

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

**for**

**Smart Home Alarm System**

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

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

**FCC ID: GX9HSGWCATM1ZB**

**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.**

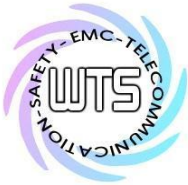
**FCC Registration No.: TW1072, TW1140, TW1146, TW1477, TW0037**

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



**Report No.: W6M22407-23644-C-1**

6F, NO. 58, LANE 188, RUEY-KUANG RD., NEIHU TAIPEI 114, TAIWAN, R.O.C.  
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Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

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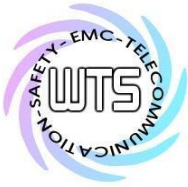
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**1 General Information**

**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.

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.

**Tester:**

October 25, 2024

Sora Kuo

Date

WTS-Lab.

Name

Signature

**Technical responsibility for area of testing:**

October 25, 2024

Kevin Wang

Date

WTS

Name

Signature



Registration number: W6M22407-23644-C-1

FCC ID: GX9HSGWCATM1ZB

## **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. 99, Sec. 1, Balian Rd., Xizhi Dist.,  
New Taipei City 221032, Taiwan (R.O.C.)

Worldwide Testing Services (Taiwan) Co., Ltd.  
6F., No. 58, Ln. 188, Ruiguang Rd., Neihu Dist.,  
Taipei City 114, Taiwan (R.O.C.)  
Tel: 886-2-6606-8877

### **1.2.2 Details of accreditation status**

Accredited testing laboratory

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

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

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

Name: ./.

Accredited number: ./.

Street: ./.

Town: ./.

Country: ./.

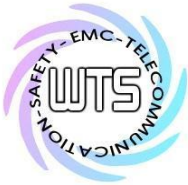
## **1.3 Details of approval holder**

Name: CLIMAX TECHNOLOGY CO., LTD.  
Street: No. 258, Sinhu 2nd Rd., Neihu District,  
Town: Taipei City 114,  
Country: Taiwan (R.O.C.)

## **1.4 Application details**

Date of receipt of test item: July 31, 2024

Date of test: from August 01, 2024 to October 24, 2024



Registration number: W6M22407-23644-C-1  
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## **1.5 General information of Test item**

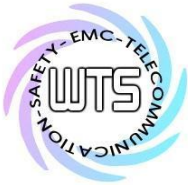
Type of test item: Smart Home Alarm System  
Model number: HSGWx-xxxxx-xxxxx Series(x=0~9, A~Z or blank)  
Brand name: ./.  
Multi-listing model number: ./.  
Sample no.: #01

### **Technical data**

Frequency band: 2.4 GHz – 2.4835 GHz

Zigbee		
Mode	Channel	Conducted Power (dBm)
Mode 1	Ch 1 : 2405 MHz	15.82
	Ch 8 : 2440 MHz	15.52
	Ch 15 : 2475 MHz	14.94
Mode 2	Ch 1 : 2405 MHz	0.43
	Ch 8 : 2440 MHz	-1.58
	Ch 15 : 2475 MHz	-3.30

WLAN		
Mode	Channel	Conducted Power (dBm)
802.11b	Ch 1 : 2412 MHz	14.83
	Ch 6 : 2437 MHz	14.91
	Ch 11 : 2462 MHz	15.27
802.11g	Ch 1 : 2412 MHz	13.00
	Ch 6 : 2437 MHz	13.13
	Ch 11 : 2462 MHz	13.42
802.11n20MHz	Ch 1 : 2412 MHz	12.45
	Ch 6 : 2437 MHz	12.58
	Ch 11 : 2462 MHz	12.68



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

Registration number: W6M22407-23644-C-1  
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BT			
Band	Mode	Channel	Power(dBm)
2.4GHz	BR	Ch 0 : 2402 MHz	8.61
		Ch 39 : 2441 MHz	8.31
		Ch 78 : 2480 MHz	8.19
	EDR	Ch 0 : 2402 MHz	8.83
		Ch 39 : 2441 MHz	8.62
		Ch 78 : 2480 MHz	8.41
	BLE 1M	Ch 0 : 2402 MHz	5.38
		Ch 19 : 2440 MHz	5.30
		Ch 39 : 2480 MHz	5.22

Number of channels: WLAN  
 802.11b, g, n 20MHz: 11 channels, 11n 40MHz: 7 channels  
 Bluetooth: 79 channels(BT2.0), 40channels(BLE)

Operation modes: Duplex

Modulation type: O-QPSK、DSSS/OFDM、GFSK、 $\pi/4$ DQPSK、8DPSK

Fixed point-to-point operation:  Yes /  No

Type of antenna: Zigbee: PCB antenna  
 WLAN & BT & BLE: Monopole antenna

Antenna gain: Zigbee (Mode 1): 3.61dBi  
 Zigbee (Mode 2): 0.94dBi  
 WLAN & BT & BLE: 2.78dBi

Directional gain: ./.

Power supply: Adapter (I/P: 100-240V~50/60Hz 0.30A  
 O/P: 12.0V=1.0A 12W)  
 Battery 7.2V, 1100mAh

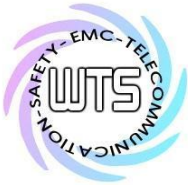
Host device: none

Classification:

Fixed Device	<input type="checkbox"/>
Mobile Device (Human Body distance > 20cm)	<input checked="" type="checkbox"/>
Portable Device (Human Body distance < 20cm)	<input type="checkbox"/>
Modular Radio Device	<input type="checkbox"/>

### Manufacturer: (if applicable)

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



Registration number: W6M22407-23644-C-1  
 FCC ID: GX9HSGWCATM1ZB

**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.

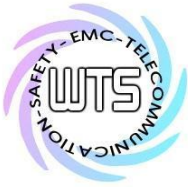
**Zigbee**

Mode	T <sub>on</sub> (ms)	T <sub>on</sub> +T <sub>off</sub> (ms)	Duty cycle(%)	1/T - VBW(kHz)
Zigbee	100	100	100.00%	0.01

**WLAN**

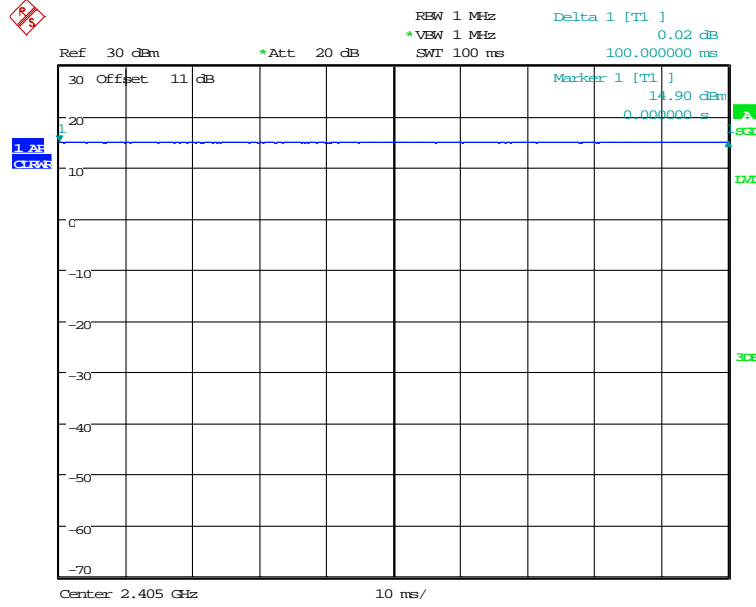
Mode	T <sub>on</sub> (ms)	T <sub>on</sub> +T <sub>off</sub> (ms)	Duty cycle(%)	Duty Factor(dB)	1/T - VBW(KHz)
802.11b	8.486	8.534	99.44%	0.02	0.01
802.11g	1.41	1.498	94.13%	0.26	0.71
802.11n 20M	1.33	1.41	94.33%	0.25	0.75

Mode	T <sub>on</sub> (ms)	T <sub>on</sub> +T <sub>off</sub> (ms)	Duty cycle(%)	1/T - VBW(kHz)
BLE 1M	0.421	0.625	67.36%	2.38



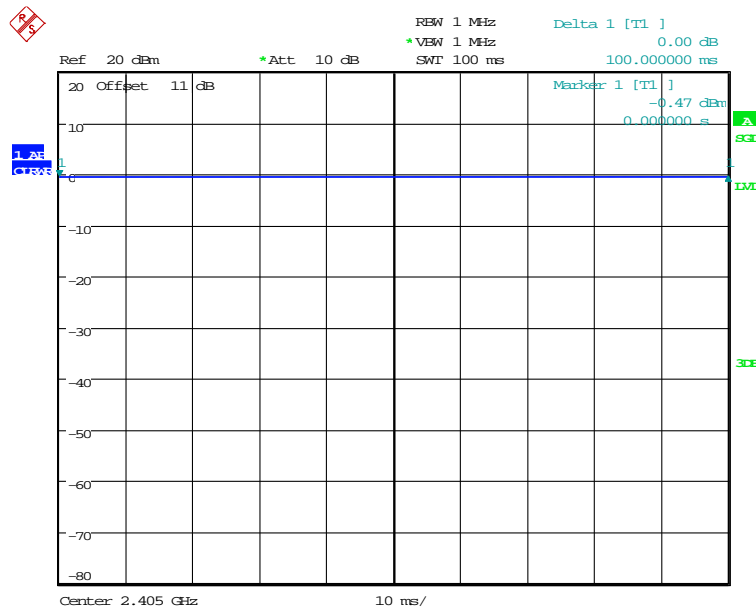
Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

Duty cycle plot  
Zigbee  
Mode 1



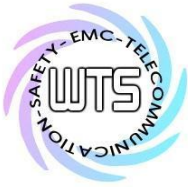
DUTY ZIGBEE  
Date: 23.OCT.2024 10:17:29

Mode 2



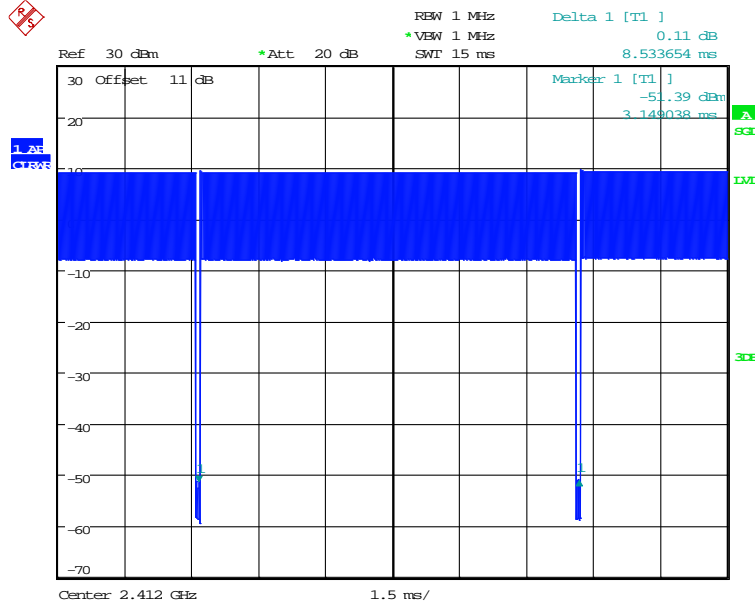
DUTY ZIGBEE  
Date: 23.OCT.2024 11:08:04



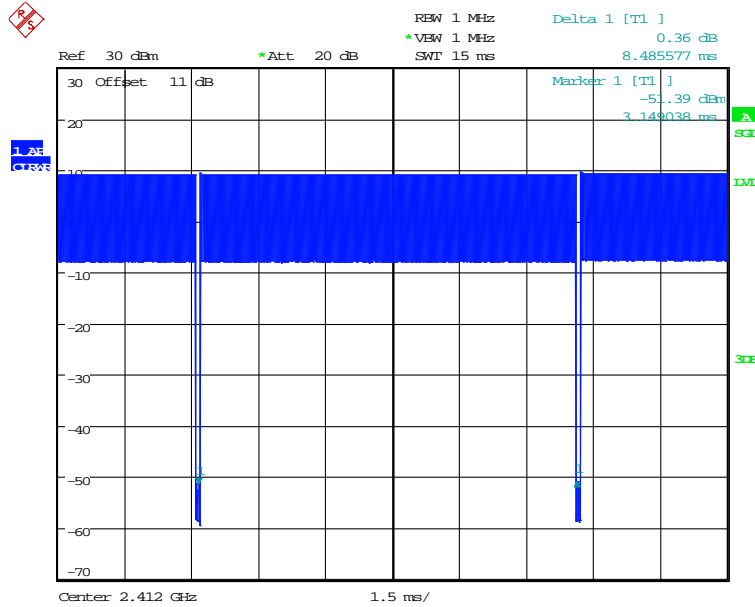


Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

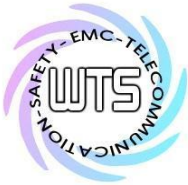
WLAN  
802.11b



DUTY 802.11B  
Date: 17.OCT.2024 19:35:56

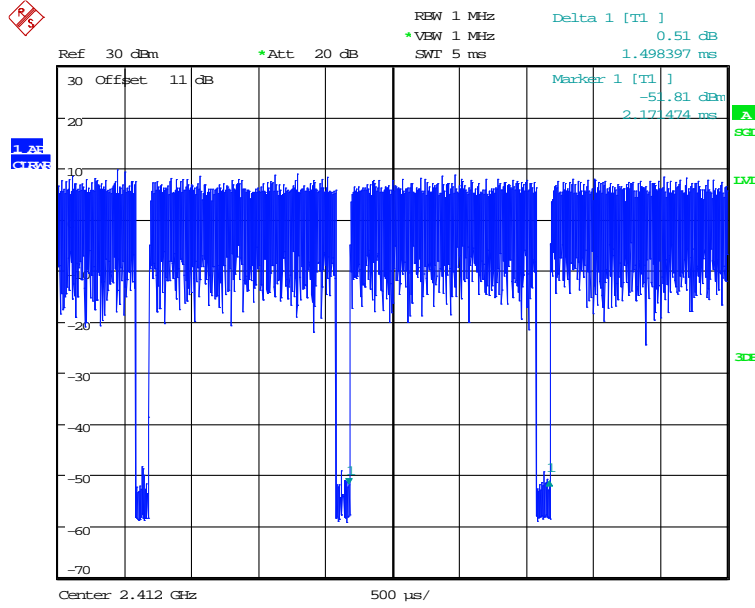


DUTY 802.11B  
Date: 17.OCT.2024 19:36:02

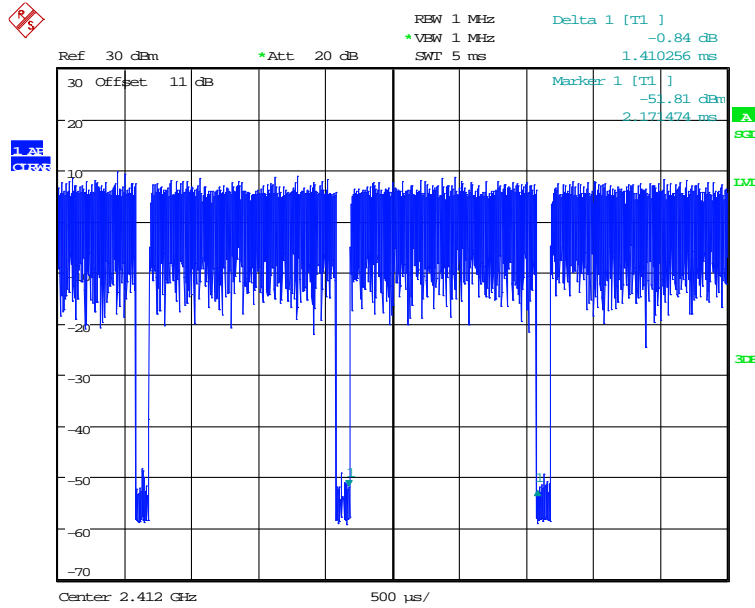


Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

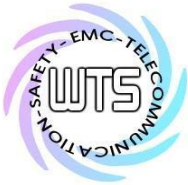
802.11g



DUTY 802.11G  
Date: 17.OCT.2024 19:36:53



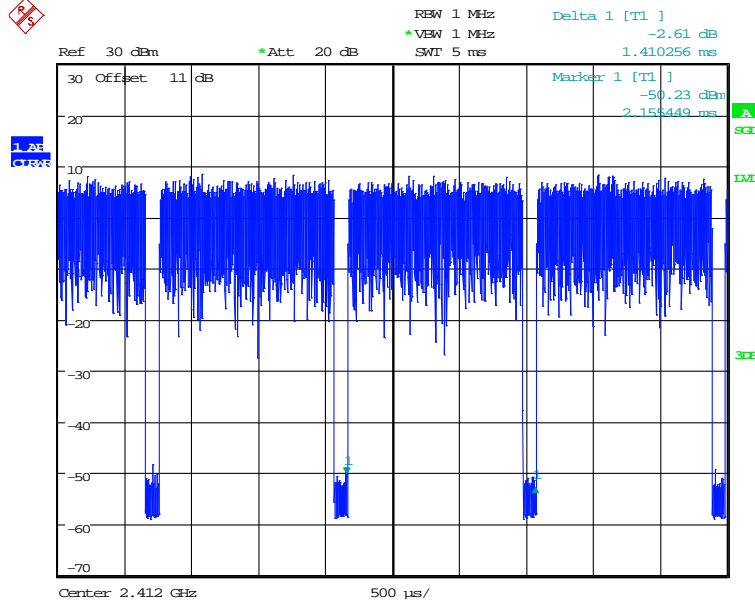
DUTY 802.11G  
Date: 17.OCT.2024 19:37:01



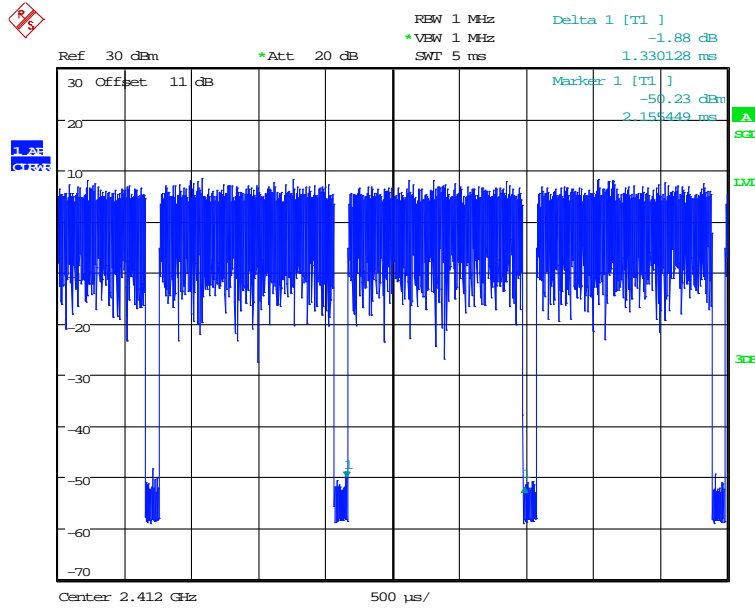
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FCC ID: GX9HSGWCATM1ZB

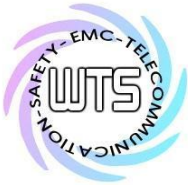
802.11n 20MHz



DUTY 802.11N 20MHZ  
Date: 17.OCT.2024 19:41:50

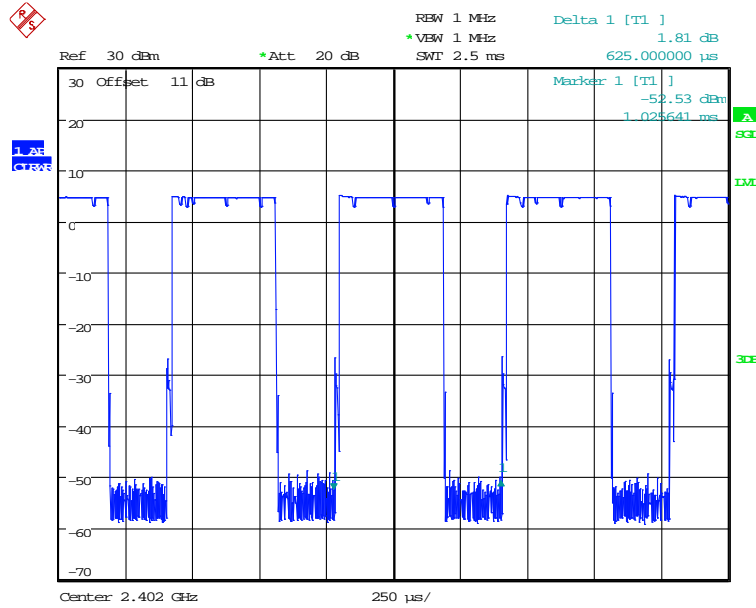


DUTY 802.11N 20MHZ  
Date: 17.OCT.2024 19:41:55

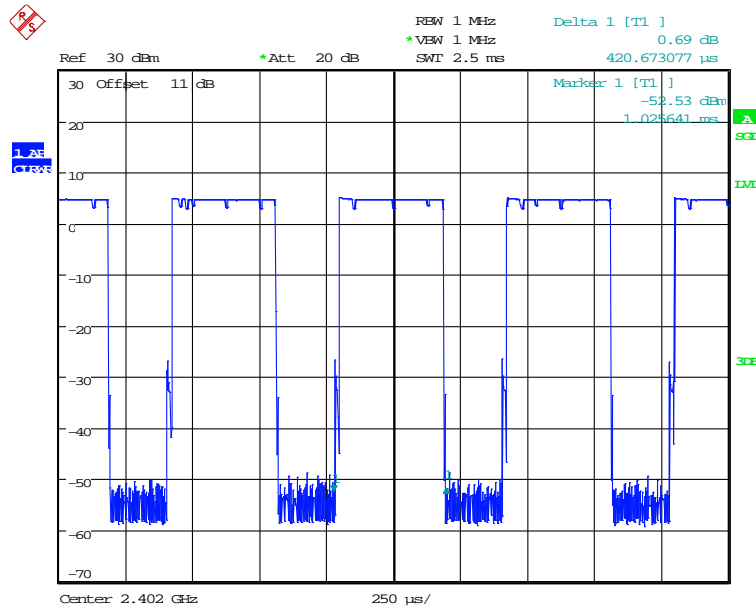


Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

BLE 1M



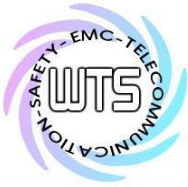
DUTY BLE 1M  
Date: 17.OCT.2024 19:23:31



DUTY BLE 1M  
Date: 17.OCT.2024 19:23:39

## 1.6 Test standards

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



Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

**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 HSGW-MAX8-DT32. This model does not contain logo.



Registration number: W6M22407-23644-C-1

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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: 12Vd.c., 2A  
 Adapter (I/P: 100-240V~50/60Hz 0.30A  
 O/P: 12.0V=1.0A 12W)  
 Battery 7.2V, 1100mAh

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.



Registration number: W6M22407-23644-C-1

FCC ID: GX9HSGWCATM1ZB

## 2.3 Test Equipment List

BT2.0

Max Output Power&20DB BANDWIDTH&

BANDEDGE&FREQUENCY SEPARATION&NUMBER OF HOPPING&DWELL TIME

BLE & WiFi & Zigbee

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

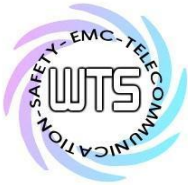
Code No.	Test equipment	Mode No.	Serial No.	Brand	Cal. Date	Next Cal. Date
ETSTW-RE 050	Attenuator 10dB	50HF-010-1	None	JFW	2024/2/16	2025/2/15
ETSTW-RE 055	SPECTRUM ANALYZER	FSU 26	200074	R&S	2024/3/7	2025/3/6
ETSTW-RE 099	DC Block	50DB-007-1	None	JFW	2024/2/16	2025/2/15
ETSTW-Cable 030	Microwave Cable	SUCOFLEX 104 (S_Cable 9)	279067	HUBER+SUHNER	2024/2/16	2025/2/15

## 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	2024/9/11	2025/9/10
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	2024/7/12	2025/7/11
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	2024/7/12	2025/7/11
ETSTW-Cable 084	SMA type cable (1m)	SF104-11SMA-1000	816477/4	HONOVA	2024/7/12	2025/7/11
ETSTW-Cable 089	SMA type cable (2m)	SF104-11SMA-2000	SN 811889/4	HUBER+SUHNER	2024/7/12	2025/7/11
WTSTW-SW 002	EMI TEST SOFTWARE	EZ_EMCI	None	Farad	Version ETS-03A1 Version EMEC-3A1+	

## 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	2024/6/13	2025/6/12
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_EMCI	None	Farad	Version ETS-03A1 Version EMEC-3A1+	



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## **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

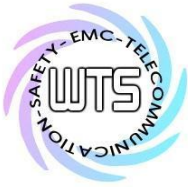
The EUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m (non metallic table) and arranged according to ANSI C63.10-2013 6.2.2. The table used for radiated measurements is capable of continuous rotation. The spectrum was scanned from 30 MHz to the frequency specified as follows:

- (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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FCC ID: GX9HSGWCATM1ZB

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:

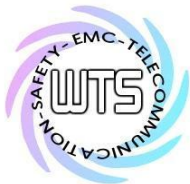
Average = Peak + Duty Factor

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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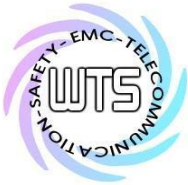
**3 Test results (enclosure)**

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



Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

**3.1 Peak Output Power (transmitter)**

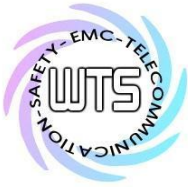
FCC Rule: 15.247(b)(3)

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: October 17, 2024-October 23, 2024  
Temperature: 24.0 °C  
Humidity: 58.7 %  
Tester: Sora

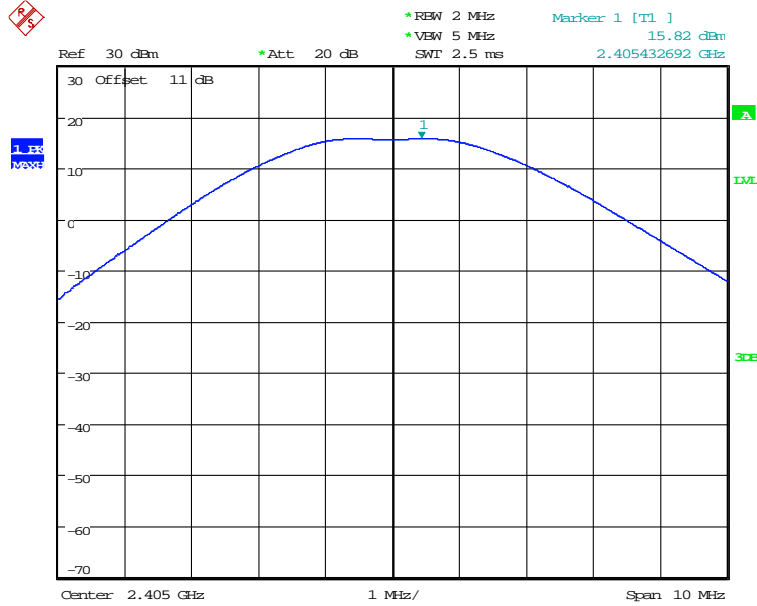
Zigbee

Mode	Channel	Power (dBm)	Limit (dBm)
Mode 1	Ch 1 : 2405 MHz	15.82	30
	Ch 8 : 2440 MHz	15.52	30
	Ch 15 : 2475 MHz	14.94	30
Mode 2	Ch 1 : 2405 MHz	0.43	30
	Ch 8 : 2440 MHz	-1.58	30
	Ch 15 : 2475 MHz	-3.30	30

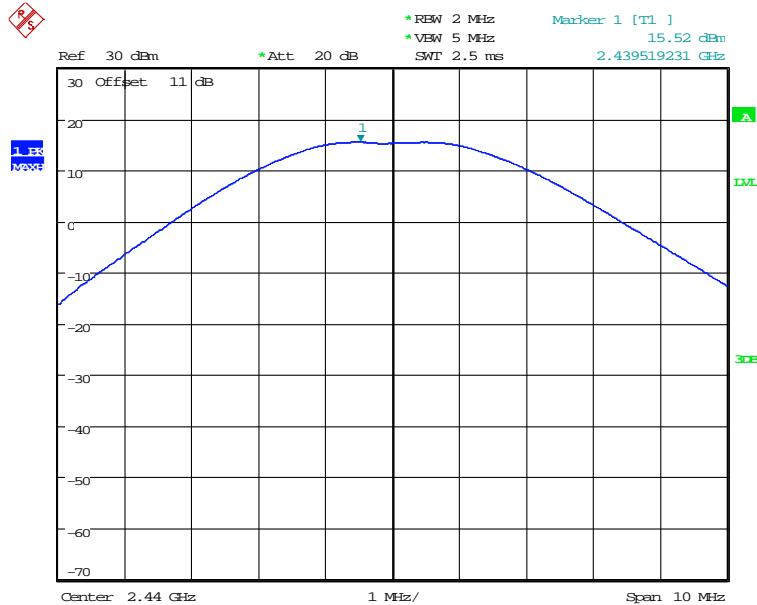


Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

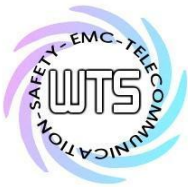
Mode 1



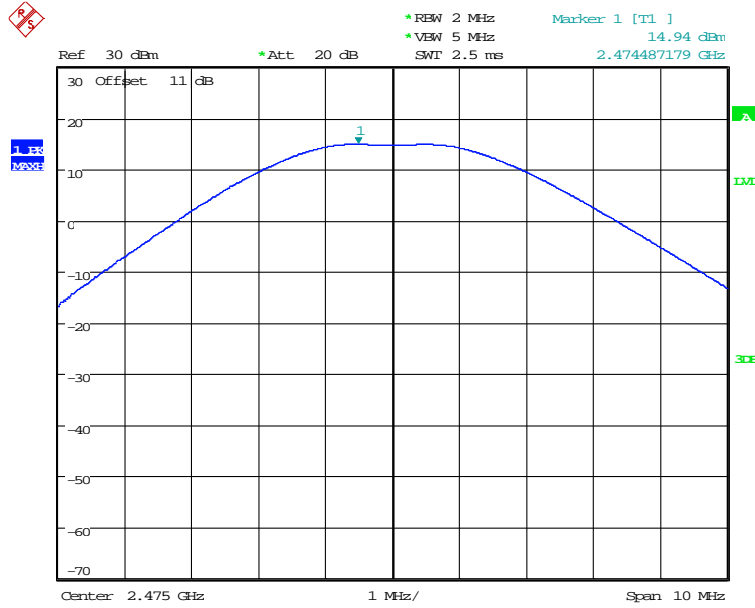
MAX OUTPUT POWER ZIGBEE 2405MHz  
Date: 23.OCT.2024 10:05:33



MAX OUTPUT POWER ZIGBEE 2440MHz  
Date: 23.OCT.2024 10:06:00

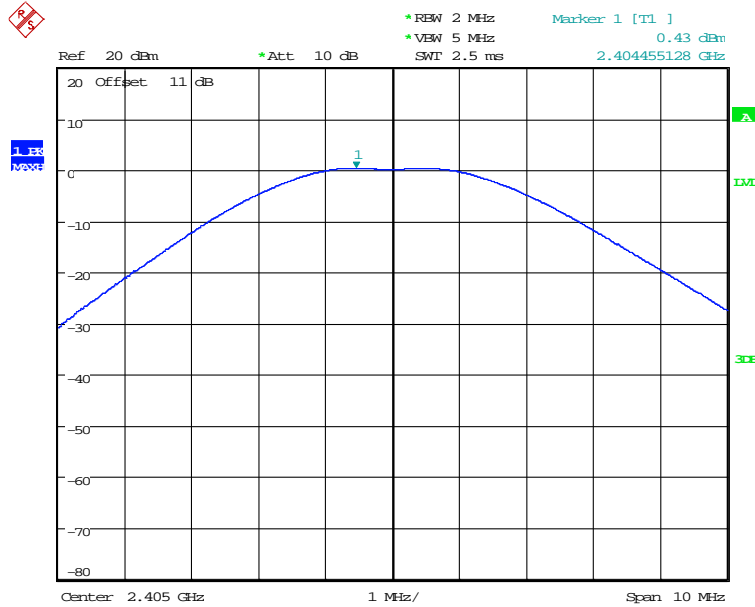


Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

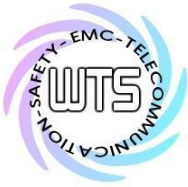


MAX OUTPUT POWER ZIGBEE 2475MHz  
Date: 23.OCT.2024 10:06:24

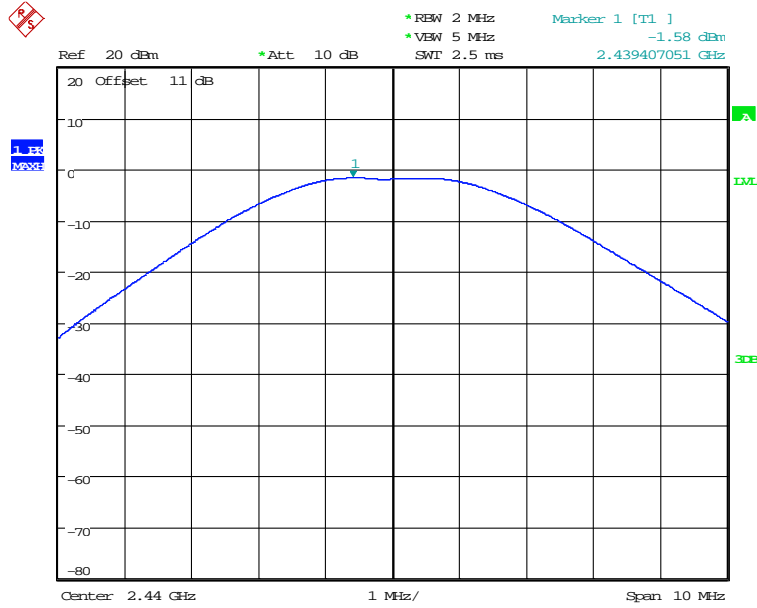
## Mode 2



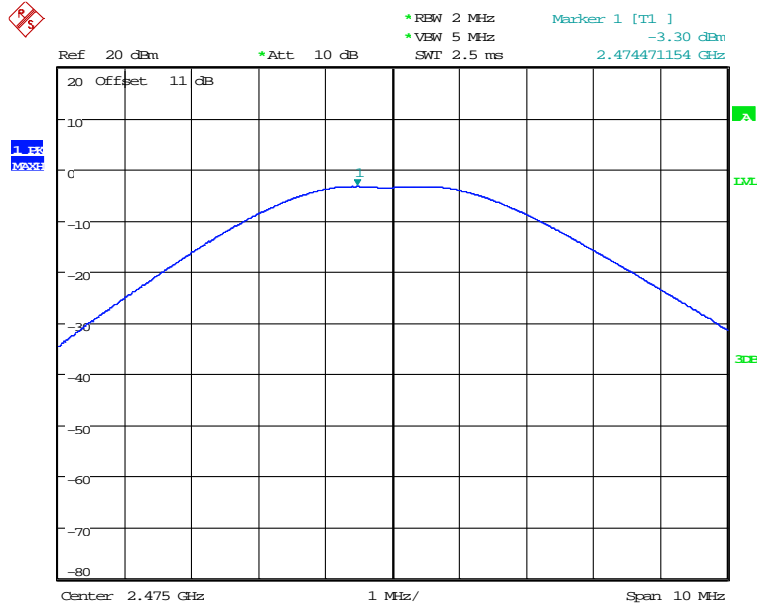
MAX OUTPUT POWER ZIGBEE 2405MHz  
Date: 23.OCT.2024 11:08:44



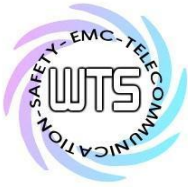
Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB



MAX OUTPUT POWER ZIGBEE 2440MHz  
Date: 23.OCT.2024 11:09:07



MAX OUTPUT POWER ZIGBEE 2475MHz  
Date: 23.OCT.2024 11:09:34

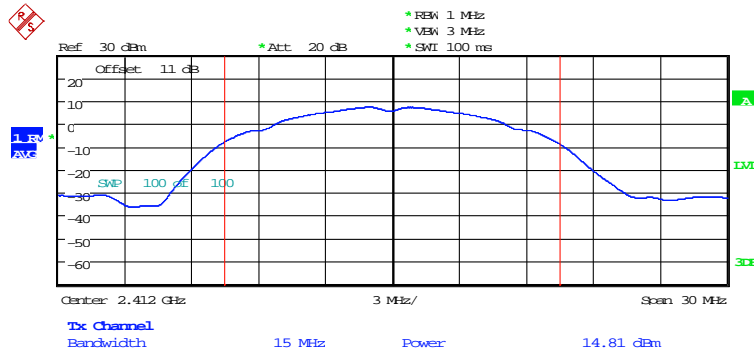


Registration number: W6M22407-23644-C-1  
 FCC ID: GX9HSGWCATM1ZB

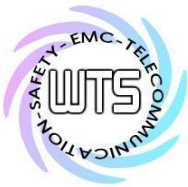
## WLAN

Band	Mode	Channel	Conducted power with DF (dBm)	DF (dB)	Limit (dBm)
2.4GHz	802.11b	Ch 1 : 2412 MHz	14.83	0.02	30
		Ch 6 : 2437 MHz	14.91	0.02	30
		Ch 11 : 2462 MHz	15.27	0.02	30
	802.11g	Ch 1 : 2412 MHz	13.00	0.26	30
		Ch 6 : 2437 MHz	13.13	0.26	30
		Ch 11 : 2462 MHz	13.42	0.26	30
	802.11n 20M	Ch 1 : 2412 MHz	12.45	0.25	30
		Ch 6 : 2437 MHz	12.58	0.25	30
		Ch 11 : 2462 MHz	12.68	0.25	30

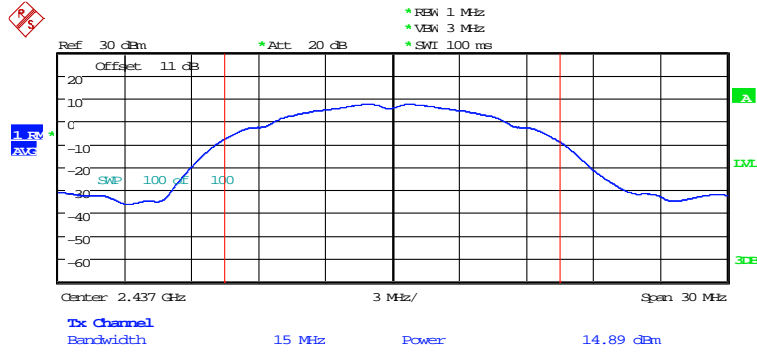
## 802.11b



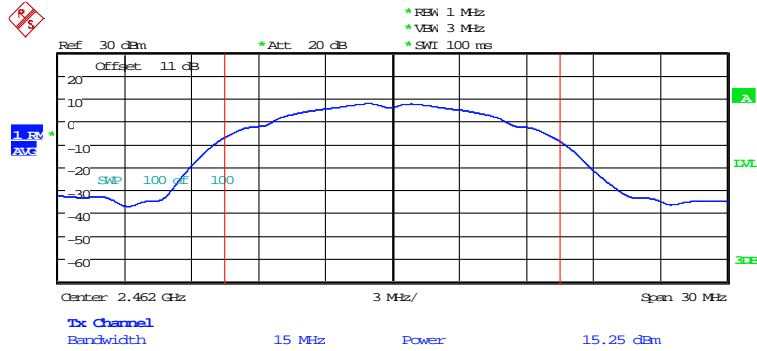
MAX OUTPUT POWER 802.11B CH01  
 Date: 17.OCT.2024 19:47:51



Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

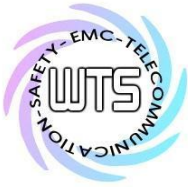


MAX OUTPUT POWER 802.11B CH06  
Date: 17.OCT.2024 19:48:15



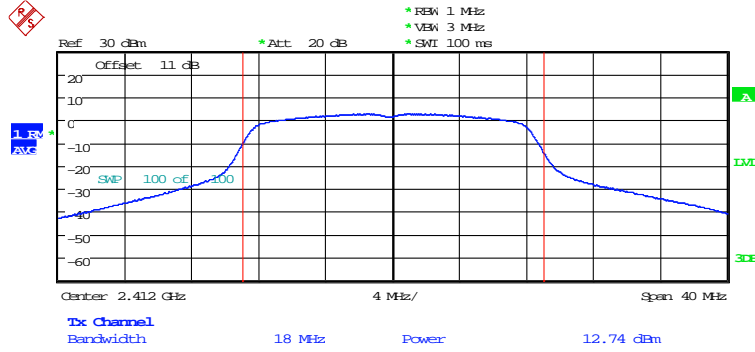
MAX OUTPUT POWER 802.11B CH11  
Date: 17.OCT.2024 19:48:42



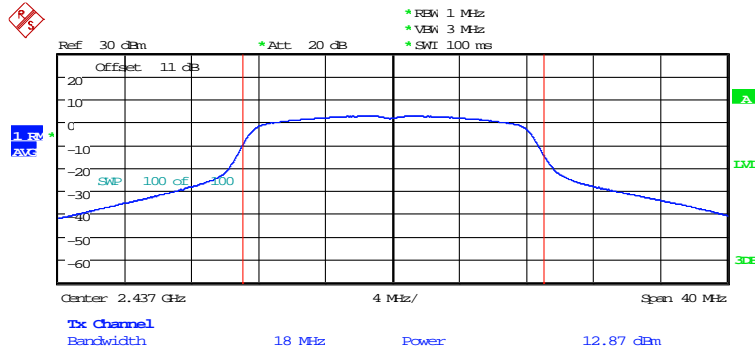


Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

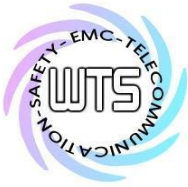
802.11g



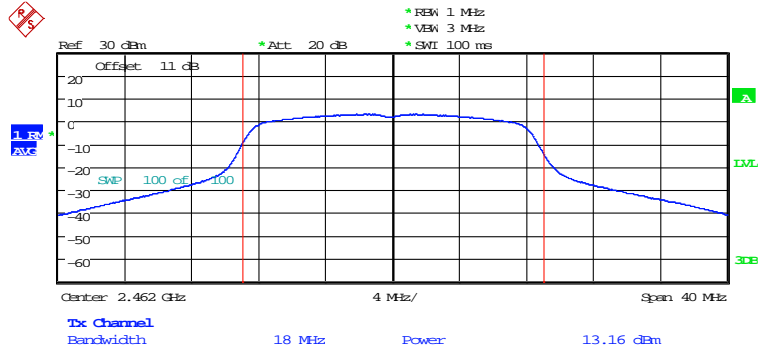
MAX OUTPUT POWER 802.11G CH01  
Date: 17.OCT.2024 19:50:16



MAX OUTPUT POWER 802.11G CH06  
Date: 17.OCT.2024 19:49:49

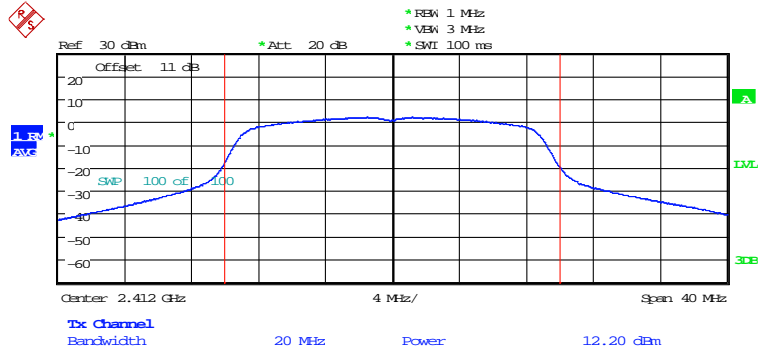


Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

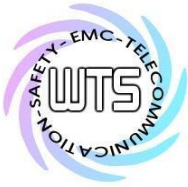


MAX OUTPUT POWER 802.11G CH11  
Date: 17.OCT.2024 19:49:23

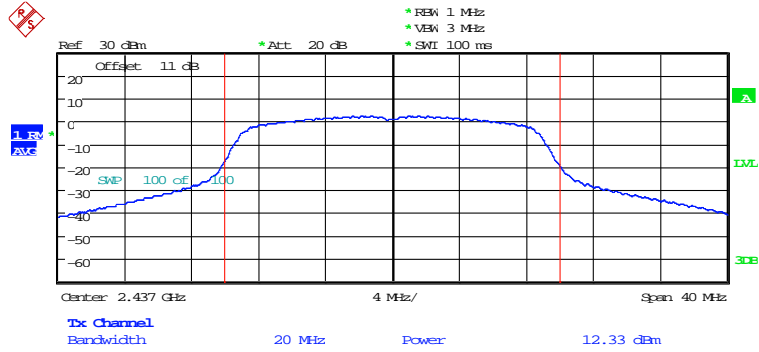
## 802.11n 20M



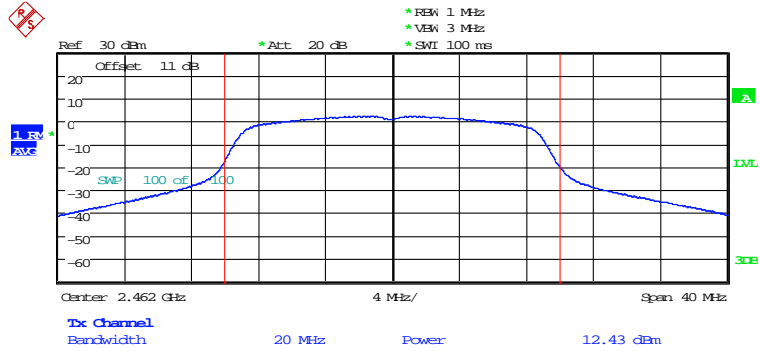
MAX OUTPUT POWER 802.11N 20MHZ CH01  
Date: 17.OCT.2024 19:47:14



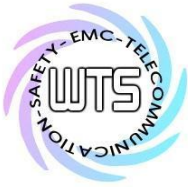
Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB



MAX OUTPUT POWER 802.11N 20MHZ CH06  
Date: 17.OCT.2024 19:46:46



MAX OUTPUT POWER 802.11N 20MHZ CH11  
Date: 17.OCT.2024 19:46:12

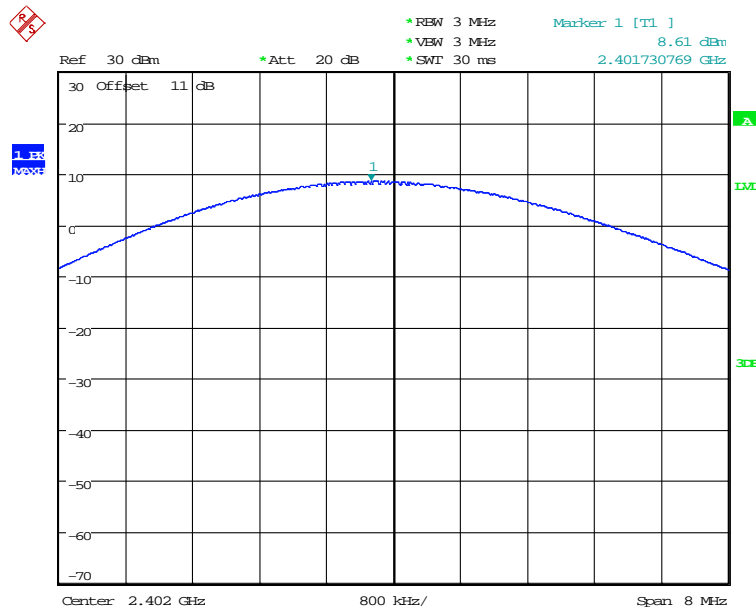


Registration number: W6M22407-23644-C-1  
 FCC ID: GX9HSGWCATM1ZB

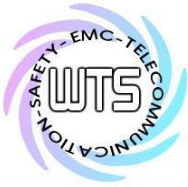
### Bluetooth

Band	Mode	Channel	Power (dBm)	Limit (dBm)
2.4GHz	BR	Ch 0 : 2402 MHz	8.61	21
		Ch 39 : 2441 MHz	8.31	21
		Ch 78 : 2480 MHz	8.19	21
	EDR	Ch 0 : 2402 MHz	8.83	21
		Ch 39 : 2441 MHz	8.62	21
		Ch 78 : 2480 MHz	8.41	21
	BLE	Ch 0 : 2402 MHz	5.38	30
		Ch 19 : 2440 MHz	5.30	30
		Ch 39 : 2480 MHz	5.22	30

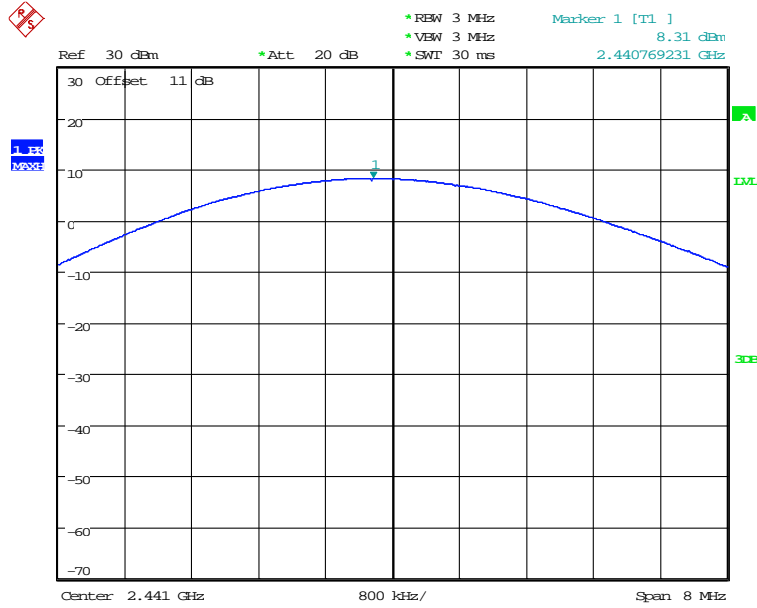
### Normal mode



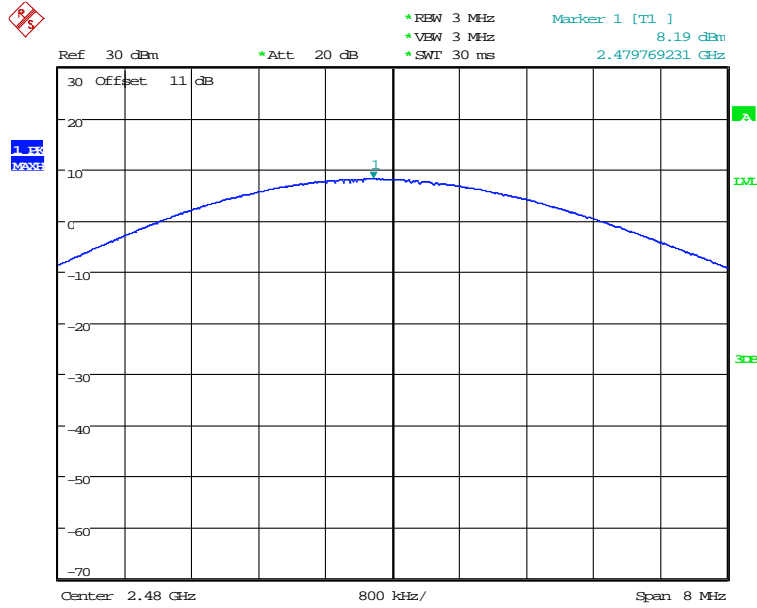
MAX OUTPUT POWER CH0  
 Date: 17.OCT.2024 18:44:32



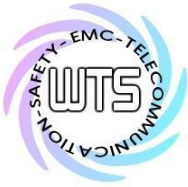
Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB



MAX OUTPUT POWER CH39  
Date: 17.OCT.2024 18:46:16

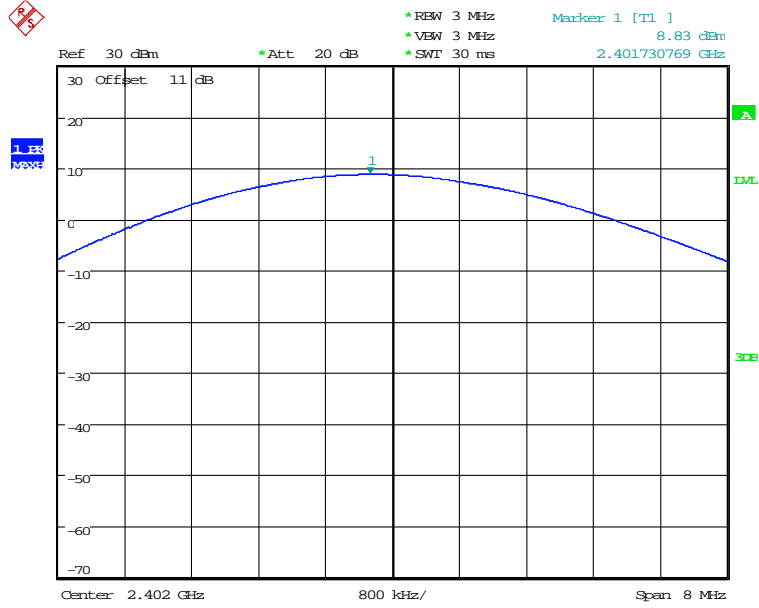


MAX OUTPUT POWER CH78  
Date: 17.OCT.2024 18:48:04

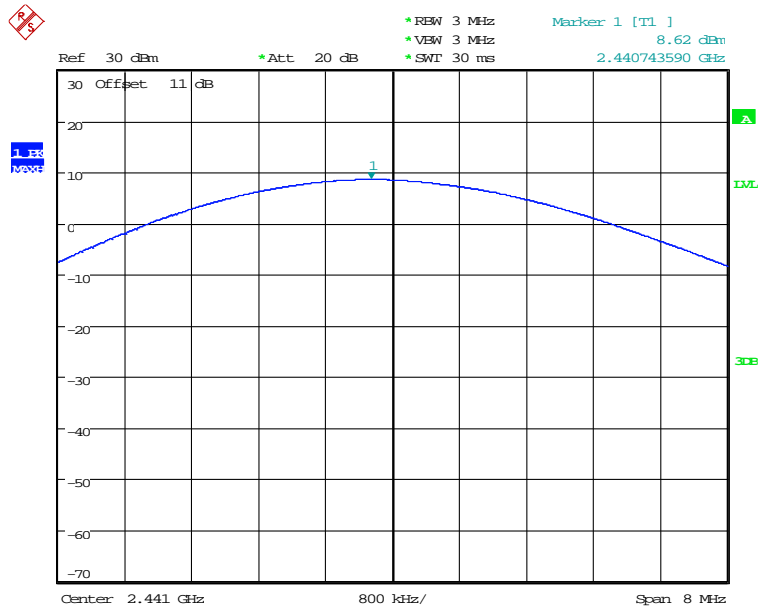


Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

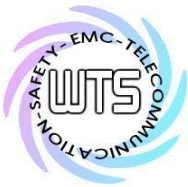
EDR mode



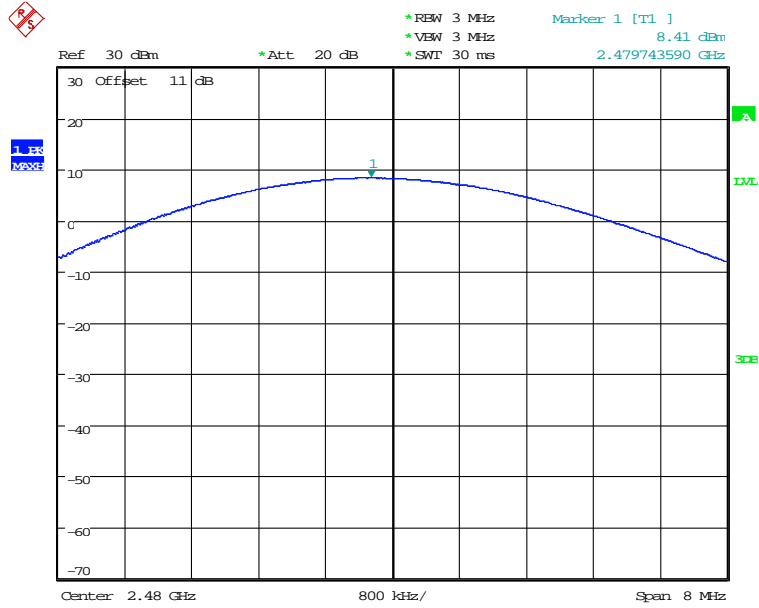
MAX OUTPUT POWER CH0 EDR MODE  
Date: 17.OCT.2024 18:49:44



MAX OUTPUT POWER CH39 EDR MODE  
Date: 17.OCT.2024 18:50:24

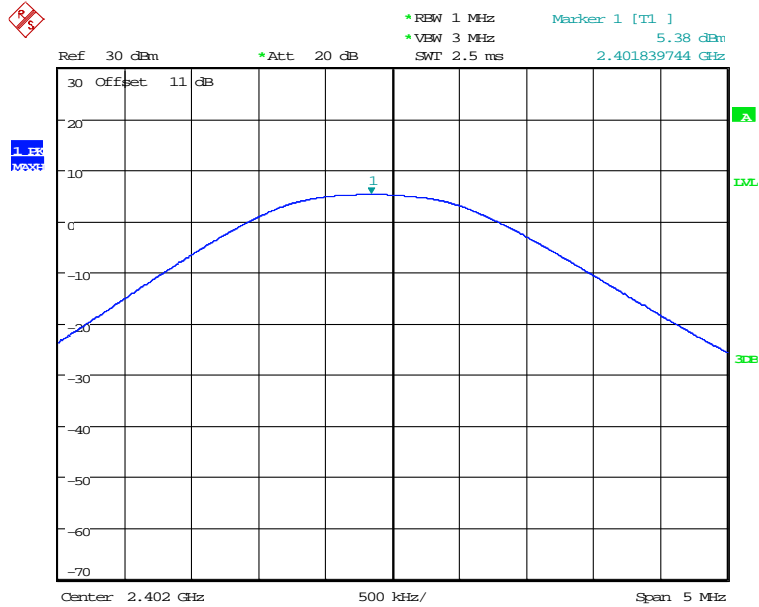


Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

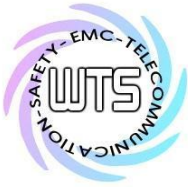


MAX OUTPUT POWER CH78 EDR MODE  
Date: 17.OCT.2024 18:50:52

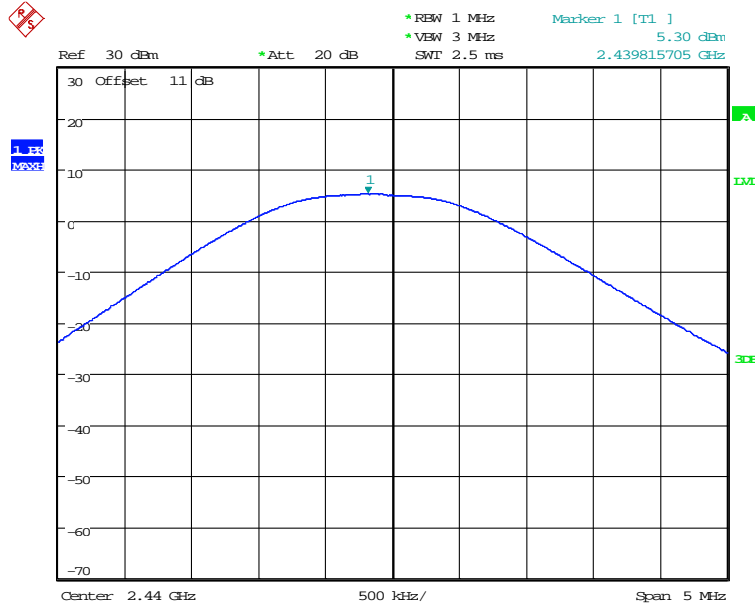
## BLE



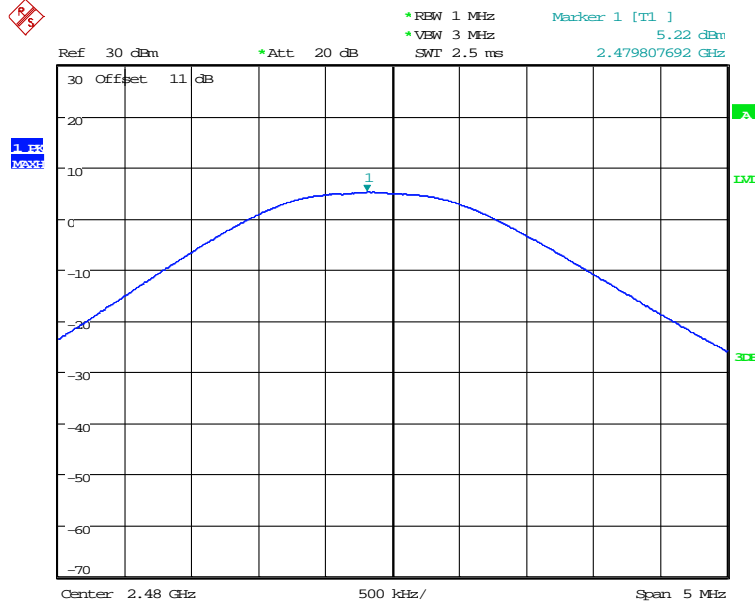
MAX OUTPUT POWER BLE 1M CH00  
Date: 17.OCT.2024 19:21:43



Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

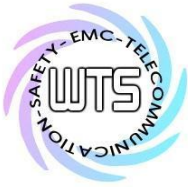


MAX OUTPUT POWER BLE 1M CH19  
Date: 17.OCT.2024 19:24:03



MAX OUTPUT POWER BLE 1M CH39  
Date: 17.OCT.2024 19:25:21





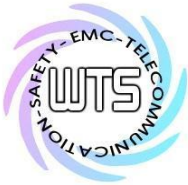
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

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: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

**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:

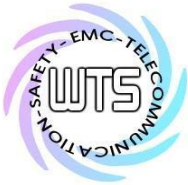
“If the emission is pulsed, modify the unit for continuous operation, use the setting shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation.”

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: W6M22407-23644-C-1

FCC ID: GX9HSGWCATM1ZB

### **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:

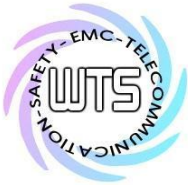
“If the emission is pulsed, modify the unit for continuous operation, use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation.”

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

Test equipment used: ETSTW-RE 030, ETSTW-RE 111, ETSTW-RE 088, ETSTW-RE 018,  
ETSTW-RE 064

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



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

Registration number: W6M22407-23644-C-1  
 FCC ID: GX9HSGWCATM1ZB

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

HSGW<sub>x</sub>-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)
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--

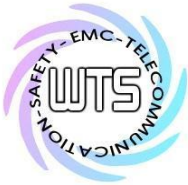
  

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

### Note

1. Correction Factor = Antenna factor + Cable loss - Pre-amplifier
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.



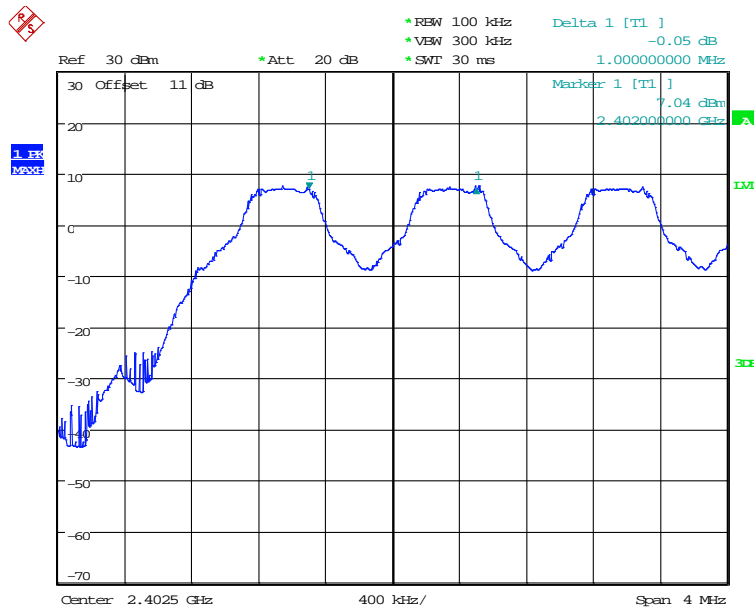
Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

### 3.4 Carrier Frequency Separation

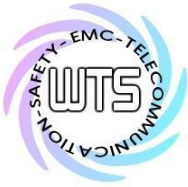
Carrier Frequency Separation was measured with modulation (declared by manufacturer). According to FCC rules part 15 subpart C §15.247 frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or 20 dB bandwidth of the hopping channel, whichever is greater.

Test date: October 17, 2024  
Temperature: 25.5 °C  
Humidity: 56.7 %  
Tester: Sora

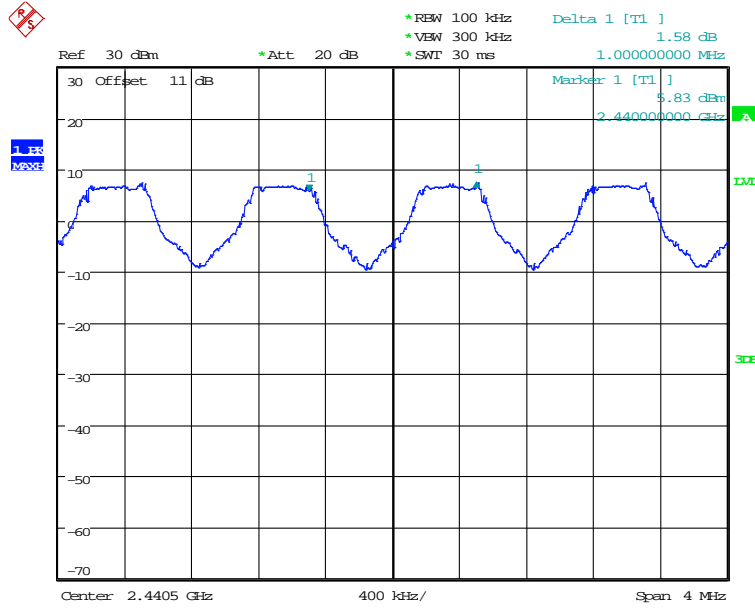
### Bluetooth



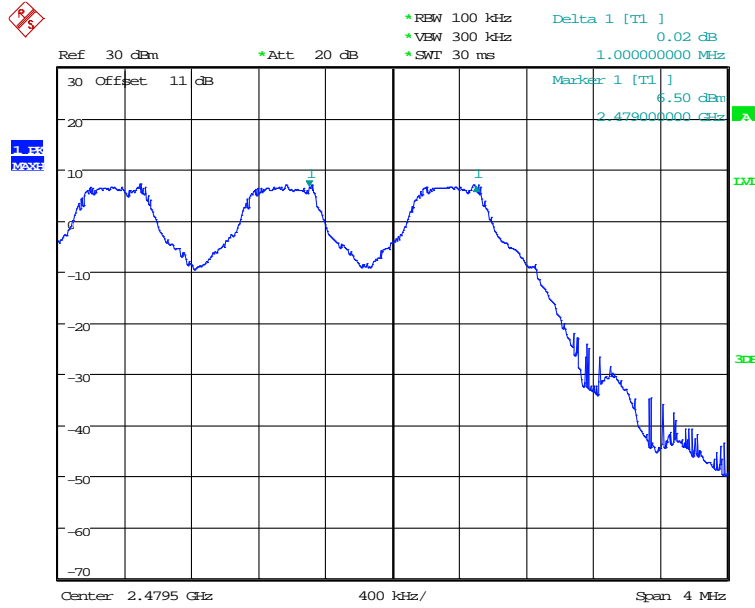
FREQUENCY SEPARATION CH0  
Date: 17.OCT.2024 19:03:44



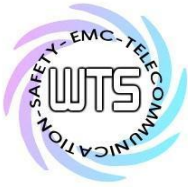
Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB



FREQUENCY SEPARATION CH39  
Date: 17.OCT.2024 19:04:36



FREQUENCY SEPARATION CH78  
Date: 17.OCT.2024 19:05:32

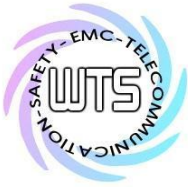


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

**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: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

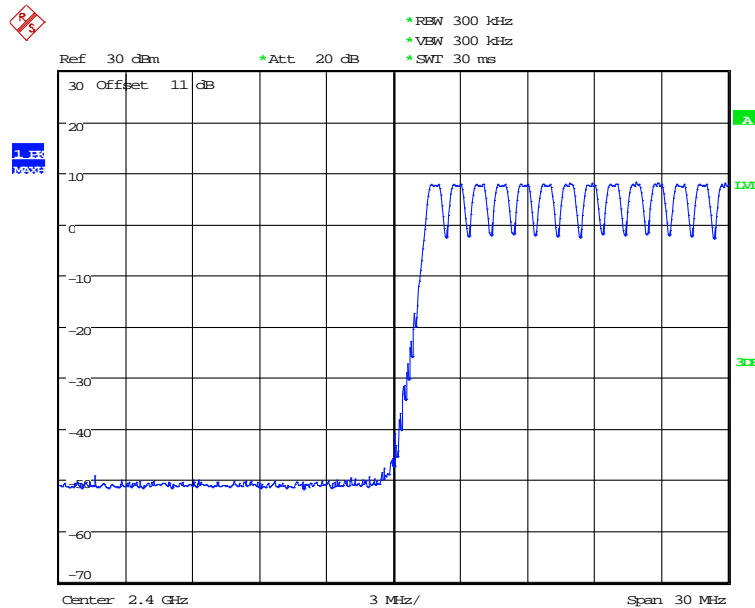
### 3.5 Number of Hopping Frequencies

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.

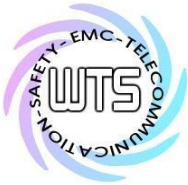
Test date: October 17, 2024  
Temperature: 25.5 °C  
Humidity: 56.7 %  
Tester: Sora

### Bluetooth

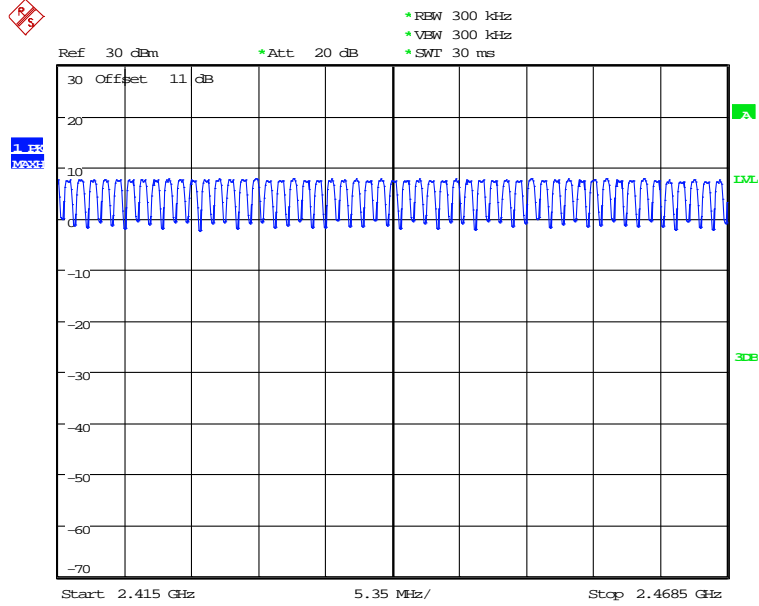


NUMBER OF HOPPING CH0-13  
Date: 17.OCT.2024 19:00:40

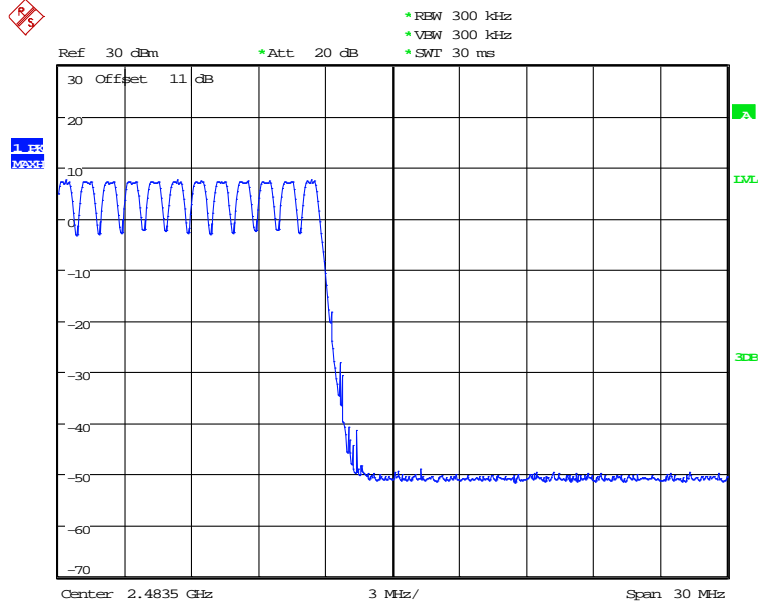




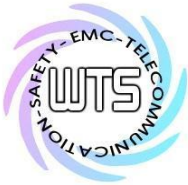
Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB



NUMBER OF HOPPING CH14-66  
Date: 17.OCT.2024 19:02:44



NUMBER OF HOPPING CH67-78  
Date: 17.OCT.2024 19:01:28



Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

**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**

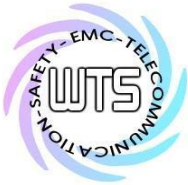
The generation of the hopping sequence is determined by the Bluetooth core specification and complies with the FCC requirements.

**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: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

### 3.6 Time of Occupancy (Dwell Time)

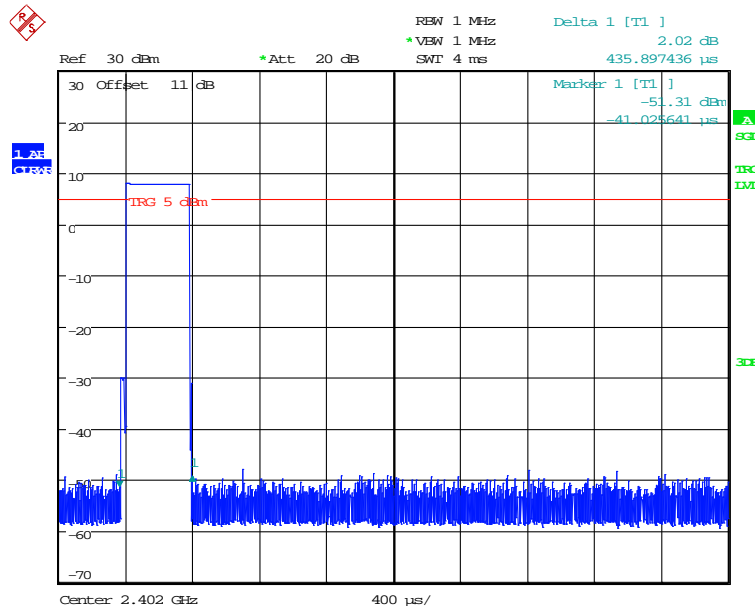
Frequency hopping systems operating in the 5725-5850 MHz band shall use an average time of occupancy on any frequency not greater than 0.4 seconds within a 30 second period.

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.

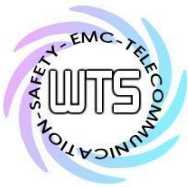
For frequency hopping systems operating in the 902-928 MHz band: if the 20dB bandwidth of the hopping channel is less than 250 kHz, the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20dB bandwidth of the hopping channel is 250 kHz or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

Test date: October 17, 2024  
Temperature: 25.5 °C  
Humidity: 56.7 %  
Tester: Sora

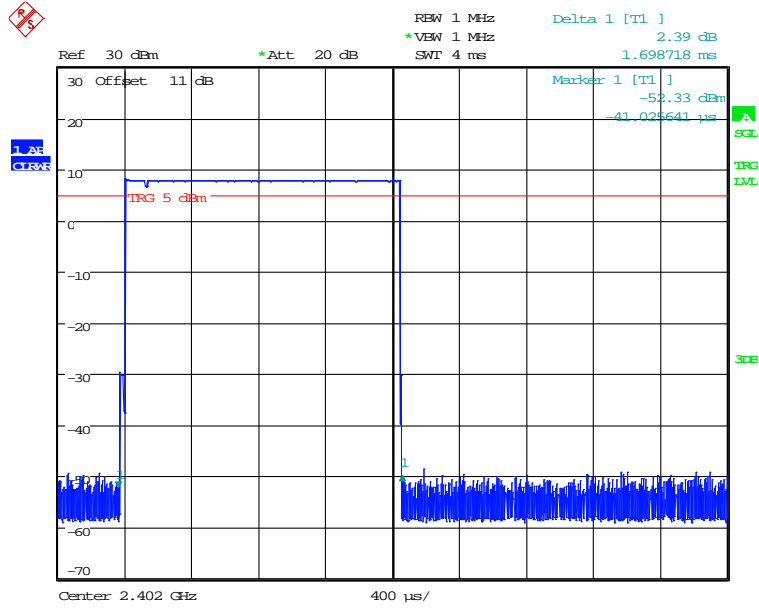
### Bluetooth



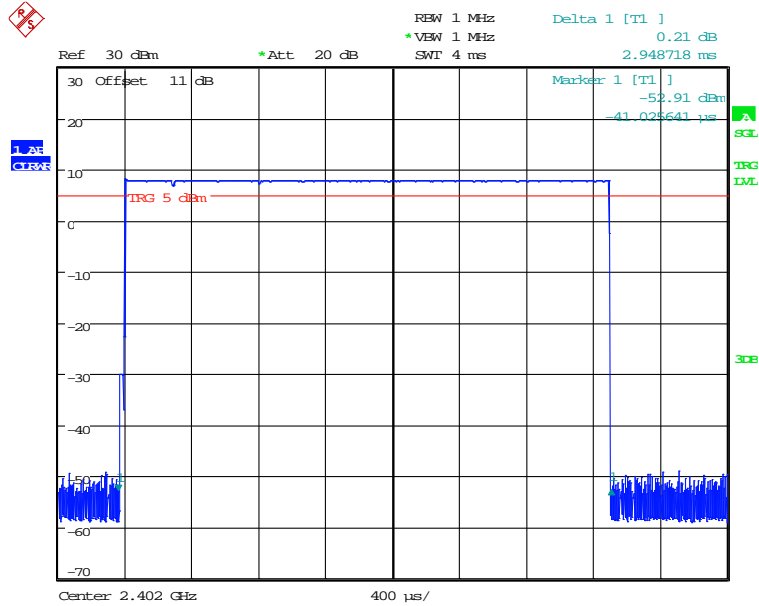
DWELL TIME CH0 DH1 ( 0.436ms \* 320events = 139.52ms )  
Date: 17.OCT.2024 19:18:38



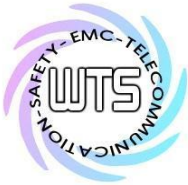
Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB



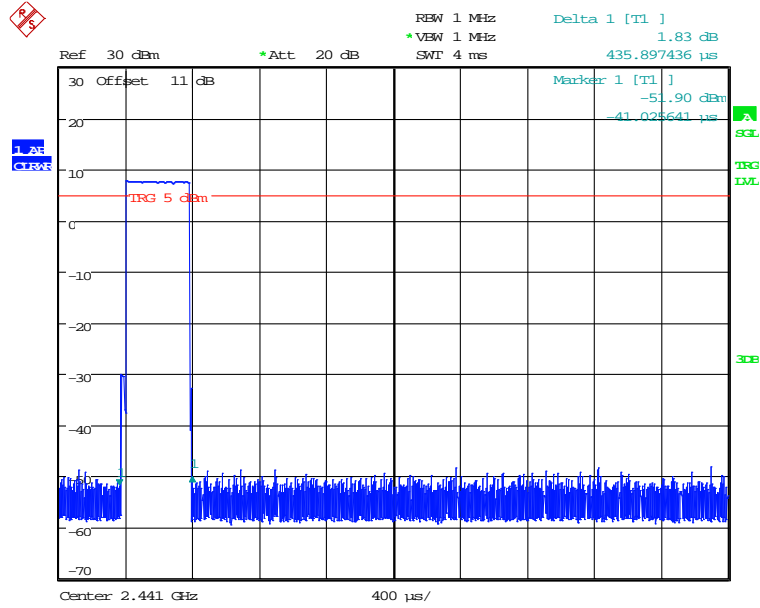
DWELL TIME CH0 DH3 ( 1.699ms \* 160events = 271.84ms )  
Date: 17.OCT.2024 19:17:36



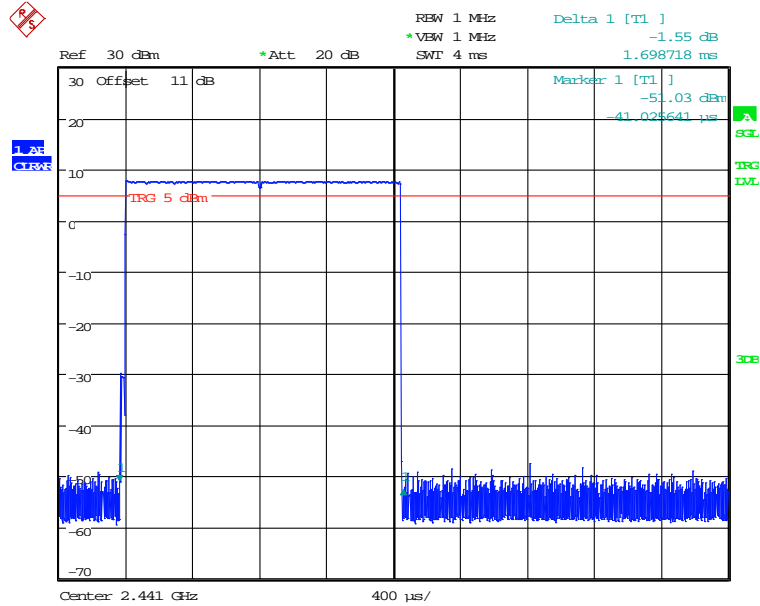
DWELL TIME CH0 DH5 ( 2.949ms \* 106events = 312.594ms )  
Date: 17.OCT.2024 19:15:04



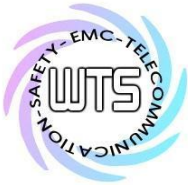
Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB



DWELL TIME CH39 DH1 ( 0.436ms \* 320events = 139.52ms )  
Date: 17.OCT.2024 19:19:02

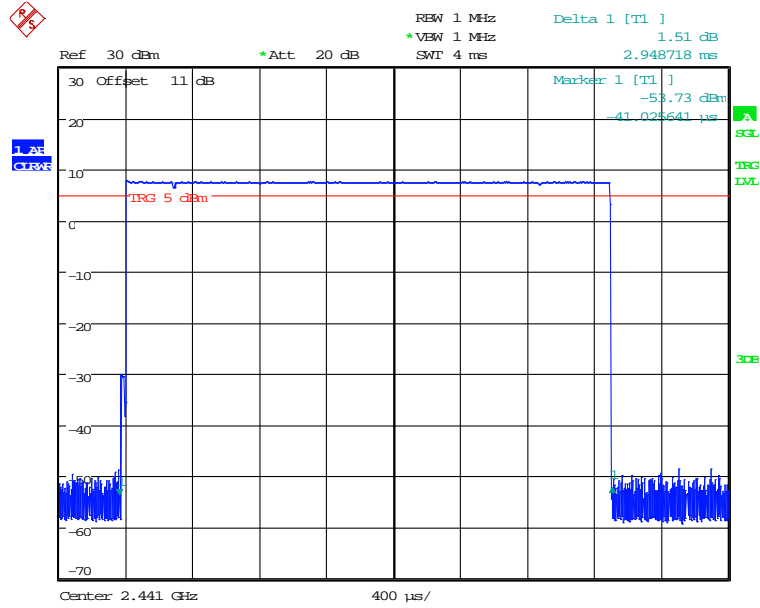


DWELL TIME CH39 DH3 ( 1.699ms \* 160events = 271.84ms )  
Date: 17.OCT.2024 19:17:20

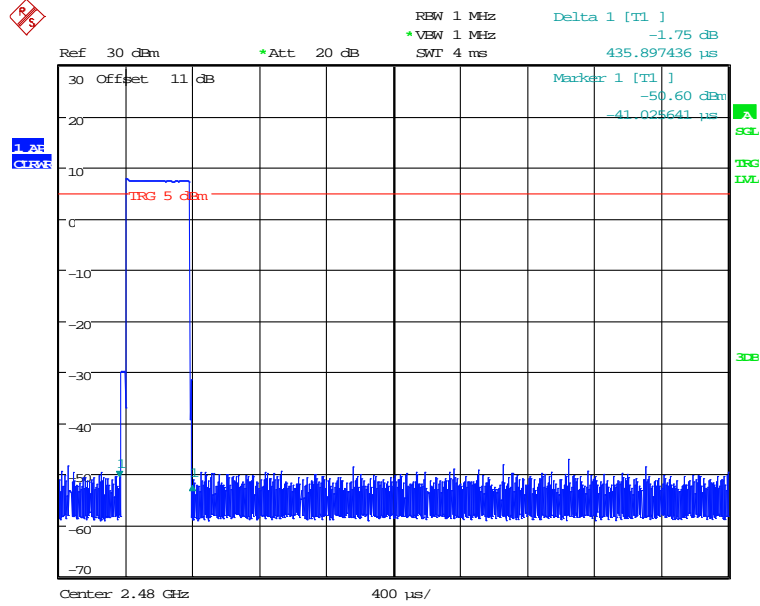


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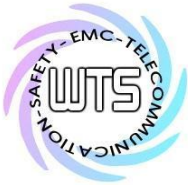
Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB



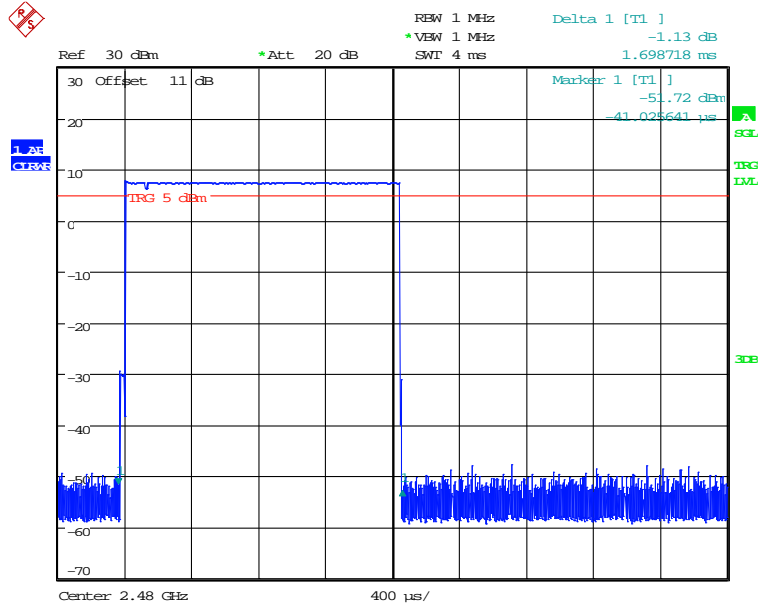
DWELL TIME CH39 DH5 ( 2.949ms \* 106events = 312.594ms )  
Date: 17.OCT.2024 19:15:30



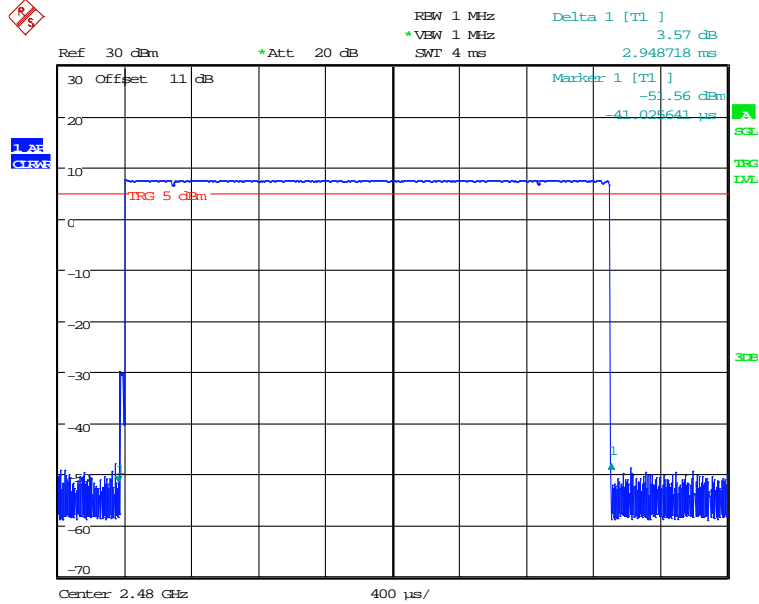
DWELL TIME CH78 DH1 ( 0.436ms \* 320events = 139.52ms )  
Date: 17.OCT.2024 19:19:21



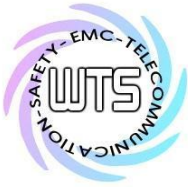
Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB



DWELL TIME CH78 DH3 ( 1.699ms \* 160events = 271.84ms )  
Date: 17.OCT.2024 19:17:03



DWELL TIME CH78 DH5 ( 2.949ms \* 106events = 312.594ms )  
Date: 17.OCT.2024 19:15:53

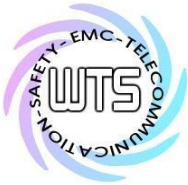


Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

**Limits and measurement periods:**

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





Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

### 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: October 17, 2024

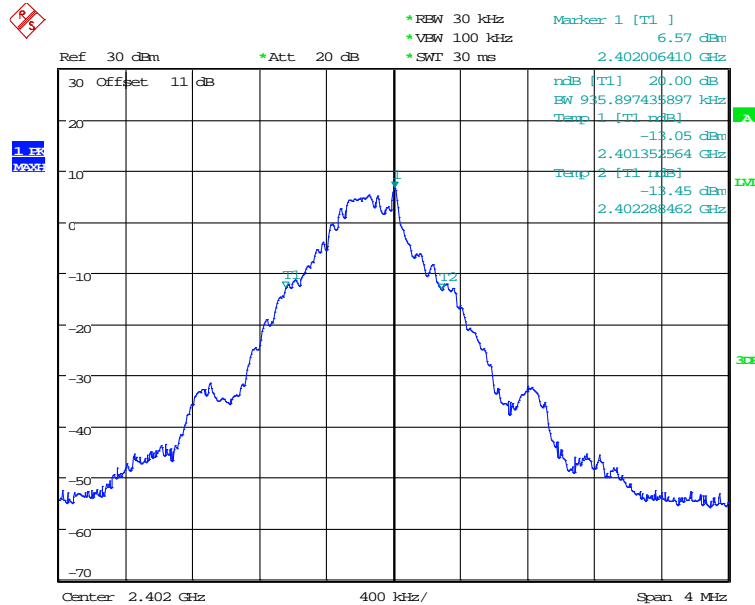
Temperature: 25.5 °C

Humidity: 56.7 %

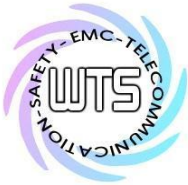
Tester: Sora

Bluetooth

Normal mode

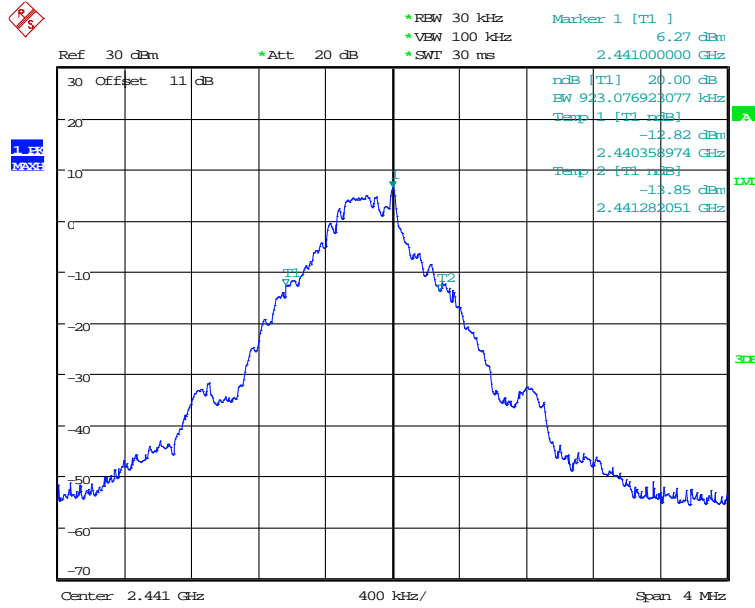


20DB BANDWIDTH CH0  
Date: 17.OCT.2024 18:44:40

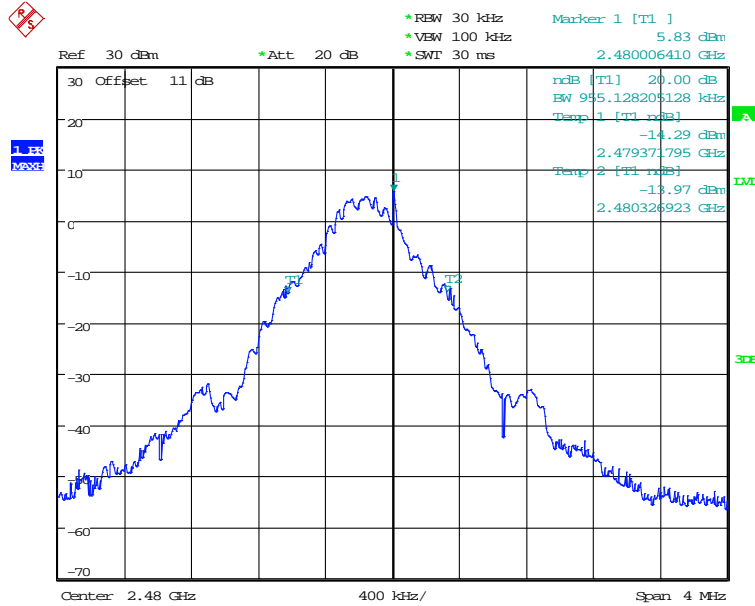


# Worldwide Testing Services(Taiwan) Co., Ltd.

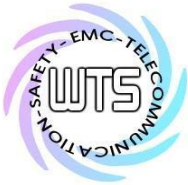
Registration number: W6M22407-23644-C-1  
 FCC ID: GX9HSGWCATM1ZB



20DB BANDWIDTH CH39  
 Date: 17.OCT.2024 18:46:24

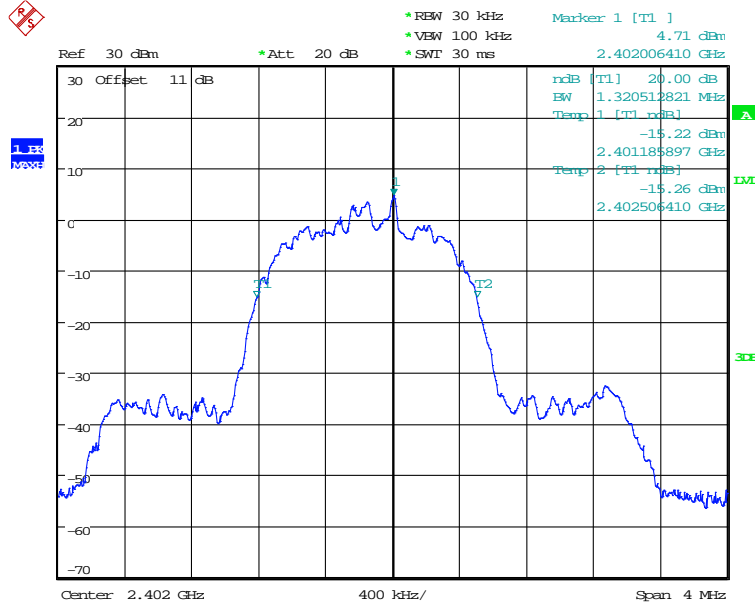


20DB BANDWIDTH CH78  
 Date: 17.OCT.2024 18:48:12

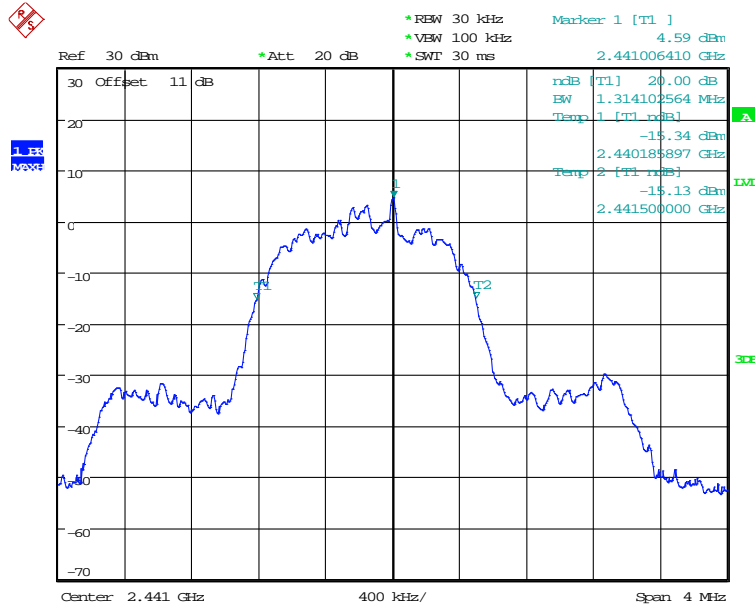


Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

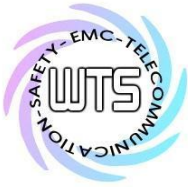
EDR mode



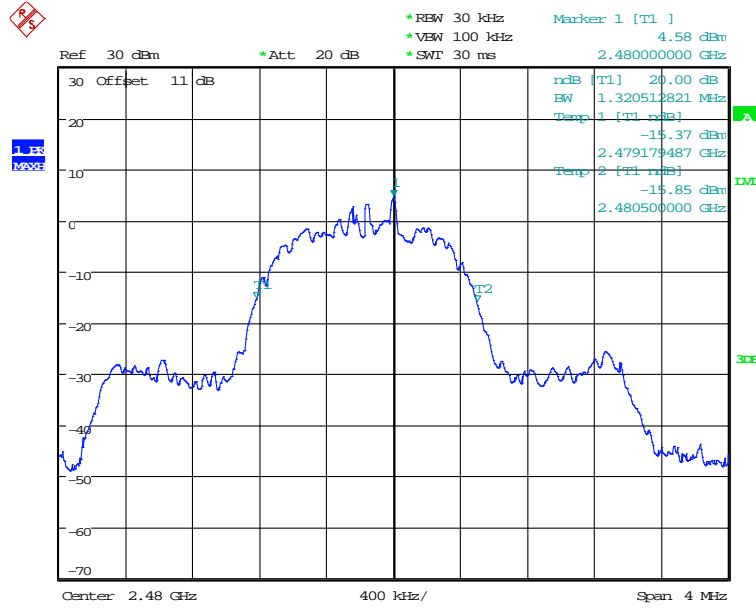
20DB BANDWIDTH CH0 EDR MODE  
Date: 17.OCT.2024 18:49:52



20DB BANDWIDTH CH39 EDR MODE  
Date: 17.OCT.2024 18:50:32



Registration number: W6M22407-23644-C-1  
 FCC ID: GX9HSGWCATM1ZB



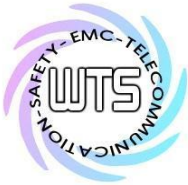
20DB BANDWIDTH CH78 EDR MODE  
 Date: 17.OCT.2024 18:51:00

### 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.



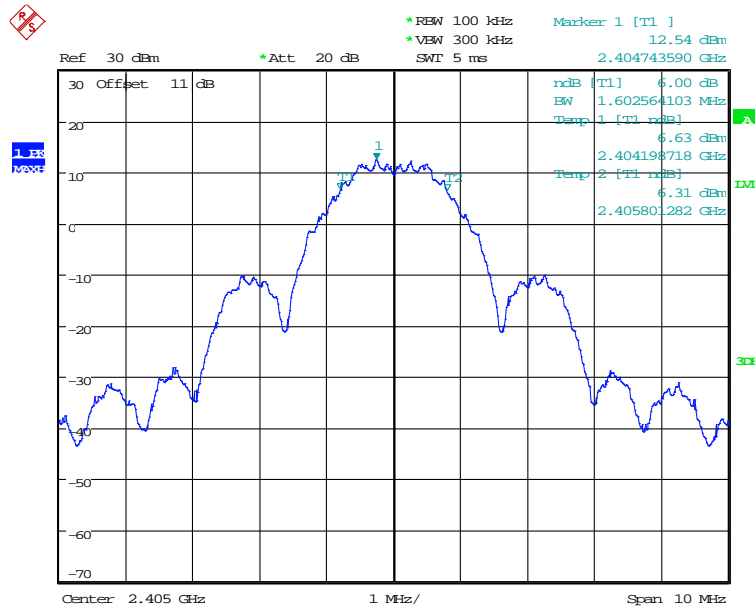
Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

### 3.8 Minimum 6 dB Bandwidth

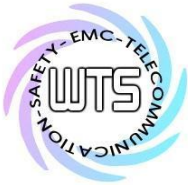
The analyzer ResBW was set to 100 kHz. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A PEAK reading was taken, two markers were set 6 dB below the maximum level on the right and the left side of the emission. The 6 dB bandwidth is the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

Test date: October 17, 2024- October 23, 2024  
Temperature: 24.0 °C  
Humidity: 58.7 %  
Tester: Sora

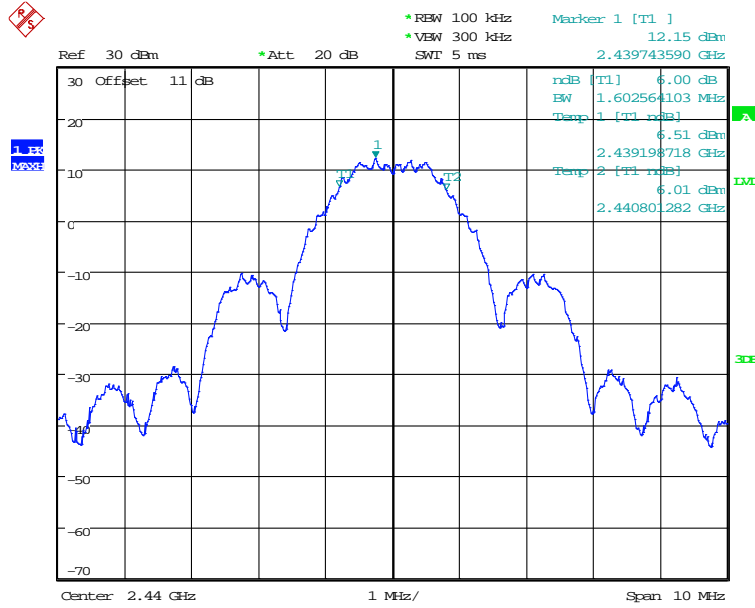
Zigbee  
Mode 1



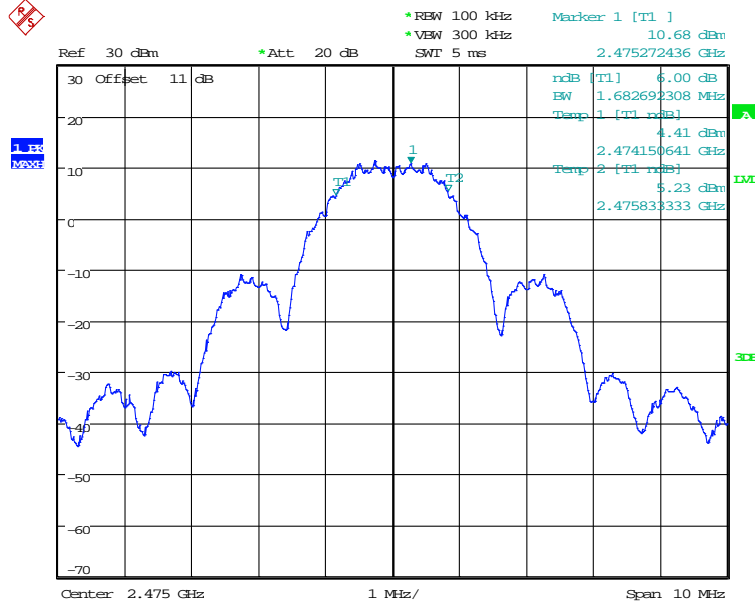
6DB BANDWIDTH ZIGBEE 2405MHz  
Date: 23.OCT.2024 10:09:40



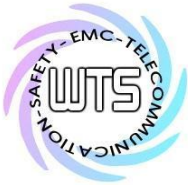
Registration number: W6M22407-23644-C-1  
 FCC ID: GX9HSGWCATM1ZB



6DB BANDWIDTH ZIGBEE 2440MHz  
 Date: 23.OCT.2024 10:10:10

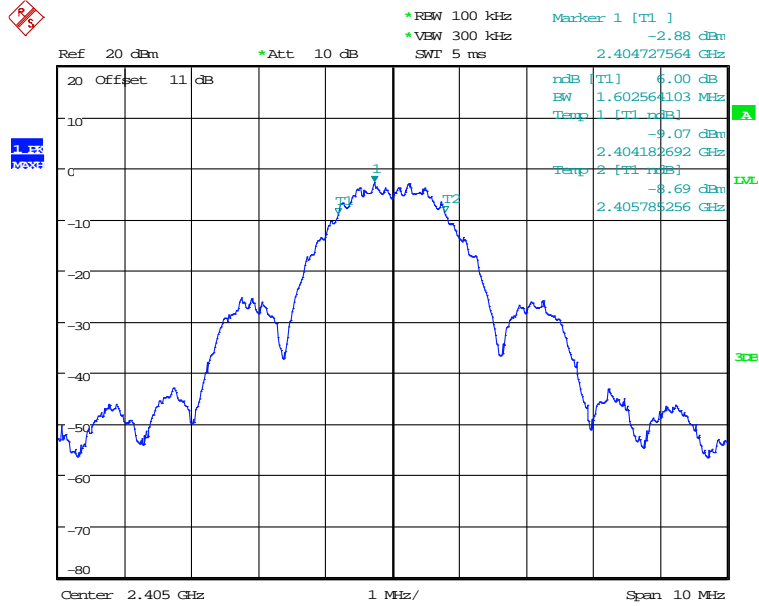


6DB BANDWIDTH ZIGBEE 2475MHz  
 Date: 23.OCT.2024 10:10:38

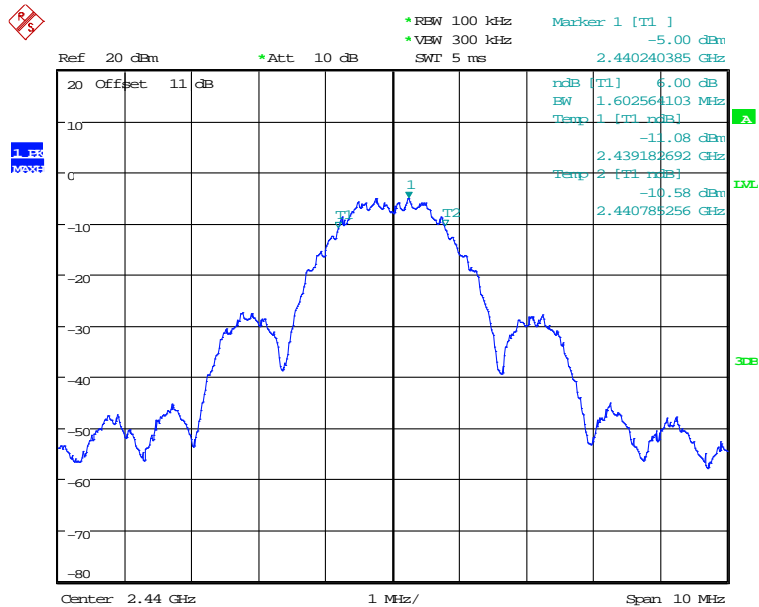


Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

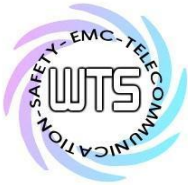
Mode 2



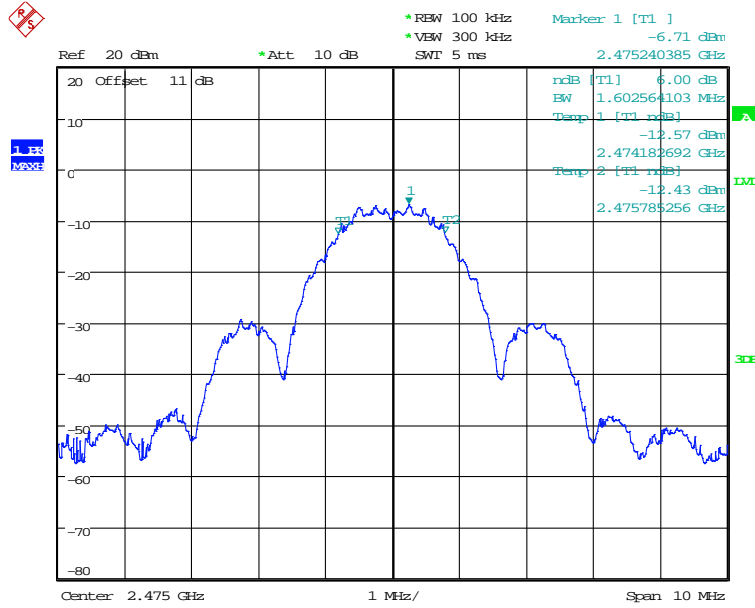
6DB BANDWIDTH ZIGBEE 2405MHz  
Date: 23.OCT.2024 11:12:31



6DB BANDWIDTH ZIGBEE 2440MHz  
Date: 23.OCT.2024 11:13:01

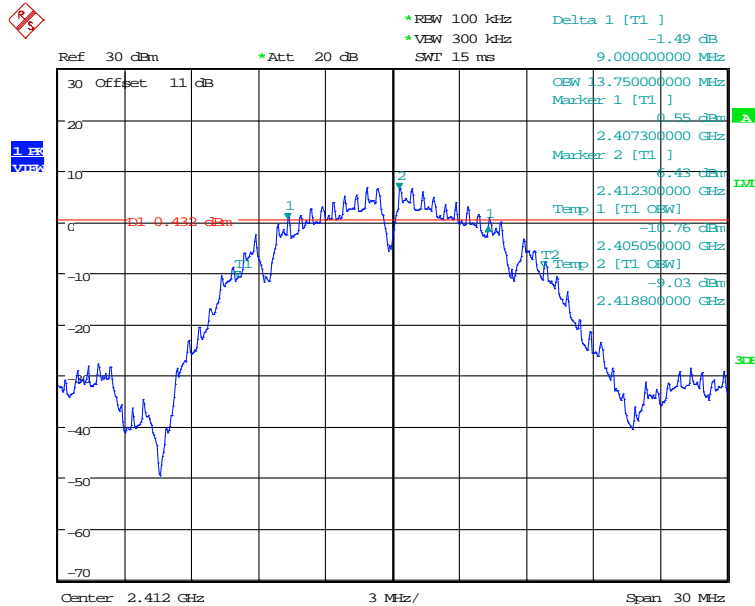


Registration number: W6M22407-23644-C-1  
 FCC ID: GX9HSGWCATM1ZB



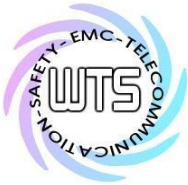
6DB BANDWIDTH ZIGBEE 2475MHz  
 Date: 23.OCT.2024 11:13:35

WLAN  
 802.11b

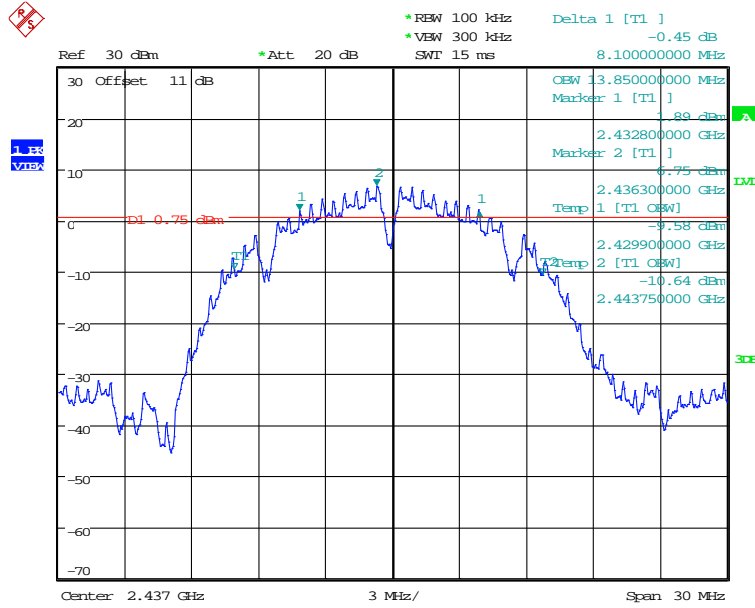


6DB BANDWIDTH 802.11B CH01  
 Date: 17.OCT.2024 19:32:27

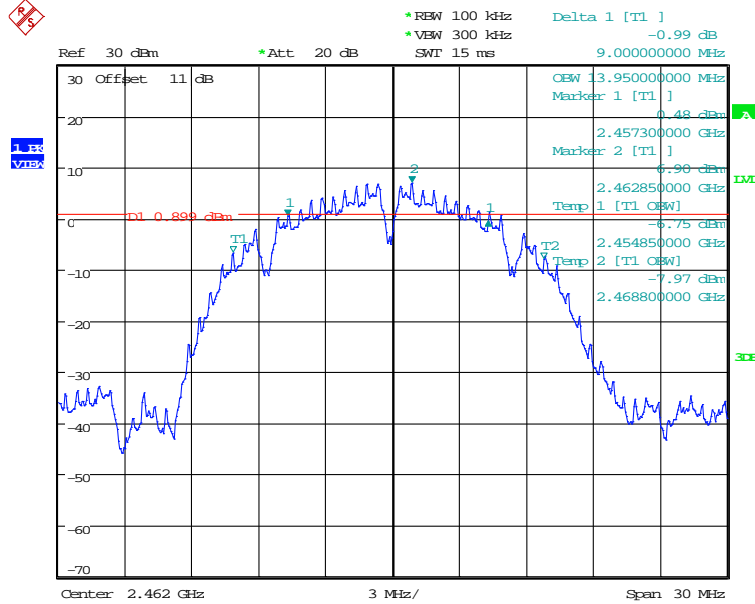




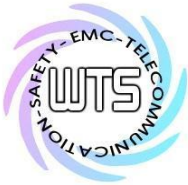
Registration number: W6M22407-23644-C-1  
 FCC ID: GX9HSGWCATM1ZB



6DB BANDWIDTH 802.11B CH06  
 Date: 17.OCT.2024 19:33:28

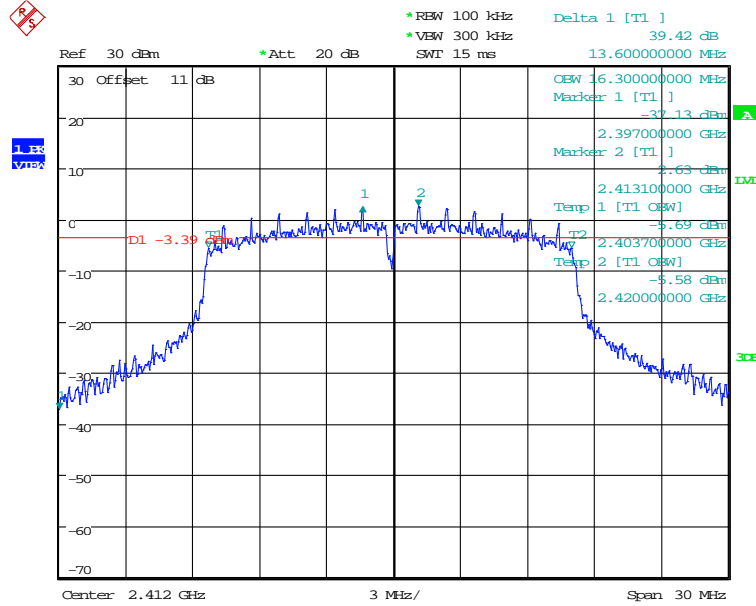


6DB BANDWIDTH 802.11B CH11  
 Date: 17.OCT.2024 19:34:16

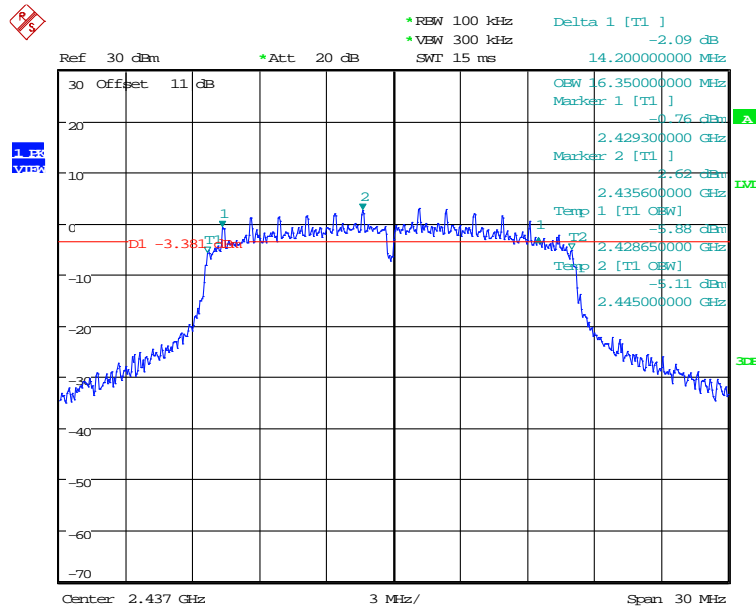


Registration number: W6M22407-23644-C-1  
 FCC ID: GX9HSGWCATM1ZB

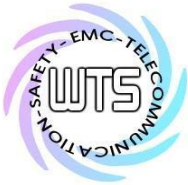
802.11g



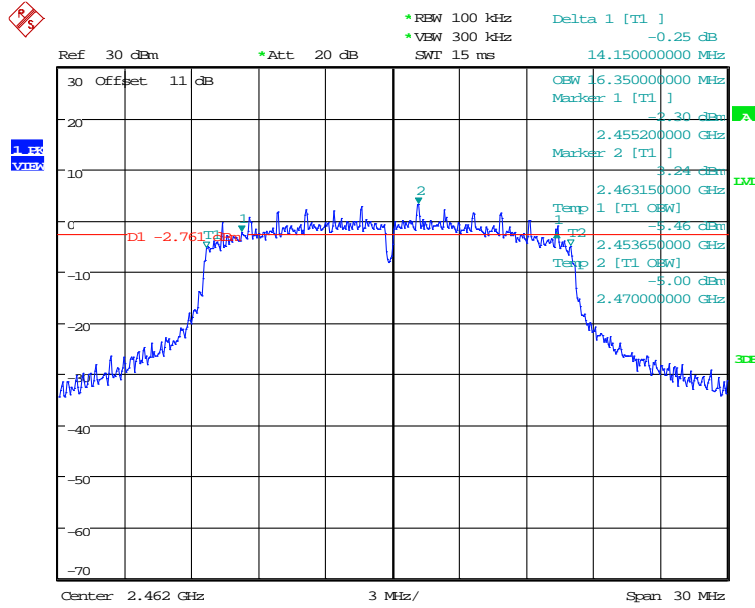
6DB BANDWIDTH 802.11G CH01  
 Date: 17.OCT.2024 19:37:20



6DB BANDWIDTH 802.11G CH06  
 Date: 17.OCT.2024 19:38:00

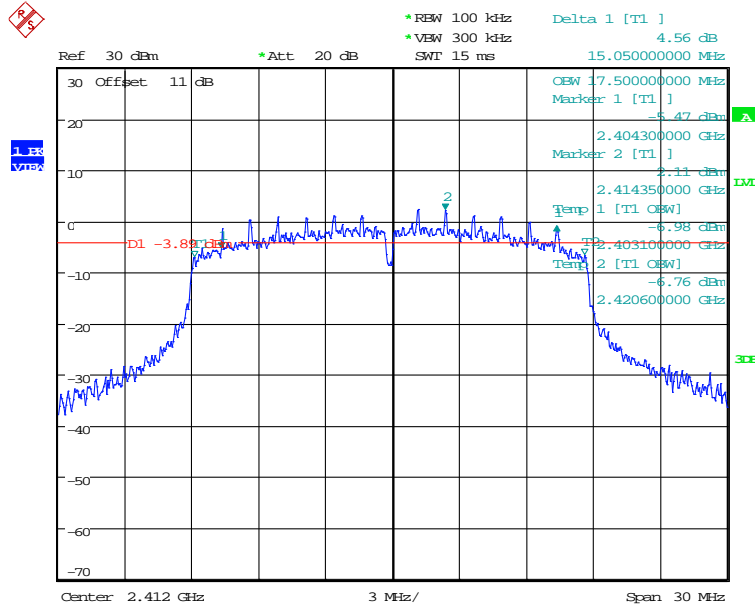


Registration number: W6M22407-23644-C-1  
 FCC ID: GX9HSGWCATM1ZB

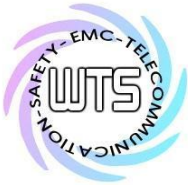


6DB BANDWIDTH 802.11G CH11  
 Date: 17.OCT.2024 19:38:35

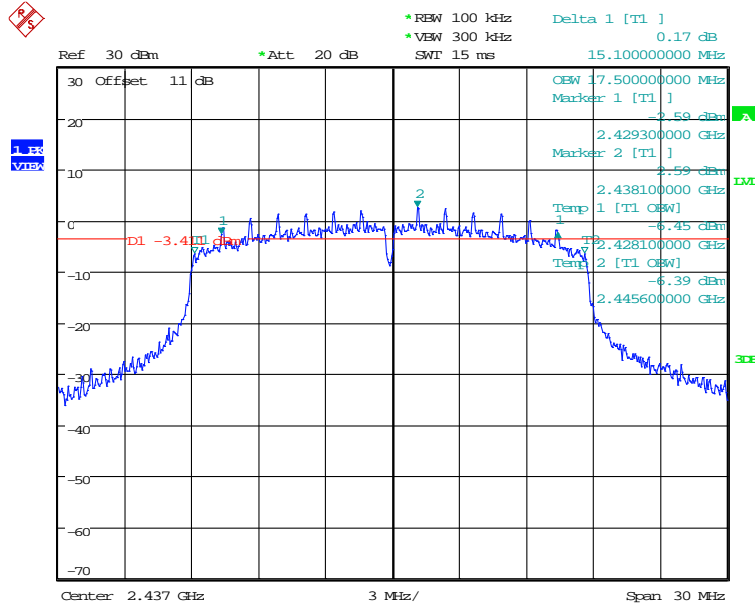
## 802.11n 20M



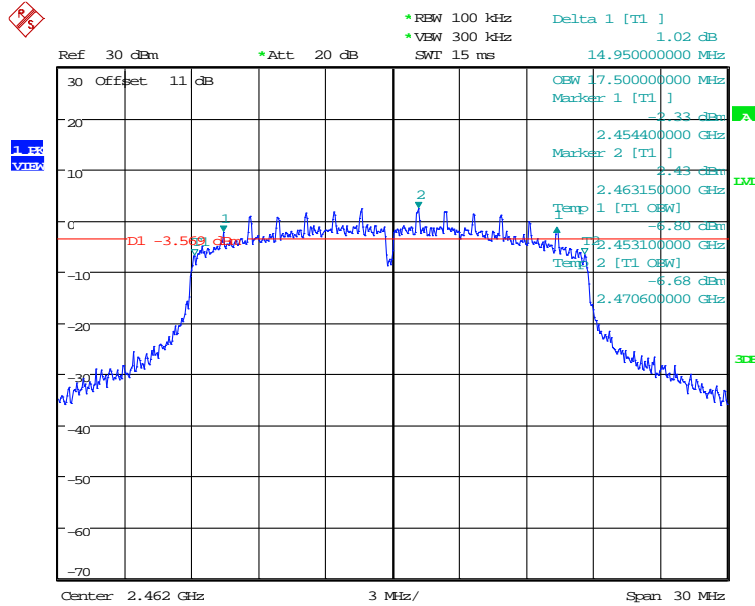
6DB BANDWIDTH 802.11N 20MHZ CH01  
 Date: 17.OCT.2024 19:40:45



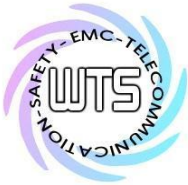
Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB



6DB BANDWIDTH 802.11N 20MHZ CH06  
Date: 17.OCT.2024 19:42:29



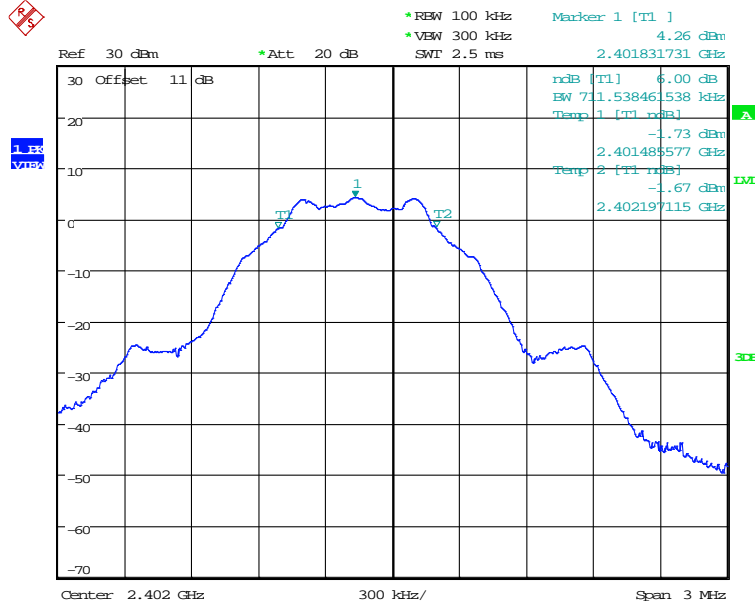
6DB BANDWIDTH 802.11N 20MHZ CH11  
Date: 17.OCT.2024 19:43:16



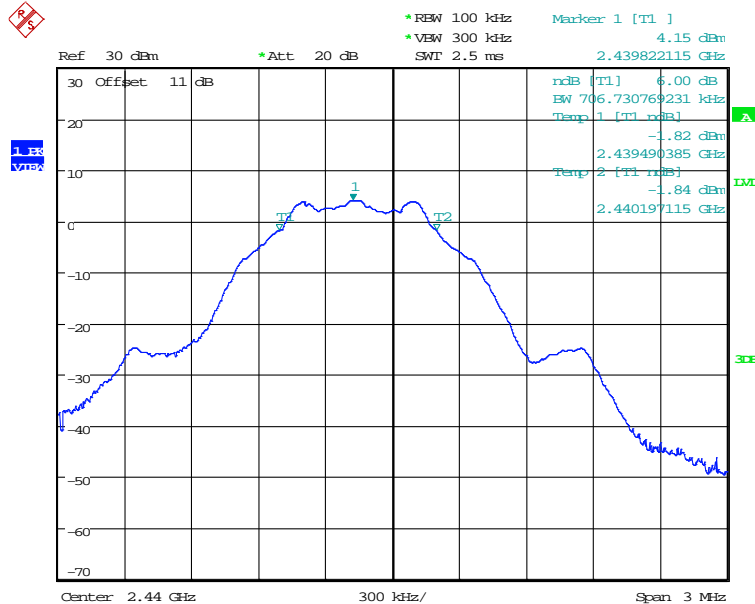
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

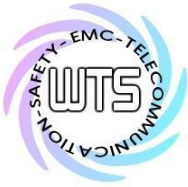
Bluetooth  
BLE 1M



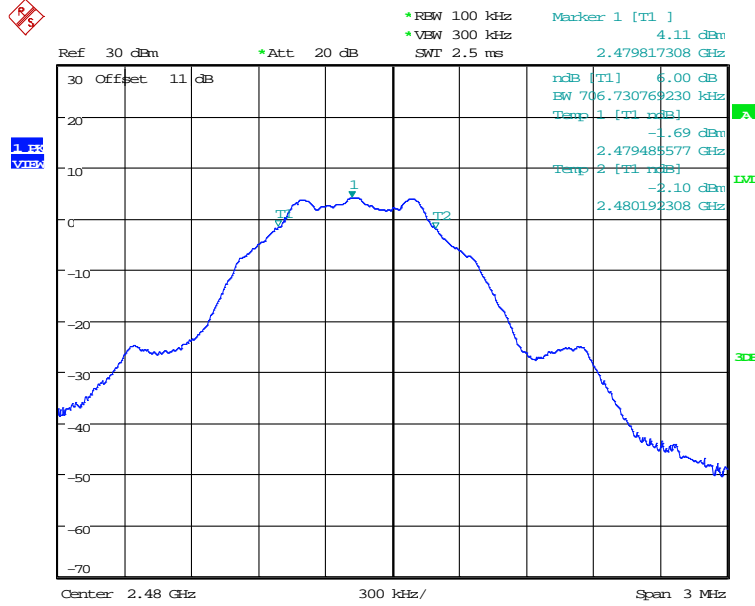
6DB BANDWIDTH BLE 1M CH00  
Date: 17.OCT.2024 19:21:53



6DB BANDWIDTH BLE 1M CH19  
Date: 17.OCT.2024 19:24:13



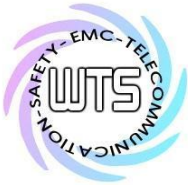
Registration number: W6M22407-23644-C-1  
 FCC ID: GX9HSGWCATM1ZB



6DB BANDWIDTH BLE 1M CH39  
 Date: 17.OCT.2024 19:25:31

**Limits:**

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



Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

### 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: October 17, 2024- October 23, 2024

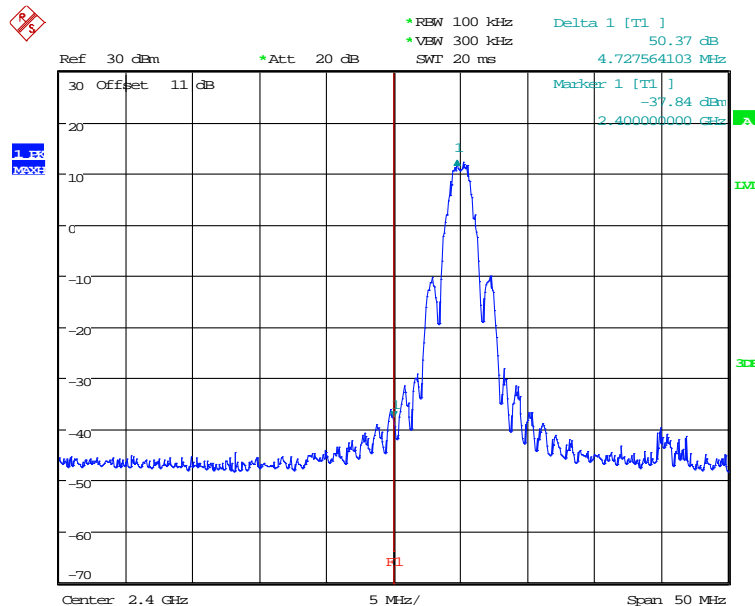
Temperature: 24.0 °C

Humidity: 58.7 %

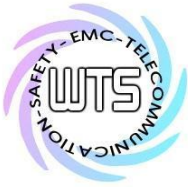
Tester: Sora

Zigbee

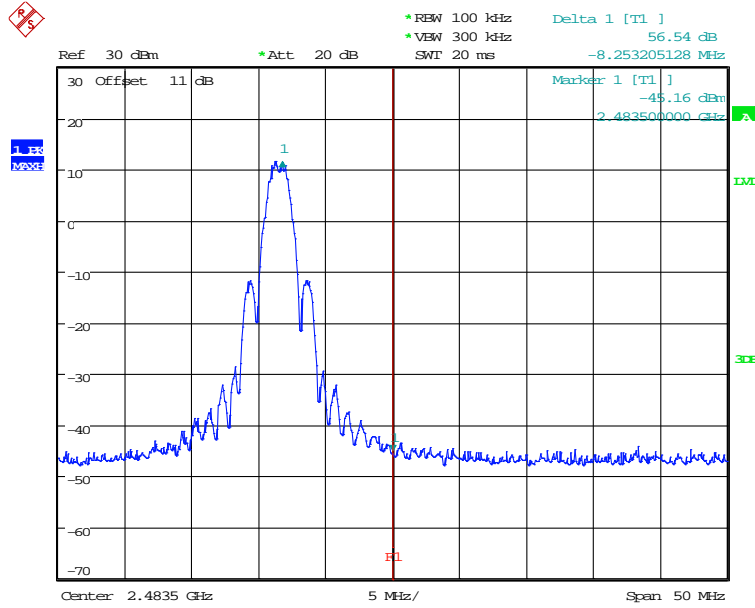
Mode 1



BANDEGE ZIGBEE 2405MHz  
Date: 23.OCT.2024 10:13:30

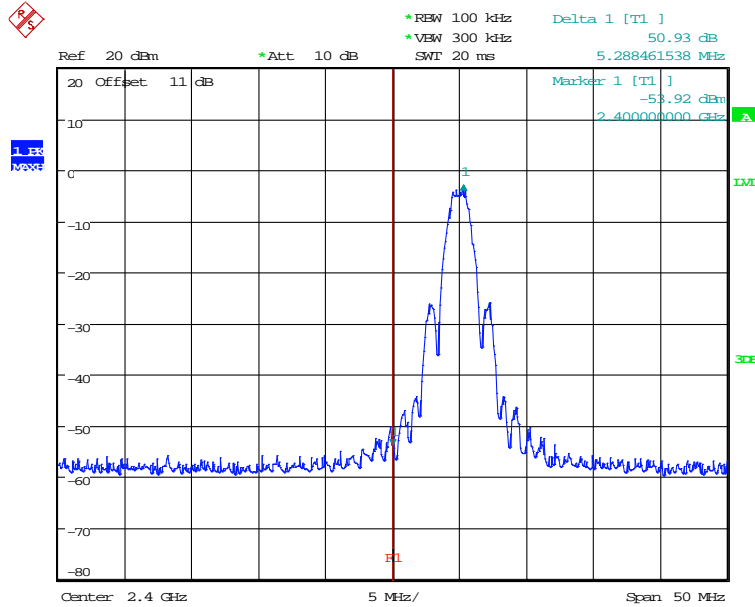


Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB



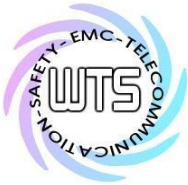
BANDEDGE ZIGBEE 2475MHz  
Date: 23.OCT.2024 10:12:57

## Mode 2

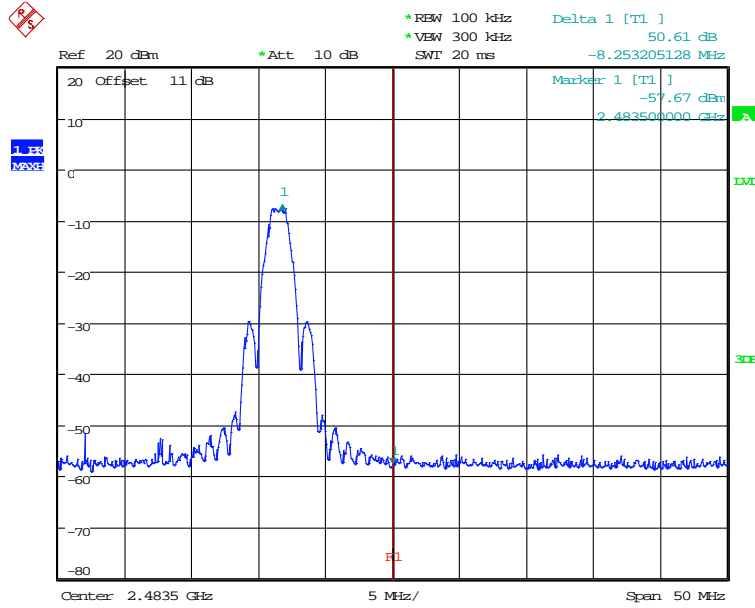


BANDEDGE ZIGBEE 2405MHz  
Date: 23.OCT.2024 11:15:02



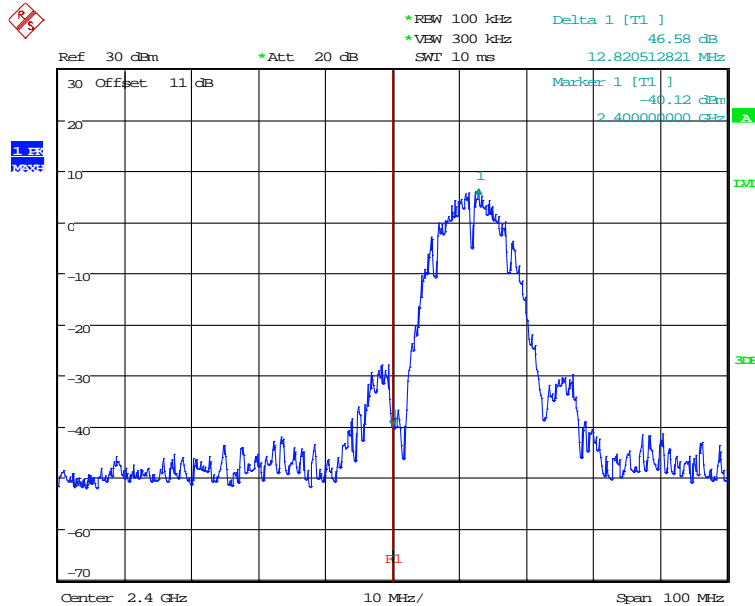


Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

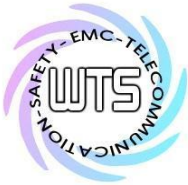


BANDEDGE ZIGBEE 2475MHz  
Date: 23.OCT.2024 11:14:19

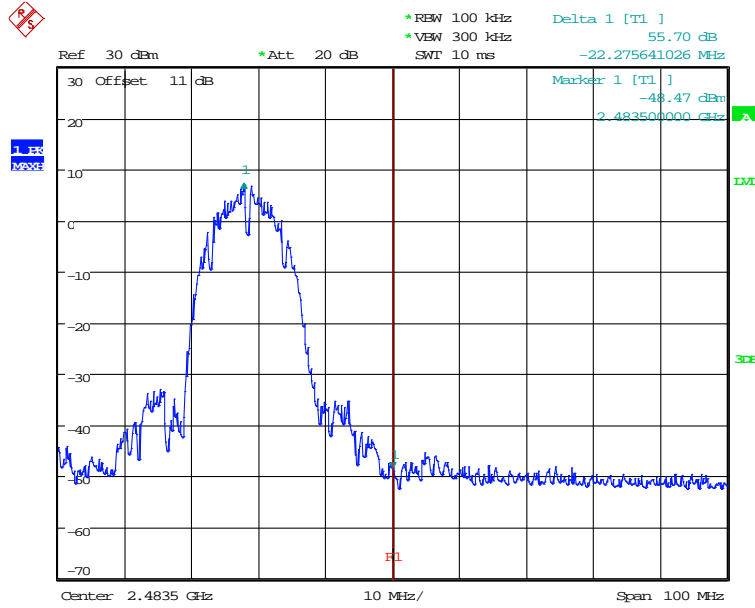
WLAN  
802.11b



BANDEDGE 802.11B CH01  
Date: 17.OCT.2024 19:32:39

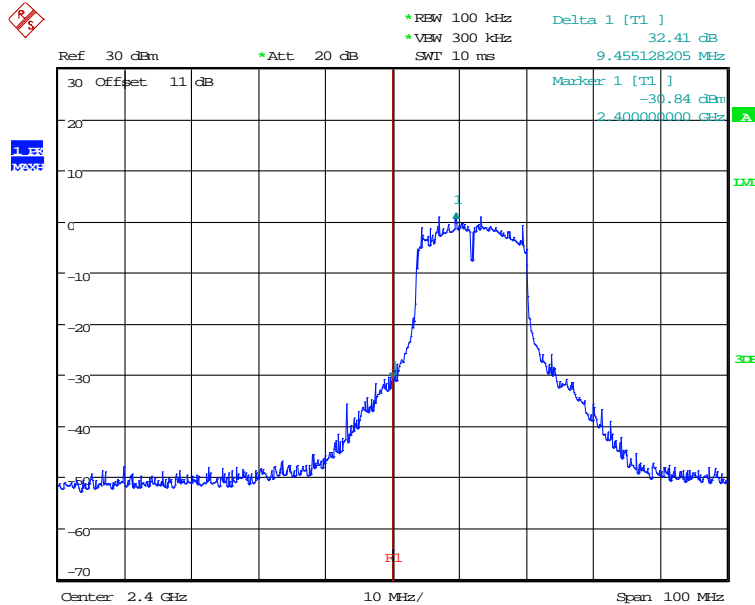


Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

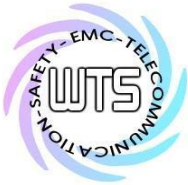


BANDEDGE 802.11B CH11  
Date: 17.OCT.2024 19:34:28

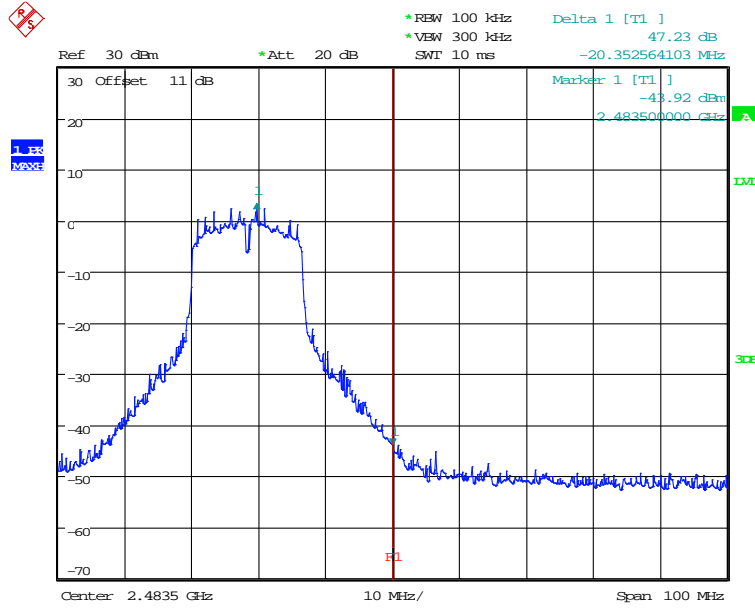
## 802.11g



BANDEDGE 802.11G CH01  
Date: 17.OCT.2024 19:37:32

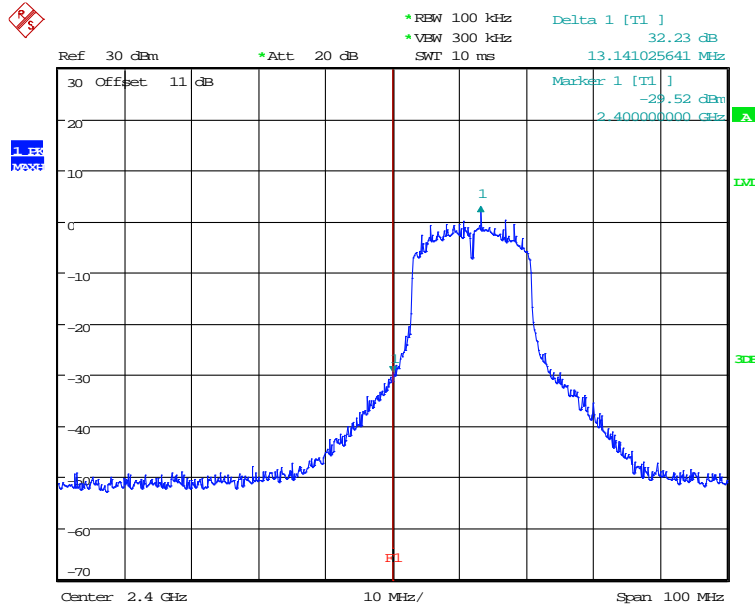


Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

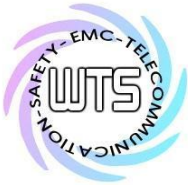


BANDEDGE 802.11G CH11  
Date: 17.OCT.2024 19:38:47

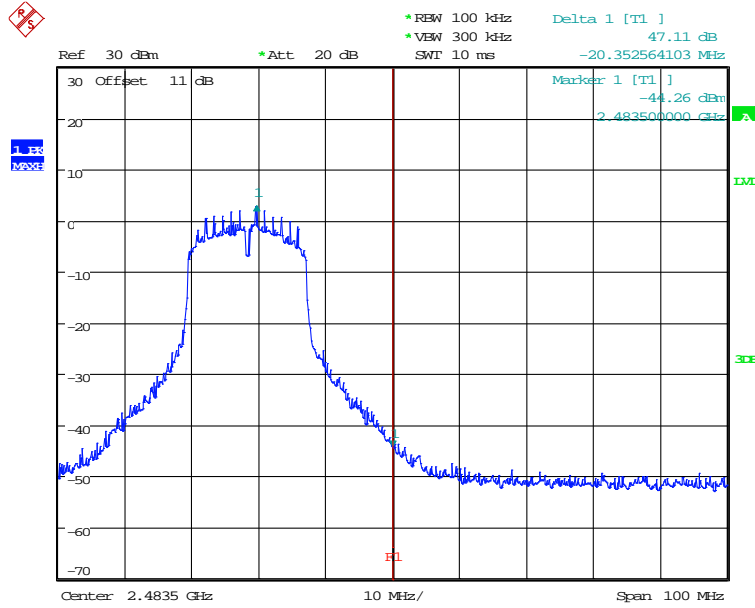
## 802.11n 20M



BANDEDGE 802.11N 20MHZ CH01  
Date: 17.OCT.2024 19:40:57

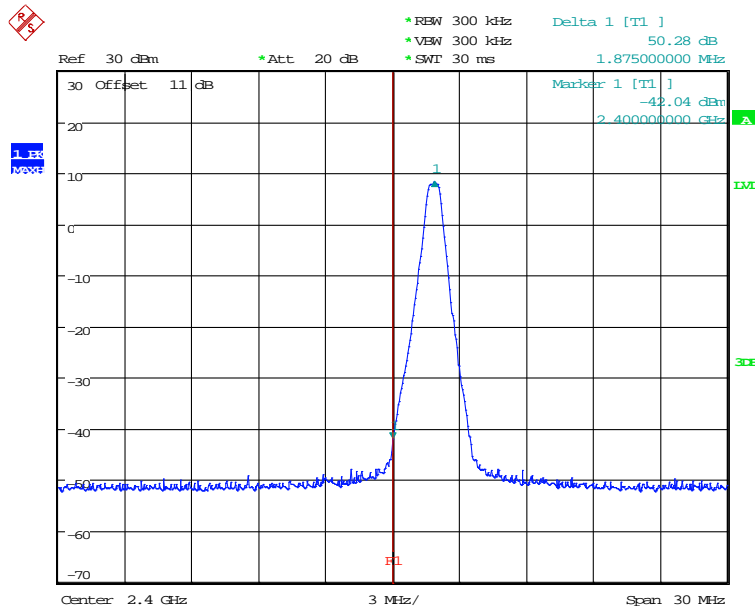


Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

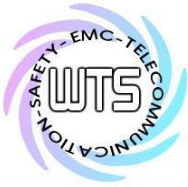


BANDEDGE 802.11N 20MHZ CH11  
Date: 17.OCT.2024 19:43:28

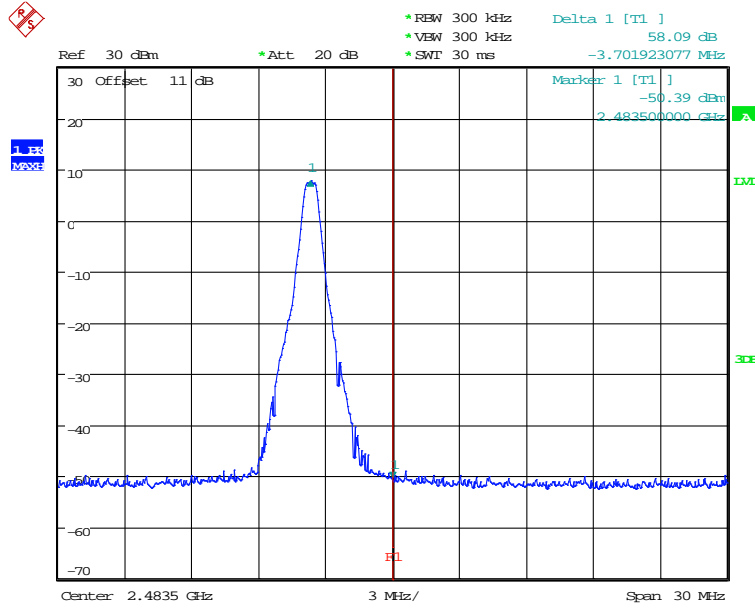
## Bluetooth Normal mode



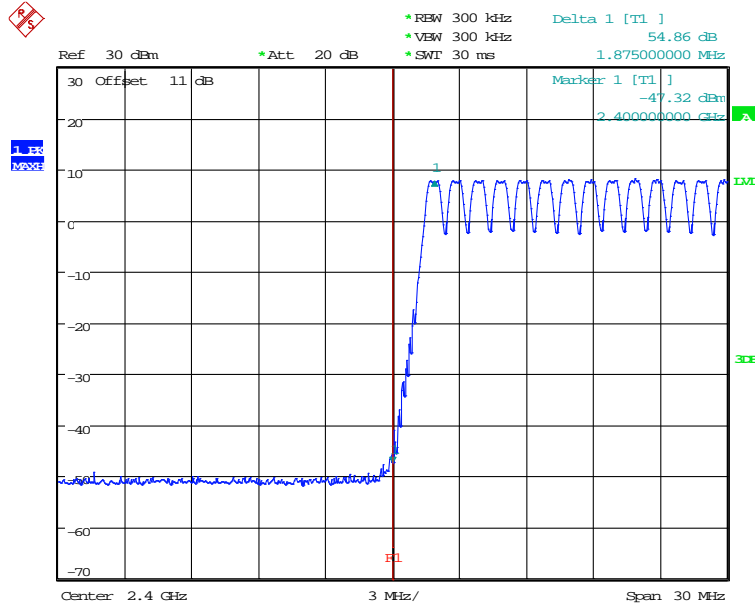
BANDEDGE CH0  
Date: 17.OCT.2024 18:44:52



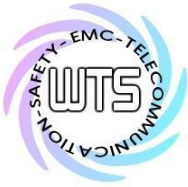
Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB



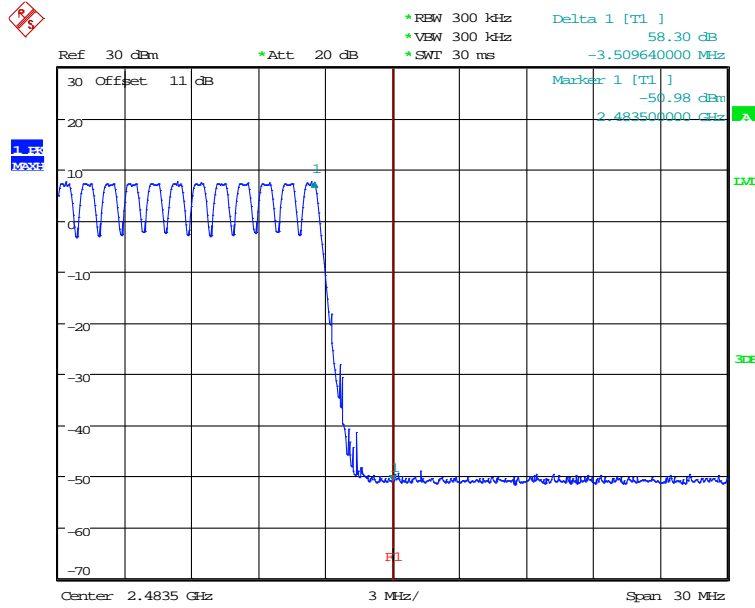
BANDEDGE CH78  
Date: 17.OCT.2024 18:48:20



BANDEDGE CH0 HOPPING MODE  
Date: 17.OCT.2024 19:00:41

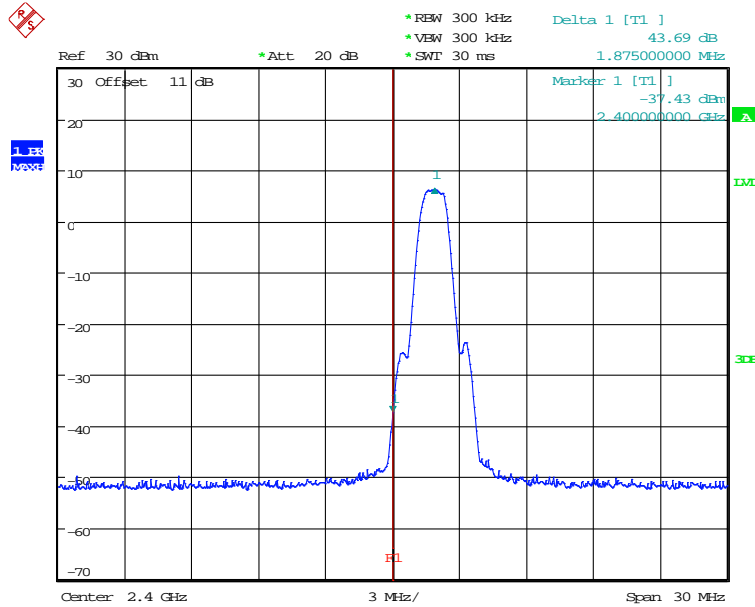


Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

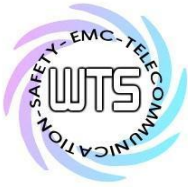


BANDEdge CH78 HOPPING MODE  
Date: 17.OCT.2024 19:01:29

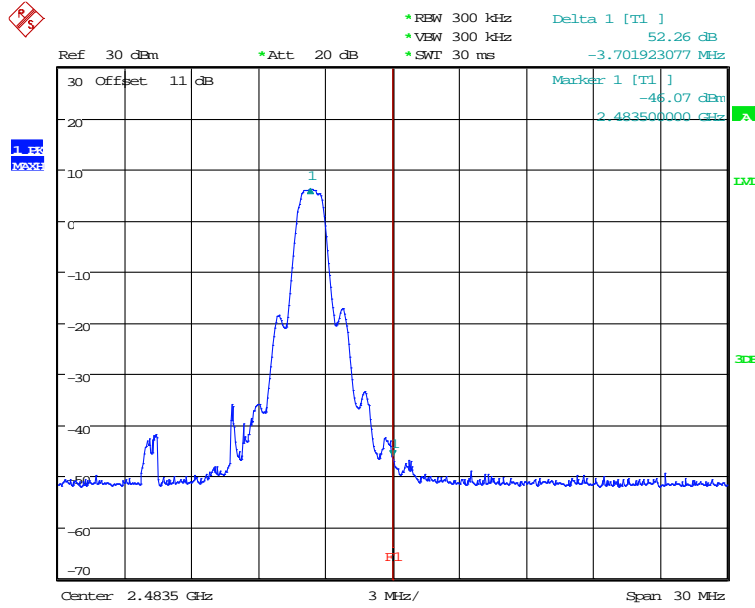
## EDR mode



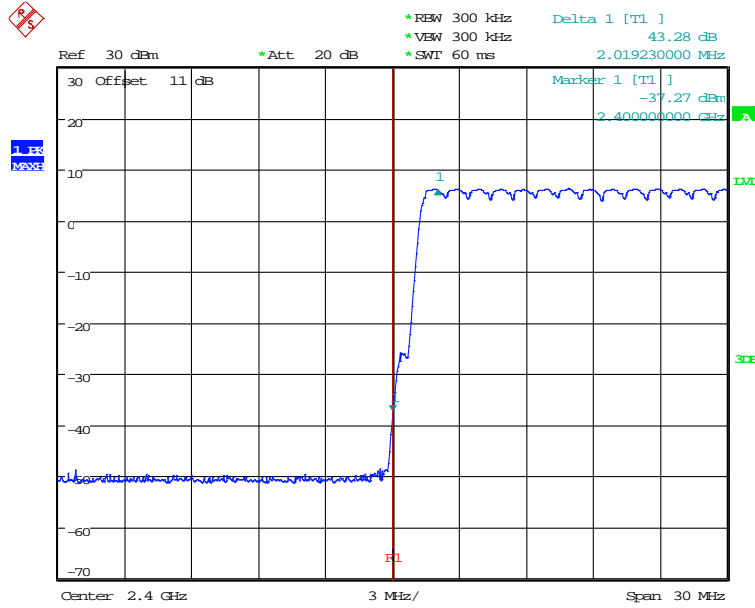
BANDEdge CH0 EDR MODE  
Date: 17.OCT.2024 18:50:00



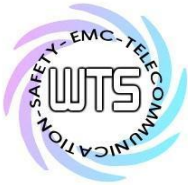
Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB



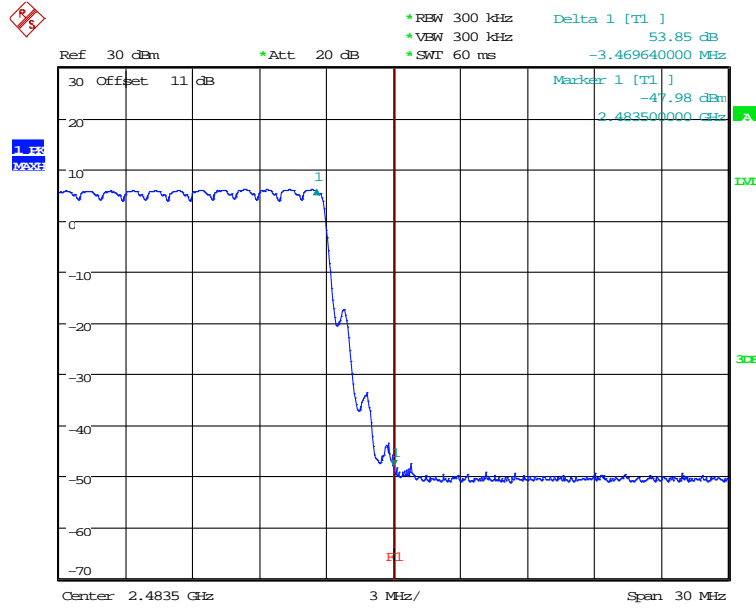
BANDEdge CH78 EDR MODE  
Date: 17.OCT.2024 18:51:12



BANDEdge CH0 EDR HOPPING MODE  
Date: 17.OCT.2024 18:56:16

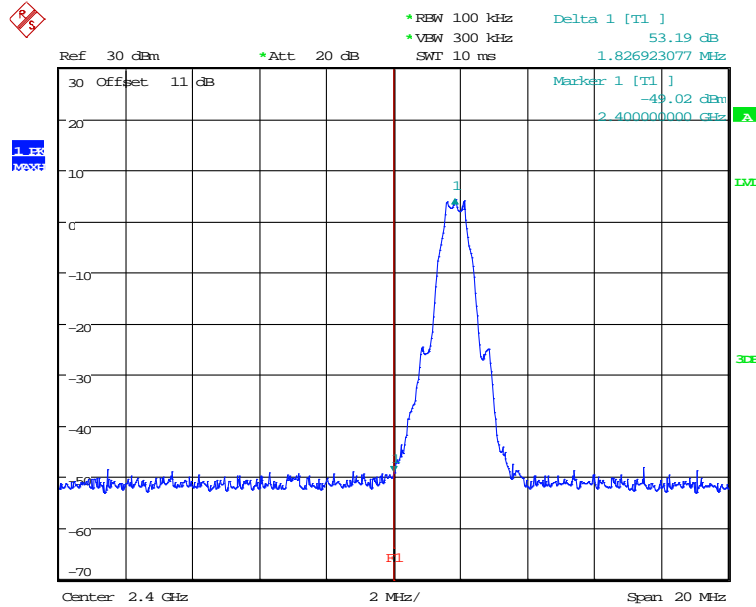


Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB



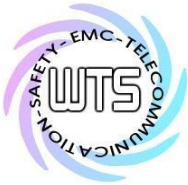
BANDEGE CH78 EDR HOPPING MODE  
Date: 17.OCT.2024 18:58:08

## BLE 1M

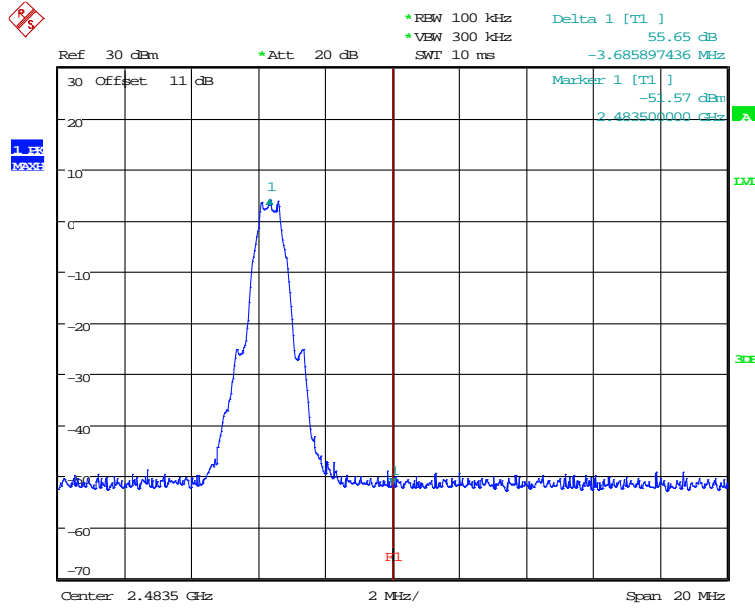


BANDEGE BLE 1M CH00  
Date: 17.OCT.2024 19:22:11





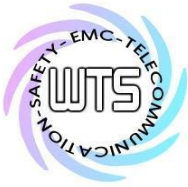
Registration number: W6M22407-23644-C-1  
 FCC ID: GX9HSGWCATM1ZB



BANDEGE BLE 1M CH39  
 Date: 17.OCT.2024 19:25:49

Limit:

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



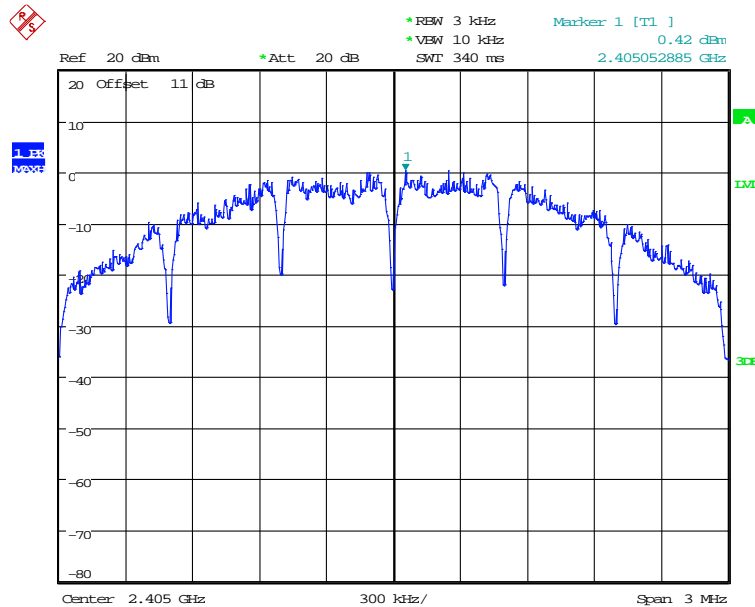
Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

### 3.10 Peak Power Spectral Density

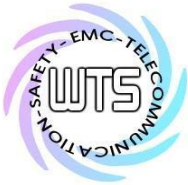
Peak Power Spectral density is a measured at low, middle and high channel.  
The peak output power is measured with a measurement bandwidth of 10 MHz and displayed on diagram together with Peak Power Spectral Density result which was measured with a bandwidth of 3 kHz, appreciate frequency span and sweep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

Test date: October 17, 2024-October 23, 2024  
Temperature: 24.0 °C  
Humidity: 58.7 %  
Tester: Sora

Zigbee  
Mode 1

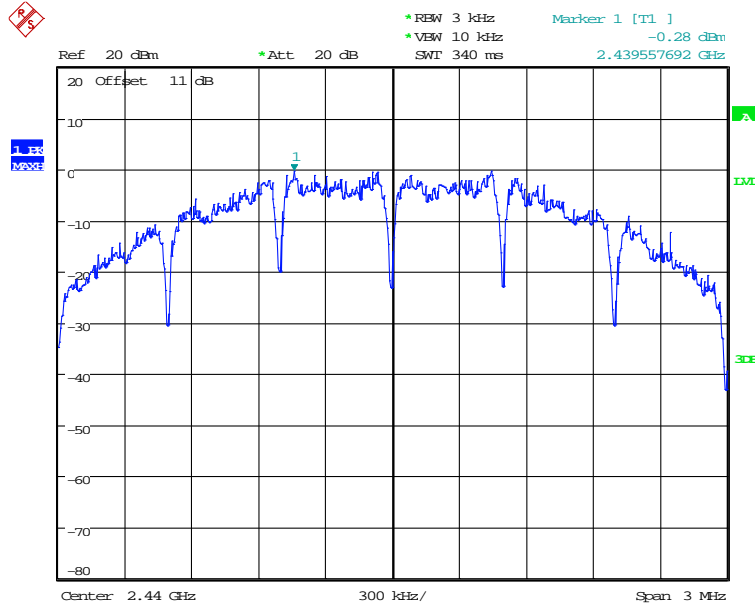


POWER DENSITY ZIGBEE 2405MHz  
Date: 23.OCT.2024 10:08:58

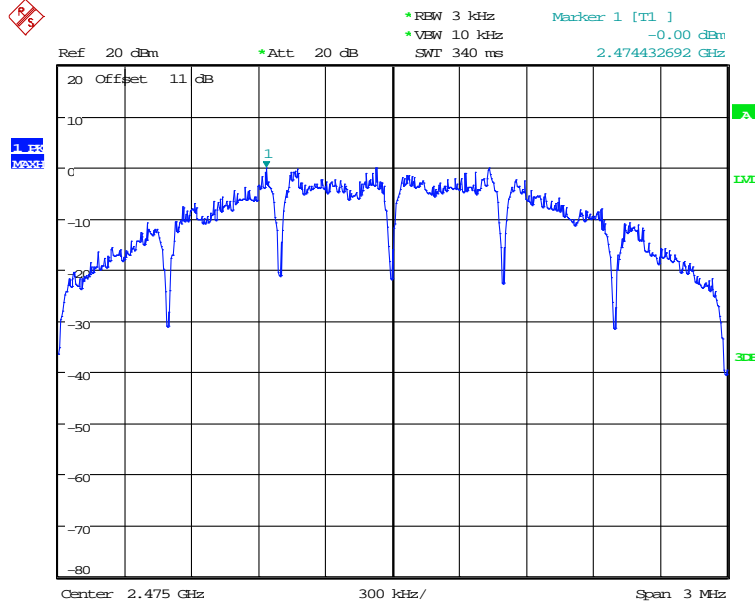


# Worldwide Testing Services(Taiwan) Co., Ltd.

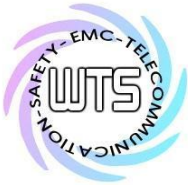
Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB



POWER DENSITY ZIGBEE 2440MHz  
Date: 23.OCT.2024 10:08:24

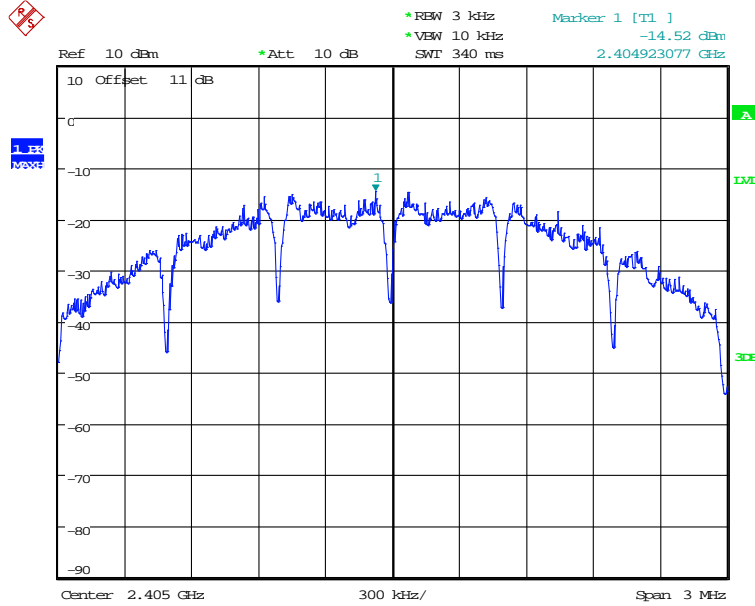


POWER DENSITY ZIGBEE 2475MHz  
Date: 23.OCT.2024 10:07:48

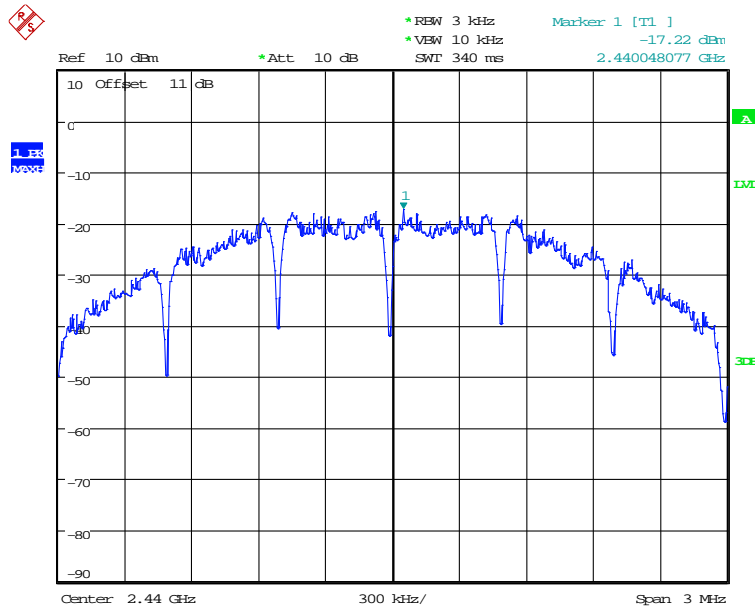


Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

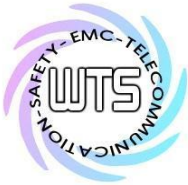
Mode 2



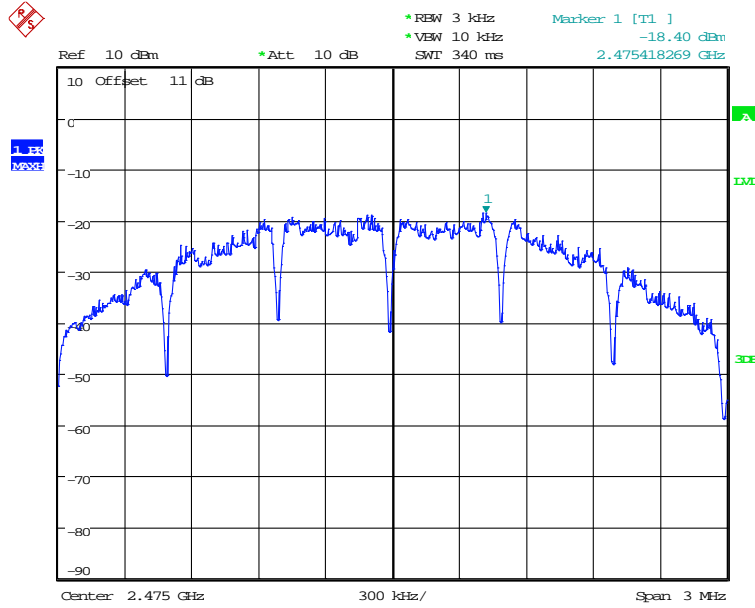
POWER DENSITY ZIGBEE 2405MHz  
Date: 23.OCT.2024 11:11:52



POWER DENSITY ZIGBEE 2440MHz  
Date: 23.OCT.2024 11:11:19

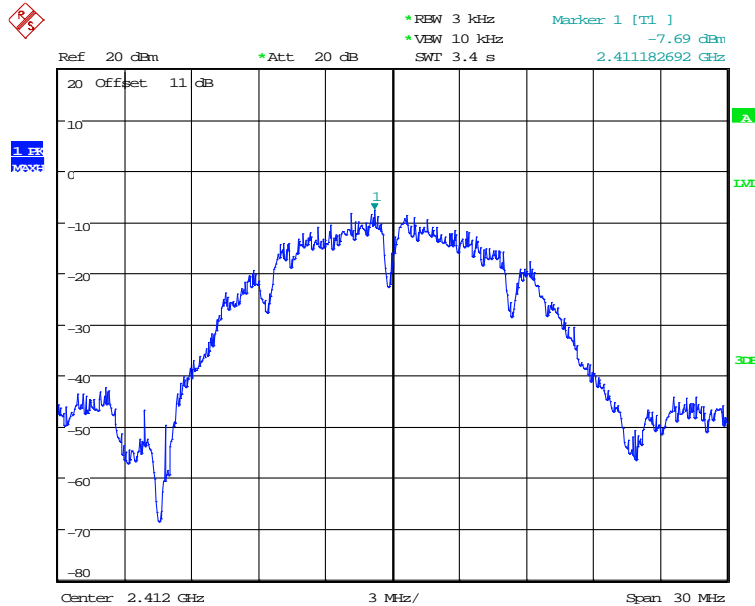


Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

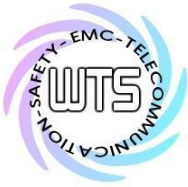


POWER DENSITY ZIGBEE 2475MHZ  
Date: 23.OCT.2024 11:10:51

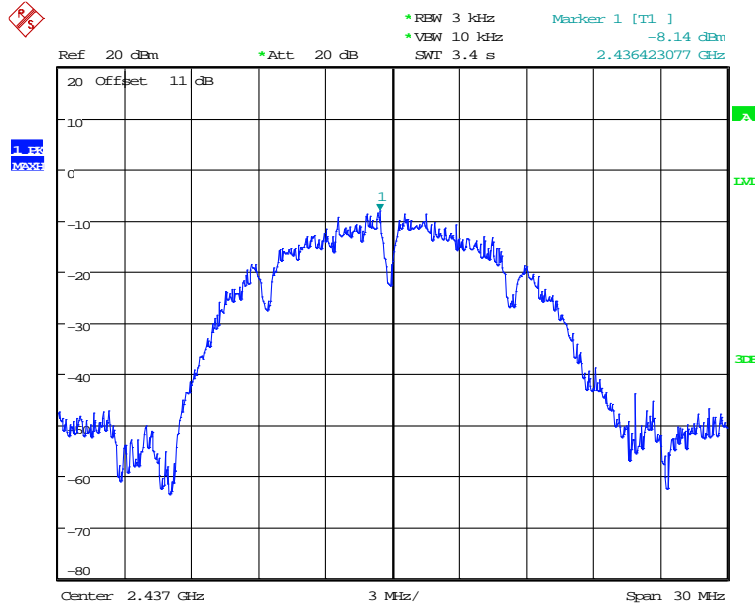
WLAN  
802.11b



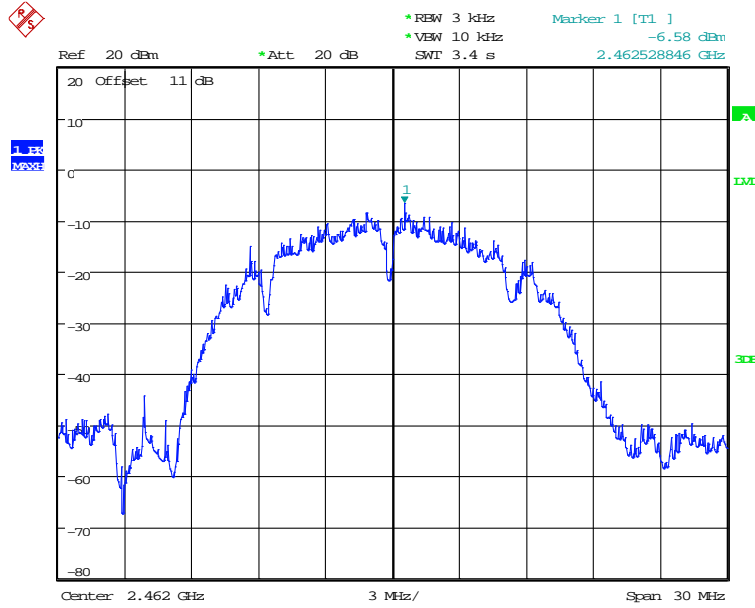
POWER DENSITY 802.11B CH01  
Date: 17.OCT.2024 19:32:35



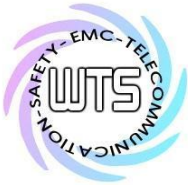
Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB



POWER DENSITY 802.11B CH06  
Date: 17.OCT.2024 19:33:36

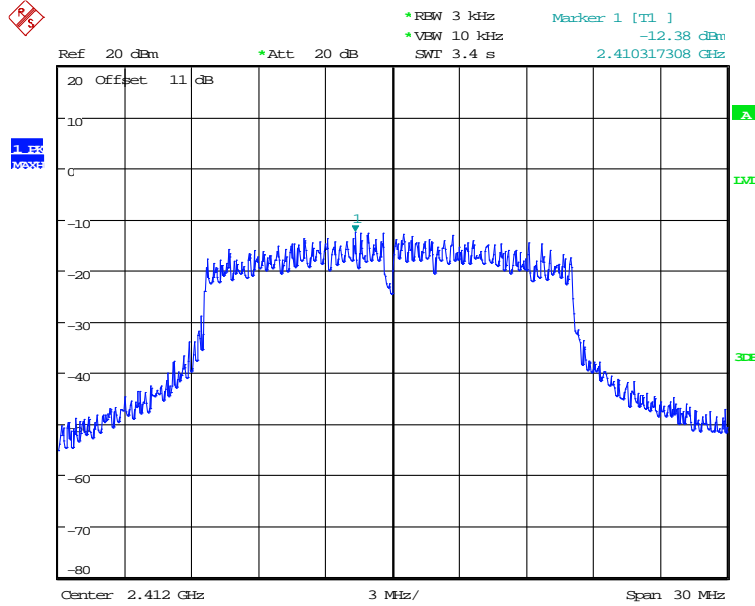


POWER DENSITY 802.11B CH11  
Date: 17.OCT.2024 19:34:24

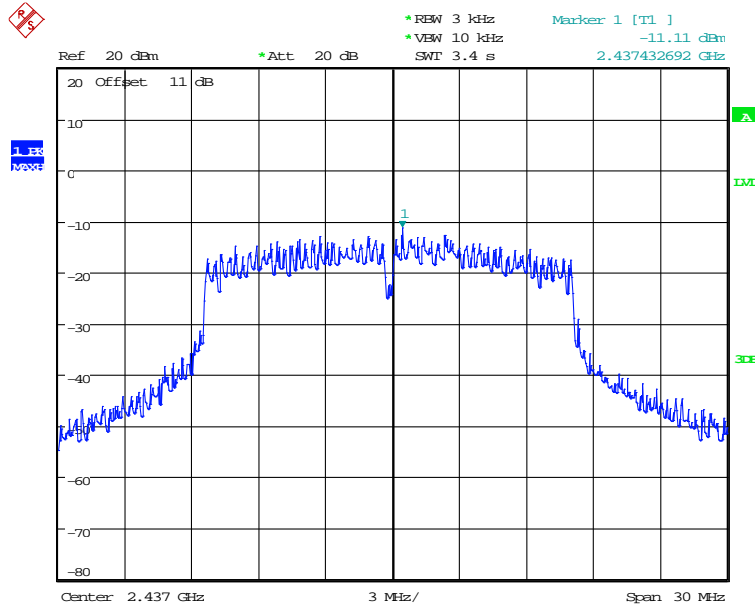


Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

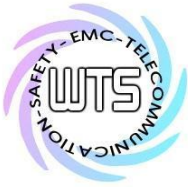
802.11g



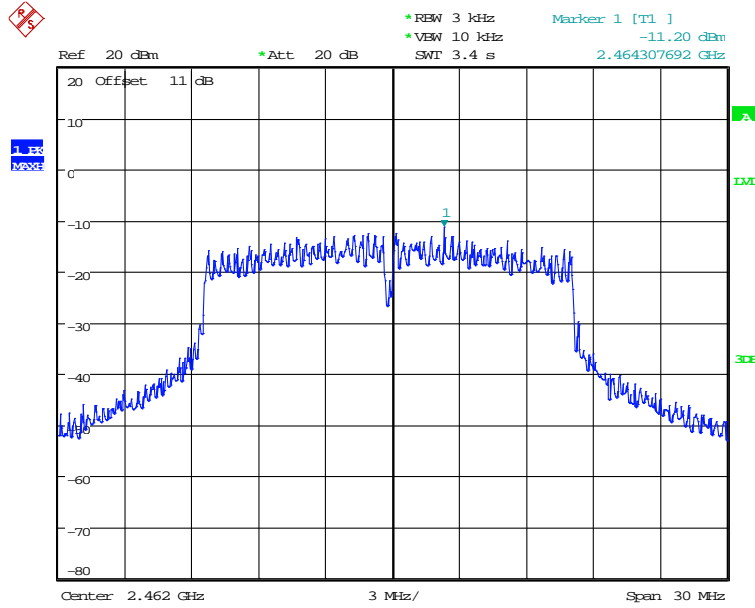
POWER DENSITY 802.11G CH01  
Date: 17.OCT.2024 19:37:28



POWER DENSITY 802.11G CH06  
Date: 17.OCT.2024 19:38:08

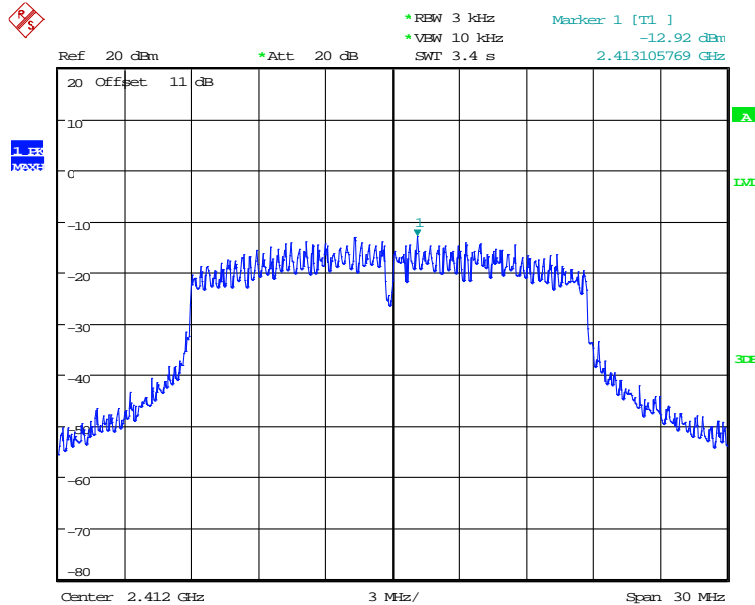


Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB



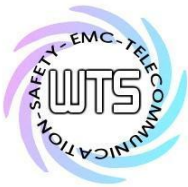
POWER DENSITY 802.11G CH11  
Date: 17.OCT.2024 19:38:43

802.11n 20M

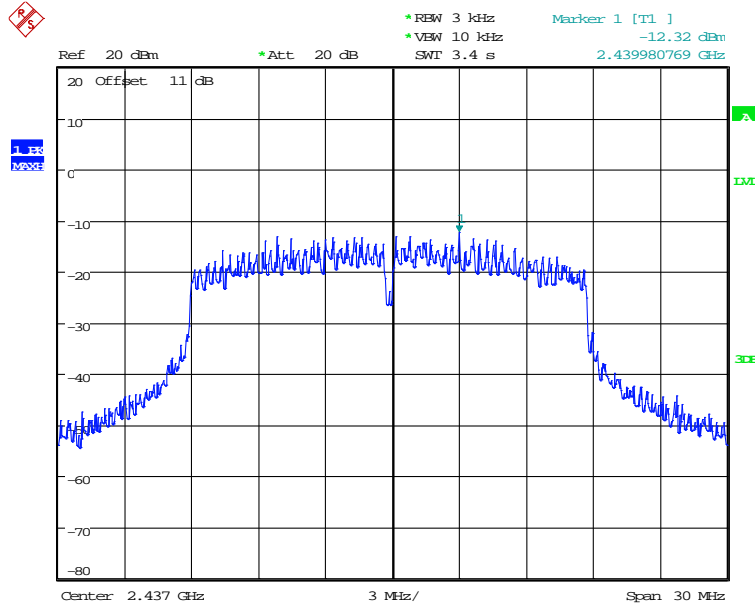


POWER DENSITY 802.11N 20MHZ CH01  
Date: 17.OCT.2024 19:40:53

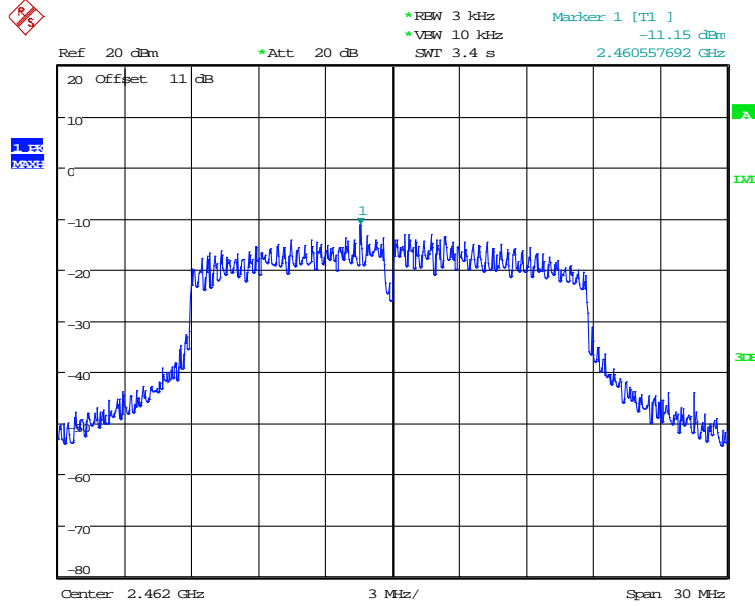




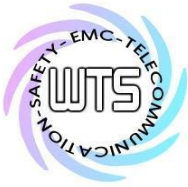
Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB



POWER DENSITY 802.11N 20MHZ CH06  
Date: 17.OCT.2024 19:42:37

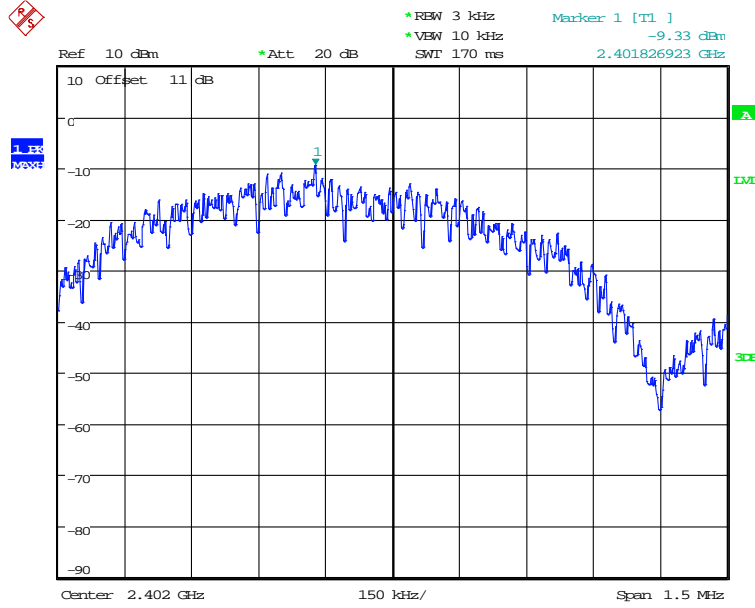


POWER DENSITY 802.11N 20MHZ CH11  
Date: 17.OCT.2024 19:43:24

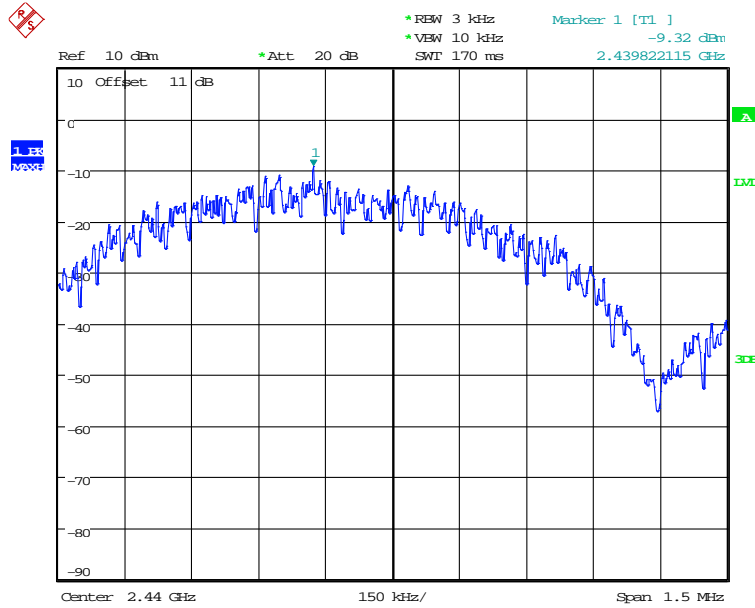


Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

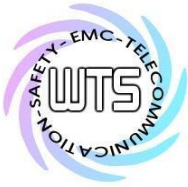
BLE 1M



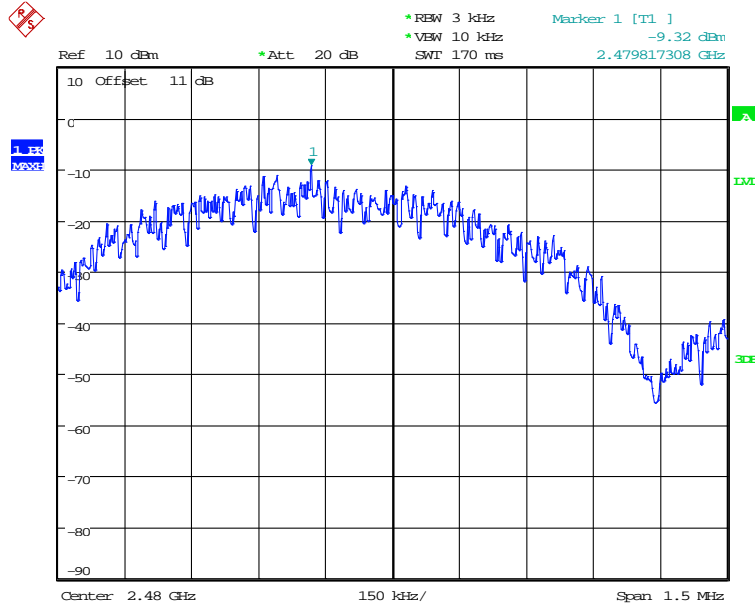
POWER DENSITY BLE 1M CH00  
Date: 17.OCT.2024 19:22:03



POWER DENSITY BLE 1M CH19  
Date: 17.OCT.2024 19:24:23



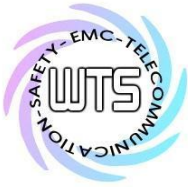
Registration number: W6M22407-23644-C-1  
 FCC ID: GX9HSGWCATM1ZB



POWER DENSITY BLE 1M CH39  
 Date: 17.OCT.2024 19:25:41

**Limits:**

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



Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

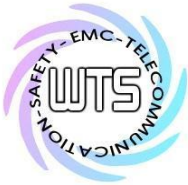
**3.11 Radiated Emission from Digital Part**

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.: W6M22407-23644-P-15B.

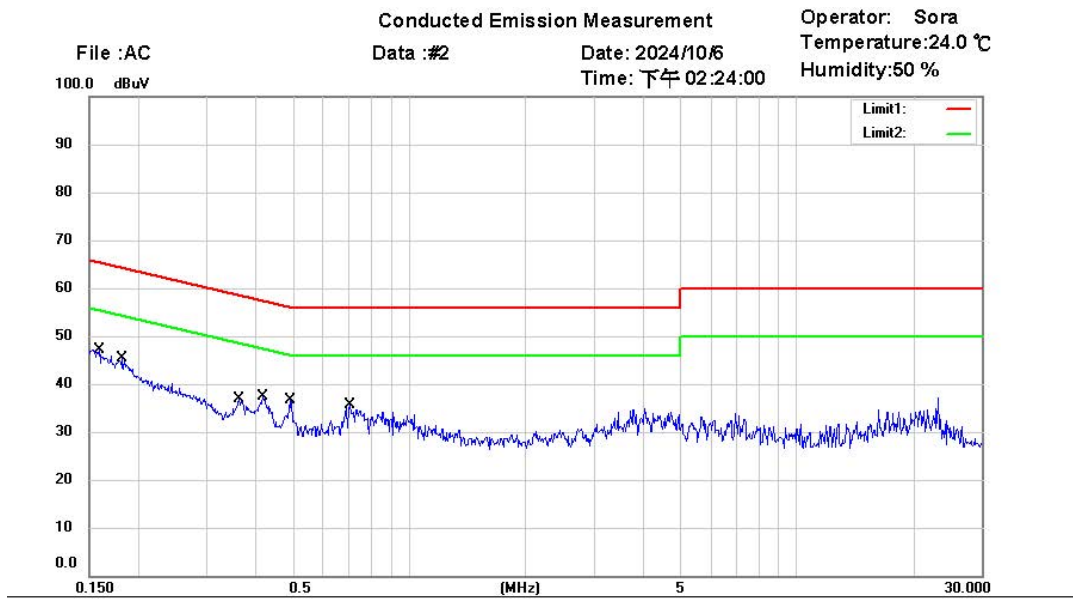


Registration number: W6M22407-23644-C-1  
 FCC ID: GX9HSGWCATM1ZB

## 3.12 Power Line Conducted Emission

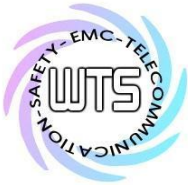
For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the table bellows with this provision 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 : W6M22407-23644      Power : 120 V.a.c.  
 M/N:  
 Test Mode : Mode 1  
 Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	0.1584	29.93	QP	9.64	39.57	65.55	-25.98	
	0.1584	18.41	AVG	9.64	28.05	55.55	-27.50	
	0.1817	28.68	QP	9.64	38.32	64.41	-26.09	
	0.1817	19.46	AVG	9.64	29.10	54.41	-25.31	
	0.3628	18.18	QP	9.66	27.84	58.66	-30.82	
	0.3628	11.30	AVG	9.66	20.96	48.66	-27.70	
	0.4191	21.60	QP	9.66	31.26	57.47	-26.21	
*	0.4191	13.27	AVG	9.66	22.93	47.47	-24.54	
	0.4898	16.91	QP	9.66	26.57	56.17	-29.60	
	0.4898	11.80	AVG	9.66	21.46	46.17	-24.71	
	0.7047	13.99	QP	9.67	23.66	56.00	-32.34	
	0.7047	7.66	AVG	9.67	17.33	46.00	-28.67	



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

Registration number: W6M22407-23644-C-1  
 FCC ID: GX9HSGWCATM1ZB

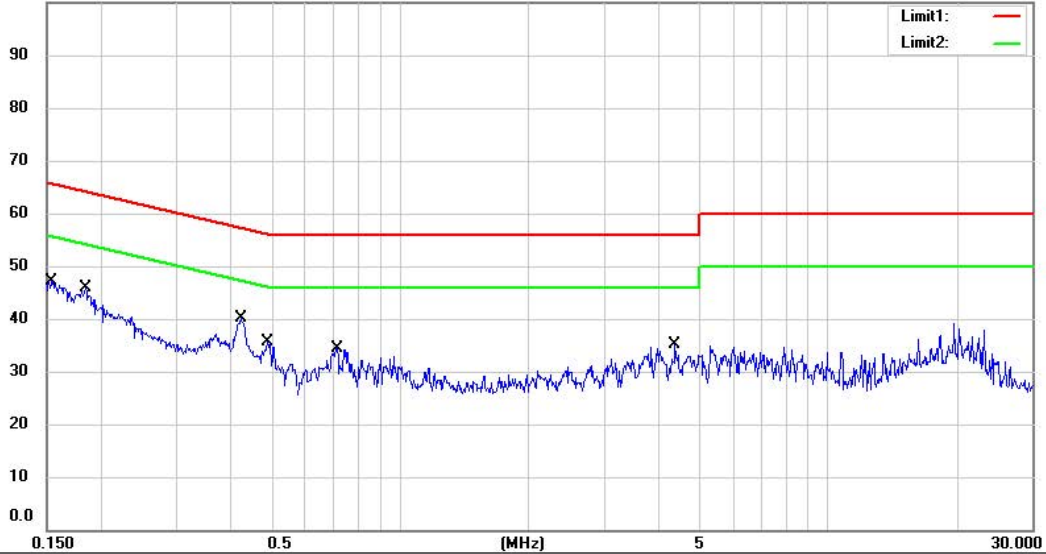
Conducted Emission Measurement

Operator: Sora  
 Temperature: 24.0 °C  
 Humidity: 50 %

File : AC  
 100.0 dBuV

Data : #1

Date: 2024/10/6  
 Time: 下午 02:22:40



Site : Chamber\_03

Condition : FCC Part 15 Class B Conduction (QP)

Phase: L1

EUT : W6M22407-23644

Power : 120 Vac.

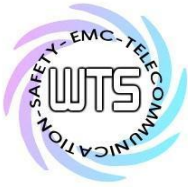
M/N:

Test Mode : Mode 1

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	0.1540	31.31	QP	9.66	40.97	65.78	-24.81	
	0.1540	18.97	AVG	9.66	28.63	55.78	-27.15	
	0.1843	28.31	QP	9.65	37.96	64.29	-26.33	
	0.1843	18.63	AVG	9.65	28.28	54.29	-26.01	
*	0.4220	24.73	QP	9.66	34.39	57.41	-23.02	
	0.4220	13.35	AVG	9.66	23.01	47.41	-24.40	
	0.4888	17.84	QP	9.66	27.50	56.19	-28.69	
	0.4888	10.70	AVG	9.66	20.36	46.19	-25.83	
	0.7137	18.27	QP	9.67	27.94	56.00	-28.06	
	0.7137	7.36	AVG	9.67	17.03	46.00	-28.97	
	4.3835	16.53	QP	9.73	26.26	56.00	-29.74	
	4.3835	8.62	AVG	9.73	18.35	46.00	-27.65	

- Note:**
1. The formula of measured value as:  $\text{Test Result} = \text{Reading} + \text{Correction Factor}$
  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.

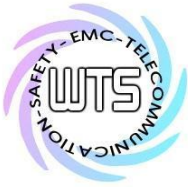


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

**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: W6M22407-23644-C-1  
FCC ID: GX9HSGWCATM1ZB

## **Appendix**

### **Measurement diagrams**

Spurious Emissions radiated





Radiated Emission Measurement

Operator: Kai

File : 1\_2

Data : #1

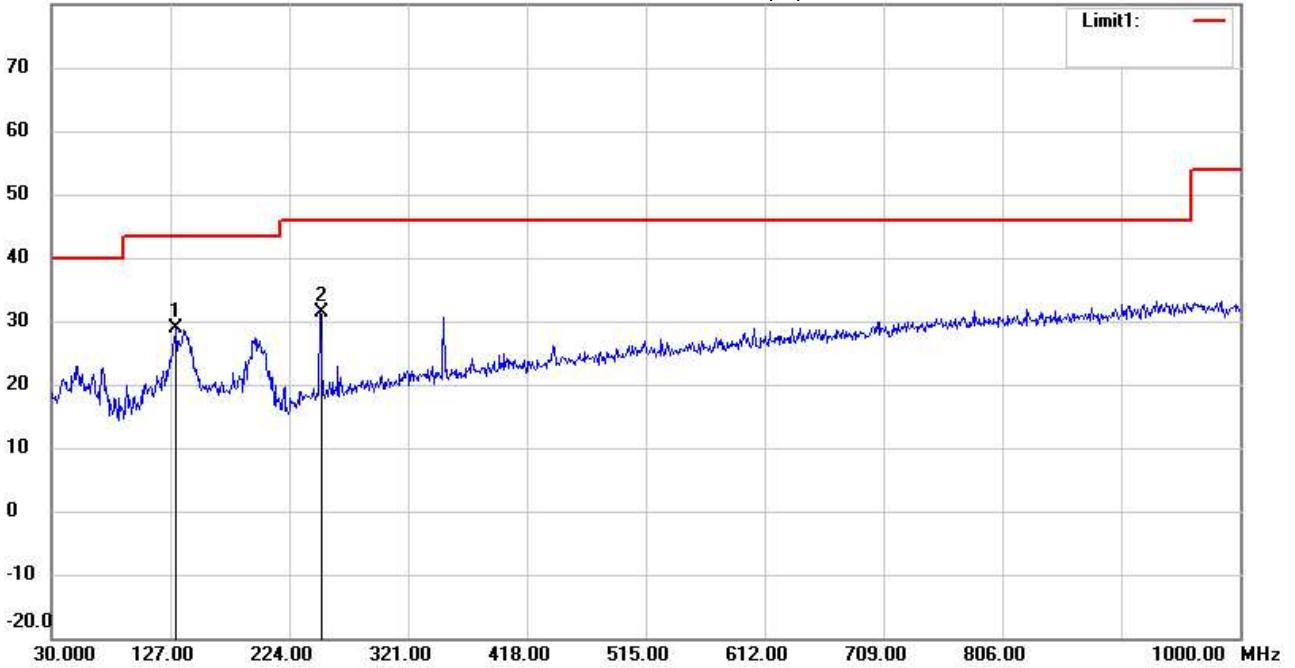
Date: 2024/10/18

Temperature: 25.0 °C

80.0 dBuV/m

Time: 下午 02:53:37

Humidity: 54.9 %



Site : 966A Chamber

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

EUT : W6M22407-23644

M/N:

Test Mode : TX 2405MHz

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
	131.8500	42.53	peak	-13.60	28.93	43.50	100	108	-14.57	
*	249.7050	45.18	peak	-13.73	31.45	46.00	100	115	-14.55	



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Radiated Emission Measurement

Operator: Kai

File : 1\_2

Data : #2

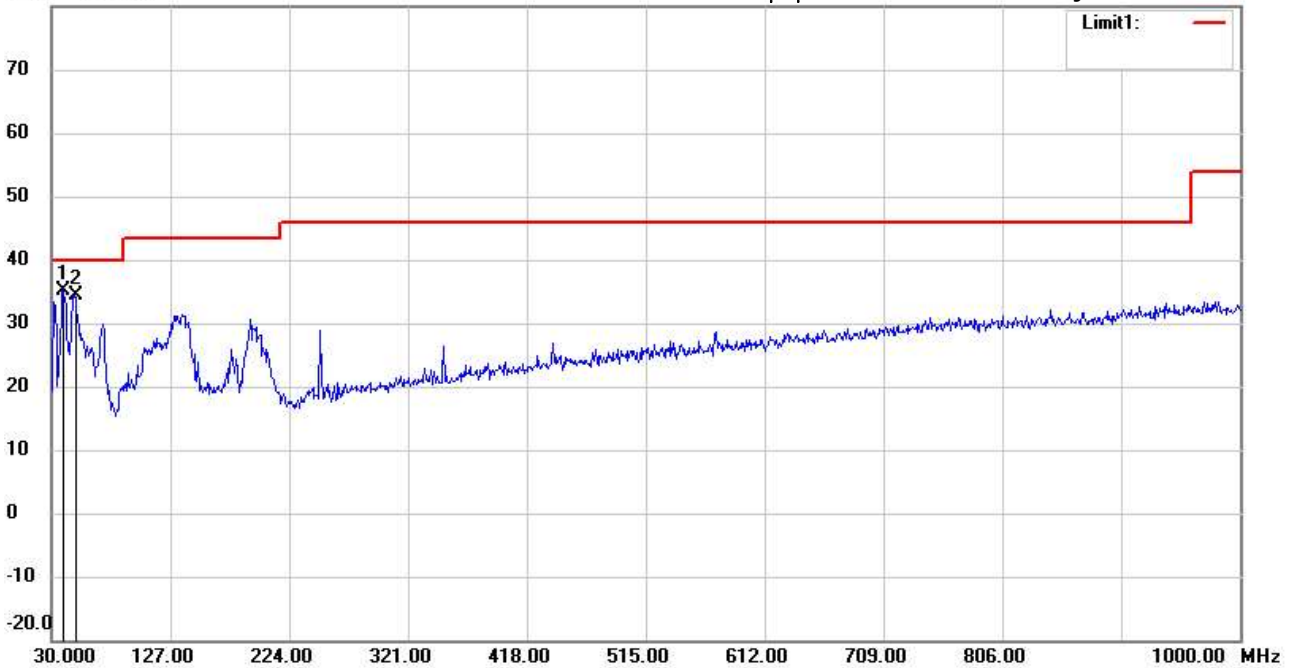
Date: 2024/10/18

Temperature: 25.0 °C

80.0 dBuV/m

Time: 下午 02:54:22

Humidity: 54.9 %



Site : 966A Chamber

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

Polarization: *Vertical*

EUT : W6M22407-23644

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 2405MHz

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
*	39.7000	48.94	peak	-13.70	35.24	40.00	100	359	-4.76	
	48.9150	47.08	peak	-12.67	34.41	40.00	100	344	-5.59	

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



Radiated Emission Measurement

Operator: Kai

File :3

Data :#1

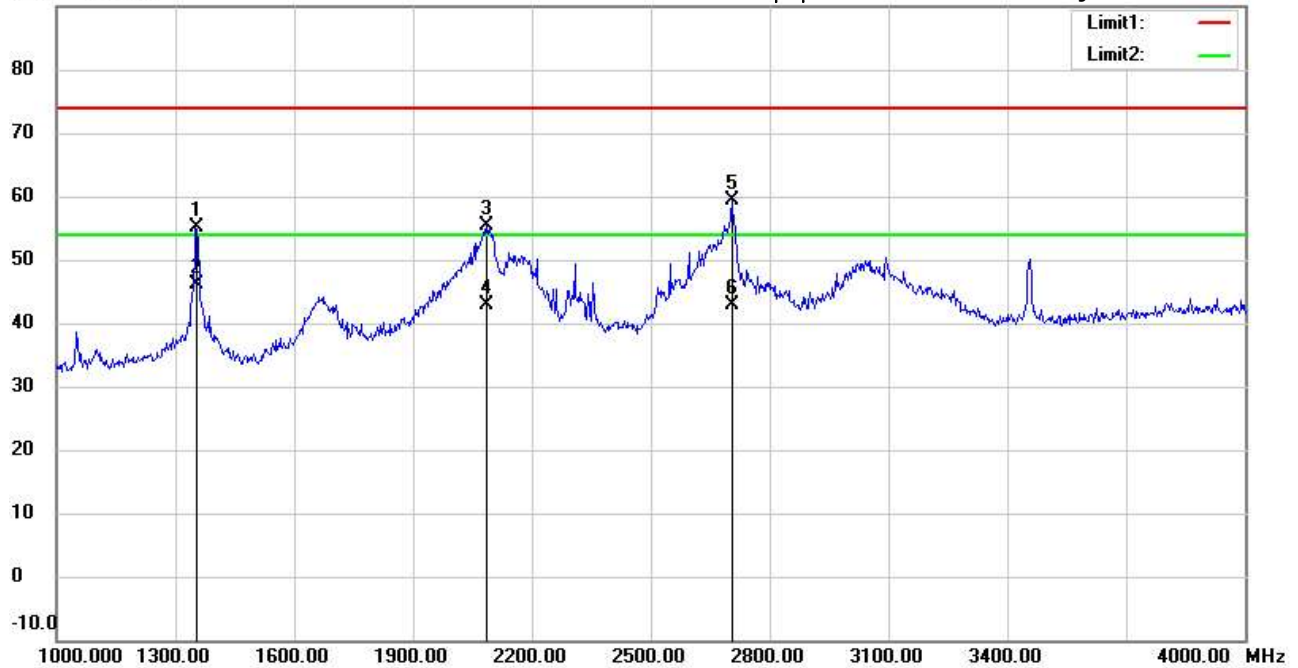
Date: 2024/10/18

Temperature: 25.0 °C

90.0 dBuV/m

Time: 下午 02:01:30

Humidity: 54.9 %



Site : 966A Chamber

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

EUT : W6M22407-23644

M/N:

Test Mode : TX 2405MHz

Note :

Polarization: *Horizontal*

Power : 120 V.a.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
	1352.500	63.32	peak	-8.10	55.22	74.00	150	33	-18.78	
*	1352.500	54.13	AVG	-8.10	46.03	54.00	150	33	-7.97	
	2086.000	60.72	peak	-5.27	55.45	74.00	150	63	-18.55	
	2086.000	48.06	AVG	-5.27	42.79	54.00	150	63	-11.21	
	2705.500	62.60	peak	-3.12	59.48	74.00	150	16	-14.52	
	2705.500	45.99	AVG	-3.12	42.87	54.00	150	16	-11.13	

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



Radiated Emission Measurement

Operator: Kai

File :3

Data :#6

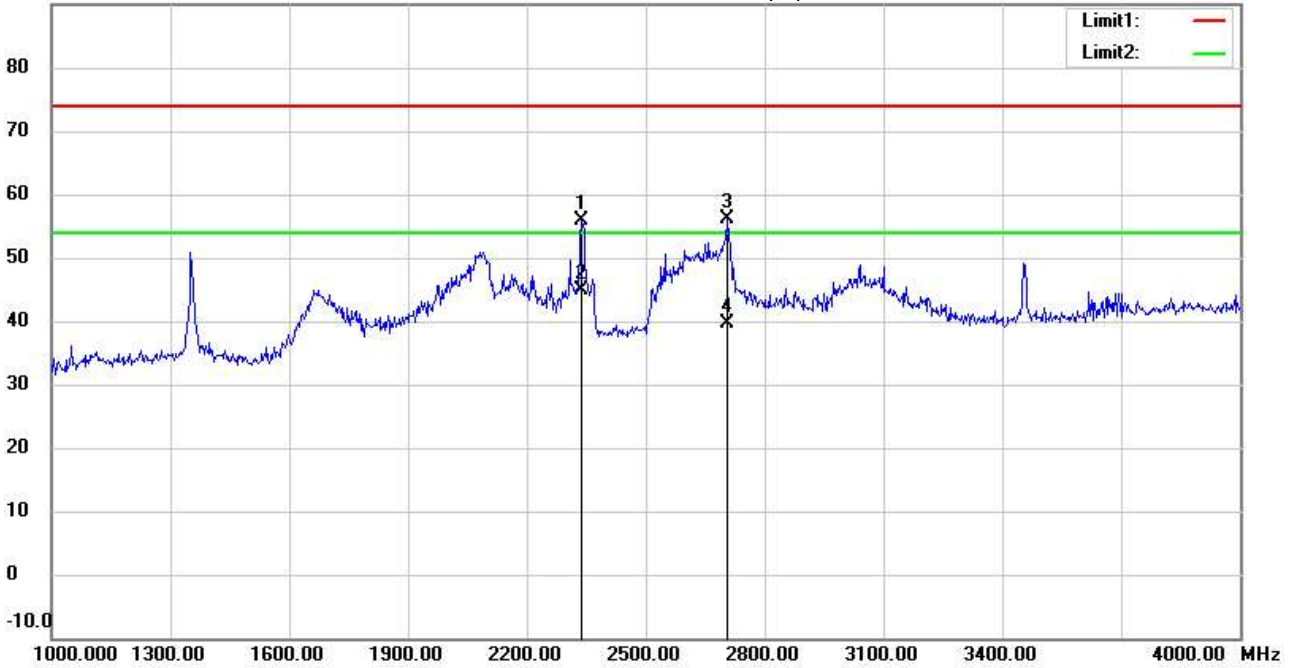
Date: 2024/10/18

Temperature: 25.0 °C

90.0 dBuV/m

Time: 下午 02:04:14

Humidity: 54.9 %



Site : 966A Chamber

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

EUT : W6M22407-23644

M/N:

Test Mode : TX 2405MHz

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
	2338.000	60.05	peak	-4.17	55.88	74.00	150	214	-18.12	
*	2338.000	48.96	AVG	-4.17	44.79	54.00	150	214	-9.21	
	2705.500	59.36	peak	-3.12	56.24	74.00	150	55	-17.76	
	2705.500	42.69	AVG	-3.12	39.57	54.00	150	55	-14.43	



Radiated Emission Measurement

Operator: Kai

File :3

Data :#2

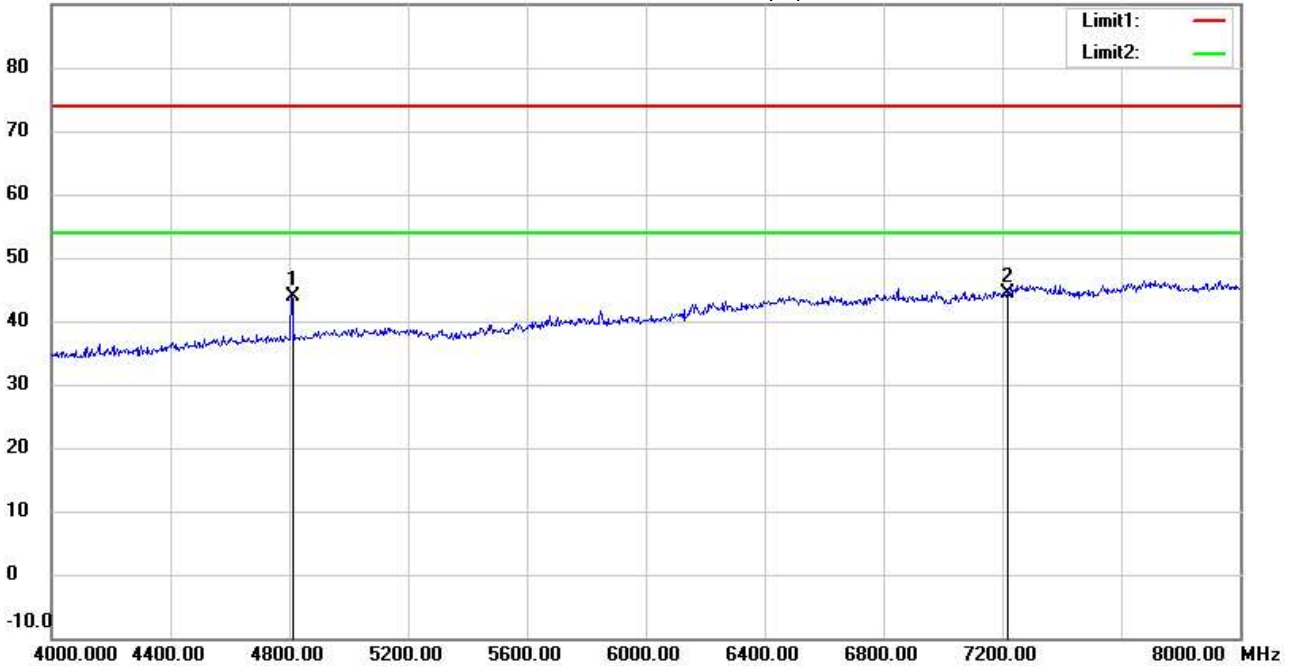
Date: 2024/10/18

Temperature: 25.0 °C

90.0 dBuV/m

Time: 下午 02:02:13

Humidity: 54.9 %



Site : 966A Chamber

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

EUT : W6M22407-23644

M/N:

Test Mode : TX 2405MHz

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
	4810.000	39.32	peak	4.56	43.88	74.00	150	112	-30.12	
*	7215.000	32.90	peak	11.57	44.47	74.00	150	31	-29.53	



Radiated Emission Measurement

Operator: Kai

File :3

Data :#7

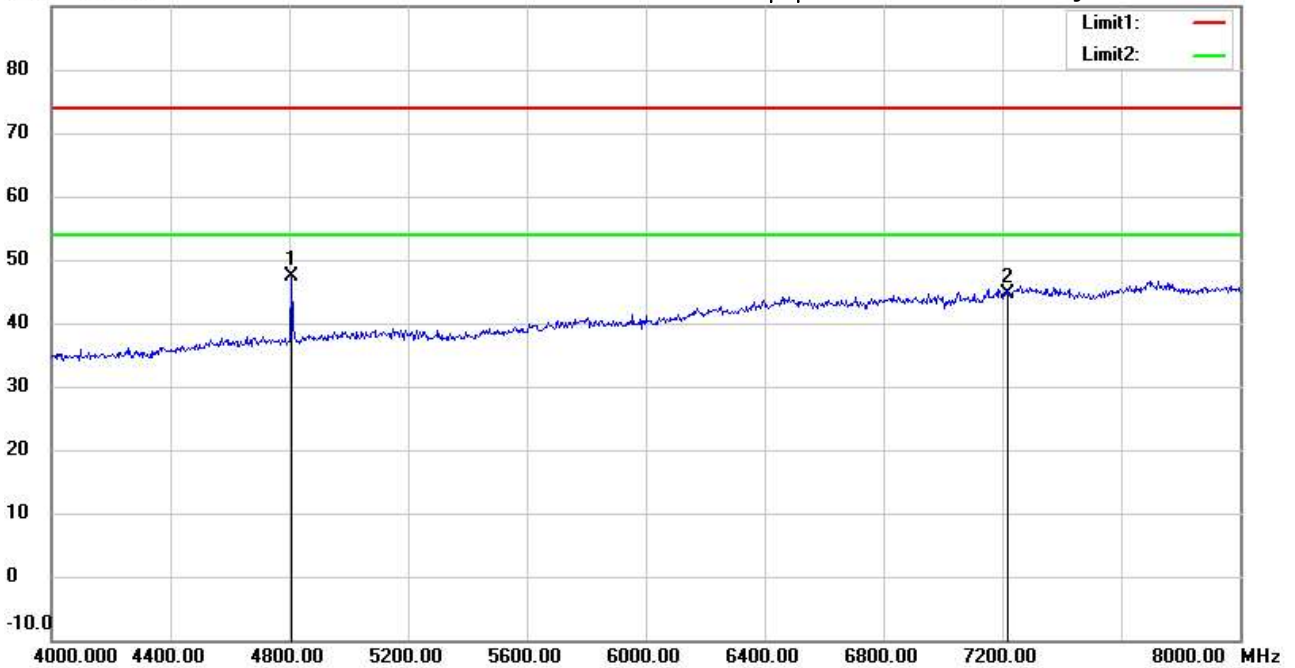
Date: 2024/10/18

Temperature: 25.0 °C

90.0 dBuV/m

Time: 下午 02:04:57

Humidity: 54.9 %



Site : 966A Chamber

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

Polarization: *Vertical*

EUT : W6M22407-23644

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 2405MHz

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
*	4808.000	42.83	peak	4.55	47.38	74.00	150	196	-26.62	
	7215.000	32.97	peak	11.57	44.54	74.00	150	132	-29.46	



Radiated Emission Measurement

Operator: Kai

File :3

Data :#3

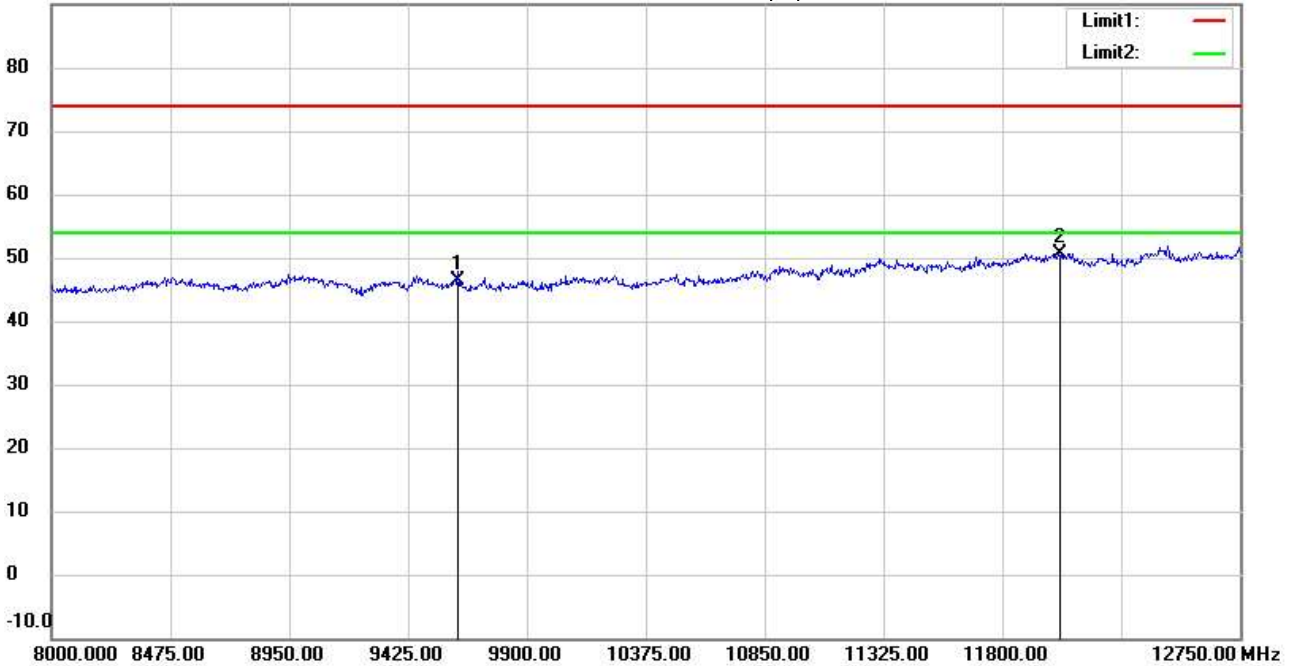
Date: 2024/10/18

Temperature: 25.0 °C

90.0 dBuV/m

Time: 下午 02:03:02

Humidity: 54.9 %



Site : 966A Chamber

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

Polarization: *Horizontal*

EUT : W6M22407-23644

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 2405MHz

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
	9620.000	33.25	peak	13.04	46.29	74.00	150	354	-27.71	
*	12025.000	33.53	peak	17.03	50.56	74.00	150	129	-23.44	



Radiated Emission Measurement

Operator: Kai

File :3

Data :#8

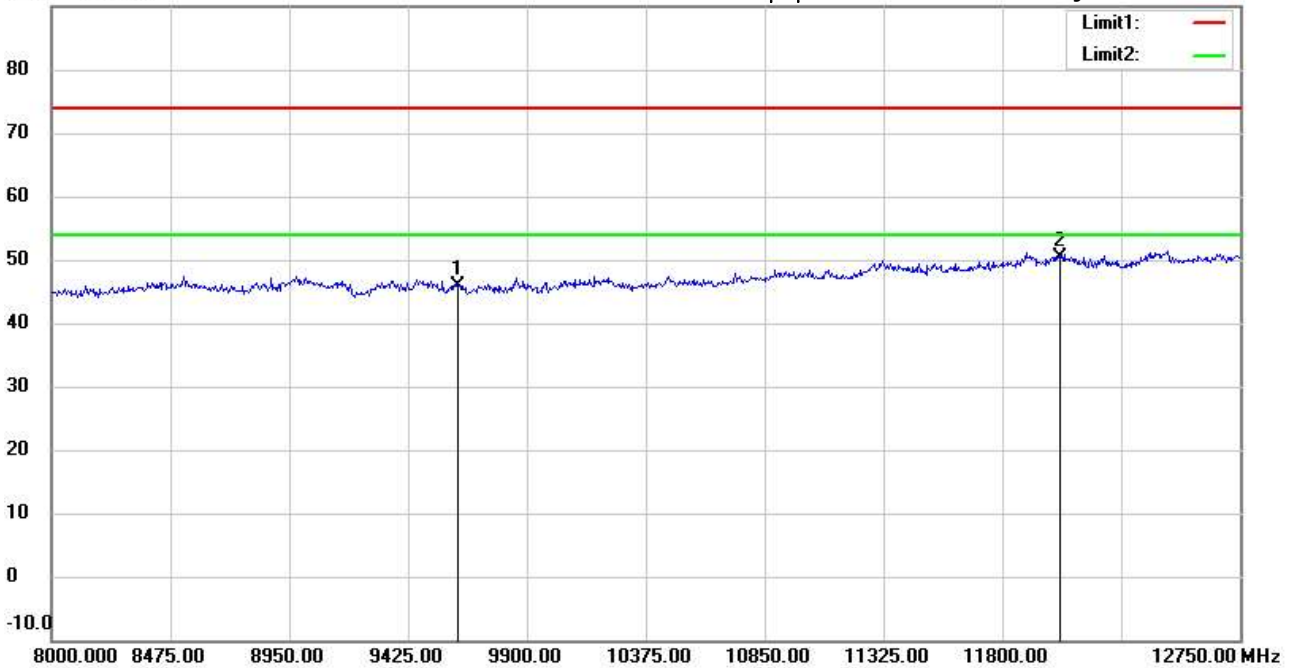
Date: 2024/10/18

Temperature: 25.0 °C

90.0 dBuV/m

Time: 下午 02:05:39

Humidity: 54.9 %



Site : 966A Chamber

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

Polarization: **Vertical**

EUT : W6M22407-23644

Power : 120 V.a.c.

M/N:

Distance: 3m

Test Mode : TX 2405MHz

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
	9620.000	32.92	peak	13.04	45.96	74.00	150	355	-28.04	
*	12025.000	33.31	peak	17.03	50.34	74.00	150	350	-23.66	





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Radiated Emission Measurement

Operator: Kai

File :3

Data :#4

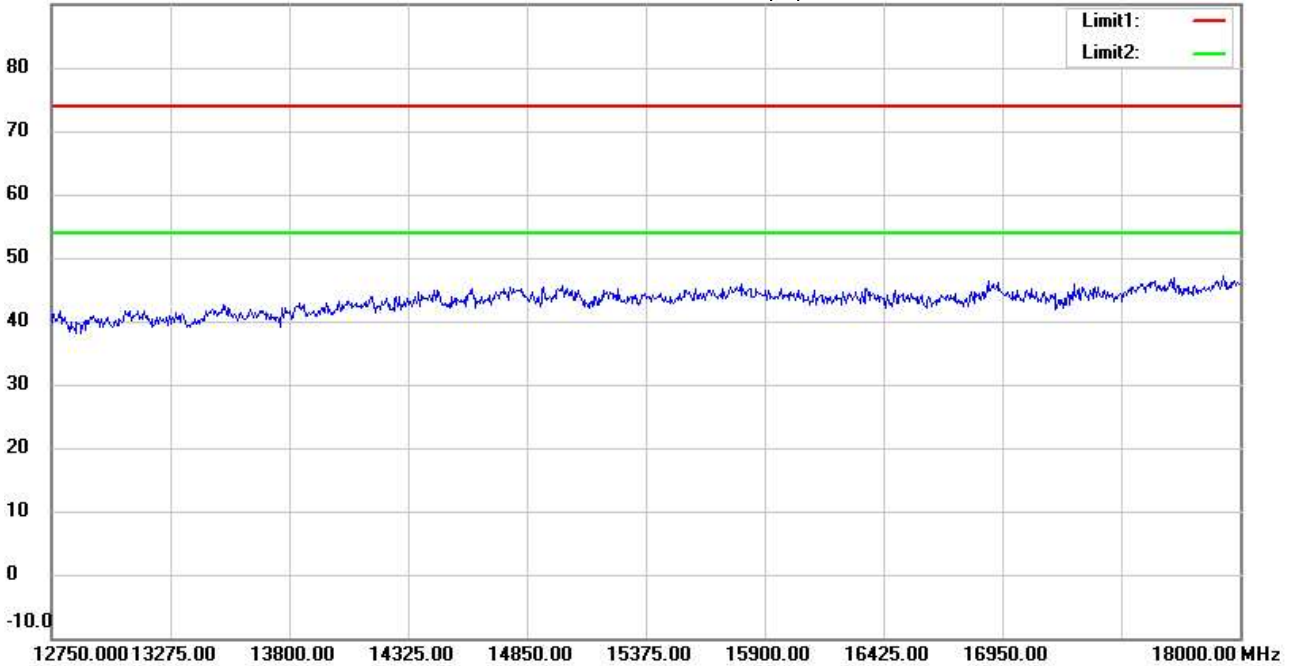
Date: 2024/10/18

Temperature: 25.0 °C

90.0 dBuV/m

Time: 下午 02:03:18

Humidity: 54.9 %



Site : 966A Chamber

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

Polarization: *Horizontal*

EUT : W6M22407-23644

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 2405MHz

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
-----	-----------------	----------------	----------	---------------------	-----------------	----------------	--------------	----------------	-------------	---------

\*: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 :3

Data :#9

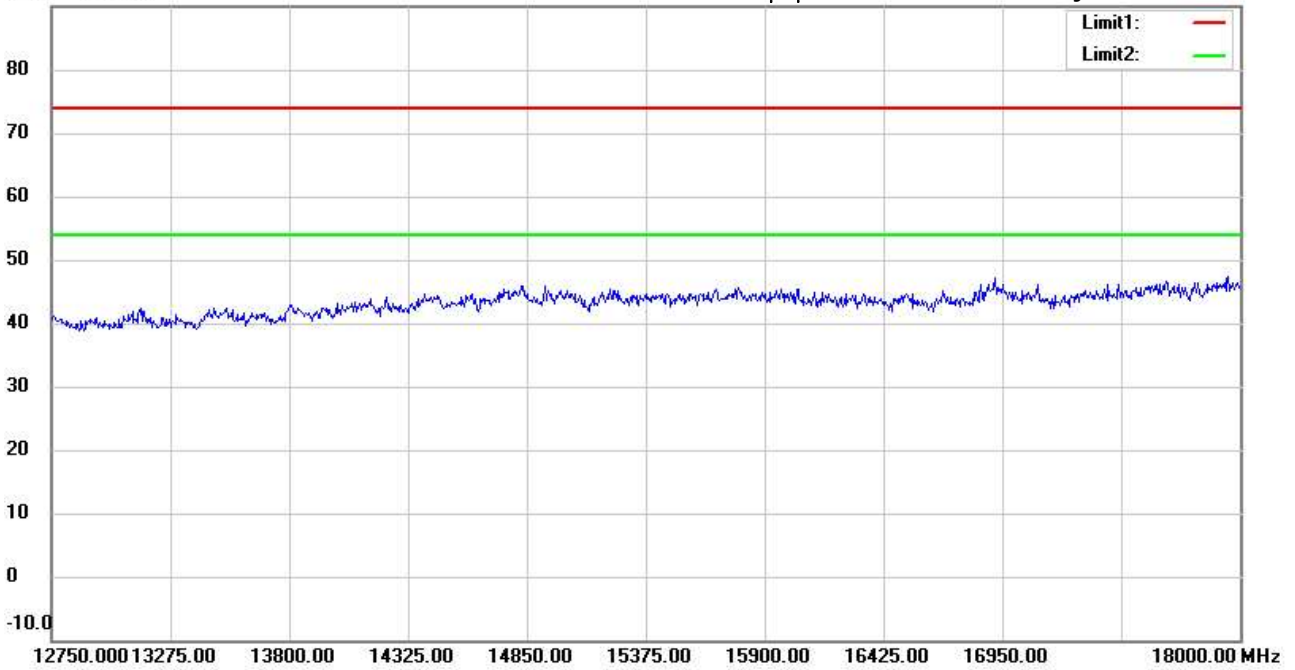
Date: 2024/10/18

Temperature: 25.0 °C

90.0 dBuV/m

Time: 下午 02:05:56

Humidity: 54.9 %



Site : 966A Chamber

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

Polarization: *Vertical*

EUT : W6M22407-23644

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 2405MHz

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
-----	-----------------	----------------	----------	---------------------	-----------------	----------------	--------------	----------------	-------------	---------

\*: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 :3

Data :#5

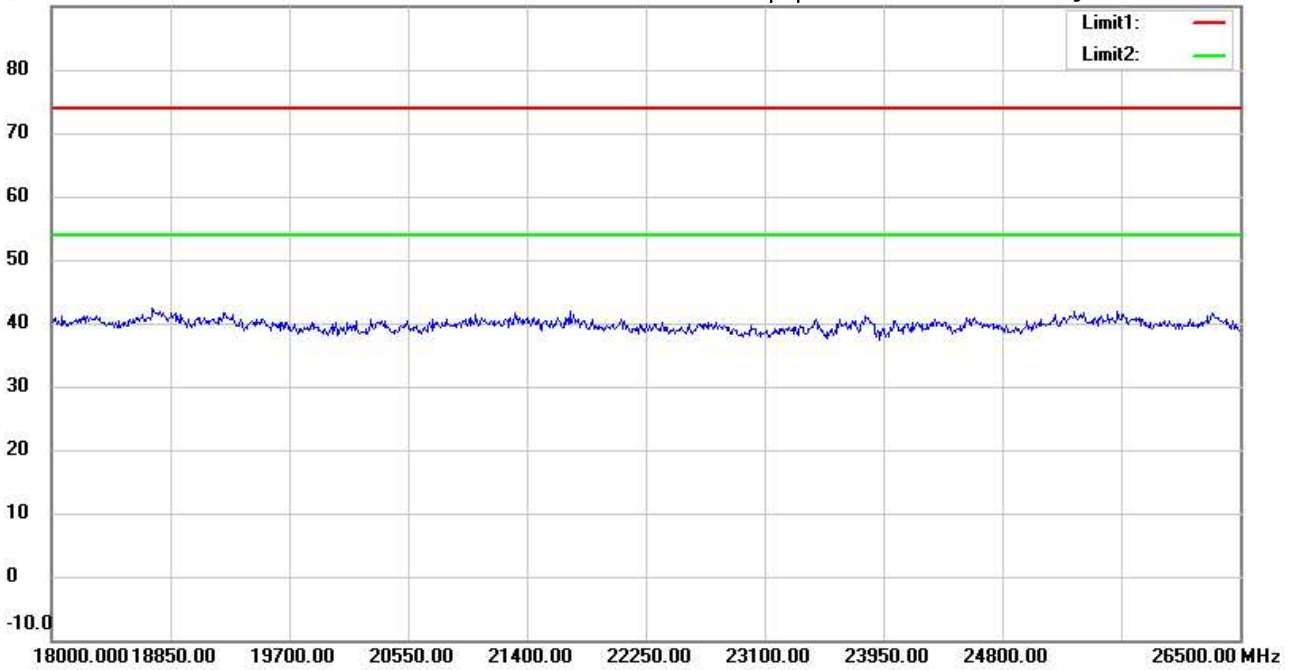
Date: 2024/10/18

Temperature: 25.0 °C

90.0 dBuV/m

Time: 下午 02:03:29

Humidity: 54.9 %



Site : 966A Chamber

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

Polarization: *Horizontal*

EUT : W6M22407-23644

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 2405MHz

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
-----	-----------------	----------------	----------	---------------------	-----------------	----------------	--------------	----------------	-------------	---------

\*: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 :3

Data :#10

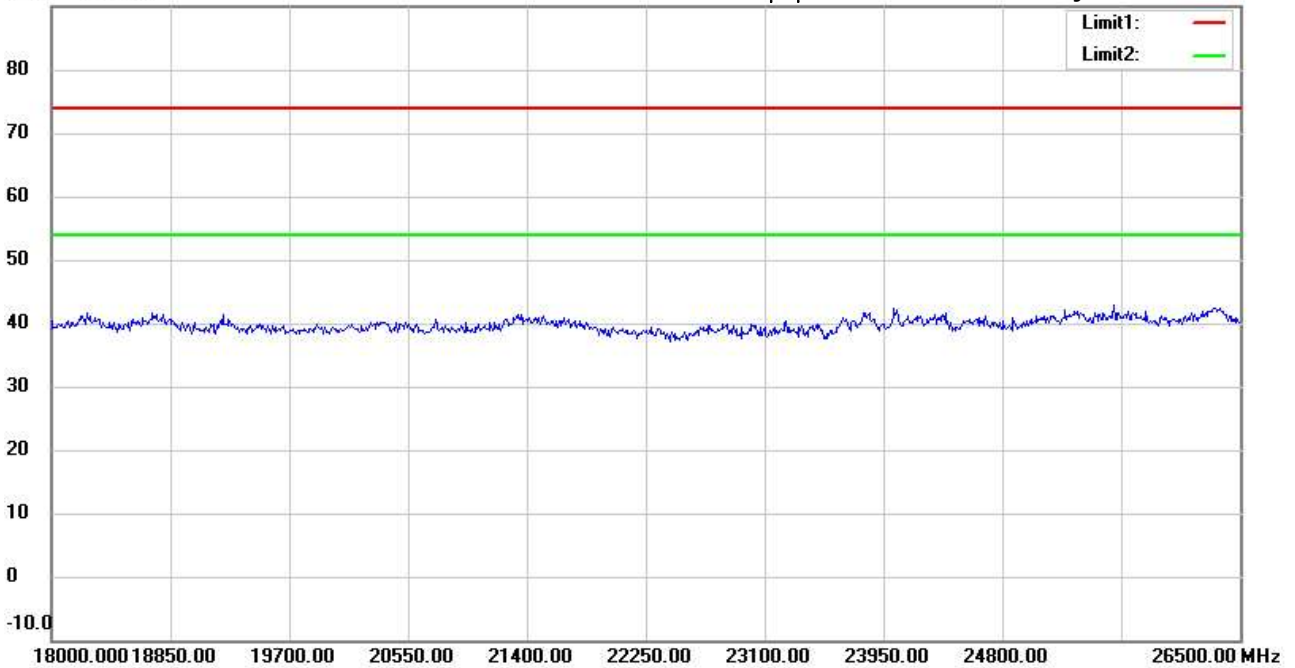
Date: 2024/10/18

Temperature: 25.0 °C

90.0 dBuV/m

Time: 下午 02:06:06

Humidity: 54.9 %



Site : 966A Chamber

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

EUT : W6M22407-23644

M/N:

Test Mode : TX 2405MHz

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
-----	-----------------	----------------	----------	---------------------	-----------------	----------------	--------------	----------------	-------------	---------

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



Radiated Emission Measurement

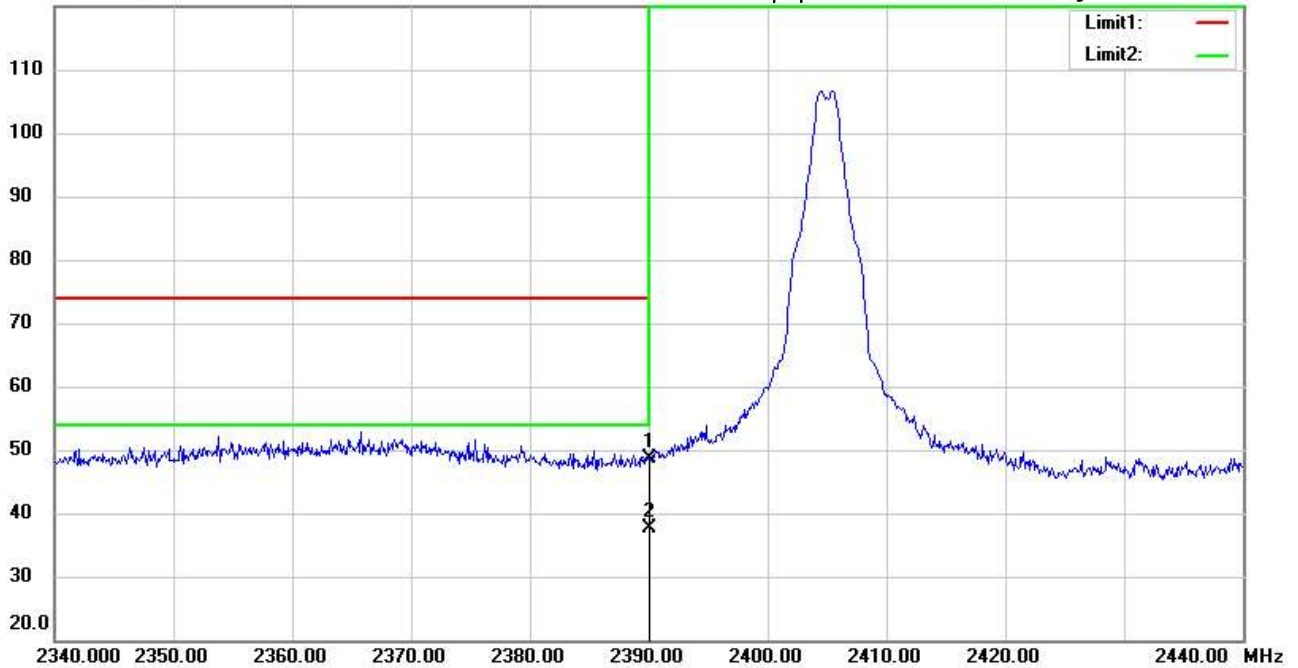
Operator: Kai

File : Bandedge  
 120.0 dBuV/m

Data : #1

Date: 2024/10/18  
 Time: 下午 02:38:48

Temperature: 25.0 °C  
 Humidity: 54.9 %



Site : 966A Chamber

Condition : FCC 15.247 PK (Bandedge)

EUT : W6M22407-23644

M/N:

Test Mode : TX 2405MHz

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
	2390.000	53.04	peak	-4.45	48.59	74.00	150	306	-25.41	
*	2390.000	42.10	AVG	-4.45	37.65	54.00	150	306	-16.35	



Radiated Emission Measurement

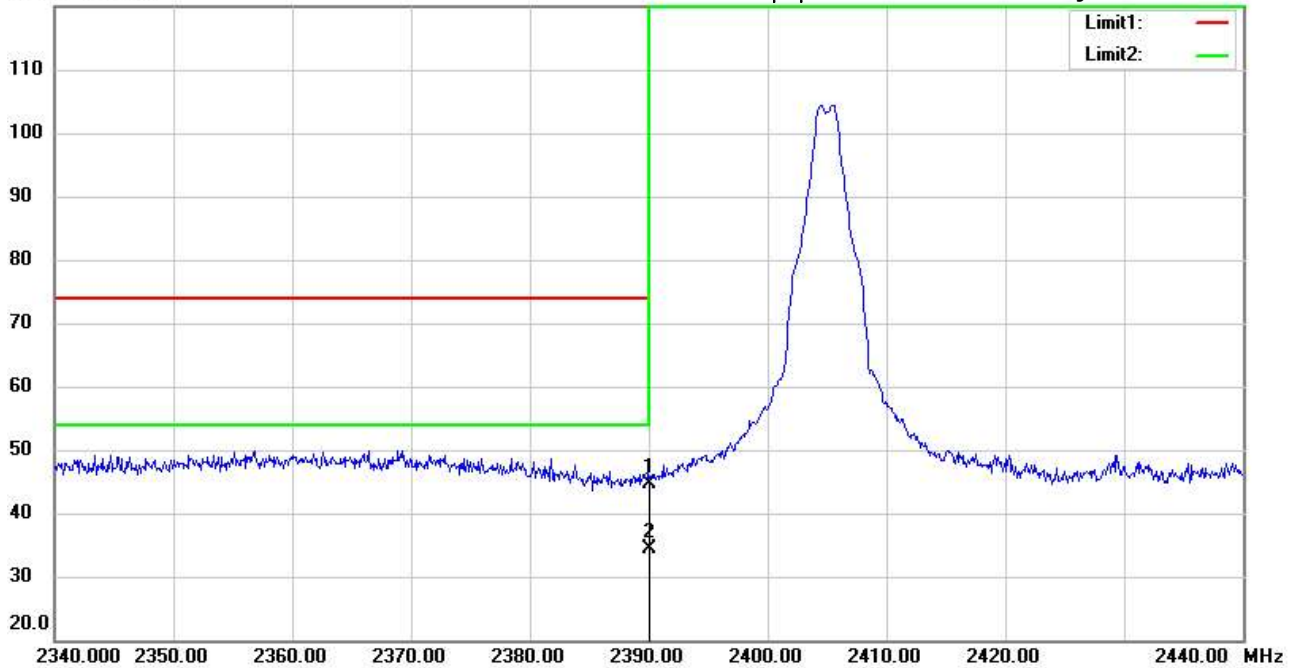
Operator: Kai

File : Bandedge  
 120.0 dBuV/m

Data : #2

Date: 2024/10/18  
 Time: 下午 02:40:14

Temperature: 25.0 °C  
 Humidity: 54.9 %



Site : 966A Chamber

Condition : FCC 15.247 PK (Bandedge)

EUT : W6M22407-23644

M/N:

Test Mode : TX 2405MHz

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
	2390.000	49.06	peak	-4.45	44.61	74.00	150	42	-29.39	
*	2390.000	38.92	AVG	-4.45	34.47	54.00	150	42	-19.53	