



中认信通

CHINA CERTIFICATION ICT CO., LTD (DONGGUAN)

JAPAN MIC TEST REPORT

Applicant: Zhiyi (Zhongshan) Technology Co., Ltd.

Address: No. 39, Donghui Road, Cuiheng New District, 528400 Zhongshan,
Guangdong, PEOPLE'S REPUBLIC OF CHINA

Product Name: Robotic vacuum cleaner

Model Number: V5s Max, X321, V5x

Type of Equipment: Certification Ordinance Article 2, Paragraph 1, Item 19

Test method(s): MIC Notice No.88 of 2004, Appendix No.43
(Version: MIC Notice No.409 of 2023)

The above device has been tested and found compliant with the requirement of the relative standards by China Certification ICT Co., Ltd (Dongguan)

Report Number: 2503A28684E-RF-07B

Date Of Issue: 2026/1/22

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Test Facility

The Test site used by China Certification ICT Co., Ltd (Dongguan) to collect test data is located on the Room 101 & 201, Building 2, 256 Pingdong Road, Dalang Town, Dongguan City, Guangdong, China.

Declarations

China Certification ICT Co., Ltd (Dongguan) is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol “▲”. Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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Each test item follows the test standard(s) without deviation.

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	2503A28684E-RF-07B	Original Report	2026/1/22

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

EUT Name:	Robotic vacuum cleaner
Trade Name:	EASINE, ZACO, ILIFE, ZHIYI 智意
EUT Model:	V5s Max
Multiple Models:	X321,V5x
Frequency Range:	802.11b/g/n ht20: 2412-2472 MHz
Nominal RF Output Power (Conducted):	802.11b: 5.30mW/MHz 802.11g: 1.40mW/MHz 802.11n ht20: 1.20mW/MHz
Number of TX Chain(s):	1
Number of RX Chain(s):	1
Antenna Gain[▲]:	2.54 dBi
Modulation Type:	802.11b: DSSS-DBPSK, DQPSK, CCK 802.11g/n: OFDM-BPSK, QPSK, 16QAM, 64QAM
Emission Type:	G1D, D1D
Rated Voltage:	14.4Vdc from battery or 19Vdc from Charging Dock
Sample Number:	3F9J-1
EUT Received Date:	2025/12/31
EUT Received Status:	Good

Note: The Multiple models are electrically identical with the test model. Please refer to the declaration letter for more detail, which was provided by manufacturer.

Operation Frequency Detail

For 802.11b/g/n ht20:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	8	2447
2	2417	9	2452
3	2422	10	2457
4	2427	11	2462
5	2432	12	2467
6	2437	13	2472
7	2442	/	/

The test frequencies were performed the test as below:

Test Channel	Frequency (MHz)
Lowest	2412
Middle	2442
Highest	2472

1.2 Accessory Information

Accessory Description	Manufacturer	Model	Parameters
Charging Dock	/	/	/
Power Adapter	Dongguan GuanJin Electronics Technology Co., Ltd	K12V190060J	Input:100-240V~50/60Hz 0.35A Output:19.0V=0.6A
Remote Control	/	/	/
Cleaning Brush	/	/	/
High Performance Filter	/	/	/
Battery	BYD COMPANY LIMITED	H18650CH-4SIP-AGX-8	Rated Capacity:2400mAh 14.4V 34.56Wh
Extra Side Brush	/	/	/

1.3 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 1of the Radio Law, compliant with Article 49-20 of Radio equipment regulations.

1.4 Test Methodology

All measurements contained in this report were conducted with technical regulations of MIC Notice No.88 of 2004, Appendix No.43.

1.5 Description of Test Configuration

1.5.1 EUT Operation Condition

EUT Operation Mode:	The system was configured for testing in Engineering Mode, which was provided by the manufacturer.		
Equipment Modifications:	No		
EUT Exercise Software:	mptool.exe		
The software was provided by manufacturer. The maximum power was configured as below, that was provided by the manufacturer▲:			
Test Modes	Power Level Setting		
	Lowest Channel	Middle Channel	Highest Channel
802.11b	84	84	84
802.11g	84	84	84
802.11n ht20	84	84	84

1.5.2 EUT Extremity Condition

Environment Element	Range	Declared Voltage Value (Vdc)	Measured Voltage (Vdc)	Voltage Variation (%)
Voltage Fluctuation:	NV	14.4	3.30	/
	LV	12.5	3.29	-0.30
	HV	16.4	3.31	0.30

Note:

- Voltage Variation (%) = (Measured Voltage at High or Low Voltage - Measured Voltage at Normal Voltage)/ Measured Voltage at Normal Voltage*100.
- The Measured Voltage for the Radio Part fluctuation is verified at the power input PIN of the RF circuit.

The EUT be operated at 12.5~16.4Vdc which was provided by manufacturer, the supply voltage of RF part was varied within $\pm 1\%$. All test cases were done under the Normal Voltage (NV) only.

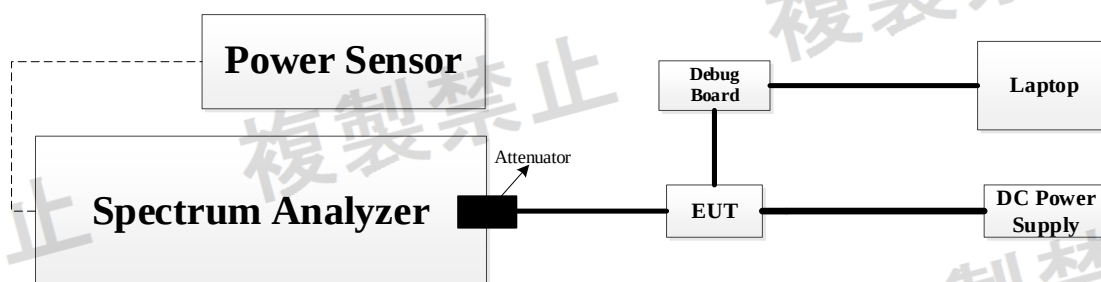
1.5.3 Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Lenovo	Laptop	T460S	60PDTEK7
Unknown	Debug Board	Unknown	Unknown
GWINSTEK	DC Power Supply	SPS3610	D33251
Tenda	Wireless Router	RX12 Pro	ED331010215000033

1.5.4 Support Cable List and Details

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
Detachable Power Cable	No	No	1.2	DC Power Supply	EUT
Serial Cable	No	No	0.2	Debug Board	EUT
USB Cable	No	No	1	Debug Board	Laptop

1.5.5 Block Diagram of Test Setup



1.6 Measurement Uncertainty

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.

Parameter	Measurement Uncertainty
Frequency Error	$\pm 0,5$ ppm
Occupied bandwidth and spreading bandwidth	± 5 %
RF output power, conducted	± 0.61 dB
Unwanted Emissions (TX&RX), conducted	± 2.47 dB
Temperature	± 1 °C
Humidity	± 5 %
DC and low frequency voltages	± 0.4 %
Duty Cycle	1%

2. SUMMARY OF TEST RESULTS

Certification Ordinance Article 2-1-19 Conducted with: MIC Notice No.88 Appendix No.43	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*
7	Transmission Frequency Switching Function	Not Applicable**
8	Transmission Antenna Gain	Not Applicable***
9	Transmission Radiation Angle Width	Not Applicable***
10	Interference Prevention Function	Compliant
11	Frequency Hopping Dwell Time	Not Applicable****
12	Construction Protection Confirmation	Compliant

Note:

Not Applicable*: Only required for OBW between 26MHz and 40MHz with OFDM modulation type.

Not Applicable**: Only required for device with "the EIRP shortage is compensated by Antenna output power" function.

Not Applicable***: This item not applicable when the EIRP less than the limit.

Not Applicable****: Testing is only required for FHSS system devices.

3. REQUIREMENTS AND TEST PROCEDURES

3.1 Frequency Error

3.1.1 Limit

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

3.1.2 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.

3.2 Occupied Bandwidth

3.2.1 Limit

- Occupied bandwidth: $\leq 26\text{ MHz}$
- Occupied bandwidth: $\geq 26\text{ MHz}$ and $\leq 40\text{ MHz}$

3.2.2 Test Procedure

1. Set the UUT as transmitting the modulation signal and fixed channelize.
2. The spectrum analyzer should be set as follows:
 - Center Frequency: The center frequency of the channel under test
 - Span: 2~3.5 times of occupied bandwidth allocation.
 - RBW: $\leq 3\%$ of the occupied frequency bandwidth.
 - VBW: Same as RBW
 - Sweep time: Minimum time for which measurement accuracy is guaranteed. However, in the case of burst waves, at least one burst per sample must be entered.
 - Sweep Mode: Continuous Sweep
 - Detect Mode: Positive Peak
 - Trace Mode: Max Hold
3. SA set to 99% of occupied bandwidth to measure occupied bandwidth.
4. Find the lowest and highest frequency in which the mean power emitted below the lower and above the upper frequency limits are respectively equal to 0.5% of the total mean power of a given emission. This lowest and highest frequency shall be recorded.

3.3 Transmitter Spurious Emission Strength and Unwanted Emission Intensity

3.3.1 Limit

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

3.3.2 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

3.4 Antenna Output Power and Antenna Power Tolerance

3.4.1 Limit

Antenna Output Power:

- ≤ 10 mW/MHz (OFDM/DSSS for bandwidth ≤ 26 MHz)
- ≤ 5 mW/MHz (OFDM for bandwidth ≥ 26 MHz and ≤ 40 MHz)

The Output Power Tolerance must not greater than +20%.

E.I.R.P:

- ≤ 12.14 dBm/MHz (OFDM/DSSS for bandwidth ≤ 26 MHz)
- ≤ 9.13 dBm/MHz (OFDM for bandwidth ≥ 26 MHz and ≤ 40 MHz)

3.4.2 Test Procedure

1. Set the UUT as transmitting the modulation signal.

2. The settings of the spectrum analyzer when providing frequency search for the maximum power should be set as follows:

- Center Frequency: The center frequency of the channel under test
- Span: Approximately 2 times of the occupied frequency bandwidth.
- RBW: 1 MHz
- VBW: 3 * RBW
- Sweep time: Minimum time that ensures measurement accuracy
(For burst waves, the time should be long enough to include at least one burst per sample)
- Trigger Condition: Free run
- Sweep Mode: Continuous Sweep
- Detect Mode: Positive Peak
- Trace Mode: Max Hold

3. The settings of the spectrum analyzer when measuring power shall be as follows:

- Measurement Mode: Time Domain Power
- Center Frequency: Searched frequency for the maximum power in step 2.
- Span: 0 Hz
- RBW: 1MHz
- VBW: Same as RBW
- Sweep Mode: Continuous Sweep

4. Test procedures for different technologies:

(1) For frequency hopping systems (including hybrid systems with DSSS or OFDM):

a. Confirm via submitted documentation that the frequency hopping intervals in the frequency distribution are uniformly spaced at ≤ 1 MHz and that the occurrence probability at each hopping frequency is uniform. If confirmed, proceed as follows:

- 1) Connect a power meter and measure the total power.
- 2) Divide the total power by the Spread Bandwidth to calculate the average power per 1 MHz.
- 3) The antenna power is defined as:
 - For continuous wave: the value from step 2) above.
 - For burst wave: the value from step 2) above adjusted by the duty cycle, representing the average power within the burst.

b. If the frequency distribution or occurrence probability is non-uniform:

- Set the spectrum analyzer as step 2 to search for the frequency providing maximum antenna power.
- Then set the spectrum analyzer as step 3 to measure the antenna power at that frequency.

(2) For Systems using OFDM or Direct Sequence Spread Spectrum (DSSS):

- a. Set the spectrum analyzer as step 2 to search for the frequency providing maximum antenna power.
- b. Sweep repeatedly until no further changes are observed on the display, then measure the frequency that yields the maximum power per 1 MHz.
- c. Then set the spectrum analyzer as step 3 to measure the antenna power at that frequency.
- d. The antenna power is defined as:
 - For continuous wave: value corrected as Spread Bandwidth to calculate the average power per 1 MHz.
 - For burst wave: the adjusted reading from the corrected value (as in continuous wave) and the duty cycle, representing the average power within the burst.
- e. For OFDM systems with multiple subcarrier modulation schemes:
 - Measure the antenna power for each modulation type and select the highest value as the final result.

(3) For Other Systems:

- a. Connect a power meter and measure the total power.
- b. The antenna power is defined as:
 - For continuous wave: the value from step a above.
 - For burst wave: the adjusted reading from the corrected value (as in continuous wave) and the duty cycle, representing the average power within the burst.

3.5 Receiver Spurious Emission and Unwanted Emission Intensity

3.5.1 Limit

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

3.5.2 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 $< 1 \text{ GHz}$
 - RBW: 1MHz, VBW: 1MHz for Frequency $> 1 \text{ GHz}$
 - Sweep time: AUTO or more
 - Sweep mode: Auto Sweep
 - Detection: Positive Peak
 - Reference Level: Enough level for maximum dynamic range

3.6 Interference Prevention Function

3.6.1 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.

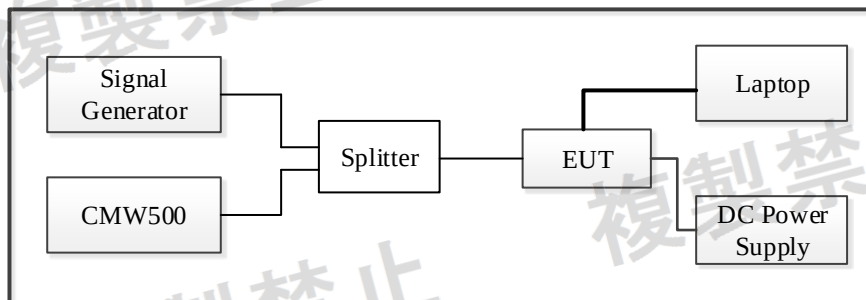
Article 1.8 of MPT Ministerial Notice No. 424 of 1994 (the last revision: Notice No. 374 of Nov. 10, 2023)

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.

3.6.2 Test Procedure

Measurement System Diagram:



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.

3.7 Construction Protection Confirmation

3.7.1 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.

4. TEST DATA AND RESULTS

4.1 Test Environmental Conditions & Test Equipment List and Details

Test Date:		2026/1/12			
Tester:		Zoey Song			
Environmental Conditions:					
Temperature: (°C):	23.2	Relative Humidity: (%)	50	ATM Pressure: (kPa)	101.7

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date	Calibration Agency	Calibration Method ^{Note}
UNI-T	Multimeter	UT39A+	C210582554	2025/07/18	2026/07/17	BACL Cal	C
R&S	Spectrum Analyzer	FSU26	200256	2025/03/31	2026/03/30	BACL Cal	C
eastsheep	Coaxial Attenuator	2W-SMA-JK-18G	21060301	Each time	N/A	CCICT	D
GWINSTEK	DC Power Supply	SPS3610	D33251	N/A	N/A	N/A	N/A
Agilent	MXG Vector Signal Generator	N5182B	MY51350142	2025/11/09	2026/11/08	BACL Cal	C
R&S	Wideband Radio Communication Tester	CMW500	143458	2025/03/31	2026/03/30	BACL Cal	C
Mini-Circuits	Power Splitter	ZFRSC-183-S+	SF440201614	2025/09/01	2026/08/30	BACL Cal	C

* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, 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)

4.2 Frequency Error

Test Result: Compliant. Please refers to following table and plots.

Test Mode: Carrier transmitting mode; Test Condition: NV

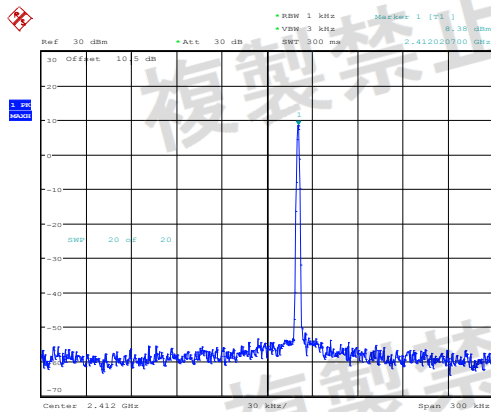
Mode	Test Frequency (MHz)	Measure Frequency (MHz)	Frequency Tolerance(ppm)	Limit (ppm)	Verdict
Single Carrier	2412	2412.02070	8.58	± 50	Pass
	2442	2442.02100	8.60	± 50	Pass
	2472	2472.02100	8.50	± 50	Pass

Note: Frequency Tolerance = (Measured Frequency - Test Frequency)/Test Frequency*10⁶

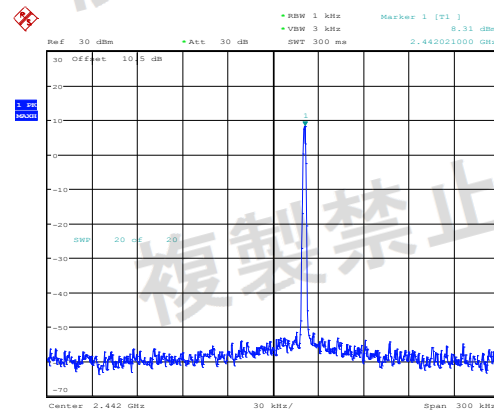
Test Plots as following:

Test Condition: NV

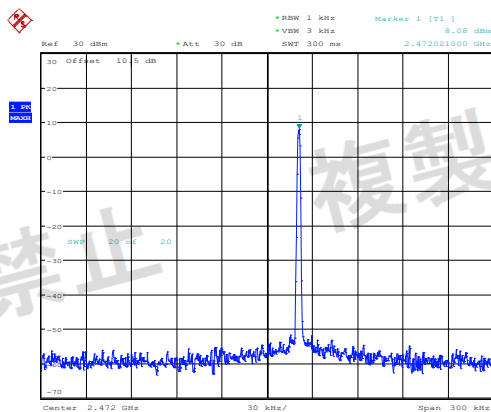
2412MHz



2442MHz



2472MHz



4.3 Occupied Bandwidth

Test Result: Compliant. Please refers to following table and plots.

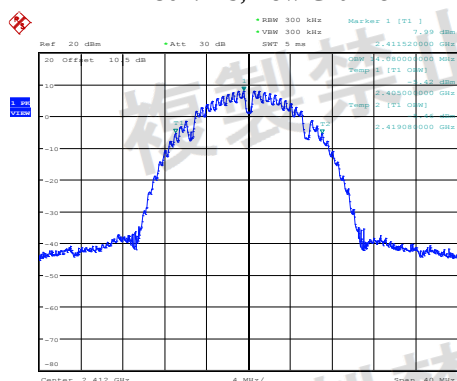
Test Mode: Transmitting; Test Condition: NV

Mode	Occupied bandwidth (MHz)			Limit (MHz)	Verdict
	Low Channel	Middle Channel	High Channel		
802.11b	14.08	14.08	14.08	≤ 26	Pass
802.11g	16.88	16.92	16.92	≤ 26	Pass
802.11n20	18.00	18.00	18.00	≤ 26	Pass

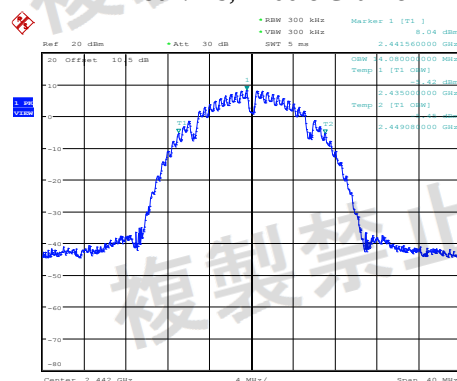
Test Plots as following:

Test Condition: NV

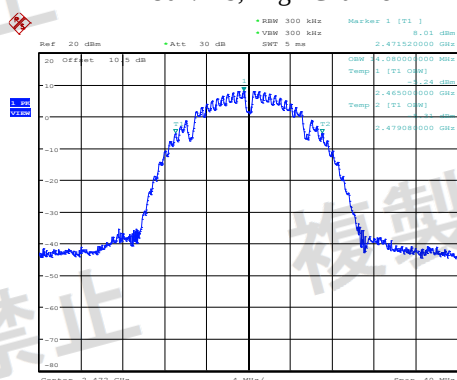
802.11b, Low Channel



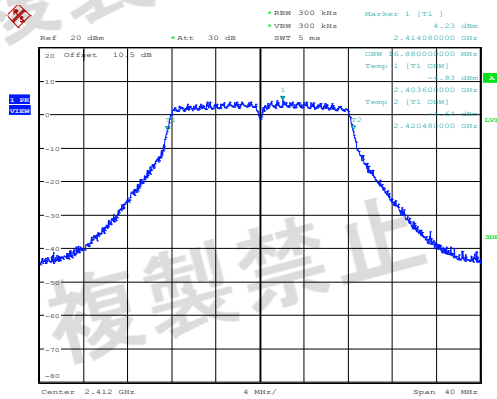
802.11b, Middle Channel



802.11b, High Channel

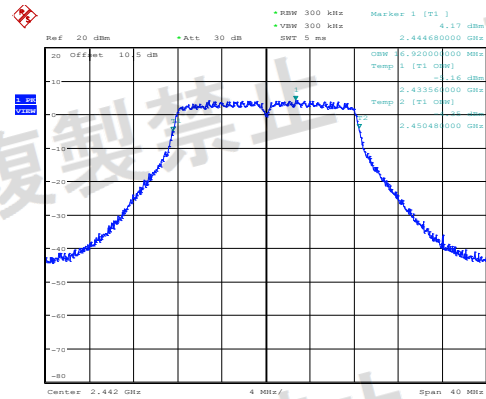


802.11g, Low Channel



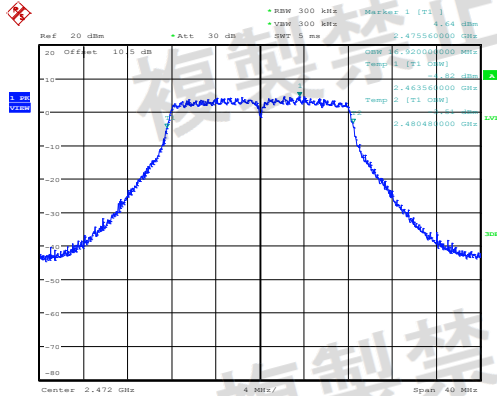
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 20:51:30

802.11g, Middle Channel



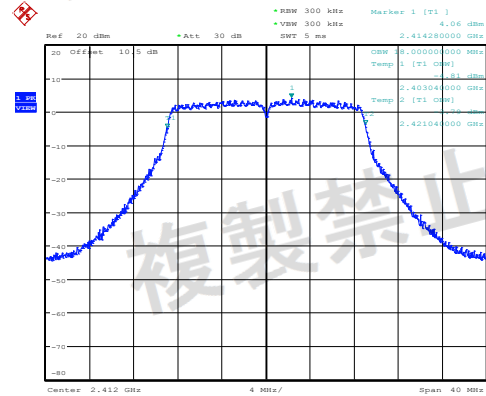
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 20:59:48

802.11g, High Channel



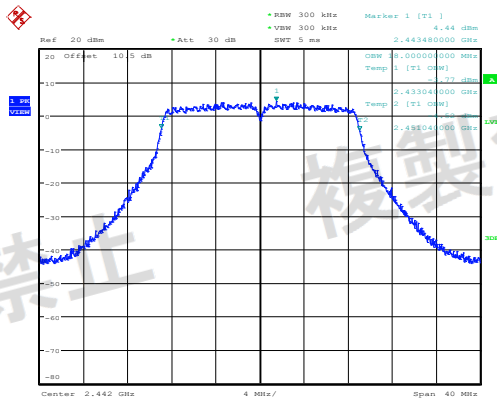
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:11:24

802.11n20, Low Channel



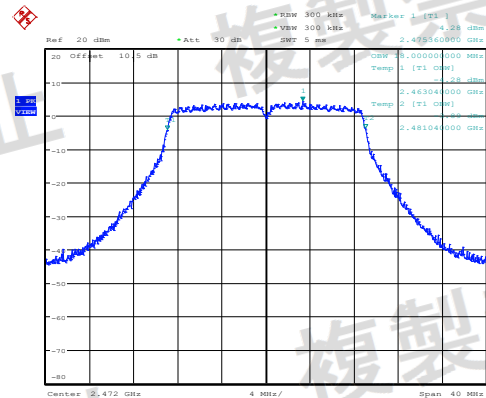
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:18:37

802.11n20, Middle Channel



ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:25:31

802.11n20, High Channel



ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:30:34

4.4 Transmitter Spurious Emission Strength and Unwanted Emission Intensity

Test Result: Compliant. Please refers to following table and plots.

Test Mode: Transmitting; Test Condition: NV

802.11b

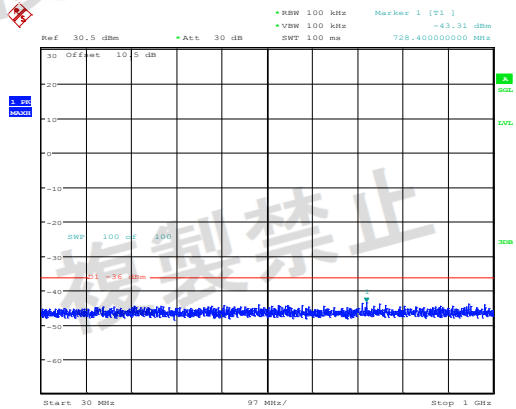
Channel	Test Band (RBW)	Frequency Range		Max.Emission Located(MHz)	Result (dBm/RBW)	Result (μW/RBW)	Limit (μW/RBW)	Verdict
		Start(MHz)	Stop(MHz)					
Low	Band I (100kHz)	30	1000	728.4	-43.31	0.047	0.25	Pass
	Band II (1MHz)	1000	2387	2377.291	-38.76	0.133	2.50	Pass
	Band III (1MHz)	2387	2400	2399.994	-33.96	0.402	25	Pass
	Band IV (1MHz)	2483.5	2496.5	2494.628	-36.73	0.212	25	Pass
	Band V (1MHz)	2496.5	12500	3171.736	-34.34	0.368	2.50	Pass
Middle	Band I (100kHz)	30	1000	816.67	-42.69	0.054	0.25	Pass
	Band II (1MHz)	1000	2387	2288.523	-39.41	0.115	2.50	Pass
	Band III (1MHz)	2387	2400	2397.361	-38.31	0.148	25	Pass
	Band IV (1MHz)	2483.5	2496.5	2487.374	-37.88	0.163	25	Pass
	Band V (1MHz)	2496.5	12500	3176.738	-35.21	0.301	2.50	Pass
High	Band I (100kHz)	30	1000	820.065	-43.22	0.048	0.25	Pass
	Band II (1MHz)	1000	2387	2371.050	-38.63	0.137	2.50	Pass
	Band III (1MHz)	2387	2400	2396.276	-38.83	0.131	25	Pass
	Band IV (1MHz)	2483.5	2496.5	2484.046	-30.26	0.942	25	Pass
	Band V (1MHz)	2496.5	12500	3176.738	-34.22	0.378	2.50	Pass

802.11g

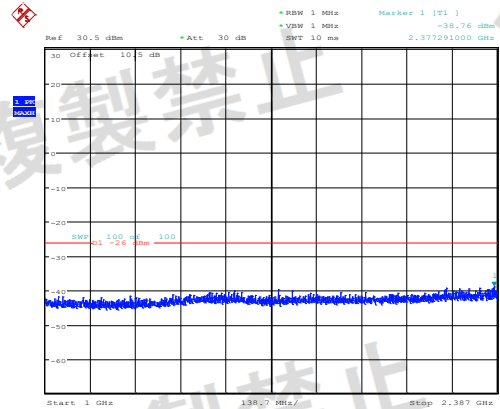
Channel	Test Band (RBW)	Frequency Range		Max.Emission Located(MHz)	Result (dBm/RBW)	Result (μW/RBW)	Limit (μW/RBW)	Verdict
		Start(MHz)	Stop(MHz)					
Low	Band I (100kHz)	30	1000	760.895	-43.28	0.047	0.25	Pass
	Band II (1MHz)	1000	2387	2369.663	-38.30	0.148	2.50	Pass
	Band III (1MHz)	2387	2400	2399.812	-28.20	1.514	25	Pass
	Band IV (1MHz)	2483.5	2496.5	2488.005	-37.40	0.182	25	Pass
	Band V (1MHz)	2496.5	12500	10709.374	-35.94	0.255	2.50	Pass
Middle	Band I (100kHz)	30	1000	636.25	-43.27	0.047	0.25	Pass
	Band II (1MHz)	1000	2387	2343.310	-38.80	0.132	2.50	Pass
	Band III (1MHz)	2387	2400	2390.478	-38.19	0.152	25	Pass
	Band IV (1MHz)	2483.5	2496.5	2490.520	-37.04	0.198	25	Pass
	Band V (1MHz)	2496.5	12500	3176.738	-34.06	0.393	2.50	Pass
High	Band I (100kHz)	30	1000	916.58	-43.58	0.044	0.25	Pass
	Band II (1MHz)	1000	2387	2368.276	-39.26	0.119	2.50	Pass
	Band III (1MHz)	2387	2400	2396.672	-38.18	0.152	25	Pass
	Band IV (1MHz)	2483.5	2496.5	2483.520	-24.77	3.333	25	Pass
	Band V (1MHz)	2496.5	12500	3171.736	-31.74	0.670	2.50	Pass

802.11n ht20

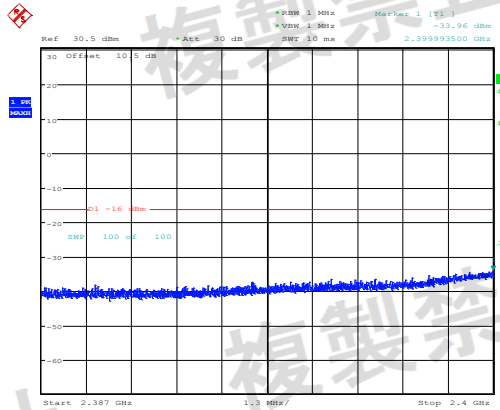
Channel	Test Band (RBW)	Frequency Range		Max.Emission Located(MHz)	Result (dBm/RBW)	Result (μW/RBW)	Limit (μW/RBW)	Verdict
		Start(MHz)	Stop(MHz)					
Low	Band I (100kHz)	30	1000	390.355	-43.52	0.044	0.25	Pass
	Band II (1MHz)	1000	2387	2379.372	-39.38	0.115	2.50	Pass
	Band III (1MHz)	2387	2400	2399.877	-27.95	1.602	25	Pass
	Band IV (1MHz)	2483.5	2496.5	2488.668	-37.45	0.180	25	Pass
	Band V (1MHz)	2496.5	12500	3171.736	-35.61	0.275	2.50	Pass
Middle	Band I (100kHz)	30	1000	88.2	-43.96	0.040	0.25	Pass
	Band II (1MHz)	1000	2387	2372.437	-39.02	0.125	2.50	Pass
	Band III (1MHz)	2387	2400	2392.532	-37.25	0.188	25	Pass
	Band IV (1MHz)	2483.5	2496.5	2485.424	-37.50	0.178	25	Pass
	Band V (1MHz)	2496.5	12500	3161.733	-33.89	0.408	2.50	Pass
High	Band I (100kHz)	30	1000	634.795	-43.13	0.049	0.25	Pass
	Band II (1MHz)	1000	2387	2357.180	-38.95	0.127	2.50	Pass
	Band III (1MHz)	2387	2400	2397.563	-38.38	0.145	25	Pass
	Band IV (1MHz)	2483.5	2496.5	2483.533	-24.18	3.819	25	Pass
	Band V (1MHz)	2496.5	12500	3166.735	-33.65	0.432	2.50	Pass

Test Plots as following:**Test Condition: NV****802.11b, Low Channel(30MHz~1GHz)**

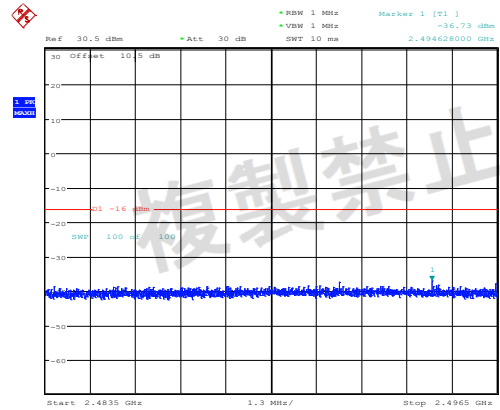
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 20:24:23

802.11b, Low Channel(1GHz~2.387GHz)

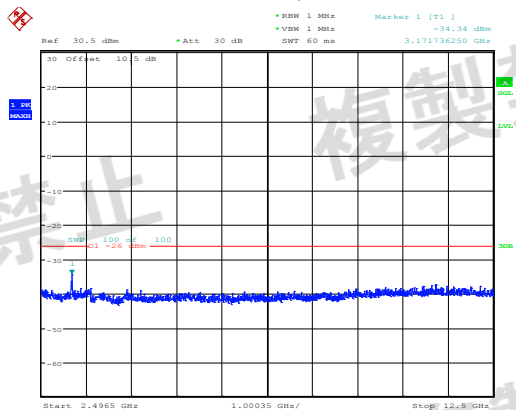
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 20:24:42

802.11b, Low Channel(2.387GHz~2.4GHz)

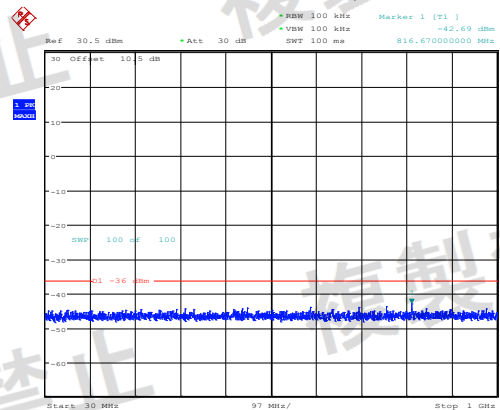
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 20:24:57

802.11b, Low Channel(2.4835GHz~2.4965GHz)

ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 20:25:12

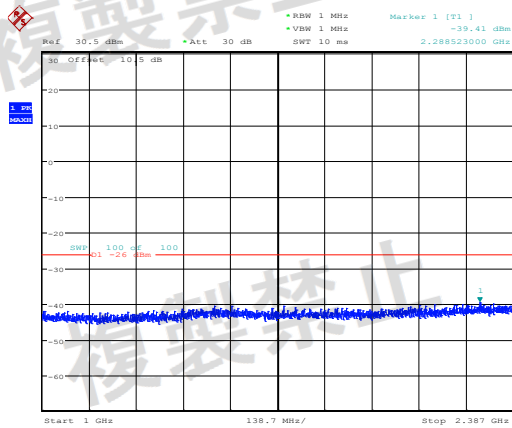
802.11b, Low Channel(2.4965GHz~12.5GHz)

ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 20:25:46

802.11b, Middle Channel(30MHz~1GHz)

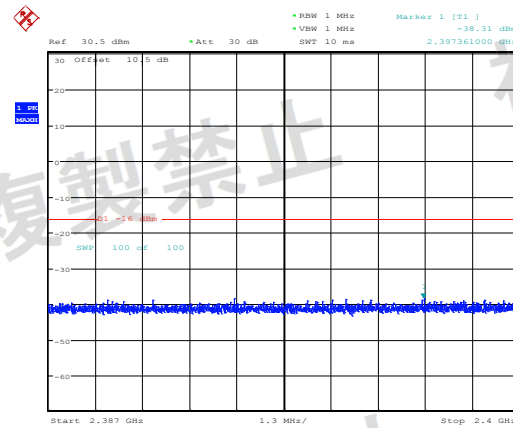
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 20:40:48

802.11b, Middle Channel(1GHz~2.387GHz)



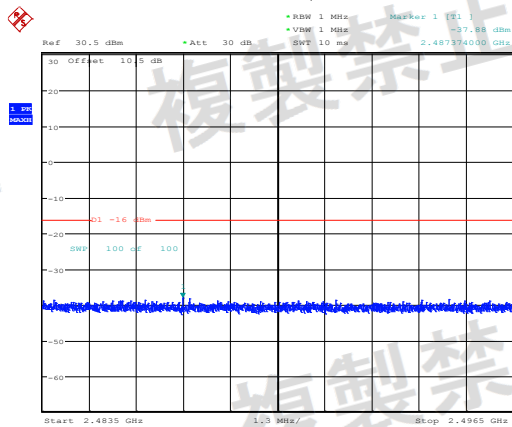
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 20:41:07

802.11b, Middle Channel(2.387GHz~2.4GHz)



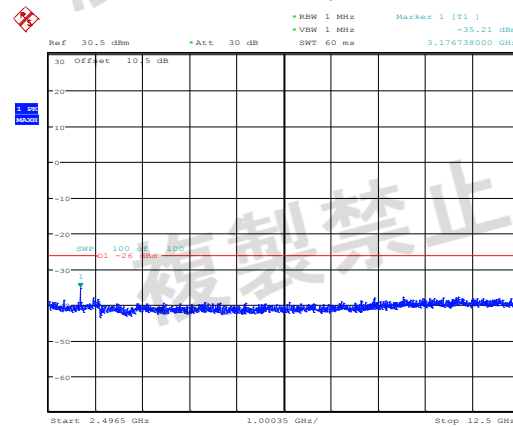
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Date: 12.JAN.2026 20:41:23

802.11b, Middle Channel(2.4835GHz~2.4965GHz)



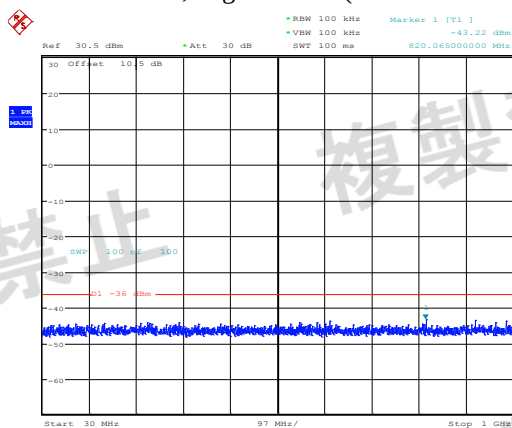
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 20:41:38

802.11b, Middle Channel(2.4965GHz~12.5GHz)



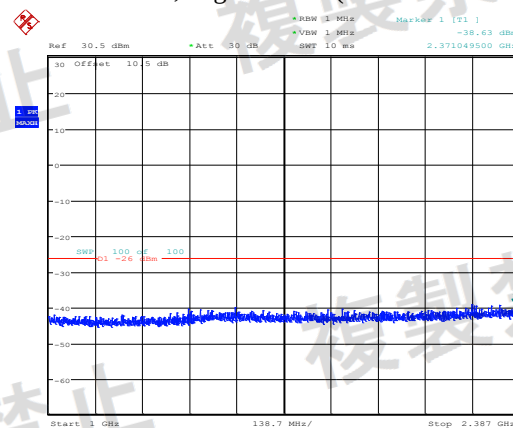
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 20:42:12

802.11b, High Channel(30MHz~1GHz)



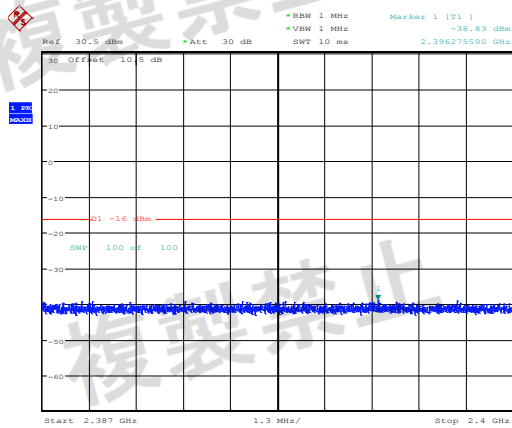
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 20:46:46

802.11b, High Channel(1GHz~2.387GHz)



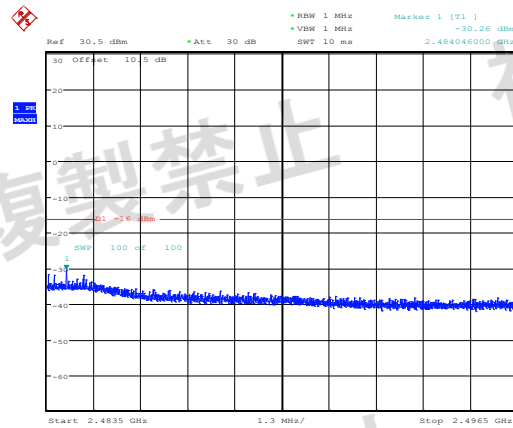
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 20:47:04

802.11b, High Channel(2.387GHz~2.4GHz)



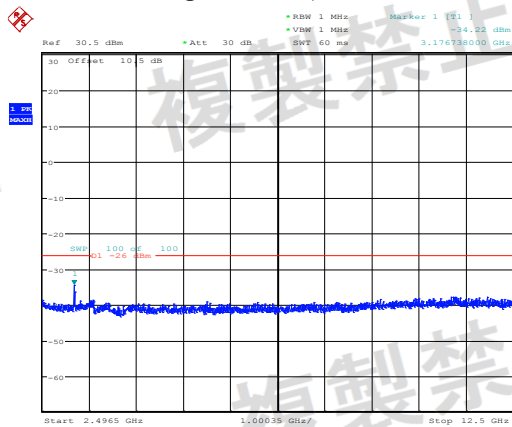
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 20:47:21

802.11b, High Channel(2.4835GHz~2.4965GHz)



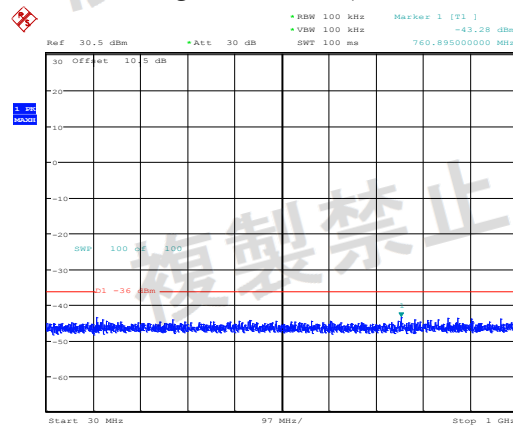
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 20:47:37

802.11b, High Channel(2.4965GHz~12.5GHz)



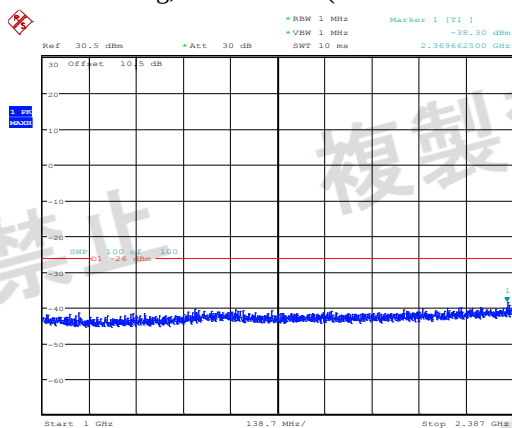
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 20:48:12

802.11g, Low Channel(30MHz~1GHz)



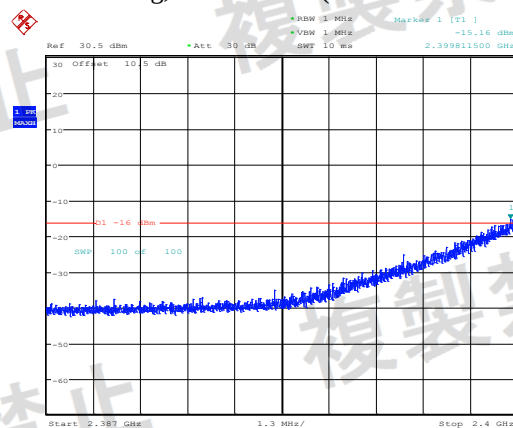
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 20:51:53

802.11g, Low Channel(1GHz~2.387GHz)



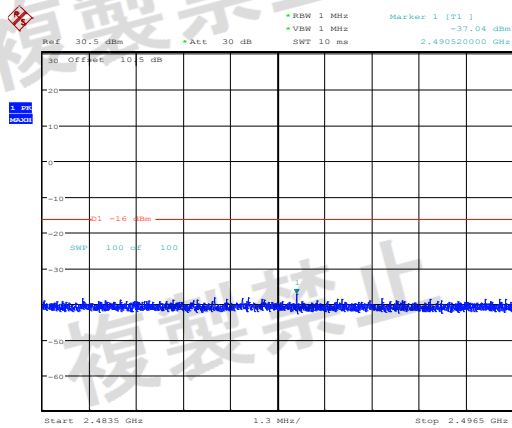
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 20:52:11

802.11g, Low Channel(2.387GHz~2.4GHz)



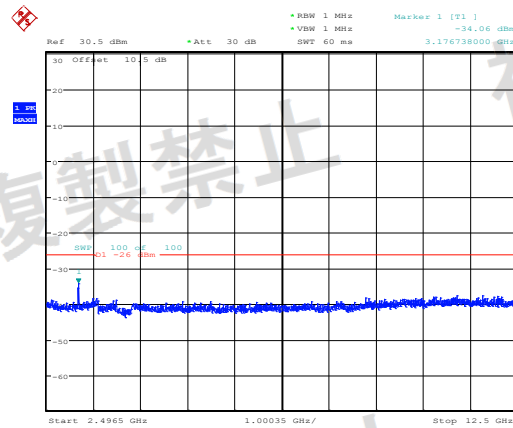
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 20:52:27

802.11g, Middle Channel(2.4835GHz~2.4965GHz)



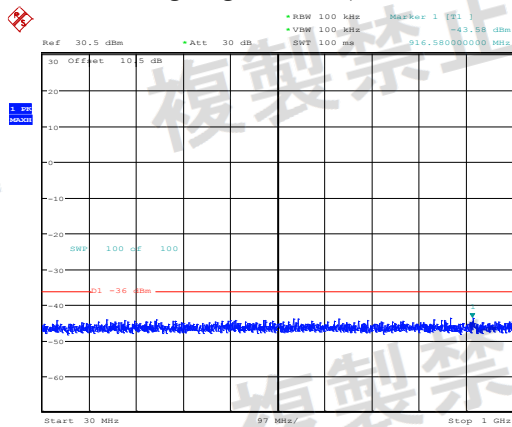
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:01:01

802.11g, Middle Channel(2.4965GHz~12.5GHz)



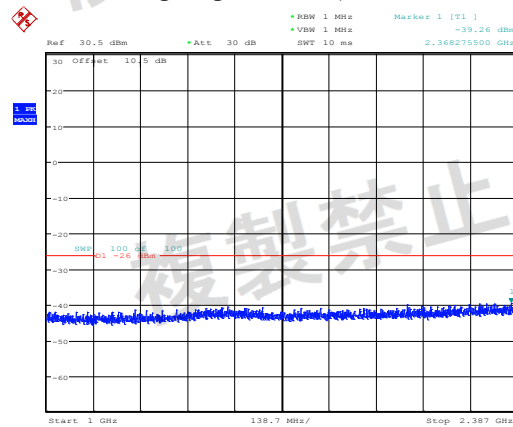
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:01:35

802.11g, High Channel(30MHz~1GHz)



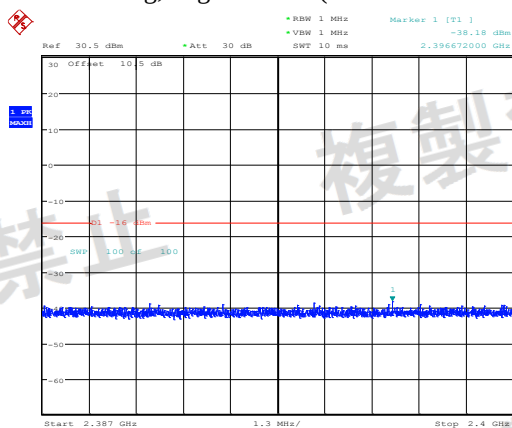
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:11:47

802.11g, High Channel(1GHz~2.387GHz)



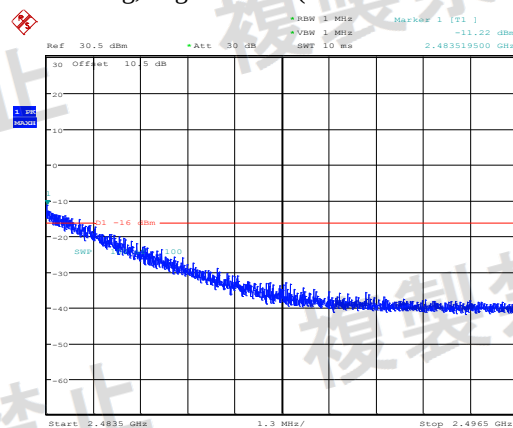
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:12:06

802.11g, High Channel(2.387GHz~2.4GHz)



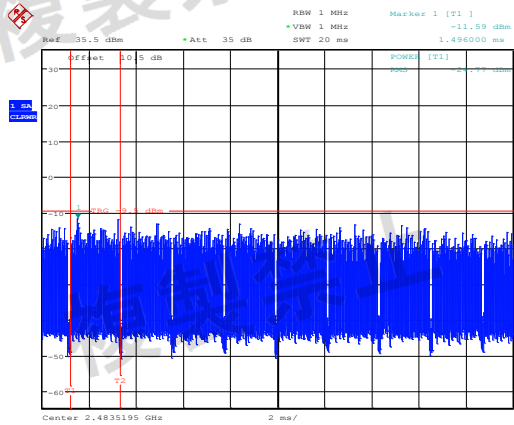
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:12:23

802.11g, High Channel(2.4835GHz~2.4965GHz)



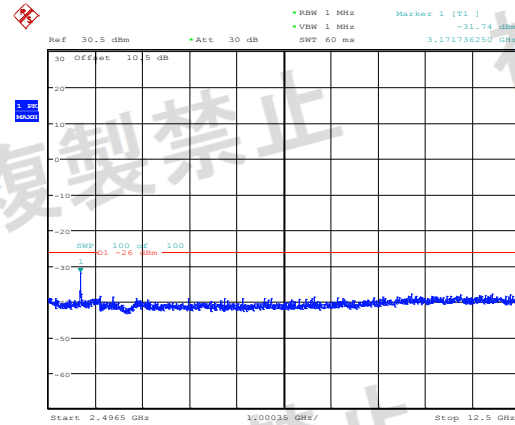
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:12:38

802.11g, High Channel(2.4835GHz~2.4965GHz)



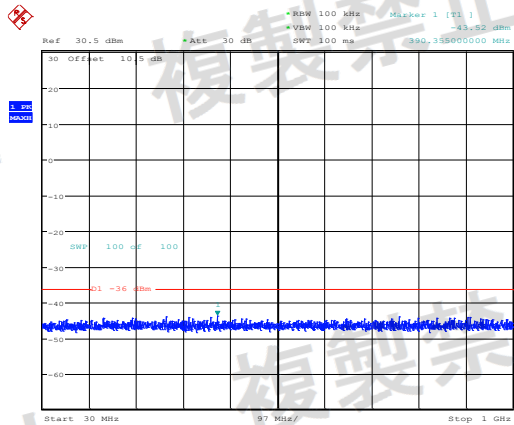
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:15:12

802.11g, High Channel(2.4965GHz~12.5GHz)



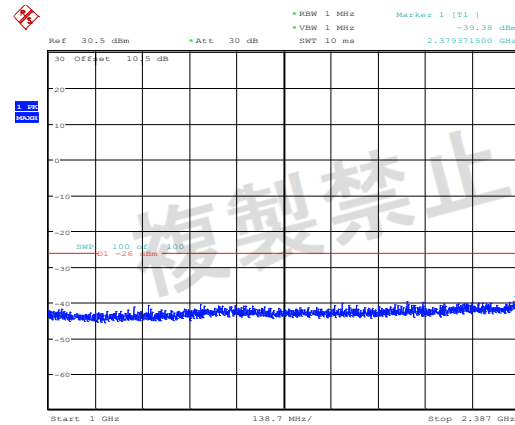
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:15:46

802.11n20, Low Channel(30MHz~1GHz)



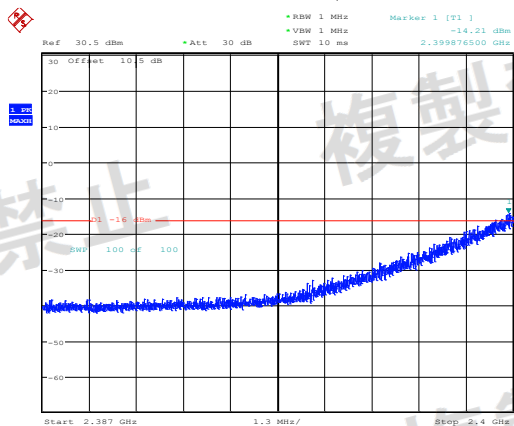
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:19:01

802.11n20, Low Channel(1GHz~2.387GHz)



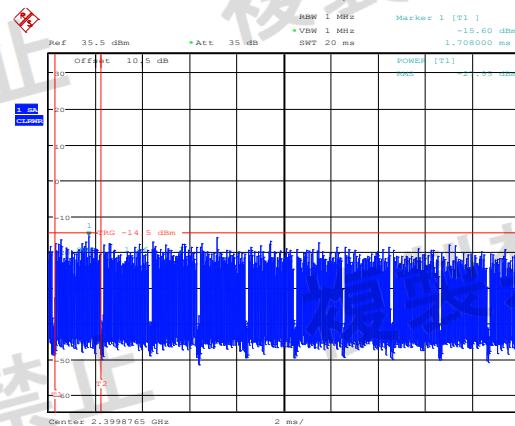
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:19:19

802.11n20, Low Channel(2.387GHz~2.4GHz)



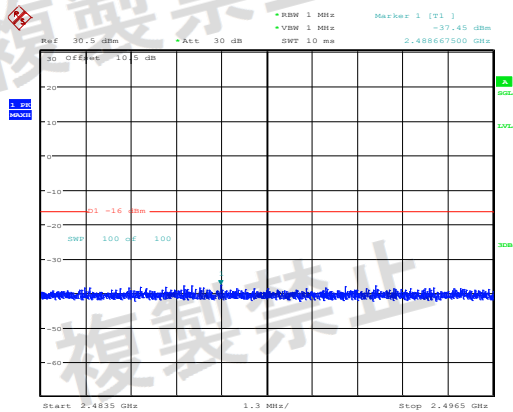
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:19:35

802.11n20, Low Channel(2.387GHz~2.4GHz)



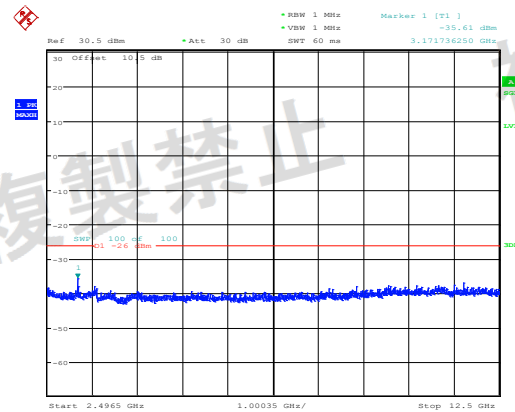
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:21:55

802.11n20, Low Channel(2.4835GHz~2.4965GHz)



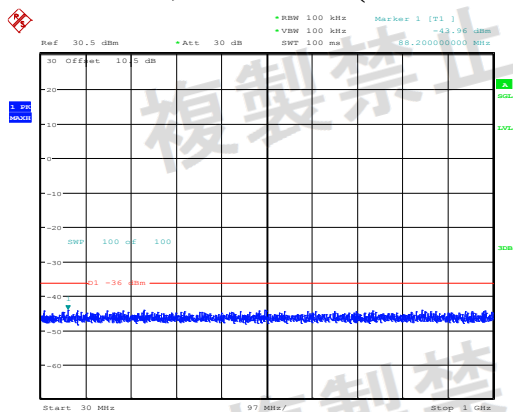
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:22:12

802.11n20, Low Channel(2.4965GHz~12.5GHz)



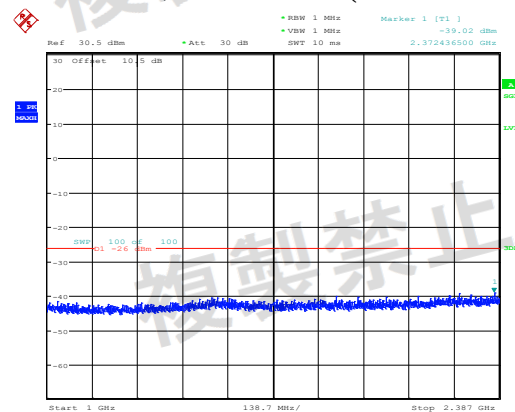
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:22:45

802.11n20, Middle Channel(30MHz~1GHz)



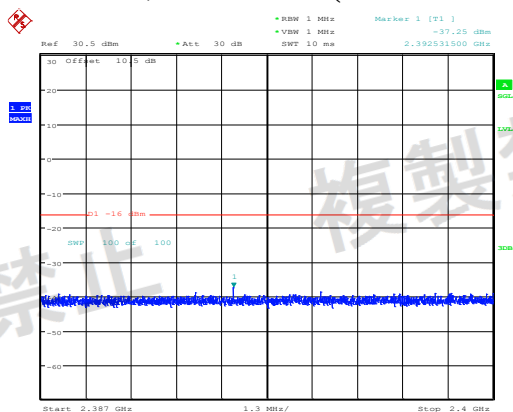
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:25:55

802.11n20, Middle Channel(1GHz~2.387GHz)



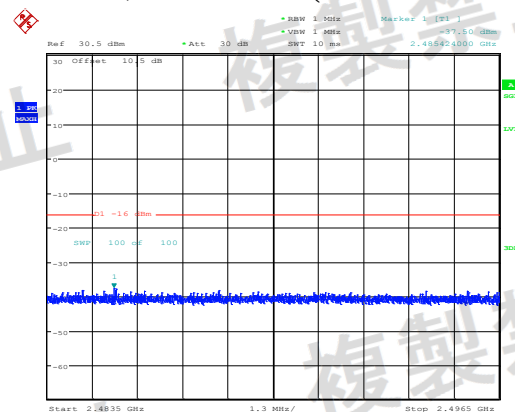
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:26:13

802.11n20, Middle Channel(2.387GHz~2.4GHz)



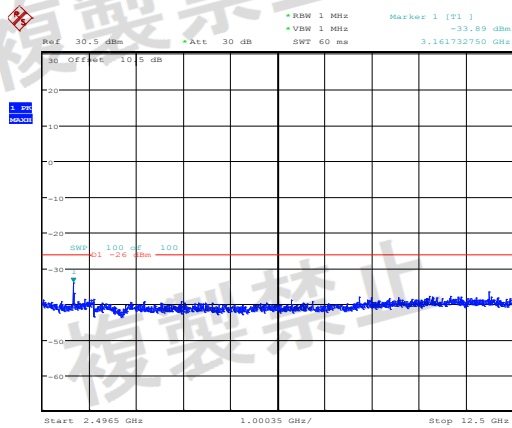
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:26:29

802.11n20, Middle Channel(2.4835GHz~2.4965GHz)



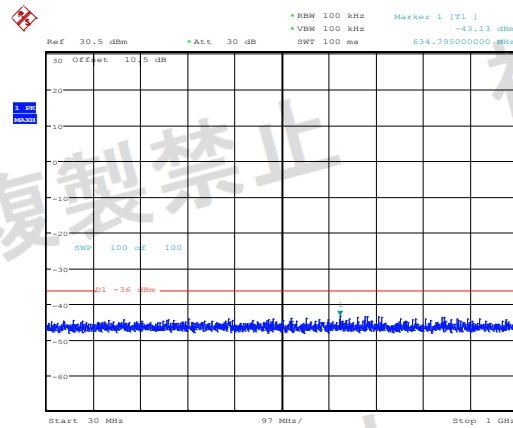
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:26:46

802.11n20, Middle Channel(2.4965GHz~12.5GHz)



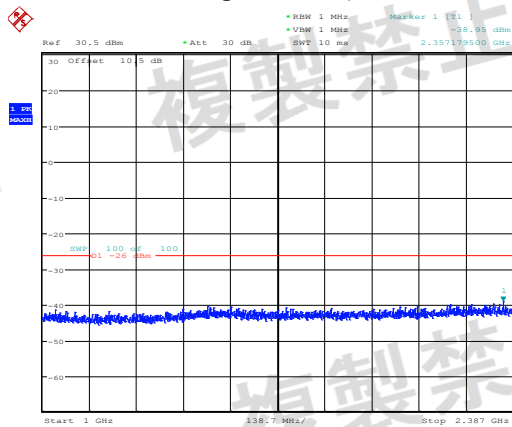
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:27:20

802.11n20, High Channel(30MHz~1GHz)



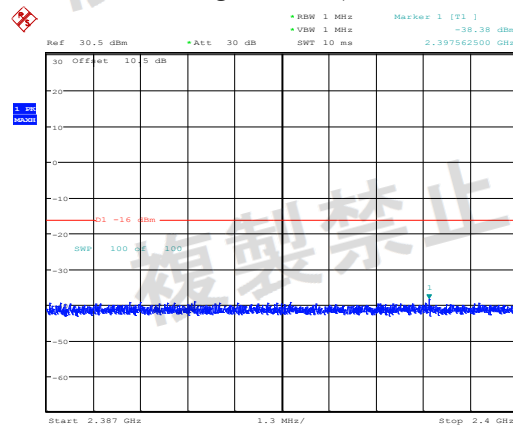
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:30:58

802.11n20, High Channel(1GHz~2.387GHz)



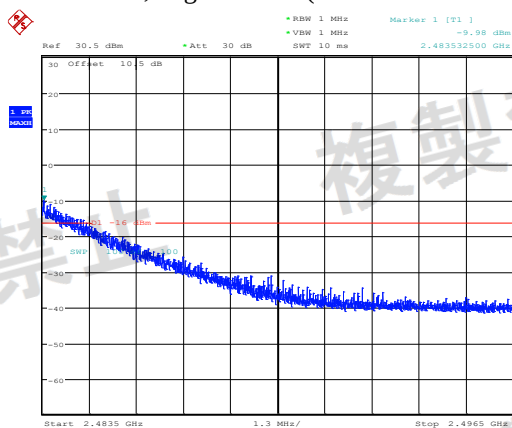
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:31:17

802.11n20, High Channel(2.387GHz~2.4GHz)



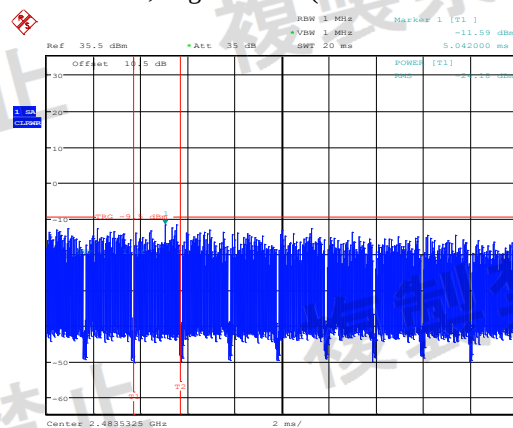
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:31:33

802.11n20, High Channel(2.4835GHz~2.4965GHz)



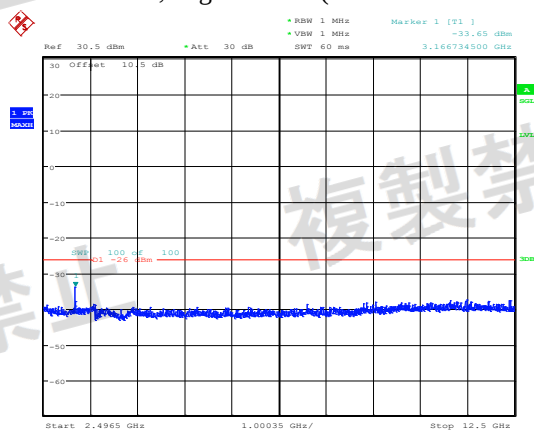
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Date: 12.JAN.2026 21:31:49

802.11n20, High Channel(2.4835GHz~2.4965GHz)



ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:33:52

802.11n20, High Channel(2.4965GHz~12.5GHz)



ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:34:26

4.5 Antenna Output Power and Antenna Power Tolerance

Test Result: Compliant

Test Mode: Transmitting

Declared Power:

Mode	Antenna Gain (dBi)	Declared Power (mW/MHz)
802.11b	2.54	5.30
802.11g		1.40
802.11n ht20		1.20

Mode	Channel	Antenna output power (dBm/MHz)	Antenna output power(mW/MHz)		Antenna output tolerance (%)		EIRP (dBm/MHz)		Verdict
			Result	Limit	Result	Limit	Result	Limit	
802.11b	Low	7.04	5.058	≤ 10	-4.57	+20	9.58	≤ 12.14	Pass
	Middle	4.89	3.083	≤ 10	-41.83	+20	7.43	≤ 12.14	Pass
	High	7.24	5.297	≤ 10	-0.06	+20	9.78	≤ 12.14	Pass
802.11g	Low	0.44	1.107	≤ 10	-20.93	+20	2.98	≤ 12.14	Pass
	Middle	0.62	1.153	≤ 10	-17.64	+20	3.16	≤ 12.14	Pass
	High	1.42	1.387	≤ 10	-0.93	+20	3.96	≤ 12.14	Pass
802.11n ht20	Low	0.40	1.096	≤ 10	-8.67	+20	2.94	≤ 12.14	Pass
	Middle	0.60	1.148	≤ 10	-4.33	+20	3.14	≤ 12.14	Pass
	High	0.44	1.107	≤ 10	-7.75	+20	2.98	≤ 12.14	Pass

Note:

Antenna output power(mW/MHz) = $10^{\lfloor \text{Antenna output power(dBm/MHz)} / 10 \rfloor}$

Antenna output power tolerance(%) = (Antenna output power - Declared power) / Declared power * 100

EIRP(dBm/MHz) = Antenna output power(dBm/MHz) + Antenna gain.

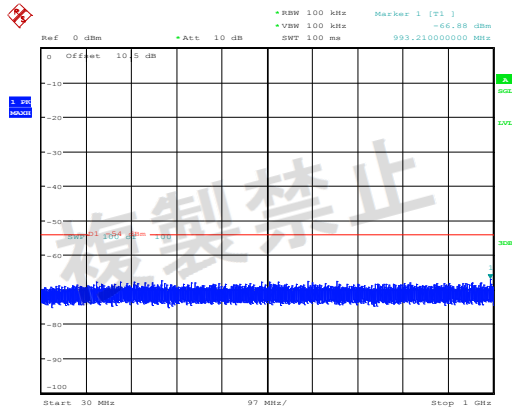
4.6 Receiver Spurious Emission and Unwanted Emission Intensity

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

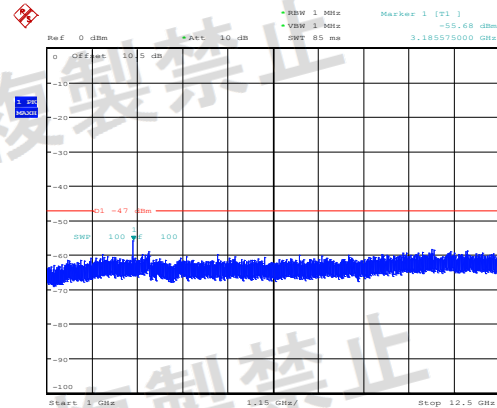
Test Mode: Receiving

Test Condition: NV

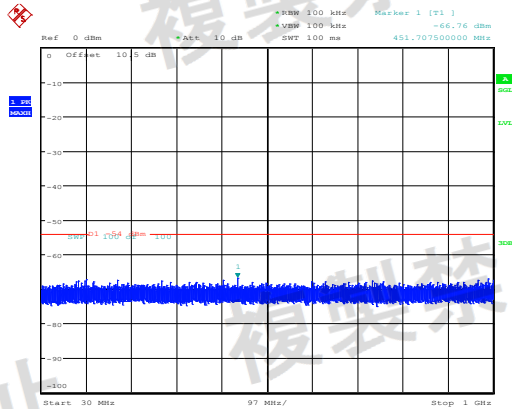
Mode	Channel	Test Band (RBW)	Frequency Range		Max.Emission Located(MHz)	Result (dBm)	Result (nW)	Limit (nW)	Verdict
			Start(MHz)	Stop(MHz)					
802.11b	Low	Band I (100kHz)	30	1000	993.21	-66.88	0.205	4	Pass
		Band II (1MHz)	1000	12500	3185.575	-55.68	2.704	20	Pass
	Middle	Band I (100kHz)	30	1000	451.708	-66.76	0.211	4	Pass
		Band II (1MHz)	1000	12500	3182.7	-55.29	2.958	20	Pass
	High	Band I (100kHz)	30	1000	903.388	-66.88	0.205	4	Pass
		Band II (1MHz)	1000	12500	3180.975	-54.36	3.664	20	Pass
802.11g	Low	Band I (100kHz)	30	1000	858.817	-66.21	0.239	4	Pass
		Band II (1MHz)	1000	12500	3175.8	-55.98	2.523	20	Pass
	Middle	Band I (100kHz)	30	1000	419.94	-67.38	0.183	4	Pass
		Band II (1MHz)	1000	12500	3176.95	-54.69	3.396	20	Pass
	High	Band I (100kHz)	30	1000	958.969	-67.02	0.199	4	Pass
		Band II (1MHz)	1000	12500	3176.95	-53.44	4.529	20	Pass
802.11n ht20	Low	Band I (100kHz)	30	1000	842.521	-66.68	0.215	4	Pass
		Band II (1MHz)	1000	12500	3178.675	-55.07	3.112	20	Pass
	Middle	Band I (100kHz)	30	1000	412.374	-66.82	0.208	4	Pass
		Band II (1MHz)	1000	12500	3176.375	-54.60	3.467	20	Pass
	High	Band I (100kHz)	30	1000	590.854	-67.18	0.191	4	Pass
		Band II (1MHz)	1000	12500	3170.625	-55.03	3.141	20	Pass

Test Plots as following:**Test Condition: NV****802.11b, Low Channel(30MHz~1GHz)**

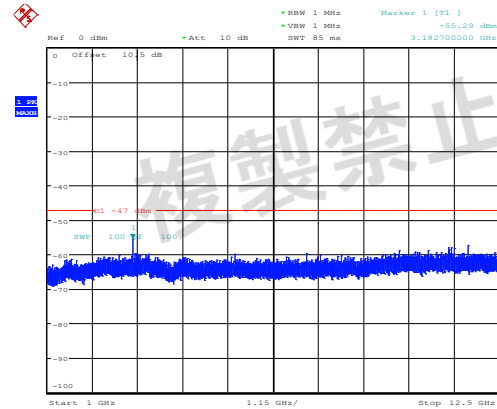
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:50:37

802.11b, Low Channel(1GHz~12.5GHz)

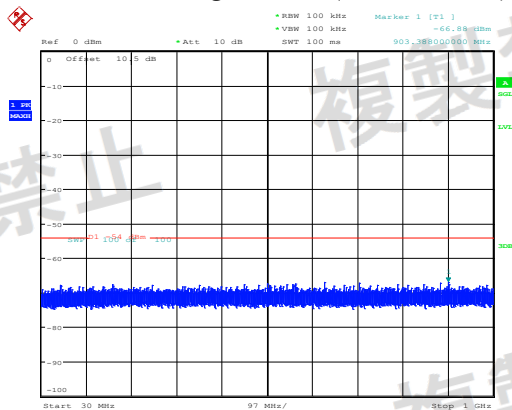
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:51:19

802.11b, Middle Channel(30MHz~1GHz)

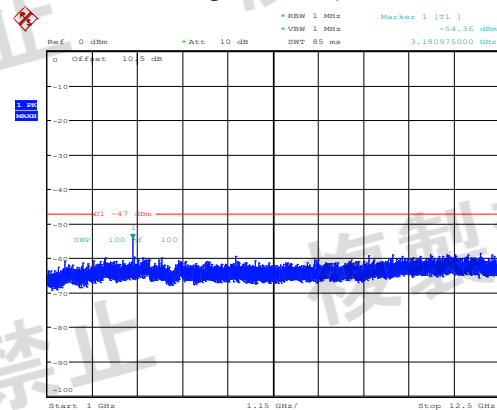
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:51:50

802.11b, Middle Channel(1GHz~12.5GHz)

ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:52:33

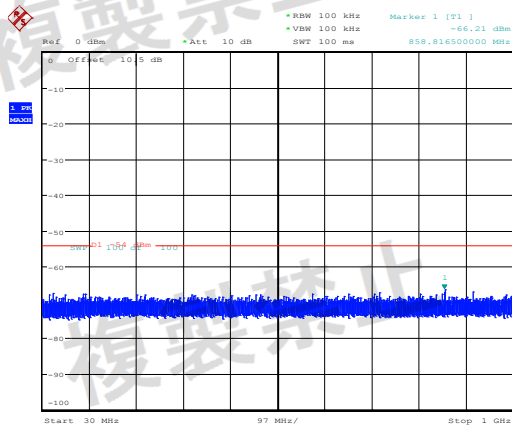
802.11b, High Channel(30MHz~1GHz)

ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:53:11

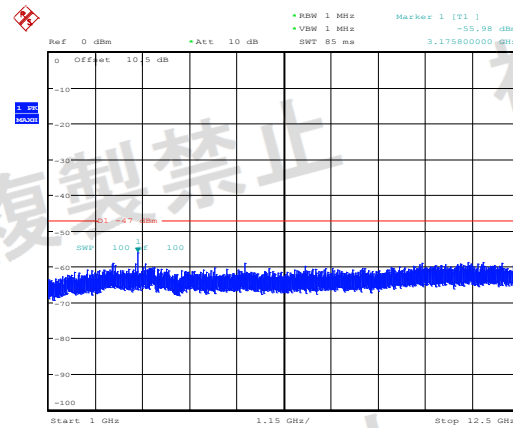
802.11b, High Channel(1GHz~12.5GHz)

ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:53:53

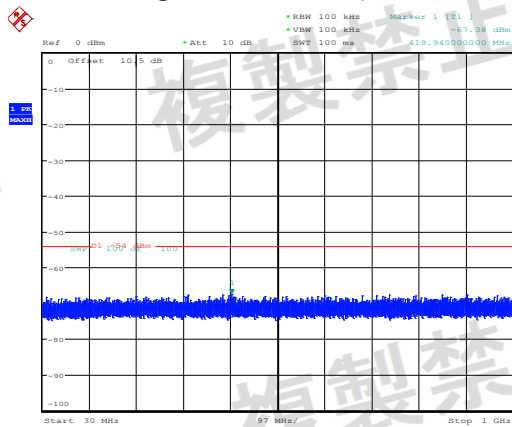
802.11g, Low Channel(30MHz~1GHz)



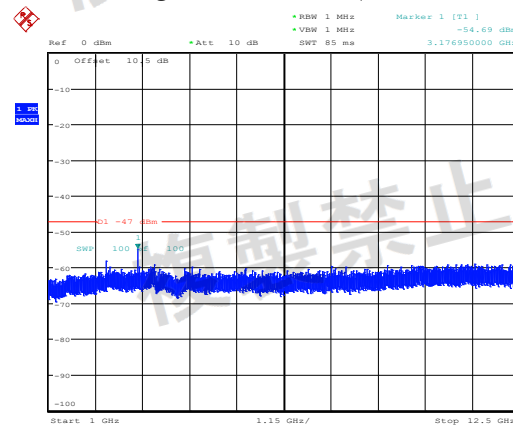
802.11g, Low Channel(1GHz~12.5GHz)



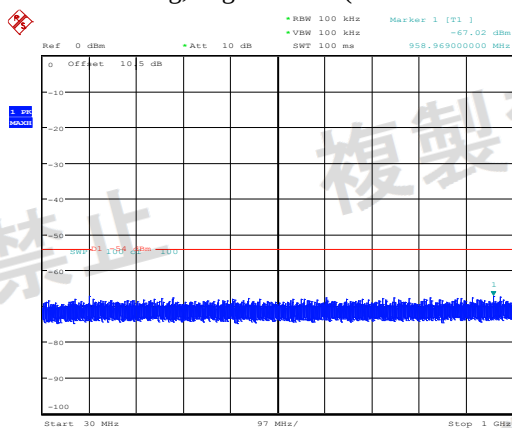
802.11g, Middle Channel(30MHz~1GHz)



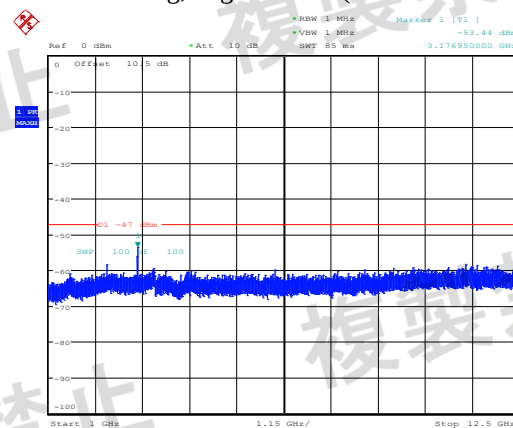
802.11g, Middle Channel(1GHz~12.5GHz)



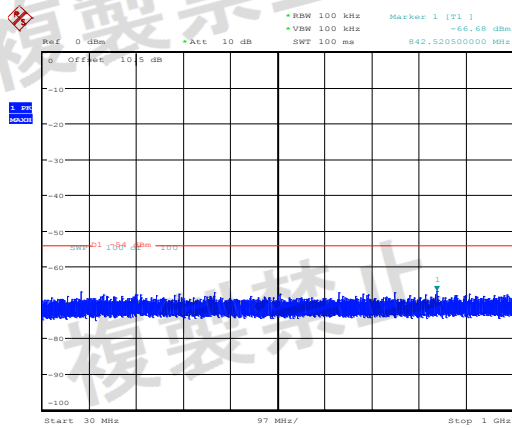
802.11g, High Channel(30MHz~1GHz)



802.11g, High Channel(1GHz~12.5GHz)

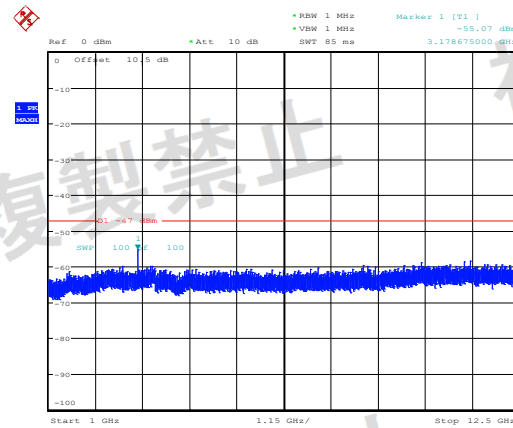


802.11n20, Low Channel(30MHz~1GHz)



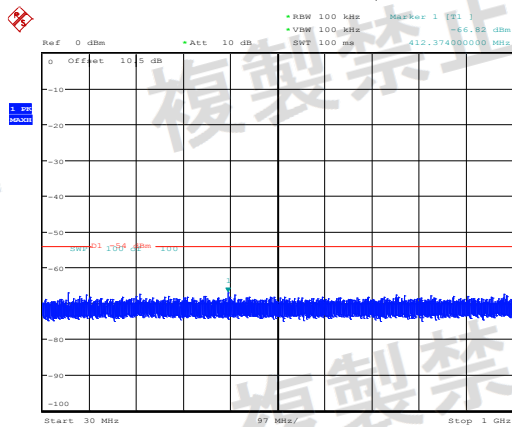
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:58:32

802.11n20, Low Channel(1GHz~12.5GHz)



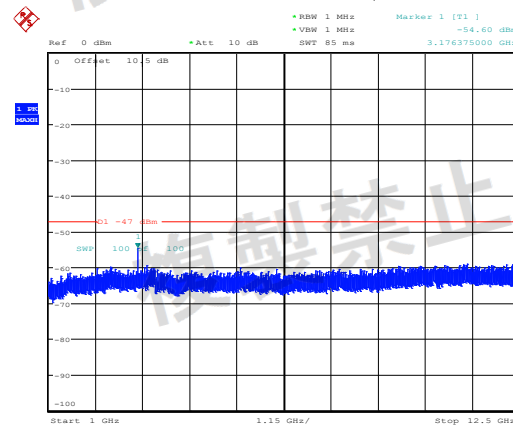
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 21:59:13

802.11n20, Middle Channel(30MHz~1GHz)



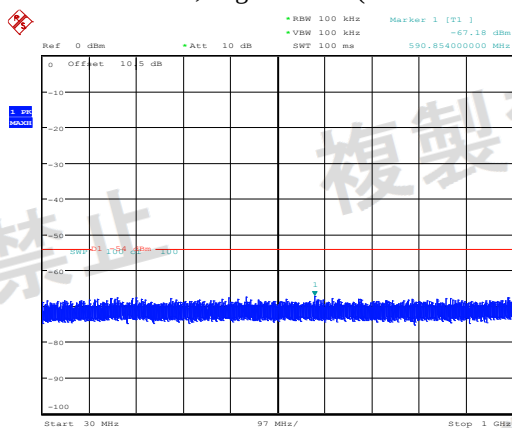
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 22:00:13

802.11n20, Middle Channel(1GHz~12.5GHz)



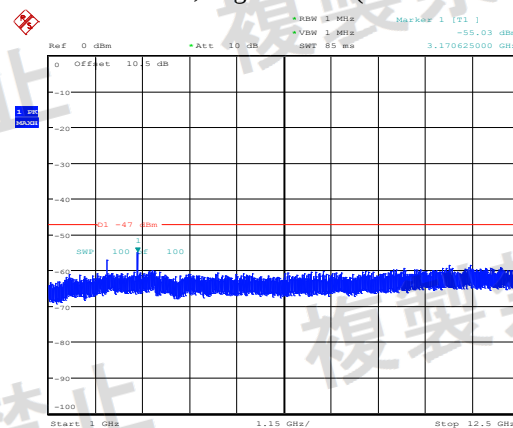
ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 22:00:54

802.11n20, High Channel(30MHz~1GHz)



ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 22:01:25

802.11n20, High Channel(1GHz~12.5GHz)



ProjectNo.:2503A28684E-RF Tester:Zoey Song
Date: 12.JAN.2026 22:02:07

4.7 Interference Prevention Function

Test Result: Compliant, please see the below table.

Item	Result	Requirement	Verdict
Methodology to transmit ID Code:	Automatically	Automatically	Compliant
Methodology to receive ID Code:	Automatically	Automatically	Compliant
Identification Codes (ID Codes):	ea:bc:d1:5e:10:16	/	/
Bits of ID Codes:	48 bits	48 bits or more	Compliant
Screenshot:	ea:bc:d1:5e:10:16		

4.8 Construction Protection Confirmation

Result: Compliant, please see the below table.

☒ Sealed with screws.	
☐ Plastic chassis is being welded using ultrasonic waves.	
☐ Cover is glued using a special adhesive.	
☐ Metal covers are spot-fused.	
☐ Cover is specially interlocked.	
☒ RF and Modulation components are covered with shielding case and this shielding case is soldered.	
☐ Other	If 'Other', describe the method here. Then delete this text.

Photographs



5. EUT PHOTOGRAPHS

Please refer to the attachment 2503A28684E-RF-EXP EUT EXTERNAL PHOTOGRAPHS and 2503A28684E-RF-INP EUT INTERNAL PHOTOGRAPHS.

6. TEST SETUP PHOTOGRAPHS

Please refer to the attachment 2503A28684E-RF-TSP TEST SETUP PHOTOGRAPHS.

******* END OF REPORT *******