EMC TEST REPORT For VCCI

Test Report No.	:	KES-E1-16T0611
Date of Issue	:	Dec, 05, 2016
Product name	:	NETWORK CAMERA
Model/Type No.	:	XNB-8000N
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	:	Nov, 28, 2016
Test Results	:	☒ **In Compliance** ☐ **Not in Compliance**

Tested by

Young Suk, Song
EMC Test Engineer

Reviewed by

Dong-Hun, Jang
EMC Technical Manager

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REPORT REVISION HISTORY

Date	Test Report No.	Revision History
Dec. 05, 2016	KES-E1-16T0611	Issued

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1.0 General Product Description

Main Specifications of EUT are:

Video	
Imaging Device	1/1.8" 6M CMOS
Total Pixels	3096(H) x 2094(V)
Effective Pixels	2616(H) x 1976(V)
Scanning System	Progressive Scan
Min. Illumination	Color : 0.03 lux (TBD) B/W : 0.003Lux(TBD)
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(TBD), 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, Butto 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 55 characters) - W/W : English/Numeric/Special Characters - China : English/Numeric/Special/Chinese Characters - Common : Multi-line (Max 6), Color (Grey/Green/Red/Blue/Black/White), Transparency, Auto Scale by Resolution
Day & Night	Auto (ICR) / Color / B/W / External / Schedule
Backlight Compensation	Off / BLC / HLC(Masking/Dimming), WDR(Seamless transition TBD)
Wide Dynamic Range	120dB(TBD)
Contrast Enhancement	SSDR (Off / On)
Digital Noise Reduction	SSNR5 (2D+3D Noise Filter) (Off / On)
Digital Image Stabilization	Off / On
Defog	Auto(input from fog&Dust detection) / Manual / Off
Motion Detection	Yes(8ea, 4point Polygonal zones)
Privacy Masking	Off / On (32ea, polygonal zones) - Color : Grey/Green/Red/Blue/Black/White - Mosaic ※ Zoom ratio option for mask mode (TBD)
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 →TBD)

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Digital PTZ	24X, 'Digital PTZ(Preset, Group)
Flip / Mirror	Flip : On/Off Mirror : On/Off Hallway view : 90°/270°
Intelligent Video & Audio A	Tampering, Loitering, Directional Detection, Defocus Detection, Fog&Dust Detection, Virtual Line, Enter/Exit, Appear / Disappear, Audio Detection, Motion Detection, Digital Auto Tracking, Sound Classification
Alarm I/O	Input 1ea / Output 1ea
Remote Control Interface	-
RS-485 Protocol	-
Alarm Triggers	Alarm Input, Motion Detection, Intelligent Video Analytics, Network Disconnect
Alarm events	File upload via FTP, E-Mail Notification via E-Mail local storage(SD/SDHC/SDXC) or NAS recording at Event Triggers External output DPTZ preset
Audio In	Selectable (Mic IN/Line IN), Supply voltage: 2.5VDC(4mA), Input impedance: approx. 2K Ohm
Audio out	Line out, Max output level: 1 Vrms
Fan / Heater	-
Pixel Counter	Support
Network	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Forma	H.265/H.264 (MPEG-4 Part 10/AVC) : Main/Baseline/High , Motion JPEG
Resolution	5M mode : 2592 x 1944, 2592 x 1464, 1920 x 1080, 1600 x 1200, 1280 x 1024, 1280 x 960 1280 x 720, 1024 x 768, 800 x 600, 720 x 576, 720 x 480, 640 x 480, 320 x 240 2M mode : 1920x1080, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 800x450, 720x576 640x480, 640x360, 320x240, 320x180
Max. Framerate	5M mode : H.265/H.264 : Max. 30fps at all resolutions Motion JPEG : Max. 30fps 2M mode : H.265/H.264 : Max. 60fps at all resolutions Motion JPEG : Max. 30fps
Smart Codec	Manual Mode (area-based : 5EA)
Video Quality Adjustment	H.264/H.265 : Target Bitrate Level Control MJPEG : Target Bitrate Level Control
Bitrate Control Method	H.264/H.265 : CBR or VBR, with WiseStream MJPEG : VBR
Streaming Capability	Multiple Streaming (Up to 10 Profiles)
Audio Compression Forma	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-dierctional (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

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Security	HTTPS(SSL) Login Authentication Digest Login Authentication IP Address Filtering User access Log 802.1X Authentication (EAP-TLS, EAP-LEAP) - Streaming Encryption 기능구현
Streaming Method	Streaming Method
Max. User Access	20 users at Unicast Mode(TBD)
Edge Storage	SD/SDHC/SDXC 2slot (up to 512 GB) - Continuous recording(1'st slot to 2'nd slot) - (TBD) Redundant recording - Motion Images recorded in the SD/SDHC/SDXC memory card can be downloaded. NAS(Network Attached Storage) Local PC for Instant Recording
Application Programming I	ONVIF Profile S/G SUNAPI(HTTP API) Open Platform
Webpage Language	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Denish, Portuguese, Czech, Polish, Turkish, Rumanian, Serbian, Dutch, Croatia, Hungary, Greek, Norsk, Finnish
Web Viewer	Supported OS: Windows 7, 8, 10, Mac OS X 10.8. 10.9. 10.10. 10.11 **Non-plugin Webviewer** Supported Browser: Google Chrome 47, MS Edge 20 Support Codec : Video : H.264, MJPEG (MAX 1M 15FPS) Audio : G.711 **Plug-in Webviewer** Supported Browser : MS Explore 11 , Mozilla Firefox 43 , Apple Safari 9 * Mac OS X only
Central Management Soft	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
스펙시트 미표기 요구사양	
Cable Connection	Plug-in
SD카드	듀얼슬롯

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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-8000N	-	Tianjin Samsung Techwin Opto-Electronic Co.,Ltd.	E.U.T

1.5 Support Equipments

Description	Model Number	Serial Number	Manufacturer	Remarks
POE ADAPTOR	ANY4805C-LT1	10H300002	ANY ELECTRONICS CO., LTD	-
Notebook	X56K	HN11N5151FJ0045W	HANSUNG COMPUTER	-
Notebook ADAPTOR	A12-120P1A	F180271552011758	CHICONY POWER TECHNOLOGY CO.,LTD.	-
SPEAKER	BR10000A CUVE	-	BEIJING EDIFIER HI-TECH GROUP.	-
Cellphone	LG-F700	-	LG	-
Alarm	-	-	-	-
Micro SD CARD	-	-	-	4GB
Lens	SLA-M2890DN	-	SAMSUNG	-

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1.6 External I/O Cabling

- AC, DC 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
	Audio In	Cellphone	Audio In	1.0	U
	Audio OUT	SPEAKER	Audio OUT	1.7	U
	Micro SD	Micro SD Card	Micro SD	-	-
	Iris	Lens	Iris	-	-
	2Pin	Alarm	2Pin	3.0	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 ADAPTOR	RJ-45	3.0	U
	Audio In	cellphone	Audio In	1.0	U
	Audio OUT	SPEAKER	Audio OUT	1.7	U
	Micro SD	Micro SD Card	Micro SD	-	-
	Iris	Lens	Iris	-	-
	2Pin	Alarm	2Pin	3.0	U
POE ADAPTOR	RJ-45	Notebook	RJ-45	3.5	U

* Unshielded = U, Shielded = S

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1.7 EUT Operating Mode(s)

Test mode	Normal operating
AC, DC, POE	E.U.T Monitoring, 1 ㎑, Ping Test

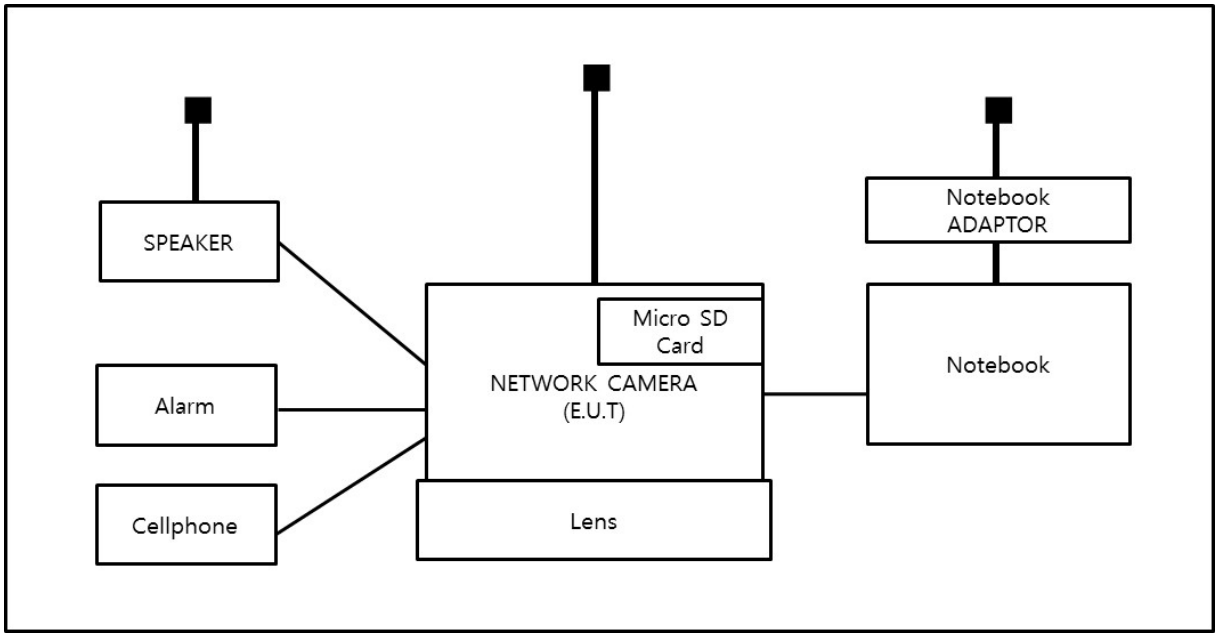
E.U.T Test operating S/W		
Name	Version	Manufacture Company
-	-	-

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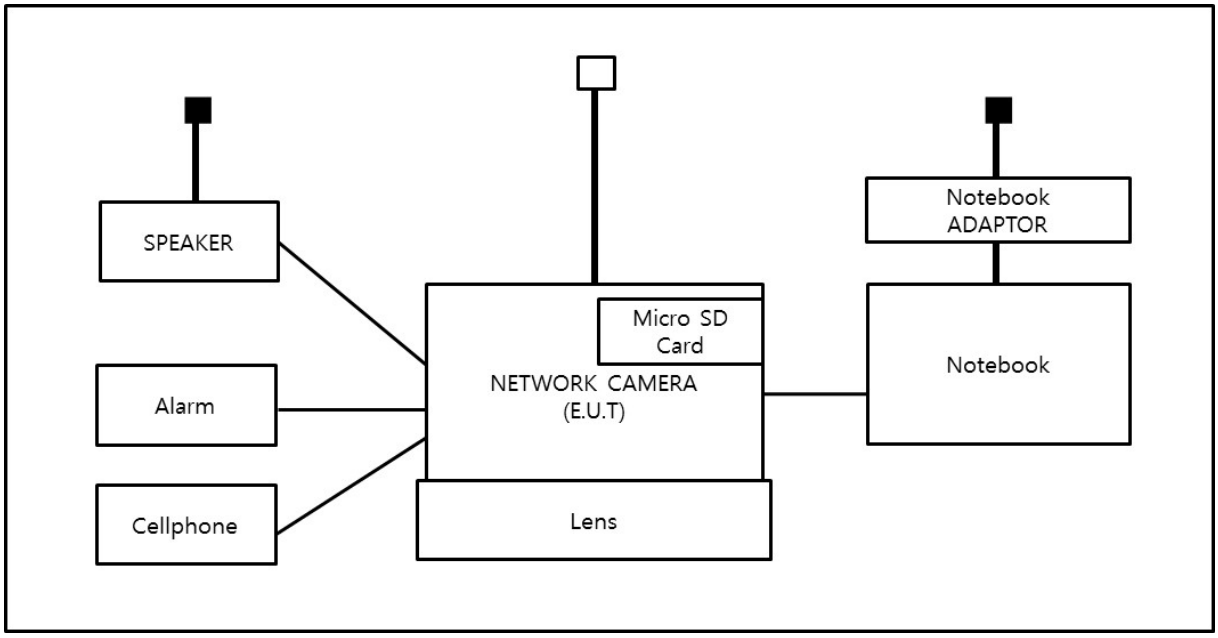
1.8 Configuration

■ AC Main
□ DC Main

- AC Mode

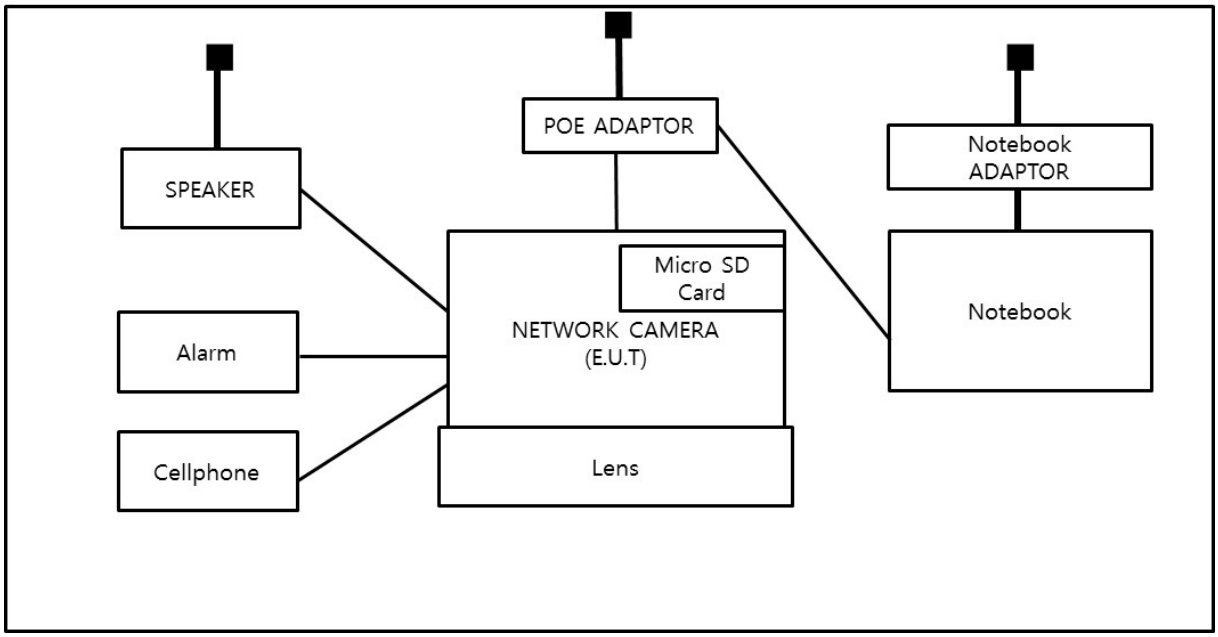


- DC Mode



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- POE Mode



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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)	KOREA LABORATORY ACCREDITATION SCHEME KOLAS TESTING NO. 489

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2.0 Test Regulations

The emissions tests were performed according to following regulations:

☐ **EMC – Directive 2014/30/EU**

☐ EN 61000-6-3:2011		
☐ EN 61000-6-1:2007		
☐ EN 61000-6-4:2007 +A1:2011		
☐ EN 61000-6-2:2005		
☐ EN 55011:2007 +A1:2010	☐ Group 1 ☐ Class A	☐ Group 2 ☐ Class B
☐ EN 55014-1:2006 +A2:2011		
☐ EN 55014-2:1997 +A2:2008		
☐ EN 55015:2013		
☐ EN 61547 :2009		
☐ EN 55022:2010	☐ Class A	☐ Class B
☐ EN 55024:2010 +A1:2015		
☐ EN 50130-4:2011 +A1:2014		
☐ EN 61000-3-2:2014		
☐ EN 61000-3-3:2013		
☐ EN 61326-1:2013		

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☒ **VCCI V-3 / 2015.04** ☒ Class A ☐ Class B

☐ **AS/NZS CISPR22:2009 +A1:2010** ☐ Class A ☐ Class B

☐ **47 CFR Part 15, Subpart B**

- ☐ CISPR 22:2009 +A1:2010 ☒ Class A ☐ Class B
- ☐ ANSI C63.4-2009

☐ **IC Regulation ICES-003 : 2016**

- ☐ CAN/CSA CISPR 22-10 ☐ Class A ☐ Class B
- ☐ ANSI C63.4-2014

☐ **RE– Directive 2014/53/EU**

☐ EN 301 489-1 V1.9.2

- ☐ Equipment for fixed use
- ☐ Equipment for vehicular use
- ☐ Equipment for portable use

☐ EN 301 489-3 V1.6.1

☐ EN 301 489-17 V2.2.1

☐ EN 60945:2002

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2.1 Conducted Emissions Mains Power Ports

Test Date
Nov, 28, 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: 17,4 ℃
Relative Humidity: 41,7 %

Frequency Range of Measurement
150 ㎑ to 30 ㎒

Instrument Settings
IF Band Width: 9 ㎑

Test Results
The requirements are:

☒ PASS
☐ NOT PASS
☐ NOT APPLICABLE

Remarks
See Appendix A for test data.

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2.2 Conducted Emissions at Telecommunication Ports

Test Date
Nov, 28, 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: 17,4 ℃
Relative Humidity: 41,7 %

Frequency Range of Measurement
150 ㎑ to 30 ㎒

Instrument Settings
IF Band Width: 9 ㎑

Test Results
The requirements are:

☒ PASS
☐ NOT PASS
☐ NOT APPLICABLE

Remarks
See Appendix A for test data.

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2.3 Radiated Electric Field Emissions(Below 1 ㎓)

Test Date
Nov, 28, 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: 3,9 ℃
Relative Humidity: 65,0 %

Frequency Range of Measurement
30 ㎒ to 1 ㎓

Instrument Settings
IF Band Width: 120 ㎑

Test Results
The requirements are:

☒ PASS
☐ NOT PASS
☐ NOT APPLICABLE

Remarks
See Appendix A for test data.

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2.4 Radiated Electric Field Emissions(Above 1 ㎓)

Test Date
Nov, 28, 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: 17,4 ℃
Relative Humidity: 41,7 %

Frequency Range of Measurement
1 ㎓ to 6 ㎓

Instrument Settings
IF Band Width: 1 ㎒

Test Results
The requirements are:

☒ PASS
☐ NOT PASS
☐ NOT APPLICABLE

Remarks
See Appendix A for test data.

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APPENDIX A – TEST DATA

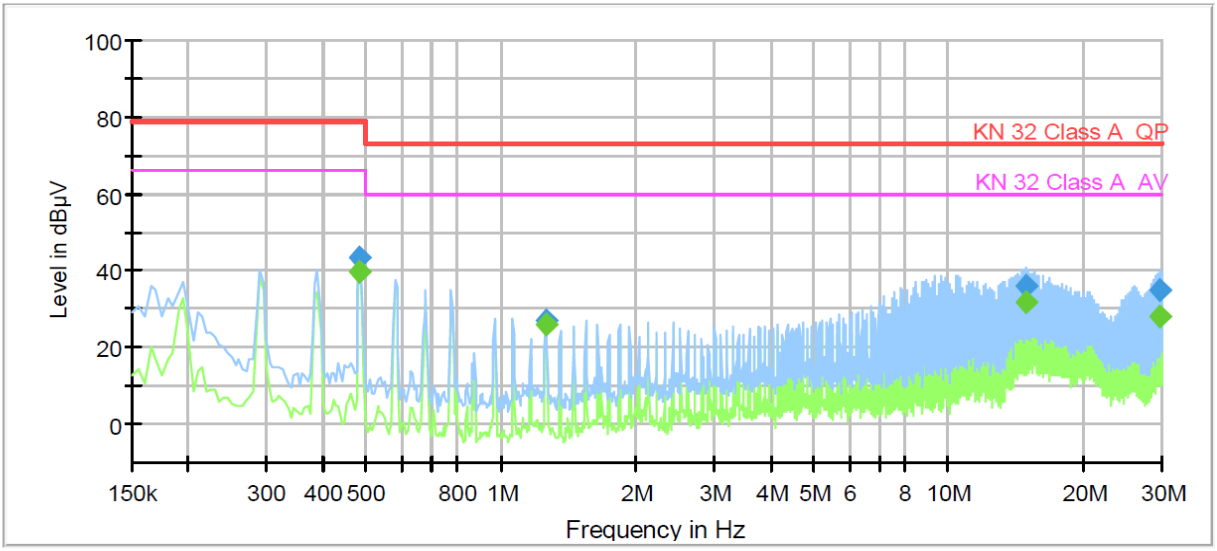
Conducted Emissions at Mains Power Ports

- AC Mode

[HOT]

Common Information

Test Description:	Conducted Emission
Model No.:	XNB-8000N
Mode	AC
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	---	39.53	66.00	26.47	1000.0	9.000	L1	9.8
0.485000	43.53	---	79.00	35.47	1000.0	9.000	L1	9.8
1.260000	---	26.01	60.00	33.99	1000.0	9.000	L1	10.1
1.260000	26.84	---	73.00	46.16	1000.0	9.000	L1	10.1
14.835000	---	31.63	60.00	28.37	1000.0	9.000	L1	10.1
14.835000	36.25	---	73.00	36.75	1000.0	9.000	L1	10.1
29.575000	---	28.28	60.00	31.72	1000.0	9.000	L1	10.4
29.575000	35.12	---	73.00	37.88	1000.0	9.000	L1	10.4

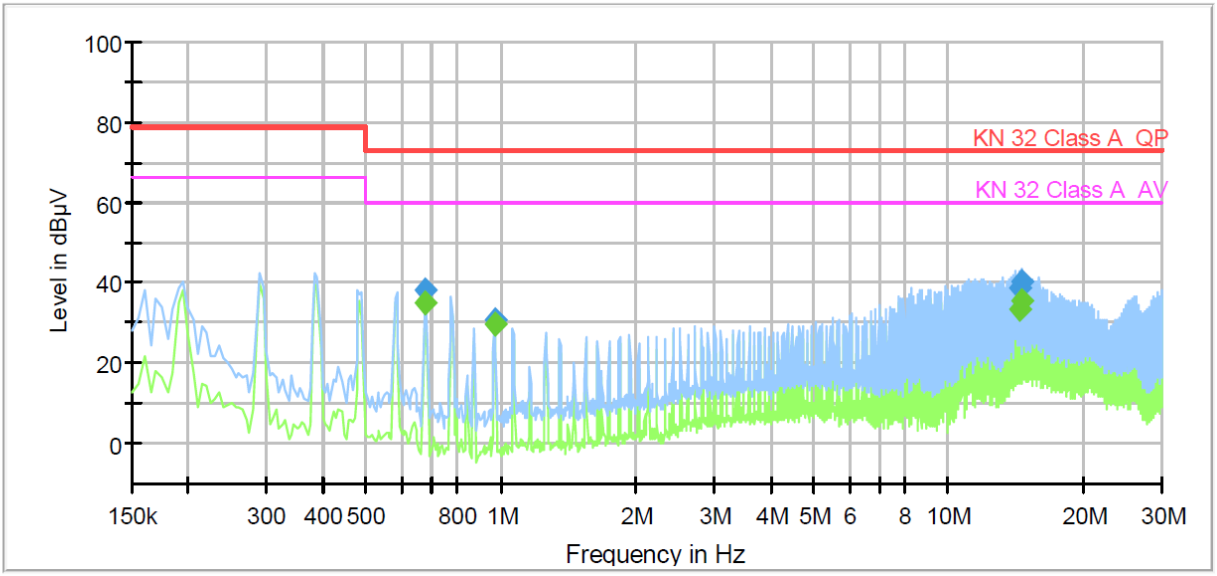
♦ Calculation
QuasiPeak[dBuV] / CAverage [dBuV] = Reading Value[dBuV] + Corr. [dB]
QuasiPeak / CAverage : The Final Value
Reading Value : Not shown in the table.
Corr. : Correction values (LISN FACTOR+ Cable Loss)

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[NEUTRAL]

Common Information

Test Description:	Conducted Emission
Model No.:	XNB-8000N
Mode	AC
Operator Name:	KES



Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.680000	---	34.85	60.00	25.15	1000.0	9.000	N	9.9
0.680000	38.21	---	73.00	34.79	1000.0	9.000	N	9.9
0.970000	---	29.84	60.00	30.16	1000.0	9.000	N	10.0
0.970000	30.83	---	73.00	42.17	1000.0	9.000	N	10.0
14.355000	---	33.43	60.00	26.57	1000.0	9.000	N	10.1
14.355000	38.49	---	73.00	34.51	1000.0	9.000	N	10.1
14.550000	---	35.53	60.00	24.47	1000.0	9.000	N	10.1
14.550000	39.98	---	73.00	33.02	1000.0	9.000	N	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 (LISN FACTOR+ Cable Loss)

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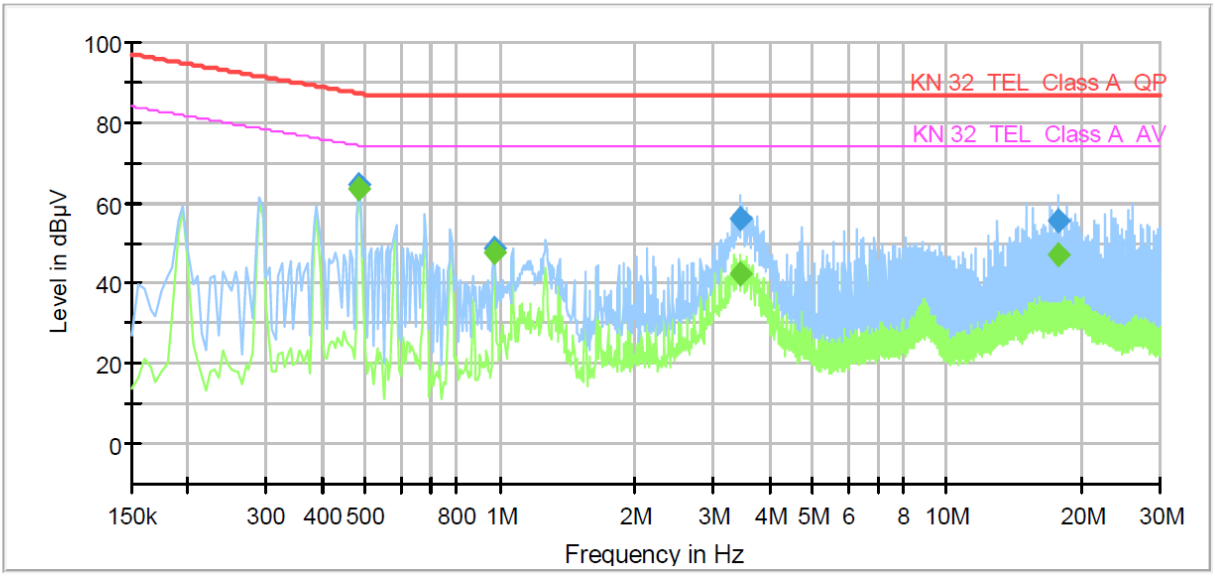
Conducted Emissions at Telecommunication Ports

- AC Mode

[10 Mbps]

Common Information

Test Description:	Telecommunication Emission
Model No.:	XNB-8000N
Mode	AC_10M
Operator Name:	KES



Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.485000	---	63.53	74.25	10.72	1000.0	9.000	Single Line	10.1
0.485000	64.70	---	87.25	22.55	1000.0	9.000	Single Line	10.1
0.970000	---	47.78	74.00	26.22	1000.0	9.000	Single Line	10.2
0.970000	48.49	---	87.00	38.51	1000.0	9.000	Single Line	10.2
3.460000	---	42.15	74.00	31.85	1000.0	9.000	Single Line	10.2
3.460000	56.07	---	87.00	30.93	1000.0	9.000	Single Line	10.2
17.770000	---	47.33	74.00	26.67	1000.0	9.000	Single Line	10.2
17.770000	55.81	---	87.00	31.19	1000.0	9.000	Single Line	10.2

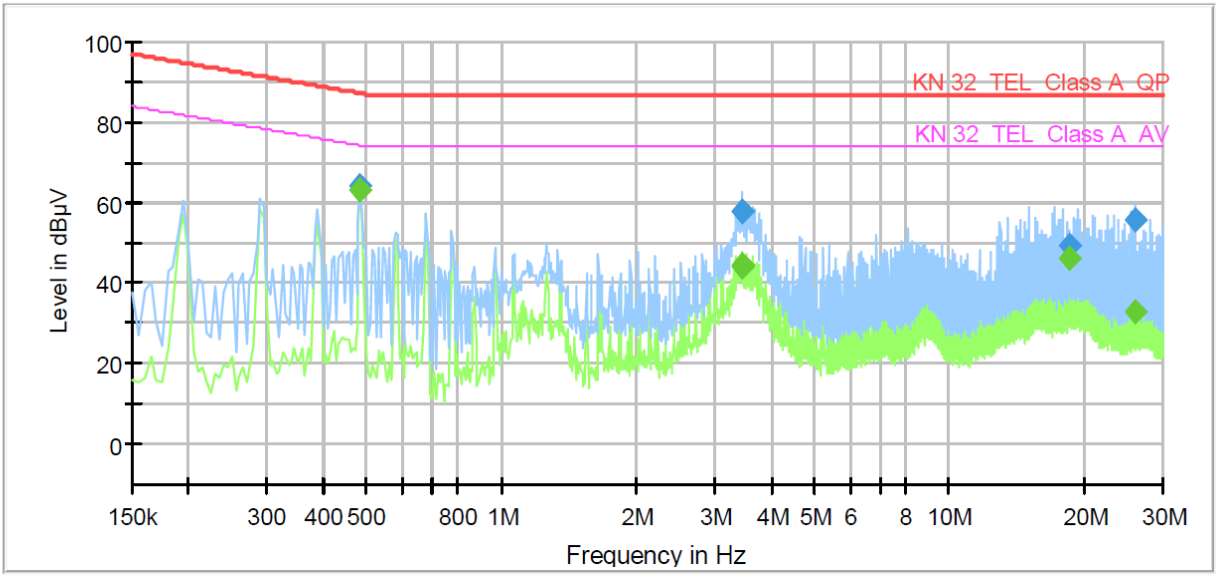
♦ Calculation
QuasiPeak[dBuV] / CAverage [dBuV] = Reading Value[dBuV] + Corr. [dB]
QuasiPeak / CAverage : The Final Value
Reading Value : Not shown in the table.
Corr. : Correction values (ISN FACTOR+ Cable Loss)

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[100 Mbps]

Common Information

Test Description:	Telecommunication Emission
Model No.:	XNB-8000N
Mode	AC_100M
Operator Name:	KES



Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.485000	---	63.04	74.25	11.21	1000.0	9.000	Single Line	9.6
0.485000	64.27	---	87.25	22.98	1000.0	9.000	Single Line	9.6
3.450000	---	44.26	74.00	29.74	1000.0	9.000	Single Line	9.7
3.450000	57.60	---	87.00	29.40	1000.0	9.000	Single Line	9.7
3.455000	---	43.74	74.00	30.26	1000.0	9.000	Single Line	9.7
3.455000	57.46	---	87.00	29.54	1000.0	9.000	Single Line	9.7
18.550000	---	46.12	74.00	27.88	1000.0	9.000	Single Line	9.6
18.550000	49.15	---	87.00	37.85	1000.0	9.000	Single Line	9.6
26.015000	---	32.65	74.00	41.35	1000.0	9.000	Single Line	9.5
26.015000	55.36	---	87.00	31.64	1000.0	9.000	Single Line	9.5

♦ Calculation
QuasiPeak[dBuV] / CAverage [dBuV] = Reading Value[dBuV] + Corr. [dB]
QuasiPeak / CAverage : The Final Value
Reading Value : Not shown in the table.
Corr. : Correction values (ISN FACTOR+ Cable Loss)

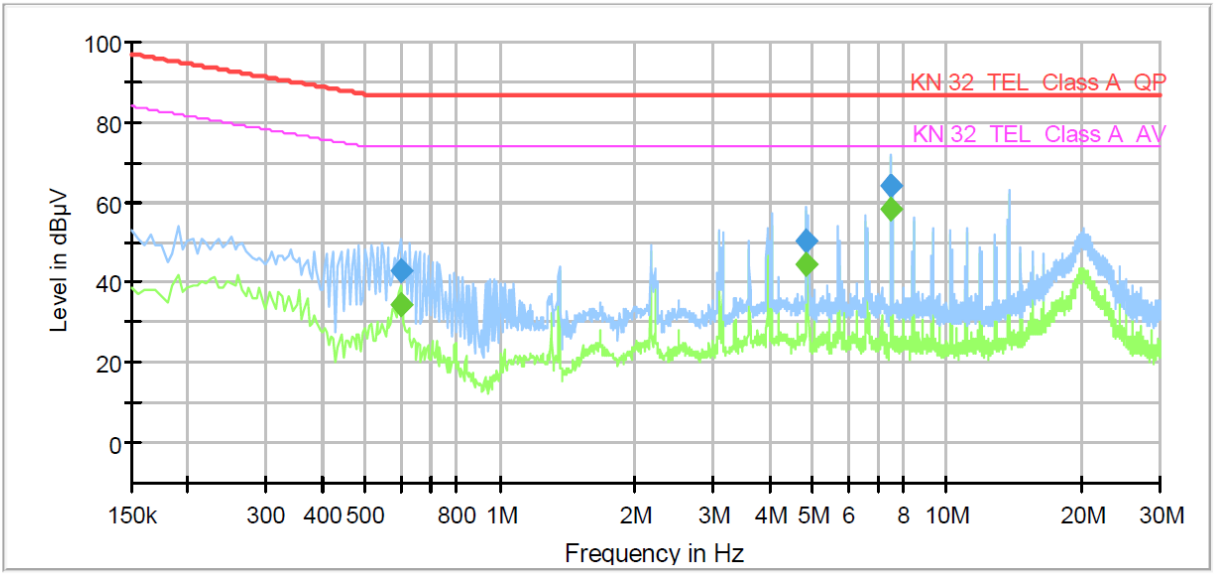
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- DC Mode

[10 Mbps]

Common Information

Test Description:	Telecommunication Emission
Model No.:	XNB-8000N
Mode	DC_10M
Operator Name:	KES



Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.600000	---	34.32	74.00	39.68	1000.0	9.000	Single Line	10.1
0.600000	43.01	---	87.00	43.99	1000.0	9.000	Single Line	10.1
4.835000	---	44.61	74.00	29.39	1000.0	9.000	Single Line	10.1
4.835000	50.12	---	87.00	36.88	1000.0	9.000	Single Line	10.1
7.500000	---	58.38	74.00	15.62	1000.0	9.000	Single Line	10.0
7.500000	64.08	---	87.00	22.92	1000.0	9.000	Single Line	10.0

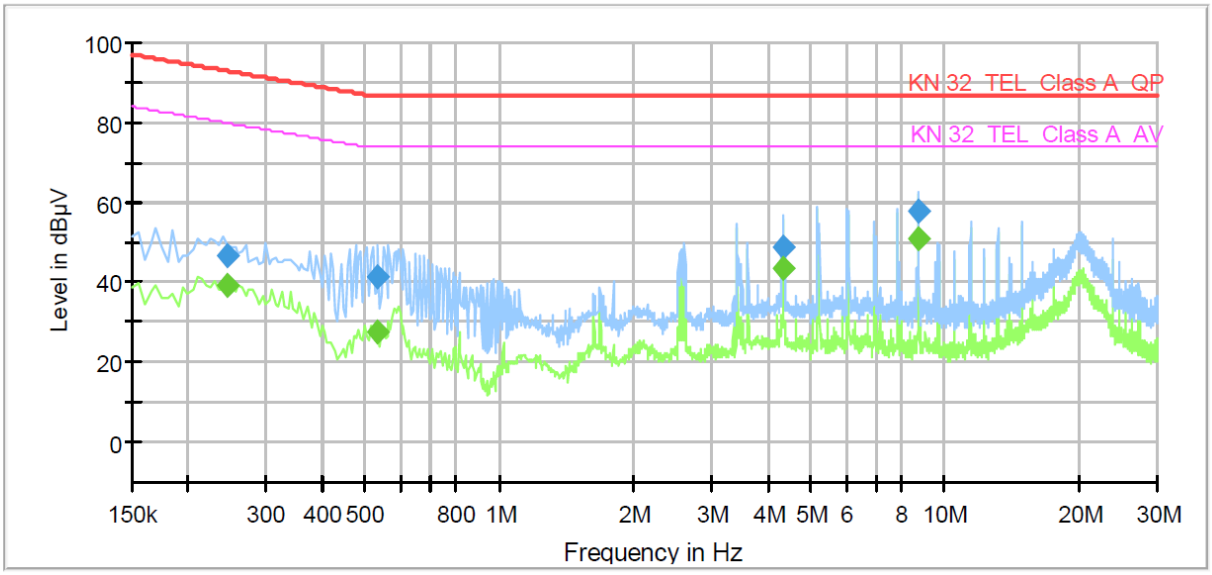
♦ Calculation
QuasiPeak[dBuV] / CAverage [dBuV] = Reading Value[dBuV] + Corr. [dB]
QuasiPeak / CAverage : The Final Value
Reading Value : Not shown in the table.
Corr. : Correction values (ISN FACTOR+ Cable Loss)

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[100 Mbps]

Common Information

Test Description:	Telecommunication Emission
Model No.:	XNB-8000N
Mode	DC_100M
Operator Name:	KES



Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.245000	---	39.18	79.92	40.74	1000.0	9.000	Single Line	9.6
0.245000	46.51	---	92.92	46.41	1000.0	9.000	Single Line	9.6
0.535000	---	27.56	74.00	46.44	1000.0	9.000	Single Line	9.6
0.535000	41.40	---	87.00	45.60	1000.0	9.000	Single Line	9.6
4.350000	---	43.25	74.00	30.75	1000.0	9.000	Single Line	9.6
4.350000	48.75	---	87.00	38.25	1000.0	9.000	Single Line	9.6
8.750000	---	51.03	74.00	22.97	1000.0	9.000	Single Line	9.5
8.750000	57.64	---	87.00	29.36	1000.0	9.000	Single Line	9.5

♦ Calculation
QuasiPeak[dBuV] / CAverage [dBuV] = Reading Value[dBuV] + Corr. [dB]
QuasiPeak / CAverage : The Final Value
Reading Value : Not shown in the table.
Corr. : Correction values (ISN FACTOR+ Cable Loss)

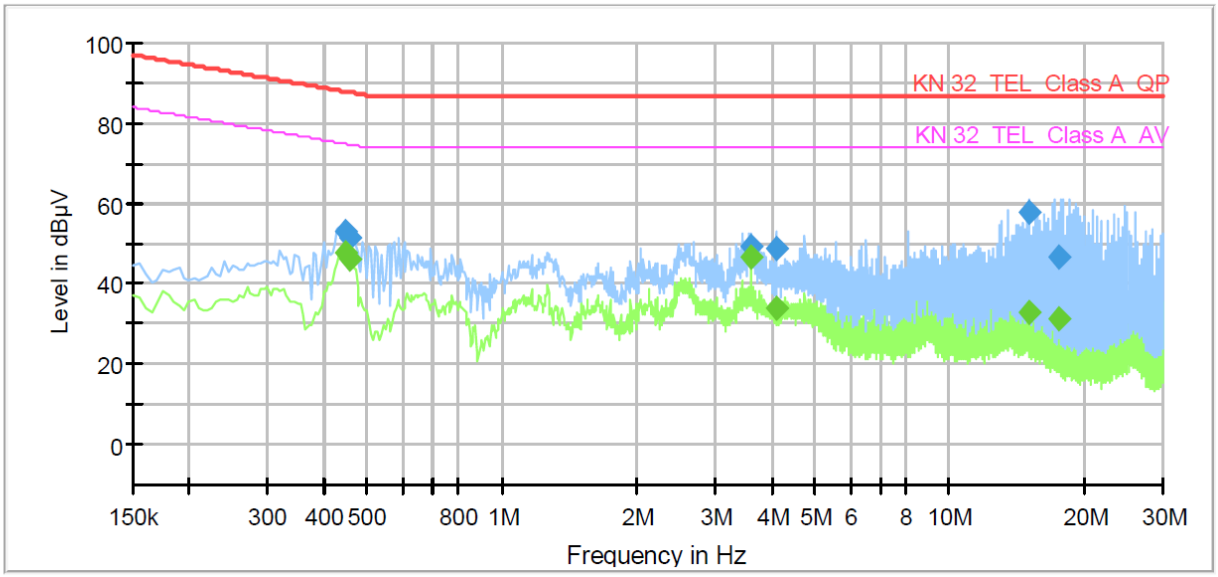
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- POE Mode

[10 Mbps]

Common Information

Test Description:	Telecommunication Emission
Model No.:	XNB-8000N
Mode	POE_10M
Operator Name:	KES



Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.445000	---	47.87	74.97	27.10	1000.0	9.000	Single Line	10.1
0.445000	53.12	---	87.97	34.85	1000.0	9.000	Single Line	10.1
0.455000	---	46.10	74.78	28.68	1000.0	9.000	Single Line	10.1
0.455000	51.59	---	87.78	36.19	1000.0	9.000	Single Line	10.1
3.600000	---	46.63	74.00	27.37	1000.0	9.000	Single Line	10.2
3.600000	49.46	---	87.00	37.54	1000.0	9.000	Single Line	10.2
4.090000	---	33.83	74.00	40.17	1000.0	9.000	Single Line	10.1
4.090000	48.87	---	87.00	38.13	1000.0	9.000	Single Line	10.1
15.025000	---	32.81	74.00	41.19	1000.0	9.000	Single Line	10.1
15.025000	57.54	---	87.00	29.46	1000.0	9.000	Single Line	10.1
17.570000	---	31.24	74.00	42.76	1000.0	9.000	Single Line	10.2
17.570000	46.84	---	87.00	40.16	1000.0	9.000	Single Line	10.2

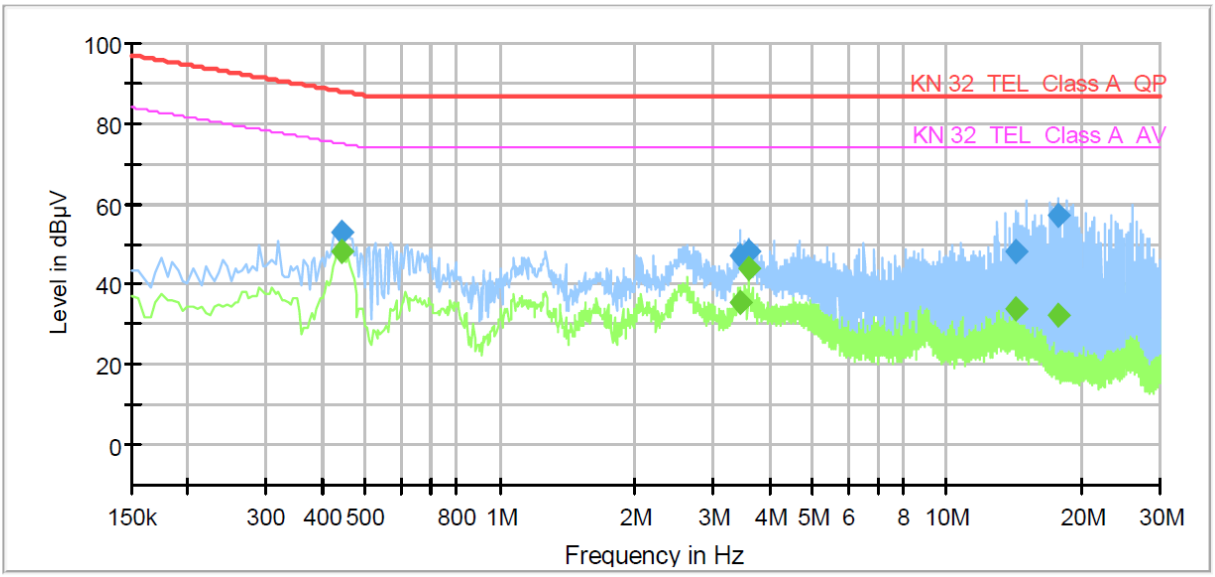
♦ Calculation
QuasiPeak[dBuV] / CAverage [dBuV] = Reading Value[dBuV] + Corr. [dB]
QuasiPeak / CAverage : The Final Value
Reading Value : Not shown in the table.
Corr. : Correction values (ISN FACTOR+ Cable Loss)

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[100 Mbps]

Common Information

Test Description:	Telecommunication Emission
Model No.:	XNB-8000N
Mode	POE_100M
Operator Name:	KES



Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.440000	---	48.01	75.06	27.05	1000.0	9.000	Single Line	9.6
0.440000	52.98	---	88.06	35.08	1000.0	9.000	Single Line	9.6
3.450000	---	35.62	74.00	38.38	1000.0	9.000	Single Line	9.7
3.450000	47.17	---	87.00	39.83	1000.0	9.000	Single Line	9.7
3.600000	---	43.93	74.00	30.07	1000.0	9.000	Single Line	9.7
3.600000	48.03	---	87.00	38.97	1000.0	9.000	Single Line	9.7
14.275000	---	34.01	74.00	39.99	1000.0	9.000	Single Line	9.6
14.275000	47.91	---	87.00	39.09	1000.0	9.000	Single Line	9.6
17.770000	---	32.14	74.00	41.86	1000.0	9.000	Single Line	9.7
17.770000	57.18	---	87.00	29.82	1000.0	9.000	Single Line	9.7

♦ Calculation
QuasiPeak[dBuV] / CAverage [dBuV] = Reading Value[dBuV] + Corr. [dB]
QuasiPeak / CAverage : The Final Value
Reading Value : Not shown in the table.
Corr. : Correction values (ISN FACTOR+ Cable Loss)

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Radiated Electric Field Emissions(Below 1 ㎓)

- AC Mode

Frequency	Amplitude	ANT Polar. (H/V)	ANT. Height	Correction Factor		Corrected Amplitude	Applicable Limit	Margin
[㎒]	[dB㎶]		[m]	ANT. [dB/m]	Cable [dB]	[dB㎶/m]	[dB㎶/m]	[dB]
150.19	18.71	H	2.36	8.21	3.57	30.49	40.00	9.51
157.05	12.58	V	1.35	8.45	3.66	24.69	40.00	15.31
224.06	11.85	H	2.11	11.83	4.41	28.09	40.00	11.91
230.72	16.25	V	1.85	11.98	4.49	32.72	47.00	14.28
270.45	19.24	V	1.05	12.81	4.90	36.95	47.00	10.05
297.69	12.37	V	3.01	13.34	5.13	30.84	47.00	16.16
297.72	13.05	H	2.00	13.34	5.13	31.52	47.00	15.48
350.96	12.95	H	1.96	14.56	5.65	33.16	47.00	13.84

* H : Horizontal, V : Vertical

♦ Calculation
Corrected Amplitude [㏈uV] = Amplitude[㏈uV] + Correction Factor [㏈]
Corrected Amplitude : The Final Value, Amplitude : Reading Value,
Correction Factor : ANT FACTOR + Cable loss

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- DC Mode

Frequency	Amplitude	ANT Polar. (H/V)	ANT. Height	Correction Factor		Corrected Amplitude	Applicable Limit	Margin
[㎒]	[dBμV]		[m]	ANT. [dB/m]	Cable [dB]	[dBμV/m]	[dBμV/m]	[dB]
151.24	10.52	H	2.36	8.24	3.58	22.34	40.00	17.66
155.10	11.58	V	1.52	8.38	3.63	23.59	40.00	16.41
220.01	12.25	H	2.01	11.74	4.36	28.35	40.00	11.65
229.79	11.09	H	1.95	11.96	4.47	27.52	40.00	12.48
251.07	10.23	V	3.02	12.43	4.73	27.39	47.00	19.61
297.69	13.20	H	1.22	13.34	5.13	31.67	47.00	15.33
473.24	11.28	V	3.01	16.73	6.89	34.90	47.00	12.10

* H : Horizontal, V : Vertical

♦ Calculation
Corrected Amplitude [dBuV] = Amplitude[dBuV] + Correction Factor [dB]
Corrected Amplitude : The Final Value, Amplitude : Reading Value,
Correction Factor : ANT FACTOR + Cable loss

- POE Mode

Frequency	Amplitude	ANT Polar. (H/V)	ANT. Height	Correction Factor		Corrected Amplitude	Applicable Limit	Margin
[㎒]	[dBμV]		[m]	ANT. [dB/m]	Cable [dB]	[dBμV/m]	[dBμV/m]	[dB]
152.26	13.25	H	2.31	8.28	3.60	25.13	40.00	14.87
155.00	15.68	V	2.00	8.38	3.63	27.69	40.00	12.31
223.03	11.25	H	1.52	11.81	4.39	27.45	40.00	12.55
223.94	11.01	V	1.66	11.83	4.40	27.24	40.00	12.76
260.80	13.25	H	3.01	12.62	4.81	30.68	47.00	16.32
270.54	13.20	V	1.25	12.81	4.90	30.91	47.00	16.09
320.01	14.21	H	2.01	13.84	5.35	33.40	47.00	13.60
370.41	11.98	V	1.09	15.01	5.86	32.85	47.00	14.15

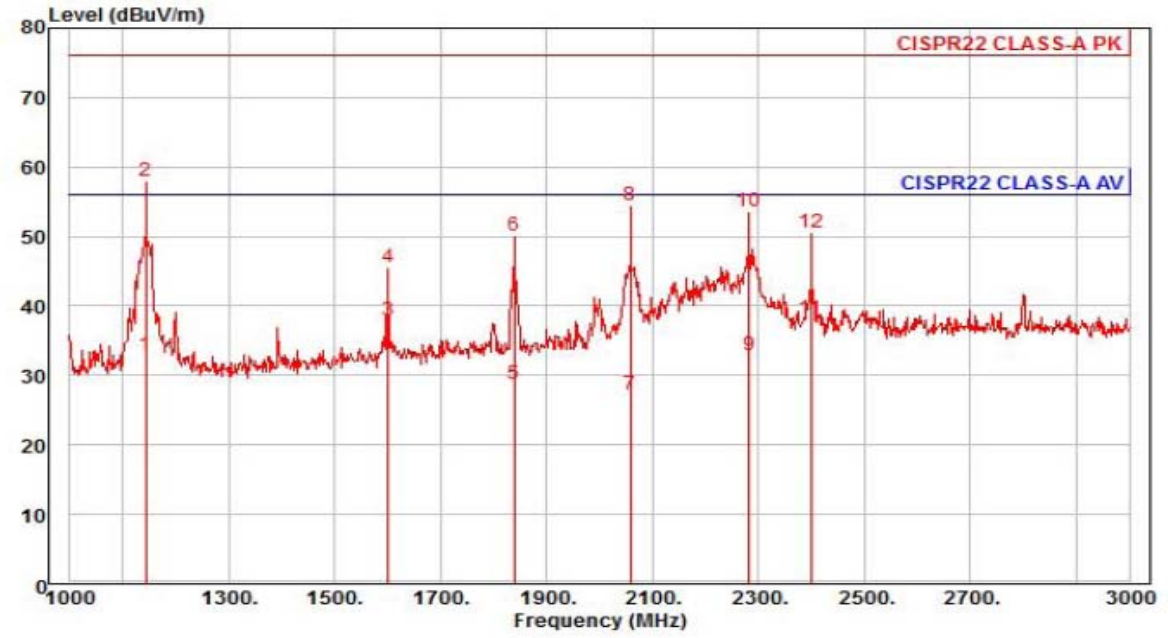
* H : Horizontal, V : Vertical

♦ Calculation
Corrected Amplitude [dBuV] = Amplitude[dBuV] + Correction Factor [dB]
Corrected Amplitude : The Final Value, Amplitude : Reading Value,
Correction Factor : ANT FACTOR + Cable loss

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Radiated Electric Field Emissions(Above 1 ㎓)

- AC Mode




```
Site      : chamber
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) horizontal
          : RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project   :
Model     : XNB-8000N
Mode      : AC
Memo      : 1 ~ 3 GHz
```

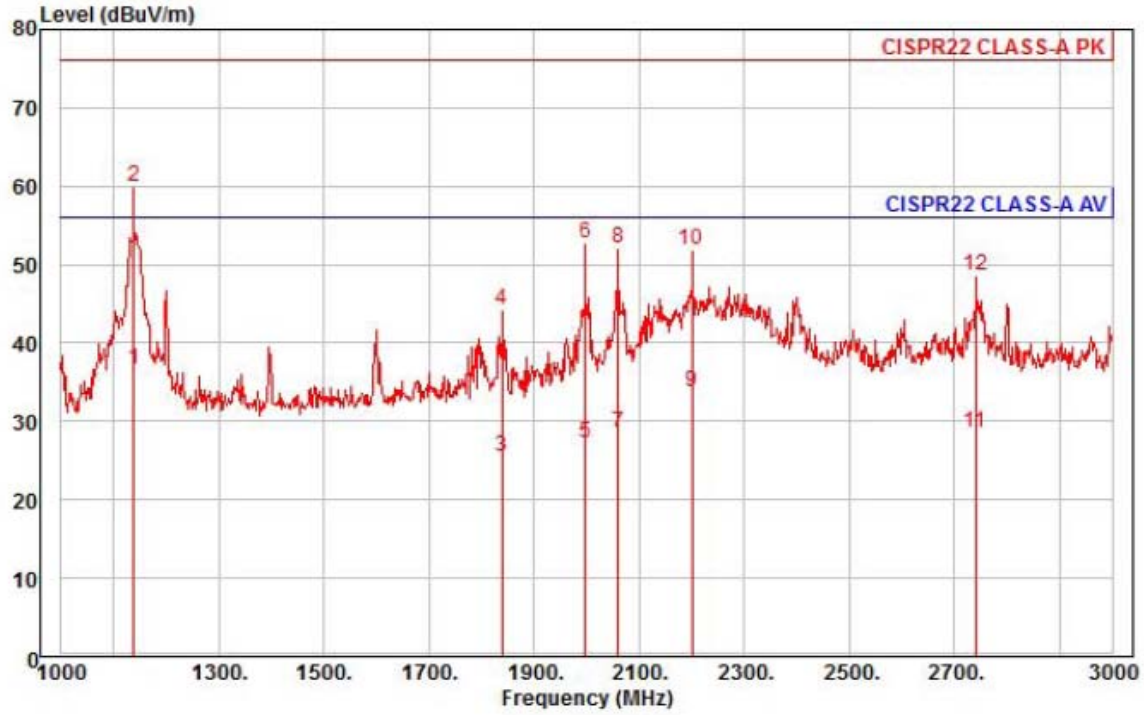
	Freq	Read Level	Ant Factor	Cable Loss	Preamp Factor	TPos	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	1144.00	41.29	24.48	6.95	39.74	214	56.00	-23.02	horizontal	Average
2 pk	1144.00	66.34	24.48	6.95	39.74	214	76.00	-17.97	horizontal	Peak
3	1600.00	42.61	26.29	8.31	39.22	39	56.00	-18.01	horizontal	Average
4	1600.00	50.14	26.29	8.31	39.22	39	76.00	-30.48	horizontal	Peak
5	1840.00	31.89	27.24	8.93	39.34	28	56.00	-27.28	horizontal	Average
6	1840.00	53.20	27.24	8.93	39.34	28	76.00	-25.97	horizontal	Peak
7	2058.00	29.18	28.02	9.47	39.41	199	56.00	-28.74	horizontal	Average
8	2058.00	56.38	28.02	9.47	39.41	199	76.00	-21.54	horizontal	Peak
9	2282.00	33.82	28.57	10.02	39.42	56	56.00	-23.01	horizontal	Average
10	2282.00	54.42	28.57	10.02	39.42	56	76.00	-22.41	horizontal	Peak
11 pp	2400.00	38.44	28.86	10.32	39.42	51	56.00	-17.80	horizontal	Average
12	2400.00	50.83	28.86	10.32	39.42	51	76.00	-25.41	horizontal	Peak

♦ Calculation

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

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

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Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : XNB-8000N
Mode : AC
Memo : 1 ~ 3 GHz

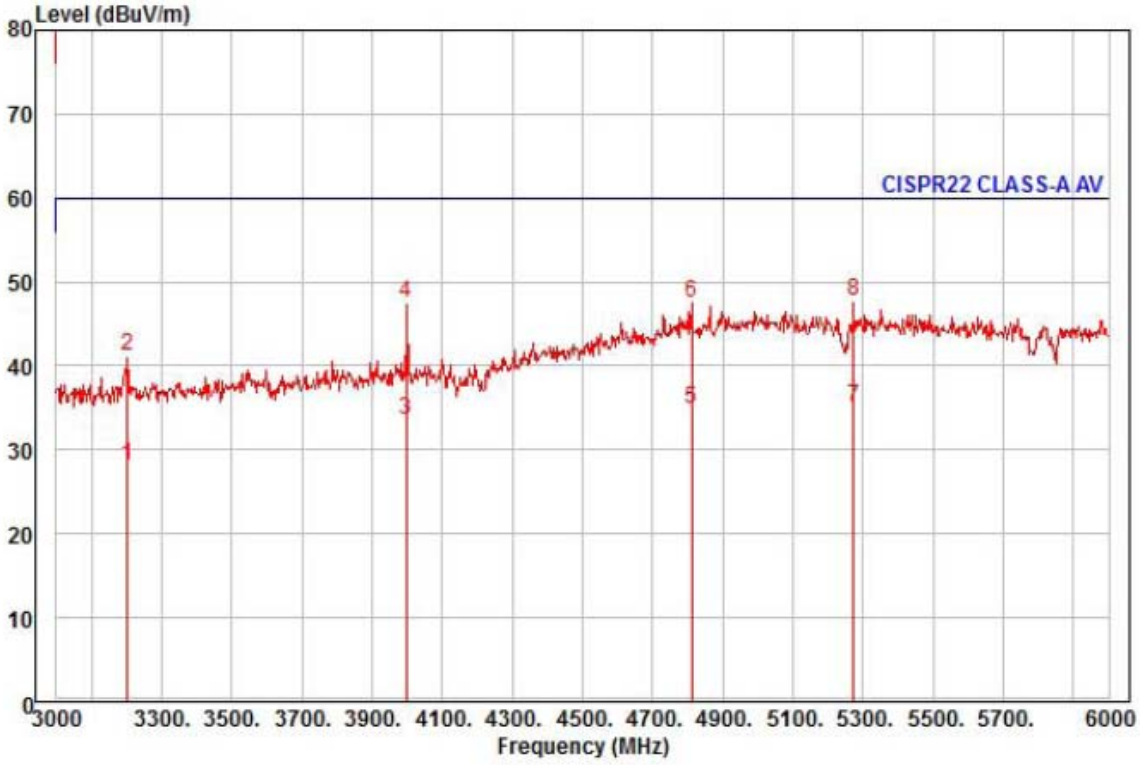
	Freq	Read Level	Ant Factor	Cable Loss	Preamp Factor	TPos	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1 av	1138.00	44.94	24.46	6.93	39.76	172	56.00	-19.43	vertical	Average
2 pp	1138.00	68.22	24.46	6.93	39.76	172	76.00	-16.15	vertical	Peak
3	1840.00	28.60	27.24	8.93	39.34	160	56.00	-30.57	vertical	Average
4	1840.00	47.52	27.24	8.93	39.34	160	76.00	-31.65	vertical	Peak
5	1998.00	29.40	27.87	9.33	39.41	187	56.00	-28.81	vertical	Average
6	1998.00	54.91	27.87	9.33	39.41	187	76.00	-23.30	vertical	Peak
7	2060.00	30.45	28.03	9.48	39.41	218	56.00	-27.45	vertical	Average
8	2060.00	54.06	28.03	9.48	39.41	218	76.00	-23.84	vertical	Peak
9	2200.00	35.03	28.37	9.80	39.42	187	56.00	-22.22	vertical	Average
10	2200.00	53.05	28.37	9.80	39.42	187	76.00	-24.20	vertical	Peak
11	2740.00	27.59	29.69	11.09	39.81	333	56.00	-27.44	vertical	Average
12	2740.00	47.73	29.69	11.09	39.81	333	76.00	-27.30	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

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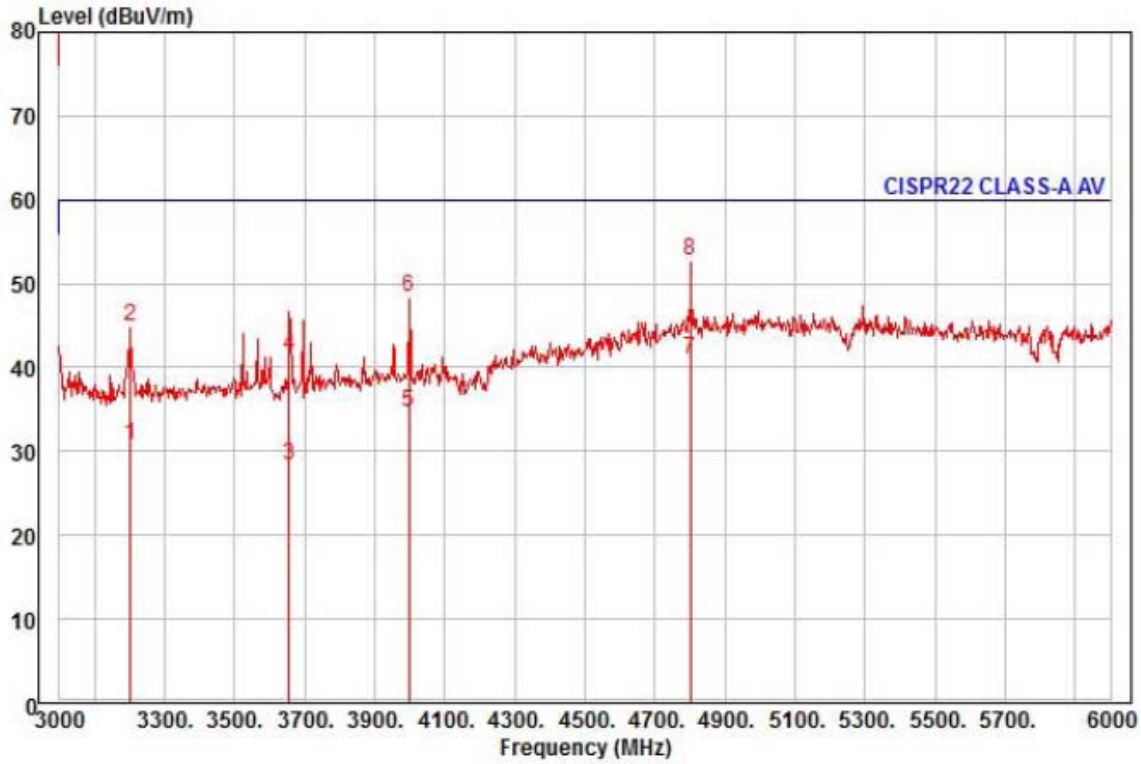


Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : XNB-8000N
Mode : AC
Memo : 3 ~ 6 GHz

	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	25.88	30.67	12.06	40.42	180	60.00	-31.81	horizontal	Average
2	3201.00	38.92	30.67	12.06	40.42	180	80.00	-38.77	horizontal	Peak
3	3999.00	28.64	32.01	13.56	40.70	36	60.00	-26.49	horizontal	Average
4	3999.00	42.62	32.01	13.56	40.70	36	80.00	-32.51	horizontal	Peak
5	4812.00	23.62	36.65	15.11	40.46	30	60.00	-25.08	horizontal	Average
6	4812.00	36.33	36.65	15.11	40.46	30	80.00	-32.37	horizontal	Peak
7 pp	5274.00	22.81	37.17	15.83	40.72	38	60.00	-24.91	horizontal	Average
8 pk	5274.00	35.35	37.17	15.83	40.72	38	80.00	-32.37	horizontal	Peak

♦ Calculation
Over Limit [dB] = (Read Level[dBuV] + Ant Factor[dB/m] + Cable Loss [dB] − Preamp Factor [dB]) − Limit Line[dBuV]
Over Limit : Margin Value, Read Level : Reading Value, Ant Factor : Ant Factor, Cable Loss : Cable loss, Preamp Factor : Preamp Factor

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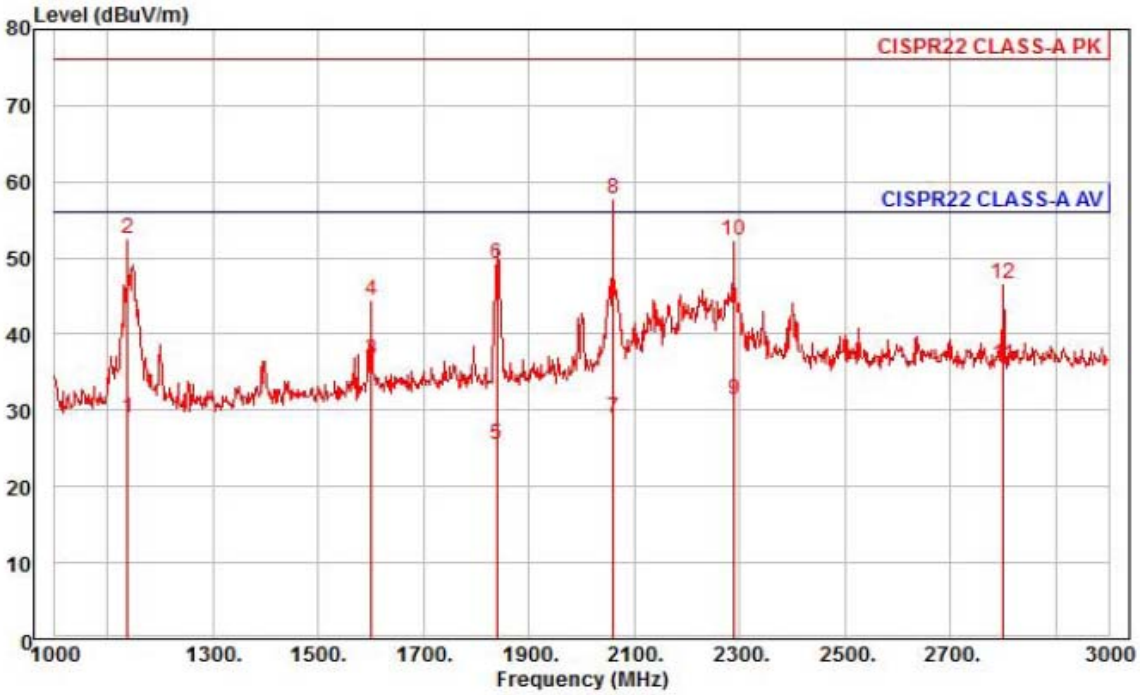
Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : XNB-8000N
Mode : AC
Memo : 3 ~ 6 GHz

	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	28.53	30.67	12.06	40.42	1	60.00	-29.16	vertical	Average
2	3201.00	42.57	30.67	12.06	40.42	1	80.00	-35.12	vertical	Peak
3	3657.00	24.73	31.43	12.91	40.82	171	60.00	-31.75	vertical	Average
4	3657.00	37.88	31.43	12.91	40.82	171	80.00	-38.60	vertical	Peak
5	3999.00	29.83	32.01	13.56	40.70	262	60.00	-25.30	vertical	Average
6	3999.00	43.62	32.01	13.56	40.70	262	80.00	-31.51	vertical	Peak
7 pp	4800.00	29.80	36.58	15.10	40.47	269	60.00	-18.99	vertical	Average
8 pk	4800.00	41.50	36.58	15.10	40.47	269	80.00	-27.29	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

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- DC Mode



Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : XNB-8000N
Mode : DC
Memo : 1 ~ 3 GHz

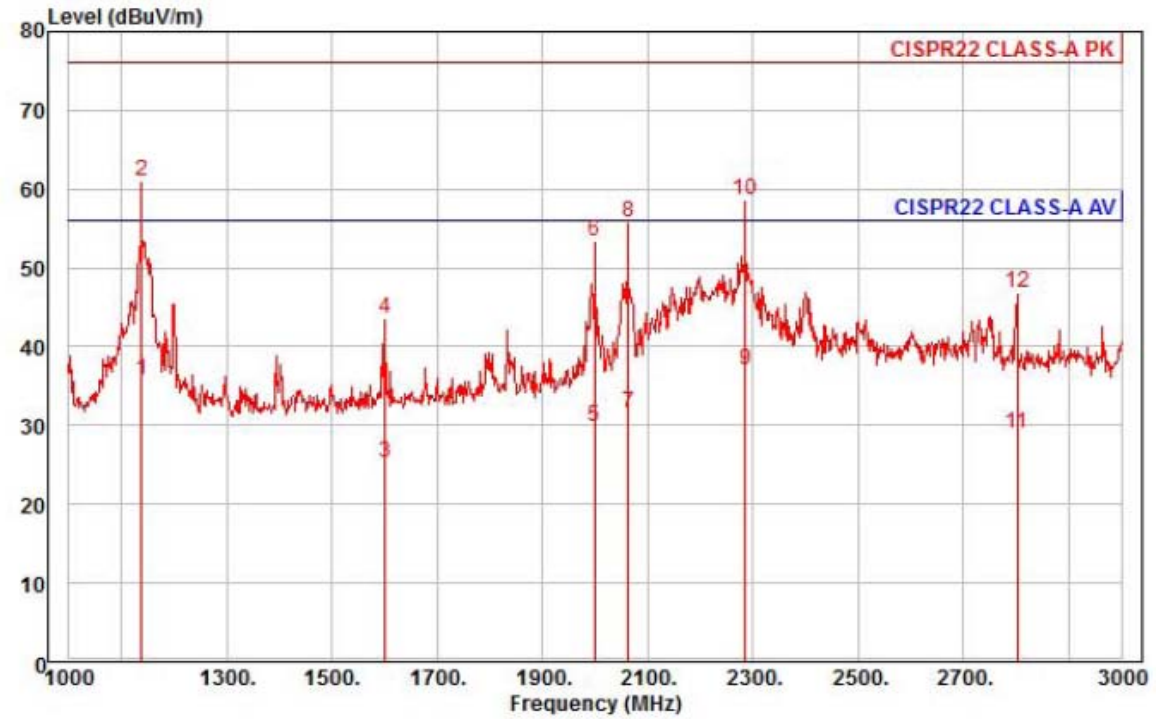
	Freq	Read Level	Ant Factor	Cable Loss	Preamp Factor	TPos	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	1138.00	37.42	24.46	6.93	39.76	280	56.00	-26.95	horizontal	Average
2	1138.00	60.93	24.46	6.93	39.76	280	76.00	-23.44	horizontal	Peak
3 av	1600.00	41.16	26.29	8.31	39.22	47	56.00	-19.46	horizontal	Average
4	1600.00	49.13	26.29	8.31	39.22	47	76.00	-31.49	horizontal	Peak
5	1840.00	28.65	27.24	8.93	39.34	265	56.00	-30.52	horizontal	Average
6	1840.00	52.47	27.24	8.93	39.34	265	76.00	-26.70	horizontal	Peak
7	2060.00	30.85	28.03	9.48	39.41	179	56.00	-27.05	horizontal	Average
8 pp	2060.00	59.64	28.03	9.48	39.41	179	76.00	-18.26	horizontal	Peak
9	2290.00	32.18	28.59	10.04	39.42	82	56.00	-24.61	horizontal	Average
10	2290.00	53.02	28.59	10.04	39.42	82	76.00	-23.77	horizontal	Peak
11	2800.00	34.87	29.84	11.23	39.88	213	56.00	-19.94	horizontal	Average
12	2800.00	45.39	29.84	11.23	39.88	213	76.00	-29.42	horizontal	Peak

♦ Calculation

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

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

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Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : XNB-8000N
Mode : DC
Memo : 1 ~ 3 GHz

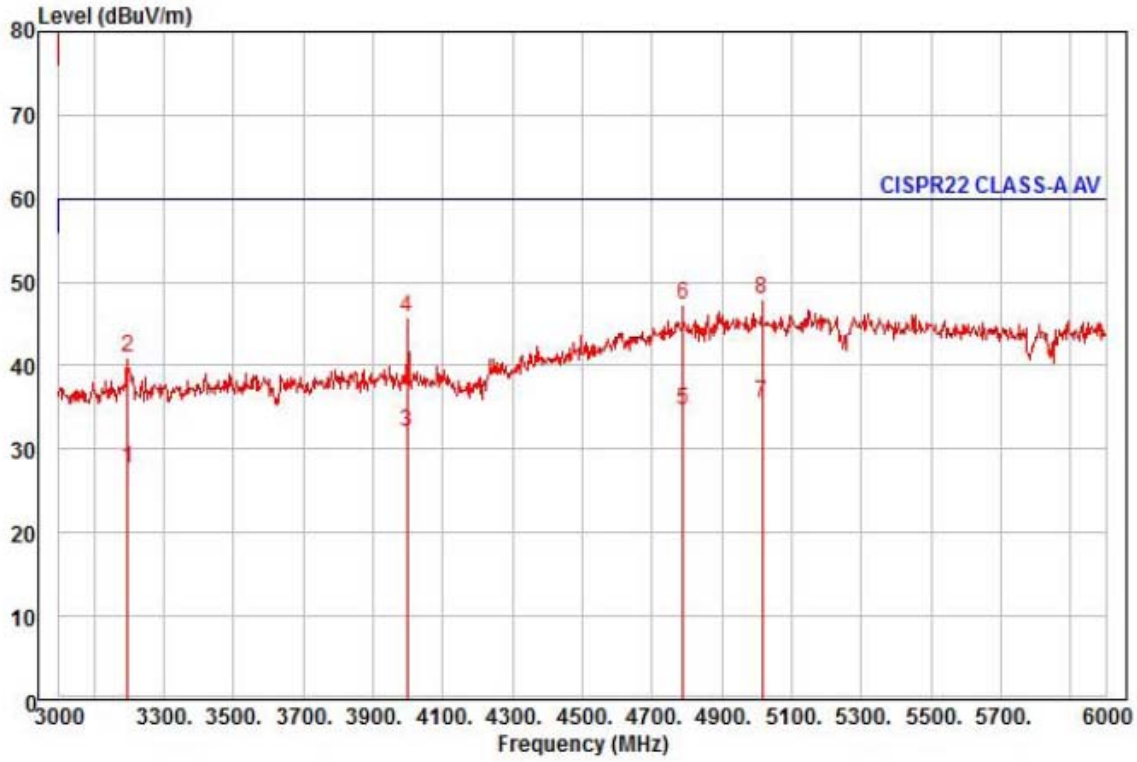
	Freq	Read Level	Ant Factor	Cable Loss	Preamp Factor	TPos	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	1138.00	44.11	24.46	6.93	39.76	227	56.00	-20.26	vertical	Average
2 pp	1138.00	69.48	24.46	6.93	39.76	227	76.00	-14.89	vertical	Peak
3	1600.00	29.86	26.29	8.31	39.22	205	56.00	-30.76	vertical	Average
4	1600.00	48.25	26.29	8.31	39.22	205	76.00	-32.37	vertical	Peak
5	2000.00	32.15	27.88	9.34	39.41	184	56.00	-26.04	vertical	Average
6	2000.00	55.59	27.88	9.34	39.41	184	76.00	-22.60	vertical	Peak
7	2064.00	33.54	28.04	9.48	39.41	343	56.00	-24.35	vertical	Average
8	2064.00	57.67	28.04	9.48	39.41	343	76.00	-20.22	vertical	Peak
9 av	2286.00	37.91	28.58	10.03	39.42	343	56.00	-18.90	vertical	Average
10	2286.00	59.46	28.58	10.03	39.42	343	76.00	-17.35	vertical	Peak
11	2802.00	27.87	29.84	11.24	39.88	7	56.00	-26.93	vertical	Average
12	2802.00	45.60	29.84	11.24	39.88	7	76.00	-29.20	vertical	Peak

♦ Calculation

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

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

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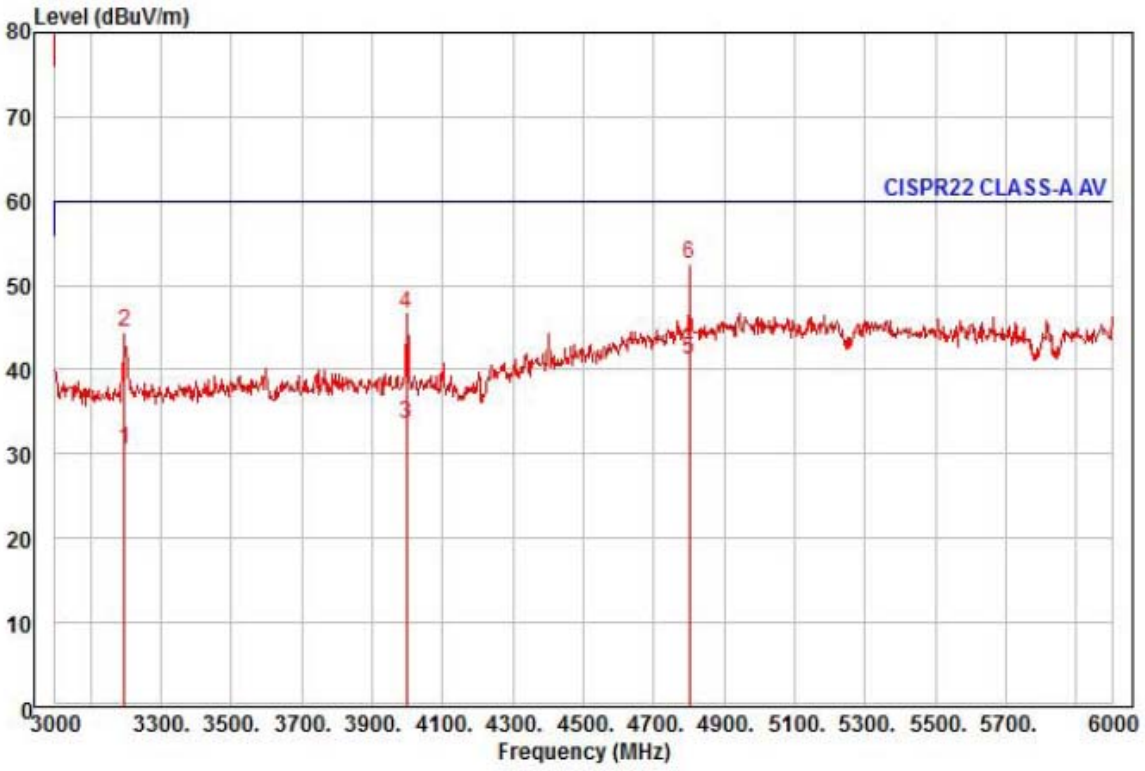


Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : XNB-8000N
Mode : DC
Memo : 3 ~ 6 GHz

	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	25.32	30.66	12.05	40.41	45	60.00	-32.38	horizontal	Average
2	3198.00	38.70	30.66	12.05	40.41	45	80.00	-39.00	horizontal	Peak
3	3999.00	27.27	32.01	13.56	40.70	37	60.00	-27.86	horizontal	Average
4	3999.00	40.86	32.01	13.56	40.70	37	80.00	-34.27	horizontal	Peak
5	4788.00	23.60	36.51	15.07	40.48	126	60.00	-25.30	horizontal	Average
6	4788.00	36.12	36.51	15.07	40.48	126	80.00	-32.78	horizontal	Peak
7 pp	5016.00	22.69	37.69	15.35	40.30	171	60.00	-24.57	horizontal	Average
8 pk	5016.00	35.29	37.69	15.35	40.30	171	80.00	-31.97	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

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



Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : XNB-8000N
Mode : DC
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	28.29	30.66	12.05	40.41	23	60.00	-29.41	vertical	Average
2	3198.00	42.20	30.66	12.05	40.41	23	80.00	-35.50	vertical	Peak
3	3999.00	28.62	32.01	13.56	40.70	34	60.00	-26.51	vertical	Average
4	3999.00	41.81	32.01	13.56	40.70	34	80.00	-33.32	vertical	Peak
5 pp	4800.00	30.03	36.58	15.10	40.47	268	60.00	-18.76	vertical	Average
6 pk	4800.00	41.38	36.58	15.10	40.47	268	80.00	-27.41	vertical	Peak

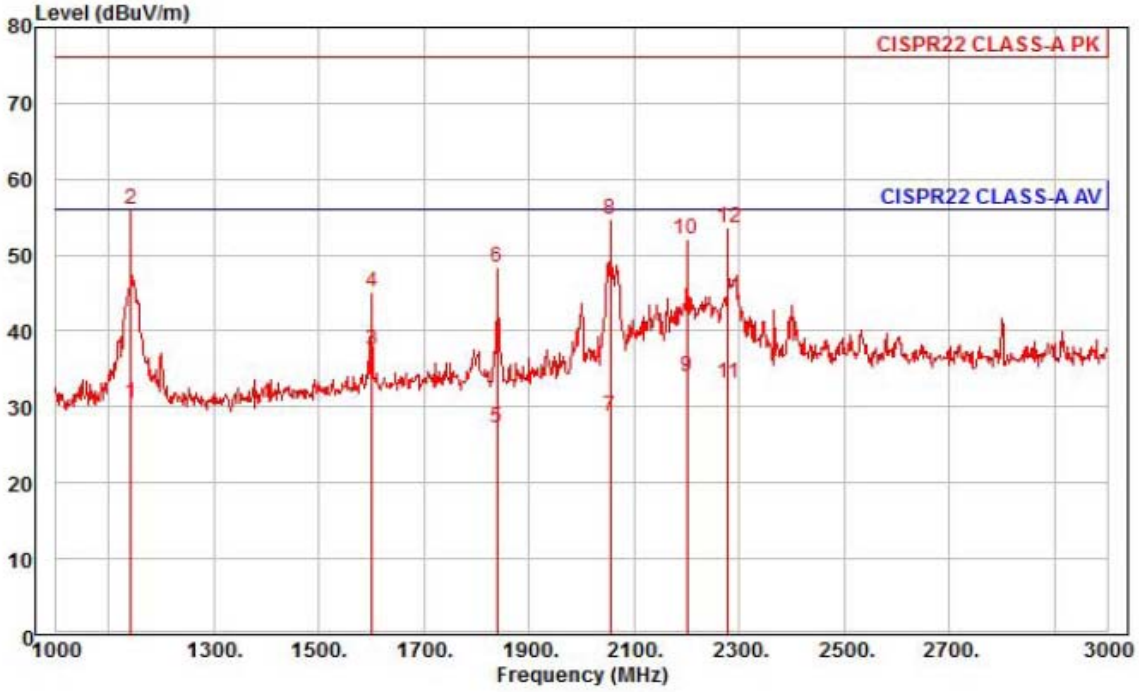
♦ Calculation

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

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- POE Mode



Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : XNB-8000N
Mode : POE
Memo : 1 ~ 3 GHz

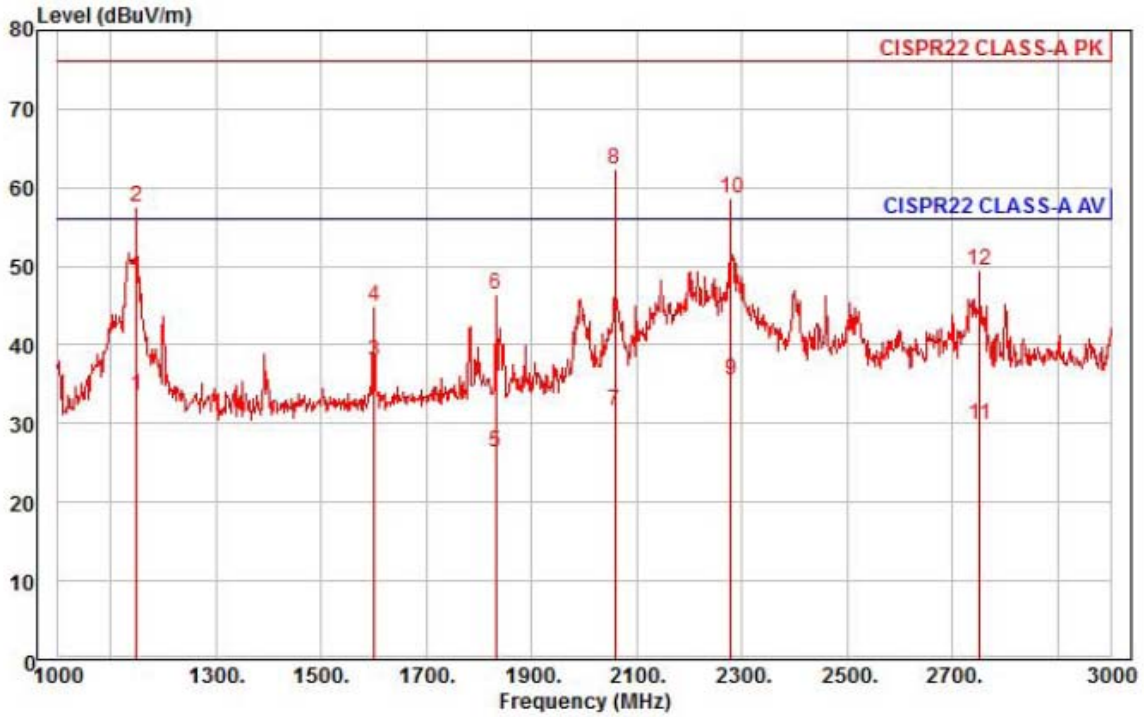
	Freq	Read Level	Ant Factor	Cable Loss	Preamp Factor	TPos	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	1142.00	38.78	24.47	6.95	39.75	230	56.00	-25.55	horizontal	Average
2 pk	1142.00	64.42	24.47	6.95	39.75	230	76.00	-19.91	horizontal	Peak
3 pp	1600.00	42.14	26.29	8.31	39.22	45	56.00	-18.48	horizontal	Average
4	1600.00	49.70	26.29	8.31	39.22	45	76.00	-30.92	horizontal	Peak
5	1840.00	30.39	27.24	8.93	39.34	30	56.00	-28.78	horizontal	Average
6	1840.00	51.62	27.24	8.93	39.34	30	76.00	-27.55	horizontal	Peak
7	2054.00	30.70	28.01	9.46	39.41	339	56.00	-27.24	horizontal	Average
8	2054.00	56.71	28.01	9.46	39.41	339	76.00	-21.23	horizontal	Peak
9	2200.00	35.15	28.37	9.80	39.42	173	56.00	-22.10	horizontal	Average
10	2200.00	53.38	28.37	9.80	39.42	173	76.00	-23.87	horizontal	Peak
11	2280.00	33.95	28.57	10.01	39.42	333	56.00	-22.89	horizontal	Average
12	2280.00	54.53	28.57	10.01	39.42	333	76.00	-22.31	horizontal	Peak

♦ Calculation

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

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

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Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : XNB-8000N
Mode : POE
Memo : 1 ~ 3 GHz

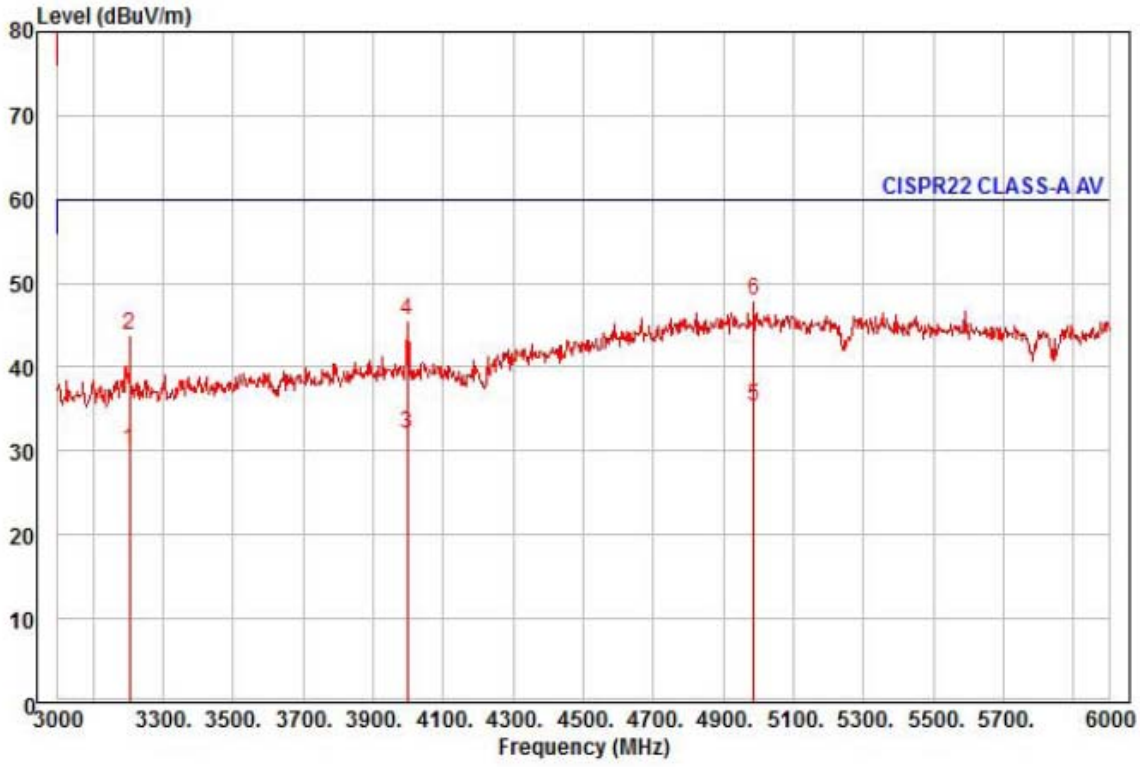
	Freq	Read Level	Ant Factor	Cable Loss	Preamp Factor	TPos	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	1148.00	41.74	24.50	6.97	39.73	176	56.00	-22.52	vertical	Average
2	1148.00	65.82	24.50	6.97	39.73	176	76.00	-18.44	vertical	Peak
3 av	1600.00	42.63	26.29	8.31	39.22	344	56.00	-17.99	vertical	Average
4	1600.00	49.57	26.29	8.31	39.22	344	76.00	-31.05	vertical	Peak
5	1832.00	29.54	27.21	8.91	39.33	226	56.00	-29.67	vertical	Average
6	1832.00	49.58	27.21	8.91	39.33	226	76.00	-29.63	vertical	Peak
7	2058.00	33.61	28.02	9.47	39.41	350	56.00	-24.31	vertical	Average
8 pp	2058.00	64.22	28.02	9.47	39.41	350	76.00	-13.70	vertical	Peak
9	2280.00	36.43	28.57	10.01	39.42	330	56.00	-20.41	vertical	Average
10	2280.00	59.50	28.57	10.01	39.42	330	76.00	-17.34	vertical	Peak
11	2752.00	28.92	29.72	11.11	39.82	356	56.00	-26.07	vertical	Average
12	2752.00	48.48	29.72	11.11	39.82	356	76.00	-26.51	vertical	Peak

♦ Calculation

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

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

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```
Site      : chamber
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) horizontal
         : RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project   :
Model     : XNB-8000N
Mode      : POE
Memo      : 3 ~ 6 GHz
```

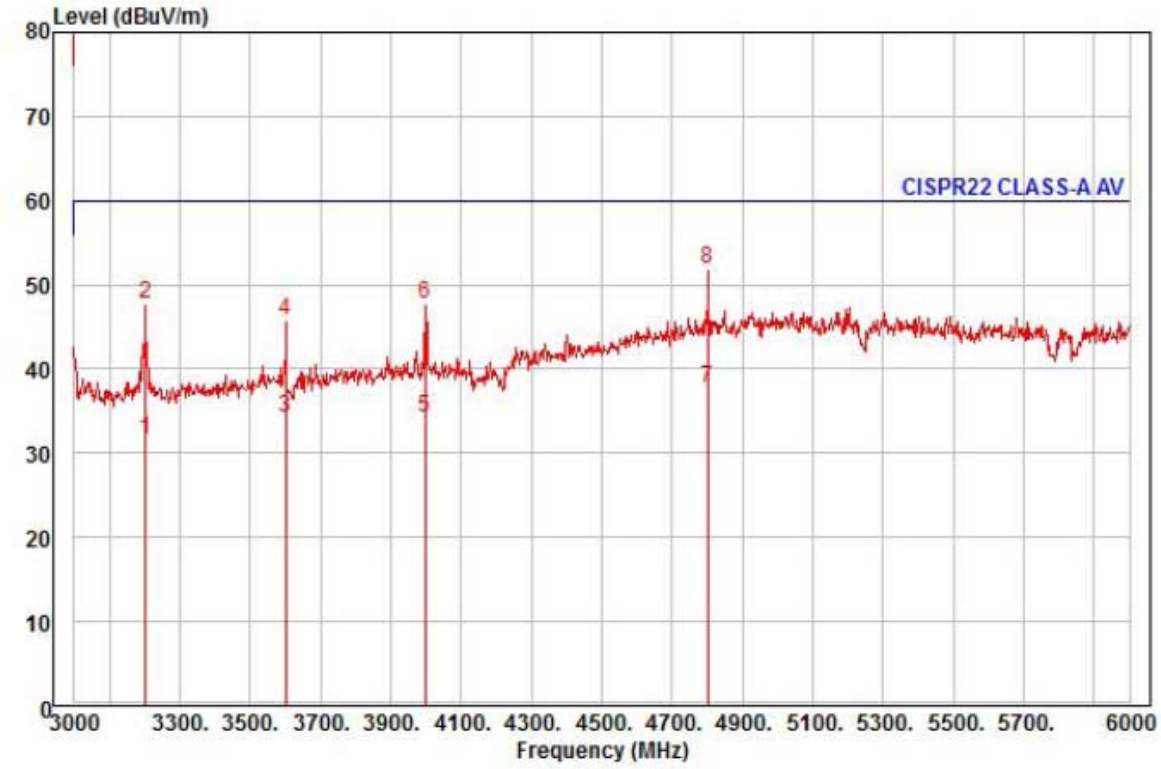
	Freq	Read Level	Ant Factor	Cable Loss	Preamp Factor	TPos	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	3204.00	27.74	30.67	12.07	40.42	41	60.00	-29.94	horizontal	Average
2	3204.00	41.59	30.67	12.07	40.42	41	80.00	-36.09	horizontal	Peak
3	3999.00	27.15	32.01	13.56	40.70	38	60.00	-27.98	horizontal	Average
4	3999.00	40.59	32.01	13.56	40.70	38	80.00	-34.54	horizontal	Peak
5 pp	4986.00	22.55	37.64	15.30	40.28	32	60.00	-24.79	horizontal	Average
6 pk	4986.00	35.23	37.64	15.30	40.28	32	80.00	-32.11	horizontal	Peak

♦ Calculation

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

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

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Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
Model : XNB-8000N
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	3201.00	29.23	30.67	12.06	40.42	320	60.00	-28.46	vertical	Average
2	3201.00	45.36	30.67	12.06	40.42	320	80.00	-32.33	vertical	Peak
3	3600.00	30.93	31.34	12.81	40.84	23	60.00	-25.76	vertical	Average
4	3600.00	42.41	31.34	12.81	40.84	23	80.00	-34.28	vertical	Peak
5	3999.00	29.39	32.01	13.56	40.70	29	60.00	-25.74	vertical	Average
6	3999.00	42.89	32.01	13.56	40.70	29	80.00	-32.24	vertical	Peak
7 pp	4800.00	26.49	36.58	15.10	40.47	357	60.00	-22.30	vertical	Average
8 pk	4800.00	40.70	36.58	15.10	40.47	357	80.00	-28.09	vertical	Peak

♦ Calculation

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

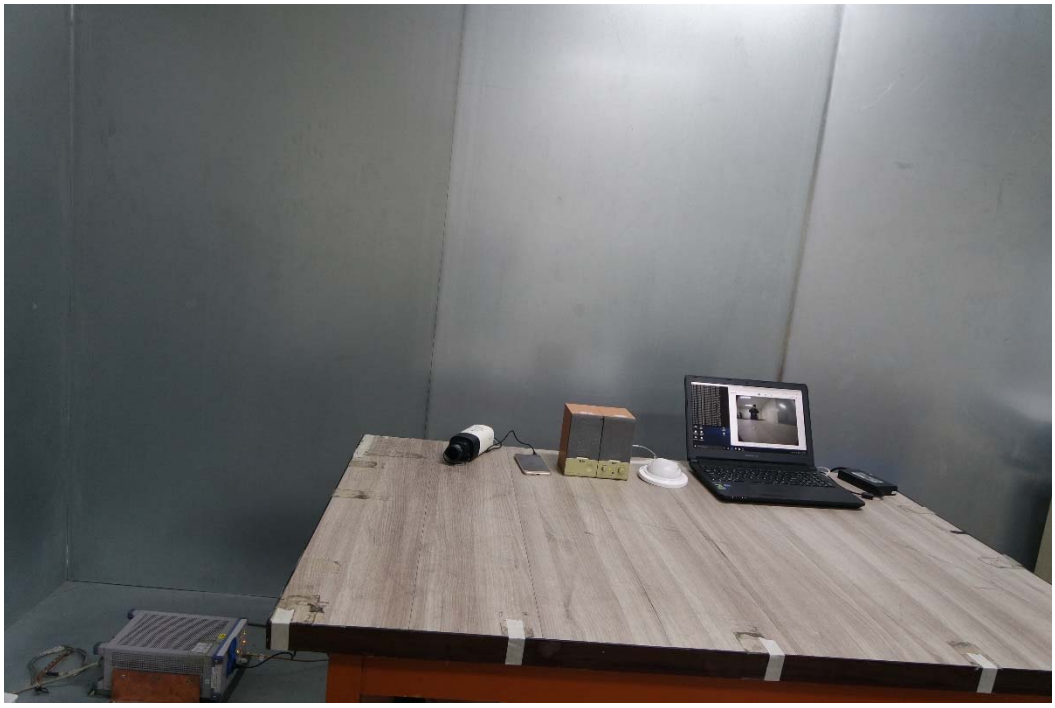
Over Limit : Margin Value, Read Level : Reading Value, Ant Factor : Ant Factor, Cable Loss : Cable loss, Preamp Factor : Preamp Factor

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Test Setup Photos and Configuration

Conducted Voltage Emissions

- AC Mode

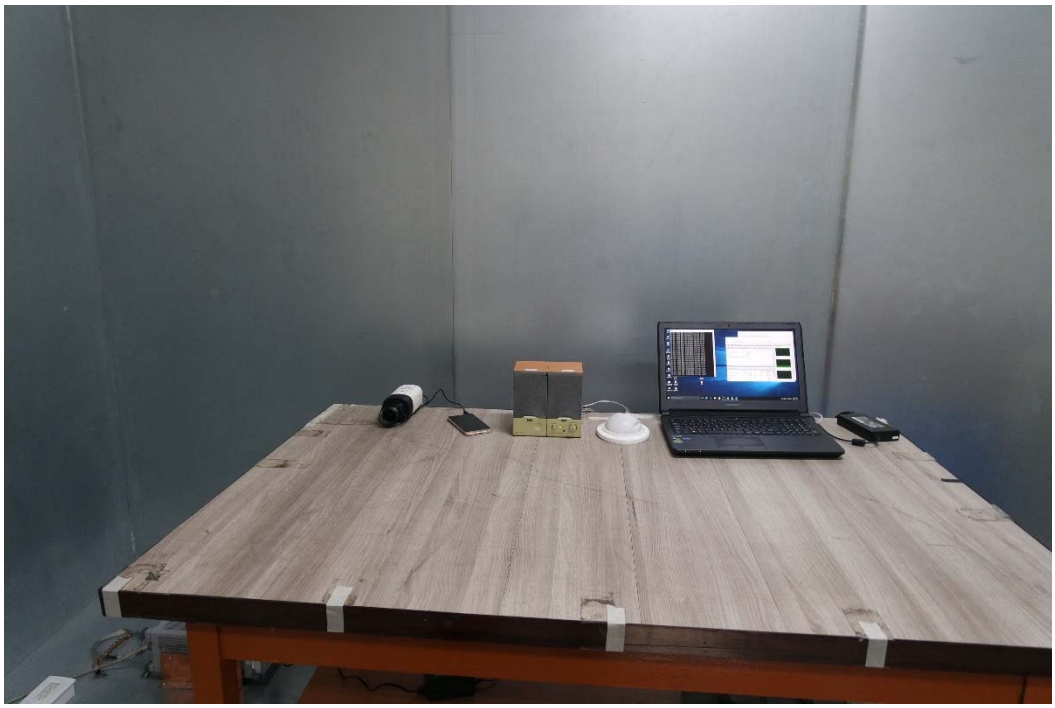




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Conducted Telecommunication Emissions

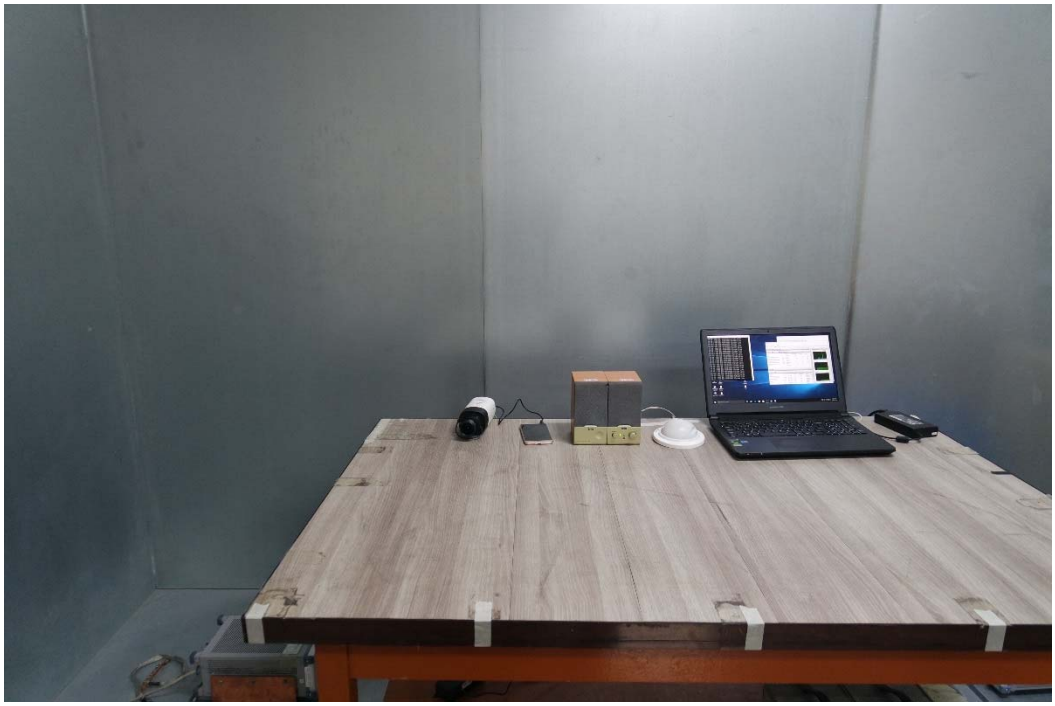
- AC Mode





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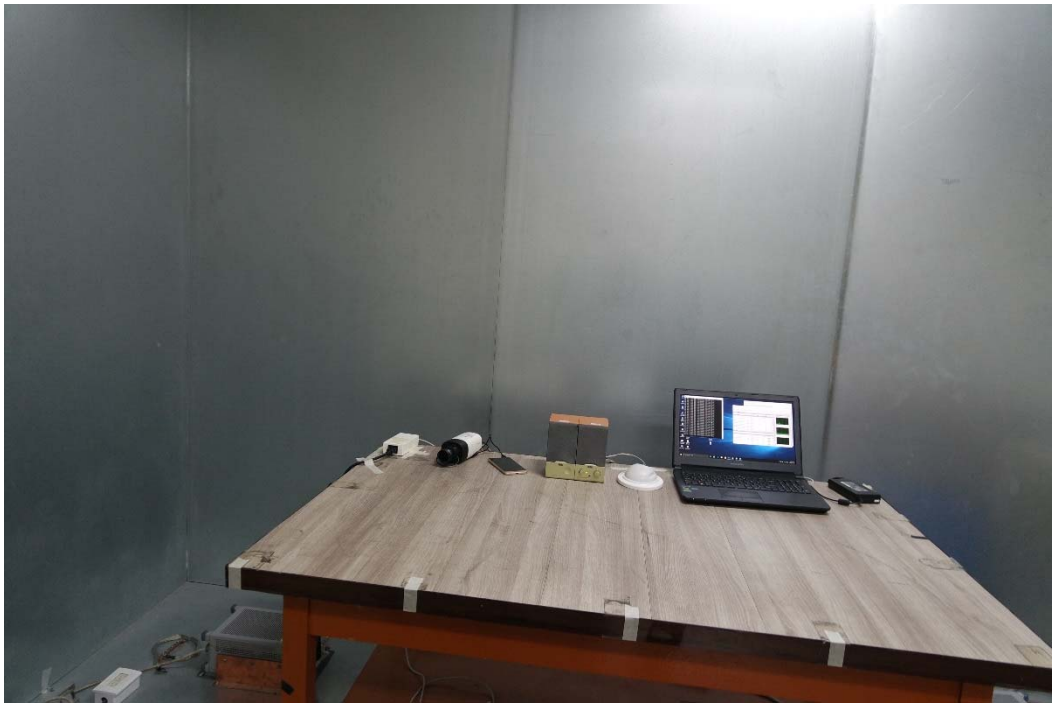
- DC Mode





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- POE Mode





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Radiated Electric Field Emissions(Below 1 ㎓)

- AC Mode





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- DC Mode





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- POE Mode

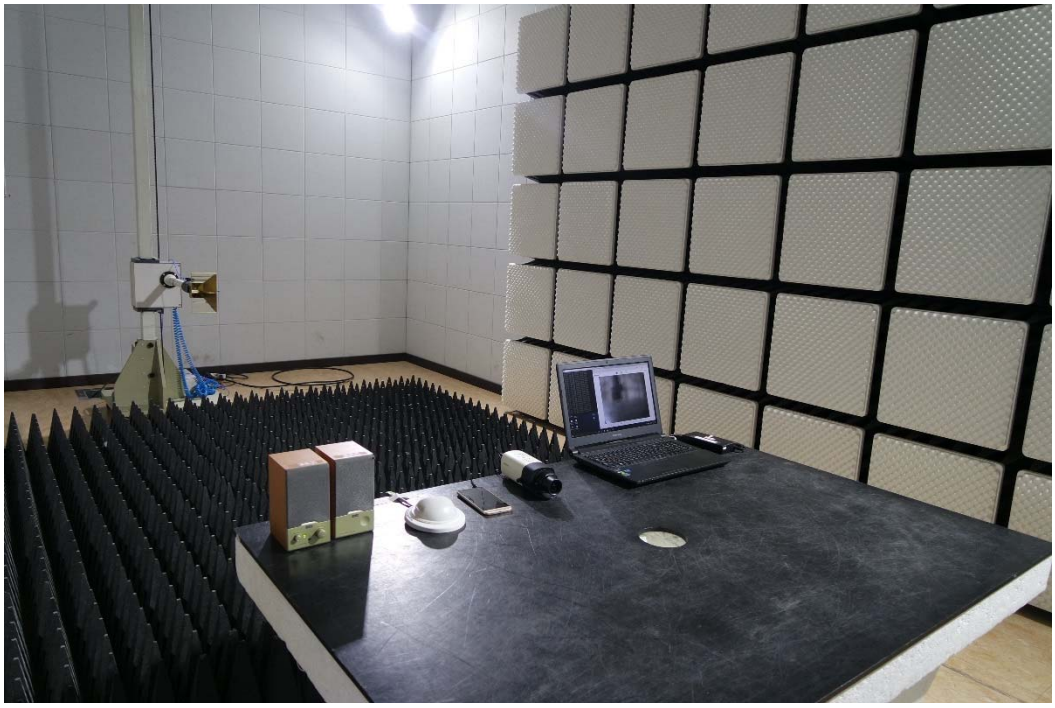




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Radiated Electric Field Emissions(Above 1 ㎓)

- AC Mode





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- DC Mode





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- POE Mode





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EUT External Photographs

(Top)



(Bottom)



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EUT Internal Photographs

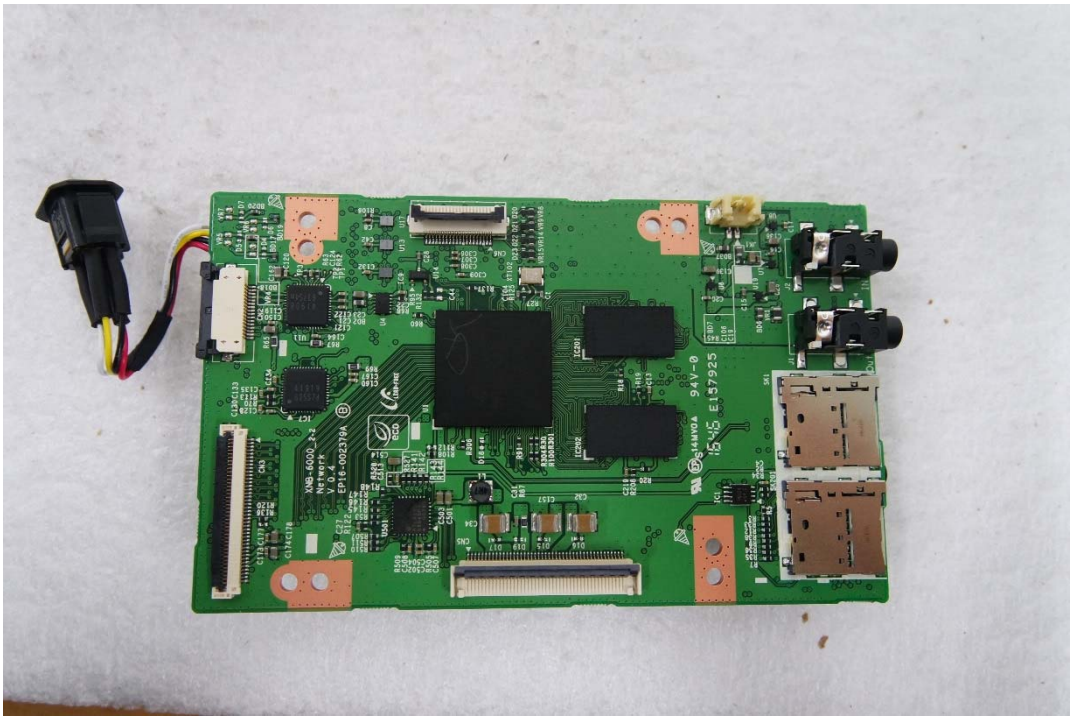
(Internal View)



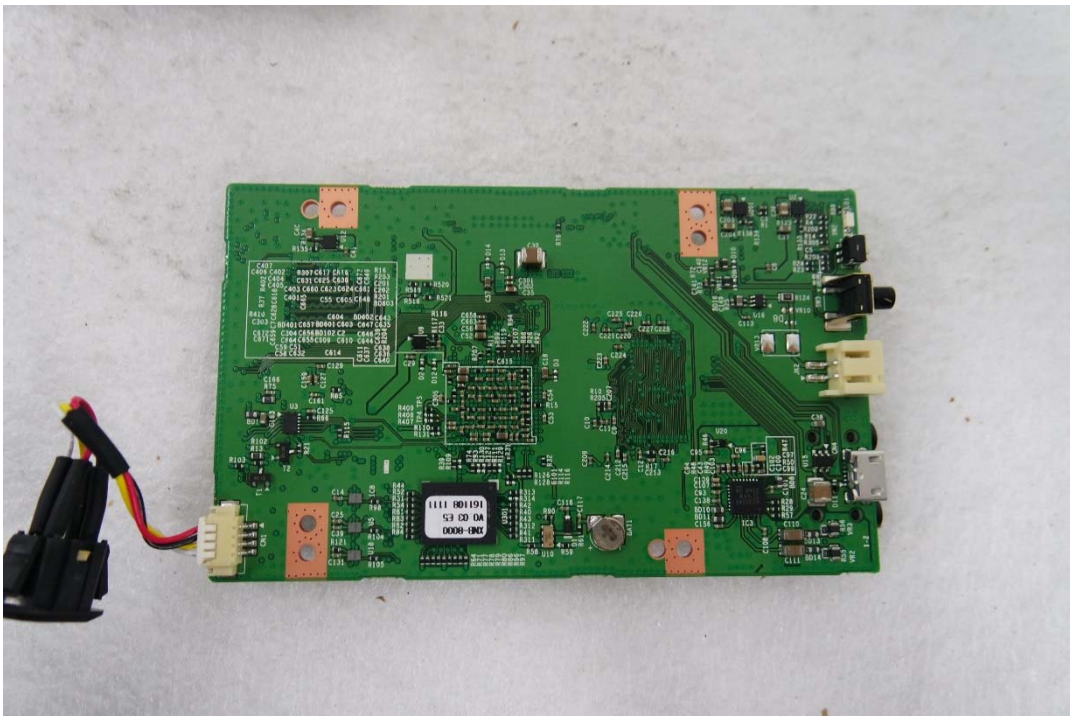
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EUT Internal View – Main Board

(Top)



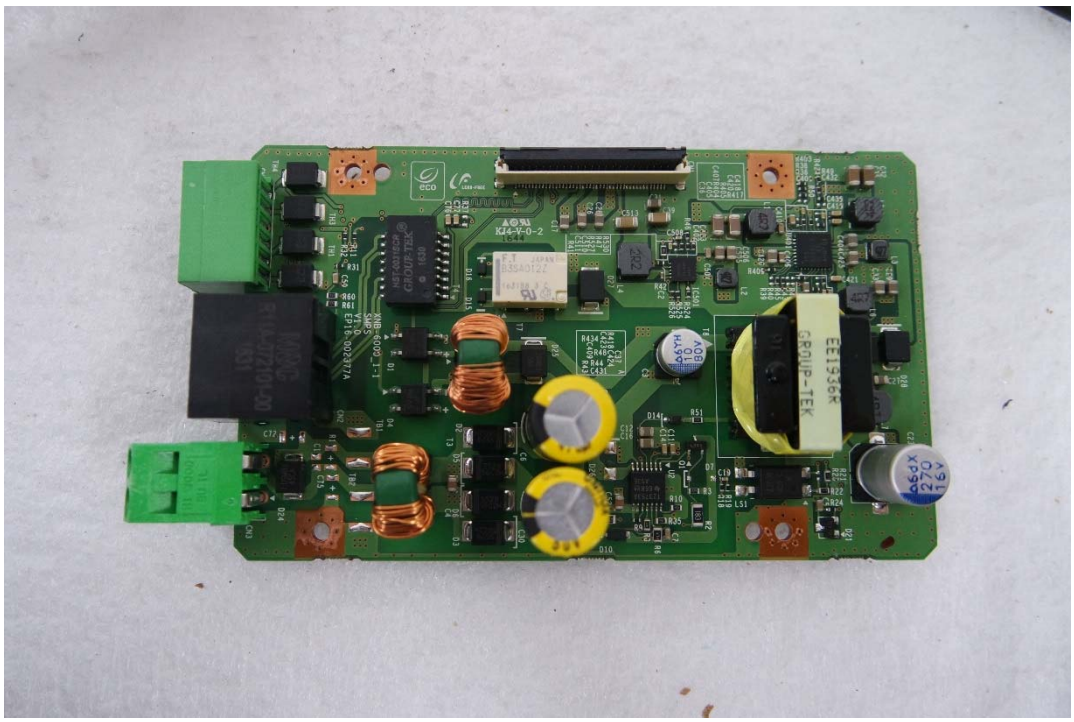
(Bottom)



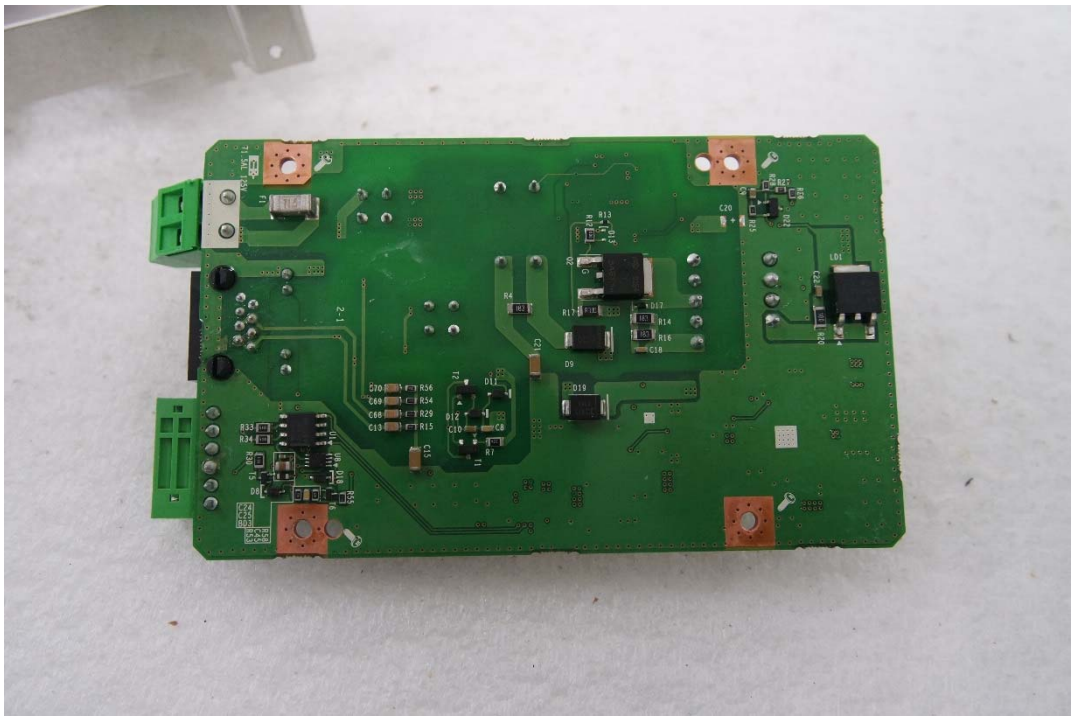
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EUT Internal View – Power Board

(Top)



(Bottom)



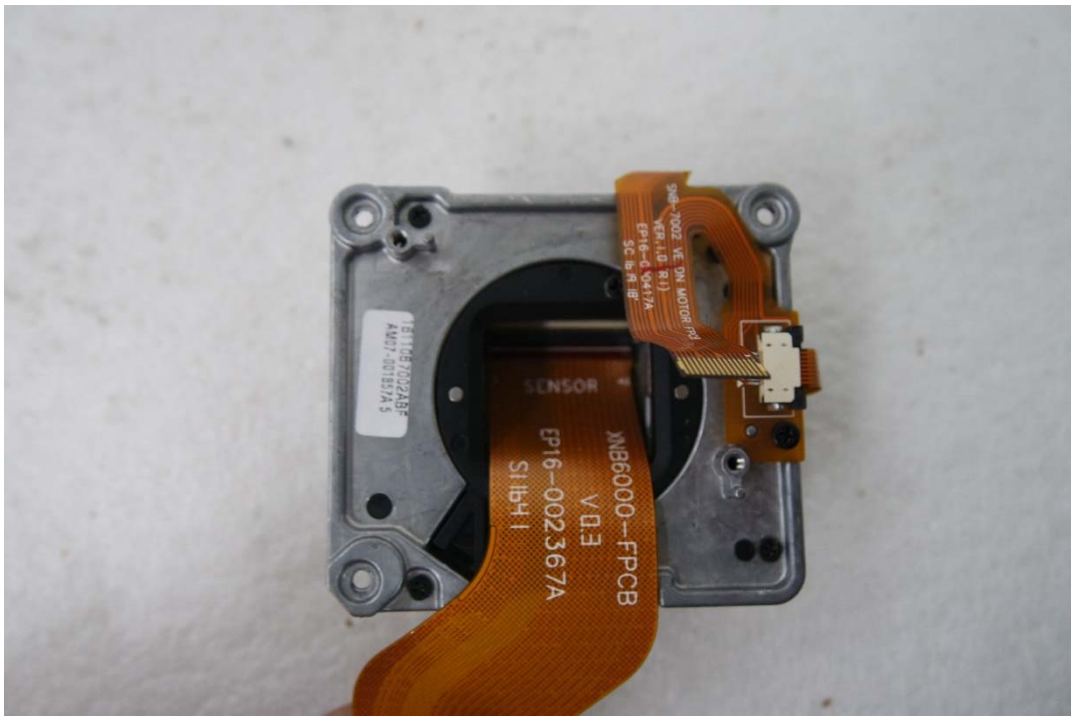
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EUT Internal View – Lens

(Top)



(Bottom)



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