EMI TEST REPORT

Test Report No. : 22EE0006-YW-2

Applicant:	**Hitachi Software Engineering Co., Ltd.**
Type of Equipment:	**Electronic Pen**
Model No.:	**K-W019-301**
FCC ID:	**PJV-RX02**
Test standard:	**FCC Part 15 Subpart C §15.249**
Test Result:	**Complied**

1. This test report shall not be reproduced in full or partial, without the written approval of A-Pex International Co., Ltd.
2. The results in this report apply only to the sample tested.
3. This equipment is in compliance with above regulation. We hereby certify that the data contain a true representation of the EMC profile.
4. The test results in this report are traceable to the national or international standards.
5. This test report does not constitute an endorsement by NIST/NVLAP or U.S. Government.

Date of test: January 30, 2002 **Issued date:** February 4, 2002

Tested by: _____ **Approved by:** _____

Naoki Sakamoto
Group Leader of EMC section

Kazutoyo Nakanishi
Site Operation Manager of EMC section

A-pex International Co., Ltd.
YOKOWA LAB.
108 Yokowa-cho, Ise-shi, Mie-ken 516-1106 JAPAN
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Facsimile: int +81 596 39 0232

CONTENTS

SECTION 1: Client information

Company Name	:	Hitachi Software Engineering Co., Ltd.
Company Trade Name	:	Hitachi Software Engineering Co., Ltd.
Address	:	6-81 Onoe-cho, Naka-ku,Yokohama-shi, Kanagawa 231-0015 Japan
Telephone Number	:	+81-45-681-2146
Facsimile Number	:	+81-45-681-3062
Contact Person	:	Yasuhiro Nakada

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

2.1 Identification of E.U.T.

Type of Equipment	:	Electronic Pen
Model No.	:	K-W019-301
FCC ID	:	PJV-RX02
Condition of EUT	:	Production Prototype
Rating	:	DC 2.4V
Country of Manufacture	:	Japan
Receipt Date of Sample	:	January 8, 2002

2.2 Product Description

Model: K-W019-301, referred to as the EUT in this report, is an Electronic Pen.
This product is supplied to Hitachi Software Engineering as a unit.
By combining with a large-sized back projection display, an electronic pen is made into an input device and it is located as a product, which has digitizer ability.

Clock frequency is as follows;
CPU : 2MHz

The specification is as follows;

Carrier Frequency	: 911.1MHz and 911.7MHz
Operation Voltage	: DC2.4V (Ni-MH)
Modulation	: Frequency Modulation
Information on antenna	: Build in antenna

SECTION 3: Test specification, methods & procedures

3.1 Test Specification

Test Specification : FCC Part 15 Subpart C

Title : FCC 47CFR Part15 Radio Frequency Device
Subpart C Intentional Radiators
§15.249 Operation within the Band 902-928MHz, 2400-2483.5MHz,
5725-5875MHz and 24.0-24.25GHz

3.2 Methods & Procedures

No.	Item	Test Procedure	Specification	Remarks
1	Electric Field Strength of Fundamental Emission	FCC/ANSI C63.4:1992	§15.249(a)	3m
2	Electric Field Strength of Spurious Emission	FCC/ANSI C63.4:1992	§15.249(a), (c)	3m

3.3 Additions or deviations to standards

No addition, deviation or exclusion has been made from standards.

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

4.1 Operating Modes

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

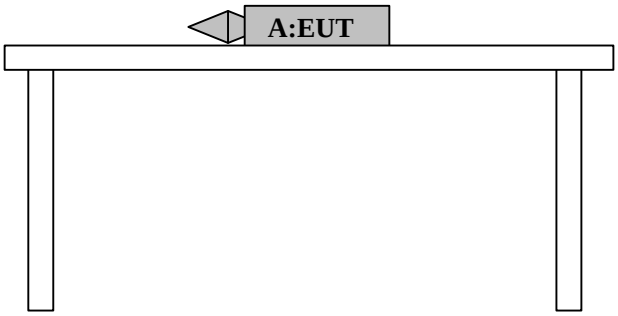
The operating mode/system were as follows:

The sequence is used: Transmitting mode (Ch1:911.1MHz and Ch4:911.7MHz)

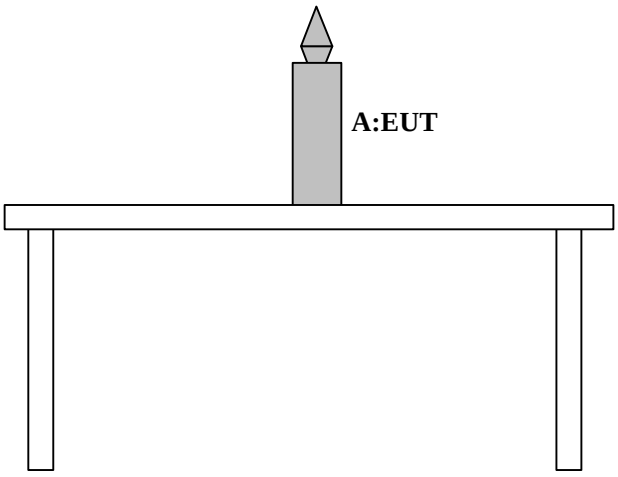
Justification: The system was configured in typical fashion (as a customer would normally use it) for testing.

4.2 Configuration and peripherals

Front View (Horizontal)



Front View (Vertical)



*Test data was taken under worse case conditions.

Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	FCC ID	Remark
A	Electronic Pen	K-W019-301 (911.1MHz or 911.7MHz)	-	Suzuka Fuji Xerox	PJV-RX02	EUT

SECTION 5: Summary of test results

5.1 Test results

No.	Item	Test Procedure	Specification	Worst margin	Result
1	Electric Field Strength of Fundamental Emission	ANSI C63.4:1992	§15.249(a)	**Ch1:911.1MHz** 13.9dB, HOR (EUT: Horizontal) **Ch4:911.7MHz** 9.9dB, HOR (EUT: Horizontal)	Complied
2	Electric Field Strength of Spurious Emission	ANSI C63.4:1992	§15.249(a), (c)	**Ch1:911.1MHz** PK=18.3dB (1822.20MHz,HOR) (EUT: Horizontal) AV=1.5dB (1822.20MHz, VER) (EUT: Vertical) **Ch4:911.7MHz** PK=21.5dB (9117.00MHz, VER) (EUT: Horizontal) AV=3.6dB (1823.40MHz, HOR) (EUT: Horizontal)	Complied

A-PEX INTERNATIONAL hereby confirms that E.U.T., in the configuration tested, complies with the specifications FCC Part 15 Subpart C §15.249.

5.2 Uncertainty

Radiated Emission Test

The measurement uncertainty (with a 95% confidence level) for this test using Biconical antenna is ±4.4dB.
The measurement uncertainty (with a 95% confidence level) for this test using Logperiodic antenna is ±4.8dB.

The data listed in this test report may exceed the test limit because it does not have enough margin.

5.3 Test Location

A-PEX International Co.,Ltd. Yokowa No.3 test site
108 Yokowa-cho, Ise-shi, Mie-ken 516-1106 Japan
Telephone number : +81-596-39-1485
Facsimile number : +81-596-39-0232
This site has been fully described in a report submitted to FCC office, and listed on September 12, 2000 (Registration number: 90412), and they were accepted by Industry Canada on May 1, 2001 (Registration number: IC2973-3).

*NVLAP Lab. code : 200109-0

5.4 Photographs of test setup

Refer to Appendix 1.

5.5 Test instruments

Refer to Appendix 2.

5.6 Data of EMI Test

Refer to Appendix 3.

SECTION 6: Radiated emission

6.1 Operating environment

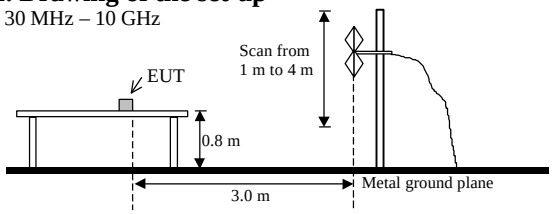
The test was carried out in an open site.

Temperature : See data
Humidity : See data

6.2 Test configuration

EUT was placed on a platform of nominal size, 1m by 1m, raised 80cm above the conducting ground plane.
EUTwas placed on both horizontal and vertical.
Test was made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna was varied in height above the conducting ground plane to obtain the maximum signal strength.
A drawing of the set up is shown in the photos of Appendix 1 and Figure 1.

Figure 1. Drawing of the set-up



6.3 Test conditions

Frequency range : 30MHz-10GHz
Test distance : 3m
EUT position : Table top (center)

6.4 Test procedure

The Radiated Electric Field Strength intensity has been measured on an open test site with a ground plane and at a distance of 3m.
Pre check measurements were performed at high-level of 80-90MHz, 270-290MHz and 500-700MHz in a screened room. Otherwise the noise from EUT might have been concealed by the ambient noise.
Measurements were performed with a quasi-peak detector.
The measuring antenna height was varied between 1 to 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 both vertical and horizontal antenna polarization.
The EUT was put into operation at Transmitting mode.
The radiated emission measurements were made with the following detector function of the test receiver.

	30MHz – 1000MHz	1GHz – 10GHz
Detector Type	: QP	PK / AV
IF Bandwidth	: 120kHz	RBW 1MHz, VBW 1MHz / RBW 1MHz, VBW 10Hz

6.5 Results

Summary of the test results: Pass

Date: 2002-01-30 Tested by: N. Sakamoto

A-pex International Co., Ltd.
YOKOWA LAB.
108 Yokowa-cho, Ise-shi, Mie-ken 516-1106 JAPAN
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APPENDIX 1: Photographs of test setup

APPENDIX 2: Test instruments

APPENDIX 3: Data of EMI test

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Radiated emission

Horizontal

Vertical

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Test Report No :22EE0006-YW-2

APPENDIX 2
Test Instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No.	Test Item	Calibration Date * (Interval:month)
AF-01	Pre Amplifier	Hewlett Packard	8447D	RE	2001/03/31 * 12
AF-06	Pre Amplifier	Agilent	HP8449B	RE	2001/12/21 * 12
AT-06	Attenuator	Anritsu	MP721B	RE	2001/03/31 * 12
LA-06	Logperiodic Antenna	Schwarzbeck	UHALP9108-A	RE	2001/05/01 * 12
SA-04	Spectrum Analyzer	Hewlett Packard	8567A	RE	2001/03/31 * 12
SA-07	Spectrum Analyzer	Advantest	R3273	RE	2001/12/05 * 12
HA-01	Horn Antenna	A.H.Systems	SAS-200/571	RE	2001/05/20 * 12
CC-3ORC	Yokowa No.3 open coaxial(0.01-1000MHz)	A-PEX	CC-31,CC-32,CC-33,CC-34,CC-35,CC-36,CC-37,SW-31,SW-32	RE	2001/03/31 * 12
CC-C12	Microwave Cable	Suhner	SUCOFLEX	RE	2002/01/13 * 12
CC-C13	Microwave Cable	Suhner	SUCOFLEX	RE	2002/01/13 * 12
YOATS-03	Open Test Site	JSE	10m	RE	2001/05/01 * 12

All equipment is calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
RE: Radiated emission,

DATA OF FUNDAMENTAL EMISSIONS

A-PEX INTERNATIONAL CO., LTD.
YOKOWA NO.3 OPEN SITE

COMPANY : Hitachi Software Engineering Co.,Ltd.
EQUIPMENT : Electronic Pen
MODEL : K-W019-301
FCC ID : PJV-RX02
POWER : DC2.4V
Mode : Transmitting

REPORT NO : 22EE0006-YW-2
REGULATION : Fcc Part15 SubpartC 249
TEST DISTANCE : 3m
DATE : 2002/ 1/30
Temp./Humi. : 23deg.C/35%

ENGINEER : Naoki Sakamoto

Ch1:911.1MHz

Horizontal

No.	FREQ	READING		ANT	AMP	CABLE	ATTEN	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS		HOR	VER		HOR	VER
	[GHz]	[dBuV]	[dBuV]	[dB]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]
1	911.11	56.5	46.4	37.4	26.6	6.9	5.8	80.0	69.9	93.9	13.9	24.0

Vertical

No.	FREQ	READING		ANT	AMP	CABLE	ATTEN	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS		HOR	VER		HOR	VER
	[GHz]	[dBuV]	[dBuV]	[dB]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]
1	911.11	42.9	53.0	37.4	26.6	6.9	5.8	66.4	76.5	93.9	27.5	17.4

Ch4:911.7MHz

Horizontal

No.	FREQ	READING		ANT	AMP	CABLE	ATTEN	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS		HOR	VER		HOR	VER
	[GHz]	[dBuV]	[dBuV]	[dB]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]
1	911.71	60.5	50.9	37.4	26.6	6.9	5.8	84.0	74.4	93.9	9.9	19.5

Vertical

No.	FREQ	READING		ANT	AMP	CABLE	ATTEN	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS		HOR	VER		HOR	VER
	[GHz]	[dBuV]	[dBuV]	[dB]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]
1	911.71	47.9	58.2	37.4	26.6	6.9	5.8	71.4	81.7	93.9	22.5	12.2

Sample Calculation :
RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + ATTEN.

DATA OF RADIATION TEST

A-PEX INTERNATIONAL CO., LTD.
YOKOWA No.3 OPEN TEST SITE
Report No.: 22EE0006-YW-2

Applicant : Hitachi Software Engineering Co., Ltd.
Kind of Equipment : Electronic Pen
Model No. : K-W019-301
Serial No. :
Power : DC2.4V
Mode : TxCh1 (Horizontal)
Remarks : FCC ID: PJV-RX02
Date : 1/30/2001
Test Distance : 3 m
Temperature : 23 ℃
Humidity : 31 %
Regulation : FCC Part 15 Subpart C Section 15.209 (Peak Limit / Upper 1GHz)

Engineer : Naoki Sakamoto

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.	1822.20	BB	62.1	60.2	29.3	38.2	2.5	0.0	55.7	53.8	74.0	18.3	20.2
2.	2733.30	BB	52.7	54.1	31.6	38.1	3.4	0.0	49.6	51.0	74.0	24.4	23.0
3.	3644.40	BB	44.0	47.9	32.2	38.0	4.0	0.0	42.2	46.1	74.0	31.8	27.9
4.	4555.50	BB	47.9	46.8	34.4	38.2	4.9	0.0	49.0	47.9	74.0	25.0	26.1
5.	5466.60	BB	43.1	43.1	36.1	37.8	5.5	0.0	46.9	46.9	74.0	27.1	27.1
6.	6377.70	BB	43.6	42.2	37.8	38.2	5.9	0.0	49.1	47.7	74.0	24.9	26.3
7.	7288.80	BB	42.3	41.9	39.2	38.2	6.4	0.0	49.7	49.3	74.0	24.3	24.7
8.	8199.90	BB	42.3	42.8	38.5	38.3	6.9	0.0	49.4	49.9	74.0	24.6	24.1
9.	9111.00	BB	42.2	42.7	40.1	38.5	7.2	0.0	51.0	51.5	74.0	23.0	22.5

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

All other spurious emissions were less than 20dB for the limit.
ANT.TYPE:30-300MHz Biconical,300-1000MHz Logperiodic,1-10GHz DRG Horn

DATA OF RADIATION TEST

A-PEX INTERNATIONAL CO., LTD.
YOKOWA No.3 OPEN TEST SITE
Report No.: 22EE0006-YW-2

Applicant : Hitachi Software Engineering Co., Ltd.
Kind of Equipment : Electronic Pen
Model No. : K-W019-301
Serial No. :
Power : DC2.4V
Mode : TxCh1 (Horizontal)
Remarks : FCC ID: PJV-RX02
Date : 1/30/2001
Test Distance : 3 m
Temperature : 23 ℃
Humidity : 31 %
Regulation : FCC Part 15 Subpart C Section 15.209 (Average Limit / Upper 1GHz)

Engineer : Naoki Sakamoto

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.	1822.20	BB	57.8	58.9	29.3	38.2	2.5	0.0	51.4	52.5	54.0	2.6	1.5
2.	2733.30	BB	49.1	52.2	31.6	38.1	3.4	0.0	46.0	49.1	54.0	8.0	4.9
3.	3644.40	BB	33.1	43.0	32.2	38.0	4.0	0.0	31.3	41.2	54.0	22.7	12.8
4.	4555.50	BB	43.1	38.3	34.4	38.2	4.9	0.0	44.2	39.4	54.0	9.8	14.6
5.	5466.60	BB	32.1	31.9	36.1	37.8	5.5	0.0	35.9	35.7	54.0	18.1	18.3
6.	6377.70	BB	31.6	31.7	37.8	38.2	5.9	0.0	37.1	37.2	54.0	16.9	16.8
7.	7288.80	BB	32.2	32.1	39.2	38.2	6.4	0.0	39.6	39.5	54.0	14.4	14.5
8.	8199.90	BB	32.9	32.7	38.5	38.3	6.9	0.0	40.0	39.8	54.0	14.0	14.2
9.	9111.00	BB	32.9	32.8	40.1	38.5	7.2	0.0	41.7	41.6	54.0	12.3	12.4

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

All other spurious emissions were less than 20dB for the limit.
ANT.TYPE:30-300MHz Biconical,300-1000MHz Logperiodic,1-10GHz DRG Horn

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Applicant : Hitachi Software Engineering Co., Ltd.
Kind of Equipment : Electronic Pen
Model No. : K-W019-301
Serial No. :
Power : DC2.4V
Mode : TxCh1 (Vertical)
Remarks : FCC ID: PJV-RX02
Date : 1/30/2001
Test Distance : 3 m
Temperature : 23 ℃
Humidity : 31 %
Regulation : FCC Part 15 Subpart C Section 15.209 (Peak Limit / Upper 1GHz)

Engineer : Naoki Sakamoto

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.	1822.20	BB	54.5	58.8	29.3	38.2	2.5	0.0	48.1	52.4	74.0	25.9	21.6
2.	2733.30	BB	48.7	50.3	31.6	38.1	3.4	0.0	45.6	47.2	74.0	28.4	26.8
3.	3644.40	BB	45.5	46.5	32.2	38.0	4.0	0.0	43.7	44.7	74.0	30.3	29.3
4.	4555.50	BB	47.9	49.2	34.4	38.2	4.9	0.0	49.0	50.3	74.0	25.0	23.7
5.	5466.60	BB	42.7	41.8	36.1	37.8	5.5	0.0	46.5	45.6	74.0	27.5	28.4
6.	6377.70	BB	42.1	42.2	37.8	38.2	5.9	0.0	47.6	47.7	74.0	26.4	26.3
7.	7288.80	BB	42.1	41.3	39.2	38.2	6.4	0.0	49.5	48.7	74.0	24.5	25.3
8.	8199.90	BB	42.7	42.7	38.5	38.3	6.9	0.0	49.8	49.8	74.0	24.2	24.2
9.	9111.00	BB	42.9	43.0	40.1	38.5	7.2	0.0	51.7	51.8	74.0	22.3	22.2

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

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Humidity : 31 %
Regulation : FCC Part 15 Subpart C Section 15.209 (Average Limit / Upper 1GHz)

Engineer : Naoki Sakamoto

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.	1822.20	BB	50.4	57.2	29.3	38.2	2.5	0.0	44.0	50.8	54.0	10.0	3.2
2.	2733.30	BB	40.9	45.9	31.6	38.1	3.4	0.0	37.8	42.8	54.0	16.2	11.2
3.	3644.40	BB	33.9	38.9	32.2	38.0	4.0	0.0	32.1	37.1	54.0	21.9	16.9
4.	4555.50	BB	43.2	45.7	34.4	38.2	4.9	0.0	44.3	46.8	54.0	9.7	7.2
5.	5466.60	BB	32.4	32.3	36.1	37.8	5.5	0.0	36.2	36.1	54.0	17.8	17.9
6.	6377.70	BB	32.1	31.9	37.8	38.2	5.9	0.0	37.6	37.4	54.0	16.4	16.6
7.	7288.80	BB	32.4	32.4	39.2	38.2	6.4	0.0	39.8	39.8	54.0	14.2	14.2
8.	8199.90	BB	32.7	32.7	38.5	38.3	6.9	0.0	39.8	39.8	54.0	14.2	14.2
9.	9111.00	BB	32.8	32.7	40.1	38.5	7.2	0.0	41.6	41.5	54.0	12.4	12.5

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

All other spurious emissions were less than 20dB for the limit.
ANT.TYPE:30-300MHz Biconical,300-1000MHz Logperiodic,1-10GHz DRG Horn

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Applicant : Hitachi Software Engineering Co., Ltd.
Kind of Equipment : Electronic Pen
Model No. : K-W019-301
Serial No. :
Power : DC2.4V
Mode : TxCh4 (Horizontal)
Remarks : FCC ID: PJV-RX02
Date : 1/30/2001
Test Distance : 3 m
Temperature : 23 ℃
Humidity : 31 %
Regulation : FCC Part 15 Subpart C Section 15.209 (Peak Limit / Upper 1GHz)

Engineer : Naoki Sakamoto

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.	1823.40	BB	57.8	57.0	29.3	38.2	2.5	0.0	51.4	50.6	74.0	22.6	23.4
2.	2735.10	BB	48.7	49.7	31.6	38.1	3.4	0.0	45.6	46.6	74.0	28.4	27.4
3.	3646.80	BB	46.0	49.2	32.2	38.0	4.0	0.0	44.2	47.4	74.0	29.8	26.6
4.	4558.50	BB	44.2	48.0	34.4	38.2	4.9	0.0	45.3	49.1	74.0	28.7	24.9
5.	5470.20	BB	42.2	43.3	36.1	37.8	5.5	0.0	46.0	47.1	74.0	28.0	26.9
6.	6381.90	BB	41.6	42.5	37.8	38.2	5.9	0.0	47.1	48.0	74.0	26.9	26.0
7.	7293.60	BB	41.5	42.9	39.2	38.2	6.4	0.0	48.9	50.3	74.0	25.1	23.7
8.	8205.30	BB	42.1	41.8	38.5	38.3	6.9	0.0	49.2	48.9	74.0	24.8	25.1
9.	9117.00	BB	42.8	42.7	40.1	38.5	7.2	0.0	51.6	51.5	74.0	22.4	22.5

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

All other spurious emissions were less than 20dB for the limit.
ANT.TYPE:30-300MHz Biconical,300-1000MHz Logperiodic,1-10GHz DRG Horn

DATA OF RADIATION TEST

A-PEX INTERNATIONAL CO., LTD.
YOKOWA No.3 OPEN TEST SITE
Report No.: 22EE0006-YW-2

Applicant : Hitachi Software Engineering Co., Ltd.
Kind of Equipment : Electronic Pen
Model No. : K-W019-301
Serial No. :
Power : DC2.4V
Mode : TxCh4 (Horizontal)
Remarks : FCC ID: PJV-RX02
Date : 1/30/2001
Test Distance : 3 m
Temperature : 23 ℃
Humidity : 31 %
Regulation : FCC Part 15 Subpart C Section 15.209 (Average Limit / Upper 1GHz)

Engineer : Naoki Sakamoto

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.	1823.40	BB	56.8	55.3	29.3	38.2	2.5	0.0	50.4	48.9	54.0	3.6	5.1
2.	2735.10	BB	43.4	44.7	31.6	38.1	3.4	0.0	40.3	41.6	54.0	13.7	12.4
3.	3646.80	BB	37.2	44.5	32.2	38.0	4.0	0.0	35.4	42.7	54.0	18.6	11.3
4.	4558.50	BB	33.1	42.9	34.4	38.2	4.9	0.0	34.2	44.0	54.0	19.8	10.0
5.	5470.20	BB	32.2	32.6	36.1	37.8	5.5	0.0	36.0	36.4	54.0	18.0	17.6
6.	6381.90	BB	31.7	32.6	37.8	38.2	5.9	0.0	37.2	38.1	54.0	16.8	15.9
7.	7293.60	BB	32.5	32.9	39.2	38.2	6.4	0.0	39.9	40.3	54.0	14.1	13.7
8.	8205.30	BB	32.7	32.7	38.5	38.3	6.9	0.0	39.8	39.8	54.0	14.2	14.2
9.	9117.00	BB	33.0	32.9	40.1	38.5	7.2	0.0	41.8	41.7	54.0	12.2	12.3

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

All other spurious emissions were less than 20dB for the limit.
ANT.TYPE:30-300MHz Biconical,300-1000MHz Logperiodic,1-10GHz DRG Horn

DATA OF RADIATION TEST

A-PEX INTERNATIONAL CO., LTD.
YOKOWA No.3 OPEN TEST SITE
Report No. : 22EE0006-YW-2

Applicant : Hitachi Software Engineering Co., Ltd.
Kind of Equipment : Electronic Pen
Model No. : K-W019-301
Serial No. :
Power : DC2.4V
Mode : TxCh4 (Vertical)
Remarks : FCC ID: PJV-RX02
Date : 1/30/2001
Test Distance : 3 m
Temperature : 23 ℃
Humidity : 31 %
Regulation : FCC Part 15 Subpart C Section 15.209 (Peak Limit / Upper 1GHz)

Engineer : Naoki Sakamoto

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.	1823.40	BB	53.9	57.4	29.3	38.2	2.5	0.0	47.5	51.0	74.0	26.5	23.0
2.	2735.10	BB	46.9	46.8	31.6	38.1	3.4	0.0	43.8	43.7	74.0	30.2	30.3
3.	3646.80	BB	45.9	51.7	32.2	38.0	4.0	0.0	44.1	49.9	74.0	29.9	24.1
4.	4558.50	BB	47.4	46.4	34.4	38.2	4.9	0.0	48.5	47.5	74.0	25.5	26.5
5.	5470.20	BB	45.2	42.4	36.1	37.8	5.5	0.0	49.0	46.2	74.0	25.0	27.8
6.	6381.90	BB	42.1	41.9	37.8	38.2	5.9	0.0	47.6	47.4	74.0	26.4	26.6
7.	7293.60	BB	42.0	42.5	39.2	38.2	6.4	0.0	49.4	49.9	74.0	24.6	24.1
8.	8205.30	BB	41.7	42.7	38.5	38.3	6.9	0.0	48.8	49.8	74.0	25.2	24.2
9.	9117.00	BB	42.0	43.7	40.1	38.5	7.2	0.0	50.8	52.5	74.0	23.2	21.5

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

All other spurious emissions were less than 20dB for the limit.
ANT.TYPE:30-300MHz Biconical,300-1000MHz Logperiodic,1-10GHz DRG Horn

DATA OF RADIATION TEST

A-PEX INTERNATIONAL CO., LTD.
YOKOWA No.3 OPEN TEST SITE
Report No. : 22EE0006-YW-2

Applicant : Hitachi Software Engineering Co., Ltd.
Kind of Equipment : Electronic Pen
Model No. : K-W019-301
Serial No. :
Power : DC2.4V
Mode : TxCh4 (Vertical)
Remarks : FCC ID: PJV-RX02
Date : 1/30/2001
Test Distance : 3 m
Temperature : 23 ℃
Humidity : 31 %
Regulation : FCC Part 15 Subpart C Section 15.209 (Average Limit / Upper 1GHz)

Engineer : Naoki Sakamoto

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.	1823.40	BB	51.6	55.1	29.3	38.2	2.5	0.0	45.2	48.7	54.0	8.8	5.3
2.	2735.10	BB	38.5	37.8	31.6	38.1	3.4	0.0	35.4	34.7	54.0	18.6	19.3
3.	3646.80	BB	36.7	48.7	32.2	38.0	4.0	0.0	34.9	46.9	54.0	19.1	7.1
4.	4558.50	BB	40.3	41.3	34.4	38.2	4.9	0.0	41.4	42.4	54.0	12.6	11.6
5.	5470.20	BB	36.7	32.5	36.1	37.8	5.5	0.0	40.5	36.3	54.0	13.5	17.7
6.	6381.90	BB	31.7	32.0	37.8	38.2	5.9	0.0	37.2	37.5	54.0	16.8	16.5
7.	7293.60	BB	32.6	32.5	39.2	38.2	6.4	0.0	40.0	39.9	54.0	14.0	14.1
8.	8205.30	BB	32.8	32.3	38.5	38.3	6.9	0.0	39.9	39.4	54.0	14.1	14.6
9.	9117.00	BB	32.9	32.6	40.1	38.5	7.2	0.0	41.7	41.4	54.0	12.3	12.6

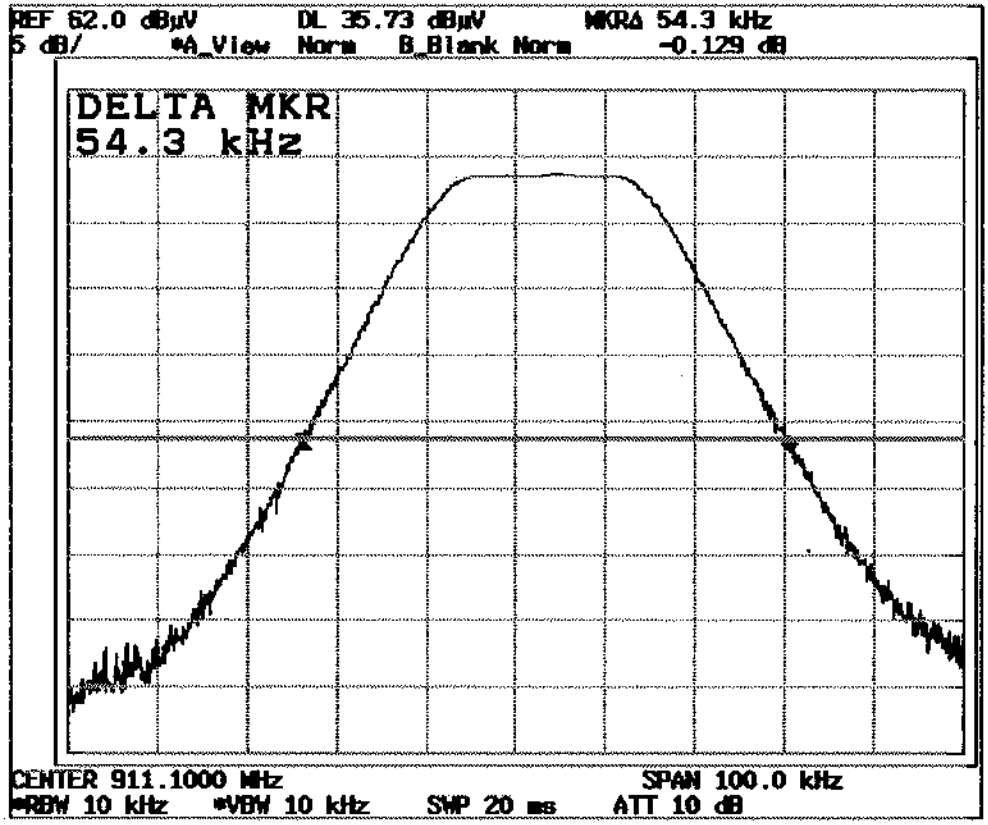
CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

All other spurious emissions were less than 20dB for the limit.
ANT.TYPE:30-300MHz Biconical,300-1000MHz Logperiodic,1-10GHz DRG Horn

20dB Bandwidth Emission

Hitachi Software Engineering Co., Ltd. / K-W019-301 / FCC ID : PJV-RX02 / 22EE0006-YW-2

Ch1 : 911.1MHz (Antenna: HOR / EUT: Horizontal)



Ch4 : 911.7MHz (Antenna: HOR / EUT: Horizontal)