

47 CFR PART 15 SUBPART C TEST REPORT

for

Personal Transport System for the MPU5

Model No.: WR-PT5-0001

FCC ID: 2AG3J-WRPT50001

of

Applicant: Persistent systems LLC

Address: 601 W 26th St Suite 905 New York 10001 United States

Tested and Prepared

By

Worldwide Testing Services (Taiwan) Co., Ltd.

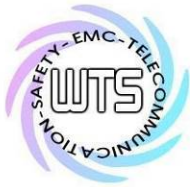
FCC Registration No.: TW1072, TW1140, TW1146, TW1477, TW0037

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



Report No.: W6M22405-23479-CLR

6F., No. 58, Ln. 188, Rueiguang Rd., Neihu Dist., Taipei City, Taiwan (R.O.C.)
TEL: 886-2-66068877 FAX: 886-2-66068879 E-mail: wtls@wtls-lab.com

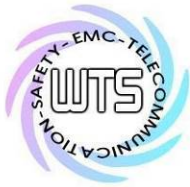


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1 General Information

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 tests were carried out and passed in accordance to the standards:

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

47 CFR PART 15 SUBPART E § 15.407 (2023-10)

47CFR Part 22 (2023), Part 24 (2023) and Part 27 (2023)

ANSI C63.10-2013

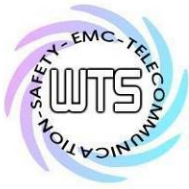
The complexity of the technical specifications, however, means that full and thorough testing is impractical for both technical and economic reasons.

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

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 1.6.
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.



Worldwide Testing Services(Taiwan) Co., Ltd.

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Important Notes:

Proper labelling is required for each device. Devices shall be labelled in accordance with labelling requirements pursuant to section 15.19 and section 2.1074 of the FCC rules.

Devices subject to a Declaration of Conformity shall be uniquely identified by the responsible party.

This identification shall not be of a format which could be confused with the FCC Identifier required on certified, notified type accepted or type approved equipment.

The responsible party shall maintain adequate identification records to facilitate positive identification for each device.

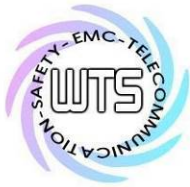
The user manual or instruction manual shall included also a warning statement that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Reference Section 15.21

Furthermore information to the user regarding to the interference potential of the device and about simple measures that can be taken to correct interference is required.

Reference Section 15.105

The responsible party must warrant that each unit of equipment marketed under a Declaration of Conformity is identical to the unit tested and found acceptable with the standards and that the records maintained by the responsible party continue to reflect the equipment being produced under the Declaration of Conformity within the variation that can be expected due to quantity production and testing on a statistical basis.



Worldwide Testing Services(Taiwan) Co., Ltd.

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1.2 Tester

March 05, 2025

Sora Kuo

Sora.

Date

WTS-Lab.

Test Engineer

Signature

Technical responsibility for area of testing:

March 05, 2025

Kevin Wang

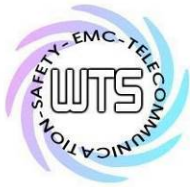
Kevin Wang

Date

WTS

Name

Signature



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1.3 Testing laboratory

1.3.1 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

1.3.2 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

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

Name: ./.

Accredited number: ./.

Street: ./.

Town: ./.

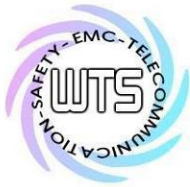
Country: ./.

1.4 Details of applicant

Name:	Persistent systems LLC
Street:	601 W 26th St Suite 905
Town:	New York 10001
Country:	United States

1.5 Application details

Date of receipt of test item:	July 31, 2024
Date of test:	from February 24, 2025 to February 25, 2025



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1.6 Test item

1.6.1 Description of test item

Type of product: Personal Transport System for the MPU5

Type identification: WR-PT5-0001

Multi-listing model no.: ./.

Brand name: ./.

Sample no.: #03

1.6.2 Manufacturer (if different from applicant in point 1.4)

Name: ./.

Street: ./.

Town: ./.

Country: ./.

1.6.3 Frequency behavior

Highest frequency generated in the device or on which the device operates or tunes (MHz)		Upper frequency of measurement range (MHz)
☐	Below 1.705	30
☐	1.705 - 108	1000
☐	108 -500	2000
☐	500 - 1000	5000
☒	Above 1000	5th harmonic of the highest frequency or 40 GHz, whichever is lower

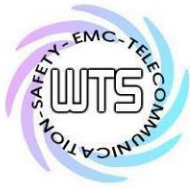
1.7 Test standards

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

47 CFR PART 15 SUBPART E § 15.407 (2023-10)

47CFR Part 22 (2023), Part 24 (2023) and Part 27 (2023)

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: 860 ... 1030 hPa

Details of power supply: Battery 3.7Vd.c., 600mAh

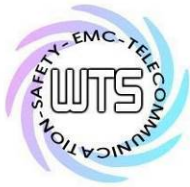
Other parameters: without

Test item Name	Measurement Uncertainty
Estimation Result of Uncertainty of Radiated Emission(3M-966A)	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

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

Test location

OATS (10m)	No.5-1, Lishui, Shuang Sing Village, Wanli Dist., New Taipei City 207, Taiwan (R.O.C.)	☐
semi-anechoic chamber (3m)	No.35, Aly. 21, Ln. 228, Ankang Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C.)	☒



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2.3 Test results

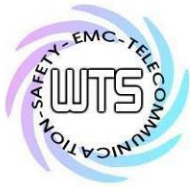
☒ 1st test

☐ test after modification

☐ production test

Test Emission / Immunity			Done	Test passed	Test failed
Emission	Radiated Emission	47 CFR part 15.209	☒	☒	☐

(The following is intentionally left blank.)



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2.4.1 Radiated Emission

2.4.1.1 Test Equipment

30-1000MHz (966A)

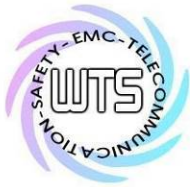
Code No.	Test equipment	Mode No.	Serial No.	Brand	Cal. Date	Next Cal. Date
ETSTW-RE 154	EMI Test Receiver	ESR3	102829	R&S	2024/4/10	2025/4/9
ETSTW-RE 160	Amplifier Module	CHC 3	None	WTS	2024/7/12	2025/7/11
ETSTW-RE 177	TRILOG Broadband Antenna	VULB 9168&EMCI-N-6-06	01380&AT-06007	SCHWARZBECK&EMC	2024/3/4	2025/3/3
ETSTW-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+	

1-18GMHz (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 160	Amplifier Module	CHC 3	None	WTS	2024/7/12	2025/7/11
ETSTW-RE 030	Double-Ridged Guide Horn Antenna	3117	35224	ETS-Lindgren	2024/5/15	2025/5/14
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+	

18-26.5GHz (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 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
WTSTW-SW 002	EMI TEST SOFTWARE	EZ EMC	None	Farad	Version ETS-03A1 Version EMEC-3A1+	



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26.5-40GHz (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 019	MICROWAVE HORN ANTENNA	22240-25	121074	FM	2024/6/25	2025/6/24
ETSTW-Cable 049	Microwave Cable	FA147A0015M2020	30064-1	UTIFLEX	2024/8/15	2025/8/14
WTSTW-SW 002	EMI TEST SOFTWARE	EZ_EMC	None	Farad	Version ETS-03A1 Version EMEC-3A1+	

2.4.1.2 Applicable standard

FCC Rules: 15.247/15.407/22/24/27/15.205/15.209

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

2.4.1.3 Test Procedures

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

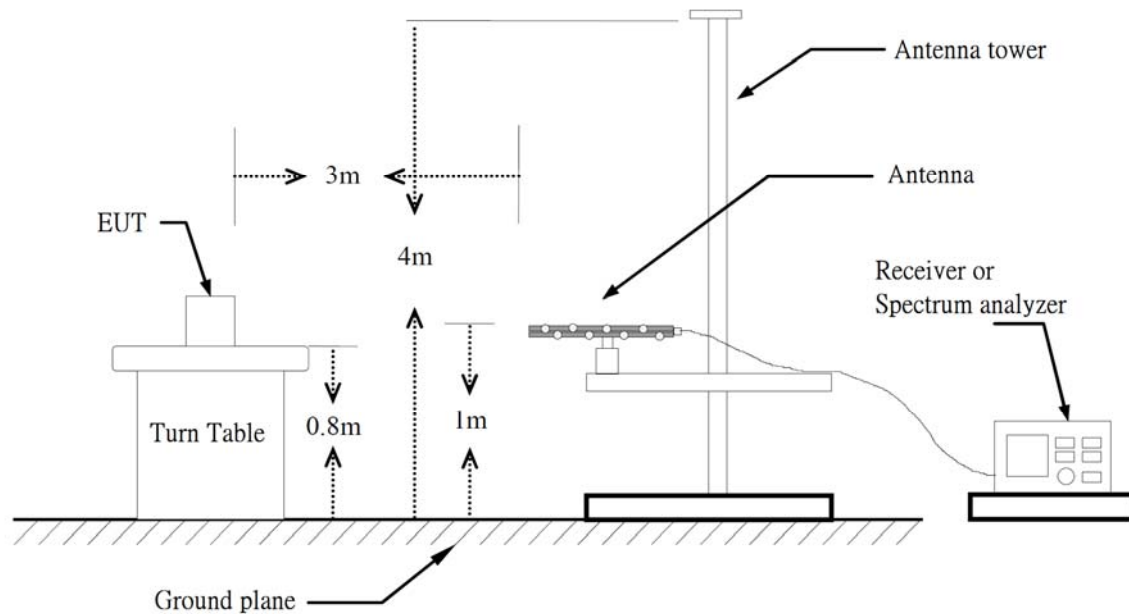
2.4.1.4 Limits

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

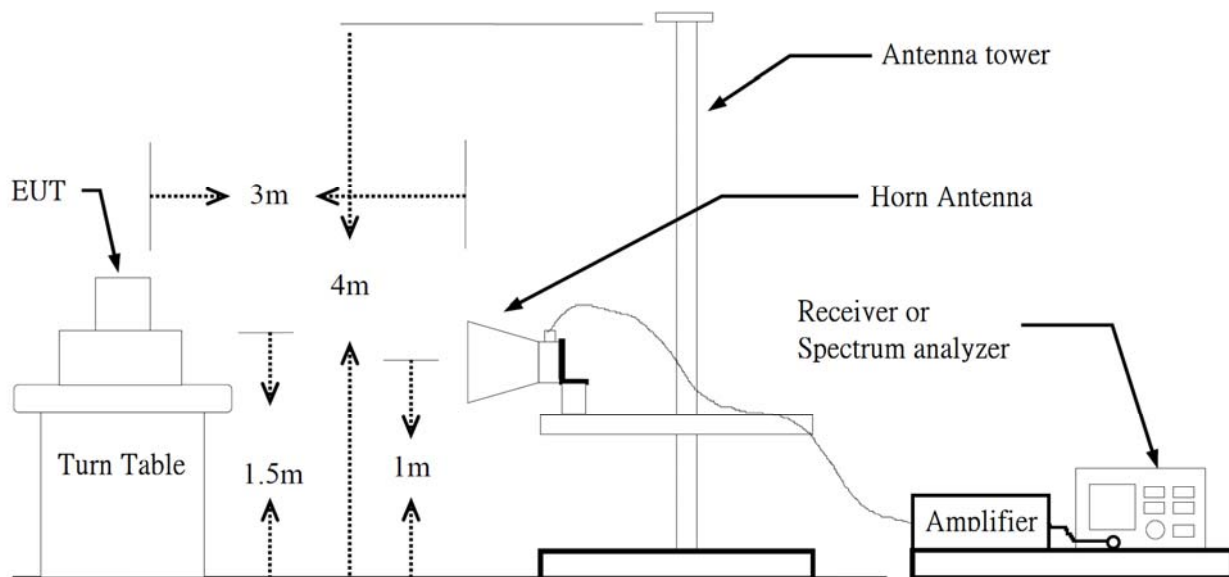
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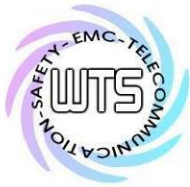
2.4.1.5 Test Setup



Below 1 GHz



Above 1 GHz



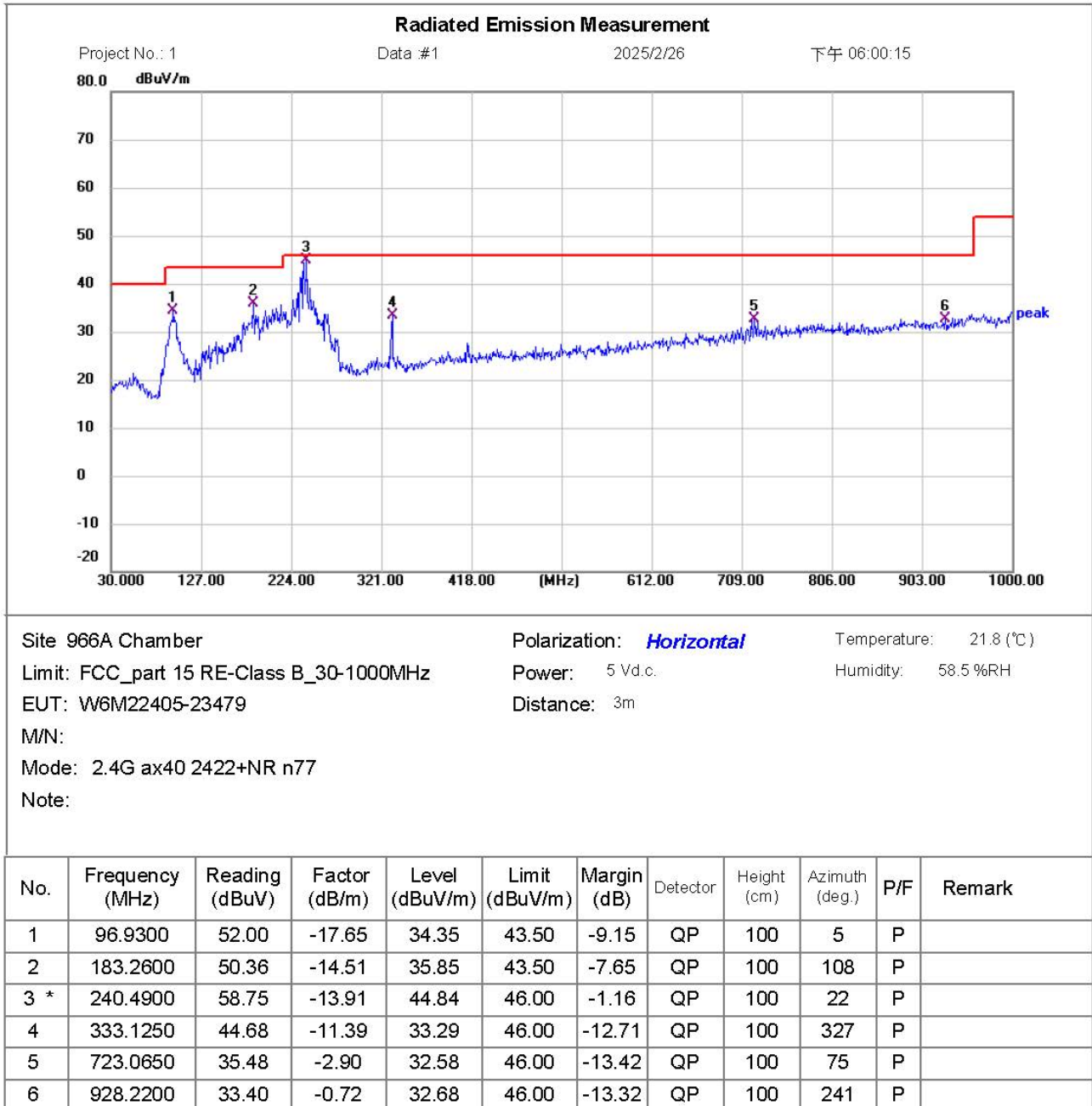
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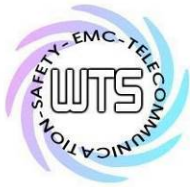
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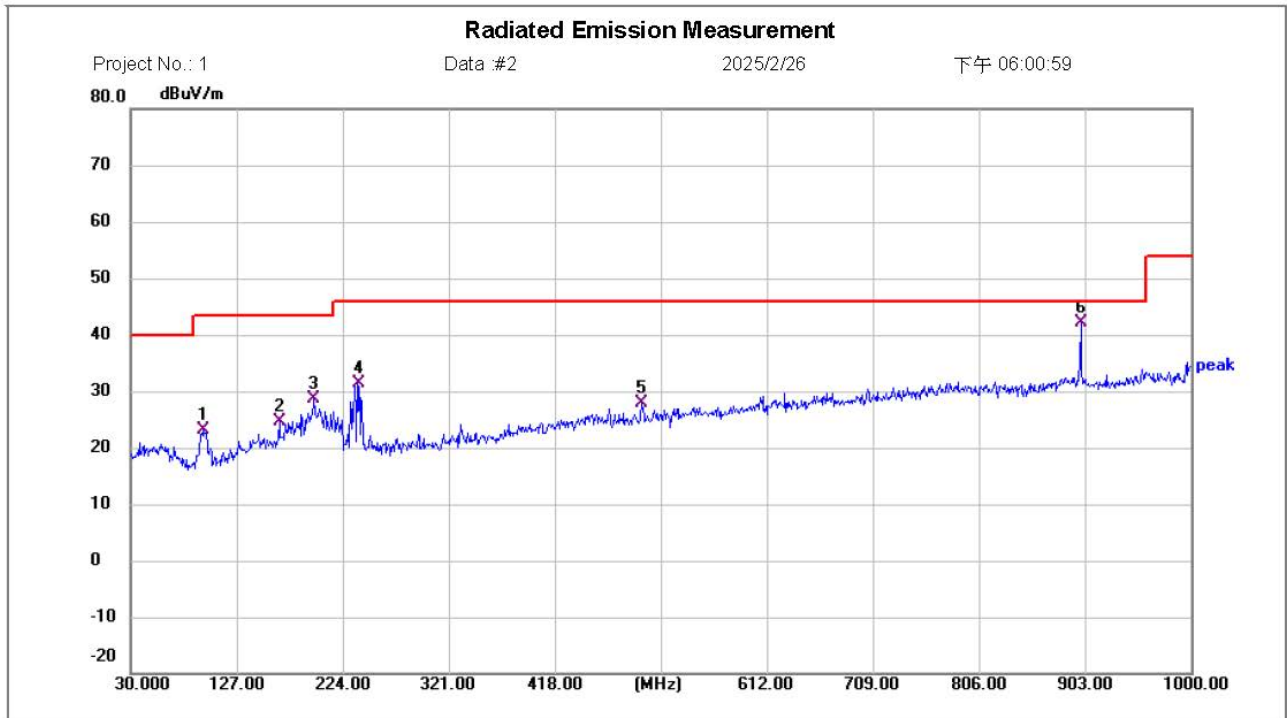
2.4.1.6 Test Results

Explanation: The worst case is 2.4G ax40 + NR n77.





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Site: 966A Chamber

Polarization: **Vertical**

Temperature: 21.8 (°C)

Limit: FCC_part 15 RE-Class B_30-1000MHz

Power: 5 Vd.c.

Humidity: 58.5 %RH

EUT: W6M22405-23479

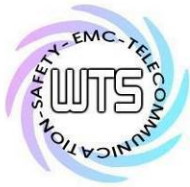
Distance: 3m

M/N:

Mode: 2.4G ax40 2422+NR n77

Note:

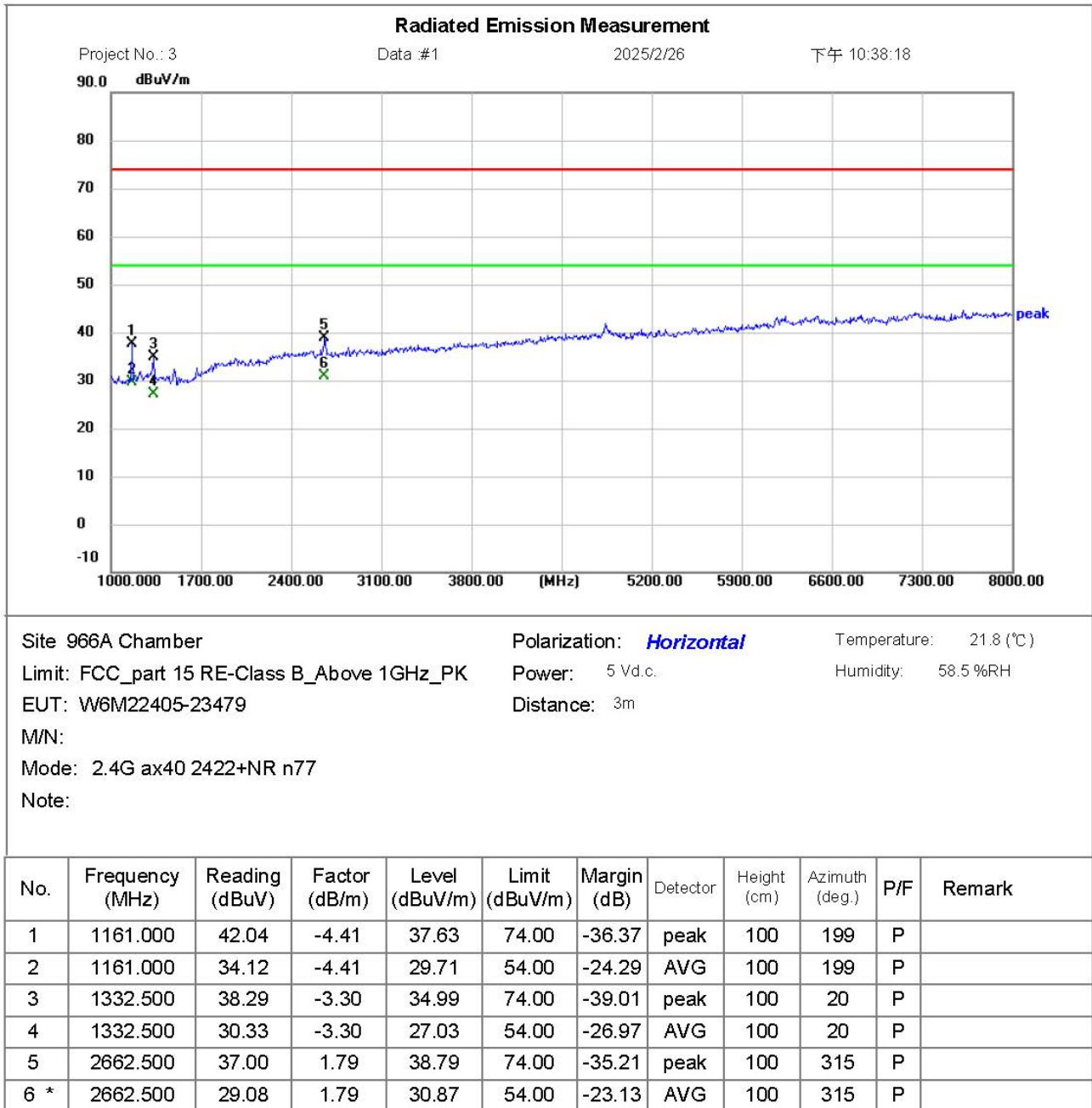
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	96.9300	40.79	-17.65	23.14	43.50	-20.36	QP	100	91	P	
2	166.2849	37.37	-12.69	24.68	43.50	-18.82	QP	100	359	P	
3	198.2949	44.31	-15.69	28.62	43.50	-14.88	QP	100	32	P	
4	238.0649	45.56	-14.17	31.39	46.00	-14.61	QP	100	32	P	
5	497.5400	35.45	-7.54	27.91	46.00	-18.09	QP	100	350	P	
6 *	899.6050	43.22	-1.14	42.08	46.00	-3.92	QP	100	71	P	

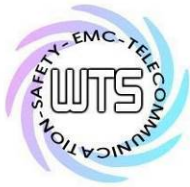


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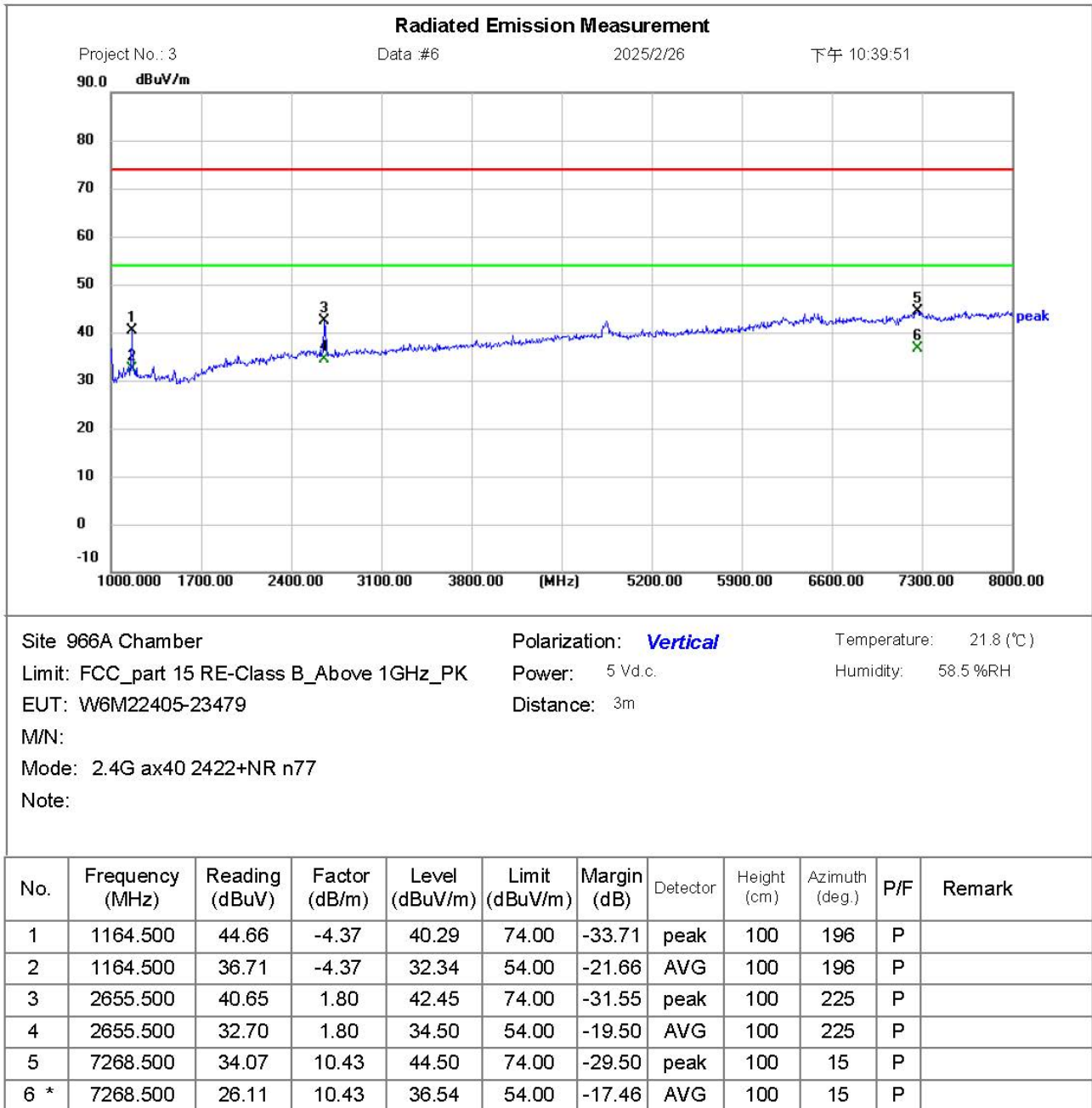


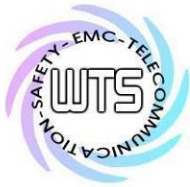


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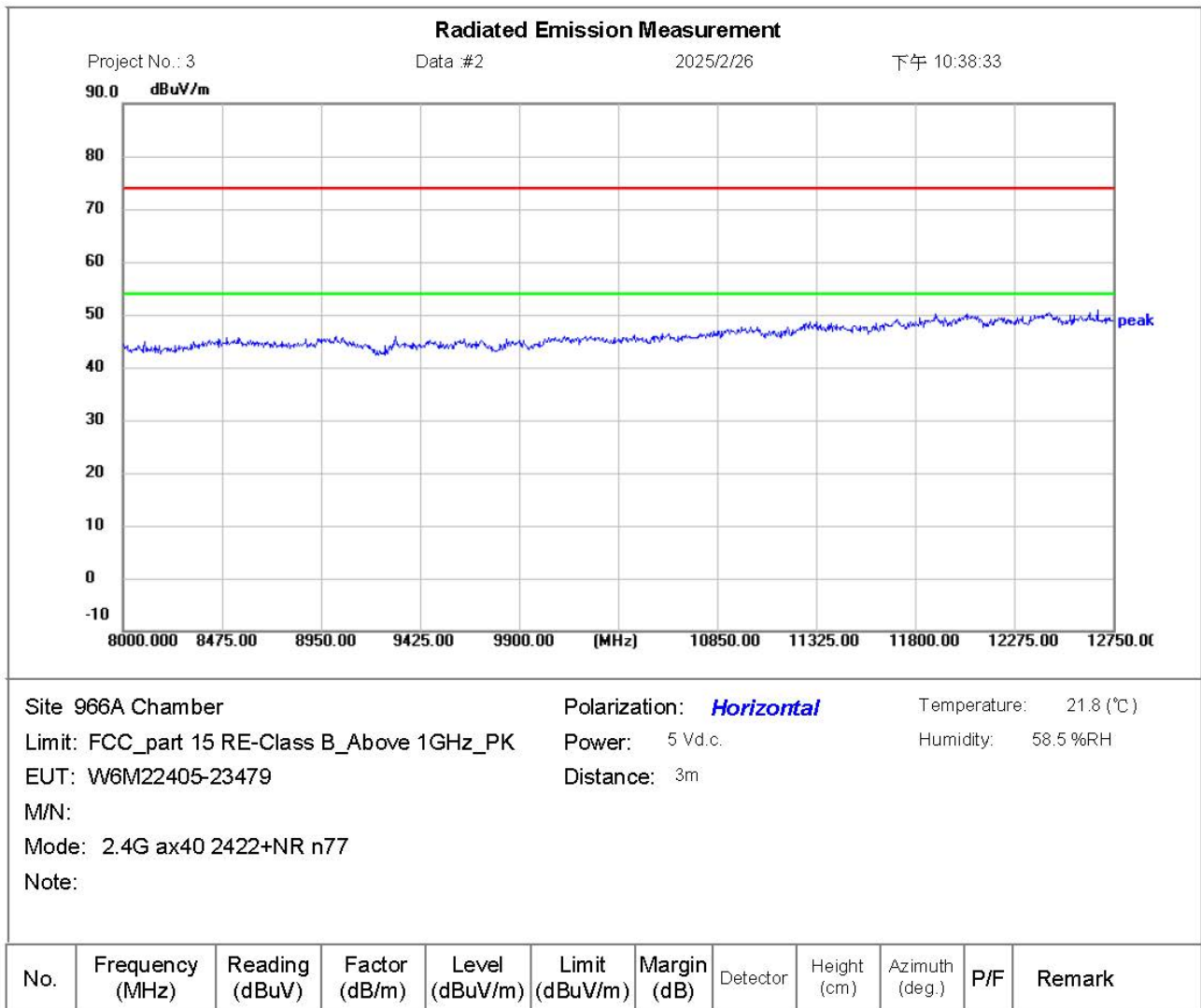


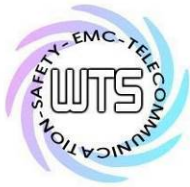


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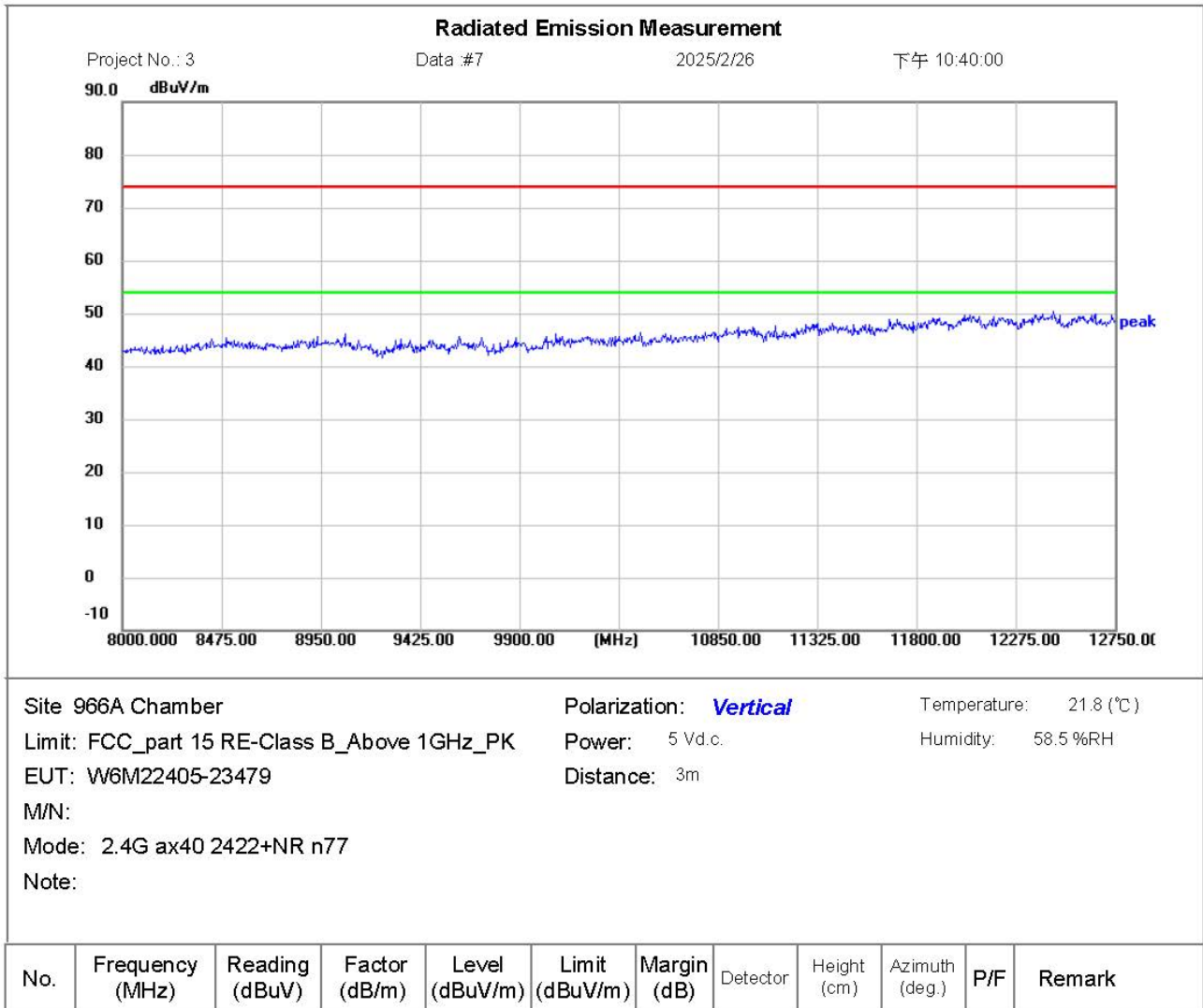
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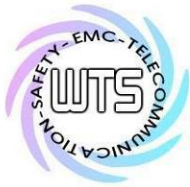




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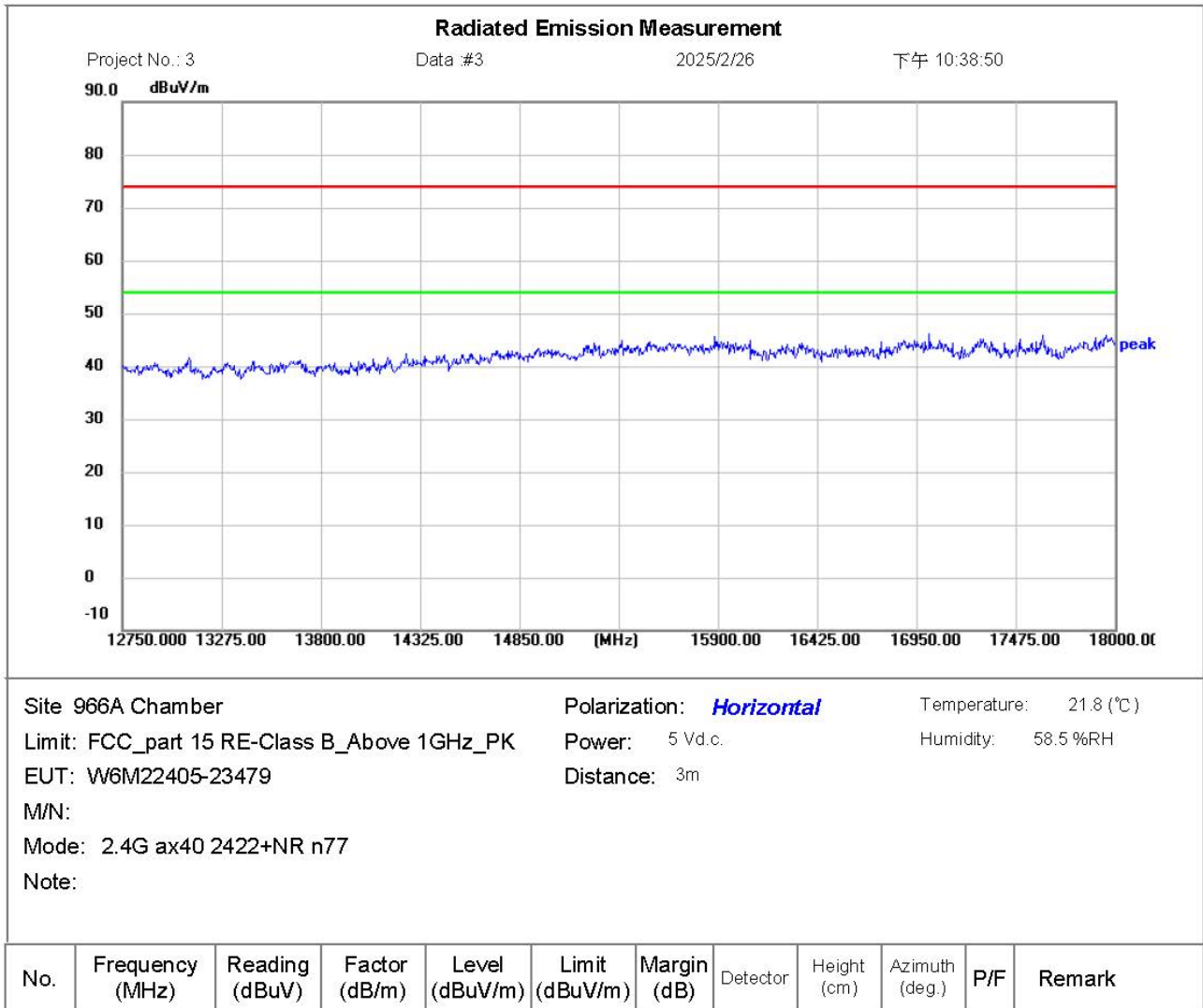


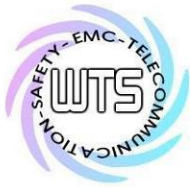


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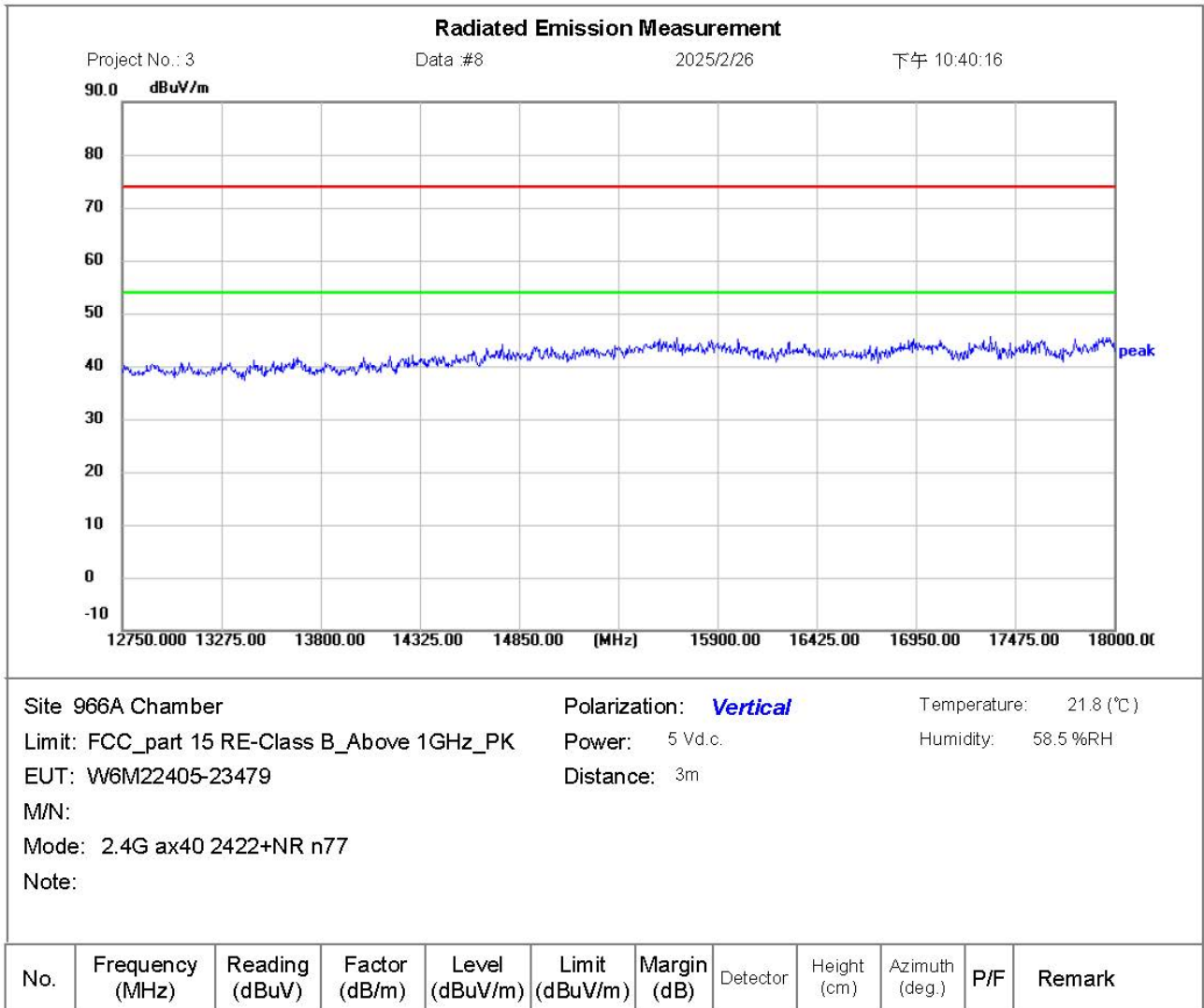


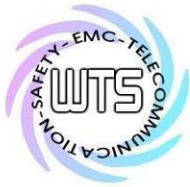


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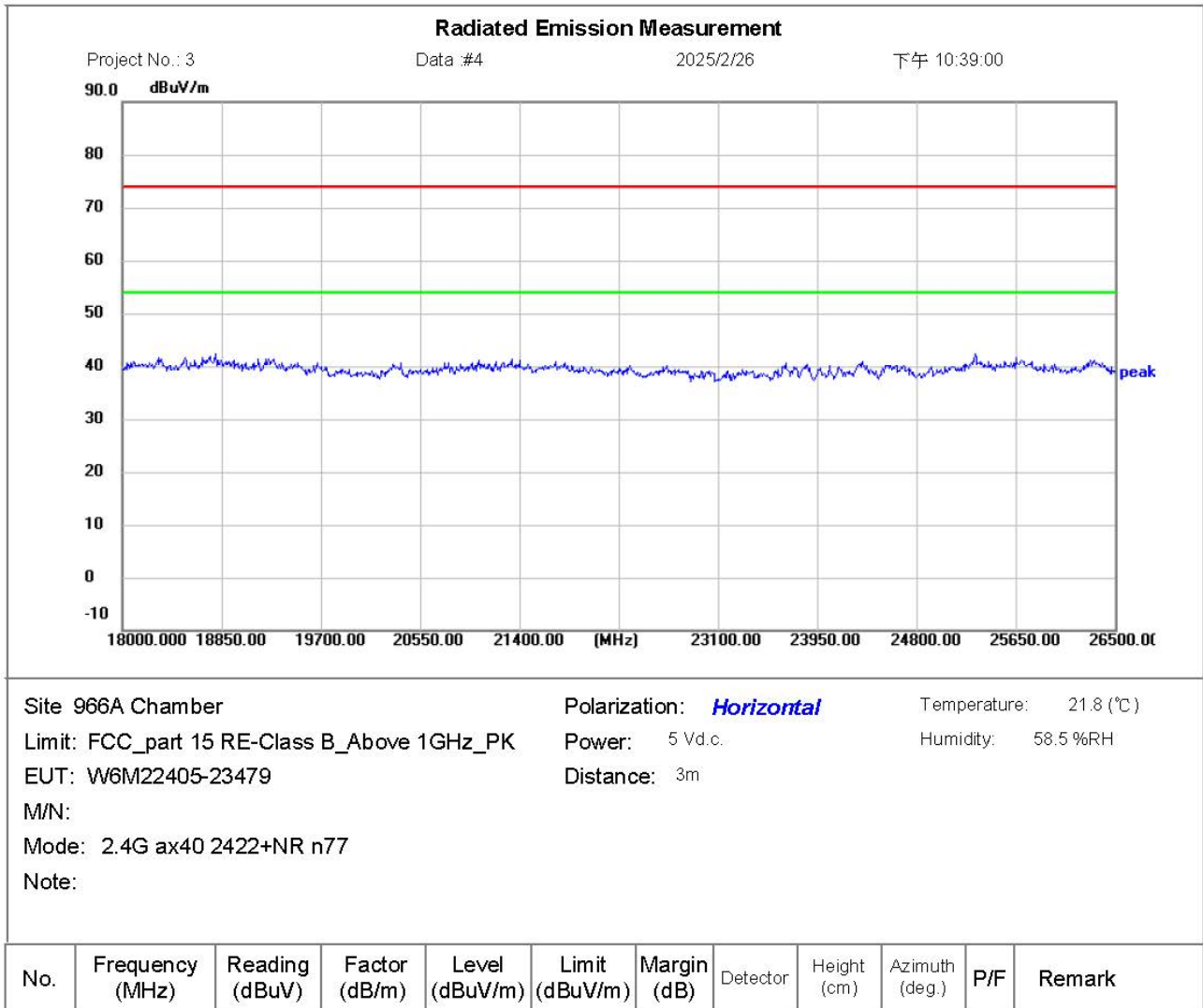


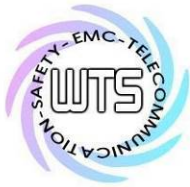


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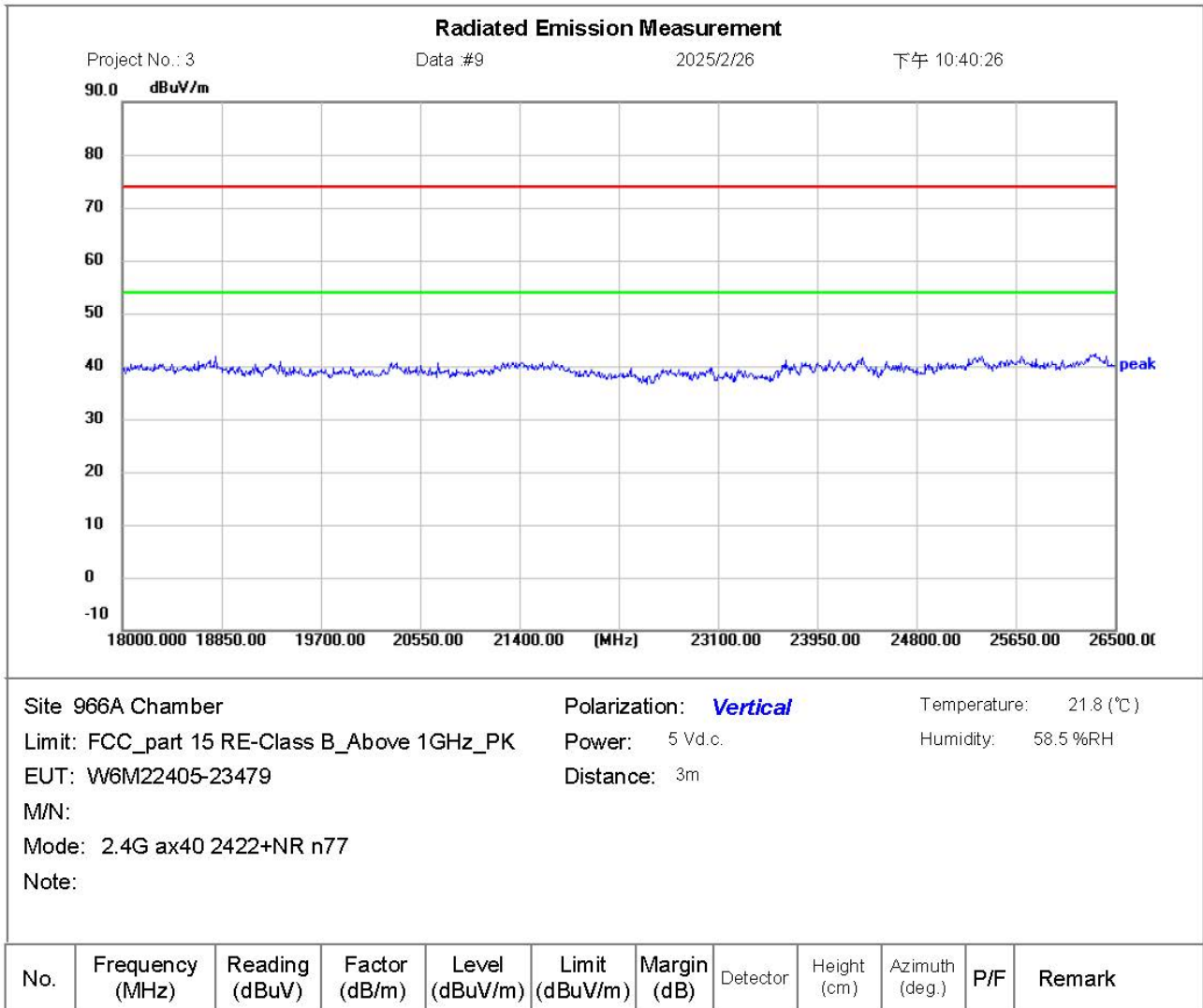


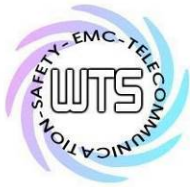


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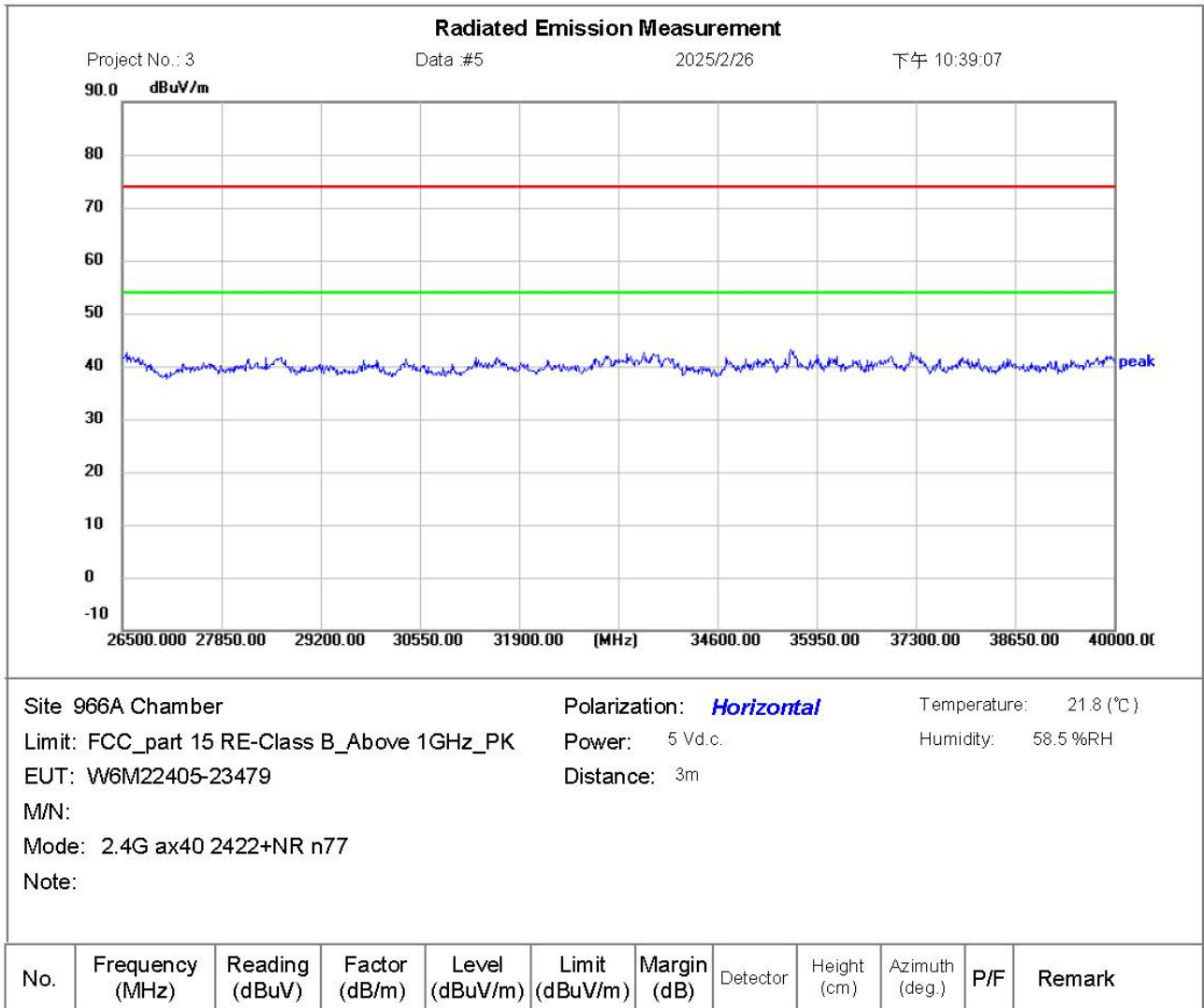




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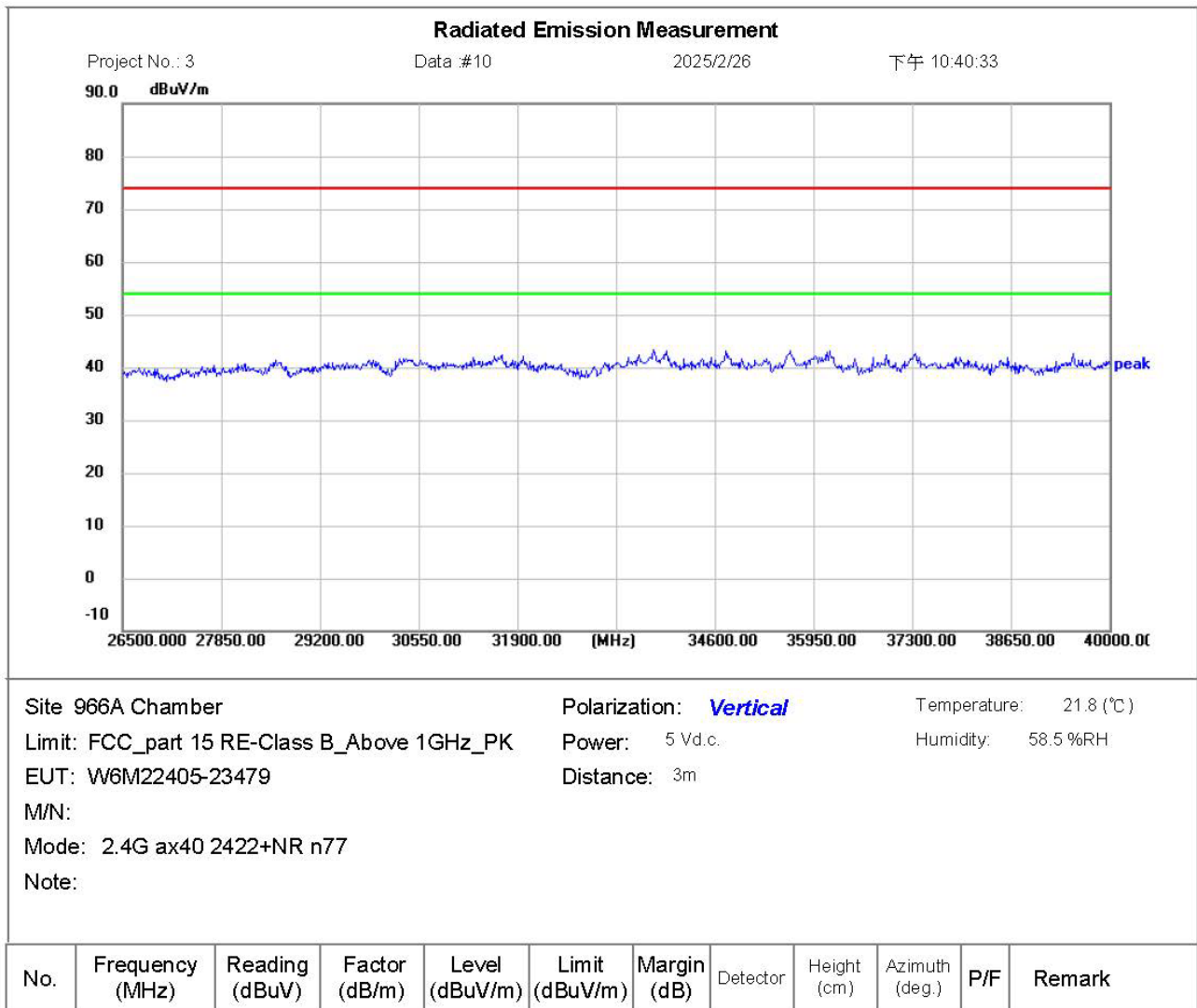




Worldwide Testing Services(Taiwan) Co., Ltd.

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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. Up Line: PK Limit Line, Down Line: Ave Limit Line.