

EMC / EMI Test Report

As per

**FCC Part 15 Subpart B:2016
ICES-003:2016**

VVSG 1.0 (2005) Volume 1

Clause 4.1.2.5 to 4.1.2.12

Emissions & Immunity for

**Information Technology Class B Equipment
on the**

**ICX DRE VVPAT
ICX DRE Report Printer
ICX BMD**



Canada

Issued by:

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Testing produced for

PRO V&V



Jandrew Gonzales,
Project Engineer

See Appendix A for full client &
EUT details.



Registration #
6844A-3



Testing Laboratory
Certificate #2955.02



R-4023, G-506
C-4498, T-1246



Registration #
CA6844

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

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Report Scope

This report addresses the EMC verification testing and test results of the **ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD**, herein referred to as EUT (Equipment Under Test). The EUT was tested for emissions and immunity compliance against the following standards:

FCC Part 15 Subpart B:2016

ICES-003:2016

VVSG 1.0 (2005) Volume 1: Subsection 4.1.2.5 to 4.1.2.12

EN61000-4-2

EN61000-4-3

EN61000-4-4

EN61000-4-5

EN61000-4-6

EN61000-4-8

EN61000-4-11

Power line conducted emissions, radiated emissions, harmonics emissions, flicker emissions, and immunity testing was evaluated on the EUT. Test procedures, results, justifications, and engineering considerations, if any, follow later in this report.

For a more detailed list of the standards and the revision used, see the "Applicable Standards, Specifications and Methods" section of this report.

This report does not imply product endorsement by any government, accreditation agency, or TÜV SÜD Canada Inc.

Opinions or interpretations expressed in this report, if any, are outside the scope of TÜV SÜD Canada Inc. accreditations. Any opinions expressed do not necessarily reflect the opinions of TÜV SÜD Canada Inc., unless otherwise stated.

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Summary

The results contained in this report relate only to the item(s) tested.

| | |
|--------------------------------|----------------------------------------------------|
| Equipment Under Test (EUT) | ICX DRE VVPAT ICX DRE Report Printer ICX BMD |
| EUT passed all tests performed | Yes |
| Testing conducted by | Jandrew Gonzales |

For testing dates, see 'Testing Environmental Conditions and Dates'.

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Test Results Summary

| Standard/ Method | Description | Criteria | Class / Level | Result |
|------------------------------------------------------|-----------------------------------|------------------------------------------|-------------------------------------------|-------------|
| FCC 15.107 ICES-003 VVSG 1.0 Vol. 1 4.1.2.9 | Power Line Conducted Emissions | N/A | Class B | Pass |
| FCC 15.109 ICES-003 VVSG 1.0 Vol. 1 4.1.2.9 | Radiated Emissions | N/A | Class B | Pass |
| EN 61000-4-11 VVSG 1.0 Vol. 1 4.1.2.5 | Electrical Power Disturbance | Normal Operation & No Data Loss | Various | Pass |
| EN 61000-4-4 VVSG 1.0 Vol. 1 4.1.2.6 | Electrical Fast Transient | Normal Operation & No Data Loss | ±2kV - Mains | Pass |
| EN 61000-4-5 VVSG 1.0 Vol. 1 4.1.2.7 | Lightning Surge | Normal Operation & No Data Loss | ±2kV Line - Line ±2kV Line - Ground | Pass |
| EN 61000-4-2 VVSG 1.0 Vol. 1 4.1.2.8 | Electrostatic Disruption | Normal Operation & No Data Loss | ±8kV Contact ±15kV Air | Pass |
| EN 61000-4-3 VVSG 1.0 Vol. 1 4.1.2.10 | Electromagnetic Susceptibility | Normal Operation & No Data Loss | 10 V/m, 80 MHz – 1 GHz | Pass |
| EN 61000-4-6 VVSG 1.0 Vol. 1 4.1.2.11 | Conducted RF Immunity | Normal Operation & No Data Loss | 10 Vrms, 150 kHz – 80 MHz | Pass |
| EN 61000-4-8 VVSG 1.0 Vol. 1 4.1.2.12 | Magnetic Fields Immunity | Normal Operation & No Data Loss | 30 A/m | Pass |
| Overall Result | | | | Pass |

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If the product as tested complies with the specification or requirement, the EUT is deemed to comply and is issued a 'PASS' grade. If not, 'FAIL' grade is issued.

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Notes, Justifications, or Deviations

The following justifications for tests not performed or deviations from the above listed specifications apply:

No Electrical Fast Transients or Conducted RF Immunity tests were performed on any of the I/O cables of the EUTs. All cables are less than 3m.

The ICX BMD model required a ferrite on the Audio Input to pass Electrical Fast Transient testing. Please see Figure 45 for installation location. The spec for the ferrite is as follows:

Steward: 28A2029-0A2

A later revision of the standard may have been substituted in place of the previous dated referenced revision. The year of the specification used is listed under applicable standards. Using the later revision accomplishes the goal of ensuring compliance to the intent of the previous specification, while allowing the laboratory to incorporate the extensions and clarifications made available by a later revision.

Sample Calculation(s)

Radiated Emission Test

Margin = Limit – (Received Signal + Antenna Factor + Cable Loss – Pre-Amp Gain)

Margin = 50dB μ V/m – (50dB μ V + 10dB + 2.5dB – 20dB)

Margin = 7.5 dB (pass)

Power Line Conducted Emission Test

Margin = Limit – (Received Signal + Attenuation Factor + Cable Loss + LISN Factor)

Margin = 73.0dB μ V – (50dB μ V + 10dB + 2.5dB + 0.5dB)

Margin = 10.0 dB (pass)

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Applicable Standards, Specifications and Methods

| | |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANSI C63.4:2014 | Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz |
| CFR47 FCC Part 15 Subpart B:2016 | Code of Federal Regulations - Radio Frequency Devices |
| ICES-003, Issue 6 2016 | Information Technology Equipment (ITE) - Limits and Methods of Measurement |
| VVSG 1.0 (2005) Volume 1 | United States Election Assistance Commission – Voluntary Voting System Guidelines – Version 1.0 Volume 1 |
| CISPR 16-2-3:2010/A2:2014 | Specification for Radio Disturbance and Immunity Measuring Apparatus and Methods - Part 2-3: Methods of Measurement of Disturbances and Immunity - Radiated Disturbance Measurements |
| IEC 61000-4-2:2008 EN 61000-4-2:2009 | Testing and Measurement Techniques - Electrostatic Discharge Immunity Test |
| IEC/EN 61000-4-3:2006/ A2:2010 | Testing and Measurement Techniques - Radiated, Radio-Frequency, Electromagnetic Field Immunity Test |
| IEC/EN 61000-4-4:2004 | Testing and Measurement Techniques - Electrical Fast Transient/Burst Immunity Test |
| IEC 61000-4-5:2005 EN 61000-4-5:2006 | Testing and Measurement Techniques - Surge Immunity Test |
| IEC 61000-4-6:2008 EN 61000-4-6:2009 | Testing and Measurement Techniques - Immunity to Conducted Disturbances, Induced by Radio-Frequency Fields |
| IEC 61000-4-8:2009 EN 61000-4-8:2010 | Testing and Measurement Techniques - Power Frequency Magnetic Field Immunity Test |
| IEC/EN 61000-4-11:2004 | Testing and Measurement Techniques - Voltage Dips, Short Interruptions and Voltage Variations Immunity Tests |
| ISO 17025:2005 | General Requirements for the Competence of Testing and Calibration Laboratories |

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Document Revision Status

Revision 0 September 27, 2017
Initial Release

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Definitions and Acronyms

The following definitions and acronyms are applicable in this report.
See also ANSI C63.14.

AM – Amplitude Modulation
CDN – Coupling Decoupling Network
EFT – Electrical Fast Transients
ESD – Electro-Static Discharge
HCP – Horizontal Coupling Plane
VCP – Vertical Coupling Plane
LISN – Line Impedance Stabilization Network
NCR – No Calibration Required
NSA – Normalized Site Attenuation
N/A – Not Applicable
RF – Radio Frequency

AE – Associated Equipment. Equipment needed to exercise and/or monitor the operation of the EUT.

Class A Device – A device that is marketed for use in a commercial, industrial or business environment. A 'Class A' device should not be marketed for use by the general public. A 'Class A' device should contain a warning notice in the user manual stating that it could cause radio interference. For example: "**Warning:** Operation of this equipment in a residential environment could cause radio interference."

Class B Device – A device that is marketed for use in a residential environment and may also be used in a commercial, business or industrial environments. NOTE: A residential environment is an environment where the use of broadcast radio and television receivers may be expected within a distance of 10m of the device concerned.

EMC – Electro-Magnetic Compatibility. The ability of an equipment or system to function satisfactorily in its electromagnetic environment without introducing intolerable electromagnetic disturbances to anything in that environment.

EMI – Electro-Magnetic Immunity. The ability to maintain a specified performance when the equipment is subjected to disturbance (unwanted) signals of specified levels.

EUT – Equipment Under Test. A device or system being evaluated for compliance that is representative of a product to be marketed.

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ITE – Information Technology Equipment. Has a primary function of entry, storage, display, retrieval, transmission, processing, switching, or control of data and/or telecommunication messages and which may be equipped with one or more ports typically for information transfer.

Antenna Port – Port, other than a broadcast receiver tuner port, for connection of an antenna used for intentional transmission and/or reception of radiated RF energy.

Broadcast Receiver Tuner Port – Port intended for the reception of a modulated RF signal carrying terrestrial, satellite and/or cable transmissions of audio and/or video broadcast and similar services.

Optical Fiber Port – Port at which an optical fiber is connected to an equipment.

Signal/Control Port – Port intended for the interconnection of components of a EUT, or between a EUT and local AE and used in accordance with relevant functional specifications (for example for the maximum length of cable connected to it). (Examples include: RS-232, USB, HDMI, Fire Wire)

Wired Network Port – Point of connection for voice, data and signaling transfers intended to interconnect widely dispersed systems by direct connection to a single-user or multi-user communication network. (Examples include: CATV, PSTN, ISDN, xDSL, LAN and similar networks)

EMC Test Plan – An EMC test plan established prior to testing. See 'Appendix A – EUT & Client Provided Details'.

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Testing Facility

Testing for EMC on the EUT was carried out at TÜV SÜD Canada testing lab near Toronto, Ontario. The testing lab has a calibrated 3m semi-anechoic chamber which allows measurements on a EUT that has a maximum width or length of up to 2m and a height of up to 3m. The chamber is equipped with a turntable that is capable of testing devices up to 3300lb in weight. This facility is capable of testing products that are rated for 120Vac and 240Vac single phase, or devices that are rated for a 208Vac 3 phase input. DC capability is also available for testing. The chamber is equipped with a mast that controls the polarization and height of the antenna. Control of the mast occurs in the control room adjoining the shielded chamber. Radiated emission measurements are performed using a BiLog antenna and a Horn antenna where applicable. Conducted emissions, unless otherwise stated, are performed using a LISN and using the Vertical Ground plane if applicable.

Calibrations and Accreditations

The 3m semi-anechoic chamber is registered with Federal Communications Commission (FCC, CA6844), Industry Canada (IC, 6844A-3) and Voluntary Control Council for Interference (VCCI, R-4023, G-506, C-4498, and T-1246). This chamber was calibrated for Normalized Site Attenuation (NSA) using test procedures outlined in ANSI C63.4 "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz". The chamber is lined with ferrite tiles and absorption cones to minimize any undesired reflections. The NSA data is kept on file at TÜV SÜD Canada. For radiated susceptibility testing, a 16 point field calibration has been performed on the chamber. The field uniformity data is kept on file at TÜV SÜD Canada. TÜV SÜD Canada Inc. is accredited to ISO 17025 by A2LA with Testing Certificate #2955.02. The laboratory's current scope of accreditation listing can be found as listed on the A2LA website. All measuring equipment is calibrated on an annual or bi-annual basis as listed for each respective test.

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Testing Environmental Conditions and Dates

Following environmental conditions were recorded in the facility during time of testing:

ICX DRE VVPAT & ICX DRE Report Printer

| Date | Test | Initials | Temperature (°C) | Humidity (%) | Pressure (kPa) |
|---------------------------------|--------------------------------|-----------------|-------------------------|---------------------|-----------------------|
| August 1, 2017 | Power Line Conducted Emissions | JG | 25.5 | 51.6 | 101.4 |
| July 31, 2017 | Radiated Emissions | JG | 25.7 | 50.3 | 101.2 |
| August 1, 2017 | Electrostatic Disruption | JG | 25.5 | 51.6 | 101.4 |
| July 31, 2017 | Electromagnetic Susceptibility | JG | 25.7 | 50.3 | 101.2 |
| July 31, 2017 | Electrical Fast Transient | JG | 25.7 | 50.3 | 101.2 |
| August 2, 2017 | Lightning Surge | JG | 26.1 | 52.7 | 101.0 |
| July 31, 2017 | Conducted RF Immunity | JG | 25.7 | 50.3 | 101.2 |
| July 31, 2017 | Magnetic Fields Immunity | JG | 25.7 | 50.3 | 101.2 |
| July 31, 2017 August 2, 2017 | Electrical Power Disturbance | JG | 25.7 26.1 | 50.3 52.7 | 101.2 101.0 |

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ICX BMD

| Date | Test | Initials | Temperature (°C) | Humidity (%) | Pressure (kPa) |
|----------------|--------------------------------|----------|------------------|--------------|----------------|
| Sept. 26, 2017 | Power Line Conducted Emissions | JG | 26.3 | 53.7 | 101.0 |
| Sept. 26, 2017 | Radiated Emissions | JG | 26.3 | 53.7 | 101.0 |
| Sept. 26, 2017 | Electrostatic Disruption | JG | 26.3 | 53.7 | 101.0 |
| Sept. 26, 2017 | Electromagnetic Susceptibility | JG | 26.3 | 53.7 | 101.0 |
| Sept. 26, 2017 | Electrical Fast Transient | JG | 26.3 | 53.7 | 101.0 |
| Sept. 26, 2017 | Lightning Surge | JG | 26.3 | 53.7 | 101.0 |
| Sept. 26, 2017 | Conducted RF Immunity | JG | 26.3 | 53.7 | 101.0 |
| Sept. 26, 2017 | Magnetic Fields Immunity | JG | 26.3 | 53.7 | 101.0 |
| Sept. 26, 2017 | Electrical Power Disturbance | JG | 26.3 | 53.7 | 101.0 |

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Detailed Test Result Section

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Power Line Conducted Emissions – 4.1.2.9

Purpose

The purpose of this test is to ensure that the RF energy unintentionally emitted from the EUT's power line does not exceed the limits listed below as defined in the applicable test standard and measured from a LISN. This helps protect lower frequency radio services such as AM radio, shortwave radio, amateur radio, maritime radio, CB radio, and so on, from unwanted interference.

Limits & Method

The method is as defined in ANSI C63.4. The limits are as defined in FCC Part 15 Section 15.107 and ICES-003 Issue 6 Section 6.1:

CLASS B

| Average Limits | | Quasi-Peak Limits | |
|-------------------|----------------------|-------------------|----------------------|
| 150 kHz – 500 kHz | 56 to 46* dB μ V | 150 kHz – 500 kHz | 66 to 56* dB μ V |
| 500 kHz – 5 MHz | 46 dB μ V | 500 kHz – 5 MHz | 56 dB μ V |
| 5 MHz – 30 MHz | 50 dB μ V | 5 MHz – 30 MHz | 60 dB μ V |

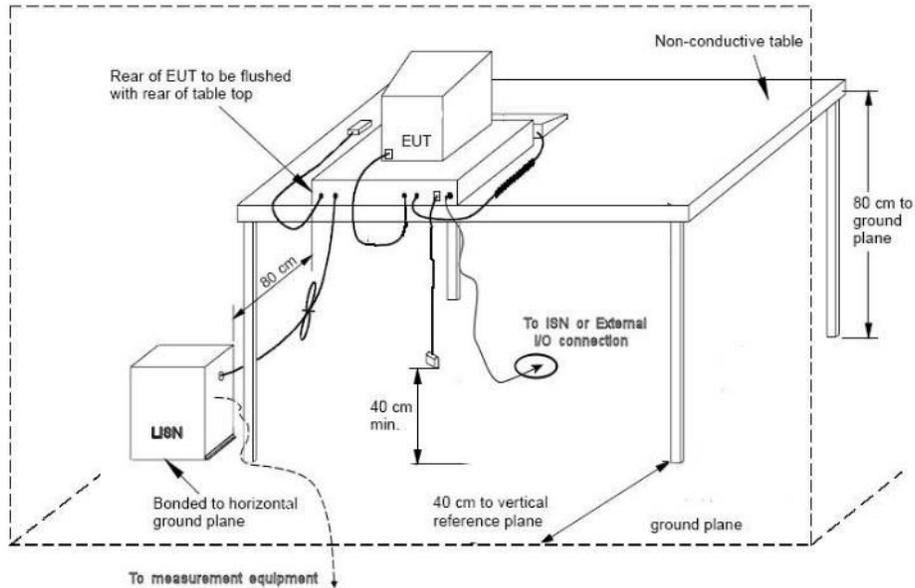
* Decreases linearly with the logarithm of the frequency

Both Quasi-Peak and Average limits are applicable and each is specified as being measured with a resolution bandwidth of 9 kHz. For Quasi-Peak, a video bandwidth at least three times greater than the resolution bandwidth is used.

Based on ANSI C63.4 Section 4.2, if the Peak or Quasi-Peak detector measurements do not exceed the Average limits, then the EUT is deemed to have passed the requirements.

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Typical Setup Diagram



Measurement Uncertainty

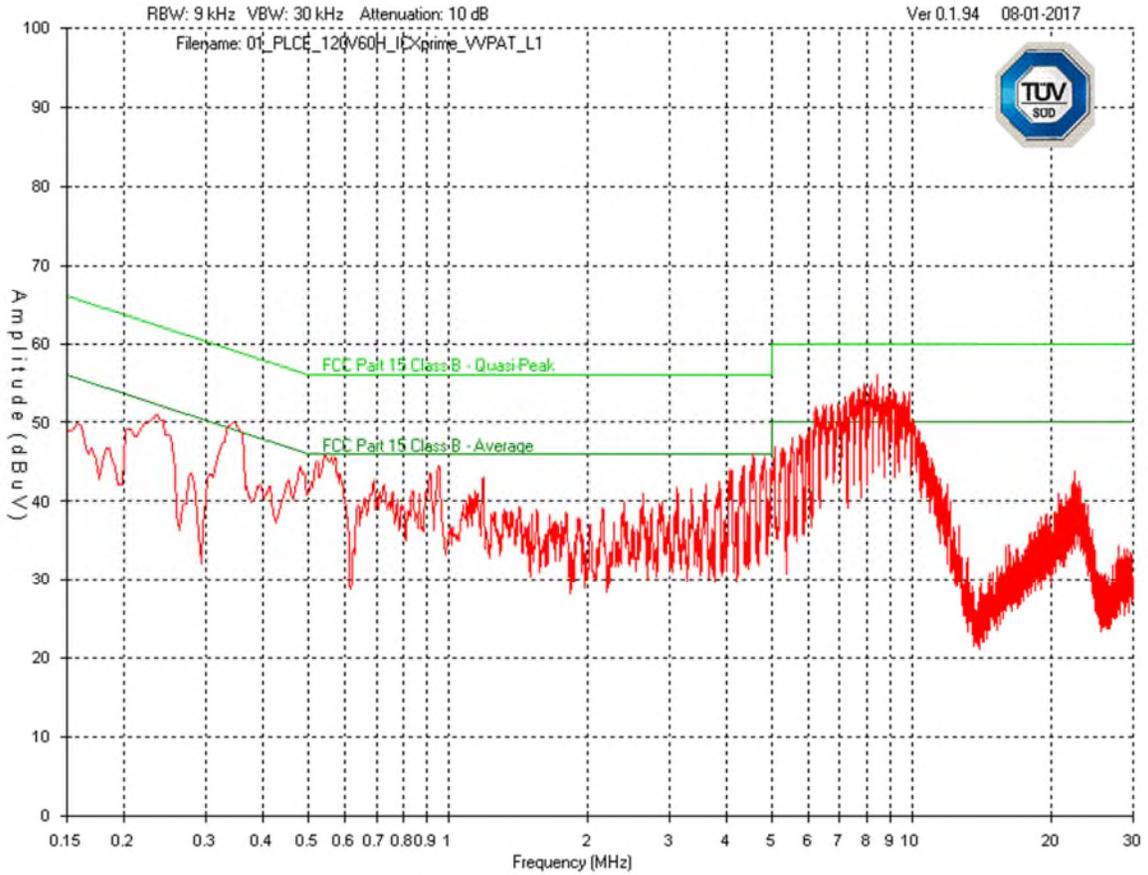
The expanded measurement uncertainty is calculated in accordance with CISPR 16-4-2 and is $\pm 2.91\text{dB}$ with a 'k=2' coverage factor and a 95% confidence level.

Preliminary Graphs

The graphs shown below are maximized peak measurement graphs measured with a resolution bandwidth greater than or equal to the final required detector. This peaking process is done as a worst case measurement and enables the detection of frequencies of concern for final measurement. For final measurements with the appropriate detector, where applicable, please refer to the tables under Final Measurements.

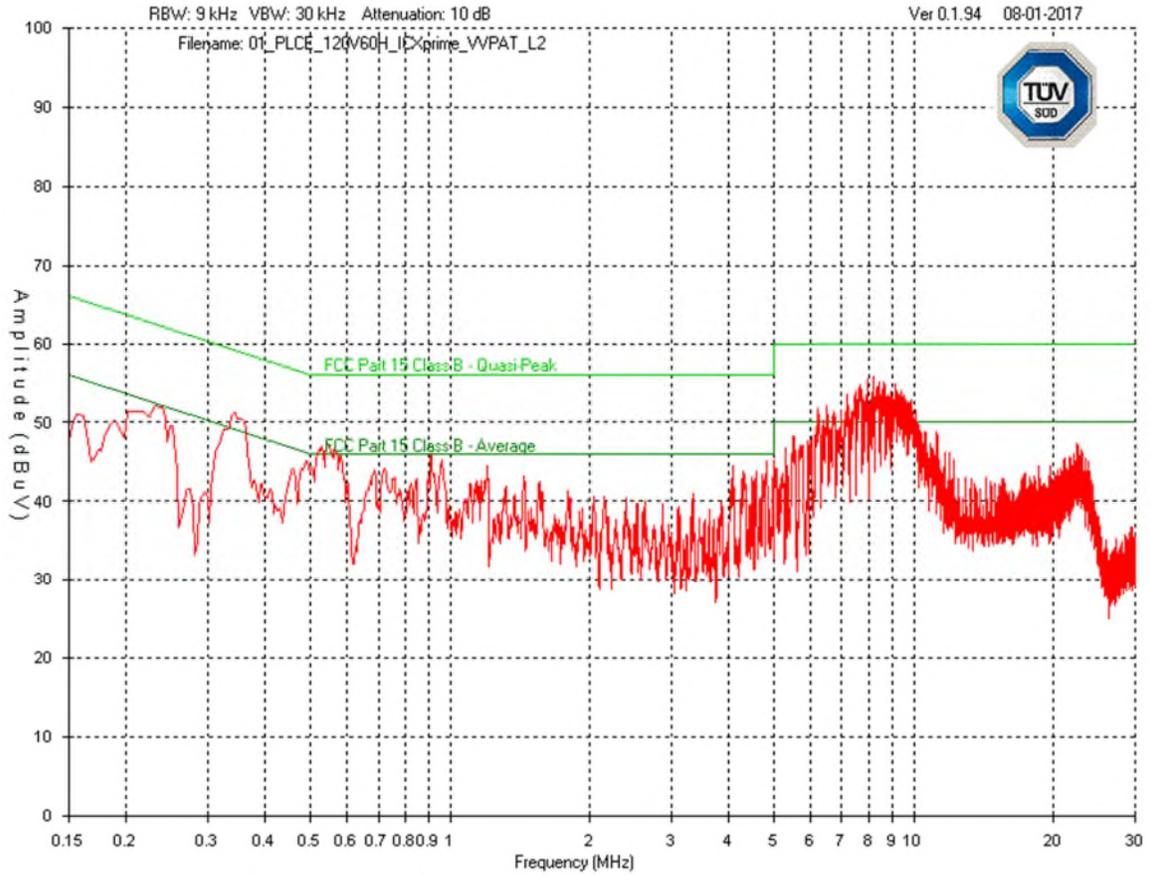
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Line (L1) – 120Vac 60Hz – ICX DRE VVPAT



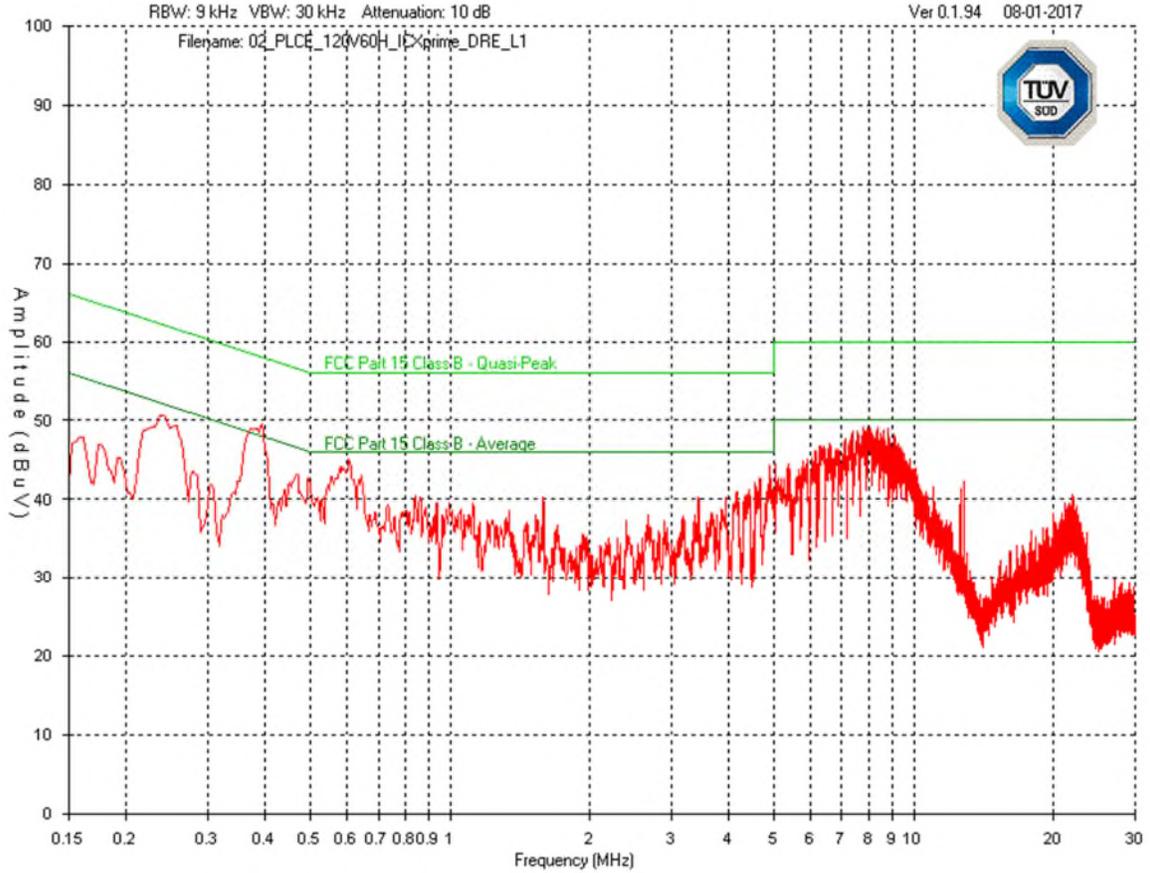
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Neutral (L2) – 120Vac 60Hz - ICX DRE VVPAT



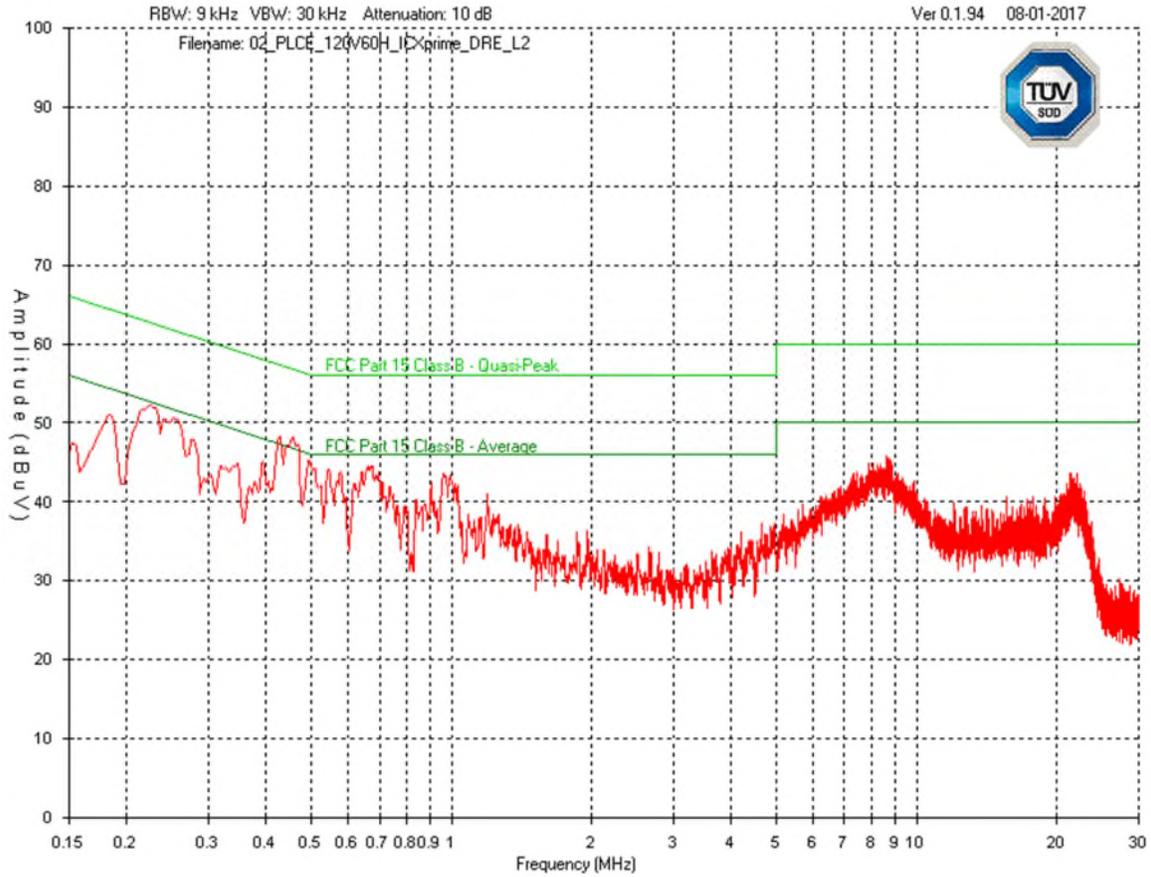
| | | |
|-------------|----------------------------------------------------------------|-------------------------------------------------------------------------------------|
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Line (L1) – 120Vac 60Hz – ICX DRE Report Printer



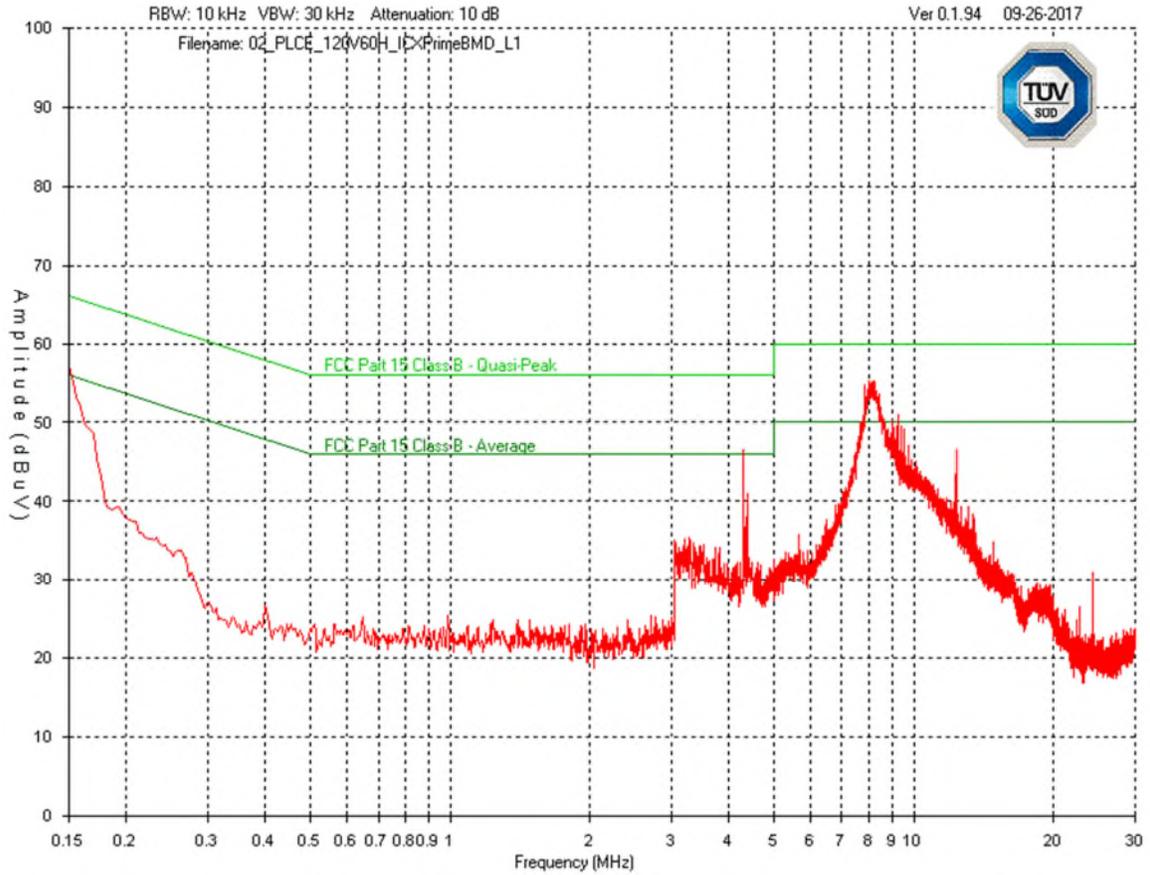
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Neutral (L2) – 120Vac 60Hz – ICX DRE Report Printer



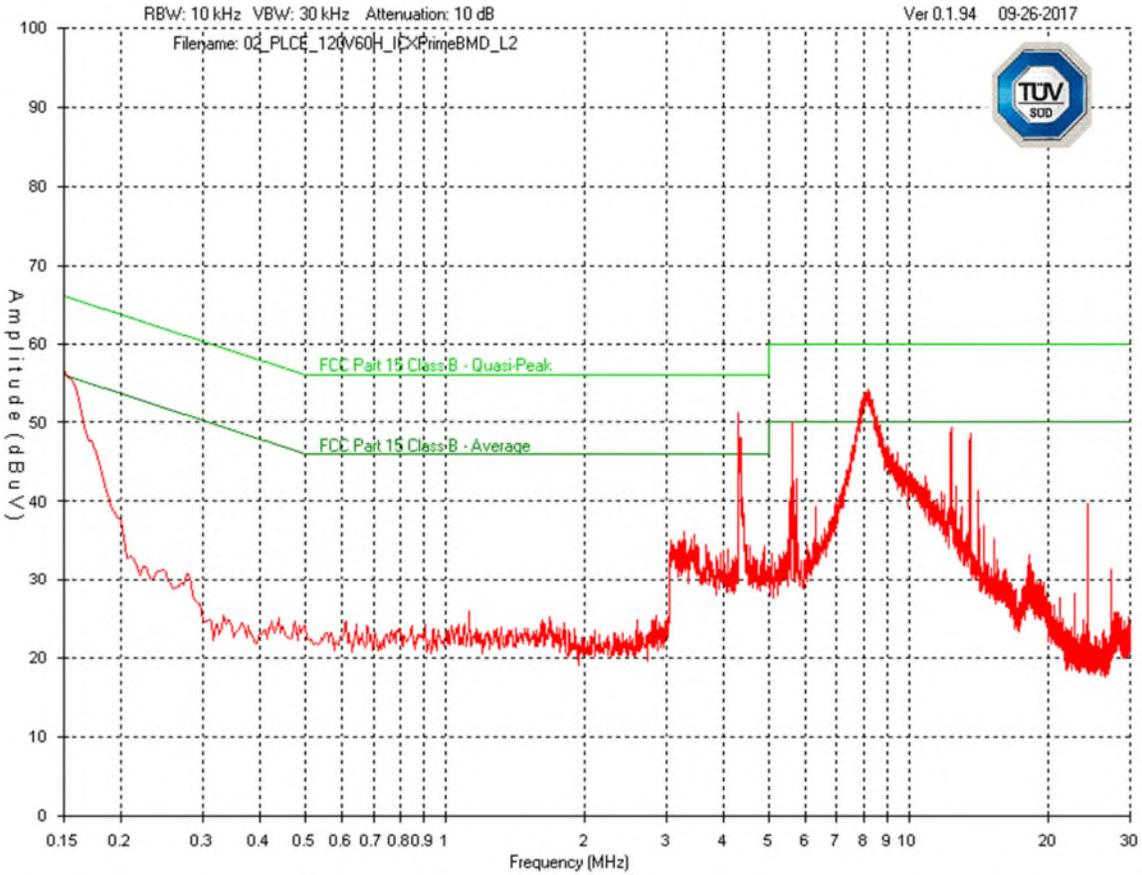
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Line (L1) – 120Vac 60Hz – ICX BMD



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Neutral (L2) – 120Vac 60Hz – ICX BMD



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Final Measurements

| Product Category | | | Class B | | | | | | | | |
|------------------|----------------------|------------------------|-------------------|-------------------|------------------|--------------|-----------------|------------------|----------------|-----------------|-----------|
| EUT | | | ICX DRE VVPAT | | | | | | | | |
| Supply | | | 120Vac 60Hz | | | | | | | | |
| Frequency (MHz) | Detector Peak/AVG/QP | Received Signal (dBµV) | Atten Factor (dB) | Cable Factor (dB) | LISN Factor (dB) | Level (dBµV) | QP Limit (dBµV) | AVG Limit (dBµV) | QP Margin (dB) | AVG Margin (dB) | Pass/Fail |
| Line | | | | | | | | | | | |
| 8.415 | AVG | 31.5 | 10.0 | 0.1 | 0.1 | 41.7 | -- | 50.0 | -- | 8.3 | Pass |
| 8.188 | AVG | 30.6 | 10.0 | 0.1 | 0.1 | 40.8 | -- | 50.0 | -- | 9.2 | Pass |
| 7.916 | AVG | 30.1 | 10.0 | 0.1 | 0.1 | 40.3 | -- | 50.0 | -- | 9.7 | Pass |
| 6.945 | AVG | 26.8 | 10.0 | 0.1 | 0.1 | 37.0 | -- | 50.0 | -- | 13.0 | Pass |
| 0.915 | AVG | 17.8 | 10.0 | 0.1 | 0.1 | 28.0 | -- | 46.0 | -- | 18.0 | Pass |
| 0.344 | AVG | 26.7 | 10.0 | 0.1 | 0.1 | 36.9 | -- | 49.1 | -- | 12.2 | Pass |
| 0.544 | AVG | 19.4 | 10.0 | 0.1 | 0.1 | 29.6 | -- | 46.0 | -- | 16.4 | Pass |
| 0.234 | AVG | 32.3 | 10.0 | 0.0 | 0.1 | 42.4 | -- | 52.3 | -- | 9.9 | Pass |
| 4.340 | AVG | 21.6 | 10.0 | 0.1 | 0.1 | 31.8 | -- | 46.0 | -- | 14.2 | Pass |
| 8.415 | PEAK | 45.8 | 10.0 | 0.1 | 0.1 | 56.0 | 60.0 | -- | 4.0 | -- | Pass |
| 8.188 | PEAK | 44.8 | 10.0 | 0.1 | 0.1 | 55.0 | 60.0 | -- | 5.0 | -- | Pass |
| 7.916 | PEAK | 44.7 | 10.0 | 0.1 | 0.1 | 54.9 | 60.0 | -- | 5.1 | -- | Pass |
| 8.914 | PEAK | 44.6 | 10.0 | 0.1 | 0.1 | 54.8 | 60.0 | -- | 5.2 | -- | Pass |
| 8.693 | PEAK | 44.3 | 10.0 | 0.1 | 0.1 | 54.5 | 60.0 | -- | 5.5 | -- | Pass |
| 7.662 | PEAK | 44.2 | 10.0 | 0.1 | 0.1 | 54.4 | 60.0 | -- | 5.6 | -- | Pass |
| Neutral | | | | | | | | | | | |
| 8.194 | AVG | 31.3 | 10.0 | 0.1 | 0.1 | 41.5 | -- | 50.0 | -- | 8.5 | Pass |
| 7.958 | AVG | 31.2 | 10.0 | 0.1 | 0.1 | 41.4 | -- | 50.0 | -- | 8.6 | Pass |
| 8.594 | AVG | 28.5 | 10.0 | 0.1 | 0.1 | 38.7 | -- | 50.0 | -- | 11.3 | Pass |
| 8.424 | AVG | 32.3 | 10.0 | 0.1 | 0.1 | 42.5 | -- | 50.0 | -- | 7.5 | Pass |
| 0.341 | AVG | 28.6 | 10.0 | 0.1 | 0.1 | 38.8 | -- | 49.2 | -- | 10.4 | Pass |
| 0.909 | AVG | 19.5 | 10.0 | 0.1 | 0.1 | 29.7 | -- | 46.0 | -- | 16.3 | Pass |
| 0.544 | AVG | 20.7 | 10.0 | 0.1 | 0.1 | 30.9 | -- | 46.0 | -- | 15.1 | Pass |
| 0.231 | AVG | 32.5 | 10.0 | 0.0 | 0.1 | 42.6 | -- | 52.4 | -- | 9.8 | Pass |
| 8.194 | PEAK | 45.7 | 10.0 | 0.1 | 0.1 | 55.9 | 60.0 | -- | 4.1 | -- | Pass |
| 7.958 | PEAK | 45.3 | 10.0 | 0.1 | 0.1 | 55.5 | 60.0 | -- | 4.5 | -- | Pass |
| 8.594 | PEAK | 45.0 | 10.0 | 0.1 | 0.1 | 55.2 | 60.0 | -- | 4.8 | -- | Pass |
| 8.424 | PEAK | 45.0 | 10.0 | 0.1 | 0.1 | 55.2 | 60.0 | -- | 4.8 | -- | Pass |
| 9.159 | PEAK | 44.7 | 10.0 | 0.1 | 0.1 | 54.9 | 60.0 | -- | 5.1 | -- | Pass |
| 7.650 | PEAK | 44.5 | 10.0 | 0.1 | 0.1 | 54.7 | 60.0 | -- | 5.3 | -- | Pass |

Average and Quasi-Peak Emissions Table – ICX DRE VVPAT

| | | |
|-------------|----------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

| Product Category | | | Class B | | | | | | | | |
|------------------|----------------------|------------------------|------------------------|-------------------|------------------|--------------|-----------------|------------------|----------------|-----------------|-----------|
| EUT | | | ICX DRE Report Printer | | | | | | | | |
| Supply | | | 120Vac 60Hz | | | | | | | | |
| Frequency (MHz) | Detector Peak/AVG/QP | Received Signal (dBµV) | Atten Factor (dB) | Cable Factor (dB) | LISN Factor (dB) | Level (dBµV) | QP Limit (dBµV) | AVG Limit (dBµV) | QP Margin (dB) | AVG Margin (dB) | Pass/Fail |
| Line | | | | | | | | | | | |
| 0.392 | AVG | 24.6 | 10.0 | 0.1 | 0.1 | 34.8 | -- | 48.0 | -- | 13.2 | Pass |
| 7.799 | AVG | 24.5 | 10.0 | 0.1 | 0.1 | 34.7 | -- | 50.0 | -- | 15.3 | Pass |
| 8.406 | AVG | 25.6 | 10.0 | 0.1 | 0.1 | 35.8 | -- | 50.0 | -- | 14.2 | Pass |
| 7.979 | AVG | 25.1 | 10.0 | 0.1 | 0.1 | 35.3 | -- | 50.0 | -- | 14.7 | Pass |
| 0.604 | AVG | 21.4 | 10.0 | 0.1 | 0.1 | 31.6 | -- | 46.0 | -- | 14.4 | Pass |
| 0.240 | AVG | 30.2 | 10.0 | 0.0 | 0.1 | 40.3 | -- | 52.1 | -- | 11.8 | Pass |
| 4.877 | AVG | 21.3 | 10.0 | 0.1 | 0.1 | 31.5 | -- | 46.0 | -- | 14.5 | Pass |
| 6.607 | AVG | 23.1 | 10.0 | 0.1 | 0.1 | 33.3 | -- | 50.0 | -- | 16.7 | Pass |
| 0.392 | PEAK | 39.3 | 10.0 | 0.1 | 0.1 | 49.5 | 58.0 | -- | 8.5 | -- | Pass |
| 7.799 | PEAK | 39.0 | 10.0 | 0.1 | 0.1 | 49.2 | 60.0 | -- | 10.8 | -- | Pass |
| 8.370 | PEAK | 38.9 | 10.0 | 0.1 | 0.1 | 49.1 | 60.0 | -- | 10.9 | -- | Pass |
| 7.979 | PEAK | 38.9 | 10.0 | 0.1 | 0.1 | 49.1 | 60.0 | -- | 10.9 | -- | Pass |
| 0.604 | PEAK | 34.8 | 10.0 | 0.1 | 0.1 | 45.0 | 56.0 | -- | 11.0 | -- | Pass |
| 8.824 | PEAK | 38.7 | 10.0 | 0.1 | 0.1 | 48.9 | 60.0 | -- | 11.1 | -- | Pass |
| Neutral | | | | | | | | | | | |
| 0.425 | AVG | 26.2 | 10.0 | 0.1 | 0.1 | 36.4 | -- | 47.4 | -- | 11.0 | Pass |
| 0.225 | AVG | 36.7 | 10.0 | 0.0 | 0.1 | 46.8 | -- | 52.6 | -- | 5.8 | Pass |
| 0.676 | AVG | 27.8 | 10.0 | 0.1 | 0.1 | 38.0 | -- | 46.0 | -- | 8.0 | Pass |
| 0.544 | AVG | 21.3 | 10.0 | 0.1 | 0.1 | 31.5 | -- | 46.0 | -- | 14.5 | Pass |
| 0.960 | AVG | 16.7 | 10.0 | 0.1 | 0.1 | 26.9 | -- | 46.0 | -- | 19.1 | Pass |
| 0.425 | PEAK | 38.1 | 10.0 | 0.1 | 0.1 | 48.3 | 57.4 | -- | 9.1 | -- | Pass |
| 0.225 | PEAK | 42.1 | 10.0 | 0.0 | 0.1 | 52.2 | 62.6 | -- | 10.4 | -- | Pass |
| 0.676 | PEAK | 34.4 | 10.0 | 0.1 | 0.1 | 44.6 | 56.0 | -- | 11.4 | -- | Pass |
| 0.544 | PEAK | 34.0 | 10.0 | 0.1 | 0.1 | 44.2 | 56.0 | -- | 11.8 | -- | Pass |
| 0.960 | PEAK | 33.3 | 10.0 | 0.1 | 0.1 | 43.5 | 56.0 | -- | 12.5 | -- | Pass |
| 0.183 | PEAK | 40.8 | 10.0 | 0.0 | 0.2 | 51.0 | 64.4 | 54.4 | 13.4 | 3.4 | Pass |

Average and Quasi-Peak Emissions Table – ICX DRE Report Printer

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

| Product Category | | | Class B | | | | | | | | |
|------------------|----------------------|------------------------|-------------------|-------------------|------------------|--------------|-----------------|------------------|----------------|-----------------|-----------|
| EUT | | | ICX Prime BMD | | | | | | | | |
| Supply | | | 120Vac 60Hz | | | | | | | | |
| Frequency (MHz) | Detector Peak/AVG/QP | Received Signal (dBµV) | Atten Factor (dB) | Cable Factor (dB) | LISN Factor (dB) | Level (dBµV) | QP Limit (dBµV) | AVG Limit (dBµV) | QP Margin (dB) | AVG Margin (dB) | Pass/Fail |
| Line | | | | | | | | | | | |
| 8.166 | AVG | 33.9 | 10.0 | 0.1 | 0.1 | 44.1 | -- | 50.0 | -- | 5.9 | Pass |
| 9.239 | AVG | 25.1 | 10.0 | 0.1 | 0.1 | 35.3 | -- | 50.0 | -- | 14.7 | Pass |
| 4.294 | AVG | 11.1 | 10.0 | 0.1 | 0.1 | 21.3 | -- | 46.0 | -- | 24.7 | Pass |
| 9.409 | AVG | 24.6 | 10.0 | 0.1 | 0.1 | 34.8 | -- | 50.0 | -- | 15.2 | Pass |
| 0.153 | AVG | 39.1 | 10.0 | 0.0 | 0.2 | 49.3 | -- | 55.8 | -- | 6.5 | Pass |
| 9.509 | AVG | 23.7 | 10.0 | 0.1 | 0.1 | 33.9 | -- | 50.0 | -- | 16.1 | Pass |
| 12.357 | AVG | 15.7 | 10.0 | 0.1 | 0.1 | 25.9 | -- | 50.0 | -- | 24.1 | Pass |
| 8.166 | PEAK | 45.2 | 10.0 | 0.1 | 0.1 | 55.4 | 60.0 | -- | 4.6 | -- | Pass |
| 9.239 | PEAK | 40.8 | 10.0 | 0.1 | 0.1 | 51.0 | 60.0 | -- | 9.0 | -- | Pass |
| 4.294 | PEAK | 36.4 | 10.0 | 0.1 | 0.1 | 46.6 | 56.0 | -- | 9.4 | -- | Pass |
| 9.409 | PEAK | 39.3 | 10.0 | 0.1 | 0.1 | 49.5 | 60.0 | -- | 10.5 | -- | Pass |
| 0.153 | PEAK | 44.9 | 10.0 | 0.0 | 0.2 | 55.1 | 65.8 | -- | 10.7 | -- | Pass |
| 9.509 | PEAK | 38.9 | 10.0 | 0.1 | 0.1 | 49.1 | 60.0 | -- | 10.9 | -- | Pass |
| Neutral | | | | | | | | | | | |
| 4.291 | AVG | 11.5 | 10.0 | 0.1 | 0.1 | 21.7 | 56.0 | 46.0 | 34.3 | 24.3 | Pass |
| 8.212 | AVG | 32.6 | 10.0 | 0.1 | 0.1 | 42.8 | 60.0 | 50.0 | 17.2 | 7.2 | Pass |
| 5.607 | AVG | 10.7 | 10.0 | 0.1 | 0.1 | 20.9 | 60.0 | 50.0 | 39.1 | 29.1 | Pass |
| 0.153 | AVG | 39.2 | 10.0 | 0.0 | 0.2 | 49.4 | 65.8 | 55.8 | 16.4 | 6.4 | Pass |
| 12.370 | AVG | 16.4 | 10.0 | 0.1 | 0.1 | 26.6 | 60.0 | 50.0 | 33.4 | 23.4 | Pass |
| 13.583 | AVG | 11.9 | 10.0 | 0.1 | 0.1 | 22.1 | 60.0 | 50.0 | 37.9 | 27.9 | Pass |
| 4.291 | PEAK | 41.0 | 10.0 | 0.1 | 0.1 | 51.2 | 56.0 | 46.0 | 4.8 | -5.2 | Pass |
| 8.212 | PEAK | 44.0 | 10.0 | 0.1 | 0.1 | 54.2 | 60.0 | 50.0 | 5.8 | -4.2 | Pass |
| 5.607 | PEAK | 39.9 | 10.0 | 0.1 | 0.1 | 50.1 | 60.0 | 50.0 | 9.9 | -0.1 | Pass |
| 0.153 | PEAK | 45.4 | 10.0 | 0.0 | 0.2 | 55.6 | 65.8 | 55.8 | 10.2 | 0.2 | Pass |
| 12.370 | PEAK | 39.2 | 10.0 | 0.1 | 0.1 | 49.4 | 60.0 | 50.0 | 10.6 | 0.6 | Pass |
| 13.583 | PEAK | 38.4 | 10.0 | 0.1 | 0.1 | 48.6 | 60.0 | 50.0 | 11.4 | 1.4 | Pass |

Average and Quasi-Peak Emissions Table – ICX BMD

Note:

- Peak = Peak measurement
- AVG = Average measurement
- QP = Quasi-Peak measurement

See 'Appendix B – EUT, Peripherals and Test Setup Photos' for photos showing the test set-up for the highest line conducted emission

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Test Equipment List

| Equipment | Model No. | Manufacturer | Last Calibration Date | Next Calibration Date | Asset # |
|--------------------|-----------------------------|-----------------------|-----------------------|-----------------------|----------|
| Spectrum Analyzer | ESL 6 | Rohde & Schwarz | Nov. 25, 2015 | Nov. 25, 2017 | GEMC 160 |
| LISN | FCC-LISN-50-100-1-02-MS461F | FCC | Feb. 5, 2016 | Feb. 5, 2018 | GEMC 121 |
| LISN | FCC-LISN-50-100-1-02-MS461F | FCC | Feb. 5, 2016 | Feb. 5, 2018 | GEMC 122 |
| RF Cable 7m | LMR-400-7M-50Ω-MN-MN | LexTec | NCR | NCR | GEMC 28 |
| RF Cable 1m | LMR-400-1M-50Ω-MN-MN | LexTec | NCR | NCR | GEMC 29 |
| Attenuator 10 dB | 612-10-1 | Meca Electronics, Inc | NCR | NCR | GEMC 223 |
| Emissions Software | 0.1.94 | Global EMC | NCR | NCR | GEMC 58 |

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| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Radiated Emissions – 4.1.2.9

Purpose

The purpose of this test is to ensure that the RF energy unintentionally emitted from the EUT does not exceed the limits listed below as defined in the applicable test standard and measured from a receiving antenna. This helps protect broadcast radio services such as television, FM radio, pagers, cellular telephones, emergency services, and so on, from unwanted interference.

Limit(s)

The method is as defined in ANSI C63.4:2014. The limits are as defined in FCC Part 15 Section 15.109 and ICES-003 Issue 6 Section 6.2:

CLASS B

FCC Part 15, Subpart B and ICES-003 Limits - 30MHz – 1GHz

| Frequency Range ^a | Quasi-Peak Limits - 3m ^b |
|------------------------------|-------------------------------------|
| 30 MHz – 88 MHz | 40 dB μ V/m |
| 88 MHz – 216 MHz | 43.5 dB μ V/m |
| 216 MHz – 960 GHz | 46 dB μ V/m |
| 960 MHz – 1 GHz | 54 dB μ V/m |

| Frequency Range ^a | Average Limit - 3m ^c | Peak Limit - 3m ^d |
|------------------------------|---------------------------------|------------------------------|
| 1 GHz and Up | 54 dB μ V/m | 74 dB μ V/m |

^aThe frequency range scanned is in accordance to FCC Part 15 Section 15.33(b).

^bLimit is with a resolution bandwidth of 120 kHz, a video bandwidth at least three times greater than the resolution bandwidth, and using a Quasi-Peak detector.

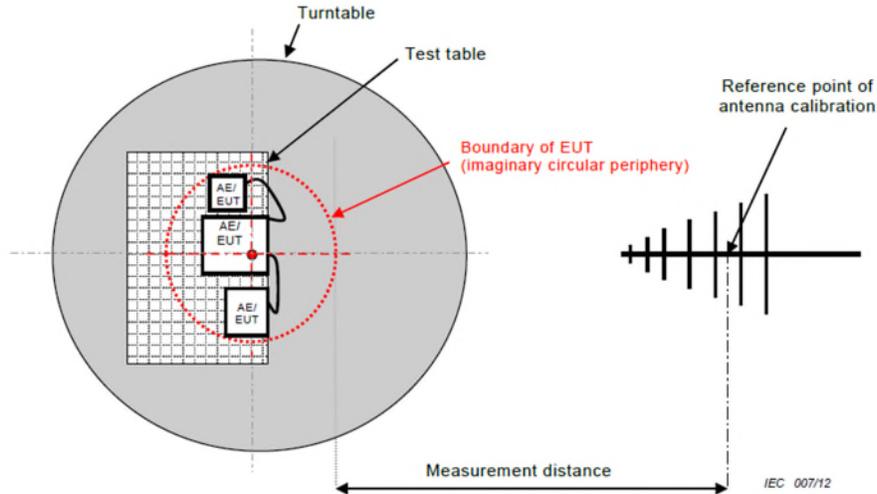
^cLimit is with a resolution bandwidth of 1 MHz and using an Average detector.

^dLimit is with a resolution bandwidth of 1 MHz, a video bandwidth at least three times greater than the resolution bandwidth, and using a Peak detector.

Based on ANSI C63.4 Section 4.2, if the Peak detector measurements do not exceed the Quasi-Peak limits, where defined, then the EUT is deemed to have passed the requirements.

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Typical Radiated Emissions Setup



Note: In accordance with FCC Part 15, section 15.31(f)(1), testing was performed at a 3 meter test distance and an extrapolation factor, if applicable, of 20 dB/decade was applied. For example, an extrapolation of 10m to 3m is $20\log(10/3) = 10.5$ dB.

Measurement Uncertainty

The expanded measurement uncertainty is calculated in accordance with CISPR 16-4-2 and is ± 4.25 dB for 30MHz – 1GHz and ± 4.93 dB for 1GHz – 18GHz with a 'k=2' coverage factor and a 95% confidence level.

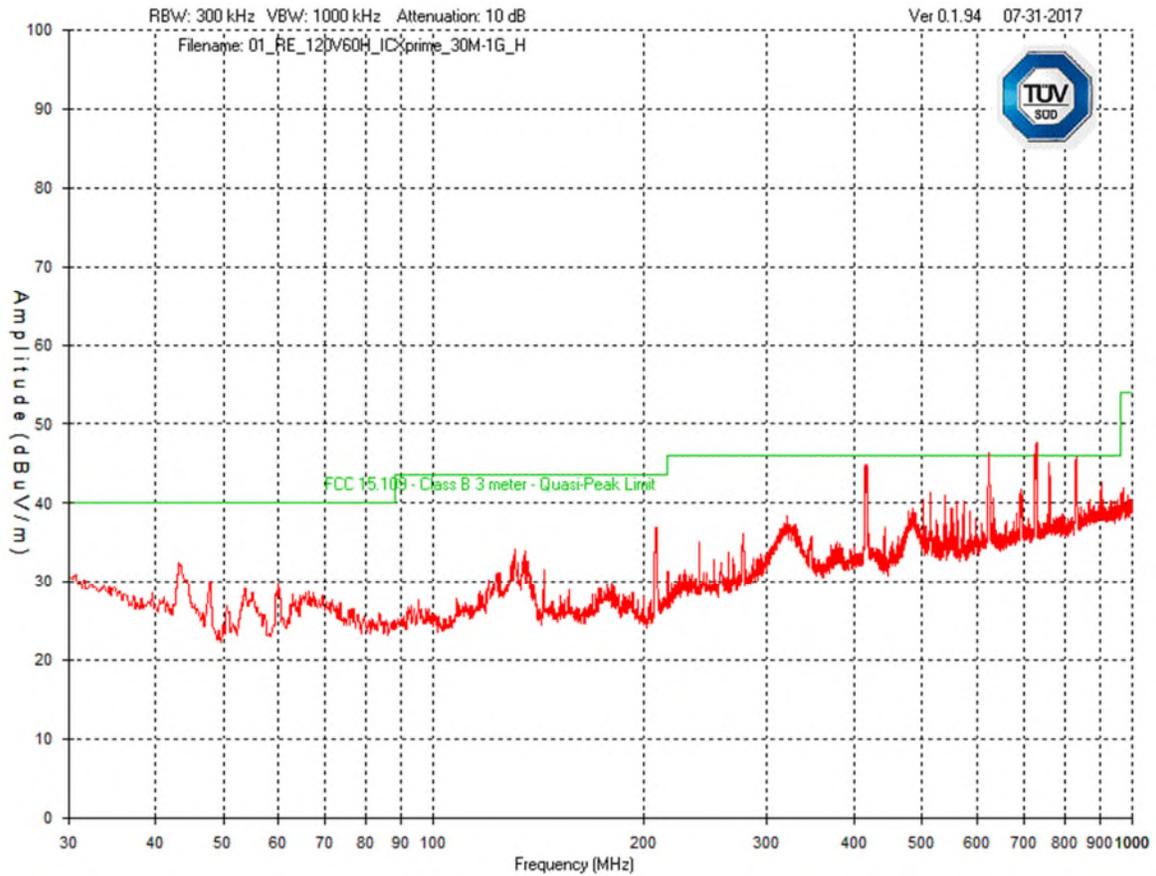
Preliminary Graphs

The graphs shown below are maximized peak measurement graphs measured with a resolution bandwidth greater than or equal to the final required detector over a full 0-360°. This peaking process is done as a worst case measurement and enables the detection of frequencies of concern for final measurement. For final measurements with the appropriate detector, where applicable, please refer to the tables under Final Measurements.

In accordance with FCC Part 15, Subpart A, Section 15.33, the device was scanned to a minimum of a 1 GHz. For devices containing clocks higher than 108 MHz, they were scanned above 1 GHz to meet the requirements of FCC Part 15, Section 15.33.

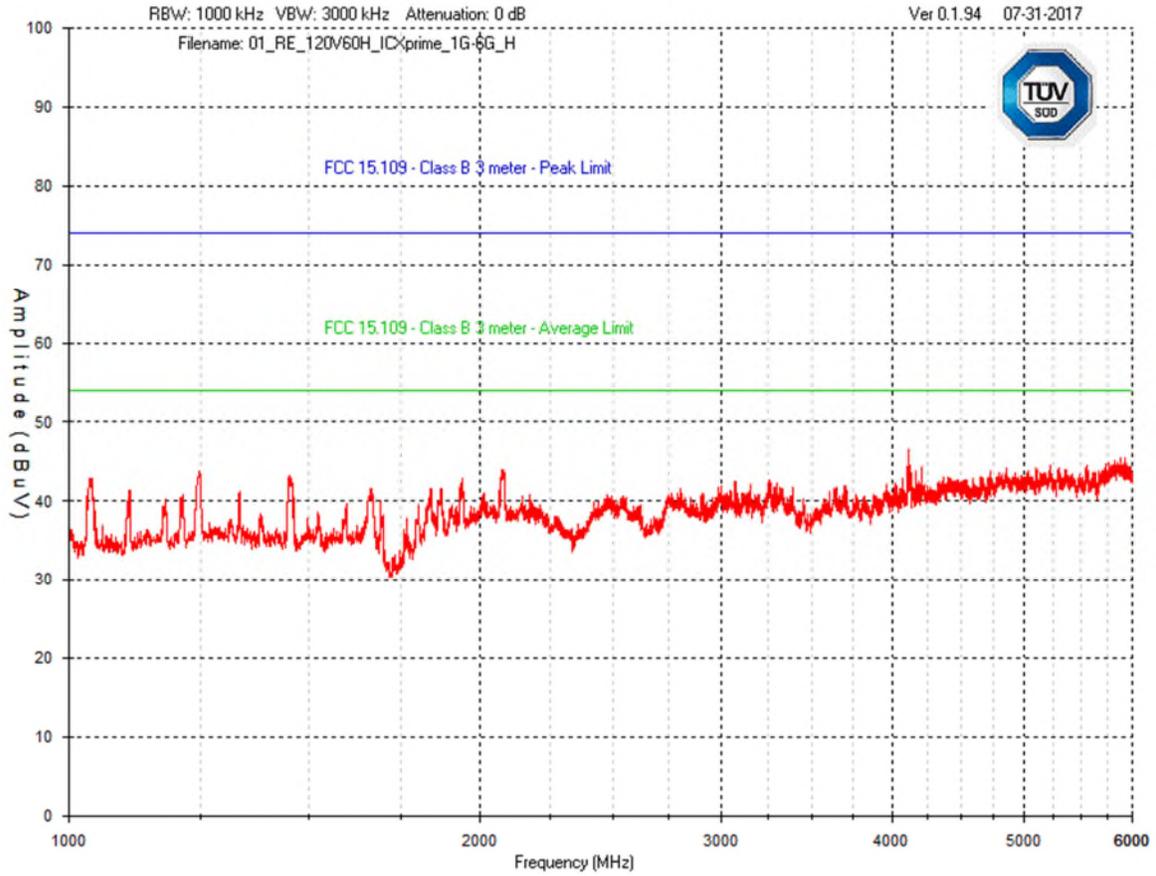
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Horizontal - Peak Emissions Graph – ICX DRE VVPAT
120Vac 60Hz – 30MHz - 1GHz**



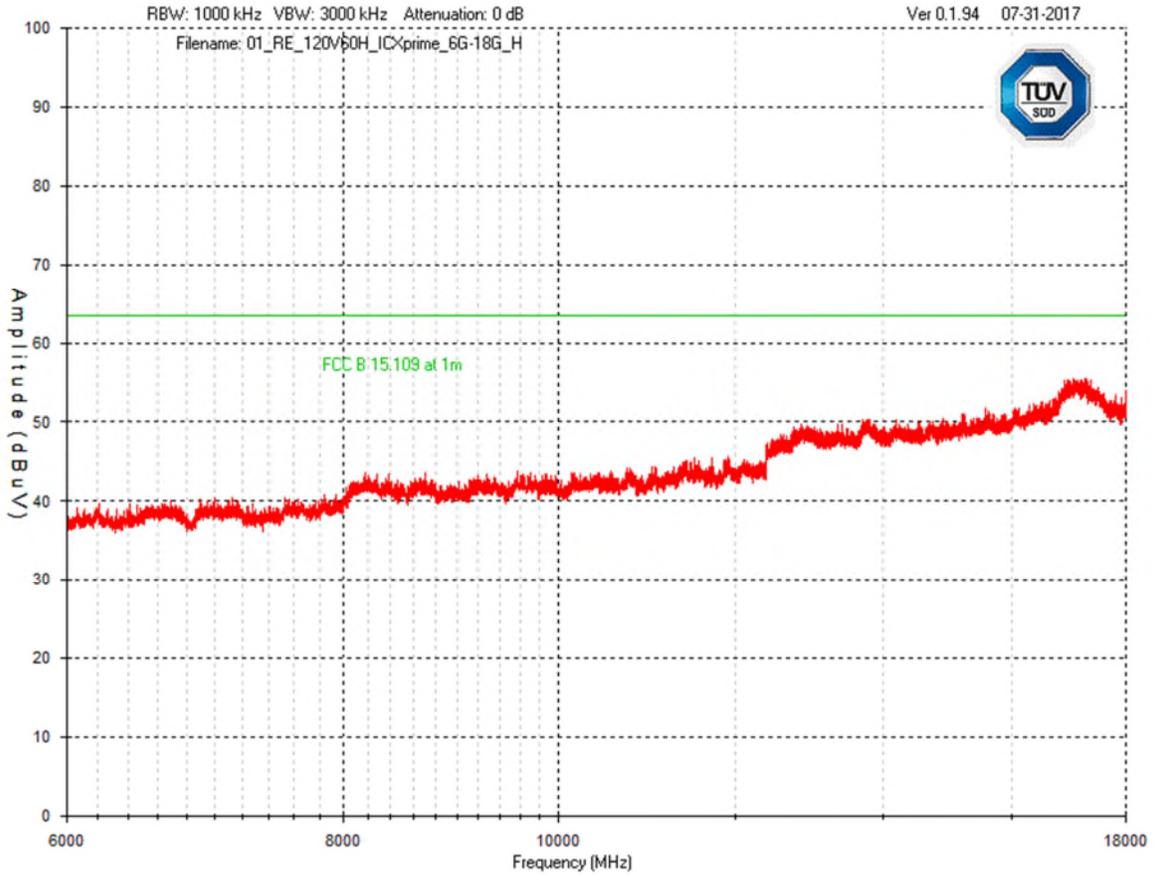
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Horizontal - Peak Emissions Graph - ICX DRE VVPAT
120Vac 60Hz – 1GHz - 6GHz**



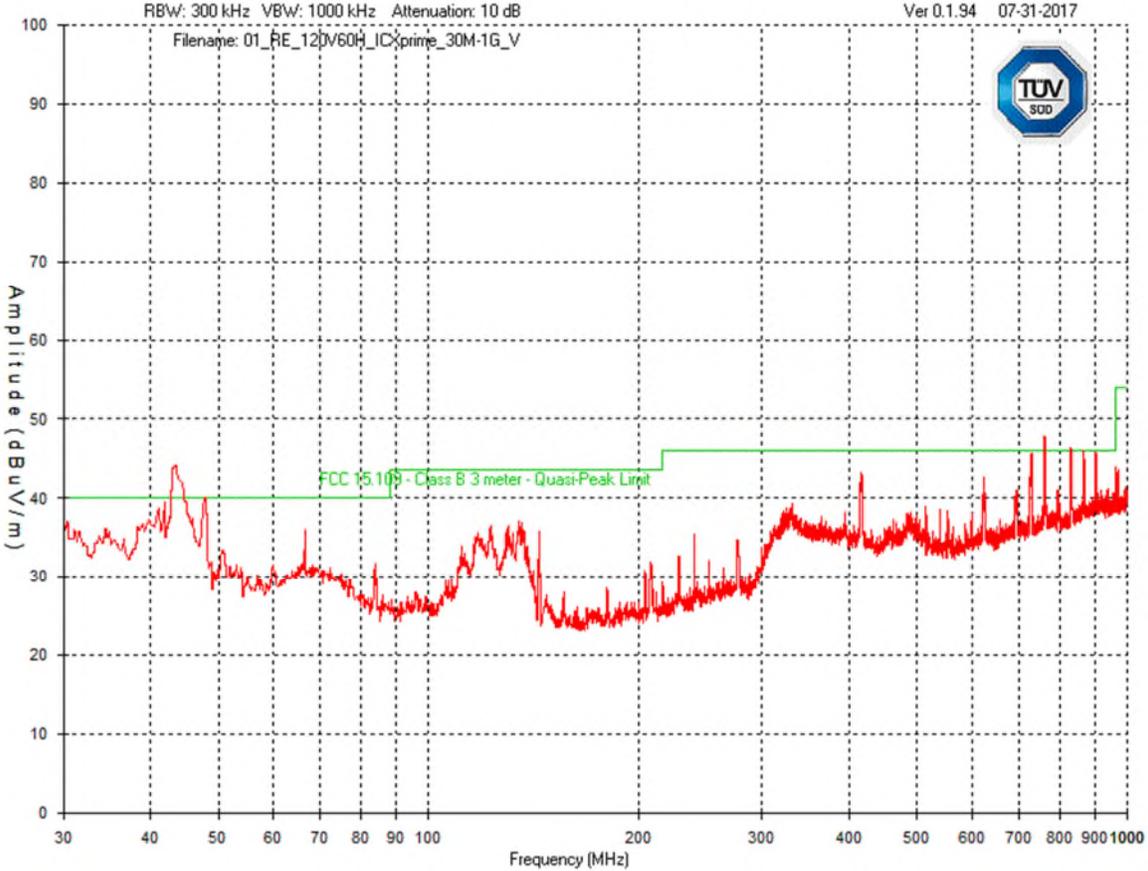
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Horizontal - Peak Emissions Graph - ICX DRE VVPAT
120Vac 60Hz – 6GHz - 18GHz**



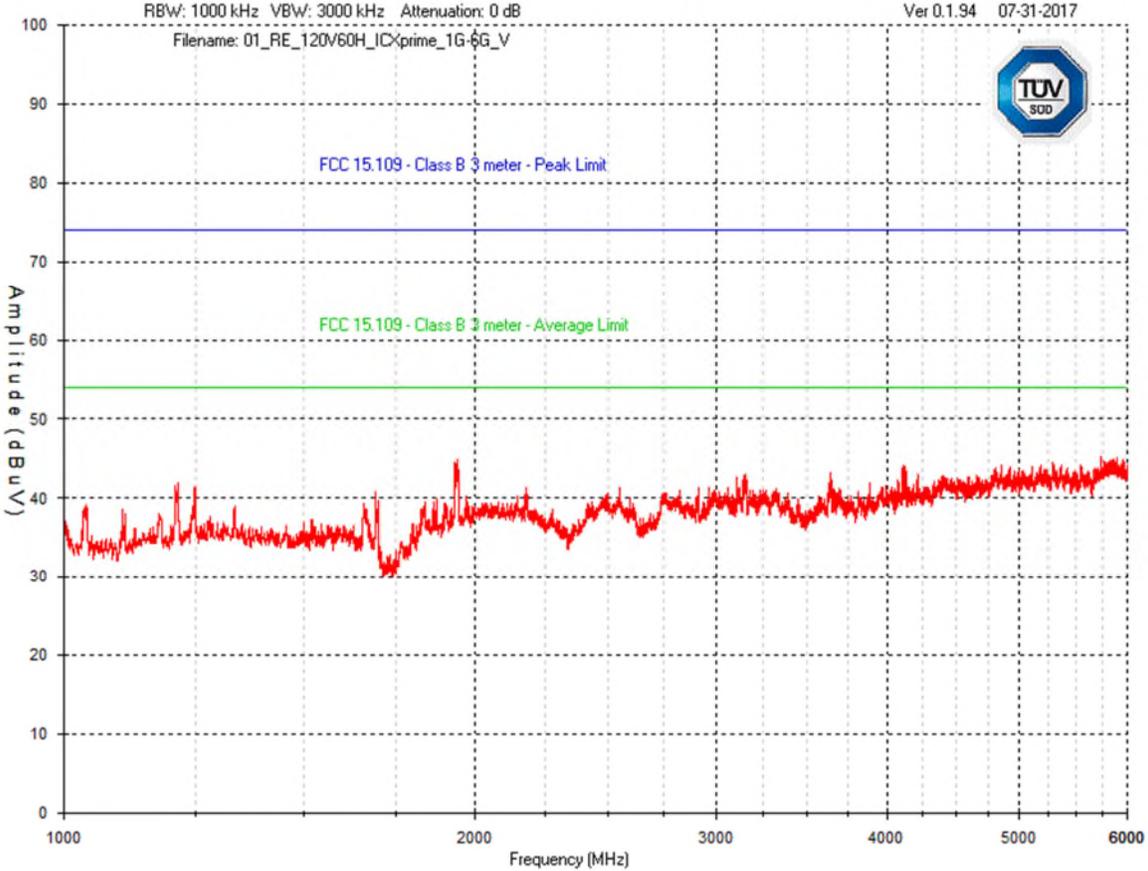
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Vertical - Peak Emissions Graph - ICX DRE VVPAT
120Vac 60Hz – 30MHz - 1GHz**



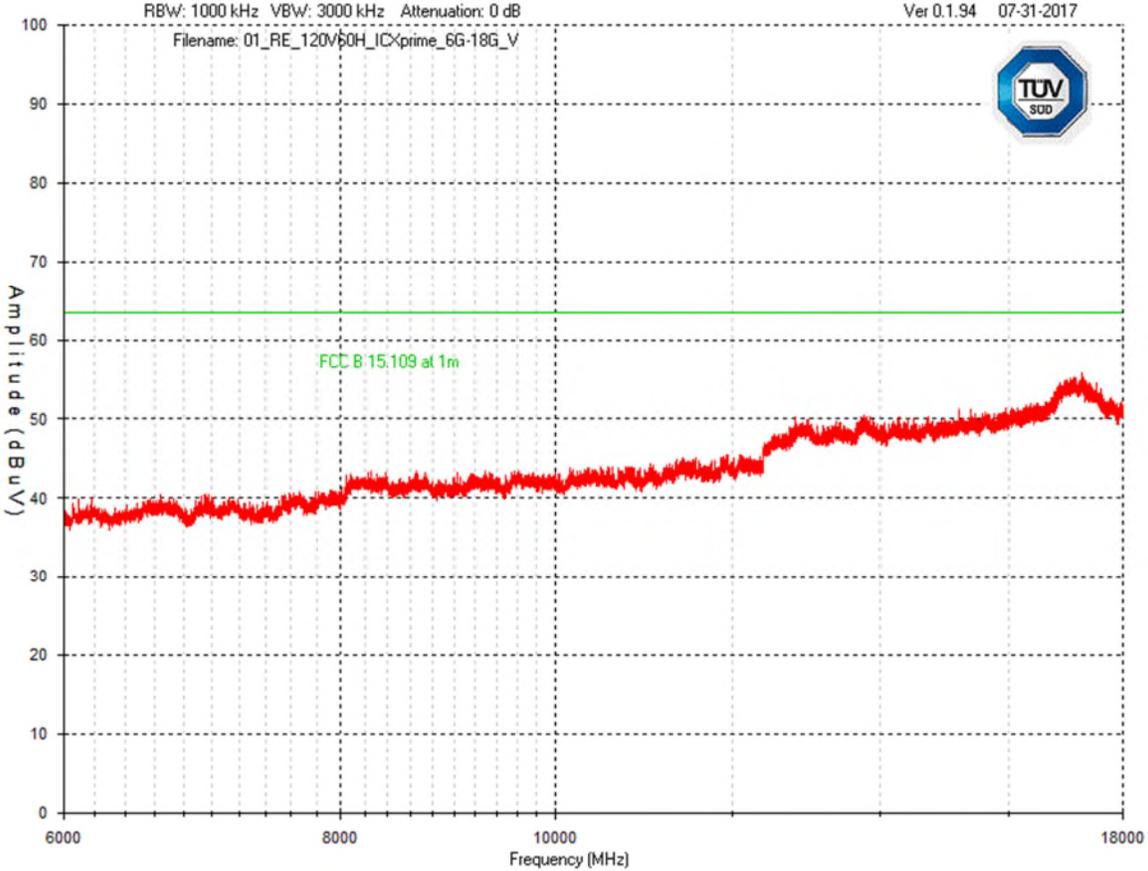
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Vertical - Peak Emissions Graph - ICX DRE VVPAT
120Vac 60Hz – 1GHz - 6GHz**



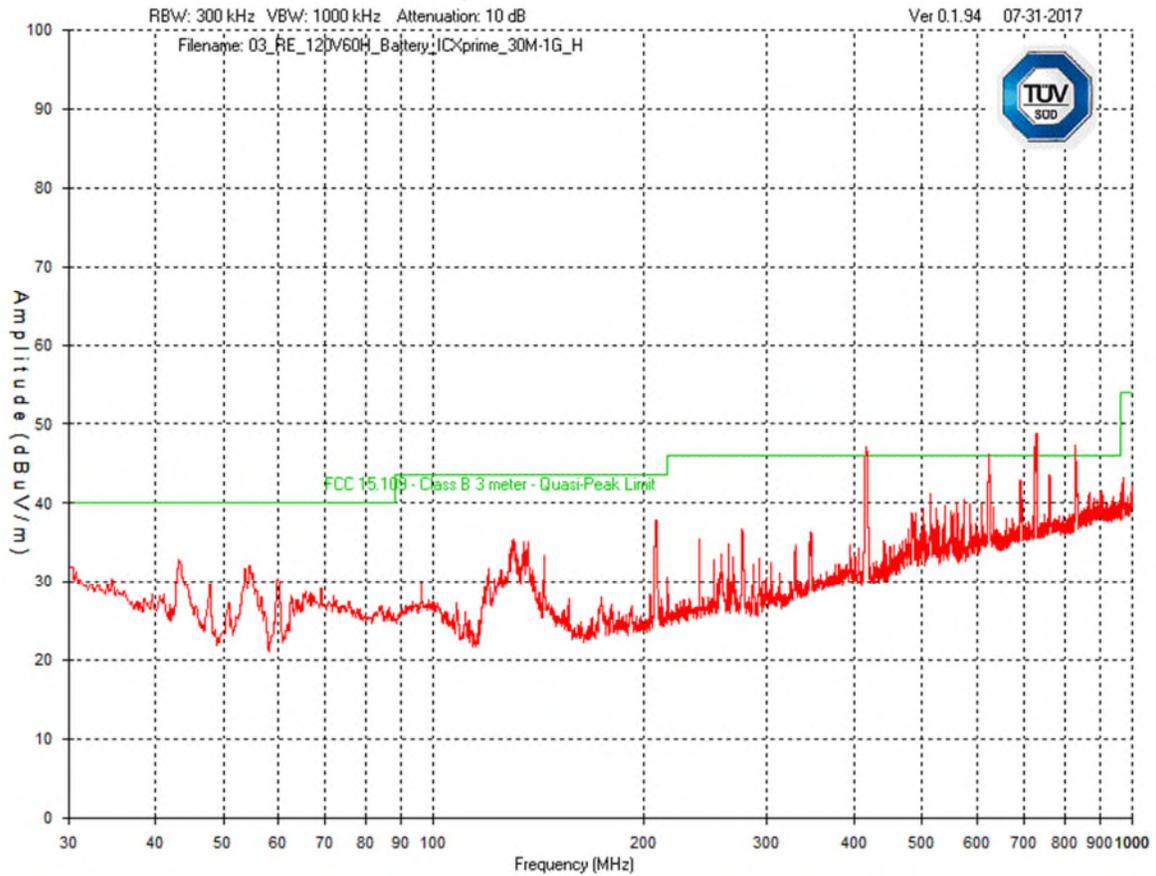
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Vertical - Peak Emissions Graph - ICX DRE VVPAT
120Vac 60Hz – 6GHz - 18GHz**



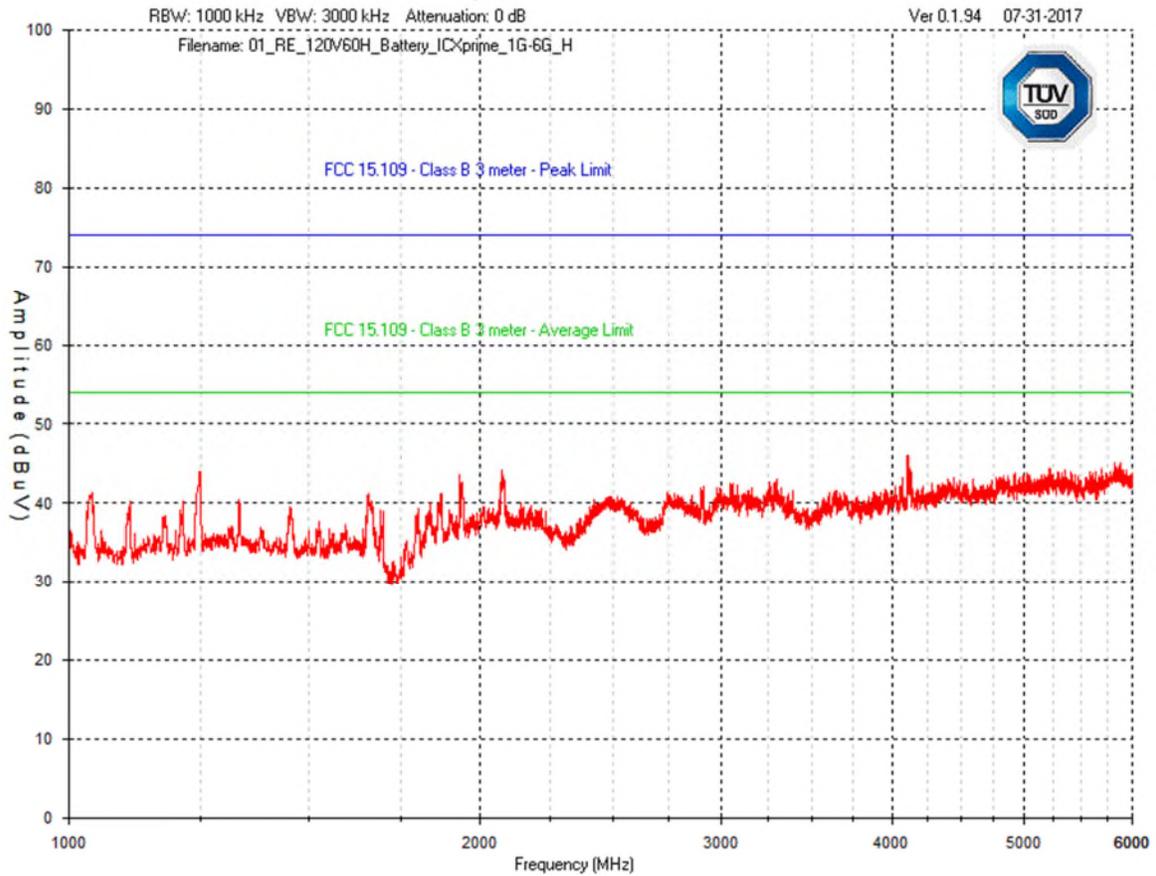
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Horizontal - Peak Emissions Graph – ICX DRE VVPAT Battery Mode – 30MHz - 1GHz



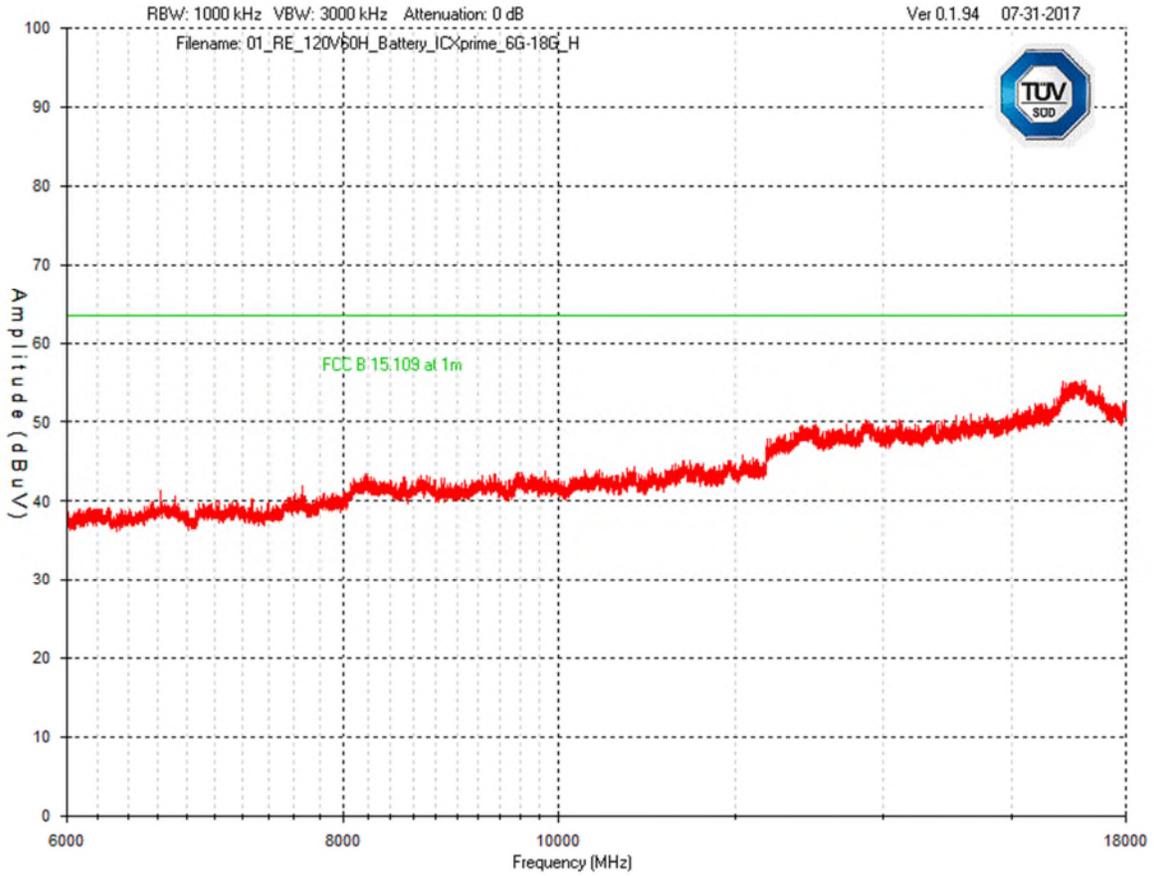
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Horizontal - Peak Emissions Graph - ICX DRE VVPAT
Battery Mode – 1GHz - 6GHz**



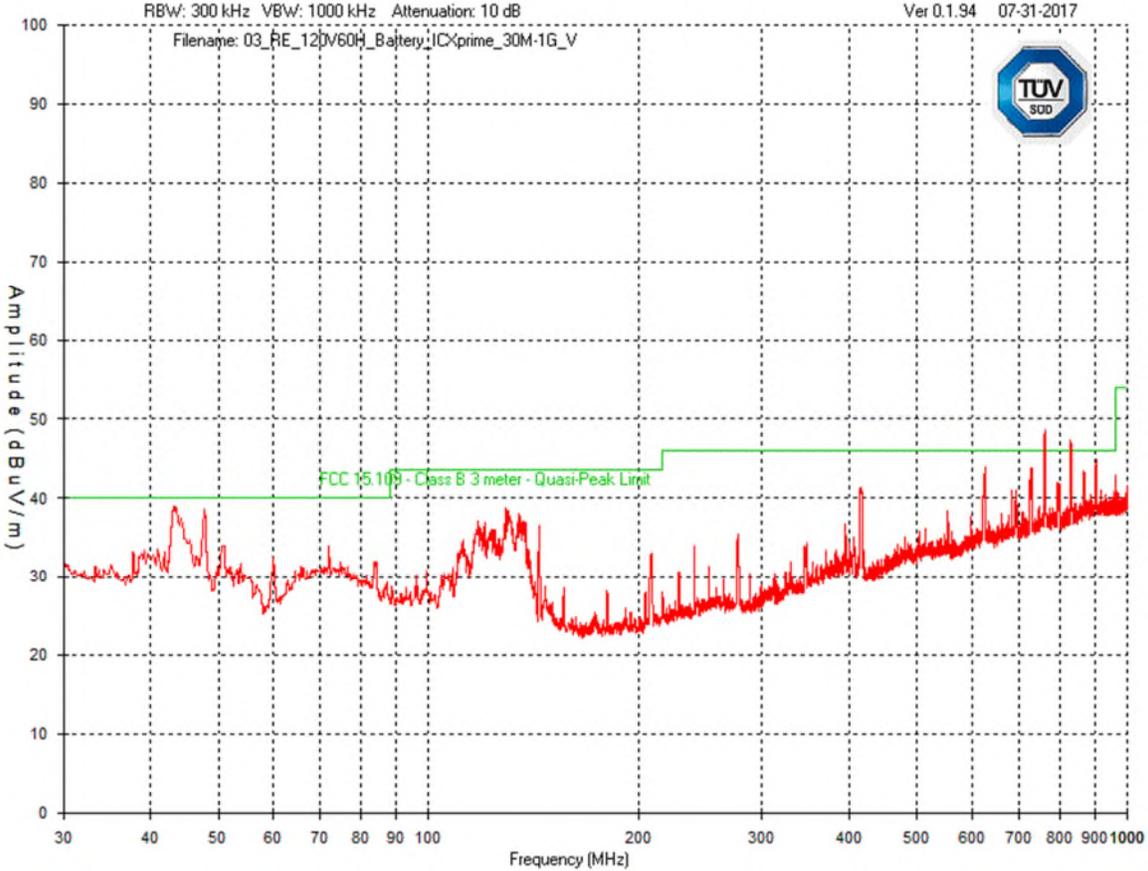
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Horizontal - Peak Emissions Graph - ICX DRE VVPAT
Battery Mode – 6GHz - 18GHz**



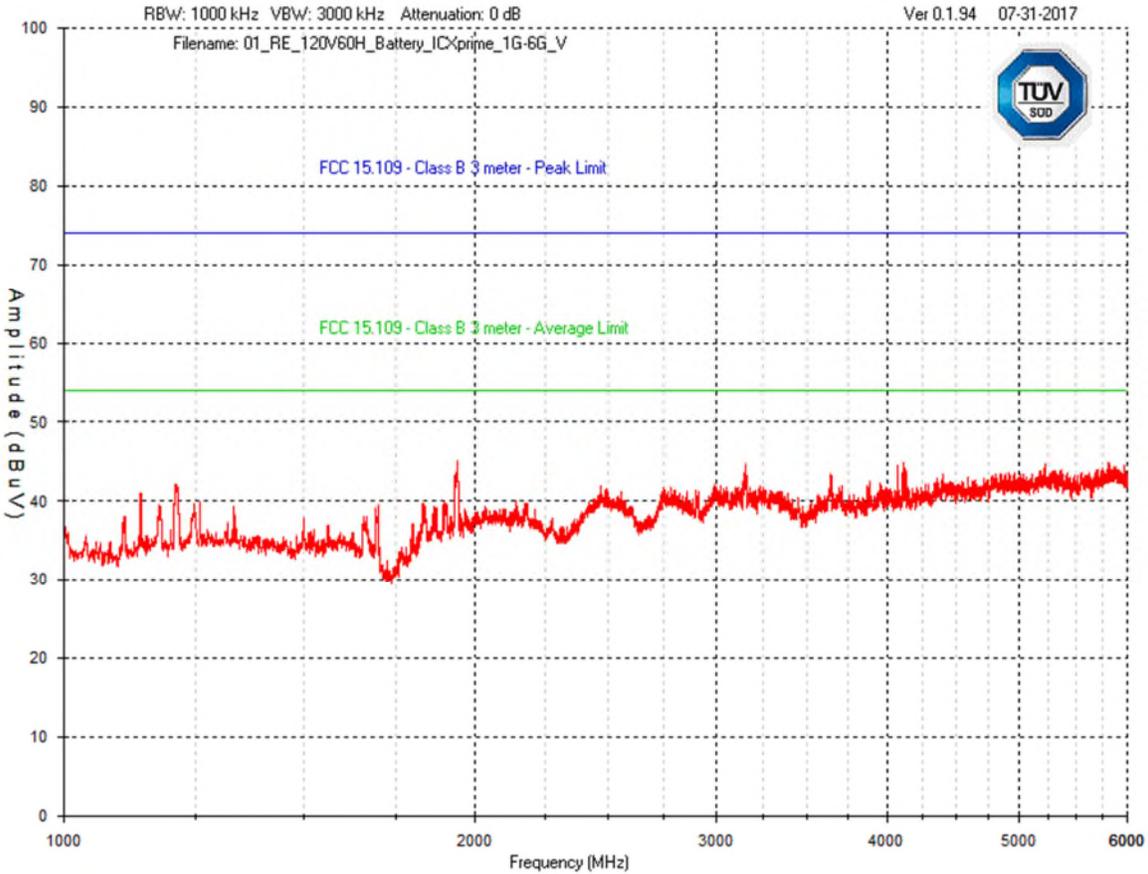
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Vertical - Peak Emissions Graph - ICX DRE VVPAT
Battery Mode – 30MHz - 1GHz**



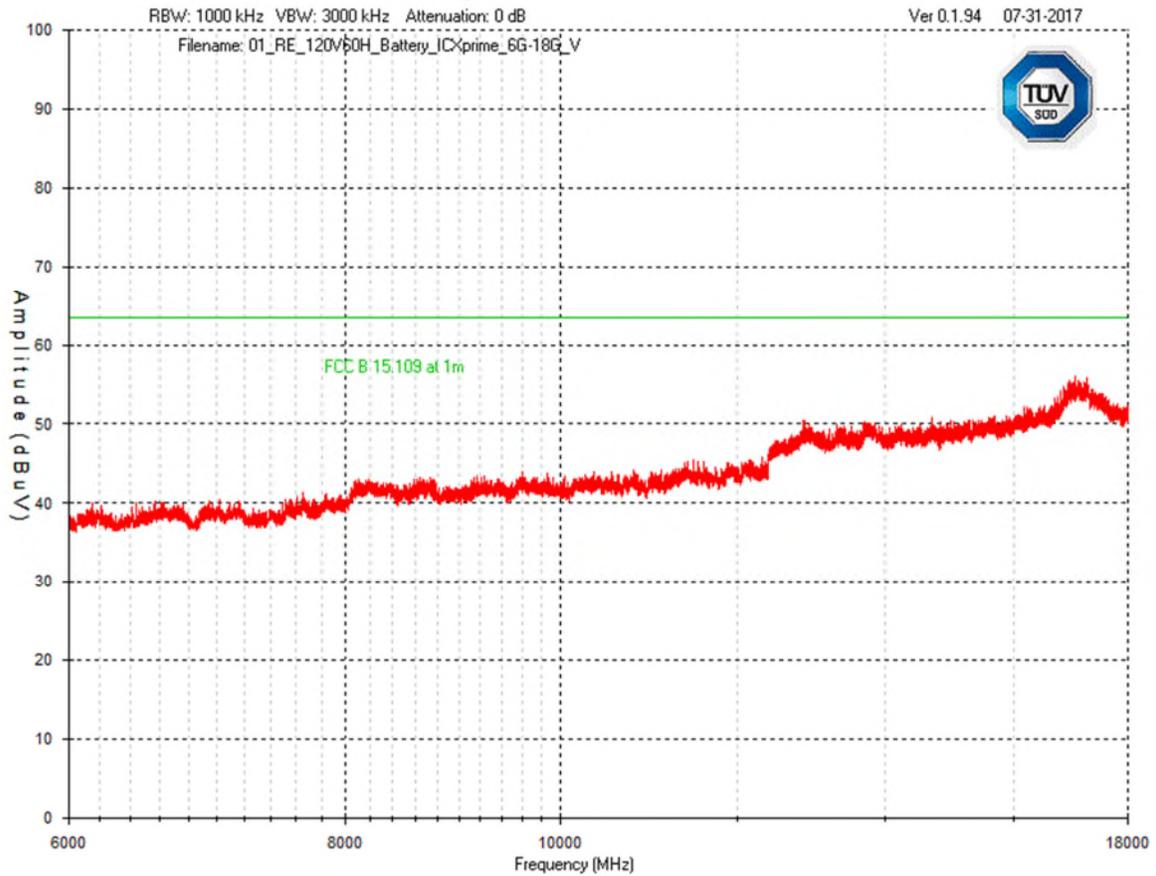
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Vertical - Peak Emissions Graph - ICX DRE VVPAT
Battery Mode – 1GHz - 6GHz**



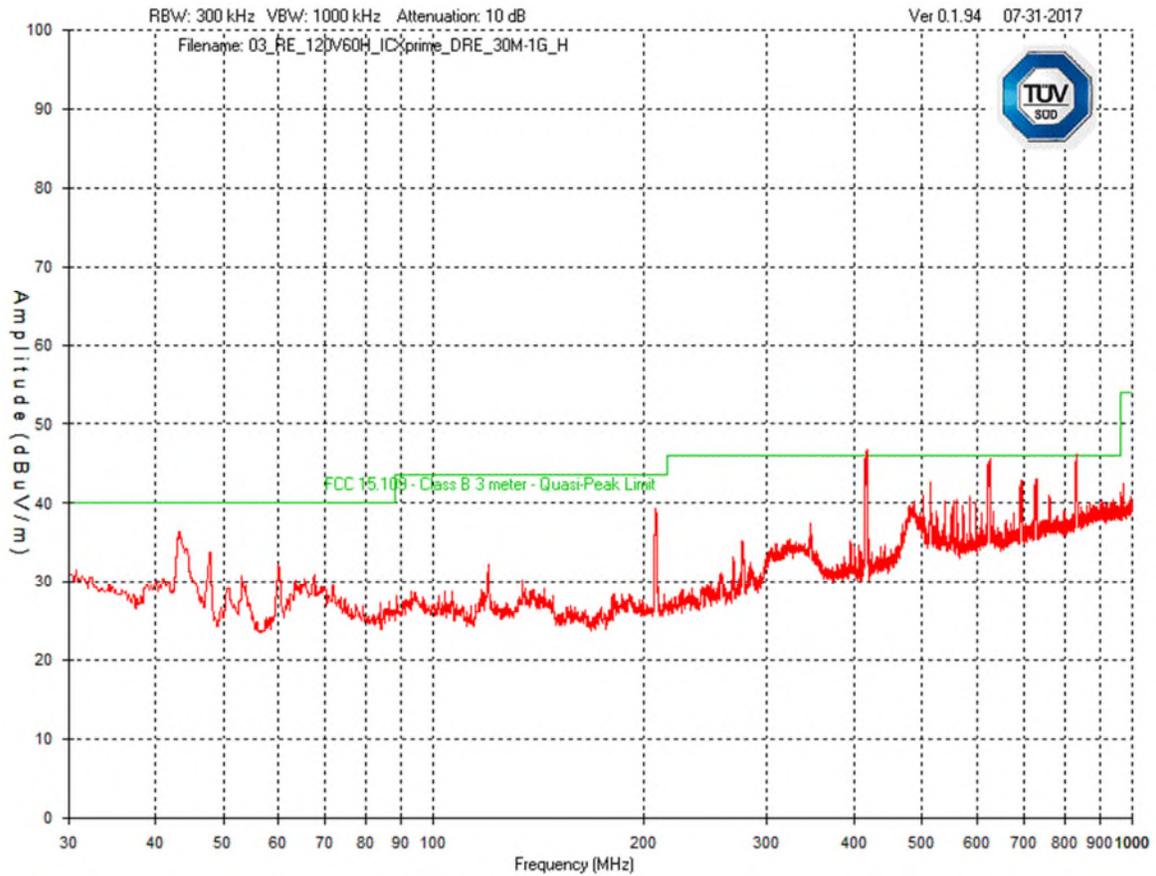
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Vertical - Peak Emissions Graph - ICX DRE VVPAT
Battery Mode – 6GHz - 18GHz**



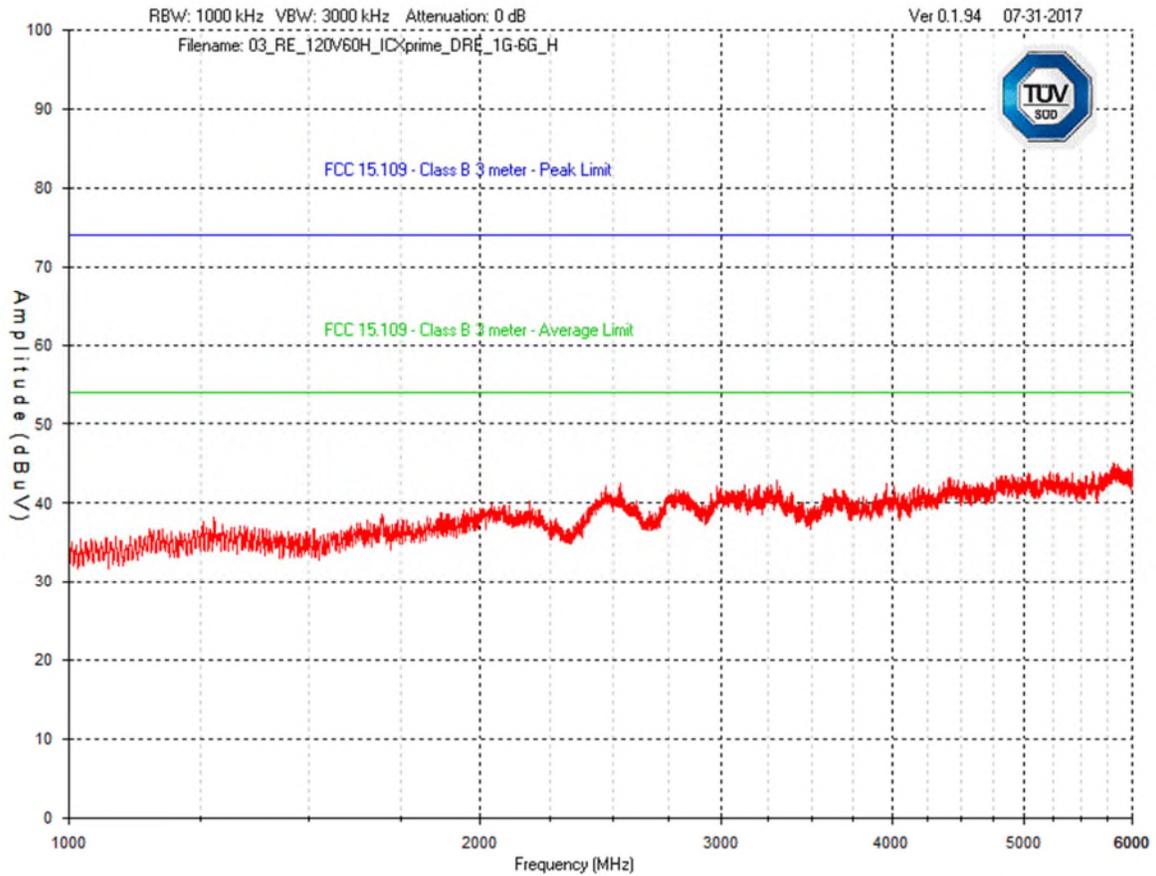
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Horizontal - Peak Emissions Graph – ICX DRE Report Printer
120Vac 60Hz – 30MHz - 1GHz**



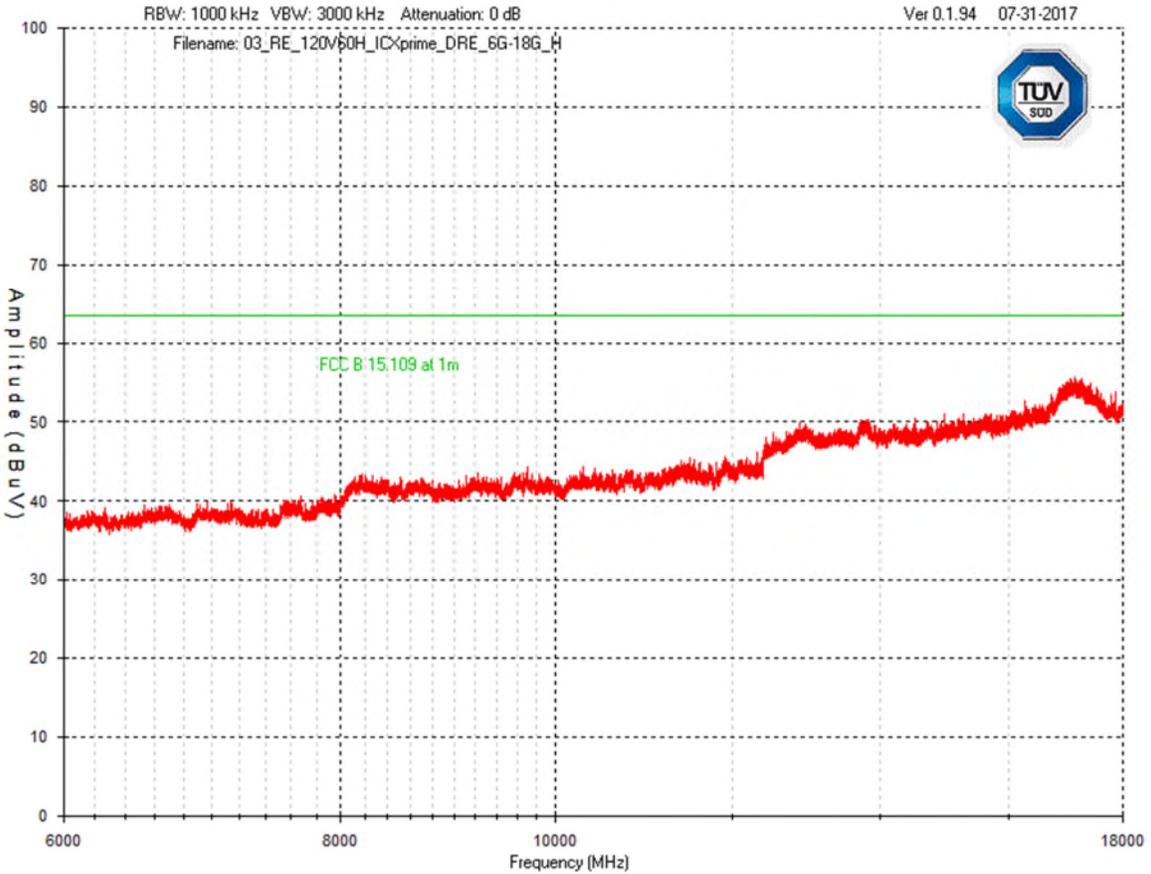
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Horizontal - Peak Emissions Graph - ICX DRE Report Printer
120Vac 60Hz – 1GHz - 6GHz**



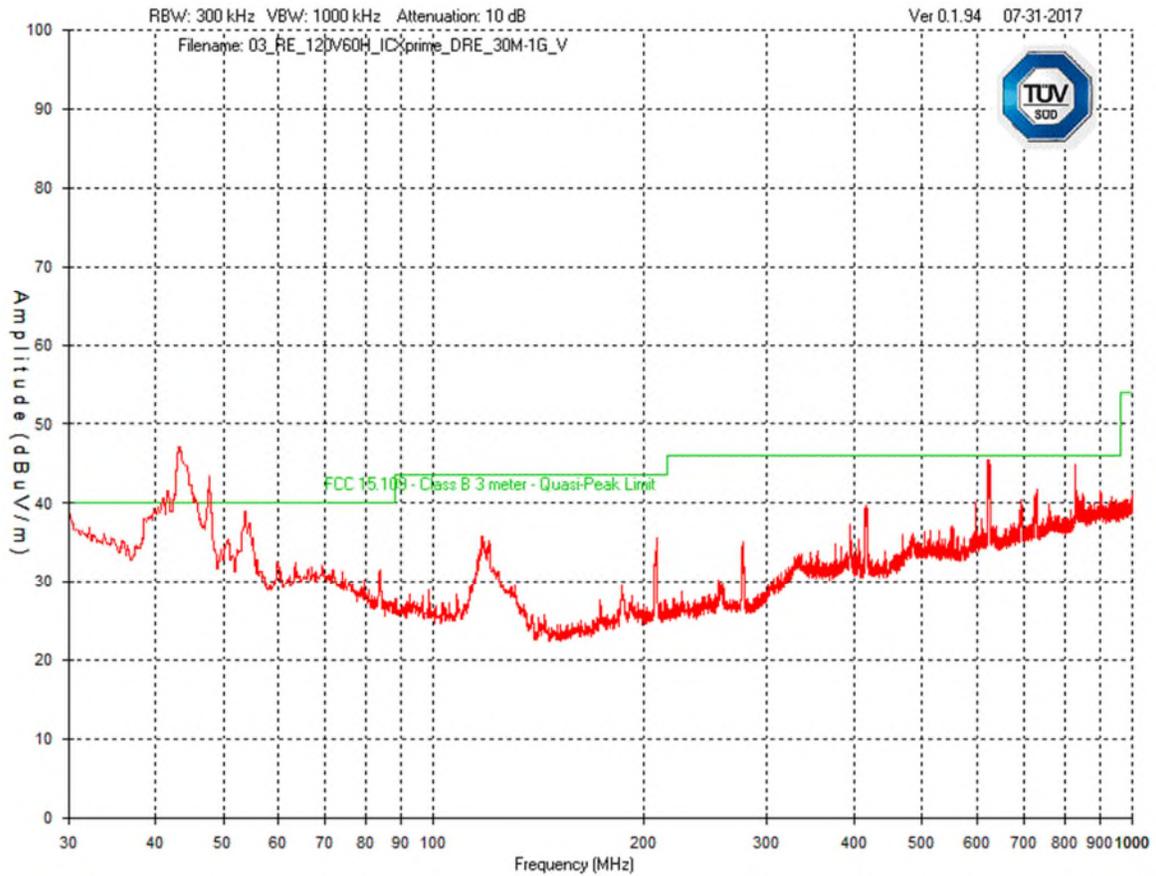
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Horizontal - Peak Emissions Graph - ICX DRE Report Printer
120Vac 60Hz – 6GHz - 18GHz**



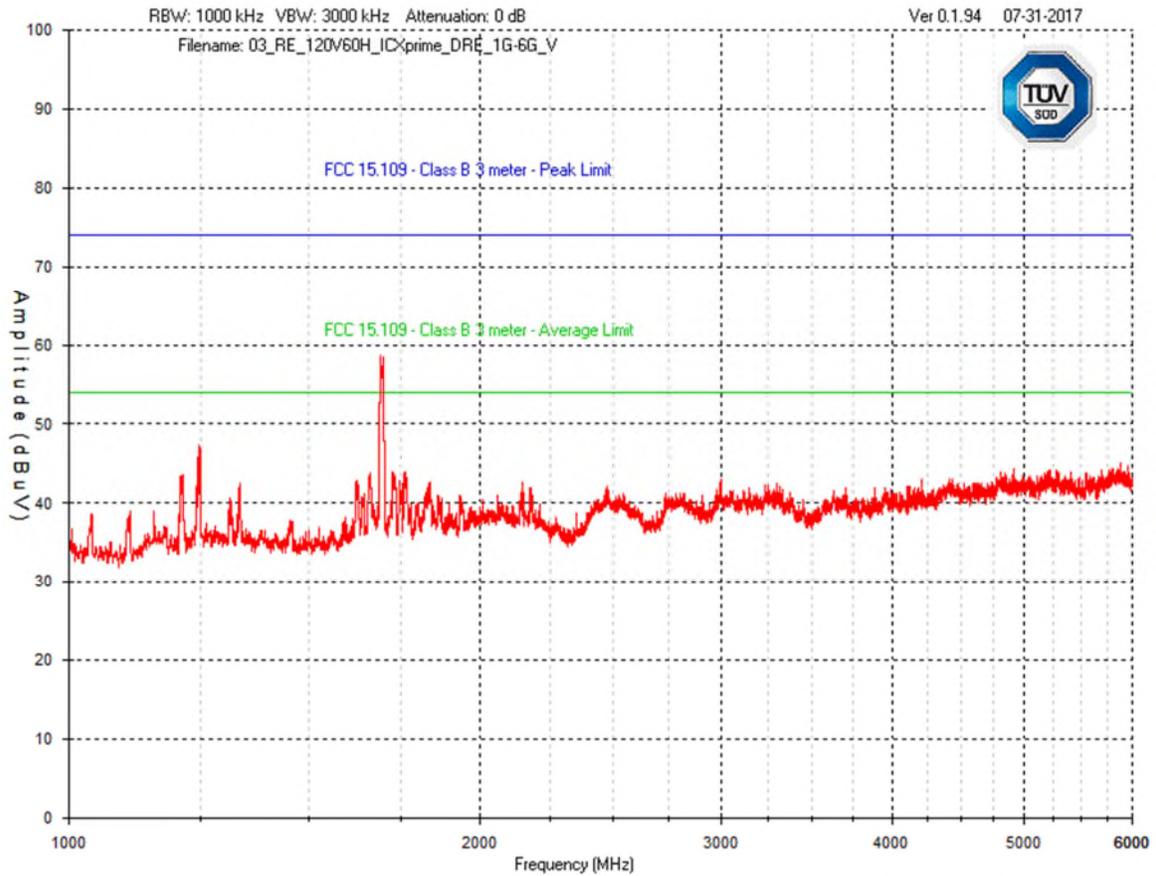
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Vertical - Peak Emissions Graph - ICX DRE Report Printer
120Vac 60Hz – 30MHz - 1GHz**



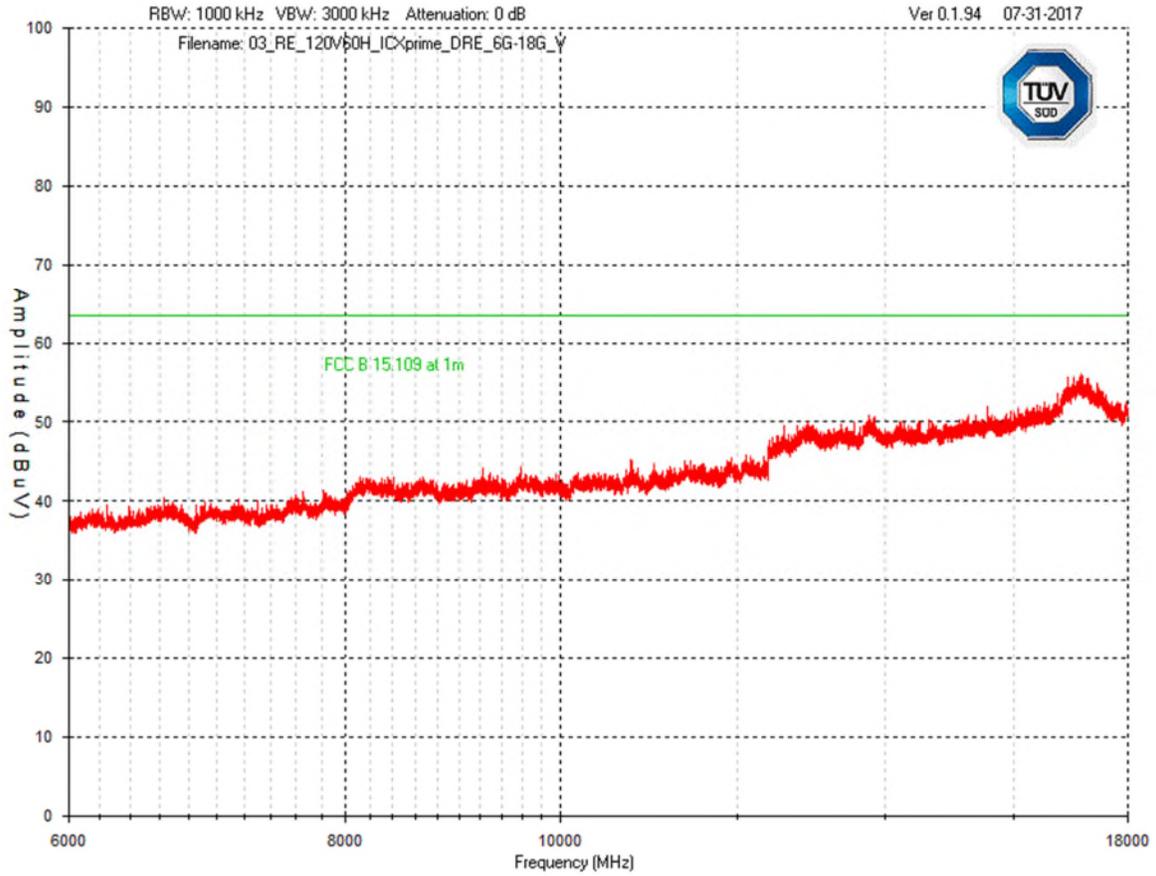
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Vertical - Peak Emissions Graph - ICX DRE Report Printer
120Vac 60Hz – 1GHz - 6GHz**



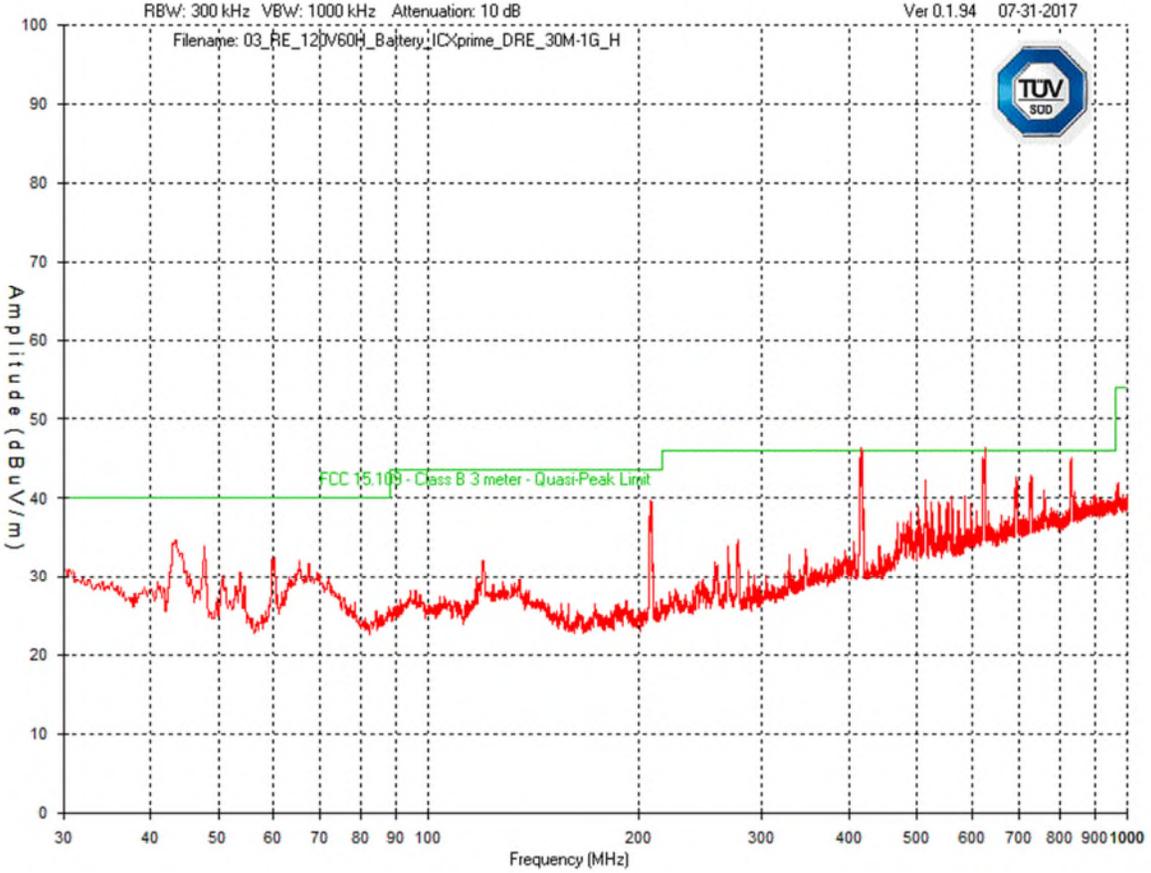
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Vertical - Peak Emissions Graph - ICX DRE Report Printer
120Vac 60Hz – 6GHz - 18GHz**



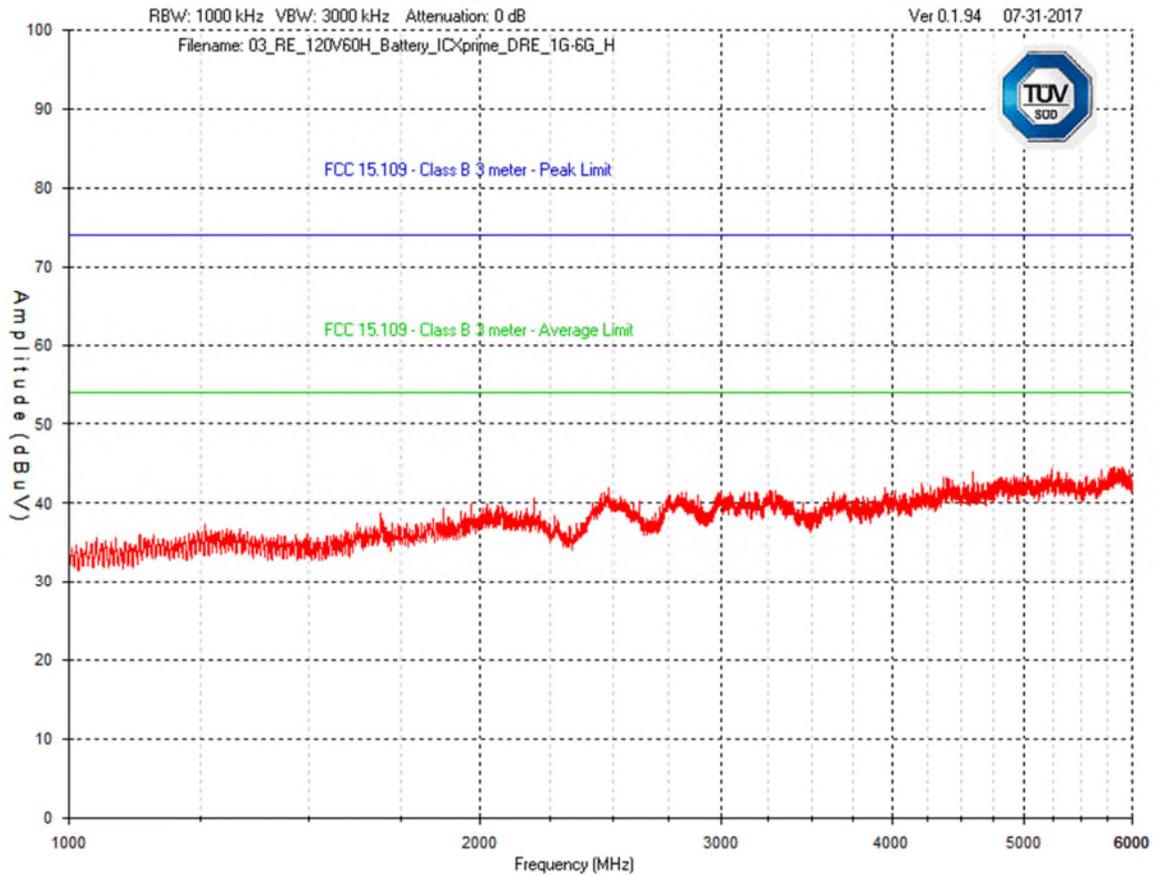
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Horizontal - Peak Emissions Graph – ICX DRE Report Printer
Battery Mode – 30MHz - 1GHz**



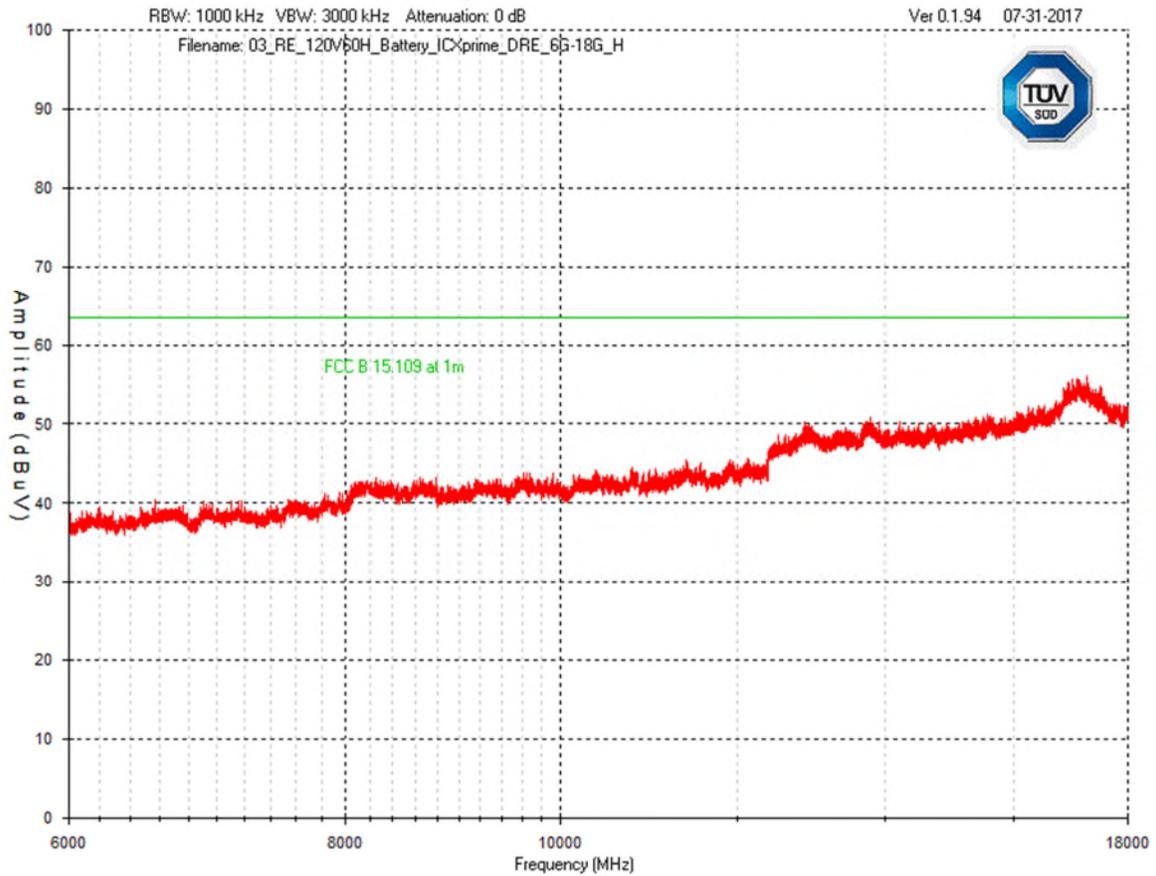
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Horizontal - Peak Emissions Graph - ICX DRE Report Printer
Battery Mode – 1GHz - 6GHz**



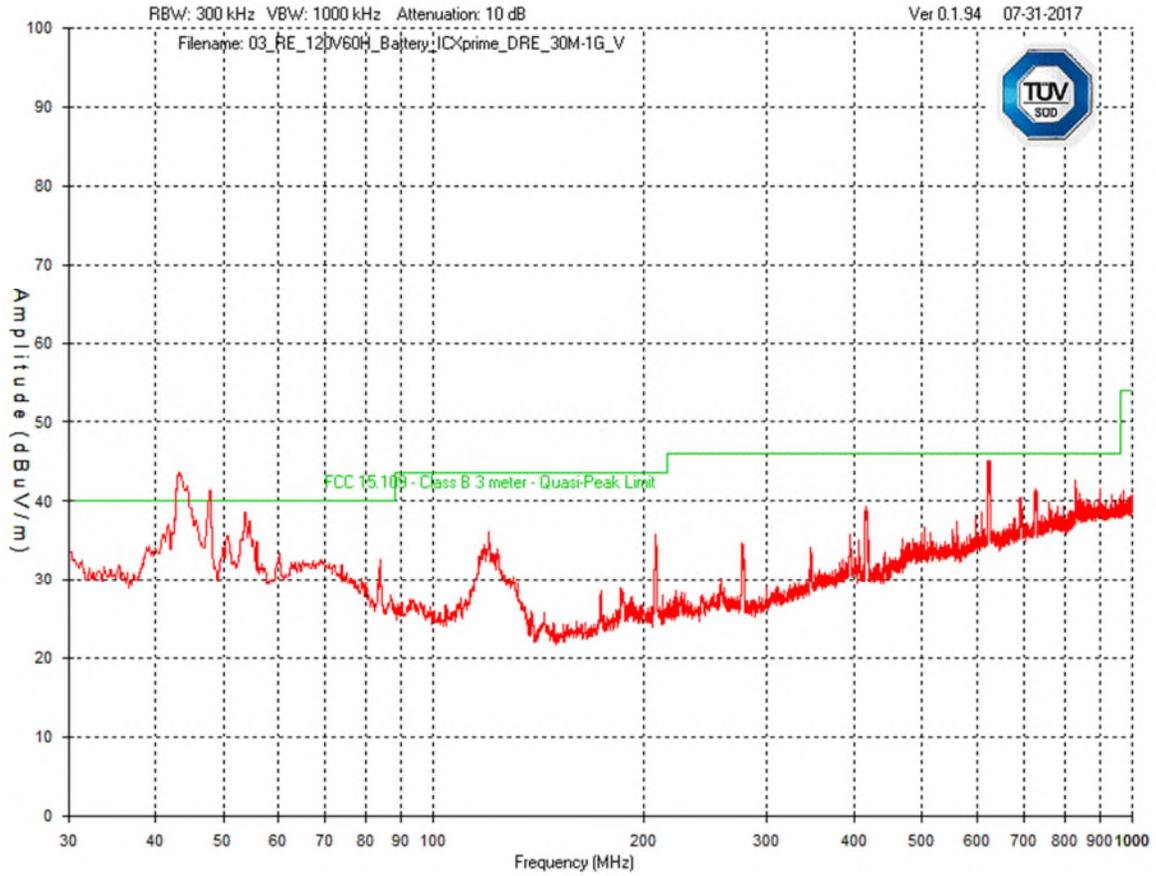
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Horizontal - Peak Emissions Graph - ICX DRE Report Printer
Battery Mode – 6GHz - 18GHz**



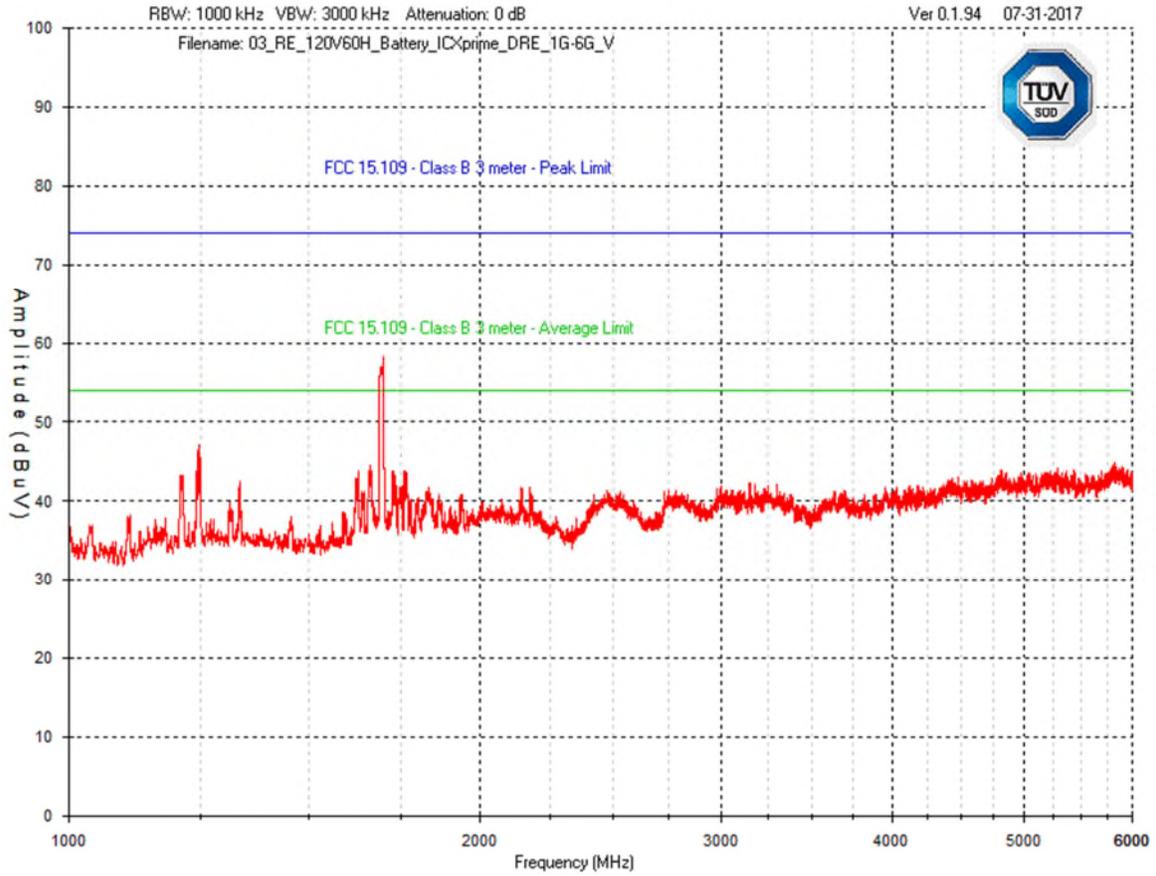
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Vertical - Peak Emissions Graph - ICX DRE Report Printer
Battery Mode – 30MHz - 1GHz**



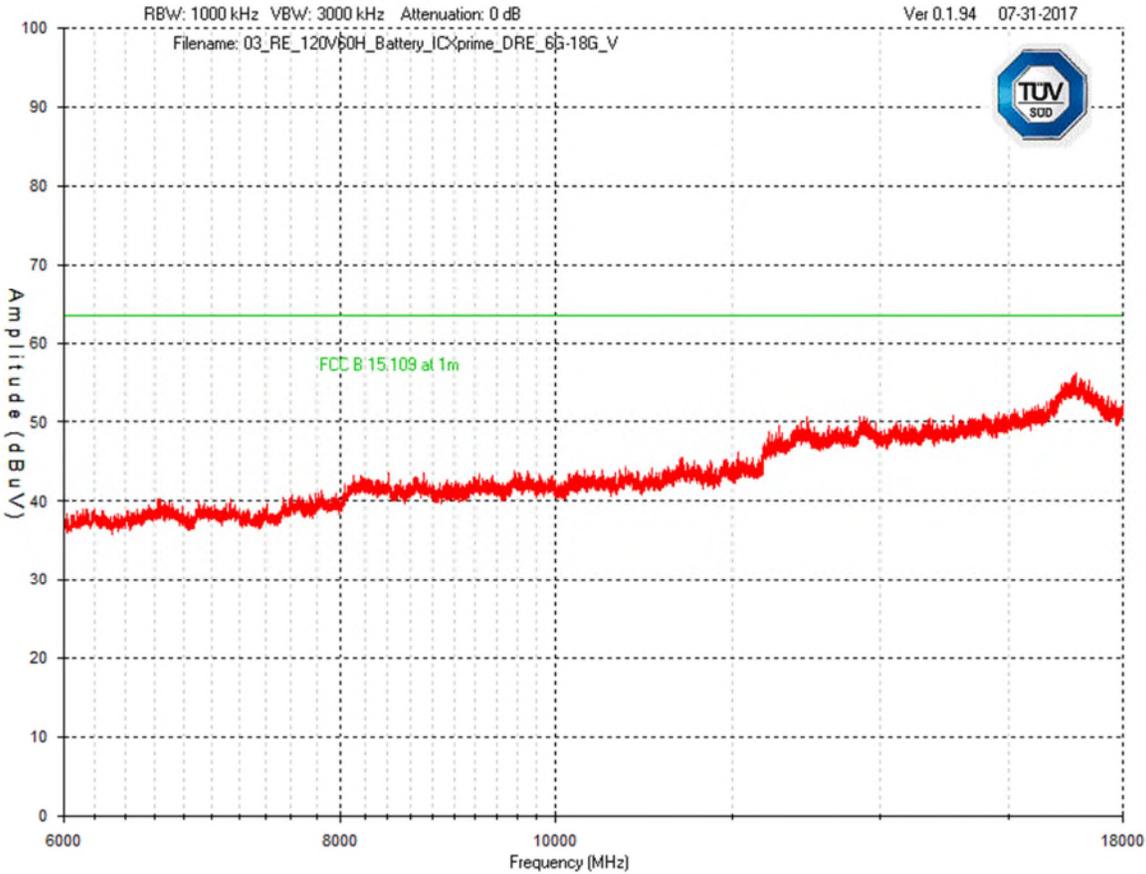
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Vertical - Peak Emissions Graph - ICX DRE Report Printer
Battery Mode – 1GHz - 6GHz**



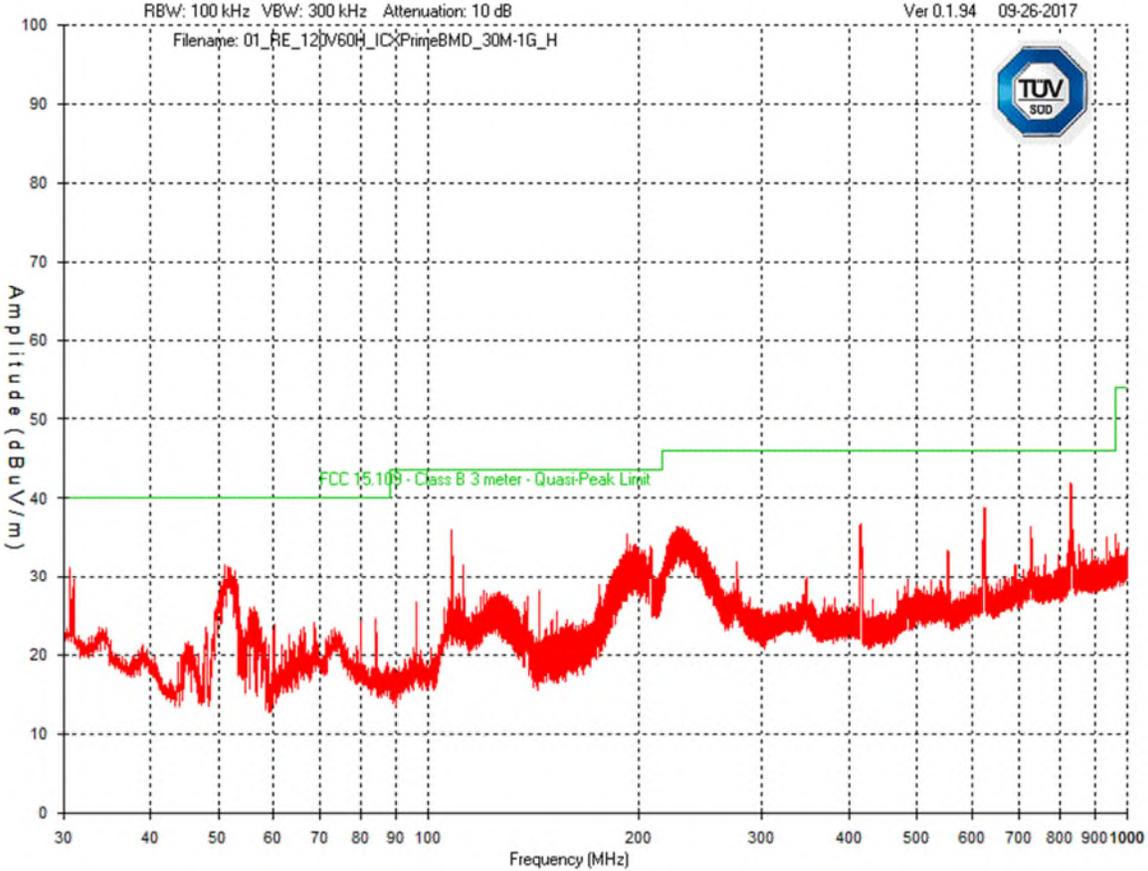
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Vertical - Peak Emissions Graph - ICX DRE Report Printer
Battery Mode – 6GHz - 18GHz**



| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

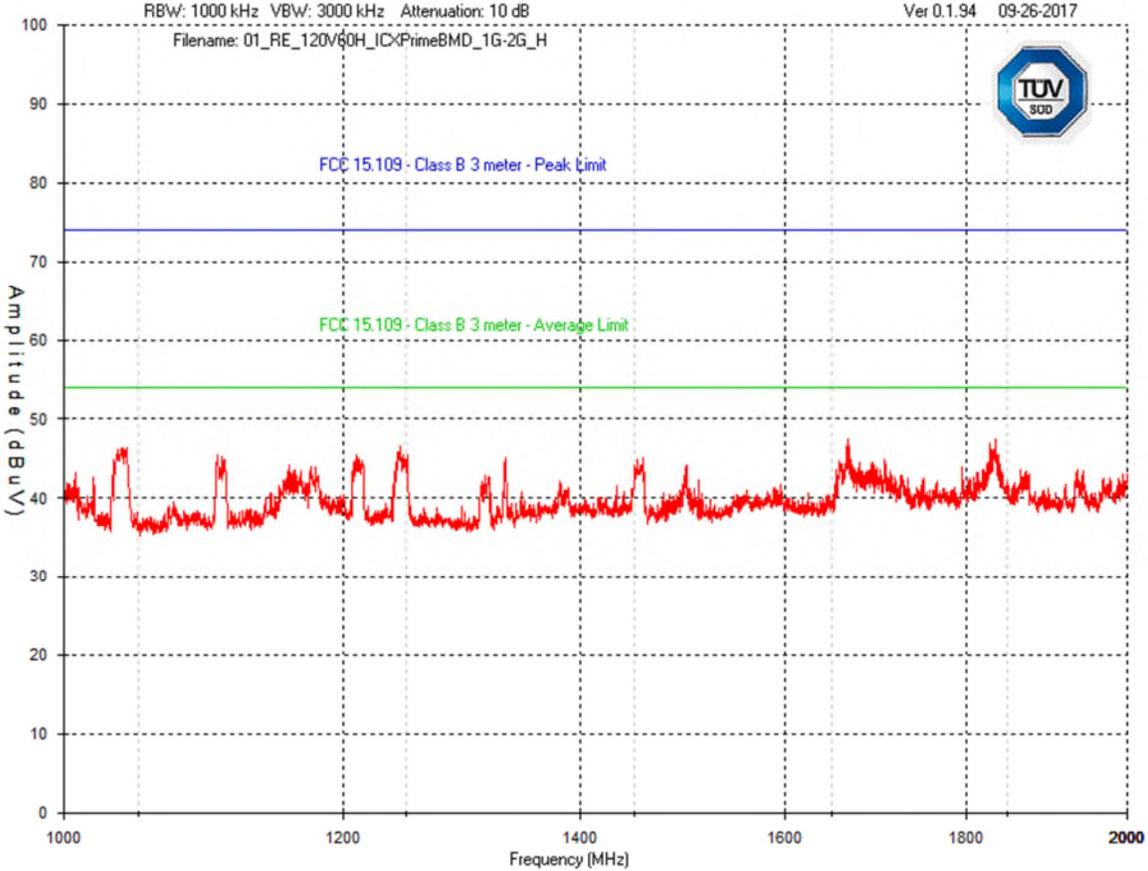
Horizontal - Peak Emissions Graph - ICX BMD
120Vac 60Hz – 30MHz - 1GHz



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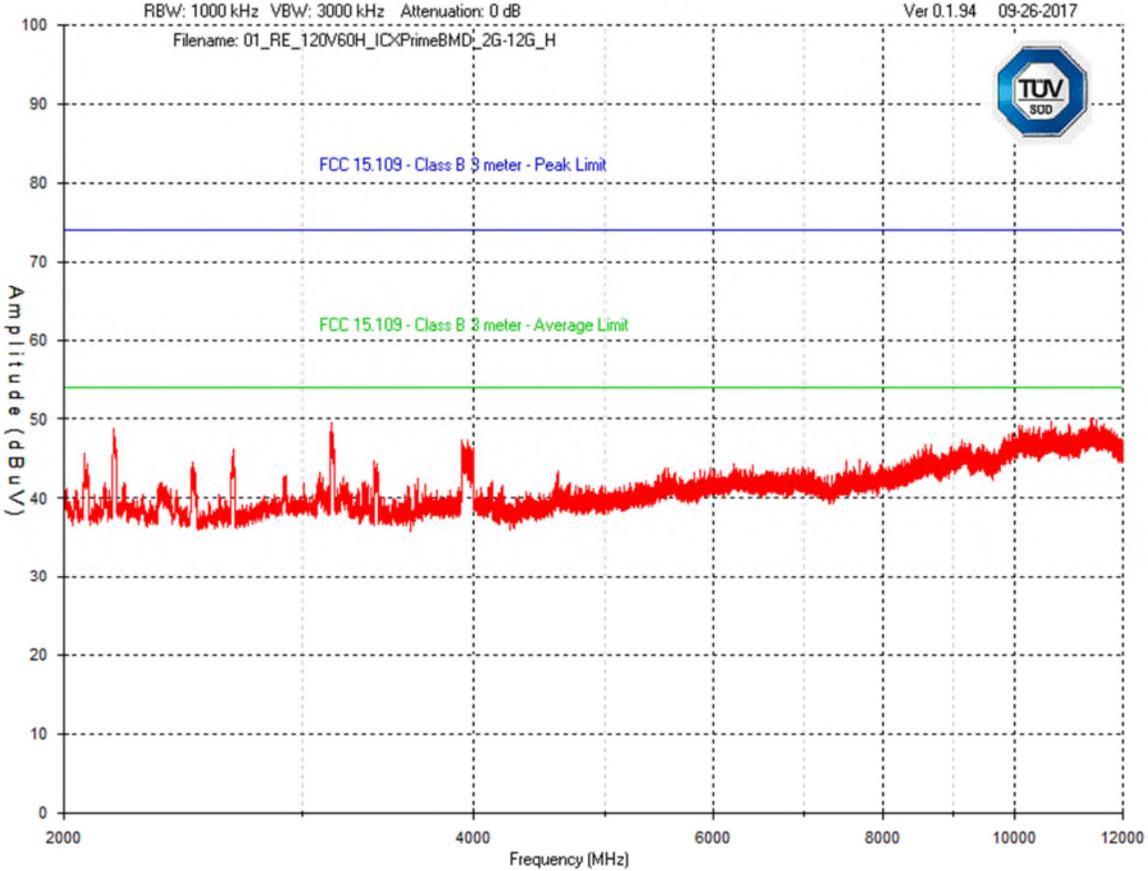
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Horizontal - Peak Emissions Graph - ICX BMD
120Vac 60Hz – 1GHz - 2GHz



| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

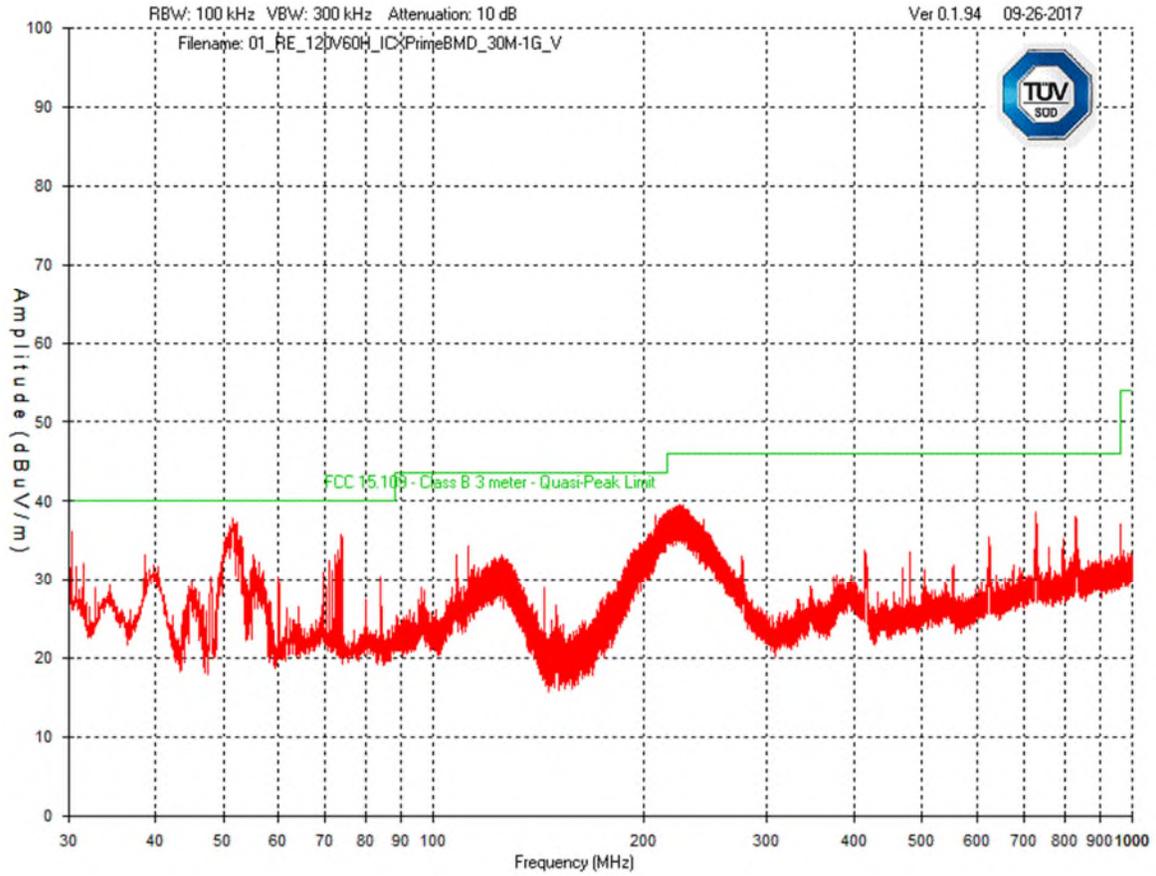
Horizontal - Peak Emissions Graph - ICX BMD
120Vac 60Hz – 2GHz - 12GHz



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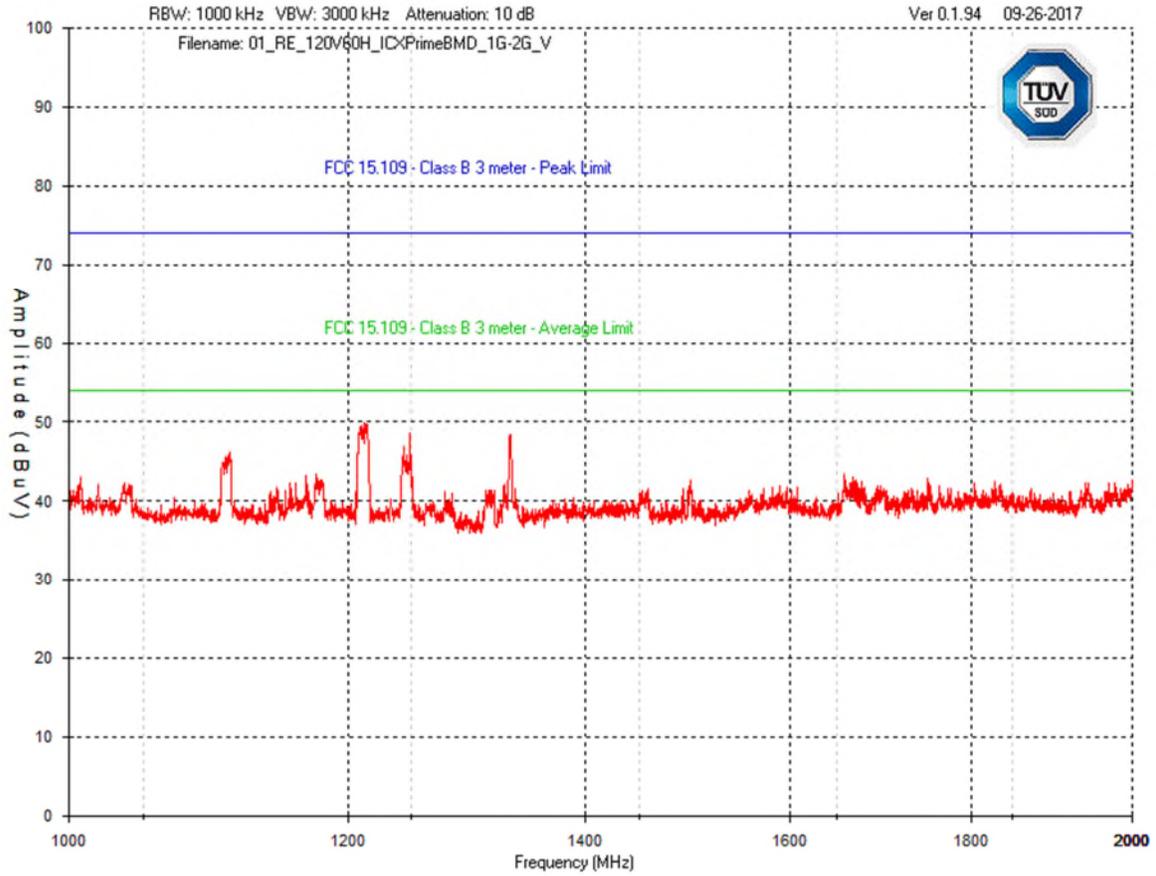
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Vertical - Peak Emissions Graph - ICX BMD
120Vac 60Hz – 30MHz - 1GHz**



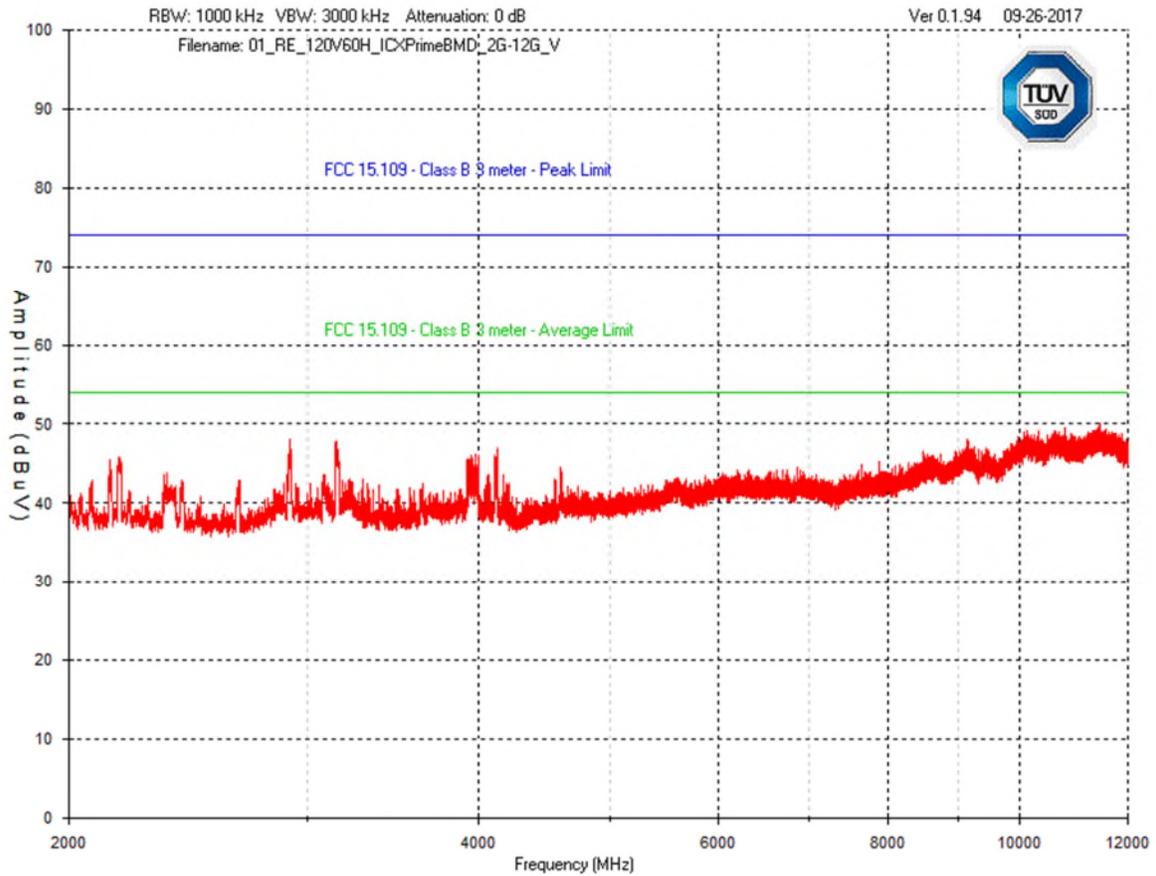
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Vertical - Peak Emissions Graph - ICX BMD
120Vac 60Hz – 1GHz - 2GHz



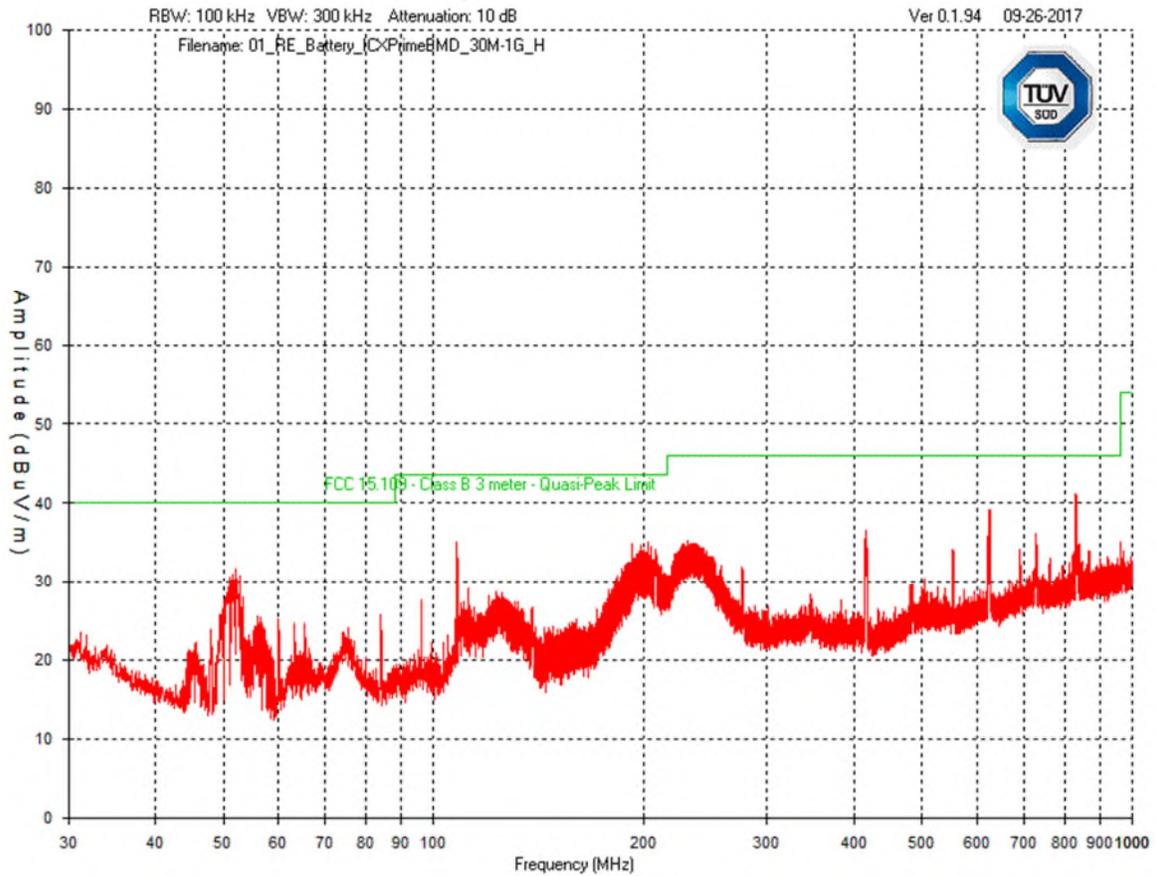
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Vertical - Peak Emissions Graph - ICX BMD
120Vac 60Hz – 2GHz - 12GHz



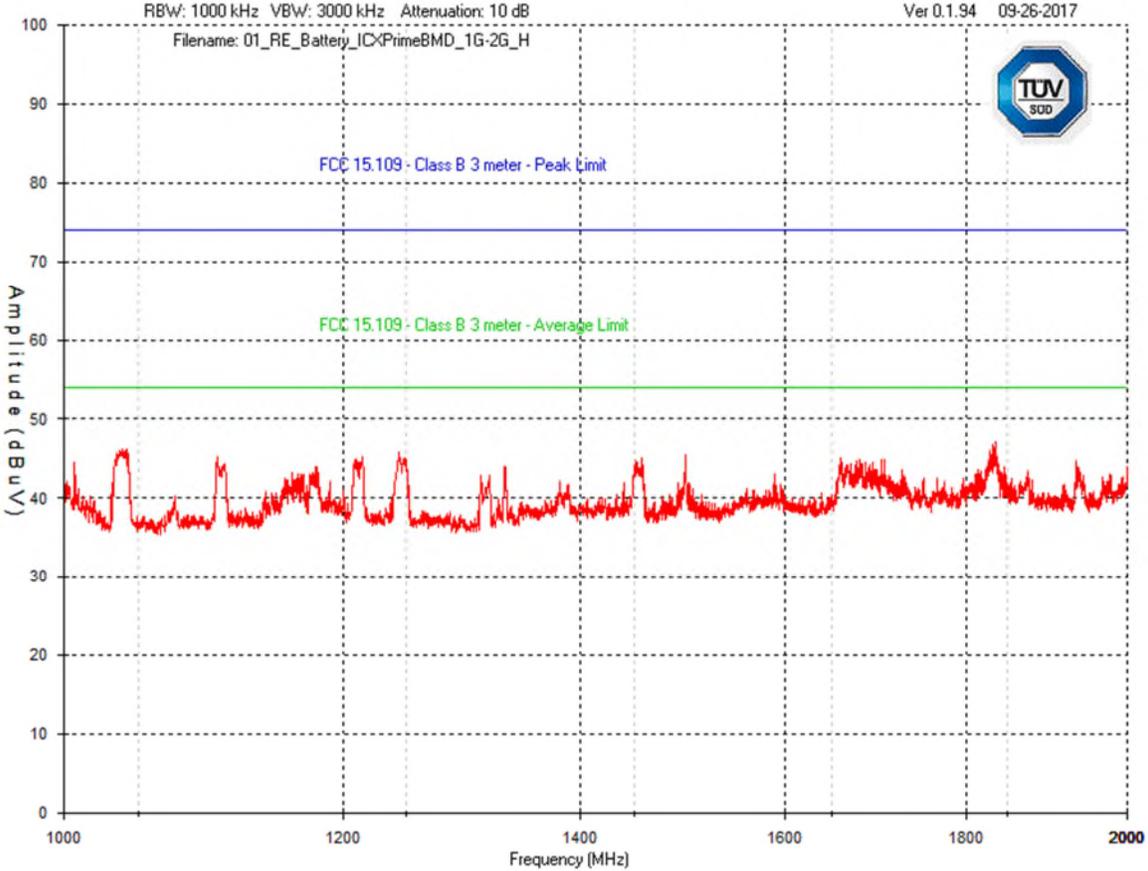
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Horizontal - Peak Emissions Graph - ICX BMD Battery Mode – 30MHz - 1GHz



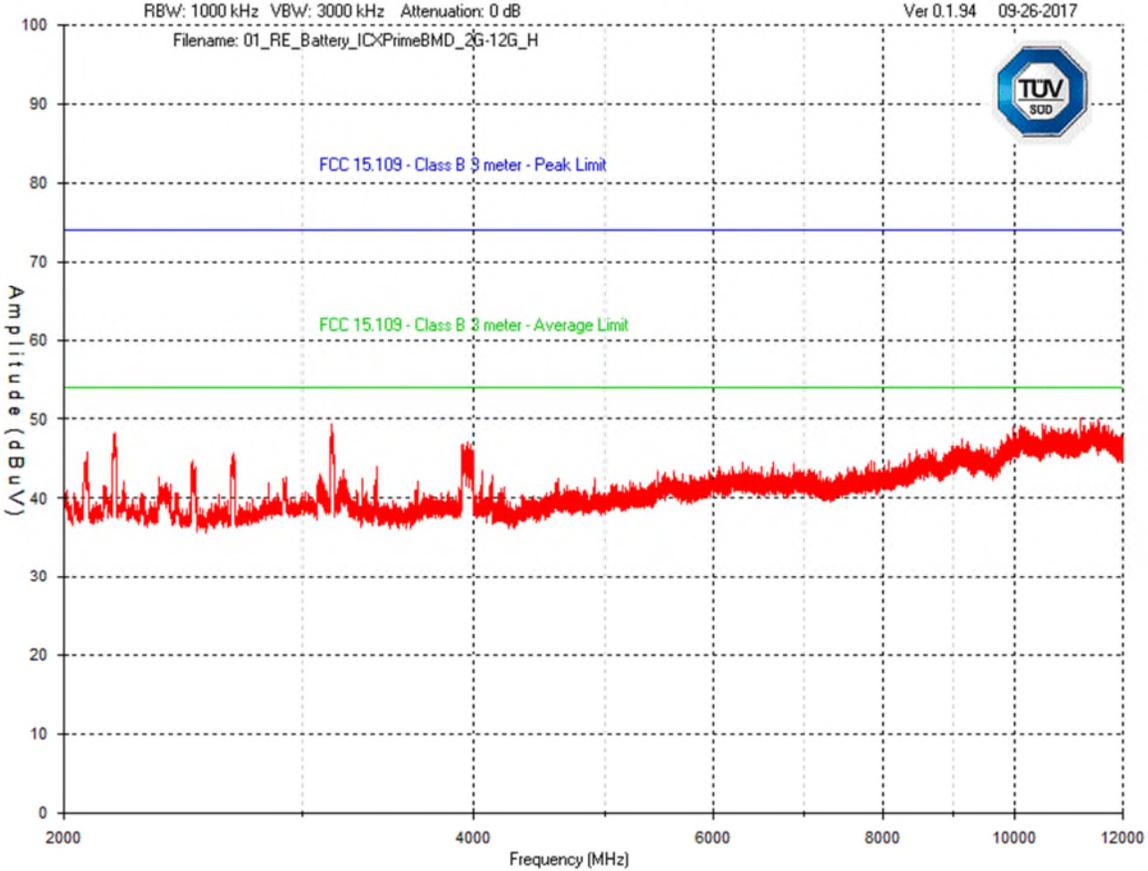
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Horizontal - Peak Emissions Graph - ICX BMD
Battery Mode – 1GHz - 2GHz**



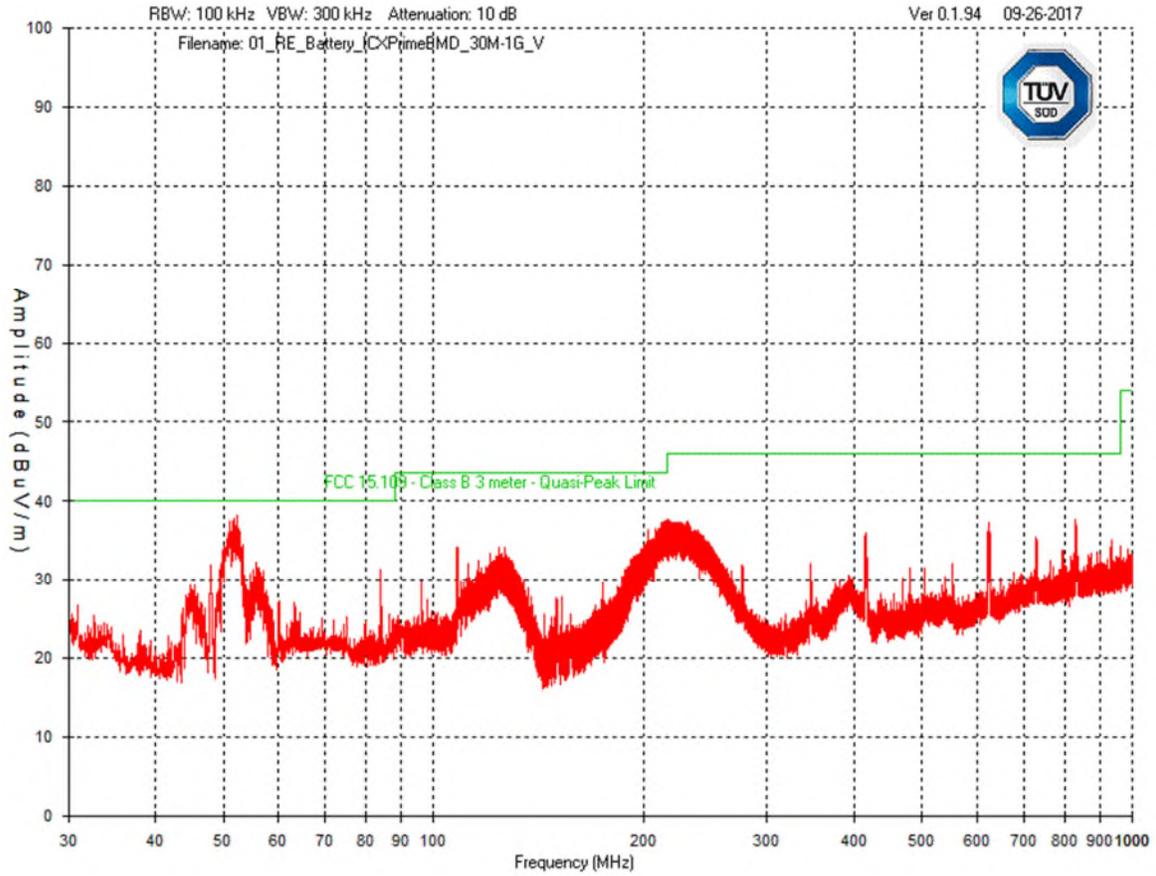
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Horizontal - Peak Emissions Graph - ICX BMD
Battery Mode – 2GHz - 12GHz**



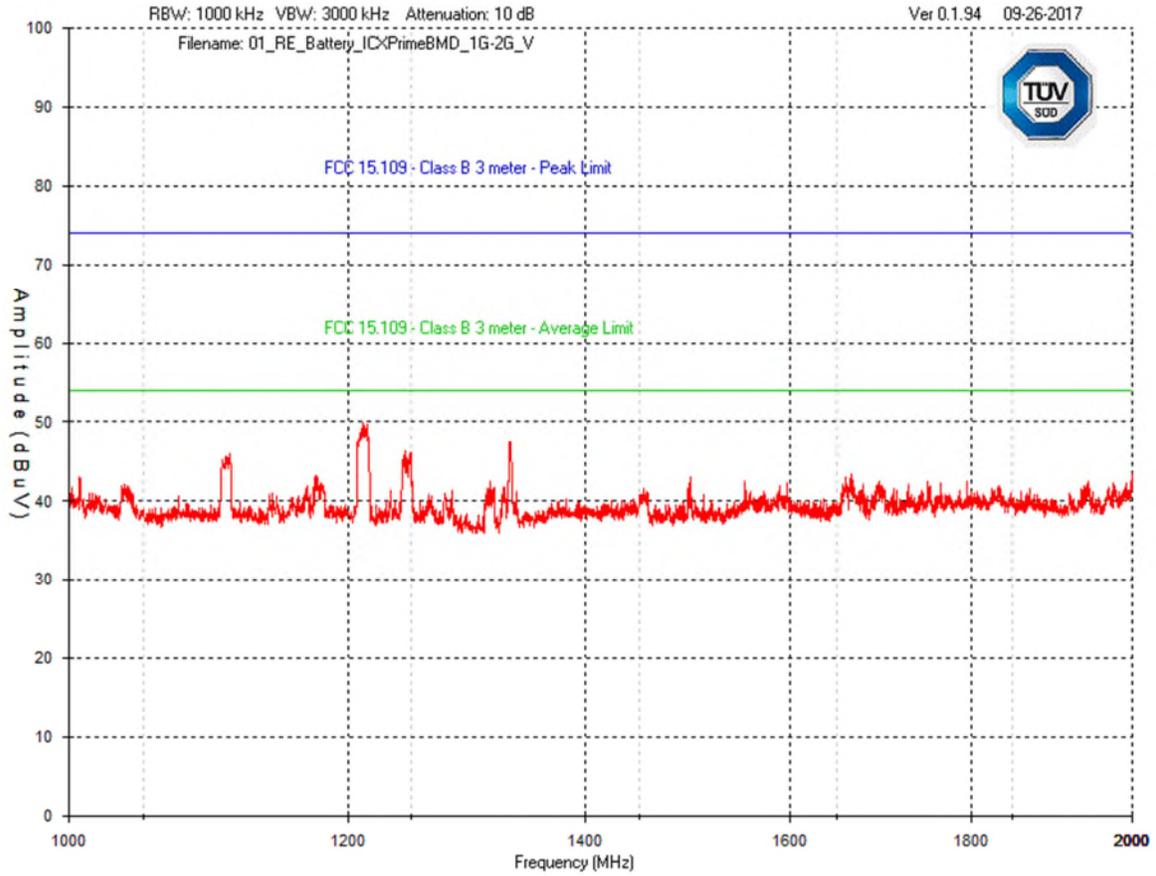
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Vertical - Peak Emissions Graph - ICX BMD
Battery Mode – 30MHz - 1GHz**



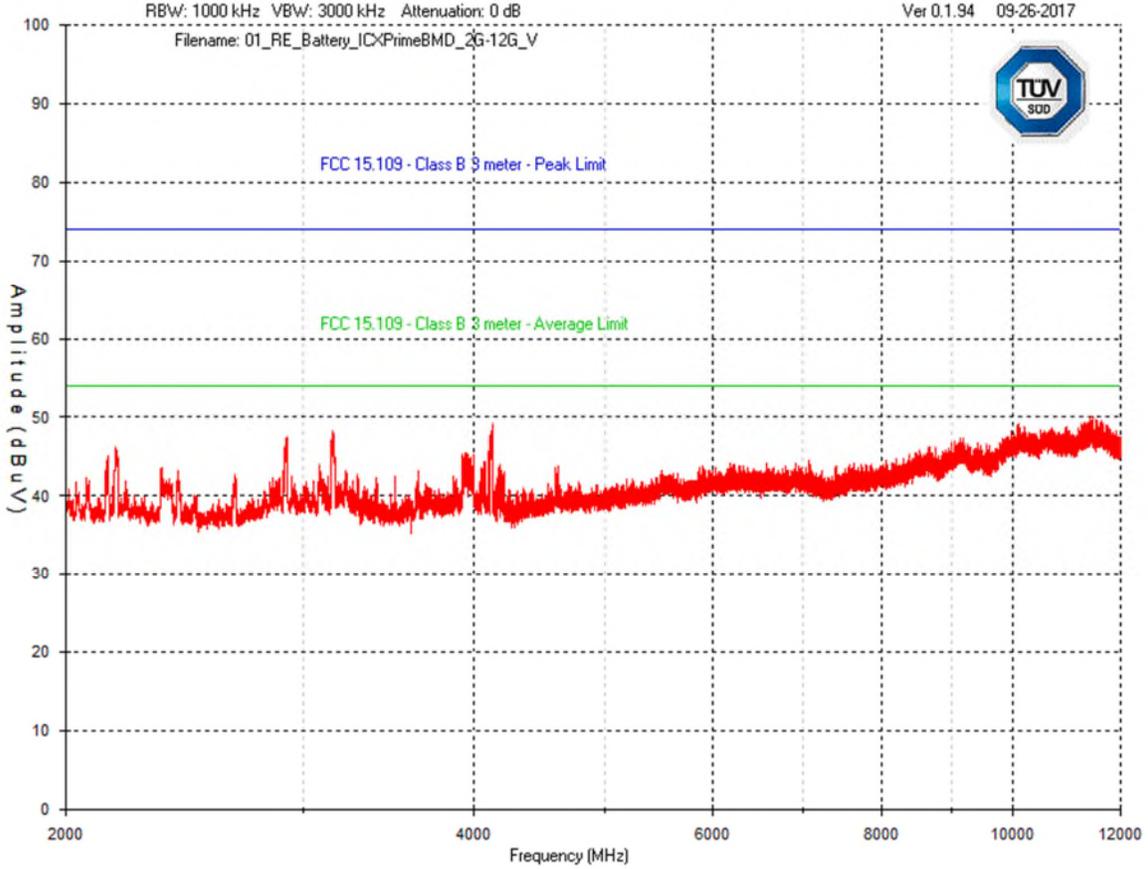
| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Vertical - Peak Emissions Graph - ICX BMD
Battery Mode – 1GHz - 2GHz**



| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

**Vertical - Peak Emissions Graph - ICX BMD
Battery Mode – 2GHz - 12GHz**



| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Final Measurements

The worst case measurement for the ICX DRE VVPAT, Report Printer and BMD, as listed in the table below appeared at a vertical antenna height of 100 cm and a table azimuth of 84 degrees.

| Product Category | | | Class B | | | | | | | |
|---------------------------------|------------------|------------------------------|-----------------------|-------------------|-------------------|--------------|----------------------|-------------------------|----------------|-----------|
| EUT Name | | | ICX DRE VVPAT | | | | | | | |
| Supply | | | 120Vac 60Hz | | | | | | | |
| Frequency (MHz) | Detector Peak/QP | Received Signal (dB μ V) | Antenna Factor (dB/m) | Atten Factor (dB) | Cable Factor (dB) | Pre-Amp (dB) | Level (dB μ V/m) | QP Limit (dB μ V/m) | QP Margin (dB) | Pass/Fail |
| Horizontal Antenna Polarization | | | | | | | | | | |
| 728.71 | QP | 40.7 | 21.8 | 6.0 | 2.0 | -28.6 | 41.9 | 46.0 | 4.1 | Pass |
| 624.39 | QP | 34.5 | 21.0 | 6.0 | 1.8 | -28.7 | 34.6 | 46.0 | 11.4 | Pass |
| 831.20 | QP | 31.6 | 22.5 | 6.0 | 2.2 | -28.4 | 33.9 | 46.0 | 12.1 | Pass |
| 759.93 | QP | 33.7 | 22.3 | 6.0 | 2.1 | -28.5 | 35.6 | 46.0 | 10.4 | Pass |
| 414.79 | QP | 37.5 | 16.2 | 6.0 | 1.4 | -28.7 | 32.4 | 46.0 | 13.6 | Pass |
| 693.77 | PEAK | 41.0 | 21.6 | 6.0 | 1.9 | -28.6 | 41.9 | 46.0 | 4.1 | Pass |
| Vertical Antenna Polarization | | | | | | | | | | |
| 43.25 | QP | 45.9 | 10.6 | 6.0 | 0.4 | -28.5 | 34.4 | 40.0 | 5.6 | Pass |
| 760.97 | QP | 39.1 | 22.3 | 6.0 | 2.1 | -28.5 | 41.0 | 46.0 | 5.0 | Pass |
| 829.07 | QP | 38.2 | 22.5 | 6.0 | 2.2 | -28.4 | 40.5 | 46.0 | 5.5 | Pass |
| 863.63 | QP | 33.5 | 23.3 | 6.0 | 2.2 | -28.3 | 36.7 | 46.0 | 9.3 | Pass |
| 898.15 | QP | 33.6 | 23.7 | 6.0 | 2.2 | -28.3 | 37.2 | 46.0 | 8.8 | Pass |
| 728.69 | QP | 35.7 | 21.8 | 6.0 | 2.0 | -28.6 | 36.9 | 46.0 | 9.1 | Pass |
| 414.36 | QP | 37.1 | 16.2 | 6.0 | 1.4 | -28.7 | 32.0 | 46.0 | 14.0 | Pass |

Quasi-Peak Emissions Table – ICX DRE VVPAT

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

| Product Category | | | Class B | | | | | | | |
|---------------------------------|------------------|------------------------|-----------------------|-------------------|-------------------|--------------|----------------|-------------------|----------------|-----------|
| EUT Name | | | ICX DRE VVPAT | | | | | | | |
| Supply | | | Battery Mode | | | | | | | |
| Frequency (MHz) | Detector Peak/QP | Received Signal (dBµV) | Antenna Factor (dB/m) | Atten Factor (dB) | Cable Factor (dB) | Pre-Amp (dB) | Level (dBµV/m) | QP Limit (dBµV/m) | QP Margin (dB) | Pass/Fail |
| Horizontal Antenna Polarization | | | | | | | | | | |
| 416.46 | QP | 44.7 | 16.2 | 6.0 | 1.4 | -28.7 | 39.6 | 46.0 | 6.4 | Pass |
| 728.69 | QP | 40.8 | 21.8 | 6.0 | 2.0 | -28.6 | 42.0 | 46.0 | 4.0 | Pass |
| 622.96 | QP | 33.2 | 21.0 | 6.0 | 1.8 | -28.7 | 33.3 | 46.0 | 12.7 | Pass |
| 828.99 | QP | 32.1 | 22.5 | 6.0 | 2.2 | -28.4 | 34.4 | 46.0 | 11.6 | Pass |
| 759.93 | QP | 33.9 | 22.3 | 6.0 | 2.1 | -28.5 | 35.8 | 46.0 | 10.2 | Pass |
| 691.06 | PEAK | 42.1 | 21.5 | 6.0 | 1.8 | -28.6 | 42.8 | 46.0 | 3.2 | Pass |
| Vertical Antenna Polarization | | | | | | | | | | |
| 763.71 | QP | 39.9 | 22.3 | 6.0 | 2.1 | -28.5 | 41.8 | 46.0 | 4.2 | Pass |
| 829.38 | QP | 38.3 | 22.5 | 6.0 | 2.2 | -28.4 | 40.6 | 46.0 | 5.4 | Pass |
| 43.19 | QP | 46.1 | 10.6 | 6.0 | 0.4 | -28.5 | 34.6 | 40.0 | 5.4 | Pass |
| 902.52 | QP | 33.9 | 23.7 | 6.0 | 2.2 | -28.2 | 37.6 | 46.0 | 8.4 | Pass |
| 47.65 | QP | 45.9 | 9.0 | 6.0 | 0.4 | -28.5 | 32.8 | 40.0 | 7.2 | Pass |
| 624.71 | QP | 41.9 | 21.0 | 6.0 | 1.8 | -28.7 | 42.0 | 46.0 | 4.0 | Pass |

Quasi-Peak Emissions Table – ICX DRE VVPAT Battery Mode

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

| Product Category | | | Class B | | | | | | | |
|---------------------------------|------------------|------------------------|------------------------|-------------------|-------------------|--------------|----------------|-------------------|----------------|-----------|
| EUT Name | | | ICX DRE Report Printer | | | | | | | |
| Supply | | | 120Vac 60Hz | | | | | | | |
| Frequency (MHz) | Detector Peak/QP | Received Signal (dBµV) | Antenna Factor (dB/m) | Atten Factor (dB) | Cable Factor (dB) | Pre-Amp (dB) | Level (dBµV/m) | QP Limit (dBµV/m) | QP Margin (dB) | Pass/Fail |
| Horizontal Antenna Polarization | | | | | | | | | | |
| 416.34 | QP | 44.0 | 16.2 | 6.0 | 1.4 | -28.7 | 38.9 | 46.0 | 7.1 | Pass |
| 833.14 | QP | 32.1 | 22.6 | 6.0 | 2.2 | -28.4 | 34.5 | 46.0 | 11.5 | Pass |
| 621.71 | QP | 42.3 | 21.0 | 6.0 | 1.8 | -28.7 | 42.4 | 46.0 | 3.6 | Pass |
| 728.86 | QP | 32.7 | 21.8 | 6.0 | 2.0 | -28.6 | 33.9 | 46.0 | 12.1 | Pass |
| 694.35 | PEAK | 42.0 | 21.6 | 6.0 | 1.9 | -28.6 | 42.9 | 46.0 | 3.1 | Pass |
| 514.13 | PEAK | 44.9 | 18.9 | 6.0 | 1.6 | -28.7 | 42.7 | 46.0 | 3.3 | Pass |
| Vertical Antenna Polarization | | | | | | | | | | |
| 43.36 | QP | 49.2 | 10.6 | 6.0 | 0.4 | -28.5 | 37.7 | 40.0 | 2.3 | Pass |
| 47.65 | QP | 46.3 | 9.0 | 6.0 | 0.4 | -28.5 | 33.2 | 40.0 | 6.8 | Pass |
| 621.60 | QP | 37.2 | 20.9 | 6.0 | 1.8 | -28.7 | 37.2 | 46.0 | 8.8 | Pass |
| 30.00 | QP | 32.1 | 17.9 | 6.0 | 0.3 | -28.5 | 27.8 | 40.0 | 12.2 | Pass |
| 52.90 | QP | 38.8 | 7.8 | 6.0 | 0.4 | -28.5 | 24.5 | 40.0 | 15.5 | Pass |
| 829.03 | QP | 33.1 | 22.5 | 6.0 | 2.2 | -28.4 | 35.4 | 46.0 | 10.6 | Pass |

Quasi-Peak Emissions Table – ICX DRE Report Printer

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

| Product Category | | | Class B | | | | | | | |
|---------------------------------|------------------|------------------------|------------------------|-------------------|-------------------|--------------|----------------|-------------------|----------------|-----------|
| EUT Name | | | ICX DRE Report Printer | | | | | | | |
| Supply | | | Battery Mode | | | | | | | |
| Frequency (MHz) | Detector Peak/QP | Received Signal (dBµV) | Antenna Factor (dB/m) | Atten Factor (dB) | Cable Factor (dB) | Pre-Amp (dB) | Level (dBµV/m) | QP Limit (dBµV/m) | QP Margin (dB) | Pass/Fail |
| Horizontal Antenna Polarization | | | | | | | | | | |
| 624.71 | QP | 41.9 | 21.0 | 6.0 | 1.8 | -28.7 | 42.0 | 46.0 | 4.0 | Pass |
| 416.55 | QP | 45.1 | 16.2 | 6.0 | 1.4 | -28.7 | 40.0 | 46.0 | 6.0 | Pass |
| 833.06 | QP | 33.9 | 22.6 | 6.0 | 2.2 | -28.4 | 36.3 | 46.0 | 9.7 | Pass |
| 725.59 | PEAK | 41.7 | 21.7 | 6.0 | 2.0 | -28.6 | 42.8 | 46.0 | 3.2 | Pass |
| 693.97 | PEAK | 41.9 | 21.6 | 6.0 | 1.9 | -28.6 | 42.8 | 46.0 | 3.2 | Pass |
| 514.13 | PEAK | 44.5 | 18.9 | 6.0 | 1.6 | -28.7 | 42.3 | 46.0 | 3.7 | Pass |
| Vertical Antenna Polarization | | | | | | | | | | |
| 43.19 | QP | 49.3 | 10.6 | 6.0 | 0.4 | -28.5 | 37.8 | 40.0 | 2.2 | Pass |
| 47.65 | QP | 45.9 | 9.0 | 6.0 | 0.4 | -28.5 | 32.8 | 40.0 | 7.2 | Pass |
| 624.71 | QP | 37.9 | 21.0 | 6.0 | 1.8 | -28.7 | 38.0 | 46.0 | 8.0 | Pass |
| 53.67 | QP | 38.9 | 7.8 | 6.0 | 0.4 | -28.5 | 24.6 | 40.0 | 15.4 | Pass |
| 416.35 | PEAK | 44.3 | 16.2 | 6.0 | 1.4 | -28.7 | 39.2 | 46.0 | 6.8 | Pass |
| 83.84 | PEAK | 48.2 | 6.4 | 6.0 | 0.5 | -28.5 | 32.6 | 40.0 | 7.4 | Pass |

Quasi-Peak Emissions Table – ICX DRE Report Printer Battery Mode

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

| Product Category | | Class B | | | | | | | | | |
|---------------------------------|-------------------|------------------------|-----------------------|-------------------|--------------|----------------|--------------------|---------------------|-----------------|------------------|-----------|
| EUT Name | | ICX DRE Report Printer | | | | | | | | | |
| Supply | | 120Vac 60Hz | | | | | | | | | |
| Frequency (MHz) | Detector Peak/AVG | Received Signal (dBµV) | Antenna Factor (dB/m) | Cable Factor (dB) | Pre-Amp (dB) | Level (dBµV/m) | AVG Limit (dBµV/m) | PEAK Limit (dBµV/m) | AVG Margin (dB) | PEAK Margin (dB) | Pass/Fail |
| Horizontal Antenna Polarization | | | | | | | | | | | |
| 5815.00 | PEAK | 41.8 | 33.7 | 1.4 | -31.7 | 45.2 | 54.0 | 74.0 | 8.8 | 28.8 | Pass |
| 3298.00 | PEAK | 43.1 | 30.6 | 1.0 | -31.8 | 42.9 | 54.0 | 74.0 | 11.1 | 31.1 | Pass |
| 2532.33 | PEAK | 45.6 | 29.2 | 0.8 | -33.1 | 42.5 | 54.0 | 74.0 | 11.5 | 31.5 | Pass |
| 2175.67 | PEAK | 44.8 | 28.2 | 0.7 | -33.5 | 40.2 | 54.0 | 74.0 | 13.8 | 33.8 | Pass |
| 1697.00 | PEAK | 46.0 | 26.2 | 0.6 | -34.1 | 38.7 | 54.0 | 74.0 | 15.3 | 35.3 | Pass |
| 1278.33 | PEAK | 47.2 | 25.3 | 0.5 | -34.7 | 38.3 | 54.0 | 74.0 | 15.7 | 35.7 | Pass |
| Vertical Antenna Polarization | | | | | | | | | | | |
| 1692.40 | AVG | 48.3 | 26.1 | 0.6 | -34.1 | 40.9 | 54.0 | -- | 13.1 | -- | Pass |
| 1693.00 | PEAK | 66.1 | 26.1 | 0.6 | -34.1 | 58.7 | -- | 74.0 | -- | 15.3 | Pass |
| 1247.67 | PEAK | 56.4 | 25.2 | 0.5 | -34.8 | 47.3 | 54.0 | 74.0 | 6.7 | 26.7 | Pass |
| 1243.67 | PEAK | 55.0 | 25.2 | 0.5 | -34.8 | 45.9 | 54.0 | 74.0 | 8.1 | 28.1 | Pass |
| 1726.33 | PEAK | 51.2 | 26.2 | 0.6 | -34.0 | 44.0 | 54.0 | 74.0 | 10.0 | 30.0 | Pass |
| 1764.33 | PEAK | 50.9 | 26.3 | 0.6 | -33.9 | 43.9 | 54.0 | 74.0 | 10.1 | 30.1 | Pass |
| 1661.00 | PEAK | 51.2 | 25.9 | 0.6 | -34.0 | 43.7 | 54.0 | 74.0 | 10.3 | 30.3 | Pass |

Average Emissions Table – ICX DRE Report Printer

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

| Product Category | | | Class B | | | | | | | | |
|---------------------------------|-------------------|------------------------|------------------------|-------------------|--------------|----------------|--------------------|---------------------|-----------------|------------------|-----------|
| EUT Name | | | ICX DRE Report Printer | | | | | | | | |
| Supply | | | Battery Mode | | | | | | | | |
| Frequency (MHz) | Detector Peak/AVG | Received Signal (dBµV) | Antenna Factor (dB/m) | Cable Factor (dB) | Pre-Amp (dB) | Level (dBµV/m) | AVG Limit (dBµV/m) | PEAK Limit (dBµV/m) | AVG Margin (dB) | PEAK Margin (dB) | Pass/Fail |
| Horizontal Antenna Polarization | | | | | | | | | | | |
| 5889.00 | PEAK | 41.1 | 33.9 | 1.4 | -31.8 | 44.6 | 54.0 | 74.0 | 9.4 | 29.4 | Pass |
| 2483.67 | PEAK | 45.5 | 28.9 | 0.8 | -33.3 | 41.9 | 54.0 | 74.0 | 12.1 | 32.1 | Pass |
| 3292.00 | PEAK | 41.8 | 30.5 | 1.0 | -31.7 | 41.6 | 54.0 | 74.0 | 12.4 | 32.4 | Pass |
| 2193.00 | PEAK | 45.1 | 28.1 | 0.7 | -33.4 | 40.5 | 54.0 | 74.0 | 13.5 | 33.5 | Pass |
| 1692.33 | PEAK | 46.1 | 26.1 | 0.6 | -34.1 | 38.7 | 54.0 | 74.0 | 15.3 | 35.3 | Pass |
| 1260.33 | PEAK | 46.3 | 25.2 | 0.5 | -34.7 | 37.3 | 54.0 | 74.0 | 16.7 | 36.7 | Pass |
| Vertical Antenna Polarization | | | | | | | | | | | |
| 1699.76 | AVG | 48.9 | 26.1 | 0.6 | -34.1 | 41.5 | 54.0 | -- | 12.5 | -- | Pass |
| 1699.00 | PEAK | 65.6 | 26.1 | 0.6 | -34.1 | 58.2 | -- | 74.0 | -- | 15.8 | Pass |
| 1247.67 | PEAK | 56.2 | 25.2 | 0.5 | -34.8 | 47.1 | 54.0 | 74.0 | 6.9 | 26.9 | Pass |
| 1242.33 | PEAK | 55.6 | 25.2 | 0.5 | -34.8 | 46.5 | 54.0 | 74.0 | 7.5 | 27.5 | Pass |
| 1661.00 | PEAK | 52.1 | 25.9 | 0.6 | -34.0 | 44.6 | 54.0 | 74.0 | 9.4 | 29.4 | Pass |
| 1763.67 | PEAK | 50.7 | 26.3 | 0.6 | -33.9 | 43.7 | 54.0 | 74.0 | 10.3 | 30.3 | Pass |
| 1727.67 | PEAK | 50.9 | 26.2 | 0.6 | -34.0 | 43.7 | 54.0 | 74.0 | 10.3 | 30.3 | Pass |

Average Emissions Table – ICX DRE Report Printer Battery Mode

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

| Product Category | | | Class B | | | | | | | |
|---------------------------------|------------------|------------------------|-----------------------|-------------------|-------------------|--------------|----------------|-------------------|----------------|-----------|
| EUT Name | | | ICX BMD | | | | | | | |
| Supply | | | 120Vac 60Hz | | | | | | | |
| Frequency (MHz) | Detector Peak/QP | Received Signal (dBµV) | Antenna Factor (dB/m) | Atten Factor (dB) | Cable Factor (dB) | Pre-Amp (dB) | Level (dBµV/m) | QP Limit (dBµV/m) | QP Margin (dB) | Pass/Fail |
| Horizontal Antenna Polarization | | | | | | | | | | |
| 829.21 | PEAK | 39.3 | 22.5 | 6.0 | 2.5 | -28.4 | 41.9 | 46.0 | 4.1 | Pass |
| 832.77 | PEAK | 39.2 | 22.5 | 6.0 | 2.5 | -28.4 | 41.8 | 46.0 | 4.2 | Pass |
| 621.87 | PEAK | 38.6 | 20.8 | 6.0 | 2.0 | -28.7 | 38.7 | 46.0 | 7.3 | Pass |
| 624.95 | PEAK | 38.5 | 20.9 | 6.0 | 2.0 | -28.7 | 38.7 | 46.0 | 7.3 | Pass |
| 108.00 | PEAK | 49.9 | 7.8 | 6.0 | 0.8 | -28.5 | 36.0 | 43.5 | 7.5 | Pass |
| 192.02 | PEAK | 47.1 | 9.8 | 6.0 | 1.0 | -28.5 | 35.4 | 43.5 | 8.1 | Pass |
| Vertical Antenna Polarization | | | | | | | | | | |
| 51.67 | QP | 45.4 | 8.2 | 6.0 | 0.5 | -28.5 | 31.6 | 40.0 | 8.4 | Pass |
| 30.29 | QP | 30.1 | 16.5 | 6.0 | 0.4 | -28.5 | 24.5 | 40.0 | 15.5 | Pass |
| 30.29 | PEAK | 41.8 | 16.5 | 6.0 | 0.4 | -28.5 | 36.2 | 40.0 | 3.8 | Pass |
| 73.86 | PEAK | 51.9 | 5.7 | 6.0 | 0.6 | -28.5 | 35.7 | 40.0 | 4.3 | Pass |
| 207.27 | PEAK | 49.5 | 10.3 | 6.0 | 1.0 | -28.5 | 38.3 | 43.5 | 5.2 | Pass |
| 73.11 | PEAK | 49.8 | 5.8 | 6.0 | 0.6 | -28.5 | 33.7 | 40.0 | 6.3 | Pass |

Quasi-Peak Emissions Table – ICX BMD

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

| Product Category | | | Class B | | | | | | | |
|---------------------------------|------------------|------------------------|-----------------------|-------------------|-------------------|--------------|----------------|-------------------|----------------|-----------|
| EUT Name | | | ICX Prime BMD | | | | | | | |
| Supply | | | Battery Mode | | | | | | | |
| Frequency (MHz) | Detector Peak/QP | Received Signal (dBµV) | Antenna Factor (dB/m) | Atten Factor (dB) | Cable Factor (dB) | Pre-Amp (dB) | Level (dBµV/m) | QP Limit (dBµV/m) | QP Margin (dB) | Pass/Fail |
| Horizontal Antenna Polarization | | | | | | | | | | |
| 828.95 | PEAK | 38.6 | 22.5 | 6.0 | 2.5 | -28.4 | 41.2 | 46.0 | 4.8 | Pass |
| 833.19 | PEAK | 38.5 | 22.5 | 6.0 | 2.5 | -28.4 | 41.1 | 46.0 | 4.9 | Pass |
| 624.88 | PEAK | 39.0 | 20.9 | 6.0 | 2.0 | -28.7 | 39.2 | 46.0 | 6.8 | Pass |
| 621.87 | PEAK | 39.0 | 20.8 | 6.0 | 2.0 | -28.7 | 39.1 | 46.0 | 6.9 | Pass |
| 52.11 | PEAK | 45.7 | 8.0 | 6.0 | 0.5 | -28.5 | 31.7 | 40.0 | 8.3 | Pass |
| 203.03 | PEAK | 46.7 | 9.9 | 6.0 | 1.0 | -28.5 | 35.1 | 43.5 | 8.4 | Pass |
| Vertical Antenna Polarization | | | | | | | | | | |
| 52.14 | QP | 45.1 | 8.0 | 6.0 | 0.5 | -28.5 | 31.1 | 40.0 | 8.9 | Pass |
| 203.09 | PEAK | 48.0 | 9.9 | 6.0 | 1.0 | -28.5 | 36.4 | 43.5 | 7.1 | Pass |
| 55.83 | PEAK | 46.6 | 7.6 | 6.0 | 0.5 | -28.5 | 32.2 | 40.0 | 7.8 | Pass |
| 49.58 | PEAK | 45.5 | 8.6 | 6.0 | 0.5 | -28.5 | 32.1 | 40.0 | 7.9 | Pass |
| 47.96 | PEAK | 45.1 | 8.9 | 6.0 | 0.5 | -28.5 | 32.0 | 40.0 | 8.0 | Pass |
| 829.11 | PEAK | 35.2 | 22.5 | 6.0 | 2.5 | -28.4 | 37.8 | 46.0 | 8.2 | Pass |

Quasi-Peak Emissions Table – ICX BMD Battery Mode

Note:

Peak = Peak measurement

QP = Quasi-Peak measurement

See ‘Appendix B – EUT, Peripherals, and Test Setup Photos’ for photos showing the test set-up for the highest radiated emission.

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Test Equipment List

| Equipment | Model No. | Manufacturer | Last Calibration Date | Next Calibration Date | Asset # |
|----------------------------|------------------------|-----------------------|-----------------------|-----------------------|-----------|
| Spectrum Analyzer | ESU 40 | Rohde & Schwarz | Jan. 6, 2016 | Jan. 6, 2018 | GEMC 233 |
| BiLog Antenna | 3142-C | ETS | Feb. 22, 2017 | Feb. 22, 2019 | GEMC 137 |
| Attenuator 6 dB | 612-06-1 | Meca Electronics, Inc | NCR | NCR | GEMC 286 |
| Pre-Amp 9 kHz – 1 GHz | CPA9231A | Chase | Oct 12, 2016 | Oct 12, 2018 | GEMC 6403 |
| Horn Antenna 2 – 18 GHz | WBH218HN | Q-par | Feb. 12, 2016 | Feb. 12, 2018 | GEMC 6375 |
| Horn Antenna 1 – 18 GHz | AH-118 | Com-Power Corporation | July 12, 2017 | July 12, 2019 | GEMC 214 |
| Pre-Amp 1 – 26.5 GHz | HP 8449B | HP | Nov. 27, 2015 | Nov. 27, 2017 | GEMC 189 |
| RF Cable 7m | LMR-400-7M-50Ω-MN-MN | LexTec | NCR | NCR | GEMC 28 |
| RF Cable 10m | LMR-400-10M-50Ω-MN-MN | LexTec | NCR | NCR | GEMC 27 |
| RF Cable 0.5m | LMR-400-0.5M-50Ω-MN-MN | LexTec | NCR | NCR | GEMC 31 |
| Emissions Software | 0.1.94 | Global EMC | NCR | NCR | GEMC 58 |

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| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Electrical Power Disturbance – 4.1.2.5

Purpose

An AC powered device may be subjected to voltage dips, short interruptions or other voltage variations in the power line. Such conditions are mainly caused by faults or changes in the network due to sudden large changes in load, or when a brown out or a black out condition occurs. These voltage dips can also occur with power supplies that are not well regulated such as emergency diesel AC generators. This test simulates the occurrence of these conditions and subjects the EUT to this phenomenon.

Application Level Requirements

This test is performed in accordance with the methodology defined in IEC 61000-4-11. As per VVSG 1.0 (2005) Vol. 1, the following dip and interruption levels apply:

| Voltage Dip Level | Duration | Duration @ 60Hz [Cycles] |
|-------------------|-------------|--------------------------|
| 30% (36 Vac) | 0.01s | 0.6 |
| 60% (72 Vac) | 0.1s / 1.0s | 6 / 60 |
| 100% (120 Vac) | 0.5 | 300 |

| Voltage Surge Level | Duration | Duration @ 60Hz [Cycles] |
|---------------------|----------|--------------------------|
| 85% (102 Vac) | 4 hours | 14400 |
| 115% (138 Vac) | 4 hours | 14400 |

Surges of +15% line variations of nominal line voltage and electrical power increases of 7.5% and reductions of 12.5% of nominal specified power supply for a period of up to four hours at each level.

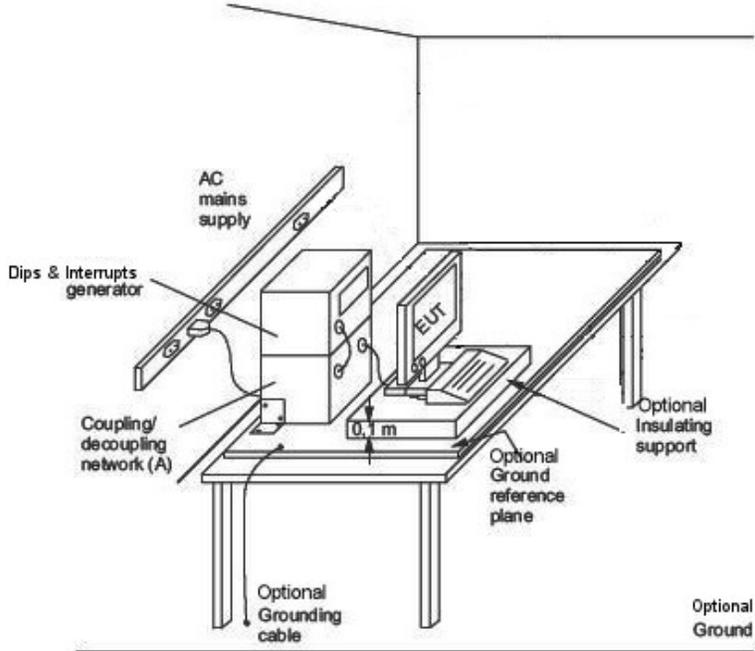
The voltage level in brackets is the residual voltage of the voltage dip applied and presumes a normal operating voltage of 120 Vac and a frequency of 60Hz.

The test is carried out at phase angles of 0°, 90°, and 270° of the AC with 5 repetitions applied at each of the dips and interrupts listed in the table above.

No disruption of normal operation or loss of data is applied to this test.

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSF V1.0 Volume 1 | |

Typical Test Setup



Application Level Accuracy

As per IEC 61000-4-11, the voltage must be $\pm 5\%$ of the voltage stated to be applied. The frequency must be kept within $\pm 2\%$ of the stated frequency.

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Test Results

The EUTs passed the requirements. The EUTs met the criteria's listed above in the application level requirements. At each voltage dip level the UPSs momentarily ran on battery mode and re-entered charging mode. During the 5 second interruption (0% for 300 cycles), the EUTs UPSs entered battery mode and returned to charging mode after 5 seconds. The EUTs maintained operation during the +/- 15% surges of voltages and increases of 7.5% and decreases of 12.5%.

No anomalies were observed for the surges and no disruption to operation or data loss occurred.

Test Equipment List

| Equipment | Model No. | Manufacturer | Last Calibration Date | Next Calibration Date | Asset # |
|--------------------|----------------|--------------------------|-----------------------|-----------------------|-----------|
| Immunity Generator | CE Master | Keytek Thermo Corp. | Dec. 19, 2016 | Dec. 19, 2018 | GEMC 140 |
| Immunity Generator | EMC Pro Plus | Keytek Thermo Corp. | Dec. 19, 2016 | Dec. 19, 2018 | GEMC 4 |
| Immunity Software | CEWare 32 V4.1 | Thermo Fisher Scientific | NCR | NCR | GEMC 182 |
| Variac | PWRSTA 3PN126 | Powerstat | NCR | NCR | GEMC 6032 |

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| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Electrical Fast Transients / Bursts – 4.1.2.6

Purpose

Electrical Fast Transients is a series of bursts consisting of a number of fast transients, which in a typical application environment, can be coupled into the supply and onto the I/O lines of the EUT. These transient signals usually arise from nearby switching circuitry such as a light switch, relay bounces, electric motor noise, interruption of inductive loads, etc. This test is to verify that the EUT is immune to such transient disturbances based on the applicable test levels. This test, however, does not guarantee that the EUT will not experience higher level burst impulses during its operation, which may cause the EUT to fail.

Application Level Requirement

This test is performed in accordance with the methodology defined in IEC 61000-4-4. The voltage waveform applied has the following characteristics:

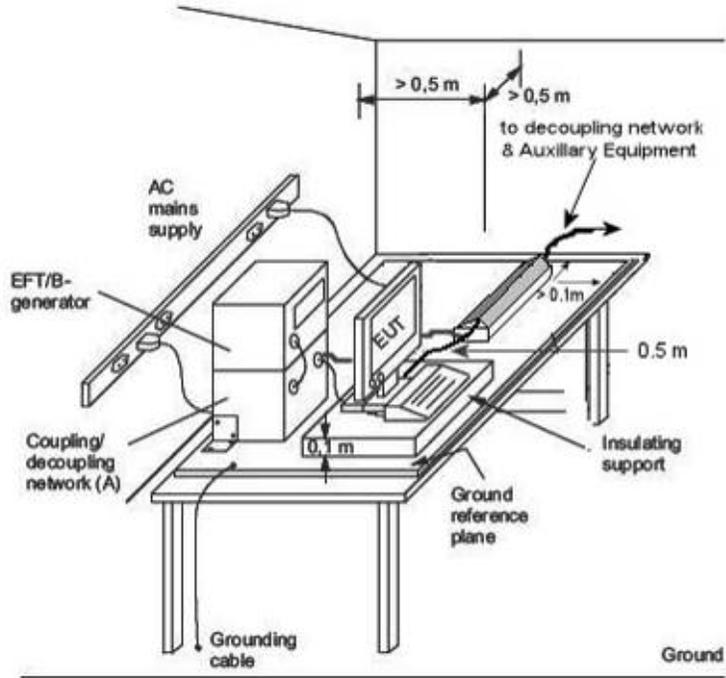
- Pulse rise time: 5ns \pm 30%
- Pulse duration (to 50% value): 50ns \pm 30%
- Pulse repetition frequency 100kHz
- Burst duration should be 15ms \pm 20%
- Burst period should be 300ms \pm 20%

Bursts are applied for 1 minute each at the positive and the negative polarity to the mains power input (common mode) and to each applicable I/O line.

A test level of \pm 2kV is applied to the power supply port(s) via a coupling and decoupling network and \pm 1kV to each applicable I/O line via a Capacitive Coupling Clamp. No disruption of normal operation or loss of data is to occur during the performance of this test.

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Typical Test Setup



Application Level Accuracy

As per IEC 61000-4-4, the test level is specified as being within $\pm 10\%$ into a 50Ω load and $\pm 20\%$ into a 1000Ω load.

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Test Results

The EUT passed the requirements. The ICX BMD required a ferrite to pass EFT. Ferrite information can be found in 'Appendix A, Modifications for Compliance'. The EUTs were not disrupted from their normal operation and did not lose any data during the test.

ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD

| Test Voltage | Repetition Rate | Coupling Lines | Result |
|--------------|-----------------|----------------|--------|
| ±2kV | 100kHz | L – N – PE | Pass |
| ±2kV | 100kHz | PE | Pass |

Test Equipment List

| Equipment | Model No. | Manufacturer | Last Calibration Date | Next Calibration Date | Asset # |
|--------------------|----------------|--------------------------|-----------------------|-----------------------|----------|
| Immunity Generator | CE Master | Keytek Thermo Corp. | Dec. 19, 2016 | Dec. 19, 2018 | GEMC 140 |
| Immunity Generator | EMC Pro Plus | Keytek Thermo Corp. | Dec. 19, 2016 | Dec. 19, 2018 | GEMC 4 |
| Immunity Software | CEWare 32 V4.1 | Thermo Fisher Scientific | NCR | NCR | GEMC 182 |

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| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Lightning Surge – 4.1.2.7

Purpose

Surge occurs when a high energy disturbance takes place on the power lines, or less frequently, I/O lines and can cause significant temporary increase in current and/or voltage. These disturbances can arise during a nearby lightning strike, circuit trips, short-circuits on the same power line that the equipment is connected to, etc. The sudden rise in voltage over a very short period of time could cause damage to the components of the EUT and this test assesses the immunity of the EUT to such transient waves. This test differs from Electrical Fast Transients / Bursts in that this waveform, characterized by the rapid increase of current and/or voltage followed by a slower decrease, has a longer wave duration that could allow damage to the EUT. This test does not guarantee that the EUT will not be exposed to a higher level of surge energy during its operation, which may cause the EUT to fail. This test also does not ensure operation of the EUT in the presence of direct lightning effects.

Application Level Requirement

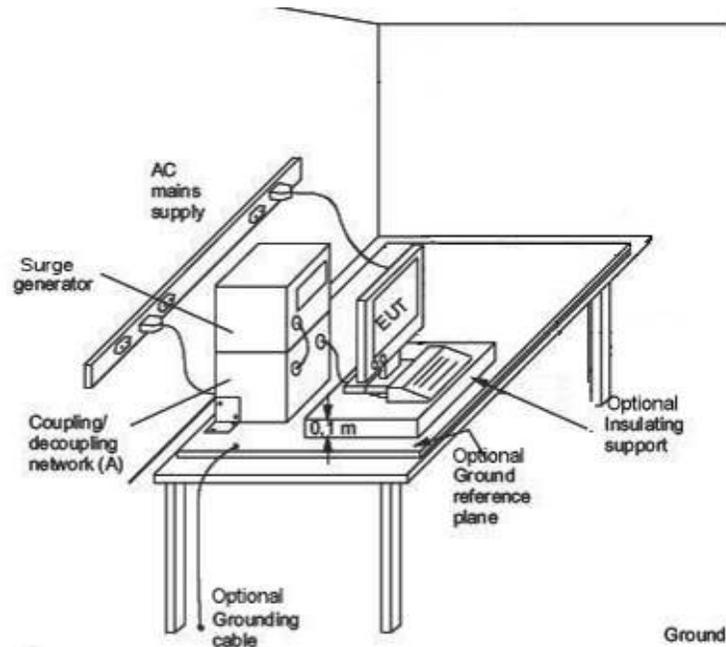
This test is performed in accordance with the methodology defined in IEC 61000-4-5. Surges are simulated using a waveform generator and the characteristics of the waveform generated are as follows:

- Rise time of 1.2 μ s and wave duration of 50 μ s (to 50% value) into an open circuit.
- Rise time of 8 μ s and wave duration of 20 μ s (to 50% value) into a short circuit.
- Dwell time of 60 seconds between each surge.
- 5 surges in the positive and 5 surges in the negative polarity.
- For AC systems, the surge pulses are applied at 0°, 90°, 180° and 270°.
- For AC systems, Line to Ground is performed at the same amount as the Line to Line voltage.

For AC mains supply, a test level of ± 2 kV Line to Line and ± 2 kV Line to Ground is applied to the power supply port(s) via a coupling and decoupling network. Lower test levels are evaluated first before applying the required test level. No disruption of normal operation or data loss is allowed as applied to this test.

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Typical Test Setup



Application Level Accuracy

As per IEC 61000-4-5, the level is specified as being within $\pm 10\%$ for open circuit voltage calibration or $\pm 10\%$ for short circuit current calibration. The EUT's input impedance, or whether Line – PE or Line – Line is being performed, combined with the calibrated generators output impedance, will affect the timing and voltage/current of the waveform applied to the EUT.

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Test Results

The EUT passed the requirements. The EUTs did not encounter any deviation from normal operation or data loss.

ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD

| Test Voltages | Phase Angles | Number of Surges | Coupling Lines | Result |
|--------------------|---------------------|------------------|----------------|--------|
| ±0.5kV, ±1kV, ±2kV | 0°, 90°, 180°, 270° | 5 per polarity | L – GND | Pass |
| ±0.5kV, ±1kV, ±2kV | 0°, 90°, 180°, 270 | 5 per polarity | N – GND | Pass |
| ±0.5kV, ±1kV, ±2kV | 0°, 90°, 180°, 270° | 5 per polarity | L – N | Pass |

Test Equipment List

| Equipment | Model No. | Manufacturer | Last Calibration Date | Next Calibration Date | Asset # |
|--------------------|----------------|--------------------------|-----------------------|-----------------------|----------|
| Immunity Generator | EMC Pro Plus | Keytek Thermo Corp. | Dec. 19, 2016 | Dec. 19, 2018 | GEMC 4 |
| Immunity Generator | EMC Pro Plus | Keytek Thermo Corp. | Dec. 20, 2016 | Dec. 20, 2018 | GEMC 188 |
| Immunity Software | CEWare 32 V4.1 | Thermo Fisher Scientific | NCR | NCR | GEMC 182 |

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| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

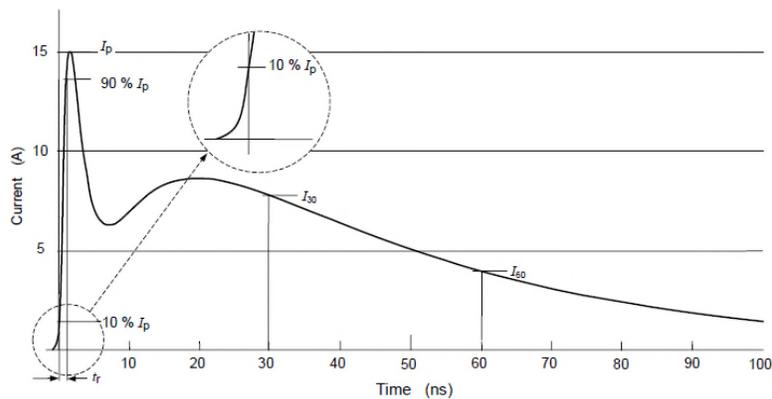
Electrostatic Disruption – 4.1.2.8

Purpose

The purpose of this immunity test is to apply a static electricity discharge from the operator to the EUT or create a nearby discharge field. An example of this discharge can be seen in low humidity conditions when a person touches an object and creates a small spark. This spark could potentially be harmful to the operation of the EUT. The contact method, with related reduced voltages, has been shown to be roughly equivalent to air discharges in severity and due to its reproducibility, contact is the preferred test method. Air discharge is used where contact discharge cannot be applied since the discharge point is significantly insulated and the insulation cannot be easily broken through. This test ensures a minimum level of immunity which is likely to occur in a normal usage environment. This test does not guarantee that the EUT will not be exposed to higher discharge levels which could cause it to fail.

Application Level Requirement

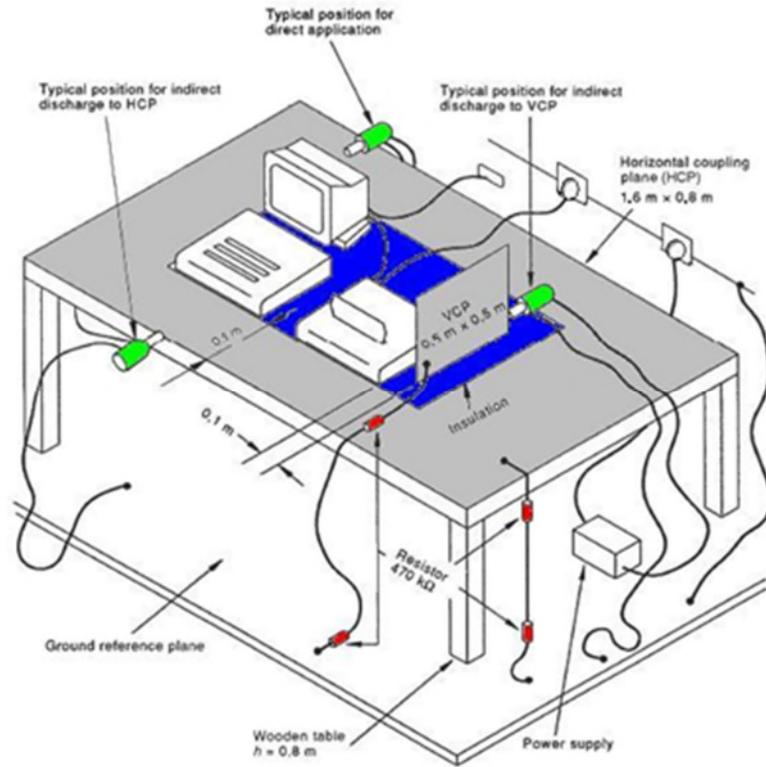
This test is performed in accordance with the methodology defined in IEC 61000-4-2. Ten hits in the positive and negative polarity are applied at each defined discharge point on the EUT. These are called direct discharges, regardless of contact or air being applied. Horizontal Coupling Plane (HCP) and Vertical Coupling Plane (VCP) discharges are also applied and these are called indirect discharges. A typical test setup representation is shown on the following page. A photograph of the actual test setup is shown in Appendix B. See the results table under Test Results for the actual EUT discharge points.



A level of $\pm 8\text{kV}$ contact or $\pm 15\text{kV}$ air, where applicable, is applied to each defined discharge point. For air discharge testing, the test is applied at the lower test levels first. No disruption to normal operation or loss of data is applied to this test. However, all anomalies, if any, are noted.

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Typical ESD Setup



Application Level Accuracy

Contact discharge: $\pm 15\%$ for the first peak current, $\pm 5\%$ for the output voltage and $\pm 25\%$ for the rise time as measured at the discharge electrode tip of ESD generator.

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Test Results

The EUTs passed the requirements. The EUTs encountered no disruption of normal operation and no loss of data. No anomalies were observed.

ICX DRE VVPAT

| Location | Test Voltage | Discharge Type | Pass / Fail |
|------------------------|----------------------------|----------------|------------------------|
| 1. HCP | ±8kV | Contact | Pass |
| 2. VCP | ±8kV | Contact | Pass |
| 3. Ethernet Connector | ±8kV | Contact | Pass |
| 4. ICX Handle | ±8kV | Contact | Pass |
| 5. ICX Backrest | ±8kV | Contact | Pass |
| 6. Printer Keyhole | ±8kV | Contact | Pass (No Discharge) |
| 7. Touch Screen | ±2kV, ±4kV, ±8kV, ±15kV | Air | Pass (No Discharge) |
| 8. Power Cable | ±2kV, ±4kV, ±8kV, ±15kV | Air | Pass (No Discharge) |
| 9. Headphones | ±2kV, ±4kV, ±8kV, ±15kV | Air | Pass (No Discharge) |
| 10. Touch Input | ±2kV, ±4kV, ±8kV, ±15kV | Air | Pass (No Discharge) |
| 11. Device Sides | ±2kV, ±4kV, ±8kV, ±15kV | Air | Pass (No Discharge) |
| 12. Printer Window | ±2kV, ±4kV, ±8kV, ±15kV | Air | Pass (No Discharge) |
| 13. Printer Sides | ±2kV, ±4kV, ±8kV, ±15kV | Air | Pass (No Discharge) |
| 14. Power Cables | ±2kV, ±4kV, ±8kV, ±15kV | Air | Pass (No Discharge) |
| 15. Touch Input Cables | ±2kV, ±4kV, ±8kV, ±15kV | Air | Pass (No Discharge) |

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

ICX DRE Report Printer

| Location | Test Voltage | Discharge Type | Pass / Fail |
|------------------------|----------------------------|----------------|------------------------|
| 1. HCP | ±8kV | Contact | Pass |
| 2. VCP | ±8kV | Contact | Pass |
| 3. Ethernet Connector | ±8kV | Contact | Pass |
| 4. ICX Handle | ±8kV | Contact | Pass |
| 5. ICX Backrest | ±8kV | Contact | Pass |
| 6. Touch Screen | ±2kV, ±4kV, ±8kV, ±15kV | Air | Pass (No Discharge) |
| 7. Power Cable | ±2kV, ±4kV, ±8kV, ±15kV | Air | Pass (No Discharge) |
| 8. Headphones | ±2kV, ±4kV, ±8kV, ±15kV | Air | Pass (No Discharge) |
| 9. Touch Input | ±2kV, ±4kV, ±8kV, ±15kV | Air | Pass (No Discharge) |
| 10. Device Sides | ±2kV, ±4kV, ±8kV, ±15kV | Air | Pass (No Discharge) |
| 11. Power Cables | ±2kV, ±4kV, ±8kV, ±15kV | Air | Pass (No Discharge) |
| 12. Touch Input Cables | ±2kV, ±4kV, ±8kV, ±15kV | Air | Pass (No Discharge) |

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

ICX BMD

| Location | Test Voltage | Discharge Type | Pass / Fail |
|-----------------------------|----------------------------|----------------|------------------------|
| 1. HCP | ±8kV | Contact | Pass |
| 2. VCP | ±8kV | Contact | Pass |
| 3. Ethernet Connector | ±8kV | Contact | Pass |
| 4. ICX Handle | ±8kV | Contact | Pass |
| 5. ICX Backrest | ±8kV | Contact | Pass |
| 6. Touch Screen | ±2kV, ±4kV, ±8kV, ±15kV | Air | Pass (No Discharge) |
| 7. Power Cable | ±2kV, ±4kV, ±8kV, ±15kV | Air | Pass (No Discharge) |
| 8. Headphones | ±2kV, ±4kV, ±8kV, ±15kV | Air | Pass (No Discharge) |
| 9. Touch Input | ±2kV, ±4kV, ±8kV, ±15kV | Air | Pass (No Discharge) |
| 10. Device Sides | ±2kV, ±4kV, ±8kV, ±15kV | Air | Pass (No Discharge) |
| 11. Power Cables | ±2kV, ±4kV, ±8kV, ±15kV | Air | Pass (No Discharge) |
| 12. Touch Input Cables | ±2kV, ±4kV, ±8kV, ±15kV | Air | Pass (No Discharge) |
| 13. Top Paper Tray | ±2kV, ±4kV, ±8kV, ±15kV | Air | Pass (No Discharge) |
| 14. Paper Loading Tray | ±2kV, ±4kV, ±8kV, ±15kV | Air | Pass (No Discharge) |
| 15. On / Off Button Printer | ±2kV, ±4kV, ±8kV, ±15kV | Air | Pass (No Discharge) |

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Test Equipment List

| Equipment | Model No. | Manufacturer | Last Calibration Date | Next Calibration Date | Asset # |
|---------------|---------------|--------------|-----------------------|-----------------------|----------|
| ESD Generator | NSG 437 | Teseq | June 28, 2017 | June 28, 2019 | GEMC 130 |
| ESD HCP | 80CM x 160CM | Global EMC | NCR | NCR | GEMC 50 |
| ESD VCP | 50CM x 50CM | Global EMC | NCR | NCR | GEMC 51 |
| ESD 470K A | 2x470kΩ 100CM | Global EMC | NCR | NCR | GEMC 52 |
| ESD 470K B | 2x470kΩ 100CM | Global EMC | NCR | NCR | GEMC 53 |

IEC61000-4-2_ESD_Rev4

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

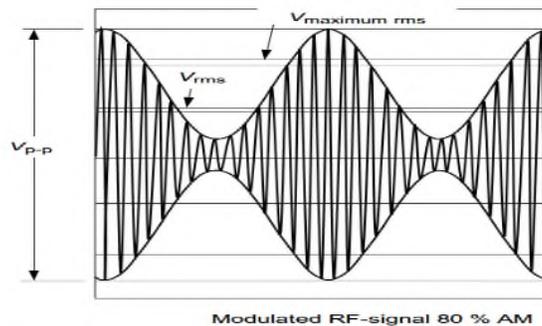
Electromagnetic Susceptibility – 4.1.2.10

Purpose

The EUT will likely be exposed to intentional sources of electromagnetic radiation during its regular application. Sources of such radiation can be cellular phones, FM radio, television, remote car alarms, garage door openers, and other broadcast transmissions. These sources of radiation are licensed or certified for broadcast and therefore, the EUT should be immune to their RF energy. This test assesses the immunity of the EUT to the applicable field strength test level. This test, however, does not guarantee that the EUT will not be exposed to higher level fields during its operation, which may cause it to fail.

Application Level Requirement

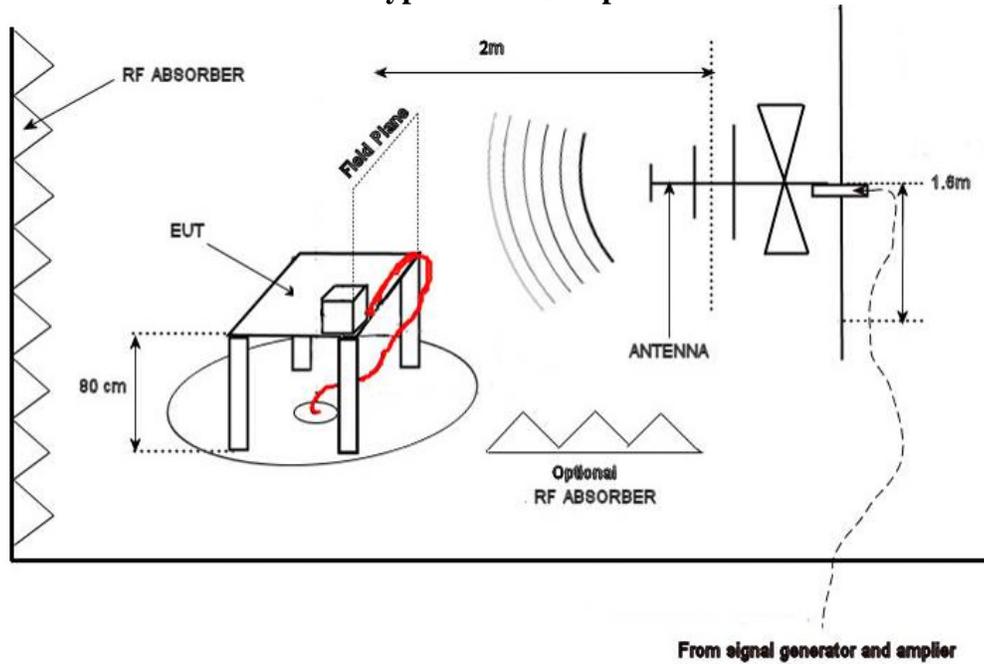
This test is performed in accordance with the methodology defined in IEC 61000-4-3. The immunity test is performed over the frequency range of 80MHz to 1.0GHz. As the frequency range is swept incrementally, the step size used is calculated at 1% of the preceding frequency value, rounded down to the nearest kHz. Known clock frequencies, local oscillators, etc. are analyzed separately, where applicable, and these are defined in "Appendix A – EUT & Client Provided Details". The field uniformity is calibrated at 10V/m and a modulation of 80% AM 1kHz sine wave is applied during the application of the RF energy at each frequency.



The RF field is applied in both horizontal and vertical antenna polarization and four sides of the EUT are subjected to this RF field. The dwell time used for each frequency is 3 seconds. Forward power is monitored and records are kept on file at TÜV SÜD Canada Inc. An isotropic field probe is also placed in near proximity of the EUT to verify the application of the RF field. Performance Criteria level A as defined in "Appendix A – EUT & Client Provided Details" is applied to this test.

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Typical Test Setup



Application Level Accuracy

As per IEC 61000-4-3, the RF field is specified as 0dB to +6dB for at least 12 of the 16 calibration points. For a 10 V/m field, this allows for the EUT to be subjected to a field of 10 V/m to 20 V/m with at least 75% coverage at this level.

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Test Results

The EUTs encountered no disruption of normal operation or data loss. No other anomalies were observed.

ICX DRE VVPAT, Report Printer & BMD

| | |
|-------------------------------------------|-----------------------------|
| Input Voltage and Frequency | 120V 60Hz & Battery Mode |
| Frequency Range and Field Strength | 80MHz – 1GHz 10V/m (80% AM) |
| Sweep Step | 1% of Fundamental |
| Dwell Time | 3 sec. |
| Result | Pass |

Test Equipment List

| Equipment | Model No. | Manufacturer | Last Calibration Date | Next Calibration Date | Asset # |
|-------------------|-----------|-----------------|-----------------------|-----------------------|----------|
| Signal Generator | SMHU | Rohde & Schwarz | Feb. 1, 2017 | Feb. 1, 2019 | GEMC 155 |
| BiLog Antenna | 3142-C | ETS | Oct. 5, 2016 | Oct. 5, 2018 | GEMC 8 |
| Power Amplifier | 150W1000 | AR | NCR | NCR | GEMC 179 |
| Field Probe | FL 7018 | AR | Sept. 21, 2016 | Sept. 21, 2018 | GEMC 164 |
| Field Monitor | FM 7004 | AR | NCR | NCR | GEMC 13 |
| Power Head | PH 2000 | AR | Feb. 1, 2017 | Feb. 1, 2019 | GEMC 15 |
| Power Meter | PM 2002 | AR | Feb. 1, 2017 | Feb. 1, 2019 | GEMC 16 |
| Immunity Software | V221 | Global EMC | NCR | NCR | GEMC 57 |

IEC61000-4-3_RadiatedImmunity_Rev4

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

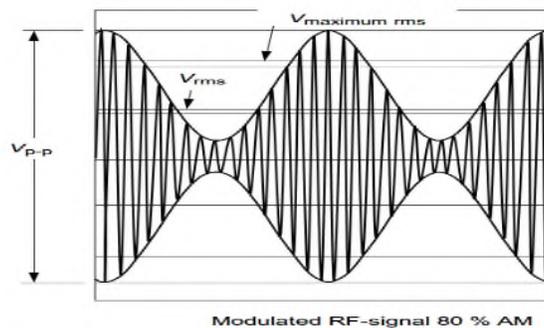
Conducted RF Immunity – 4.1.2.11

Purpose

The EUT will likely be exposed, in some way, to low frequency intentional sources of RF energy during its regular application. Sources of such radiations can be AM radio, shortwave radio, CB transmissions, and other low frequency broadcast transmissions. These sources of radiations are licensed or certified for broadcast and therefore, the EUT should be immune to their RF energy. Due to the properties of radio, the power or I/O lines on the EUT would likely be the passive receiving antenna that induces the disturbance to the EUT. Since this is the main method of coupling at this frequency range, the direct application of the RF energy to the line being tested is used. At this frequency range and level, this method is easier to produce and reproduce in a laboratory environment than subjecting the EUT to an equivalent RF field.

Application Level Requirement

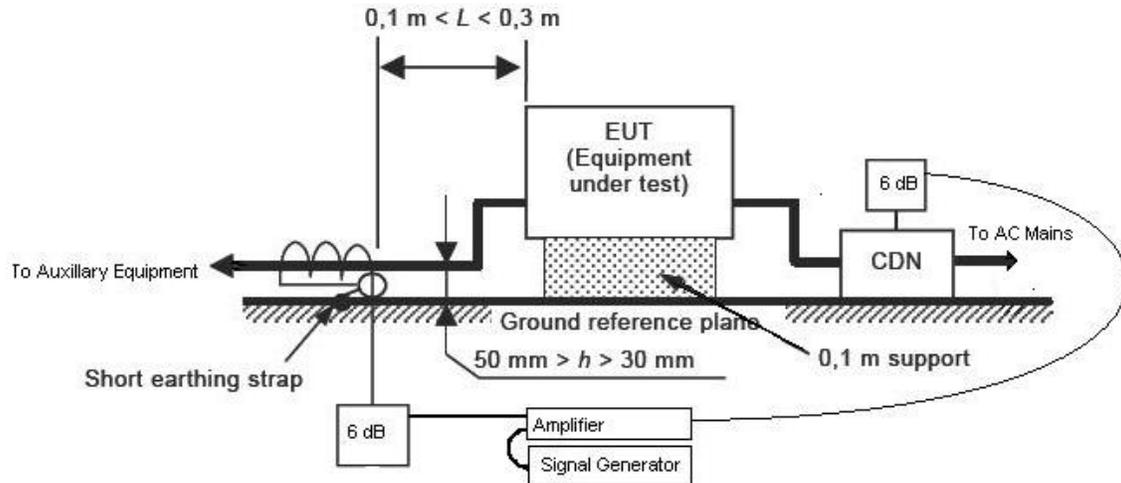
This test is performed in accordance with the methodology defined in IEC 61000-4-6. I/O cables are tested using a bulk current injection probe and power lines are tested using a coupling and decoupling network. The immunity test is performed over the frequency range of 150kHz to 80MHz. As the frequency range is swept incrementally, the step size used is calculated at 1% of the preceding frequency value, rounded down to the nearest kHz. Known clock frequencies, local oscillators, etc. are analyzed separately, where applicable, and these are defined in "Appendix A – EUT & Client Provided Details". The test level is calibrated at 10Vrms and a modulation of 80% AM 1kHz sine wave is applied during the application of the RF energy at each frequency.



The dwell time used for each frequency is 3 seconds. A current probe is placed between the coupling device and the EUT to verify the application of the RF energy. No disruption to normal operation or data loss allowed is applied to this test.

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Typical Test Setup



Application Level Accuracy

As per IEC 61000-4-6, the CDN must meet a common mode impedance $|Z_{CE}| = 150\Omega \pm 20\Omega$ for 150kHz to 26MHz and $|Z_{CE}| = 150\Omega + 60\Omega$ or $150\Omega - 45\Omega$ for 26MHz to 80MHz. During tests using the bulk current injection probe, the impedance of each cable will affect the current injected and therefore, current was monitored. The calibration is performed according to IEC 61000-4-6 which allows for $\pm 2\text{dB}$.

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Test Results

The EUTs passed the requirements. The EUTs met Criteria A as defined in "Appendix A – EUT & Client Provided Details". No anomalies were observed.

ICX DRE VVPAT, Report Printer & BMD

| | |
|--------------------------------------------|--------------------------------|
| Input Voltage and Frequency | 120Vac 60Hz |
| Frequency Range and Signal Strength | 150kHz - 80MHz 10Vrms (80% AM) |
| Sweep Step | 1% of Fundamental |
| Dwell Time | 3 sec. |
| AC Mains | Pass |
| Result | Pass |

Test Equipment List

| Equipment | Model No. | Manufacturer | Last Calibration Date | Next Calibration Date | Asset # |
|----------------------|----------------|-----------------|-----------------------|-----------------------|----------|
| Power Line CDN | FCC-801-M3-16A | FCC | Feb. 10, 2016 | Feb. 10, 2018 | GEMC 138 |
| Power Amplifier | 75A250A | AR | NCR | NCR | GEMC 14 |
| RF Current Probe | F-33-2 | FCC | Jan. 27, 2017 | Jan. 27, 2019 | GEMC 19 |
| Signal Generator | SMHU | Rohde & Schwarz | Feb. 1, 2017 | Feb. 1, 2019 | GEMC 155 |
| Power Attenuator 6dB | 100-A-FFN-06 | Bird | NCR | NCR | GEMC 48 |
| Immunity Software | V221 | Global EMC | NCR | NCR | GEMC 57 |

IEC61000-4-6_ConductedImmunity_Rev4

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Magnetic Fields Immunity – 4.1.2.12

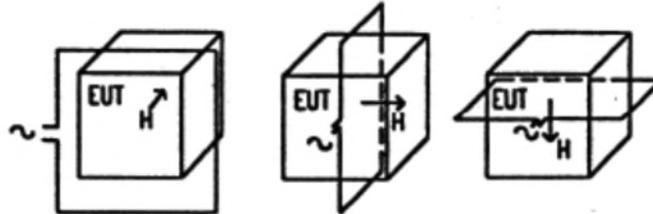
Purpose

A magnetic field with the frequency of the power line is generated around the EUT. In practice, the EUT will be subjected to power frequency magnetic fields from nearby power lines, transformers, or devices such as televisions or monitors. Since the EUT is usually used in conjunction with other electrical equipment, it is subjected to the steady state magnetic fields. These are magnetic fields that the device is exposed to under normal operating conditions. These fields have lower field strengths compared to typical transient magnetic fields.

Application Level Requirement

This test is performed in accordance with the methodology defined in IEC 61000-4-8. Three orthogonal axis of the EUT are subjected to the field within the magnetic loop. The transient magnetic field, if applicable, is tested for 1 minute while the steady state magnetic field is tested for 15 minutes. The frequency applied is 60 Hz. A magnetic field strength of 30 A/m is applied to the EUT in each orthogonal axis. No disruption to normal operation or loss of data is applied to this test.

Typical Setup Diagram



Application Level Accuracy

As per IEC 61000-4-8, the field over the area that the EUT occupies within the loop must be calibrated to be within $\pm 3\text{dB}$. For a field strength of 3 A/m, this means that the empty calibrated field strength can be between 2.1 A/m and 4.2 A/m over the area that the EUT occupies.

Test Results

The EUT passed the requirements. The EUT did not encounter any disruption of normal operation or loss of data. No anomalies were observed.

When a 60 Hz field was applied, the EUTs were powered at 120 Vac 60 Hz, battery mode and the field strength at 30 A/m.

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Test Equipment List

| Equipment | Model No. | Manufacturer | Last Calibration Date | Next Calibration Date | Asset # |
|-----------------------|------------------|--------------|-----------------------|-----------------------|-----------|
| 80 Turn Magnetic Loop | 1m x 1m | Global EMC | NCR | NCR | GEMC 136 |
| Variac | PWRSTA 3PN126 | Powerstat | NCR | NCR | GEMC 6032 |
| Clamp Meter | 365 | Fluke | Nov. 23, 2016 | Nov. 23, 2017 | GEMC 260 |

IEC61000-4-8_MagneticImmunity_Rev3

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Appendix A – EUT & Client Provided Details

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

General EUT Description

| Client Details | |
|---------------------------------------------|-----------------------------------------------------------------------------------------|
| Organization / Address | Pro V&V 700 Boulevard South – Suite 102 Huntsville, AL 35802 United States |
| Contact | Michael Walker |
| Phone | +1 256 713 1111 |
| Email | mwalker@provandv.com |
| Manufacturer Details (if not same as above) | |
| Organization / Address | Dominion Voting Systems 215 Spadina Ave – Suite 200 Toronto, ON M5T 2C7 Canada |
| Contact | Aamer Chaudhry |
| Phone | +1 416 762 8683 ext. 227 |
| Email | aamer.chaudhry@dominionvoting.com |
| EUT (Equipment Under Test) Details | |
| EUT Name | ICX DRE VVPAT ICX DRE Report Printer ICX BMD |
| EUT Model / SN | Refer to tester notes |
| EUT revision | New Product |
| Software version | N/A |
| Equipment category | Voting Machines |
| EUT is powered using | 120VAC and back-up battery |
| Input voltage range(s) (V) | 82 – 144V 50/60Hz ± 3Hz |
| Frequency range(s) (Hz) | Highest Frequency: 2.3GHz |
| Rated input current (A) | 12A |
| Nominal power consumption (W) | 1000W |
| Number of power supplies in EUT | 1 |
| Transmits RF energy? (describe) | N/A |
| Basic EUT functionality description | Voting Machine |

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

| EUT (Equipment Under Test) Details | |
|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| High level block diagram of EUT (attachment) | See Dominion Voting Notes |
| Modes of operation | AC mode and battery mode |
| Step by step instructions for setup and operation | See operator/customer |
| Customer to setup EUT on site? | Yes |
| EUT response time (ms) | 5 min |
| EUT setup time (min) | 5 min |
| Frequency of all clocks present in EUT | Highest Frequency: 2.3GHz |
| I/O cable description Specify length and type | Various – all less than 3m |
| Available connectors on EUT | Ethernet, Audio In/Out, USB 2.0, USB 3.0, DC Barrel, 24V output, Mini USB |
| Peripherals required to exercise EUT Ex. Signal generator | N/A |
| Method of monitoring EUT and description of failure for immunity. | Monitor automatic voting session on EUT to see if voting results (Selected candidates: A1, B1, C1 and QR code) are correctly printed at a set interval of 5 minutes. |

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

EUT Functional Description

Three voting system configurations

EUT Configuration

Please see Appendix B for a picture of the unit running in normal conditions.

- Cables and earthing were connected as per manufacturer's specification.
- All Cables are less than 3m

Operational Setup

Peripheral devices were attached to the EUT for its test operation. However, this report does not represent compliance of these peripheral device(s) in any way.

- Turn on device, enter test mode using voter and admin cards

Modifications for Compliance

The following modifications were made during testing for the sample to achieve compliance with the testing requirements:

- ICX Prime VVPAT, DRE require no modifications to achieve compliance during the test program
- ICX Prime BMD required a ferrite by Steward Electronics, Part Number 28A2029-0A2, please see Figure 45 for installation location

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

EUT Serial Numbers

| ICX DRE VVPAT & Report Printer Serial Numbers | | |
|----------------------------------------------------------|-----------------|----------------------|
| <u>Device</u> | <u>Model#</u> | <u>Serial Number</u> |
| ATI | 181-000036 | B104326-1-4-035 |
| ATI | 181-000036 | B104326-1-4-040 |
| AVALUE Tablet | HID-21V-BTX-01R | 1707101710 |
| AVALUE Tablet | HID-21V-BTX-01R | 1707101725 |
| AVALUE Tablet | HID-21V-BTX-01R | 1707101731 |
| Headphones | ACM-70 | Dominion-HP-001 |
| Headphones | ACM-70 | Dominion-HP-002 |
| Power Supply | 9NA1802821 | H7221000053 |
| Power Supply | 9NA1802821 | H7221000039 |
| Power Supply | 9NA1802821 | H72210000712 |
| VVPAT | VRP3 | KPR0000000711 |
| VVPAT | VRP3 | KPR0000000712 |

| ICX BMD Serial Numbers | | | |
|-------------------------------|-----------------|----------------------|---------------------------|
| <u>Device</u> | <u>Model#</u> | <u>Serial Number</u> | <u>Unit Configuration</u> |
| AVALUE Tablet | HID-21V-BTX-01R | 1708100916 | A |
| AVALUE Tablet | HID-21V-BTX-01R | 1708100876 | B |
| AVALUE Tablet | HID-21V-BTX-01R | 1708100915 | C |
| HP Laser Jet Pro | M402 dne | PHB5D00782 | A |
| HP Laser Jet Pro | M402 dne | PHB5D04714 | B |
| HP Laser Jet Pro | M402 dne | PHB4F04770 | C |
| Smart UPS 1500 | 1500 | 351716X02289 | A |
| Smart UPS 1500 | 1500 | WS1530180004 | B |
| Smart UPS 1500 | 1500 | 3S1536X06484 | C |
| EMI Filter | 1 | H72210000712 | A |
| EMI Filter | 2 | KPR0000000711 | B |
| EMI Filter | 3 | KPR0000000712 | C |

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

ICX BMD Test Configurations

| Configurations & Tests for ICX BMD | |
|------------------------------------|-----------------------------------------|
| <u>Configuration</u> | <u>Tests</u> |
| A | Electrical Fast Transients |
| | Electrical Power Disturbance Part 1 |
| | Lightning Surge |
| | Magnetic Fields Immunity |
| B | Conducted Susceptibility |
| | Electrical Power Disturbance Part 2 |
| | Conducted Emissions (UPS & Filter Only) |
| C | Radiated Susceptibility |
| | Radiated Emissions |
| | Conducted Emissions (Not UPS & Filter) |
| | Electrostatic Disruption |

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Appendix B – EUT, Peripherals, and Test Setup Photos

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

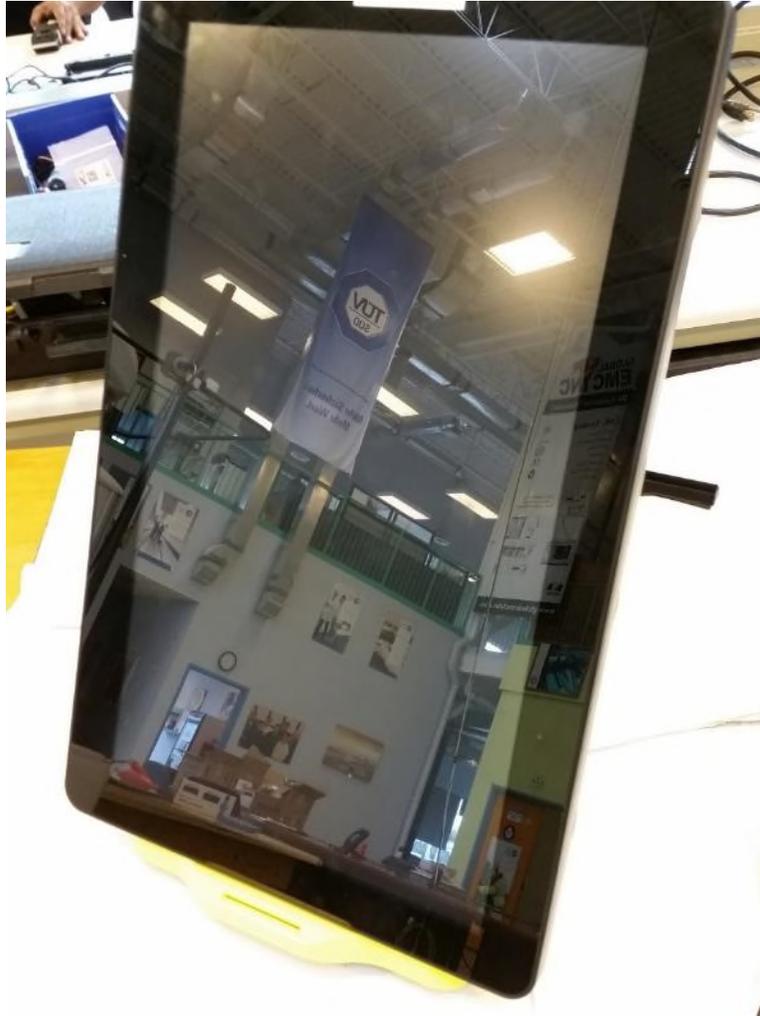


Figure 1 – EUT Front Close Up – ICX DRE Tablet (VVPAT, Report Printer & BMD)

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

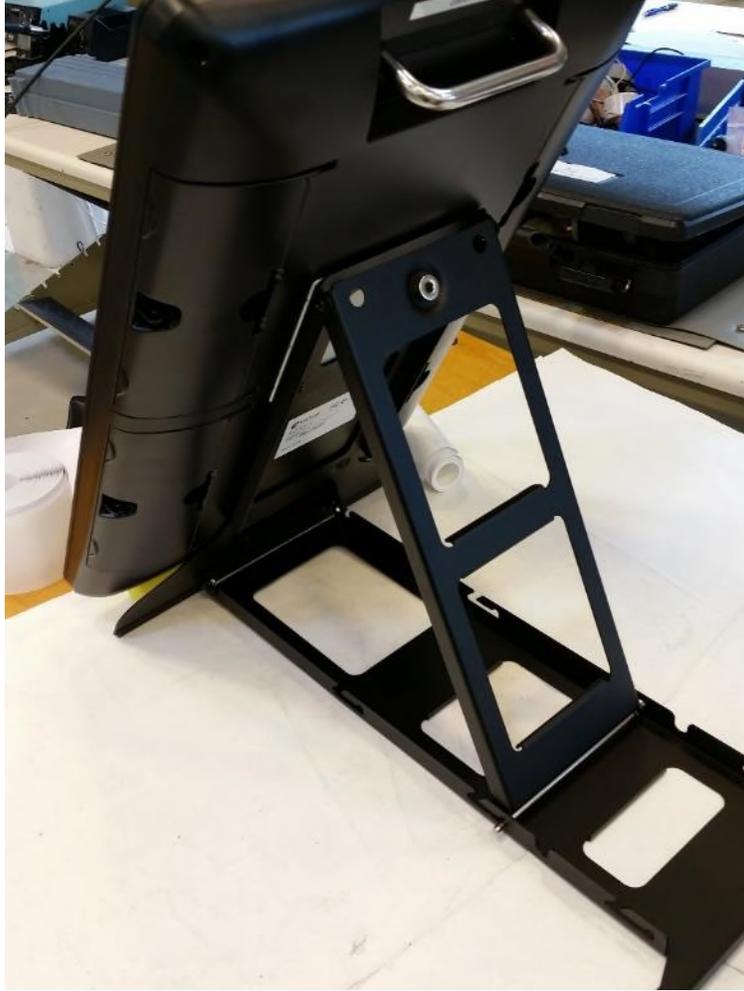


Figure 2 – EUT Rear Close Up – ICX DRE Tablet (VVPAT, Report Printer & BMD)

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 3 – EUT Close Up – ICX DRE Tablet Information

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 4 – EUT Close Up – ICX DRE Tablet Power Supply

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 5 – EUT Close Up – ICX DRE VVPAT Printer Label

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 6 – EUT Close Up – ICX BMD AC Filter Label

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 7 – EUT Close Up – ICX BMD UPS Front

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 8 – EUT Close Up – ICX BMD UPS Rear

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 9 – EUT Close Up – ICX BMD Printer Front

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 10 – EUT Close Up – ICX BMD UPS Rear

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 11 – EUT – Report Printer, Left / Right Paddles, Headphones, Binary Input

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 12 – Power Line Conducted Emissions Setup – Photo 1
(ICX DRE Report Printer)

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

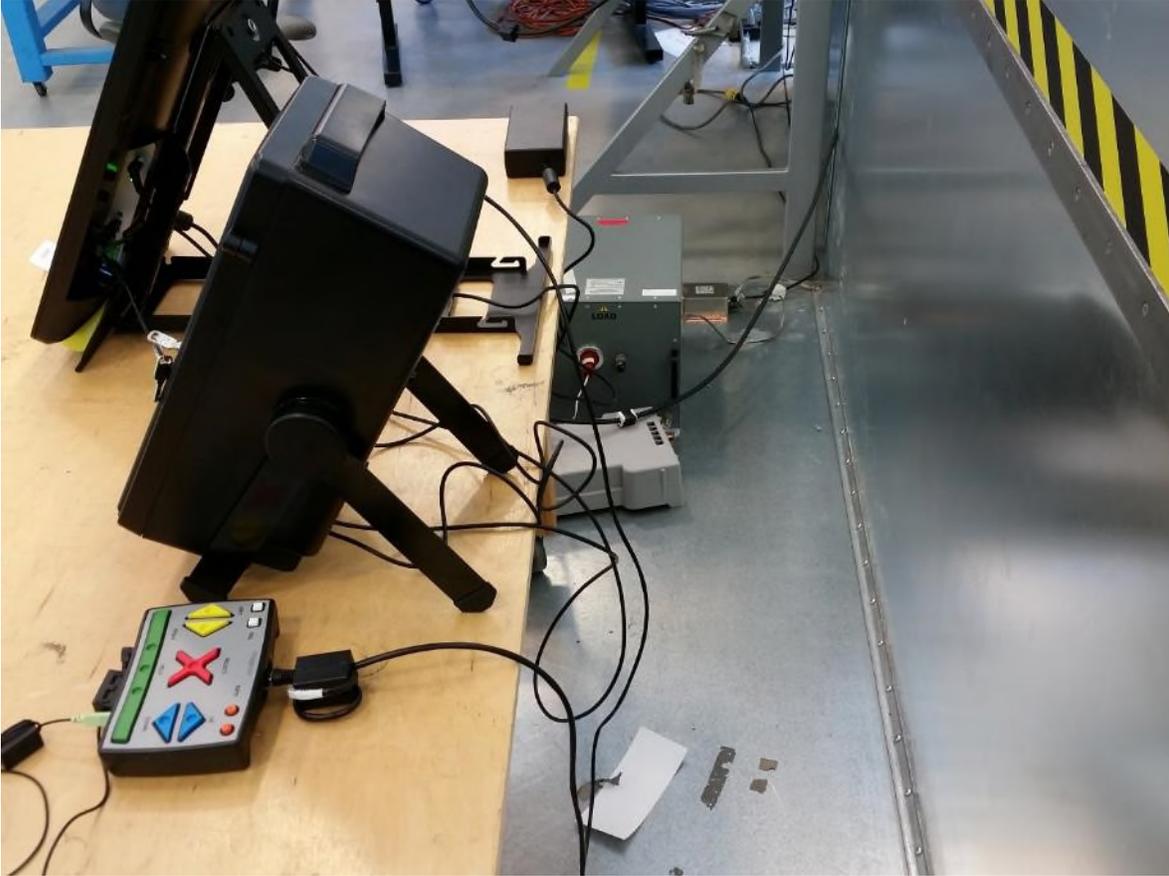


Figure 13 – Power Line Conducted Emissions Setup – Photo 2
(ICX DRE Report Printer)

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 14 – Power Line Conducted Emissions Setup – Photo 1
(ICX DRE VVPAT)

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

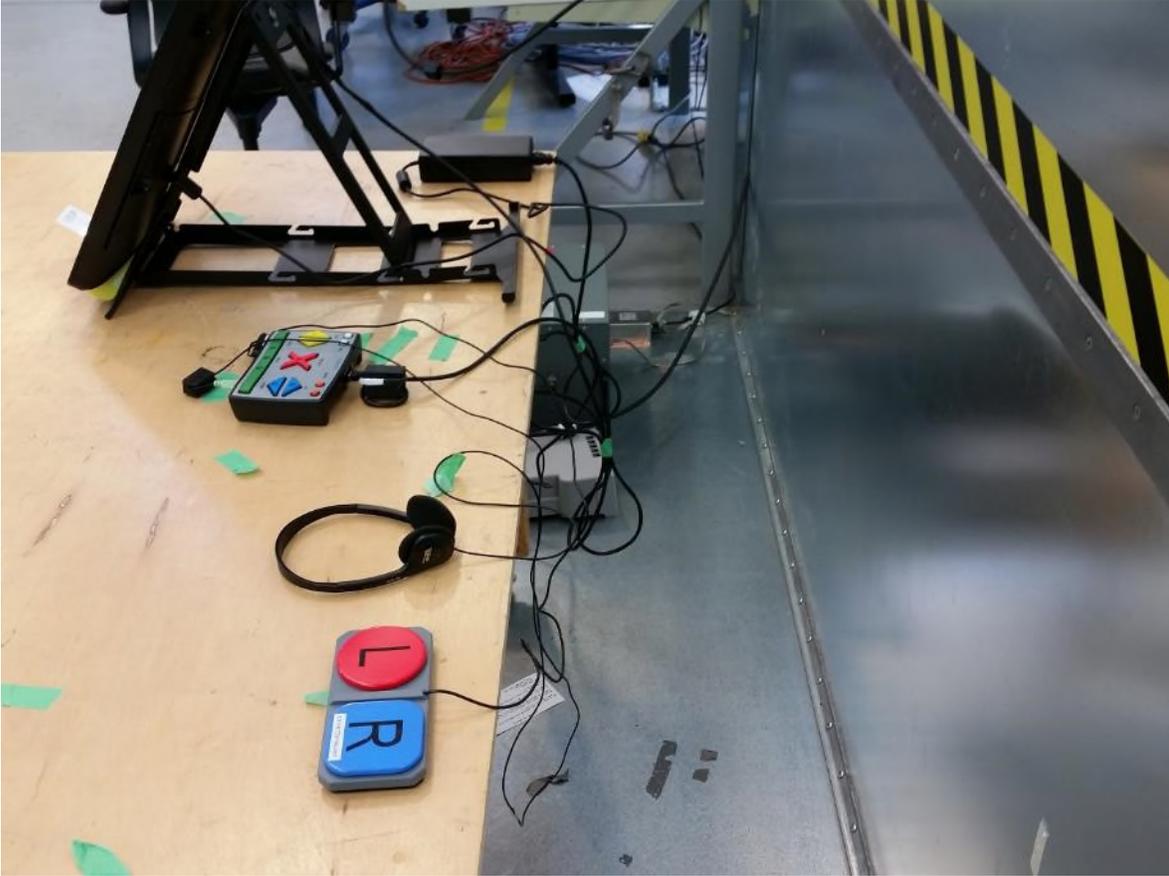


Figure 15 – Power Line Conducted Emissions Setup – Photo 2
(ICX DRE VVPAT)

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 16 – Power Line Conducted Emissions Setup – Photo 1 (ICX BMD)

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 17 – Power Line Conducted Emissions Setup – Photo 2
(ICX BMD)

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 18 – Radiated Emissions Setup (ICX DRE Report Printer) – Photo 1

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| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 19 – Radiated Emissions Setup (ICX DRE Report Printer) – Photo 2
30MHz – 1GHz

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 20 – Radiated Emissions Setup (ICX DRE Report Printer) – Photo 3
1GHz – 6GHz

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 21 – Radiated Emissions Setup (ICX DRE Report Printer) – Photo 4
6GHz – 18GHz

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

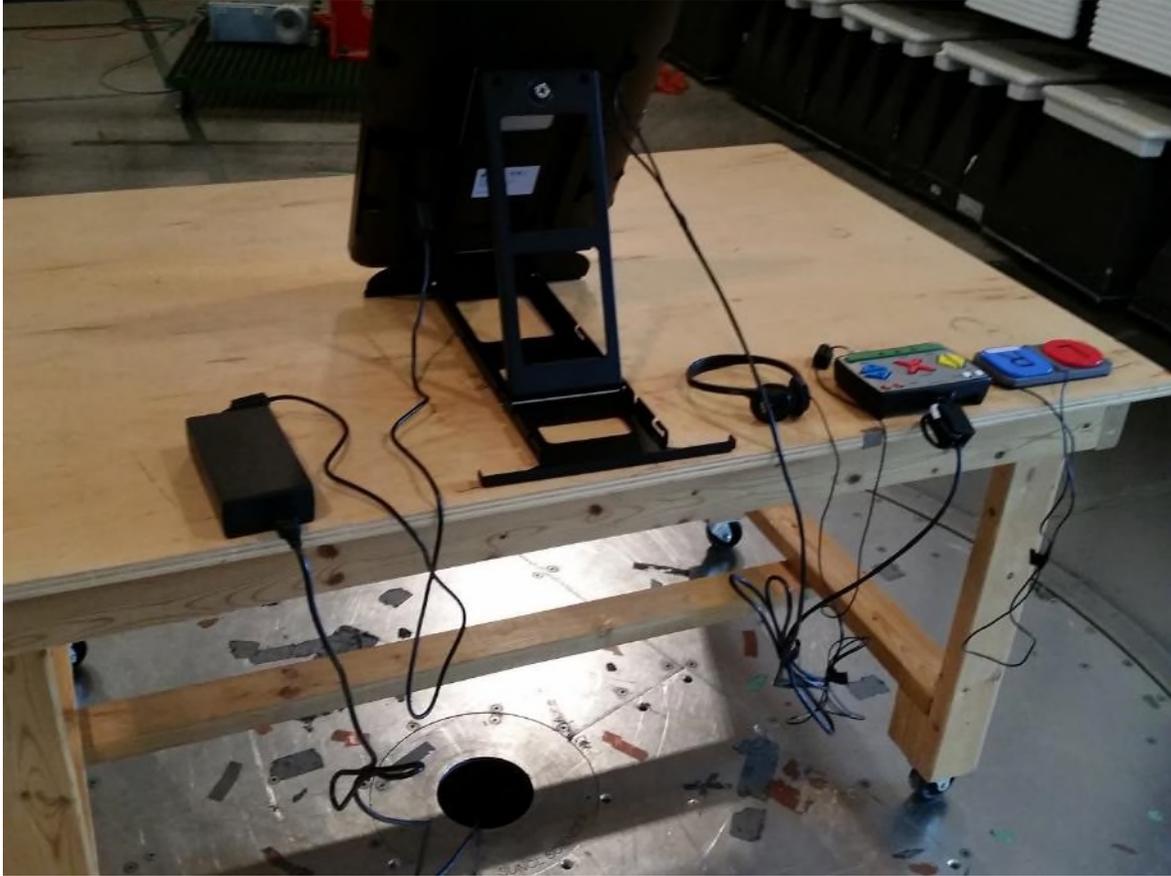


Figure 22 – Radiated Emissions Setup (ICX DRE VVPAT) – Photo 1

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 23 – Radiated Emissions Setup (ICX DRE VVPAT) – Photo 2
30MHz – 1GHz

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 24 – Radiated Emissions Setup (ICX DRE VVPAT) – Photo 3
1GHz – 6GHz

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 25 – Radiated Emissions Setup (ICX DRE VVPAT) – Photo 4
6GHz – 18GHz

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 26 – Radiated Emissions Setup (ICX BMD) – Photo 1

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 27 – Radiated Emissions Setup (ICX BMD) – Photo 2
30MHz – 1GHz

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

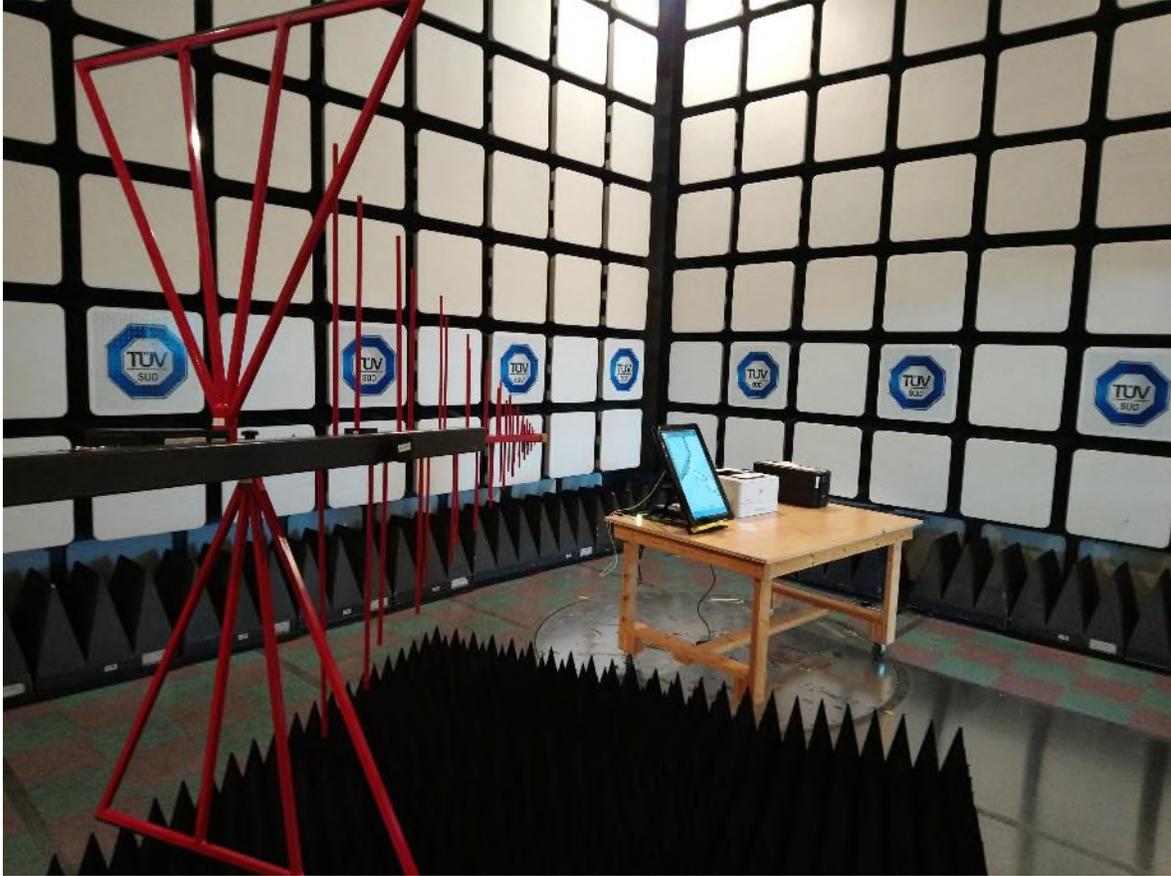


Figure 28 – Radiated Emissions Setup (ICX BMD) – Photo 3
1GHz – 2GHz

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 29 – Radiated Emissions Setup (ICX BMD) – Photo 3
2GHz – 12GHz

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 30 – Electrical Power Disturbance Pt. 1 / Electrical Fast Transient / Lightning Surge (ICX DRE Report Printer)

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 31 – Electrical Power Disturbance Pt. 1 / Electrical Fast Transient / Lightning Surge (ICX DRE VVPAT)

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

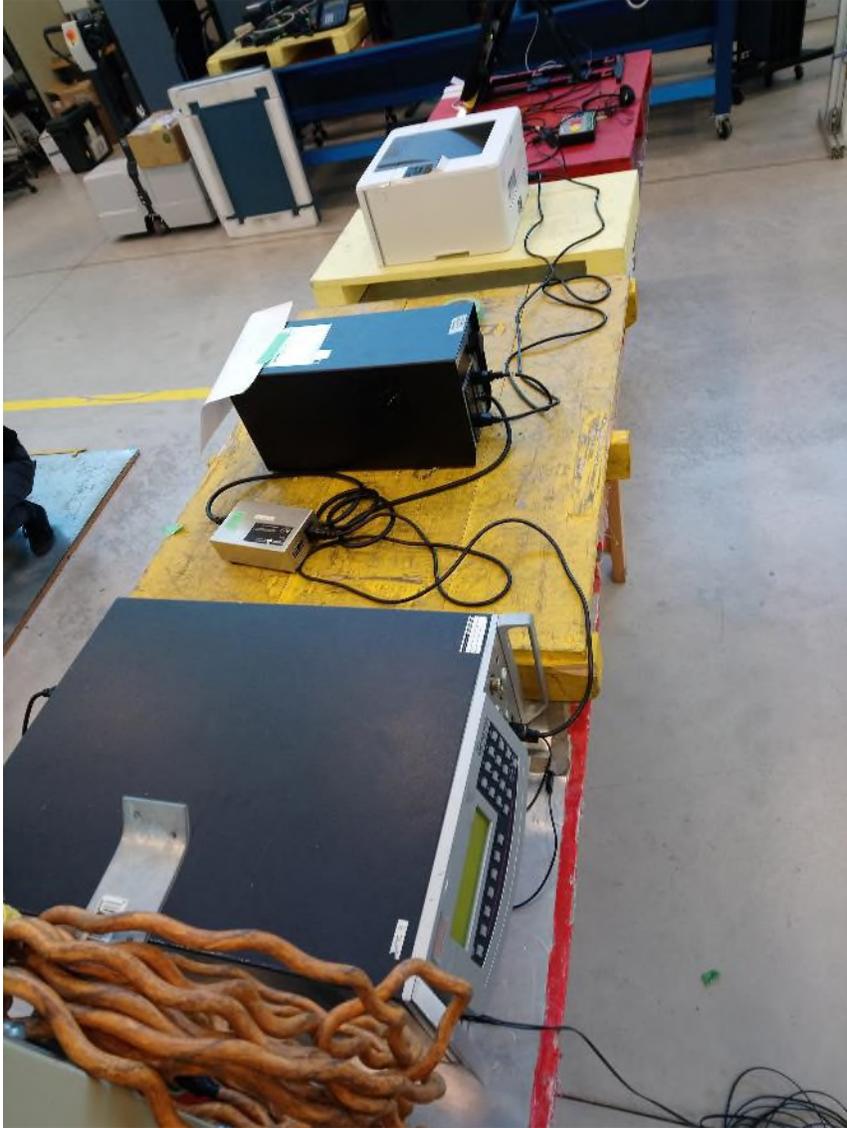


Figure 32 – Electrical Power Disturbance Pt. 1 / Electrical Fast Transient / Lightning Surge (ICX BMD)

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 33 – Electrical Power Disturbance Pt. 2 (ICX DRE VVPAT & Report Printer)

| | | |
|-------------|--------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Client | Pro V&V |  Canada |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 34 – Electrical Power Disturbance Pt. 2 (ICX BMD)

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 35 – Electrostatic Disruption Setup (ICX DRE VVPAT)
(ICX DRE Report Printer has an additional printer on the table)

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 36 – Electrostatic Disruption Setup (ICX BMD)

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| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 37 – Electromagnetic Susceptibility Setup (ICX DRE VVPAT & Report Printer)

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 38 – Electromagnetic Susceptibility Setup (ICX BMD)

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

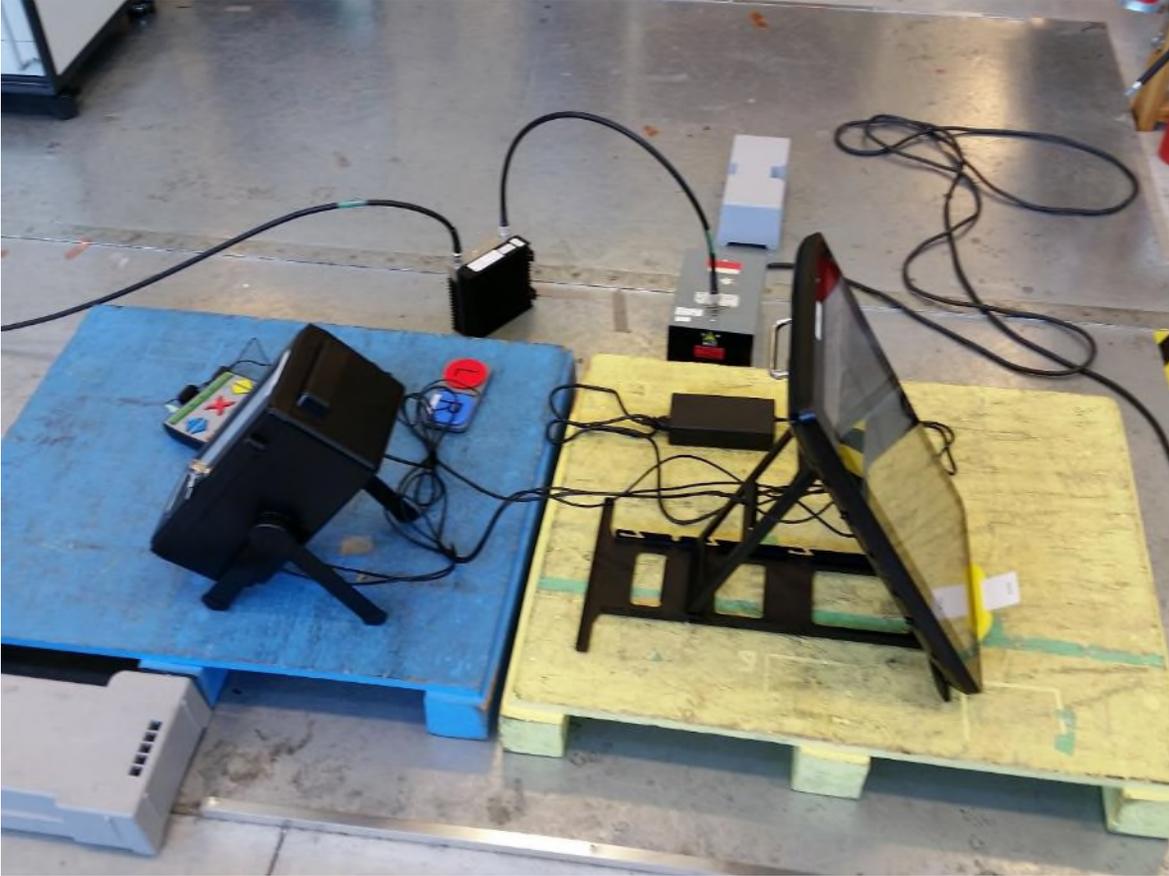


Figure 39 – Conducted RF Immunity Setup (ICX DRE Report Printer)

| | | |
|-------------|--------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Client | Pro V&V |  Canada |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

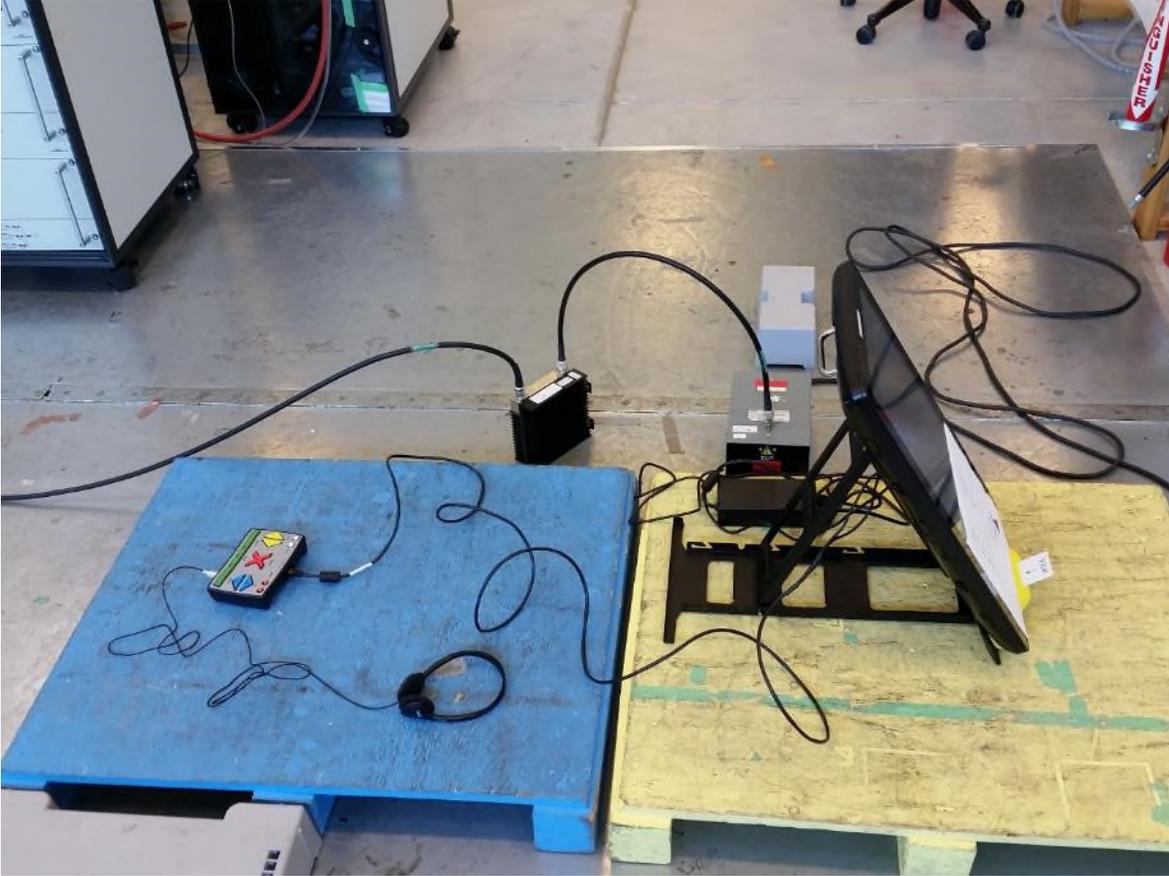


Figure 40 – Conducted RF Immunity Setup (ICX DRE VVPAT)

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

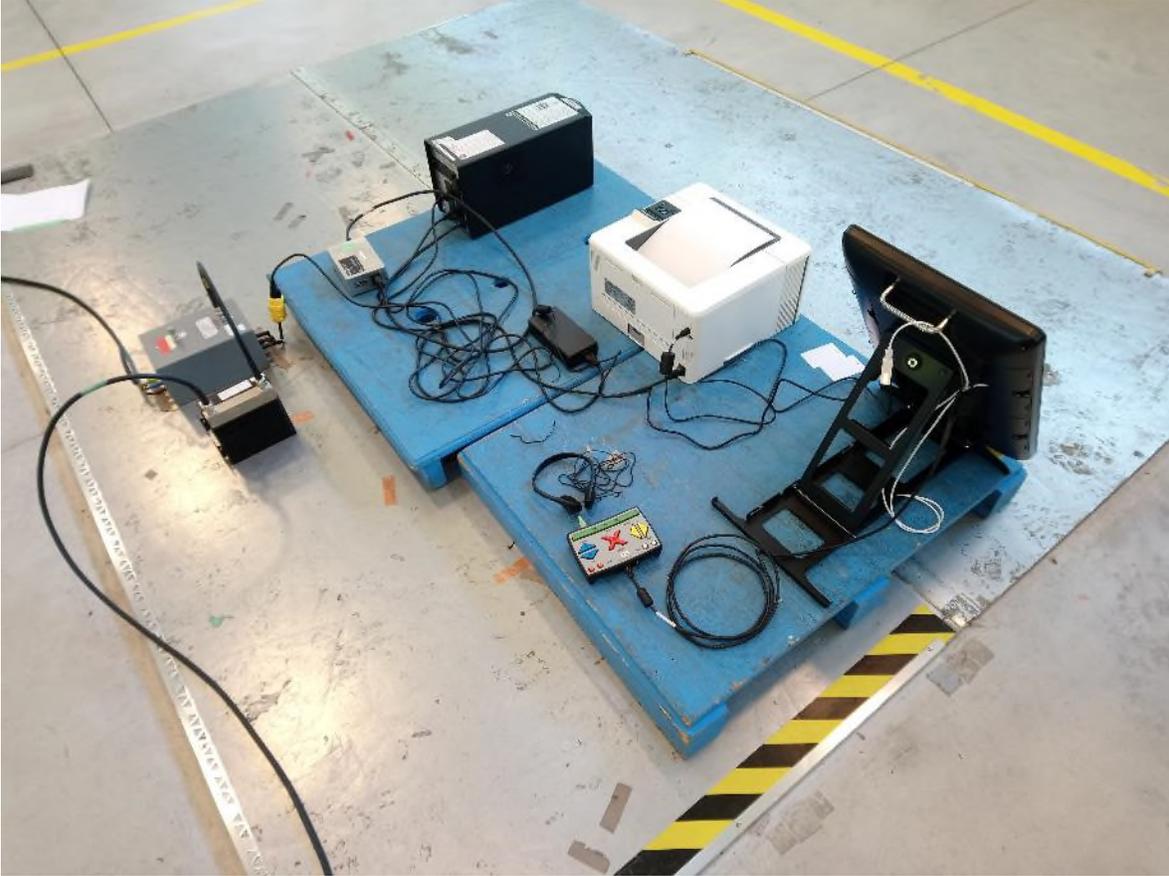


Figure 41 – Conducted RF Immunity Setup (ICX BMD)

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| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 42 – Magnetic Fields Immunity (ICX DRE Report Printer)

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

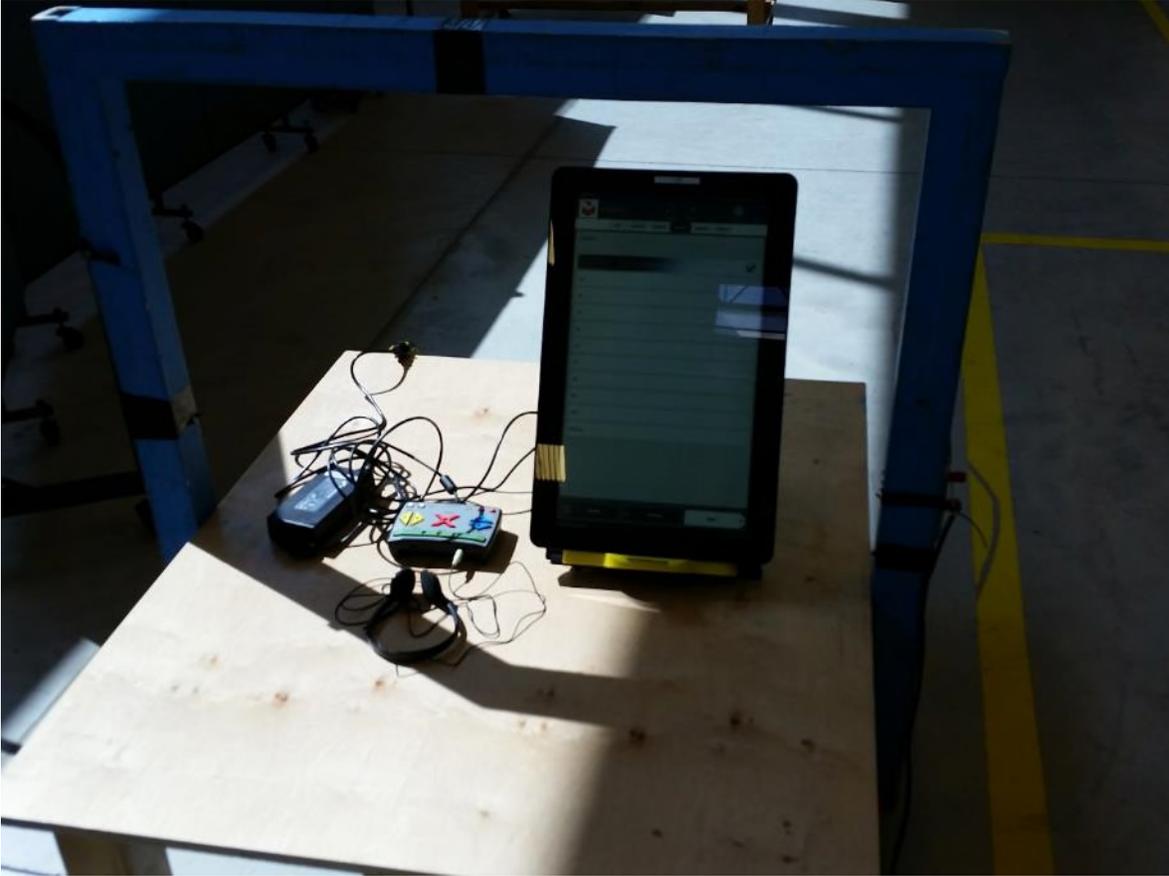


Figure 43 – Magnetic Fields Immunity (ICX DRE VVPAT)

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 44 – Magnetic Fields Immunity (ICX BMD)

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |



Figure 45 – EFT Ferrite Placement for ICX BMD

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Appendix C – Product Marking

| | | |
|-------------|--------------------------------------------------------|-------------------------------------------------------------------------------------|
| Client | Pro V&V |  |
| Product | ICX DRE VVPAT, ICX DRE Report Printer, ICX BMD | |
| Standard(s) | FCC Part 15 Subpart B / ICES-003 VVSG V1.0 Volume 1 | |

Product Marking

Products marketed in the US:

For products that are not intentional radiators and are subject to the 'verification' procedure in the US, according to the FCC, the product shall bear the following statement in a conspicuous location on the device:

*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.*

Where a device is constructed in two or more sections connected by wires and marketed together, the statement specified is required to be affixed only to the main control unit.

When the device is so small or for such use that it is not practicable to place the statement specified on it, the information required by this paragraph shall be placed in a prominent location in the instruction manual or pamphlet supplied to the user or, alternatively, shall be placed on the container in which the device is marketed.

In this case, the following statement may accompany the product:

"This device complies with Part 15 of the FCC Rules. See manual for details"

Also, the FCC identifier or other unique identifier such as a model number and serial number, as appropriate, must be displayed on the device.

Products marketed within Canada:

According to Industry Canada, the following statement shall be permanently affixed to the ITE or displayed electronically and its text must be clearly legible. If the dimensions of the device are too small or if it is not practical to place the label on the device and electronic labeling has not been implemented, the label shall be, upon agreement with Industry Canada, placed in a prominent location in the user manual supplied with the ITE.

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

* Insert either "A" or "B" but not both to identify the applicable Class of ITE.