

**47 CFR PART 15 SUBPART C TEST REPORT**

**for**

**Base Unit**

**Model No.: BUN<sub>x</sub>-xxxxx-xxxxx Series**

**(x=0~9, A~Z or blank)**

**FCC ID: GX9BUN3**

of

Applicant: **CLIMAX TECHNOLOGY CO., LTD.**

Address: No. 258, Sinhu 2nd Rd., Neihu District, Taipei City 114,  
Taiwan ( R.O.C.)

Tested and Prepared

by

**Worldwide Testing Services (Taiwan) Co., Ltd.**

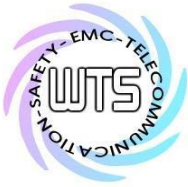
**FCC Registration No.: TW1072, TW1140, TW1141, TW1146, TW1477,  
TW0200, TW0037**

**Industry Canada filed test laboratory Reg. No.: 20037, 5107A, 31634**



**Report No.: W6M22405-23456-C-1**

6F, NO. 58, LANE 188, RUEY-KUANG RD., NEIHU TAIPEI 114, TAIWAN, R.O.C.  
TEL: 886-2-66068877      FAX: 886-2-66068879      E-mail: [wts@wts-lab.com](mailto:wts@wts-lab.com)



Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3

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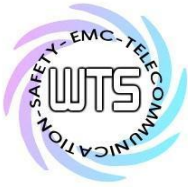
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## **1 General Information**

### **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.

### **Tester:**

May 30, 2024

Sora Kuo

Date

WTS-Lab.

Name

Signature

### **Technical responsibility for area of testing:**

May 30, 2024

Kevin Wang

Date

WTS

Name

Signature



Registration number: W6M22405-23456-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.)

Xizhi Lab

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, TW1141, TW1146, TW1477,  
TW0200, TW0037

Industry Canada filed test laboratory Reg. No.: 20037, 5107A, 31634

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

Name: ./.

Accredited number: ./.

Street: ./.

Town: ./.

Country: ./.

## **1.3 Details of approval holder**

Name: CLIMAX TECHNOLOGY CO., LTD.

Street: No. 258, Sinhu 2nd Rd., Neihu District,

Town: Taipei City 114,

Country: Taiwan (R.O.C.)



Registration number: W6M22405-23456-C-1

FCC ID: GX9BUN3

## 1.4 Application details

Date of receipt of test item: May 06, 2024

Date of test: from May 07, 2024 to May 30, 2024

## 1.5 General information of Test item

Type of test item: Base Unit

Model number: BUNx-xxxxx-xxxxx Series(x=0~9, A~Z or blank)

Brand name: ./.

Multi-listing model number: ./.

Sample no.: #01

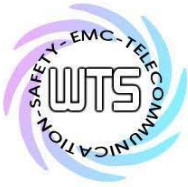
## Technical data

Frequency band: WLAN: 2.4 GHz – 2.4835 GHz

910.76MHz

WLAN		
Mode	Channel	Conducted Power (dBm)
802.11b	Ch 1 : 2412 MHz	14.21
	Ch 6 : 2437 MHz	14.44
	Ch 11 : 2462 MHz	14.80
802.11g	Ch 1 : 2412 MHz	8.77
	Ch 6 : 2437 MHz	9.06
	Ch 11 : 2462 MHz	9.47
802.11n20MHz	Ch 1 : 2412 MHz	8.78
	Ch 6 : 2437 MHz	9.05
	Ch 11 : 2462 MHz	9.41
802.11n40MHz	Ch 1 : 2422 MHz	8.93
	Ch 4 : 2437 MHz	9.00
	Ch 7 : 2452 MHz	9.10

910.76MHz		
Mode	Channel	Conducted Power (dBm)
910.76	906.32 MHz	7.12
	914.84 MHz	4.30



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3

Number of channels: WLAN  
802.11b, g, n 20MHz: 11 channels, 11n 40MHz: 7 channels

Operation modes: Duplex

Modulation type: WLAN: DSSS/OFDM, 910.76MHz: FSK

Fixed point-to-point operation:  Yes /  No

Type of antenna: PCB antenna

Antenna gain: WLAN: 2.27 dBi  
910.76MHz: 2.49 dBi

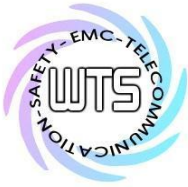
Directional gain: ./.

Power supply: Adapter (I/P: 100-240V~0.4A 50/60Hz  
O/P: 12.0V=1.0A 12.0W)  
Battery 7.2V, 2300mAh 230mA

Host device: none

**Manufacturer: (if applicable)**

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



Registration number: W6M22405-23456-C-1  
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## 1.5 Duty Cycles

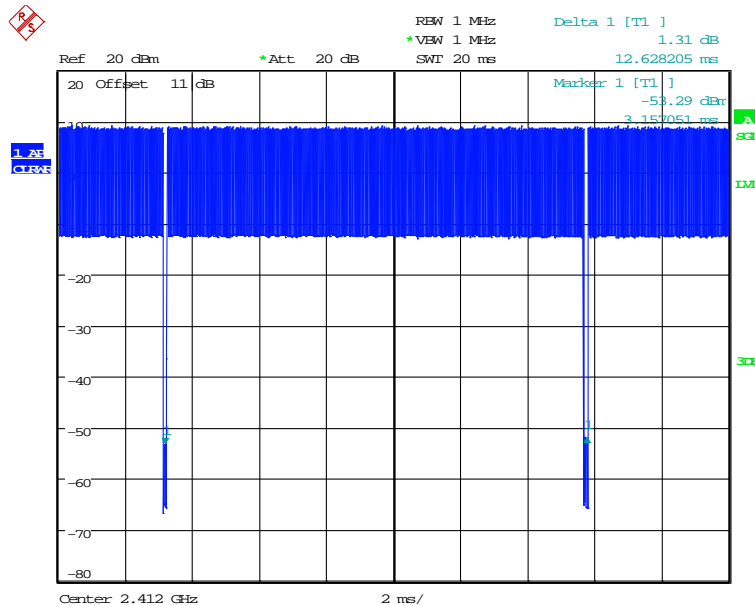
A correction factor shall be added to the measurement results prior to comparing with the emission limit to compute the emission level that would have been measured had the test been performed at 100% duty cycle.

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

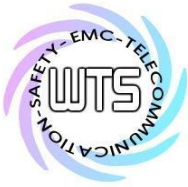
### WLAN

Mode	Ton (ms)	Ton+Toff (ms)	Duty cycle (%)	Duty Factor (dB)	1/T - VBW (KHz)
802.11b	12.564	12.628	99.49%	0.02	0.01
802.11g	2.083	2.196	94.85%	0.23	0.48
802.11n 20M	1.939	2.091	92.73%	0.33	0.52
802.11n 40M	0.954	1.504	63.43%	1.98	1.05

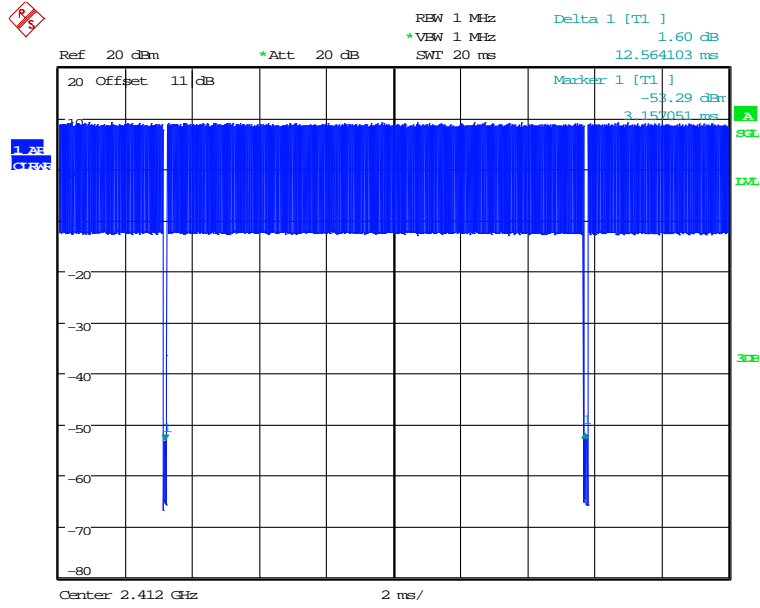
### Duty cycle plot 802.11b



DUTY 802.11B  
 Date: 23.MAY.2024 15:14:20

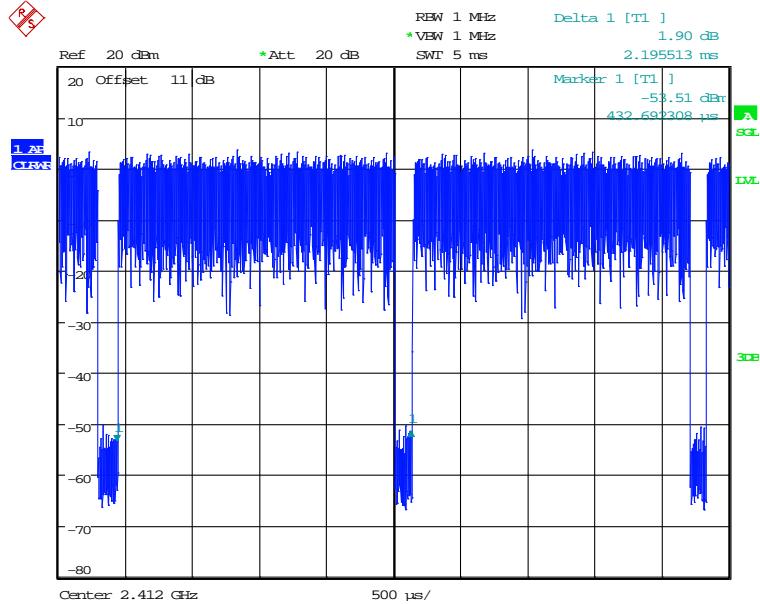


Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3



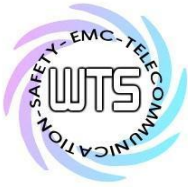
DUTY 802.11B  
Date: 23.MAY.2024 15:14:29

## 802.11g

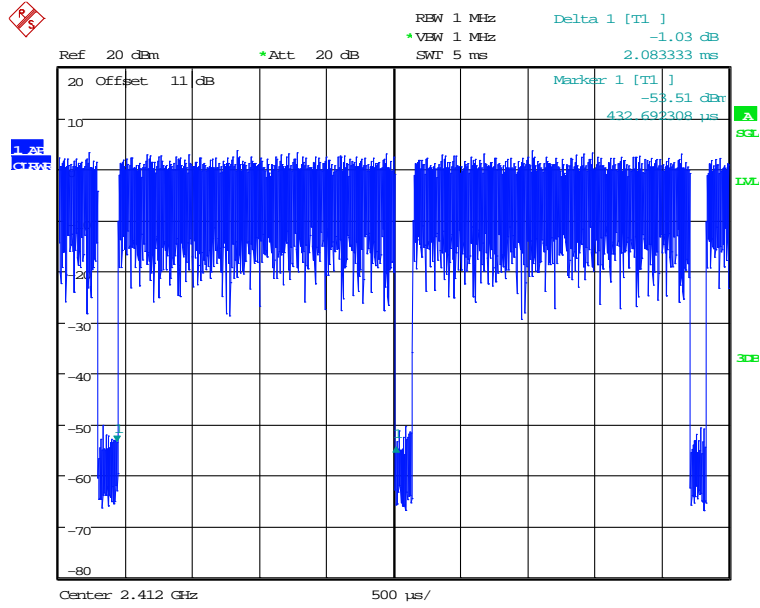


DUTY 802.11G  
Date: 23.MAY.2024 15:12:42



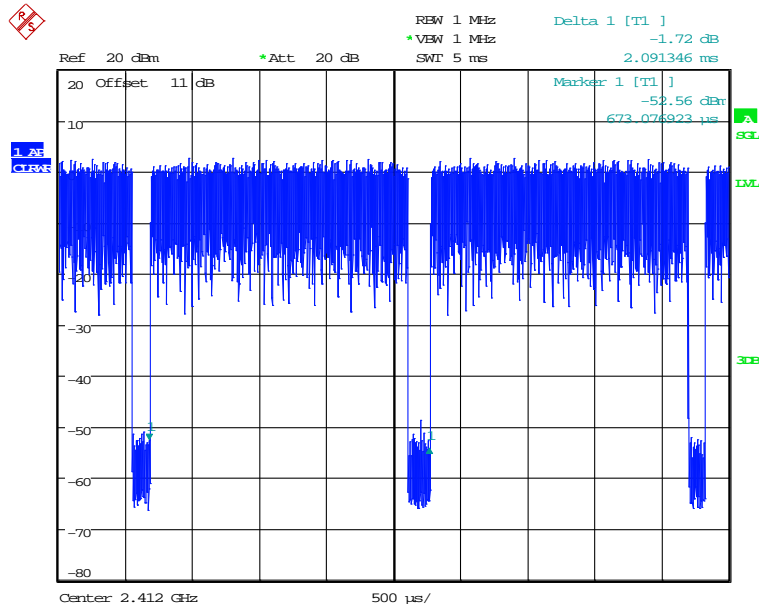


Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3



DUTY 802.11G  
Date: 23.MAY.2024 15:12:58

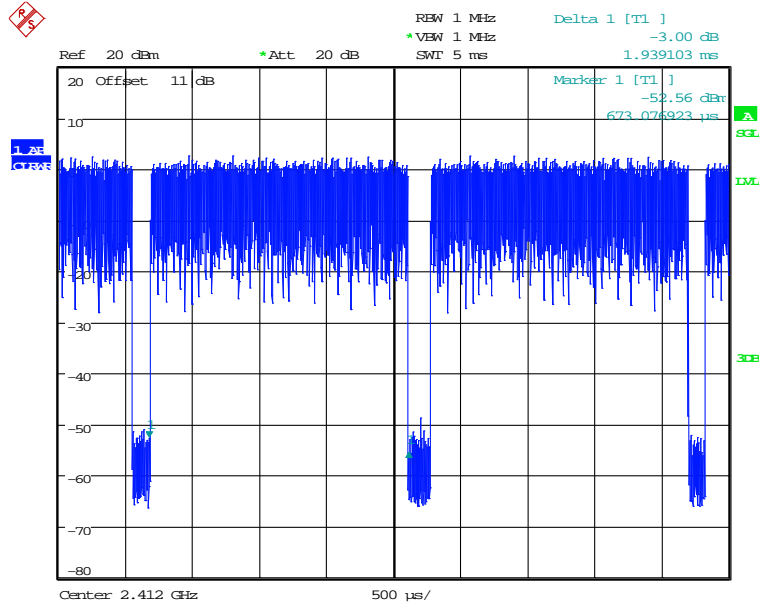
802.11n 20MHz



DUTY 802.11N 20MHZ  
Date: 23.MAY.2024 14:47:03

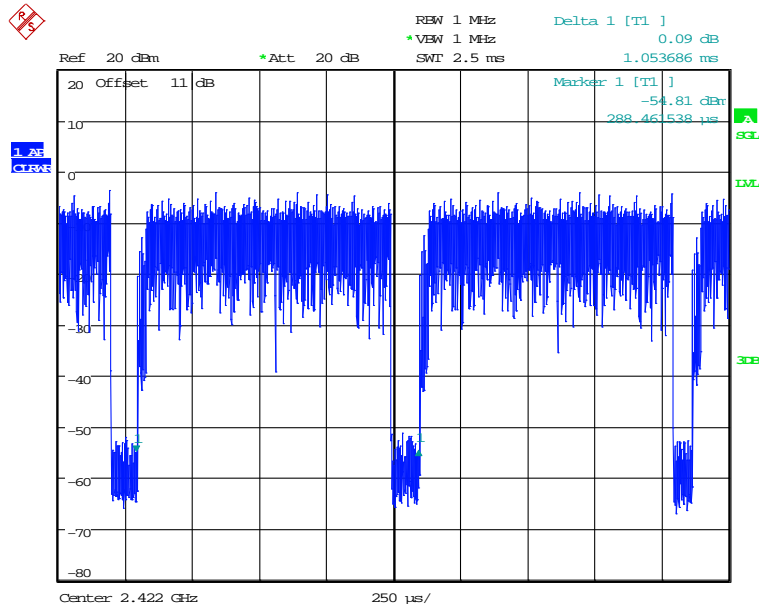


Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3

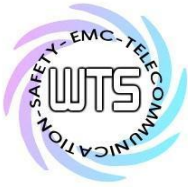


DUTY 802.11N 20MHZ  
Date: 23.MAY.2024 14:47:11

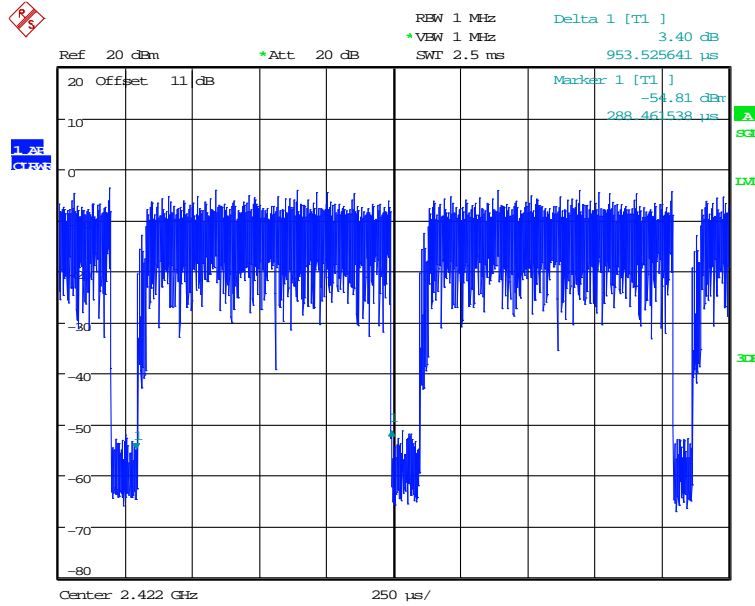
## 802.11n 40MHz



DUTY 802.11N 40MHZ  
Date: 23.MAY.2024 14:48:54



Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3



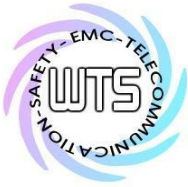
DUTY 802.11N 40MHZ  
Date: 23.MAY.2024 14:49:01

## 1.6 Test standards

47 CFR PART 15 SUBPART C § 15.247 (2023-10)

### Special statement:

1. This test report is valid in connection to the model has been tested, any modification to the product which is different from the test model will avoid the certification of the test report.
2. This test report shall always be duplicated in full pages unless the written approval of the testing.
3. The x in model number is representing different case shape, case colors, led mask color, and control ID.
4. The model number of EUT is BUN-3. This model does not contain logo.



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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.

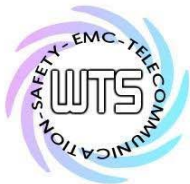
### 2.2 Test environment

Relative humidity content: 20 ... 75 %  
Air pressure: 86 ... 103 kPa  
Power supply: Adapter (I/P: 100-240V~0.4A 50/60Hz  
O/P: 12.0V=1.0A 12.0W)  
Battery 7.2V, 2300mAh 230mA

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) (Transmitter Radiated Emissions in Restricted Bands, Spurious Emissions (tx), Radiated Emission from Digital Part)	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 (20 dB Bandwidth, 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 (Radiated Emission on the band edge)	Expanded Uncertainty : 0.67 dBc
Estimation Result of Uncertainty of Frequency Separation Measurement (Carrier Frequency Separation, Number of Hopping Frequencies)	Expanded Uncertainty : 554.14 Hz
Estimation Result of Uncertainty of Duty Cycle Measurement (Time of Occupancy (Dwell Time))	Expanded Uncertainty : 0.1 ms

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



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## 2.3 Test Equipment List

WLAN

Max Output Power, 6DB Bandwidth, Band edge, Power Spectral Density, Duty  
 910.76MHz

Max Output Power, 20DB Bandwidth, Band edge & Frequency Separation,  
 Number Of Hopping, Dwell Time

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

## Spurious Emission(966A)

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	2024/2/16	2025/4/9
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)	EMCI04-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_EMCI	None	Farad	Version ETS-03A1 Version EMEC-3A1+	



Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3

## **2.4 General Test Procedure**

**POWER LINE CONDUCTED INTERFERENCE:** The procedure used was ANSI STANDARD C63.10-2013 6.2 using a 50 $\mu$ H LISN (if necessary). Both lines were observed. The bandwidth of the spectrum analyzer was 10 kHz with an appropriate sweep speed.

**RADIATION INTERFERENCE:** The test procedure used was according to ANSI STANDARD C63.10-2013 6.3 employing a spectrum analyzer. For investigated frequency is equal to or below 1GHz, the RBW and VBW of the spectrum analyzer was 100 kHz and 100kHz respectively with an appropriate sweep speed. For investigated frequency is above 1GHz, both of RBW and VBW of the spectrum analyzer were 1 MHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna.

**FORMULA OF CONVERSION FACTORS:** The Field Strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dB $\mu$ V) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB.

Example:

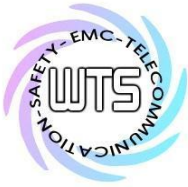
Freq (MHz)      METER READING + ACF + CABLE LOSS (to the receiver) = FS  
33                      20 dB $\mu$ V + 10.36 dB + 6 dB = 36.36 dB $\mu$ V/m @3m

The EUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m (non metallic table) and arranged according to ANSI C63.10-2013 6.2.2. The table used for radiated measurements is capable of continuous rotation. The spectrum was scanned from 30 MHz to the frequency specified as follows:

- (1) If the intentional radiator operates below 10 GHz: to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.
- (2) If the intentional radiator operates at or above 10 GHz and below 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 100 GHz, whichever is lower.
- (3) If the intentional radiator operates at or above 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 200 GHz, whichever is lower, unless specified otherwise elsewhere in the rules.
- (4) If the intentional radiator contains a digital device, regardless of whether this digital device controls the functions of the intentional radiator or the digital device is used for additional control or function purposes other than to enable the operation of the intentional radiator, the frequency range shall be investigated up to the range specified in paragraphs (a)(1)-(a)(3) of this section or the range applicable to the digital device, as shown in paragraph (b)(1) of this Section, whichever is the higher frequency range of investigation.

For hand-held devices, a exploratory test was performed with three (3) orthogonal planes to determine the highest emissions.

When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.



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When the radiated emission limits are expressed in terms of the average value of the emission, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.

The formula is as follows:

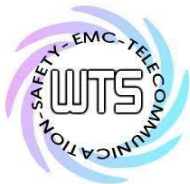
Average = Peak + Duty Factor

Duty Factor =  $20 \log(\text{dwell time}/T)$

T = 100ms when the pulse train period is over 100 ms or the period of the pulse train.

Modified Limits for peak according to 15.35 (b) = Max Permitted average Limits + 20dB

ANSI STANDARD C63.10-2013 B.2.7: Any measurements that utilize special test software shall be indicated and referenced in the test report. During testing, test software 'EZ EMC' was used for setting up different operation modes.



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**3 Test results (enclosure)**

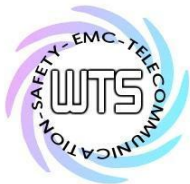
TEST CASE	Para. Number	Required	Test passed	Test failed
Peak Output Power	15.247(b)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Equivalent isotropically radiated Power	15.247(b)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Spurious Emissions radiated – Transmitter operating	15.247(d):15.209	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Spurious Emissions conducted – Transmitter operating	15.247	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Carrier Frequency Separation	15.247(a) (1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Number of Hopping Frequencies	15.247(a) (1)(i)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Time of Occupancy (Dwell Time)	15.247(a) (1)(i)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
20 dB Bandwidth	15.247(a) (1)(i)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Minimum 6 dB Bandwidth	15.247(a)(2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Band-edge Compliance of RF Emission	15.247(d)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Peak Power Spectral Density	15.247(e)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Radiated Emission from Digital Part	15.109	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Power Line Conducted Emission	15.207(a)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Note:**

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)

FCC Rule: 15.247(b)(3)

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).

Test date: May 21, 2024-May 23, 2024

Temperature: 31.9 °C

Humidity: 60.0 %

Tester: Sora

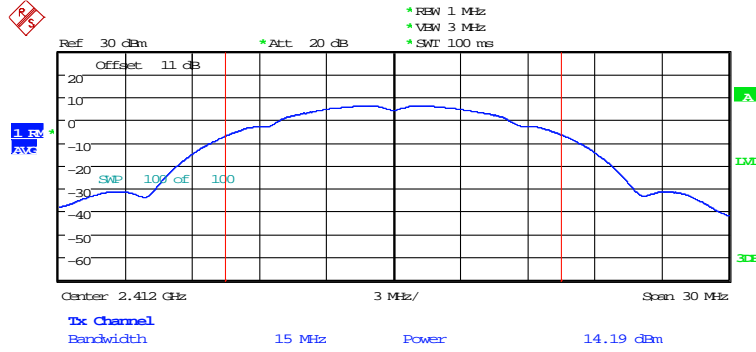
#### WLAN

Mode	Channel	Conducted power with DF		DF (dB)	Limit (dBm)
		Antenna 1 (dBm)			
802.11b	Ch 1 : 2412 MHz	14.21		0.02	30
	Ch 6 : 2437 MHz	14.44		0.02	30
	Ch 11 : 2462 MHz	14.80		0.02	30
802.11g	Ch 1 : 2412 MHz	8.77		0.23	30
	Ch 6 : 2437 MHz	9.06		0.23	30
	Ch 11 : 2462 MHz	9.47		0.23	30
802.11n 20MHz	Ch 1 : 2412 MHz	8.78		0.33	30
	Ch 6 : 2437 MHz	9.05		0.33	30
	Ch 11 : 2462 MHz	9.41		0.33	30
802.11n 40MHz	Ch 1 : 2422 MHz	8.93		1.98	30
	Ch 4 : 2437 MHz	9.00		1.98	30
	Ch 7 : 2452 MHz	9.10		1.98	30

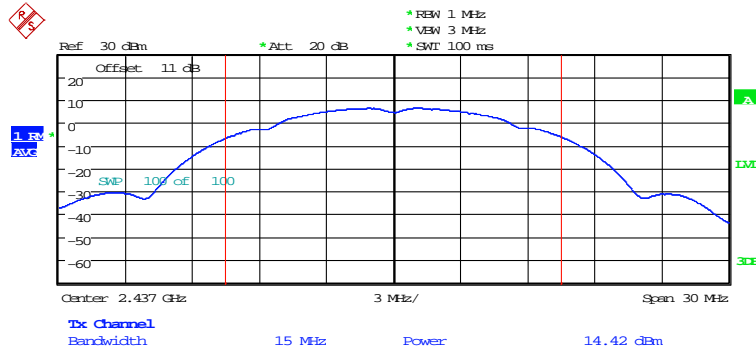


Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3

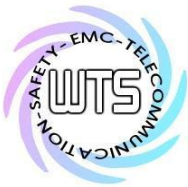
802.11b



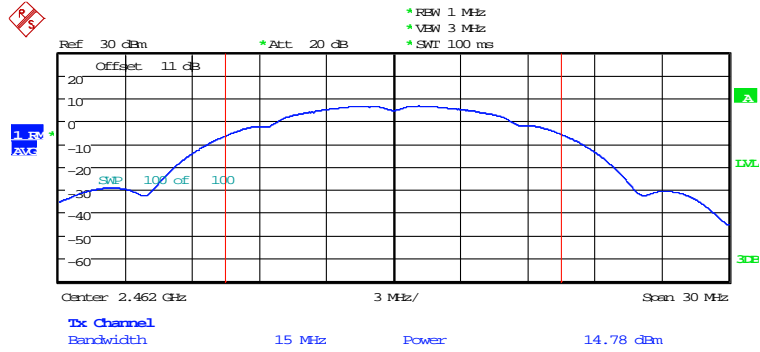
MAX OUTPUT POWER 802.11B CH01  
Date: 23.MAY.2024 15:06:43



MAX OUTPUT POWER 802.11B CH06  
Date: 23.MAY.2024 15:07:33

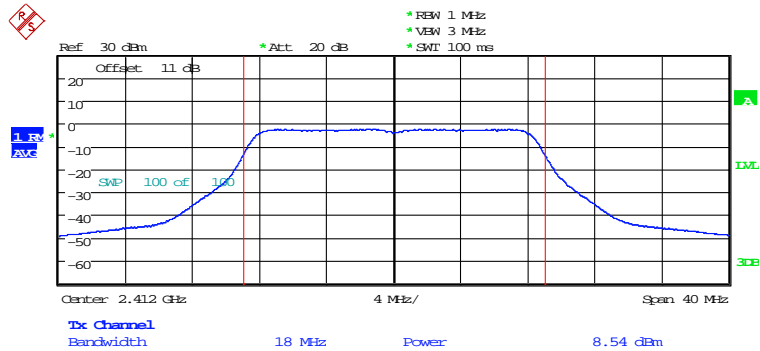


Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3

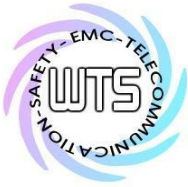


MAX OUTPUT POWER 802.11B CH11  
Date: 23.MAY.2024 15:08:27

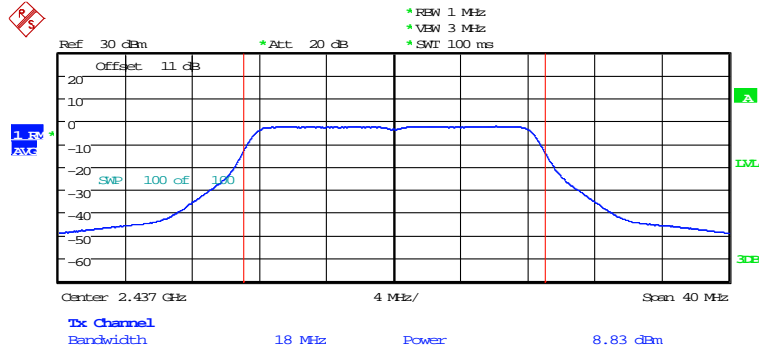
802.11g



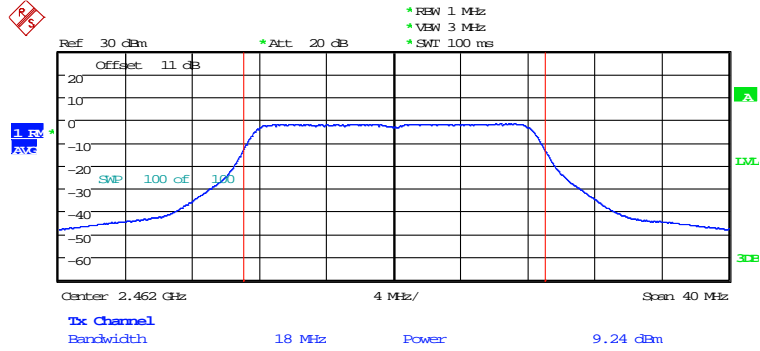
MAX OUTPUT POWER 802.11G CH01  
Date: 23.MAY.2024 15:02:57



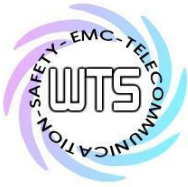
Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3



MAX OUTPUT POWER 802.11G CH06  
Date: 23.MAY.2024 15:03:53

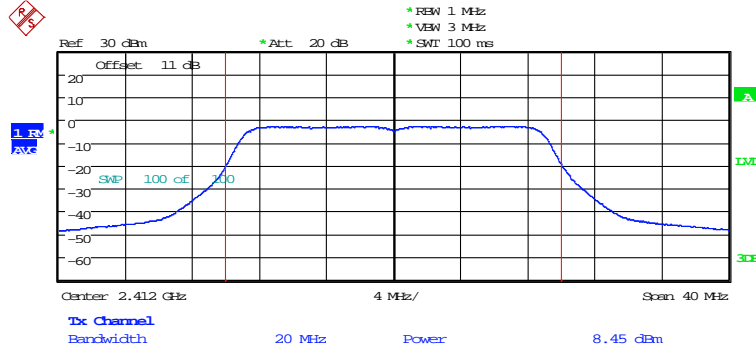


MAX OUTPUT POWER 802.11G CH11  
Date: 23.MAY.2024 15:04:51

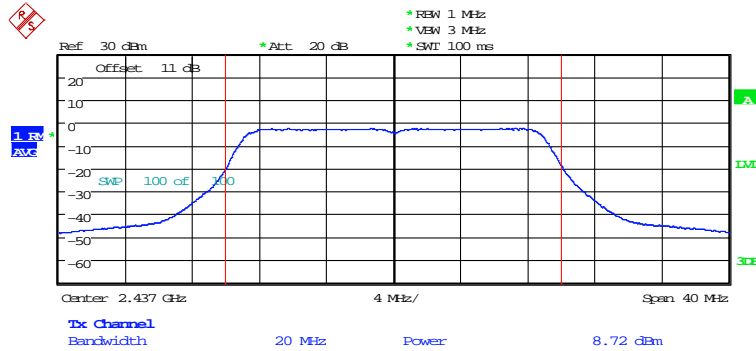


Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3

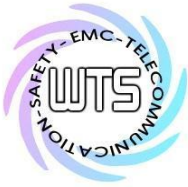
802.11n 20MHz



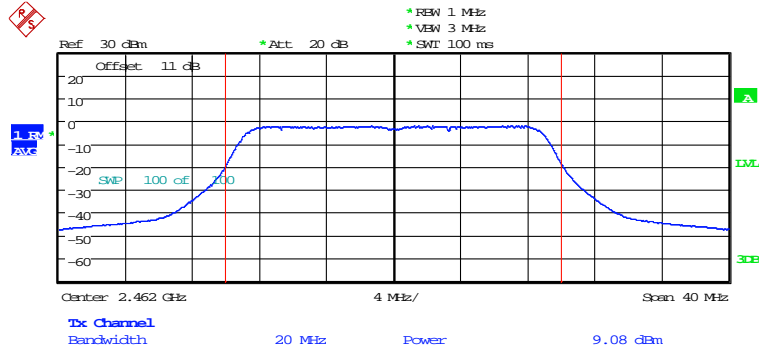
MAX OUTPUT POWER 802.11N 20MHZ CH01  
Date: 23.MAY.2024 14:59:43



MAX OUTPUT POWER 802.11N 20MHZ CH06  
Date: 23.MAY.2024 15:00:40

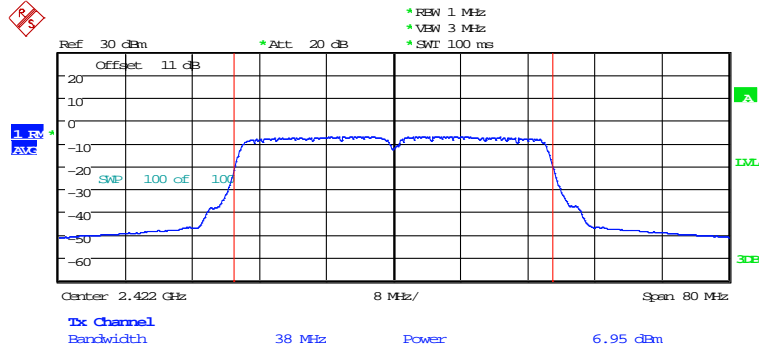


Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3

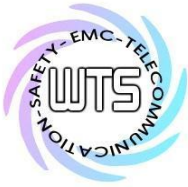


MAX OUTPUT POWER 802.11N 20MHZ CH11  
Date: 23.MAY.2024 15:01:36

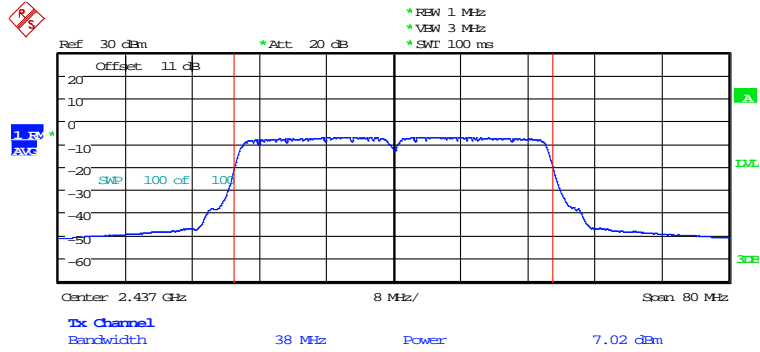
## 802.11n 40MHz



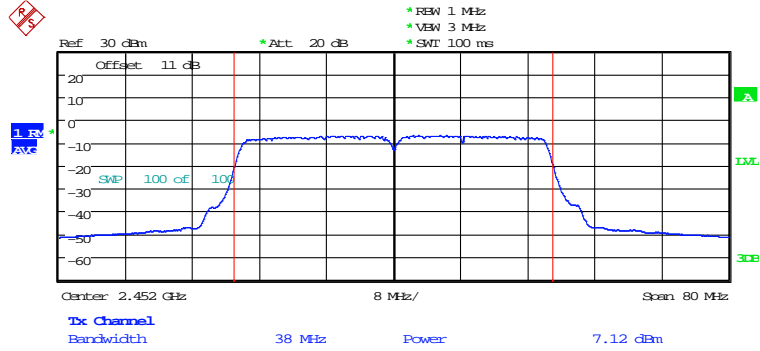
MAX OUTPUT POWER 802.11N 40MHZ CH01  
Date: 23.MAY.2024 14:58:27



Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3



MAX OUTPUT POWER 802.11N 40MHZ CH04  
Date: 23.MAY.2024 14:57:37



MAX OUTPUT POWER 802.11N 40MHZ CH07  
Date: 23.MAY.2024 14:56:38

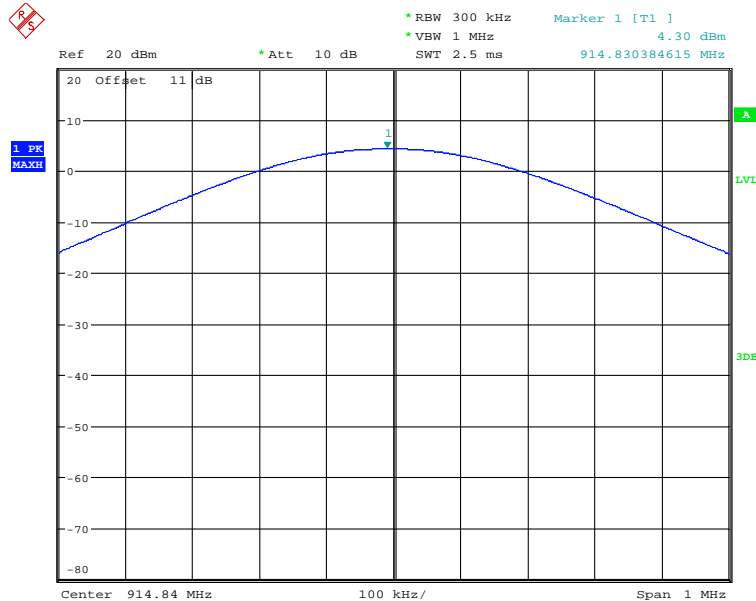
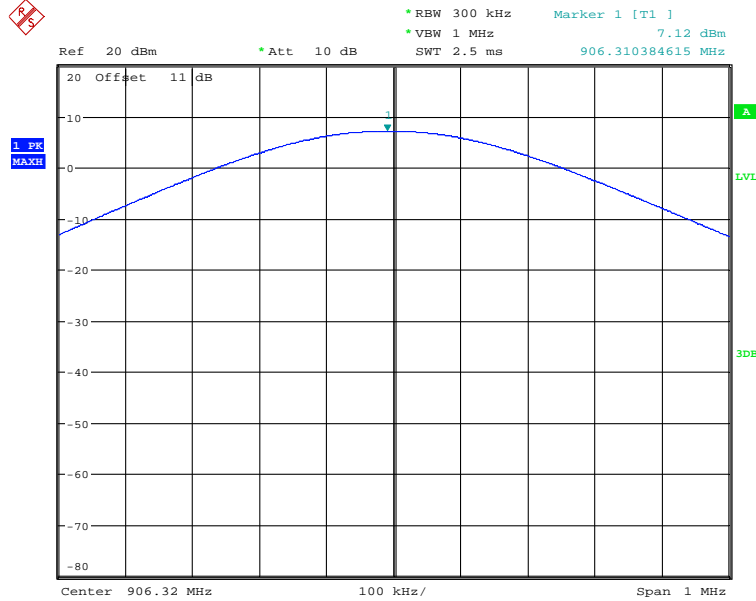


# Worldwide Testing Services(Taiwan) Co., Ltd.

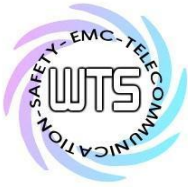
Registration number: W6M22405-23456-C-1  
 FCC ID: GX9BUN3

910.76MHz

Band	Channel	Power (dBm)	Limit (dBm)
910.76MHz	906.32 MHz	7.12	30
	914.84 MHz	4.30	30







# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22405-23456-C-1  
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Limits:

Frequency MHz	Power dBm
902 - 928	30
2400 – 2483.5	30
5725 – 5850	30

In case of employing transmitter antennas having antenna gain  $> 6$  dBi and using fixed point-to point operation consider §15.247 (b)(4)



Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3

**3.2 Transmitter Radiated Emissions in Restricted Bands**

FCC Rules: 15.247 (c), 15.205, 15.209, 15.35

Radiated emission measurements were performed from 30 MHz to 26500 MHz.

For radiated emission tests, the analyzer setting was as followings:

Frequency  $\leq$  1 GHz, RBW:100 kHz, VBW: 100 kHz (Peak measurements)

Frequency  $>$  1 GHz, RBW: 1 MHz, VBW: 1 MHz (Peak measurements)

Frequency  $>$  1 GHz , RBW:1 MHz , VBW: 10 Hz (Average measurements)

Limits.

For frequencies below 1GHz:

Frequency of Emission (MHz)	Field strength (microvolts/meter)	Field Strength (dB microvolts/meter)
30 - 88	100	40.0
88 - 216	150	43.5
216 - 960	200	46.0
Above	500	54.0

For frequencies above 1GHz (Average measurements).

Guidance on Measurement of Digit Transmission Systems:

“If the emission is pulsed, modify the unit for continuous operation, use the setting shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation.”

The correction factor, based on the total channel dwell time in a 100 ms period, may be mathematically applied to a measurement made with an average detector, to further reduce the value.

Duty cycle correction =  $20 \log (\text{dwell time}/ 100\text{ms})$

Note: No duty cycle correction was added to the reading of this EUT.

Explanation: See attached diagrams in Appendix.



Registration number: W6M22405-23456-C-1

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### **3.3 Spurious Emissions (tx)**

Spurious emission was measured with modulation (declared by manufacturer).

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. Attenuation below the general limits specified in § 15.209(a) is not required. In addition, 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) (see § 15.205(c))

FCC Rule: 15.247(d), 15.35

For out of band emissions that are close to or that exceed the 20 dB attenuation requirement described in the specification, radiated measurements were performed at a 3 m separation distance to determine whether these emissions complied with the general radiated emission requirement.

Limits:

For frequencies above 1GHz (Peak measurements).

Modified Limit for peak according to 15.35 (b) = Max Permitted average Limits + 20dB

For frequencies above 1GHz (Average measurements).

Max. reading – 20dB

Max. reading – 20 dB

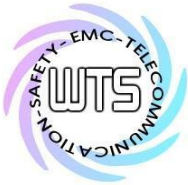
Guidance on Measurement of Digit Transmission Systems:

“If the emission is pulsed, modify the unit for continuous operation, use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation.”

The correction factor, based on the total channel dwell time in a 100 ms period, may be mathematically applied to a measurement made with an average detector, to further reduce the value.

Duty Cycle correction =  $20 \log (\text{dwell time}/100\text{ms})$

Note: No duty cycle correction was added to the reading of EUT.



# Worldwide Testing Services(Taiwan) Co., Ltd.

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SAMPLE CALCULATION OF LIMIT. All results will be updated by an automatic measuring system in accordance with point 2.3.

Calculation of test results:

Such factors like antenna correction, cable loss, external attenuation etc. are already included in the provided measurement results. This is done by using validated test software and calibrated test system according the accreditation requirements.

The peak and average spurious emission plots was measured with the average limits. In the Table being listed the critical peak and average value and exhibit the compliance with the above calculated Limits.

If in the column's correction factor states a value then the max. Field strength in the same row is corrected by a value gained from the "Correction Factor".

### Summary table with radiated data of the test plots

BUNx-xxxxx-xxxxx

Model: Series(x=0~9, A~Z or blank)      Date:      --

Mode:      --      Temperature:      --      °C      Engineer:      --

Polarization:      --      Humidity:      --      %

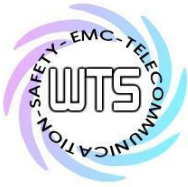
Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

### Note

1. Correction Factor = Antenna factor + Cable loss - Preamplifier
2. The formula of measured value as: Test Result = Reading + Correction Factor
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. After evaluated, the test result in this report adopt the worst case to measure, please see attached diagrams in appendix.

**TEST RESULT (Transmitter):** The unit DOES meet the FCC requirements.

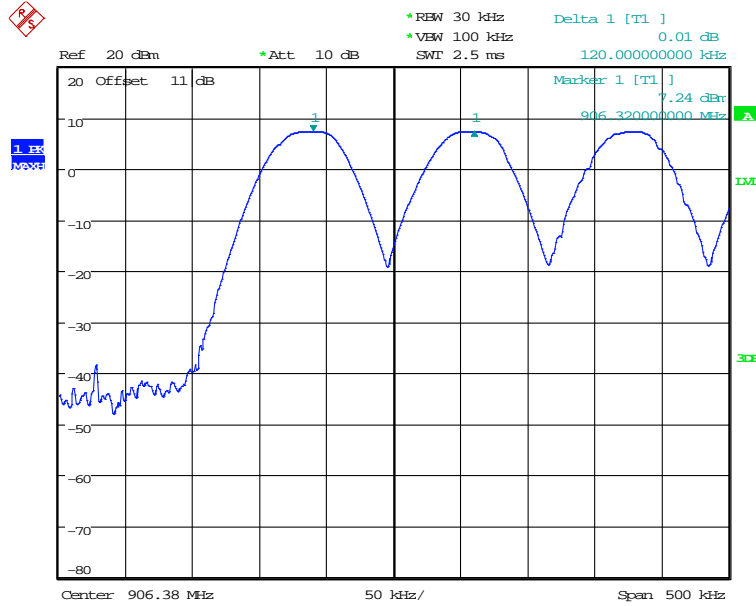


Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3

### 3.4 Carrier Frequency Separation

Carrier Frequency Separation was measured with modulation (declared by manufacturer). According to FCC rules part 15 subpart C §15.247 frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or 20 dB bandwidth of the hopping channel, whichever is greater.

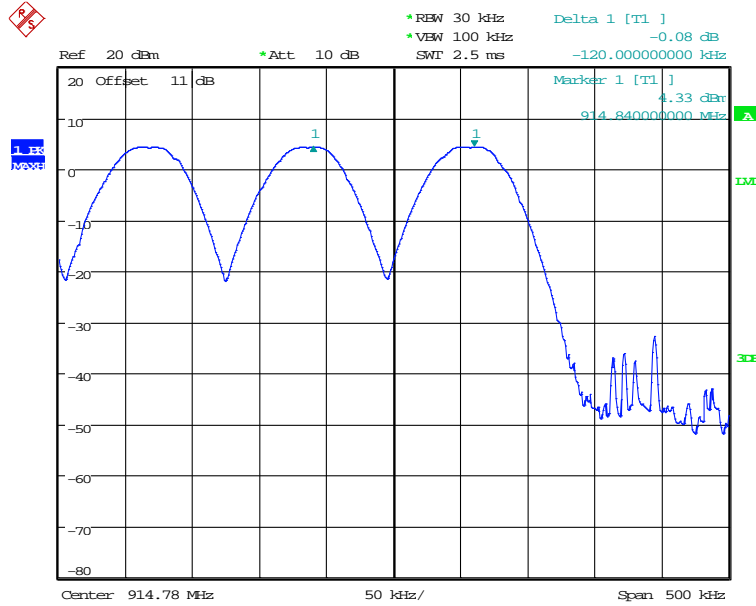
Test date: May 22, 2024  
Temperature: 31.6 °C  
Humidity: 60.0 %  
Tester: Sora



FREQUENCY SEPARATION 906.32MHz  
Date: 22.MAY.2024 09:00:20



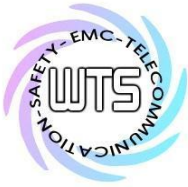
Registration number: W6M22405-23456-C-1  
 FCC ID: GX9BUN3



FREQUENCY SEPARATION 914.84MHz  
 Date: 22.MAY.2024 09:07:06

**Limits:**

Frequency Range MHz	Limits	
	20 dB bandwidth < 25 kHz	20 dB bandwidth > 25 kHz
902-928	25 kHz	20 dB bandwidth
2400-2483.5 5725-5850.0	25 kHz	20 dB bandwidth



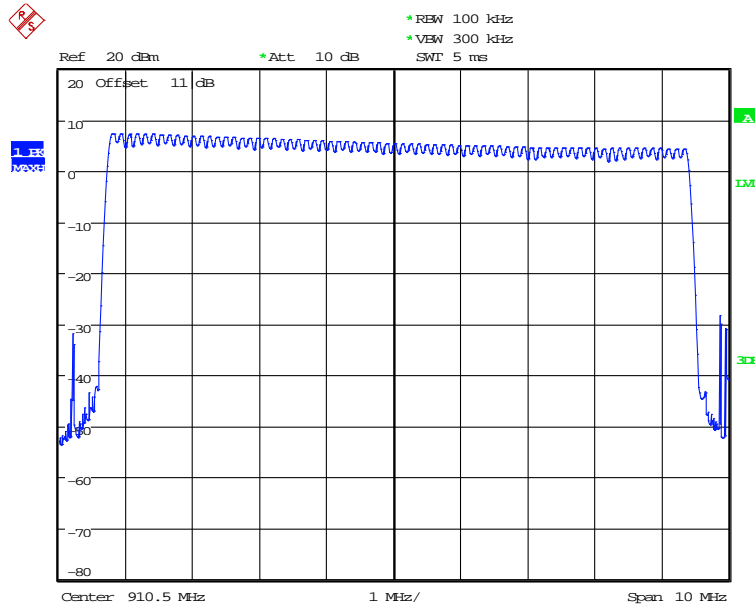
Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3

### 3.5 Number of Hopping Frequencies

According to FCC rules part 15 subpart C §15.247 frequency hopping systems operating in the 2400-2483.5 MHz band shall use at least 15 hopping frequencies. Frequency hopping systems in 5725-5850 MHz bands shall use at least 75 hopping frequencies.

For frequency hopping systems operating in the 902-928 MHz band: if the 20dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies; if the 20dB bandwidth of the hopping channel 250 kHz or greater, the system shall use at least 25 hopping frequencies.

Test date: May 22, 2024  
Temperature: 31.6 °C  
Humidity: 60.0 %  
Tester: Sora



NUMBER OF HOPPING  
Date: 22.MAY.2024 08:29:55



Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3

**Limits:**

Frequency Range MHz	Limit	
	20dB Bandwidth	Number of Channels
902-928 MHz	Bandwidth < 250 kHz	≥ 50
	Bandwidth ≥ 250 kHz	≥ 25
2400-2483.5	not defined	15
5725-5850.0 MHz	1 MHz	75

**3.5.1 Pseudorandom Frequency Hopping Sequence**

The generation of the hopping sequence is determined by the Bluetooth core specification and complies with the FCC requirements.

**3.5.2 Coordination of hopping sequences to other transmitters**

According to the Bluetooth core specification such a coordination is not possible. During scatternet function only one of the two hopping sequences will be used at a definite moment.

**3.5.3 System Receiver Hopping Capability**

According to the Bluetooth core specification. The system receivers shift frequencies in synchronization with the transmitted signals.





Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3

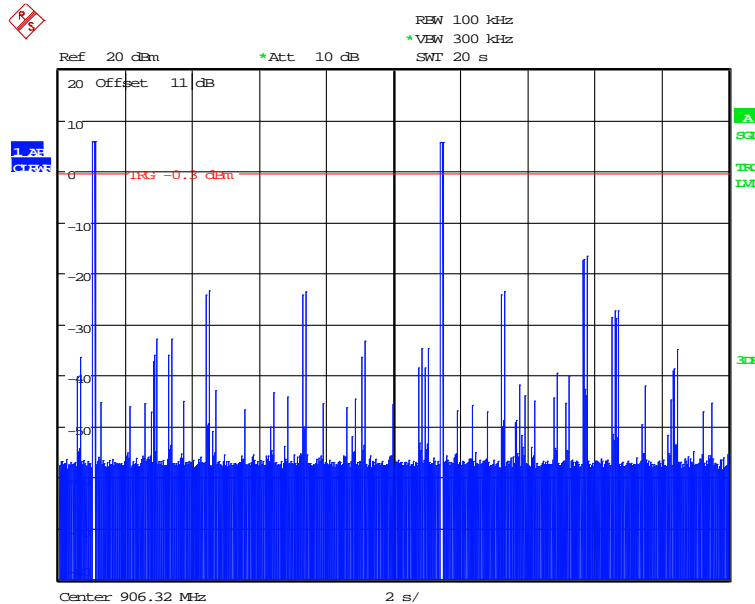
### 3.6 Time of Occupancy (Dwell Time)

Frequency hopping systems operating in the 5725-5850 MHz band shall use an average time of occupancy on any frequency not greater than 0.4 seconds within a 30 second period.

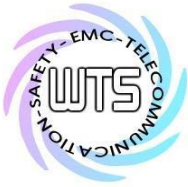
In 2400-2483.5 MHz band the average time of occupancy on any channel shall not be greater than 0.4 seconds multiplied by the number of hopping channels employed.

For frequency hopping systems operating in the 902-928 MHz band: if the 20dB bandwidth of the hopping channel is less than 250 kHz, the average time of occupancy on any frequency shall not greater than 0.4 seconds within a 20 second period; if the 20dB bandwidth of the hopping channel is 250 kHz or greater, the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period.

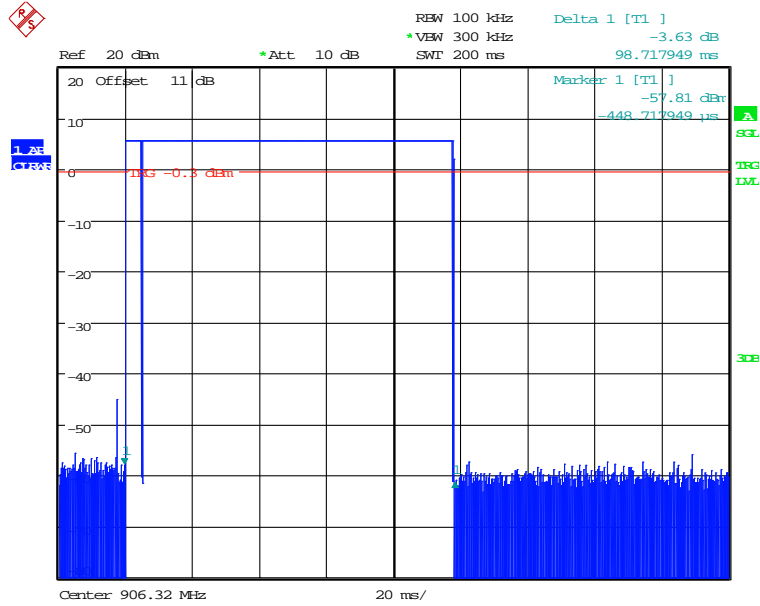
Test date: May 29, 2024  
Temperature: 30.7 °C  
Humidity: 51.5 %  
Tester: Sora



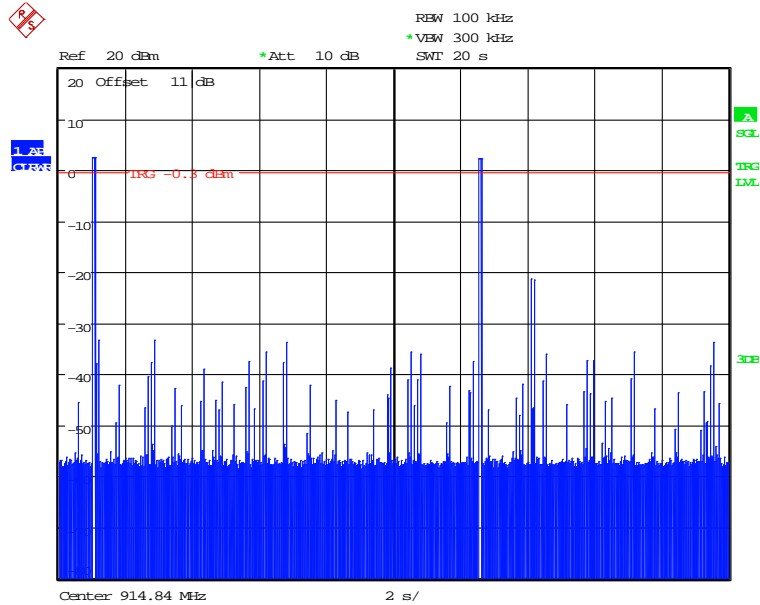
DWELL TIME 906.32MHz  
Date: 29.MAY.2024 13:57:42



Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3



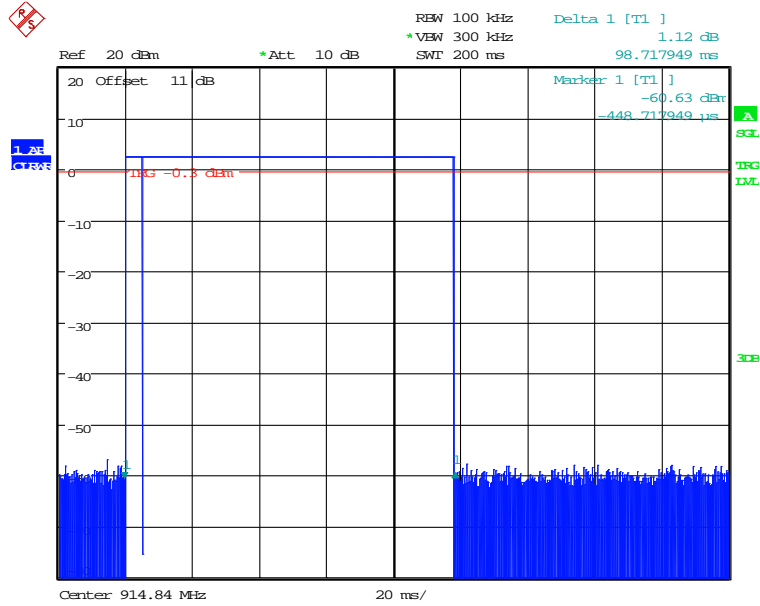
DWELL TIME 906.32MHz ( 98.72ms \* 2events = 197.44ms )  
Date: 29.MAY.2024 14:18:12



DWELL TIME 914.84MHz  
Date: 29.MAY.2024 14:24:57



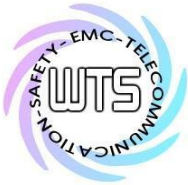
Registration number: W6M22405-23456-C-1  
 FCC ID: GX9BUN3



DWELL TIME 914.84MHz ( 98.72ms \* 2events = 197.44ms )  
 Date: 29.MAY.2024 14:19:32

### Limits and measurement periods:

Frequency MHz	Number of channels	Measurement Periode	Limit
902 – 928	≥50	20 s	0.4 s
	49 ≥ 25	10 s	0.4 s
2400 – 2483.5	≥ 15	0.4 s * number of used channels	0.4 s
5725- 5850	≥ 75	30 s	0.4s



Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3

### 3.7 20dB Bandwidth

Frequency hopping systems operating in the 5725-5850 MHz bands shall use a maximum 20dB bandwidth of 1 MHz.

The 20dB bandwidth is measured on the lowest, middle and highest hopping channel.

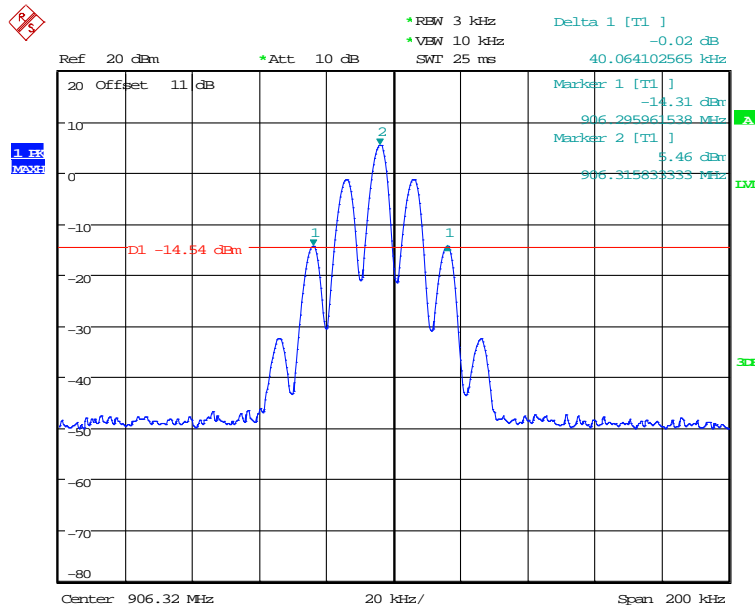
For frequency hopping systems operating in the 902-928 MHz band the maximum 20dB bandwidth of the hopping channel is 500 kHz.

Test date: May 21, 2024

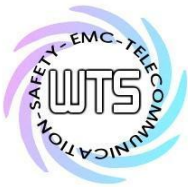
Temperature: 31.8 °C

Humidity: 60.0 %

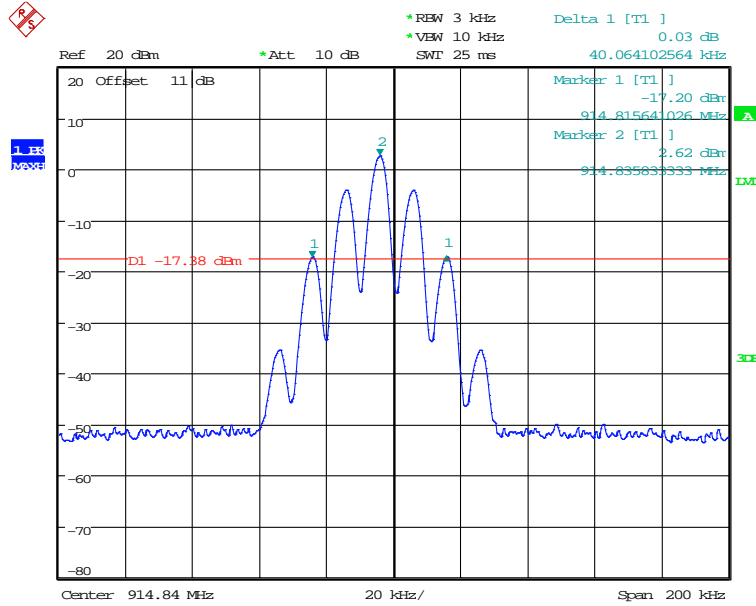
Tester: Sora



20DB BANDWIDTH 906.32MHz  
Date: 21.MAY.2024 16:48:52



Registration number: W6M22405-23456-C-1  
 FCC ID: GX9BUN3



20DB BANDWIDTH 914.84MHz  
 Date: 21.MAY.2024 16:50:59

### Limits:

Frequency Range / MHz	Limit
902-928	≤ 500 kHz
2400-2483.5	not defined
5725-5850	≤ 1 MHz

### 3.7.1 System Receiver Input Bandwidth

It is determined in the Bluetooth core specification. The value matches to the bandwidth of transmitter signal.



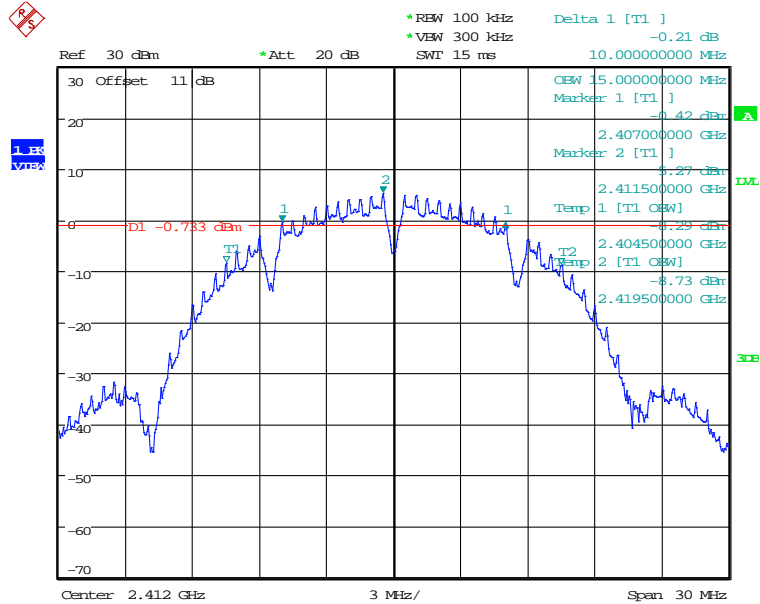
Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3

### 3.8 Minimum 6 dB Bandwidth

The analyzer ResBW was set to 100 kHz. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A PEAK reading was taken, two markers were set 6 dB below the maximum level on the right and the left side of the emission. The 6 dB bandwidth is the frequency difference between the two markers.

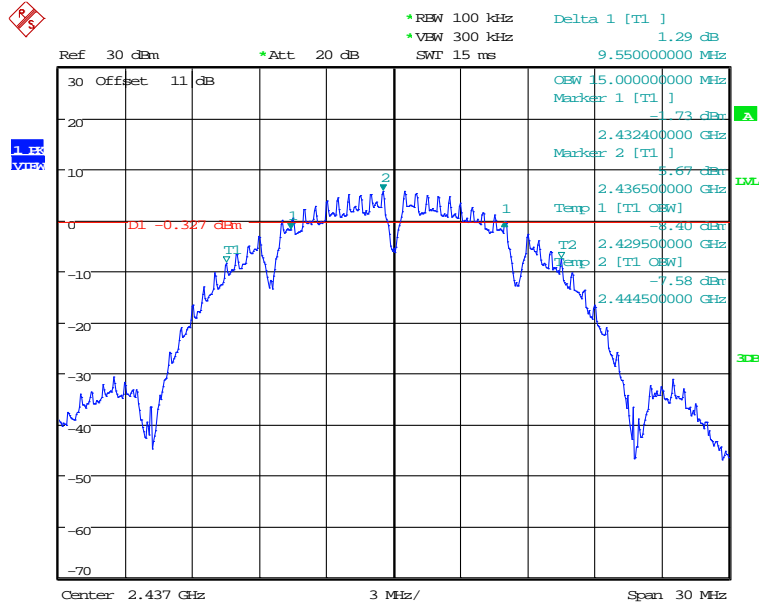
Test date: May 23, 2024  
Temperature: 31.9 °C  
Humidity: 60.0 %  
Tester: Sora

WLAN  
802.11b

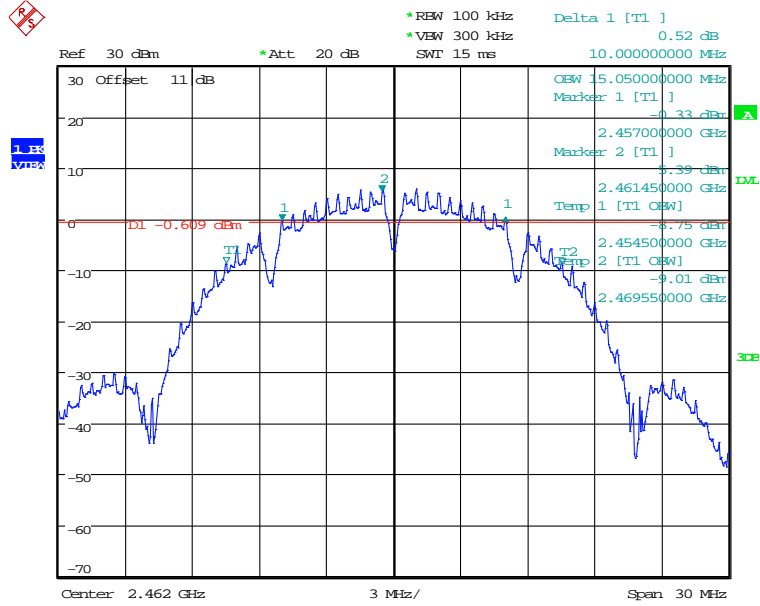




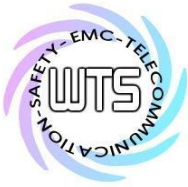
Registration number: W6M22405-23456-C-1  
 FCC ID: GX9BUN3



6DB BANDWIDTH 802.11B CH06  
 Date: 23.MAY.2024 14:36:45



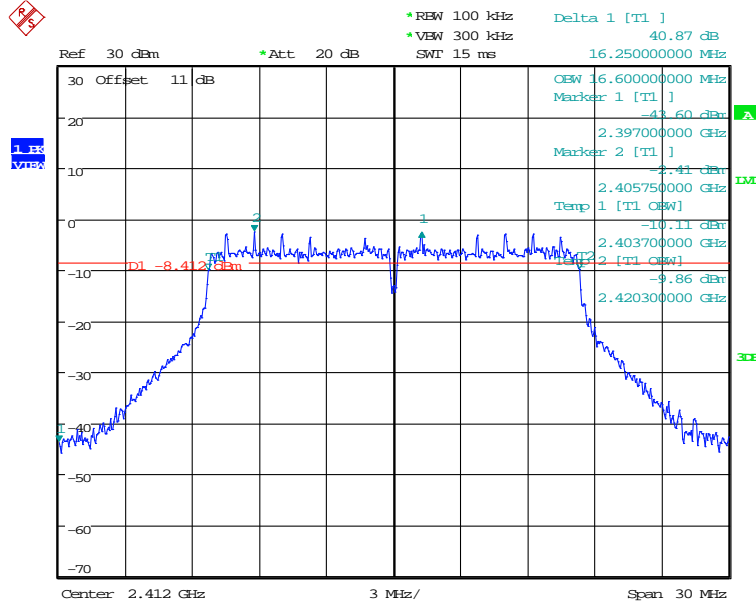
6DB BANDWIDTH 802.11B CH11  
 Date: 23.MAY.2024 14:38:06



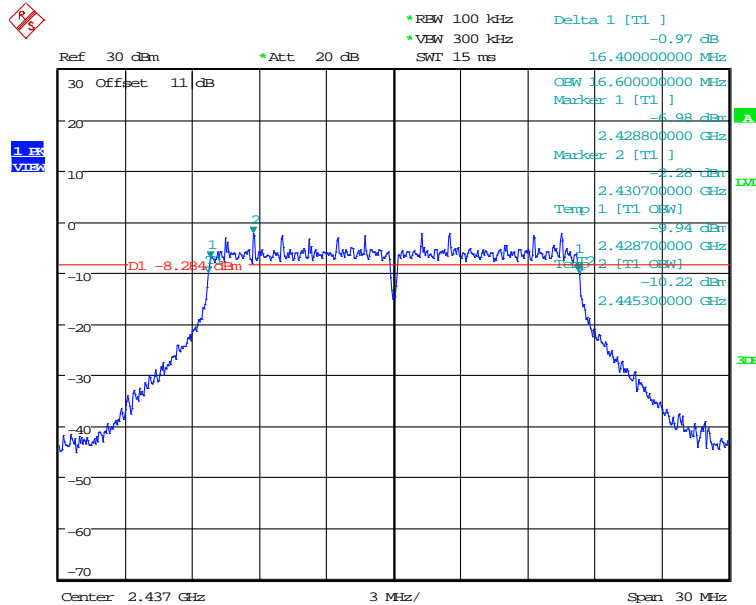
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3

802.11g



6DB BANDWIDTH 802.11G CH01  
Date: 23.MAY.2024 14:39:31

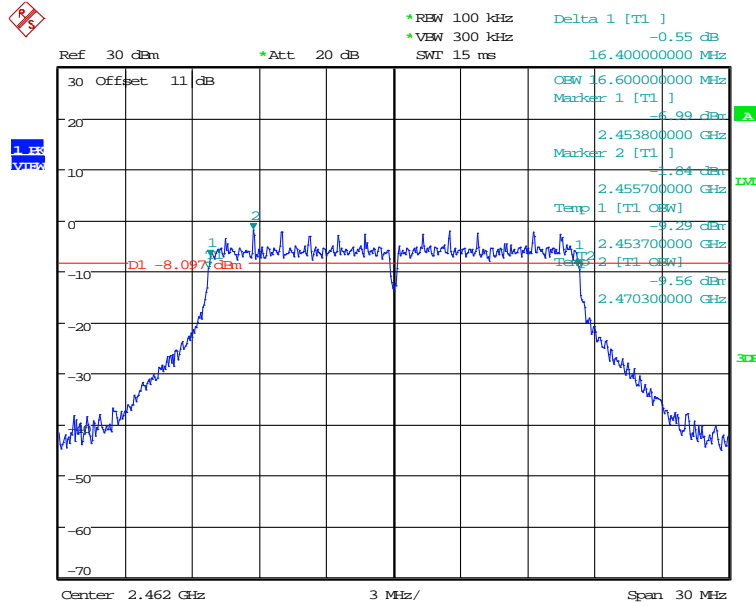


6DB BANDWIDTH 802.11G CH06  
Date: 23.MAY.2024 14:40:42



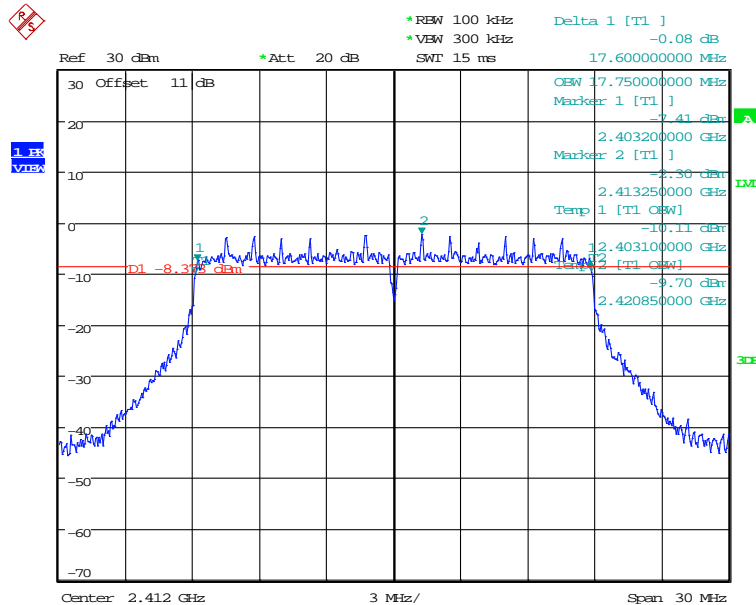


Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3



6DB BANDWIDTH 802.11G CH11  
Date: 23.MAY.2024 14:41:46

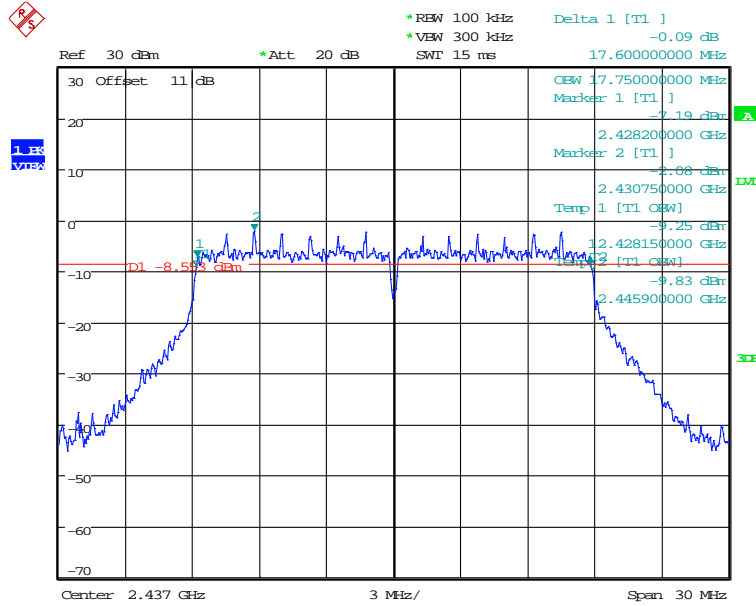
## 802.11n 20MHz



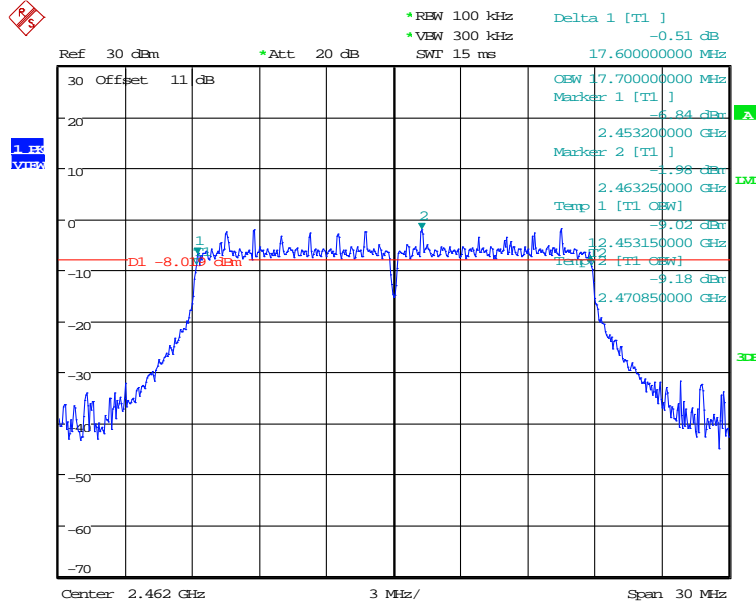
6DB BANDWIDTH 802.11N 20MHZ CH01  
Date: 23.MAY.2024 14:43:09



Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3



6DB BANDWIDTH 802.11N 20MHZ CH06  
Date: 23.MAY.2024 14:44:16



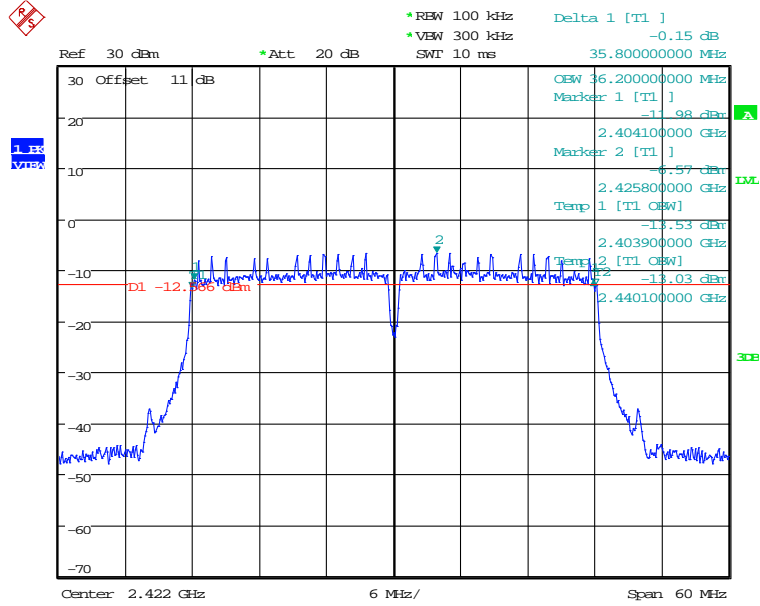
6DB BANDWIDTH 802.11N 20MHZ CH11  
Date: 23.MAY.2024 14:45:20



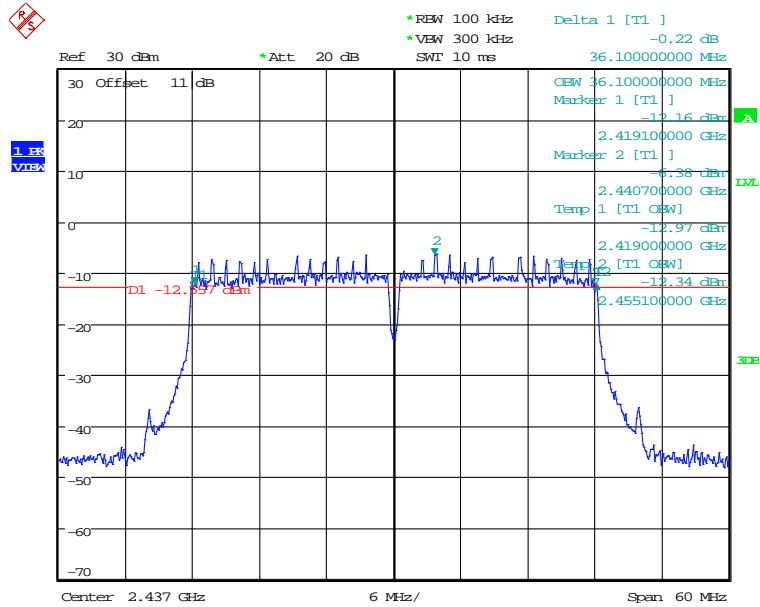
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3

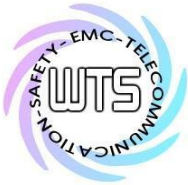
802.11n 40MHz



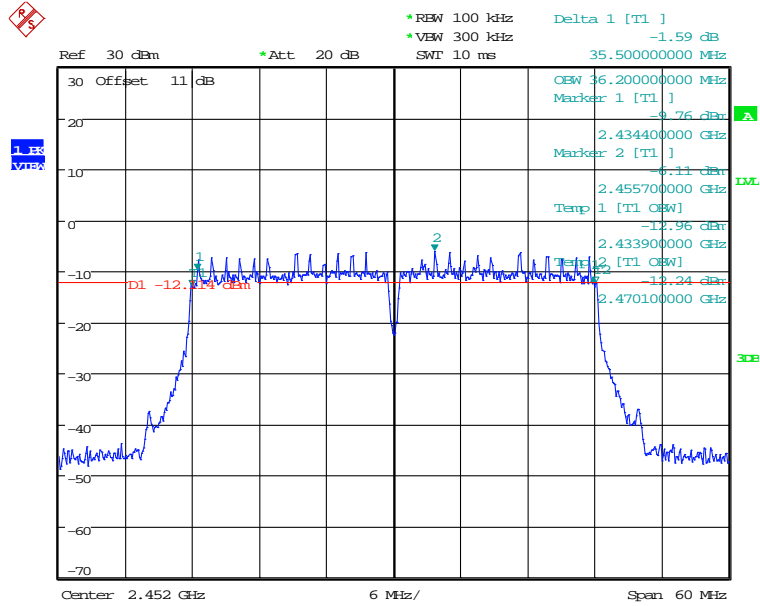
6DB BANDWIDTH 802.11N 40MHZ CH01  
Date: 23.MAY.2024 14:49:45



6DB BANDWIDTH 802.11N 40MHZ CH04  
Date: 23.MAY.2024 14:51:06



Registration number: W6M22405-23456-C-1  
 FCC ID: GX9BUN3



6DB BANDWIDTH 802.11N 40MHZ CH07  
 Date: 23.MAY.2024 14:52:21

**Limits:**

Frequency Range MHz	Limits
902-928	min 500 kHz
2400-2483.5	min 500 kHz
5725-5850	min 500 kHz



Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3

### 3.9 Emissions in nonrestricted frequency bands

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. 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.

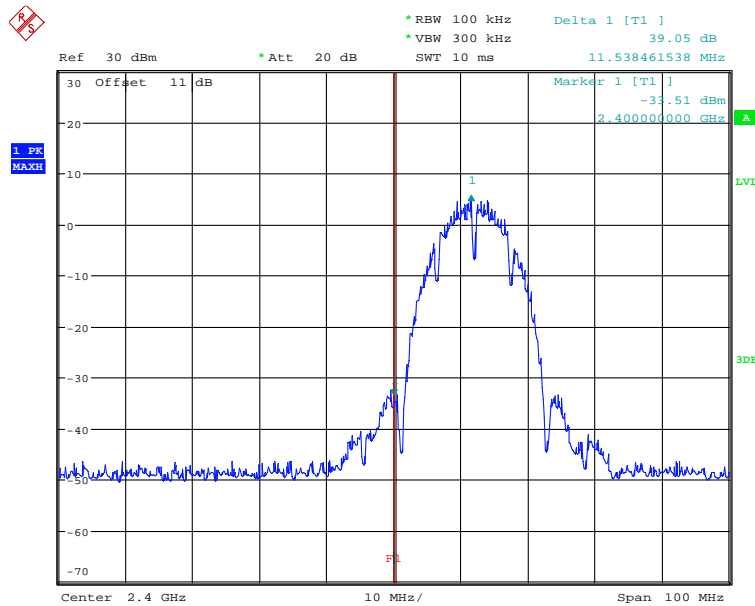
Test date: May 21, 2024-May 23, 2024

Temperature: 31.9 °C

Humidity: 60.0 %

Tester: Sora

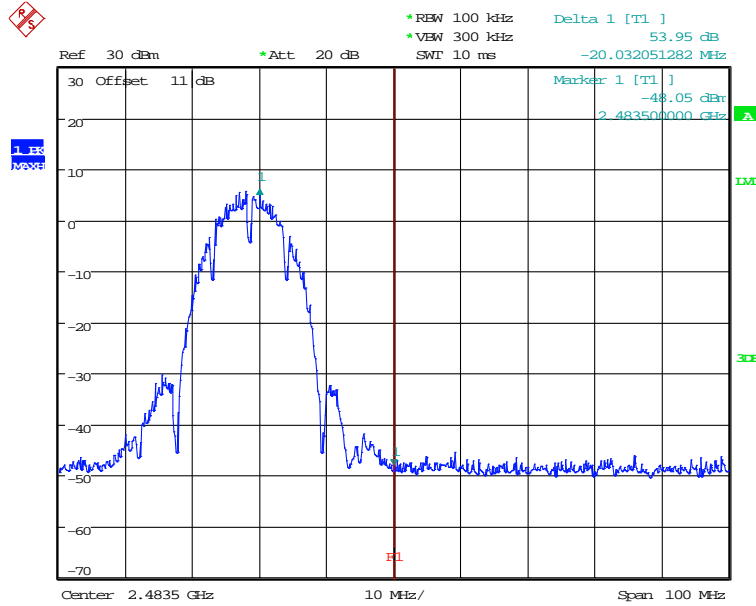
WLAN  
802.11b



BANDEDGE 802.11B CH01  
Date: 23.MAY.2024 14:35:45

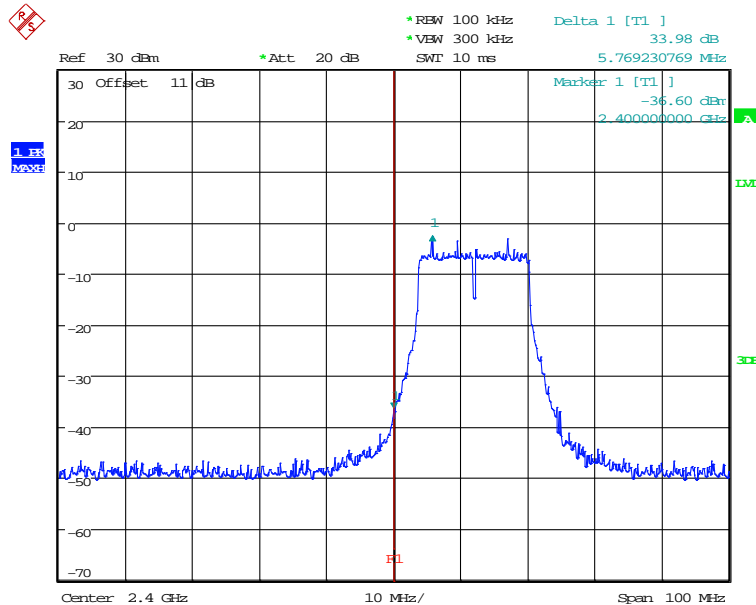


Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3



BANDEDGE 802.11B CH11  
Date: 23.MAY.2024 14:38:20

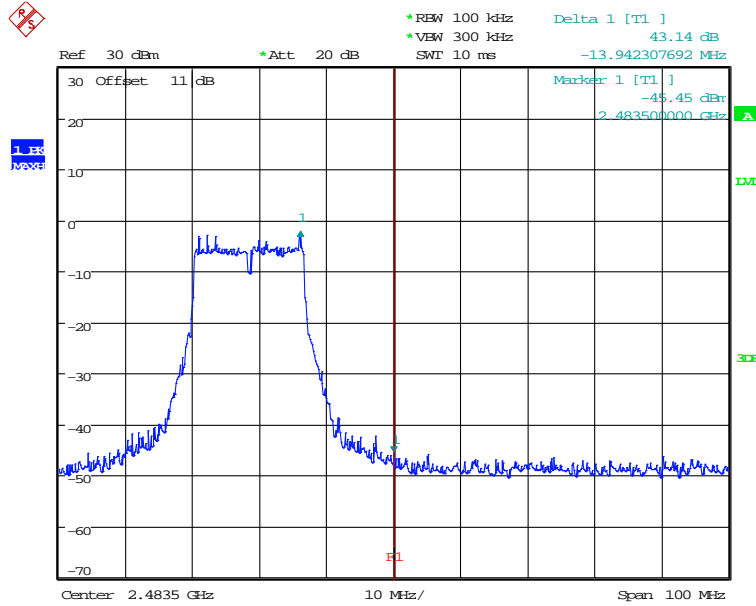
## 802.11g



BANDEDGE 802.11G CH01  
Date: 23.MAY.2024 14:39:45

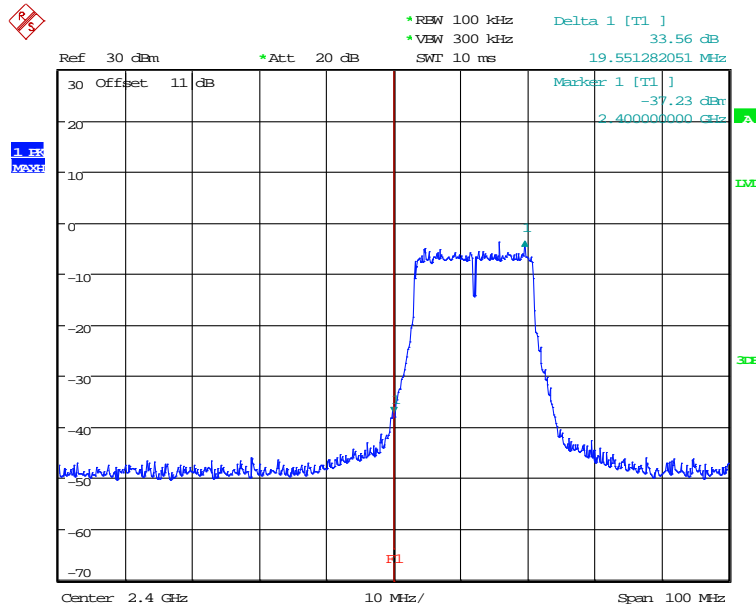


Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3



BANDEDGE 802.11G CH11  
Date: 23.MAY.2024 14:42:00

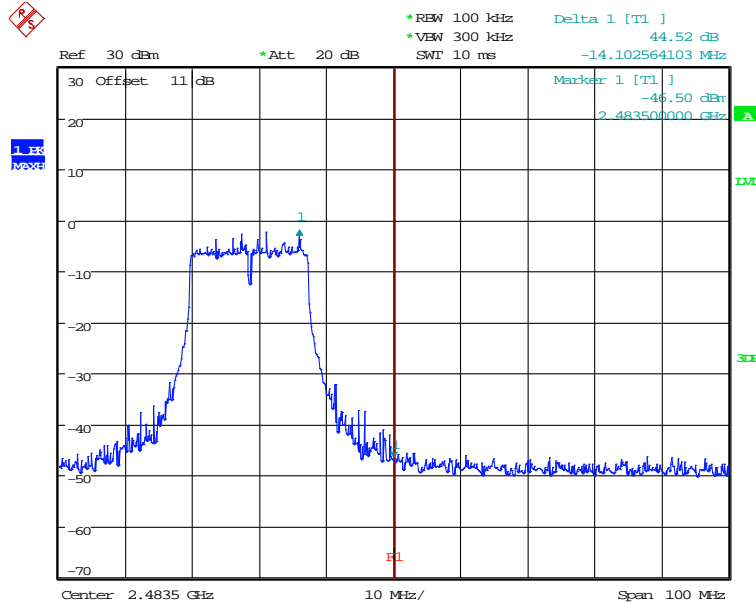
## 802.11n 20MHz



BANDEDGE 802.11N 20MHZ CH01  
Date: 23.MAY.2024 14:43:23

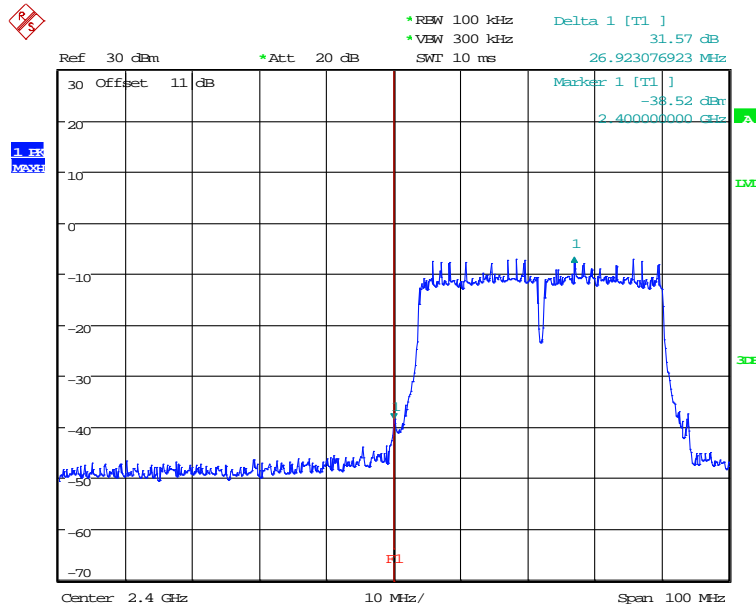


Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3



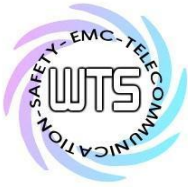
BANDEDGE 802.11N 20MHZ CH11  
Date: 23.MAY.2024 14:45:34

## 802.11n 40MHz

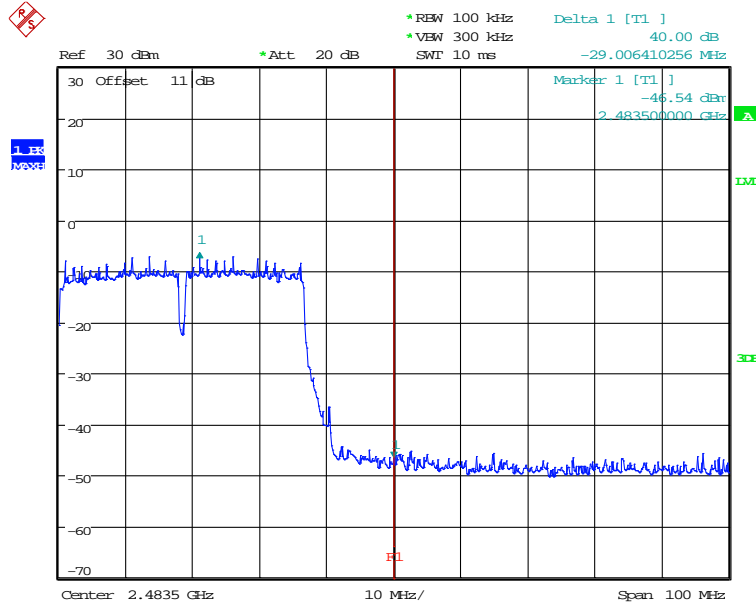


BANDEDGE 802.11N 40MHZ CH01  
Date: 23.MAY.2024 14:50:02



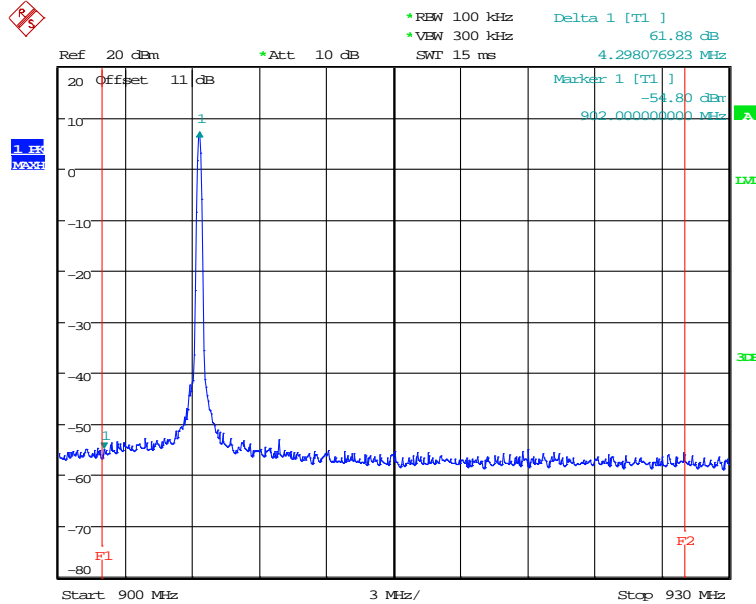


Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3

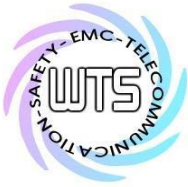


BANDEDGE 802.11N 40MHZ CH07  
Date: 23.MAY.2024 14:52:38

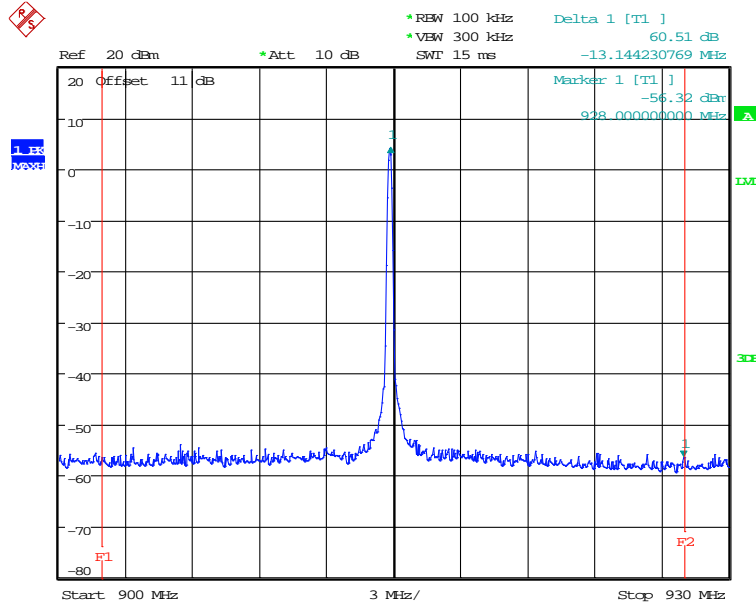
910.76MHz



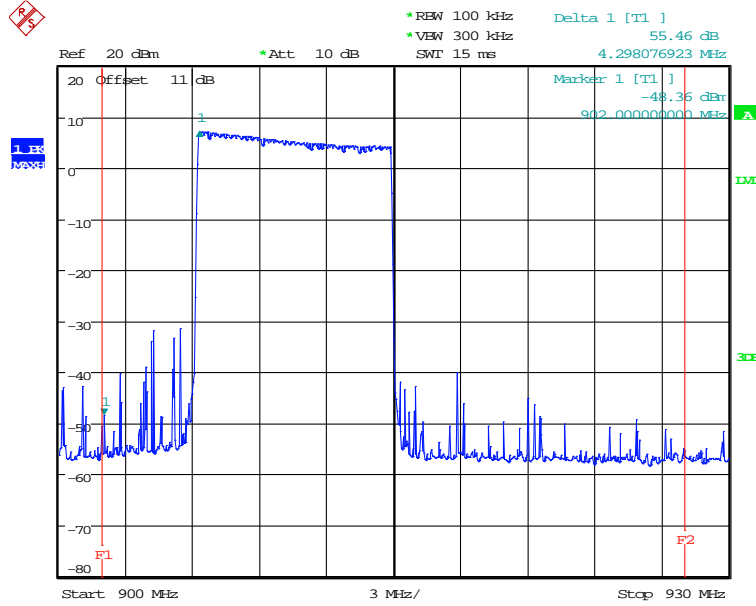
BANDEDGE 906.32MHz  
Date: 21.MAY.2024 17:01:04



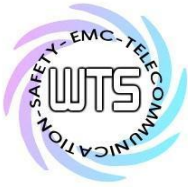
Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3



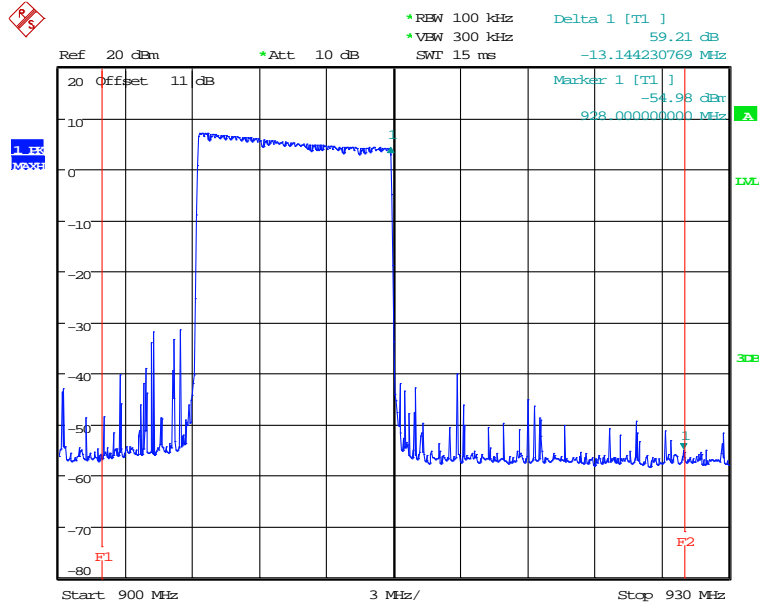
BANDEDGE 914.84MHz  
Date: 21.MAY.2024 17:01:45



BANDEDGE 906.32MHz HOPPING MODE  
Date: 21.MAY.2024 17:07:05



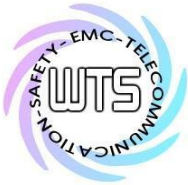
Registration number: W6M22405-23456-C-1  
 FCC ID: GX9BUN3



BANDEDGE 914.84MHz HOPPING MODE  
 Date: 21.MAY.2024 17:06:24

Limit:

Frequency Range / MHz	Limit
902 – 928	- 20 dB
2400 – 2483.5	
5725 - 5850	



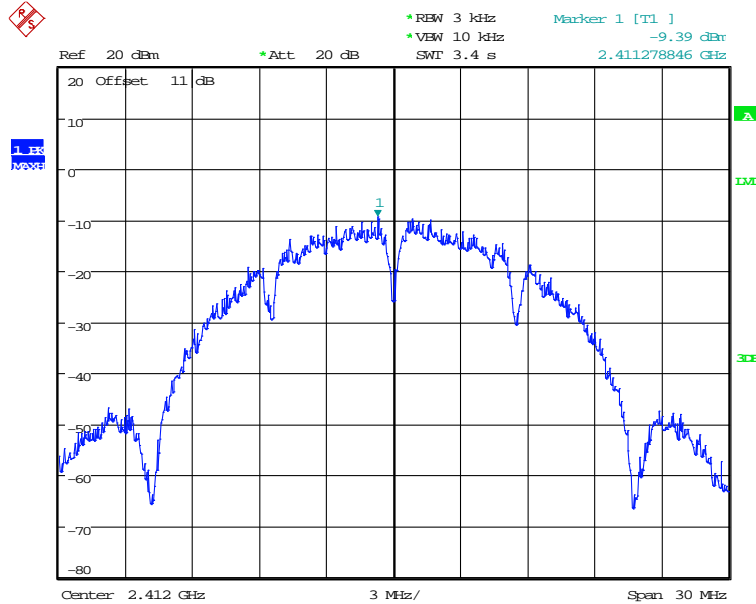
Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3

### 3.10 Peak Power Spectral Density

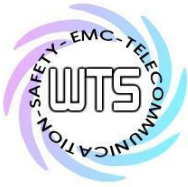
Peak Power Spectral density is a measured at low, middle and high channel.  
The peak output power is measured with a measurement bandwidth of 10 MHz and displayed on diagram together with Peak Power Spectral Density result which was measured with a bandwidth of 3 kHz, appreciate frequency span and sweep time.

Test date: May 23, 2024  
Temperature: 31.9 °C  
Humidity: 60.0 %  
Tester: Sora

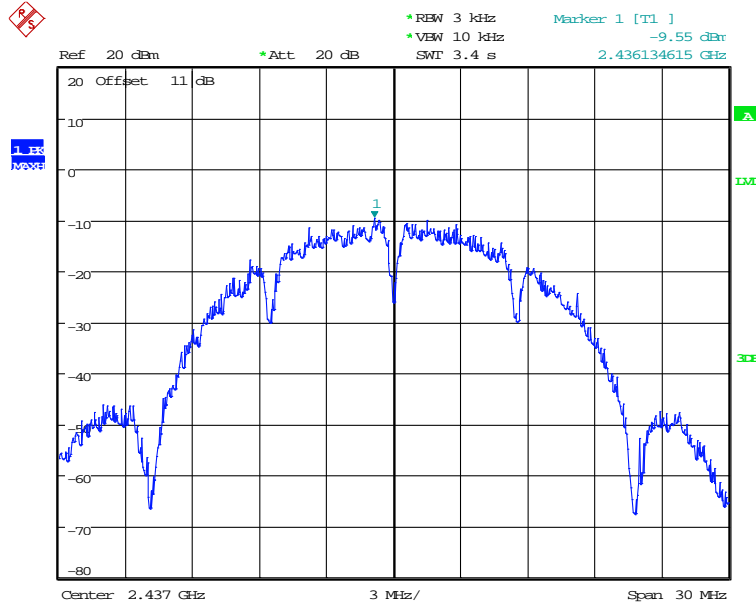
WLAN  
802.11b



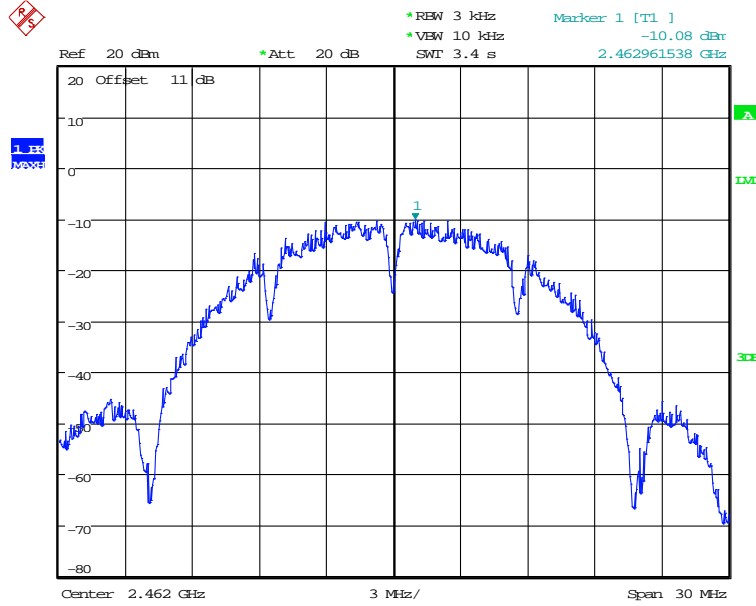
POWER DENSITY 802.11B CH01  
Date: 23.MAY.2024 14:35:40



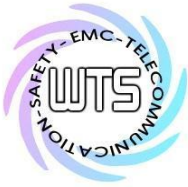
Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3



POWER DENSITY 802.11B CH06  
Date: 23.MAY.2024 14:36:54

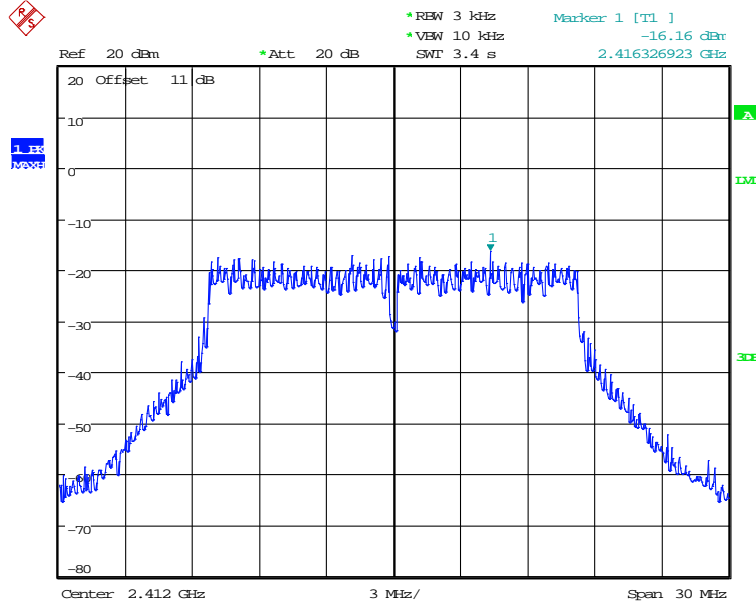


POWER DENSITY 802.11B CH11  
Date: 23.MAY.2024 14:38:15

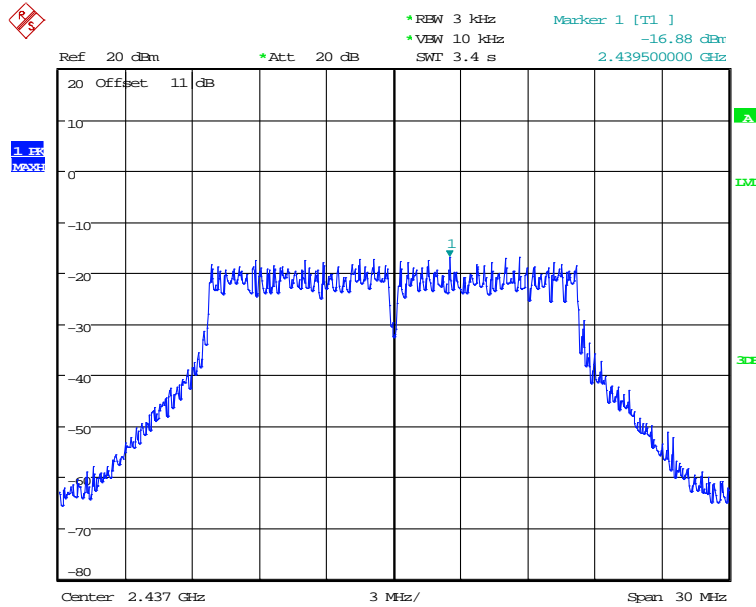


Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3

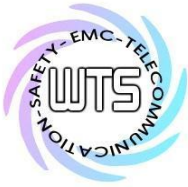
802.11g



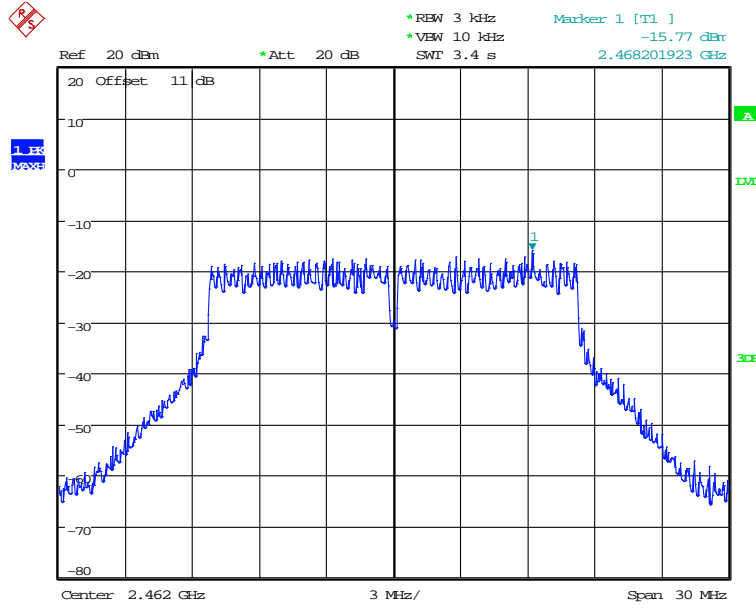
POWER DENSITY 802.11G CH01  
Date: 23.MAY.2024 14:39:40



POWER DENSITY 802.11G CH06  
Date: 23.MAY.2024 14:40:51

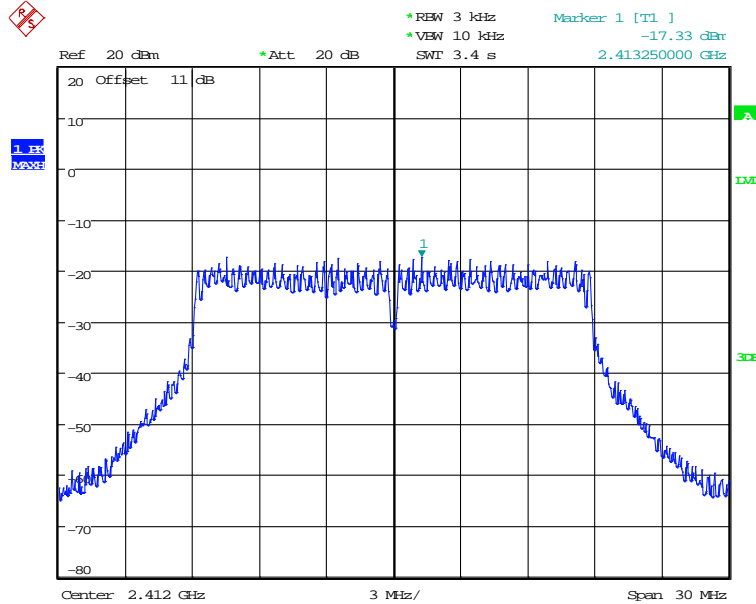


Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3

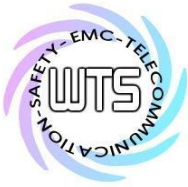


POWER DENSITY 802.11G CH11  
Date: 23.MAY.2024 14:41:55

## 802.11n 20MHz

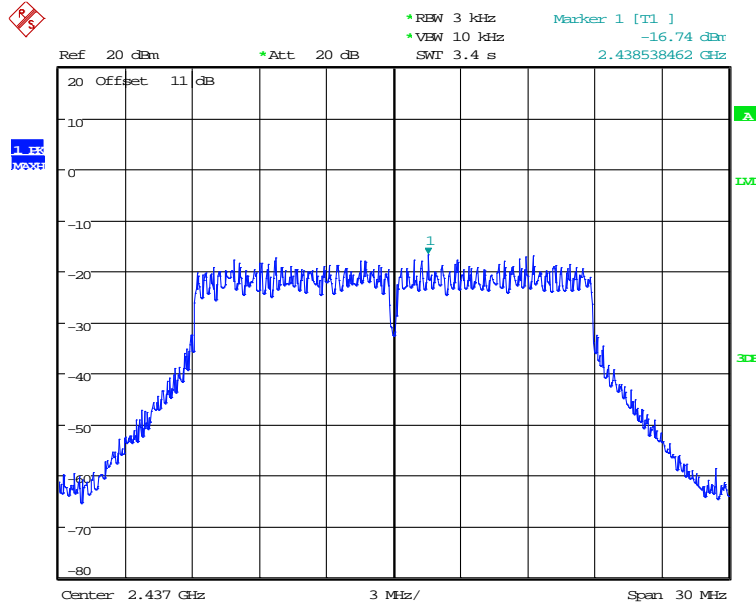


POWER DENSITY 802.11N 20MHZ CH01  
Date: 23.MAY.2024 14:43:18

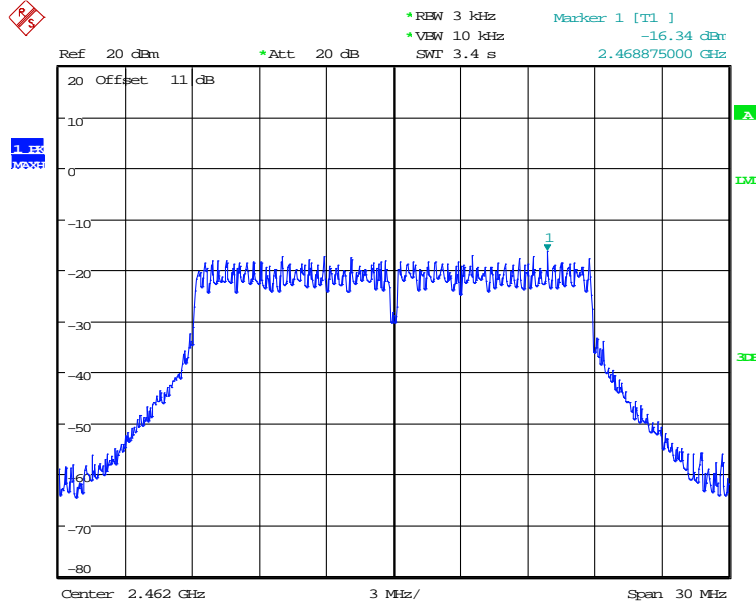


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3

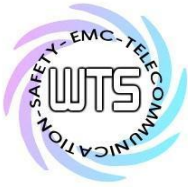


POWER DENSITY 802.11N 20MHZ CH06  
Date: 23.MAY.2024 14:44:25



POWER DENSITY 802.11N 20MHZ CH11  
Date: 23.MAY.2024 14:45:29

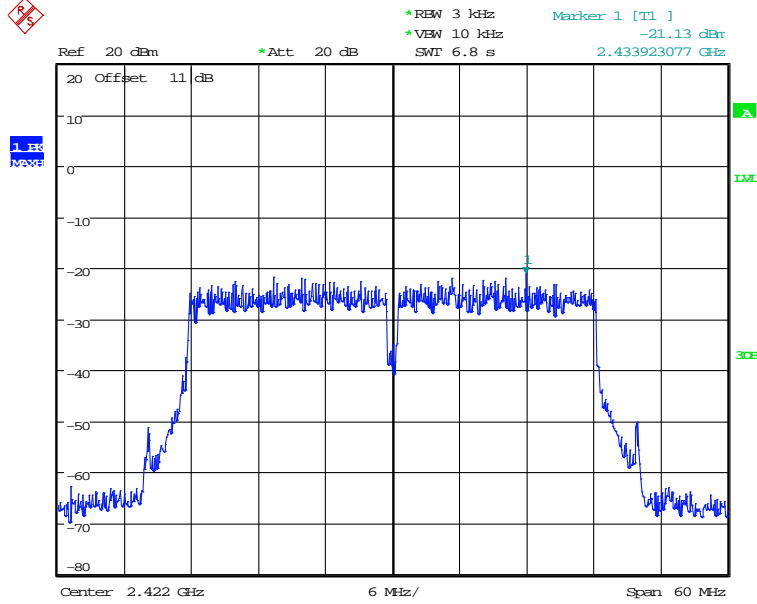




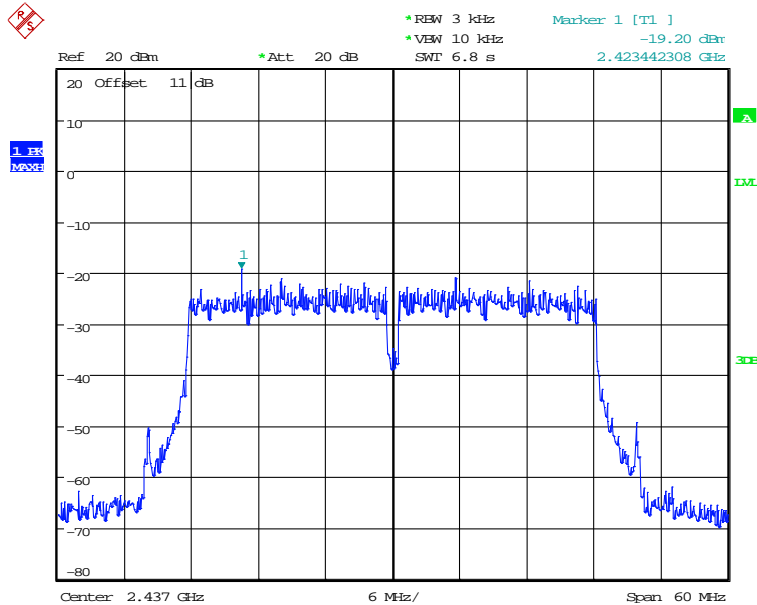
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3

802.11n 40MHz



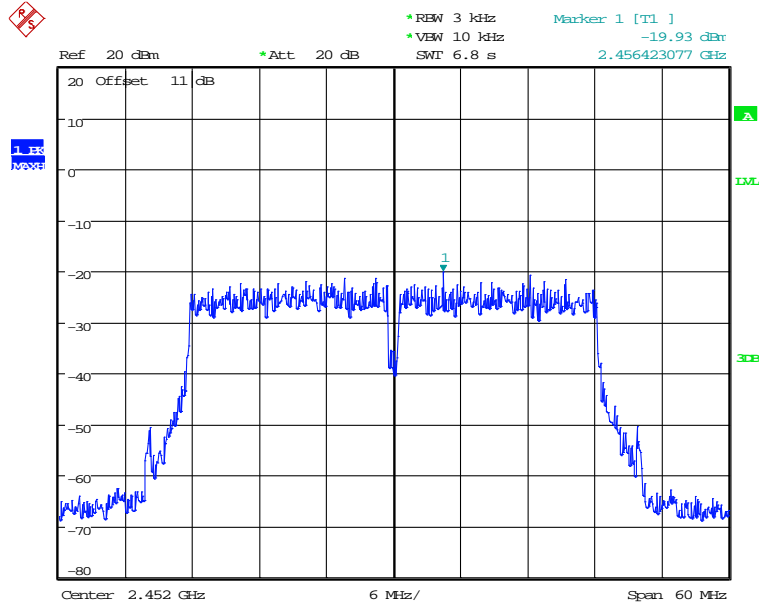
POWER DENSITY 802.11N 40MHZ CH01  
Date: 23.MAY.2024 14:49:57



POWER DENSITY 802.11N 40MHZ CH04  
Date: 23.MAY.2024 14:51:18



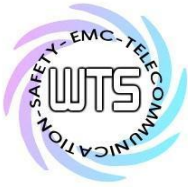
Registration number: W6M22405-23456-C-1  
 FCC ID: GX9BUN3



POWER DENSITY 802.11N 40MHZ CH07  
 Date: 23.MAY.2024 14:52:33

**Limits:**

Frequency Range MHz	dBm
902-928	8
2400-2483.5	8
5725-5850	8



Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3

**3.11 Radiated Emission from Digital Part**

FCC Rule: 15.109

Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency of Emission (MHz)	Field Strength (microvolts/meter)	Field Strength (dBmicrovolts/meter)
30 – 88	100	40.0
88 – 216	150	43.5
216 – 960	200	46.0
Above 960	500	54.0

Explanation: Please refer to separated test report no.: W6M22405-23456-P-15B.

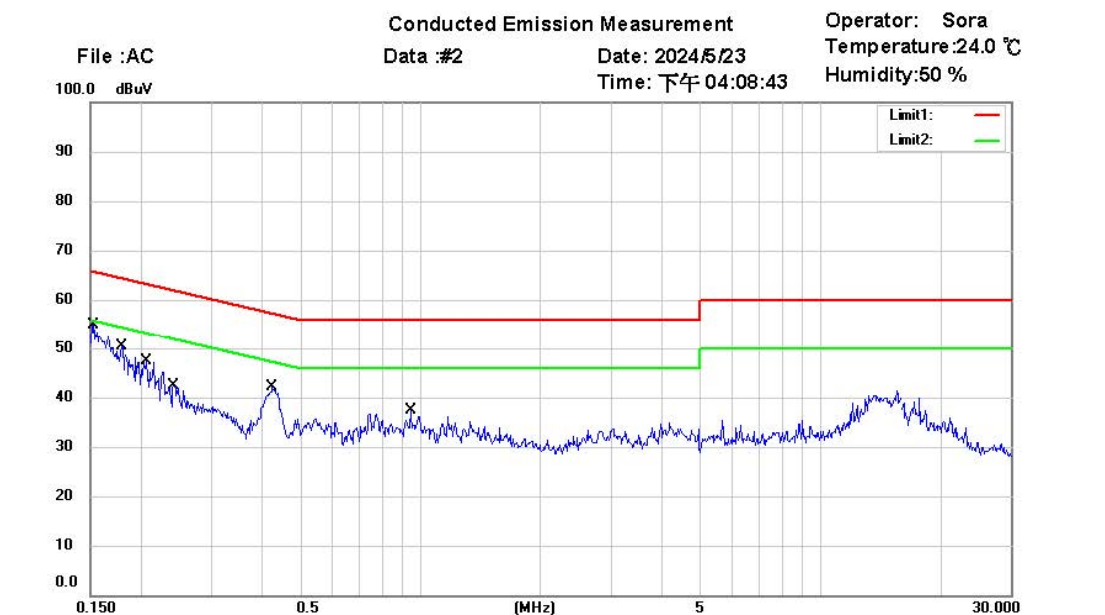


Registration number: W6M22405-23456-C-1  
 FCC ID: GX9BUN3

## 3.12 Power Line Conducted Emission

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.

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.



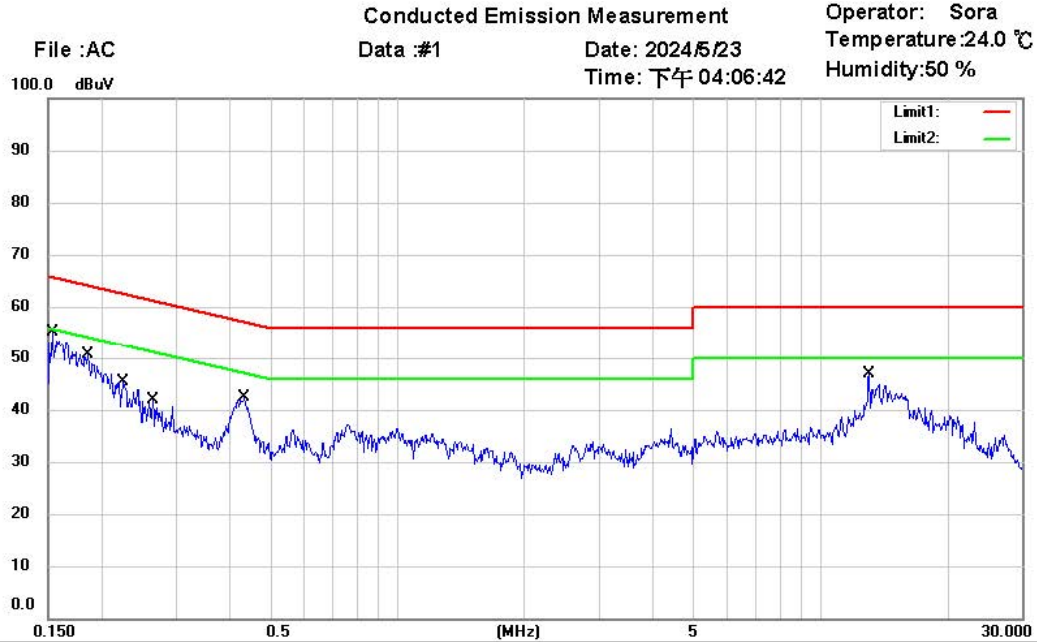
Site : Chamber\_03  
 Condition : FCC Part 15 Class B Conduction (QP) Phase: N  
 EUT : W6M22405-23456 Power : 120 V.a.c.  
 M/N:  
 Test Mode : Charge  
 Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	0.1517	32.03	QP	9.64	41.67	65.91	-24.24	
	0.1517	17.81	AVG	9.64	27.45	55.91	-28.46	
	0.1796	28.11	QP	9.64	37.75	64.50	-26.75	
	0.1796	13.38	AVG	9.64	23.02	54.50	-31.48	
	0.2064	24.21	QP	9.64	33.85	63.35	-29.50	
	0.2064	7.28	AVG	9.64	16.92	53.35	-36.43	
	0.2414	22.09	QP	9.64	31.73	62.05	-30.32	
	0.2414	6.16	AVG	9.64	15.80	52.05	-36.25	
	0.4244	26.71	QP	9.66	36.37	57.36	-20.99	
*	0.4244	21.51	AVG	9.66	31.17	47.36	-16.19	
	0.9477	18.36	QP	9.68	28.04	56.00	-27.96	
	0.9477	11.60	AVG	9.68	21.28	46.00	-24.72	



# Worldwide Testing Services(Taiwan) Co., Ltd.

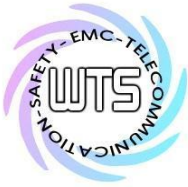
Registration number: W6M22405-23456-C-1  
 FCC ID: GX9BUN3



Site : Chamber\_03  
 Condition : FCC Part 15 Class B Conduction (QP) Phase: L1  
 EUT : W6M22405-23456 Power : 120 Va.c.  
 M/N:  
 Test Mode : Charge  
 Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	0.1528	31.69	QP	9.66	41.35	65.85	-24.50	
	0.1528	17.62	AVG	9.66	27.28	55.85	-28.57	
	0.1855	26.06	QP	9.65	35.71	64.24	-28.53	
	0.1855	14.62	AVG	9.65	24.27	54.24	-29.97	
	0.2247	21.59	QP	9.65	31.24	62.64	-31.40	
	0.2247	5.04	AVG	9.65	14.69	52.64	-37.95	
	0.2636	19.51	QP	9.65	29.16	61.32	-32.16	
	0.2636	6.70	AVG	9.65	16.35	51.32	-34.97	
	0.4340	26.39	QP	9.66	36.05	57.18	-21.13	
*	0.4340	20.01	AVG	9.66	29.67	47.18	-17.51	
	12.9375	27.60	QP	9.83	37.43	60.00	-22.57	
	12.9375	16.75	AVG	9.83	26.58	50.00	-23.42	

- 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.

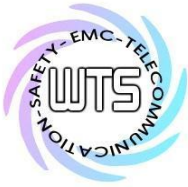


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3

**Limits:**

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi Peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50



Registration number: W6M22405-23456-C-1  
FCC ID: GX9BUN3

## **Appendix**

### **Measurement diagrams**

Spurious Emissions radiated



Radiated Emission Measurement

Operator: Kai

File : 1\_WiFi 2

Data : #1

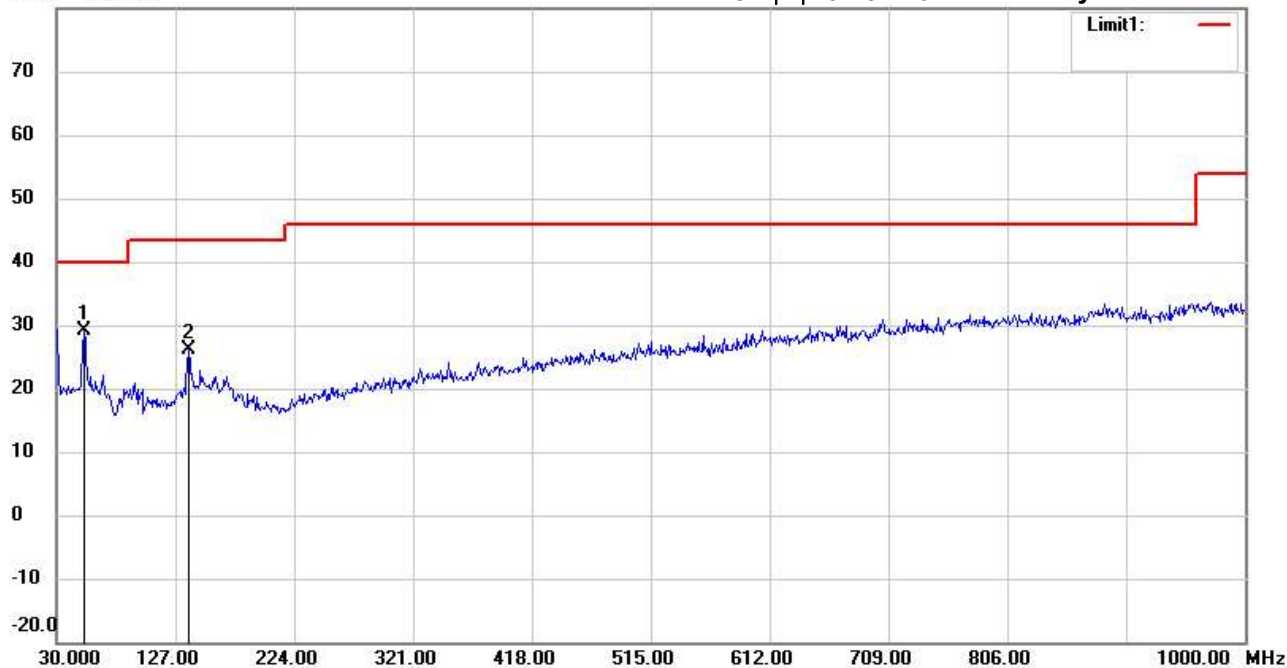
Date: 2024/5/16

Temperature: 23.6 °C

80.0 dBuV/m

Time: 下午 01:51:10

Humidity: 58.0 %



Site : 966A Chamber

Condition : FCC\_part 15 RE-Class C\_30-1000MHz

Polarization: *Horizontal*

EUT : W6M22405-23456

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11b CH1

Note :

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
*	52.3100	41.82	peak	-12.68	29.14	40.00	100	73	-10.86	
	137.6700	39.05	peak	-13.03	26.02	43.50	100	277	-17.48	





Radiated Emission Measurement

Operator: Kai

File : 1\_WiFi 2

Data : #2

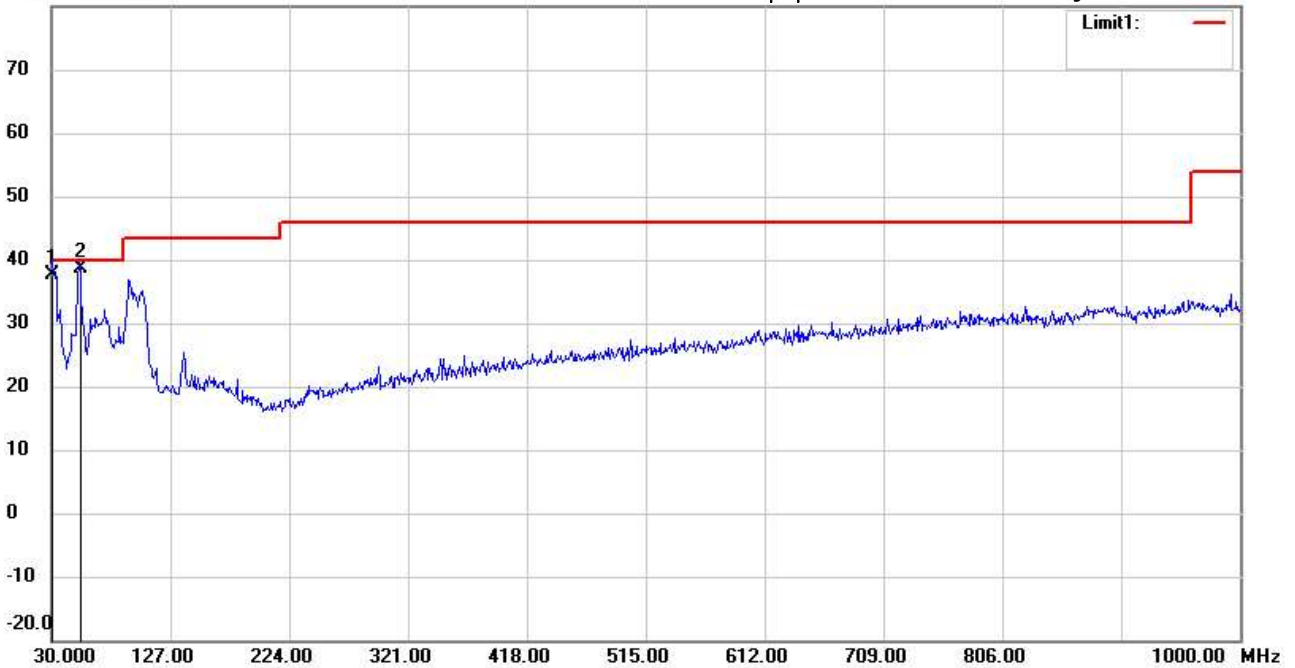
Date: 2024/5/16

Temperature: 23.6 °C

80.0 dBuV/m

Time: 下午 01:51:55

Humidity: 58.0 %



Site : 966A Chamber

Condition : FCC\_part 15 RE-Class C\_30-1000MHz

Polarization: *Vertical*

EUT : W6M22405-23456

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11b CH1

Note :

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
	30.9700	52.41	QP	-14.75	37.66	40.00	100	113	-2.34	
*	52.7950	51.33	QP	-12.70	38.63	40.00	100	359	-1.37	



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Radiated Emission Measurement

Operator: Kai

File :3

Data :#1

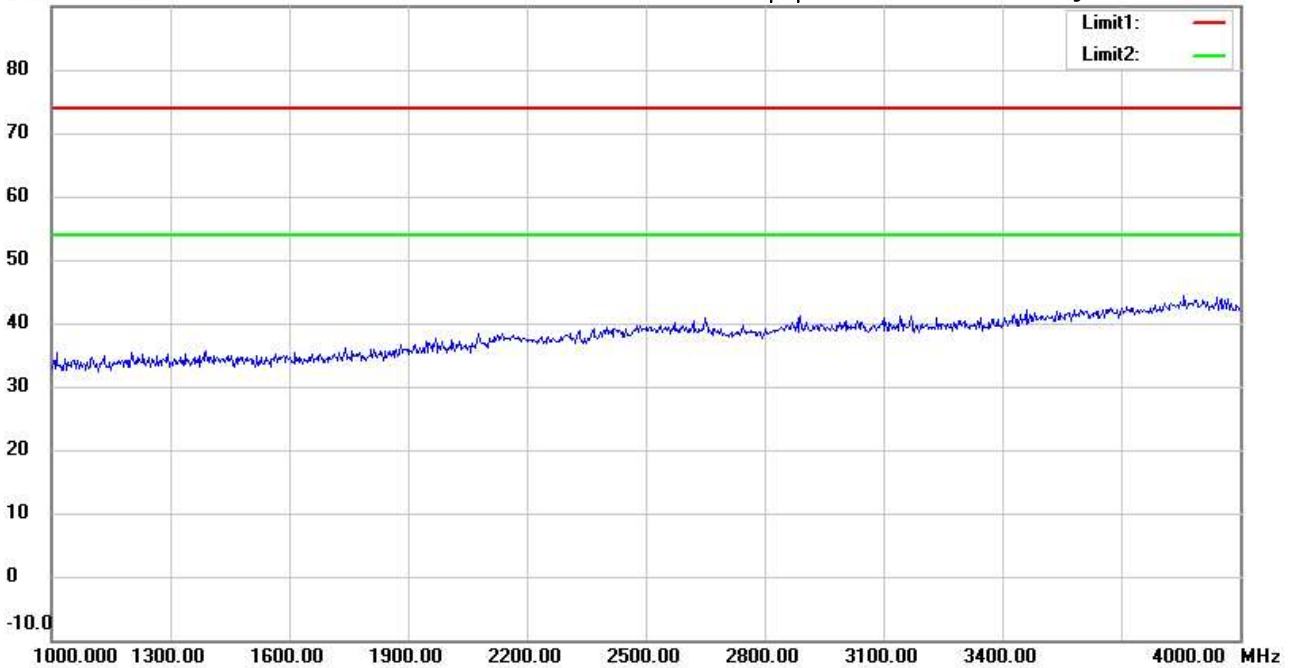
Date: 2024/5/15

Temperature: 23.4 °C

90.0 dBuV/m

Time: 下午 05:08:46

Humidity: 58.9 %



Site : 966A Chamber

Condition : FCC\_part 15 RE-Class C\_Above 1GHz\_PK

EUT : W6M22405-23456

M/N:

Test Mode : TX 802.11b CH1

Note :

Polarization: *Horizontal*

Power : 120 Va.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



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Radiated Emission Measurement

Operator: Kai

File :3

Data :#6

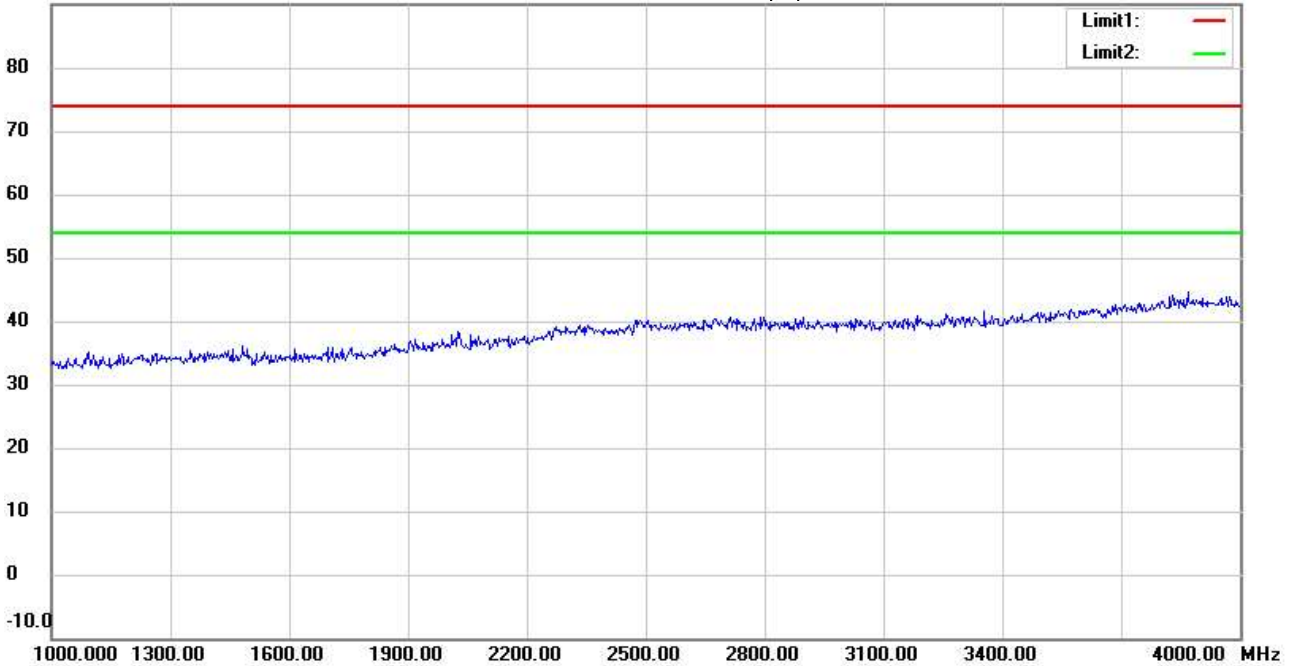
Date: 2024/5/15

Temperature: 23.4 °C

90.0 dBuV/m

Time: 下午 05:11:33

Humidity: 58.9 %



Site : 966A Chamber

Condition : FCC\_part 15 RE-Class C\_Above 1GHz\_PK

EUT : W6M22405-23456

M/N:

Test Mode : TX 802.11b CH1

Note :

Polarization: *Vertical*

Power : 120 Va.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



Radiated Emission Measurement

Operator: Kai

File :3

Data :#2

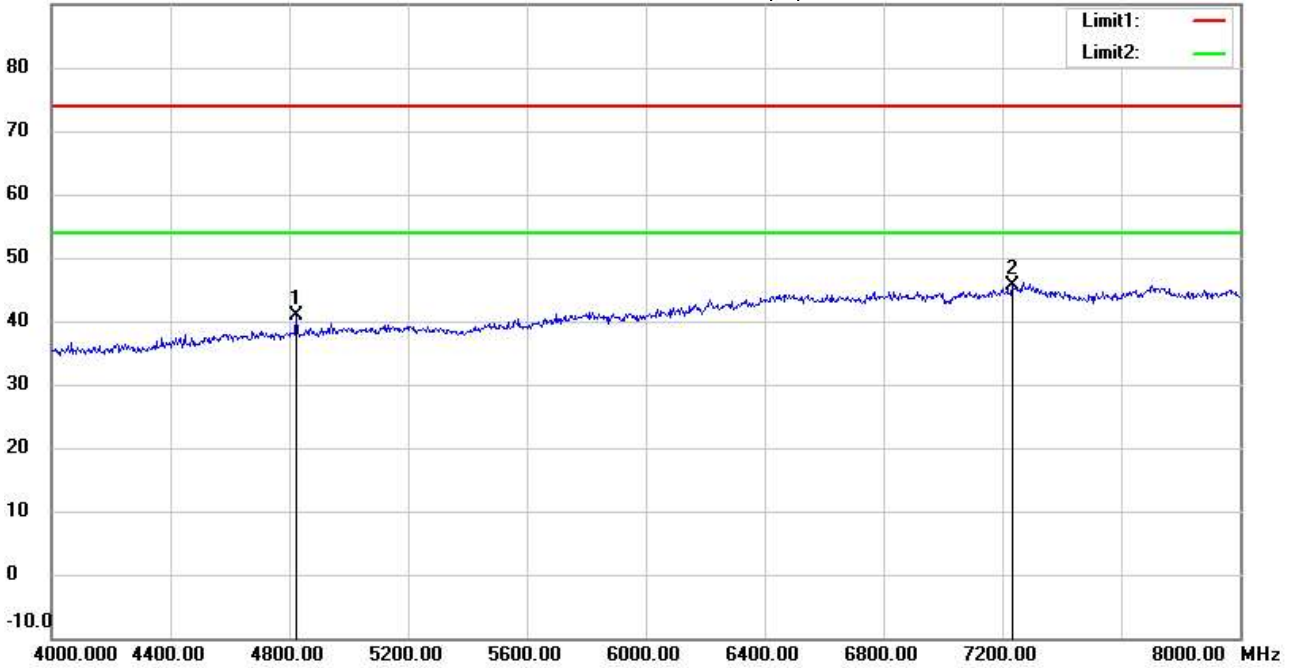
Date: 2024/5/15

Temperature: 23.4 °C

90.0 dBuV/m

Time: 下午 05:09:30

Humidity: 58.9 %



Site : 966A Chamber

Condition : FCC\_part 15 RE-Class C\_Above 1GHz\_PK

Polarization: *Horizontal*

EUT : W6M22405-23456

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11b CH1

Note :

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	36.53	peak	4.43	40.96	74.00	150	109	-33.04	
*	7236.000	34.42	peak	11.10	45.52	74.00	150	170	-28.48	



Radiated Emission Measurement

Operator: Kai

File :3

Data :#7

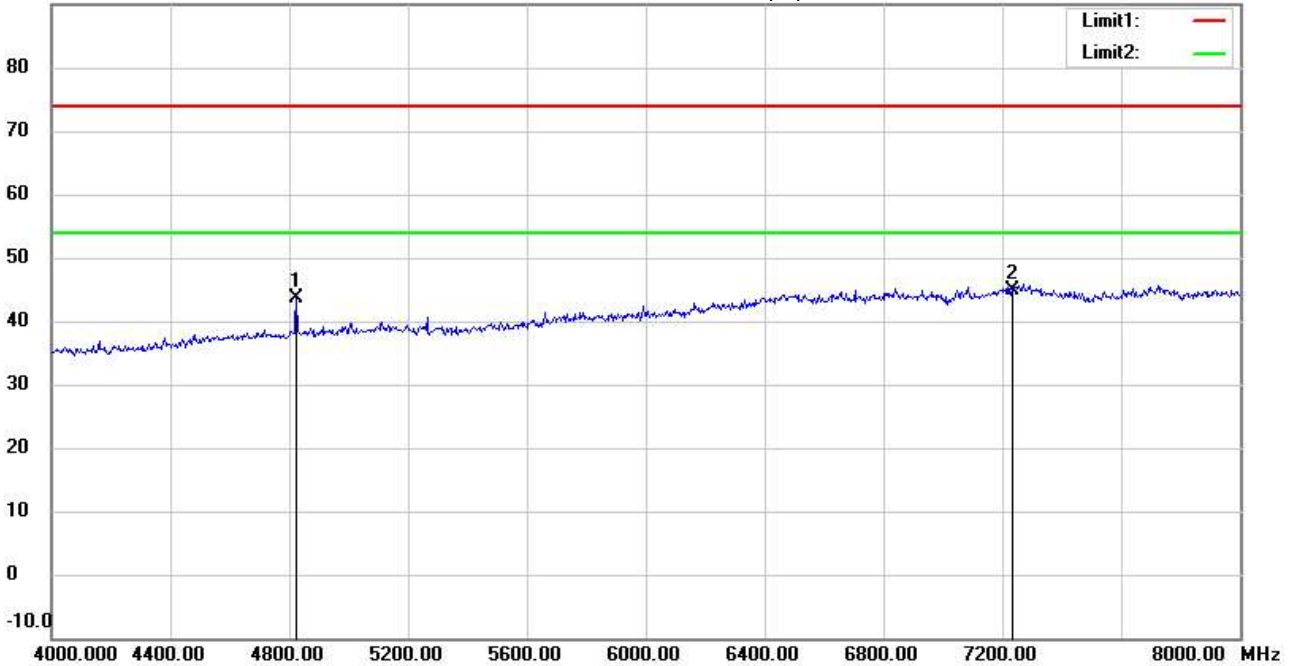
Date: 2024/5/15

Temperature: 23.4 °C

90.0 dBuV/m

Time: 下午 05:12:18

Humidity: 58.9 %



Site : 966A Chamber

Condition : FCC\_part 15 RE-Class C\_Above 1GHz\_PK

Polarization: **Vertical**

EUT : W6M22405-23456

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11b CH1

Note :

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	39.18	peak	4.43	43.61	74.00	150	23	-30.39	
*	7236.000	33.88	peak	11.10	44.98	74.00	150	111	-29.02	



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Radiated Emission Measurement

Operator: Kai

File :3

Data :#3

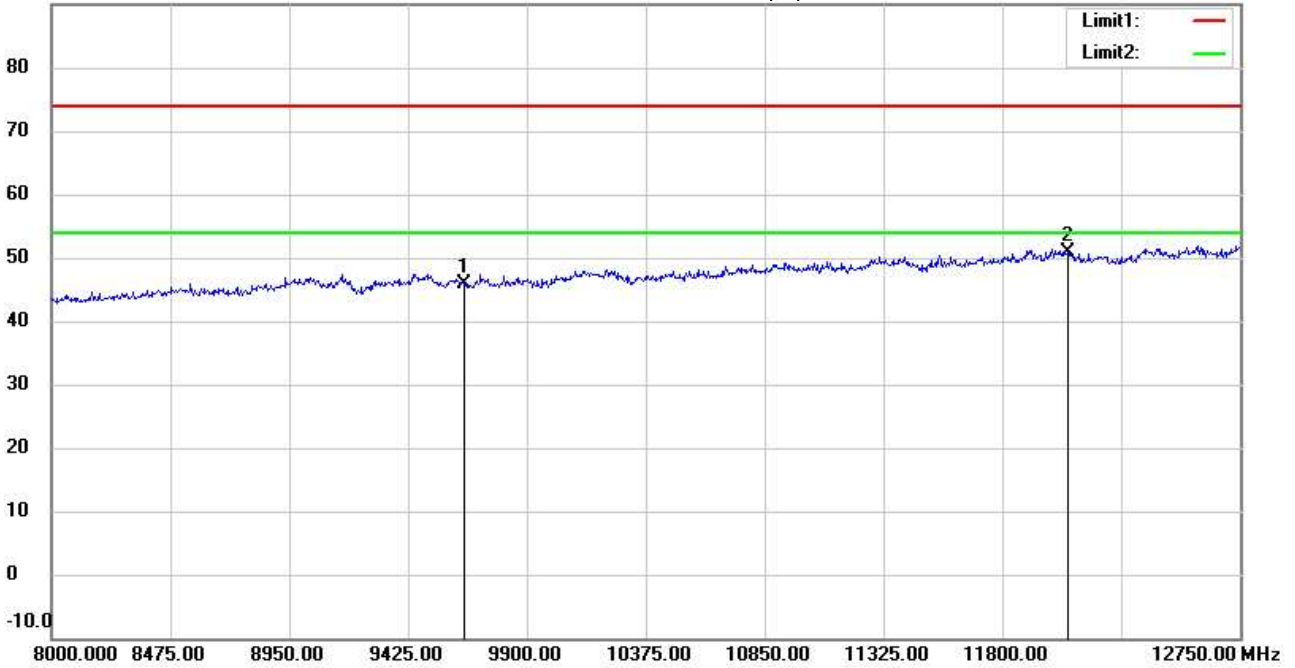
Date: 2024/5/15

Temperature: 23.4 °C

90.0 dBuV/m

Time: 下午 05:10:19

Humidity: 58.9 %



Site : 966A Chamber

Condition : FCC\_part 15 RE-Class C\_Above 1GHz\_PK

Polarization: *Horizontal*

EUT : W6M22405-23456

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11b CH1

Note :

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	33.05	peak	12.84	45.89	74.00	150	56	-28.11	
*	12060.000	34.26	peak	16.60	50.86	74.00	150	243	-23.14	

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



Radiated Emission Measurement

Operator: Kai

File :3

Data :#8

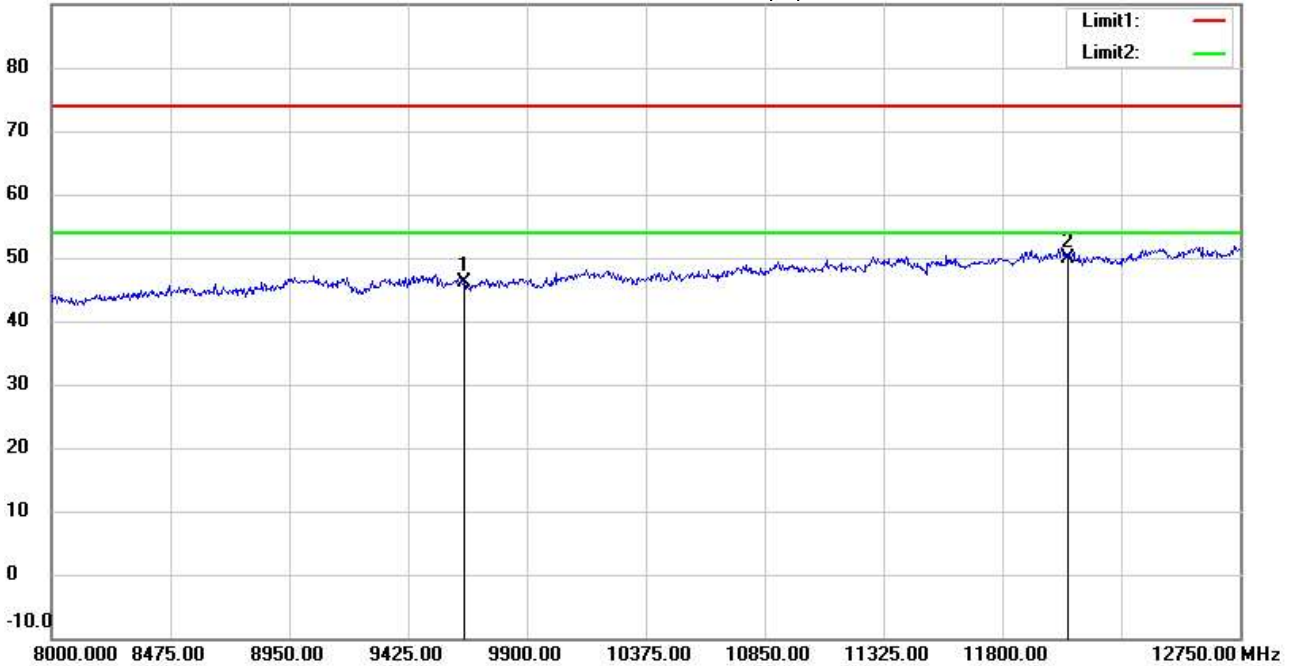
Date: 2024/5/15

Temperature: 23.4 °C

90.0 dBuV/m

Time: 下午 05:13:00

Humidity: 58.9 %



Site : 966A Chamber

Condition : FCC\_part 15 RE-Class C\_Above 1GHz\_PK

Polarization: **Vertical**

EUT : W6M22405-23456

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11b CH1

Note :

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	33.25	peak	12.84	46.09	74.00	150	185	-27.91	
*	12060.000	33.35	peak	16.60	49.95	74.00	150	255	-24.05	



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Radiated Emission Measurement

Operator: Kai

File :3

Data :#4

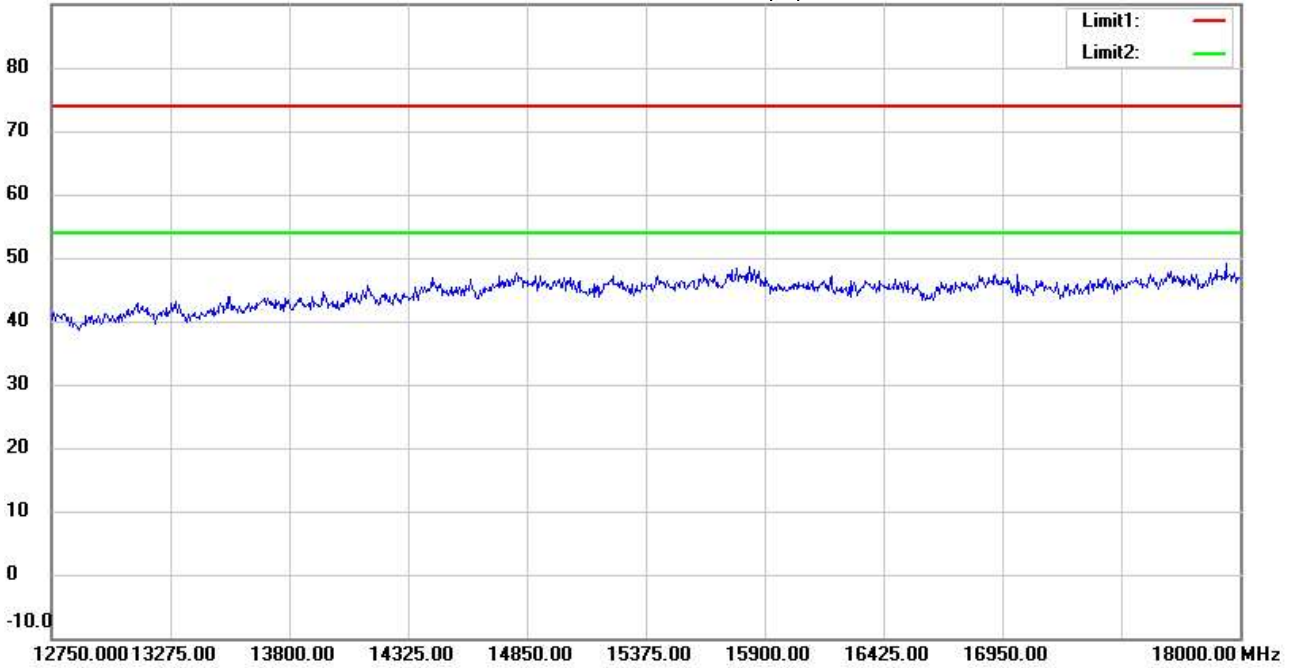
Date: 2024/5/15

Temperature: 23.4 °C

90.0 dBuV/m

Time: 下午 05:10:37

Humidity: 58.9 %



Site : 966A Chamber

Condition : FCC\_part 15 RE-Class C\_Above 1GHz\_PK

Polarization: *Horizontal*

EUT : W6M22405-23456

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11b CH1

Note :

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





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**Radiated Emission Measurement**

Operator: Kai

File :3

Data :#9

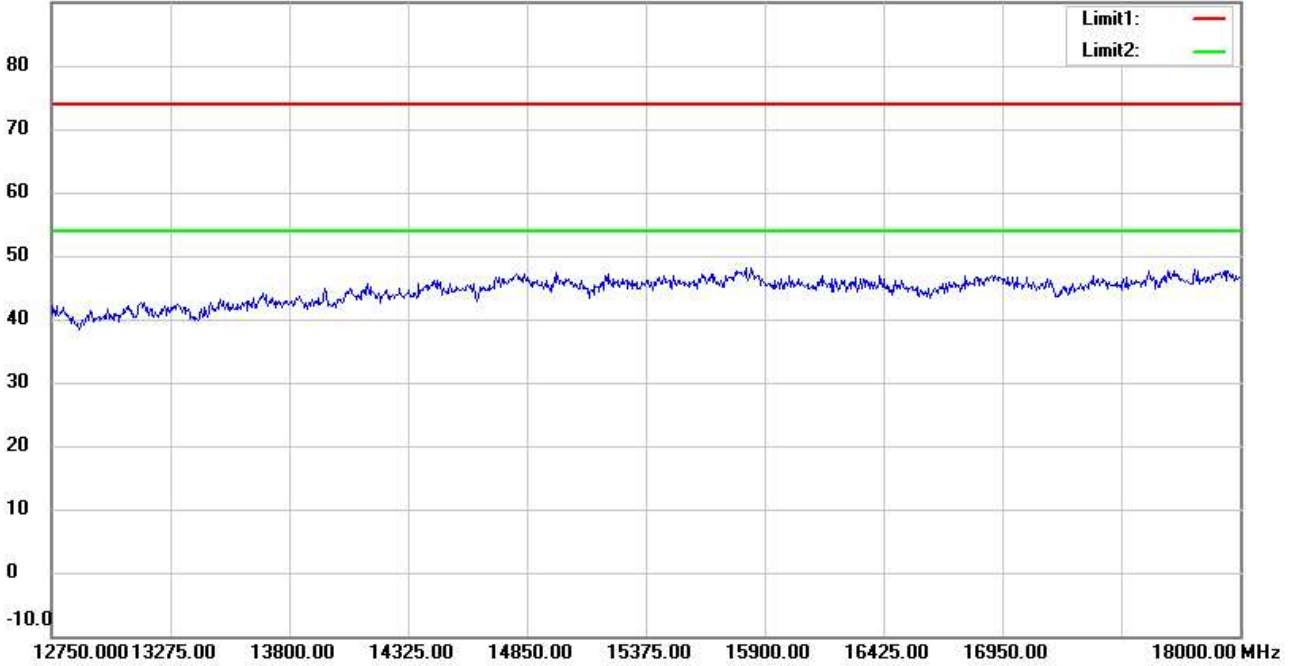
Date: 2024/5/15

Temperature: 23.4 °C

90.0 dBuV/m

Time: 下午 05:13:17

Humidity: 58.9 %



Site : 966A Chamber

Condition : FCC\_part 15 RE-Class C\_Above 1GHz\_PK

EUT : W6M22405-23456

M/N:

Test Mode : TX 802.11b CH1

Note :

Polarization: **Vertical**

Power : 120 Va.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



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Radiated Emission Measurement

Operator: Kai

File :3

Data :#5

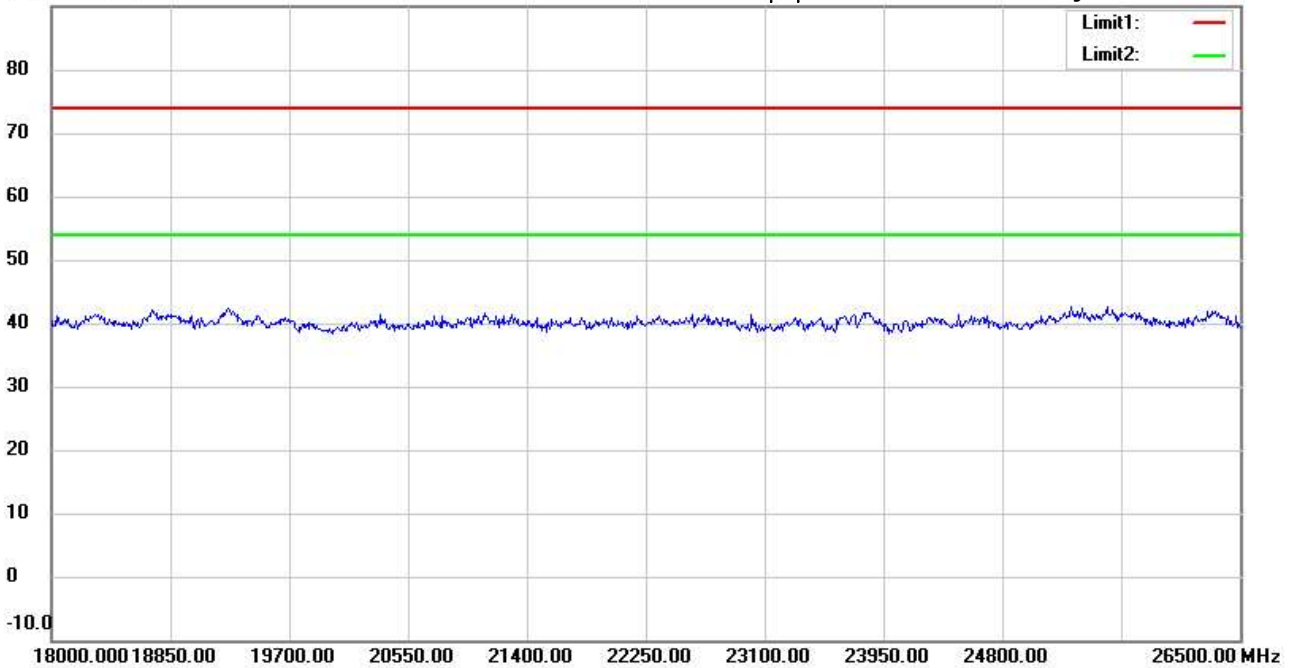
Date: 2024/5/15

Temperature: 23.4 °C

90.0 dBuV/m

Time: 下午 05:10:48

Humidity: 58.9 %



Site : 966A Chamber

Condition : FCC\_part 15 RE-Class C\_Above 1GHz\_PK

Polarization: *Horizontal*

EUT : W6M22405-23456

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11b CH1

Note :

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



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Radiated Emission Measurement

Operator: Kai

File :3

Data :#10

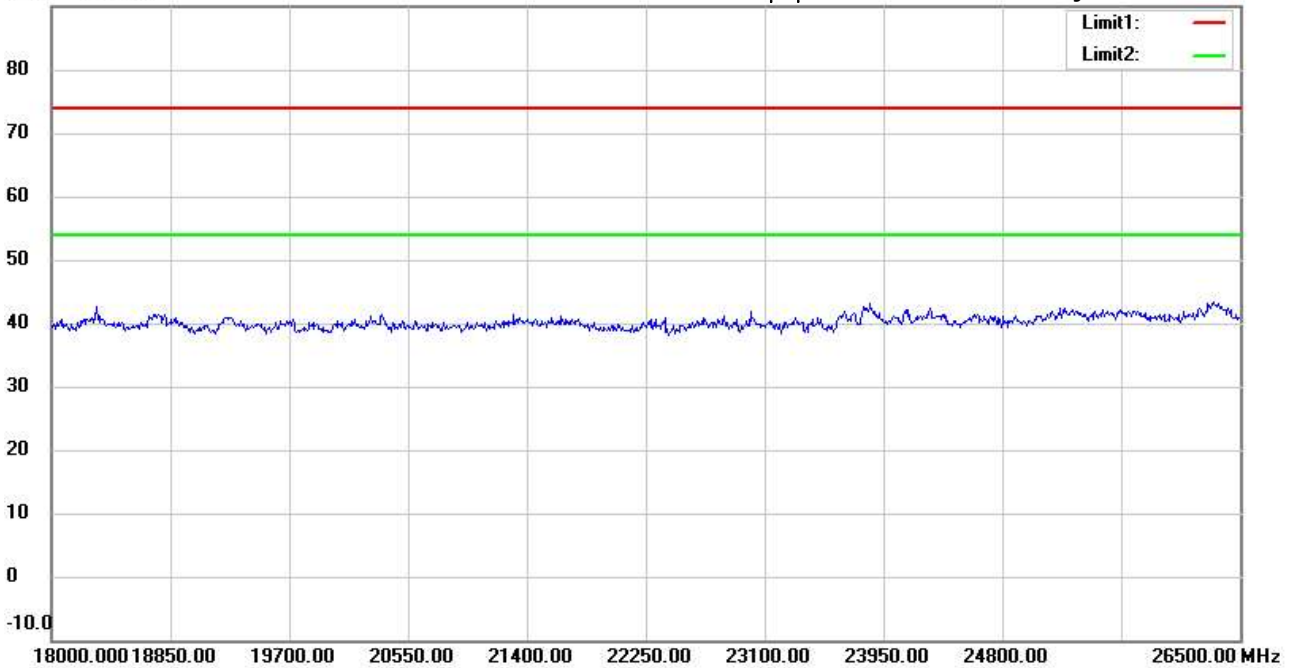
Date: 2024/5/15

Temperature: 23.4 °C

90.0 dBuV/m

Time: 下午 05:13:28

Humidity: 58.9 %



Site : 966A Chamber

Condition : FCC\_part 15 RE-Class C\_Above 1GHz\_PK

Polarization: *Vertical*

EUT : W6M22405-23456

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11b CH1

Note :

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



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Radiated Emission Measurement

Operator: Kai

File :3

Data :#1

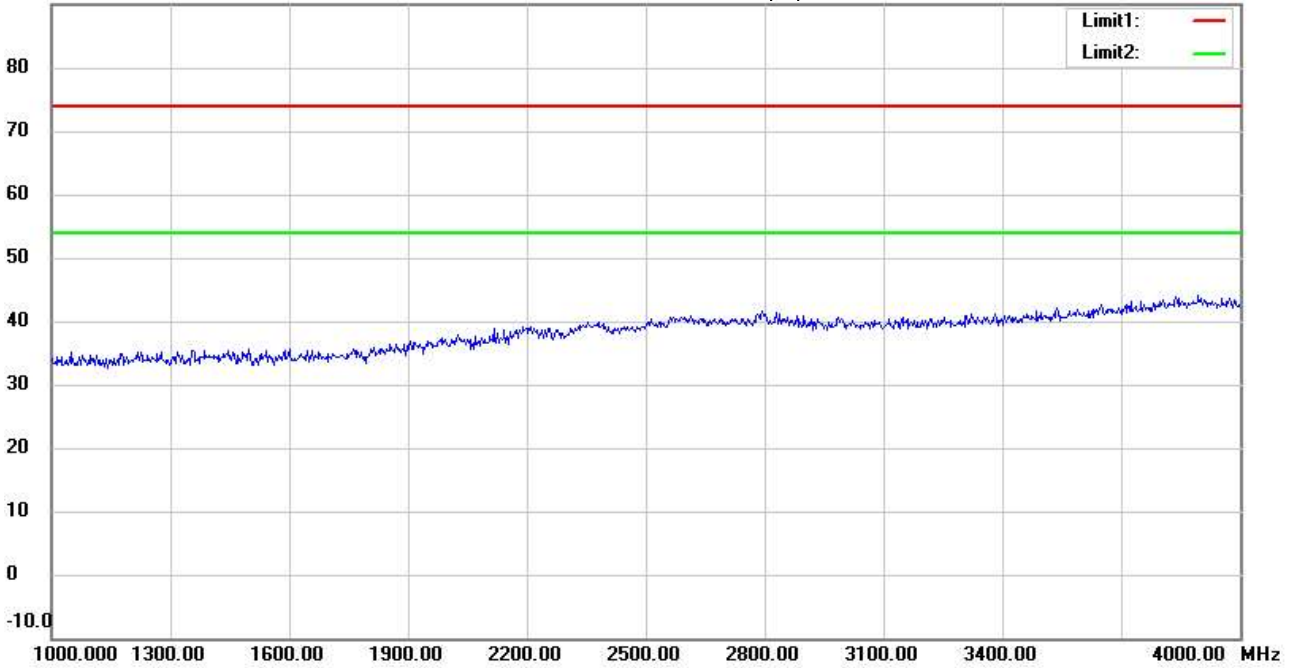
Date: 2024/5/15

Temperature: 23.4 °C

90.0 dBuV/m

Time: 下午 05:27:49

Humidity: 58.9 %



Site : 966A Chamber

Condition : FCC\_part 15 RE-Class C\_Above 1GHz\_PK

Polarization: *Horizontal*

EUT : W6M22405-23456

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11b CH6

Note :

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



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Radiated Emission Measurement

Operator: Kai

File :3

Data :#6

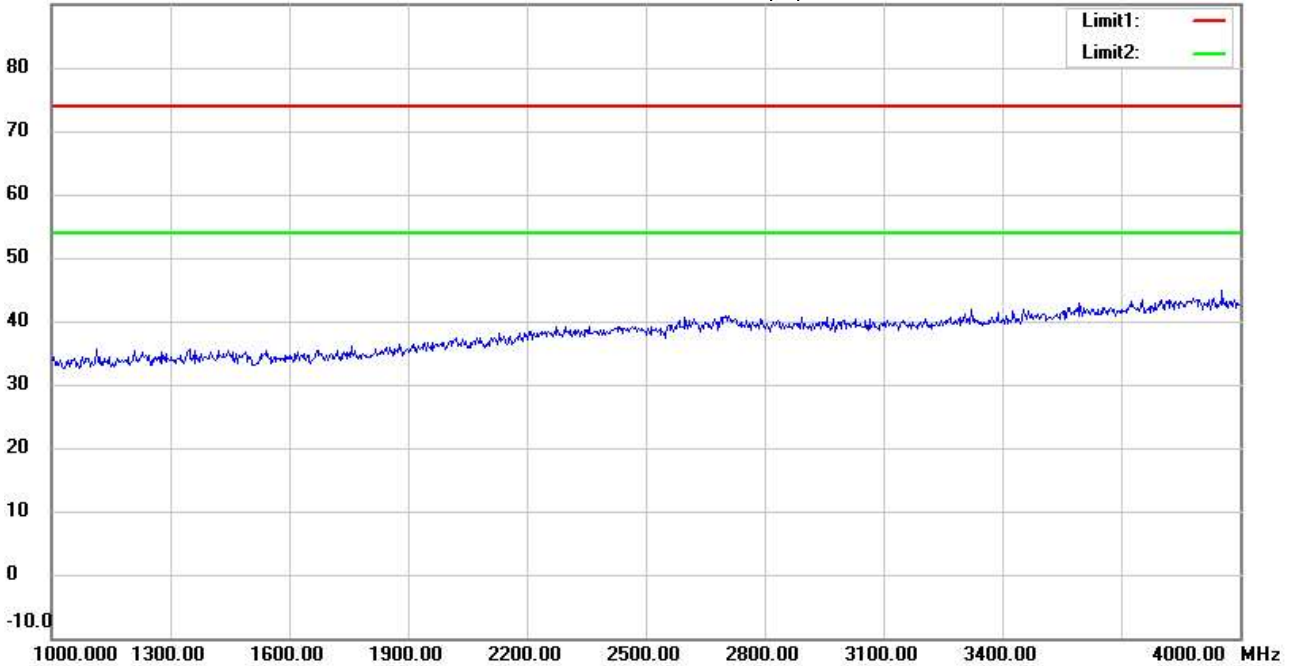
Date: 2024/5/15

Temperature: 23.4 °C

90.0 dBuV/m

Time: 下午 05:30:34

Humidity: 58.9 %



Site : 966A Chamber

Condition : FCC\_part 15 RE-Class C\_Above 1GHz\_PK

EUT : W6M22405-23456

M/N:

Test Mode : TX 802.11b CH6

Note :

Polarization: *Vertical*

Power : 120 Va.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



Radiated Emission Measurement

Operator: Kai

File :3

Data :#2

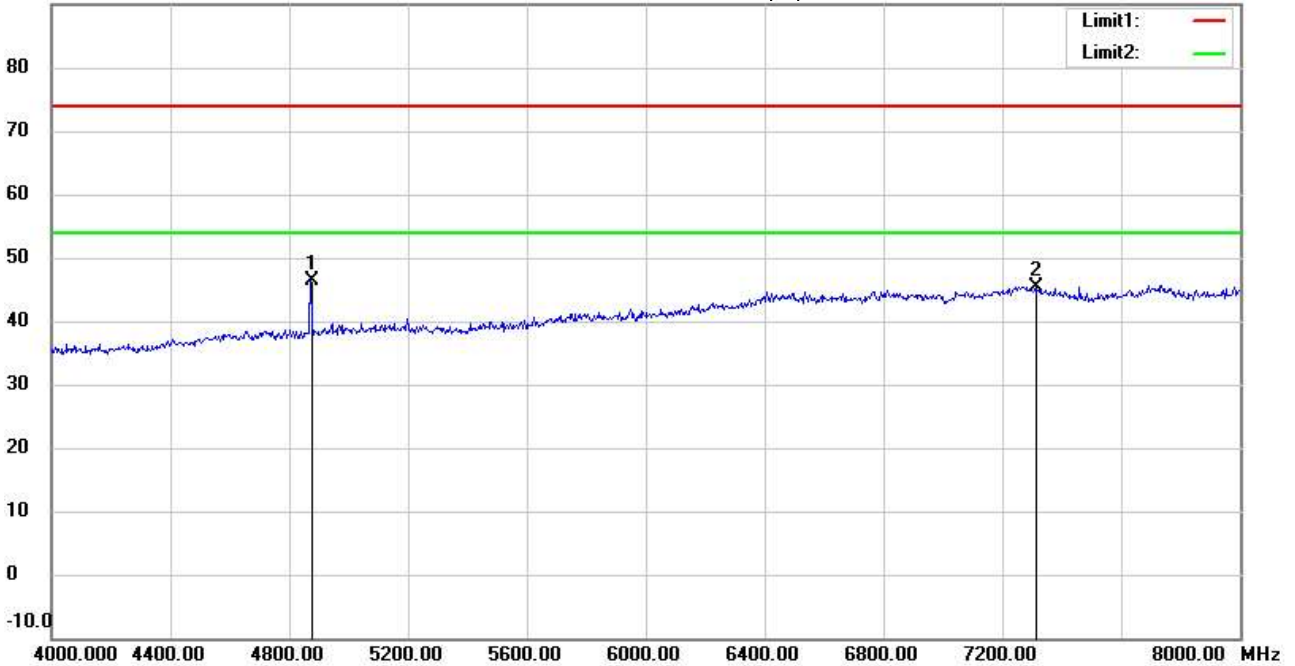
Date: 2024/5/15

Temperature: 23.4 °C

90.0 dBuV/m

Time: 下午 05:28:32

Humidity: 58.9 %



Site : 966A Chamber

Condition : FCC\_part 15 RE-Class C\_Above 1GHz\_PK

Polarization: *Horizontal*

EUT : W6M22405-23456

Power : 120 V.a.c.

M/N:

Distance: 3m

Test Mode : TX 802.11b CH6

Note :

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
*	4874.000	41.76	peak	4.66	46.42	74.00	150	330	-27.58	
	7311.000	34.01	peak	11.30	45.31	74.00	150	207	-28.69	