



EMC TEST REPORT For C-TICK

Test Report No. : KES-E1-17T0306-R1
Date of Issue : Feb. 24, 2023
Product name : NETWORK CAMERA
Model/Type No. : XNV-6120
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 : Apr. 14, 2017
Test date : Apr. 29, 2017
Test Results : ☒ **In Compliance** ☐ **Not in Compliance**

Tested by

Sung Keun, Park
EMC Test Engineer

Reviewed by

Dong-Hun, Jang
EMC Technical Manager

Tested by Young Suk, Song
(Retired person)
Proxy signature : Sung Keun, Park

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

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.
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

**KES Co., Ltd.**

C-3701, Simin-daero 365-40,
Dongan-gu, Anyang-si, Gyeonggi-do, 14057, Korea
Tel: +82-31-425-6200 / Fax: +82-31-424-0450
www.kes.co.kr

Report No.:

KES-E1-17T0306-R1

Page (2) of (48)

REPORT REVISION HISTORY

Date	Test Report No.	Revision History
May. 02, 2017	KES-E1-17T0306	Issued
Feb. 24, 2023	KES-E1-17T0306-R1	Change the Model/Type No., Applicant, Applicant Address, manufacturer and manufacturer Address at the request of the customer

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd. This document may be altered or revised by KES Co., Ltd. personnel only, and shall be noted in the revision section of the document. Any alteration of this document not carried out by KES Co., Ltd. will constitute fraud and shall nullify the document.

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.
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

TABLE OF CONTENTS

1.0	General Product Description.....	4
1.1	Test Voltage & Frequency	6
1.2	Variant Model Differences	6
1.3	Device Modifications	6
1.4	Equipment Under Test.....	6
1.5	Support Equipments	6
1.6	External I/O Cabling	7
1.7	EUT Operating Mode(s)	8
1.8	Configuration	9
P1.9	Calibration Details of Equipment Used for Measurement	11
1.10	Test Facility	11
1.11	Laboratory Accreditations and Listings	11
2.0	Test Regulations.....	12
2.1	Conducted Emissions at Mains Power Ports	14
2.2	Conducted Emissions at Telecommunication Ports.....	15
2.3	Radiated Electric Field Emissions(Below 1 GHz)	16
2.4	Radiated Electric Field Emissions(Above 1 GHz)	17
APPENDIX A – TEST DATA.....		18
	Conducted Emissions at Mains Power Ports.....	18
	Conducted Emissions at Telecommunication Ports	20
	Radiated Electric Field Emissions(Below 1 GHz)	26
	Radiated Electric Field Emissions(Above 1 GHz)	28
	Test Setup Photos and Configuration	40
	Conducted Voltage Emissions	40
	Conducted Telecommunication Emissions	41
	Radiated Electric Field Emissions(Below 1 GHz)	42
	Radiated Electric Field Emissions(Above 1 GHz)	43
	EUT External Photographs	44
	EUT Internal Photographs	45

1.0 General Product Description

Main Specifications of EUT are:

XNV-6120	
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
Min. Illumination	Color : 0.03 Lux (1/30sec, F1.6) B/W : 0.003 Lux (1/30sec, F1.6)
S / N Ratio	50dB
Video Out	CVBS : 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P), for installation USB : Micro USB type B, 1280x720, for installation
Lens	
Focal Length (Zoom Ratio)	5.2~62.4mm(Optical 12X)
Max. Aperture Ratio	F1.6 (Wide) ~ F3.0(Tele)
Angular Field of View	W : 54.58(H) X 32.19(V) X 61.40(D) T : 5.30(H) X 3.00(V) X 6.06(D)
Min. Object Distance	2.1m
Focus Control	Auto / Manual / One Push
Lens Type	DC Auto Iris
Mount Type	Board-in type
Pan / Tilt / Rotate	
Pan Range	0° ~ +354°
Tilt Range	0° ~ +75°
Rotate Range	0° ~ +355°
Operational	
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 / Manual / Off
Motion Detection	Off/ On(8ea, 8point Polygonal zones)
Privacy Masking	Off / On (32ea, Rectangle 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 Zoom	24X
Preset	300 ea
Image Rotation	Flip : On/Off Mirror : On/Off Hallway : 90° / 270°
Video & Audio Analytics	Tampering, Loitering, Directional Detection, Defocus Detection, Fog Detection, Virtual Line, Enter/Exit, Appear / Disappear, Audio Detection, Face Detection, Motion Detection Sound Classification
Alarm	Input 1ea / Output 1ea
Alarm events	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 preset
Audio out	Line out (3.5mm mono jack), Max output level: 1 Vrms
Pixel Counter	support

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.
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



KES Co., Ltd.

C-3701, Simin-daero 365-40,
Dongan-gu, Anyang-si, Gyeonggi-do, 14057, Korea
Tel: +82-31-425-6200 / Fax: +82-31-424-0450
www.kes.co.kr

Report No.:
KES-E1-17T0306-R1
Page (5) of (48)

Network	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265/H.264 (MPEG-4 Part 10/AVC) : Main/Baseline/High Motion JPEG
Resolution	1920x1080, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360, 320x240
Max. Framerate	H.264/H.265 : Max. 60fps at all resolutions Motion JPEG : Max. 30fps at all resolutions
Smart Codec	Manual Mode (area-based : 5EA)
WiseStream II	support
Video Quality Adjustment	H.264/H.265/MJPEG : Target Bitrate Level Control
Bitrate Control Method	H.264/H.265 : CBR or VBR Motion JPEG : 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)
Streaming Method	Unicast / Multicast
Max. User Access	20 users at Unicast Mode
Edge Storage	SD/SDHC/SDXC 2slot (up to 512 GB) - Continuous recording(1st slot to 2nd 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 Interface	ONVIF Profile S/G SUNAPI 2.0(HTTP API) 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 10.10, 10.11, 10.12 Non-plugin Webviewer Supported Browser: Google Chrome 56, MS Edge 39, Mozilla Firefox 49(Window 64bit only) , Apple Safari 10 (Mac OS X only) Plug-in Webviewer Supported Browser : MS Explore 11, Apple Safari 10 (Mac OS X only)
Central Management Software	SmartViewer
Environmental	
Operating Temperature / Humidity	-40°C ~ +55°C(-40°F ~ +131°F) / Less than 90% RH * Start up should be done at above -35°C
Storage Temperature / Humidity	-50°C ~ +60°C (-58°F ~ +140°F) / Less than 90% RH
Ingress Protection	IP67, IP66, NEMA 4X
Vandal Resistance	IK10
Electrical	
Input Voltage / Current	AC24V, DC12V, PoE(IEEE802.3af, Class3)
Power Consumption	24V AC : Max. 8.2W 12V DC : Max. 7W PoE : Max. 7.8W
Mechanical	
Color / Material	Ivory / Aluminum
Dimension (WxHxD)	Ø160 x H128.5mm
Weight	985g

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.
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

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

1.2 Variant Model Differences

Not applicable

1.3 Device Modifications

Not applicable

1.4 Equipment Under Test

Description	Model Number	Serial Number	Manufacturer	Remarks
NETWORK CAMERA	XNV-6120	-	HANWHA VISION VIETNAM COMPANY LIMITED	E.U.T

1.5 Support Equipments

Description	Model Number	Serial Number	Manufacturer	Remarks
POE Adaptor	POE36U-1AT-R	-	PHIHONG	-
Notebook	RV518	HTK991NC600187E	Samsung Electronics Co., Ltd	-
Notebook Adaptor	ADP-60ZH	AD-6019R	DELTA ELECTRONICS, INC.	-
Speaker	BR10000A CUVE	-	BEIJING EDIFIER HI- TECH GROUP.	-
MIC	CMK-303	-	CAMAC	-
Alarm	SIP-1201DD D0	-	SAMSUNG TECHWIN CO., LTD.	-



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
	3.5 mm	Speaker	3.5 mm	1.6	U
	3.5 mm	MIC	3.5 mm	1.7	U
	3 Pin	Alarm	3 Pin	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
	3.5 mm	Speaker	3.5 mm	1.6	U
	3.5 mm	MIC	3.5 mm	1.7	U
	3 Pin	Alarm	3 Pin	1.7	U



- 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 Adaptor	RJ-45 (POE)	3.0	U
	RJ-45	Notebook	RJ-45	3.0	U
	3.5 mm	Speaker	3.5 mm	1.6	U
	3.5 mm	MIC	3.5 mm	1.7	U
	3 Pin	Alarm	3 Pin	1.7	U
Notebook	RJ-45 (DATA)	POE Adaptor	RJ-45 (DATA)	3.0	U

* Unshielded=U, Shielded=S

1.7 EUT Operating Mode(s)

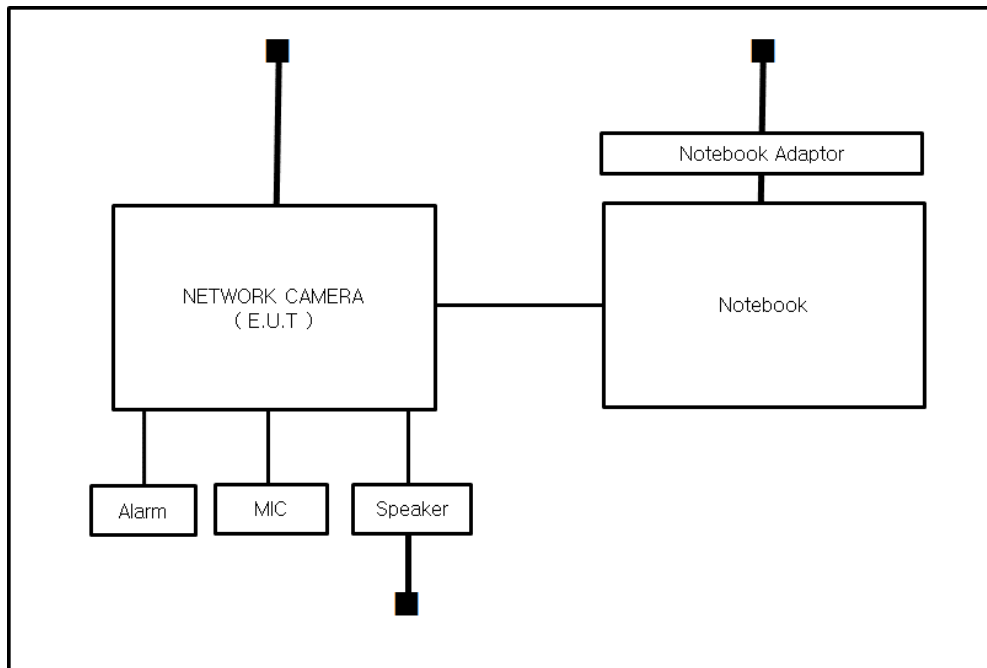
Test mode	operating
AC 24 V Mode	E.U.T Monitoring, Ping test, 1 kHz
DC 12 V Mode	E.U.T Monitoring, Ping test
POE Mode	E.U.T Monitoring, Ping test

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

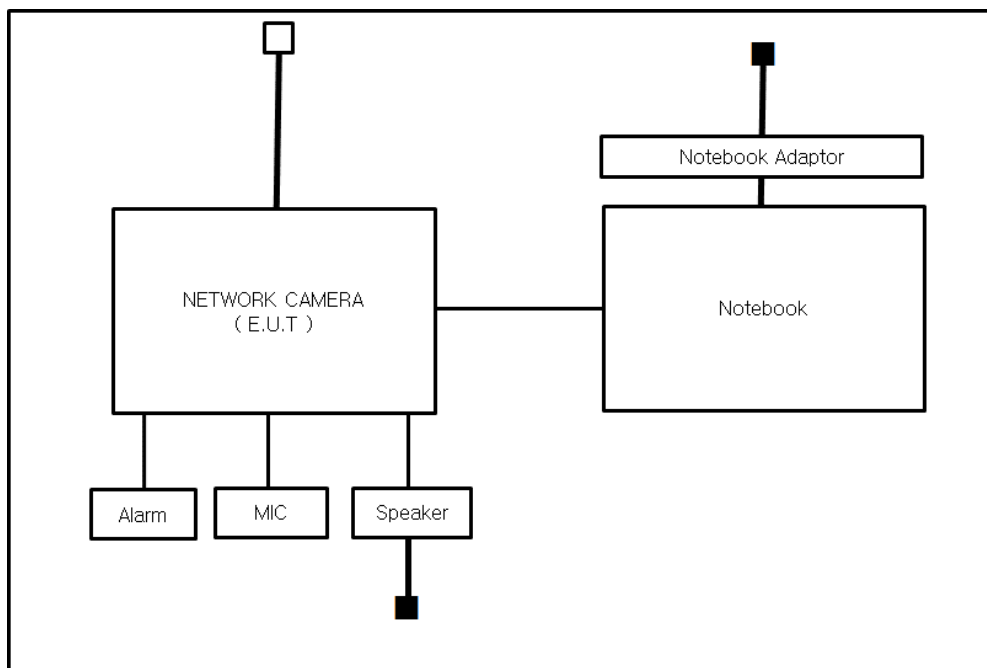
1.8 Configuration

■ AC Main
 □ DC Main

- AC 24 V Mode

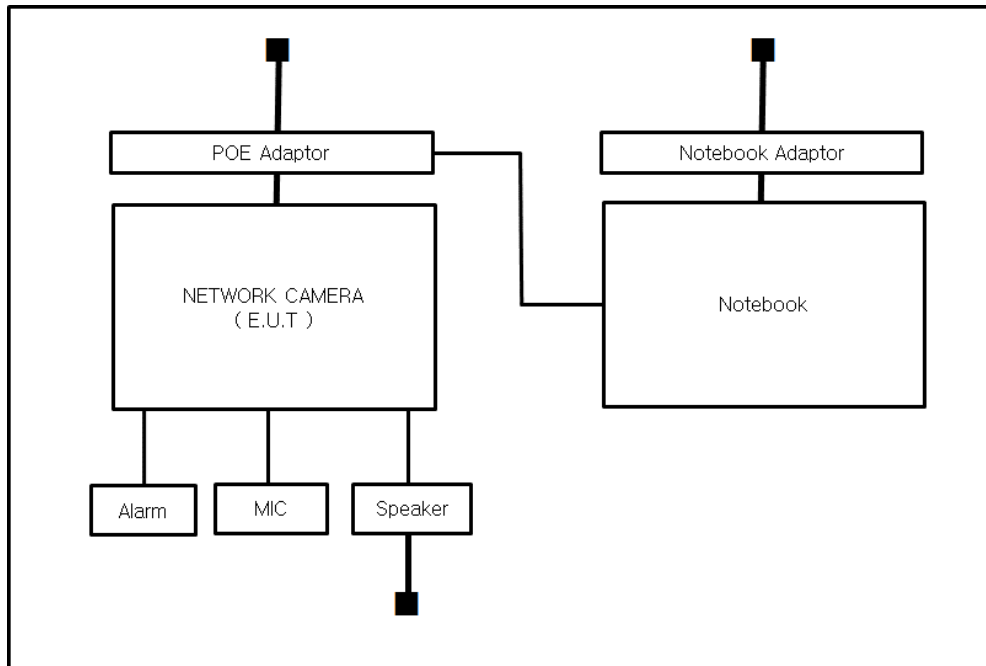


- DC 12 V Mode



This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.
 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

- PoE Mode



P1.9 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, 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 55032:2015

☐ 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



KES Co., Ltd.

C-3701, Simin-daero 365-40,
Dongan-gu, Anyang-si, Gyeonggi-do, 14057, Korea
Tel: +82-31-425-6200 / Fax: +82-31-424-0450
www.kes.co.kr

Report No.:

KES-E1-17T0306-R1

Page (13) of (48)

☐ **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

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.
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

2.1 Conducted Emissions at Mains Power Ports

Test Date

Apr. 29, 2017

Test Location

Electro wave Shieldroom

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	EMI Test S/W	EMC32	R & S	9.12.00	-
☒	EMI TEST RECEIVER	ESR3	R & S	101781	04, 27, 2018
☒	LISN	ENV216	R & S	101787	01, 11, 2018
☒	LISN	ESH2-Z5	R & S	100450	04, 27, 2018
☒	PULSE LIMITER	ESH3-Z2	R & S	101915	12, 13, 2017

Test Conditions

Temperature: 21,2 °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

Apr. 29, 2017

Test Location

Electro wave Shieldroom

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	EMI Test S/W	EMC32	R & S	9.12.00	-
☒	EMI TEST RECEIVER	ESR3	R & S	101781	04, 27, 2018
☒	LISN	ENV216	R & S	101787	01, 11, 2018
☒	LISN	ESH2-Z5	R & S	100450	04, 27, 2018
☒	PULSE LIMITER	ESH3-Z2	R & S	101915	12, 13, 2017
☒	8-WIRE ISN CAT3,5	ENY81	Rohde & Schwarz	100174	01, 11, 2018
☐	8-WIRE ISN CAT6	ENY81-CAT6	Rohde & Schwarz	101665	01, 11, 2018

Test Conditions

Temperature: 21,2 °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.

2.3 Radiated Electric Field Emissions(Below 1 GHz)

Test Date

Apr. 29, 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 S/W	-	-	-	-
☒	EMI TEST RECEIVER	ESVS10	Rohde & Schwarz	826008/014	04, 18, 2018
☒	TRILOG-BROADBAND ANTENNA	VULB9163	Schwarzbeck	714	11, 28, 2018
☐	TRILOG-BROADBAND ANTENNA	VULB9163	Schwarzbeck	715	04, 14, 2018

Test Conditions

Temperature: 23,0 °C
Relative Humidity: 29,0 %

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

Apr. 29, 2017

Test Location

Semi Anechoic Chamber #2

Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due
☒	SEMI ANECHOIC CHAMBER #2	-	SEMITEC	-	-
☒	EMI Test S/W	e3	AUDIX	8.083b	-
☒	EMI TEST RECEIVER	ESU26	R & S	100552	04, 19, 2018
☒	BROADBAND PREAMPLIFIER	BBV 9718	Schwarzbeck Mess - Elektronik	9718-246	10, 14, 2017
☒	LOG-PERIODIC ANTENNA	STLP 9149	SCHWARZBECK	9149-255	05, 17, 2018

Test Conditions

Temperature: 19,2 °C

Relative Humidity: 38,2 %

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

Remarks

See Appendix A for test data.

APPENDIX A – TEST DATA

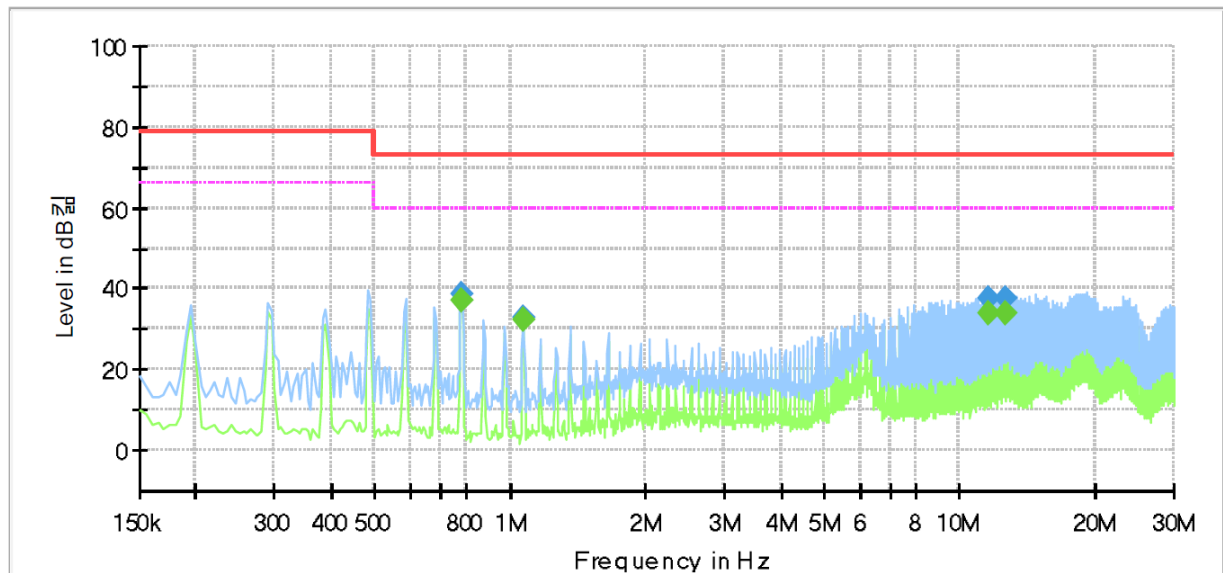
Conducted Emissions at Mains Power Ports

- AC 24 V Mode

[HOT]

Common Information

Test Description:	Conducted Emission
Model No.:	XNV-6120P
Mode	AC 24 V_H
Operator Name:	KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.780000	---	37.21	60.00	22.79	1000.0	9.000	L1	20.2
0.780000	38.69	---	73.00	34.31	1000.0	9.000	L1	20.2
1.070000	---	32.17	60.00	27.83	1000.0	9.000	L1	20.1
1.070000	32.63	---	73.00	40.37	1000.0	9.000	L1	20.1
11.585000	---	34.03	60.00	25.97	1000.0	9.000	L1	20.0
11.585000	37.51	---	73.00	35.49	1000.0	9.000	L1	20.0
12.655000	---	33.90	60.00	26.10	1000.0	9.000	L1	20.1
12.655000	37.75	---	73.00	35.25	1000.0	9.000	L1	20.1

◆ Calculation

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

QuasiPeak / CAverage : The Final Value

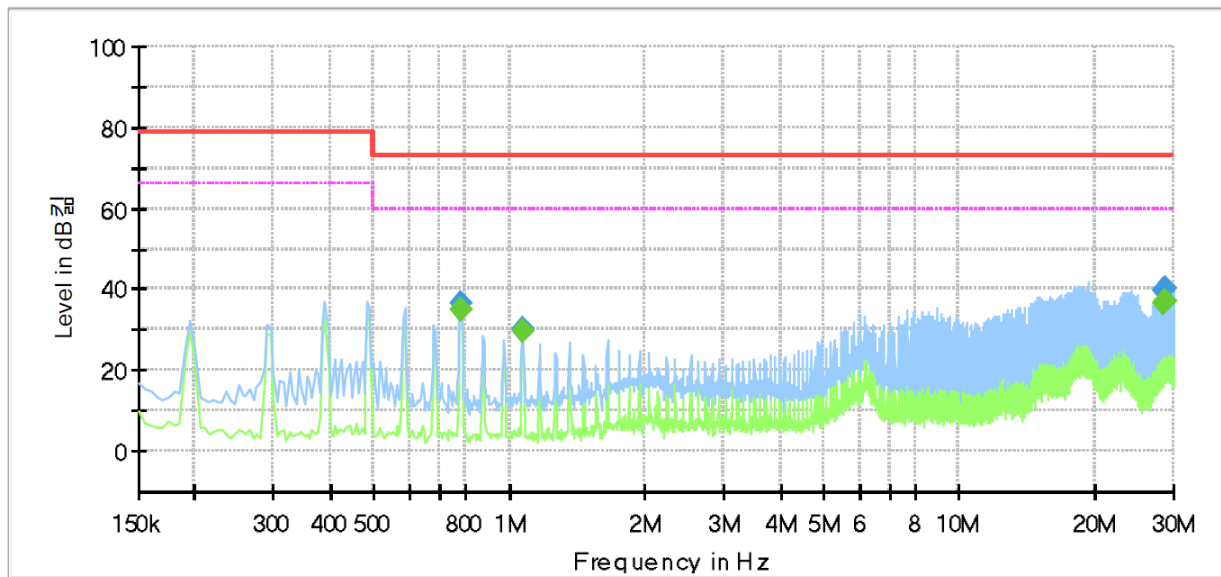
Reading Value : Not shown in the table.

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

[NEUTRAL]

Common Information

Test Description: Conducted Emission
Model No.: XNV-6120P
Mode: AC 24 V_N
Operator Name: KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.780000	---	34.81	60.00	25.19	1000.0	9.000	N	20.2
0.780000	36.28	---	73.00	36.72	1000.0	9.000	N	20.2
1.070000	---	29.86	60.00	30.14	1000.0	9.000	N	20.1
1.070000	30.32	---	73.00	42.68	1000.0	9.000	N	20.1
28.425000	---	36.51	60.00	23.49	1000.0	9.000	N	20.6
28.425000	39.61	---	73.00	33.39	1000.0	9.000	N	20.6
28.715000	---	37.17	60.00	22.83	1000.0	9.000	N	20.6
28.715000	40.17	---	73.00	32.83	1000.0	9.000	N	20.6

◆ 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 (LISN FACTOR + (Cable Loss + Pulse Limiter FACTOR))

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.
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

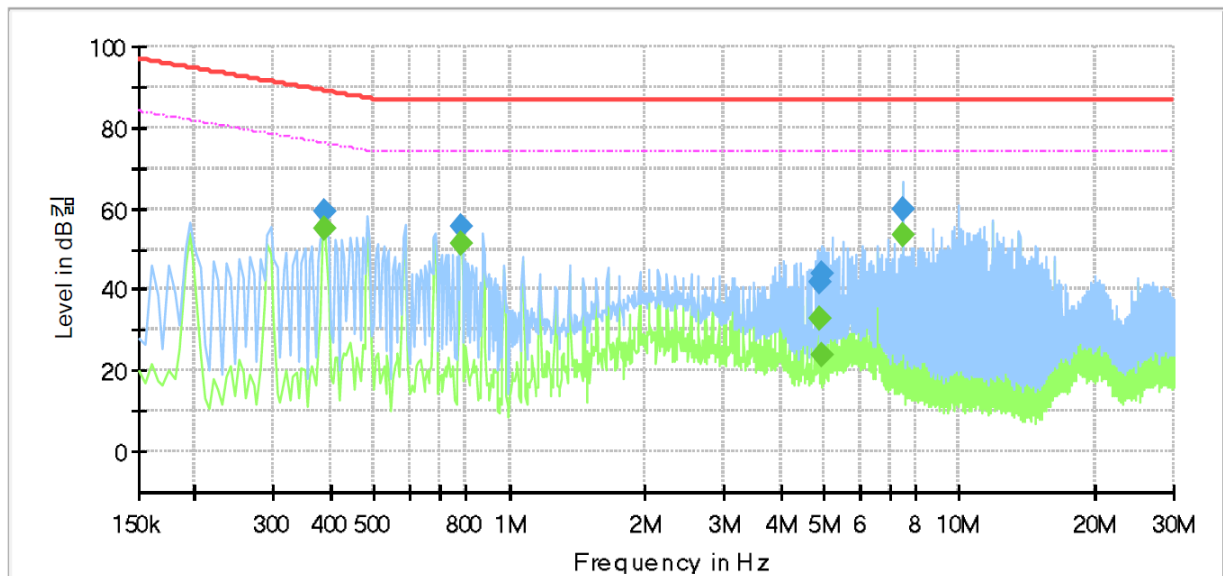
Conducted Emissions at Telecommunication Ports

- AC 24 V Mode

[10 Mbps]

Common Information

Test Description:	Telecommunication Emission
Model No.:	XNV-6120P
Mode	AC 24 V_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)
0.390000	---	54.91	76.06	21.15	1000.0	9.000	Single Line	20.6
0.390000	59.49	---	89.06	29.57	1000.0	9.000	Single Line	20.6
0.780000	---	51.57	74.00	22.43	1000.0	9.000	Single Line	20.1
0.780000	55.80	---	87.00	31.20	1000.0	9.000	Single Line	20.1
4.890000	---	32.67	74.00	41.33	1000.0	9.000	Single Line	19.5
4.890000	41.93	---	87.00	45.07	1000.0	9.000	Single Line	19.5
4.930000	---	23.68	74.00	50.32	1000.0	9.000	Single Line	19.5
4.930000	43.93	---	87.00	43.07	1000.0	9.000	Single Line	19.5
7.500000	---	53.29	74.00	20.71	1000.0	9.000	Single Line	19.6
7.500000	59.91	---	87.00	27.09	1000.0	9.000	Single Line	19.6

◆ 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 + Pulse Limiter FACTOR))

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.

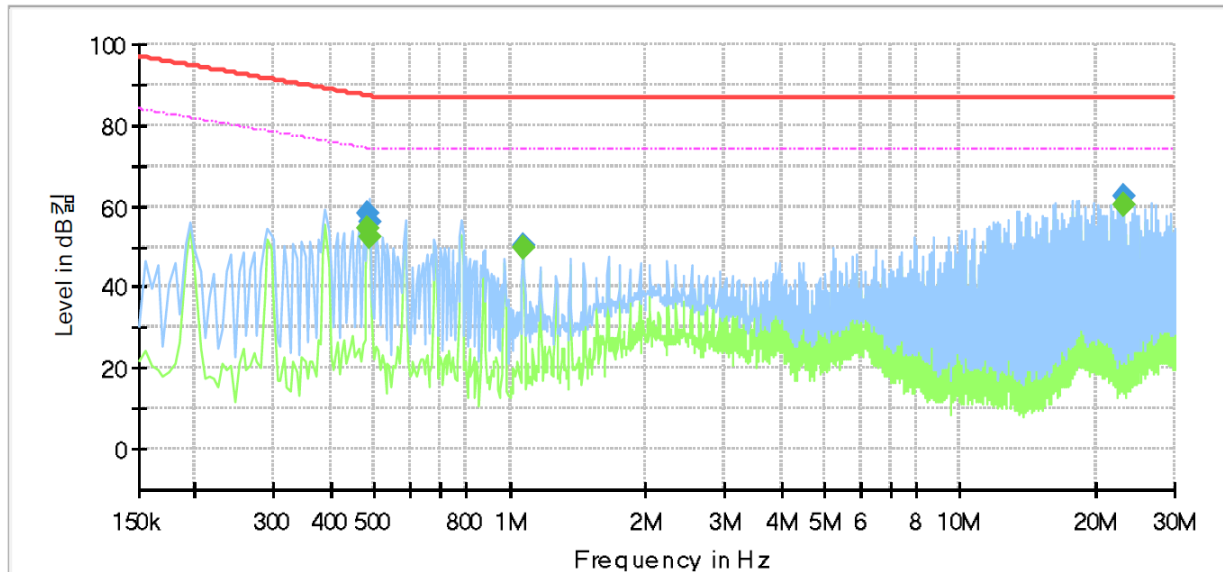
The results shown in this test report refer only to the sample(s) tested unless otherwise stated.

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

[100 Mbps]

Common Information

Test Description: Telecommunication Emission
Model No.: XNV-6120P
Mode: AC 24 V_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)
0.485000	---	54.72	74.25	19.53	1000.0	9.000	Single Line	20.7
0.485000	58.23	---	87.25	29.02	1000.0	9.000	Single Line	20.7
0.490000	---	52.43	74.17	21.74	1000.0	9.000	Single Line	20.7
0.490000	56.06	---	87.17	31.11	1000.0	9.000	Single Line	20.7
1.070000	---	49.59	74.00	24.41	1000.0	9.000	Single Line	20.2
1.070000	50.23	---	87.00	36.77	1000.0	9.000	Single Line	20.2
23.130000	---	60.18	74.00	13.82	1000.0	9.000	Single Line	20.5
23.130000	62.49	---	87.00	24.51	1000.0	9.000	Single Line	20.5

◆ 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 + Pulse Limiter FACTOR))

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.

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

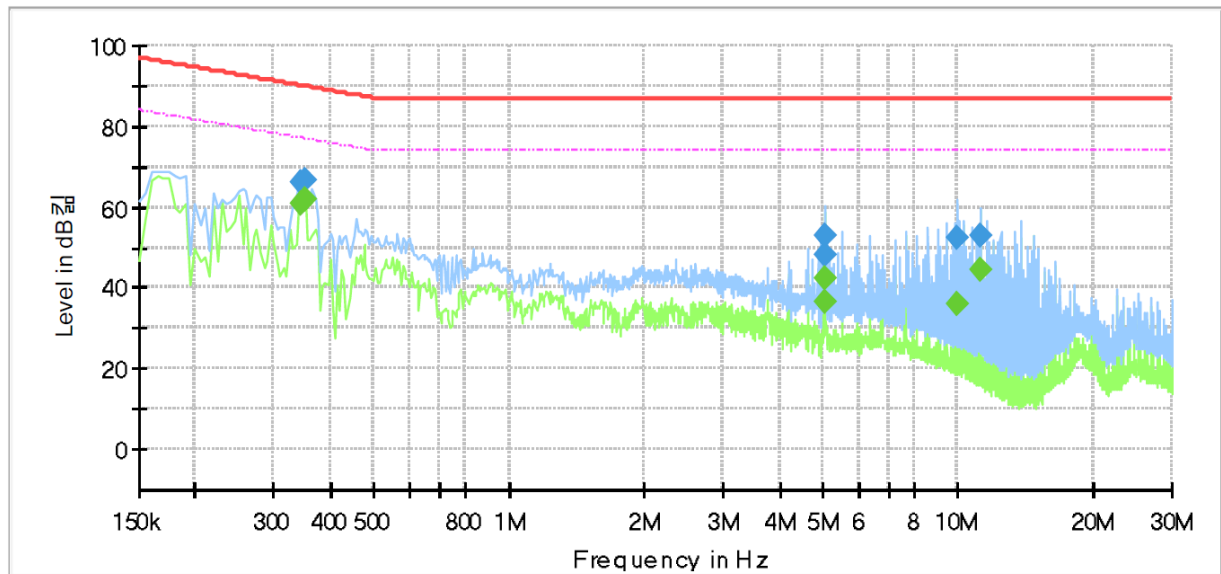
The authenticity of the test report, contact kes@kes.co.kr

- DC 12 V Mode

[10 Mbps]

Common Information

Test Description: Telecommunication Emission
Model No.: XNV-6120P
Mode: DC 12 V_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)
0.345000	---	60.98	77.08	16.10	1000.0	9.000	Single Line	20.7
0.345000	66.12	---	90.08	23.96	1000.0	9.000	Single Line	20.7
0.350000	---	61.78	76.96	15.18	1000.0	9.000	Single Line	20.6
0.350000	66.77	---	89.96	23.19	1000.0	9.000	Single Line	20.6
5.055000	---	42.34	74.00	31.66	1000.0	9.000	Single Line	19.5
5.055000	52.91	---	87.00	34.09	1000.0	9.000	Single Line	19.5
5.060000	---	36.51	74.00	37.49	1000.0	9.000	Single Line	19.5
5.060000	48.29	---	87.00	38.71	1000.0	9.000	Single Line	19.5
10.005000	---	35.92	74.00	38.08	1000.0	9.000	Single Line	19.7
10.005000	52.33	---	87.00	34.67	1000.0	9.000	Single Line	19.7
11.195000	---	44.63	74.00	29.37	1000.0	9.000	Single Line	19.8
11.195000	52.68	---	87.00	34.32	1000.0	9.000	Single Line	19.8

◆ Calculation

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

QuasiPeak / CAverage : The Final Value

Reading Value : Not shown in the table.

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

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.

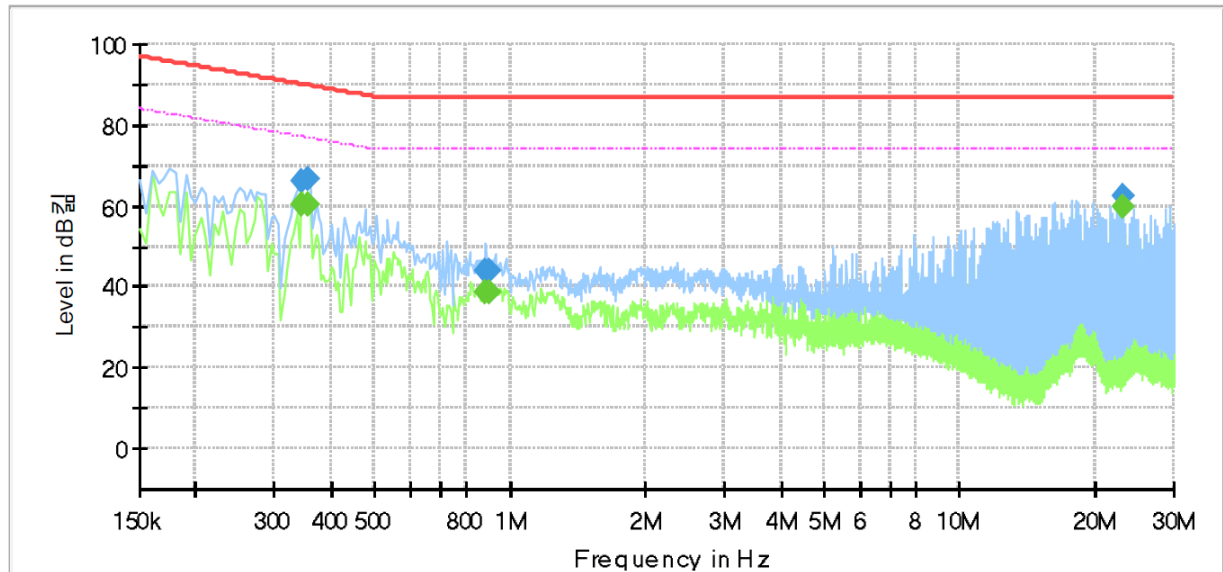
The results shown in this test report refer only to the sample(s) tested unless otherwise stated.

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

[100 Mbps]

Common Information

Test Description: Telecommunication Emission
Model No.: XNV-6120P
Mode: DC 12 V_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)
0.345000	---	60.34	77.08	16.74	1000.0	9.000	Single Line	20.9
0.345000	66.34	---	90.08	23.74	1000.0	9.000	Single Line	20.9
0.355000	---	60.11	76.84	16.73	1000.0	9.000	Single Line	20.9
0.355000	66.67	---	89.84	23.17	1000.0	9.000	Single Line	20.9
0.885000	---	38.44	74.00	35.56	1000.0	9.000	Single Line	20.3
0.885000	44.18	---	87.00	42.82	1000.0	9.000	Single Line	20.3
0.895000	---	38.80	74.00	35.20	1000.0	9.000	Single Line	20.3
0.895000	44.09	---	87.00	42.91	1000.0	9.000	Single Line	20.3
23.130000	---	60.03	74.00	13.97	1000.0	9.000	Single Line	20.5
23.130000	62.23	---	87.00	24.77	1000.0	9.000	Single Line	20.5

◆ 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 + Pulse Limiter FACTOR))

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.

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

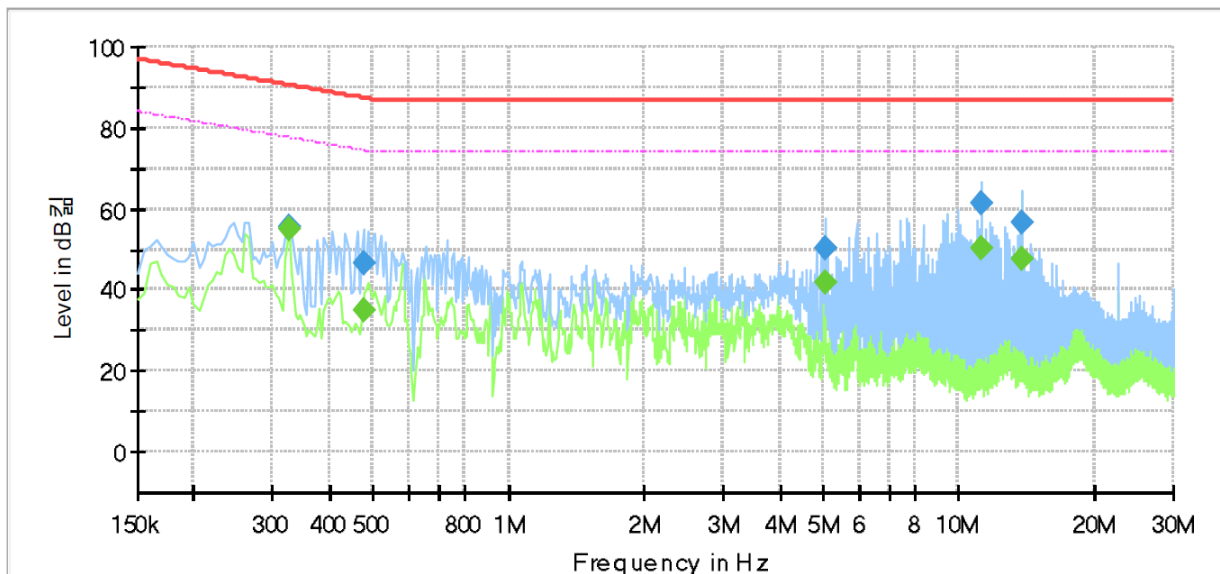
The authenticity of the test report, contact kes@kes.co.kr

- PoE Mode

[10 Mbps]

Common Information

Test Description:	Telecommunication Emission
Model No.:	XNV-6120P
Mode	POE_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)
0.325000	---	54.91	77.58	22.67	1000.0	9.000	Single Line	20.7
0.325000	55.37	---	90.58	35.21	1000.0	9.000	Single Line	20.7
0.475000	---	34.81	74.43	39.62	1000.0	9.000	Single Line	20.4
0.475000	46.80	---	87.43	40.63	1000.0	9.000	Single Line	20.4
5.055000	---	41.94	74.00	32.06	1000.0	9.000	Single Line	19.5
5.055000	50.27	---	87.00	36.73	1000.0	9.000	Single Line	19.5
11.250000	---	50.23	74.00	23.77	1000.0	9.000	Single Line	19.8
11.250000	61.41	---	87.00	25.59	1000.0	9.000	Single Line	19.8
13.750000	---	47.89	74.00	26.11	1000.0	9.000	Single Line	19.9
13.750000	56.69	---	87.00	30.31	1000.0	9.000	Single Line	19.9

◆ 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 (ISN FACTOR + (Cable Loss + Pulse Limiter FACTOR))

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.

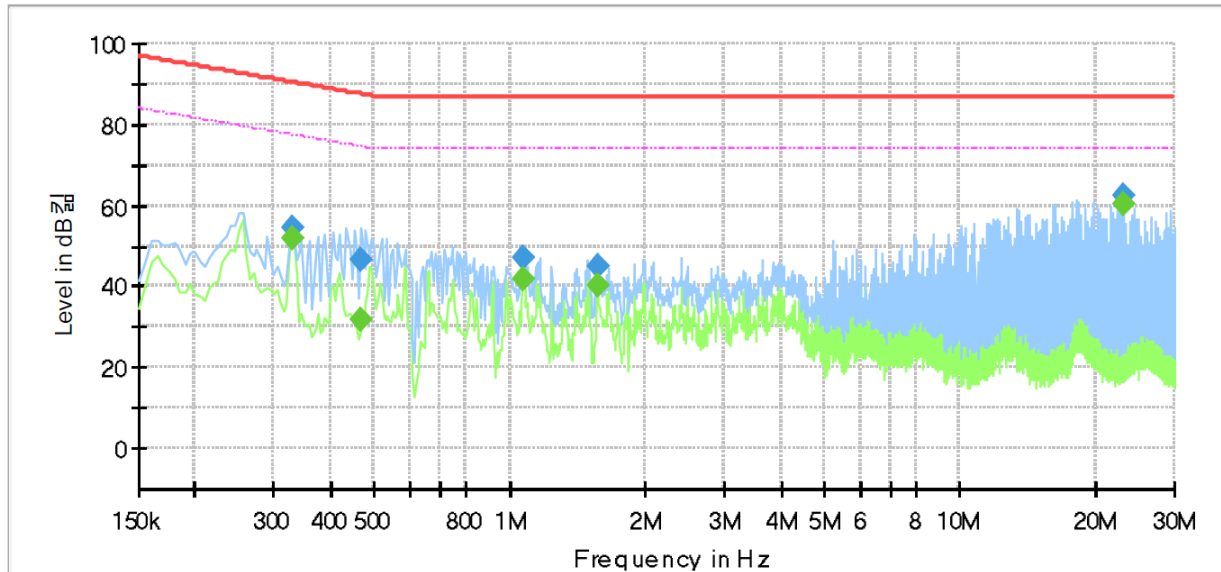
The results shown in this test report refer only to the sample(s) tested unless otherwise stated.

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

[100 Mbps]

Common Information

Test Description: Telecommunication Emission
Model No.: XNV-6120P
Mode: POE_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)
0.330000	---	51.99	77.45	25.46	1000.0	9.000	Single Line	21.0
0.330000	54.37	---	90.45	36.08	1000.0	9.000	Single Line	21.0
0.465000	---	31.60	74.60	43.00	1000.0	9.000	Single Line	20.7
0.465000	46.83	---	87.60	40.77	1000.0	9.000	Single Line	20.7
1.075000	---	42.09	74.00	31.91	1000.0	9.000	Single Line	20.2
1.075000	47.07	---	87.00	39.93	1000.0	9.000	Single Line	20.2
1.570000	---	40.30	74.00	33.70	1000.0	9.000	Single Line	20.0
1.570000	45.26	---	87.00	41.74	1000.0	9.000	Single Line	20.0
23.130000	---	60.33	74.00	13.67	1000.0	9.000	Single Line	20.5
23.130000	62.34	---	87.00	24.66	1000.0	9.000	Single Line	20.5

◆ 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 + Pulse Limiter FACTOR))

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.

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

Radiated Electric Field Emissions(Below 1 GHz)

- AC 24 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]
215.27	15.00	H	4.00	12.02	3.32	30.34	40.00	9.66
215.56	15.20	V	1.00	12.02	3.32	30.54	40.00	9.46
239.15	15.80	V	1.02	12.34	3.58	31.72	47.00	15.28
250.67	16.40	H	3.98	12.50	3.70	32.60	47.00	14.40
299.15	16.90	V	1.01	13.40	4.10	34.40	47.00	12.60
333.68	16.80	H	3.99	14.16	4.20	35.16	47.00	11.84

* H : Horizontal, V : Vertical

◆ Calculation

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

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

Correction Factor : ANT FACTOR + Cable loss

- 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]
209.80	17.00	V	1.00	11.94	3.26	32.20	40.00	7.80
216.18	15.20	H	4.00	12.03	3.33	30.56	40.00	9.44
250.62	15.80	V	1.02	12.50	3.70	32.00	47.00	15.00
312.72	16.20	V	1.01	13.70	4.14	34.04	47.00	12.96
334.28	15.10	H	3.98	14.17	4.20	33.47	47.00	13.53
399.99	14.00	H	3.99	15.61	4.60	34.21	47.00	12.79

* H : Horizontal, V : Vertical

◆ Calculation

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

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

Correction Factor : ANT FACTOR + Cable loss

**KES Co., Ltd.**

C-3701, Simin-daero 365-40,
Dongan-gu, Anyang-si, Gyeonggi-do, 14057, Korea
Tel: +82-31-425-6200 / Fax: +82-31-424-0450
www.kes.co.kr

Report No.:

KES-E1-17T0306-R1

Page (27) of (48)

- 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]
42.12	17.50	V	1.00	12.45	1.57	31.52	40.00	8.48
42.92	15.50	H	4.00	12.64	1.58	29.72	40.00	10.28
76.56	19.50	V	1.01	7.41	2.02	28.93	40.00	11.07
250.00	16.40	H	3.98	12.49	3.69	32.58	47.00	14.42
311.00	17.30	V	1.02	13.66	4.13	35.09	47.00	11.91
350.00	16.80	H	3.99	14.52	4.24	35.56	47.00	11.44

* H : Horizontal, V : Vertical

◆ Calculation

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

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

Correction Factor : ANT FACTOR + Cable loss

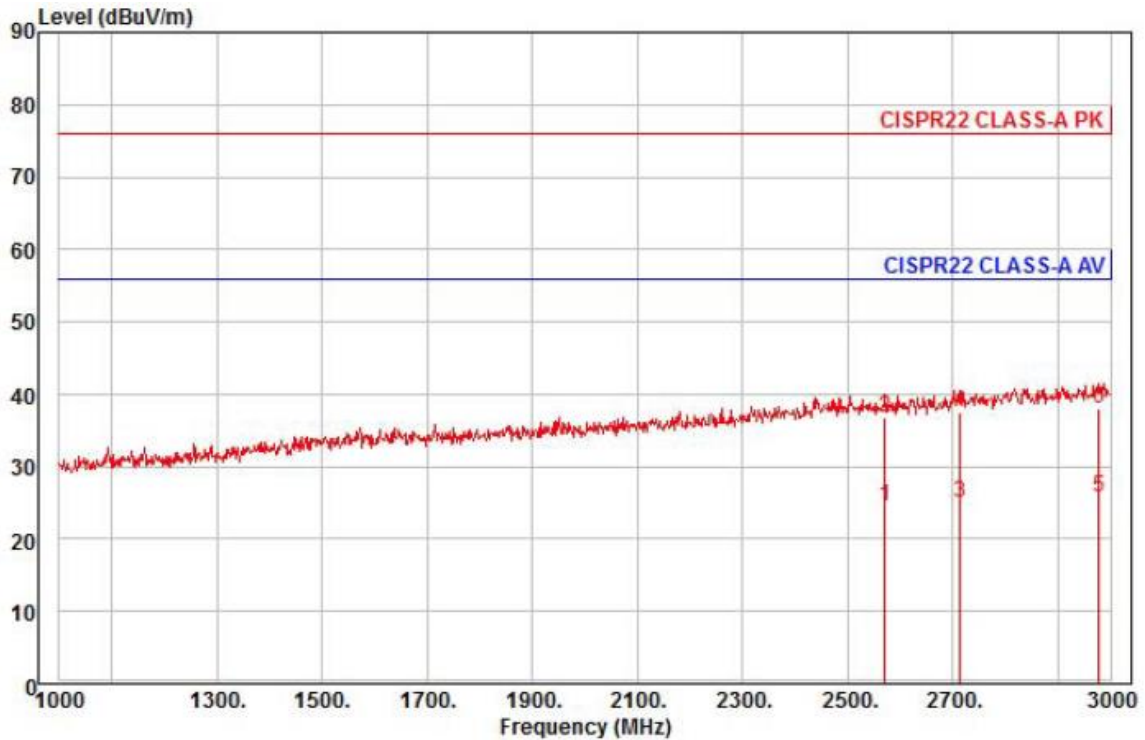
This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.

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

Radiated Electric Field Emissions(Above 1 GHz)

- AC 24 V Mode



Site : chamber
Condition: CISPR22 CLASS-A PK 3m STLP9149(9149-255,2016-05-17) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : XNV-6120P
Mode : AC 24 V
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	2572.00	25.54	27.89	10.68	39.62	1	56.00	-31.51	horizontal	Average
2	2572.00	37.86	27.89	10.68	39.62	1	76.00	-39.19	horizontal	Peak
3	2714.00	25.23	28.52	11.02	39.78	251	56.00	-31.01	horizontal	Average
4	2714.00	37.76	28.52	11.02	39.78	251	76.00	-38.48	horizontal	Peak
5 pp	2978.00	24.45	29.69	11.65	40.08	235	56.00	-30.29	horizontal	Average
6 pk	2978.00	36.87	29.69	11.65	40.08	235	76.00	-37.87	horizontal	Peak

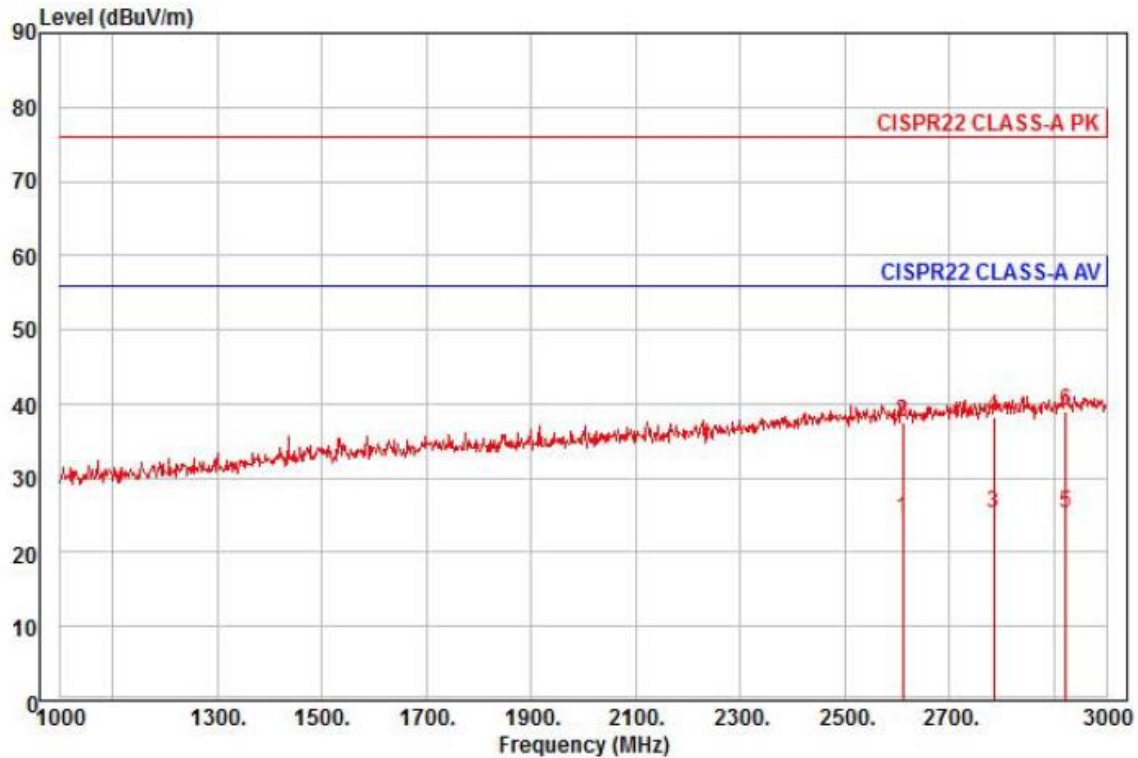
◆ Calculation

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

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.
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



Site : chamber
Condition: CISPR22 CLASS-A PK 3m STLP9149(9149-255,2016-05-17) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : XNV-6120P
Mode : AC 24 V
Memo : 1 ~ 3 GHz

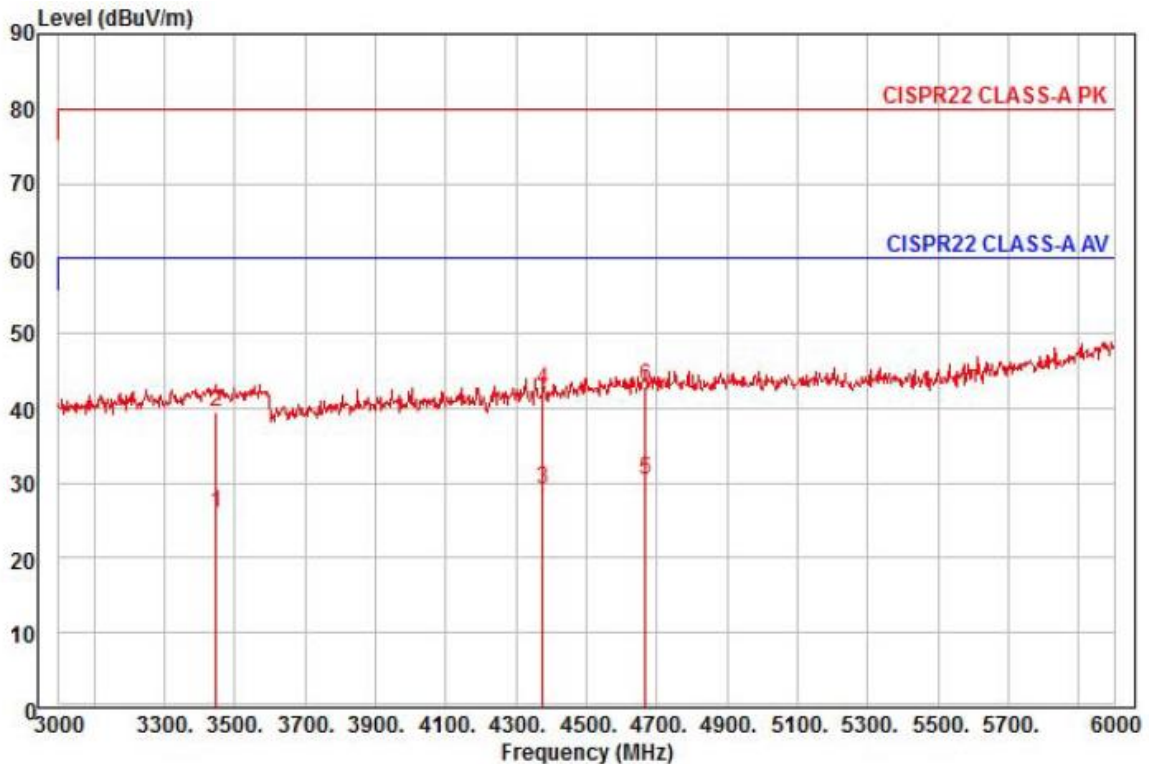
	Freq	Read Level	Ant Factor	Cable Loss	Preamp Factor	TPos	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	2612.00	25.43	28.07	10.77	39.66	267	56.00	-31.39	vertical	Average
2	2612.00	38.46	28.07	10.77	39.66	267	76.00	-38.36	vertical	Peak
3	2786.00	25.06	28.84	11.20	39.86	115	56.00	-30.76	vertical	Average
4	2786.00	38.14	28.84	11.20	39.86	115	76.00	-37.68	vertical	Peak
5 pp	2922.00	24.35	29.44	11.52	40.02	307	56.00	-30.71	vertical	Average
6 pk	2922.00	38.03	29.44	11.52	40.02	307	76.00	-37.03	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,
Cable Loss : Cable loss, Preamp Factor : Preamp Factor

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.
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



Site : chamber
Condition: CISPR22 CLASS-A PK 3m STLP9149(9149-255,2016-05-17) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : XNV-6120P
Mode : AC 24 V
Memo : 3 ~ 6 GHz

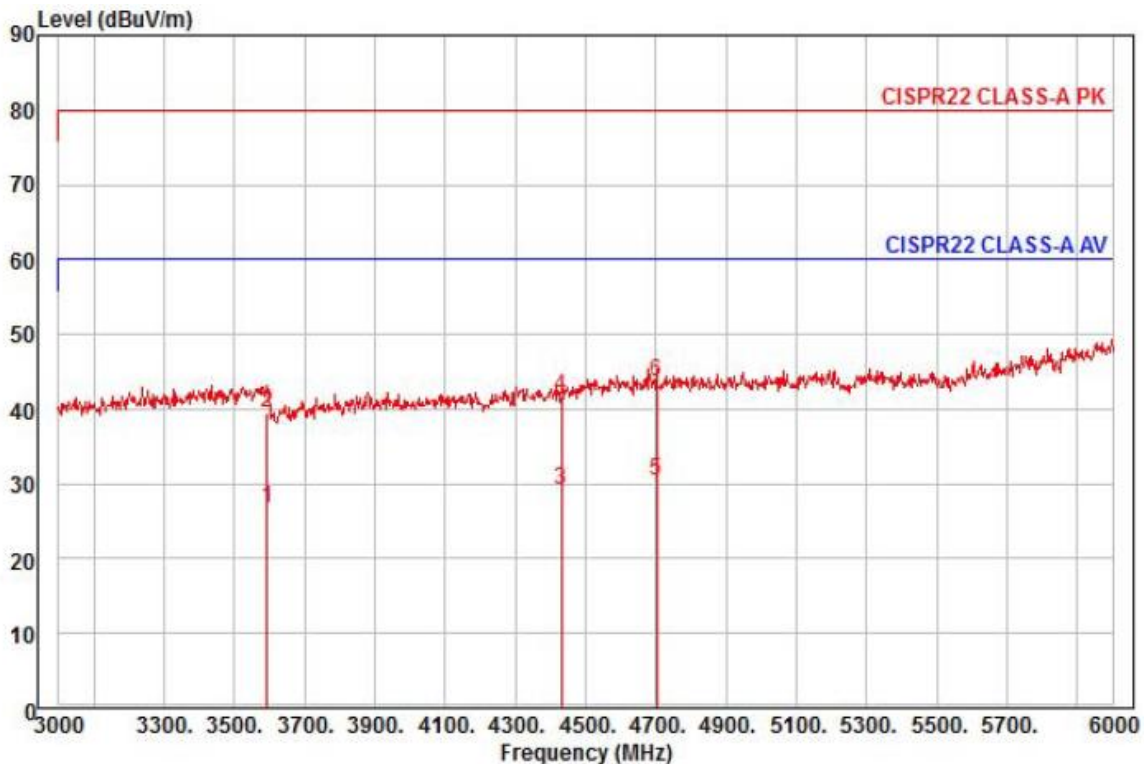
		Read	Ant	Cable	Preamp	TPos	Limit	Over		
	Freq	Level	Factor	Loss	Factor		Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	3447.00	24.02	30.24	12.53	40.80	218	60.00	-34.01	horizontal	Average
2	3447.00	37.50	30.24	12.53	40.80	218	80.00	-40.53	horizontal	Peak
3	4377.00	23.26	32.45	14.23	40.75	28	60.00	-30.81	horizontal	Average
4	4377.00	36.40	32.45	14.23	40.75	28	80.00	-37.67	horizontal	Peak
5 pp	4668.00	23.26	32.94	14.81	40.60	110	60.00	-29.59	horizontal	Average
6 pk	4668.00	35.85	32.94	14.81	40.60	110	80.00	-37.00	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

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.
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



Site : chamber
Condition: CISPR22 CLASS-A PK 3m STLP9149(9149-255,2016-05-17) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : XNV-6120P
Mode : AC 24 V
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	3594.00	24.30	30.50	12.79	40.85	103	60.00	-33.26	vertical
2	3594.00	37.04	30.50	12.79	40.85	103	80.00	-40.52	vertical
3	4431.00	23.02	32.61	14.33	40.76	69	60.00	-30.80	vertical
4	4431.00	35.56	32.61	14.33	40.76	69	80.00	-38.26	vertical
5 pp	4701.00	23.20	32.97	14.88	40.57	136	60.00	-29.52	vertical
6 pk	4701.00	36.30	32.97	14.88	40.57	136	80.00	-36.42	vertical

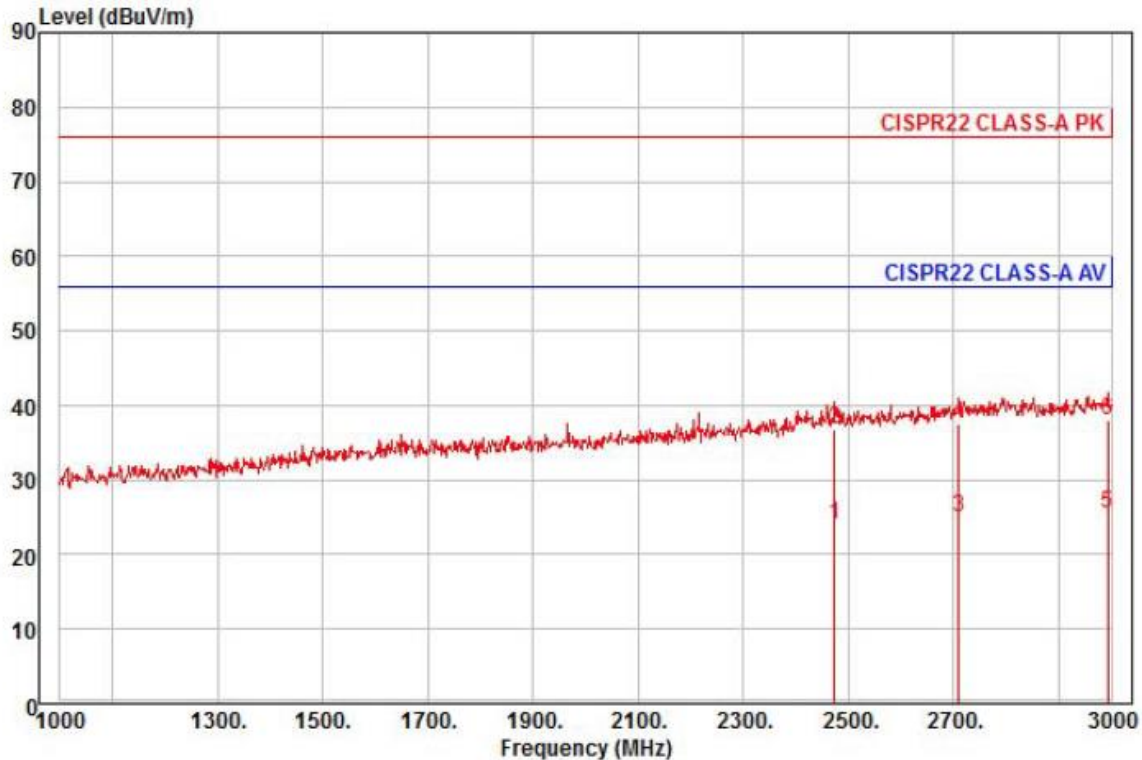
◆ Calculation

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

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.
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

- DC 12 V Mode



Site : chamber
Condition: CISPR22 CLASS-A PK 3m STLP9149(9149-255,2016-05-17) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : XNV-6120P
Mode : DC 12 V
Memo : 1 ~ 3 GHz

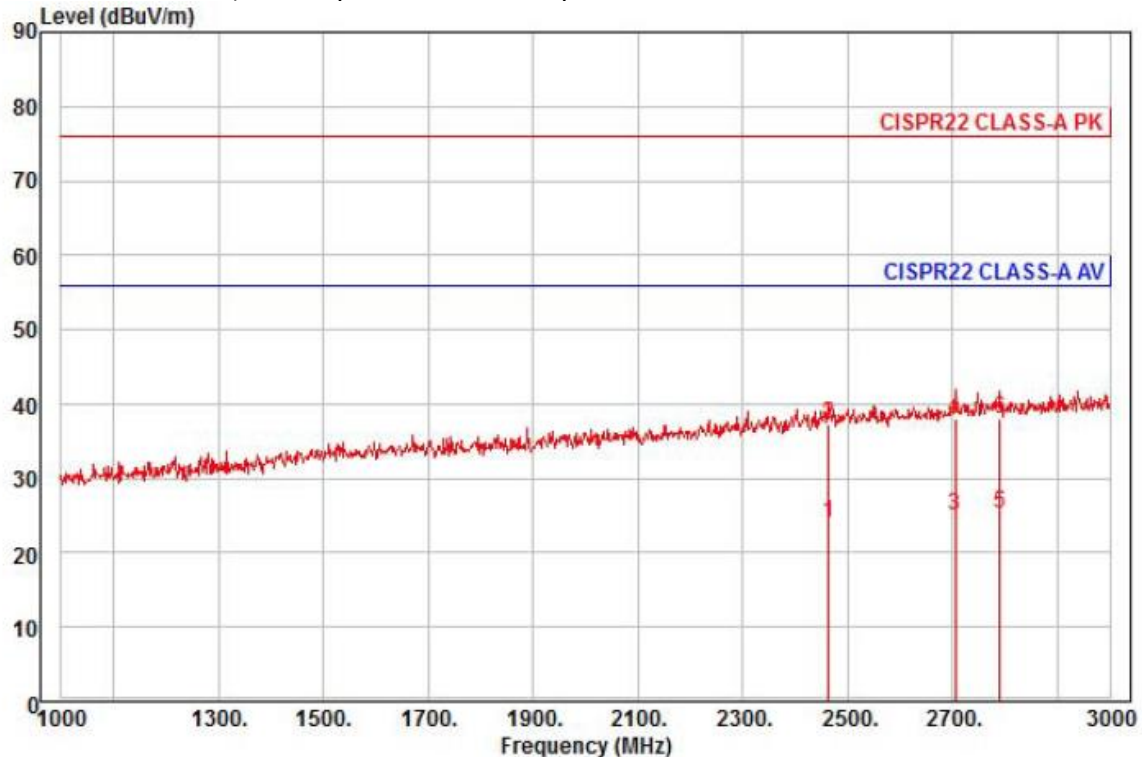
	Freq	Read Level	Ant Factor	Cable Loss	Preamp Factor	TPos	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	2474.00	25.67	27.47	10.48	39.51	49	56.00	-31.89	horizontal	Average
2	2474.00	38.33	27.47	10.48	39.51	49	76.00	-39.23	horizontal	Peak
3	2710.00	25.26	28.50	11.01	39.78	155	56.00	-31.01	horizontal	Average
4	2710.00	37.88	28.50	11.01	39.78	155	76.00	-38.39	horizontal	Peak
5 pp	2994.00	24.11	29.76	11.68	40.10	333	56.00	-30.55	horizontal	Average
6 pk	2994.00	36.57	29.76	11.68	40.10	333	76.00	-38.09	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 STLP9149(9149-255,2016-05-17) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : XNV-6120P
Mode : DC 12 V
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	2464.00	25.59	27.43	10.46	39.49	146	56.00	-32.01	vertical	Average
2	2464.00	38.99	27.43	10.46	39.49	146	76.00	-38.61	vertical	Peak
3	2706.00	25.22	28.48	11.00	39.77	267	56.00	-31.07	vertical	Average
4	2706.00	38.29	28.48	11.00	39.77	267	76.00	-38.00	vertical	Peak
5 pp	2790.00	25.03	28.86	11.21	39.87	356	56.00	-30.77	vertical	Average
6 pk	2790.00	37.84	28.86	11.21	39.87	356	76.00	-37.96	vertical	Peak

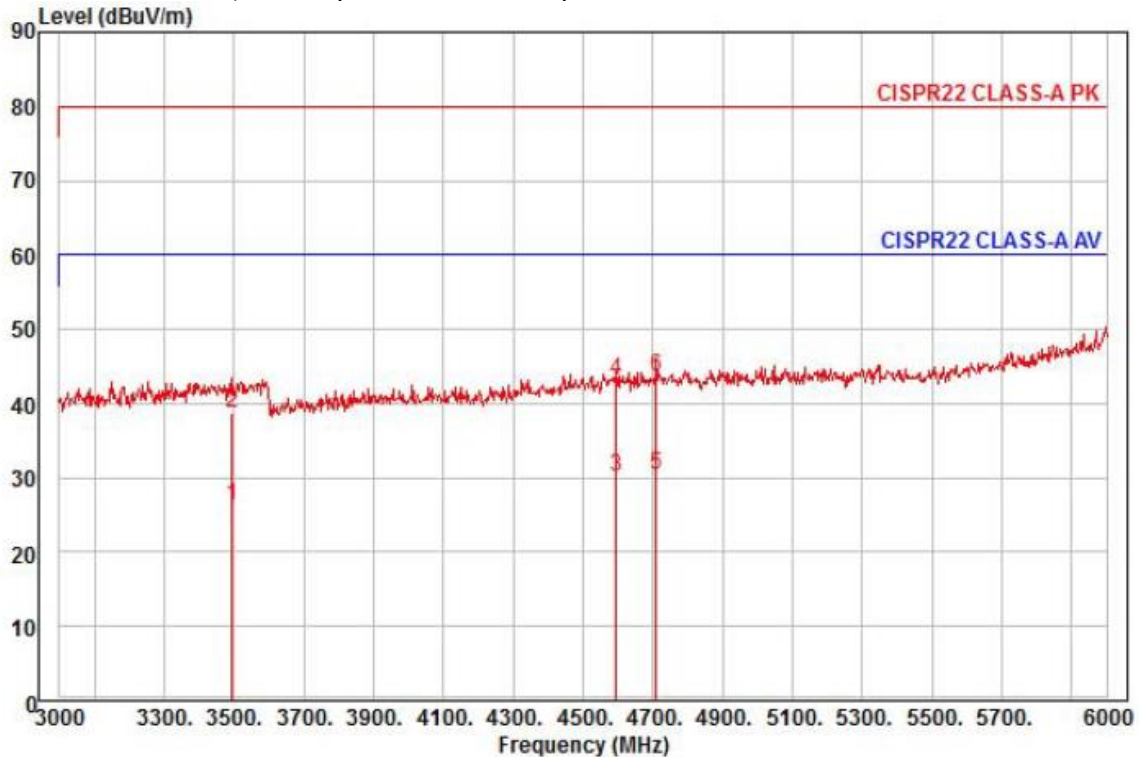
◆ Calculation

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,

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.
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

Cable Loss : Cable loss, Preamp Factor : Preamp Factor



Site : chamber
Condition: CISPR22 CLASS-A PK 3m STLP9149(9149-255,2016-05-17) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : XNV-6120P
Mode : DC 12 V
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	3495.00	24.20	30.29	12.62	40.87	73	60.00	-33.76	horizontal	Average
2	3495.00	36.80	30.29	12.62	40.87	73	80.00	-41.16	horizontal	Peak
3	4596.00	23.31	32.88	14.65	40.67	126	60.00	-29.83	horizontal	Average
4	4596.00	36.29	32.88	14.65	40.67	126	80.00	-36.85	horizontal	Peak
5 pp	4710.00	23.11	32.98	14.90	40.56	235	60.00	-29.57	horizontal	Average
6 pk	4710.00	36.43	32.98	14.90	40.56	235	80.00	-36.25	horizontal	Peak

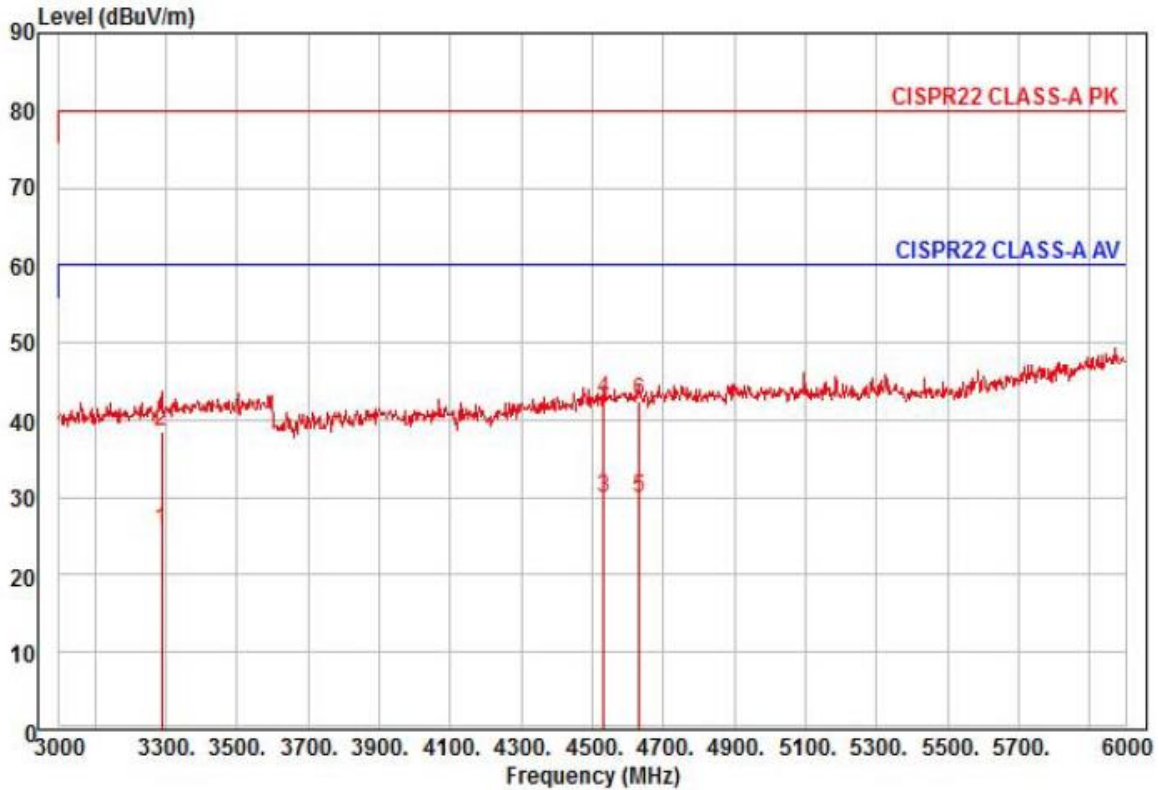
◆ Calculation

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,

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.
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

Cable Loss : Cable loss, Preamp Factor : Preamp Factor



Site : chamber
Condition: CISPR22 CLASS-A PK 3m STLP9149(9149-255,2016-05-17) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : XNV-6120P
Mode : DC 12 V
Memo : 3 ~ 6 GHz

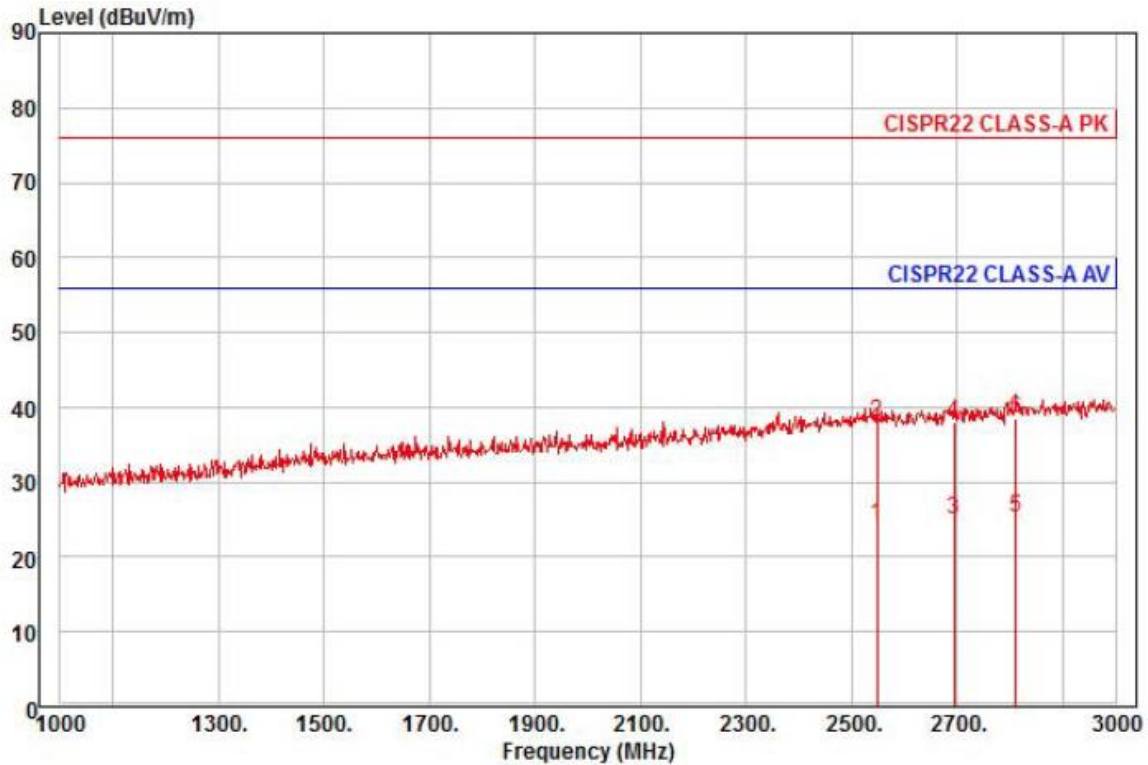
	Read Freq	Ant Level	Ant Factor	Cable Loss	Preamp Factor	TPos	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	3288.00	23.95	30.08	12.23	40.55	24	60.00	-34.29	vertical	Average
2	3288.00	36.80	30.08	12.23	40.55	24	80.00	-41.44	vertical	Peak
3	4533.00	23.19	32.83	14.53	40.74	331	60.00	-30.19	vertical	Average
4 pk	4533.00	36.09	32.83	14.53	40.74	331	80.00	-37.29	vertical	Peak
5 pp	4632.00	22.94	32.91	14.73	40.64	250	60.00	-30.06	vertical	Average
6	4632.00	35.46	32.91	14.73	40.64	250	80.00	-37.54	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
- PoE Mode



Site : chamber
Condition: CISPR22 CLASS-A PK 3m STLP9149(9149-255,2016-05-17) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : XNV-6120P
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	2548.00	25.51	27.78	10.63	39.59	50	56.00	-31.67	horizontal	Average
2	2548.00	39.18	27.78	10.63	39.59	50	76.00	-38.00	horizontal	Peak
3	2694.00	25.26	28.43	10.97	39.76	5	56.00	-31.10	horizontal	Average
4	2694.00	38.28	28.43	10.97	39.76	5	76.00	-38.08	horizontal	Peak
5 pp	2812.00	24.96	28.96	11.26	39.89	27	56.00	-30.71	horizontal	Average
6 pk	2812.00	38.16	28.96	11.26	39.89	27	76.00	-37.51	horizontal	Peak

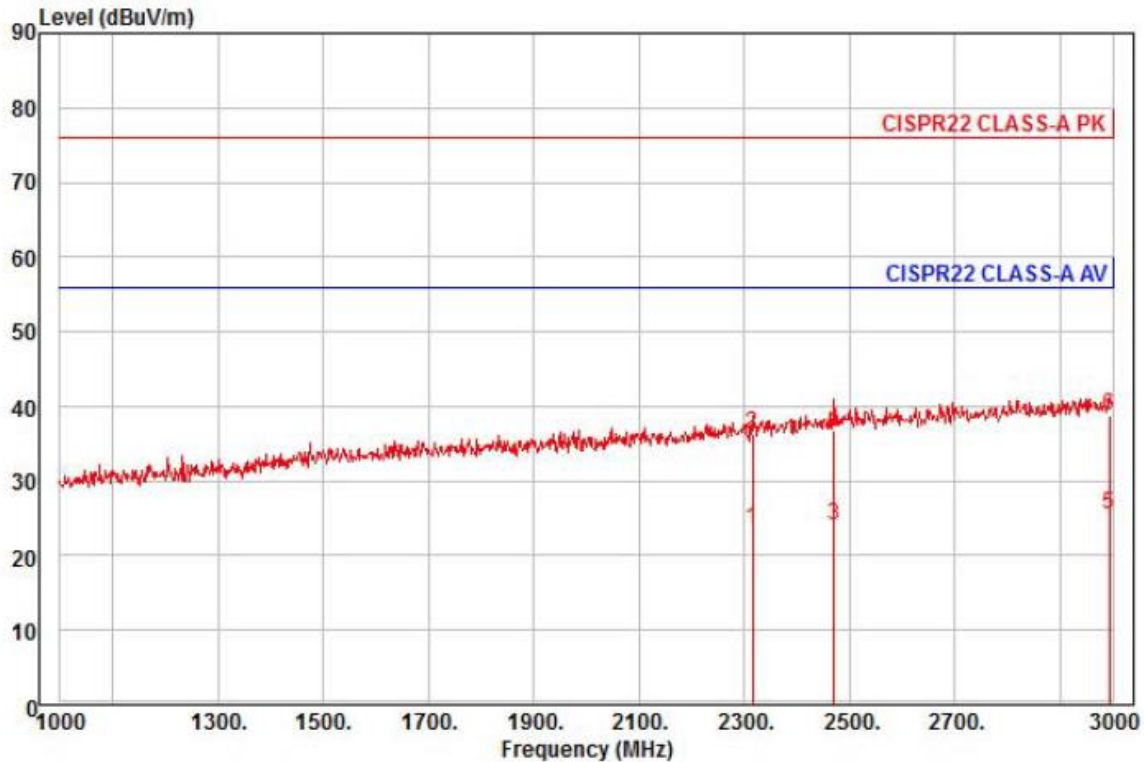
◆ Calculation

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,

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.
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

Cable Loss : Cable loss, Preamp Factor : Preamp Factor



Site : chamber
Condition: CISPR22 CLASS-A PK 3m STLP9149(9149-255,2016-05-17) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : XNV-6120P
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	2316.00	26.07	26.85	10.10	39.42	148	56.00	-32.40	vertical	Average
2	2316.00	38.79	26.85	10.10	39.42	148	76.00	-39.68	vertical	Peak
3	2470.00	25.58	27.45	10.47	39.50	281	56.00	-32.00	vertical	Average
4	2470.00	38.27	27.45	10.47	39.50	281	76.00	-39.31	vertical	Peak
5 pp	2994.00	24.25	29.76	11.68	40.10	118	56.00	-30.41	vertical	Average
6 pk	2994.00	37.47	29.76	11.68	40.10	118	76.00	-37.19	vertical	Peak

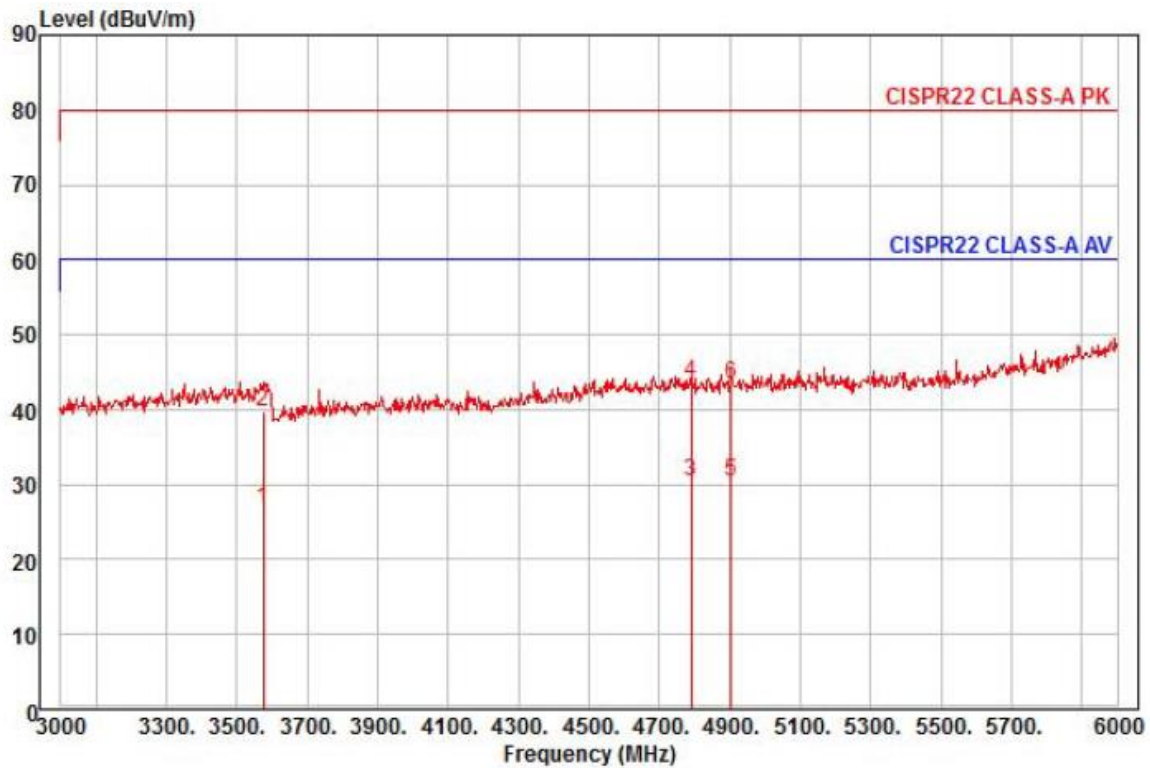
◆ Calculation

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,

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.
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

Cable Loss : Cable loss, Preamp Factor : Preamp Factor



Site : chamber
Condition: CISPR22 CLASS-A PK 3m STLP9149(9149-255,2016-05-17) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : XNV-6120P
Mode : POE
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	3576.00	24.48	30.46	12.76	40.85	55	60.00	-33.15	horizontal Average
2	3576.00	37.32	30.46	12.76	40.85	55	80.00	-40.31	horizontal Peak
3	4791.00	22.74	33.05	15.08	40.48	136	60.00	-29.61	horizontal Average
4 pk	4791.00	35.89	33.05	15.08	40.48	136	80.00	-36.46	horizontal Peak
5 pp	4902.00	22.48	33.15	15.21	40.37	307	60.00	-29.53	horizontal Average
6	4902.00	35.33	33.15	15.21	40.37	307	80.00	-36.68	horizontal Peak

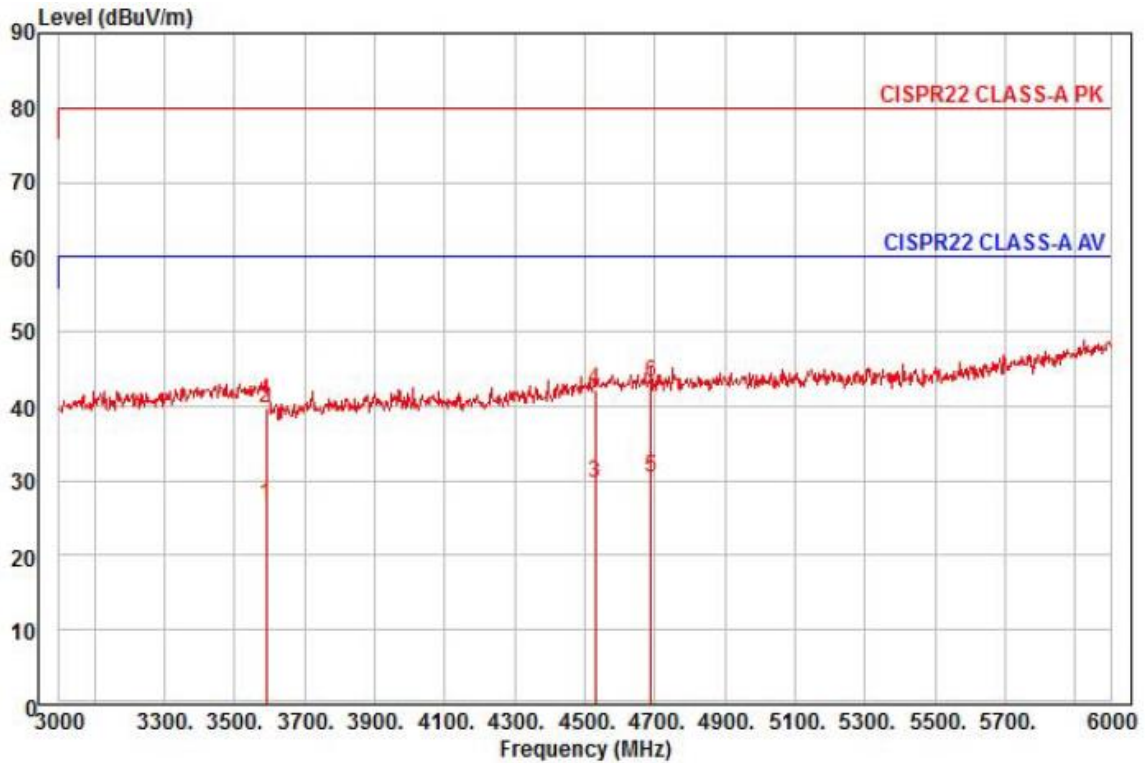
◆ Calculation

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,

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.
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

Cable Loss : Cable loss, Preamp Factor : Preamp Factor



Site : chamber
Condition: CISPR22 CLASS-A PK 3m STLP9149(9149-255,2016-05-17) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : XNV-6120P
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	3591.00	24.36	30.49	12.79	40.85	83	60.00	-33.21	vertical	Average
2	3591.00	37.33	30.49	12.79	40.85	83	80.00	-40.24	vertical	Peak
3	4530.00	23.04	32.83	14.52	40.74	235	60.00	-30.35	vertical	Average
4	4530.00	35.46	32.83	14.52	40.74	235	80.00	-37.93	vertical	Peak
5 pp	4689.00	23.10	32.96	14.85	40.58	27	60.00	-29.67	vertical	Average
6 pk	4689.00	36.00	32.96	14.85	40.58	27	80.00	-36.77	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,

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.
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

Cable Loss : Cable loss, Preamp Factor : Preamp Factor
Test Setup Photos and Configuration

Conducted Voltage Emissions

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.
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

Conducted Telecommunication Emissions



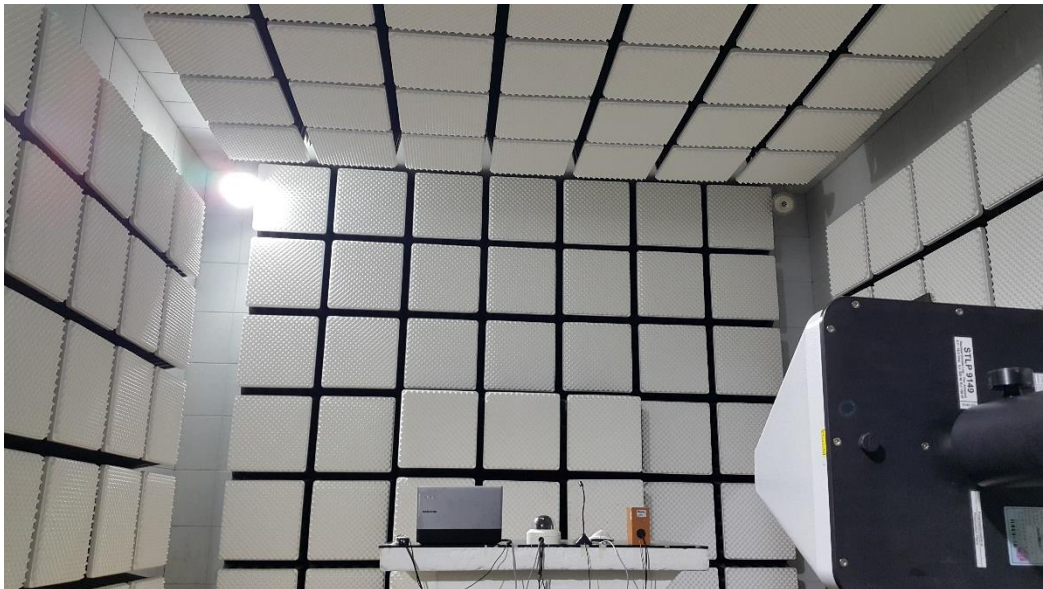
This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.
The results shown in this test report refer only to the sample(s) tested unless otherwise stated.
The authenticity of the test report, contact kes@kes.co.kr

Radiated Electric Field Emissions(Below 1 GHz)



This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.
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

Radiated Electric Field Emissions(Above 1 GHz)



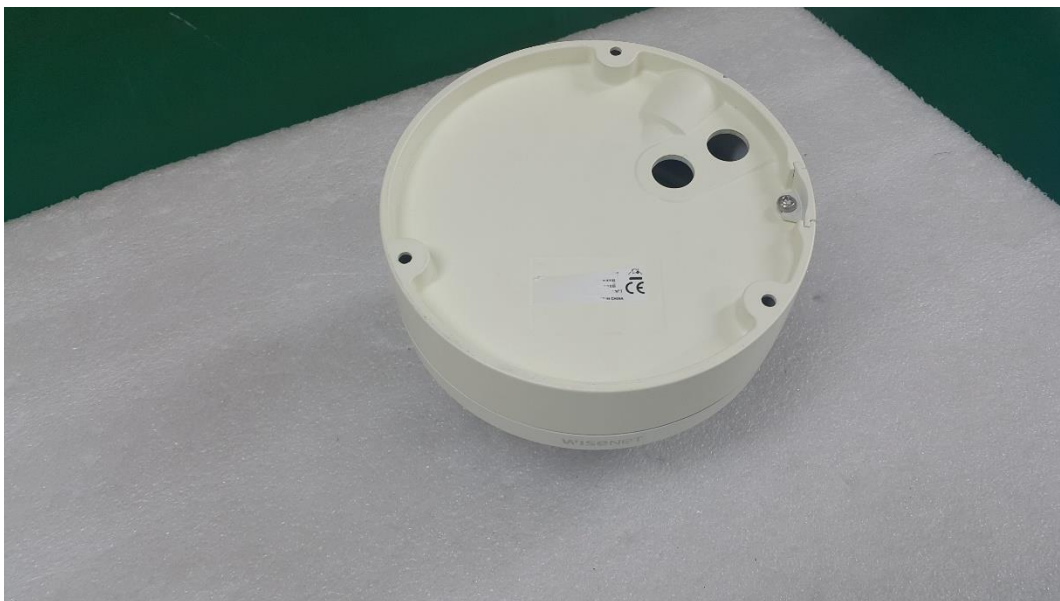
This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.
The results shown in this test report refer only to the sample(s) tested unless otherwise stated.
The authenticity of the test report, contact kes@kes.co.kr

EUT External Photographs

(Top)



(Bottom)



This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.
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

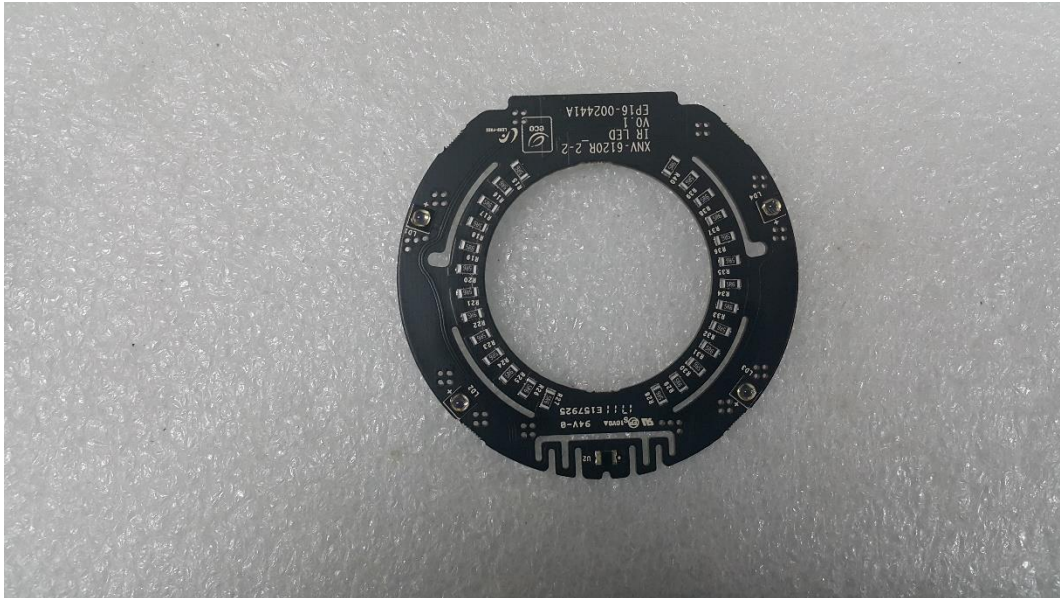
EUT Internal Photographs

(Internal View)

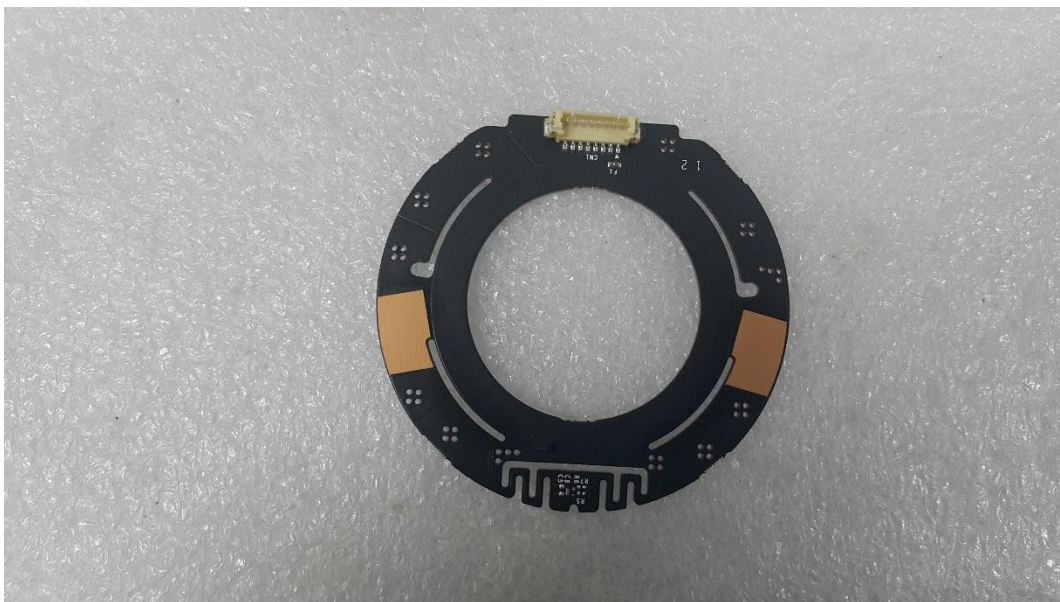


EUT Internal View – LED Board

(Top)

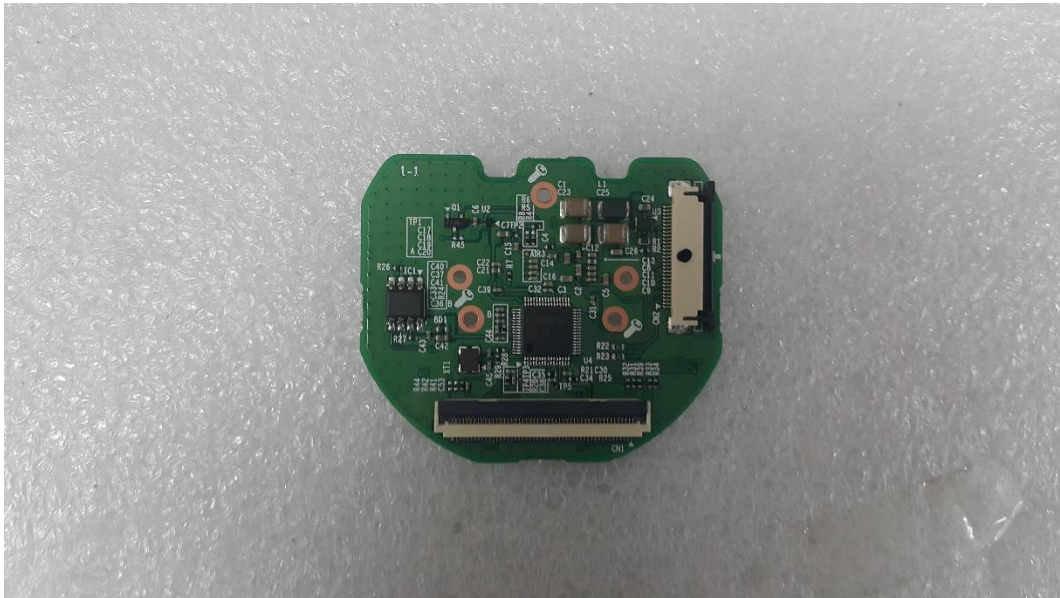


(Bottom)

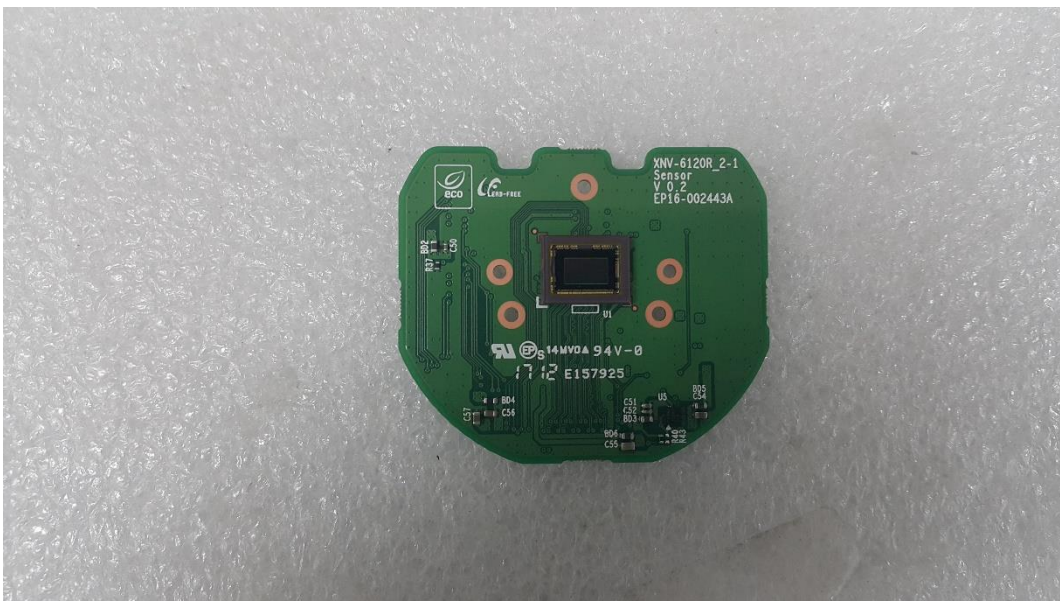


EUT Internal View – Lens Board

(Top)

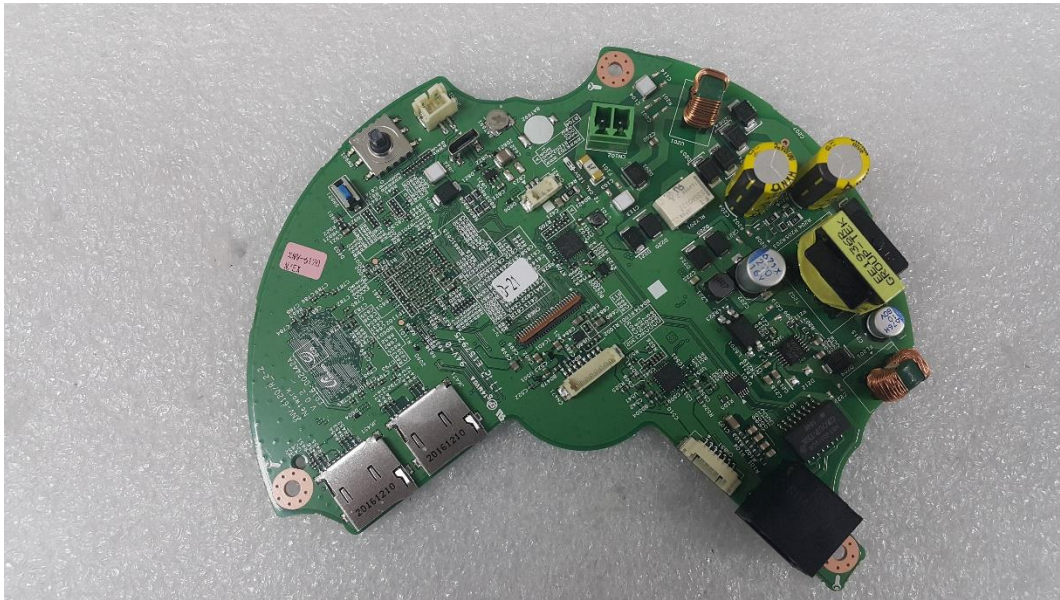


(Top)



EUT Internal View –Board

(Top)



(Top)

