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Report No.:

KES-E1-16T0684-R1

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EMC TEST REPORT For C-TICK

Test Report No. : KES-E1-16T0684-R1

Date of Issue : Feb. 24, 2023

Product name : NETWORK CAMERA

Model/Type No. : XNV-6080

Variant Model : -

Applicant : Hanwha Vision Co., Ltd

Applicant Address : 6, Pangyo-ro 319Beon-gil, Bundang-gu, Seongnam-si,
Gyeonggi-do, Republic of Korea

Manufacturer : 1. HANWHA VISION VIETNAM COMPANY LIMITED
2. D-TECH CO.,LTD.

Manufacturer Address : 1. Lot O-2, Que Vo Industrial Zone extended area,
Nam Son commune, Bac Ninh city, Bac Ninh province, Vietnam
2. 173-25, Saneop-ro, Gwonseon-gu, Suwon-si, Gyeonggi- do,
Korea (Suwon Industrial Complex)

Date of Receipt : Nov, 23, 2016

Test date : Dec, 16, 2016

Test Results : ☒ **In Compliance** ☐ **Not in Compliance**

Tested by

김세헌

Se Heon, Kim
EMC Test Engineer

Reviewed by

Dong-Hun, Jang
EMC Technical Manager

Tested by Young Suk, Song
(Retries person)
Proxy signature : Se Heon, Kim

This test report is not related to KS Q ISO/IEC 17025 and KOLAS.

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REPORT REVISION HISTORY

Date	Test Report No.	Revision History
Dec. 27, 2016	KES-E1-16T0684	Issued
Feb. 24, 2023	KES-E1-16T0684-R1	Change the Model/Type No., Applicant, Applicant Address, Manufacturer and Manufacturer Address at the request of the customer

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1.0 General Product Description

Main Specifications of EUT are:

Video	
Imaging Device	1/2.8" 2M CMOS
Total Pixels	1945(H) x 1109(V) 2.16M
Effective Pixels	1945(H) x 1097(V) 2.13M
Scanning System	Progressive Scan
Min. Illumination	Color : 0.03 lux(F1.4, 1./30sec) B/W : 0.003 Lux (F1.4, 1./30sec)
S / N Ratio	50dB
Video Out	CVBS : 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P), for installation USB : Micro USB type B, 1920 x 1080 for installation
Lens	
Focal Length (Zoom Ratio)	2.8~12mm(4.3x) motorized varifocal
Max. Aperture Ratio	1.4(Wide) ~ 3.6(Tele)
Angular Field of View	H: 119.5°, V: 62.8°, D: 142.1° H: 27.9°, V: 15.7°, D: 32.0°
Min. Object Distance	0.5m
Focus Control	Simple focus(Motorized V/F) / Manual, Remote control via network (Manual, Simple focus)
Lens Type	DC Auto Iris, P-iris
Mount Type	Board-in type
Pan / Tilt / Rotate	
Pan / Tilt / Rotate range	0° ~ 354° / 0° ~ 85°(TBD) / 0° ~ 355°
Operational	
IR LED	-
Viewable Length	-
Camera Title	Off / On (Displayed up to 85 characters) - W/W : English/Numeric/Special Characters - China : English/Numeric/Special/Chinese Characters - Common : Multi-line (Max 5), Color (Grey/Green/Red/Blue/Black/White), Transparency, Auto Scale by Resolution
Day & Night	Auto (ICR) / Color / B/W / External / Schedule
Backlight Compensation	Off / BLC / HLC(Masking/Dimming), WDR
Wide Dynamic Range	150dB
Contrast Enhancement	SSDR (Off / On)
Digital Noise Reduction	SSNR5 (2D+3D Noise Filter) (Off / On)
Digital Image Stabilization	Off / On
Defog	Auto(input from fog detection) / Manual / Off
Motion Detection	Off/ On(8ea, 8point Polygonal zones), Hand over
Privacy Masking	Off / On (32ea, polygonal zones) - Color : Grey/Green/Red/Blue/Black/White - Mosaic
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor((included Mercury & Sodium)
Contrast	level adjustment
LDC	On/Off (5 levels with Min/Max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (2 ~ 1/12,000sec)
Digital PTZ	24X, 'Digital PTZ(Preset, Group)
Flip / Mirror	Flip : On/Off Mirror : On/Off Hallway view : 90°/270°

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Video & Audio Analytics	Tampering, Loitering, Directional Detection, Defocus Detection, Fog Detection, Virtual Line, Enter/Exit, Appear / Disappear, Audio Detection, Motion Detection, Digital Auto Tracking, Sound Classification
Alarm I/O	Input 1ea / Output 1ea
Remote Control Interface	-
RS-485 Protocol	-
Alarm Triggers	Alarm Input, Motion Detection, Video & Audio Analytics, Network Disconnect
Alarm events	File upload via FTP, E-Mail Notification via E-Mail local storage(SD/SDHC/SDXC) or NAS recording at Event Triggers External output DPTZ preset
Audio In	Selectable (Mic IN/Line IN), Supply voltage: 2.5VDC(4mA), Input impedance: approx. 2K Ohm
Audio out	Line out, Max output level: 1 Vrms
Fan / Heater	N/A
Pixel Counter	Support
Network	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Form	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
Smart Codec	Manual Mode (area-based : 5EA)
WiseStream	Support
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 MJPEG : VBR
Streaming Capability	Multiple Streaming (Up to 10 Profiles)
Audio Compression Form	G.711 u-law /G.726 Selectable G.726 (ADPCM) 8KHz, G.711 8KHz G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps AAC-LC : 48Kbps at 8/16/32/48KHz
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)
Streaming Method	Unicast / Multicast
Max. User Access	20 users at Unicast Mode

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Edge Storage	SD/SDHC/SDXC 2slot (up to 512 GB) - Continuous recording(1'st slot to 2'nd slot) - Motion Images recorded in the SD/SDHC/SDXC memory card can be downloaded. NAS(Network Attached Storage) Local PC for Instant Recording
Application Programming	ONVIF Profile S/G SUNAPI(HTTP API) Open Platform
Webpage Language	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Danish, Portuguese, Czech, Polish, Turkish, Rumanian, Serbian, Dutch, Croatia, Hungary, Greek, Norsk, Finnish
Web Viewer	Supported OS: Windows 7, 8, 10, Mac OS X 10.10, 10.11, 10.12 Non-plugin Webviewer Supported Browser: Google Chrome 54, MS Edge 38, Mozilla Firefox 49, Apple Safari 9 (Mac OS X only) Plug-in Webviewer Supported Browser : MS Explore 11, Apple Safari 9 (Mac OS X only)
Central Management Software	SmartViewer, SSM
Environmental	
Operating Temperature / Humidity	-40°C ~ +55°C (-40°F ~ +131°F) / Less than 90% RH
Storage Temperature / Humidity	-50°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH
Ingress Protection	IP67, IP66, NEMA 4X
Vandal Resistance	IK10
Electrical	
Input Voltage / Current	24VAC ± 10%, 12VDC ± 10%, PoE(IEEE802.3af)
Power Consumption	TBD

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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 ☒ 24ac ☒ 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
NETWORK CAMERA	XNV-6080	-	HANWHA VISION VIETNAM COMPANY LIMITED	E.U.T

1.5 Support Equipments

Description	Model Number	Serial Number	Manufacturer	Remarks
POE Adapter	PD-3001GC/AC	RD9356082016964200	Power Dsine	-
Notebook	X56K	HN11N5151FJ0045W	HANSUNG	-
Notebook Adapter	A12-120P1A	F180271552011758	CHICONY POWER TECHNOLOGY CO.,LTD.	-
Phone	A1530	-	APPLE	-
MIC	CMK-303	-	CAMAC	1.7 m
Speaker	BR10000A CUVE	-	BEIJING EDIFIER HI- TECH GROUP.	1.6 m
Alarm	-	-	-	-



1.6 External I/O Cabling

- AC 24 V Mode

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
	7 Pin	MIC	3.5 mm	1.7	U
		Speaker	3.5 mm	1.6	U
		Alarm	3 pin	3.0	U
Notebook	Audio in	Phone	Audio out	1.7	U

- DC 12 V Mode

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
	7 Pin	MIC	3.5 mm	1.7	U
		Speaker	3.5 mm	1.6	U
		Alarm	3 pin	3.0	U
Notebook	Audio in	Phone	Audio out	1.7	U

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- PoE Mode

Start		END		Cable Spec.	
Description	I/O Port	Description	I/O Port	Length	Shield
NETWORK CAMERA (E.U.T)	RJ-45 (POE)	POE Adapter	RJ-45 (POE)	3.0	U
	7 Pin	MIC	3.5 mm	1.7	U
		Speaker	3.5 mm	1.6	U
		Alarm	3 pin	3.0	U
Notebook	Audio in	Phone	Audio out	1.7	U
	RJ-45 (DATA)	POE Adapter	RJ-45 (DATA)	3.0	U

* Unshielded=U, Shielded=S

1.7 EUT Operating Mode(s)

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

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

- Input power condition during the measurements was 24 v (ac) , 12 v (dc) , PoE.

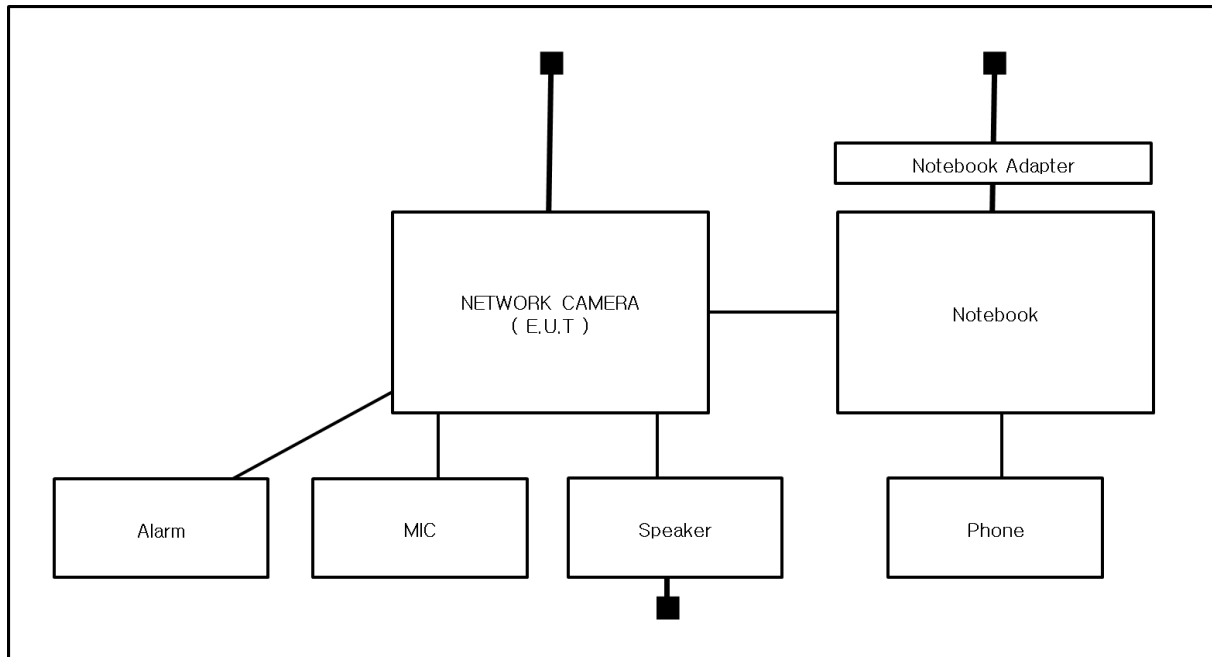
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1.8 Configuration

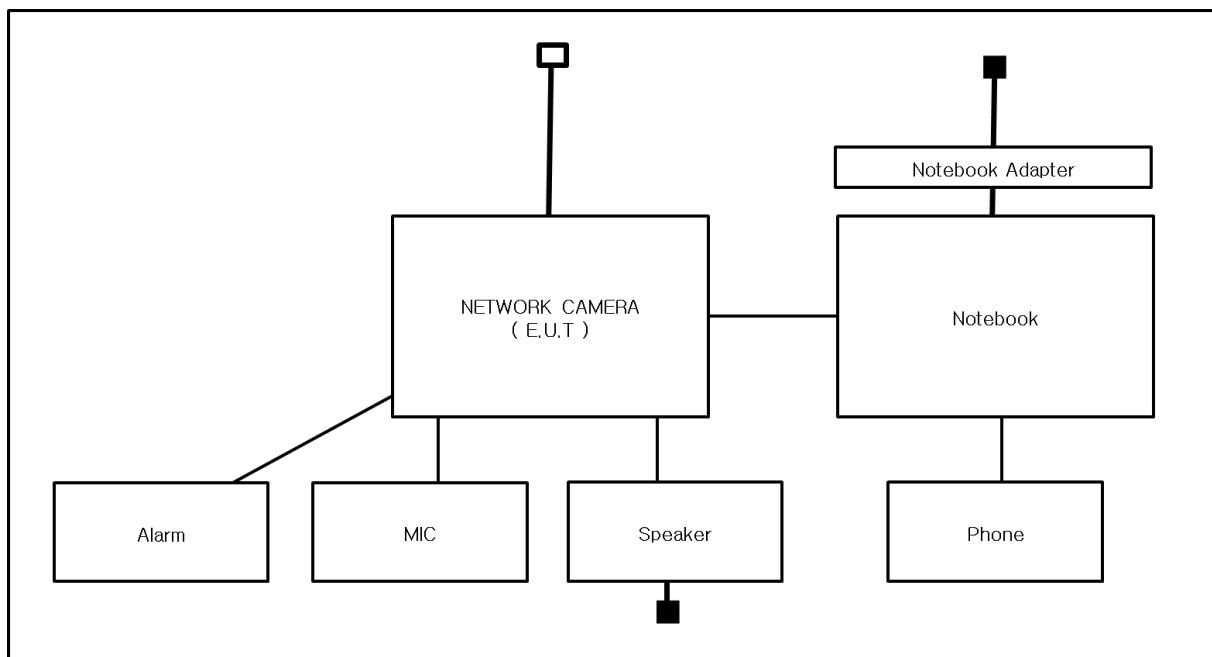
■ AC 24 V Main

☐ DC 12 V Main

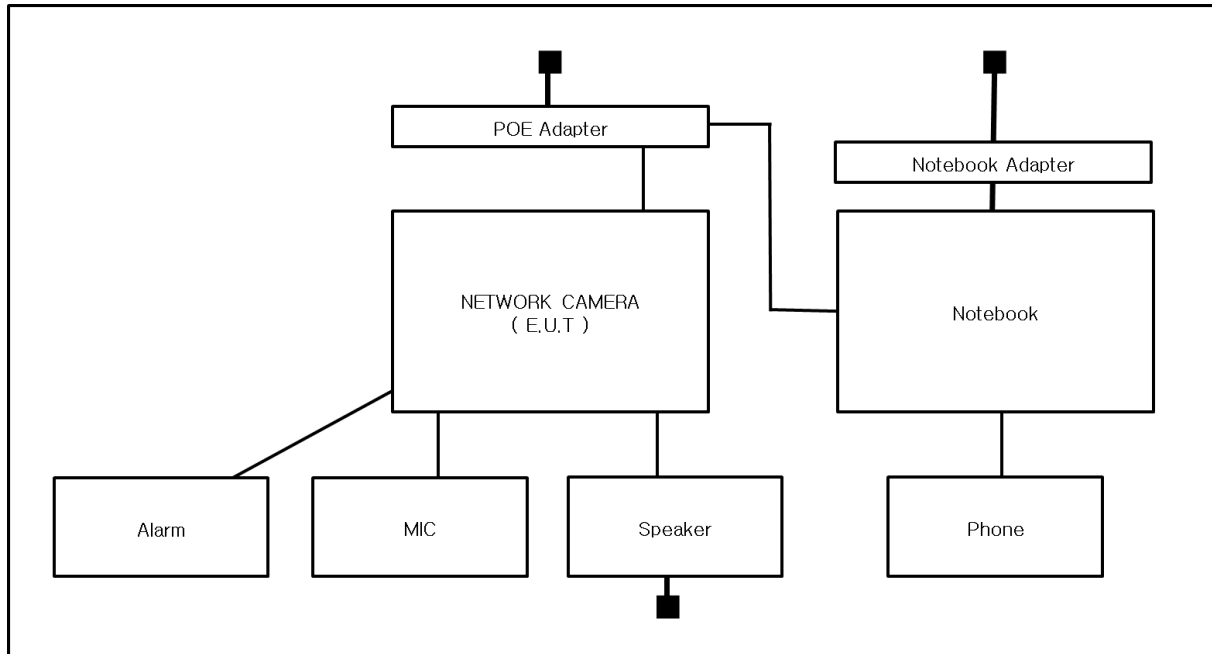
- AC 24 V Mode



- DC 12V Mode



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- PoE Mode

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, Yeoju-si, Gyeonggi-do, 12658, Korea, Republic of. The sites are constructed in conformance with the requirements of ANSI C63.4a-2017 and CISPR 16-1-4:2019

1.11 Laboratory Accreditations and Listings

Country	Agency	Scope of Accreditation	Logo
KOREA	RRA	EMI (3 m & 10 m Semi-Anechoic Chamber and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	 KR0100
International	KOLAS	EMI (3 m & 10 m Semi-Anechoic Chamber and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	 KT489
USA	FCC	3 m & 10 m Semi-Anechoic Chamber Conducted test site to perform FCC Part 15/18 measurements.	 KR0100
Canada	ISED	3 m & 10 m Semi-Anechoic Chamber and Conducted test site	 23298
JAPAN	VCCI	EMI (3 m & 10 m Semi-Anechoic Chamber and conducted test site)	 C-20136, T-20137, R-20181, G-20176
Europe	TÜV SÜD	EMI (3 m & 10 m Semi-Anechoic Chamber and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	 CARAT 001633 0004

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 55022:2010

☐ 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

Dec, 16, 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: 19,5 °C
Relative Humidity: 36,5 %

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

DC 12 V , PoE Mode N/A :
E.U.T power is 12 v (dc) power and PoE, limits are not specified

2.2 Conducted Emissions at Telecommunication Ports

Test Date

Dec, 16, 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: 19,5 °C

Relative Humidity: 36,5 %

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

RemarksSee Appendix A for test data.



2.3 Radiated Electric Field Emissions(Below 1 GHz)

Test Date

Dec, 16, 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	-	-	-	-

Test Conditions

Temperature: -1,0 °C
Relative Humidity: 38,0 %

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

Dec, 16, 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: 19,5 °C

Relative Humidity: 36,5 %

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.

APPENDIX A – TEST DATA

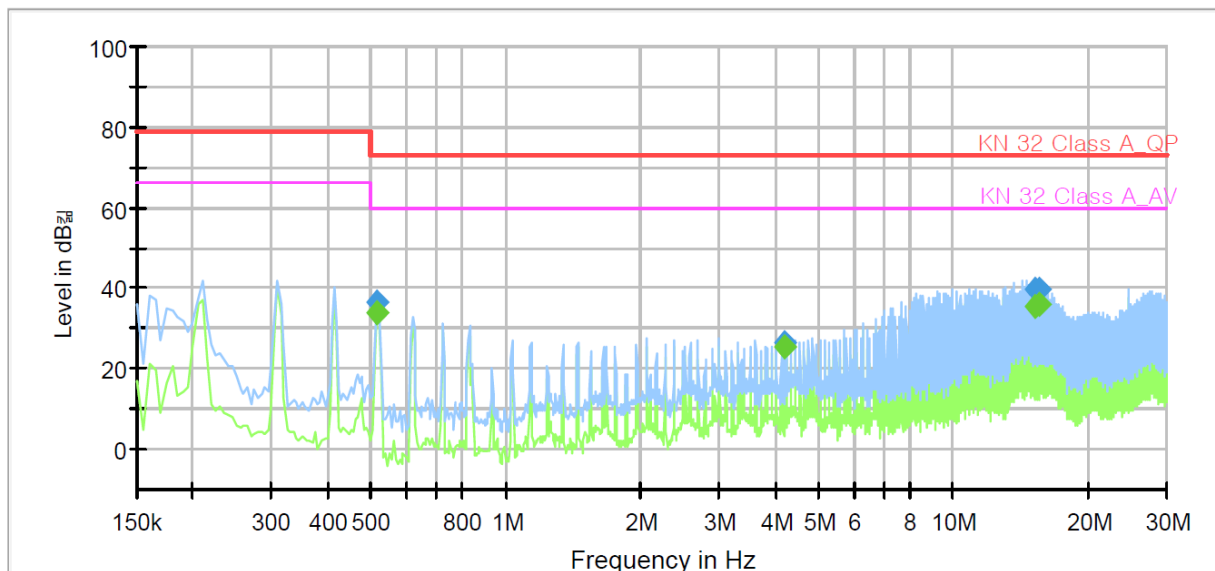
Conducted Emissions at Mains Power Ports

- AC 24 V Mode

[HOT]

Common Information

Test Description:	Conducted Emission
Model No.:	XNV-6080P
Mode	AC 24V
Operator Name:	KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.515000	---	33.74	60.00	26.26	1000.0	9.000	L1	9.8
0.515000	36.67	---	73.00	36.33	1000.0	9.000	L1	9.8
4.200000	---	25.52	60.00	34.48	1000.0	9.000	L1	10.1
4.200000	26.63	---	73.00	46.37	1000.0	9.000	L1	10.1
15.205000	---	35.54	60.00	24.46	1000.0	9.000	L1	10.1
15.205000	39.46	---	73.00	33.54	1000.0	9.000	L1	10.1
15.615000	---	35.95	60.00	24.05	1000.0	9.000	L1	10.1
15.615000	39.75	---	73.00	33.25	1000.0	9.000	L1	10.1

◆ Calculation

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

QuasiPeak / CAverage : The Final Value

Reading Value : Not shown in the table.

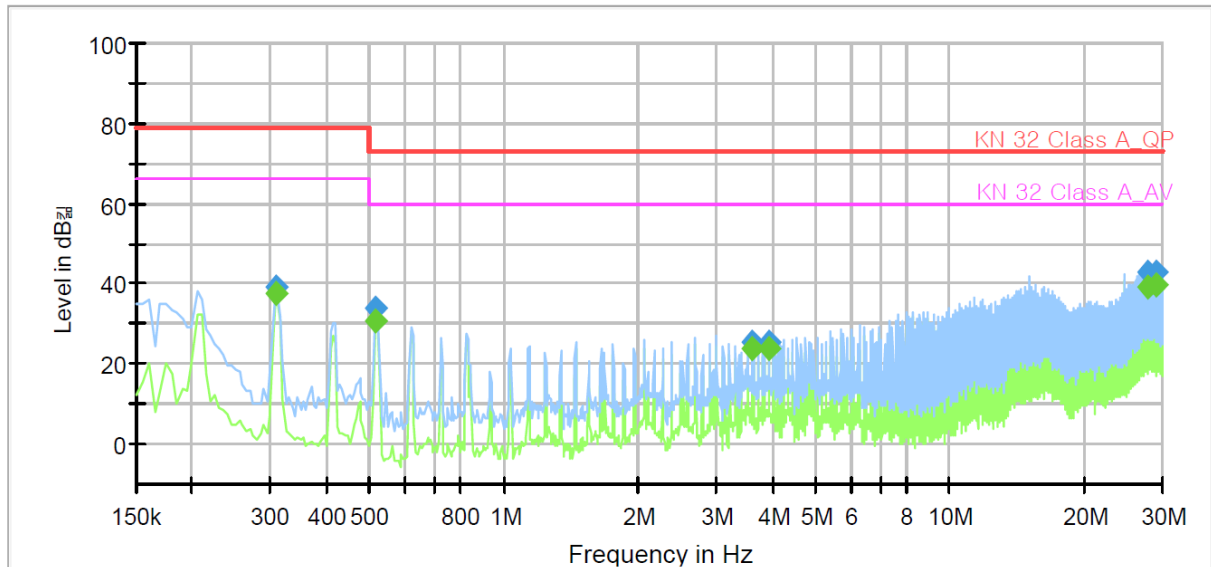
Corr. : Correction values (LISN FACTOR+ Cable Loss)

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 The authenticity of the test report, contact kes@kes.co.kr

[NEUTRAL]

Common Information

Test Description:	Conducted Emission
Model No.:	XNV-6080P
Mode	AC 24V
Operator Name:	KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.310000	---	37.79	66.00	28.21	1000.0	9.000	N	9.7
0.310000	39.05	---	79.00	39.95	1000.0	9.000	N	9.7
0.515000	---	30.78	60.00	29.22	1000.0	9.000	N	9.8
0.515000	33.66	---	73.00	39.34	1000.0	9.000	N	9.8
3.620000	---	24.06	60.00	35.94	1000.0	9.000	N	10.1
3.620000	25.41	---	73.00	47.59	1000.0	9.000	N	10.1
3.930000	---	23.89	60.00	36.11	1000.0	9.000	N	10.1
3.930000	25.60	---	73.00	47.40	1000.0	9.000	N	10.1
27.725000	---	39.42	60.00	20.58	1000.0	9.000	N	10.4
27.725000	42.70	---	73.00	30.30	1000.0	9.000	N	10.4
29.070000	---	39.85	60.00	20.15	1000.0	9.000	N	10.5
29.070000	42.77	---	73.00	30.23	1000.0	9.000	N	10.5

◆ 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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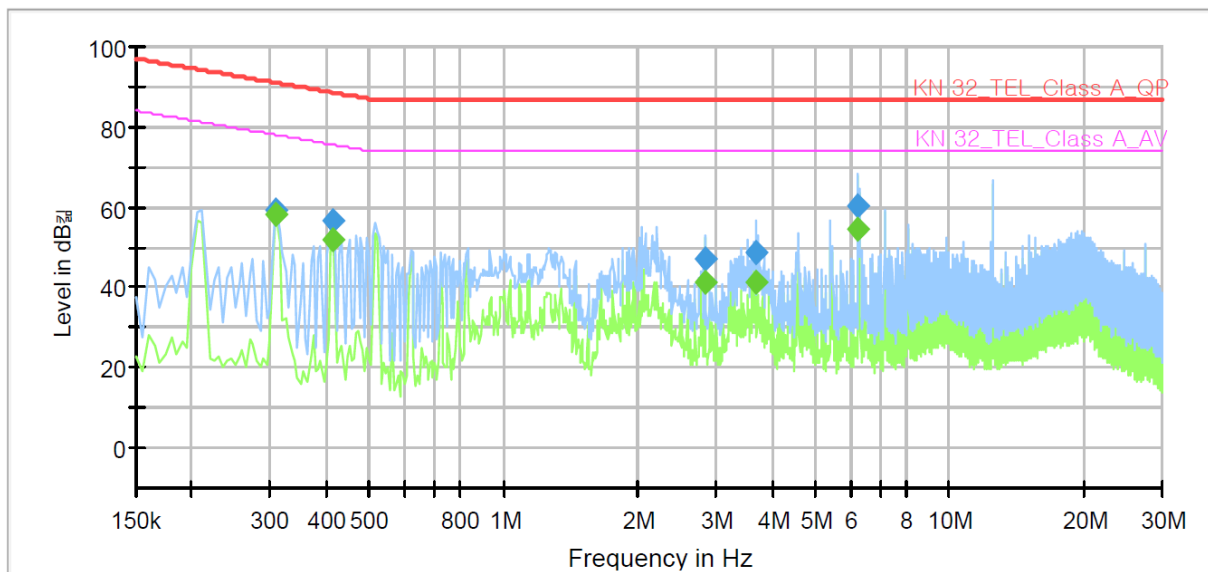
Conducted Emissions at Telecommunication Ports

- AC 24 V Mode

[10 Mbps]

Common Information

Test Description:	Telecommunication Emission
Model No.:	XNV-6080P
Mode	AC 24V_10M
Operator Name:	KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.310000	---	58.29	77.97	19.68	1000.0	9.000	Single Line	10.1
0.310000	59.36	---	90.97	31.61	1000.0	9.000	Single Line	10.1
0.415000	---	51.95	75.55	23.60	1000.0	9.000	Single Line	10.1
0.415000	56.69	---	88.55	31.86	1000.0	9.000	Single Line	10.1
2.825000	---	41.39	74.00	32.61	1000.0	9.000	Single Line	10.2
2.825000	47.16	---	87.00	39.84	1000.0	9.000	Single Line	10.2
3.690000	---	41.18	74.00	32.82	1000.0	9.000	Single Line	10.2
3.690000	48.90	---	87.00	38.10	1000.0	9.000	Single Line	10.2
6.250000	---	54.77	74.00	19.23	1000.0	9.000	Single Line	10.1
6.250000	60.52	---	87.00	26.48	1000.0	9.000	Single Line	10.1

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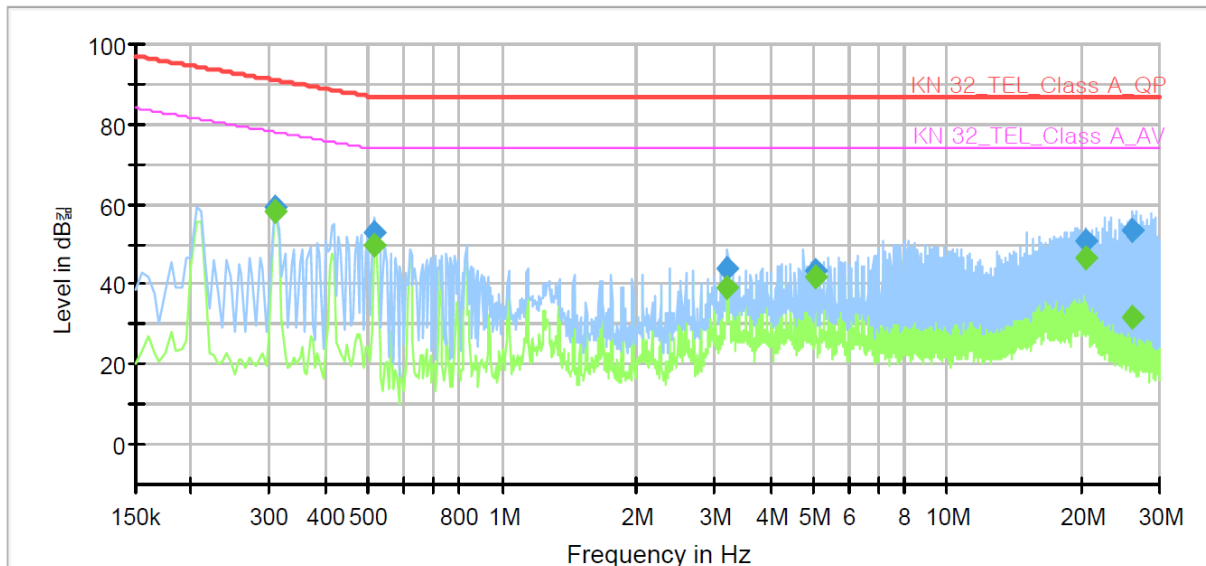
The results shown in this test report refer only to the sample(s) tested unless otherwise stated.

The authenticity of the test report, contact kes@kes.co.kr

[100 Mbps]

Common Information

Test Description:	Telecommunication Emission
Model No.:	XNV-6080P
Mode	AC 24V_100M
Operator Name:	KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.310000	---	58.15	77.97	19.82	1000.0	9.000	Single Line	9.6
0.310000	59.20	---	90.97	31.77	1000.0	9.000	Single Line	9.6
0.515000	---	49.71	74.00	24.29	1000.0	9.000	Single Line	9.6
0.515000	53.06	---	87.00	33.94	1000.0	9.000	Single Line	9.6
3.210000	---	39.20	74.00	34.80	1000.0	9.000	Single Line	9.7
3.210000	43.90	---	87.00	43.10	1000.0	9.000	Single Line	9.7
5.070000	---	41.80	74.00	32.20	1000.0	9.000	Single Line	9.6
5.070000	43.55	---	87.00	43.45	1000.0	9.000	Single Line	9.6
20.385000	---	46.61	74.00	27.39	1000.0	9.000	Single Line	9.6
20.385000	50.73	---	87.00	36.27	1000.0	9.000	Single Line	9.6
25.950000	---	31.74	74.00	42.26	1000.0	9.000	Single Line	9.5
25.950000	53.55	---	87.00	33.45	1000.0	9.000	Single Line	9.5

◆ Calculation

$$\text{QuasiPeak [dBuV]} / \text{CAverage [dBuV]} = \text{Reading Value [dBuV]} + \text{Corr. [dB]}$$

QuasiPeak / CAverage : The Final Value

Reading Value : Not shown in the table.

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

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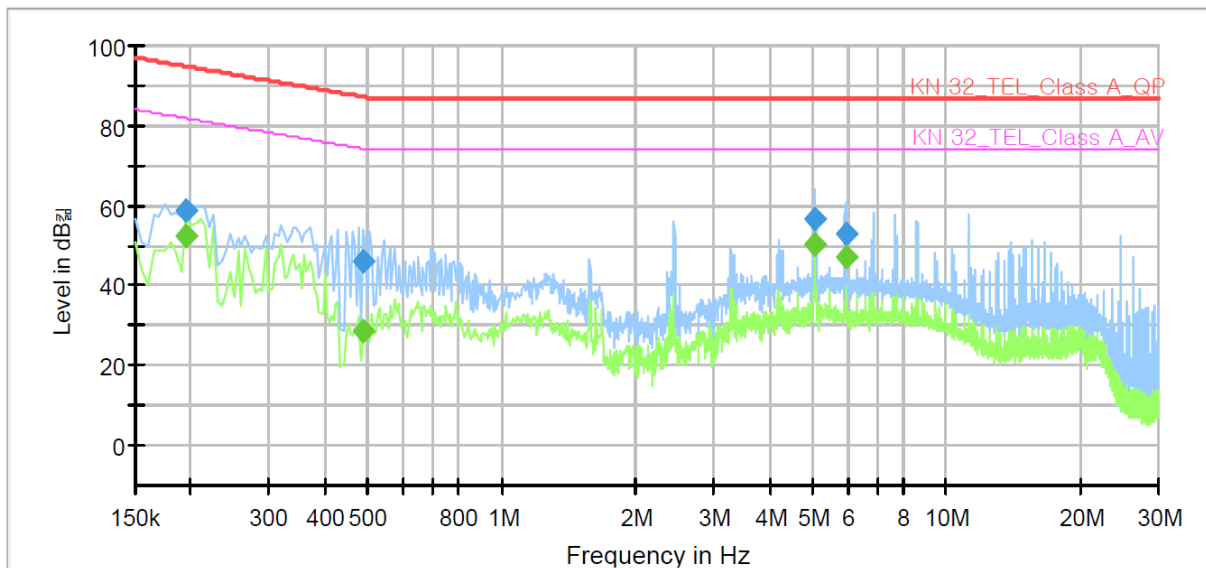
The authenticity of the test report, contact kes@kes.co.kr

- DC 12 V Mode

[10 Mbps]

Common Information

Test Description:	Telecommunication Emission
Model No.:	XNV-6080P
Mode	DC 12V_10M
Operator Name:	KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.195000	---	52.29	81.82	29.53	1000.0	9.000	Single Line	10.1
0.195000	58.90	---	94.82	35.92	1000.0	9.000	Single Line	10.1
0.490000	---	28.50	74.17	45.67	1000.0	9.000	Single Line	10.1
0.490000	45.88	---	87.17	41.29	1000.0	9.000	Single Line	10.1
5.055000	---	50.31	74.00	23.69	1000.0	9.000	Single Line	10.1
5.055000	56.40	---	87.00	30.60	1000.0	9.000	Single Line	10.1
5.925000	---	47.19	74.00	26.81	1000.0	9.000	Single Line	10.1
5.925000	52.74	---	87.00	34.26	1000.0	9.000	Single Line	10.1

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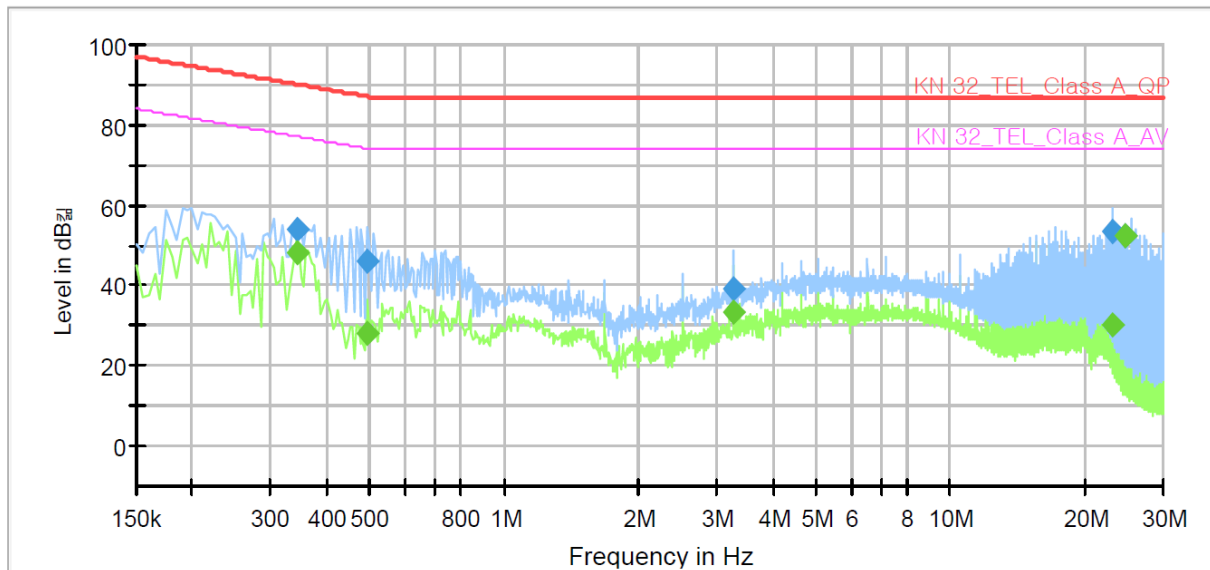
The results shown in this test report refer only to the sample(s) tested unless otherwise stated.

The authenticity of the test report, contact kes@kes.co.kr

[100 Mbps]

Common Information

Test Description:	Telecommunication Emission
Model No.:	XNV-6080P
Mode	DC 12V_100M
Operator Name:	KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.345000	---	48.16	77.08	28.92	1000.0	9.000	Single Line	9.6
0.345000	54.11	---	90.08	35.97	1000.0	9.000	Single Line	9.6
0.495000	---	28.09	74.08	45.99	1000.0	9.000	Single Line	9.6
0.495000	45.84	---	87.08	41.24	1000.0	9.000	Single Line	9.6
3.270000	---	33.12	74.00	40.88	1000.0	9.000	Single Line	9.7
3.270000	38.94	---	87.00	48.06	1000.0	9.000	Single Line	9.7
23.130000	---	30.17	74.00	43.83	1000.0	9.000	Single Line	9.5
23.130000	53.67	---	87.00	33.33	1000.0	9.000	Single Line	9.5
24.575000	---	52.31	74.00	21.69	1000.0	9.000	Single Line	9.5
24.575000	52.56	---	87.00	34.44	1000.0	9.000	Single Line	9.5

◆ 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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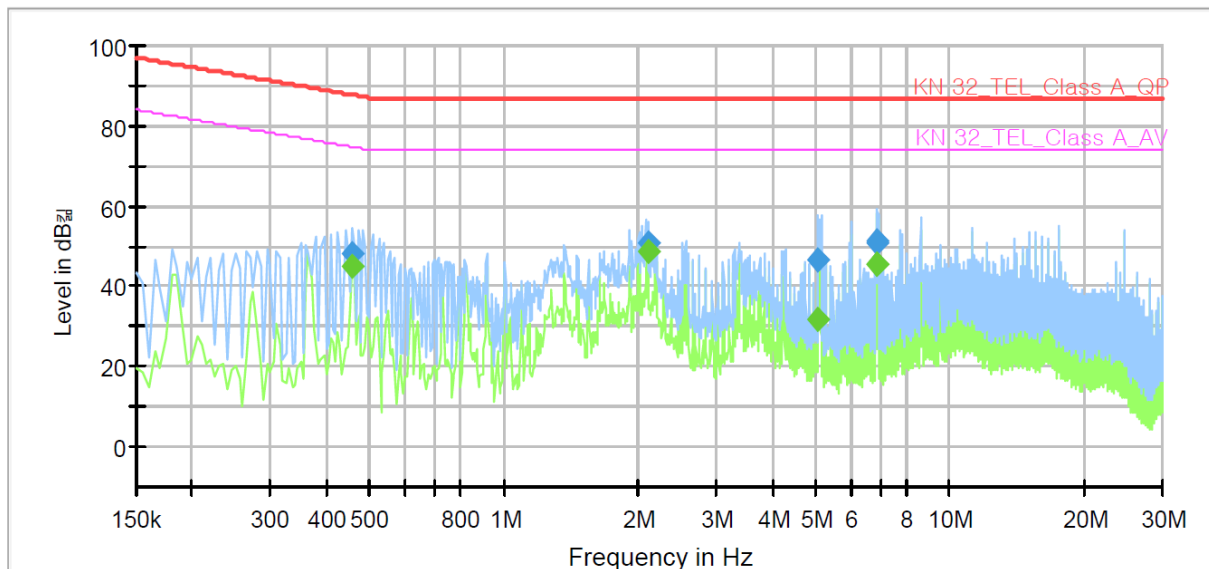
The authenticity of the test report, contact kes@kes.co.kr

- PoE Mode

[10 Mbps]

Common Information

Test Description:	Telecommunication Emission
Model No.:	XNV-6080P
Mode	POE_10M
Operator Name:	KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.455000	---	45.00	74.78	29.78	1000.0	9.000	Single Line	10.1
0.455000	48.06	---	87.78	39.72	1000.0	9.000	Single Line	10.1
2.100000	---	48.44	74.00	25.56	1000.0	9.000	Single Line	10.2
2.100000	50.86	---	87.00	36.14	1000.0	9.000	Single Line	10.2
5.065000	---	31.98	74.00	42.02	1000.0	9.000	Single Line	10.1
5.065000	46.40	---	87.00	40.60	1000.0	9.000	Single Line	10.1
6.850000	---	45.29	74.00	28.71	1000.0	9.000	Single Line	10.0
6.850000	50.89	---	87.00	36.11	1000.0	9.000	Single Line	10.0
6.900000	---	45.57	74.00	28.43	1000.0	9.000	Single Line	10.0
6.900000	51.52	---	87.00	35.48	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.

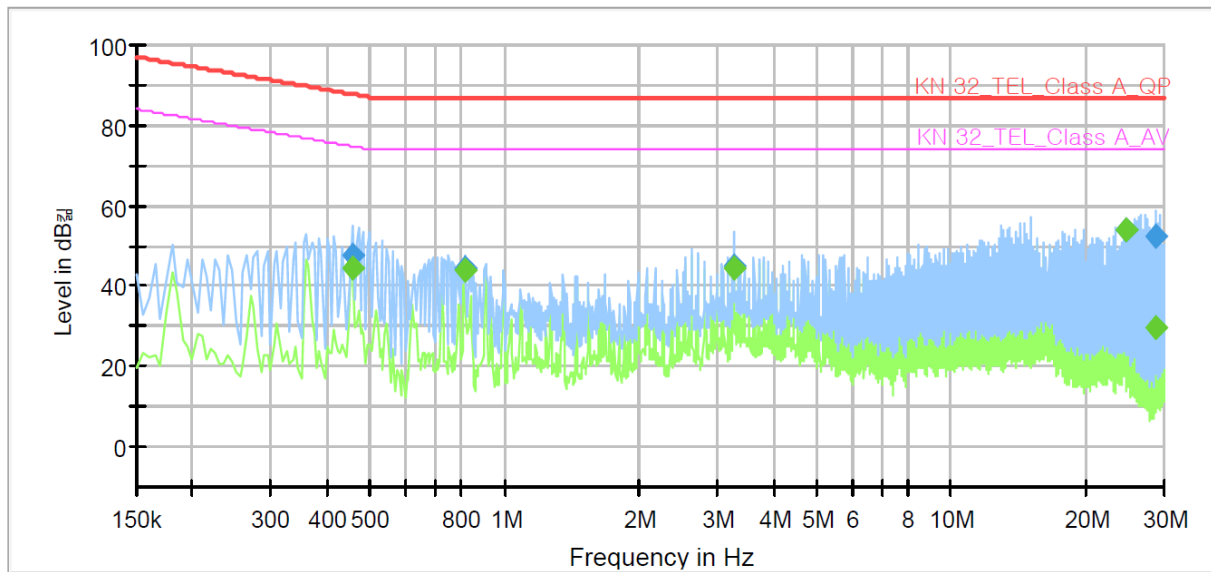
Corr. : Correction values (ISN FACTOR+ Cable Loss)

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[100 Mbps]

Common Information

Test Description: Telecommunication Emission
Model No.: XNV-6080P
Mode: POE_100M
Operator Name: KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.455000	---	44.53	74.78	30.25	1000.0	9.000	Single Line	9.6
0.455000	47.63	---	87.78	40.15	1000.0	9.000	Single Line	9.6
0.815000	---	43.90	74.00	30.10	1000.0	9.000	Single Line	9.7
0.815000	44.48	---	87.00	42.52	1000.0	9.000	Single Line	9.7
3.260000	---	44.66	74.00	29.34	1000.0	9.000	Single Line	9.7
3.260000	45.16	---	87.00	41.84	1000.0	9.000	Single Line	9.7
24.575000	---	53.81	74.00	20.19	1000.0	9.000	Single Line	9.5
24.575000	54.07	---	87.00	32.93	1000.0	9.000	Single Line	9.5
28.685000	---	29.56	74.00	44.44	1000.0	9.000	Single Line	9.5
28.685000	52.19	---	87.00	34.81	1000.0	9.000	Single Line	9.5

◆ 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)

- AC 24 V Mode

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]
121.95	18.79	H	1.06	9.49	3.19	31.47	40.00	8.53
148.28	12.22	V	2.36	8.14	3.55	23.91	40.00	16.09
172.50	13.58	H	1.25	9.09	3.83	26.50	40.00	13.50
221.96	13.95	V	2.01	11.79	4.38	30.12	40.00	9.88
334.45	15.37	V	3.05	14.18	5.49	35.04	47.00	11.96
334.50	11.58	H	1.58	14.18	5.49	31.25	47.00	15.75
425.63	12.30	H	1.09	16.06	6.49	34.85	47.00	12.15
425.70	13.28	V	2.60	16.06	6.49	35.83	47.00	11.17

* 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

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Report No.:
KES-E1-16T0684-R1
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- DC 12 V Mode

Frequency	Amplitude	ANT	ANT. Height	Correction Factor		Corrected Amplitude	Applicable Limit	Margin
[MHz]	[dBμV]	Polar. (H/V)	[m]	ANT. [dB/m]	Cable [dB]	[dBμV/m]	[dBμV/m]	[dB]
172.42	10.20	H	1.25	9.09	3.83	23.12	40.00	16.88
172.51	11.24	V	2.30	9.09	3.83	24.16	40.00	15.84
270.41	11.63	V	3.01	12.81	4.90	29.34	47.00	17.66
270.53	11.36	H	1.58	12.81	4.90	29.07	47.00	17.93
334.13	14.77	V	2.00	14.17	5.48	34.42	47.00	12.58
360.69	10.34	V	1.95	14.79	5.75	30.88	47.00	16.12
375.33	12.05	H	1.33	15.13	5.91	33.09	47.00	13.91
450.86	10.36	H	2.01	16.41	6.80	33.57	47.00	13.43

* H : Horizontal, V : Vertical

◆ Calculation

Corrected Amplitude [dBμV] = Amplitude[dBμV] + Correction Factor [dB]

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

Correction Factor : ANT FACTOR + Cable loss

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Report No.:
KES-E1-16T0684-R1
Page (29) of (57)

- PoE Mode

Frequency	Amplitude	ANT	ANT. Height	Correction Factor		Corrected Amplitude	Applicable Limit	Margin
[MHz]	[dBμV]	Polar. (H/V)	[m]	ANT. [dB/m]	Cable [dB]	[dBμV/m]	[dBμV/m]	[dB]
172.46	10.39	H	2.31	9.09	3.83	23.31	40.00	16.69
172.50	10.20	V	1.58	9.09	3.83	23.12	40.00	16.88
222.04	9.37	V	2.33	11.79	4.38	25.54	40.00	14.46
225.92	8.95	H	1.95	11.88	4.43	25.26	40.00	14.74
359.99	12.10	V	3.01	14.77	5.75	32.62	47.00	14.38
375.33	9.30	H	2.57	15.13	5.91	30.34	47.00	16.66
454.81	8.21	V	1.66	16.47	6.82	31.50	47.00	15.50
455.77	8.38	H	1.97	16.48	6.82	31.68	47.00	15.32

* H : Horizontal, V : Vertical

◆ Calculation

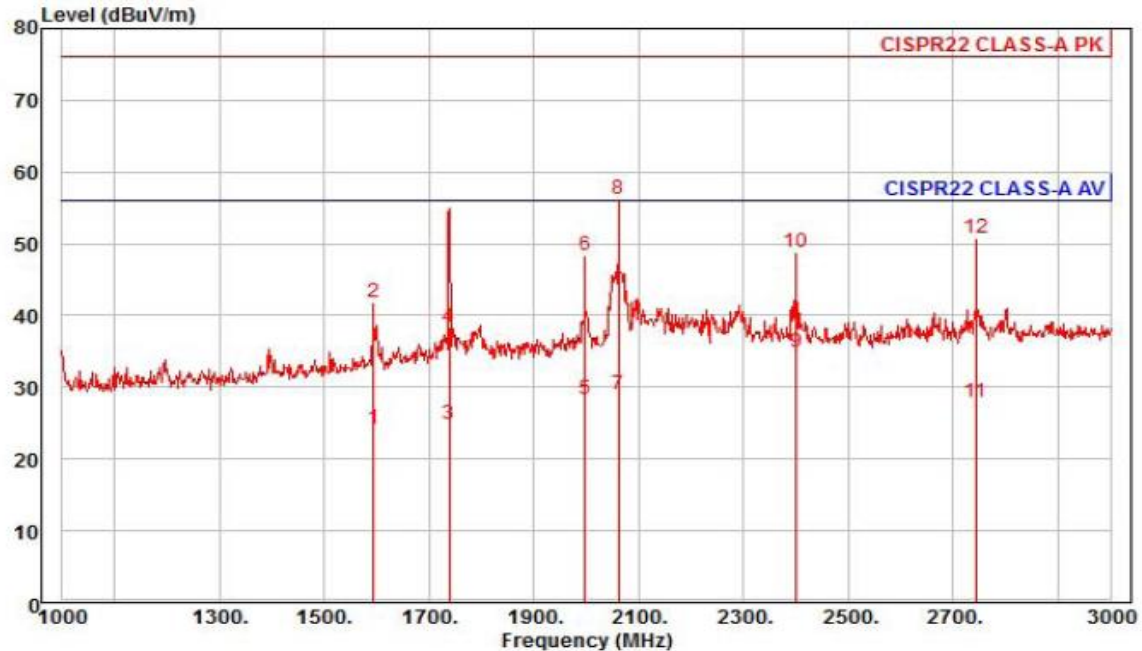
Corrected Amplitude [dBμV] = Amplitude[dBμV] + Correction Factor [dB]

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

Correction Factor : ANT FACTOR + Cable loss

Radiated Electric Field Emissions(Above 1 GHz)

- AC 24 V Mode



Site : chamber
 Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) horizontal
 : RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
 Project :
 Model : XNV-6080P
 Mode : AC 24V
 Memo : 1 ~ 3 GHz

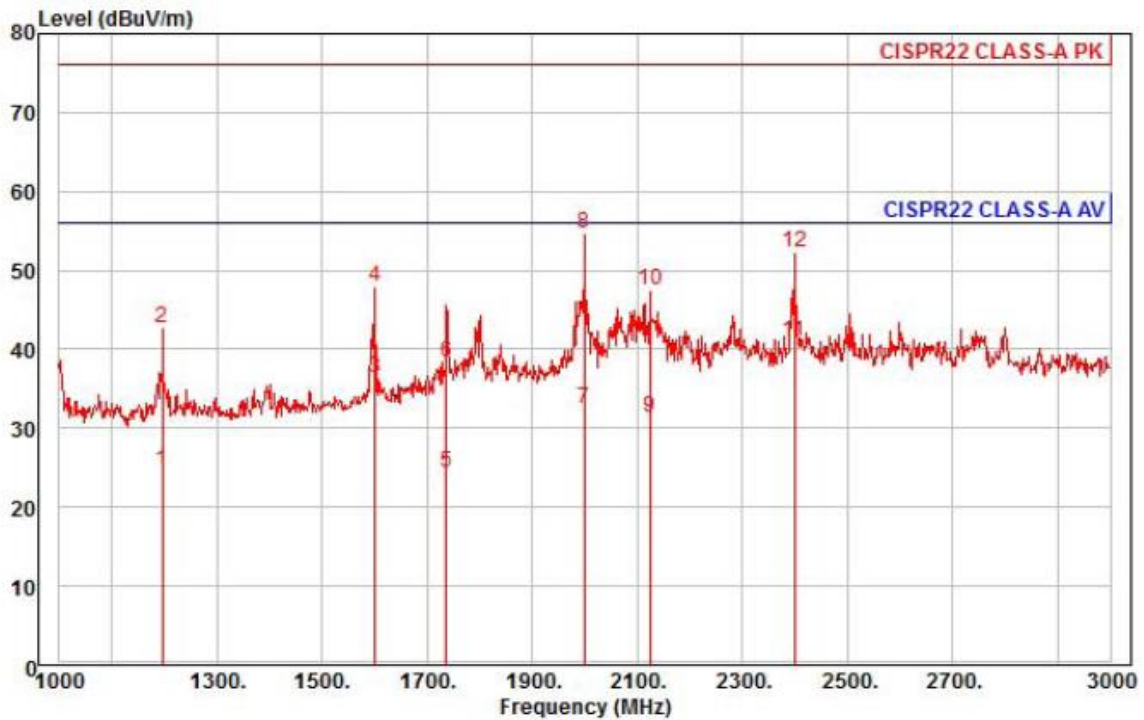
	Freq	Read Level	Ant Factor	Cable Loss	Preamp Factor	TPos	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	1594.00	28.95	26.27	8.29	39.22	214	56.00	-31.71	horizontal	Average
2	1594.00	46.58	26.27	8.29	39.22	214	76.00	-34.08	horizontal	Peak
3	1738.00	28.66	26.84	8.67	39.29	83	56.00	-31.12	horizontal	Average
4	1738.00	42.08	26.84	8.67	39.29	83	76.00	-37.70	horizontal	Peak
5	1998.00	30.51	27.87	9.33	39.41	83	56.00	-27.70	horizontal	Average
6	1998.00	50.51	27.87	9.33	39.41	83	76.00	-27.70	horizontal	Peak
7	2062.00	30.88	28.03	9.48	39.41	69	56.00	-27.02	horizontal	Average
8 pp	2062.00	58.11	28.03	9.48	39.41	69	76.00	-19.79	horizontal	Peak
9 av	2400.00	35.18	28.86	10.32	39.42	49	56.00	-21.06	horizontal	Average
10	2400.00	48.98	28.86	10.32	39.42	49	76.00	-27.26	horizontal	Peak
11	2744.00	26.90	29.70	11.10	39.82	64	56.00	-28.12	horizontal	Average
12	2744.00	49.75	29.70	11.10	39.82	64	76.00	-25.27	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 : XNV-6080P
Mode : AC 24V
Memo : 1 ~ 3 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	1196.00	32.45	24.69	7.13	39.62	78	56.00	-31.35	vertical	Average
2	1196.00	50.60	24.69	7.13	39.62	78	76.00	-33.20	vertical	Peak
3	1600.00	40.96	26.29	8.31	39.22	360	56.00	-19.66	vertical	Average
4	1600.00	52.49	26.29	8.31	39.22	360	76.00	-28.13	vertical	Peak
5	1736.00	28.23	26.83	8.66	39.29	262	56.00	-31.57	vertical	Average
6	1736.00	42.08	26.83	8.66	39.29	262	76.00	-37.72	vertical	Peak
7	2000.00	34.69	27.88	9.34	39.41	160	56.00	-23.50	vertical	Average
8 pk	2000.00	57.00	27.88	9.34	39.41	160	76.00	-21.19	vertical	Peak
9	2124.00	32.90	28.18	9.62	39.41	166	56.00	-24.71	vertical	Average
10	2124.00	49.05	28.18	9.62	39.41	166	76.00	-28.56	vertical	Peak
11 pp	2400.00	41.14	28.86	10.32	39.42	44	56.00	-15.10	vertical	Average
12	2400.00	52.64	28.86	10.32	39.42	44	76.00	-23.60	vertical	Peak

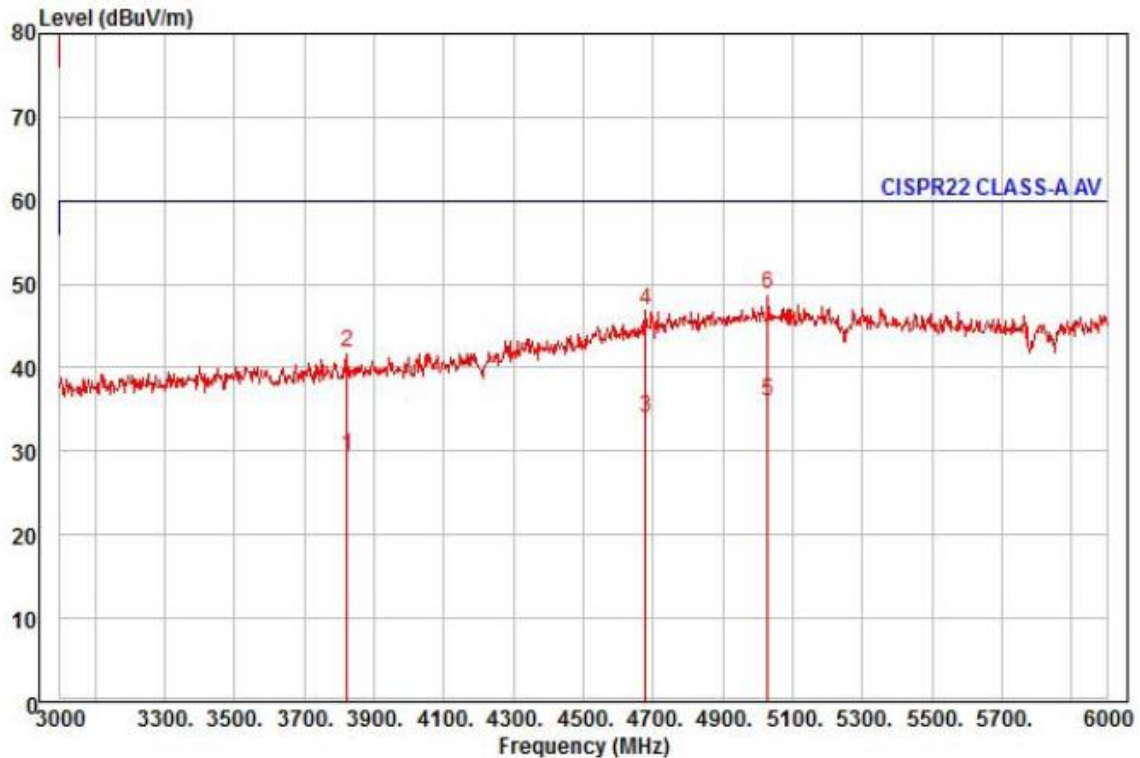
◆ Calculation

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,

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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 : XNV-6080P
 Mode : AC 24V
 Memo : 3 ~ 6 GHz

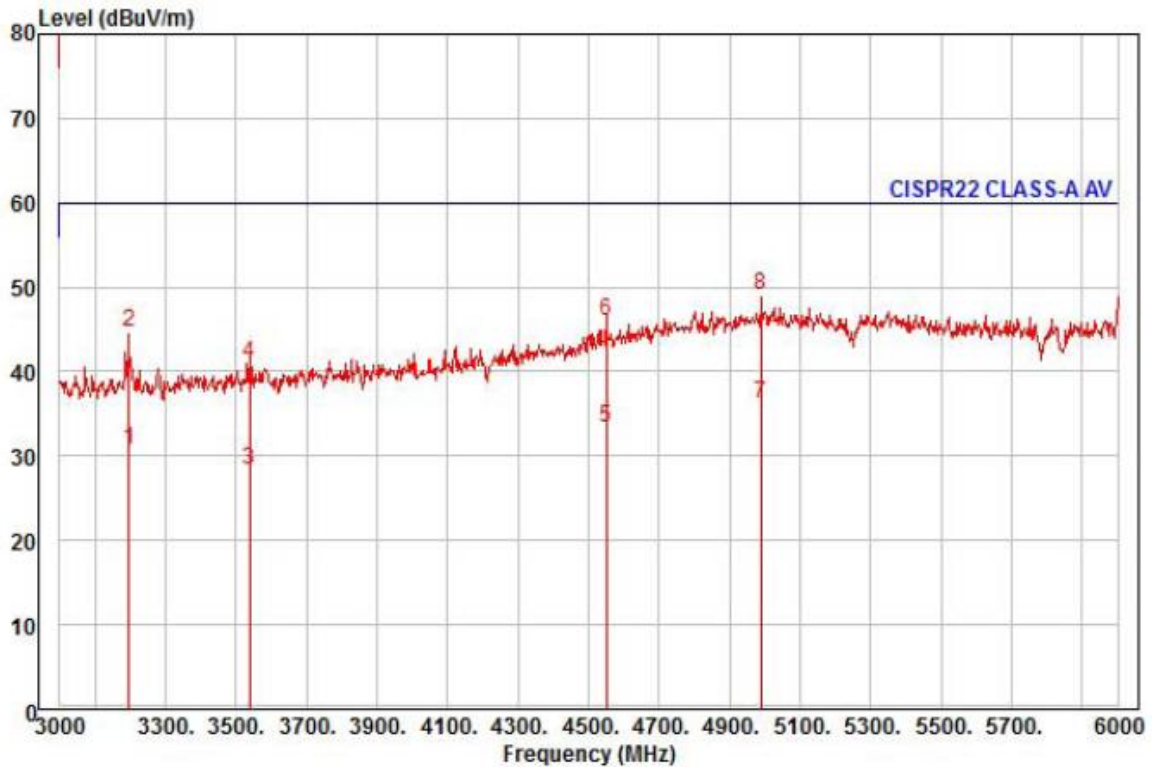
	Freq	Read Level	Ant Factor	Cable Loss	Preamp Factor	TPos	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	3822.00	25.16	31.71	13.22	40.76	26	60.00	-30.67	horizontal	Average
2	3822.00	37.72	31.71	13.22	40.76	26	80.00	-38.11	horizontal	Peak
3	4680.00	23.98	35.89	14.83	40.59	340	60.00	-25.89	horizontal	Average
4	4680.00	36.64	35.89	14.83	40.59	340	80.00	-33.23	horizontal	Peak
5 pp	5028.00	23.23	37.66	15.37	40.32	309	60.00	-24.06	horizontal	Average
6 pk	5028.00	36.17	37.66	15.37	40.32	309	80.00	-31.12	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 : XNV-6080P
 Mode : AC 24V
 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	3198.00	28.45	30.66	12.05	40.41	342	60.00	-29.25	vertical	Average
2	3198.00	42.42	30.66	12.05	40.41	342	80.00	-35.28	vertical	Peak
3	3540.00	25.21	31.24	12.70	40.87	182	60.00	-31.72	vertical	Average
4	3540.00	38.02	31.24	12.70	40.87	182	80.00	-38.91	vertical	Peak
5	4551.00	24.33	35.16	14.56	40.72	190	60.00	-26.67	vertical	Average
6	4551.00	37.02	35.16	14.56	40.72	190	80.00	-33.98	vertical	Peak
7 pp	4989.00	23.41	37.66	15.30	40.28	162	60.00	-23.91	vertical	Average
8 pk	4989.00	36.42	37.66	15.30	40.28	162	80.00	-30.90	vertical	Peak

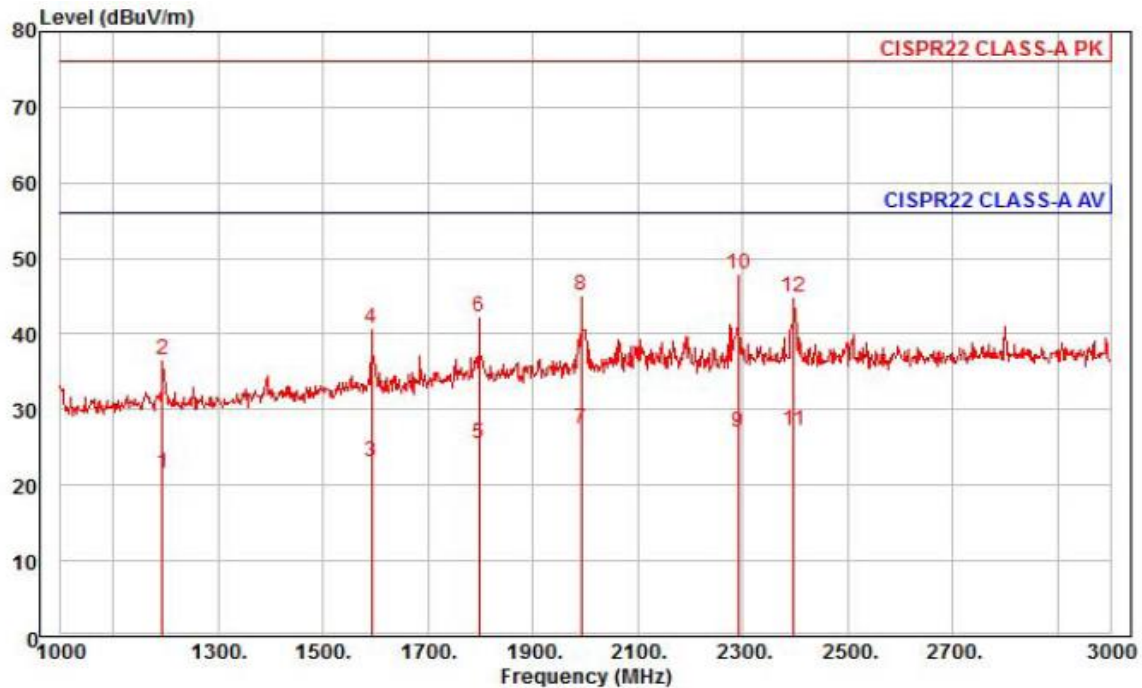
◆ Calculation

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,

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Cable Loss : Cable loss, Preamp Factor : Preamp Factor
- DC 12V Mode



Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : XNV-6080P
Mode : DC 12V
Memo : 1 ~ 3 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	1194.00	29.49	24.68	7.12	39.62	108	56.00	-34.33	horizontal	Average
2	1194.00	44.45	24.68	7.12	39.62	108	76.00	-39.37	horizontal	Peak
3	1592.00	27.83	26.26	8.29	39.22	99	56.00	-32.84	horizontal	Average
4	1592.00	45.42	26.26	8.29	39.22	99	76.00	-35.25	horizontal	Peak
5	1798.00	28.99	27.08	8.82	39.32	31	56.00	-30.43	horizontal	Average
6	1798.00	45.71	27.08	8.82	39.32	31	76.00	-33.71	horizontal	Peak
7 av	1992.00	29.67	27.85	9.32	39.41	166	56.00	-28.57	horizontal	Average
8	1992.00	47.33	27.85	9.32	39.41	166	76.00	-30.91	horizontal	Peak
9	2292.00	27.87	28.60	10.04	39.42	353	56.00	-28.91	horizontal	Average
10 pp	2292.00	48.79	28.60	10.04	39.42	353	76.00	-27.99	horizontal	Peak
11	2398.00	27.51	28.86	10.32	39.42	45	56.00	-28.73	horizontal	Average
12	2398.00	45.23	28.86	10.32	39.42	45	76.00	-31.01	horizontal	Peak

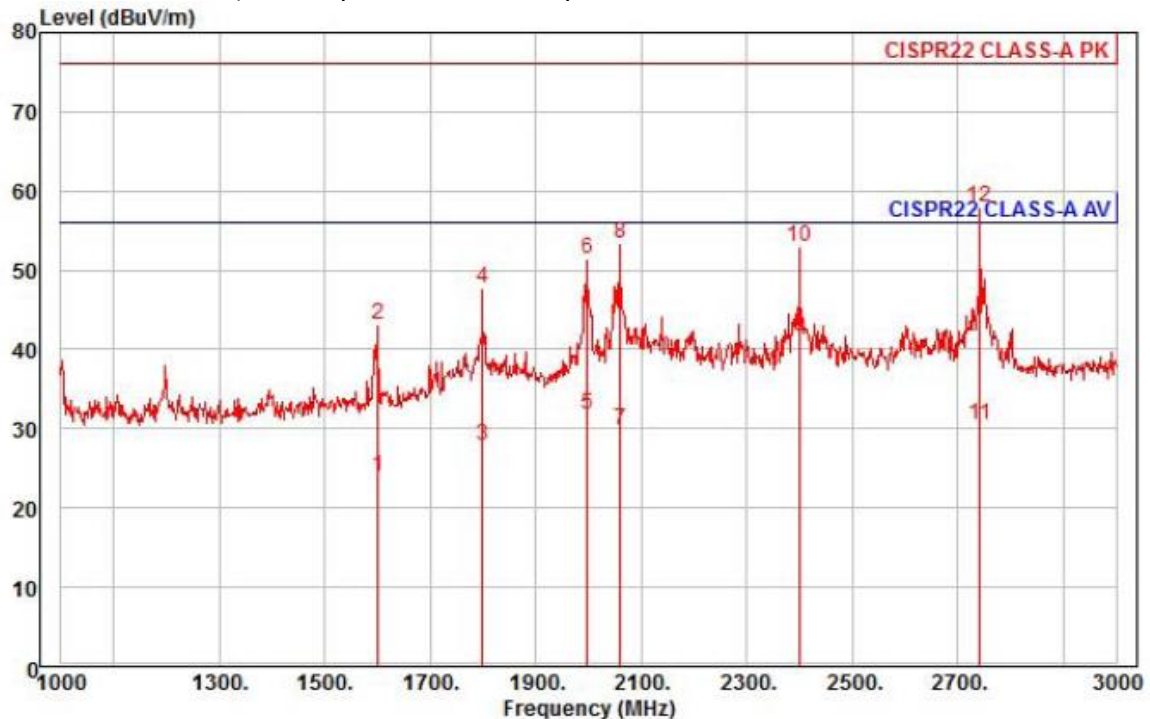
◆ Calculation

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,

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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 : XNV-6080P
Mode : DC 12V
Memo : 1 ~ 3 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	1600.00	28.52	26.29	8.31	39.22	283	56.00	-32.10	vertical	Average
2	1600.00	47.85	26.29	8.31	39.22	283	76.00	-32.77	vertical	Peak
3	1800.00	31.25	27.09	8.83	39.32	106	56.00	-28.15	vertical	Average
4	1800.00	51.22	27.09	8.83	39.32	106	76.00	-28.18	vertical	Peak
5	1998.00	34.06	27.87	9.33	39.41	226	56.00	-24.15	vertical	Average
6	1998.00	53.62	27.87	9.33	39.41	226	76.00	-24.59	vertical	Peak
7	2060.00	31.80	28.03	9.48	39.41	145	56.00	-26.10	vertical	Average
8	2060.00	55.37	28.03	9.48	39.41	145	76.00	-22.53	vertical	Peak
9 pp	2400.00	41.90	28.86	10.32	39.42	331	56.00	-14.34	vertical	Average
10	2400.00	53.22	28.86	10.32	39.42	331	76.00	-23.02	vertical	Peak
11	2742.00	29.50	29.70	11.09	39.81	98	56.00	-25.52	vertical	Average
12 pk	2742.00	56.99	29.70	11.09	39.81	98	76.00	-18.03	vertical	Peak

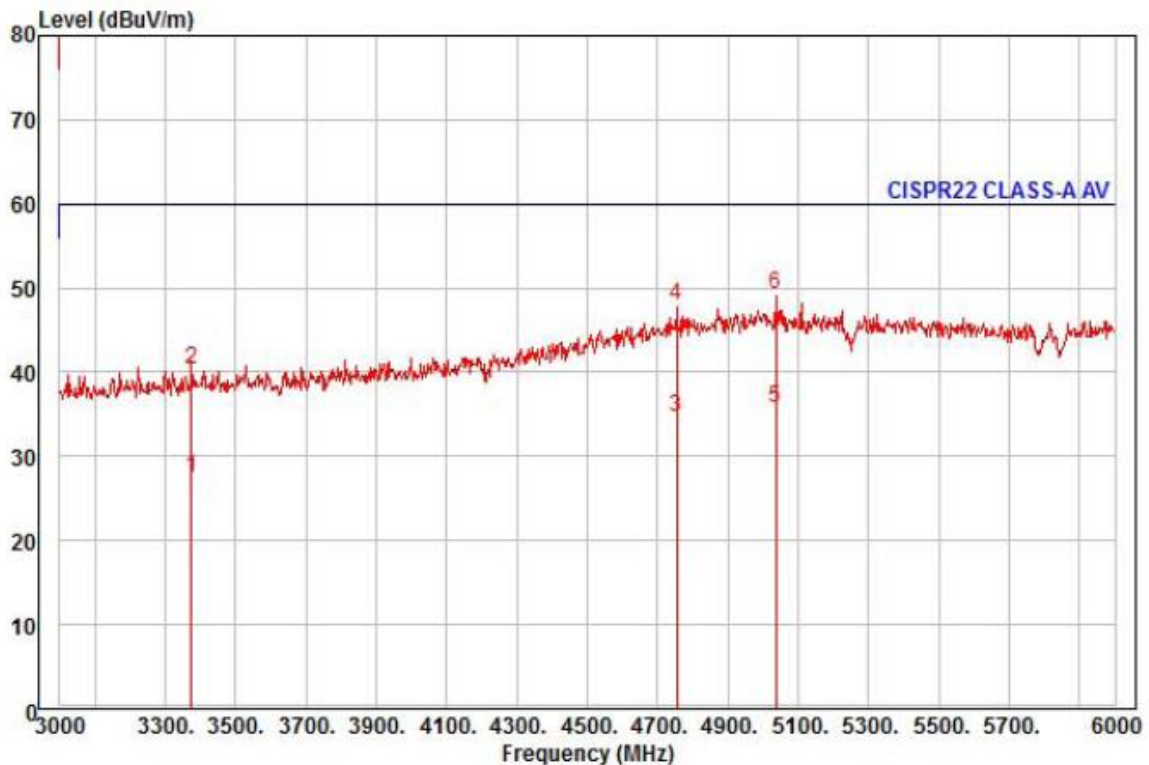
◆ Calculation

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,

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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 : XNV-6080P
Mode : DC 12V
Memo : 3 ~ 6 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	3375.00	24.77	30.96	12.40	40.69	177	60.00	-32.56	horizontal Average
2	3375.00	37.76	30.96	12.40	40.69	177	80.00	-39.57	horizontal Peak
3	4755.00	23.94	36.32	15.00	40.51	65	60.00	-25.25	horizontal Average
4	4755.00	37.25	36.32	15.00	40.51	65	80.00	-31.94	horizontal Peak
5 pp	5037.00	23.06	37.65	15.39	40.33	194	60.00	-24.23	horizontal Average
6 pk	5037.00	36.51	37.65	15.39	40.33	194	80.00	-30.78	horizontal Peak

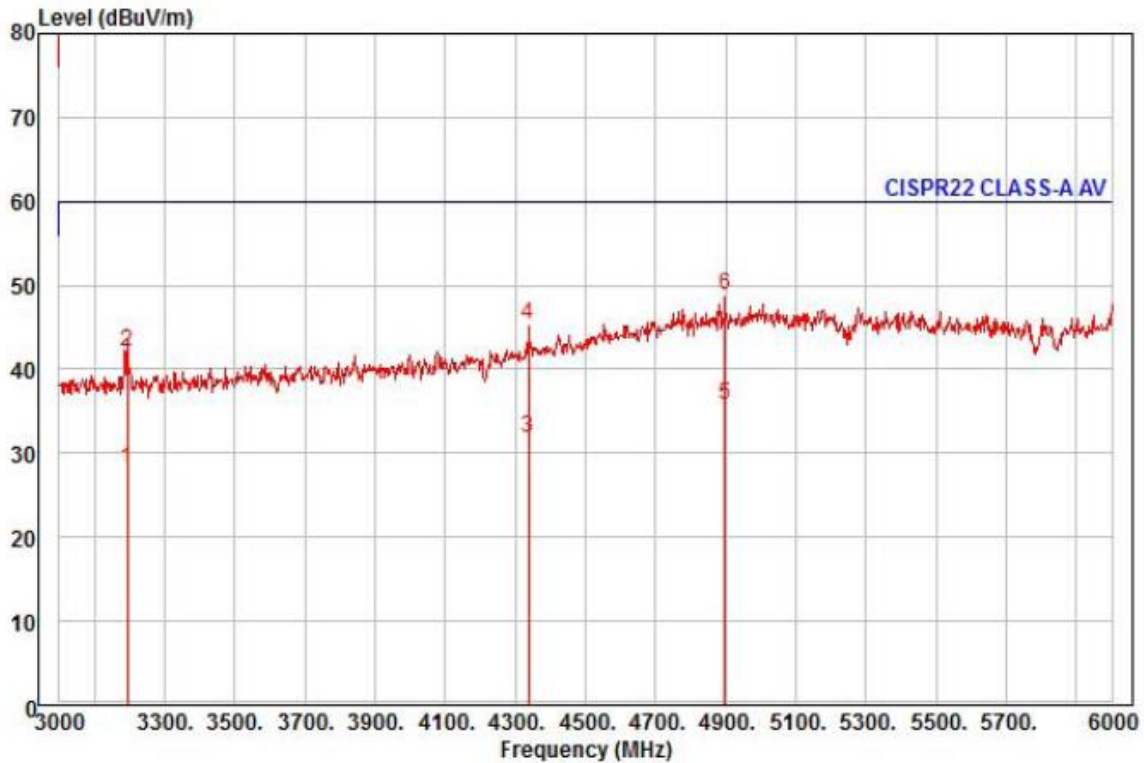
◆ Calculation

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,

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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 : XNV-6080P
 Mode : DC 12V
 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	3195.00	25.74	30.66	12.05	40.41	348	60.00	-31.96	vertical	Average
2	3195.00	39.71	30.66	12.05	40.41	348	80.00	-37.99	vertical	Peak
3	4338.00	24.52	33.94	14.17	40.75	328	60.00	-28.12	vertical	Average
4	4338.00	37.98	33.94	14.17	40.75	328	80.00	-34.66	vertical	Peak
5 pp	4899.00	23.67	37.14	15.21	40.37	119	60.00	-24.35	vertical	Average
6 pk	4899.00	36.75	37.14	15.21	40.37	119	80.00	-31.27	vertical	Peak

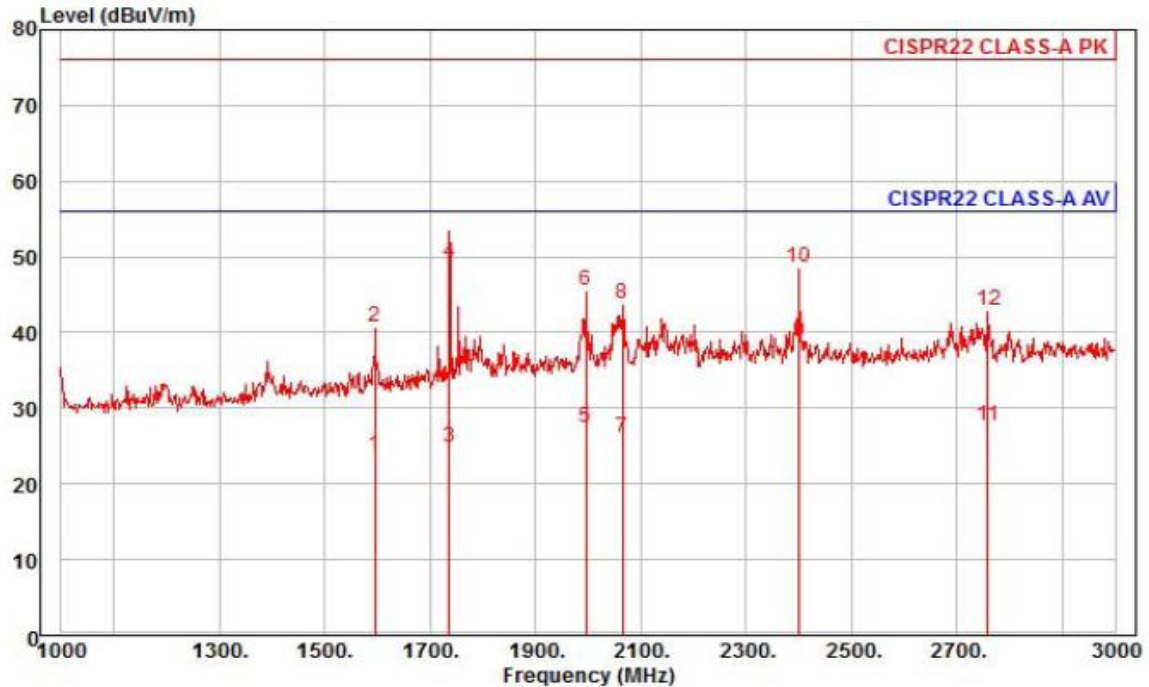
◆ Calculation

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,

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Cable Loss : Cable loss, Preamp Factor : Preamp Factor
- PoE Mode



Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : XNV-6080P
Mode : POE
Memo : 1 ~ 3 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	1596.00	28.43	26.28	8.30	39.22	174	56.00	-32.21	horizontal	Average
2	1596.00	45.30	26.28	8.30	39.22	174	76.00	-35.34	horizontal	Peak
3	1736.00	28.61	26.83	8.66	39.29	126	56.00	-31.19	horizontal	Average
4 pk	1736.00	53.17	26.83	8.66	39.29	126	76.00	-26.63	horizontal	Peak
5	1996.00	29.77	27.86	9.33	39.41	46	56.00	-28.45	horizontal	Average
6	1996.00	47.71	27.86	9.33	39.41	46	76.00	-30.51	horizontal	Peak
7	2066.00	28.07	28.04	9.49	39.41	1	56.00	-29.81	horizontal	Average
8	2066.00	45.71	28.04	9.49	39.41	1	76.00	-32.17	horizontal	Peak
9 pp	2400.00	39.01	28.86	10.32	39.42	38	56.00	-17.23	horizontal	Average
10	2400.00	48.91	28.86	10.32	39.42	38	76.00	-27.33	horizontal	Peak
11	2760.00	26.72	29.74	11.13	39.83	335	56.00	-28.24	horizontal	Average
12	2760.00	41.93	29.74	11.13	39.83	335	76.00	-33.03	horizontal	Peak

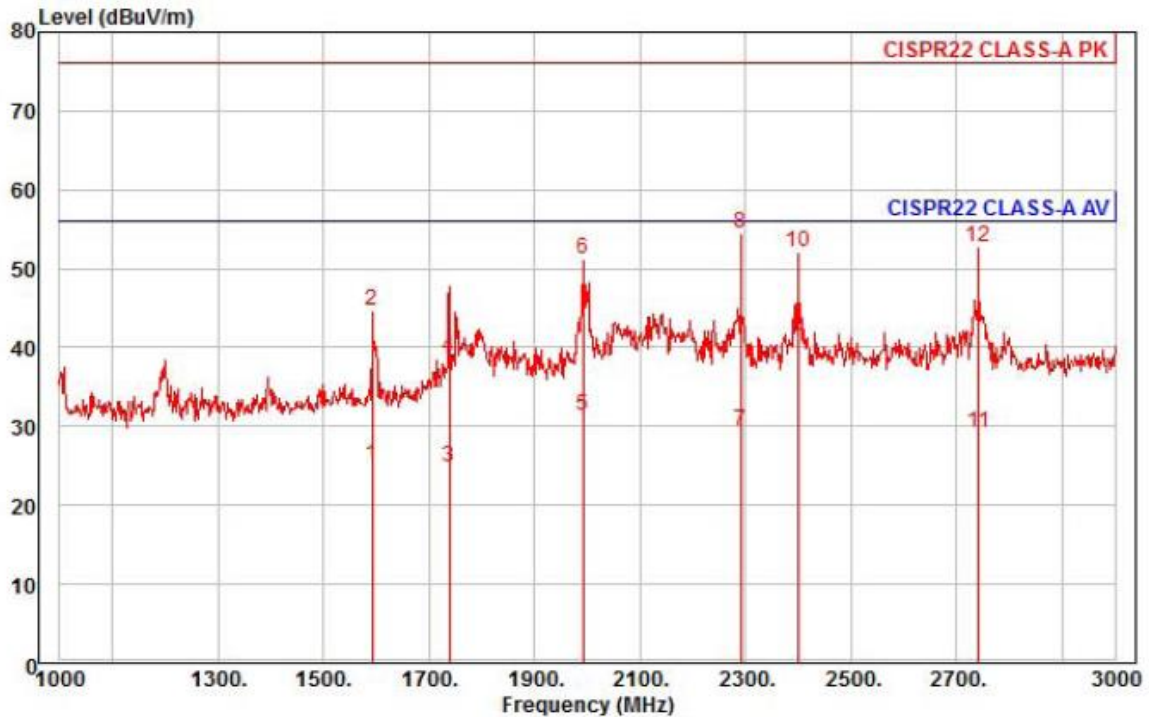
◆ Calculation

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,

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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 : XNV-6080P
 Mode : POE
 Memo : 1 ~ 3 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	1592.00	29.63	26.26	8.29	39.22	185	56.00	-31.04	vertical	Average
2	1592.00	49.35	26.26	8.29	39.22	185	76.00	-31.32	vertical	Peak
3	1738.00	28.55	26.84	8.67	39.29	45	56.00	-31.23	vertical	Average
4	1738.00	42.65	26.84	8.67	39.29	45	76.00	-37.13	vertical	Peak
5	1992.00	33.59	27.85	9.32	39.41	222	56.00	-24.65	vertical	Average
6	1992.00	53.53	27.85	9.32	39.41	222	76.00	-24.71	vertical	Peak
7	2292.00	30.23	28.60	10.04	39.42	320	56.00	-26.55	vertical	Average
8 pk	2292.00	55.18	28.60	10.04	39.42	320	76.00	-21.60	vertical	Peak
9 pp	2400.00	41.64	28.86	10.32	39.42	346	56.00	-14.60	vertical	Average
10	2400.00	52.25	28.86	10.32	39.42	346	76.00	-23.99	vertical	Peak
11	2742.00	28.25	29.70	11.09	39.81	125	56.00	-26.77	vertical	Average
12	2742.00	51.75	29.70	11.09	39.81	125	76.00	-23.27	vertical	Peak

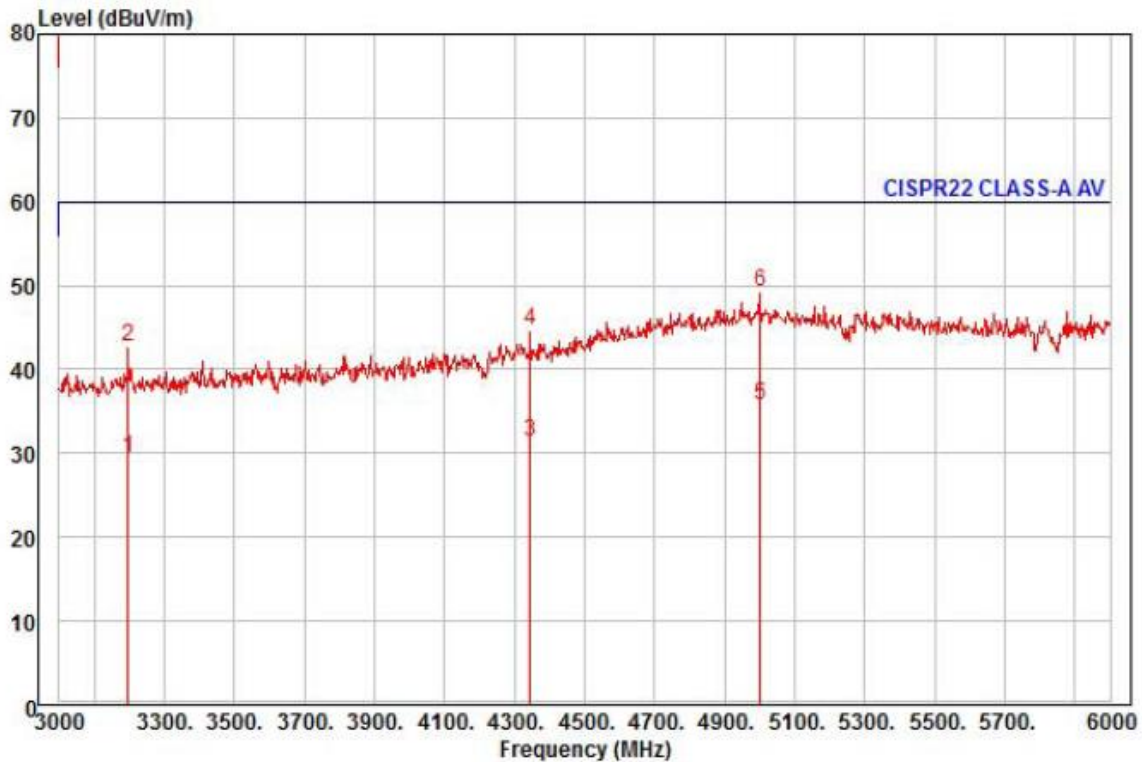
◆ Calculation

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,

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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 : XNV-6080P
 Mode : POE
 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	3198.00	27.07	30.66	12.05	40.41	14	60.00	-30.63	horizontal	Average
2	3198.00	40.52	30.66	12.05	40.41	14	80.00	-37.18	horizontal	Peak
3	4344.00	23.91	33.97	14.18	40.75	156	60.00	-28.69	horizontal	Average
4	4344.00	37.33	33.97	14.18	40.75	156	80.00	-35.27	horizontal	Peak
5 pp	5001.00	22.91	37.72	15.32	40.27	317	60.00	-24.32	horizontal	Average
6 pk	5001.00	36.53	37.72	15.32	40.27	317	80.00	-30.70	horizontal	Peak

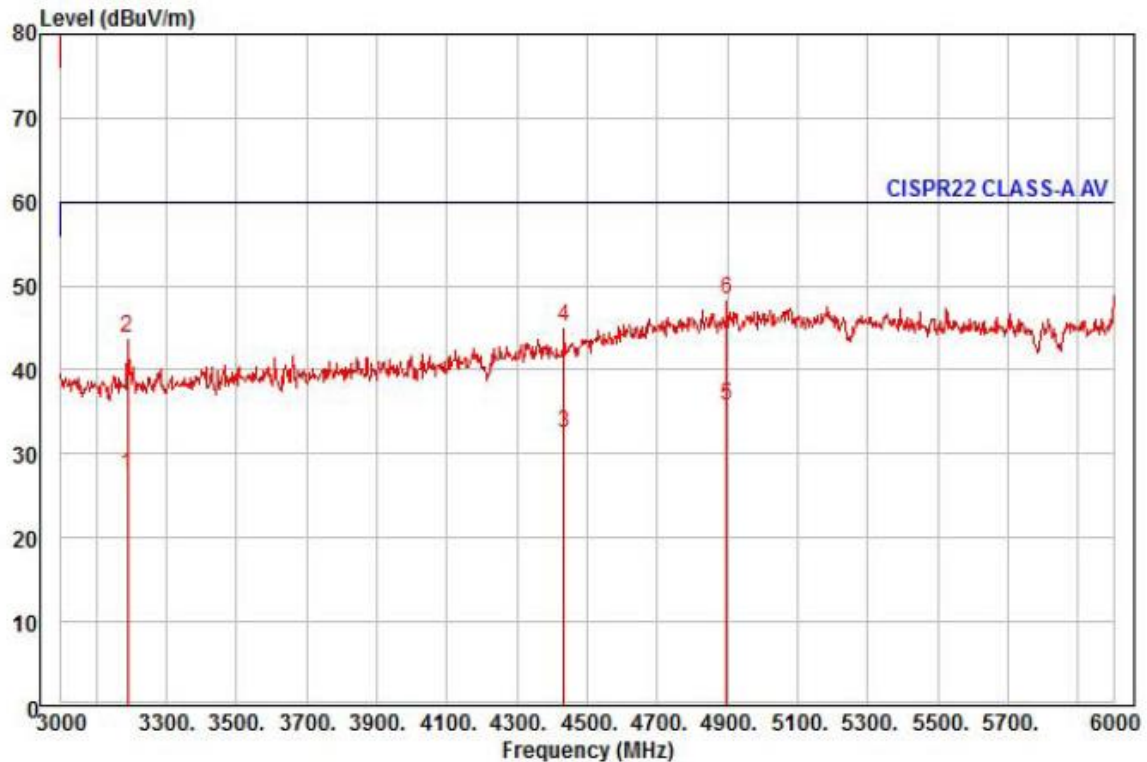
◆ Calculation

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,

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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 : XNV-6080P
 Mode : POE
 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	3189.00	25.23	30.65	12.04	40.40	257	60.00	-32.48	vertical	Average
2	3189.00	41.59	30.65	12.04	40.40	257	80.00	-36.12	vertical	Peak
3	4434.00	24.34	34.49	14.34	40.76	115	60.00	-27.59	vertical	Average
4	4434.00	37.01	34.49	14.34	40.76	115	80.00	-34.92	vertical	Peak
5 pp	4899.00	23.71	37.14	15.21	40.37	219	60.00	-24.31	vertical	Average
6 pk	4899.00	36.51	37.14	15.21	40.37	219	80.00	-31.51	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

- AC 24 V Mode



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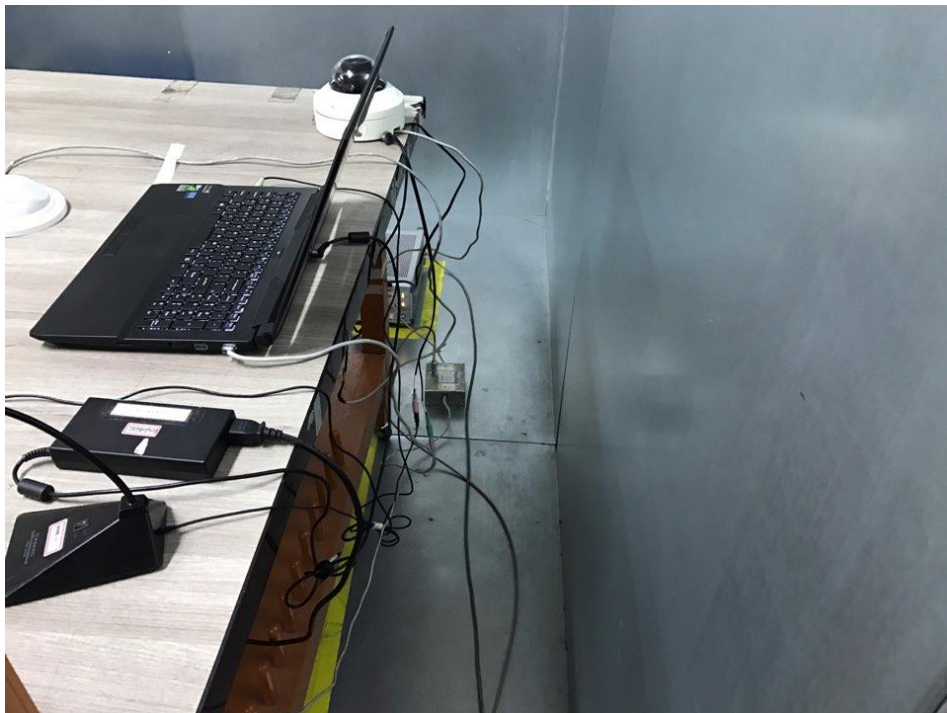
Conducted Telecommunication Emissions

- AC 24V Mode



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- DC 12V Mode

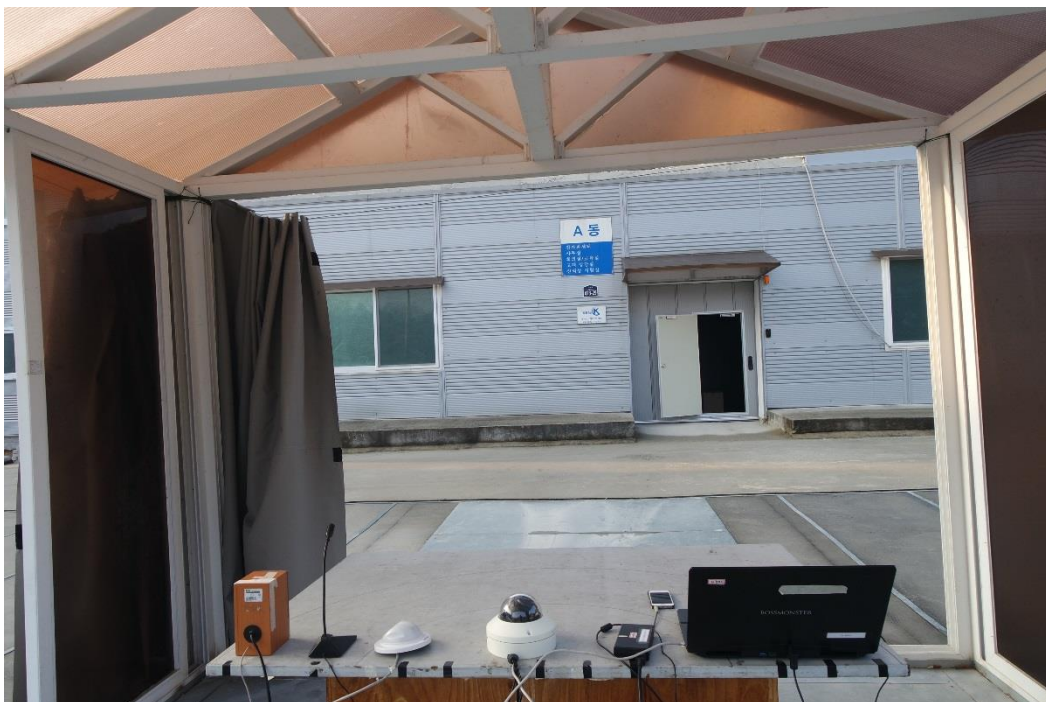


- PoE Mode



Radiated Electric Field Emissions(Below 1 GHz)

- AC 24V Mode



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- DC 12V Mode



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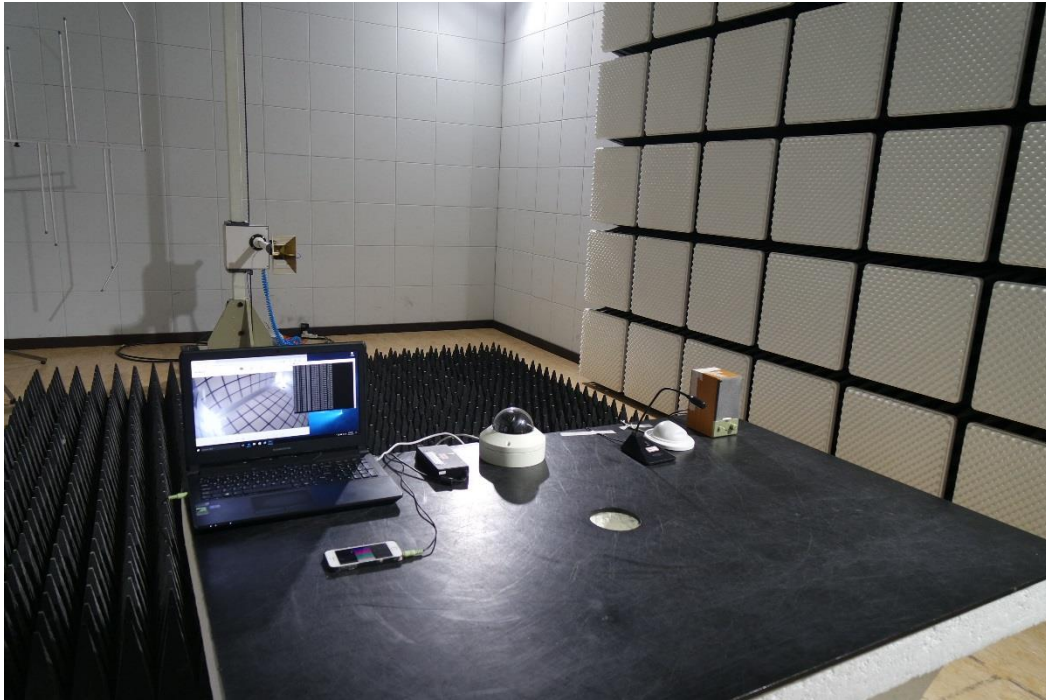
- PoE Mode



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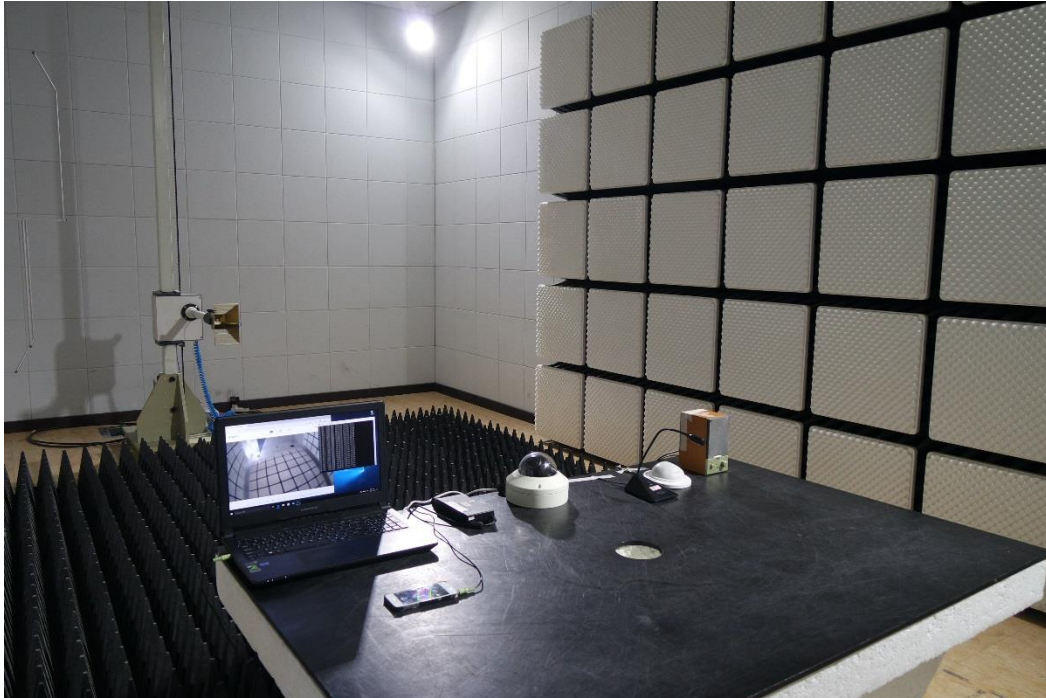
Radiated Electric Field Emissions(Above 1 GHz)

- AC 24V Mode



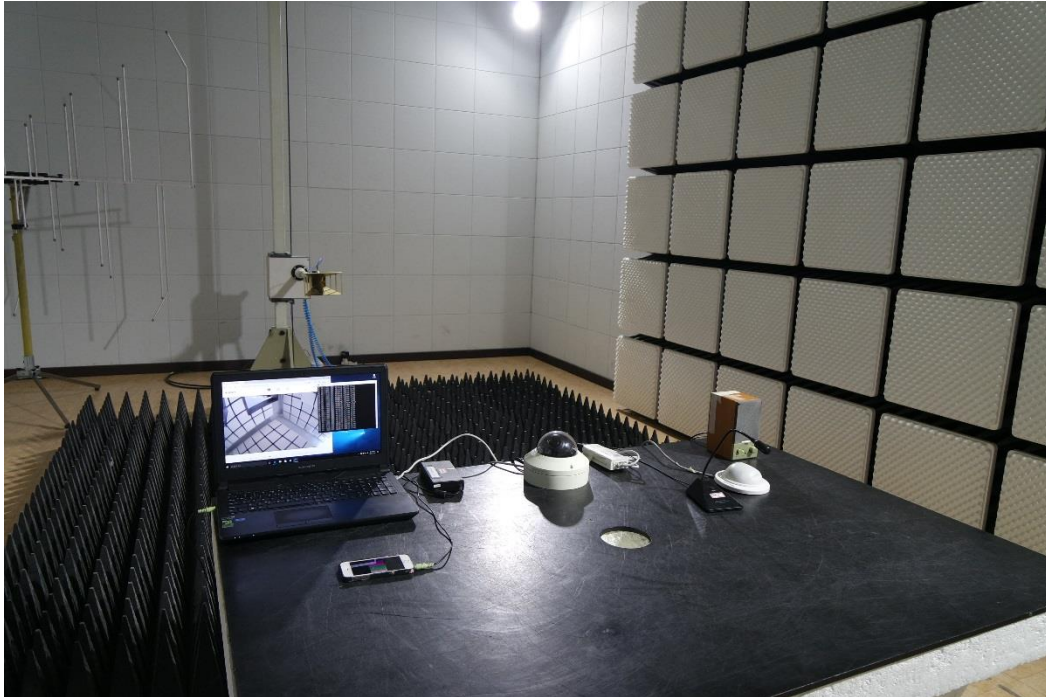
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- DC 12V Mode



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- PoE Mode



EUT External Photographs

(Top)



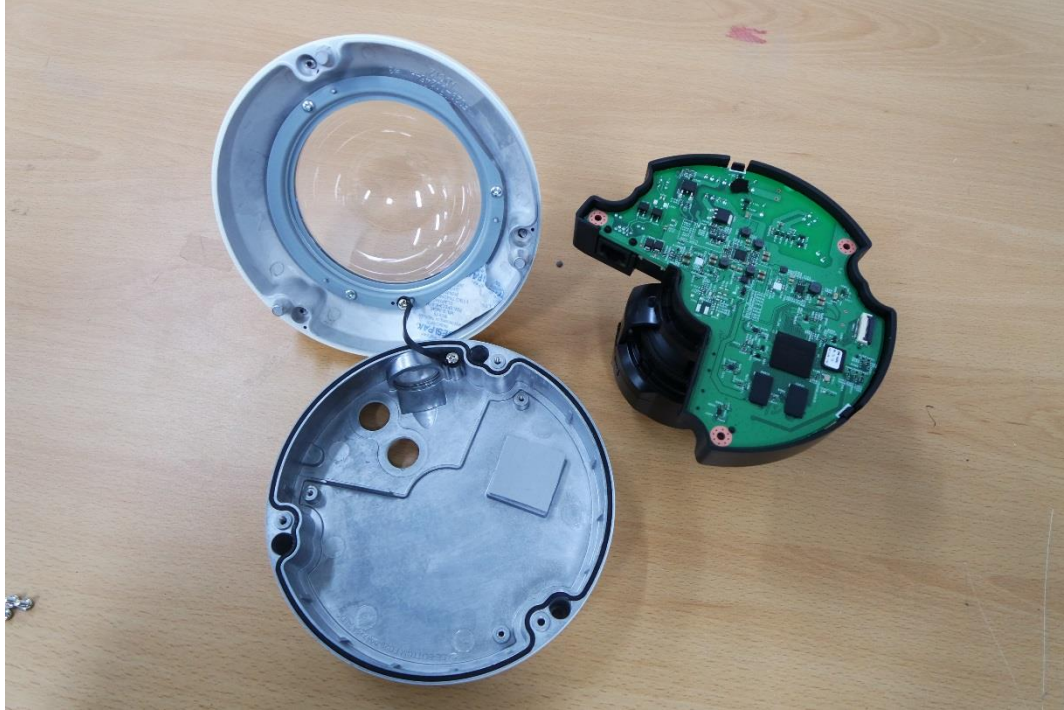
(Bottom)



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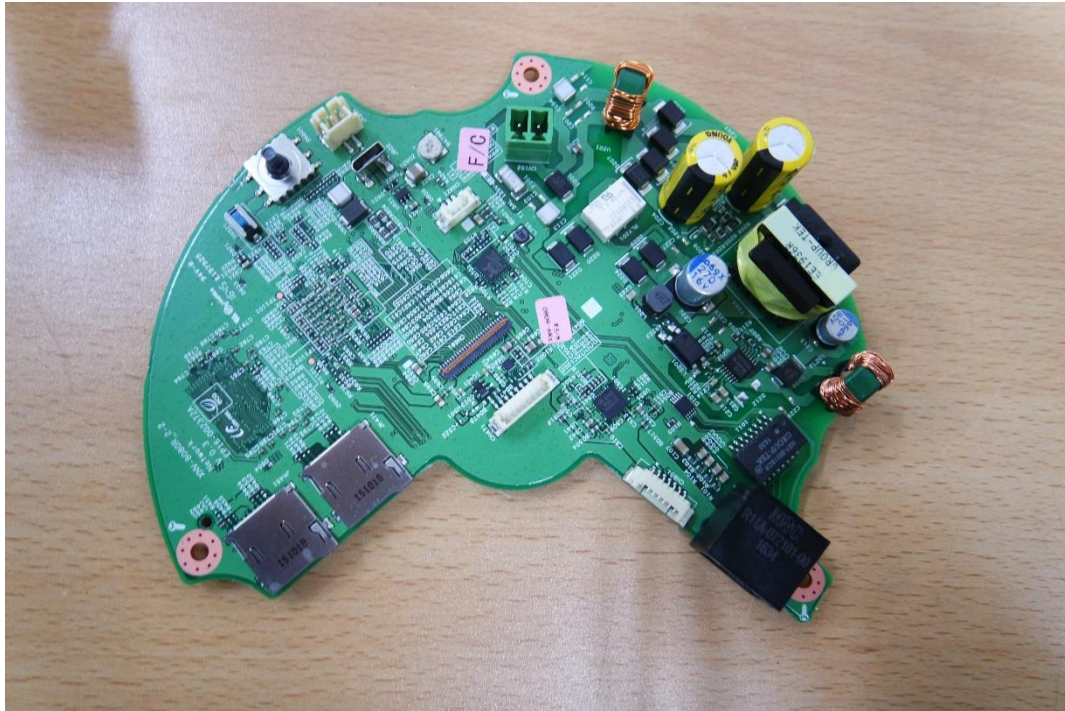
EUT Internal Photographs

(Internal View)



EUT Internal View – Main Board

(Top)



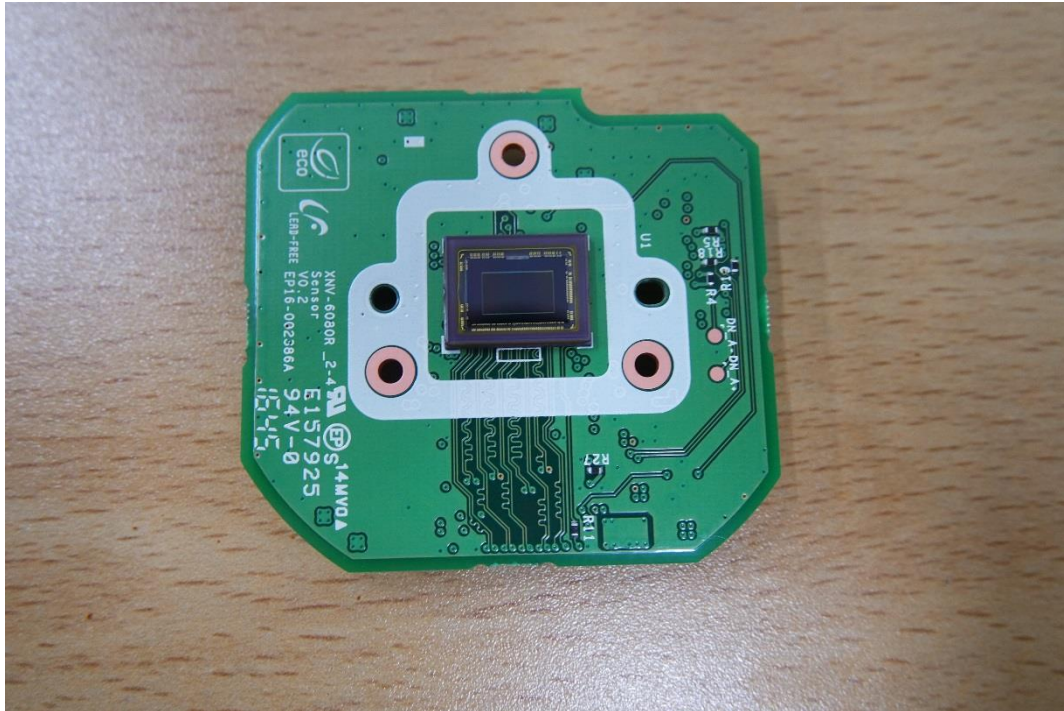
(Bottom)



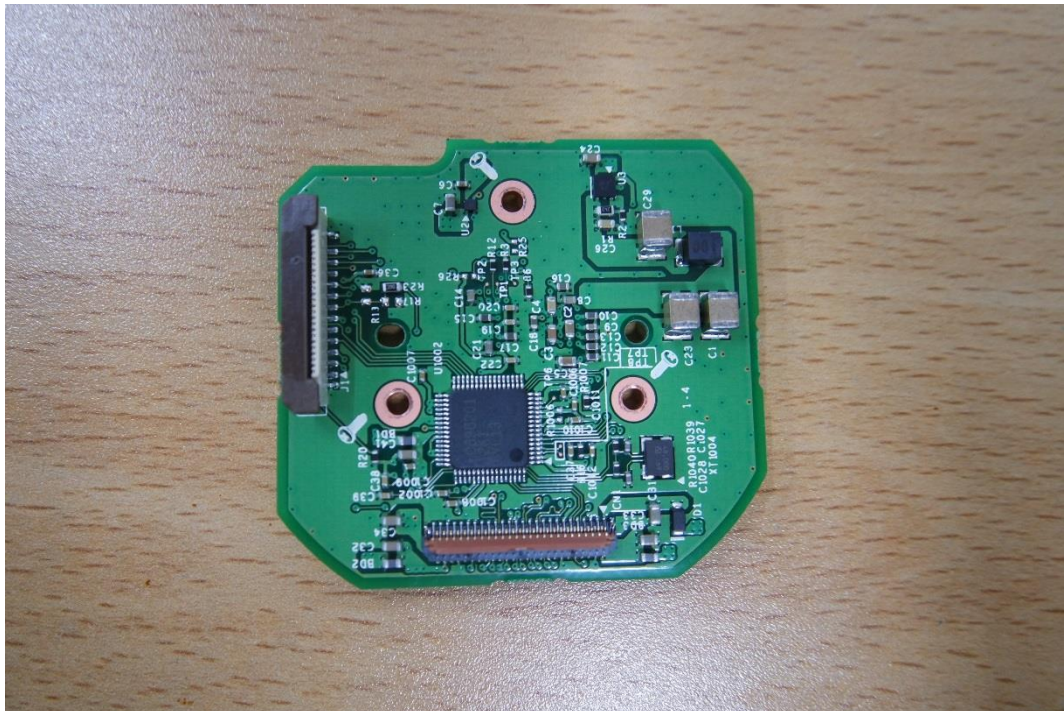
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EUT Internal View – Lens Board

(Top)



(Bottom)



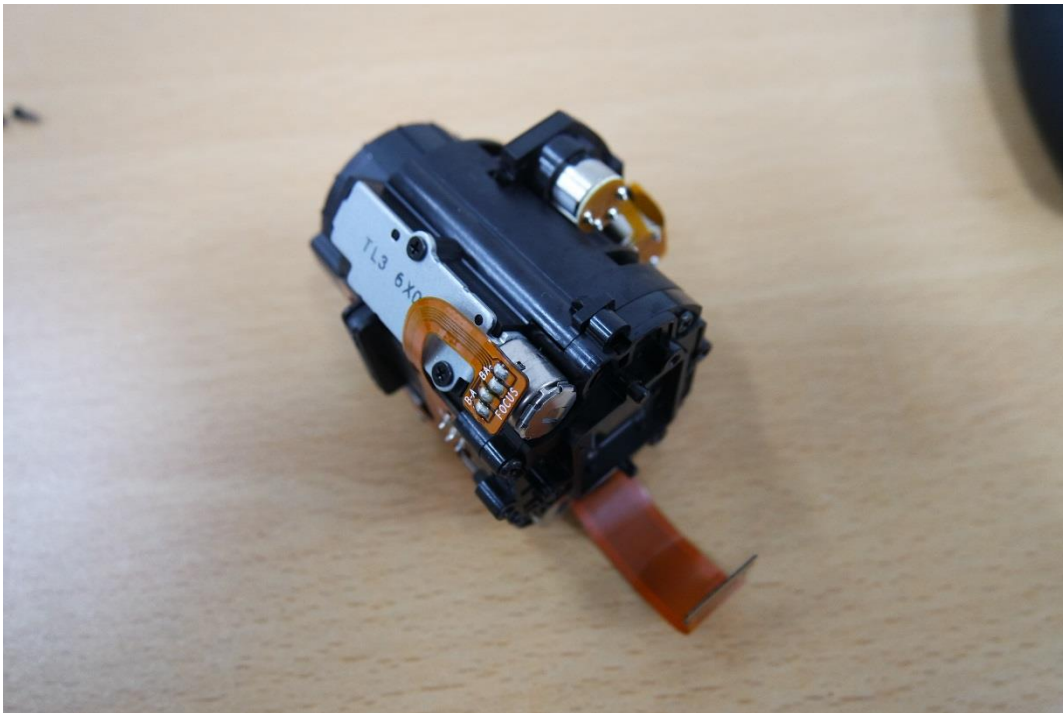
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EUT Internal View – Lens

(Top)



(Bottom)



EUT Internal View – LED

(Top)



(Bottom)

