



EMC TEST REPORT For VCCI

Test Report No. : KES-E1-16T0639
Date of Issue : Dec, 12, 2016
Product name : NETWORK CAMERA
Model/Type No. : XNB-6000N
Variant Model : -
Applicant : Hanwha Techwin Co., Ltd.
Applicant Address : Changwon-daero, Seongsan-gu Changwon-si, Gyeongsangnam-do
Manufacturer : Tianjin Samsung Techwin Opto-Electronic Co., Ltd.
Manufacturer Address : No.11 Weiliu Rd, Micro-Electronic Industrial Park, TEDA, Tianjin, 300385, People's Republic of China
Date of Receipt : Nov, 23, 2016
Test date : Dec, 05, 2016 ~ Dec, 07, 2016
Test Results : ☒ **In Compliance** ☐ **Not in Compliance**

Tested by

Dae Hyun, Kim
EMC Test Engineer

Reviewed by

Dong-Hun, Jang
EMC Technical Manager

**KES Co., Ltd.**

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KES-E1-16T0639
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REPORT REVISION HISTORY

Date	Test Report No.	Revision History
Dec. 12, 2016	KES-E1-16T0639	Issued

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1.0 General Product Description

Main Specifications of EUT are:

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 : 0.1 lux(F1.2, 1/30sec) B/W : 0 Lux (IR LED On)
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)	-
Max. Aperture Ratio	-
Angular Field of View	-
Min. Object Distance	-
Focus Control	Simple focus / Manual, Remote control via network, Button control (Manual, Simple focus)
Lens Type	Manual / DC Auto Iris, P-iris
Mount Type	C/CS
Pan / Tilt / Rotate	
Pan / Tilt / Rotate range	-
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 (Built-in Gyro sensor)
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 / Medle / High / Manual
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°
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	-

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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), Built-in MIC. Max output level : 1Vrms Supply voltage: 2.5VDC(4mA), Input impedance: approx. 2K Ohm
Audio out	Line out, Max output level: 1 Vrms
Fan / Heater	Off / On / Auto / Schedule via web viewer
Pixel Counter	Support
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, 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 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 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
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 Interface	ONVIF Profile S/G SUNAPI(HTTP API) Open Platform

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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	-10°C ~ +55°C (-14°F ~ +131°F) / Less than 90% RH
Storage Temperature / Humidity	-50°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH
Ingress Protection	-
Vandal Resistance	-
Electrical	
Input Voltage / Current	24VAC ± 10%, 12VDC ± 10%, PoE(IEEE802.3af)
Power Consumption	TBD
Mechanical	
Color / Material	Black, Ivory / Plastic
Dimension (WxHxD)	TBD
Weight	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 ☒ 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	XNB-6000N	-	Tianjin Samsung Techwin Opto-Electronic Co.,Ltd.	E.U.T

1.5 Support Equipments

Description	Model Number	Serial Number	Manufacturer	Remarks
PoE Adapter	ANY4805C-LT1	10H300002	ANY ELECTRONICS CO., LTD	-
Speaker	BR10000A CUVE	-	BEIJING EDIFIER HI-TECH GROUP.	-
Mobile Phone	A1688	-	Apple Inc.	-
Micro SD Card	-	-	-	-
Notebook	RT3290LE	5CD242B043	HP	-
Notebook Adapter	Series PPP009L-E	WCNWVOA3U3G31S	LITE-ON TECHNOLOGY (CHANGZHOU) Co., Ltd.	-
Alarm Jig	-	-	-	-

1.6 External I/O Cabling

- AC 24 V, 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(LAN)	Notebook	RJ-45(LAN)	3.0	U
	Alarm	Alarm Jig	Alarm	3.0	U
	Audio In	Mobile Phone	Audio Out	1.3	U
	Audio Out	Speaker	Audio In	1.6	U
	Micro SD Card Slot	Micro SD Card	Micro SD Card Slot	-	-

- PoE Mode

Start		END		Cable Spec.	
Description	I/O Port	Description	I/O Port	Length	Shield
NETWORK CAMERA (E.U.T)	Alarm	Alarm Jig	Alarm	3.0	U
	Audio In	Mobile Phone	Audio Out	1.3	U
	Audio Out	Speaker	Audio In	1.6	U
	Micro SD Card Slot	Micro SD Card	Micro SD Card Slot	-	-
	RJ-45(PoE)	PoE Adapter	RJ-45(PoE)	3.0	U
PoE Adapter	RJ-45(LAN)	Notebook	RJ-45(LAN)	2.0	U

* Unshielded = U, Shielded = S



1.7 EUT Operating Mode(s)

Test mode	Normal operating
AC 24 V	E.U.T Monitoring , Ping test
DC 12 V	
PoE	

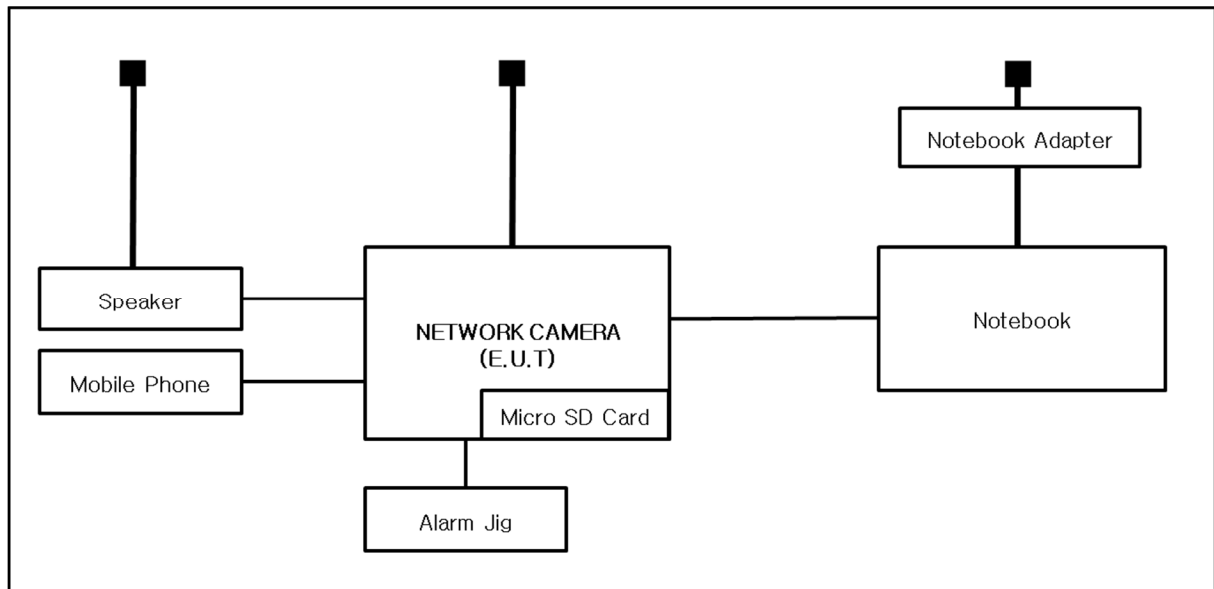
E.U.T Test operating S/W		
Name	Version	Manufacture Company
WebViewer	-	Hanwha Techwin Co., Ltd.

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

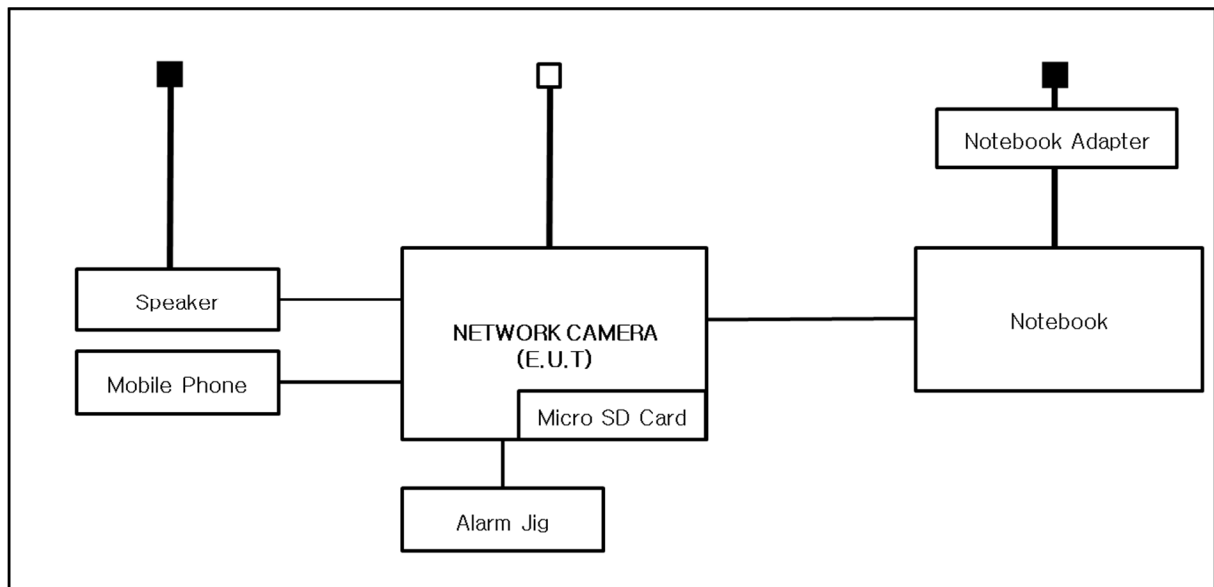
1.8 Configuration

■ AC 24 V Main
 □ DC 12 V Main

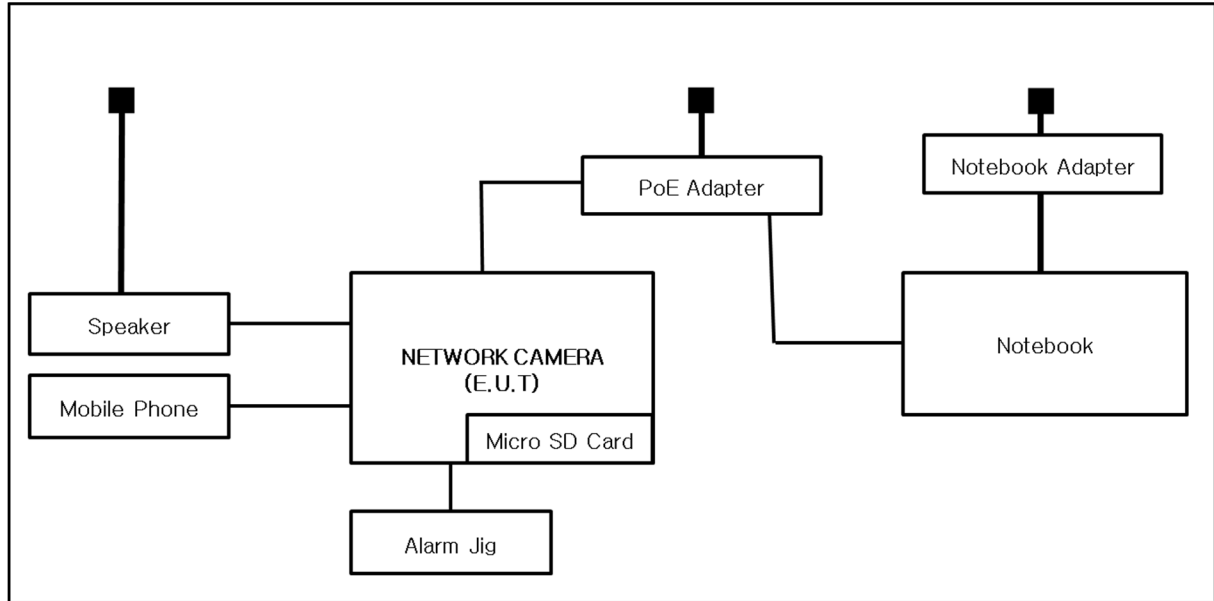
- AC 24 V Mode



- DC 12 V Mode



- PoE Mode



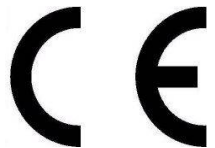
1.9 Calibration Details of Equipment Used for Measurement

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. The sites are constructed in conformance with the requirements of ANSI C63.4 and CISPR Publication 22.

1.11 Laboratory Accreditations and Listings

Country	Agency	Scope of Accreditation	Logo
USA	FCC	3 & 10 meter Open Area Test Sites and one conducted site to perform FCC Part 15/18 measurements.	
JAPAN	VCCI	Mains Ports Conducted Interference Measurement, Telecommunication Ports Conducted Disturbance Measurement and Radiation 10 meter site, Facility for measuring radiated disturbance above 1 GHz	 R-4308, C-4798, T-2311, G-914
KOREA	MSIP	EMI (10 meter Open Area Test Site and two conducted sites) Radio(3 & 10 meter Open Area Test Sites and one conducted site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	 KR0100
Canada	IC	3 & 10 meter Open Area Test Sites and one conducted site	 4769B-1
Europe	CE	EMI (10 meter Open Area Test Site and two conducted sites) Radio(3 & 10 meter Open Area Test Sites and one conducted site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	
International	KOLAS	EMI (10 meter Open Area Test Site and two conducted sites) Radio(3 & 10 meter Open Area Test Sites and one conducted site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	



2.0 Test Regulations

The emissions tests were performed according to following regulations:

☐ **EMC – Directive 2014/30/EU**

☐ EN 61000-6-3:2011

☐ EN 61000-6-1:2007

☐ EN 61000-6-4:2007 +A1:2011

☐ EN 61000-6-2:2005

☐ EN 55011:2007 +A1:2010

☐ Group 1
☐ Class A

☐ Group 2
☐ Class B

☐ EN 55014-1:2006 +A2:2011

☐ EN 55014-2:1997 +A2:2008

☐ EN 55015:2013

☐ EN 61547 :2009

☐ EN 55022:2010

☐ Class A

☐ Class B

☐ EN 55024:2010 +A1:2015

☐ EN 50130-4:2011 +A1:2014

☐ EN 61000-3-2:2014

☐ EN 61000-3-3:2013

☐ EN 61326-1:2013



-
- | | | |
|---|---|----------------------------------|
| ☒ 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 | | |



2.1 Conducted Emissions Mains Power Ports

Test Date

Dec, 06, 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: 16,9 °C
Relative Humidity: 45,3 %

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

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, 06, 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: 16,9 °C

Relative Humidity: 45,3 %

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

Dec, 05, 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, 2018
☒	OATS	-	KES	-	-
☒	Antenna Mast	-	DAEIL EMC	-	-
☒	Turn Table	-	DAEIL EMC	-	-
☒	EMI Test S/W	N/A	N/A	N/A	N/A

Test Conditions

Temperature: 5,1 °C
Relative Humidity: 58,0 %

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, 07, 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, 24, 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: 16,4 °C

Relative Humidity: 36,3 %

Frequency Range of Measurement

1 GHz to 6 GHz

Instrument Settings

IF Band Width: 1 MHz

Test Results

The requirements are:

- ☒ PASS
☐ NOT PASS
☐ NOT APPLICABLE

Remarks

See Appendix A for test data.

APPENDIX A – TEST DATA

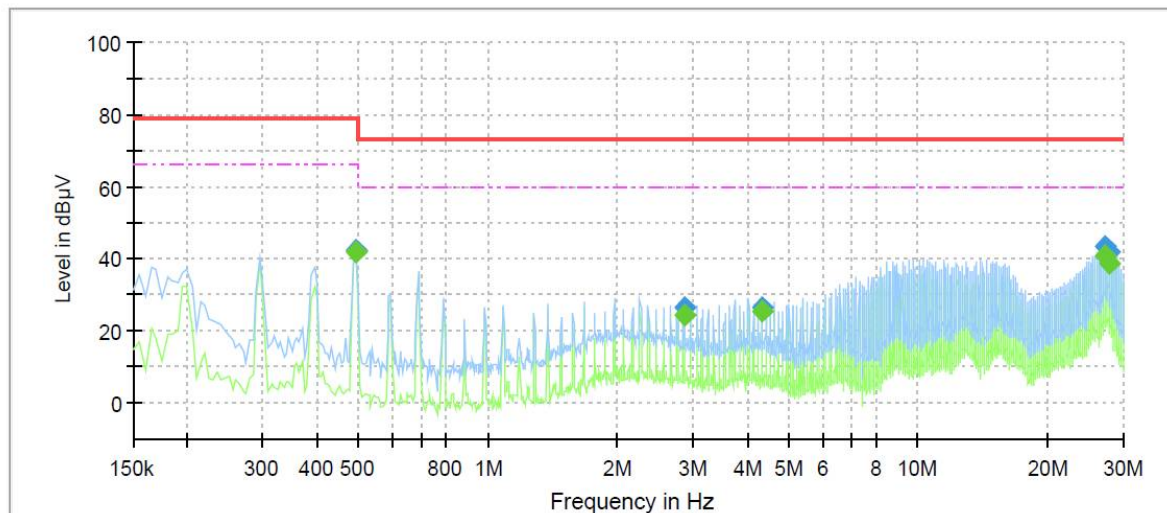
Conducted Emissions at Mains Power Ports

- AC 24 V Mode

[HOT]

Common Information

Test Description:	Conducted Emission
Model No.:	XNB-6000N
Mode	AC 24 V
Operator Name:	KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.495000	---	41.92	66.00	24.08	1000.0	9.000	L1	9.8
0.495000	42.55	---	79.00	36.45	1000.0	9.000	L1	9.8
2.860000	---	24.35	60.00	35.65	1000.0	9.000	L1	10.2
2.860000	26.47	---	73.00	46.53	1000.0	9.000	L1	10.2
4.335000	---	25.27	60.00	34.73	1000.0	9.000	L1	10.1
4.335000	26.74	---	73.00	46.26	1000.0	9.000	L1	10.1
27.295000	---	40.75	60.00	19.25	1000.0	9.000	L1	10.3
27.295000	43.49	---	73.00	29.51	1000.0	9.000	L1	10.3
27.785000	---	38.47	60.00	21.53	1000.0	9.000	L1	10.3
27.785000	41.67	---	73.00	31.33	1000.0	9.000	L1	10.3

◆ Calculation

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

QuasiPeak / CAverage : The Final Value

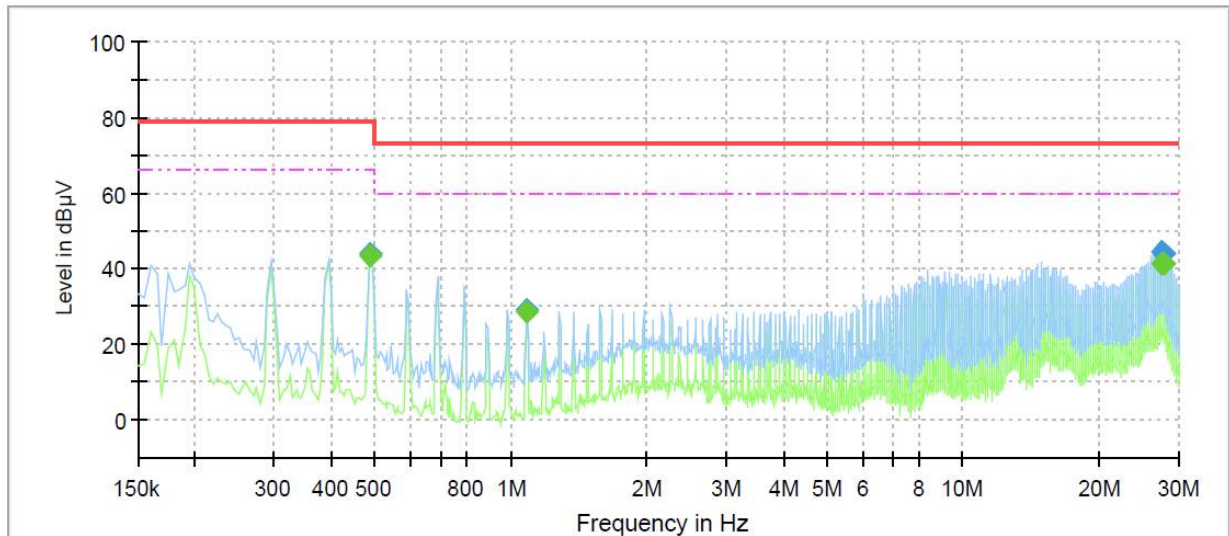
Reading Value : Not shown in the table.

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

[NEUTRAL]

Common Information

Test Description:	Conducted Emission
Model No.:	XNB-6000N
Mode	AC 24 V
Operator Name:	KES



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.490000	---	43.53	66.00	22.47	1000.0	9.000	N	9.8
0.490000	44.17	---	79.00	34.83	1000.0	9.000	N	9.8
1.085000	---	28.66	60.00	31.34	1000.0	9.000	N	10.0
1.085000	29.18	---	73.00	43.82	1000.0	9.000	N	10.0
27.395000	---	41.37	60.00	18.63	1000.0	9.000	N	10.4
27.395000	44.46	---	73.00	28.54	1000.0	9.000	N	10.4
27.885000	---	41.19	60.00	18.81	1000.0	9.000	N	10.4
27.885000	43.76	---	73.00	29.24	1000.0	9.000	N	10.4

◆ Calculation

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

QuasiPeak / CAverage : The Final Value

Reading Value : Not shown in the table.

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



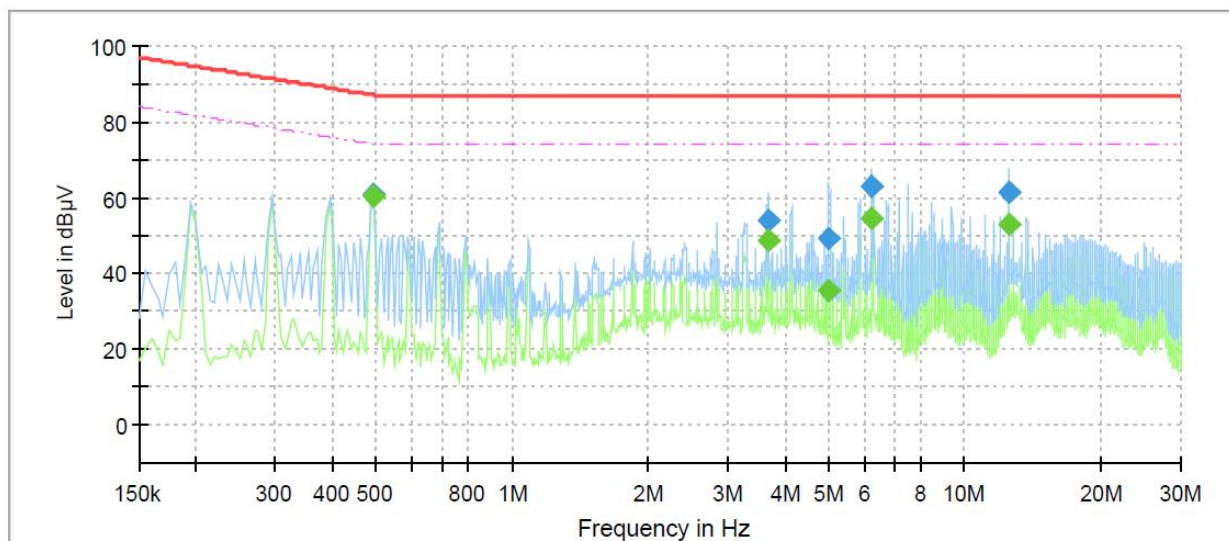
Conducted Emissions at Telecommunication Ports

- AC 24 V Mode

[10 Mbps]

Common Information

Test Description: Telecommunication Emission
Model No.: XNB-6000N
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)
0.495000	---	60.18	74.08	13.90	1000.0	9.000	Single Line	10.1
0.495000	60.69	---	87.08	26.39	1000.0	9.000	Single Line	10.1
3.695000	---	48.46	74.00	25.54	1000.0	9.000	Single Line	10.2
3.695000	54.09	---	87.00	32.91	1000.0	9.000	Single Line	10.2
4.990000	---	35.35	74.00	38.65	1000.0	9.000	Single Line	10.1
4.990000	49.34	---	87.00	37.66	1000.0	9.000	Single Line	10.1
6.250000	---	54.71	74.00	19.29	1000.0	9.000	Single Line	10.1
6.250000	62.89	---	87.00	24.11	1000.0	9.000	Single Line	10.1
12.500000	---	53.11	74.00	20.89	1000.0	9.000	Single Line	10.0
12.500000	61.35	---	87.00	25.65	1000.0	9.000	Single Line	10.0

◆ Calculation

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

QuasiPeak / CAverage : The Final Value

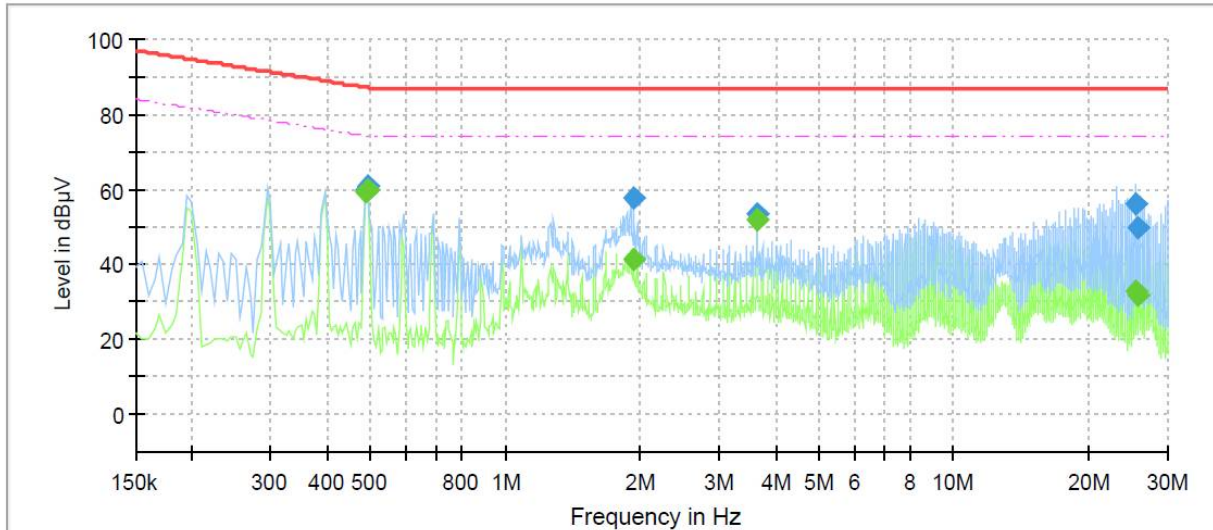
Reading Value : Not shown in the table.

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

[100 Mbps]

Common Information

Test Description: Telecommunication Emission
Model No.: XNB-6000N
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)
0.490000	---	59.39	74.17	14.78	1000.0	9.000	Single Line	9.6
0.490000	60.07	---	87.17	27.10	1000.0	9.000	Single Line	9.6
0.495000	---	59.96	74.08	14.12	1000.0	9.000	Single Line	9.6
0.495000	60.74	---	87.08	26.34	1000.0	9.000	Single Line	9.6
1.935000	---	41.41	74.00	32.59	1000.0	9.000	Single Line	9.7
1.935000	57.53	---	87.00	29.47	1000.0	9.000	Single Line	9.7
3.640000	---	51.68	74.00	22.32	1000.0	9.000	Single Line	9.7
3.640000	53.45	---	87.00	33.55	1000.0	9.000	Single Line	9.7
25.340000	---	32.59	74.00	41.41	1000.0	9.000	Single Line	9.5
25.340000	56.33	---	87.00	30.67	1000.0	9.000	Single Line	9.5
25.880000	---	31.91	74.00	42.09	1000.0	9.000	Single Line	9.5
25.880000	49.97	---	87.00	37.03	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.

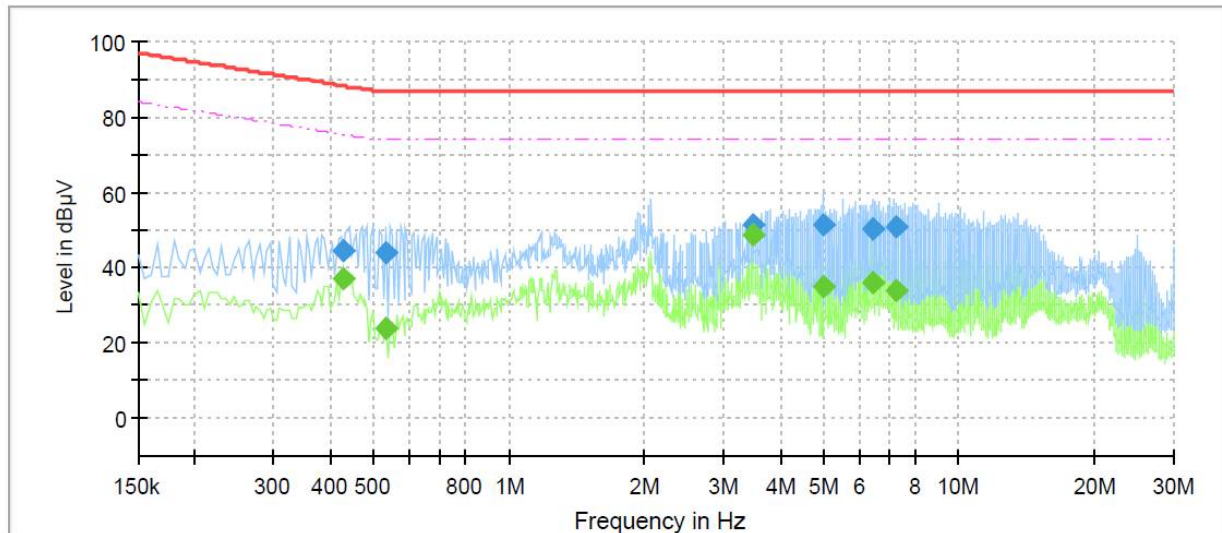
Corr. : Correction values (ISN FACTOR+ Cable Loss)

- DC 12 V Mode

[10 Mbps]

Common Information

Test Description:	Telecommunication Emission
Model No.:	XNB-6000N
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)
0.430000	---	37.12	75.25	38.13	1000.0	9.000	Single Line	10.1
0.430000	44.35	---	88.25	43.90	1000.0	9.000	Single Line	10.1
0.530000	---	23.65	74.00	50.35	1000.0	9.000	Single Line	10.1
0.530000	44.09	---	87.00	42.91	1000.0	9.000	Single Line	10.1
3.470000	---	48.92	74.00	25.08	1000.0	9.000	Single Line	10.2
3.470000	51.45	---	87.00	35.55	1000.0	9.000	Single Line	10.2
4.980000	---	34.96	74.00	39.04	1000.0	9.000	Single Line	10.1
4.980000	51.43	---	87.00	35.57	1000.0	9.000	Single Line	10.1
6.405000	---	35.97	74.00	38.03	1000.0	9.000	Single Line	10.0
6.405000	50.42	---	87.00	36.58	1000.0	9.000	Single Line	10.0
7.275000	---	33.86	74.00	40.14	1000.0	9.000	Single Line	10.0
7.275000	50.62	---	87.00	36.38	1000.0	9.000	Single Line	10.0

◆ Calculation

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

QuasiPeak / CAverage : The Final Value

Reading Value : Not shown in the table.

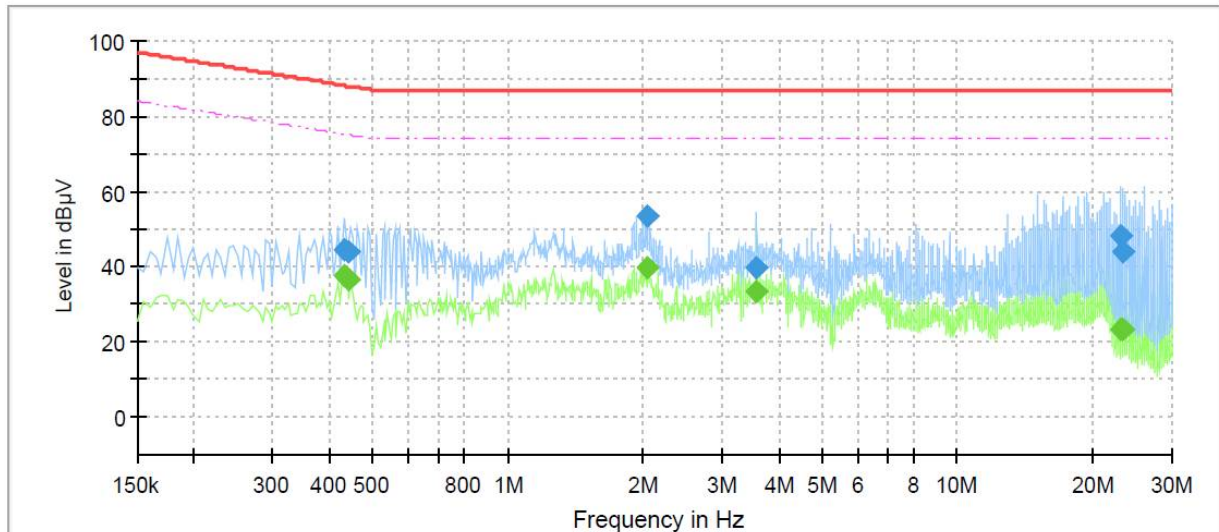
Corr. : Correction values (ISN FACTOR+ Cable Loss)



[100 Mbps]

Common Information

Test Description: Telecommunication Emission
Model No.: XNB-6000N
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)
0.435000	---	37.57	75.16	37.59	1000.0	9.000	Single Line	9.6
0.435000	44.46	---	88.16	43.70	1000.0	9.000	Single Line	9.6
0.440000	---	36.77	75.06	38.29	1000.0	9.000	Single Line	9.6
0.440000	44.15	---	88.06	43.91	1000.0	9.000	Single Line	9.6
2.040000	---	39.91	74.00	34.09	1000.0	9.000	Single Line	9.7
2.040000	53.38	---	87.00	33.62	1000.0	9.000	Single Line	9.7
3.575000	---	33.24	74.00	40.76	1000.0	9.000	Single Line	9.7
3.575000	39.64	---	87.00	47.36	1000.0	9.000	Single Line	9.7
23.120000	---	23.17	74.00	50.83	1000.0	9.000	Single Line	9.5
23.120000	47.97	---	87.00	39.03	1000.0	9.000	Single Line	9.5
23.380000	---	23.51	74.00	50.49	1000.0	9.000	Single Line	9.5
23.380000	43.86	---	87.00	43.14	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.

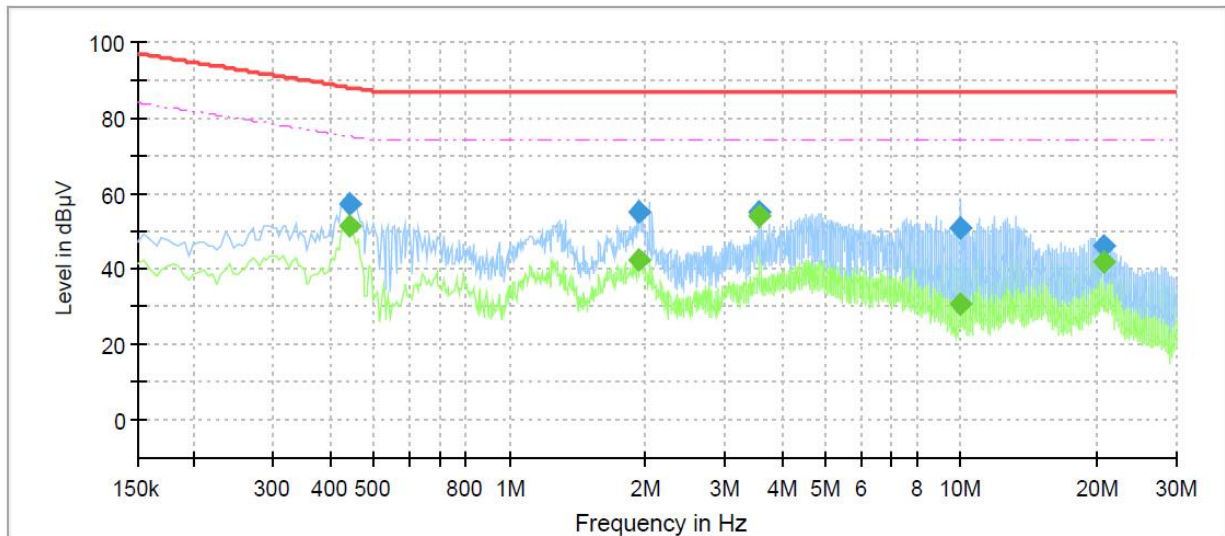
Corr. : Correction values (ISN FACTOR+ Cable Loss)

- PoE Mode

[10 Mbps]

Common Information

Test Description:	Telecommunication Emission
Model No.:	XNB-6000N
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)
0.440000	---	51.47	75.06	23.59	1000.0	9.000	Single Line	10.1
0.440000	57.39	---	88.06	30.67	1000.0	9.000	Single Line	10.1
1.940000	---	42.10	74.00	31.90	1000.0	9.000	Single Line	10.2
1.940000	55.20	---	87.00	31.80	1000.0	9.000	Single Line	10.2
3.580000	---	53.89	74.00	20.11	1000.0	9.000	Single Line	10.2
3.580000	55.12	---	87.00	31.88	1000.0	9.000	Single Line	10.2
10.005000	---	30.66	74.00	43.34	1000.0	9.000	Single Line	10.0
10.005000	50.91	---	87.00	36.09	1000.0	9.000	Single Line	10.0
20.785000	---	41.87	74.00	32.13	1000.0	9.000	Single Line	10.1
20.785000	45.99	---	87.00	41.01	1000.0	9.000	Single Line	10.1

◆ Calculation

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

QuasiPeak / CAverage : The Final Value

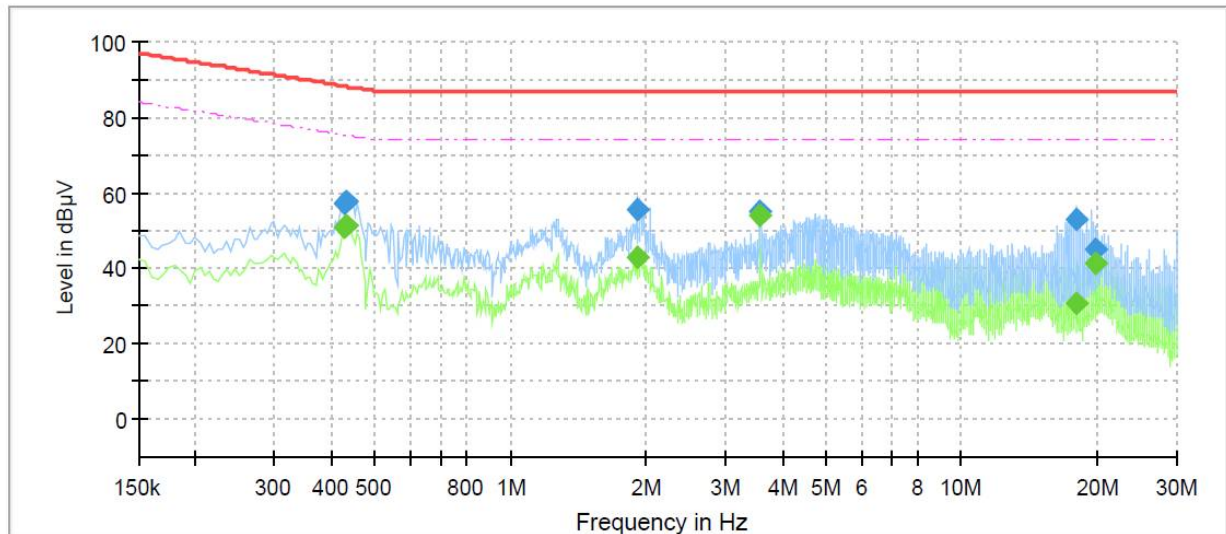
Reading Value : Not shown in the table.

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

[100 Mbps]

Common Information

Test Description: Telecommunication Emission
Model No.: XNB-6000N
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)
0.430000	---	50.99	75.25	24.26	1000.0	9.000	Single Line	9.6
0.430000	57.17	---	88.25	31.08	1000.0	9.000	Single Line	9.6
0.435000	---	51.60	75.16	23.56	1000.0	9.000	Single Line	9.6
0.435000	57.55	---	88.16	30.61	1000.0	9.000	Single Line	9.6
1.910000	---	42.67	74.00	31.33	1000.0	9.000	Single Line	9.7
1.910000	55.51	---	87.00	31.49	1000.0	9.000	Single Line	9.7
3.575000	---	53.93	74.00	20.07	1000.0	9.000	Single Line	9.7
3.575000	55.05	---	87.00	31.95	1000.0	9.000	Single Line	9.7
17.890000	---	30.83	74.00	43.17	1000.0	9.000	Single Line	9.7
17.890000	52.88	---	87.00	34.12	1000.0	9.000	Single Line	9.7
19.900000	---	41.21	74.00	32.79	1000.0	9.000	Single Line	9.6
19.900000	45.11	---	87.00	41.89	1000.0	9.000	Single Line	9.6

◆ Calculation

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

QuasiPeak / CAverage : The Final Value

Reading Value : Not shown in the table.

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



Radiated Electric Field Emissions(Below 1 GHz)

- 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]
52.09	11.71	V	1.00	13.64	1.40	26.75	40.00	13.25
58.93	10.03	H	3.80	12.78	1.48	24.29	40.00	15.71
60.13	11.13	V	1.10	12.61	1.49	25.23	40.00	14.77
131.59	15.19	H	4.00	8.66	2.33	26.18	40.00	13.82
138.63	12.90	H	3.90	8.05	2.41	23.36	40.00	16.64
154.09	16.68	V	1.10	8.32	2.57	27.57	40.00	12.43
334.12	17.08	H	4.00	14.14	3.82	35.04	47.00	11.96

* 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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Test report No.:
KES-E1-16T0639
Page (28) of (52)

- 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]
52.18	10.82	V	1.00	13.63	1.40	25.85	40.00	14.15
138.50	13.00	H	4.00	8.06	2.41	23.47	40.00	16.53
149.21	11.99	H	4.00	8.19	2.52	22.70	40.00	17.30
151.21	12.89	V	1.00	8.24	2.54	23.67	40.00	16.33
259.69	14.70	H	4.00	12.71	3.40	30.81	47.00	16.19
334.10	17.15	H	4.00	14.14	3.82	35.11	47.00	11.89

* 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

- 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]
40.52	13.19	V	1.00	12.56	1.23	26.98	40.00	13.02
50.24	10.10	V	1.10	13.87	1.37	25.34	40.00	14.66
71.48	16.31	H	4.00	9.27	1.64	27.22	40.00	12.78
80.15	17.39	V	1.00	6.91	1.78	26.08	40.00	13.92
154.99	16.40	V	1.00	8.35	2.58	27.33	40.00	12.67
334.11	17.11	H	4.00	14.14	3.82	35.07	47.00	11.93

* H : Horizontal, V : Vertical

◆ Calculation

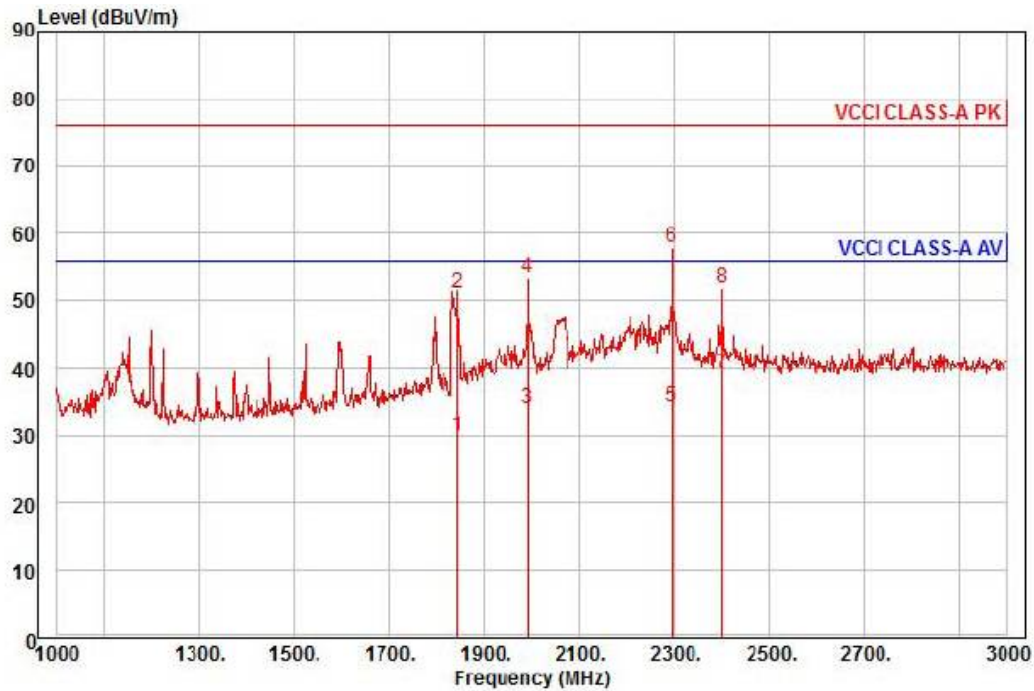
Corrected Amplitude [dBμV] = Amplitude[dBuV] + Correction Factor [dB]

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

Correction Factor : ANT FACTOR + Cable loss

Radiated Electric Field Emissions(Above 1 GHz)

- AC 24 V Mode



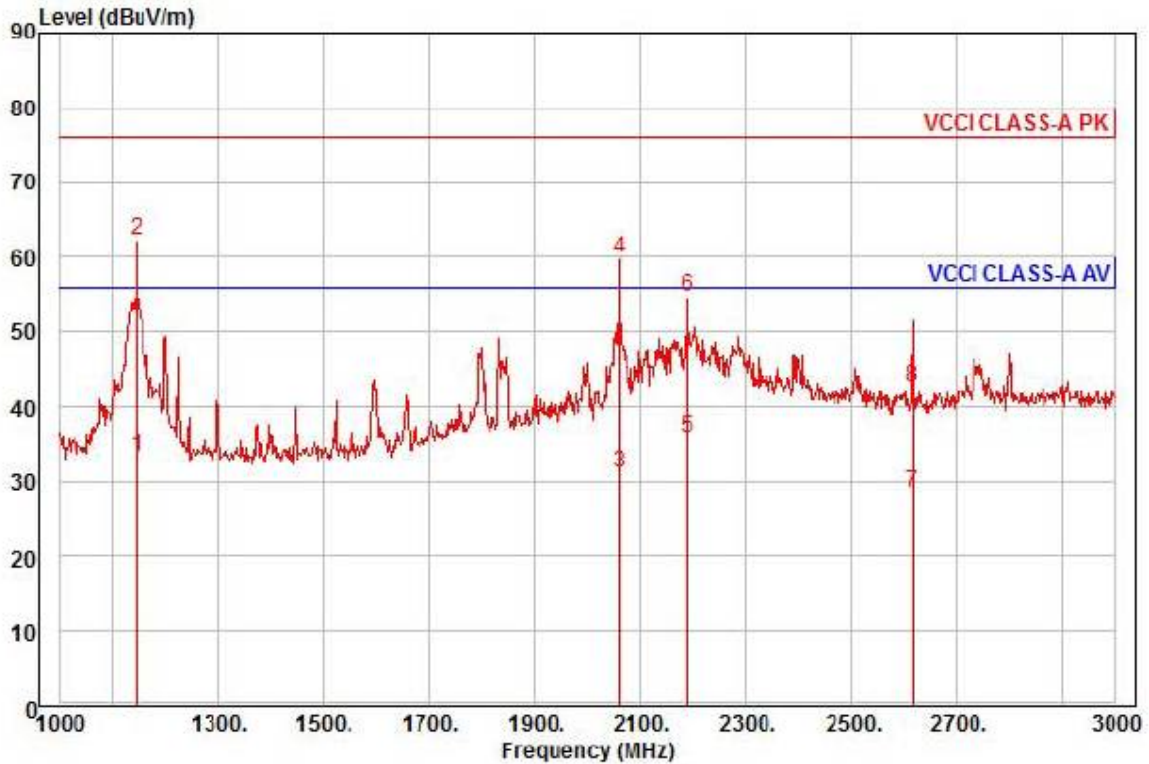
Site : chamber
Condition: VCCI CLASS-A PK 3m HORN781(2015.05.07) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project : NETWORK CAMERA
Model : XNB-6000N
Mode : AC 24 V
Memo : 1 ~ 3 GHz

	Read	Ant	Cable	Preamp	TPos	Limit	Over		
Freq	Level	Factor	Loss	Factor		Line	Limit	Pol/Phase	Remark
MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	1844.00	33.03	27.26	8.94	39.34	29	56.00	-26.11	horizontal Average
2	1844.00	54.29	27.26	8.94	39.34	29	76.00	-24.85	horizontal Peak
3	1992.00	36.35	27.85	9.32	39.41	154	56.00	-21.89	horizontal Average
4	1992.00	55.63	27.85	9.32	39.41	154	76.00	-22.61	horizontal Peak
5	2294.00	35.21	28.60	10.05	39.42	263	56.00	-21.56	horizontal Average
6 pk	2294.00	58.65	28.60	10.05	39.42	263	76.00	-18.12	horizontal Peak
7 pp	2400.00	39.46	28.85	10.32	39.42	263	56.00	-16.78	horizontal Average
8	2400.00	52.27	28.85	10.32	39.42	263	76.00	-23.97	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



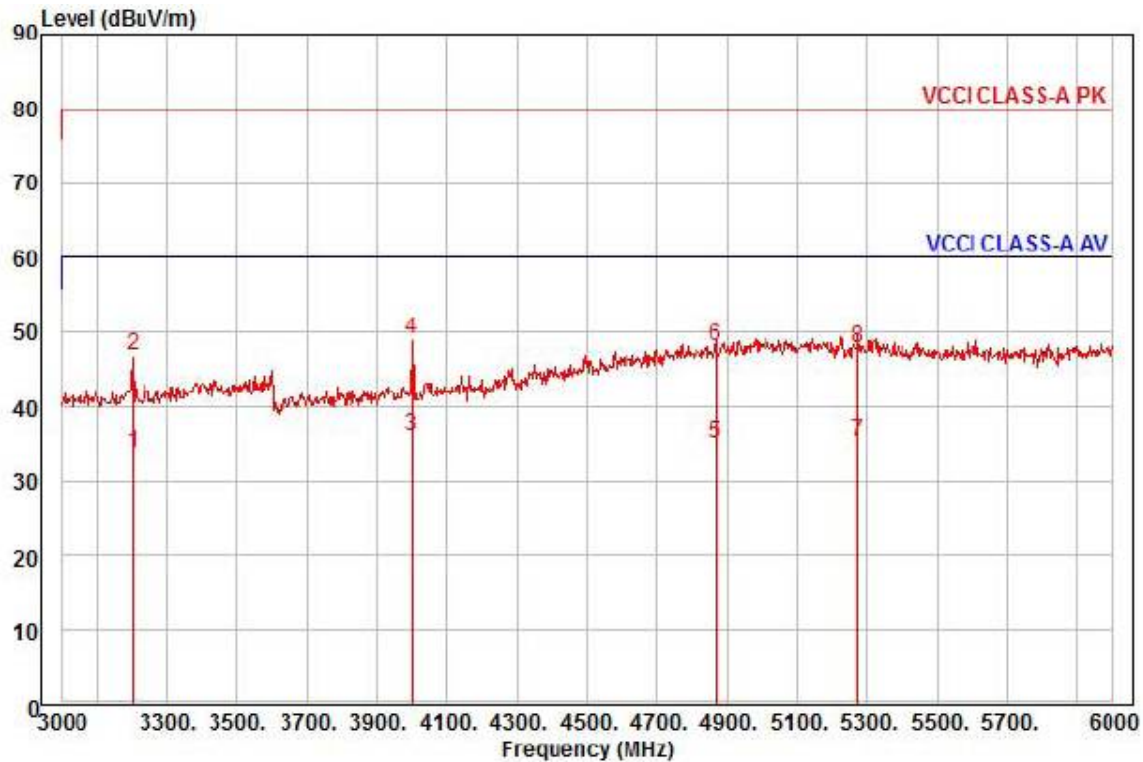
Site : chamber
Condition: VCCI CLASS-A PK 3m HORN781(2015.05.07) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project : NETWORK CAMERA
Model : XNB-6000N
Mode : AC 24 V
Memo : 1 ~ 3 GHz

	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	1146.00	41.67	24.49	6.96	39.74	154	56.00	-22.62	vertical	Average
2 pp	1146.00	70.57	24.49	6.96	39.74	154	76.00	-13.72	vertical	Peak
3	2060.00	33.07	28.03	9.48	39.41	323	56.00	-24.83	vertical	Average
4	2060.00	61.65	28.03	9.48	39.41	323	76.00	-16.25	vertical	Peak
5 av	2188.00	37.15	28.34	9.77	39.41	332	56.00	-20.15	vertical	Average
6	2188.00	56.04	28.34	9.77	39.41	332	76.00	-21.26	vertical	Peak
7	2618.00	27.94	29.39	10.79	39.67	198	56.00	-27.55	vertical	Average
8	2618.00	42.23	29.39	10.79	39.67	198	76.00	-33.26	vertical	Peak

◆ Calculation

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

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



Site : chamber

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

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

Project : NETWORK CAMERA

Model : XNB-6000N

Mode : AC 24 V

Memo : 3 ~ 6 GHz

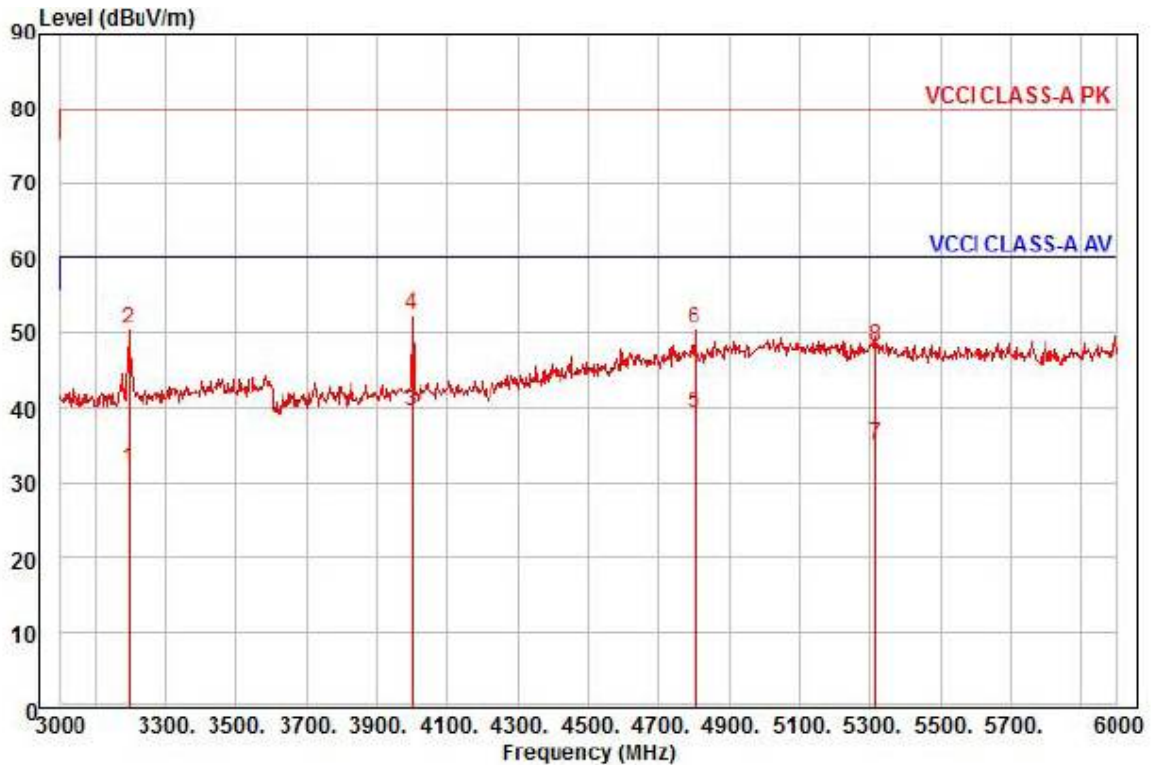
	Freq	Read Level	Ant Factor	Cable Loss	Preamp Factor	TPos	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	3201.00	31.42	30.67	12.06	40.42	222	60.00	-26.27	horizontal	Average
2	3201.00	44.41	30.67	12.06	40.42	222	80.00	-33.28	horizontal	Peak
3 pp	3999.00	31.08	32.01	13.56	40.70	144	60.00	-24.05	horizontal	Average
4 pk	3999.00	44.13	32.01	13.56	40.70	144	80.00	-31.00	horizontal	Peak
5	4869.00	23.41	36.97	15.17	40.40	224	60.00	-24.85	horizontal	Average
6	4869.00	36.32	36.97	15.17	40.40	224	80.00	-31.94	horizontal	Peak
7	5274.00	22.95	37.17	15.83	40.72	89	60.00	-24.77	horizontal	Average
8	5274.00	35.55	37.17	15.83	40.72	89	80.00	-32.17	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: VCCI CLASS-A PK 3m HORN781(2015.05.07) vertical

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

Project : NETWORK CAMERA

Model : XNB-6000N

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	3195.00	29.48	30.66	12.05	40.41	222	60.00	-28.22	vertical	Average
2	3195.00	48.24	30.66	12.05	40.41	222	80.00	-29.46	vertical	Peak
3 pp	3999.00	34.73	32.01	13.56	40.70	255	60.00	-20.40	vertical	Average
4 pk	3999.00	47.55	32.01	13.56	40.70	255	80.00	-27.58	vertical	Peak
5	4800.00	28.06	36.58	15.10	40.47	97	60.00	-20.73	vertical	Average
6	4800.00	39.23	36.58	15.10	40.47	97	80.00	-29.56	vertical	Peak
7	5316.00	22.85	37.08	15.90	40.79	191	60.00	-24.96	vertical	Average
8	5316.00	35.90	37.08	15.90	40.79	191	80.00	-31.91	vertical	Peak

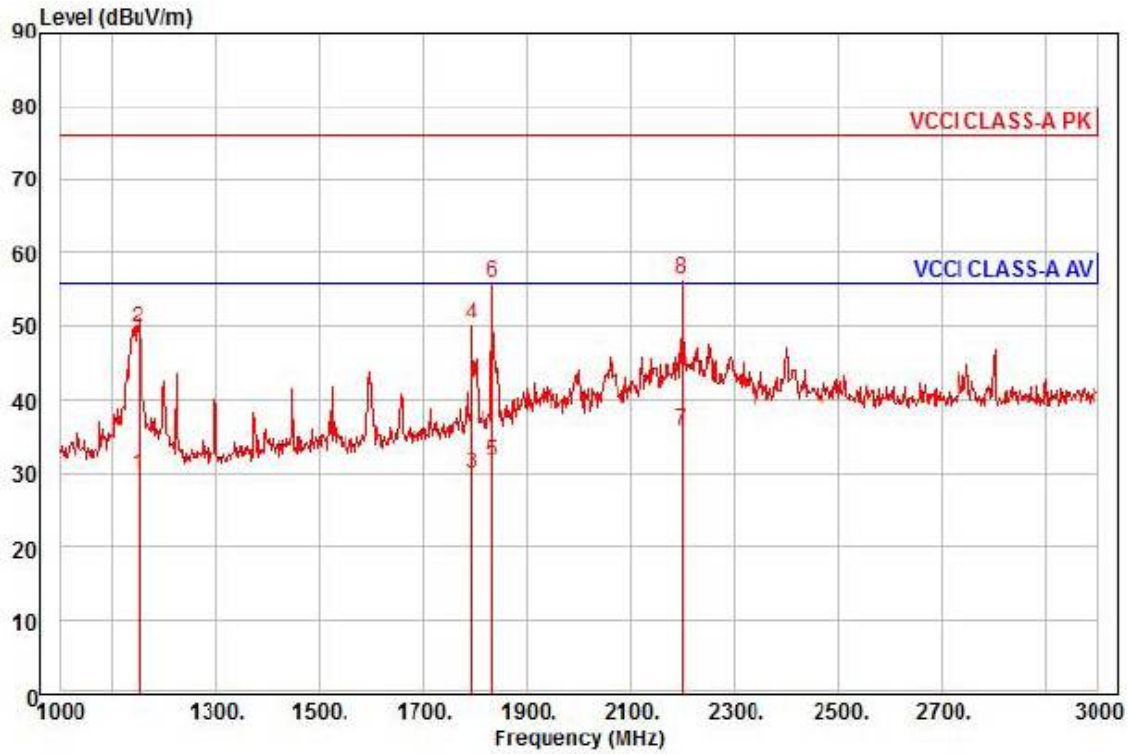
◆ Calculation

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

- DC 12 V Mode



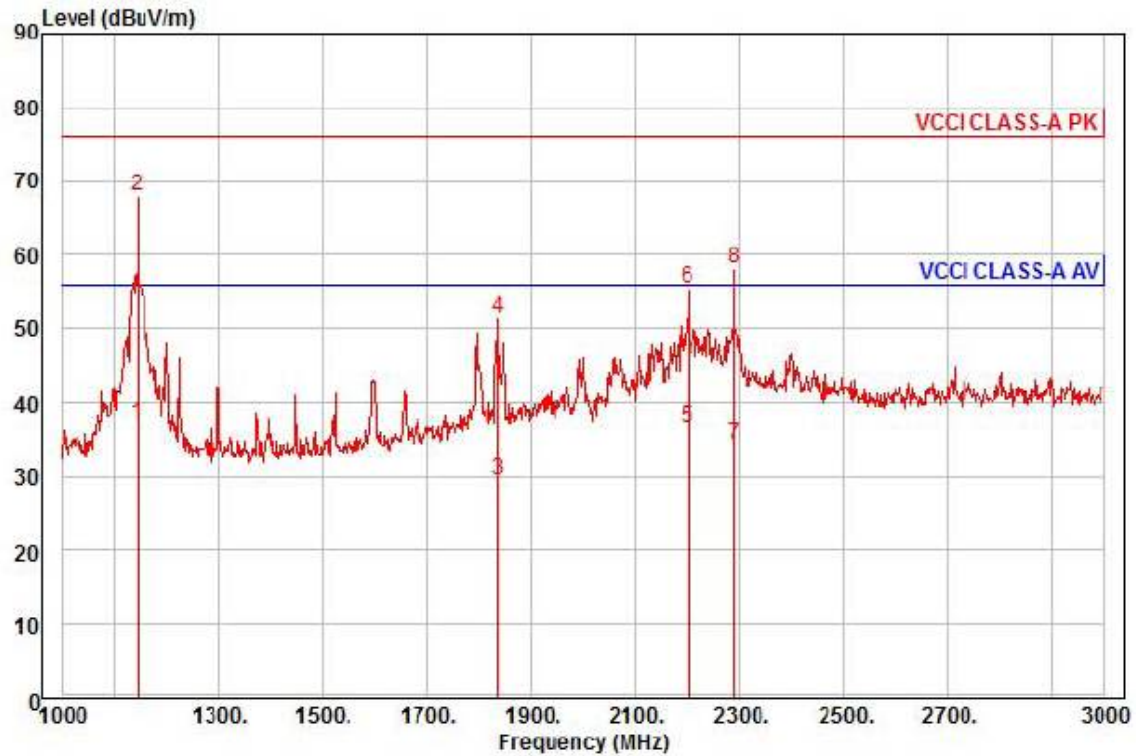
Site : chamber
Condition: VCCI CLASS-A PK 3m HORN781(2015.05.07) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project : NETWORK CAMERA
Model : XNB-6000N
Mode : DC 12 V
Memo : 1 ~ 3 GHz

	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	1150.00	37.99	24.51	6.97	39.73	298	56.00	-26.26	horizontal	Average
2	1150.00	58.07	24.51	6.97	39.73	298	76.00	-26.18	horizontal	Peak
3	1792.00	33.44	27.05	8.81	39.31	55	56.00	-26.01	horizontal	Average
4	1792.00	53.82	27.05	8.81	39.31	55	76.00	-25.63	horizontal	Peak
5	1834.00	34.79	27.22	8.91	39.33	312	56.00	-24.41	horizontal	Average
6	1834.00	59.06	27.22	8.91	39.33	312	76.00	-20.14	horizontal	Peak
7 av	2198.00	37.12	28.37	9.80	39.41	256	56.00	-20.12	horizontal	Average
8 pp	2198.00	57.63	28.37	9.80	39.41	256	76.00	-19.61	horizontal	Peak

◆ Calculation

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

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



Site : chamber

Condition: VCCI CLASS-A PK 3m HORN781(2015.05.07) vertical

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

Project : NETWORK CAMERA

Model : XNB-6000N

Mode : DC 12 V

Memo : 1 ~ 3 GHz

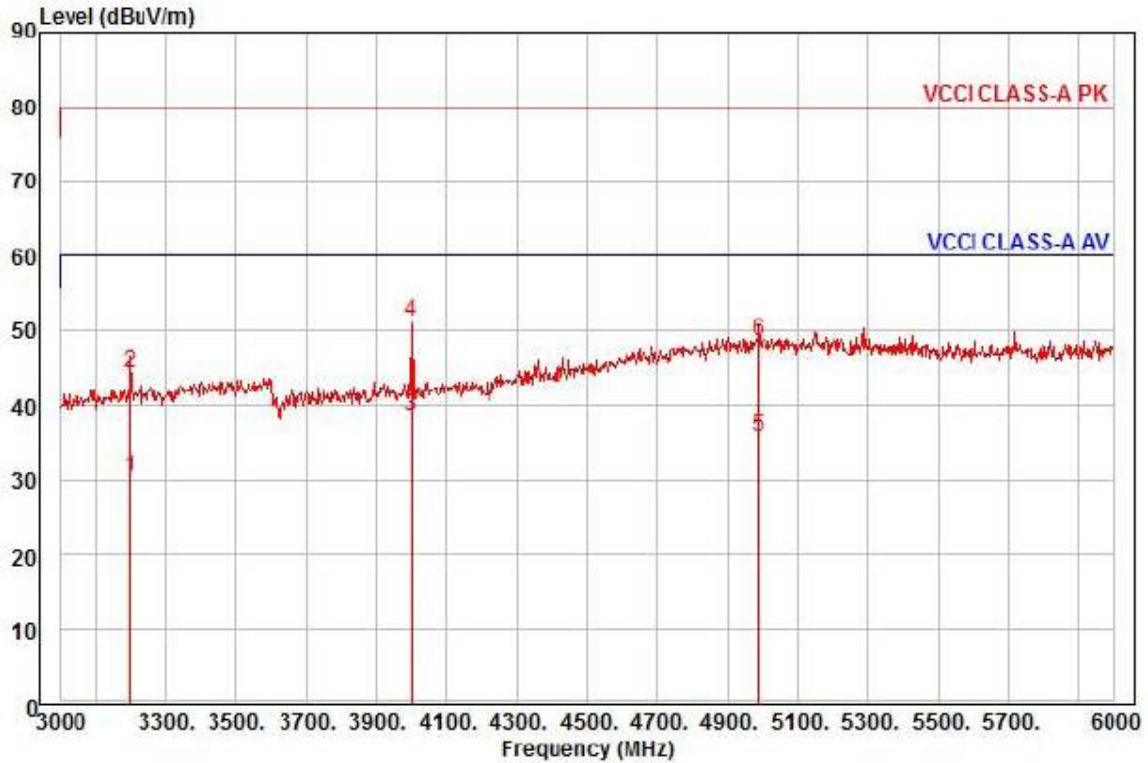
		Read	Ant	Cable	Preamp	TPos	Limit	Over		
	Freq	Level	Factor	Loss	Factor		Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1 av	1144.00	45.44	24.48	6.95	39.74	133	56.00	-18.87	vertical	Average
2 pp	1144.00	76.32	24.48	6.95	39.74	133	76.00	-7.99	vertical	Peak
3	1838.00	32.62	27.24	8.92	39.33	308	56.00	-26.55	vertical	Average
4	1838.00	54.72	27.24	8.92	39.33	308	76.00	-24.45	vertical	Peak
5	2200.00	37.74	28.37	9.80	39.42	18	56.00	-19.51	vertical	Average
6	2200.00	56.56	28.37	9.80	39.42	18	76.00	-20.69	vertical	Peak
7	2290.00	35.12	28.59	10.04	39.42	266	56.00	-21.67	vertical	Average
8	2290.00	58.92	28.59	10.04	39.42	266	76.00	-17.87	vertical	Peak

◆ Calculation

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

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

Cable Loss : Cable loss, Preamp Factor : Preamp Factor



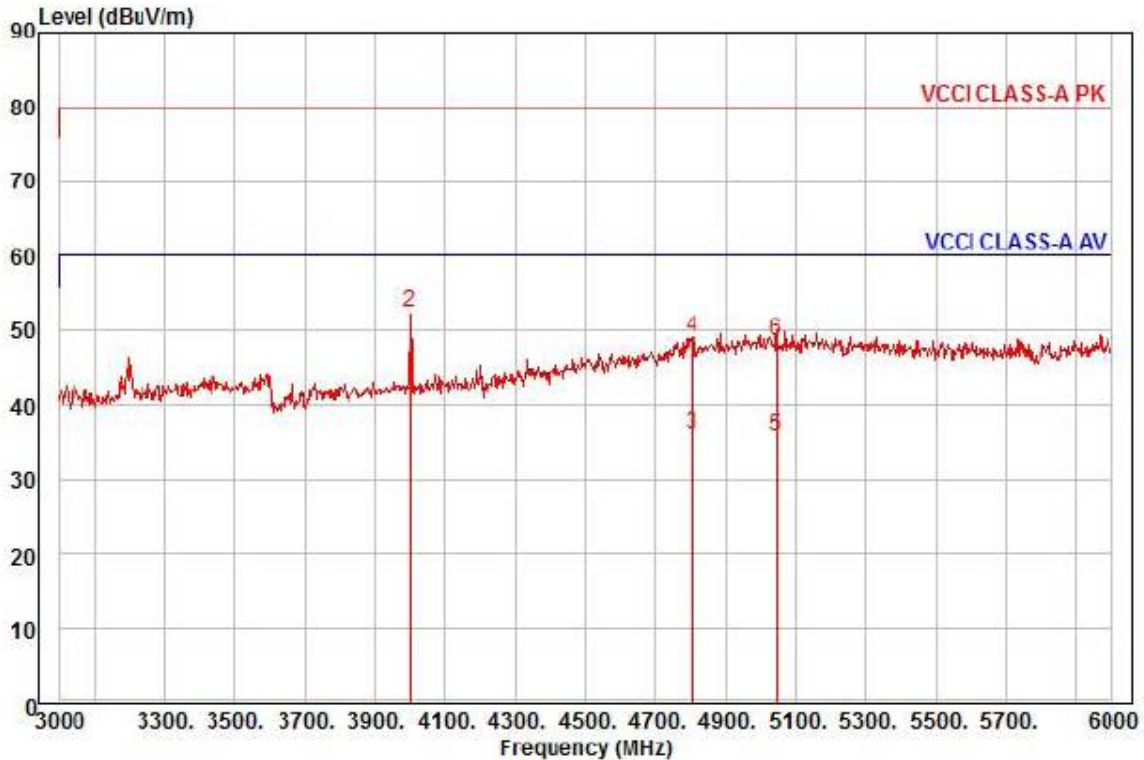
Site : chamber
Condition: VCCI CLASS-A PK 3m HORN781(2015.05.07) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project : NETWORK CAMERA
Model : XNB-6000N
Mode : DC 12 V
Memo : 3 ~ 6 GHz

	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	28.04	30.66	12.05	40.41	224	60.00	-29.66	horizontal	Average
2	3198.00	42.12	30.66	12.05	40.41	224	80.00	-35.58	horizontal	Peak
3 pp	3999.00	33.65	32.01	13.56	40.70	140	60.00	-21.48	horizontal	Average
4 pk	3999.00	46.35	32.01	13.56	40.70	140	80.00	-28.78	horizontal	Peak
5	4986.00	23.03	37.64	15.30	40.28	174	60.00	-24.31	horizontal	Average
6	4986.00	35.89	37.64	15.30	40.28	174	80.00	-31.45	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: VCCI CLASS-A PK 3m HORN781(2015.05.07) vertical

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

Project : NETWORK CAMERA

Model : XNB-6000N

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 pp	3999.00	34.78	32.01	13.56	40.70	254	60.00	-20.35	vertical	Average
2 pk	3999.00	47.67	32.01	13.56	40.70	254	80.00	-27.46	vertical	Peak
3	4803.00	24.76	36.60	15.10	40.47	4	60.00	-24.01	vertical	Average
4	4803.00	37.76	36.60	15.10	40.47	4	80.00	-31.01	vertical	Peak
5	5046.00	23.01	37.63	15.41	40.35	346	60.00	-24.30	vertical	Average
6	5046.00	35.85	37.63	15.41	40.35	346	80.00	-31.46	vertical	Peak

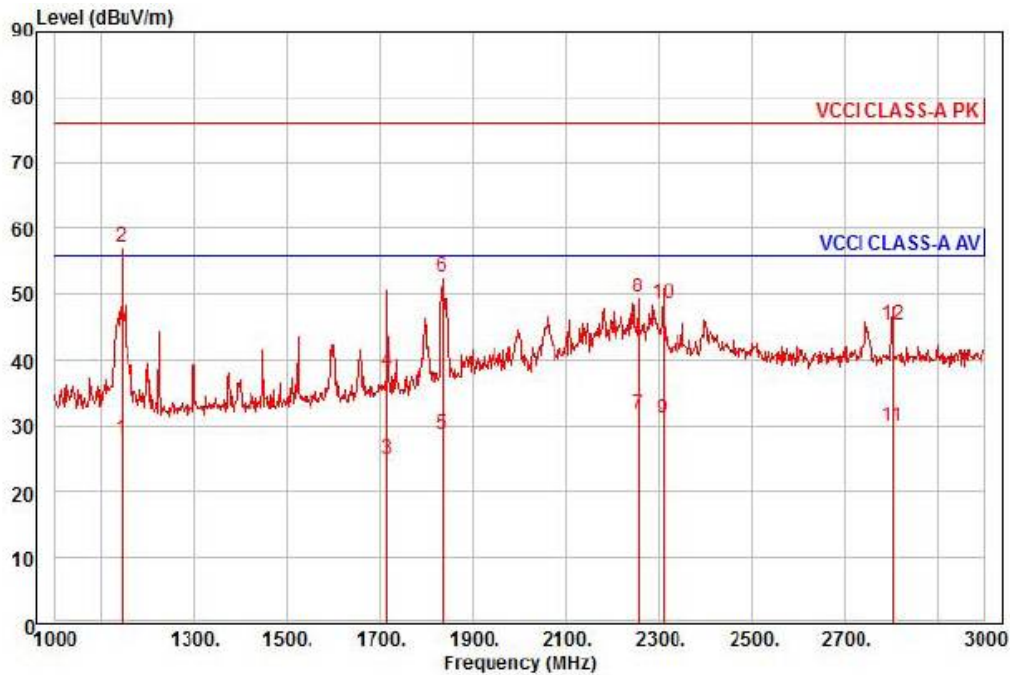
◆ Calculation

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



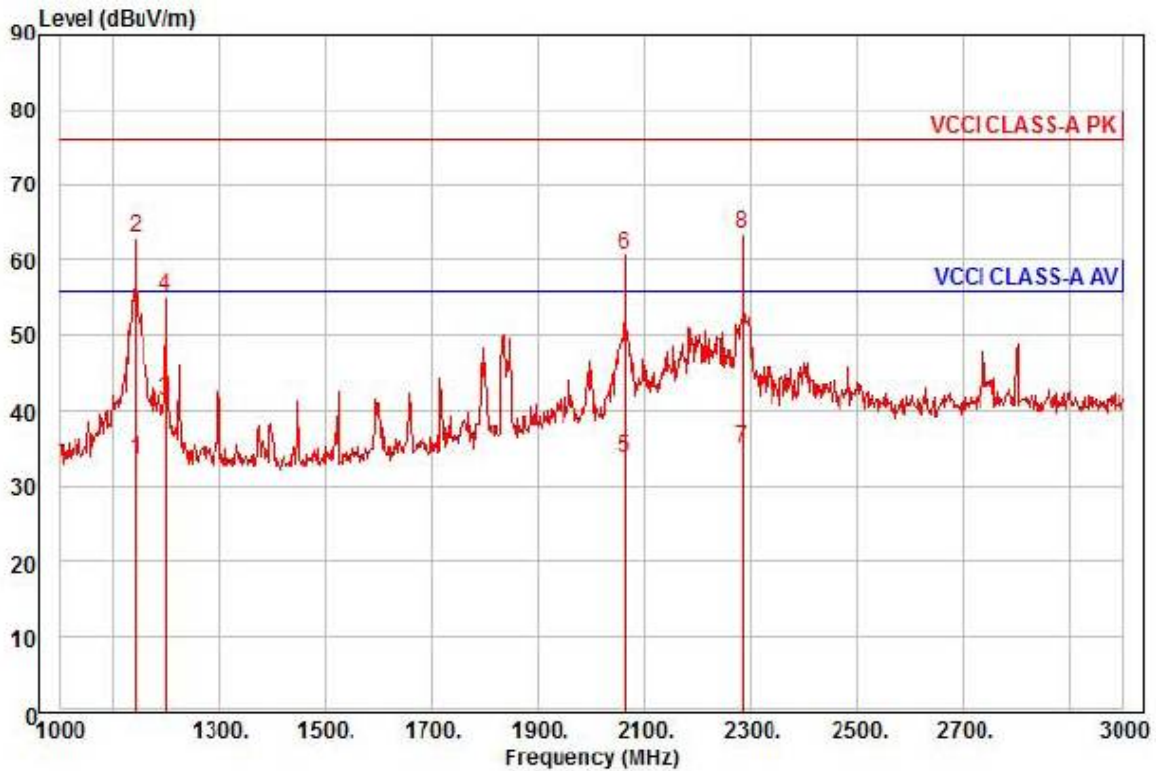
Site : chamber
Condition: VCCI CLASS-A PK 3m HORN781(2015.05.07) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project : NETWORK CAMERA
Model : XNB-6000N
Mode : PoE
Memo : 1 ~ 3 GHz

		Read	Ant	Cable	Preamp	TPos	Limit	Over		
	Freq	Level	Factor	Loss	Factor		Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	1144.00	36.38	24.48	6.95	39.74	137	56.00	-27.93	horizontal	Average
2 pp	1144.00	65.53	24.48	6.95	39.74	137	76.00	-18.78	horizontal	Peak
3	1716.00	29.03	26.75	8.61	39.28	227	56.00	-30.89	horizontal	Average
4	1716.00	42.28	26.75	8.61	39.28	227	76.00	-37.64	horizontal	Peak
5	1836.00	31.95	27.23	8.92	39.33	293	56.00	-27.23	horizontal	Average
6	1836.00	55.88	27.23	8.92	39.33	293	76.00	-23.30	horizontal	Peak
7 av	2256.00	32.76	28.51	9.95	39.42	250	56.00	-24.20	horizontal	Average
8	2256.00	50.51	28.51	9.95	39.42	250	76.00	-26.45	horizontal	Peak
9	2308.00	31.89	28.63	10.08	39.42	250	56.00	-24.82	horizontal	Average
10	2308.00	49.27	28.63	10.08	39.42	250	76.00	-27.44	horizontal	Peak
11	2802.00	28.73	29.84	11.24	39.88	217	56.00	-26.07	horizontal	Average
12	2802.00	44.19	29.84	11.24	39.88	217	76.00	-30.61	horizontal	Peak

◆ Calculation

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

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



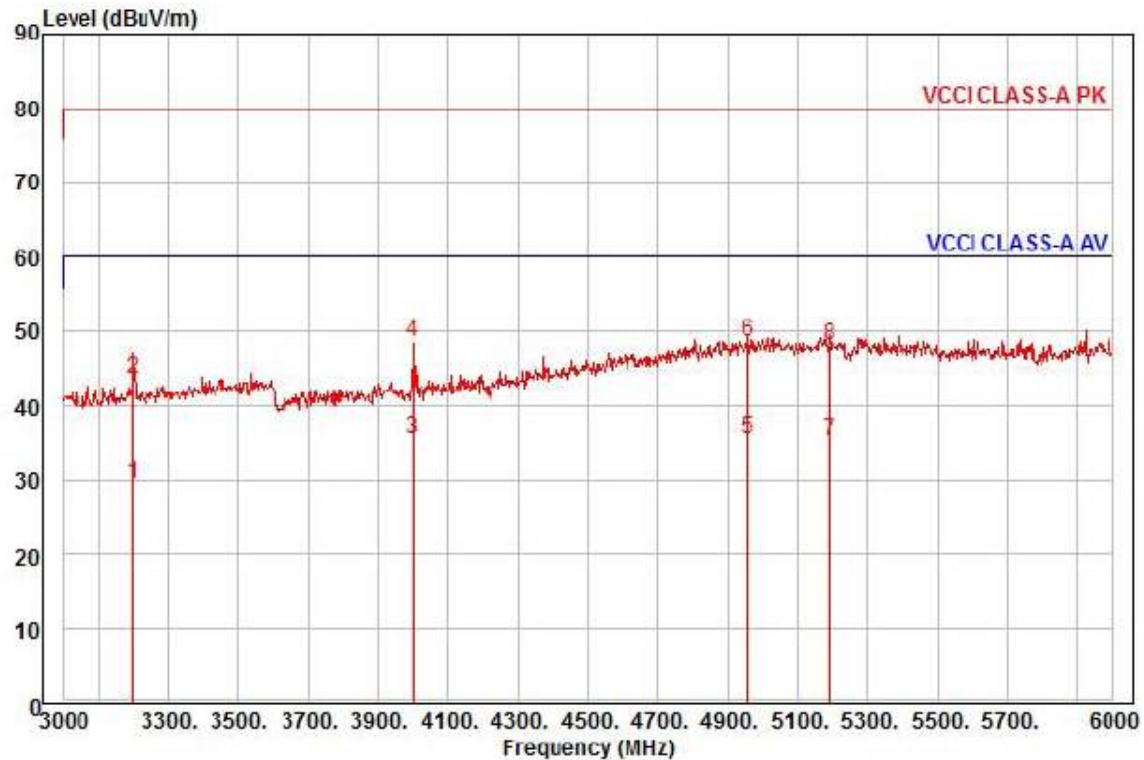
Site : chamber
Condition: VCCI CLASS-A PK 3m HORN781(2015.05.07) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project : NETWORK CAMERA
Model : XNB-6000N
Mode : PoE
Memo : 1 ~ 3 GHz

	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	1142.00	41.98	24.47	6.95	39.75	323	56.00	-22.35	vertical	Average
2	1142.00	71.46	24.47	6.95	39.75	323	76.00	-12.87	vertical	Peak
3 av	1200.00	49.14	24.70	7.14	39.61	139	56.00	-14.63	vertical	Average
4	1200.00	62.91	24.70	7.14	39.61	139	76.00	-20.86	vertical	Peak
5	2062.00	35.70	28.03	9.48	39.41	339	56.00	-22.20	vertical	Average
6	2062.00	62.74	28.03	9.48	39.41	339	76.00	-15.16	vertical	Peak
7	2284.00	35.80	28.58	10.02	39.42	359	56.00	-21.02	vertical	Average
8 pp	2284.00	64.29	28.58	10.02	39.42	359	76.00	-12.53	vertical	Peak

◆ Calculation

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

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



Site : chamber

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

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

Project : NETWORK CAMERA

Model : XNB-6000N

Mode : PoE

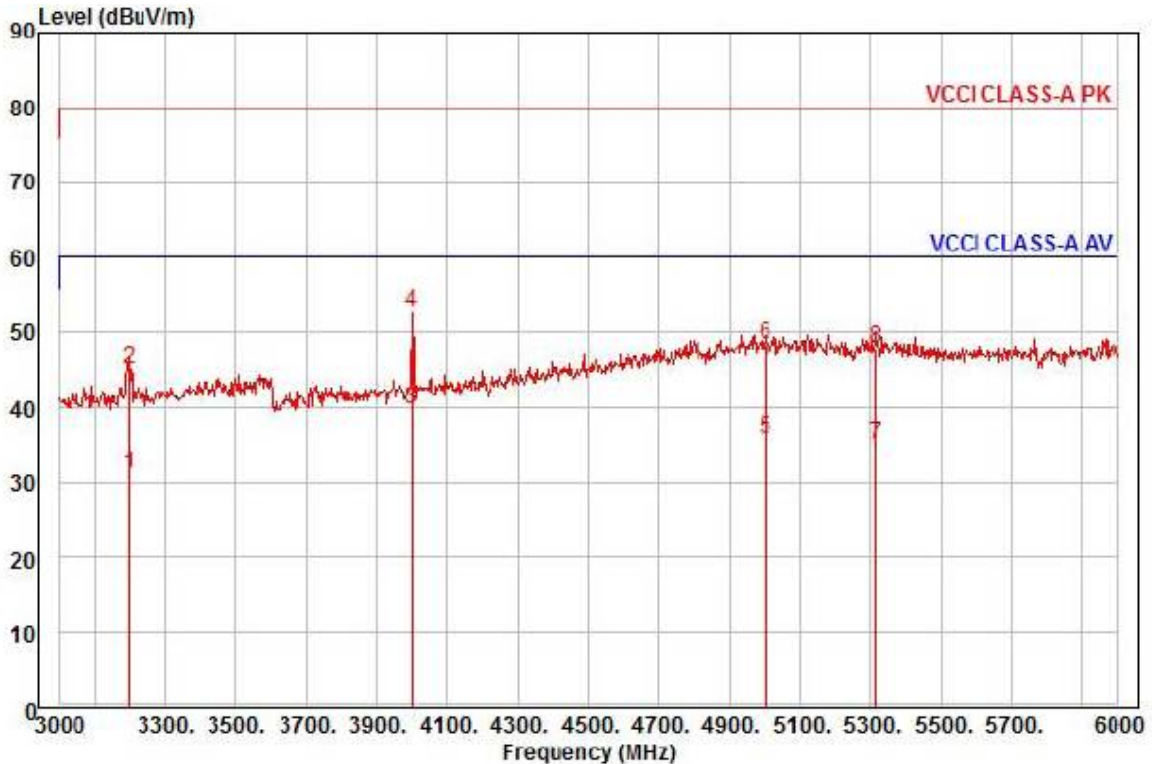
Memo : 3 ~ 6 GHz

	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	27.01	30.66	12.05	40.41	229	60.00	-30.69	horizontal	Average
2	3198.00	41.34	30.66	12.05	40.41	229	80.00	-36.36	horizontal	Peak
3 pp	3999.00	30.73	32.01	13.56	40.70	59	60.00	-24.40	horizontal	Average
4	3999.00	43.62	32.01	13.56	40.70	59	80.00	-31.51	horizontal	Peak
5	4956.00	23.08	37.47	15.27	40.31	56	60.00	-24.49	horizontal	Average
6 pk	4956.00	36.21	37.47	15.27	40.31	56	80.00	-31.36	horizontal	Peak
7	5190.00	22.86	37.34	15.69	40.59	40	60.00	-24.70	horizontal	Average
8	5190.00	35.65	37.34	15.69	40.59	40	80.00	-31.91	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: VCCI CLASS-A PK 3m HORN781(2015.05.07) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project : NETWORK CAMERA
Model : XNB-6000N
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	28.81	30.66	12.05	40.41	53	60.00	-28.89	vertical	Average
2	3198.00	42.94	30.66	12.05	40.41	53	80.00	-34.76	vertical	Peak
3 pp	3999.00	34.82	32.01	13.56	40.70	244	60.00	-20.31	vertical	Average
4 pk	3999.00	47.75	32.01	13.56	40.70	244	80.00	-27.38	vertical	Peak
5	5001.00	23.01	37.72	15.32	40.27	242	60.00	-24.22	vertical	Average
6	5001.00	35.57	37.72	15.32	40.27	242	80.00	-31.66	vertical	Peak
7	5316.00	22.83	37.08	15.90	40.79	151	60.00	-24.98	vertical	Average
8	5316.00	35.57	37.08	15.90	40.79	151	80.00	-32.24	vertical	Peak

◆ Calculation

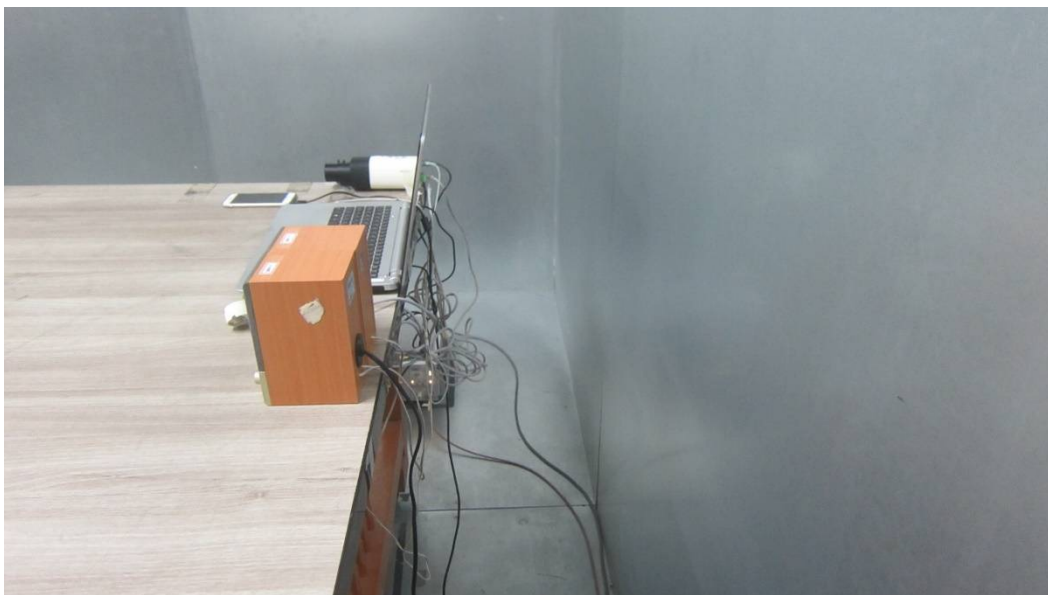
Over Limit [dB] = (Read Level[dBuV] + Ant Factor[dB/m] + Cable Loss [dB] - Preamp Factor [dB]) - Limit Line[dBuV]

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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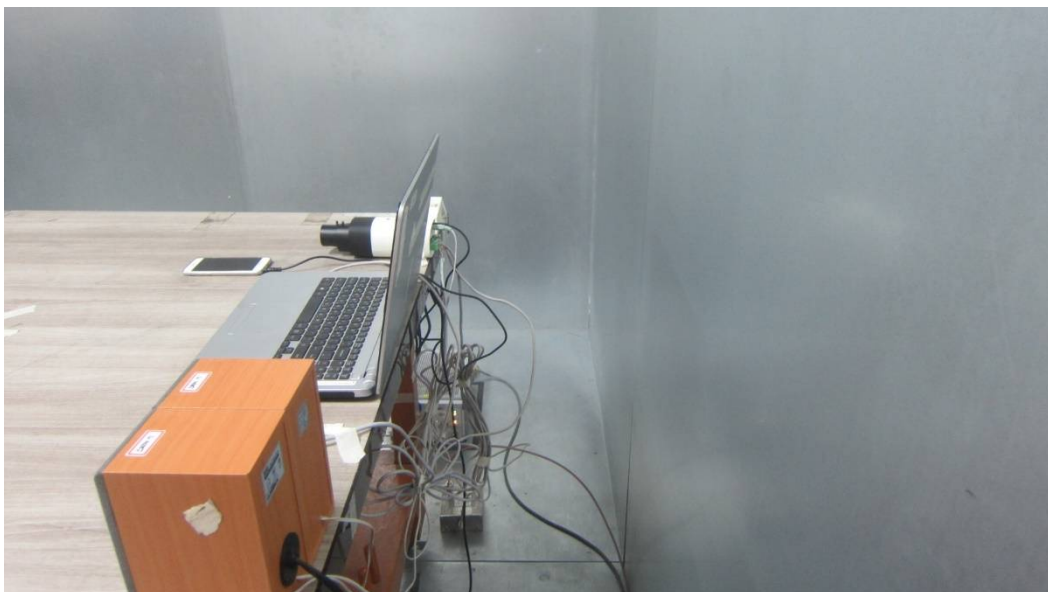
Conducted Telecommunication Emissions

- AC 24 V, DC 12 V Mode



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- PoE Mode



Radiated Electric Field Emissions(Below 1 GHz)

- AC 24 V, DC 12 V Mode



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- PoE Mode



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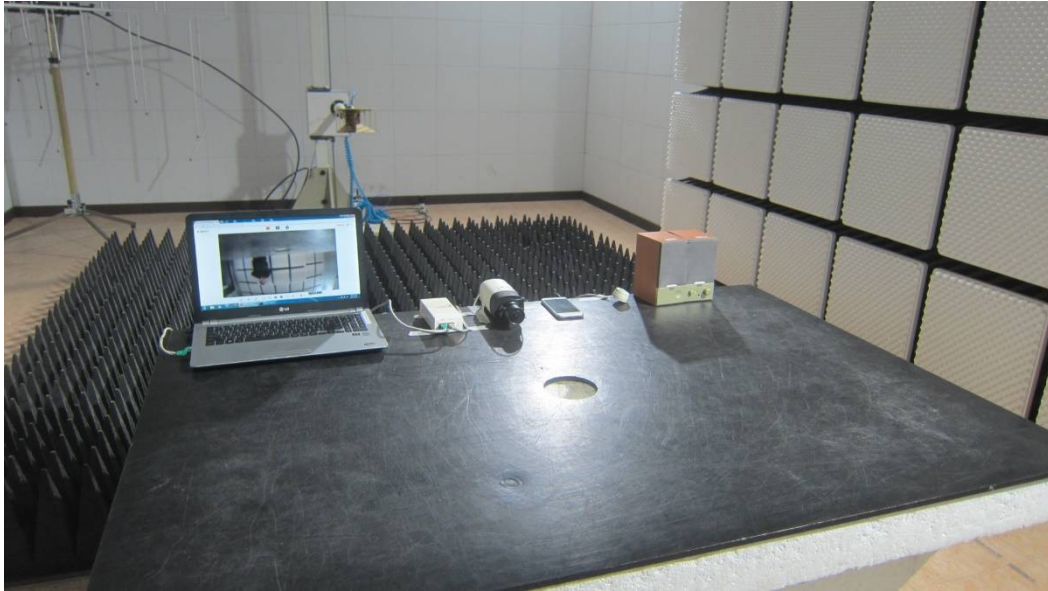
Radiated Electric Field Emissions(Above 1 GHz)

- AC 24 V, DC 12 V Mode



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- PoE Mode



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EUT External Photographs

(Top)

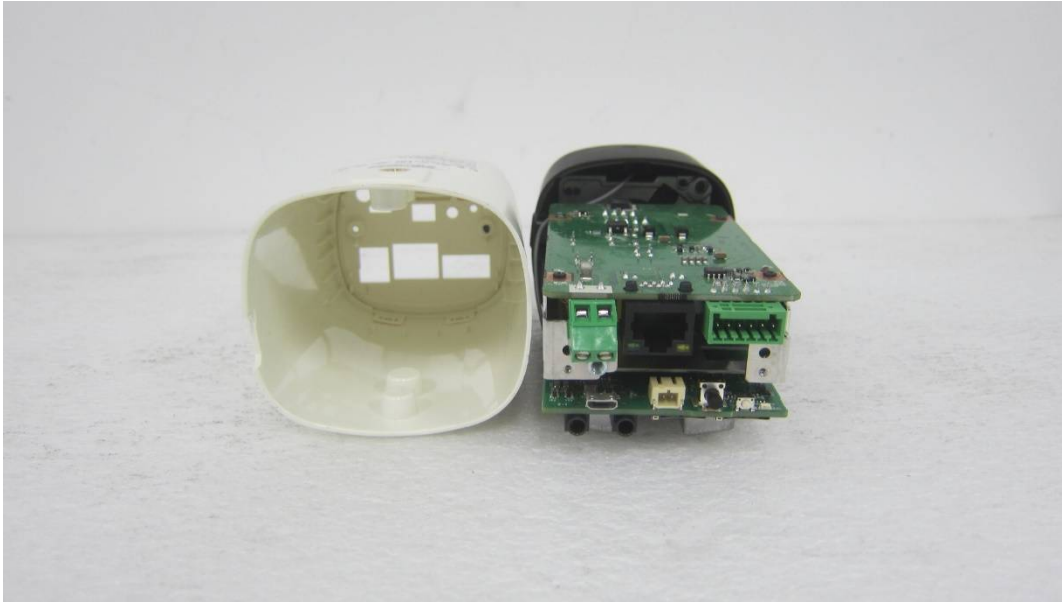


(Bottom)



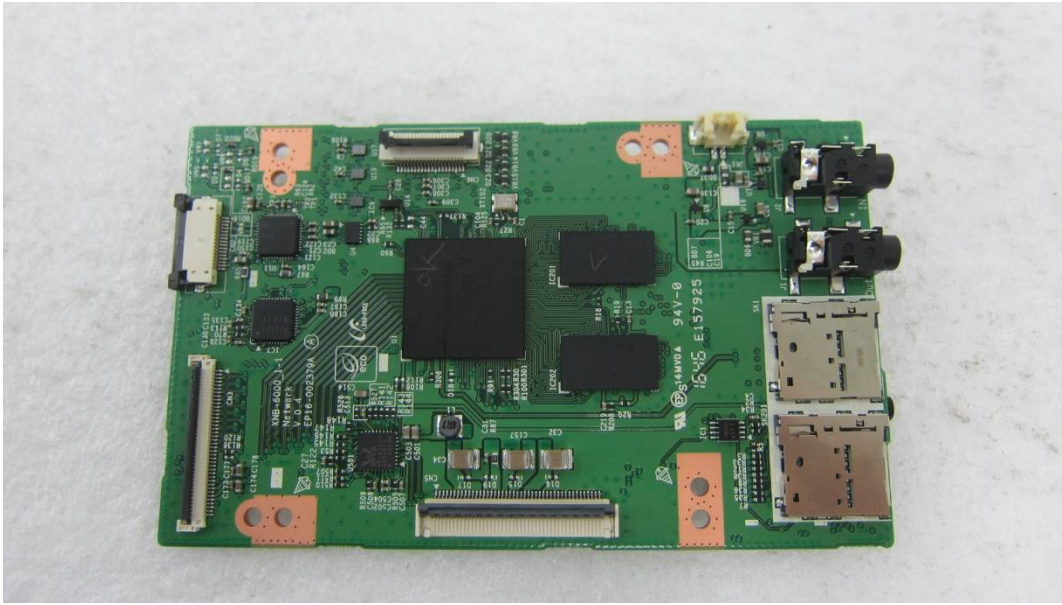
EUT Internal Photographs

(Internal View)

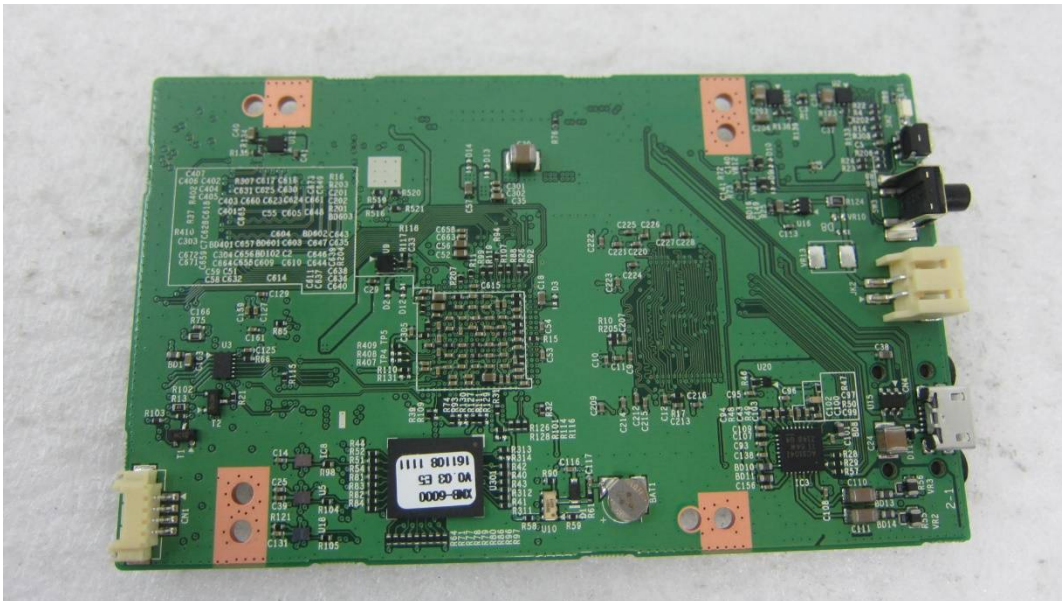


EUT Internal View – Main board

(Top)



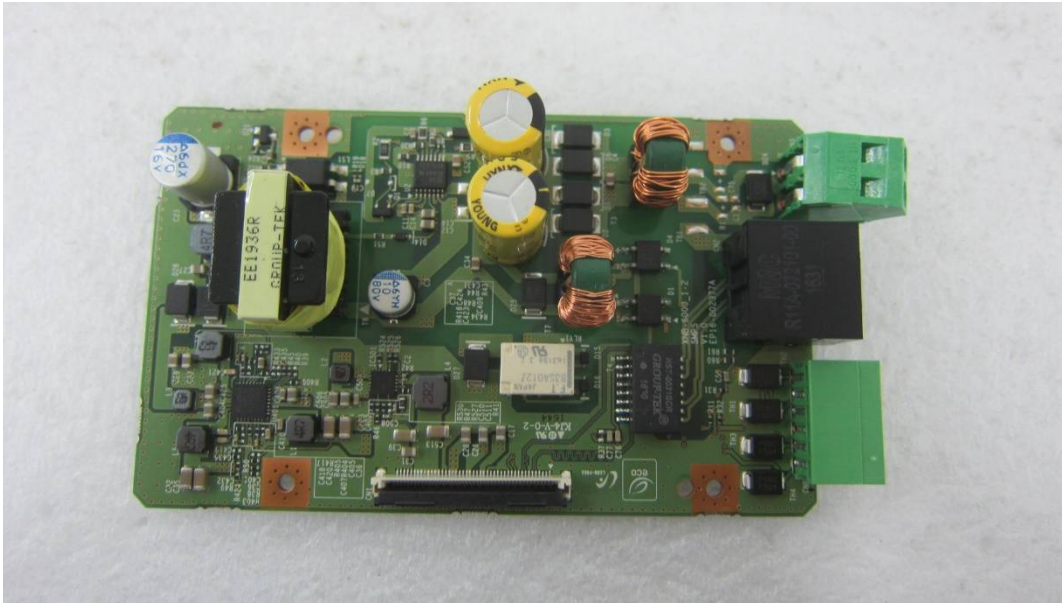
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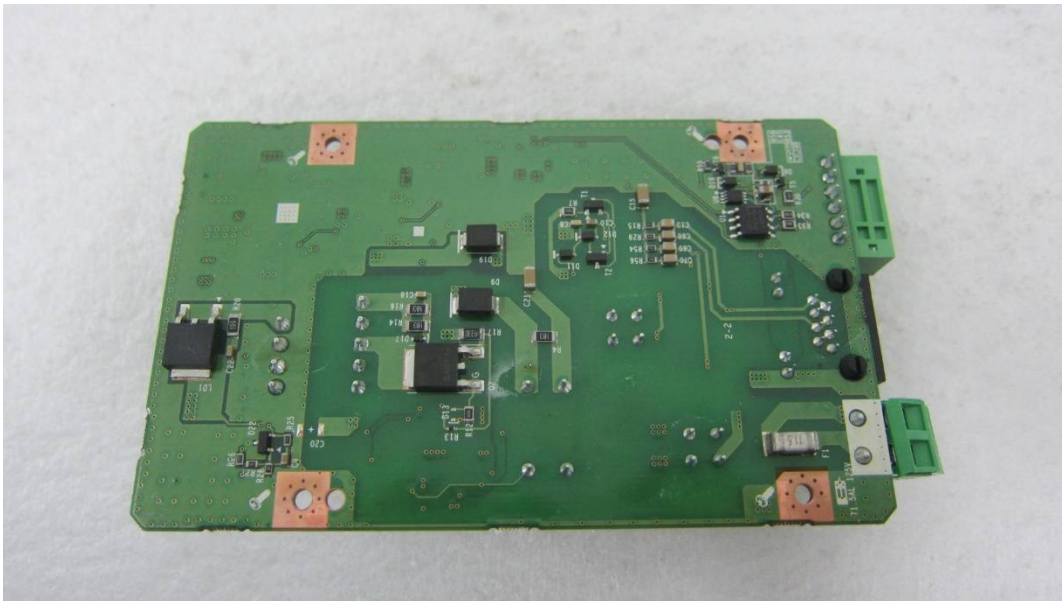
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EUT Internal View – Sub board

(Top)

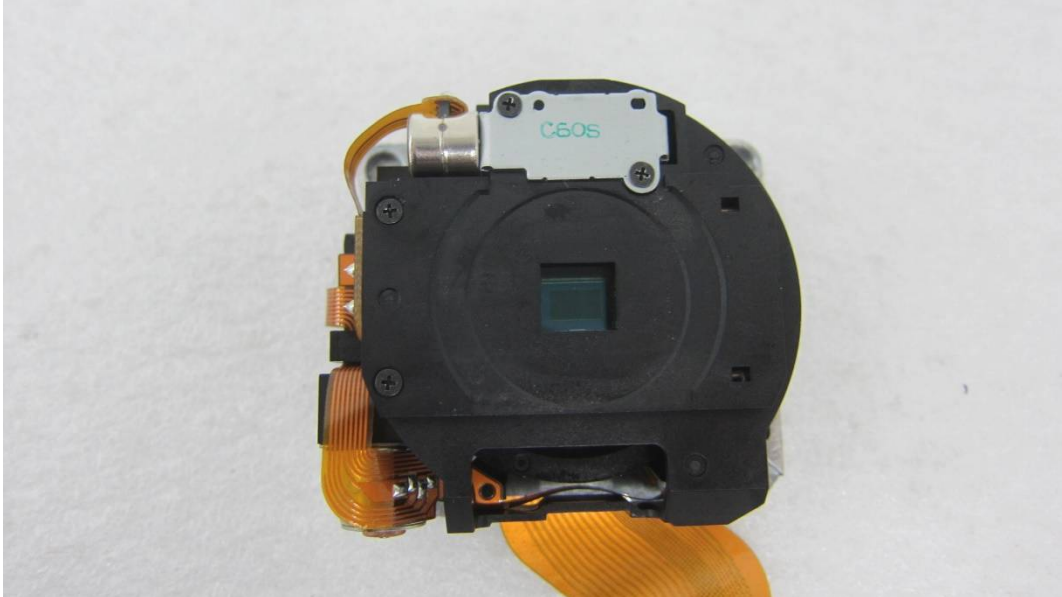


(Bottom)

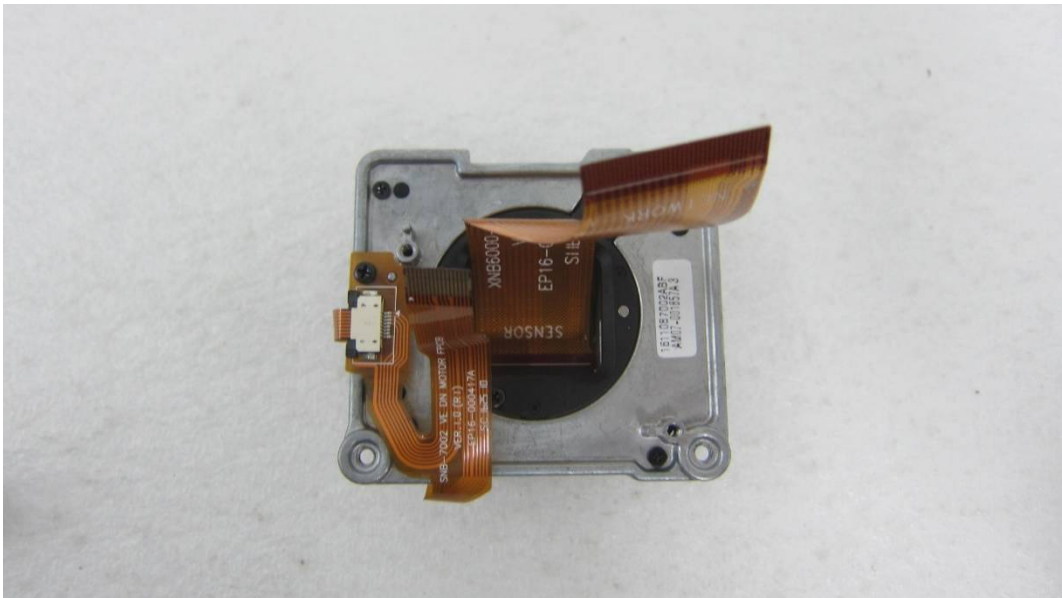


EUT Internal View – Lens Board

(Top)



(Bottom)



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