EMI TEST REPORT

Test Report No. : 10014479Y-B-R3

Applicant:	**Hitachi, Ltd., Information & Telecommunication Systems Company**
Type of Equipment:	**USB Finger Vein Biometric Authentication Uint**
Model No.:	**PC-KCB100**
FCC ID:	**ZQDPCKCB100**
Test regulation:	**FCC Part 15 Subpart B:2012 Class B ICES-003 Issue 5 Class B**
Test result:	**Complied**

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2. The results in this report apply only to the sample tested.
3. This sample tested is in compliance with the limits of the above regulation.
4. The test results in this test report are traceable to the national or international standards
5. This test report must not be used by the customer to claim product certification, approval, or endorsement by any agency of the Federal Government
6. The opinions and the interpretations to the result of the description in this report are outside scopes where UL Japan has been accredited.
7. This report is a revised version of 10014479Y-B-R2. 10014479Y-B-R2 is replaced with this report.

Date of test:

May 20, 2013

Representative test engineer:

Daigo Hamaguchi
Engineer of WiSE Japan,
UL Verification Service

Approved by:

Tomoyuki Yamashita
Manager of WiSE Japan,
UL Verification Service

☐ The testing in which "Non-accreditation" is displayed is outside the accreditation scopes in UL Japan
☒ There is no testing item of "Non-accreditation".

Testing
RTL02610

UL Japan, Inc.
Yokowa EMC Lab.
108 Yokowa-cho, Ise-shi, Mie-ken, 516-1106 JAPAN
Telephone: +81 596 39 1485
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REVISION HISTORY

Original Test Report No.: 10014479Y-B

Revision	Test report No.	Date	Page revised	Contents
- (Original)	10014479Y-B	May 29, 2013	-	-
1	10014479Y-B-R1	June 3, 2013	All Pages	-
2	10014479Y-B-R2	June 7, 2013	All Pages	-
3	10014479Y-B-R3	June 12, 2013	All Pages	-

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CONTENTS

Section 1 : Customer information

Company Name	:	Hitachi, Ltd., Information & Telecommunication Systems Company
Brand Name	:	Hitachi, Ltd.
Address	:	Hitachi Systemplaza Shinkawasaki 890 Kashimada, Saiwai, Kawasaki, Kanagawa, 212-8567 JAPAN
Telephone Number	:	+81 44 549 1728
Facsimile Number	:	+81 44 549 1127
Contact Person	:	Takashi Maruyama

Section 2 : Equipment under test (E.U.T.)

2.1 Identification of E.U.T.

Type of equipment	:	USB Finger Vein Biometric Authentication Uint
Trade name	:	Hitachi, Ltd.
Model No.	:	PC-KCB100
Serial No.	:	PE07SPL0000000
Rating	:	DC 5.0 V / 0.5A
Country of Mass-production	:	Japan
Condition of EUT	:	Engineering prototype (Not for Sale: This sample is equivalent to mass-produced items.)
Size	:	57 x 80 x 71 (Width x Length x Height (mm))
Modification of EUT	:	No modification by the test lab.
Receipt Date of Sample	:	May 20, 2013

2.2 Product description

Model: PC-KCB100 (referred to as the EUT in this report) is a USB Finger Vein Biometric Authentication Uint. .
The clock frequencies used in the EUT: 24 MHz (Xtal), 120 MHz

Section 3 : Test specification, procedures and results

3.1 Test Specification

Test Specification	:	FCC Part 15 Subpart B: 2012, final revised on December 27, 2012 and effective January 28, 2013
Title	:	FCC 47CFR Part15 Radio Frequency Device Subpart B Unintentional Radiators
Test Specification	:	ICES-003 Issue 5
Title	:	Spectrum Management and Telecommunications Interference-Causing Equipment Standard Information Technology Equipment (ITE) – Limits and methods of measurement

3.2 Procedures & results

Item	Test Procedure	Limits	Deviation	Worst margin	Result
Conducted emission	ANSI C63.4:2003 7. AC powerline conducted emission measurements	Class B	N/A	24.7 dB (8.6126 MHz, QP, N)	Complied
Radiated emission	ANSI C63.4:2003 8. Radiated emission measurements	Class B	N/A *1)	12.9 dB (105.62 MHz, Vertical)	Complied
*1) Measurements were limited up to 2 GHz since the highest frequency of internal source of the EUT is between 108 MHz and 500 MHz. Note: UL Japan's EMI Work Procedures No. 13-EM-W0420					

3.3 Addition to standard

No addition, exclusion nor deviation has been made from the standard.

3.4 Confirmation

UL Japan, Inc. hereby confirms that E.U.T., in the configuration tested, complies with the specifications FCC Part 15 Subpart B:2012 Class B and ICES-003 Issue 5 Class B.

3.5 Uncertainty

The following uncertainties have been calculated to provide a confidence level of 95% using a coverage factor k=2.

Uncertainties of measurement data after January 8, 2013

		Open area test site			Shielded room			
		No.1	No.2	No.3	No.1	No.2	No.3	No.7
		(±)	(±)	(±)	(±)	(±)	(±)	(±)
Conducted disturbance								
LISN (AMN)	9 kHz - 150 kHz	3.9 dB	-	-	3.9 dB	-	4.0 dB	-
	150 kHz - 30 MHz	3.6 dB	-	-	3.6 dB	3.5 dB	3.6 dB	3.6 dB
Radiated disturbance								
3 m	9 kHz - 30 MHz	3.4 dB	4.4 dB	3.7 dB	-	-	-	-
	30 MHz - 300 MHz	5.0 dB	5.1 dB	5.0 dB	-	-	-	-
	300 MHz - 1000 MHz	5.1 dB	5.2 dB	5.1 dB	-	-	-	-
	1 GHz - 18 GHz	5.9 dB	6.0 dB	5.7 dB	-	-	-	-

Conducted emission test

The data listed in this test report has enough margin, more than the site margin.

Radiated emission test

The data listed in this test report has enough margin, more than the site margin.

3.6 Test Location

UL Japan, Inc. Yokowa EMC Lab.
108 Yokowa-cho, Ise-shi, Mie-ken, 516-1106 JAPAN
Telephone : +81 596 39 1485
Facsimile : +81 596 39 0232

	FCC Registration Number	IC Registration Number	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Other rooms
No.1 open area test site	90412	2973A-1	-	40 x 18	-
No.2 open area test site	90411	2973A-2	-	20 x 18	-
No.3 open area test site	90412	2973A-3	-	20 x 18	-
No.1 shielded room	-	-	5.5 x 6.4 x 2.7	5.5 x 6.4	-
No.2 shielded room	-	-	4.5 x 3.6 x 2.7	4.5 x 3.6	-
No.3 shielded room	-	-	3.6 x 7.2 x 2.4	3.6 x 7.2	-
No.4 shielded room	-	-	5.5 x 5.0 x 2.4	4.35 x 3.35	-
No.5 shielded room	-	-	5.5 x 4.3 x 2.5	5.54 x 3.0	-
No.6 shielded room	-	-	5.2 x 3.2 x 2.9	5.2 x 3.2	-
No.7 shielded room	-	-	9.3 x 3.4 x 2.7	9.3 x 3.4	-
No.1 EMS lab. (Full-anechoic chamber)	-	-	5.0 x 8.0 x 3.5	-	-
No.2 EMS lab. (Full-anechoic chamber)	-	-	4.0 x 7.0 x 3.5	-	-

3.7 Test setup, Data of EMI & Test instruments

Refer to Appendix 1 to 3.

Section 4 : Operation of E.U.T. during testing

4.1 Operating modes

The EUT exercise program used during testing was designed to exercise the various system components in a manner similar to typical use.

Test sequence is used: 1.Running mode
2.Standby
※As for Radiated emission, standby mode was omitted in consideration of the worst mode.

Justification: The system was configured in typical fashion (as a customer would normally use it) for testing.

4.2 Configuration and peripherals

This page has been submitted for a separate exhibit.

Section 5 : Conducted emission

5.1 Operating environment

The test was carried out in shielded room.

Temperature : See data
Humidity : See data

5.2 Test configuration

EUT was placed on a wooden platform of nominal size, 1m by 1.8m raised 80cm above the conducting ground plane. The rear of tabletop was located 40cm to the vertical conducting plane. The rear of EUT and its peripherals was aligned and flushed with rear of tabletop. All other surfaces of tabletop were at least 80cm from any other grounded conducting surface.
EUT was located 80cm from the LISN and excess AC cable was bundled in center. I/O cables that were connected to the peripherals were bundled in center. They were folded back and forth forming a bundle and were hanged at a 40cm height to the ground plane. Each EUT current-carrying power lead, except the ground (safety) lead, was individually connected through a LISN to the input power source. All unused 50ohm connectors of the LISN were resistively terminated in 50 ohm when not connected to the measuring equipment.
Photographs of the set up are shown in Appendix 1.

5.3 Test conditions

Frequency range : 0.15 - 30 MHz
EUT position : Table top

5.4 Test procedure

The AC Mains Terminal Continuous disturbance Voltage had been measured with the EUT in shielded room.
The EUT was connected to a Line Impedance Stabilization Network (LISN).
An overview sweep with peak detection has been performed.
The measurements had been performed with a quasi-peak detector and if required, with an average detector.
The conducted emission measurements were made with the following detector function of the test receiver.

Detector Type : QP / AV
IF Band width : 9 kHz / 9 kHz

5.5 Results

Summary of the test results: Pass

Section 6 : Radiated emission

6.1 Operating environment

This test was carried out in open area test site.
Temperature : See data
Humidity : See data

6.2 Test configuration

EUT was placed on a table which was consisted by wooden, polyethylene foam and polycarbonate of nominal size, 1m by 2.33m raised 80cm above the conducting ground plane.
The rear of EUT and its peripherals was aligned and flushed with rear of tabletop.
I/O cables that were connected to the peripherals were bundled in center. They were folded back and forth forming a bundle and were hanged 40cm height to the ground plane. The measurements were performed for vertical or horizontal antenna polarization or both as necessary. The measurement antenna was varied in height above the conducting ground plane to obtain the maximum signal strength.
Photographs of the set up are shown in Appendix 1.

6.3 Test conditions

Frequency range : 30 - 2000 MHz
Test distance : 3m
EUT position : Table top

6.4 Test procedure

The Radiated Electric Field Strength intensity has been measured on an open test site with a ground plane at a distance of 3m. Pre check measurements were performed in shielded room with a search coil at 30-2000MHz to distinguish disturbances of EUT from the ambient noise.
Measurements were performed with quasi-peak detector.
The measuring antenna height was varied between 1 and 4m and EUT was rotated a full revolution in order to obtain the maximum value of the electric field intensity.
The measurements were performed for vertical or horizontal antenna polarization or both as necessary.
The radiated emission measurements were made with the following detector function of the test receiver and spectrum analyzer.

		30-1000 MHz (Test receiver)	1000-2000 MHz (Spectrum analyzer) *2)	
Detector Type:	:	QP	AV *1)	PK
IF Band width:	:	120 kHz	RBW 1MHz/ VBW 10 Hz	RBW 1MHz/ VBW 3 MHz

*1) When using Spectrum analyzer, the test was made with adjusting span to zero by using peak hold.
*2) The measurement was conducted at 3 dB bandwidth.

6.5 Results

Summary of the test results: Pass

Data of Conducted Disturbance Test

UL Japan, Inc.
YOKOWA No.3 Shielded room
Report No.: 10014479Y-B-R3

Power : DC5V(PC:AC120V/60Hz)
Mode : 1.Running mode
Remarks :
Date : 5/20/2013
Phase : Single Phase
Temperature : 23 ℃ Engineer : Tetsuya Uemura
Humidity : 31 %
Limit : FCC Part15B CLASS B

No.	FREQ.	READING(N) QP	READING(N) AV	READING(L1) QP	READING(L1) AV	LISN FACTOR	CABLE LOSS	ATTEN.	RESULT QP	RESULT AV	LIMITS QP	LIMITS AV	MARGIN QP	MARGIN AV
	[MHz]	[dBμV]		[dBμV]		[dB]	[dB]	[dB]	[dB]		[dBμV]		[dB]	
1.	0.2023	15.9	-	16.3	-	9.7	0.1	0.0	26.1	-	63.5	53.5	37.4	-
2.	0.2921	24.2	-	22.8	-	9.6	0.1	0.0	33.9	-	60.5	50.5	26.6	-
3.	0.3033	23.1	-	23.2	-	9.6	0.1	0.0	32.9	-	60.2	50.2	27.3	-
4.	8.0640	24.4	-	23.3	-	9.9	0.3	0.0	34.6	-	60.0	50.0	25.4	-
5.	8.6126	25.1	-	24.5	-	9.9	0.3	0.0	35.3	-	60.0	50.0	24.7	-
6.	14.1755	16.3	-	16.4	-	10.1	0.4	0.0	26.9	-	60.0	50.0	33.1	-

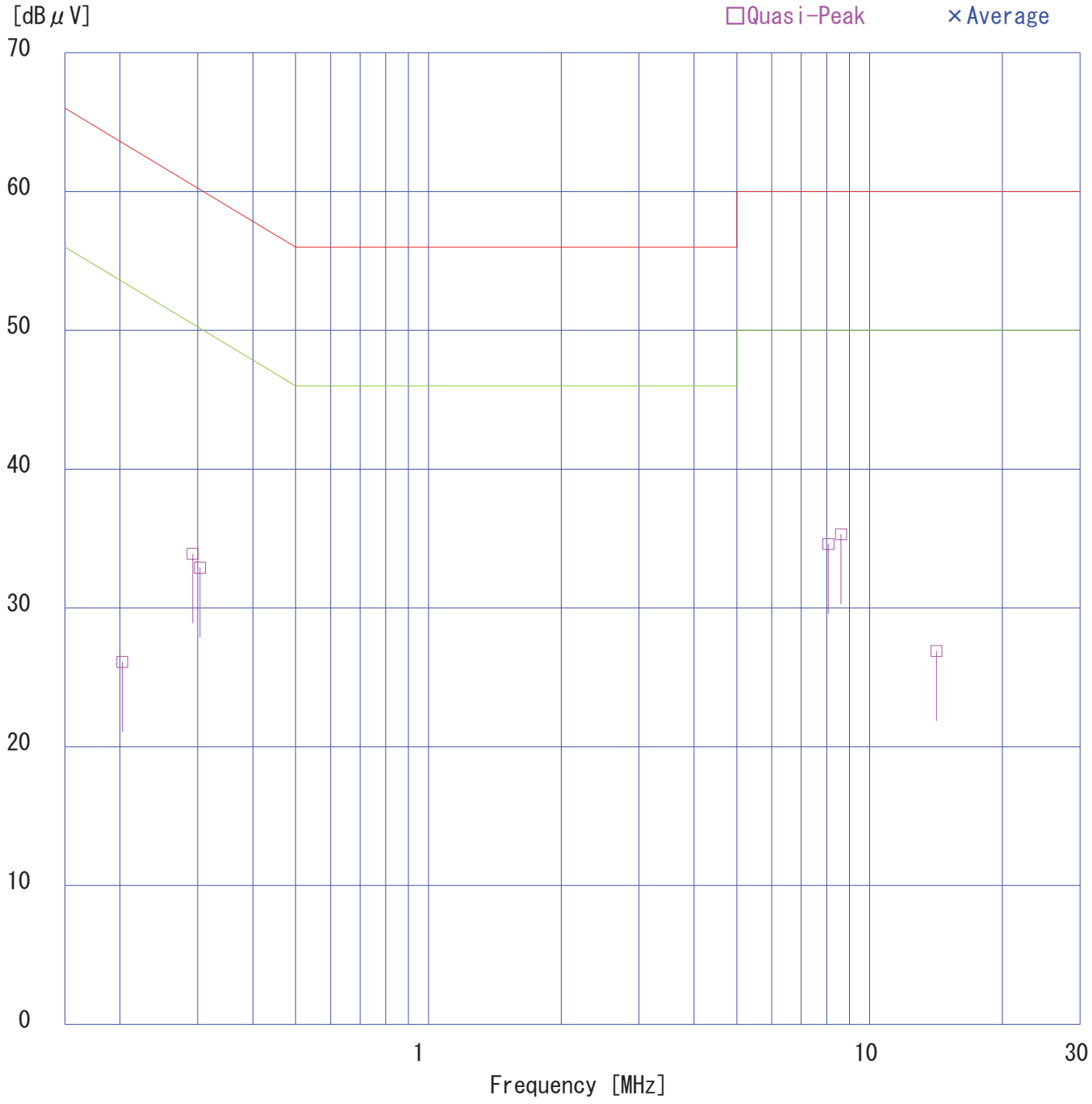
CALCULATION: READING + LISN FACTOR + CABLE LOSS + ATTEN.

Except for the above table: adequate margin data below the limits.
LS-13 LISN N Phase with Adapter_HP OFF(2012-11-22).LIS

Data of Conducted Disturbance Test

UL Japan, Inc.
YOKOWA No.3 Shielded room
Report No.: 10014479Y-B-R3

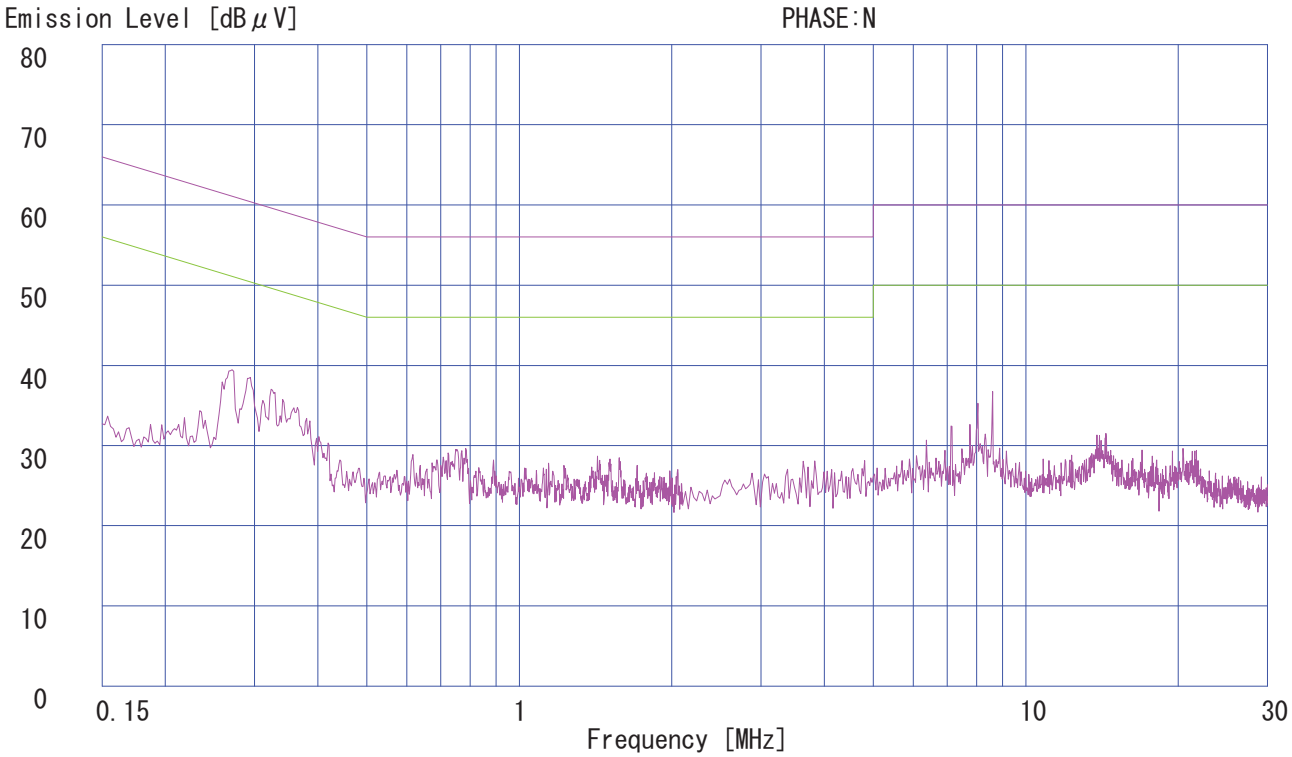
Power	: DC5V(PC:AC120V/60Hz)		
Mode	: 1.Running mode		
Remarks	:		
Date	: 5/20/2013		
Phase	: Single Phase		
Temperature	: 23 ℃	Engineer	: Tetsuya Uemura
Humidity	: 31 %		
Limit	: FCC Part15B CLASS B		

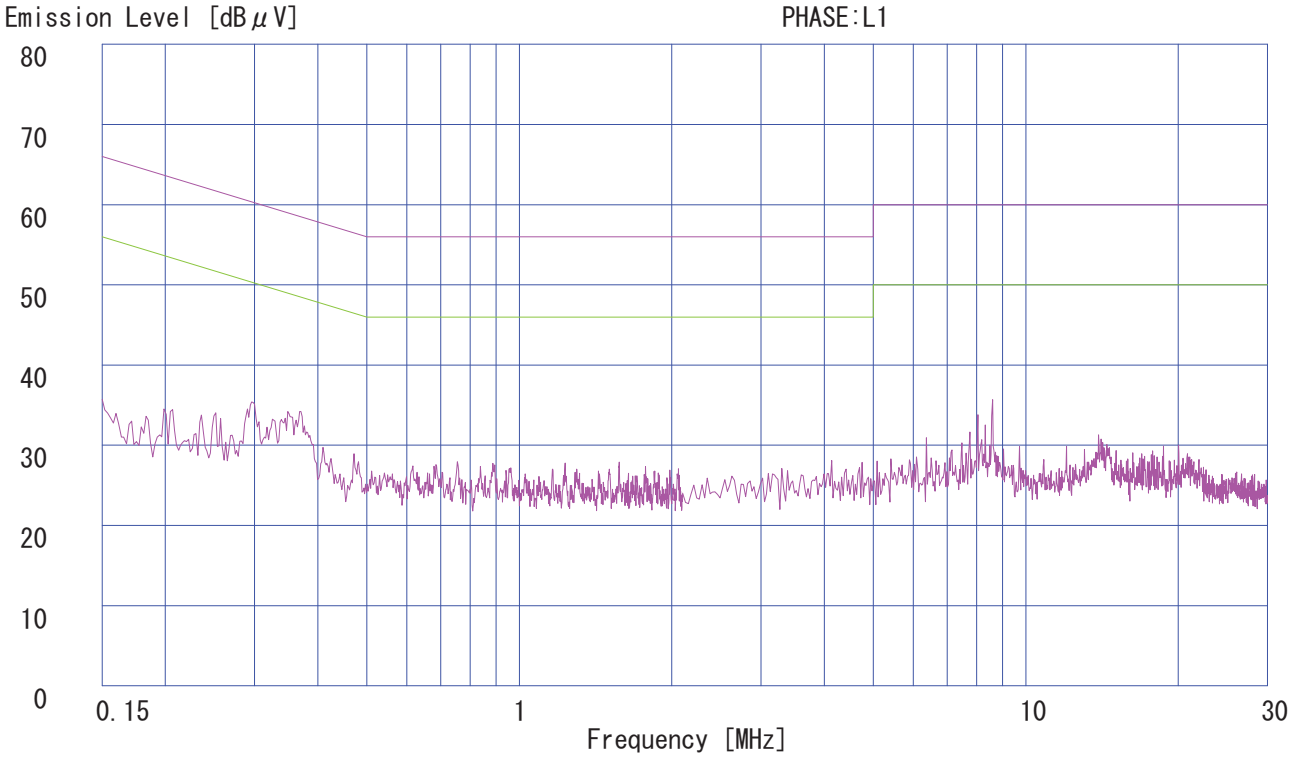


Data of Conducted Disturbance Test

UL Japan, Inc.
YOKOWA No.3 Shielded room
Report No.: 10014479Y-B-R3

Power	: DC5V(PC:AC120V/60Hz)		
Mode	: 1.Running mode		
Remarks	:		
Date	: 5/20/2013		
Phase	: Single Phase		
Temperature	: 23 ℃	Engineer	: Tetsuya Uemura
Humidity	: 31 %		
Limit 1	: FCC Part15B CLASS B		
Limit 2	: None		

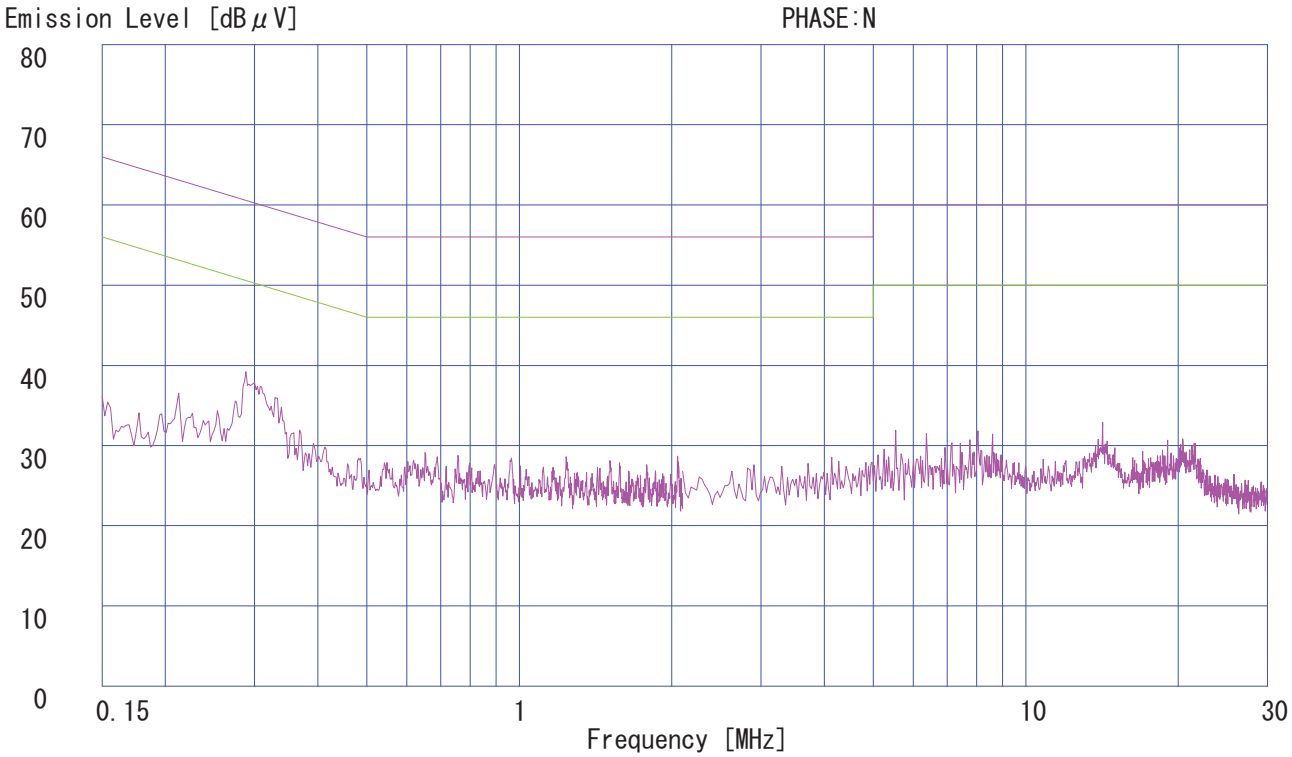


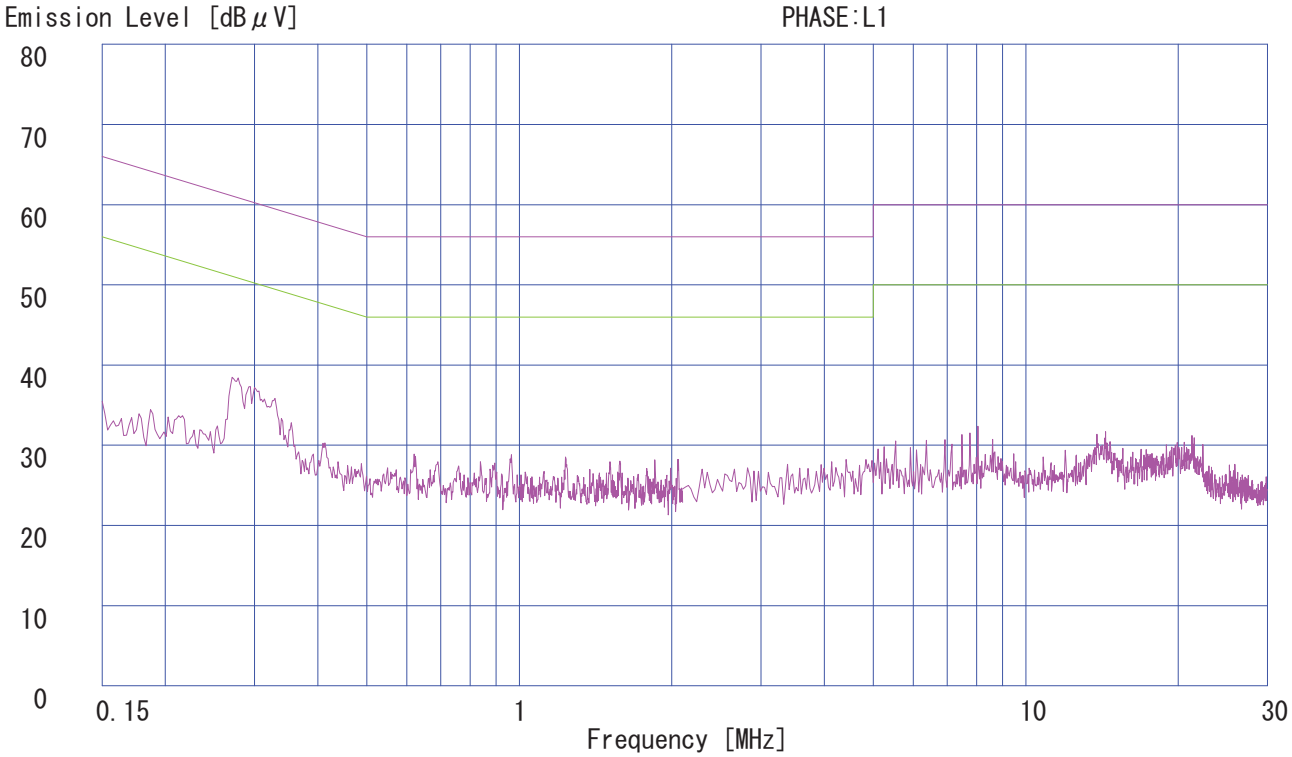


Data of Conducted Disturbance Test

UL Japan, Inc.
YOKOWA No.3 Shielded room
Report No.: 10014479Y-B-R3

Power	: DC5V(PC:AC120V/60Hz)		
Mode	: 2.Standby		
Remarks	:		
Date	: 5/20/2013		
Phase	: Single Phase		
Temperature	: 23 ℃	Engineer	: Tetsuya Uemura
Humidity	: 31 %		
Limit 1	: FCC Part15B CLASS B		
Limit 2	: None		





Data of Radiated Disturbance Test

UL Japan, Inc.
YOKOWA No.3 Open area test site
Report No.: 10014479Y-B-R3

Power : DC5V(PC:AC120V/60Hz)
Mode : 1.Running mode
Remarks :
Date : 5/20/2013
Test Distance : 3 m
Temperature : 23 ℃ Engineer : Daigo Hamaguchi
Humidity : 32 %
Limit : FCC Part15B CLASS B

No.	FREQ. [MHz]	ANT TYPE	READING HOR [dBμV]	READING VER [dBμV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT HOR [dBμV/m]	RESULT VER [dBμV/m]	LIMITS [dBμV/m]	MARGIN HOR [dB]	MARGIN VER [dB]
1.	84.00	BB	37.9	32.8	7.2	28.0	1.8	6.0	24.9	19.8	40.0	15.1	20.2
2.	90.00	BB	39.9	39.9	8.3	28.0	1.8	6.0	28.0	28.0	43.5	15.5	15.5
3.	96.00	BB	33.6	34.5	9.5	28.0	1.9	6.0	23.0	23.9	43.5	20.5	19.6
4.	97.56	BB	36.5	40.7	9.8	28.0	1.9	6.0	26.2	30.4	43.5	17.3	13.1
5.	102.00	BB	35.0	35.6	10.6	28.0	2.0	6.0	25.6	26.2	43.5	17.9	17.3
6.	105.62	BB	30.8	39.5	11.1	28.0	2.0	6.0	21.9	30.6	43.5	21.6	12.9
7.	120.00	BB	33.0	32.9	13.2	28.0	2.1	6.0	26.3	26.2	43.5	17.2	17.3
8.	144.00	BB	33.5	31.8	14.8	28.0	2.3	6.0	28.6	26.9	43.5	14.9	16.6
9.	168.00	BB	32.2	31.9	15.7	28.0	2.5	6.0	28.4	28.1	43.5	15.1	15.4
10.	192.00	BB	30.6	28.3	16.4	28.0	2.7	5.9	27.6	25.3	43.5	15.9	18.2
11.	286.36	BB	26.2	27.1	19.0	27.9	3.4	5.9	26.6	27.5	46.0	19.4	18.5
12.	335.19	BB	37.3	29.7	16.5	27.8	3.7	2.9	32.6	25.0	46.0	13.4	21.0
13.	372.34	BB	31.5	32.4	17.0	27.8	4.0	2.9	27.6	28.5	46.0	18.4	17.5
14.	480.00	BB	28.5	30.7	18.6	27.8	4.6	2.9	26.8	29.0	46.0	19.2	17.0
15.	550.67	BB	27.0	27.7	19.6	27.6	4.9	2.9	26.8	27.5	46.0	19.2	18.5

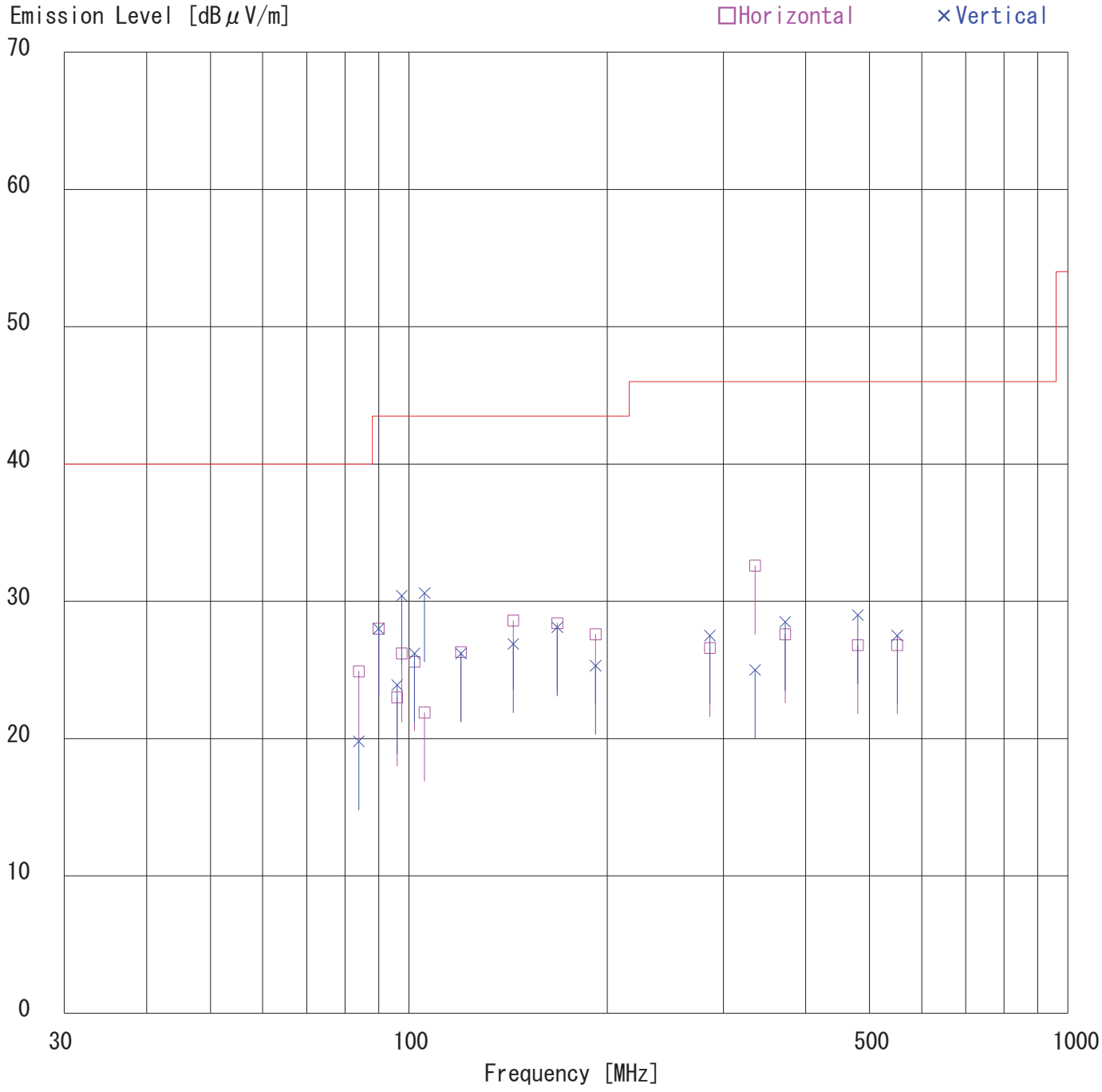
CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.
Except for the above table : adequate margin data below the limits.

ANT TYPE : 30-299.99MHz Biconical, 300.00-1000MHz Logperiodic

Data of Radiated Disturbance Test

UL Japan, Inc.
YOKOWA No.3 Open area test site
Report No.: 10014479Y-B-R3

Power	: DC5V(PC:AC120V/60Hz)		
Mode	: 1.Running mode		
Remarks	:		
Date	: 5/20/2013		
Test Distance	: 3 m		
Temperature	: 23 ℃	Engineer	: Daigo Hamaguchi
Humidity	: 32 %		
Limit	: FCC Part15B CLASS B		



Data of Radiated Disturbance Test

UL Japan, Inc.
YOKOWA No.3 Open area test site
Report No.: 10014479Y-B-R3

Power : DC5V(PC:AC120V/60Hz)
Mode : 1.Running mode
Remarks :
Date : 5/20/2013
Test Distance : 3 m
Temperature : 23 ℃ Engineer : Daigo Hamaguchi
Humidity : 32 %
Limit : FCC Part15B CLASS B(Average Limit / Upper 1GHz)

No.	FREQ. [MHz]	ANT TYPE	READING HOR [dBμV]	READING VER [dBμV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT HOR [dBμV/m]	RESULT VER [dBμV/m]	LIMITS [dBμV/m]	MARGIN HOR [dB]	MARGIN VER [dB]
1.	1025.00	BB	36.8	38.3	24.2	40.8	3.9	0.0	24.1	25.6	54.0	29.9	28.4
2.	1200.00	BB	37.2	37.7	24.3	40.5	4.2	0.0	25.2	25.7	54.0	28.8	28.3
3.	1260.00	BB	35.9	37.2	24.4	40.4	4.3	0.0	24.2	25.5	54.0	29.8	28.5
4.	1380.00	BB	36.0	36.1	24.5	40.3	4.5	0.0	24.7	24.8	54.0	29.3	29.2
5.	1619.62	BB	35.7	36.6	25.1	39.9	4.8	0.0	25.7	26.6	54.0	28.3	27.4
6.	1720.95	BB	35.1	36.5	25.5	39.7	5.0	0.0	25.9	27.3	54.0	28.1	26.7

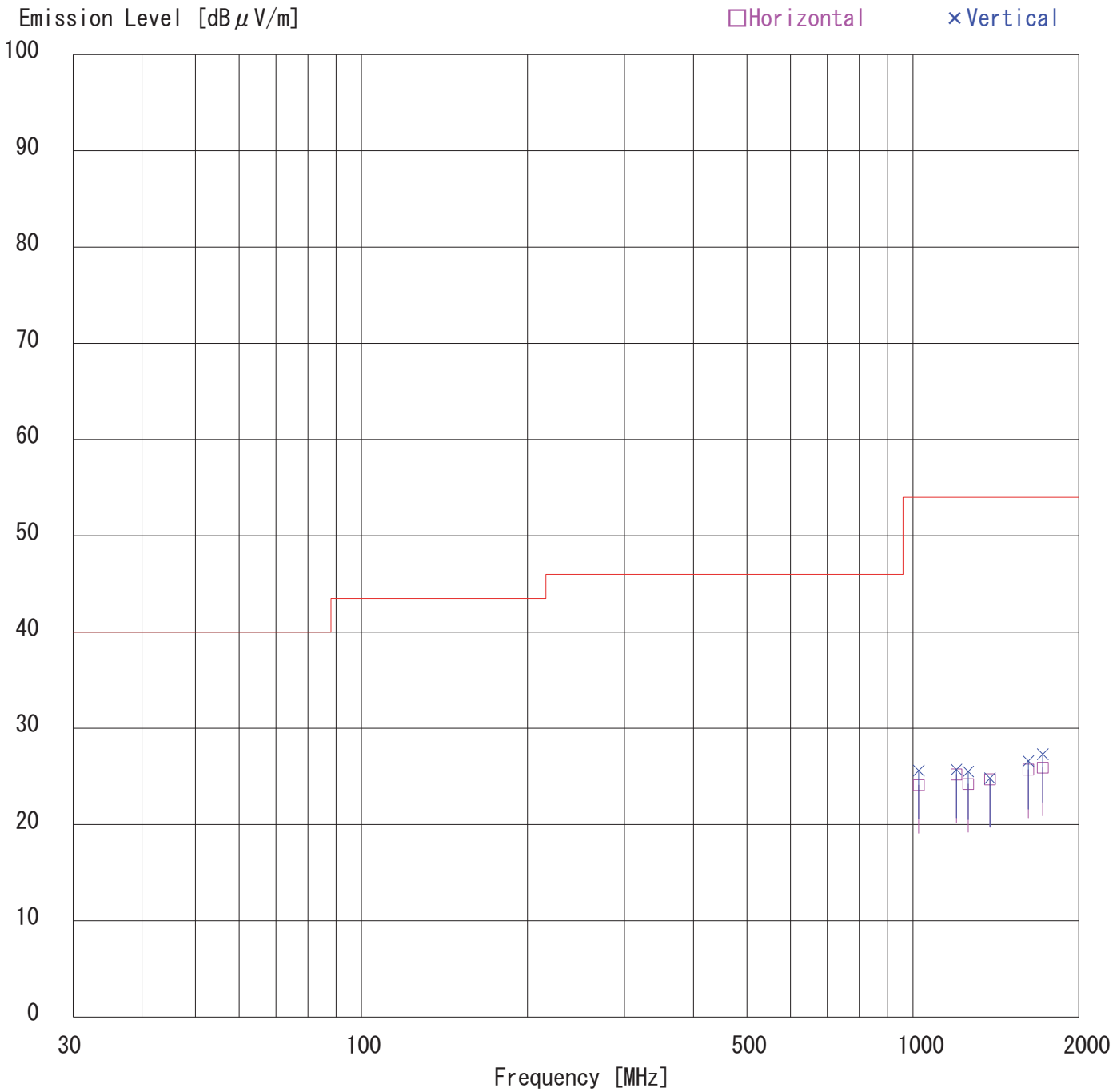
CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.
Except for the above table : adequate margin data below the limits.

ANT TYPE : 1GHz-2GHz Horn

Data of Radiated Disturbance Test

UL Japan, Inc.
YOKOWA No.3 Open area test site
Report No.: 10014479Y-B-R3

Power	: DC5V(PC:AC120V/60Hz)		
Mode	: 1.Running mode		
Remarks	:		
Date	: 5/20/2013		
Test Distance	: 3 m		
Temperature	: 23 ℃	Engineer	: Daigo Hamaguchi
Humidity	: 32 %		
Limit	: FCC Part15B CLASS B(Average Limit / Upper 1GHz)		



Data of Radiated Disturbance Test

UL Japan, Inc.
YOKOWA No.3 Open area test site
Report No.: 10014479Y-B-R3

Power : DC5V(PC:AC120V/60Hz)
Mode : 1.Running mode
Remarks :
Date : 5/20/2013
Test Distance : 3 m
Temperature : 23 ℃ Engineer : Daigo Hamaguchi
Humidity : 32 %
Limit : FCC Part15B CLASS B(Peak Limit / Upper 1GHz)

No.	FREQ. [MHz]	ANT TYPE	READING HOR [dBμV]	READING VER [dBμV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT HOR [dBμV/m]	RESULT VER [dBμV/m]	LIMITS [dBμV/m]	MARGIN HOR [dB]	MARGIN VER [dB]
1.	1025.00	BB	50.0	50.8	24.2	40.8	3.9	0.0	37.3	38.1	74.0	36.7	35.9
2.	1200.00	BB	50.0	53.7	24.3	40.5	4.2	0.0	38.0	41.7	74.0	36.0	32.3
3.	1260.00	BB	48.9	49.5	24.4	40.4	4.3	0.0	37.2	37.8	74.0	36.8	36.2
4.	1380.00	BB	49.8	49.5	24.5	40.3	4.5	0.0	38.5	38.2	74.0	35.5	35.8
5.	1619.62	BB	47.4	55.3	25.1	39.9	4.8	0.0	37.4	45.3	74.0	36.6	28.7
6.	1720.95	BB	47.4	54.6	25.5	39.7	5.0	0.0	38.2	45.4	74.0	35.8	28.6

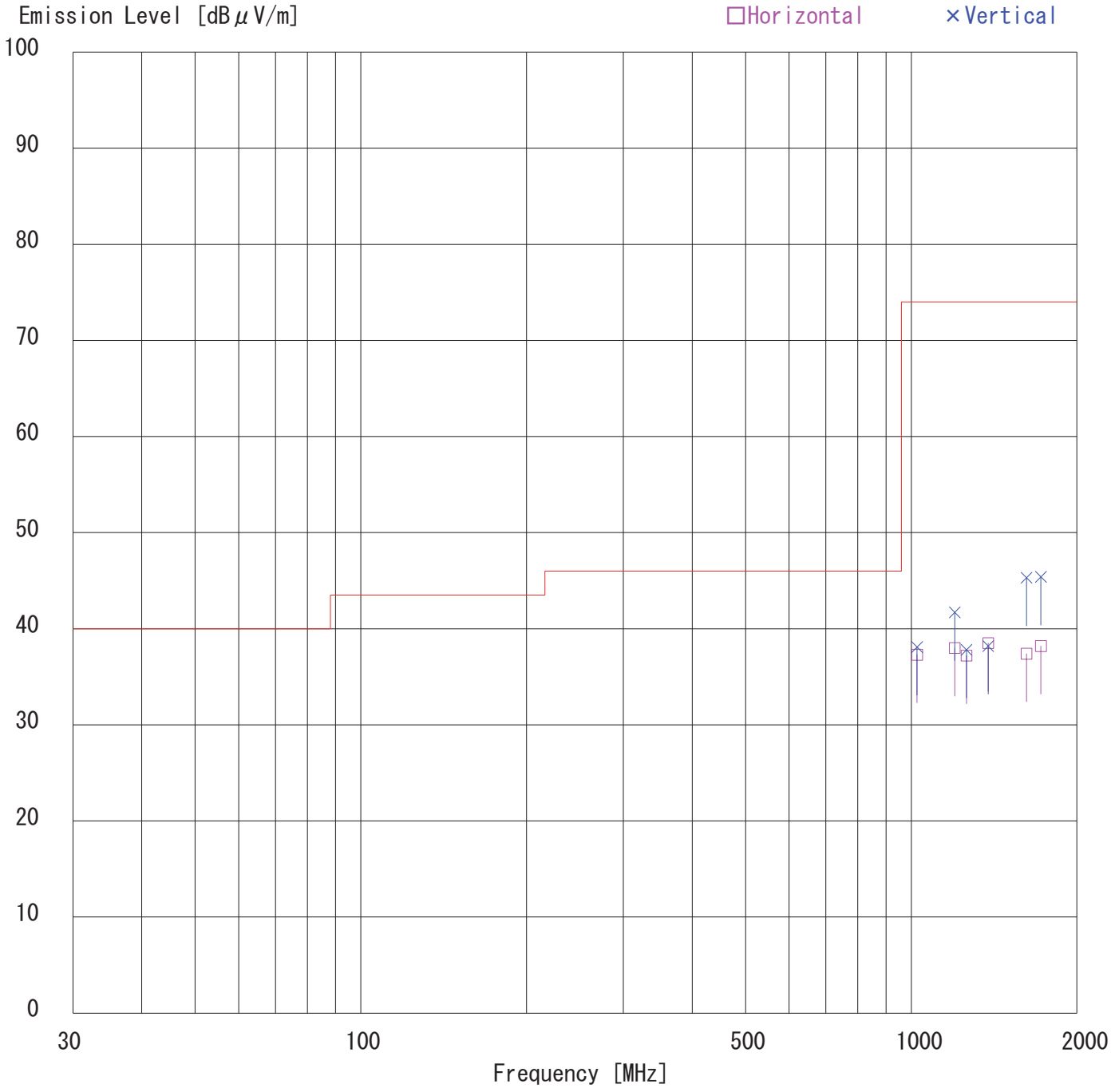
CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.
Except for the above table : adequate margin data below the limits.

ANT TYPE : 1GHz-2GHz Horn

Data of Radiated Disturbance Test

UL Japan, Inc.
YOKOWA No.3 Open area test site
Report No.: 10014479Y-B-R3

Power	: DC5V(PC:AC120V/60Hz)		
Mode	: 1.Running mode		
Remarks	:		
Date	: 5/20/2013		
Test Distance	: 3 m		
Temperature	: 23 ℃	Engineer	: Daigo Hamaguchi
Humidity	: 32 %		
Limit	: FCC Part15B CLASS B(Peak Limit / Upper 1GHz)		



Test Report No :10014479Y-B-R3

APPENDIX 2
Test Instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
SA-06	Spectrum Analyzer	Advantest	R3273	110501566	CE, RE	2013/01/17 * 12
AF-01	Pre Amplifier	Hewlett Packard	8447D	2443A04060	RE	2013/03/05 * 12
AT-26	Attenuator	Anritsu	MP721A	6200543689	RE	2012/07/13 * 12
AT-09	Attenuator	Anritsu	MP721B	M03235	RE	2012/08/08 * 12
BA-06	Biconical Antenna	Schwarzbeck	BBA9106	1523	RE	2012/10/08 * 12
LA-07	Logperiodic Antenna	Schwarzbeck	UKLP9140-A	N/A	RE	2012/11/18 * 12
MTR-06	Test Receiver	Rohde & Schwarz	ESCS30	830245/011	CE, RE	2012/07/10 * 12
CC-3ORC	Yokowa No.3 open coaxial(0.01-1000MHz)	Suhner	CC-31,CC-32,CC-34,CC-35,CC-36,CC-37,SW-31,SW-32	YO0301	RE	2012/05/25 * 12
YOATS-03(NSA)	Open area test site	JSE	3m、10m	3	RE	2012/05/06 * 12
CUST-YW-RE	Software for Radiated Emision	ULJ	-	-	RE	-
LS-13	LISN (AMN)	Rohde & Schwarz	ENV216	101058	CE(EUT)	2012/11/22 * 12
LS-04	LISN(AMN)	Rohde & Schwarz	ESH3-Z5	831767/003	CE	2012/12/05 * 12
TA-23	Terminator	RadiaIII	R404111000	-	CE	2012/06/20 * 12
CC-3S	Yokowa No.3 shield coaxial(0.01-1000MHz)	UL Japan	CC-34,CC-35,CC-37,CC-38,SW-31,SW-32	YS0301	CE	2013/03/07 * 12
CUST-YW-CE	Software for Conducted Emission	ULJ	-	-	CE	-
OS-07	Digital Humidity Indicator	SATO	PC-5000TRH-Ⅱ	05A06	RE	2013/01/17 * 12
OS-11	Digital Humidity Indicator	SATO	PC-5000TRH	B-11	CE	2013/04/25 * 12
DM-03	Tester	SANWA	PC500	7019229	CE, RE	2012/06/07 * 12
YJM-05	Measure	PROMART	EN1955	-	CE, RE	-
SC-03	Search Coil	UL Japan	-	-	RE	-
COTS-YW-LOCAL-TOYO	Software for Local Oscillator Frequency Test	TOYO Technica Corporation	-	-	RE	-
AF-06	Pre Amplifier	Agilent	HP8449B	3008A01672	RE	2012/12/05 * 12
HA-07	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9120 D	9120D-684	RE	2012/11/07 * 12
CC-C2	Microwave Cable	Suhner/storm	-	-	RE	2012/10/11 * 12

The expiration date of the calibration is the end of the expired month .
As for some calibrations performed after the tested dates , those test equipment have been controlled by means of an unbroken chains of calibrations .

All equipment is calibrated with valid calibrations . Each measurement data is traceable to the national or international standards .
Test Item :
CE: Conducted emission ,
RE: Radiated emission