



EMC TEST REPORT For CE

Test Report No. : KES-E1-17T0748-R1
Date of Issue : May. 08, 2018
Product name : Security LED Monitor
Model/Type No. : SMT-4033
Variant Model : -
Applicant : Hanwha Techwin Co., Ltd.
Applicant Address : 6, Pangyo-ro 319 Beon-gil, Bundang-gu, Seongnam-si,
Gyeonggi-do, 13488, KOREA
Manufacturer : Weihai Daewoo Electronics Co., Ltd.
Manufacturer Address : No.26, HongKong Road, Economic & Technical
Development Zone, 264205 Weihai City, Shandong Province,
China
Date of Receipt : Oct. 30, 2017
Test date : Nov. 07, 2017 ~ Nov. 08, 2017
Test Results : ☒ **In Compliance** ☐ **Not in Compliance**

Tested by

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EMC Test Engineer

Reviewed by

Dong-Hun, Jang
EMC Technical Manager

This test report is not related to KOLAS.

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REPORT REVISION HISTORY

Date	Test Report No.	Revision History
Nov. 14, 2017	KES-E1-17T0748	Issued
May. 08, 2018	KES-E1-17T0748-R1	Re-issue due to changed customer's address

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1.0 General Product Description

Main Specifications of E.U.T are:

Model Name		SMT-4033
Image		
<i>Display</i>		
Screen Size		39.5"
Max. Resolution		1920 x 1080
Brightness		350cd/m ²
Contrast Ratio		5000:1
Aspect Ratio		16:9
Viewing Angle (H/V)		178°/178°
Display Color		16.7 million
Response Time		9.5ms(G to G)
Video System		NTSC/PAL
Panel Life		30,000 hours
Filter Type		3D combfilter
<i>Interface</i>		
Video	Connector	VGA, DVI, HDMI, BNC(CVBS, THROUGH OUT))
RGB/DVI	Connector	Analog D-sub(15 pin), DVI-D
	Input Signal	0.7Vp-p±5%
	Available Format	640 x 480@60Hz/66Hz/72Hz/75Hz (VGA), 720 x 400@70Hz, 800 x 600@56Hz/60Hz/72Hz/75Hz (SVGA), 832 x 624@75Hz, 1,024 x 768@60Hz/70Hz/75Hz (XGA), 1,152 x 864@75Hz, 1,280 x 720@60Hz, 1,280 x 800@60Hz, 1,280 x 1,024@60Hz/75Hz (SXGA), 1,360 x 768@60Hz, 1,440 x 900@60Hz, 1,600 x 900@60Hz, 1,680 x 1,050@60Hz, 1,920 x 1,080@60Hz
HDMI	Connector	HDMI
	Available Format	640 x 480p@60Hz, 720 x 480p@60Hz, 720 x 576p@50Hz, 1,280 x 720p@50Hz/60Hz, 1,920 x 1,080i@60Hz, 1,920 x 1,080p@60Hz
Audio	Connector	3.5mm Mini Phone Jack
	Output Signal	Loop-through line level(PC only), Speakers : 2x2W (AUDIO SIGNAL SPEC)
Application Support		Remote Controller
<i>On Screen Display (OSD)</i>		
Functions		VESA™ DPM Compatible
Language		Chinese(Simplified), English, French, German, Spanish,Dutch,Russian,Arabic
<i>General</i>		
Electrical	Input Voltage	AC 100 ~ 240V(50/60Hz)
	Power Consumption	<60W
Environmental	Operating Temperature	0 ~ +40°C (+32°F ~ +104°F)
	Operating Humidity	10% ~ 80% (non-condensing)
Mechanical	Dimensions with Stand	906.7*647.5*279.7mm
	Dimensions without Stand	906.7*516.9*47.8mm
	Bezel Size	13.66/17.66mm(Top/Bottom/Side)
	Weight	TBD
	Cabinet Color	Black
	Rack Mount	N/A
VESA Mounts Interface		100 x 100mm
Accessory		STAND

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1.1 Test Voltage & Frequency

Unless indicated otherwise on the individual data sheet or test results, the test voltage and frequency was as indicated below.

Voltage ☒ 230Vac ☐ 100 Vac ☐ 24 Vac ☐ 12 Vdc ☐ PoE
Frequency ☒ 50 Hz ☐ 60 Hz ☐ Hz

1.2 Variant Model Differences

Not applicable

1.3 Device Modifications

Not applicable

1.4 Equipment Under Test

Description	Model Number	Serial Number	Manufacturer	Remarks
Security LED Monitor	SMT-4033	-	Weihai Daewoo Electronics Co.,Ltd.	E.U.T

1.5 Support Equipments

Description	Model Number	Serial Number	Manufacturer	Remarks
Notebook	NT63025J	JK9091EF400432X	SAMSUNG	-
Notebook Adapter	A13-040N2A	-	Chicony Power Technology (suzhou)Co., Ltd.	-
MONITOR	SMT-2232	C95V67VF900025B	Weihai Daewoo Electronics Co., Ltd.	-
Camera	HIDC-2600TV	14112598449	Honeywell	-
Camera Adapter	GA0520A-1	09J315042	Netrontech Electronic co., Ltd	-
Speaker	BR10000A CUVE	-	BEIJING EDIFIER HI-TECH GROUP.	-

1.6 External I/O Cabling

■ VGA Mode

Start		END		Cable Spec.	
Description	I/O Port	Description	I/O Port	Length	Shield
Security LED Monitor	D-SUB	Notebook	D-SUB	1.4	S
	Audio in		Audio out	1.0	U
	Audio out	Speaker	Audio in	1.6	U

* Unshielded=U, Shielded=S

■ HDMI Mode

Start		END		Cable Spec.	
Description	I/O Port	Description	I/O Port	Length	Shield
Security LED Monitor	HDMI	Notebook	HDMI	1.2	S

* Unshielded=U, Shielded=S

■ DVI Mode

Start		END		Cable Spec.	
Description	I/O Port	Description	I/O Port	Length	Shield
Security LED Monitor	DVI	Notebook	HDMI	1.3	S

* Unshielded=U, Shielded=S

■ BNC Mode

Start		END		Cable Spec.	
Description	I/O Port	Description	I/O Port	Length	Shield
Security LED Monitor	BNC OUT	MONITOR	BNC IN	4.0	S
	BNC IN	Camera	BNC OUT	4.0	S

* Unshielded=U, Shielded=S

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1.7 E.U.T Operating Mode(s)

Test mode	operating
D-SUB	check the screen output status of the test equipment and the sound output of 1 kHz tone from the speaker by running COLOR BAR on the notebook.
HDMI	check the screen output status of the test equipment and the sound output of 1 kHz tone from the speaker by running COLOR BAR on the notebook.
DVI	check the screen output status of the test equipment and the sound output of 1 kHz tone from the speaker by running COLOR BAR on the notebook.
BNC	connected the camera and monitor to the BNC IN and OUT ports of the test equipments respectively and it was confirmed that the image of the camera was outputted normally on the test equipment and monitor.

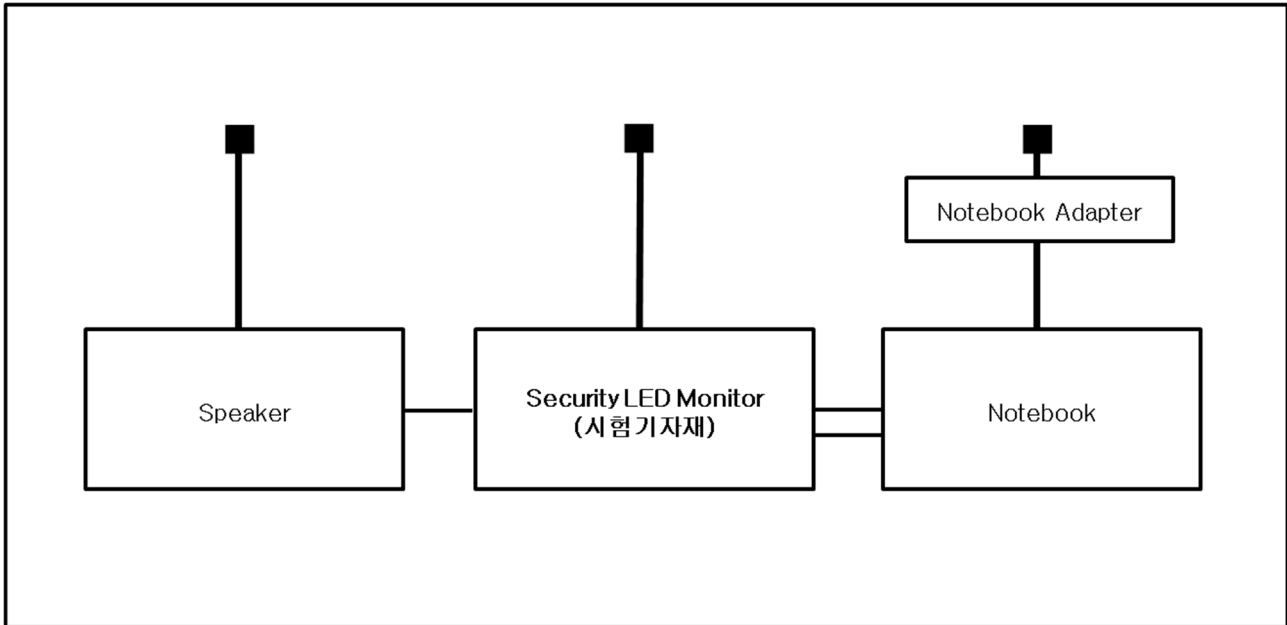
E.U.T Test operating S/W		
Name	Version	Manufacture Company
-	-	-

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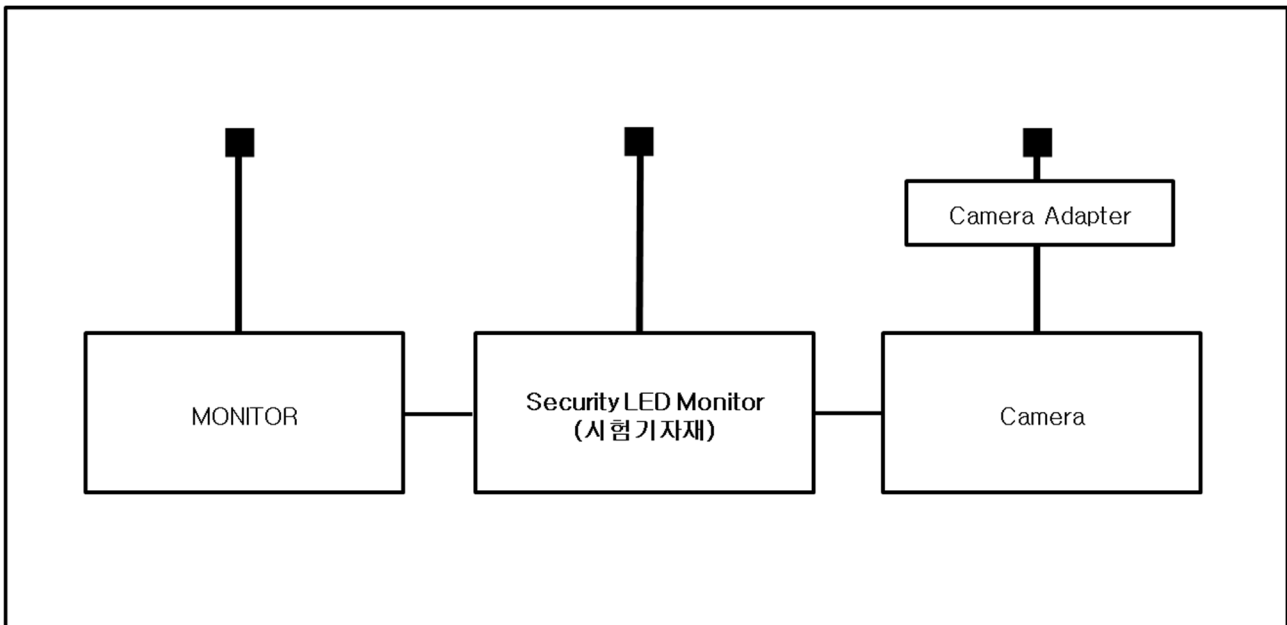
1.8 Configuration

■ AC Main
 □ DC Main

■ VGA, DVI, HDMI Mode



■ BNC Mode



1.9 Calibration Details of Equipment Used for Measurement

N/A

1.10 Test Facility

The measurement facility is located at 473-21 Gayeo-ro, Yeosu-si, Gyeonggi-do, 12658, Korea. The sites are constructed in conformance with the requirements of ANSI C63.4:2014 and CISPR 16-1-4:2012

1.11 Laboratory Accreditations and Listings

Country	Agency	Scope of Accreditation	Logo
KOREA	RRA	EMI (3 m & 10 m Semi-Aechoic Chamber , 10 m Open Area and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	 KR0100
International	KOLAS	EMI (3 m & 10 m Semi-Aechoic Chamber , and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	 KT489
USA	FCC	3 m & 10 m Semi-Aechoic Chamber, 10 m Open Area and Conducted test site to perform FCC Part 15/18 measurements.	 KR0100
Canada	ISED	3 m & 10 m Semi-Aechoic Chamber and Conducted test site	 23298-1
JAPAN	VCCI	Mains Ports Conducted Interference Measurement, Telecommunication Ports Conducted Disturbance Measurement and Radiation 10 meter site, Facility for measuring radiated disturbance above 1 GHz	 R-4308, C-4798, T-2311, G-914
Europe	TÜV SÜD	EMI (3 m & 10 m Semi-Aechoic Chamber , 10 m Open Area and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	 CARAT 17 07 01633 001



2.0 Test Regulations

The emissions tests were performed according to following regulations:

☒ **EMC – Directive 2014/30/EU**

☐ EN 61000-6-3:2011

☐ EN 61000-6-1:2007

☐ EN 61000-6-4:2007 +A1:2011

☐ EN 61000-6-2:2005

☐ EN 55011:2007 +A1:2010

☐ Group 1
☐ Class A

☐ Group 2
☐ Class B

☐ EN 55014-1:2006 +A2:2011

☐ EN 55014-2:1997 +A2:2008

☐ EN 55015:2013

☐ EN 61547:2009

☒ EN 55032:2012/AC:2013

☒ Class A

☐ Class B

☒ EN 55024:2010

☐ EN 50130-4:2011 +A1:2014

☒ EN 61000-3-2:2014

☒ EN 61000-3-3:2013

☐ EN 61326-1:2013



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-
- | | | |
|---|----------------------------------|----------------------------------|
| ☐ VCCI V-3 / 2015.04 | ☐ Class A | ☐ Class B |
| ☐ AS/NZS CISPR22:2009 +A1:2010 | ☐ Class A | ☐ Class B |
| ☐ 47 CFR Part 15, Subpart B | | |
| ☐ CISPR 22:2009 +A1:2010 | ☐ Class A | ☐ Class B |
| ☐ ANSI C63.4-2009 | | |
| ☐ IC Regulation ICES-003 : 2016 | | |
| ☐ CAN/CSA CISPR 22-10 | ☐ Class A | ☐ Class B |
| ☐ ANSI C63.4-2014 | | |
|
☐ RE- Directive 2014/53/EU | | |
|
☐ EN 301 489-1 V1.9.2 | | |
| ☐ Equipment for fixed use | | |
| ☐ Equipment for vehicular use | | |
| ☐ Equipment for portable use | | |
|
☐ EN 301 489-3 V1.6.1 | | |
|
☐ EN 301 489-17 V2.2.1 | | |
|
☐ EN 60945:2002 | | |

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2.1 Conducted Emissions at Mains Power Ports

Test Date

Nov. 07, 2017

Test Location

Electro wave Shieldroom

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	EMI Test S/W	EMC32	R & S	9.12.00	-
☒	EMI TEST RECEIVER	ESR3	R & S	101783	04, 27, 2018
☒	LISN	ENV216	R & S	101137	02, 03, 2018
☒	LISN	ENV216	R & S	101786	04, 27, 2018
☒	PULSE LIMITER	ESH3-Z2	R & S	101914	12, 13, 2017
☐	LISN	NNBM8124	SCHWARZBECK	8124-1002	08, 07, 2018
☐	LISN	NNBM8124	SCHWARZBECK	8124-1003	08, 07, 2018

Test Conditions

Temperature: 19,8 °C
Relative Humidity: 53,1 %

Frequency Range of Measurement

150 kHz to 30 MHz

Instrument Settings

IF Band Width: 9 kHz

Test Results

The requirements are:

- ☒ PASS
☐ NOT PASS
☐ NOT APPLICABLE

Remarks

See Appendix A for test data.



2.2 Conducted Emissions at Telecommunication Ports

Test Date

N/A

Test Location

Electro wave Shieldroom

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☐	EMI Test S/W	EMC32	R & S	9.12.00	-
☐	EMI TEST RECEIVER	ESR3	R & S	101783	04, 27, 2018
☐	LISN	ENV216	R & S	101137	02, 03, 2018
☐	LISN	ENV216	R & S	101786	04, 27, 2018
☐	PULSE LIMITER	ESH3-Z2	R & S	101914	12, 13, 2017
☐	8-WIRE ISN CAT3	CAT3 8158	SCHWARZBECK	8158-0019	03, 29, 2018
☐	8-WIRE ISN CAT5	CAT5 8158	SCHWARZBECK	8158-0030	03, 29, 2018

Test Conditions

Temperature: °C
Relative Humidity: %

Frequency Range of Measurement

150 kHz to 30 MHz

Instrument Settings

IF Band Width: 9 kHz

Test Results

The requirements are:

- ☐ PASS
☐ NOT PASS
☒ NOT APPLICABLE

Remarks

-



2.3 Radiated Electric Field Emissions(Below 1 GHz)

Test Date

Nov. 07, 2017

Test Location

☐ OPEN AREA TEST SITE #2 ☒ SAC #4(10 m)

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	EMI Test S/W	EP5/RE	TOYO Corporation	6.0.0	-
☒	EMI TEST RECEIVER	ESU26	R & S	100551	04, 18, 2018
☒	AMPLIFIER	SCU 01	R & S	100603	12, 13, 2017
☒	TRILOG-BROADBAND ANTENNA	VULB9163	Schwarzbeck	716	11, 28, 2018

Test Conditions

Temperature: 20,5 °C
Relative Humidity: 43,6 %

Frequency Range of Measurement

30 MHz to 1 GHz

Instrument Settings

IF Band Width: 120 kHz

Test Results

The requirements are:

☒ PASS
☐ NOT PASS
☐ NOT APPLICABLE

Remarks

See Appendix A for test data.



2.4 Radiated Electric Field Emissions(Above 1 GHz)

Test Date

Nov. 07, 2017

Test Location

SEMI ANECHOIC CHAMBER #3

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	EMI Test S/W	EP5/RE	TOYO Corporation	6.0.0	-
☒	EMI TEST RECEIVER	ESR7	R & S	101190	08, 07, 2018
☒	PREAMPLIFIER	8449B	AGILENT	3008A01967	05, 31, 2018
☐	ATTENUATOR	8491A	HP	32173	03, 24, 2018
☒	DOUBLE RIDGED HORN ANTENNA	SAS-571	A.H.SYSTEM,INC	781	05, 02, 2018

Test Conditions

Temperature: 20,2 °C
Relative Humidity: 42,7 %

Frequency Range of Measurement

1 GHz to 6 GHz

Instrument Settings

IF Band Width: 1 MHz

Test Results

The requirements are:

- ☒ PASS
☐ NOT PASS
☐ NOT APPLICABLE

Remarks

See Appendix A for test data.



2.5 Harmonic Current Emissions

Test Date

Nov. 07, 2017

Test Location

Electro wave Shieldroom

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	EMI Test S/W	dpa.control	EM TEST	5.4.11.0	-
☒	DIGITAL POWER ANALYZER	DPA 500N	EM TEST	V1024106759	08, 09, 2018
☒	POWER SOURCE	ACS 500N6	EM TEST	V1024106760	-

Test Conditions

Temperature: 19,8 °C

Relative Humidity: 53,1 %

Classification of Equipment for Harmonic Current Emissions

- ☐ Class A
- ☐ Class B
- ☐ Class C(Below 25 W)
- ☐ Class C(Above 25 W)
- ☒ Class D

Test Results

The requirements are:

- ☒ PASS
- ☐ NOT PASS
- ☐ NOT APPLICABLE

Remarks

See Appendix A for test data.



2.6 Voltage Fluctuations and Flicker

Test Date

Nov. 07, 2017

Test Location

Electro wave Shieldroom

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	EMI Test S/W	dpa.control	EM TEST	5.4.11.0	-
☒	DIGITAL POWER ANALYZER	DPA 500N	EM TEST	V1024106759	08, 08, 2018
☒	POWER SOURCE	ACS 500N6	EM TEST	V1024106760	-

Test Conditions

Temperature: 19,8 °C

Relative Humidity: 53,1 %

Test Results

The requirements are:

- ☒ PASS
☐ NOT PASS
☐ NOT APPLICABLE

Remarks

See Appendix A for test data.

3.0 Criteria for compliance

Criteria for compliance was based on the following guidelines:

General performance criteria

The manufacturer has the obligation to express the performance criteria in terms which relate to the performance of his specific product when used as intended.

The following performance criteria are applicable, and shall only be evaluated when the functions referred to are implemented.

Examples of functions defined by the manufacturer to be evaluated during testing include, but are not limited to, the following:

- essential operational modes and states;
- tests of all peripheral access (hard disks, floppy disks, printers, keyboard, mouse, etc.);
- quality of software execution;
- quality of data display and transmission;
- quality of speech transmission.

Performance criterion A

During and after the test the EUT shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed below a minimum performance level specified by the manufacturer when the EUT is used as intended. The performance level may be replaced by a permissible loss of performance. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the EUT if used as intended.

Performance criterion B

After the test, the EUT shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed, after the application of the phenomena below a performance level specified by the manufacturer, when the EUT is used as intended. The performance level may be replaced by a permissible loss of performance. During the test, degradation of performance is allowed. However, no change of operating state or stored data is allowed to persist after the test.

If the minimum performance level (or the permissible performance loss) is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the EUT if used as intended.

Performance criterion C

During and after testing, a temporary loss of function is allowed, provided the function is self recoverable, or can be restored by the operation of the controls or cycling of the power to the Functions, and/or information stored in non-volatile memory, or protected by a battery backup, shall not be lost.

EUT by the user in accordance with the manufacturer's instructions.



3.1 Electrostatic Discharge

Reference Standard

EN 61000-4-2:2009

Test Date

Nov. 08, 2017

Test Location

EMS-ESD: Electro wave Shieldroom

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	EMS Test S/W	-	-	-	-
☒	ESD SIMULATOR	ESS-2000	Noise Ken	ESS05X4620	02, 24, 2018
☒	HCP	-	Noise Ken	-	-
☒	VCP	-	Noise Ken	-	-

Test Conditions

Temperature: 20,6 °C
Relative Humidity: 45,8 %
Atmospheric Pressure: 100,1 kPa



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Test Specifications

Discharge Factor: ≥ 1 s

Discharge Impedance: 330 ohm / 150 pF

Kind of Discharge: Air, Contact (direct and indirect)

Polarity: Positive and Negative

Number of Discharge: 10 at all locations for Air discharge
25 at all locations for Contact discharge

Discharge Voltage:	Contact	Air	HCP	VCP
	☒ 2 kV	☒ 2 kV	☒ 2 kV	☒ 2 kV
	☒ 4 kV	☒ 4 kV	☒ 4 kV	☒ 4 kV
	☐ 6 kV	☐ 6 kV	☐ 6 kV	☐ 6 kV
	☐ 8 kV	☒ 8 kV	☐ 8 kV	☐ 8 kV
	☐ 15 kV	☐ 15 kV	☐ 15 kV	☐ 15 kV

Notes: HCP: Horizontal coupling plane

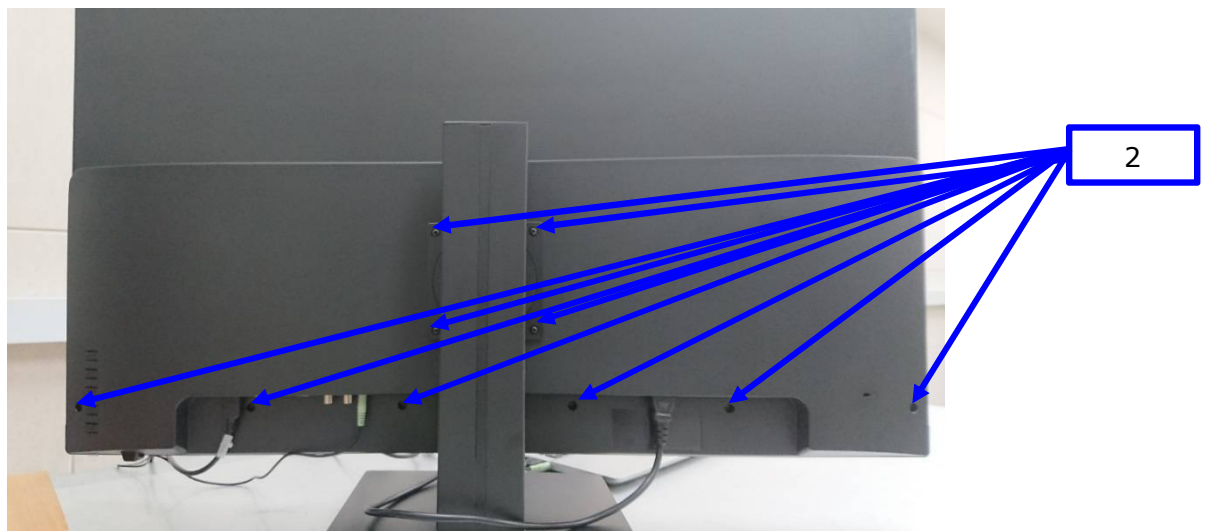
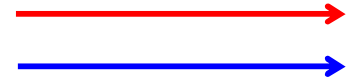
VCP: Vertical coupling plane

Required Performance Criteria: ☒ B

Location of Discharge:

■ D-SUB, HDMI, DVI, BNC Mode

Air
Contact



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Test Data

■ VGA Mode

Indirect Discharge

No.	Test Point	Discharge Method	Observations	Remarks
1	HCP Contact	Contact Discharge	A	-
2	VCP Contact	Contact Discharge	A	-

Direct Discharge

No.	Test Point	Discharge Method	Observations	Remarks
1	Display	Air Discharge	A	-
2	Rear screw	Contact Discharge	A	-

■ HDMI Mode

Indirect Discharge

No.	Test Point	Discharge Method	Observations	Remarks
1	HCP Contact	Contact Discharge	A	-
2	VCP Contact	Contact Discharge	A	-

Direct Discharge

No.	Test Point	Discharge Method	Observations	Remarks
1	Display	Air Discharge	A	-
2	Rear screw	Contact Discharge	A	-

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■ DVI Mode

Indirect Discharge

No.	Test Point	Discharge Method	Observations	Remarks
1	HCP Contact	Contact Discharge	A	-
2	VCP Contact	Contact Discharge	A	-

Direct Discharge

No.	Test Point	Discharge Method	Observations	Remarks
1	Display	Air Discharge	A	-
2	Rear screw	Contact Discharge	A	-

■ BNC Mode

Indirect Discharge

No.	Test Point	Discharge Method	Observations	Remarks
1	HCP Contact	Contact Discharge	A	-
2	VCP Contact	Contact Discharge	A	-

Direct Discharge

No.	Test Point	Discharge Method	Observations	Remarks
1	Panel niche	Air Discharge	A	-
2	Screw	Contact Discharge	A	-

Note: "Blank" = Not performed

Observations:

Complied – No degradation of function

Test Results

- ☒ PASS Required Performance Criteria
☐ NOT PASS Required Performance Criteria

Remarks

PASS Required Performance Criteria.



3.2 Radiated Electric Field Immunity

Reference Standard

EN 61000-4-3:2006 +A2:2010

Test Date

Nov. 08, 2017

Test Location

EMS-RS: ☐ SEMI ANECHOIC CHAMBER #2 ☒ SEMI ANECHOIC CHAMBER #3

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	EMS Test S/W	EMC32	R & S	10.10.02	-
☒	SIGNAL GENERATOR	SMB 100A	R & S	177586	08, 07, 2018
☒	BROADBAND AMPLIFIER	BBA100	R & S	101239	08, 07, 2018
☒	BROADBAND AMPLIFIER	100S1G6M1	AR	579931	08, 07, 2018
☒	POWER METER	NRP2	R & S	103475	08, 07, 2018
☒	AVG POWER SENSOR	NRP-Z91	R & S	102526	08, 07, 2018
☒	AVG POWER SENSOR	NRP-Z91	R & S	102527	08, 07, 2018
☒	STACKED DOUBLE LOG-PER- ANTENNA	STPL9128 E	Schwarzbeck	9128ES-121	-
☒	DIRECTIONAL COUPLER	KYDC-D1070-DX40	KY TELECOM	KY150001	08, 07, 2018
☒	DOUBLE RIDGED HORN ANTENNA	SAS-571	A.H.SYSTEM, INC	781	05, 02, 2019

Test Conditions

Temperature: 19,8 °C
Relative Humidity: 44,2 %
Atmospheric Pressure: 100,1 kPa



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Test Specifications

Antenna Polarization: Horizontal & vertical unless indicated otherwise

Antenna Distance: ☒ 3 m

Field Strength: ☐ 1 V/m ☒ 3 V/m
☐ 10 V/m

Frequency Range: ☒ 80 MHz to 1 GHz ☐ 1,4 GHz to 2,7 GHz
☐ 80 MHz to 2,7 GHz

Modulation: ☒ AM, 80 %, 1 kHz sine wave
☐ PM, 1 Hz (0,5 s ON : 0,5 s OFF)

Frequency step: ☒ 1 % step

Dwell Time: ☒ 1 s ☐ 3 s

of Sides Radiated: ☒ 4

Required Performance Criteria: ☒ A

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Test Data

■ VGA Mode

Side Exposed	Observations	
	Horizontal	Vertical
Front	A	A
Right	A	A
Back	A	A
Left	A	A

■ HDMI Mode

Side Exposed	Observations	
	Horizontal	Vertical
Front	A	A
Right	A	A
Back	A	A
Left	A	A

■ DVI Mode

Side Exposed	Observations	
	Horizontal	Vertical
Front	A	A
Right	A	A
Back	A	A
Left	A	A

■ BNC Mode

Side Exposed	Observations	
	Horizontal	Vertical
Front	A	A
Right	A	A
Back	A	A
Left	A	A

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Note: "Blank" = Not performed

Observations:

Complied – No degradation of function

Test Results

- ☒ PASS Required Performance Criteria
- ☐ NOT PASS Required Performance Criteria

Remarks

PASS Required Performance Criteria.

3.3 Electrical Fast Transients/Bursts

Reference Standard

EN 61000-4-4:2012

Test Date

Nov. 08, 2017

Test Location

EMS-EFT: Electro wave Shieldroom

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	EMS Test S/W	iec.control	EM TEST	5.4.7	-
☒	ULTRA COMPACT SIMULATOR	UCS 500N7	EM TEST	P1608172950	11, 28, 2018
☒	MOTOR VARIAC	MV2616	EM TEST	P1552169719	11, 28, 2018
☒	CAPACITIVE COUPLING CLAMP	HFK	EM TEST	P1633183115	11, 28, 2018

Test Conditions

Temperature: 20,6 °C
Relative Humidity: 45,8 %
Atmospheric Pressure: 100,1 kPa

Test Specifications

Pulse Amplitude & Polarity:
(AC Power Lines) ☒ ± 1.0 kV ☐ ± 2.0 kV
☐ ± 4.0 kV

Pulse Amplitude & Polarity:
(Signal Lines) ☒ ± 0.5 kV ☐ ± 1.0 kV
☐ ± 2.0 kV

Burst Period: ☒ 300 ms ☐ 2 s

Repetition Rate: ☒ 5 kHz ☐ 100 kHz

Duration of Test Voltage: ☒ ≥ 1 min

Required Performance Criteria: ☒ B

Test Data

■ VGA Mode

☒ Input a.c. power ports – Coupling/Decoupling Network used

Mode of Application	Observations	
	(+) Burst (kV)	(-) Burst (kV)
L – N – PE	A	A

☐ Input d.c. power ports – Coupling/Decoupling Network used

Mode of Application	Observations	
	(+) Burst (kV)	(-) Burst (kV)
-	-	-

☐ Signal ports and telecommunication ports – Coupling Clamp used

Mode of Application	Observations	
	(+) Burst (kV)	(-) Burst (kV)
-	-	-

■ HDMI Mode

☒ Input a.c. power ports – Coupling/Decoupling Network used

Mode of Application	Observations	
	(+) Burst (kV)	(-) Burst (kV)
L – N – PE	A	A

☐ Input d.c. power ports – Coupling/Decoupling Network used

Mode of Application	Observations	
	(+) Burst (kV)	(-) Burst (kV)
-	-	-

☐ Signal ports and telecommunication ports – Coupling Clamp used

Mode of Application	Observations	
	(+) Burst (kV)	(-) Burst (kV)
-	-	-

■ DVI Mode

☒ Input a.c. power ports – Coupling/Decoupling Network used

Mode of Application	Observations	
	(+) Burst (kV)	(-) Burst (kV)
L – N – PE	A	A

☐ Input d.c. power ports – Coupling/Decoupling Network used

Mode of Application	Observations	
	(+) Burst (kV)	(-) Burst (kV)
-	-	-

☐ Signal ports and telecommunication ports – Coupling Clamp used

Mode of Application	Observations	
	(+) Burst (kV)	(-) Burst (kV)
-	-	-

■ BNC Mode

☒ Input a.c. power ports – Coupling/Decoupling Network used

Mode of Application	Observations	
	(+) Burst (kV)	(-) Burst (kV)
L – N – PE	A	A

☐ Input d.c. power ports – Coupling/Decoupling Network used

Mode of Application	Observations	
	(+) Burst (kV)	(-) Burst (kV)
-	-	-

☒ Signal ports and telecommunication ports – Coupling Clamp used

Mode of Application	Observations	
	(+) Burst (kV)	(-) Burst (kV)
BNC	A	A

Note: "Blank" = Not performed

Observations:

Complied – No degradation of function

Test Results

☒ PASS Required Performance Criteria

☐ NOT PASS Required Performance Criteria

Remarks

PASS Required Performance Criteria.



3.4 Surge Transients

Reference Standard

EN 61000-4-5:2014

Test Date

Nov. 08, 2017

Test Location

EMS-Surge: Electro wave Shieldroom

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	EMS Test S/W	iec.control	EM TEST	5.4.7	-
☒	ULTRA COMPACT SIMULATOR	UCS 500N7	EM TEST	P1608172950	11, 28, 2018
☒	MOTOR VARIAC	MV2616	EM TEST	P1552169719	11, 28, 2018
☒	CDN	CNV 508N1	EM TEST	P1610176296	11, 29, 2018

Test Conditions

Temperature: 20,6 °C
Relative Humidity: 45,8 %
Atmospheric Pressure: 100,1 kPa



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Test Specifications

AC Power Lines

Source Impedance: 12 ohm for common mode and 2 ohm for differential mode

Surge Amplitude :

Common Mode

☒ (0,5 / 1,0 / 2,0) kV

Differential Mode

☐ (0,5 / 1,0) kV

Number of Surges:

☒ 5 surges per angle

Angle:

☒ 0°, 90°, 180°, 270° (input a.c. power port)

Polarity:

☒ Positive & Negative

Repetition Rate:

☒ 1 surge per min ☐ 1 surge per 30 sec.

Required Performance Criteria: ☒ B

Signal Lines

Source Impedance: 42 ohm for common mode

Surge Amplitude:

Common Mode

☐ (1,0) kV

Number of Surges:

☐ 5 Surges

Polarity:

☐ Positive & Negative

Repetition Rate:

☐ 1 surge per min ☐ 1 surge per 30 sec.

Required Performance Criteria: ☐ B

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Test Data

■ VGA Mode

☒ Line to Line – Differential Mode

Mode of Application	Observations	
	(+) Surge (kV)	(-) Surge (kV)
L – N	A	A
L – PE	A	A
N – PE	A	A

☐ Line to Earth – Common Mode

Mode of Application	Observations	
	(+) Surge (kV)	(-) Surge (kV)
-	-	-

Signal Lines

☐ Line to Earth – Common Mode

Mode of Application	Observations	
	(+) Surge (kV)	(-) Surge (kV)
-	-	-

■ HDMI Mode

☒ Line to Line – Differential Mode

Mode of Application	Observations	
	(+) Surge (kV)	(-) Surge (kV)
L – N	A	A
L – PE	A	A
N – PE	A	A

☐ Line to Earth – Common Mode

Mode of Application	Observations	
	(+) Surge (kV)	(-) Surge (kV)
-	-	-

Signal Lines

☐ Line to Earth – Common Mode

Mode of Application	Observations	
	(+) Surge (kV)	(-) Surge (kV)
-	-	-

■ DVI Mode

☒ Line to Line – Differential Mode

Mode of Application	Observations	
	(+) Surge (kV)	(-) Surge (kV)
L – N	A	A
L – PE	A	A
N – PE	A	A

☐ Line to Earth – Common Mode

Mode of Application	Observations	
	(+) Surge (kV)	(-) Surge (kV)
-	-	-

Signal Lines

☐ Line to Earth – Common Mode

Mode of Application	Observations	
	(+) Surge (kV)	(-) Surge (kV)
-	-	-

■ BNC Mode

☒ Line to Line – Differential Mode

Mode of Application	Observations	
	(+) Surge (kV)	(-) Surge (kV)
L – N	A	A
L – PE	A	A
N – PE	A	A

☐ Line to Earth – Common Mode

Mode of Application	Observations	
	(+) Surge (kV)	(-) Surge (kV)
-	-	-

Signal Lines

☐ Line to Earth – Common Mode

Mode of Application	Observations	
	(+) Surge (kV)	(-) Surge (kV)
BNC	A	A



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Note: "Blank" = Not performed

Observations:

Complied – No degradation of function

Test Results

- ☒ PASS Required Performance Criteria
- ☐ NOT PASS Required Performance Criteria

Remarks

PASS Required Performance Criteria.



3.5 Conducted Disturbance

Reference Standard

EN 61000-4-6:2014

Test Date

Nov. 08, 2017

Test Location

EMS-CS: Electro wave Shieldroom

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	EMS Test S/W	icd.control	EM TEST	5.3.11	-
☒	CONTINUOUS WAVE SIMULATOR	CWS 500N1.4	EM TEST	P1602169880	11, 28, 2018
☒	ATTENUATOR	ATT 6/80	EM TEST	P1614178148	11, 28, 2018
☒	CDN	CDN M016	TESEQ	43694	11, 28, 2018
☒	EM CLAMP	KEMZ 801A	TESEQ	44099	11, 30, 2018

Test Conditions

Temperature: 22,0 °C
Relative Humidity: 44,9 %
Atmospheric Pressure: 100,2 kPa



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Test Specifications

Frequency range:

☒ 150 kHz to 80 MHz
☐ 150 kHz to 230 MHz

☐ 10 kHz to 30 MHz
☐ 10 kHz to 100 MHz

Voltage Level:

☐ 1 Vrms
☐ 10 Vrms

☒ 3 Vrms

Modulation:

☒ AM, 80 %, 1 kHz sine wave
☐ PM, 1 Hz (0,5 s ON : 0,5 s OFF)

Frequency step:

☒ 1 % step

Dwell Time:

☒ 1 s ☐ 3 s

Required Performance Criteria: ☒ A

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Test Data**■ D-SUB Mode**☒ Input a.c. power ports

Coupling Location (Line Stressed)	Coupling Method	Observations
L - N - PE	CDN-M2/M3N	A

☐ Input d.c. power ports

Coupling Location (Line Stressed)	Coupling Method	Observations
-	CDN	-

☐ Signal ports and telecommunication ports

Coupling Location (Line Stressed)	Coupling Method	Observations
-	EM Injection Clamp	-

■ HDMI Mode☒ Input a.c. power ports

Coupling Location (Line Stressed)	Coupling Method	Observations
L - N - PE	CDN-M2/M3N	A

☐ Input d.c. power ports

Coupling Location (Line Stressed)	Coupling Method	Observations
-	CDN	-

☐ Signal ports and telecommunication ports

Coupling Location (Line Stressed)	Coupling Method	Observations
-	EM Injection Clamp	-

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■ DVI Mode

☒ Input a.c. power ports

Coupling Location (Line Stressed)	Coupling Method	Observations
L – N – PE	CDN-M2/M3N	A

☐ Input d.c. power ports

Coupling Location (Line Stressed)	Coupling Method	Observations
-	CDN	-

☐ Signal ports and telecommunication ports

Coupling Location (Line Stressed)	Coupling Method	Observations
-	EM Injection Clamp	-

■ BNC Mode

☒ Input a.c. power ports

Coupling Location (Line Stressed)	Coupling Method	Observations
L – N – PE	CDN-M2/M3N	A

☐ Input d.c. power ports

Coupling Location (Line Stressed)	Coupling Method	Observations
-	CDN	-

☒ Signal ports and telecommunication ports

Coupling Location (Line Stressed)	Coupling Method	Observations
BNC	EM Injection Clamp	A

Notes: CDN = Coupling Decoupling Network
"blank" = Not performed

Observations:
Complied – No degradation of function

Test Results

☒ PASS Required Performance Criteria
☐ NOT PASS Required Performance Criteria

Remarks

PASS Required Performance Criteria.



3.6 Voltage Dips and Short Interruptions

Reference Standard

EN 61000-4-11:2004

Test Date

Nov. 08, 2017

Test Location

EMS-Voltage dip: Electro wave Shieldroom

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	EMS Test S/W	iec.control	EM TEST	5.4.7	-
☒	ULTRA COMPACT SIMULATOR	UCS 500N7	EM TEST	P1608172950	11, 28, 2018
☒	MOTOR VARIAC	MV2616	EM TEST	P1552169719	11, 28, 2018

Test Conditions

Temperature: 20,6 °C
Relative Humidity: 45,8 %
Atmospheric Pressure: 100,1 kPa



Test Specifications & Observations/Remarks

■ VGA Mode

Test Level	Duration [in period/ms (50 Hz)]	Criteria	Results
☒ 0 %Ut (>95 % dip)	☒ 0.5 / 10	<u>B</u>	<u>A</u>
☒ 30 %Ut (70 % dip)	☒ 25 / 500	<u>C</u>	<u>C</u>
☒ 0 %Ut (>95 % Interruptions)	☒ 250 / 5 000	<u>C</u>	<u>C</u>

■ HDMI Mode

Test Level	Duration [in period/ms (50 Hz)]	Criteria	Results
☒ 0 %Ut (>95 % dip)	☒ 0.5 / 10	<u>B</u>	<u>A</u>
☒ 30 %Ut (70 % dip)	☒ 25 / 500	<u>C</u>	<u>C</u>
☒ 0 %Ut (>95 % Interruptions)	☒ 250 / 5 000	<u>C</u>	<u>C</u>

■ DVI Mode

Test Level	Duration [in period/ms (50 Hz)]	Criteria	Results
☒ 0 %Ut (>95 % dip)	☒ 0.5 / 10	<u>B</u>	<u>A</u>
☒ 30 %Ut (70 % dip)	☒ 25 / 500	<u>C</u>	<u>C</u>
☒ 0 %Ut (>95 % Interruptions)	☒ 250 / 5 000	<u>C</u>	<u>C</u>



■ BNC Mode

<u>Test Level</u>	<u>Duration [in period/ms (50 Hz)]</u>	<u>Criteria</u>	<u>Results</u>
☒ 0 %Ut (>95 % dip)	☒ 0.5 / 10	<u> B </u>	<u> A </u>
☒ 30 %Ut (70 % dip)	☒ 25 / 500	<u> C </u>	<u> C </u>
☒ 0 %Ut (>95 % Interruptions)	☒ 250 / 5 000	<u> C </u>	<u> C </u>

Observations:

- A – No response observed from E.U.T
- B – Unit shuts down then automatically restarts when full voltage is restored.
- C – Unit shuts down then manually restarts when full voltage is restored or Loss of function.

Test Results

- ☒ PASS Required Performance Criteria
- ☐ NOT PASS Required Performance Criteria

Remarks

C : Temporarily disconnected during testing but normal operation without test intervention after testing

APPENDIX A – TEST DATA

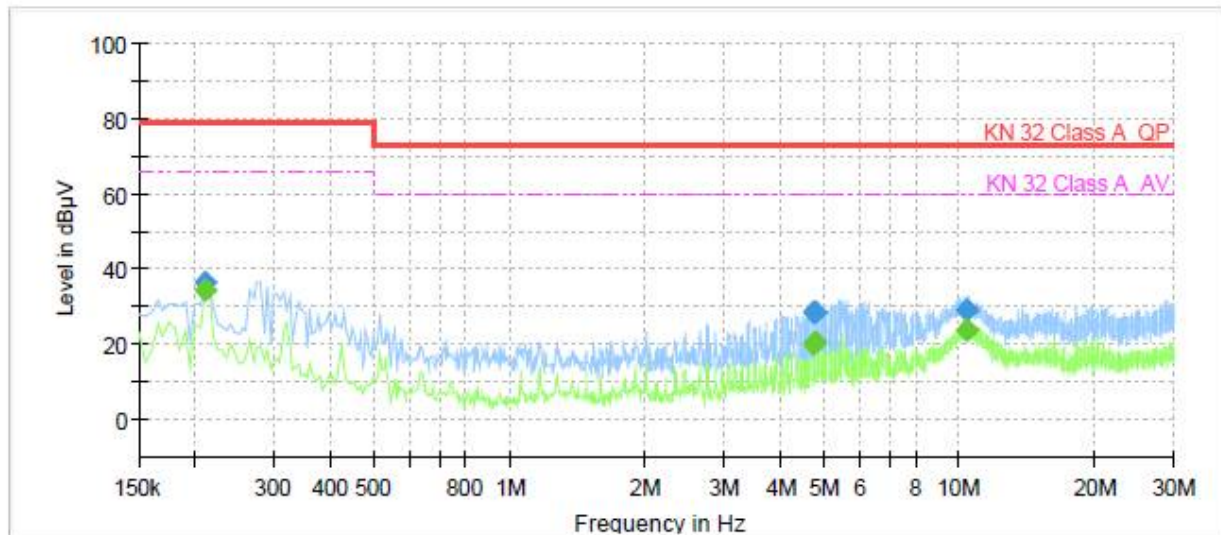
Conducted Emissions at Mains Power Ports

■ VGA Mode

[HOT]

Common Information

Test Description:	Conducted Emission
Model No.:	SMT-4033
Mode	VGA
Operator Name:	KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.210000	---	34.53	66.00	31.47	1000.0	9.000	L1	19.5
0.210000	36.43	---	79.00	42.57	1000.0	9.000	L1	19.5
4.760000	---	19.93	60.00	40.07	1000.0	9.000	L1	19.8
4.760000	28.77	---	73.00	44.23	1000.0	9.000	L1	19.8
4.775000	---	20.91	60.00	39.09	1000.0	9.000	L1	19.8
4.775000	28.82	---	73.00	44.18	1000.0	9.000	L1	19.8
10.380000	---	23.84	60.00	36.16	1000.0	9.000	L1	20.1
10.380000	28.99	---	73.00	44.01	1000.0	9.000	L1	20.1
10.435000	---	23.77	60.00	36.23	1000.0	9.000	L1	20.1
10.435000	29.07	---	73.00	43.93	1000.0	9.000	L1	20.1



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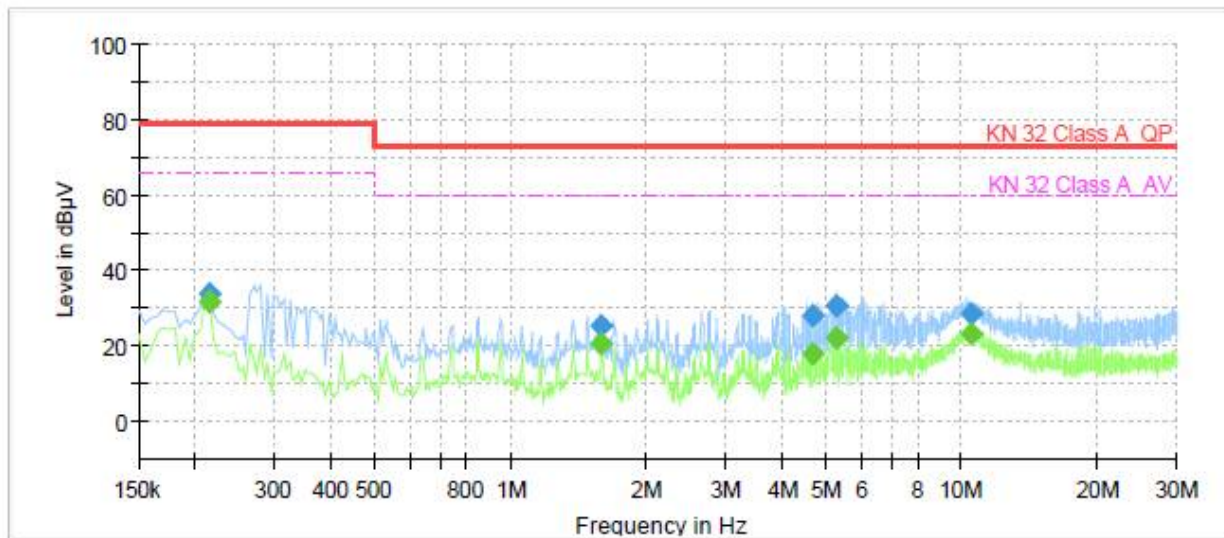
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[NEUTRAL]

Common Information

Test Description: Conducted Emission
Model No.: SMT-4033
Mode: VGA
Operator Name: KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.215000	---	31.54	66.00	34.46	1000.0	9.000	N	19.5
0.215000	33.96	---	79.00	45.04	1000.0	9.000	N	19.5
1.595000	---	20.84	60.00	39.16	1000.0	9.000	N	20.2
1.595000	25.64	---	73.00	47.36	1000.0	9.000	N	20.2
4.685000	---	18.09	60.00	41.91	1000.0	9.000	N	19.8
4.685000	28.05	---	73.00	44.95	1000.0	9.000	N	19.8
5.310000	---	22.04	60.00	37.96	1000.0	9.000	N	19.8
5.310000	30.46	---	73.00	42.54	1000.0	9.000	N	19.8
10.550000	---	23.54	60.00	36.46	1000.0	9.000	N	20.1
10.550000	28.41	---	73.00	44.59	1000.0	9.000	N	20.1

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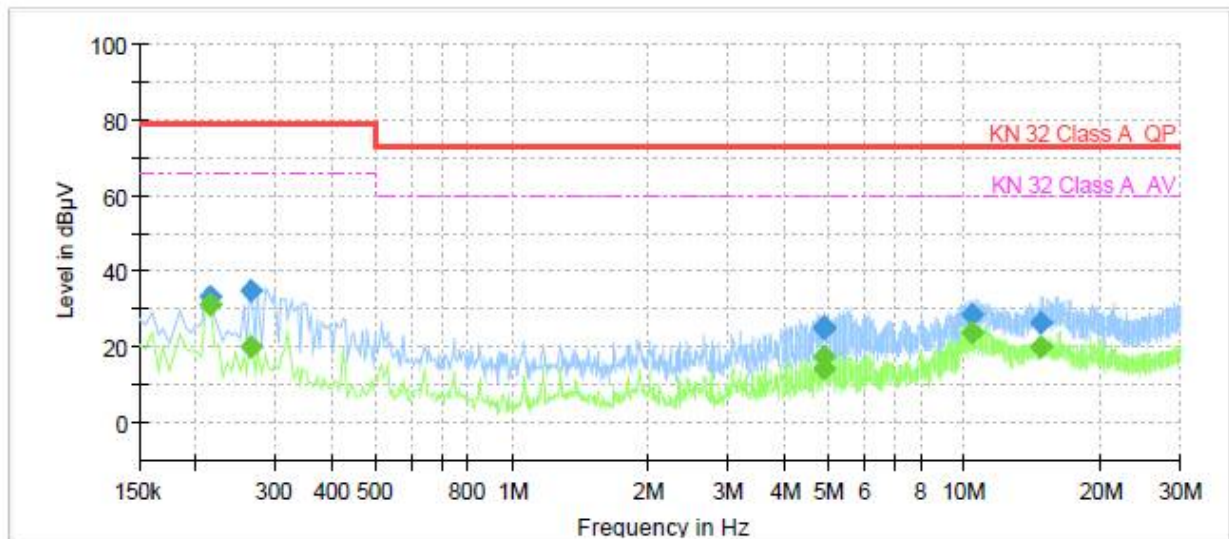
■ HDMI Mode

[HOT]

Common Information

Test Description:
Model No.:
Mode
Operator Name:

Conducted Emission
SMT-4033
HDMI
KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.215000	---	31.41	66.00	34.59	1000.0	9.000	L1	19.5
0.215000	33.11	---	79.00	45.89	1000.0	9.000	L1	19.5
0.265000	---	19.96	66.00	46.04	1000.0	9.000	L1	19.5
0.265000	34.88	---	79.00	44.12	1000.0	9.000	L1	19.5
4.900000	---	17.64	60.00	42.36	1000.0	9.000	L1	19.8
4.900000	25.65	---	73.00	47.35	1000.0	9.000	L1	19.8
4.915000	---	14.31	60.00	45.69	1000.0	9.000	L1	19.8
4.915000	25.00	---	73.00	48.00	1000.0	9.000	L1	19.8
10.375000	---	23.83	60.00	36.17	1000.0	9.000	L1	20.1
10.375000	28.42	---	73.00	44.58	1000.0	9.000	L1	20.1
14.750000	---	19.99	60.00	40.01	1000.0	9.000	L1	20.1
14.750000	26.61	---	73.00	46.39	1000.0	9.000	L1	20.1



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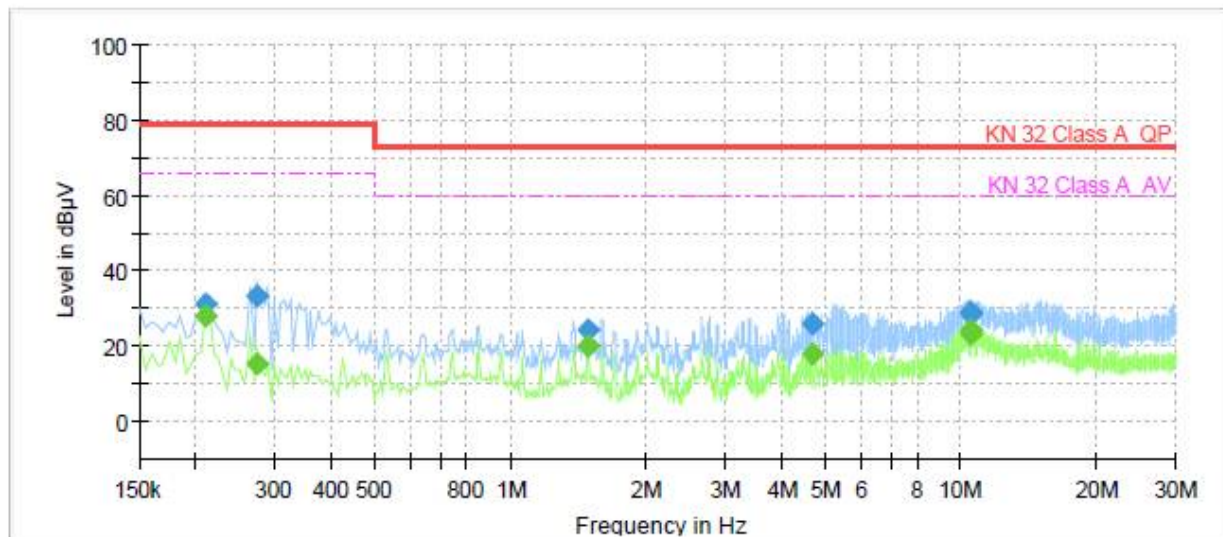
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[NEUTRAL]

Common Information

Test Description:
Model No.:
Mode
Operator Name:

Conducted Emission
SMT-4033
HDMI
KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.210000	---	28.07	66.00	37.93	1000.0	9.000	N	19.5
0.210000	31.23	---	79.00	47.77	1000.0	9.000	N	19.5
0.275000	---	15.42	66.00	50.58	1000.0	9.000	N	19.6
0.275000	33.46	---	79.00	45.54	1000.0	9.000	N	19.6
1.490000	---	20.40	60.00	39.60	1000.0	9.000	N	20.2
1.490000	24.51	---	73.00	48.49	1000.0	9.000	N	20.2
4.685000	---	17.81	60.00	42.19	1000.0	9.000	N	19.8
4.685000	25.98	---	73.00	47.02	1000.0	9.000	N	19.8
10.475000	---	23.32	60.00	36.68	1000.0	9.000	N	20.1
10.475000	28.53	---	73.00	44.47	1000.0	9.000	N	20.1
10.560000	---	24.20	60.00	35.80	1000.0	9.000	N	20.1
10.560000	29.26	---	73.00	43.74	1000.0	9.000	N	20.1

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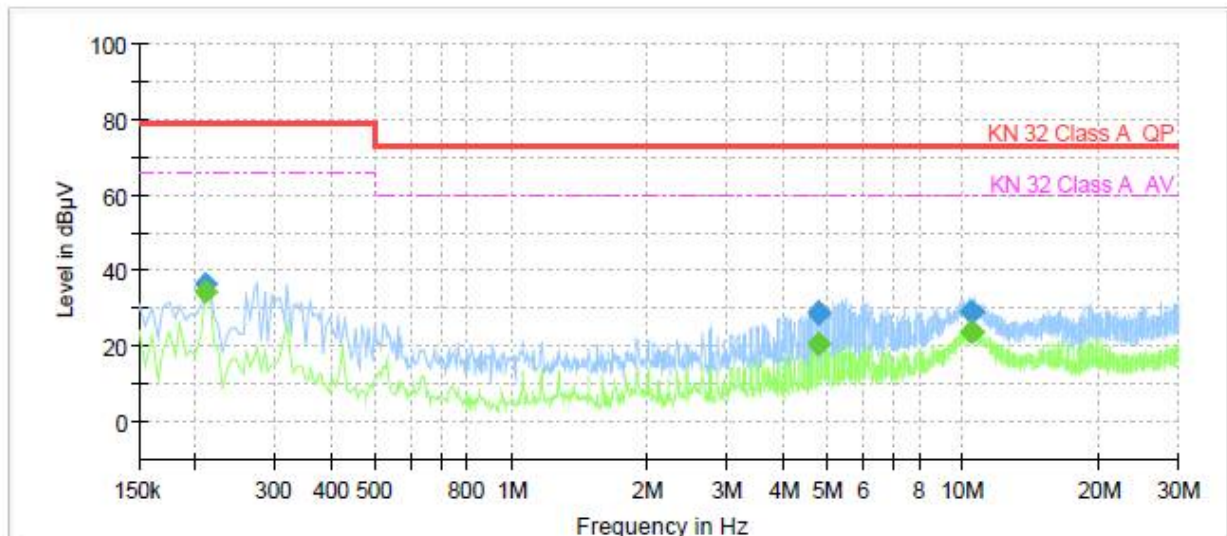
■ DVI Mode

[HOT]

Common Information

Test Description:
Model No.:
Mode
Operator Name:

Conducted Emission
SMT-4033
DVI
KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.210000	---	34.50	66.00	31.50	1000.0	9.000	L1	19.5
0.210000	36.38	---	79.00	42.62	1000.0	9.000	L1	19.5
4.765000	---	20.64	60.00	39.36	1000.0	9.000	L1	19.8
4.765000	28.70	---	73.00	44.30	1000.0	9.000	L1	19.8
4.775000	---	20.88	60.00	39.12	1000.0	9.000	L1	19.8
4.775000	28.90	---	73.00	44.10	1000.0	9.000	L1	19.8
10.380000	---	23.65	60.00	36.35	1000.0	9.000	L1	20.1
10.380000	29.04	---	73.00	43.96	1000.0	9.000	L1	20.1
10.480000	---	23.86	60.00	36.14	1000.0	9.000	L1	20.1
10.480000	29.14	---	73.00	43.86	1000.0	9.000	L1	20.1

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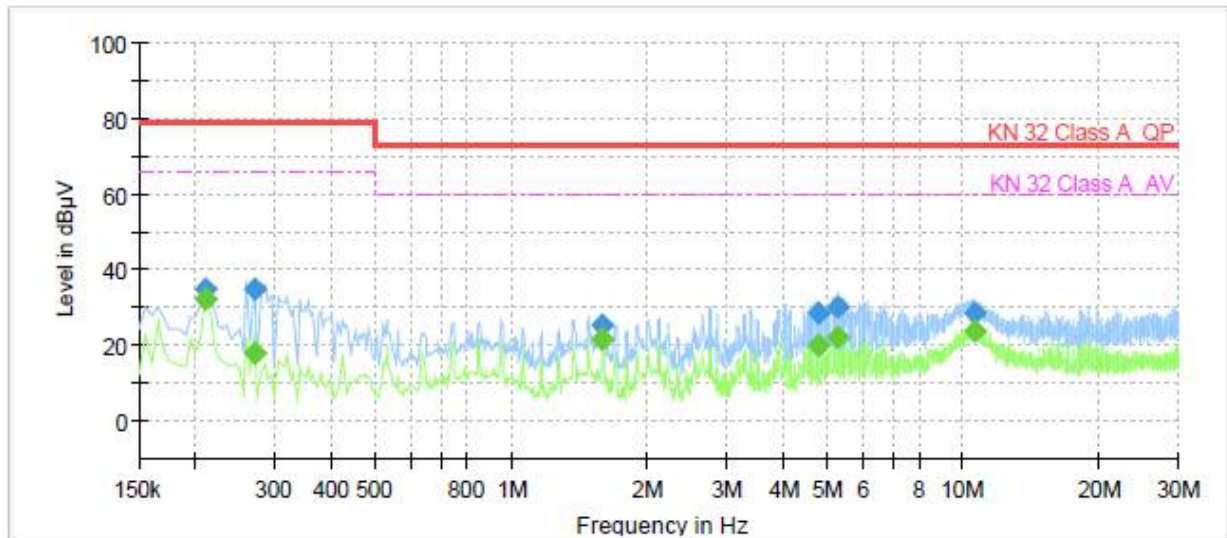
KES-E1-17T0748-R1

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[NEUTRAL]

Common Information

Test Description: Conducted Emission
Model No.: SMT-4033
Mode: DVI
Operator Name: KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.210000	---	32.46	66.00	33.54	1000.0	9.000	N	19.5
0.210000	34.80	---	79.00	44.20	1000.0	9.000	N	19.5
0.270000	---	18.11	66.00	47.89	1000.0	9.000	N	19.5
0.270000	34.96	---	79.00	44.04	1000.0	9.000	N	19.5
1.590000	---	21.75	60.00	38.25	1000.0	9.000	N	20.2
1.590000	25.65	---	73.00	47.35	1000.0	9.000	N	20.2
4.785000	---	19.98	60.00	40.02	1000.0	9.000	N	19.8
4.785000	28.76	---	73.00	44.24	1000.0	9.000	N	19.8
5.300000	---	22.19	60.00	37.81	1000.0	9.000	N	19.8
5.300000	30.43	---	73.00	42.57	1000.0	9.000	N	19.8
10.615000	---	23.61	60.00	36.39	1000.0	9.000	N	20.1
10.615000	28.57	---	73.00	44.43	1000.0	9.000	N	20.1

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■ BNC Mode

[HOT]

Common Information

Test Description:

Model No.:

Mode

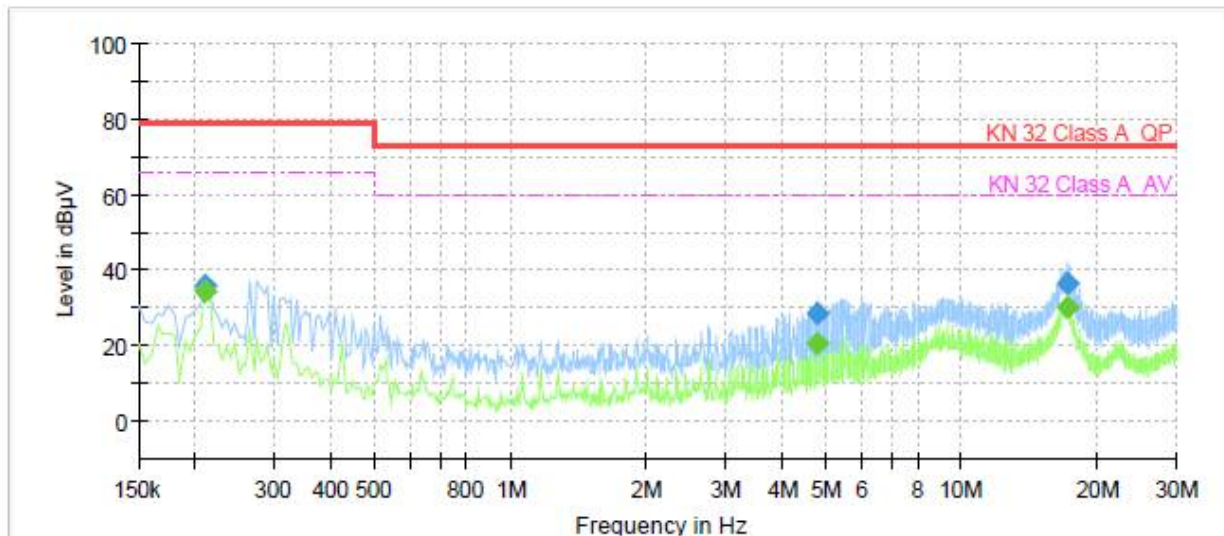
Operator Name:

Conducted Emission

SMT-4033

BNC

KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.210000	---	34.43	66.00	31.57	1000.0	9.000	L1	19.5
0.210000	36.26	---	79.00	42.74	1000.0	9.000	L1	19.5
4.765000	---	20.46	60.00	39.54	1000.0	9.000	L1	19.8
4.765000	28.65	---	73.00	44.35	1000.0	9.000	L1	19.8
17.185000	---	30.31	60.00	29.69	1000.0	9.000	L1	20.2
17.185000	36.51	---	73.00	36.49	1000.0	9.000	L1	20.2

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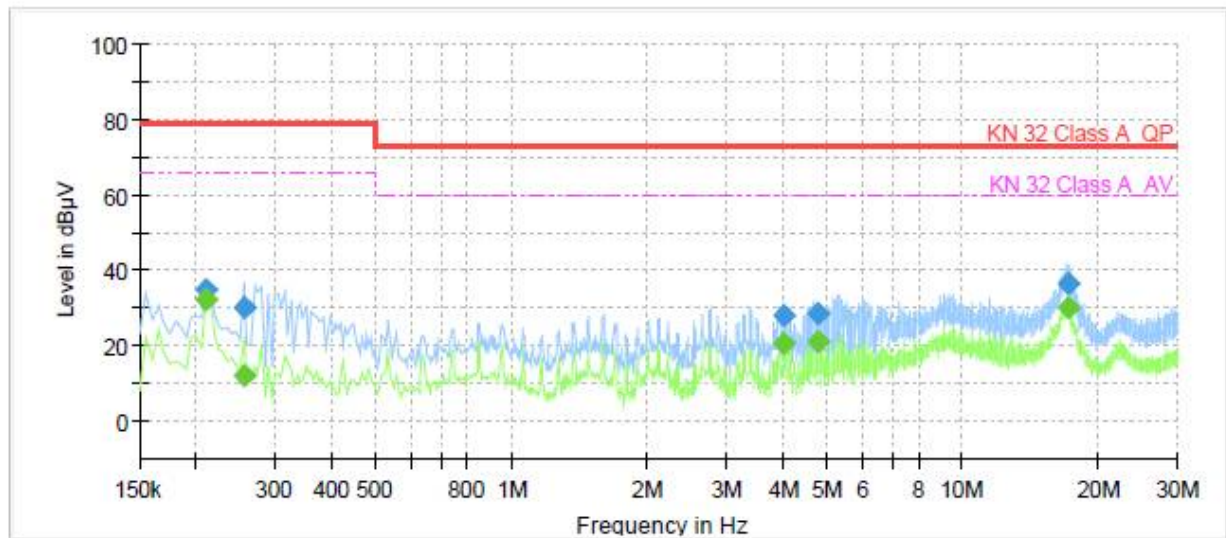
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[NEUTRAL]

Common Information

Test Description: Conducted Emission
 Model No.: SMT-4033
 Mode: BNC
 Operator Name: KES



Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.210000	---	32.54	66.00	33.46	1000.0	9.000	N	19.5
0.210000	34.75	---	79.00	44.25	1000.0	9.000	N	19.5
0.255000	---	12.34	66.00	53.66	1000.0	9.000	N	19.5
0.255000	30.02	---	79.00	48.98	1000.0	9.000	N	19.5
4.040000	---	20.50	60.00	39.50	1000.0	9.000	N	19.9
4.040000	28.05	---	73.00	44.95	1000.0	9.000	N	19.9
4.775000	---	20.95	60.00	39.05	1000.0	9.000	N	19.8
4.775000	28.84	---	73.00	44.16	1000.0	9.000	N	19.8
17.140000	---	30.35	60.00	29.65	1000.0	9.000	N	20.2
17.140000	36.35	---	73.00	36.65	1000.0	9.000	N	20.2

◆ Calculation

QuasiPeak[dBuV] / CAverage [dBuV] = Reading Value[dBuV] + Corr. [dB]

QuasiPeak / CAverage : The Final Value

Reading Value : Not shown in the table.

Corr. : Correction values (LISN FACTOR + (Cable Loss + Pulse Limiter FACTOR))



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Conducted Emissions at Telecommunication Ports

[10 Mbps]

N/A

◆ Calculation

QuasiPeak[dBuV] / CAverage [dBuV] = Reading Value[dBuV] + Corr. [dB]

QuasiPeak / CAverage : The Final Value

Reading Value : Not shown in the table.

Corr. : Correction values (ISN FACTOR + (Cable Loss + Pulse Limiter FACTOR))

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[100 Mbps]

N/A

◆ Calculation

QuasiPeak[dBuV] / CAverage [dBuV] = Reading Value[dBuV] + Corr. [dB]

QuasiPeak / CAverage : The Final Value

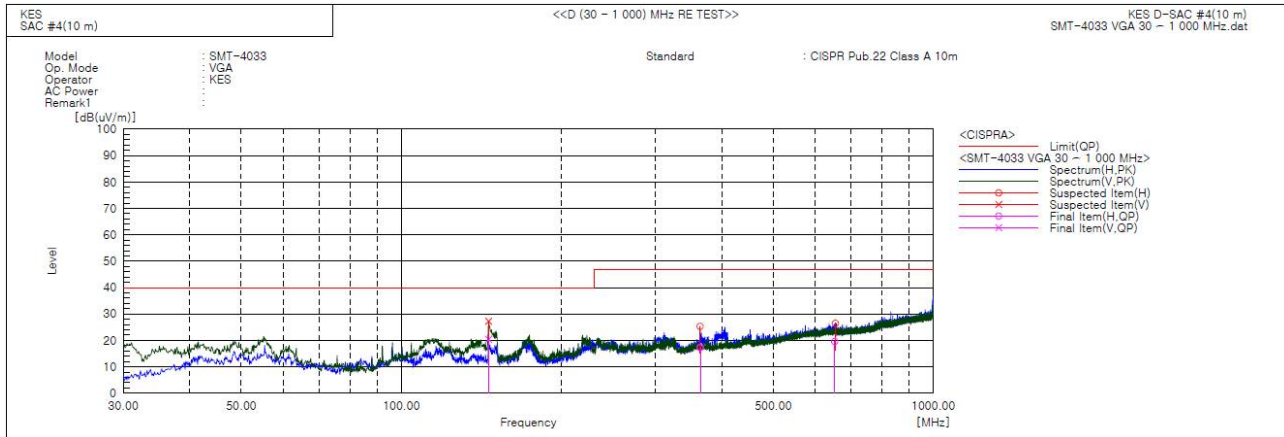
Reading Value : Not shown in the table.

Corr. : Correction values (ISN FACTOR + (Cable Loss + Pulse Limiter FACTOR))



Radiated Electric Field Emissions(Below 1 GHz)

■ VGA Mode



Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]	Remark
1	145.902	V	52.0	-31.6	20.4	40.0	19.6	100.0	292.0	
2	364.682	H	38.7	-21.4	17.3	47.0	29.7	100.0	345.0	
3	652.202	H	33.4	-13.8	19.6	47.0	27.4	100.0	139.0	



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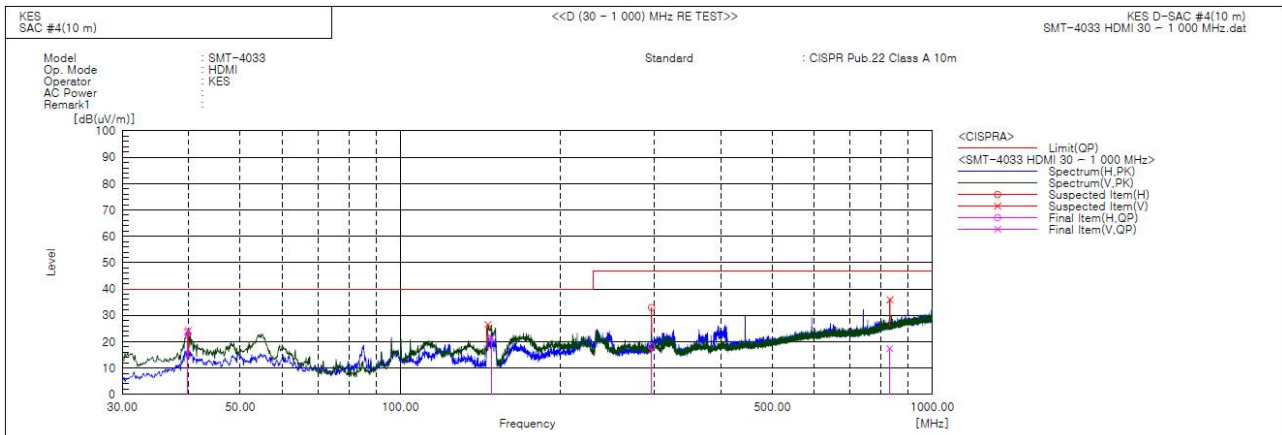
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■ HDMI Mode



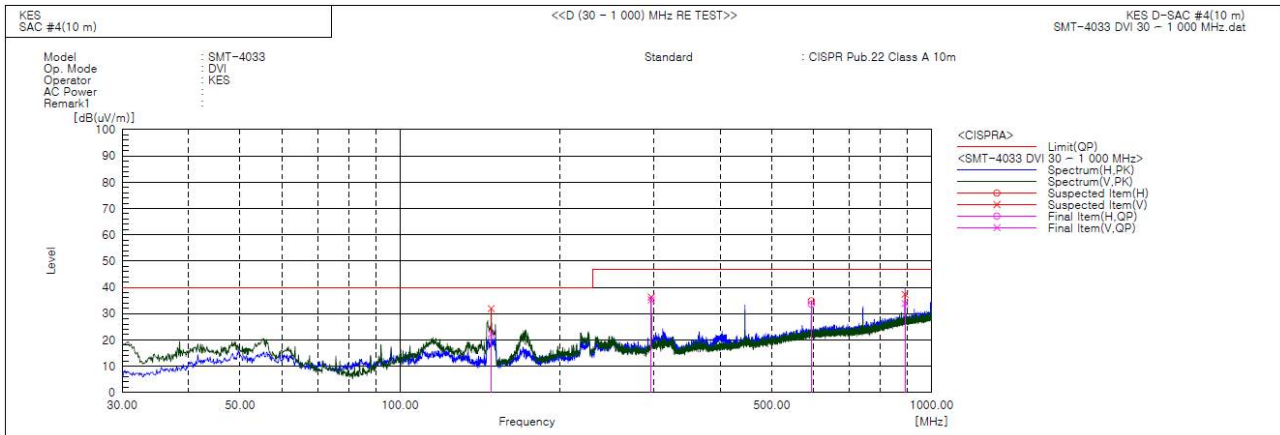
Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]	Remark
1	39.740	V	53.1	-29.5	23.6	40.0	16.4	100.0	111.0	
2	148.341	V	52.9	-31.4	21.5	40.0	18.5	101.0	112.0	
3	296.763	H	42.0	-23.9	18.1	47.0	28.9	100.0	315.0	
4	831.826	V	28.4	-11.0	17.4	47.0	29.6	104.0	351.0	

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■ DVI Mode

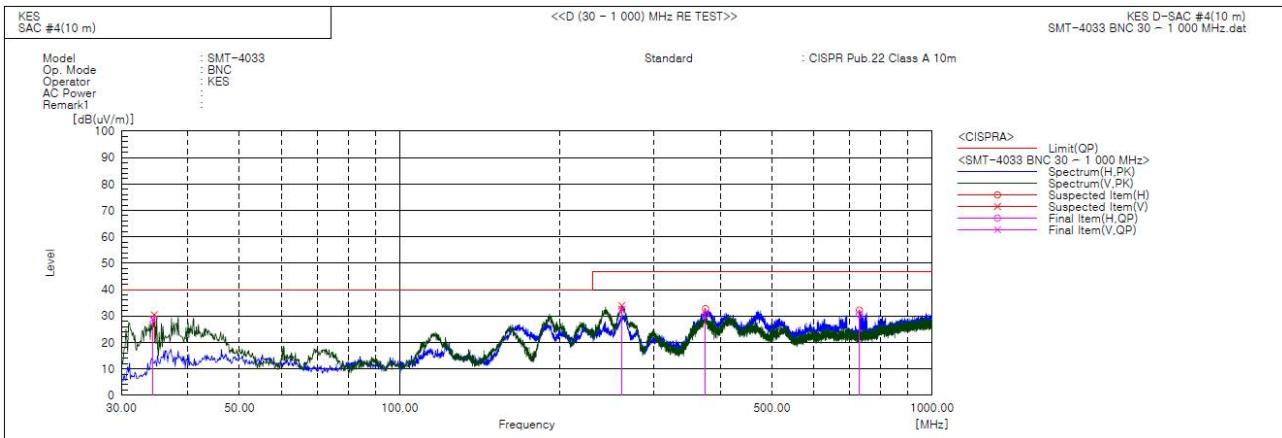


Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]	Remark
1	148.517	V	53.6	-31.4	22.2	40.0	17.8	100.0	343.0	
2	297.005	V	59.1	-23.9	35.2	47.0	11.8	128.0	305.0	
3	594.022	H	48.1	-14.5	33.6	47.0	13.4	390.0	228.0	
4	891.031	V	43.4	-9.6	33.8	47.0	13.2	173.0	201.0	



■ BNC Mode



Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]	Remark
1	34.363	V	60.3	-31.5	28.8	40.0	11.2	100.0	209.0	
2	261.594	V	57.3	-24.9	32.4	47.0	14.6	124.0	288.0	
3	375.192	H	51.6	-21.1	30.5	47.0	16.5	232.0	117.0	
4	730.946	H	43.8	-13.2	30.6	47.0	16.4	367.0	356.0	

◆ Calculation – SAC #4(10 m)

Result(QP) [dB(μV/m)] = (Reading(QP)[dB(μV)] + c.f[dB(1/m)])

Margin(QP)[dB] = Limit[dB(μV/m)] - Result(QP) [dB(μV/m)]

Reading(QP) : Reading value, Result(QP) : Reading value + Factor value

Limit(QP) : Limit value, c.f : (ANT Factor + Cable Loss - Preamp Factor), Margin: Margin value



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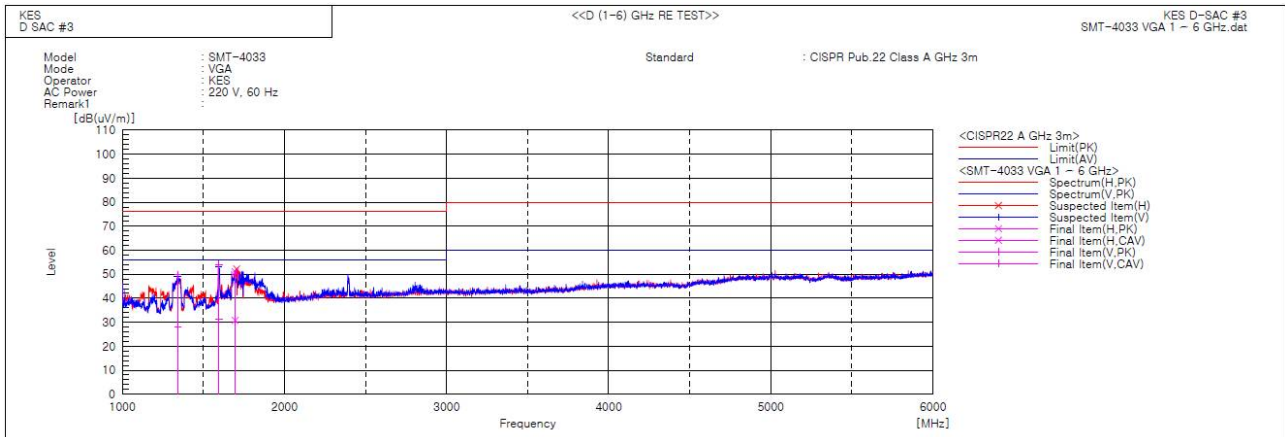
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Radiated Electric Field Emissions(Above 1 GHz)

■ VGA Mode



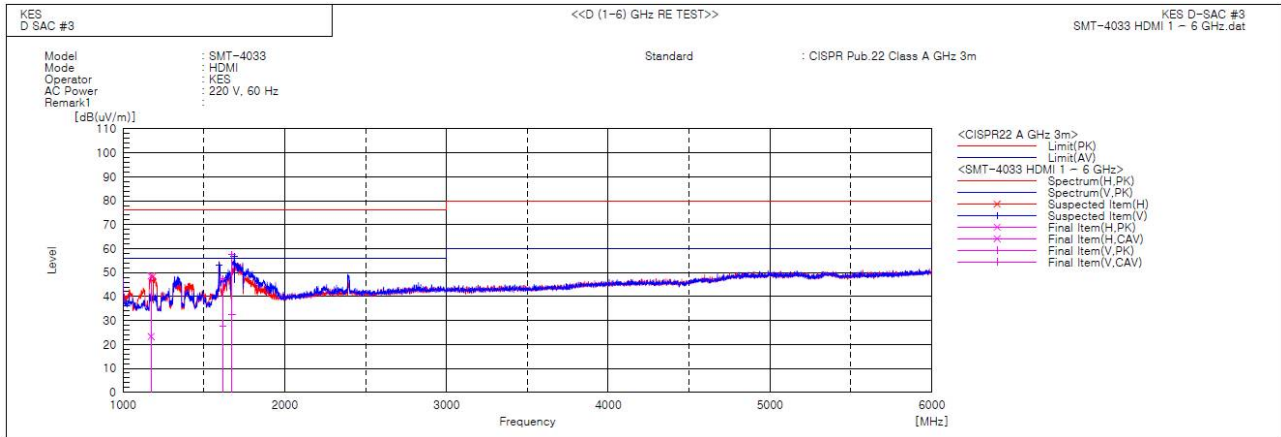
Final Result

No.	Frequency [MHz]	(P)	Reading PK [dB(uV)]	Reading CAV [dB(uV)]	c.f [dB(1/m)]	Result PK [dB(uV/m)]	Result CAV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin CAV [dB]	Height [cm]	Angle [deg]	Remark
1	1343.389	V	57.1	35.3	-7.4	49.7	27.9	76.0	56.0	26.3	28.1	100.0	10.1	
2	1595.320	V	59.3	36.3	-5.2	54.1	31.1	76.0	56.0	21.9	24.9	100.0	250.3	
3	1696.072	H	55.2	35.0	-4.2	51.0	30.8	76.0	56.0	25.0	25.2	100.0	2.3	

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■ HDMI Mode



Final Result

No.	Frequency [MHz]	(P)	Reading PK [dB(uV)]	Reading CAV [dB(uV)]	c.f [dB(1/m)]	Result PK [dB(uV/m)]	Result CAV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin CAV [dB]	Height [cm]	Angle [deg]	Remark
1	1173.742	H	57.3	32.0	-8.7	48.6	23.3	76.0	56.0	27.4	32.7	100.0	90.5	
2	1618.535	V	52.4	32.7	-5.0	47.4	27.7	76.0	56.0	28.6	28.3	100.0	323.5	
3	1673.363	V	62.0	36.7	-4.4	57.6	32.3	76.0	56.0	18.4	23.7	100.0	328.3	



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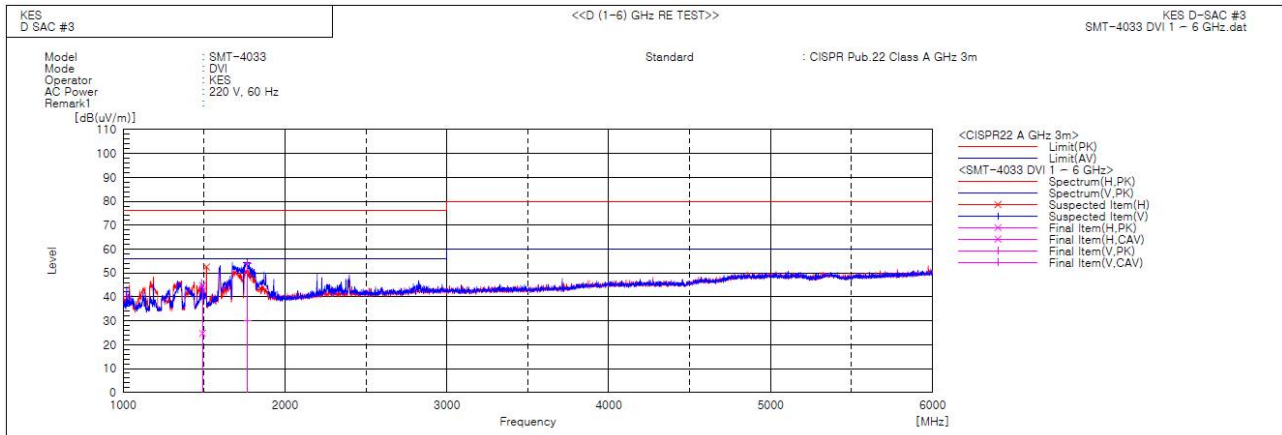
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Report No.:

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■ DVI Mode



Final Result

No.	Frequency [MHz]	(P)	Reading PK [dB(μV)]	Reading CAV [dB(μV)]	c.f [dB(1/m)]	Result PK [dB(μV/m)]	Result CAV [dB(μV/m)]	Limit PK [dB(μV/m)]	Limit AV [dB(μV/m)]	Margin PK [dB]	Margin CAV [dB]	Height [cm]	Angle [deg]	Remark
1	1490.875	H	51.0	31.0	-6.2	44.8	24.8	76.0	56.0	31.2	31.2	100.0	4.3	
2	1768.789	V	57.4	33.7	-3.5	53.9	30.2	76.0	56.0	22.1	25.8	100.0	330.6	

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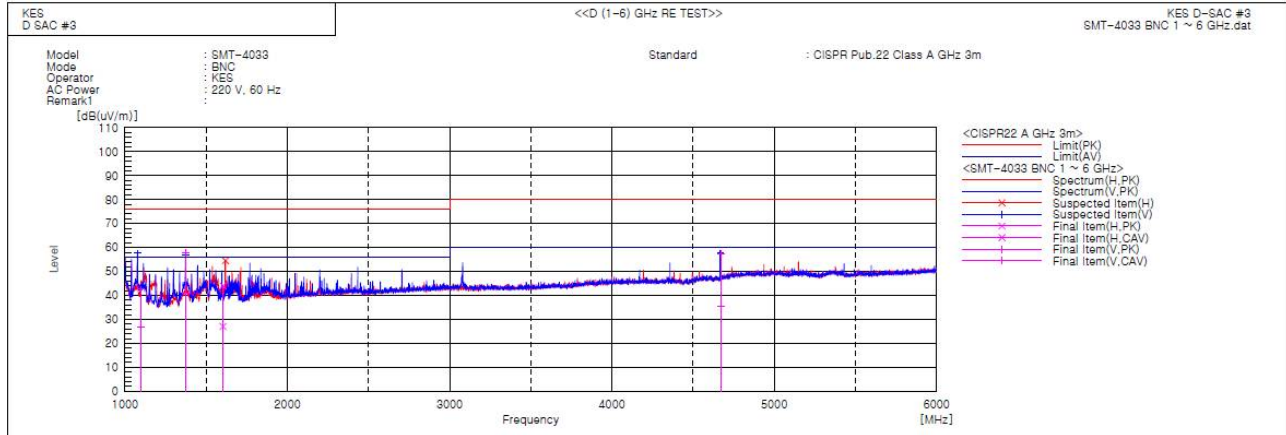
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Report No.:

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■ BNC Mode



Final Result

No.	Frequency [MHz]	(P)	Reading PK [dB(uV)]	Reading CAV [dB(uV)]	c.f [dB(1/m)]	Result PK [dB(uV/m)]	Result CAV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin CAV [dB]	Height [cm]	Angle [deg]	Remark
1	1098.416	V	51.8	36.1	-9.3	42.5	26.8	76.0	56.0	33.5	29.2	100.0	285.8	
2	1373.490	V	65.0	48.1	-7.2	57.8	40.9	76.0	56.0	18.2	15.1	100.0	284.4	
3	1603.603	H	49.1	32.1	-5.1	44.0	27.0	76.0	56.0	32.0	29.0	100.0	30.3	
4	4672.019	V	48.8	26.7	8.5	57.3	35.2	80.0	60.0	22.7	24.8	100.0	131.1	

◆ Calculation

Over Limit [dB] = (Read Level[dB μ V] + Ant Factor[dB/m] + Cable Loss [dB] - Preamp Factor [dB]) - Limit Line[dB μ V]

Over Limit : Margin, Read Level : Reading value, Ant Factor : ANT Factor,
Cable Loss : Cable loss, Preamp Factor : Preamp Factor

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Harmonic Current Emissions and Voltage Fluctuations and Flicker

■ VGA Mode

Average harmonic current results

Hn	I _{eff} [A]	% of Limit	Limit [A]	Result
1	212.949E-3			
2	3.034E-3			PASS
3	203.371E-3	8.842	2.30	PASS
4	2.848E-3			PASS
5	193.648E-3	16.987	1.14	PASS
6	2.711E-3			PASS
7	179.149E-3	23.266	770.00E-3	PASS
8	2.744E-3			PASS
9	160.458E-3	40.115	400.00E-3	PASS
10	2.097E-3			PASS
11	139.733E-3	42.343	330.00E-3	PASS
12	1.926E-3			PASS
13	117.796E-3	56.093	210.00E-3	PASS
14	1.968E-3			PASS
15	95.973E-3	63.982	150.00E-3	PASS
16	1.977E-3			PASS
17	75.239E-3	56.849	132.35E-3	PASS
18	2.112E-3			PASS
19	56.831E-3	47.991	118.42E-3	PASS
20	2.019E-3			PASS
21	42.205E-3	26.261	160.71E-3	PASS
22	2.151E-3			PASS
23	31.669E-3	21.581	146.74E-3	PASS
24	1.973E-3			PASS
25	26.256E-3	19.449	135.00E-3	PASS
26	1.889E-3			PASS
27	24.114E-3	19.292	124.99E-3	PASS
28	1.638E-3			PASS
29	23.602E-3	20.279	116.39E-3	PASS
30	1.587E-3			PASS
31	22.299E-3	20.482	108.87E-3	PASS
32	1.376E-3			PASS
33	20.070E-3	19.624	102.27E-3	PASS
34	1.168E-3			PASS
35	17.090E-3	17.721	96.44E-3	PASS
36	1.115E-3			PASS
37	13.387E-3	14.676	91.21E-3	PASS
38	985.713E-6			PASS
39	9.975E-3	11.527	86.53E-3	PASS
40	1.094E-3			PASS

Harmonic currents less than 0.6% of the input current measured under the test conditions, or less than 5 mA, whichever is greater, are disregarded.



Test Data - Harmonics (continued)

Maximum harmonic current results

Hn	I _{eff} [A]	% of Limit	Limit [A]	Result
1	213.139E-3			
2	3.134E-3			PASS
3	203.781E-3	5.907	3.45	PASS
4	3.084E-3			PASS
5	193.875E-3	11.338	1.71	PASS
6	2.825E-3			PASS
7	179.545E-3	15.545	1.15	PASS
8	2.899E-3			PASS
9	160.578E-3	26.763	600.00E-3	PASS
10	2.310E-3			PASS
11	139.883E-3	28.259	495.00E-3	PASS
12	2.121E-3			PASS
13	117.856E-3	37.415	315.00E-3	PASS
14	2.119E-3			PASS
15	96.013E-3	42.672	225.00E-3	PASS
16	2.200E-3			PASS
17	75.323E-3	37.941	198.52E-3	PASS
18	2.244E-3			PASS
19	56.896E-3	32.031	177.63E-3	PASS
20	2.140E-3			PASS
21	42.294E-3	26.317	160.71E-3	PASS
22	2.308E-3			PASS
23	31.745E-3	21.633	146.74E-3	PASS
24	2.103E-3			PASS
25	26.363E-3	19.528	135.00E-3	PASS
26	2.071E-3			PASS
27	24.249E-3	19.400	124.99E-3	PASS
28	1.809E-3			PASS
29	23.695E-3	20.359	116.39E-3	PASS
30	1.758E-3			PASS
31	22.438E-3	20.610	108.87E-3	PASS
32	1.529E-3			PASS
33	20.195E-3	19.747	102.27E-3	PASS
34	1.294E-3			PASS
35	17.230E-3	17.867	96.44E-3	PASS
36	1.190E-3			PASS
37	13.504E-3	14.804	91.21E-3	PASS
38	1.049E-3			PASS
39	10.065E-3	11.631	86.53E-3	PASS
40	1.205E-3			PASS

Harmonic currents less than 0.6% of the input current measured under the test conditions, or less than 5 mA, whichever is greater, are disregarded.

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■ HDMI Mode

Average harmonic current results

Hn	I _{eff} [A]	% of Limit	Limit [A]	Result
1	213.531E-3			
2	2.962E-3			PASS
3	203.512E-3	8.848	2.30	PASS
4	2.906E-3			PASS
5	193.837E-3	17.003	1.14	PASS
6	2.524E-3			PASS
7	178.974E-3	23.243	770.00E-3	PASS
8	2.460E-3			PASS
9	159.666E-3	39.917	400.00E-3	PASS
10	1.794E-3			PASS
11	138.583E-3	41.995	330.00E-3	PASS
12	1.690E-3			PASS
13	116.355E-3	55.407	210.00E-3	PASS
14	1.788E-3			PASS
15	94.159E-3	62.773	150.00E-3	PASS
16	1.863E-3			PASS
17	73.301E-3	55.384	132.35E-3	PASS
18	2.047E-3			PASS
19	54.927E-3	46.383	118.42E-3	PASS
20	1.899E-3			PASS
21	40.544E-3	25.228	160.71E-3	PASS
22	1.982E-3			PASS
23	30.450E-3	20.750	146.74E-3	PASS
24	1.768E-3			PASS
25	25.625E-3	18.981	135.00E-3	PASS
26	1.582E-3			PASS
27	23.926E-3	19.142	124.99E-3	PASS
28	1.316E-3			PASS
29	23.555E-3	20.239	116.39E-3	PASS
30	1.305E-3			PASS
31	22.191E-3	20.383	108.87E-3	PASS
32	1.144E-3			PASS
33	19.875E-3	19.434	102.27E-3	PASS
34	1.049E-3			PASS
35	16.676E-3	17.293	96.44E-3	PASS
36	989.668E-6			PASS
37	12.903E-3	14.146	91.21E-3	PASS
38	931.748E-6			PASS
39	9.471E-3	10.945	86.53E-3	PASS
40	1.021E-3			PASS

Harmonic currents less than 0.6% of the input current measured under the test conditions, or less than 5 mA, whichever is greater, are disregarded.

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Test Data - Harmonics (continued)

Maximum harmonic current results

Hn	I _{eff} [A]	% of Limit	Limit [A]	Result
1	213.645E-3			
2	3.144E-3			PASS
3	203.938E-3	5.911	3.45	PASS
4	3.102E-3			PASS
5	193.996E-3	11.345	1.71	PASS
6	2.633E-3			PASS
7	179.380E-3	15.531	1.15	PASS
8	2.609E-3			PASS
9	159.840E-3	26.640	600.00E-3	PASS
10	1.919E-3			PASS
11	138.728E-3	28.026	495.00E-3	PASS
12	1.786E-3			PASS
13	116.417E-3	36.958	315.00E-3	PASS
14	1.899E-3			PASS
15	94.238E-3	41.884	225.00E-3	PASS
16	1.984E-3			PASS
17	73.393E-3	36.969	198.52E-3	PASS
18	2.195E-3			PASS
19	55.099E-3	31.019	177.63E-3	PASS
20	2.088E-3			PASS
21	40.721E-3	25.338	160.71E-3	PASS
22	2.150E-3			PASS
23	30.508E-3	20.790	146.74E-3	PASS
24	1.884E-3			PASS
25	25.686E-3	19.027	135.00E-3	PASS
26	1.685E-3			PASS
27	23.996E-3	19.197	124.99E-3	PASS
28	1.362E-3			PASS
29	23.646E-3	20.317	116.39E-3	PASS
30	1.354E-3			PASS
31	22.248E-3	20.435	108.87E-3	PASS
32	1.201E-3			PASS
33	19.944E-3	19.502	102.27E-3	PASS
34	1.096E-3			PASS
35	16.731E-3	17.350	96.44E-3	PASS
36	1.050E-3			PASS
37	12.940E-3	14.186	91.21E-3	PASS
38	975.998E-6			PASS
39	9.528E-3	11.010	86.53E-3	PASS
40	1.126E-3			PASS

Harmonic currents less than 0.6% of the input current measured under the test conditions, or less than 5 mA, whichever is greater, are disregarded.

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■ DVI Mode

Average harmonic current results

Hn	I _{eff} [A]	% of Limit	Limit [A]	Result
1	213.185E-3			
2	3.023E-3			PASS
3	203.513E-3	8.848	2.30	PASS
4	2.826E-3			PASS
5	193.634E-3	16.985	1.14	PASS
6	2.741E-3			PASS
7	178.945E-3	23.240	770.00E-3	PASS
8	2.788E-3			PASS
9	160.039E-3	40.010	400.00E-3	PASS
10	2.117E-3			PASS
11	139.145E-3	42.165	330.00E-3	PASS
12	2.043E-3			PASS
13	117.053E-3	55.740	210.00E-3	PASS
14	2.147E-3			PASS
15	95.033E-3	63.355	150.00E-3	PASS
16	2.145E-3			PASS
17	74.221E-3	56.079	132.35E-3	PASS
18	2.265E-3			PASS
19	55.823E-3	47.140	118.42E-3	PASS
20	2.108E-3			PASS
21	41.293E-3	25.694	160.71E-3	PASS
22	2.105E-3			PASS
23	30.939E-3	21.083	146.74E-3	PASS
24	1.894E-3			PASS
25	25.765E-3	19.085	135.00E-3	PASS
26	1.735E-3			PASS
27	23.889E-3	19.112	124.99E-3	PASS
28	1.479E-3			PASS
29	23.409E-3	20.114	116.39E-3	PASS
30	1.492E-3			PASS
31	22.122E-3	20.319	108.87E-3	PASS
32	1.341E-3			PASS
33	19.884E-3	19.443	102.27E-3	PASS
34	1.218E-3			PASS
35	16.819E-3	17.441	96.44E-3	PASS
36	1.169E-3			PASS
37	13.173E-3	14.442	91.21E-3	PASS
38	994.280E-6			PASS
39	9.805E-3	11.330	86.53E-3	PASS
40	1.040E-3			PASS

Harmonic currents less than 0.6% of the input current measured under the test conditions, or less than 5 mA, whichever is greater, are disregarded.



Test Data - Harmonics (continued)

Maximum harmonic current results

Hn	I _{eff} [A]	% of Limit	Limit [A]	Result
1	213.404E-3			
2	3.239E-3			PASS
3	204.036E-3	5.914	3.45	PASS
4	2.935E-3			PASS
5	193.935E-3	11.341	1.71	PASS
6	2.845E-3			PASS
7	179.402E-3	15.533	1.15	PASS
8	2.864E-3			PASS
9	160.260E-3	26.710	600.00E-3	PASS
10	2.291E-3			PASS
11	139.304E-3	28.142	495.00E-3	PASS
12	2.158E-3			PASS
13	117.121E-3	37.181	315.00E-3	PASS
14	2.248E-3			PASS
15	95.103E-3	42.268	225.00E-3	PASS
16	2.271E-3			PASS
17	74.295E-3	37.424	198.52E-3	PASS
18	2.449E-3			PASS
19	55.997E-3	31.525	177.63E-3	PASS
20	2.274E-3			PASS
21	41.465E-3	25.801	160.71E-3	PASS
22	2.266E-3			PASS
23	31.039E-3	21.152	146.74E-3	PASS
24	2.000E-3			PASS
25	25.841E-3	19.142	135.00E-3	PASS
26	1.834E-3			PASS
27	23.959E-3	19.168	124.99E-3	PASS
28	1.552E-3			PASS
29	23.490E-3	20.183	116.39E-3	PASS
30	1.669E-3			PASS
31	22.194E-3	20.386	108.87E-3	PASS
32	1.514E-3			PASS
33	19.943E-3	19.500	102.27E-3	PASS
34	1.373E-3			PASS
35	16.867E-3	17.491	96.44E-3	PASS
36	1.247E-3			PASS
37	13.218E-3	14.492	91.21E-3	PASS
38	1.068E-3			PASS
39	9.876E-3	11.413	86.53E-3	PASS
40	1.121E-3			PASS

Harmonic currents less than 0.6% of the input current measured under the test conditions, or less than 5 mA, whichever is greater, are disregarded.

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■ BNC Mode

Average harmonic current results

Hn	I _{eff} [A]	% of Limit	Limit [A]	Result
1	212.422E-3			
2	2.585E-3			PASS
3	202.655E-3	8.811	2.30	PASS
4	2.568E-3			PASS
5	193.400E-3	16.965	1.14	PASS
6	2.489E-3			PASS
7	179.278E-3	23.283	770.00E-3	PASS
8	2.537E-3			PASS
9	160.581E-3	40.145	400.00E-3	PASS
10	1.897E-3			PASS
11	140.260E-3	42.503	330.00E-3	PASS
12	1.775E-3			PASS
13	118.605E-3	56.479	210.00E-3	PASS
14	1.809E-3			PASS
15	96.892E-3	64.595	150.00E-3	PASS
16	1.825E-3			PASS
17	76.268E-3	57.626	132.35E-3	PASS
18	1.912E-3			PASS
19	57.876E-3	48.874	118.42E-3	PASS
20	1.827E-3			PASS
21	43.103E-3	26.820	160.71E-3	PASS
22	1.912E-3			PASS
23	32.279E-3	21.997	146.74E-3	PASS
24	1.831E-3			PASS
25	26.501E-3	19.630	135.00E-3	PASS
26	1.678E-3			PASS
27	24.203E-3	19.363	124.99E-3	PASS
28	1.523E-3			PASS
29	23.586E-3	20.265	116.39E-3	PASS
30	1.405E-3			PASS
31	22.410E-3	20.585	108.87E-3	PASS
32	1.241E-3			PASS
33	20.310E-3	19.859	102.27E-3	PASS
34	1.089E-3			PASS
35	17.383E-3	18.025	96.44E-3	PASS
36	1.029E-3			PASS
37	13.713E-3	15.034	91.21E-3	PASS
38	937.751E-6			PASS
39	10.297E-3	11.899	86.53E-3	PASS
40	1.057E-3			PASS

Harmonic currents less than 0.6% of the input current measured under the test conditions, or less than 5 mA, whichever is greater, are disregarded.

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Test Data - Harmonics (continued)

Maximum harmonic current results

Hn	I _{eff} [A]	% of Limit	Limit [A]	Result
1	212.558E-3			
2	2.871E-3			PASS
3	203.206E-3	5.890	3.45	PASS
4	2.697E-3			PASS
5	193.690E-3	11.327	1.71	PASS
6	2.575E-3			PASS
7	179.757E-3	15.563	1.15	PASS
8	2.693E-3			PASS
9	160.742E-3	26.790	600.00E-3	PASS
10	2.118E-3			PASS
11	140.389E-3	28.361	495.00E-3	PASS
12	1.916E-3			PASS
13	118.673E-3	37.674	315.00E-3	PASS
14	1.942E-3			PASS
15	96.942E-3	43.085	225.00E-3	PASS
16	1.962E-3			PASS
17	76.372E-3	38.470	198.52E-3	PASS
18	1.990E-3			PASS
19	57.945E-3	32.621	177.63E-3	PASS
20	1.975E-3			PASS
21	43.246E-3	26.910	160.71E-3	PASS
22	2.048E-3			PASS
23	32.339E-3	22.038	146.74E-3	PASS
24	1.917E-3			PASS
25	26.534E-3	19.655	135.00E-3	PASS
26	1.834E-3			PASS
27	24.257E-3	19.406	124.99E-3	PASS
28	1.624E-3			PASS
29	23.686E-3	20.351	116.39E-3	PASS
30	1.506E-3			PASS
31	22.489E-3	20.656	108.87E-3	PASS
32	1.347E-3			PASS
33	20.391E-3	19.939	102.27E-3	PASS
34	1.212E-3			PASS
35	17.432E-3	18.077	96.44E-3	PASS
36	1.102E-3			PASS
37	13.780E-3	15.107	91.21E-3	PASS
38	1.037E-3			PASS
39	10.417E-3	12.038	86.53E-3	PASS
40	1.134E-3			PASS

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Test Data - Voltage Fluctuations

Maximum Flicker results

■ VGA Mode

	EUT values	Limit	Result
Pst	0.028	1.00	PASS
Plt	0.028	0.65	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.042	4.00	PASS
Tmax [s]	0.000	0.50	PASS

■ HDMI Mode

	EUT values	Limit	Result
Pst	0.028	1.00	PASS
Plt	0.028	0.65	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.040	4.00	PASS
Tmax [s]	0.000	0.50	PASS

■ DVI Mode

	EUT values	Limit	Result
Pst	0.028	1.00	PASS
Plt	0.028	0.65	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.041	4.00	PASS
Tmax [s]	0.000	0.50	PASS

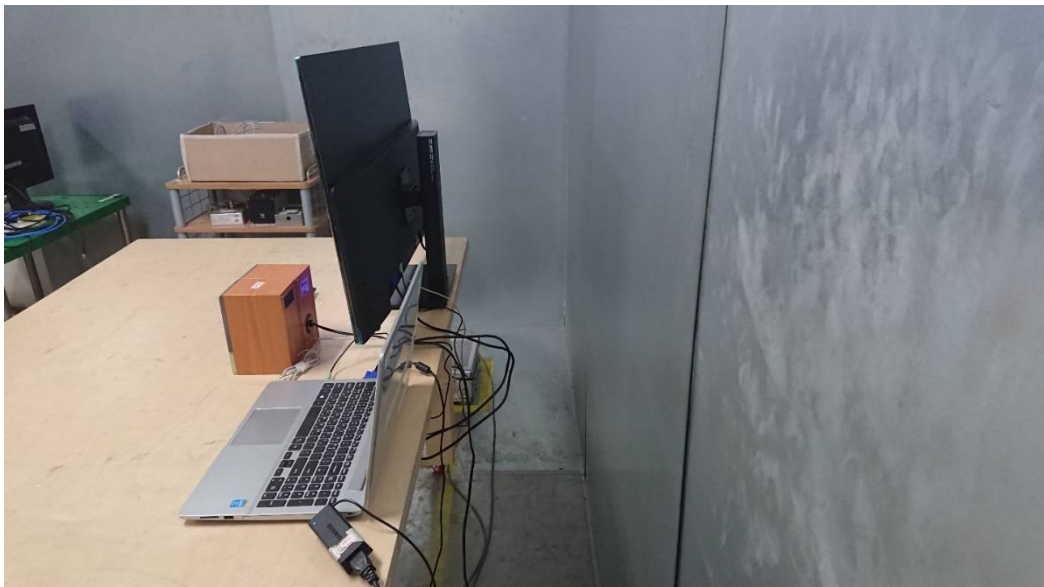
■ BNC Mode

	EUT values	Limit	Result
Pst	0.028	1.00	PASS
Plt	0.028	0.65	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.038	4.00	PASS
Tmax [s]	0.000	0.50	PASS

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Test Setup Photos and Configuration

Conducted Voltage Emissions



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■ BNC Mode





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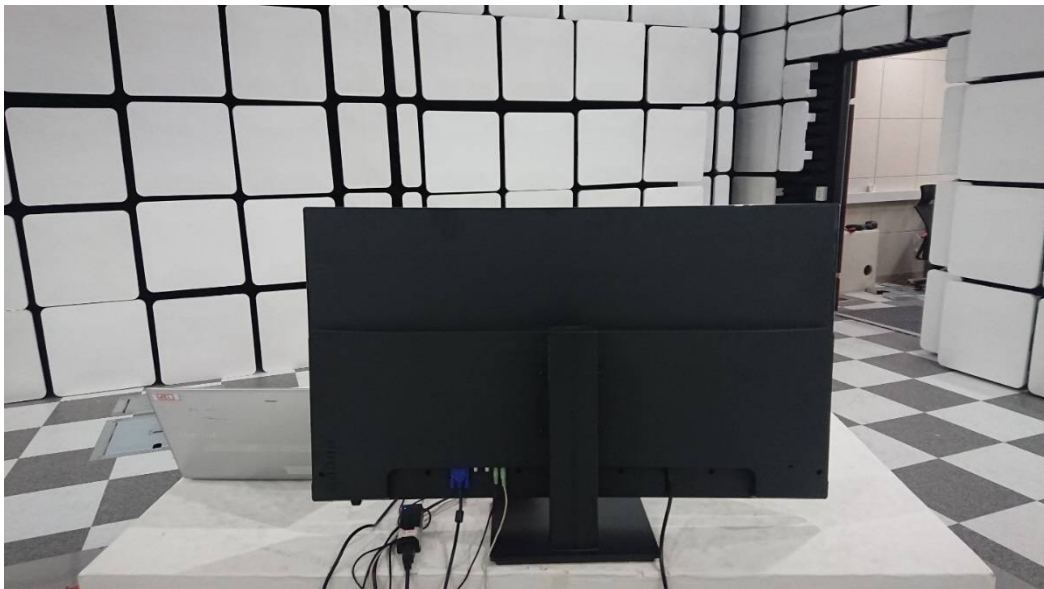
Conducted Telecommunication Emissions

N/A

N/A

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Radiated Electric Field Emissions(Below 1 GHz)



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■ BNC Mode

Radiated Electric Field Emissions(Above 1 GHz)



■ BNC Mode



Harmonic Current Emissions and Voltage Fluctuations and Flicker



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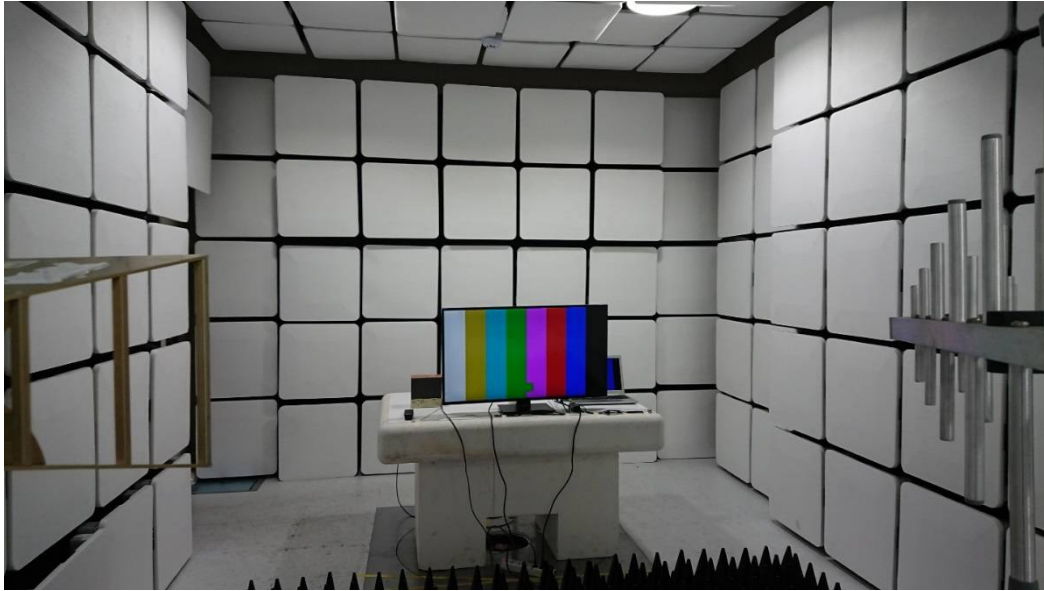
Electrostatic Discharge



■ BNC Mode



Radiated Electric Field Immunity



■ BNC Mode



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Electrical Fast Transients/Bursts



■ BNC Mode



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Surge Transients



■ BNC Mode



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Conducted Disturbance



■ BNC Mode



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Voltage Dips and Short Interruptions



■ BNC Mode



EUT External Photographs

(Top)



(Bottom)



EUT Internal Photographs

(Internal View)



EUT Internal View – Board 1

(Top)

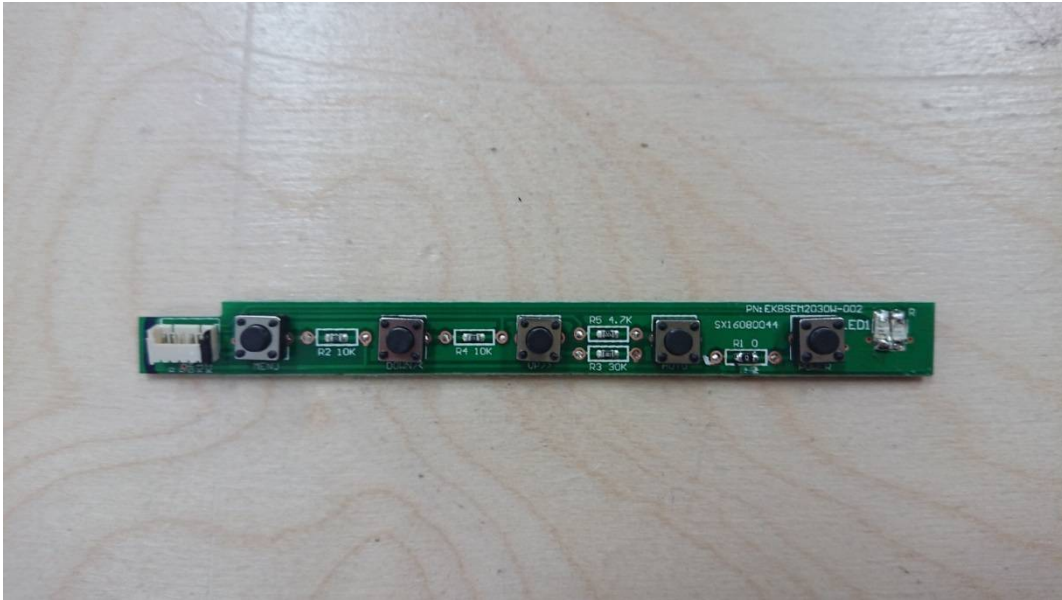


(Bottom)

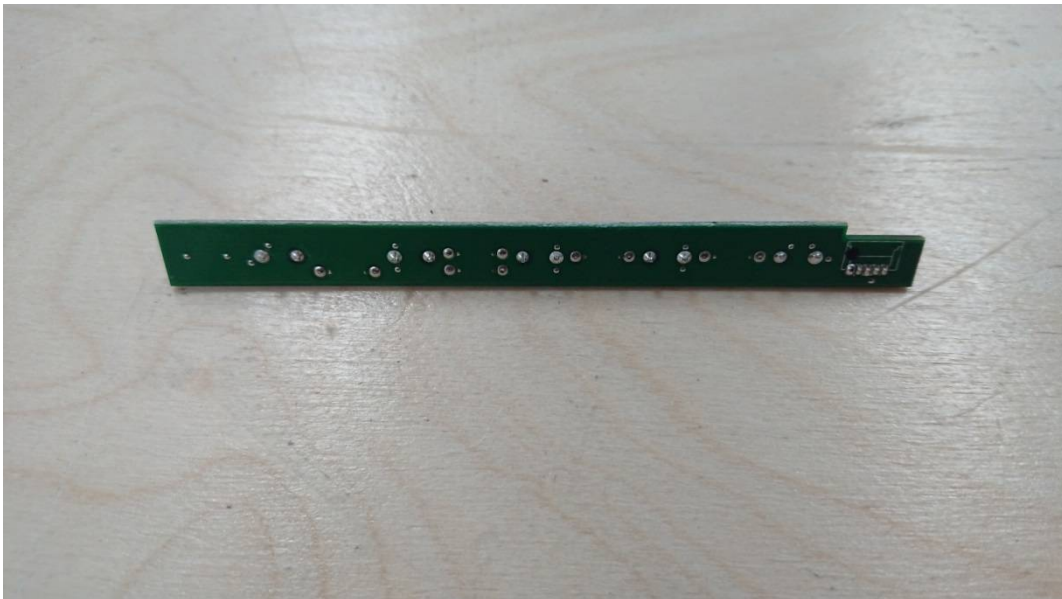


EUT Internal View – Board 2

(Top)

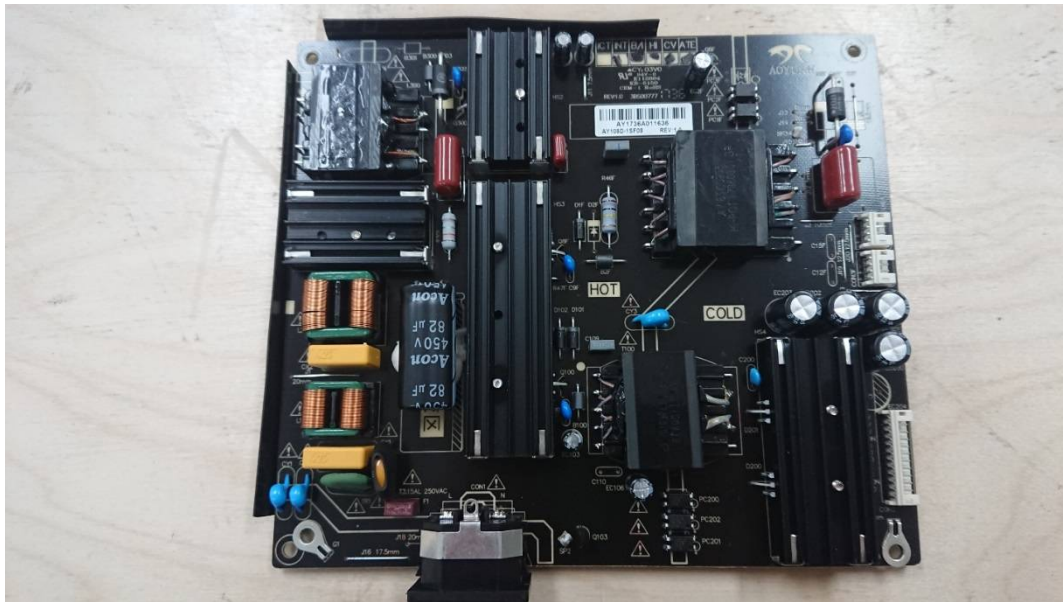


(Bottom)



EUT Internal View – Board 3

(Top)



(Bottom)



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EUT Internal View – Board 4

(Top)



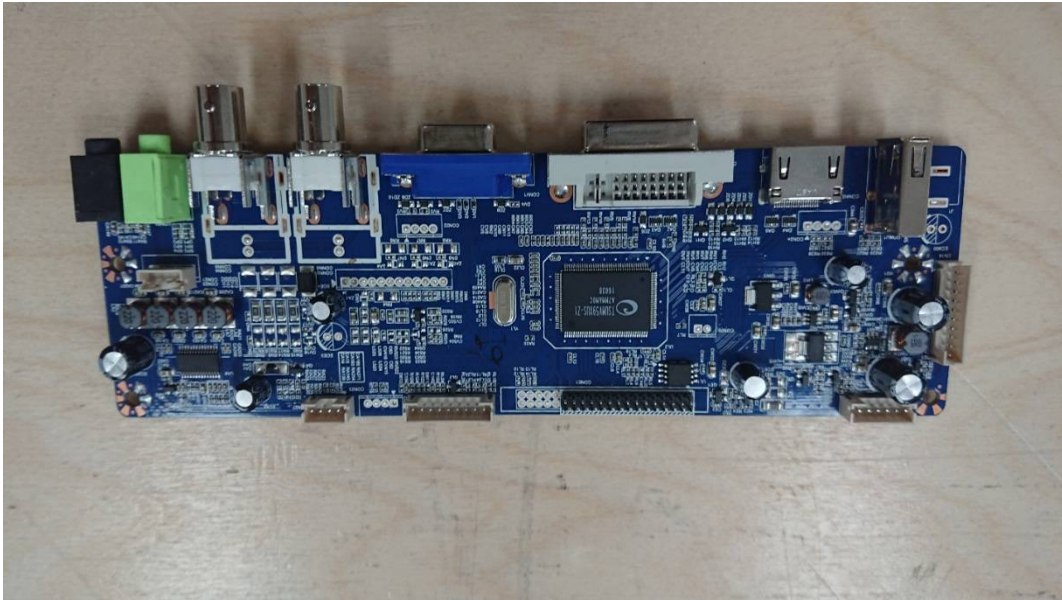
(Bottom)



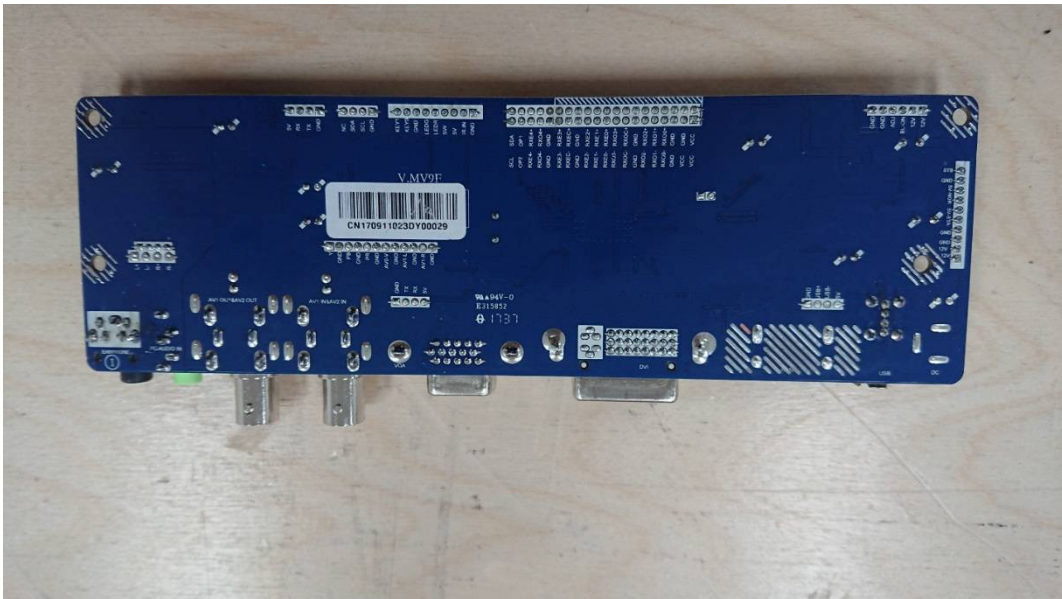
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EUT Internal View – Board 5

(Top)



(Bottom)



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Label and Location



Security LED Monitor

Model No : SMT-4033

Manufacturer : Weihai Daewoo Electronics Co.,Ltd.

Made in China

