

<b>Prüfbericht-Nr.:</b> <i>Test report no.:</i>	<b>CN254AH7 001</b>	<b>Auftrags-Nr.:</b> <i>Order no.:</i>	<b>326067061</b>	<b>Seite 1 von 41</b> <i>Page 1 of 41</i>
<b>Kunden-Referenz-Nr.:</b> <i>Client reference no.:</i>	<b>1288983</b>	<b>Auftragsdatum:</b> <i>Order date:</i>	<b>2024-12-05</b>	
<b>Auftraggeber:</b> <i>Client:</i>	<b>IKEA of Sweden AB</b> Box 702, SE-343 81 Älmhult, Sweden			
<b>Prüfgegenstand:</b> <i>Test item:</i>	<b>Self-ballasted LED lamps</b>			
<b>Bezeichnung / Typ-Nr.:</b> <i>Identification / Type no.:</i>	<b>LED2406G4NA</b>			
<b>Auftrags-Inhalt:</b> <i>Order content:</i>	<b>TÜV Rheinland EMC service</b>			
<b>Prüfgrundlage:</b> <i>Test specification:</i>	<b>FCC 47 CFR Part 15, Subpart B:2023 Class B</b> <b>ICES-005:2018</b>			
<b>Wareneingangsdatum:</b> <i>Date of sample receipt:</i>	<b>2024-12-27</b>	Refer to the EUT photos file		
<b>Prüfmuster-Nr.:</b> <i>Test sample no.:</i>	<b>A003898107-002</b>			
<b>Prüfzeitraum:</b> <i>Testing period:</i>	<b>Refer to test report</b>			
<b>Ort der Prüfung:</b> <i>Place of testing:</i>	<b>Refer to clause 1.1</b>			
<b>Prüflaboratorium:</b> <i>Testing laboratory:</i>	<b>TÜV Rheinland (Shanghai) Co., Ltd.</b>			
<b>Prüfergebnis*:</b> <i>Test result*:</i>	<b>Pass</b>			
<b>geprüft von:</b> <i>tested by:</i>	<b>genehmigt von:</b> <i>authorized by:</i>			
<b>Datum:</b> <i>Date:</i>	<b>Ausstellungsdatum:</b> <i>Issue date:</i>			
<b>Stellung / Position:</b>	<b>Stellung / Position:</b>			
<b>Sonstiges /</b> <i>Other:</i>	FCC ID: FHO-LED2406G4NA Test Firm Name: TÜV Rheinland (Shanghai) Co., Ltd. Designation Number: CN1396 Test Firm Registration Number: 930979			
<b>Zustand des Prüfgegenstandes bei Anlieferung:</b> <i>Condition of the test item at delivery:</i>	<b>Prüfmuster vollständig und unbeschädigt</b> <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			
<b>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.</b> <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>				

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**Anmerkungen**  
Remarks

- |   |  |
|---|--|
| 1 | <p>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.<br/>Detaillierte Informationen bezüglich Prüfbedingungen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden.</p> <p><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></p>   |
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| 3 | <p>Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben.<br/>Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt.</p> <p><i>Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report.<br/>Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</i></p>  |
| 4 | <p>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.</p> <p><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></p>   |

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**Revision history of test report:**

<b>Report number</b>	<b>Issue date</b>	<b>Contents and reason for change if appropriate</b>
CN254AH7 001	2025-03-13	Initial release.

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# 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 self-ballasted LED lamps for lighting and similar use. For the further information, refer to the user's manual.

### 2.2 Ratings and System Details

Rated input	: AC 120 V, 60 Hz, 47 mA
Rated power	: 4.2 W
RF IC	: TLSR9268J

### 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.

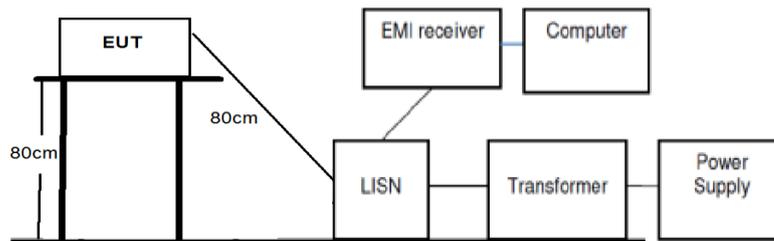
Refer to the related paragraph of this report.

The sequence of testing:

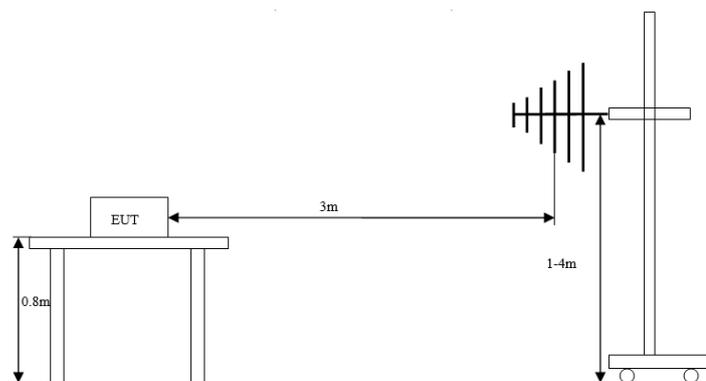
1. Conducted emission tests were performed on 2025-01-20.
2. Radiated emission tests were performed on 2025-01-18~2025-02-07.

#### 3.2 Equipment and cable arrangement

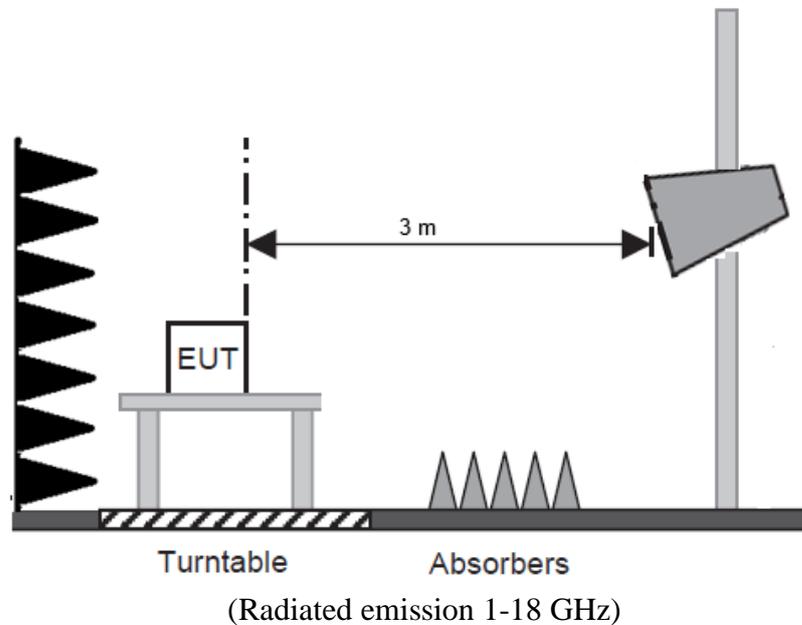
Block diagram for both conducted emission and radiated emission tests is as follows:



(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  $U_{\text{CISPR}}$  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

<b>Result:</b>	<b>Passed</b>
Date of testing	: 2025-01-20
Test procedure	: FCC 47 CFR Part 15, Subpart B:2023, 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 $\mu$ V (decrease with the logarithm of frequency); 0.5 – 5 MHz, 56 dB $\mu$ V; 5 – 30 MHz, 60 dB $\mu$ V Average limit: 0.15 – 0.5 MHz, 56 to 46 dB $\mu$ V (decrease with the logarithm of frequency); 0.5 – 5 MHz, 46 dB $\mu$ V; 5 – 30 MHz, 50 dB $\mu$ 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: 22.0 °C; Relative humidity: 45.0 %
Expanded measurement uncertainty ( $k=2$ )	: 2.33 dB The minimum margin to the limit is 11.56 dB at 1.617000 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.

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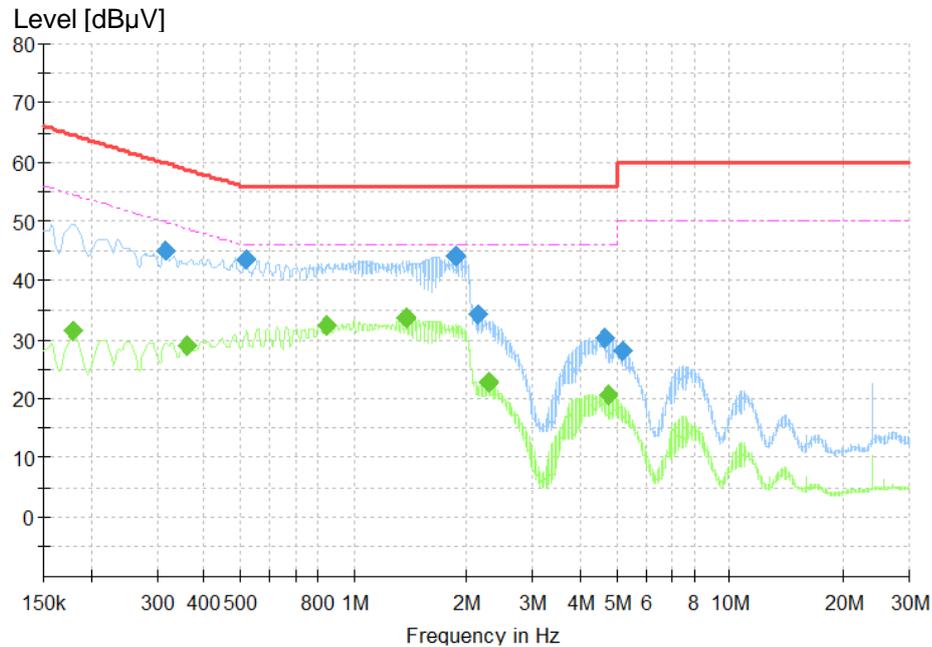
The following figures and tables were those measured by an automatic measuring system. Both quasi-peak and average measurements were performed. In the following spectral diagram, “♦” means Quasi-Peak Value and “◆” means Average Value results.

Notes on following tables of conducted emission results and conversions:

Level (dB $\mu$ 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)

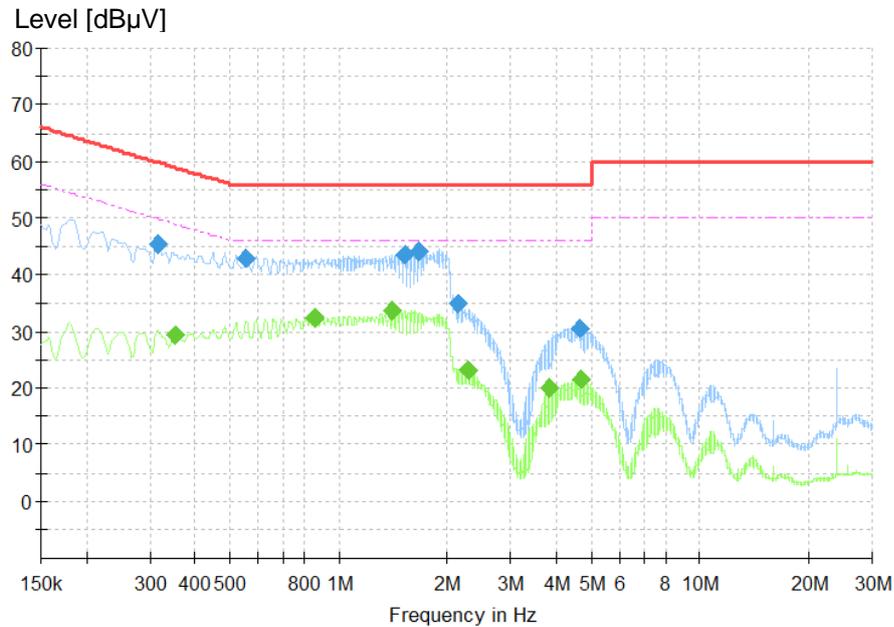
Margin: Limit (dB $\mu$ V) - Level (dB $\mu$ V)

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

**Final Quasi-peak measurement result:**

Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.314250	45.16	59.86	14.70	1000.0	9.000	L1	10.3
0.519000	43.54	56.00	12.46	1000.0	9.000	L1	10.3
1.860000	44.05	56.00	11.95	1000.0	9.000	L1	10.1
2.136750	34.31	56.00	21.69	1000.0	9.000	L1	10.1
4.652250	30.13	56.00	25.87	1000.0	9.000	L1	10.3
5.160750	28.04	60.00	31.96	1000.0	9.000	L1	10.4

**Final Average measurement result:**

Frequency (MHz)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.179250	31.51	54.52	23.01	1000.0	9.000	L1	10.3
0.361500	29.08	48.69	19.61	1000.0	9.000	L1	10.3
0.852000	32.48	46.00	13.52	1000.0	9.000	L1	10.5
1.378500	33.47	46.00	12.53	1000.0	9.000	L1	10.4
2.274000	22.74	46.00	23.26	1000.0	9.000	L1	10.1
4.726500	20.77	46.00	25.23	1000.0	9.000	L1	10.3

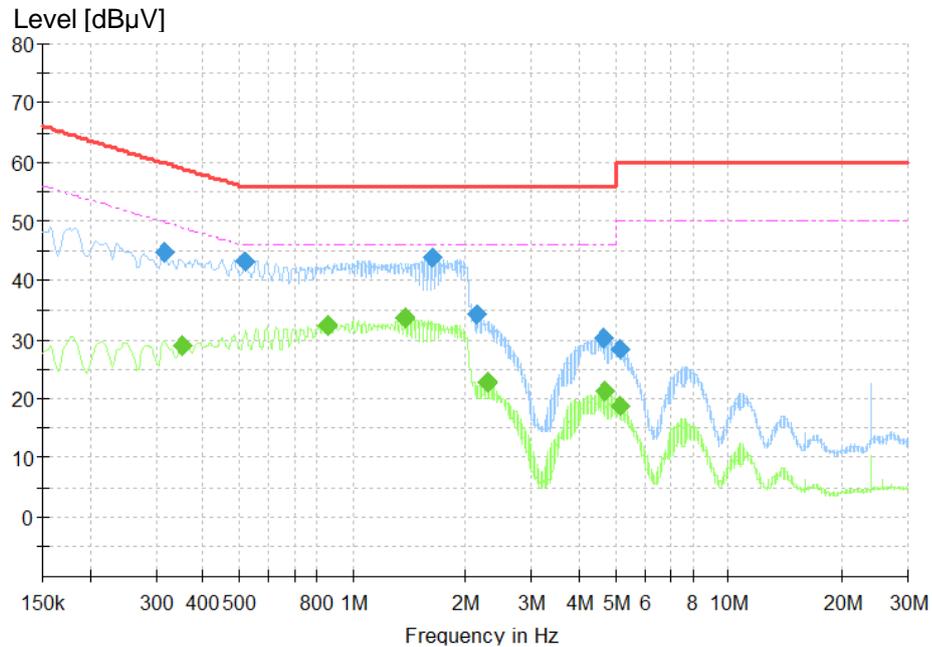
**Figure 2: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, N, Mode 1**


Final Quasi-peak measurement result:

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.314250	45.35	59.86	14.51	1000.0	9.000	N	10.5
0.552750	42.90	56.00	13.10	1000.0	9.000	N	10.3
1.515750	43.61	56.00	12.39	1000.0	9.000	N	10.4
1.673250	44.19	56.00	11.81	1000.0	9.000	N	10.5
2.136750	34.80	56.00	21.20	1000.0	9.000	N	10.5
4.616250	30.39	56.00	25.61	1000.0	9.000	N	10.7

Final Average measurement result:

Frequency (MHz)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.352500	29.28	48.90	19.62	1000.0	9.000	N	10.4
0.858750	32.28	46.00	13.72	1000.0	9.000	N	10.4
1.412250	33.57	46.00	12.43	1000.0	9.000	N	10.4
2.274000	23.06	46.00	22.94	1000.0	9.000	N	10.5
3.828750	20.03	46.00	25.97	1000.0	9.000	N	10.7
4.688250	21.50	46.00	24.50	1000.0	9.000	N	10.7

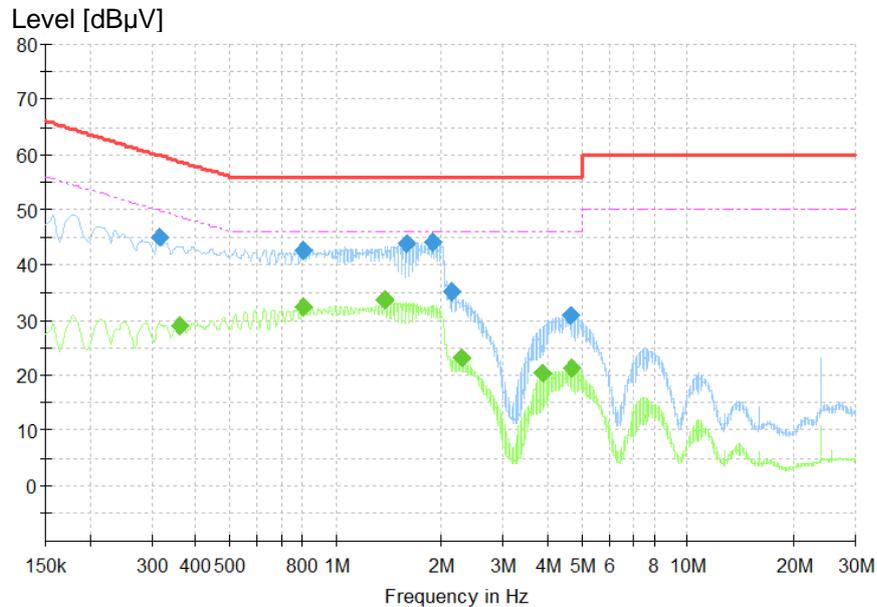
**Figure 3: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, L, Mode 2**


Final Quasi-peak measurement result:

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.314250	44.71	59.86	15.15	1000.0	9.000	L1	10.3
0.519000	43.24	56.00	12.76	1000.0	9.000	L1	10.3
1.621500	43.68	56.00	12.32	1000.0	9.000	L1	10.3
2.134500	34.37	56.00	21.63	1000.0	9.000	L1	10.1
4.650000	30.25	56.00	25.75	1000.0	9.000	L1	10.3
5.133750	28.30	60.00	31.70	1000.0	9.000	L1	10.3

Final Average measurement result:

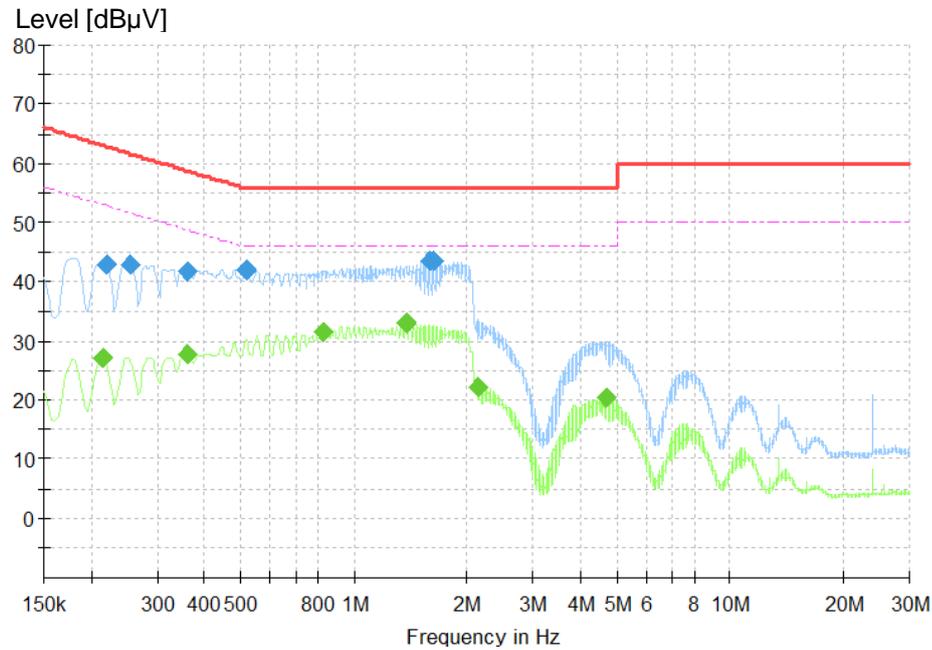
Frequency (MHz)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.352500	28.84	48.90	20.06	1000.0	9.000	L1	10.3
0.861000	32.36	46.00	13.64	1000.0	9.000	L1	10.5
1.376250	33.57	46.00	12.43	1000.0	9.000	L1	10.4
2.274000	22.65	46.00	23.35	1000.0	9.000	L1	10.1
4.686000	21.30	46.00	24.70	1000.0	9.000	L1	10.3
5.158500	18.85	50.00	31.15	1000.0	9.000	L1	10.4

**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)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.314250	45.16	59.86	14.70	1000.0	9.000	N	10.5
0.809250	42.64	56.00	13.36	1000.0	9.000	N	10.4
1.601250	43.90	56.00	12.10	1000.0	9.000	N	10.5
1.893750	44.17	56.00	11.83	1000.0	9.000	N	10.5
2.134500	35.06	56.00	20.94	1000.0	9.000	N	10.5
4.647750	30.68	56.00	25.32	1000.0	9.000	N	10.7

**Final Average measurement result:**

Frequency (MHz)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.361500	28.98	48.69	19.71	1000.0	9.000	N	10.4
0.813750	32.46	46.00	13.54	1000.0	9.000	N	10.4
1.376250	33.47	46.00	12.53	1000.0	9.000	N	10.4
2.271750	23.03	46.00	22.97	1000.0	9.000	N	10.5
3.862500	20.37	46.00	25.63	1000.0	9.000	N	10.7
4.683750	21.35	46.00	24.65	1000.0	9.000	N	10.7

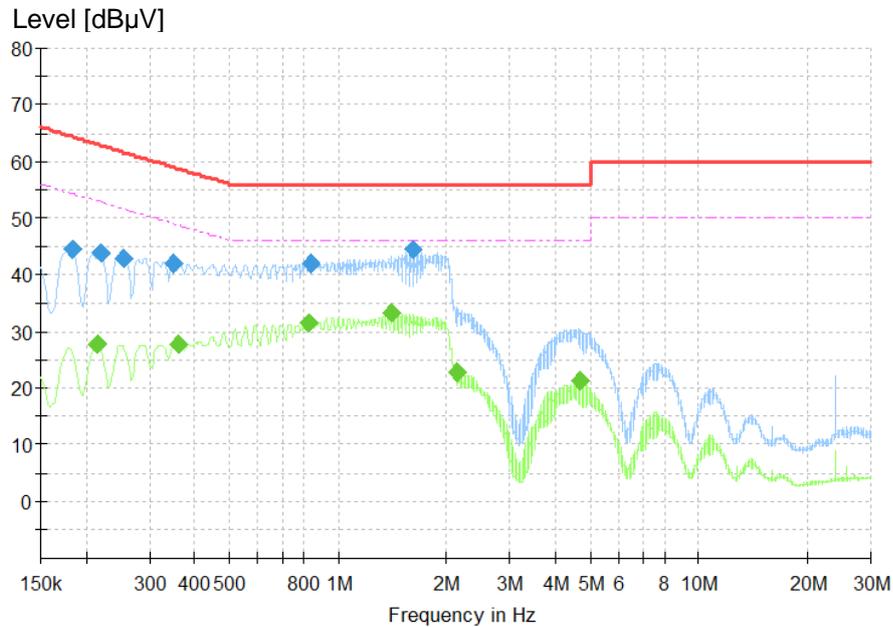
**Figure 5: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, L, Mode 3**


Final Quasi-peak measurement result:

Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.219750	43.01	62.83	19.82	1000.0	9.000	L1	10.3
0.255750	42.89	61.57	18.68	1000.0	9.000	L1	10.3
0.361500	41.63	58.69	17.07	1000.0	9.000	L1	10.3
0.516750	42.11	56.00	13.89	1000.0	9.000	L1	10.3
1.594500	43.40	56.00	12.60	1000.0	9.000	L1	10.3
1.630500	43.65	56.00	12.35	1000.0	9.000	L1	10.3

Final Average measurement result:

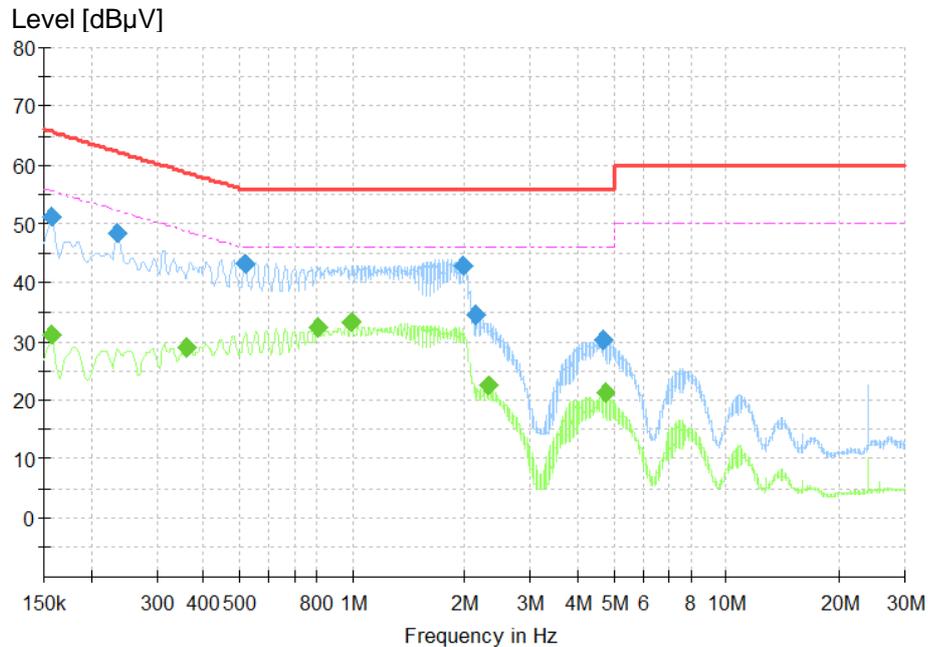
Frequency (MHz)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.215250	26.99	53.00	26.01	1000.0	9.000	L1	10.3
0.361500	27.58	48.69	21.11	1000.0	9.000	L1	10.3
0.829500	31.40	46.00	14.60	1000.0	9.000	L1	10.5
1.371750	33.01	46.00	12.99	1000.0	9.000	L1	10.4
2.125500	22.10	46.00	23.90	1000.0	9.000	L1	10.1
4.668000	20.28	46.00	25.72	1000.0	9.000	L1	10.3

**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)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.183750	44.37	64.31	19.94	1000.0	9.000	N	10.6
0.219750	43.80	62.83	19.03	1000.0	9.000	N	10.7
0.255750	42.96	61.57	18.61	1000.0	9.000	N	10.6
0.348000	41.94	59.01	17.07	1000.0	9.000	N	10.4
0.834000	41.83	56.00	14.17	1000.0	9.000	N	10.4
1.617000	44.44	56.00	11.56	1000.0	9.000	N	10.5

**Final Average measurement result:**

Frequency (MHz)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.215250	27.75	53.00	25.25	1000.0	9.000	N	10.8
0.361500	27.88	48.69	20.81	1000.0	9.000	N	10.4
0.829500	31.59	46.00	14.41	1000.0	9.000	N	10.4
1.410000	33.31	46.00	12.69	1000.0	9.000	N	10.4
2.127750	22.71	46.00	23.29	1000.0	9.000	N	10.5
4.677000	21.23	46.00	24.77	1000.0	9.000	N	10.7

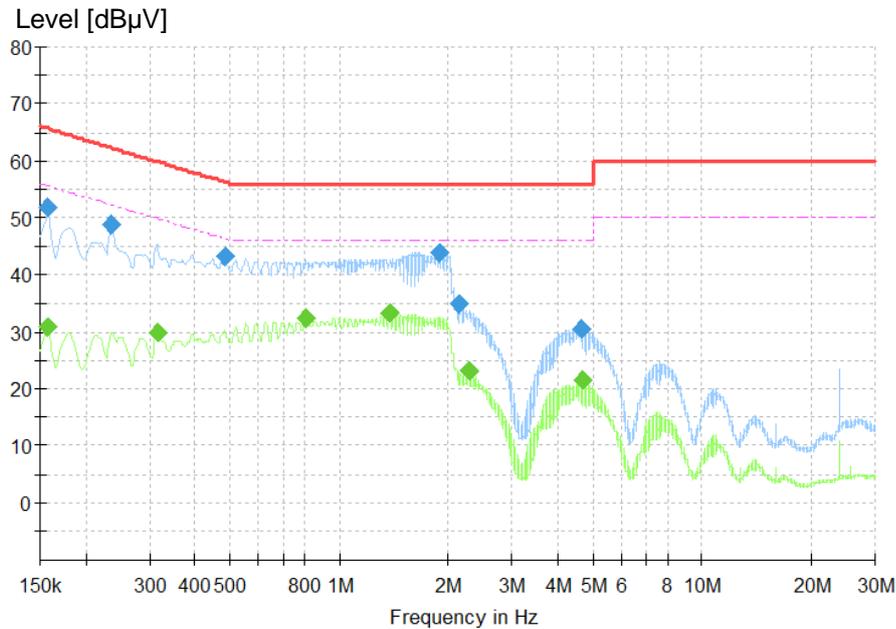
**Figure 7: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, L, Mode 4**


Final Quasi-peak measurement result:

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.156750	51.38	65.63	14.26	1000.0	9.000	L1	10.3
0.235500	48.42	62.25	13.83	1000.0	9.000	L1	10.3
0.516750	43.35	56.00	12.65	1000.0	9.000	L1	10.3
1.968000	43.01	56.00	12.99	1000.0	9.000	L1	10.1
2.132250	34.44	56.00	21.56	1000.0	9.000	L1	10.1
4.679250	30.08	56.00	25.92	1000.0	9.000	L1	10.3

Final Average measurement result:

Frequency (MHz)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.156750	31.20	55.63	24.43	1000.0	9.000	L1	10.3
0.361500	28.82	48.69	19.88	1000.0	9.000	L1	10.3
0.813750	32.39	46.00	13.61	1000.0	9.000	L1	10.5
0.998250	33.22	46.00	12.78	1000.0	9.000	L1	10.7
2.305500	22.57	46.00	23.43	1000.0	9.000	L1	10.1
4.715250	21.10	46.00	24.90	1000.0	9.000	L1	10.3

**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)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.156750	51.72	65.63	13.91	1000.0	9.000	N	10.3
0.235500	48.61	62.25	13.64	1000.0	9.000	N	10.7
0.483000	43.32	56.29	12.96	1000.0	9.000	N	10.2
1.893750	43.94	56.00	12.06	1000.0	9.000	N	10.5
2.134500	34.92	56.00	21.08	1000.0	9.000	N	10.5
4.647750	30.48	56.00	25.52	1000.0	9.000	N	10.7

Final Average measurement result:

Frequency (MHz)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.156750	30.85	55.63	24.79	1000.0	9.000	N	10.3
0.314250	29.98	49.86	19.88	1000.0	9.000	N	10.5
0.813750	32.24	46.00	13.76	1000.0	9.000	N	10.4
1.376250	33.28	46.00	12.72	1000.0	9.000	N	10.4
2.271750	23.20	46.00	22.80	1000.0	9.000	N	10.5
4.683750	21.47	46.00	24.53	1000.0	9.000	N	10.7

## 5.2 Emission in the Frequency Range above 30 MHz

### 5.2.1 Radiated emission (30-1000 MHz)

<b>Result:</b>	<b>Passed</b>
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Date of testing	: 2025-02-07
Test procedure	: FCC 47 CFR Part 15, Subpart B:2023, ICES-005:2018, ANSI C63.4-2014 and CISPR 16-2-3
Product classification	: Class B
Frequency range	: 30 – 1000 MHz
Limits	: Quasi-peak limits (3 m distance): 30 – 88 MHz, 40 dB $\mu$ V/m; 88 – 216 MHz, 43.5 dB $\mu$ V/m; 216 – 1000 MHz, 46 dB $\mu$ V/m (see Note 1)
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: 22.5 °C; Relative humidity: 48.3 %
Expanded measurement uncertainty ( $k=2$ )	: 5.40 dB The minimum margin to the limit is 6.9 dB at 17963.875000 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.

*Note 1: The class B limits of ICES-005:2018 is stricter than those FCC 47 CFR Part 15, Subpart B:2023 for 3 m test distance. Therefore, the former limits are used in following figures and tables.*

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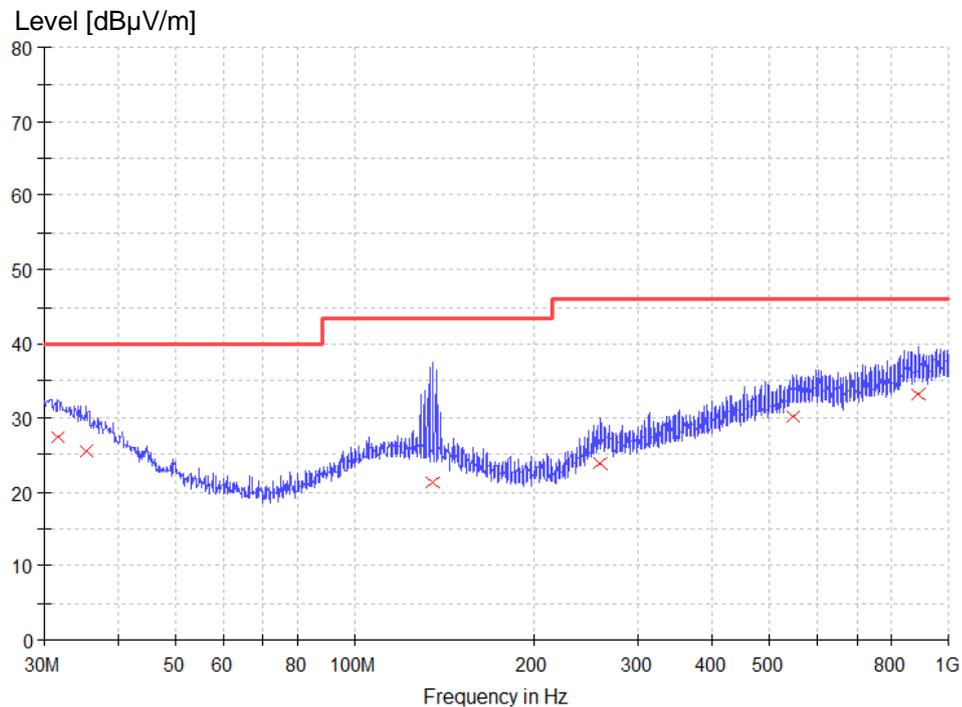
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Notes on following tables of radiated emission results and conversions:

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

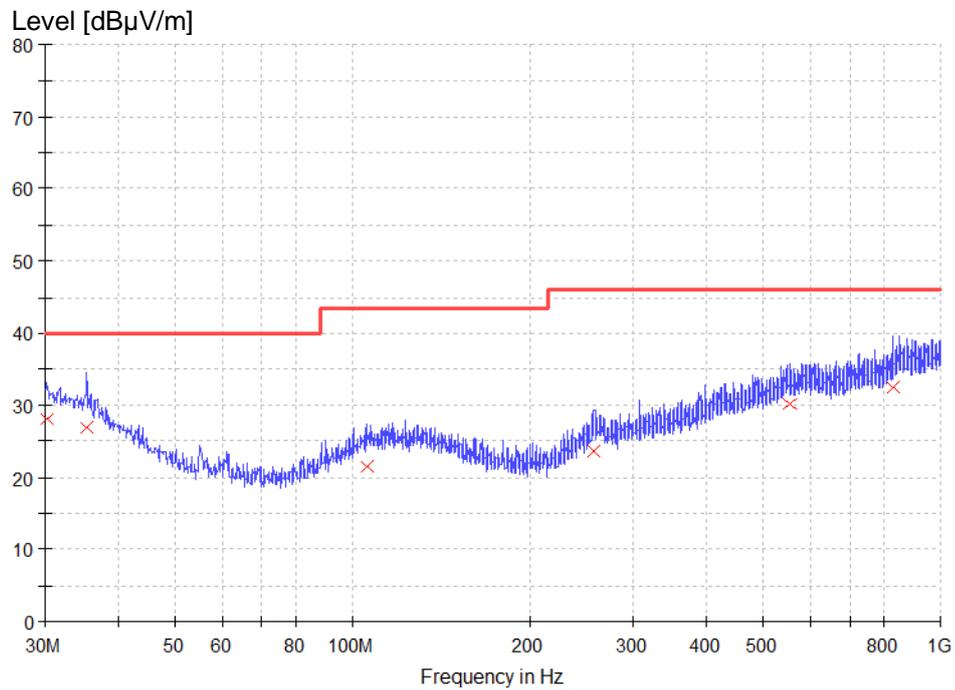
Corr. (dB): correction factor including: antenna factor, cable loss, and gain of pre-amplifier (if used)

Margin: Limit (dB $\mu$ V/m) - QuasiPeak (dB $\mu$ V/m)

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


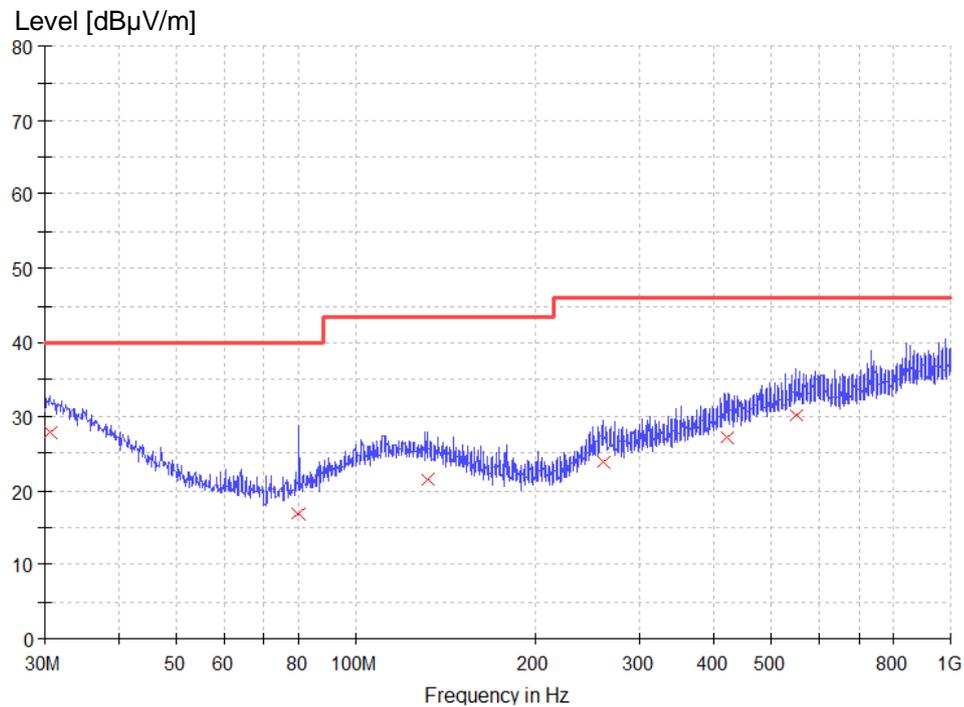
Final quasi-peak measurement results:

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
31.697500	27.3	1000.0	120.000	100.0	H	180.0	24.0	12.7	40.0
35.335000	25.6	1000.0	120.000	100.0	H	180.0	22.3	14.4	40.0
135.487500	21.4	1000.0	120.000	100.0	H	180.0	18.4	22.1	43.5
259.526250	23.8	1000.0	120.000	100.0	H	180.0	20.7	22.2	46.0
547.252500	30.2	1000.0	120.000	100.0	H	180.0	26.6	15.8	46.0
890.390000	33.3	1000.0	120.000	100.0	H	180.0	28.7	12.7	46.0

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


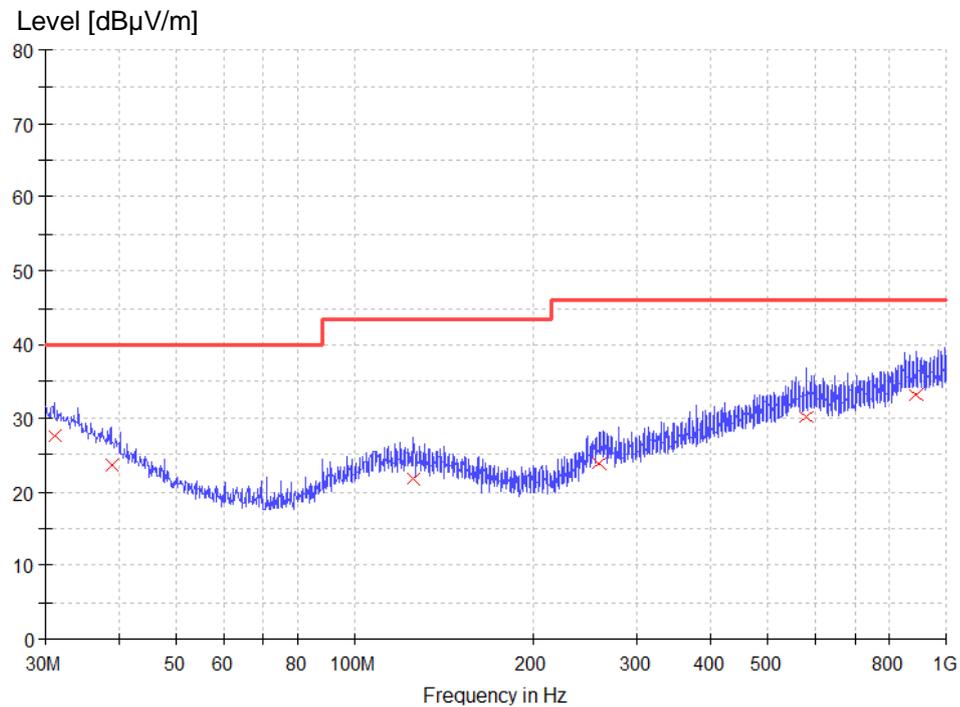
Final quasi-peak measurement results:

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
30.242500	28.0	1000.0	120.000	100.0	V	180.0	24.7	12.0	40.0
35.335000	26.8	1000.0	120.000	100.0	V	180.0	22.3	13.2	40.0
106.023750	21.5	1000.0	120.000	100.0	V	180.0	18.4	22.0	43.5
257.950000	23.6	1000.0	120.000	100.0	V	180.0	20.5	22.4	46.0
554.527500	30.3	1000.0	120.000	100.0	V	180.0	26.7	15.7	46.0
833.038750	32.6	1000.0	120.000	100.0	V	180.0	28.6	13.4	46.0

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


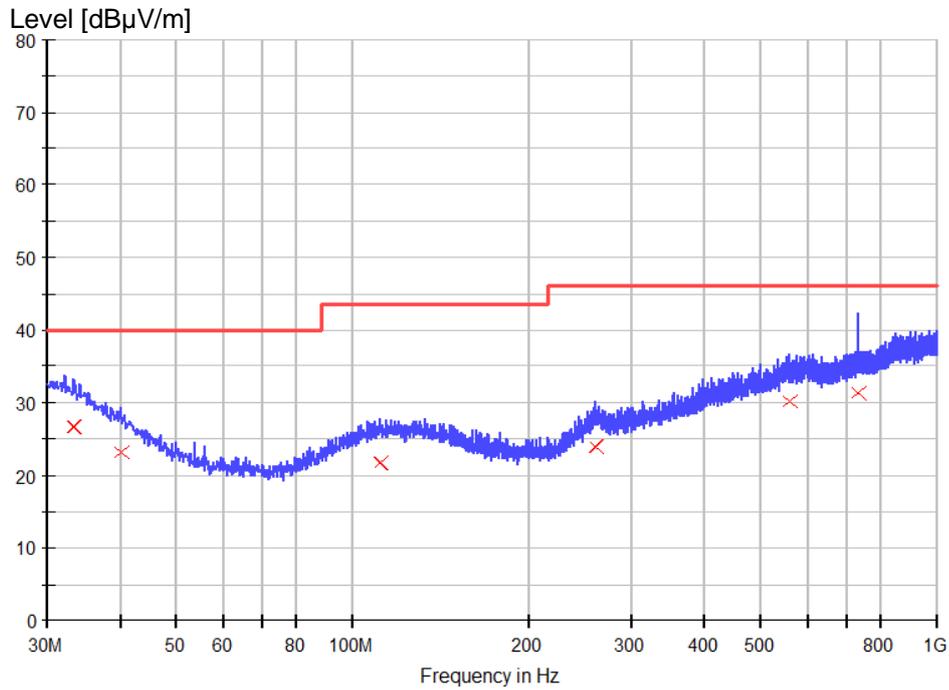
Final quasi-peak measurement results:

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
30.606250	27.9	1000.0	120.000	100.0	H	180.0	24.5	12.1	40.0
79.955000	16.9	1000.0	120.000	100.0	H	180.0	13.8	23.1	40.0
132.335000	21.6	1000.0	120.000	100.0	H	180.0	18.6	21.9	43.5
260.011250	23.9	1000.0	120.000	100.0	H	180.0	20.8	22.1	46.0
421.273750	27.2	1000.0	120.000	100.0	H	180.0	23.9	18.8	46.0
551.375000	30.2	1000.0	120.000	100.0	H	180.0	26.7	15.8	46.0

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


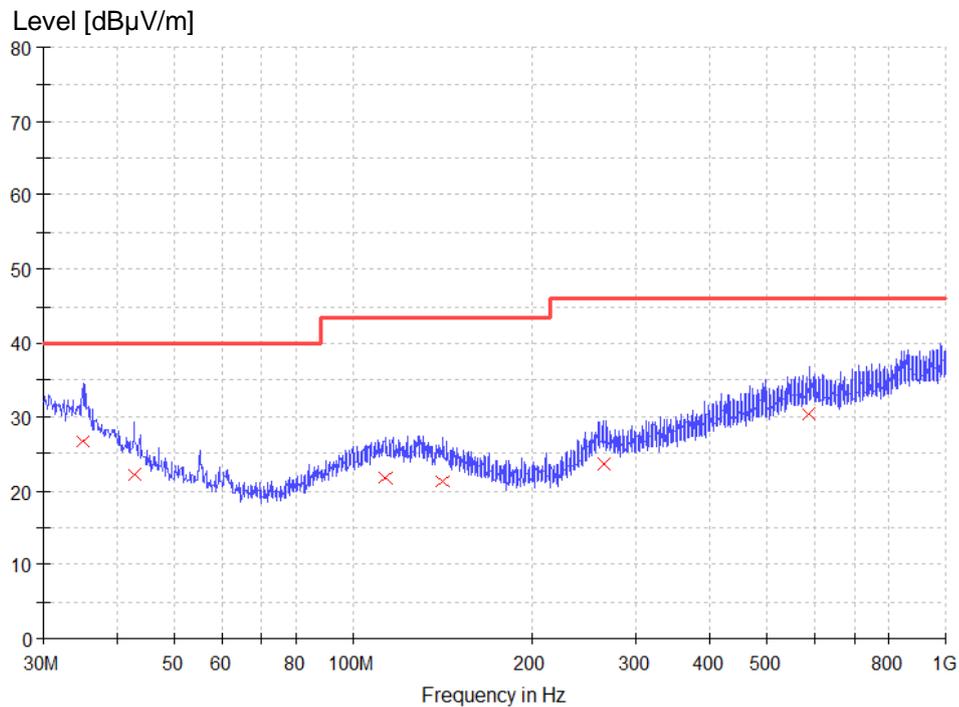
Final quasi-peak measurement results:

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
31.091250	27.7	1000.0	120.000	100.0	V	180.0	24.3	12.3	40.0
38.851250	23.7	1000.0	120.000	100.0	V	180.0	20.4	16.3	40.0
126.030000	21.7	1000.0	120.000	100.0	V	180.0	18.7	21.8	43.5
259.768750	23.8	1000.0	120.000	100.0	V	180.0	20.8	22.2	46.0
578.656250	30.2	1000.0	120.000	100.0	V	180.0	26.5	15.9	46.0
891.723750	33.3	1000.0	120.000	100.0	V	180.0	28.7	12.7	46.0

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


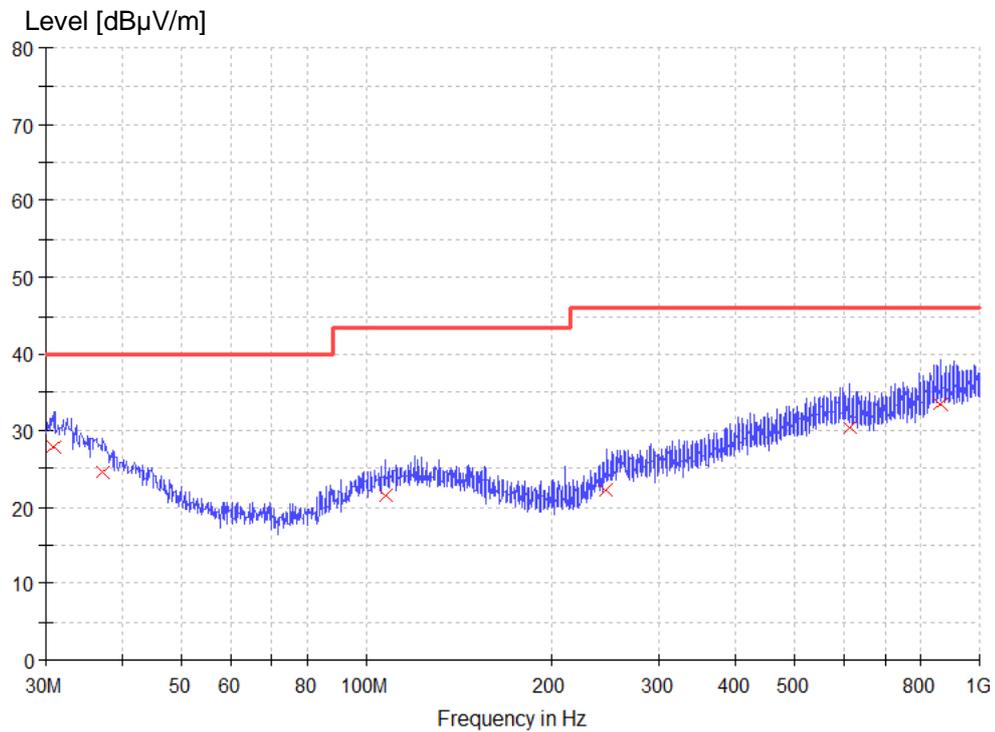
Final quasi-peak measurement results:

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
33.273750	26.6	1000.0	120.000	100.0	H	144.0	23.3	13.4	40.0
39.942500	23.1	1000.0	120.000	100.0	H	144.0	19.8	16.9	40.0
111.358750	21.7	1000.0	120.000	100.0	H	144.0	18.7	21.8	43.5
261.587500	23.9	1000.0	120.000	100.0	H	144.0	20.9	22.1	46.0
557.073750	30.2	1000.0	120.000	100.0	H	144.0	26.7	15.8	46.0
732.158750	31.4	1000.0	120.000	100.0	H	144.0	27.5	14.6	46.0

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


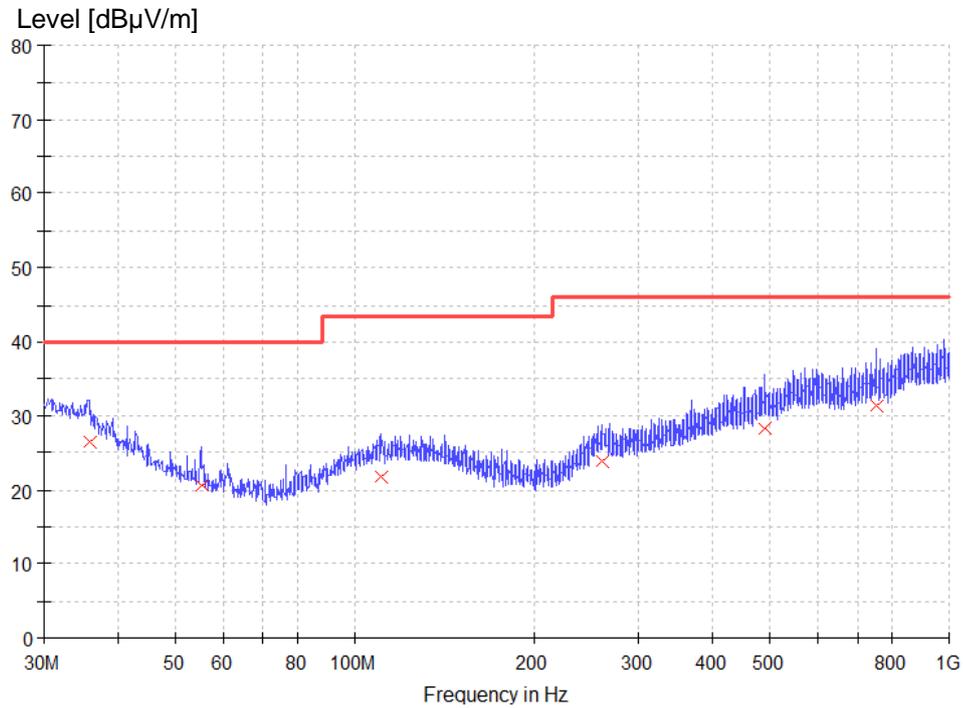
Final quasi-peak measurement results:

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
34.971250	26.6	1000.0	120.000	100.0	V	180.0	22.5	13.4	40.0
42.731250	22.1	1000.0	120.000	100.0	V	180.0	18.3	17.9	40.0
113.056250	21.8	1000.0	120.000	100.0	V	180.0	18.8	21.7	43.5
141.307500	21.3	1000.0	120.000	100.0	V	180.0	18.1	22.2	43.5
264.861250	23.7	1000.0	120.000	100.0	V	180.0	20.7	22.3	46.0
587.871250	30.4	1000.0	120.000	100.0	V	180.0	26.7	15.6	46.0

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


Final quasi-peak measurement results:

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
30.848750	27.7	1000.0	120.000	100.0	H	180.0	24.4	12.3	40.0
37.275000	24.6	1000.0	120.000	100.0	H	180.0	21.3	15.4	40.0
107.357500	21.5	1000.0	120.000	100.0	H	180.0	18.5	18.6	40.0
246.795000	22.2	1000.0	120.000	100.0	H	180.0	19.2	24.8	47.0
615.637500	30.5	1000.0	120.000	100.0	H	180.0	27.0	16.5	47.0
862.017500	33.4	1000.0	120.000	100.0	H	180.0	28.8	13.6	47.0

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


Final quasi-peak measurement results:

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
35.698750	26.4	1000.0	120.000	100.0	V	180.0	22.1	13.6	40.0
55.341250	20.6	1000.0	120.000	100.0	V	180.0	13.6	19.4	40.0
110.631250	21.7	1000.0	120.000	100.0	V	180.0	18.6	21.9	43.5
260.738750	23.8	1000.0	120.000	100.0	V	180.0	20.8	22.2	46.0
488.567500	28.4	1000.0	120.000	100.0	V	180.0	25.1	17.6	46.0
752.892500	31.4	1000.0	120.000	100.0	V	180.0	27.9	14.6	46.0

## 5.2.2 Radiated Emission (1-18 GHz)

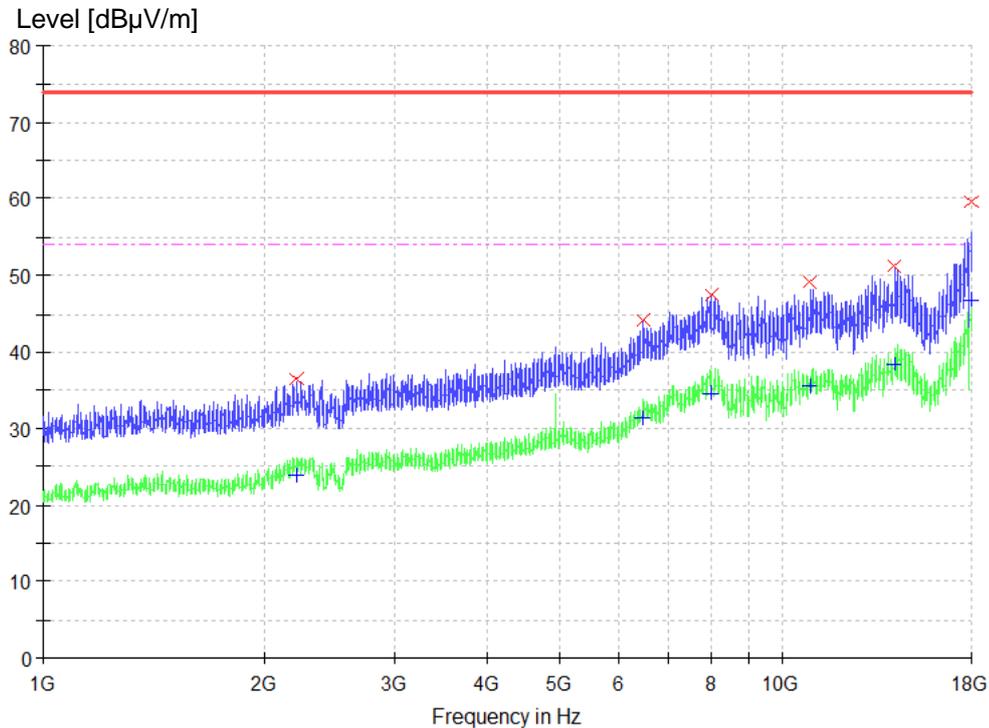
**Result:**
**Passed**

Date of testing	: 2025-01-18
Port	: Enclosure
Test procedure	: FCC 47 CFR Part 15, Subpart B:2023, ICES-005:2018, ANSI C63.4-2014 and CISPR 16-2-3
Product classification	: Class B
Limit	: Peak limits (3 m distance): 1 – 18 GHz, 74 dB $\mu$ V/m Average limits (3 m distance): 1 – 18 GHz, 54 dB $\mu$ V/m
Frequency range	: 1 – 18 GHz (see Note 2)
Kind of test site	: Absorber-lined semi-anechoic chamber
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: 22.5 °C; Relative humidity: 48.3 %
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 6.9 dB at 17964.406250 MHz. The margin is higher than expanded measurement uncertainty.

The radiated disturbance test was carried out in an absorber-lined semi-anechoic chamber. The test distance from the receiving antenna to the EUT is 3 m. The site voltage standing wave ratio ( $S_{VSWR}$ ) of the absorber-lined 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, the receiving antenna was kept aiming at the EUT and its height 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.

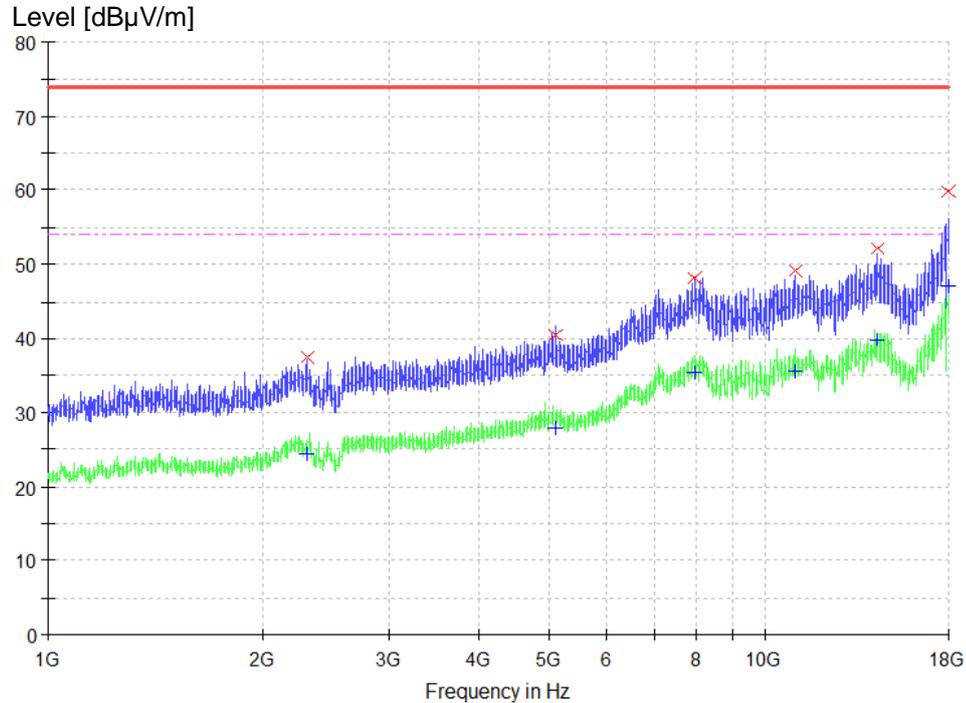
*Note 2: The highest frequency in the EUT is 2480 MHz. According to FCC Part 15 subpart B §15.33 (b) (1) and Table 3 of ICES-003:2020, the upper frequency for radiated emission measurement is 18 GHz.*

**Figure 17: Spectral Diagrams, Radiated Emission, 1 GHz – 18 GHz, Horizontal polarization on mode 1**

**Final peak measurement result:**

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
2208.593750	36.4	1000.0	1000.000	200.0	H	13.7	-15.7	37.6	74.0
6469.218750	44.1	1000.0	1000.000	100.0	H	29.0	-7.8	29.9	74.0
8040.125000	47.4	1000.0	1000.000	300.0	H	-151.9	-3.7	26.6	74.0
10916.312500	49.2	1000.0	1000.000	100.0	H	17.7	-2.1	24.9	74.0
14189.875000	51.2	1000.0	1000.000	400.0	H	64.5	1.4	22.9	74.0
17977.687500	59.7	1000.0	1000.000	100.0	H	-126.0	12.0	14.3	74.0

**Final average measurement result:**

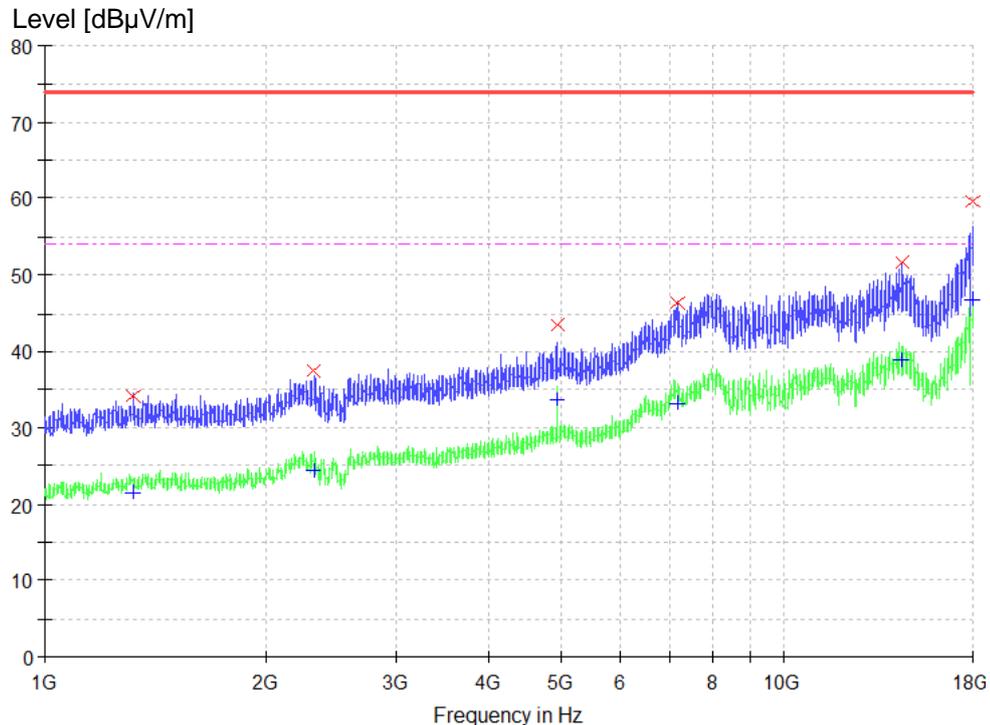
Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
2208.593750	23.9	1000.0	1000.000	200.0	H	13.7	-15.7	30.1	54.0
6469.218750	31.4	1000.0	1000.000	100.0	H	29.0	-7.8	22.6	54.0
8040.125000	34.6	1000.0	1000.000	300.0	H	-151.9	-3.7	19.4	54.0
10916.312500	35.6	1000.0	1000.000	100.0	H	17.7	-2.1	18.4	54.0
14189.875000	38.5	1000.0	1000.000	400.0	H	64.5	1.4	15.6	54.0
17977.687500	46.7	1000.0	1000.000	100.0	H	-126.0	12.0	7.3	54.0

**Figure 18: Spectral Diagrams, Radiated Emission, 1 GHz – 18 GHz, Vertical polarization on mode 1**

**Final peak measurement result:**

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
2300.500000	37.4	1000.0	1000.000	400.0	V	148.7	-15.8	36.6	74.0
5084.781250	40.6	1000.0	1000.000	100.0	V	-73.2	-11.0	33.5	74.0
7995.500000	48.1	1000.0	1000.000	200.0	V	-123.6	-3.5	25.9	74.0
11036.375000	49.0	1000.0	1000.000	300.0	V	-57.5	-2.3	25.0	74.0
14362.531250	52.1	1000.0	1000.000	100.0	V	-78.5	2.3	21.9	74.0
17974.500000	59.9	1000.0	1000.000	100.0	V	93.4	11.9	14.1	74.0

**Final average measurement result:**

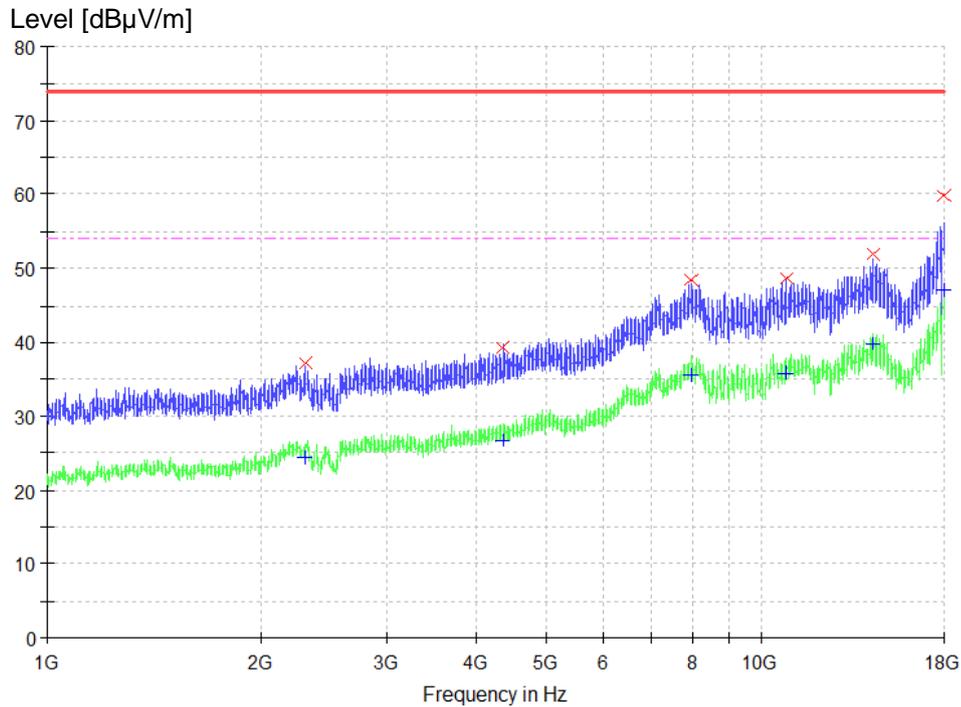
Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
2300.500000	24.3	1000.0	1000.000	400.0	V	148.7	-15.8	29.7	54.0
5084.781250	27.9	1000.0	1000.000	100.0	V	-73.2	-11.0	26.1	54.0
7995.500000	35.3	1000.0	1000.000	200.0	V	-123.6	-3.5	18.7	54.0
11036.375000	35.5	1000.0	1000.000	300.0	V	-57.5	-2.3	18.5	54.0
14362.531250	39.7	1000.0	1000.000	100.0	V	-78.5	2.3	14.3	54.0
17974.500000	47.0	1000.0	1000.000	100.0	V	93.4	11.9	7.1	54.0

**Figure 19: Spectral Diagrams, Radiated Emission, 1 GHz – 18 GHz, Horizontal polarization on mode 2**

**Final peak measurement result:**

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1317.156250	34.2	1000.0	1000.000	200.0	H	90.1	-18.9	39.8	74.0
2313.781250	37.3	1000.0	1000.000	400.0	H	-33.3	-15.8	36.7	74.0
4946.656250	43.6	1000.0	1000.000	100.0	H	157.4	-11.2	30.4	74.0
7161.968750	46.2	1000.0	1000.000	150.0	H	-135.0	-5.6	27.8	74.0
14401.843750	51.7	1000.0	1000.000	100.0	H	96.4	2.4	22.3	74.0
17952.187500	59.7	1000.0	1000.000	100.0	H	-92.7	11.5	14.4	74.0

**Final average measurement result:**

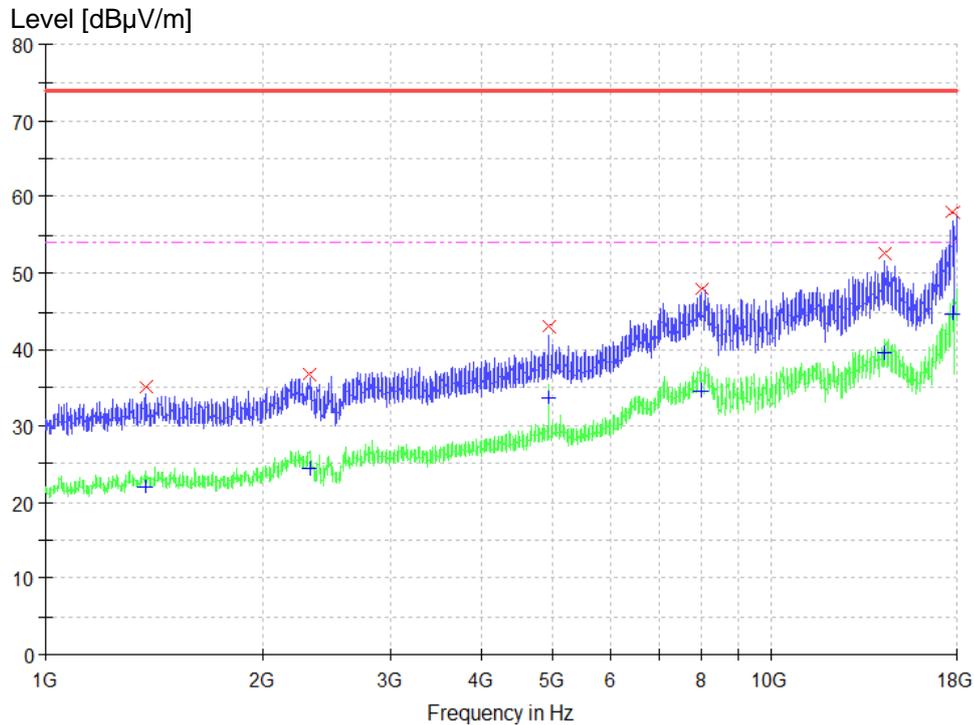
Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1317.156250	21.5	1000.0	1000.000	200.0	H	90.1	-18.9	32.6	54.0
2313.781250	24.4	1000.0	1000.000	400.0	H	-33.3	-15.8	29.7	54.0
4946.656250	33.7	1000.0	1000.000	100.0	H	157.4	-11.2	20.3	54.0
7161.968750	33.3	1000.0	1000.000	150.0	H	-135.0	-5.6	20.7	54.0
14401.843750	38.9	1000.0	1000.000	100.0	H	96.4	2.4	15.1	54.0
17952.187500	46.7	1000.0	1000.000	100.0	H	-92.7	11.5	7.3	54.0

**Figure 20: Spectral Diagrams, Radiated Emission, 1 GHz – 18 GHz, Vertical polarization on mode 2**

**Final peak measurement result:**

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
2305.812500	37.2	1000.0	1000.000	150.0	V	127.5	-15.8	36.8	74.0
4340.500000	39.3	1000.0	1000.000	100.0	V	0.7	-12.6	34.7	74.0
7983.812500	48.3	1000.0	1000.000	300.0	V	138.5	-3.6	25.7	74.0
10828.656250	48.6	1000.0	1000.000	200.0	V	59.8	-2.7	25.4	74.0
14362.000000	52.0	1000.0	1000.000	100.0	V	115.2	2.3	22.0	74.0
17963.875000	59.9	1000.0	1000.000	100.0	V	67.4	11.7	14.1	74.0

**Final average measurement result:**

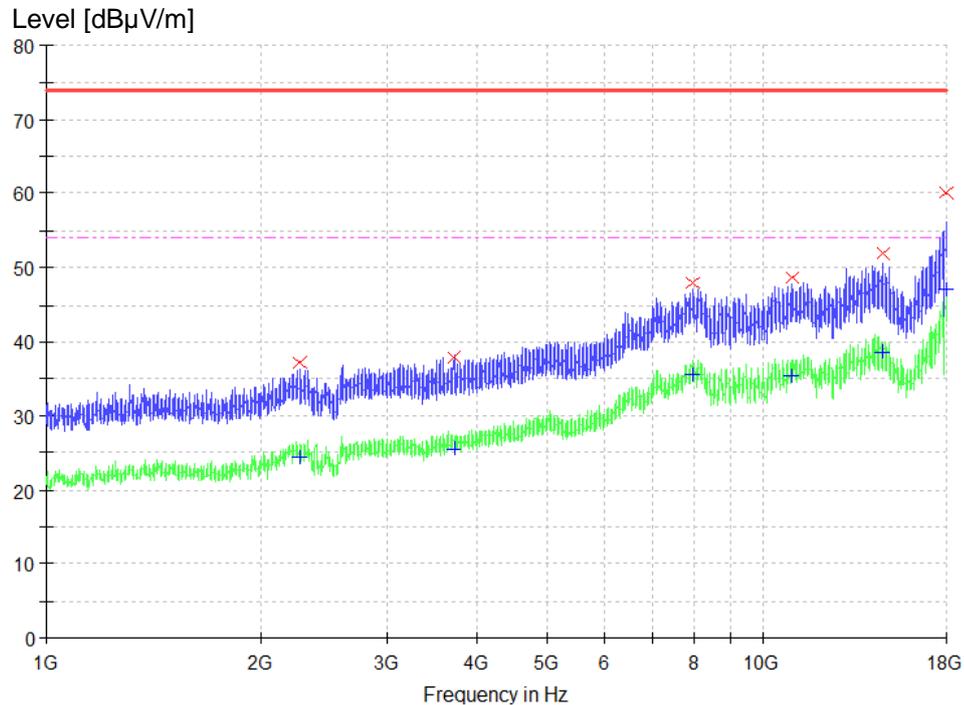
Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
2305.812500	24.4	1000.0	1000.000	150.0	V	127.5	-15.8	29.6	54.0
4340.500000	26.7	1000.0	1000.000	100.0	V	0.7	-12.6	27.3	54.0
7983.812500	35.6	1000.0	1000.000	300.0	V	138.5	-3.6	18.4	54.0
10828.656250	35.8	1000.0	1000.000	200.0	V	59.8	-2.7	18.2	54.0
14362.000000	39.7	1000.0	1000.000	100.0	V	115.2	2.3	14.3	54.0
17963.875000	47.1	1000.0	1000.000	100.0	V	67.4	11.7	6.9	54.0

**Figure 21: Spectral Diagrams, Radiated Emission, 1 GHz – 18 GHz, Horizontal polarization on mode 3**

**Final peak measurement result:**

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1372.406250	35.1	1000.0	1000.000	200.0	H	69.3	-18.7	38.9	74.0
2319.093750	36.8	1000.0	1000.000	100.0	H	120.0	-15.8	37.2	74.0
4946.656250	43.0	1000.0	1000.000	300.0	H	-145.6	-11.2	31.0	74.0
8005.062500	48.0	1000.0	1000.000	100.0	H	-137.7	-3.5	26.1	74.0
14366.781250	52.6	1000.0	1000.000	100.0	H	-43.8	2.3	21.4	74.0
17817.781250	58.1	1000.0	1000.000	200.0	H	-158.7	8.9	15.9	74.0

**Final average measurement result:**

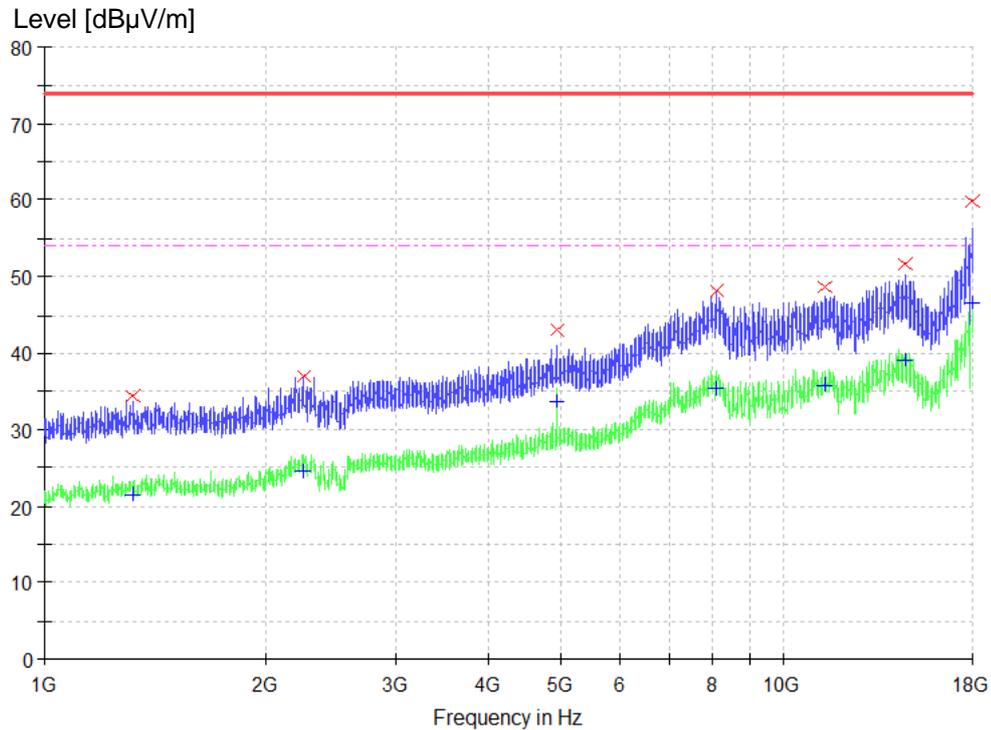
Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1372.406250	21.9	1000.0	1000.000	200.0	H	69.3	-18.7	32.1	54.0
2319.093750	24.3	1000.0	1000.000	100.0	H	120.0	-15.8	29.8	54.0
4946.656250	33.7	1000.0	1000.000	300.0	H	-145.6	-11.2	20.3	54.0
8005.062500	34.7	1000.0	1000.000	100.0	H	-137.7	-3.5	19.3	54.0
14366.781250	39.6	1000.0	1000.000	100.0	H	-43.8	2.3	14.4	54.0
17817.781250	44.7	1000.0	1000.000	200.0	H	-158.7	8.9	9.3	54.0

**Figure 22: Spectral Diagrams, Radiated Emission, 1 GHz – 18 GHz, Vertical polarization on mode 3**

**Final peak measurement result:**

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
2251.625000	37.2	1000.0	1000.000	100.0	V	146.9	-15.6	36.8	74.0
3696.625000	38.0	1000.0	1000.000	200.0	V	-4.7	-13.9	36.0	74.0
7978.500000	48.0	1000.0	1000.000	300.0	V	-133.0	-3.6	26.0	74.0
10930.125000	48.7	1000.0	1000.000	100.0	V	-174.4	-2.1	25.3	74.0
14750.343750	52.0	1000.0	1000.000	400.0	V	61.1	1.8	22.0	74.0
17964.406250	60.1	1000.0	1000.000	200.0	V	-71.0	11.7	13.9	74.0

**Final average measurement result:**

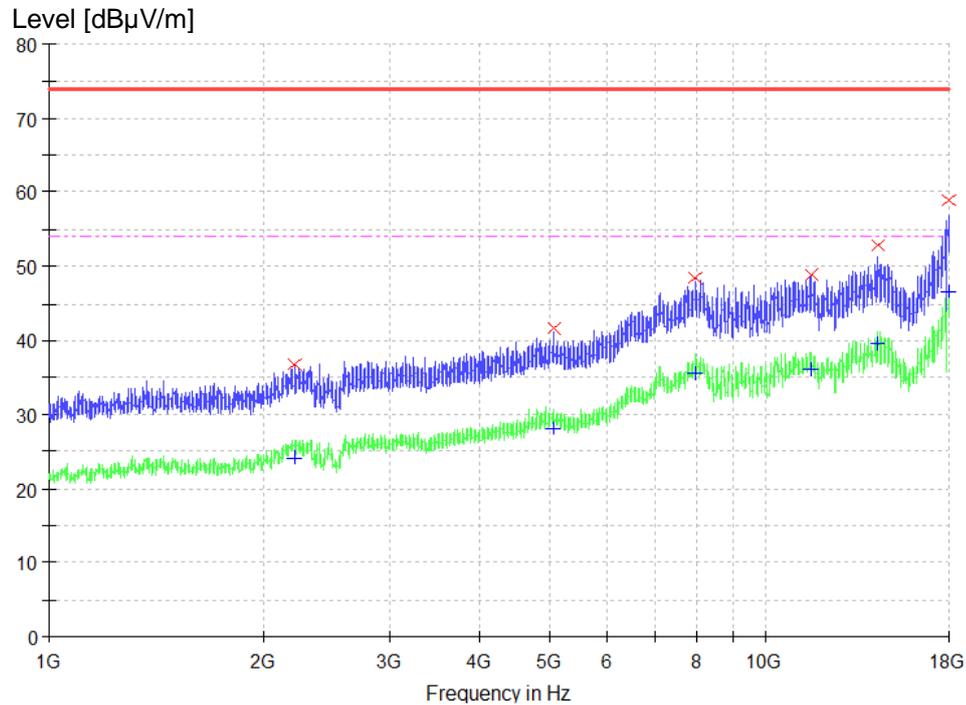
Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
2251.625000	24.3	1000.0	1000.000	100.0	H	146.9	-15.6	29.7	54.0
3696.625000	25.6	1000.0	1000.000	200.0	H	-4.7	-13.9	28.4	54.0
7978.500000	35.6	1000.0	1000.000	300.0	H	-133.0	-3.6	18.4	54.0
10930.125000	35.2	1000.0	1000.000	100.0	H	-174.4	-2.1	18.8	54.0
14750.343750	38.6	1000.0	1000.000	400.0	H	61.1	1.8	15.4	54.0
17964.406250	47.1	1000.0	1000.000	200.0	H	-71.0	11.7	6.9	54.0

**Figure 23: Spectral Diagrams, Radiated Emission, 1 GHz – 18 GHz, Horizontal polarization on mode 4**

**Final peak measurement result:**

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1314.500000	34.4	1000.0	1000.000	200.0	H	70.9	-18.9	39.7	74.0
2243.125000	37.0	1000.0	1000.000	300.0	H	163.4	-15.6	37.0	74.0
4946.656250	43.0	1000.0	1000.000	100.0	H	-18.4	-11.2	31.0	74.0
8127.250000	48.1	1000.0	1000.000	400.0	H	-174.0	-4.2	25.9	74.0
11401.343750	48.8	1000.0	1000.000	100.0	H	31.8	-2.5	25.3	74.0
14577.687500	51.7	1000.0	1000.000	200.0	H	175.8	2.3	22.4	74.0
17974.500000	59.9	1000.0	1000.000	100.0	H	-56.2	11.9	14.1	74.0

**Final average measurement result:**

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1314.500000	21.6	1000.0	1000.000	200.0	H	70.9	-18.9	32.5	54.0
2243.125000	24.5	1000.0	1000.000	300.0	H	163.4	-15.6	29.5	54.0
4946.656250	33.6	1000.0	1000.000	100.0	H	-18.4	-11.2	20.4	54.0
8127.250000	35.4	1000.0	1000.000	400.0	H	-174.0	-4.2	18.6	54.0
11401.343750	35.9	1000.0	1000.000	100.0	H	31.8	-2.5	18.1	54.0
14577.687500	39.2	1000.0	1000.000	200.0	H	175.8	2.3	14.9	54.0
17974.500000	46.7	1000.0	1000.000	100.0	H	-56.2	11.9	7.3	54.0

**Figure 24: Spectral Diagrams, Radiated Emission, 1 GHz – 18 GHz, Vertical polarization on mode 4**

**Final peak measurement result:**

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
2197.968750	36.8	1000.0	1000.000	100.0	V	3.2	-15.8	37.2	74.0
5055.031250	41.6	1000.0	1000.000	200.0	V	-19.3	-11.0	32.4	74.0
7978.500000	48.4	1000.0	1000.000	200.0	V	-111.3	-3.6	25.6	74.0
11559.656250	48.8	1000.0	1000.000	300.0	V	168.1	-1.9	25.2	74.0
14369.437500	52.8	1000.0	1000.000	100.0	V	137.8	2.3	21.2	74.0
17981.937500	59.0	1000.0	1000.000	100.0	V	102.4	12.1	15.0	74.0

**Final average measurement result:**

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
2197.968750	24.2	1000.0	1000.000	100.0	V	3.2	-15.8	29.9	54.0
5055.031250	28.2	1000.0	1000.000	200.0	V	-19.3	-11.0	25.8	54.0
7978.500000	35.6	1000.0	1000.000	200.0	V	-111.3	-3.6	18.4	54.0
11559.656250	36.1	1000.0	1000.000	300.0	V	168.1	-1.9	17.9	54.0
14369.437500	39.6	1000.0	1000.000	100.0	V	137.8	2.3	14.4	54.0
17981.937500	46.6	1000.0	1000.000	100.0	V	102.4	12.1	7.4	54.0

## **6 Photographs of the Test Set-Up**

Refer to the test setup file.

## 7 List of Test and Measurement Instruments

Equip.	Description	Model	Manufacturer	Last Date	Due Date
				DD.MM.YYYY	DD.MM.YYYY
9061503	Shielded enclosure	10.055x3.605x3.000	Frankonia	08.11.2023	08.11.2028
9023229	EMI test receiver	ESR3	Rohde&Schwarz	03.08.2024	03.08.2025
G1824248	Dual display multimeter	F45	Fluke	28.06.2024	28.06.2025
9062744	EMI measurement software	EMC32-E+(10.60.20)	Rohde&Schwarz	N/A	N/A
G1830003	Artificial mains network	ENV432	Rohde&Schwarz	11.10.2024	11.10.2025
G1811378	3m semi-anechoic chamber	SAC3	Frankonia	03.12.2023	03.12.2026
G1811391	EMI test receiver	ESCI	Rohde&Schwarz	17.10.2024	17.10.2025
G1811425	Bilog antenna	CBL 6112D	Teseq	20.04.2023	20.04.2026
9062745	EMI measurement software	EMC32-MEB (10.60.20)	Rohde&Schwarz	N/A	N/A
G1822702	Spectrum analyser	FSV40	Rohde&Schwarz	15.07.2024	15.07.2025
G1822694	Double ridged broadband horn antenna	BBHA 9120 D	Schwarzbeck	24.03.2021	24.03.2026
G1825371	Preamplifier	EMC051845SE	Taiwan EMCI	24.07.2024	24.07.2025

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**End of test report**