

TDK EMC CENTER CHIKUMAGAWA OPEN SITE

543 OTAI SAKU-CITY NAGANO JAPAN

REPORT OF MEASUREMENTS ON DIGITAL DEVICE

Date : November 24 ,2000

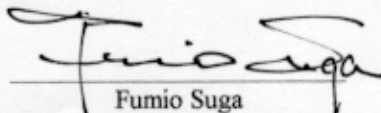
Issued in : Saku-city , JAPAN

TDK APPLICATION No.: TDC-00-1105

1. Applicant : FUJI PHOTO FILM CO. , LTD
13-45 , SENZUI 3 - CHOME , ASAKA - SHI , SAITAMA
351 - 8585 JAPAN
2. Factory : FUJIX CO. , LTD
1 - 6 , MATSUZAKADAIRA TAIWA - CHO ,
KUROKAWA - GUN , MIYAGI - KEN , 981 - 3492 JAPAN
3. Description of Equipment Under Test (EUT)
- 3-1. EUT : DIGITAL CAMERA
3-2. Category : FCC Class B Digital Device
3-3. FCC ID No. : F5GFP-2300
3-4. Trade Name : FUJIFILM
3-5. Model No. : Fine Pix 2300
3-6. Serial No. : U09301
3-7. Date of Manufacture : October ,2000
3-8. Power Supply : 120 V AC , 60Hz
4. Regulation Applied : FCC Part 15 Subpart B CLASS B 3m
5. Measurement Procedure Used : ANSI C63.4 - 1992
6. Place of Measurement : TDK EMC CENTER CHIKUMAGAWA OPEN SITE
7. Date of Measurement : November 22 ,2000
8. Measurement Results : The test results show that EUT conform to regulations
applied as shown in the attached sheets.

Note : (1) The test results relate only to items tested.

(2) This report shall not be reproduced except in full without the written approval of testing
laboratory.



Fumio Suga

Chief of TDK CHIKUMAGAWA OPEN SITE

Phone : 047-378-9470

TDK Application No. : TDC-00-1105

MEASUREMENT RESULTS OF RADIATED RADIO NOISE at 3m

Date : November 22, 2000

Temp. : 15 °C ; Humi. : 44 %

Test Receiver : Rohde & Schwarz ESCS 30
 Operation Mode : Detector function : CISPR Quasi-Peak
 6dB Band width : 120kHz External Attenuator : none

Description of Equipment : DIGITAL CAMERA

Model No. : Fine Pix 2300

Test Condition of Equipment Under Test (EUT)

1) Configuration of EUT : Refer to sheet No.5, 6 and .7

2) EUT Grounding : None.

3) Operating Condition : CAMERA Mode .

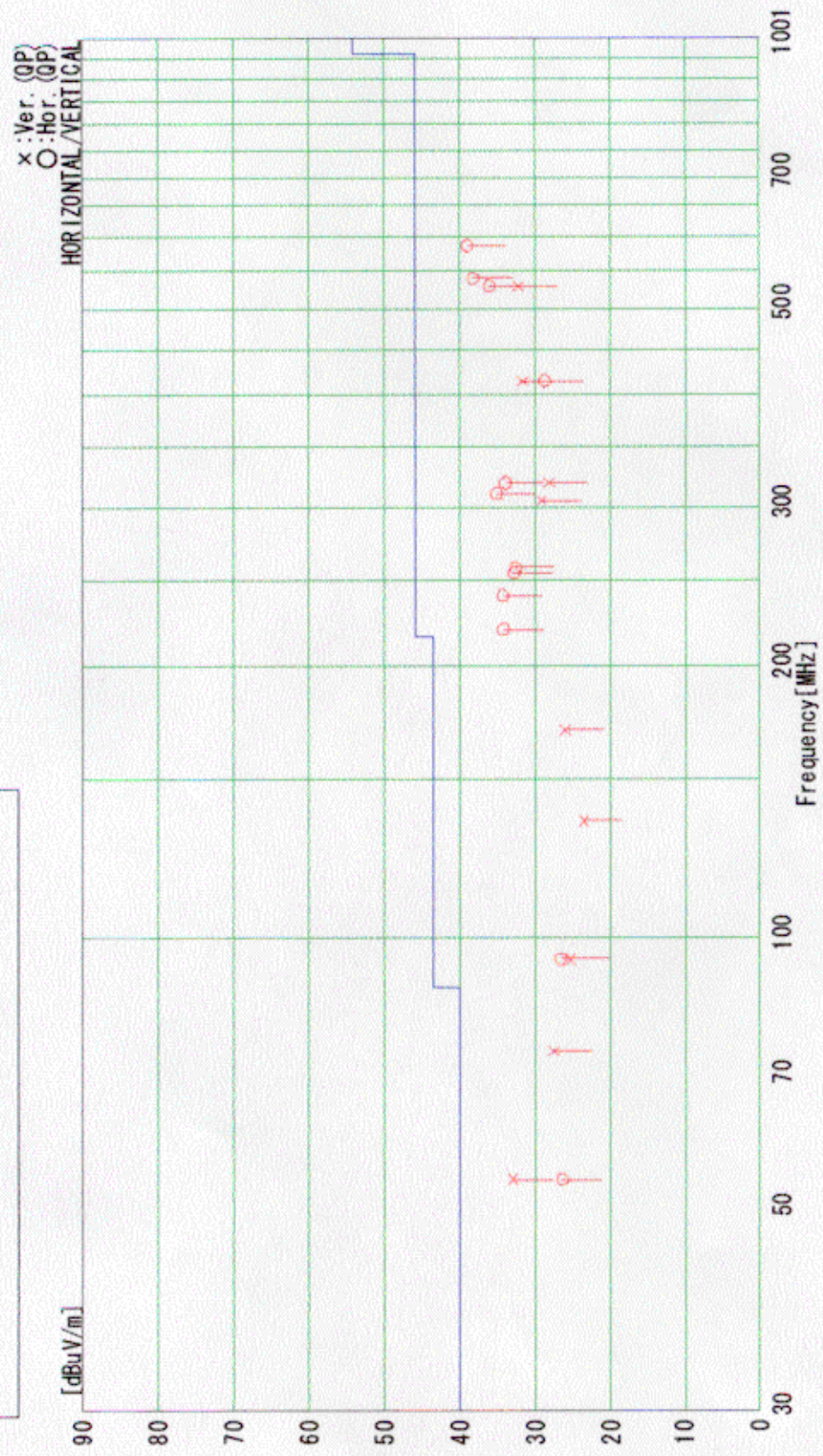
Frequency (MHz)	Correction Factor (dB)	Meter Reading (dB μ V/m)		Limit (dB μ V/m)	Emission Level (dB μ V/m)		Margin (dB)
		Hor.	Ver.		Hor.	Ver.	
54.140	11.0	26.3	32.8	40.0	26.3	32.8	7.2
75.170	7.4	---	27.4	40.0	---	27.4	12.6
94.920	10.7	26.5	25.2	43.5	26.5	25.2	17.0
135.000	16.0	---	23.5	43.5	---	23.5	20.0
170.000	17.6	---	25.9	43.5	---	25.9	17.6
220.030	20.0	34.1	---	46.0	34.1	---	11.9
240.030	20.4	34.2	---	46.0	34.2	---	11.8
254.150	20.4	32.7	---	46.0	32.7	---	13.3
257.730	20.5	32.5	---	46.0	32.5	---	13.5
306.000	19.2	---	29.0	46.0	---	29.0	17.0
311.420	19.4	35.0	---	46.0	35.0	---	11.0
320.050	19.6	33.8	28.0	46.0	33.8	28.0	12.2
415.230	21.3	28.6	31.6	46.0	28.6	31.6	14.4
528.090	23.5	---	32.1	46.0	---	32.1	13.9
529.770	23.5	36.0	---	46.0	36.0	---	10.0
540.080	23.8	38.1	---	46.0	38.1	---	7.9
587.040	24.9	38.9	---	46.0	38.9	---	7.1

Note : 1) Meter Readings include Correction Factor (Antenna factor , Cable loss).

2) Margin = Limit - Emission Level.

Tested by : *Juniliko Ochi*
 Engineer of TDK Chikumagawa Open Site

FCC 15B CLASS B RADIATED 3m
EUT : Fine Pix 2300 120V/60Hz
MODE : CAMERA Mode
Frequency : 30 ~ 1000 MHz



TDK Application No. : TDC-00-1105

MEASUREMENT RESULTS OF RADIATED RADIO NOISE at 3m

Date : November 22 ,2000

Temp. : 15 °C ; Humi. : 44 %

Test Receiver : Rohde & Schwarz ESCS 30
 Operation Mode : Detector function : CISPR Quasi-Peak
 6dB Band width : 120kHz External Attenuator : none

Description of Equipment : DIGITAL CAMERA

Model No. : Fine Pix 2300

Test Condition of Equipment Under Test (EUT)

1) Configuration of EUT : Refer to sheet No.5, 6 and .7

2) EUT Grounding : None.

3) Operating Condition : USB Mode .

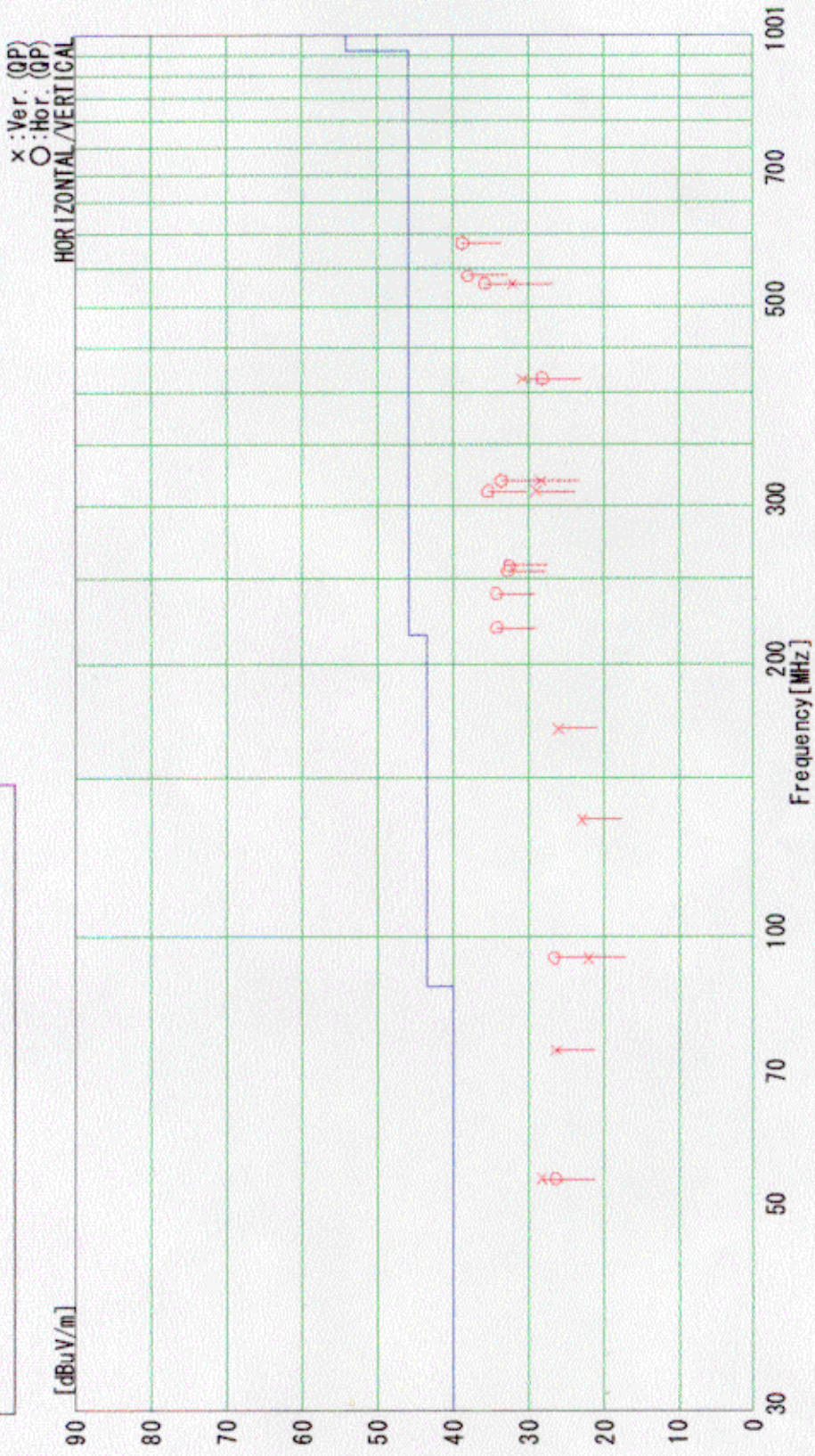
Frequency (MHz)	Correction Factor (dB)	Meter Reading (dB μ V/m)		Limit (dB μ V/m)	Emission Level (dB μ V/m)		Margin (dB)
		Hor.	Ver.		Hor.	Ver.	
54.140	11.0	26.3	28.2	40.0	26.3	28.2	11.8
75.170	7.4	---	26.2	40.0	---	26.2	13.8
94.920	10.7	26.5	22.0	43.5	26.5	22.0	17.0
135.000	16.0	---	22.8	43.5	---	22.8	20.7
170.000	17.6	---	25.9	43.5	---	25.9	17.6
220.030	20.0	34.1	---	46.0	34.1	---	11.9
240.030	20.4	34.2	---	46.0	34.2	---	11.8
254.150	20.4	32.7	---	46.0	32.7	---	13.3
257.730	20.5	32.5	---	46.0	32.5	---	13.5
311.420	19.4	35.3	28.9	46.0	35.3	28.9	10.7
320.050	19.6	33.5	28.3	46.0	33.5	28.3	12.5
415.230	21.3	28.1	30.7	46.0	28.1	30.7	15.3
528.090	23.5	---	32.0	46.0	---	32.0	14.0
529.770	23.5	35.7	---	46.0	35.7	---	10.3
540.080	23.8	37.9	---	46.0	37.9	---	8.1
587.040	24.9	38.7	---	46.0	38.7	---	7.3

Note : 1) Meter Readings include Correction Factor (Antenna factor , Cable loss).

2)Margin = Limit - Emission Level.

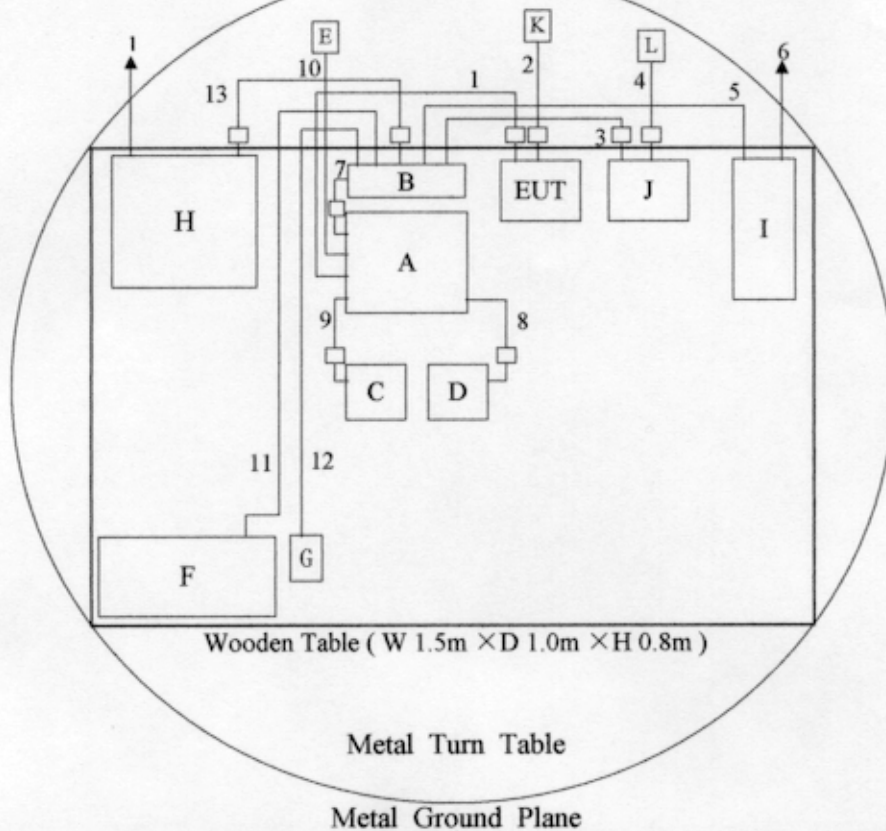
Tested by : *Kumihiko Owa*
 Engineer of TDK Chikumagawa Open Site

FCC 15B CLASS B RADIATED 3m
EUT : Fine Pix 2300 120V/60Hz
MODE : USB Mode
Frequency : 30 ~ 1000 MHz



EUT's Test Arrangement of Radiation

Non Metallic (F. R. P.) Dome (W 8.0m × D 6.3m × H 5.5m)



Test Configuration

No.	Device	MODEL No.	FCC ID	S/N	Manufacturer
EUT	DIGITAL CAMERA	Fine Pix 2300	F5GFP-2300	U09301	FUJI PHOTO FILM CO. , LTD
A	PC NOTE BOOK COMPUTER	PCG-505TR	DOC	3415556	SONY
B	PORT REPLICATOR	PCGA-PR5	DOC	126219	SONY
C	FLOPPY DISK DRIVE	PCGA-FD5	DOC	1215376	SONY
D	CD-ROM DRIVE	PCGA-CD51	DOC	3101473	SONY
E	AC ADAPTER	PCGA-AC51		9906A0361473	SONY
F	KEY BOARD	SKR-2233	GJJSKR-223C9	8AAE001175	SEJINER ELECTON , Inc.
G	MOUSE	2.1A	C3KKMP3	02209569	MICRO SOFT
H	PC MONITOR	M2978	BEJCA500	CY5430HF3CV	LG ELECTRONICS
I	SCANNER	AS1	F5GAS-1	0009	FUJI PHOTO FILM CO. , LTD
J	DIGITAL CAMERA	MX-2900ZOOM	F5GMX-2900	U000015	FUJI PHOTO FILM CO. , LTD
K	AC ADAPTER	AC-5VH		9637	FUJI PHOTO FILM CO. , LTD
L	AC ADAPTER	AC-5V		9914	FUJI PHOTO FILM CO. , LTD

TDK Application No. : TDC-00-1105

Connection Cables

No.	I/F & Power Cable	Model No.	Cable Length	Feraite Core	Manufacturer
1	USB CABLE	-----	1.50 m	YES	SHIELD YES
2	AC ADAPTOR CABLE	-----	1.90 m	YES	
3	RS232C CABLE	-----	2.00 m	YES	SHIELD YES
4	AC ADAPTOR CABLE	-----	1.90 m	YES	
5	SCSI CABLE	-----	1.50 m	YES	SHIELD YES
6	AC CABLE(SCANNER)	-----	1.80 m		
7	PORT REPLICATOR CABLE	-----	0.20 m	YES	SHIELD YES
8	CD-ROM CABLE	-----	0.30 m	YES	SHIELD YES
9	FLOPPY DRIVE CABLE	-----	0.10 m	YES	SHIELD YES
10	AC ADAPTOR CABLE(PC)	-----	2.20 m		
11	MOUSE CABLE	-----	1.90 m		SHIELD YES
12	KEY BOARD CABLE	-----	1.10 m		SHIELD YES
13	PC MONITOR CABLE	-----	1.65 m	YES	SHIELD YES
14	PC MONITOR POWER CABLE	-----	1.70 m		

RADIATION MEASUREMENT

EUT : DIGITAL CAMERA

MODEL No. Fine Pix 2300

CONFIGURATION FRONT VIEW



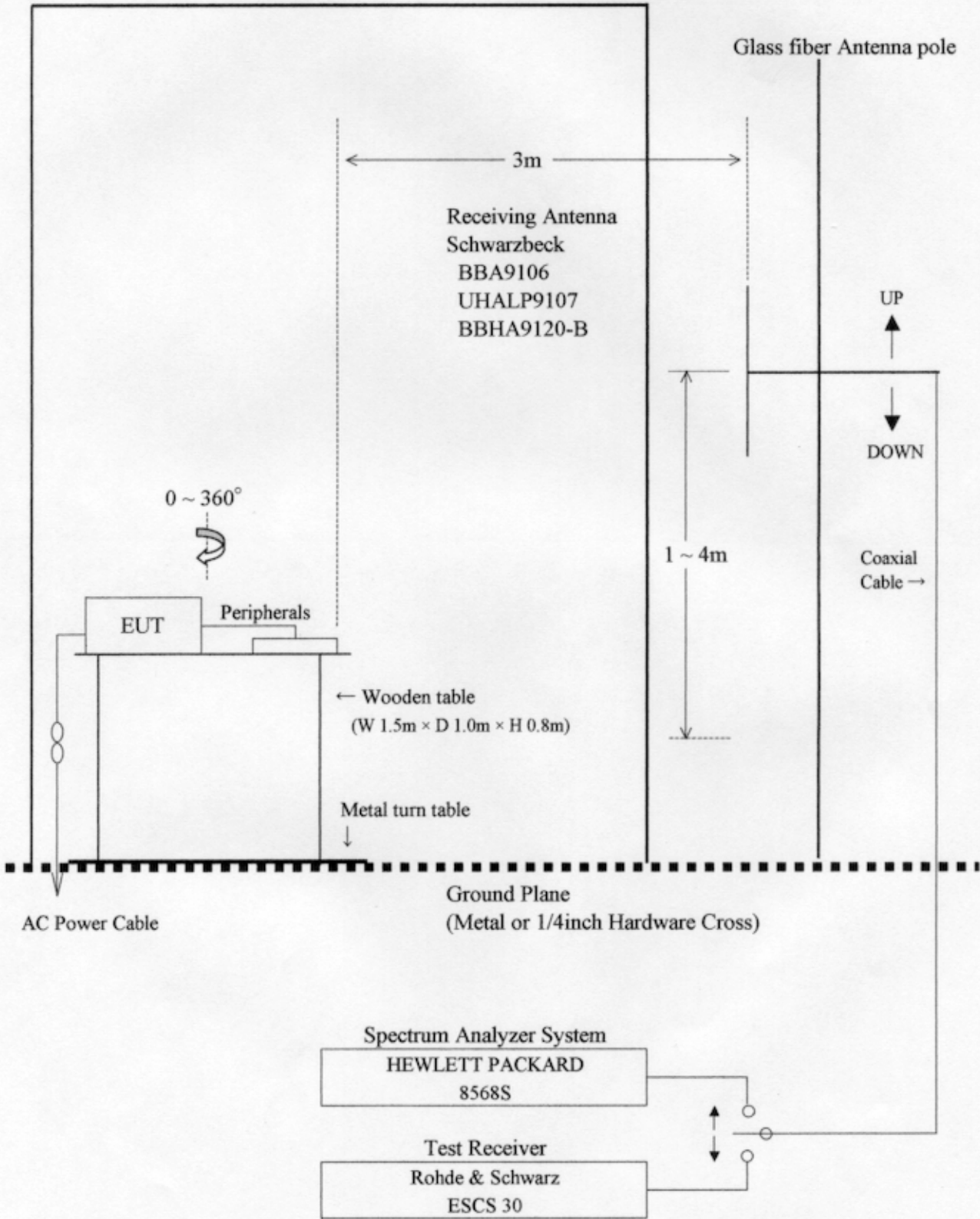
CONFIGURATION REAR VIEW



EUT's Test Arrangement of Radiation

Fig 1

Non matallic (F. R. P.) Dome (W 8.0m × D 6.3m × H 5.5m)



Date : November 22 ,2000
Temp. : 18 °C : Humi. : 65 %

Test Receiver :	Rohde & Schwarz ESCS 30		
Operation Mode :	Detector function : CISPR Quasi-Peak		
	6dB Band width : 10kHz	External Attenuator : none	

Description of Equipment : DIGITAL CAMERA		
Model No. :	Fine Pix 2300	; Type : Desk Top

Test Condition of Equipment Under Test (EUT)

1) Configuration of EUT :	Refer to sheet No.13, 14 and 15.
2) EUT Grounding :	None.
3) Operating Condition :	CAMERA Mode .

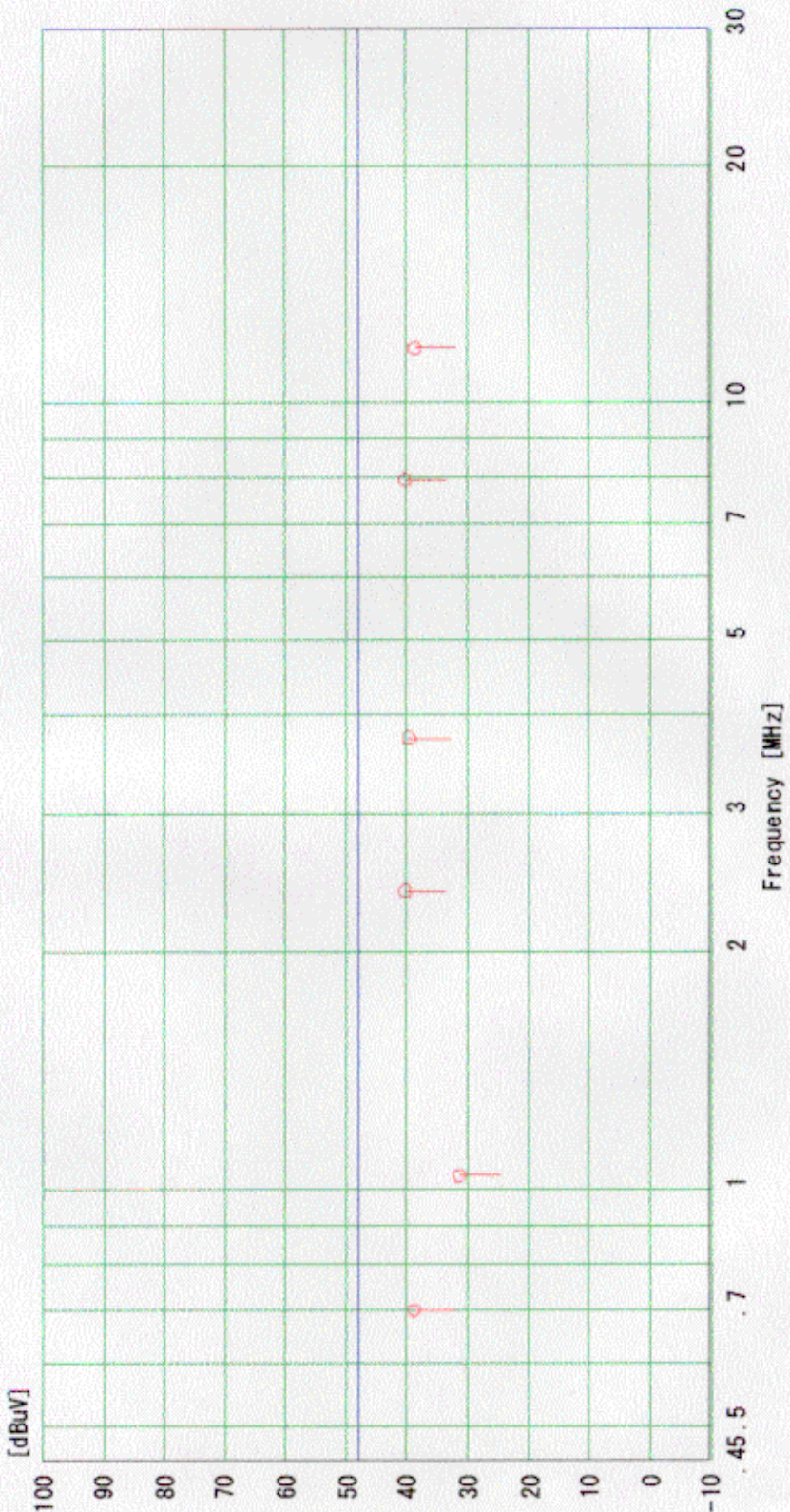
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Note :

- 1) Correction Factor include LISN Factor and cable loss for 7 meters.
Meter Readings include Correction Factor.
- 2)VA : Between one end of the power cable and the grounded.
VB : Between the other end of the power cable and the grounded.
- 3)Margin = Limit – Emission Level.

Tested by : Kunihiko Ooi
Engineer of TDK Chikumagawa Open Site

FCC 15B CLASS B CONDUCTED
EUT : Fine Pix 2300 120V/60Hz
MODE : CAMERA Mode
Frequency : 0.45 ~ 30 MHz



Date : November 22 ,2000
Temp. : 18 °C ; Humi. : 65 %

Test Receiver :	Rohde & Schwarz ESCS 30		
Operation Mode :	Detector function : CISPR Quasi-Peak		
	6dB Band width :	10kHz	External Attenuator : none

Description of Equipment : DIGITAL CAMERA
Model No. : Fine Pix 2300 ; Type : Desk Top

Test Condition of Equipment Under Test (EUT)

1) Configuration of EUT :	Refer to sheet No.13, 14 and 15.
2) EUT Grounding :	None.
3) Operating Condition :	USB Mode .

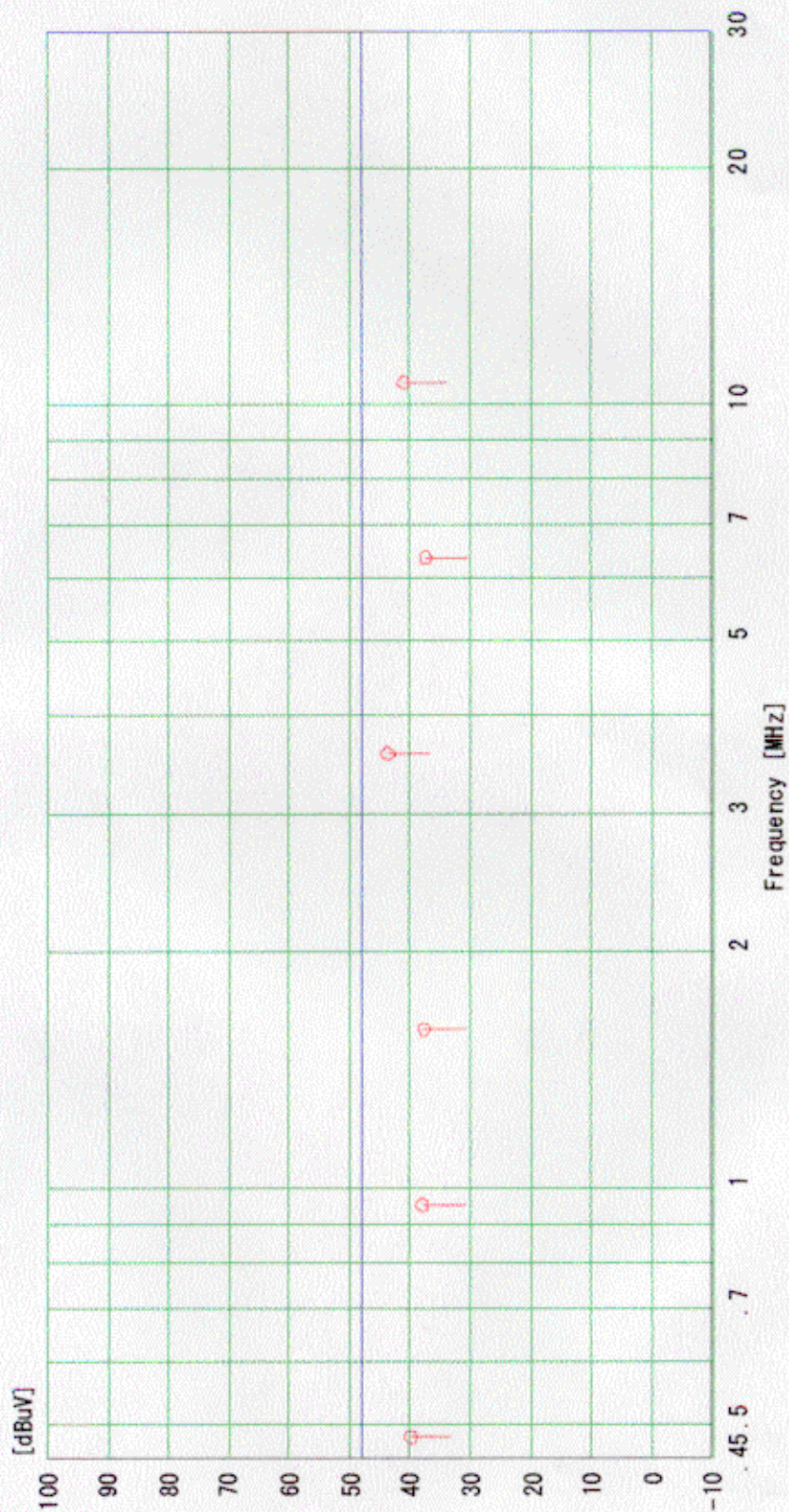
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Note :

- 1) Correction Factor include LISN Factor and cable loss for 7 meters.
Meter Readings include Correction Factor.
- 2)VA : Between one end of the power cable and the grounded.
VB : Between the other end of the power cable and the grounded.
- 3)Margin = Limit – Emission Level.

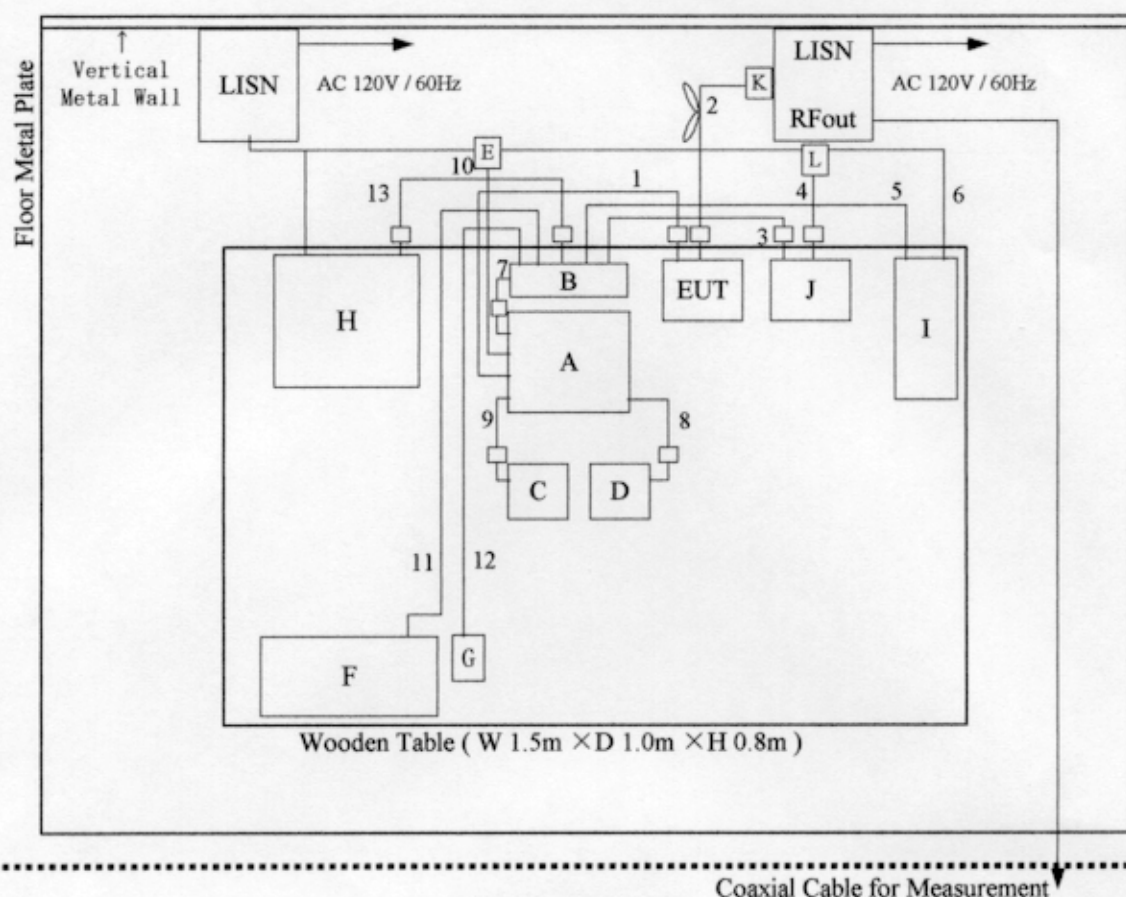
Tested by : Amihiko Ooi
Engineer of TDK Chikumagawa Open Site

FCC 15B CLASS B CONDUCTED
 EUT : Fine Pix 2300 120V/60Hz
 MODE : USB Mode
 Frequency : 0.45 ~ 30 MHz



EUT's Test Arrangement of Conduction

Compact Anechoic Chamber (W 3.0m × D 7.0m × H 3.0m)



Test Configuration

No.	Device	MODEL No.	FCC ID	S/N	Manufacturer
EUT	DIGITAL CAMERA	Fine Pix 2300	F5GFP-2300	U09301	FUJI PHOTO FILM CO. , LTD
A	PC NOTE BOOK COMPUTER	PCG-505TR	DOC	3415556	SONY
B	PORT REPLICATOR	PCGA-PR5	DOC	126219	SONY
C	FLOPPY DISK DRIVE	PCGA-FD5	DOC	1215376	SONY
D	CD-ROM DRIVE	PCGA-CD51	DOC	3101473	SONY
E	AC ADAPTER	PCGA-AC51		9906A0361473	SONY
F	KEY BOARD	SKR-2233	GJJSKR-223C9	8AAE001175	SEJINER ELECTON , Inc.
G	MOUSE	2.1A	C3KKMP3	02209569	MICRO SOFT
H	PC MONITOR	M2978	BEJCA500	CY5430HF3CV	LG ELECTRONICS
I	SCANNER	AS1	F5GAS-1	0009	FUJI PHOTO FILM CO. , LTD
J	DIGITAL CAMERA	MX-2900ZOOM	F5GMX-2900	U000015	FUJI PHOTO FILM CO. , LTD
K	AC ADAPTER	AC-5VH		9637	FUJI PHOTO FILM CO. , LTD
L	AC ADAPTER	AC-5V		9914	FUJI PHOTO FILM CO. , LTD

TDK Application No. : TDC-00-1105

Connection Cables

No.	I/F & Power Cable	Model No.	Cable Length	Feraite Core	Manufacturer
1	USB CABLE	-----	1.50 m	YES	SHIELD YES
2	AC ADAPTOR CABLE	-----	1.90 m	YES	
3	RS232C CABLE	-----	2.00 m	YES	SHIELD YES
4	AC ADAPTOR CABLE	-----	1.90 m	YES	
5	SCSI CABLE	-----	1.50 m	YES	SHIELD YES
6	AC CABLE(SCANNER)	-----	1.80 m		
7	PORT REPLICATOR CABLE	-----	0.20 m	YES	SHIELD YES
8	CD-ROM CABLE	-----	0.30 m	YES	SHIELD YES
9	FLOPPY DRIVE CABLE	-----	0.10 m	YES	SHIELD YES
10	AC ADAPTOR CABLE(PC)	-----	2.20 m		
11	MOUSE CABLE	-----	1.90 m		SHIELD YES
12	KEY BOARD CABLE	-----	1.10 m		SHIELD YES
13	PC MONITOR CABLE	-----	1.65 m	YES	SHIELD YES
14	PC MONITOR POWER CABLE	-----	1.70 m		

CONDUCTION MEASUREMENT

EUT : DIGITAL CAMERA

MODEL No. Fine Pix 2300

CONFIGURATION FRONT VIEW



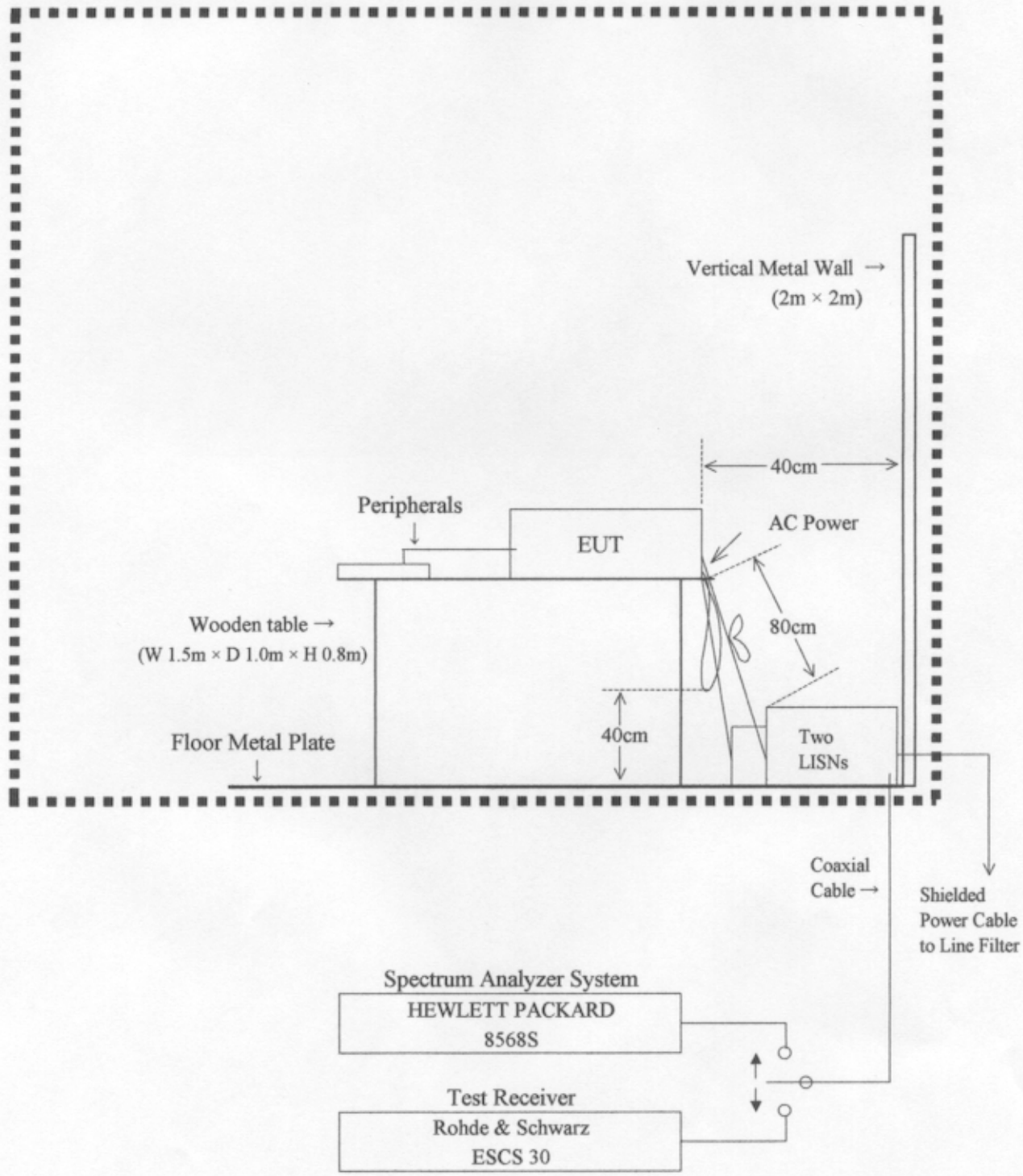
CONFIGURATION SIDE VIEW



EUT's Test Arrangement of Conduction

Fig 2

Compact Anechoic Chamber (W 3.0m × D 7.0m × H 3.0m)



TDK Application No. : TDC-00-1105

MEASURING INSTRUMENT USED

TDK APPLICATION No. : TDC-00-1105

☐	<u>Instrument</u>	<u>Model No.</u>	<u>Manufacturer</u>	<u>ID No.</u>	<u>Last Calibration Date</u>	<u>Period</u>
☒	Spectrum Analyzer	8568B	Hewlett-Packard	2445A00924	Apr. 2000	1 year
☒	RF-Preselector	85685A	Hewlett-Packard	2648A00481	Apr. 2000	1 year
☒	Field Strength Meter	ESCS 30	Rohde & Schwarz	825788/007	Apr. 2000	1 year
☐	Field Strength Meter	ESMI	Rohde & Schwarz	61360008	Oct. 1999	1 year
☒	Pre - Amplifier	8447D	Hewlett-Packard	2443A04539	Mar. 2000	1 year
☐	Pre - Amplifier	8449B	Hewlett-Packard	3008A01391	Apr. 2000	1 year
☒	Biconical Antenna	BBA9106	Schwarzbeck	D-6901 No.2	Apr. 2000	1 year
☒	Log-Periodic Antenna	UHALP9107	Schwarzbeck	424/517	Apr. 2000	1 year
☐	Dipole Antenna	VHA9103	Schwarzbeck	D-6901 No.3	Apr. 2000	1 year
☐	Dipole Antenna	UHA9105	Schwarzbeck	29-14066	Apr. 2000	1 year
☒	LISN (50 μ H/50 Ω)	KNW-407	Kyoritsu Electrical Works	8-680-7	Mar. 2000	1 year
☒	LISN (50 μ H/50 Ω)	KNW-407	Kyoritsu Electrical Works	8-823-10	Mar. 2000	1 year
☐	LISN (50 μ H/50 Ω)	KNW-408	Kyoritsu Electrical Works	8-652-35	Mar. 2000	1 year
☐	LISN (50 μ H/50 Ω)	ESH2-Z5	Rohde & Schwarz	881 362/011	Apr. 2000	1 year
☒	Open Test Site	TCO-10	TDK Corporation	GD-0043-5	Apr. 2000	1 year
☒	Co-axial Cable	AK9513	Schwarzbeck	N-C007	Mar. 2000	1 year
☐	Co-axial Cable	8D-2V	Shinagawa Densen	N-C012	Mar. 2000	1 year
☐	Co-axial Cable	8D-2V	Shinagawa Densen	N-C013	Mar. 2000	1 year
☒	Co-axial Cable	8D-2V	Shinagawa Densen	N-C014	Mar. 2000	1 year
☒	Co-axial Cable	8D-2V	Shinagawa Densen	N-C016	Mar. 2000	1 year
☒	Co-axial Cable	5D-2W	Shinagawa Densen	N-C017	Mar. 2000	1 year
☒	RF Switch (EMI Interface)	MP59B	Anritsu	N-C025	Mar. 2000	1 year