

# DECLARATION OF CONFORMITY

**We; Hanwha Techwin Co., Ltd.**

**DECLARE UNDER OUR SOLE RESPONSIBILITY THAT THE PRODUCT;**

**Report No: KES-E1-16T0240**

**Type of equipment: NETWORK CAMERA**

**Model Name: QNO-6020RP**

**Variant Model: QNO-6030RP, QNO-6010RP**

**Applicant: Hanwha Techwin Co., Ltd.**

**Address: 1204,Changwon-daero, Seongsan-gu, Chang-won-si, Gyeongsangnam-do,Korea**

**Manufacturer : Tianjin Samsung Techwin Opto-Electronic Co.,Ltd.**

**Address: No.11 Weiliu Rd, Micro-Electronic Industrial Park, TEDA, Tianjin, 300385, People's Republic of China**

**Test standards : AS/NZS CISPR22:2009+A1:2010**

**Classification: C-Tick**

**The above equipment was tested by EMC compliance Testing Laboratory for with the requirements of C-tick Rules and Regulations. The results of testing in this report apply to the product / system which was tested only.**

**Jun. 07. 2016**

**(Date of issue)**

**(Name and signature of authorized person)**



# EMC TEST REPORT For C-TICK

Test Report No. : KES-E1-16T0240  
Date of Issue : Jun. 07, 2016  
Product name : NETWORK CAMERA  
Model/Type No. : QNO-6020RP  
Variant Model : QNO-6030RP, QNO-6010RP  
Applicant : Hanwha Techwin Co., Ltd.  
Applicant Address : 1204, Changwon-daero, Seongsan-gu, Changwon-si,  
Gyeongsangnam-do, Korea  
Manufacturer : Tianjin Samsung Techwin Opto-Electronic Co.,Ltd.  
Manufacturer Address : No.11 Weiliu Rd, Micro-Electronic Industrial Park, TEDA, Tianjin,  
300385, People's Republic of China  
Date of Receipt : May. 23, 2016  
Test date : May. 31, 2016  
Test Results : ☒ **In Compliance** ☐ **Not in Compliance**

Tested by

Young-Suk, Song  
EMC Test Engineer

Reviewed by

Dong-Hun, Jang  
EMC Technical Manager

**KES Co., Ltd.**

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Test report No.:  
KES-E1-16T0240  
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**REPORT REVISION HISTORY**

| Date          | Revision       | Page No |
|---------------|----------------|---------|
| Jun. 07, 2016 | KES-E1-16T0240 | Issued  |
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## 1.0 General Product Description

### Main Specifications of EUT are:

| Video                        |                                                                                                                                                                                                                                                                           | Network                           |                                                                                                                                                                                                                                                                                                                                   |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Imaging Device               | 1/2.9" 2.19M CMOS                                                                                                                                                                                                                                                         | Ethernet                          | RJ-45 (10/100BASE-T)                                                                                                                                                                                                                                                                                                              |
| Total Pixels                 | 2,000(H) x 1,121(V)                                                                                                                                                                                                                                                       | Video Compression Format          | H.265, H.264, MJPEG                                                                                                                                                                                                                                                                                                               |
| Effective Pixels             | 1,984(H) x 1,105(V)                                                                                                                                                                                                                                                       | Resolution                        | 1920x1080/ 1280x1024/ 1280x960/ 1280x720/ 1024x768/ 800x600/ 720x576/ 720x480/ 640x480/ 320x240                                                                                                                                                                                                                                   |
| Scanning System              | Progressive                                                                                                                                                                                                                                                               | Max. Framerate                    | H.265 : Max 30fps at all resolutions<br>H.264 : Max 30fps at all resolutions<br>MJPEG : Max 15fps @ all resolution.                                                                                                                                                                                                               |
| Min. Illumination            | Color : 0.15Lux, B/W : 0Lux                                                                                                                                                                                                                                               | Smart codec                       | Wise Stream                                                                                                                                                                                                                                                                                                                       |
| Lens                         |                                                                                                                                                                                                                                                                           | Video Quality Adjustment          | H.265 : Target Bitrate Level Control<br>H.264 : Target Bitrate Level Control<br>MJPEG : Quality Level Control                                                                                                                                                                                                                     |
| Focal Length (Zoom Ratio)    | Fixed 3.6mm                                                                                                                                                                                                                                                               | Bitrate control method            | H.265 : CBR or VBR<br>H.264 : CBR or VBR<br>MJPEG : VBR                                                                                                                                                                                                                                                                           |
| Max. Aperture Ratio          | F1.8                                                                                                                                                                                                                                                                      | Streaming Capability              | Multiple Streaming(Up to 3 Profiles)                                                                                                                                                                                                                                                                                              |
| Angular Field of View        | H 86.48° / V 46.22° / D 102.44°                                                                                                                                                                                                                                           | Audio I/O                         | Line in                                                                                                                                                                                                                                                                                                                           |
| Min. Object Distance         | -                                                                                                                                                                                                                                                                         | Audio Compression Format          | G.711 u-law / G.726 Selectable<br>G.726(ADPCM) : 8KHz, G.711 : 8KHz<br>G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps                                                                                                                                                                                                                     |
| Lens Type                    | Fixed                                                                                                                                                                                                                                                                     | Audio Communication               | Uni-directional                                                                                                                                                                                                                                                                                                                   |
| Mount Type                   | Board type                                                                                                                                                                                                                                                                | IP                                | IPv4, IPv6                                                                                                                                                                                                                                                                                                                        |
| Operational                  |                                                                                                                                                                                                                                                                           | Protocol                          | TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, RTSP, NTP, HTTP, HTTPS, SSL/TSL, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour                                                                                                                                                   |
| IR Viewable Length           | 30m                                                                                                                                                                                                                                                                       | Security                          | HTTPS(SSL) Login Authentication<br>Digest Login Authentication<br>IP Address Filtering<br>User access Log<br>802.1X Authentication                                                                                                                                                                                                |
| Camera Title                 | Off / On (Displayed up to 20 characters per line)<br>- W/W : English/Numeric/Special Characters<br>- China : English/Numeric/Special/Chinese Characters<br>- Common : Multi-line (Max 5), Color (Grey/Green/Red/Blue/Black/White), Transparency, Auto Scale by Resolution | Streaming Method                  | Unicast / Multicast                                                                                                                                                                                                                                                                                                               |
| Day & Night                  | True Day & Night                                                                                                                                                                                                                                                          | Max. User Access                  | 6 users at Unicast Mode                                                                                                                                                                                                                                                                                                           |
| Backlight Compensation       | Off / BLC                                                                                                                                                                                                                                                                 | Edge storage                      | Micro SD/SDHC/SDXC Max 128G, NAS<br>- Motion images recorded in the SD memory card can be downloaded<br>- Manual recording at Local PC                                                                                                                                                                                            |
| Wide Dynamic Range           | 120dB                                                                                                                                                                                                                                                                     | Application Programming Interface | ONVIF Profile S, G<br>SUNAPI(HTTP API)                                                                                                                                                                                                                                                                                            |
| Digital Noise Reduction      | SSNR(Off / On)                                                                                                                                                                                                                                                            | Webpage Language                  | English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Danish, Portuguese, Turkish, Polish, Czech, Rumanian, Serbian, Dutch, Croatia, Hungary, Greek, Finnish, Norwegian                                                                                                                         |
| Motion Detection             | Off / On (4ea polygon zones)                                                                                                                                                                                                                                              | Web Viewer                        | Supported OS: Windows 7, 8, 10, Mac OS X 10.8, 10.9, 10.10, 10.11<br>[Non-plugin Webviewer]<br>Supported Browser: Google Chrome 47, MS Edge 20<br>Support Codec : Video-H.264, MJPEG (Max. 1M 15fps), Audio-G.711<br>[Plug-in Webviewer]<br>Supported Browser : MS Explore 11, Mozilla Firefox 43, Apple Safari 9 * Mac OS X only |
| Privacy Masking              | Off / On (6ea rectangle zones)                                                                                                                                                                                                                                            | Central Management Software       | SmartViewer                                                                                                                                                                                                                                                                                                                       |
| Gain Control                 | Off / Low / Middle / High                                                                                                                                                                                                                                                 | Pixel Counter                     | Support ( plug-in viewer only )                                                                                                                                                                                                                                                                                                   |
| White Balance                | ATW / AWC / Manual / Indoor / Outdoor                                                                                                                                                                                                                                     | Environmental                     |                                                                                                                                                                                                                                                                                                                                   |
| LDC(Lens distortion control) | On/Off (5 levels with Min/Max)                                                                                                                                                                                                                                            | Operating Temperature / Humidity  | -30°C ~ +55°C / Less than 90% RH * Start up should be done at above -20°C                                                                                                                                                                                                                                                         |
| Electronic Shutter Speed     | Minimum / Maximum / Anti flicker                                                                                                                                                                                                                                          | Storage Temperature / Humidity    | -30°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH                                                                                                                                                                                                                                                                                 |
| Flip / Mirror                | Flip / Mirror / Hallway view                                                                                                                                                                                                                                              | Ingress Protection                | IP66                                                                                                                                                                                                                                                                                                                              |
| Intelligent Video Analytics  | Motion Detection with metadata, Tampering, Defocus                                                                                                                                                                                                                        | Vandal Resistance                 | IK10                                                                                                                                                                                                                                                                                                                              |
| Alarm I/O                    | Input 1 / Output 1                                                                                                                                                                                                                                                        | Electrical                        |                                                                                                                                                                                                                                                                                                                                   |
| Alarm Triggers               | Motion detection, Tampering Detection, SD card error, NAS error, Alarm input, Defocus detection                                                                                                                                                                           | Input Voltage / Current           | PoE(IEEE802.3af, Class3), DC 12V                                                                                                                                                                                                                                                                                                  |
| Alarm Events                 | File upload via FTP and E-Mail<br>Local storage recording at Event<br>Notification via E-Mail<br>External output                                                                                                                                                          | Power Consumption                 | Max.6.6W(PoE), Max.5.5W(DC12V)                                                                                                                                                                                                                                                                                                    |
|                              |                                                                                                                                                                                                                                                                           | Mechanical                        |                                                                                                                                                                                                                                                                                                                                   |
|                              |                                                                                                                                                                                                                                                                           | Color / Material                  | Gray / Metal                                                                                                                                                                                                                                                                                                                      |
|                              |                                                                                                                                                                                                                                                                           | Dimension (WxHxD)                 | ø70.0x246mm                                                                                                                                                                                                                                                                                                                       |
|                              |                                                                                                                                                                                                                                                                           | Weight                            | 730g                                                                                                                                                                                                                                                                                                                              |



## 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 ☐ 230 Vac ☒ PoE ☒ 12 Vdc  
Frequency ☐ 50 Hz ☐ 60 Hz ☐ Hz

## 1.2 Variant Model Differences

| Variant Model |                          |
|---------------|--------------------------|
| QNO-6030RP    | Focus Length differences |
| QNO-6010RP    |                          |

## 1.3 Device Modifications

Not applicable

## 1.4 Equipment Under Test

| Description    | Model Number | Serial Number | Manufacturer                                      | Remarks |
|----------------|--------------|---------------|---------------------------------------------------|---------|
| NETWORK CAMERA | QNO-6020RP   | -             | Tianjin Samsung Techwin Opto-Electronic Co., Ltd. | E.U.T   |

## 1.5 Support Equipments

| Description      | Model Number   | Serial Number    | Manufacturer                               | Remarks |
|------------------|----------------|------------------|--------------------------------------------|---------|
| PoE              | ANY4805C-LT1   | 15030100002      | ANY ELECTRONICS CO., LTD.                  | -       |
| Notebook         | ProBook4430s   | -                | HP                                         | -       |
| Notebook adapter | SeriesPPP0009H | -                | Chicony Power Technology (suzhou)Co., Ltd. | -       |
| Alarm            | SIE-0001 DO    | C54167JB601268 F | SAMSUNG TECHWIN CO., LTD.                  | -       |
| Mike             | -              | -                | -                                          | -       |

## 1.6 External I/O Cabling

- DC 12V Mode

| Start                  |          | END         |          | Cable Spec. |        |
|------------------------|----------|-------------|----------|-------------|--------|
| Description            | I/O Port | Description | I/O Port | Length      | Shield |
| NETWORK CAMERA (E.U.T) | Alarm IN | Alarm       | Alarm IN | 3.0         | U      |
|                        | RJ-45    | Notebook    | RJ-45    | 4.0         | U      |

- PoE Mode

| Start                  |          | END         |          | Cable Spec. |        |
|------------------------|----------|-------------|----------|-------------|--------|
| Description            | I/O Port | Description | I/O Port | Length      | Shield |
| NETWORK CAMERA (E.U.T) | Alarm IN | Alarm       | Alarm IN | 3.0         | U      |
|                        | RJ-45    | PoE         | RJ-45    | 4.0         | U      |
| PoE                    | RJ-45    | Notebook    | RJ-45    | 4.0         | U      |

\* Unshielded=U, Shielded=S

## 1.7 EUT Operating Mode(s)

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

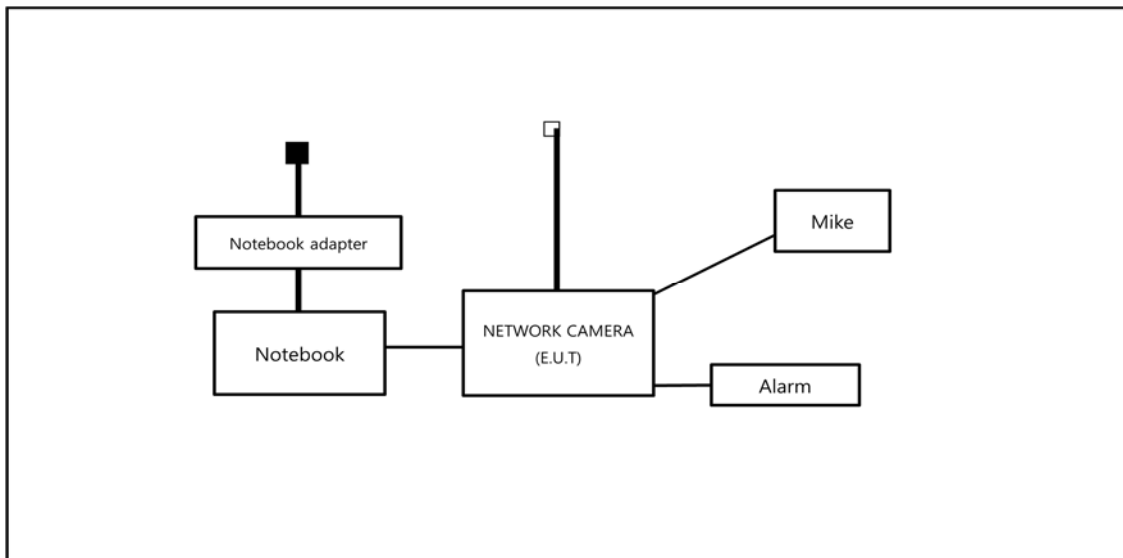
| Test mode | Normal operating                |
|-----------|---------------------------------|
| OP        | MONITORING<br>Network ping test |

- Input power condition during the measurements was 12 V (dc) , PoE

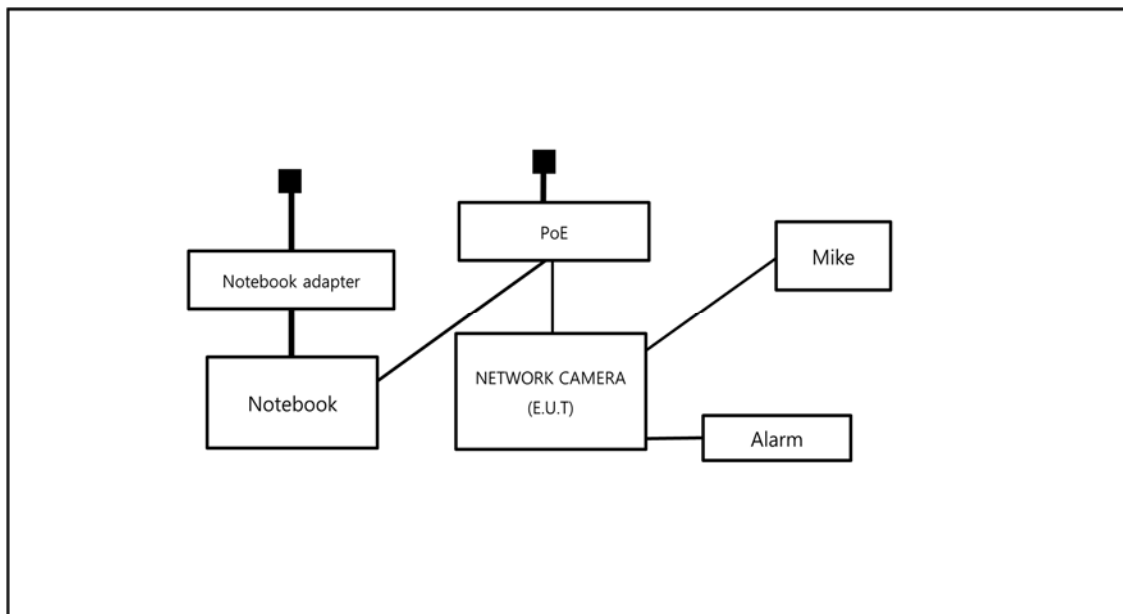
## 1.8 Configuration

■ AC Main  
□ DC Main

- DC 12V Mode



- PoE Mode



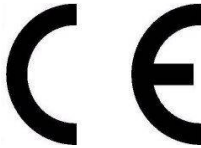
## 1.9 Calibration Details of Equipment Used for Measurement

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 473-29 Gayeo-ro, Yeosu-si, Gyeonggi-do, 12658, Korea. The sites are constructed in conformance with the requirements of ANSI C63.4 and CISPR Publication 22.

## 1.11 Laboratory Accreditations and Listings

| Country       | Agency | Scope of Accreditation                                                                                                                                                                                 | Logo                                                                                                                     |
|---------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| USA           | FCC    | 3 & 10 meter Open Area Test Sites and one conducted site to perform FCC Part 15/18 measurements.                                                                                                       |                                       |
| JAPAN         | VCCI   | Mains Ports Conducted Interference Measurement, Telecommunication Ports Conducted Disturbance Measurement and Radiation 10 meter site, Facility for measuring radiated disturbance above 1 GHz         | <br>R-4308, C-4798,<br>T-2311, G-914 |
| KOREA         | MSIP   | EMI (10 meter Open Area Test Site and two conducted sites)<br>Radio(3 & 10 meter Open Area Test Sites and one conducted site)<br>EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions) | <br>KR0100                          |
| Canada        | IC     | 3 & 10 meter Open Area Test Sites and one conducted site                                                                                                                                               | <br>4769B-1                         |
| Europe        | CE     | EMI (10 meter Open Area Test Site and two conducted sites)<br>Radio(3 & 10 meter Open Area Test Sites and one conducted site)<br>EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions) |                                     |
| International | KOLAS  | EMI (10 meter Open Area Test Site and two conducted sites)<br>Radio(3 & 10 meter Open Area Test Sites and one conducted site)<br>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 55022:2010

☐ Class A

☐ Class B

☐ EN 55024:2010

☐ EN 50130-4:2011 +A1:2014

☐ EN 61000-3-2:2014

☐ EN 61000-3-3:2013

☐ EN 61326-1:2013

☐ VCCI V-3/2013.04

☐ Class A

☐ Class B

☒ AS/NZS CISPR22:2009 +A1:2010

☒ Class A

☐ Class B

☐ 47 CFR Part 15, Subpart B / ANSI C63.4-2009

☐ Class A

☐ Class B

☐ IC Regulation ICES-003 : 2012  
/ ANSI C63.4-2014

☐ Class A

☐ Class B

☐ CISPR 22:2009 +A1:2010

☐ Class A

☐ Class B



---

☐ **R&TTE- Directive 1999/5/EC**

☐ 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 at Mains Power Ports

### Test Date

N/A

### Test Location

Electro wave Shieldroom

### Test Equipment

| Used                     | Description             | Model Number | Manufacturer | Serial Number | Cal. Due     |
|--------------------------|-------------------------|--------------|--------------|---------------|--------------|
| <input type="checkbox"/> | EMI Test Receiver       | ESR3         | R & S        | 101783        | 05, 03, 2017 |
| <input type="checkbox"/> | LISN                    | ENV216       | R & S        | 101137        | 02, 04, 2017 |
| <input type="checkbox"/> | LISN                    | ENV216       | R & S        | 101786        | 05, 02, 2017 |
| <input type="checkbox"/> | Electro wave Shieldroom | -            | AONE SHIELD  | -             | -            |

### Test Conditions

Temperature: °C  
Relative Humidity: %

### Frequency Range of Measurement

150 kHz to 30 MHz

### Instrument Settings

IF Band Width: 9 kHz

### TestResults

The requirements are:

- ☐ PASS  
☐ NOT PASS  
☒ NOT APPLICABLE

### Remarks

Beacause the E.U.T power is 12 V (dc) power and PoE, limits are not specified

## 2.2 Conducted Emissions at Telecommunication Ports

### Test Date

May. 31, 2016

### Test Location

Electro wave Shieldroom

### Test Equipment

| Used                                | Description             | Model Number | Manufacturer     | Serial Number | Cal. Due     |
|-------------------------------------|-------------------------|--------------|------------------|---------------|--------------|
| <input checked="" type="checkbox"/> | EMI Test Receiver       | ESR3         | R & S            | 101783        | 05, 03, 2017 |
| <input checked="" type="checkbox"/> | LISN                    | ENV216       | R & S            | 101137        | 02. 04. 2017 |
| <input checked="" type="checkbox"/> | LISN                    | ENV216       | R & S            | 101786        | 05, 02, 2017 |
| <input checked="" type="checkbox"/> | 8-Wire ISN CAT3         | CAT3 8158    | Schwarzbeck Mess | 8158-0019     | 04. 01. 2017 |
| <input checked="" type="checkbox"/> | 8-Wire ISN CAT5         | CAT5 8158    | Schwarzbeck Mess | 8158-0030     | 04. 01. 2017 |
| <input type="checkbox"/>            | 8-Wire ISN CAT6         | NTFM 8158    | Schwarzbeck Mess | 8158-0029     | 08. 14. 2016 |
| <input checked="" type="checkbox"/> | Electro wave Shieldroom | -            | SEMITEC          | -             | -            |

### Test Conditions

Temperature: 26,4 °C

Relative Humidity: 48,5 %

### Frequency Range of Measurement

150 kHz to 30 MHz

### Instrument Settings

IF Band Width: 9 kHz

### Test Results

The requirements are:

- ☒ PASS  
☐ NOT PASS  
☐ NOT APPLICABLE

### Remarks

See Appendix A for test data.



## 2.3 Radiated Electric Field Emissions(Below 1 GHz)

### Test Date

May. 31, 2016

### Test Location

☐ Open Area Test Site #1      ☒ Open Area Test Site #2

### Test Equipment

| Used                                | Description              | Model Number | Manufacturer | Serial Number | Cal. Due     |
|-------------------------------------|--------------------------|--------------|--------------|---------------|--------------|
| <input checked="" type="checkbox"/> | EMI Test Receiver        | ESR3         | R&S          | 101781        | 05, 03, 2017 |
| <input checked="" type="checkbox"/> | Trilog-Broadband Antenna | VULB 9163    | SCHWARZBECK  | 9168-713      | 05, 15, 2017 |
| <input checked="" type="checkbox"/> | Open Area Test Site      | -            | KES          | -             | -            |
| <input checked="" type="checkbox"/> | Antenna Mast             | -            | DAEIL EMC    | -             | -            |
| <input checked="" type="checkbox"/> | Turn Table               | -            | DAEIL EMC    | -             | -            |

### Test Conditions

Temperature: 27,0 °C

Relative Humidity: 45,0 %

### 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

May. 31, 2016

### Test Location

Semi Anchoic Chamber #2

### Test Equipment

| Used                                | Description                    | Model Number | Manufacturer                  | Serial Number | Cal. Due     |
|-------------------------------------|--------------------------------|--------------|-------------------------------|---------------|--------------|
| <input checked="" type="checkbox"/> | EMI Test Receiver              | ESU26        | R&S                           | 100551        | 04, 18, 2016 |
| <input checked="" type="checkbox"/> | Broadband Coaxial Preamplifier | BBV 9718     | Schwarzbeck Mess - Elektronik | 9718-246      | 10. 23. 2016 |
| <input checked="" type="checkbox"/> | DOUBLE RIDGED HORN ANTENNA     | SAS-571      | A.H.SYSTEM,INC                | 781           | 05. 07. 2017 |
| <input checked="" type="checkbox"/> | Semi Anchoic Chamber #2        | -            | SEMITEC                       | -             | -            |
| <input checked="" type="checkbox"/> | Antenna Mast                   | -            | AUDIX                         | -             | -            |
| <input checked="" type="checkbox"/> | Turn Table                     | -            | AUDIX                         | -             | -            |

### Test Conditions

Temperature: 26,4 °C  
Relative Humidity: 48,5 %

### Frequency Range of Measurement

1 GHz to 6 GHz

### Instrument Settings

IF Band Width: 1 MHz

### Test Results

The requirements are:

- ☒ PASS  
☐ NOT PASS  
☐ NOT APPLICABLE

### Remarks

See Appendix A for test data.



---

## **APPENDIX A – TEST DATA**

### **Conducted Emissions at Mains Power Ports**

**[HOT]**

N/A



**KES Co., Ltd.**

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**[NEUTRAL]**

N/A

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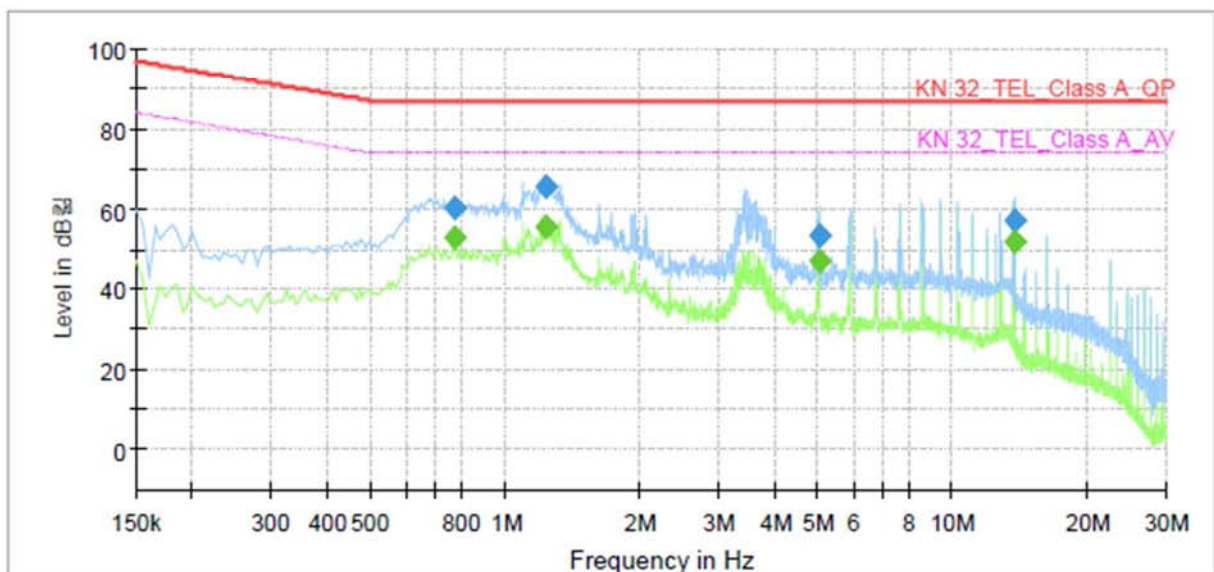
## Conducted Emissions at Telecommunication Ports

- DC 12V Mode

[10 Mbps]

### Common Information

|                   |                            |
|-------------------|----------------------------|
| Test Description: | Telecommunication Emission |
| Model No.:        | QNO-6020RP                 |
| Mode              | DC 12V_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) |
|-----------------|------------------|-----------------|--------------|-------------|-----------------|-----------------|-------------|------------|
| 0.770000        | ---              | 53.19           | 74.00        | 20.81       | 1000.0          | 9.000           | Single Line | 9.9        |
| 0.770000        | 60.19            | ---             | 87.00        | 26.81       | 1000.0          | 9.000           | Single Line | 9.9        |
| 1.235000        | ---              | 55.55           | 74.00        | 18.45       | 1000.0          | 9.000           | Single Line | 9.8        |
| 1.235000        | 65.71            | ---             | 87.00        | 21.29       | 1000.0          | 9.000           | Single Line | 9.8        |
| 5.055000        | ---              | 46.92           | 74.00        | 27.08       | 1000.0          | 9.000           | Single Line | 9.9        |
| 5.055000        | 53.55            | ---             | 87.00        | 33.45       | 1000.0          | 9.000           | Single Line | 9.9        |
| 13.750000       | ---              | 51.91           | 74.00        | 22.09       | 1000.0          | 9.000           | Single Line | 10.1       |
| 13.750000       | 57.36            | ---             | 87.00        | 29.64       | 1000.0          | 9.000           | Single Line | 10.1       |



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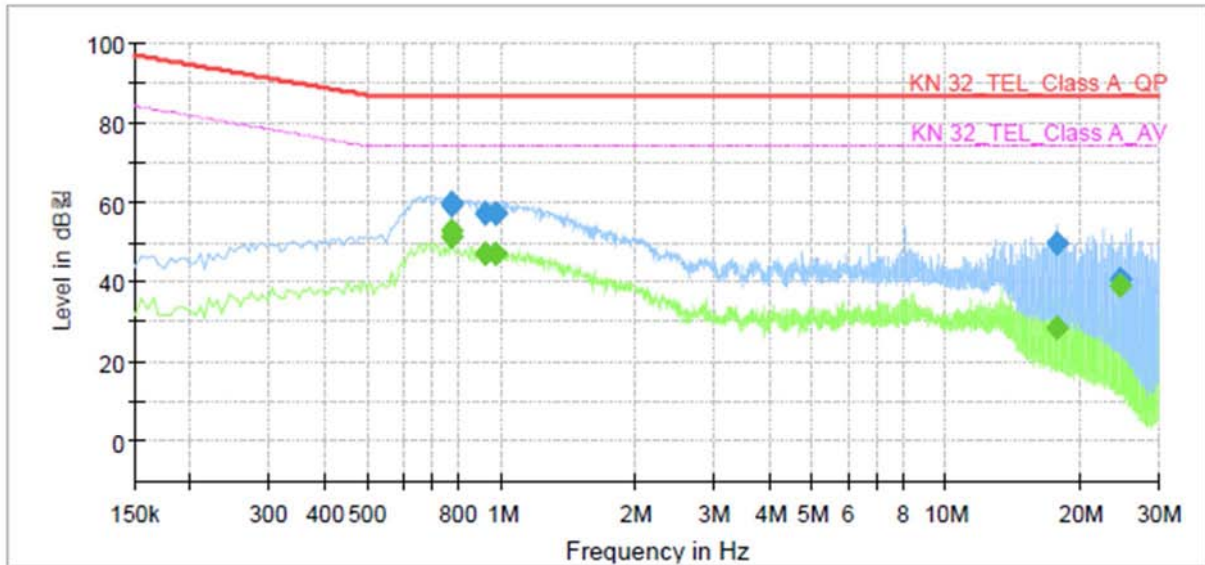
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Test report No.:  
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[100 Mbps]

### Common Information

Test Description: Telecommunication Emission  
Model No.: QNO-6020RP  
Mode: DC 12V\_100 Mbps  
Operator Name: KES



### Final Result

| Frequency (MHz) | QuasiPeak (dB $\mu$ V) | CAverage (dB $\mu$ V) | Limit (dB $\mu$ V) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line        | Corr. (dB) |
|-----------------|------------------------|-----------------------|--------------------|-------------|-----------------|-----------------|-------------|------------|
| 0.770000        | ---                    | 52.76                 | 74.00              | 21.24       | 1000.0          | 9.000           | Single Line | 9.4        |
| 0.770000        | 59.68                  | ---                   | 87.00              | 27.32       | 1000.0          | 9.000           | Single Line | 9.4        |
| 0.775000        | ---                    | 51.45                 | 74.00              | 22.55       | 1000.0          | 9.000           | Single Line | 9.4        |
| 0.775000        | 59.06                  | ---                   | 87.00              | 27.94       | 1000.0          | 9.000           | Single Line | 9.4        |
| 0.915000        | ---                    | 47.03                 | 74.00              | 26.97       | 1000.0          | 9.000           | Single Line | 9.4        |
| 0.915000        | 57.34                  | ---                   | 87.00              | 29.66       | 1000.0          | 9.000           | Single Line | 9.4        |
| 0.975000        | ---                    | 47.21                 | 74.00              | 26.79       | 1000.0          | 9.000           | Single Line | 9.4        |
| 0.975000        | 57.31                  | ---                   | 87.00              | 29.69       | 1000.0          | 9.000           | Single Line | 9.4        |
| 17.830000       | ---                    | 28.39                 | 74.00              | 45.61       | 1000.0          | 9.000           | Single Line | 9.5        |
| 17.830000       | 49.90                  | ---                   | 87.00              | 37.10       | 1000.0          | 9.000           | Single Line | 9.5        |
| 24.575000       | ---                    | 39.41                 | 74.00              | 34.59       | 1000.0          | 9.000           | Single Line | 9.4        |
| 24.575000       | 40.53                  | ---                   | 87.00              | 46.47       | 1000.0          | 9.000           | Single Line | 9.4        |

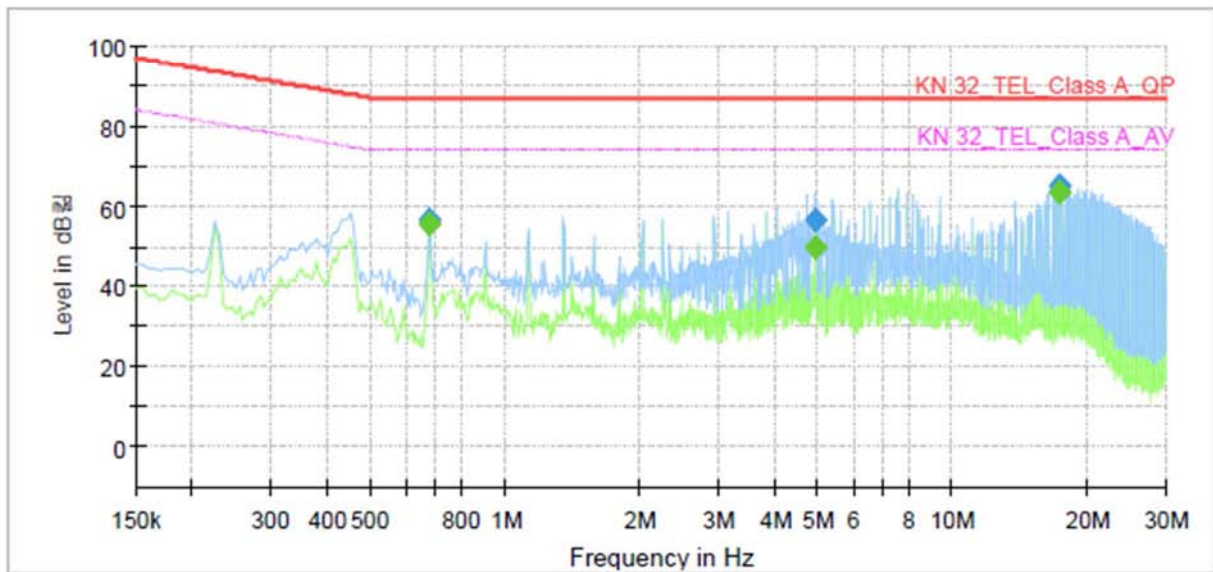
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- PoE Mode

**[10 Mbps]**

## Common Information

|                   |                            |
|-------------------|----------------------------|
| Test Description: | Telecommunication Emission |
| Model No.:        | QNO-6020RP                 |
| 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) |
|-----------------|------------------|-----------------|--------------|-------------|-----------------|-----------------|-------------|------------|
| 0.680000        | ---              | 55.59           | 74.00        | 18.41       | 1000.0          | 9.000           | Single Line | 9.9        |
| 0.680000        | 56.62            | ---             | 87.00        | 30.38       | 1000.0          | 9.000           | Single Line | 9.9        |
| 4.945000        | ---              | 49.82           | 74.00        | 24.18       | 1000.0          | 9.000           | Single Line | 9.9        |
| 4.945000        | 56.79            | ---             | 87.00        | 30.21       | 1000.0          | 9.000           | Single Line | 9.9        |
| 17.410000       | ---              | 63.63           | 74.00        | 10.37       | 1000.0          | 9.000           | Single Line | 10.1       |
| 17.410000       | 64.96            | ---             | 87.00        | 22.04       | 1000.0          | 9.000           | Single Line | 10.1       |



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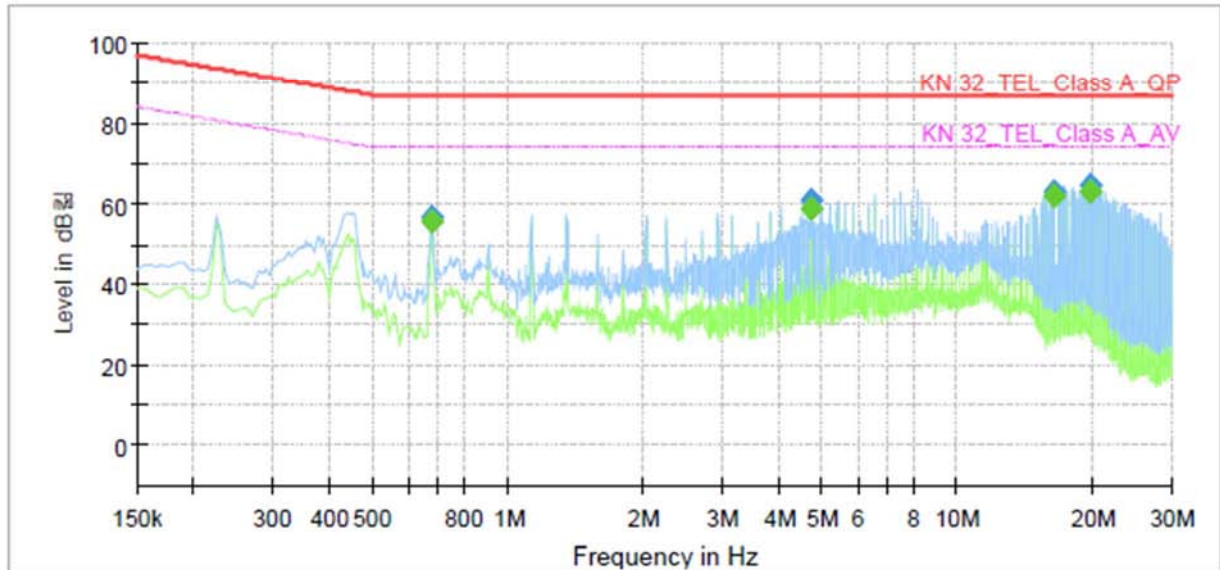
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Test report No.:  
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[100 Mbps]

### Common Information

Test Description: Telecommunication Emission  
Model No.: QNO-6020RP  
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) |
|-----------------|------------------|-----------------|--------------|-------------|-----------------|-----------------|-------------|------------|
| 0.680000        | ---              | 55.40           | 74.00        | 18.60       | 1000.0          | 9.000           | Single Line | 9.4        |
| 0.680000        | 56.56            | ---             | 87.00        | 30.44       | 1000.0          | 9.000           | Single Line | 9.4        |
| 4.750000        | ---              | 58.96           | 74.00        | 15.04       | 1000.0          | 9.000           | Single Line | 9.4        |
| 4.750000        | 60.81            | ---             | 87.00        | 26.19       | 1000.0          | 9.000           | Single Line | 9.4        |
| 16.510000       | ---              | 62.01           | 74.00        | 11.99       | 1000.0          | 9.000           | Single Line | 9.6        |
| 16.510000       | 63.20            | ---             | 87.00        | 23.80       | 1000.0          | 9.000           | Single Line | 9.6        |
| 19.900000       | ---              | 63.23           | 74.00        | 10.77       | 1000.0          | 9.000           | Single Line | 9.5        |
| 19.900000       | 64.36            | ---             | 87.00        | 22.64       | 1000.0          | 9.000           | Single Line | 9.5        |

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**Radiated Electric Field Emissions(Below 1 GHz)**

- DC 12V Mode

| Frequency | Amplitude    | ANT             | ANT. Height | Correction Factor |               | Corrected Amplitude | Applicable Limit | Margin |
|-----------|--------------|-----------------|-------------|-------------------|---------------|---------------------|------------------|--------|
| [MHz]     | [dB $\mu$ V] | Polar.<br>(H/V) | [m]         | ANT.<br>[dB/m]    | Cable<br>[dB] | [dB $\mu$ V/m]      | [dB $\mu$ V/m]   | [dB]   |
| 149.60    | 15.33        | V               | 1.00        | 8.19              | 2.77          | 26.29               | 40.00            | 13.71  |
| 222.73    | 21.13        | H               | 3.80        | 11.80             | 3.51          | 36.44               | 40.00            | 3.56   |
| 223.01    | 16.19        | V               | 1.00        | 11.81             | 3.51          | 31.51               | 40.00            | 8.49   |
| 259.52    | 15.96        | H               | 4.00        | 12.59             | 3.88          | 32.43               | 47.00            | 14.57  |
| 297.32    | 10.89        | V               | 1.00        | 13.33             | 4.19          | 28.41               | 47.00            | 18.59  |
| 519.78    | 11.37        | H               | 4.00        | 17.54             | 5.86          | 34.77               | 47.00            | 12.23  |

\* H : Horizontal, V : Vertical

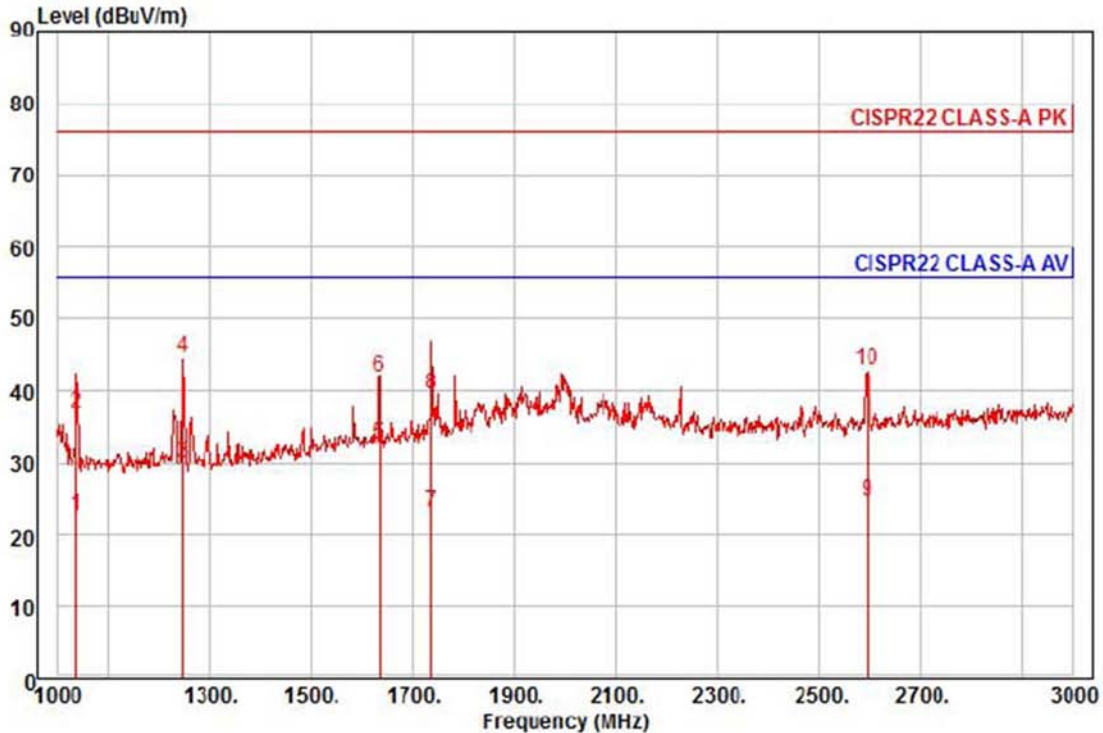
- PoE Mode

| Frequency | Amplitude    | ANT             | ANT. Height | Correction Factor |               | Corrected Amplitude | Applicable Limit | Margin |
|-----------|--------------|-----------------|-------------|-------------------|---------------|---------------------|------------------|--------|
| [MHz]     | [dB $\mu$ V] | Polar.<br>(H/V) | [m]         | ANT.<br>[dB/m]    | Cable<br>[dB] | [dB $\mu$ V/m]      | [dB $\mu$ V/m]   | [dB]   |
| 48.14     | 16.44        | V               | 1.00        | 13.86             | 1.42          | 31.72               | 40.00            | 8.28   |
| 222.74    | 21.23        | H               | 3.93        | 11.80             | 3.51          | 36.54               | 40.00            | 3.46   |
| 223.05    | 20.32        | V               | 1.00        | 11.81             | 3.51          | 35.64               | 40.00            | 4.36   |
| 297.61    | 14.48        | H               | 4.00        | 13.33             | 4.19          | 32.00               | 47.00            | 15.00  |
| 519.49    | 13.71        | V               | 1.00        | 17.53             | 5.86          | 37.10               | 47.00            | 9.90   |
| 631.09    | 8.53         | H               | 4.00        | 19.42             | 6.61          | 34.56               | 47.00            | 12.44  |

\* H : Horizontal, V : Vertical

## Radiated Electric Field Emissions(Above 1 GHz)

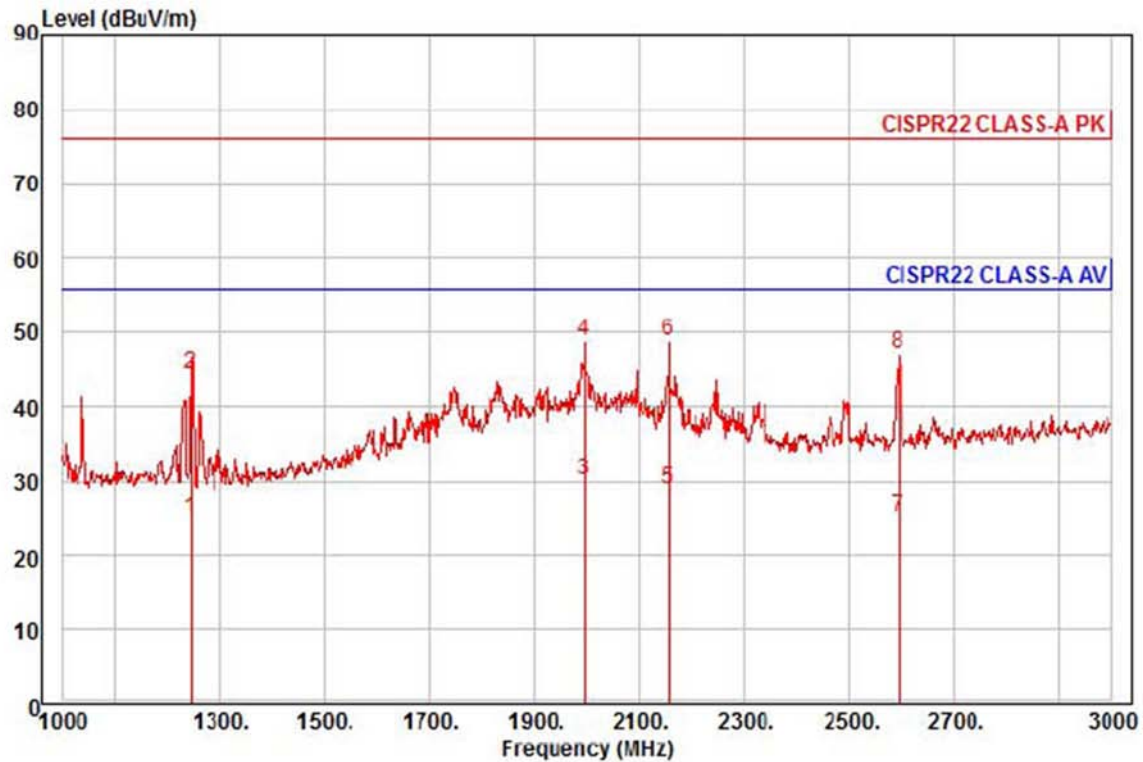
- DC 12V Mode



Site : chamber  
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) horizontal  
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto  
Project :  
Model : QNO-6020RP  
Mode : DC 12V  
Memo :

|      | Freq    | Read Level | Ant Factor | Cable Loss | Preamp Factor | TPos | Limit Line | Over Limit | Pol/Phase  | Remark  |
|------|---------|------------|------------|------------|---------------|------|------------|------------|------------|---------|
|      | MHz     | dBuV       | dB/m       | dB         | dB            | deg  | dBuV/m     | dB         |            |         |
| 1    | 1038.00 | 32.29      | 24.06      | 6.62       | 40.10         | 273  | 56.00      | -33.13     | horizontal | Average |
| 2    | 1038.00 | 46.12      | 24.06      | 6.62       | 40.10         | 273  | 76.00      | -39.30     | horizontal | Peak    |
| 3    | 1246.00 | 37.85      | 24.89      | 7.22       | 40.00         | 136  | 56.00      | -26.04     | horizontal | Average |
| 4 pk | 1246.00 | 52.48      | 24.89      | 7.22       | 40.00         | 136  | 76.00      | -31.41     | horizontal | Peak    |
| 5 pp | 1634.00 | 37.69      | 26.43      | 8.34       | 39.81         | 345  | 56.00      | -23.35     | horizontal | Average |
| 6    | 1634.00 | 46.97      | 26.43      | 8.34       | 39.81         | 345  | 76.00      | -34.07     | horizontal | Peak    |
| 7    | 1736.00 | 27.56      | 26.83      | 8.62       | 39.76         | 267  | 56.00      | -32.75     | horizontal | Average |
| 8    | 1736.00 | 43.70      | 26.83      | 8.62       | 39.76         | 267  | 76.00      | -36.61     | horizontal | Peak    |
| 9    | 2596.00 | 25.08      | 29.34      | 10.26      | 39.98         | 225  | 56.00      | -31.30     | horizontal | Average |
| 10   | 2596.00 | 43.21      | 29.34      | 10.26      | 39.98         | 225  | 76.00      | -33.17     | horizontal | Peak    |

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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 : QNO-6020RP  
Mode : DC 12V  
Memo :

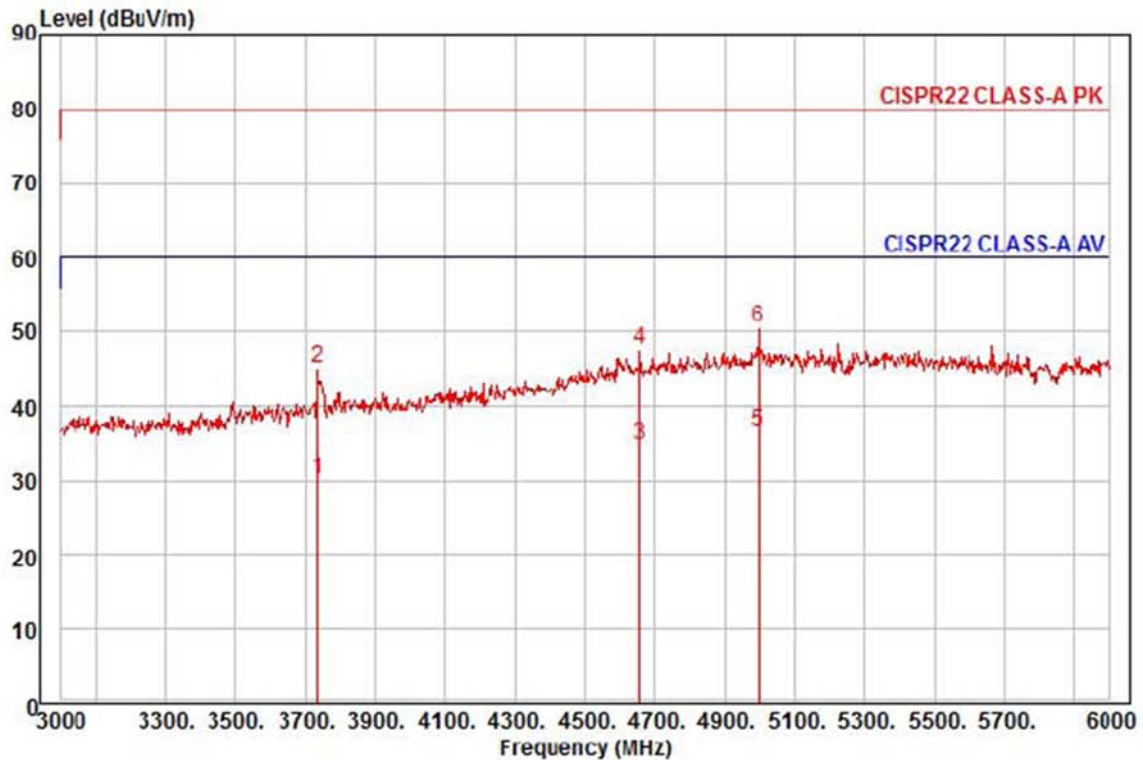
|      | Freq    | Read Level | Ant Factor | Cable Loss | Preamp Factor | TPos | Limit Line | Over Limit | Pol/Phase | Remark  |
|------|---------|------------|------------|------------|---------------|------|------------|------------|-----------|---------|
|      | MHz     | dBuV       | dB/m       | dB         | dB            | deg  | dBuV/m     | dB         |           |         |
| 1    | 1244.00 | 32.98      | 24.88      | 7.22       | 40.00         | 183  | 56.00      | -30.92     | vertical  | Average |
| 2    | 1244.00 | 52.18      | 24.88      | 7.22       | 40.00         | 183  | 76.00      | -31.72     | vertical  | Peak    |
| 3 pp | 1996.00 | 32.49      | 27.86      | 9.34       | 39.63         | 194  | 56.00      | -25.94     | vertical  | Average |
| 4    | 1996.00 | 51.15      | 27.86      | 9.34       | 39.63         | 194  | 76.00      | -27.28     | vertical  | Peak    |
| 5    | 2156.00 | 30.79      | 28.26      | 9.59       | 39.72         | 73   | 56.00      | -27.08     | vertical  | Average |
| 6 pk | 2156.00 | 50.71      | 28.26      | 9.59       | 39.72         | 73   | 76.00      | -27.16     | vertical  | Peak    |
| 7    | 2594.00 | 25.73      | 29.34      | 10.26      | 39.97         | 166  | 56.00      | -30.64     | vertical  | Average |
| 8    | 2594.00 | 47.43      | 29.34      | 10.26      | 39.97         | 166  | 76.00      | -28.94     | vertical  | Peak    |



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Test report No.:  
KES-E1-16T0240  
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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 : QNO-6020RP  
Mode : DC 12V  
Memo :

|      | Freq    | Read Level | Ant Factor | Cable Loss | Preamplifier Factor | TPos | Limit Line | Over Limit | Pol/Phase  | Remark  |
|------|---------|------------|------------|------------|---------------------|------|------------|------------|------------|---------|
|      | MHz     | dBuV       | dB/m       | dB         | dB                  | deg  | dBuV/m     | dB         |            |         |
| 1    | 3735.00 | 25.88      | 31.56      | 12.98      | 40.36               | 98   | 60.00      | -29.94     | horizontal | Average |
| 2    | 3735.00 | 40.92      | 31.56      | 12.98      | 40.36               | 98   | 80.00      | -34.90     | horizontal | Peak    |
| 3    | 4659.00 | 24.65      | 35.77      | 14.72      | 40.41               | 53   | 60.00      | -25.27     | horizontal | Average |
| 4    | 4659.00 | 37.54      | 35.77      | 14.72      | 40.41               | 53   | 80.00      | -32.38     | horizontal | Peak    |
| 5 pp | 4995.00 | 23.95      | 37.69      | 15.32      | 40.41               | 190  | 60.00      | -23.45     | horizontal | Average |
| 6 pk | 4995.00 | 37.87      | 37.69      | 15.32      | 40.41               | 190  | 80.00      | -29.53     | horizontal | Peak    |

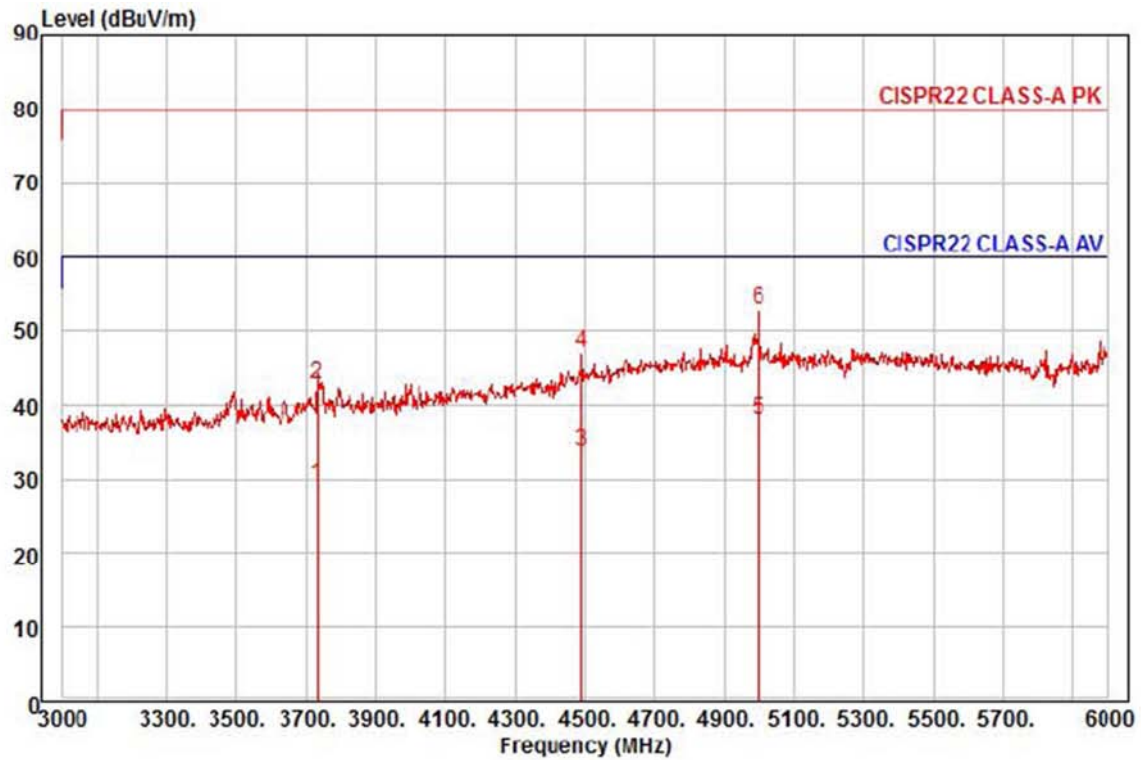
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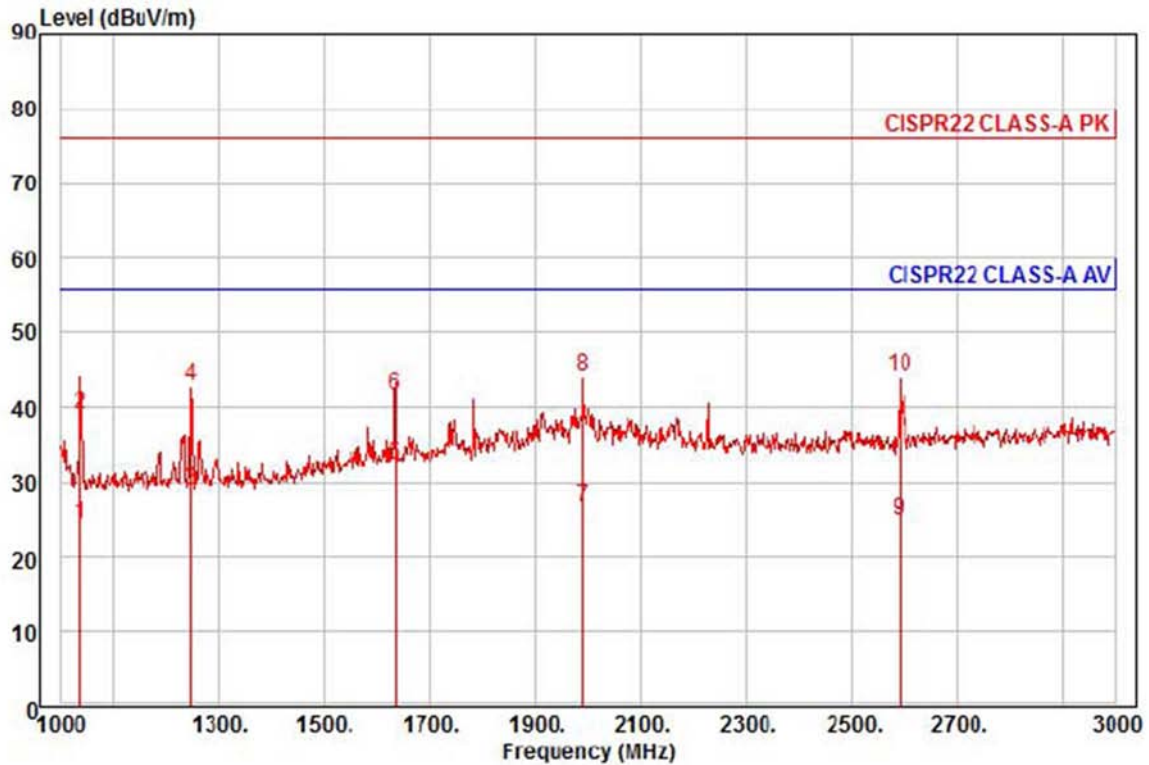


Site : chamber  
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) vertical  
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto  
Project :  
Model : QNO-6020RP  
Mode : DC 12V  
Memo :

|      | Freq    | Read Level | Ant Factor | Cable Loss | Preamplifier Factor | TPos | Limit Line | Over Limit | Pol/Phase | Remark  |
|------|---------|------------|------------|------------|---------------------|------|------------|------------|-----------|---------|
|      | MHz     | dBuV       | dB/m       | dB         | dB                  | deg  | dBuV/m     | dB         |           |         |
| 1    | 3732.00 | 25.10      | 31.56      | 12.97      | 40.36               | 144  | 60.00      | -30.73     | vertical  | Average |
| 2    | 3732.00 | 38.63      | 31.56      | 12.97      | 40.36               | 144  | 80.00      | -37.20     | vertical  | Peak    |
| 3    | 4491.00 | 25.10      | 34.81      | 14.41      | 40.41               | 262  | 60.00      | -26.09     | vertical  | Average |
| 4    | 4491.00 | 38.28      | 34.81      | 14.41      | 40.41               | 262  | 80.00      | -32.91     | vertical  | Peak    |
| 5 pp | 4998.00 | 25.33      | 37.71      | 15.33      | 40.41               | 68   | 60.00      | -22.04     | vertical  | Average |
| 6 pk | 4998.00 | 40.44      | 37.71      | 15.33      | 40.41               | 68   | 80.00      | -26.93     | vertical  | Peak    |

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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 : QNO-6020RP  
Mode : PoE  
Memo :

|      | Freq    | Read Level | Ant Factor | Cable Loss | Preamp Factor | TPos | Limit Line | Over Limit | Pol/Phase  | Remark  |
|------|---------|------------|------------|------------|---------------|------|------------|------------|------------|---------|
|      | MHz     | dBuV       | dB/m       | dB         | dB            | deg  | dBuV/m     | dB         |            |         |
| 1    | 1038.00 | 33.98      | 24.06      | 6.62       | 40.10         | 154  | 56.00      | -31.44     | horizontal | Average |
| 2    | 1038.00 | 48.39      | 24.06      | 6.62       | 40.10         | 154  | 76.00      | -37.03     | horizontal | Peak    |
| 3    | 1246.00 | 36.75      | 24.89      | 7.22       | 40.00         | 247  | 56.00      | -27.14     | horizontal | Average |
| 4    | 1246.00 | 50.89      | 24.89      | 7.22       | 40.00         | 247  | 76.00      | -33.00     | horizontal | Peak    |
| 5 pp | 1634.00 | 37.29      | 26.43      | 8.34       | 39.81         | 331  | 56.00      | -23.75     | horizontal | Average |
| 6    | 1634.00 | 46.67      | 26.43      | 8.34       | 39.81         | 331  | 76.00      | -34.37     | horizontal | Peak    |
| 7    | 1990.00 | 29.17      | 27.84      | 9.32       | 39.63         | 261  | 56.00      | -29.30     | horizontal | Average |
| 8 pk | 1990.00 | 46.72      | 27.84      | 9.32       | 39.63         | 261  | 76.00      | -31.75     | horizontal | Peak    |
| 9    | 2590.00 | 25.42      | 29.33      | 10.25      | 39.97         | 223  | 56.00      | -30.97     | horizontal | Average |
| 10   | 2590.00 | 44.50      | 29.33      | 10.25      | 39.97         | 223  | 76.00      | -31.89     | horizontal | Peak    |

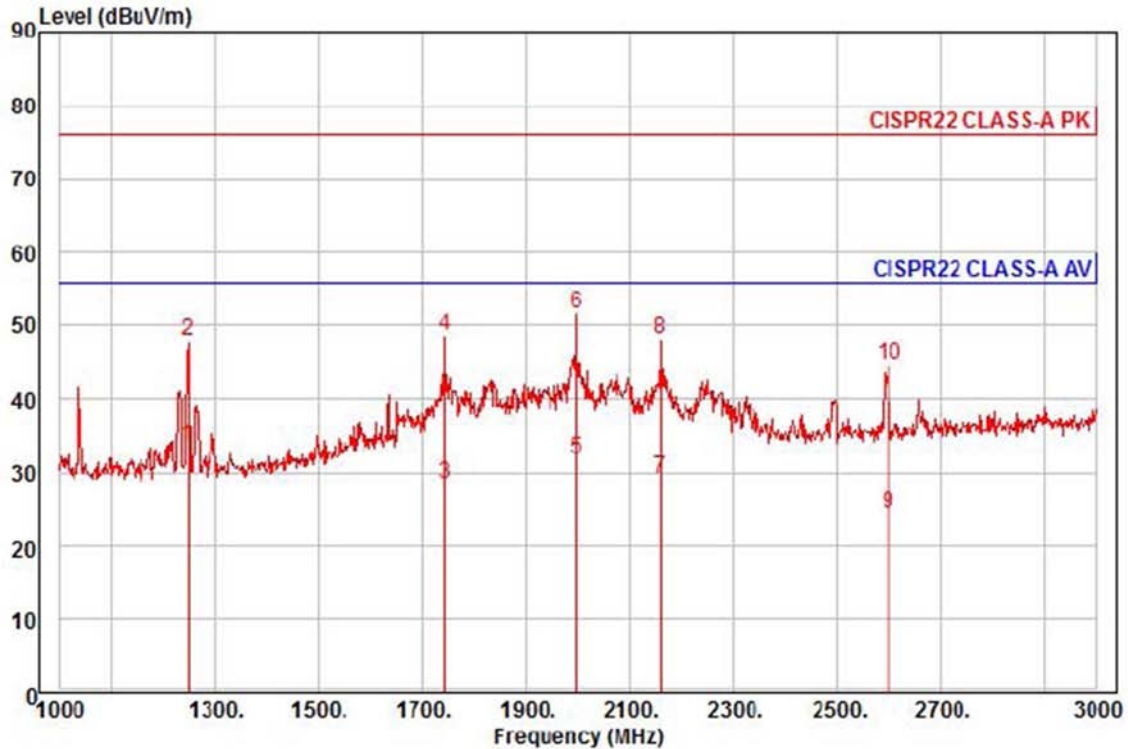
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Site : chamber  
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) vertical  
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto  
Project :  
Model : QNO-6020RP  
Mode : PoE  
Memo :

|      | Freq    | Read Level | Ant Factor | Cable Loss | Preamp Factor | TPos | Limit Line | Over Limit | Pol/Phase | Remark  |
|------|---------|------------|------------|------------|---------------|------|------------|------------|-----------|---------|
|      | MHz     | dBuV       | dB/m       | dB         | dB            | deg  | dBuV/m     | dB         |           |         |
| 1 pp | 1248.00 | 41.41      | 24.89      | 7.23       | 40.00         | 181  | 56.00      | -22.47     | vertical  | Average |
| 2    | 1248.00 | 55.69      | 24.89      | 7.23       | 40.00         | 181  | 76.00      | -28.19     | vertical  | Peak    |
| 3    | 1744.00 | 32.81      | 26.86      | 8.65       | 39.76         | 80   | 56.00      | -27.44     | vertical  | Average |
| 4    | 1744.00 | 52.89      | 26.86      | 8.65       | 39.76         | 80   | 76.00      | -27.36     | vertical  | Peak    |
| 5    | 1998.00 | 34.35      | 27.87      | 9.34       | 39.63         | 353  | 56.00      | -24.07     | vertical  | Average |
| 6 pk | 1998.00 | 54.11      | 27.87      | 9.34       | 39.63         | 353  | 76.00      | -24.31     | vertical  | Peak    |
| 7    | 2160.00 | 31.14      | 28.27      | 9.60       | 39.72         | 74   | 56.00      | -26.71     | vertical  | Average |
| 8    | 2160.00 | 49.83      | 28.27      | 9.60       | 39.72         | 74   | 76.00      | -28.02     | vertical  | Peak    |
| 9    | 2600.00 | 24.97      | 29.35      | 10.27      | 39.98         | 234  | 56.00      | -31.39     | vertical  | Average |
| 10   | 2600.00 | 44.91      | 29.35      | 10.27      | 39.98         | 234  | 76.00      | -31.45     | vertical  | Peak    |

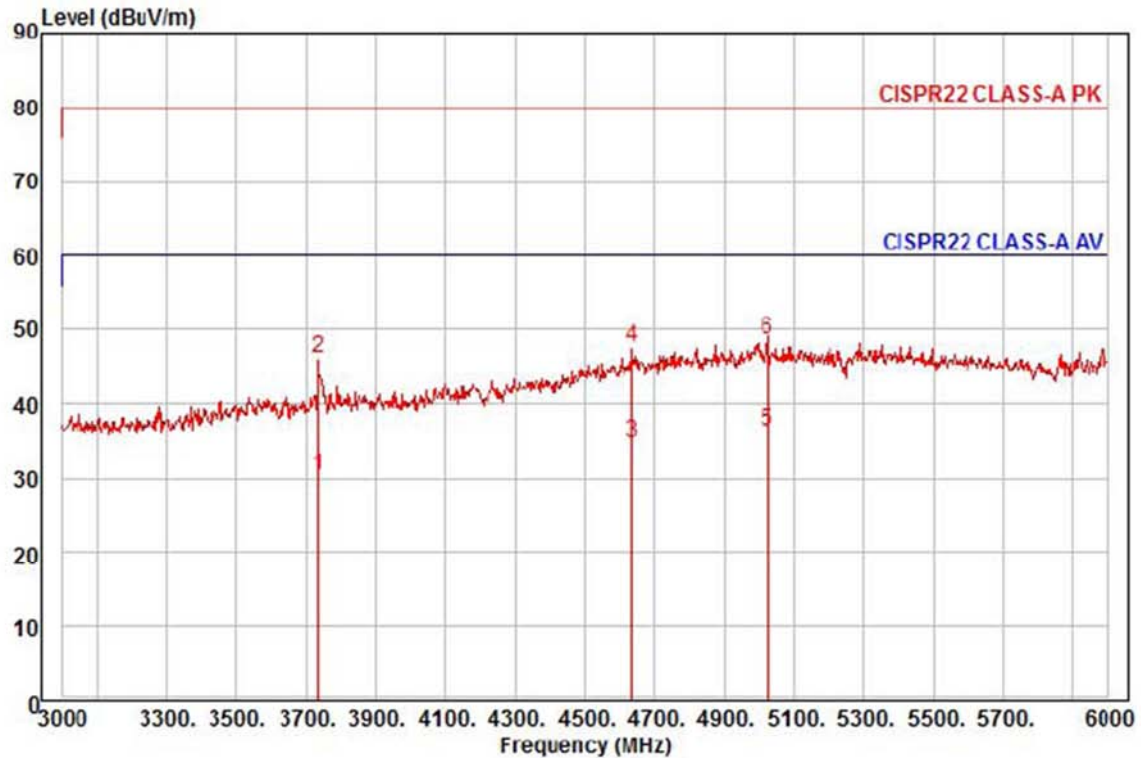
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Test report No.:  
KES-E1-16T0240  
Page (28) of (43)



Site : chamber  
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) horizontal  
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto  
Project :  
Model : QNO-6020RP  
Mode : PoE  
Memo :

|      | Freq    | Read Level | Ant Factor | Cable Loss | Preamp Factor | TPos | Limit Line | Over Limit | Pol/Phase  | Remark  |
|------|---------|------------|------------|------------|---------------|------|------------|------------|------------|---------|
|      | MHz     | dBuV       | dB/m       | dB         | dB            | deg  | dBuV/m     | dB         |            |         |
| 1    | 3735.00 | 26.27      | 31.56      | 12.98      | 40.36         | 119  | 60.00      | -29.55     | horizontal | Average |
| 2    | 3735.00 | 41.91      | 31.56      | 12.98      | 40.36         | 119  | 80.00      | -33.91     | horizontal | Peak    |
| 3    | 4638.00 | 24.82      | 35.65      | 14.68      | 40.41         | 206  | 60.00      | -25.26     | horizontal | Average |
| 4    | 4638.00 | 37.59      | 35.65      | 14.68      | 40.41         | 206  | 80.00      | -32.49     | horizontal | Peak    |
| 5 pp | 5025.00 | 23.61      | 37.67      | 15.36      | 40.41         | 193  | 60.00      | -23.77     | horizontal | Average |
| 6 pk | 5025.00 | 35.97      | 37.67      | 15.36      | 40.41         | 193  | 80.00      | -31.41     | horizontal | Peak    |

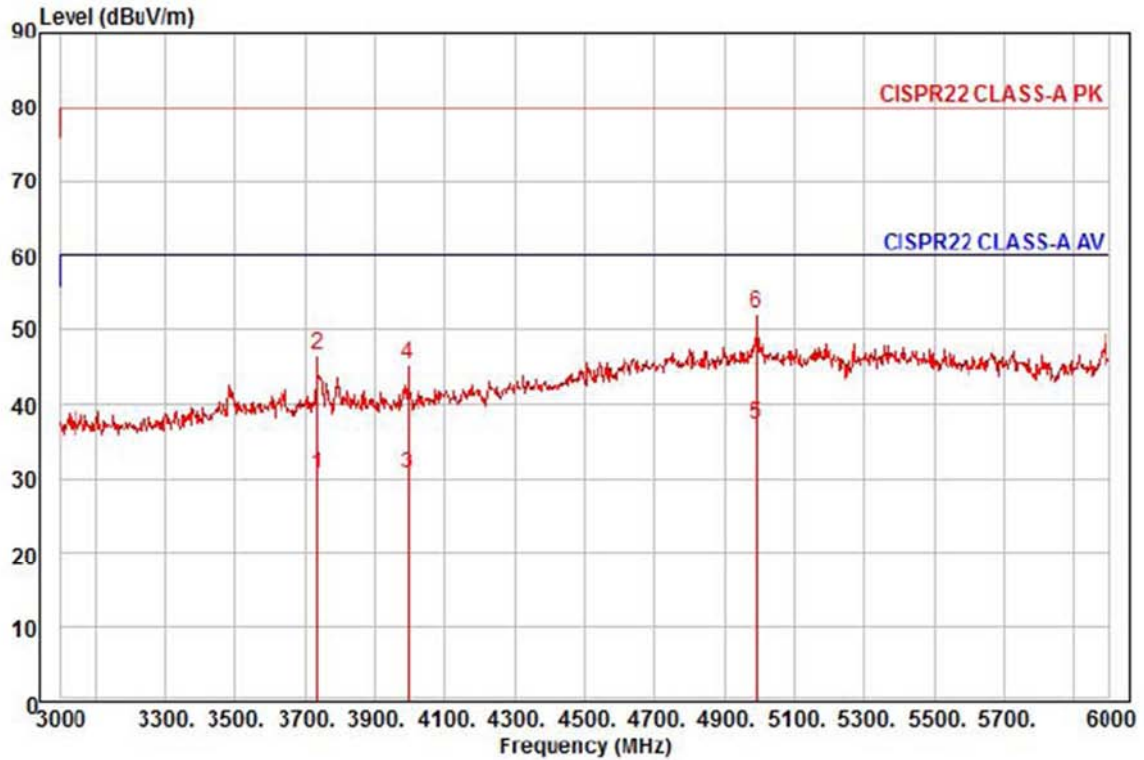
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Test report No.:  
KES-E1-16T0240  
Page (29) of (43)



Site : chamber  
Condition: CISPR22 CLASS-A PK 3m HORN781(2015.05.07) vertical  
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto  
Project :  
Model : QNO-6020RP  
Mode : PoE  
Memo :

|      | Freq    | Read Level | Ant Factor | Cable Loss | Preamplifier Factor | TPos | Limit Line | Over Limit | Pol/Phase | Remark  |
|------|---------|------------|------------|------------|---------------------|------|------------|------------|-----------|---------|
|      | MHz     | dBuV       | dB/m       | dB         | dB                  | deg  | dBuV/m     | dB         |           |         |
| 1    | 3735.00 | 26.46      | 31.56      | 12.98      | 40.36               | 36   | 60.00      | -29.36     | vertical  | Average |
| 2    | 3735.00 | 42.37      | 31.56      | 12.98      | 40.36               | 36   | 80.00      | -33.45     | vertical  | Peak    |
| 3    | 3993.00 | 25.58      | 32.00      | 13.50      | 40.41               | 42   | 60.00      | -29.33     | vertical  | Average |
| 4    | 3993.00 | 40.16      | 32.00      | 13.50      | 40.41               | 42   | 80.00      | -34.75     | vertical  | Peak    |
| 5 pp | 4989.00 | 24.77      | 37.66      | 15.31      | 40.41               | 70   | 60.00      | -22.67     | vertical  | Average |
| 6 pk | 4989.00 | 39.79      | 37.66      | 15.31      | 40.41               | 70   | 80.00      | -27.65     | vertical  | Peak    |

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## **Test Setup Photos and Configuration**

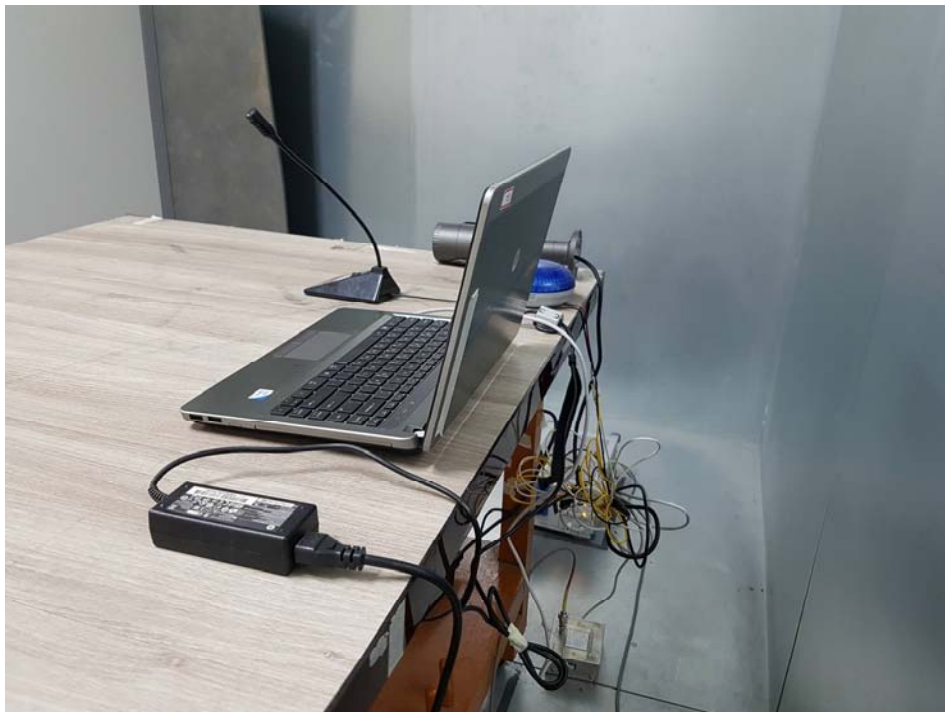
### **Conducted Voltage Emissions**

N/A

N/A

## Conducted Telecommunication Emissions

- DC 12V Mode



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- PoE Mode



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## Radiated Electric Field Emissions(Below 1 GHz)

- DC 12V Mode



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- PoE Mode



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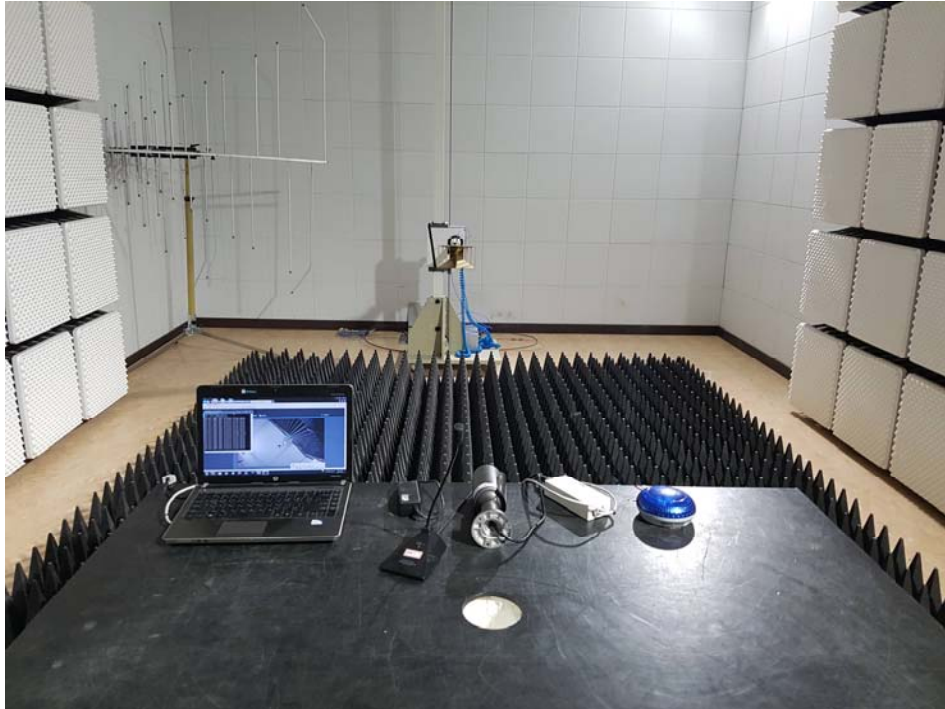
## Radiated Electric Field Emissions(Above 1 GHz)

- DC 12V 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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## Main Board EUT Internal View – Board 1

(Top)



(Bottom)



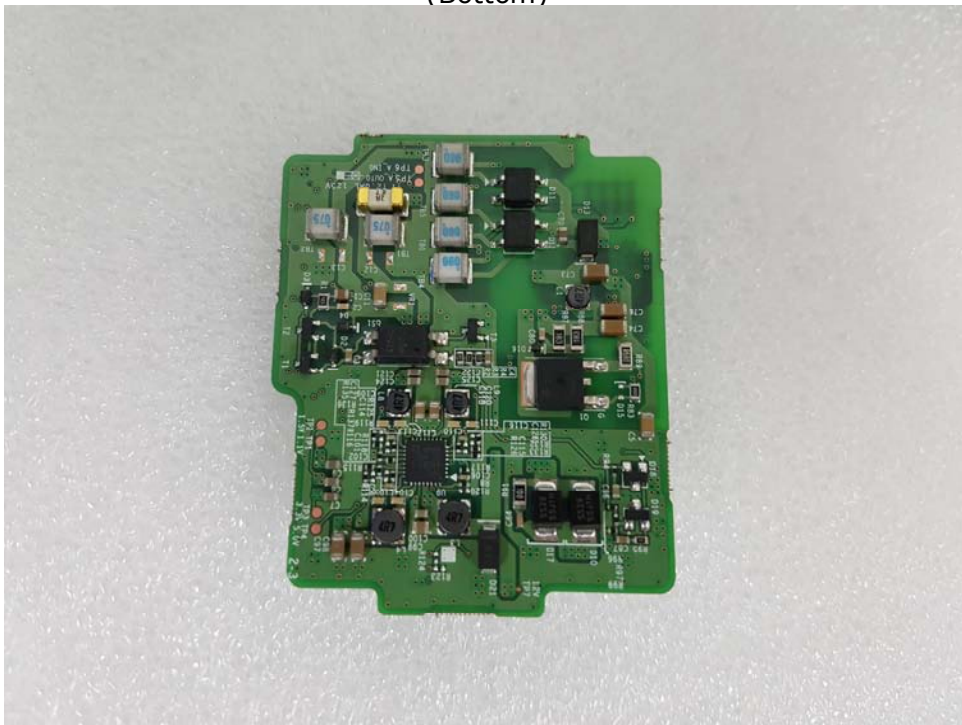
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## Main Board EUT Internal View – Board 2

(Top)



(Bottom)



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## Main Board EUT Internal View – Board 3

(Top)



(Bottom)



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## Main Board EUT Internal View – Board 4

(Top)



(Bottom)



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## Main Board EUT Internal View – Camera

(Top)



(Bottom)



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