

47 CFR PART 15 SUBPART C TEST REPORT
for
802.11ac/abgn 2T2R Half Mini-PCI-Express Module
Model No.: AWM5820
FCC ID: RPV-AWM5820

of

Applicant: ATOP Technologies, Inc
Address: 1F, No. 30 R&D Rd. II, Science-Based Industrial Park,
Hsinchu 30076, Taiwan R.O.C.

Tested and Prepared

by

Worldwide Testing Services (Taiwan) Co., Ltd.

FCC Registration No.: TW1477, TW1072

Industry Canada filed test laboratory Reg. No.: 20037, 5107A



Report No.: W6M22403-23316-C-1

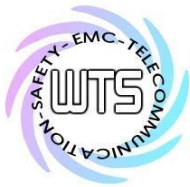


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1 General Information

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:

April 18, 2024

Ken Kang

Date

WTS-Lab.

Name

Signature

Technical responsibility for area of testing:

April 18, 2024

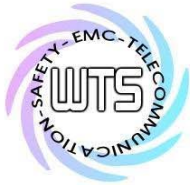
Kevin Wang

Date

WTS

Name

Signature



Registration number: W6M22403-23316-C-1

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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

No.35, Aly. 21, Ln. 228, Ankang Rd., Neihu Dist.,
Taipei City 114, Taiwan (R.O.C.)
Tel: 886-2-6613-0228

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.: TW1477, TW1072

Industry Canada filed test laboratory Reg. No.: 20037, 5107A

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

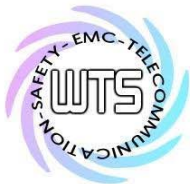
Name: ./.
Accredited number: ./.
Street: ./.
Town: ./.
Country: ./.

1.3 Application details

Name: ATOP Technologies, Inc
Street: 1F, No. 30 R&D Rd. II, Science-Based Industrial Park,
Town: Hsinchu 30076,
Country: Taiwan R.O.C.

Manufacturer: (if applicable)

Name: ./.
Street: ./.
Town: ./.
Country: ./.



Registration number: W6M22403-23316-C-1

FCC ID: RPV-AWM5820

Date of receipt of test item: March 19, 2024

Date of test: from March 20, 2024 to April 17, 2024

1.4 General information of Test item

Type of test item: 802.11ac/abgn 2T2R Half Mini-PCI-Express Module

Model no.: AWM5820

Multi-listing model no.: ./.

Brand name: ATOP

Power supply: 3.3Vd.c.

Antenna type: #614X Replacement Antenna

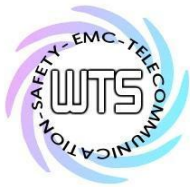
Antenna gain: 3dBi (ANT 1 & ANT 2)

Directional gain: 6.01dBi

According to KDB 662911, Unequal antenna gains, with equal transmit powers. For antenna gains given by G_1 , G_2 , ..., G_N dBi. If transmit signals are correlated, then Directional gain $= 10 \log[(10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_N/20})^2 / N]$ dBi [Note the “20”s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]

Technical data

WLAN		
Mode	Channel	Conducted Power (dBm)
802.11b	Ch 1 : 2412 MHz	11.11
	Ch 6 : 2437 MHz	10.93
	Ch 11 : 2462 MHz	10.65
802.11g	Ch 1 : 2412 MHz	12.35
	Ch 6 : 2437 MHz	11.65
	Ch 11 : 2462 MHz	11.30
802.11n 20MHz	Ch 1 : 2412 MHz	13.60
	Ch 6 : 2437 MHz	13.11
	Ch 11 : 2462 MHz	12.71
802.11n 40MHz	Ch 1 : 2422 MHz	13.14
	Ch 4 : 2437 MHz	12.75
	Ch 7 : 2452 MHz	12.53



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Operation modes: Duplex
Modulation type: DSSS/OFDM
Sample no.: #01

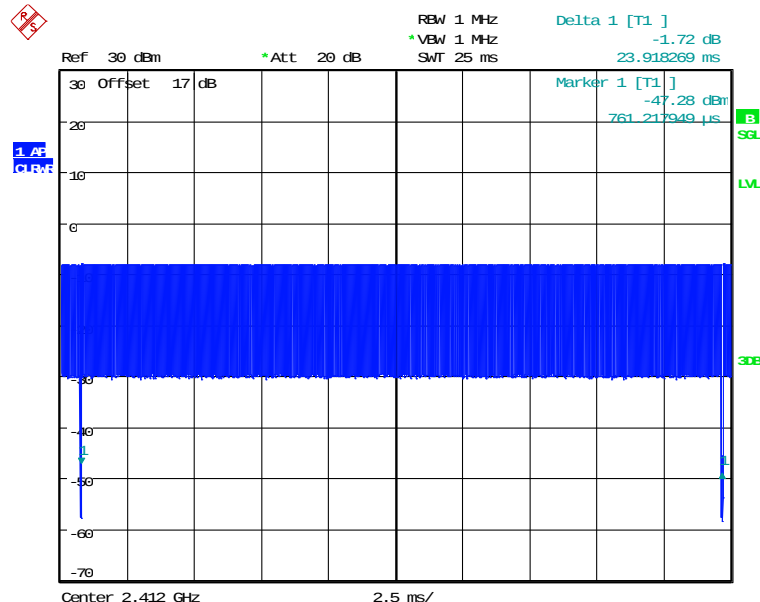
1.5 Duty Cycles

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)
802.11b	23.87821	23.918269	99.83%	0.01	0.01
802.11g	23.87821	23.918269	99.83%	0.01	0.01
802.11n 20MHz	23.87821	23.926282	99.80%	0.01	0.01
802.11n 40MHz	23.87019	23.918269	99.80%	0.01	0.01

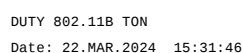
Duty cycle plot
802.11b



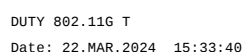
DUTY 802.11B T
Date: 22.MAR.2024 15:32:21

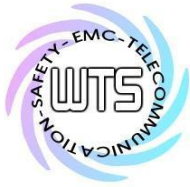


FCC ID: RPV-AWM5820

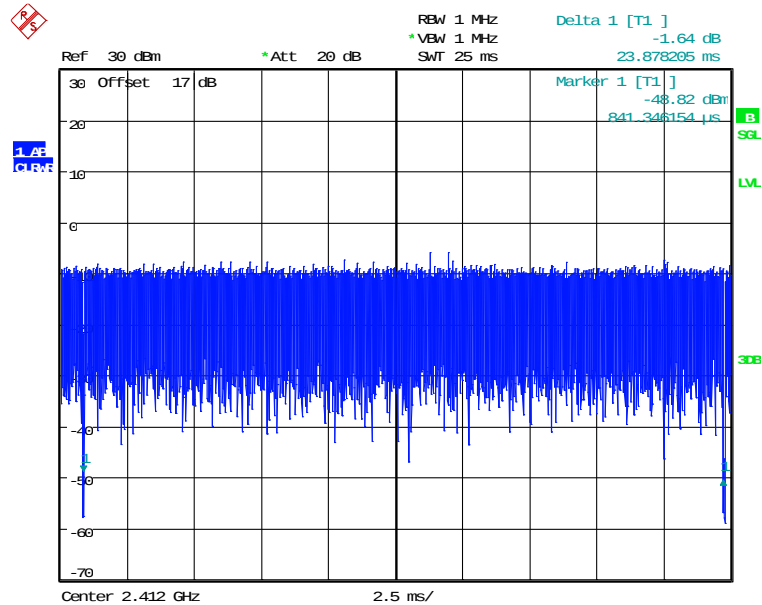


802.11g



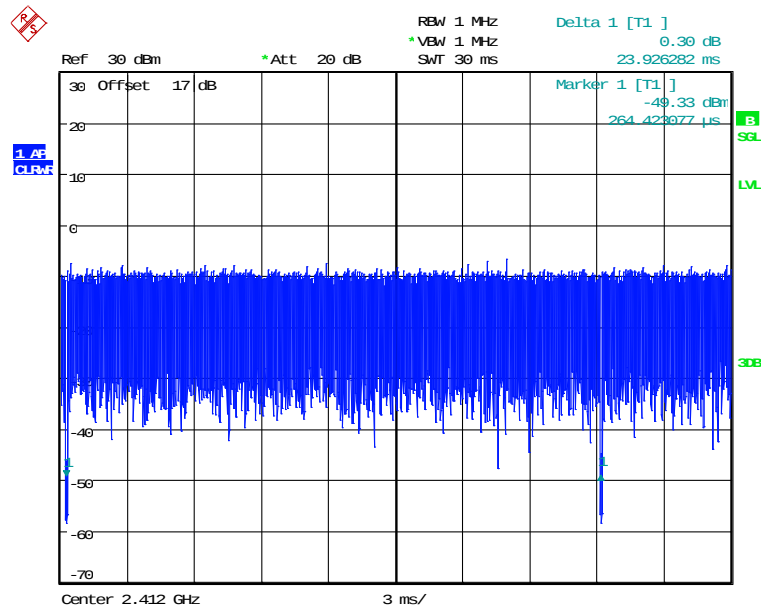


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FCC ID: RPV-AWM5820



DUTY 802.11G TON
Date: 22.MAR.2024 15:33:59

802.11n 20MHz



DUTY 802.11N20 T
Date: 22.MAR.2024 15:38:22



FCC ID: RPV-AWM5820

DUTY 802.11N20 TON
Date: 22.MAR.2024 15:38:07

DUTY 802.11N40 T
Date: 22.MAR.2024 15:39:54



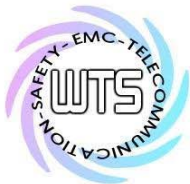
Ref 30 dBm * Att 20 dB RBW 1 MHz VBW 1 MHz SWT 30 ms Delta 1 [T1] -2.82 dB 23.870192 ms

30 Offset 17 dB Marker 1 [T1] -46.34 dBm 2.860577 ms

Center 2.422 GHz 3 ms/

1.6 Test standards

Technical standard : 47 CFR PART 15 SUBPART C § 15.247 (2022-10)



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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: 3.3Vd.c.

Extreme conditions parameters: ./.

Test item Name	Uncertainty
Estimation Result of Uncertainty of Conducted Emission (Power Line Conducted Emission)	Expanded Uncertainty : AMN : 0.94 dB Voltage probe : 0.96 dB Include Pulse Limiter : 1.5 dB
Estimation Result of Uncertainty of Radiated Emission(3M - 966A) (Spurious Emissions radiated – Transmitter operating)	Expanded Uncertainty : 0.009-30 MHz : 1.88 dB 30-1000 MHz : 3.20 dB 1-18 GHz : 3.56 dB 18-40 GHz : 2.94 dB
Estimation Result of Uncertainty of Bandwidth Measurement (Minimum 6 dB Bandwidth)	Expanded Uncertainty : 0.45 kHz
Estimation Result of Uncertainty of Conducted Output Power Measurement (Peak Output Power (transmitter))	Expanded Uncertainty : 1.64 dB
Estimation Result of Uncertainty of Power Density Measurement (Peak Power Spectral Density)	Expanded Uncertainty : 1.64 dB
Estimation Result of Uncertainty of Band Edge Measurement (Emissions in nonrestricted frequency bands)	Expanded Uncertainty : 0.67 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

AC Conducted

Code No.	Test equipment	Mode No.	Serial No.	Brand	Cal. Date	Next Cal. Date
ETSTW-CE 001	EMI TEST RECEIVER	ESHS10	842121/013	R&S	2023/6/12	2024/6/11
ETSTW-CE 003	AC POWER SOURCE	APS-9102	D161137	GW	Function Test	
ETSTW-CE 016	TWO-LINE V-NETWORK	ENV216	100050	R&S	2023/10/26	2024/10/25
ETSTW-RE 045	ESA-E SERIES SPECTRUM ANALYZER	E4404B	MY45111242	Agilent	Pre-test Use	
ETSTW-Cable 093	BNC Cable (3m)	EMCCFD-300 -BM-BM-3000	240109	EMCI	2024/1/10	2025/1/9
WTSTW-SW 002	EMI TEST SOFTWARE	EZ_EMC	None	Farad	Version ETS-03A1 Version EMEC-3A1+	

966A Spurious Emission & Bandedge

Code No.	Test equipment	Mode No.	Serial No.	Brand	Cal. Date	Next Cal. Date
ETSTW-RE 153	Signal Analyzer	FSV40	101929	R&S	2023/9/20	2024/9/19
ETSTW-RE 154	EMI Test Receiver	ESR3	102829	R&S	2023/4/13	2024/4/12
ETSTW-RE 160	Amplifier Module	CHC 3	None	WTS	2023/7/14	2024/7/13
ETSTW-RE 177	TRILOG Broadband Antenna	VULB 9168&EMCI-N-6-06	01380&AT-06007	SCHWARZBECK&EMC	2024/3/4	2025/3/3
ETSTW-RE 178	Double Ridged Guide Horn Antenna	DRH18-E	210505A18ES	RFSPIN	2024/2/29	2025/2/28
ETSTW-Cable 077	SMA type cable (10m)	EMC104-SM-SM-10000	230511	EMCI	2023/7/14	2024/7/13
ETSTW-Cable 084	SMA type cable (1m)	SF104-11SMA-1000	816477/4	HONOVA	2023/7/14	2024/7/13
ETSTW-Cable 089	SMA type cable (2m)	SF104-11SMA-2000	SN 811889/4	HUBER+SUHNER	2023/7/14	2024/7/13
WTSTW-SW 002	EMI TEST SOFTWARE	EZ_EMC	None	Farad	Version ETS-03A1 Version EMEC-3A1+	

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	2024/2/16	2025/2/15
ETSTW-RE 055	SPECTRUM ANALYZER	FSU 26	200074	R&S	2024/3/7	2025/3/6
ETSTW-RE 099	DC Block	50DB-007-1	None	JFW	2024/2/16	2025/2/15
ETSTW-Cable 030	Microwave Cable	SUCOFLEX 104 (S_Cable 9)	279067	HUBER+SUHNER	2024/2/16	2025/2/15

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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



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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.

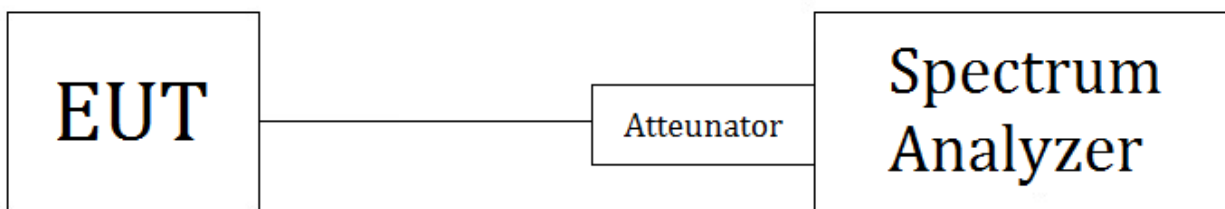
The power was measured with modulation (declared by the applicant).

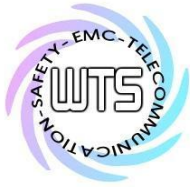
3.1.2 Test procedure

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





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3.1.4 Test results

Test date : 2024/04/09

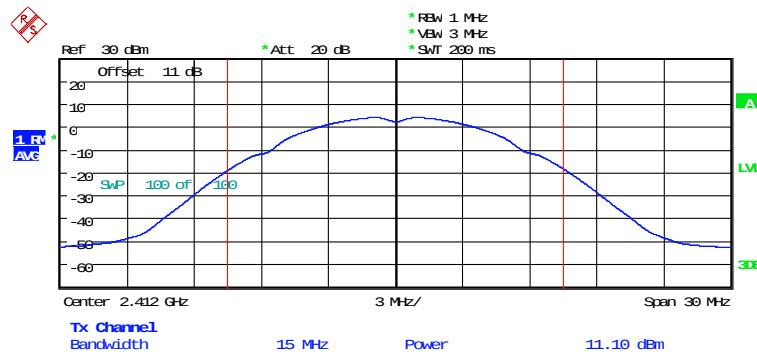
Temperature: 26.2°C

Humidity: 60.0 %

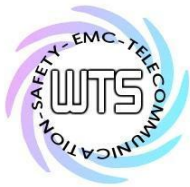
Tester: Ken

Band	Mode	Channel	Conducted power with DF		Combine (dBm)	DF (dB)	Limit (dBm)
			Antenna 1 (dBm)	Antenna 2 (dBm)			
2.4GHz	802.11b	Ch 1 : 2412 MHz	11.11	10.58	-	0.01	29.99
		Ch 6 : 2437 MHz	10.93	9.97	-	0.01	29.99
		Ch 11 : 2462 MHz	10.65	9.48	-	0.01	29.99
	802.11g	Ch 1 : 2412 MHz	11.95	12.35	-	0.01	29.99
		Ch 6 : 2437 MHz	11.63	11.65	-	0.01	29.99
		Ch 11 : 2462 MHz	11.30	11.08	-	0.01	29.99
	802.11n 20MHz	Ch 1 : 2412 MHz	10.87	10.30	13.60	0.01	29.99
		Ch 6 : 2437 MHz	10.51	9.65	13.11	0.01	29.99
		Ch 11 : 2462 MHz	10.22	9.10	12.71	0.01	29.99
	802.11n 40MHz	Ch 1 : 2422 MHz	10.49	9.73	13.14	0.01	29.99
		Ch 4 : 2437 MHz	10.12	9.33	12.75	0.01	29.99
		Ch 7 : 2452 MHz	10.02	8.95	12.53	0.01	29.99

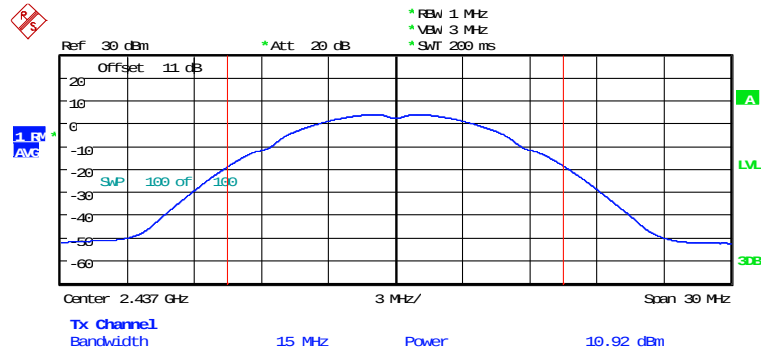
ANT 1
802.11b



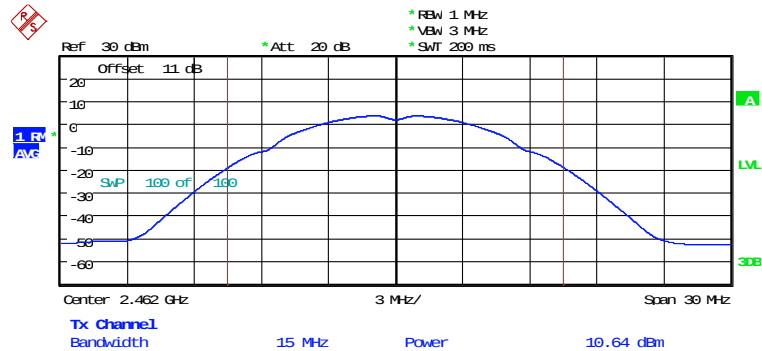
MAX OUTPUT POWER 802.11B CH01
Date: 9.APR.2024 11:58:18



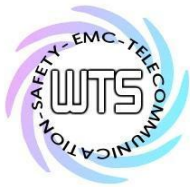
Registration number: W6M22403-23316-C-1
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MAX OUTPUT POWER 802.11B CH06
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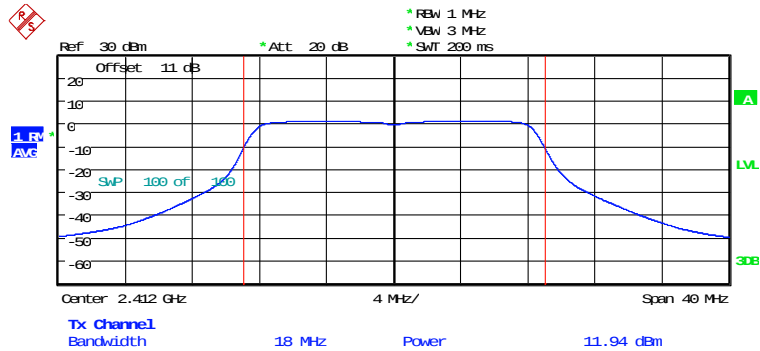
MAX OUTPUT POWER 802.11B CH11
Date: 9.APR.2024 11:59:38



Registration number: W6M22403-23316-C-1

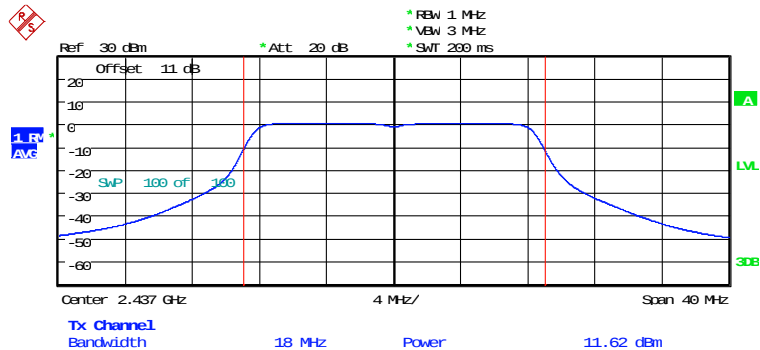
FCC ID: RPV-AWM5820

802.11g



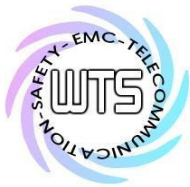
MAX OUTPUT POWER 802.11G CH01

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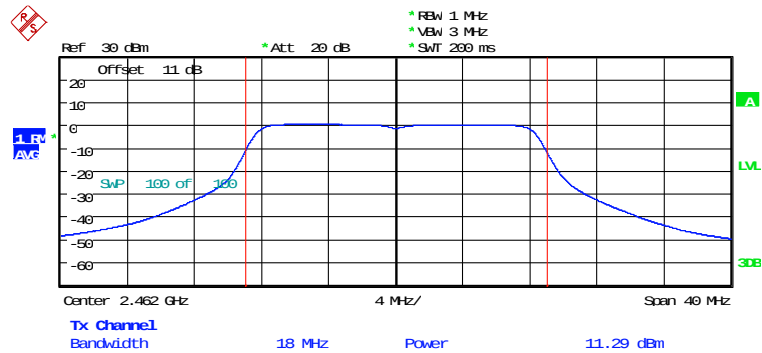


MAX OUTPUT POWER 802.11G CH06

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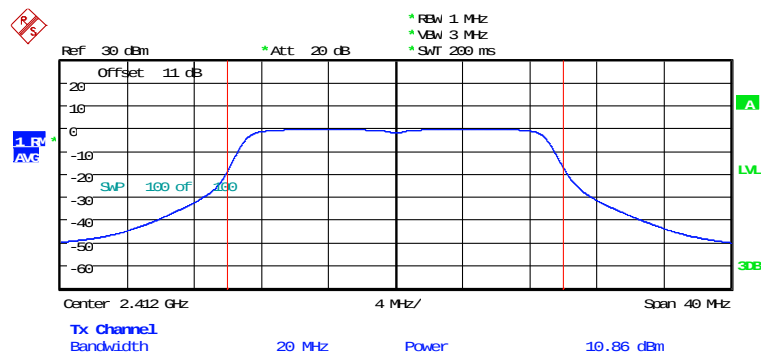


Registration number: W6M22403-23316-C-1
FCC ID: RPV-AWM5820

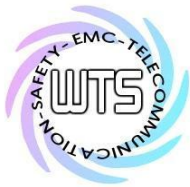


MAX OUTPUT POWER 802.11G CH11
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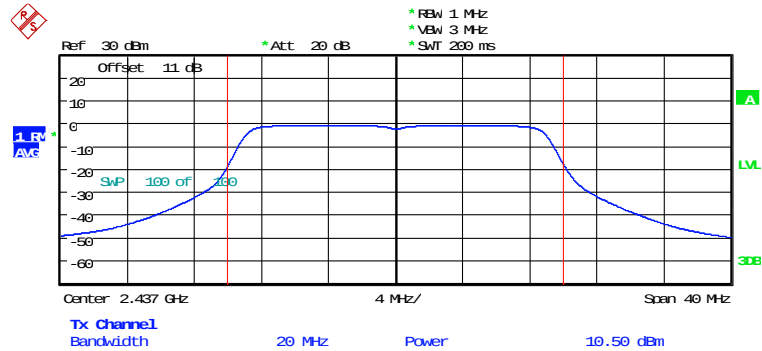
802.11n 20MHz



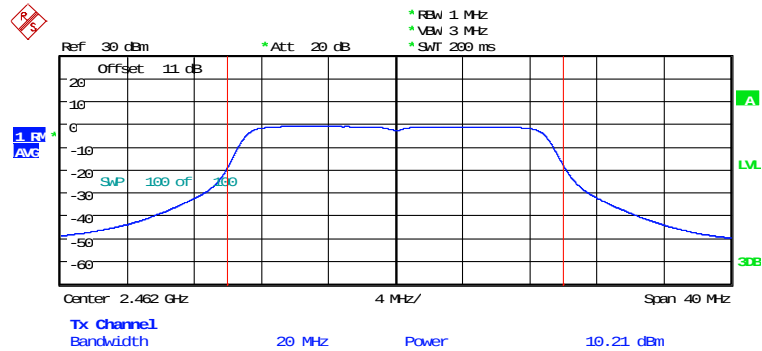
MAX OUTPUT POWER 802.11N 20MHZ CH01
Date: 9.APR.2024 12:03:21



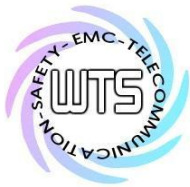
Registration number: W6M22403-23316-C-1
FCC ID: RPV-AWM5820



MAX OUTPUT POWER 802.11N 20MHZ CH06
Date: 9.APR.2024 12:04:00



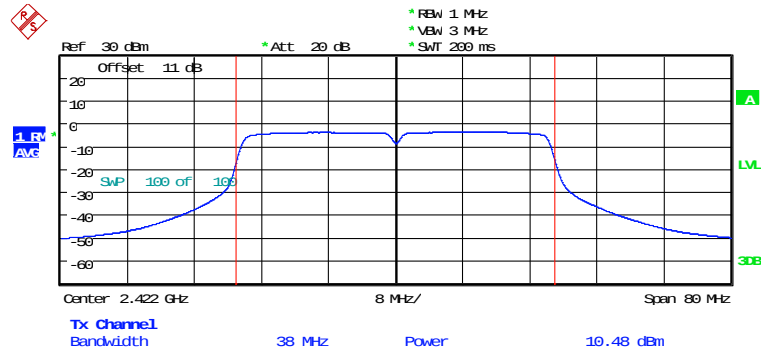
MAX OUTPUT POWER 802.11N 20MHZ CH11
Date: 9.APR.2024 12:04:42



Registration number: W6M22403-23316-C-1

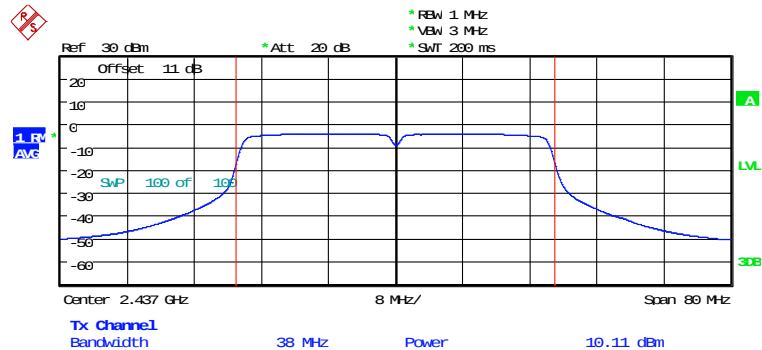
FCC ID: RPV-AWM5820

802.11n 40MHz



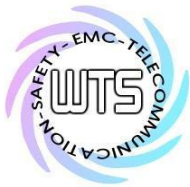
MAX OUTPUT POWER 802.11N 40MHZ CH01

Date: 9.APR.2024 12:05:43

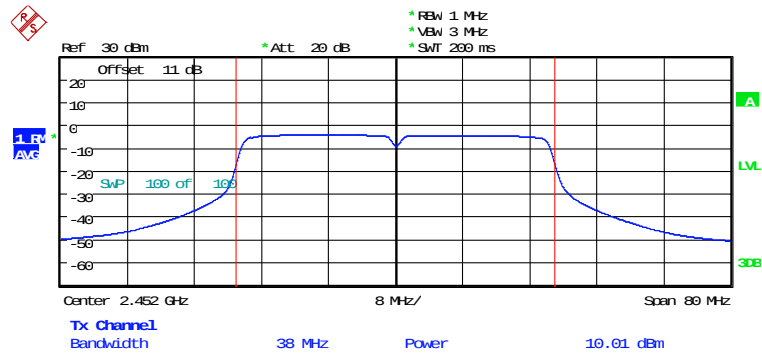


MAX OUTPUT POWER 802.11N 40MHZ CH04

Date: 9.APR.2024 12:06:35

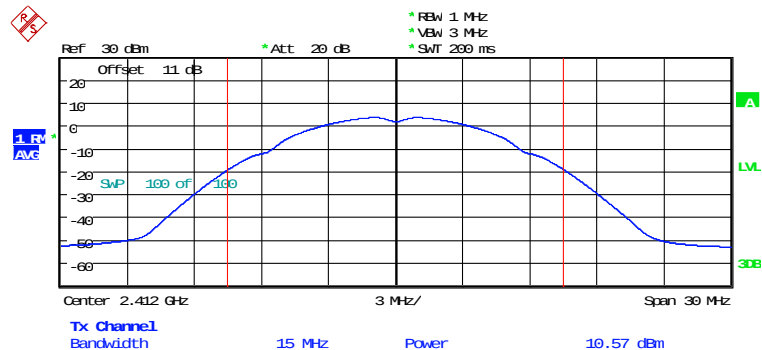


Registration number: W6M22403-23316-C-1
FCC ID: RPV-AWM5820

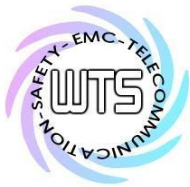


MAX OUTPUT POWER 802.11N 40MHZ CH07
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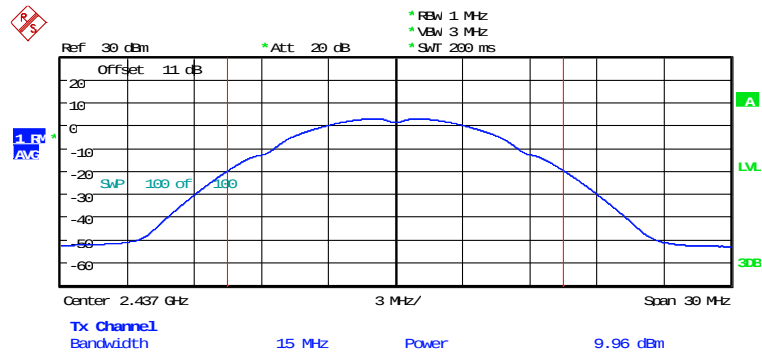
ANT 2
802.11b



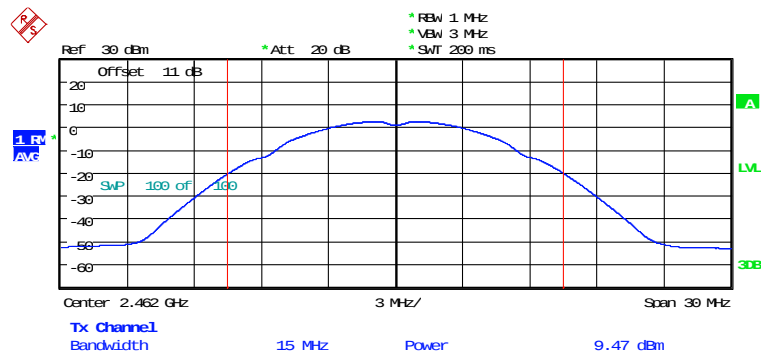
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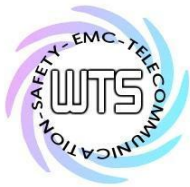
Registration number: W6M22403-23316-C-1
FCC ID: RPV-AWM5820



MAX OUTPUT POWER 802.11B CH06
Date: 9.APR.2024 13:19:04



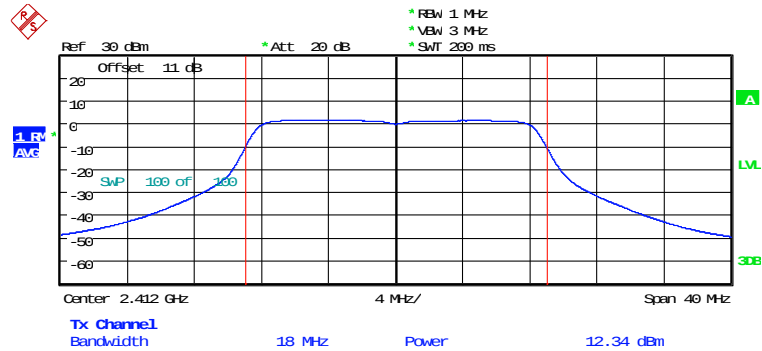
MAX OUTPUT POWER 802.11B CH11
Date: 9.APR.2024 13:19:53



Registration number: W6M22403-23316-C-1

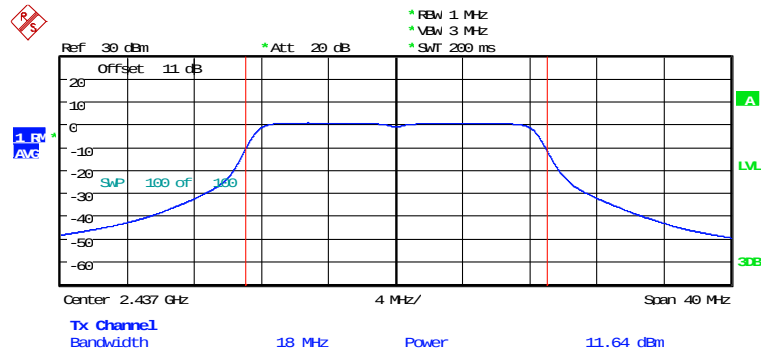
FCC ID: RPV-AWM5820

802.11g



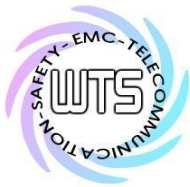
MAX OUTPUT POWER 802.11G CH01

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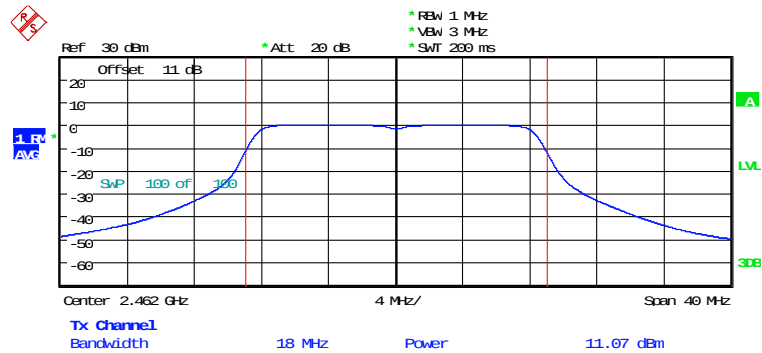


MAX OUTPUT POWER 802.11G CH06

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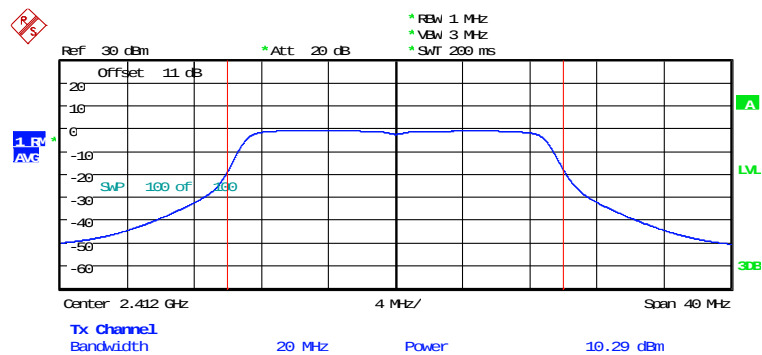


Registration number: W6M22403-23316-C-1
FCC ID: RPV-AWM5820

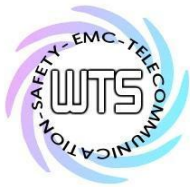


MAX OUTPUT POWER 802.11G CH11
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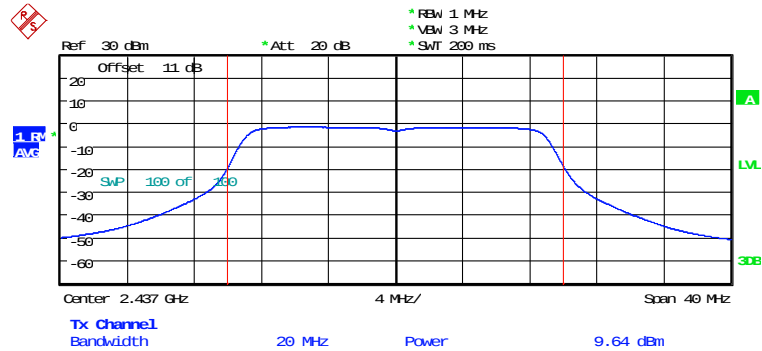
802.11n 20MHz



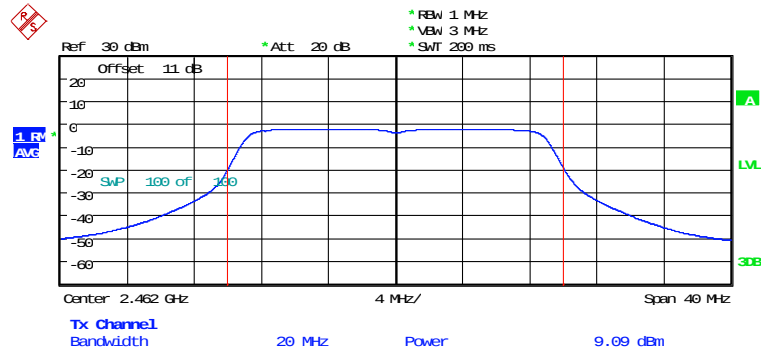
MAX OUTPUT POWER 802.11N 20MHZ CH01
Date: 9.APR.2024 13:23:27



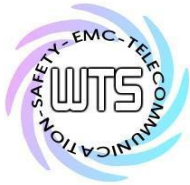
Registration number: W6M22403-23316-C-1
FCC ID: RPV-AWM5820



MAX OUTPUT POWER 802.11N 20MHZ CH06
Date: 9.APR.2024 13:24:10



MAX OUTPUT POWER 802.11N 20MHZ CH11
Date: 9.APR.2024 13:24:53

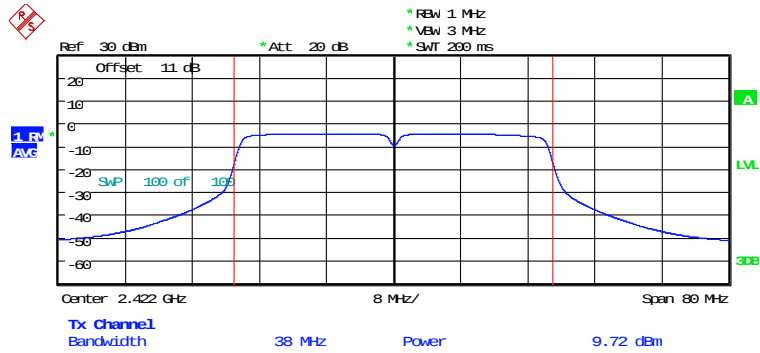


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22403-23316-C-1

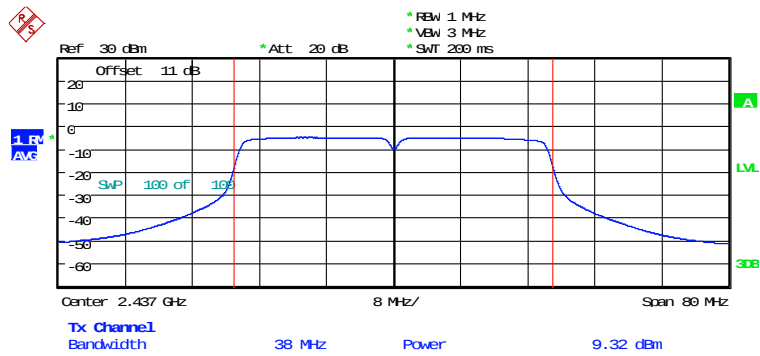
FCC ID: RPV-AWM5820

802.11n 40MHz



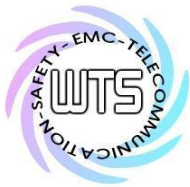
MAX OUTPUT POWER 802.11N 40MHZ CH01

Date: 9.APR.2024 13:25:57

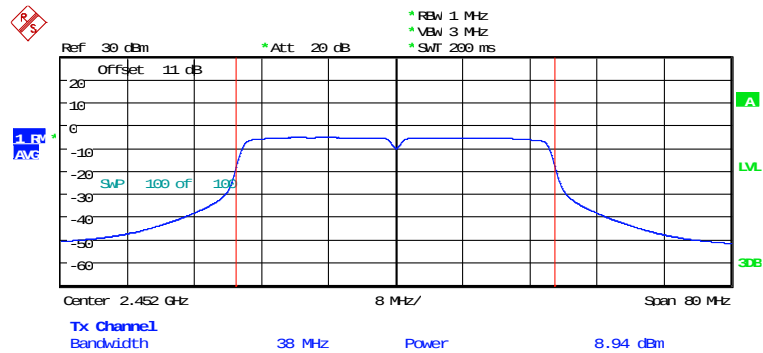


MAX OUTPUT POWER 802.11N 40MHZ CH04

Date: 9.APR.2024 13:26:44



Registration number: W6M22403-23316-C-1
FCC ID: RPV-AWM5820



MAX OUTPUT POWER 802.11N 40MHZ CH07
Date: 9.APR.2024 13:27:26



Registration number: W6M22403-23316-C-1

FCC ID: RPV-AWM5820

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.

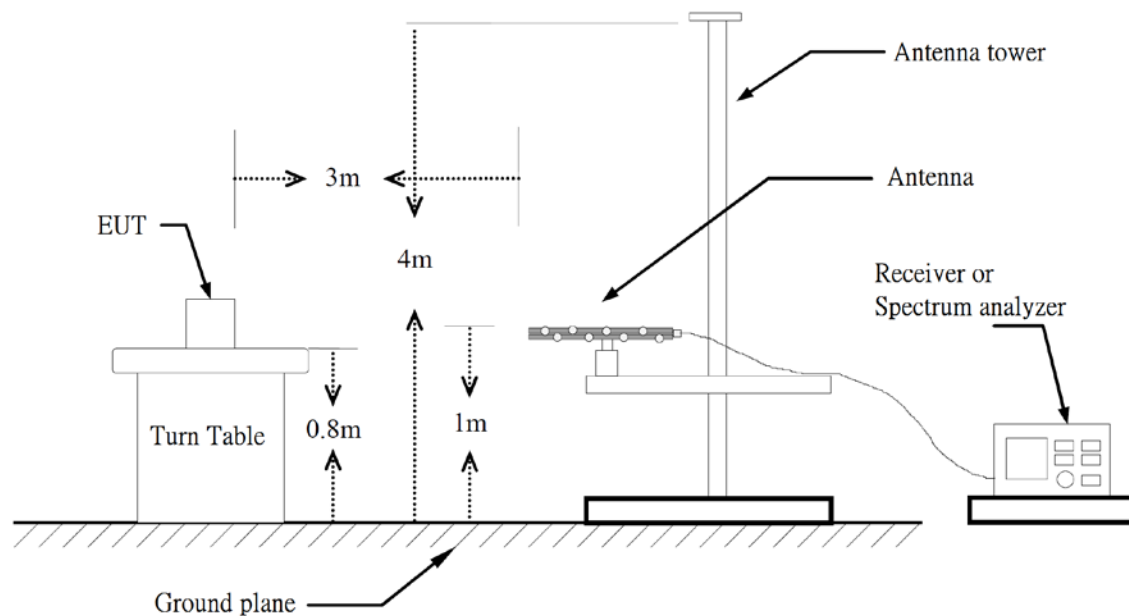
3.2.3 Limits

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

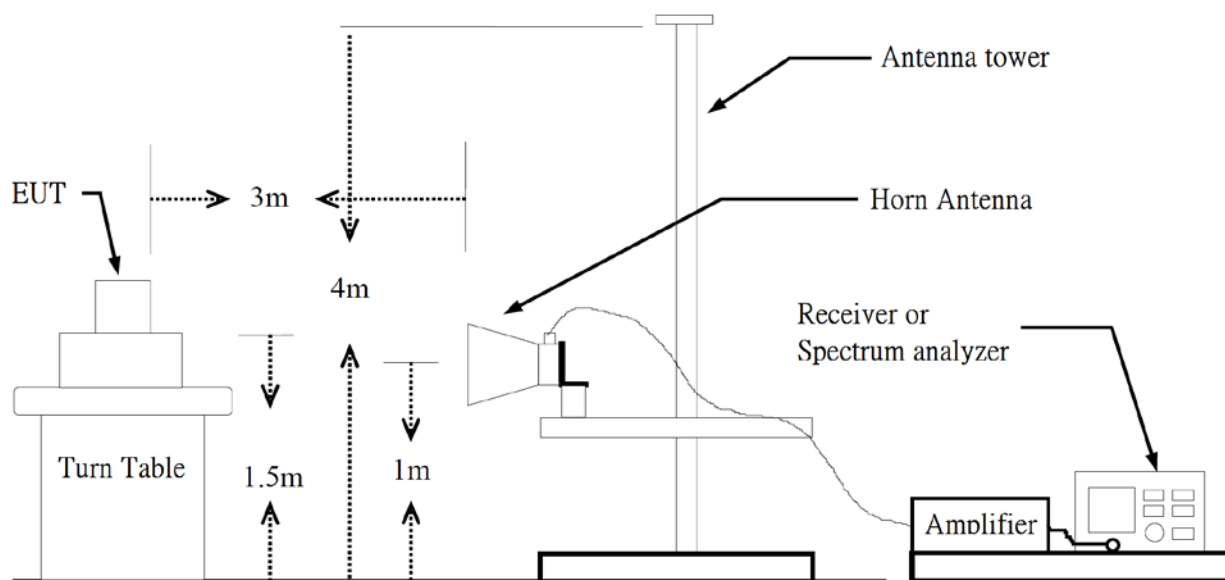
Registration number: W6M22403-23316-C-1

FCC ID: RPV-AWM5820

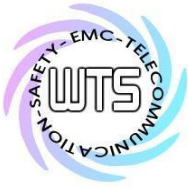
3.2.4 Test Setup



Below 1 GHz



Above 1 GHz



Registration number: W6M22403-23316-C-1

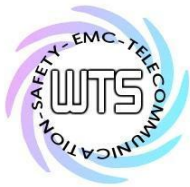
FCC ID: RPV-AWM5820

3.2.5 Test results (With Environmental Conditions)

Explanation: See attached diagrams in Appendix.

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**



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.

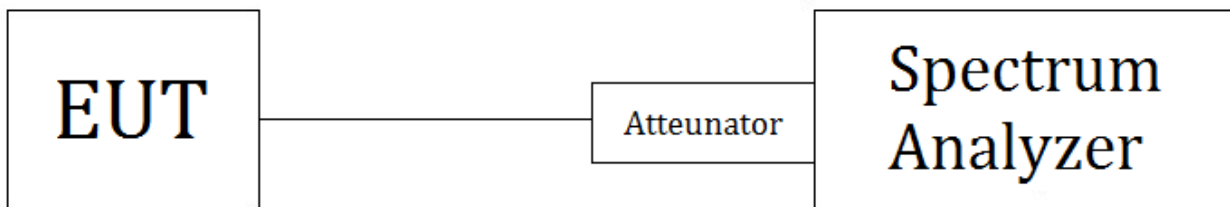
Attenuation below the general limits specified in § 15.209(a) is not required.

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 : 2024/04/09

Temperature: 26.2°C

Humidity: 60.0 %

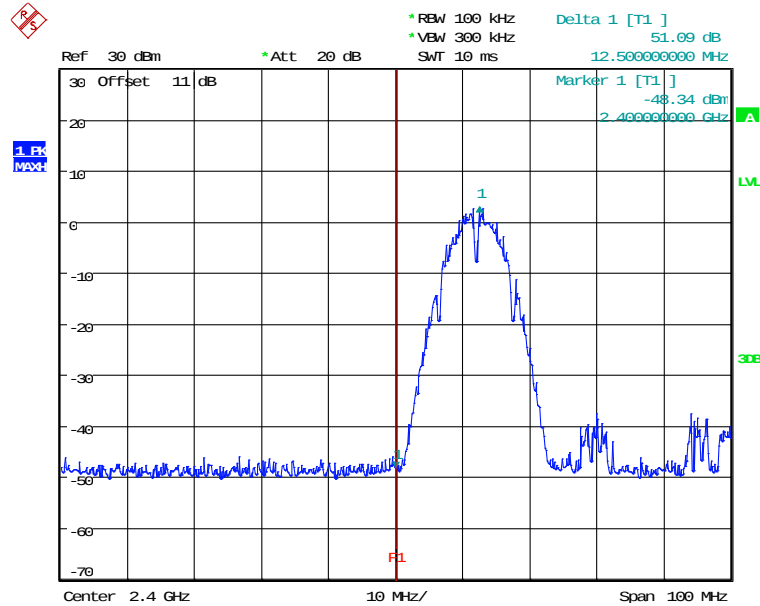
Tester: Ken

Registration number: W6M22403-23316-C-1
FCC ID: RPV-AWM5820

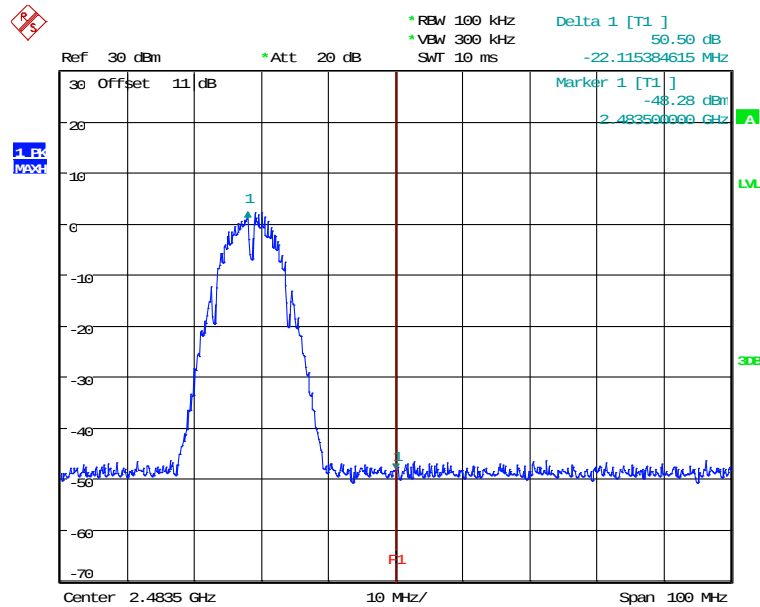
3.3.6 Test results

ANT 1

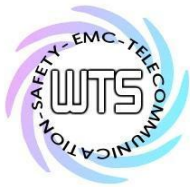
802.11b



BANDEDGE 802.11B CH01
Date: 9.APR.2024 11:38:51



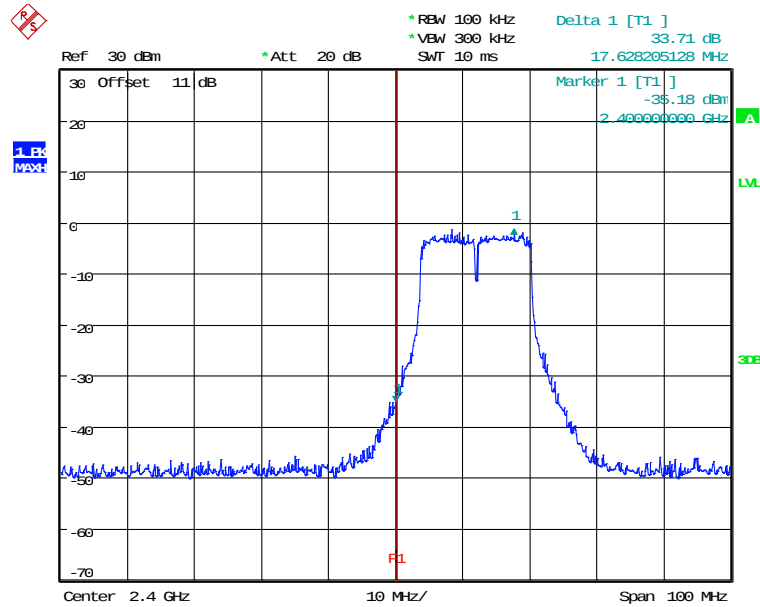
BANDEDGE 802.11B CH11
Date: 9.APR.2024 11:53:23



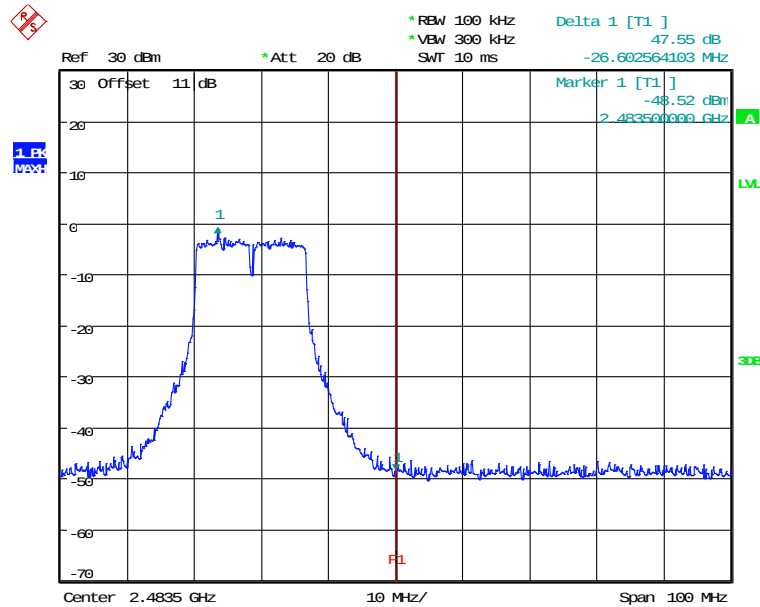
Registration number: W6M22403-23316-C-1

FCC ID: RPV-AWM5820

802.11g



BANDEGE 802.11G CH01
Date: 9.APR.2024 11:42:57



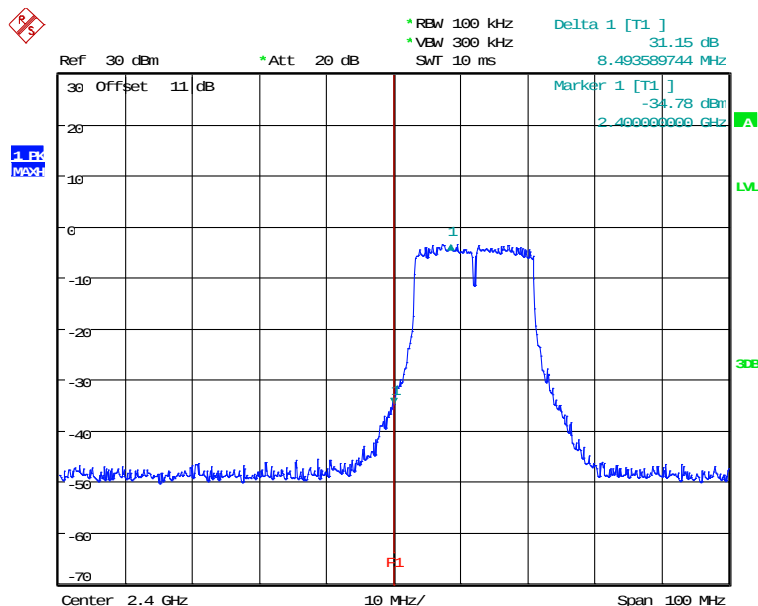
BANDEGE 802.11G CH11
Date: 9.APR.2024 11:46:40



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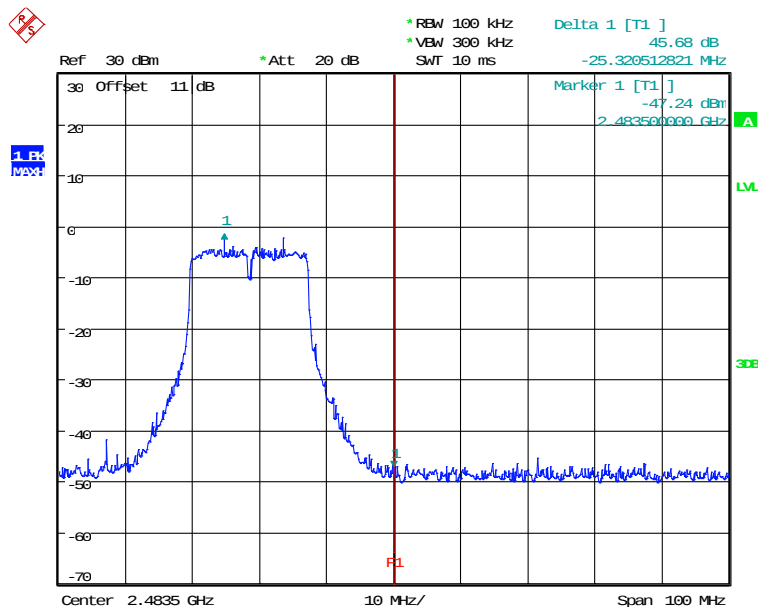
FCC ID: RPV-AWM5820

802.11n 20MHz



BANDEDGE 802.11N 20MHZ CH01

Date: 9.APR.2024 11:47:32



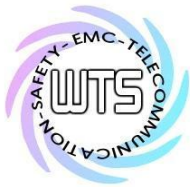
BANDEDGE 802.11N 20MHZ CH11

Date: 9.APR.2024 11:49:07



802.11n 40MHz

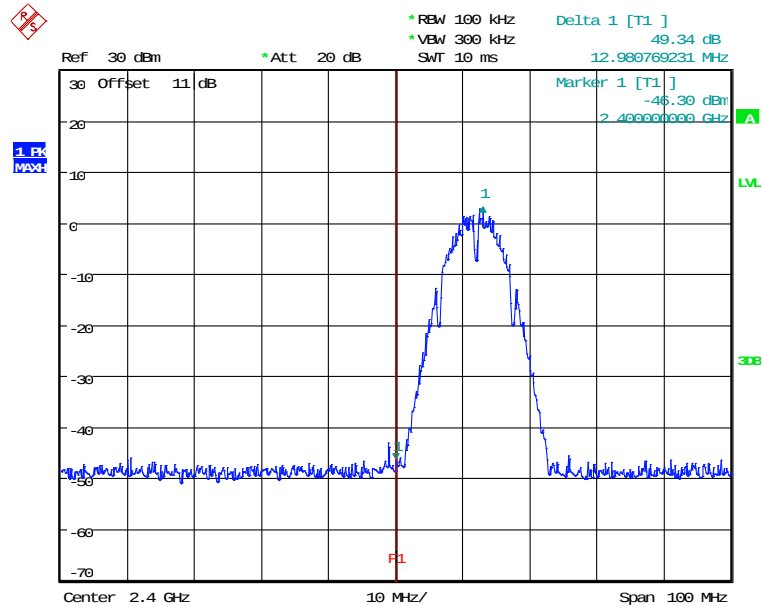
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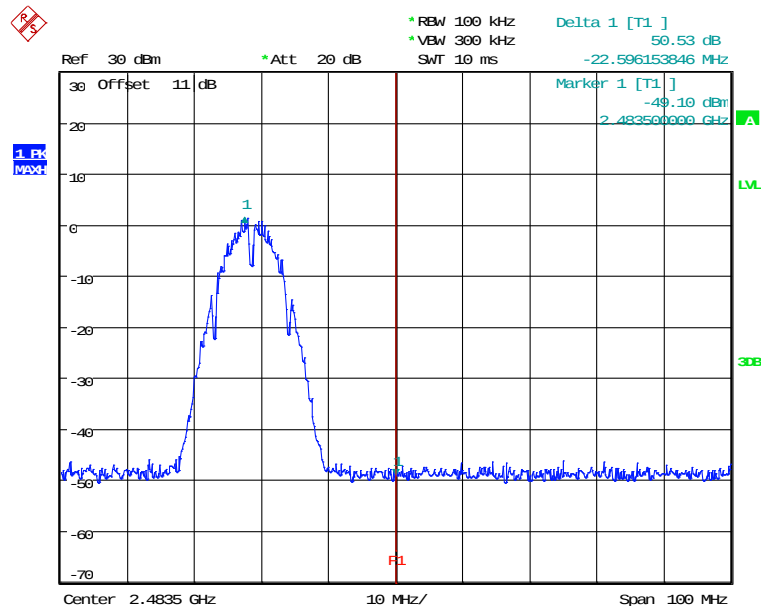
Registration number: W6M22403-23316-C-1

FCC ID: RPV-AWM5820

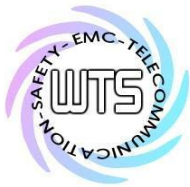
ANT 2
802.11b



BANDEGE 802.11B CH01
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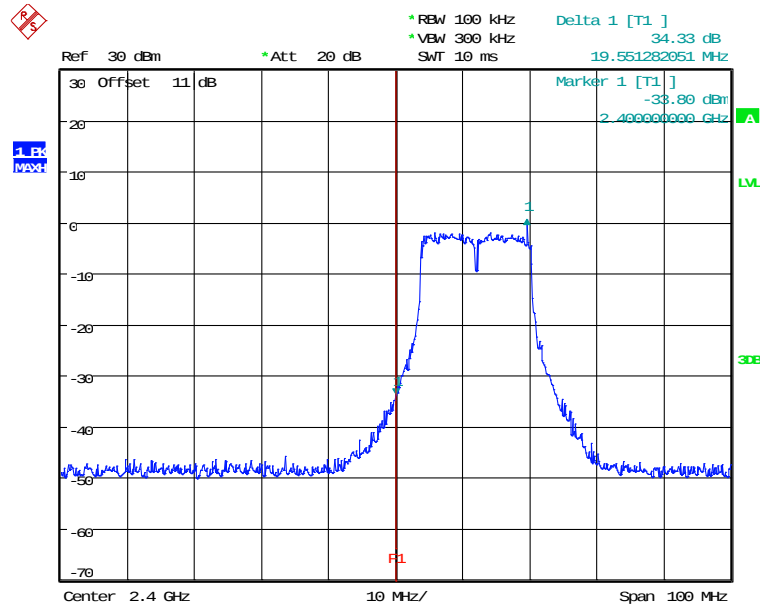
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Date: 9.APR.2024 13:05:52



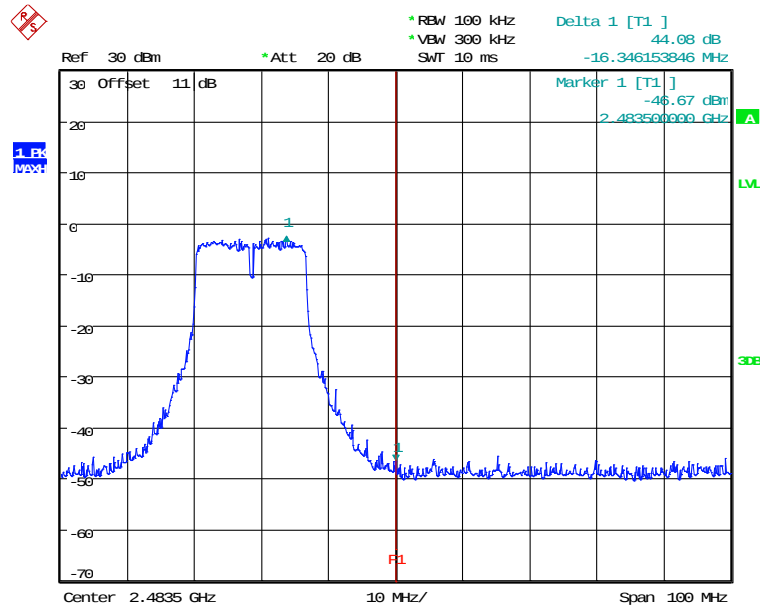
Registration number: W6M22403-23316-C-1

FCC ID: RPV-AWM5820

802.11g



BANDEDGE 802.11G CH01
Date: 9.APR.2024 13:07:15



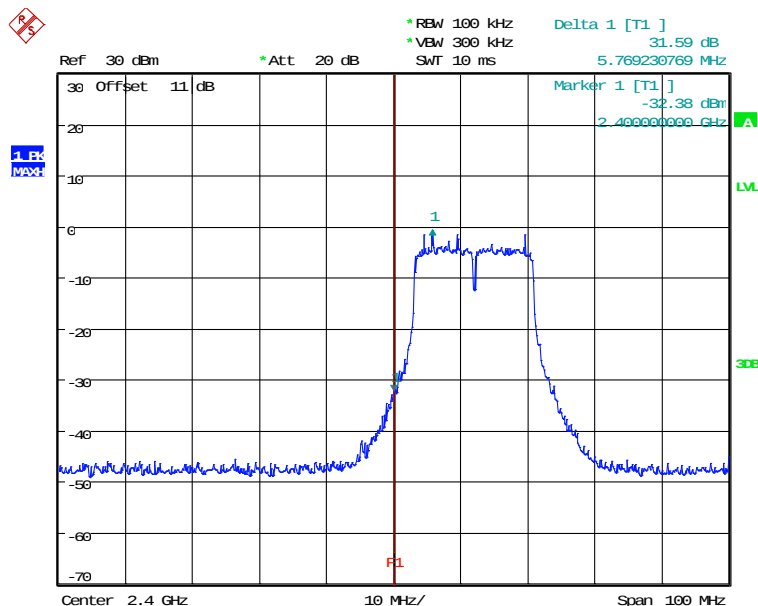
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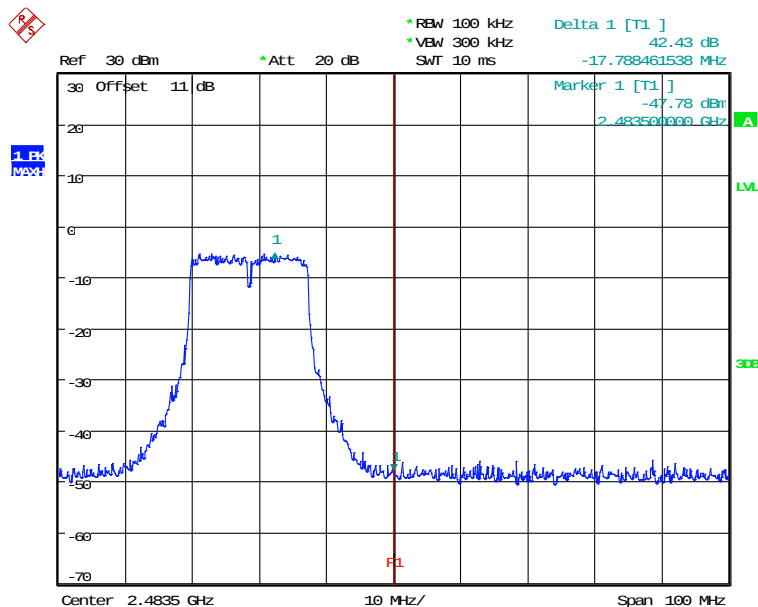
FCC ID: RPV-AWM5820

802.11n 20MHz



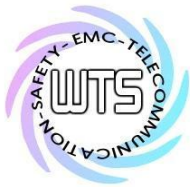
BANDEDGE 802.11N 20MHZ CH01

Date: 9.APR.2024 13:10:03



BANDEDGE 802.11N 20MHZ CH11

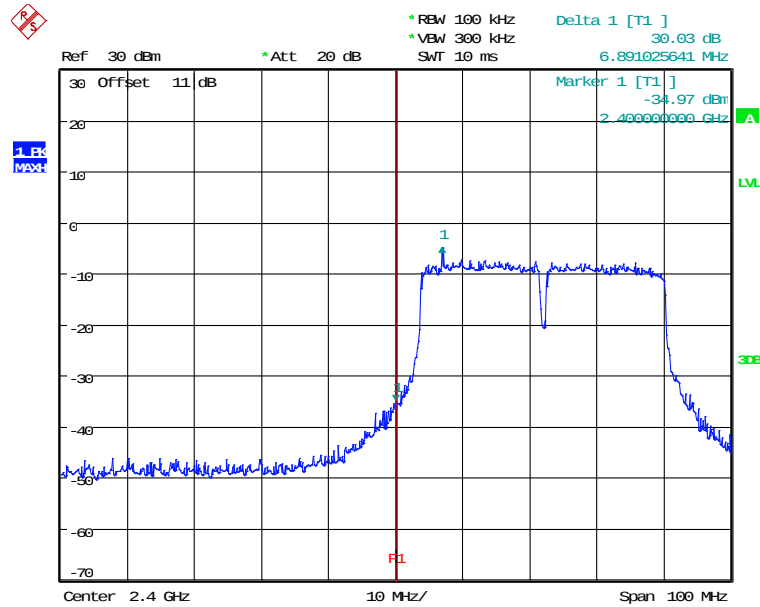
Date: 9.APR.2024 13:11:30



Registration number: W6M22403-23316-C-1

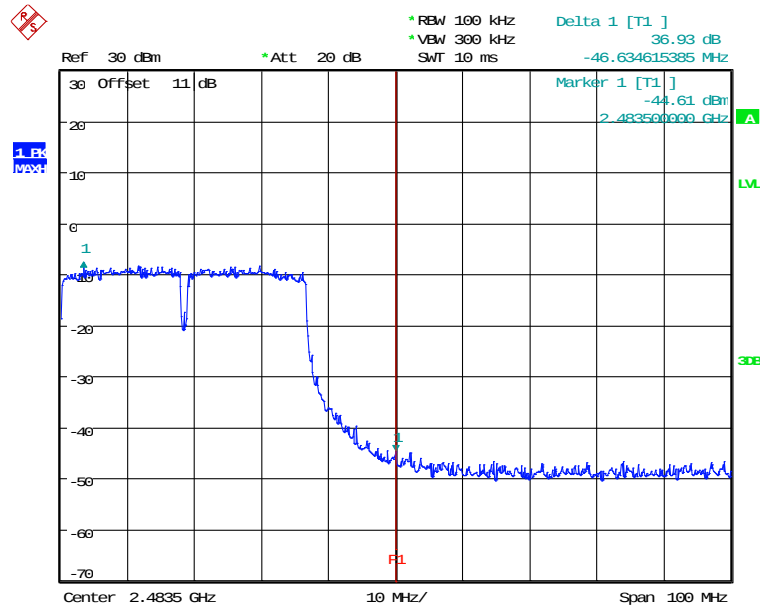
FCC ID: RPV-AWM5820

802.11n 40MHz



BANDEDGE 802.11N 40MHZ CH01

Date: 9.APR.2024 13:12:20



BANDEDGE 802.11N 40MHZ CH07

Date: 9.APR.2024 13:13:52



Registration number: W6M22403-23316-C-1

FCC ID: RPV-AWM5820

3.4 Minimum 6 dB Bandwidth

3.4.1 Applicable Standard

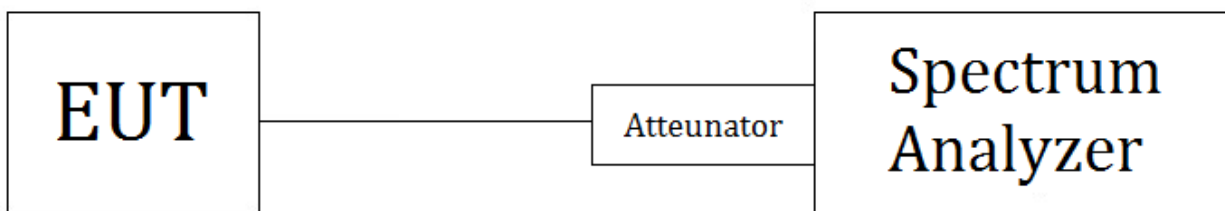
FCC Rules: 15.247(a)(2)

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	

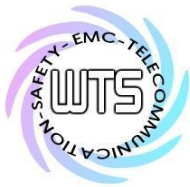
3.4.5 Test Environmental Conditions

Test date : 2024/04/09

Temperature: 26.2°C

Humidity: 60.0 %

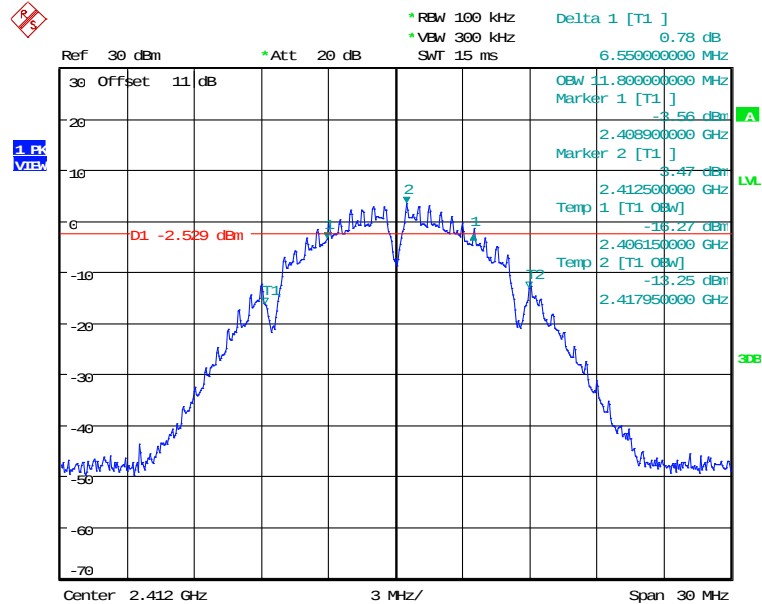
Tester: Ken



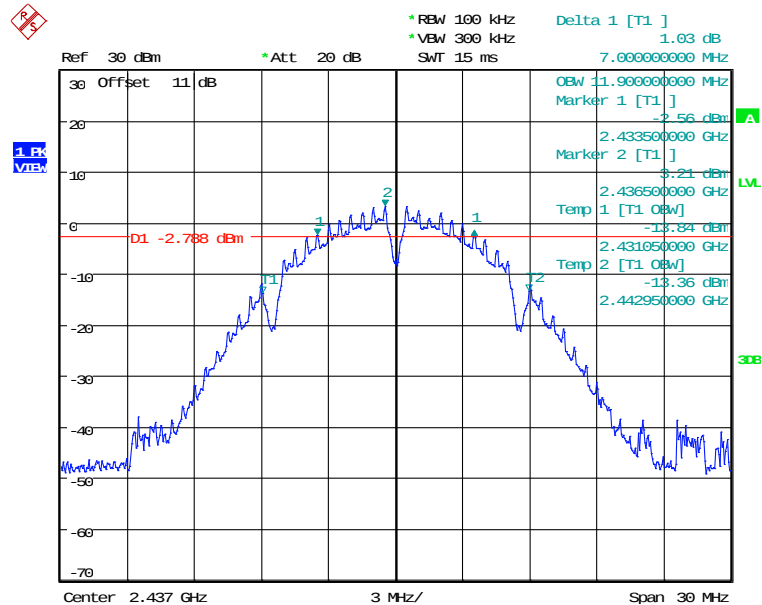
Registration number: W6M22403-23316-C-1

FCC ID: RPV-AWM5820

ANT 1
802.11b



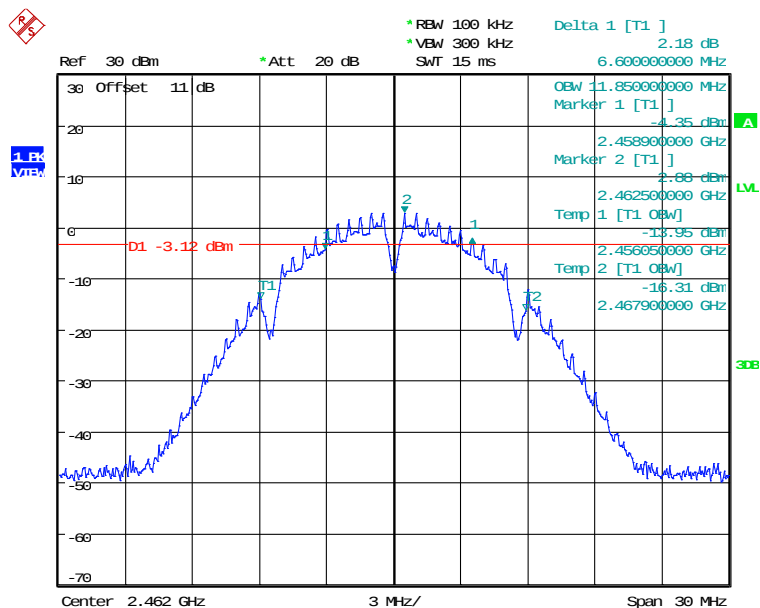
6DB BANDWIDTH 802.11B CH01
Date: 9.APR.2024 11:38:37



6DB BANDWIDTH 802.11B CH06
Date: 9.APR.2024 11:52:15

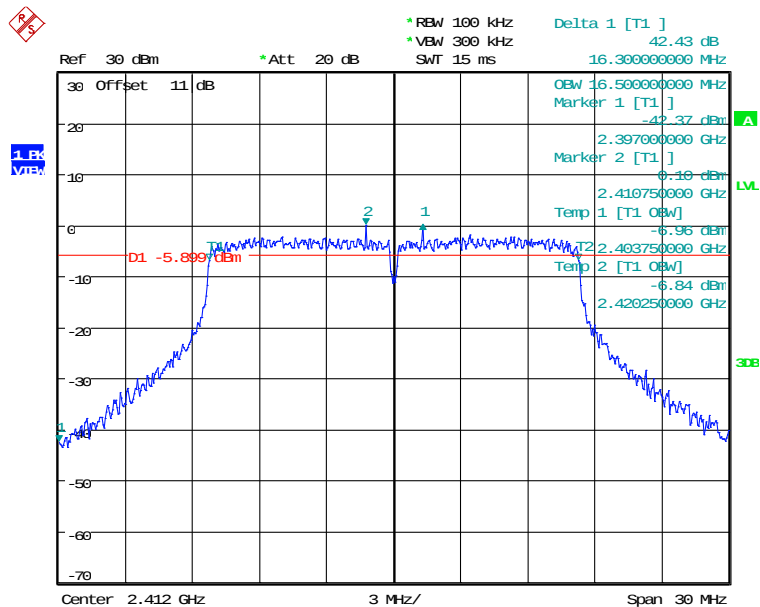
Registration number: W6M22403-23316-C-1

FCC ID: RPV-AWM5820

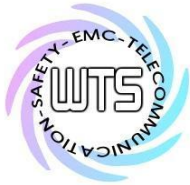


6DB BANDWIDTH 802.11B CH11
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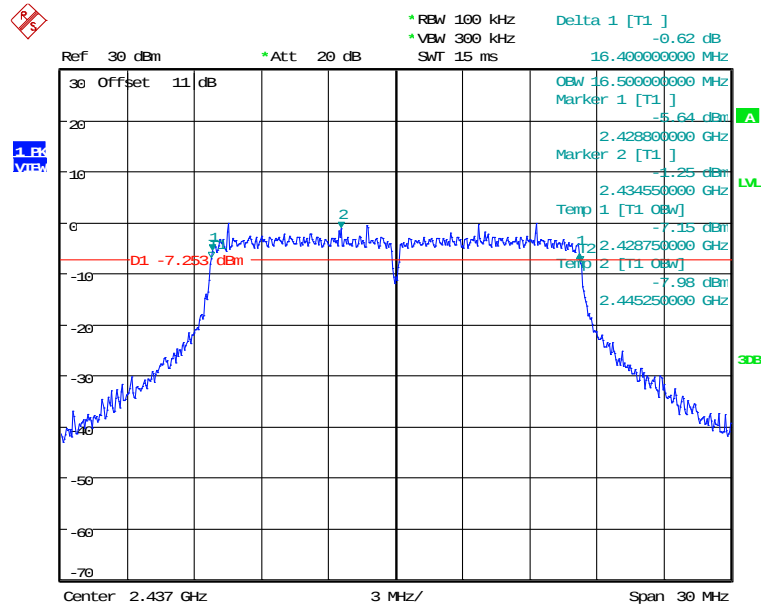
802.11g



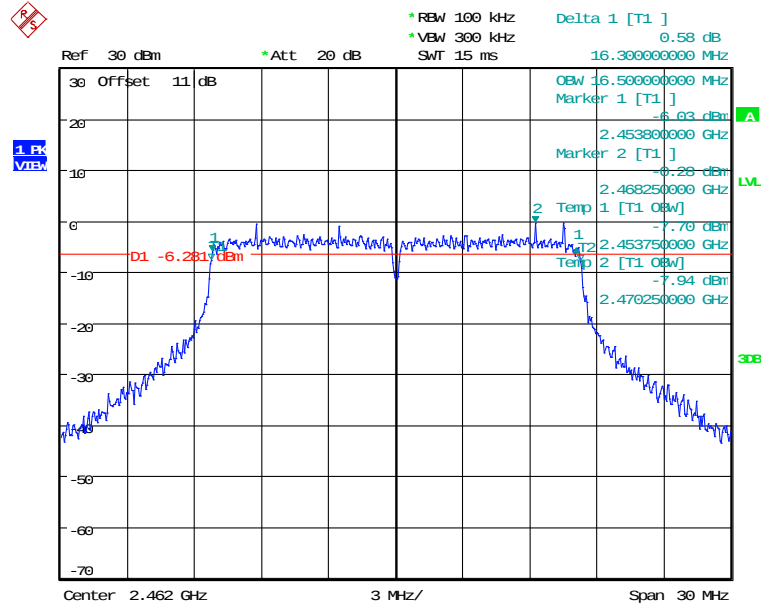
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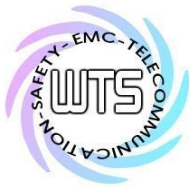
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FCC ID: RPV-AWM5820



6DB BANDWIDTH 802.116 CH06
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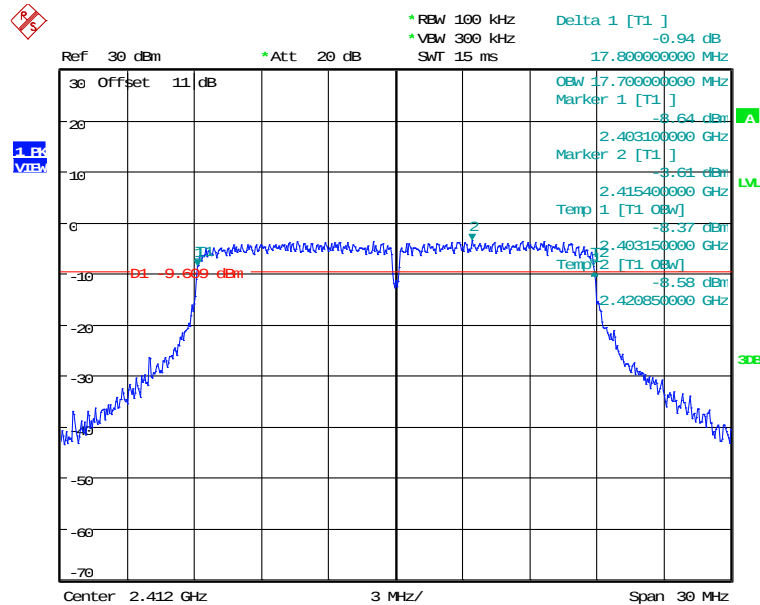
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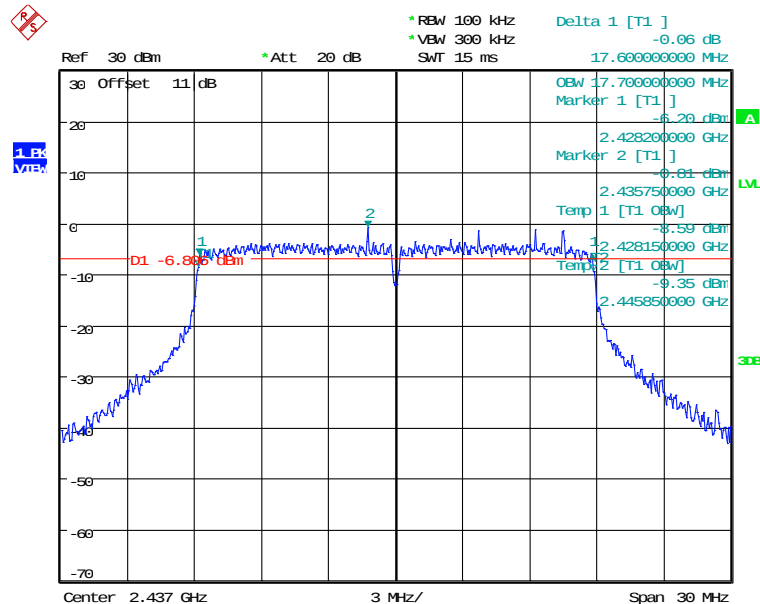
FCC ID: RPV-AWM5820

802.11n 20MHz



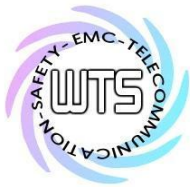
6DB BANDWIDTH 802.11N 20MHZ CH01

Date: 9.APR.2024 11:47:15

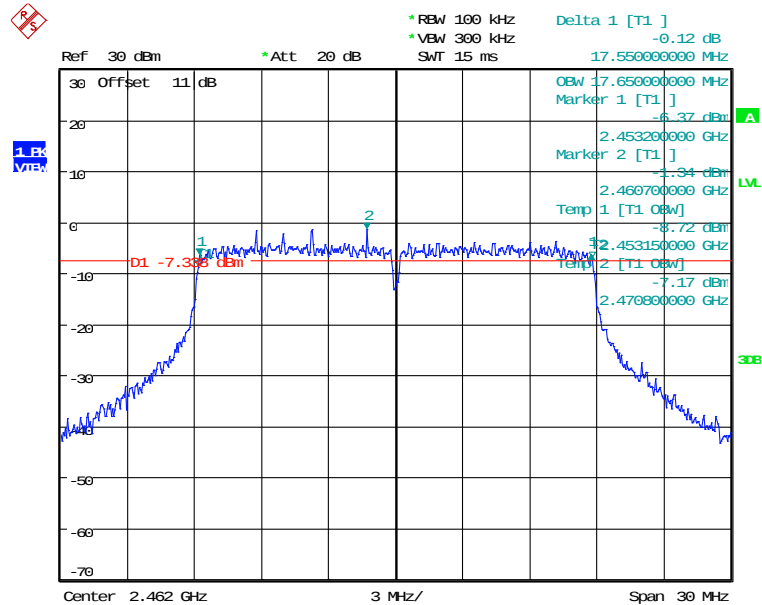


6DB BANDWIDTH 802.11N 20MHZ CH06

Date: 9.APR.2024 11:48:10

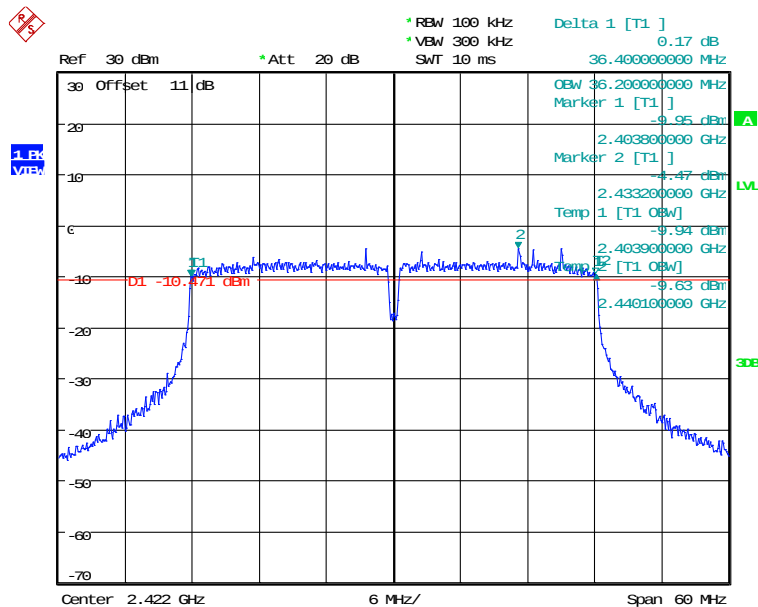


Registration number: W6M22403-23316-C-1
FCC ID: RPV-AWM5820

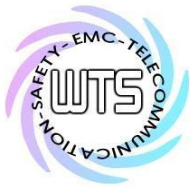


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Date: 9.APR.2024 11:48:53

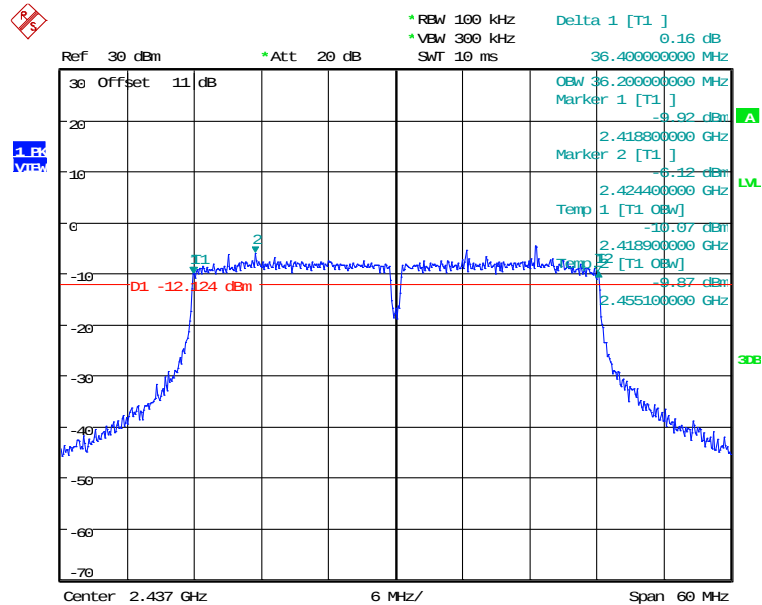
802.11n 40MHz



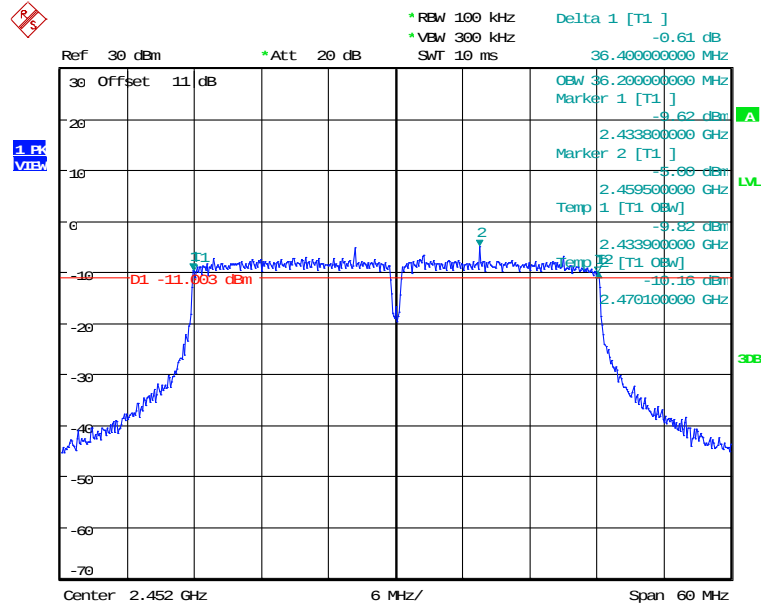
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Date: 9.APR.2024 11:49:39



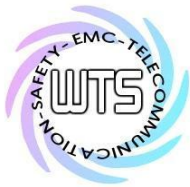
Registration number: W6M22403-23316-C-1
FCC ID: RPV-AWM5820



6DB BANDWIDTH 802.11N 40MHZ CH04
Date: 9.APR.2024 11:50:27



6DB BANDWIDTH 802.11N 40MHZ CH07
Date: 9.APR.2024 11:51:11

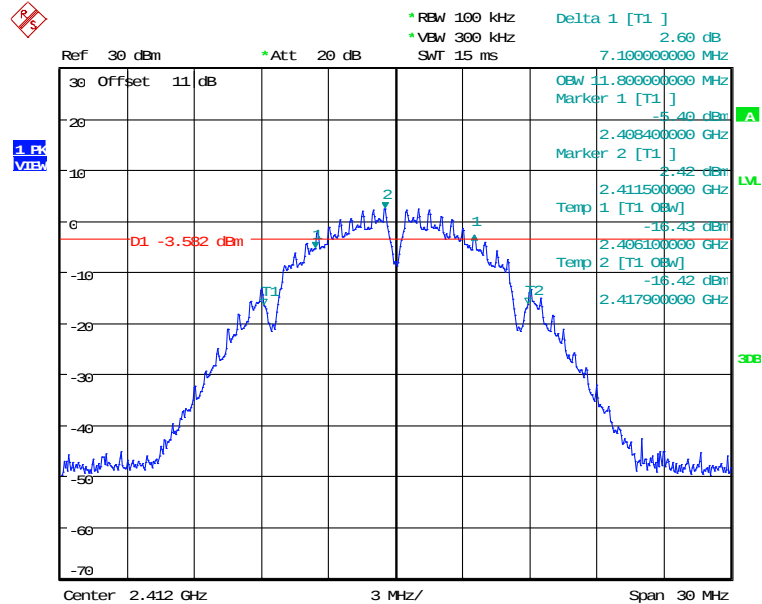


Registration number: W6M22403-23316-C-1

FCC ID: RPV-AWM5820

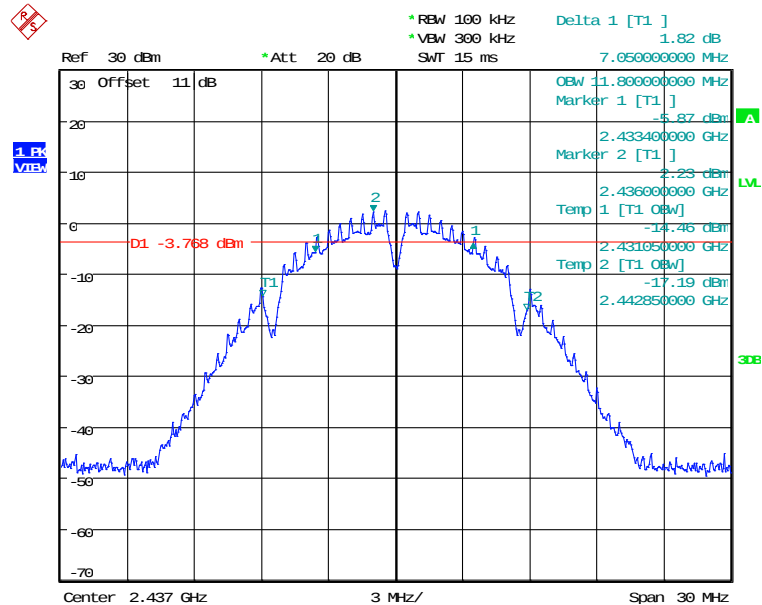
ANT 2

802.11b



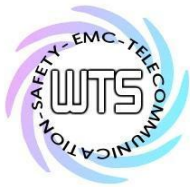
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Date: 9.APR.2024 13:04:12

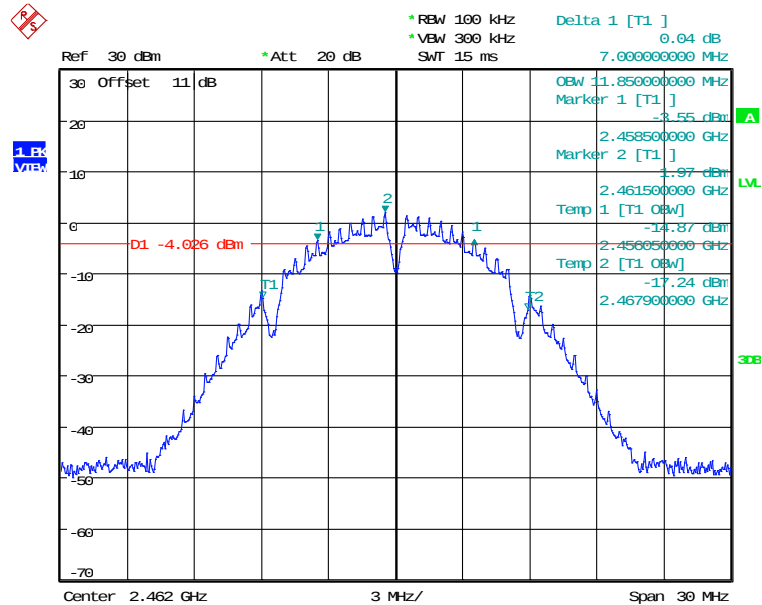


6DB BANDWIDTH 802.11B CH06

Date: 9.APR.2024 13:04:57

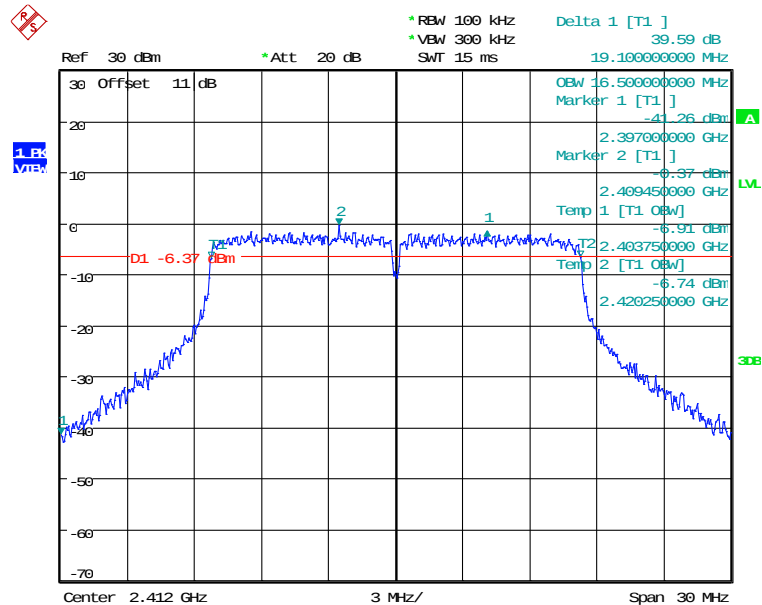


Registration number: W6M22403-23316-C-1
FCC ID: RPV-AWM5820

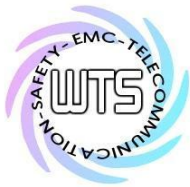


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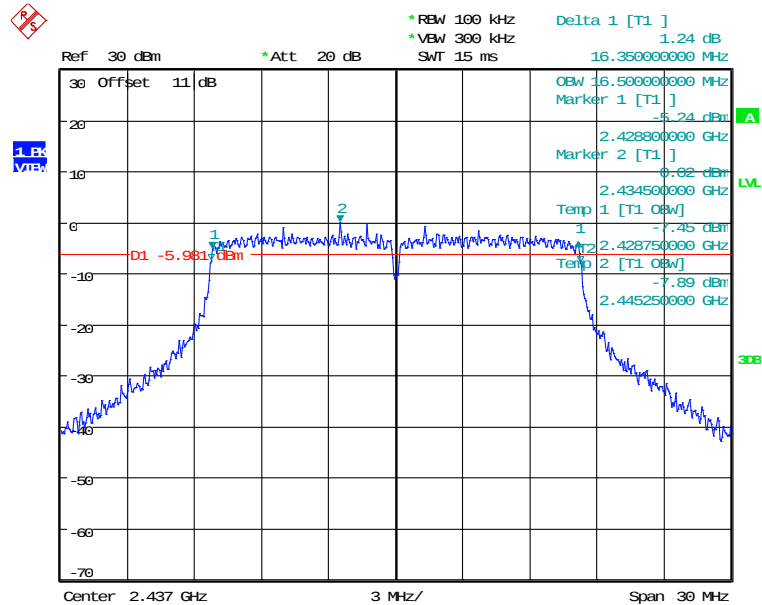
802.11g



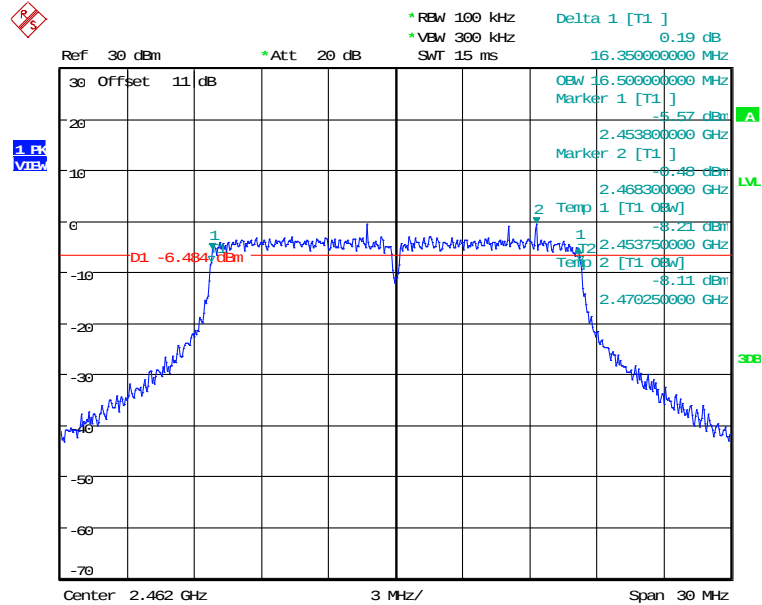
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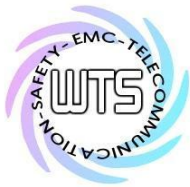
Registration number: W6M22403-23316-C-1
FCC ID: RPV-AWM5820



6DB BANDWIDTH 802.116 CH06
Date: 9.APR.2024 13:07:43



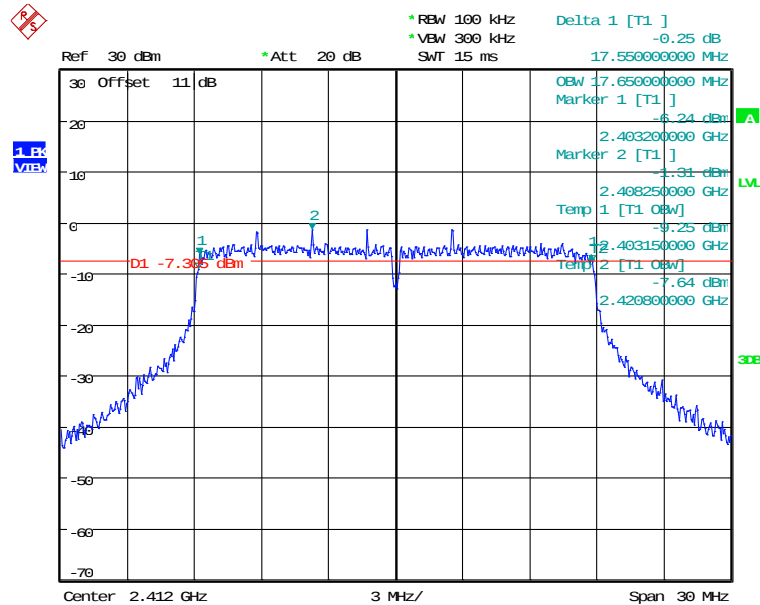
6DB BANDWIDTH 802.116 CH11
Date: 9.APR.2024 13:08:25



Registration number: W6M22403-23316-C-1

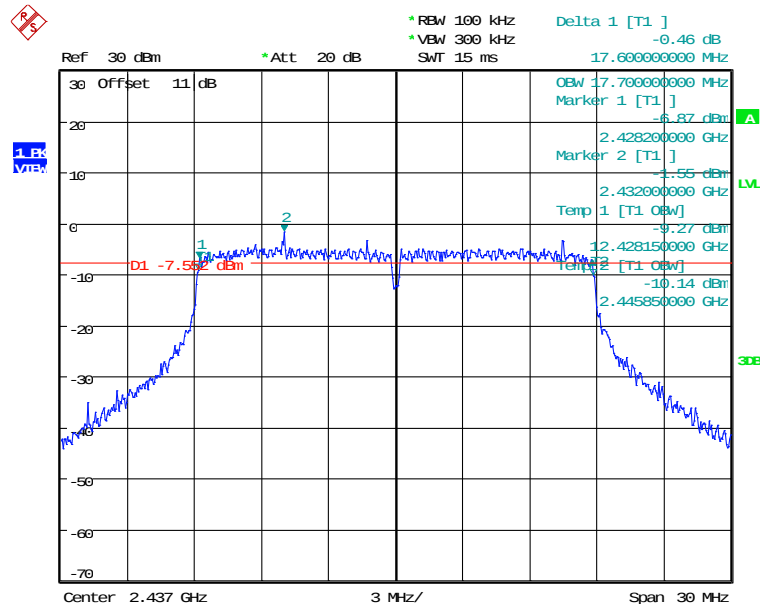
FCC ID: RPV-AWM5820

802.11n 20MHz



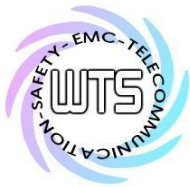
6DB BANDWIDTH 802.11N 20MHZ CH01

Date: 9.APR.2024 13:09:18

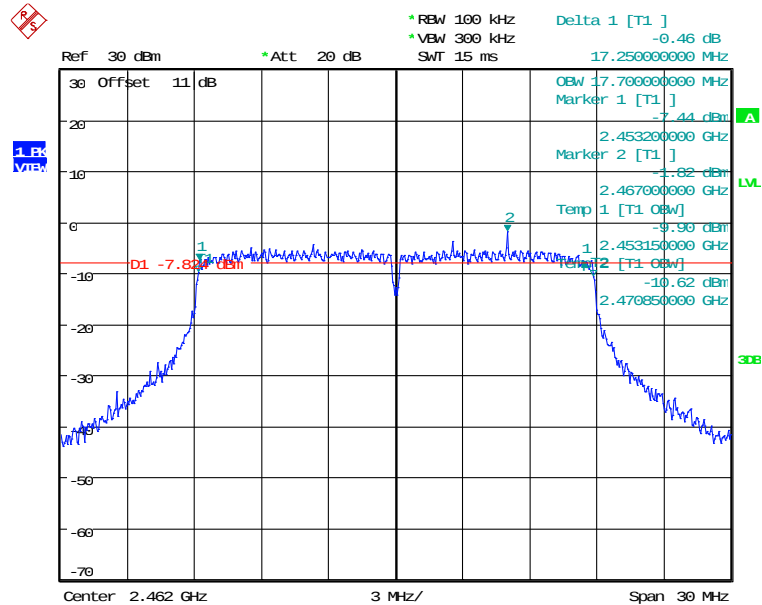


6DB BANDWIDTH 802.11N 20MHZ CH06

Date: 9.APR.2024 13:10:38

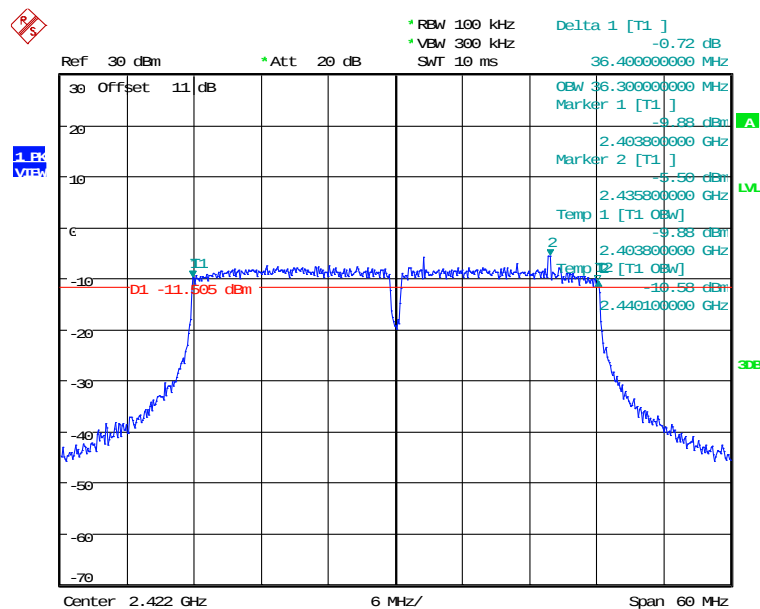


Registration number: W6M22403-23316-C-1
FCC ID: RPV-AWM5820

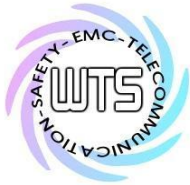


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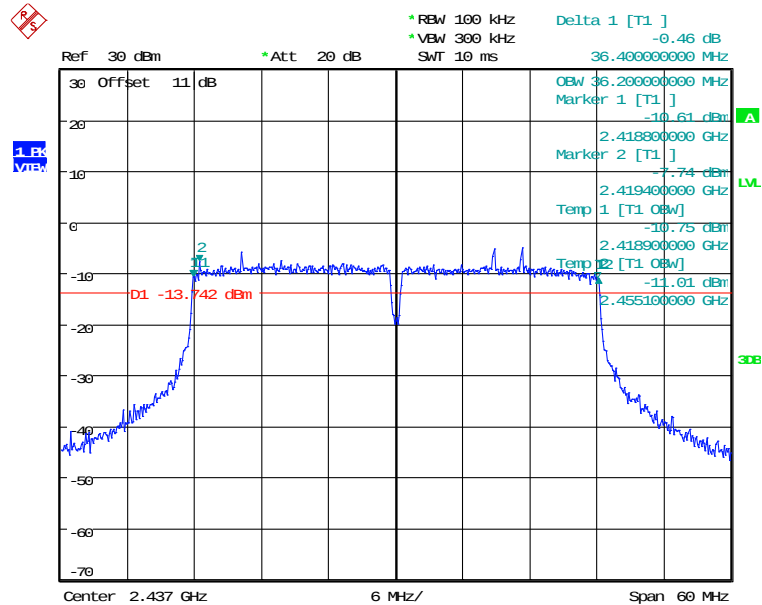
802.11n 40MHz



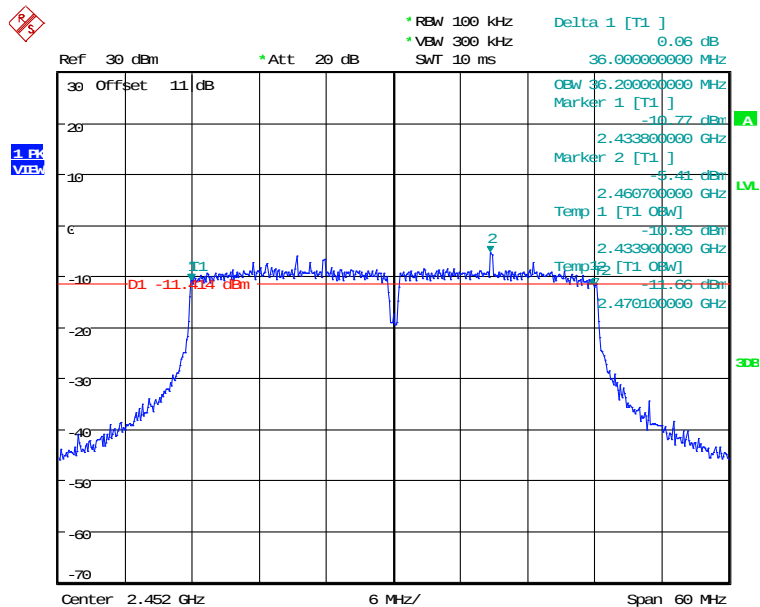
6DB BANDWIDTH 802.11N 40MHZ CH01
Date: 9.APR.2024 13:12:03



Registration number: W6M22403-23316-C-1
FCC ID: RPV-AWM5820



6DB BANDWIDTH 802.11N 40MHZ CH04
Date: 9.APR.2024 13:12:49



6DB BANDWIDTH 802.11N 40MHZ CH07
Date: 9.APR.2024 13:13:32



Registration number: W6M22403-23316-C-1

FCC ID: RPV-AWM5820

3.5 Peak Power Spectral Density

3.5.1 Applicable Standard

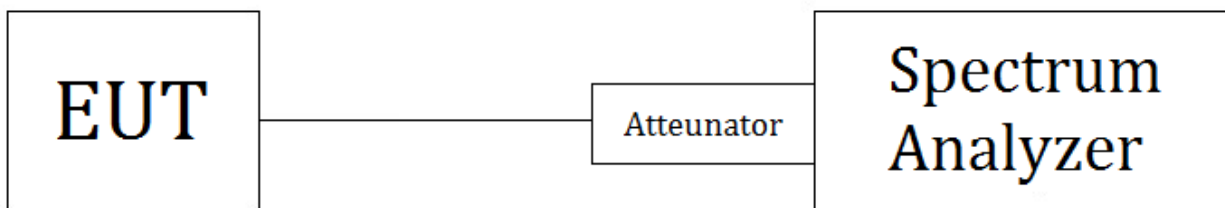
FCC Rules: 15.247(e)

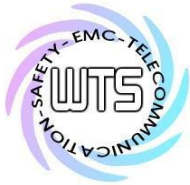
For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of 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: W6M22403-23316-C-1
FCC ID: RPV-AWM5820

3.5.4 Test results

Test date : 2024/04/09

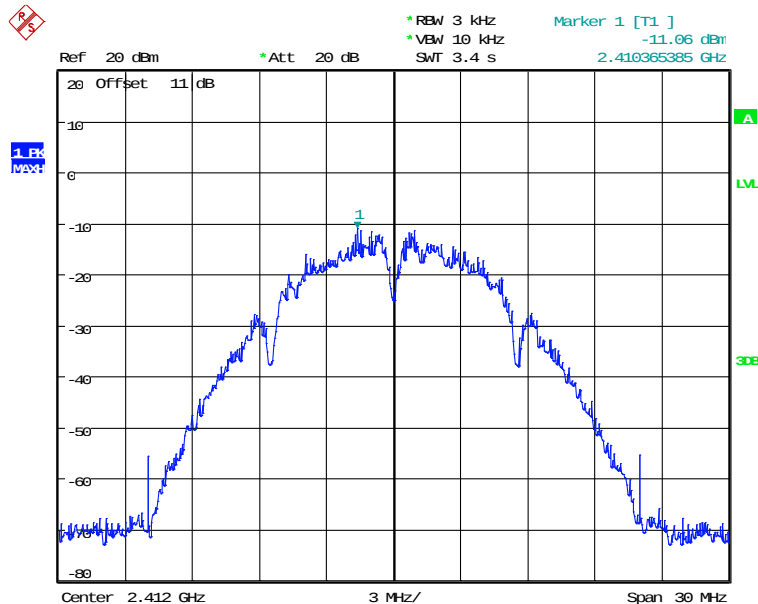
Temperature: 26.2°C

Humidity: 60.0 %

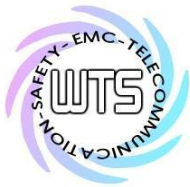
Tester: Ken

Band	Mode	Channel	Antenna 1 (dBm)	Antenna 2 (dBm)	Combine (dBm)	Limit (dBm)
2.4GHz	802.11b	Ch 1 : 2412 MHz	-11.06	-11.84	-	8
		Ch 6 : 2437 MHz	-11.35	-13.17	-	8
		Ch 11 : 2462 MHz	-11.83	-13.27	-	8
	802.11g	Ch 1 : 2412 MHz	-13.76	-13.97	-	8
		Ch 6 : 2437 MHz	-13.88	-14.17	-	8
		Ch 11 : 2462 MHz	-14.26	-15.34	-	8
	802.11n 20M	Ch 1 : 2412 MHz	-13.91	-14.81	-11.33	8
		Ch 6 : 2437 MHz	-15.04	-16.54	-12.72	8
		Ch 11 : 2462 MHz	-15.44	-17.05	-13.16	8
	802.11n 40M	Ch 1 : 2422 MHz	-18.85	-18.64	-15.73	8
		Ch 4 : 2437 MHz	-17.15	-19.14	-15.02	8
		Ch 7 : 2452 MHz	-18.29	-19.45	-15.82	8

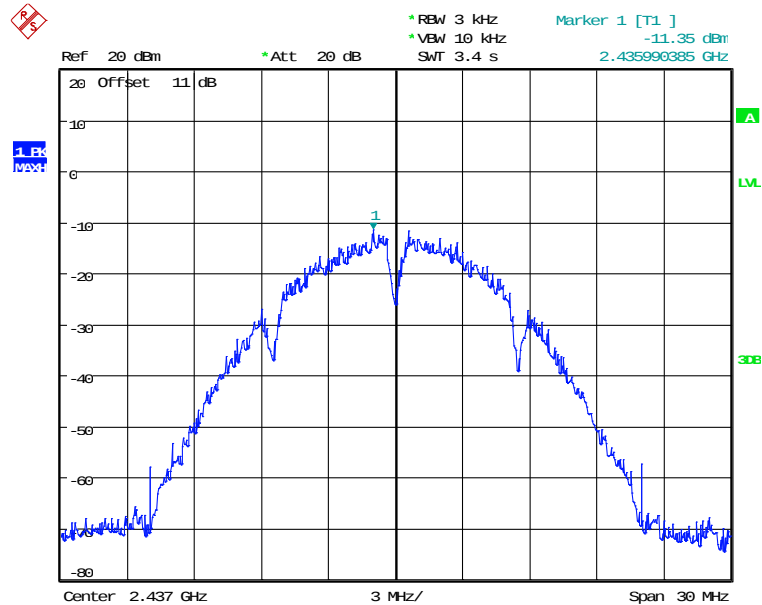
ANT 1
802.11b



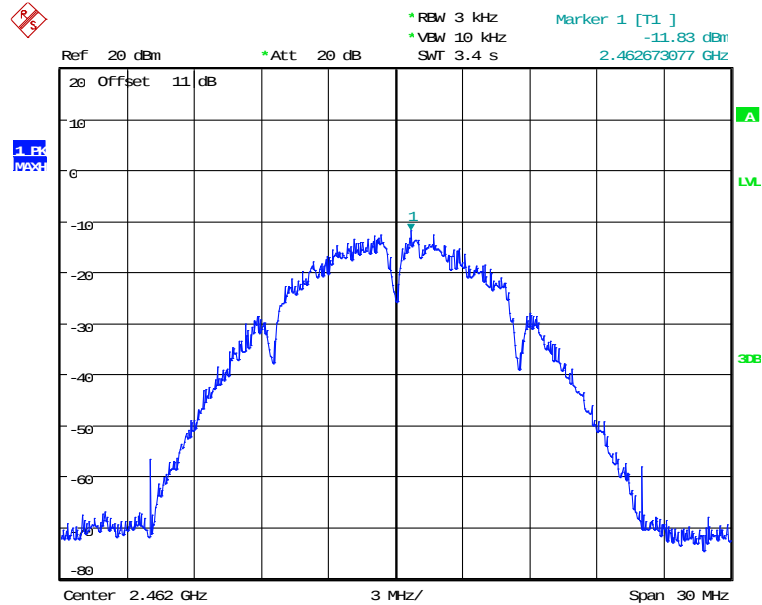
POWER DENSITY 802.11B CH01
Date: 9.APR.2024 11:38:46



Registration number: W6M22403-23316-C-1
FCC ID: RPV-AWM5820



POWER DENSITY 802.11B CH06
Date: 9.APR.2024 11:52:26



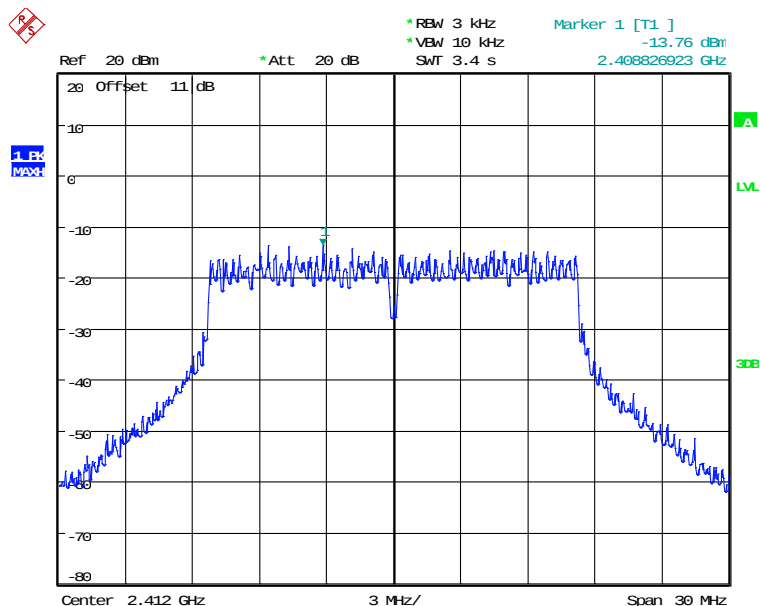
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Date: 9.APR.2024 11:53:18



Registration number: W6M22403-23316-C-1

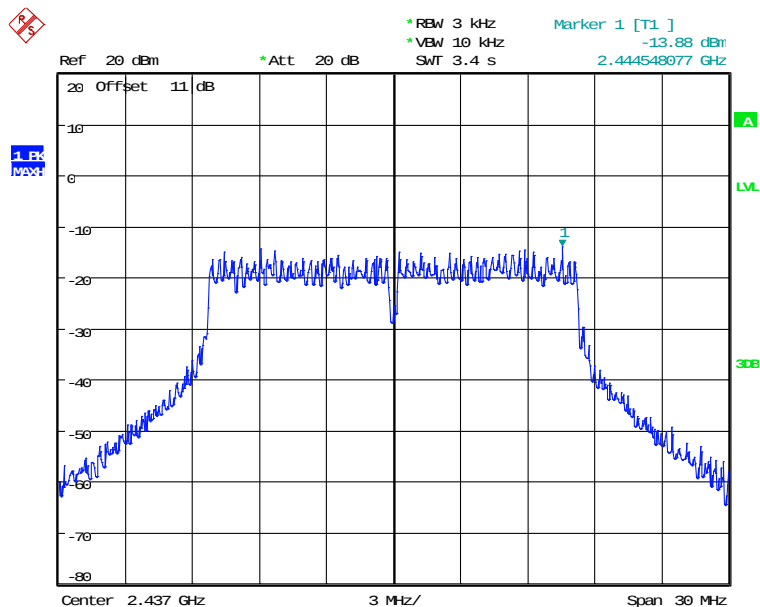
FCC ID: RPV-AWM5820

802.11g



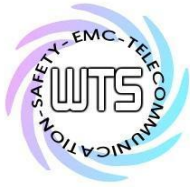
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Date: 9.APR.2024 11:42:52

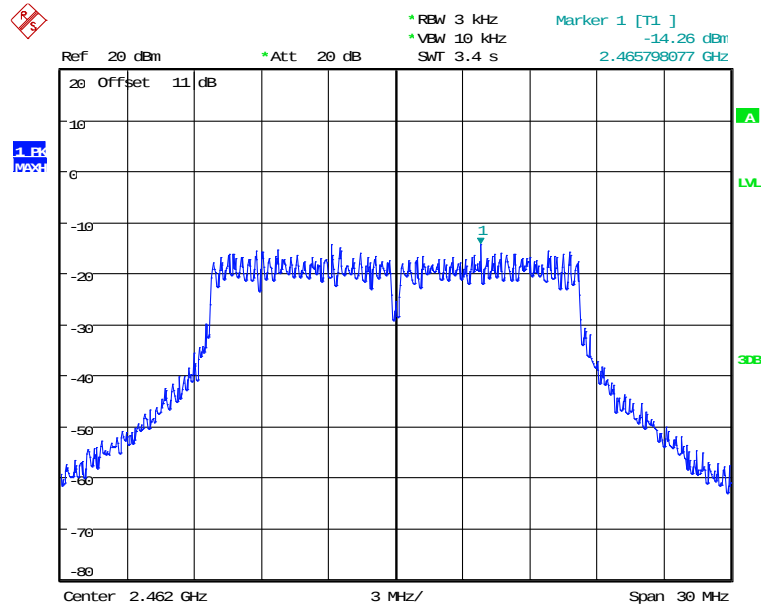


POWER DENSITY 802.116 CH06

Date: 9.APR.2024 11:45:54

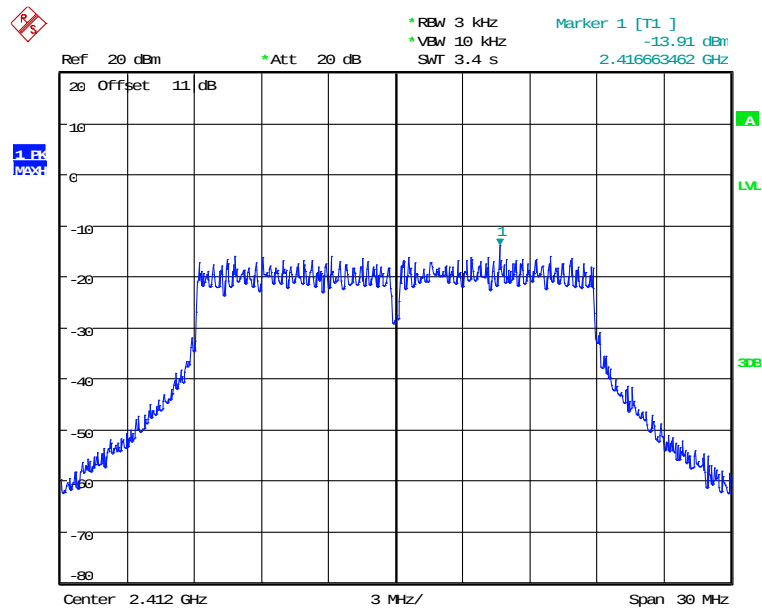


Registration number: W6M22403-23316-C-1
FCC ID: RPV-AWM5820

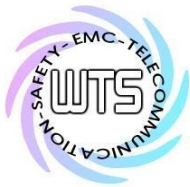


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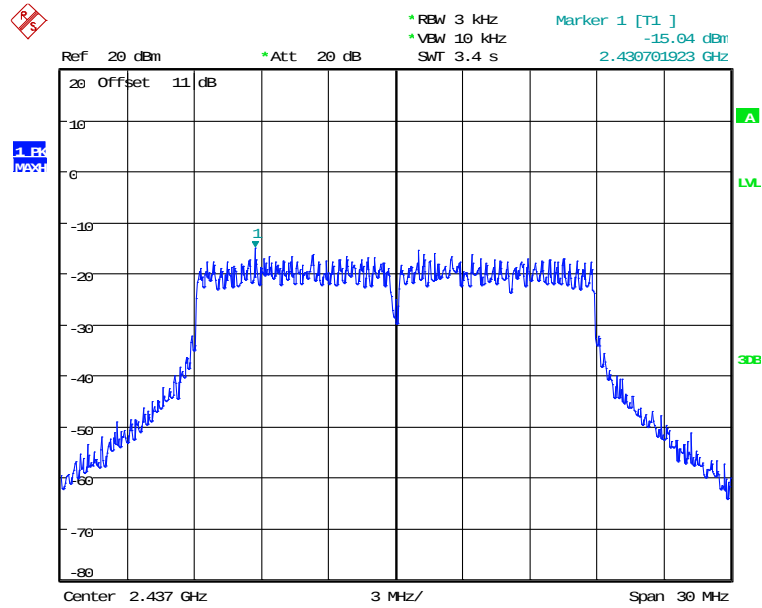
802.11n 20MHz



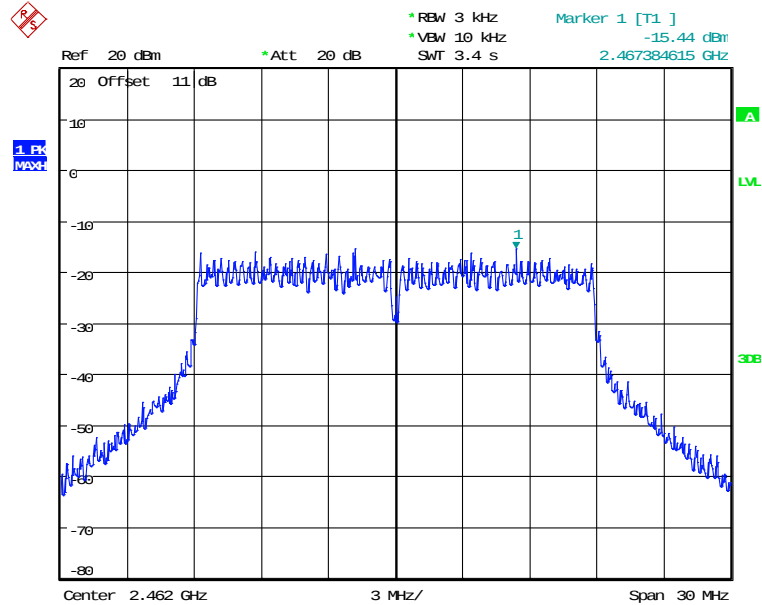
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Date: 9.APR.2024 11:47:26



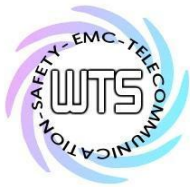
Registration number: W6M22403-23316-C-1
FCC ID: RPV-AWM5820



POWER DENSITY 802.11N 20MHZ CH06
Date: 9.APR.2024 11:48:21



POWER DENSITY 802.11N 20MHZ CH11
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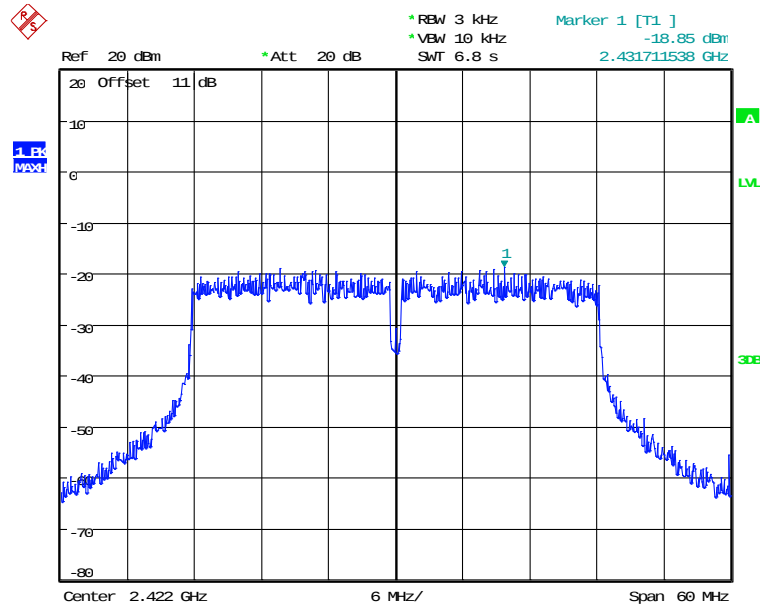


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22403-23316-C-1

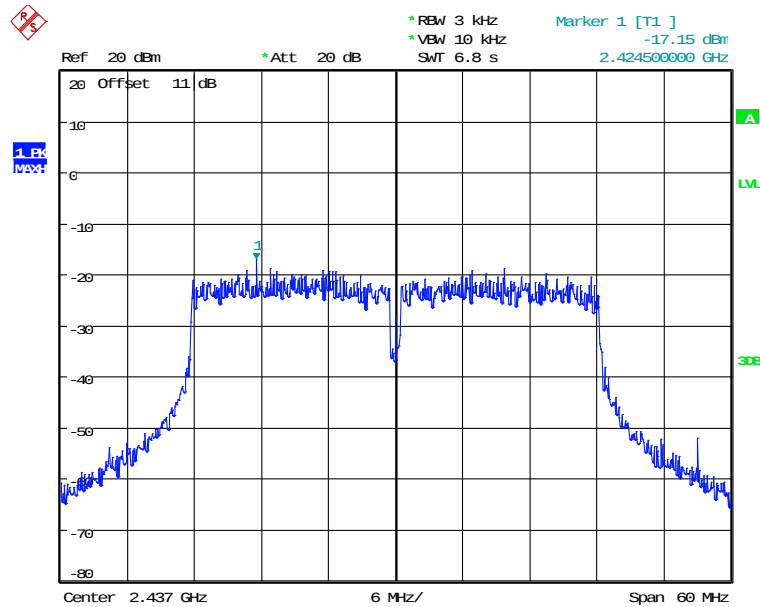
FCC ID: RPV-AWM5820

802.11n 40MHz



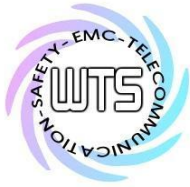
POWER DENSITY 802.11N 40MHZ CH01

Date: 9.APR.2024 11:49:51

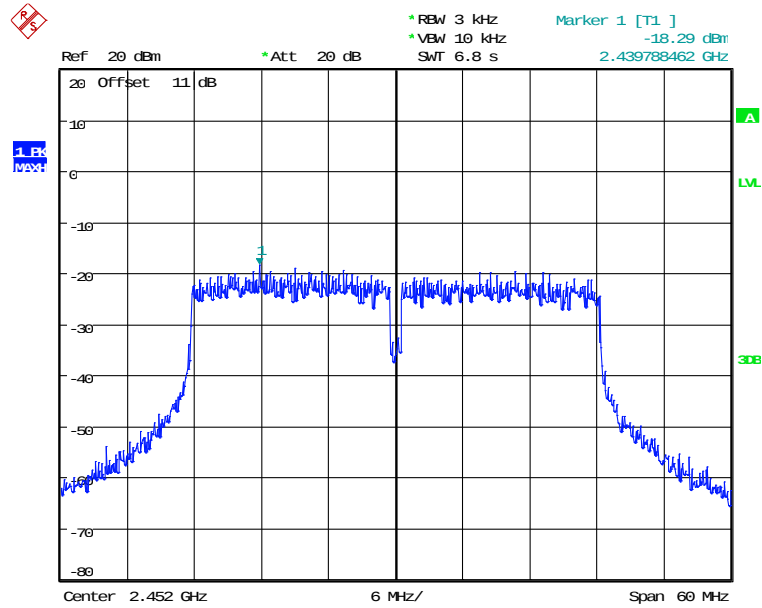


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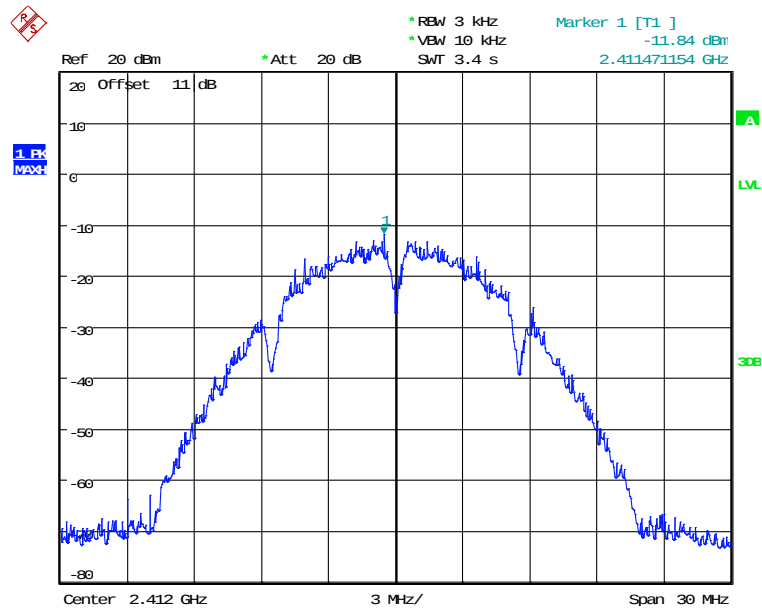


Registration number: W6M22403-23316-C-1
FCC ID: RPV-AWM5820

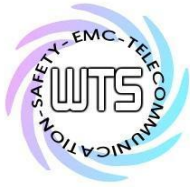


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Date: 9.APR.2024 11:51:23

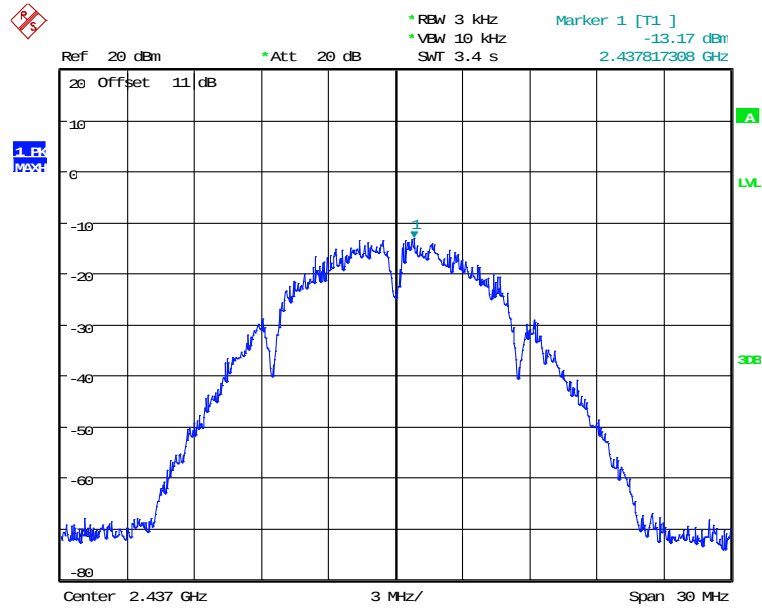
ANT 2
802.11b



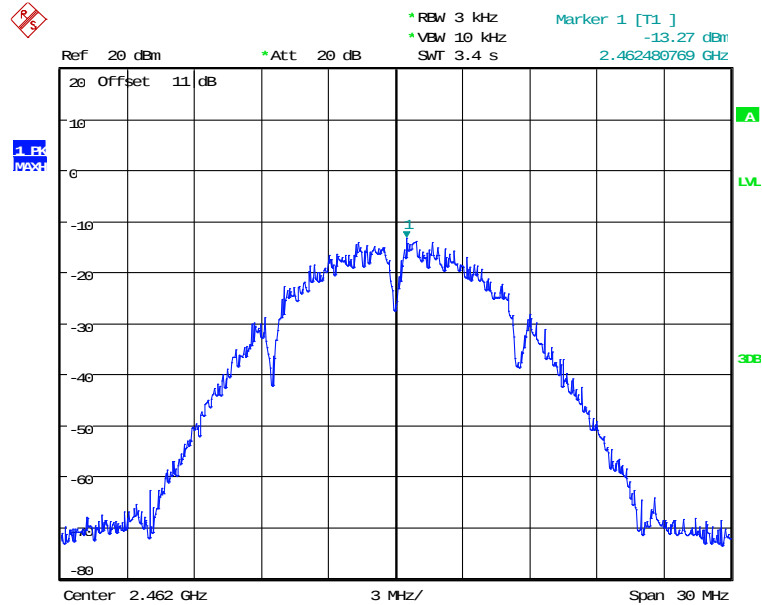
POWER DENSITY 802.11B CH01
Date: 9.APR.2024 13:04:21



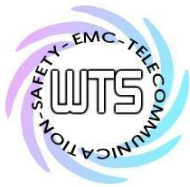
Registration number: W6M22403-23316-C-1
FCC ID: RPV-AWM5820



POWER DENSITY 802.11B CH06
Date: 9.APR.2024 13:05:06



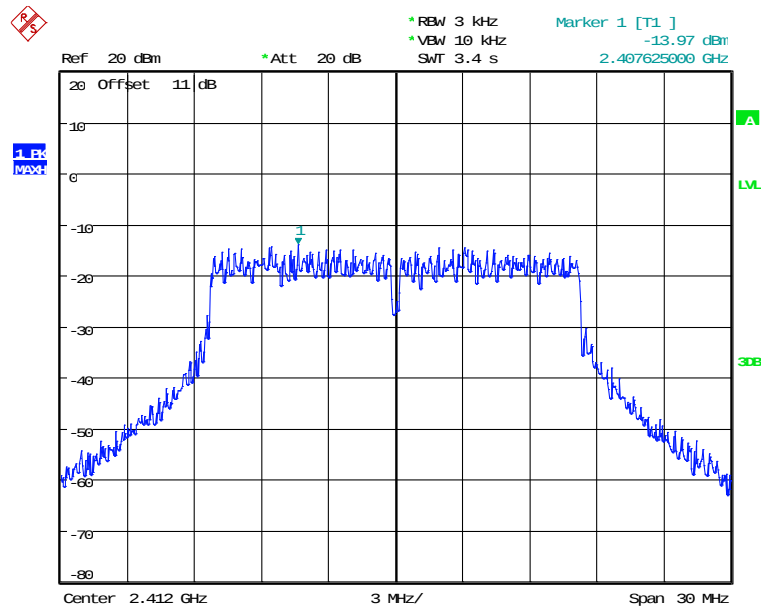
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Date: 9.APR.2024 13:05:47



Registration number: W6M22403-23316-C-1

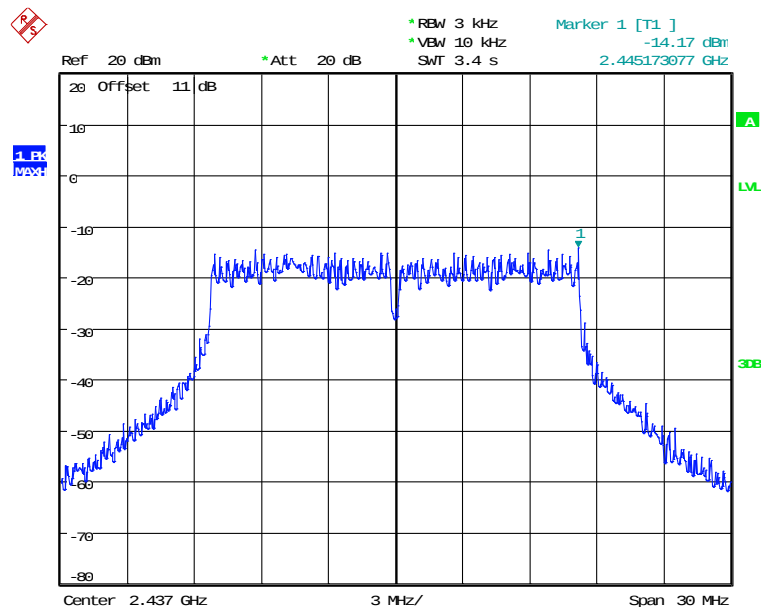
FCC ID: RPV-AWM5820

802.11g



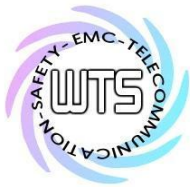
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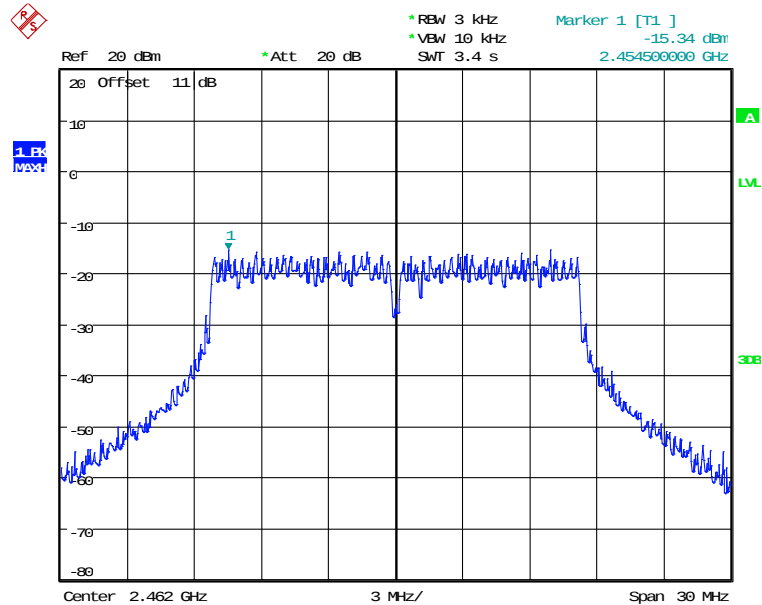


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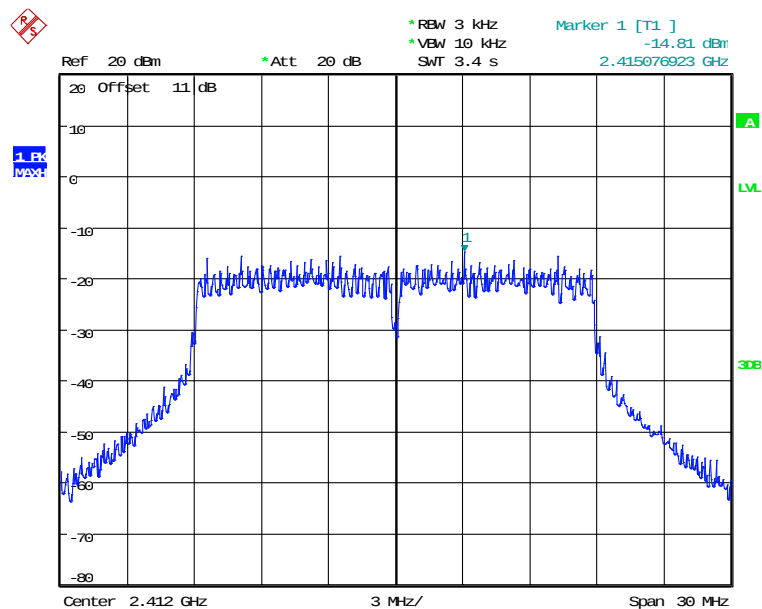


Registration number: W6M22403-23316-C-1
FCC ID: RPV-AWM5820

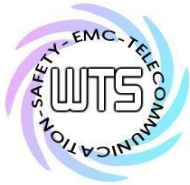


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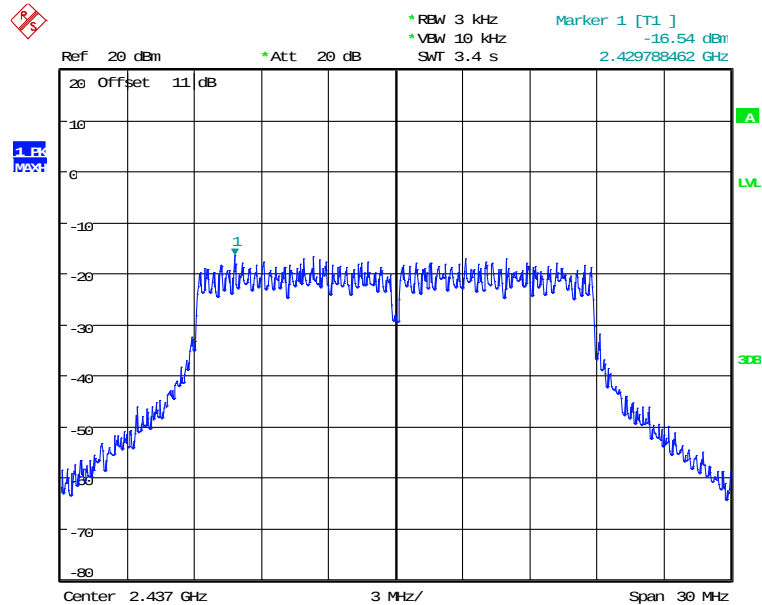
802.11n 20MHz



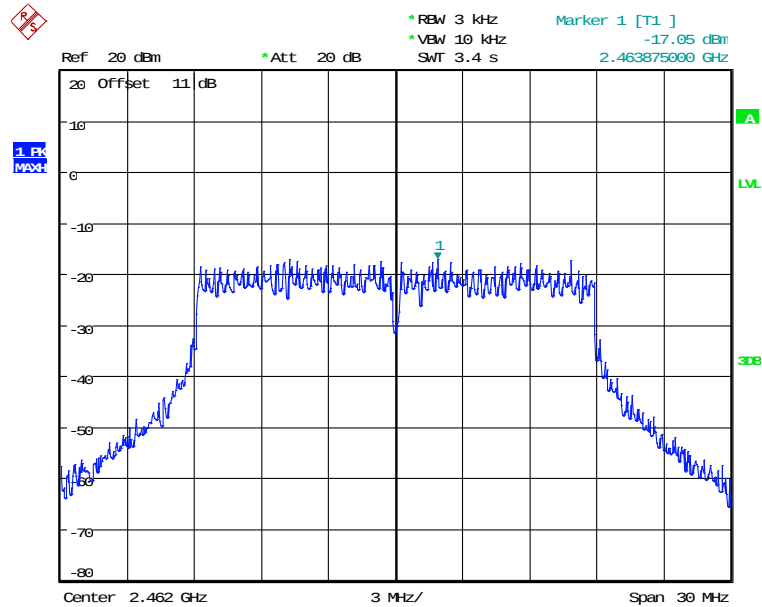
POWER DENSITY 802.11N 20MHZ CH01
Date: 9.APR.2024 13:09:27



Registration number: W6M22403-23316-C-1
FCC ID: RPV-AWM5820



POWER DENSITY 802.11N 20MHZ CH06
Date: 9.APR.2024 13:10:47



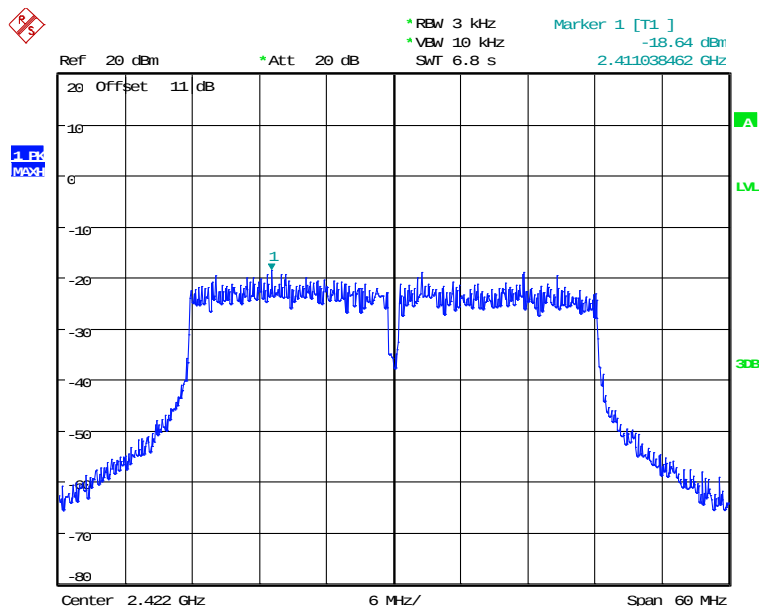
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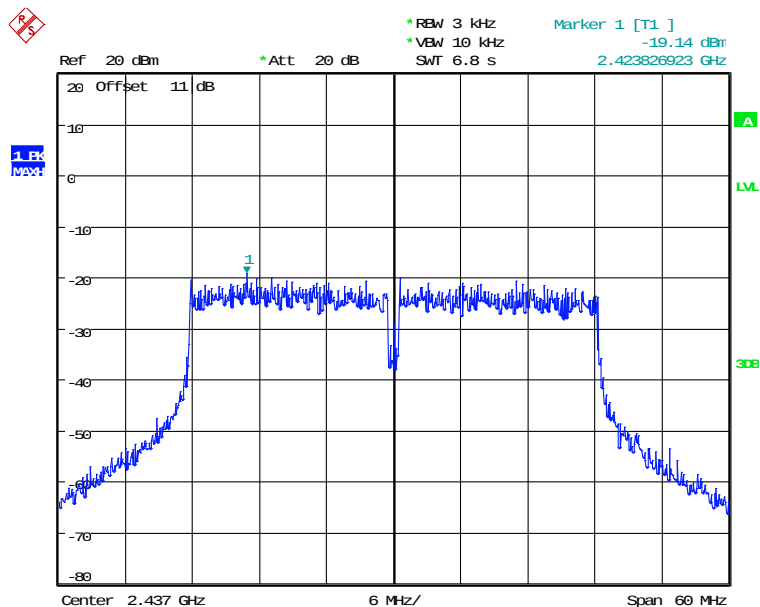
FCC ID: RPV-AWM5820

802.11n 40MHz



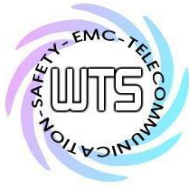
POWER DENSITY 802.11N 40MHZ CH01

Date: 9.APR.2024 13:12:15



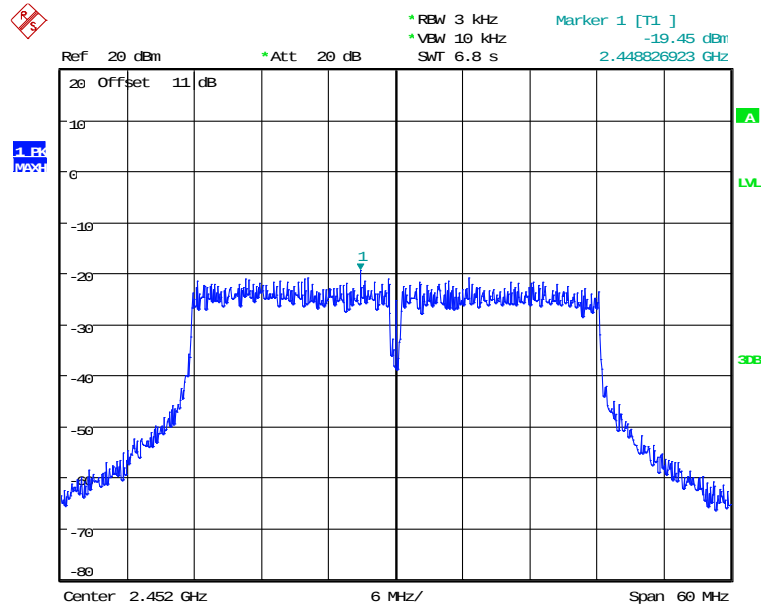
POWER DENSITY 802.11N 40MHZ CH04

Date: 9.APR.2024 13:13:03



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22403-23316-C-1
FCC ID: RPV-AWM5820



POWER DENSITY 802.11N 40MHZ CH07
Date: 9.APR.2024 13:13:46

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.

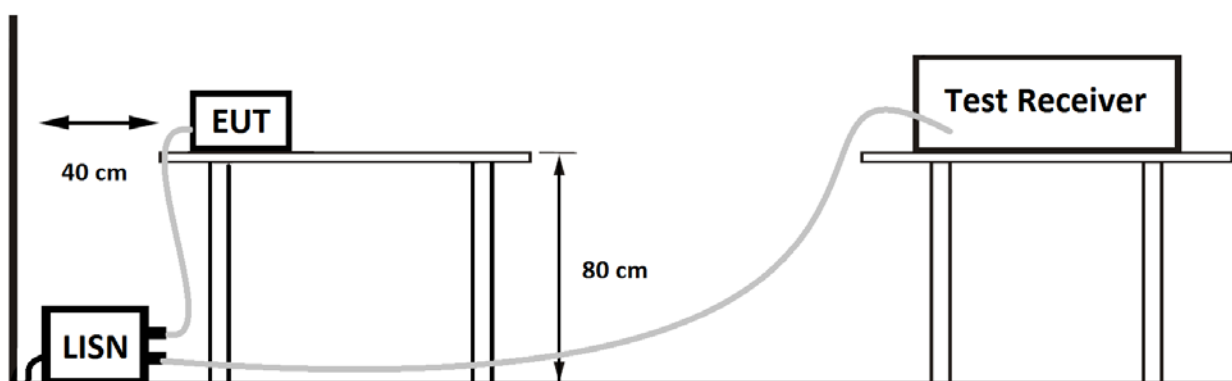
3.6.2 Limits

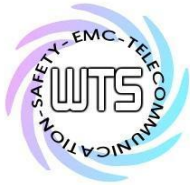
Frequency of emission (MHz)	Conducted limit (dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

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 μ H/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

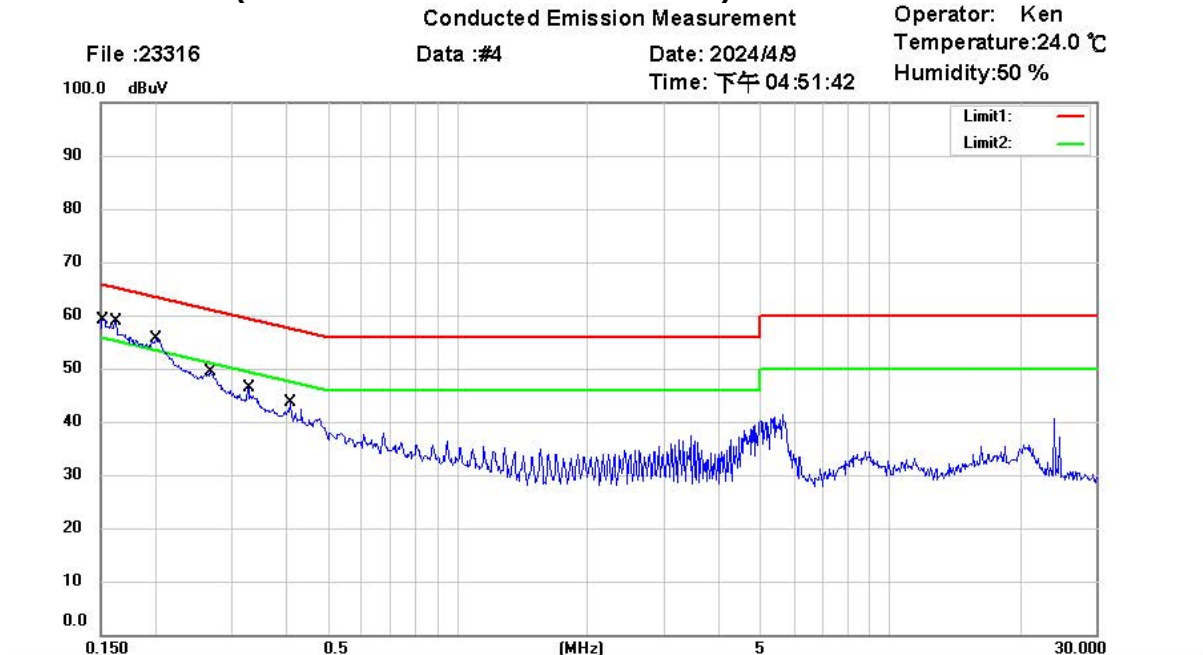




Registration number: W6M22403-23316-C-1

FCC ID: RPV-AWM5820

3.6.5 Test results (With Environmental Conditions)



Site : Chamber_03

Condition : FCC Part 15 Class B Conduction (QP)

Phase: *N*

EUT : W6M22403-23316

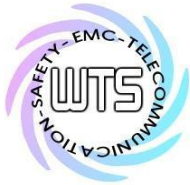
Power : 3.3 Vd.c.

M/N:

Test Mode :

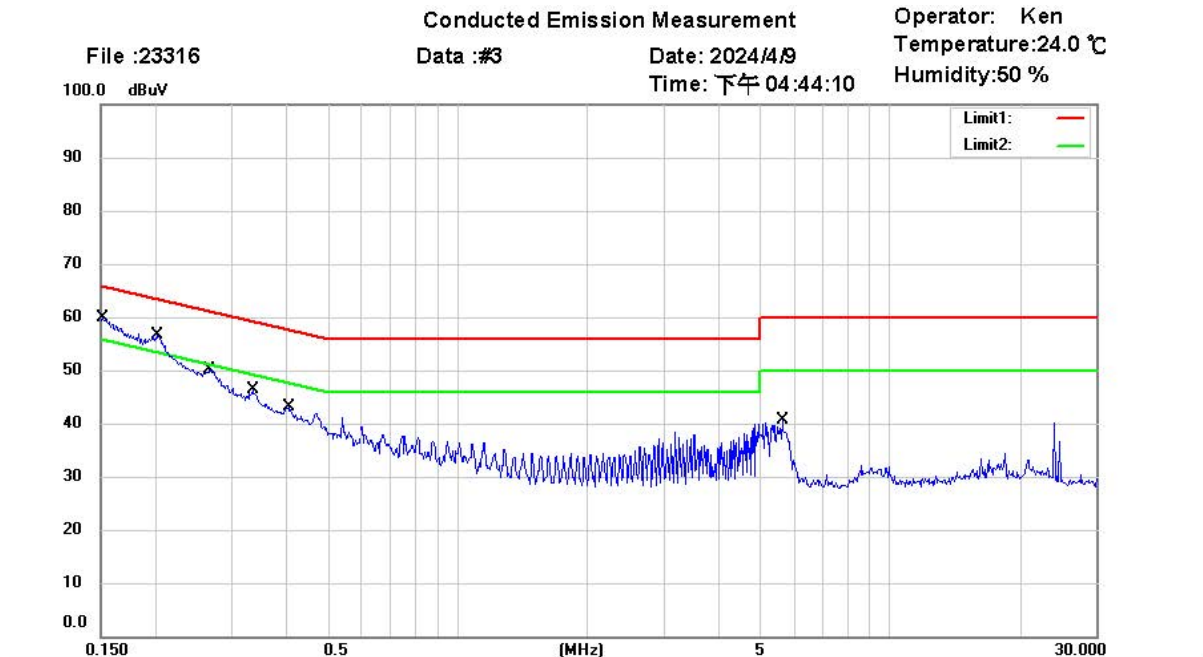
Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	0.1508	37.51	QP	9.64	47.15	65.96	-18.81	
	0.1508	14.63	AVG	9.64	24.27	55.96	-31.69	
	0.1616	35.97	QP	9.64	45.61	65.38	-19.77	
	0.1616	7.82	AVG	9.64	17.46	55.38	-37.92	
*	0.2004	35.95	QP	9.64	45.59	63.59	-18.00	
	0.2004	23.19	AVG	9.64	32.83	53.59	-20.76	
	0.2676	28.14	QP	9.65	37.79	61.19	-23.40	
	0.2676	17.67	AVG	9.65	27.32	51.19	-23.87	
	0.3270	22.36	QP	9.65	32.01	59.53	-27.52	
	0.3270	-4.05	AVG	9.65	5.60	49.53	-43.93	
	0.4097	19.74	QP	9.66	29.40	57.65	-28.25	
	0.4097	12.07	AVG	9.66	21.73	47.65	-25.92	



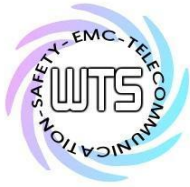
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22403-23316-C-1
FCC ID: RPV-AWM5820



Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	0.1512	37.71	QP	9.66	47.37	65.93	-18.56	
	0.1512	15.17	AVG	9.66	24.83	55.93	-31.10	
*	0.2016	37.43	QP	9.65	47.08	63.54	-16.46	
	0.2016	26.19	AVG	9.65	35.84	53.54	-17.70	
	0.2667	27.86	QP	9.65	37.51	61.22	-23.71	
	0.2667	17.91	AVG	9.65	27.56	51.22	-23.66	
	0.3387	24.26	QP	9.66	33.92	59.24	-25.32	
	0.3387	17.82	AVG	9.66	27.48	49.24	-21.76	
	0.4046	21.56	QP	9.66	31.22	57.76	-26.54	
	0.4046	15.68	AVG	9.66	25.34	47.76	-22.42	
	5.6125	25.15	QP	9.75	34.90	60.00	-25.10	
	5.6125	15.34	AVG	9.75	25.09	50.00	-24.91	

- Note:
1. The formula of measured value as: Test Result = Reading + Correction Factor
 2. The Correction Factor = Cable Loss + LISN Insertion Loss + Pulse Limit Loss
 3. Detector function in the form : PK = Peak, QP = Quasi Peak, AV = Average
 4. All not in the table noted test results are more than 20 dB below the relevant limits.
 5. Up Line: QP Limit Line, Down Line: Ave Limit Line.



Registration number: W6M22403-23316-C-1
FCC ID: RPV-AWM5820

Appendix

Measurement diagrams

Spurious Emissions radiated



Address:No.99,Sec.1,Balian Rd.,Xizhi Dist.,New Taipei City
Tel:+886-2-2646-1508
Fax:+886-2-2646-1533

Radiated Emission Measurement

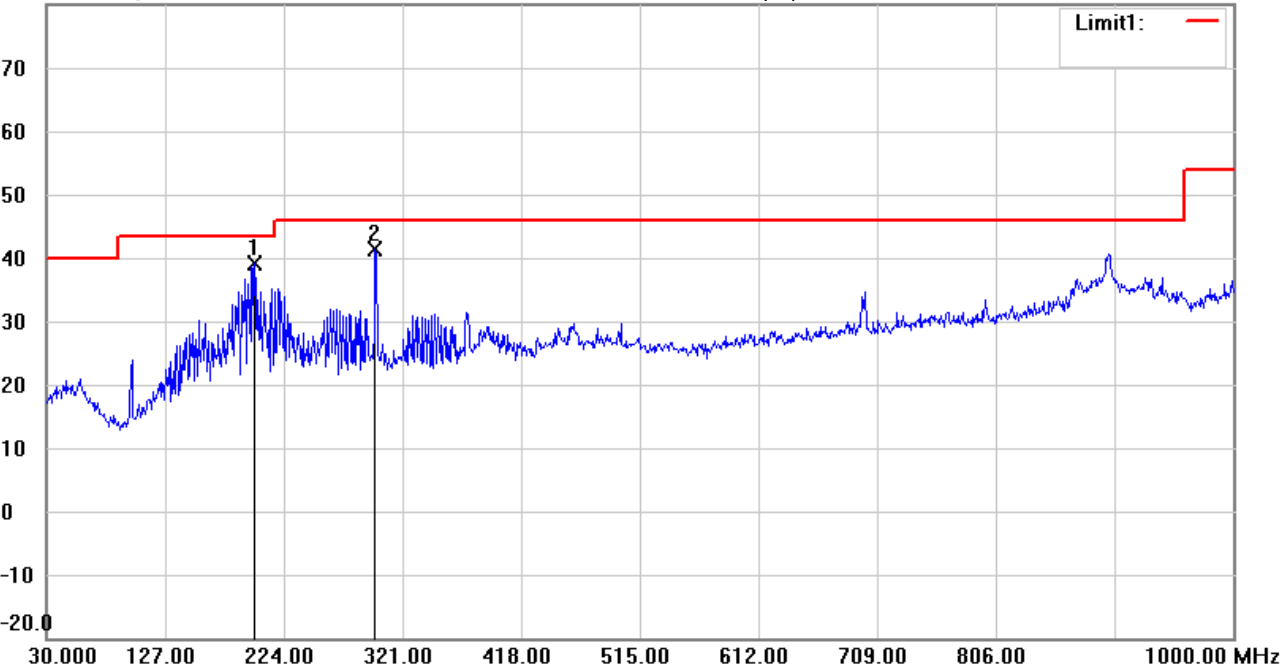
Operator: Kai
Temperature:24.3 °C
Humidity:52.0 %

File :1_WiFi 2

Data :#1

Date: 2024/4/2
Time: 下午 02:44:49

80.0 dBuV/m



Site : 966A Chamber
Condition : FCC_part 15 RE-Class C_30-1000MHz
EUT : W6M22403-23316
M/N:
Test Mode : TX 802.11b CH1
Note :

Polarization: Horizontal
Power : 3.3 Vd.c.
Distance: 3m

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	199.7500	54.90	peak	-15.83	39.07	43.50	100	1	-4.43	
	298.6900	53.64	peak	-12.22	41.42	46.00	100	332	-4.58	

*:Maximum data x:Over limit !:over margin



Address: No. 99, Sec. 1, Balian Rd., Xizhi Dist., New Taipei City
Tel: +886-2-2646-1508
Fax: +886-2-2646-1533

Radiated Emission Measurement

Operator: Kai

File : 1_WiFi 2

Data : #2

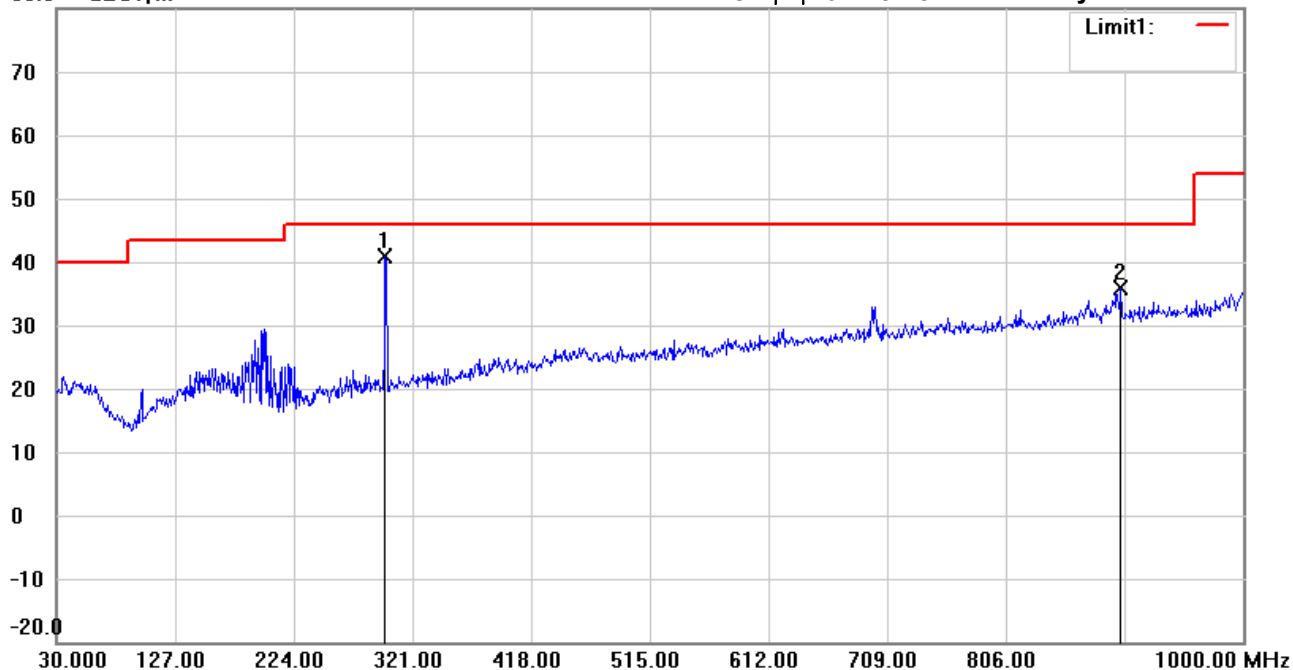
Date: 2024/4/2

Temperature: 24.3 °C

80.0 dBuV/m

Time: 下午 02:45:45

Humidity: 52.0 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

EUT : W6M22403-23316

M/N:

Test Mode : TX 802.11b CH1

Note :

Polarization: Vertical

Power : 3.3 Vd.c.

Distance: 3m

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	298.6900	52.99	peak	-12.22	40.77	46.00	100	274	-5.23	
	900.0900	37.00	peak	-1.24	35.76	46.00	100	207	-10.24	

*:Maximum data x:Over limit !:over margin



Address:No.99,Sec.1,Balian Rd.,Xizhi Dist.,New Taipei City
Tel:+886-2-2646-1508
Fax:+886-2-2646-1533

Radiated Emission Measurement

Operator: Gino

File :3

Data :#1

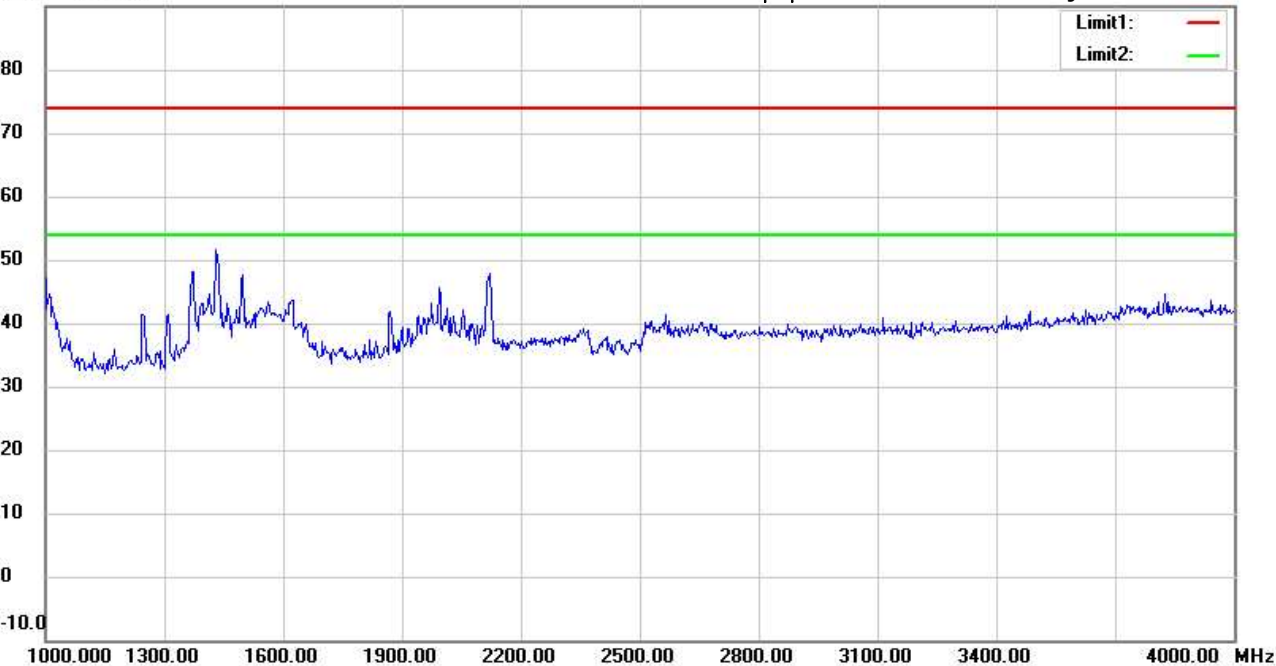
Date: 2024/3/29

Temperature:25.9 °C

90.0 dBuV/m

Time: 下午 07:10:37

Humidity:58.6 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22403-23316

M/N:

Test Mode : TX 802.11b CH1

Note :

Polarization: **Horizontal**

Power : 3.3 Vd.c.

Distance: 3m

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
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*:Maximum data x:Over limit !:over margin



Address:No.99,Sec.1,Balian Rd.,Xizhi Dist.,New Taipei City
Tel:+886-2-2646-1508
Fax:+886-2-2646-1533

Radiated Emission Measurement

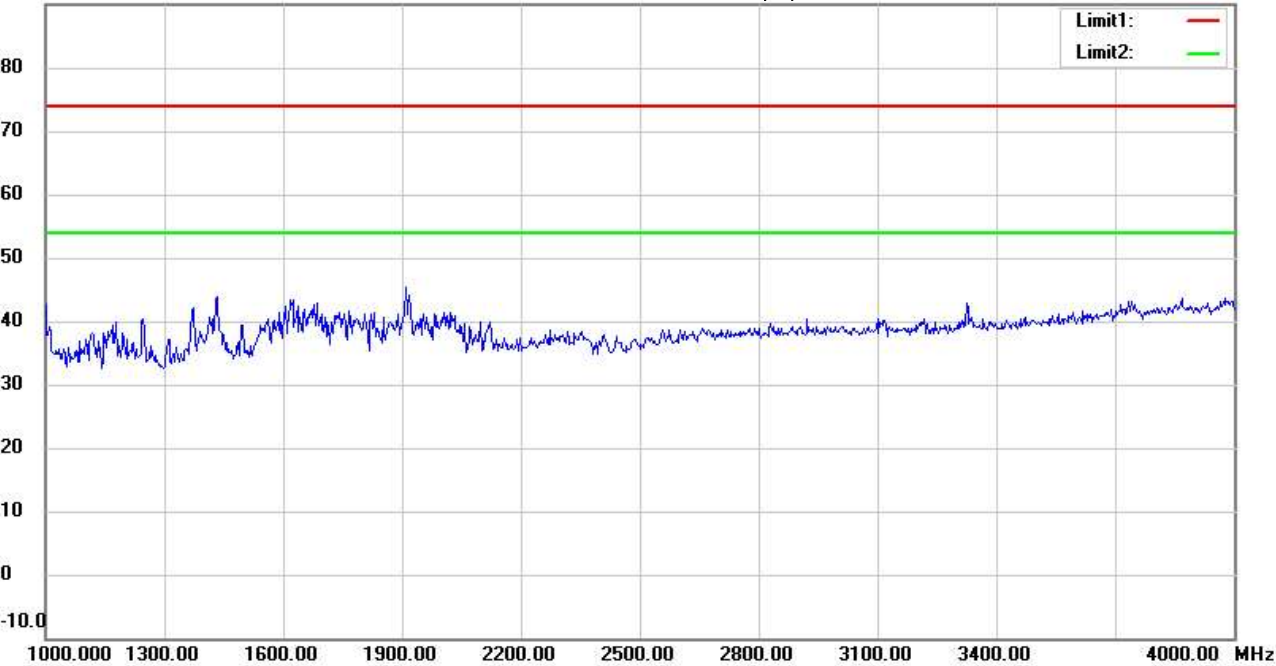
Operator: Gino
Temperature:25.9 °C
Humidity:58.6 %

File :3

Data :#6

Date: 2024/3/29
Time: 下午 07:13:38

90.0 dBuV/m



Site : 966A Chamber
Condition : FCC_part 15 RE-Class C_Above 1GHz_PK
EUT : W6M22403-23316
M/N:
Test Mode : TX 802.11b CH1
Note :

Polarization: Vertical
Power : 3.3 Vd.c.
Distance: 3m

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
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*:Maximum data x:Over limit !:over margin



Address:No.99,Sec.1,Balian Rd.,Xizhi Dist.,New Taipei City
Tel:+886-2-2646-1508
Fax:+886-2-2646-1533

Radiated Emission Measurement

Operator: Gino

File :3

Data :#2

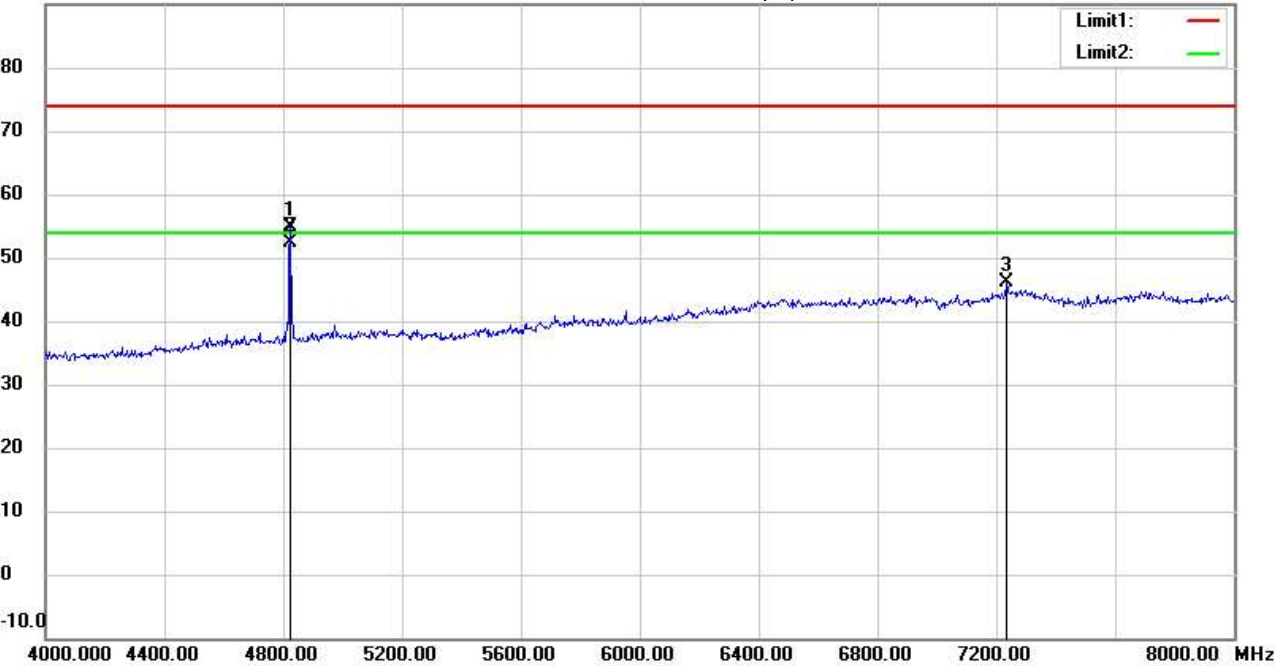
Date: 2024/3/29

Temperature:25.9 °C

90.0 dBuV/m

Time: 下午 07:11:26

Humidity:58.6 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22403-23316

M/N:

Test Mode : TX 802.11b CH1

Note :

Polarization: **Horizontal**

Power : 3.3 Vd.c.

Distance: 3m

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	4824.000	50.42	peak	4.43	54.85	74.00	150	305	-19.15	
*	4824.000	47.85	AVG	4.43	52.28	54.00	150	305	-1.72	
	7236.000	35.15	peak	11.10	46.25	74.00	150	203	-27.75	

*:Maximum data x:Over limit !:over margin



Address: No. 99, Sec. 1, Balian Rd., Xizhi Dist., New Taipei City
Tel: +886-2-2646-1508
Fax: +886-2-2646-1533

Radiated Emission Measurement

Operator: Gino

File : 3

Data : #7

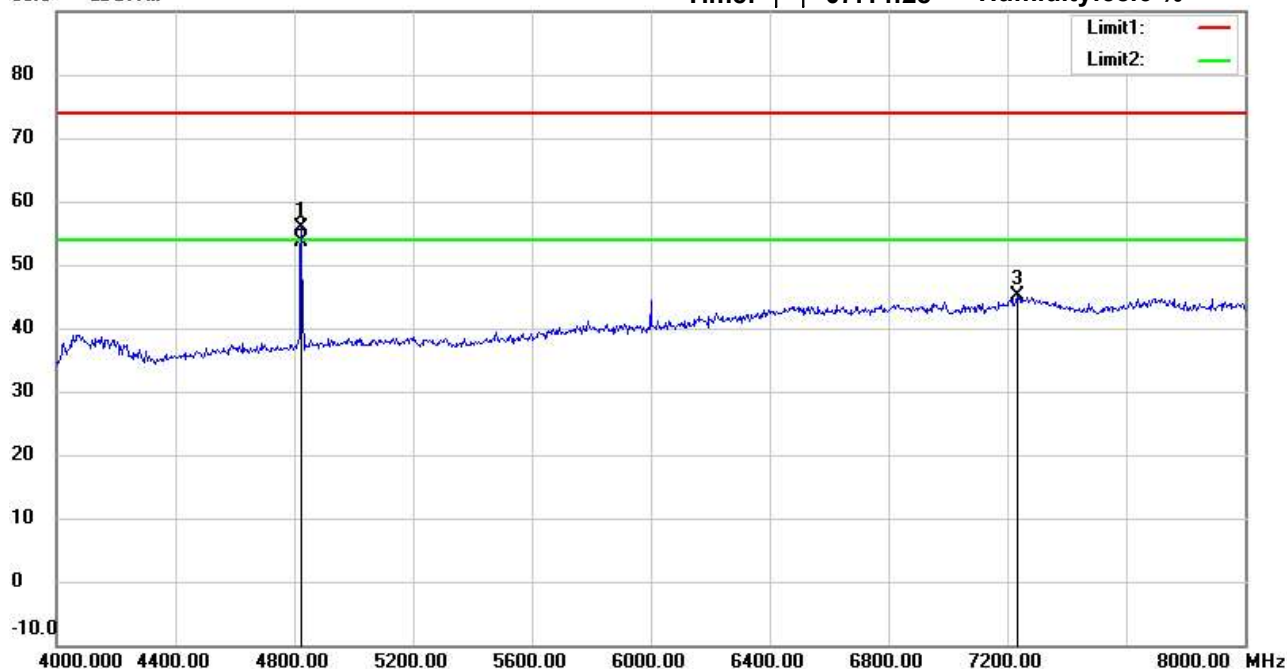
Date: 2024/3/29

Temperature: 25.9 °C

90.0 dBuV/m

Time: 下午 07:14:28

Humidity: 58.6 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22403-23316

M/N:

Test Mode : TX 802.11b CH1

Note :

Polarization: **Vertical**

Power : 3.3 Vd.c.

Distance: 3m

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	4824.000	51.50	peak	4.43	55.93	74.00	150	18	-18.07	
*	4824.000	49.23	AVG	4.43	53.66	54.00	150	18	-0.34	
	7236.000	33.92	peak	11.10	45.02	74.00	150	83	-28.98	

*:Maximum data x:Over limit !:over margin



Address:No.99,Sec.1,Balian Rd.,Xizhi Dist.,New Taipei City
Tel:+886-2-2646-1508
Fax:+886-2-2646-1533

Radiated Emission Measurement

Operator: Gino

File :3

Data :#3

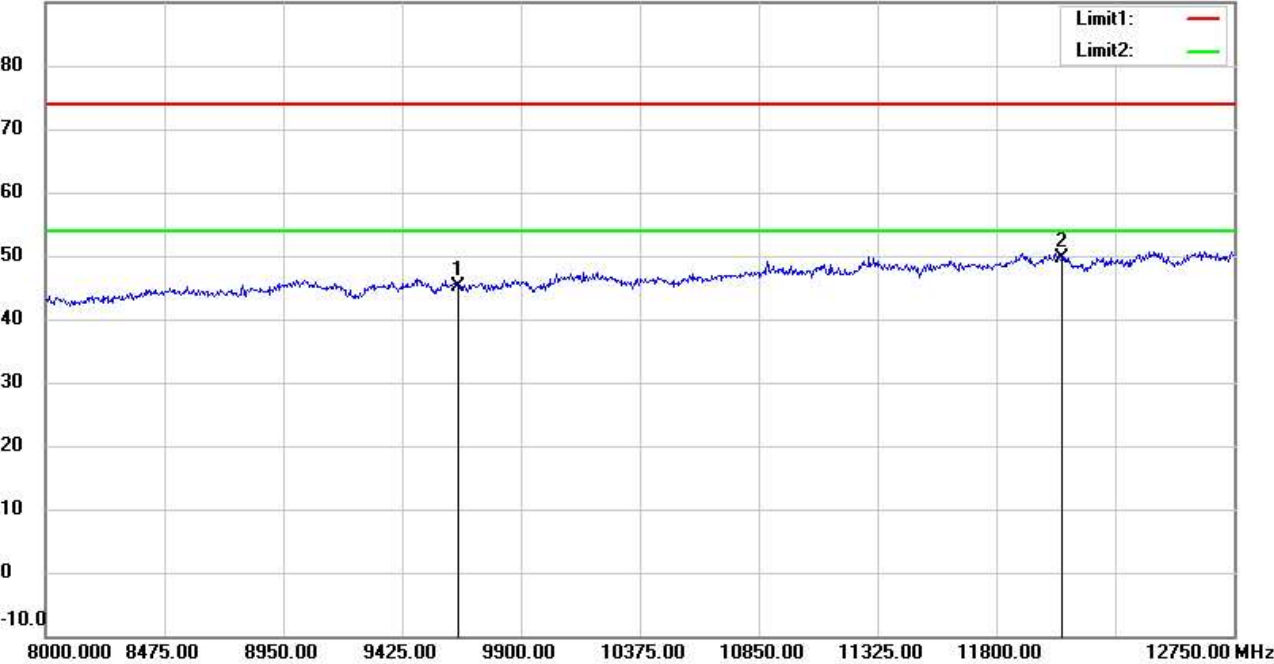
Date: 2024/3/29

Temperature:25.9 °C

90.0 dBuV/m

Time: 下午 07:12:21

Humidity:58.6 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22403-23316

M/N:

Test Mode : TX 802.11b CH1

Note :

Polarization: **Horizontal**

Power : 3.3 Vd.c.

Distance: 3m

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	9648.000	32.31	peak	12.84	45.15	74.00	150	49	-28.85	
*	12060.000	33.13	peak	16.60	49.73	74.00	150	10	-24.27	

*:Maximum data x:Over limit !:over margin



Address: No. 99, Sec. 1, Balian Rd., Xizhi Dist., New Taipei City
Tel: +886-2-2646-1508
Fax: +886-2-2646-1533

Radiated Emission Measurement

Operator: Gino

File : 3

Data : #8

Date: 2024/3/29

Temperature: 25.9 °C

90.0 dBuV/m

Time: 下午 07:15:15

Humidity: 58.6 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22403-23316

M/N:

Test Mode : TX 802.11b CH1

Note :

Polarization: Vertical

Power : 3.3 Vd.c.

Distance: 3m

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	9648.000	32.26	peak	12.84	45.10	74.00	150	90	-28.90	
*	12060.000	33.36	peak	16.60	49.96	74.00	150	322	-24.04	

*:Maximum data x:Over limit !:over margin



Address:No.99,Sec.1,Balian Rd.,Xizhi Dist.,New Taipei City
Tel:+886-2-2646-1508
Fax:+886-2-2646-1533

Radiated Emission Measurement

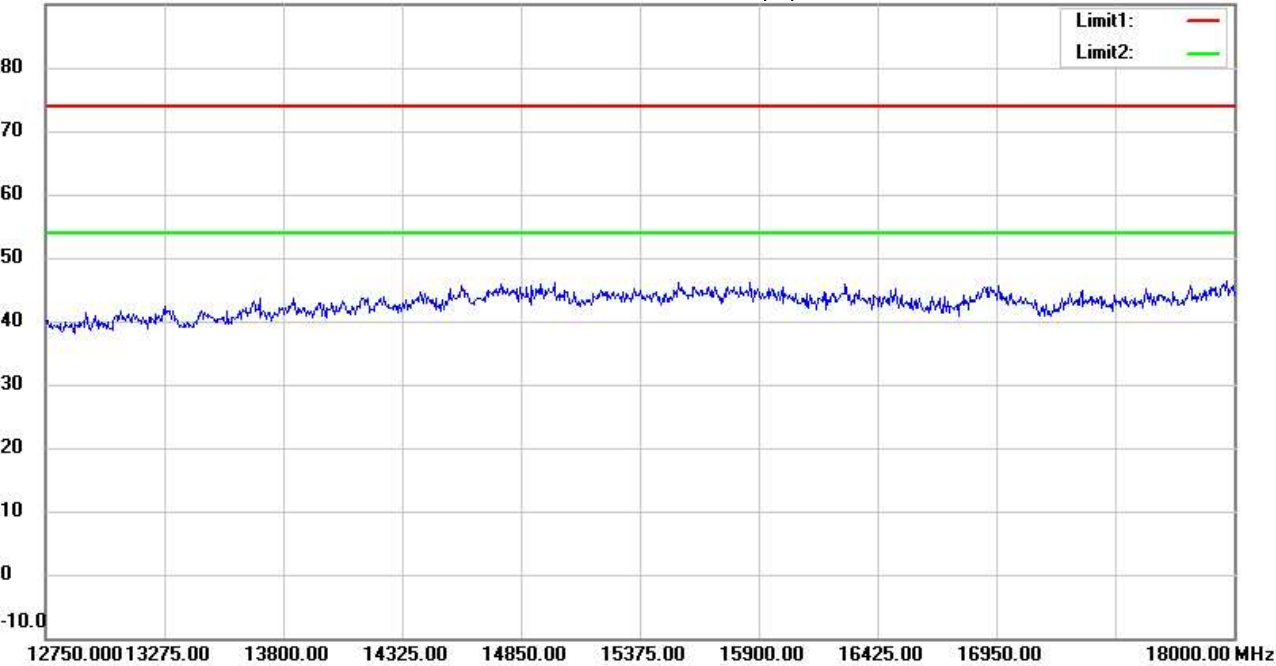
Operator: Gino
Temperature:25.9 °C
Humidity:58.6 %

File :3

Data :#4

Date: 2024/3/29
Time: 下午 07:12:37

90.0 dBuV/m



Site : 966A Chamber
Condition : FCC_part 15 RE-Class C_Above 1GHz_PK
EUT : W6M22403-23316
M/N:
Test Mode : TX 802.11b CH1
Note :

Polarization: *Horizontal*
Power : 3.3 Vd.c.
Distance: 3m

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
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*:Maximum data x:Over limit !:over margin



Address:No.99,Sec.1,Balian Rd.,Xizhi Dist.,New Taipei City
Tel:+886-2-2646-1508
Fax:+886-2-2646-1533

Radiated Emission Measurement

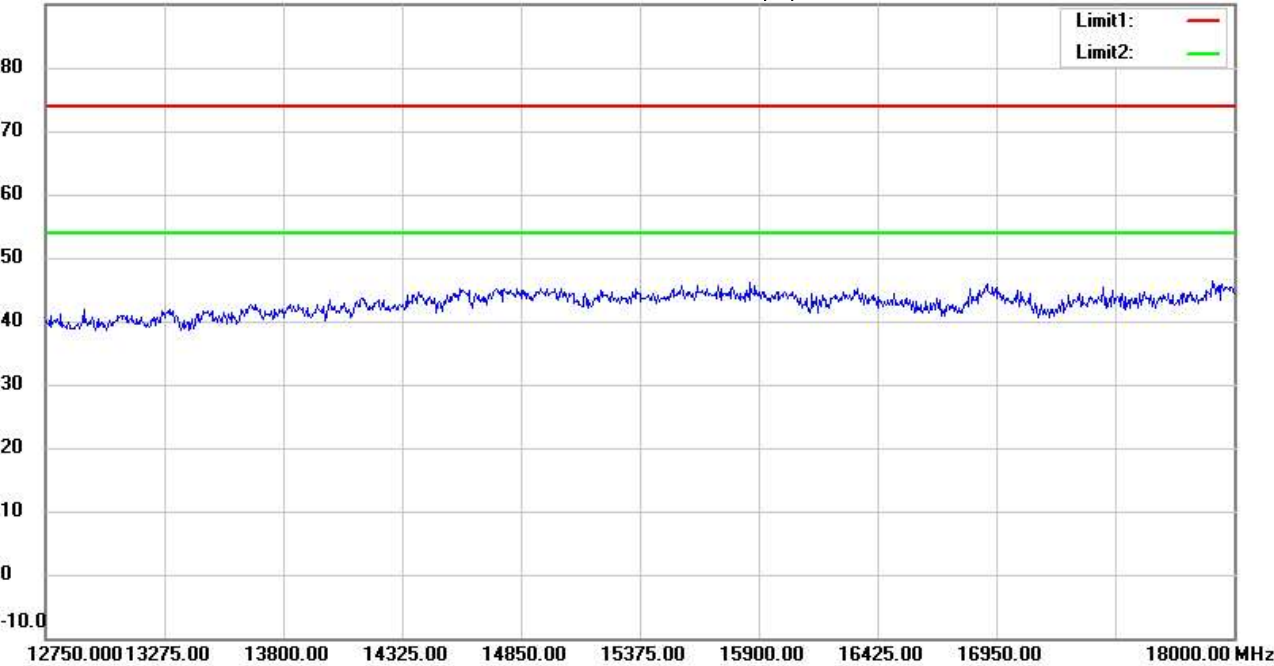
Operator: Gino
Temperature:25.9 °C
Humidity:58.6 %

File :3

Data :#9

Date: 2024/3/29
Time: 下午 07:15:32

90.0 dBuV/m



Site : 966A Chamber
Condition : FCC_part 15 RE-Class C_Above 1GHz_PK
EUT : W6M22403-23316
M/N:
Test Mode : TX 802.11b CH1
Note :

Polarization: Vertical
Power : 3.3 Vd.c.
Distance: 3m

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
-----	-----------------	----------------	----------	---------------------	-----------------	----------------	--------------	----------------	-------------	---------

*:Maximum data x:Over limit !:over margin



Address:No.99,Sec.1,Balian Rd.,Xizhi Dist.,New Taipei City
Tel:+886-2-2646-1508
Fax:+886-2-2646-1533

Radiated Emission Measurement

Operator: Gino

File :3

Data :#5

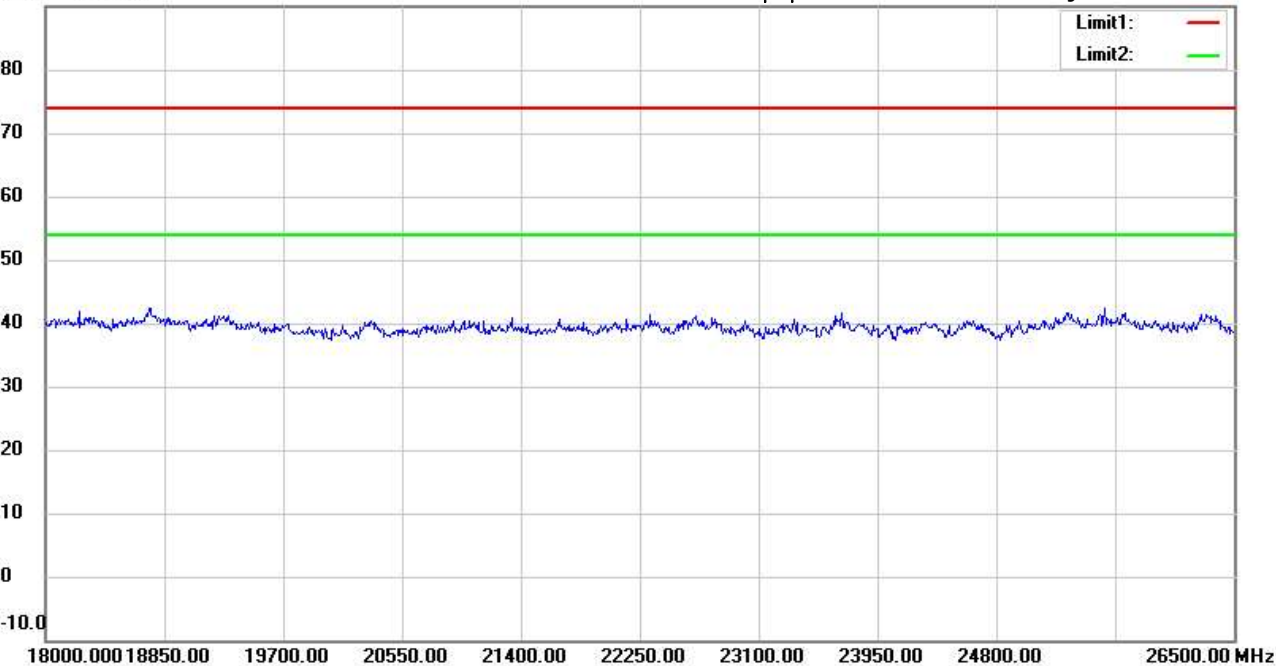
Date: 2024/3/29

Temperature:25.9 °C

90.0 dBuV/m

Time: 下午 07:12:47

Humidity:58.6 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22403-23316

M/N:

Test Mode : TX 802.11b CH1

Note :

Polarization: Horizontal

Power : 3.3 Vd.c.

Distance: 3m

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
-----	-----------------	----------------	----------	---------------------	-----------------	----------------	--------------	----------------	-------------	---------

*:Maximum data x:Over limit !:over margin



Address:No.99,Sec.1,Balian Rd.,Xizhi Dist.,New Taipei City
Tel:+886-2-2646-1508
Fax:+886-2-2646-1533

Radiated Emission Measurement

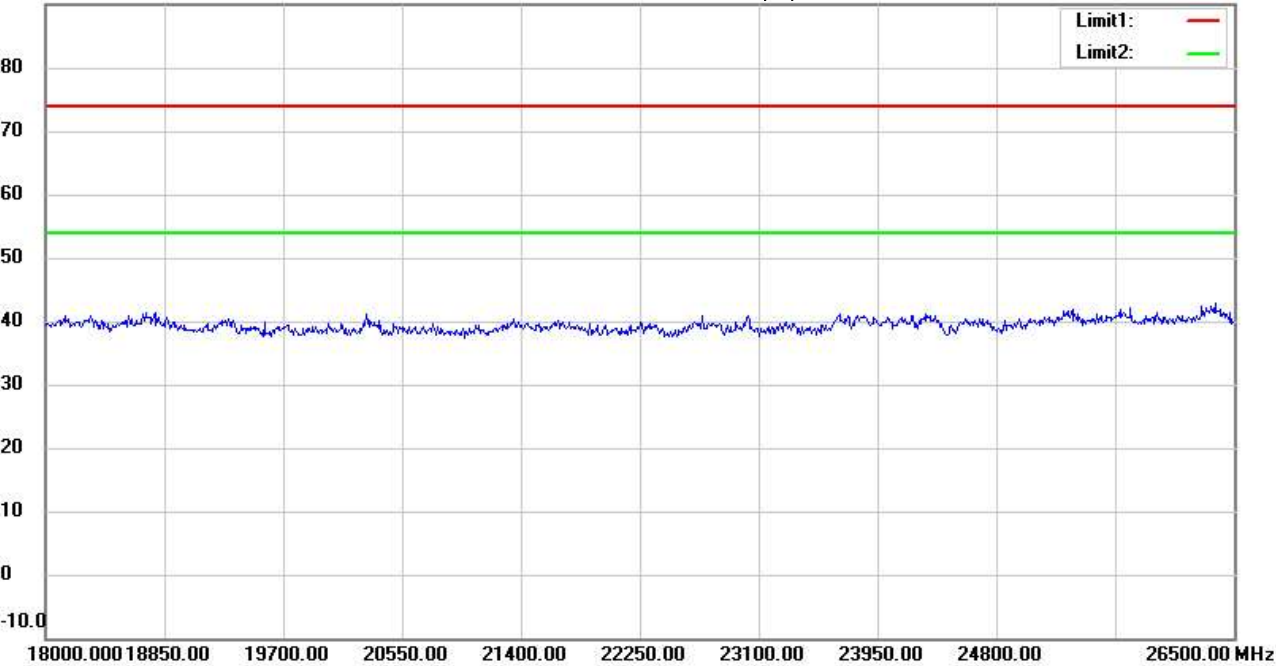
Operator: Gino
Temperature:25.9 °C
Humidity:58.6 %

File :3

Data :#10

Date: 2024/3/29
Time: 下午 07:15:42

90.0 dBuV/m



Site : 966A Chamber
Condition : FCC_part 15 RE-Class C_Above 1GHz_PK
EUT : W6M22403-23316
M/N:
Test Mode : TX 802.11b CH1
Note :

Polarization: Vertical
Power : 3.3 Vd.c.
Distance: 3m

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
-----	-----------------	----------------	----------	---------------------	-----------------	----------------	--------------	----------------	-------------	---------

*:Maximum data x:Over limit !:over margin



Address:No.99,Sec.1,Balian Rd.,Xizhi Dist.,New Taipei City
Tel:+886-2-2646-1508
Fax:+886-2-2646-1533

Radiated Emission Measurement

Operator: Gino

File :3

Data :#1

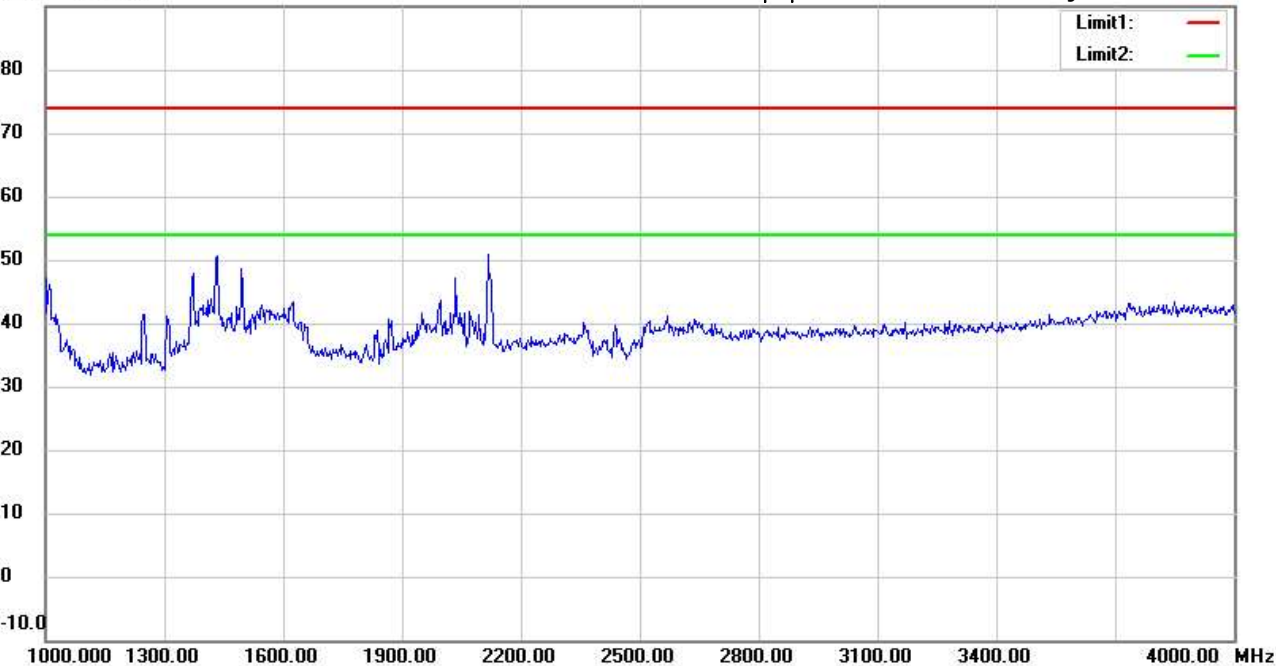
Date: 2024/3/29

Temperature:25.9 °C

90.0 dBuV/m

Time: 下午 07:33:32

Humidity:58.6 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22403-23316

M/N:

Test Mode : TX 802.11b CH6

Note :

Polarization: **Horizontal**

Power : 3.3 Vd.c.

Distance: 3m

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
-----	-----------------	----------------	----------	---------------------	-----------------	----------------	--------------	----------------	-------------	---------

*:Maximum data x:Over limit !:over margin



Address:No.99,Sec.1,Balian Rd.,Xizhi Dist.,New Taipei City
Tel:+886-2-2646-1508
Fax:+886-2-2646-1533

Radiated Emission Measurement

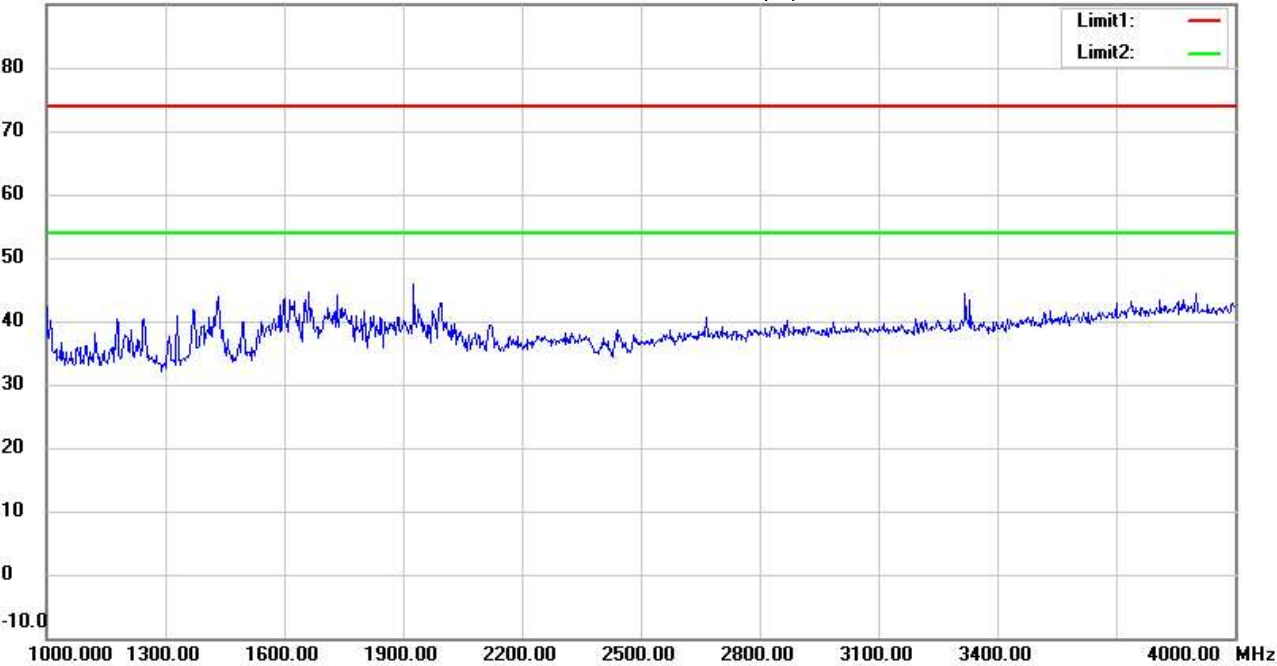
Operator: Gino
Temperature:25.9 °C
Humidity:58.6 %

File :3

Data :#6

Date: 2024/3/29
Time: 下午 07:36:32

90.0 dBuV/m



Site : 966A Chamber
Condition : FCC_part 15 RE-Class C_Above 1GHz_PK
EUT : W6M22403-23316
M/N:
Test Mode : TX 802.11b CH6
Note :

Polarization: Vertical
Power : 3.3 Vd.c.
Distance: 3m

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
-----	-----------------	----------------	----------	---------------------	-----------------	----------------	--------------	----------------	-------------	---------

*:Maximum data x:Over limit !:over margin