

47 CFR PART 15 SUBPART C TEST REPORT

for

Lighthouse

Model No.: CY-LH0-22-XB1

FCC ID: 2AVNXCYLH022

of

Applicant: **Airgain**

Address: 3611 Valley Centre Drive, Ste. 150 San Diego, CA 92130 USA

Tested and Prepared

by

Worldwide Testing Services (Taiwan) Co., Ltd.

FCC Registration No.: TW1072, TW1140, TW1146, TW1477, TW0037

Industry Canada filed test laboratory Reg. No.: 20037, 31634



Report No.: W6R22602-24980-C-1

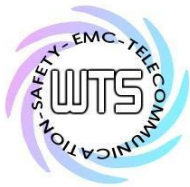


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1 General Information

1.1 Notes

The purpose of conformity testing is to increase the probability of adherence to the essential requirements or conformity specifications, as appropriate.

The complexity of the technical specifications, however, means that full and thorough testing is impractical for both technical and economic reasons.

Furthermore, there is no guarantee that a test sample which has passed all the relevant tests conforms to a specification.

Neither is there any guarantee that such a test sample will interwork with other genuinely open systems.

The existence of the tests nevertheless provides the confidence that the test sample possesses the qualities as maintained and that its performance generally conforms to representative cases of communications equipment.

Laboratory disclaimer-

1. The test results of this test report relate exclusively to the item tested as specified in 1.5.
2. The test report may only be reproduced or published in full.
3. Reproduction or publication of extracts from the report requires the prior written approval of the Worldwide Testing Services(Taiwan) Co., Ltd.
4. Antenna gain is provided by applicant and laboratory issue relevant data and results.

Specific Conditions:

Usage of the hereunder tested device in combination with other integrated or external antennas requires at least additional output power measurements, spurious emission measurements, conducted emission measurements (AC supply lines) and radio frequency exposure evaluations for each individual configuration performed, for certification by FCC.

The test sample is able to work according IEEE 802.11 b/g/n.

This report is related to FCC Part 15 C (DSSS and OFDM device).

Tester:

March 03, 2026

Rick Chen

Rick Chen.

Date

WTS-Lab.

Name

Signature

Technical responsibility for area of testing:

March 03, 2026

Kevin Wang

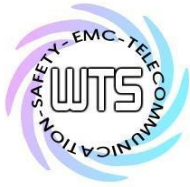
Kevin Wang

Date

WTS

Name

Signature



Registration number: W6R22602-24980-C-1

FCC ID: 2AVNXCYLH022

1.2 Testing laboratory

1.2.1 Location

10m OATS

No.5-1, Lishui, Shuang Sing Village, Wanli Dist.,
New Taipei City 207, Taiwan (R.O.C.)

3 meter semi-anechoic chamber/Conducted Emission

No. 99, Sec. 1, Balian Rd., Xizhi Dist.,
New Taipei City 221032, Taiwan (R.O.C.)

Worldwide Testing Services (Taiwan) Co., Ltd.

6F., No. 58, Ln. 188, Ruiguang Rd., Neihu Dist.,
Taipei City 114, Taiwan (R.O.C.)

Tel: 886-2-6606-8877

1.2.2 Details of accreditation status

Accredited testing laboratory

FCC filed test laboratory Reg. No.: TW1072, TW1140, TW1146, TW1477, TW0037

Industry Canada filed test laboratory Reg. No.: 20037, 31634

Test location, where different from Worldwide Testing Services (Taiwan) Co., Ltd. :

Name: ./.

Accredited number: ./.

Street: ./.

Town: ./.

Country: ./.

1.3 Application details

Name: Airgain

Street: 3611 Valley Centre Drive, Ste. 150 San Diego,

Town: CA 92130

Country: USA

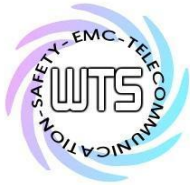
Manufacturer: (if applicable)

Name: ./.

Street: ./.

Town: ./.

Country: ./.



Registration number: W6R22602-24980-C-1
FCC ID: 2AVNXCYLH022

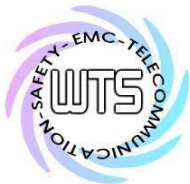
Date of receipt of test item(1st): February 10, 2025
Date of test(1st): from February 11, 2025 to May 05, 2025
Date of receipt of test item(2nd): January 28, 2026
Date of test(2nd): from January 29, 2026 to March 02, 2026

1.4 General information of Test item

Type of test item: Lighthouse
Model no.: CY-LH0-22-XB1
Multi-listing model no.: CY-LH0-22-SB1
Brand name: Airgain
Power supply: 120Va.c.
Antenna type: N01AGCYM Embedded Antenna
Antenna gain: 5dBi

Technical data

WLAN		
Mode	Channel	Conducted Power (dBm)
802.11b	Ch 1 : 2412 MHz	11.48
	Ch 6 : 2437 MHz	11.57
	Ch 11 : 2462 MHz	11.78
802.11g	Ch 1 : 2412 MHz	10.63
	Ch 6 : 2437 MHz	11.02
	Ch 11 : 2462 MHz	11.26
802.11n20MHz	Ch 1 : 2412 MHz	10.50
	Ch 6 : 2437 MHz	10.89
	Ch 11 : 2462 MHz	11.13
802.11n40MHz	Ch 1 : 2422 MHz	12.73
	Ch 4 : 2437 MHz	12.90
	Ch 7 : 2452 MHz	12.94



Registration number: W6R22602-24980-C-1

FCC ID: 2AVNXCYLH022

Operation modes: Duplex

Modulation type: DSSS/OFDM

Sample no.: #01

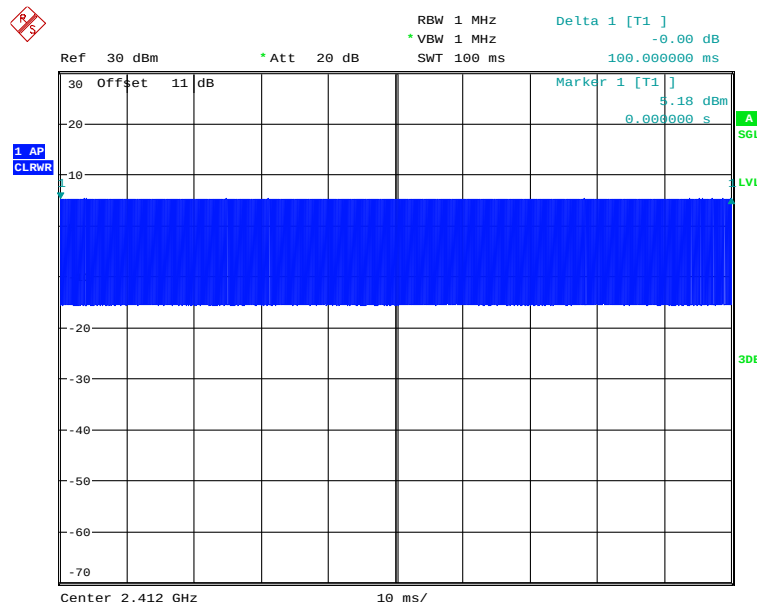
1.5 Duty Cycles

A correction factor shall be added to the measurement results prior to comparing with the emission limit to compute the emission level that would have been measured had the test been performed at 100% duty cycle.

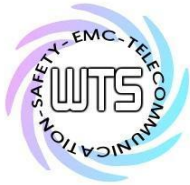
The correction factor is computed as $[10 \log (1 / D)]$, where D is the duty cycle.

Mode	Ton (ms)	Ton+Toff (ms)	Duty cycle (%)	Duty Factor (dB)	1/T - VBW (KHz)
802.11 B	100	100	100%	0.00	0.01
802.11 G	100	100	100%	0.00	0.01
802.11n (20MHz)	100	100	100%	0.00	0.01
802.11n (40MHz)	100	100	100%	0.00	0.01

Duty cycle plot

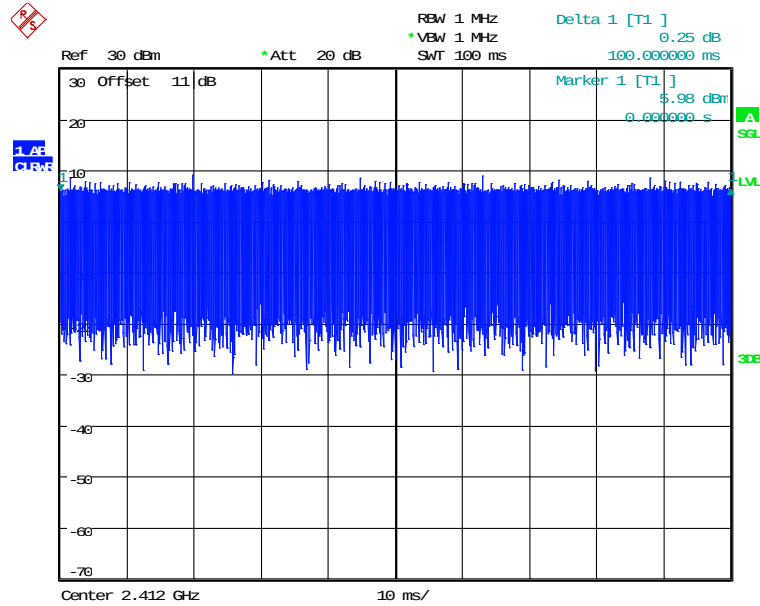


DUTY 802.11B
Date: 29.APR.2025 20:21:26

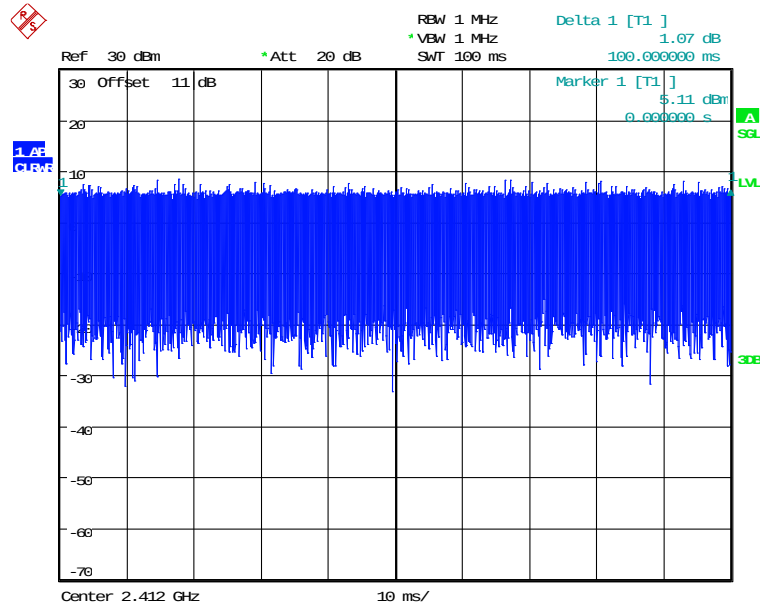


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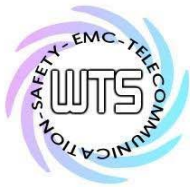
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FCC ID: 2AVNXCYLH022



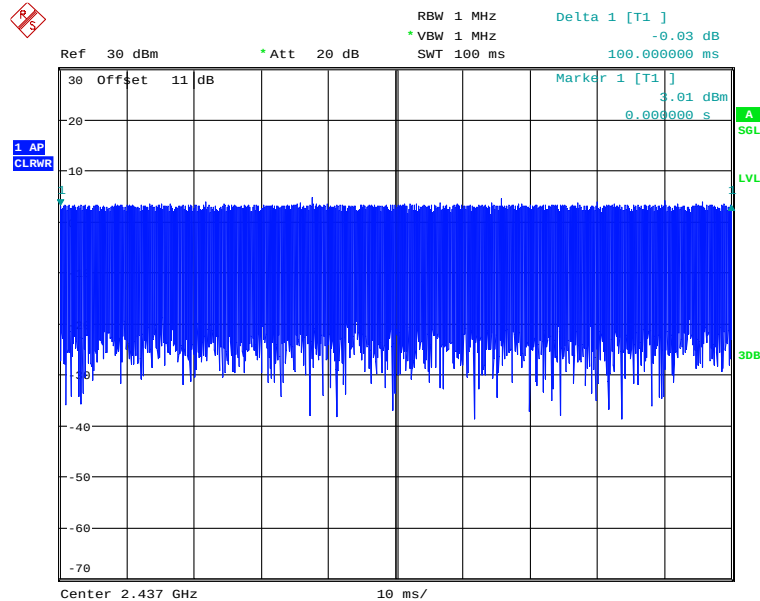
DUTY 802.11G
Date: 29.APR.2025 20:22:29



DUTY 802.11N20
Date: 29.APR.2025 20:23:45



Registration number: W6R22602-24980-C-1
FCC ID: 2AVNXCYLH022



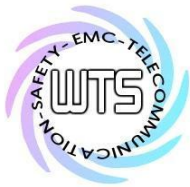
DUTY 802.11N40
Date: 29.APR.2025 20:24:57

1.6 Test standards

47 CFR PART 15 SUBPART C § 15.247 (2024-10)

Special statement:

1. This submission is a Class II change and test report is based on the original test report no.: W6M22502-24125-C-1.
2. The relevant Circuitry, PCB Layout, Inner element, Appearance and Function is exactly the same as the one in original test report. The differences are add the multi-listing model number and 5G antenna, Except for Radiated Emission and test item of below 1GHz were tested, the other test result is also based on the original test report no. W6M22502-24125-C-1 without re-testing.



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FCC ID: 2AVNXCYLH022

2 Technical test

2.1 Summary of test results

No deviations from the technical specification(s) were ascertained in the course of the tests performed. ☒

or

The deviations were ascertained in the course of the tests performed. ☐

2.2 Test environment

Relative humidity content: 20 ... 75 %

Air pressure: 86 ... 103 kPa

Power supply: 120Va.c.

Extreme conditions parameters: ./.

Test item Name	Uncertainty
Estimation Result of Uncertainty of Conducted Emission (CR) (Power Line Conducted Emission)	Expanded Uncertainty : AMN : 1.04 dB
Estimation Result of Uncertainty of Radiated Emission(3M-966A) (Spurious Emissions radiated – Transmitter operating)	Expanded Uncertainty : 0.009-30 MHz : 1.85 dB 30-1000 MHz : 4.21 dB 1-18 GHz : 3.19 dB 18-40 GHz : 1.90 dB
Estimation Result of Uncertainty of Bandwidth Measurement (Minimum 6 dB Bandwidth)	Expanded Uncertainty : 0.37 kHz
Estimation Result of Uncertainty of Conducted Output Power Measurement (Peak Output Power (transmitter))	Expanded Uncertainty : 1.49 dB
Estimation Result of Uncertainty of Power Density Measurement (Peak Power Spectral Density)	Expanded Uncertainty : 1.49 dB
Estimation Result of Uncertainty of Band Edge Measurement (Emissions in nonrestricted frequency bands)	Expanded Uncertainty : 0.63 dBc

The decision rule is: Measurement uncertainty is not included in the calculation of test results.



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2.3 Test Equipment List

Max Output Power & 6DB Bandwidth & Bandedge & Power Density & Duty

Code No.	Test equipment	Mode No.	Serial No.	Brand	Cal. Date	Next Cal. Date
ETSTW-RE 050	Attenuator 10dB	50HF-010-1	None	JFW	2025/2/14	2026/2/13
ETSTW-RE 055	SPECTRUM ANALYZER	FSU 26	200074	R&S	2025/3/5	2026/3/4
ETSTW-RE 099	DC Block	50DB-007-1	None	JFW	2025/2/14	2026/2/13
ETSTW-Cable 030	Microwave Cable	SUCOFLEX 104 (S_Cable 9)	279067	HUBER+SUHNER	2025/2/14	2026/2/13

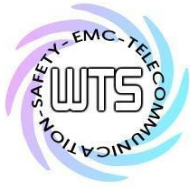
Spurious Emission (966A)

Origin

Code No.	Test equipment	Mode No.	Serial No.	Brand	Cal. Date	Next Cal. Date
ETSTW-RE 153	Signal Analyzer	FSV40	101929	R&S	2024/9/11	2025/9/10
ETSTW-RE 154	EMI Test Receiver	ESR3	102829	R&S	2025/2/14	2026/4/8
ETSTW-RE 160	Amplifier Module	CHC 3	None	WTS	2024/7/12	2025/7/11
ETSTW-RE 177	TRILOG Broadband Antenna	VULB 9168& EMCI-N-6-06	01380&AT-06007	SCHWARZBECK &EMC	2025/3/10	2026/3/9
ETSTW-RE 178	Double Ridged Guide Horn Antenna	DRH18-E	210505A18ES	RFSPIN	2025/3/7	2026/3/6
ETSTW-Cable 077	SMA type cable (10m)	EMC104-SM-SM-10000	230511	EMCI	2024/7/12	2025/7/11
ETSTW-Cable 084	SMA type cable (1m)	SF104-11SMA-1000	816477/4	HONOVA	2024/7/12	2025/7/11
ETSTW-Cable 089	SMA type cable (2m)	SF104-11SMA-2000	SN 811889/4	HUBER+SUHNER	2024/7/12	2025/7/11
WTSTW-SW 002	EMI TEST SOFTWARE	EZ EMC	None	Farad	Version ETS-03A1 Version EMEC-3A1+	

Add

Code No.	Test equipment	Mode No.	Serial No.	Brand	Cal. Date	Next Cal. Date
ETSTW-RE 153	Signal Analyzer	FSV40	101929	R&S	2025/9/10	2026/9/9
ETSTW-RE 154	EMI Test Receiver	ESR3	102829	R&S	2025/4/9	2026/4/8
ETSTW-RE 160	Amplifier Module	CHC 3	None	WTS	2025/7/11	2026/7/10
ETSTW-RE 177	TRILOG Broadband Antenna	VULB 9168& EMCI-N-6-06	01380&AT-06007	SCHWARZBECK &EMC	2025/3/10	2026/3/9
ETSTW-RE 178	Double Ridged Guide Horn Antenna	DRH18-E	210505A18ES	RFSPIN	2025/3/7	2026/3/6
ETSTW-Cable 077	SMA type cable (10m)	EMC104-SM-SM-10000	230511	EMCI	2025/7/11	2026/7/10
ETSTW-Cable 084	SMA type cable (1m)	SF104-11SMA-1000	816477/4	HONOVA	2025/7/11	2026/7/10
ETSTW-Cable 089	SMA type cable (2m)	SF104-11SMA-2000	SN 811889/4	HUBER+SUHNER	2025/7/11	2026/7/10
WTSTW-SW 002	EMI TEST SOFTWARE	EZ EMC	None	Farad	Version ETS-03A1 Version EMEC-3A1+	



Worldwide Testing Services(Taiwan) Co., Ltd.

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AC Conducted

Origin

Code No.	Test equipment	Mode No.	Serial No.	Brand	Cal. Date	Next Cal. Date
ETSTW-CE 032	EMI Test Receiver	ESR3	102830	R&S	2024/4/22	2025/4/21
ETSTW-CE 035	AC Power Source	AFC-150	A2000386	All power	Function Test	
ETSTW-CE 034	Line-Impedance Stabilisation Network	NSLK8127	01087	SCHWARZBECK	2024/7/18	2025/7/17
ETSTW-Cable 092	BNC Cable (3m)	EMCCFD-300 -BM-BM-3000	240108	EMCI	2025/1/9	2026/1/8

Add

Code No.	Test equipment	Mode No.	Serial No.	Brand	Cal. Date	Next Cal. Date
ETSTW-CE 032	EMI Test Receiver	ESR3	102830	R&S	2025/5/5	2026/5/4
ETSTW-CE 035	AC Power Source	AFC-150	A2000386	All power	Function Test	
ETSTW-CE 034	Line-Impedance Stabilisation Network	NSLK8127	01087	SCHWARZBECK	2025/7/17	2026/7/16
ETSTW-Cable 092	BNC Cable (3m)	EMCCFD-300-BM-BM-3000	240108	EMCI	2026/1/8	2027/1/7
WTSTW-SW 002	EMI TEST SOFTWARE	EZ EMC	None	Farad	Version ETS-03A1 Version EMEC-3A1+	

Registration number: W6R22602-24980-C-1

FCC ID: 2AVNXCYLH022

3 Test results (enclosure)

TEST CASE	Para. Number	Required	Test passed	Test failed
Peak Output Power (transmitter)	15.247(b)(3)	☒	☒	☐
Spurious Emissions radiated – Transmitter operating	15.247 (d) 15.205, 15.209	☒	☒	☐
Emissions in nonrestricted frequency bands	15.247(d)	☒	☒	☐
Minimum 6 dB Bandwidth	15.247(a)(2)	☒	☒	☐
Peak Power Spectral Density	15.247(e)	☒	☒	☐
Power Line Conducted Emission	15.207	☒	☒	☐

Note:

1. This EUT incorporates a MIMO function with IEEE 802.11b, 802.11g, and 802.11n. Physically, this EUT includes two transmitters and two receivers with two incoherent streams. This device uses multiplexing and also employ cyclic delay diversity to improve range and throughput, and this device simultaneously operates on two adjacent channels.
2. This EUT is 2*2 spatial MIMO (2Tx&2Rx) without beam forming function. That operates dual chain configuration. The Pre-test was performed to determine the worst case mode from all possible combinations between all available modulations, data rates, bandwidths, and spatial stream modes.
3. The detail of chosen mode for full testing are as below:

Mode	Available channel	Chosen Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11b	1 to 11	1,6,11	DSSS	DBPSK, DQPSK, CCK	1
802.11g	1 to 11	1,6,11	OFDM	BPSK, QPSK, 16QAM, 64QAM	6
802.11n (20MHz)	1 to 11	1,6,11	OFDM	BPSK, QPSK, 16QAM, 64QAM	6.5
802.11n (40MHz)	1 to 7	1,4,7	OFDM	BPSK, QPSK, 16QAM, 64QAM	13.5



Registration number: W6R22602-24980-C-1

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3.1 Peak Output Power (transmitter)

3.1.1 Applicable Standard

FCC Rule: 15.247(b)(3)

For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

This measurement applies to equipment with an integral antenna and to equipment with an antenna connector and equipped with an antenna as declared by the applicant.

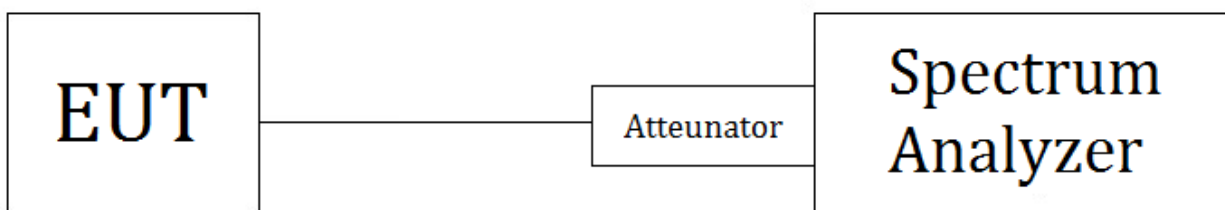
The power was measured with modulation (declared by the applicant).

3.1.2 Test procedure

Following Subclause 11.9.2.2.2 of ANSI C63.10

1. Set span to at least 1.5 times the OBW , Set RBW = 1% to 5% of the OBW, not to exceed 1 MHz , Set VBW $\geq [3 \times \text{RBW}]$.
2. Number of points in sweep $\geq [2 \times \text{span} / \text{RBW}]$, Sweep time = auto , Detector = RMS.
3. Trace average at least 100 traces in power averaging (rms) mode.
4. Compute power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function, with band limits set equal to the OBW band edges.

3.1.3 Test Setup





FCC ID: 2AVNXCYLH022

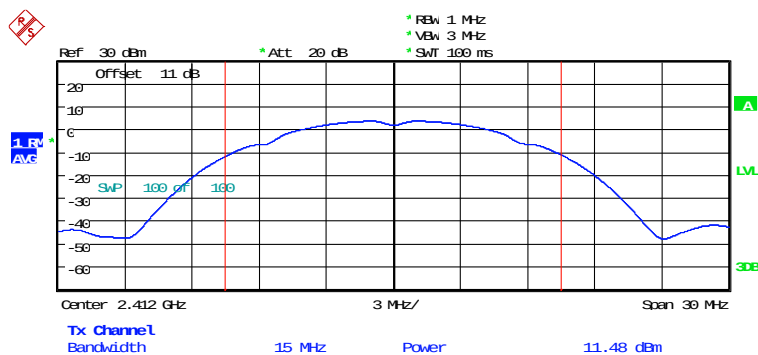
Test date : April 29, 2025

Temperature: 25.7°C

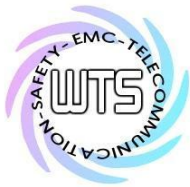
Humidity: 57.0 %

Tester : Sky

Band	Mode	Channel	Conducted power with DF (dBm)	DF (dB)	Limit (dBm)
2.4GHz	802.11b	Ch 1 : 2412 MHz	11.48	0.00	30
		Ch 6 : 2437 MHz	11.57	0.00	30
		Ch 11 : 2462 MHz	11.78	0.00	30
	802.11g	Ch 1 : 2412 MHz	10.63	0.00	30
		Ch 6 : 2437 MHz	11.02	0.00	30
		Ch 11 : 2462 MHz	11.26	0.00	30
	802.11n 20MHz	Ch 1 : 2412 MHz	10.50	0.00	30
		Ch 6 : 2437 MHz	10.89	0.00	30
		Ch 11 : 2462 MHz	11.13	0.00	30
	802.11n 40MHz	Ch 1 : 2422 MHz	12.73	0.00	30
		Ch 4 : 2437 MHz	12.90	0.00	30
		Ch 7 : 2452 MHz	12.94	0.00	30



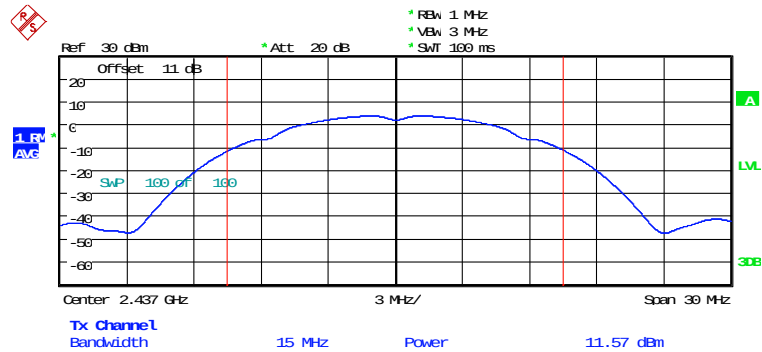
MAX OUTPUT POWER 802.11B CH01
Date: 29-APR-2025 20:07:12



Worldwide Testing Services(Taiwan) Co., Ltd.

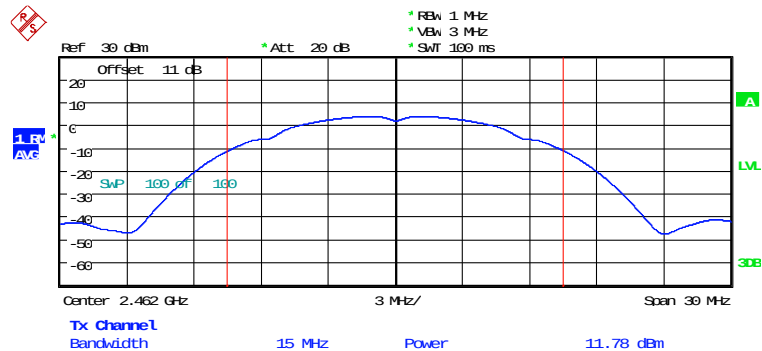
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FCC ID: 2AVNXCYLH022



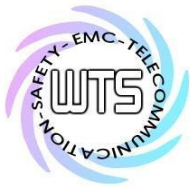
MAX OUTPUT POWER 802.11B CH06

Date: 29.APR.2025 20:07:58



MAX OUTPUT POWER 802.11B CH11

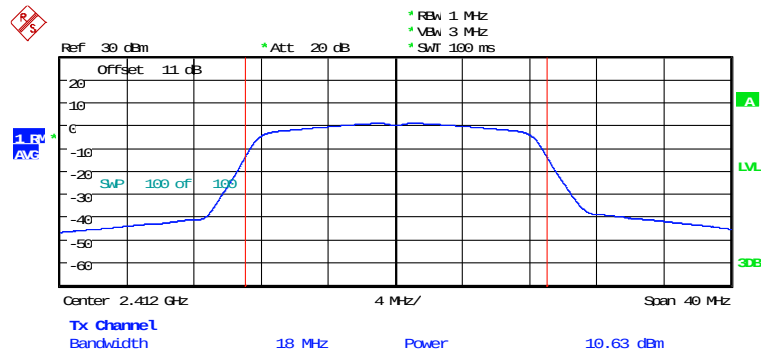
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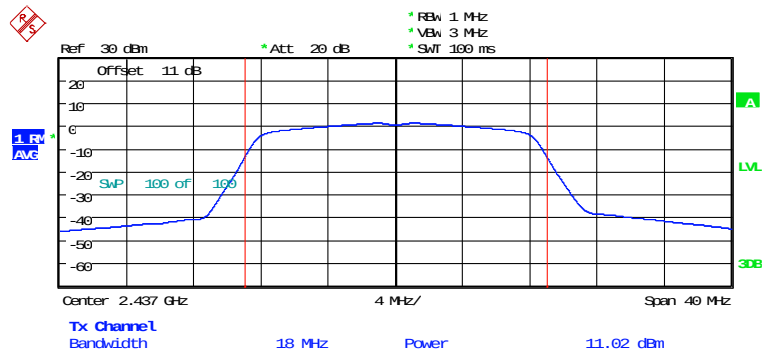
FCC ID: 2AVNXCYLH022

802.11g



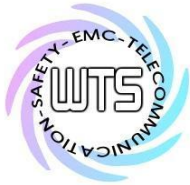
MAX OUTPUT POWER 802.11G CH01

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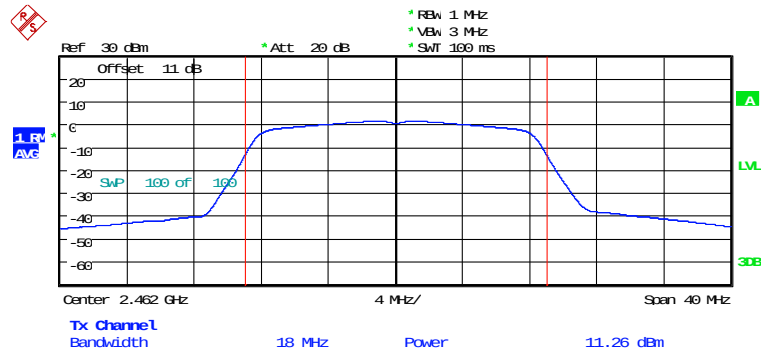


MAX OUTPUT POWER 802.11G CH06

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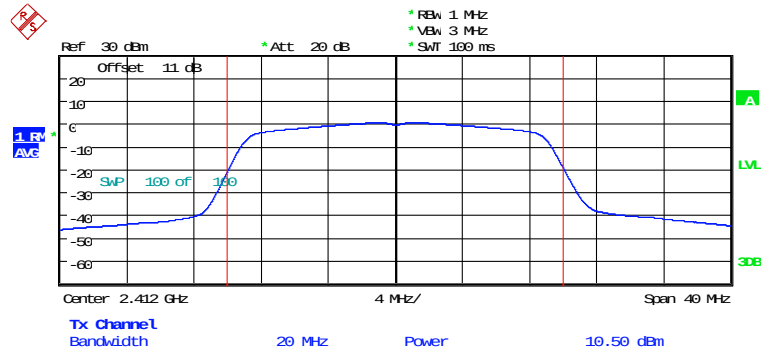


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FCC ID: 2AVNXCYLH022

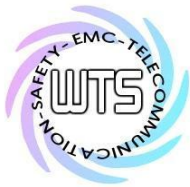


MAX OUTPUT POWER 802.11G CH11
Date: 29.APR.2025 20:12:25

802.11n 20MHz

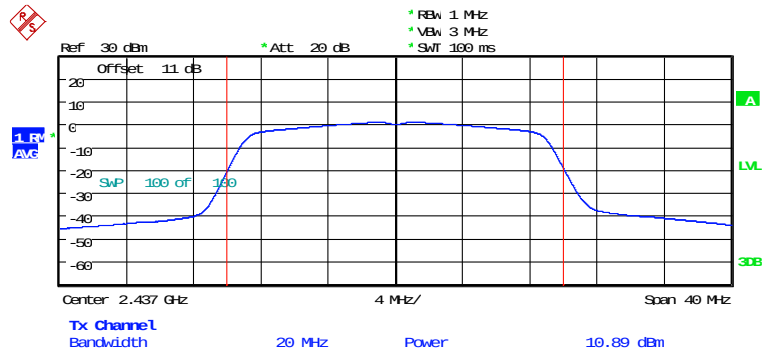


MAX OUTPUT POWER 802.11N 20MHZ CH01
Date: 29.APR.2025 20:14:02

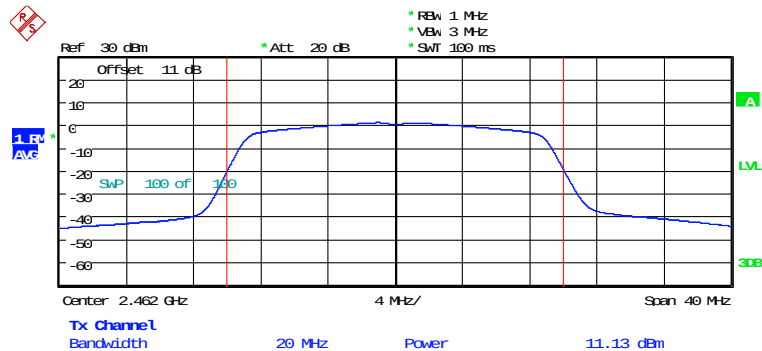


Worldwide Testing Services(Taiwan) Co., Ltd.

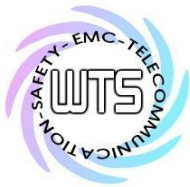
Registration number: W6R22602-24980-C-1
FCC ID: 2AVNXCYLH022



MAX OUTPUT POWER 802.11N 20MHZ CH06
Date: 29.APR.2025 20:14:43



MAX OUTPUT POWER 802.11N 20MHZ CH11
Date: 29.APR.2025 20:15:30

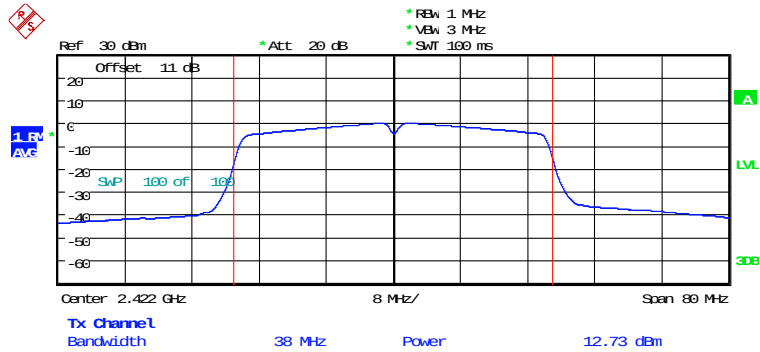


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22602-24980-C-1

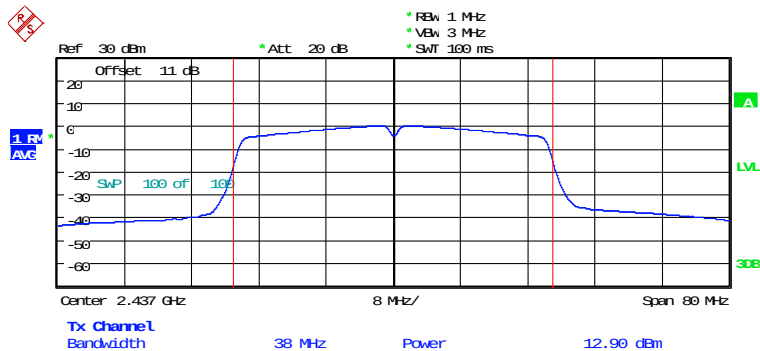
FCC ID: 2AVNXCYLH022

802.11n 40MHz



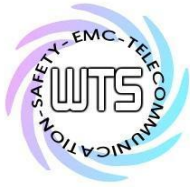
MAX OUTPUT POWER 802.11N 40MHZ CH01

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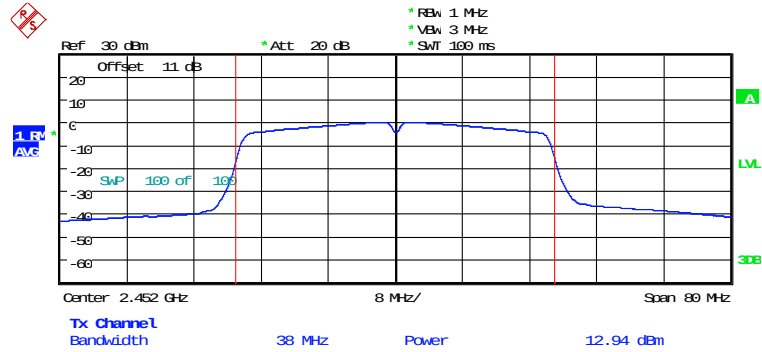
MAX OUTPUT POWER 802.11N 40MHZ CH04

Date: 29.APR.2025 20:17:37



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22602-24980-C-1
FCC ID: 2AVNXCYLH022



MAX OUTPUT POWER 802.11N 40MHZ CH07
Date: 29.APR.2025 20:18:24



Registration number: W6R22602-24980-C-1

FCC ID: 2AVNXCYLH022

3.2 Spurious Emissions radiated – Transmitter operating

3.2.1 Applicable Standard

FCC Rules: 15.247 (d), 15.205, 15.209

Radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a).

3.2.2 Test procedure

1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. Below 1GHz measurement the EUT is placed on turntable which is 0.8m above ground plane. And above 1GHz measurement EUT was placed on low permittivity and low tangent turn table which is 1.5m above ground plane.
2. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m height to find out the highest emissions.
3. Receiver or Spectrum analyzer configuration
 - (a)120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
 - (b)RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
 - (c)RBW=1MHz, VBW=10Hz or 1/T and Peak detector is for average measured value of radiated emission above 1GHz.

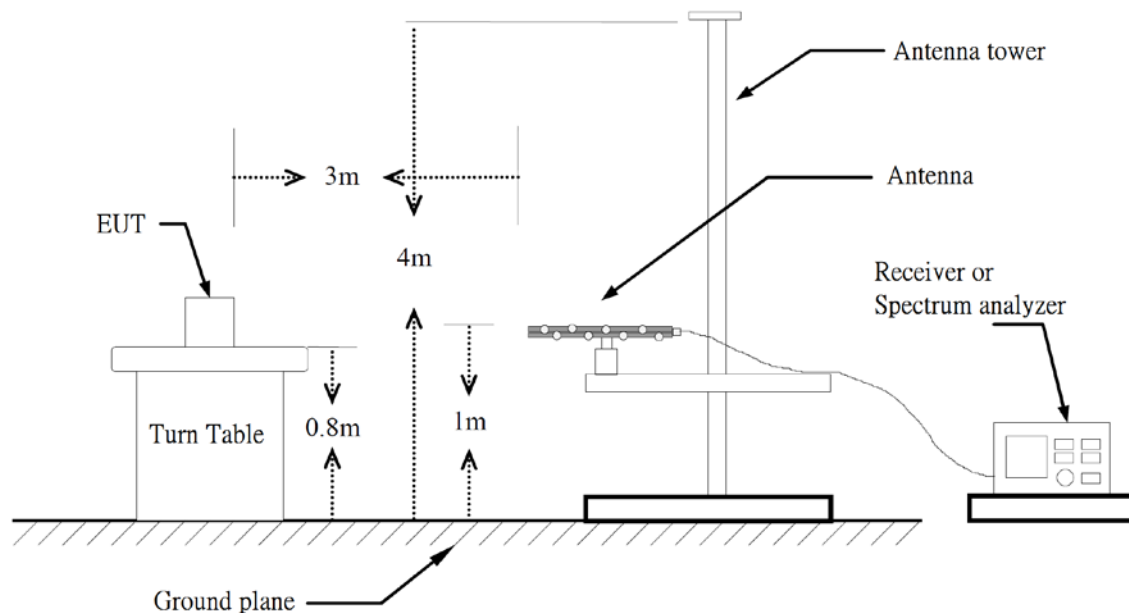
3.2.3 Limits

Frequency (MHz)	Field strength (uV/m)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

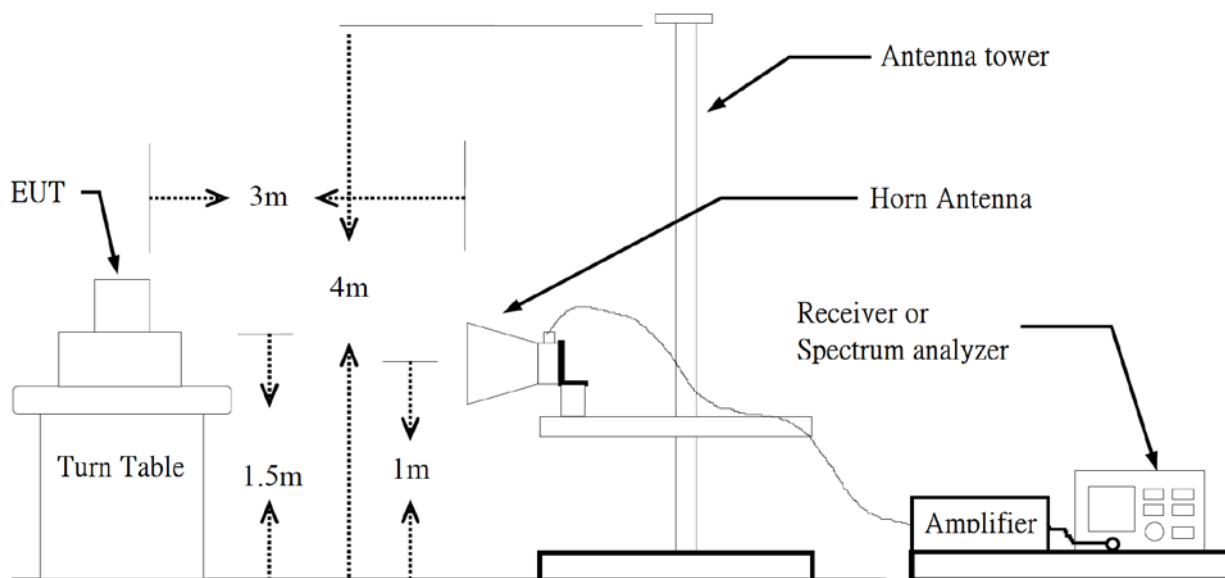
Registration number: W6R22602-24980-C-1

FCC ID: 2AVNXCYLH022

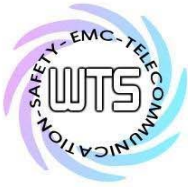
3.2.4 Test Setup



Below 1 GHz



Above 1 GHz



Registration number: W6R22602-24980-C-1

FCC ID: 2AVNXCYLH022

3.2.5 Test results (With Environmental Conditions)

Correction Factor = Antenna factor + Cable loss - Preamplifier

- 1. The formula of measured value as: Test Result = Reading + Correction Factor**
- 2. Detector function in the form : PK = Peak, QP = Quasi Peak, AV = Average**
- 3. All not in the table noted test results are more than 20 dB below the relevant limits.**
- 4. After evaluated, the test result in this report adopt the worst case to measure**
- 5. See attached diagrams in Appendix.**



Registration number: W6R22602-24980-C-1

FCC ID: 2AVNXCYLH022

3.3 Emissions in nonrestricted frequency bands

3.3.1 Applicable Standard

FCC Rules: 15.247(d)

In any 100 kHz bandwidth outside the frequency band in which the intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

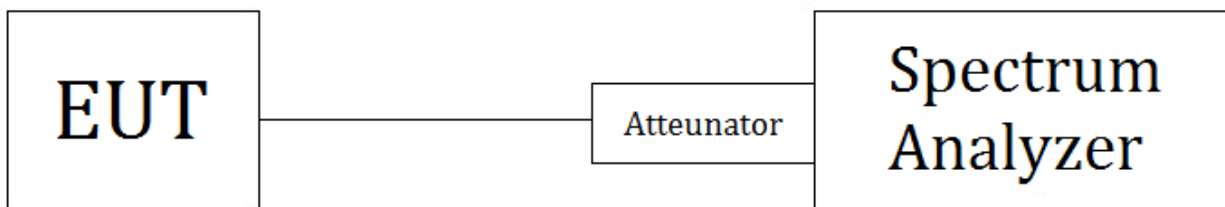
Attenuation below the general limits specified in § 15.209(a) is not required.

In addition radiated emission which fall in the restricted bands, as defined in section 15.205(a), must also with the radiated emission limits.

3.3.2 Test procedure

1. Set RBW = 100 kHz , VBW $\geq [3 \times \text{RBW}]$
2. Set Detector = peak , Sweep time = auto , Trace mode = max hold, and allow sweep to continue until the trace stabilizes
3. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.

3.3.3 Test setup



3.3.4 Limits

See 3.3.1

3.3.5 Test Environmental Conditions

Test date : April 29, 2025

Temperature: 25.7°C

Humidity: 57.0 %

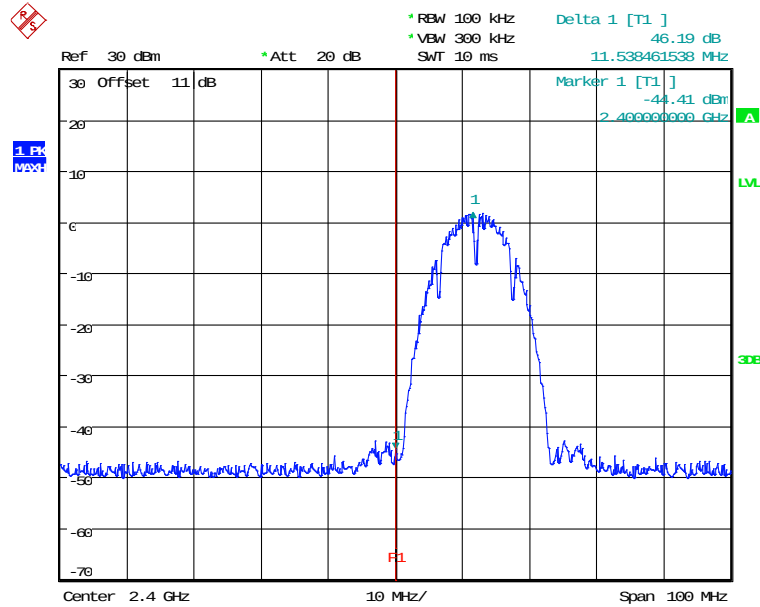
Tester : Sky

Registration number: W6R22602-24980-C-1

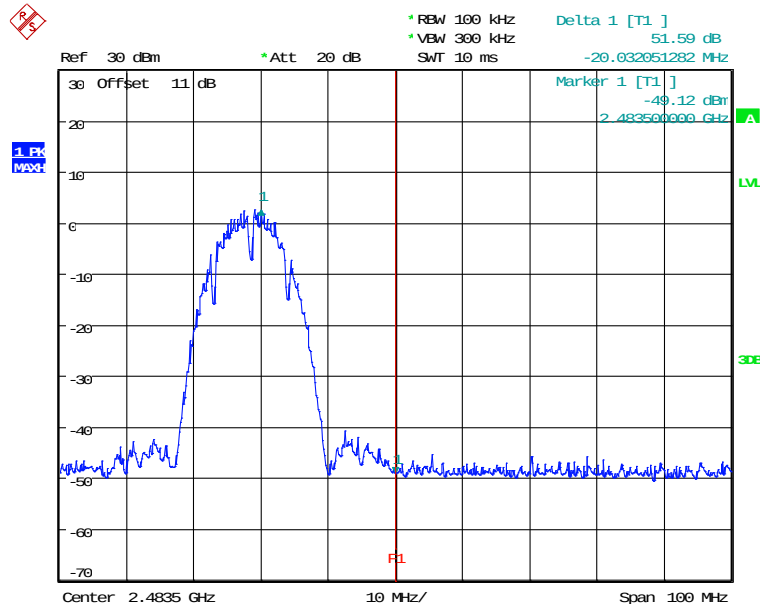
FCC ID: 2AVNXCYLH022

3.3.6 Test results

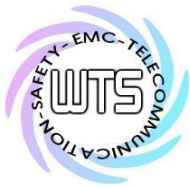
802.11b



BANDEDGE 802.11B CH01
Date: 29.APR.2025 19:32:28



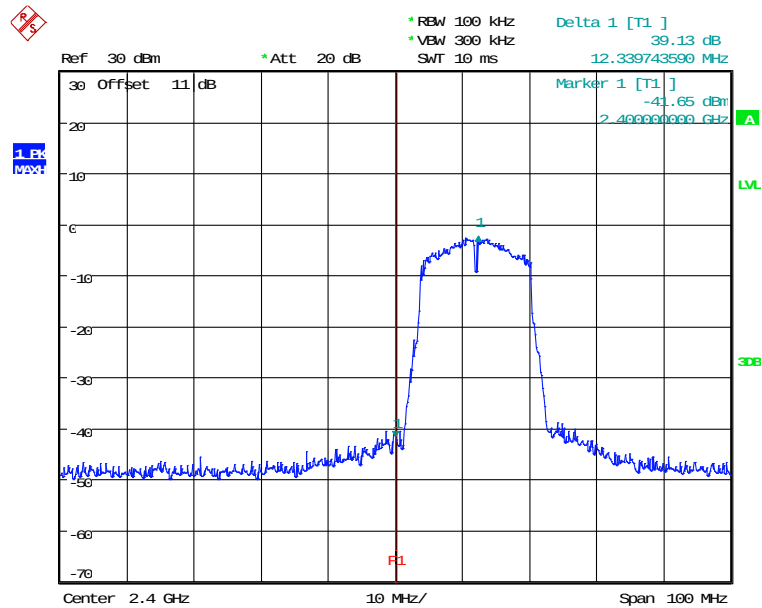
BANDEDGE 802.11B CH11
Date: 29.APR.2025 19:46:53



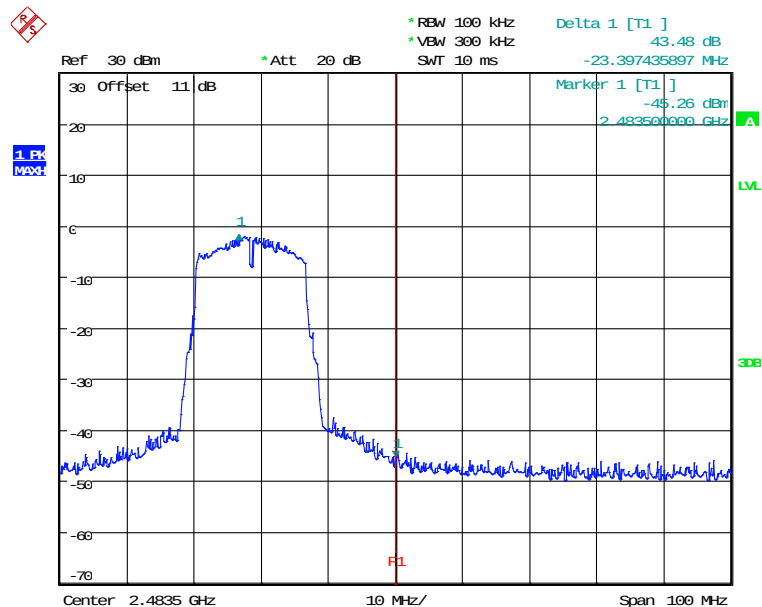
Registration number: W6R22602-24980-C-1

FCC ID: 2AVNXCYLH022

802.11g



BANDEDGE 802.11G CH01
Date: 29.APR.2025 19:48:07



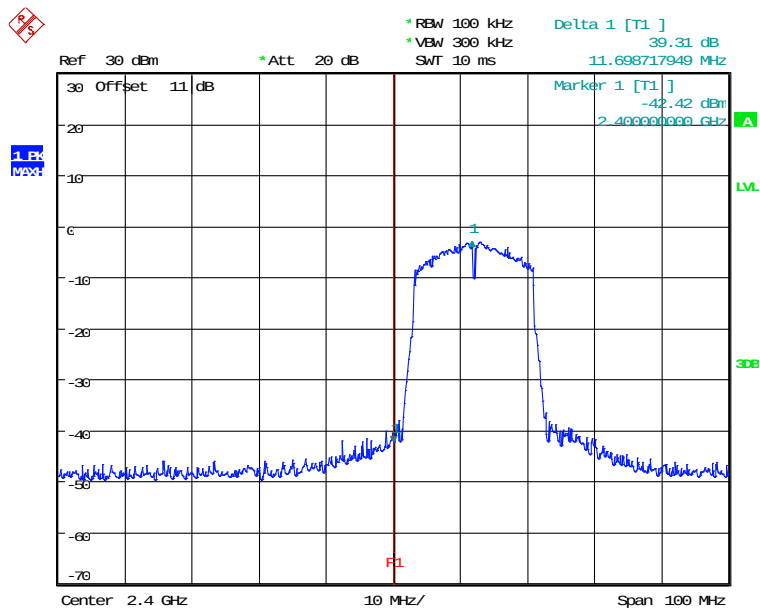
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Registration number: W6R22602-24980-C-1

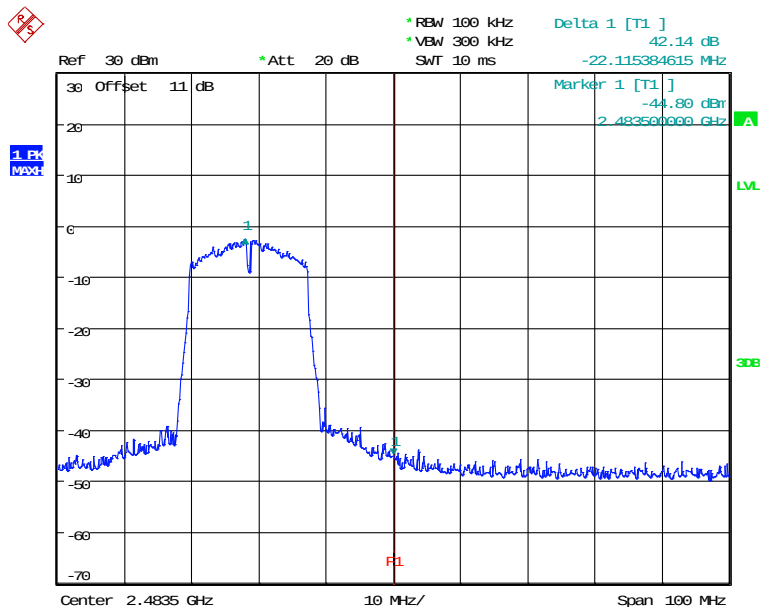
FCC ID: 2AVNXCYLH022

802.11n 20MHz



BANDEDGE 802.11N 20MHZ CH01

Date: 29.APR.2025 19:51:52



BANDEDGE 802.11N 20MHZ CH11

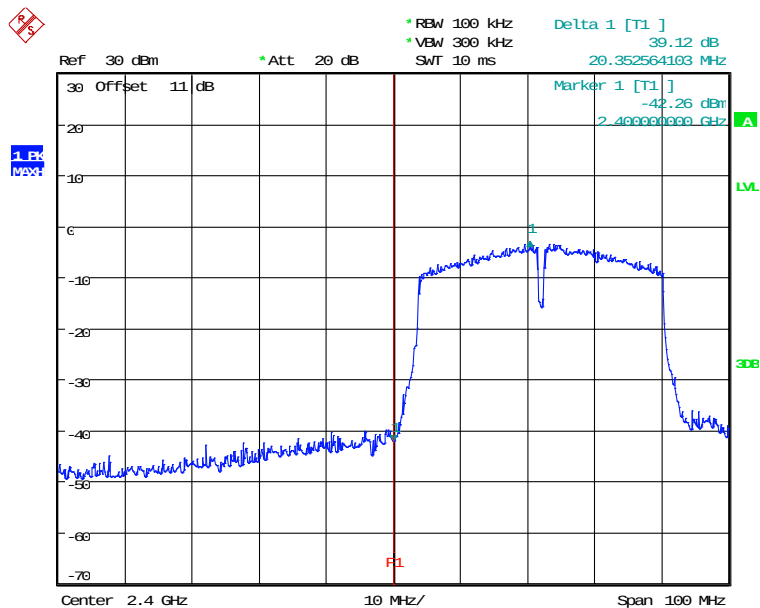
Date: 29.APR.2025 19:53:52



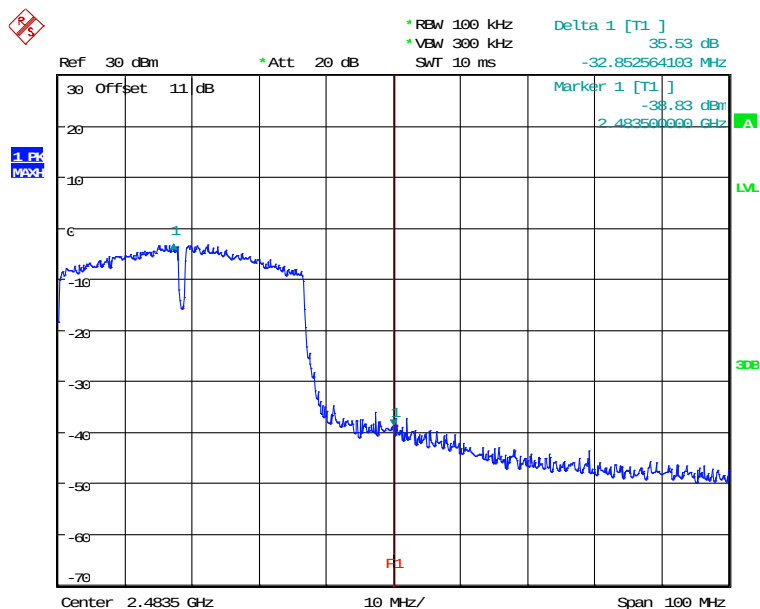
Registration number: W6R22602-24980-C-1

FCC ID: 2AVNXCYLH022

802.11n 40MHz



BANDEDGE 802.11N 40MHZ CH01
Date: 29.APR.2025 19:59:16



BANDEDGE 802.11N 40MHZ CH07
Date: 29.APR.2025 20:01:17



Registration number: W6R22602-24980-C-1

FCC ID: 2AVNXCYLH022

3.4 Minimum 6 dB Bandwidth

3.4.1 Applicable Standard

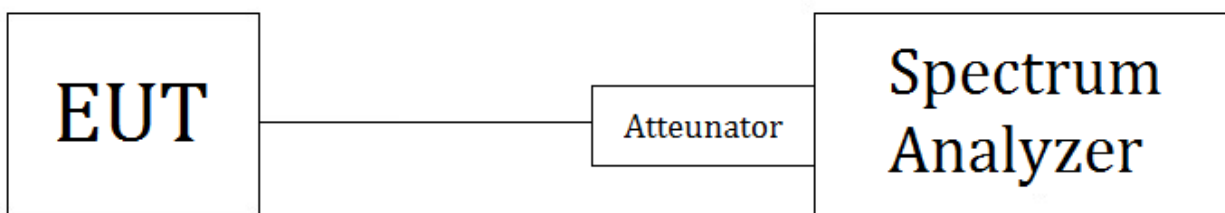
FCC Rules: 15.247(a)(2)

Systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

3.4.2 Test procedure

1. Set RBW = 100 kHz , Set the VBW $\geq [3 \times \text{RBW}]$.
2. Set Detector = peak , Trace mode = max hold , Sweep = auto couple and allow the trace to stabilize.
3. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

3.4.3 Test setup



3.4.4 Limits

Frequency Range (MHz)	Limits (kHz)
902-928	≥ 500
2400-2483.5	
5725-5850	



Registration number: W6R22602-24980-C-1

FCC ID: 2AVNXCYLH022

3.4.5 Test Environmental Conditions

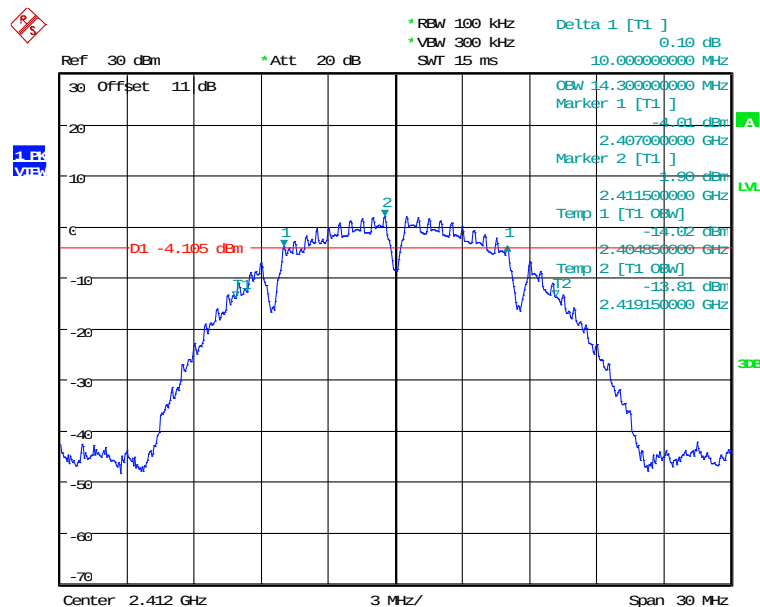
Test date : April 29, 2025

Temperature: 25.7°C

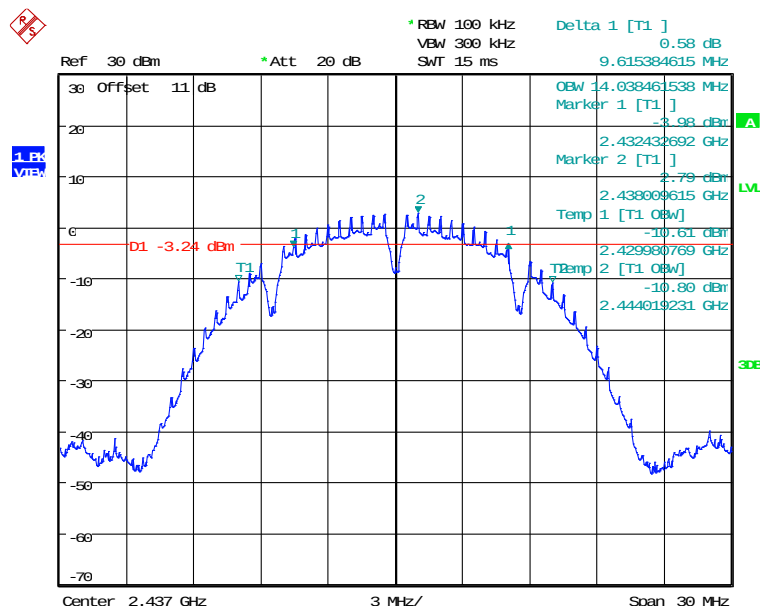
Humidity: 57.0 %

Tester : Sky

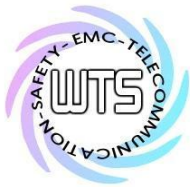
802.11b



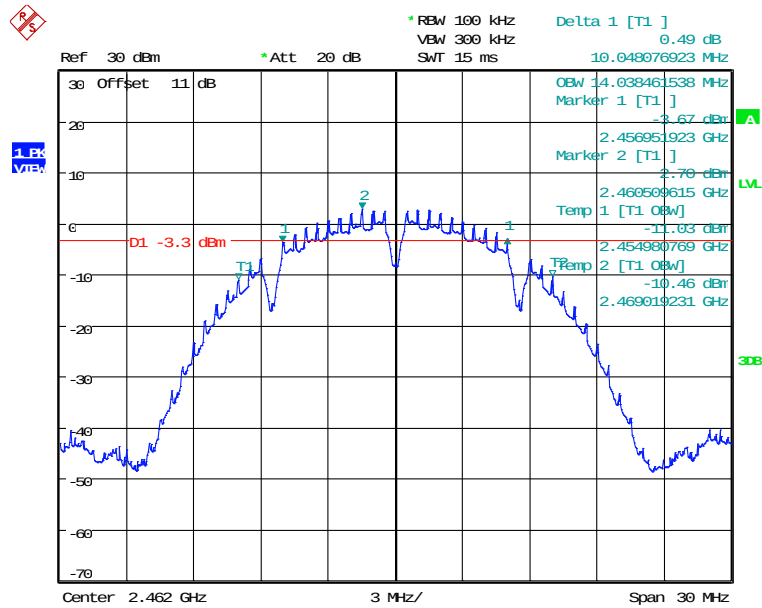
6DB BANDWIDTH 802.11B CH01
Date: 29.APR.2025 19:32:13



6DB BANDWIDTH 802.11B CH06
Date: 29.APR.2025 20:49:51

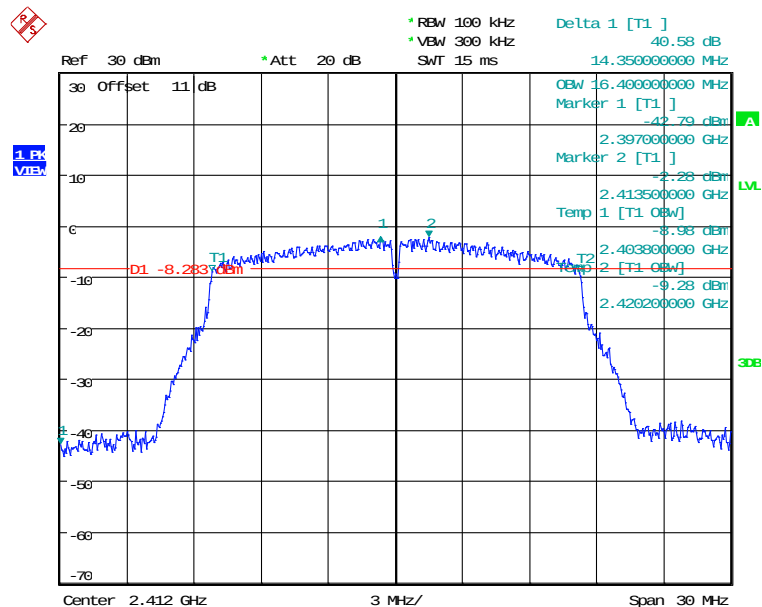


Registration number: W6R22602-24980-C-1
FCC ID: 2AVNXCYLH022

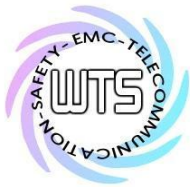


6DB BANDWIDTH 802.11B CH11
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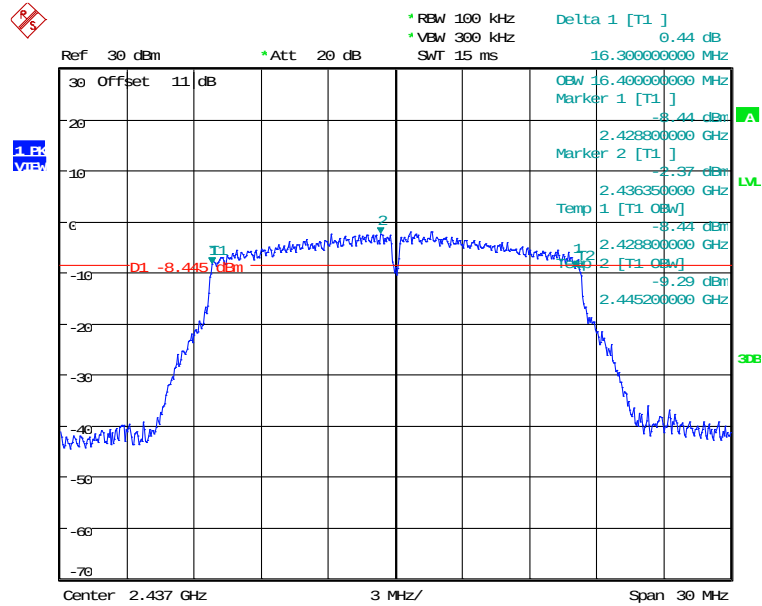
802.11g



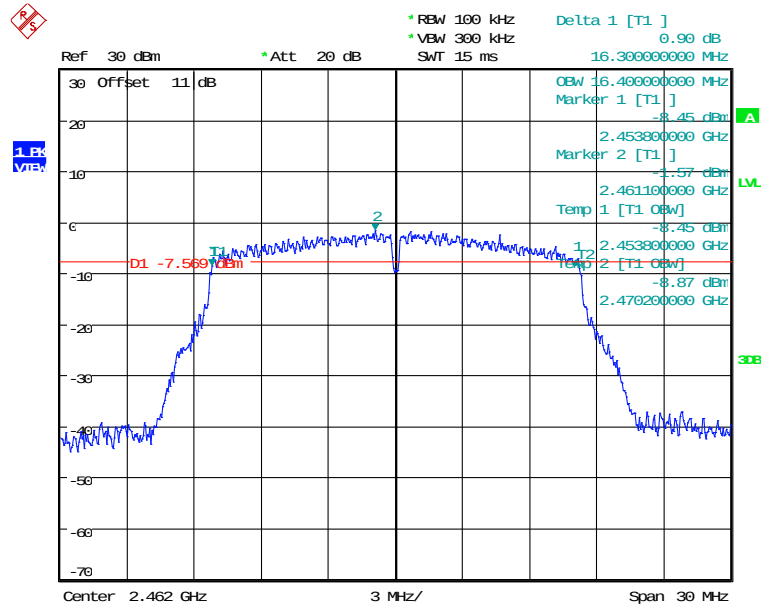
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FCC ID: 2AVNXCYLH022



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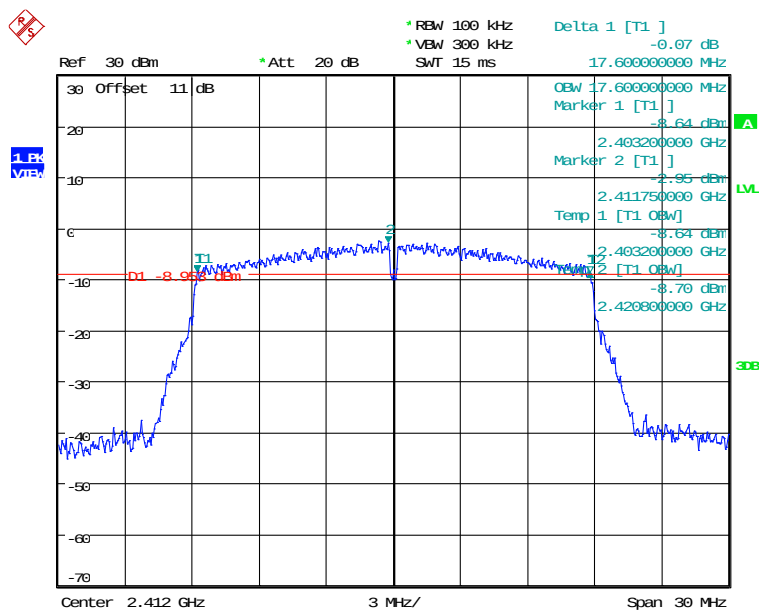


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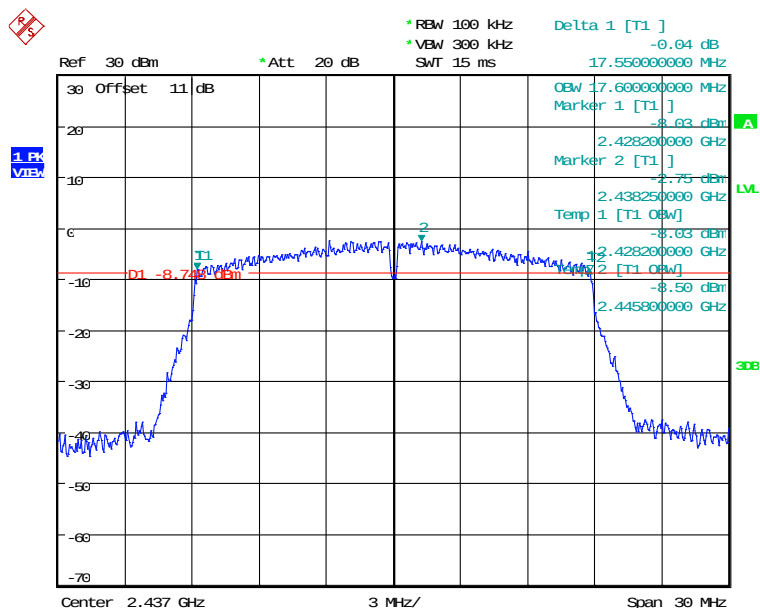


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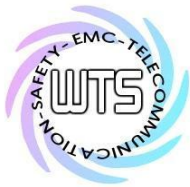
802.11n 20MHz



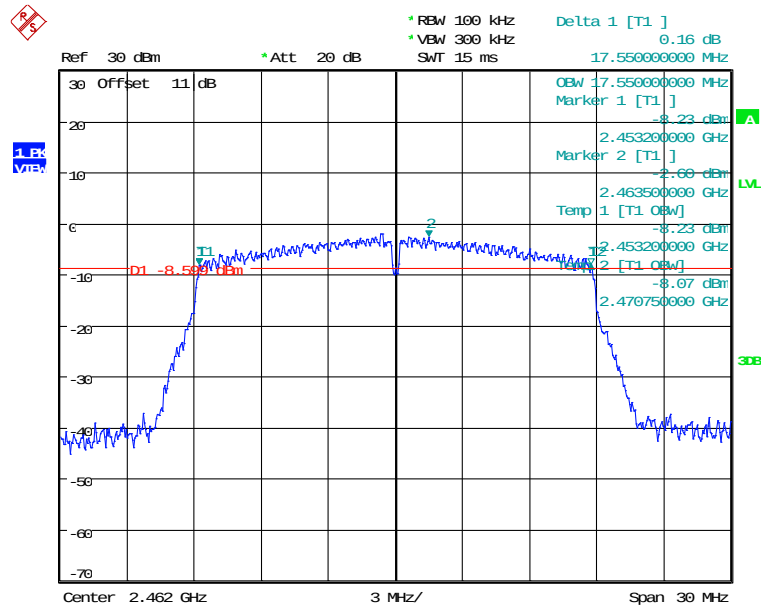
Date: 29.APR.2025 19:51:38



Date: 29.APR.2025 19:52:51

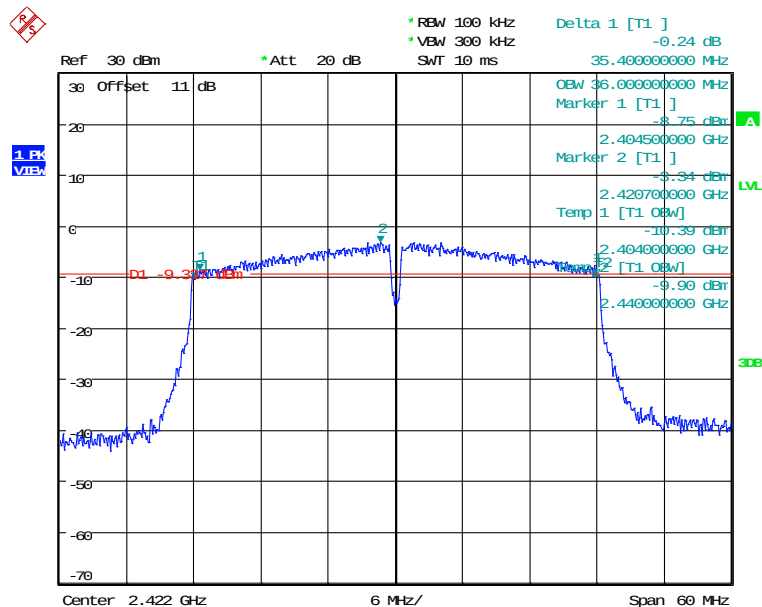


Registration number: W6R22602-24980-C-1
FCC ID: 2AVNXCYLH022

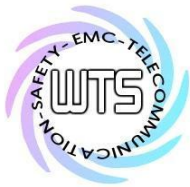


6DB BANDWIDTH 802.11N 20MHZ CH11
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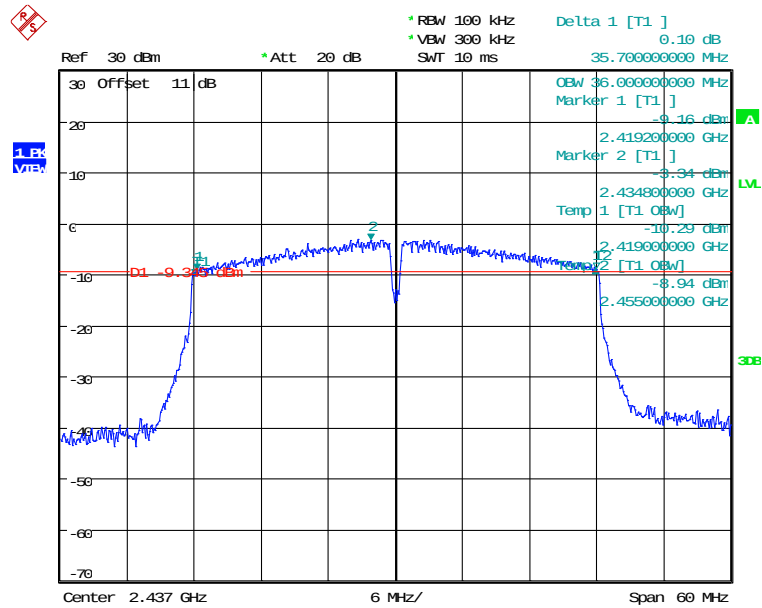
802.11n 40MHz



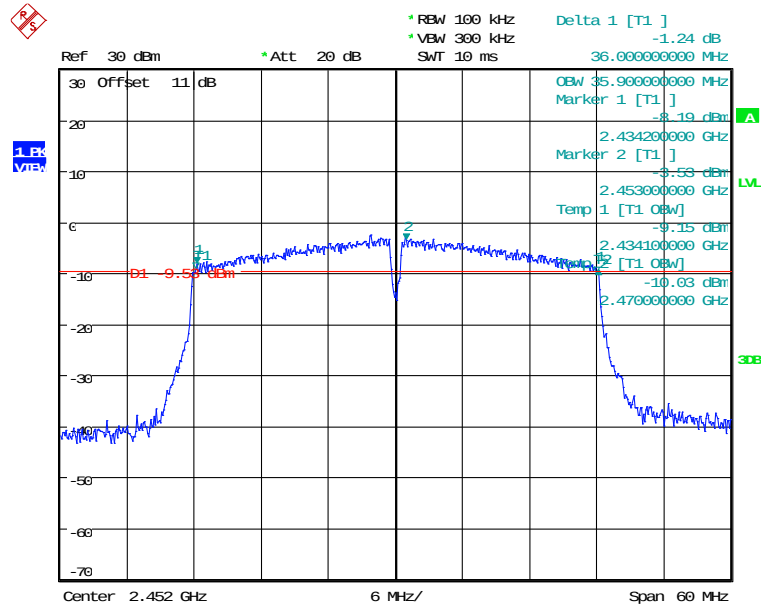
6DB BANDWIDTH 802.11N 40MHZ CH01
Date: 29.APR.2025 19:58:59



Registration number: W6R22602-24980-C-1
FCC ID: 2AVNXCYLH022



6DB BANDWIDTH 802.11N 40MHZ CH04
Date: 29.APR.2025 19:59:58



6DB BANDWIDTH 802.11N 40MHZ CH07
Date: 29.APR.2025 20:01:00

3.5 Peak Power Spectral Density

3.5.1 Applicable Standard

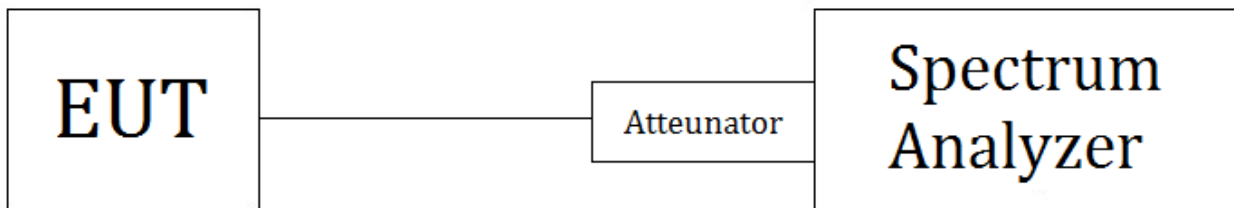
FCC Rules: 15.247(e)

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

3.5.2 Test procedure

1. Set the RBW to $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$, the VBW $\geq [3 \times \text{RBW}]$.
2. Set Detector = peak, Sweep time = auto couple, Trace mode = max hold and allow trace to fully stabilize
3. Use the peak marker function to determine the maximum amplitude level within the RBW.

3.5.3 Test setup



Registration number: W6R22602-24980-C-1
FCC ID: 2AVNXCYLH022

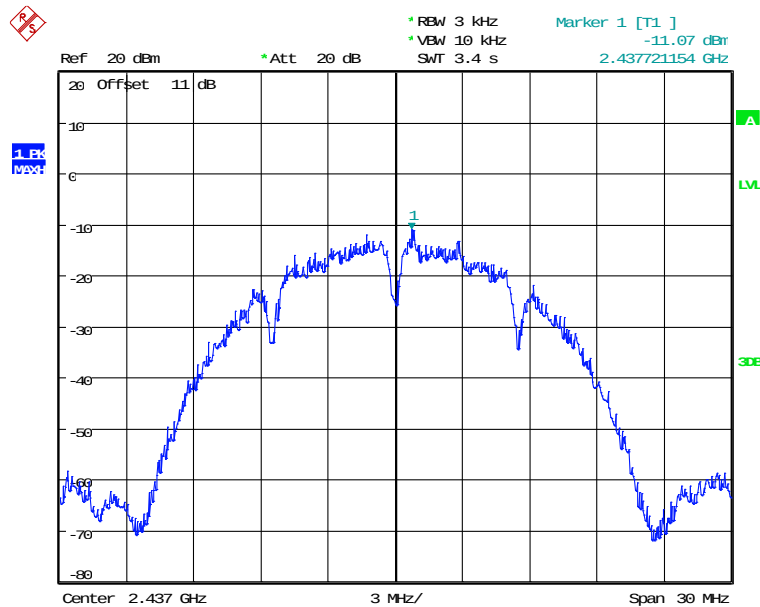
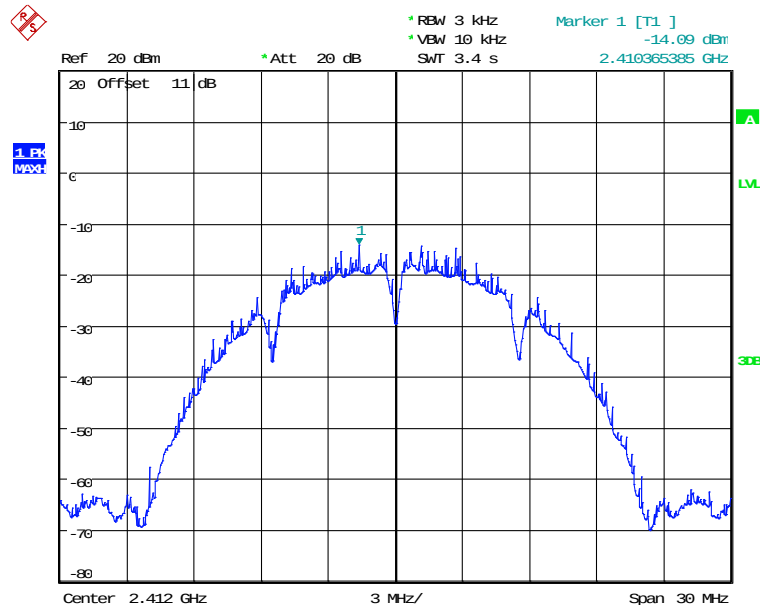
3.5.4 Test results

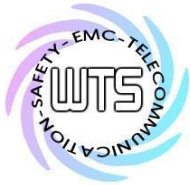
Test date : April 29, 2025
802.11b

Temperature: 25.7°C

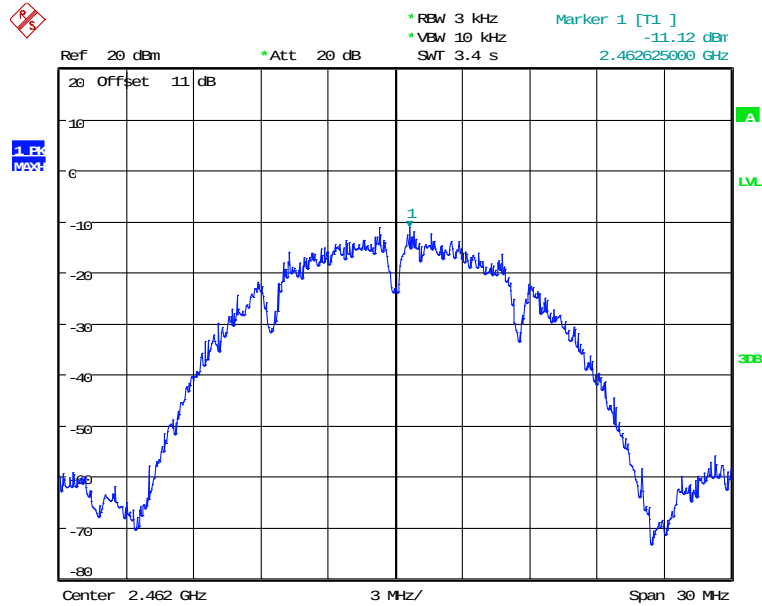
Humidity: 57.0 %

Tester : Sky



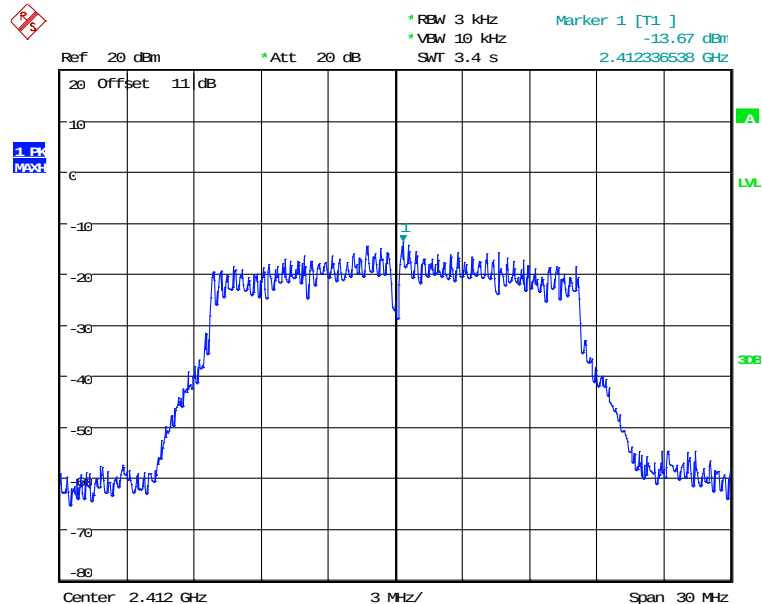


Registration number: W6R22602-24980-C-1
FCC ID: 2AVNXCYLH022

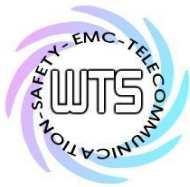


POWER DENSITY 802.11b CH11
Date: 29.APR.2025 19:46:48

802.11g

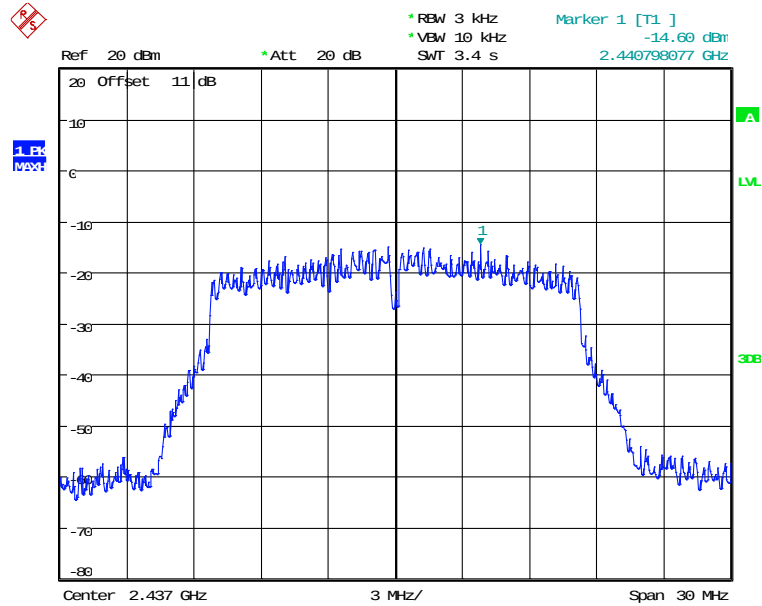


POWER DENSITY 802.11g CH01
Date: 29.APR.2025 19:48:02

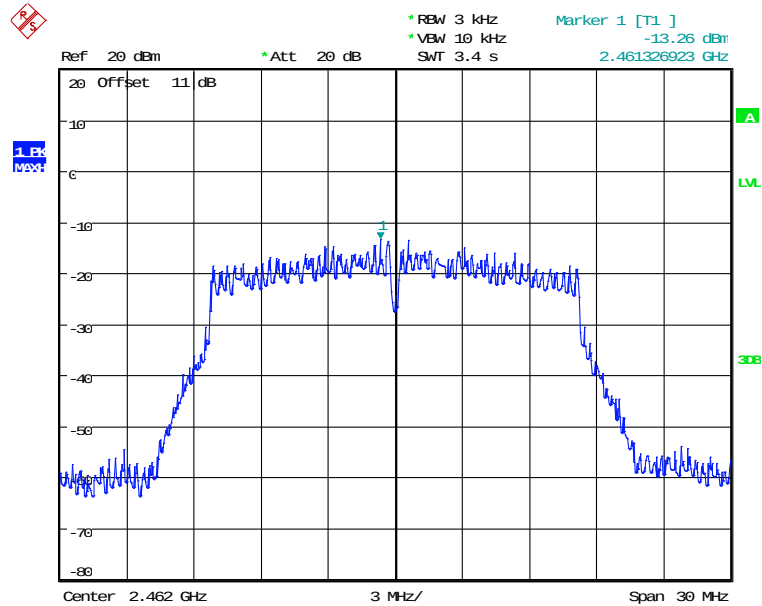


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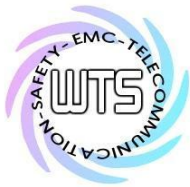
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FCC ID: 2AVNXCYLH022



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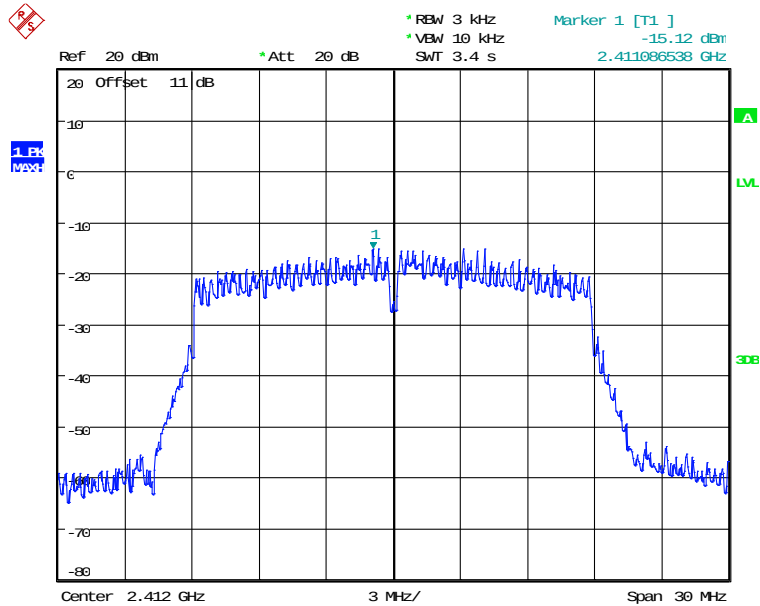
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Date: 29.APR.2025 19:50:29



Registration number: W6R22602-24980-C-1

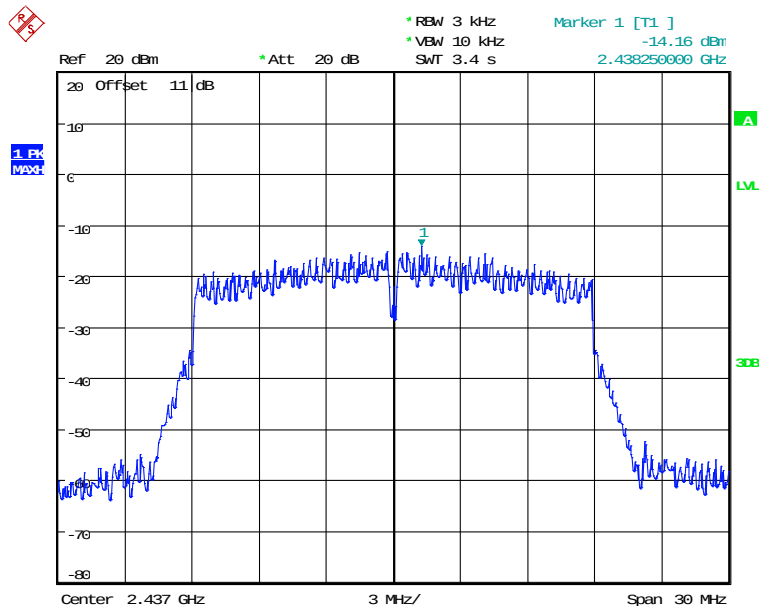
FCC ID: 2AVNXCYLH022

802.11n 20MHz



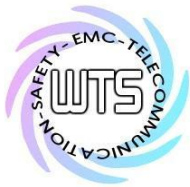
POWER DENSITY 802.11N 20MHZ CH01

Date: 29.APR.2025 19:51:47

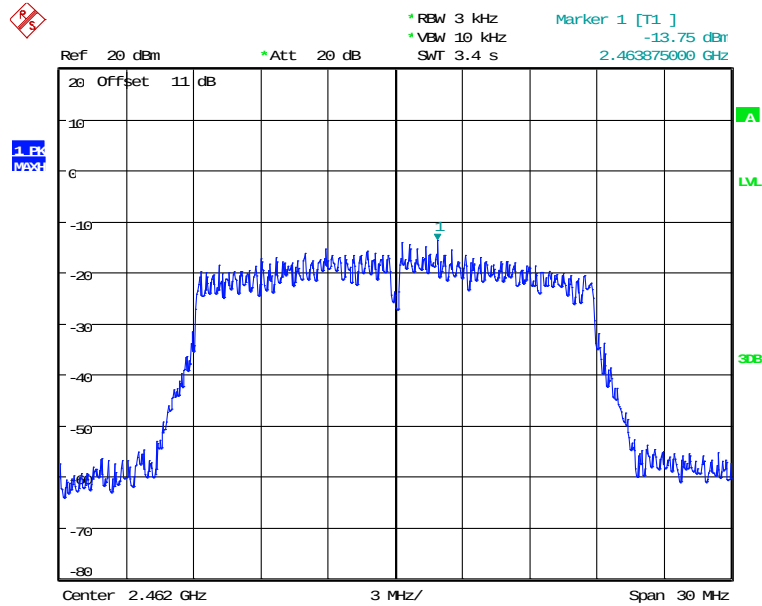


POWER DENSITY 802.11N 20MHZ CH06

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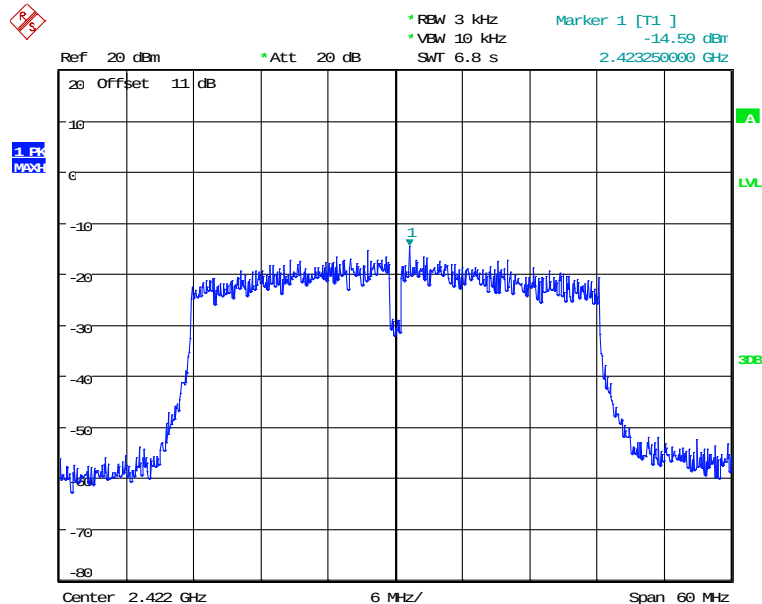


Registration number: W6R22602-24980-C-1
FCC ID: 2AVNXCYLH022

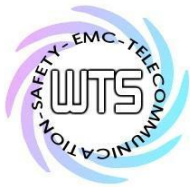


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Date: 29.APR.2025 19:53:47

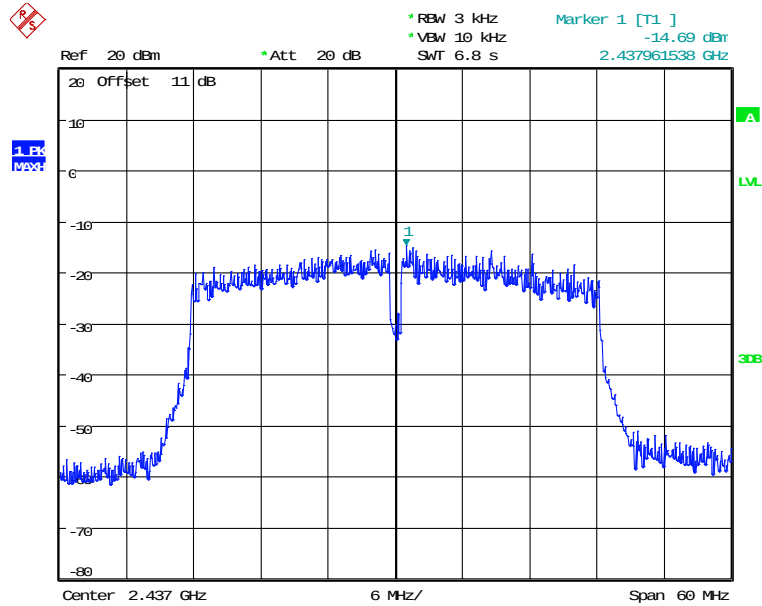
802.11n 40MHz



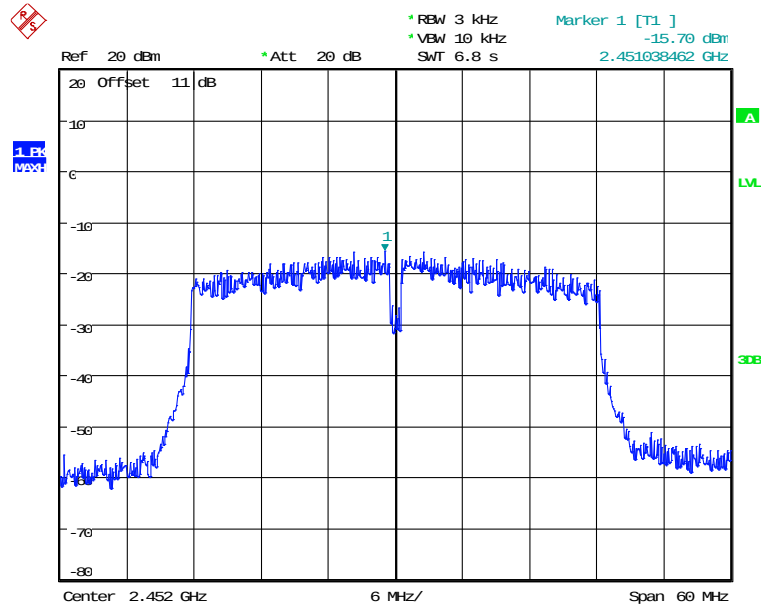
POWER DENSITY 802.11N 40MHZ CH01
Date: 29.APR.2025 19:59:11



Registration number: W6R22602-24980-C-1
FCC ID: 2AVNXCYLH022



POWER DENSITY 802.11N 40MHZ CH04
Date: 29.APR.2025 20:00:10



POWER DENSITY 802.11N 40MHZ CH07
Date: 29.APR.2025 20:01:12

3.6 Power Line Conducted Emission

3.6.1 Applicable Standard

FCC Rules:15.207(a)

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the table bellows with this provision shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminals.

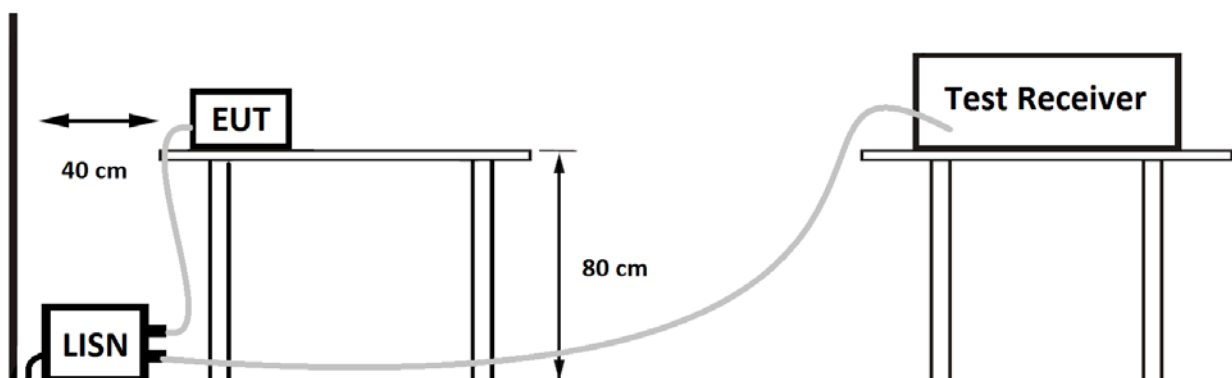
3.6.2 Limits

Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

3.6.3 Test procedure

1. EUT is placed on a test table, raised 80 cm above the reference ground plane. The vertical conducting plane is located 40 cm to the rear of the device.
2. Connect EUT to a 50 μH/50 ohms line impedance stabilization network (LISN). AC input is 120V/60Hz
3. This measurement was transact first with instrumentation using an average and peak detector and a 10 kHz bandwidth. If the peak detector achieves a calculated level, the measurement is repeated by an instrumentation using a quasi-peak detector.

3.6.4 Test setup



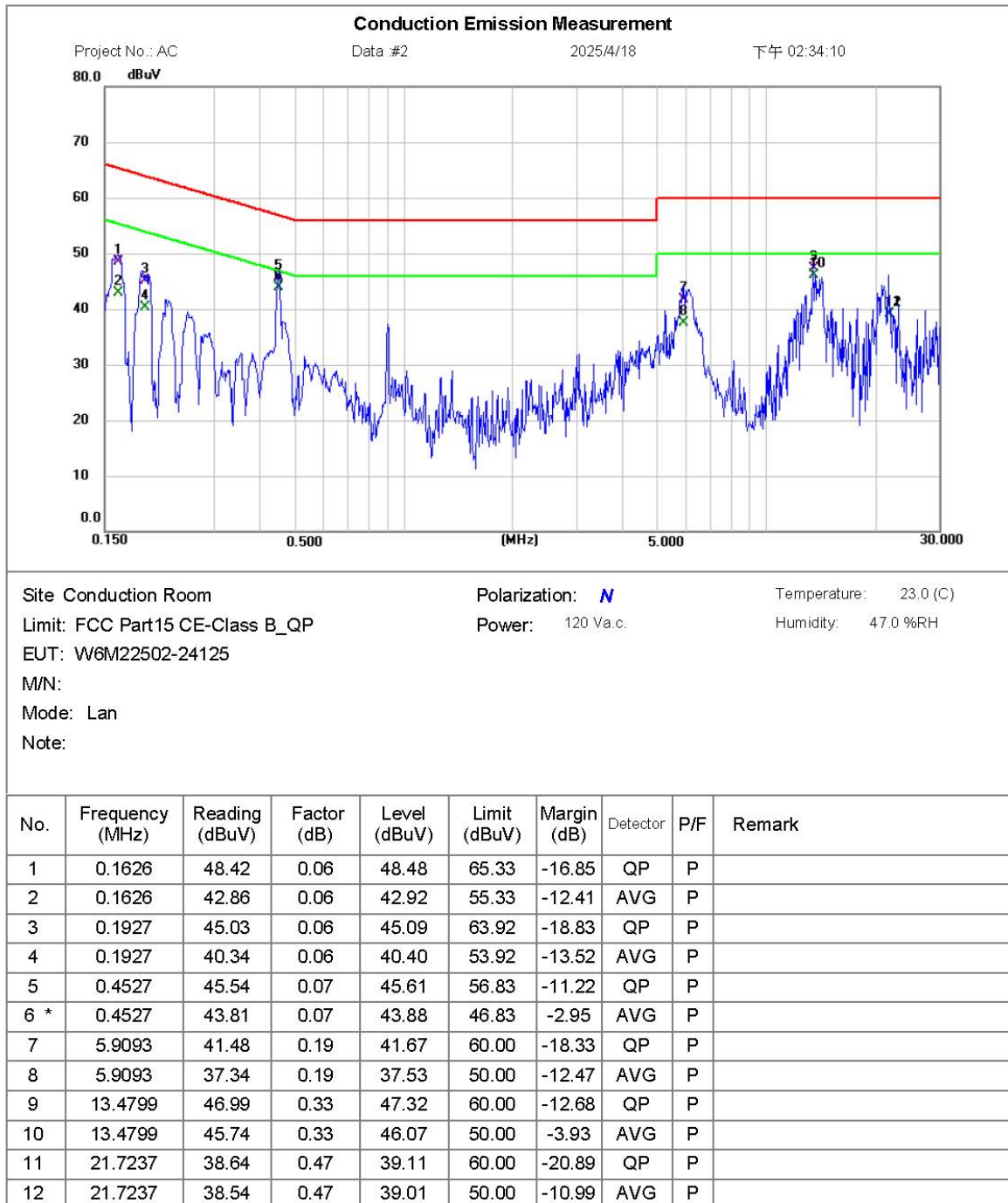
Registration number: W6R22602-24980-C-1

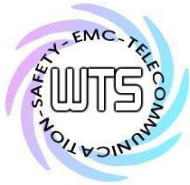
FCC ID: 2AVNXCYLH022

3.6.5 Test results (With Environmental Conditions)

Origin

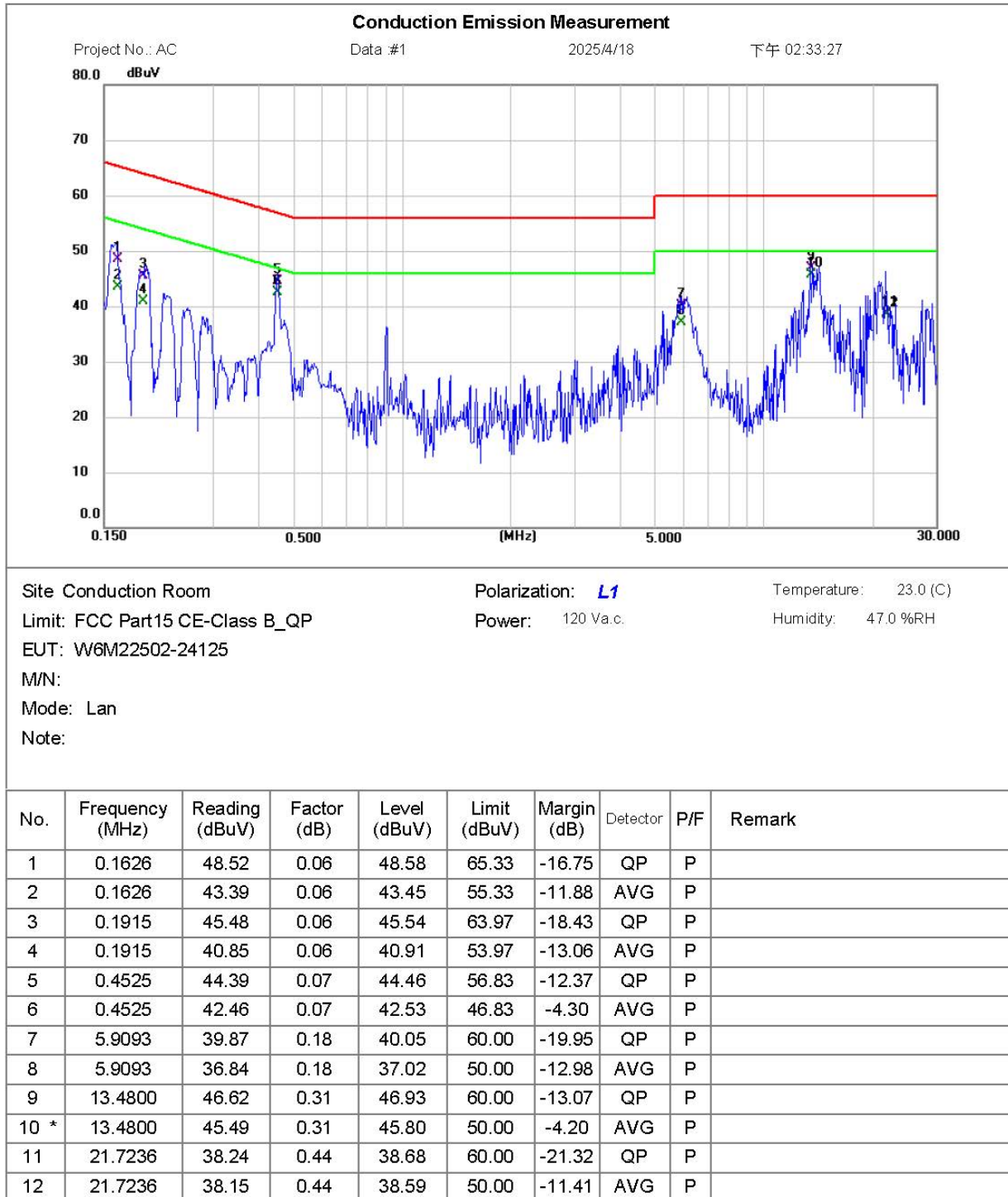
Mode 1

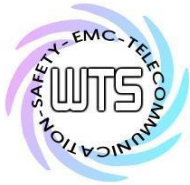




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Registration number: W6R22602-24980-C-1
FCC ID: 2AVNXCYLH022



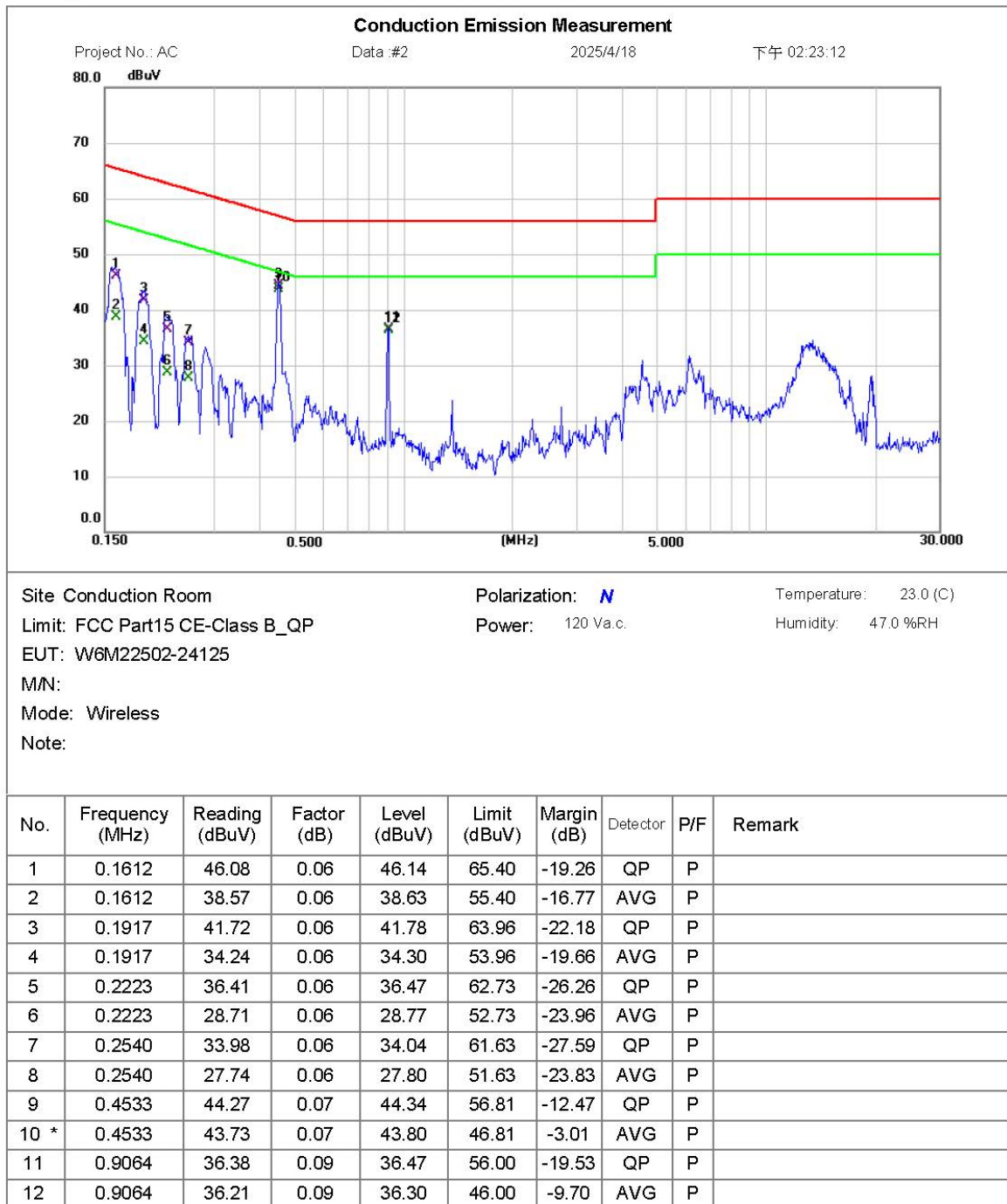


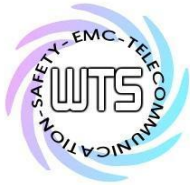
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22602-24980-C-1

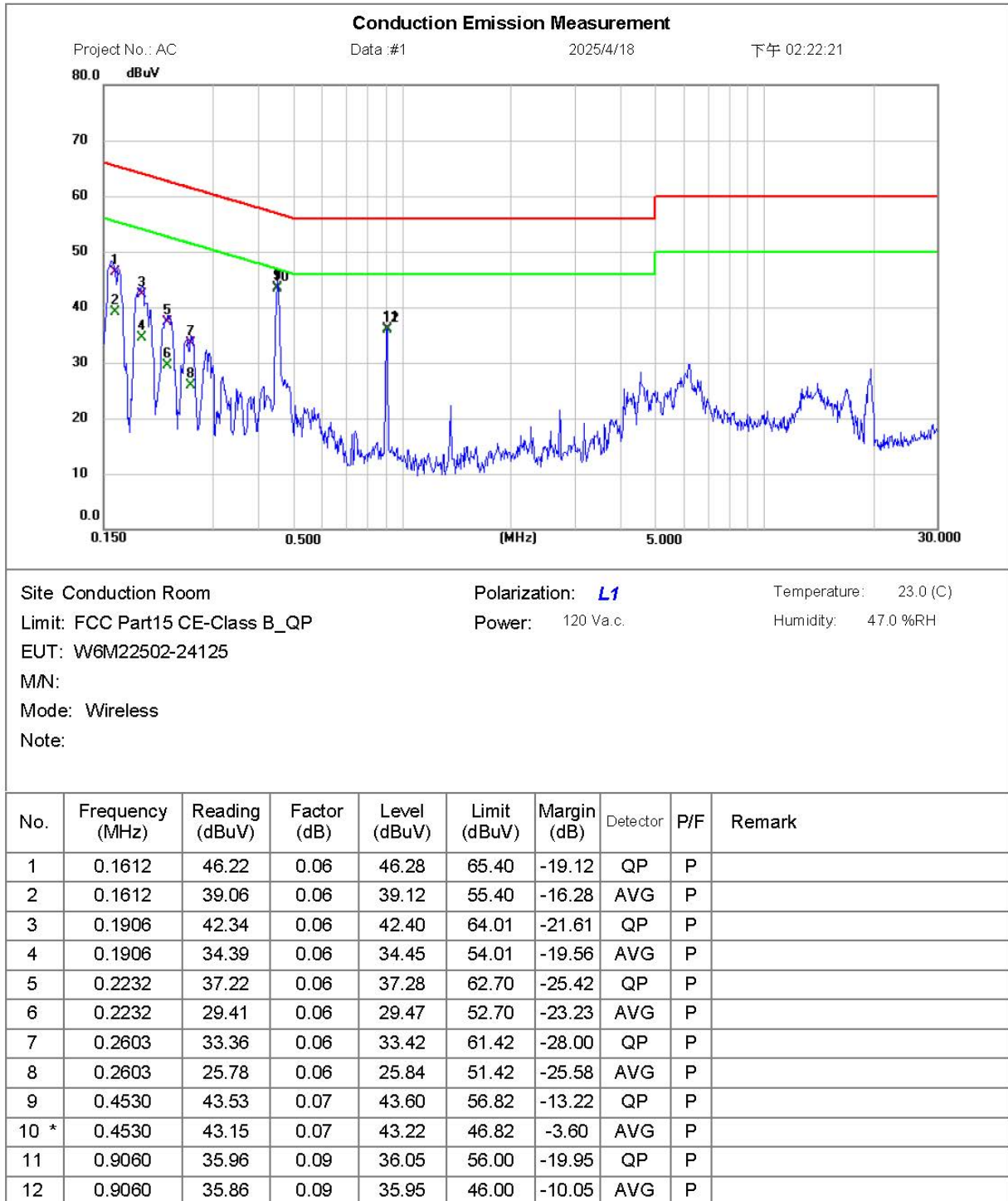
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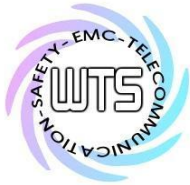
Mode 2





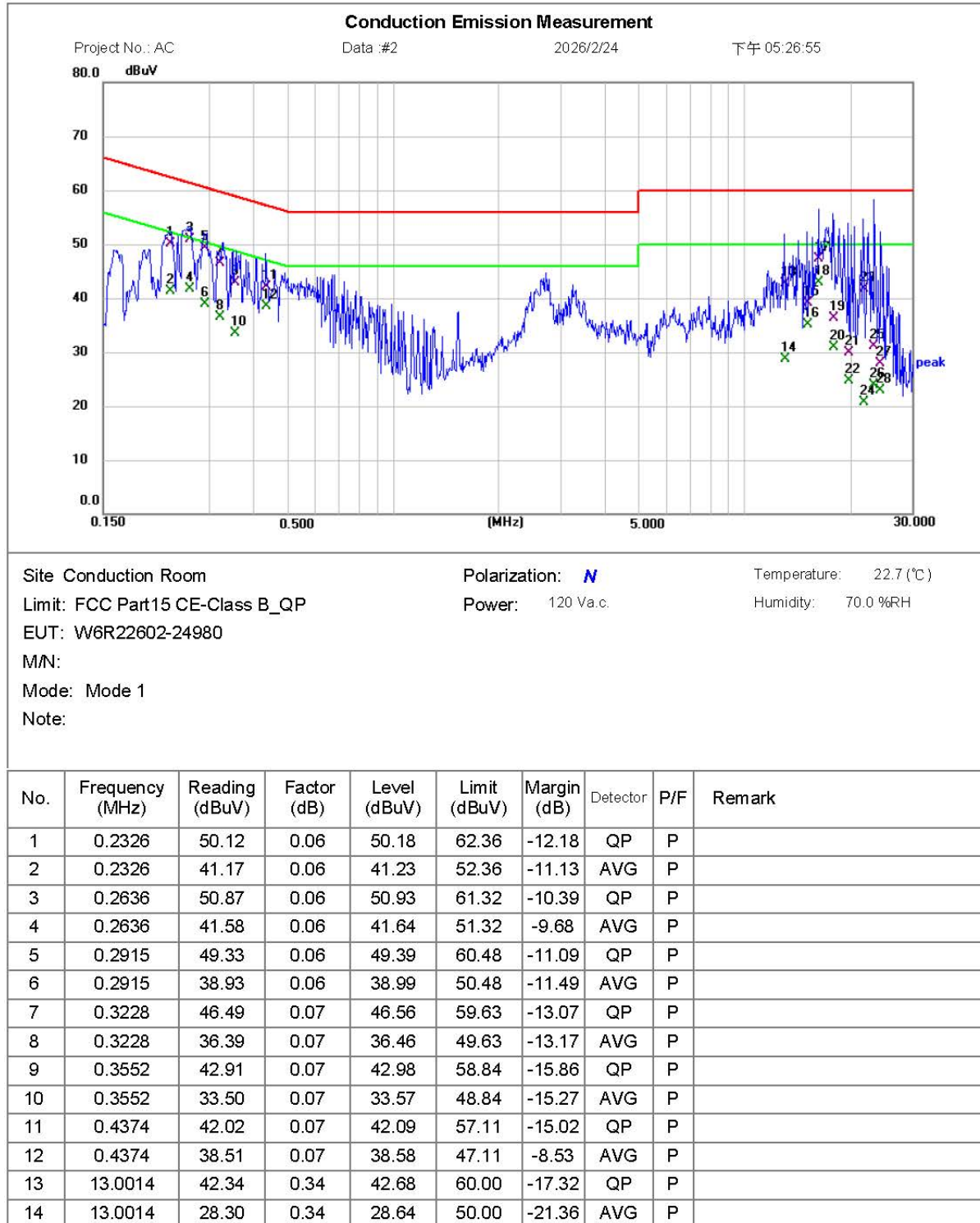
Registration number: W6R22602-24980-C-1
FCC ID: 2AVNXCYLH022

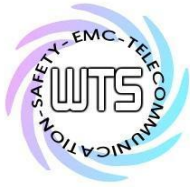




Registration number: W6R22602-24980-C-1
FCC ID: 2AVNXCYLH022

Add Mode 1





Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22602-24980-C-1
FCC ID: 2AVNXCYLH022

Site Conduction Room
Limit: FCC Part15 CE-Class B_QP
EUT: W6R22602-24980
M/N:
Mode: Mode 1
Note:

Polarization: **N**
Power: 120 Va.c.

Temperature: 22.7 (°C)
Humidity: 70.0 %RH

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
15	15.0678	38.79	0.40	39.19	60.00	-20.81	QP	P	
16	15.0678	34.64	0.40	35.04	50.00	-14.96	AVG	P	
17	16.2277	46.87	0.43	47.30	60.00	-12.70	QP	P	
18 *	16.2277	42.43	0.43	42.86	50.00	-7.14	AVG	P	
19	17.8589	35.83	0.46	36.29	60.00	-23.71	QP	P	
20	17.8589	30.49	0.46	30.95	50.00	-19.05	AVG	P	
21	19.7545	29.45	0.50	29.95	60.00	-30.05	QP	P	
22	19.7545	24.28	0.50	24.78	50.00	-25.22	AVG	P	
23	21.7348	41.17	0.54	41.71	60.00	-18.29	QP	P	
24	21.7348	20.12	0.54	20.66	50.00	-29.34	AVG	P	
25	23.3724	30.45	0.57	31.02	60.00	-28.98	QP	P	
26	23.3724	23.29	0.57	23.86	50.00	-26.14	AVG	P	
27	24.3955	27.41	0.59	28.00	60.00	-32.00	QP	P	
28	24.3955	22.28	0.59	22.87	50.00	-27.13	AVG	P	