

TEST REPORT

STANDARD : RTCA DO-160G:2010 Section 21.5

Applicant	Testing Laboratory
FUJITA ELECTRIC WORKS,LTD 945, Yamanishi,Ninomiya-machi, Naka-gun,Kanagawa 259-0124 Japan Tel : +81 463 71 2541	Intertek Japan K.K. Matsuda Laboratory (Open area test site) 1283 Yadoriki, Matsuda-machi, Ashigarakami-gun, Kanagawa-ken, 258-0001 Japan Tel.: +81 465 89 2316 Fax.: +81 465 89 2160 (Anechoic chamber) 1386 Yadoriki, Matsuda-machi, Ashigarakami-gun Kanagawa-ken, 258-0001 Japan URL: http://www.japan.intertek-etlsemko.com

Equipment Type	WATCH LOGGER
Trademark	FUJITA ELECTRIC WORKS,LTD
Model (s)	KT-295F / KT-295DX
Serial No.	03FE001401008376 / 03FE0014FB000131
Test Result	Complied
Report Number	26100123JMA-001
Original Issue Date	August 4, 2023
Revised Issue Date	October 15, 2026

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. (This test report shall not be reproduced except in full, without written approval of Intertek Japan K. K.). Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

Approved by



Hideaki Kosemura
[Reviewer]

Tested by

Hidetoshi Sasaki

[Engineer]

1 GENERAL INFORMATION 3

2 TEST SUMMARY 4

2.1 Test standards & Test results..... 4

2.2 Test application..... 4

3 SYSTEM INFORMATION 5

3.1 System configuration 5

3.2 Support Equipment specification 5

3.3 Cable specification 5

3.4 Variation of Models 6

3.5 EUT setup Block diagram..... 7

4 OPERATIONAL CONDITION..... 8

4.1 Operating Flow 8

5 MEASUREMENT UNCERTAINTY 9

6 TEST CONDITION AND TEST RESULTS..... 10

7 TEST EQUIPMENTS 11

8 PHOTOGRAPHS OF TEST SET-UP 12

ANNEX : CHART OF TEST RESULTS 15

APPENDIX A : WATCHLOGGER LINEUP

1 GENERAL INFORMATION**TEST PERFORMED**

Location	Matsuda No.8 Test Site
EUT Received	July 12, 2023
Date of Test	July 12, 2023 and July 13, 2023

Qualifications of Testing Laboratory

Accreditation/Recognition	Scope	Lab. Code	Remarks
VLAC	Wireless / EMC Testing	VLAC-008-3	JAPAN
FCC	Wireless / EMC Testing	JP0009	USA
BSMI	EMC Testing	SL2-IN-E-6009	TAIWAN
SABS	EMC Testing	N/A	South Africa
Filing			
VCCI	EMC Testing	A-0127	JAPAN

ABBREVIATIONS

ESA	Electronic subassembly	Cal	Calibration
EUT	Device Under Test	Q-P	Quasi-peak
AE	Associated Equipment	PK	Peak
AN	Artificial Network	AVG	Average
LCD	Liquid-Crystal Display	N/A	Not applicable or Not available

Revision Summary

Revised Date	Section	Description of Changes
August 4, 2023	-	Original Issue (Report No. 23060135JMA-001)
October 15, 2026	-	Previous report No. 23060135JMA-001 was superseded by this report No. 26100123JMA-001.
	3, Appendix	Variation model (M/N: KT-165F/GX) was added in section 3.4. Table A.6 was added in Appendix A.

2 TEST SUMMARY

2.1 Test standards & Test results

EMC tests were performed according to measurement methods specified in the following reference standards:

Test requirements:		
RTCA DO-160G:2010	Environmental Conditions and Test Procedures for Airborne Equipment	
Test methods:		Result
RTCA DO-160G:2010 Section 21.5	Radiated RF Emissions	Pass
Remarks	Refer to Annex for the chart of the test result.	

2.2 Test application

The tests were performed at the following points.

Test method	Limit	Test application		Remarks
RTCA DO-160G:2010 Section 21.5	Category H	KT-295F	Super multi mode Front, Rear, Left, Right, Top, Bottom	-
		KT-295DX	Super multi mode Front, Rear, Left, Right, Top, Bottom	

3 SYSTEM INFORMATION

The equipment under test (EUT) consisted of the following apparatus.
The information of this section is provided by the Applicant. Intertek assumes no responsibility for the accuracy of the information provided.

3.1 System configuration

Symbol	Item	Model	Serial	Trade Mark	Note
A1	WATCH LOGGER	KT-295F	03FE001401008376	FUJITA ELECTRIC WORKS,LTD	Non Bluetooth model
A2	WATCH LOGGER	KT-295DX	03FE0014FB000131	FUJITA ELECTRIC WORKS,LTD	Bluetooth model
Power Ratings of EUT :		DC3.0 V			
Power Supply :		DC3.0 V (Battery)			
Condition of Equipment :		Production			
EUT Photo		See Section 8			

3.2 Support Equipment specification

No support equipment was provided for the test.

3.3 Cable specification

No cable was provided for the test.

3.4 Variation of Models

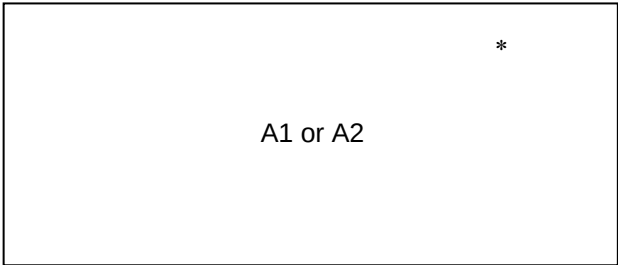
No	Model No.	Difference
1	KT-155F	Refer to Appendix A Table A.1
2	KT-155U	Refer to Appendix A Table A.1
3	KT-175F	Refer to Appendix A Table A.1
4	KT-115XLF	Refer to Appendix A Table A.1
5	KT-255F	Refer to Appendix A Table A.1
6	KT-255U	Refer to Appendix A Table A.1
7	KT-275F	Refer to Appendix A Table A.1
8	KT-215XLF	Refer to Appendix A Table A.1
9	KT-195F	Refer to Appendix A Table A.1
10	KT-195U	Refer to Appendix A Table A.1
11	KT-295F	Tested model Refer to Appendix A Table A.1
12	KT-295U	Refer to Appendix A Table A.1
13	KT-215LF	Refer to Appendix A Table A.1
14	KT-155F/EX	Refer to Appendix A Table A.1
15	KT-165F	Refer to Appendix A Table A.2
16	KT-265F	Refer to Appendix A Table A.2
17	KT-195U/GX	Refer to Appendix A Table A.3
18	KT-295U/GX	Refer to Appendix A Table A.3
19	KT-195F/GX	Refer to Appendix A Table A.3
20	KT-295F/GX	Refer to Appendix A Table A.3
21	KT-155FP	Refer to Appendix A Table A.4
22	KT-115LFP	Refer to Appendix A Table A.4
23	KT-155F/EX(LED)	Refer to Appendix A Table A.4
24	KT-255F/32	Refer to Appendix A Table A.4
25	KT-115LFP/A	Refer to Appendix A Table A.4
26	KT-155DX	Refer to Appendix A Table A.5
27	KT-255DX	Refer to Appendix A Table A.5
28	KT-195DX	Refer to Appendix A Table A.5
29	KT-295DX	Tested model Refer to Appendix A Table A.5
30	KT-115XDX	Refer to Appendix A Table A.5
31	KT-215XDX	Refer to Appendix A Table A.5
32	KT-155DXP	Refer to Appendix A Table A.5
33	KT-115DXP	Refer to Appendix A Table A.5
34	KT-165F/GX	Refer to Appendix A Table A.6

KT-295F and KT-295DX were tested on behalf of all models by applicant's judgment.

3.5 EUT setup Block diagram

3.5.1 Super multi mode

* : EUT



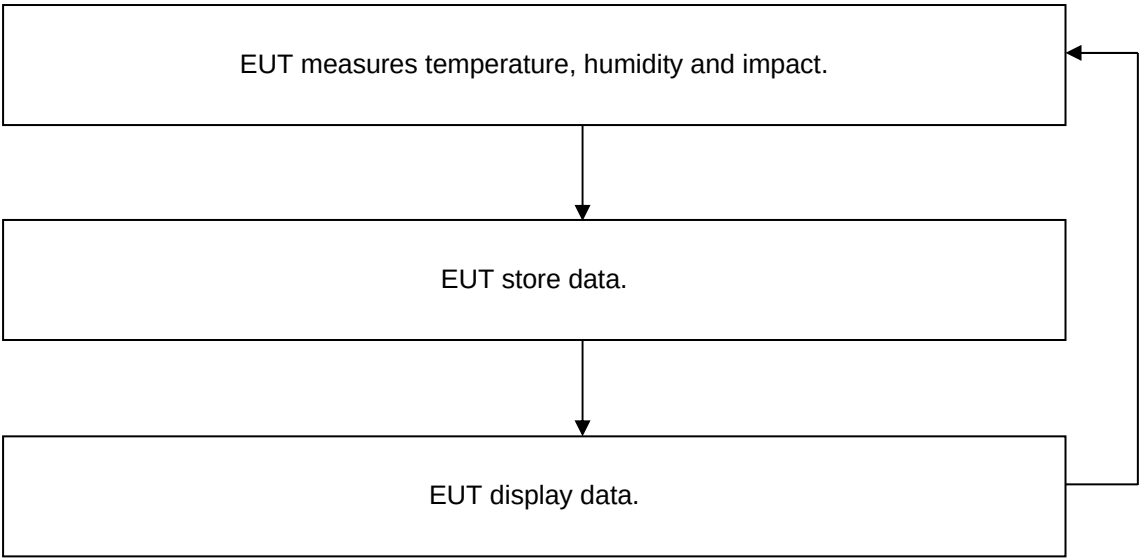
The symbols and numbers assigned to the equipments and cables on this diagram correspond to the ones in from Sections 3.1 to 3.3.

4 OPERATIONAL CONDITION

The test was performed under the following mode.
The information of this section is provided by the Applicant. Intertek assumes no responsibility for the accuracy of the information provided.

4.1 Operating Flow

4.1.1 Super multi mode
Cycle time for operation: 60 sec



Note: KT-295DX has Bluetooth function. Bluetooth function is OFF during the test.

5 MEASUREMENT UNCERTAINTY

Traceability to national standard in SI units is ensured with these values.
Compliance with the limits in this standard are determined without in consideration of the measurement uncertainty of the measurement instrumentation.

Radiated RF Emissions	
100MHz – 200MHz	4.85 dB(k=2)
200MHz – 1GHz	5.84 dB(k=2)
1GHz – 6GHz	5.58 dB(k=2)

6 TEST CONDITION AND TEST RESULTS

See ANNEX for the detailed result.

6.1 Radiated RF Emissions

Location	Matsuda No.8 Test Site
Test Engineer	Hidetoshi Sasaki

Test Specification

Item	Section	Category	Test Procedure
Radiated RF Emissions	21.5	H	LEN-RJP-EM035

Frequency Range of Measurements

Model	Operating mode	Tested side	Required Frequency Range	Measured Frequency Range
KT-295F	Super multi mode	Front, Rear, Left, Right, Top, Bottom	100 MHz – 6000 MHz	100 MHz – 6000 MHz
KT-295DX	Super multi mode	Front, Rear, Left, Right, Top, Bottom	100 MHz – 6000 MHz	100 MHz – 6000 MHz

Environmental Condition

Date	Temperature Variation	Humidity Variation	Atmospheric Pressure
July 12, 2023	21 °C–24 °C	44 %–56 %	97.7 kPa–97.8 kPa
July 13, 2023	22 °C–24 °C	37 %–48 %	97.7 kPa–97.9 kPa

Test Results

Model	Operating mode	Tested side	Result	Remarks
KT-295F	Super multi mode	Front, Rear, Left, Right, Top, Bottom	Pass	See Note
KT-295DX	Super multi mode	Front, Rear, Left, Right, Top, Bottom	Pass	See Note

Note: Refer to Annex for the chart of the test result.

7 TEST EQUIPMENTS

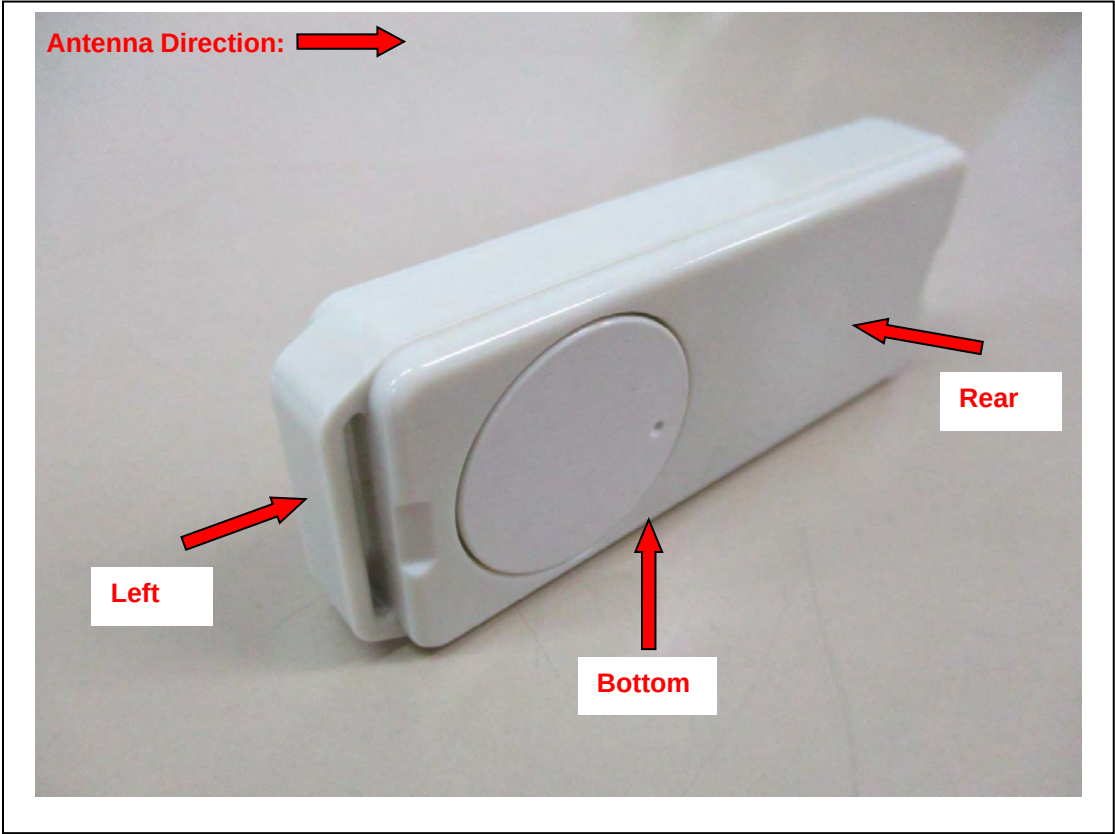
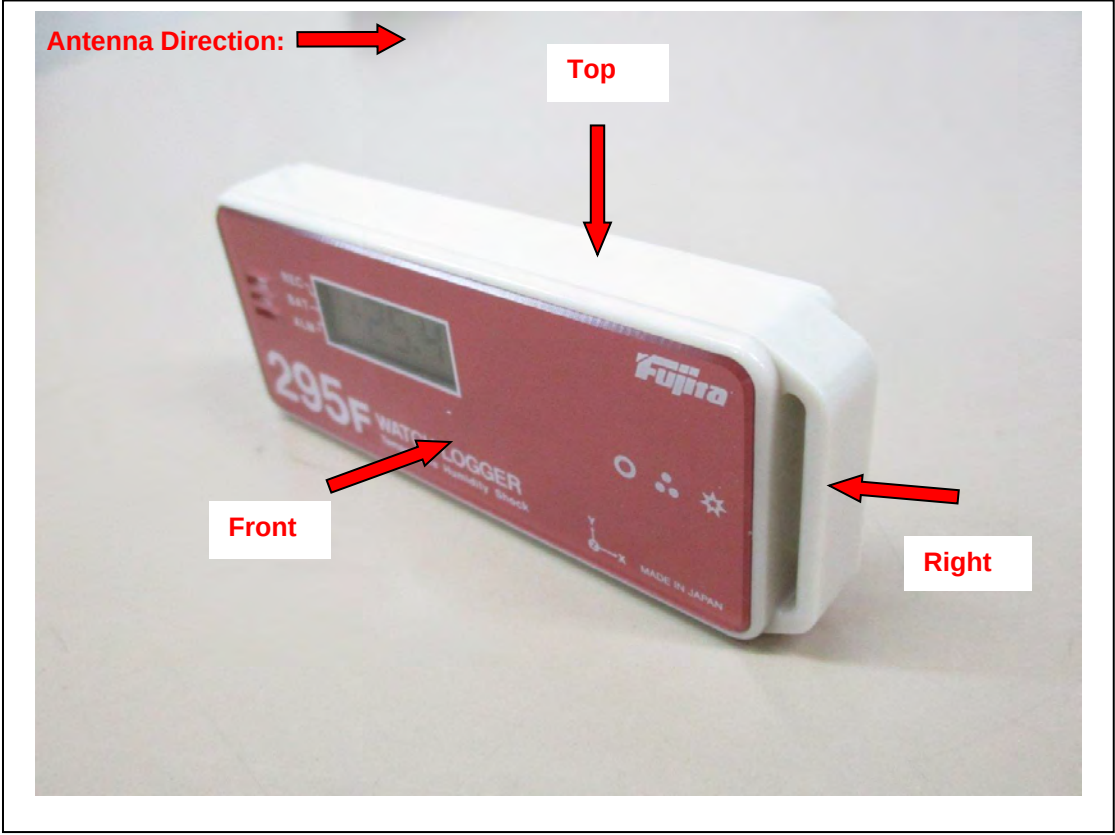
Measurement equipment

Equipment	Model number	Serial number	Manufacturer	Calibration date	Calibration due date
Radiated RF Emissions					
Attenuator	6803.17.B	None(DML412)	HUBER+SUHNER	Mar.30, 2023	Mar.29, 2024
Biconical antenna	BBA9106	None (D02083002)	Schwarzbeck	Mar.22, 2023	Mar.21, 2024
Logperiodic antenna	3146	1672	EMCO	Mar.22, 2023	Mar.21, 2024
Double Ridged Guide antenna	3115	2567	EMCO	Dec.09, 2022	Dec.08, 2023
Pre-amplifier	ZFL-500/ZX60-3018G	2007040601	Mini-Circuits	Jan.13, 2023	Jan.12, 2024
Pre-amplifier	8449B	3008A00455	HEWLETT PACKARD	Feb.13, 2023	Feb.12, 2024
Spectrum Analyzer	E7403A	MY42000061	Agilent	Jul. 04, 2023	Jul.03, 2024

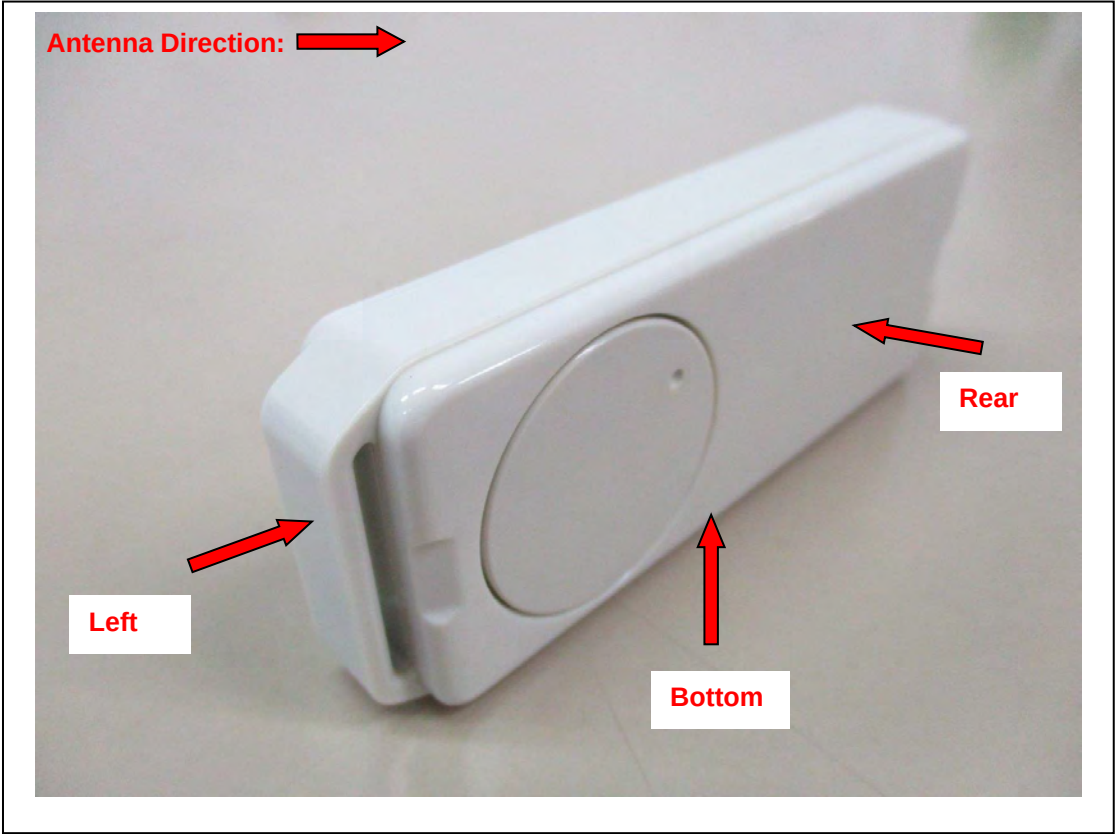
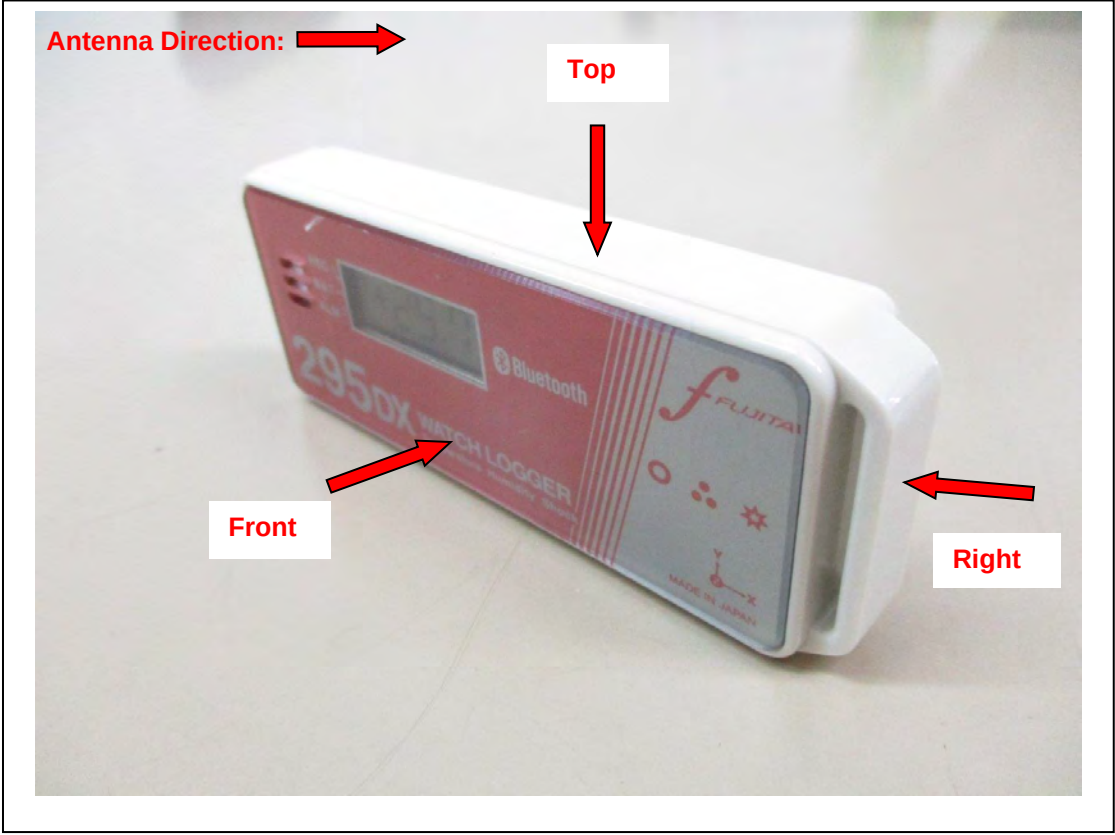
8 PHOTOGRAPHS OF TEST SET-UP

8.1 Equipment Under Test

KT-295F



KT-295DX



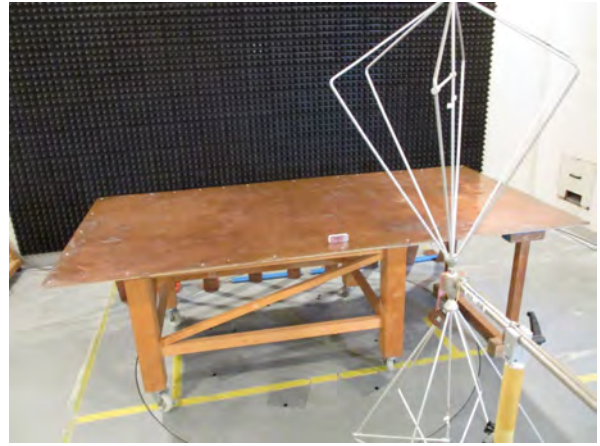
8.2 Test Setup

8.2.1 Section 21.5 - Radiated RF Emission

8.2.1.1 Super multi mode (KT-295F and KT-295DX)



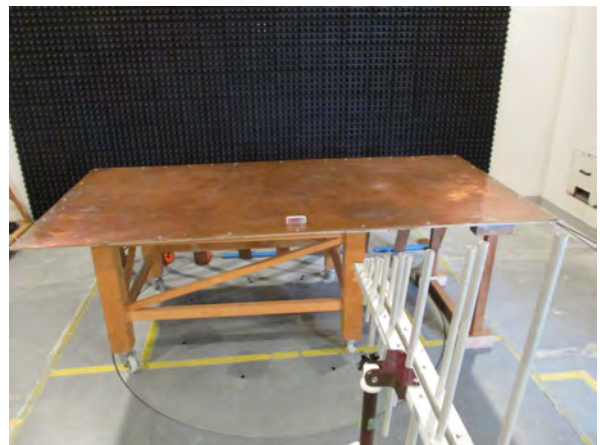
100 MHz-200 MHz (Horizontal)



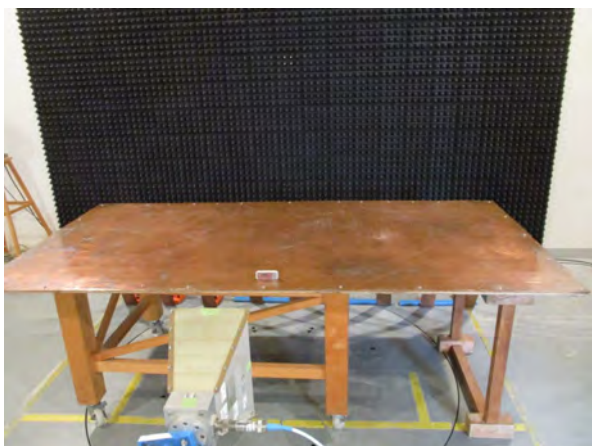
100 MHz-200 MHz (Vertical)



200 MHz-1000 MHz (Horizontal)



200 MHz-1000 MHz (Vertical)



1000 MHz-6000 MHz (Horizontal)



1000 MHz-6000 MHz (Vertical)

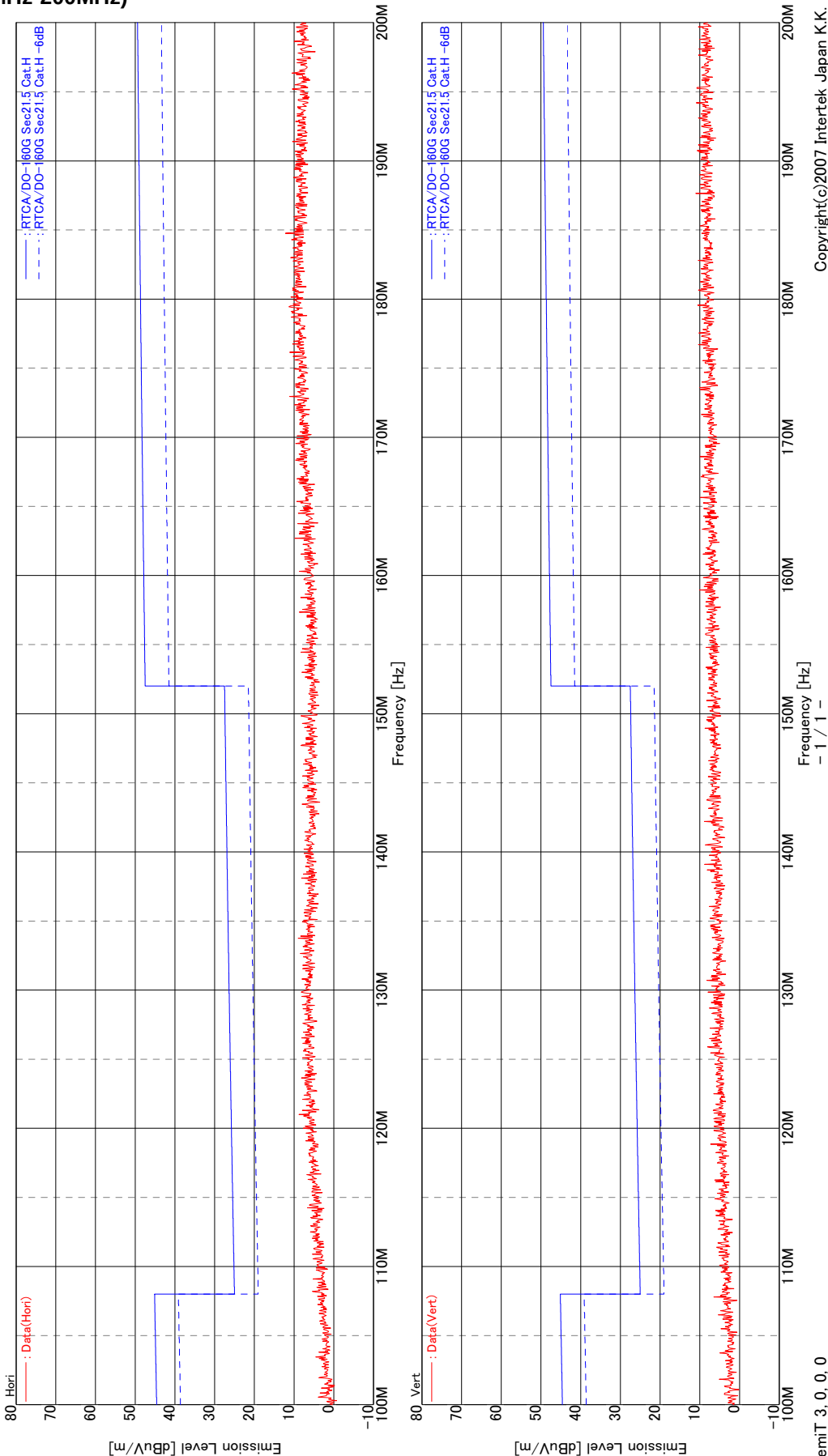
ANNEX : CHART OF TEST RESULTS

Section 21.5
Ambient Noise (100MHz-200MHz)

< Graph number # >
RTCA DO-160G Section21.5
Matsuda No.8 Test Site
Date tested : Jul 12 2023
Company : FUJITA ELECTRIC WORKS,LTD
EUT Name : WATCH LOGGER
Model number : -
Serial number : -

Distance 1.00 m

Test mode : Ambient
Power source : -
File number : -
Engineer : Hidetoshi Sasaki
Note :

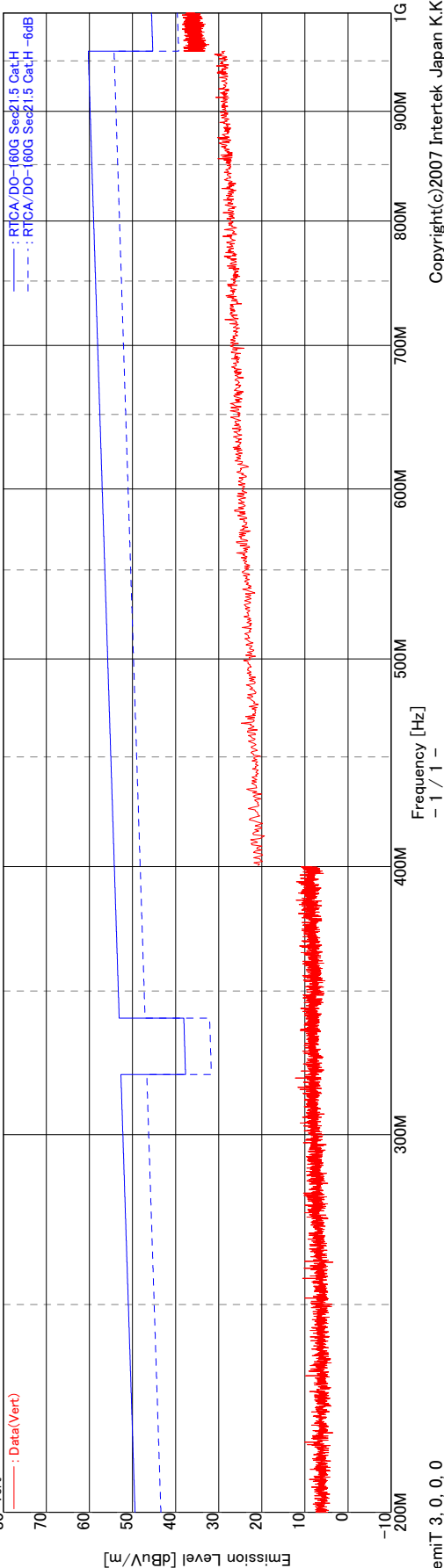
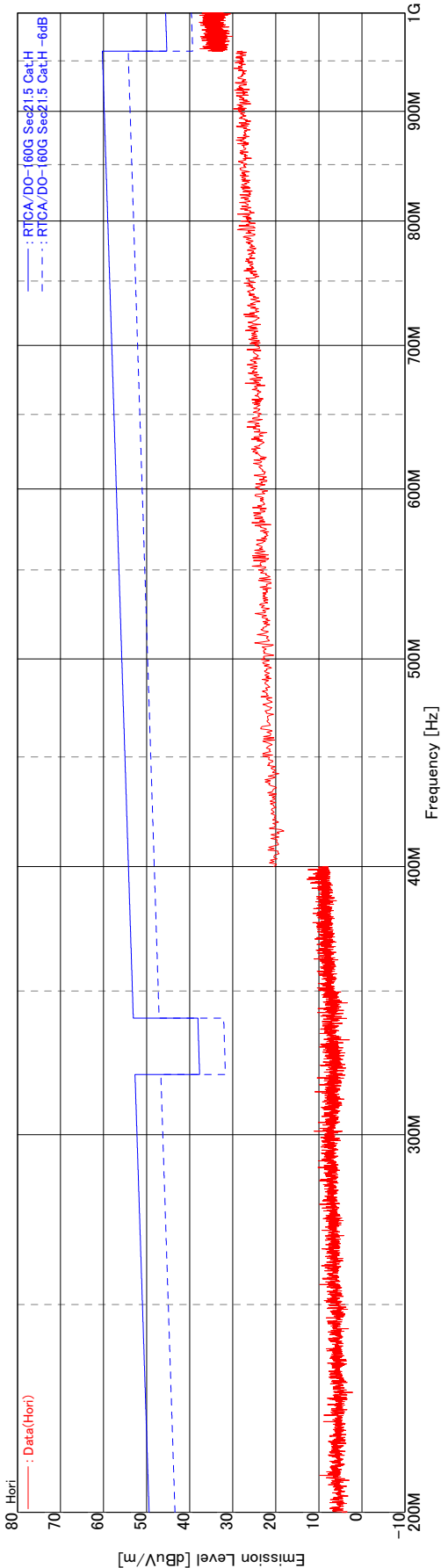


Section 21.5
Ambient Noise (200MHz-1GHz)

< Graph number # >
RTCA DO-160G Section21.5
Matsuda No.8 Test Site
Date tested : Jul 12 2023
Company : FUJITA ELECTRIC WORKS,LTD
EUT Name : WATCH LOGGER
Model number : -
Serial number : -

Distance 1.00 m

Test mode : Ambient
Power source : -
File number : -
Engineer : Hidetoshi Sasaki
Note :

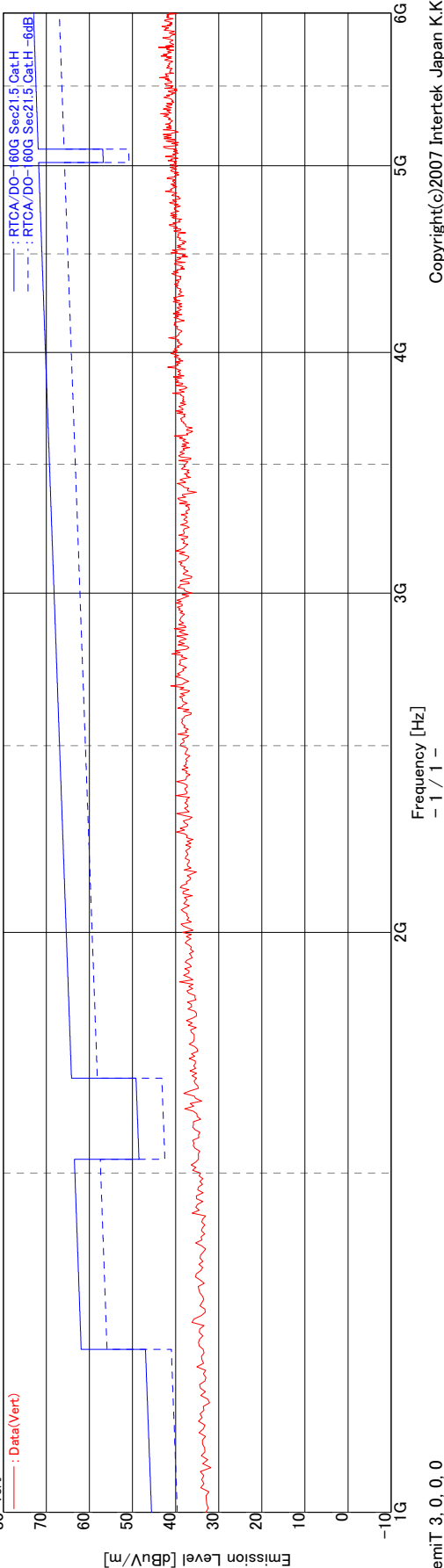
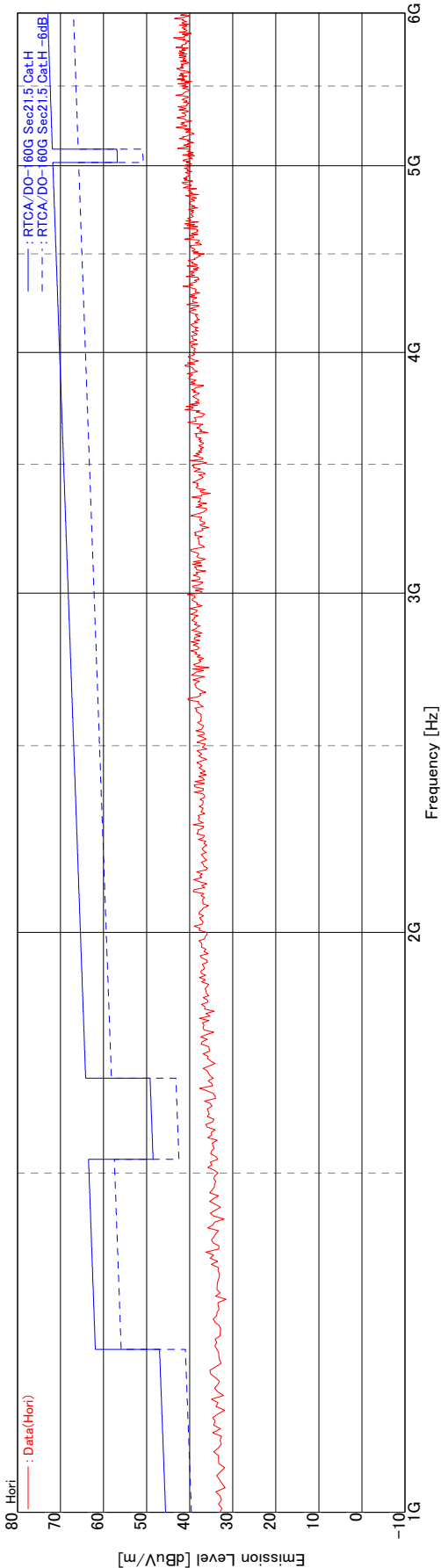


Section 21.5
Ambient Noise (1GHz-6GHz)

< Graph number # >
RTCA DO-160G Section21.5
Matsuda No.8 Test Site
Date tested : Jul 12 2023
Company : FUJITA ELECTRIC WORKS,LTD
EUT Name : WATCH LOGGER
Model number : -
Serial number : -

Distance 1.00 m

Test mode : Ambient
Power source : -
File number : -
Engineer : Hidetoshi Sasaki
Note :



Section 21.5
KT-295F: Front (100MHz-200MHz)

< Graph number # >

RTCA DO-160G Section21.5

Matsuda No.8 Test Site

Date tested : Jul 12 2023

Company : FUJITA ELECTRIC WORKS,LTD

EUT Name : WATCH LOGGER

Model number : KT-295F

Serial number : 03FE001401008376

Test mode : Super multi mode

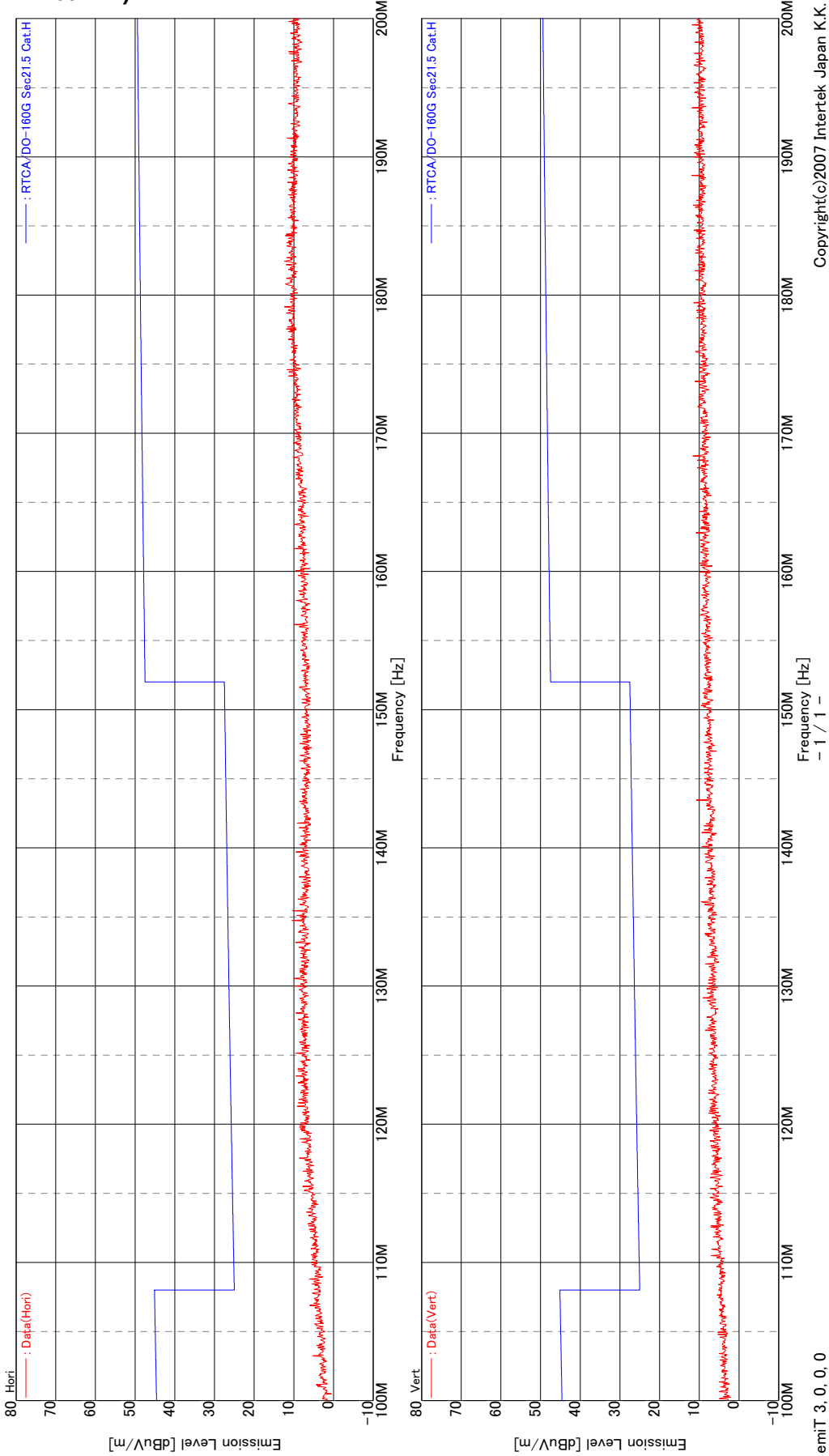
Power source : Battery (DC3 V)

File number : Front

Engineer : Hidetoshi Sasaki

Note :

Distance 1.00 m



Section 21.5
KT-295F: Front (200MHz-1GHz)

< Graph number # >

RTCA DO-160G Section21.5

Matsuda No.8 Test Site

Date tested : Jul 13 2023

Company : FUJITA ELECTRIC WORKS,LTD

EUT Name : WATCH LOGGER

Model number : KT-295F

Serial number : 03FE001401008376

Test mode : Super multi mode

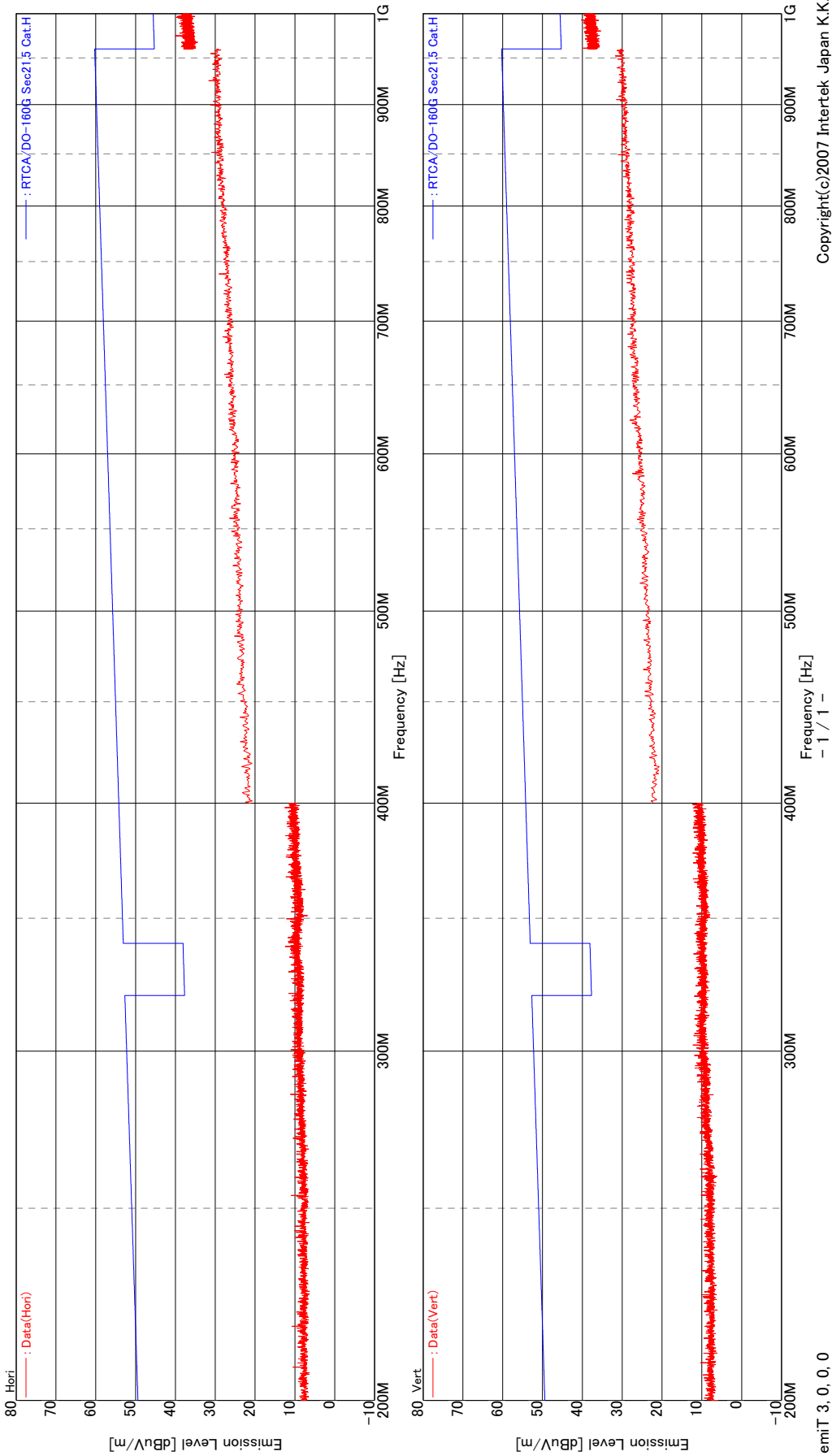
Power source : Battery (DC3 V)

File number : Front

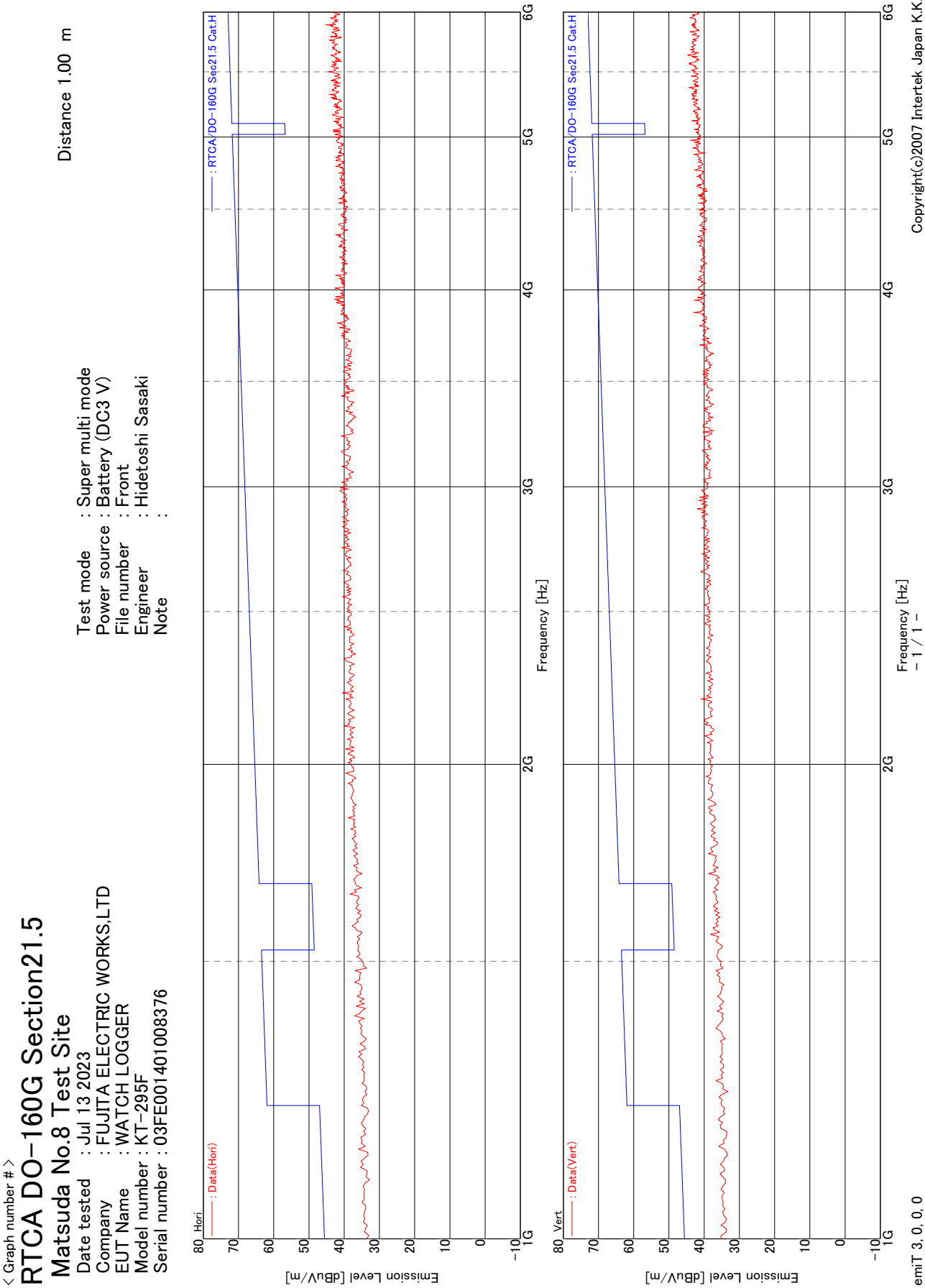
Engineer : Hidetoshi Sasaki

Note :

Distance 1.00 m



Section 21.5
KT-295F: Front (1GHz-6GHz)



Section 21.5
KT-295F: Rear (100MHz-200MHz)

< Graph number # >

RTCA DO-160G Section21.5

Matsuda No.8 Test Site

Date tested : Jul 12 2023

Company : FUJITA ELECTRIC WORKS,LTD

EUT Name : WATCH LOGGER

Model number : KT-295F

Serial number : 03FE001401008376

Test mode : Super multi mode

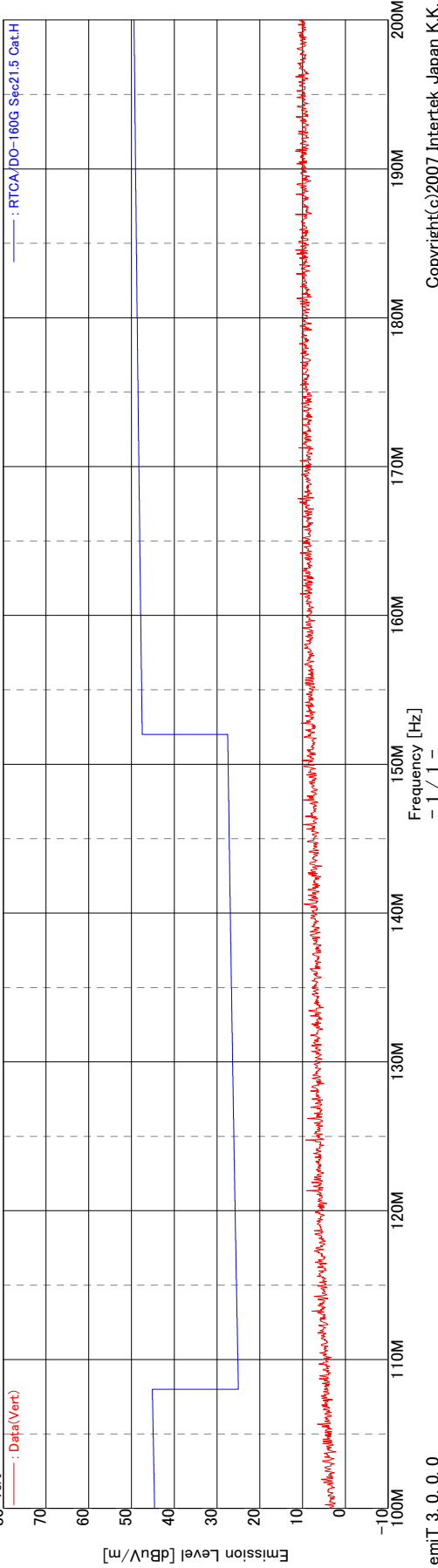
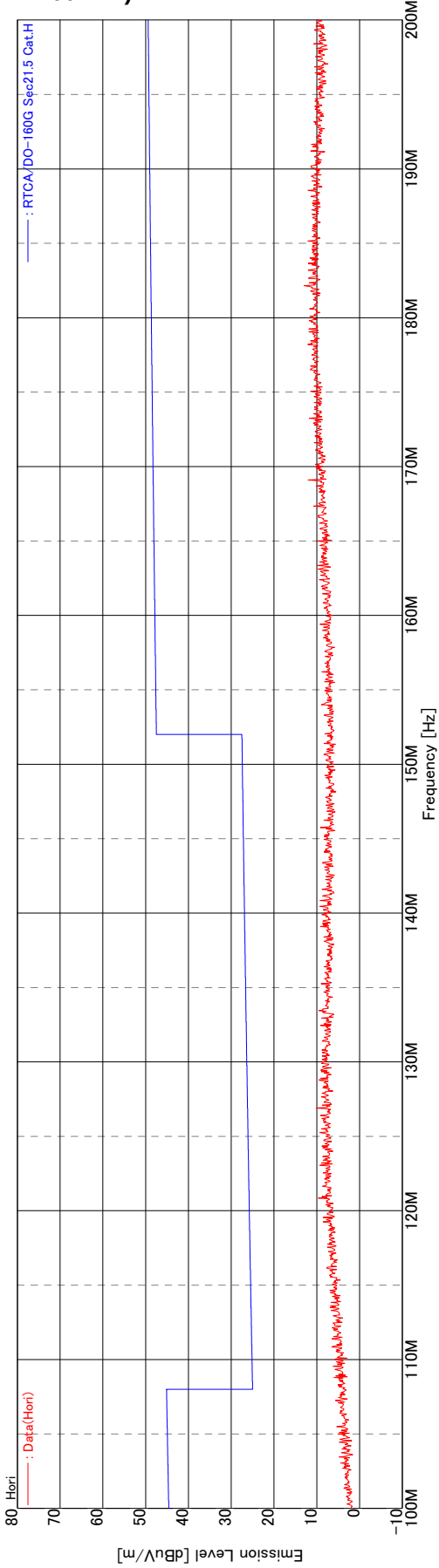
Power source : Battery (DC3 V)

File number : Rear

Engineer : Hidetoshi Sasaki

Note :

Distance 1.00 m



Section 21.5
KT-295F: Rear (200MHz-1GHz)

< Graph number # >

RTCA DO-160G Section21.5

Matsuda No.8 Test Site

Date tested : Jul 13 2023

Company : FUJITA ELECTRIC WORKS,LTD

EUT Name : WATCH LOGGER

Model number : KT-295F

Serial number : 03FE001401008376

Test mode : Super multi mode

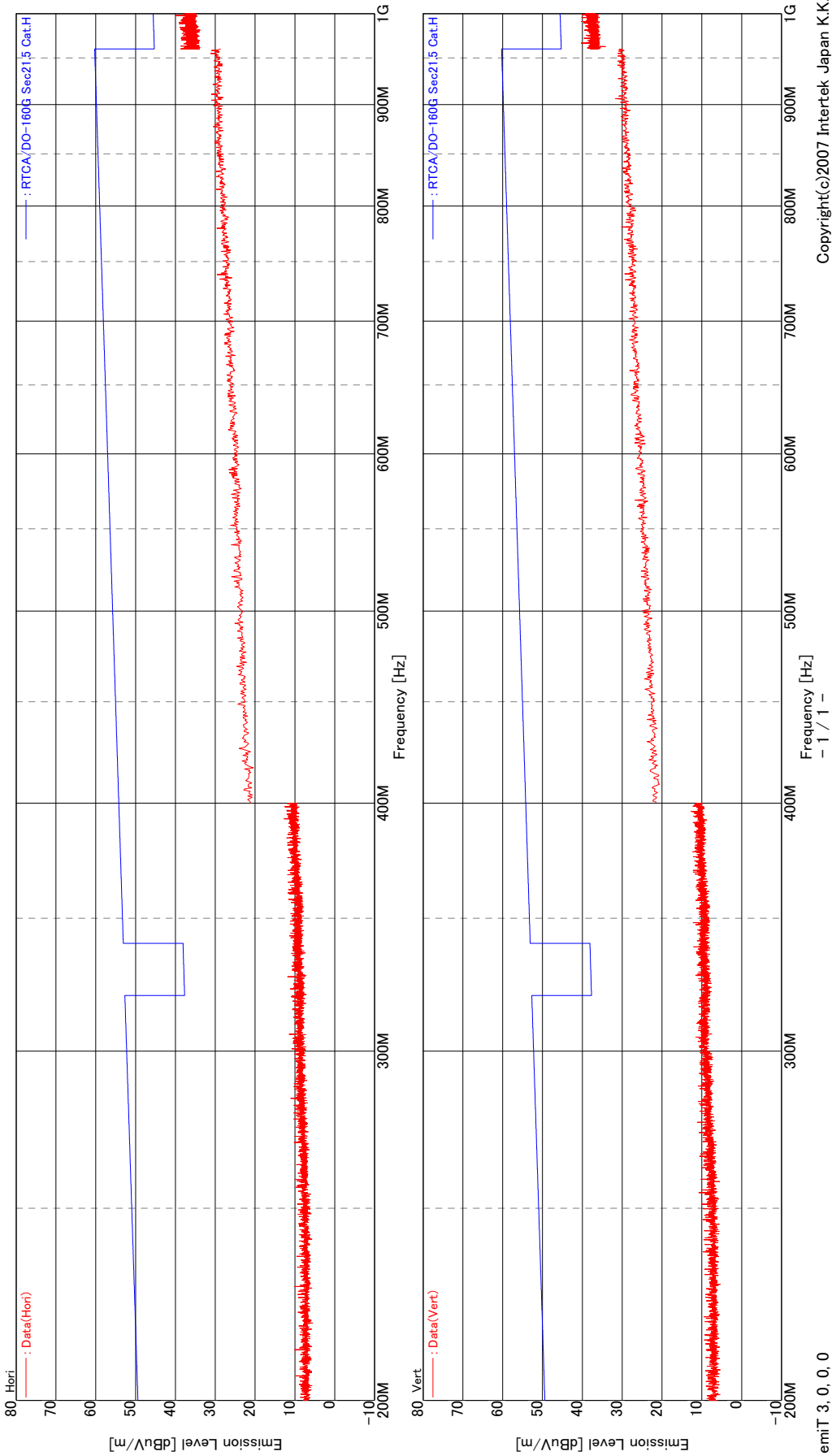
Power source : Battery (DC3 V)

File number : Rear

Engineer : Hidetoshi Sasaki

Note :

Distance 1.00 m



Distance 1.00 m

Test mode : Super multi mode
Power source : Battery (DC3 V)
File number : Rear
Engineer : Hidetoshi Sasaki
Note :

< Graph number # >
RTCA DO-160G Section 21.5

Matsuda No.8 Test Site

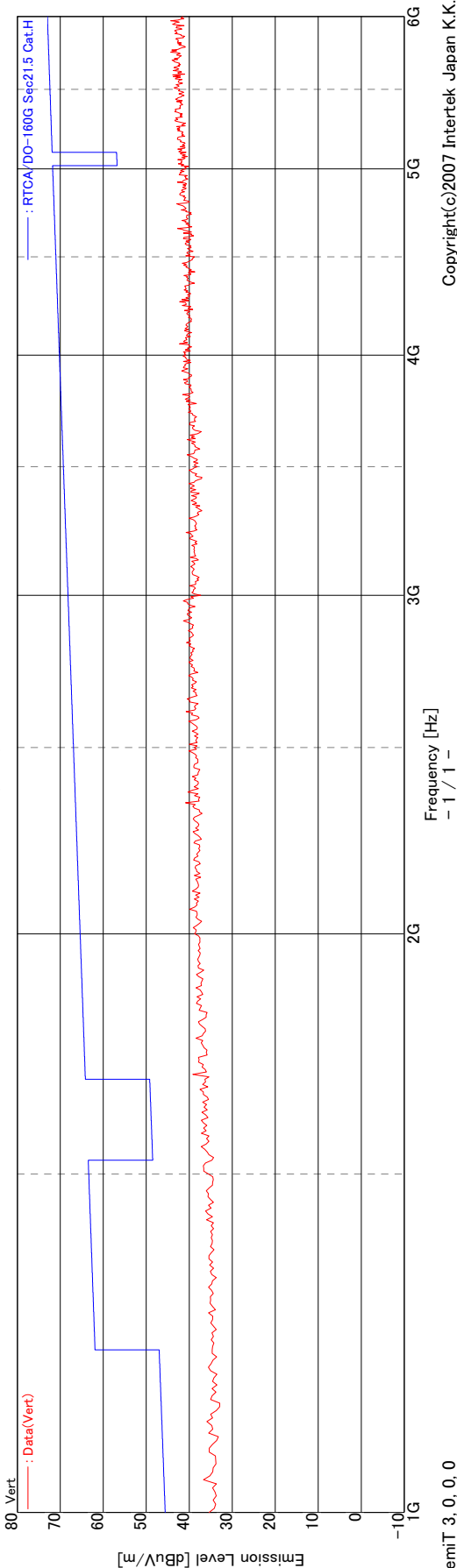
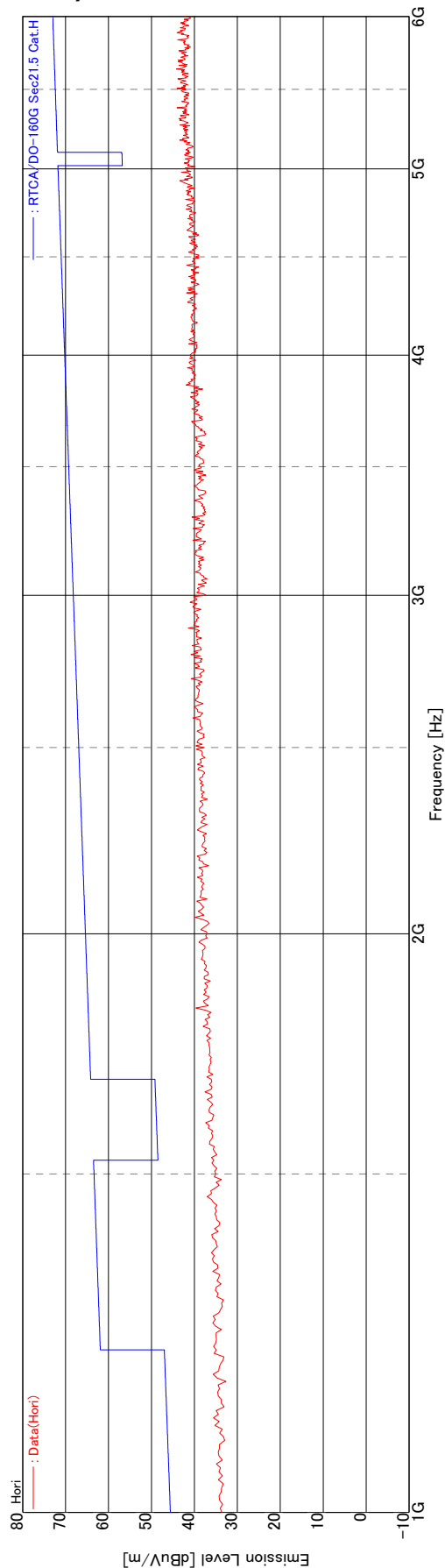
Date tested : Jul 13 2023

Company : FUJITA ELECTRIC WORKS, LTD

EUT Name : WATCH LOGGER

Model number : KT-295F

Serial number : 03FE001401008376



Section 21.5
KT-295F: Left (100MHz-200MHz)

< Graph number # >

RTCA DO-160G Section21.5

Matsuda No.8 Test Site

Date tested : Jul 12 2023

Company : FUJITA ELECTRIC WORKS,LTD

EUT Name : WATCH LOGGER

Model number : KT-295F

Serial number : 03FE001401008376

Test mode : Super multi mode

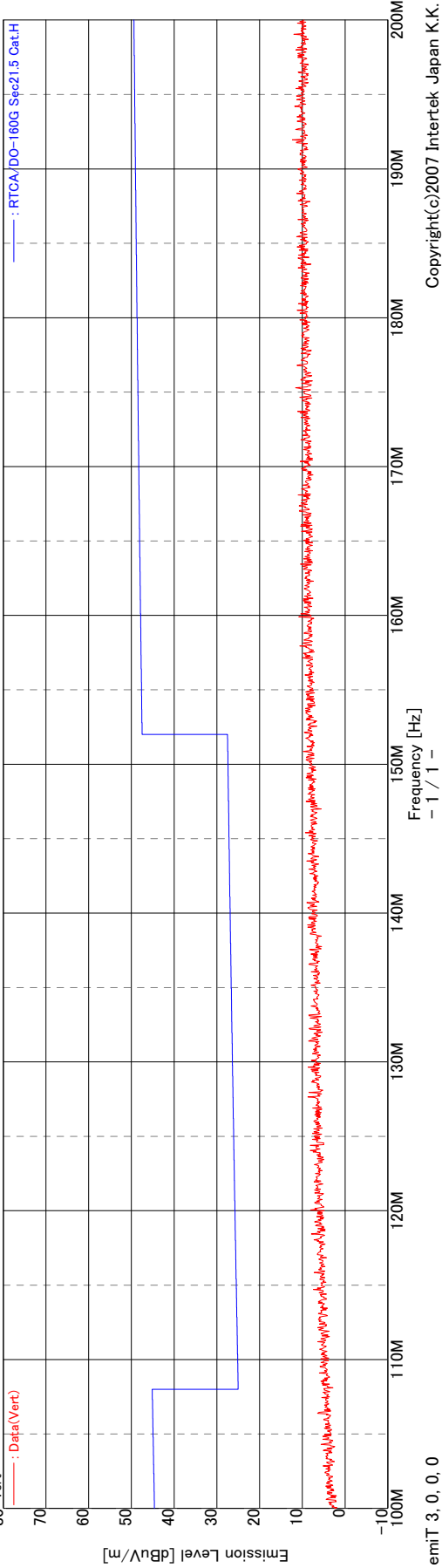
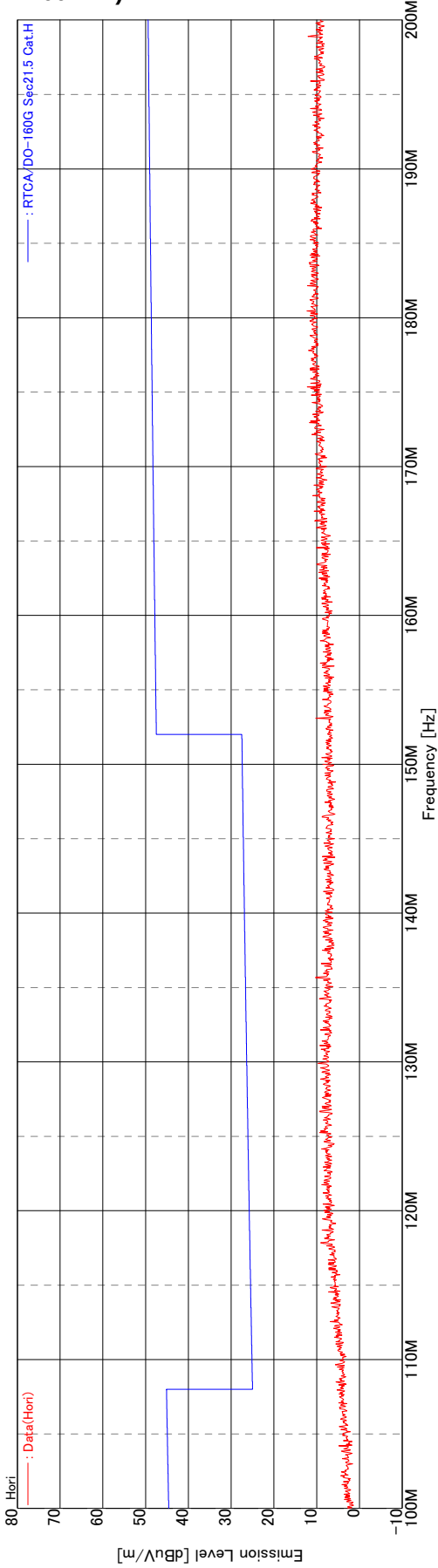
Power source : Battery (DC3 V)

File number : Left

Engineer : Hidetoshi Sasaki

Note :

Distance 1.00 m



Section 21.5
KT-295F: Left (200MHz-1GHz)

< Graph number # >

RTCA DO-160G Section21.5

Matsuda No.8 Test Site

Date tested : Jul 13 2023

Company : FUJITA ELECTRIC WORKS,LTD

EUT Name : WATCH LOGGER

Model number : KT-295F

Serial number : 03FE001401008376

Test mode : Super multi mode

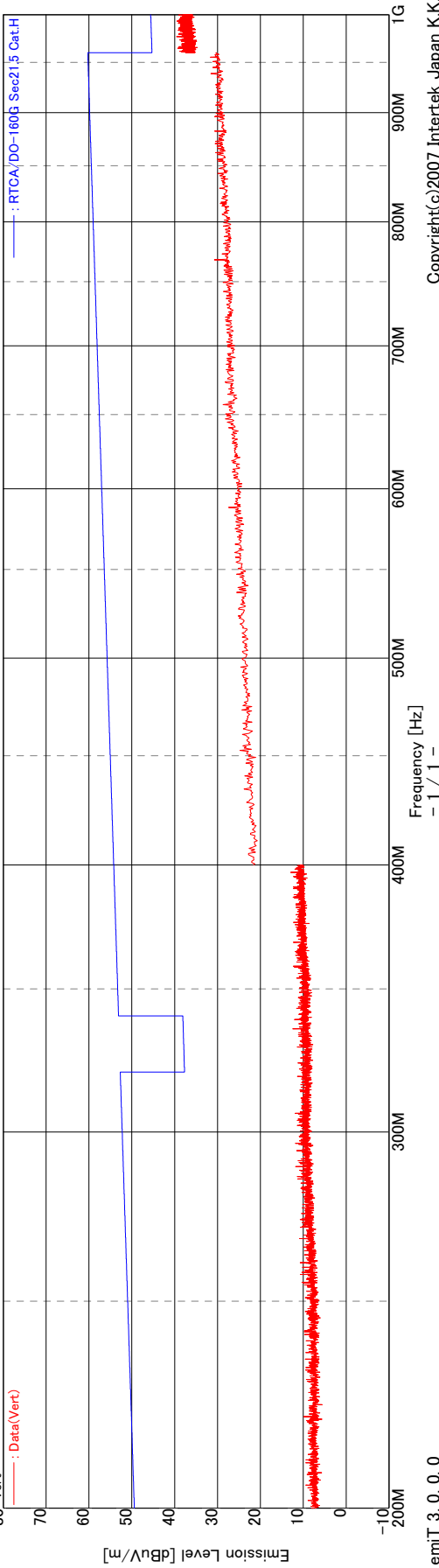
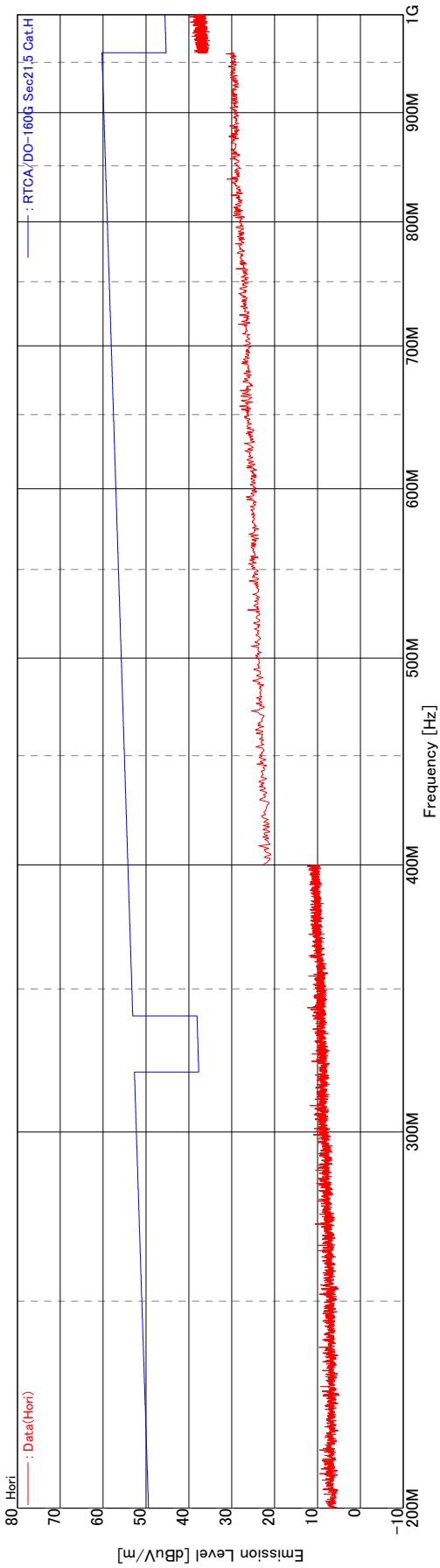
Power source : Battery (DC3 V)

File number : Left

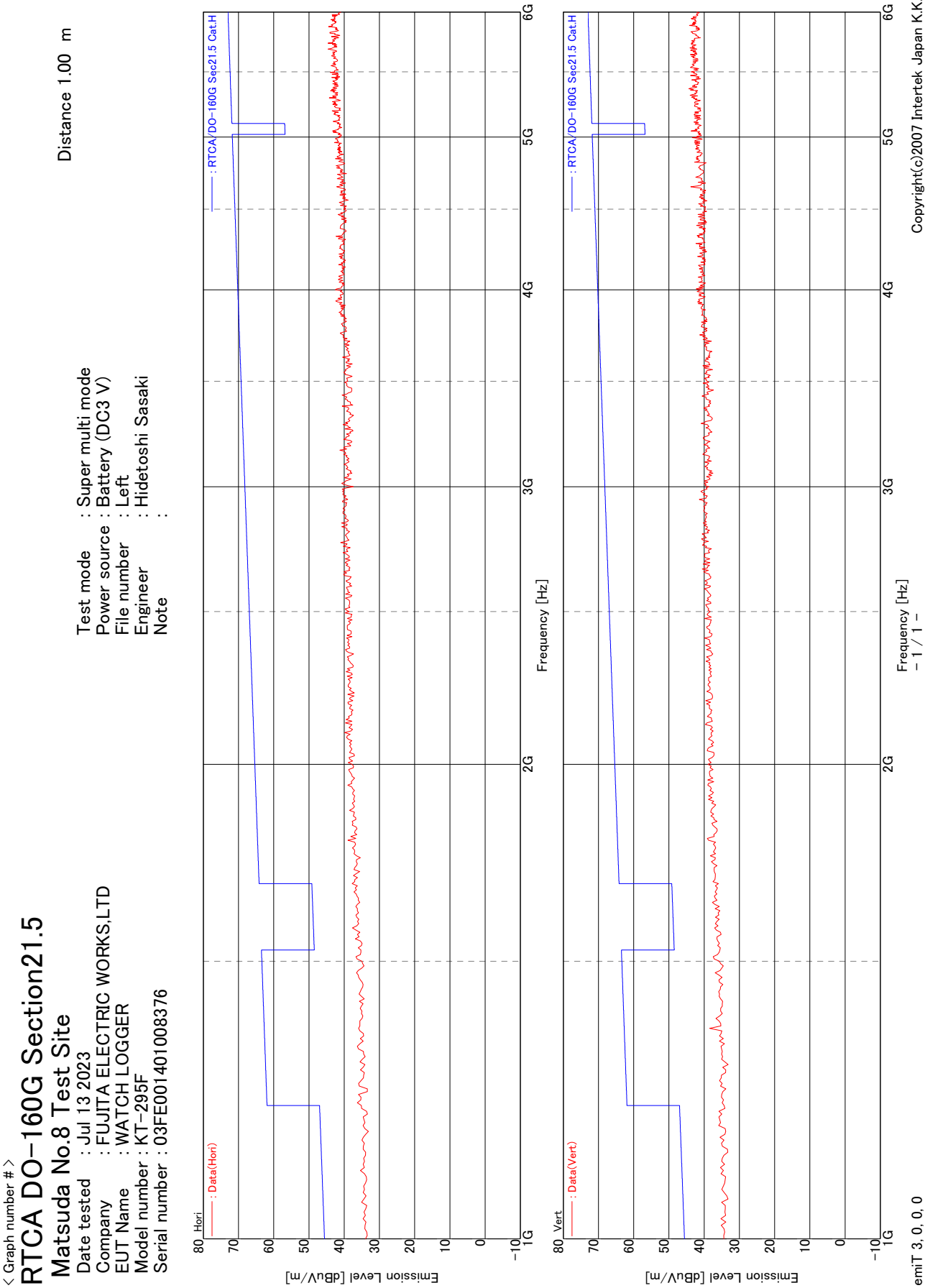
Engineer : Hidetoshi Sasaki

Note :

Distance 1.00 m



Section 21.5
KT-295F: Left (1GHz-6GHz)



Section 21.5
KT-295F: Right (100MHz-200MHz)

< Graph number # >

RTCA DO-160G Section21.5

Matsuda No.8 Test Site

Date tested : Jul 12 2023

Company : FUJITA ELECTRIC WORKS,LTD

EUT Name : WATCH LOGGER

Model number : KT-295F

Serial number : 03FE001401008376

Test mode : Super multi mode

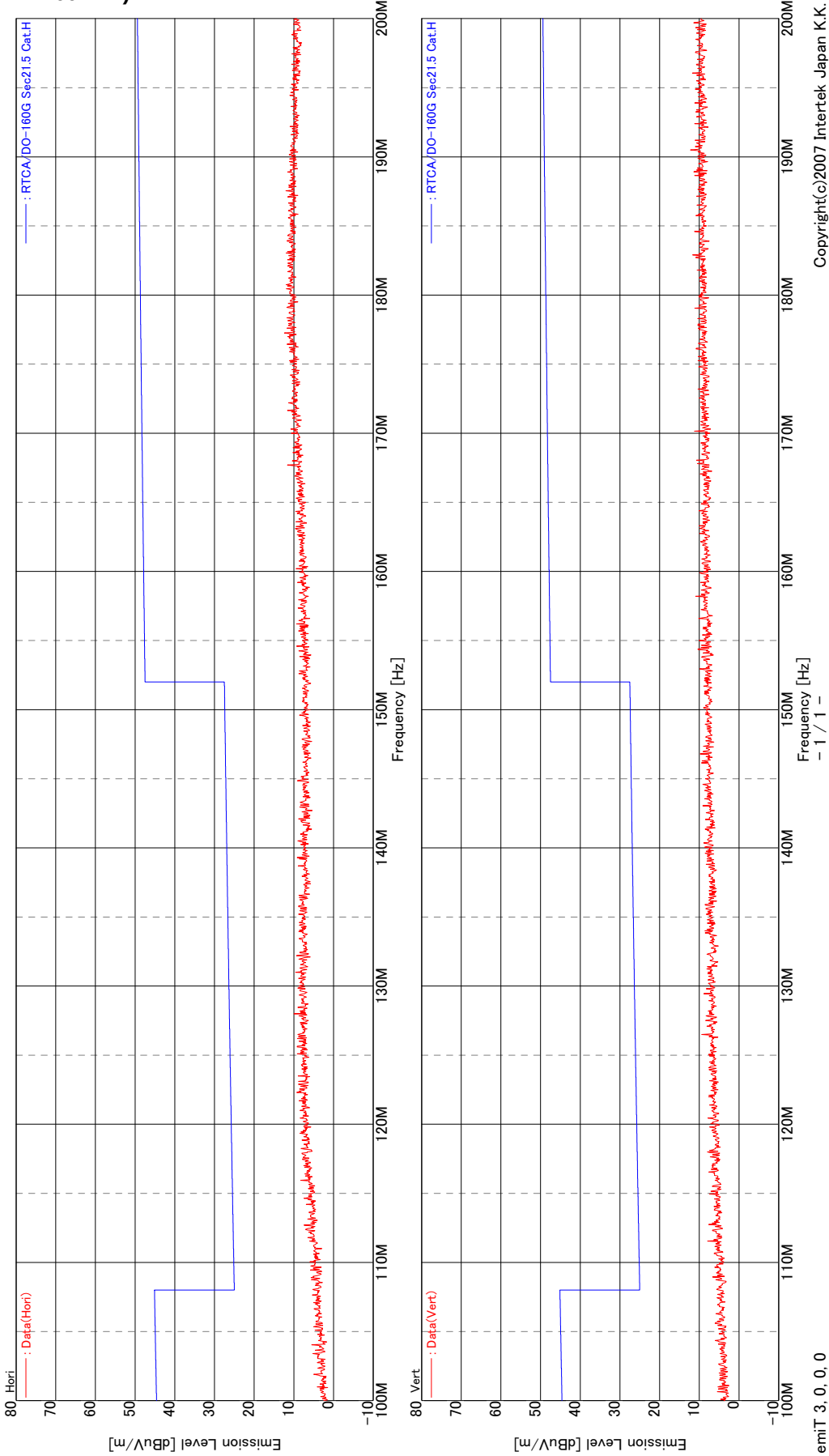
Power source : Battery (DC3 V)

File number : Right

Engineer : Hidetoshi Sasaki

Note :

Distance 1.00 m



Section 21.5
KT-295F: Right (200MHz-1GHz)

< Graph number # >

RTCA DO-160G Section21.5

Matsuda No.8 Test Site

Date tested : Jul 13 2023

Company : FUJITA ELECTRIC WORKS,LTD

EUT Name : WATCH LOGGER

Model number : KT-295F

Serial number : 03FE001401008376

Test mode : Super multi mode

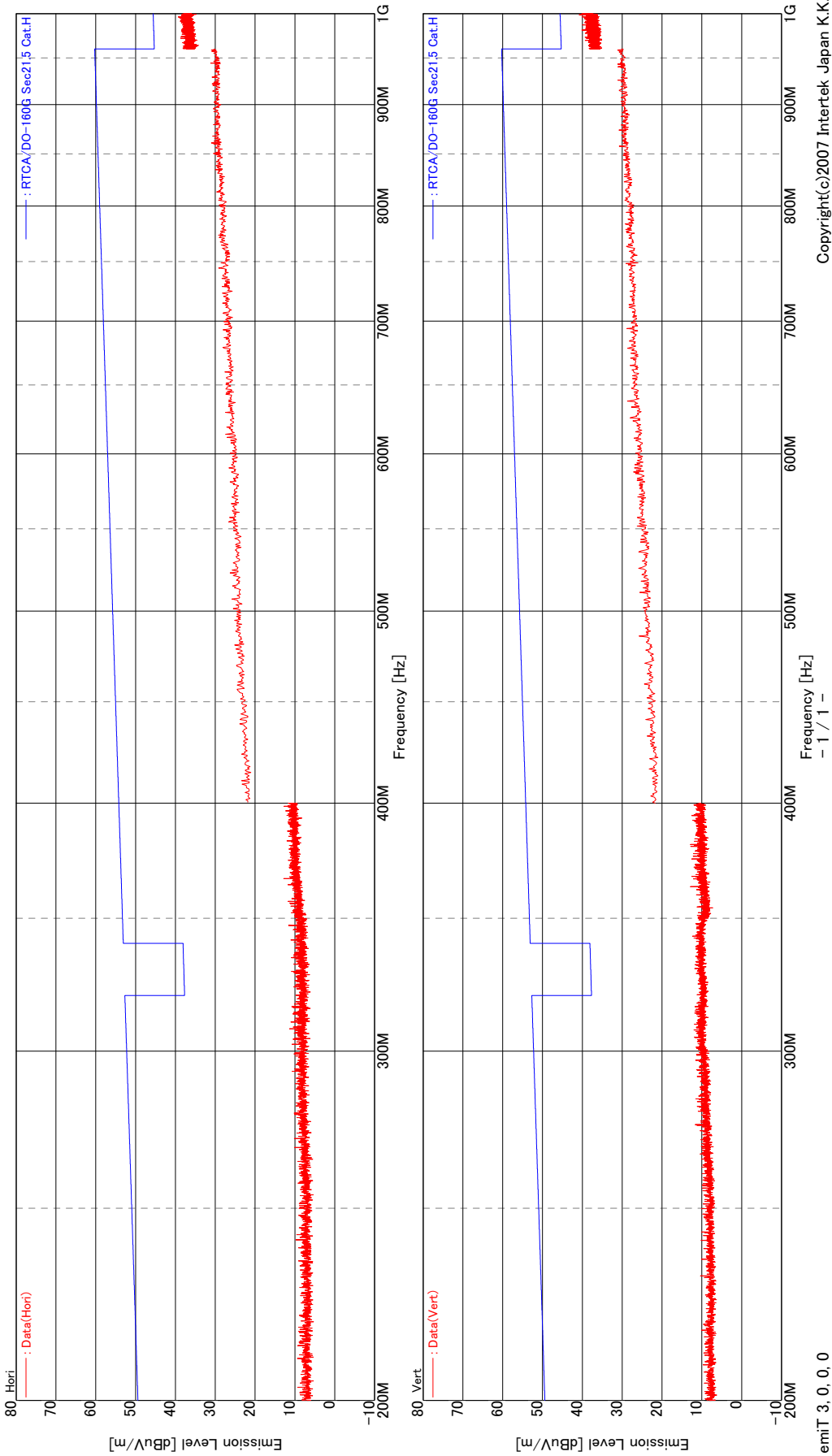
Power source : Battery (DC3 V)

File number : Right

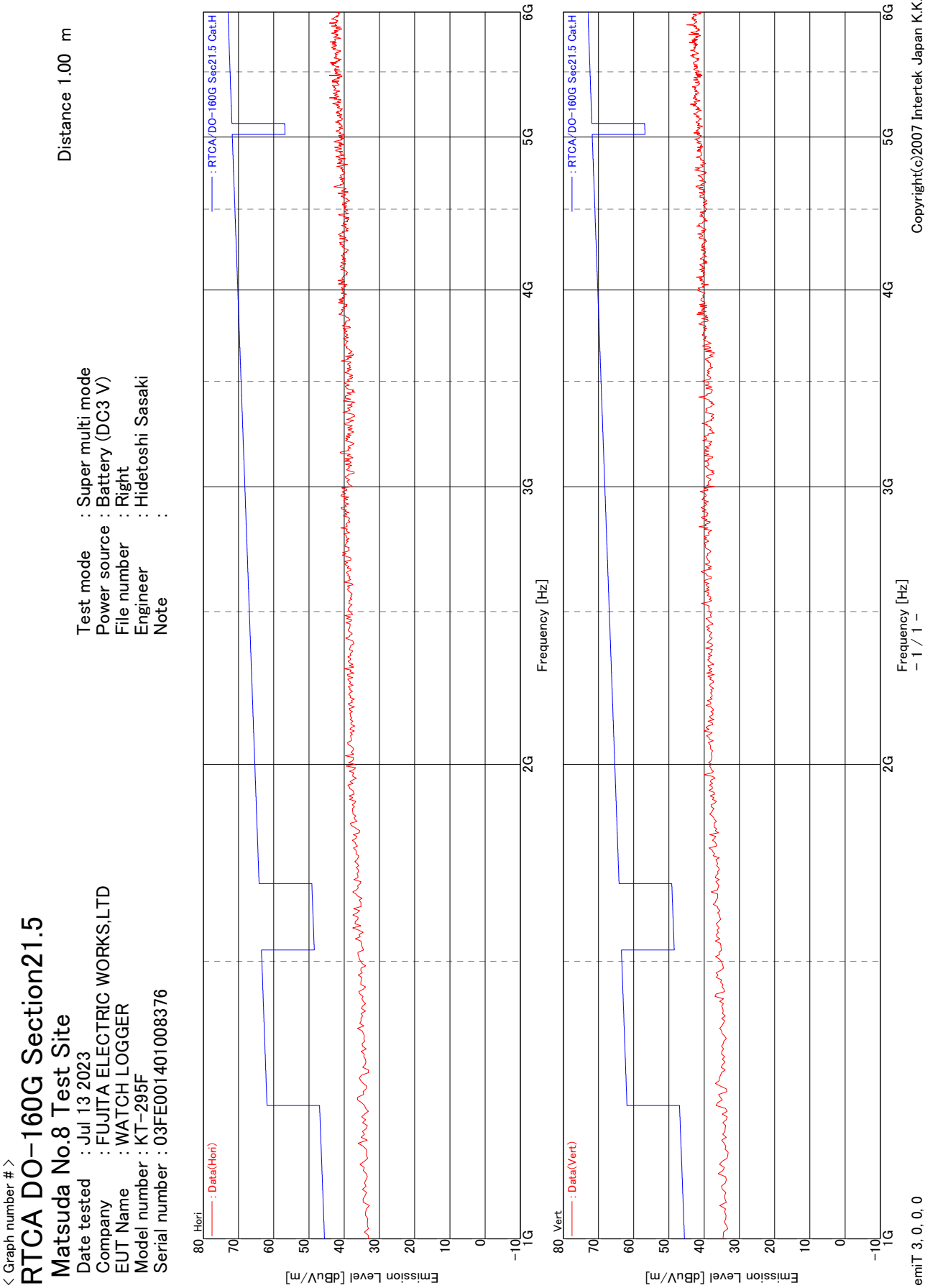
Engineer : Hidetoshi Sasaki

Note :

Distance 1.00 m



Section 21.5
KT-295F: Right (1GHz-6GHz)



Section 21.5
KT-295F: Top (100MHz-200MHz)

< Graph number # >

RTCA DO-160G Section21.5

Matsuda No.8 Test Site

Date tested : Jul 12 2023

Company : FUJITA ELECTRIC WORKS,LTD

EUT Name : WATCH LOGGER

Model number : KT-295F

Serial number : 03FE001401008376

Test mode : Super multi mode

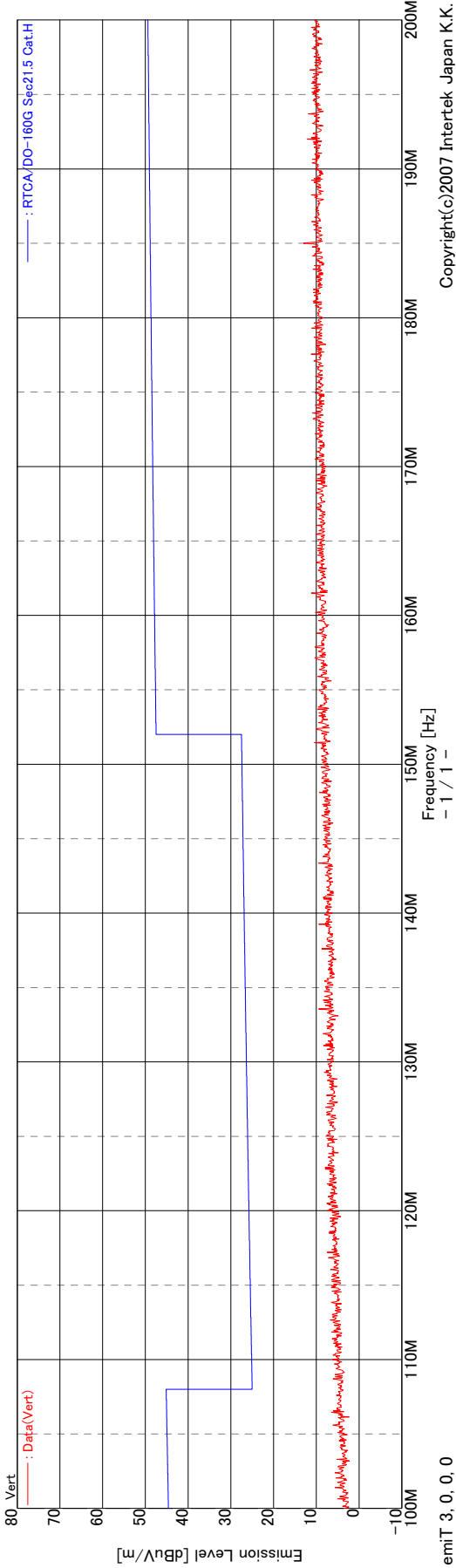
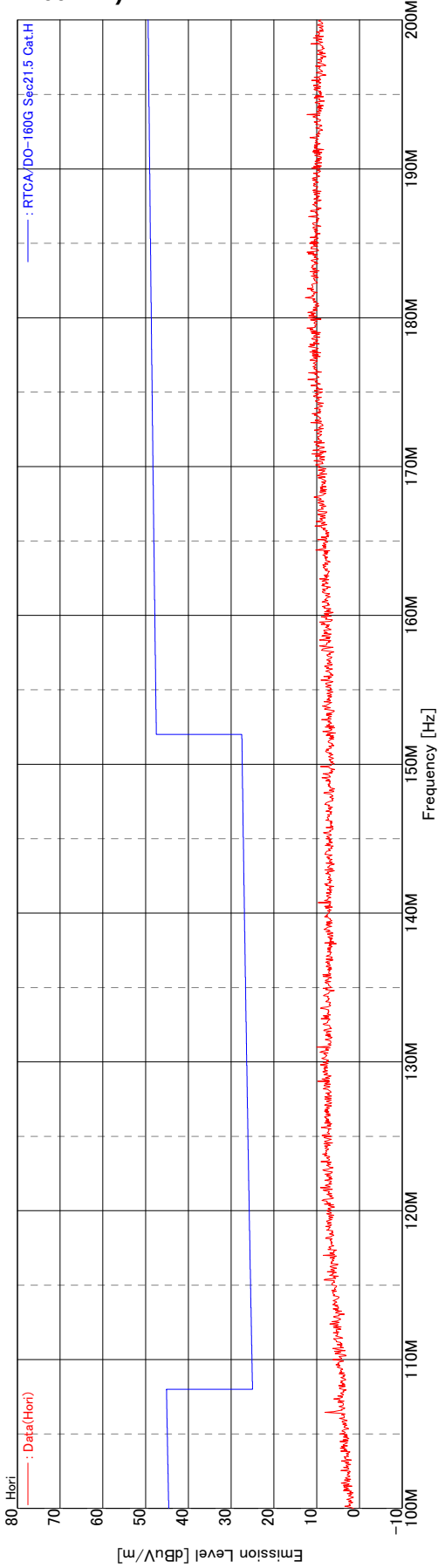
Power source : Battery (DC3 V)

File number : Top

Engineer : Hidetoshi Sasaki

Note :

Distance 1.00 m

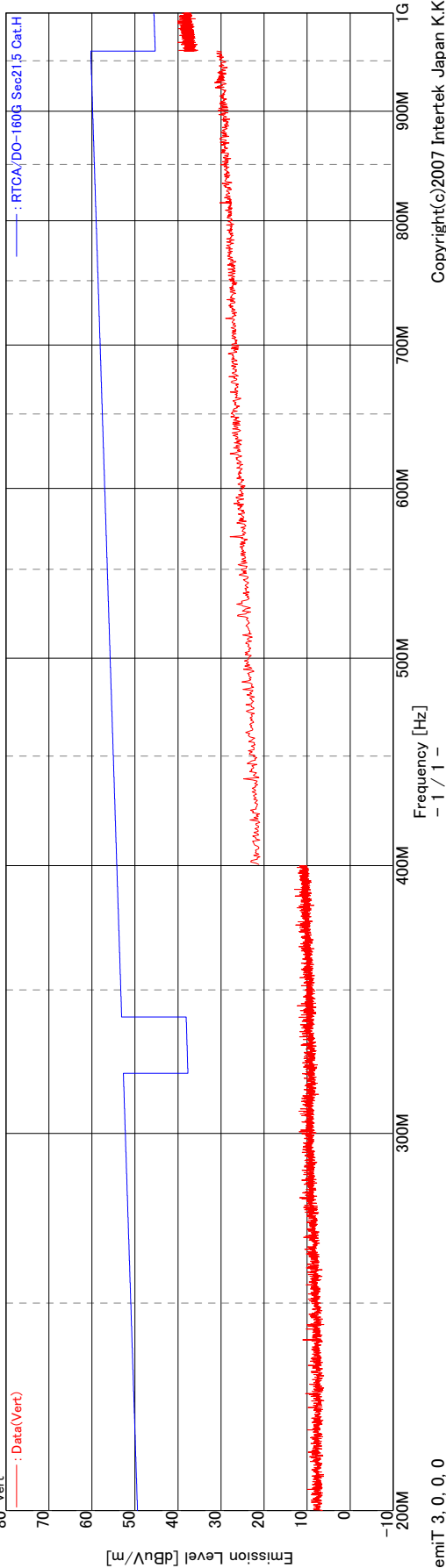
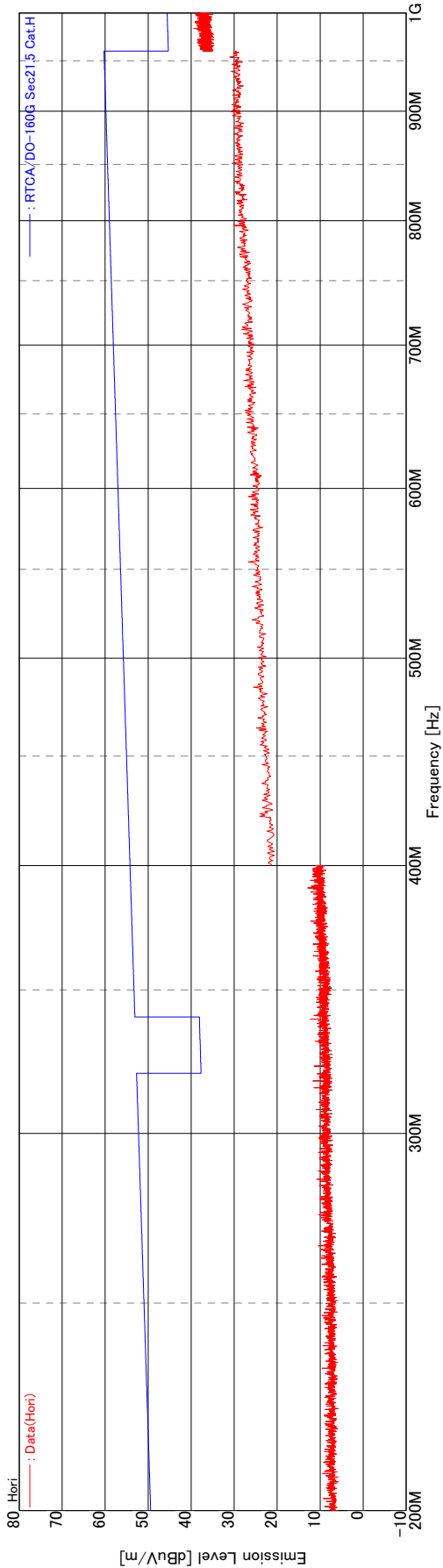


Section 21.5
KT-295F: Top (200MHz-1GHz)

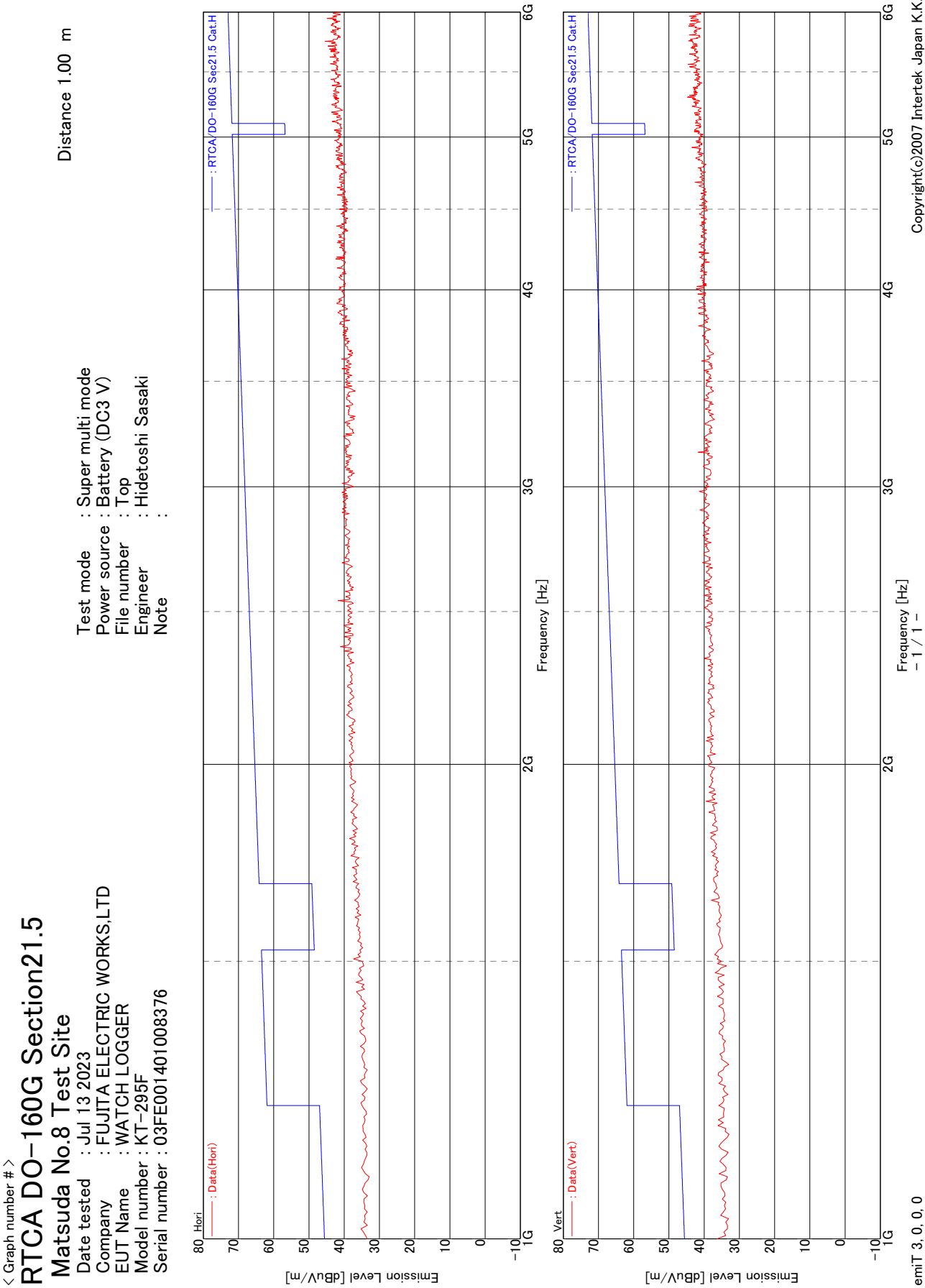
< Graph number # >
RTCA DO-160G Section21.5
Matsuda No.8 Test Site
Date tested : Jul 13 2023
Company : FUJITA ELECTRIC WORKS,LTD
EUT Name : WATCH LOGGER
Model number : KT-295F
Serial number : 03FE001401008376

Distance 1.00 m

Test mode : Super multi mode
Power source : Battery (DC3 V)
File number : Top
Engineer : Hidetoshi Sasaki
Note :



Section 21.5
KT-295F: Top (1GHz-6GHz)



Section 21.5
KT-295F: Bottom (100MHz-200MHz)

< Graph number # >

RTCA DO-160G Section21.5

Matsuda No.8 Test Site

Date tested : Jul 12 2023

Company : FUJITA ELECTRIC WORKS,LTD

EUT Name : WATCH LOGGER

Model number : KT-295F

Serial number : 03FE001401008376

Test mode : Super multi mode

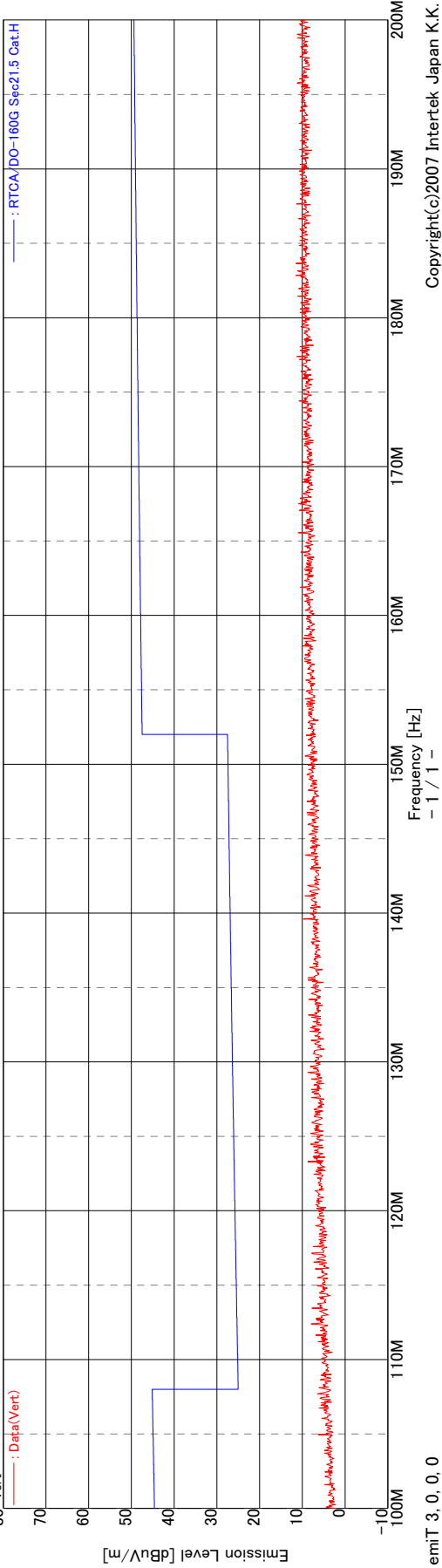
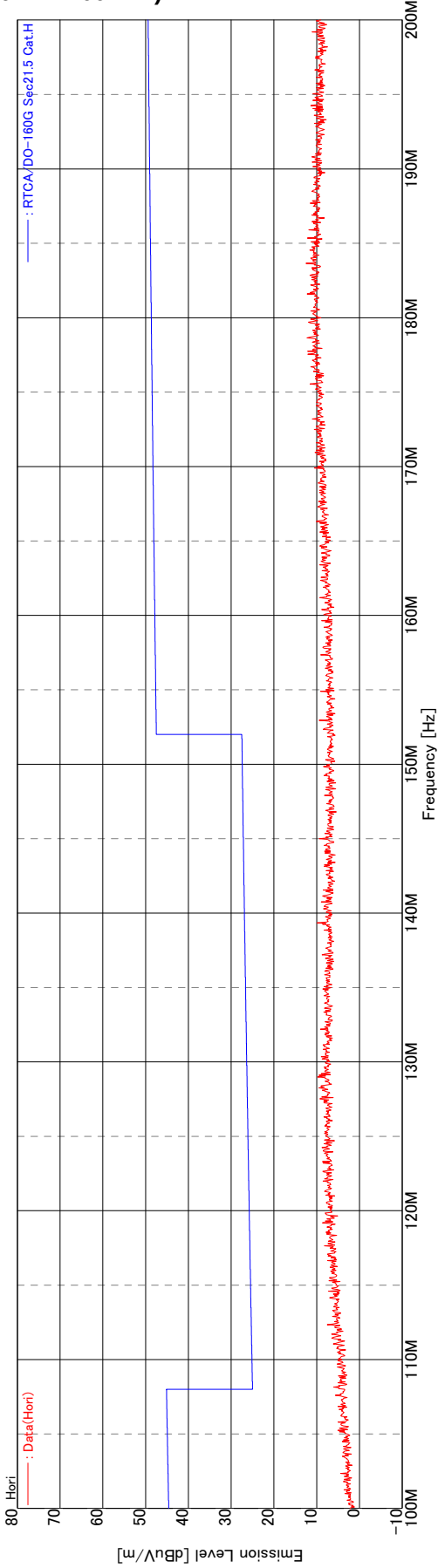
Power source : Battery (DC3 V)

File number : Bottom

Engineer : Hidetoshi Sasaki

Note :

Distance 1.00 m



Section 21.5
KT-295F: Bottom (200MHz-1GHz)

< Graph number # >

RTCA DO-160G Section21.5

Matsuda No.8 Test Site

Date tested : Jul 13 2023

Company : FUJITA ELECTRIC WORKS,LTD

EUT Name : WATCH LOGGER

Model number : KT-295F

Serial number : 03FE001401008376

Test mode : Super multi mode

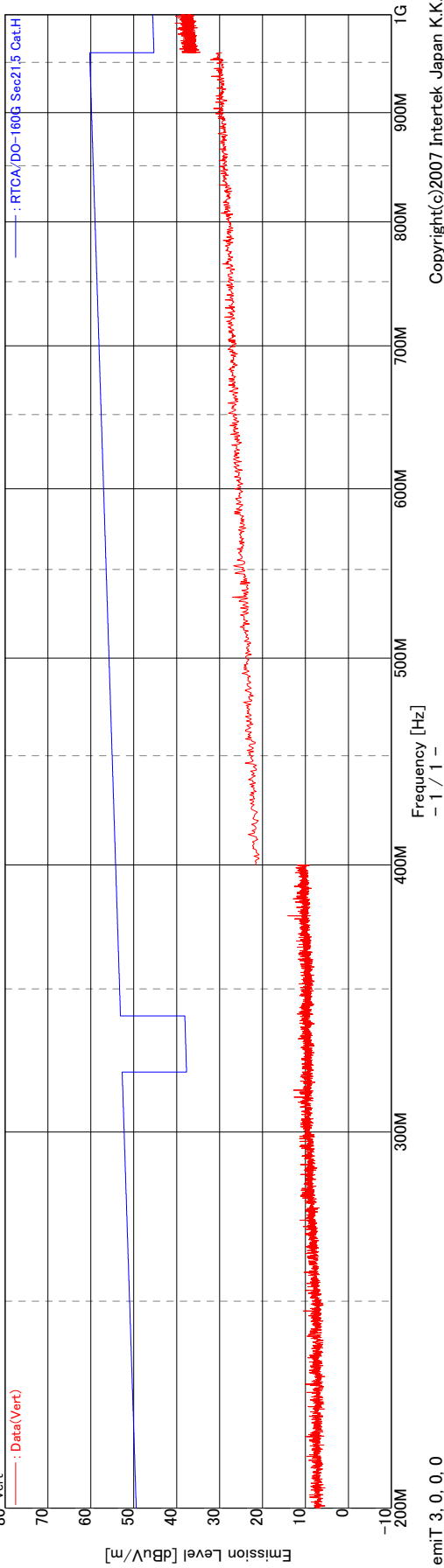
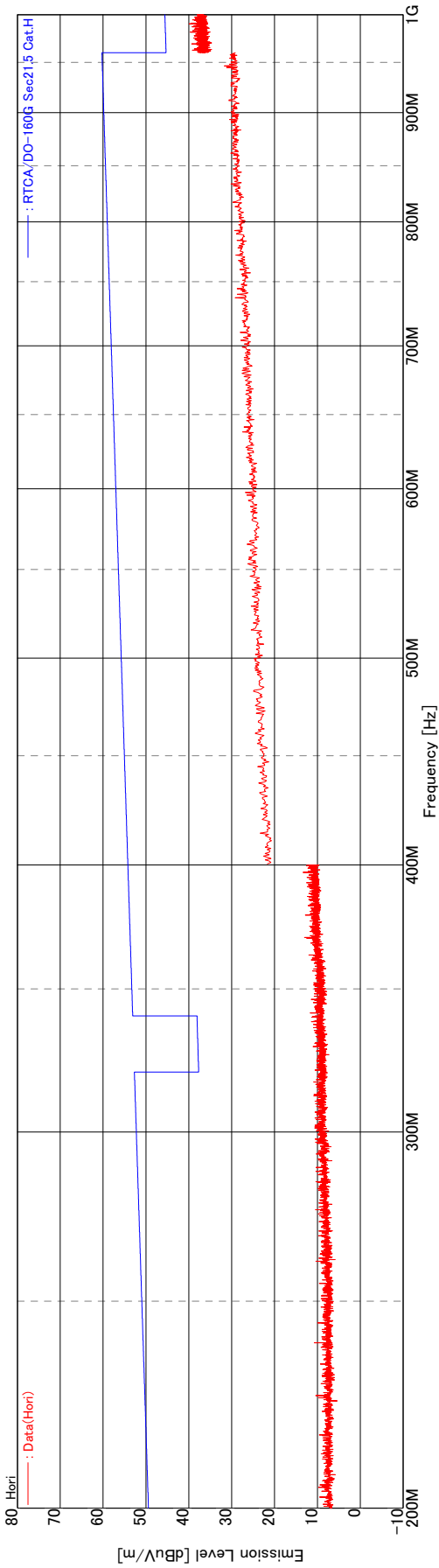
Power source : Battery (DC3 V)

File number : Bottom

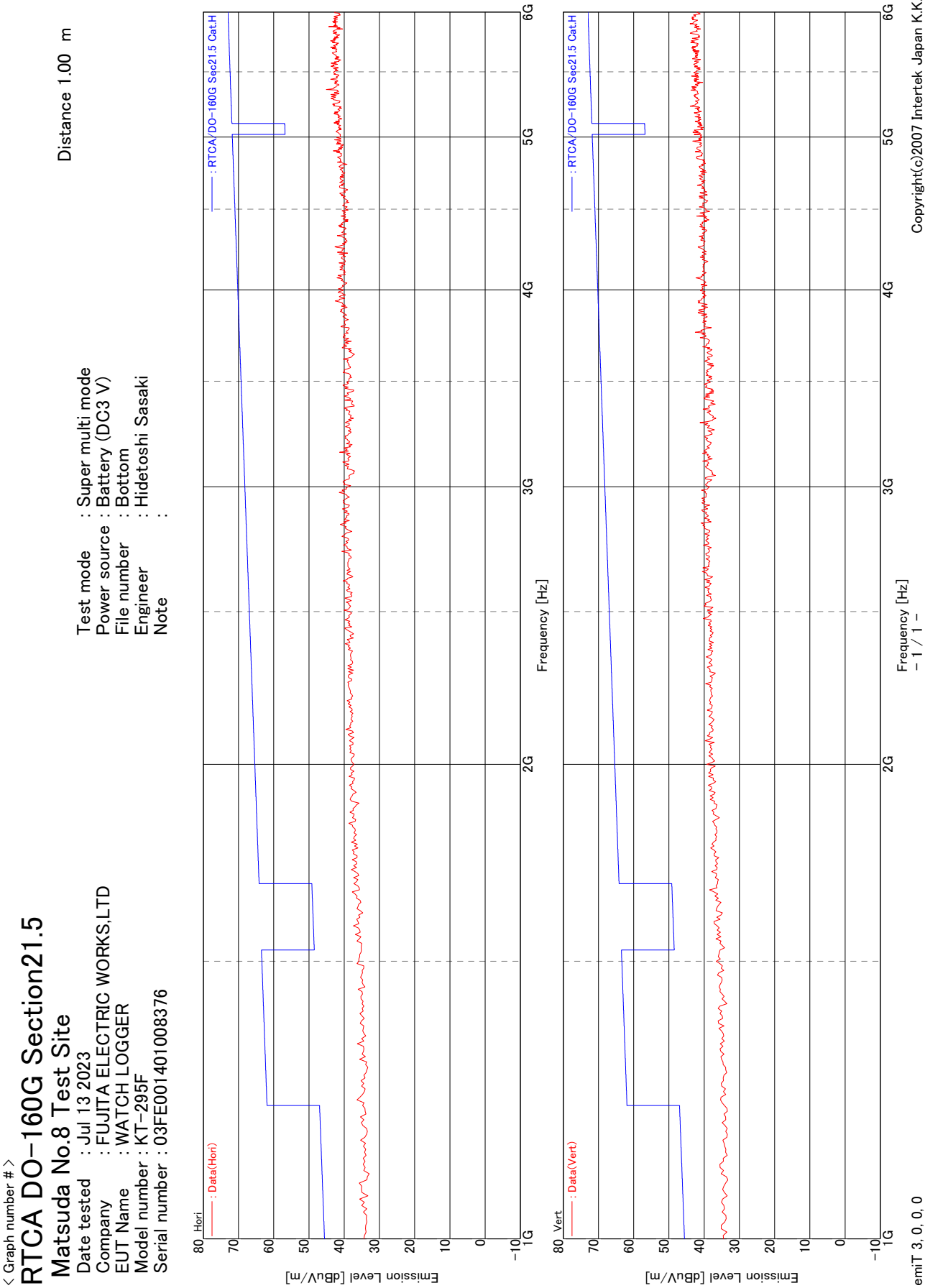
Engineer : Hidetoshi Sasaki

Note :

Distance 1.00 m



Section 21.5
KT-295F: Bottom (1GHz-6GHz)

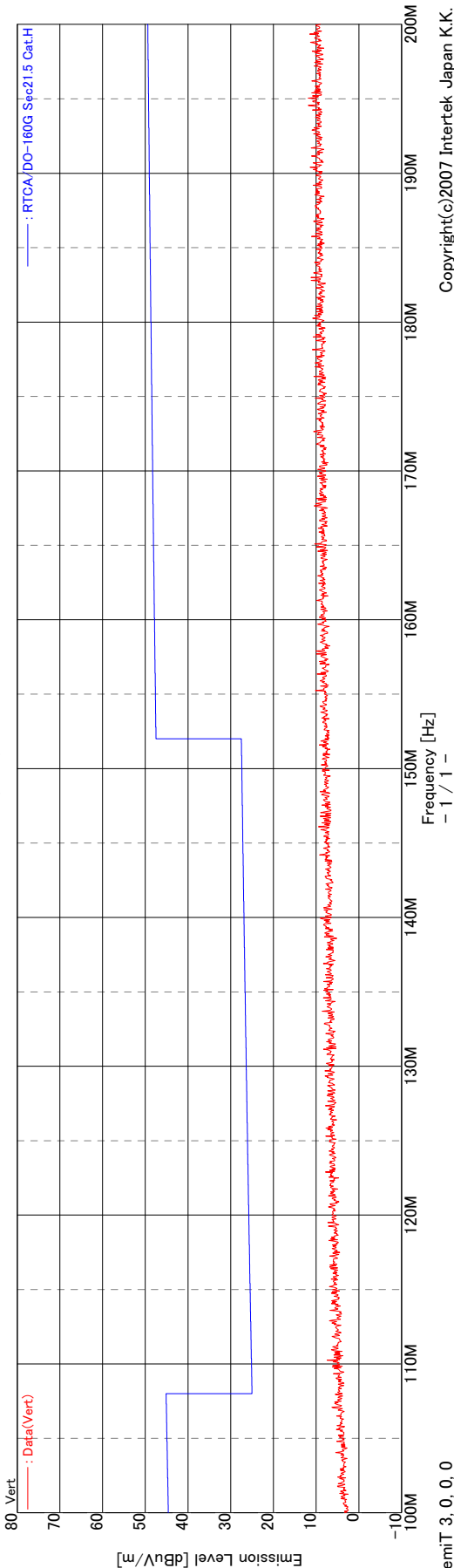
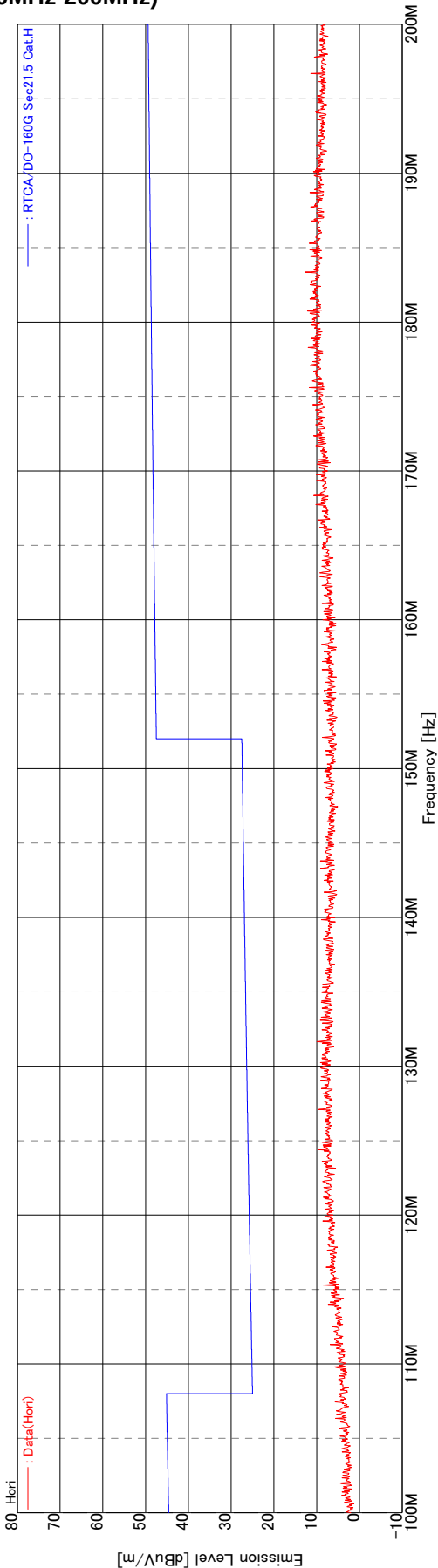


Section 21.5
KT-295DX: Front (100MHz-200MHz)

< Graph number # >
RTCA DO-160G Section21.5
Matsuda No.8 Test Site
Date tested : Jul 12 2023
Company : FUJITA ELECTRIC WORKS,LTD
EUT Name : WATCH LOGGER
Model number : KT-295DX
Serial number : 03FE0014FB000131

Test mode : Super multi mode
Power source : Battery (DC3 V)
File number : Front
Engineer : Hidetoshi Sasaki
Note :

Distance 1.00 m



Copyright(c)2007 Intertek Japan K.K.

Section 21.5
KT-295DX: Front (200MHz-1GHz)

< Graph number # >

RTCA DO-160G Section21.5

Matsuda No.8 Test Site

Date tested : Jul 12 2023

Company : FUJITA ELECTRIC WORKS,LTD

EUT Name : WATCH LOGGER

Model number : KT-295DX

Serial number : 03FE0014FB000131

Test mode : Super multi mode

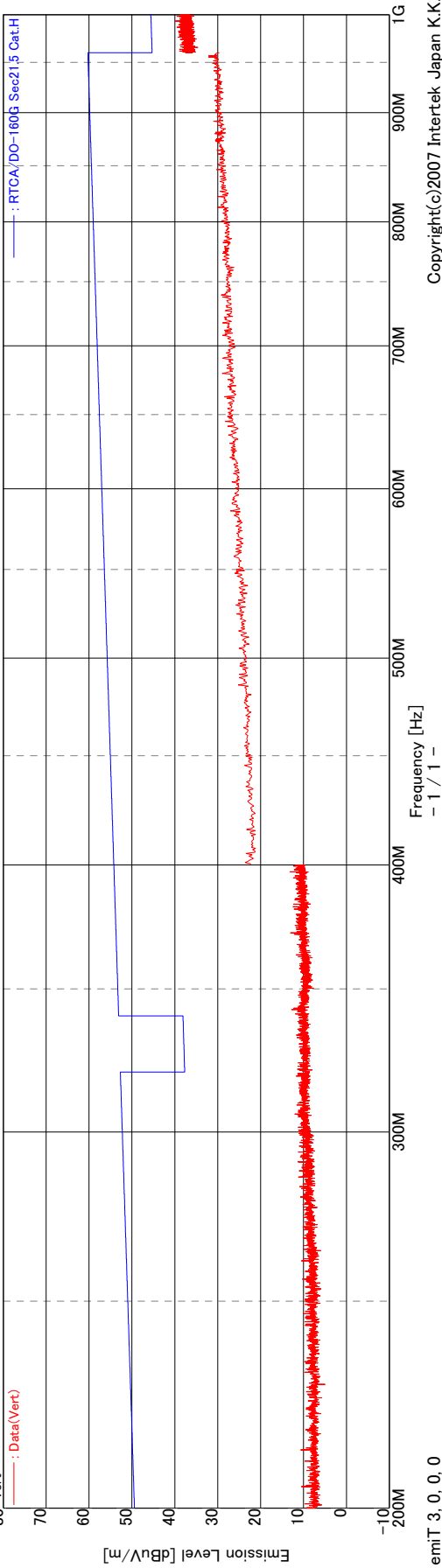
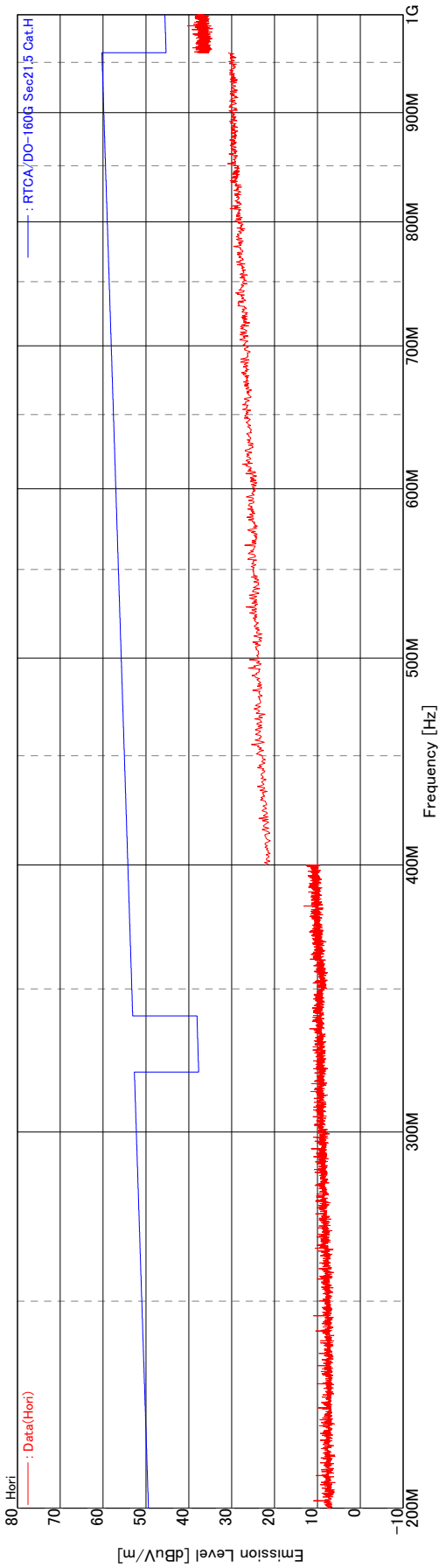
Power source : Battery (DC3 V)

File number : Front

Engineer : Hidetoshi Sasaki

Note :

Distance 1.00 m



Section 21.5
KT-295DX: Front (1GHz-6GHz)

< Graph number # >

RTCA DO-160G Section21.5

Matsuda No.8 Test Site

Date tested : Jul 12 2023

Company : FUJITA ELECTRIC WORKS,LTD

EUT Name : WATCH LOGGER

Model number : KT-295DX

Serial number : 03FE0014FB000131

Test mode : Super multi mode

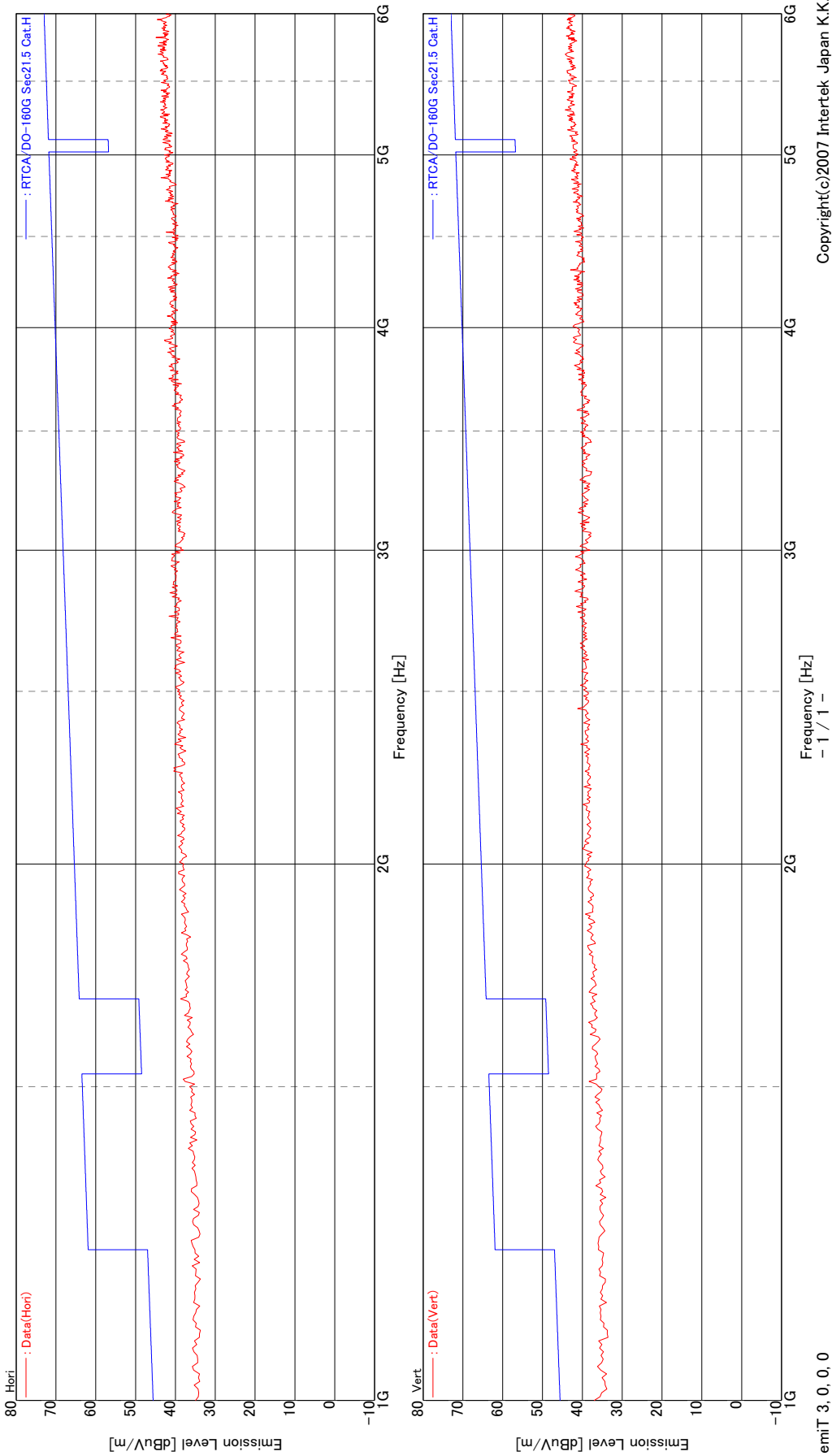
Power source : Battery (DC3 V)

File number : Front

Engineer : Hidetoshi Sasaki

Note :

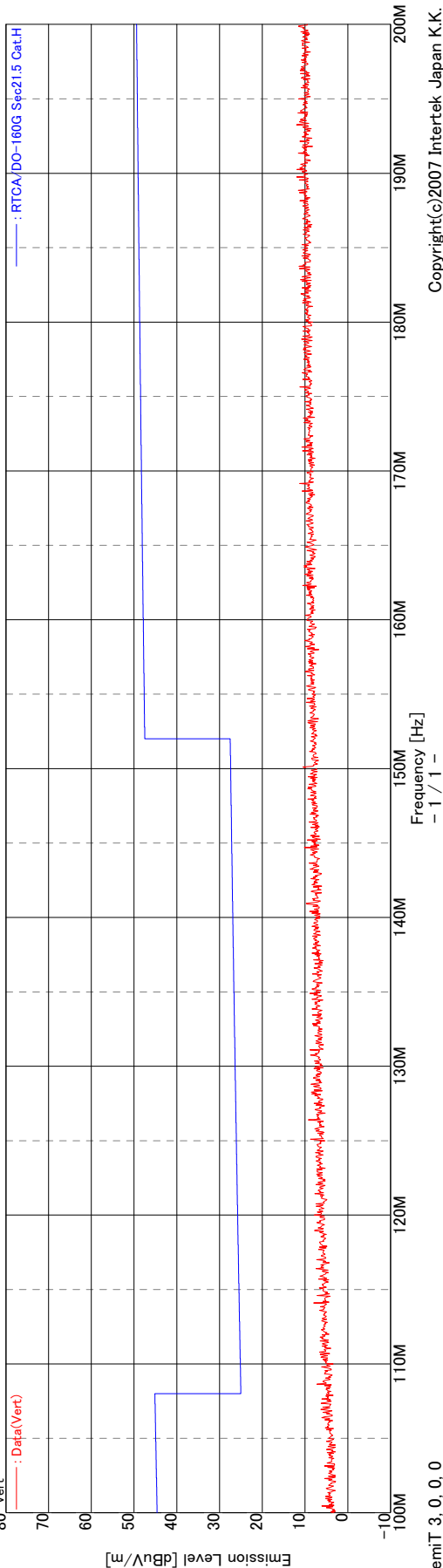
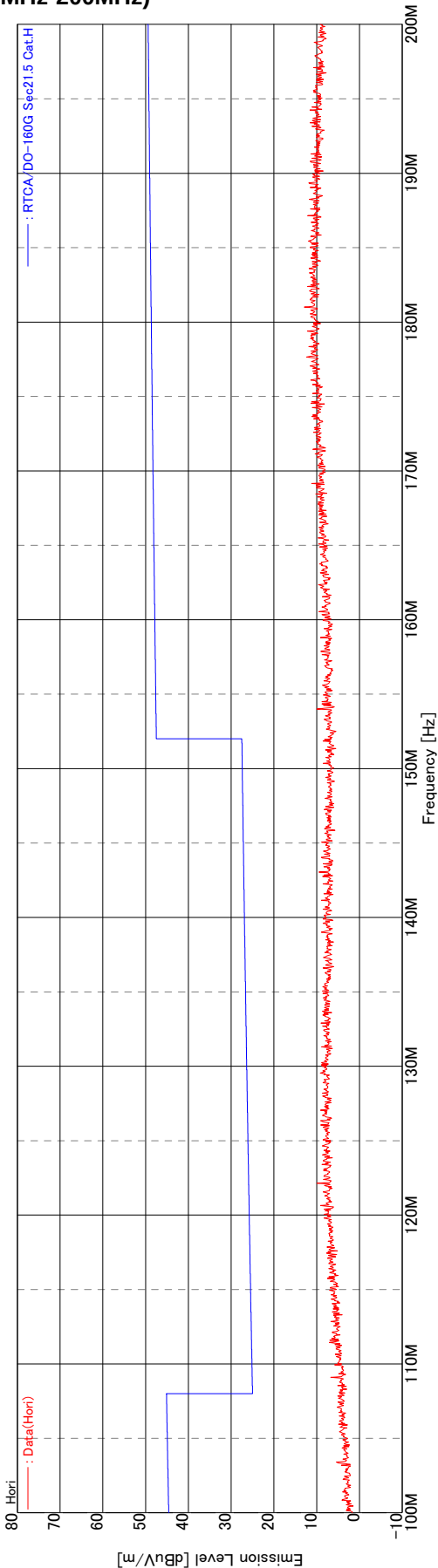
Distance 1.00 m



Section 21.5
KT-295DX: Rear (100MHz-200MHz)

< Graph number # >
RTCA DO-160G Section21.5
Matsuda No.8 Test Site
Date tested : Jul 12 2023
Company : FUJITA ELECTRIC WORKS,LTD
EUT Name : WATCH LOGGER
Model number : KT-295DX
Serial number : 03FE0014FB000131

Distance 1.00 m
Test mode : Super multi mode
Power source : Battery (DC3 V)
File number : Rear
Engineer : Hidetoshi Sasaki
Note :



Section 21.5
KT-295DX: Rear (200MHz-1GHz)

< Graph number # >

RTCA DO-160G Section21.5

Matsuda No.8 Test Site

Date tested : Jul 12 2023

Company : FUJITA ELECTRIC WORKS,LTD

EUT Name : WATCH LOGGER

Model number : KT-295DX

Serial number : 03FE0014FB000131

Test mode : Super multi mode

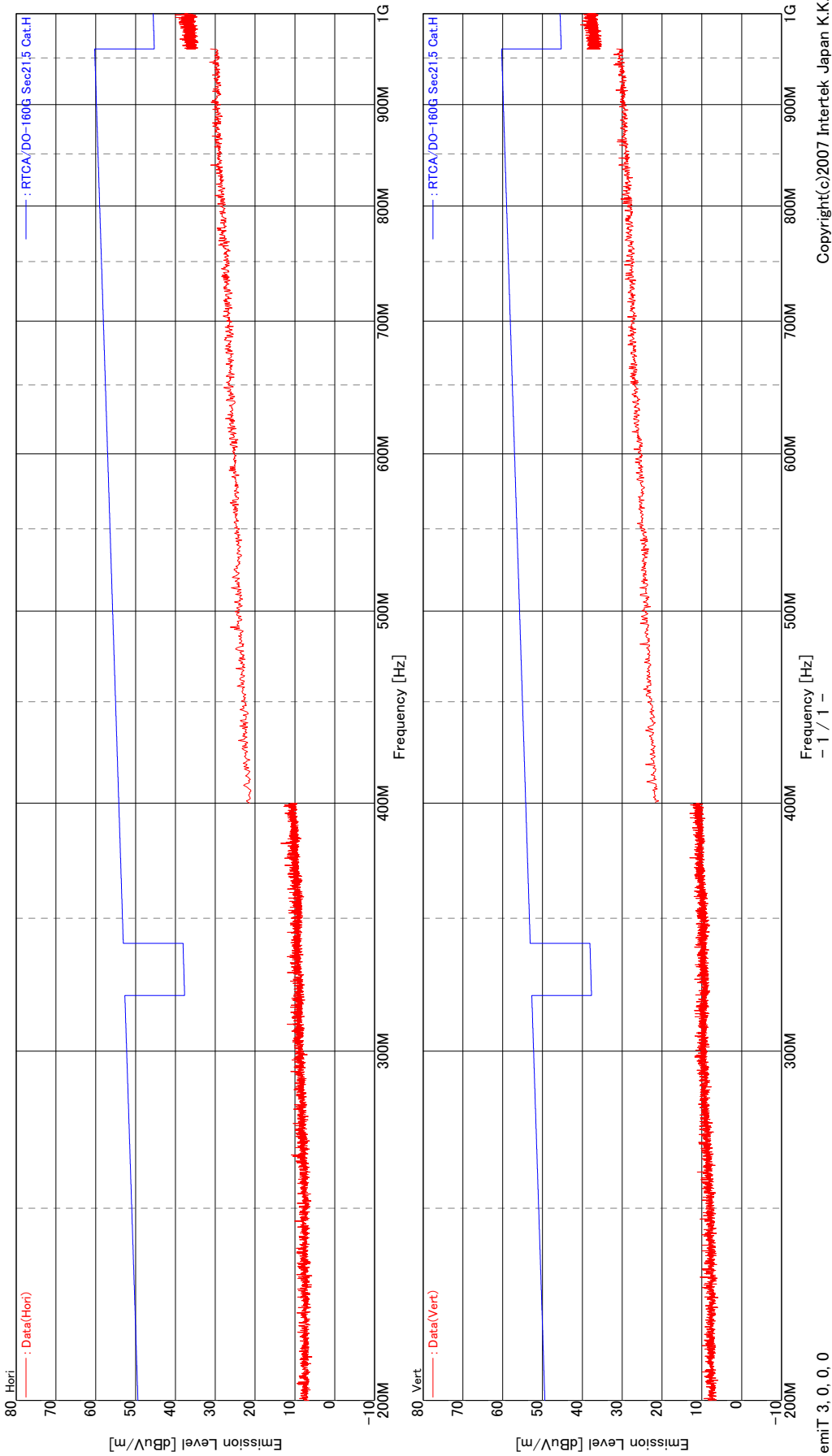
Power source : Battery (DC3 V)

File number : Rear

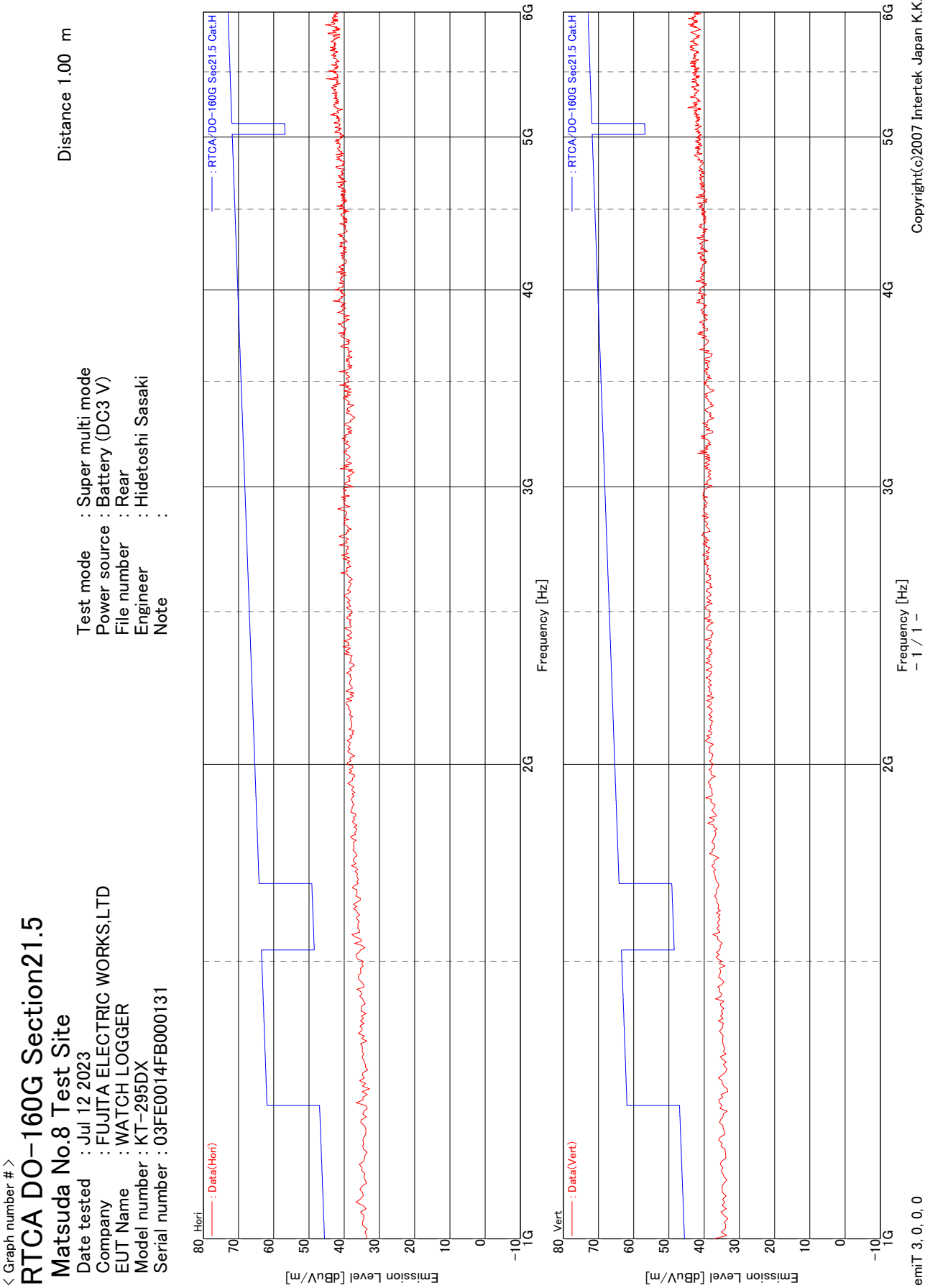
Engineer : Hidetoshi Sasaki

Note :

Distance 1.00 m



Section 21.5
KT-295DX: Rear (1GHz-6GHz)



Section 21.5
KT-295DX: Left (100MHz-200MHz)

< Graph number # >

RTCA DO-160G Section21.5

Matsuda No.8 Test Site

Date tested : Jul 12 2023

Company : FUJITA ELECTRIC WORKS,LTD

EUT Name : WATCH LOGGER

Model number : KT-295DX

Serial number : 03FE0014FB000131

Test mode : Super multi mode

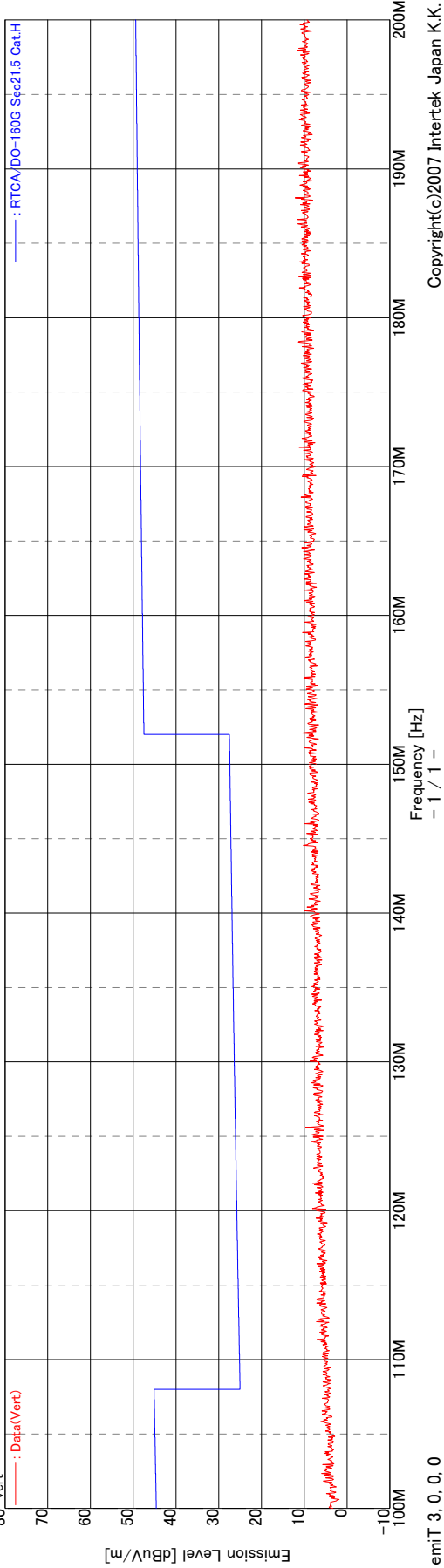
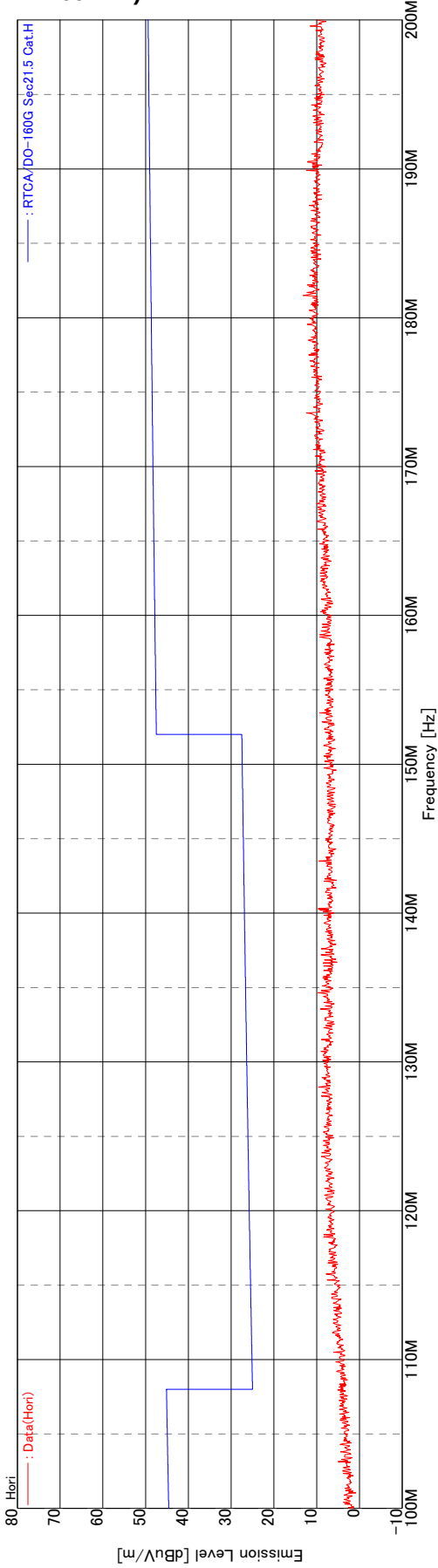
Power source : Battery (DC3 V)

File number : Left

Engineer : Hidetoshi Sasaki

Note :

Distance 1.00 m



Section 21.5
KT-295DX: Left (200MHz-1GHz)

< Graph number # >

RTCA DO-160G Section21.5

Matsuda No.8 Test Site

Date tested : Jul 12 2023

Company : FUJITA ELECTRIC WORKS,LTD

EUT Name : WATCH LOGGER

Model number : KT-295DX

Serial number : 03FE0014FB000131

Test mode : Super multi mode

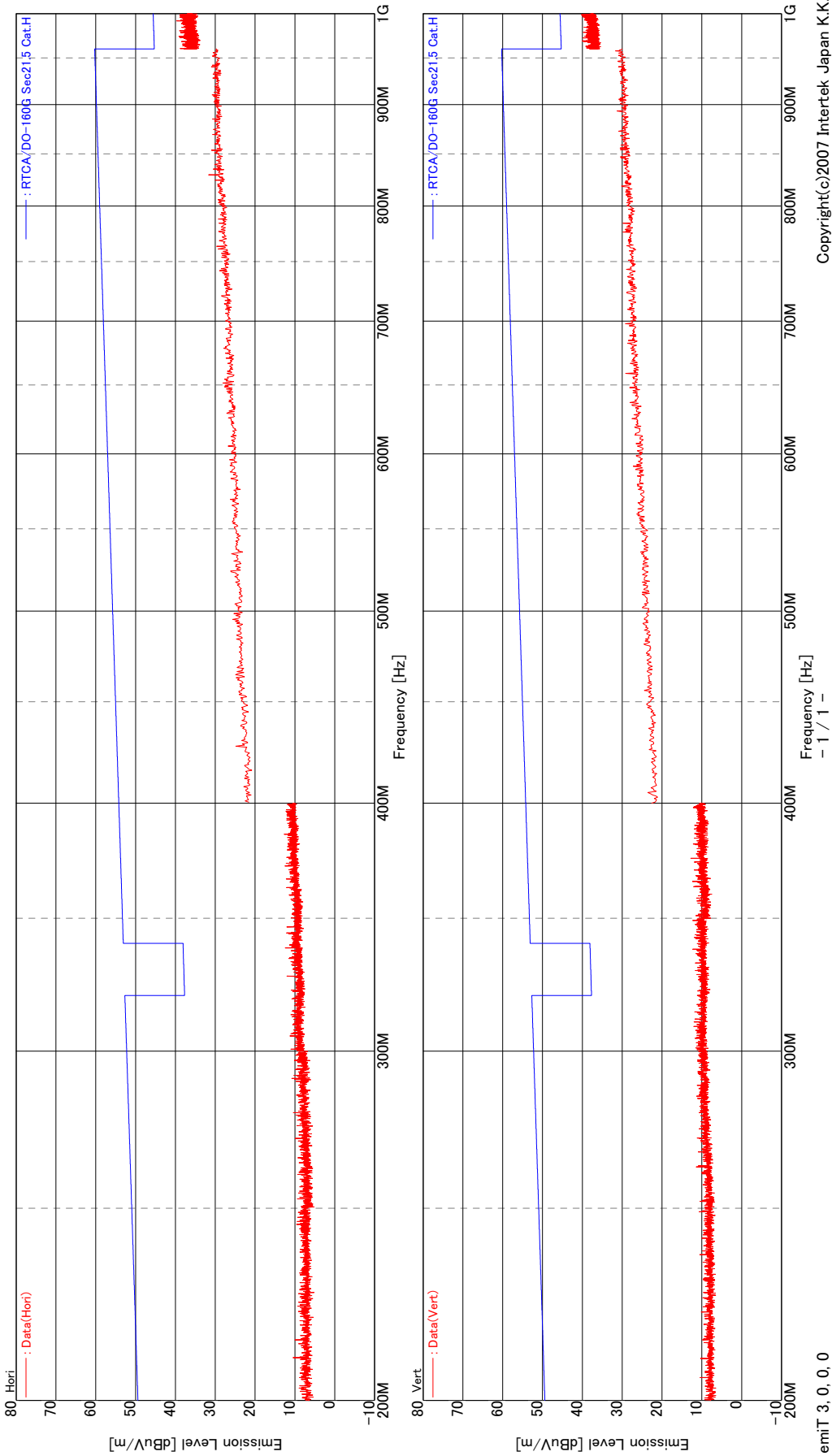
Power source : Battery (DC3 V)

File number : Left

Engineer : Hidetoshi Sasaki

Note :

Distance 1.00 m



Section 21.5
KT-295DX: Right (100MHz-200MHz)

< Graph number # >

RTCA DO-160G Section21.5

Matsuda No.8 Test Site

Date tested : Jul 12 2023

Company : FUJITA ELECTRIC WORKS,LTD

EUT Name : WATCH LOGGER

Model number : KT-295DX

Serial number : 03FE0014FB000131

Test mode : Super multi mode

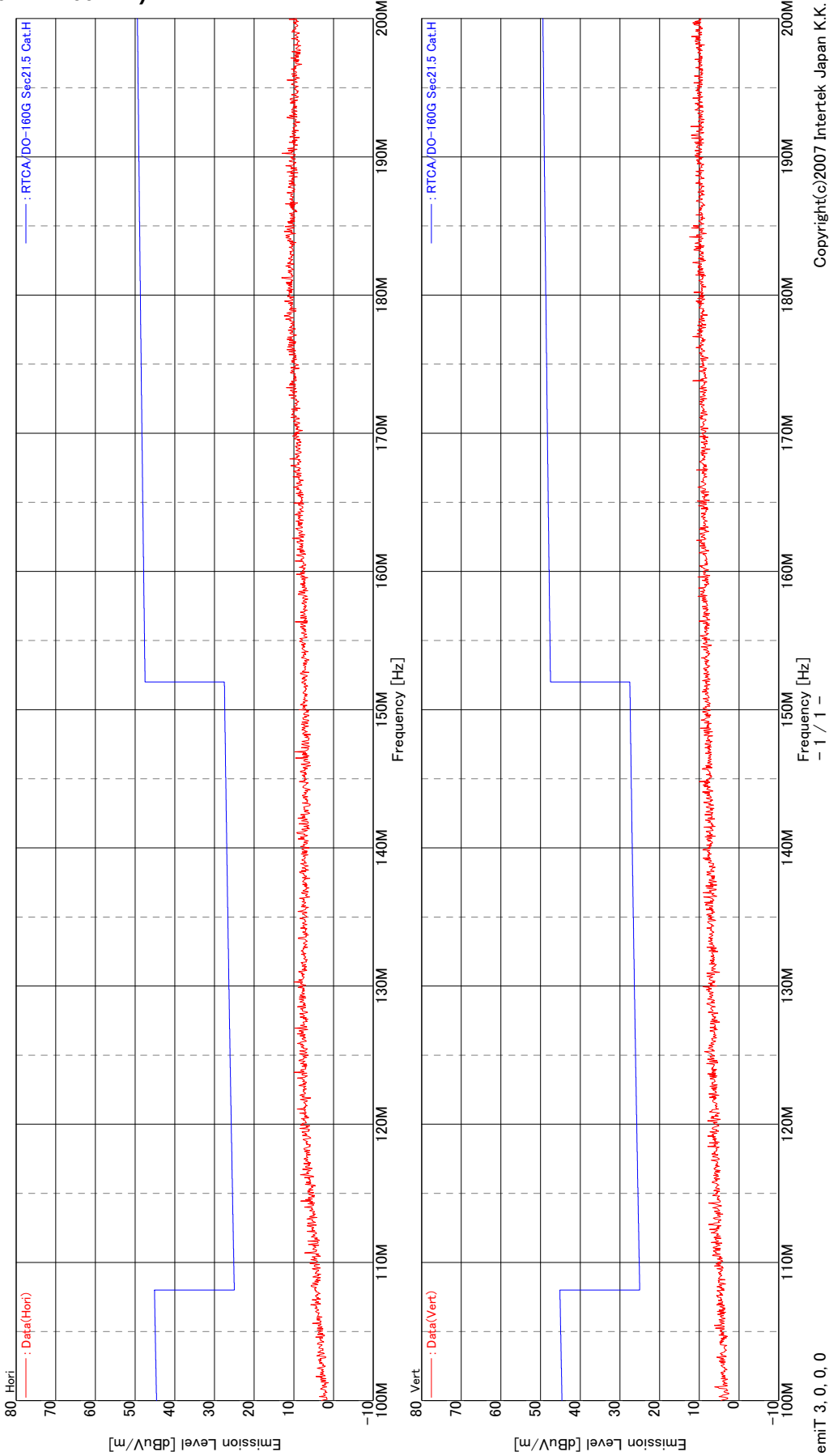
Power source : Battery (DC3 V)

File number : Right

Engineer : Hidetoshi Sasaki

Note :

Distance 1.00 m



Section 21.5
KT-295DX: Right (200MHz-1GHz)

< Graph number # >

RTCA DO-160G Section21.5

Matsuda No.8 Test Site

Date tested : Jul 12 2023

Company : FUJITA ELECTRIC WORKS,LTD

EUT Name : WATCH LOGGER

Model number : KT-295DX

Serial number : 03FE0014FB000131

Test mode : Super multi mode

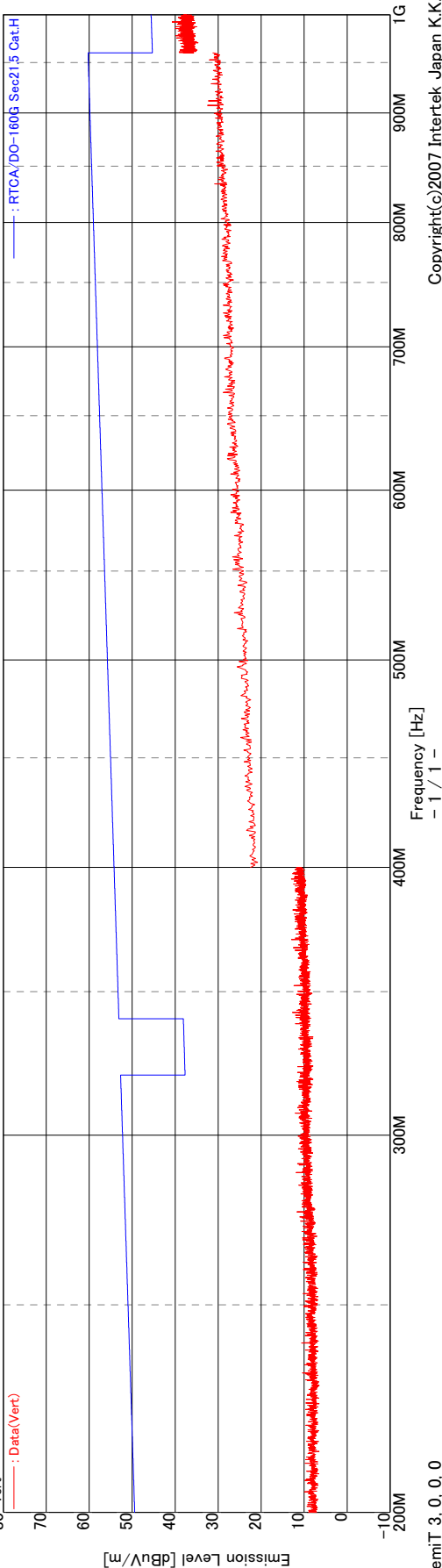
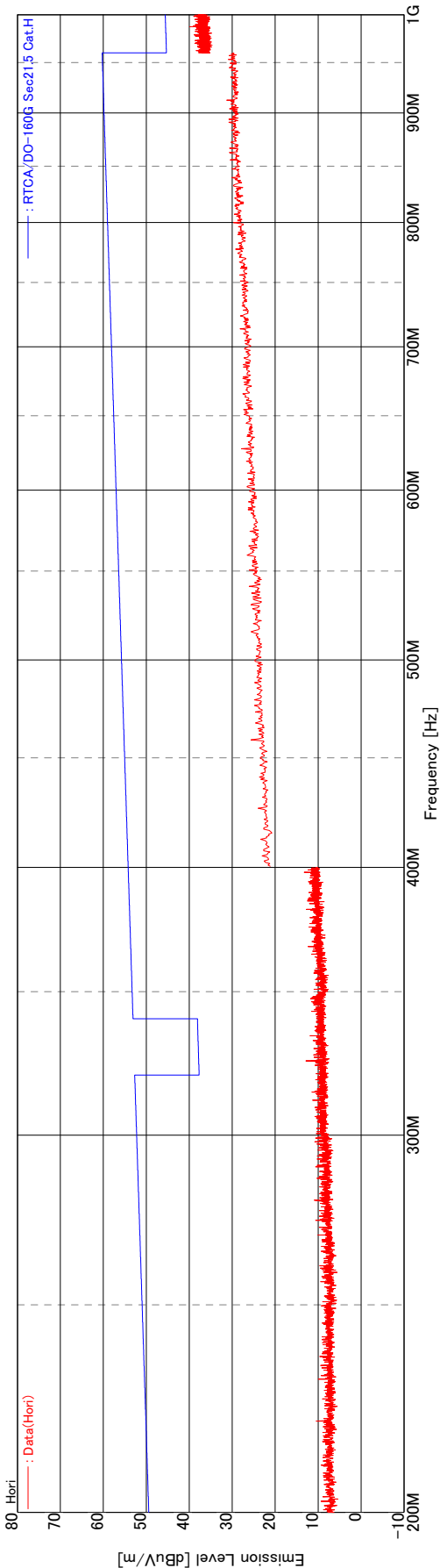
Power source : Battery (DC3 V)

File number : Right

Engineer : Hidetoshi Sasaki

Note :

Distance 1.00 m



Section 21.5
KT-295DX: Right (1GHz-6GHz)

< Graph number # >

RTCA DO-160G Section21.5

Matsuda No.8 Test Site

Date tested : Jul 12 2023

Company : FUJITA ELECTRIC WORKS,LTD

EUT Name : WATCH LOGGER

Model number : KT-295DX

Serial number : 03FE0014FB000131

Test mode : Super multi mode

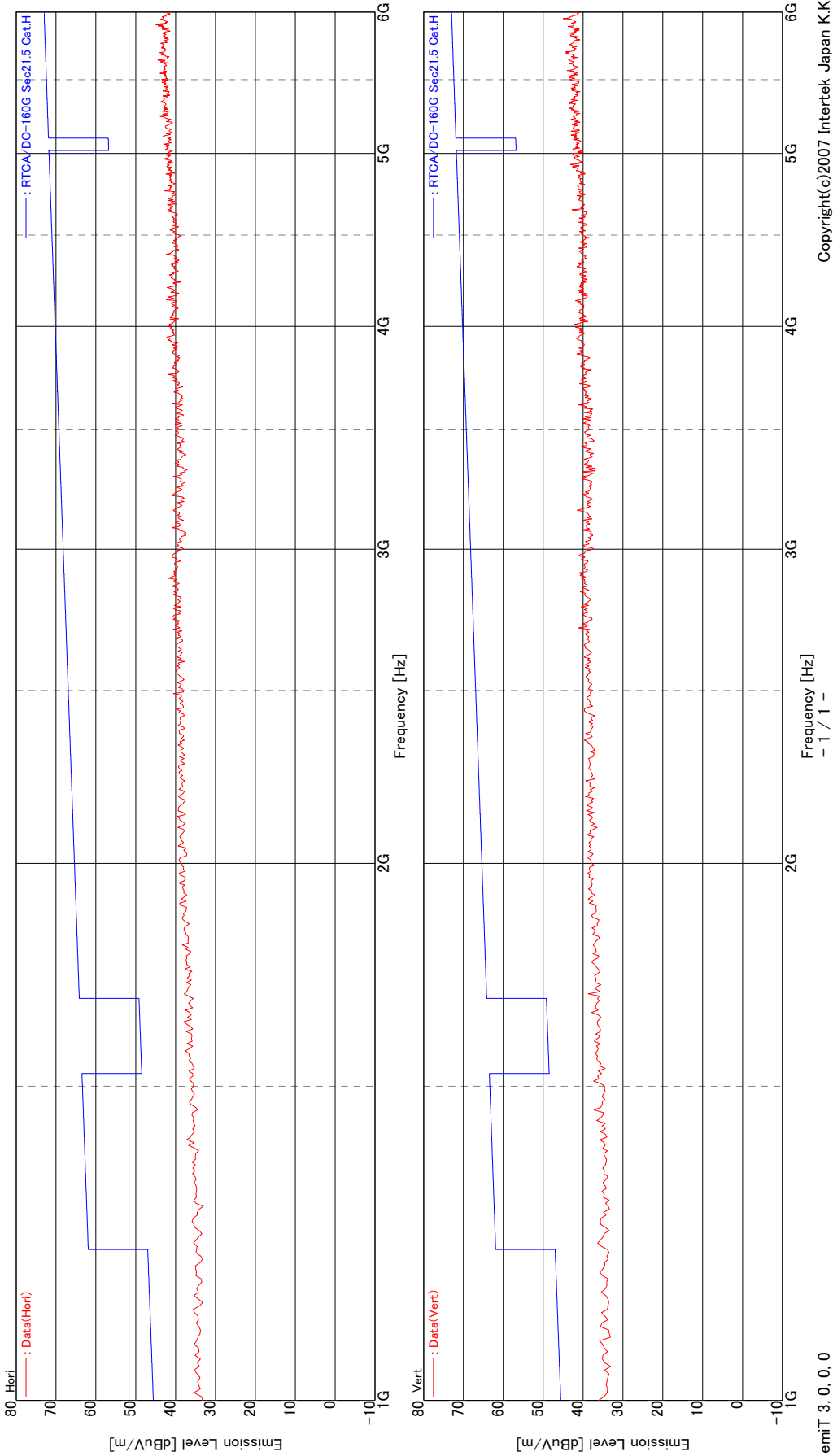
Power source : Battery (DC3 V)

File number : Right

Engineer : Hidetoshi Sasaki

Note :

Distance 1.00 m



Section 21.5
KT-295DX: Top (100MHz-200MHz)

Distance 1.00 m

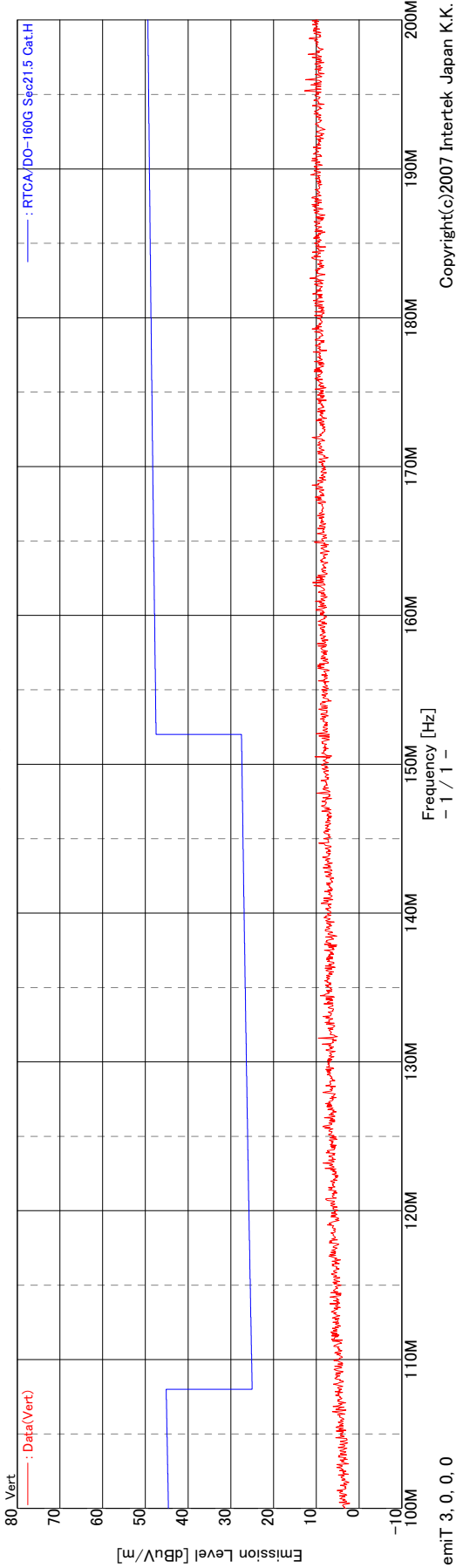
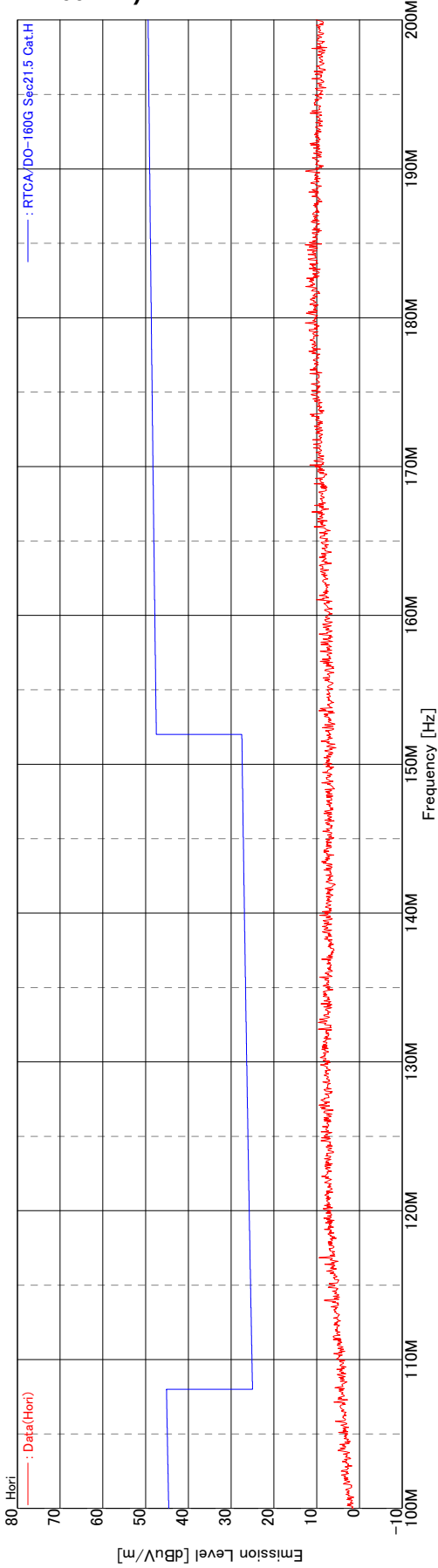
Test mode : Super multi mode
Power source : Battery (DC3 V)
File number : Top
Engineer : Hidetoshi Sasaki
Note :

Graph number # >

RTCA DO-160G Section21.5

Matsuda No.8 Test Site

Date tested : Jul 12 2023
Company : FUJITA ELECTRIC WORKS,LTD
EUT Name : WATCH LOGGER
Model number : KT-295DX
Serial number : 03FE0014FB000131



Section 21.5
KT-295DX: Top (200MHz-1GHz)

< Graph number # >

RTCA DO-160G Section21.5

Matsuda No.8 Test Site

Date tested : Jul 12 2023

Company : FUJITA ELECTRIC WORKS,LTD

EUT Name : WATCH LOGGER

Model number : KT-295DX

Serial number : 03FE0014FB000131

Test mode : Super multi mode

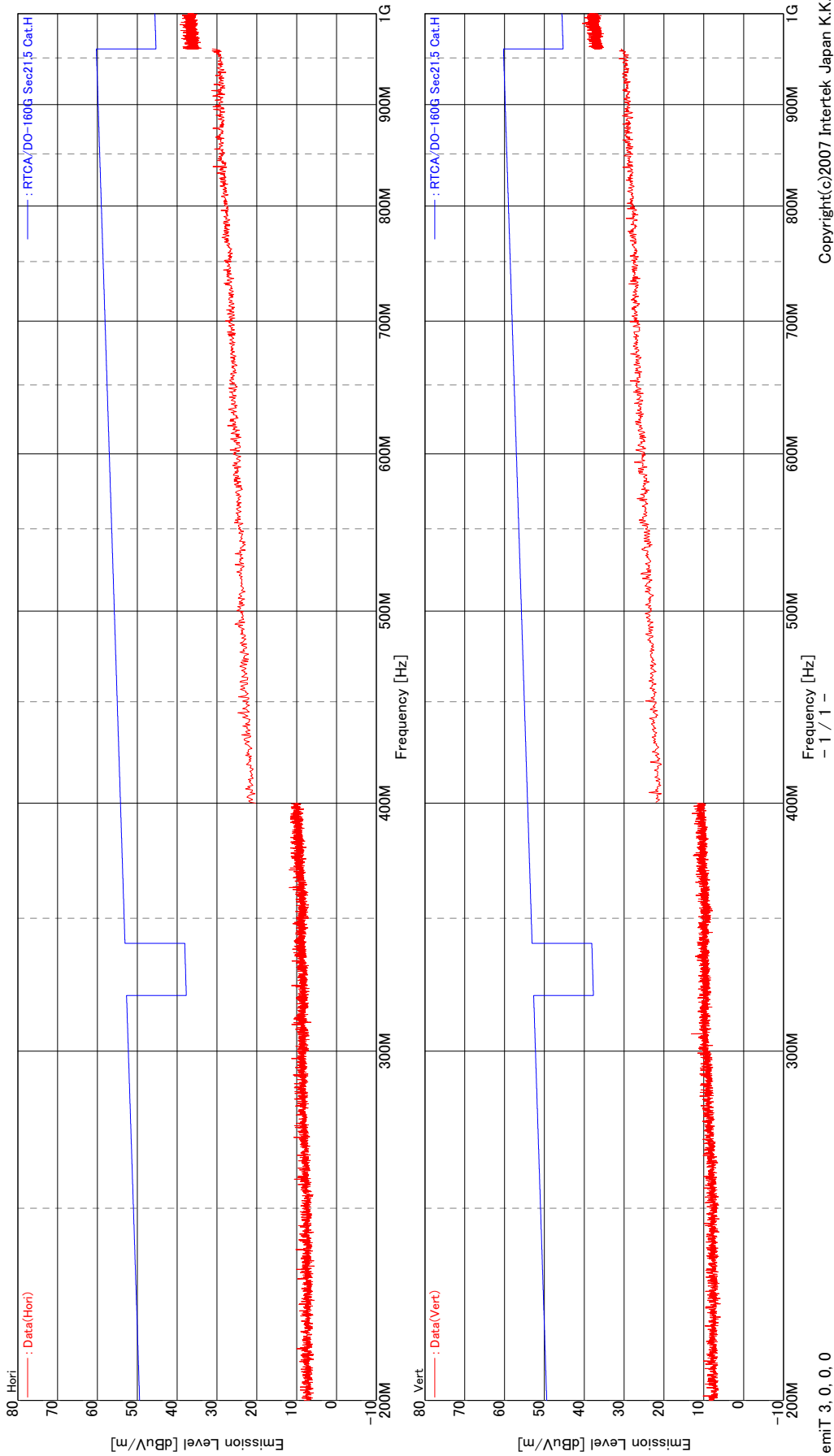
Power source : Battery (DC3 V)

File number : Top

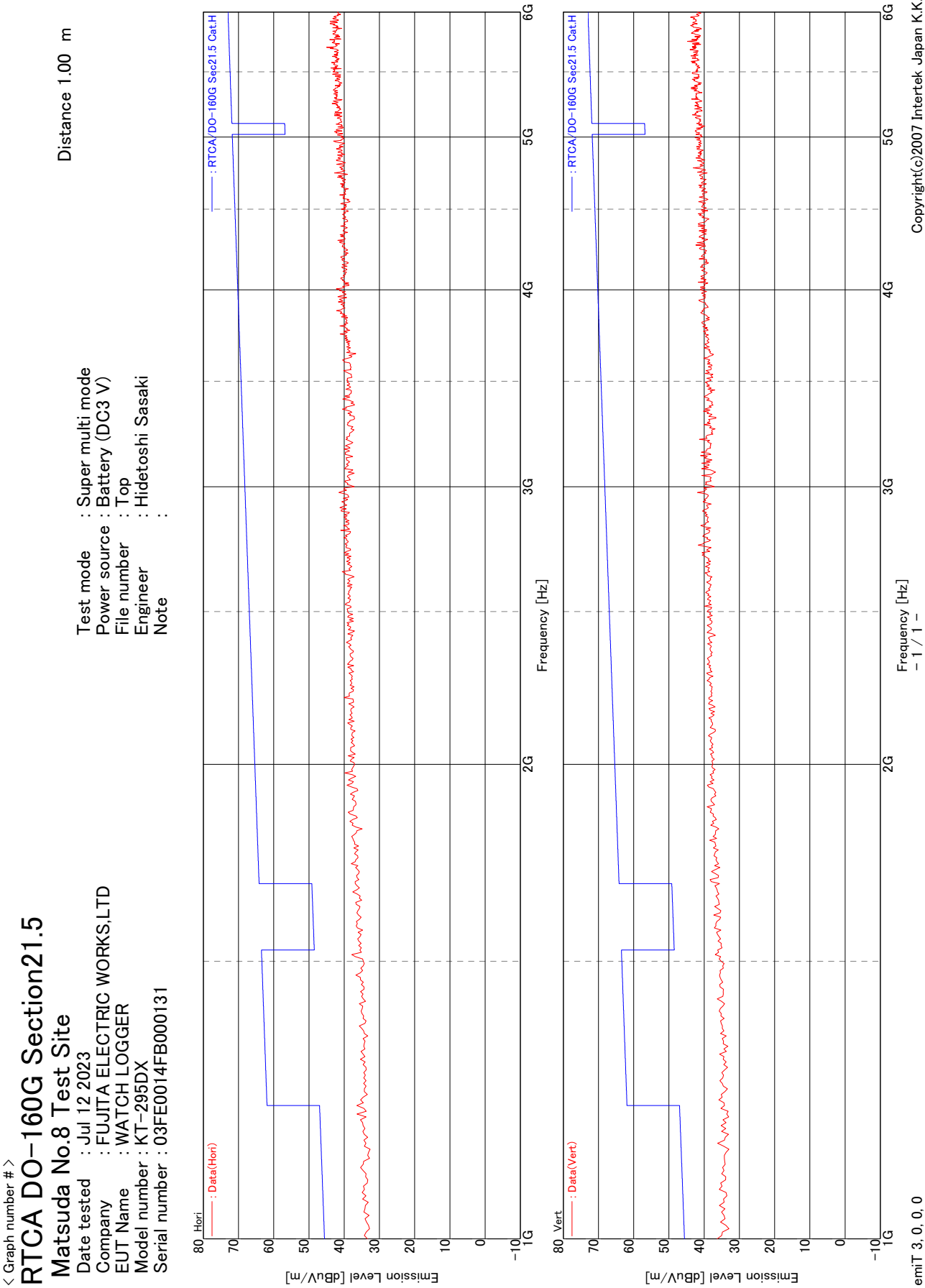
Engineer : Hidetoshi Sasaki

Note :

Distance 1.00 m



Section 21.5
KT-295DX: Top (1GHz-6GHz)



Section 21.5
KT-295DX: Bottom (100MHz-200MHz)

< Graph number # >

RTCA DO-160G Section21.5

Matsuda No.8 Test Site

Date tested : Jul 12 2023

Company : FUJITA ELECTRIC WORKS,LTD

EUT Name : WATCH LOGGER

Model number : KT-295DX

Serial number : 03FE0014FB000131

Test mode : Super multi mode

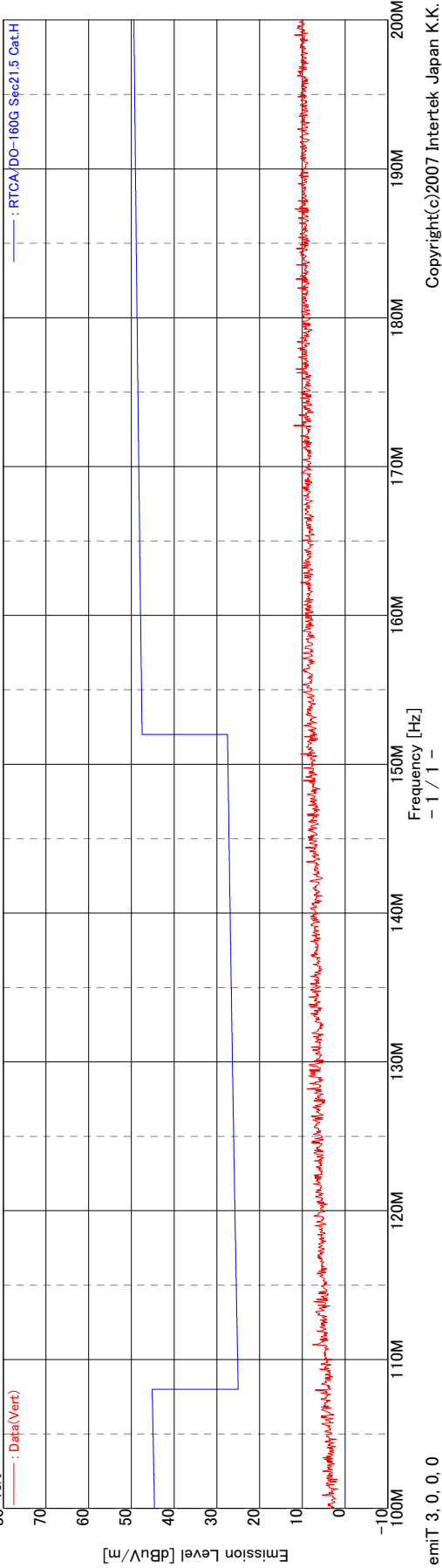
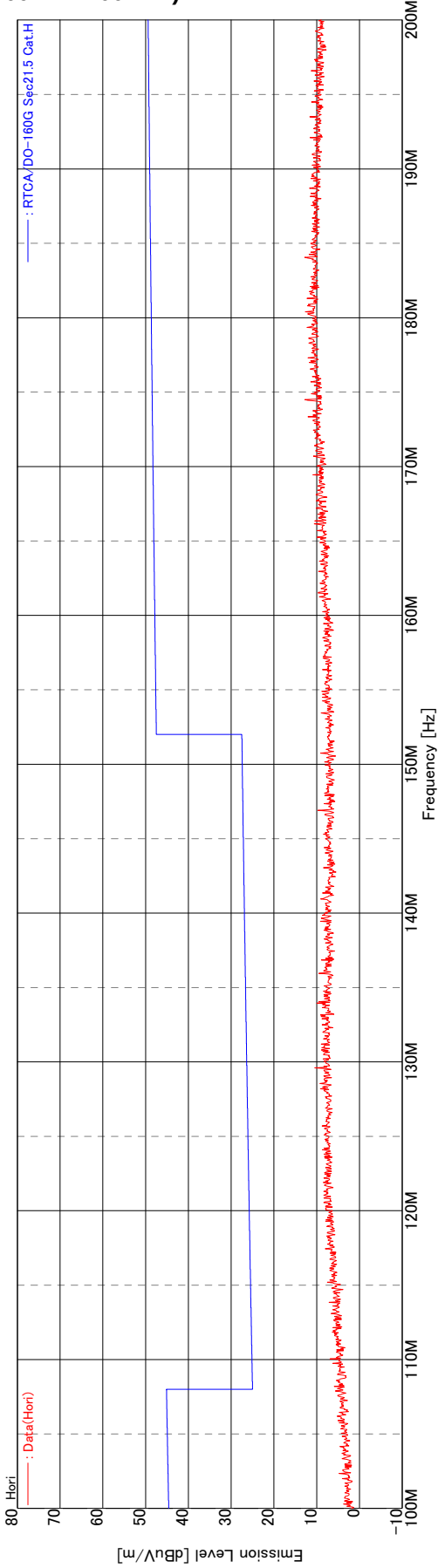
Power source : Battery (DC3 V)

File number : Bottom

Engineer : Hidetoshi Sasaki

Note :

Distance 1.00 m



Section 21.5
KT-295DX: Bottom (200MHz-1GHz)

< Graph number # >

RTCA DO-160G Section21.5

Matsuda No.8 Test Site

Date tested : Jul 12 2023

Company : FUJITA ELECTRIC WORKS,LTD

EUT Name : WATCH LOGGER

Model number : KT-295DX

Serial number : 03FE0014FB000131

Test mode : Super multi mode

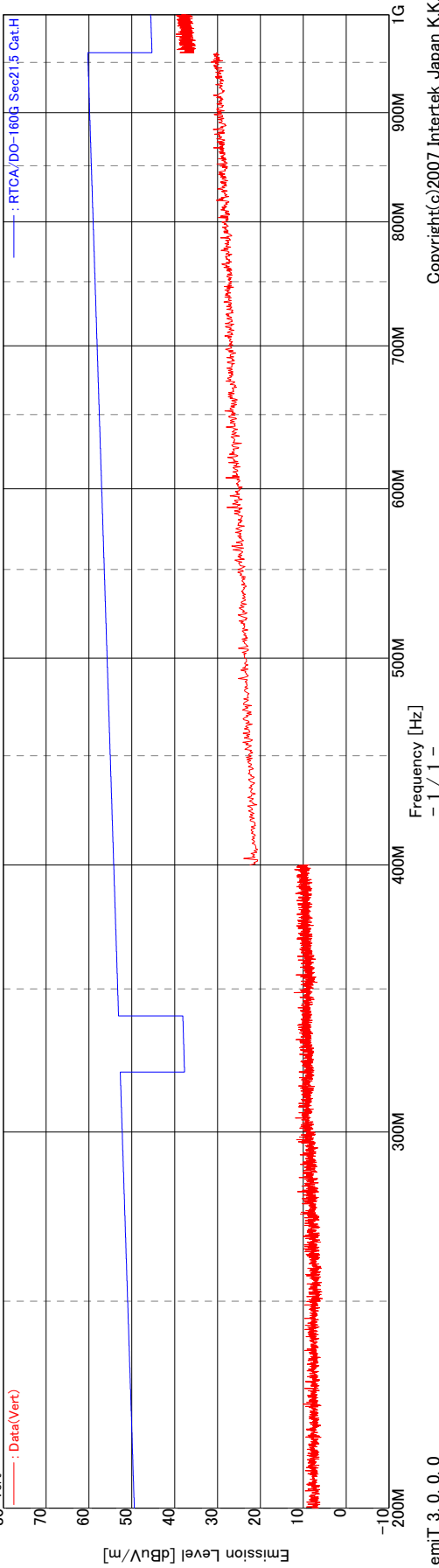
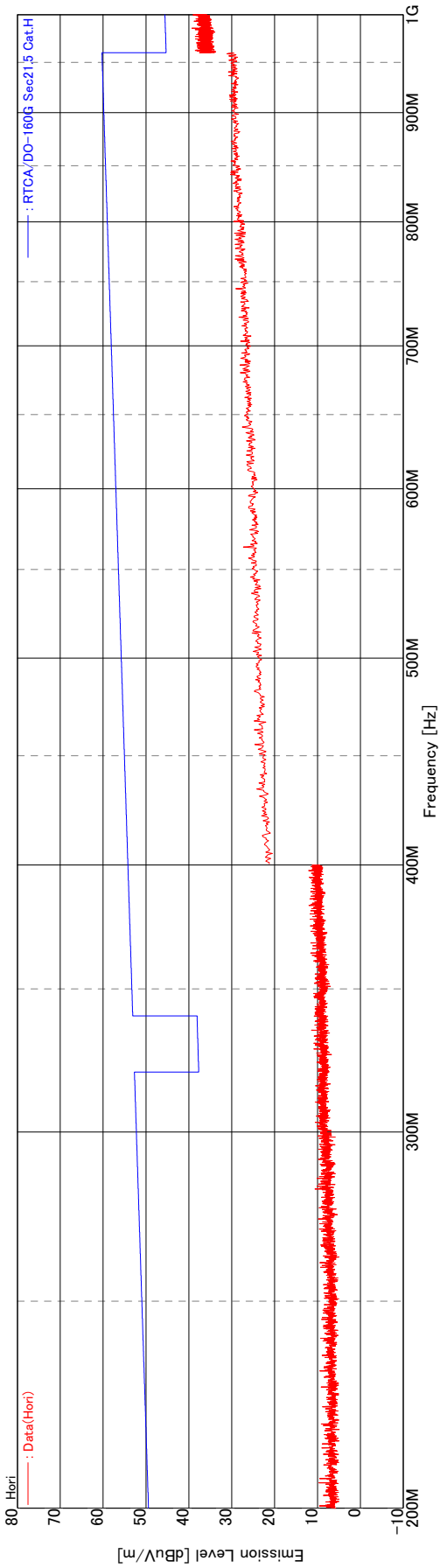
Power source : Battery (DC3 V)

File number : Bottom

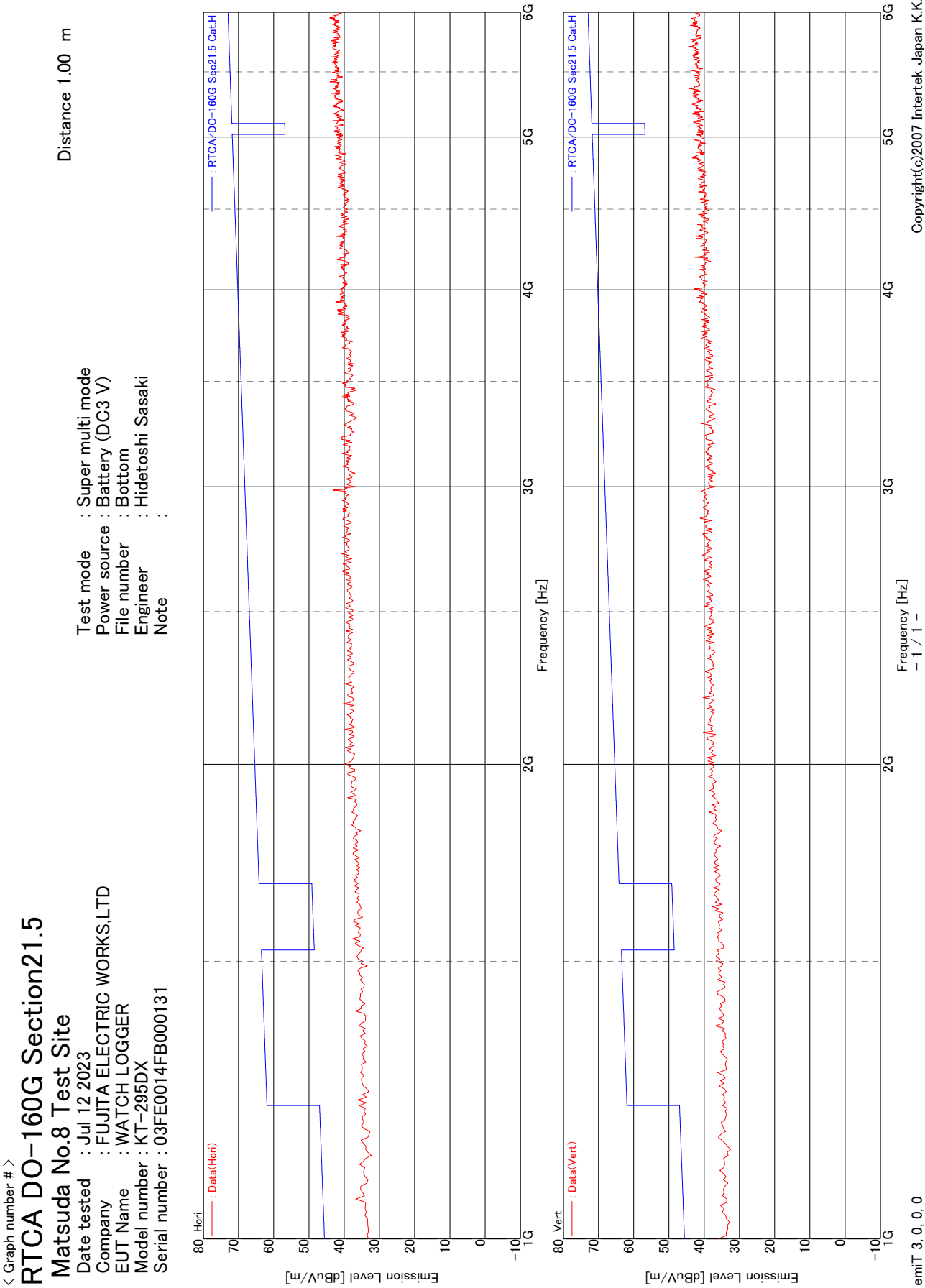
Engineer : Hidetoshi Sasaki

Note :

Distance 1.00 m



Section 21.5
KT-295DX: Bottom (1GHz-6GHz)



*** End of Report ***

APPENDIX A: WATCHLOGGER LINEUP

Table A.1

Sensor		Temperature				Temperature / Humidity				Impact				Temperature Humidity	Low Temperature
		Temperature		Temperature / Humidity		Temperature		Temperature / Humidity		Temperature		Temperature / Humidity		Temperature Humidity	Low Temperature
External															
Model No.		KT-155F	KT-155U	KT-175F	KT-115XLF	KT-255F	KT-255U	KT-275F	KT-215XLF	KT-195F	KT-195U	KT-295F	KT-295U	KT-215LF	KT-155F/EX
Communication System		NFC	USB	NFC	NFC	NFC	USB	NFC	NFC	NFC	USB	NFC	USB	NFC	NFC
Measurement Object	Temperature	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Humidity	—	—	—	—	○	○	○	○	—	—	○	○	○	—
	Impact	—	—	—	—	—	—	—	—	○	○	○	○	—	—
Temperature	Range	-40~+80℃	-40~+80℃	-40~+80℃	-40~+80℃	-40~+80℃	-40~+80℃	-40~+80℃	-40~+80℃	-40~+80℃	-40~+80℃	-40~+80℃	-40~+80℃	-40~+80℃	-80~+80℃
	Precision (Outside range)	±0.3℃(-10~50℃) ±0.5℃(外側範囲)	±0.3℃(-10~50℃) ±0.5℃(外側範囲)	±0.3℃(-10~50℃) ±0.5℃(外側範囲)	±0.3℃(-10~50℃) ±0.5℃(外側範囲)	±0.3℃(-10~50℃) ±0.5℃(外側範囲)	±0.3℃(-10~50℃) ±0.5℃(外側範囲)	±0.3℃(-10~50℃) ±0.5℃(外側範囲)	±0.3℃(-10~50℃) ±0.5℃(外側範囲)	±0.3℃(-10~50℃) ±0.5℃(外側範囲)	±0.3℃(-10~50℃) ±0.5℃(外側範囲)	±0.3℃(-10~50℃) ±0.5℃(外側範囲)	±0.3℃(-10~50℃) ±0.5℃(外側範囲)	±0.3℃(-10~50℃) ±0.5℃(外側範囲)	±0.5℃(-80~30℃)
	Resolution	0.1℃	0.1℃	0.1℃	0.1℃	0.1℃	0.1℃	0.1℃	0.1℃	0.1℃	0.1℃	0.1℃	0.1℃	0.1℃	0.1℃
	Period (min)	1~255分	1~255分	1~255分	1~255分	1~255分	1~255分	1~255分	1~255分	1~255分	1~255分	1~255分	1~255分	1~255分	1~255分
	Data capacity	16,000	32,000	16,000	16,000	16,000	32,000	16,000	16,000	14,000	32,000	14,000	32,000	16,000	16,000
Humidity	Range	—	—	—	—	0~99%	0~99%	0~99%	0~99%	—	—	0~99%	0~99%	0~99%	—
	Precision	—	—	—	—	±5%	±5%	±5%	±5%	—	—	±5%	±5%	±5%	—
	Resolution	—	—	—	—	1%	1%	1%	1%	—	—	1%	1%	1%	—
	Period (min)	—	—	—	—	1~255分	1~255分	1~255分	1~255分	—	—	1~255分	1~255分	1~255分	—
	Data capacity	—	—	—	—	16,000	32,000	16,000	16,000	—	—	14,000	32,000	16,000	—
Impact	Range	—	—	—	—	—	—	—	—	5~75G	5~75G	5~75G	5~75G	—	—
	Precision	—	—	—	—	—	—	—	—	±15%	±15%	±15%	±15%	—	—
	Resolution	—	—	—	—	—	—	—	—	1G	1G	1G	1G	—	—
	Period (min)	—	—	—	—	—	—	—	—	When perceiving	When perceiving	When perceiving	When perceiving	—	—
	Data capacity	—	—	—	—	—	—	—	—	2,000	2,000	2,000	2,000	—	—

Table A.2

No	Model No.	External	Sensor	Commu- nication System	Circuit	Enclosure Dimension	Weight	Battery
1	KT-175F		Temperature	NFC		90×55×7.7mm	40g	CR2430
2	KT-165F		Temperatur	NFC	Same as KT175F	34×54×10mm	18g	CR2025
3	KT-275F		Temperature / Humidity	NFC		90×55×7.7mm	40g	CR2430
4	KT-265F		Temperature / Humidity	NFC	Same as KT275F	34×54×10mm	18g	CR2025

KT-175F and KT-275F have been already registered on last test.
KT-165F and KT-265F are the models to be added.

KT-165F is changed the enclosure size to smaller than KT-175F, and has the same function as KT-175F with five color panels.
KT-265F is changed the enclosure size to smaller than KT-275F, and has the same function as KT-275F with five color panels.

KT-165F circuit is entirely the same as KT-175F's one except for the different battery capacity.
KT-265F circuit is entirely the same as KT-275F's one except for the different battery capacity.

Battery CR2430 is the lithium coin battery with 300mAh capacity.
Battery CR2025 is the lithium coin battery with 160mAh capacity.

Table A.3

No	Model Name	Eternal	Measured Sensor	Communication System	Impact Record Capacity	Impact Measure Range	Other Circuit	Enclosure Dimension	Weight	Battery
1	KT-195U		Temperature / Impact	USB	2,000 events	5~75G		90×34×15	50g	CR2477
2	KT-195U/GX		Temperature / Impact	USB	16,000 events	3~125G	Same as KT-195U	90×34×15	50g	CR2477
3	KT-295U		Temperature / Humidity / Impact	USB	2,000 events	5~75G		90×34×15	50g	CR2477
4	KT-295U/GX		Temperature / Humidity / Impact	USB	16,000 events	3~125G	Same as KT-295U	90×34×15	50g	CR2477
5	KT-195F		Temperature / Impact	NFC	2,000 events	5~75G		90×34×15	50g	CR2477
6	KT-195F/GX		Temperature / Impact	NFC	16,000 events	3~125G	Same as KT-195F	90×34×15	50g	CR2477
7	KT-295F		Temperature / Humidity / Impact	NFC	2,000 events	5~75G		90×34×15	50g	CR2477
8	KT-295F/GX		Temperature / Humidity / Impact	NFC	16,000 events	3~125G	Same as KT-295F	90×34×15	50g	CR2477

Recording capacities of KT-195U/GX, KT-295U/GX, KT-195F/GX and KT-295F/GX are higher than KT-195U, KT-295U, KT-195F and KT-295F.
Impact measurement ranges of KT-195U/GX, KT-295U/GX, KT-195F/GX and KT-295F/GX are wider than KT-195U, KT-295U, KT-195F and KT-295F.

The memories and impact sensors for KT-195U_KT-295U and KT-195U/GX_KT-295U/GX are different. The other circuits are same.
The memories and impact sensors for KT-195F_KT-295F and KT-195F/GX_KT-295F/GX are different. The other circuits are same.

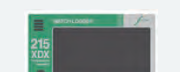
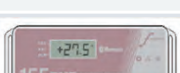
Table A.4

No	Model No.	External	Sensor	Communication System	Record Capacity	Measurement Range	Other Circuit	Enclosure Dimension (mm)	Weight	Battery
1	KT-155FP		Temperature	NFC	16000 events	-40~80℃	Same as KT-155F	90×34×15	50g	CR2477
2	KT-115LFP		Temperature	NFC	16000 events	-40~80℃	Same as KT-115XLF	90×55×15	40g	CR2430
3	KT-155F/EX (LED)		Temperature	NFC	16000 events	-80~80℃	Same as KT-155F/EX	90×34×15	50g	ER2450
4	KT-255F/32		Temperature / Humidity	NFC	Temperature: 32000 events Humidity: 32000 events	Temperature: -40~80℃ Humidity: 1~99%	Same as KT-255F	90×34×15	50g	CR2477
5	KT-115LFP/A		Temperature	NFC	16000 events	-40~80℃	Same as KT-115XLF	90×55×15	40 g	CR2430

The circuit of these models are the same as the models listed in "Other Circuit".

The circuit of KT-155FP, KT-115LFP and KT-115LFP/A are the same and temperature sensor is probe type.
 The circuit of KT-155F/EX(LED) is the same as KT-155F/EX and the LED turns ON when recording temperature out of setting range.
 The circuit of KT-225F/32 is the same as KT-255F. Only the memory capacity of KT-225F/32 is different.

Table A.5

No	Model No.	External	Sensor	Communication System	Record Capacity	Measurement Range	Other Circuit	Enclosure Dimension (mm)	Weight	Battery
1	KT-155DX		Temperature	NFC + BLE	16000 events	-40~80℃	BLE added on KT-155F	90×34×15	50g	CR2477
2	KT-255DX		Temperature / Humidity	NFC + BLE	Temperature :16000 events Humidity:16000 events	Temperature :-40~80℃ Humidity:1~99%	BLE added on KT-255F	90×34×15	50g	CR2477
3	KT-195DX		Temperature / Impact	NFC + BLE	Temperature :16000 events Impact:16000 events	Temperature :-40~80℃ Impact:3~125G	BLE added on KT-195F	90×34×15	50g	CR2477
4	KT-295DX		Temperature / Humidity / Impact	NFC + BLE	Temperature :16000 events Humidity:16000 events Impact:16000 events	Temperature :-40~80℃ Humidity:1~99% Impact:3~125G	BLE added on KT-295F	90×34×15	50g	CR2477
5	KT-115XDX		Temperature	NFC + BLE	16000 events	-40~80℃	BLE added on KT-115XLF	90×55×30	90g	CR2477
6	KT-215XDX		Temperature / Humidity	NFC + BLE	Temperature :16000 events Humidity:16000 events	Temperature :-40~80℃ Humidity:1~99%	BLE added on KT-215XLF	90×55×30	90g	CR2477
7	KT-155DXP		Temperature	NFC + BLE	16000 events	-40~80℃	BLE added on KT-155FP	90×34×15	50g	CR2477
8	KT-115DXP		Temperature	NFC + BLE	16000 events	-40~80℃	BLE added on KT-115LFP	90×55×30	90g	CR2477

All the models above are the Bluetooth function additional models of the models listed in "Other Circuit".

All the models above are used in airborne mode (Bluetooth function is OFF) in the aircraft.

The circuit of KT-155DXP and KT-115DXP are the same as the models listed in "Other Circuit" and temperature sensor is probe type.

Table A.6

No	MODEL.No.	External	Sensor	Communication System	Recording Capacity	Measurement Range	Other circuit	Enclosure Dimension (mm)	Weight	Battery
1	KT-165F/GX		Temperature · Impact	FeLiCa	16,000 events	Tem:-20~80℃ Impact:3~125G	Same as KT-195F/GX	54×34×10	18g	CR2025

The already registered KT-195F/GX and KT-165F/GX will use the same circuit except for changes in chassis dimensions.