

EMC TEST REPORT

No. 2102344STO-102

Electromagnetic disturbances

EQUIPMENT UNDER TEST

Equipment: Electronic control gear for LED / Power Supply
Type/Model: ICPSW24-7-3
Manufacturer: IKEA of Sweden AB
Tested by request of: IKEA of Sweden AB

SUMMARY

Referring to the emission limits, and the operating mode during the tests specified in this report, the equipment complies with the requirements according to the following standards:

FCC 47 CFR Part 15: Radio frequency devices, Subpart B: Unintentional radiators. Class B equipment.

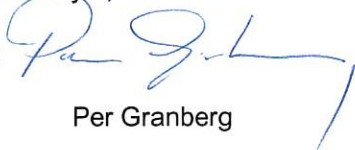
ICES-001 Issue 5: Industrial, Scientific and Medical (ISM) Radio Frequency Generators with emission limits for class B Group 1 equipment

ICES-005 Issue 5: Lighting Equipment, Class B. (2018)

For details, see clause 2 – 4.

Date of issue: July 2, 2021

Tested by:



Per Granberg

Approved by:



Matti Virkki

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

Revision History

| Test report no. | Release no. | Date of issue | Description |
|-----------------|-------------|---------------|-------------|
| 2102344STO-102 | 1 | July 2, 2021 | |

Terms, definition and abbreviations

The following terms, definitions and abbreviations may be used throughout the report.

| Term/definition/abbreviation | Meaning |
|------------------------------|---|
| AAN | Asymmetrical Artificial Network |
| AC | Alternating Current |
| AE | Associated Equipment |
| AMN | Artificial Mains Network |
| AV | Average |
| BW | Bandwidth |
| CAV | CISPR Average |
| CM | Common Mode |
| CMAD | Common Mode Absorption Device |
| DC | Direct Current |
| DM | Differential Mode |
| EM | Electromagnetic |
| EMC | Electromagnetic Compatibility |
| EUT | Equipment Under Test |
| F | Fail |
| FAR | Fully Anechoic Room |
| F_x | Highest fundamental frequency generated or used within the EUT, or highest frequency at which it operates |
| H | Horizontal |
| ISN | Impedance Stabilizing Network |
| MU | Measurement Uncertainty |
| N/A | Not Applicable |
| P | Pass |
| PE | Protective Earth |
| PK | Peak |
| Pol. | Polarisation |
| QP / QPK | Quasi-Peak |
| RBW | Resolution Bandwidth |
| RF | Radio Frequency |
| RGP | Reference Ground Plane |
| RH | Relative Humidity |
| RMS | Root Mean Square |
| Rx | Receiver / Receiving |
| SAC | Semi-Anechoic Chamber |
| Tx | Transmitter / Transmitting |
| V | Vertical |
| VBW | Video Bandwidth |

CONTENTS

| | Page |
|---|-------------|
| 1. Client Information | 5 |
| 2. Equipment under test (EUT)..... | 5 |
| 2.1 Identification of the EUT | 5 |
| 2.2 Test set up and EUT photos | 6 |
| 2.3 Additional information about the EUT | 7 |
| 2.4 Associated equipment..... | 7 |
| 2.5 Decision rule | 7 |
| 3. Test Specifications | 8 |
| 3.1 Additions, deviations and exclusions from standards and accreditation | 8 |
| 3.2 Test site..... | 8 |
| 3.3 Mode of operation during the test | 9 |
| 4. Test Summary | 9 |
| 5. Conducted continuous disturbances | 10 |
| 5.1 Test results, AC Power input port, Class B..... | 12 |
| 5.2 Test equipment | 13 |
| 6. Radiated rf Emission in the frequency-range 30 MHz – 1 GHz | 14 |
| 6.1 Test results, 30 – 1000 MHz, FCC, Class B, ICES-001, Group 1, Class B,..... | 16 |
| 6.2 Test equipment | 17 |

1. CLIENT INFORMATION

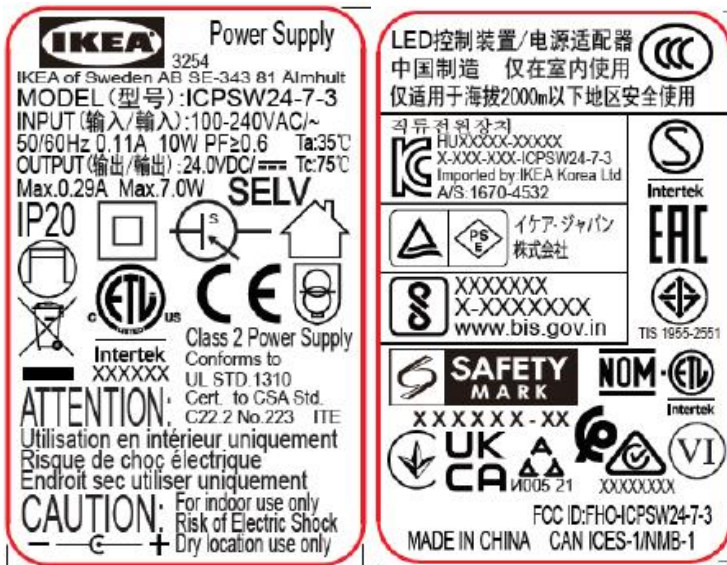
The EUT has been tested by request of

| | |
|------------------------|---|
| Company | IKEA of Sweden AB Box 702 SE-343 81 Älmhult Sweden |
| Name of contact | Christian Truedsson |
| Client observer | - |

2. EQUIPMENT UNDER TEST (EUT)

2.1 Identification of the EUT

| | | | | | |
|---|---|-------------------|--------------------|------------------|---|
| Equipment: | Electronic control gear for LED / Power Supply | | | | |
| Type/Model: | ICPSW24-7-3 | | | | |
| Brand name: | IKEA | | | | |
| S/N: | - | | | | |
| Manufacturer: | IKEA of Sweden AB Box 702 SE-343 81 Älmhult Sweden | | | | |
| Installation class: | <input type="checkbox"/> I <input checked="" type="checkbox"/> II <input type="checkbox"/> III <input type="checkbox"/> N/A | | | | |
| Highest clock frequency, F_x: | < 108 MHz | | | | |
| Transmitting freq.: | - | | | | |
| Software version: | - | | | | |
| Hardware version: | - | | | | |
| Mounting position: (during normal use) | <input type="checkbox"/> Table-top <input type="checkbox"/> Floor-standing <input type="checkbox"/> Wall/ceiling <input type="checkbox"/> Hand-held <input checked="" type="checkbox"/> Other: | | | | |
| Supplementary information: | - | | | | |
| Input ratings | Voltage [V] | Freq. [Hz] | Current [A] | Power [W] | Coupling |
| <input checked="" type="checkbox"/> AC | 100 – 240 | 50/60 | 0.11 | 10 | L1 <input checked="" type="checkbox"/> L2 <input type="checkbox"/> L3 <input type="checkbox"/> N <input checked="" type="checkbox"/> PE <input type="checkbox"/> |
| <input type="checkbox"/> DC | | | | | V+ <input type="checkbox"/> V- <input type="checkbox"/> PE <input type="checkbox"/> |
| <input type="checkbox"/> Battery | | | | | V+ <input type="checkbox"/> V- <input type="checkbox"/> |
| <input type="checkbox"/> Other: | | | | | |
| Output ratings | Voltage [V] | Freq. [Hz] | Current [A] | Power [W] | Coupling |
| <input checked="" type="checkbox"/> DC | 24 | - | 0.29 | 7 | V+ <input checked="" type="checkbox"/> V- <input checked="" type="checkbox"/> PE <input type="checkbox"/> |
| <input type="checkbox"/> Other: | | | | | |



Photo/copy of marking/rating plate(s)

2.2 Test set up and EUT photos

Test set up and EUT photos are enclosed in Annex 1 to this test report.

2.3 Additional information about the EUT

The ICPSW24-7-3 is a plug in LED-driver for use with LED luminaires, ICPSW24-7-3 can also be used as a power supply for other type of apparatus.

The EUT has the following ports:

| Port type | Port name | Length [m] | Shielded |
|---|-----------------------|------------|--------------------------|
| AC I/O | | | |
| <input checked="" type="checkbox"/> AC power input | Supply plug | - | <input type="checkbox"/> |
| <input type="checkbox"/> AC power output | | | <input type="checkbox"/> |
| DC I/O | | | |
| <input type="checkbox"/> DC power input | | | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> DC power output | DC load, 2-core cable | 3* | <input type="checkbox"/> |
| Signal/control I/O | | | |
| <input type="checkbox"/> Signal/control | | | <input type="checkbox"/> |
| <input type="checkbox"/> Telecom/network | | | <input type="checkbox"/> |
| Supplementary information: | | | |
| *According to the manufacturer: the maximum length of the DC-output cable is 3 m when used as a power supply, however as LED-driver in luminaire systems the cable may be longer. | | | |

2.4 Associated equipment

Associated equipment is equipment needed for correct operation of the EUT, but not included as part of the testing and evaluation of the EUT.

| Equipment | Manufacturer | Type/Model | S/N |
|---------------|--------------|--------------------------------|-----|
| LED-load: 7 W | IKEA | L1908 Mittled L1909 Mittled | - |

2.5 Decision rule

The statements of conformity are reported as:

Passed – When the measured values are within the specified limits.

Failed – When one or more measures values are outside the specified limits.

3. TEST SPECIFICATIONS

3.1 Additions, deviations and exclusions from standards and accreditation

The following editions of basic standards were applied instead of the standards referenced in FCC 47 CFR Part 15 and ICES-005:

| Referenced | Applied |
|-----------------|-----------------|
| ANSI C63.4-2014 | ANSI C63.4-2014 |

The following editions of basic standards were applied instead of the standards referenced in ICES-001:

| Referenced | Applied |
|-----------------|-------------------------|
| CSA CISPR 11:19 | CISPR 11:2015 + A1:2016 |

3.2 Test site

Measurements were performed at:

Intertek Semko AB.
 Torshamnsgatan 43,
 P.O. Box 1103
 SE-164 22 Kista

Intertek Semko AB is an FCC listed test site with site registration number 90913
 Intertek Semko AB is an FCC accredited conformity assessment body with designation number SE0002
 Intertek Semko AB is an Industry Canada listed test facility with IC assigned code 2042G

Measurement chambers

| Measurement Chamber | Type of chamber | IC Site filing # |
|--|-------------------------------|------------------|
| <input checked="" type="checkbox"/> STORA HALLEN | Semi-anechoic 10 m and 3 m | 2042G-2 |
| <input type="checkbox"/> BJÖRKHALLEN | Semi-anechoic 3 m | 2042G-1 |
| <input type="checkbox"/> 5 m CHAMBER | Semi-anechoic 5 m | 2042G-3 |

3.3 Mode of operation during the test

| Mode no. | Supply | Description |
|----------|--------------|--|
| 1 | 120 V, 60 Hz | Max output load condition, LED-load of 7 W |

| Test | Mode of operation |
|--------------------------------|-------------------|
| Conducted continuous emission | 1 |
| Radiated emission of EM fields | 1 |

4. TEST SUMMARY

The test has been carried out at the Intertek Semko AB premises in Kista, Sweden.

The results in this report apply only to sample tested.

Result: P – F – N/A

| EMISSION TESTS | | | | | |
|----------------------------|------------------------|--------------------------------|--------------|---------|---------|
| Chapter | Standard(s) | Description | Port type(s) | Note(s) | Verdict |
| 5 | ANSI C63.4 CISPR 11 | Conducted continuous emission | AC input | - | P |
| 6 | ANSI C63.4 CISPR 11 | Radiated emission of EM fields | Enclosure | - | P |
| Supplementary information: | | | | | |

**5. CONDUCTED CONTINUOUS DISTURBANCES
in the frequency-range 0.15 – 30 MHz**

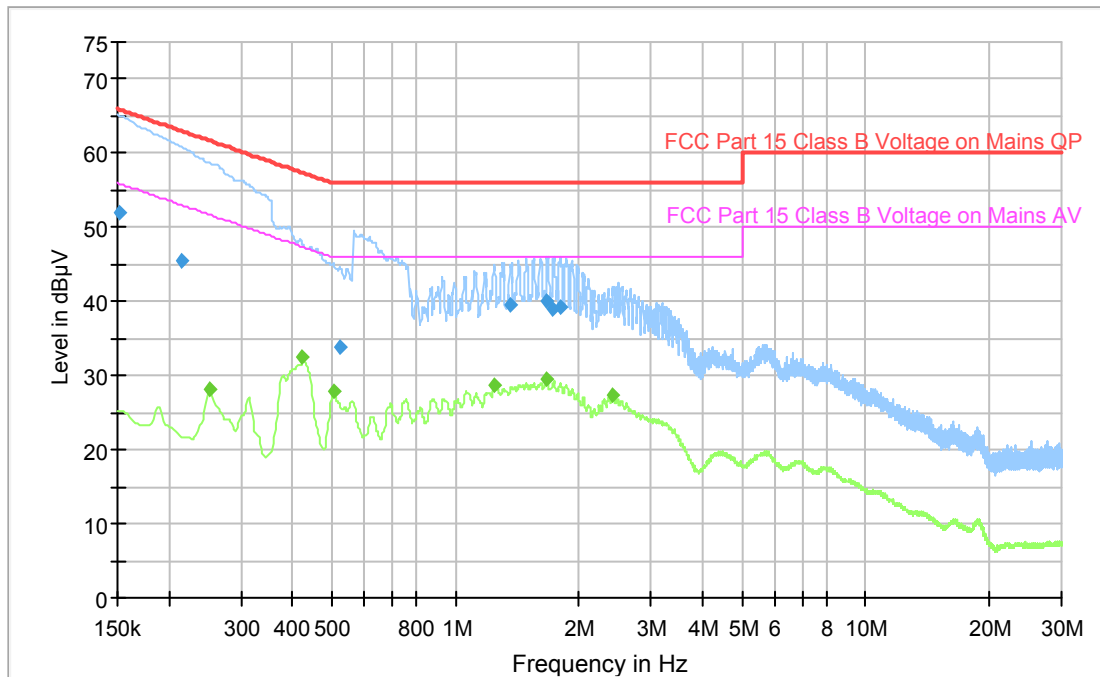
| Date of test | Temp. [°C] | Humidity [%RH] | Tested by |
|--------------|------------|----------------|-----------|
| May 31, 2021 | 22 | 30 | PEG |

| Test setup and procedure: | EUT was placed 0.8 m from the AMN /ISN. Overview sweeps were performed for each lead of the cable(s). AE requiring mains power to operate was/were connected to AMN /ISN terminated with 50 Ω, when applicable. | | |
|---|---|-------------------------|----------|
| EUT position: | <input checked="" type="checkbox"/> Table-top (EUT 0.4 m from the RGP) <input type="checkbox"/> Floor-standing (EUT 12 mm from the RGP) <input type="checkbox"/> Other: | | |
| Tested port type(s): | Coupling device | Measurement uncertainty | |
| | | Frequency range | Value |
| <input checked="" type="checkbox"/> AC power | <input checked="" type="checkbox"/> AMN | 0.15 – 30 MHz | ± 3.3 dB |
| Supplementary information: Measurement uncertainty is calculated in accordance with CISPR 16-4-2:2011. The measurement uncertainty is given with a confidence of 95 %. | | | |

| Port | Frequency [MHz] | Voltage limits [dB μ V] (2) | |
|--|-----------------|---------------------------------|-------------|
| | | QP | AV |
| Limits FCC Part 15 subpart B | | | |
| <input type="checkbox"/> AC power input Class A | 0.15 – 0.50 | 79 | 66 |
| | 0.50 – 30.0 | 73 | 60 |
| <input checked="" type="checkbox"/> AC power input Class B | 0.15 – 0.50 | 66 – 56 (1) | 56 – 46 (1) |
| | 0.50 – 5.00 | 56 | 46 |
| | 5.00 – 30.0 | 60 | 50 |
| Supplementary information: (1) The limits decrease linearly with the logarithm of the frequency. (2) At transitional frequencies the lower limit applies. | | | |

| Port | Frequency [MHz] | Rated input power of ≤ 20 kVA (2) | | Rated input power of > 20 kVA (2),(3) | |
|---|-----------------|--|-----------------|---|-----------------|
| | | QP dB(μ V) | AV dB(μ V) | QP dB(μ V) | AV dB(μ V) |
| Limits, Class A ICES-001 group 1 according to CISPR 11 | | | | | |
| <input type="checkbox"/> AC power | 0,15 – 0,50 | 79 | 66 | 100 | 90 |
| | 0,50 – 5,00 | 73 | 60 | 86 | 76 |
| | 5,00 – 30,0 | 73 | 60 | 90-73 (1) | 80-60 (1) |
| Limits ICES-001, Class B group 1 according to CISPR 11 | | | | | |
| <input checked="" type="checkbox"/> AC power | 0,15 – 0,50 | 66-56 (1) | 56-46 (1) | 66-56 (1) | 56-46 (1) |
| | 0,50 – 5,00 | 56 | 46 | 56 | 46 |
| | 0,50 – 30,0 | 60 | 50 | 60 | 50 |
| Supplementary information: (1) The limits decrease linearly with the logarithm of the frequency. (2) At transitional frequencies the lower limit applies. (3) These limits apply to equipment with a rated input power > 20 kVA and intended to be powered by a dedicated power transformer or generator, and which is not connected to Low Voltage (LV) overhead power lines. For equipment not intended to be powered by a user specific power transformer, the limits for ≤ 20 kVA apply. The manufacturer and/or supplier shall provide information on installation measures that can be used to reduce emissions from the installed equipment. In particular, it shall be indicated that this equipment is intended to be powered by a dedicated power transformer or generator and not by LV overhead power lines. | | | | | |

5.1 Test results, AC Power input port, Class B



The EUT also fulfil the class B limit for ICES-001 and ICES-005, see limit table on previous page.

Diagram, Peak and AV overview sweep

Measurement results, Quasi-peak and Average

| Frequency (MHz) | QuasiPeak (dBµV) | Average (dBµV) | Limit (dBµV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | PE |
|-----------------|------------------|----------------|--------------|-------------|-----------------|-----------------|------|-----|
| 0.152250 | 51.92 | --- | 65.88 | 13.96 | 1000.0 | 9.000 | N | GND |
| 0.215250 | 45.47 | --- | 63.00 | 17.53 | 1000.0 | 9.000 | N | GND |
| 0.251250 | --- | 28.19 | 51.72 | 23.53 | 1000.0 | 9.000 | L1 | GND |
| 0.424500 | --- | 32.38 | 47.36 | 14.98 | 1000.0 | 9.000 | L1 | GND |
| 0.503250 | --- | 27.91 | 46.00 | 18.09 | 1000.0 | 9.000 | L1 | GND |
| 0.523500 | 33.83 | --- | 56.00 | 22.17 | 1000.0 | 9.000 | N | GND |
| 1.241250 | --- | 28.71 | 46.00 | 17.29 | 1000.0 | 9.000 | L1 | GND |
| 1.360500 | 39.49 | --- | 56.00 | 16.51 | 1000.0 | 9.000 | L1 | GND |
| 1.659750 | --- | 29.50 | 46.00 | 16.50 | 1000.0 | 9.000 | L1 | GND |
| 1.671000 | 40.12 | --- | 56.00 | 15.88 | 1000.0 | 9.000 | L1 | GND |
| 1.727250 | 38.99 | --- | 56.00 | 17.01 | 1000.0 | 9.000 | L1 | GND |
| 1.797000 | 39.28 | --- | 56.00 | 16.72 | 1000.0 | 9.000 | L1 | GND |
| 2.409000 | --- | 27.37 | 46.00 | 18.63 | 1000.0 | 9.000 | L1 | GND |

The EUT also fulfil the class B limit for ICES-001 and ICES-005, see limit table on previous page.

$$\text{Result [dBµV]} = \text{Analyser reading [dBµV]} + \text{cable loss [dB]} + \text{LISN insertion loss [dB]}$$

5.2 Test equipment

| Equipment type | Manufacturer | Model | Inv. No. | Last Cal. date | Cal. interval |
|----------------------|-----------------|-------------------|----------|----------------|---------------|
| Measurement software | Rohde & Schwarz | EMC32 - V10.50.40 | -- | -- | -- |
| Receiver | Rohde & Schwarz | ESU 8 | 12866 | 2020-07-27 | 1 year |
| AMN / LISN | Rohde & Schwarz | ESH3-Z5 | 2728 | 2020-07-08 | 1 year |
| Pulse limiter | Rohde & Schwarz | ESH3-Z5 | 4623 | 2020-05-13 | 1 year |

6. RADIATED RF EMISSION IN THE FREQUENCY-RANGE 30 MHz – 1 GHz

| Date of test | Temp. [°C] | Humidity [%RH] | Tested by |
|--------------|------------|----------------|-----------|
| May 25, 2021 | 21 | 34 | PEG |

| | | | |
|---|---|--------------------------------|--|
| Test setup and procedure: | The EUT was placed on a non-conductive support on the RGP. Overview sweeps were performed with the measurement receiver in max hold mode and the peak detector activated in the frequency range 30 – 1000 MHz. Above 1 GHz, both the peak and average detectors were activated, when applicable. During height scan above 1 GHz the EUT was kept in antennas cone of radiation. | | |
| EUT position: | <input checked="" type="checkbox"/> Table-top (EUT 0.8 m from the RGP) <input type="checkbox"/> Floor-standing (EUT 12 mm from the RGP) <input type="checkbox"/> Other: | | |
| Highest measured frequency: | <input checked="" type="checkbox"/> $F_X \leq 108$ MHz: 1 GHz <input type="checkbox"/> $108 \text{ MHz} < F_X \leq 500$ MHz: 2 GHz <input type="checkbox"/> $500 \text{ MHz} < F_X \leq 1$ GHz: 5 GHz <input type="checkbox"/> $F_X > 1$ GHz: $5 \times F_X$ up to a max. of 40 GHz <input type="checkbox"/> F_X is unknown: 40 GHz | | |
| Frequency range: | Measuring distance | Measurement uncertainty | |
| <input checked="" type="checkbox"/> 30 to 1000 MHz | 3 m | ± 5.1 dB | |
| <input type="checkbox"/> 30 to 1000 MHz | 10 m | ± 5.0 dB | |
| <input type="checkbox"/> 1.0 to 18 GHz | 3 m | ± 4.5 dB | |
| <input type="checkbox"/> 18 to 26 GHz | 3 m | ± 4.8 dB | |
| <input type="checkbox"/> 26 to 40 GHz | 3 m | ± 5.7 dB | |
| Supplementary information: Measurement uncertainty is calculated in accordance with CISPR 16-4-2:2011. The measurement uncertainty is given with a confidence of 95 %. | | | |

| Test | Freq. [MHz] | Meas. angle [°] | Antenna | | | RBW [kHz] | | | VBW [kHz] |
|---------|--------------|-----------------|---------|---------|---------|-----------|------|------|-----------|
| | | | Type | Height | Pol. | QP | PK | AV | PK |
| Preview | 30 – 1000 | 0 – 359 | Bilog | 1 – 4 m | V and H | - | 120 | - | 1000 |
| Final | | | | | | 120 | - | - | |
| Preview | 1000 – 40000 | 0 – 359 | Horn | 1 – 4 m | | - | 1000 | 1000 | 3000 |
| Final | | | | | | - | 1000 | 1000 | - |

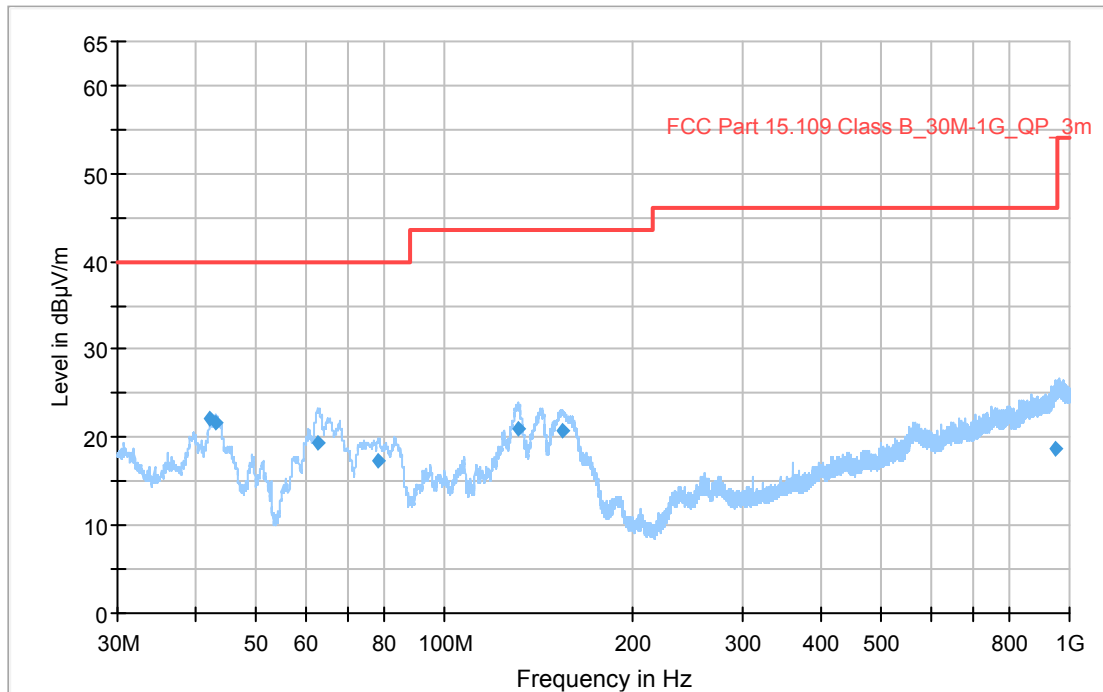
| Measurement distance [m] | Frequency [MHz] | Limits [dBµV/m] | | |
|---|-----------------|-----------------|------|------|
| | | QP | PK | AV |
| Limits, FCC, Class A | | | | |
| <input type="checkbox"/> 3 / <input type="checkbox"/> 10 | 30 – 88 | 49.5 / 39.1 | - | - |
| | 88 – 216 | 54.0 / 43.5 | - | - |
| | 216 – 960 | 56.9 / 46.4 | - | - |
| | 960 – 1000 | 60.0 / 49.5 | - | - |
| <input type="checkbox"/> 3 | Above 1000 | - | 80.0 | 60.0 |
| Limits, FCC, Class B | | | | |
| <input checked="" type="checkbox"/> 3 / <input type="checkbox"/> 10 | 30 – 88 | 40.0 / 29.5 | - | - |
| | 88 – 216 | 43.5 / 33.1 | - | - |
| | 216 – 960 | 46.0 / 35.6 | - | - |
| | 960 – 1000 | 54.0 / 43.5 | - | - |
| <input type="checkbox"/> 3 | Above 1000 | - | 74.0 | 54.0 |
| Limits, ICES-005 Class A | | | | |
| <input type="checkbox"/> 3 / <input type="checkbox"/> 10 | 30 – 88 | 49.5 / 39.1 | - | - |
| | 88 – 216 | 54.0 / 43.5 | - | - |
| | 216 – 1000 | 56.9 / 46.4 | - | - |
| Limits, ICES-005, Class B | | | | |
| <input checked="" type="checkbox"/> 3 / <input type="checkbox"/> 10 | 30 – 88 | 40.0 / 29.5 | - | - |
| | 88 – 216 | 43.5 / 33.1 | - | - |
| | 216 – 1000 | 46.0 / 35.6 | - | - |

| Test facility & measurement distance | Frequency [MHz] | Limits [dBµV/m] | |
|---|-----------------|----------------------------|--------------------------------|
| | | Rated input power ≤ 20 kVA | Rated input power > 20 kVA (1) |
| | | QP | QP |
| Limits ICES-001, Class A group 1 according to CISPR 11 | | | |
| <input type="checkbox"/> SAC, 10 m | 30 – 230 | 40 | 50 |
| | 230 – 1000 | 47 | 50 |
| <input type="checkbox"/> SAC, 3 m | 30 – 230 | 50 | 60 |
| | 230 – 1000 | 57 | 60 |
| Limits ICES-001, Class B group 1 according to CISPR 11 | | | |
| <input type="checkbox"/> SAC, 10 m | 30 – 230 | 30 | 30 |
| | 230 – 1000 | 37 | 37 |
| <input checked="" type="checkbox"/> SAC, 3 m | 30 – 230 | 40 | 40 |
| | 230 – 1000 | 47 | 47 |

Supplementary information:

(1): These limits apply to equipment with a rated input power of > 20 kVA and intended to be used at locations where there is a distance greater than 30 m between the equipment and third party sensitive radio communications. The manufacturer shall indicate in the technical documentation that this equipment is intended to be used at locations where the separation distance to third party sensitive radio services is > 30 m. If the manufacturer does not include the particular conditions of use of the equipment in the technical documentation for the user, then the limits for equipment with a rated input power of ≤ 20 kVA shall apply

6.1 Test results, 30 – 1000 MHz, FCC, Class B, ICES-001, Group 1, Class B, ICES-005, Class B



The EUT also fulfil the class B limit for ICES-001 and ICES-005, see measurement result below.

Diagram, Peak overview sweep

Measurement results, Quasi-peak, FCC, Class B

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) |
|-----------------|--------------------|----------------|-------------|-----------------|-----------------|-------------|-----|---------------|
| 42.270 | 22.21 | 40.00 | 17.79 | 1000.0 | 120.0 | 100.0 | V | 191.0 |
| 43.110 | 21.69 | 40.00 | 18.31 | 1000.0 | 120.0 | 100.0 | V | 131.0 |
| 62.940 | 19.28 | 40.00 | 20.72 | 1000.0 | 120.0 | 122.0 | V | 269.0 |
| 78.300 | 17.25 | 40.00 | 22.75 | 1000.0 | 120.0 | 124.0 | V | 118.0 |
| 131.460 | 21.04 | 43.52 | 22.48 | 1000.0 | 120.0 | 106.0 | V | 198.0 |
| 154.770 | 20.69 | 43.52 | 22.83 | 1000.0 | 120.0 | 105.0 | V | 210.0 |
| 951.390 | 18.74 | 46.02 | 27.28 | 1000.0 | 120.0 | 196.0 | V | 328.0 |

Result [dBµV/m] = Analyser reading [dBµV] + Antenna factor [1/m] - Amplifier gain [dB] + Cable loss [dB]

Measurement results, Quasi-peak, ICES-001, Group 1, Class B

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) |
|-----------------|--------------------|----------------|-------------|-----------------|-----------------|-------------|-----|---------------|
| 42.270 | 22.21 | 40.00 | 17.79 | 1000.0 | 120.0 | 100.0 | V | 191.0 |
| 43.110 | 21.69 | 40.00 | 18.31 | 1000.0 | 120.0 | 100.0 | V | 131.0 |
| 62.940 | 19.28 | 40.00 | 20.72 | 1000.0 | 120.0 | 122.0 | V | 269.0 |
| 78.300 | 17.25 | 40.00 | 22.75 | 1000.0 | 120.0 | 124.0 | V | 118.0 |
| 131.460 | 21.04 | 40.00 | 18.96 | 1000.0 | 120.0 | 106.0 | V | 198.0 |
| 154.770 | 20.69 | 40.00 | 19.31 | 1000.0 | 120.0 | 105.0 | V | 210.0 |
| 951.390 | 18.74 | 47.00 | 28.26 | 1000.0 | 120.0 | 196.0 | V | 328.0 |

Result [dBµV/m] = Analyser reading [dBµV] + Antenna factor [1/m] - Amplifier gain [dB] + Cable loss [dB]

Measurement results, Quasi-peak, ICES-005, Class B

| Frequency (MHz) | QuasiPeak (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) |
|-----------------|--------------------------|----------------------|-------------|-----------------|-----------------|-------------|-----|---------------|
| 42.270 | 22.21 | 40.00 | 17.79 | 1000.0 | 120.0 | 100.0 | V | 191.0 |
| 43.110 | 21.69 | 40.00 | 18.31 | 1000.0 | 120.0 | 100.0 | V | 131.0 |
| 62.940 | 19.28 | 40.00 | 20.72 | 1000.0 | 120.0 | 122.0 | V | 269.0 |
| 78.300 | 17.25 | 40.00 | 22.75 | 1000.0 | 120.0 | 124.0 | V | 118.0 |
| 131.460 | 21.04 | 43.52 | 22.48 | 1000.0 | 120.0 | 106.0 | V | 198.0 |
| 154.770 | 20.69 | 43.52 | 22.83 | 1000.0 | 120.0 | 105.0 | V | 210.0 |
| 951.390 | 18.74 | 46.02 | 27.28 | 1000.0 | 120.0 | 196.0 | V | 328.0 |

Result [dB μ V/m] = Analyser reading [dB μ V] + Antenna factor [1/m] - Amplifier gain [dB] + Cable loss [dB]

6.2 Test equipment

| Equipment type | Manufacturer | Model | Inv. No. | Last Cal. date | Cal. interval |
|----------------------|-----------------|-------------------|----------|----------------|---------------|
| Measurement software | Rohde & Schwarz | EMC32 - V10.50.40 | -- | -- | -- |
| Measurement Receiver | Rohde & Schwarz | ESW44 | 33890 | 2020-07-08 | 1 year |
| Antenna | Chase | CBL 6111A | 34200 | 2020-03-18 | 3 years |
| Pre-amplifier | SEMKO | AM1331 | 7992 | 2020-06-15 | 1 year |