OKI

EMI TEST REPORT

FCC RULES AND REGURATIONS
PART 15
(RADIO FREQUENCY DEVICES)
CLASS B

EQUIPMENT
CLASS B DIGITAL DEVICE

MODEL NAME	: OKIFAX 5700/5900
MODEL NUMBER	: F21011A/F21012A
FCC ID.	: BDBF21011A
DATE OF TEST	: 1998/12/01

TEST SITE

NAME	: OKI EMI TAKASAKI SITE
FCC FILE NUMBER	: 31040/SIT

REFERENCE NUMBER : 787550

OKI ELECTRIC INDUSTRY COMPANY, LIMITED
ENGINEERING ADMINISTRATION DIVISION
10-3, SHIBAURA 4-CHOME, MINATO-KU
TOKYO 108-8551, JAPAN.

Oki Electric Industry Company, Limited certifies that this test report is described in compliance with Part 15 of the FCC Rules and Regulations (47 CFR Part 15) and that the data measured and measurement manner have been accurately performed with the product mentioned below in compliance with American National Standard Institute (ANSI) C63.4-1992 for measurement procedure are used by the FCC dated March 3, 1997 at the Oki EMI Takasaki Site of FCC file number 31040/SIT.

Model Name : OKIFAX 5700/5900

Model Number : F21011A/F21012A

FCC ID. : BDBF21011A

Date : 1998/12/07 APPROVED BY

M. Takahashi

Masaru Takahashi
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16-36, Shibaura 4-chome, Minato-ku,
Tokyo 108-0023, Japan.

CONTENTS

1. GENERAL INFORMATION

1.1 Product Description

The model name OKIFAX 5700/5900 (referred to as the EUT in this report) is a desk top fax machine by electrophotographic technology using a LED head. The EUT provided line interface, 1 parallel port(CENTRONICS) and 120 volts power supply. Therefore, the EUT had been measured in the following eight kinds of operation at this test.

(1)FAX transmission
(2)FAX reception
(3)Copy
(4)Stand-by state
(5)PC print
(6)PC scan
(7)PC transmission
(8)PC reception

Optionally, the EUT is provided with two kinds Memory Board(model:Board-RA1-2 and Board-RA1), telephone(model:TEL-U1) and Second Tray(model:EN2910A).

Although this report includes only the model OKIFAX 5900 EMI test data, it covers both the model OKIFAX 5700 and the model OKIFAX 5900 for the reason below. OKIFAX 5900 is equipped with a JBIG chip, while OKIFAX 5700 is not equipped with a chip. JBIG chips affect EMI more adversely. Therefore, only the model OKIFAX 5900 had been measured.

1.2 Tested System Details

The all equipment, plus descriptions of all cables used in the tested system as follows : (See Figure 1)

Tested System

Sign	Model Number (Serial Number)	FCC ID	Description	Manufacturer
A	F21011A/F21012A (*)(None)	BDBF21011A	Facsimile	Oki Data Corporation.
B	DESKPRO 590 (7516HKW40186)	CNT75MDB6N5	Personal Computer	Compaq Computer Corporation.
C	461-P (35142601C513)	BR8SM-5514CP	Monitor	Compaq Computer Corporation.
D	RT6656TWJP (B2080G39EX42F))	AQ6-MTN4C15	Keyboard	Compaq Computer Corporation.
E	37964 (1641589)	C3KMS1	Serial mouse	Microsoft Corporation.
F	M-S34 (141189-401)	DZL211029	Bus mouse	Compaq Computer Corporation.
G	F21001A (None)	BDBF21001A	Intercommunication FAX (OKIOFFICE 44)	Oki Data Corporation.

(*)EUT submitted for grant.

Options

Sign	Model Number (Serial Number)	Description	Manufacturer
H	TEL-U1 (None)	Telephone	Oki Data Corporation.
I	Board-RA1-2 (None)	Memory Board	Oki Data Corporation.
J	Board-RA1 (None)	Memory Board	Oki Data Corporation.
K	EN2910A (None)	Second Tray	Oki Data Corporation.

Used Cables

Sign	Description	Length (m)	Shielded Cable	Notice
1	Power cord	1.80	No	
2	Communication cable	12.75	No	with ferrite core and connector
3	Communication cable	0.80	No	with ferrite core
4	Parallel(CENTRONICS) cable	1.80	Yes	
5	Video cable	1.50	Yes	(1) with ferrite core
6	Power cord	1.80	No	
7	Serial(RS-232C) mouse cable	1.80	Yes	(2)
8	Bus mouse cable	1.80	Yes	(3)
9	Keyboard cable	1.95	Yes	(4)
10	Power cord	1.80	No	
11	Power cord	1.80	No	

(1)Video cable permanently attached to monitor.

(2)Serial mouse cable permanently attached to mouse.

(3)Bus mouse cable permanently attached to mouse.

(4)Keyboard cable permanently attached to keyboard.

1.3 Test Methodology

Both AC powerline conducted and radiated testing were performed according to the procedures in American National Standard Institute(ANSI) C63.4-1992, entitled "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electric Equipment in the Range of 9 kHz to 40 GHz" for measurement procedure are used by the FCC. Radiated testing was performed at an antenna to EUT distance of 3 meters.

1.4 Test Facility

The Semi Anechoic Chamber and conducted measurement facility used to collect the radiated data is located on 3-1, Futaba-cho, Takasaki-shi, Gumma, Japan. This site has been fully described in a report dated Dec. 17, 1990 submitted to your office, and again accepted renewal in a letter dated Mar. 3, 1997(31040/SIT).

2. SYSTEM TEST CONFIGURATION

2.1 Justification

The position of the EUT, connecting equipments to the EUT and the interface cables connected between each equipment was set up in maximum emission position of arrangements which were compliance with Section 6.2.1, 11.2, 11.2.4 of ANSI C63.4-1992. A mode of the operation of EUT is divided into the Facsimile mode and the PC mode. First, it tested in the facsimile mode. The FAX transmission operation mode were tested in addition to the FAX reception operation mode, Copy operation mode and Stand-by state during preliminary emissions tests. Next, it tested in the PC mode. The PC transmission operation mode were tested in addition to the PC reception operation mode, PC scan operation mode and PC print operation mode during preliminary emissions tests. Therefore, the final qualification testing was completed with FAX reception operation mode and PC print operation mode. The option was investigated as provided with both the all and nothing. The Telephone, Memory Board(model:Board-RA1-2) and Second Tray were provided for final testing as it was found to be the worst case operating mode.

2.2 EUT Exercise Software

The EUT operation mode used during radiated and conducted testing was designed to moving the facsimile in a manner similar to a typical use each as follows.

[Facsimile mode]

(a)FAX transmission operation mode

(1)CCITT Chart No.1 shall be used as original. Set the original on the document hopper.

(2)Set the transmission mode TRANSMIT RESOLUTION to "FINE" and the contrast TYPE OF ORIGINAL to "DARK" and press the "START" key.

(3)Next, press the "START" key on OKIOFFICE 44(Intercommunication FAX) of the remote machine.

(4)The transmit operation gets started.

(5)Repeat the transmit operation continuously by loading the original prior to the completion of the transmission of current document.

(b)FAX reception operation mode

(1)Set the letter-size recording paper.

(2)At the remote machine, set the CCITT Chart No.1 and change the transmission mode TRANSMIT RESOLUTION to "FINE" and the contrast TYPE OF ORIGINAL to "DARK".

(3)Press the start key of the remote machine. Thereafter, press the start key of EUT with in 30 seconds.

(4)The receive operation is started.

(5)Repeat the receive operation continuously by loading the original before the document loaded on OKIOFFICE 44(Intercommunication FAX) comes to an end.

(c)Copy operation mode

(1)Set the letter-size recording paper.

(2)CCITT Chart No.1 shall be used as original. Set the original on the document hopper.

(3)Press the copy key. Repeat the copy operation.

(4)Repeat the copy operation continuously by loading the original before

the document on the hopper is finished.

(d)Stand-by state mode

(1)The machine is in the stand-by state mode when only the power supply is turned on.

[PC mode]

(a)PC print operation mode

(1)Set the letter-size recording paper.

(2)Use the Software for the data "H" on the diskette transfer from Personal Computer to EUT.

(3)The PC print operation gets started.

(4)The data are transferred to RAM in the Personal Computer.

(5)The data are transferred from RAM to the EUT.

(6)The data are printed on recording paper of the EUT.

(7)Repeat the PC print operation continuously by the software is finished.

(b)PC scan operation mode

(1)CCITT Chart No.1 shall be used as original on the document hopper.

(2)Use the software for the scanning document.

(3)The PC scan operation gets started.

(4)The scanning data are transferred from the EUT to RAM in the Personal Computer.

(5)Repeat the PC scan operation continuously by loading the original before the document on the hopper is finished.

(c)PC transmission operation mode

(1)At the remote machine, set the letter-size recording hopper.

(2)Use the Software for the data "H" on the diskette transfer from Personal Computer to the remote machine.

(3)The PC transmission operation gets started.

(4)The data are transferred to RAM in the Personal Computer.

(5)The data are transferred from RAM to the EUT.

(6)The data are transferred from EUT to the remote machine.

(7)The data are printed on recording paper of the remote machine.

(8)Repeat the PC transmission operation continuously by the Software is

finished.

(d)PC reception operation mode

(1)Use the Software for the receiving document.

(2)At the remote machine, set the CCITT Chart No.1 on the document hopper and change the transmission mode TRANSMIT RESOLUTION to "FINE" and the contrast TYPE OF ORIGINAL to "DARK" and press the "START" key.

(3)The PC reception operation gets started.

(4)The data are transferred from the remote machine to the EUT.

(5)The data are transferred from the EUT to RAM in the Personal Computer.

(6)Repeat the PC reception operation continuously by loading the original before the document on the hopper is finished.

2.3 Special Accessories

As shown in section 1.2, all interface cables(except communication cables) used for compliance testing are shielded. The interface cable of EUT are not marketed with EUT to the end user. All cable connectors feature integral metal hoods for shielding.

2.4 Configuration of Tested System

As shown on Figure 1. The intercommunication facsimile for the EUT which was placed outside the Semi Anechoic Chamber was connected to the EUT with 12.75 meters length unshielded communication cord. The EUT and the connecting equipments have their own provision for connection to a power cord, the units were grounded to the earth on the test site at the plug end of a power cord.

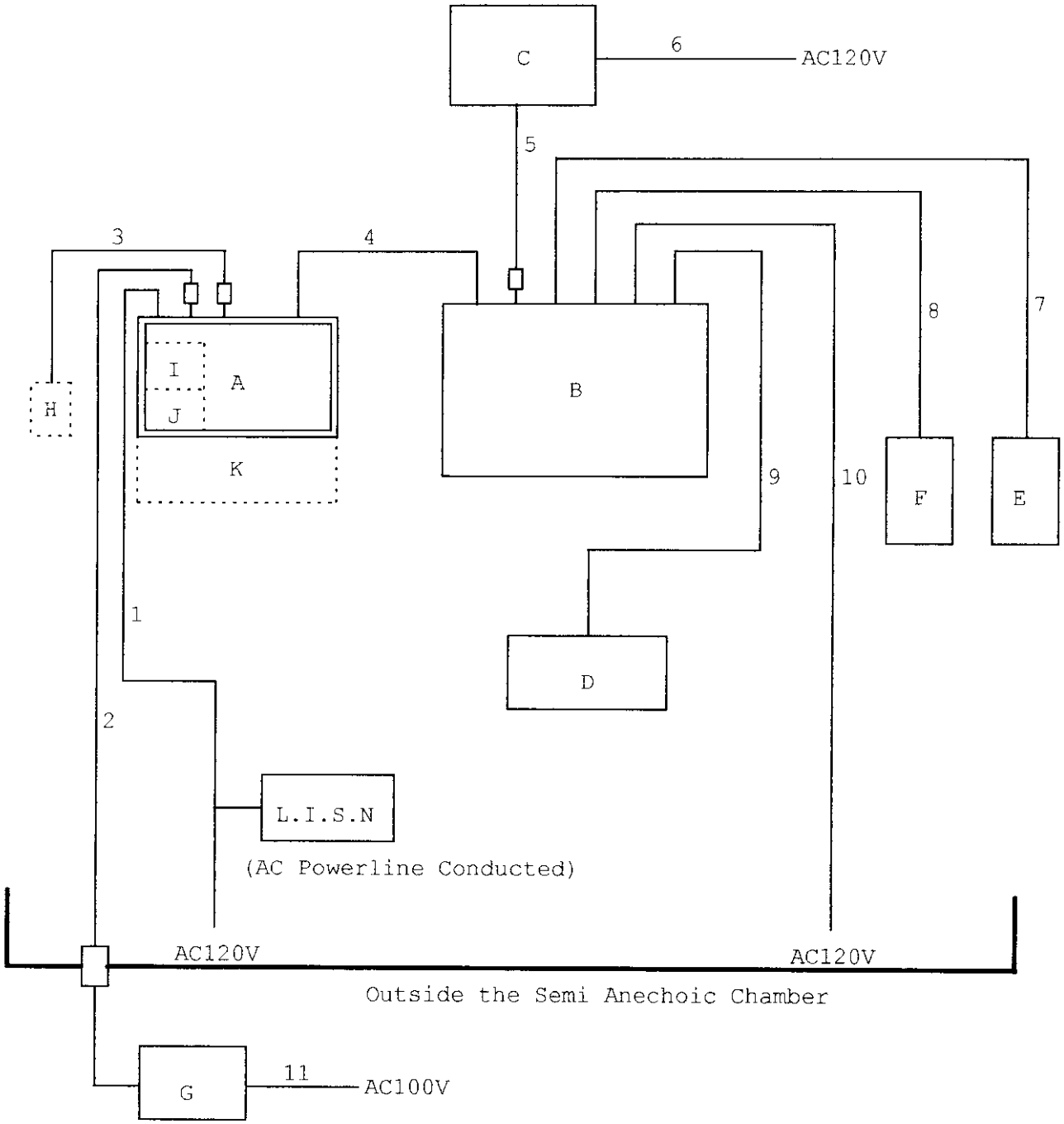

C
6
AC120V
5
3
4
8
7
I
A
J
H
B
K
9
10
F
E
1
D
2
L.I.S.N
(AC Powerline Conducted)
AC120V
AC120V
Outside the Semi Anechoic Chamber
G
11
AC100V

Figure 1

3. AC POWERLINE CONDUCTED AND RADIATED MEASUREMENT PHOTOS

3.1 AC Powerline Conducted Measurement Photos

AC Powerline Conducted measurement photos are shown on Picture 1(FAX mode) and Picture 2(PC mode).

3.2 Radiated Measurement Photos

Radiated measurement photos are shown on Picture 3(FAX mode) and Picture 4(PC mode).

4. AC POWERLINE CONDUCTED EMISSION DATA

4.1 Test Procedure

The following was measured of EMI Automatic Measuring Systems.

(1) The spectrum analyzer was used to find noise conditions in peak mode from 0.45 MHz to 30 MHz in 10 kHz bandwidth. Meter reading levels were measured by the test receiver in Quasi-Peak mode as item (2).

(2) After item (1), the test receiver was used to measure meter reading levels in CISPR Quasi-Peak mode in 0.45 MHz to 30 MHz width in Detector Bandwidth of 9 kHz at 6 dB level, the reading levels were recorded on the recording sheet.

(3) The test receiver was used to measure meter reading levels in CISPR Quasi-Peak mode and CISPR Average mode in order to judge for NB or BB.

4.2 Measured Data

The PC print operation mode with telephone, Memory Board(model:Board-RA1-2) and Second Tray as option for the EUT was in the maximum emission. The data are reported on PC print operation mode in the six points in compliance with Section 10.1.8.1 of ANSI C63.4-1992.

No	Freq. (MHz)	Line Measure	Read (dBμV)	LISN Fact. (dB)	Emission (dBμV)	NB or BB	Limit (dBμV)	Dif. (dB)
1	0.4570	VB	44.3	0.3	31.6	BB	47.9	-16.3
2	0.4598	VA	44.9	0.3	32.2	BB	47.9	-15.7
3	20.0111	VA	37.2	1.7	38.9	NB	47.9	-9.0
4	20.0168	VB	37.3	1.7	39.0	NB	47.9	-8.9
5	24.5889	VA	40.3	2.0	42.3	NB	47.9	-5.6
6	24.5889	VB	39.4	2.0	41.4	NB	47.9	-6.5

LISN Factor includes Cable Loss.

Emission Level = Meter Reading + LISN Factor

VA : Ground One End

VB : Ground the other End

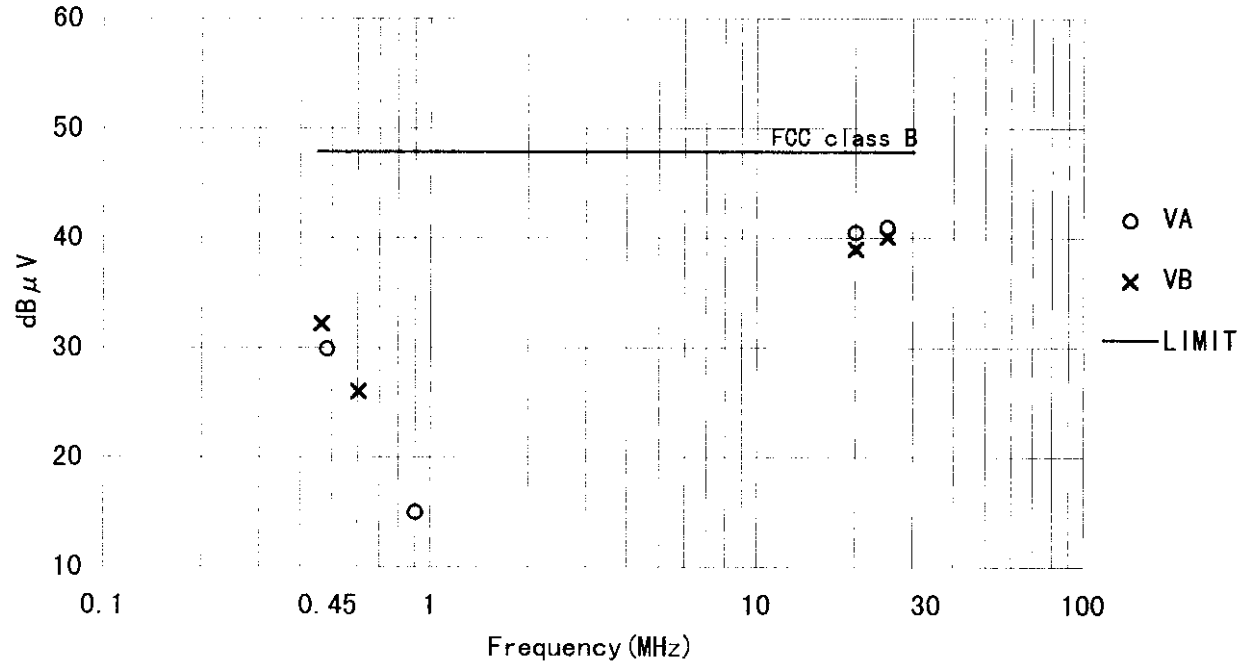
NB : Narrow Band

BB : Broad Band

4.3 Frequency Spectrum and Data Measured

DATE : 98/12/01
REGULATION : FCC class B
LISN : KNW-407
TEST MODE : FAX reception
COMMENTS : FAX mode
: with Telephone, Memory Board(model:Board-RA1-2) and Second Tray

TEST Ref. No. 787550 (T-3)
Room Condition
TEMP./R.H. : 20°C/38%
POWER SUPPLY : 120V/60Hz
TEST ENGINEER : N.Maruyama

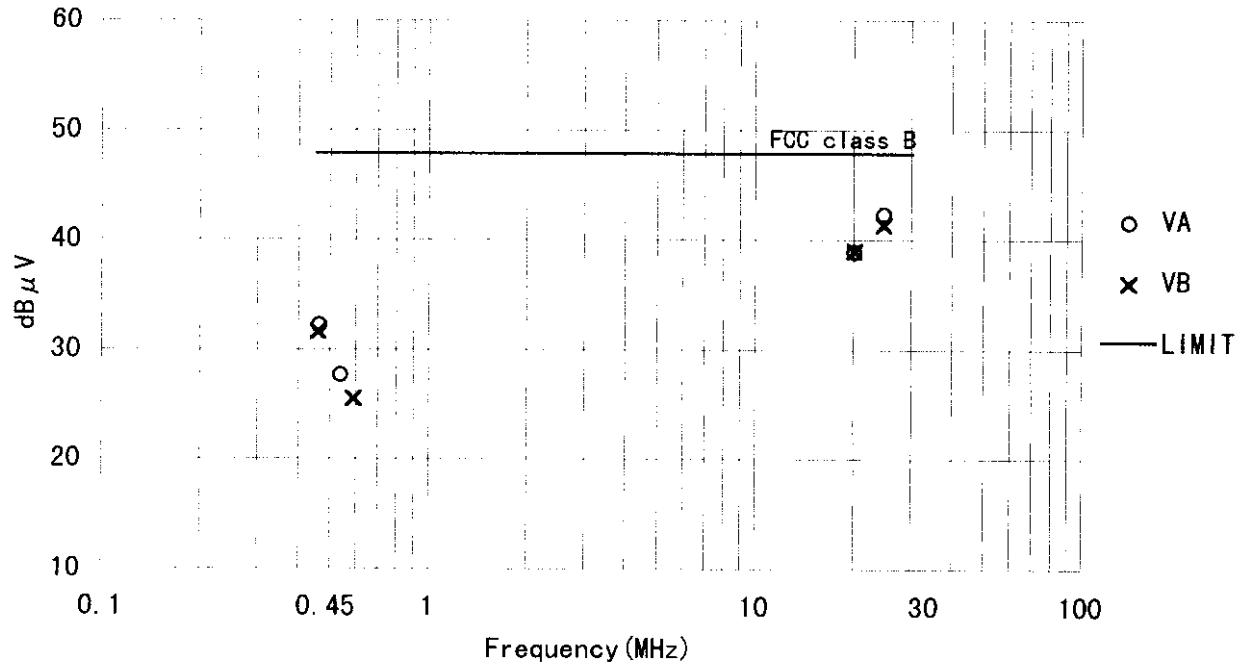


No.	Freq. (MHz)	Line	Corr. Factor (dB)	Reading (dBμV) Q.P	Reading (dBμV) AV	Limit (dBμV)	Emission (dBμV) QP	Emission (dBμV) AV	NB/BB	Dif. level (dB)
1	0.4626	VB	0.3	44.9	25.2	47.9	32.2	25.5	BB	-15.7
2	0.4821	VA	0.3	42.6	22.7	47.9	29.9	23.0	BB	-18.0
3	0.6006	VB	0.3	38.7	18.0	47.9	26.0	18.3	BB	-21.9
4	0.8976	VA	0.3	27.7	15.1	47.9	15.0	15.4	BB	-32.9
5	20.0166	VB	1.7	37.3	37.5	47.9	39.0	39.2	NB	-8.9
6	20.0191	VA	1.7	38.8	39.0	47.9	40.5	40.7	NB	-7.4
7	25.0017	VA	2.1	38.9	38.5	47.9	41.0	40.6	NB	-6.9
8	25.0019	VB	2.1	38.0	37.5	47.9	40.1	39.6	NB	-7.8

TEST ENGINEER N. Maruyama VERIFICATION M. Takahashi

DATE : 98/12/01
REGULATION : FCC class B
LISN : KNW-407
TEST MODE : PC print
COMMENTS : PC mode
: with Telephone, Memory Board(model:Board-RA1-2) and Second Tray

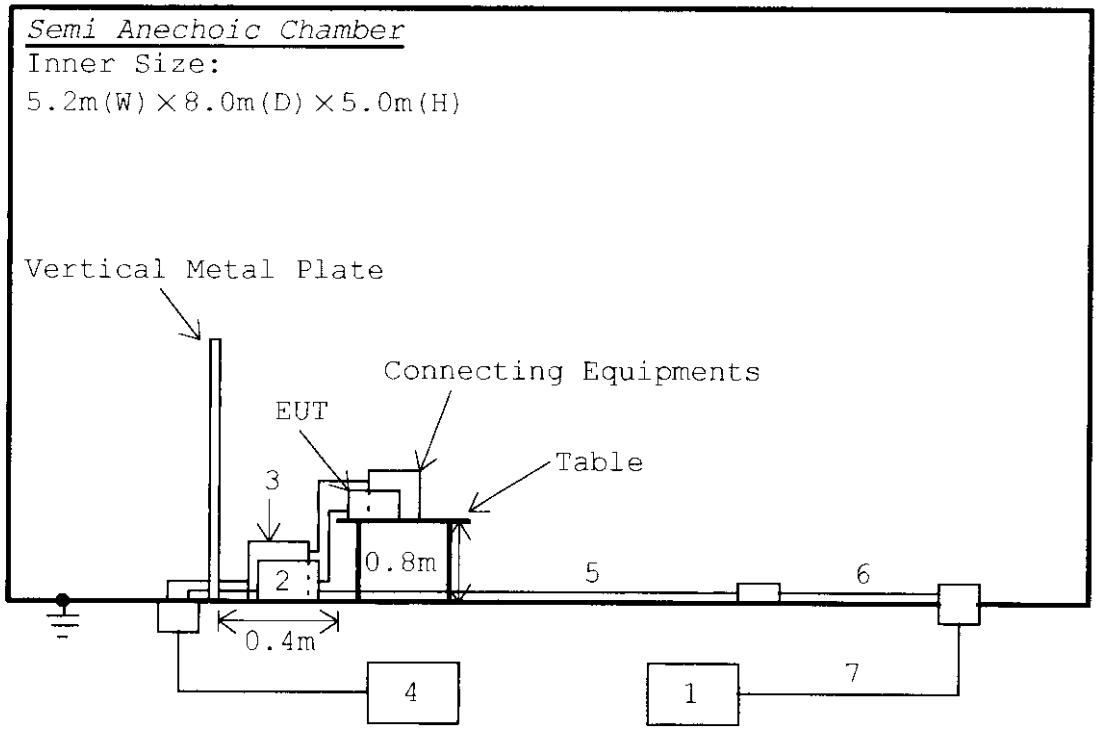
TEST Ref. No. 787550 (T-4)
Room Condition
TEMP./R.H. : 20°C/38%
POWER SUPPLY : 120V/60Hz
TEST ENGINEER : N.Maruyama



No.	Freq. (MHz)	Line	Corr. Factor (dB)	Reading (dBμV) Q.P	Reading (dBμV) AV	Limit (dBμV)	Emission (dBμV) QP	Emission (dBμV) AV	NB/BB	Dif. level (dB)
1	0.4570	VB	0.3	44.3	24.7	47.9	31.6	25.0	BB	-16.3
2	0.4598	VA	0.3	44.9	26.2	47.9	32.2	26.5	BB	-15.7
3	0.5351	VA	0.3	40.4	20.3	47.9	27.7	20.6	BB	-20.2
4	0.5867	VB	0.3	38.2	19.5	47.9	25.5	19.8	BB	-22.4
5	20.0111	VA	1.7	37.2	33.7	47.9	38.9	35.4	NB	-9.0
6	20.0168	VB	1.7	37.3	37.9	47.9	39.0	39.6	NB	-8.9
7	24.5889	VA	2.0	40.3	36.5	47.9	42.3	38.5	NB	-5.6
8	24.5889	VB	2.0	39.4	35.4	47.9	41.4	37.4	NB	-6.5

TEST ENGINEER N. Maruyama VERIFICATION M. Takahashi

4.4 Test Instrumentation Used, AC Powerline Conducted Measurement



Sign	Description	Manufacturer /Model No.	Serial No.	Last Cal.	Cal. Interval
1	EMI Automatic Measuring System	Toyo corp. TS-9949	None	-----	-----
1-1	Spectrum Monitor	ROHDE&SCHWARZ EZM	894.046.019	98/10/09	1 Year
1-2	Spectrum Analyzer	ROHDE&SCHWARZ FSA	860.694.034, 860.667.005	98/10/09	1 Year
1-3	Test Receiver	ROHDE&SCHWARZ ESH3	894718.010	98/10/09	1 Year
1-4	RF Relais Matrix	ROHDE&SCHWARZ PSU	894719.028	98/10/09	1 Year
1-5	Pulse Limiter	ROHDE&SCHWARZ ESH3-Z2	357-8810-52	98/10/09	1 Year
1-6	Personal Computer	NEC Corp. PC-9801RA51	9Z020733A	98/05/09	1 Year (Inspection only)
1-7	Color Display Monitor	NEC Corp. N5913L	GFG0111087	98/05/09	

Figure 2-1/2

Sign	Description	Manufacturer /Model No.	Serial No.	Last Cal.	Cal. Interval
1-8	Printer	NEC Corp. PC-PR101G2	0200680RA	98/05/09	1 Year (Inspection only)
1-9	Graphics Plotter	HP 7550A	2936A28273	98/05/09	
1-10	High Resolution Display	NEC Corp. PC-TV454	5928162	98/05/09	
2	LISN	Kyoritsu KNW-407	8-784-16	97/12/18	1 Year
3	LISN	Kyoritsu KNW-407	8-1064-6	98/07/02	1 Year
4	Automatic Voltage Regulator	NF Circuit Design EA2100A, EA2010A	125168, 124170	98/01/27	1 Year (Preventive Maintenance)
5	Coaxial Cable	SHOWA RG-58/U (5m)	None	98/11/25	1 Year
6	Coaxial Cable	SHOWA 5D2W (7m)	None	98/11/25	1 Year
7	Coaxial Cable	SHOWA RG-58/U (5m)	None	98/11/25	1 Year

Figure 2-2/2

5. RADIATED EMISSION DATA

5.1 Test Procedure

The following was measured of EMI Automatic Measuring Systems.

(1) The spectrum analyzer was used to find noise conditions in peak mode from 30 MHz to 1,000 MHz in 100 kHz bandwidth. Meter reading levels were measured by the test receiver in Quasi-Peak mode as item (2).

(2) After item (1), the test receiver was used to measure meter reading levels in CISPR Quasi-Peak mode in 30 MHz to 1,000 MHz width in Detector Bandwidth of 120 kHz at 6 dB level, the reading levels were recorded on the recording sheet.

5.2 Measured Data

The PC print operation mode with telephone, Memory Board(model:Board-RA1-2) and Second Tray as option for the EUT was in the maximum emission. The data are reported on PC print operation mode in the six points in compliance with Section 10.1.8.1 of ANSI C63.4-1992.

No	Freq. (MHz)	Antenna	Polarization	Azm (deg)	Hgt (m)	Read (dBμV)	Corr. Factor (dB)	Emission (dBμV/m)	Limit (dBμV/m)	Dif. (dB)
1	40.008	BC	V	35	1.00	27.8	7.8	35.6	40.0	-4.4
2	60.004	BC	V	255	1.00	33.8	1.8	35.6	40.0	-4.4
3	80.002	BC	V	265	1.00	33.9	0.3	34.2	40.0	-5.8
4	98.307	BC	V	35	1.00	33.7	3.4	37.1	43.5	-6.4
5	100.007	BC	V	265	1.00	34.0	3.6	37.6	43.5	-5.9
6	160.004	BC	H	145	1.90	30.7	10.0	40.7	43.5	-2.8

Emission Level = Meter Reading + Correction Factor

BC : Biconical Antenna

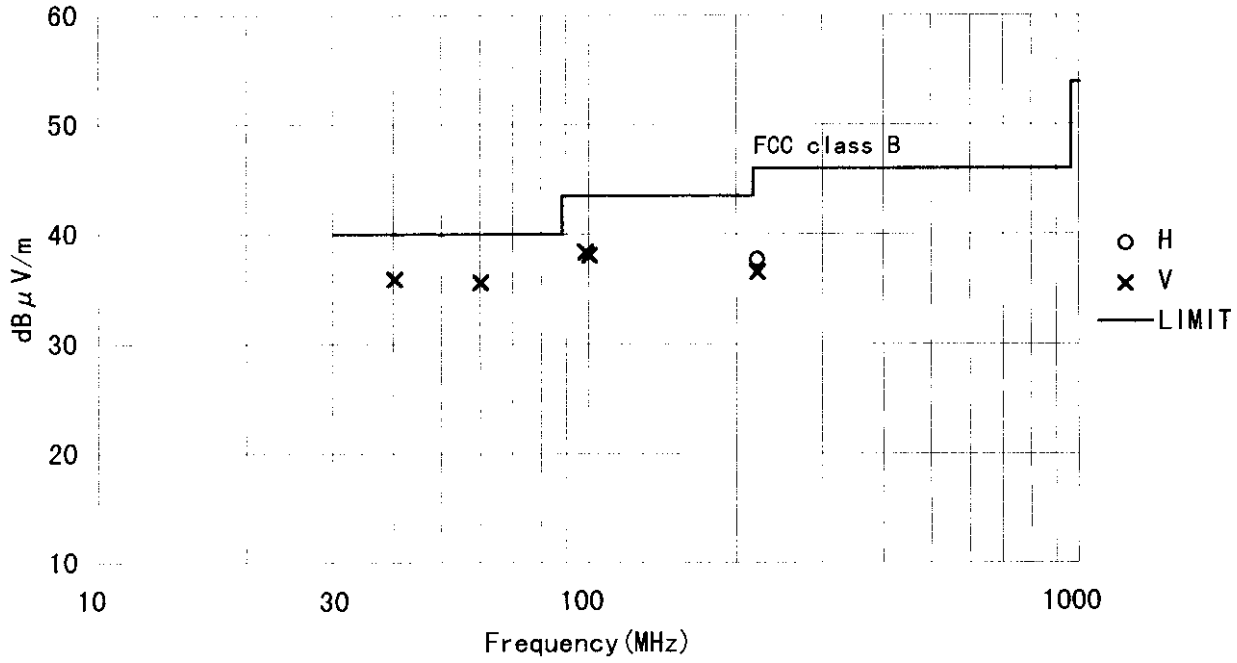
LP : Log Periodic Antenna

DP : Tuned Half-wave Dipole Antenna

5.3 Frequency Spectrum and Data Measured

DATE : 98/12/01
REGULATION : FCC class B
DISTANCE : 3 m
ANTENNA : BBA-9106/UHALP-9107
TEST MODE : FAX reception
COMMENTS : FAX mode
: with Telephone, Memory Board(model:Board-RA1-2) and Second Tray

TEST Ref. No. 787550 (T-5)
Ambient Condition : TEMP./R.H. : 20°C/38%
Measuring Room : TEMP./R.H. : 20°C/38%
POWER SUPPLY : 120V/60Hz
TEST ENGINEER : N. Maruyama

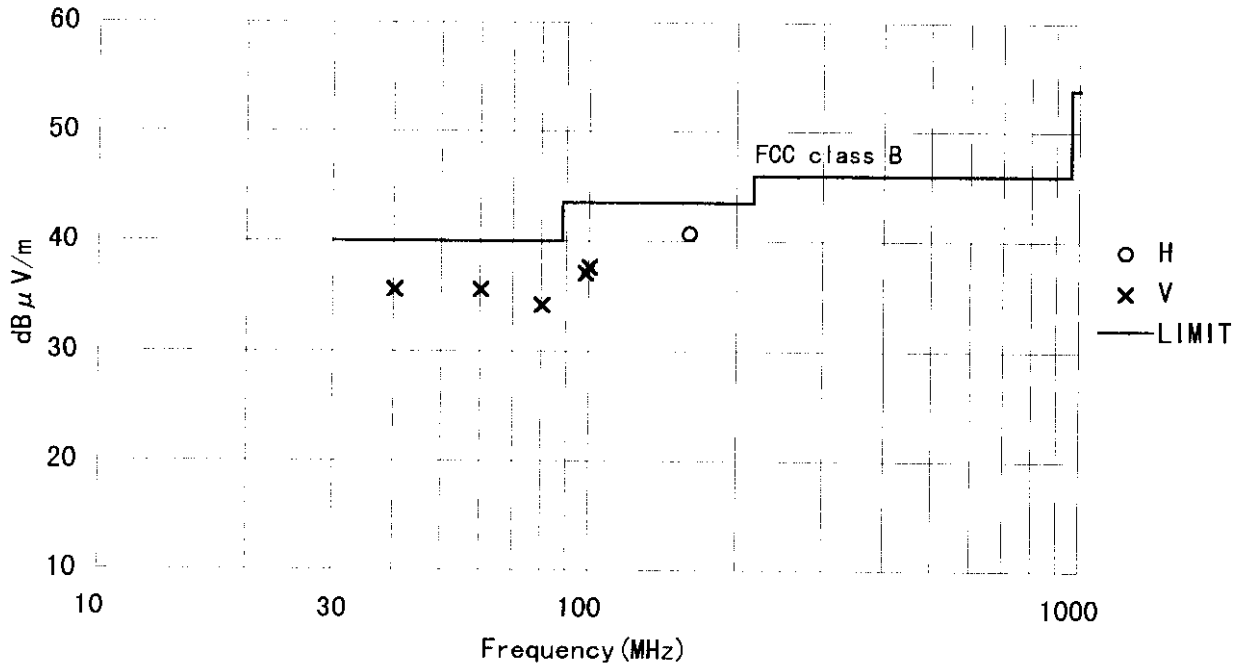


No.	Freq. (MHz)	Pol.	Corr. Factor (dB)	Meter Reading (dBμV)	Turn Table (degree)	Ant. Hgt. (m)	Limit (dBμV/m)	Emission (dBμV/m)	Dif. level (dB)
1	40.004	V	7.8	28.1	20	1.00	40.0	35.9	-4.1
2	60.001	V	1.8	33.8	250	1.00	40.0	35.6	-4.4
3	98.307	V	3.4	35.0	30	1.00	43.5	38.4	-5.1
4	100.002	V	3.6	34.5	300	1.00	43.5	38.1	-5.4
5	220.005	H	13.0	24.7	245	1.00	46.0	37.7	-8.3
6	220.008	V	13.0	23.6	320	1.00	46.0	36.6	-9.4

TEST ENGINEER N. Maruyama VERIFICATION M. Takahashi

DATE : 98/12/01
REGULATION : FCC class B
DISTANCE : 3 m
ANTENNA : BBA-9106/UHALP-9107
TEST MODE : PC print
COMMENTS : PC mode
: with Telephone, Memory Board(model:Board-RA1-2) and Second Tray

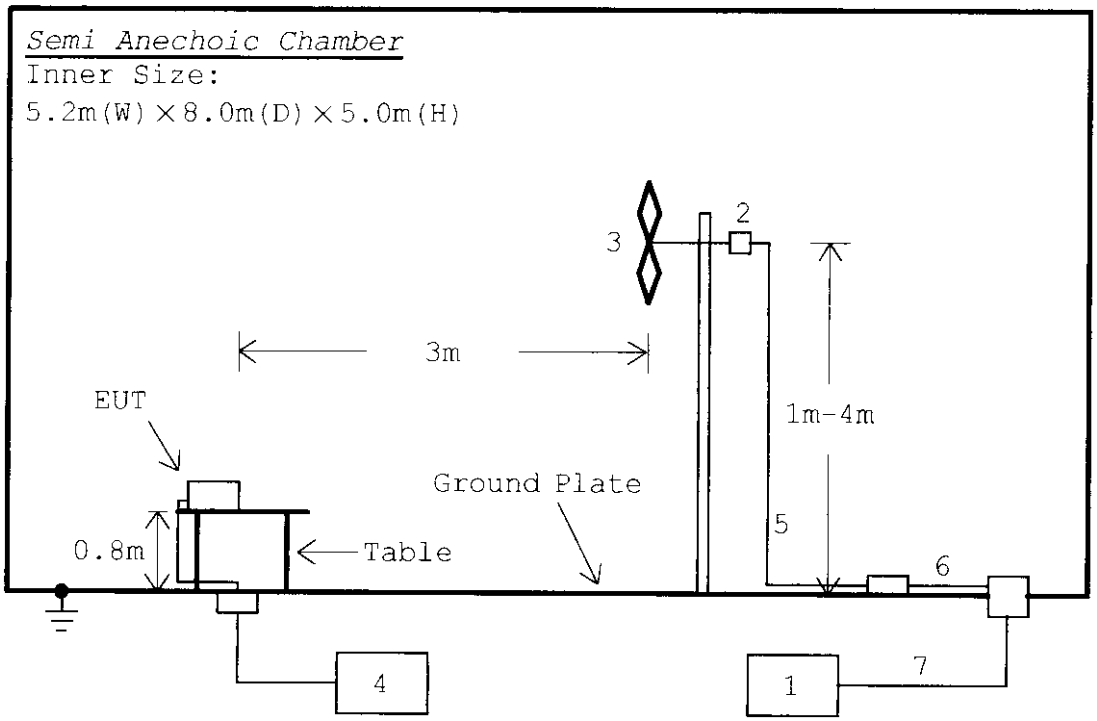
TEST Ref. No. 787550 (T-6)
Ambient Condition : TEMP./R.H. : 20°C/38%
Measuring Room : TEMP./R.H. : 20°C/38%
POWER SUPPLY : 120V/60Hz
TEST ENGINEER : N. Maruyama



No.	Freq. (MHz)	Pol.	Corr. Factor (dB)	Meter Reading (dBμV)	Turn Table (degree)	Ant. Hgt. (m)	Limit (dBμV/m)	Emission (dBμV/m)	Dif. level (dB)
1	40.008	V	7.8	27.8	35	1.00	40.0	35.6	-4.4
2	60.004	V	1.8	33.8	255	1.00	40.0	35.6	-4.4
3	80.002	V	0.3	33.9	265	1.00	40.0	34.2	-5.8
4	98.307	V	3.4	33.7	35	1.00	43.5	37.1	-6.4
5	100.007	V	3.6	34.0	265	1.00	43.5	37.6	-5.9
6	160.004	H	10.0	30.7	145	1.90	43.5	40.7	-2.8

TEST ENGINEER N. Maruyama VERIFICATION M. Takahashi

5.4 Test Instrumentation Used, Radiated Measurement



Sign	Description	Manufacturer /Model No.	Serial No.	Last Cal.	Cal. Interval
1	EMI Automatic Measuring System	Toyo corp. TS-9949	None	-----	-----
1-1	Spectrum Monitor	ROHDE&SCHWARZ EZM	894.046.019	98/10/09	1 Year
1-2	Programmable Test Receiver	ROHDE&SCHWARZ ESVP	894985-010	98/10/09	1 Year
1-3	Spectrum Analyzer	ROHDE&SCHWARZ FSA	860.694.034, 860.667.005	98/10/09	1 Year
1-4	RF Relais Matrix	ROHDE&SCHWARZ PSU	894719.028	98/10/09	1 Year
1-5	Preamplifier	ROHDE&SCHWARZ ESV-Z3	880.827/004	98/10/09	1 Year
1-6	Personal Computer	NEC Corp. PC-9801RA51	9Z020733A	98/05/09	1 Year (Inspection only)
1-7	Color Display Monitor	NEC Corp. N5913L	GFG0111087	98/05/09	

Figure 3-1/2

Sign	Description	Manufacturer /Model No.	Serial No.	Last Cal.	Cal. Interval
1-8	Printer	NEC Corp. PC-PR101G2	0200680RA	98/05/09	1 Year (Inspection only)
1-9	Graphics Plotter	HP 7550A	2936A28273	98/05/09	
1-10	High Resolution Display	NEC Corp. PC-TV454	5928162	98/05/09	
1-11	Antenna Turn Table Controller	Tokin Corp. 5906	905162	98/05/09	
1-12	Antenna Turn Table Driver	Tokin Corp. 5907	905163	98/05/09	
2	Fixed Coaxial Attenuator	HP 8491A (3dB)	2708A30283	98/04/21	1 Year
3-1	Antenna	Schwarzbeck BBA 9106 Biconical	None (Our Adm. No.T1)	98/05/21	1 Year
3-2	Antenna	Schwarzbeck VHA 9103	None (Our Adm. No.T1)	98/05/21	1 Year
3-3	Antenna	Schwarzbeck UHALP 9107 Log Periodic	91071025	98/05/21	1 Year
3-4	Antenna	Schwarzbeck UHA 9105	None	98/05/21	1 Year
4	Automatic Voltage Regulator	NF Circuit Design EA2100A, EA2010A	125168, 124170	98/01/27	1 Year(Preventive Maintenance)
5	Coaxial Cable	SHOWA 5D2W (7m)	None	98/11/25	1 Year
6	Coaxial Cable	SHOWA 10D2W (7m)	None	98/11/25	1 Year
7	Coaxial Cable	FUJIKURA RG-214/U (5m)	None	98/11/25	1 Year

Figure 3-2/2

5.5 Field Strength Calculation

Once all the data are gathered, it needs to be reduced to the form which can be directory compared to be specification limit. The level measured at the Test Receiver meter as follows :

$$FS = MR + AF + CL - AG$$
$$= MR + CF$$

where : FS = Field Strength
MR = Test Receiver Meter Reading
AF = Antenna Factor(loss)
CL = Cable Loss(included 3 dB of Pad Attenuation)
AG = Amplifier Gain
CF = Correction Factor

Assume the following situation : A meter reading of 30.7 dB μ V was obtained for a class B digital device measured at 160.004 MHz 3 meters from the EUT. Assume correction factor of 10.0 dB(included 3 dB of Pad Attenuation). The final field strength would be determined as follows :

$$FS = 30.7 + 15.2 + 4.8 - 10.0$$
$$= 30.7 + 10.0$$
$$= 40.7 \ (dB \mu V/m)$$

This result is below the FCC limit of 43.5 dB μ V/m at 160.004 MHz.