Exhibit C ..... Measurement Report

FCC Part 15 Subpart B EMI TEST REPORT

of

E.U.T. : RF Switch

MODEL : 15-1212

FCC ID. : AAO15-1212

for

APPLICANT : RadioShack A Division of Tandy Corporation

ADDRESS : 100 Throckmorton St., Ste. 1300, Fort Worth, TX

Test Performed by

ELECTRONICS TESTING CENTER, TAIWAN
NO. 8 LANE 29, WENMIMG ROAD,
LOSHAN TSUN, KWEISHAN HSIANG,
TAOYUAN, TAIWAN, R.O.C.

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Report Number : ET87R-04-014

TEST REPORT CERTIFICATION

Applicant : RadioShack A Division of Tandy Corporation
100 Throckmorton St., Ste. 1300, Fort Worth, TX

Manufacturer : BIWAVE ELECTRONICS, INC.
149-28 KEELUNG ROAD SEC. 2, TAIPEI 110, TAIWAN, R.O.C.

Description of EUT :

a) Type of EUT : RF Switch

b) Trade Name : N/A

c) Model No. : 15-1212

d) Power Supply : DC 5V

Regulation Applied : FCC Rules and Regulations Part 15 Subpart B (1996)

I HEREBY CERTIFY THAT: The data shown in this report were made in accordance with the procedures given in ANSI C63.4, and the energy emitted by the device was founded to be within the limits applicable. I assume full responsibility for accuracy and completeness of these data.

Note: 1. The result of the testing report relate only to the item tested.
2. The testing report shall not be reproduced expect in full, without the written approval of ETC.

Issued Date : Mar. 27, 1998

Test Engineer : K. C. Chen
(K. C. Chen)

Approve & Authorized Signer : Will Yauo
Will Yauo, Supervisor
EMI Test Site of ELECTRONICS TESTING CENTER, TAIWAN

1 GENERAL INFORMATION

1.1 Product Description

a) Type of EUT : RF Switch

b) Trade Name : N/A

c) Model No. : 15-1212

d) Power Supply : DC 5V

1.2 Characteristics of Device

The RF Switch is intended for reception of video transmission. It modulate video signal to the standard out channel 3 or 4. The Video signal have nominal 75 Ohm output impedance in NTSC format on channel 3 or 4. And it can auto switch the input signals to TV, that is, when there is a AV signal coming into the AV terminal, it will auto switch to this terminal, otherwise, it will be at "antenna in" position.

1.3 Test Methodology

For RF Switch, both conducted, radiated, conducted RF output signal and spurious level and transfer switch isolation testing were performed according to the procedures in ANSI C63.4(1992).

1.4 Test Facility

The open area test site and conducted measurement facility used to collect the radiated data is located on the roof top of Building at No.34, 5 Lirn, Din Fu Tsun, Lin Kou, Taipei, Taiwan, R.O.C.

This site has been fully described in a report submitted to your office, and accepted in a letter dated Feb. 10 , 1997.

2 LIMITATIONS AND LABELING REQUIREMENT

2.1 Definition

Unintentional radiator:
A device that intentionally generates and radio frequency energy for use within the device, or that sends radio frequency signals by conduction to associated equipment via connecting wiring, but which is not intended to emit RF energy by radiation or induction.

Class A Digital Device:
A digital device which is marketed for use in commercial or business environment; exclusive of a device which is market for use by the general public, or which is intended to be used in the home.

Class B Digital Device :
A digital device which is marketed for use in a residential environment notwithstanding use in a commercial, business of industrial environment. Example of such devices that are marketed for the general public.

Note : A manufacturer may also qualify a device intended to be marketed in a commercial, business, or industrial environment as a Class B digital device, and in fact is encouraged to do so, provided the device complies with the technical specifications for a Class B Digital Device. In the event that a particular type of device has been found to repeatedly cause harmful interference to radio communications, the Commission may classify such a digital device as a Class B Digital Device, Regardless of its intended use.

2.2 Limitation Requirement

(1) Conducted Emission Limits

For unintentional device, according to § 15.107, Line Conducted Emission Limits is as following:

Class B Line Conducted Emission Limits :

Frequency MHz	Emissions μV	Emissions dBμV
0.45 - 30.0	250	48.0

Class A Line Conducted Emission Limits :

Frequency MHz	Emissions μ V	Emissions dB μ V
0.45 - 1.705	1000	60.0
1.705 - 30.0	3000	69.5

(2) Radiated Emission Requirement

Class B Radiated Emission Limits :

Frequency MHz	Distance Meters	Radiated dB μ V/m	Radiated μ V/m
30 - 88	3	40.0	100
88 - 216	3	43.5	150
216 - 960	3	46.0	200
above 960	3	54.0	500

For unintentional class A devices, according to § 15.109(a), the field strength of radiated emissions from unintentional radiators at a distance of 10 meters shall not exceed the following values:

Class A Radiated Emission Limits :

Frequency MHz	Distance Meters	Radiated dB μ V/m	Radiated μ V/m
30 - 88	10	39.0	90
88 - 216	10	43.5	150
216 - 960	10	46.4	210
above 960	10	49.5	300

(3) RF Output Signal Requirement

For TV interface devices, according to § 15.115(b)(1), At any RF output terminal, the maximum measured RMS voltage, in microvolt, corresponding to the peak envelope power of the modulated signal across a resistance (R in Ohms) matching the rated output impedance of the TV interface device, shall not exceed the following :

a). For cable system terminal device or a TV interface device used with a master antenna, 692.8 times the square root of R for video signal and 155 times the square root R for

audio signal.

b). For all other TV interface devices, 346.4 times the square root of R for video signal and 77.5 times the square root of R for audio signal.

(4) RF Output Spurious Requirement

For TV interface devices, according to § 15.115(b)(2), at any RF output terminal, peak power envelope, across R (same as the R in RF output signal), of any emission appearing on frequencies removed by more than 4.6 MHz below or 7.4 MHz above the video carrier frequency shall not exceed the following :

a). For cable system terminal device or a TV interface device used with a master antenna, 692.8 times the square root of R.

b). For all other TV interface devices, 10.95times the square root of R.

(5) Isolation of Transfer Switch Requirement

For TV interface devices, according to § 15.115(c)(ii), isolation of transfer switch shall not exceed 0.346 times the square root of R (same as the R in RF output signal).

2.3 Labeling Requirement

The device shall bear the following statement in a conspicuous location on the device :

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions : (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

2.4 User Information

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual.

The Federal Communications Commission Radio Frequency Interference Statement includes the following paragraph.

This equipment has been tested and found to comply with the limits for a Class B Digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio / TV technician for help.

3. SYSTEM TEST CONFIGURATION

3.1 Justification

The system was configured for testing in EUT is working.

The EUT was rotated to obtain the maximum level of radiated emissions .The antenna was varied in height above ground to obtain the maximum signal strength. The antenna height was varied from 1 to 4 meters.

3.2 Device for Tested System

Device	Manufacture	Model / FCC ID.	Description
RF Switch*	Biwave Electronics	15-1212 AAO15-1212	Unshielded Signal Cable 2m with core Coaxial Cable 0.43m
Signal Generator	ANRITSU	MG318A N/A	Power Cable 1.8m Coaxial Cable 1m
DC Power Supply	Good Will	3030	Power cord 1.8m

Remark "*" means equipment under test.

4 RADIATED EMISSION MEASUREMENT

4.1 Description for Radiated Emission Measured

According to § 15.33 (b), radiated emission frequency was measured from 30 MHz to 5GHz.

The field strength measurements of the receiver under test which was placed on an wooden turntable 0.8 meter in height. The receiving antenna polarized horizontally was varied from 1 to 4 meters and the wooden turntable was rotated through 360 degrees to obtain the highest reading on the field strength meter or on the display of the spectrum analyzer. And also, each emission was to be maximized by changing the orientation of the equipment under test. These measurements were repeated with the receiving antenna polarized vertically.

A VITS test signal of 5V is applied.

According to FCC rule, for device submitted for notification in this report, the limit below 1 GHz is quasi peak and above 1 GHz is both peak and average applied. It is considered that the emission level is also in compliance with average limit when the measurement with peak function meets average limit. *All data listed in this section is derived with peak function detector.*

The following data lists the significant emission frequencies, measured levels, correction factor (includes cable and antenna corrections),the corrected reading, the limit , and margin. Explanation of the Correction Factor is given in paragraph 4.3.

4.2 Radiated Emission Data

Operation Condition : A VITS test signal of 5V is applied.
Test Date: Mar. 22, 1998 Temperature : 26 ℃ Humidity: 66%

A. Channel 3 (frequency : 61.25 Hz)

Frequency (MHz)	Meter Reading @3m (dBuV) H	Meter Reading @3m (dBuV) V	Corrected Factor (dB)	Result (dBuV/m) H	Result (dBuV/m) V	Limit @3m (dBuV/m)	Margin (dB)
61.249	41.6	34.8	-16.3	25.3	18.5	40.0	-14.7
122.501	40.0	31.4	-11.3	28.7	20.1	43.5	-14.8
Above 300	--	--	--	--	--	--	--

B. Channel 4 (frequency : 67.25 MHz)

Frequency (MHz)	Meter Reading @3m (dBuV) H	Meter Reading @3m (dBuV) V	Corrected Factor (dB)	Result (dBuV/m) H	Result (dBuV/m) V	Limit @3m (dBuV/m)	Margin (dB)
67.283	46.4	44.1	-16.9	29.5	27.2	40.0	-10.5
134.696	44.5	40.6	-11.3	33.2	29.3	43.5	-10.3
Above 300	--	--	--	--	--	--	--

Note :

1. Remark "—" means that the emissions from EUT are too weak to be measured.

4.3 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

RESULT = READING + CORR. FACTOR

where CORR. FACTOR = Antenna FACTOR + Cable FACTOR

4.4 Equipment for Radiation Measurement

The following test equipment are used during the radiated test

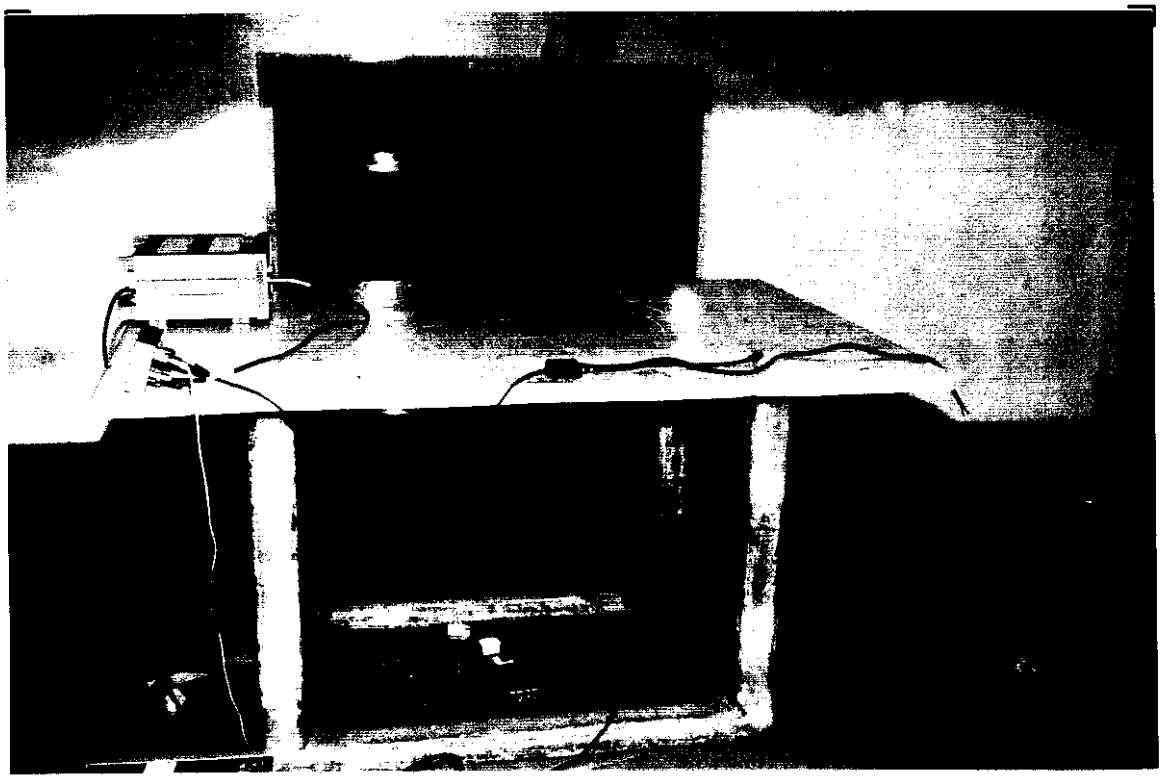
Equipment	Manufacturer	Model No.	Next Cal. Date
Spectrum Analyzer	Hewlett-Packard	8568B	Oct. 16, 1998
Quasi Peak Adapter	Hewlett-Packard	85650A	Oct. 07, 1998
Pre-selector	Hewlett-Packard	85685A	Oct. 16, 1998
Pre-Amplifier	Hewlett-Packard	8447D	Oct. 16, 1998
Log Periodic Antenna	EMCO	3146	Dec.10, 1999
Biconical Antenna	EMCO	3108	Jan.13, 1999

4.5 Measuring Instrument Setup

Explanation of measuring instrument setup when respective function is used in any frequency band is as following :

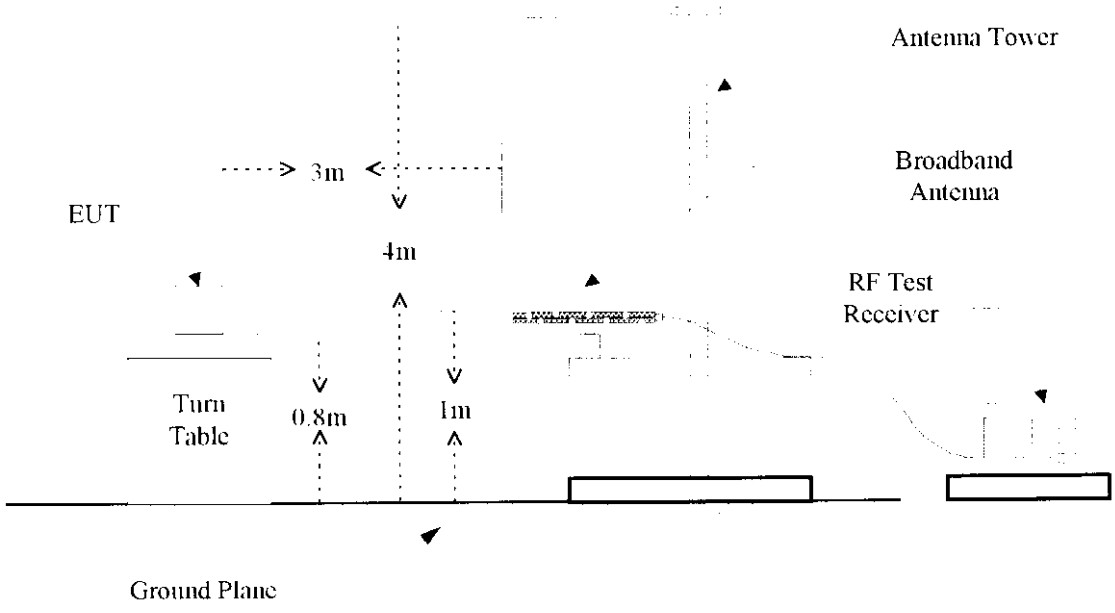
Frequency Band (MHz)	Instrument	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	RF Test Receiver	Quasi Peak	120 kHz	N/A
	Spectrum Analyzer	Peak	100 kHz	100 kHz
Above 1000	Spectrum Analyzer	Peak	1 MHz	1 MHz
	Spectrum Analyzer	Average	1 MHz	300 Hz

4.6 Photos of Radiation Measuring Setup



4.7 Open Field Test Site Setup Diagram

Radiated Emission's Frequency Below 1 GHz



5 CONDUCTED EMISSION MEASUREMENT

5.1 Description

This EUT is excused from investigation of conducted emission, for it is powered by battery only. According to § 15.107 (d), measurements to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines.

6 RF OUTPUT LEVEL MEASUREMENT

6.1 Measurement Description

According to section 12.2.5 of ANSI C63.4, the output signal level is the maximum voltage level present at the output terminal of a TV interface device on a particular frequency during normal use of the device.

A VITS test signal of 5V is applied.

6.2 Data of Measurement

Test Date : Mar. 23, 1998 Temperature : 25 °C Humidity: 63%

Operation Condition : VITS 5V

Channel	Frequency Measured (MHz)		Meter Reading (dBm)		Insertion Loss (dB)	Result (uV)		Limit (uV)	
	Visual	Aural	Visual	Aural		Visual	Aural	Visual	Aural
CH 3	61.29	56.86	-40.9	-56.1	0.1	2497.6	434.0	3000	671
CH 4	67.36	71.86	-40.9	-56.5	0.1	2497.6	414.5	3000	671

Note : The audio channel showed above table is the one generating higher output level of tow audio channels.

6.3 Calculation of Data Measured

The measuring data for output signal level is calculated as following formula :

$$\text{Result (uV)} = \left[10^{\frac{(\text{Reading+Insertion Loss})}{10}} \times 75 \times 10^{3} \right]^{\frac{1}{2}} \times 10^{6}$$

6.4 Equipment for RF Output Level Measurement

Equipment	Manufacturer	Model No.	Next Cal. Date
RF Test Receiver	Hewlett-Packard	8546A	Jun. 10, 1998

The parameters of instrument is set as following while measurement is performed :

Resolution Bandwidth	:	100 KHz
Video Bandwidth	:	100 KHz
Frequency Span	:	10 MHz
Sweep Time	:	200 ms
Function	:	Peak

7 CONDUCTED SPURIOUS EMISSION MEASUREMENT

7.1 Description of Measurement

According to section 12.2.5 of ANSI C63.4, the output signal level is the maximum voltage level present at the output terminal of a TV interface device on a particular frequency during normal use of the device.

A VITS test signal of 5V is applied.

7.2 Data of Measurement

Test Date : Mar. 23, 1998 Temperature : 25 ℃ Humidity: 63%

A. Channel :3

Frequency MHz	Meter Reading dBm	ATT. dB	Amplifier Gain dB	Pad Loss dB	Result in dBm	Result in uV	Limit in uV
47.90	-87.1	6	0	0	-81.1	24.1	95
74.85	-87.8	6	0	0	-81.8	22.3	95
94.85	-87.8	6	0	0	-81.8	22.3	95

Note :

1. Measuring instrument input impedance is selected with 75 Ohms when perform this item of measurement and a built in pre-amplifier is active.

B. Channel :4

Frequency MHz	Meter Reading dBm	ATT. dB	Amplifier Gain dB	Pad Loss dB	Result in dBm	Result in uV	Limit in uV
53.90	-85.3	6	0	0	-79.3	29.7	95
80.95	-85.9	6	0	0	-79.9	27.7	95
202.10	-87.8	6	0	0	-81.8	22.3	95

7.3 Calculation of Data Measured

The measuring data for output signal level is calculated as following formula :

$$\text{Result (uV)} = \left[10^{\frac{(\text{Reading+Pad Loss-Amplifier Gain+Att.})}{10}} \times 75 \times 10^{-3} \right]^{\frac{1}{2}} \times 10^{6}$$

7.4 Equipment for Conducted Spurious Measurement

Equipment	Manufacturer	Model No.	Next Cal. Date
RF Test Receiver	Hewlett-Packard	8546A	Jun. 10, 1998

The parameters of Spectrum Analyzer is set as following while measurement is performed :

Resolution Bandwidth : 100 KHz
Video Bandwidth : 100 KHz
Frequency Span : 10 MHz
Sweep Time : 200 ms
Function : Peak

8 ANTENNA TRANSFER SWITCH MEASUREMENT

8.1 Description for measurement

For TV interface devices, according to § 15.115(c)(ii), isolation of transfer switch shall not exceed 0.346 times the square root of R (same as the R in RF output signal).

A VITS test signal of 5V is applied.

8.2 Data of Measurement

Test Date : Mar. 23, 1998 Temperature : 25 °C Humidity: 63%

Output Channel	Meter Reading (dBm)	Corrected Factor (dB)	Result (uV)	Limit (uV)	Margin (uV)
3	-104.7	3	2.3	3.0	0.7
4	-103.1	3	2.7	3.0	0.3

Note :

1. Measuring instrument input impedance is selected with 75 Ohms when perform this item of measurement and a built in pre-amplifier is active.
2. Corrected factor includes matching pad loss or attenuator attenuation (if any), cable loss and amplifier gain (if any), that is :

pad loss + attenuation - amplifier gain

8.3 Result Calculation

$$\text{Result (uV)} = \left[10^{\frac{(\text{Reading+Corrected Factor})}{10}} \times 75 \times 10^{-3} \right]^{\frac{1}{2}} \times 10^{6}$$

8.4 Measuring Instrument

Equipment	Manufacturer	Model No.	Next Cal. Date
RF test Receiver	Hewlett-Packard	8546A	Jun. 10, 1998

The parameters of RF test receiver is set as following while measurement is performed :

Resolution Bandwidth	:	100 KHz
Video Bandwidth	:	100 KHz
Frequency Span	:	1 MHz
Sweep Time	:	200 ms
Function	:	Peak