

EMI TESTING REPORT

EUT : TV BOX

MODEL : ATV-3000 PRO

FCC ID : OLYATV3000

PREPARED FOR :

DIGIMEDIA TECHNOLOGIES CO., LTD.

3F, NO. 63, PO-AI ROAD,

TAIPEI, TAIWAN, R.O.C.

PREPARED BY :

SPECTRUM RESEARCH & TESTING LABORATORY INC.
NO. 101-10, LING 8, SHAN-TONG LI CHUNG-LI CITY,
TAOYUAN, TAIWAN, R. O. C.

TEL : (03) 4987684

FAX : (03) 4986528

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1. TEST REPORT CERTIFICATION**APPLICANT** : DIGIMEDIA TECHNOLOGIES CO., LTD.**ADDRESS** : 3F, NO. 63, PO-AI ROAD,
TAIPEI, TAIWAN, R.O.C.

_____**EUT DESCRIPTION** : TV BOX(A) POWER SUPPLY : FROM ADAPTOR(B) MODEL : ATV-3000 PRO(C) FCC ID : OLYATV3000**FINAL TEST DATE** : 07/06/1999**MEASUREMENT PROCEDURE USED :**

* PART 15 SUB PART B OF FCC RULES AND REGULATIONS (47 CFR PART 15)

* ANSI C63.4 - 1992

We hereby show that :

The measurement shown in the attachment were made in accordance with the procedures indicated, and the energy emitted by the equipment was found to be within the limits applicable.

TESTING ENGINEER : Kiki Wu DATE 7/6/99
Kiki Wu**SUPERVISOR** : Jesse Ho DATE 7/6/99
Jesse Ho**APPROVED BY** : Johnson Ho DATE 7/6/99
Johnson Ho

2. TEST STATEMENT

2.1 TEST STATEMENT

1. This letter is to explain the test condition of this project.
The EUT be tested as the following status.
2. The data was shown in this report reflects the worst-case data for the condition as listed above.
Please disregard any other oricessir(s) speed shown in this user manual.
3. EUT conditions:

Mode 1: Instant view the TV on PC monitor.
Mode 2: Video function under VIDEO/SVIDEO status.
Mode 3: Video function under TV/CATV status.

The EUT was passed FCC certification.
4. NVLAP logo is to be approved by management (it is according to NVLAP requirement if it need) before use.

2.2 DEPARTURE FROM DOCUMENT POLICIES, PROCEDURE OR SPECIFICATIONS, THE STATEMNT

- A. Did have
Any departure from document policies & procedures or from specifications.
Yes _____, No ✓ _____ .
If yes, the description as below.
- B. The certificate and report shall not be reproduced except in full, without the written approval of SRT laboratory.
- C. The report must not be used by the client to claim product endorsement by NVLAP or any agency the government.
- D. This product is a prototype product.
- E. The effect that the results relate only to the items tested.

3. EUT MODIFICATIONS

The following accessories were added to the EUT during testing :

No modifications by SRT lab.

4. MODIFICATION LETTER

This section contains the following documents :

A. Letter of modifications.



駿林科技股份有限公司
DigiMedia Technology Co., Ltd.
3F, NO. 63, PO-AI ROAD TAIPEI, TAIWAN, R.O.C.
Tel: +886-2-2389 8180 Fax: 2389 8179
Homepage: <http://www.digimedia.com.tw/>
E-Mail: digimedi@ms6.hinet.net

Federal Communications Commission
Authorization and Evaluation Division
7435 Oakland Mills Road
Columbia, MD 21046

To whom it may concern :

This is to serve as proper notice that our company agrees to make
all modifications to FCC ID : OLYATV3000 as listed in section
3.0 of modification to submitted by Spectrum Research and Testing
Laboratory, Inc.

Respectfully,

Marco Ma
(Name, Surname)

General Manager
(Position/Title)

Effective Dates :

From June.9.1999 to Dec.31.1999

DATE : June.9.1999

5. CONDUCTED POWER LINE TEST

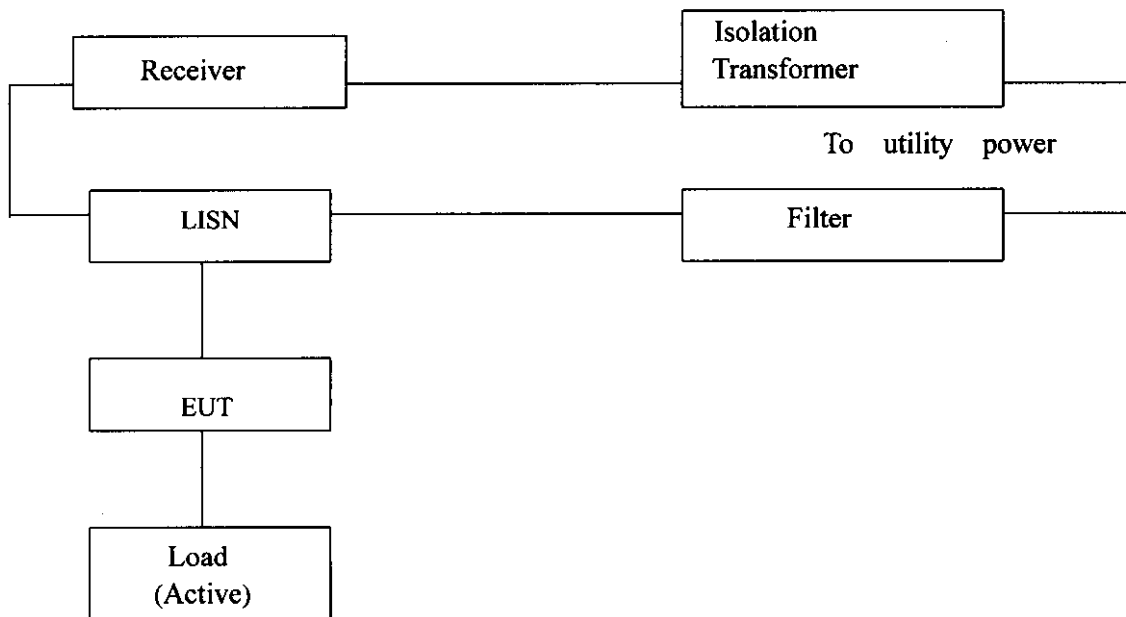
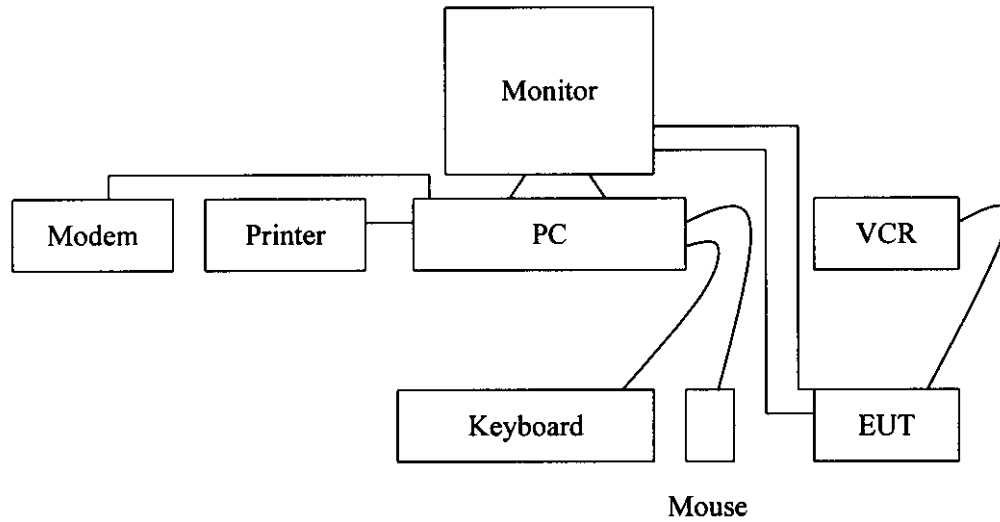
5.1 TEST EQUIPMENT

The following test equipment were used during the conducted power line test :

EQUIPMENT/ FACILITIES	SPECIFICATIONS	MANUFACTURER	MODEL/ SERIAL#	DATE OF CAL. & CAL. CENTER	DUE DATE	FINAL TEST
SPECTRUM ANALYZER	9 KHz TO 1 GHz	HP	8590L/ 3624A01317	AUGUST 1998 ETC	1Y	
EMI TEST RECEIVER	9 KHz TO 30 MHz	ROHDE & SCHWARZ	ESHS30/ 826003/008	AUGUST 1998 ETC	1Y	√
LISN	50 uH, 50 ohm	SOLAR ELECTRONICS	9252-50- R24-BNC/ 951315	AUGUST 1998 ETC	1Y	√
LISN	50uH, 50 ohm	SOLAR ELECTRONICS	9252-50- R24-BNC/ 951318	AUGUST 1998 ETC	1Y	√
SIGNAL GENERATOR	9 KHz TO 1080 MHz	ROHDE & SCHWARZ	SMY01/ 841104/019	APRIL 1999 ETC	1Y	√
POWER CONVERTER	0 TO 300 VAC VAC 47-500 Hz	AFC	AFC-1KW/ 850510	MARCH 1999 SRT	1Y	√

5.2 TEST PROCEDURE

The EUT was tested according to ANSI C63.4-1992. The frequency spectrum from 0.45 MHz to 30 MHz was investigated. The LISN used was 50 ohm/50 uHenry as specified by SECTION 5.1 of ANSI C63.4-1992. Cables and peripherals were moved to find the maximum emission levels for each frequency.

5.3 TEST SETUP

5.4 CONFIGURATION OF THE EUT

The EUT was configured according to ANSI C63.4 - 1992. All interface ports were connected to the appropriate peripherals. All peripherals and cables are listed below.

A. EUT

DEVICE	MANUFACTURER	MODEL #	REC'D
TV BOX	DIGIMEDIA TECHNOLOGIES CO., LTD.	ATV-3000 PRO	OLYATV3000

B. INTERNAL DEVICES

DEVICE	MANUFACTURER	MODEL #	REC'D / Doc
N/A			

C. PERIPHERALS

DEVICE	MANUFACTURER	MODEL # SERIAL #	FCCID / DoC	CABLE
MONITOR	DTK	CDD-1401	HG7CDD-1401	1.8m unshielded power cord 1.2 shielded data cable (S2)
PRINTER	HP	2225C	DSI6XU2225	1.8m unshielded power cord 1.2 shielded data cable (S2)
MODEM	SMARTEAM	1200AT	EF56A51200AT	1.8m unshielded power cord 1.2 shielded data cable (S2)
KEYBOARD	COMPAQ	286220-AB5	AQ6-71Z15	1.8m unshielded data cable
MOUSE	LOGITECH	M-S34	DZL210472	1.8m unshielded data cable
PC	COMPAQ	3431	EUN3431	1.8m unshielded data cable
VCR	RCA	VR720HF	ACJ927092AHS	1.2m unshielded power cord
ADAPTOR (110V)	SINCHO	SCP48-90850	N/A	1.8m unshielded power cord
ADAPTOR (2300V)	SINCHO	SCP48-09085T	N/A	1.8m unshielded power cord

- REMARK :

- (1). Cable - uns : Unshielded
 s : Shielded
 S1 : Single point shielding
 S2 : 360° shielding
 S3 : Double point shielding

- (2). Cables - all 1m or greater in length – bundled according to ANSI C63.4 – 1992.

5.5 EUT OPERATING CONDITION

Operating condition is according to ANSI C63.4 - 1992.

1. EUT power on.
2. Mode 1 : Instant view the TV on PC monitor.
Mode 2 : Video function under VIDEO/SVIDEO status.
Mode 3 : Video function under TV/CATV status.
3. Test with PC
CPU : Pentium 166MMX, clock chip: 66MHz
Resolution : 1024 * 768

5.6 CONDUCTED POWER LINE EMISSION LIMIT

FREQUENCY RANGE (MHz)	CLASS A	CLASS B
0.45 - 1.705	1000 uV	250 uV
1.705 - 30	3000 uV	250 uV

NOTE : In the above table, the tighter limit applies at the band edges.

5.7 CONDUCTED POWER LINE TEST RESULT

The frequency spectrum from 0.45 MHz to 30 MHz was investigated.
All readings are quasi-peak values with a resolution bandwidth
of 9 KHz.

Temperature : 25 °CHumidity : 41 %RH**QUASI-PEAK**

FREQUENCY (MHz)	LINE1 (uV)	LINE2 (uV)	LIMIT (uV)
0.45	14.79	*	250
0.54	*	50.70	250
1.03	7.673	23.44	250
6.29	6.026	7.499	250
10.7	41.69	6.166	250
23.7	43.65	51.88	250

- REMARKS :** (1). * = Measurement does not apply for this frequency
(2). Uncertainty in conducted emission measured is <+/-2dB
(3). Any departure from specification : N/A
(4). Model 1

SIGNED BY TESTING ENGINEER : Liki Wu

5.7 CONDUCTED POWER LINE TEST RESULT

The frequency spectrum from 0.45 MHz to 30 MHz was investigated.
All readings are quasi-peak values with a resolution bandwidth
of 9 KHz.

Temperature : 25 °C

Humidity : 41 %RH

QUASI-PEAK

FREQUENCY (MHz)	LINE1 (uV)	LINE2 (uV)	LIMIT (uV)
0.45	53.09	59.57	250
0.76	21.63	30.20	250
1.01	18.40	24.27	250
3.65	2.884	4.677	250
6.33	6.095	12.74	250
11.4	7.674	12.45	250
23.8	12.16	10.12	250

- REMARKS :** (1). * = Measurement does not apply for this frequency
 (2). Uncertainty in conducted emission measured is <+/-2dB
 (3). Any departure from specification : N/A
 (4). Model 2

SIGNED BY TESTING ENGINEER :

Kiki Wu

5.7 CONDUCTED POWER LINE TEST RESULT

The frequency spectrum from 0.45 MHz to 30 MHz was investigated. All readings are quasi-peak values with a resolution bandwidth of 9 KHz.

Temperature : 25 °CHumidity : 41 %RH**QUASI - PEAK**

FREQUENCY (MHz)	LINE1 (uV)	LINE2 (uV)	LIMIT (uV)
0.45	53.09	59.57	250
0.76	22.13	30.90	250
1.03	18.20	23.71	250
5.16	5.495	7.943	250
6.26	6.607	10.00	250
24.0	29.17	11.22	250

- REMARKS :** (1). * = Measurement does not apply for this frequency
(2). Uncertainty in conducted emission measured is <+/-2dB
(3). Any departure from specification : N/A
(4). Model 3

SIGNED BY TESTING ENGINEER : K. Ki Wu

6. RADIATED EMISSION TEST**6.1 TEST EQUIPMENT**

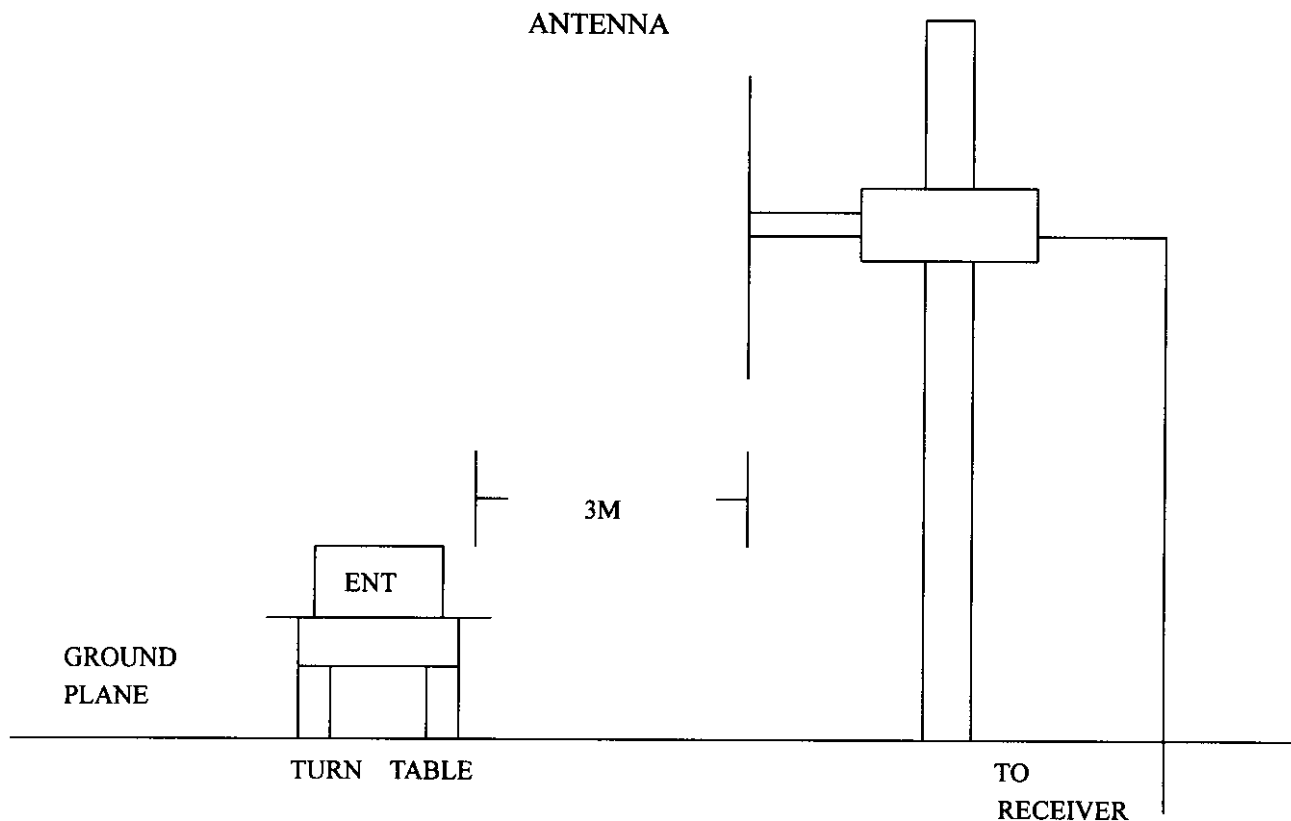
The following test equipment were used during the radiated emission test :

EQUIPMENT / FACILITIES	SPECIFICATIONS	MANUFACTURER	MODEL # / SERIAL #	DATE OF CAL. & CAL. CENTER	DUE DATE	FINAL TEST
RECEIVER	20 MHz TO 1000 MHz	R & S	ESVS30/ 841977/003	APRIL 1999 ETC	1Y	√
SPECTRUM ANALYZER	100 Hz TO 1500 MHz	HP	8568B/ 3019A05294	OCT. 1998 ETC	1Y	
SPECTRUM ANALYZER	9 KHz TO 22 GHz	HP	8593E/ 3322A00670	APRIL 1999 ETC	1Y	
SPECTRUM ANALYZER	100 Hz TO 1000 MHz	IFR	A-7550/ 2684/1248	JULY 1998 ETC	1Y	
SIGNAL GENERATOR	9 KHz TO 1080 MHz	ROHDE & SCHWARZ	SMY01/ 841104/019	APRIL 1999 ETC	1Y	√
DIPOLE ANTENNA	28 MHz TO 1000 MHz	EMCO	3121C/ 9003-534	MARCH 1999 SRT	1Y	
DIPOLE ANTENNA	28 MHz TO 1000 MHz	EMCO	3121C/ 9611-1239	SEP. 1998 SRT	1Y	
BI-LOG ANTENNA	26 MHz TO 2000 MHz	EMCO	3142/ 9608-1073	SEP. 1998 SRT	1Y	√
BI-LOG ANTENNA	26 MHz TO 1100 MHz	EMCO	3143/ 9509-1152	SEP. 1998 SRT	1Y	
PRE-AMPLIFIER	0.1 MHz TO 1300 MHz	HP	8447D/ 2944A08402	APRIL 1999 ETC	1Y	
PRE-AMPLIFIER	0.1 MHz TO 1300 MHz	HP	8447D/ 2944A06412	AUGUST 1998 ETC	1Y	
HORN ANTENNA	1 GHz TO 18 GHz	EMCO	3115/ 9012-3619	JAN. 1999 EMCO	1Y	

6.2 TEST PROCEDURE

- (1).The EUT was tested according to ANSI C63.4-1992. The radiated test was performed at SRT lab's open site. this site is on file with the FCC laboratory division, reference 31040/SIT.
- (2).The EUT, peripherals were put on the turntable which table size is 1m x 1.5 m, table high 0.8 m. All set up is according to ANSI C63.4-1992.
- (3).The frequency spectrum from 30 MHz to 1 GHz was investigated. All readings from 30 MHz to 1 GHz are quasi-peak values with a resolution bandwidth of 120 KHz. All readings are above 1 GHz, peak values with a resolution bandwidth of 1 MHz. Measurements were made at 3 meters.
- (4). The antenna high were varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (5). The antenna polarization : Vertical polarization and horizontal polarization.

6.3 RADIATED TEST SET-UP

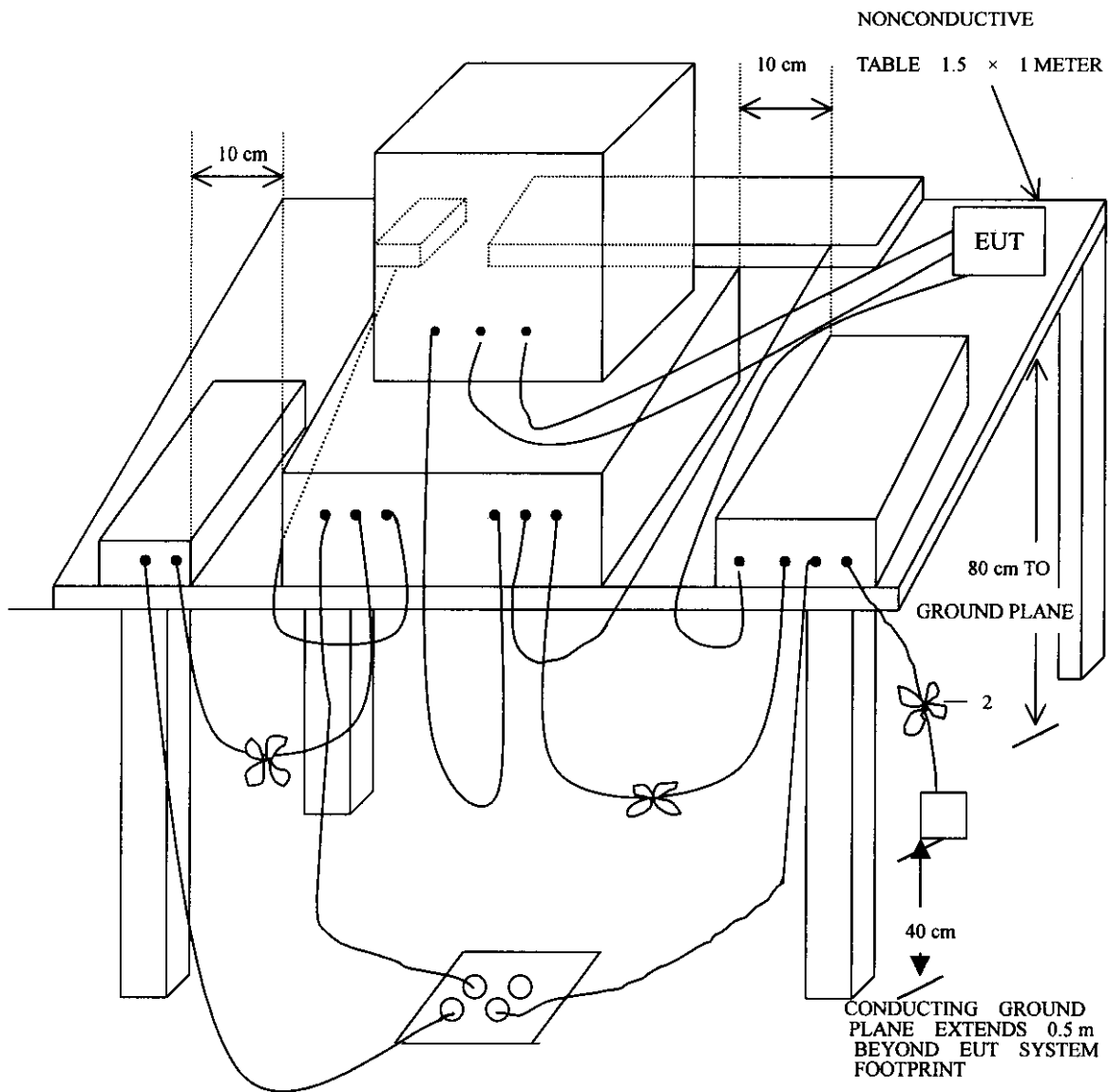


6.3 RADIATED TEST SET-UP

ANSI

ELECTRICAL AND ELECTRONIC EQUIPMENT IN THE RANGE OF 9 KHz TO 40 GHz

C63.4-1992



6.4 CONFIGURATION OF THE THE EUT

Same as section 4.4 of this report

6.5 EUT OPERATING CONDITION

Same as section 4.5 of this report.

6.6 RADIATED EMISSION LIMIT

All emission from a digital device, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strength specified below :

CLASS B

FREQUENCY (MHz)	DISTANCE (m)	FIELDS STRENGTH (uV/m)
30 - 88	3	100
88 - 216	3	150
216 - 960	3	200
ABOVE 960	3	500

CLASS B (OPEN CASE)

FREQUENCY (MHz)	DISTANCE (m)	FIELDS STRENGTH (uV/m)
30 - 88	3	199.5
88 - 216	3	298.5
216 - 960	3	398.1

CLASS A

FREQUENCY (MHz)	DISTANCE (m)	FIELDS STRENGTH (uV/m)
30 - 88	3	316.3
88 - 216	3	473.2
216 - 960	3	613.0
ABOVE 960	3	1000.0

- NOTE** : 1. In the emission tables above, the tighter limit applies at the band edges.
2. Distance refers to the distance between measuring instrument, antenna, and the closest point of any part of the device or system.

6.7 RADIATED EMISSION TEST RESULT

The frequency spectrum from 30 MHz to 1 GHz was investigated. All readings from 30 MHz to 1 GHz are quasi-peak values with a resolution bandwidth of 120 KHz. All readings are above 1 GHz, peak values with a resolution bandwidth of 1 MHz. Measurements were made at 3 meters.

Temperature : 29 °CHumidity : 45 %RH

FREQ. (MHz)	FACTOR (dB)	ANT. FACTOR (dB/m)	READING (dBuV)		EMISSION (uV/m)		LIMITS (uV/m)
			HORIZ	VERT	HORIZ	VERT	
47.4632	0.4	10.8	22.4	*	47.86	*	100
59.6462	0.7	8.9	*	24.3	*	49.55	100
66.6684	0.8	8.2	24.3	*	46.24	*	100
137.6468	1.0	11.7	*	20.4	*	45.19	150
150.6528	1.1	9.1	24.1	20.5	51.88	34.28	150
178.6461	1.1	10.5	*	21.9	*	47.32	150
197.4863	1.2	12.0	20.6	*	48.98	*	150

- REMARKS** :
- (1). *= Measurement does not apply for this frequency.
 - (2). Uncertainty in radiated emission measured is ± 4 dB
 - (3). Any departure from specification : N/A
 - (4). Factor will include cable loss and correction factor.
 - (5). Sample calculation

$$20 \log (\text{emission}) \text{ uV/m} = \text{Factor(dB)} + \text{Ant. factor(dB/m)} + \text{reading(dBuV)}$$
 - (6). Model 1

SIGNED BY TESTING ENGINEER :

kiki Wu

6.7 RADIATED EMISSION TEST RESULT

The frequency spectrum from 30 MHz to 1 GHz was investigated. All readings from 30 MHz to 1 GHz are quasi-peak values with a resolution bandwidth of 120 KHz. All readings are above 1 GHz, peak values with a resolution bandwidth of 1 MHz. Measurements were made at 3 meters.

Temperature : 29 °CHumidity : 45 %RH

FREQ. (MHz)	FACTOR (dB)	ANT. FACTOR (dB/m)	READING (dBuV)		EMISSION (uV/m)		LIMITS (uV/m)
			HORIZ	VERT	HORIZ	VERT	
47.5655	0.5	10.7	*	22.3	*	47.32	100
59.2366	0.7	8.9	25.2	*	54.95	*	100
94.2661	0.8	8.7	24.3	*	48.98	*	150
145.9413	1.1	10.3	*	19.8	*	36.31	150
146.5669	1.1	10.1	23.9	*	56.89	*	150
201.6754	1.2	12.3	*	18.3	*	38.90	150

- REMARKS :**
- (1). *= Measurement does not apply for this frequency.
 - (2). Uncertainty in radiated emission measured is <+/-4dB
 - (3). Any departure from specification : N/A
 - (4). Factor will include cable loss and correction factor.
 - (5). Sample calculation

$$20 \log (\text{emission}) \text{ uV/m} = \text{Factor(dB)} + \text{Ant. factor(dB/m)} + \text{reading(dBuV)}$$
 - (6). Model 2

SIGNED BY TESTING ENGINEER :

Kiki Wn

6.7 RADIATED EMISSION TEST RESULT

The frequency spectrum from 30 MHz to 1 GHz was investigated. All readings from 30 MHz to 1 GHz are quasi-peak values with a resolution bandwidth of 120 KHz. All readings are above 1 GHz, peak values with a resolution bandwidth of 1 MHz. Measurements were made at 3 meters.

Temperature : 29 °CHumidity : 45 %RH

FREQ. (MHz)	FACTOR (dB)	ANT. FACTOR (dB/m)	READING (dBuV)		EMISSION (uV/m)		LIMITS (uV/m)
			HORIZ	VERT	HORIZ	VERT	
47.6566	0.5	10.7	*	23.5	*	54.33	100
58.1648	0.7	9.1	22.8	*	42.66	*	100
75.6889	0.7	7.9	*	24.5	*	45.19	100
95.5666	0.8	8.7	23.5	23.6	44.67	45.19	150
105.4170	0.8	9.1	23.4	*	46.24	*	150
145.1132	1.1	10.5	*	31.8	*	46.77	150
145.5862	1.1	10.4	24.5	*	63.10	*	150

- REMARKS :**
- (1). *= Measurement does not apply for this frequency.
 - (2). Uncertainty in radiated emission measured is <+/-4dB
 - (3). Any departure from specification : N/A
 - (4). Factor will include cable loss and correction factor.
 - (5). Sample calculation

$$20 \log (\text{emission}) \text{ uV/m} = \text{Factor(dB)} + \text{Ant. factor(dB/m)} + \text{reading(dBuV)}$$
 - (6). Model 3

SIGNED BY TESTING ENGINEER :

