

Prüfbericht-Nr.: Test report no.:	CN24V1HU 001	Auftrags-Nr.: Order no.:	326013247	Seite 1 von 24 Page 1 of 24
Kunden-Referenz-Nr.: Client reference no.:	1288983	Auftragsdatum: Order date:	2023-04-09	
Auftraggeber: Client:	IKEA of Sweden AB Box 702, SE-343 81 Älmhult, Sweden			
Prüfgegenstand: Test item:	Portable Lamp			
Bezeichnung / Typ-Nr.: Identification / Type no.:	B2311			
Auftrags-Inhalt: Order content:	TÜV Rheinland EMC service			
Prüfgrundlage: Test specification:	FCC 47 CFR Part 15, Subpart B:2022 Class B ICES-005:2018			
Wareneingangsdatum: Date of sample receipt:	2024-04-11	Refer to the EUT photos file		
Prüfmuster-Nr.: Test sample no:	A003694560-005			
Prüfzeitraum: Testing period:	Refer to test report			
Ort der Prüfung: Place of testing:	Refer to clause 1.1			
Prüflaboratorium: Testing laboratory:	TÜV Rheinland (Suzhou) Co., Ltd.			
Prüfergebnis*: Test result*:	Pass			
geprüft von: tested by:	genehmigt von: authorized by:			
Datum: Date:	2024-05-25		Ausstellungsdatum: Issue date: 2024-05-25	
Stellung / Position:	Sachverständige(r)/Expert		Stellung / Position: Sachverständige(r)/Expert	
Sonstiges / Other:	FCC ID: FHO-B2311 Test Firm Name: TÜV Rheinland (Suzhou) Co., Ltd. Test Firm Registration Number: 251781 Designation Number: CN1370			
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:	Prüfmuster vollständig und unbeschädigt Test item complete and undamaged			
* Legende:	P(ass) = entspricht o.g. Prüfgrundlage(n)	F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
* Legend:	P(ass) = passed a.m. test specification(s)	F(ail) = failed a.m. test specification(s)	N/A = not applicable	N/T = not tested
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. This test report only relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.				

Prüfbericht-Nr.: CN24V1HU 001
Test report no.:

Seite 2 von 24
Page 2 of 24

Anmerkungen
Remarks

1	Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben. Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden. <i>The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.</i>
2	Wie vertraglich vereinbart, wurde dieses Dokument nur digital unterzeichnet. Der TÜV Rheinland hat nicht überprüft, welche rechtlichen oder sonstigen diesbezüglichen Anforderungen für dieses Dokument gelten. Diese Überprüfung liegt in der Verantwortung des Benutzers dieses Dokuments. Auf Verlangen des Kunden kann der TÜV Rheinland die Gültigkeit der digitalen Signatur durch ein gesondertes Dokument bestätigen. Diese Anfrage ist an unseren Vertrieb zu richten. Eine Umweltgebühr für einen solchen zusätzlichen Service wird erhoben. Informationen zur Verifizierung der Authentizität unserer Dokumente erhalten Sie auf folgender Webseite: go.tuv.com/digital-signature <i>As contractually agreed, this document has been signed digitally only. TUV Rheinland has not verified and unable to verify which legal or other pertaining requirements are applicable for this document. Such verification is within the responsibility of the user of this document. Upon request by its client, TUV Rheinland can confirm the validity of the digital signature by a separate document. Such request shall be addressed to our Sales department. An environmental fee for such additional service will be charged. For information on verifying the authenticity of our documents, please visit the following website: go.tuv.com/digital-signature</i>
3	Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt. <i>Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report.</i> <i>Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</i>
4	Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnissen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2021, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. Zu weiteren Informationen bezüglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019. <i>The decision rule for statements of conformity, based on numerical measurement results, in this test report is based on the "Zero Guard Band Rule" and "Simple Acceptance" in accordance with ILAC G8:2019 and IEC Guide 115:2021, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report. For additional information to the resulting risk based of this decision rule please refer to ILAC G8:2019.</i>

Prüfbericht - Nr.: CN24V1HU 001
Test Report No.:

Seite 3 von 24
Page 3 of 24

TEST SUMMARY

5.1.1 CONDUCTED EMISSION

Result:

Passed

5.2.1 RADIATED EMISSION (30-1000 MHz)

Result:

Passed

Contents

1	TEST SITES	5
1.1	TEST FACILITIES.....	5
2	GENERAL PRODUCT INFORMATION	6
2.1	PRODUCT FUNCTION AND INTENDED USE	6
2.2	RATINGS AND SYSTEM DETAILS.....	6
2.3	INDEPENDENT OPERATION MODES.....	6
2.4	DESCRIPTION OF INTERCONNECTING CABLES	6
2.5	NOISE GENERATING AND NOISE SUPPRESSING PARTS	6
2.6	HIGHEST FREQUENCY GENERATED OR USED IN THE DEVICE OR ON WHICH THE DEVICE OPERATES OR TUNES ..	6
2.7	SUBMITTED DOCUMENTS.....	6
3	TEST SET-UP AND OPERATION MODES.....	7
3.1	PRINCIPLE OF CONFIGURATION SELECTION	7
3.2	EQUIPMENT AND CABLE ARRANGEMENT.....	7
3.3	TEST SOFTWARE	8
3.4	SPECIAL ACCESSORIES AND AUXILIARY EQUIPMENT	8
3.5	COUNTERMEASURES TO ACHIEVE EMC COMPLIANCE	8
4	CONFORMITY DECISION RULE.....	9
5	TEST RESULTS EMISSION	10
5.1	EMISSION IN THE FREQUENCY RANGE UP TO 30 MHz	10
5.1.1	Conducted emission	10
5.2	EMISSION IN THE FREQUENCY RANGE ABOVE 30 MHz.....	16
5.2.1	Radiated emission (30-1000 MHz).....	16
6	PHOTOGRAPHS OF THE TEST SET-UP.....	22
7	LIST OF TEST AND MEASUREMENT INSTRUMENTS	23
8	LIST OF FIGURES.....	24

1 Test Sites

1.1 Test Facilities

Laboratory: TÜV Rheinland (Suzhou) Co., Ltd.

Address: No.14 building and north half of No.10 workshop building, No.525, Yuewang Lingang South Road, Pingqian (Taicang) Modern Industrial Park, Shaxi Town, Taicang City, Jiangsu Province, China

The used test equipment is in accordance with CISPR 16-1 series standards for measurement of radio interference.

Refer to Clause 7 for test and measurement instruments.

2 General Product Information

2.1 Product Function and Intended Use

The EUT (equipment under test) is an ordinary table lamp for lighting and similar use. For the further information, refer to the user's manual.

2.2 Ratings and System Details

Rated input	:	USB input: DC 5 V, 4.5 W Battery input: DC 4.8 V, 1.4 W
Protection class	:	III

2.3 Independent Operation Modes

The basic operation modes are: "ON" and "OFF" with dimming function.

2.4 Description of interconnecting cables

N/A

2.5 Noise Generating and Noise Suppressing Parts

Refer to the circuit diagram for further information.

2.6 Highest frequency generated or used in the device or on which the device operates or tunes

The highest frequency used in the EUT is 200 kHz.

2.7 Submitted Documents

Circuit diagram, user's manual and rating label.

3 Test Set-up and Operation Modes

3.1 Principle of Configuration Selection

Emission: The equipment under test (EUT) was configured to measure its highest possible emission level. The test conditions were adapted accordingly in reference to the instructions for use.

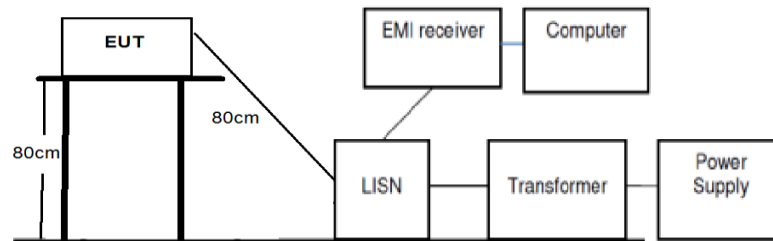
Refer to the related paragraph of this report.

The sequence of testing:

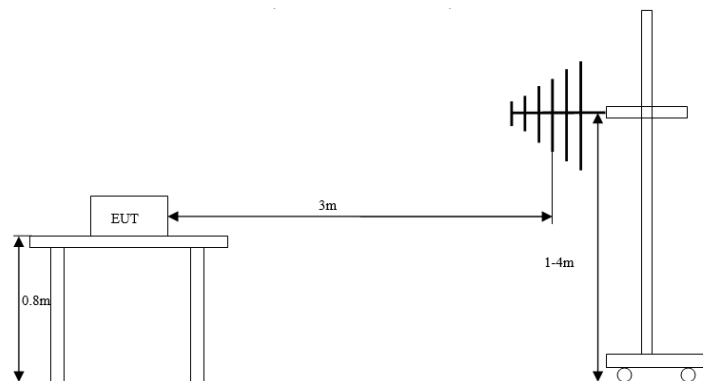
1. Radiated emission tests were performed on 2024-04-16.
2. Conducted emission tests were performed on 2024-04-15.

3.2 Equipment and cable arrangement

Block diagram for both conducted emission and radiated emission tests is as follows:



(Conducted emission)



(Radiated emission 30-1000 MHz)

Also refer to photographs on clause 6 for test setups for both conducted emission test and radiated emission test.

3.3 Test Software

No special test software was used during the tests.

3.4 Special Accessories and Auxiliary Equipment

During the tests, the power supply (Model: ICPSW5-5NA-1, Brand: IKEA) and laptop (Model: T450, Brand: ThinkPad) were used.

3.5 Countermeasures to achieve EMC Compliance

No other special measure is employed to achieve the requirement.

4 Conformity Decision Rule

For all EMI tests included in this report, as measurement uncertainties are less than the values U_{CISPR} given in CISPR 16-4-2, compliance with the limits is determined by comparing measurement results directly with corresponding limits without taking into consideration of measurement uncertainties.

5 Test Results EMISSION

5.1 Emission in the Frequency Range up to 30 MHz

5.1.1 Conducted emission

Result:		Passed
Date of testing	: 2024-04-15	
Test procedure	: FCC 47 CFR Part 15, Subpart B:2022, ICES-005:2018, ANSI C63.4-2014 and CISPR 16-2-1	
Frequency range	: 0.15 – 30 MHz	
Limits	: Quasi-peak limit: 0.15 – 0.5 MHz, 66 to 56 dB μ V (decrease with the logarithm of frequency); 0.5 – 5 MHz, 56 dB μ V; 5 – 30 MHz, 60 dB μ V Average limit: 0.15 – 0.5 MHz, 56 to 46 dB μ V (decrease with the logarithm of frequency); 0.5 – 5 MHz, 46 dB μ V; 5 – 30 MHz, 50 dB μ V	
Bandwidth of EMI receiver for final measurement	: 9 kHz	
Measurement time for final measurement	: 1 s	
Kind of test site	: Shielded room	
Input voltage	: AC 120 V, 60 Hz	
Operational mode	: Mode 1: Charging by power supply and lighting on Mode 2: Charging by laptop and lighting on (The EUT was measured at the maximum and minimum light output, only recorded the worst case (maximum lighting output) in the report.	
Ambient condition	: Temperature: 22.5 °C; Relative humidity: 48.9 %	
Expanded measurement uncertainty ($k=2$)	: 2.33 dB The minimum margin to the limit is 12.81dB at 0.51 MHz. The margin is higher than expanded measurement uncertainty.	

The measurement setup was made according to ANSI C63.4-2014 in a shielded room.

The measurement equipment like test receivers, quasi-peak detector and artificial mains network (AMN) are in compliance with CISPR 16-1 series standards.

The tested object was set-up on a wooden support. The EUT was set 0.8 m away from the AMN. The cord longer than necessary to be connected to the AMN was folded forth and back parallel so as to form a bundle with a length between 0.3 m and 0.4 m.

The disturbance voltage test was performed on the neutral line and phase line of the power supply of the EUT respectively.

Prüfbericht - Nr.: CN24V1HU 001
Test Report No.:

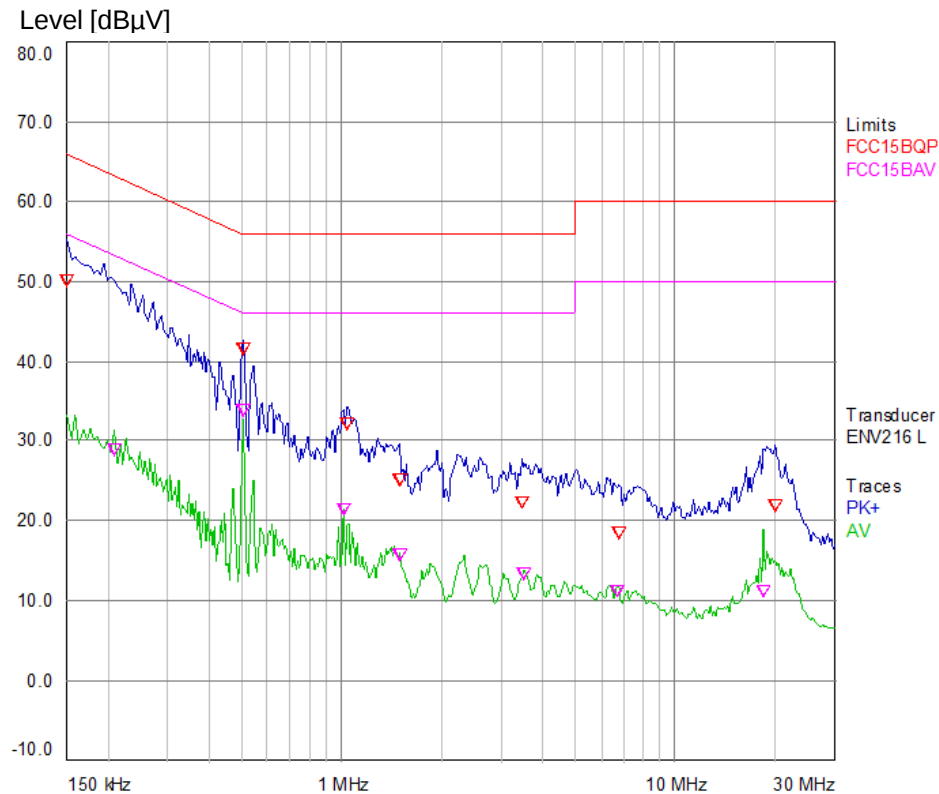
Seite 11 von 24
Page 11 of 24

The following figures and tables were those measured by an automatic measuring system. Both quasi-peak and average measurements were performed. In the following spectral diagram, “” means Quasi-Peak Value and “” means Average Value results.

Notes on following tables of conducted emission results and conversions:

Level (dB μ V): final measurement results by using quasi-peak detector and average detector
Transd (dB): transducer factor including cable loss, insertion loss of artificial mains network and gain of pre-amplifier (if used)

Margin: Limit (dB μ V) - Level (dB μ V)

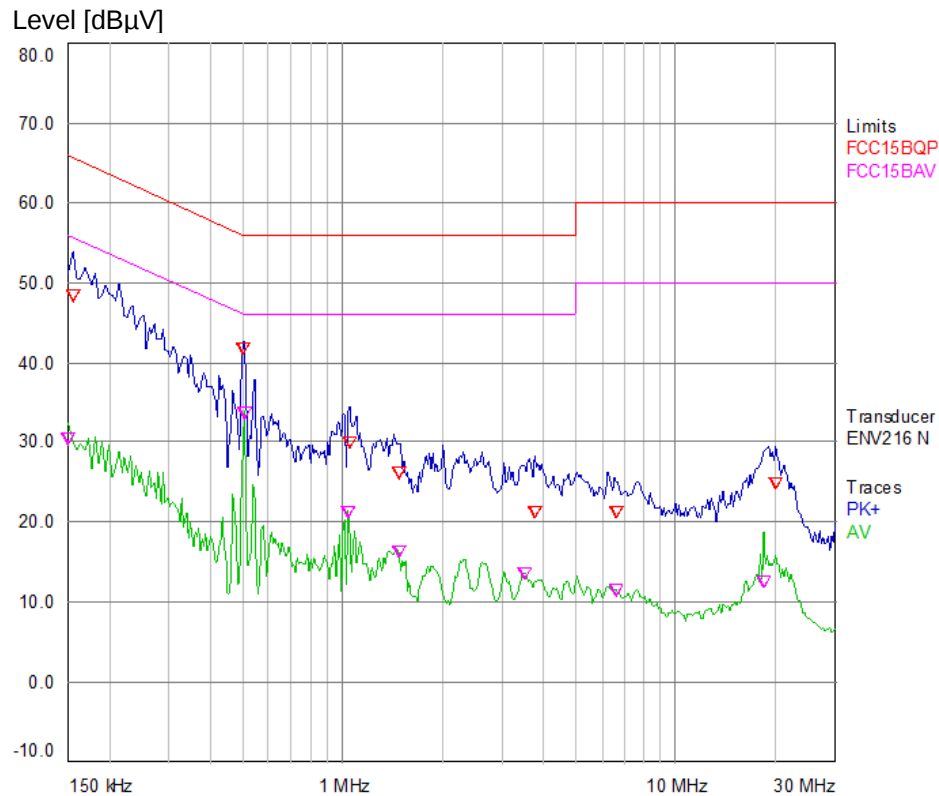
Figure 1: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, L on mode 1


Final quasi-peak measurement result:

Trace	Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Delta Limit (dB)	Comment
1 QP	0.15	49.37	66.00	-16.63	L1 / off
1 QP	0.5055	40.86	56.00	-15.14	L1 / off
1 QP	1.041	31.43	56.00	-24.57	L1 / off
1 QP	1.4865	24.35	56.00	-31.65	L1 / off
1 QP	3.4755	21.60	56.00	-34.40	L1 / off
1 QP	6.774	17.70	60.00	-42.30	L1 / off
1 QP	19.9005	21.04	60.00	-38.96	L1 / off

Final average measurement result:

Trace	Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Delta Limit (dB)	Comment
2 CA	0.2085	28.27	53.26	-24.99	L1 / off
2 CA	0.5055	33.08	46.00	-12.92	L1 / off
2 CA	1.0095	20.75	46.00	-25.25	L1 / off
2 CA	1.4865	15.00	46.00	-31.00	L1 / off
2 CA	3.525	12.69	46.00	-33.31	L1 / off
2 CA	6.711	10.48	50.00	-39.52	L1 / off
2 CA	18.384	10.43	50.00	-39.57	L1 / off

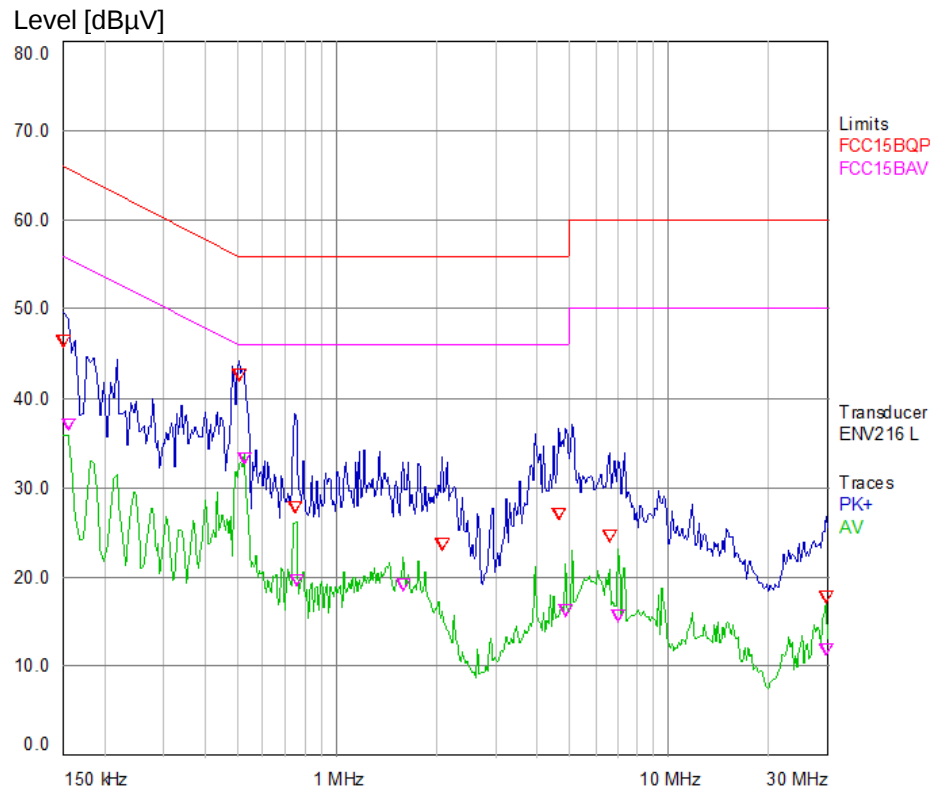
Figure 2: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, N on mode 1


Final quasi-peak measurement result:

Trace	Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Delta Limit (dB)	Comment
1 QP	0.1545	47.54	65.75	-18.21	N / off
1 QP	0.501	40.95	56.00	-15.05	N / off
1 QP	1.05	29.28	56.00	-26.72	N / off
1 QP	1.4685	25.40	56.00	-30.60	N / off
1 QP	3.75	20.54	56.00	-35.46	N / off
1 QP	6.648	20.44	60.00	-39.56	N / off
1 QP	19.833	24.15	60.00	-35.85	N / off

Final average measurement result:

Trace	Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Delta Limit (dB)	Comment
2 CA	0.15	29.73	56.00	-26.27	N / off
2 CA	0.5055	32.78	46.00	-13.22	N / off
2 CA	1.041	20.46	46.00	-25.54	N / off
2 CA	1.482	15.50	46.00	-30.50	N / off
2 CA	3.5205	12.86	46.00	-33.14	N / off
2 CA	6.621	10.58	50.00	-39.42	N / off
2 CA	18.3705	11.77	50.00	-38.23	N / off

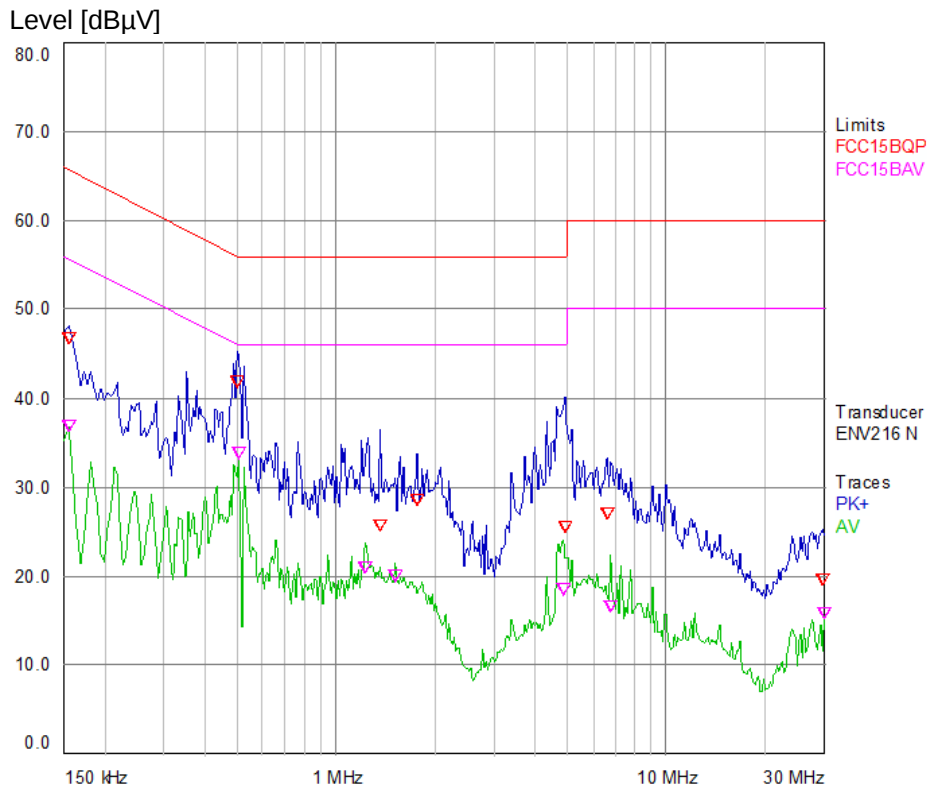
Figure 3: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, L on mode 2


Final quasi-peak measurement result:

Trace	Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Delta Limit (dB)	Comment
1 QP	0.15	45.72	66.00	-20.28	L1 / off
1 QP	0.5055	41.83	56.00	-14.17	L1 / off
1 QP	0.7485	27.02	56.00	-28.98	L1 / off
1 QP	2.0715	22.92	56.00	-33.08	L1 / off
1 QP	4.632	26.38	56.00	-29.62	L1 / off
1 QP	6.603	23.87	60.00	-36.13	L1 / off
1 QP	29.8095	17.00	60.00	-43.00	L1 / off

Final average measurement result:

Trace	Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Delta Limit (dB)	Comment
2 CA	0.1545	36.46	55.75	-19.29	L1 / off
2 CA	0.5235	32.68	46.00	-13.32	L1 / off
2 CA	0.753	19.02	46.00	-26.98	L1 / off
2 CA	1.5855	18.45	46.00	-27.55	L1 / off
2 CA	4.8525	15.61	46.00	-30.39	L1 / off
2 CA	7.0395	14.99	50.00	-35.01	L1 / off
2 CA	29.5395	11.17	50.00	-38.83	L1 / off

Figure 4: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, N on mode 2


Final quasi-peak measurement result:

Trace	Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Delta Limit (dB)	Comment
1 QP	0.1545	46.08	65.75	-19.67	N / off
1 QP	0.501	41.12	56.00	-14.88	N / off
1 QP	1.356	24.99	56.00	-31.01	N / off
1 QP	1.752	27.81	56.00	-28.19	N / off
1 QP	4.911	24.83	56.00	-31.17	N / off
1 QP	6.6255	26.32	60.00	-33.68	N / off
1 QP	29.5665	18.90	60.00	-41.10	N / off

Final average measurement result:

Trace	Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Delta Limit (dB)	Comment
2 CA	0.1545	36.12	55.75	-19.63	N / off
2 CA	0.51	33.19	46.00	-12.81	N / off
2 CA	1.2255	20.30	46.00	-25.70	N / off
2 CA	1.509	19.34	46.00	-26.66	N / off
2 CA	4.875	17.79	46.00	-28.21	N / off
2 CA	6.7605	15.96	50.00	-34.04	N / off
2 CA	29.8905	15.16	50.00	-34.84	N / off

5.2 Emission in the Frequency Range above 30 MHz

5.2.1 Radiated emission (30-1000 MHz)

Result:	Passed
----------------	---------------

Date of testing	: 2023-04-16
Test procedure	: FCC 47 CFR Part 15, Subpart B:2022, ICES-005:2018, ANSI C63.4-2014 and CISPR 16-2-3
Product classification	: Class B
Frequency range	: 30 – 1000 MHz (see Note 1)
Limits	: Quasi-peak limits (3 m distance): 30 – 88 MHz, 40 dB μ V/m; 88 – 216 MHz, 43.5 dB μ V/m; 216 – 1000 MHz, 46 dB μ V/m (see Note 2)
Bandwidth of EMI receiver for final measurement	: 120 kHz
Measurement time for final measurement	: 1 s
Kind of test site	: Semi-anechoic chamber
Input voltage	: AC 120 V, 60 Hz for power supply DC 4.8 V for battery
Operational mode	: Mode 1: Charging by power supply and lighting on Mode 2: Lighting on by battery powered
Ambient condition	: Temperature: 20.6 °C; Relative humidity: 45.7 %
Expanded measurement uncertainty (k=2)	: 5.40 dB The minimum margin to the limit is 12.0 dB at 982.176250 MHz. The margin is higher than expanded measurement uncertainty.

The radiated disturbance test was carried out in a semi-anechoic chamber. The test distance from the receiving antenna to the EUT is 3 m. The normalized site attenuation of the semi-anechoic chamber is regularly calibrated to ensure the radiated disturbance test results are valid. During the test, the EUT was placed on an 80 cm wooden support above the reference ground plane. The wooden support was rotated 360° around and the height of the antenna was varied from 1 m to 4 m to find the maximum disturbance. The test was performed with the antenna both in its horizontal and vertical polarizations.

The following figures and tables were those measured by an automatic measurement system. A preview test was firstly performed with peak detector. The final test was performed with quasi-peak at those critical frequencies during the preview test. In the following spectral diagram, “×” means quasi-peak test results.

Notes on following tables of radiated emission results and conversions:

QuasiPeak (dB μ V/m): final measurement results by using quasi-peak detector

Prüfbericht - Nr.: CN24V1HU 001

Test Report No.:

Seite 17 von 24

Page 17 of 24

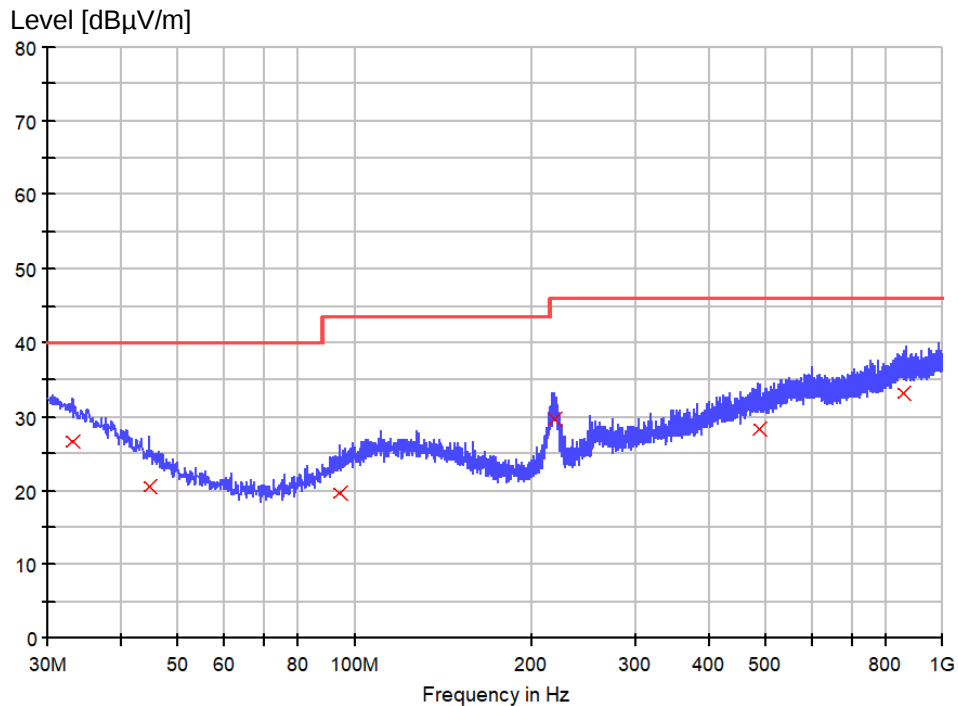
Corr. (dB): correction factor including: antenna factor, cable loss, and gain of pre-amplifier (if used)

Margin: Limit (dB μ V/m) - QuasiPeak (dB μ V/m)

Note 1: The highest frequency in the EUT is less than 108 MHz. According to FCC Part 15 subpart B §15.33 (b) (1), the upper frequency for radiated emission measurement is 1000 MHz.

Note 2: The class B limits of ICES-005:2018 is stricter than those FCC 47 CFR Part 15, Subpart B:2022 for 3 m test distance. Therefore, the former limits are used in following figures and tables.

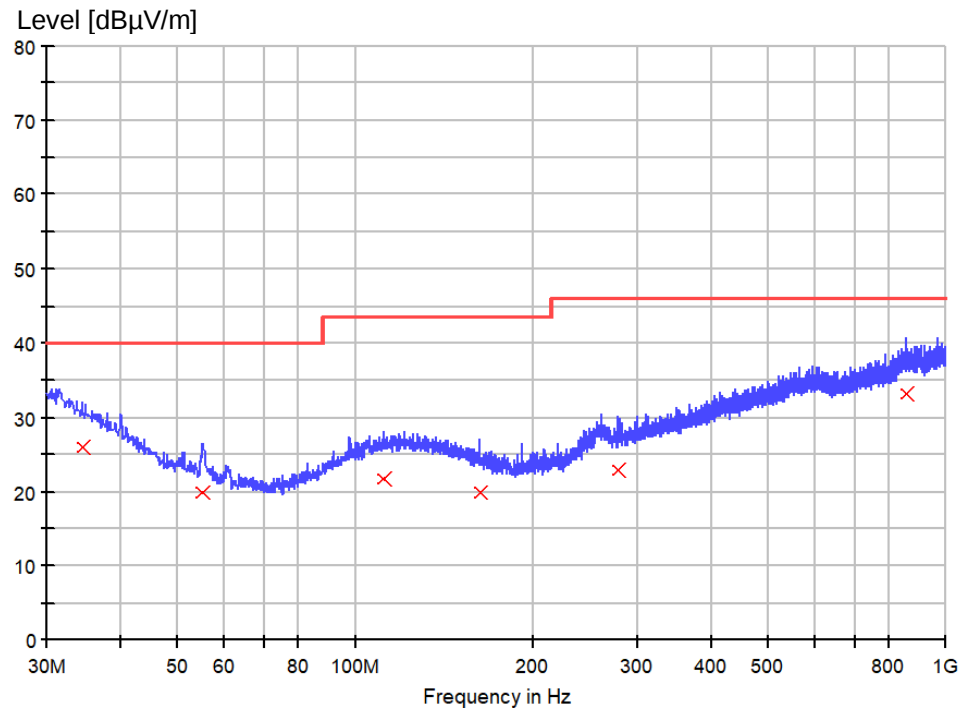
Figure 5: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Horizontal polarization on mode 1



Final quasi-peak measurement results:

Frequency (MHz)	QuasiPeak (dBμV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
33.031250	26.6	120.000	115.0	H	-180.0	23.4	13.4	40.0
44.671250	20.5	120.000	120.0	H	-125.0	17.3	19.5	40.0
94.262500	19.7	120.000	105.0	H	90.0	16.6	23.8	43.5
218.543750	29.7	120.000	100.0	H	45.0	16.1	16.3	46.0
489.658750	28.3	120.000	150.0	H	95.0	25.2	17.7	46.0
858.380000	33.3	120.000	125.0	H	-145.0	28.9	12.7	46.0

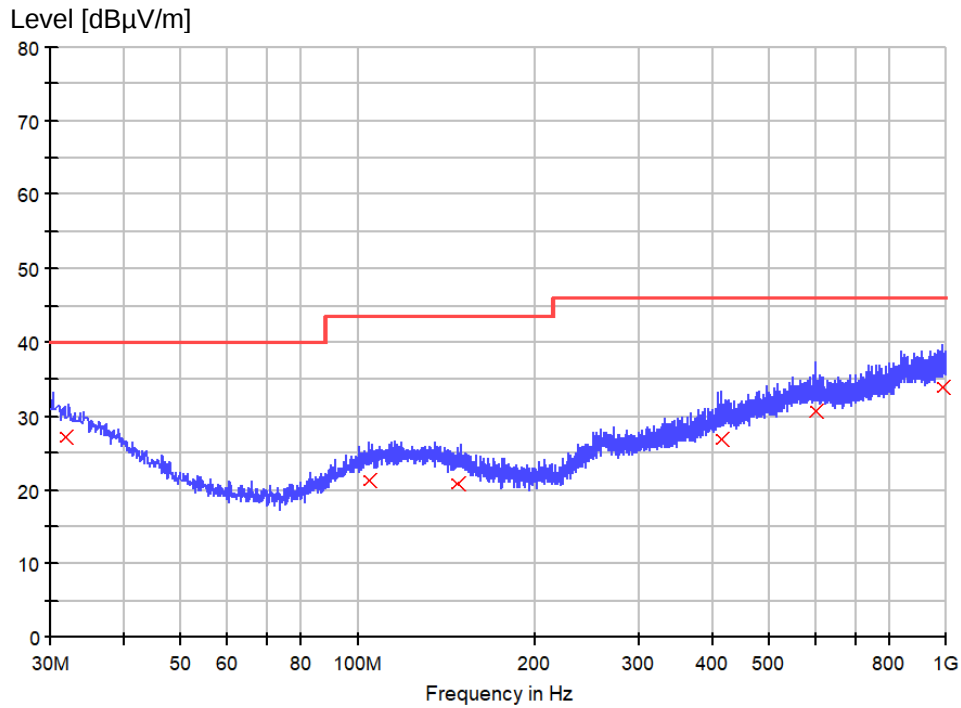
Figure 6: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Vertical polarization on mode 1



Final quasi-peak measurement results:

Frequency (MHz)	QuasiPeak (dBμV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
34.486250	25.9	120.000	100.0	V	-180.0	22.7	14.1	40.0
55.098750	19.9	120.000	110.0	V	-125.0	13.7	20.1	40.0
111.237500	21.7	120.000	105.0	V	-95.0	18.7	21.8	43.5
162.647500	19.8	120.000	120.0	V	95.0	16.8	23.7	43.5
278.198750	23.0	120.000	100.0	V	120.0	19.9	23.0	46.0
857.895000	33.2	120.000	115.0	V	160.0	28.9	12.8	46.0

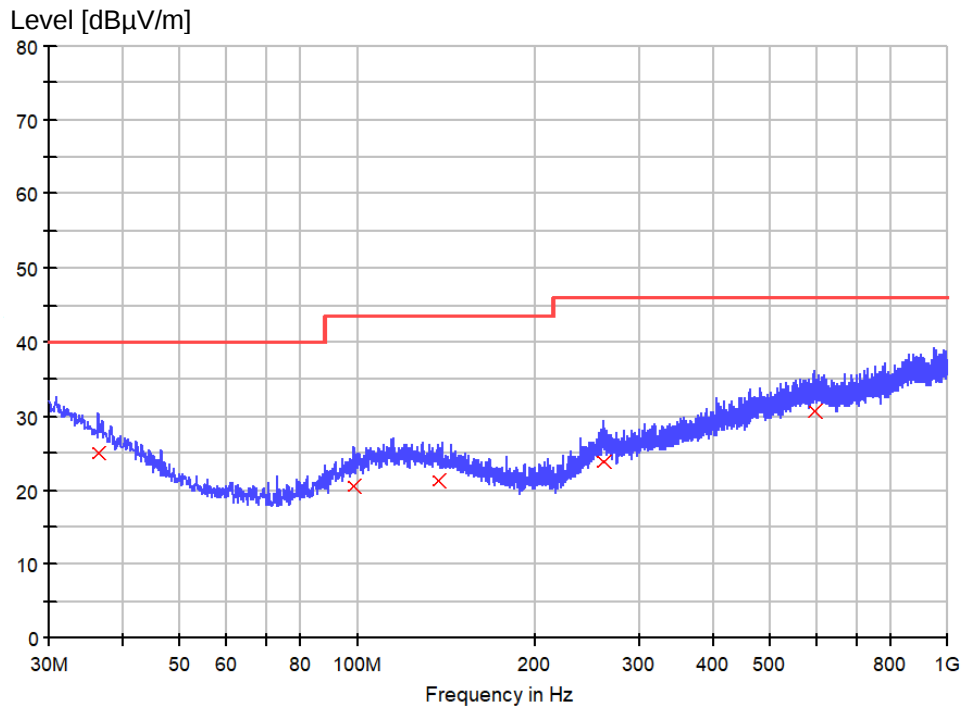
Figure 7: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Horizontal polarization on mode 2



Final quasi-peak measurement results:

Frequency (MHz)	QuasiPeak (dBμV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
31.818750	27.2	120.000	100.0	H	-180.0	23.9	12.8	40.0
104.690000	21.3	120.000	120.0	H	125.0	18.3	22.3	43.5
147.855000	20.7	120.000	125.0	H	-95.0	17.7	22.8	43.5
414.605000	26.9	120.000	110.0	H	-145.0	23.8	19.1	46.0
599.026250	30.7	120.000	105.0	H	105.0	26.9	15.3	46.0
982.176250	34.0	120.000	130.0	H	165.0	29.8	12.0	46.0

Figure 8: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Vertical polarization on mode 2



Final quasi-peak measurement results:

Frequency (MHz)	QuasiPeak (dBμV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
36.426250	24.9	120.000	100.0	V	180.0	21.7	15.1	40.0
98.748750	20.5	120.000	120.0	V	95.0	17.5	23.0	43.5
137.063750	21.4	120.000	105.0	V	125.0	18.3	22.1	43.5
260.011250	23.8	120.000	135.0	V	-105.0	20.8	22.2	46.0
597.935000	30.7	120.000	125.0	V	90.0	26.9	15.3	46.0

6 Photographs of the Test Set-Up

Refer to the test setup file.

Prüfbericht - Nr.: CN24V1HU 001
Test Report No.:Seite 23 von 24
Page 23 of 24

7 List of Test and Measurement Instruments

Equip.	Description	Model	Manufacturer	Last Date	Due Date
				DD.MM.YYYY	DD.MM.YYYY
G1811378	3m semi-anechoic chamber	SAC3	Frankonia	03.12.2023	03.12.2026
G1811391	EMI test receiver	ESCI	Rohde&Schwarz	16.10.2023	16.10.2024
G1811425	Bilog antenna	CBL 6112D	Teseq	20.04.2023	20.04.2026
9062745	EMI measurement software 3m SAC	EMC32 (10.60.20)	Rohde&Schwarz	N/A	N/A
9053584	Shielded enclosure	FRSR	Frankonia	02.12.2022	02.12.2027
G1811402	EMI test receiver	ESCI	Rohde&Schwarz	05.12.2023	05.12.2024
G1811403	Artificial mains network	ENV216	Rohde&Schwarz	16.10.2023	16.10.2024
G1824846	EMC measurement software	ES-SCAN (Version2.7)	Rohde&Schwarz	N/A	N/A

8 List of Figures

Figure 1: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, L on mode 1	12
Figure 2: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, N on mode 1	13
Figure 3: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, L on mode 2	14
Figure 4: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, N on mode 2	15
Figure 5: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Horizontal polarization on mode 1	18
Figure 6: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Vertical polarization on mode 1	19
Figure 7: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Horizontal polarization on mode 2	20
Figure 8: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Vertical polarization on mode 2	21

End of test report