# EMC TEST REPORT

| | | |
|---|---|---|
| Test Report No. | : | KES-EM-22T0317 |
| Date of Issue | : | Apr. 05, 2022 |
| Product name | : | CCTV CAMERA |
| Model/Type No. | : | ANV-L6082R |
| Variant Model | : | - |
| Applicant | : | Hanwha Techwin Co., Ltd. |
| Applicant Address | : | 6, Pangyo-ro 319Beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea |
| Manufacturer | : | 1. HANWHA TECHWIN SECURITY VIETNAM CO.,LTD.<br>2. D-TECH CO.,LTD. |
| Manufacturer Address | : | 1. Lot O-2, Que Vo Industrial Zone extended area, Nam Son commune, Bac Ninh city, Bac Ninh province, Vietnam<br>2. 173-25, Saneop-ro, Gwonseon-gu, Suwon-si, Gyeonggi- do, Korea (Suwon Industrial Complex) |
| Equipment authorization | : | **Supplier's Declaration of Conformity** |
| Date of Receipt | : | Mar. 15, 2022 |
| Test date | : | Mar. 16, 2022 |
| Test Results | : | ☒ **In Compliance** ☐ **Not in Compliance** |

*Tested by*

Eun Gu, Jeon
EMC Test Engineer

*Reviewed by*

Dong-Hun, Jang
EMC Technical Manager

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

# REPORT REVISION HISTORY

| Date | Test Report No. | Revision History |
|---|---|---|
| Apr. 05, 2022 | KES-EM-22T0317 | Issued |
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# 1.0 General Product Description

## Main Specifications of EUT are:

| | |
|---|---|
| **Video** | |
| Imaging Device | 1/2.8" CMOS |
| Resolution | 1920x1080, 1280x960, 1280x720, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360 |
| Max. Framerate | H.264 : Max. 30fps/25fps(60Hz/50Hz)<br>MJPEG : Max. 2fps at 1920x1080, Max.. 3fps at 1280x960, 1280x720,<br>Max. 10fps at other resolution |
| NETD | None |
| Pixel Size | None |
| Min. Illumination | Color: 0.03Lux(F1.6, 1/30sec)<br>BW : 0Lux (IR LED on) |
| Video Out | None |
| Video Transmission Distance | None |
| **Lens** | |
| Focal Length (Zoom Ratio) | 3.3~10.3mm(3.1x) motorized varifocal |
| Max. Aperture Ratio | F1.6(Wide) ~ F3.3(Tele) |
| Angular Field of View | H: 105.2°(Wide) ~ 30.6°(Tele)<br>V: 54.8°(Wide) ~ 17.2°(Tele)<br>D: 126.9°(Wide) ~ 35.1°(Tele) |
| Min. Object Distance | 0.5m(1.64ft) |
| Focus Control | Simple focus |
| Lens Type | DC auto iris |
| Mount Type | None |
| Optional Lens | None |
| **Pan / Tilt / Rotate** | |
| Pan / Tilt / Rotate Range | 0°~350° / 0°~67° / 0°~355° |
| Pan Range | None |
| Pan Speed | None |
| Tilt Range | None |
| Tilt Speed | None |
| Rotate Range | None |
| Sequence | None |
| Preset Accuracy | None |
| **Operational** | |
| Camera Title | Displayed up to 15 characters |
| Direction Indicator | None |
| Day & Night | Auto(ICR) |
| Backlight Compensation | BLC, WDR, SSDR |
| Wide Dynamic Range | 120dB |

| | |
|---|---|
| Digital Noise Reduction | SSNR |
| Digital Image Stabilization | None |
| Defog | None |
| Motion Detection | 4ea, rectangler zones |
| Privacy Masking | 6ea, rectangular zones |
| Gain Control | Low / Middle / High |
| White Balance | ATW / AWC / Manual / Indoor / Outdoor |
| LDC | Support |
| Electronic Shutter Speed | Minimum / Maximum / Anti flicker (2~1/12,000sec) |
| Digital PTZ | None |
| Video Rotation | Flip, Mirror, Hallway view(90°/270°) |
| Analytics | Motion detection, Tampering |
| Business Intelligence | None |
| Serial Interface | None |
| Alarm I/O | None |
| Alarm Triggers | Analytics |
| Alarm Events | File upload via FTP and e-mail<br>Notification via e-mail<br>SD/SDHC recording at event triggers |
| Audio Streaming | None |
| Audio In | None |
| Audio Out | None |
| IR Viewable Length | 30m(98.43ft) |
| IR Illuminator (Optional) | None |
| Water Removal | None |
| Auto Tracking | None |
| Coaxial Protocol | None |
| Color Palettes | None |
| **Radiometry** | |
| Temperature Detect Range | None |
| Temperature Accuracy | None |
| Temperature Detection | None |
| Additional | None |
| **Network** | |
| Ethernet | RJ-45(10/100BASE-T) |
| Video Compression | H.264: Main/Baseline/High, MJPEG |

| | |
|---|---|
| Audio Compression | None |
| Smart Codec | WiseStreamⅡ |
| Video Quality Adjustment | H.264: Target bitrate level control<br>MJPEG: Quality level control |
| Bitrate Control | H.264: CBR or VBR<br>MJPEG: VBR |
| Streaming | Unicast(6 users) / Multicast<br>Multiple streaming (Up to 3 profiles) |
| Protocol | IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour |
| SIP support (VoIP, Peer-to-peer, SIP/PB | None |
| Security | HTTPS(SSL) Login Authentication<br>Digest Login Authentication<br>IP Address Filtering<br>User access log<br>802.1X Authentication(EAP-TLS, EAP-LEAP) |
| Application Programming Interface | ONVIF Profile S/G/T<br>SUNAPI(HTTP API) |
| **General** | |
| Webpage Language | English |
| Web Viewer | None |
| Edge Storage | Micro SD/SDHC 1slot 32GB |
| Memory | 512MB RAM, 256MB Flash |
| **Environmental & Electrical** | |
| Operating Temperature / Humidity | -30°C ~ +55°C(-22°F ~ +131°F) / Less than 95% RH<br>* Start up should be done at above -20°C(-4°F) |
| Storage Temperature / Humidity | -30°C ~ +55°C(-22°F ~ +131°F) / Less than 95% RH |
| Certification | IP66, IK10 |
| Input Voltage | PoE(IEEE802.3af, Class3) |
| Power Consumption | Max 7.0W, Typical 5.0W |
| **Mechanical** | |
| Color / Material | White / Plastic, Aluminum |
| RAL Code | RAL9003 |
| Product Dimensions / Weight | Ø137.8x107.1mm(Ø5.43x4.22"), 550g |
| Compatible Conduit hole / Gangbox | None / Single, Double, 4" Octagon |
| Hanging Mount (Dome) | SBP-301HMW2 |
| Skin Cover | None |
| Skin Cover (Dome) | None |

| | |
|---|---|
| Weather Cap (Dome) | None |
| Power Module | None |
| Backbox | SBV-A14B |
| **DORI (EN62676-4 standard)** | |
| Detect (25PPM/ 8PPF) | Wide: 26.5m(87.07ft) / Tele: 70.3m(230.59ft) |
| Observe (63PPM/ 19PPF) | Wide: 10.6m(34.83ft) / Tele: 28.1m(92.24ft) |
| Recognize (125PPM/ 38PPF) | Wide: 5.3m(17.41ft) / Tele: 14.1m(46.12ft) |
| Identify (250PPM/ 76PPF) | Wide: 2.7m(8.71ft) / Tele: 7.0m(23.06ft) |
| **LPR/ANPR/MMCR** | |
| Speed Description | None |
| Speed limit | None |
| Min. Forward Distance | None |
| Max. Forward Distance | None |
| Max. Horizontal Angle | None |
| Max. Vertical Angle | None |
| Horizontal Offset | None |
| Camera Height | None |
| Lane Coverage | None |
| Vehicle Recognition | None |
| Available Countries | None |
| **Wisenet Road AI LPR/ANPR/MMCR** | |
| Solution | None |
| Speed Description | None |
| Lane Coverage | None |
| Speed limit | None |
| Min. Forward Distance | None |
| Max. Forward Distance | None |
| Max. Horizontal Angle | None |
| Max. Vertical Angle | None |
| Horizontal Offset | None |
| Camera Height | None |
| Vehicle Recognition | None |
| Available Countries | None |

## 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.

☒ AC 120 V, 60 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 |
|---|---|---|---|---|
| CCTV CAMERA | ANV-L6082R | - | HANWHA TECHWIN SECURITY VIETNAM CO.,LTD. | EUT |

## 1.5 Support Equipments

| Description | Model Number | Serial Number | Manufacturer | Remarks |
|---|---|---|---|---|
| Notebook | LG15N54 | 503NZWY038929 | LG Electronics. | - |
| Notebook Adapter | PA-1900-14 | OF2R263348701 7764 | LITE-ON TECHNOLOGY COPORATION | - |
| PoE Adapter | PSE156G | - | - | - |
| Micro SD Card | - | - | - | - |

## 1.6 External I/O Cabling

| Start | | END | | Cable Spec. | |
|---|---|---|---|---|---|
| **Description** | **I/O Port** | **Description** | **I/O Port** | **Length** | **Shield** |
| CCTV CAMERA (EUT) | RJ-45 | PoE Adapter | RJ-45 | 3.0 | U |
| | Micro SD | Micro SD Card | Micro SD | - | - |
| PoE Adapter | RJ-45 | Notebook | RJ-45 | 1.0 | U |
| Notebook | DC Jack | Notebook Adapter | DC Jack | 1.4 | S |

* Unshielded=U, Shielded=S

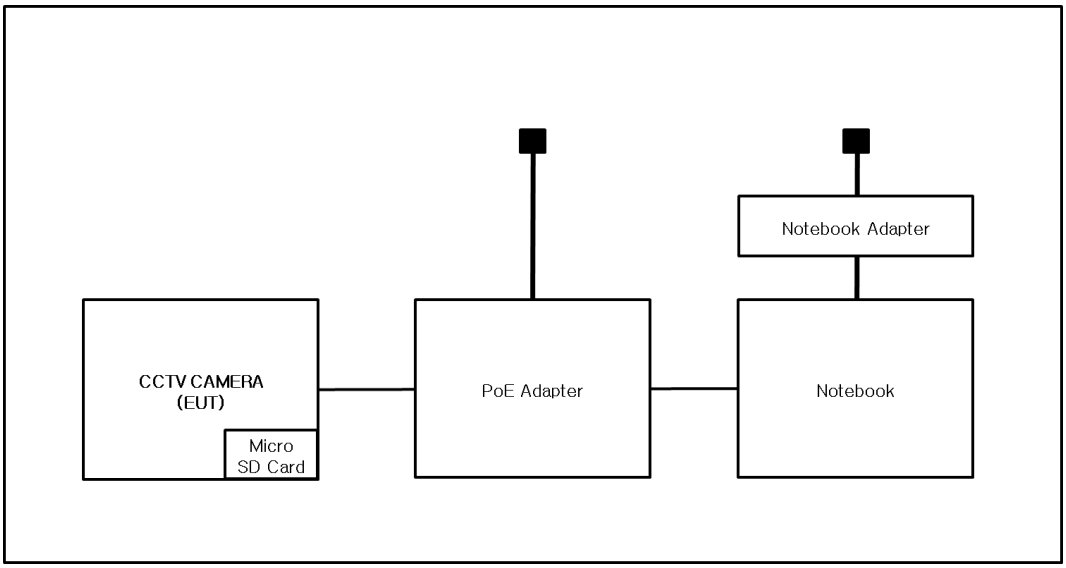
## 1.7 EUT Operating Mode(s)

| Test Mode | operating |
|---|---|
| Operating Mode | Monitoring EUT |

| EUT Test operating S/W | | |
|---|---|---|
| **Name** | **Version** | **Manufacture Company** |
| - | - | - |

## 1.8 Configuration

■ AC Main
□ DC Main



## 1.9 Remarks when standards applied

N/A

## 1.10 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.

## 1.11 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 C63.4a-2017 and CISPR 16-1-4:2019

## 1.12 Laboratory Accreditations and Listings

| Country | Agency | Scope of Accreditation | Logo |
|---|---|---|---|
| KOREA | **RRA** | EMI (3 m & 10 m Semi-Anechoic Chamber , 10 m Open Area and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions) | KR0100 |
| International | **KOLAS** | EMI (3 m & 10 m Semi-Anechoic Chamber , and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions) | KT489 |
| USA | **FCC** | 3 m & 10 m Semi-Anechoic Chamber, 10 m Open Area and Conducted test site to perform FCC Part 15/18 measurements. | KR0100 |
| Canada | **ISED** | 3 m & 10 m Semi-Anechoic Chamber and Conducted test site | 23298-1 |
| 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-20056, C-20036, T-20040, G-20057 |
| Europe | **TÜV SÜD** | EMI (3 m & 10 m Semi-Anechoic Chamber , 10 m Open Area and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions) | CARAT 001633 0004 |

# 2.0 Test Regulations

The emissions tests were performed according to following regulations:

☒ **47 CFR Part 15, Subpart B**

| | | |
|---|---|---|
| ☐ CISPR 22:2009 +A1:2010 | ☐ Class A | ☐ Class B |
| ☒ ANSI C63.4a-2017 | ☒ Class A | ☐ Class B |

☒ **IC Regulation ICES-003 Issue 7**

| | | |
|---|---|---|
| ☐ CAN/CSA-CISPR 32:17 | ☐ Class A | ☐ Class B |
| ☒ ANSI C63.4a-2017 | ☒ Class A | ☐ Class B |

# 2.1 Conducted Emissions at Mains Power Ports

**Test Date**
Mar. 16, 2022

**Test Location**
Electro wave Shieldroom #6

**Test Equipment**

| Used | Description | Model Number | Manufacturer | Serial Number | Cal. Due |
|---|---|---|---|---|---|
| ☒ | EMI Test S/W | EMC32 | R & S | 9.12.00 | - |
| ☒ | EMI TEST RECEIVER | ESR3 | R & S | 101783 | 12, 28, 2022 |
| ☒ | LISN | ENV216 | R & S | 101787 | 12, 27, 2022 |
| ☒ | LISN | ESH2-Z5 | R & S | 100450 | 12, 27, 2022 |
| ☒ | PULSE LIMITER | ESH3-Z2 | R & S | 101915 | 12, 27, 2022 |

**Test Conditions**
Temperature: (24,4 ± 0,2) ℃
Relative Humidity: (43,8 ± 0,2) % R.H.

**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.

# 2.2 Radiated Electric Field Emissions(Below 1 ㎓)

**Test Date**
Mar. 16, 2022

**Test Location**
☐ OPEN AREA TEST SITE #2 ☒ SEMI ANECHOIC CHAMBER #4(10m)

**Test Equipment**

| Used | Description | Model Number | Manufacturer | Serial Number | Cal. Due |
|---|---|---|---|---|---|
| ☒ | EMI Test S/W | EP5/RE | TOYO Corporation | 6.0.0 | - |
| ☒ | EMI TEST RECEIVER | ESU26 | R & S | 100551 | 03, 31, 2023 |
| ☒ | AMPLIFIER | SCU 01 | R & S | 100603 | 11, 24, 2022 |
| ☒ | TRILOG-BROADBAND ANTENNA | VULB9163 | Schwarzbeck | 715 | 12, 08, 2022 |
| ☒ | ATTENUATOR | 8491A | HP | 32173 | 03, 08, 2023 |

**Test Conditions**
Temperature: (23,8 ± 0,1) ℃
Relative Humidity: (42,6 ± 0,1) % R.H.

**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.

# 2.3 Radiated Electric Field Emissions(Above 1 ㎓)

**Test Date**
Mar. 16, 2022

**Test Location**
SEMI ANECHOIC CHAMBER #5

**Test Equipment**

| Used | Description | Model Number | Manufacturer | Serial Number | Cal. Due |
|---|---|---|---|---|---|
| ☒ | EMI Test S/W | EP5/RE | TOYO Corporation | 6.0.120 | - |
| ☒ | EMI TEST RECEIVER | ESU26 | Rohde & Schwarz | 100552 | 03, 31, 2023 |
| ☒ | HORN ANTENNA | BBHA 9120D | SCHWARZBECK | 9120D-1802 | 12, 16, 2022 |
| ☒ | PREAMPLIFIER | 8449B | HP | 3008A00538 | 06, 21, 2022 |

**Test Conditions**
Temperature: (24,7 ± 0,1) ℃
Relative Humidity: (48,1 ± 0,1) % R.H.

**Frequency Range of Measurement**
1 ㎓ to 5 ㎓

**Instrument Settings**
IF Band Width: 1 ㎒

**Test Results**
The requirements are:
☒ PASS
☐ NOT PASS
☐ NOT APPLICABLE

**Remarks**
See Appendix A for test data.

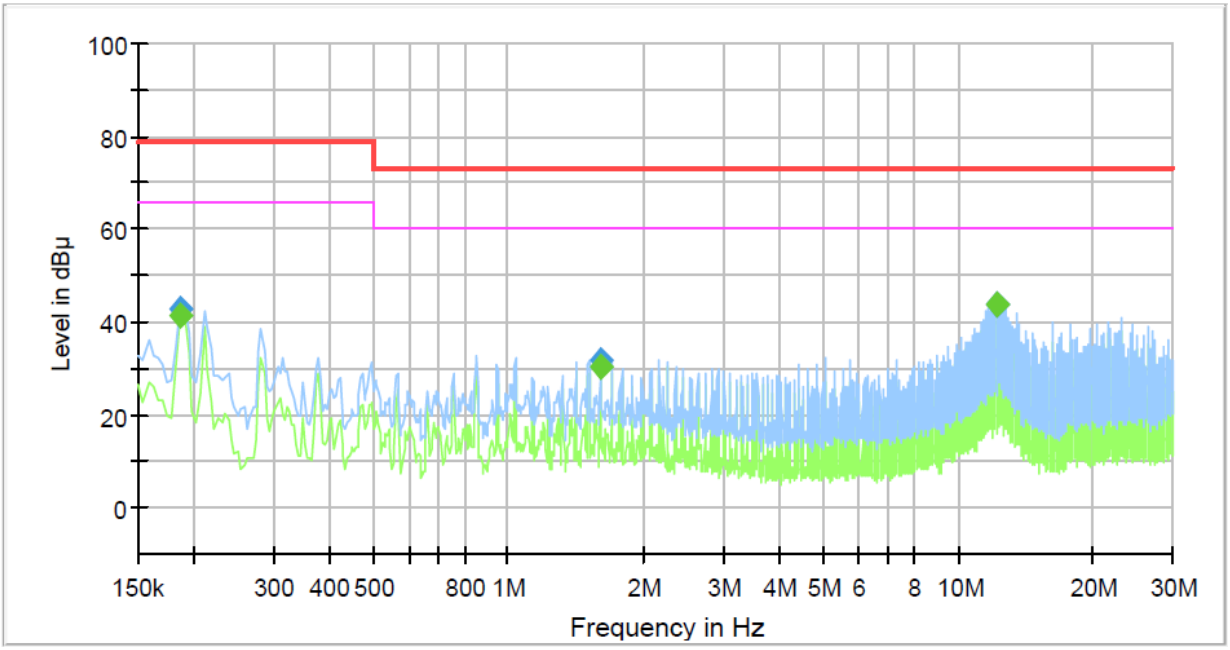
# APPENDIX A – TEST DATA

## Conducted Emissions at Mains Power Ports

HOT LINE

## Common Information

| | |
|---|---|
| Test Description: | Conducted Emission |
| Model No.: | ANV-L6082R |
| Phase: | |
| Mode: | L1 |
| Operator Name: | KES |



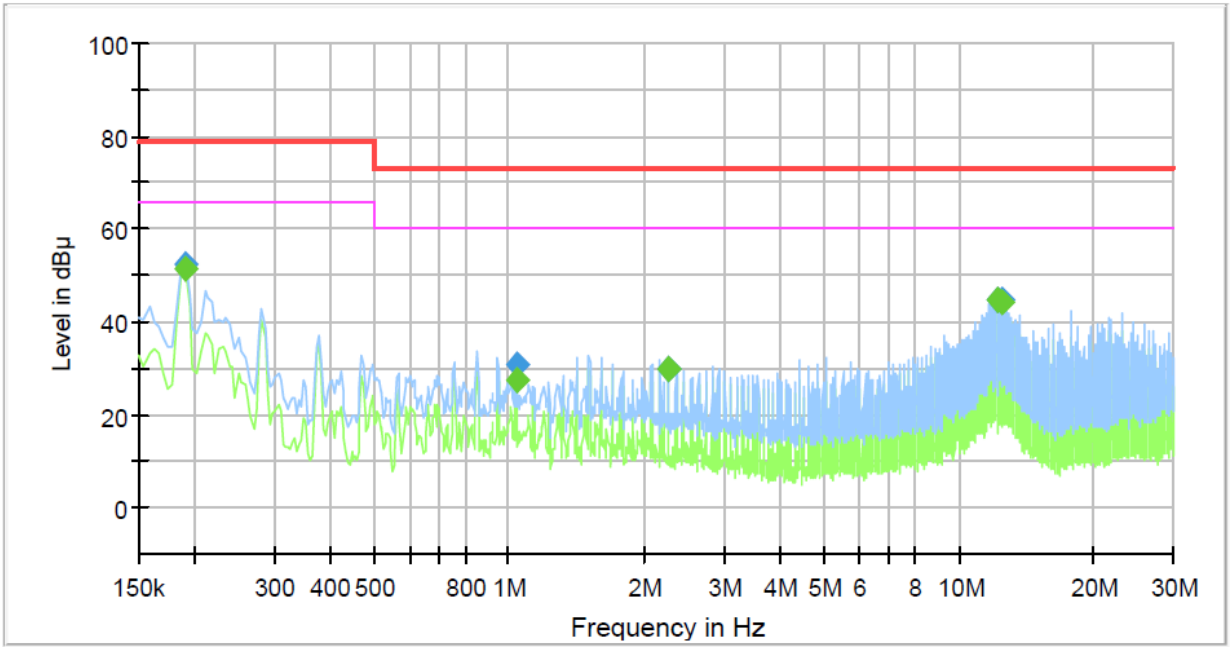

## Final_Result

| Frequency (MHz) | QuasiPeak (dBµV) | CAverage (dBµV) | Limit (dBµV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | Corr. (dB) |
|---|---|---|---|---|---|---|---|---|
| 0.186000 | --- | 41.31 | 66.00 | 24.69 | 1000.0 | 9.000 | L1 | 19.6 |
| 0.186000 | 42.62 | --- | 79.00 | 36.38 | 1000.0 | 9.000 | L1 | 19.6 |
| 1.602000 | --- | 30.37 | 60.00 | 29.63 | 1000.0 | 9.000 | L1 | 20.4 |
| 1.602000 | 31.56 | --- | 73.00 | 41.44 | 1000.0 | 9.000 | L1 | 20.4 |
| 12.250000 | --- | 43.58 | 60.00 | 16.42 | 1000.0 | 9.000 | L1 | 20.5 |
| 12.250000 | 43.91 | --- | 73.00 | 29.09 | 1000.0 | 9.000 | L1 | 20.5 |

NEUTRAL LINE

# Common Information

| | |
|---|---|
| Test Description: | Conducted Emission |
| Model No.: | ANV-L6082R |
| Phase: | |
| Mode: | N |
| Operator Name: | KES |



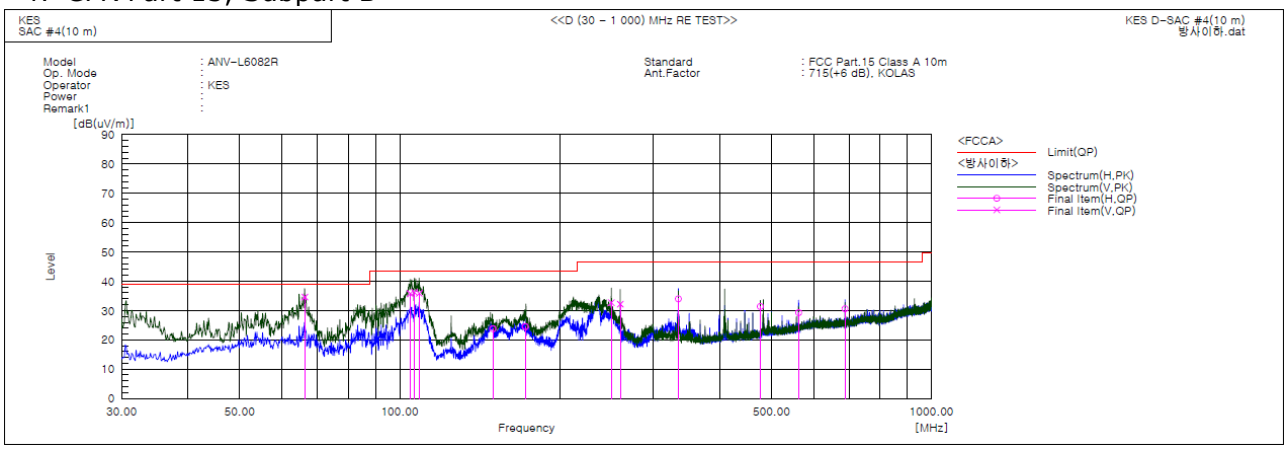

# Final_Result

| Frequency (MHz) | QuasiPeak (dBµV) | CAverage (dBµV) | Limit (dBµV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | Corr. (dB) |
|---|---|---|---|---|---|---|---|---|
| 0.190000 | --- | 51.64 | 66.00 | 14.36 | 1000.0 | 9.000 | N | 19.5 |
| 0.190000 | 52.31 | --- | 79.00 | 26.69 | 1000.0 | 9.000 | N | 19.5 |
| 1.038000 | --- | 27.67 | 60.00 | 32.33 | 1000.0 | 9.000 | N | 20.2 |
| 1.038000 | 30.70 | --- | 73.00 | 42.30 | 1000.0 | 9.000 | N | 20.2 |
| 2.262000 | --- | 29.79 | 60.00 | 30.21 | 1000.0 | 9.000 | N | 20.4 |
| 2.262000 | 30.03 | --- | 73.00 | 42.97 | 1000.0 | 9.000 | N | 20.4 |
| 12.154000 | --- | 44.52 | 60.00 | 15.48 | 1000.0 | 9.000 | N | 20.4 |
| 12.154000 | 44.90 | --- | 73.00 | 28.10 | 1000.0 | 9.000 | N | 20.4 |
| 12.438000 | --- | 44.08 | 60.00 | 15.92 | 1000.0 | 9.000 | N | 20.4 |
| 12.438000 | 44.71 | --- | 73.00 | 28.29 | 1000.0 | 9.000 | N | 20.4 |

◆ 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 + Pulse Limiter FACTOR))

# Radiated Electric Field Emissions(Below 1 ㎓)

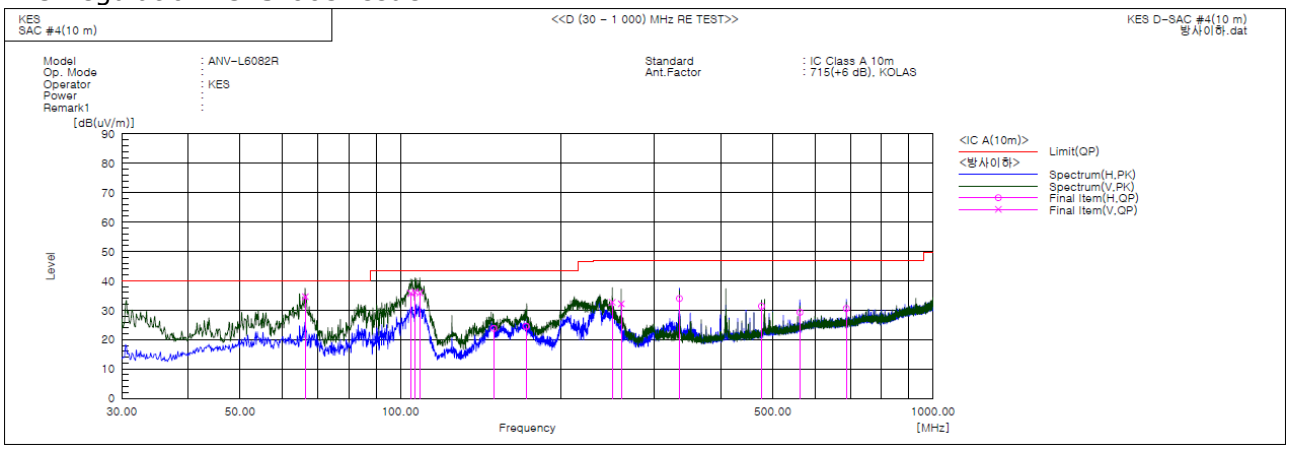
- 47 CFR Part 15, Subpart B




Final Result

| No. | Frequency [MHz] | (P) | Reading QP [dB(uV)] | c.f [dB(1/m)] | Result QP [dB(uV/m)] | Limit QP [dB(uV/m)] | Margin QP [dB] | Height [cm] | Angle [deg] | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 66.326 | V | 58.3 | -23.7 | 34.6 | 39.0 | 4.4 | 100.0 | 98.0 | |
| 2 | 104.615 | V | 58.2 | -22.4 | 35.8 | 43.5 | 7.7 | 120.0 | 216.0 | |
| 3 | 106.528 | V | 58.6 | -22.4 | 36.2 | 43.5 | 7.3 | 112.0 | 234.0 | |
| 4 | 108.796 | V | 58.3 | -22.4 | 35.9 | 43.5 | 7.6 | 113.0 | 208.0 | |
| 5 | 149.634 | H | 49.1 | -25.3 | 23.8 | 43.5 | 19.7 | 359.0 | 211.0 | |
| 6 | 172.264 | H | 48.6 | -24.1 | 24.5 | 43.5 | 19.0 | 386.0 | 23.0 | |
| 7 | 250.006 | V | 52.0 | -19.3 | 32.7 | 46.5 | 13.8 | 123.0 | 140.0 | |
| 8 | 259.796 | V | 51.2 | -19.0 | 32.2 | 46.5 | 14.3 | 124.0 | 11.0 | |
| 9 | 334.136 | H | 49.9 | -15.9 | 34.0 | 46.5 | 12.5 | 384.0 | 327.0 | |
| 10 | 476.229 | H | 43.6 | -12.2 | 31.4 | 46.5 | 15.1 | 386.0 | 269.0 | |
| 11 | 562.269 | H | 39.1 | -9.8 | 29.3 | 46.5 | 17.2 | 374.0 | 94.0 | |
| 12 | 687.284 | H | 38.3 | -7.7 | 30.6 | 46.5 | 15.9 | 400.0 | 173.0 | |

- IC Regulation ICES-003 Issue 7

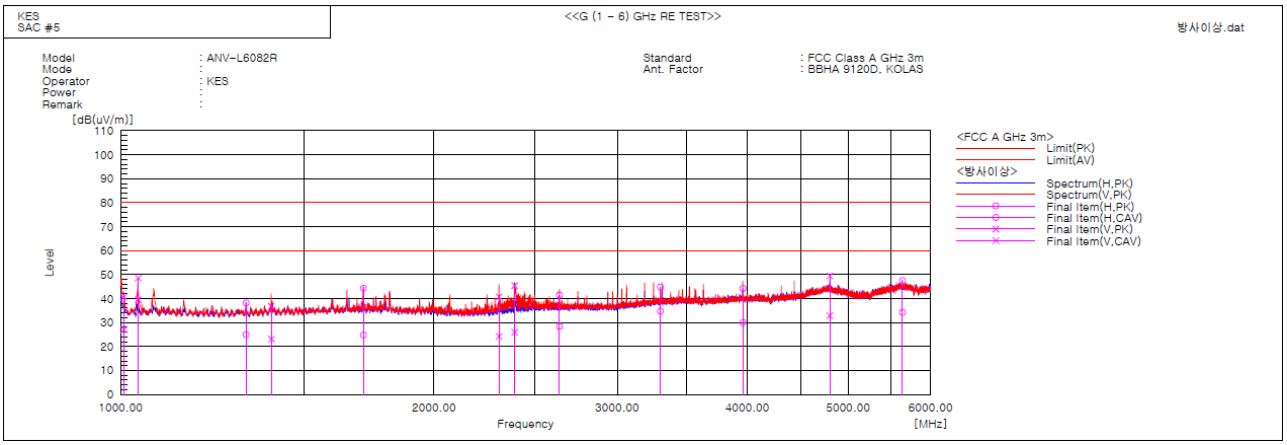



Final Result

| No. | Frequency [MHz] | (P) | Reading QP [dB(uV)] | c.f [dB(1/m)] | Result QP [dB(uV/m)] | Limit QP [dB(uV/m)] | Margin QP [dB] | Height [cm] | Angle [deg] | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 66.326 | V | 58.3 | -23.7 | 34.6 | 40.0 | 5.4 | 100.0 | 98.0 | |
| 2 | 104.615 | V | 58.2 | -22.4 | 35.8 | 43.5 | 7.7 | 120.0 | 216.0 | |
| 3 | 106.528 | V | 58.6 | -22.4 | 36.2 | 43.5 | 7.3 | 112.0 | 234.0 | |
| 4 | 108.796 | V | 58.3 | -22.4 | 35.9 | 43.5 | 7.6 | 113.0 | 208.0 | |
| 5 | 149.634 | H | 49.1 | -25.3 | 23.8 | 43.5 | 19.7 | 359.0 | 211.0 | |
| 6 | 172.264 | H | 48.6 | -24.1 | 24.5 | 43.5 | 19.0 | 386.0 | 23.0 | |
| 7 | 250.006 | V | 52.0 | -19.3 | 32.7 | 47.0 | 14.3 | 123.0 | 140.0 | |
| 8 | 259.796 | V | 51.2 | -19.0 | 32.2 | 47.0 | 14.8 | 124.0 | 11.0 | |
| 9 | 334.136 | H | 49.9 | -15.9 | 34.0 | 47.0 | 13.0 | 384.0 | 327.0 | |
| 10 | 476.229 | H | 43.6 | -12.2 | 31.4 | 47.0 | 15.6 | 386.0 | 269.0 | |
| 11 | 562.269 | H | 39.1 | -9.8 | 29.3 | 47.0 | 17.7 | 374.0 | 94.0 | |
| 12 | 687.284 | H | 38.3 | -7.7 | 30.6 | 47.0 | 16.4 | 400.0 | 173.0 | |

♦ Calculation – SAC #4(10 m)
Result(QP) [dB(㎶/m)] = (Reading(QP)[dB(㎶)] + c.f[dB(1/m)]
Margin(QP)[dB] = Limit[dB(㎶/m)] - Result(QP) [dB(㎶/m)]
Reading(QP) : Reading value, Result(QP) : Reading value + Factor value
Limit(QP) : Limit value, c.f : (ANT Factor + Cable Loss - Preamp Factor), Margin: Margin value

## Radiated Electric Field Emissions(Above 1 ㎓)




Final Result

| No. | Frequency [MHz] | (P) | Reading PK [dB(uV)] | Reading CAV [dB(uV)] | c.f [dB(1/m)] | Result PK [dB(uV/m)] | Result CAV [dB(uV/m)] | Limit PK [dB(uV/m)] | Limit AV [dB(uV/m)] | Margin PK [dB] | Margin CAV [dB] | Height [cm] | Angle [deg] | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1395.330 | V | 42.1 | 28.5 | -5.3 | 36.8 | 23.2 | 80.0 | 60.0 | 43.2 | 36.8 | 113.0 | 202.5 | |
| 2 | 2309.346 | V | 42.7 | 26.2 | -1.9 | 40.8 | 24.3 | 80.0 | 60.0 | 39.2 | 35.7 | 386.0 | 343.8 | |
| 3 | 1711.224 | H | 48.4 | 28.9 | -4.1 | 44.3 | 24.8 | 80.0 | 60.0 | 35.7 | 35.2 | 400.0 | 324.5 | |
| 4 | 1319.892 | H | 44.0 | 30.8 | -5.8 | 38.2 | 25.0 | 80.0 | 60.0 | 41.8 | 35.0 | 359.0 | 108.0 | |
| 5 | 2390.792 | V | 47.0 | 27.6 | -1.6 | 45.4 | 26.0 | 80.0 | 60.0 | 34.6 | 34.0 | 133.0 | 194.4 | |
| 6 | 1006.897 | V | 48.4 | 34.7 | -7.7 | 40.7 | 27.0 | 80.0 | 60.0 | 39.3 | 33.0 | 400.0 | 238.5 | |
| 7 | 2640.023 | H | 41.9 | 28.8 | -0.4 | 41.5 | 28.4 | 80.0 | 60.0 | 38.5 | 31.6 | 259.0 | 347.1 | |
| 8 | 3960.566 | H | 41.2 | 27.0 | 3.0 | 44.2 | 30.0 | 80.0 | 60.0 | 35.8 | 30.0 | 378.0 | 170.5 | |
| 9 | 4799.628 | V | 42.9 | 26.3 | 6.6 | 49.5 | 32.9 | 80.0 | 60.0 | 30.5 | 27.1 | 386.0 | 133.0 | |
| 10 | 5637.583 | H | 39.4 | 26.1 | 8.1 | 47.5 | 34.2 | 80.0 | 60.0 | 32.5 | 25.8 | 134.0 | 256.4 | |
| 11 | 3300.135 | H | 43.2 | 33.2 | 1.6 | 44.8 | 34.8 | 80.0 | 60.0 | 35.2 | 25.2 | 386.0 | 133.3 | |
| 12 | 1039.308 | V | 56.0 | 47.0 | -7.4 | 48.6 | 39.6 | 80.0 | 60.0 | 31.4 | 20.4 | 148.0 | 243.9 | |

♦ Calculation

Result(PK/CAV) [dB(㎶/m)] = (Reading(PK/CAV)[dB(㎶)] + c.f[dB(1/m)]

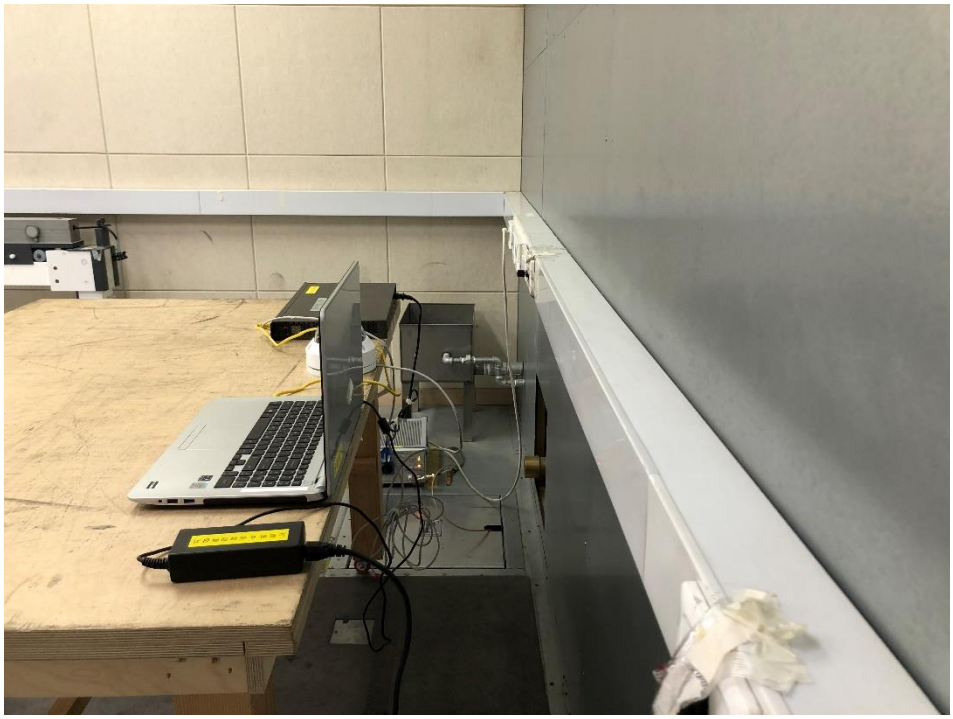
Margin(PK/CAV)[dB] = Limit[dB(㎶/m)] - Result(PK/CAV) [dB(㎶/m)]

Reading(PK/CAV) : Reading value, Result(PK/CAV) : Reading value + Factor value

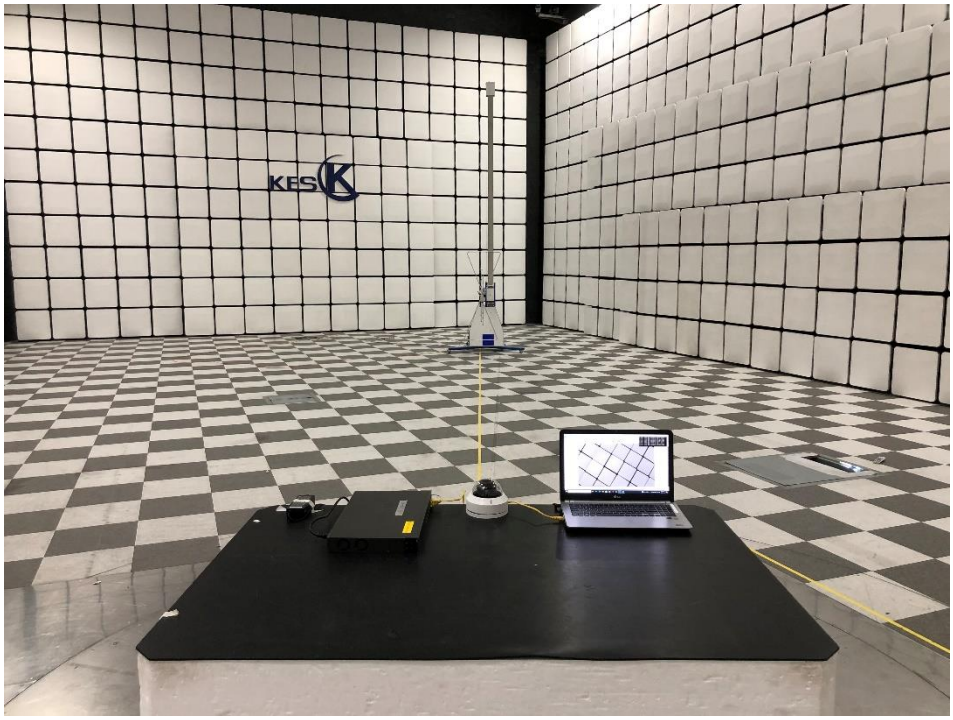
Limit(QP) : Limit value, c.f : (ANT Factor + Cable Loss - Preamp Factor), Margin: Margin value

## Test Setup Photos and Configuration

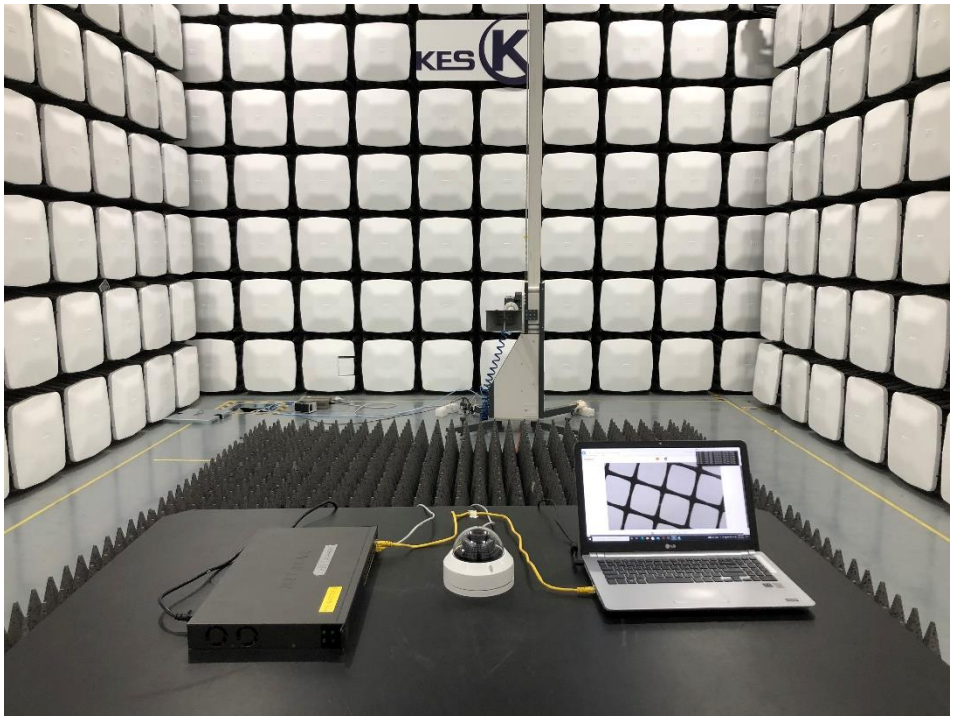
## Conducted Emissions at Mains Power Ports

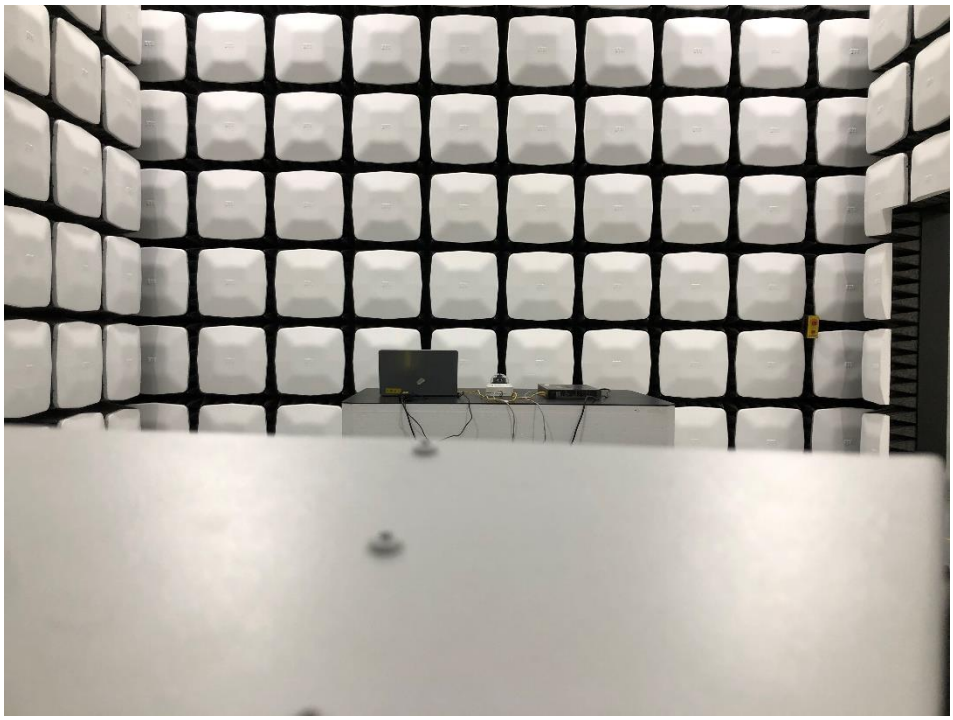


## Radiated Electric Field Emissions(Below 1 ㎓)



## Radiated Electric Field Emissions(Above 1 ㎓)





# EUT External Photographs

(Top)

(Bottom)

# EUT Internal Photographs

(Internal View)

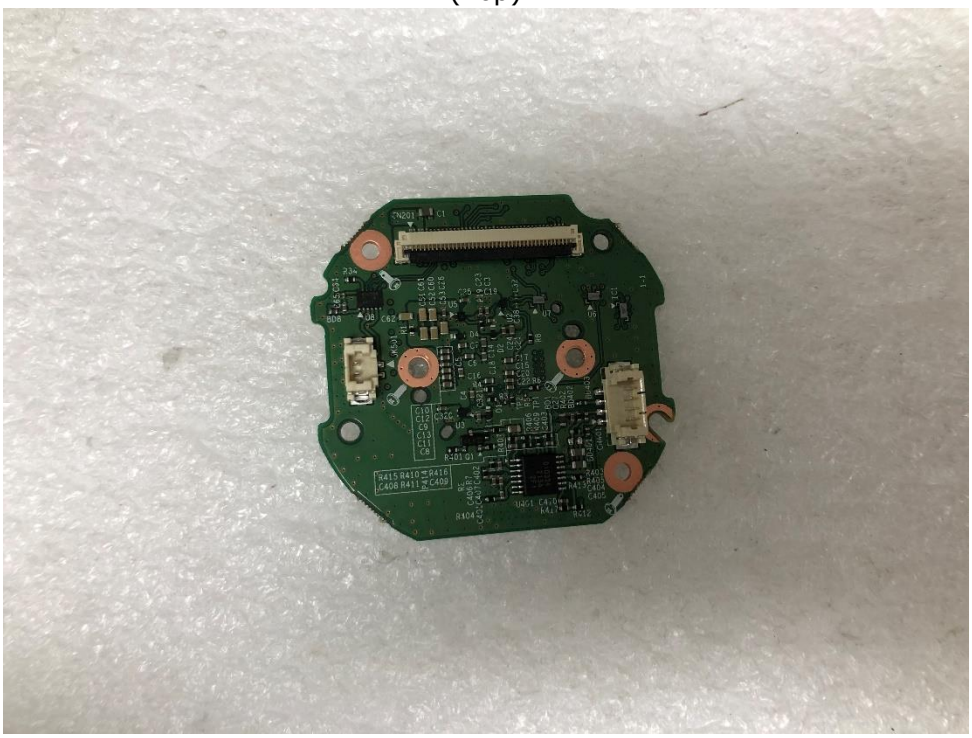
# EUT Internal View – Board 1

(Top)

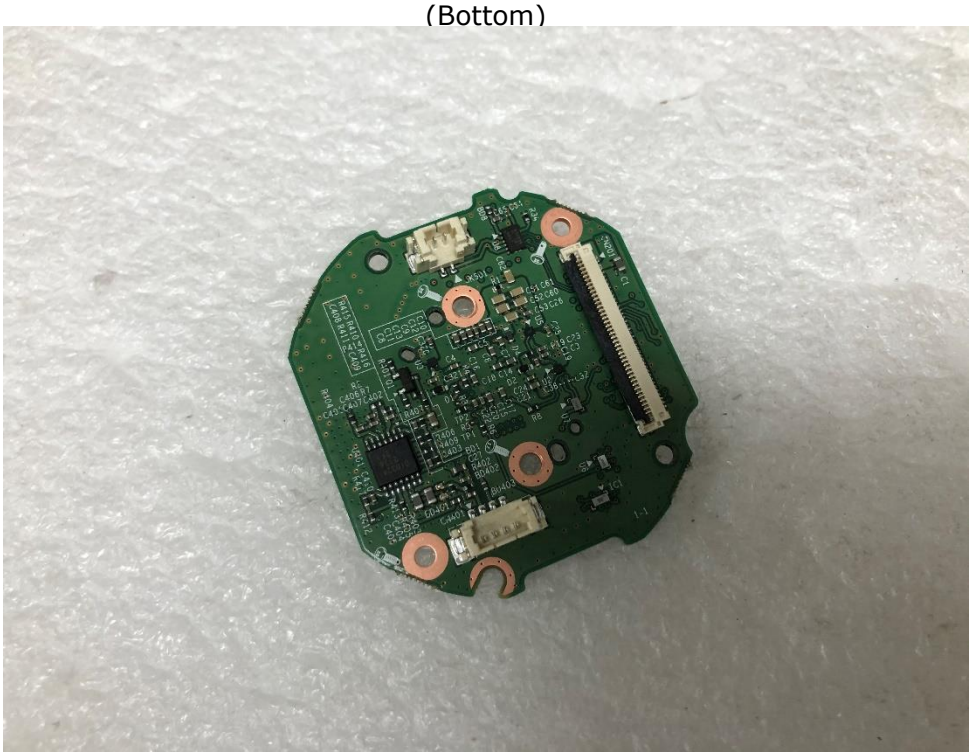
(Bottom)

# EUT Internal View – Board 2

(Top)



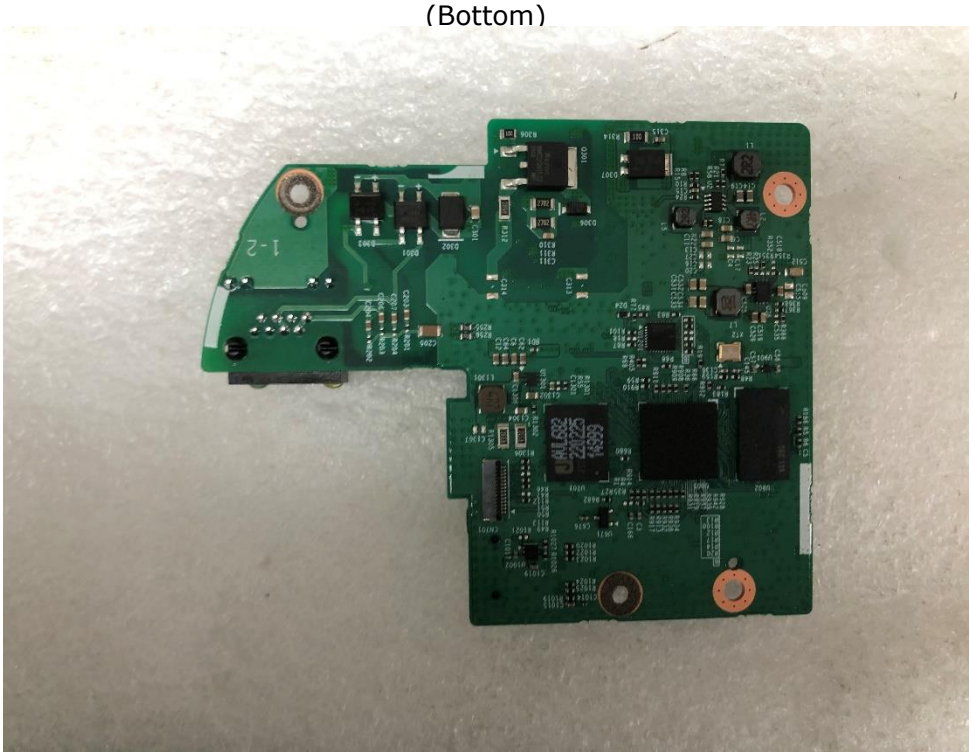
(Bottom)



# EUT Internal View – Board 3

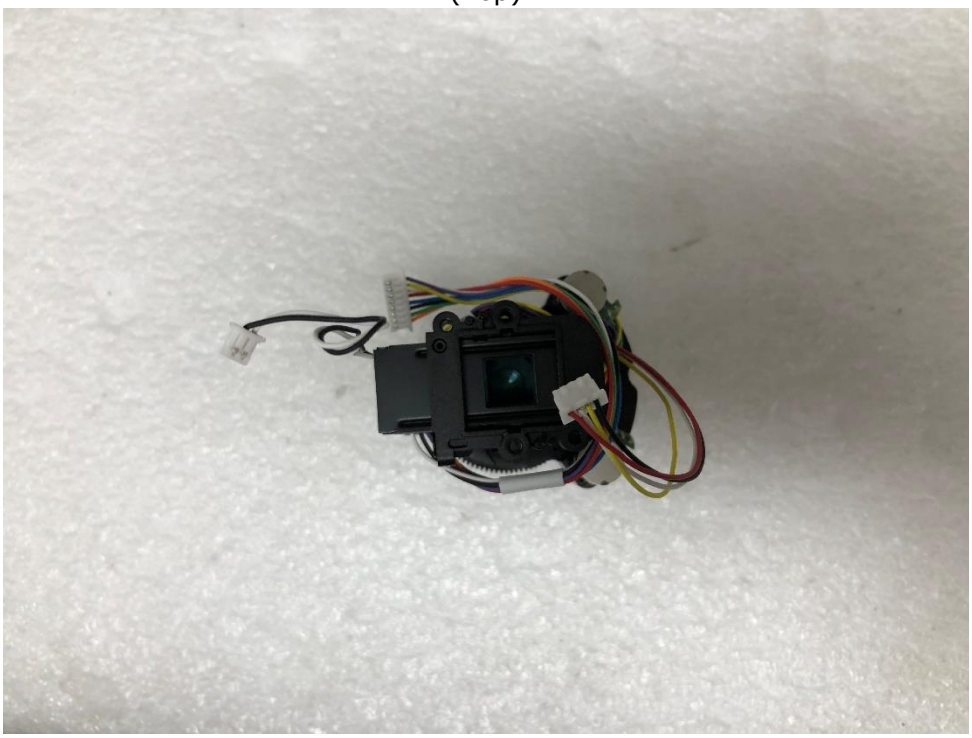
(Top)

(Bottom)



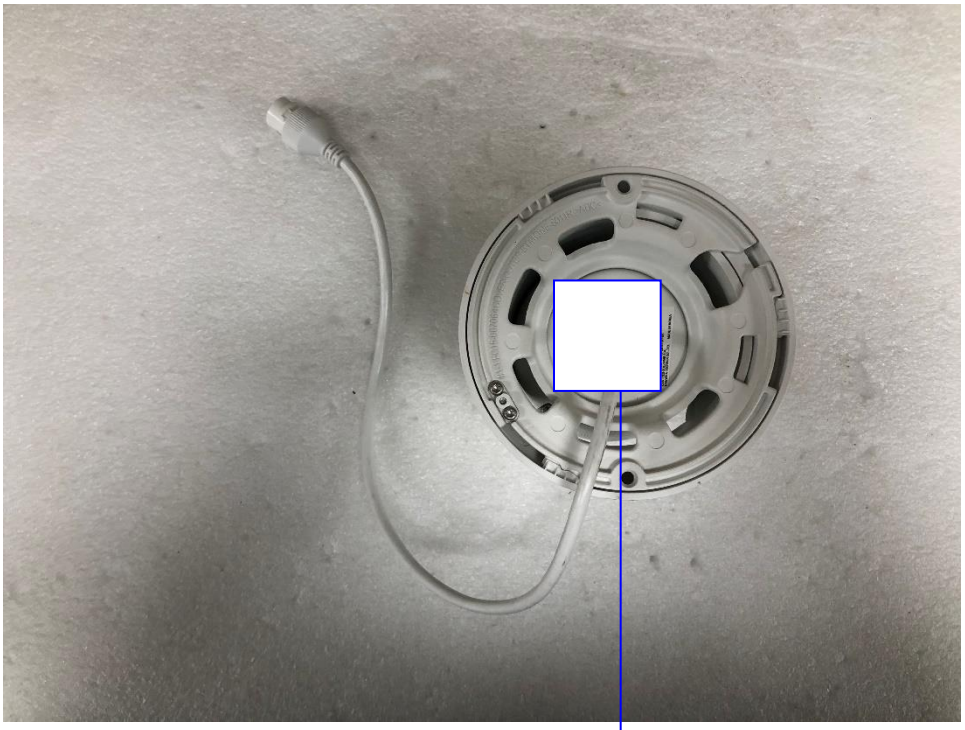
# EUT Internal View – Lens

(Top)



(Bottom)

# Label Photographs



CAN ICES-3(A) / NMB-3(A)

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.
Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :
(1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.