

Prüfbericht-Nr.: <i>Test report no.:</i>	CN25V4L4 001	Auftrags-Nr.: <i>Order no.:</i>	326110792	Seite 1 von 42 <i>Page 1 of 42</i>
Kunden-Referenz-Nr.: <i>Client reference no.:</i>	1288983	Auftragsdatum: <i>Order date:</i>	2025-05-23	
Auftraggeber: <i>Client:</i>	IKEA of Sweden AB Box 702, SE-343 81 Älmhult, Sweden			
Prüfgegenstand: <i>Test item:</i>	Fixed Luminaire			
Bezeichnung / Typ-Nr.: <i>Identification / Type no.:</i>	E2516			
Auftrags-Inhalt: <i>Order content:</i>	TÜV Rheinland EMC service			
Prüfgrundlage: <i>Test specification:</i>	FCC 47 CFR Part 15, Subpart B:2023 Class B ICES-005:2018 ICES-003:2020			
Wareneingangsdatum: <i>Date of sample receipt:</i>	2025-08-11	Refer to the EUT photos file		
Prüfmuster-Nr.: <i>Test sample no.:</i>	A004064680-001			
Prüfzeitraum: <i>Testing period:</i>	Refer to test report			
Ort der Prüfung: <i>Place of testing:</i>	Refer to clause 1.1			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Shanghai) Co., Ltd.			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von: <i>tested by:</i>	Jessie Xu <i>Jessie Xu</i>		genehmigt von: <i>authorized by:</i>	JiaYi Zhou <i>JiaYi Zhou</i>
Datum: <i>Date:</i>	2025-08-19		Ausstellungsdatum: <i>Issue date:</i>	2025-08-19
Stellung / Position:	Project engineer		Stellung / Position:	Authorizer
Sonstiges / <i>Other:</i>	FCC ID: FHO-E2516 Test Firm Name: TUV Rheinland (Shanghai) Co., Ltd. Designation Number: CN1396 Test Firm Registration Number: 930979			
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>	Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>			
* 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. <i>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.</i>				

Prüfbericht-Nr.: CN25V4L4 001
Test report no.:

Seite 2 von 42
Page 2 of 42

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.: CN25V4L4 001
Test Report No.:

Seite 3 von 42
Page 3 of 42

Revision history of test report:

Report number	Issue date	Contents and reason for change if appropriate
CN25V4L4 001	2025-08-19	Initial release.

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	9
3.4	SPECIAL ACCESSORIES AND AUXILIARY EQUIPMENT	9
3.5	COUNTERMEASURES TO ACHIEVE EMC COMPLIANCE	9
4	CONFORMITY DECISION RULE.....	10
5	TEST RESULTS EMISSION	11
5.1	EMISSION IN THE FREQUENCY RANGE UP TO 30 MHz	11
5.1.1	Conducted emission	11
5.2	EMISSION IN THE FREQUENCY RANGE ABOVE 30 MHz.....	21
5.2.1	Radiated emission (30-1000 MHz).....	21
5.2.2	Radiated Emission (1-18 GHz).....	31
6	PHOTOGRAPHS OF THE TEST SET-UP.....	40
7	LIST OF TEST AND MEASUREMENT INSTRUMENTS	41
8	LIST OF FIGURES.....	42

1 Test Sites

1.1 Test Facilities

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

Address: Workshop14, North Half of Workshop 10 and Workshop 16, Pingqian (Taicang)
Modern Industrial Park, No.525, Yuewang Lingang South Road, Shaxi, Taicang, Jiangsu,
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 fixed luminaire for lighting and similar use.
For further information, refer to the user's manual.

2.2 Ratings and System Details

Rated input : AC 100-240 V, 50/60 Hz
Rated power : 10 W
Protection class : I

2.3 Independent Operation Modes

The basic operation modes are: "ON" and "OFF".

The test mode as follows:

"On"

- Mode 1: Warm lighting with the max. lighting output.
- Mode 2: Warm lighting with the min. lighting output.
- Mode 3: White lighting with the max. lighting output.
- Mode 4: White lighting with the min. lighting output.

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 2480 MHz.

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.

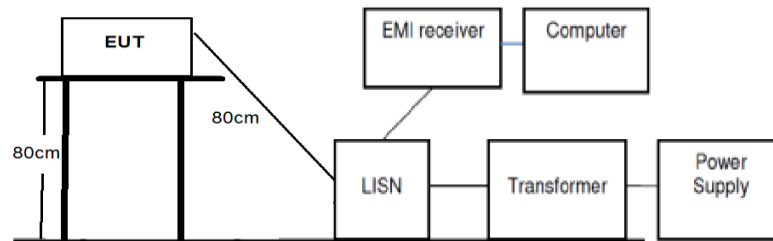
Refer to the related paragraph of this report.

The sequence of testing:

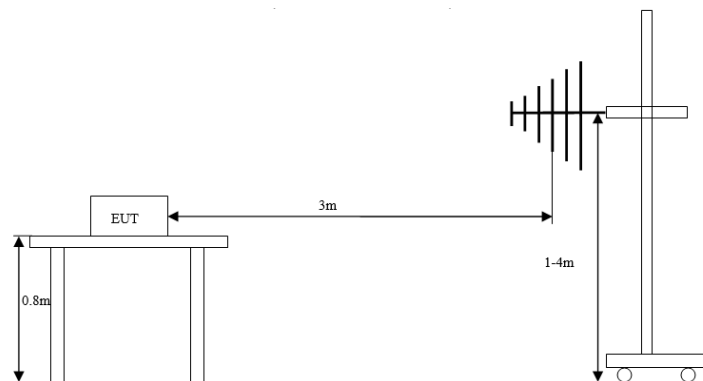
1. Conducted emission tests were performed on 2025-08-13.
2. Radiated emission tests were performed on 2025-08-13~2025-08-14.

3.2 Equipment and cable arrangement

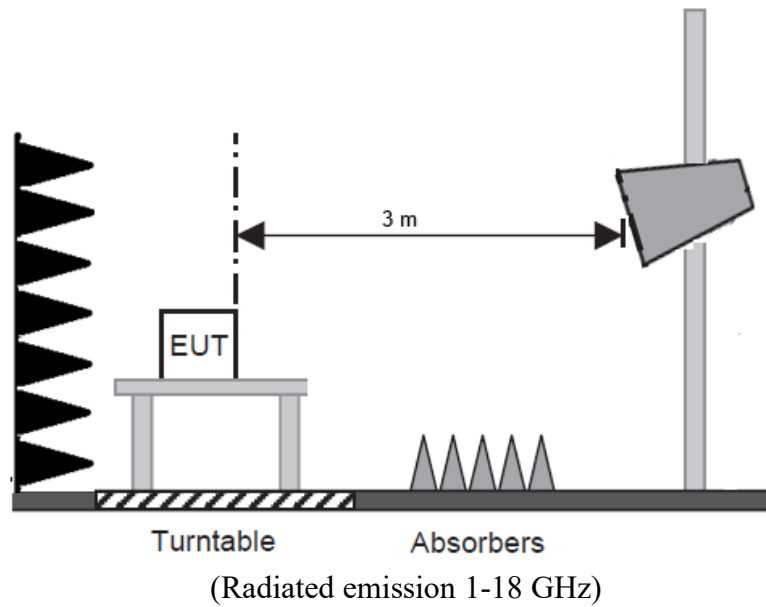
Block diagram for both conducted emission and radiated emission tests is as follows:



(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

The “Home” APP for iPhone was used during the tests.

3.4 Special Accessories and Auxiliary Equipment

During the tests, the following auxiliary equipment were used.

No.	Product	Model	Brand
1	Mobile phone	iPhone 15	Apple
2	Loudspeaker	HomePod mini	Apple
3	Remote control	E2489	IKEA

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	: 2025-08-13	
Test procedure	: FCC 47 CFR Part 15, Subpart B:2023, ICES-005:2018, ICES-003:2020, 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: Warm lighting with the max. lighting output. Mode 2: Warm lighting with the min. lighting output. Mode 3: White lighting with the max. lighting output. Mode 4: White lighting with the min. lighting output.	
Ambient condition	: Temperature: 24.6 °C; Relative humidity: 53.2 %	
Expanded measurement uncertainty ($k=2$)	: 2.33 dB The minimum margin to the limit is 9.12 dB at 0.678750 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.: CN25V4L4 001

Test Report No.:

Seite 12 von 42

Page 12 of 42

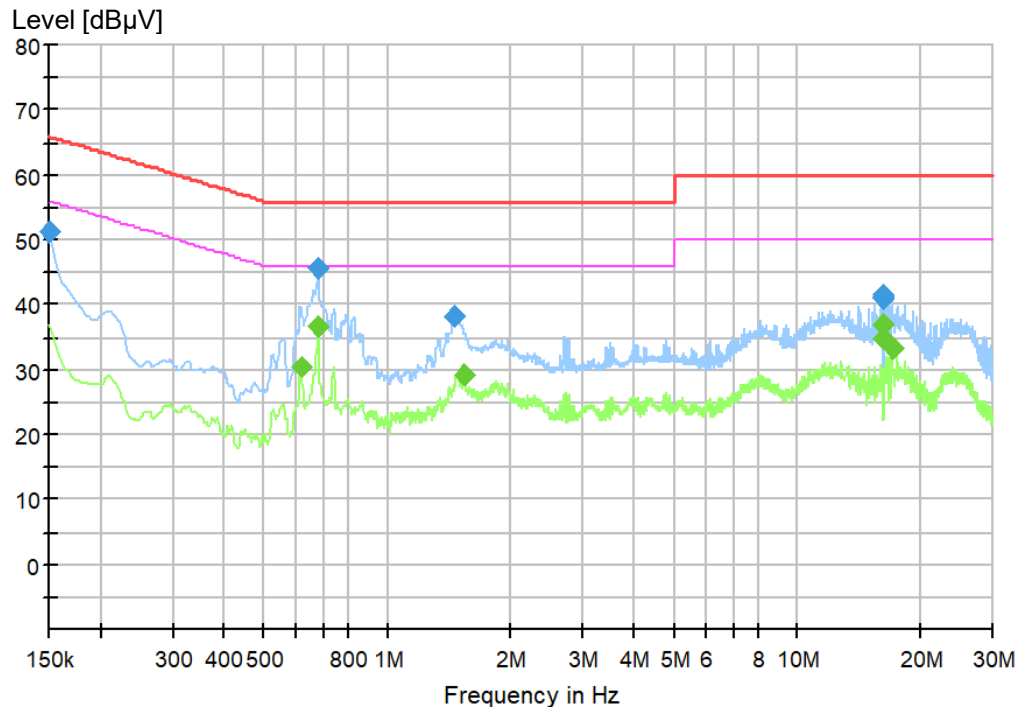
The following figures and tables were those measured by an automatic measuring system. Both quasi-peak and average measurements were performed. In the following spectral diagram, “◆” means Quasi-Peak Value and “♦” means Average Value results.

Notes on following tables of conducted emission results and conversions:

Level (dBμV): 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 (dBμV) - Level (dBμV)

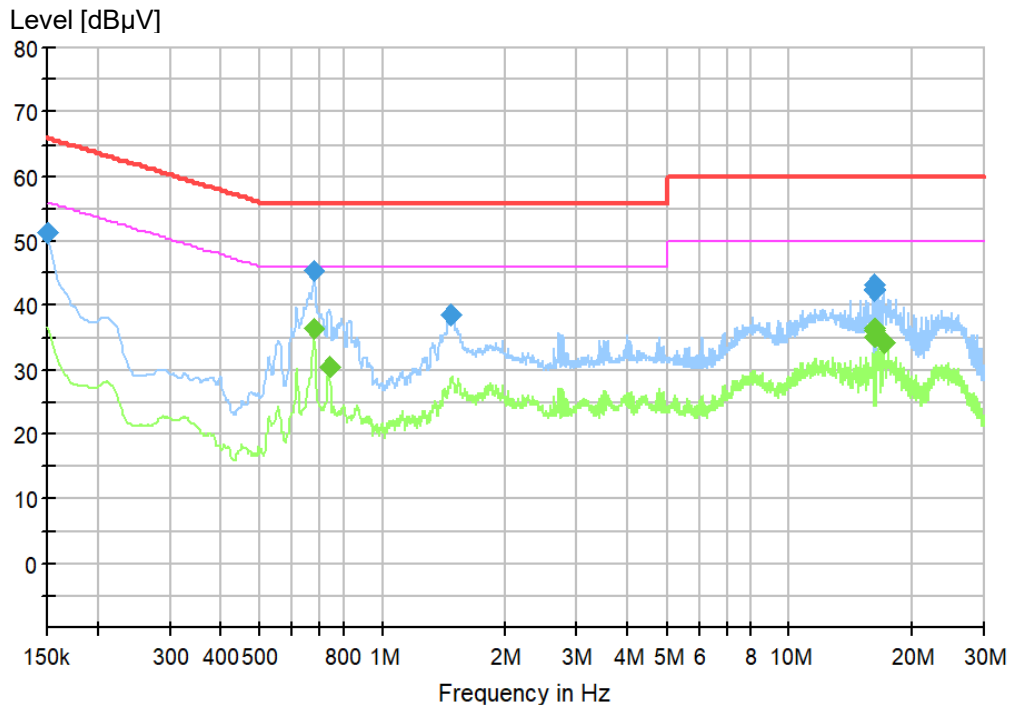
Figure 1: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, L, Mode 1


Final Quasi-peak measurement result:

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Line
0.150000	51.33	66.00	14.67	L1
0.678750	45.73	56.00	10.27	L1
1.459500	38.33	56.00	17.67	L1
16.077750	40.99	60.00	19.01	L1
16.149750	41.42	60.00	18.58	L1
16.221750	41.69	60.00	18.31	L1

Final Average measurement result:

Frequency (MHz)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Line
0.615750	30.58	46.00	15.42	L1
0.678750	36.76	46.00	9.24	L1
1.536000	29.37	46.00	16.63	L1
16.152000	34.84	50.00	15.16	L1
16.221750	37.03	50.00	12.97	L1
17.020500	33.40	50.00	16.60	L1

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


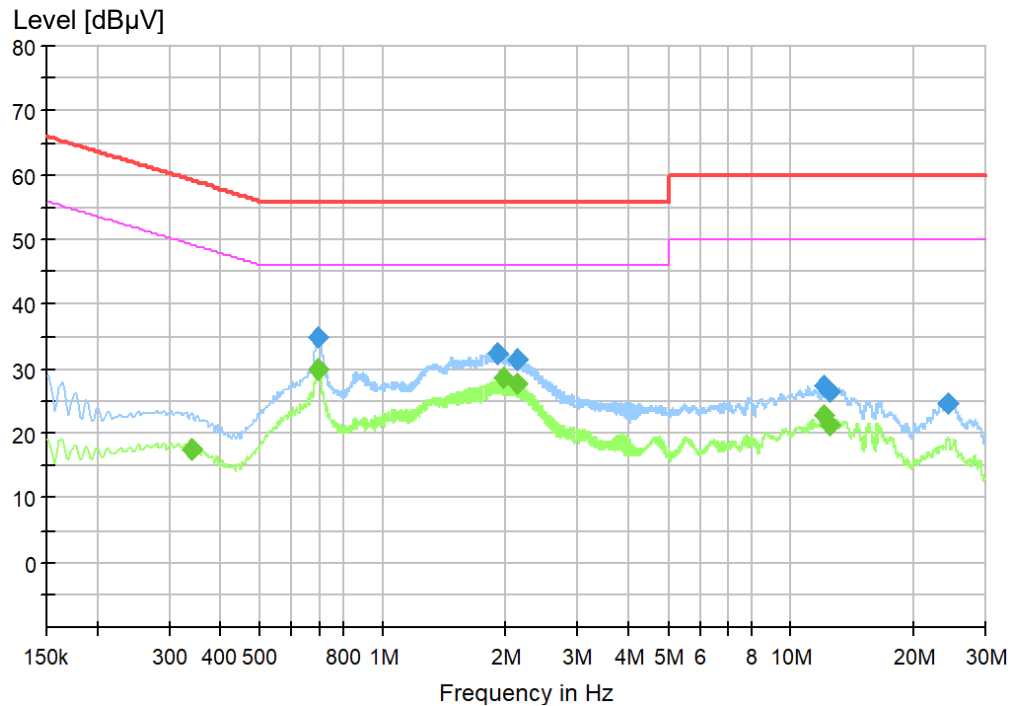
Final Quasi-peak measurement result:

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Line
0.150000	51.11	66.00	14.89	N
0.678750	45.44	56.00	10.56	N
1.470750	38.58	56.00	17.42	N
16.073250	42.63	60.00	17.37	N
16.145250	43.35	60.00	16.65	N
16.217250	42.39	60.00	17.61	N

Final Average measurement result:

Frequency (MHz)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Line
0.678750	36.42	46.00	9.58	N
0.739500	30.38	46.00	15.62	N
16.075500	35.14	50.00	14.86	N
16.147500	36.06	50.00	13.94	N
16.217250	36.45	50.00	13.55	N
17.016000	34.36	50.00	15.64	N

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

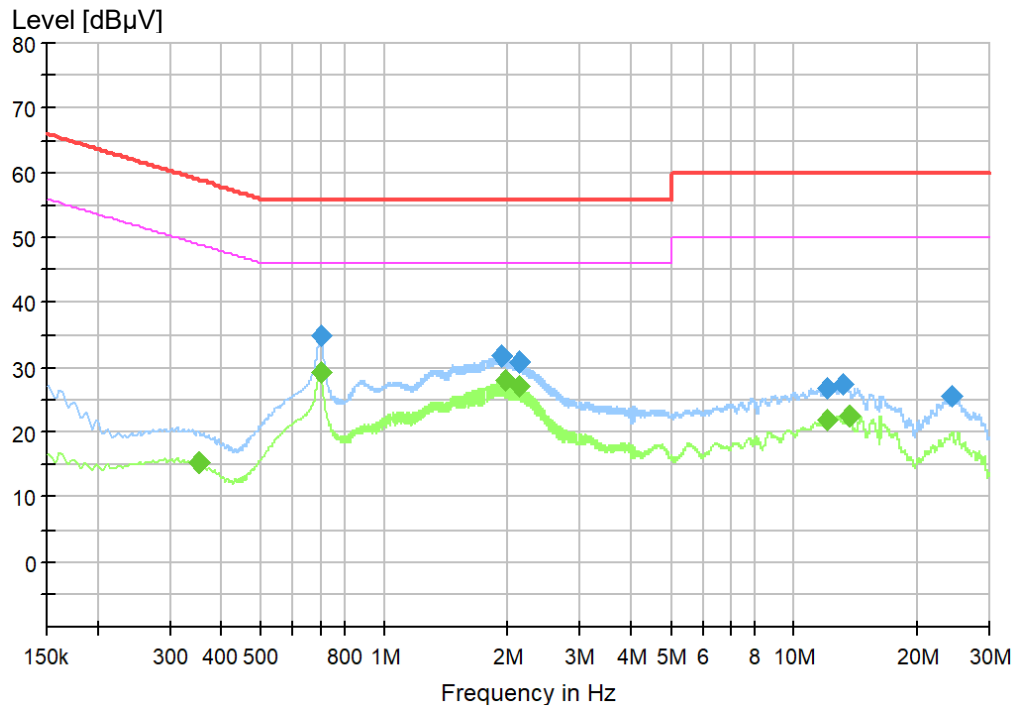


Final Quasi-peak measurement result:

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Line
0.694500	34.89	56.00	21.11	L1
1.902750	32.43	56.00	23.57	L1
2.136750	31.54	56.00	24.46	L1
12.106500	27.33	60.00	32.67	L1
12.423750	26.54	60.00	33.46	L1
24.308250	24.58	60.00	35.42	L1

Final Average measurement result:

Frequency (MHz)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Line
0.341250	17.62	49.17	31.55	L1
0.692250	29.95	46.00	16.05	L1
1.963500	28.57	46.00	17.43	L1
2.136750	27.79	46.00	18.21	L1
12.068250	22.66	50.00	27.34	L1
12.423750	21.38	50.00	28.62	L1

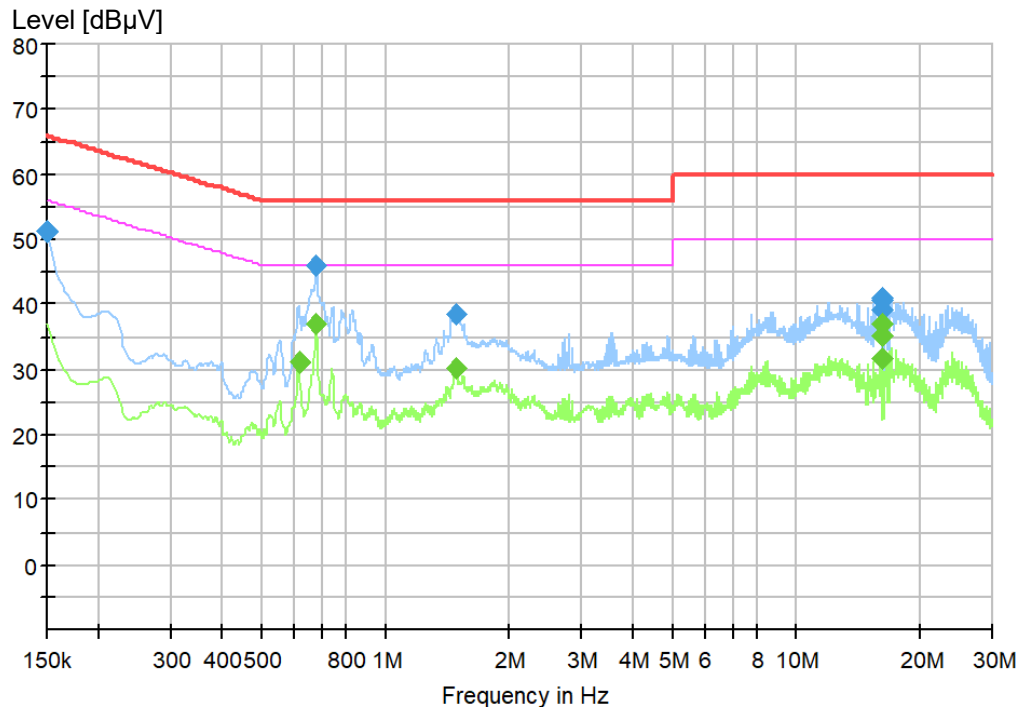
Figure 4: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, N, Mode 2


Final Quasi-peak measurement result:

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line
0.699000	34.87	56.00	21.13	N
1.934250	31.64	56.00	24.36	N
2.125500	30.69	56.00	25.31	N
12.120000	26.92	60.00	33.08	N
13.173000	27.55	60.00	32.45	N
24.333000	25.54	60.00	34.46	N

Final Average measurement result:

Frequency (MHz)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Line
0.352500	15.28	48.90	33.62	N
0.696750	29.32	46.00	16.68	N
1.963500	28.10	46.00	17.90	N
2.136750	27.12	46.00	18.88	N
12.095250	21.75	50.00	28.25	N
13.609500	22.50	50.00	27.50	N

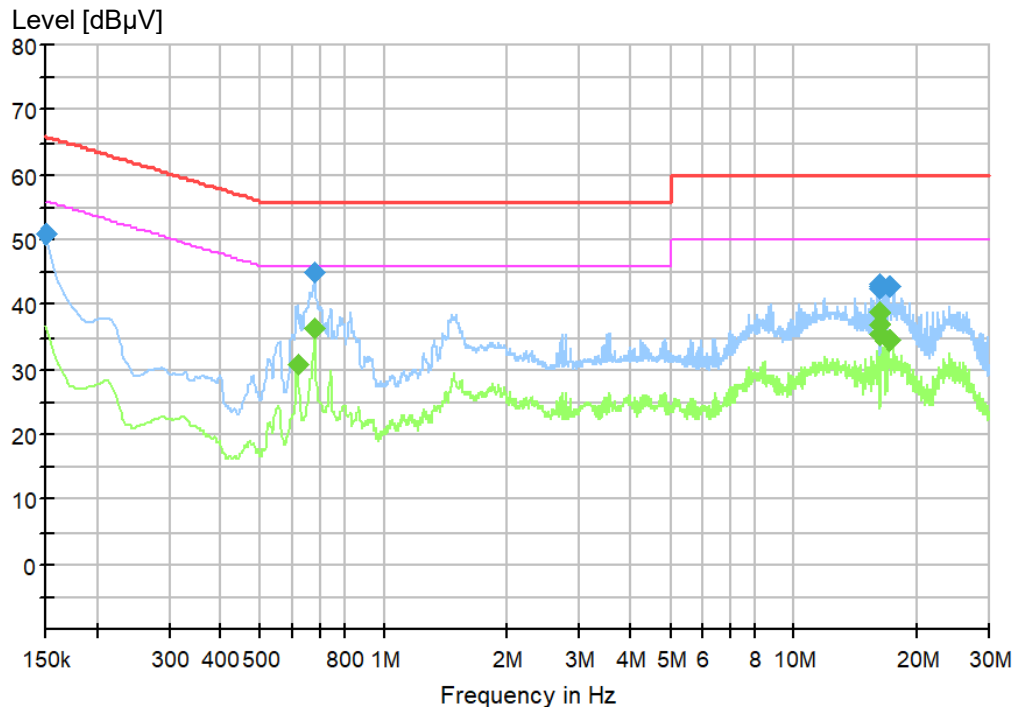
Figure 5: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, L, Mode 3


Final Quasi-peak measurement result:

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Line
0.150000	51.16	66.00	14.84	L1
0.681000	46.06	56.00	9.94	L1
1.488750	38.60	56.00	17.40	L1
16.091250	40.79	60.00	19.21	L1
16.163250	40.98	60.00	19.02	L1
16.237500	39.15	60.00	20.85	L1

Final Average measurement result:

Frequency (MHz)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Line
0.615750	31.00	46.00	15.00	L1
0.678750	36.88	46.00	9.12	L1
1.488750	30.29	46.00	15.71	L1
16.093500	31.85	50.00	18.15	L1
16.165500	35.22	50.00	14.78	L1
16.235250	36.94	50.00	13.06	L1

Figure 6: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, N, Mode 3


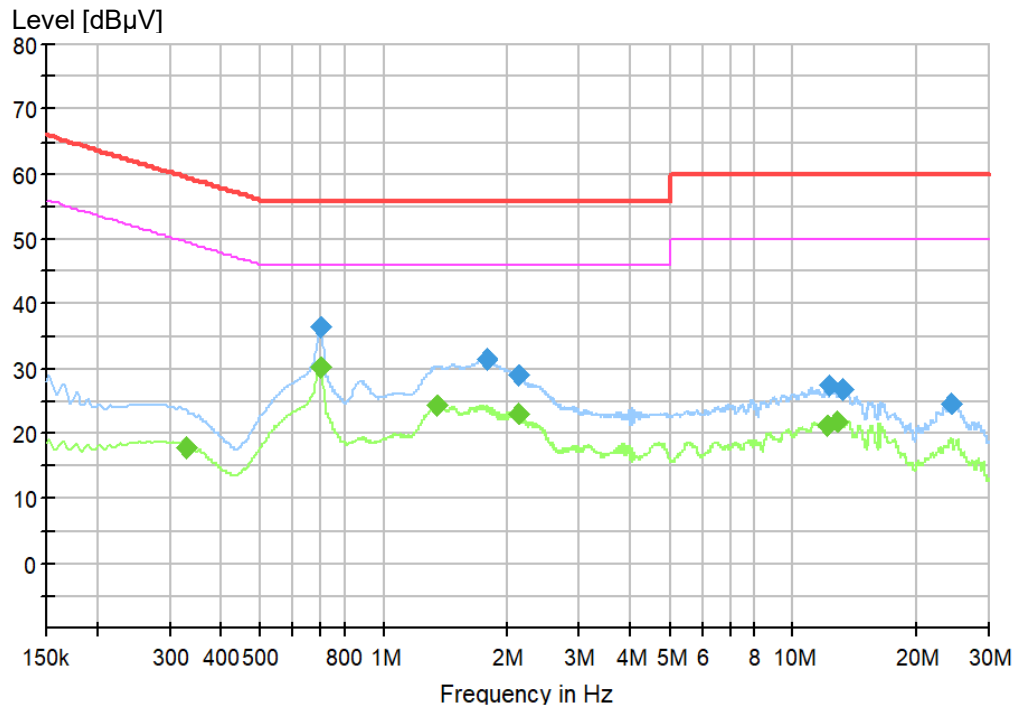
Final Quasi-peak measurement result:

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Line
0.150000	50.92	66.00	15.08	N
0.681000	45.12	56.00	10.88	N
16.080000	42.99	60.00	17.01	N
16.152000	43.30	60.00	16.70	N
16.224000	42.59	60.00	17.41	N
17.052000	43.00	60.00	17.00	N

Final Average measurement result:

Frequency (MHz)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Line
0.615750	30.73	46.00	15.27	N
0.678750	36.24	46.00	9.76	N
16.080000	35.43	50.00	14.57	N
16.154250	37.02	50.00	12.98	N
16.224000	38.76	50.00	11.24	N
17.027250	34.42	50.00	15.58	N

Figure 7: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, L, Mode 4

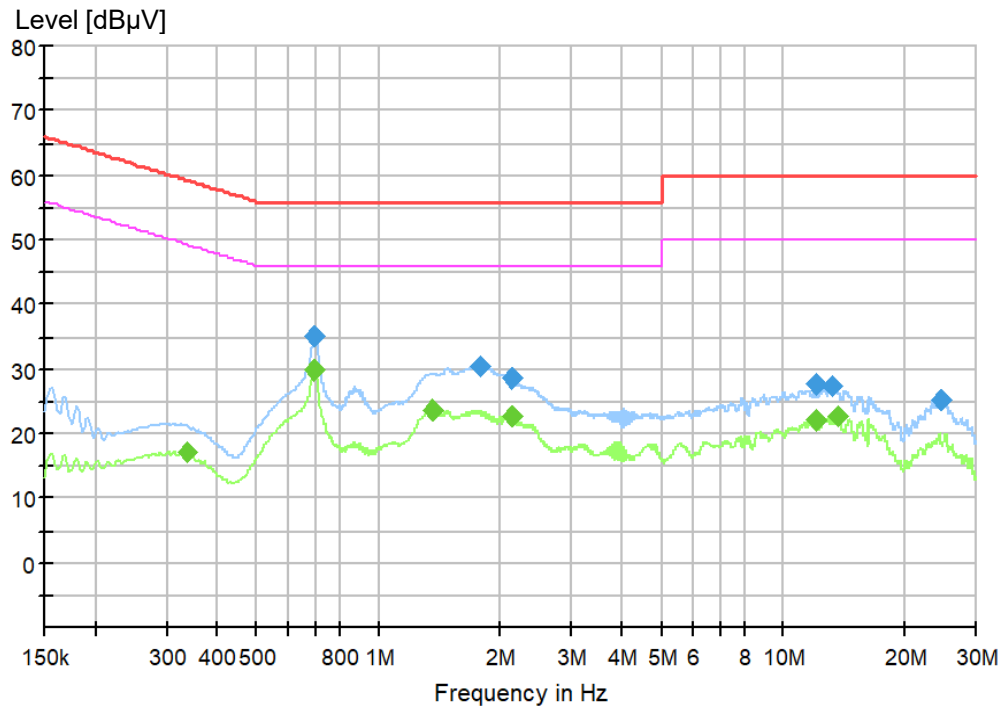


Final Quasi-peak measurement result:

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Line
0.696750	36.39	56.00	19.61	L1
1.781250	31.29	56.00	24.71	L1
2.127750	28.96	56.00	27.04	L1
12.158250	27.31	60.00	32.69	L1
13.170750	26.87	60.00	33.13	L1
24.299250	24.68	60.00	35.32	L1

Final Average measurement result:

Frequency (MHz)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Line
0.330000	17.98	49.45	31.47	L1
0.696750	30.06	46.00	15.94	L1
1.347000	24.34	46.00	21.66	L1
2.130000	23.20	46.00	22.80	L1
12.081750	21.15	50.00	28.85	L1
12.828750	21.93	50.00	28.07	L1

Figure 8: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, N, Mode 4


Final Quasi-peak measurement result:

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Line
0.694500	35.25	56.00	20.75	N
1.781250	30.58	56.00	25.42	N
2.130000	28.74	56.00	27.26	N
12.113250	27.73	60.00	32.27	N
13.179750	27.56	60.00	32.44	N
24.423000	25.41	60.00	34.59	N

Final Average measurement result:

Frequency (MHz)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Line
0.336750	17.15	49.28	32.13	N
0.694500	29.98	46.00	16.02	N
1.356000	23.59	46.00	22.41	N
2.139000	22.84	46.00	23.16	N
12.077250	22.19	50.00	27.81	N
13.607250	22.77	50.00	27.23	N

5.2 Emission in the Frequency Range above 30 MHz

5.2.1 Radiated emission (30-1000 MHz)

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

Date of testing	: 2025-08-13
Test procedure	: FCC 47 CFR Part 15, Subpart B:2023, ICES-005:2018, ICES-003:2020, ANSI C63.4-2014 and CISPR 16-2-3
Product classification	: Class B
Frequency range	: 30 – 1000 MHz
Limits	: Quasi-peak limits (10 m distance): 30 – 88 MHz, 29.5 dBμV/m; 88 – 216 MHz, 33.1 dBμV/m; 216 – 1000 MHz, 35.6 dBμV/m (see Note)
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
Operational mode	: Mode 1: Warm lighting with the max. lighting output. Mode 2: Warm lighting with the min. lighting output. Mode 3: White lighting with the max. lighting output. Mode 4: White lighting with the min. lighting output.
Ambient condition	: Temperature: 23.6 °C; Relative humidity: 55.1 %
Expanded measurement uncertainty ($k=2$)	: 5.40 dB The minimum margin to the limit is 7.49 dB at 42.017 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.

Prüfbericht - Nr.: CN25V4L4 001

Test Report No.:

Seite 22 von 42

Page 22 of 42

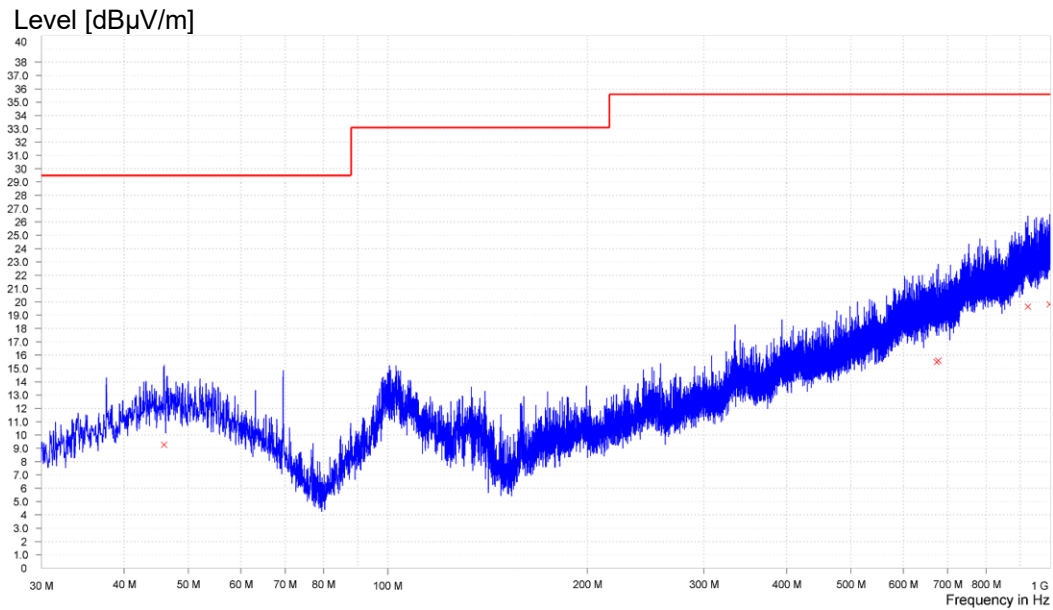
Notes on following tables of radiated emission results and conversions:

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

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

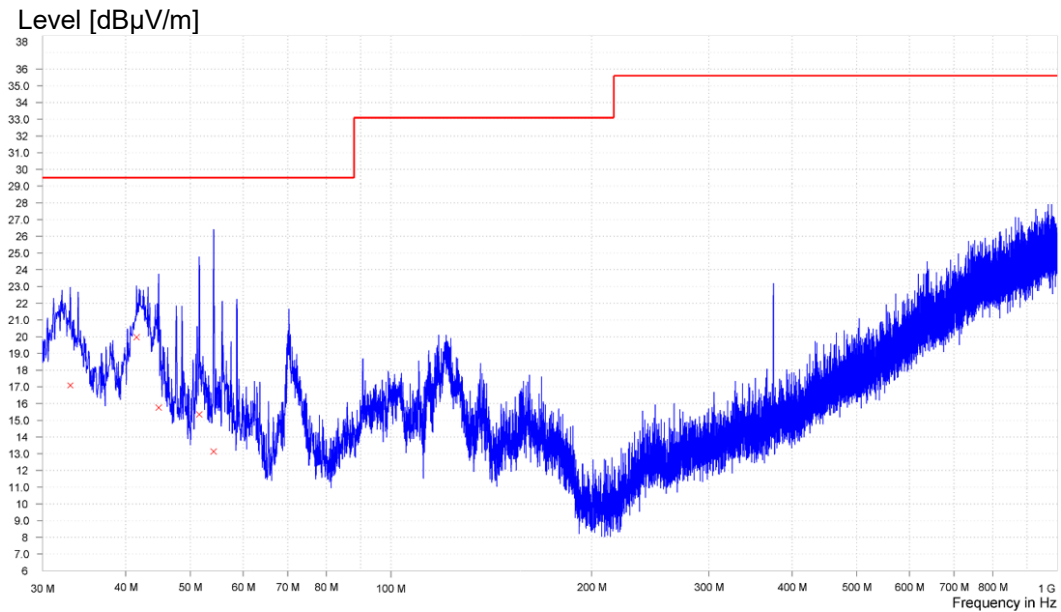
Margin: Limit (dB μ V/m) - QuasiPeak (dB μ V/m)

Note: The class B limits of ICES-005:2018 is stricter than those FCC 47 CFR Part 15, Subpart B:2023 and ICES-003:2020 for 3 m test distance. Therefore, the former limits are used in following figures and tables.

Figure 9: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Horizontal polarization, Mode 1


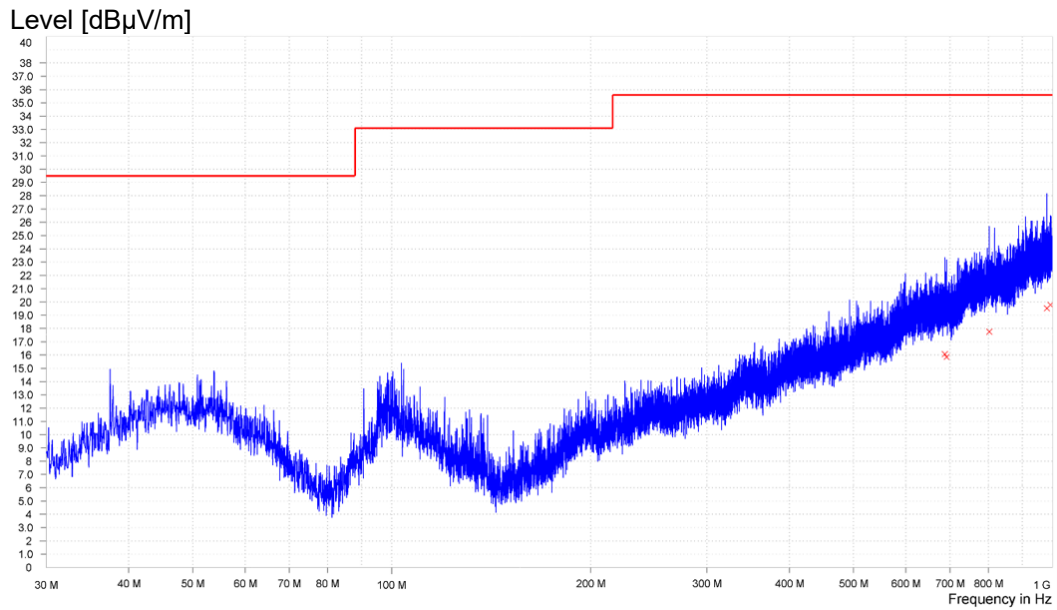
Final quasi-peak measurement results:

Rg	Frequency [MHz]	Range Name	QPK Level [dBμV/m]	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Meas. Time [s]
1	45.951	Horizontal	9.26	29.50	20.24	-7.55	H	-36	3.80	120.000	1.000
1	673.972	Horizontal	15.48	35.60	20.12	3.19	H	178	1.90	120.000	1.000
1	677.744	Horizontal	15.58	35.60	20.02	3.23	H	71	2.90	120.000	1.000
1	925.041	Horizontal	19.63	35.60	15.97	6.75	H	180	1.30	120.000	1.000
1	997.844	Horizontal	19.81	35.60	15.79	7.12	H	71	3.20	120.000	1.000

Figure 10: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Vertical polarization, Mode 1


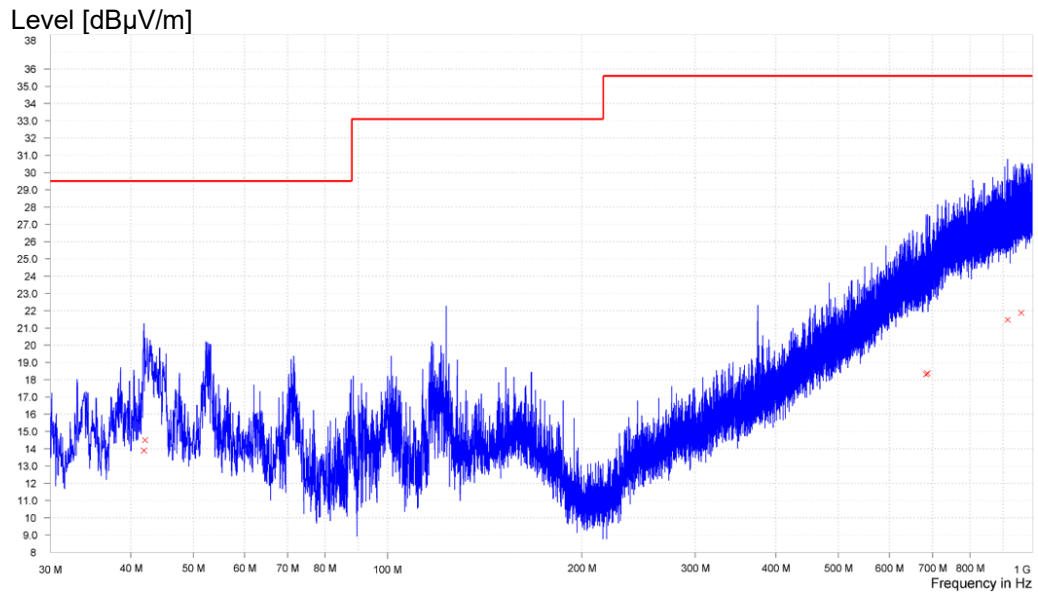
Final quasi-peak measurement results:

Rg	Frequency [MHz]	Range Name	QPK Level [dBμV/m]	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Meas. Time [s]
2	33.018	Vertical	17.09	29.50	12.41	-8.17	V	-178	2.30	120.000	1.000
2	41.532	Vertical	19.96	29.50	9.54	-7.28	V	161	1.10	120.000	1.000
2	44.819	Vertical	15.75	29.50	13.75	-7.03	V	-72	2.90	120.000	1.000
2	51.556	Vertical	15.36	29.50	14.14	-6.86	V	17	2.10	120.000	1.000
2	54.196	Vertical	13.13	29.50	16.37	-6.89	V	53	2.30	120.000	1.000

Figure 11: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Horizontal polarization, Mode 2


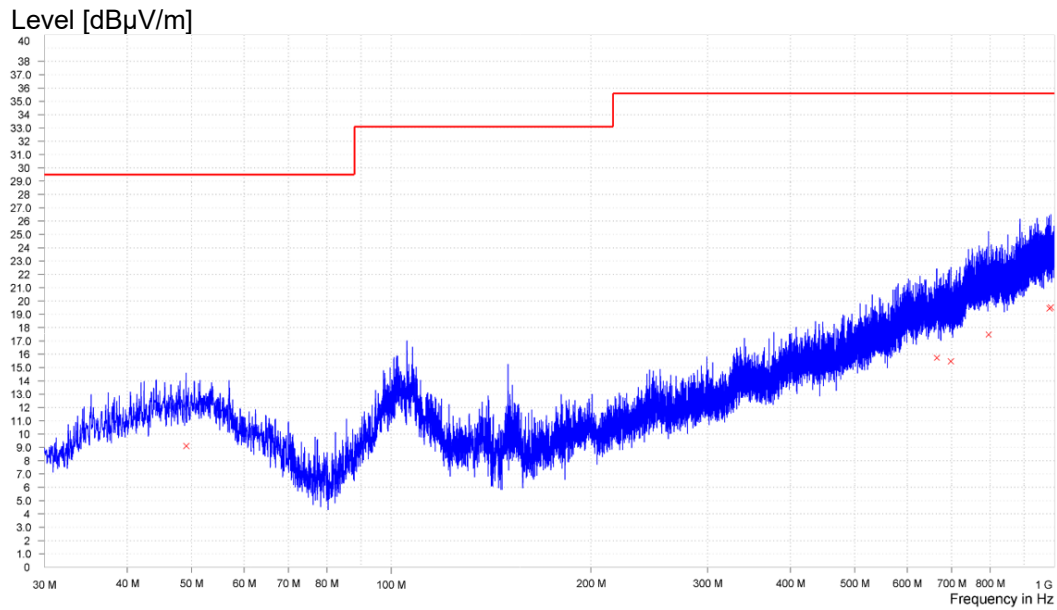
Final quasi-peak measurement results:

Rg	Frequency [MHz]	Range Name	QPK Level [dBμV/m]	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Meas. Time [s]
1	687.714	Horizontal	16.08	35.60	19.52	3.29	H	170	2.20	120.000	1.000
1	691.702	Horizontal	15.84	35.60	19.76	3.27	H	180	4.00	120.000	1.000
1	802.551	Horizontal	17.74	35.60	17.86	5.06	H	-23	3.20	120.000	1.000
1	980.923	Horizontal	19.53	35.60	16.07	7.00	H	74	2.80	120.000	1.000
1	993.210	Horizontal	19.77	35.60	15.83	7.05	H	-180	2.90	120.000	1.000

Figure 12: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Vertical polarization, Mode 2


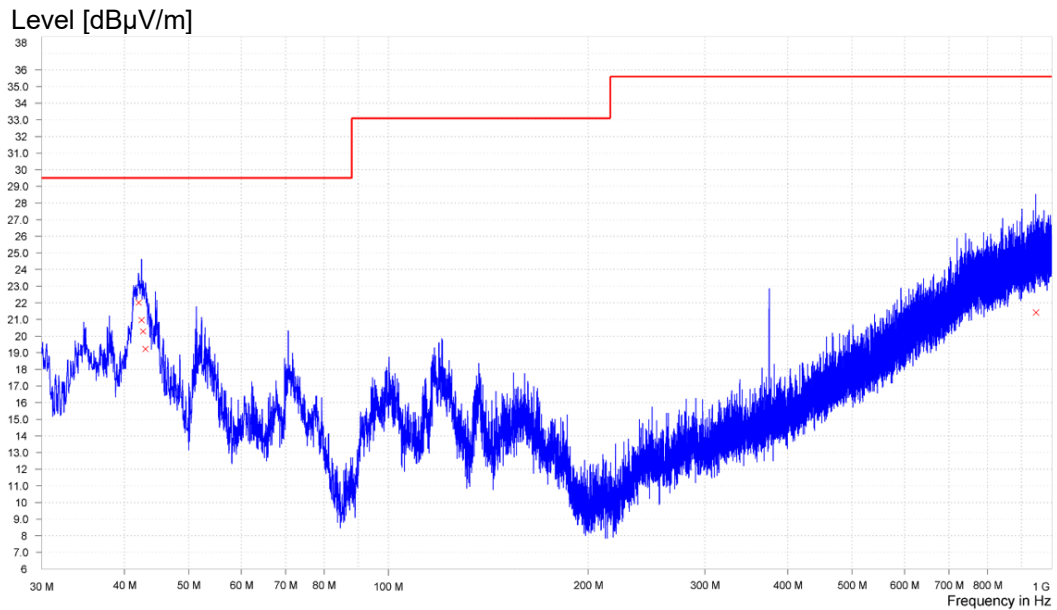
Final quasi-peak measurement results:

Rg	Frequency [MHz]	Range Name	QPK Level [dBμV/m]	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Meas. Time [s]
2	41.909	Vertical	13.90	29.50	15.60	-7.26	V	178	1.20	120.000	1.000
2	42.071	Vertical	14.50	29.50	15.00	-7.25	V	113	2.70	120.000	1.000
2	683.672	Vertical	18.31	35.60	17.29	3.83	V	54	2.10	120.000	1.000
2	687.337	Vertical	18.37	35.60	17.23	3.89	V	94	2.80	120.000	1.000
2	915.017	Vertical	21.48	35.60	14.12	6.53	V	-159	3.00	120.000	1.000
2	960.715	Vertical	21.87	35.60	13.73	6.97	V	102	1.20	120.000	1.000

Figure 13: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Horizontal polarization, Mode 3


Final quasi-peak measurement results:

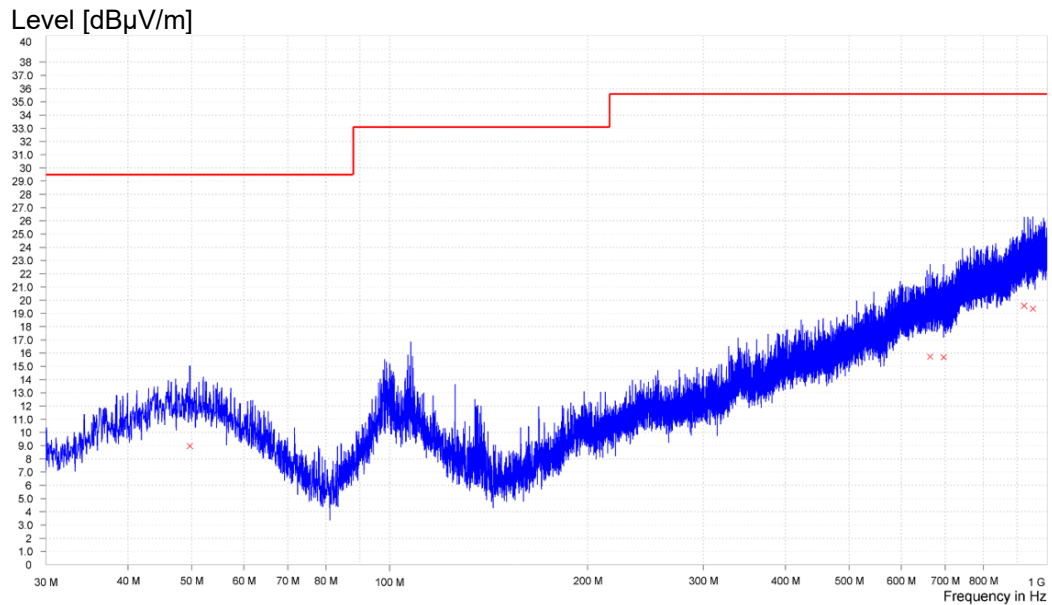
Rg	Frequency [MHz]	Range Name	QPK Level [dBμV/m]	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Meas. Time [s]
1	49.077	Horizontal	9.11	29.50	20.39	-7.36	H	23	2.80	120.000	1.000
1	664.973	Horizontal	15.73	35.60	19.87	3.12	H	-105	3.00	120.000	1.000
1	698.168	Horizontal	15.47	35.60	20.13	3.17	H	-69	2.90	120.000	1.000
1	796.084	Horizontal	17.48	35.60	18.12	5.15	H	95	2.10	120.000	1.000
1	982.971	Horizontal	19.43	35.60	16.17	7.00	H	-13	3.30	120.000	1.000
1	987.713	Horizontal	19.51	35.60	16.09	7.04	H	-178	2.20	120.000	1.000

Figure 14: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Vertical polarization, Mode 3


Final quasi-peak measurement results:

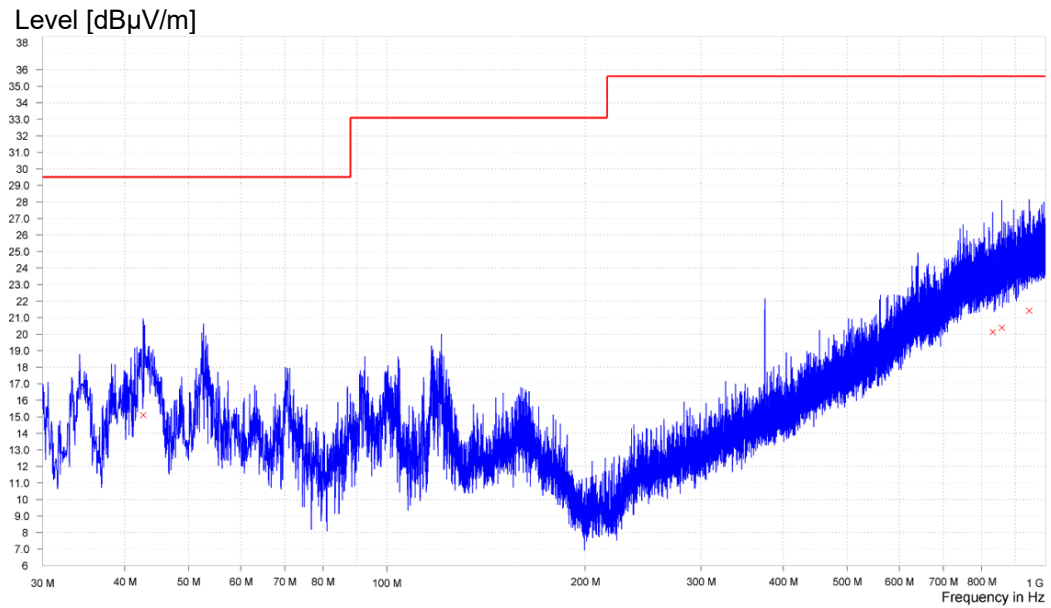
Rg	Frequency [MHz]	Range Name	QPK Level [dBμV/m]	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Meas. Time [s]
2	42.017	Vertical	22.01	29.50	7.49	-7.26	V	106	1.10	120.000	1.000
2	42.448	Vertical	20.96	29.50	8.54	-7.21	V	-134	1.30	120.000	1.000
2	42.664	Vertical	20.28	29.50	9.22	-7.19	V	132	2.20	120.000	1.000
2	43.041	Vertical	19.23	29.50	10.27	-7.15	V	-13	2.30	120.000	1.000
2	946.596	Vertical	21.41	35.60	14.19	6.81	V	95	2.70	120.000	1.000

Figure 15: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Horizontal polarization, Mode 4



Final quasi-peak measurement results:

Rg	Frequency [MHz]	Range Name	QPK Level [dBμV/m]	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Meas. Time [s]
1	49.669	Horizontal	8.96	29.50	20.54	-7.37	H	-134	1.20	120.000	1.000
1	663.949	Horizontal	15.73	35.60	19.87	3.11	H	180	2.90	120.000	1.000
1	695.959	Horizontal	15.69	35.60	19.91	3.16	H	78	1.30	120.000	1.000
1	922.346	Horizontal	19.57	35.60	16.03	6.75	H	149	3.70	120.000	1.000
1	951.985	Horizontal	19.36	35.60	16.24	6.56	H	117	1.20	120.000	1.000

Figure 16: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Vertical polarization, Mode 4


Final quasi-peak measurement results:

Rg	Frequency [MHz]	Range Name	QPK Level [dBμV/m]	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Meas. Time [s]
2	42.664	Vertical	15.10	29.50	14.40	-7.19	V	52	2.70	120.000	1.000
2	831.867	Vertical	20.13	35.60	15.47	5.91	V	117	1.10	120.000	1.000
2	858.542	Vertical	20.39	35.60	15.21	6.12	V	110	2.20	120.000	1.000
2	945.411	Vertical	21.42	35.60	14.18	6.80	V	-178	2.90	120.000	1.000

5.2.2 Radiated Emission (1-18 GHz)

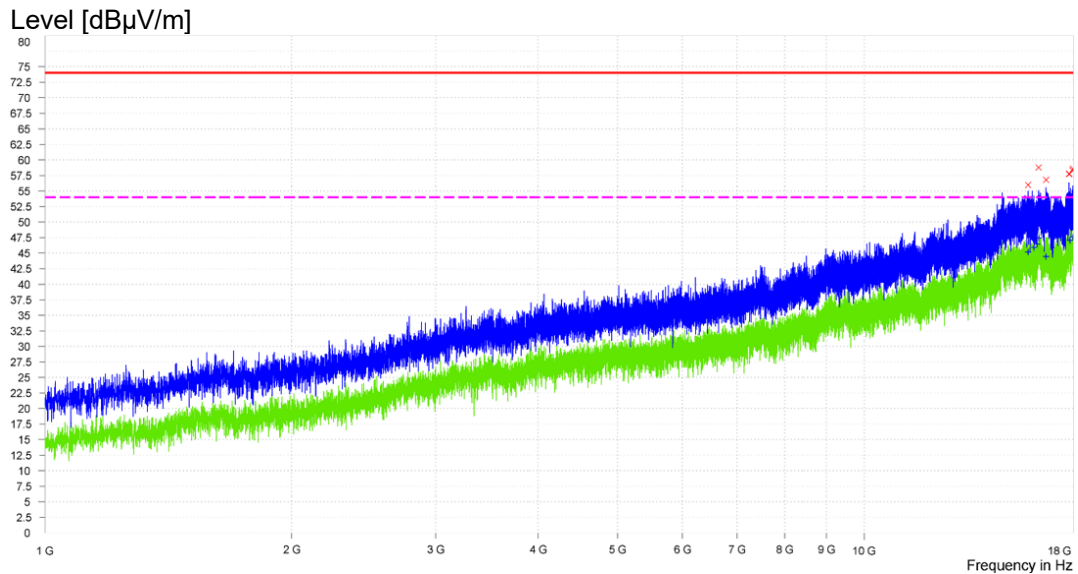
Result:
Passed

Date of testing	: 2025-08-14
Port	: Enclosure
Test procedure	: FCC 47 CFR Part 15, Subpart B:2023, ICES-005:2018, ICES-003:2020 and ANSI C63.4-2014 and CISPR 16-2-3
Product classification	: Class B
Limit	: Peak limits (3 m distance): 1–18 GHz, 74 dB μ V/m Average limits (3 m distance): 1–18 GHz, 54 dB μ V/m
Frequency range	: 1 – 18 GHz (see Note)
Kind of test site	: Semi-anechoic chamber with RF absorber material on the ground plane.
Test distance	: 3 m
Test voltage	: AC 120 V, 60 Hz
Operational mode	: Mode 1: Warm lighting with the max. lighting output. Mode 2: Warm lighting with the min. lighting output. Mode 3: White lighting with the max. lighting output. Mode 4: White lighting with the min. lighting output.
Earthing	: No earthing
Ambient condition	: Temperature: 23.6 °C; Relative humidity: 55.1 %
Expanded measurement uncertainty ($k=2$)	: 5.17 dB (1 GHz~6 GHz) 5.12 dB (6 GHz~18 GHz) The minimum margin to the limit is 6.21 dB at 17,986.719 MHz. The margin is higher than expanded measurement uncertainty.

The radiated disturbance test was carried out in the semi-anechoic chamber with RF absorber material on the ground plane. 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 supporting table. And the supporting table 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. The final test was performed with peak detector and average detector at those critical frequencies during the preview test. In the following figure, “×” and “+” means measurement results with peak detector and average detector.

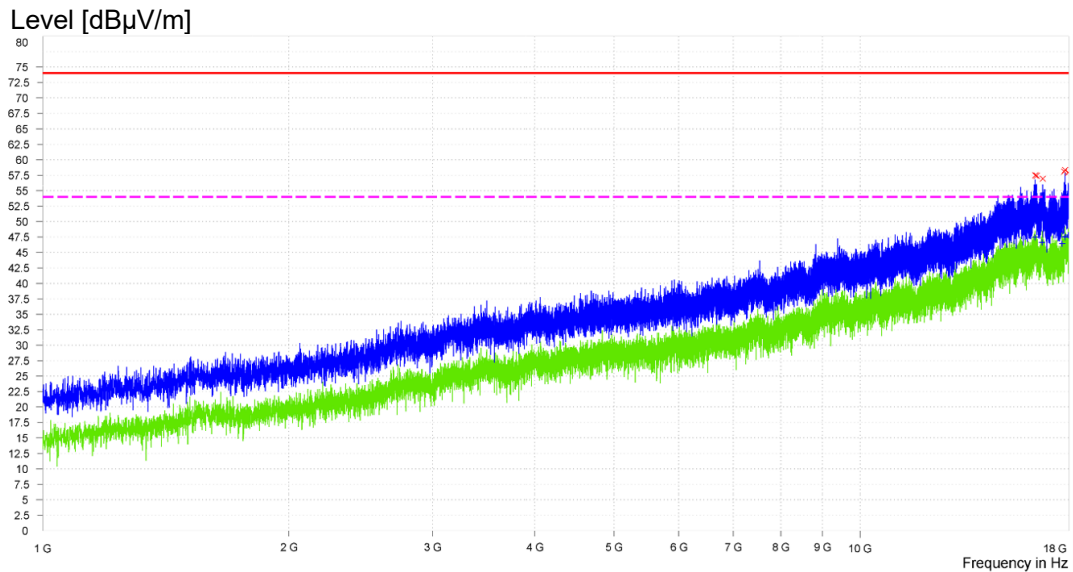
Note: The highest frequency in the EUT is 2480 MHz. According to FCC Part 15 subpart B §15.33 (b) (1) and ICES-003:2020 table 3, the upper frequency for radiated emission measurement is 18 GHz.

Figure 17: Spectral Diagrams, Radiated Emission, 1 GHz – 18 GHz, Horizontal polarization, Mode 1

Final peak measurement result:

Rg	Frequency [MHz]	PK+ Level [dBµV/m]	PK+ Limit [dBµV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	15,853.750	55.97	74.00	18.03	14.96	H	-94	1.10	1,000.000
1	16,329.750	58.78	74.00	15.22	15.95	H	-104	1.20	1,000.000
1	16,676.125	56.80	74.00	17.20	16.00	H	-109	3.80	1,000.000
1	17,792.281	57.77	74.00	16.23	18.17	H	-178	1.30	1,000.000
1	17,798.125	57.72	74.00	16.28	18.22	H	-42	2.10	1,000.000
1	17,948.469	58.34	74.00	15.66	18.41	H	-91	2.10	1,000.000
1	17,990.969	58.55	74.00	15.45	18.45	H	-163	1.30	1,000.000

Final average measurement result:

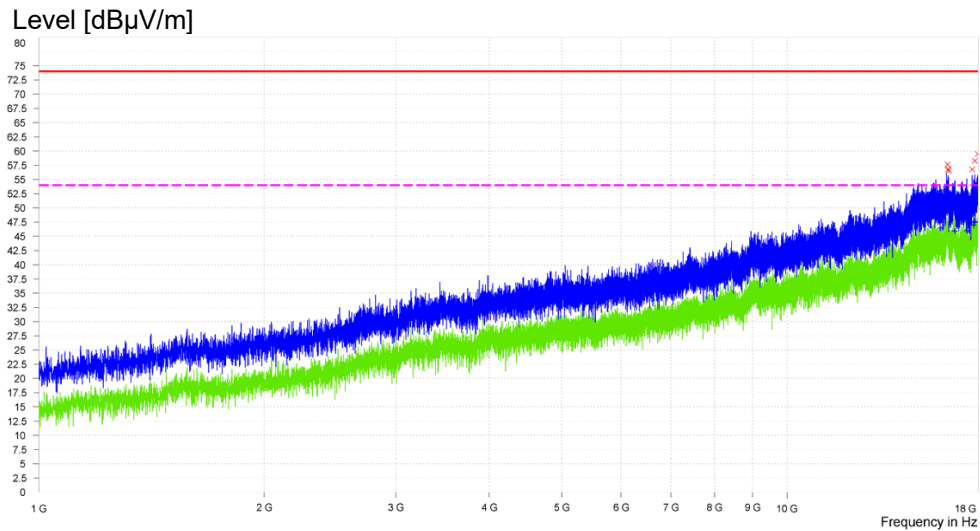
Rg	Frequency [MHz]	AVG Level [dBµV/m]	AVG Limit [dBµV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	15,853.750	45.18	54.00	8.82	14.96	H	-94	1.10	1,000.000
1	16,123.094	45.93	54.00	8.07	15.65	H	-24	3.00	1,000.000
1	16,263.344	46.47	54.00	7.53	16.04	H	-156	2.70	1,000.000
1	16,334.531	47.45	54.00	6.55	15.94	H	-106	2.70	1,000.000
1	16,676.125	44.47	54.00	9.53	16.00	H	-109	3.80	1,000.000
1	17,844.875	47.08	54.00	6.92	18.30	H	-7	1.10	1,000.000
1	17,998.938	47.64	54.00	6.36	18.45	H	44	2.10	1,000.000

Figure 18: Spectral Diagrams, Radiated Emission, 1 GHz – 18 GHz, Vertical polarization, Mode 1

Final peak measurement result:

Rg	Frequency [MHz]	PK+ Level [dBµV/m]	PK+ Limit [dBµV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	16,380.219	57.50	74.00	16.50	15.79	V	-28	2.90	1,000.000
1	16,444.500	57.42	74.00	16.58	15.54	V	-177	1.60	1,000.000
1	16,722.875	56.94	74.00	17.06	16.09	V	-29	3.00	1,000.000
1	17,776.344	58.08	74.00	15.92	18.04	V	-57	2.10	1,000.000
1	17,820.969	58.34	74.00	15.66	18.27	V	-148	2.20	1,000.000
1	17,972.906	57.95	74.00	16.05	18.43	V	38	2.80	1,000.000

Final average measurement result:

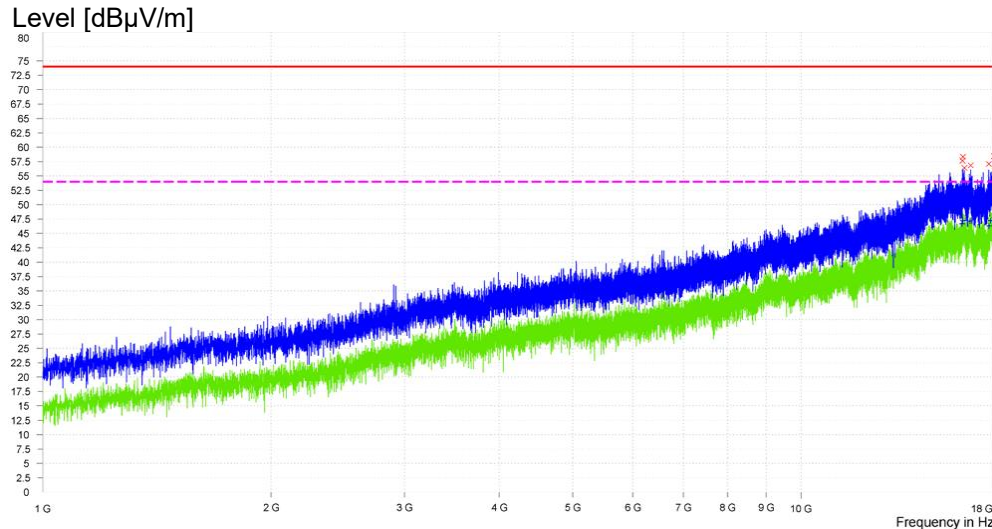
Rg	Frequency [MHz]	AVG Level [dBµV/m]	AVG Limit [dBµV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	16,367.469	47.49	54.00	6.51	15.83	V	-76	1.30	1,000.000
1	16,694.188	46.64	54.00	7.36	16.10	V	61	2.30	1,000.000
1	17,669.563	46.46	54.00	7.54	17.16	V	-151	1.50	1,000.000
1	17,816.188	47.55	54.00	6.45	18.26	V	70	1.60	1,000.000
1	17,817.781	47.48	54.00	6.52	18.26	V	32	1.10	1,000.000
1	17,986.719	47.79	54.00	6.21	18.44	V	-13	1.70	1,000.000

Figure 19: Spectral Diagrams, Radiated Emission, 1 GHz – 18 GHz, Horizontal polarization, Mode 2

Final peak measurement result:

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	16,392.438	57.63	74.00	16.37	15.75	H	151	2.70	1,000.000
1	16,419.531	56.79	74.00	17.21	15.65	H	-83	3.30	1,000.000
1	16,436.531	56.49	74.00	17.51	15.57	H	-127	1.10	1,000.000
1	17,677.000	56.75	74.00	17.25	17.22	H	-108	1.70	1,000.000
1	17,824.688	58.25	74.00	15.75	18.27	H	54	1.20	1,000.000
1	17,987.250	59.49	74.00	14.51	18.44	H	-152	1.10	1,000.000

Final average measurement result:

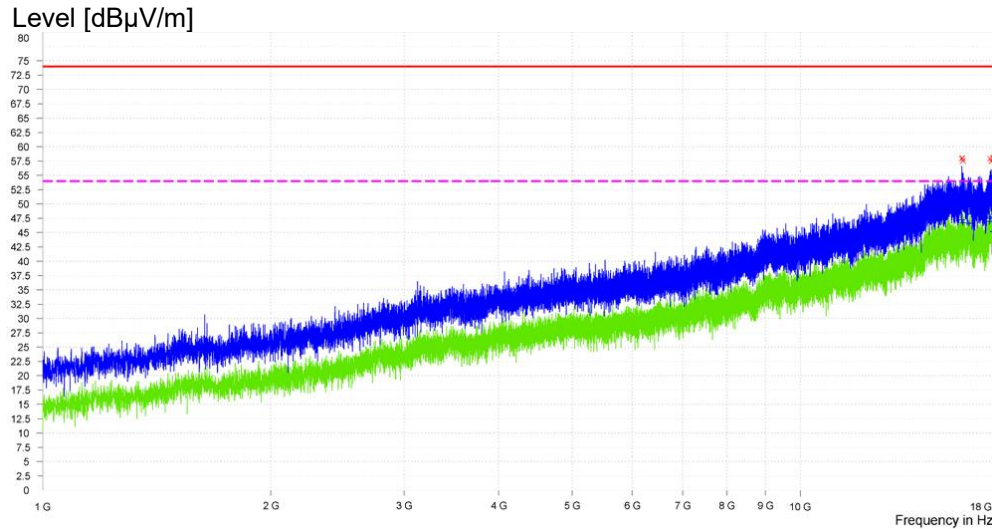
Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	16,024.813	46.44	54.00	7.56	15.17	H	115	1.90	1,000.000
1	16,757.406	45.98	54.00	8.02	16.04	H	-131	3.70	1,000.000
1	17,391.188	46.00	54.00	8.00	16.46	H	-118	2.00	1,000.000
1	17,759.875	46.96	54.00	7.04	17.91	H	-2	1.90	1,000.000
1	17,790.156	47.43	54.00	6.57	18.16	H	-120	2.90	1,000.000
1	17,832.125	47.54	54.00	6.46	18.28	H	136	2.30	1,000.000

Figure 20: Spectral Diagrams, Radiated Emission, 1 GHz – 18 GHz, Vertical polarization, Mode 2

Final peak measurement result:

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	16,321.250	57.66	74.00	16.35	15.98	V	163	2.70	1,000.000
1	16,346.750	58.35	74.00	15.65	15.90	V	-51	1.30	1,000.000
1	16,424.313	56.41	74.00	17.59	15.63	V	-130	2.70	1,000.000
1	16,732.969	56.82	74.00	17.18	16.08	V	12	1.60	1,000.000
1	17,683.906	57.10	74.00	16.90	17.28	V	21	1.50	1,000.000
1	17,964.406	58.42	74.00	15.58	18.43	V	147	1.60	1,000.000

Final average measurement result:

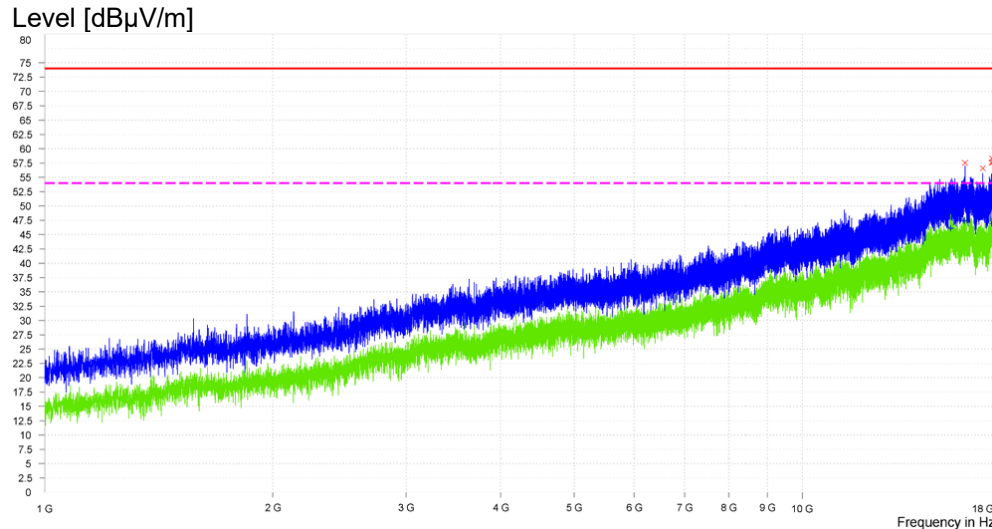
Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	16,301.594	46.66	54.00	7.34	16.04	V	84	1.10	1,000.000
1	16,334.000	47.24	54.00	6.76	15.94	V	167	2.90	1,000.000
1	16,709.594	47.15	54.00	6.85	16.11	V	10	1.20	1,000.000
1	17,691.344	46.30	54.00	7.70	17.34	V	-127	1.70	1,000.000
1	17,785.906	47.26	54.00	6.74	18.12	V	-37	2.90	1,000.000
1	17,981.938	47.72	54.00	6.28	18.44	V	141	2.10	1,000.000

Figure 21: Spectral Diagrams, Radiated Emission, 1 GHz – 18 GHz, Horizontal polarization, Mode 3

Final peak measurement result:

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	16,351.000	57.99	74.00	16.01	15.88	H	-108	1.20	1,000.000
1	16,364.281	57.96	74.00	16.04	15.84	H	37	2.90	1,000.000
1	16,386.063	57.54	74.00	16.46	15.77	H	17	4.00	1,000.000
1	17,811.938	57.91	74.00	16.09	18.25	H	-89	1.30	1,000.000
1	17,869.313	57.47	74.00	16.53	18.33	H	-74	1.70	1,000.000
1	17,949.000	57.97	74.00	16.03	18.41	H	-36	2.10	1,000.000
1	17,995.750	58.08	74.00	15.92	18.45	H	-171	2.00	1,000.000

Final average measurement result:

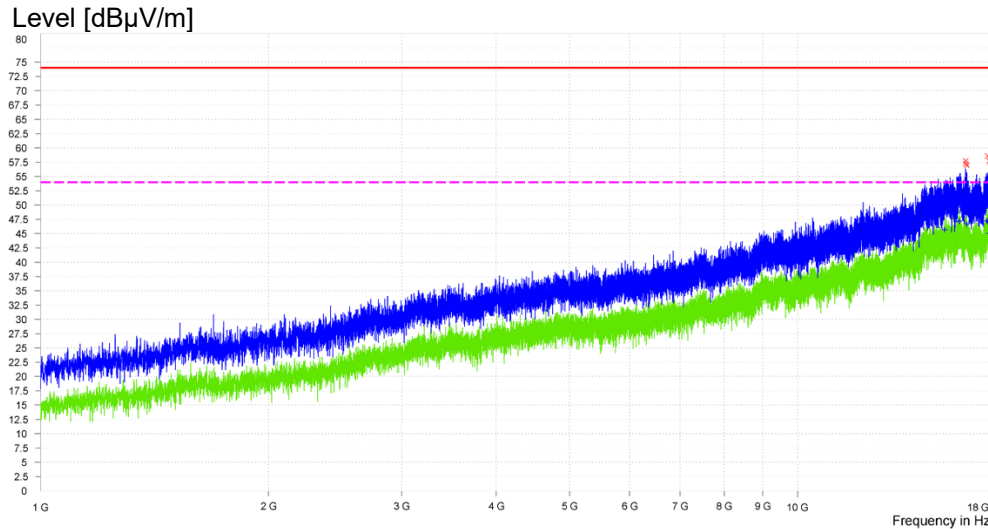
Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	16,351.000	47.20	54.00	6.80	15.88	H	-108	1.20	1,000.000
1	16,387.125	46.75	54.00	7.25	15.77	H	-19	2.10	1,000.000
1	16,696.844	46.62	54.00	7.38	16.11	H	-103	2.20	1,000.000
1	17,771.031	46.91	54.00	7.09	18.00	H	114	1.70	1,000.000
1	17,797.063	47.47	54.00	6.53	18.21	H	-36	1.90	1,000.000
1	17,808.219	47.69	54.00	6.31	18.25	H	117	2.10	1,000.000
1	17,949.000	45.19	54.00	8.81	18.41	H	-36	2.10	1,000.000

Figure 22: Spectral Diagrams, Radiated Emission, 1 GHz – 18 GHz, Vertical polarization, Mode 3

Final peak measurement result:

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	16,398.813	57.51	74.00	16.49	15.73	V	-167	3.30	1,000.000
1	17,315.750	56.56	74.00	17.44	16.66	V	49	4.00	1,000.000
1	17,777.406	57.58	74.00	16.42	18.05	V	25	1.10	1,000.000
1	17,810.875	58.30	74.00	15.70	18.25	V	56	1.80	1,000.000
1	17,856.031	57.64	74.00	16.36	18.31	V	125	1.10	1,000.000
1	17,955.375	57.69	74.00	16.31	18.42	V	157	1.90	1,000.000

Final average measurement result:

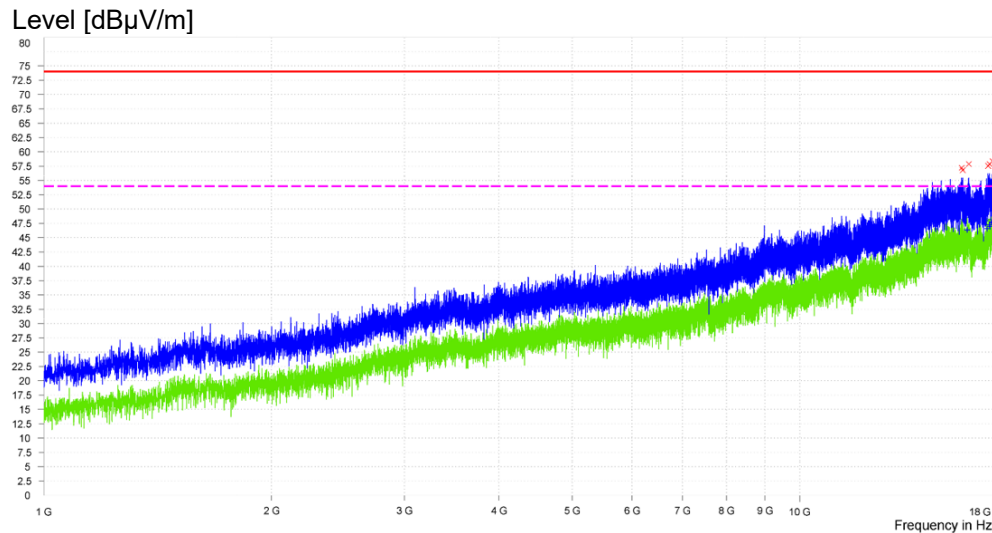
Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	15,702.875	46.10	54.00	7.90	15.02	V	-34	2.70	1,000.000
1	16,361.625	47.44	54.00	6.56	15.85	V	-98	2.10	1,000.000
1	17,778.469	46.95	54.00	7.05	18.06	V	78	1.20	1,000.000
1	17,905.969	47.67	54.00	6.33	18.38	V	131	1.30	1,000.000
1	17,940.500	47.35	54.00	6.65	18.41	V	178	2.20	1,000.000
1	17,986.188	47.37	54.00	6.63	18.44	V	29	1.10	1,000.000

Figure 23: Spectral Diagrams, Radiated Emission, 1 GHz – 18 GHz, Horizontal polarization, Mode 4

Final peak measurement result:

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	16,677.719	57.74	74.00	16.26	16.01	H	-26	1.20	1,000.000
1	16,684.094	57.24	74.00	16.76	16.04	H	-98	2.70	1,000.000
1	16,738.281	56.95	74.00	17.05	16.07	H	-107	3.30	1,000.000
1	17,833.719	58.54	74.00	15.46	18.28	H	-35	2.90	1,000.000
1	17,917.125	57.74	74.00	16.26	18.39	H	-34	2.10	1,000.000
1	17,961.750	57.50	74.00	16.50	18.42	H	35	1.70	1,000.000
1	17,998.406	58.46	74.00	15.54	18.45	H	36	2.30	1,000.000

Final average measurement result:

Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	15,632.750	45.72	54.00	8.28	14.53	H	-47	1.30	1,000.000
1	16,360.563	47.19	54.00	6.81	15.85	H	-35	1.40	1,000.000
1	16,722.875	46.70	54.00	7.30	16.09	H	37	3.80	1,000.000
1	17,797.063	47.27	54.00	6.73	18.21	H	49	2.70	1,000.000
1	17,867.719	47.04	54.00	6.96	18.33	H	-91	2.80	1,000.000
1	17,917.125	45.06	54.00	8.94	18.39	H	-34	2.10	1,000.000
1	17,998.406	47.72	54.00	6.28	18.45	H	36	2.30	1,000.000

Figure 24: Spectral Diagrams, Radiated Emission, 1 GHz – 18 GHz, Vertical polarization, Mode 4

Final peak measurement result:

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	16,375.969	57.21	74.00	16.79	15.81	V	-142	2.80	1,000.000
1	16,430.156	56.81	74.00	17.19	15.60	V	101	2.00	1,000.000
1	16,738.281	57.88	74.00	16.12	16.07	V	41	1.30	1,000.000
1	17,749.250	57.52	74.00	16.48	17.82	V	94	1.10	1,000.000
1	17,830.000	57.86	74.00	16.14	18.28	V	-60	1.30	1,000.000
1	17,989.375	58.39	74.00	15.61	18.44	V	29	1.70	1,000.000

Final average measurement result:

Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	16,653.281	46.35	54.00	7.65	15.87	V	133	2.90	1,000.000
1	17,690.281	46.60	54.00	7.40	17.34	V	-125	1.70	1,000.000
1	17,834.250	47.24	54.00	6.76	18.28	V	-154	2.10	1,000.000
1	17,864.000	46.97	54.00	7.03	18.33	V	14	3.00	1,000.000
1	17,946.344	47.76	54.00	6.24	18.41	V	47	1.30	1,000.000
1	17,983.000	47.61	54.00	6.39	18.44	V	27	1.90	1,000.000

6 Photographs of the Test Set-Up

Refer to the test setup file.

Prüfbericht - Nr.: CN25V4L4 001
Test Report No.:
Seite 41 von 42
Page 41 of 42

7 List of Test and Measurement Instruments

Equip. no.	Equipment name	Model	Serial no.	Manufacturer	Cal. date	Due date
EMC-C-195	EMI test receiver	ESR3	102794	Rohde & Schwarz	2025-08-02	2026-08-02
EMC-C-366	Thermohygrometer	608-H1	2485149174	testo	2025-07-11	2026-07-11
EMC-S-028	EMI measurement software	EMC32-E+ (10.60.20)	100150	Rohde & Schwarz	N/A	N/A
EMC-C-190	Artificial mains network	ENV432	101514	Rohde & Schwarz	2024-10-11	2025-10-11
EMC-C-332	10 m semi-anechoic chamber	SAC10-5	FJ219015	Frankonia	2023-07-16	2026-07-16
EMC-C-204	Trilog broadband antenna	VULB 9163	01564	Schwarzbeck	2025-08-04	2027-02-04
EMC-C-230	Trilog broadband antenna	VULB 9168	01463	Schwarzbeck	2024-07-30	2026-01-30
EMC-C-301	EMI test receiver	ESR7	102512	Rohde & Schwarz	2025-01-21	2026-01-21
EMC-C-319	Thermohygrometer	608-H1	2283796623	testo	2025-06-10	2026-06-10
EMC-C-322	Signal conditioning unit	SCU01F	100451	Rohde & Schwarz	2024-10-11	2025-10-11
EMC-C-337	EMI test receiver	ESR3	102995	Rohde & Schwarz	2024-10-17	2025-10-17
EMC-S-306	EMC measurement software	ELEKTRA 5.04.0	N/A	Rohde & Schwarz	N/A	N/A
EMC-C-321	Signal conditioning unit	SCU01F	100450	Rohde & Schwarz	2024-10-11	2025-10-11
EMC-C-161	Spectrum analyser	FSV40	101258	Rohde & Schwarz	2025-07-11	2026-07-11
EMC-C-068	Broadband horn antenna	BBHA 9170	9170-305	Schwarzbeck	2023-06-18	2028-06-18
EMC-C-323	Signal conditioning unit	SCU18F	100986	Rohde & Schwarz	2024-10-11	2025-10-11

8 List of Figures

Figure 1: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, L, Mode 1	13
Figure 2: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, N, Mode 1	14
Figure 3: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, L, Mode 2	15
Figure 4: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, N, Mode 2	16
Figure 5: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, L, Mode 3	17
Figure 6: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, N, Mode 3	18
Figure 7: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, L, Mode 4	19
Figure 8: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, N, Mode 4	20
Figure 9: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Horizontal polarization, Mode 1	23
Figure 10: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Vertical polarization, Mode 1	24
Figure 11: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Horizontal polarization, Mode 2	25
Figure 12: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Vertical polarization, Mode 2	26
Figure 13: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Horizontal polarization, Mode 3	27
Figure 14: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Vertical polarization, Mode 3	28
Figure 15: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Horizontal polarization, Mode 4	29
Figure 16: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Vertical polarization, Mode 4	30
Figure 17: Spectral Diagrams, Radiated Emission, 1 GHz – 18 GHz, Horizontal polarization, Mode 1	32
Figure 18: Spectral Diagrams, Radiated Emission, 1 GHz – 18 GHz, Vertical polarization, Mode 1	33
Figure 19: Spectral Diagrams, Radiated Emission, 1 GHz – 18 GHz, Horizontal polarization, Mode 2	34
Figure 20: Spectral Diagrams, Radiated Emission, 1 GHz – 18 GHz, Vertical polarization, Mode 2	35
Figure 21: Spectral Diagrams, Radiated Emission, 1 GHz – 18 GHz, Horizontal polarization, Mode 3	36
Figure 22: Spectral Diagrams, Radiated Emission, 1 GHz – 18 GHz, Vertical polarization, Mode 3	37
Figure 23: Spectral Diagrams, Radiated Emission, 1 GHz – 18 GHz, Horizontal polarization, Mode 4	38
Figure 24: Spectral Diagrams, Radiated Emission, 1 GHz – 18 GHz, Vertical polarization, Mode 4	39

End of test report