

47 CFR PART 15 SUBPART C TEST REPORT

for

PC Speakers

Model No.: SP10

FCC ID: YWO-SP10

of

Applicant: ELECOM CO., LTD.

**Address: Fushimimachi 4-1-1, Chuo-ku, Osaka City, Osaka
Japan 541-8765**

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.: W6M22412-24038-C-1

6F., No. 58, Ln. 188, Rueiguang Rd., Neihu Dist., Taipei City, Taiwan (R.O.C.)
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Registration number: W6M22412-24038-C-1

FCC ID: YWO-SP10

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1 General Information

1.1 Notes

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

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

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

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

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

Laboratory disclaimer-

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

Tester:

April 10, 2025

Sora Kuo

Sora

Date

WTS-Lab.

Name

Signature

Technical responsibility for area of testing:

April 10, 2025

Kevin Wang

Kevin Wang

Date

WTS

Name

Signature



Worldwide Testing Services(Taiwan) Co., Ltd.

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1.2 Testing laboratory

1.2.1 Location

10m OATS

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

3 meter semi-anechoic chamber

No. 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: ELECOM CO., LTD.

Street: Fushimimachi 4-1-1, Chuo-ku,

City: Osaka City, Osaka

Country: Japan 541-8765

1.4 Application details

Date of receipt of test item: January 14, 2025

Date of test: from January 15, 2025 to April 02, 2025



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1.5 General information of Test item

Type of product: PC Speakers

Type identification: SP10

Multi-listing model no.: ./.

Brand name: ELECOM

Sample no.: #02

Technical data

Frequency band: 2402 - 2480 MHz

Bluetooth		
Mode	Channel/Frequency	Power (dBm)
BR	Ch 0 : 2402 MHz	-3.41
	Ch 39 : 2441 MHz	-2.85
	Ch 78 : 2480 MHz	-2.43
EDR	Ch 0 : 2402 MHz	-2.35
	Ch 39 : 2441 MHz	-1.80
	Ch 78 : 2480 MHz	-1.45

Power supply: USB 5Vd.c.

Operation modes: Duplex

Modulation type: GFSK、 $\pi/4$ DQPSK、8DPSK

Antenna type: Inverted F antenna

Antenna gain: -0.68 dBi

Host device: none

Classification:

Fixed Device	☐
Mobile Device (Human Body distance > 20cm)	☐
Portable Device (Human Body distance < 20cm)	☒
Modular Radio Device	☐

Manufacturer: (if applicable)

Name: ./.

Street: ./.

Town: ./.

Country: ./.

1.6 Test standards

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

ANSI C63.10-2013



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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

Details of power supply: USB 5Vd.c.

Extreme conditions parameters: test voltage : -- extreme
min : -- V
max : -- V

Test item Name	Uncertainty
Estimation Result of Uncertainty of Conducted Emission (Power Line Conducted Emission)	Expanded Uncertainty : AMN : 0.94 dB Voltage probe : 1.21 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 Emissions from Digital Part)	Expanded Uncertainty : 0.009-30 MHz : 1.85 dB 30-1000 MHz : 3.92 dB 1-18 GHz : 3.19 dB 18-40 GHz : 1.90 dB
Estimation Result of Uncertainty of Bandwidth Measurement (20 dB Bandwidth)	Expanded Uncertainty : 0.37 kHz
Estimation Result of Uncertainty of Conducted Output Power Measurement (Peak Output Power (transmitter))	Expanded Uncertainty : 1.63 dB
Estimation Result of Uncertainty of Band Edge Measurement (Band-edge Compliance of RF Emissions)	Expanded Uncertainty : 0.63 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 : 0.18 ms

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



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2.3 Test Equipment List

Max Output Power & 20DB BANDWIDTH & BANDEDGE & FREQUENCY SEPARATION & NUMBER OF HOPPING & DWELL TIME

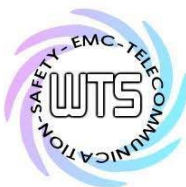
Code No.	Test equipment	Mode No.	Serial No.	Brand	Cal. Date	Next Cal. Date
ETSTW-RE 050	Attenuator 10dB	50HF-010-1	None	JFW	2025/2/14	2026/2/13
ETSTW-RE 055	SPECTRUM ANALYZER	FSU 26	200074	R&S	2025/3/5	2026/3/4
ETSTW-RE 099	DC Block	50DB-007-1	None	JFW	2025/2/14	2026/2/13
ETSTW-Cable 030	Microwave Cable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

Spurious Emission (966A)

Code No.	Test equipment	Mode No.	Serial No.	Brand	Cal. Date	Next Cal. Date
ETSTW-RE 153	Signal Analyzer	FSV40	101929	R&S	2024/9/11	2025/9/10
ETSTW-RE 154	EMI Test Receiver	ESR3	102829	R&S	2025/2/14	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	2025/3/10	2026/3/9
ETSTW-RE 178	Double Ridged Guide Horn Antenna	DRH18-E	210505A18ES	RFSPIN	2025/3/7	2026/3/6
ETSTW-Cable 077	SMA type cable (10m)	EMC104-SM-SM-10000	230511	EMCI	2024/7/12	2025/7/11
ETSTW-Cable 084	SMA type cable (1m)	SF104-11SMA-1000	816477/4	HONOVA	2024/7/12	2025/7/11
ETSTW-Cable 089	SMA type cable (2m)	SF104-11SMA-2000	SN 811889/4	HUBER+SUHNER	2024/7/12	2025/7/11
WTSTW-SW 002	EMI TEST SOFTWARE	EZ EMC	None	Farad	Version ETS-03A1 Version EMEC-3A1+	
ETSTW-RE 018	MICROWAVE HORN ANTENNA	AT4560	27212	AR	2024/8/1	2025/7/31
ETSTW-RE 088	SOLID STATE AMPLIFIER	KMA180265A01	99057	KMIC	2024/9/13	2025/9/12
ETSTW-Cable 028	Microwave Cable	FA147A0015M2020	30064-2	UTIFLEX	2024/9/13	2025/9/12
ETSTW-Cable 029	Microwave Cable	FA147A0015M2020	30064-3	UTIFLEX	2024/9/13	2025/9/12

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	2024/10/22	2025/10/21
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	2024/11/7	2025/11/6
WTSTW-SW 002	EMI TEST SOFTWARE	EZ EMC	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 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. The ambient temperature of the UUT was 23°C with a humidity of 40 %.

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 dBμV) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB.

Example:

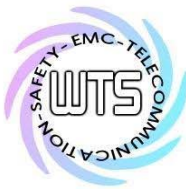
Freq (MHz)	METER READING + ACF + CABLE LOSS (to the receiver) = FS
33	20 dBμV + 10.36 dB + 6 dB = 36.36 dBμV/m @3m

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

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

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

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



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

The formula is as follows:

Average = Peak + Duty Factor

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

$T = 100\text{ms}$ 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)	☒	☒	☐
Equivalent radiated Power	15.247(b)	☒	☒	☐
Spurious Emissions radiated – Transmitter operating	15.247(d):15.209	☒	☒	☐
Spurious Emissions conducted – Transmitter operating	15.247	☐	☐	☐
Carrier Frequency Separation	15.247(a) (1)	☒	☒	☐
Number of Hopping Frequencies	15.247(a) (1)(i)	☒	☒	☐
Time of Occupancy (Dwell Time)	15.247(a) (1)(i)	☒	☒	☐
20 dB Bandwidth	15.247(a) (1)(i)	☒	☒	☐
Band-edge Compliance of RF Emission	15.247(d)	☒	☒	☐
Radiated Emission from Receiver Part	15.109	☐	☐	☐
Power Line Conducted Emission	15.207(a)	☒	☒	☐

The follows is intended to leave blank.



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3.1 Peak Output Power (transmitter)

FCC Rule: 15.247

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: January 20, 2025

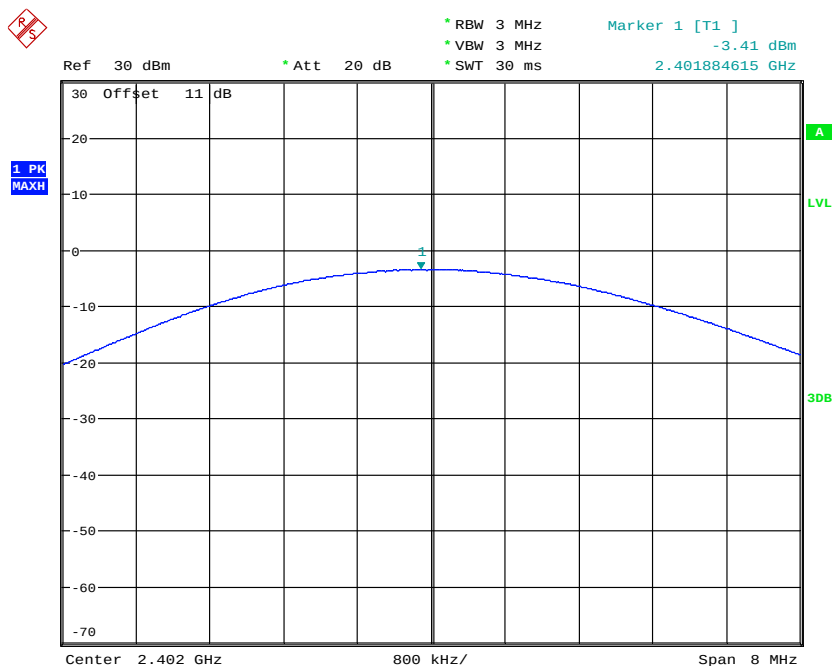
Temperature: 21.5°C

Humidity: 57.1 %

Tester: Sora

Band	Mode	Channel/Frequency	Power (dBm)	Limit (dBm)
2.4GHz	BR	Ch 0 : 2402 MHz	-3.41	21
		Ch 39 : 2441 MHz	-2.85	21
		Ch 78 : 2480 MHz	-2.43	21
	EDR	Ch 0 : 2402 MHz	-2.35	21
		Ch 39 : 2441 MHz	-1.80	21
		Ch 78 : 2480 MHz	-1.45	21

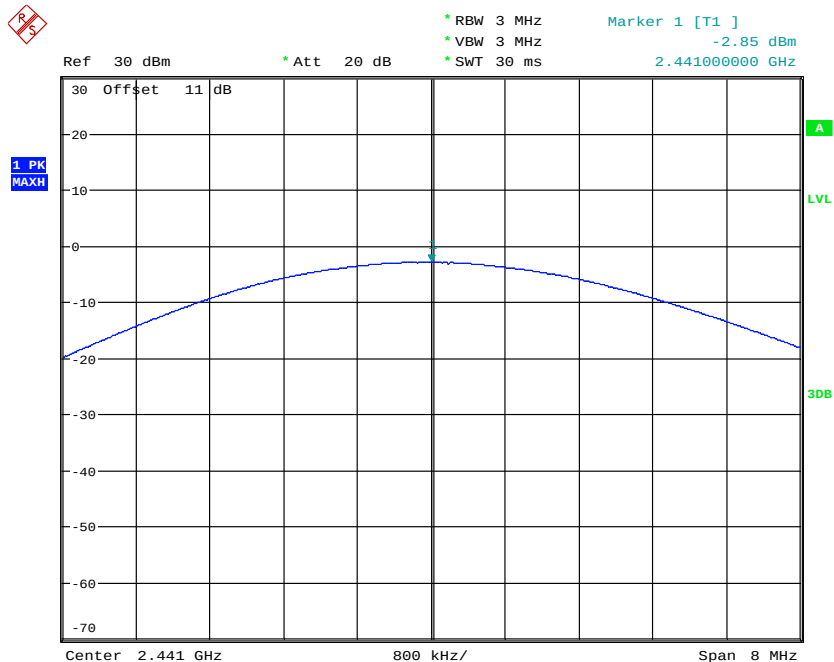
Normal mode



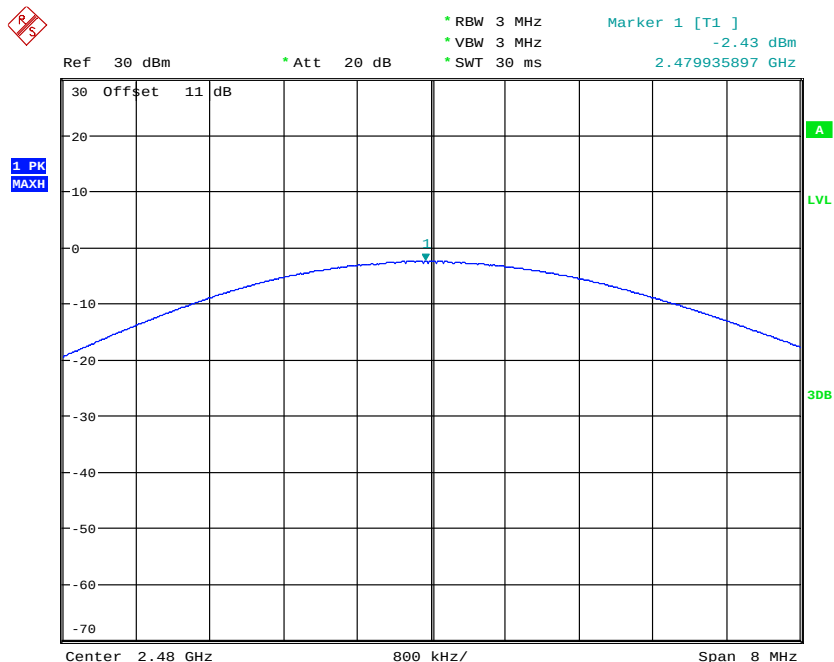
MAX OUTPUT POWER CH0
Date: 20.JAN.2025 10:35:05



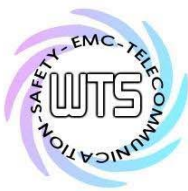
Registration number: W6M22412-24038-C-1
FCC ID: YWO-SP10



MAX OUTPUT POWER CH39
Date: 20.JAN.2025 10:36:37



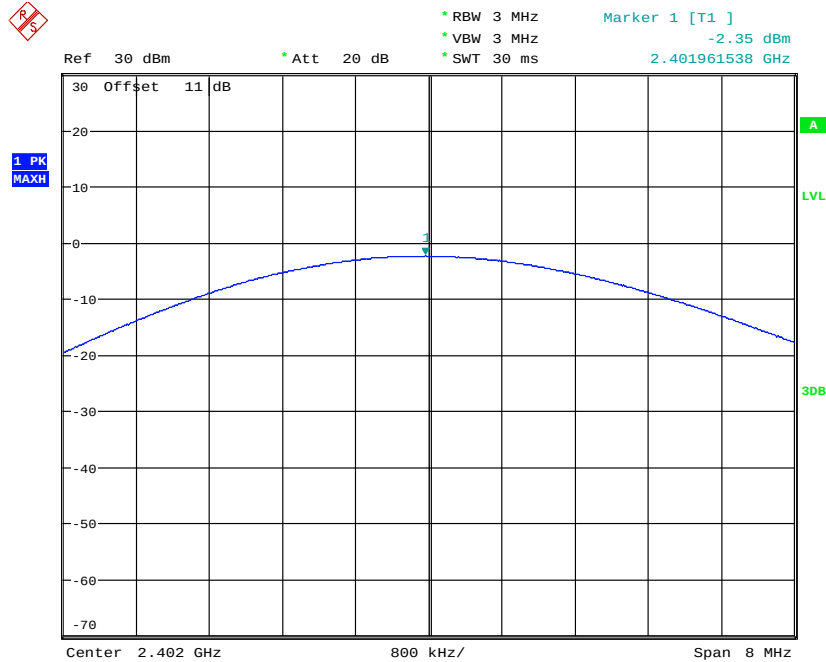
MAX OUTPUT POWER CH78
Date: 20.JAN.2025 10:37:05



Registration number: W6M22412-24038-C-1

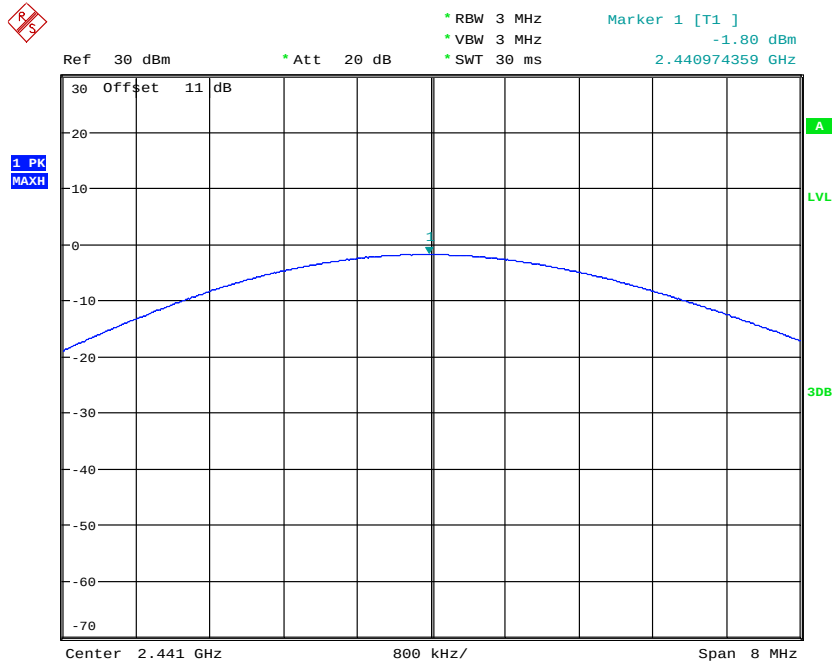
FCC ID: YWO-SP10

EDR mode



MAX OUTPUT POWER CH0 EDR MODE

Date: 20.JAN.2025 10:37:49



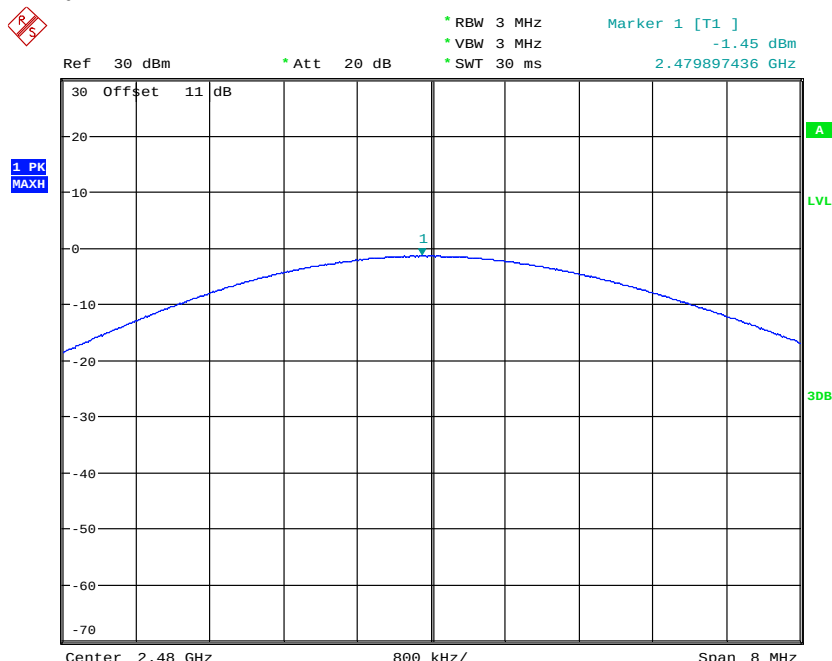
MAX OUTPUT POWER CH39 EDR MODE

Date: 20.JAN.2025 10:38:29



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MAX OUTPUT POWER CH78 EDR MODE
Date: 20.JAN.2025 10:39:41

Limits:

Frequency (MHz)	Number of hopping channels			
	≥ 75	≥ 50	$49 \geq 25$	$74 \geq 15$
902-928	--	30 dBm	24 dBm	--
2400-2483.5 MHz	30 dBm	--	--	21 dBm
5725-5850 MHz	30 dBm	--	--	--

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



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3.2 Transmitter Radiated Emissions in restricted Bands

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

Radiated emission measurements were performed from 30 MHz to 26000 MHz.

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

RES BW VID BW

Frequency <1 GHz 100 kHz 100 kHz (Peak measurements)

Frequency >1 GHz 1 MHz 1 MHz (Peak measurements)

1 MHz 1 MHz (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 960	500	54.0

For frequencies above 1GHz (Average measurements).

Guidance on Measurement of FHSS Systems:

“If the emission is pulsed, modify the unit for continues operation , use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation.” Here the correction was added to the limit instead subtracted from the reading.

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

For frequencies above 1GHz (Average measurements).

Limit – duty cycle correction

No duty cycle correction was added to the reading.

54.0dB μ V/m

For frequencies above 1GHz (Peak measurements).

Limit + 20dB

54.0dB μ V/m + 20 dB= 74 dB μ V/m

Explanation: See attached diagrams in appendix.



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3.3 Spurious emissions (tx)

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

In any 100 kHz bandwidth outside the frequency band in which the intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c))

SAMPLE CALCULATION OF LIMIT. All results will be updated by an automatic measuring system in accordance to 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 an 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 "Marker-Delta-Method" or the „Duty-Cycle Correction Factor“.

Summary table with radiated data of the test plots

Model: SP10 Date: --
 Mode: -- Temperature: -- °C Engineer: --
 Polarization: Horizontal 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)	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.			
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--



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Polarization: Vertical

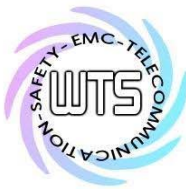
Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--

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

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

All other not noted test plots do not contain significant test results in relation to the limits.

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



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3.4 Carrier Frequency Separation

Carrier Frequency Separation was measured with modulation (declared by manufacturer).

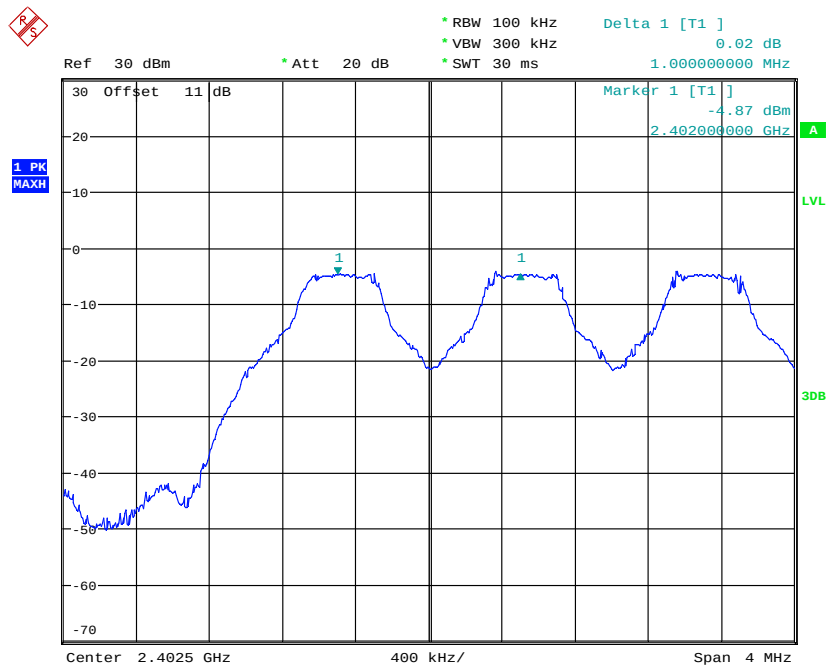
According to FCC rules part 15 subpart C §15.247 frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or 20 dB bandwidth of the hopping channel, whichever is greater.

Test date: January 20, 2025

Temperature: 21.5°C

Humidity: 57.1 %

Tester: Sora

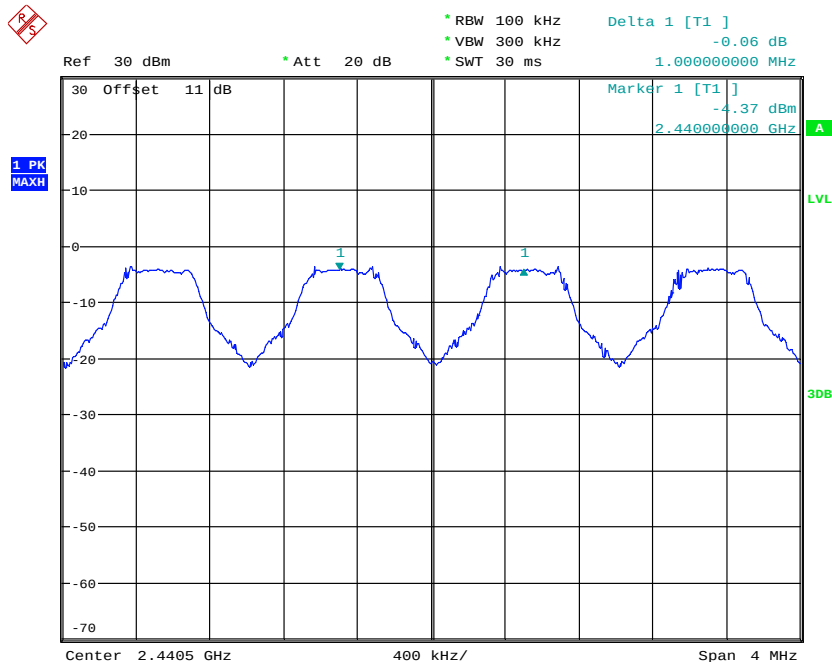


FREQUENCY SEPARATION CH0

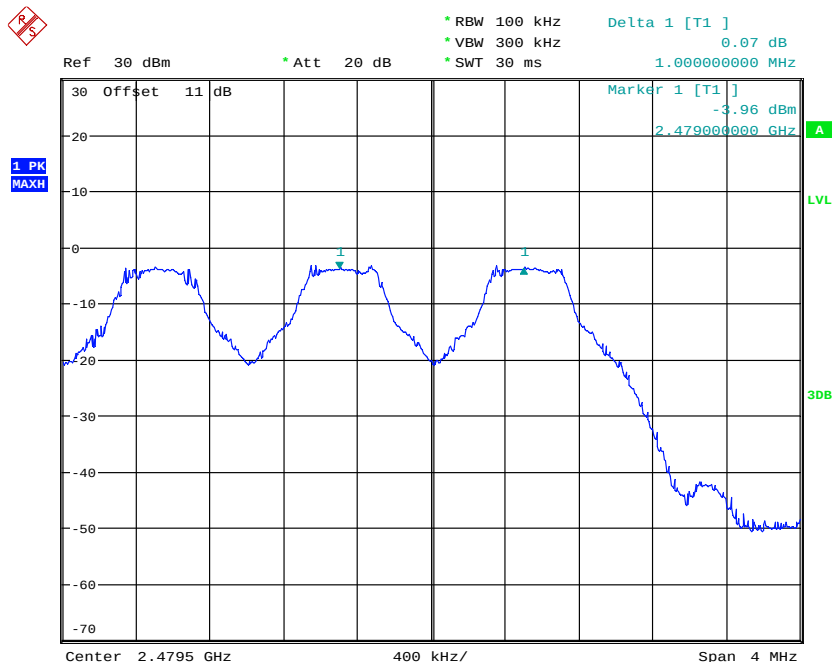
Date: 20.JAN.2025 10:48:09



Registration number: W6M22412-24038-C-1
FCC ID: YWO-SP10



FREQUENCY SEPARATION CH39
Date: 20.JAN.2025 10:49:01



FREQUENCY SEPARATION CH78
Date: 20.JAN.2025 10:49:57



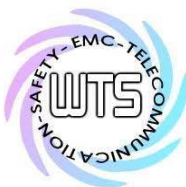
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22412-24038-C-1

FCC ID: YWO-SP10

Limits:

Frequency (MHz)	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: W6M22412-24038-C-1

FCC ID: YWO-SP10

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 least 75 hopping frequencies.

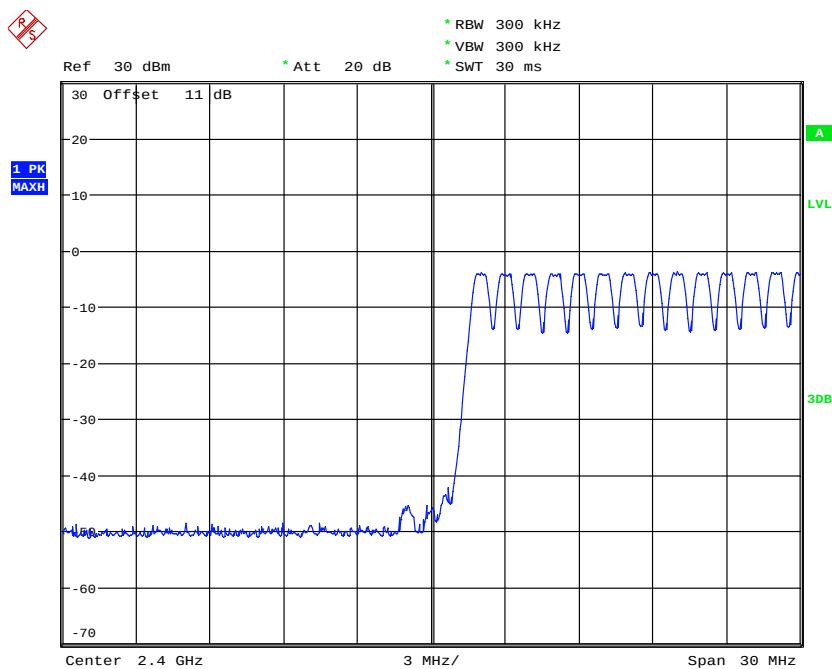
For frequency hopping systems operating in the 902-928 MHz band: if the 20dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies; if the 20dB bandwidth of the hopping channel 250 kHz or greater, the system shall use at least 25 hopping frequencies.

Test date: January 20, 2025

Temperature: 21.5°C

Humidity: 57.1 %

Tester: Sora



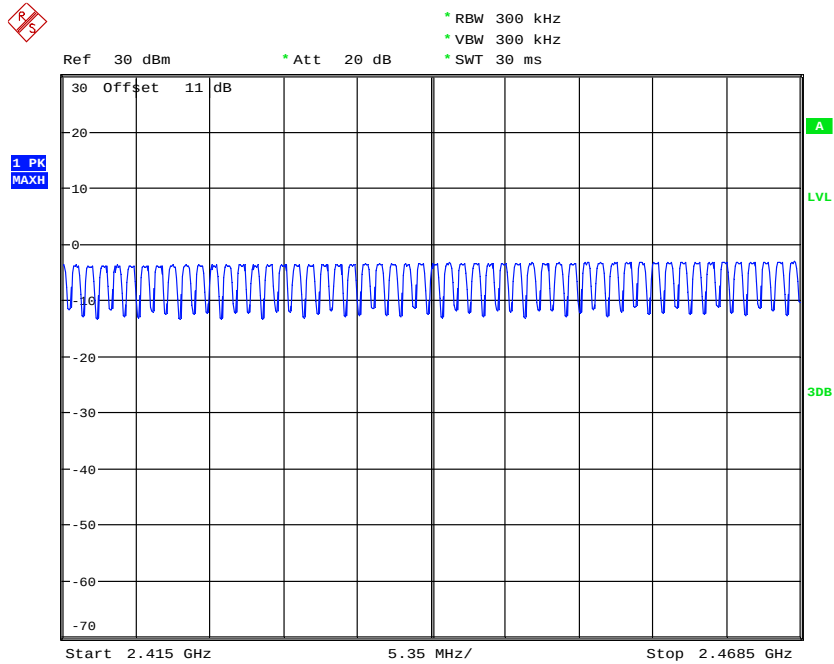
NUMBER OF HOPPING CH0-13

Date: 20.JAN.2025 10:45:05



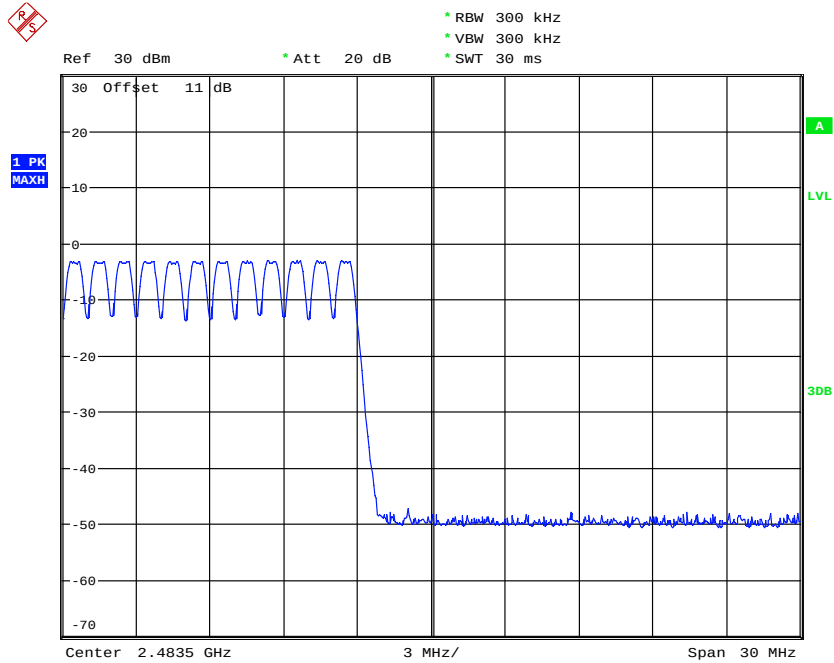
Registration number: W6M22412-24038-C-1

FCC ID: YWO-SP10



NUMBER OF HOPPING CH14-66

Date: 20.JAN.2025 10:47:09



NUMBER OF HOPPING CH67-78

Date: 20.JAN.2025 10:45:53



Registration number: W6M22412-24038-C-1

FCC ID: YWO-SP10

Limits:

Frequency (MHz)	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

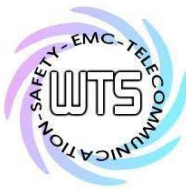
The generation of the hopping sequence is determined by the Bluetooth core specification and complies with the FCC requirements.

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: W6M22412-24038-C-1

FCC ID: YWO-SP10

3.6 Time of Occupancy (Dwell Time)

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

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

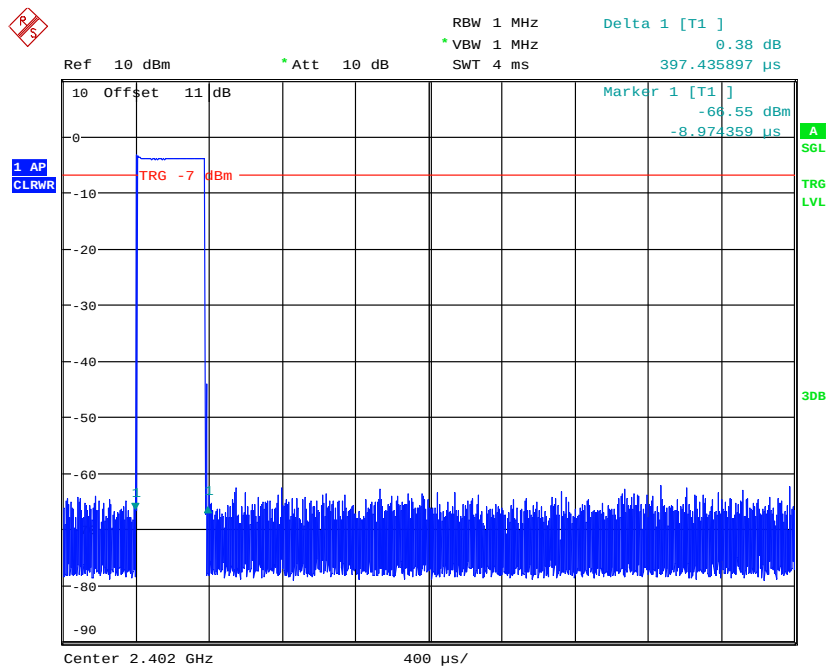
For frequency hopping systems operating in the 902-928 MHz band: if the 20dB bandwidth of the hopping channel is less than 250 kHz, the average time of occupancy on any frequency shall not greater than 0.4 seconds within a 20 second period; if the 20dB bandwidth of the hopping channel is 250 kHz or greater,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

Test date: January 20, 2025

Temperature: 21.5°C

Humidity: 57.1 %

Tester: Sora

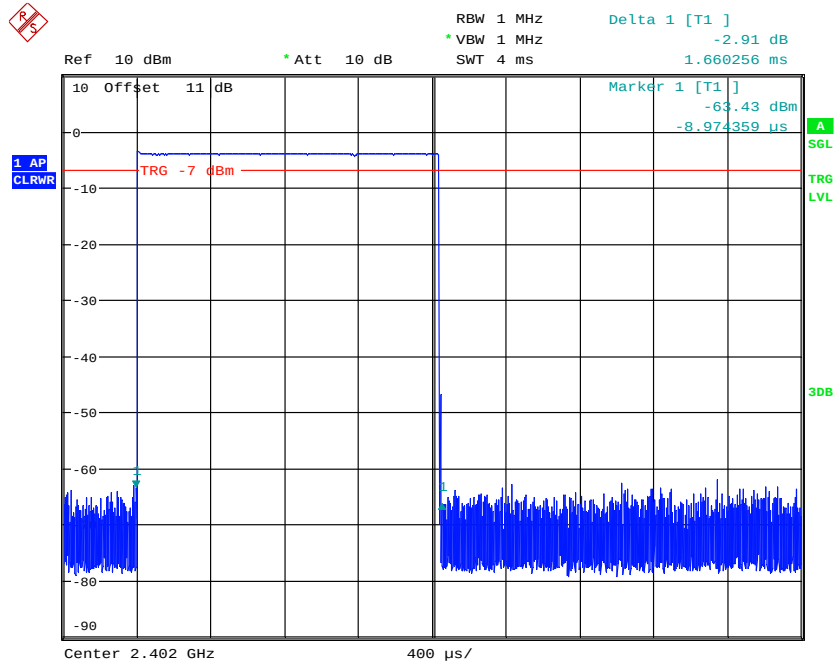


DWELL TIME CH0 DH1 (0.397ms * 320events = 127.04ms)

Date: 20.JAN.2025 10:54:25

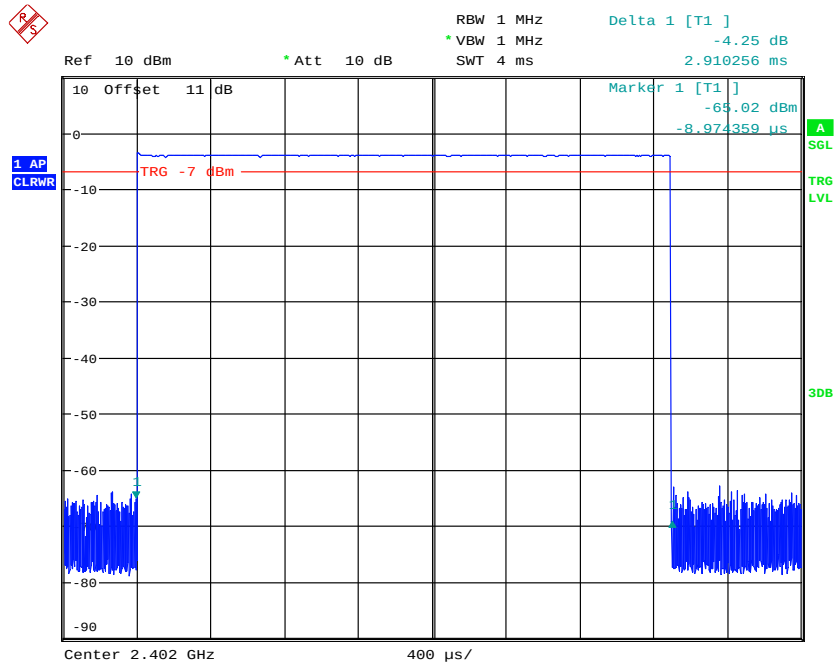


Registration number: W6M22412-24038-C-1
FCC ID: YWO-SP10



DWELL TIME CH0 DH3 (1.66ms * 160events = 265.6ms)

Date: 20.JAN.2025 10:57:01



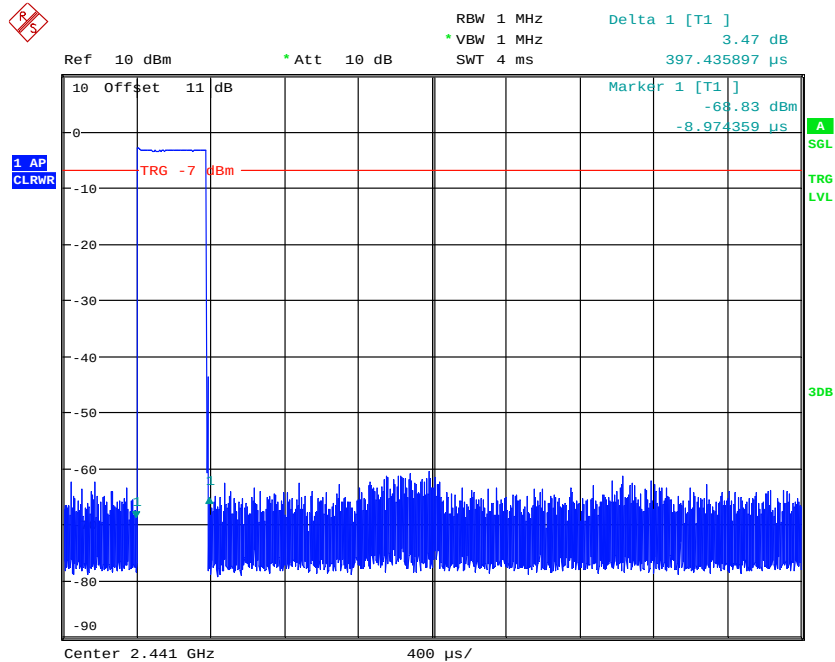
DWELL TIME CH0 DH5 (2.91ms * 106events = 308.46ms)

Date: 20.JAN.2025 10:57:51



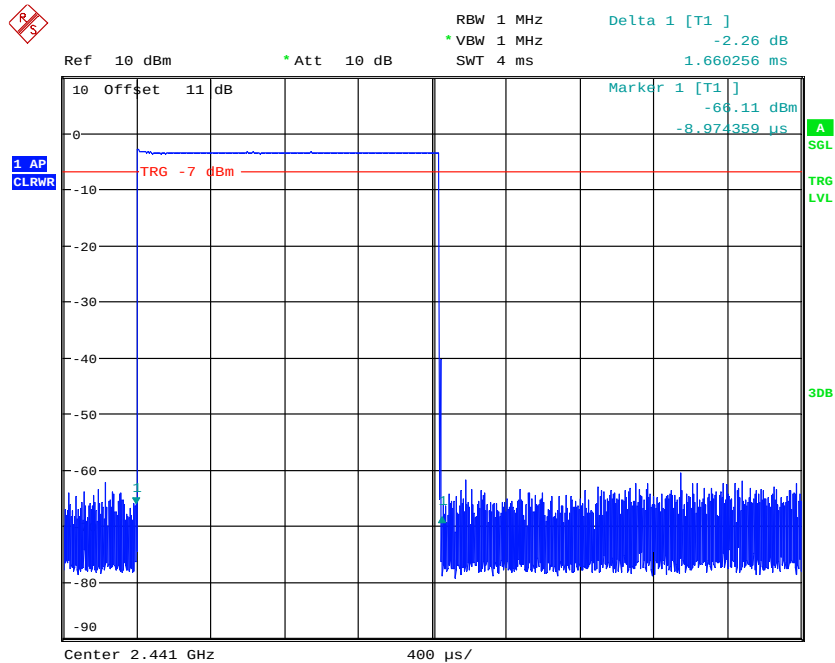
Registration number: W6M22412-24038-C-1

FCC ID: YWO-SP10



DWELL TIME CH39 DH1 (0.397ms * 320events = 127.04ms)

Date: 20.JAN.2025 10:55:07



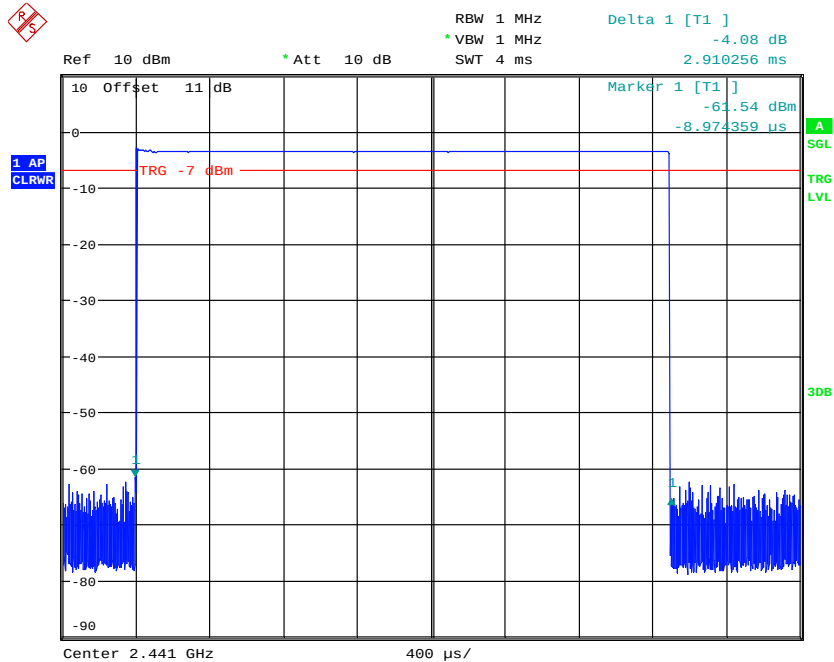
DWELL TIME CH39 DH3 (1.66ms * 160events = 265.6ms)

Date: 20.JAN.2025 10:56:38



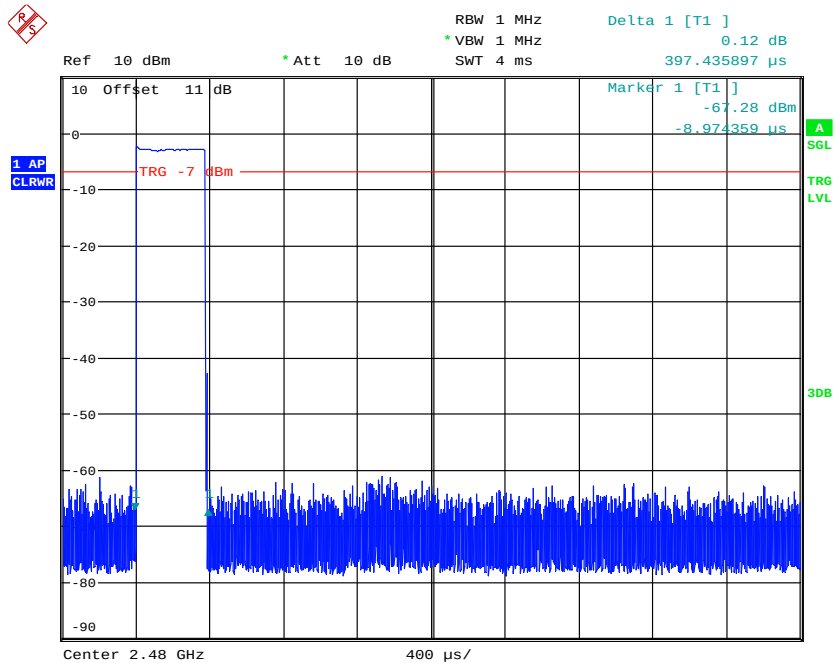
Registration number: W6M22412-24038-C-1

FCC ID: YWO-SP10



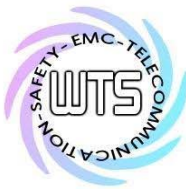
DWELL TIME CH39 DH5 (2.91ms * 106events = 308.46ms)

Date: 20.JAN.2025 10:58:15



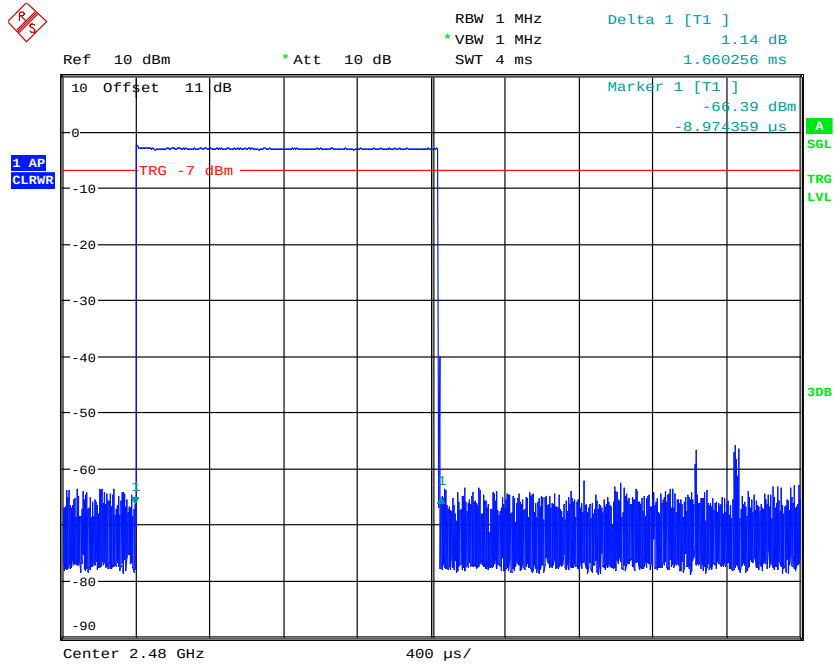
DWELL TIME CH78 DH1 (0.397ms * 320events = 127.04ms)

Date: 20.JAN.2025 10:55:27



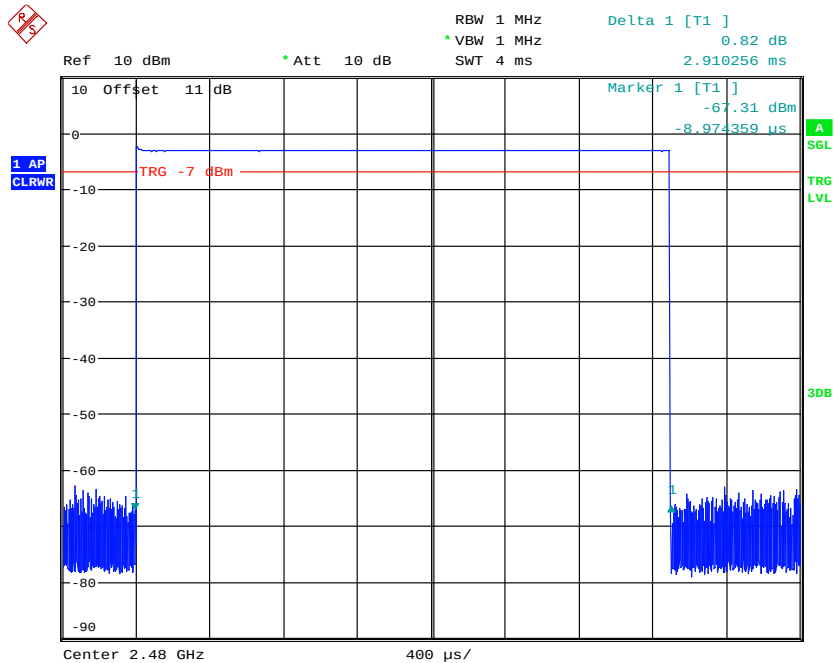
Registration number: W6M22412-24038-C-1

FCC ID: YWO-SP10



DWELL TIME CH78 DH3 (1.66ms * 160events = 265.6ms)

Date: 20.JAN.2025 10:56:21



DWELL TIME CH78 DH5 (2.91ms * 106events = 308.46ms)

Date: 20.JAN.2025 10:58:31



Registration number: W6M22412-24038-C-1

FCC ID: YWO-SP10

Limits and measurement periods:

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



FCC ID: YWO-SP10

3.7 20dB Bandwidth

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

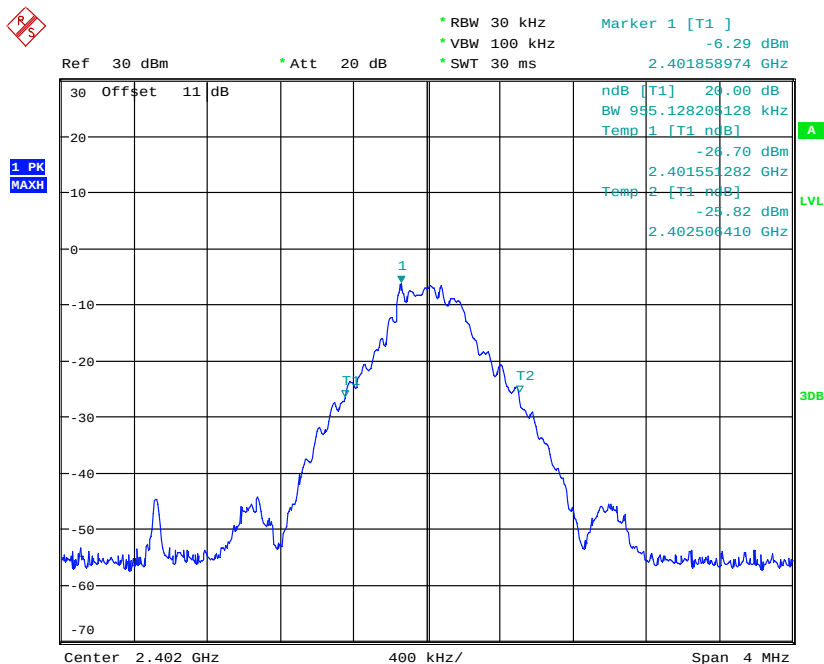
For frequency hopping systems operating in the 902-928 MHz band the maximum 20dB bandwidth of the hopping channel is 500 kHz.

Temperature: 21.5°C

Humidity: 57.1 %

Tester: Sora

Normal mode



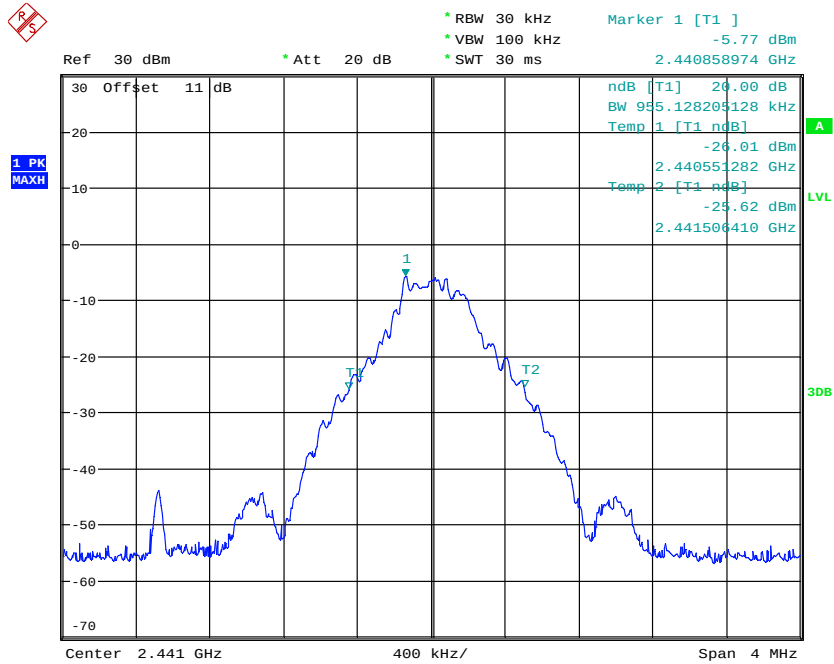
20DB BANDWIDTH CH0
Date: 20.JAN.2025 10:35:13



Worldwide Testing Services(Taiwan) Co., Ltd.

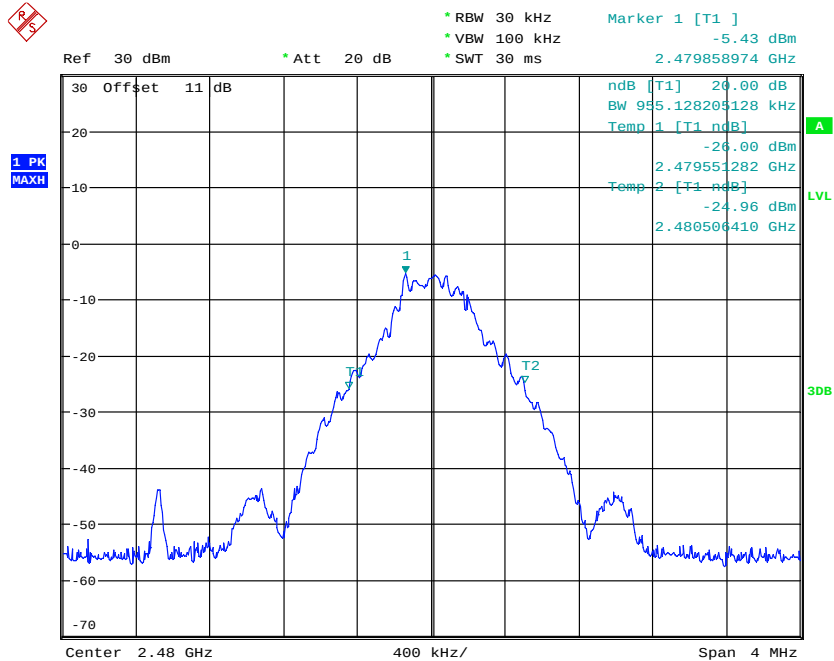
Registration number: W6M22412-24038-C-1

FCC ID: YWO-SP10



20DB BANDWIDTH CH39

Date: 20.JAN.2025 10:36:45



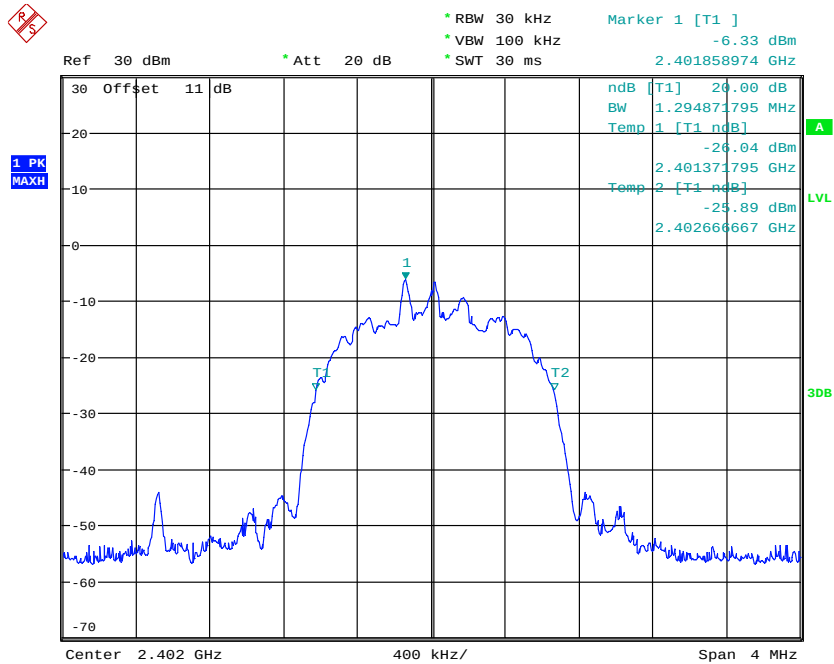
20DB BANDWIDTH CH78

Date: 20.JAN.2025 10:37:13

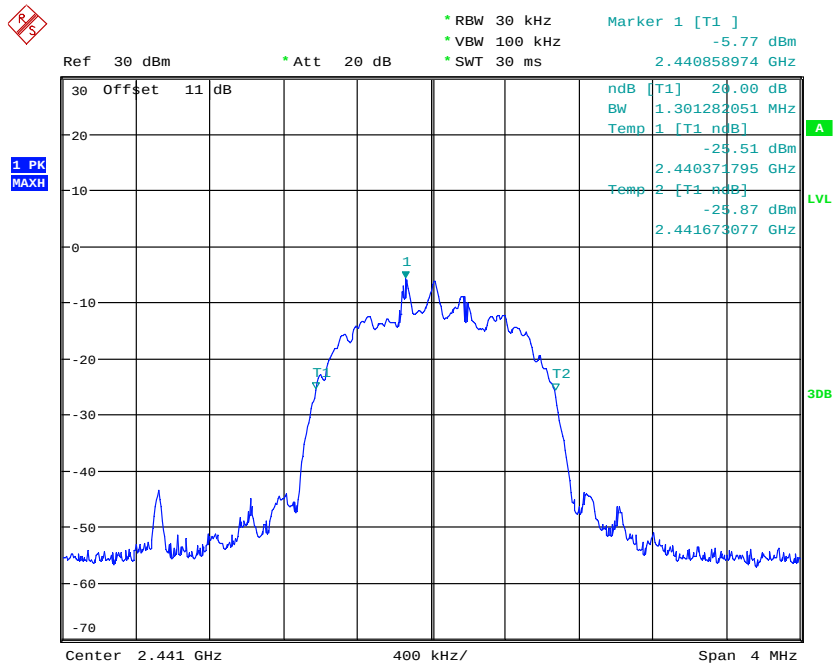


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22412-24038-C-1
FCC ID: YWO-SP10
EDR mode



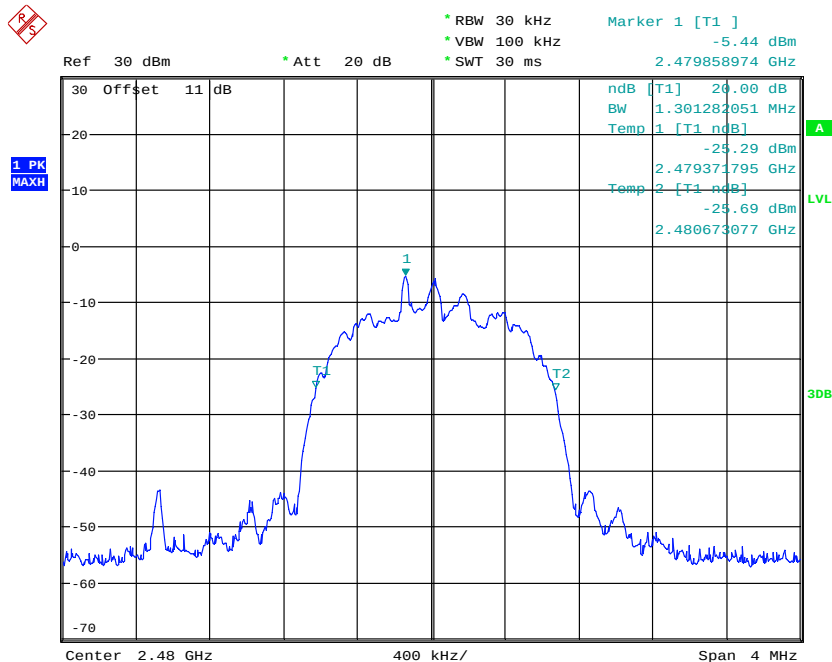
20DB BANDWIDTH CH0 EDR MODE
Date: 20.JAN.2025 10:37:57



20DB BANDWIDTH CH39 EDR MODE
Date: 20.JAN.2025 10:38:37

Registration number: W6M22412-24038-C-1

FCC ID: YWO-SP10



20DB BANDWIDTH CH78 EDR MODE

Date: 20.JAN.2025 10:39:49

Limits:

Frequency (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: W6M22412-24038-C-1

FCC ID: YWO-SP10

3.8 Band-edge Compliance of RF Emissions

According to FCC rules part 15 subpart C §15.247(c) 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.

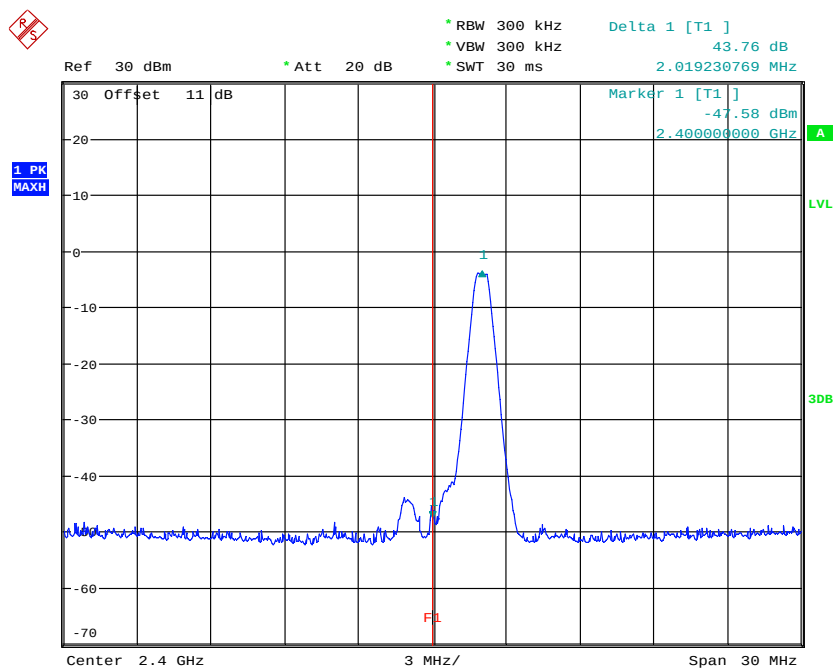
Test date: January 20, 2025

Temperature: 21.5°C

Humidity: 57.1 %

Tester: Sora

Normal mode

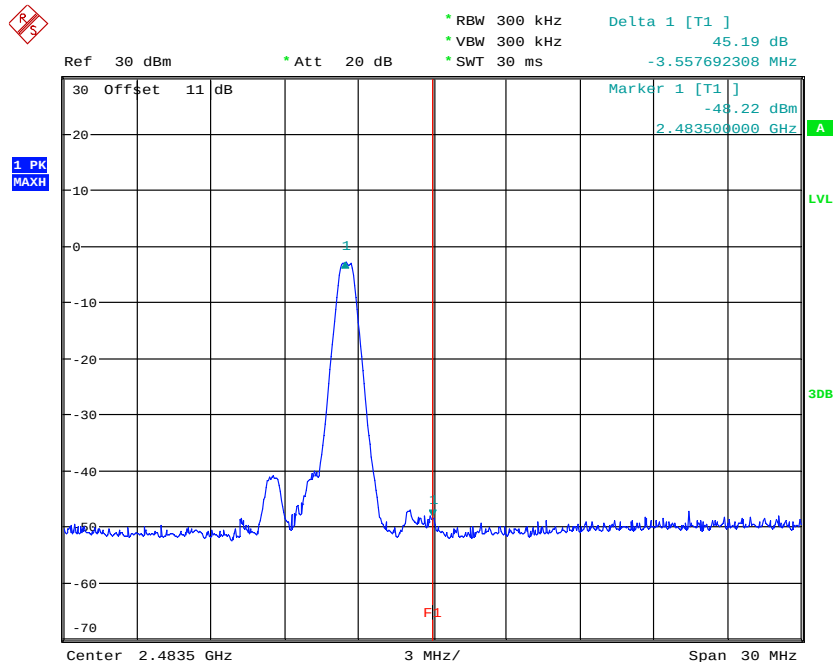


BANDEDGE CH0

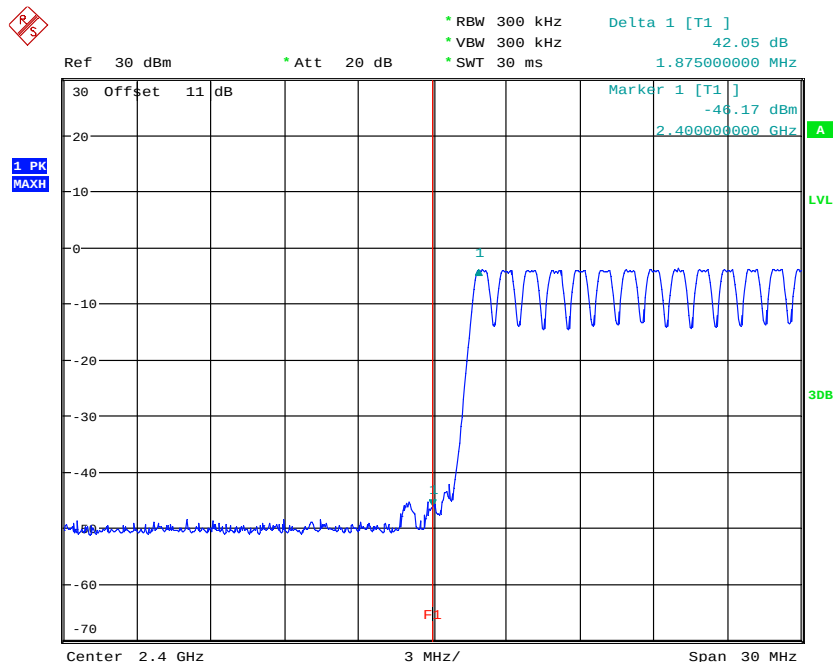
Date: 20.JAN.2025 10:35:25



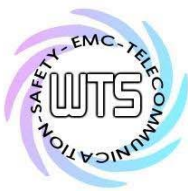
Registration number: W6M22412-24038-C-1
FCC ID: YWO-SP10



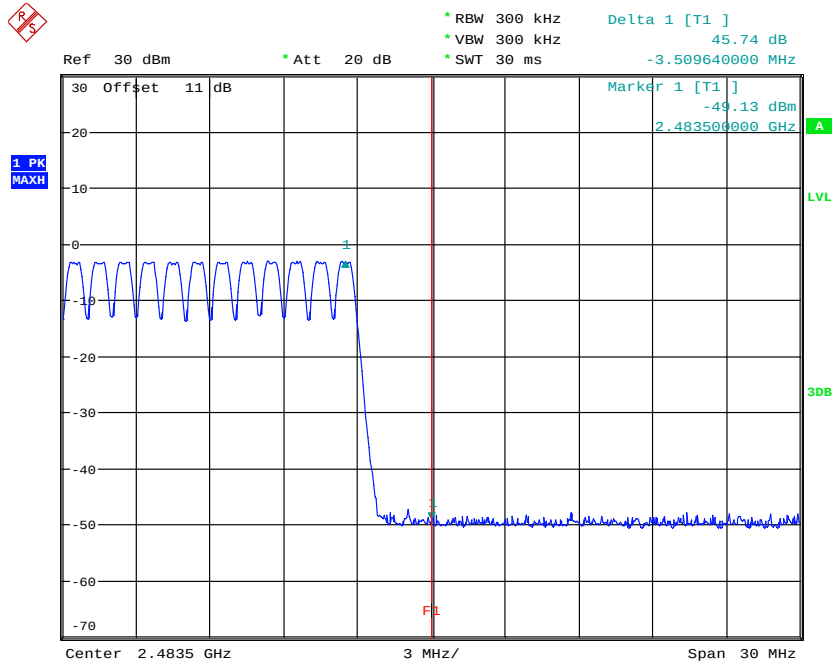
BANDEDGE CH78
Date: 20.JAN.2025 10:37:21



BANDEDGE CH0 HOPPING MODE
Date: 20.JAN.2025 10:45:06

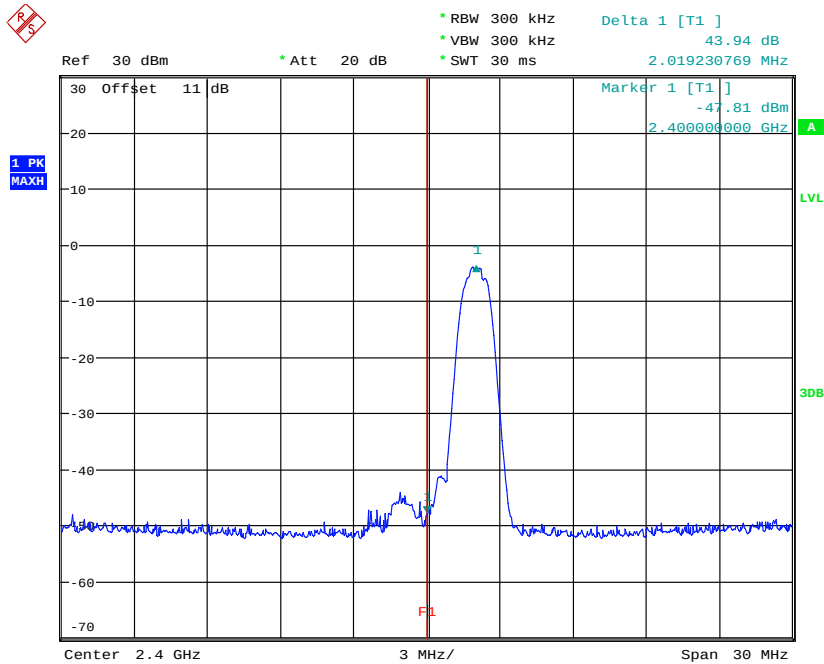


Registration number: W6M22412-24038-C-1
FCC ID: YWO-SP10



BANDEDGE CH78 HOPPING MODE
Date: 20.JAN.2025 10:45:54

EDR mode



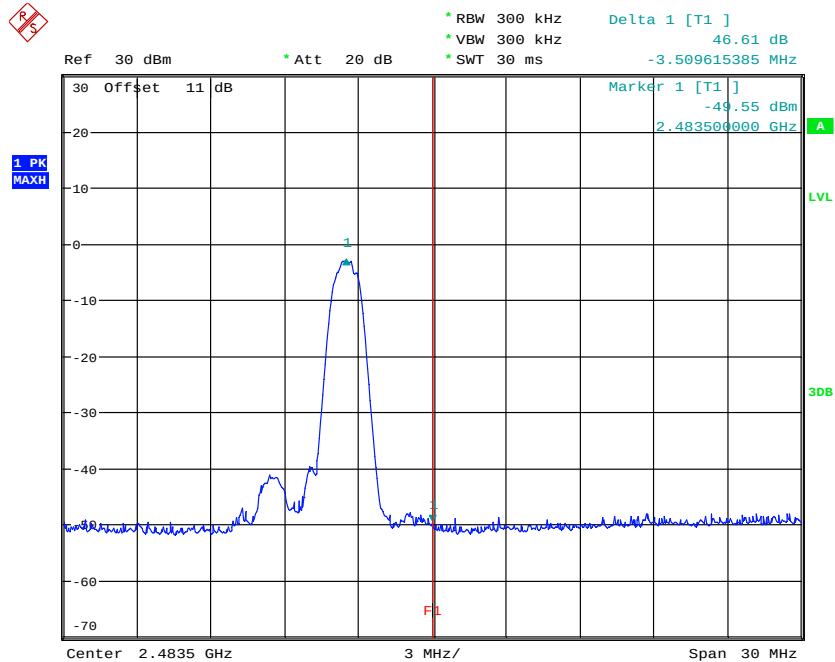
BANDEDGE CH0 EDR MODE
Date: 20.JAN.2025 10:38:05



Worldwide Testing Services(Taiwan) Co., Ltd.

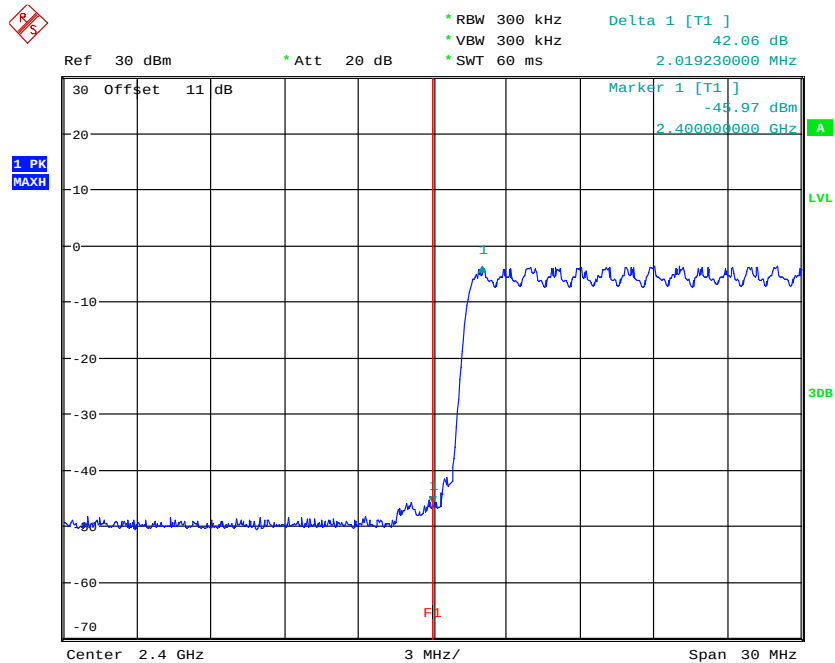
Registration number: W6M22412-24038-C-1

FCC ID: YWO-SP10



BANDEDGE CH78 EDR MODE

Date: 20.JAN.2025 10:40:01



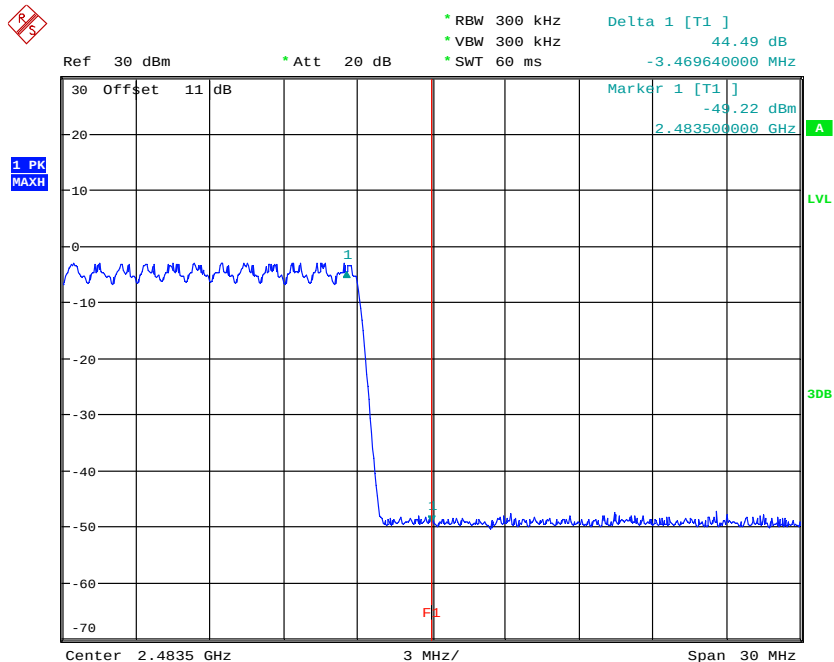
BANDEDGE CH0 EDR HOPPING MODE

Date: 20.JAN.2025 10:42:01



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22412-24038-C-1
FCC ID: YWO-SP10



BANDEDGE CH78 EDR HOPPING MODE
Date: 20.JAN.2025 10:43:53

Limits:

Frequency (MHz)	Limit
902 – 928	- 20 dB
2400 – 2483.5	
5725 - 5850	



Registration number: W6M22412-24038-C-1

FCC ID: YWO-SP10

3.9 Radiated Emissions from Digital Part

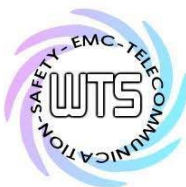
FCC Rule: 15.109

Summary table with radiated data of the test plots

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: The test results are listed in the separated test report no.: W6M22412-24038-P-15B.



Registration number: W6M22412-24038-C-1

FCC ID: YWO-SP10

3.10 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.

Note:

- 1. The formula of measured value as: Test Result = Reading + Correction Factor**
- 2. The Correction Factor = Cable Loss + LISN Insertion Loss + Pulse Limit Loss**
- 3. Detector function in the form : PK = Peak, QP = Quasi Peak, AV = Average**
- 4. All not in the table noted test results are more than 20 dB below the relevant limits.**
- 5. Up Line: QP Limit Line, Down Line: Ave Limit Line.**
- 6. Please refer test report no.: W6M22412-24038-P-15B**



Registration number: W6M22412-24038-C-1
FCC ID: YWO-SP10

Appendix

Measurement diagrams

Spurious Emissions radiated



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

Radiated Emission Measurement

Operator: Echo

File : 1

Data : #1

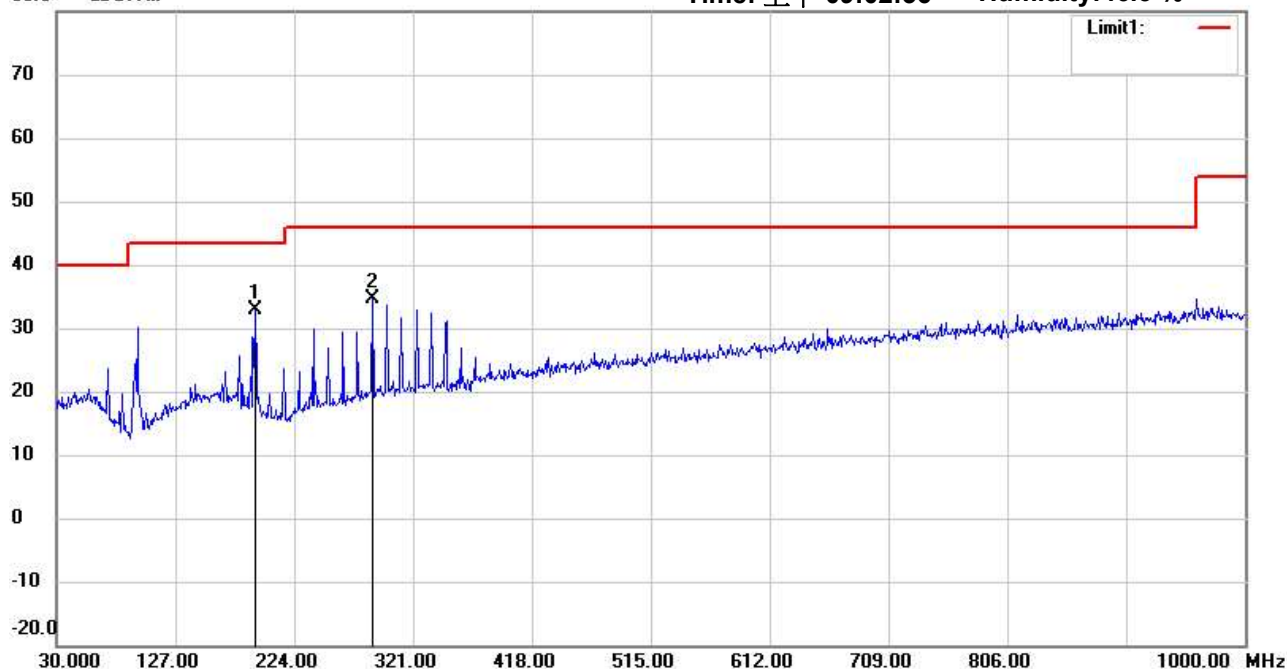
Date: 2025/3/22

Temperature: 22.8 °C

80.0 dBuV/m

Time: 上午 09:02:36

Humidity: 46.3 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

EUT : W6M22412-24038

M/N:

Test Mode : TX 2402MHz

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
*	191.9900	47.96	peak	-15.06	32.90	43.50	100	276	-10.60	
	288.0200	47.19	peak	-12.46	34.73	46.00	100	104	-11.27	

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



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

Radiated Emission Measurement

Operator: Echo

File : 1

Data : #2

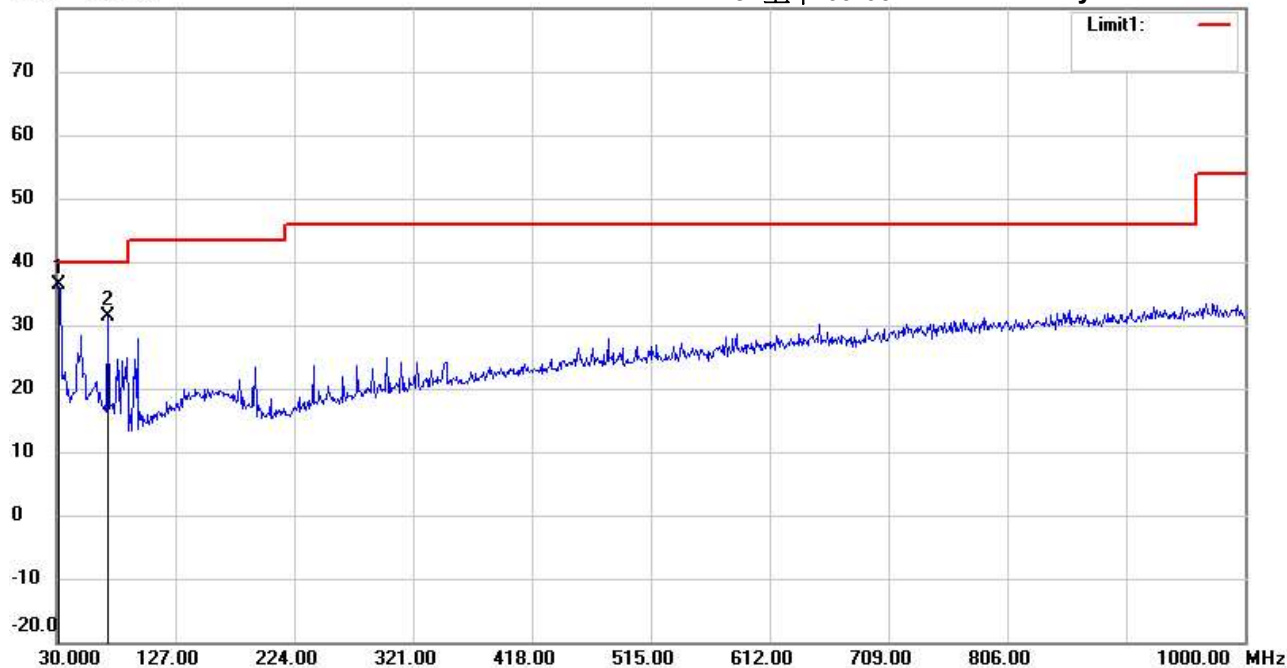
Date: 2025/3/22

Temperature: 22.8 °C

Time: 上午 09:03:21

Humidity: 46.3 %

80.0 dBuV/m



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

EUT : W6M22412-24038

M/N:

Test Mode : TX 2402MHz

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
*	31.4550	51.38	peak	-14.94	36.44	40.00	100	102	-3.56	
	71.7100	46.87	peak	-15.56	31.31	40.00	100	197	-8.69	

*: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: Echo

File : 3

Data : #1

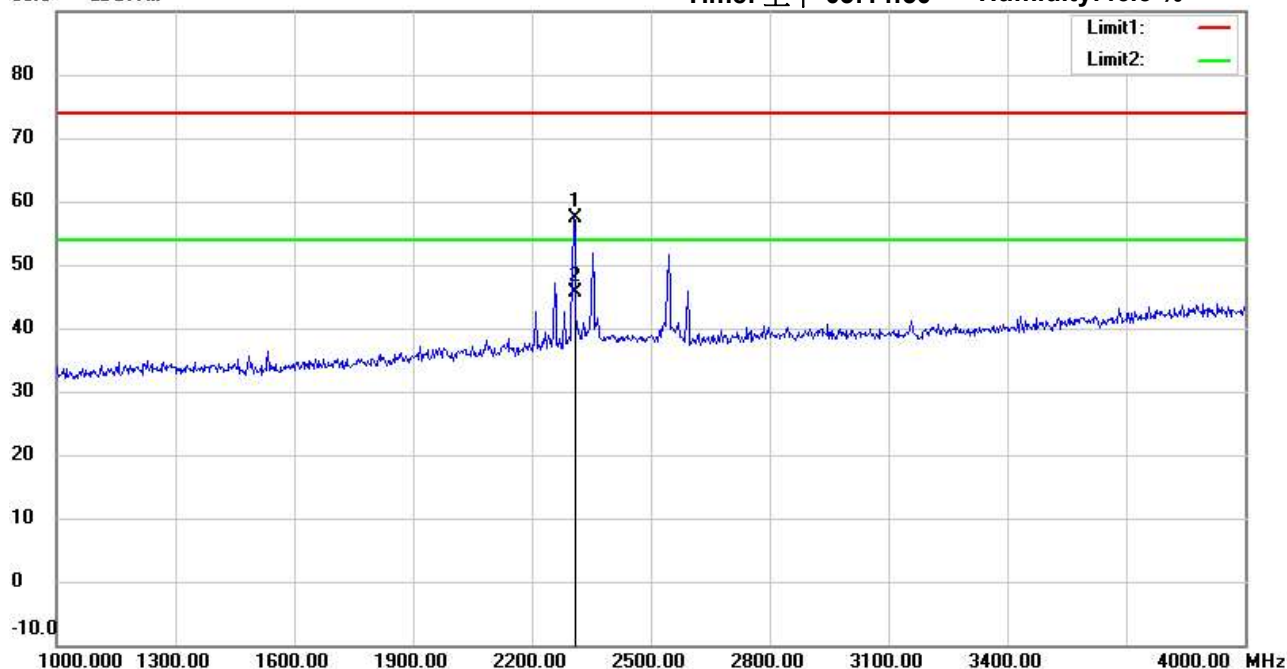
Date: 2025/3/22

Temperature: 22.8 °C

90.0 dBuV/m

Time: 上午 03:14:50

Humidity: 46.3 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22412-24038

M/N:

Test Mode : TX 2402MHz

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
	2306.500	60.96	peak	-3.60	57.36	74.00	150	360	-16.64	
*	2306.500	49.11	AVG	-3.60	45.51	54.00	150	360	-8.49	

*: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: Echo

File : 3

Data : #6

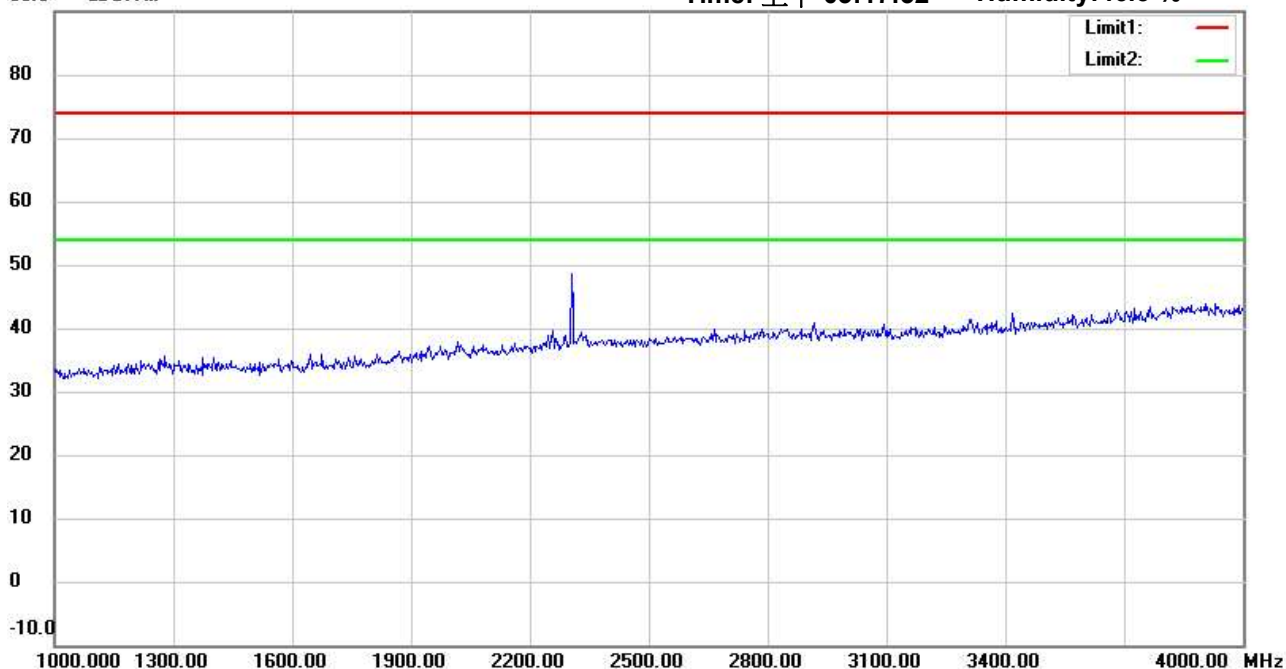
Date: 2025/3/22

Temperature: 22.8 °C

90.0 dBuV/m

Time: 上午 03:17:32

Humidity: 46.3 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22412-24038

M/N:

Test Mode : TX 2402MHz

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



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: Echo

File : 3

Data : #2

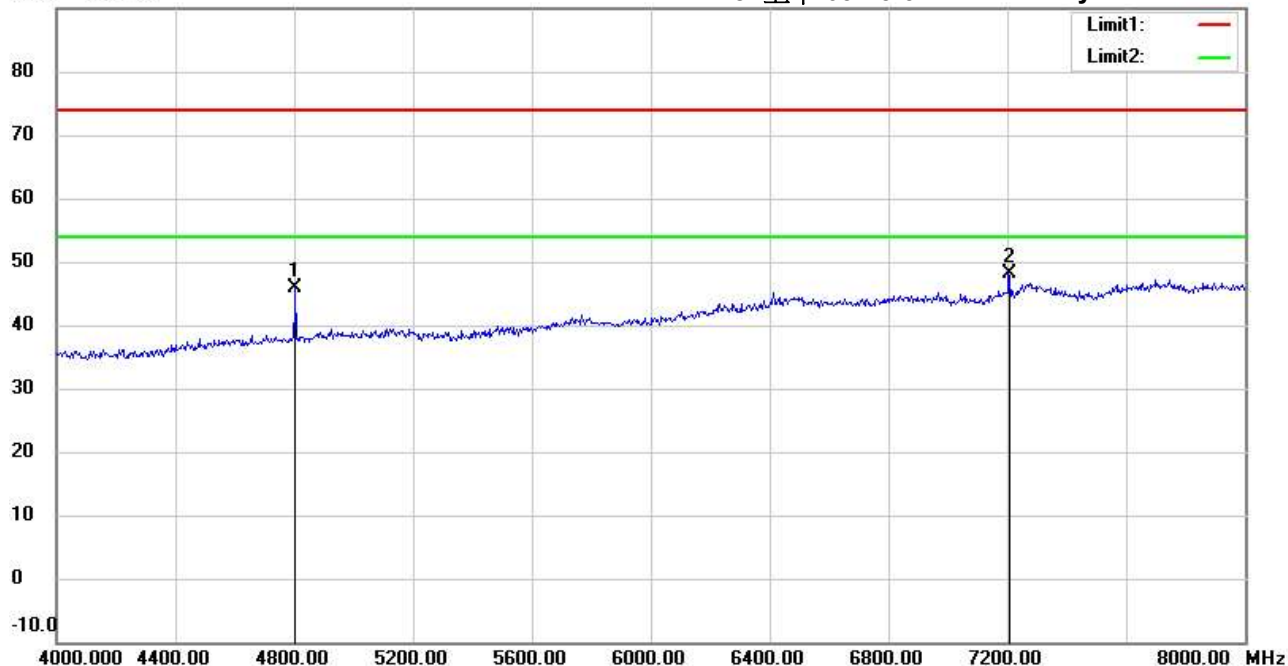
Date: 2025/3/22

Temperature: 22.8 °C

90.0 dBuV/m

Time: 上午 03:15:32

Humidity: 46.3 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22412-24038

M/N:

Test Mode : TX 2402MHz

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
	4804.000	40.75	peak	5.13	45.88	74.00	150	2	-28.12	
*	7206.000	36.33	peak	11.90	48.23	74.00	150	23	-25.77	

*: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: Echo

File : 3

Data : #7

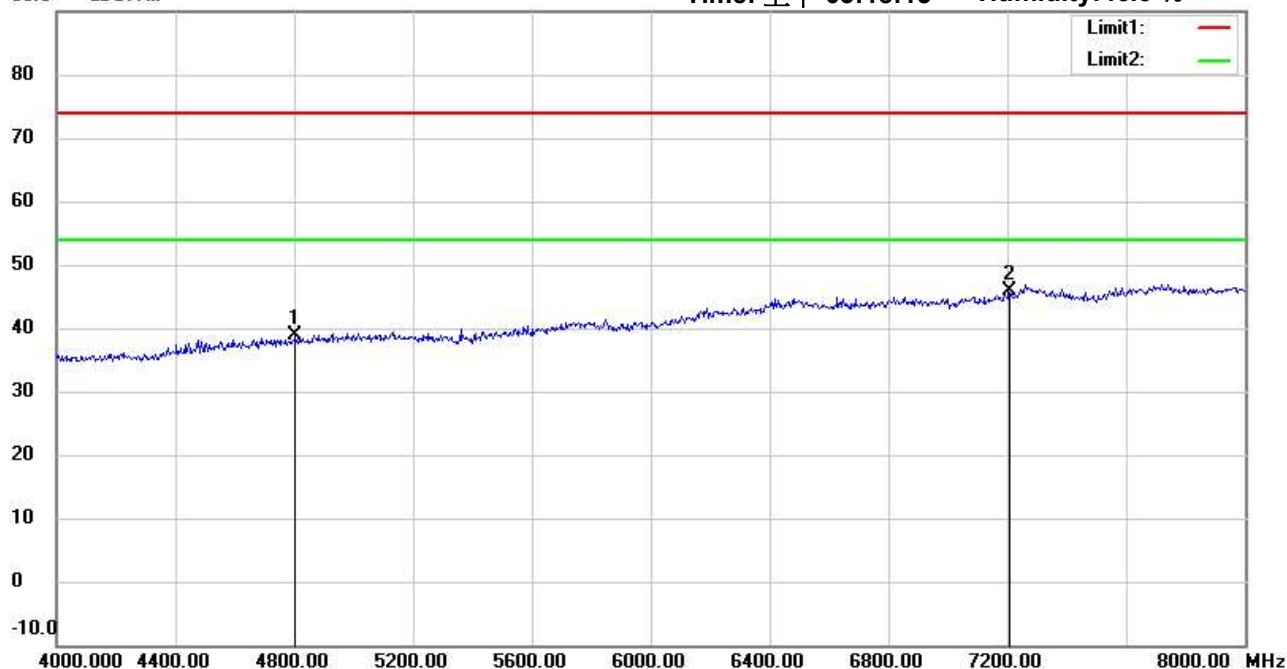
Date: 2025/3/22

Temperature: 22.8 °C

90.0 dBuV/m

Time: 上午 03:18:15

Humidity: 46.3 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22412-24038

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: Vertical

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
	4804.000	33.65	peak	5.13	38.78	74.00	150	150	-35.22	
*	7206.000	33.93	peak	11.90	45.83	74.00	150	34	-28.17	

*: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: Echo

File : 3

Data : #3

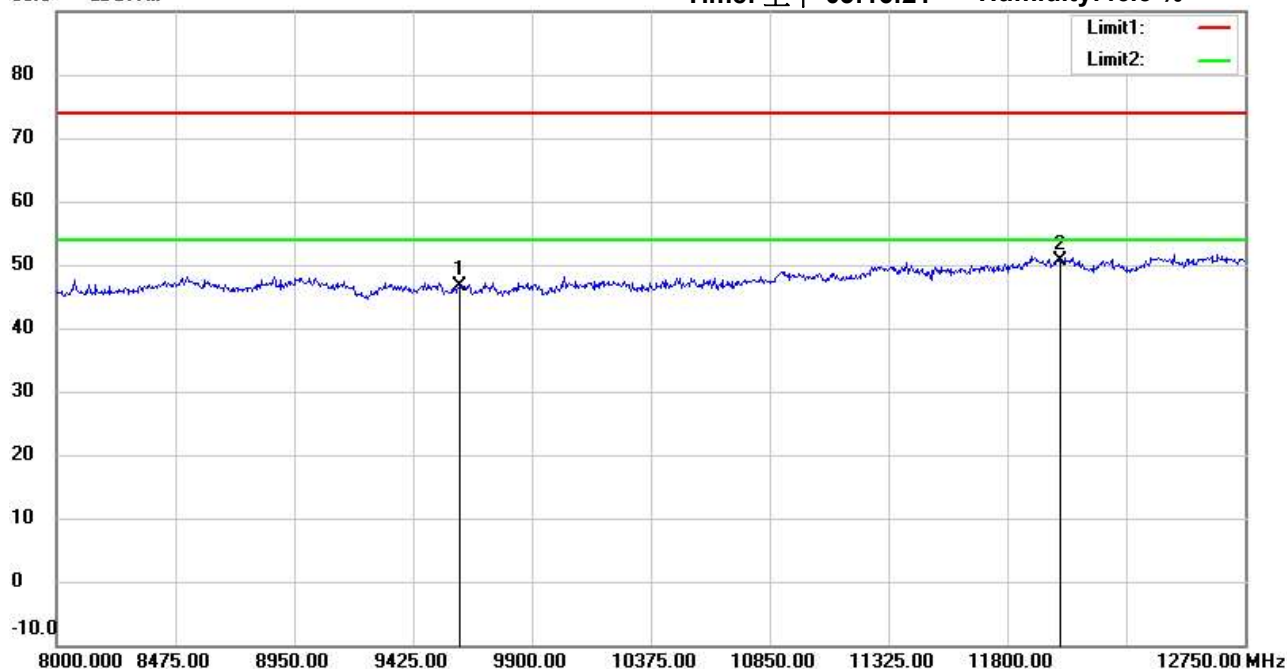
Date: 2025/3/22

Temperature: 22.8 °C

90.0 dBuV/m

Time: 上午 03:16:21

Humidity: 46.3 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22412-24038

M/N:

Test Mode : TX 2402MHz

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
	9608.000	33.00	peak	13.52	46.52	74.00	150	261	-27.48	
*	12010.000	33.06	peak	17.61	50.67	74.00	150	235	-23.33	

*: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: Echo

File : 3

Data : #8

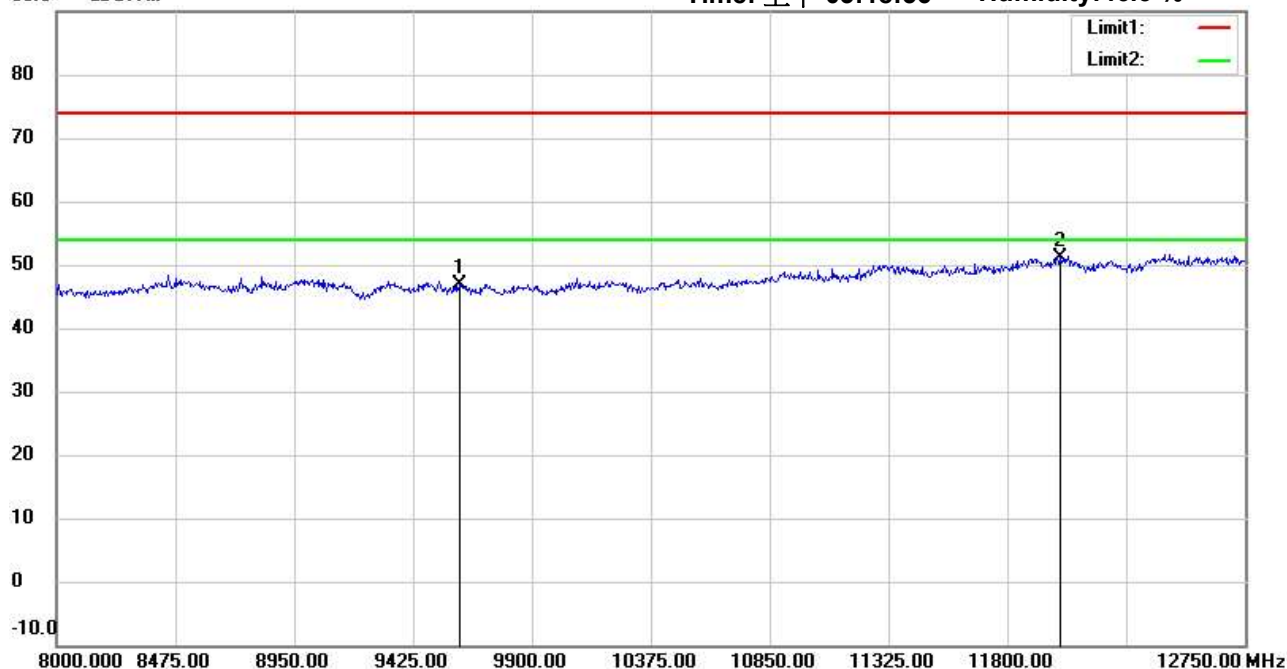
Date: 2025/3/22

Temperature: 22.8 °C

90.0 dBuV/m

Time: 上午 03:18:56

Humidity: 46.3 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22412-24038

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: Vertical

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
	9608.000	33.28	peak	13.52	46.80	74.00	150	351	-27.20	
*	12010.000	33.43	peak	17.61	51.04	74.00	150	338	-22.96	

*: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: Echo

File : 3

Data : #4

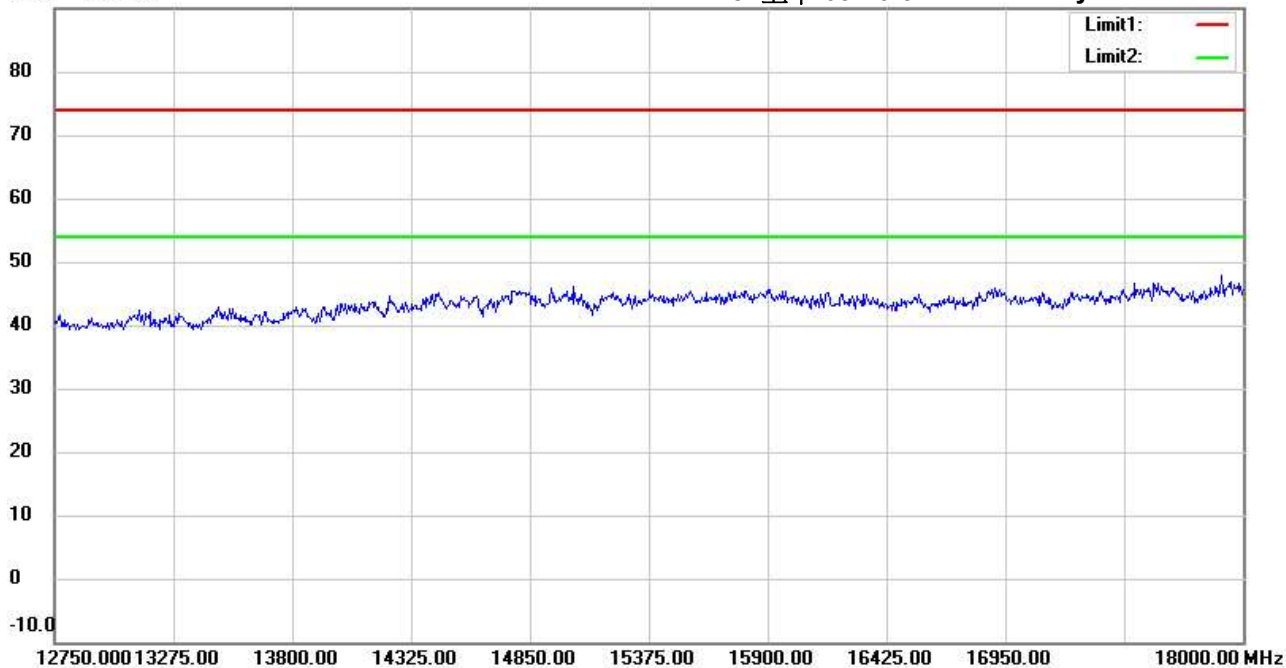
Date: 2025/3/22

Temperature: 22.8 °C

90.0 dBuV/m

Time: 上午 03:16:37

Humidity: 46.3 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22412-24038

M/N:

Test Mode : TX 2402MHz

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



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

Radiated Emission Measurement

Operator: Echo

File : 3

Data : #9

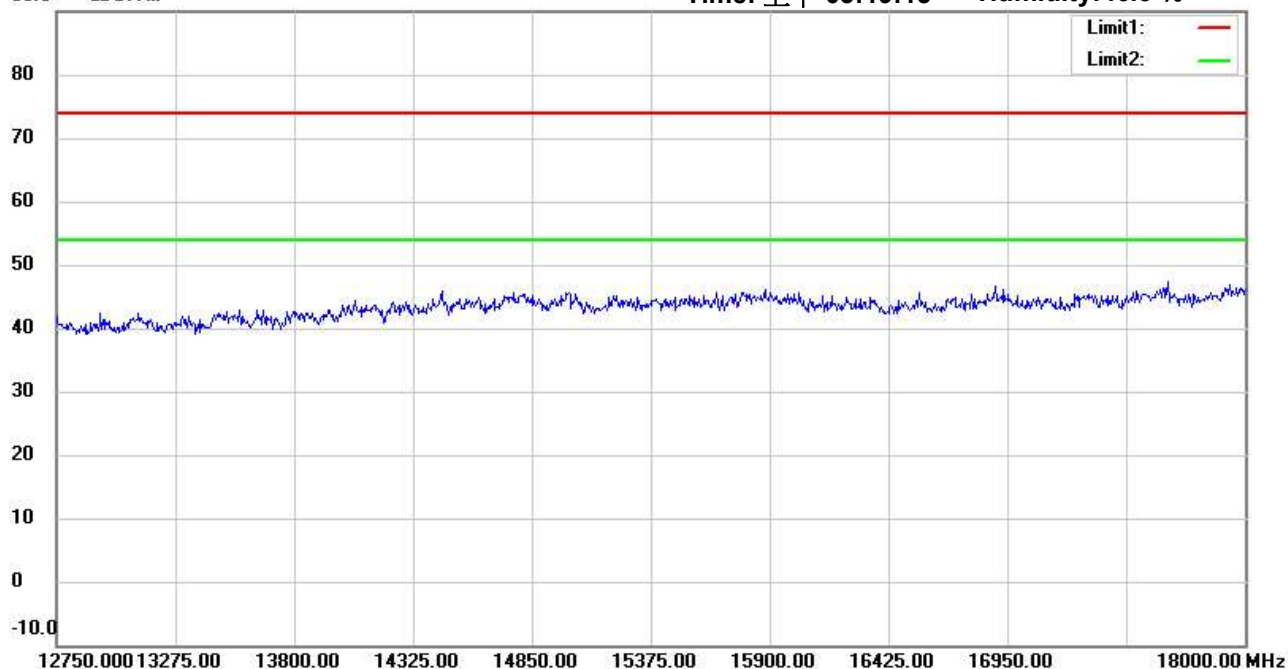
Date: 2025/3/22

Temperature: 22.8 °C

90.0 dBuV/m

Time: 上午 03:19:13

Humidity: 46.3 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22412-24038

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: Vertical

Power : 120 Va.c.

Distance: 3m

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



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: Echo

File : 3

Data : #5

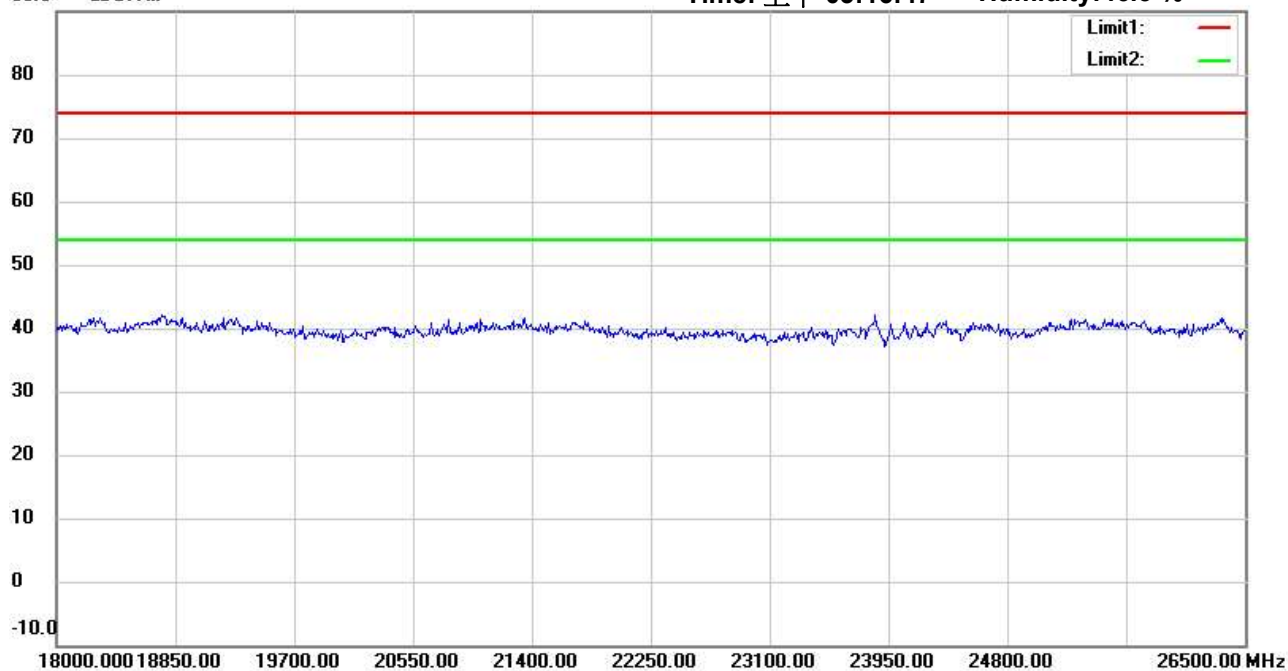
Date: 2025/3/22

Temperature: 22.8 °C

90.0 dBuV/m

Time: 上午 03:16:47

Humidity: 46.3 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22412-24038

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: **Horizontal**

Power : 120 Va.c.

Distance: 3m

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



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: Echo

File : 3

Data : #10

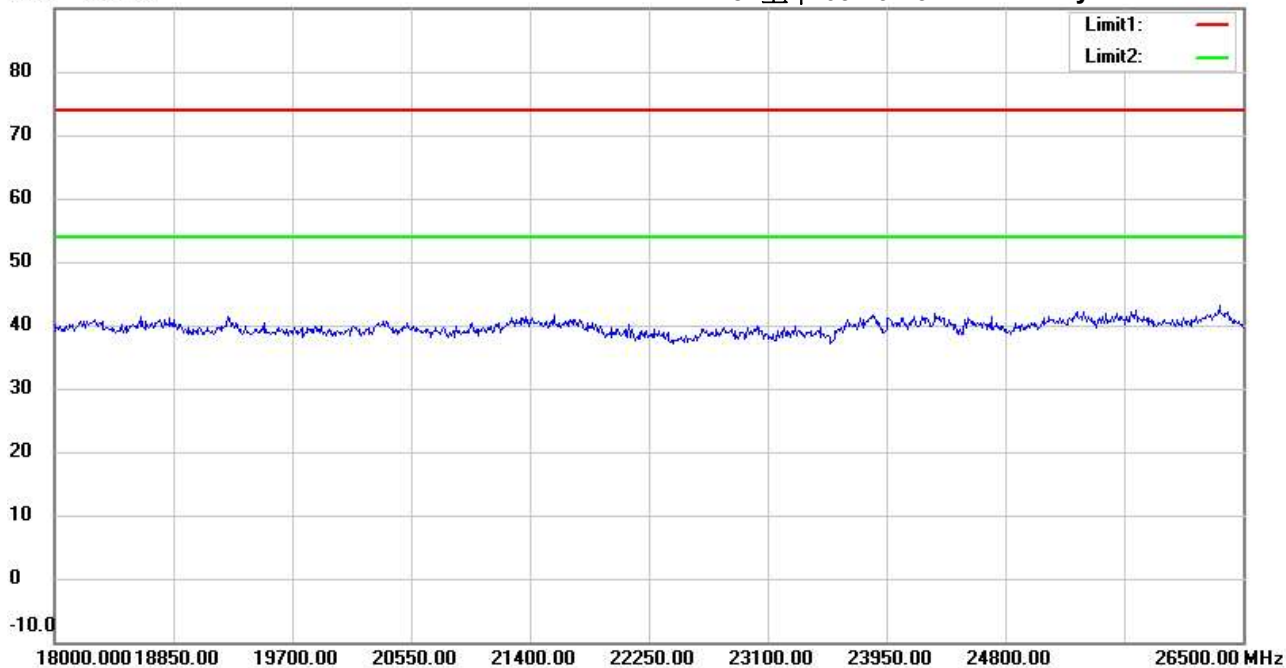
Date: 2025/3/22

Temperature: 22.8 °C

90.0 dBuV/m

Time: 上午 03:19:23

Humidity: 46.3 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22412-24038

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: Vertical

Power : 120 Va.c.

Distance: 3m

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



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: Echo

File : 3

Data : #1

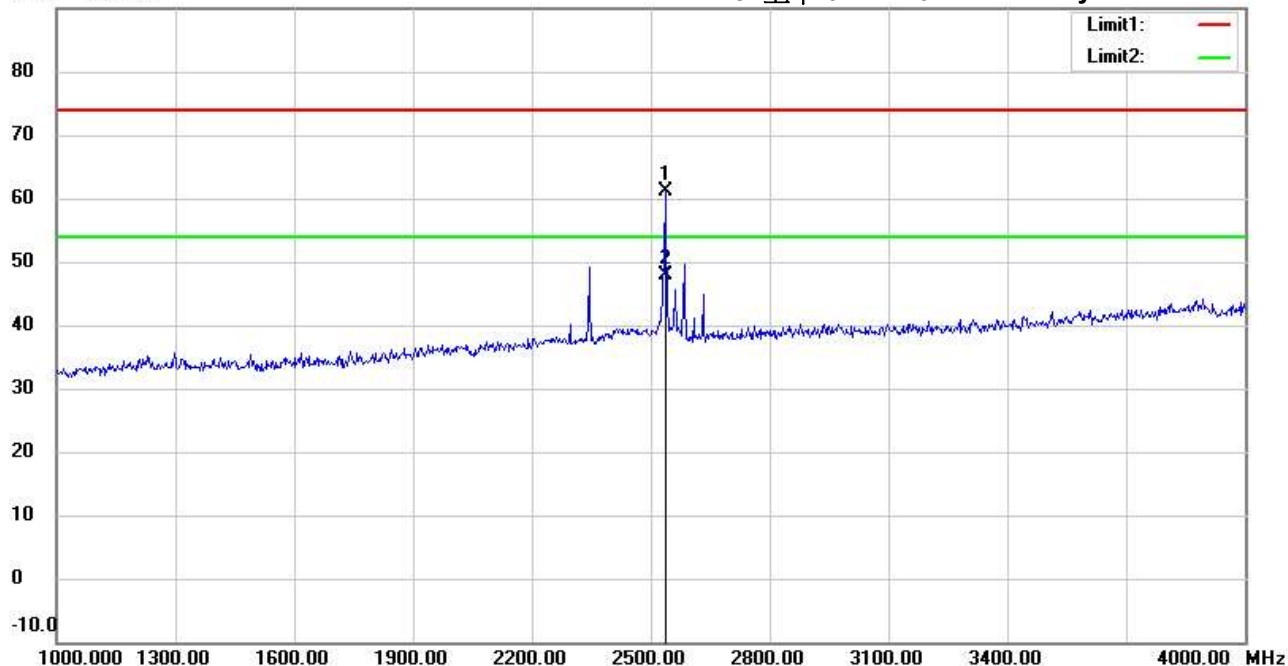
Date: 2025/3/22

Temperature: 22.8 °C

90.0 dBuV/m

Time: 上午 04:14:10

Humidity: 46.3 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22412-24038

M/N:

Test Mode : TX 2441MHz

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
	2537.500	62.36	peak	-1.20	61.16	74.00	150	50	-12.84	
*	2537.500	49.01	AVG	-1.20	47.81	54.00	150	50	-6.19	

*: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: Echo

File : 3

Data : #6

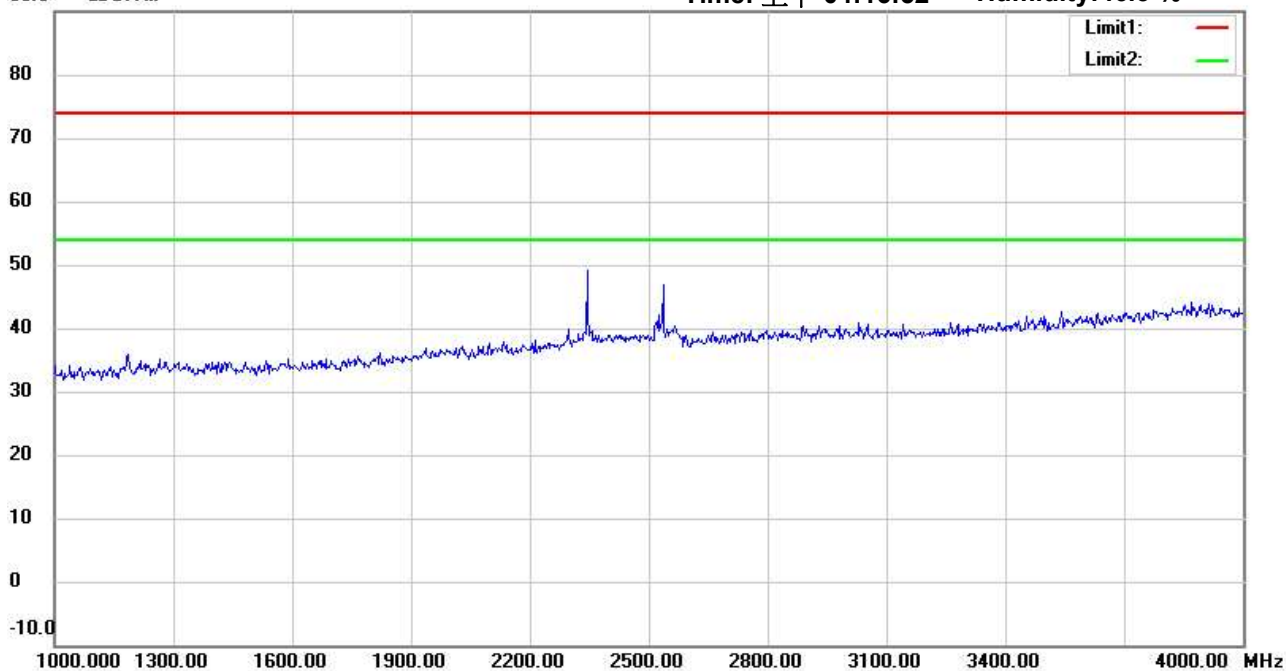
Date: 2025/3/22

Temperature: 22.8 °C

90.0 dBuV/m

Time: 上午 04:16:52

Humidity: 46.3 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22412-24038

M/N:

Test Mode : TX 2441MHz

Note :

Polarization: **Vertical**

Power : 120 Va.c.

Distance: 3m

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



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: Echo

File : 3

Data : #2

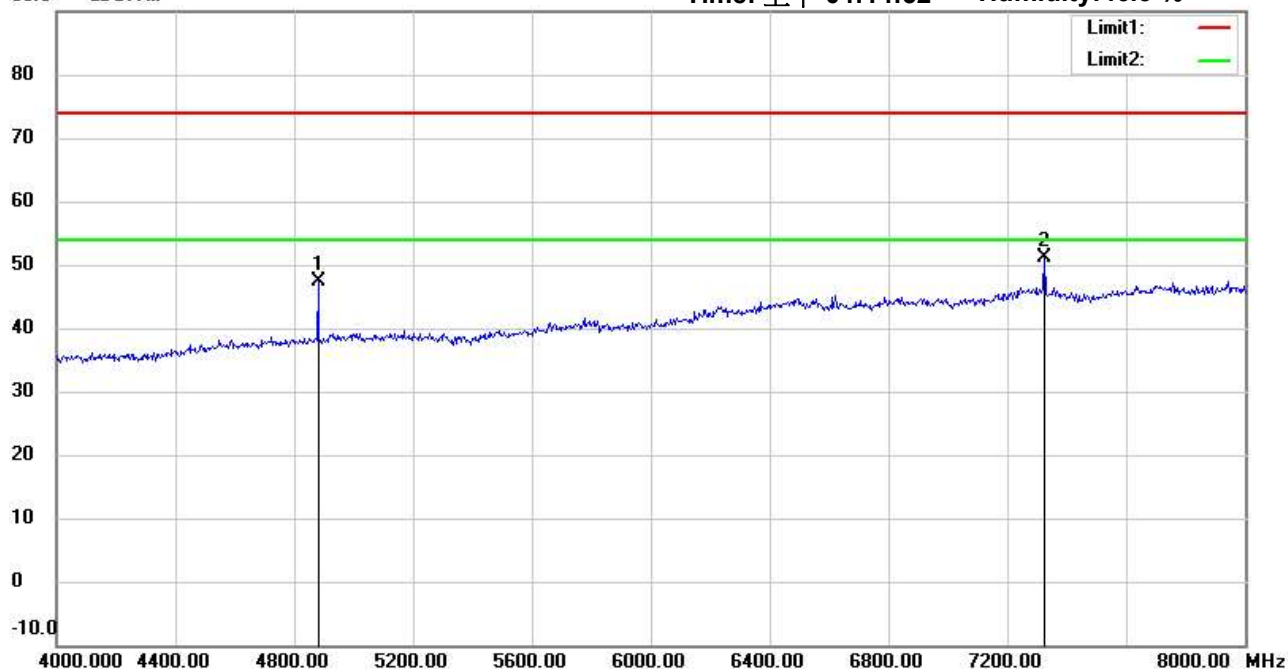
Date: 2025/3/22

Temperature: 22.8 °C

90.0 dBuV/m

Time: 上午 04:14:52

Humidity: 46.3 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22412-24038

M/N:

Test Mode : TX 2441MHz

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
	4882.000	42.05	peak	5.45	47.50	74.00	150	359	-26.50	
*	7324.000	38.46	peak	12.65	51.11	74.00	150	337	-22.89	

*: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: Echo

File : 3

Data : #7

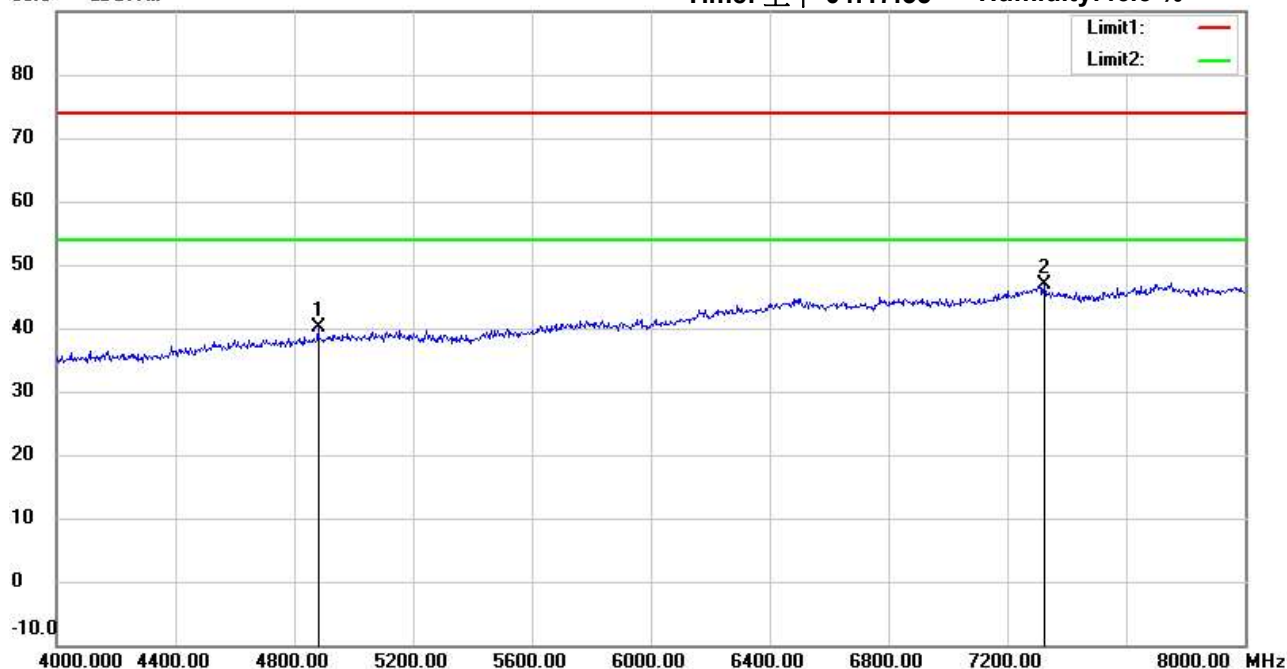
Date: 2025/3/22

Temperature: 22.8 °C

90.0 dBuV/m

Time: 上午 04:17:35

Humidity: 46.3 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22412-24038

M/N:

Test Mode : TX 2441MHz

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
	4882.000	34.63	peak	5.45	40.08	74.00	150	196	-33.92	
*	7323.000	34.14	peak	12.66	46.80	74.00	150	164	-27.20	

*: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: Echo

File : 3

Data : #3

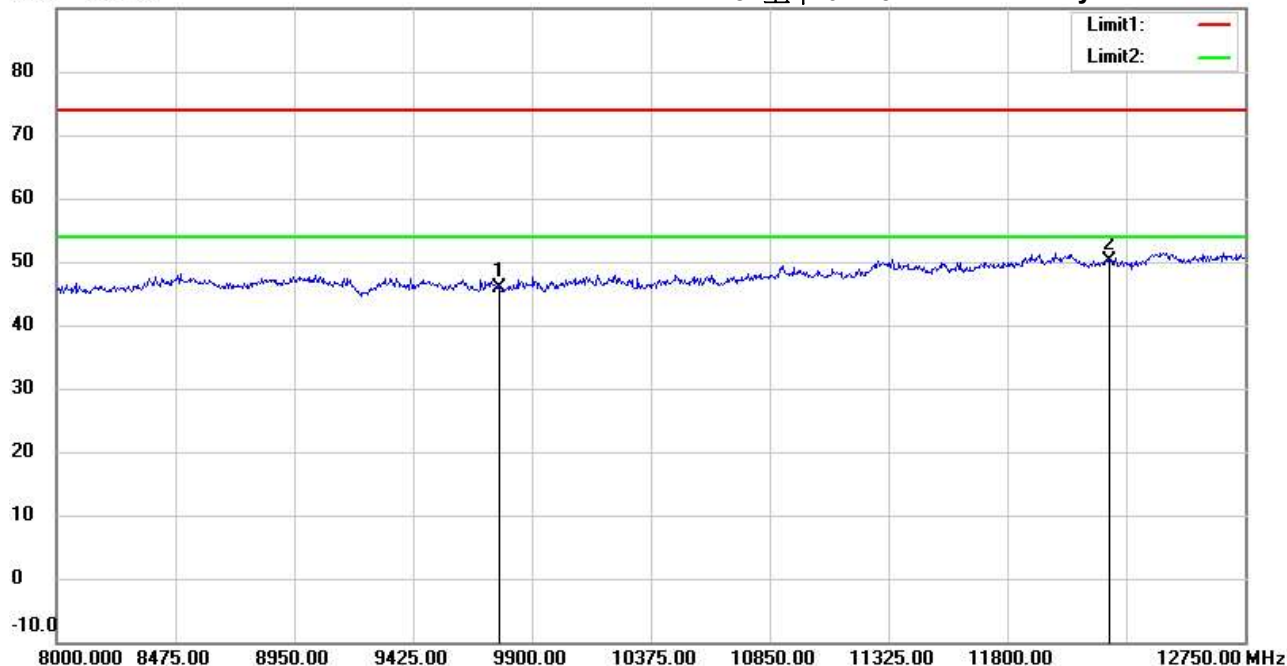
Date: 2025/3/22

Temperature: 22.8 °C

90.0 dBuV/m

Time: 上午 04:15:41

Humidity: 46.3 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22412-24038

M/N:

Test Mode : TX 2441MHz

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
	9764.000	31.85	peak	13.93	45.78	74.00	150	124	-28.22	
*	12205.000	32.66	peak	17.54	50.20	74.00	150	311	-23.80	

*: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: Echo

File : 3

Data : #8

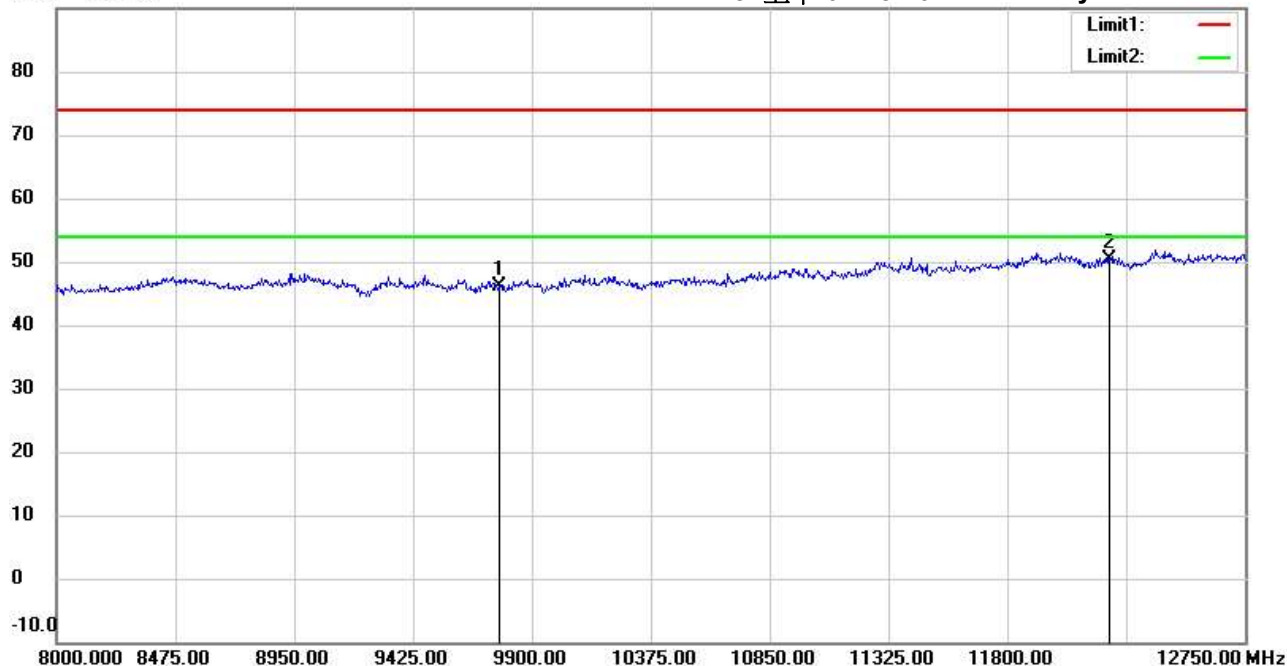
Date: 2025/3/22

Temperature: 22.8 °C

90.0 dBuV/m

Time: 上午 04:18:16

Humidity: 46.3 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22412-24038

M/N:

Test Mode : TX 2441MHz

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
	9764.000	32.10	peak	13.93	46.03	74.00	150	137	-27.97	
*	12205.000	32.77	peak	17.54	50.31	74.00	150	79	-23.69	

*: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: Echo

File : 3

Data : #4

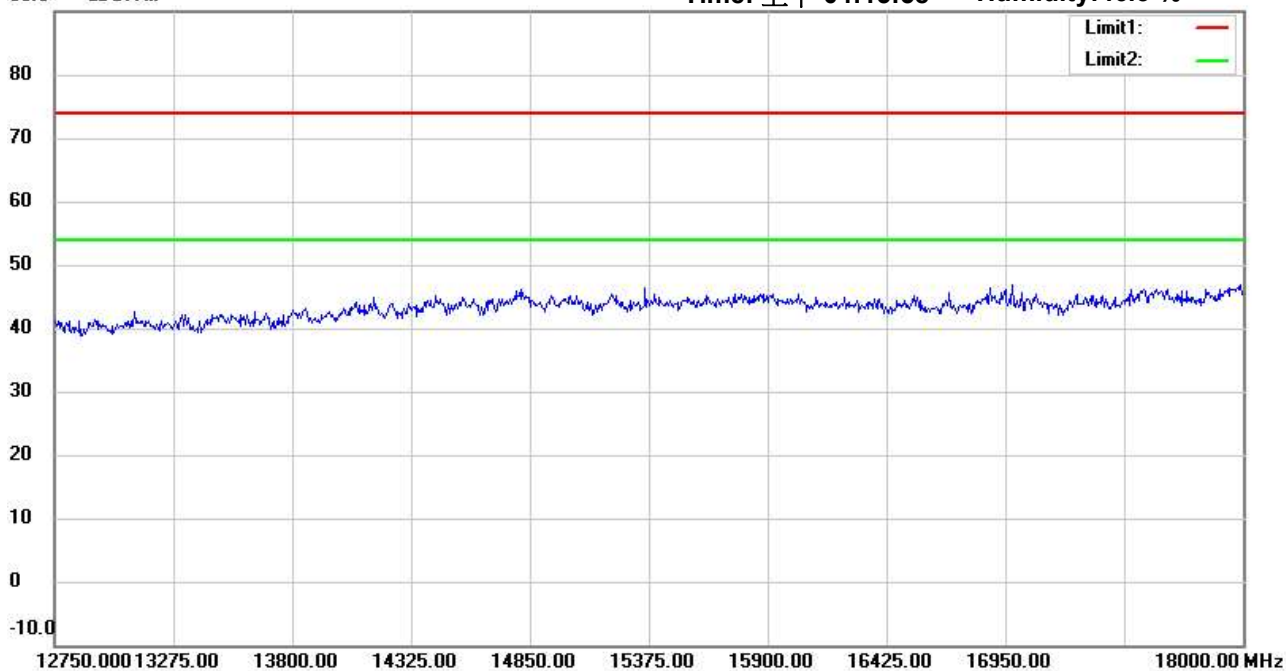
Date: 2025/3/22

Temperature: 22.8 °C

90.0 dBuV/m

Time: 上午 04:15:58

Humidity: 46.3 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22412-24038

M/N:

Test Mode : TX 2441MHz

Note :

Polarization: **Horizontal**

Power : 120 Va.c.

Distance: 3m

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



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: Echo

File : 3

Data : #9

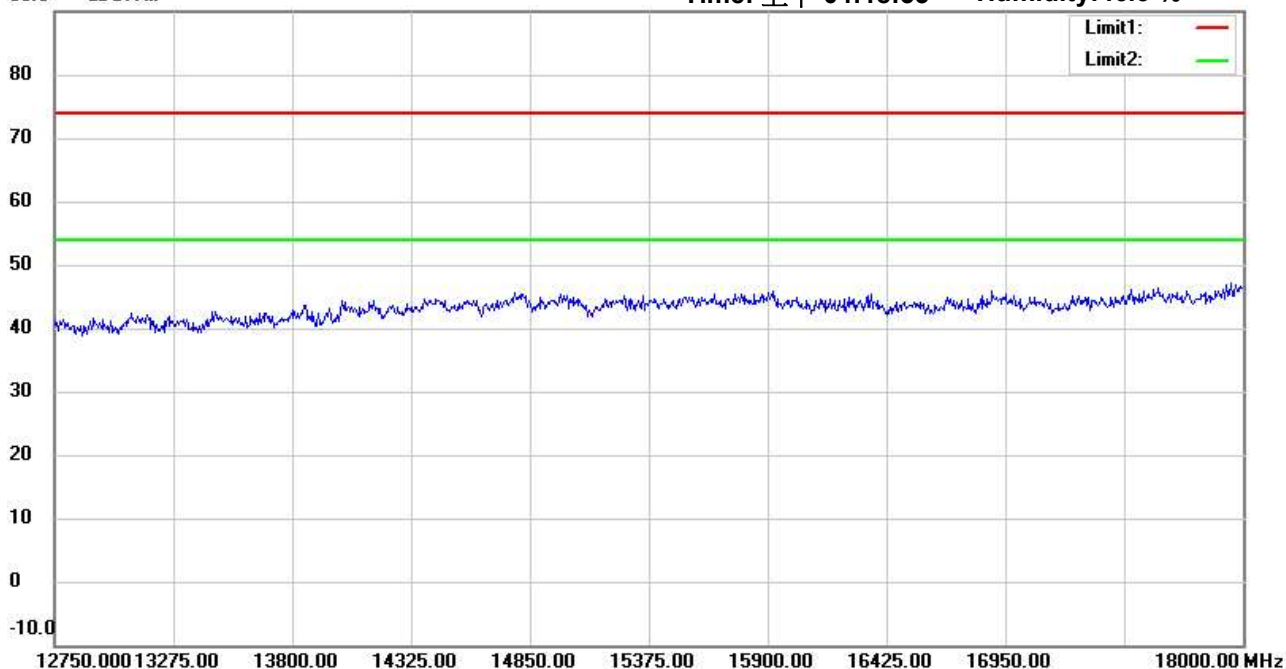
Date: 2025/3/22

Temperature: 22.8 °C

90.0 dBuV/m

Time: 上午 04:18:33

Humidity: 46.3 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22412-24038

M/N:

Test Mode : TX 2441MHz

Note :

Polarization: Vertical

Power : 120 Va.c.

Distance: 3m

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



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: Echo

File :3

Data :#5

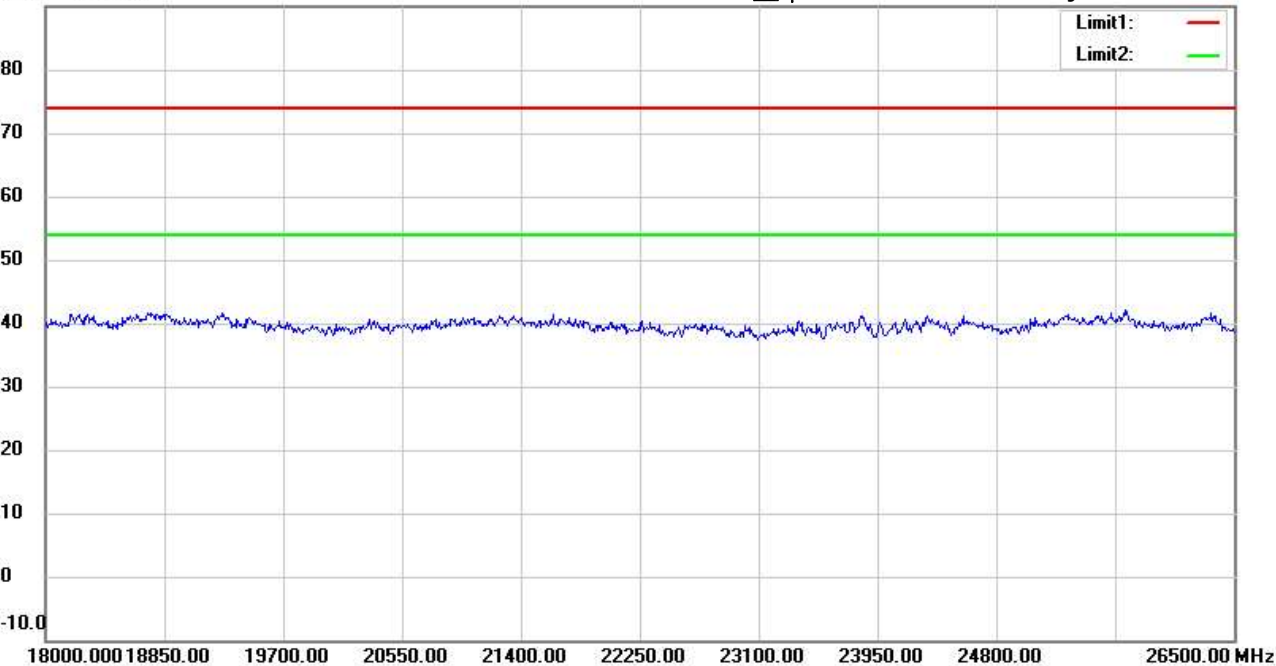
Date: 2025/3/22

Temperature:22.8 °C

90.0 dBuV/m

Time: 上午 04:16:07

Humidity:46.3 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22412-24038

M/N:

Test Mode : TX 2441MHz

Note :

Polarization: *Horizontal*

Power : 120 Va.c.

Distance: 3m

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



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: Echo

File : 3

Data : #10

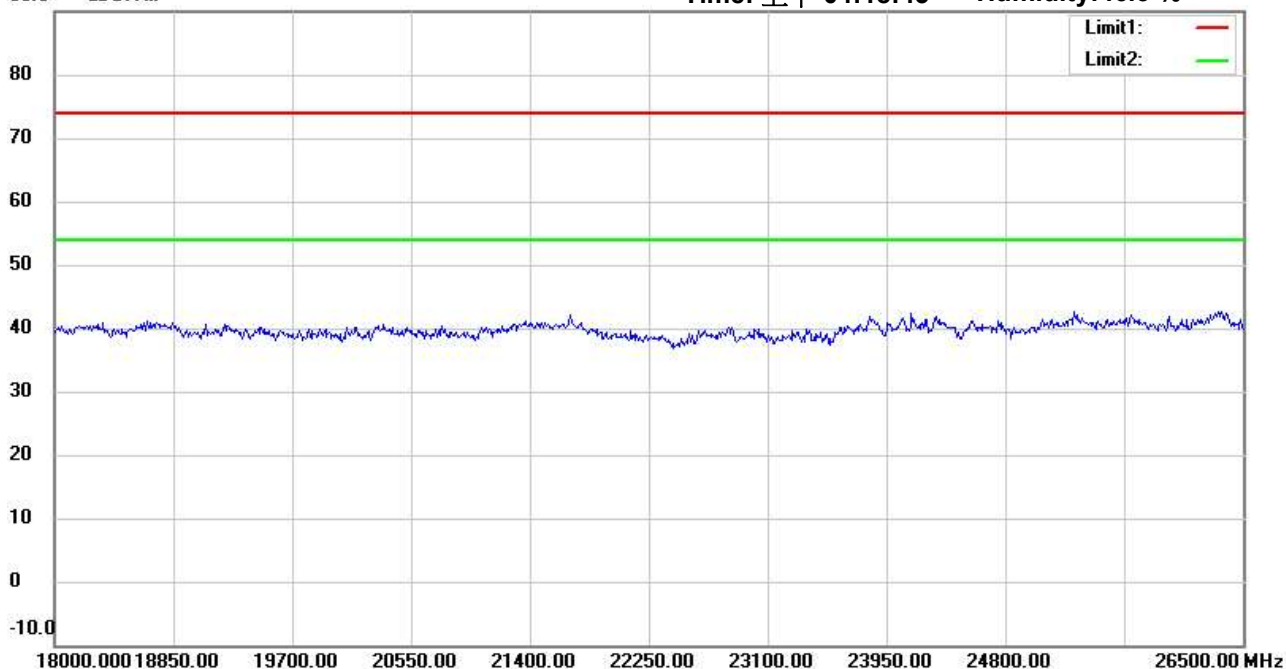
Date: 2025/3/22

Temperature: 22.8 °C

90.0 dBuV/m

Time: 上午 04:18:43

Humidity: 46.3 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22412-24038

M/N:

Test Mode : TX 2441MHz

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



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: Echo

File : 3

Data : #1

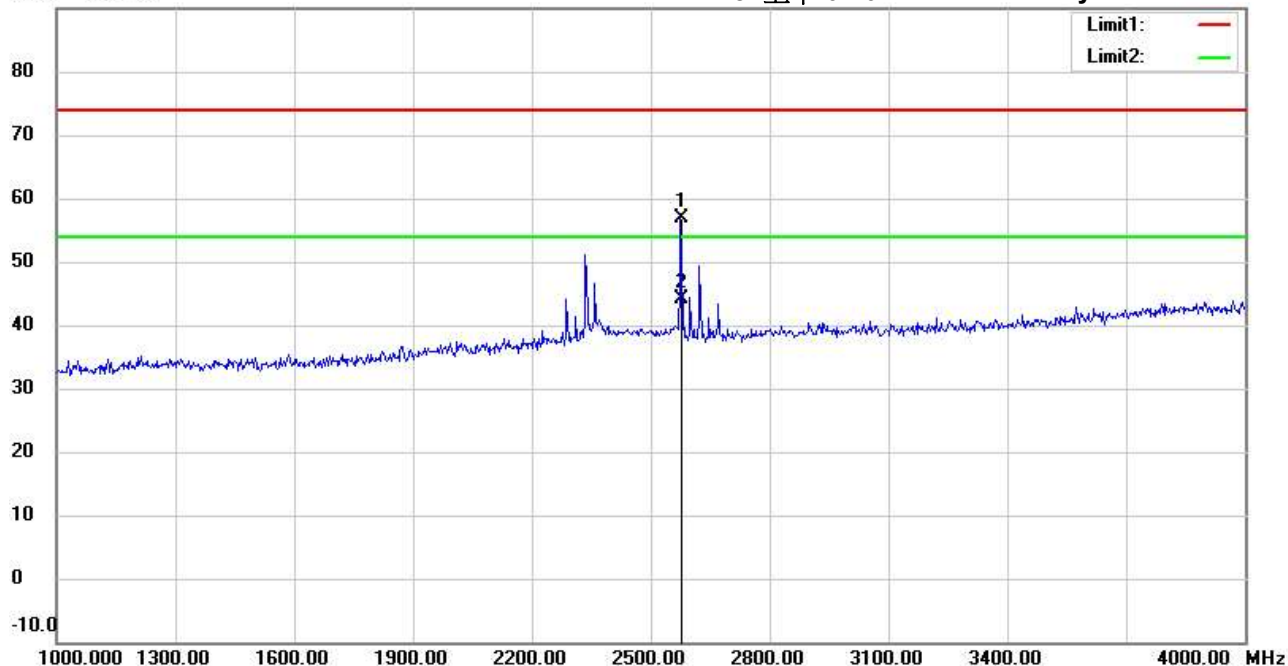
Date: 2025/3/22

Temperature: 22.8 °C

90.0 dBuV/m

Time: 上午 04:04:21

Humidity: 46.3 %



Site : 966A Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22412-24038

M/N:

Test Mode : TX 2480MHz

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
	2576.500	59.30	peak	-2.45	56.85	74.00	150	68	-17.15	
*	2576.500	46.62	AVG	-2.45	44.17	54.00	150	68	-9.83	

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