

EMC TEST REPORT

No. 2102483STO-101

Electromagnetic disturbances

EQUIPMENT UNDER TEST

Equipment: Surface-mounted luminaire with LED

Type/Model: T2106 NA Stoffmoln

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

For details, see clause 2 – 4.

Date of issue: October 19, 2021

Tested by:


Per Granberg

Approved by:


Anna Näslund

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Revision History

| Test report no. | Release no. | Date of issue | Description |
|------------------------|--------------------|----------------------|--------------------|
| 2102483STO-101 | 1 | October 19, 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 |

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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 | Magnus Heurlin |
| Client observer | - |

2. EQUIPMENT UNDER TEST (EUT)

2.1 Identification of the EUT

| | | | | | | | | | | | | | | | |
|---|---|--------------------------|-------------------------------------|-------------------------------------|--|-----------|-----------|-----------|--------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| Equipment: | Surface-mounted luminaire with LED | | | | | | | | | | | | | | |
| Type/Model: | T2106 NA Stoffmoln | | | | | | | | | | | | | | |
| Brand name: | IKEA | | | | | | | | | | | | | | |
| S/N: | - | | | | | | | | | | | | | | |
| Manufacturer: | IKEA of Sweden AB Box 702 SE-343 81 Älmhult Sweden | | | | | | | | | | | | | | |
| Highest clock frequency, F_X: | 2405 – 2480 MHz | | | | | | | | | | | | | | |
| Software version: | - | | | | | | | | | | | | | | |
| Hardware version: | - | | | | | | | | | | | | | | |
| Mounting position: (during normal use) | <input type="checkbox"/> Table-top <input type="checkbox"/> Floor-standing <input checked="" type="checkbox"/> Wall/ceiling <input type="checkbox"/> Hand-held <input type="checkbox"/> Other: | | | | | | | | | | | | | | |
| Supplementary information: | | | | | | | | | | | | | | | |
| Input ratings | Voltage [V] | Freq. [Hz] | Current [A] | Power [W] | Coupling | | | | | | | | | | |
| <input checked="" type="checkbox"/> AC | 120 | 60 | - | 21 | <table border="0"> <tr> <td>L1</td> <td>L2</td> <td>L3</td> <td>N</td> <td>PE</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> </table> | L1 | L2 | L3 | N | PE | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| L1 | L2 | L3 | N | PE | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | | | | | | | | | |
| <input type="checkbox"/> DC | | | | | <table border="0"> <tr> <td>V+</td> <td>V-</td> <td>PE</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table> | V+ | V- | PE | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | |
| V+ | V- | PE | | | | | | | | | | | | | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | |
| <input type="checkbox"/> Battery | | | | | <table border="0"> <tr> <td>V+</td> <td>V-</td> <td>PE</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table> | V+ | V- | PE | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | |
| V+ | V- | PE | | | | | | | | | | | | | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | |
| <input type="checkbox"/> Other: | | | | | | | | | | | | | | | |



??????
Type No. T2106

Stoftmoln

Made in

Conforms to:UL Std 1598 Certified to:CSA
Std C22.2 No. 250.0
CAN ICES-005 (B) / NMB-005 (B)
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.



Sup. No.00000



TYP T2106 NA Version 1

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 EUT is surface-mounted luminaire provided with a radio remote controlled dimming and on-off.

The EUT has the following ports:

| Port type | Port name | Shielded |
|--|--------------------|--------------------------|
| AC I/O | | |
| <input checked="" type="checkbox"/> AC power input | AC-power connector | <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 type="checkbox"/> DC power output | | <input type="checkbox"/> |
| Signal/control I/O | | |
| <input type="checkbox"/> Telecom/network | | <input type="checkbox"/> |
| <input type="checkbox"/> Signal/control | | <input type="checkbox"/> |
| Supplementary information: | | |

The EUT ports were connected according to the following:

| Port name | Cable type | Connected to |
|--------------------|--------------|-----------------|
| AC-power connector | 3-core cable | AC mains supply |

2.4 Peripheral/auxiliary equipment

Peripheral

Equipment needed for correct operation of the EUT, but not included as part of the testing.

| Equipment | Manufacturer | Type/Model | S/N |
|----------------|--------------|--|-----|
| Remote control | IKEA | 605121-1 7AX1-RC-ZAB-H0 3V, Zigbee3.0 | - |

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 |
| CISPR 15:2015 | CISPR 15:2018 |

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 | The EUT set to max luminous intensity |
| 2 | 120 V, 60 Hz | The EUT set to min luminous intensity |

| Test | Mode of operation |
|---|-------------------|
| Conducted continuous emission | 1,2 |
| Radiated emission of EM fields, 30 – 1000 MHz | 1,2 |
| Radiated emission of EM fields, 1 – 13 GHz | 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 | Conducted continuous emission | AC input | (1) | Pass |
| 6 | ANSI C63.4 | Radiated emission of EM fields | Enclosure | (1) | Pass |
| Supplementary information: (1) Measured value(s) is/are within the measurement uncertainty interval to the limit. | | | | | |

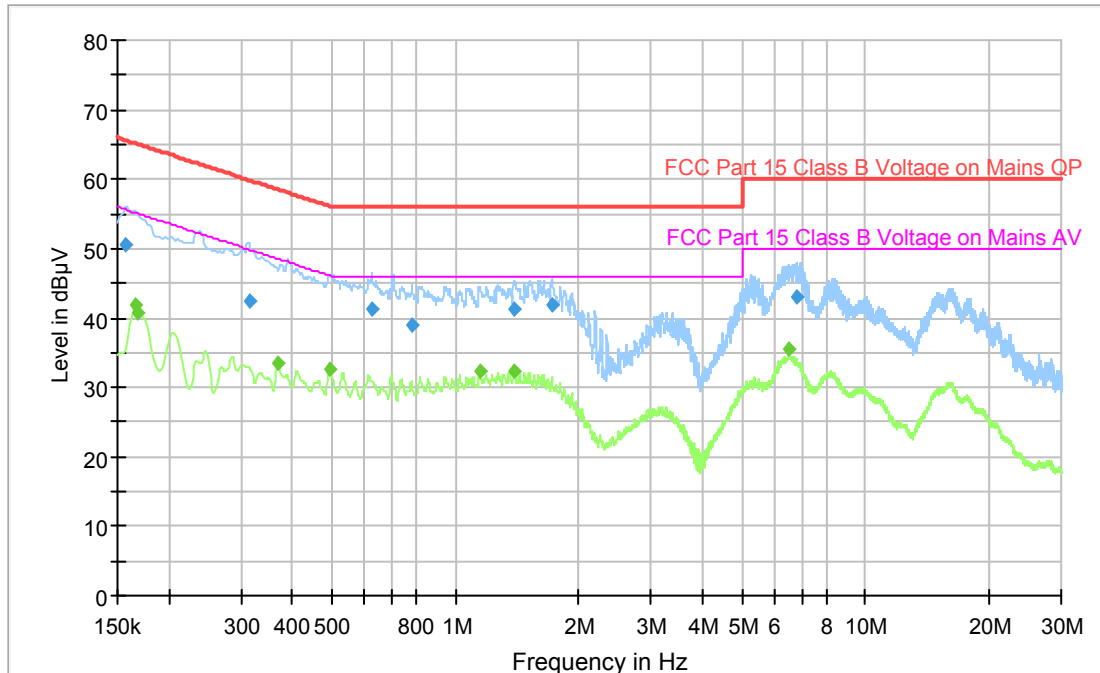
5. CONDUCTED CONTINUOUS DISTURBANCES
in the frequency-range 0.15 – 30 MHz

| Date of test | Temp. [°C] | Humidity [%RH] | Tested by |
|------------------|------------|----------------|-----------|
| October 14, 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 [dBμV] (2) | |
|--|-----------------|---------------------------|-------------|
| | | QP | AV |
| Limits FCC Part 15 subpart B and ICES-005, Class 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. | | | |

5.1 Test results, AC Power port, FCC/ICES-005, Class B, mode of operation No.1



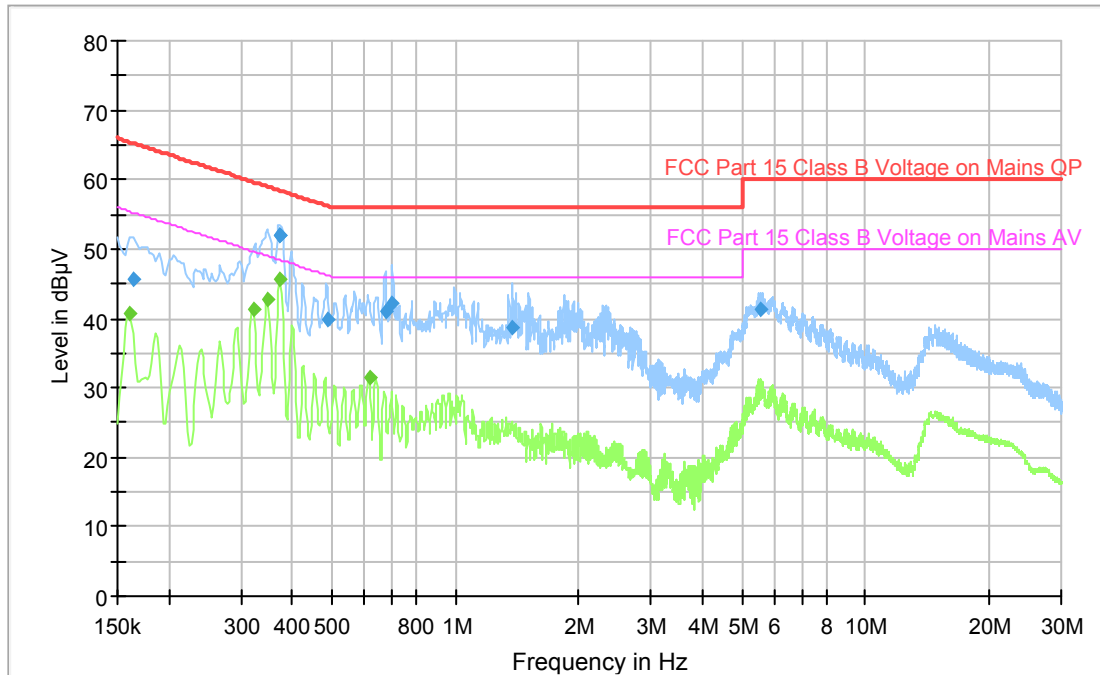
Diagram, Peak and AV overview sweep

Measurement results, Quasi-peak & Average

| Frequency (MHz) | QuasiPeak (dBµV) | Average (dBµV) | Limit (dBµV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | PE |
|-----------------|------------------|----------------|--------------|-------------|-----------------|-----------------|------|-----|
| 0.156750 | 50.56 | --- | 65.63 | 15.07 | 1000.0 | 9.000 | N | GND |
| 0.165750 | --- | 41.83 | 55.17 | 13.34 | 1000.0 | 9.000 | N | GND |
| 0.168000 | --- | 40.63 | 55.06 | 14.43 | 1000.0 | 9.000 | L1 | GND |
| 0.314250 | 42.56 | --- | 59.86 | 17.30 | 1000.0 | 9.000 | N | GND |
| 0.370500 | --- | 33.47 | 48.49 | 15.02 | 1000.0 | 9.000 | L1 | GND |
| 0.492000 | --- | 32.60 | 46.13 | 13.53 | 1000.0 | 9.000 | L1 | GND |
| 0.624750 | 41.32 | --- | 56.00 | 14.68 | 1000.0 | 9.000 | L1 | GND |
| 0.780000 | 38.99 | --- | 56.00 | 17.01 | 1000.0 | 9.000 | L1 | GND |
| 1.146750 | --- | 32.36 | 46.00 | 13.64 | 1000.0 | 9.000 | L1 | GND |
| 1.389750 | --- | 32.46 | 46.00 | 13.54 | 1000.0 | 9.000 | L1 | GND |
| 1.396500 | 41.43 | --- | 56.00 | 14.57 | 1000.0 | 9.000 | L1 | GND |
| 1.718250 | 41.95 | --- | 56.00 | 14.05 | 1000.0 | 9.000 | L1 | GND |
| 6.481500 | --- | 35.56 | 50.00 | 14.44 | 1000.0 | 9.000 | L1 | GND |
| 6.812250 | 42.99 | --- | 60.00 | 17.01 | 1000.0 | 9.000 | L1 | GND |

Result [dBµV] = Analyser reading [dBµV] + cable loss [dB] + LISN insertion loss [dB]

5.2 Test results, AC Power port, FCC/ICES-005, Class B, mode of operation No.2



Diagram, Peak and AV overview sweep

Measurement results, Quasi-peak & Average

| Frequency (MHz) | QuasiPeak (dBµV) | Average (dBµV) | Limit (dBµV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | PE |
|------------------|------------------|----------------|--------------|-------------|-----------------|-----------------|-----------|------------|
| 0.161250 | --- | 40.76 | 55.40 | 14.64 | 1000.0 | 9.000 | N | GND |
| 0.163500 | 45.55 | --- | 65.28 | 19.73 | 1000.0 | 9.000 | N | GND |
| 0.323250 | --- | 41.20 | 49.62 | 8.42 | 1000.0 | 9.000 | L1 | GND |
| 0.350250 | --- | 42.81 | 48.96 | 6.15 | 1000.0 | 9.000 | L1 | GND |
| 0.372750 | 52.02 | --- | 58.44 | 6.42 | 1000.0 | 9.000 | L1 | GND |
| *0.375000 | --- | 45.69 | 48.39 | 2.70 | 1000.0 | 9.000 | L1 | GND |
| 0.375000 | 51.89 | --- | 58.39 | 6.50 | 1000.0 | 9.000 | L1 | GND |
| 0.487500 | 39.83 | --- | 56.21 | 16.38 | 1000.0 | 9.000 | L1 | GND |
| 0.615750 | --- | 31.43 | 46.00 | 14.57 | 1000.0 | 9.000 | L1 | GND |
| 0.676500 | 41.14 | --- | 56.00 | 14.86 | 1000.0 | 9.000 | L1 | GND |
| 0.703500 | 42.18 | --- | 56.00 | 13.82 | 1000.0 | 9.000 | L1 | GND |
| 1.383000 | 38.57 | --- | 56.00 | 17.43 | 1000.0 | 9.000 | L1 | GND |
| 5.536500 | 41.22 | --- | 60.00 | 18.78 | 1000.0 | 9.000 | N | GND |

* Measured value(s) is/are within the measurement uncertainty interval to the limit.

Result [dBµV] = Analyser reading [dBµV] + cable loss [dB] + LISN insertion loss [dB]

5.3 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 | 2021-07-07 | 1 year |
| AMN / LISN | Rohde & Schwarz | ESH3-Z5 | 2728 | 2021-07-05 | 1 year |
| Pulse limiter | Rohde & Schwarz | ESH3-Z5 | 32455 | 2021-07-06 | 1 year |
| Measurement cable | Huber+Suhner | RG 223/U | 9815 | 2021-06-07 | 1 year |
| Measurement cable | Suhner | G03232 D-01 | 9701 | 2021-06-07 | 1 year |

6. RADIATED RF EMISSION IN THE FREQUENCY-RANGE 30 MHz – 13 GHz

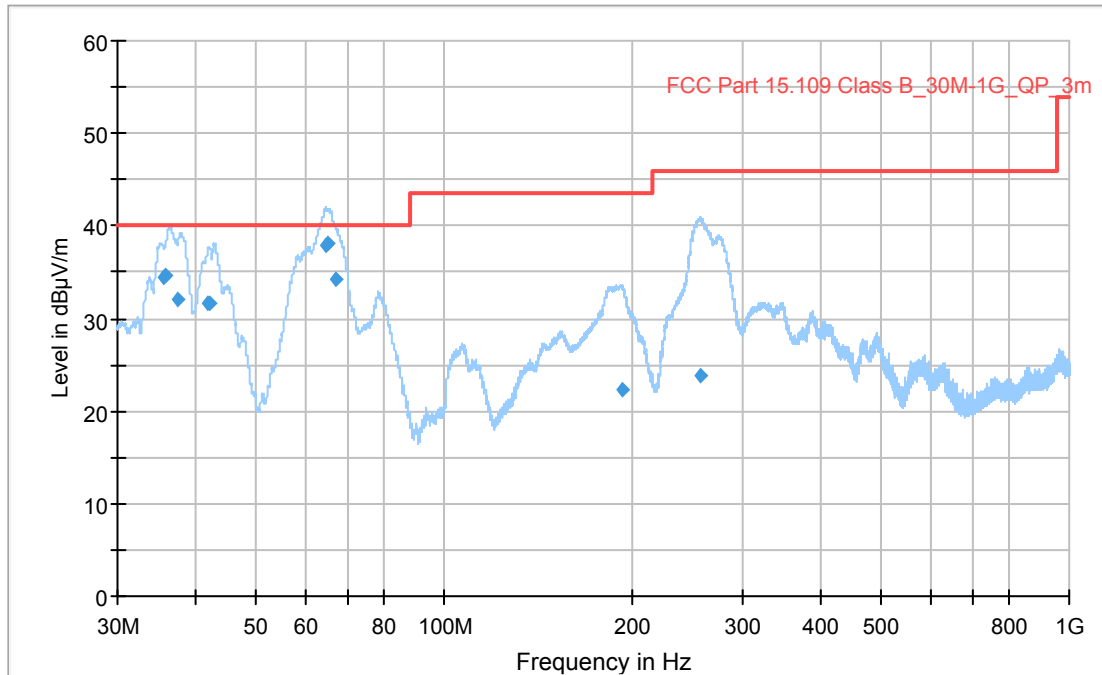
| Date of test | Temp. [°C] | Humidity [%RH] | Tested by |
|-----------------|------------|----------------|-----------|
| October 8, 2021 | 21 | 48 | PEG |

| | | | |
|---|---|--------------------------------|--|
| 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 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 checked="" 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 checked="" 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 [dB μ V/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 checked="" 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 | - | - |
| | 230 – 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 | - | - |

6.1 Test results, 30 – 1000 MHz, FCC/ICES-005, Class B, mode of operation No.1



Diagram, Peak overview sweep

Measurement results, Quasi-peak

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) |
|-----------------|--------------------|----------------|-------------|-----------------|-----------------|--------------|----------|---------------|
| 35.460 | 34.35 | 40.00 | 5.65 | 1000.0 | 120.0 | 106.0 | V | 187.0 |
| 35.880 | 34.75 | 40.00 | 5.25 | 1000.0 | 120.0 | 100.0 | V | 196.0 |
| 37.560 | 32.14 | 40.00 | 7.86 | 1000.0 | 120.0 | 103.0 | V | 19.0 |
| 41.760 | 31.63 | 40.00 | 8.37 | 1000.0 | 120.0 | 104.0 | V | 89.0 |
| 42.210 | 31.70 | 40.00 | 8.30 | 1000.0 | 120.0 | 106.0 | V | 104.0 |
| *64.590 | 37.84 | 40.00 | 2.16 | 1000.0 | 120.0 | 181.0 | V | 129.0 |
| *65.310 | 38.21 | 40.00 | 1.79 | 1000.0 | 120.0 | 145.0 | V | 171.0 |
| 67.170 | 34.33 | 40.00 | 5.67 | 1000.0 | 120.0 | 127.0 | V | -16.0 |
| 192.390 | 22.31 | 43.52 | 21.21 | 1000.0 | 120.0 | 192.0 | H | 66.0 |
| 256.590 | 23.76 | 46.02 | 22.26 | 1000.0 | 120.0 | 113.0 | H | -30.0 |

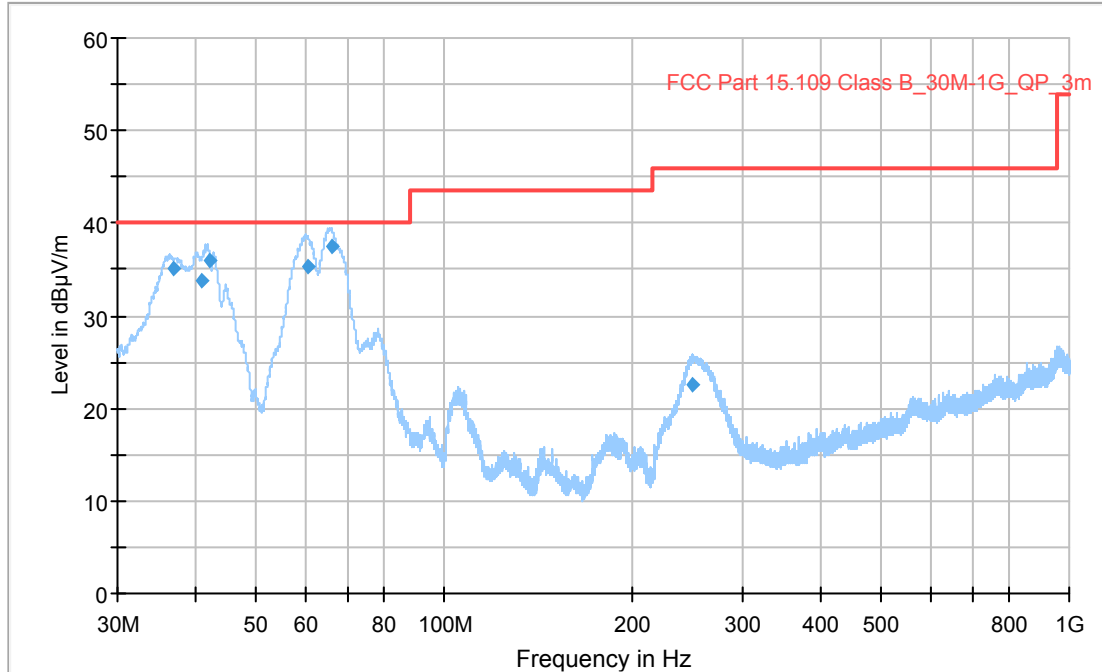
* Measured value(s) is/are within the measurement uncertainty interval to the limit.

The EUT also fulfil the class B limit of ICES-005, see limit table on page 16.

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

6.2 Test results, 30 – 1000 MHz, FCC/ICES-005, Class B, mode of operation No.2

The EUT also fulfil the class B limit of ICES-005, see limit table on page 16.



Diagram, Peak overview sweep

Measurement results, Quasi-peak

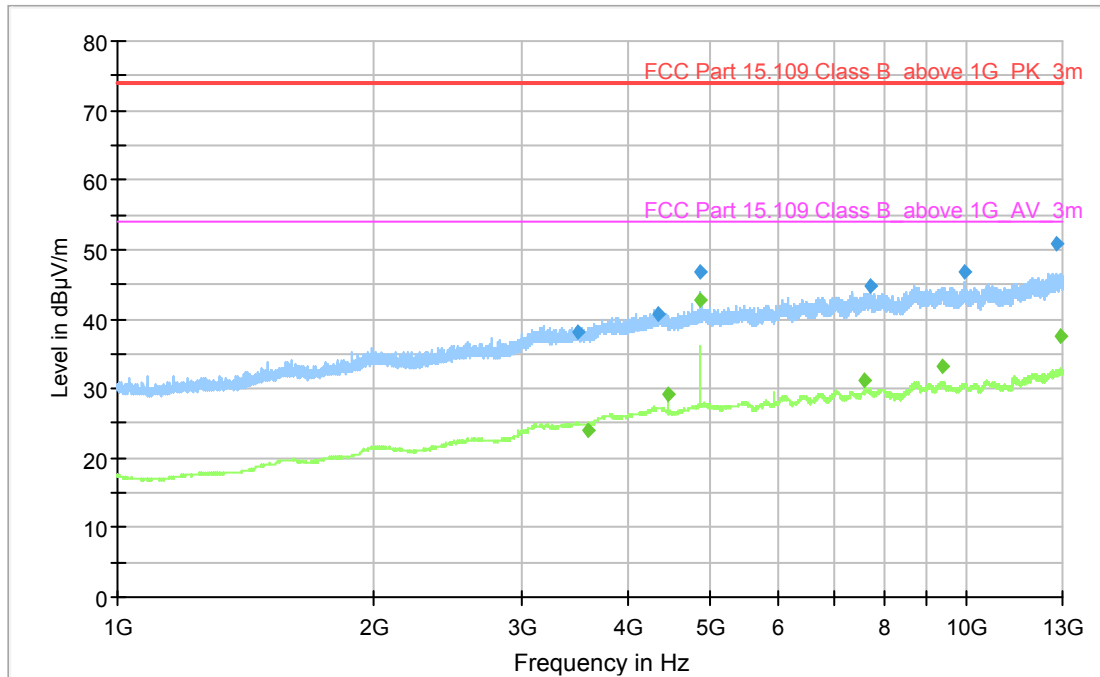
| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) |
|-----------------|--------------------|----------------|-------------|-----------------|-----------------|-------------|-----|---------------|
| *36.960 | 35.05 | 40.00 | 4.95 | 1000.0 | 120.0 | 106.0 | V | 273.0 |
| 40.860 | 33.72 | 40.00 | 6.28 | 1000.0 | 120.0 | 100.0 | V | 193.0 |
| *42.030 | 35.97 | 40.00 | 4.03 | 1000.0 | 120.0 | 103.0 | V | 186.0 |
| *60.330 | 35.35 | 40.00 | 4.65 | 1000.0 | 120.0 | 148.0 | V | 316.0 |
| *66.060 | 37.50 | 40.00 | 2.50 | 1000.0 | 120.0 | 166.0 | V | 320.0 |
| 249.450 | 22.52 | 46.02 | 23.50 | 1000.0 | 120.0 | 148.0 | H | 328.0 |

* Measured value(s) is/are within the measurement uncertainty interval to the limit.

The EUT also fulfil the class B limit of ICES-005, see limit table on page 16.

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

6.3 Test results, 1 – 13 GHz, FCC, Class B, mode of operation No.1



Diagram, Peak and Average overview sweep

Measurement results, Peak & Average

| Frequency (MHz) | MaxPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol |
|-----------------|------------------|------------------|----------------|-------------|-----------------|-----------------|-------------|-----|
| 3488.250 | 38.16 | --- | 74.00 | 35.84 | 1000.0 | 1000.0 | 135.0 | V |
| 3584.750 | --- | 24.10 | 54.00 | 29.90 | 1000.0 | 1000.0 | 100.0 | V |
| 4334.500 | 40.69 | --- | 74.00 | 33.31 | 1000.0 | 1000.0 | 205.0 | H |
| 4450.500 | --- | 29.24 | 54.00 | 24.76 | 1000.0 | 1000.0 | 209.0 | H |
| 4852.500 | 46.81 | --- | 74.00 | 27.19 | 1000.0 | 1000.0 | 293.0 | V |
| 4852.500 | --- | 42.63 | 54.00 | 11.37 | 1000.0 | 1000.0 | 260.0 | V |
| 7600.250 | --- | 31.28 | 54.00 | 22.72 | 1000.0 | 1000.0 | 213.0 | H |
| 7699.000 | 44.87 | --- | 74.00 | 29.13 | 1000.0 | 1000.0 | 259.0 | V |
| 9393.750 | --- | 33.19 | 54.00 | 20.81 | 1000.0 | 1000.0 | 104.0 | H |
| 9967.250 | 46.76 | --- | 74.00 | 27.24 | 1000.0 | 1000.0 | 249.0 | H |
| 12813.500 | 50.74 | --- | 74.00 | 23.26 | 1000.0 | 1000.0 | 117.0 | H |
| 12911.250 | --- | 37.47 | 54.00 | 16.53 | 1000.0 | 1000.0 | 325.0 | V |

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

6.4 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 | 2021-07-21 | 1 year |
| Antenna | Chase | CBL 6111A | 34200 | 2020-03-18 | 3 years |
| Pre-amplifier | SEMKO | AM1331 | 7992 | 2021-09-30 | 1 year |
| Horn antenna | Rohde & Schwarz | HF907 | 31245 | 2020-01-17 | 3 years |
| Pre-amplifier | Bonn | BLMA 0118-M | 31246 | 2021-09-08 | 1 year |
| Measurement cable | Huber & Suhner | Sucoflex 106 | 39122 | 2021-05-06 | 1 year |
| Measurement cable | Rosenberger | LA5-S003-7000 | 39148 | 2021-05-06 | 1 year |
| Measurement cable | Rosenberger | LA5-S003-7000 | 39163 | 2021-02-04 | 1 year |