EMC TEST REPORT

FCC 47 CFR Part 15B, ISED ICES-003 Issue 6

Report Reference No	G0M-1801-7169-EF0115B-V01
Testing Laboratory	Eurofins Product Service GmbH
Address	Storkower Str. 38c 15526 Reichenwalde Germany
Accreditation	A2LA Accredited Testing Laboratory, Certificate No.: 1983.01 FCC Filed Test Laboratory, Reg.-No.: 96970 IC Testing Laboratory site: 3470A-2
Applicant	Dräger Safety AG & Co. KGaA
Address	Revalstraße 1 23560 Lübeck GERMANY
Test Specification	Full compliance test
Standard	47 CFR Part 15 Subpart B ISED ICES-003 Issue 6 ANSI C63.4:2014
Non-Standard Test Method	None
Equipment under Test (EUT):	
Product Description	Inductive Charger
Model(s)	Induktive Power Unit
Additional Model(s)	None
Brand Name(s)	Dräger
Hardware Version(s)	8325825
Software Version(s)	8325897
FCC-ID	X6O-IC001
IC	5895F-IC001
Test Result	**PASSED**

Possibe test case verdicts:		
required by standard but not tested	N/T	
not required by standard	N/R	
required by standard but not appl. to test object	N/A	
test object does meet the requirement	P(PASS)	
test object does not meet the requirement	F(FAIL)	
Testing:		
Date of receipt of test item	2018-06-06	
Report:		
Compiled by	Christian Weber	
Tested by (+ signature) (Responsible for Test)	Christian Weber	C. Weber .....
Approved by (+ signature) (Deputy Head of Lab)	Jens Marquardt	.....
Date of Issue	2019-01-07	
Total number of pages	37	
General Remarks:		
The test results presented in this report relate only to the object tested. **The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer to ensure that all production models meet the intent of the requirements detailed within this report.** This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.		
Additional Comments:		

ABBREVIATIONS AND ACRONYMS

Acronyms	
Acronym	Description
EUT	Equipment Under Test
FCC	Federal Communications Commission
ISED	Innovation, Science and Economic Development Canada
T_{NOM}	Nominal operating temperature
V_{NOM}	Nominal supply voltage

VERSION HISTORY

Version History			
Version	Issue Date	Remarks	Revised By
01	2019-01-07	Initial Release	

REPORT INDEX

1 Equipment (Test Item) Under Test

Description	Inductive Charger	
Model	Induktive Power Unit	
Additional Model(s)	None	
Brand Name(s)	Dräger	
Serial Number(s)	Unspecified	
Hardware Version(s)	8325825	
Software Version(s)	8325897	
FCC-ID	X6O-IC001	
IC	5895F-IC001	
Class	Class B	
Equipment type	Table top	
Highest internal frequency [MHz]	50	
Supply Voltage	V_{NOM}	24 VDC (10 – 30 VDC)
AC/DC-Adaptor 1	Model	GT-41076-0612
	Vendor	Dräger
	Input	100-240 VAC / 50-60 Hz / 0.3A
	Output	12 VDC / 0.5 A
AC/DC-Adaptor 2	Model	GT-43004P15024-T3
	Vendor	Dräger
	Input	100-240 VAC / 50-60 Hz / 2A
	Output	24 VDC / 6.25 A
Manufacturer	Dräger Safety AG & Co. KGaA Revalstraße 1 23560 Lübeck GERMANY	

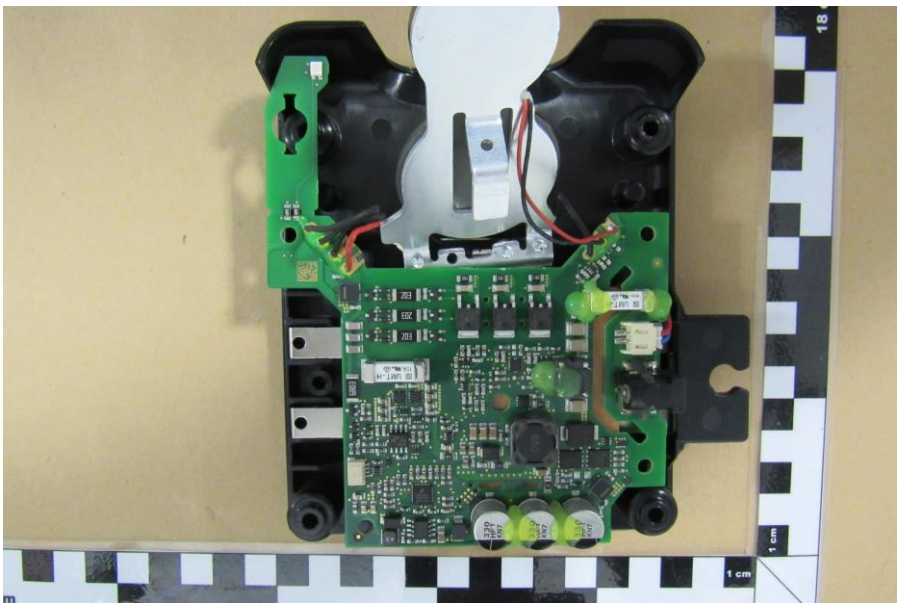
1.1 Equipment Ports

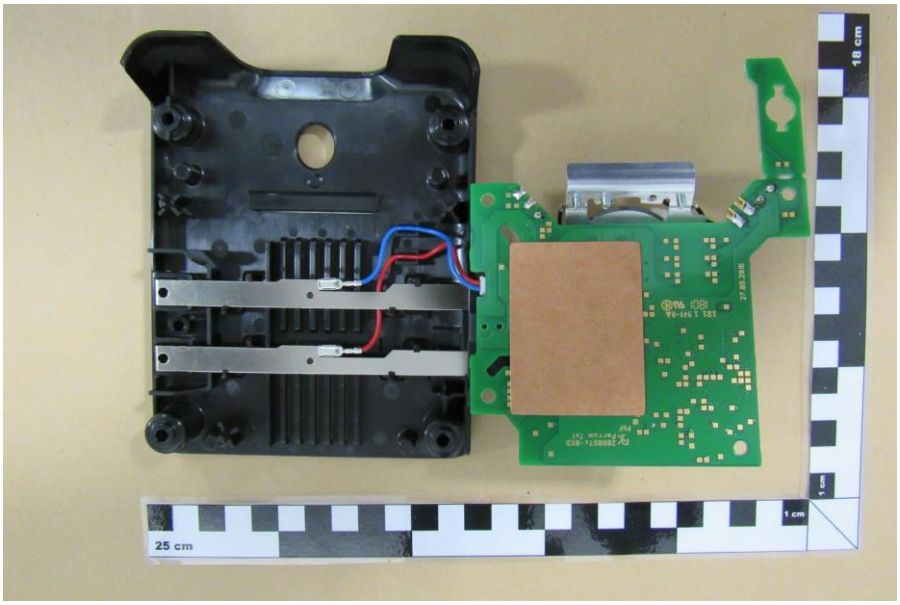
Name	Type	Attributes		Comment
Supply	DC	Count: Direction: Service only:	1 In No	

Description:	
AC	AC mains power input/output port
DC	DC power input/output port
IO	Input/Output port
TP	Telecommunication port
NE	Non-electrical port

1.2 Equipment Photos – Internal

EUT INDUCTIVE COILS


EUT PCB TOP


EUT PCB BOTTOM


1.3 Equipment Photos - External

EUT TOP	EUT BOTTOM
	

EUT SIDE VIEW	EUT LABEL
	

AC/DC-ADAPTOR 1	AC/DC-ADAPTOR 1 LABEL
	

AC/DC-ADAPTOR 2	AC/DC-ADAPTOR 2 - ADAPTOR FOR EUT
	

AC/DC-ADAPTOR 2 - ADAPTOR FOR EUT - LABEL	AC/DC-ADAPTOR 2 - LABEL
	

AE: CHARGING LOAD TOP	AE: CHARGING LOAD BOTTOM
	

AE: CHARGING LOAD LABEL	AE: CLIENT DEVICE TOP
	

AE: CLIENT DEVICE BOTTOM	AE: CLIENT DEVICE LABEL
	

AE: CLIENT DEVICE LABEL 2


1.4 Support Equipment

Product Type	Device	Manufacturer	Model	Comment
AE	Charging load	Dräger	LBT 0200 power supply	
AE	Client Device	Dräger	X-am 8000	With LBT 0200 power supply
Description:				
AE	Auxillary Equipment			
SIM	Simulator			
CBL	Connecting Cable			
Comment:				

1.5 Operational Modes

Mode #	Description
1	Charging mode
Comment:	

1.6 EUT Configuration

Configuration #	Description
1	A single load is placed inside the charger. The charger is supplied by the AC/DC-adaptor 1
2	A single client device is placed inside the charger. The charger is supplied by the AC/DC-adaptor 1
3	10 chargers are cascaded with one load placed inside each charger. The chain of chargers is supplied by the AC/DC-adaptor 2
Comment: Pre-tests were performed in order to determine the worst case emissions for a combination of up to 20 chargers supplied by a single ac/dc-adaptor. The combination of 10 chargers gave the worst case and is reported as worst case radiated emission case. For ac power line conducted emissions all three configurations (single charger with adaptor 1 and load, single charger with adaptor 1 and client and 10 chargers with adaptor 2 and loads) are reported	

1.7 Sample emission level calculation

The following is a description of terms and a sample calculation, as appears in the radiated emissions data table. The numbers used in the calculation are for example only. There is no direct correlation to the specific data taken for the product described in this document:

Reading:

This is the reading obtained on the spectrum analyzer in dBµV. Any external preamplifiers used are taken into account through internal analyzer settings.

A.F.:

This is the antenna factor for the receiving antenna. It is a conversion factor, which converts electric fields strengths to voltages, which can be measured directly on the spectrum analyzer. It is treated as a loss in dB. Cable losses have been included with the A.F. to simplify the calculations. The antenna factor is used in calculations as follows:

Reading on Analyzer (dBµV) + A.F. (dB/m) = Net field strength (dBµV/m)

Net:

This is the net field strength measurement (as shown above).

Limit:

This is the FCC Class B radiated emission limit (in units of dBµV/m). The FCC limits are given in units of µV/m. The following formula is used to convert the units of µV/m to dBµV/m:

Limit (dBµV/m) = 20*log (µV/m)

Margin:

This is the margin of compliance below the FCC limit. The units are given in dB. A negative margin indicates the emission was below the limit. A positive margin indicates that the emission exceeds the limit.

Example only:

Reading + AF	= Net Reading	:	Net reading	- FCC limit	= Margin
+21.5 dBµV	+ 26 dB/m = 47.5 dBµV/m	:	47.5 dBµV/m	- 57.0 dBµV/m	= -9.5 dB

2 Result Summary

FCC 47 CFR Part 15B, ISED ICES-003 Issue 6				
Reference	**Requirement**	**Reference Method**	**Result**	**Remarks**
Emission				
FCC 15.109 ICES-003, 8, 6.1	Radiated emissions	ANSI C63.4:2014	PASS	
FCC 15.107 ICES-003, 8, 6.2	AC power line conducted emissions	ANSI C63.4:2014	PASS	
Comment:				

Possible Test Case Verdicts	
PASS	Test object does meet the requirements
FAIL	Test object does not meet the requirements
N/T	Required by standard but not tested
N/R	Not required by standard for the test object

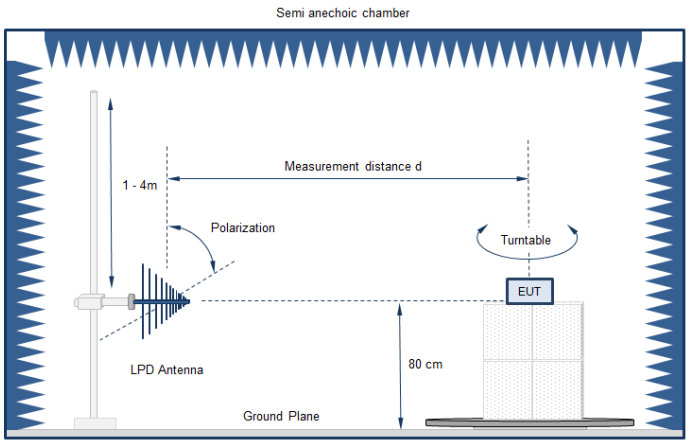
2.1 Test Conditions and Results - Radiated emissions acc. to ANSI C63.4

2.1.1 Information

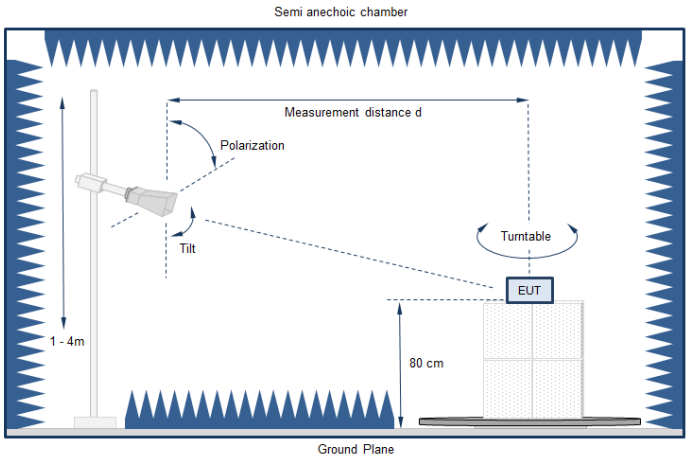
Test Information	
Reference	FCC 15.109, ICES-003, 8, 6.1
Reference method	ANSI C63.4:2014 Section 8
Equipment class	Class B
Equipment type	Table top
Highest internal frequency [MHz]	50
Measurement range	30 MHz to 1 GHz
Temperature [°C]	24
Humidity [%]	53
Operator	Christian Weber
Date	2018-09-17

2.1.2 Setup

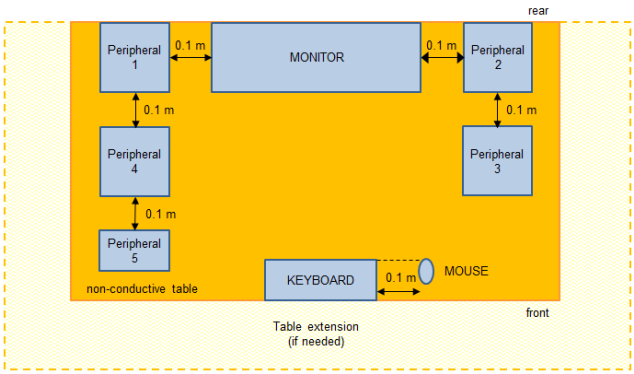
Measurement up to 1 GHz



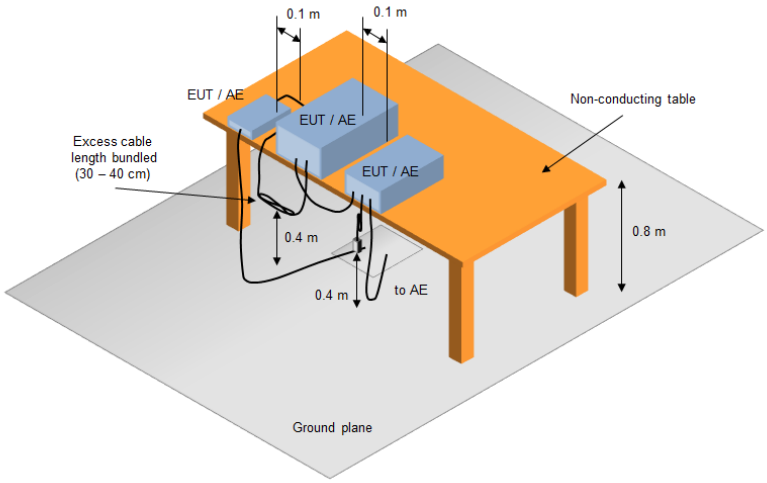
Measurement above 1 GHz



Equipment placement - Table top



Test Setup



2.1.3 Equipment

Test Equipment					
Manufacturer	Description	Model	Identifier	Cal. Date	Cal. Due
Anechoic chamber	Frankonia	AC1	EF00200	functional test	functional test
EMI Test Receiver	Rohde & Schwarz Vertriebs GmbH	ESR7	EF00943	2018-07	2019-07
R&S	Biconical Antenna	HK 116	EF00030	2016-04	2019-04
R&S	LPD Antenna	HL 223	EF00187	2016-05	2019-05

2.1.4 Procedure

Exploratory measurement
1. The EUT was placed on a non-conductive table at a height of 0.8m. 2. The EUT and support equipment, if needed, were set up to simulate typical usage. 3. Cables, of type and length specified by the manufacturer, were connected to at least one port of each type and were terminated by a device or simulating load of actual usage. 4. The antenna was placed at a distance of 3 or 10 m. 5. The received signal was monitored at the measurement receiver. 6. This procedure has to be performed in both antenna polarizations, horizontal and vertical. 7. The arrangement of the equipment with the maximum emission level is shown on the setup picture at item 1.3

Final measurement
1. The EUT was placed on a 0.8 m non-conductive table at a 3 m distance from the receive antenna. The antenna output was connected to the measurement receiver. 2. A biconical antenna was used for the frequency range 30 – 200 MHz, a logarithmic periodical antenna was used for the frequency range from 200 – 1000 MHz. Above one 1 GHz a Double Ridged Broadband Horn antenna was used. The antenna was placed on an adjustable height antenna mast. 3. The EUT and cable arrangement were based on the exploratory measurement results. 4. Emissions were maximized at each frequency by rotating the EUT and adjusting the receive antenna height and polarization. The maximum values were recorded. 5. The test data of the worst-case conditions were recorded and shown on the next pages.

2.1.5 Limits

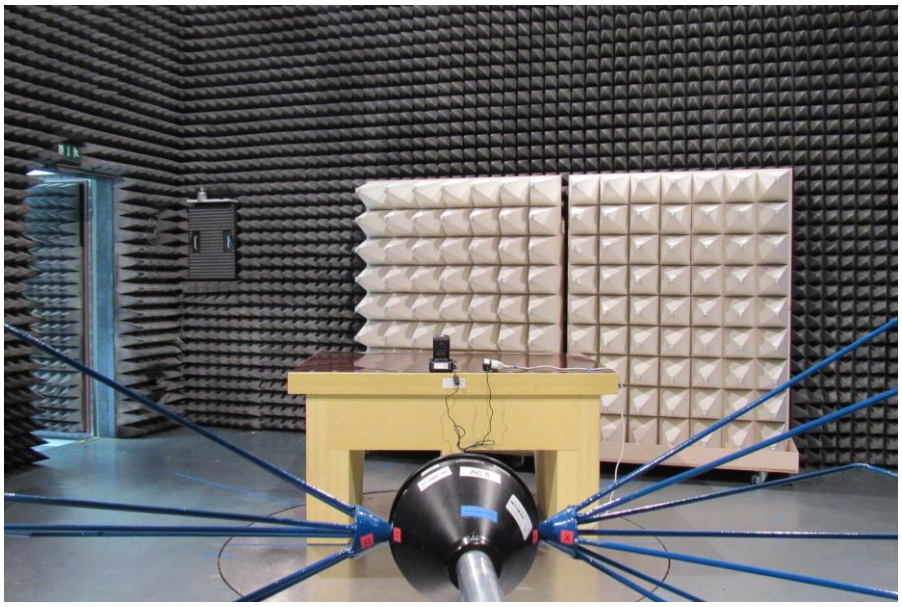
Class B @ 3 m		
Frequency [MHz]	Detector	Limit [dBµV/m]
30 - 88	Quasi-peak	40
88 - 216	Quasi-peak	43.5
216 - 960	Quasi-peak	46
960 - 1000	Quasi-peak	54
> 1000	Peak Average	74 54

Class A @ 10 m		
Frequency [MHz]	Detector	Limit [dBµV/m]
30 - 88	Quasi-peak	39
88 - 216	Quasi-peak	43.5
216 - 960	Quasi-peak	46.5
960 - 1000	Quasi-peak	49.5
> 1000	Peak Average	69.5 49.5

2.1.6 Results

Test Results			
Operational mode	EUT Configuration	Verdict	Remark
1	2	PASS	

2.1.7 Setup Photos

Test Setup


2.1.8 Records

Radiated emissions under normal conditions according to FCC Part 15b

Project number: G0M-1801-7169

Applicant:	Dräger Safety AG & Co. KGaA
EUT Name:	Inductive Charger
Model:	Induktive Power Unit
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Weber
Test Conditions:	Tnom: 24.2°C, Unom: 120 VAC/60 Hz
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3 m
Mode:	WPT; 10 Chargers + Charging loads
Test Date:	2018-09-17
Note:	

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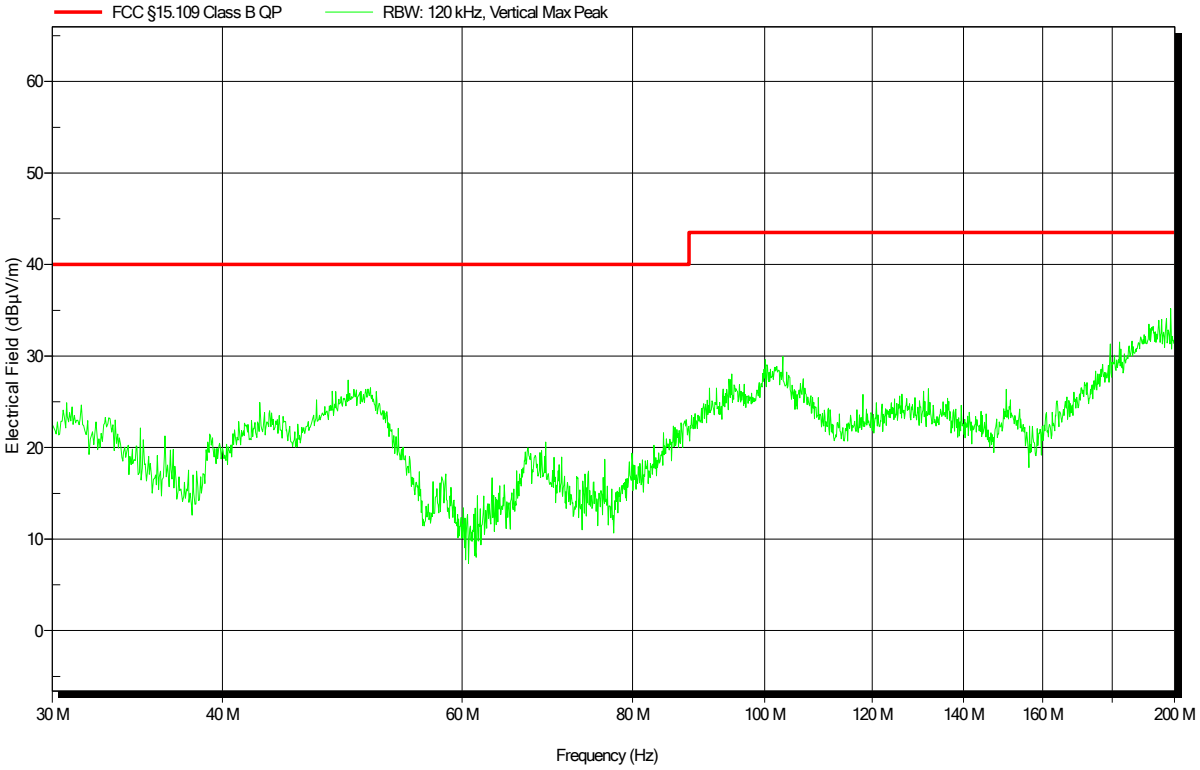

Radiated emissions under normal conditions according to FCC Part 15b

Project number: G0M-1801-7169

Applicant:	Dräger Safety AG & Co. KGaA
EUT Name:	Inductive Charger
Model:	Induktive Power Unit
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Weber
Test Conditions:	Tnom: 24.2°C, Unom: 120 VAC/60 Hz
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	WPT; 10 Chargers + Charging loads
Test Date:	2018-09-17
Note:	

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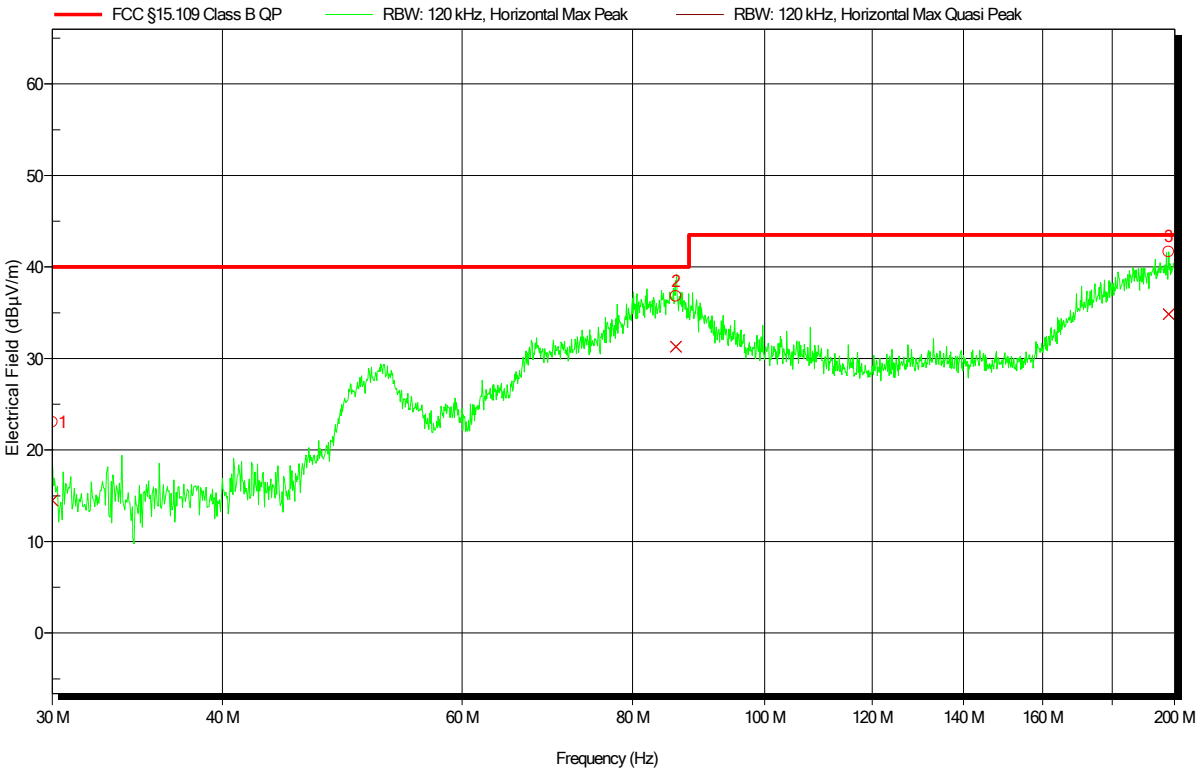

Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height
1	30 MHz	14.5 dBµV/m	40 dBµV/m	-25.5 dB	Pass	30 Degree	2.2 m
2	86.086 MHz	31.3 dBµV/m	40 dBµV/m	-8.7 dB	Pass	30 Degree	2.2 m
3	197.969 MHz	34.84 dBµV/m	43.52 dBµV/m	-8.69 dB	Pass	30 Degree	2.2 m

Radiated emissions under normal conditions according to FCC Part 15b

Project number: G0M-1801-7169

Applicant:	Dräger Safety AG & Co. KGaA
EUT Name:	Inductive Charger
Model:	Induktive Power Unit
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Weber
Test Conditions:	Tnom: 24.2°C, Unom: 120 VAC/60 Hz
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	WPT; 10 Chargers + Charging loads
Test Date:	2018-09-17
Note:	

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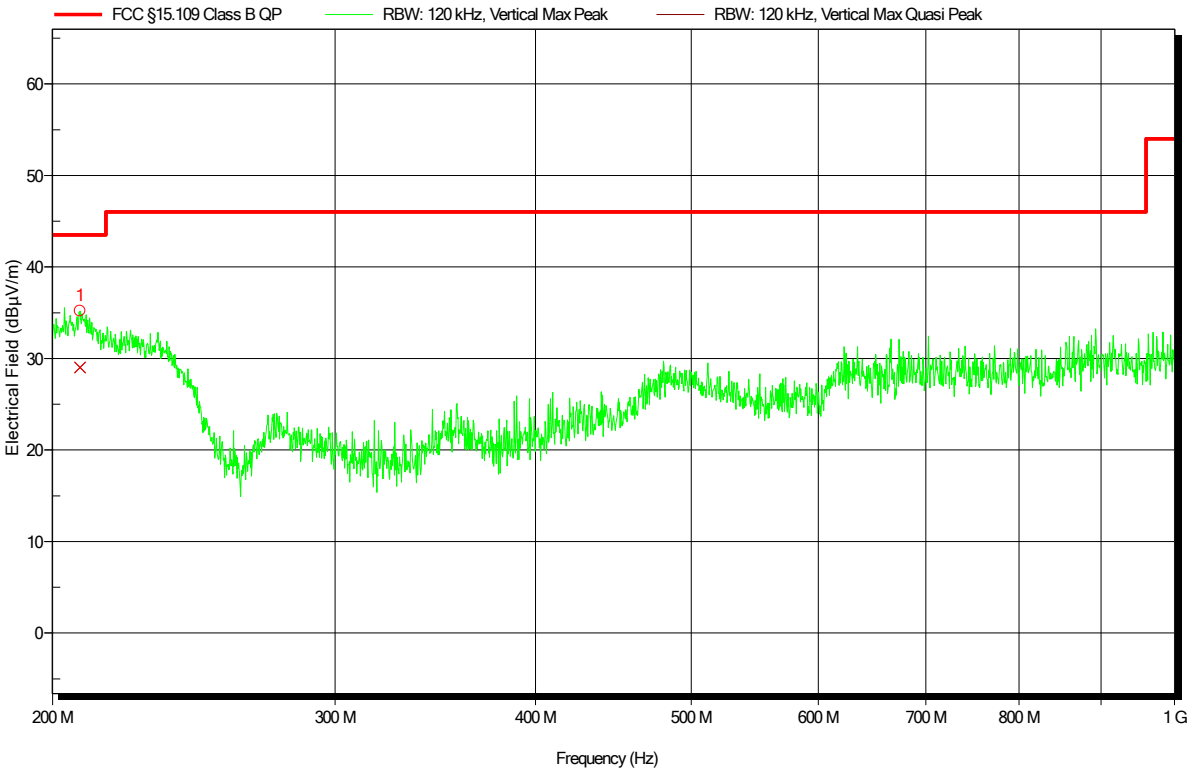

Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height
1	208.13 MHz	29.01 dBµV/m	43.52 dBµV/m	-14.51 dB	Pass	-120 Degree	1 m

Radiated emissions under normal conditions according to FCC Part 15b

Project number: G0M-1801-7169

Applicant:	Dräger Safety AG & Co. KGaA
EUT Name:	Inductive Charger
Model:	Induktive Power Unit
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Weber
Test Conditions:	Tnom: 24.2°C, Unom: 120 VAC/60 Hz
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	WPT; 10 Chargers + Charging loads
Test Date:	2018-09-17
Note:	

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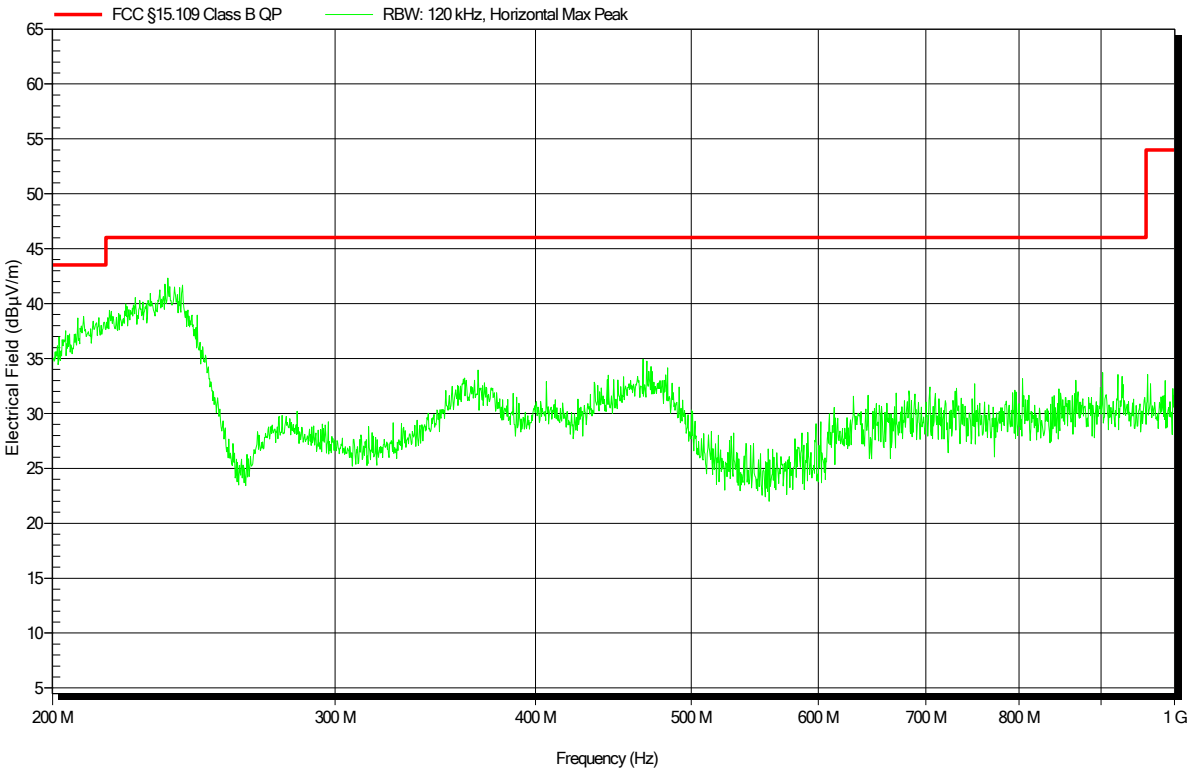


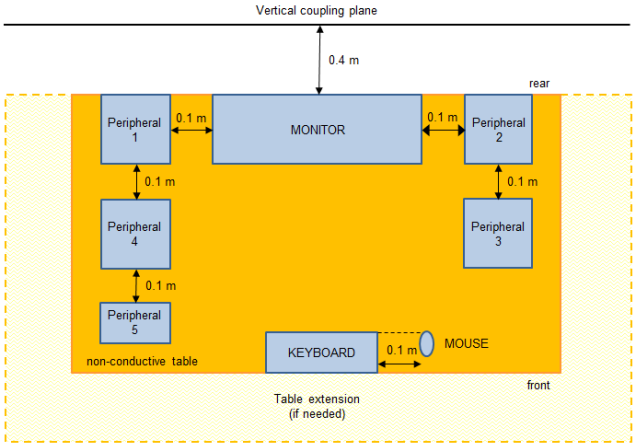
2.2 Test Conditions and Results - Conducted emissions acc. to ANSI C63.4

2.2.1 Information

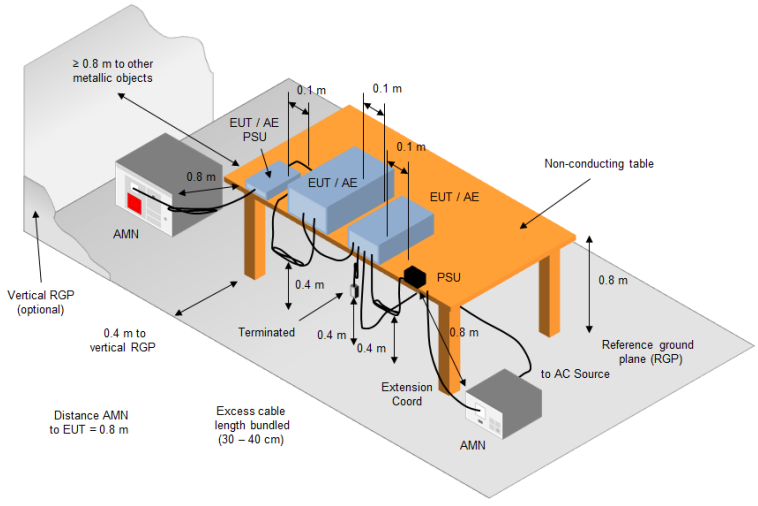
Test Information	
Reference	FCC 15.107, ICES-003, 8, 6.2
Reference method	ANSI C63.4:2014 Section 12
Measurement range	150 kHz to 30 MHz
Equipment class	Class B
Equipment type	Table top
Temperature [°C]	24
Humidity [%]	51
Operator	Christian Weber
Date	2018-09-18

2.2.2 Setup

Equipment placement



Test Setup



2.2.3 Equipment

Test Equipment					
Manufacturer	Description	Model	Identifier	Cal. Date	Cal. Due
R&S	AMN	ESH2-Z5	EF00182	2017-01	2019-01
R&S	Pulse Limiter	ESH3-Z2	EF01063	2018-07	2019-07
R&S	EMI Test Receiver	ESR 7	EF00943	2018-07	2019-07

2.2.4 Procedure

Exploratory measurement
1. The EUT was placed on a non conductive table 0.8 m above the reference ground plane and 0.4 m away from the vertical conducting plane (ANSI C63.4: 2014 item 7.3.1)
2. The power cord that is normally supplied or recommended by the manufacturer was connected to the LISN.
3. The distance between the outer edge of the EUT and the LISN shall be set to 0.8 m. A longer power cord shall be bundled to this length (bundling shall not exceed 40 cm in length).
4. The LISN measurement port was connected to a measurement receiver
5. I/O cables were bundled not longer than 0.4 m
6. Measurement was performed in the frequency range 0.15 – 30MHz on each current-carrying conductor
7. To maximize the emissions the cable positions were manipulated
8. The worst configuration of EUT and cables is shown on a test setup picture at item 1.3

Final measurement
1. The EUT was placed on a non conductive table 0.8 m above the reference ground plane and 0.4 m away from the vertical conducting plane (ANSI C63.4: 2014 item 7.3.1)
2. The power cord that is normally supplied or recommended by the manufacturer was connected to the LISN.
3. The distance between the outer edge of the EUT and the LISN shall be set to 0.8 m. A longer power cord shall be bundled to this length (bundling shall not exceed 40 cm in length).
4. The LISN measurement port was connected to a measurement receiver
5. The EUT and cable arrangement were based on the exploratory measurement results
6. The test data of the worst-case conditions were recorded and shown on the next pages

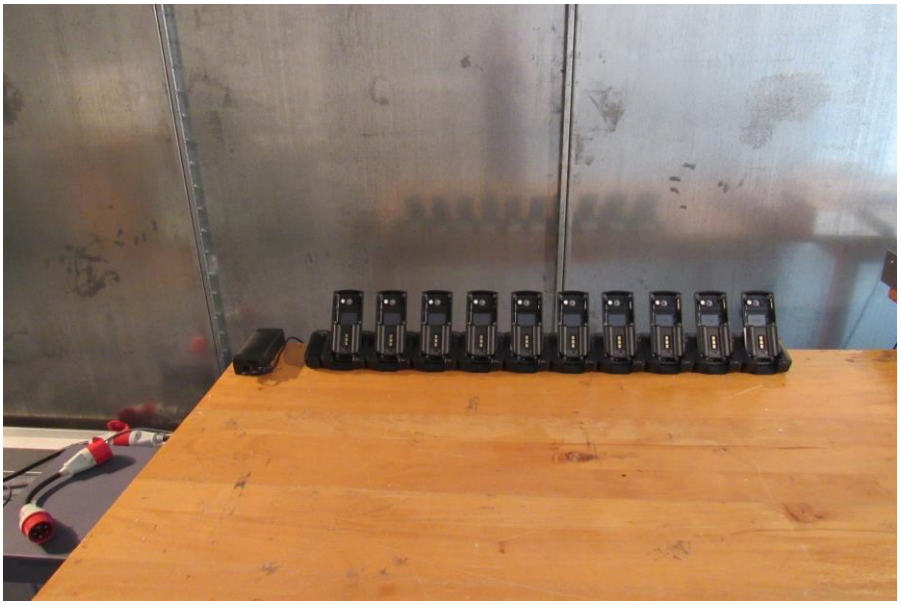
2.2.5 Limits

Class B		
Frequency [MHz]	Quasi-peak Limit [dBµV]	Average Limit [dBµV]
0.15 - 0.5	66 - 56 *	56 - 46 *
0.5 - 5	56	46
5 - 30	60	50
* Decreases with the logarithm of the frequency		

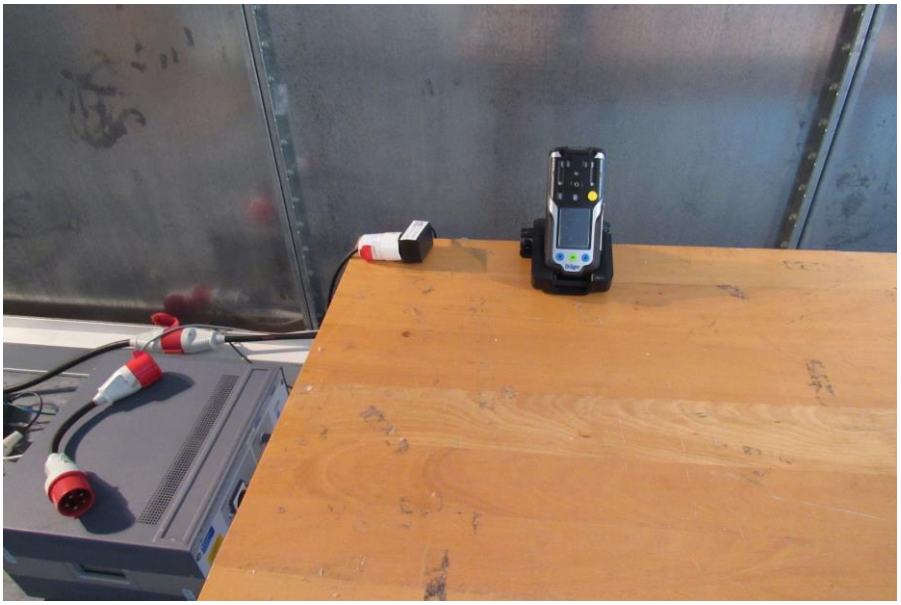
2.2.6 Results

AC power line conducted emissions					
Port	Coupling	Operational mode	EUT Configuration	Verdict	Remark
Supply	AMN	1	1/2/3	PASS	

2.2.7 Setup Photos

TEST SETUP: 10 CHARGERS + CHARGING LOADS


TEST SETUP: 1 CHARGER + CHARGING LOAD


TEST SETUP: 1 CHARGER + CLIENT DEVICE


2.2.8 Records

EMI voltage test in the ac-mains according to FCC Part 15b

Project number: G0M-1801-7169

Applicant:	Dräger Safety AG & Co. KGaA
EUT Name:	Inductive Charger
Model:	Induktive Power Unit
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Weber
Test Conditions:	Tnom: 24.2°C, Unom: 120 VAC/60 Hz
LISN:	ESH2-Z5 N
Mode:	WPT; 10 Chargers + Charging loads
Test Date:	2018-09-18
Note:	

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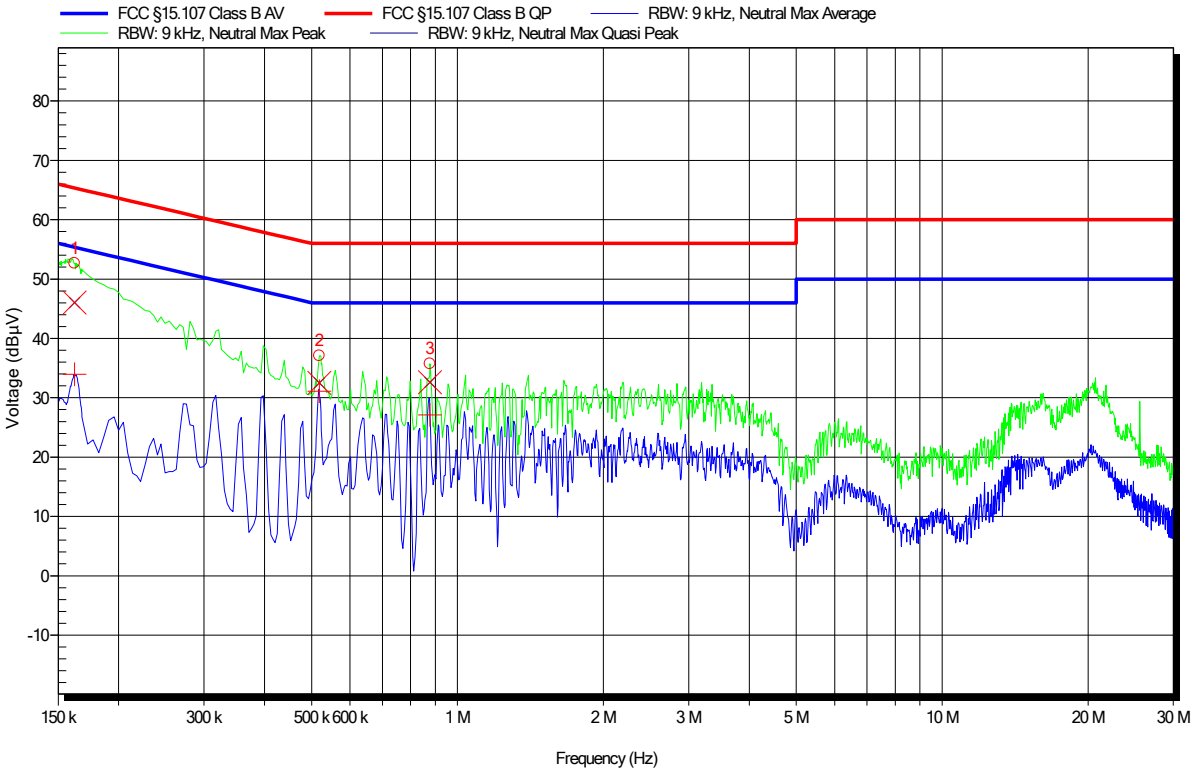

Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
1	162.15 kHz	46.03 dBµV	65.35 dBµV	-19.32 dB	Pass
2	518.55 kHz	32.49 dBµV	56 dBµV	-23.51 dB	Pass
3	877.2 kHz	32.62 dBµV	56 dBµV	-23.38 dB	Pass

Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status
1	162.15 kHz	33.95 dBµV	55.35 dBµV	-21.4 dB	Pass
2	518.55 kHz	31.11 dBµV	46 dBµV	-14.89 dB	Pass
3	877.2 kHz	27.12 dBµV	46 dBµV	-18.88 dB	Pass

EMI voltage test in the ac-mains according to FCC Part 15b

Project number: G0M-1801-7169

Applicant:	Dräger Safety AG & Co. KGaA
EUT Name:	Inductive Charger
Model:	Induktive Power Unit
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Weber
Test Conditions:	Tnom: 24.2°C, Unom: 120 VAC/60 Hz
LISN:	ESH2-Z5 L
Mode:	WPT; 10 Chargers + Charging loads
Test Date:	2018-09-18
Note:	

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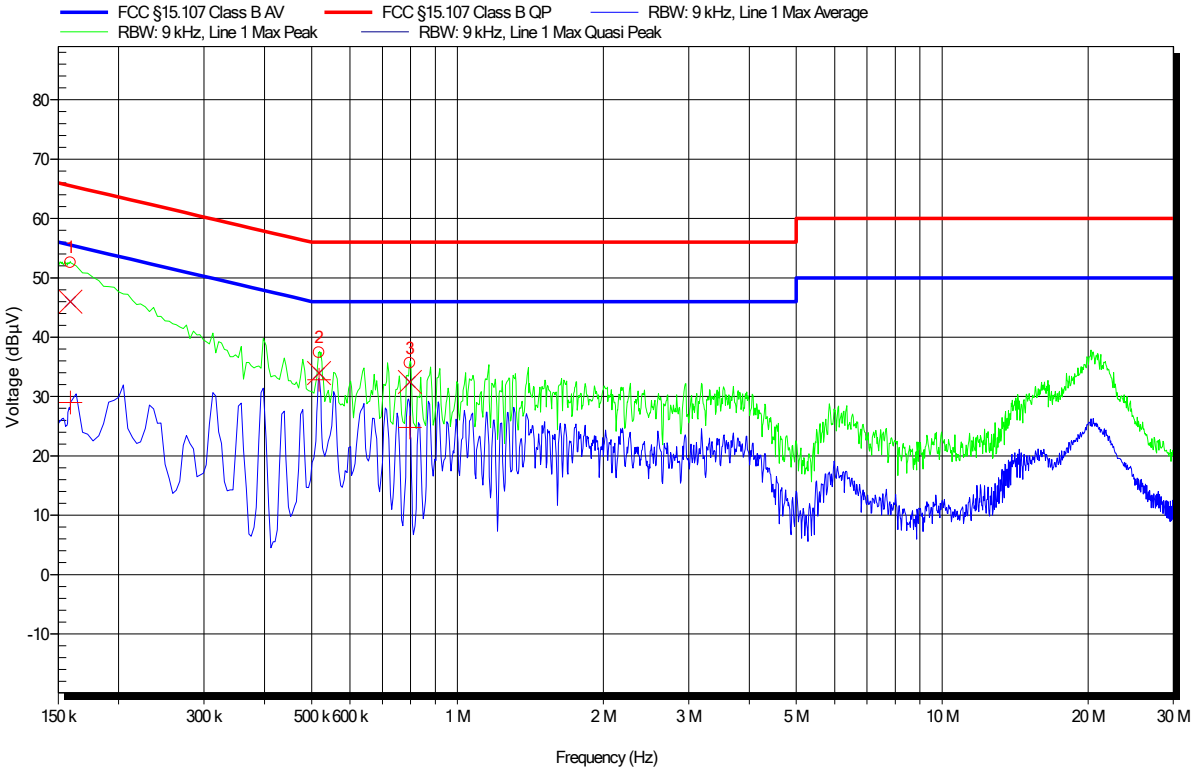

Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
1	159 kHz	45.97 dBµV	65.52 dBµV	-19.54 dB	Pass
2	518.1 kHz	33.94 dBµV	56 dBµV	-22.06 dB	Pass
3	798 kHz	32.46 dBµV	56 dBµV	-23.54 dB	Pass

Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status
1	159 kHz	29 dBµV	55.52 dBµV	-26.51 dB	Pass
2	518.1 kHz	32.83 dBµV	46 dBµV	-13.17 dB	Pass
3	798 kHz	24.77 dBµV	46 dBµV	-21.23 dB	Pass

EMI voltage test in the ac-mains according to FCC Part 15b

Project number: G0M-1801-7169

Applicant:	Dräger Safety AG & Co. KGaA
EUT Name:	Inductive Charger
Model:	Induktive Power Unit
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Weber
Test Conditions:	Tnom: 24.2°C, Unom: 120 VAC/60 Hz
LISN:	ESH2-Z5 N
Mode:	WPT; 1 Charger + Charging load
Test Date:	2018-09-18
Note:	

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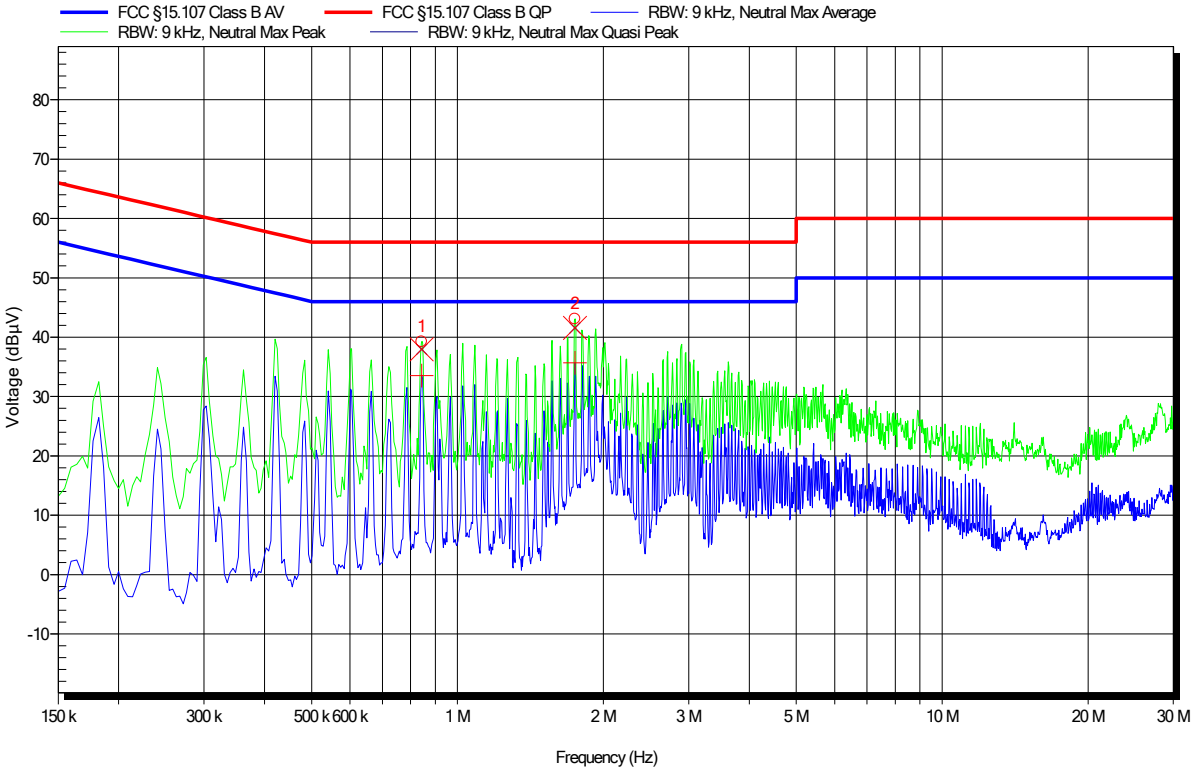

Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
1	843.45 kHz	37.95 dBµV	56 dBµV	-18.05 dB	Pass
2	1.747 MHz	41.56 dBµV	56 dBµV	-14.44 dB	Pass

Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status
1	843.45 kHz	33.53 dBµV	46 dBµV	-12.47 dB	Pass
2	1.747 MHz	35.7 dBµV	46 dBµV	-10.3 dB	Pass

EMI voltage test in the ac-mains according to FCC Part 15b

Project number: G0M-1801-7169

Applicant:	Dräger Safety AG & Co. KGaA
EUT Name:	Inductive Charger
Model:	Induktive Power Unit
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Weber
Test Conditions:	Tnom: 24.2°C, Unom: 120 VAC/60 Hz
LISN:	ESH2-Z5 L
Mode:	WPT; 1 Charger + Charging load
Test Date:	2018-09-18
Note:	

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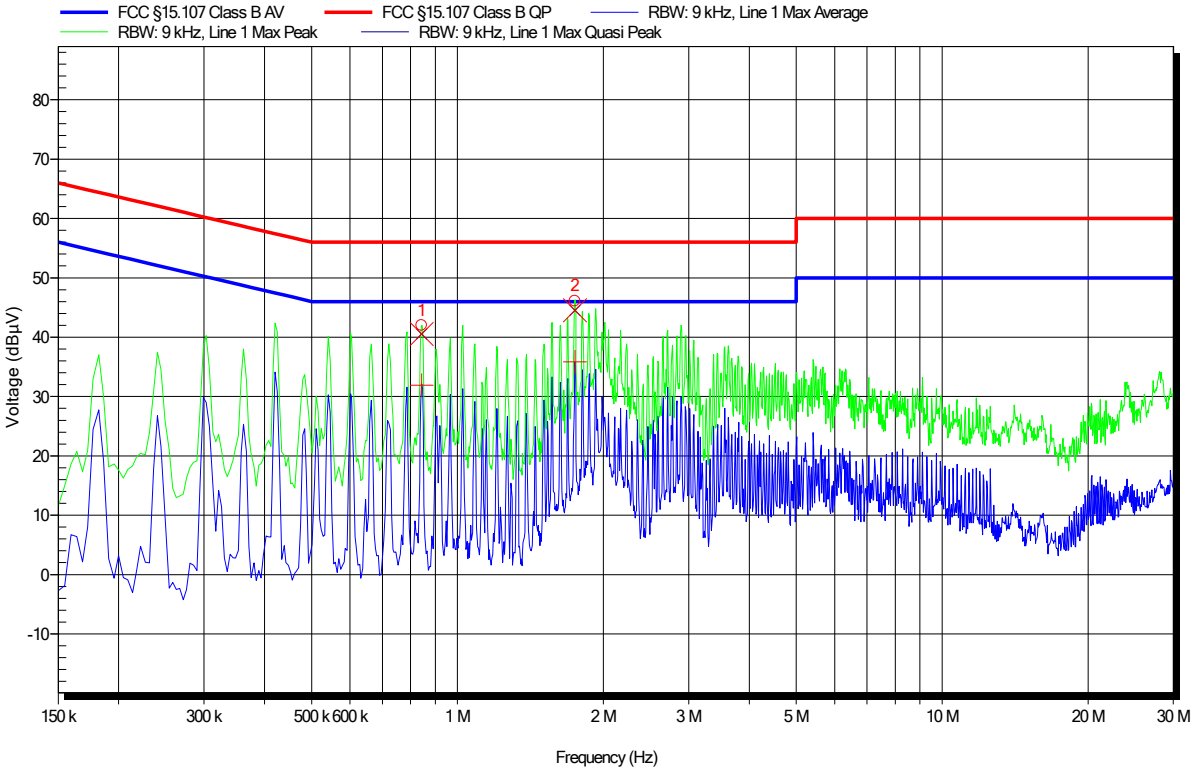

Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
1	843 kHz	40.52 dBµV	56 dBµV	-15.48 dB	Pass
2	1.747 MHz	44.54 dBµV	56 dBµV	-11.46 dB	Pass

Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status
1	843 kHz	31.91 dBµV	46 dBµV	-14.09 dB	Pass
2	1.747 MHz	35.86 dBµV	46 dBµV	-10.14 dB	Pass

EMI voltage test in the ac-mains according to FCC Part 15b

Project number: G0M-1801-7169

Applicant:	Dräger Safety AG & Co. KGaA
EUT Name:	Inductive Charger
Model:	Induktive Power Unit
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Weber
Test Conditions:	Tnom: 24.2°C, Unom: 120 VAC/60 Hz
LISN:	ESH2-Z5 N
Mode:	WPT; 1 Charger + Client Device
Test Date:	2018-09-18
Note:	

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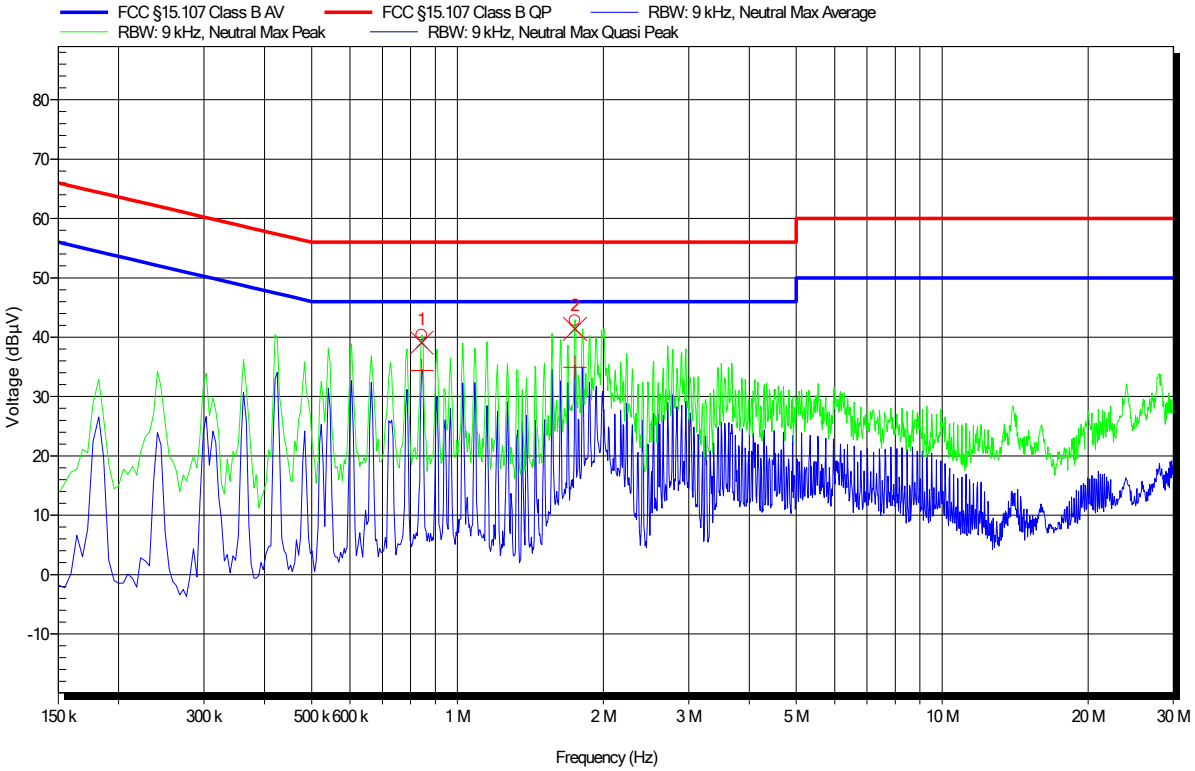

Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
1	843.9 kHz	39.06 dBµV	56 dBµV	-16.94 dB	Pass
2	1.747 MHz	41.38 dBµV	56 dBµV	-14.62 dB	Pass

Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status
1	843.9 kHz	34.37 dBµV	46 dBµV	-11.63 dB	Pass
2	1.747 MHz	34.95 dBµV	46 dBµV	-11.05 dB	Pass

EMI voltage test in the ac-mains according to FCC Part 15b

Project number: G0M-1801-7169

Applicant:	Dräger Safety AG & Co. KGaA
EUT Name:	Inductive Charger
Model:	Induktive Power Unit
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Weber
Test Conditions:	Tnom: 24.2°C, Unom: 120 VAC/60 Hz
LISN:	ESH2-Z5 L
Mode:	WPT; 1 Charger + Client Device
Test Date:	2018-09-18
Note:	

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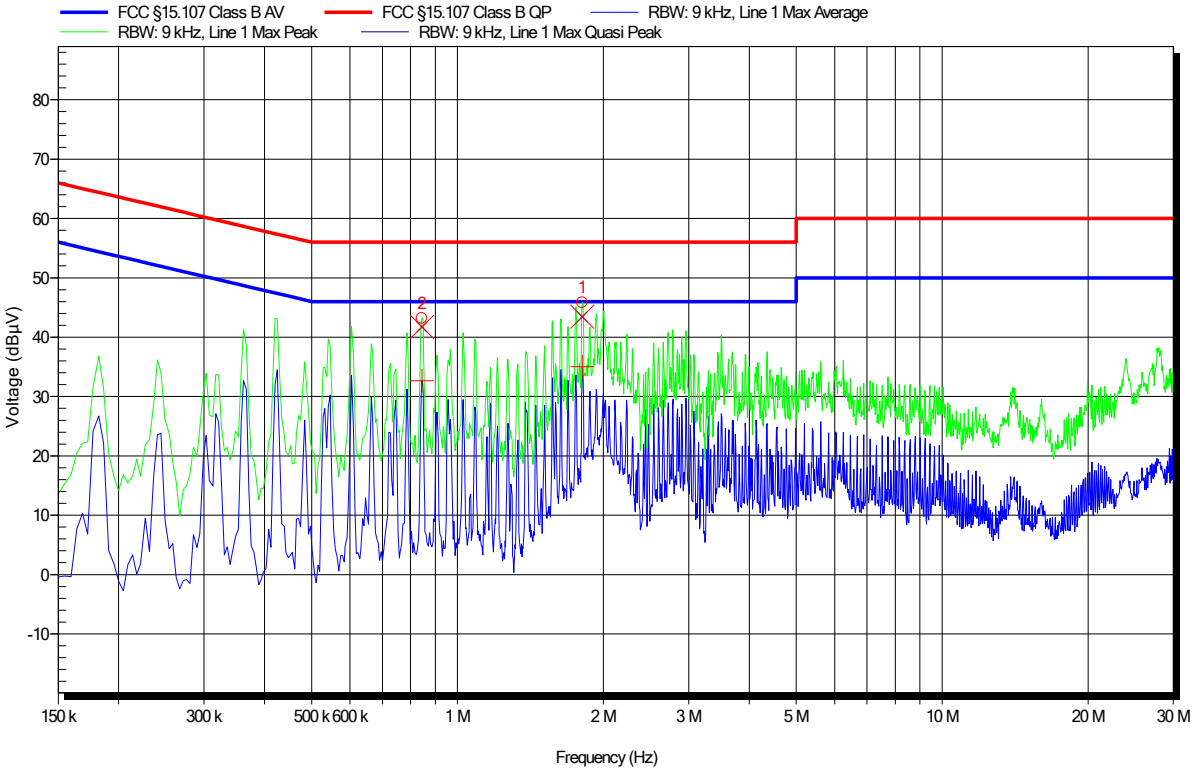

Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
1	1.81 MHz	43.43 dBµV	56 dBµV	-12.57 dB	Pass
2	844.8 kHz	41.71 dBµV	56 dBµV	-14.29 dB	Pass

Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status
1	1.81 MHz	35.05 dBµV	46 dBµV	-10.95 dB	Pass
2	844.8 kHz	32.68 dBµV	46 dBµV	-13.32 dB	Pass