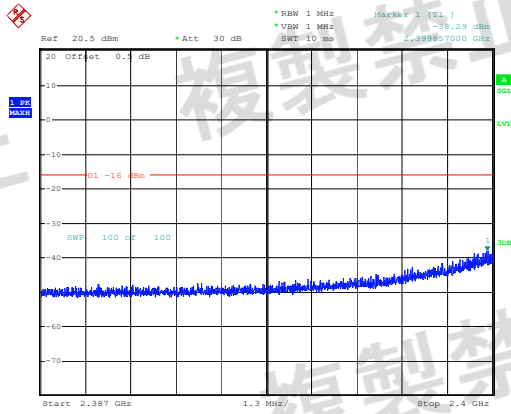
HV, Low Channel



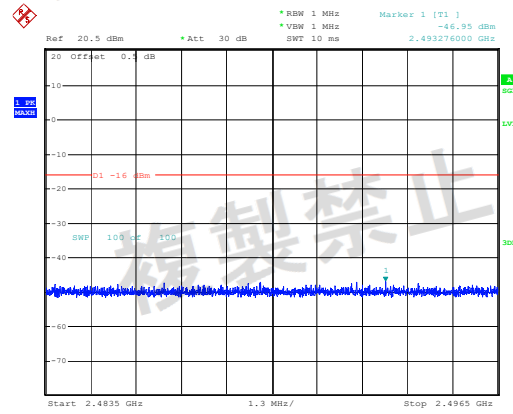
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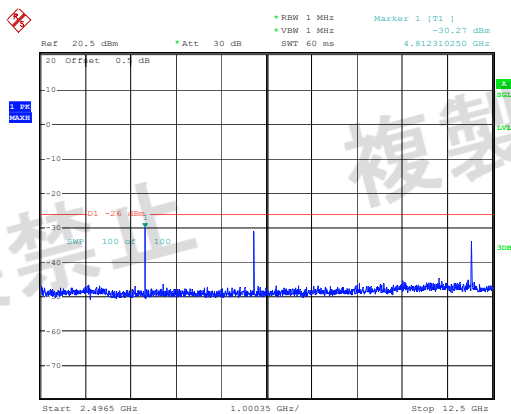
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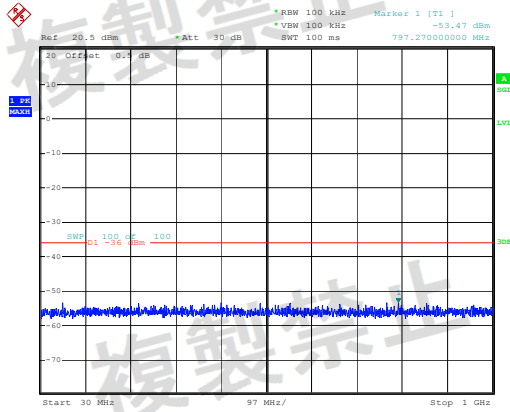


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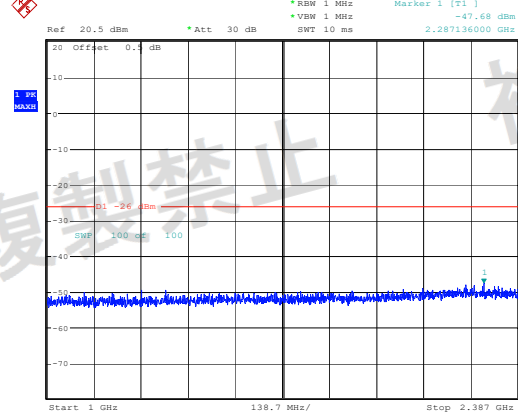


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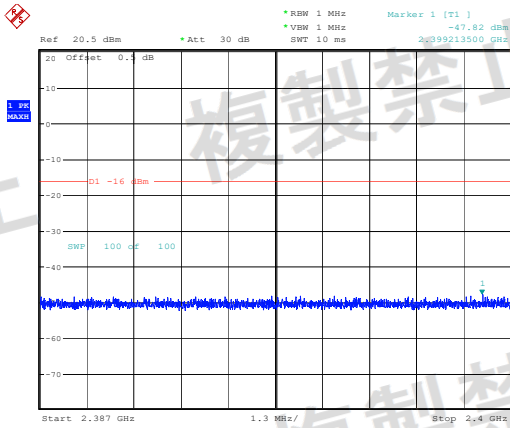
HV, Middle Channel



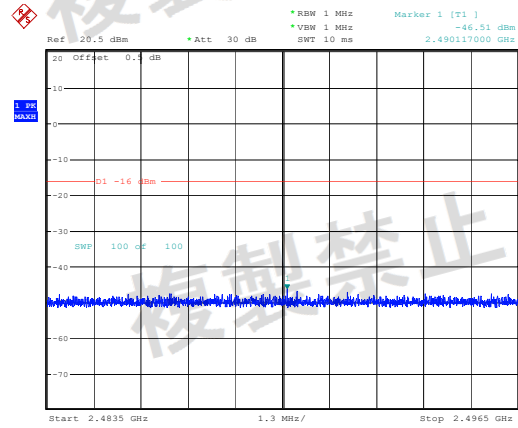
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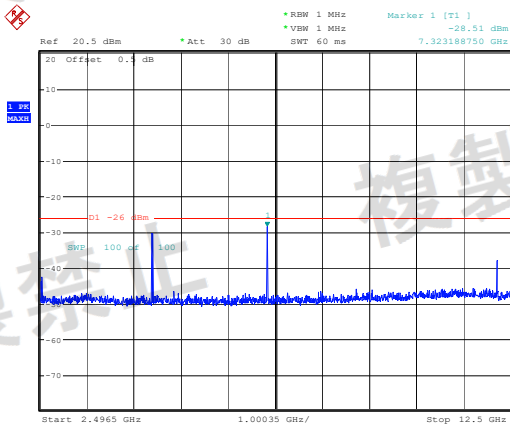
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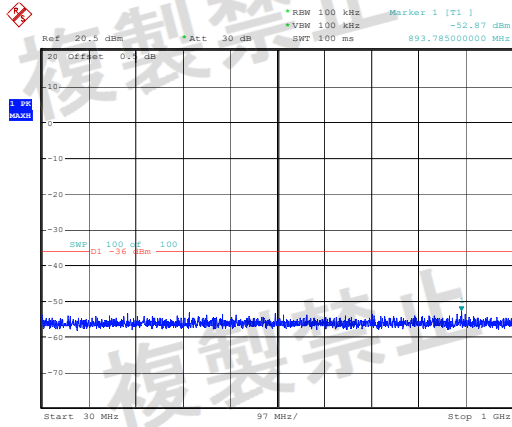


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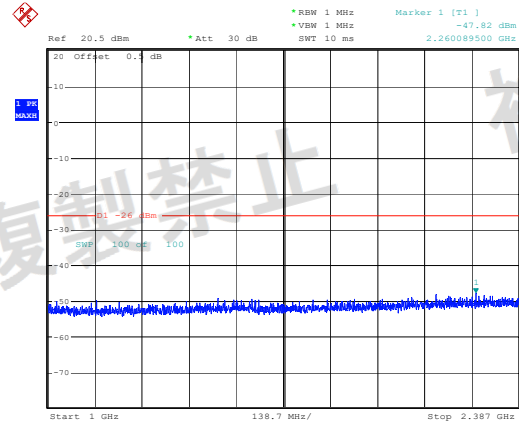


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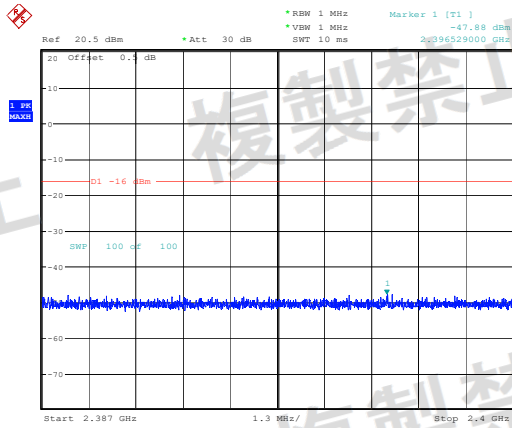
HV, High Channel



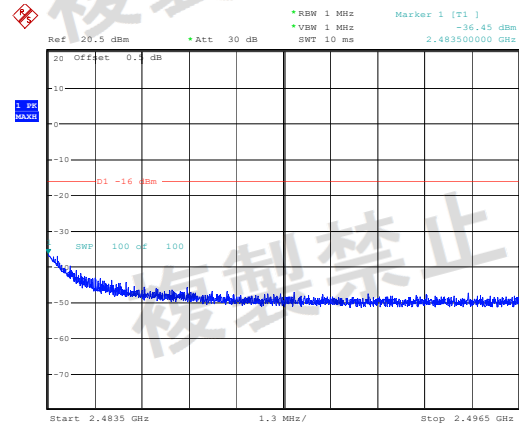
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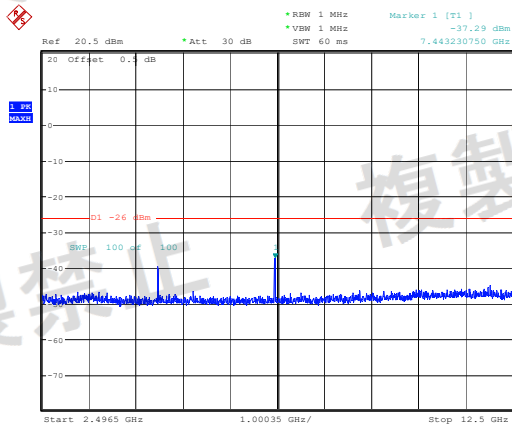
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Date: 27.OCT.2025 09:16:00



ProjectNo.:2507X78799E-RF Tester:Apollo Luo
Date: 27.OCT.2025 09:16:13



ProjectNo.:2507X78799E-RF Tester:Apollo Luo
Date: 27.OCT.2025 09:16:23



ProjectNo.:2507X78799E-RF Tester:Apollo Luo
Date: 27.OCT.2025 09:16:53

ANTENNA OUTPUT POWER AND ANTENNA POWER TOLERANCE

Limit

- Antenna output power ≤ 10 mW
- The Output Power Tolerance must be within +20% ~ -80%.
- EIRP ≤ 12.14 dBm (other from 2400-2483.5 MHz)

Test Procedure

- Connect the EUT antenna port to Power meter with RF cable;
- Power meter Detector: Average, Auto Duty factor
- Set the EUT Frequency to measure, test mode continuous transmitting.

Test Data

Test Mode:	Transmitting	Test Date:	2025-10-27
Temperature:	24.7°C	ATM Pressure:	100.1kPa
Humidity:	56%	Test Engineer:	Apollo Luo

Test Result: Compliant

Declared Power:

Mode	Antenna gain (dBi)	Declared power (mW)
Zigbee	4.3	6.00

Output power

Test Condition	Mode	Channel	Conducted power (dBm)	Antenna output power (mW)		Antenna output tolerance (%)		EIRP (dBm)	
				Result	Limit	Result	Limit	Result	Limit
NV	Zigbee	Low	7.416	5.516	≤ 10	-8.07	-80~+20	11.72	≤ 12.14
		Middle	7.332	5.410		-9.83		11.63	
		High	7.166	5.207		-13.22		11.47	
LV	Zigbee	Low	7.412	5.511	≤ 10	-8.15	-80~+20	11.71	≤ 12.14
		Middle	7.330	5.408		-9.87		11.63	
		High	7.169	5.211		-13.15		11.47	
HV	Zigbee	Low	7.419	5.520	≤ 10	-8.00	-80~+20	11.72	≤ 12.14
		Middle	7.330	5.408		-9.87		11.63	
		High	7.165	5.206		-13.23		11.47	

Note:

1) Antenna Output power (mW) = $10^{(\text{Conducted power(dBm)} / 10)}$

2) Antenna Output Power Tolerance (%) = $(\text{Antenna Output power} - \text{Declared Power}) / \text{Declared Power} * 100\%$

3) EIRP (dBm) = $\text{Conducted power(dBm)} + \text{Antenna gain}$.

RECEIVER SPURIOUS EMISSION AND UNWANTED EMISSION INTENSITY

Limit

- $\leq 4 \text{ nW}$ ($30 \text{ MHz} \leq f \leq 1000 \text{ MHz}$)
- $\leq 20 \text{ nW}$ ($1 \text{ GHz} \leq f \leq 12.5 \text{ GHz}$)

Test Procedure

- ❖ Conditions of Application Equipment (EUT)
 - The modulation state shall be “continuous receiving mode”.
- ❖ Spectrum Analyzer Conditions
 - Start Frequency: Start Frequency of frequency range to measure (30MHz to 1GHz)
 - Stop Frequency: Stop Frequency of frequency range to measure (1GHz to 12.5GHz)
 - Span: Auto (Measurement Range)
 - RBW: 100 kHz, VBW: 100 kHz for Frequency < 1 GHz
 - RBW: 1MHz, VBW: 1MHz for Frequency > 1 GHz
 - Sweep time: Auto or more
 - Sweep mode: Auto Sweep
 - Detection: Positive Peak
 - Reference Level: Enough level for maximum dynamic range

Test Data

Test Mode:	Receiving	Test Date:	2025-10-27
Temperature:	24.7°C	ATM Pressure:	100.1kPa
Humidity:	56%	Test Engineer:	Apollo Luo

Test Result: Compliant, please see the below tables and plots

Test Condition	Mode	Test Band (RBW)	Result			Limit (nW)	Result
			Frequency	Reading			
				(MHz)	(dBm)		
NV	Low Channel	Band I (100kHz)	538.43	-73.98	0.040	4	PASS
		Band II (1MHz)	11461.55	-66.09	0.246	20	PASS
	Middle Channel	Band I (100kHz)	922.79	-59.58	1.102	4	PASS
		Band II (1MHz)	12006.65	-65.14	0.306	20	PASS
	High Channel	Band I (100kHz)	440.65	-73.71	0.043	4	PASS
		Band II (1MHz)	11277.55	-65.84	0.261	20	PASS
LV	Low Channel	Band I (100kHz)	74.23	-65.30	0.295	4	PASS
		Band II (1MHz)	11091.83	-65.96	0.254	20	PASS
	Middle Channel	Band I (100kHz)	790.00	-73.67	0.043	4	PASS
		Band II (1MHz)	2401.28	-65.75	0.266	20	PASS
	High Channel	Band I (100kHz)	627.23	-73.92	0.041	4	PASS
		Band II (1MHz)	11492.60	-66.38	0.230	20	PASS

Test Condition	Mode	Test Band (RBW)	Result			Limit (nW)	Result
			Frequency	Reading			
			(MHz)	(dBm)	(nW)		
HV	Low Channel	Band I (100kHz)	311.74	-74.12	0.039	4	PASS
		Band II (1MHz)	1738.30	-65.94	0.255	20	PASS
	Middle Channel	Band I (100kHz)	529.74	-74.13	0.039	4	PASS
		Band II (1MHz)	11684.08	-66.01	0.251	20	PASS
	High Channel	Band I (100kHz)	42.42	-73.72	0.042	4	PASS
		Band II (1MHz)	11996.88	-66.11	0.245	20	PASS

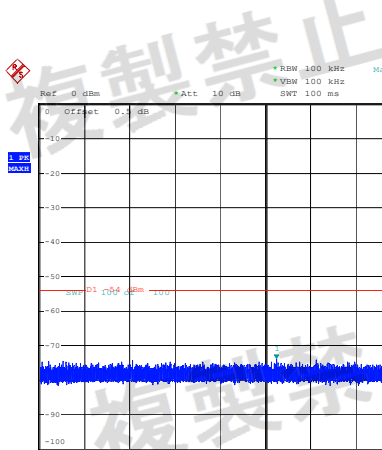
Note:

Band I: 30MHz~1000MHz

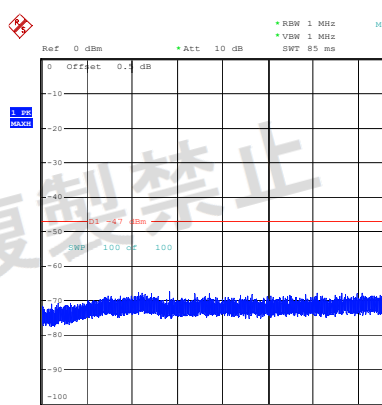
Band II: 1000MHz~12500MHz

Please refer to the below plots for normal voltage test.

複製禁止

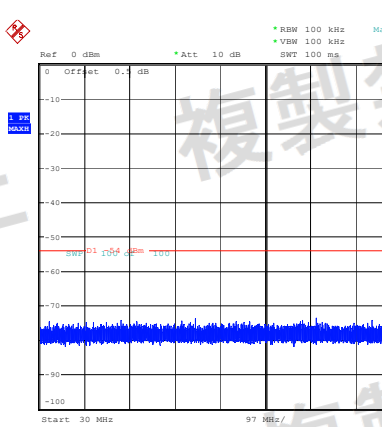


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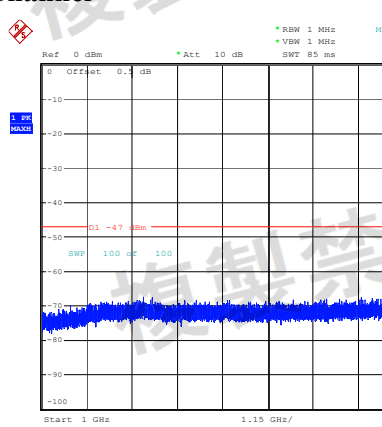


ProjectNo.:2507X78799E-RF

NV, Middle Channel

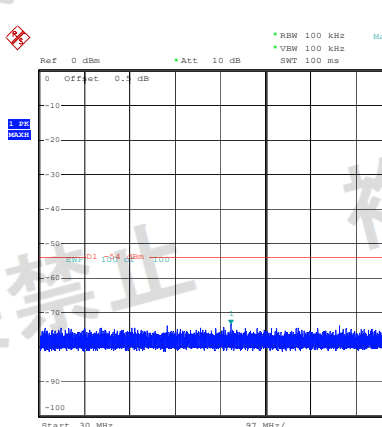


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Date: 07.09.2025 09:32:30

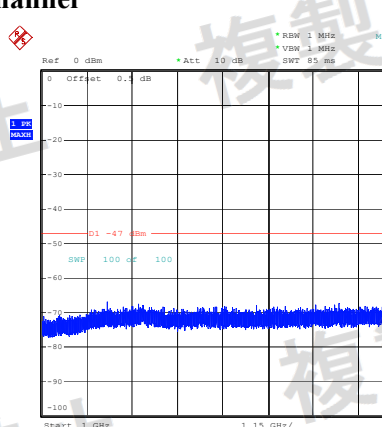


ProjectNo.:2507X78799E-RF

NV, High Channel

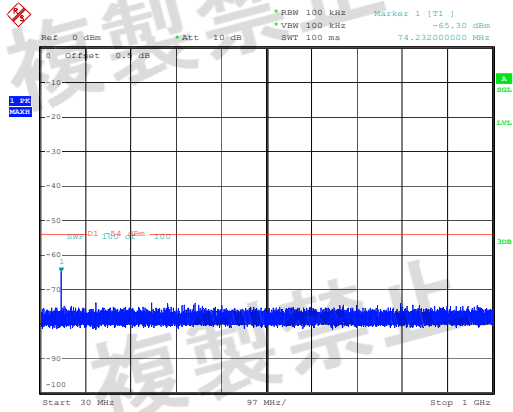


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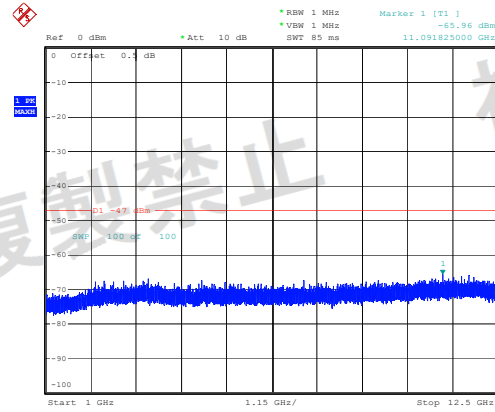


ProjectNo.:2507X78799E-RF

LV, Low Channel

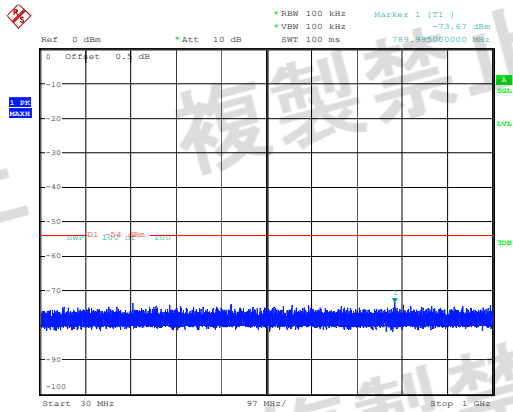


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Date: 27.OCT.2025 09:35:00

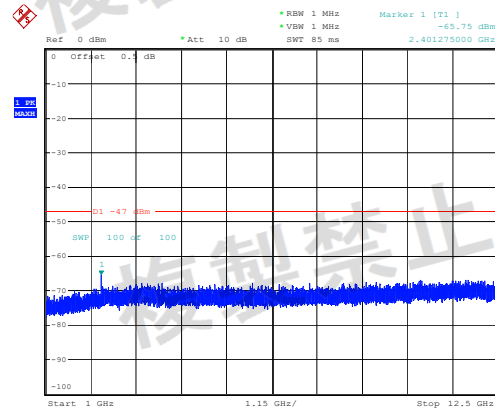


ProjectNo.:2507X78799E-RF Tester:Apollo Luo
Date: 27.OCT.2025 09:35:40

LV, Middle Channel

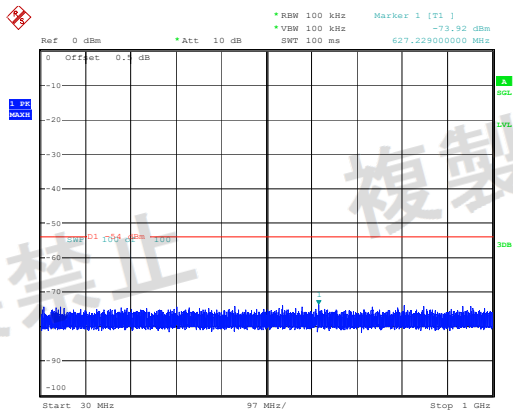


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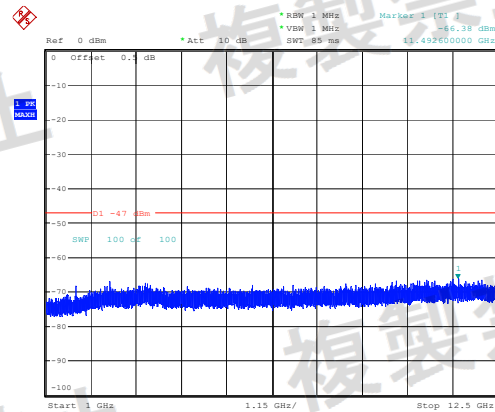


ProjectNo.:2507X78799E-RF Tester:Apollo Luo
Date: 27.OCT.2025 09:36:52

LV, High Channel

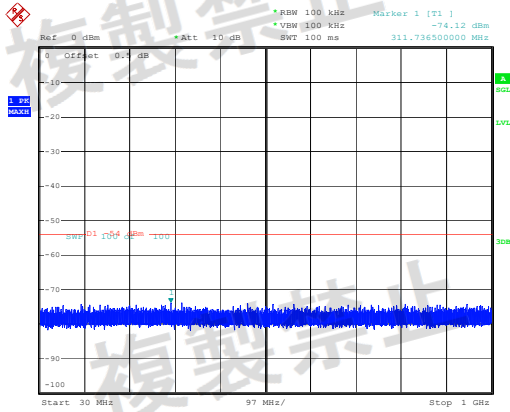


ProjectNo.:2507X78799E-RF Tester:Apollo Luo
Date: 27.OCT.2025 09:37:29

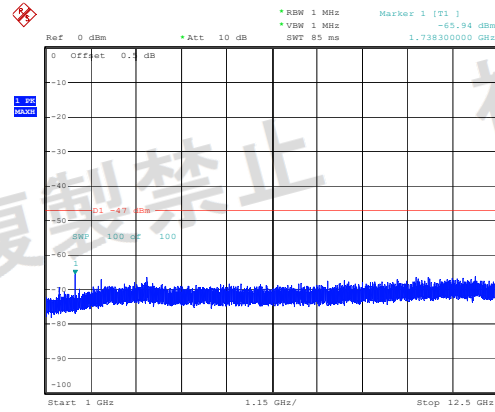


ProjectNo.:2507X78799E-RF Tester:Apollo Luo
Date: 27.OCT.2025 09:38:09

HV, Low Channel

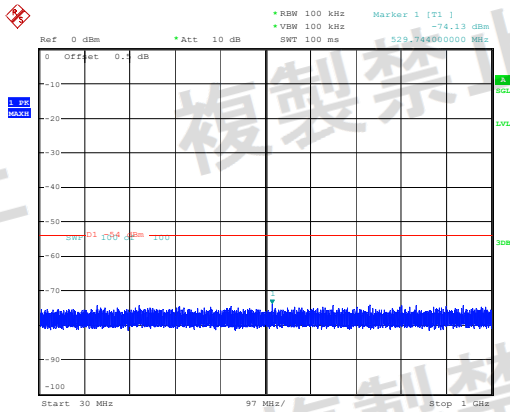


ProjectNo.:2507X78799E-RF Tester:Apollo Luo
Date: 27.OCT.2025 09:20:16

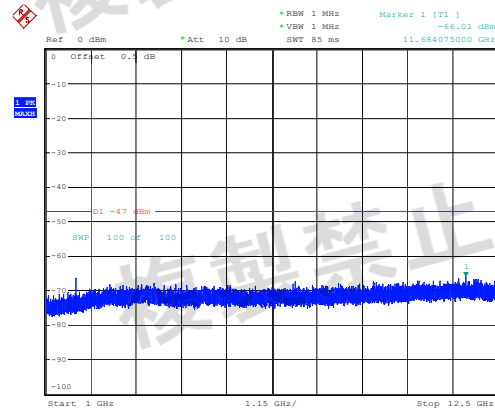


ProjectNo.:2507X78799E-RF Tester:Apollo Luo
Date: 27.OCT.2025 09:20:55

HV, Middle Channel

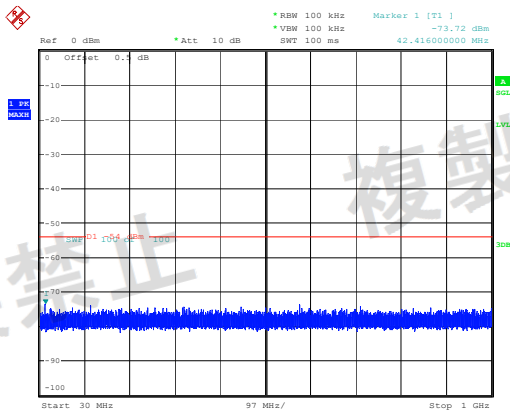


ProjectNo.:2507X78799E-RF Tester:Apollo Luo
Date: 27.OCT.2025 09:26:43

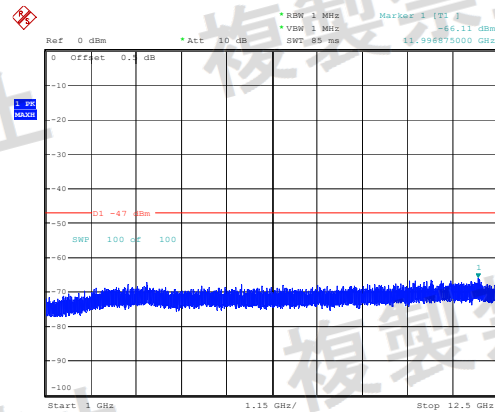


ProjectNo.:2507X78799E-RF Tester:Apollo Luo
Date: 27.OCT.2025 09:27:22

HV, High Channel



ProjectNo.:2507X78799E-RF Tester:Apollo Luo
Date: 27.OCT.2025 09:27:54



ProjectNo.:2507X78799E-RF Tester:Apollo Luo
Date: 27.OCT.2025 09:28:33

INTERFERENCE PREVENTION FUNCTION

Requirement

Article 6-2.3 of Regulations for Enforcement of the radio law

A wireless device used mainly in the same premises to automatically transmit or receive identification codes.

Article 1.8 of MPT Ministerial Notice No. 424 of 1994 (the last revision: Notice No. 374 of Nov. 10, 2023)

48 bits or more. However, for radio of the following frequencies, the requirement is 19 bits or more:

- (1), 5150-5250MHz; 5470-5730MHz; 5925-6425MHz;
- (2), 24.77-25.23GHz;
- (3), 57-66GHz.

Test Procedure

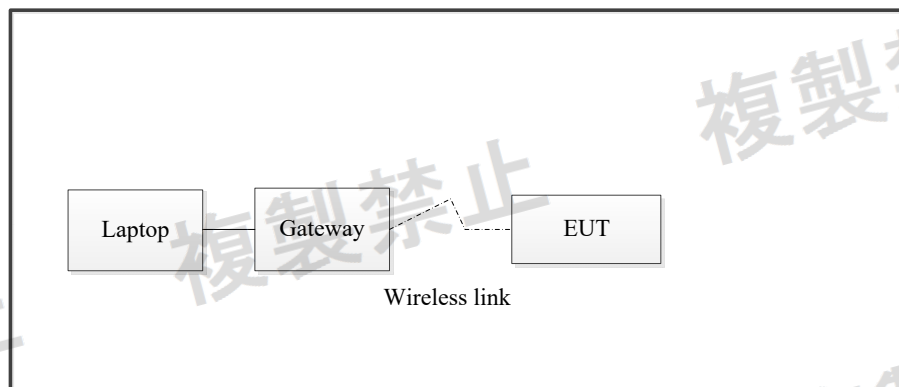
In the case that the EUT has the function of automatically transmitting the identification code:

1. Transmit the predetermined identification codes from EUT
2. Check the transmitted identification codes with the demodulator.

In the case of receiving the identification codes:

1. Transmit the predetermined identification codes from the counterpart.
2. Check if communication is normal
3. Transmit the signal other than predetermined ID codes from the counterpart.
4. Check if the EUT stops the transmission, or if it displays that identification codes are different from the predetermined ones.

Test Setup Block Diagram



Measurement Result

Test Mode:	Transmitting	Test Date:	2025-10-27
Temperature:	24.7°C	ATM Pressure:	100.1kPa
Humidity:	56%	Test Engineer:	Apollo Luo

Test Result: Good

CONSTRUCTION PROTECTION CONFIRMATION

Limit

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 Result

Compliant, The RF part (including the antenna) is covered by the EUT housing, The interior of the housing is designed with a fixed structure that cannot be opened without tools. Please refer to the EUT photo.

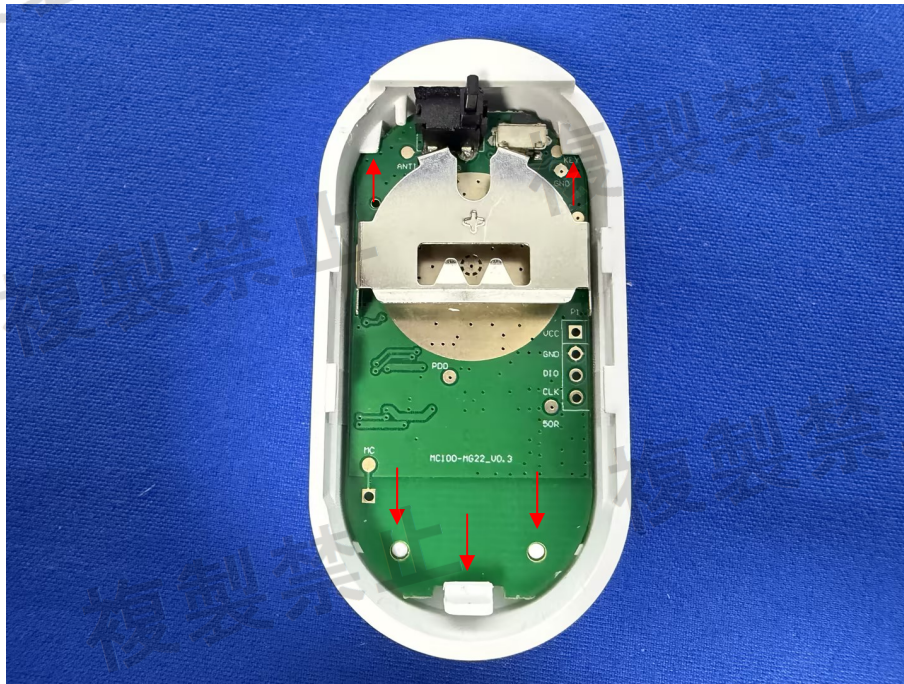


EXHIBIT A – EUT PHOTOGRAPHS

Please refer to the attachment 2507X78799E-RF-EXP EUT EXTERNAL PHOTOGRAPHS and 2507X78799E -RF-INP EUT INTERNAL PHOTOGRAPHS.

EXHIBIT B – TEST SETUP PHOTOGRAPHS

Please refer to the attachment 2507X78799E-RF-TSP TEST SETUP PHOTOGRAPHS.

Declarations

1. Bay Area Compliance Laboratories Corp. (Fujian) is not responsible for authenticity of any information provided by the applicant. Information from the applicant that may affect test results are marked with an asterisk “★”.
2. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested.
3. Unless required by the rule provided by the applicant or product regulations, then decision rule in this report did not consider the uncertainty.
4. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor $k=2$ with the 95% confidence interval.
5. This report cannot be reproduced except in full, without prior written approval of Bay Area Compliance Laboratories Corp. (Fujian).
6. This report is valid only with a valid digital signature. The digital signature may be available only under the adobe software above version 7.0.

****END OF REPORT****