



EMC TEST REPORT For VCCI

Test Report No. : KES-E1-16T0590
Date of Issue : Nov, 25, 2016
Product name : NETWORK CAMERA
Model/Type No. : XNP-6370RHN
Variant Model : -
Applicant : Hanwha Techwin Co., Ltd.
Applicant Address : 1204, Changwon-daero, Seongsan-gu, Changwon-si,
Gyeongsangna-do, Korea
Manufacturer : Tianjin Samsung Techwin Opto-Electronic Co., Ltd.
Manufacturer Address : No.11 Weiliu Rd, Micro-Electronic Industrial Park, TEDA,
Tianjin, 300385, People's Republic of China
Date of Receipt : Nov, 14, 2016
Test date : Nov, 18, 2016 ~ Nov, 21, 2016
Test Results : ☒ In Compliance ☐ Not in Compliance

Tested by

Jin Bae Lee
EMC Test Engineer

Reviewed by

Dong-Hun, Jang
EMC Technical Manager

**KES Co., Ltd.**

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Test report No.:
KES-E1-16T0590
Page (2) of (39)

REPORT REVISION HISTORY

Date	Test Report No.	Revision History
Nov. 14, 2016	KES-E1-16T0590	Issued

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TABLE OF CONTENTS

1.0	General Product Description.....	4
1.1	Test Voltage & Frequency	7
1.2	Variant Model Differences	7
1.3	Device Modifications	7
1.4	Equipment Under Test.....	7
1.5	Support Equipments	7
1.6	External I/O Cabling	8
1.7	EUT Operating Mode(s)	8
1.8	Configuration	9
1.9	Calibration Details of Equipment Used for Measurement	10
1.10	Test Facility	10
1.11	Laboratory Accreditations and Listings	10
2.0	Test Regulations.....	11
2.1	Conducted Emissions Mains Power Ports.....	13
2.2	Conducted Emissions at Telecommunication Ports.....	14
2.3	Radiated Electric Field Emissions(Below 1 GHz)	15
2.4	Radiated Electric Field Emissions(Above 1 GHz)	16
APPENDIX A – TEST DATA.....		17
Conducted Emissions at Mains Power Ports.....		17
Conducted Emissions at Telecommunication Ports		19
Radiated Electric Field Emissions(Below 1 GHz)		21
Radiated Electric Field Emissions(Above 1 GHz)		22
Test Setup Photos and Configuration		26
Conducted Voltage Emissions		26
Conducted Telecommunication Emissions		27
Radiated Electric Field Emissions(Below 1 GHz)		28
Radiated Electric Field Emissions(Above 1 GHz)		29
EUT External Photographs.....		30
EUT Internal Photographs		31



1.0 General Product Description

Main Specifications of EUT are:

Video	
Imaging Device	1/1.9" 2.42M CMOS
Total Pixels	1952(H) X 1241(V) approx 2.42M pixels
Effective Pixels	1937(H) X 1097(V) approx 2.12M pixels
Scanning System	Progressive Scan
Min. Illumination	Color : 0.1 lux (1/30sec, F1.5, 50IRE), 0.0017Lux(2sec, F1.5, 50IRE) Color : 0.05 lux (1/30sec, F1.5, 30IRE), 0.00083Lux(2sec, F1.5, 30IRE) 0 Lux (IR LED On)
S / N Ratio	50dB
Video Out	CVBS : 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P), for installation
Lens	
Focal Length (Zoom Ratio)	8mm ~ 222mm (37x)
Max. Aperture Ratio	F1.5 (Wide) ~ F4.6 (Tele)
Angular Field of View	H : 59.3°(Wide) ~ 1.9°(Tele) / V : 35.8°(Wide) ~ 1.1°(Tele)
Min. Object Distance	1.5m (3.28ft)
Focus Control	AF / One-Shot AF / Manual
Lens Type	DC Auto Iris
Mount Type	Board-in type
Pan / Tilt / Rotate	
Pan Range	360° Endless
Pan Speed	Preset : 400°/sec , Manual : 0.024°/sec ~ 250°/sec
Tilt Range	190°(-5° ~185°)
Tilt Speed	Preset : 300°/sec , Manual : 0.024°/sec ~ 250°/sec
Rotate Range	-
Sequence	Preset (300 ea), Swing, Group (6 ea), Trace, Tour , Auto Run, Schedule
Preset Accuracy	±0.2°
Azimuth	Yes (E/W/S/N/NE/SE/NW/SW OSD)
Auto Tracking	Off / On
Operational	
IR LED	2 ea
Viewable Length	350m
Camera Title	Off / On (Displayed up to 15 characters per line) - W/W : English/Numeric/Special Characters - Korea : English/Numeric/Special/Korean Characters - China : English/Numeric/Special/Chinese Characters - Common : Multi-line (Max 6), Color (Grey/Green/Red/Blue/Black/White), Transparency, Auto Scale by Resolution
Day & Night	Auto (ICR) / Color / B/W
Backlight Compensation	Off / BLC / WDR
Wide Dynamic Range	120dB
Contrast Enhancement	SSDR (Off / On)
Digital Noise Reduction	SSNR(2D+3D Noise Filter) (Off / On)
Defog	Auto/Manual/Off
Motion Detection	Yes(4ea, Polygonal zones)
Privacy Masking	Off / On (16ea, rectangular zones) - Color : Grey/Green/Red/Blue/Black/White - Zoom ratio option for mask mode
Gain Control	Off / Low / Medium / High

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Test report No.:
KES-E1-16T0590
Page (5) of (39)

White Balance	ATW / AWC / Manual / Indoor / Outdoor / Mercury / Sodium
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (2 ~ 1/12,000sec)
Digital Zoom	16x , area zoom function support digital zoom 2x
Rotate Image	Flip : On/Off Mirror : On/Off
Intelligent Video Analytics	Tampering, Virtual Line, Enter/Exit, Appear / Disappear, Audio Detection
Alarm I/O	Input 4ea / Output 2ea (Relay type)
Remote Control Interface	RS-485/422
RS-485 Protocol	Samsung-T/E, Pelco-D/P, Panasonic, Honeywell, AD, Vicon, GE, BOSCH
Alarm Triggers	Alarm Input, Motion Detection, Intelligent Video Analytics, Network Disconnect
Alarm events	- File upload via FTP, E-Mail - Notification via E-Mail - local storage(SD/SDHC) or NAS recording at Event Triggers - External output - PTZ preset
Audio In	Selectable (Mic IN/Line IN), Supply voltage: 2.5VDC(4mA), Input impedance: approx. 2K Ohm
Audio out	Line out (3.5mm stereo mini jack), Max output level: 1 Vrms
Network	
Ethernet	RJ-45 (10/100BASE-T) SFP (*only using SBP-302HF)
Video Compression Format	H.265/H.264 (MPEG-4 Part 10/AVC) : Main/Baseline/High , Motion JPEG
Resolution	1920x1080, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 800x450, 720x576, 640x480, 640x360, 320x240, 320x180
Max. Framerate	H.265/H.264 : Max. 60fps at all resolutions Motion JPEG : Max. 30fps at all resolutions
Smart Codec	Manual Mode (area-based : 5EA)
Video Quality Adjustment	H.264/H.265 : Target Bitrate Level Control MJPEG : Target Bitrate Level Control
Bitrate Control Method	H.264/H.265 : CBR or VBR, with WiseStream MJPEG : VBR
Streaming Capability	Multiple Streaming (Up to 10 Profiles)
Audio Compression Format	G.711 u-law /G.726 Selectable G.726 (ADPCM) 8KHz, G.711 8KHz G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps AAC-LC : 48Kbps at 16KHz
Audio Communication	Bi-directional (2-Way)
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Security	HTTPS(SSL) Login Authentication Digest Login Authentication IP Address Filtering User access Log 802.1X Authentication (EAP-TLS, EAP-LEAP)

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Test report No.:
KES-E1-16T0590
Page (6) of (39)

Streaming Method	Unicast / Multicast
Max. User Access	15 Users at Unicast Mode
Edge Storage	SD/SDHC/SDXC(up to 128 G) - motion Images recorded in the SD/SDHC/SDXC memory card can be downloaded. NAS(Network Attached Storage) Local PC for Instant Recording
Application Programming Interface	ONVIF Profile S/G SUNAPI(HTTP API) SVNP 1.2 WiseNet Open Platform
Webpage Language	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek
Web Viewer	Supported OS: Windows 7, 8.1, 10, Mac OS X 10.9, 10.10, 10.11 [Plug-in Free Webviewer] Supported Browser: Google Chrome, MS Edge Support Codec : Video-H.264, MJPEG (Max. 1M 15fps) [Plug-in Webviewer] Supported Browser : MS Explorer 11, Mozilla Firefox, Apple Safari 9 ※ Mac OS X only
Central Management Software	SmartViewer, SSM
Environmental	
Operating Temperature / Humidity	-50°C ~ +55°C (-58°F ~ +131°F) / Less than 90% RH
Storage Temperature / Humidity	-50°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH
Ingress Protection	IP66
Vandal Resistance	IK10
Electrical	
Input Voltage / Current	AC24V
Power Consumption	90W(Heater On, IR On), 60W(Heater Off, IR On)
Mechanical	
Color / Material	black(head) + ivory(body) / Aluminum, Plastic
Dimension (WxHxD)	Ø236.9 x 407.7
Weight	7.1kg

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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 ☐ 100 Vac ☐ 110 Vac ☐ 120 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
NETWORK CAMERA	XNP-6370RHN	-	Tianjin Samsung Techwin Opto-Electronic Co.,Ltd.	E.U.T

1.5 Support Equipments

Description	Model Number	Serial Number	Manufacturer	Remarks
NOTEBOOK	NT63025J	JK9091EF400432X	Samsung Electronics Suzhou Computer Co., Ltd.	-
NOTEBOOK ADAPTOR	A13-040N2A	CN60BA4400313AD 0N843KO243	Chicony Power Technology (suzhou)Co., Ltd.	-
SMART PHONE	LG-H791	-	LG Electronics	-
CONTROLLER	SPC-1010	C50E67WG10100F	SamSung Techwin Co.,Ltd	
CONTROLLER ADAPTOR	PA-120150SN	-	-	-
ALARM	-	-	-	-
SPEAKER	BR10000A CUVE	-	BEIJING EDIFIER HI-TECH GROUP.	-
SDcard	-	-	MANDO	16 GB

1.6 External I / O Cabling

Start		END		Cable Spec.	
Description	I / O Port	Description	I / O Port	Length	Shield
NETWORK CAMERA (E.U.T)	RJ-45	NOTEBOOK	RJ-45	3.0	U
	3.5 mm	SMART PHONE	3.5 mm	1.3	U
	2 Pin	CONTROLLER	2 Pin	3.0	U
	2 Pin	ALARM	2 Pin	3.0	U
	3.5 mm	SPEAKER	3.5 mm	1.6	U
	Slot	SDcard	Slot	-	-

* Unshielded = U, Shielded = S

1.7 EUT Operating Mode(s)

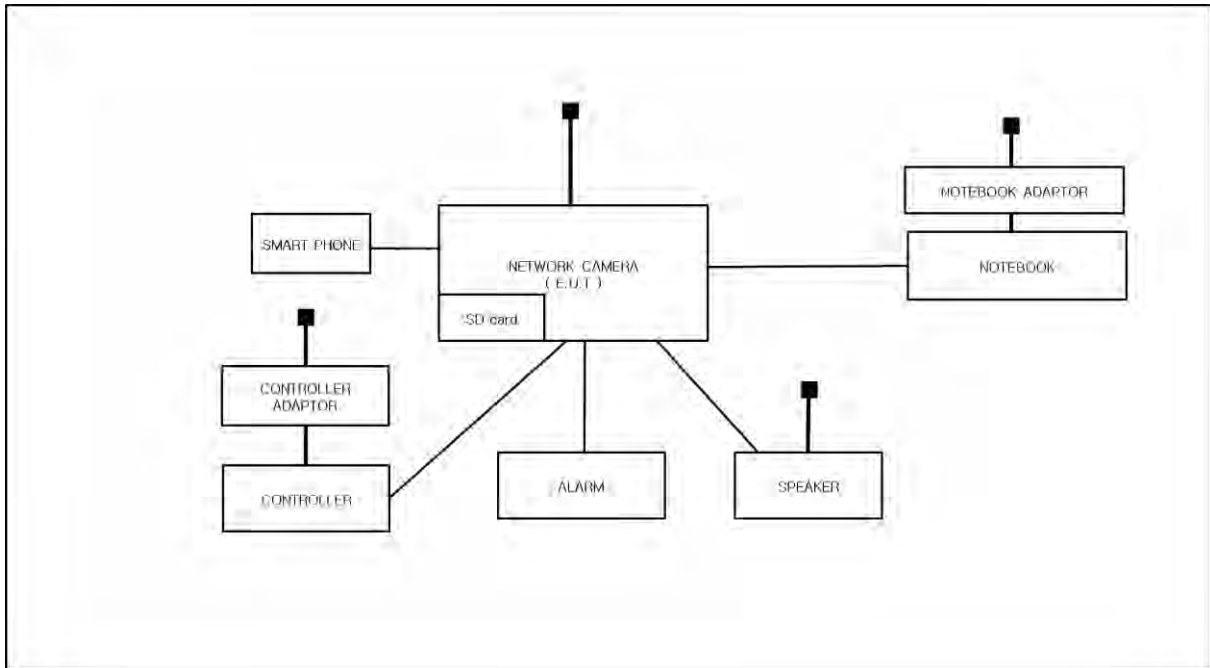
Equipment under test was operated during the measurement under the following conditions:

operating
E.U.T Monitoring , Ping test, 1 kHz

E.U.T Test operating S/W		
Name	Version	Manufacture Company
SmartViewer	-	Hanwha Techwin Co., Ltd.

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 55022:2010

☐ Class A

☐ Class B

☐ EN 55024:2010 +A1:2015

☐ EN 50130-4:2011 +A1:2014

☐ EN 61000-3-2:2014

☐ EN 61000-3-3:2013

☐ EN 61326-1:2013



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Test report No.:
KES-E1-16T0590
Page (12) of (39)

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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 C63.4-2014 | | |
| ☐ 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 Mains Power Ports

Test Date

Nov, 19, 2016

Test Location

Electro wave Shieldroom

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, 04, 2017
☒	LISN	ENV216	R & S	101786	05, 02, 2017
☒	Electro wave Shieldroom	-	SEMITEC	-	-
☒	EMI Test S/W	EMC32	R & S	9.12.00	-

Test Conditions

Temperature: 19,2 °C
Relative Humidity: 43,6 %

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

Nov, 19, 2016

Test Location

Electro wave Shieldroom

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, 04, 2017
☒	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
☒	Electro wave Shieldroom	-	SEMITEC	-	-
☒	EMI Test S/W	EMC32	R & S	9.12.00	-

Test Conditions

Temperature: 19,2 °C

Relative Humidity: 43,6 %

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.



2.3 Radiated Electric Field Emissions(Below 1 GHz)

Test Date

Nov, 19, 2016

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 ANT	VULB 9163	Schwarzbeck	9163-713	05, 15, 2017
☒	OATS	-	KES	-	-
☒	Antenna Mast	-	DAEIL EMC	-	-
☒	Turn Table	-	DAEIL EMC	-	-
☒	EMI Test S/W	N/A	N/A	N/A	N/A

Test Conditions

Temperature: 19,3 °C

Relative Humidity: 51,0 %

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

Nov, 18, 2016

Test Location

Semi Anechoic Chamber #2

Test Equipment

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

Test Conditions

Temperature: 19,4 °C

Relative Humidity: 49,2 %

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

RemarksSee Appendix A for test data.

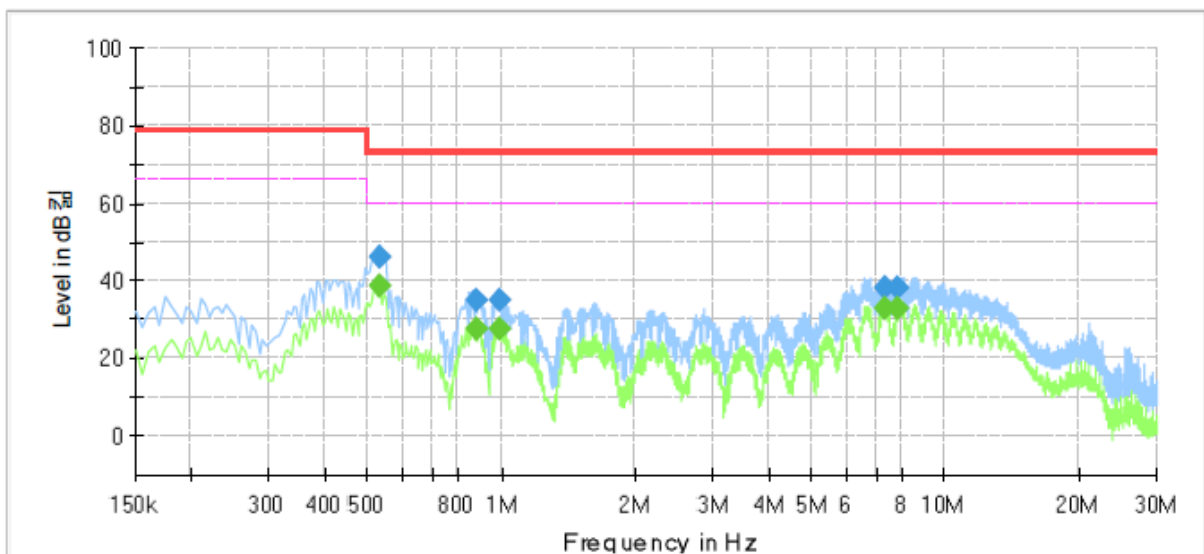
APPENDIX A – TEST DATA

Conducted Emissions at Mains Power Ports

[HOT]

Common Information

Test Description:	Conducted Emission
Model No.:	XNP-6370RHN
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)
0.530000	---	38.59	60.00	21.41	1000.0	9.000	L1	9.8
0.530000	46.06	---	73.00	26.94	1000.0	9.000	L1	9.8
0.880000	---	27.38	60.00	32.62	1000.0	9.000	L1	10.0
0.880000	34.84	---	73.00	38.16	1000.0	9.000	L1	10.0
0.990000	---	27.48	60.00	32.52	1000.0	9.000	L1	10.0
0.990000	34.80	---	73.00	38.20	1000.0	9.000	L1	10.0
7.310000	---	32.96	60.00	27.04	1000.0	9.000	L1	9.9
7.310000	38.31	---	73.00	34.69	1000.0	9.000	L1	9.9
7.865000	---	32.60	60.00	27.40	1000.0	9.000	L1	9.9
7.865000	37.89	---	73.00	35.11	1000.0	9.000	L1	9.9

◆ Calculation

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

QuasiPeak / CAverage : The Final Value

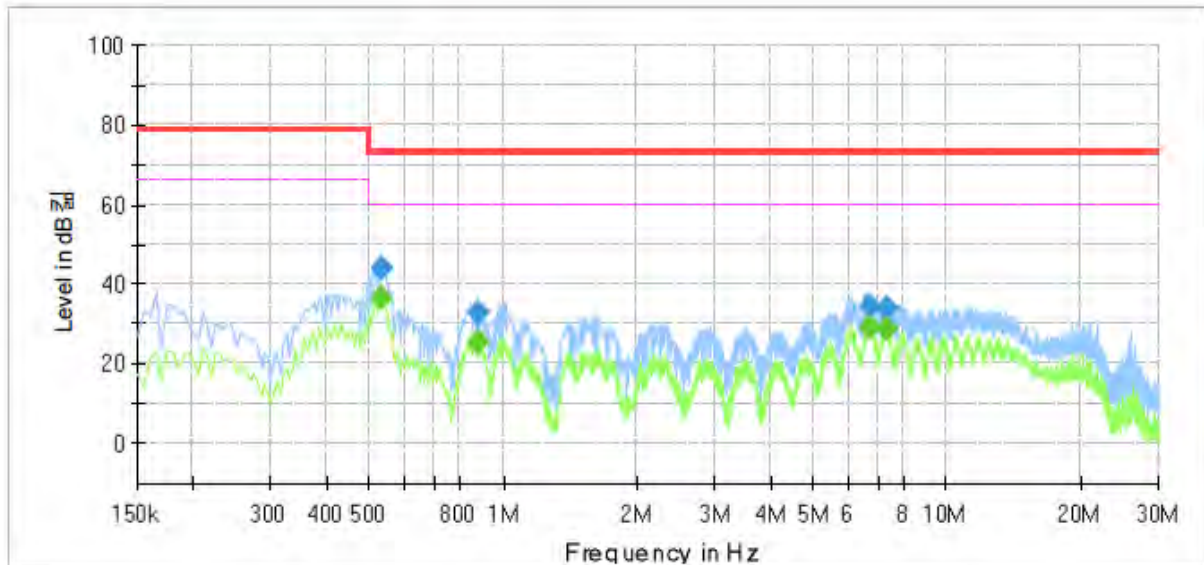
Reading Value : Not shown in the table.

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

[NEUTRAL]

Common Information

Test Description:	Conducted Emission
Model No.:	XNP-6370RHN
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)
0.530000	---	36.45	60.00	23.55	1000.0	9.000	N	9.8
0.530000	43.89	---	73.00	29.11	1000.0	9.000	N	9.8
0.880000	---	25.29	60.00	34.71	1000.0	9.000	N	10.0
0.880000	32.75	---	73.00	40.25	1000.0	9.000	N	10.0
6.745000	---	29.19	60.00	30.81	1000.0	9.000	N	9.9
6.745000	34.67	---	73.00	38.33	1000.0	9.000	N	9.9
7.315000	---	28.85	60.00	31.15	1000.0	9.000	N	9.9
7.315000	34.15	---	73.00	38.85	1000.0	9.000	N	9.9

◆ Calculation

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

QuasiPeak / CAverage : The Final Value

Reading Value : Not shown in the table.

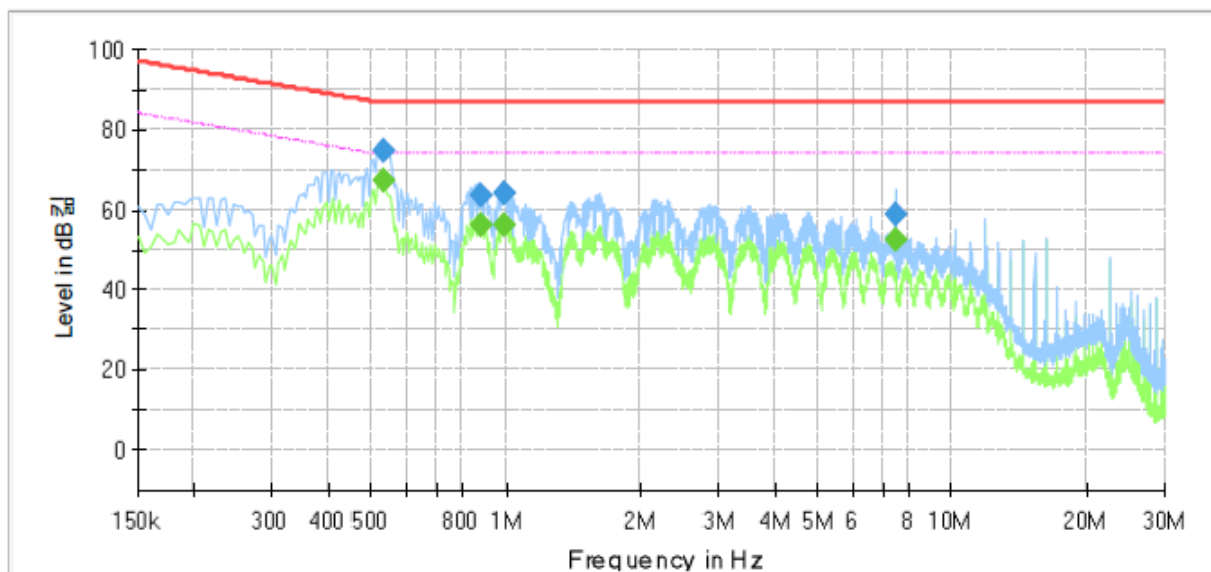
Corr. : Correction values (LISN FACTOR+ Cable Loss)

Conducted Emissions at Telecommunication Ports

[10 Mbps]

Common Information

Test Description:	Telecommunication Emission
Model No.:	XNP-6370RHN
Mode	10 Mbps
Operator Name:	KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.535000	---	67.04	74.00	6.96	1000.0	9.000	Single Line	10.1
0.535000	74.53	---	87.00	12.47	1000.0	9.000	Single Line	10.1
0.880000	---	56.14	74.00	17.86	1000.0	9.000	Single Line	10.2
0.880000	63.68	---	87.00	23.32	1000.0	9.000	Single Line	10.2
0.995000	---	56.33	74.00	17.67	1000.0	9.000	Single Line	10.2
0.995000	63.83	---	87.00	23.17	1000.0	9.000	Single Line	10.2
7.500000	---	52.26	74.00	21.74	1000.0	9.000	Single Line	10.0
7.500000	58.71	---	87.00	28.29	1000.0	9.000	Single Line	10.0

◆ Calculation

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

QuasiPeak / CAverage : The Final Value

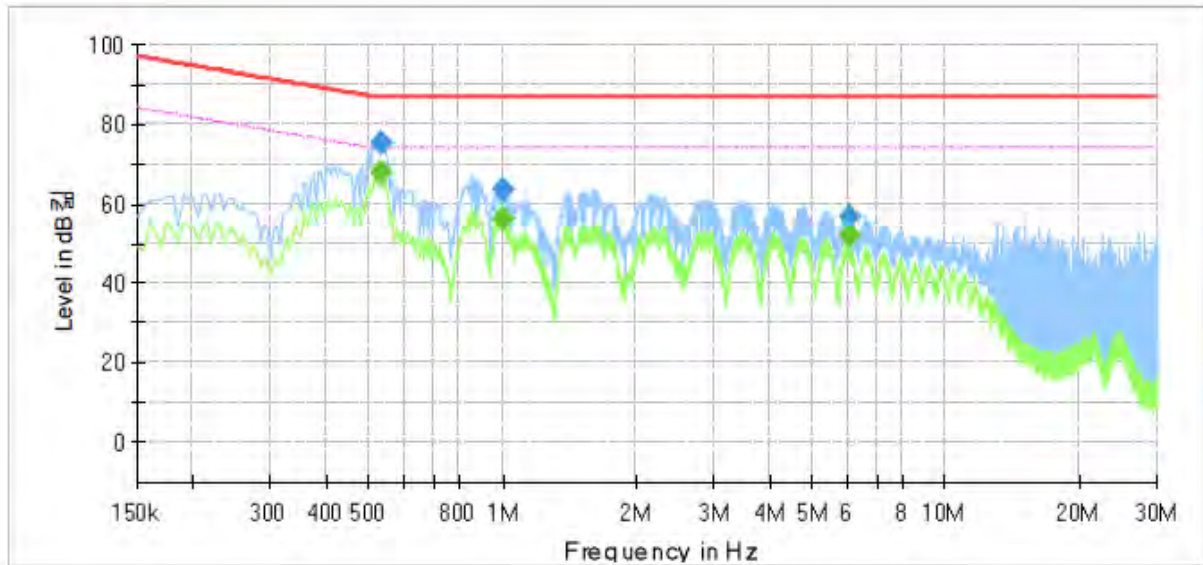
Reading Value : Not shown in the table.

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

[100 Mbps]

Common Information

Test Description:	Telecommunication Emission
Model No.:	XNP-6370RHN
Mode	100 Mbps
Operator Name:	KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.530000	---	67.55	74.00	6.45	1000.0	9.000	Single Line	9.6
0.530000	75.15	---	87.00	11.85	1000.0	9.000	Single Line	9.6
1.005000	---	56.02	74.00	17.98	1000.0	9.000	Single Line	9.7
1.005000	63.62	---	87.00	23.38	1000.0	9.000	Single Line	9.7
6.060000	---	51.95	74.00	22.05	1000.0	9.000	Single Line	9.6
6.060000	56.80	---	87.00	30.20	1000.0	9.000	Single Line	9.6

◆ 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)

**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]
50.33	13.10	V	1.82	13.91	2.10	29.11	40.00	10.89
260.84	10.79	H	3.33	12.62	4.81	28.22	47.00	18.78
334.59	11.18	H	3.27	14.18	5.49	30.85	47.00	16.15
425.68	11.36	V	2.24	16.06	6.49	33.91	47.00	13.09
482.63	18.90	V	2.18	16.86	6.93	42.69	47.00	4.31
557.66	13.55	H	3.72	18.37	7.47	39.39	47.00	7.61

* H : Horizontal, V : Vertical

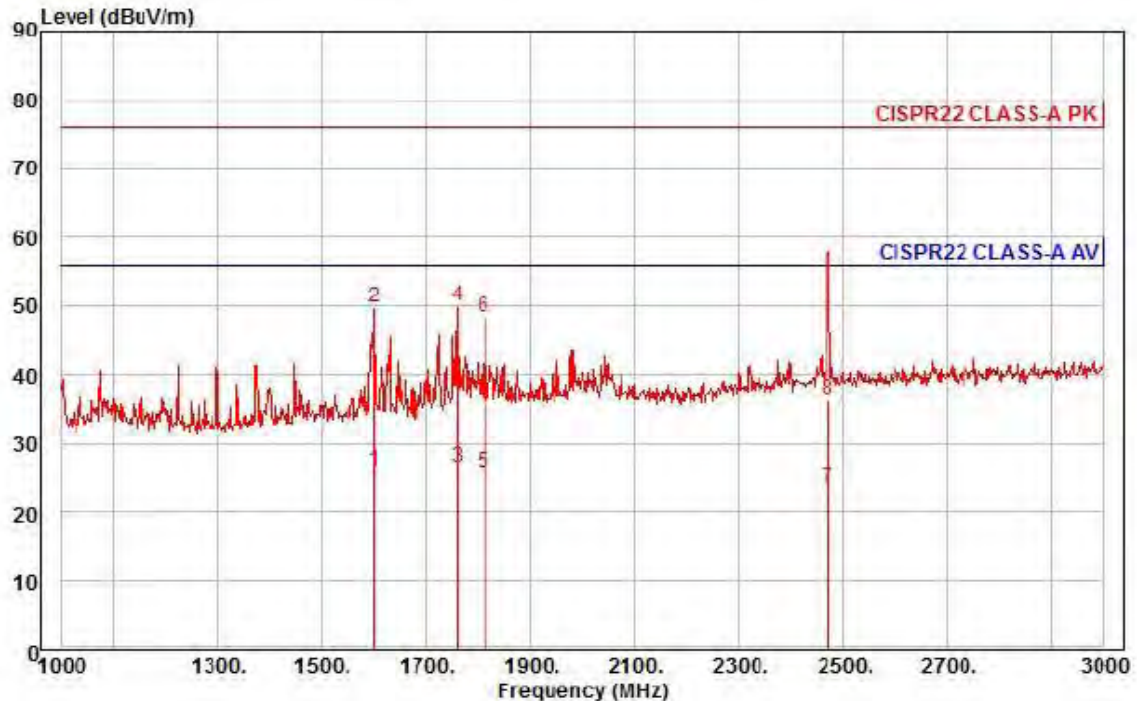
◆ Calculation

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

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

Correction Factor : ANT FACTOR + Cable loss

Radiated Electric Field Emissions(Above 1 GHz)



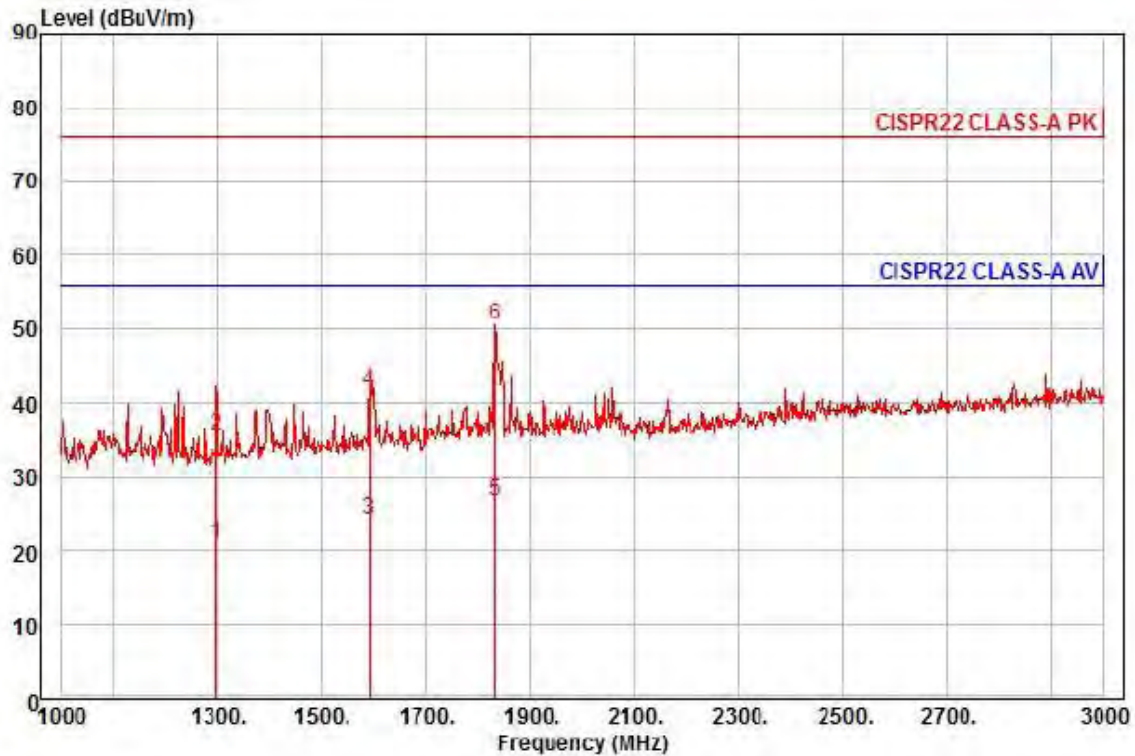
Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) horizontal
RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : XNP-6370RHN
Mode :
Memo :

	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	1600.00	30.67	26.29	8.31	39.22	142	56.00	-29.95	horizontal	Average
2	1600.00	54.49	26.29	8.31	39.22	142	76.00	-26.13	horizontal	Peak
3 av	1760.00	30.17	26.93	8.72	39.30	116	56.00	-29.48	horizontal	Average
4 pp	1760.00	53.64	26.93	8.72	39.30	116	76.00	-26.01	horizontal	Peak
5	1812.00	29.14	27.13	8.86	39.32	152	56.00	-30.19	horizontal	Average
6	1812.00	51.60	27.13	8.86	39.32	152	76.00	-27.73	horizontal	Peak
7	2472.00	23.62	29.04	10.47	39.50	59	56.00	-32.37	horizontal	Average
8	2472.00	36.35	29.04	10.47	39.50	59	76.00	-39.64	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



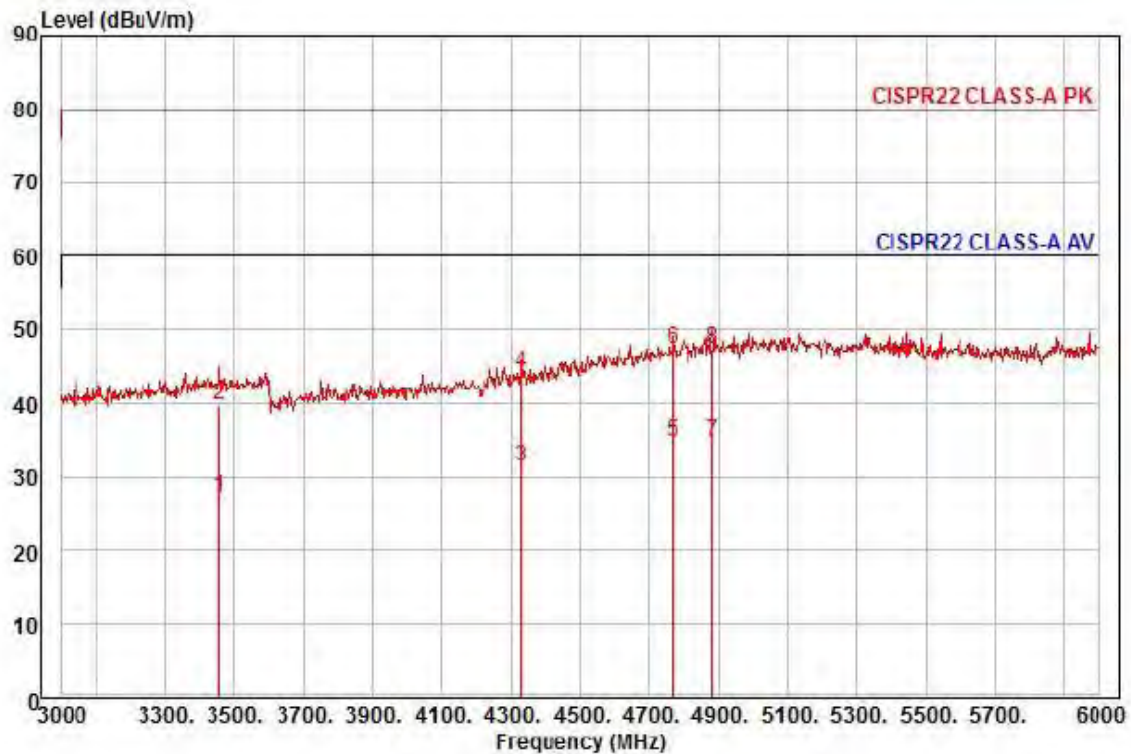
Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : XNP-6370RHN
Mode :
Memo :

	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	1298.00	27.98	25.09	7.43	39.37	188	56.00	-34.87	vertical	Average
2	1298.00	42.37	25.09	7.43	39.37	188	76.00	-40.48	vertical	Peak
3	1592.00	28.94	26.26	8.29	39.22	185	56.00	-31.73	vertical	Average
4	1592.00	46.44	26.26	8.29	39.22	185	76.00	-34.23	vertical	Peak
5 av	1834.00	29.93	27.22	8.91	39.33	159	56.00	-29.27	vertical	Average
6 pp	1834.00	53.65	27.22	8.91	39.33	159	76.00	-25.55	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



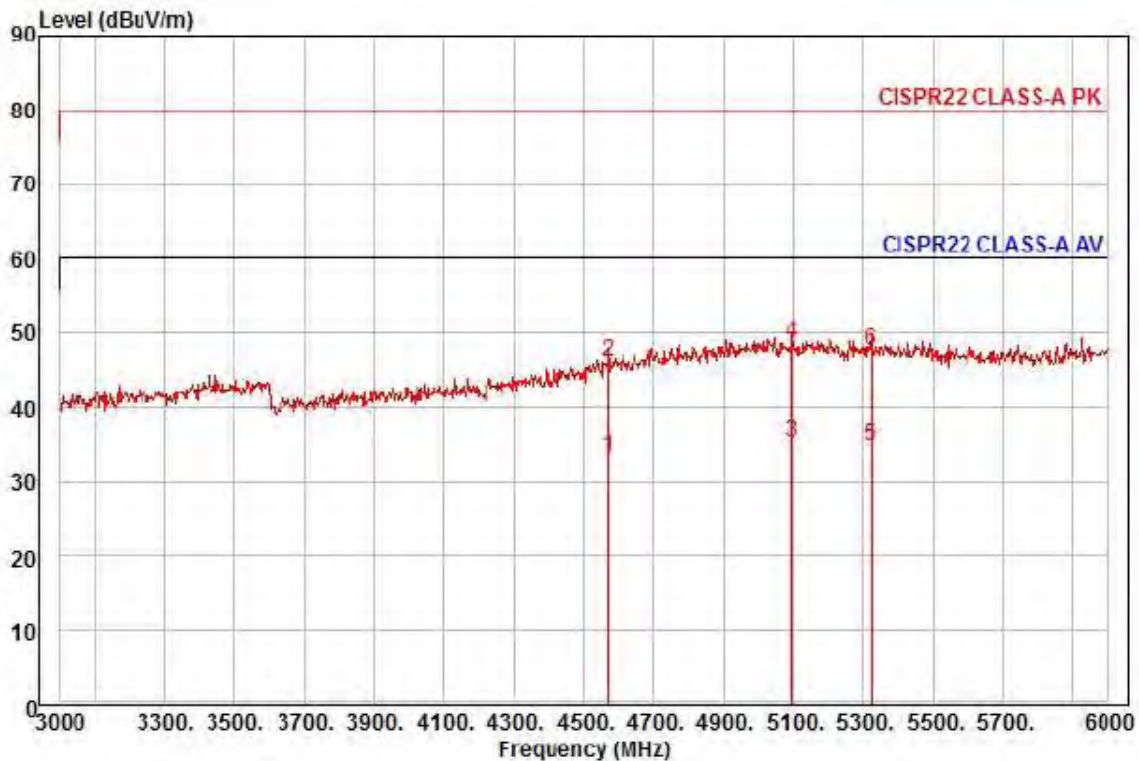
Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : XNP-6370RHN
Mode :
Memo :

	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	3459.00	24.34	31.10	12.55	40.82	88	60.00	-32.83	horizontal	Average
2	3459.00	36.78	31.10	12.55	40.82	88	80.00	-40.39	horizontal	Peak
3	4329.00	24.00	33.89	14.15	40.75	198	60.00	-28.71	horizontal	Average
4	4329.00	36.81	33.89	14.15	40.75	198	80.00	-35.90	horizontal	Peak
5	4767.00	23.88	36.39	15.03	40.50	80	60.00	-25.20	horizontal	Average
6 pk	4767.00	36.52	36.39	15.03	40.50	80	80.00	-32.56	horizontal	Peak
7 pp	4881.00	23.05	37.04	15.19	40.39	29	60.00	-25.11	horizontal	Average
8	4881.00	35.55	37.04	15.19	40.39	29	80.00	-32.61	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 : XNP-6370RHN

Mode :

Memo :

		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	4569.00	24.11	35.26	14.60	40.70	360	60.00	-26.73	vertical	Average
2	4569.00	36.88	35.26	14.60	40.70	360	80.00	-33.96	vertical	Peak
3 pp	5097.00	22.65	37.52	15.51	40.43	112	60.00	-24.75	vertical	Average
4 pk	5097.00	36.06	37.52	15.51	40.43	112	80.00	-31.34	vertical	Peak
5	5322.00	22.67	37.07	15.91	40.80	160	60.00	-25.15	vertical	Average
6	5322.00	35.45	37.07	15.91	40.80	160	80.00	-32.37	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

Test Setup Photos and Configuration

Conducted Voltage Emissions



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Conducted Telecommunication Emissions



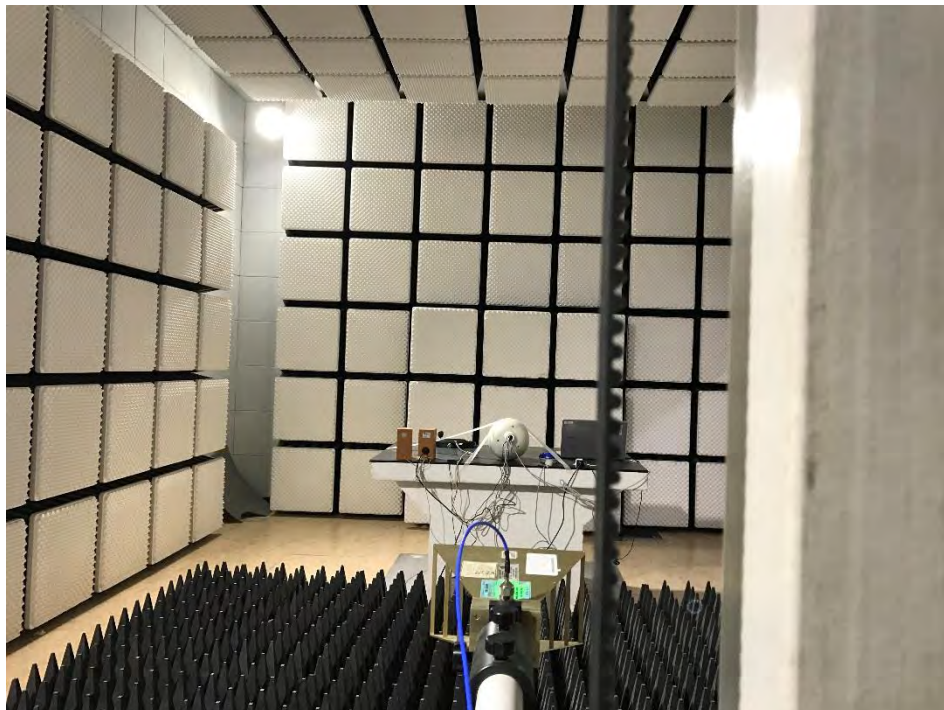
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Radiated Electric Field Emissions(Below 1 GHz)



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Radiated Electric Field Emissions(Above 1 GHz)



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EUT External Photographs

(Top)



(Bottom)



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EUT Internal Photographs

(Internal View)



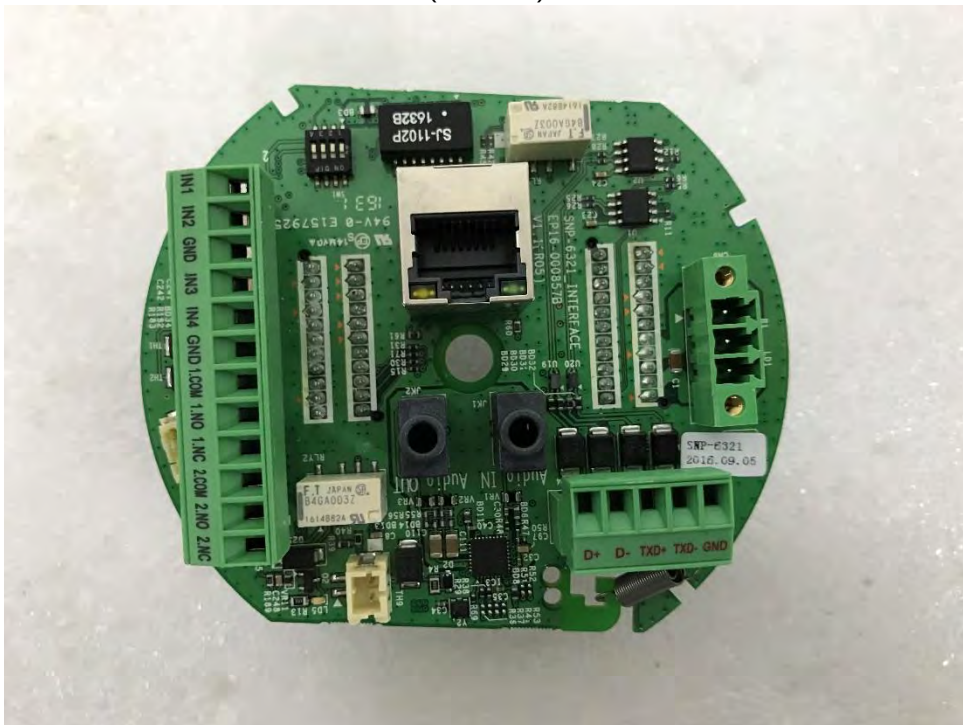
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EUT Internal View – Board 1

(Top)



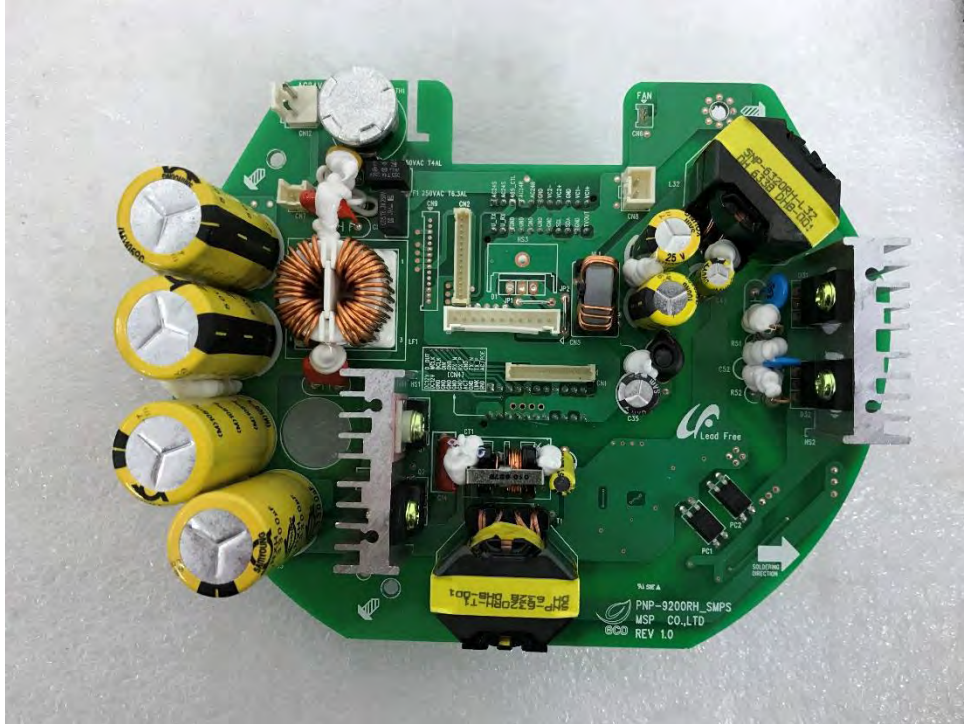
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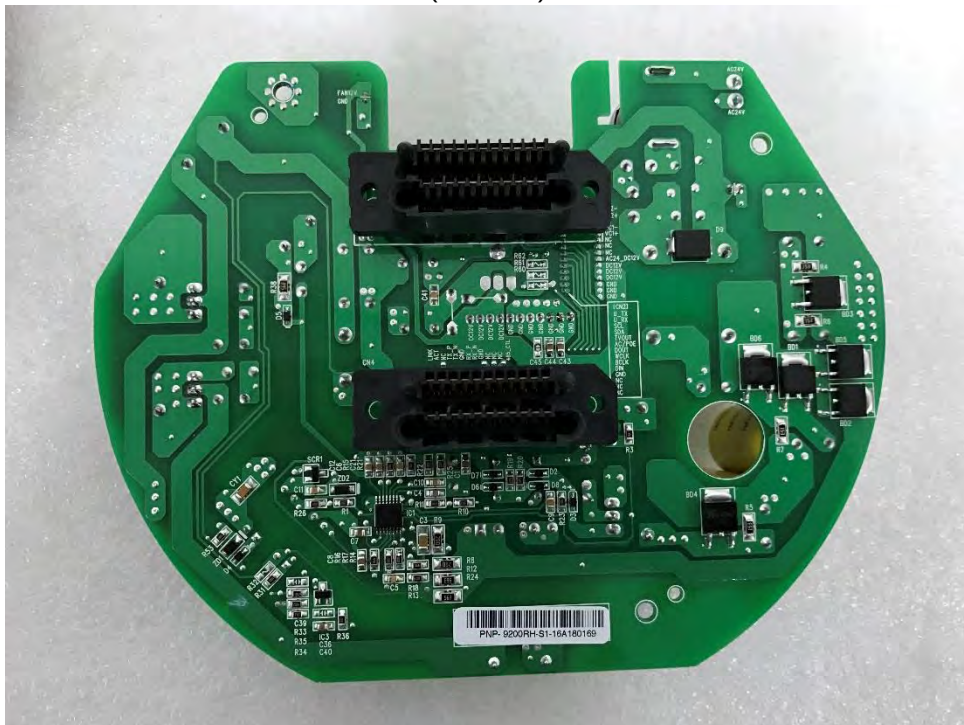
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EUT Internal View – Board 2

(Top)



(Bottom)



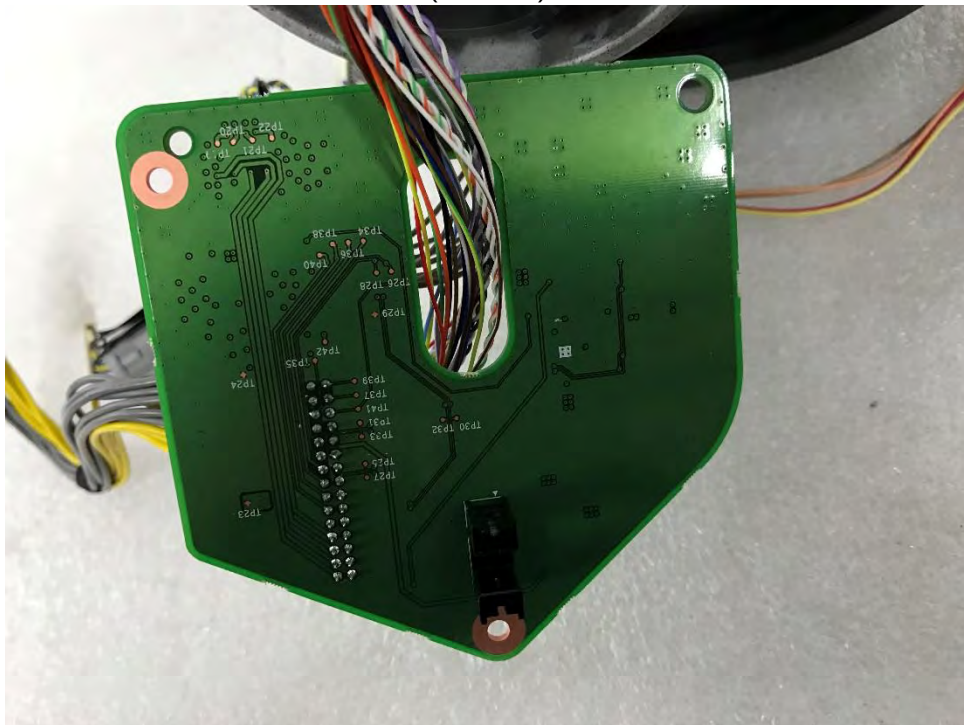
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EUT Internal View – Board 3

(Top)



(Bottom)



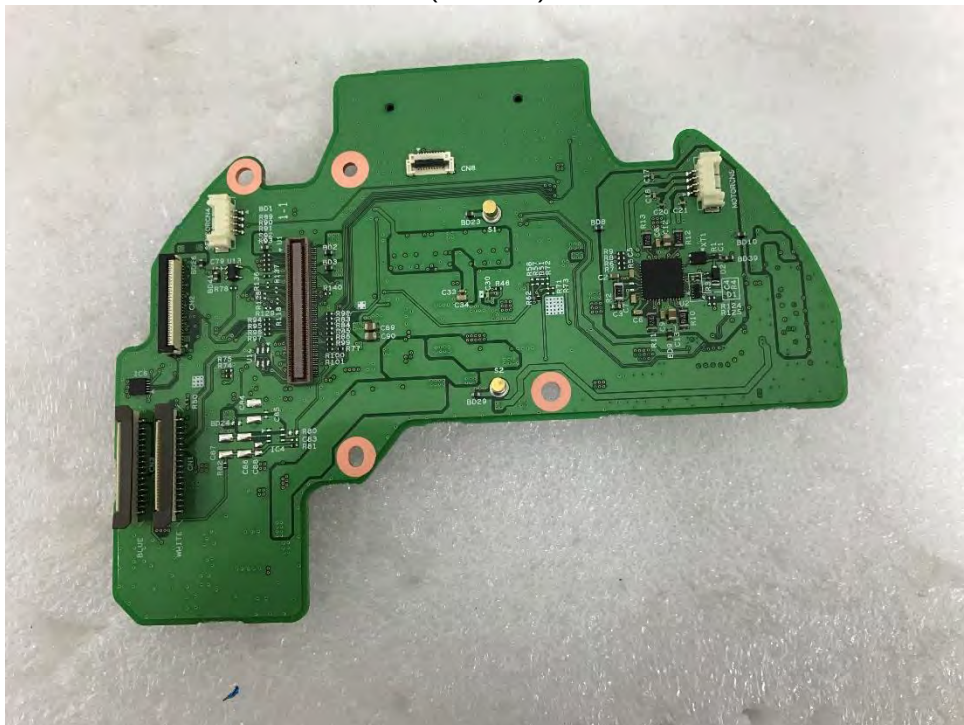
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EUT Internal View – Board 4

(Top)



(Bottom)



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EUT Internal View – Board 5

(Top)



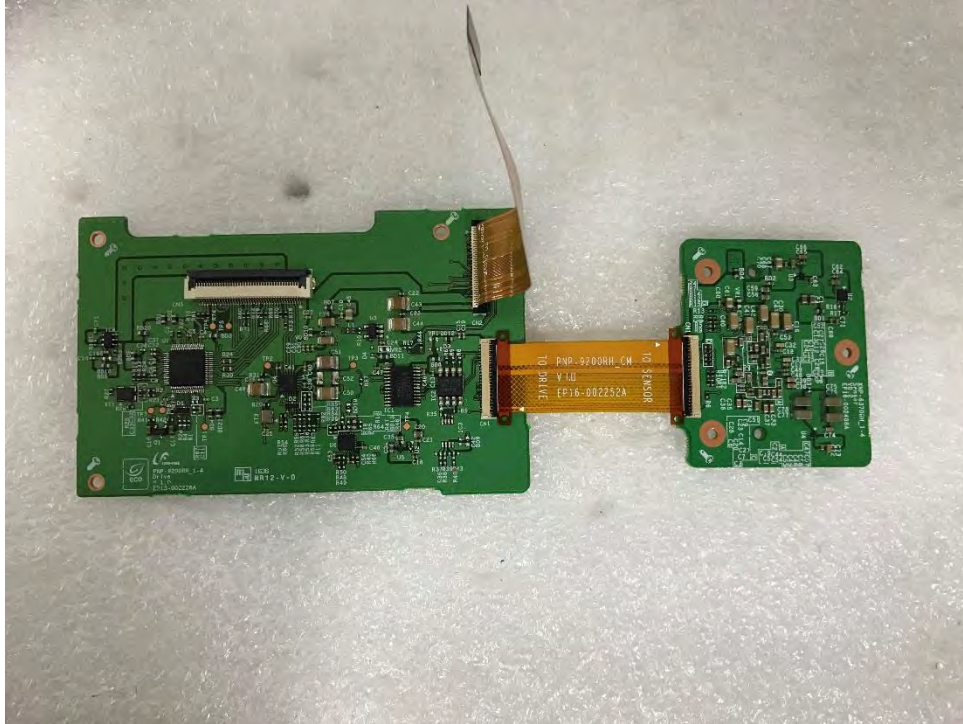
(Bottom)



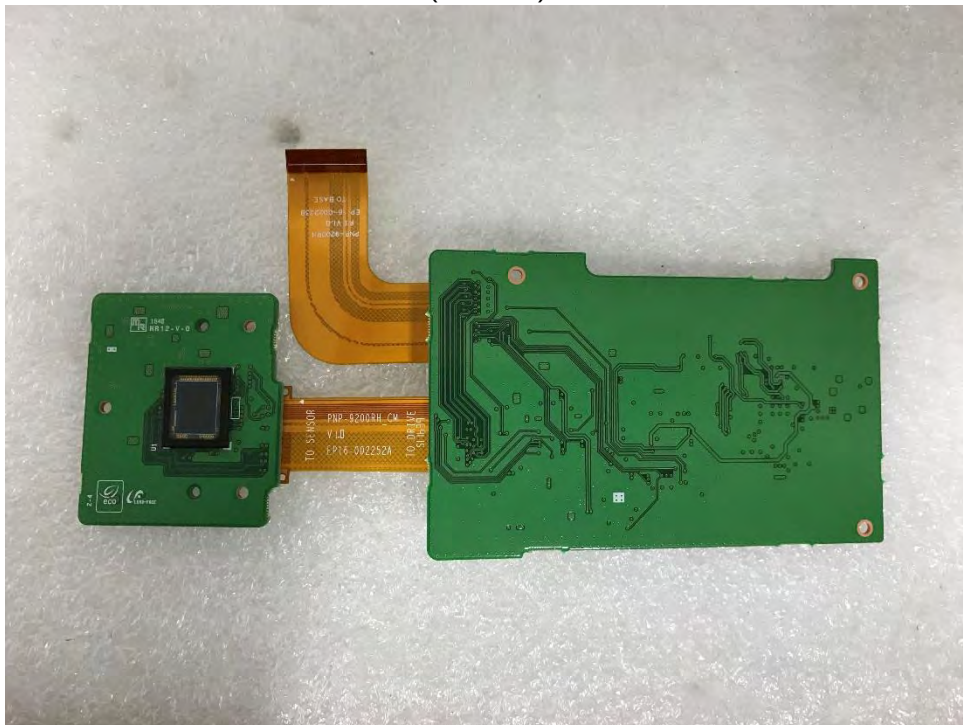
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EUT Internal View – Board 6

(Top)



(Bottom)



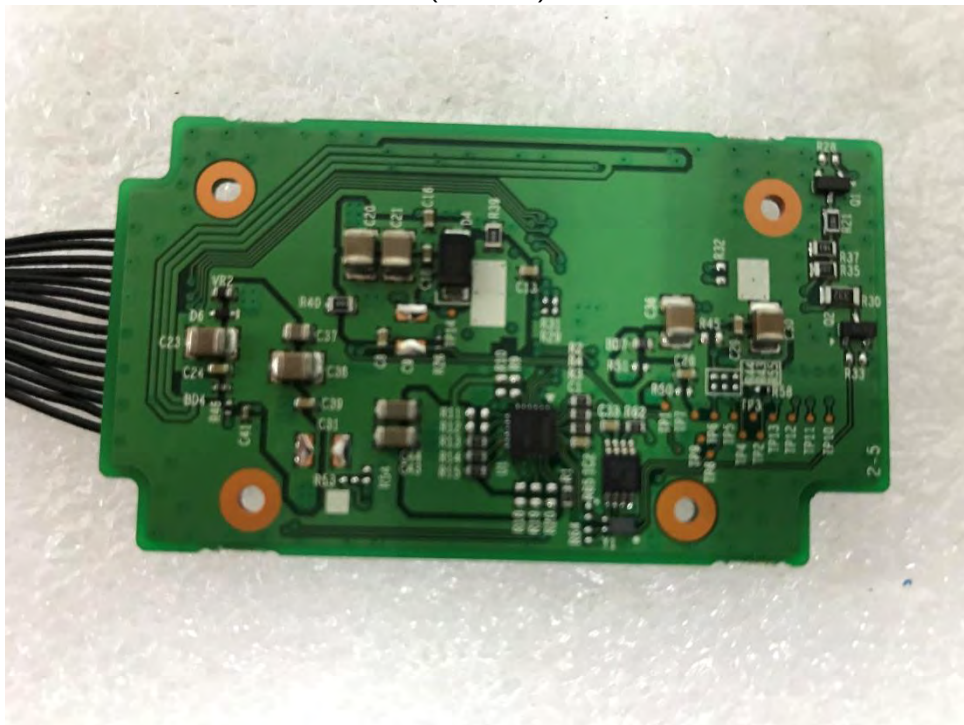
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EUT Internal View – Board 7

(Top)



(Bottom)



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EUT Internal View – Board 8

(Top)



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