

TEST REPORT

Reference No...... : WTD25D11316005W003
Applicant..... : Shenzhen Sybran Technology Co.,Ltd.
Address..... : 804, Bldg 5A, Block C, Chuangzhiyuncheng Phase II, Xingke 1st Rd,
Xili St Nanshan, Shenzhen, China
Manufacturer..... : Shenzhen Sybran Technology Co.,Ltd.
Address..... : 804, Bldg 5A, Block C, Chuangzhiyuncheng Phase II, Xingke 1st Rd,
Xili St Nanshan, Shenzhen, China
Product..... : CODE27 Companion Hub
Model(s)..... : SyBran-01
Standards..... : Article 2 Paragraph 1 of Item 19 (for WIFI 1-13 CH),
MIC Notice No.88 Appendix No.43
Date of Receipt Sample..... : 2025-11-28
Date of Test..... : 2025-12-02 to 2025-12-30
Date of Issue..... : 2026-01-27
Test Result..... : **Pass**

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company.

The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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3 Revision History

Test Report No.	Date of Receipt Sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTD25D11316005W003	2025-11-28	2025-12-02 to 2025-12-30	2026-01-27	Original	-	Valid

4 General Information

4.1 General Description of E.U.T.

Product:		CODE27 Companion Hub
Model(s):		SyBran-01
Model Description:		There are two hardware configurations for this model: configuration A and configuration B, the only difference being the cable specifications.
Hardware version:		YT-921 V_1.2
Software version:		rk3588s_yt921-userdebug 12 SQ3A.220705.003.A1 eng.dj 20260119.111702
Radio type:		WLAN
WLAN	Technical:	2.4G-802.11b/g/n HT20/ax HE20
	Modulation:	DSSS, OFDM
	Frequency range:	802.11b/g/n HT20/ax HE20: 2412~2472MHz,
	Subcarriers:	802.11g/n: 3.2 subcarriers/MHz (312.5 kHz spacing) 802.11 ax: 12.8 subcarriers/MHz (78.125 kHz spacing)
	Output power:	ANT 1: 802.11b: 7.39mW/MHz 802.11g: 3.63mW/MHz 802.11n (HT20): 3.65mW/MHz 802.11ax (HE20): 3.80mW/MHz ANT 2: 802.11b: 8.39mW/MHz 802.11g: 5.26mW/MHz 802.11n (HT20): 4.95mW/MHz 802.11ax (HE20): 4.62mW/MHz ANT 1+ANT 2: 802.11g/n (HT20)/ax (HE20): 8.42mW/MHz
	Antenna installation:	FPC Antenna
	Antenna gain:	2.56dBi
	Note:	#: The antenna gain is provided by the applicant, and the applicant should be responsible for its authenticity, WALTEK lab has not verified the authenticity of its information.

4.2 Details of E.U.T.

Power Supply Technical: DC 20V

AC Adapter:

Model: A869-200325C-JP1

INPUT: 100-240V~ 50/60Hz 1.7A

OUTPUT:

DC 5V 3A

DC 9V 3A

DC 12V 3A

DC 15V 3A

DC 20V 3.25A

Manufacturer: Dongguan Aohal Technology Co.,Ltd.

4.3 Channel List

Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
1	2412	2	2417	3	2422	4	2427
5	2432	6	2437	7	2442	8	2447
9	2452	10	2457	11	2462	12	2467
13	2472						

4.4 General condition

Ambient Condition: 23.3°C, 52.7 %RH

4.4.1 Environmental condition of test site

Voltage fluctuation

1. In the case of a characteristic test in the technical regulations conformity certification

The power supply supplies the voltage rating.

2. Other cases

The power supply supplies the voltage rating and the voltage rating $\pm 10\%$. However, when it can be confirmed that the change of the input voltage to the wireless part circuit of the testing machine is $\pm 1\%$ or less when the input voltage to the testing machine from the external source changes at $\pm 10\%$, examines it only by the voltage rating.

4.4.2 Test Mode

All test mode(s) and condition(s) mentioned were considered and evaluated respectively by performing full tests, the worst data were recorded and reported.

Have been confirmed the fluctuation of power supply to the RF circuit of EUT (excluding power source) is equal to or less than $\pm 1\%$ when the power supply to the product varies at $\pm 10\%$ by Manufacturer.

DC Input	RF_IC Input	Rate of fluctuation(%)
18V	3.3V	0.0
20V	3.3V	0.0
22V	3.3V	0.0
Note: The EUT has two hardware configurations, which do not affect the voltage input and parameters of the RF circuit.		

Test mode	Low channel	Middle channel	High channel
Transmitting(802.11b/g/n20/ax20)	2412MHz	2442MHz	2472MHz
Receiving(802.11b/g/n20/ax20)	2412MHz	2442MHz	2472MHz
Normal Operation	2412MHz	2442MHz	2472MHz
Normal Operation	2422MHz	2442MHz	2462MHz

Note: 802.11 ax HE20 support all RUs, only the worst case(full RU) is recorded in the report.

4.5 Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Calibration Date	Calibration Due Date
1	EXA Signal Analyzer	Malaysia Keysight	N9010A	MY50520207	2025-04-19	2026-04-18
2	Spectrum Analyzer	R&S	FSP30	100091	2025-04-19	2026-04-18
3	DC power supply	Agilent	E3640A	MY40006693	2025-04-19	2026-04-18
4	Temperature & Humidity Chamber	Agilent	TH-1P-B	WIT-05121302	2025-11-14	2026-11-13
5	Temperature/ Humidity Meter	Agilent	ZC1-2	TR7-TH	2025-05-29	2026-05-28
6	ESG VECTOR SIGNAL GENERATOR	Malaysia Keysight	E4438C	MY45092536	2025-04-19	2026-04-18
7.	USB Wideband Power Sensor	Keysight	U2021XA	SG5440003	2025-04-19	2026-04-18
8.	Universal Radio Communication Tester	R&S	CMW 500	127818	2025-04-19	2026-04-18
9.	Attenuator	ShangHai HuaXiang	TS2-6dB-1G-A	20070707	2025-01-10	2026-01-09
10.	Power Splitter	Mini-Circuits	ZNPD1-50-S+	SUU2751527	2025-01-10	2026-01-09

Remark:

(a) Calibration conducted by the National Institute of Information and Communications Technology (NICT) in Japan (hereinafter referred to as "NICT") or a designated calibration agency under Article 102-18 paragraph (1) in JRL.

(b) Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Act (Act No. 51 of 1992).

(c) Calibration conducted in countries except Japan, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1).

(d) Calibration, etc. conducted by using measuring instruments and other equipment listed in the right column of appended table No. 3, which shall have been given any type of calibration, etc. listed above from (a) to (c)

From JRL Article 24-2, paragraph 4, Item 2

1. All Equipments Calibration use the calibration method (c).

2. All Equipments Calibration in GUANG ZHOU GRG METROLOGY&TEST CO., LTD./ No.163.Pingyun Rd, West of HuangPu Ave. Guangzhou, Guangdong, China.

3. Regarding the measuring device, Article 24-2, Paragraph 4 of the Radio Law.

4.6 Measurement Uncertainty

Parameter	Uncertainty
Radio Frequency	$\pm 1 \times 10^{-7}$ Hz
RF Power	± 0.42 dB
RF Power Density	± 0.7 dB
Conducted Spurious Emissions	± 2.76 dB (9kHz~26500MHz)
Confidence interval: 95%. Confidence factor: k=2	

5 Test Summary

Test Items	Result
Transmitting equipment	
Antenna Power	PASS
Tolerances for Antenna Power	PASS
Frequency Tolerance	PASS
Transmission Rate	N/A
Occupied Frequency Bandwidth	PASS
Spread Bandwidth	N/A
Process Gain	N/A
Spurious emission intensity	PASS
Half-power beam width	Note1
Carrier sense function	PASS
Receiving equipment	
Secondary Radiated Emissions	PASS
Controlling equipment	
Interference prevention function	PASS
N/A is an abbreviation for Not Applicable. Note1: The max EIRP of 20MHz system is 11.75dBm/MHz and that is less than 12.14dBm/MHz, the test is not applicable.	

6 Measurements of Transmitting Equipment

6.1 Antenna Power and Antenna Power Tolerances

6.1.1 Test Requirement

Article 2, Paragraph 1, Item (19).

6.1.2 Limit

- a. The antenna power of a transmitting equipment (with a frequency band of 2,427 - 2,470.75 MHz, for spread spectrum systems using FH systems, hybrid systems of DS and FH, or hybrid systems of FH and OFDM) shall be such that the mean power within a bandwidth of 1 MHz is 3 mW or less in the case of modulation using a standard coding test signal with the same transmission rate as that of the modulation signal.
- b. The antenna power of a transmitting equipment using a spread spectrum system other than any of those in "a" and the OFDM system shall be such that the mean power within a bandwidth of 1 MHz is 10 mW or less for the 20MHz system and 5 mW or less for the 40MHz system in the case of modulation using a standard coding test signal with the same transmission rate as that of the modulation signal.
- c. The antenna power of a transmitting equipment using systems other than any of those in "a" or "b" shall be 10 mW or less for the 20MHz system and 5 mW or less for the 40MHz system.

Upper limit of the tolerance for antenna power shall be 20%.

6.1.3 Measuring Instruments and setting

Please refer to section 4 in this report. The following table is the setting of the spectrum.

6.1.4 Test Procedures

Step 1

Connect the UUT to the spectrum analyzer and use the following settings:

Center Frequency: The center frequency of the UUT test channel

RBW: 1MHz

VBW: 1MHz

Span: Wide enough to cover the total power envelope of the signal of the UUT

Detector: Peak

Trance Mode: Max Hold

Find the Peak value for the power envelope and record the frequency.

Step 2

Change the spectrum analyzer and use the following settings:

Center Frequency: Record frequency of step 1.

RBW: 1MHz

VBW: 1MHz

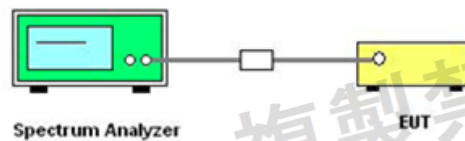
Span: 0Hz

Sweep time: enough to capture the signal burst.

Detector: RMS

Capture the burst signal power and record it.

6.1.5 Test Setup Layout



6.1.6 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

6.1.7 Test Result**ANT 1:**

Modulation	Channel	Antenna Power (dBm/MHz)	Test Result for Antenna Power (mW/MHz)	Antenna power Limit (mW/MHz)	Declared Antenna Power (mW/MHz)	Tolerance(%)
802.11b	Low	7.28	5.34	10.00	7.39	-27.67
	Middle	8.31	6.77	10.00	7.39	-8.33
	High	8.68	7.39	10.00	7.39	0.00
802.11g	Low	4.50	2.82	10.00	3.63	-22.38
	Middle	4.85	3.05	10.00	3.63	-15.85
	High	5.60	3.63	10.00	3.63	0.00
802.11n-HT20	Low	4.31	2.70	10.00	3.65	-26.12
	Middle	4.69	2.95	10.00	3.65	-19.36
	High	5.63	3.65	10.00	3.65	0.00
802.11ax-HE20	Low	4.91	3.1	10.00	3.80	-18.42
	Middle	4.93	3.11	10.00	3.80	-18.16
	High	5.80	3.8	10.00	3.80	0.00

ANT 2:

Modulation	Channel	Antenna Power (dBm/MHz)	Test Result for Antenna Power (mW/MHz)	Antenna power Limit (mW/MHz)	Declared Antenna Power (mW/MHz)	Tolerance(%)
802.11b	Low	7.81	6.05	10.00	8.39	-27.90
	Middle	8.41	6.94	10.00	8.39	-17.24
	High	9.24	8.39	10.00	8.39	0.00
802.11g	Low	5.88	3.87	10.00	5.26	-26.41
	Middle	6.46	4.43	10.00	5.26	-15.87
	High	7.21	5.26	10.00	5.26	0.00
802.11n-HT20	Low	5.22	3.33	10.00	4.95	-32.66
	Middle	6.26	4.23	10.00	4.95	-14.48
	High	6.94	4.95	10.00	4.95	0.00
802.11ax-HE20	Low	5.88	3.87	10.00	4.62	-16.23
	Middle	6.38	4.35	10.00	4.62	-5.84
	High	6.65	4.62	10.00	4.62	0.00

ANT 1+ ANT 2:

Modulation	Channel	Antenna Power (dBm/MHz)	Test Result for Antenna Power (mW/MHz)	Antenna power Limit (mW/MHz)	Declared Antenna Power (mW/MHz)	Tolerance(%)
802.11g	Low	8.25	6.69	10.00	8.42	-1.97
	Middle	8.74	7.48	10.00	8.42	3.79
	High	9.49	8.89	10.00	8.42	12.70
802.11n HT20	Low	7.80	6.03	10.00	8.42	-7.33
	Middle	8.56	7.17	10.00	8.42	1.61
	High	9.34	8.60	10.00	8.42	10.99
802.11ax-HE20	Low	8.43	6.96	10.00	8.42	-17.29
	Middle	8.73	7.46	10.00	8.42	-11.43
	High	9.25	8.42	10.00	8.42	0.00

Note:

- 1, Cyclic Delay Diversity modes use for 802.11g and later devices to communicate with legacy 802.11 devices. Directional gain = antenna Gain + Array Gain, Array Gain = 0 dB for Number of antennas $N \leq 4$.
- 2, EIRP=Conducted Power (dBm/MHz) + Directional Gain (dBi).
- 3, The max EIRP of 20MHz system is 12.05dBm/MHz, that is less than 12.14dBm/MHz.

6.2 Frequency Tolerance

6.2.1 Test Requirement

Article 2, Paragraph 1, Item (19).

6.2.2 Limit

According to Article 2-1, the Tolerance of frequency: $\pm 50 \times 10^{-6}$.

6.2.3 Measuring Instruments and setting

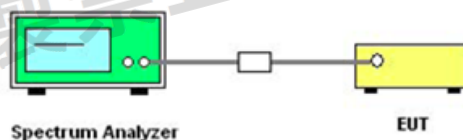
Please refer to section 4 in this report. The following table is the setting of the spectrum.

Spectrum Parameter	Setting
Span Frequency	500 KHz
RB/VB	10 kHz / 10 kHz

6.2.4 Test Procedures

- 1 Frequency accuracy of SA shall be less than 10% of limits tolerance (5ppm)
- 2 Setting of SA is following as: RB:10kHz / VB:10kHz / SPAN: 500KHz
- 3 Center Frequency: The center frequency of testing for EUT
- 4 Sweep time: Auto
- 5 Detect mode: Positive peak
- 6 EUT have transmitted absence of modulation signal and fixed channelize. f is using the mark cursor to mark the peak frequency value, f_c is declaring of channel frequency. Then the frequency error formula is $(f_c - f) / f_c \times 10^6 \text{ ppm}$ and the limit is less than $\pm 50 \text{ ppm}$

6.2.5 Test Setup Layout



6.2.6 Test Deviation

There is no deviation with the original standard.

6.2.7 EUT Operation during Test

The EUT was placed on the test table and programmed in un-modulation function.

6.2.8 Test Result**ANT 1:**

Frequency (MHz)	Result (MHz)	Tolerance (kHz)	Tolerance (ppm)	Limit
2412.00	2412.003	+3	+1.24	±50
2442.00	2442.003	+3	+1.23	±50
2472.00	2472.001	+1	+0.40	±50

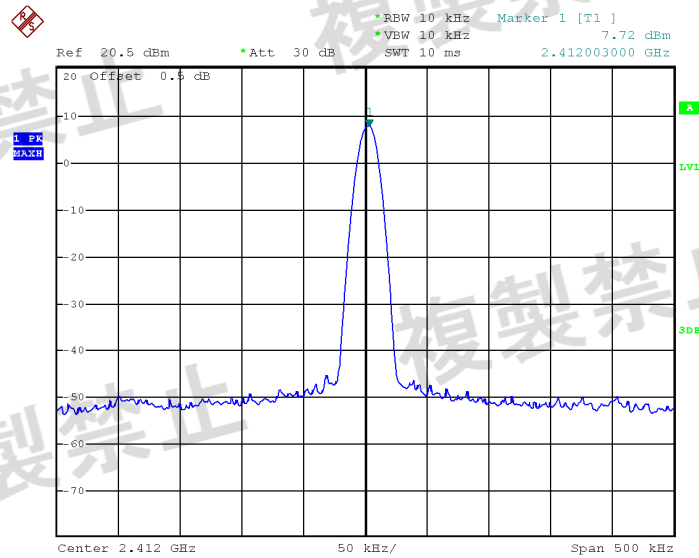
ANT 2:

Frequency (MHz)	Result (MHz)	Tolerance (kHz)	Tolerance (ppm)	Limit
2412.00	2412.001	1	0.41	±50
2442.00	2442.001	1	0.41	±50
2472.00	2472.002	2	0.81	±50

ANT 1:

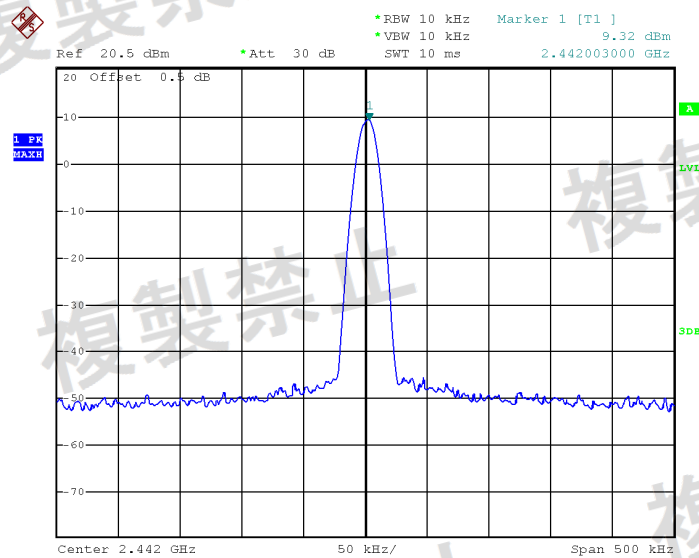
Test Plots

Channel 2412MHz



Date: 26.DEC.2025 14:01:13

Channel 2442MHz



Date: 26.DEC.2025 14:06:21



Test Plots

Ref 20.5 dBm * Att 30 dB * RBW 10 kHz * VBW 10 kHz * SWT 10 ms Marker 1 [T1] 7.59 dBm 2.412001000 GHz

20 Offset 0.5 dB

1.00 MAX

Center 2.412 GHz 50 kHz/ Span 500 kHz

Date: 26.DEC.2025 14:10:48

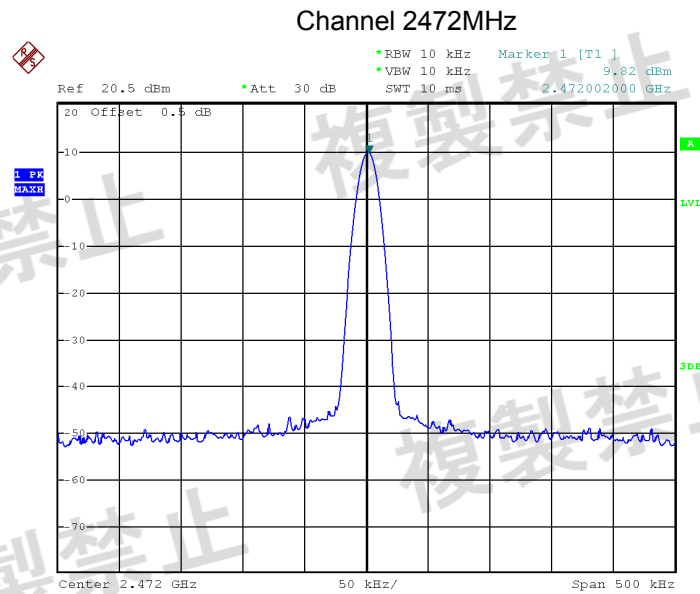
Ref 20.5 dBm Att 30 dB RBW 10 kHz VBW 10 kHz SWT 10 ms Marker 1 [T1] 9.26 dBm 2.442001000 GHz

Offset 0.5 dB

1 dB MAXH

Center 2.442 GHz 50 kHz/ Span 500 kHz

Date: 26.DEC.2025 14:06:42



Date: 26.DEC.2025 14:09:54

6.3 Occupied Frequency Bandwidth

6.3.1 Test Requirement

Article 2, Paragraph 1, Item (19).

6.3.2 Limit

According to Radio Law of Japan item 19 of Article 2 Paragraph 1, permissible value for occupied bandwidth using the FH system, a hybrid system combining DS and FH systems, or a hybrid system combining FH and OFDM systems shall be 83.5 MHz or less, while necessary bandwidth (minimum occupied bandwidth sufficient to ensure information transmission of required quality at a required transmission rate for the system used under specified conditions for a given emission type) using a system other than any of the above shall be 26 MHz or less for the 20MHz system, for the 40MHz system, shall be 26-40MHz.

6.3.3 Measuring Instruments and setting

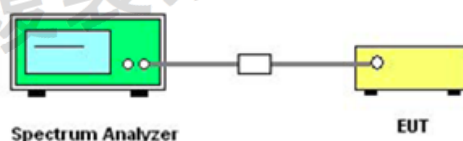
Please refer to section 4 in this report. The following table is the setting of the spectrum.

Spectrum Parameter	Setting
Span Frequency	2 to 3.5 times the limit
RB/VB	300kHz

6.3.4 Test Procedures

- Setting of SA is following as:
RB/VB: 300kHz
SPAN: 2 to 3.5 times the limit
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 (For DSSS or OFDM Device) or continuous maximum power of hopping mode (For FHSS Device). SA set to 99% of occupied bandwidth to measure occupied bandwidth. The limit is less than 26MHz (For DSSS or OFDM Device) or 83.5MHz (For FHSS Device).

6.3.5 Test Setup Layout



6.3.6 Test Deviation

There is no deviation with the original standard.

6.3.7 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

6.3.8 Test Result

ANT 1:

Modulation	Channel	Occupied Frequency Bandwidth (MHz)	Limit (MHz)
802.11b	Low	11.232	< 26
	Middle	11.232	< 26
	High	11.128	< 26
802.11g	Low	17.056	< 26
	Middle	16.952	< 26
	High	17.056	< 26
802.11n-HT20	Low	18.096	< 26
	Middle	18.200	< 26
	High	18.200	< 26
802.11ax-HE20	Low	19.136	< 26
	Middle	19.136	< 26
	High	19.032	< 26

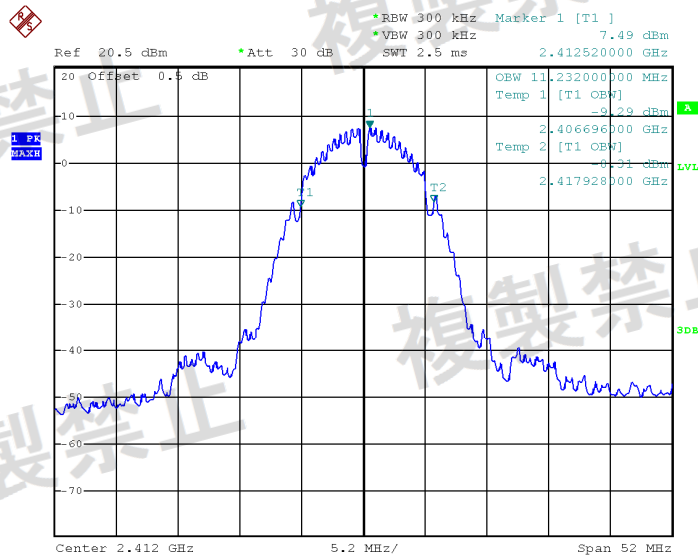
ANT 2:

Modulation	Channel	Occupied Frequency Bandwidth (MHz)	Limit (MHz)
802.11b	Low	11.336	< 26
	Middle	11.232	< 26
	High	11.128	< 26
802.11g	Low	16.952	< 26
	Middle	16.952	< 26
	High	16.952	< 26
802.11n-HT20	Low	17.992	< 26
	Middle	18.096	< 26
	High	18.096	< 26
802.11ax-HE20	Low	19.136	< 26
	Middle	19.136	< 26
	High	19.136	< 26

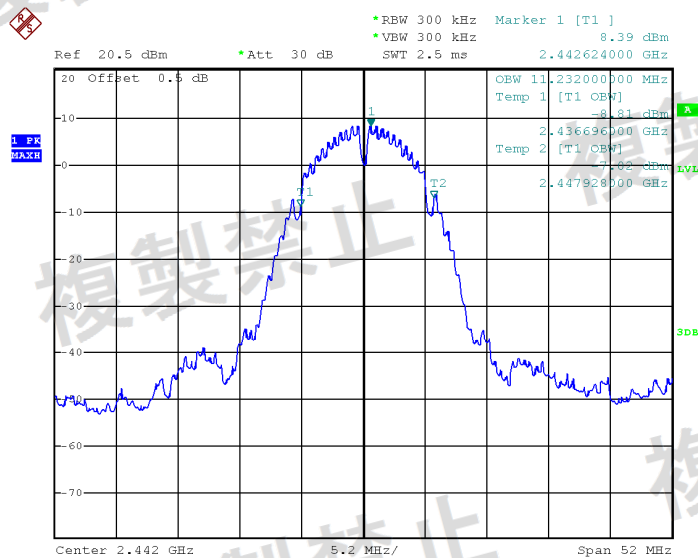
ANT 1:

Test Plots

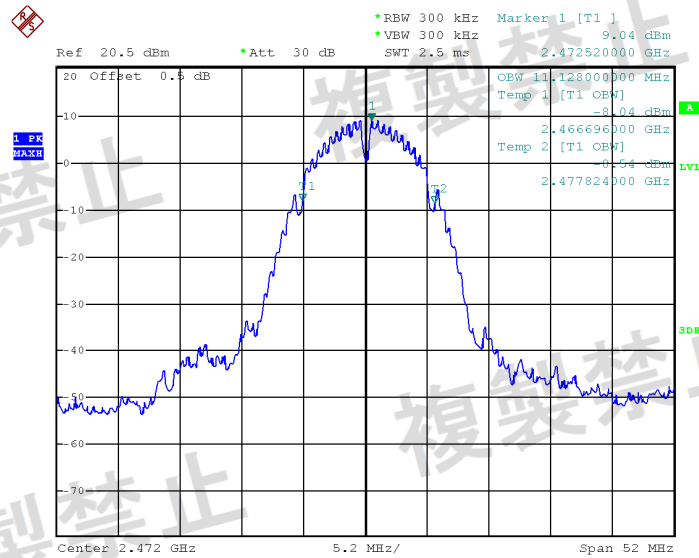
802.11b: Low Channel



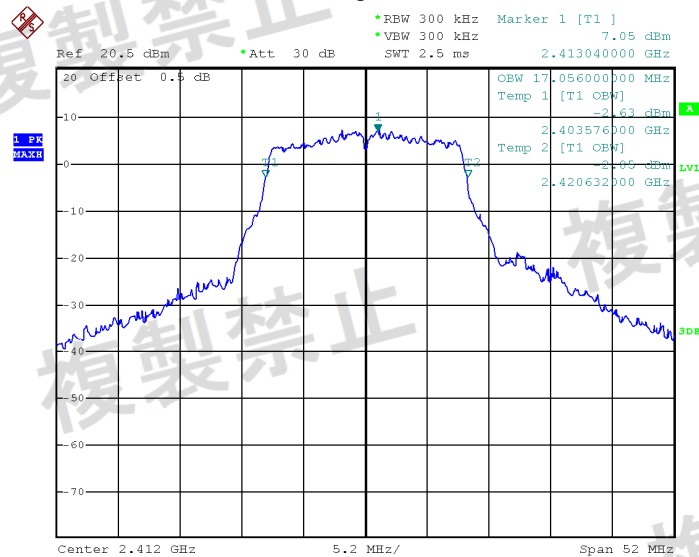
802.11b: Middle Channel



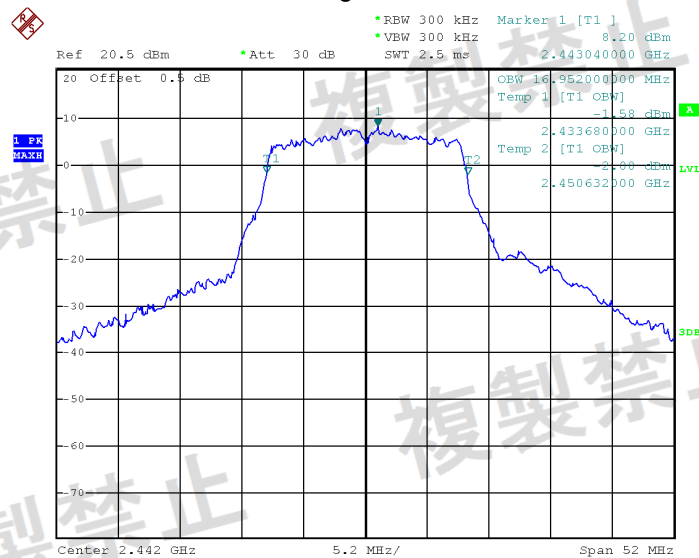
802.11b: High Channel



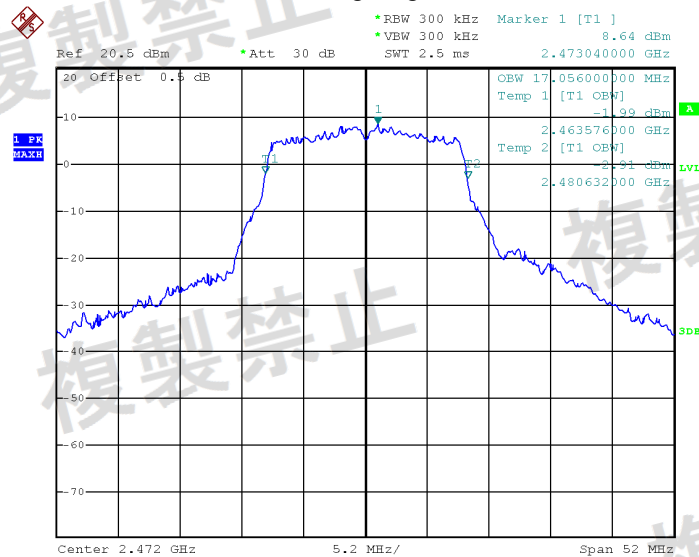
802.11g: Low Channel



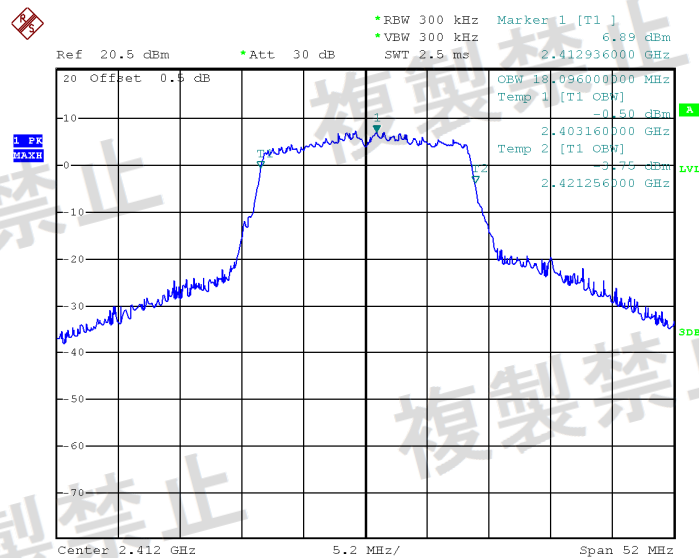
802.11g: Middle Channel



802.11g: High Channel

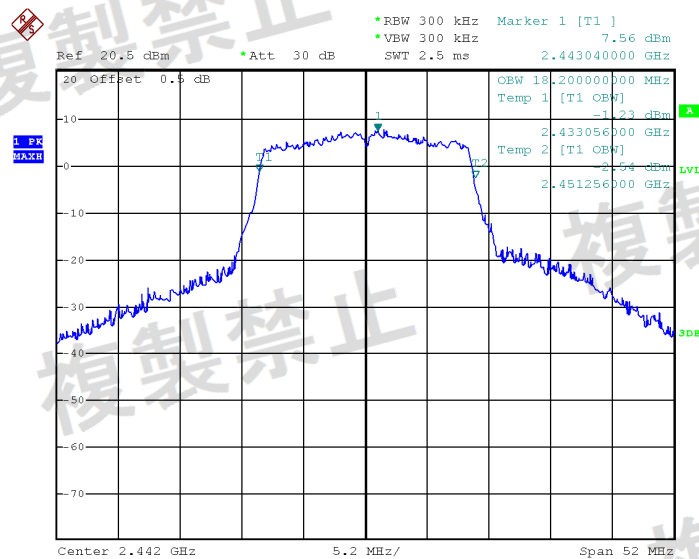


802.11n-HT20: Low Channel



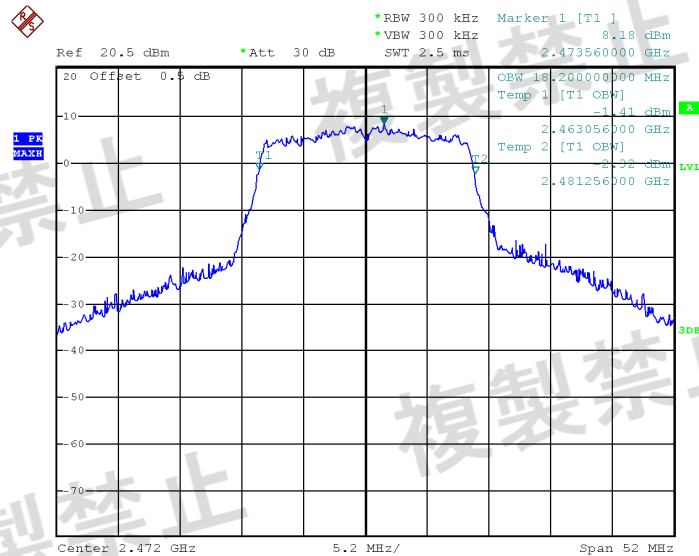
Date: 26.DEC.2025 09:48:13

802.11n-HT20: Middle Channel



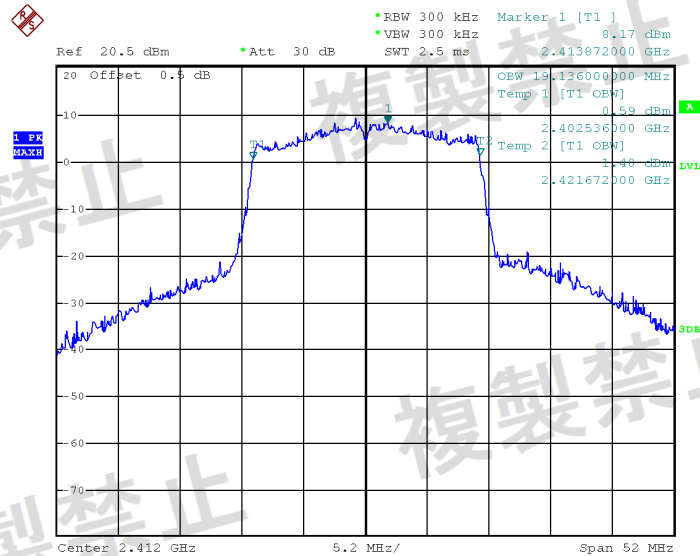
Date: 26.DEC.2025 09:49:03

802.11n-HT20: High Channel



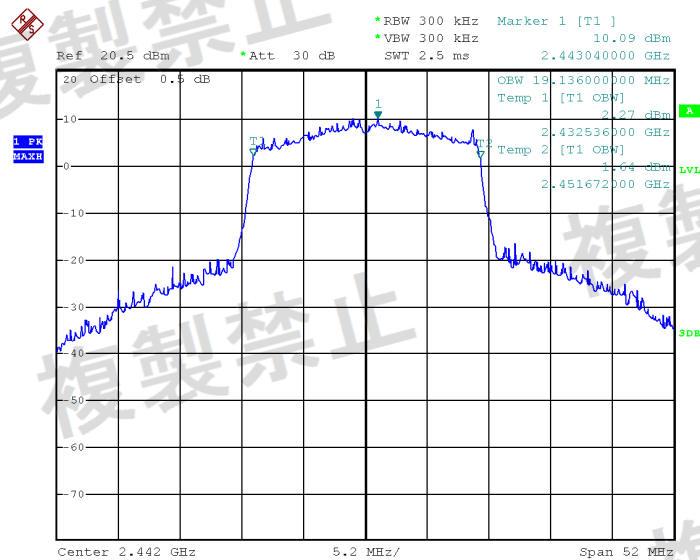
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802.11ax-HE20: Low Channel



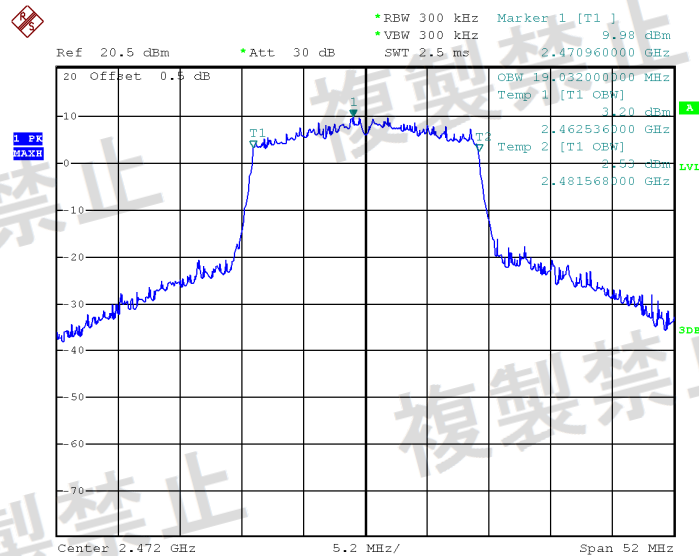
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802.11ax-HE20: Middle Channel



Date: 26.DEC.2025 09:51:52

802.11ax-HE20: High Channel

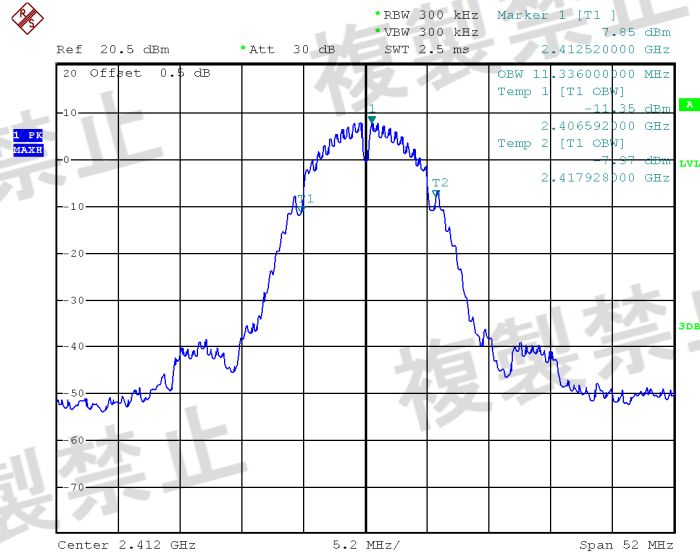


Date: 26.DEC.2025 09:52:32

ANT 2:

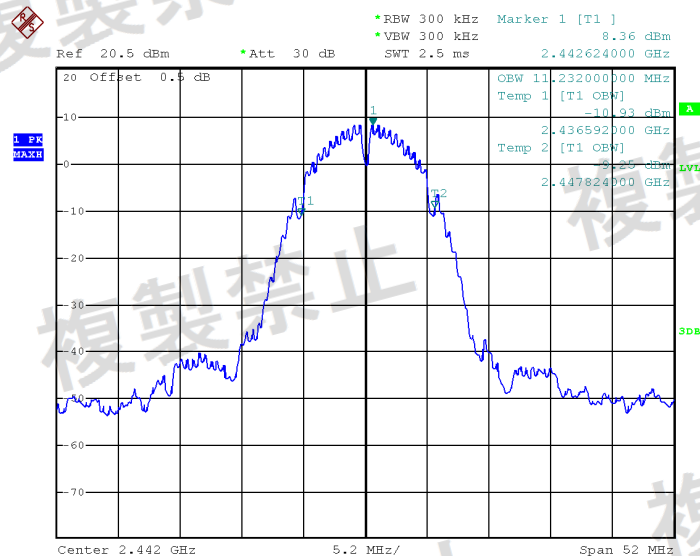
Test Plots

802.11b: Low Channel



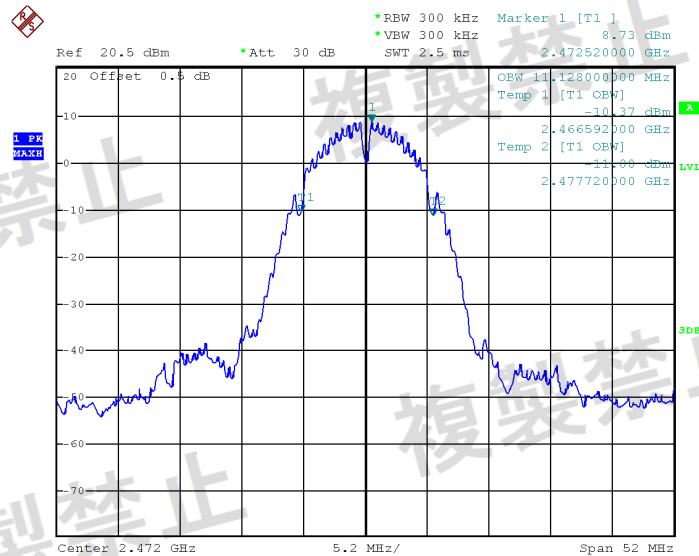
Date: 26.DEC.2025 10:05:28

802.11b: Middle Channel



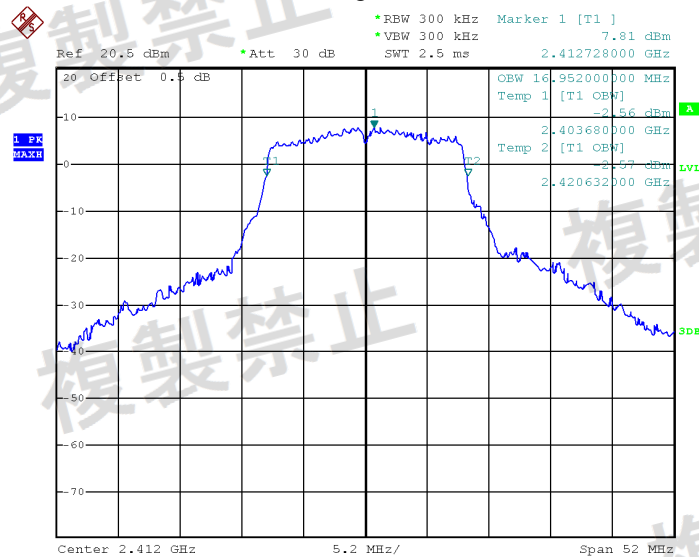
Date: 26.DEC.2025 10:06:10

802.11b: High Channel



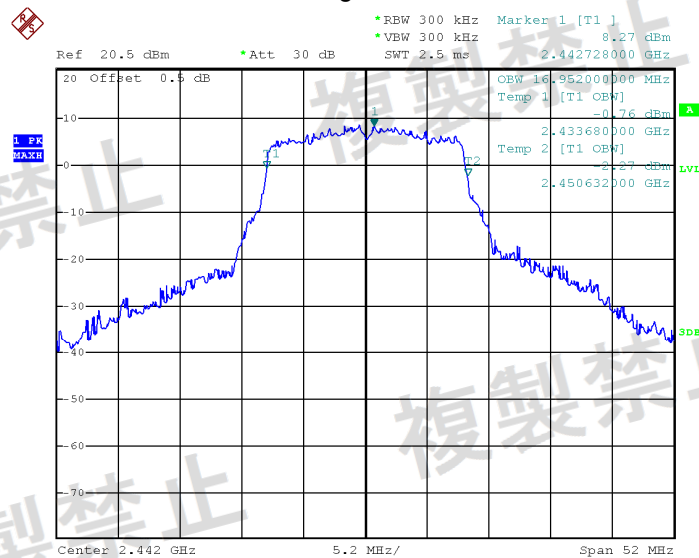
Date: 26.DEC.2025 10:06:38

802.11g: Low Channel

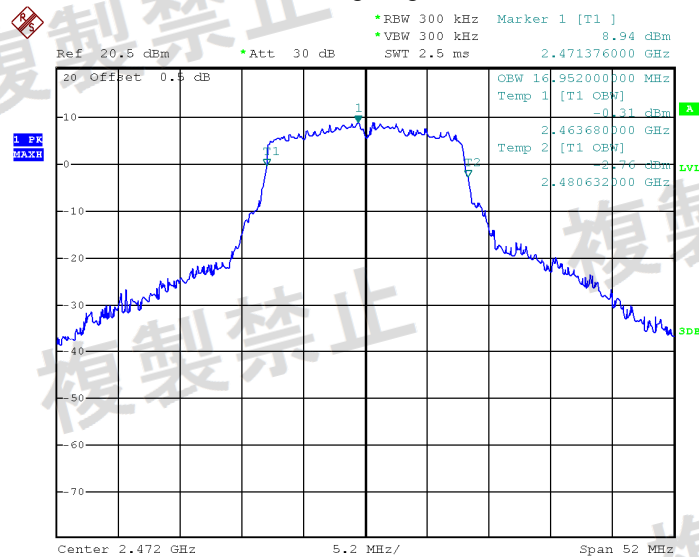


Date: 26.DEC.2025 10:09:39

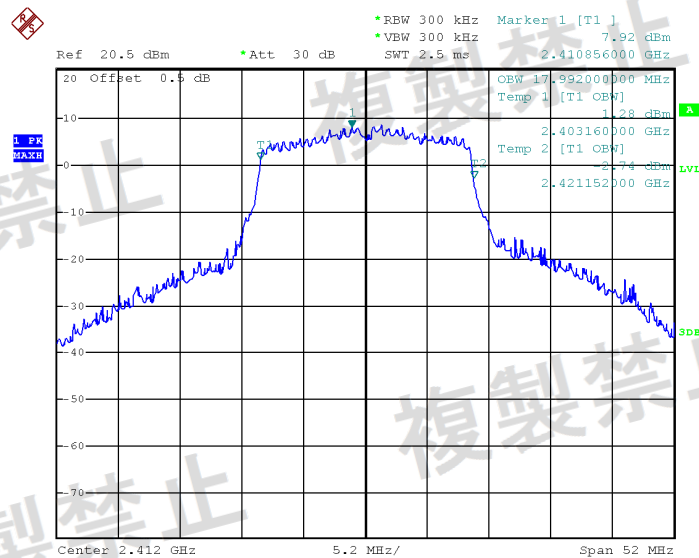
802.11g: Middle Channel



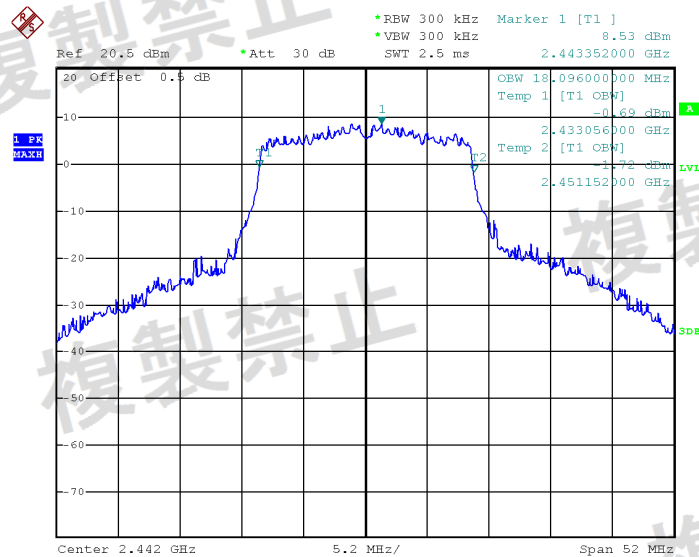
802.11g: High Channel



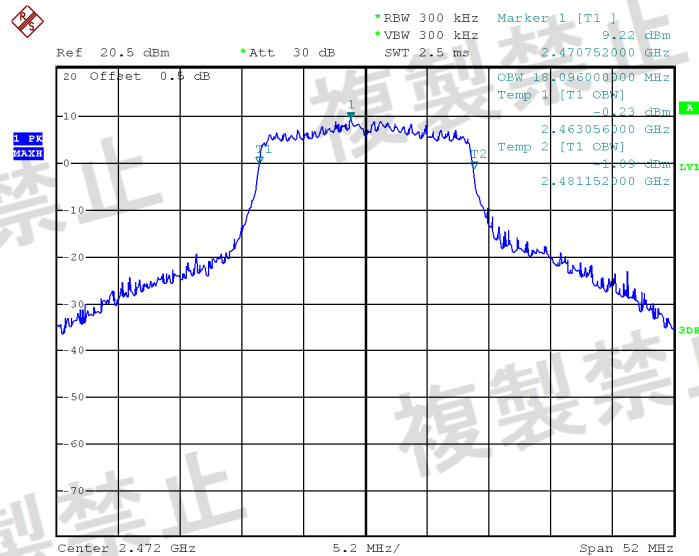
802.11n-HT20: Low Channel



802.11n-HT20: Middle Channel

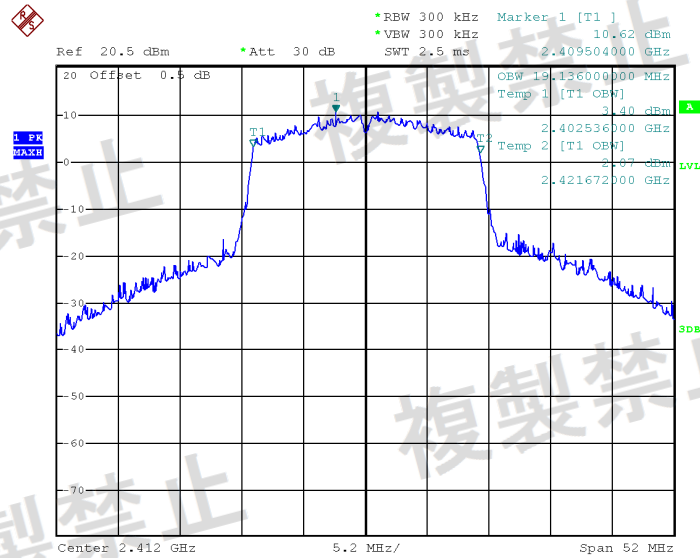


802.11n-HT20: High Channel



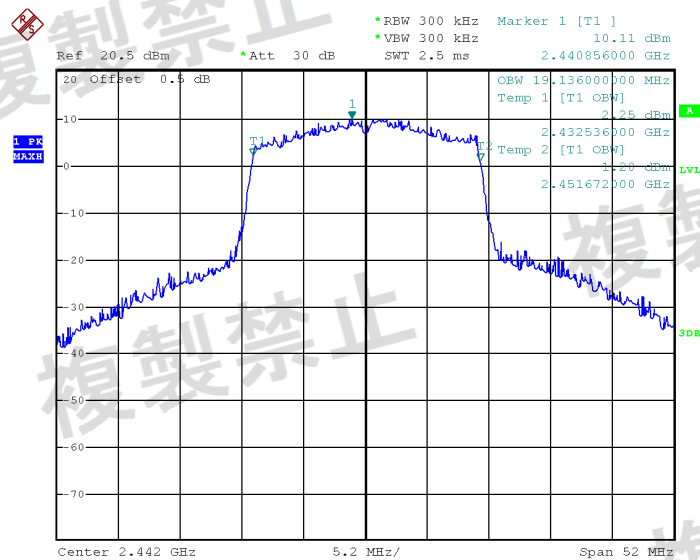
Date: 26.DEC.2025 10:12:11

802.11ax-HE20: Low Channel



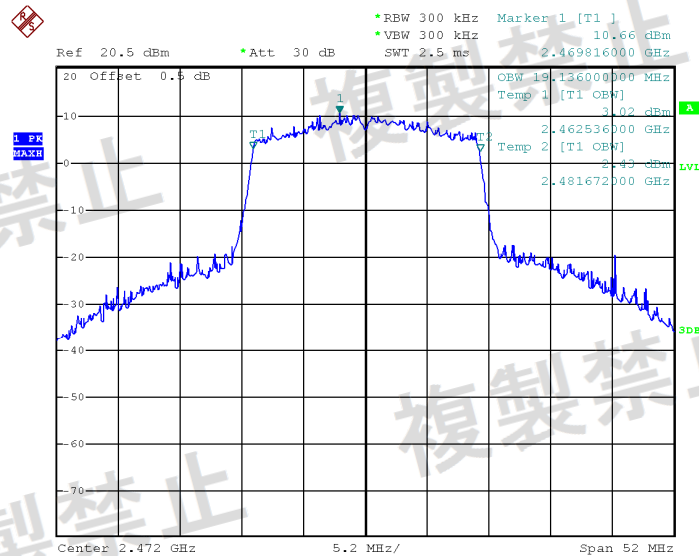
Date: 26.DEC.2025 10:14:26

802.11ax-HE20: Middle Channel



Date: 26.DEC.2025 10:15:56

802.11ax-HE20: High Channel



Date: 26.DEC.2025 10:16:48

6.4 Spurious Emission Intensity

6.4.1 Test Requirement

Article 2, Paragraph 1, Item (19).

6.4.2 Limit

According to Article 2-1, permissible mean power of spurious emission of each frequency supplied to a feeder, that is, mean power of spurious emission in the 1 MHz bandwidth at frequency f other than frequency band used shall be as follows: a. $2,387\text{MHz} \leq f \leq 2,400\text{MHz}$ and $2,483.5\text{MHz} < f \leq 2,496.5\text{MHz}$ 25 μW or less b. $2,387\text{MHz} > f$ and $2,496.5\text{MHz} < f$ 2.5 μW or less.

6.4.3 Measuring Instruments and setting

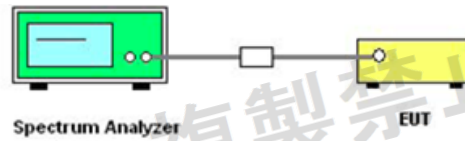
Please refer to section 4 in this report. The following table is the setting of the spectrum.

Spectrum Parameter	Setting
Attenuation	Auto
RB/VB	100KHz(Below 1GHz);1MHz(Above 1GHz)
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

6.4.4 Test Procedures

- 1 EUT have transmitted the maximum modulation signal and fixed channelize.
- 2 Setting of SA is following as: RB:1MHz / VB:1MHz / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold
- 3 Setting of SA is following as 30MHz and stop frequency 2387MHz Then to mark peak reading value + cable loss shall be less than 2.5 μW .
- 4 SA adjusted to start frequency 2387MHz and stop frequency 2400MHz. Then to mark peak reading value + cable loss shall be less than 25 μW .
- 5 SA adjusted to start frequency 2483.5MHz and stop frequency 2496.5MHz Then to mark peak reading value + cable loss shall be less than 25 μW
- 6 SA adjusted to start frequency 2496.5MHz and stop frequency 12500MHz Then to mark peak reading value + cable loss shall be less than 2.5 μW
- 7 If the Result_Value is over the requirement, take total sum of 1MHz band centered at the spur frequency like ACLP measurement as Result_Value.

6.4.5 Test Setup Layout



6.4.6 Test Deviation

There is no deviation with the original standard.

6.4.7 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

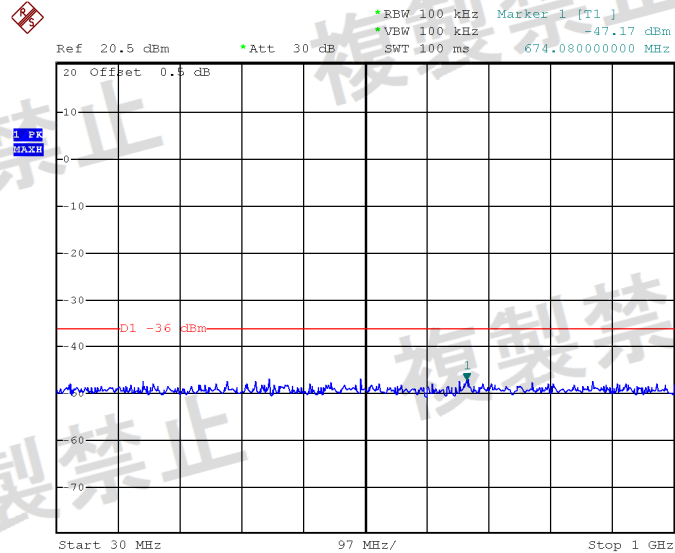
6.4.8 Test Result

Modulation	Channel	Test Mode	Test Result
802.11b	Low	Transmitting	PASS
	Middle	Transmitting	PASS
	High	Transmitting	PASS
802.11g	Low	Transmitting	PASS
	Middle	Transmitting	PASS
	High	Transmitting	PASS
802.11n-HT20	Low	Transmitting	PASS
	Middle	Transmitting	PASS
	High	Transmitting	PASS
802.11ax-HE20	Low	Transmitting	PASS
	Middle	Transmitting	PASS
	High	Transmitting	PASS
Remark: All test modes and antenna were tested, only the worst case(802.11 n-HT20, ANT 1+ANT 2) was reported			

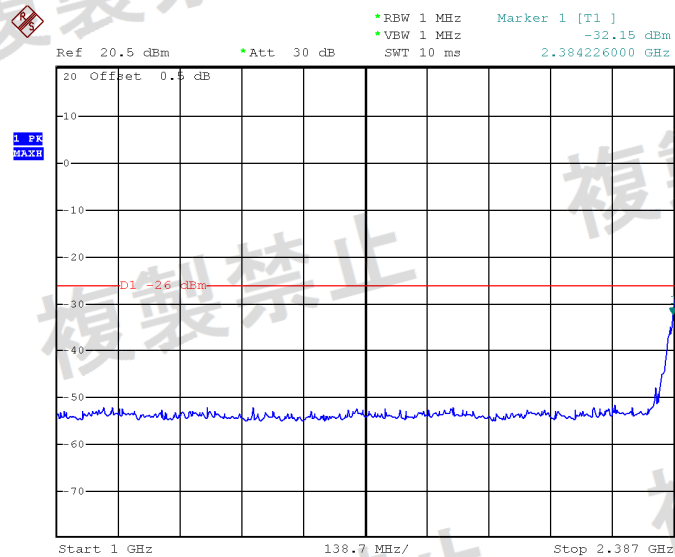
ANT 1+ANT 2:

Modulation	Channel	Band (GHz)	Frequency (GHz)	Max Value (dBm)	Max Value (μW/MHz)	Limit (μW/MHz)
802.11n-HT20	Low	0.03-1	0.674080	-47.17	0.19*	2.5
		1-2.387	2.384226	-32.15	0.61	2.5
		2.387-2.4	2.39961	-17.36	18.37	25
		2.4835-2.4965	2.491846	-43.93	0.04	25
		2.4965-12.5	12.119867	-40.58	0.09	2.5
	Middle	0.03-1	0.70706	-46.59	0.22*	2.5
		1-2.387	2.384226	-46.18	0.02	2.5
		2.387-2.4	2.39987	-39.19	0.12	25
		2.4835-2.4965	2.484488	-39.58	0.11	25
		2.4965-12.5	11.439629	-40.97	0.08	2.5
	High	0.03-1	0.73422	-44.08	0.39*	2.5
		1-2.387	2.043024	-52.05	0.01	2.5
		2.387-2.4	2.397556	-49.44	0.01	25
		2.4835-2.4965	2.483500	-17.87	16.33	25
		2.4965-12.5	11.419622	-40.36	0.09	2.5

*: The measurement result is dBm/100kHz, which converted to μW/100kHz, and then converted to μW/MHz.

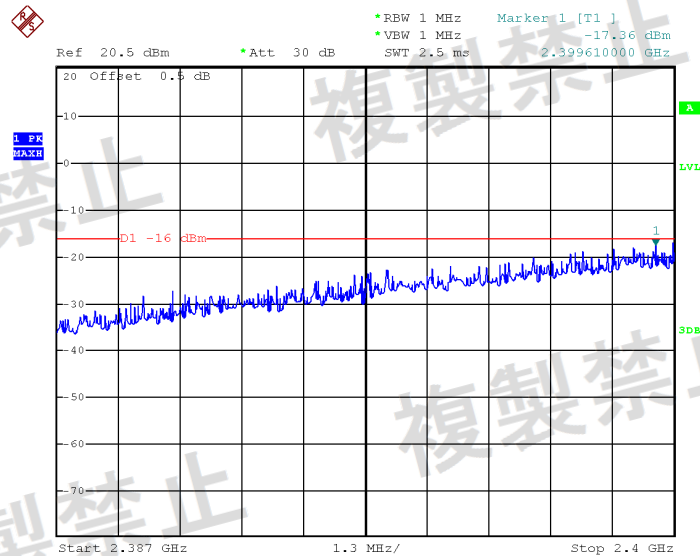
ANT 1+ANT 2:**Test Plots (802.11n HT20)****Low Channel Band 1 0.03-1GHz**

Date: 26.DEC.2025 15:27:23

Low Channel Band 2 1-2.387GHz

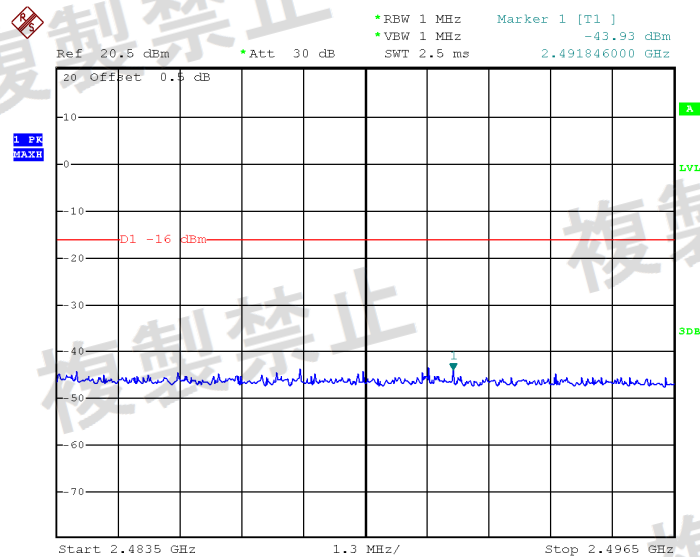
Date: 26.DEC.2025 15:36:45

Low Channel Band 3 2.387-2.4GHz



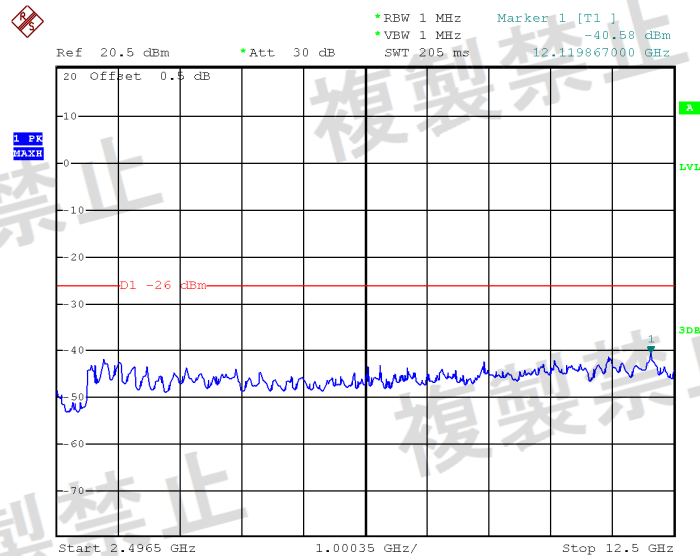
Date: 26.DEC.2025 16:12:09

Low Channel Band 4 2.4835-2.4965GHz



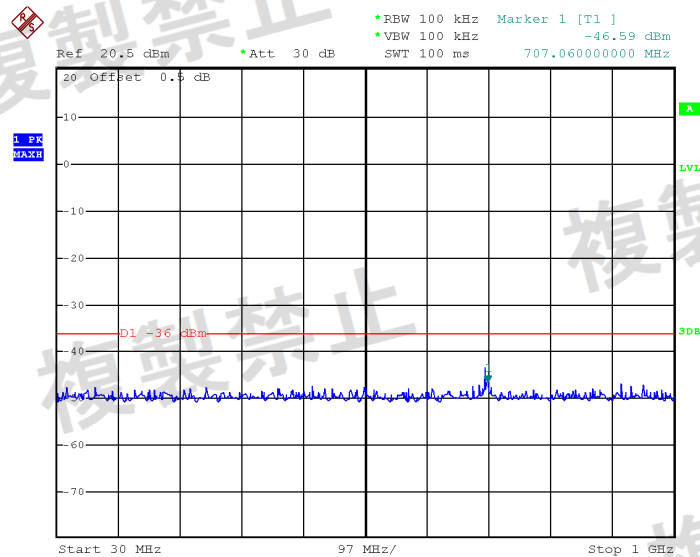
Date: 27.DEC.2025 07:32:34

Low Channel Band 5 2.4965-12.5GHz



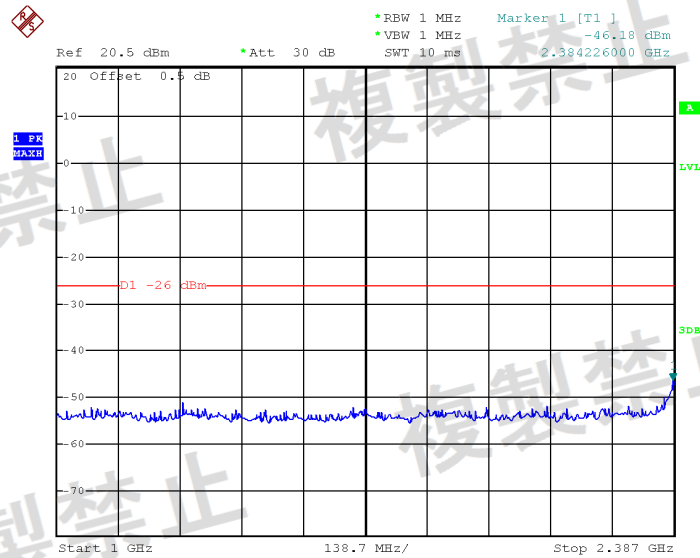
Date: 27.DEC.2025 08:14:12

Middle Channel Band 1 0.03-1GHz



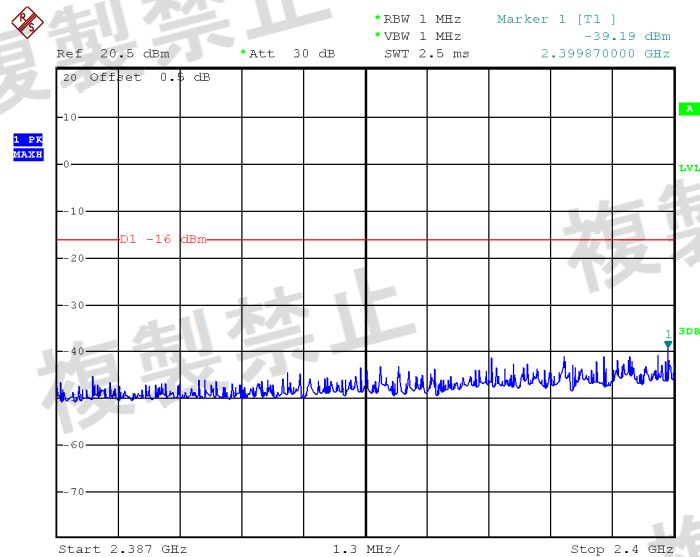
Date: 26.DEC.2025 15:27:49

Middle Channel Band 2 1-2.387GHz



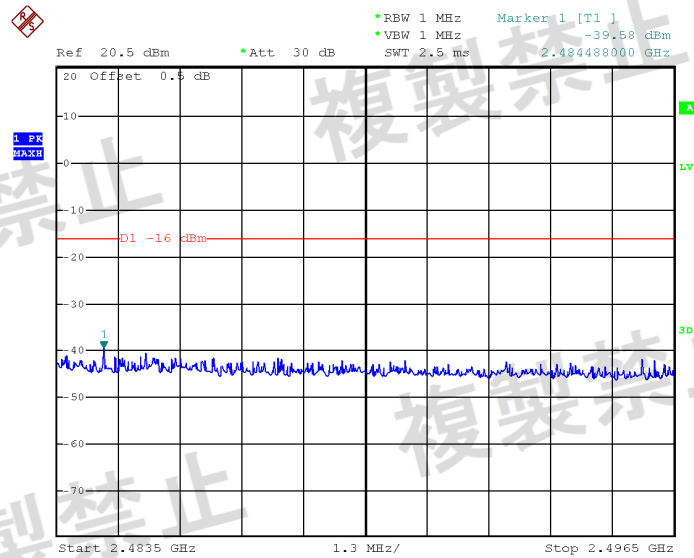
Date: 26.DEC.2025 15:37:10

Middle Channel Band 3 2.387-2.4GHz



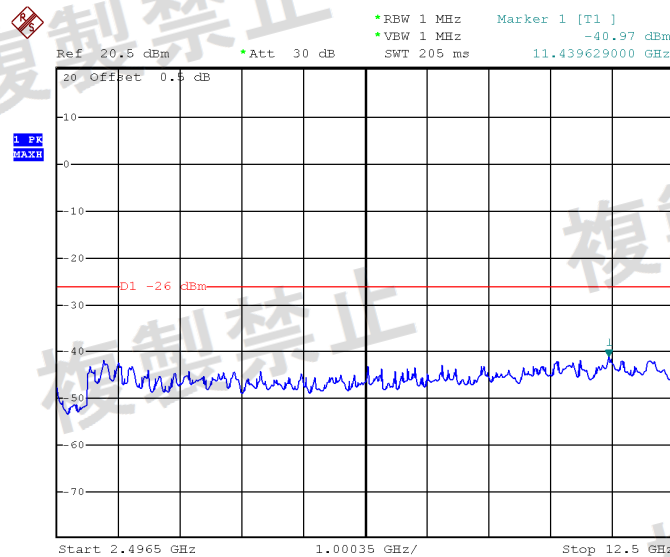
Date: 26.DEC.2025 16:12:42

Middle Channel Band 4 2.4835-2.4965GHz



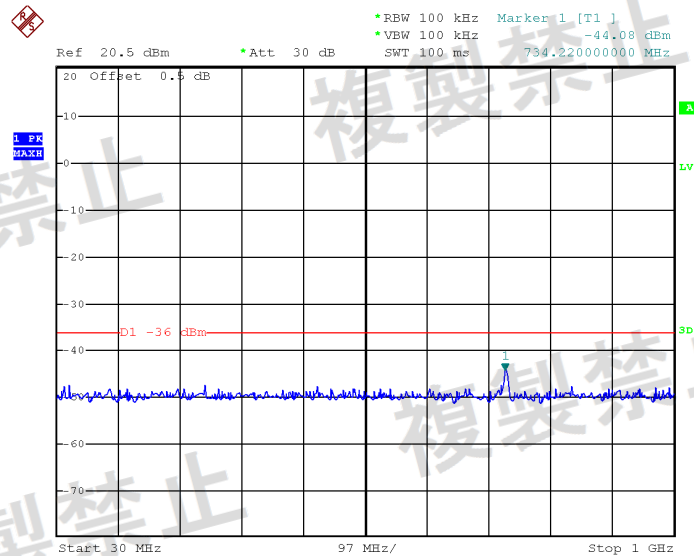
Date: 27.DEC.2025 07:33:13

Middle Channel Band 5 2.4965-12.5GHz



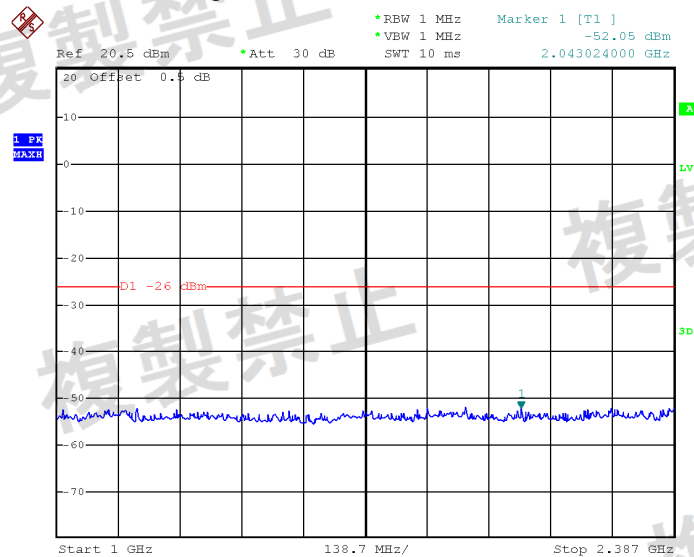
Date: 27.DEC.2025 08:14:48

High Channel Band 1 0.03-1GHz



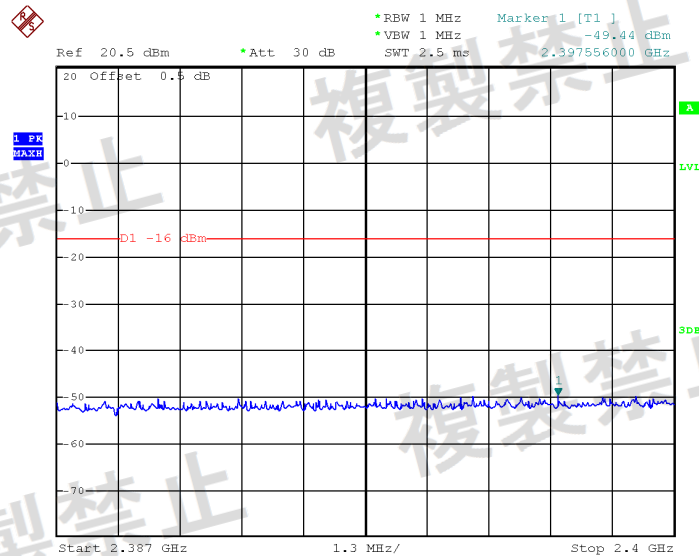
Date: 26.DEC.2025 15:28:09

High Channel Band 2 1-2.387GHz



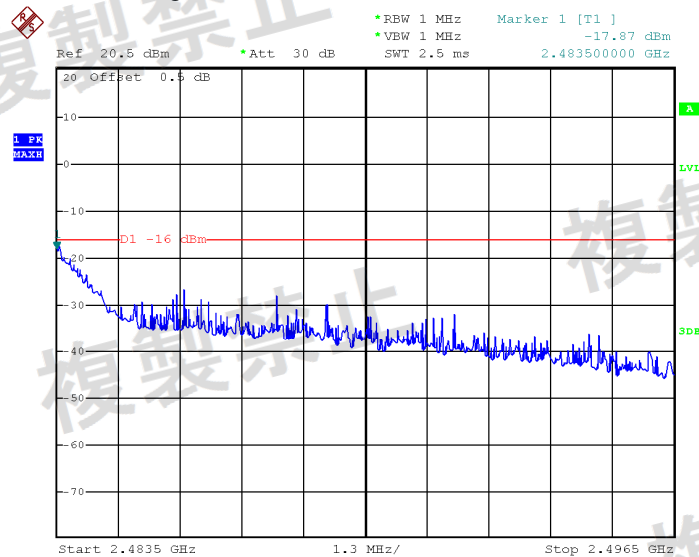
Date: 26.DEC.2025 15:37:38

High Channel Band 3 2.387-2.4GHz



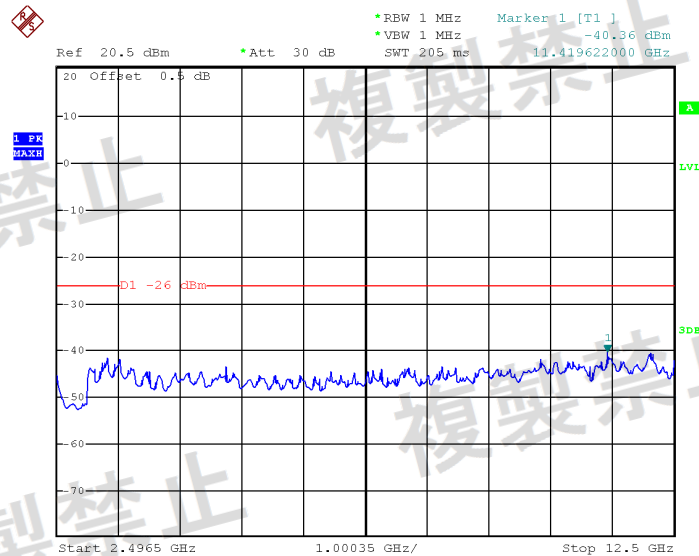
Date: 26.DEC.2025 16:13:06

High Channel Band 4 2.4835-2.4965GHz



Date: 27.DEC.2025 07:35:34

High Channel Band 5 2.4965-12.5GHz



Date: 27.DEC.2025 08:15:30

6.5 Carrier Sense Capability

6.5.1 Test Requirement

Article 2, Paragraph 1, Item (19).

6.5.2 Limit

EUT stop RF transmission signal after carrier inject to EUT.

6.5.3 Measuring Instruments and Setting

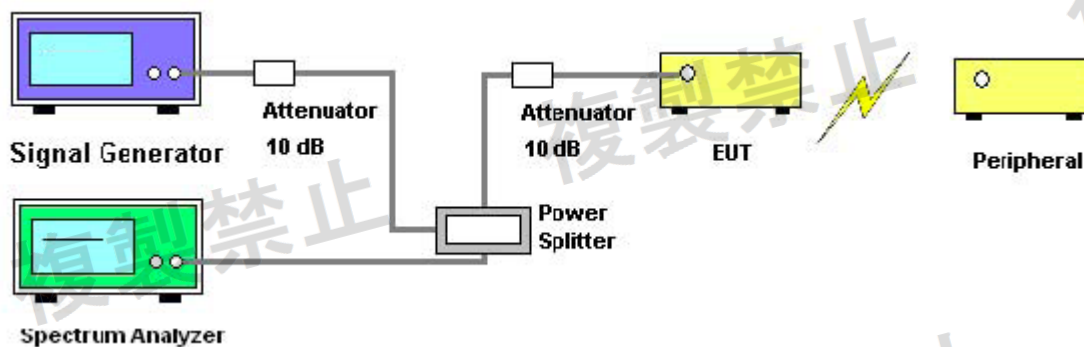
Please refer to section 4 in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
RB/VB	1MHz
Span	50MHz
Sweep	Continuous
Detector	Peak
Trigger mode	Video

6.5.4 Test Procedures

- 1 SSG adjusted the frequency as same as the EUT transmitted signal and emitted the absence of modulation from SSG and power level is $(On\ 22.79 + Gr - 20 \cdot \log(f)) [dBm]$ (Gr: dBi; f: MHz). Then turn off the RF signal of SSG.
- 2 EUT have transmitted the maximum modulation signal and fixed channelize.
- 3 Setting of SA is following as: RB:1MHz / VB:1MHz / SPAN: 50MHz / AT: 10dB / Ref: 0dBm / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak.
- 4 SSG RF Signal On.
- 5 EUT shall be stop the transmitted any signal and SSG RF Signal Off. Then EUT will be continuous transmitted signal.

6.5.5 Test Setup Layout



6.5.6 Test Deviation

There is no deviation with the original standard.

6.5.7 EUT Operation during Test

The EUT was programmed to be in normal operation mode.

6.5.8 Test Result

Test Result: Compliant

7 Measurements of Receiving Equipment

7.1 Secondary Radiated Emissions

7.1.1 Test Requirement

Article 2, Paragraph 1, Item (19).

7.1.2 Limit

According to Article 2-1, the limit on secondary emissions radiated from the receiving equipment within which the function of other radio equipment will not be impaired shall be, in terms of the power of a dummy antenna circuit that has the same electrical constant as the receiving antenna, 4 nW or less at a frequency below 1 GHz and 20 nW or less at a frequency of 1 GHz or higher as measured using the circuit.

7.1.3 Measuring Instruments and setting

Please refer to section 4 in this report. The following table is the setting of the spectrum.

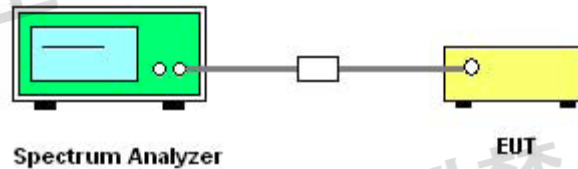
Spectrum Parameter	Setting
Attenuation	Auto
RB/VB	100 kHz (below 1GHz emissions) / 1 MHz (above 1GHz emissions)
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

7.1.4 Test Procedures

- 1 EUT has the continuous reception mode and fixed only one channelize.
- 2 Setting of SA is following as RB / VB: 100 kHz (below 1GHz emissions) / 1 MHz (above 1GHz emissions) / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold
- 3 SA set RB: 100kHz and VB: 100kHz. Then adjust to start frequency 30MHz and stop frequency 1000MHz. Search to mark peak reading value + cable loss shall be less than 4nW
- 4 SA set RB: 1MHz and VB: 1MHz. Then adjust to start frequency 1000MHz and stop frequency 12500MHz. Search to mark peak reading value + cable loss shall be less than 20nW

5 If power level of lower emissions are more than 1/10 of limit (0.4nW for $f < 1\text{GHz}$, 2nW for $f \geq 1\text{GHz}$), all those are to be indicated in the 2nd and 3rd lines. If others are 1/10 or less more of the limit, no necessary to be indicated

7.1.5 Test Setup Layout



7.1.6 Test Deviation

There is no deviation with the original standard.

7.1.7 EUT Operation during Test

The EUT was programmed to be in receiving mode.

7.1.8 Test Result

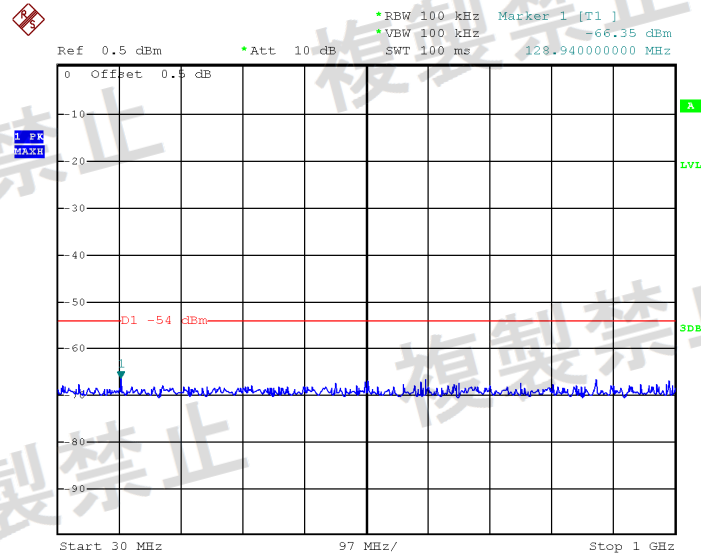
Modulation	Channel	Test Mode	Test Result
802.11b	Low	Receiving	PASS
	Middle	Receiving	PASS
	High	Receiving	PASS
802.11g	Low	Receiving	PASS
	Middle	Receiving	PASS
	High	Receiving	PASS
802.11n-HT20	Low	Receiving	PASS
	Middle	Receiving	PASS
	High	Receiving	PASS
802.11ax-HE20	Low	Receiving	PASS
	Middle	Receiving	PASS
	High	Receiving	PASS
Remark: All test modes and antenna were tested, only the worst case(802.11 n-HT20, ANT 1+ANT 2) was reported			

Modulation	Channel	Band (GHz)	Frequency (GHz)	Max Value (dBm)	Max Value (nW)	Limit (nW)
802.11n-HT20	Low	0.03-1	0.12894	-66.35	0.23	4
		1-12.5	12.109	-62.05	0.62	20
	Middle	0.03-1	0.94568	-66.75	0.21	4
		1-12.5	11.488	-62.00	0.63	20
	High	0.03-1	0.53246	-67.38	0.18	4
		1-12.5	11.465	-60.19	0.96	20

ANT 1 + ANT 2:

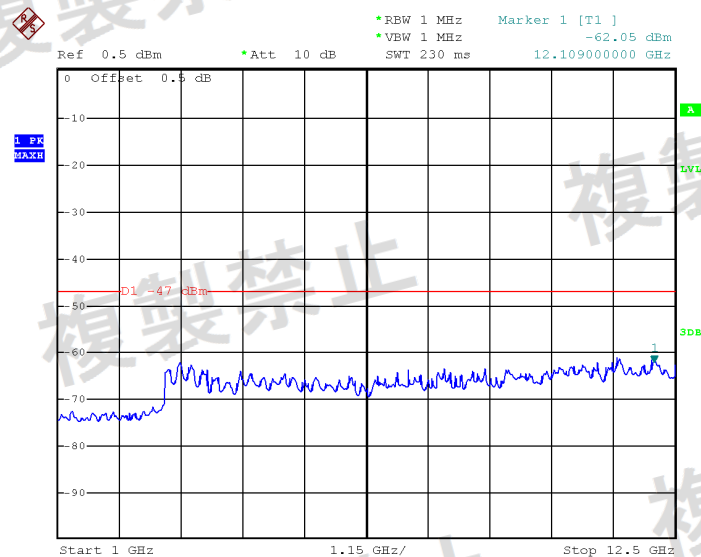
Test Plot 802.11n HT20

Low Channel Band 1 0.03-1GHz



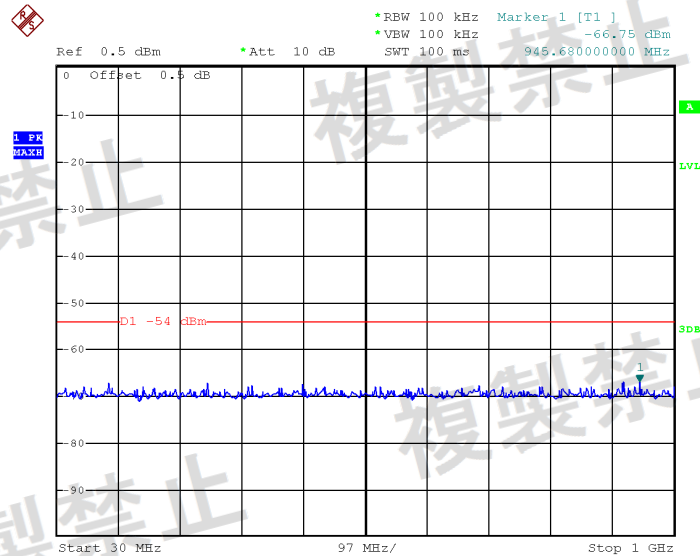
Date: 27.DEC.2025 08:30:14

Low Channel Band 2 1-12.5GHz



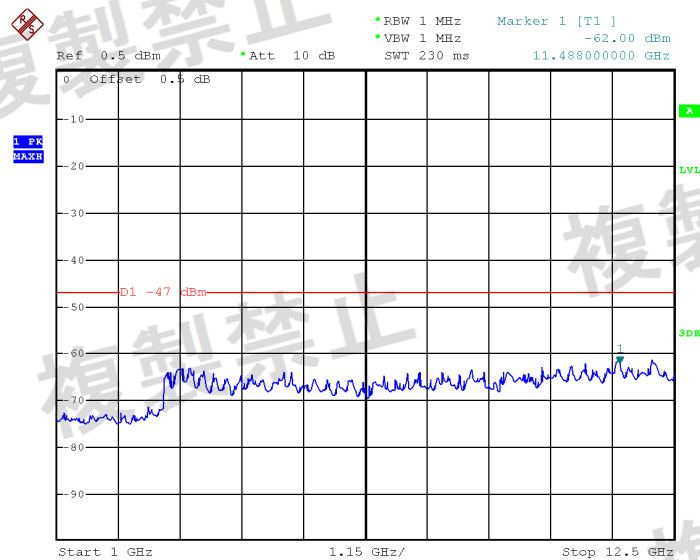
Date: 27.DEC.2025 08:43:29

Middle Channel Band 1 0.03-1GHz



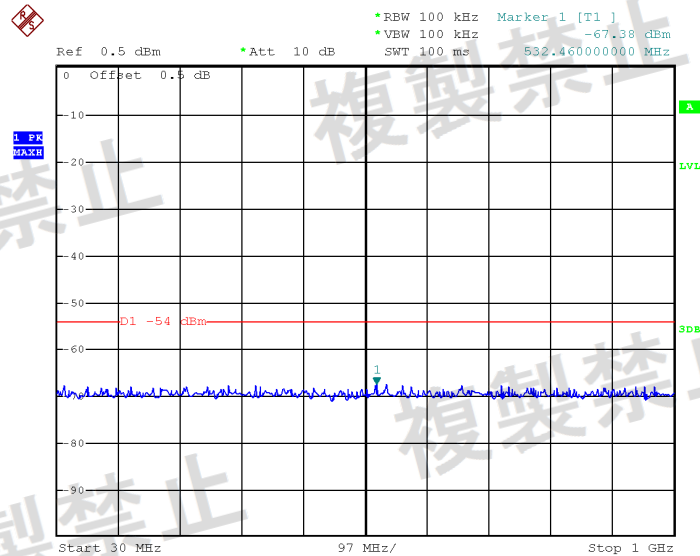
Date: 27.DEC.2025 08:30:32

Middle Channel Band 2 1-12.5GHz



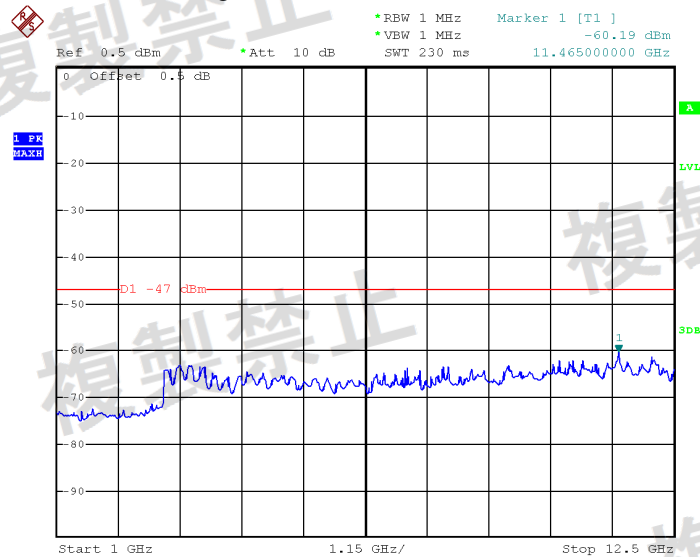
Date: 27.DEC.2025 08:43:48

High Channel Band 1 0.03-1GHz



Date: 27.DEC.2025 08:30:49

High Channel Band 2 1-12.5GHz



Date: 27.DEC.2025 08:44:08

8 Measurements of Telecommunications circuit connection equipment

8.1 Interference prevention function

8.1.1 Test Requirement

Test requirement is in Clause 3.5(2), the identification code shall be 48 bits long.

8.1.2 Conditions etc. of test equipment

- (1) The demodulator shall be able to demodulate the transmitting signal from the radio equipment and display contents of the identification code.
- (2) The opposite equipment shall be able to transmit the identification code as same as the transmitting signal from the radio equipment

8.1.3 Test Procedure

- (1) The radio equipment with automatic transmitting function of identification code A. Transmit the assigned identification code from the radio equipment. B. Confirm the identification code received by the demodulator.
- (2) The radio equipment with automatic receiving function of identification code A. Transmit the assigned identification code from the opposite equipment.

8.1.4 Test Setup Layout



8.1.5 Test Deviation

There is no deviation with the original standard.

8.1.6 EUT Operation during Test

The EUT was programmed to be in normal operation mode.

8.1.7 Test Result

Item	Modulation	Test mode	Results
Identification code	802.11b	Normal Operation	PASS
Identification code	802.11g	Normal Operation	PASS
Identification code	802.11n-HT20	Normal Operation	PASS
Identification code	802.11ax-HE20	Normal Operation	PASS

EUT BD Address: 40:d9:5a:6a:97:24

9 Test Setup View



10 Photographs - Constructional Details

Note: Please refer to appendix: Appendix-SyBran-01-Photos.

===== End of Report =====