



EMC TEST REPORT For CE

Test Report No. : KES-E1-17T0126-R1
Date of Issue : Oct, 23, 2017
Product name : CCTV CAMERA
Model/Type No. : SCB-6003PH
Variant Model : -
Applicant : Hanwha Techwin Co., Ltd.
Applicant Address : 1204, Changwon-daero, Seongsan-gu, Changwon-si,
Gyeongsangnam-do, Korea
Manufacturer : Hanwha Techwin (Tianjin) Co., Ltd.
Manufacturer Address : No.11 Weiliu Rd, Micro-Electronic Industrial Park, TEDA,
Tianjin, 300385, People's Republic of China
Date of Receipt : Feb, 03, 2017
Test date : Feb, 10, 2017 ~ Feb, 13, 2017
Test Results : ☒ **In Compliance** ☐ **Not in Compliance**

Tested by

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Test report No.:

KES-E1-17T0126-R1

Page (2) of (60)

REPORT REVISION HISTORY

Date	Test Report No.	Revision History
Feb. 20, 2017	KES-E1-17T0126	Issued
Oct. 23, 2017	KES-E1-17T0126-R1	Standard Revision

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TABLE OF CONTENTS

1.0	General Product Description	4
1.1	Test Voltage & Frequency	5
1.2	Variant Model Differences.....	5
1.3	Device Modifications	5
1.4	Equipment Under Test.....	5
1.5	Support Equipments	5
1.6	External I/O Cabling	5
1.7	E.U.T Operating Mode(s)	6
1.8	Configuration.....	6
1.9	Calibration Details of Equipment Used for Measurement	7
1.10	Test Facility	7
1.11	Laboratory Accreditations and Listings	7
2.0	Test Regulations.....	8
2.1	Conducted Emissions at Mains Power Ports	10
2.2	Conducted Emissions at Telecommunication Ports	11
2.3	Radiated Electric Field Emissions(Below 1 GHz)	12
2.4	Radiated Electric Field Emissions(Above 1 GHz)	13
2.5	Harmonic Current Emissions.....	14
2.6	Voltage Fluctuations and Flicker	15
3.0	Criteria for compliance.....	16
3.1	Electrostatic Discharge.....	18
3.2	Radiated Electric Field Immunity	21
3.3	Electrical Fast Transients/Bursts	24
3.4	Surge Transients	26
3.5	Conducted Disturbance	29
3.6	Voltage Dips and Short Interruptions	31
APPENDIX A – TEST DATA.....		33
Conducted Emissions at Mains Power Ports.....		33
Conducted Emissions at Telecommunication Ports		35
Radiated Electric Field Emissions(Below 1 GHz)		37
Radiated Electric Field Emissions(Above 1 GHz).....		38
Harmonic Current Emissions and Voltage Fluctuations and Flicker		42
Test Setup Photos and Configuration		45
Conducted Voltage Emissions		45
Conducted Telecommunication Emissions		46
Radiated Electric Field Emissions(Below 1 GHz)		47
Radiated Electric Field Emissions(Above 1 GHz).....		48
Harmonic Current Emissions and Voltage Fluctuations and Flicker		49
Electrostatic Discharge		50
Radiated Electric Field Immunity		50
Electrical Fast Transients/Bursts		51
Surge Transients.....		52
Conducted Disturbance		53
Voltage Dips and Short Interruptions.....		54
EUT External Photographs		55
EUT Internal Photographs		56



1.0 General Product Description

Main Specifications of E.U.T are:

	SCB-6003PH
Video	
Imaging Device	1/2.9" 2M CMOS
Total Pixels	2,000(H) x 1,121(V) 2.24M pixels
Effective Pixels	1,984(H) x 1,105(V) 2.19M pixels
Scanning System	Progressive Scan
Min. Illumination	Color : 0.15Lux (F1.2, 50IRE); 0.09Lux (F1.2, 30IRE) B/W : 0.015Lux (F1.2, 50IRE); 0.009Lux (F1.2, 30IRE)
S / N Ratio	52dB (AGC off, Weight on)
Video Output	BNC(AHD / CVBS Selectable)
Resolution	1920 x 1080
Max. Framerate	25fps @1080p
Lens Type	
Focal Length (Zoom Ratio)	-
Max. Aperture Ratio	-
Angular Field of View	-
Min. Object Distance	-
Focus Control	-
Lens Type	-
Mount Type	C/CS
Auto Back Focus(ABF)	-
Operational	
IR LED	-
Viewable length	-
On Screen Display	Multi-language Support(16) English, Japanese, Spanish, French, Portuguese, Korean, German, Italian, Russian, Polish, Czech, Romanian, Serbian, Swedish, Danish, Turkish
Camera Title	Off / On (Displayed 15 characters)
Day & Night	Auto (ICR) / External / Color / B/W
Backlight Compensation	Off / User BLC / HLC
Wide Dynamic Range	D-WDR
Contrast Enhancement	-
Digital Noise Reduction	SSNR4 (Off / On)
Defog	AUTO / MANUAL / OFF
Digital Image Stabilization	Not support
Motion Detection	Off / On(4 zones)
Privacy Masking	Off / On (4zones rectangle)
Gain Control	Off / Low / Middle / High / Very High
White Balance	ATW / Outdoor / Indoor / Manual / AWC (1,800K ~ 10,500K)
LDC (Lens Distortion Correction)	Not support
Electronic Shutter Speed	1sec~ 1/12,000sec
Digital Zoom	Not support
Reverse	Off / H-Rev / V-Rev / HV-Rev
Profile	Basic, Day & Night, Backlight, ITS, Indoor, User
Intelligent Video Analytics	Not support
Alarm	(MD) output 1, External D/N 1
Remote control interface	Coaxial, RS-485
Protocol	Coax : ACP(AHD Coax Protocol) RS-485 : Samsung T/E, Pelco D/P, Panasonic Bosch, Honeywell, Vicon, GE, AD
Video Transmission Distance	500m(5C2V Coaxial Cable)
Environmental	
Operating Temperature / Humidity	-10°C ~ +55°C (+14°F ~ +131°F) / Less than 90% RH
Ingress Protection	-
Vandal Resistance	-
Electrical	
Input Voltage/Current	220VAC±10%
Power Consumption	6W
Mechanical	
Color / Material	Ivory / Plastic
Dimension (WxHxD)	116.6(L)*68.3(W)*59.6(H)
Weight	600g

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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 ☐ 220 Vac ☒ 230 Vac ☐ 240 Vac ☐ 24 Vac ☐ 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
CCTV CAMERA	SCB-6003PH	-	Hanwha Techwin (Tianjin) Co.,Ltd.	E.U.T

1.5 Support Equipments

Description	Model Number	Serial Number	Manufacturer	Remarks
MONITOR	M1950DM	206KCLH81256	LG Electronics Co., Ltd.	-
MONITOR Adapter	PA-1650-64	OE9FA612314103637	LITE-ON TECHNOLOGY CORPORATION	-
Alarm	-	-	-	-

1.6 External I/O Cabling

Start		END		Cable Spec.	
Description	I/O Port	Description	I/O Port	Length	Shield
CCTV CAMERA (E.U.T)	BNC	MONITOR	Component	3.0	S
	RS 485	Alarm	RS 485	3.0	U

* Unshielded=U, Shielded=S

1.7 E.U.T Operating Mode(s)

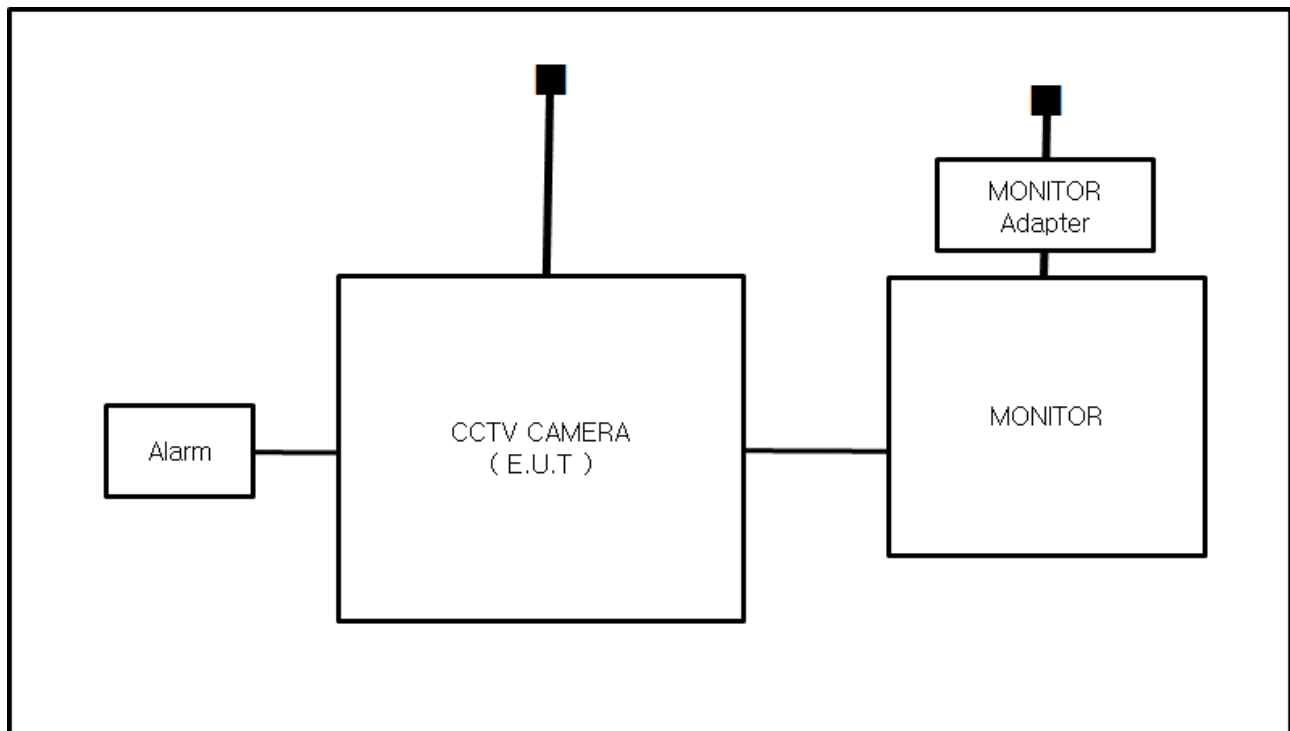
Equipment under test was operated during the measurement under the following conditions:

Test mode	operating
AC 230 V	E.U.T Monitoring

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

1.8 Configuration

■ AC Main
□ DC Main



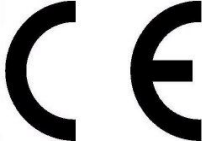
1.9 Calibration Details of Equipment Used for Measurement

Test equipment and test accessories are calibrated on regular basis. The maximum time between calibrations is one year or what is recommended by the manufacturer, whichever is less.

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 and CISPR Publication 22.

1.11 Laboratory Accreditations and Listings

Country	Agency	Scope of Accreditation	Logo
USA	FCC	3 & 10 meter Open Area Test Sites and one conducted site to perform FCC Part 15/18 measurements.	
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
KOREA	MSIP	EMI (10 meter Open Area Test Site and two conducted sites) Radio(3 & 10 meter Open Area Test Sites and one conducted site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	 KR0100
Canada	IC	3 & 10 meter Open Area Test Sites and one conducted site	 4769B-1
Europe	CE	EMI (10 meter Open Area Test Site and two conducted sites) Radio(3 & 10 meter Open Area Test Sites and one conducted site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	
International	KOLAS	EMI (10 meter Open Area Test Site and two conducted sites) Radio(3 & 10 meter Open Area Test Sites and one conducted site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	



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

☒ Class A

☐ Class B

☐ EN 55024:2010 +A1:2015

☒ EN 50130-4:2011

☒ EN 61000-3-2:2014

☒ EN 61000-3-3:2013

☐ EN 61326-1:2013



-
- | | | |
|---|----------------------------------|----------------------------------|
| ☐ 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 C63.4-2014 | ☐ Class A | ☐ Class B |
| ☐ 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 | | |



2.1 Conducted Emissions at Mains Power Ports

Test Date

Feb, 10, 2017

Test Location

Electro wave Shieldroom #3

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	EMI Test Receiver	ESR3	R & S	101783	05, 03, 2017
☒	LISN	ENV216	R & S	101137	02, 03, 2018
☒	LISN	ENV216	R & S	101786	05, 02, 2017
☒	PULSE LIMITER	ESH3-Z2	R&S	101914	12, 13, 2017
☒	Shield Room #3	-	SEMITEC	-	-
☒	EMI Test S/W	EMC32	R&S	9.12.00	-

Test Conditions

Temperature: 20,2 °C

Relative Humidity: 36,3 %

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 #3

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☐	EMI Test Receiver	ESR3	R & S	101783	05, 03, 2017
☐	LISN	ENV216	R & S	101137	02, 03, 2018
☐	LISN	ENV216	R & S	101786	05, 02, 2017
☐	8-Wire ISN CAT3	CAT3 8158	Schwarzbeck Mess	8158-0019	04, 01, 2017
☐	8-Wire ISN CAT5	CAT5 8158	Schwarzbeck Mess	8158-0030	04, 01, 2017
☐	8-Wire ISN CAT6	NTFM 8158	Schwarzbeck Mess	8158-0029	08, 11, 2017
☐	PULSE LIMITER	ESH3-Z2	R&S	101914	12, 13, 2017
☐	Shield Room #3	-	SEMITEC	-	-
☐	EMI Test S/W	EMC32	R & S	9.12.00	

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

N/A : None, Telecommunication Port. Test is not applicable



2.3 Radiated Electric Field Emissions(Below 1 GHz)

Test Date

Feb, 10, 2017

Test Location

☐ Open Area Test Site #1

☒ Open Area Test Site #2

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	EMI TEST Receiver	ESR3	R&S	101781	05, 03, 2017
☒	Trilog-Broadband Antenna	VULB9163	Schwarzbeck	714	11, 28, 2018
☒	OATS	-	KES	-	-
☒	Antenna Mast	-	DAEIL EMC	-	-
☒	Turn Table	-	DAEIL EMC	-	-
☒	EMI Test S/W	-	-	-	-

Test Conditions

Temperature: -6,1 °C

Relative Humidity: 44,0 %

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

Feb, 10 2017

Test Location

Semi Anechoic Chamber #2

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	DOUBLE RIDGED HORN ANTENNA	SAS-571	A.H.SYSTEM,INC	781	05, 07, 2017
☒	EMI Test Receiver	ESU26	R&S	100552	04, 24, 2017
☒	Broadband Coaxial Preamplifier	BBV 9718	Schwarzbeck Mess - Elektronik	9718-246	10, 14, 2017
☒	Semi Anechoic Chamber #2	-	SEMITEC	-	-
☒	Antenna Mast	-	AUDIX	-	-
☒	Turn Table	-	AUDIX	-	-
☒	EMI Test S/W	e3	AUDIX	8.083b	-

Test Conditions

Temperature: 20,2 °C

Relative Humidity: 36,3 %

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

Feb, 10 2017

Test Location

Electro wave Shieldroom

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	AC Source	ACS 500 N	EM TEST	V1024106760	08, 08, 2017
☒	Digital Power Analyzer	DPA 500 N	EM TEST	V1024106759	08, 08, 2017
☒	EMI Test S/W	dpa.control	EM TEST AG	5.4.8.0	-

Test Conditions

Temperature: 20,2 °C

Relative Humidity: 36,3 %

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

Feb, 10 2017

Test Location

Electro wave Shieldroom

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	AC Source	ACS 500 N	EM test	V1024106760	08, 08, 2017
☒	Digital Power Analyzer	DPA 500 N	EM test	V1024106759	08, 08, 2017
☒	EMI Test S/W	dpa.control	EM TEST AG	5.4.8.0	-

Test Conditions

Temperature: 20,2 °C

Relative Humidity: 36,3 %

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:

EN 50130-4:2011 +A1:2014 Alarm systems-Part 4: Electromagnetic compatibility Product family standard: Immunity requirements for components of fire, intruder and social alarm systems

The variety and the diversity of the apparatus within the scope of this document makes it difficult to define precise criteria for the evaluation of the immunity test results.

If as a result of the application of the tests defined in this standard, the apparatus becomes dangerous or unsafe then the apparatus shall be deemed to have failed the test.

A functional description and a definition of performance by the manufacture and noted in the test report, based on the following criteria:

Electrostatic discharge

There shall be no damage, malfunction or change of status due to the conditioning.

Flickering of an indicator during the application of discharge is permissible, providing that is no residual change in the EUT or any change in outputs, which could be interpreted by associated equipment as a change.

Radiated electromagnetic fields

There shall be no damage, malfunction or change of status due to the conditioning.

Flickering of an indicator during the application of discharge is permissible, providing which could be interpreted by associated equipment as a change, and no such

Flickering of indicators occurs at a field strength of 3 V/m.

For components of CCTV systems, where the picture is allowed at 10 V/m, providing.

(a) there is no permanent damage or change to EUT

(e.g. no corruption of memory or changes to programmable setting etc.)

(b) at 3 V/m, any deterioration of the picture is so minor that the system could still be used; and

(c) there is no observable deterioration of the picture at 1 V/m.

Fast transient burst / slow high energy voltage surge

There shall be no damage, malfunction or change of status due to the conditioning.

Flickering of an indicator during the application of discharge is permissible, providing

That there is no residual is permissible, providing that there is no residual change in the EUT or any change in outputs, which could be interpreted by associated equipment as a change.

Conducted RF immunity

There shall be no damage, malfunction or change of status due to the conditioning.

Flickering of an indicator during the application of discharge is permissible, providing

That there is no residual is permissible, providing that there is no residual change in the EUT or any change in outputs, which could be interpreted by associated equipment as a change,
and no such flickering of indicators oeuvres at $U = 130 \text{ dB}\mu\text{V}$.

For component of CCTV systems, where the status is monitored by observing the TV picture,
then deterioration of the picture is allowed at $U = 140 \text{ dB}\mu\text{V}$, providing:

- (a) there is no permanent damage or change to the EUT
(e.g. no corruption of memory or changes to programmable settings etc.)
- (b) at $U = 130 \text{ dB}\mu\text{V}$, any deterioration of the picture is so minor that the system could still be used; and
- (c) there in no observable deterioration of the picture at $U = 120 \text{ dB}\mu\text{V}$.

Voltage dip/interruption / Voltage variation

There shall be no damage, malfunction or change of status due to the conditioning.

Flickering of an indicator during the conditioning is permissible, providing that there is no residual change in the EUT or any change in outputs, which could be interpreted by associated equipment as a change. The EUT shall meet the acceptance criteria for the functional test, after the conditioning.

3.1 Electrostatic Discharge

Reference Standard

EN 61000-4-2:2009

Test Date

Feb, 13, 2017

Test Location

EMS-ESD: Electro wave Shieldroom

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	ESD SIMULATOR	ESS-2000	Noise Ken	ESS05X4620	02, 24, 2017
☒	HCP	-	Noise Ken	-	-
☒	VCP	-	Noise Ken	-	-
☒	EMS Test S/W	-	-	-	-

Test Conditions

Temperature: 22,6 °C
Relative Humidity: 40,1 %
Atmospheric Pressure: 102,0 kPa

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
10 at all locations for Contact discharge

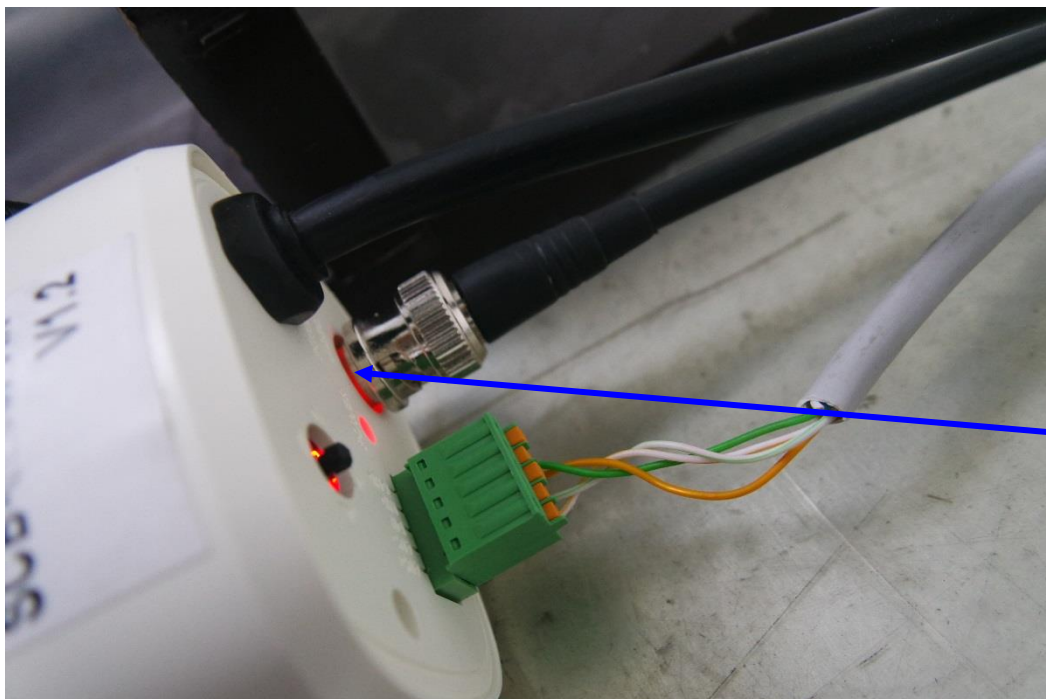
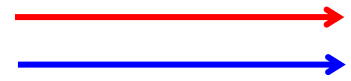
Discharge Voltage:	Contact ☐ 2 kV ☐ 4 kV ☒ 6 kV ☐ 8 kV ☐ 15 kV	Air ☒ 2 kV ☒ 4 kV ☐ 6 kV ☒ 8 kV ☐ 15 kV	HCP ☐ 2 kV ☐ 4 kV ☒ 6 kV ☐ 8 kV ☐ 15 kV	VCP ☐ 2 kV ☐ 4 kV ☒ 6 kV ☐ 8 kV ☐ 15 kV
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Notes: HCP: Horizontal coupling plane
VCP: Vertical coupling plane

Required Performance Criteria: ☒ Complied

Location of Discharge:

Air
Contact



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Test report No.:

KES-E1-17T0126-R1

Page (20) of (60)

Test Date

Indirect Discharge

No.	Test Point	Discharge Method	Performance Criteria	Results	Remarks
1	HCP Contact	Contact Discharge	Complied	Complied	-
2	VCP Contact	Contact Discharge	Complied	Complied	-

Direct Discharge

No.	Test Point	Discharge Method	Performance Criteria	Results	Remarks
1	Surface	Contact Discharge	Complied	Complied	-
2	Screw	Contact Discharge	Complied	Complied	-
3	Port	Contact Discharge	Complied	Complied	-

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.

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3.2 Radiated Electric Field Immunity

Reference Standard

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

Test Date

Feb, 13, 2017

Test Location

EMS-RS: ☐ Semi Anechoic Chamber #1☒ Semi Anechoic Chamber #2

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	Signal Generator	ESG-3000A	HP	US37040210	11, 01, 2017
☒	Amplifier	ITA0300-200	Infinitech	-	11, 01, 2017
☒	Amplifier	ITA0750-200	Infinitech	-	11, 01, 2017
☒	Amplifier	ITA1500-100	Infinitech	-	11, 01, 2017
☒	Amplifier	ITA2500-100	Infinitech	-	11, 01, 2017
☒	GPIO INTERFACE CONTROL	SYSTEM CONTROL UNIT	Infinitech	-	-
☒	POWER SUPPLY	SYSTEM POWER SUPPLY	Infinitech	-	-
☒	Power Meter	E4419B	Agilent	MY45101506	06, 27, 2017
☒	Average Power Sensor	E9301A	Agilent	-	06, 27, 2017
☒	Average Power Sensor	E9301A	Agilent	MY41495698	11, 17, 2017
☒	Stacked Double Log-Per- Antenna	STPL9128 D	SCHWARZBECK	9128D038	-
☐	SIGNAL GENERATOR	SMB100A	Rohde & Schwarz	177586	08, 08, 2017
☒	Semi Anechoic Chamber #2	-	SEMITEC	-	-
☒	EMS Test S/W	KTI_RS2012	KOREA TECHNOLOGY INSTITUTE CO., LTD	2.1.1	-



Test Conditions

Temperature: 22,6 °C
Relative Humidity: 40,1 %
Atmospheric Pressure: 102,0 kPa

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: ☒ Complied

**KES Co., Ltd.**

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Test report No.:

KES-E1-17T0126-R1

Page (23) of (60)

Test Data

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

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.

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3.3 Electrical Fast Transients/Bursts

Reference Standard

EN 61000-4-4:2012

Test Date

Feb, 13, 2017

Test Location

EMS-EFT: Electro wave Shieldroom

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	Ultra Compact Simulator	UCS 500 N5	EM TEST	V0936105120	06, 27, 2017
☒	Capacitive Coupling Clamp	HFK	EM TEST	070925	06, 27, 2017
☒	Motor Variac	MV2616	EM TEST	V0936105123	06, 27, 2017
☒	EMS Test S/W	iec.control	EM TEST AG	5.0.9.0	-

Test Conditions

Temperature: 22,6 °C
Relative Humidity: 40,1 %
Atmospheric Pressure: 102,0 kPa

Test Specifications

Pulse Amplitude & Polarity: (AC Power Lines)	☐ ± 1.0 kV ☐ ± 4.0 kV	☒ ± 2.0 kV
Pulse Amplitude & Polarity: (Other supply / Signal Lines)	☐ ± 0.5 kV ☐ ± 2.0 kV	☒ ± 1.0 kV
Burst Period:	☒ 300 ms	☐ 2 s
Repetition Rate:	☐ 5 kHz	☒ 100 kHz
Duration of Test Voltage:	☒ ≥ 1 min	
Required Performance Criteria:	☒ Complied	

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

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

☐ 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	Complied	Complied
Alarm	Complied	Complied

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

Feb, 13, 2017

Test Location

EMS-Surge: Electro wave Shieldroom

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	ULTRA COMPACT SIMULATOR	UCS 500 N5	EM TEST	V0936105120	06, 27, 2017
☒	MOTOR VARIAC	MV2616	EM TEST	V0936105123	06, 27, 2017
☒	CDN	CNV 508N1	EM TEST	P1551168979	04, 27, 2017
☐	CDN	CNV 508T5	EM TEST	P1549168422	06, 27, 2017
☒	EMS Test S/W	iec.control	EM TEST	5.0.9.0	-

Test Conditions

Temperature: 22,6 °C
Relative Humidity: 40,1 %
Atmospheric Pressure: 102,0 kPa



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: ☒ Complied

Other supply / Signal Lines

Source Impedance: 42 ohm for common mode

Surge Amplitude:

Common Mode

☒ (0,5 / 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: ☒ Complied



Test Data

☒ Line to Line – Differential Mode

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

☐ 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	Complied	Complied
Alarm	Complied	Complied

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

Feb, 13, 2017

Test Location

EMS-CS: Electro wave Shieldroom

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	Continuous Wave Generator	CWS 500N1	EM TEST	V0936105119	08, 08, 2017
☒	6 dB Attenuator	ATT6	EM TEST	1208-34	08, 08, 2017
☒	CDN	CDN-M2/M3N	EM TEST	0909-06	08, 08, 2017
☐	CDN	CDN-T2-RJ11	EM TEST	0909-07	08, 08, 2017
☐	CDN	CDN-T4	EM TEST	0909-08	08, 08, 2017
☐	CDN	CDN-T8RJ45	EM TEST	0909-09	08, 08, 2017
☐	CDN	CDN-AF2	EM TEST	0909-10	08, 08, 2017
☐	CDN	CDN-AF4	EM TEST	0909-11	08, 08, 2017
☒	EM Injection Clamp	EM 101	Liithi	35943	02, 03, 2018
☒	EMS Test S/W	icd.control	EM TEST	5.3.7	-

Test Conditions

Temperature: 22,6 °C
Relative Humidity: 40,1 %
Atmospheric Pressure: 102,0 kPa



Test Specifications

Frequency range: ☒ 150 kHz to 100 MHz ☐ 10 kHz to 30 MHz
☐ 150 kHz to 230 MHz ☐ 10 kHz to 100 MHz

Voltage Level: ☐ 1 Vrms ☐ 3 Vrms
☒ 10 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: ☒ Complied

Test Data

☒ Input a.c. power ports

Coupling Location (Line Stressed)	Coupling Method	Observations
L – N – PE	CDN (☐ M2, ☒ M3)	Complied

☐ Input d.c. power ports

Coupling Location (Line Stressed)	Coupling Method	Observations
-	CDN (☐ M2, ☐ M3)	-

☒ Signal ports and telecommunication ports

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

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

Feb, 13, 2017

Test Location

EMS-Voltage dip: Electro wave Shieldroom

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	Ultra Compact Simulator	UCS 500 N5	EM TEST	V0936105120	06, 27, 2017
☒	Motor Variac	MV2616	EM TEST	V0936105123	06, 27, 2017
☒	EMS Test S/W	iec.control	EM TEST AG	5.0.9.0	-

Test Conditions

Temperature: 22,6 °C
Relative Humidity: 40,1 %
Atmospheric Pressure: 102,0 kPa



Test Specifications & Observations/Remarks

(Test Voltage : AC 230 V)

<u>Test Level</u>	<u>Duration [in period/ms (50 Hz)]</u>	<u>Results</u>
☒ 20 % dip	☒ 250 /5000	<u>Complied</u>
☒ 30 % dip	☒ 25 /500	<u>Complied</u>
☒ 60 % dip	☒ 10 /200	<u>Complied</u>
☒ 100 % dip	☒ 250 /5000	<u>Complied</u>
- Voltage variations		
☒ Unom + 10 %	☒ 253.0 V (ac)	<u>Complied</u>
☒ Unom - 15 %	☒ 195.5 V (ac)	<u>Complied</u>

Observations:

Complied – No degradation of function

Test Results

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

Remarks

PASS Required Performance Criteria.

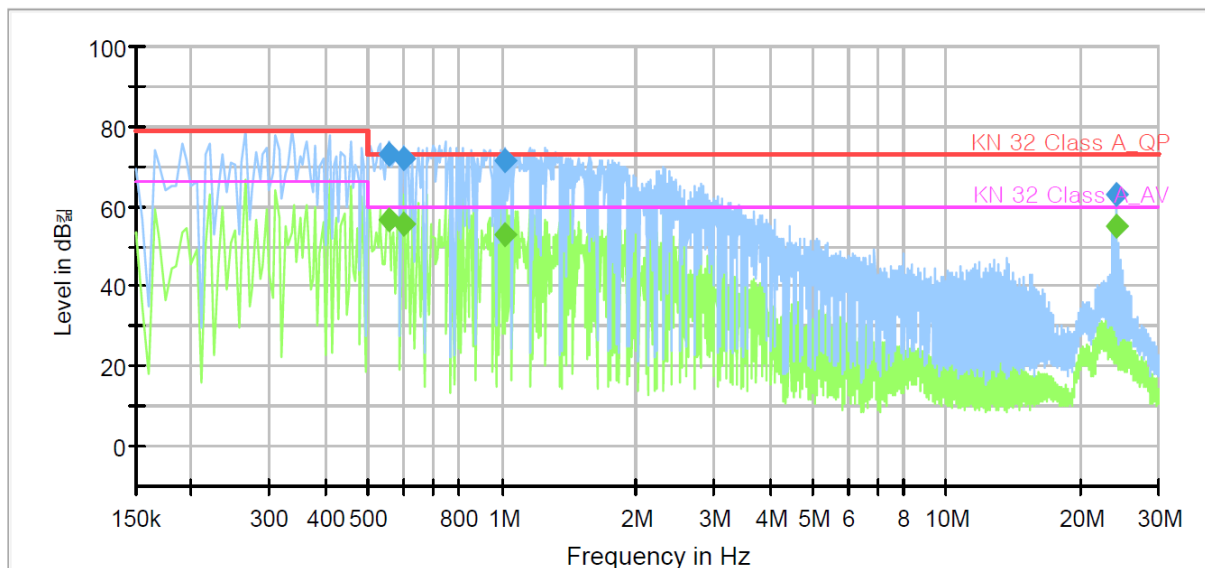
APPENDIX A – TEST DATA

Conducted Emissions at Mains Power Ports

[HOT]

Common Information

Test Description:	Conducted Emission
Model No.:	SCB-6003PH
Mode	H
Operator Name:	KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.555000	---	56.48	60.00	3.52	1000.0	9.000	L1	20.5
0.555000	72.80	---	73.00	0.20	1000.0	9.000	L1	20.5
0.600000	---	55.63	60.00	4.37	1000.0	9.000	L1	20.4
0.600000	72.09	---	73.00	0.91	1000.0	9.000	L1	20.4
1.010000	---	53.17	60.00	6.83	1000.0	9.000	L1	20.1
1.010000	71.68	---	73.00	1.32	1000.0	9.000	L1	20.1
24.005000	---	55.30	60.00	4.70	1000.0	9.000	L1	20.3
24.005000	62.93	---	73.00	10.07	1000.0	9.000	L1	20.3

♦ Calculation

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

QuasiPeak / CAverage : The Final Value

Reading Value : Not shown in the table.

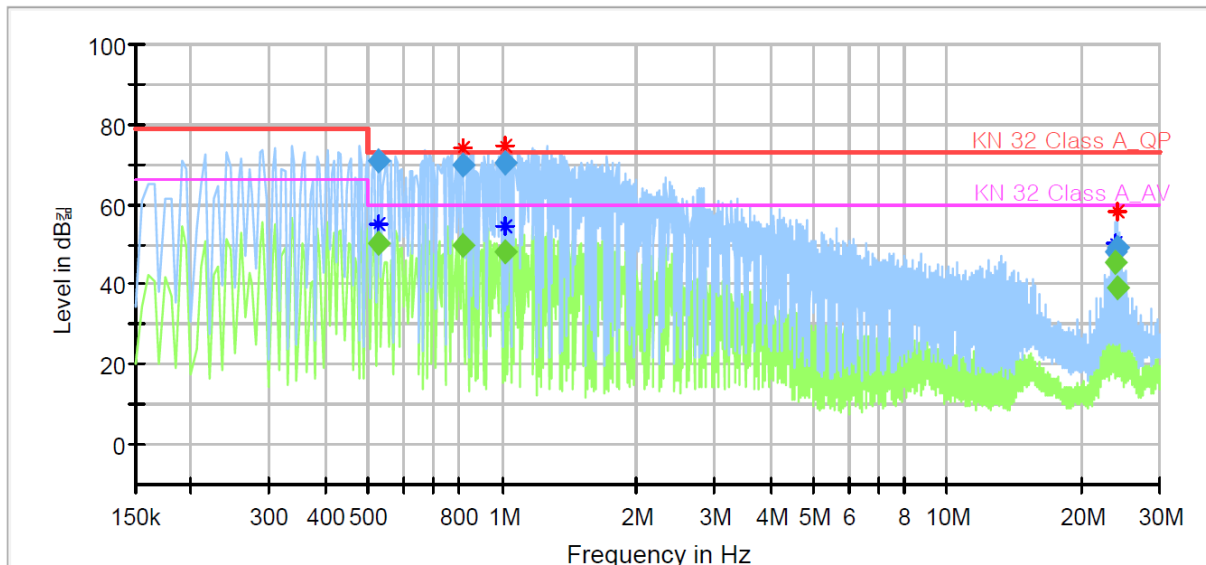
Corr. : Correction values (LISN FACTOR+ Cable Loss)



[NEUTRAL]

Common Information

Test Description: Conducted Emission
Model No.: SCB-6003PH
Mode: N
Operator Name: KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.525000	---	50.04	60.00	9.96	1000.0	9.000	N	20.5
0.525000	70.89	---	73.00	2.11	1000.0	9.000	N	20.5
0.815000	---	49.51	60.00	10.49	1000.0	9.000	N	20.3
0.815000	70.04	---	73.00	2.96	1000.0	9.000	N	20.3
1.020000	---	48.08	60.00	11.92	1000.0	9.000	N	20.1
1.020000	70.13	---	73.00	2.87	1000.0	9.000	N	20.1
23.975000	---	45.39	60.00	14.61	1000.0	9.000	N	20.2
23.975000	47.99	---	73.00	25.01	1000.0	9.000	N	20.2
24.205000	---	39.19	60.00	20.81	1000.0	9.000	N	20.2
24.205000	49.40	---	73.00	23.60	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)

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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)

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Test report No.:
KES-E1-17T0126-R1
Page (36) of (60)

[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)

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Radiated Electric Field Emissions(Below 1 GHz)

Frequency	Amplitude	ANT	ANT. Height	Correction Factor		Corrected Amplitude	Applicable Limit	Margin
[MHz]	[dB μ V]	Polar. (H/V)	[m]	ANT. [dB/m]	Cable [dB]	[dB μ V/m]	[dB μ V/m]	[dB]
162.72	16.98	H	2.14	8.36	3.72	29.06	40.00	10.94
162.83	17.79	V	2.33	8.36	3.72	29.87	40.00	10.13
297.67	18.21	H	1.25	13.38	5.13	36.72	47.00	10.28
297.68	18.37	V	1.90	13.38	5.13	36.88	47.00	10.12
334.52	19.31	V	3.35	14.18	5.49	38.98	47.00	8.02
371.33	17.97	H	2.14	14.98	5.87	38.82	47.00	8.18
371.47	18.09	V	1.89	14.99	5.87	38.95	47.00	8.05
482.91	18.97	H	3.04	17.05	6.93	42.95	47.00	4.05

* H : Horizontal, V : Vertical

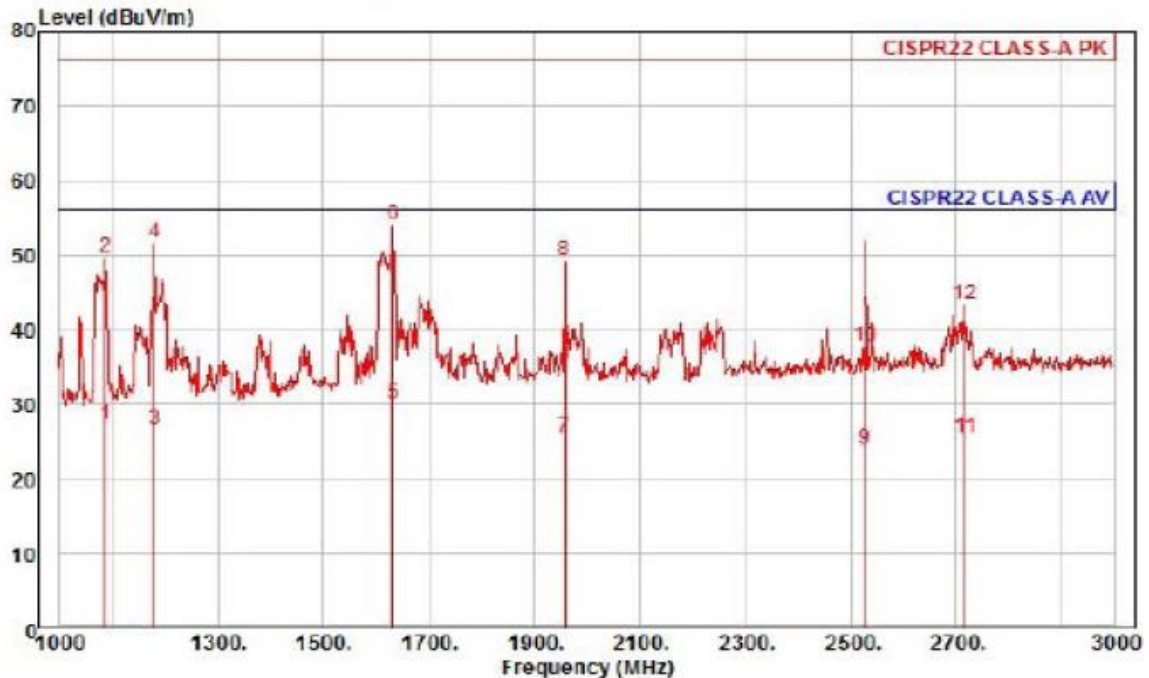
◆ Calculation

Corrected Amplitude [dB μ V] = Amplitude[dB μ V] + Correction Factor [dB]

Corrected Amplitude : The Final Value, Amplitude : Reading Value,

Correction Factor : ANT FACTOR + Cable loss

Radiated Electric Field Emissions(Above 1 GHz)



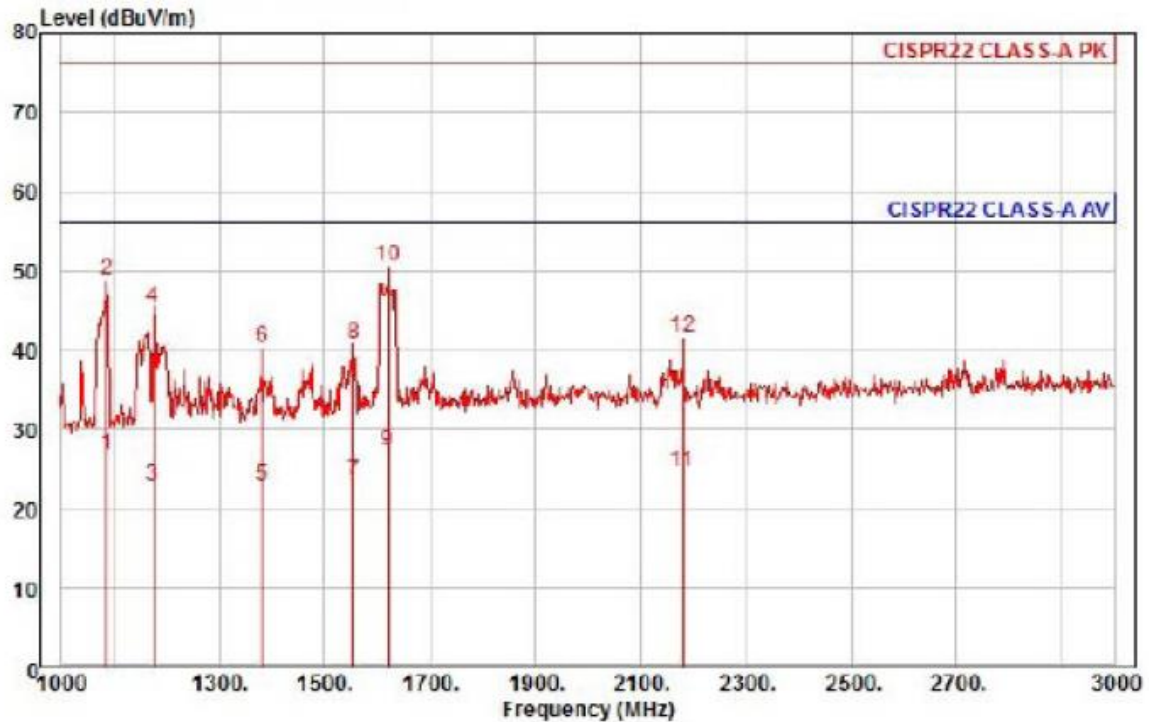
Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : SCB-6003PH
Mode :
Memo : (1 ~ 3) GHz

		Read	Ant	Cable	Preamp	TPos	Limit	Over		
	Freq	Level	Factor	Loss	Factor		Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	1086.00	36.15	24.25	6.76	39.88	1	56.00	-28.72	horizontal	Average
2	1086.00	58.57	24.25	6.76	39.88	1	76.00	-26.30	horizontal	Peak
3	1180.00	34.66	24.62	7.07	39.66	62	56.00	-29.31	horizontal	Average
4	1180.00	59.69	24.62	7.07	39.66	62	76.00	-24.28	horizontal	Peak
5 av	1632.00	34.59	26.42	8.39	39.24	36	56.00	-25.84	horizontal	Average
6 pp	1632.00	58.39	26.42	8.39	39.24	36	76.00	-22.04	horizontal	Peak
7	1958.00	27.93	27.71	9.23	39.39	314	56.00	-30.52	horizontal	Average
8	1958.00	51.79	27.71	9.23	39.39	314	76.00	-26.66	horizontal	Peak
9	2528.00	23.89	29.17	10.59	39.57	96	56.00	-31.92	horizontal	Average
10	2528.00	37.48	29.17	10.59	39.57	96	76.00	-38.33	horizontal	Peak
11	2718.00	24.60	29.64	11.03	39.79	56	56.00	-30.52	horizontal	Average
12	2718.00	42.60	29.64	11.03	39.79	56	76.00	-32.52	horizontal	Peak

◆ Calculation

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

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



Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : SCB-6003PH
Mode :
Memo : (1 ~ 3) GHz

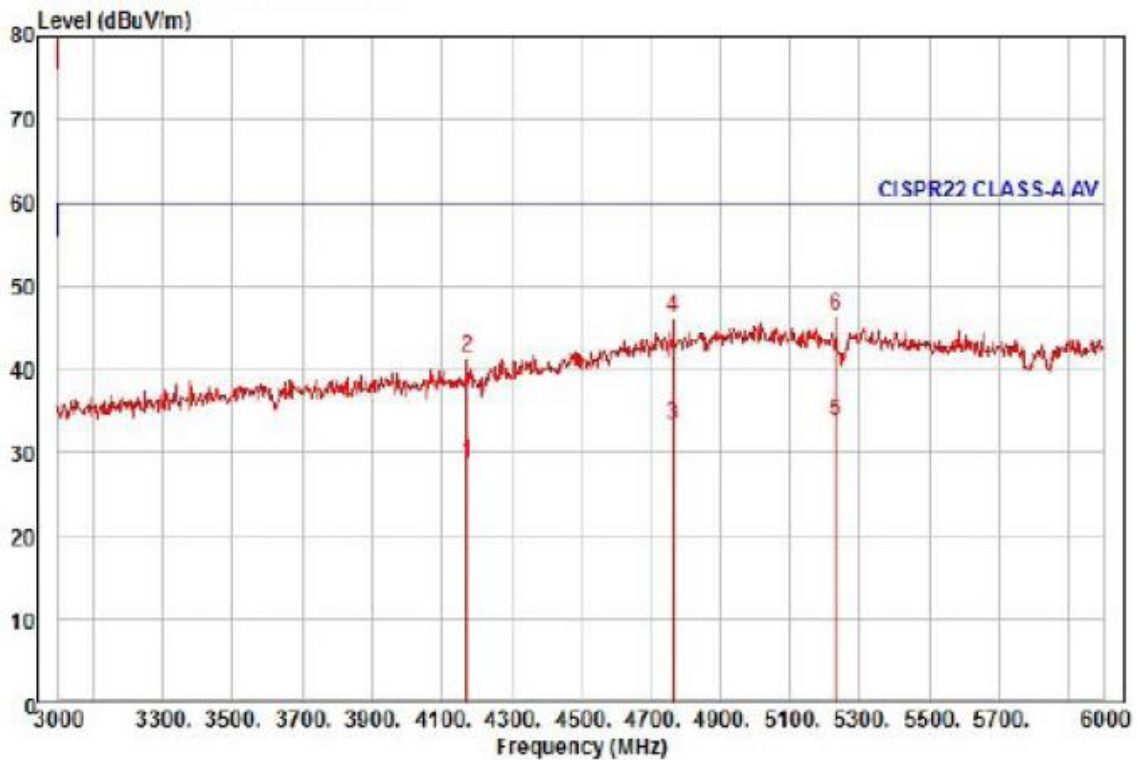
	Read	Ant	Cable	Preamp	TPos	Limit	Over		
Freq	Level	Factor	Loss	Factor		Line	Limit	Pol/Phase	Remark
MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	1086.00	35.62	24.25	6.76	39.88	24	56.00	-29.25	vertical
2	1086.00	57.72	24.25	6.76	39.88	24	76.00	-27.15	vertical
3	1174.00	30.99	24.60	7.05	39.67	78	56.00	-33.03	vertical
4	1174.00	53.26	24.60	7.05	39.67	78	76.00	-30.76	vertical
5	1382.00	28.97	25.43	7.67	39.17	84	56.00	-33.10	vertical
6	1382.00	46.48	25.43	7.67	39.17	84	76.00	-35.59	vertical
7	1556.00	28.44	26.12	8.18	39.20	61	56.00	-32.46	vertical
8	1556.00	45.64	26.12	8.18	39.20	61	76.00	-35.26	vertical
9 av	1620.00	31.83	26.37	8.36	39.23	344	56.00	-28.67	vertical
10 pp	1620.00	55.15	26.37	8.36	39.23	344	76.00	-25.35	vertical
11	2180.00	25.97	28.32	9.75	39.41	3	56.00	-31.37	vertical
12	2180.00	42.98	28.32	9.75	39.41	3	76.00	-34.36	vertical

◆ Calculation

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

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

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Site : chamber

Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) horizontal

: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto

Project :

Model : SCB-6003PH

Mode :

Memo : (3 ~ 6) GHz

	Freq	Read Level	Ant Factor	Cable Loss	Preamp Factor	TPos	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	4173.00	22.56	33.00	13.89	40.72	120	60.00	-31.27	horizontal	Average
2	4173.00	35.26	33.00	13.89	40.72	120	80.00	-38.57	horizontal	Peak
3	4764.00	22.42	36.37	15.02	40.51	282	60.00	-26.70	horizontal	Average
4	4764.00	35.26	36.37	15.02	40.51	282	80.00	-33.86	horizontal	Peak
5 pp	5232.00	21.37	37.25	15.76	40.66	31	60.00	-26.28	horizontal	Average
6 pk	5232.00	34.06	37.25	15.76	40.66	31	80.00	-33.59	horizontal	Peak

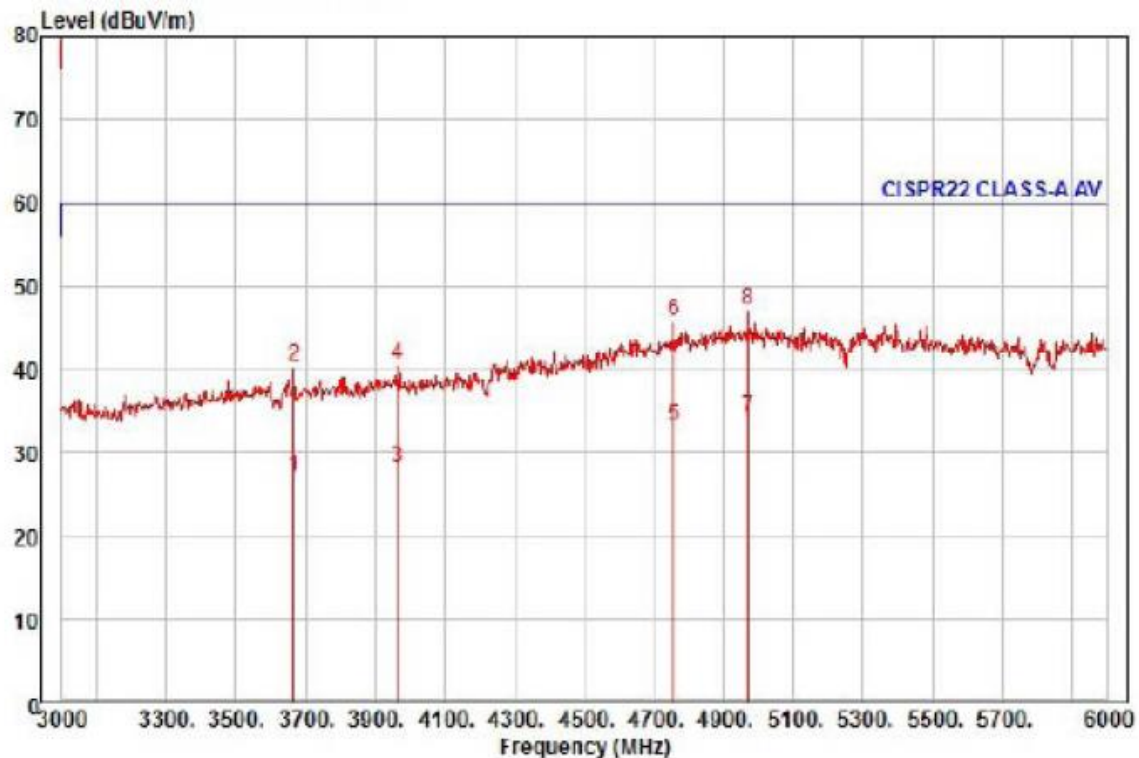
◆ Calculation

Over Limit [dB] = (Read Level[dBuV] + Ant Factor[dB/m] + Cable Loss [dB] – Preamp Factor [dB]) – Limit Line[dBuV]

Over Limit : Margin Value, Read Level : Reading Value, Ant Factor : Ant Factor,

Cable Loss : Cable loss, Preamp Factor : Preamp Factor

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The results shown in this test report refer only to the sample(s) tested unless otherwise stated.



Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : SCB-6003PH
Mode :
Memo : (3 ~ 6) GHz

	Freq	Read Level	Ant Factor	Cable Loss	Preamp Factor	TPos	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	3666.00	23.55	31.45	12.93	40.82	265	60.00	-32.89	vertical	Average
2	3666.00	36.76	31.45	12.93	40.82	265	80.00	-39.68	vertical	Peak
3	3963.00	23.30	31.95	13.49	40.71	41	60.00	-31.97	vertical	Average
4	3963.00	35.91	31.95	13.49	40.71	41	80.00	-39.36	vertical	Peak
5	4758.00	22.27	36.34	15.01	40.51	334	60.00	-26.89	vertical	Average
6	4758.00	34.97	36.34	15.01	40.51	334	80.00	-34.19	vertical	Peak
7 pp	4971.00	21.66	37.55	15.28	40.30	47	60.00	-25.81	vertical	Average
8 pk	4971.00	34.59	37.55	15.28	40.30	47	80.00	-32.88	vertical	Peak

◆ Calculation

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

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

**Harmonic Current Emissions and Voltage Fluctuations and Flicker****Average harmonic current results**

Hn	I _{eff} [A]	% of Limit	Limit [A]	Result
1	7.383E-3			
2	868.211E-6			PASS
3	6.108E-3	0.295	2.07	PASS
4	736.443E-6			PASS
5	6.015E-3	0.586	1.03	PASS
6	707.474E-6			PASS
7	5.809E-3	0.838	693.00E-3	PASS
8	665.866E-6			PASS
9	5.636E-3	1.566	360.00E-3	PASS
10	716.801E-6			PASS
11	5.419E-3	1.824	297.00E-3	PASS
12	607.458E-6			PASS
13	5.172E-3	2.737	189.00E-3	PASS
14	568.342E-6			PASS
15	4.834E-3			PASS
16	518.428E-6			PASS
17	4.549E-3			PASS
18	463.119E-6			PASS
19	4.234E-3			PASS
20	447.054E-6			PASS
21	3.846E-3			PASS
22	389.541E-6			PASS
23	3.473E-3			PASS
24	333.390E-6			PASS
25	3.142E-3			PASS
26	304.591E-6			PASS
27	2.741E-3			PASS
28	272.930E-6			PASS
29	2.386E-3			PASS
30	274.264E-6			PASS
31	2.047E-3			PASS
32	220.642E-6			PASS
33	1.706E-3			PASS
34	231.220E-6			PASS
35	1.402E-3			PASS
36	203.535E-6			PASS
37	1.123E-3			PASS
38	205.957E-6			PASS
39	891.628E-6			PASS
40	200.641E-6			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	7.556E-3			
2	1.171E-3			PASS
3	6.269E-3	0.136	4.60	PASS
4	1.010E-3			PASS
5	6.460E-3	0.283	2.28	PASS
6	881.995E-6			PASS
7	5.982E-3	0.388	1.54	PASS
8	848.091E-6			PASS
9	5.755E-3	0.719	800.00E-3	PASS
10	957.290E-6			PASS
11	5.542E-3	0.840	660.00E-3	PASS
12	809.366E-6			PASS
13	5.297E-3	1.261	420.00E-3	PASS
14	752.410E-6			PASS
15	5.018E-3	1.673	300.00E-3	PASS
16	680.600E-6			PASS
17	4.658E-3			PASS
18	625.778E-6			PASS
19	4.392E-3			PASS
20	600.300E-6			PASS
21	3.959E-3			PASS
22	556.913E-6			PASS
23	3.618E-3			PASS
24	473.672E-6			PASS
25	3.246E-3			PASS
26	426.945E-6			PASS
27	2.848E-3			PASS
28	404.971E-6			PASS
29	2.620E-3			PASS
30	388.064E-6			PASS
31	2.157E-3			PASS
32	378.708E-6			PASS
33	1.807E-3			PASS
34	339.437E-6			PASS
35	1.525E-3			PASS
36	320.789E-6			PASS
37	1.228E-3			PASS
38	305.302E-6			PASS
39	1.005E-3			PASS
40	301.560E-6			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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www.kes.co.kr

Test report No.:
KES-E1-17T0126-R1
Page (44) of (60)

Test Data - Voltage Fluctuations

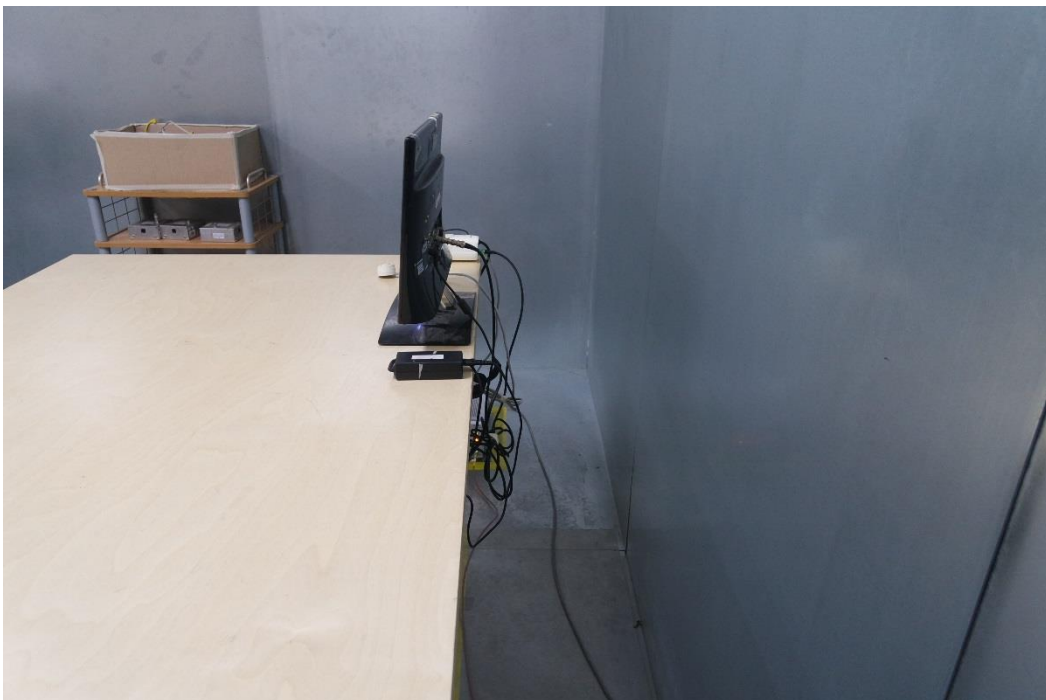
Maximum Flicker results

	EUT values	Limit	Result
Pst	0.028	1.00	PASS
Plt	0.028	0.65	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.033	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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KES-E1-17T0126-R1
Page (46) of (60)

Conducted Telecommunication Emissions

N/A

N/A

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Radiated Electric Field Emissions(Below 1 GHz)



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Radiated Electric Field Emissions(Above 1 GHz)



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Harmonic Current Emissions and Voltage Fluctuations and Flicker



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Electrostatic Discharge

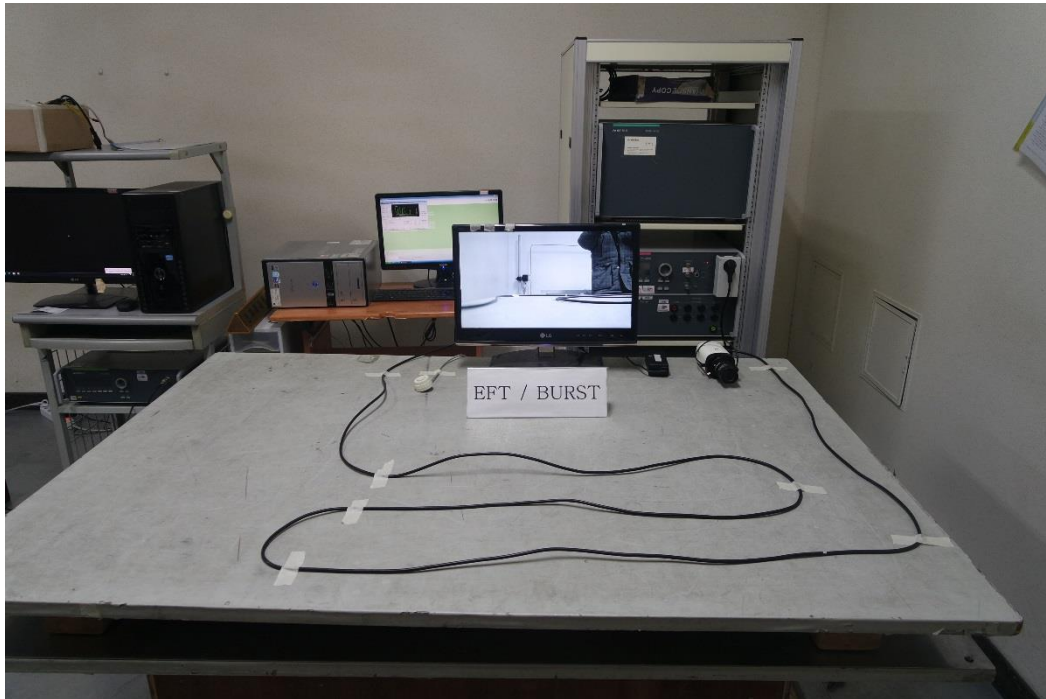


Radiated Electric Field Immunity



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Electrical Fast Transients/Bursts



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Surge Transients



Conducted Disturbance



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Voltage Dips and Short Interruptions



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EUT External Photographs

(Top)



(Bottom)



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EUT Internal Photographs

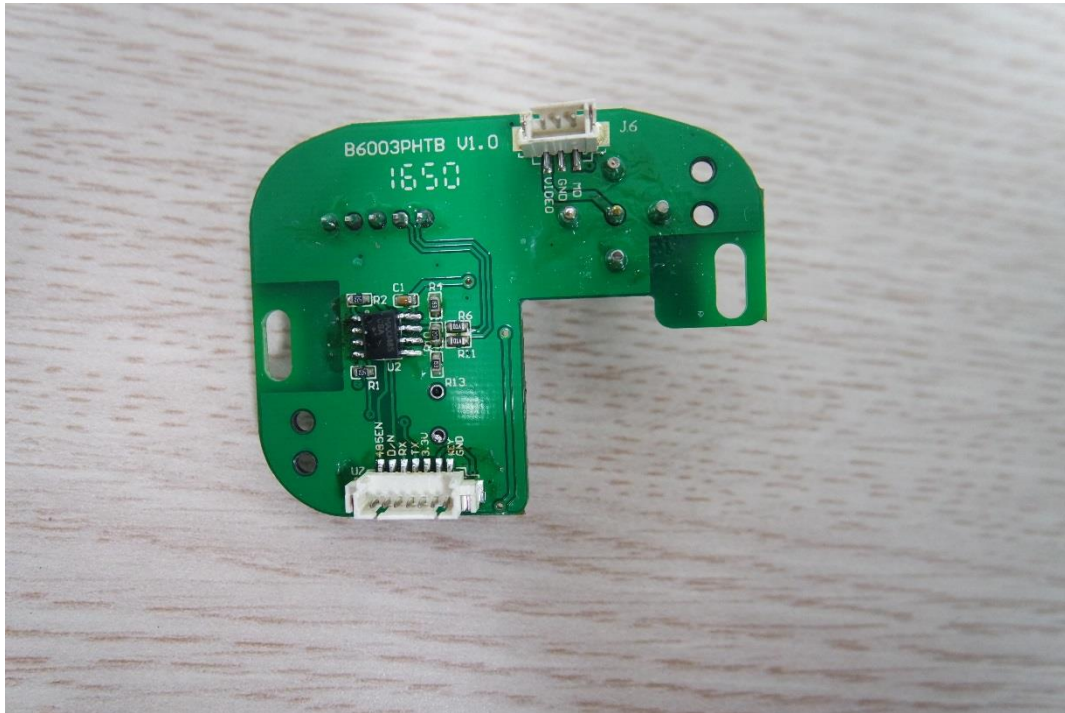
(Internal View)



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EUT Internal View – Main Board

(Top)



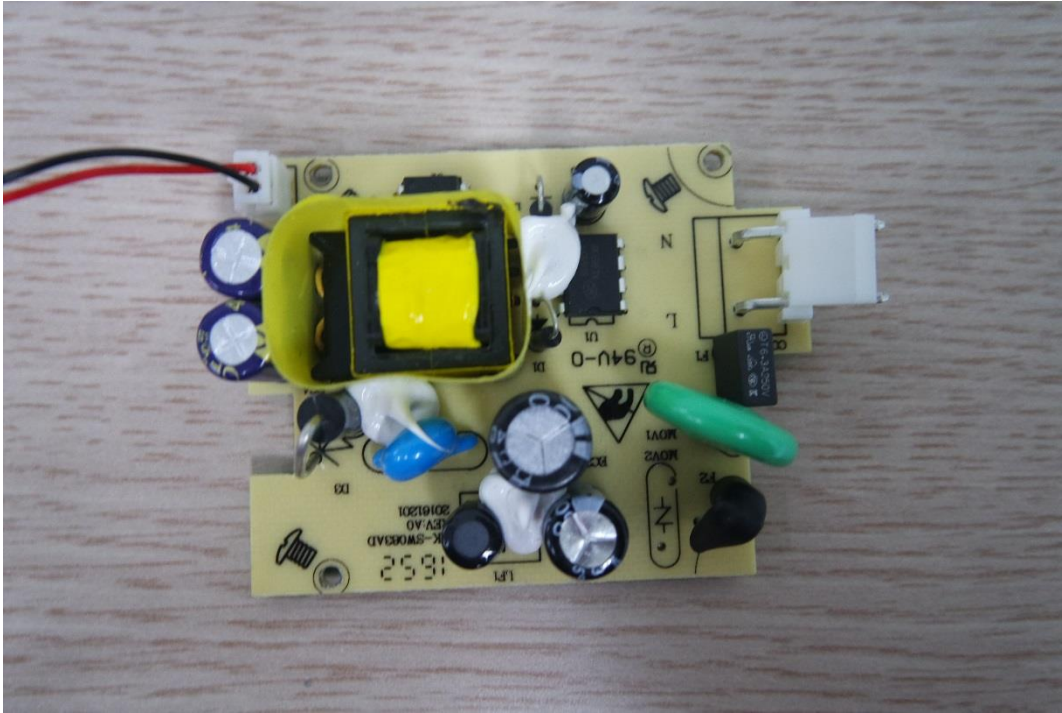
(Bottom)



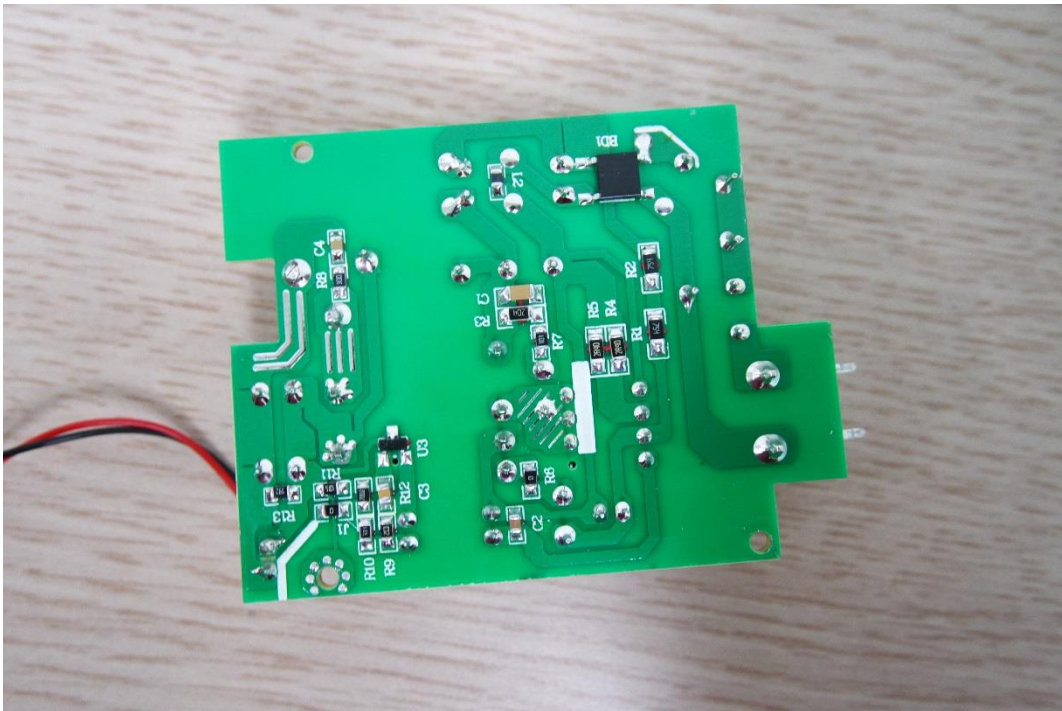
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EUT Internal View – Power Board

(Top)



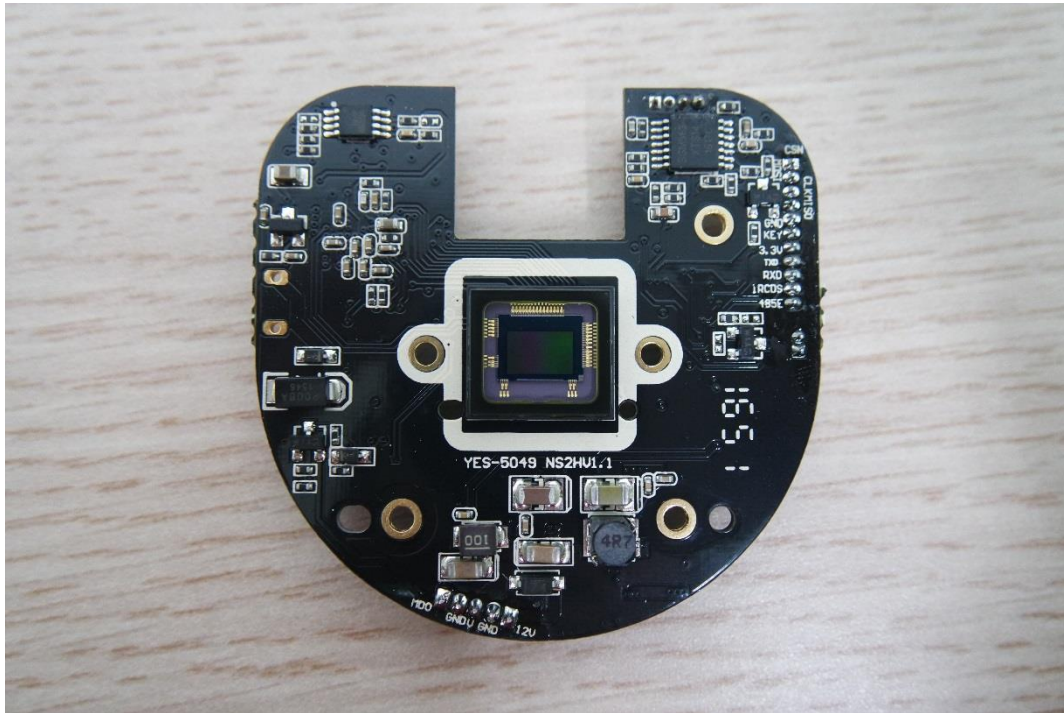
(Bottom)



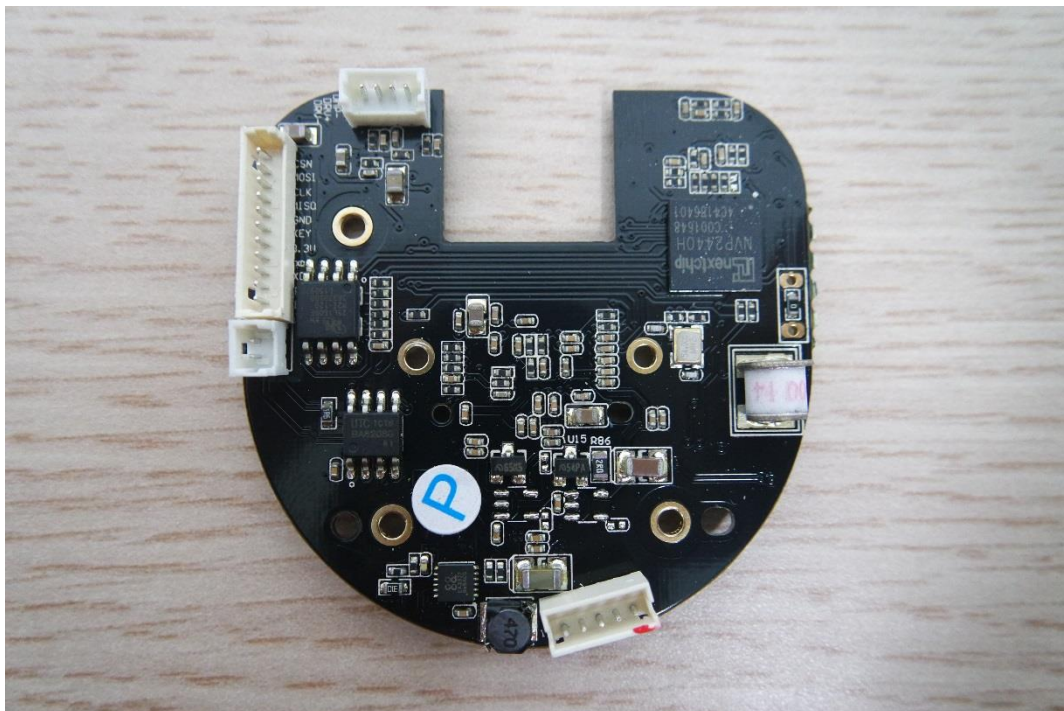
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EUT Internal View – Lens Board

(Top)



(Bottom)



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Label and Location



CCTV CAMERA

Model No : SCB-6003PH

Manufacturer : Hanwha Techwin (Tianjin) Co.,Ltd.

Made in of China

