

Prüfbericht-Nr.: Test report no.:	CN25S46W 001	Auftrags-Nr.: Order no.:	326069093	Seite 1 von 46 Page 1 of 46
Kunden-Referenz-Nr.: Client reference no.:	1288983	Auftragsdatum: Order date:	2025-11-10	
Auftraggeber: Client:	IKEA of Sweden AB Box 702, SE-343 81 Älmhult, Sweden			
Prüfgegenstand: Test item:	Portable luminaire			
Bezeichnung / Typ-Nr.: Identification / Type no.:	B2502			
Auftrags-Inhalt: Order content:	TÜV Rheinland EMC service			
Prüfgrundlage: Test specification:	FCC 47 CFR Part 15, Subpart B:2023 Class B ICES-005:2018 ICES-003:2020			
Wareneingangsdatum: Date of sample receipt:	2025-12-10	Refer to the EUT photos file		
Prüfmuster-Nr.: Test sample no.:	A004159899-003			
Prüfzeitraum: Testing period:	2025-12-25~2026-01-06			
Ort der Prüfung: Place of testing:	Refer to clause 1.1			
Prüflaboratorium: Testing laboratory:	TÜV Rheinland (Shanghai) Co., Ltd.			
Prüfergebnis*: Test result*:	Pass			
geprüft von: tested by:	Jessie Xu		genehmigt von: authorized by:	HeXiong Liu
Datum: Date:	2026-01-14		Ausstellungsdatum: Issue date:	2026-01-14
Stellung / Position:	Project engineer		Stellung / Position:	Authorizer
Sonstiges / Other:	FCC ID: FHO-B2502 Test Firm Name: TUV Rheinland (Shanghai) Co., Ltd. Designation Number: CN1396 Test Firm Registration Number: 930979			
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:	Prüfmuster vollständig und unbeschädigt Test item complete and undamaged			
* Legende:	P(ass) = entspricht o.g. Prüfgrundlage(n)	F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
* Legend:	P(ass) = passed a.m. test specification(s)	F(ail) = failed a.m. test specification(s)	N/A = not applicable	N/T = not tested
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. This test report only relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.				

Prüfbericht-Nr.: CN25S46W 001
Test report no.:

Seite 2 von 46
Page 2 of 46

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.
Detaillierte Informationen bezüglich Prüfkonditionen, 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> |
| 2 | <p>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</p> <p><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></p> |
| 3 | <p>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.</p> <p><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></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 115:2023, 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 115:2023, 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> |

Prüfbericht - Nr.: CN25S46W 001
Test Report No.:

Seite 3 von 46
Page 3 of 46

Revision history of test report:

Report number	Issue date	Contents and reason for change if appropriate
CN25S46W 001	2026-01-14	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 ..	7
2.7	SUBMITTED DOCUMENTS.....	7
3	TEST SET-UP AND OPERATION MODES.....	8
3.1	PRINCIPLE OF CONFIGURATION SELECTION	8
3.2	EQUIPMENT AND CABLE ARRANGEMENT.....	8
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.....	17
5.2.1	Radiated emission (30-1000 MHz).....	17
5.2.2	Radiated Emission (1-18 GHz).....	31
6	PHOTOGRAPHS OF THE TEST SET-UP	44
7	LIST OF TEST AND MEASUREMENT INSTRUMENTS	45
8	LIST OF FIGURES.....	46

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 test equipment used 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 portable luminaire with wireless dimming function for lighting and similar use. For further information, refer to the user's manual.

2.2 Ratings and System Details

Rated input	: DC 5 V, 2 W
Rechargeable Li-Ion Battery	: DC 7.2 V, 2600 mAh
Rechargeable Li-Ion Battery	: ICBL7.2-18-B1
model	ICBL7.2-18-USBC-B1
Technical Specification of Bluetooth Low Energy	
Frequency range	: 2402~2480 MHz
Modulation type	: GFSK
Antenna type	: PCB antenna
Antenna gain	: -0.01 dBi (declared by client)
Technical Specification of Thread	
Frequency range	: 2405~2480 MHz
Modulation type	: OQPSK
Antenna type	: PCB antenna
Antenna gain	: -0.01 dBi (declared by client)

Identities and differences:

Above model has two kinds of Rechargeable Li-Ion Battery ICBL7.2-18-B1 and ICBL7.2-18-USBC-B1. Therefore, the EMC tests were performed on sample #1 (ICBL7.2-18-B1) and sample #2 (ICBL7.2-18-USBC-B1) respectively.

2.3 Independent Operation Modes

The basic operation modes are: "Charging", "Lighting on" and "Off".

The test mode as follows:

"Charging"

Mode 1: EUT was charged with the power supply by the USB type C port.

"Lighting On"

Mode 2: EUT was illuminated by battery powered and shifted colour with max. lighting output.

Mode 3: EUT was illuminated by battery powered and shifted colour with min. lighting output.

2.4 Description of interconnecting cables

None.

2.5 Noise Generating and Noise Suppressing Parts

Refer to the circuit diagram for further information.

Prüfbericht - Nr.: CN25S46W 001
Test Report No.:

Seite 7 von 46
Page 7 of 46

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 for wireless module.

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

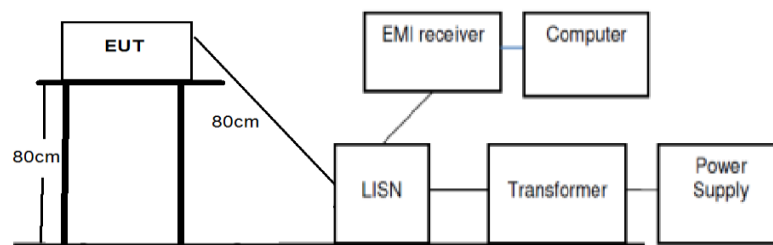
Emission: The equipment under test (EUT) was configured to measure its highest possible emission level. The test conditions were adapted accordingly in reference to the instructions for use.

Refer to the related paragraph of this report.
The sequence of testing:

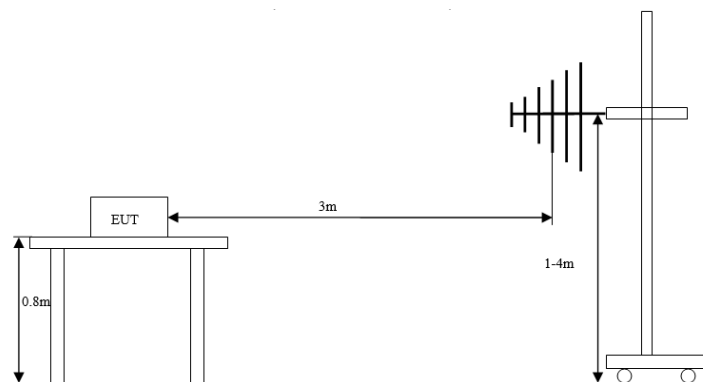
1. Conducted emission tests were performed on 2026-01-04.
2. Radiated emission tests were performed on 2025-12-25~2026-01-06.

3.2 Equipment and cable arrangement

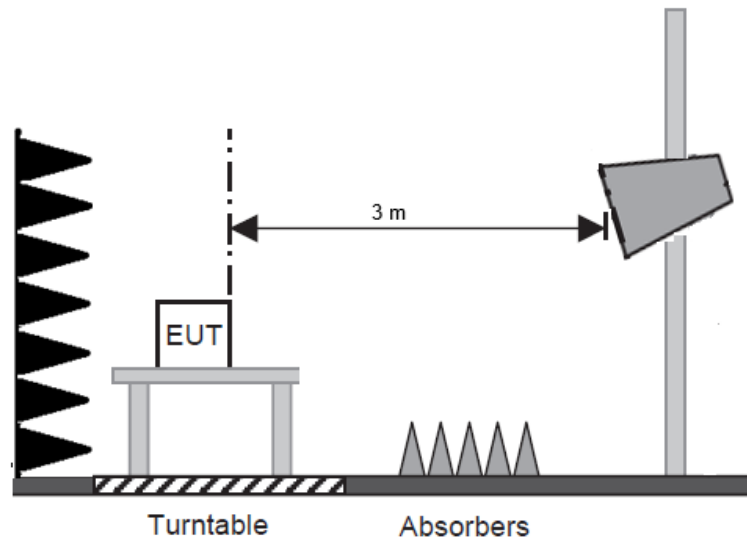
Block diagram for both conducted emission and radiated emission tests is as follows:



(Conducted emission)



(Radiated emission 30-1000 MHz)



(Radiated emission 1-18 GHz)

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

3.3 Test Software

The “Home” APP for iPhone was used during the tests for color shifting and dimming.

3.4 Special Accessories and Auxiliary Equipment

During the tests, the following auxiliary equipment were used.

No.	Product	Model	Brand	Remark
1	Mobile phone	iPhone 15	Apple	For connecting with “Home” APP by Bluetooth and Thread
2	Loudspeaker	HomePod mini	Apple	
3	Power supply	ICPSW5-5NA-1 Input: AC 100-240 V, 50/60 Hz, Max.0.2 A, 7 W Output: DC 5.0 V, Max.1.0 A, 5 W	IKEA	-
4	USB cable	2 m	IKEA	-

3.5 Countermeasures to achieve EMC Compliance

During tests, no special countermeasure was 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	: 2026-01-04	
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 for power supply	
EUT's configuration	: Sample #1 and Sample #2, defined in clause 2.2	
Operational mode	: Mode 1, defined in clause 2.3	
Ambient condition	: Temperature: 23.5 °C; Relative humidity: 49.5 %	
Expanded measurement uncertainty ($k=2$)	: 2.33 dB The minimum margin to the limit is 7.80 dB at 0.197250 MHz. The margin is higher than expanded measurement uncertainty.	
Test setup photo	: Photograph 1 of Attachment 3	

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.: CN25S46W 001

Test Report No.:

Seite 12 von 46

Page 12 of 46

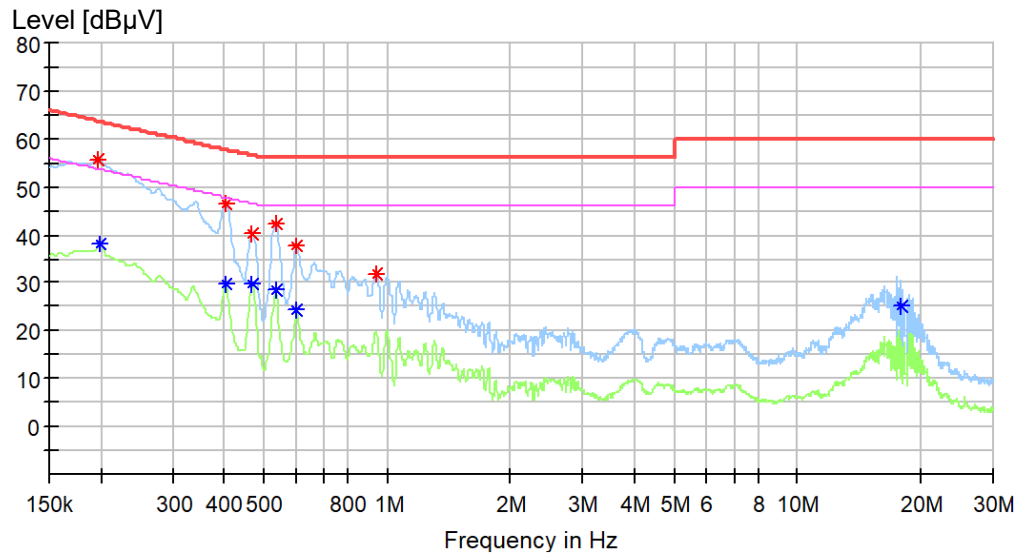
The following figures and tables were measured by an automatic measuring system. Both quasi-peak and average measurements were performed. In the following spectral diagram, “*” means Quasi-Peak Value and “*” means Average Value results.

Notes on following tables of conducted emission results and conversions:

Level (dB μ V): final measurement results by using quasi-peak detector and average detector

Transd (dB): transducer factor including cable loss, insertion loss of artificial mains network and gain of pre-amplifier (if used)

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

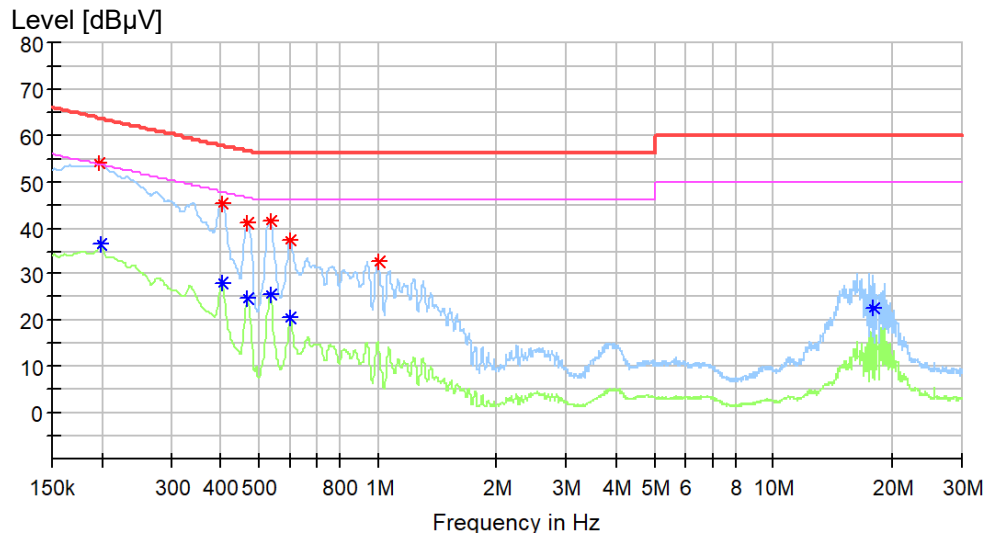
Figure 1: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, sample #1, L line


Final quasi-peak measurement result:

Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Line
0.197250	55.93	63.73	7.80	L1
0.404250	46.42	57.77	11.34	L1
0.469500	40.26	56.52	16.26	L1
0.532500	42.42	56.00	13.58	L1
0.597750	37.90	56.00	18.10	L1
0.939750	31.99	56.00	24.01	L1

Final average measurement result:

Frequency (MHz)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line
0.199500	38.26	53.63	15.37	L1
0.402000	29.77	47.81	18.04	L1
0.467250	29.84	46.56	16.73	L1
0.534750	28.38	46.00	17.62	L1
0.600000	24.35	46.00	21.65	L1
17.943000	25.09	50.00	24.91	L1

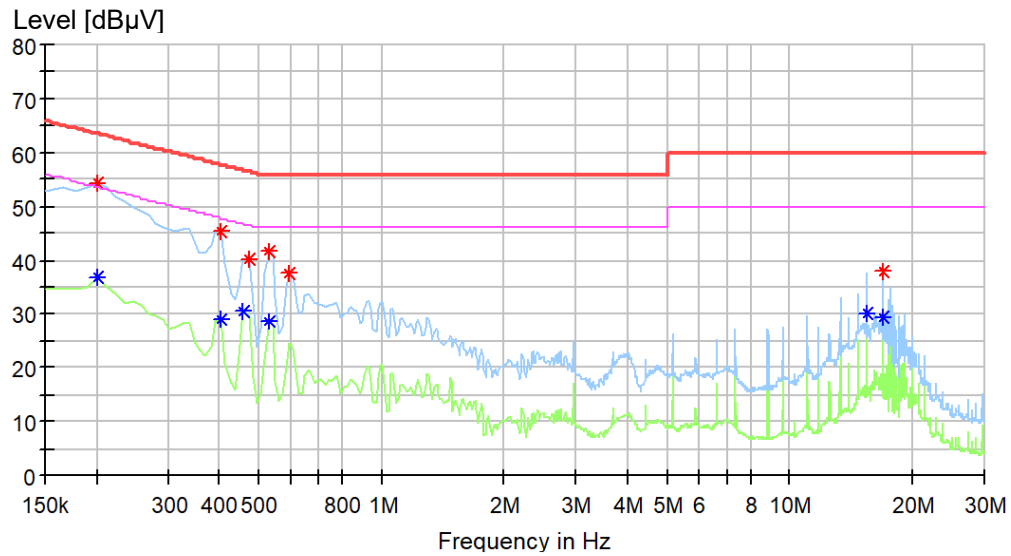
Figure 2: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, sample #1, N line


Final quasi-peak measurement result:

Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Line
0.197250	54.17	63.73	9.55	N
0.404250	45.45	57.77	12.31	N
0.469500	40.87	56.52	15.65	N
0.532500	41.60	56.00	14.40	N
0.597750	37.24	56.00	18.76	N
1.002750	32.54	56.00	23.46	N

Final average measurement result:

Frequency (MHz)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line
0.199500	36.29	53.63	17.34	N
0.402000	28.27	47.81	19.54	N
0.467250	24.59	46.56	21.98	N
0.532500	25.46	46.00	20.54	N
0.600000	20.75	46.00	25.25	N
17.916000	22.54	50.00	27.46	N

Figure 3: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, sample #2, L line


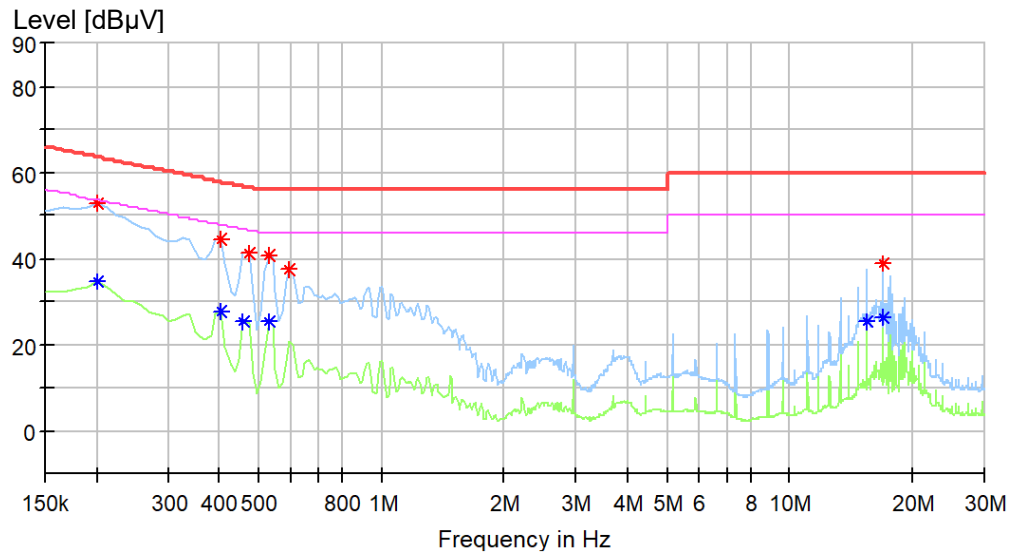
Final quasi-peak measurement result:

Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Line
0.200625	54.50	63.59	9.08	L1
0.403125	45.46	57.79	12.33	L1
0.470625	40.31	56.50	16.20	L1
0.526875	41.64	56.00	14.36	L1
0.594375	37.65	56.00	18.35	L1
16.974375	37.83	60.00	22.17	L1

Final average measurement result:

Frequency (MHz)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line
0.200625	36.92	53.59	16.67	L1
0.403125	29.13	47.79	18.65	L1
0.459375	30.36	46.70	16.35	L1
0.526875	28.66	46.00	17.34	L1
15.500625	30.07	50.00	19.93	L1
16.974375	29.49	50.00	20.51	L1

Figure 4: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, sample #2, N line



Final quasi-peak measurement result:

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Line
0.200625	52.84	63.59	10.75	N
0.403125	44.41	57.79	13.38	N
0.470625	41.07	56.50	15.44	N
0.526875	40.87	56.00	15.13	N
0.594375	37.37	56.00	18.63	N
16.974375	38.67	60.00	21.33	N

Final average measurement result:

Frequency (MHz)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Line
0.200625	34.86	53.59	18.72	N
0.403125	27.47	47.79	20.32	N
0.459375	25.18	46.70	21.52	N
0.526875	25.49	46.00	20.51	N
15.500625	25.42	50.00	24.58	N
16.974375	26.22	50.00	23.78	N

5.2 Emission in the Frequency Range above 30 MHz

5.2.1 Radiated emission (30-1000 MHz)

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

Date of testing	: 2026-01-01
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 (3 m distance): 30 – 88 MHz, 40 dB μ V/m; 88 – 216 MHz, 43.5 dB μ V/m; 216 – 1000 MHz, 46 dB μ V/m (see Note)
Bandwidth of EMI receiver for final measurement	: 120 kHz
Measurement time for final measurement	: 1 s
Kind of test site	: Semi-anechoic chamber
Supply voltage	: AC 120 V, 60 Hz for power supply DC 7.2 V for battery
EUT's configuration	: Sample #1 and Sample #2, defined in clause 2.2
Operational mode	: Mode 1~Mode 3, defined in clause 2.3. (For the modes 2&3, the worst case was found by prescanning every colour with max and min lighting output, only the test data of worst case was recorded in the report)
Ambient condition	: Temperature: 21.4 °C; Relative humidity: 43.5 %
Expanded measurement uncertainty ($k=2$)	: 5.40 dB The minimum margin to the limit is 12.2 dB at 52.916250 MHz. The margin is higher than expanded measurement uncertainty.
Test setup photo	: Photograph 2 of Attachment 3

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 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 measured by an automatic measurement system. A preview test was first 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, “x” means quasi-peak test results.

Prüfbericht - Nr.: CN25S46W 001

Test Report No.:

Seite 18 von 46

Page 18 of 46

Notes on following tables of radiated emission results and conversions:

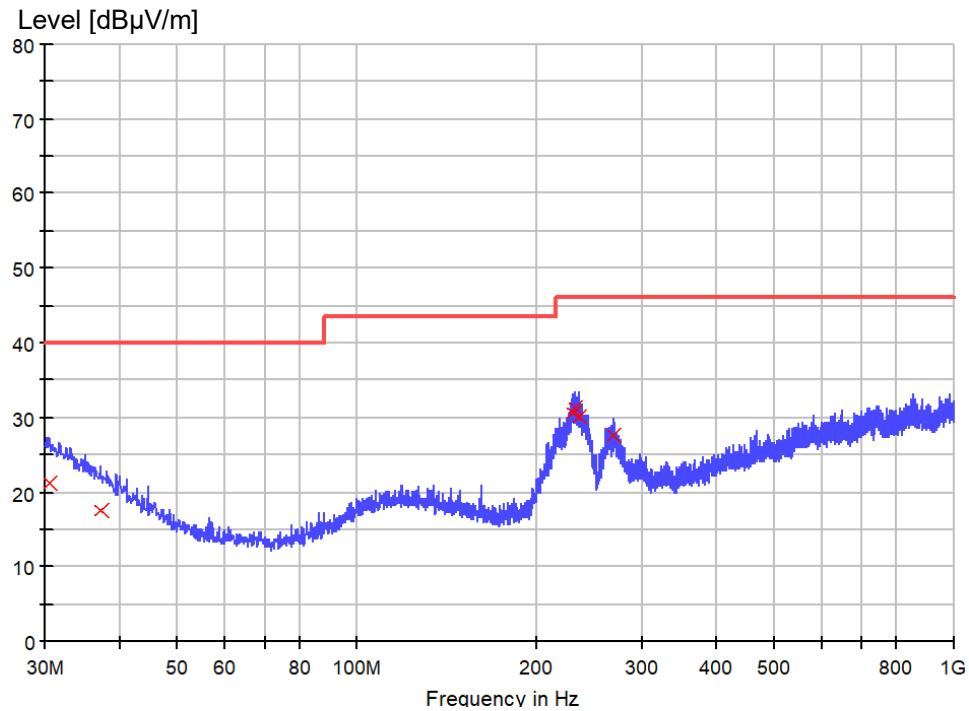
QuasiPeak (dB μ V/m): final measurement results by using quasi-peak detector

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.

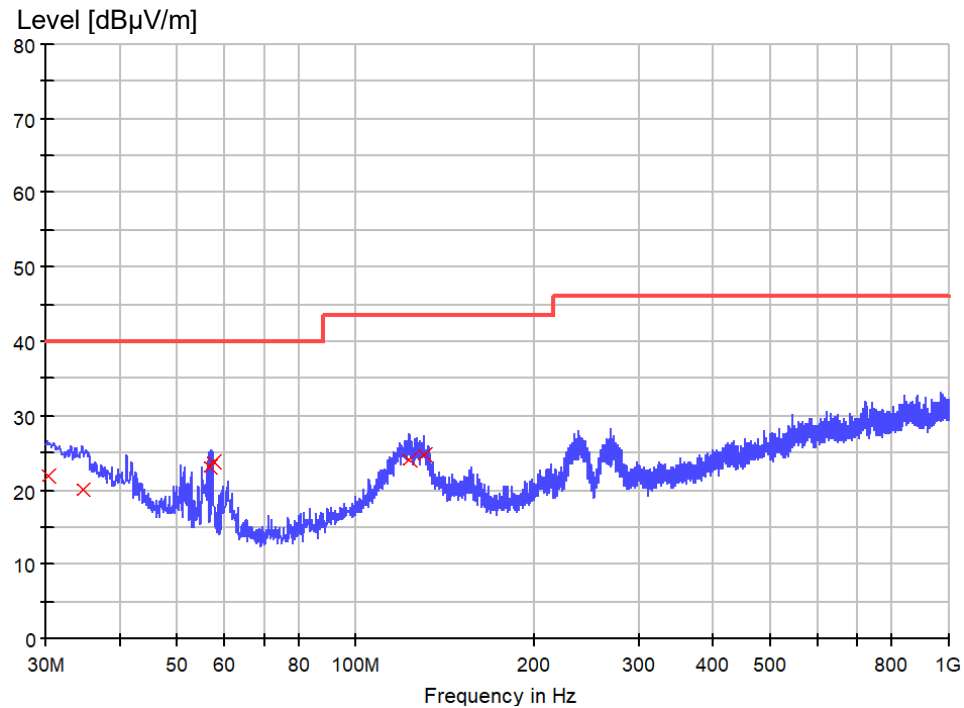
Figure 5: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Horizontal polarization, sample #1, mode 1



Final quasi-peak measurement results:

Frequency (MHz)	QuasiPeak (dBμV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
30.485000	21.4	120.000	110.0	H	-154.0	25.2	18.6	40.0
37.153750	17.6	120.000	100.0	H	89.0	21.4	22.4	40.0
229.335000	30.5	120.000	200.0	H	-78.0	17.2	15.5	46.0
231.638750	31.5	120.000	220.0	H	12.0	17.5	14.6	46.0
235.033750	30.3	120.000	180.0	H	-17.0	18.0	15.7	46.0
269.590000	27.7	120.000	170.0	H	19.0	20.4	18.3	46.0

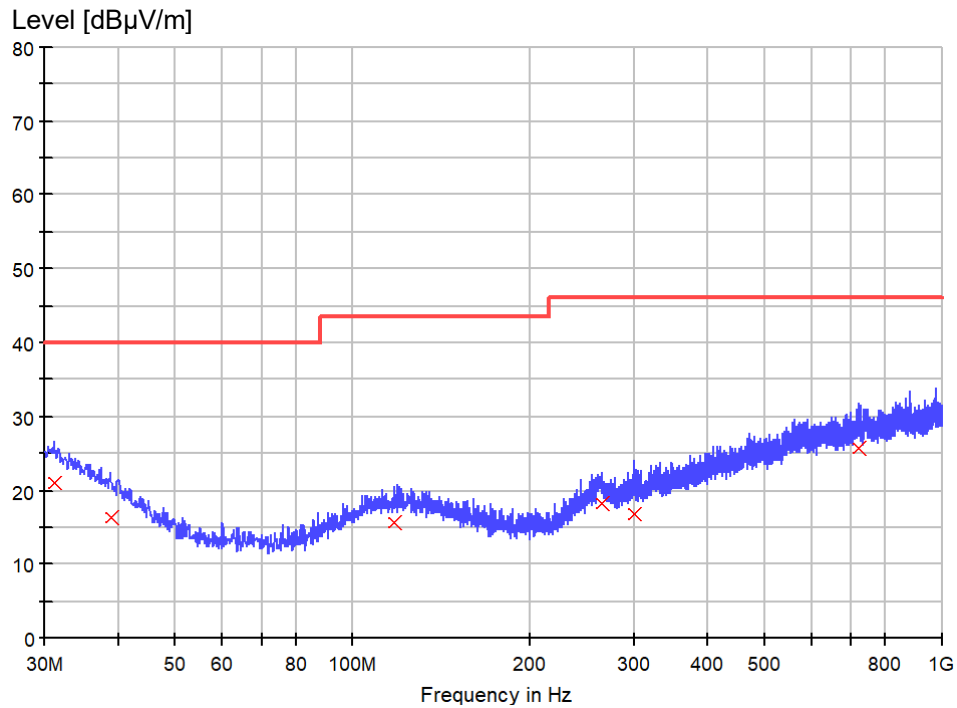
Figure 6: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Vertical polarization, sample #1, mode 1



Final quasi-peak measurement results:

Frequency (MHz)	QuasiPeak (dBμV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
30.121250	22.0	120.000	100.0	V	-16.0	25.3	18.0	40.0
34.607500	20.1	120.000	120.0	V	-49.0	22.8	19.9	40.0
56.432500	23.1	120.000	170.0	V	-171.0	13.0	16.9	40.0
57.281250	23.8	120.000	180.0	V	-129.0	12.9	16.3	40.0
123.241250	24.1	120.000	200.0	V	21.0	18.7	19.4	43.5
130.395000	24.8	120.000	110.0	V	37.0	18.5	18.7	43.5

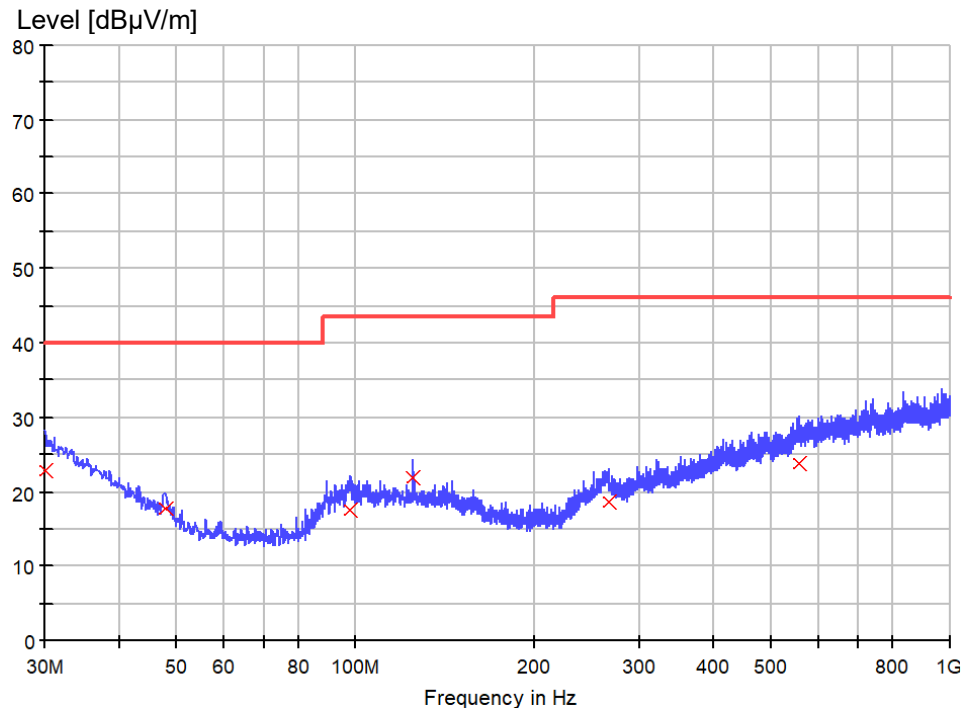
Figure 7: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Horizontal polarization, sample #1, mode 2



Final quasi-peak measurement results:

Frequency (MHz)	QuasiPeak (dBµV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
31.091250	21.0	120.000	180.0	H	15.0	24.8	19.0	40.0
38.851250	16.5	120.000	210.0	H	27.0	20.4	23.5	40.0
117.785000	15.7	120.000	130.0	H	-66.0	18.8	27.8	43.5
263.891250	18.3	120.000	120.0	H	-104.0	21.5	27.7	46.0
299.175000	16.9	120.000	100.0	H	-118.0	20.7	29.1	46.0
723.671250	25.8	120.000	170.0	H	-172.0	28.7	20.2	46.0

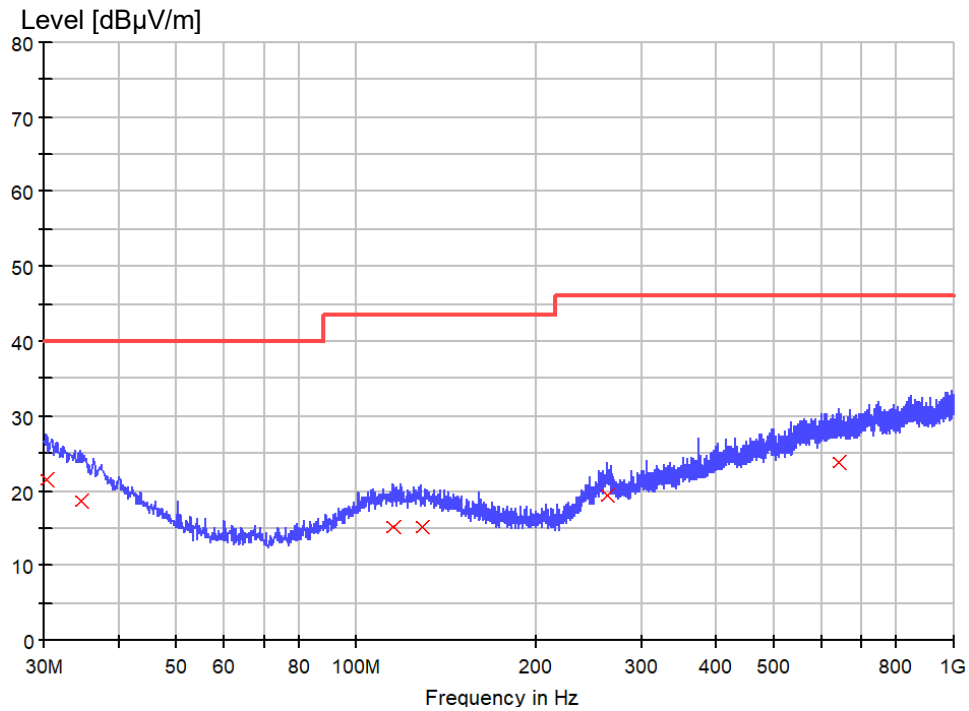
Figure 8: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Vertical polarization, sample #1, mode 2



Final quasi-peak measurement results:

Frequency (MHz)	QuasiPeak (dBμV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
30.000000	23.0	120.000	100.0	V	-36.0	25.4	17.0	40.0
47.702500	17.8	120.000	110.0	V	-14.0	15.8	22.2	40.0
98.021250	17.6	120.000	130.0	V	-64.0	17.0	25.9	43.5
124.938750	21.9	120.000	113.0	V	-12.0	18.7	21.6	43.5
266.437500	18.7	120.000	170.0	V	48.0	21.0	27.3	46.0
558.407500	23.8	120.000	180.0	V	132.0	26.5	22.2	46.0

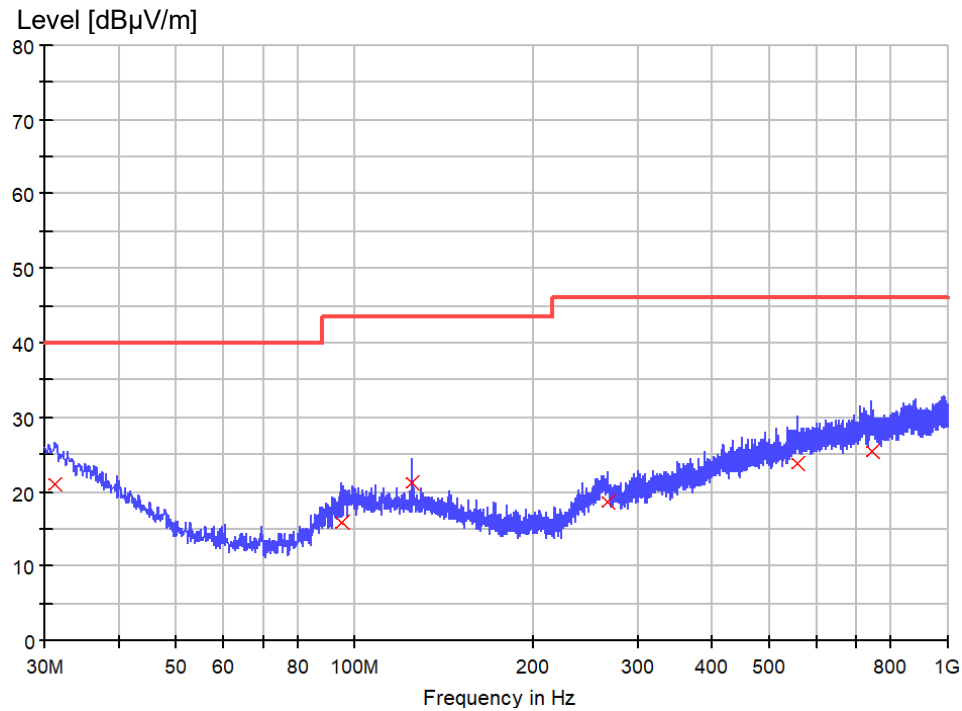
Figure 9: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Horizontal polarization, sample #1, mode 3



Final quasi-peak measurement results:

Frequency (MHz)	QuasiPeak (dBμV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
30.242500	21.6	120.000	120.0	H	-21.0	25.3	18.4	40.0
34.486250	18.8	120.000	180.0	H	-19.0	22.9	21.2	40.0
115.360000	15.3	120.000	220.0	H	75.0	18.8	28.2	43.5
128.576250	15.2	120.000	130.0	H	64.0	18.6	28.3	43.5
262.800000	19.3	120.000	120.0	H	108.0	21.6	26.7	46.0
643.525000	23.8	120.000	110.0	H	14.0	26.9	22.2	46.0

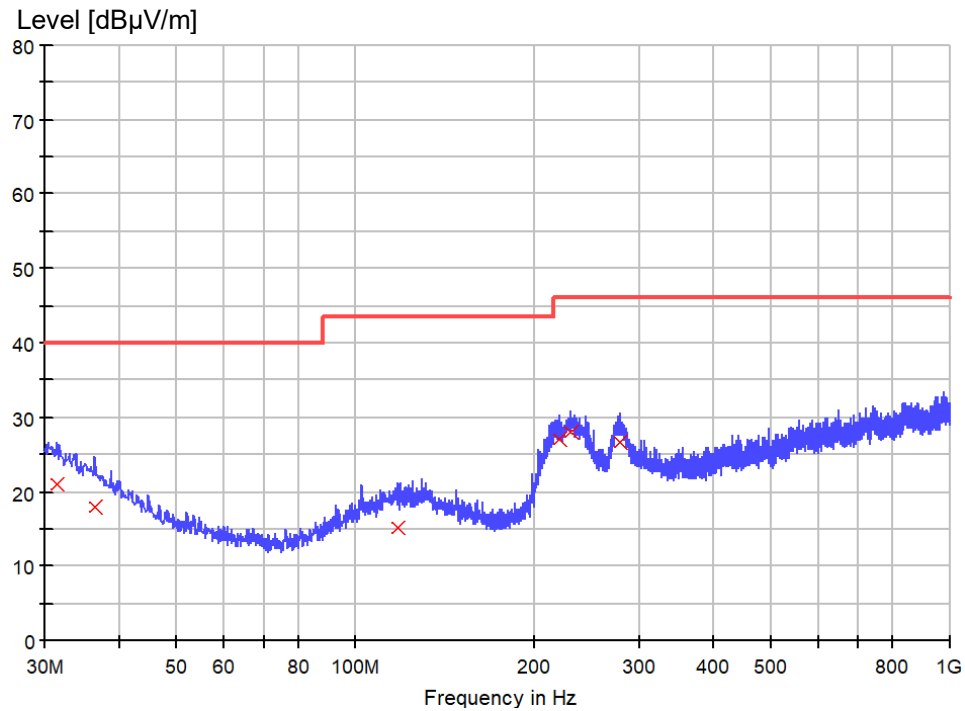
Figure 10: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Vertical polarization, sample #1, mode 3



Final quasi-peak measurement results:

Frequency (MHz)	QuasiPeak (dBμV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
31.212500	21.0	120.000	100.0	V	-47.0	24.8	19.1	40.0
94.868750	16.0	120.000	110.0	V	-59.0	16.3	27.5	43.5
124.938750	21.3	120.000	190.0	V	-72.0	18.7	22.2	43.5
266.073750	18.8	120.000	130.0	V	-19.0	21.1	27.2	46.0
558.407500	23.8	120.000	120.0	V	-112.0	26.5	22.2	46.0
742.101250	25.6	120.000	130.0	V	91.0	28.6	20.4	46.0

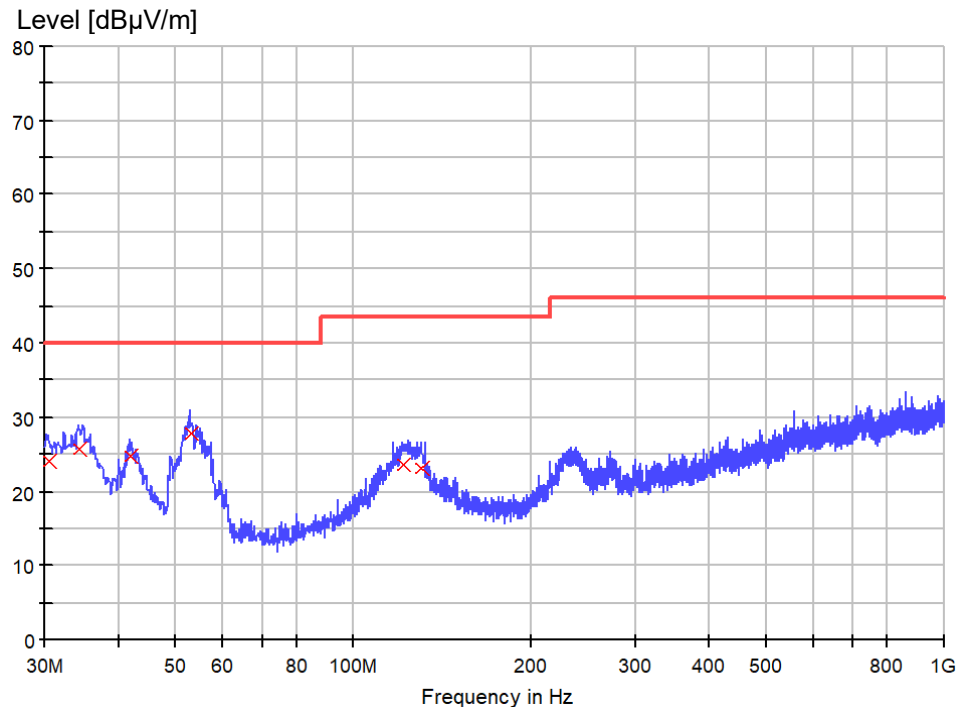
Figure 11: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Horizontal polarization, sample #2, mode 1



Final quasi-peak measurement results:

Frequency (MHz)	QuasiPeak (dBµV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
30.485000	21.4	120.000	110.0	H	-154.0	25.2	18.6	40.0
37.153750	17.6	120.000	100.0	H	89.0	21.4	22.4	40.0
229.335000	30.5	120.000	200.0	H	-78.0	17.2	15.5	46.0
231.638750	31.5	120.000	220.0	H	12.0	17.5	14.6	46.0
235.033750	30.3	120.000	180.0	H	-17.0	18.0	15.7	46.0
269.590000	27.7	120.000	170.0	H	19.0	20.4	18.3	46.0

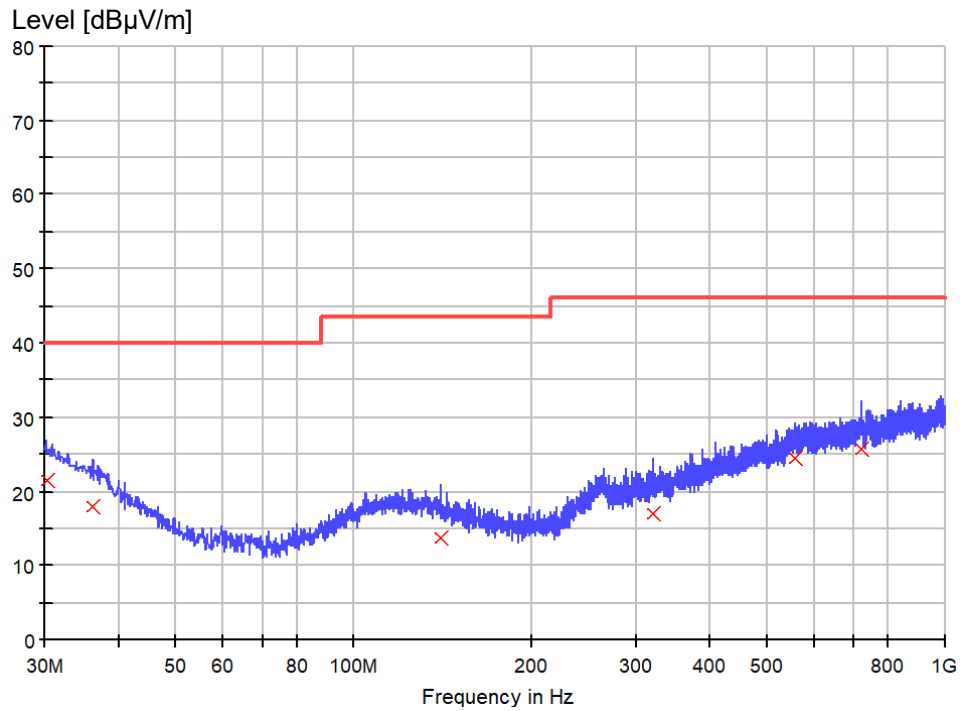
Figure 12: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Vertical polarization, sample #2, mode 1



Final quasi-peak measurement results:

Frequency (MHz)	QuasiPeak (dBµV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
30.363750	24.0	120.000	110.0	V	-36.0	25.2	16.0	40.0
34.243750	25.8	120.000	130.0	V	-17.0	23.0	14.2	40.0
41.761250	24.9	120.000	120.0	V	-28.0	18.8	15.2	40.0
52.916250	27.9	120.000	100.0	V	117.0	13.8	12.2	40.0
120.695000	23.6	120.000	120.0	V	129.0	18.7	19.9	43.5
130.031250	23.1	120.000	190.0	V	137.0	18.5	20.4	43.5

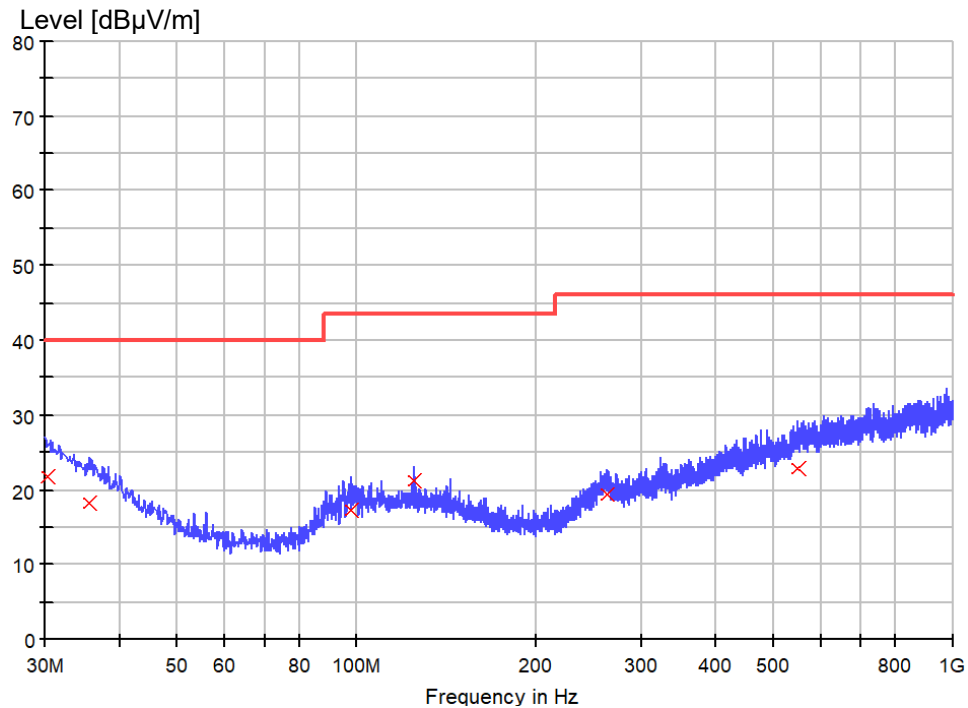
Figure 13: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Horizontal polarization, sample #2, mode 2



Final quasi-peak measurement results:

Frequency (MHz)	QuasiPeak (dBµV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
30.121250	21.6	120.000	190.0	H	-46.0	25.3	18.4	40.0
36.183750	18.1	120.000	210.0	H	-17.0	22.0	21.9	40.0
140.095000	13.9	120.000	120.0	H	-118.0	18.0	29.6	43.5
321.485000	17.1	120.000	100.0	H	74.0	21.1	28.9	46.0
558.286250	24.5	120.000	130.0	H	82.0	26.5	21.5	46.0
723.428750	25.7	120.000	170.0	H	87.0	28.7	20.3	46.0

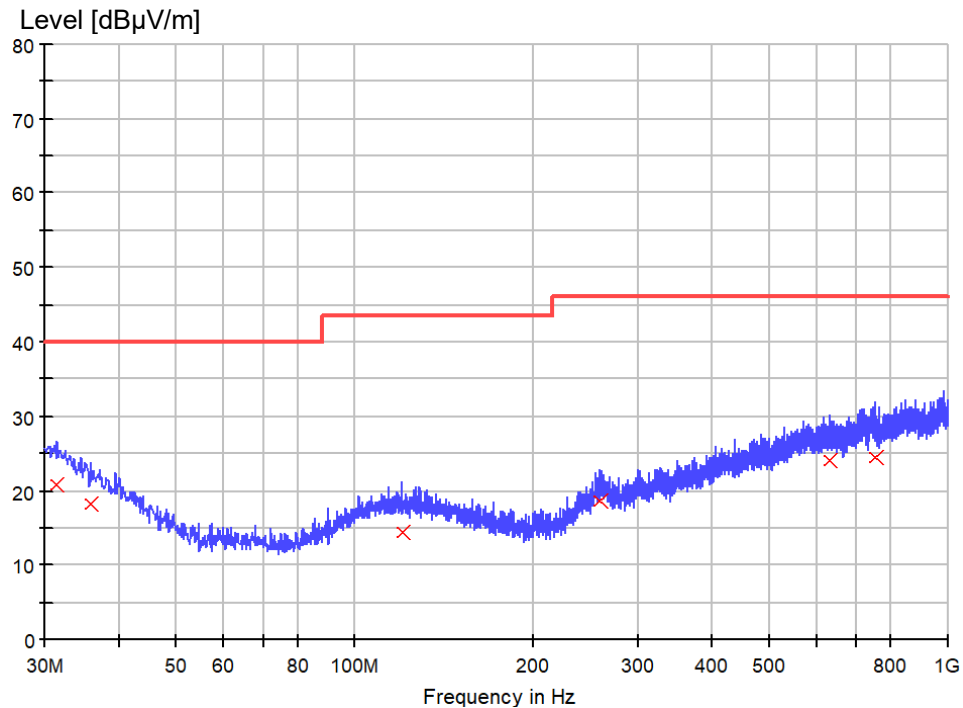
Figure 14: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Vertical polarization, sample #2, mode 2



Final quasi-peak measurement results:

Frequency (MHz)	QuasiPeak (dBμV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
30.121250	21.7	120.000	110.0	V	-16.0	25.3	18.3	40.0
35.577500	18.4	120.000	100.0	V	-27.0	22.3	21.6	40.0
97.415000	17.3	120.000	190.0	V	-81.0	16.8	26.2	43.5
124.938750	21.3	120.000	100.0	V	106.0	18.7	22.2	43.5
262.072500	19.4	120.000	130.0	V	-112.0	21.7	26.7	46.0
549.677500	23.0	120.000	120.0	V	-147.0	26.4	23.0	46.0

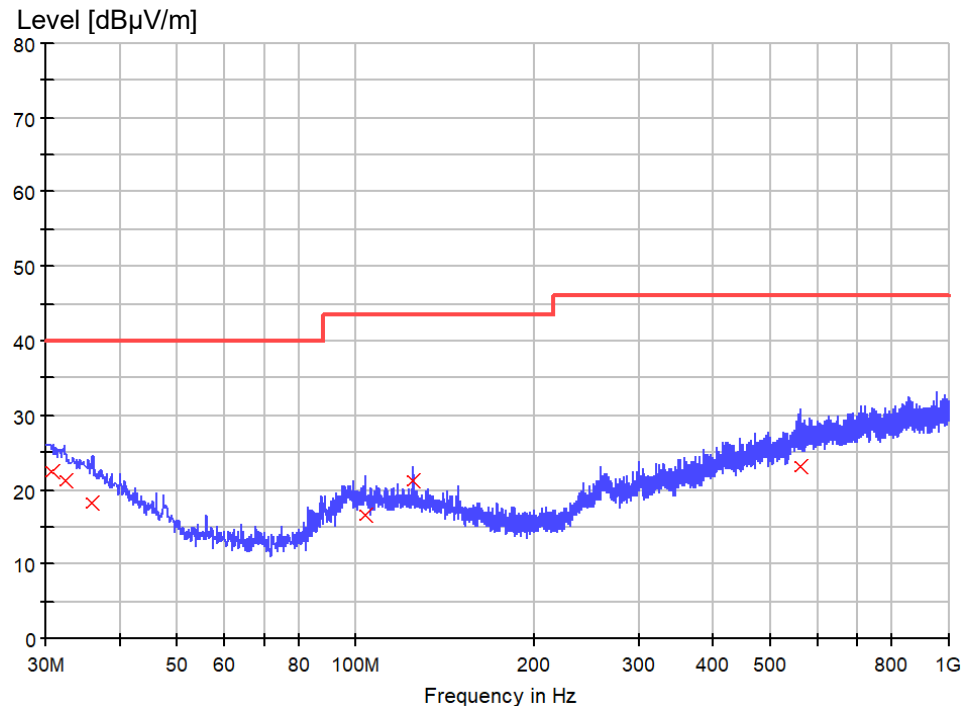
Figure 15: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Horizontal polarization, sample #2, mode 3



Final quasi-peak measurement results:

Frequency (MHz)	QuasiPeak (dBμV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
31.455000	20.8	120.000	120.0	H	-174.0	24.6	19.2	40.0
35.698750	18.2	120.000	190.0	H	23.0	22.2	21.8	40.0
120.331250	14.5	120.000	135.0	H	19.0	18.7	29.0	43.5
259.526250	18.7	120.000	120.0	H	-114.0	21.3	27.3	46.0
630.672500	24.0	120.000	220.0	H	-37.0	26.9	22.0	46.0
757.136250	24.6	120.000	180.0	H	84.0	27.8	21.4	46.0

Figure 16: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Vertical polarization, sample #2, mode 3



Final quasi-peak measurement results:

Frequency (MHz)	QuasiPeak (dBμV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
30.606250	22.4	120.000	110.0	V	-18.0	25.1	17.6	40.0
32.182500	21.2	120.000	130.0	V	-79.0	24.2	18.8	40.0
35.941250	18.2	120.000	170.0	V	46.0	22.1	21.9	40.0
103.598750	16.6	120.000	103.0	V	127.0	17.9	26.9	43.5
124.938750	21.3	120.000	100.0	V	138.0	18.7	22.2	43.5
564.106250	23.1	120.000	200.0	V	149.0	26.4	22.9	46.0

5.2.2 Radiated Emission (1-18 GHz)

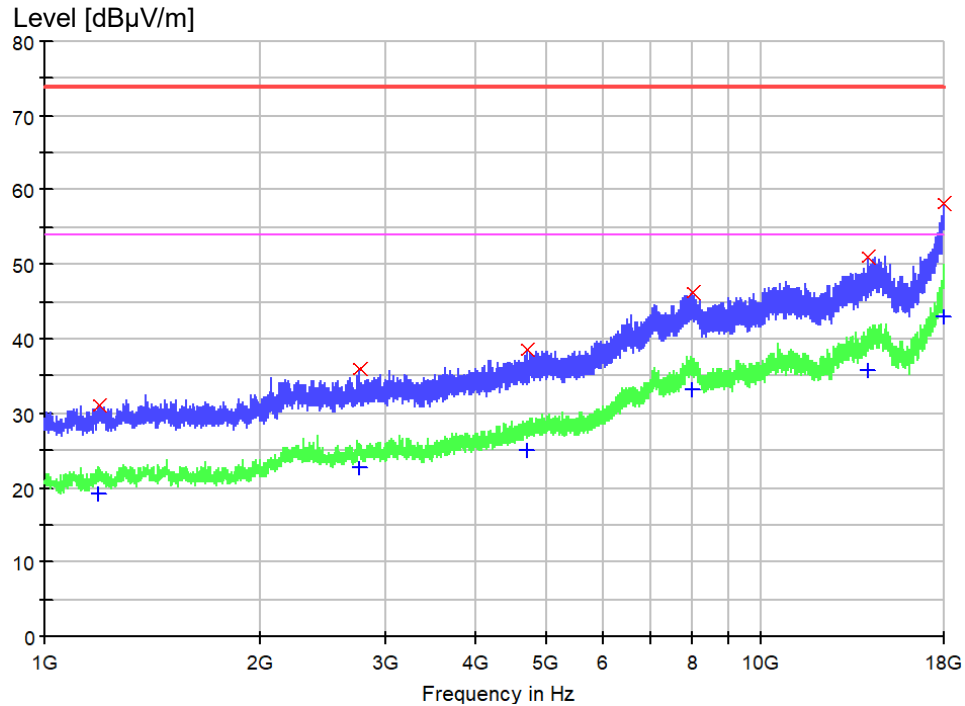
Result:
Passed

Date of testing	: 2025-12-25~2026-01-06
Port	: Enclosure
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
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	: Absorber-lined semi-anechoic chamber
Test distance	: 3 m
Supply voltage	: AC 120 V, 60 Hz for power supply DC 7.2 V for battery
EUT's configuration	: Sample #1 and Sample #2, defined in clause 2.2
Operational mode	: Mode 1~Mode 3, defined in clause 2.3. (For the modes 2&3, the worst case was found by prescanning every colour with max and min lighting output, only the test data of worst case was recorded in the report)
Earthing	: No earthing
Ambient condition	: Temperature: 22.7 °C; Relative humidity: 43.6 %
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 6.6 dB at 17987.781250 MHz. The margin is higher than expanded measurement uncertainty.
Test setup photo	: Photograph 2 of Attachment 3

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 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.

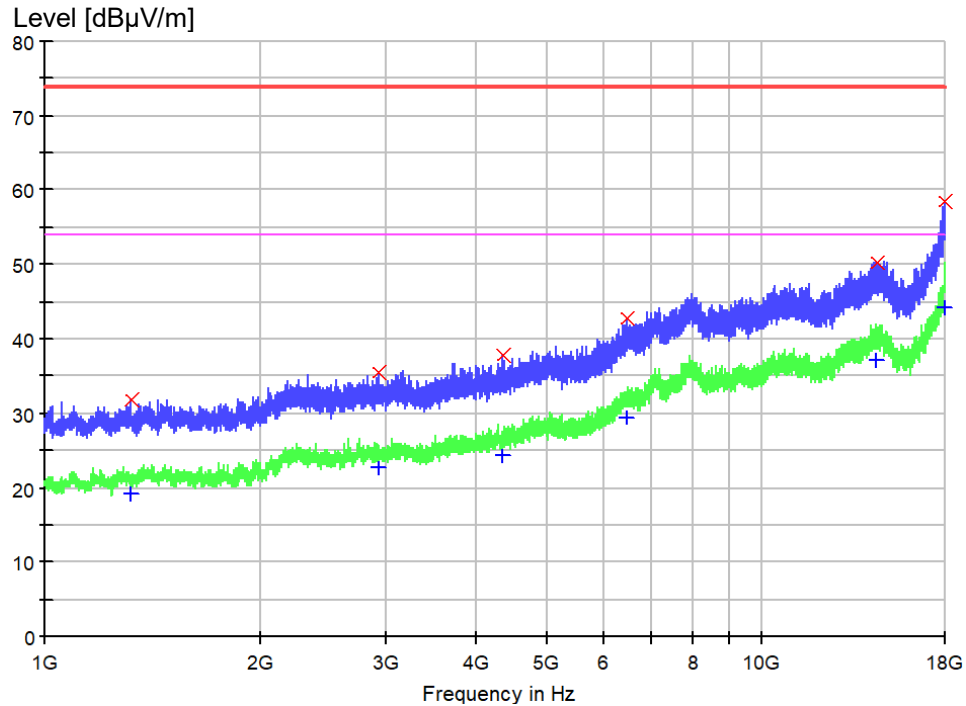
Figure 17: Spectral Diagrams and measurement results, 1 GHz – 18 GHz, Horizontal polarization, sample #1, mode 1

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)
1184.875000	31.2	1000.0	1000.000	120.0	H	-34.0	-19.5	42.8	74.0
2746.218750	36.0	1000.0	1000.000	190.0	H	-25.0	-15.2	38.0	74.0
4717.156250	38.6	1000.0	1000.000	200.0	H	-176.0	-11.5	35.4	74.0
8016.750000	46.3	1000.0	1000.000	105.0	H	54.0	-3.4	27.7	74.0
14068.750000	51.0	1000.0	1000.000	120.0	H	23.0	1.1	23.0	74.0
17999.468750	58.3	1000.0	1000.000	170.0	H	12.0	12.1	15.7	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)
1184.875000	19.2	1000.0	1000.000	120.0	H	-34.0	-19.5	34.8	54.0
2746.218750	22.7	1000.0	1000.000	190.0	H	-25.0	-15.2	31.3	54.0
4717.156250	25.1	1000.0	1000.000	200.0	H	-176.0	-11.5	28.9	54.0
8016.750000	33.2	1000.0	1000.000	105.0	H	54.0	-3.4	20.8	54.0
14068.750000	35.9	1000.0	1000.000	120.0	H	23.0	1.1	18.1	54.0
17999.468750	43.1	1000.0	1000.000	170.0	H	12.0	12.1	10.9	54.0

Figure 18: Spectral Diagrams and measurement results, 1 GHz – 18 GHz, Vertical polarization, sample #1, mode 1

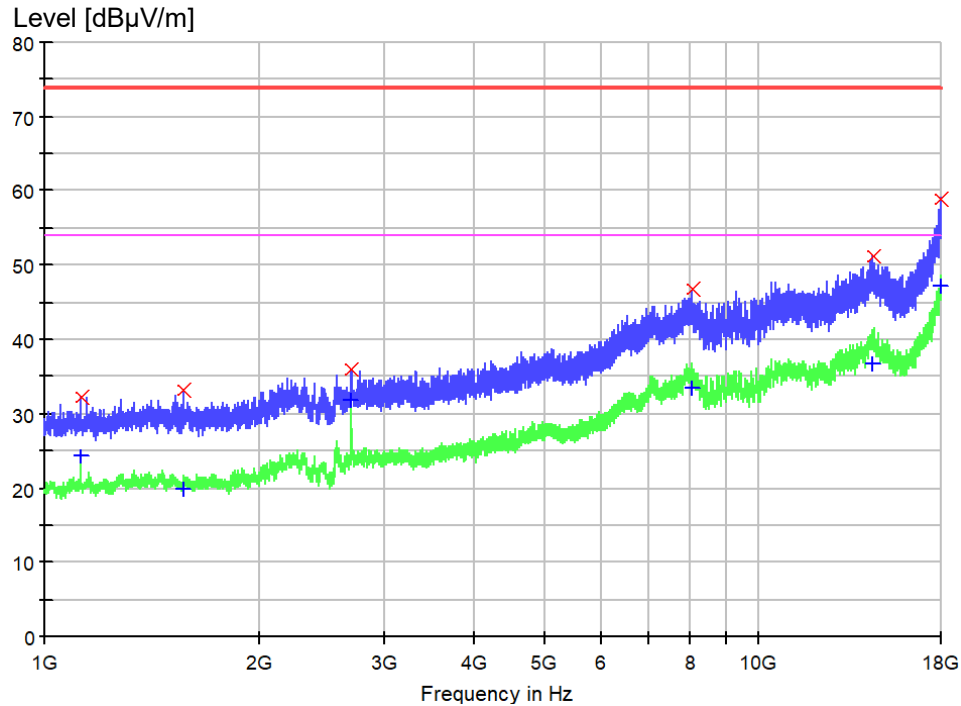


Final peak measurement result:

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)
1319.812500	31.7	1000.0	1000.000	120.0	V	-78.0	-18.8	42.3	74.0
2921.000000	35.5	1000.0	1000.000	130.0	V	19.0	-15.0	38.5	74.0
4356.968750	38.0	1000.0	1000.000	170.0	V	112.0	-12.6	36.0	74.0
6478.250000	42.7	1000.0	1000.000	100.0	V	157.0	-7.5	31.3	74.0
14426.281250	50.4	1000.0	1000.000	200.0	V	-16.0	2.7	23.6	74.0
17988.843750	58.4	1000.0	1000.000	170.0	V	-48.0	11.9	15.6	74.0

Final average measurement result:

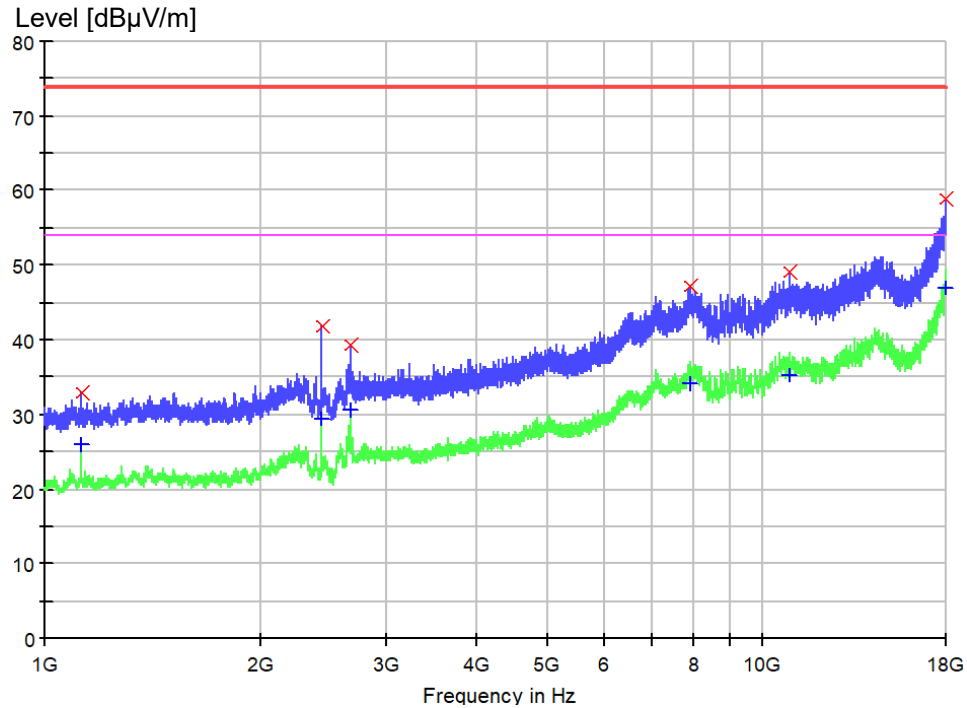
Frequency (MHz)	Average (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
1319.812500	19.1	1000.0	1000.000	120.0	V	-78.0	-18.8	34.9	54.0
2921.000000	22.8	1000.0	1000.000	130.0	V	19.0	-15.0	31.2	54.0
4356.968750	24.2	1000.0	1000.000	170.0	V	112.0	-12.6	29.8	54.0
6478.250000	29.6	1000.0	1000.000	100.0	V	157.0	-7.5	24.5	54.0
14426.281250	37.2	1000.0	1000.000	200.0	V	-16.0	2.7	16.8	54.0
17988.843750	44.3	1000.0	1000.000	170.0	V	-48.0	11.9	9.7	54.0

Figure 19: Spectral Diagrams and measurement results, 1 GHz – 18 GHz, Horizontal polarization, sample #1, 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)
1124.843750	32.4	1000.0	1000.000	120.0	H	120.0	-19.8	41.6	74.0
1566.843750	33.1	1000.0	1000.000	170.0	H	56.0	-18.9	40.9	74.0
2686.718750	36.1	1000.0	1000.000	210.0	H	-97.0	-15.4	37.9	74.0
8045.968750	46.7	1000.0	1000.000	220.0	H	-12.0	-3.5	27.3	74.0
14416.187500	51.2	1000.0	1000.000	130.0	H	-34.0	2.7	22.8	74.0
17988.843750	58.9	1000.0	1000.000	140.0	H	147.0	11.9	15.1	74.0

Final average measurement result:

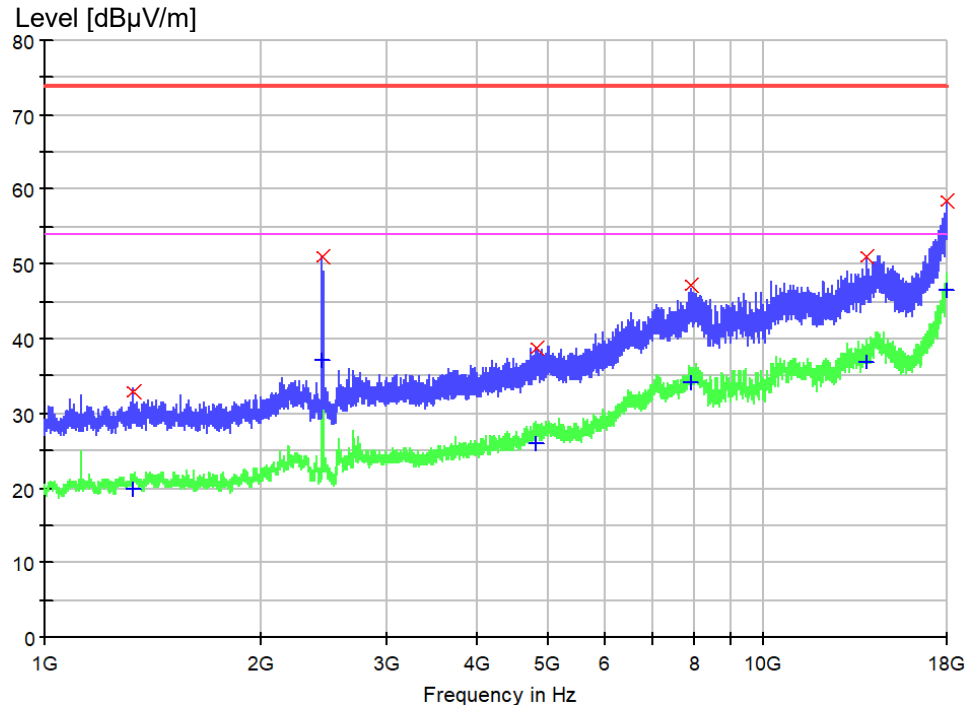
Frequency (MHz)	Average (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
1124.843750	24.4	1000.0	1000.000	120.0	H	120.0	-19.8	29.6	54.0
1566.843750	19.8	1000.0	1000.000	170.0	H	56.0	-18.9	34.2	54.0
2686.718750	31.8	1000.0	1000.000	210.0	H	-97.0	-15.4	22.2	54.0
8045.968750	33.5	1000.0	1000.000	220.0	H	-12.0	-3.5	20.5	54.0
14416.187500	36.8	1000.0	1000.000	130.0	H	-34.0	2.7	17.2	54.0
17988.843750	47.3	1000.0	1000.000	140.0	H	147.0	11.9	6.7	54.0

Figure 20: Spectral Diagrams and measurement results, 1 GHz – 18 GHz, Vertical polarization, sample #1, 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)
1124.843750	33.0	1000.0	1000.000	110.0	V	26.0	-19.8	41.0	74.0
2433.312500	42.0	1000.0	1000.000	180.0	V	17.0	-16.0	32.0	74.0
2661.750000	39.4	1000.0	1000.000	170.0	V	-96.0	-15.5	34.6	74.0
7914.750000	47.4	1000.0	1000.000	103.0	V	-102.0	-3.6	26.6	74.0
10912.062500	49.1	1000.0	1000.000	130.0	V	-33.0	-1.4	24.9	74.0
17979.812500	58.9	1000.0	1000.000	100.0	V	78.0	11.8	15.1	74.0

Final average measurement result:

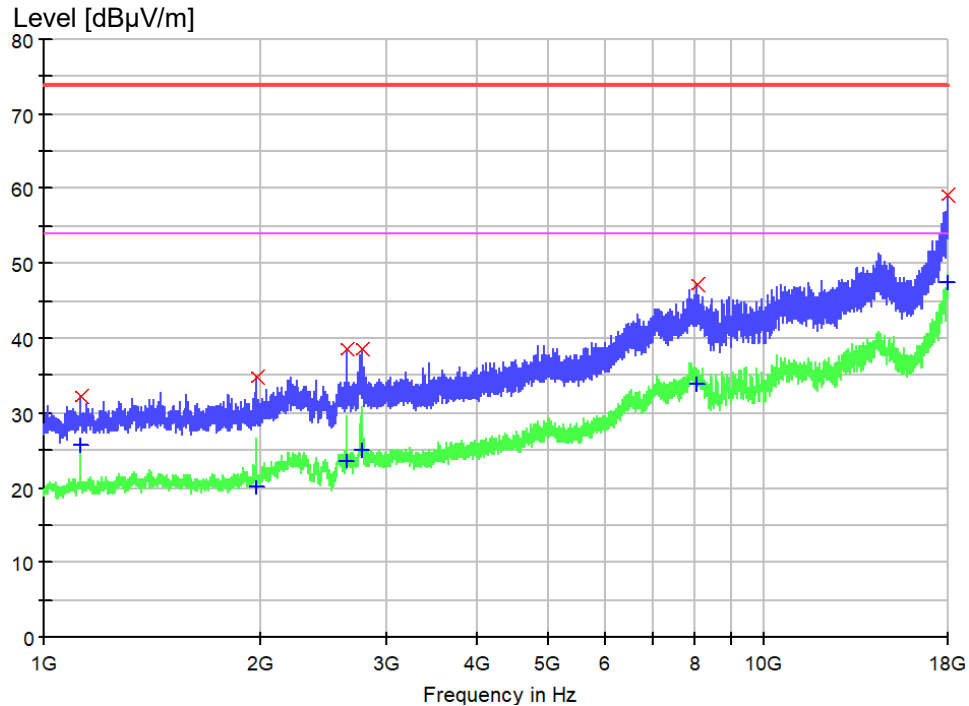
Frequency (MHz)	Average (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
1124.843750	25.9	1000.0	1000.000	110.0	V	26.0	-19.8	28.1	54.0
2433.312500	29.5	1000.0	1000.000	180.0	V	17.0	-16.0	24.6	54.0
2661.750000	30.7	1000.0	1000.000	170.0	V	-96.0	-15.5	23.3	54.0
7914.750000	34.2	1000.0	1000.000	103.0	V	-102.0	-3.6	19.8	54.0
10912.062500	35.3	1000.0	1000.000	130.0	V	-33.0	-1.4	18.7	54.0
17979.812500	47.1	1000.0	1000.000	100.0	V	78.0	11.8	6.9	54.0

Figure 21: Spectral Diagrams and measurement results, 1 GHz – 18 GHz, Horizontal polarization, sample #1, 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)
1323.531250	33.1	1000.0	1000.000	110.0	H	-10.0	-18.8	40.9	74.0
2433.843750	51.1	1000.0	1000.000	170.0	H	120.0	-16.0	22.9	74.0
4814.906250	38.8	1000.0	1000.000	120.0	H	34.0	-11.2	35.2	74.0
7911.562500	47.2	1000.0	1000.000	230.0	H	27.0	-3.6	26.8	74.0
13910.968750	51.1	1000.0	1000.000	110.0	H	102.0	1.2	22.9	74.0
17986.718750	58.4	1000.0	1000.000	100.0	H	-11.0	11.9	15.6	74.0

Final average measurement result:

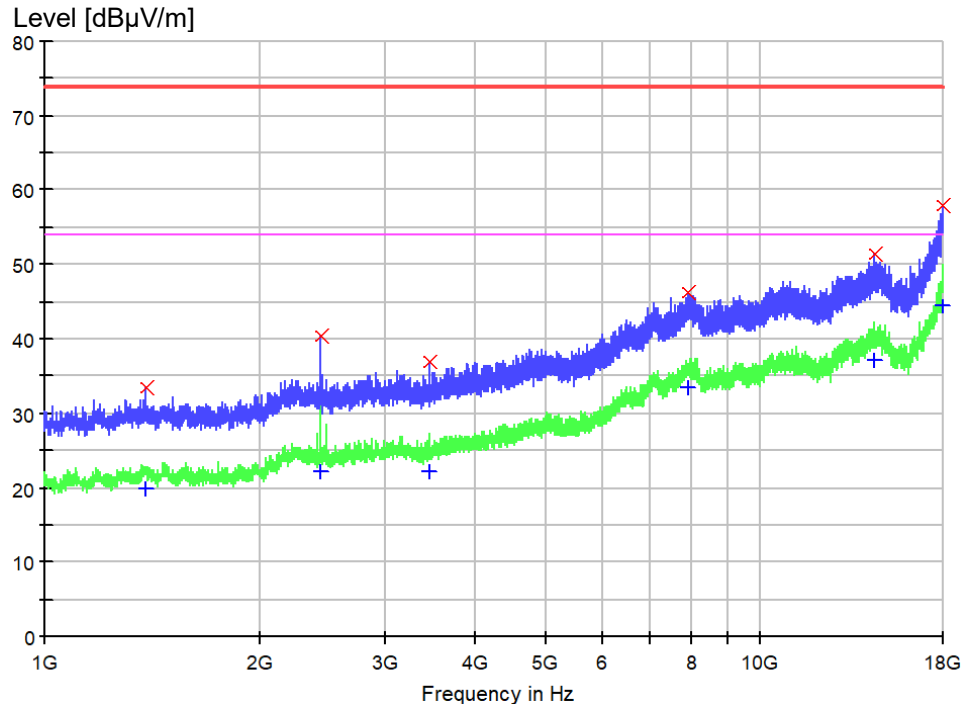
Frequency (MHz)	Average (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
1323.531250	19.8	1000.0	1000.000	110.0	H	-10.0	-18.8	34.2	54.0
2433.843750	37.2	1000.0	1000.000	170.0	H	120.0	-16.0	16.8	54.0
4814.906250	26.0	1000.0	1000.000	120.0	H	34.0	-11.2	28.0	54.0
7911.562500	34.1	1000.0	1000.000	230.0	H	27.0	-3.6	19.9	54.0
13910.968750	37.0	1000.0	1000.000	110.0	H	102.0	1.2	17.0	54.0
17986.718750	46.5	1000.0	1000.000	100.0	H	-11.0	11.9	7.5	54.0

Figure 22: Spectral Diagrams and measurement results, 1 GHz – 18 GHz, Vertical polarization, sample #1, 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)
1124.843750	32.3	1000.0	1000.000	130.0	V	24.0	-19.8	41.7	74.0
1974.312500	34.8	1000.0	1000.000	120.0	V	122.0	-17.8	39.2	74.0
2637.312500	38.5	1000.0	1000.000	110.0	V	-11.0	-15.6	35.5	74.0
2756.312500	38.5	1000.0	1000.000	100.0	V	-56.0	-15.2	35.5	74.0
8076.250000	47.1	1000.0	1000.000	110.0	V	-51.0	-3.7	26.9	74.0
17987.781250	59.1	1000.0	1000.000	170.0	V	-13.0	11.9	14.9	74.0

Final average measurement result:

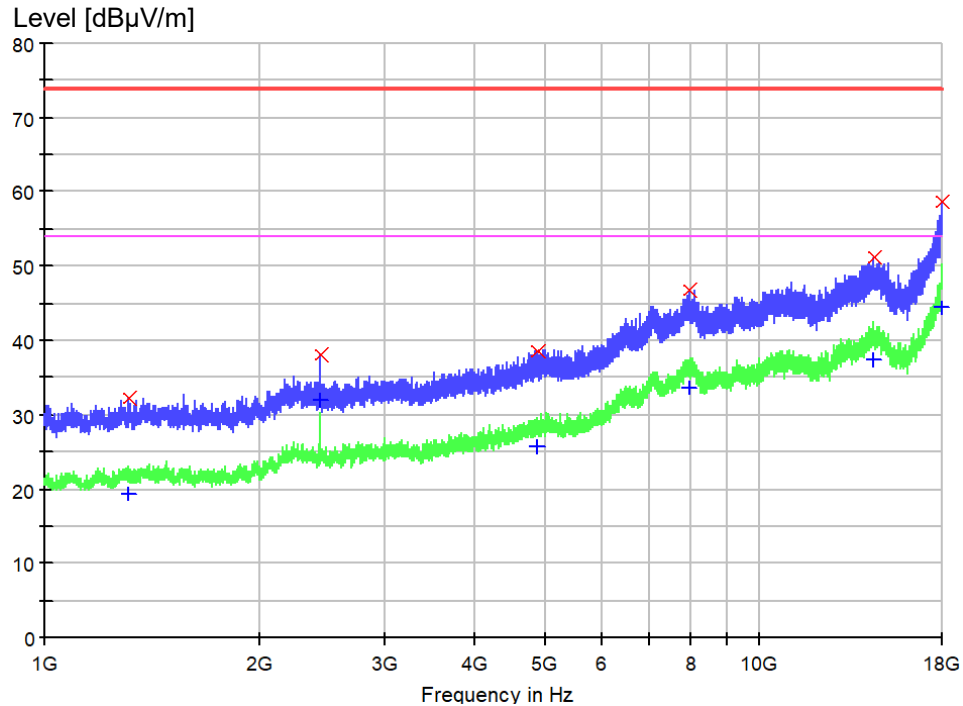
Frequency (MHz)	Average (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
1124.843750	25.7	1000.0	1000.000	130.0	V	24.0	-19.8	28.3	54.0
1974.312500	20.1	1000.0	1000.000	120.0	V	122.0	-17.8	33.9	54.0
2637.312500	23.7	1000.0	1000.000	110.0	V	-11.0	-15.6	30.4	54.0
2756.312500	25.1	1000.0	1000.000	100.0	V	-56.0	-15.2	28.9	54.0
8076.250000	33.8	1000.0	1000.000	110.0	V	-51.0	-3.7	20.2	54.0
17987.781250	47.4	1000.0	1000.000	170.0	V	-13.0	11.9	6.6	54.0

Figure 23: Spectral Diagrams and measurement results, 1 GHz – 18 GHz, Horizontal polarization, sample #2, 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)
1379.843750	33.5	1000.0	1000.000	120.0	H	20.0	-18.6	40.5	74.0
2425.343750	40.5	1000.0	1000.000	190.0	H	19.0	-16.0	33.5	74.0
3443.750000	37.0	1000.0	1000.000	180.0	H	-67.0	-14.8	37.0	74.0
7923.250000	46.2	1000.0	1000.000	110.0	H	-89.0	-3.6	27.8	74.0
14422.031250	51.6	1000.0	1000.000	210.0	H	-91.0	2.7	22.4	74.0
17981.406250	58.0	1000.0	1000.000	110.0	H	-14.0	11.8	16.0	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)
1379.843750	19.9	1000.0	1000.000	120.0	H	20.0	-18.6	34.1	54.0
2425.343750	22.2	1000.0	1000.000	190.0	H	19.0	-16.0	31.8	54.0
3443.750000	22.2	1000.0	1000.000	180.0	H	-67.0	-14.8	31.8	54.0
7923.250000	33.4	1000.0	1000.000	110.0	H	-89.0	-3.6	20.6	54.0
14422.031250	37.2	1000.0	1000.000	210.0	H	-91.0	2.7	16.8	54.0
17981.406250	44.4	1000.0	1000.000	110.0	H	-14.0	11.8	9.6	54.0

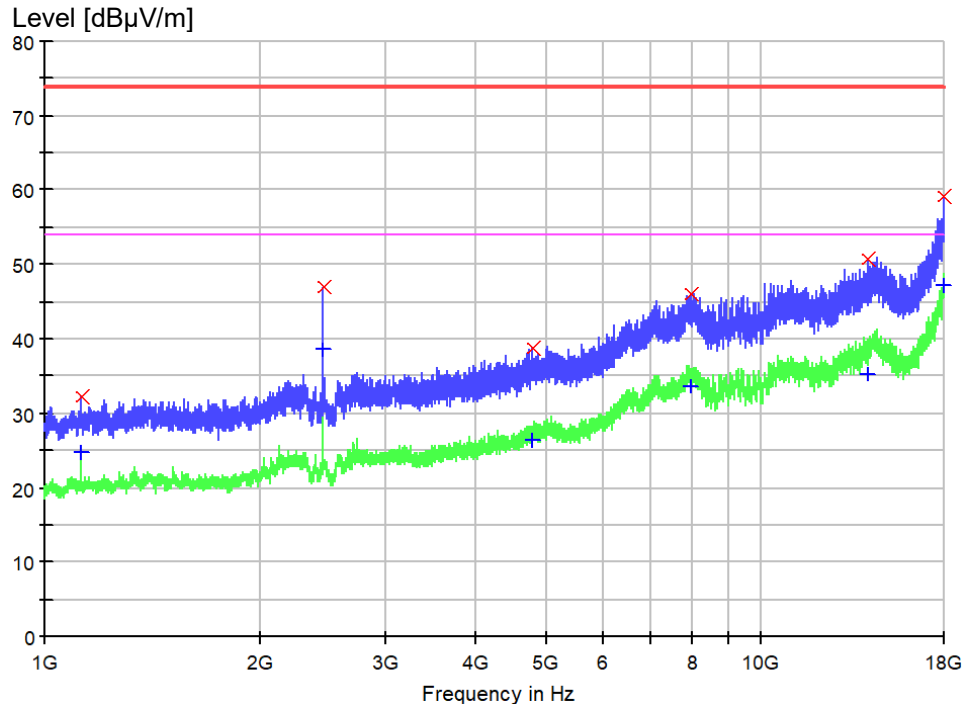
Figure 24: Spectral Diagrams and measurement results, 1 GHz – 18 GHz, Vertical polarization, sample #2, mode 1

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)
1312.375000	32.3	1000.0	1000.000	130.0	V	-99.0	-18.8	41.7	74.0
2429.062500	38.0	1000.0	1000.000	110.0	V	128.0	-16.0	36.0	74.0
4871.750000	38.6	1000.0	1000.000	100.0	V	26.0	-11.1	35.4	74.0
7988.062500	46.9	1000.0	1000.000	120.0	V	77.0	-3.3	27.1	74.0
14397.593750	51.2	1000.0	1000.000	100.0	V	124.0	2.7	22.8	74.0
17986.718750	58.8	1000.0	1000.000	170.0	V	172.0	11.9	15.2	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)
1312.375000	19.3	1000.0	1000.000	130.0	V	-99.0	-18.8	34.7	54.0
2429.062500	32.0	1000.0	1000.000	110.0	V	128.0	-16.0	22.0	54.0
4871.750000	25.8	1000.0	1000.000	100.0	V	26.0	-11.1	28.2	54.0
7988.062500	33.7	1000.0	1000.000	120.0	V	77.0	-3.3	20.3	54.0
14397.593750	37.5	1000.0	1000.000	100.0	V	124.0	2.7	16.5	54.0
17986.718750	44.3	1000.0	1000.000	170.0	V	172.0	11.9	9.7	54.0

Figure 25: Spectral Diagrams and measurement results, 1 GHz – 18 GHz, Horizontal polarization, sample #2, mode 2

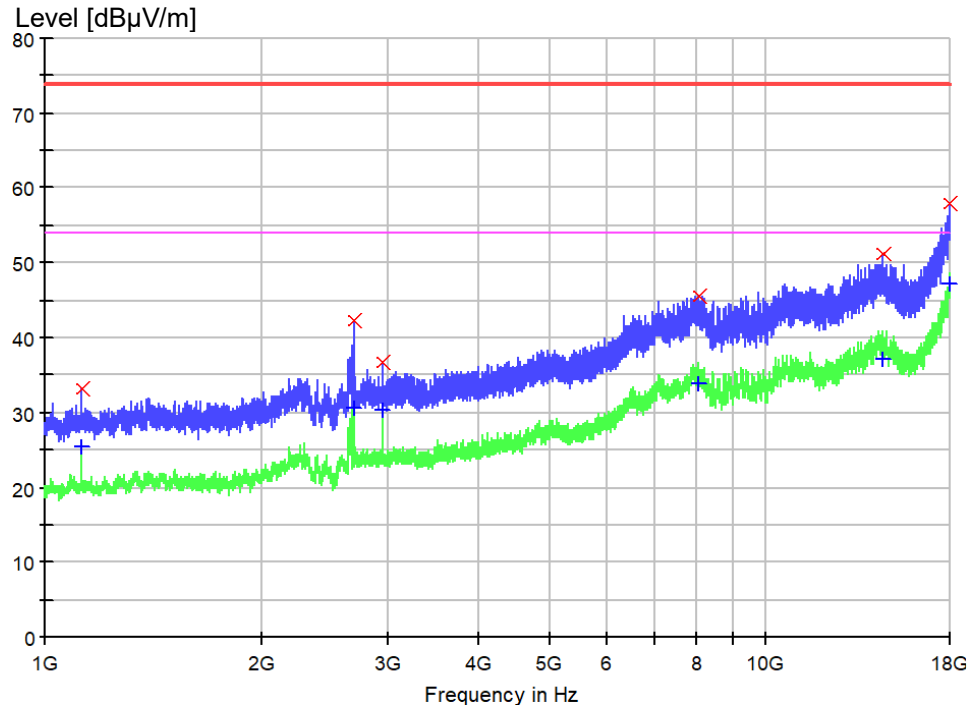


Final peak measurement result:

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)
1124.843750	32.3	1000.0	1000.000	130.0	H	-46.0	-19.8	41.7	74.0
2443.406250	47.1	1000.0	1000.000	170.0	H	122.0	-16.0	26.9	74.0
4802.687500	38.8	1000.0	1000.000	120.0	H	89.0	-11.2	35.2	74.0
7958.312500	46.0	1000.0	1000.000	200.0	H	103.0	-3.5	28.0	74.0
14121.343750	50.7	1000.0	1000.000	210.0	H	115.0	1.2	23.3	74.0
17990.437500	59.2	1000.0	1000.000	100.0	H	-43.0	11.9	14.8	74.0

Final average measurement result:

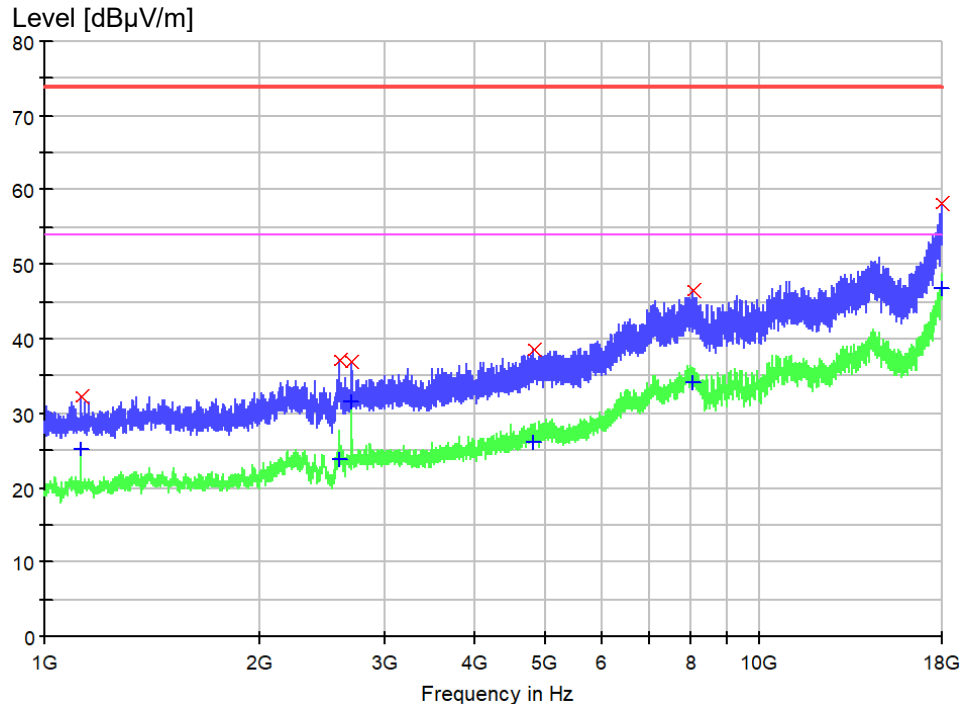
Frequency (MHz)	Average (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
1124.843750	24.7	1000.0	1000.000	130.0	H	-46.0	-19.8	29.3	54.0
2443.406250	38.7	1000.0	1000.000	170.0	H	122.0	-16.0	15.3	54.0
4802.687500	26.4	1000.0	1000.000	120.0	H	89.0	-11.2	27.6	54.0
7958.312500	33.7	1000.0	1000.000	200.0	H	103.0	-3.5	20.3	54.0
14121.343750	35.4	1000.0	1000.000	210.0	H	115.0	1.2	18.6	54.0
17990.437500	47.3	1000.0	1000.000	100.0	H	-43.0	11.9	6.7	54.0

Figure 26: Spectral Diagrams and measurement results, 1 GHz – 18 GHz, Vertical polarization, sample #2, mode 2

Final peak measurement result:

Frequency (MHz)	MaxPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
1124.843750	33.2	1000.0	1000.000	120.0	V	12.0	-19.8	40.8	74.0
2681.937500	42.4	1000.0	1000.000	190.0	V	56.0	-15.4	31.6	74.0
2936.406250	36.6	1000.0	1000.000	200.0	V	-89.0	-15.1	37.4	74.0
8073.593750	45.7	1000.0	1000.000	130.0	V	-23.0	-3.7	28.3	74.0
14495.875000	51.2	1000.0	1000.000	140.0	V	109.0	2.7	22.8	74.0
17990.437500	58.0	1000.0	1000.000	110.0	V	113.0	11.9	16.0	74.0

Final average measurement result:

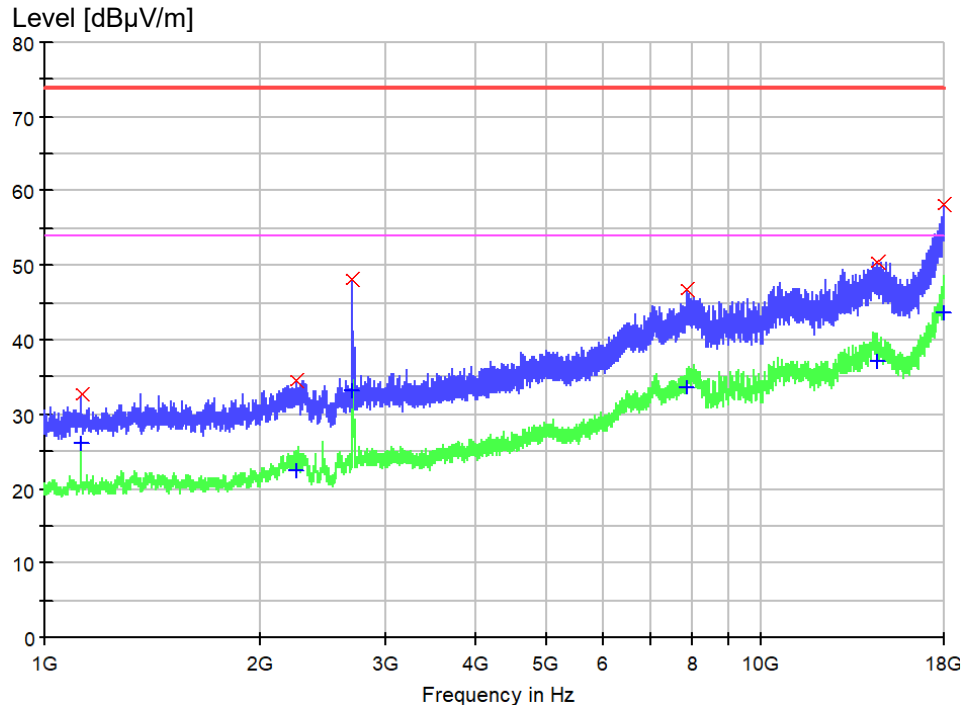
Frequency (MHz)	Average (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
1124.843750	25.6	1000.0	1000.000	120.0	V	12.0	-19.8	28.4	54.0
2681.937500	30.7	1000.0	1000.000	190.0	V	56.0	-15.4	23.3	54.0
2936.406250	30.5	1000.0	1000.000	200.0	V	-89.0	-15.1	23.5	54.0
8073.593750	34.0	1000.0	1000.000	130.0	V	-23.0	-3.7	20.0	54.0
14495.875000	37.2	1000.0	1000.000	140.0	V	109.0	2.7	16.8	54.0
17990.437500	47.2	1000.0	1000.000	110.0	V	113.0	11.9	6.8	54.0

Figure 27: Spectral Diagrams and measurement results, 1 GHz – 18 GHz, Horizontal polarization, sample #2, 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)
1124.312500	32.2	1000.0	1000.000	120.0	H	-34.0	-19.8	41.8	74.0
2582.593750	37.2	1000.0	1000.000	220.0	H	27.0	-15.8	36.8	74.0
2686.718750	37.0	1000.0	1000.000	230.0	H	68.0	-15.4	37.1	74.0
4814.906250	38.5	1000.0	1000.000	110.0	H	108.0	-11.2	35.5	74.0
8072.531250	46.6	1000.0	1000.000	100.0	H	-16.0	-3.7	27.4	74.0
17975.031250	58.2	1000.0	1000.000	130.0	H	-94.0	11.7	15.8	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)
1124.312500	25.3	1000.0	1000.000	120.0	H	-34.0	-19.8	28.7	54.0
2582.593750	23.9	1000.0	1000.000	220.0	H	27.0	-15.8	30.1	54.0
2686.718750	31.5	1000.0	1000.000	230.0	H	68.0	-15.4	22.5	54.0
4814.906250	26.3	1000.0	1000.000	110.0	H	108.0	-11.2	27.7	54.0
8072.531250	34.2	1000.0	1000.000	100.0	H	-16.0	-3.7	19.8	54.0
17975.031250	46.8	1000.0	1000.000	130.0	H	-94.0	11.7	7.2	54.0

Figure 28: Spectral Diagrams and measurement results, 1 GHz – 18 GHz, Vertical polarization, sample #2, 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)
1124.312500	32.6	1000.0	1000.000	120.0	V	-104.0	-19.8	41.4	74.0
2248.968750	34.6	1000.0	1000.000	170.0	V	-132.0	-15.6	39.4	74.0
2686.718750	48.3	1000.0	1000.000	180.0	V	27.0	-15.4	25.7	74.0
7886.593750	46.7	1000.0	1000.000	200.0	V	71.0	-3.9	27.3	74.0
14511.281250	50.6	1000.0	1000.000	103.0	V	89.0	2.7	23.4	74.0
17968.656250	58.3	1000.0	1000.000	100.0	V	23.0	11.6	15.7	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)
1124.312500	26.2	1000.0	1000.000	120.0	V	-104.0	-19.8	27.8	54.0
2248.968750	22.5	1000.0	1000.000	170.0	V	-132.0	-15.6	31.5	54.0
2686.718750	33.2	1000.0	1000.000	180.0	V	27.0	-15.4	20.8	54.0
7886.593750	33.7	1000.0	1000.000	200.0	V	71.0	-3.9	20.3	54.0
14511.281250	37.3	1000.0	1000.000	103.0	V	89.0	2.7	16.7	54.0
17968.656250	43.7	1000.0	1000.000	100.0	V	23.0	11.6	10.3	54.0

6 Photographs of the Test Set-Up

Refer to the test setup file.

Prüfbericht - Nr.: CN25S46W 001
Test Report No.:
Seite 45 von 46
Page 45 of 46

7 List of Test and Measurement Instruments

Equip. no.	Equipment name	Model	Serial no.	Manufacturer	Cal. date	Due date
EMC-S-028	EMI measurement software	EMC32-E+ (10.60.20)	100150	Rohde & Schwarz	N/A	N/A
EMC-C-366	Thermohygrometer	608-H1	2485149174	testo	2025-07-11	2026-07-11
EMC-C-195	EMI test receiver	ESR3	102794	Rohde & Schwarz	2025-08-02	2026-08-02
EMC-C-190	Artificial mains network	ENV432	101514	Rohde & Schwarz	2025-09-02	2026-09-02
EMC-S-032	EMI measurement software	EMC32-MEB (10.60.20)	100697	Rohde & Schwarz	N/A	N/A
EMC-C-155	BiLog antenna	CBL 6112D	40530	Teseq	2025-03-24	2026-09-24
EMC-C-121	Thermohygrometer	608-H1	1241320265	testo	2025-06-05	2026-06-05
EMC-C-066	EMI test receiver	ESCI	100280	Rohde & Schwarz	2025-09-28	2026-09-28
EMC-C-001	3 m semi-anechoic chamber	SAC3	FJ129002	Frankonia	2023-12-03	2026-12-03
EMC-C-175	Preamplifier	EMC051845SE	980612	EMCI Taiwan	2025-07-11	2026-07-11
EMC-C-161	Spectrum analyser	FSV40	101258	Rohde & Schwarz	2025-07-11	2026-07-11
EMC-C-019	Double ridged horn antenna	BBHA 9120 D	9120D-433	Schwarzbeck	2025-02-28	2026-08-28

8 List of Figures

Figure 1: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, sample #1, L line	13
Figure 2: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, sample #1, N line.....	14
Figure 3: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, sample #2, L line	15
Figure 4: Spectral Diagrams, Conducted Emission, 150 kHz – 30 MHz, sample #2, N line.....	16
Figure 5: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Horizontal polarization, sample #1, mode 119	
Figure 6: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Vertical polarization, sample #1, mode 1 .20	
Figure 7: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Horizontal polarization, sample #1, mode 221	
Figure 8: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Vertical polarization, sample #1, mode 2 .22	
Figure 9: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Horizontal polarization, sample #1, mode 323	
Figure 10: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Vertical polarization, sample #1, mode 324	
Figure 11: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Horizontal polarization, sample #2, mode 1	
.....	25
Figure 12: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Vertical polarization, sample #2, mode 126	
Figure 13: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Horizontal polarization, sample #2, mode 2	
.....	27
Figure 14: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Vertical polarization, sample #2, mode 228	
Figure 15: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Horizontal polarization, sample #2, mode 3	
.....	29
Figure 16: Spectral Diagrams, Radiated Emission, 30 MHz – 1000 MHz, Vertical polarization, sample #2, mode 330	
Figure 17: Spectral Diagrams and measurement results, 1 GHz – 18 GHz, Horizontal polarization, sample #1, mode 1	
.....	32
Figure 18: Spectral Diagrams and measurement results, 1 GHz – 18 GHz, Vertical polarization, sample #1, mode 133	
Figure 19: Spectral Diagrams and measurement results, 1 GHz – 18 GHz, Horizontal polarization, sample #1, mode 2	
.....	34
Figure 20: Spectral Diagrams and measurement results, 1 GHz – 18 GHz, Vertical polarization, sample #1, mode 235	
Figure 21: Spectral Diagrams and measurement results, 1 GHz – 18 GHz, Horizontal polarization, sample #1, mode 3	
.....	36
Figure 22: Spectral Diagrams and measurement results, 1 GHz – 18 GHz, Vertical polarization, sample #1, mode 337	
Figure 23: Spectral Diagrams and measurement results, 1 GHz – 18 GHz, Horizontal polarization, sample #2, mode 1	
.....	38
Figure 24: Spectral Diagrams and measurement results, 1 GHz – 18 GHz, Vertical polarization, sample #2, mode 139	
Figure 25: Spectral Diagrams and measurement results, 1 GHz – 18 GHz, Horizontal polarization, sample #2, mode 2	
.....	40
Figure 26: Spectral Diagrams and measurement results, 1 GHz – 18 GHz, Vertical polarization, sample #2, mode 241	
Figure 27: Spectral Diagrams and measurement results, 1 GHz – 18 GHz, Horizontal polarization, sample #2, mode 3	
.....	42
Figure 28: Spectral Diagrams and measurement results, 1 GHz – 18 GHz, Vertical polarization, sample #2, mode 343	

End of test report