



# Certificate of Conformity

The products

**EUT** : **Video Distributor & Video Amplifier Series**  
**Trade Name** : **SC&T**  
**Model No.** : **CAX0XXX**

which produced by

**SMART CABLING & TRANSMISSION CORP**  
**10F, No.493, Chung-Cheng Rd., Hsin Tien City,**  
**Taipei County, 231, Taiwan**

Has been tested by Electronics Testing Center, Taiwan ETC  
And was found to comply with the EMC requirements of Directive 2004/108/EC on the basis of

**EN 55013:2001/A1:2003/A2:2006**  
**EN 61000-6-1:2007**  
**IEC 61000-4-2:2008, IEC 61000-4-3:2006/A1:2007,**  
**IEC 61000-4-4:2004, IEC 61000-4-5:2005,**  
**IEC 61000-4-6:2008, IEC 61000-4-11:2004**

Signature  
Will Yauo

Manager of EMC Testing Department II  
Electronics Testing Center, Taiwan



Report Number : 09-05-RBF-070

Date of Issue: Aug. 12, 2009

**Note:1.The results of the Test Report relate only to the items tested.**

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# *EMC*

## *TEST REPORT*

Responsible Party : ***SMART CABLING & TRANSMISSION CORP***  
Manufacturer : ***SMART CABLING & TRANSMISSION CORP***  
Description of Product : ***Video Distributor & Video Amplifier Series***  
Trade Name : ***SC&T***  
Model No. : ***CAX0XXX***  
Test Report File No. : ***09-05-RBF-070***  
Date Test Item Received : ***MAY 09, 2009***  
Date Test Campaign Completed : ***Aug. 12, 2009***  
Date of Issue : ***Aug. 12, 2009***

Test Performed by

ELECTRONICS TESTING CENTER (ETC) , TAIWAN

NO. 34, LIN 5, DING FU TSUN, LINKOU HSIANG,  
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This test report consists of 39 Pages. This test report is the property of ETC, and shall not be reproduced except in full, without the written consent of ETC. ETC hereby returns all rights-in-data to [***SMART CABLING & TRANSMISSION CORP***] for their exclusive legal use.

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## CONTENTS

● EMC TEST REPORT .....	1
● CONTENTS .....	2
1. TEST REPORT CERTIFICATION .....	4
2. GENERAL INFORMATIONS .....	6
2.1 Description of EUT:.....	6
2.2 Related Information of EUT: .....	6
2.3 Tested Configuration: .....	6
2.4 Deviation Record: .....	7
2.5 Modification Record:.....	7
3. SUMMARY OF TEST RESULTS.....	8
3.1 Emissions:.....	8
3.1.1 Conducted Emissions.....	8
3.1.2 Radiated Emissions (Absorbing Clamp)Test Data .....	8
3.1.3 Harmonics Current Emissions .....	8
3.1.4 Voltage Fluctuations and Flicker .....	8
3.2 Immunity.....	9
3.2.1 Immunity Criteria .....	9
3.2.2 Electrostatic Discharge Immunity .....	9
3.2.3 RF Radiated Fields Immunity.....	9
3.2.4 EFT/Burst Immunity.....	9
3.2.5 Surge Immunity .....	10
3.2.6 RF Common Mode Immunity .....	10
3.2.7 Voltage Interruptions and Voltage Dips Immunity .....	10
4. TEST DATA & RELATED INFORMATIONS .....	11
4.1 Emissions:.....	11
4.1.1 Conducted Emissions Test : .....	11
4.1.1.1 Conducted Emissions Test Data: .....	11
4.1.1.2 Conducted Emissions Test Setup Photos : .....	14
4.1.2 Radiated Emission Data(Absorbing Clamp) .....	15
4.1.2.1 Radiated Emissions (Absorbing Clamp) Test Date: .....	15
4.1.2.2 Radiated Emissions (Absorbing Clamp) Test Setup Photos : .....	18
4.1.3 Harmonics Current Emissions Test : .....	19
4.1.3.1 Harmonics Current Emissions Test Data: .....	19
4.1.3.2 Harmonics Current Emissions Test Setup Photos : .....	21
4.1.4 Voltage Fluctuations and Flicker Test : .....	22
4.1.4.1 Voltage Fluctuations and Flicker Test Data: .....	22
4.1.4.2 Voltage Fluctuations and Flicker Test Setup Photos : .....	23

4.2 Immunity: .....	24
4.2.1 Electrostatic Discharge Immunity Test : .....	24
4.2.1.1 Electrostatic Discharge Immunity Test Data: .....	24
4.2.1.2 Electrostatic Discharge Immunity Test Setup Photos : .....	26
4.2.2 RF Radiated Fields Immunity Test : .....	27
4.2.2.1 RF Radiated Fields Immunity Test Data: .....	27
4.2.2.2 RF Radiated Fields Immunity Test Setup Photos : .....	30
4.2.3 EFT/Burst Immunity Test : .....	31
4.2.3.1 EFT/Burst Immunity Test Data: .....	31
4.2.3.2 EFT/Burst Immunity Test Setup Photos : .....	32
4.2.4 Surge Immunity Test : .....	34
4.2.4.1 Surge Immunity Test Data: .....	34
4.2.4.2 Surge Immunity Test Setup Photos : .....	35
4.2.5 RF Common Mode Immunity Test : .....	36
4.2.5.1 RF Common Mode Immunity Test Data: .....	36
4.2.5.2 RF Common Mode Immunity Test Setup Photos : .....	37
4.2.6 Voltage Interruptions and Voltage Dips Immunity Test.....	38
4.2.6.1 Voltage Interruptions and Voltage Dips Immunity Test Data .....	38
4.2.6.2 Voltage Interruptions and Voltage Dips Immunity Test Setup Photos.....	39

## 1. TEST REPORT CERTIFICATION

Client : SMART CABLING & TRANSMISSION CORP  
Address : 10F, No.493, Chung-Cheng Rd., Hsin Tien City, Taipei County, 231,  
Taiwan  
Manufacturer : SMART CABLING & TRANSMISSION CORP  
Address : 10F, No.493, Chung-Cheng Rd., Hsin Tien City, Taipei County, 231,  
Taiwan

EUT : Video Distributor & Video Amplifier Series  
Trade name : SC&T  
Model No. : CAX0XXX

Emission : EN 55013:2001/A1:2003/A2:2006  
Immunity : IEC 61000-4-2:2008  
IEC 61000-4-3:2006/A1:2007  
IEC 61000-4-4:2004  
IEC 61000-4-5:2005  
IEC 61000-4-6:2008  
IEC 61000-4-11:2004  
Regulations applied : EN 55013:2001/A1:2003/A2:2006  
EN 61000-6-1:2007

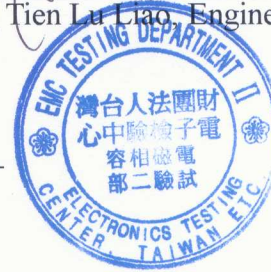
The testing described in this report has been carried out to the best of our knowledge and ability, and our responsibility is limited to the exercise of reasonable care. This certification is not intended to relieve the sellers from their legal and/or contractual obligations. Besides, the "Comment Issues" highlight above is important information for this test report. Responsible must read carefully about the description.

Test Engineer :

Chris Wu, Tien Lu Liao  
( Chris Wu, Engineer ) ( Tien Lu Liao, Engineer )

Check By :

Charles Wang  
( Charles Wang, Supervisor )



Approve &amp; Authorized :

Will Yaw  
Will Yaw, Manager  
EMC Dept. II of ELECTRONICS  
TESTING CENTER, TAIWAN

Laboratory Introduction: Electronics Testing Center, Taiwan is recognized, filed and mutual recognition arrangement as following:

- ① ISO9002 : BSMI, TÜV Product Service
- ② ISO/IEC 17025 : BSMI, CNLA, DGT, NVLAP, CCIBLAC, UL, Compliance
- ③ EN45001 : TÜV Rheinland, NEMKO, FIMKO, SGS
- ④ Filing : FCC, Industry Canada, VCCI
- ⑤ MRA : Australia, Hong Kong, New Zealand, Singapore, USA, Japan, Korea, China, APLAC through CNLA

## 2. GENERAL INFORMATIONS

### 2.1 Description of EUT:

1. Wide bandwidth, video gain compensation amplification
2. Video and Audio level adjustment.(CA101A)
3. HF compensation
4. 10dB adjustable image gain.
5. Sharpness and brightness adjustment.
6. Transmission range: 1000 meters (RG59 coaxial cable)
7. Power supply included

### 2.2 Related Information of EUT:

Power Supply : Adapter Model: ADS-B 050200  
I/P: 100-240V 50~60Hz 0.5A; O/P: 5.0V

Power Adapter :  Nonshielded  Shielded  None, Length: 1.0 m

BNC coaxial cable :  Nonshielded  Shielded  None, Length: 3.0 mx4

\* For more detailed features , please refer to User's Manual.

### 2.3 Tested Configuration:

The EUT connected with other devices.

Following peripheral devices and interface cables were connected during the measurement:

Device	Manufacturer	Model	Description
Video Distributor & Video Amplifier Series	SMART CABLING & TRANSMISSION CORP	CAX0XXX	1.5m Unshielded AC Adapter Power Cord 3.0m Shielded BNC coaxial cablex2
DVD Player	Pioneer	DVP-850AVi	1.82m Unshielded AC Adapter Power Cord
TV	Kolin	KLT-230	1.82m Unshielded AC Adapter Power Cord

Remark “\*” means equipment under test.

**2.4 Deviation Record:**

No modifications were required. (That is the EUT complied with the requirement as tested.)

**2.5 Modification Record:**

No modifications were required. (That is the EUT complied with the requirement as tested.)

### 3. SUMMARY OF TEST RESULTS

#### 3.1 Emissions:

##### 3.1.1 Conducted Emissions

– PASS (Neutral)

Minimum EMI Margin(QP) to the limit: -29.1 dB at 0.282 MHz

– PASS (Line)

Minimum EMI Margin(QP) to the limit: -33.5 dB at 0.263 MHz

##### 3.1.2 Radiated Emissions (Absorbing Clamp)Test Data

– PASS ( Cable )

Minimum EMI Margin to the limit: -14.3 dB at 31.700 MHz

– PASS ( AC Line )

Minimum EMI Margin to the limit: -15.2 dB at 32.700 MHz

– PASS ( AV Line)

Minimum EMI Margin to the limit: -14.3 dB at 31.800 MHz

##### 3.1.3 Harmonics Current Emissions

– PASS

The harmonics current values were under the limits of the class A equipment of the EN 61000-3-2.

##### 3.1.4 Voltage Fluctuations and Flicker

– PASS

The voltage fluctuations and flicker values were under the limits of the EN 61000-3-3 requirements.

## 3.2 Immunity

### 3.2.1 Immunity Criteria

The results of all of the immunity tests performed on the EUT were evaluated according to the following criteria, and according to the manufacturer's specifications for the EUT:

**Performance criterion A :** The EUT continued to operate as intended. No degradation of performance or loss of function was allowed below a performance level specified by the manufacturer, when the EUT was used as intended.

**Performance criterion B :** The EUT continued to operate as intended after the test. No degradation of performance or loss of function was allowed below a performance level specified by the manufacturer, when the EUT was used as intended. During the test, degradation of performance was however allowed. No change of actual operating state or stored data was allowed.

**Performance criterion C:** Temporary loss of function was allowed, provided the function was self recoverable or could be restored by the operation of the controls.

### 3.2.2 Electrostatic Discharge Immunity

- No Degradation of Function

- Distortion of Function

- Error of Function

#### Requirement :Criterion B (or better)

- Satisfies Criterion A

- Satisfies Criterion B

- Satisfies Criterion C

### 3.2.3 RF Radiated Fields Immunity

- No Degradation of Function

- Distortion of Function

- Error of Function

#### Requirement :Criterion A

- Satisfies Criterion A

- Satisfies Criterion B

- Satisfies Criterion C

### 3.2.4 EFT/Burst Immunity

- No Degradation of Function

- Distortion of Function

- Error of Function

#### Requirement :Criterion B(or better)

- Satisfies Criterion A

- Satisfies Criterion B

- Satisfies Criterion C

**3.2.5 Surge Immunity****Requirement :Criterion B (or better)**

- |  |                         |
|--|-------------------------|
| <input checked="" type="checkbox"/> - No Degradation of Function | - Satisfies Criterion A |
| <input type="checkbox"/> - Distortion of Function                | - Satisfies Criterion B |
| <input type="checkbox"/> - Error of Function                     | - Satisfies Criterion C |

**3.2.6 RF Common Mode Immunity****Requirement :Criterion A**

- |  |                         |
|--|-------------------------|
| <input checked="" type="checkbox"/> - No Degradation of Function | - Satisfies Criterion A |
| <input type="checkbox"/> - Distortion of Function                | - Satisfies Criterion B |
| <input type="checkbox"/> - Error of Function                     | - Satisfies Criterion C |

**3.2.7 Voltage Interruptions and Voltage Dips Immunity****Requirement :Criterion A**

- |  |                         |
|--|-------------------------|
| <input checked="" type="checkbox"/> - No Degradation of Function | - Satisfies Criterion A |
| <input type="checkbox"/> - Distortion of Function                | - Satisfies Criterion B |
| <input type="checkbox"/> - Error of Function                     | - Satisfies Criterion C |

## 4. TEST DATA & RELATED INFORMATIONS

### 4.1 Emissions:

#### 4.1.1 Conducted Emissions Test :

##### 4.1.1.1 Conducted Emissions Test Data:

Operating Conditions of The EUT : Operating

Test Date : MAY 25, 2009

Test Specification	EN 55013:2001/A1:2003/A2:2006			
Equipment	Manufacturer	Model No.	Calibration Date	Next Cal. Date
EMI Test Receiver	Rohde & Schwarz	ESCI	2009/02/04	2010/02/04
LISN	Kyoritsu	KNW-403D	2008/10/06	2009/10/06
LISN	EMCO	3850/2	2009/05/07	2010/05/07
Climatic Condition	Ambient Temperature: <u>25</u> °C		Relative Humidity: <u>52</u> %RH	
Power Supply System	AC Power : <u>230</u> Vac <u>50</u> Hz			
Test Set-up	Table-top Equipment			

**Test data see the next pages.**

Mode: Operating

Neutral

Frequency (MHz)	Meter Reading (dBμV)		Factor (dB)	Result (dBμV)		Limit (dBμV)		Margin (dBμV)	
	Q.P	AVG		Q.P	AVG	Q.P	AVG	Q.P	AVG
0.177	28.0	----	0.2	28.2	----	64.6	54.6	-36.4	----
0.240	25.1	----	0.2	25.3	----	62.1	52.1	-36.8	----
0.282	31.4	----	0.2	31.6	----	60.8	50.8	-29.1	----
0.595	22.4	----	0.3	22.7	----	56.0	46.0	-33.3	----
0.728	18.1	----	0.3	18.4	----	56.0	46.0	-37.6	----
10.402	13.7	----	0.8	14.5	----	60.0	50.0	-45.5	----

Mode: Operating

Line

Frequency (MHz)	Meter Reading (dBμV)		Factor (dB)	Result (dBμV)		Limit (dBμV)		Margin (dBμV)	
	Q.P	AVG		Q.P	AVG	Q.P	AVG	Q.P	AVG
0.157	29.2	----	0.2	29.4	----	65.6	55.6	-36.2	----
0.192	27.9	----	0.2	28.1	----	63.9	53.9	-35.8	----
0.263	27.6	----	0.2	27.8	----	61.3	51.3	-33.5	----
0.329	25.2	----	0.3	25.5	----	59.5	49.5	-34.0	----
0.509	21.2	----	0.3	21.5	----	56.0	46.0	-34.5	----
0.634	18.9	----	0.3	19.2	----	56.0	46.0	-36.8	----

Notes: 1) Place of measurement: EMC LAB. of the ETC

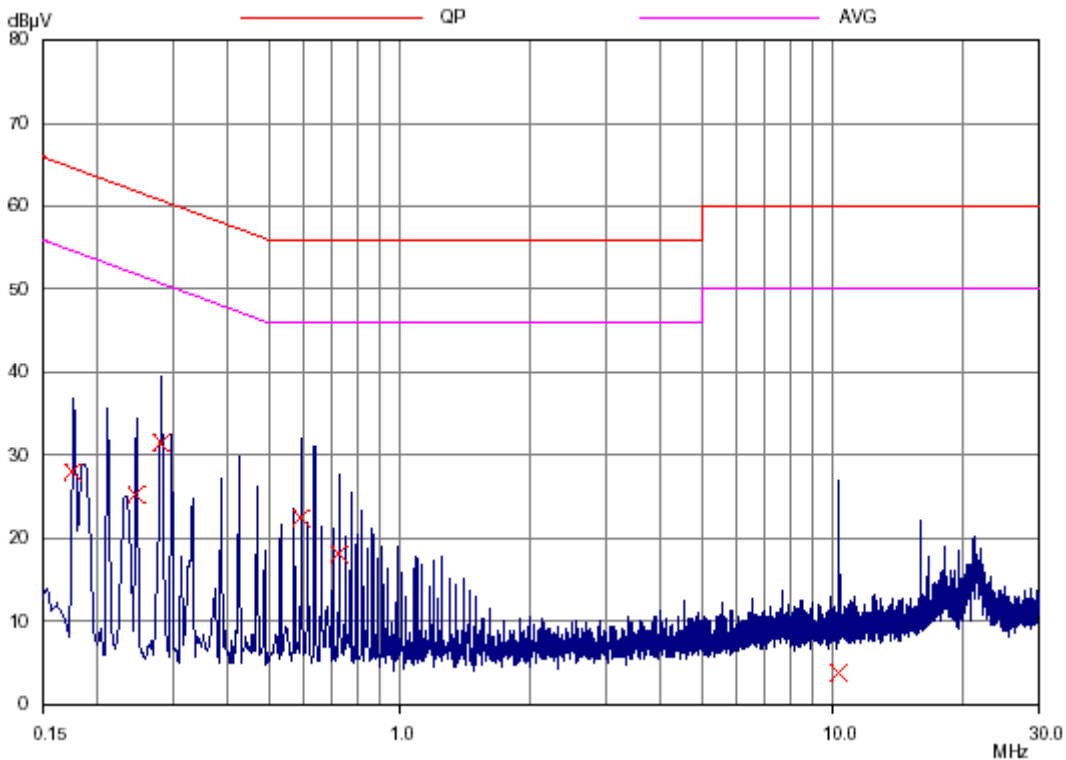
2) The EUT was placed 0.8m above reference ground plane.

3) The symbol of "----" means the Q.P. value is under the limit for AVG. so, the AVG. value doesn't need to be measured.

4) The expanded uncertainty of the conducted emission tests is 2.45 dB.

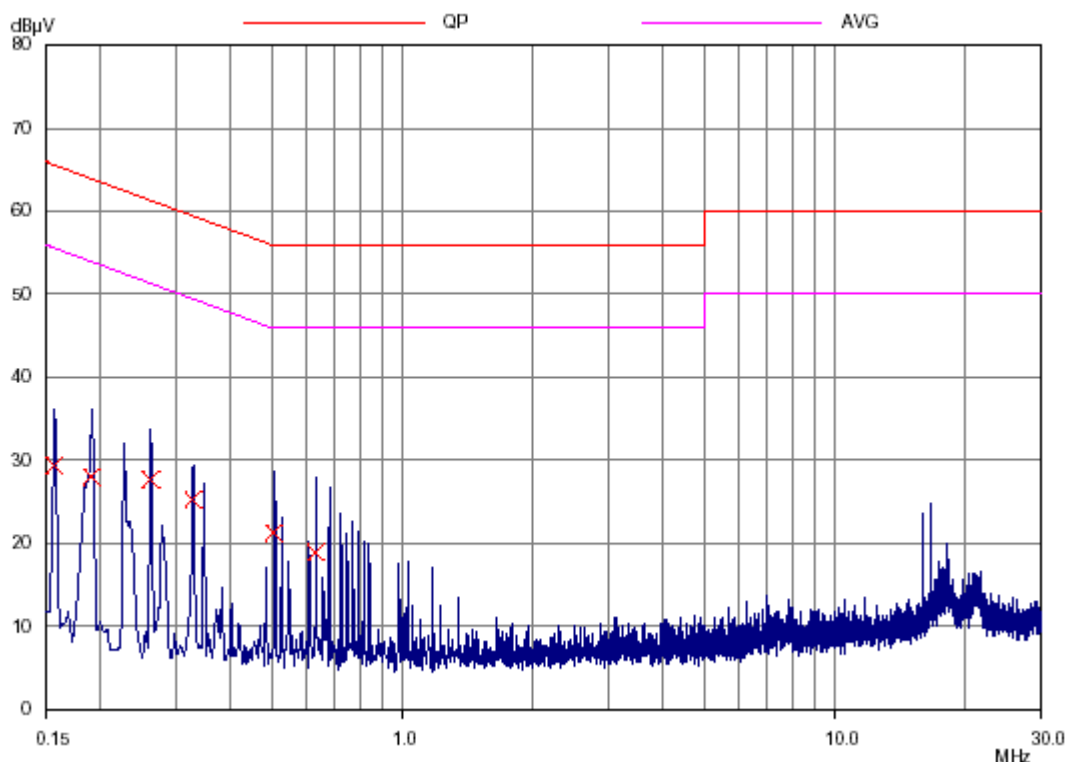
Mode: Operating

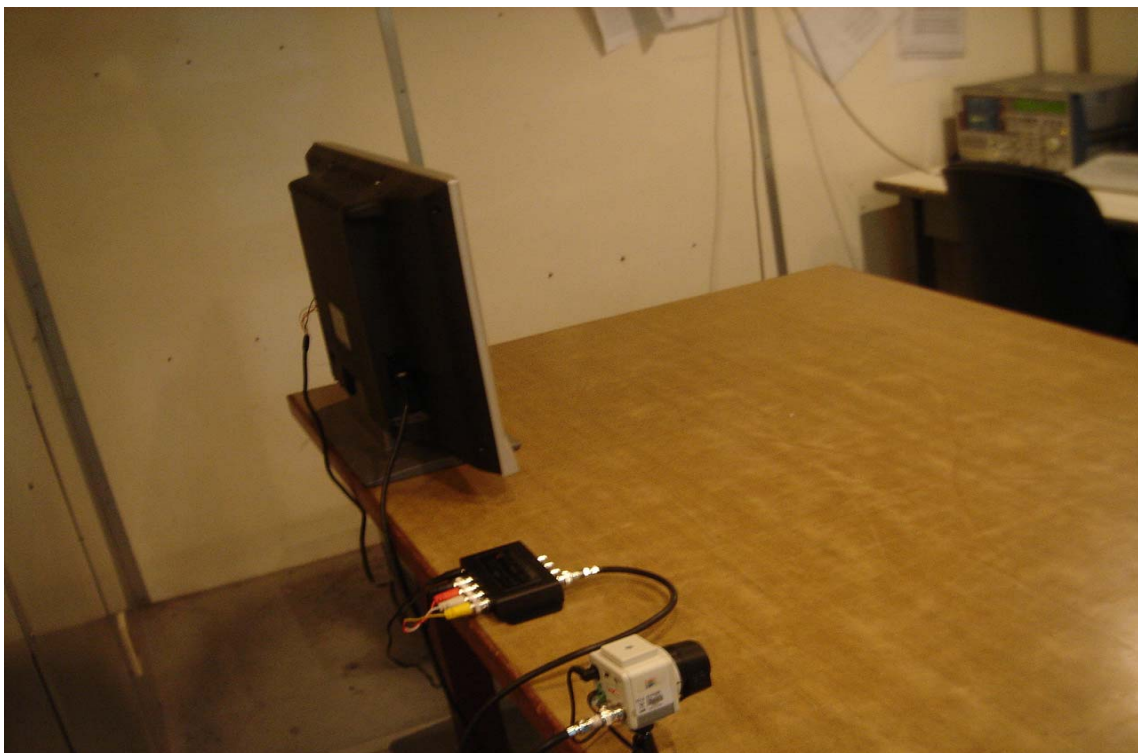
Neutral



Mode: Operating

Line



**4.1.1.2 Conducted Emissions Test Setup Photos :**

## 4.1.2 Radiated Emission Data(Absorbing Clamp)

### 4.1.2.1 Radiated Emissions (Absorbing Clamp) Test Date:

1. Operating Conditions of The EUT : Cable

Test Date : MAY 25, 2009

Test Specification	EN 55013:2001/A1:2003/A2:2006			
Equipment	Manufacturer	Model No.	Calibration Date	Next Cal. Date
EMI Test Receiver	Rohde & Schwarz	ESCI	2009/02/04	2010/02/04
LISN	Kyoritsu	KNW-403D	2008/10/06	2009/10/06
LISN	EMCO	3850/2	2009/05/07	2010/05/07
Absorbing Clamp	Rohde & Schwarz	MDS-21	2009/05/15	2010/05/15
Climatic Condition	Ambient Temperature: <u>25</u> °C		Relative Humidity: <u>67</u> %RH	
Power Supply System	AC Power : <u>230</u> Vac <u>50</u> Hz			
Test Set-up	Table-top Equipment			

Emission Frequency ( MHz )	Meter Reading ( dBuV )		CORR'd Factor ( dB )	Results ( dBpW )		Limit ( dBpW )		Margins ( dB )	
	Q.P	AVG.		Q.P	AVG.	Q.P	AVG.	Q.P	AVG.
31.700	27.2	----	3.6	30.8	----	45.1	35.1	-14.3	----
43.500	23.6	----	0.4	24.0	----	45.5	35.5	-21.5	----
68.400	24.8	----	0.4	25.2	----	46.4	36.4	-21.2	----
94.200	25.2	----	0.2	25.4	----	47.4	37.4	-22.0	----
153.100	26.3	----	-1.4	24.9	----	49.6	39.6	-24.7	----
181.200	26.1	----	-2.0	24.1	----	50.6	40.6	-26.5	----
222.800	27.2	----	-2.4	24.8	----	52.1	42.1	-27.3	----
295.700	25.5	----	-2.3	23.2	----	54.8	44.8	-31.6	----

Notes: 1) Place of Measurement: Measuring site of the ETC

2) Remark “----“ means that the emissions level is too low to be measured.

3) The expanded uncertainty of the radiated emission tests is 3.53 dB.

## 2. Operating Conditions of The EUT : AC Line

Test Date : MAY 25, 2009

Test Specification	EN 55013:2001/A1:2003/A2:2006			
Equipment	Manufacturer	Model No.	Calibration Date	Next Cal. Date
EMI Test Receiver	Rohde & Schwarz	ESCI	2009/02/04	2010/02/04
LISN	Kyoritsu	KNW-403D	2008/10/06	2009/10/06
LISN	EMCO	3850/2	2009/05/07	2010/05/07
Absorbing Clamp	Rohde & Schwarz	MDS-21	2009/05/15	2010/05/15
Climatic Condition	Ambient Temperature: <u>25</u> °C		Relative Humidity: <u>56</u> %RH	
Power Supply System	AC Power : <u>230</u> Vac <u>50</u> Hz			
Test Set-up	Table-top Equipment			

Emission Frequency ( MHz )	Meter Reading ( dBuV )		CORR'd Factor ( dB )	Results ( dBpW )		Limit ( dBpW )		Margins ( dB )	
	Q.P	AVG.		Q.P	AVG.	Q.P	AVG.	Q.P	AVG.
32.700	26.3	----	3.6	29.9	----	45.1	35.1	-15.2	----
41.300	25.1	----	1.8	26.9	----	45.4	35.4	-18.5	----
66.300	25.4	----	-0.1	25.3	----	46.3	36.3	-21.0	----
93.700	26.5	----	0.2	26.7	----	47.4	37.4	-20.7	----
150.400	27.1	----	-1.2	25.9	----	49.5	39.5	-23.6	----
177.200	28.2	----	-1.9	26.3	----	50.5	40.5	-24.2	----
224.300	26.3	----	-2.5	23.8	----	52.2	42.2	-28.4	----
298.300	25.1	----	-2.2	22.9	----	54.9	44.9	-32.0	----

Notes: 1) Place of Measurement: Measuring site of the ETC

2) Remark “----“ means that the emissions level is too low to be measured.

3) The expanded uncertainty of the radiated emission tests is 3.53 dB.

3. Operating Conditions of The EUT : AV Line

Test Date : MAY 25, 2009

Test Specification	EN 55013:2001/A1:2003/A2:2006			
Equipment	Manufacturer	Model No.	Calibration Date	Next Cal. Date
EMI Test Receiver	Rohde & Schwarz	ESCI	2009/02/04	2010/02/04
LISN	Kyoritsu	KNW-403D	2008/10/06	2009/10/06
LISN	EMCO	3850/2	2009/05/07	2010/05/07
Absorbing Clamp	Rohde & Schwarz	MDS-21	2009/05/15	2010/05/15
Climatic Condition	Ambient Temperature: <u>23</u> °C      Relative Humidity: <u>51</u> %RH			
Power Supply System	AC Power : <u>230</u> Vac <u>50</u> Hz			
Test Set-up	Table-top Equipment			

Emission Frequency ( MHz )	Meter Reading ( dBuV )		CORR'd Factor ( dB )	Results ( dBpW )		Limit ( dBpW )		Margins ( dB )	
	Q.P	AVG.		Q.P	AVG.	Q.P	AVG.	Q.P	AVG.
31.800	27.2	----	3.6	30.8	----	45.1	35.1	-14.3	----
42.500	26.3	----	0.8	27.1	----	45.5	35.5	-18.4	----
65.100	25.1	----	-0.1	25.0	----	46.3	36.3	-21.3	----
92.400	24.8	----	-0.3	24.5	----	47.3	37.3	-22.8	----
152.300	27.1	----	-1.3	25.8	----	49.5	39.5	-23.7	----
176.800	30.4	----	-1.9	28.5	----	50.4	40.4	-21.9	----
221.200	25.6	----	-2.4	23.2	----	52.1	42.1	-28.9	----
297.500	30.3	----	-2.2	28.1	----	54.9	44.9	-26.8	----

 Notes: 1) Place of Measurement: Measuring site of the ETC

2) Remark “----“ means that the emissions level is too low to be measured.

3) The expanded uncertainty of the radiated emission tests is 3.53 dB.

**4.1.2.2 Radiated Emissions (Absorbing Clamp) Test Setup Photos :**



#### 4.1.3 Harmonics Current Emissions Test :

##### 4.1.3.1 Harmonics Current Emissions Test Data:

Operating Conditions of The EUT : Operation Mode

Test Date : Jul. 20, 2009

Test Specification	EN 61000-3-2:2006			
Equipment	Manufacturer	Model No.	Calibration Date	Next Cal. Date
EMC Immunity tester	EMC-Partner	Harmonics-1000	2008/12/10	2009/12/10
Climatic Condition	Ambient Temperature: <u>24</u> °C		Relative Humidity: <u>51</u> %RH	
Power Supply System	AC Power : <u>230</u> Vac <u>50</u> Hz			
Test Set-up	Table-top Equipment			

**Test data see the next pages.**



Urms = 229.9V Freq = 49.974 Range: 0.25 A  
 Irms = 0.027A Ipk = 0.056A cf = 2.072  
 P = 2.902W S = 6.231VA pf = 0.466  
 THDi = 40.70% THDu = 0.10% Class A

Test - Time : 3min -100%

Test completed, Result: PASSED

Order	Freq. [Hz]	Iavg [A]	Imax [A]	Limit [A]	Order	Freq. [Hz]	Iavg [A]	Imax [A]	Limit [A]
1	50	0.0245	0.0248		21	1050	0	0.0001	0.1071
2	100	0	0.0008	1.08	22	1100	0	0	0.0836
3	150	0.0091	0.0091	2.3	23	1150	0	0.0001	0.0978
4	200	0	0.0004	0.43	24	1200	0	0	0.0767
5	250	0.0059	0.006	1.14	25	1250	0	0.0001	0.09
6	300	0	0.0002	0.3	26	1300	0	0	0.0708
7	350	0	0.0008	0.77	27	1350	0	0.0001	0.0833
8	400	0	0.0001	0.23	28	1400	0	0	0.0657
9	450	0	0.0015	0.4	29	1450	0	0	0.0776
10	500	0	0	0.184	30	1500	0	0	0.0613
11	550	0	0.0003	0.33	31	1550	0	0	0.0726
12	600	0	0	0.1533	32	1600	0	0	0.0575
13	650	0	0.0004	0.21	33	1650	0	0	0.0682
14	700	0	0	0.1314	34	1700	0	0	0.0541
15	750	0	0.0003	0.15	35	1750	0	0	0.0643
16	800	0	0	0.115	36	1800	0	0	0.0511
17	850	0	0.0001	0.1324	37	1850	0	0	0.0608
18	900	0	0	0.1022	38	1900	0	0	0.0484
19	950	0	0.0001	0.1184	39	1950	0	0	0.0577
20	1000	0	0	0.092	40	2000	0	0	0.046

#### 4.1.3.2 Harmonics Current Emissions Test Setup Photos :



## 4.1.4 Voltage Fluctuations and Flicker Test :

### 4.1.4.1 Voltage Fluctuations and Flicker Test Data:

Operating Conditions of The EUT : Operation

Test Date : Jul. 20, 2009

Test Specification	EN 61000-3-3:1995/A1:2001/A2:2005			
Equipment	Manufacturer	Model No.	Calibration Date	Next Cal. Date
EMC Immunity tester	EMC-Partner	Hormonics-1000	2008/12/10	2009/12/10
Climatic Condition	Ambient Temperature: <u>28</u> °C		Relative Humidity: <u>51</u> %RH	
Power Supply System	AC Power : <u>230</u> Vac <u>50</u> Hz			
Test Set-up	Table-top Equipment			

	Test Data	Limit	Pass or Fail
<b>Plt</b>	0.072	0.65	Pass
<b>Pst</b>	0.072	1.00	Pass
<b>dt</b>	0.00ms	500 ms	Pass
<b>dmax</b>	0.00%	4.0 %	Pass
<b>dc</b>	0.00%	3.3 %	Pass

#### 4.1.4.2 Voltage Fluctuations and Flicker Test Setup Photos :



## 4.2 Immunity:

### 4.2.1 Electrostatic Discharge Immunity Test :

#### 4.2.1.1 Electrostatic Discharge Immunity Test Data:

Operating Conditions of The EUT : Operation

Test Date : Jul. 20, 2009

Test Specification	IEC 61000-4-2:2008			
Equipment	Manufacturer	Model No.	Calibration Date	Next Cal. Date
Noise Ken	ESD Tester	ESS-2002	2008/09/18	2009/09/18
Climatic Condition	Ambient Temperature: <u>28</u> °C		Relative Humidity: <u>51</u> %RH	
	Atmospheric Pressure : 990 mbar			
Power Supply System	AC Power : <u>230</u> Vac <u>50</u> Hz			
Test Set-up	Table-top Equipment			

Energy-Storage Capacitor : <u>150</u> pF	Contact Discharge Times : <u>10</u> times/each condition															
Discharge Resistor : <u>330</u> Ω	Air Discharge Times : <u>10</u> times/each condition															
\ Discharge Mode	Contact Discharge								Air Discharge							
\ESD Voltage	<u>2</u> kV		<u>4</u> kV		___ kV		___ kV		<u>2</u> kV		<u>4</u> kV		<u>8</u> kV		___ kV	
\Points\Result\Polarity	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
VCP	A	A	A	A	---	---	---	---	---	---	---	---	---	---	---	---
HCP	A	A	A	A	---	---	---	---	---	---	---	---	---	---	---	---
P <sub>1</sub> ,P <sub>10</sub>	A	A	A	A	---	---	---	---	---	---	---	---	---	---	---	---
P <sub>2</sub> -P <sub>9</sub>	---	---	---	---	---	---	---	---	A	A	A	A	A	A	---	---

Note : “---“means the test could not be carrier out.

“ A ” means the EUT function was correct during the test

**TEST POINTS**



**4.2.1.2 Electrostatic Discharge Immunity Test Setup Photos :**

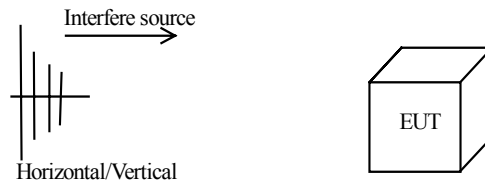
## 4.2.2 RF Radiated Fields Immunity Test :

### 4.2.2.1 RF Radiated Fields Immunity Test Data:

Operating Conditions of The EUT : Operation

Test Date : Jul. 20, 2009

Test Specification		IEC 61000-4-3:2006/A1:2007		
Equipment	Manufacturer	Model No.	Calibration Date	Next Cal. Date
Antenna	AR	AT5080	N/A	N/A
signal Generator	Aglient	E4421B	2008/08/07	2009/08/06
Amplifier	Ophir	5172	N/A	N/A
Amplifier	Ophir	5127	N/A	N/A
POWER METER	Booton	4232A	2008/08/08	2009/08/07
Climatic Condition	Ambient Temperature: <u>27</u> °C		Relative Humidity: <u>48</u> %RH	
Power Supply System	AC Power : <u>230</u> Vac <u>50</u> Hz			
Test Set-up	Table-top Equipment			



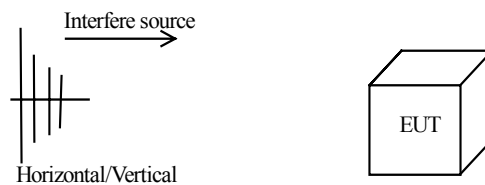
Frequency Range: <u>80</u> MHz ~ <u>1000</u> MHz		Field Strength: <u>3</u> V/m	Modulation (AM 1kHz 80%)
Sweep Rate : $\leq 1.5 \times 10^{-3}$ decades/s	Step Size : $\leq 1\%$ of preceding frequency value	Dwell time : <u>2.9</u> s	
Frequency Range (MHz)	Antenna-Polarization	Direction of Device	Test Result
80-1000	Horizontal	front	A
		rear	A
		left	A
		right	A
80-1000	Vertical	front	A
		rear	A
		left	A
		right	A

Note : "A" means the EUT function was correct during the test .

## Operating Conditions of The EUT : Operation

Test Date : Jul. 20, 2009

Test Specification	IEC 61000-4-3:2006/A1:2007			
Equipment	Manufacturer	Model No.	Calibration Date	Next Cal. Date
Antenna	AR	AT5080	N/A	N/A
signal Generator	Aglient	E4421B	2008/08/07	2009/08/06
Amplifier	Ophir	5172	N/A	N/A
Amplifier	Ophir	5127	N/A	N/A
POWER METER	Booton	4232A	2008/08/08	2009/08/07
Climatic Condition	Ambient Temperature: <u>28</u> °C		Relative Humidity: <u>51</u> %RH	
Power Supply System	AC Power : <u>230</u> Vac <u>50</u> Hz			
Test Set-up	Table-top Equipment			



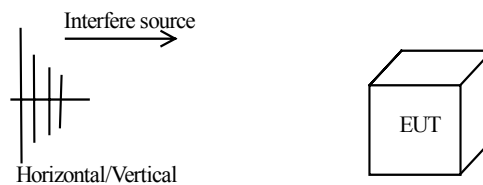
Frequency Range: <u>1400</u> MHz ~ <u>2000</u> MHz	Field Strength: <u>3</u> V/m	Modulation (AM 1kHz 80%)	
Sweep Rate : $\leq 1.5 \times 10^{-3}$ decades/s	Step Size : $\leq 1$ % of preceding frequency value	Dwell time : <u>2.9</u> s	
Frequency Range (MHz)	Antenna-Polarization	Direction of Device	Test Result
1400-2000	Horizontal	front	A
		rear	A
		left	A
		right	A
1400-2000	Vertical	front	A
		rear	A
		left	A
		right	A

Note : "A" means the EUT function was correct during the test .

### Operating Conditions of The EUT : Operation

Test Date : Jul. 20, 2009

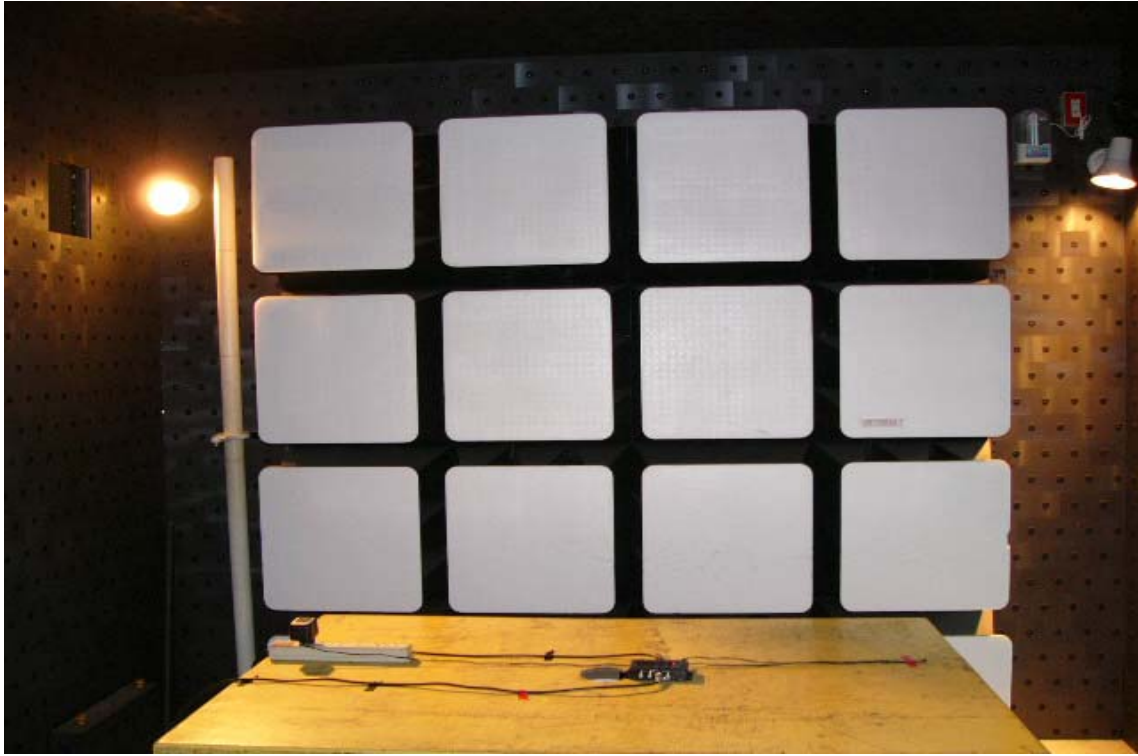
Test Specification	IEC 61000-4-3:2006/A1:2007			
Equipment	Manufacturer	Model No.	Calibration Date	Next Cal. Date
Antenna	AR	AT5080	N/A	N/A
signal Generator	Aglient	E4421B	2008/08/07	2009/08/06
Amplifier	Ophir	5172	N/A	N/A
Amplifier	Ophir	5127	N/A	N/A
POWER METER	Booton	4232A	2008/08/08	2009/08/07
Climatic Condition	Ambient Temperature: <u>28</u> °C		Relative Humidity: <u>51</u> %RH	
Power Supply System	AC Power : <u>230</u> Vac <u>50</u> Hz			
Test Set-up	Table-top Equipment			



Frequency Range: <u>2000</u> MHz ~ <u>2700</u> MHz	Field Strength: <u>1</u> V/m	Modulation (AM 1kHz 80%)	
Sweep Rate : $\leq 1.5 \times 10^{-3}$ decades/s	Step Size : $\leq 1$ % of preceding frequency value	Dwell time : <u>2.9</u> s	
Frequency Range (MHz)	Antenna-Polarization	Direction of Device	Test Result
2000-2700	Horizontal	front	A
		rear	A
		left	A
		right	A
2000-2700	Vertical	front	A
		rear	A
		left	A
		right	A

Note : "A" means the EUT function was correct during the test .

#### 4.2.2.2 RF Radiated Fields Immunity Test Setup Photos :



### 4.2.3 EFT/Burst Immunity Test :

#### 4.2.3.1 EFT/Burst Immunity Test Data:

Operating Conditions of The EUT : Operation

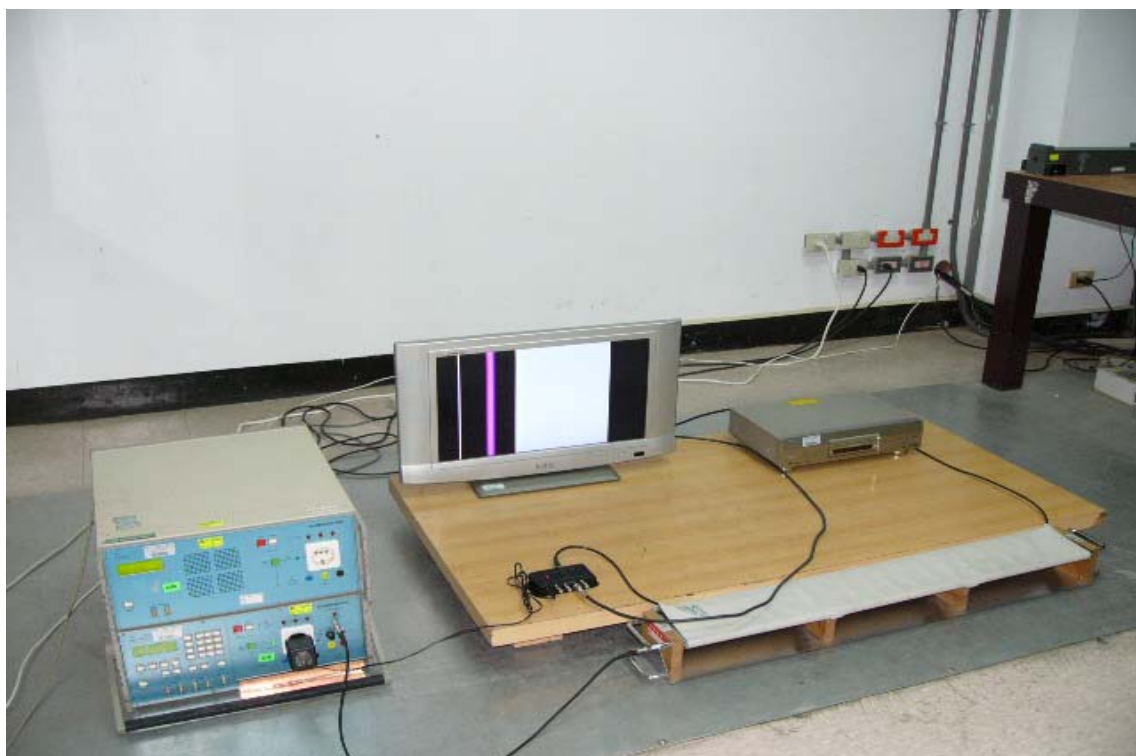
Test Date : Jul. 20, 2009

Test Specification	IEC 61000-4-4:2004			
Equipment	Manufacturer	Model No.	Calibration Date	Next Cal. Date
EMC Immunity Tester	EMC-PARTNER	TRANSIENT-1000	2009/02/23	2010/02/23
Climatic Condition	Ambient Temperature: <u>28</u> °C		Relative Humidity: <u>51</u> %RH	
	Atmospheric Pressure : 990 mbar			
Power Supply System	AC Power : <u>230</u> Vac <u>50</u> Hz			
Test Set-up	Table-top Equipment			

Pulse :5/50ns Burst :15m/300ms		Repetition Rate: <u>5kHz</u>	Test time: <u>1</u> min/each condition
\Voltage\Polarity\ \Test Point\Mode\Result\		<u>1.0kV</u>	
		+	-
Power Line	L	A	A
	N	A	A
	L-N	A	A
\Voltage\Polarity\ \Test Point\Mode\Result\		<u>0.5kV</u>	
		+	-
Video input cable		A	A
Video output cable		A	A

Note : “A” means the EUT function was correct during the test .

**4.2.3.2 EFT/Burst Immunity Test Setup Photos :**





## 4.2.4 Surge Immunity Test :

### 4.2.4.1 Surge Immunity Test Data:

Operating Conditions of The EUT : Operation

Test Date : Jul. 20, 2009

Test Specification	IEC 61000-4-5:2005			
Equipment	Manufacturer	Model No.	Calibration Date	Next Cal. Date
EMC Immunity Tester	EMC-PARTNER	TRANSIENT-1000	2009/02/23	2010/02/23
Climatic Condition	Ambient Temperature: <u>28</u> °C		Relative Humidity: <u>51</u> %RH	
	Atmospheric Pressure : 990 mbar			
Power Supply System	AC Power : <u>230</u> Vac <u>50</u> Hz			
Test Set-up	Table-top Equipment			

Waveform : 1.2/50µs(8/20µs)		Repetition rate : <u>60</u> sec		Times : <u>5</u> time/each condition		
		<b>0°</b>	<b>90°</b>	<b>180°</b>	<b>270°</b>	
	\Voltage \Mode \Polarity \Phase \Result					
0.5kV	L-N	+	A	A	A	A
		-	A	A	A	A
1.0kV	L-N	+	A	A	A	A
		-	A	A	A	A
Waveform : 1.2/50µs(8/20µs)		Repetition rate : <u>60</u> sec		Times : <u>5</u> time/each condition		
0.5kV	Video input cable	+	A			
		-	A			
1.0kV	Video input cable	+	A			
		-	A			

Note : “A” means the EUT function was correct during the test.

#### 4.2.4.2 Surge Immunity Test Setup Photos :



## 4.2.5 RF Common Mode Immunity Test :

### 4.2.5.1 RF Common Mode Immunity Test Data:

Operating Conditions of The EUT : Operation

Test Date : Jul. 20, 2009

Test Specification	IEC 61000-4-6:2007			
Equipment	Manufacturer	Model No.	Calibration Date	Next Cal. Date
CS Tester M2+3 CDN-KIT	FRANKONIA	CIT-10	2008/09/24	2009/09/24
	FRANKONIA	M2+3	2008/09/19	2009/09/19
Climatic Condition	Ambient Temperature: <u>28</u> °C		Relative Humidity: <u>51</u> %RH	
	Atmospheric Pressure : 990 mbar			
Power Supply System	AC Power : <u>230</u> Vac <u>50</u> Hz			
Test Set-up	Table-top Equipment			

Frequency Range	: <u>0.15</u> MHz ~ 100 MHz	Test Level	: <u>3</u> Vrms	Modulation (AM 1kHz 80%)
Sweep Rate	: $\leq 1.5 \times 10^{-3}$ decades/s	Step Size	: $\leq 1$ % of preceding frequency value	Dwell Time : <u>2.9</u> s
Frequency Range (MHz)	Tested Line		Test Result	
0.15~80	Power Line(M2)		A	
0.15~80	Video input cable(S1)		A	
0.15~80	Video output cable(S1)		A	

Note : "A" means the EUT function was correct during the test .

**4.2.5.2 RF Common Mode Immunity Test Setup Photos :**



**4.2.6 Voltage Interruptions and Voltage Dips Immunity Test**
**4.2.6.1 Voltage Interruptions and Voltage Dips Immunity Test Data**

 Operating Conditions of The EUT : Operation Mode

Test Date : Jul. 20, 2009

Test Specification	IEC 61000-4-11:2004			
Equipment	Manufacturer	Model No.	Calibration Date	Next Cal. Date
EMC Immunity Tester	EMC-PARTNER	TRANSIENT-1000	2009/01/17	2010/01/16
Climatic Condition	Ambient Temperature: <u>28</u> °C		Relative Humidity: <u>51</u> %RH	
Power Supply System	AC Power: <u>230</u> Vac <u>50</u> Hz			
Test Set-up	Table-top Equipment			

Test mode	Voltage dips	Durations (periods)	Interval(s)	Times	Phase	Result
Voltage interruptions	100%	250	10	12	0°/180°	A
Voltage dips in %U <sub>T</sub>	100%	(1) 1.0	10	12	0°/180°	(1) A
		(2) 0.5				(2) A
	30%	25	10	12	0°/180°	A
		10				

Note : "A" means the EUT function was correct during the test.

#### 4.2.6.2 Voltage Interruptions and Voltage Dips Immunity Test Setup Photos

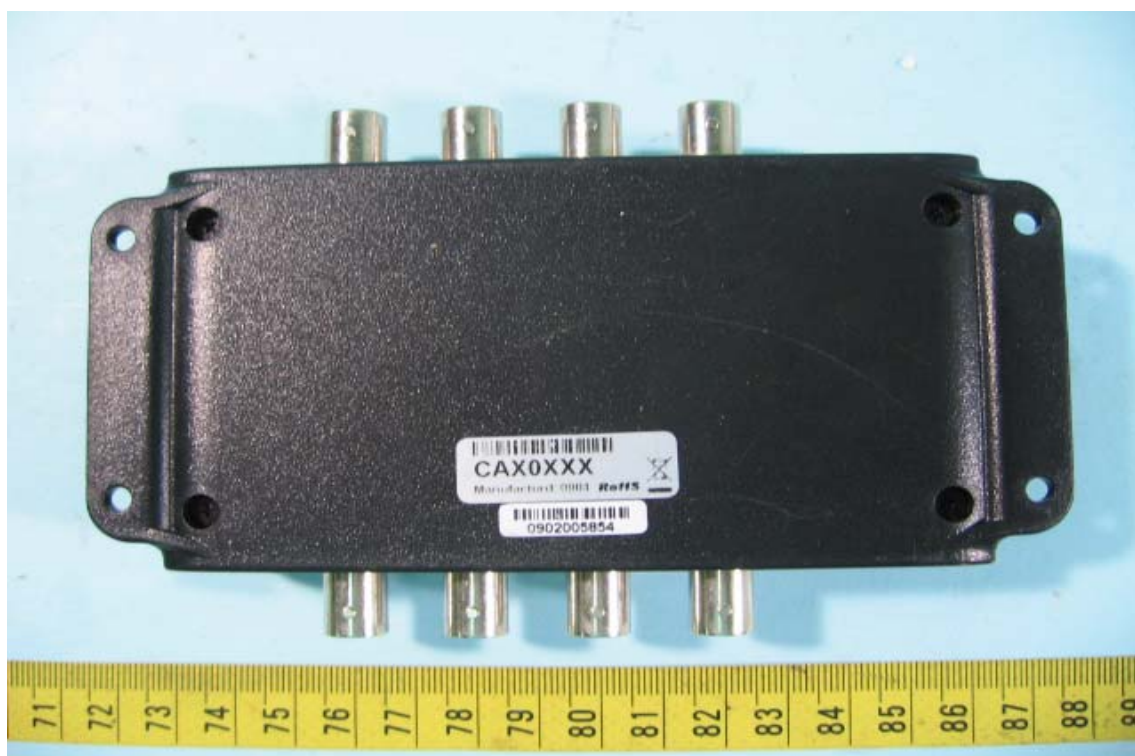


**CONSTRUCTED PHOTOS of EUT**

1. Top View of EUT



2. Bottom View of EUT



**CONSTRUCTED PHOTOS of EUT**

3. Side View of EUT



4. Side View of EUT



**CONSTRUCTED PHOTOS of EUT**

5. Side View of EUT

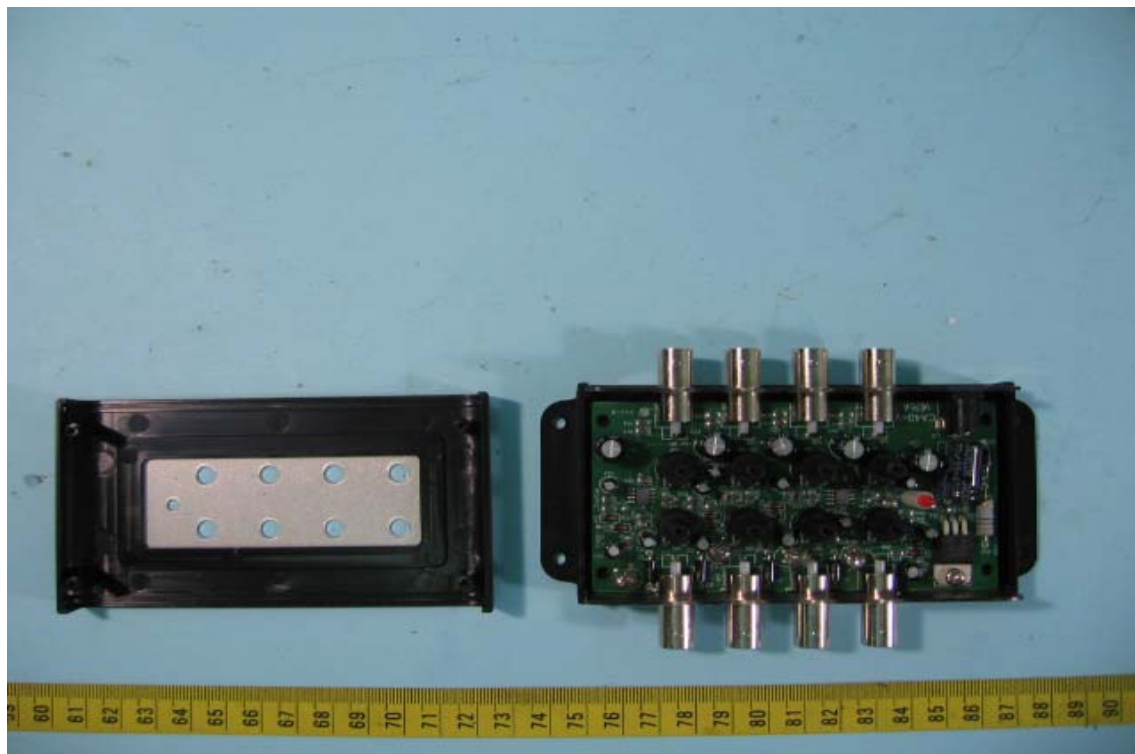


6. Side View of EUT



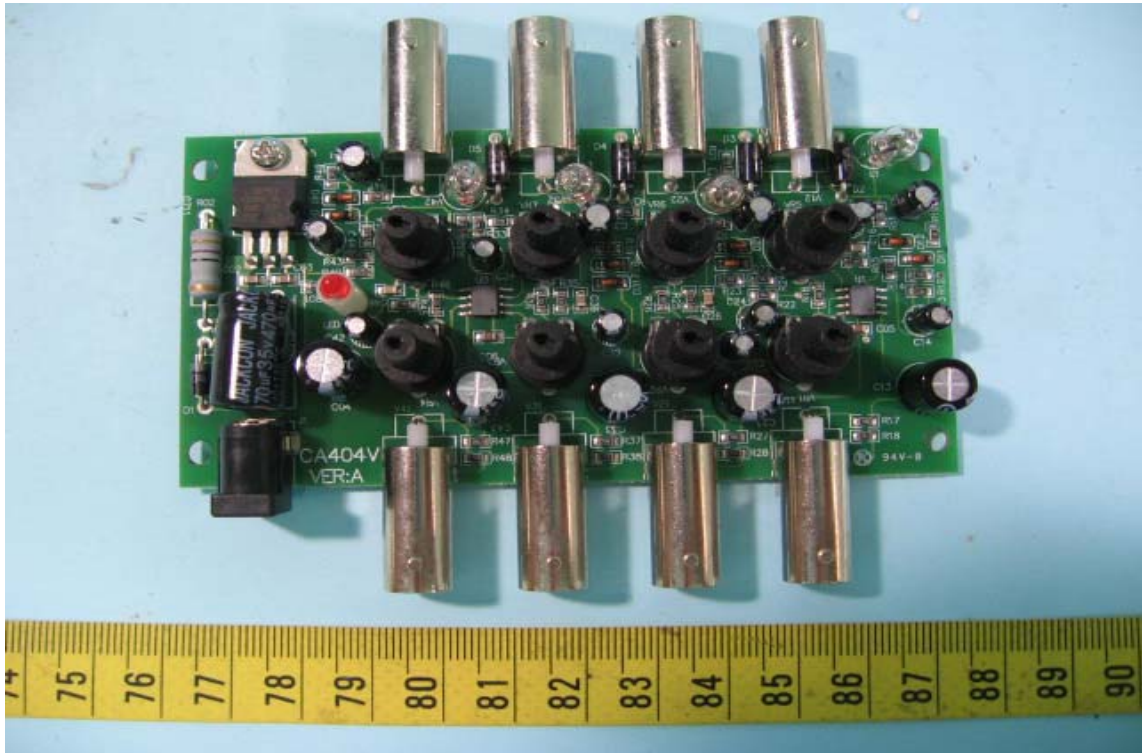
**CONSTRUCTED PHOTOS of EUT**

## 7. Internal View of EUT

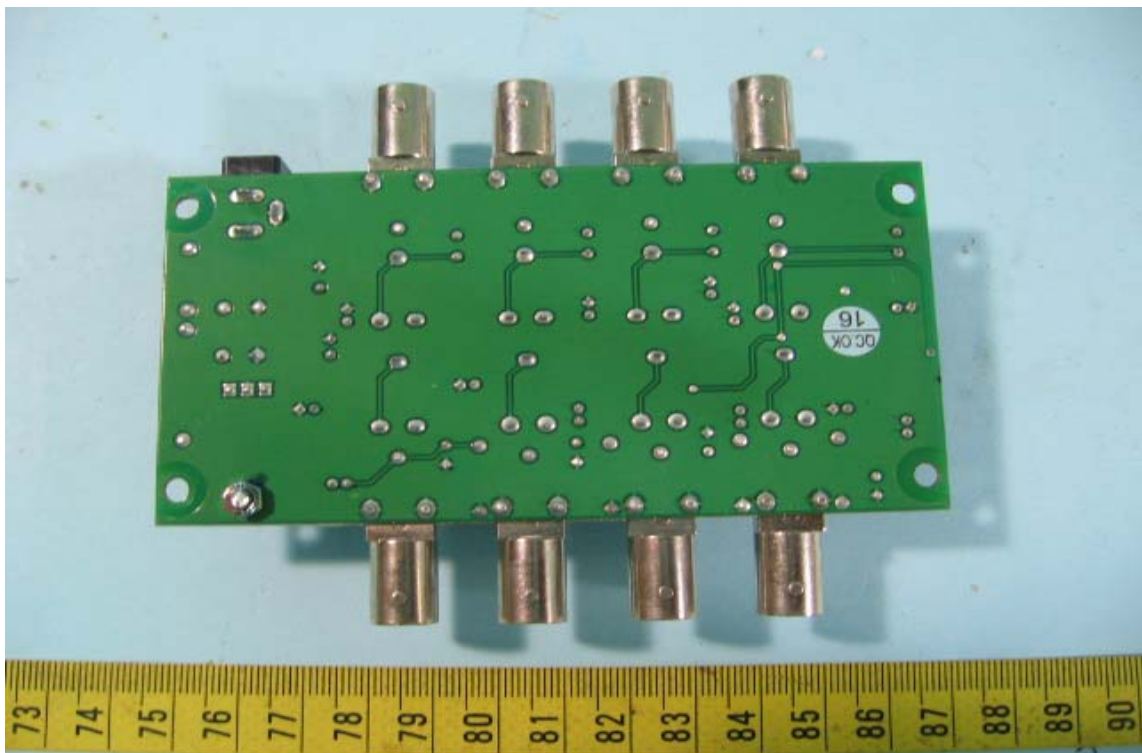


**CONSTRUCTED PHOTOS of EUT**

8. Component View of PCB



9. Solder View of PCB



## CONSTRUCTED PHOTOS of EUT

### 1. Total View of Adapter



### 2. Adapter's Label

