

Test Report

Report Number:

F251949E9

Equipment under Test (EUT):

Laser Scanner

LS-R-100

Applicant:

Hexagon Metrology GmbH

Manufacturer:

Hexagon Metrology GmbH



Deutsche
Akkreditierungsstelle
D-PL-17186-01-00

References

- [1] **ANSI C63.10-2020 + Cor. 1-2023 + C63.10a-2024 + Errata to C63.10a-2024***, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
*Remark: This standard is not in the annex of the laboratory yet
- [2] **FCC CFR 47 Part 15**, Radio Frequency Devices
- [3] **558074 D01 15.247 Meas Guidance v05r02 (April 2019)**, GUIDANCE FOR COMPLIANCE MEASUREMENTS ON DIGITAL TRANSMISSION SYSTEM, FREQUENCY HOPPING SPREAD SPECTRUM SYSTEM, AND HYBRID SYSTEM DEVICES OPERATING UNDER SECTION 15.247 OF THE FCC RULES
- [4] **RSS-247, Issue 4 (2025-07)** Digital Transmission Systems, Frequency Hopping Systems and Licence-Exempt Local Area Network Devices in 902-928 MHz, 2400-2483.5 MHz, 5150-5350 MHz, and 5470-5895 MHz bands
- [5] **RSS-Gen, Issue 5 (2018-04) + Amendment 1 (2019-03) + Amendment 2 (2021-02)** General Requirements for Compliance of Radio Apparatus

Test Result

The requirements of the tests performed as shown in the overview (clause 4) were fulfilled by the equipment under test. The complete test results are presented in the following.

“Passed” indicates that the equipment under test conforms with the relevant limits of the testing standard without taking any measurement uncertainty into account as stated in [1]. However, the measurement uncertainty is calculated and shown in this test report.

Tested by:

A blue ink signature of Paul NEUFELD.

Paul NEUFELD
24.07.2026

Signature

Written by:

A blue ink signature of Martin Eppinger.

Martin Eppinger
24.07.2026

Signature

Reviewed and
approved by:

A blue ink signature of Bernward ROHDE.

Bernward ROHDE
24.07.2026

Signature

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The test results herein refer only to the tested sample. NMI TESTLAB GmbH is not responsible for any generalisations or conclusions drawn from these test results concerning further samples. Any modification of the tested samples is prohibited and leads to the invalidity of this test report. Each page necessarily contains the NMI TESTLAB Logo and the TEST REPORT NUMBER.

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1 Identification

1.1 Applicant

Name:	Hexagon Metrology GmbH
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Country:	Germany
Name for contact purposes:	Mr. Christoph WIEST
Phone:	+49 7529 9733838
eMail address:	christoph.wiest@hexagon.com
Applicant represented during the test by the following person:	---

1.2 Manufacturer

Name:	Hexagon Metrology GmbH
Address:	Am Langholz 11, 88289 Waldburg
Country:	Germany
Name for contact purposes:	Mr. Christoph WIEST
Phone:	+49 7529 9733838
eMail address:	christoph.wiest@hexagon.com
Manufacturer represented during the test by the following person:	---

1.3 Test Laboratory

The tests were carried out by: **NMI TESTLAB GmbH formerly PHOENIX TESTLAB GmbH**
Königswinkel 10
32825 Blomberg
Germany

accredited by **Deutsche Akkreditierungsstelle GmbH (DAkkS)** according to DIN EN ISO/IEC 17025:2018. The accreditation is only valid for the scope of accreditation listed in the annex of the certificate D-PL-17186-01-00. FCC Test Firm Designation Number DE0004, FCC Test Firm Registration Number 469623, CAB Identifier DE0003 and ISED# 3469A.

1.4 EUT (Equipment under Test)

Test object: *	Laser Scanner
Model name: *	LS-R-100
Part number: *	LS-R-100#
FCC ID: *	MFFLSR100
IC certification number: *	5782A-LSR100
PMN: *	LS-R-100
HVIN: *	LSR100
FVIN: *	01

	EUT number	
	1 (conducted)	2 (radiated)
Serial number: *	---	S26GK171466
PCB identifier: *	MAIN PCBA LSR100 HW01	MAIN PCBA LSR100 HW01
Hardware version: *	01	01
Software version: *	01	01

* Declared by the applicant

2 EUTs were used for the tests, see Overview for details.

Note: NMI TESTLAB GmbH does not take samples. The samples used for tests are provided exclusively by the applicant.

1.5 Technical Data of Equipment

General EUT data	
Power supply EUT: *	DC by battery
Supply voltage EUT: *	$U_{nom} = 14.4 \text{ V}$ $U_{min} = 10.0 \text{ V}$ $U_{max} = 17.0 \text{ V}$
Temperature range: *	0 °C to + 40°C
Highest internal clock frequency: *	2480 MHz

Ports / Connectors				
Identification	Connector		Length during test	Shielding (Yes / No)
	EUT	Ancillary		
	No ports or connectors			

802.15.4 frequencies	
Channel 11	2405 MHz
Channel 12	2410 MHz
...	...
...	...
Channel 18	2440 MHz
...	...
...	...
Channel 25	2475 MHz
Channel 26	2480 MHz

proprietary radio mode	
Fulfil radio specification: *1	- (proprietary radio mode is based on IEEE 802.15.4)
Radio chip: *1	Silicon Labs EFR32MG24B210F1536IM48
Antenna type: *1	Internal PCB antenna
Antenna name: *1	ANTENNA PCBA LSR100 HW01
Antenna gain: *2	Ant 1: 3.39 dBi (Only one antenna is active simultaneously, Ant 2: 1.11 dBi switched every other transmission)
Antenna connector: *1	i-pex (MHF4)
Type of modulation: *1	O-QPSK
Operating frequency range: *1	2405 – 2480 MHz
Number of channels: *1	16 (5 MHz channel spacing)

*1 declared by the applicant

*2 based on the antenna test report F251949E14 issued by NMI TESTLAB GmbH

1.5.1 Antenna gain

The following antenna gains are based on the antenna report F251949E14 issued by NMI TESTLAB GmbH

	f_{low} 2402 MHz	f_{mid} 2440 MHz	f_{high} 2480 MHz
Ant 1 Gain [dBi]	-1.93	3.39	-0.81
Ant 2 Gain [dBi]	-4.05	1.11	-2.25

1.5.2 Ancillary Equipment / Equipment used for testing

Equipment used for testing	
Laptop*1	Dell Latitude 5420
Software*1	HexPi

*1 Provided by the applicant

Ancillary Equipment	
Rechargeable Batteries	2 x RRC2054

1.6 Dates

Date of receipt of test sample:	20.04.2026
Start of test:	21.04.2026
End of test:	06.05.2026

2 Operational States

2.1 Description of function of the EUT

The LS-R-100 laser scanner is used to measure and capture various workpiece geometries in industrial application. The measurement signals from the laser scanner are transmitted to the receiver over long distances via radio transmission. The measurement results are evaluated using the Hexagon NC Measure program.

The EUT:

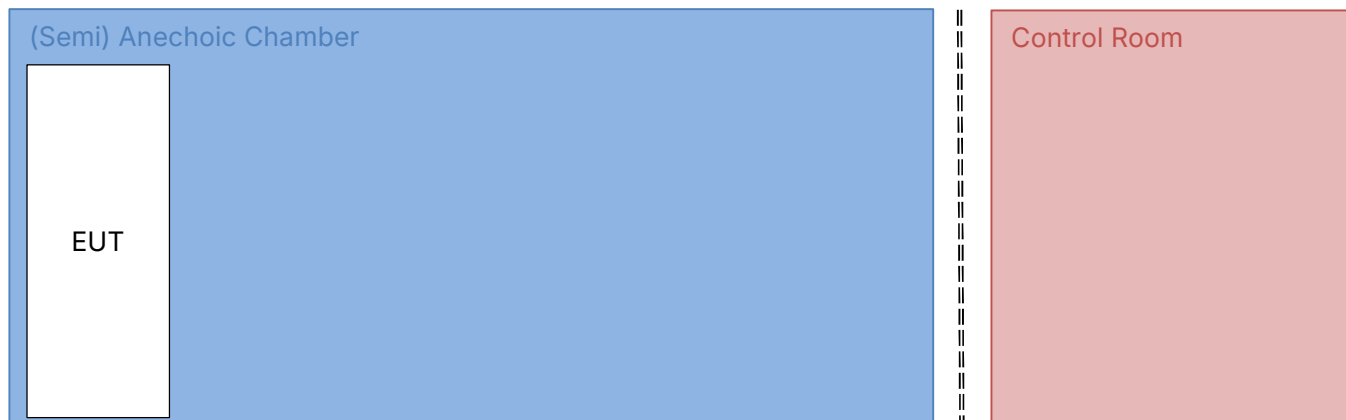


2.1.1 Operation modes

The EUT was connected to a laptop Bluetooth and with the help of the software Hexpi, provided by the applicant, the EUT was set into the respective test modes via hex commands.

Operation mode #	Radio technology	Frequency [MHz]	Channel / Band	Antenna	Modulation / Mode	Data rate	Power setting
1	802.15.4	2405	11	Ant 1	O-QPSK	250 kbps	"p100"
2	802.15.4	2440	18	Ant 1	O-QPSK	250 kbps	"p100"
3	802.15.4	2480	26	Ant 1	O-QPSK	250 kbps	"p100"
4	802.15.4	2405	11	Ant 2	O-QPSK	250 kbps	"p100"
5	802.15.4	2440	18	Ant 2	O-QPSK	250 kbps	"p100"
6	802.15.4	2480	26	Ant 2	O-QPSK	250 kbps	"p100"

2.1.2 Block Diagram (Radiated)

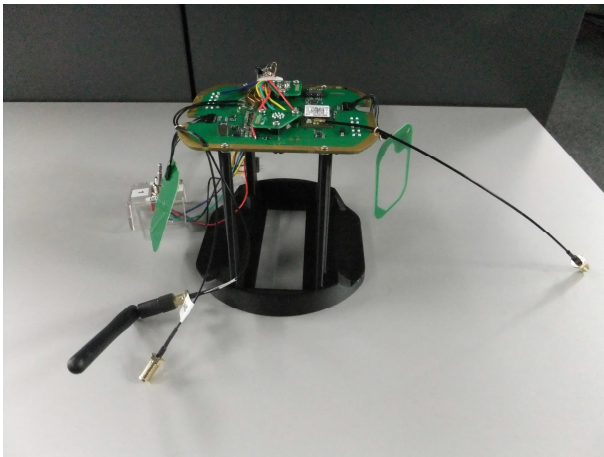


3 Additional Information

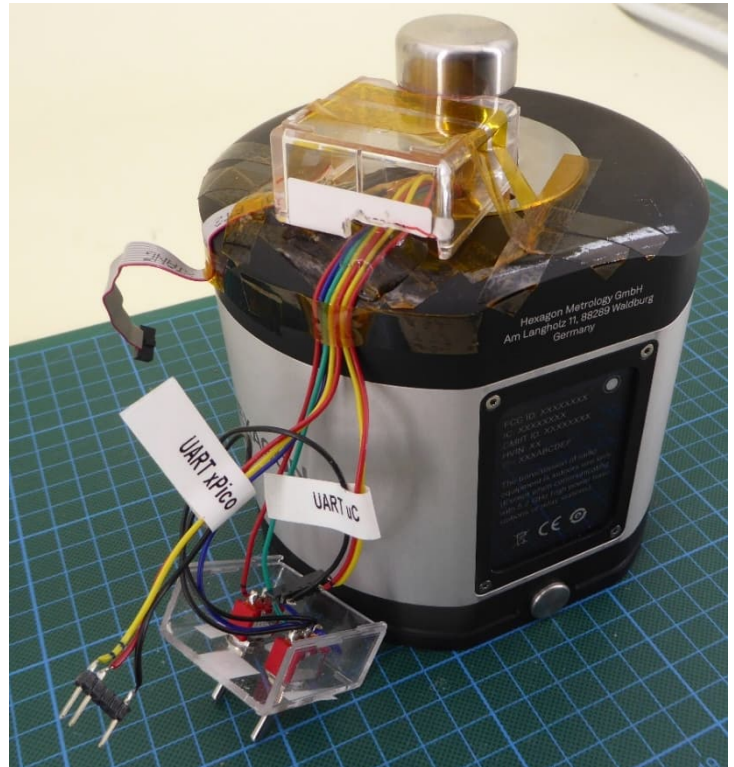
The EUT was not labeled as required by FCC / IC.

As declared by the applicant, after transmitting a packet on one antenna, the next packet shall be transmitted on the other antenna, no simultaneous transmission, no array gain is applicable.

Modified EUTs, as provided by the applicant, were used for all test



Modification – conducted EUT (EUT 1)



Modification – radiated EUT (EUT 2)

4 Overview

Application	Frequency range [MHz]	FCC 47 CFR Part 15 section [2]	RSS-247 [4] RSS-Gen [5]	Tested EUT	Status
Maximum peak conducted output power	2400.0 - 2483.5	15.247 (b) (3), (4)	6.3.2 [4]	1	Passed
Maximum (average) conducted output power	2400.0 - 2483.5	15.247 (b) (3), (4)	6.3.2 [4]	1	Passed
DTS Bandwidth / 99% Bandwidth	2400.0 - 2483.5	15.247 (a) (2)	6.3.1 [4]	1	Passed
Peak Power Spectral Density	2400.0 - 2483.5	15.247 (e)	6.3.1 [4]	1	Passed
Average Power Spectral Density	2400.0 - 2483.5	15.247 (e)	6.3.1 [4]	1	Passed
Band edge compliance	2400.0 - 2483.5	15.247 (d) 15.205 (a) 15.209 (a)	6.6 [4]	1,2	Passed* ²
Maximum unwanted emissions	0.009 – 26,500* ¹	15.247 (d) 15.205 (a) 15.209 (a)	8.9 [5]	2	Passed* ^{1*2}
Antenna Requirement	-	15.203 15.247 (b)	6.8 [5] 6.5 (c) (ii) [4]	-	Passed* ³
Conducted emissions on supply line	0.15 – 30	15.207 (a)	8.8 [5]	Not applicable	-

- *¹: As declared by the applicant the highest radio frequency of the EUT is 2.48 GHz. Therefore, the radiated emission measurement must be carried out up to 10th of the highest radio frequency, in this case 26.5 GHz.
- *²: Pre measurements have shown that antenna 1 is the worst case antenna, therefore all radiated measurements were done with antenna 1 (operation mode #1 - #3)
- *³: See Antenna gain for details

5 Results

5.1 Test setups

5.1.1 Radiated: 9 kHz to 30 MHz

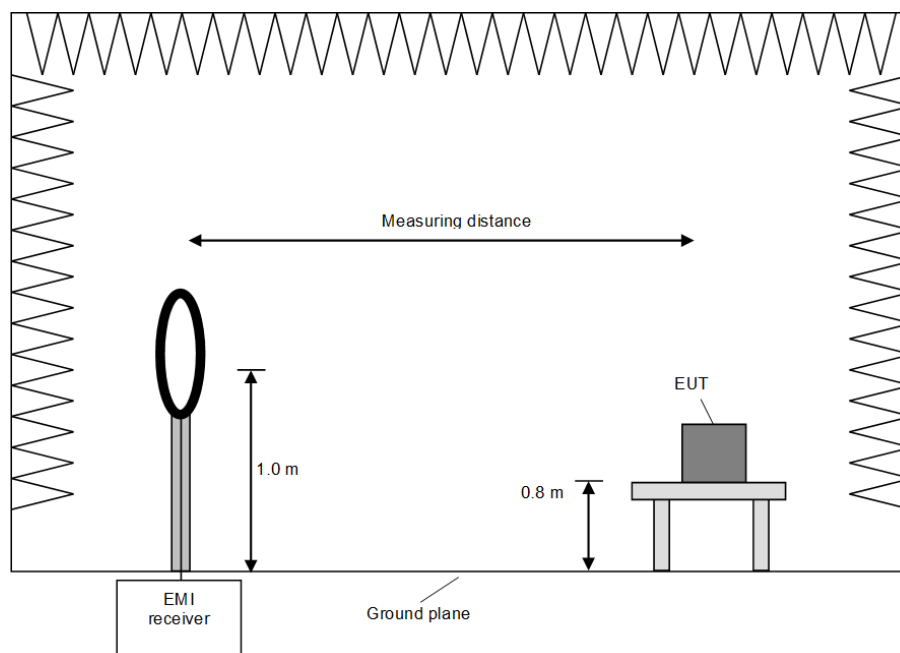
5.1.1.1 Preliminary measurement 9 kHz to 30 MHz

In the first stage a preliminary measurement is performed in a semi-anechoic chamber at a measuring distance of 3 meters. Table-top devices are set up on a non-conducting support with a size of 1 m by 1.5 m and a height of 80 cm. Floor-standing devices are placed directly on the turntable / ground plane. The setup of the equipment under test is in accordance with [1].

The frequency range 9 kHz to 30 MHz is monitored with an EMI receiver while the system and its cables are manipulated to find out the configuration with the maximum emission levels if applicable. The EMI receiver is set to MAX hold mode. The EUT and the measuring antenna are rotated around their vertical axis to find the maximum emission levels.

The resolution bandwidth of the EMI receiver is set to the following values:

Frequency range	Resolution bandwidth
9 kHz to 150 kHz	200 Hz
150 kHz to 30 MHz	9 kHz



Procedure preliminary measurement:

Pre-scans are performed in the frequency range 9 kHz to 150 kHz and 150 kHz to 30 MHz.

The following procedure is used:

- 1) Monitor the frequency range with the measuring antenna facing the EUT and an EUT / turntable azimuth of 0 °.
- 2) Manipulate the system cables to produce the maximum levels of emissions.
- 3) Rotate the EUT by 360 ° to maximize the detected signals.
- 4) Measure the frequencies of the highest detected emissions with a lower span and resolution bandwidth to increase the accuracy and note the frequency values.
- 5) If the EUT is portable or ceiling mounted, repeat steps 1 to 4 with other orientations (x,y,z) of the EUT.
- 6) Rotate the measuring antenna and repeat steps 1 to 5.

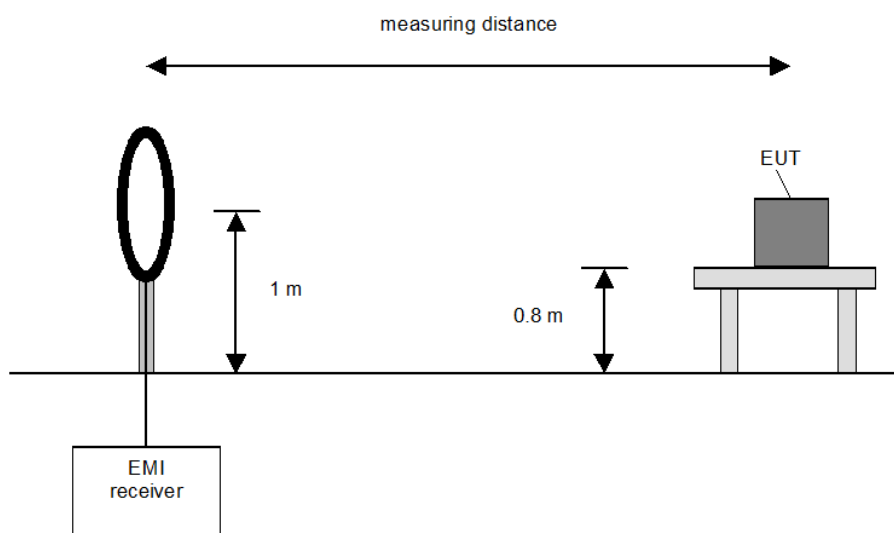
5.1.1.2 Final measurement 9 kHz to 30 MHz

In the second stage a final measurement is performed on an open area test site with no conducting ground plane at a measuring distance of 3 m, 10 m, or 30 m. If the standard requires larger measuring distances for a given frequency, the results are extrapolated according to section 15.31 (f) (2) [2]. The final measurement is performed with an EMI receiver set to Quasi-Peak detector, except for the frequency bands 9 kHz to 90 kHz and 110 kHz to 490 kHz where an Average detector is used according section 15.209 (d) [2].

At the frequencies, which were detected during the preliminary measurements, the final measurement is performed while rotating the EUT and the measuring antenna in the range of 0 ° to 360 ° around their vertical axis until the maximum level value is found.

The resolution bandwidth of the EMI receiver is set to the following values:

Frequency range	Resolution bandwidth	Measuring time
9 kHz to 150 kHz	200 Hz	1 s
150 kHz to 30 MHz	9 kHz	1 s



Procedure final measurement:

The following procedure is used:

- 1) Monitor the selected frequencies from the preliminary measurement with the measuring antenna facing the EUT and an EUT azimuth of 0 °.
- 2) Rotate the EUT by 360 ° to maximize the detected signals.
- 3) Rotate the measuring antenna and repeat steps 1 to 2 until the maximum value is found and note it.
- 4) If the EUT is portable or ceiling mounted, repeat steps 1 to 3 with other orientations (x,y,z) of the EUT.

5.1.2 Radiated: 30 MHz to 1 GHz

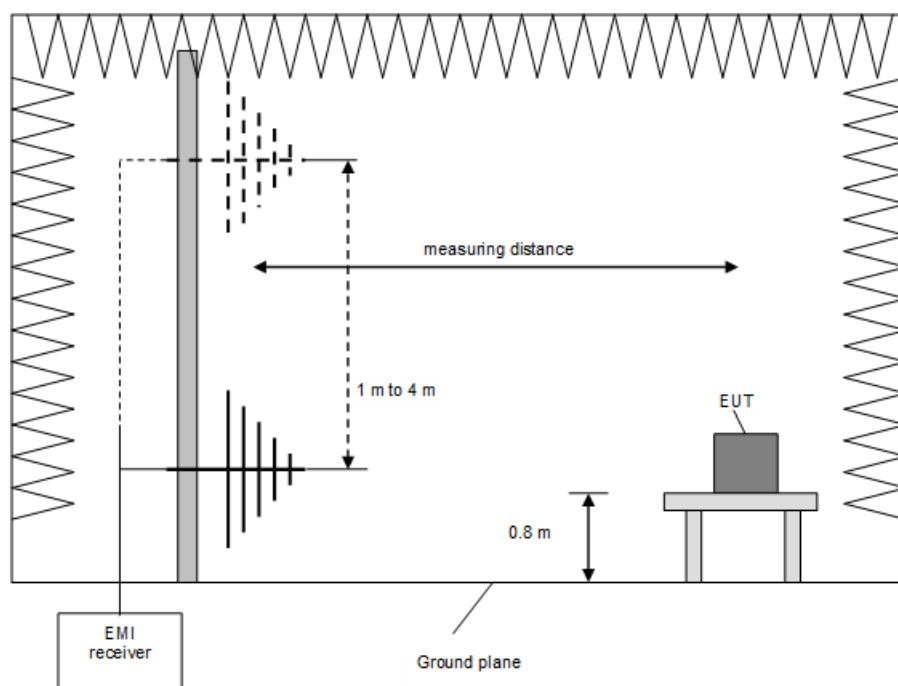
5.1.2.1 Preliminary and final measurement 30 MHz to 1 GHz

The preliminary and final measurements are performed in a semi-anechoic chamber with a metal ground plane at a measuring distance of 3 meters. Table-top devices are set up on a non-conducting support with a size of 1 m by 1.5 m and a height of 80 cm. Floor-standing devices are placed directly on the turntable / ground plane. The setup of the equipment under test is in accordance with [1].

During the tests the EUT is rotated in the range of 0 ° to 360 °, the measuring antenna is set to horizontal and vertical polarization and raised and lowered in the range from 1 m to 4 m to find the maximum level of emissions.

The resolution bandwidth of the EMI receiver is set to the following values:

Test	Frequency range	Step-size	Resolution bandwidth	Measuring time	Detector
Preliminary measurement	30 MHz to 1 GHz	30 kHz	120 kHz	-	Peak Average
Frequency peak search	± 120 kHz	10 kHz	120 kHz	1 s	Peak
Final measurement	30 MHz to 1 GHz	-	120 kHz	1 s	QuasiPeak



Procedure preliminary measurement:

The following procedure is used:

- 1) Set the measuring antenna to 1 m height.
- 2) Monitor the frequency range at horizontal polarization of the measuring antenna and an EUT / turntable azimuth of 0 °.
- 3) Rotate the EUT by 360° to maximize the detected signals.
- 4) Repeat steps 2 to 3 with the vertical polarization of the measuring antenna.
- 5) Increase the height of the measuring antenna for 0.5 m and repeat steps 2 to 4 until the final height of 4 m is reached.
- 6) The highest values for each frequency are saved by the software, including the measuring antenna height and polarization and the turntable azimuth for that value.

Procedure final measurement:

The following procedure is used:

- 1) Select the highest frequency peaks (lowest margin to the limit) for the final measurement.
- 2) The software determines the exact peak frequencies by doing a partial scan with reduced step size of the pre-scan of the selected peaks.
- 3) If the EUT is portable or ceiling mounted, find the worst-case EUT orientation (x,y,z) for the final test.
- 4) The worst-case measuring antenna height is found via varying the height by +/- 0.5 m from the value obtained in the preliminary measurement while monitoring the emission level.
- 5) The worst-case turntable position is found via varying the turntable azimuth by +/- 30° from the value obtained in the preliminary measurement while monitoring the emission level.
- 6) The final measurement is performed at the worst-case measuring antenna height and the worst-case turntable azimuth.
- 7) Steps 2 to 6 are repeated for each frequency peak selected in step 1.

5.1.3 Radiated: 1 GHz to 40 GHz

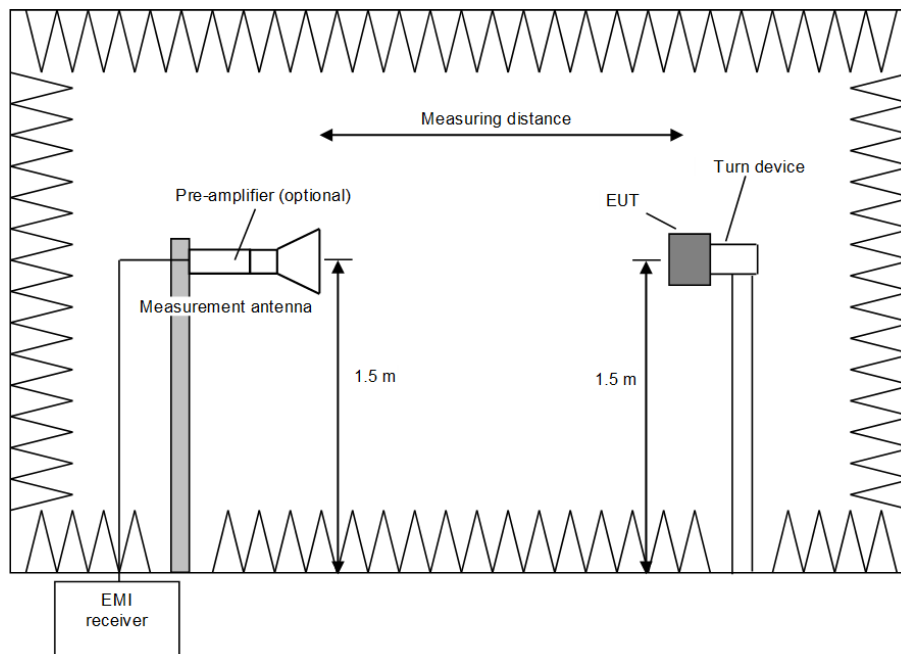
5.1.3.1 Preliminary and final measurement 1 to 40 GHz

The preliminary and final measurements are performed in a fully anechoic chamber at a measuring distance of 3 meters. Table-top devices are set up on a non-conducting turn device at the height of 1.5 m. The setup of the equipment under test is in accordance with [1].

During the tests the EUT is rotated in the range of 0 ° to 360 ° and the measuring antenna is set to horizontal and vertical polarization to find the maximum level of emissions. After these steps, the measurement is repeated after reorientating the EUT in 30 ° steps.

The resolution bandwidth of the EMI receiver is set to the following values:

Test	Frequency range	Step-size	Resolution bandwidth	Measuring time	Detector
Preliminary measurement	1 - 40 GHz	250 kHz	1 MHz	-	Peak Average
Final measurement	1 - 40 GHz	-	1 MHz	100 ms	Peak Average



Procedure preliminary measurement:

The following procedure is used:

- 1) Monitor the frequency range at horizontal polarisation of the measuring antenna and an EUT / turntable azimuth of 0°.
- 2) Rotate the EUT by 360° to maximize the detected signals.
- 3) Repeat steps 1 to 2 with the vertical polarisation of the measuring antenna.
- 4) Repeat steps 1 to 3 with the EUT reorientated by an angle of 30° (60°, 90°, 120° and 150°), according to 6.6.5.4 in [1].
- 5) The highest values for each frequency are saved by the software, including the measuring antenna polarization, the turntable azimuth and the turn device elevation for that value.

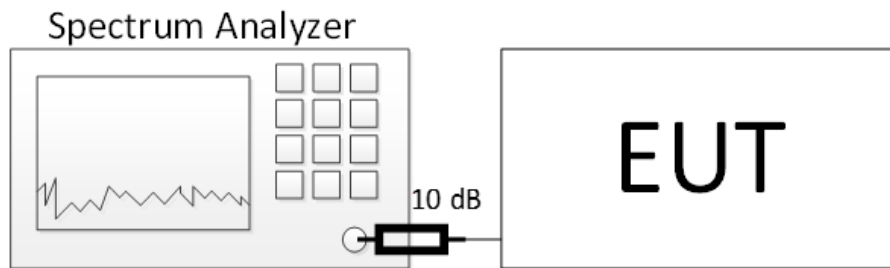
Procedure final measurement:

The following procedure is used:

- 1) Set the turntable and the turn device to the position which leads to the highest emission for the first frequency identified in the preliminary measurements.
- 2) Set the measurement antenna to the polarisation which leads to the highest emission for the first frequency identified in the preliminary measurements.
- 3) Set the spectrum analyser to EMI mode with Peak and Average detector activated.
- 4) The worst-case turntable position is found via varying the turntable azimuth by +/- 30° from the value obtained in the preliminary measurement while monitoring the emission level.
- 5) The final measurement is performed at the worst-case turntable azimuth.
- 6) Repeat steps 1 to 5 for each frequency detected during the preliminary measurements.

5.1.4 Conducted: Antenna port

Test setup (conducted)		
Used	Antenna connector	Comment
☒	Temporary antenna connector	As provided by the applicant
☐	Normal antenna connector	-



The 10 dB external attenuation are considered in all relevant plots

5.2 Duty cycle

5.2.1 Test setup (Duty cycle)

Test setup (Duty cycle)			
Used	Setup	See sub-clause	Comment
☐	Radiated: 1 GHz to 40 GHz	-	-
☒	Conducted: Antenna port	5.1.4	-

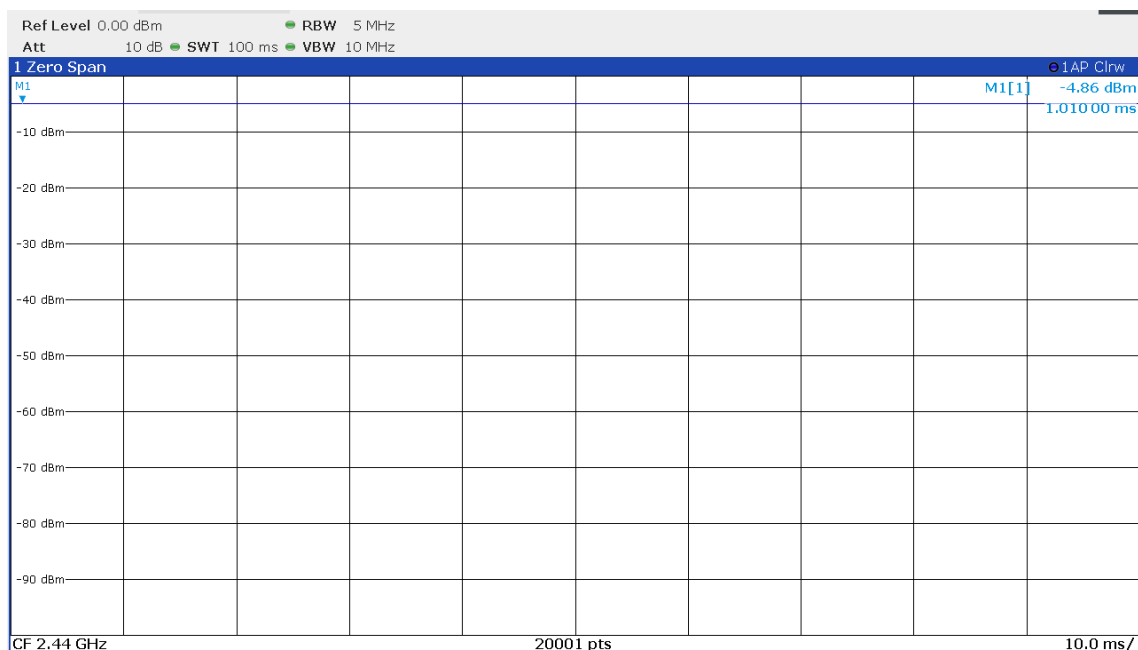
5.2.2 Test method (Duty cycle)

Test method (Duty cycle)				
Used	Sub-Clause [1]	Name of method	Applicability	Comment
☐	11.6. a)	Diode detector	No limitation	-
☒	11.6. b)	Zero span	No limitation	-

5.2.3 Test results (Duty cycle)

Ambient temperature:	23 °C
Relative humidity:	34 %

Date:	24.04.2026
Tested by:	P. NEUFELD



Pre measurements have shown that the Duty Cycle is >98% for all operation modes. Therefore no DCCF is applied.

Test equipment (please refer to chapter 7 for details)
25

5.3 DTS bandwidth

5.3.1 Test setup (DTS bandwidth)

Test setup (DTS bandwidth)			
Used	Setup	See sub-clause	Comment
☐	Radiated: 1 GHz to 40 GHz	-	-
☒	Conducted: Antenna port	5.1.4	-

5.3.2 Test method (DTS bandwidth)

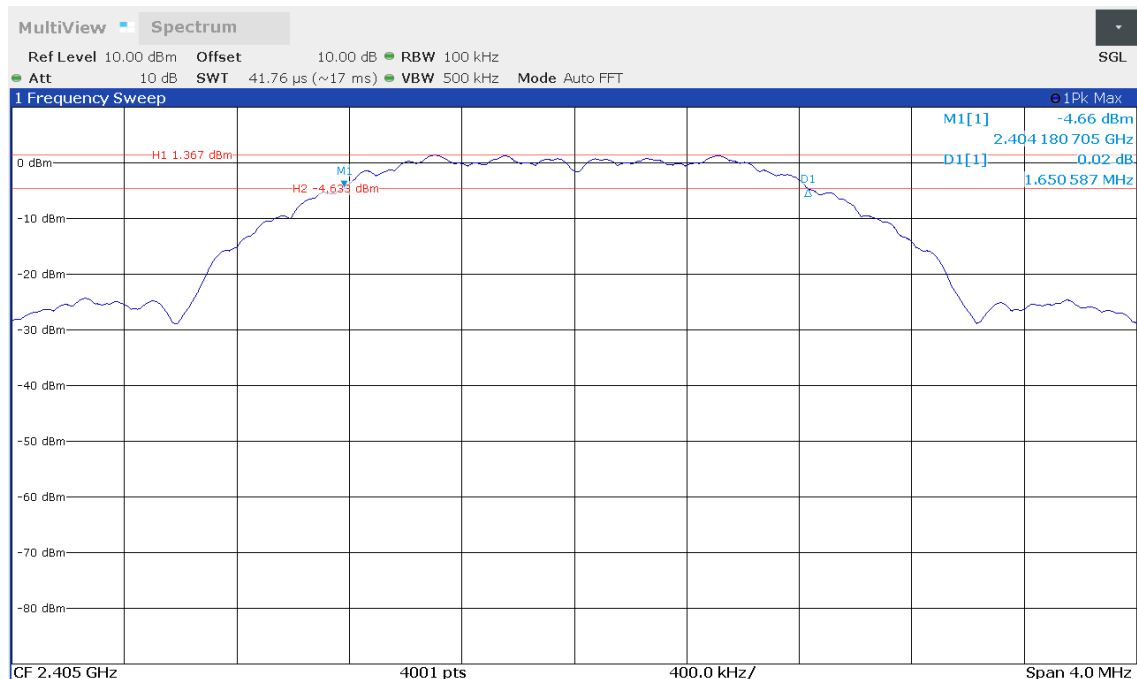
Test method (DTS bandwidth)				
Used	Sub-Clause [1]	Name of method	Applicability	Comment
☒	11.8.1	Option 1	No limitations	-
☐	11.8.2	Option 2	No limitations	6 dB down function

5.3.3 Test results (DTS bandwidth)

Ambient temperature:	23 °C
Relative humidity:	34 %

Date:	24.04.2026
Tested by:	P. NEUFELD

Worst case plot (operation mode 1):



Operation mode #	DTS bandwidth [MHz]	Minimum DTS bandwidth Limit [MHz]
1	1.650587	0.5
2	1.658585	0.5
3	1.653587	0.5
4	1.656583	0.5
5	1.656586	0.5
6	1.660585	0.5

Test result: Passed

Test equipment (please refer to chapter 7 for details)
25

5.4 Occupied bandwidth – power bandwidth (99%)

5.4.1 Test Setup (Occupied bandwidth – power bandwidth (99%))

Test setup (Occupied bandwidth – power bandwidth (99%))			
Used	Setup	See sub-clause	Comment
☐	Radiated: 1 GHz to 40 GHz	-	-
☒	Conducted: Antenna port	5.1.4	-

5.4.2 Test method (Occupied bandwidth – power bandwidth (99%))

Test method (Occupied bandwidth – power bandwidth (99%))				
Used	Sub-Clause [1]	Name of method	Applicability	Comment
☐	6.9.2	Relative measurement procedure	-	n-dB down
☒	6.9.3	Power bandwidth (99%)	*1	99% power function

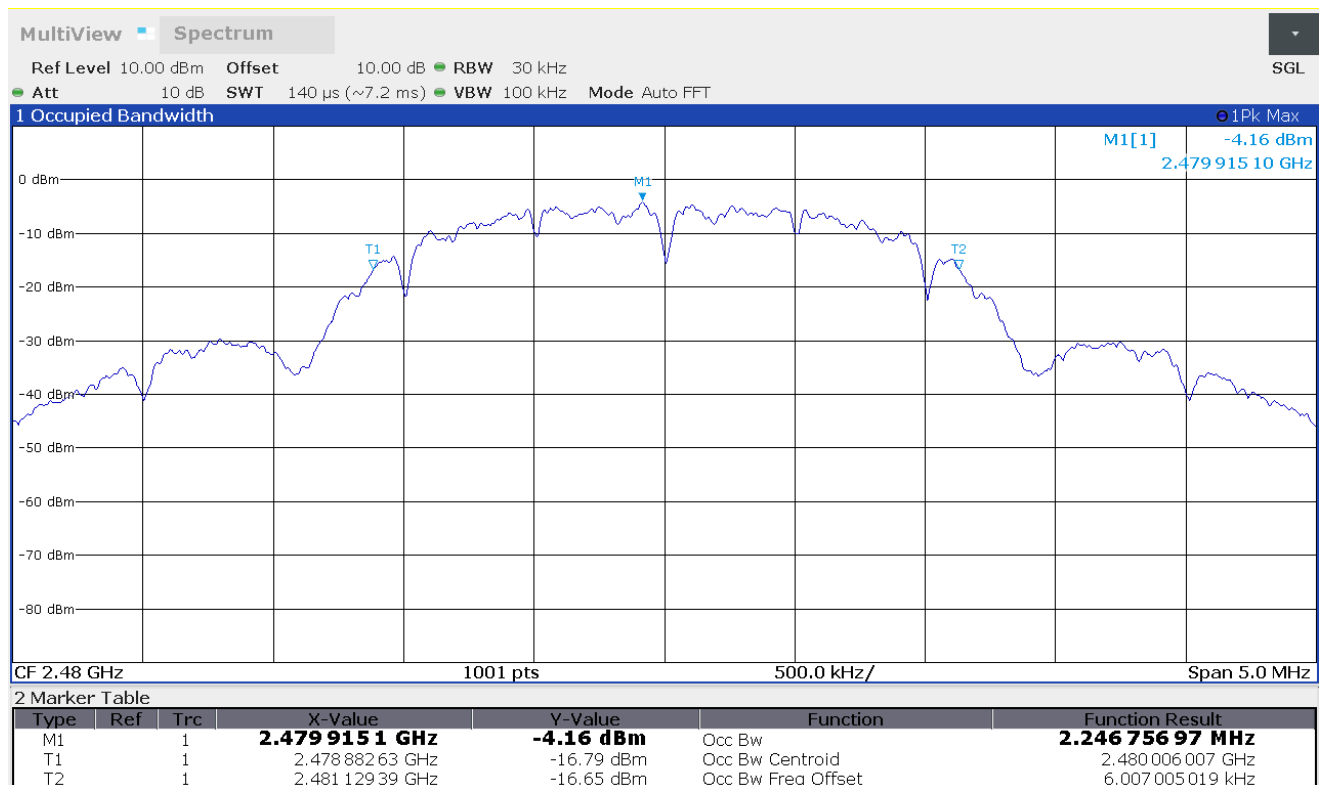
*1 See RSS-GEN Issue 5 (2018-05) sub-clause 6.7 for details.

5.4.3 Test results (Occupied bandwidth – power bandwidth (99%))

Ambient temperature:	23 °C
Relative humidity:	34 %

Date:	24.04.2026
Tested by:	P. NEUFELD

Worst case plot (operation mode 6):



Operation mode #	99% bandwidth [MHz]
1	2.237993
2	2.244700
3	2.246900
4	2.238985
5	2.243880
6	2.246757

Test result: Passed

Test equipment (please refer to chapter 7 for details)
25

5.5 DTS fundamental emission output power

5.5.1 Test setup (DTS fundamental emission output power)

Test setup (DTS fundamental emission output power)			
Used	Setup	See sub-clause	Comment
☐	Radiated: 1 GHz to 40 GHz	-	-
☒	Conducted: Antenna port	5.1.4	-

5.5.2 Test method (DTS fundamental emission output power)

Test method (Maximum peak conducted output power)				
Used	Sub-Clause [1]	Name of method	Applicability	Comment
☒	11.9.1.1	RBW $\geq$ DTS bandwidth	-	Zero span mode
☐	11.9.1.2	PKPM1 Peak power meter method* ¹	-	-

*¹ VBW of the peak power meter has to be $>$ OBW of the fundamental.

Test method (Maximum conducted (average) output power)				
Used	Sub-Clause [1]	Name of method	Applicability	Comment
☒	11.9.2.2.2	Method AVGSA-1	$D \geq 98\%$	-
☐	11.9.2.2.3	Method AVGSA-1A (alternative)	$D \geq 98\%$	-
☐	11.9.2.2.4	Method AVGSA-2	Constant D ($\pm 2\%$)	-
☐	11.9.2.2.5	Method AVGSA-2A (alternative)	Constant D ($\pm 2\%$)	-
☐	11.9.2.2.6	Method AVGSA-3A	-	-
☐	11.9.2.2.7	Method AVGSA-3A (alternative)	-	-
☐	11.9.2.3.1	Method AVGPM	Constant D ($\pm 2\%$)	-
☐	11.9.2.3.2	Method AVGPM-G	-	-

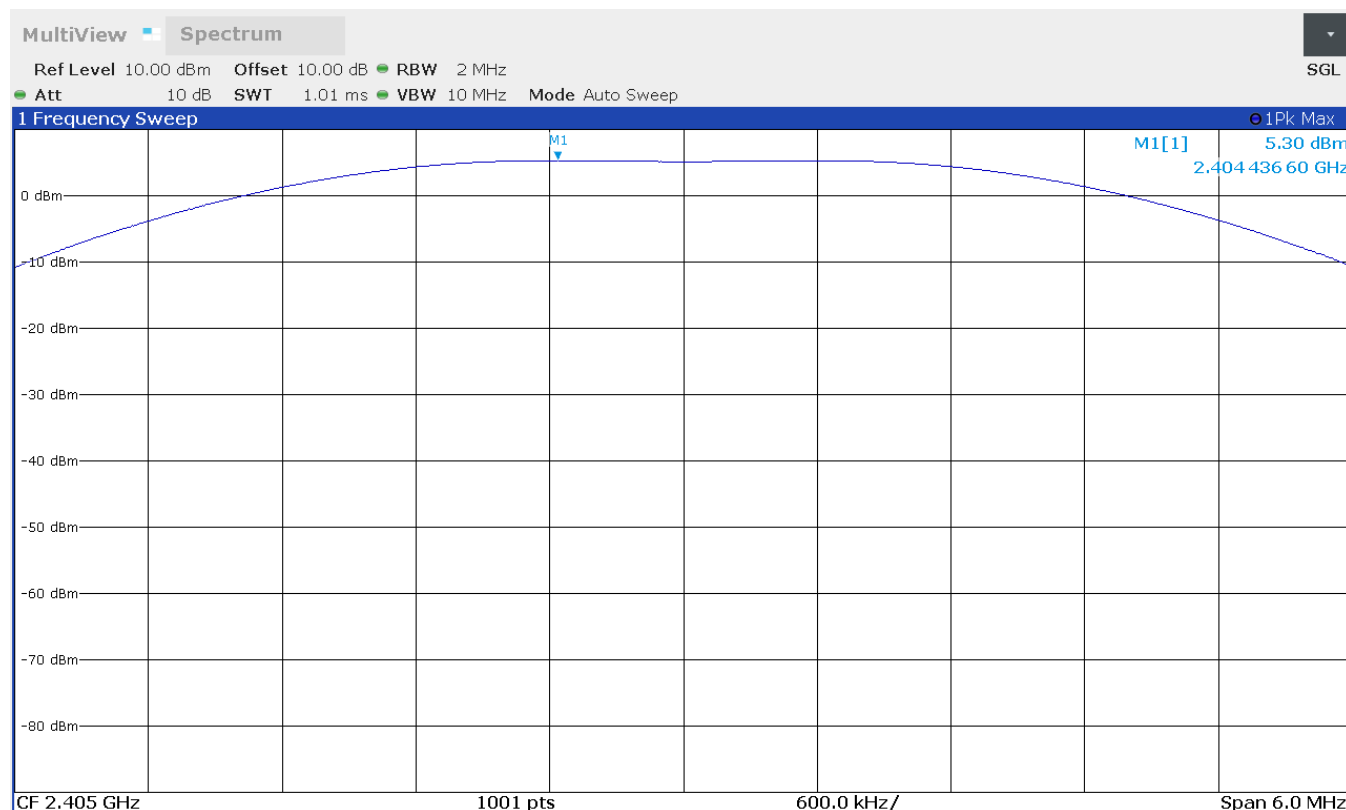
5.5.3 Test results (DTS fundamental emission output power)

Ambient temperature:	23 °C
Relative humidity:	34 %

Date:	24.04.2026
Tested by:	P. NEUFELD

5.5.3.1 Maximum peak conducted output power:

Worst case plot (operation mode 1):

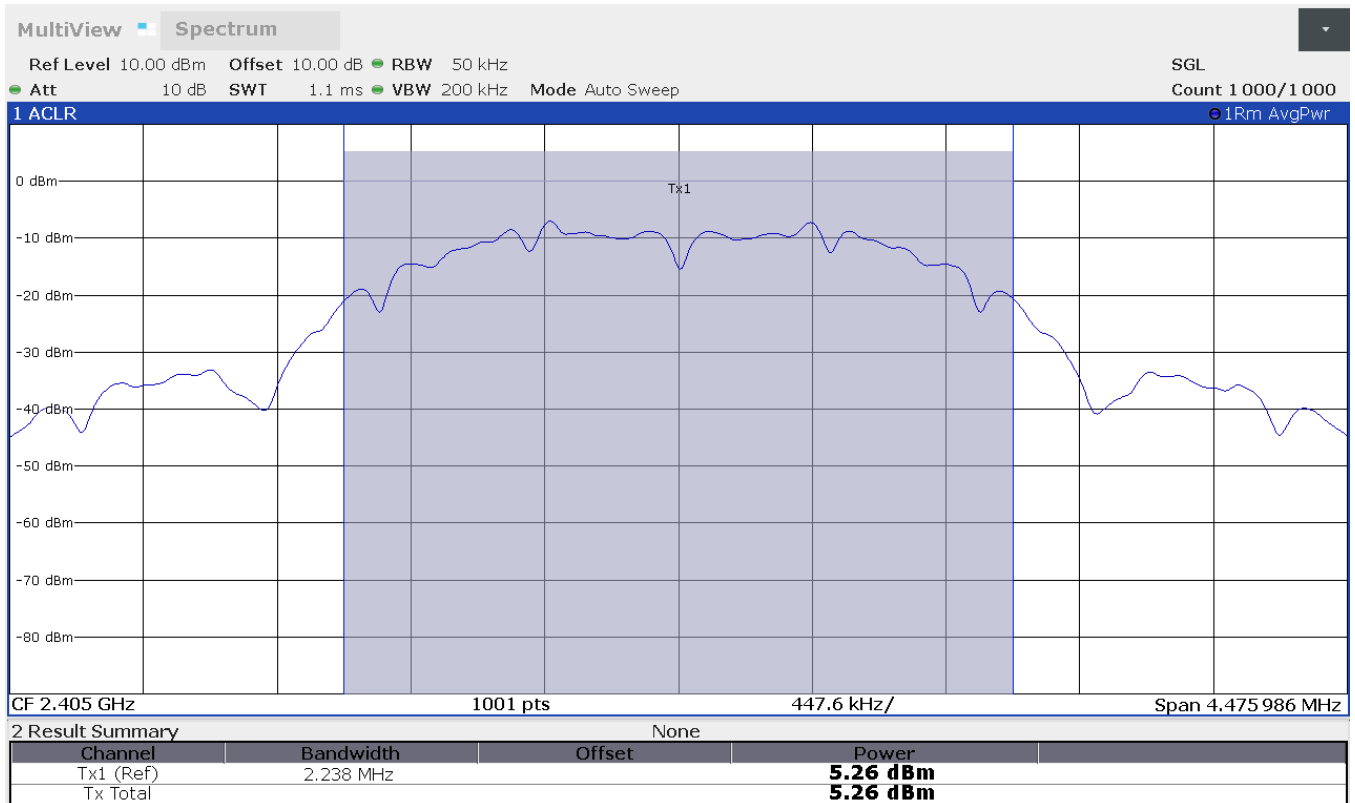


Operation mode	Reading [dBm]	Corr. Fact. [dB]	Result [dBm]	Limit [dBm]	Gain [dBi]	Result [dBm e.i.r.p.]	Limit [dBm e.i.r.p.]
1	5.3	0	5.3	30	-1.93	3.37	36
2	5.1	0	5.1	30	3.39	8.49	36
3	4.9	0	4.9	30	-0.81	4.09	36
4	4.4	0	4.4	30	-4.05	0.35	36
5	4.1	0	4.1	30	1.11	5.21	36
6	3.9	0	3.9	30	-2.25	1.65	36

Test result: Passed

5.5.3.2 Maximum conducted (average) output power

Worst case plot (operation mode 1):



Operation mode	Reading [dBm]	Corr. Fact. + DCCF [dB]	DCCF [dB]	Result [dBm]	Limit [dBm]	Gain [dBi]	Result [dBm e.i.r.p]	Limit [dBm e.i.r.p]
1	5.3	0	0	5.3	30	-1.93	3.37	36
2	5.0	0	0	5.0	30	3.39	8.39	36
3	4.8	0	0	4.8	30	-0.81	3.99	36
4	4.3	0	0	4.3	30	-4.05	0.25	36
5	4.0	0	0	4.0	30	1.11	5.11	36
6	3.8	0	0	3.8	30	-2.25	1.55	36

Test result: Passed

Test equipment (please refer to chapter 7 for details)

25

5.6 DTS maximum power spectral density

5.6.1 Test setup (DTS maximum PSD level in the fundamental emission)

Test setup (DTS fundamental emission output power)			
Used	Setup	See sub-clause	Comment
☐	Radiated: 1 GHz to 40 GHz	-	-
☒	Conducted: Antenna port	5.1.4	-

5.6.2 Test method (DTS maximum PSD level in the fundamental emission)

Test method (Maximum peak power spectral density level in the fundamental emission)				
Used	Sub-Clause [1]	Name of method	Applicability	Comment
☒	11.10.2	Method PKPSD (peak PSD)	No limitations	-

Test method (Maximum average power spectral density level in the fundamental emission)				
Used	Sub-Clause [1]	Name of method	Applicability	Comment
☒	11.10.3	Method AVGPSD-1	$D \geq 98\%$	-
☐	11.10.4	Method AVGPSD-1A (alternative)	$D \geq 98\%$	-
☐	11.10.5	Method AVGPSD-2	Constant D ($\pm 2\%$)	-
☐	11.10.6	Method AVGPSD-2A (alternative)	Constant D ($\pm 2\%$)	-
☐	11.10.7	Method AVGPSD-3	No limitations	-
☐	11.10.8	Method AVGPSD-3A (alternative)	No limitations	-

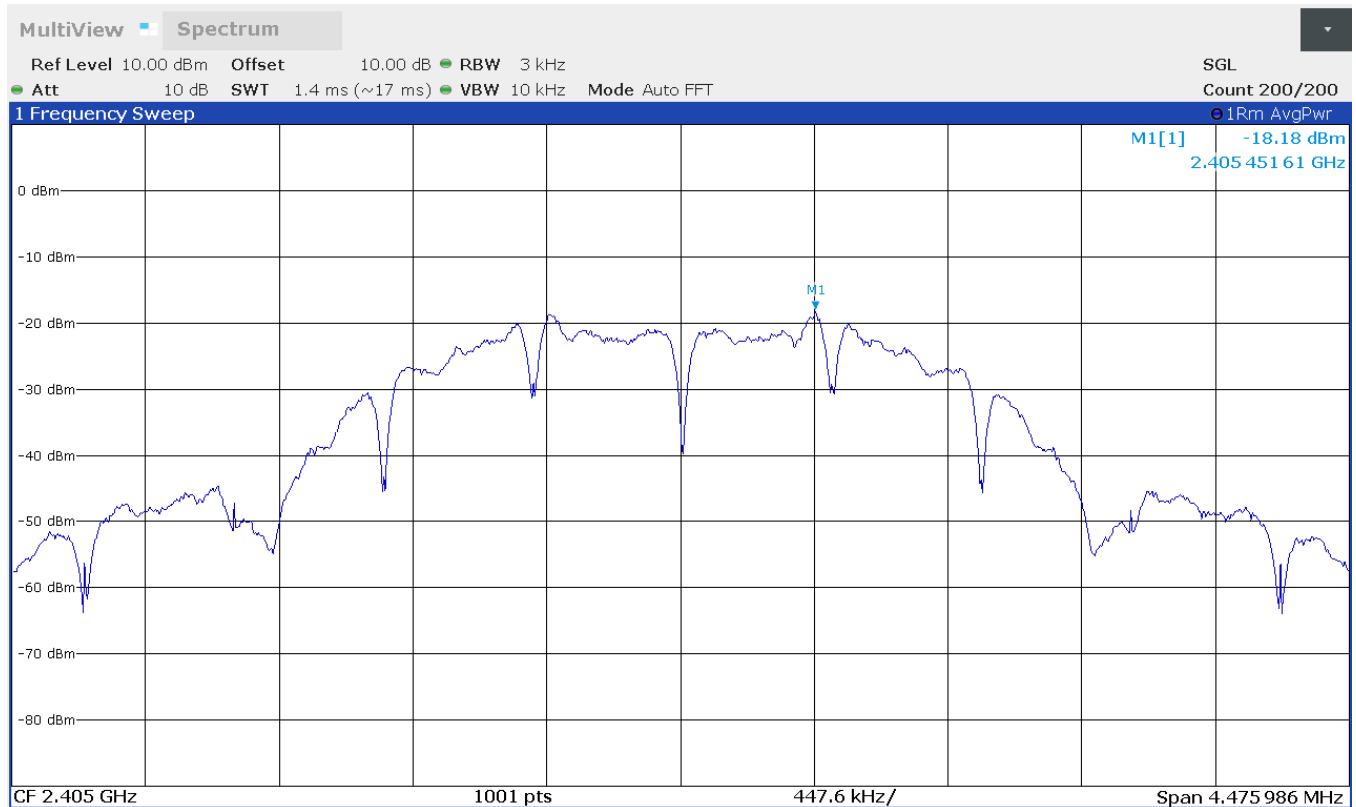
5.6.3 Test results (DTS maximum PSD level in the fundamental emission)

Ambient temperature:	23 °C
Relative humidity:	34 %

Date:	24.04.2026
Tested by:	P. NEUFELD

5.6.3.1 Maximum average PSD

Worst case plot (operation mode 1):

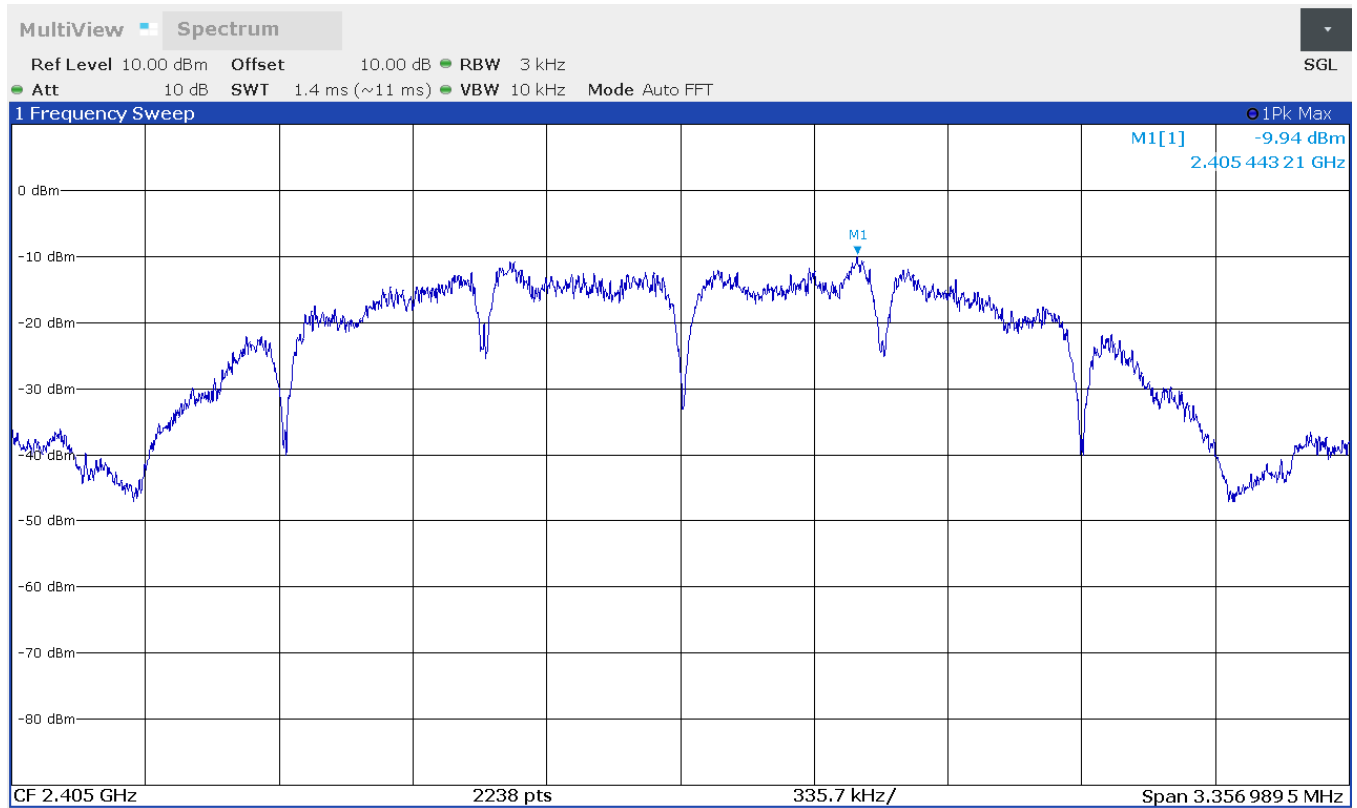


Operation mode	Reading [dBm/3 kHz]	Corr. Fact. [dB]	DCCF [dB]	Result [dBm/3 kHz]	Limit [dBm/3 kHz]
1	-18.2	0	0	-18.2	8.0
2	-18.7	0	0	-18.7	8.0
3	-19.0	0	0	-19.0	8.0
4	-19.5	0	0	-19.5	8.0
5	-19.9	0	0	-19.9	8.0
6	-20.2	0	0	-20.2	8.0

Test result: Passed

5.6.3.2 Maximum peak PSD

Worst case plot (operation mode 1):



Operation mode	Reading [dBm/3 kHz]	Corr. Fact. [dB]	DCCF [dB]	Result [dBm/3 kHz]	Limit [dBm/3 kHz]
1	-9.9	0	0	-9.9	8.0
2	-10.2	0	0	-10.2	8.0
3	-10.4	0	0	-10.4	8.0
4	-10.8	0	0	-10.8	8.0
5	-11.2	0	0	-11.2	8.0
6	-11.4	0	0	-11.4	8.0

Test result: Passed

Test equipment (please refer to chapter 7 for details)
25

5.7 DTS band-edge emission measurements

5.7.1 Test setup (Band edge – unrestricted bands)

Test setup (Band edge – unrestricted bands)			
Used	Setup	See sub-clause	Comment
☐	Radiated: 1 GHz to 40 GHz	-	-
☒	Conducted: Antenna port	5.1.4	-

5.7.2 Test method (Band edge – unrestricted bands)

Test method (Band edge – unrestricted bands)				
Used	Sub-Clause [1]	Name of method	Applicability	Comment
☒	11.11.	20 dBc (Peak)	Peak power	*1
☐	11.11.	30 dBc (Average)	RMS power	*2

*1 As declared in "47 CFR 15.247(d)" In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits

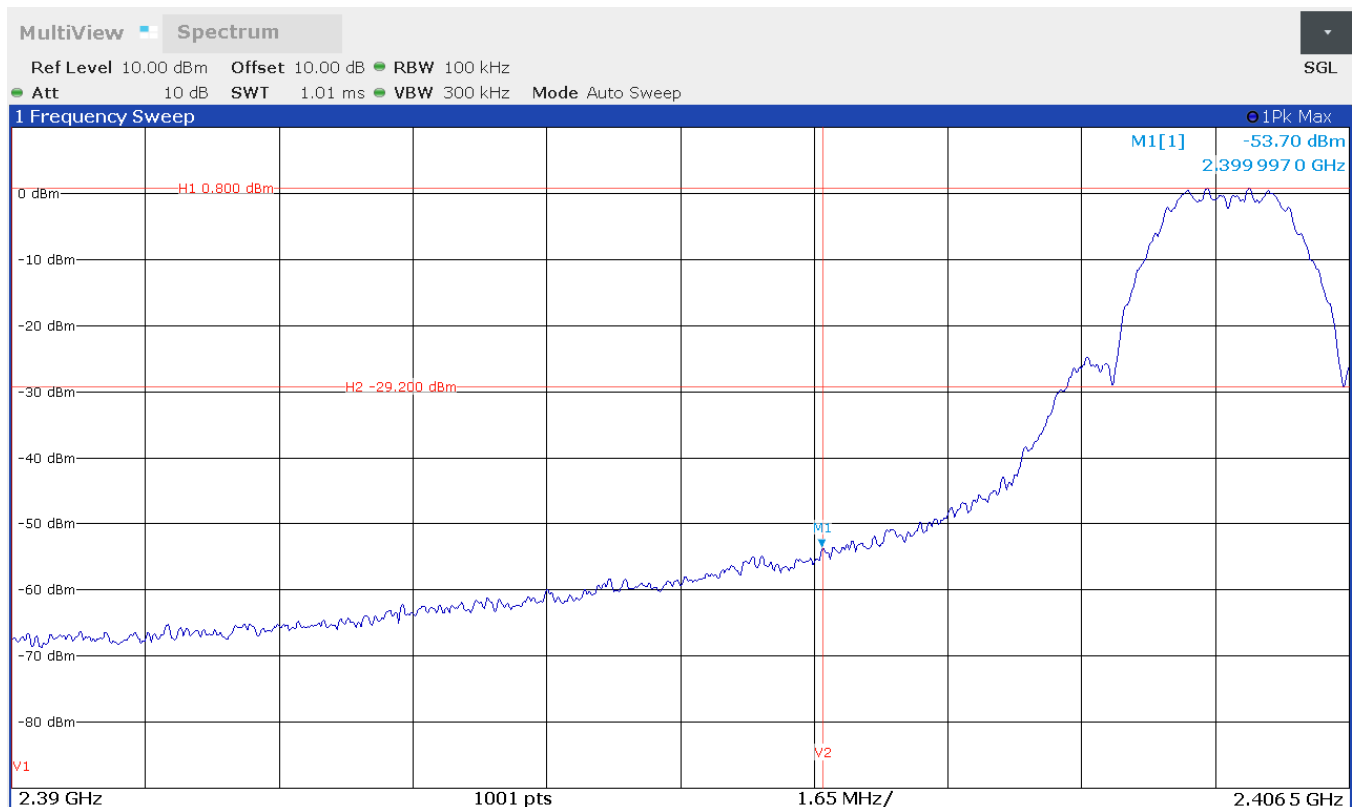
*2 If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

5.7.3 Test results (Band edge – unrestricted bands)

Ambient temperature:	23 °C
Relative humidity:	34 %

Date:	24.04.2026
Tested by:	P. NEUFELD

Worst case plot Lower band edge (operation mode 1):



Lower band edge (operation mode 1):

Frequency [MHz]	Reference [dBm]	Limit [dBm]	Unrestricted band emission [dBm]	Margin [dB]
2405.000	0.8	-29.2	-53.7	24.5

Lower band edge (operation mode 4):

Frequency [MHz]	Reference [dBm]	Limit [dBm]	Unrestricted band emission [dBm]	Margin [dB]
2405.000	1.7	-28.3	-53.5	25.2

Test result: Passed

Test equipment (please refer to chapter 7 for details)
25

5.7.4 Test setup (Band edge – restricted bands)

Test setup (Band edge – restricted bands)			
Used	Setup	See sub-clause	Comment
☒	Radiated: 1 GHz to 40 GHz	5.1.3	
☐	Conducted: Antenna port	-	

5.7.5 Test method (Band edge – restricted bands)

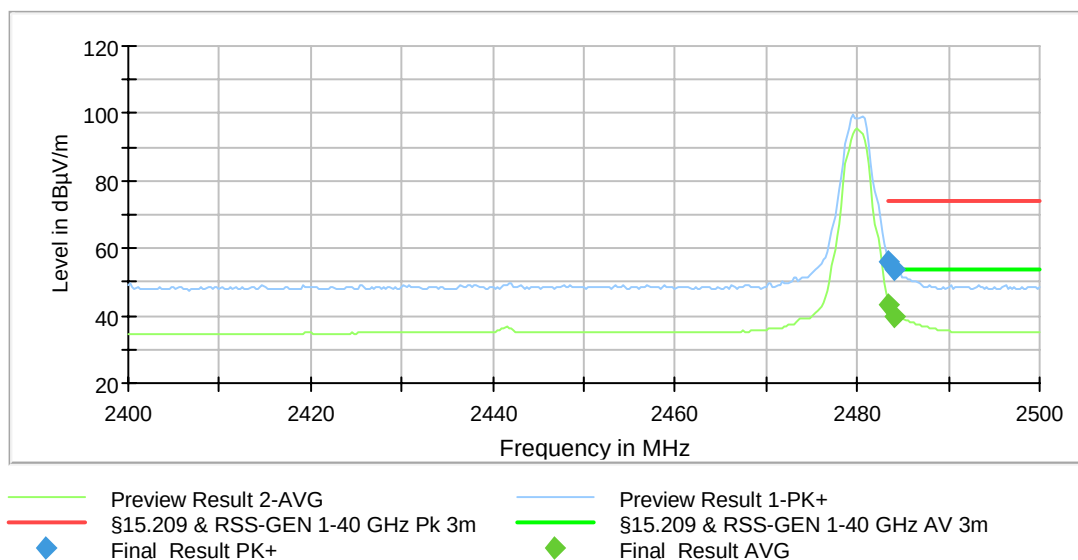
Test method (Band edge – restricted bands)				
Used	Sub-Clause [1]	Name of method	Applicability	Comment
☒	11.12.1	Standard method	No limitations	
☐	11.12.3.1	Marker-delta method		See 6.10.6 [3] 2 MHz from band
☐	11.12.3.2	Integration method		2 MHz from band

5.7.6 Test results (Band edge – restricted bands)

Ambient temperature:	22.2 °C
Relative humidity:	42 %

Date:	29.04.2026
Tested by:	B. ROHDE

Worst case plot upper band edge (operation mode 6):



Upper band edge (operation mode 3):

Frequency [MHz]	MaxPeak [dB(μV/m)]	MaxPeak Limit [dB(μV/m)]	MaxPeak Margin [dB]	Average [dB(μV/m)]	Average Limit [dB(μV/m)]	Average Margin [dB]	Meas. Time [ms]	Bandwidth [kHz]	Pol	Azimuth [°]	Corr. [dB/m]
2483.50000	56.22	74.00	17.78	43.42	54.00	10.58	1000	1000	H	-2.0	33.7
2484.00000	53.74	74.00	20.26	40.03	54.00	13.97	1000	1000	H	-14.0	33.7

Test result: Passed

Test equipment (please refer to chapter 7 for details)
15 – 21, 23, 24

5.8 Maximum unwanted emissions

5.8.1 Test setup (Maximum unwanted emissions)

Test setup (Maximum unwanted emissions)			
Used	Setup	See sub-clause	Comment
☒	Radiated: 9 kHz to 30 MHz / 30 MHz to 1 GHz / 1 GHz to 40 GHz	5.1.1 / 5.1.2 / 5.1.3	-
☐	Conducted: Antenna port	-	-

5.8.2 Test method (Maximum unwanted emissions)

☒ Test method (radiated) see sub-clause 5.1 as described herein

5.8.3 Test results (Maximum unwanted emissions)

5.8.3.1 Test results preliminary measurement 9 kHz to 30 MHz

Ambient temperature:	23.5 °C	Date:	04.05.2026
Relative humidity:	47 %	Tested by:	P. NEUFELD

Position of EUT: For tests for f between 9 kHz to 30 MHz, the EUT was set up on a table with a height of 80 cm. The distance between EUT and antenna was 3 m.

Cable guide: For detailed information of the test setup and the cable guide refer to the pictures in annex A of this test report.

Test record: The measurement value was already corrected by 40 dB/decade as described in 47 CFR 15.31(f)(2) regarding to the measurement distance as requested in 47 CFR 15.209(a)

Remark: All 3 orthogonal planes were tested separately.

Calculations:

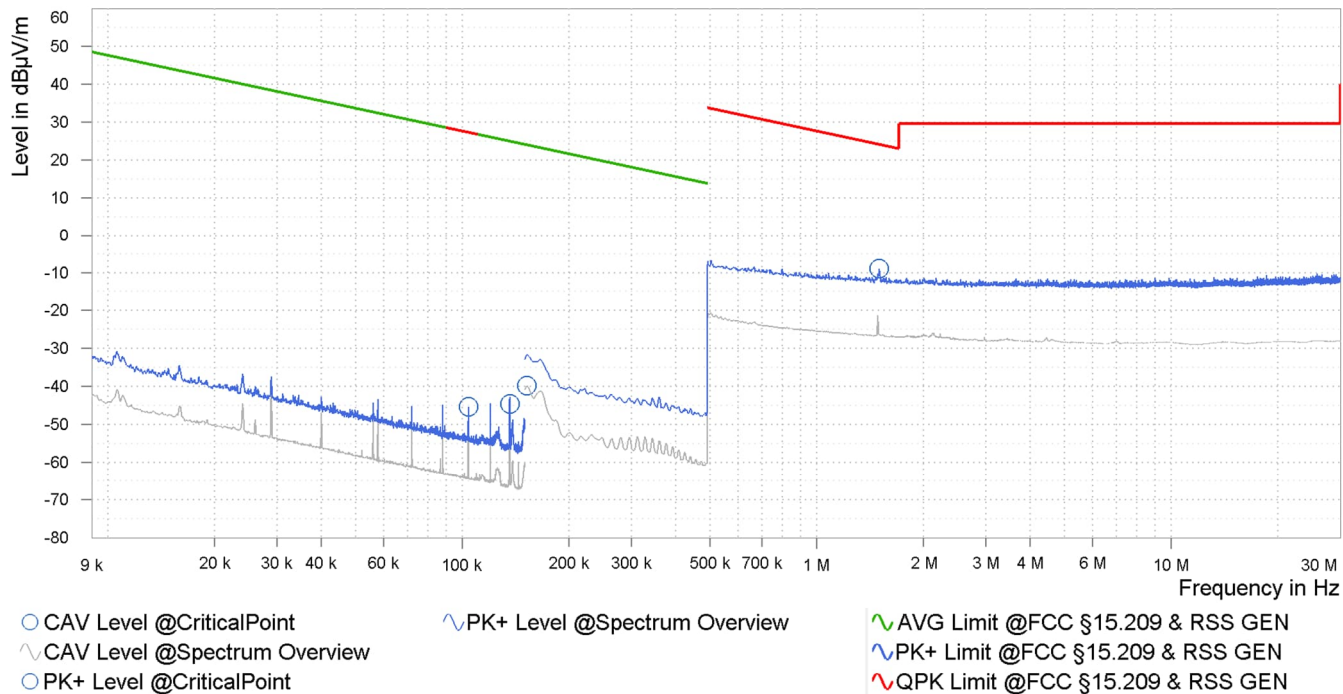
Result @ norm. dist. [dBμV/m] = Reading [dBμV] + AF [dB/m] + Distance corr. fact. [dB]

Result @ norm. dist. [dBμA/m] = Result @ norm. dist. [dBμV/m] – 20 x log₁₀ (377 Ω)

Margin [dB] = Limit [dB(μV|μA)/m] - Result [dB(μV|μA)/m]

Worst case plot:

Spurious emissions from 9 kHz to 30 MHz (operation mode 2 – position 1):



Remark: No emissions closer than 20 dB to the limit, so no final measurement was carried out.

Test equipment (please refer to chapter 7 for details)

5 – 11, 14

5.8.3.2 Test results (30 MHz – 1 GHz)

Ambient temperature:	23.5 °C
Relative humidity:	47 %

Date:	04.05.2026
Tested by:	P. NEUFELD

Position of EUT: For tests for f between 30 MHz to 1 GHz, the EUT was set up on a table with a height of 80 cm. The distance between EUT and antenna was 3 m.

Cable guide: For detailed information of test setup and the cable guide refer to the pictures in annex A of this test report.

Test record: Plots for each frequency range are submitted below.

Remark: All 3 orthogonal planes were tested separately.

Calculations:

Result [dBμV/m] = Reading [dBμV] + Correction [dB/m]

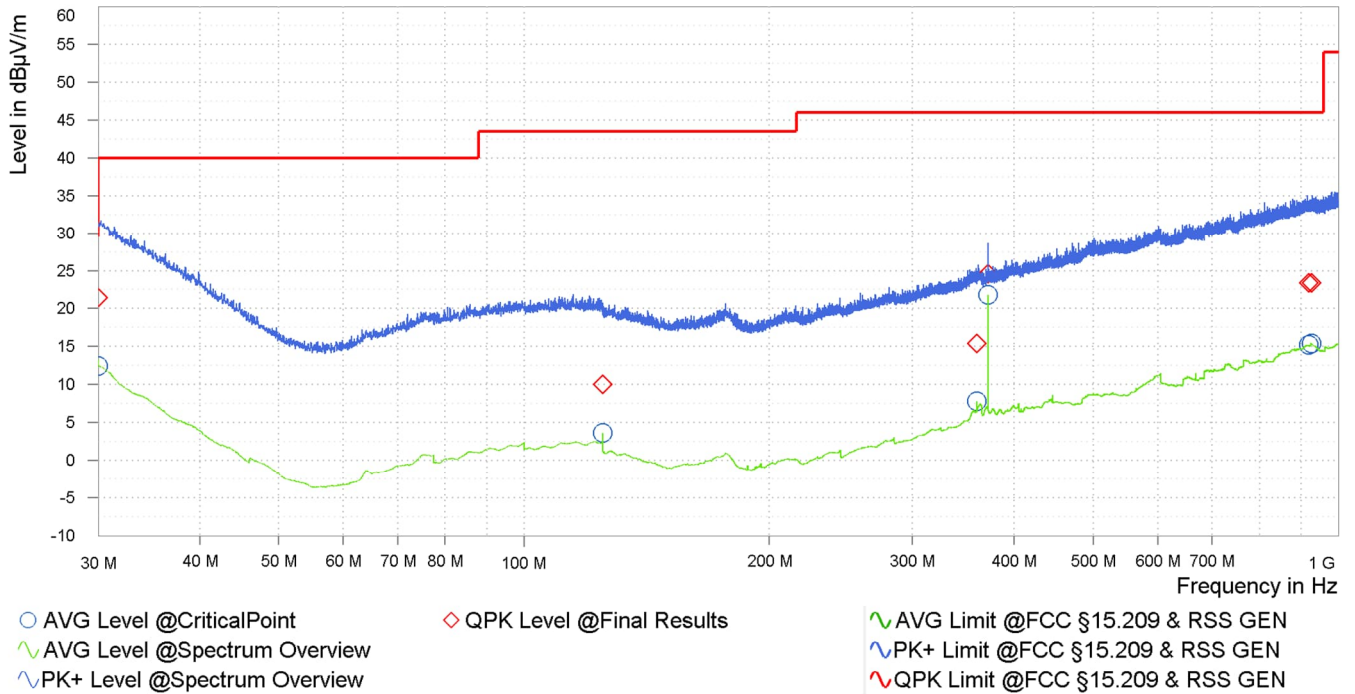
Correction [dB/m] = AF [dB/m] + Cable attenuation [dB] + optional preamp gain [dB]

Margin [dB] = Limit [dBμV/m] - Result [dBμV/m]

The measured points and the limit line in the following diagram refer to the standard measurement of the emitted interference in compliance with the above-mentioned standard. The measured points marked with "◇" are the measured results of the standard subsequent measurement in a semi-anechoic chamber.

Worst case plot:

Spurious emissions from 30 MHz to 1 GHz (operation mode 2 – position 2):



Result tables:

(Operation mode 1):

Frequency [MHz]	Result (QP) [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Correction [dB/m]	Pol. (H/V)	Azimuth [deg]	Height [m]
34.500	17.06	40.00	22.94	23.86	V	103	1.28
64.710	6.06	40.00	33.94	13.53	H	259	2.07
125.010	9.33	43.50	34.17	17.11	V	13	2.56
126.480	8.91	43.50	34.59	17.05	V	319	2.24
371.280	24.44	46.00	21.56	20.87	V	149	2.40
926.760	23.29	46.00	22.71	29.81	H	177	2.01

(Operation mode 2):

Frequency [MHz]	Result (QP) [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Correction [dB/m]	Pol. (H/V)	Azimuth [deg]	Height [m]
30.000	21.44	40.00	18.56	26.66	V	133	3.76
125.010	10.01	43.50	33.49	17.11	V	121	1.88
360.030	15.42	46.00	30.58	20.62	V	187	2.35
371.280	24.56	46.00	21.44	20.87	V	177	2.06
919.260	23.34	46.00	22.66	29.80	V	-3	3.95
927.750	23.38	46.00	22.62	29.81	V	29	4.02

(Operation mode 3):

Frequency [MHz]	Result (QP) [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Correction [dB/m]	Pol. (H/V)	Azimuth [deg]	Height [m]
30.120	21.01	40.00	18.99	26.59	V	103	1.30
125.010	10.68	43.50	32.82	17.11	H	167	2.70
360.030	15.39	46.00	30.61	20.62	V	312	2.59
371.280	24.60	46.00	21.40	20.87	V	367	2.20
917.610	23.46	46.00	22.54	29.84	V	71	1.07
926.340	23.32	46.00	22.68	29.81	V	106	1.45

Test result: Passed

Test equipment (please refer to chapter 7 for details)
5 – 13

5.8.3.3 Test results (radiated 1 GHz to 40 GHz)

Ambient temperature:	23 °C
Relative humidity:	52 %

Date:	05/06.05.2026
Tested by:	M. EPPINGER

Position of EUT: For tests for f between 1 GHz and the 10th harmonic, the EUT was set-up on a positioner device with a height of 150 cm. The distance between EUT and antenna was 3 m.

Cable guide: For detailed information of test setup and the cable guide refer to the pictures in annex A of this test report.

Test record: Plots for each frequency range are submitted below.

Remark: -

Calculation:

Max Peak [dBμV/m] = Reading [dBμV] + Correction [dB/m]

Average [dBμV/m] = Reading [dBμV] + Correction [dB/m]

Correction [dB/m] = AF [dB/m] + Cable attenuation [dB] + optional preamp gain [dB] + DCCF* [dB]
* (if applicable – only for Average values, that are fundamental related)

Margin [dB] = Limit [dBμV/m] – Max Peak | Average [dBμV/m]

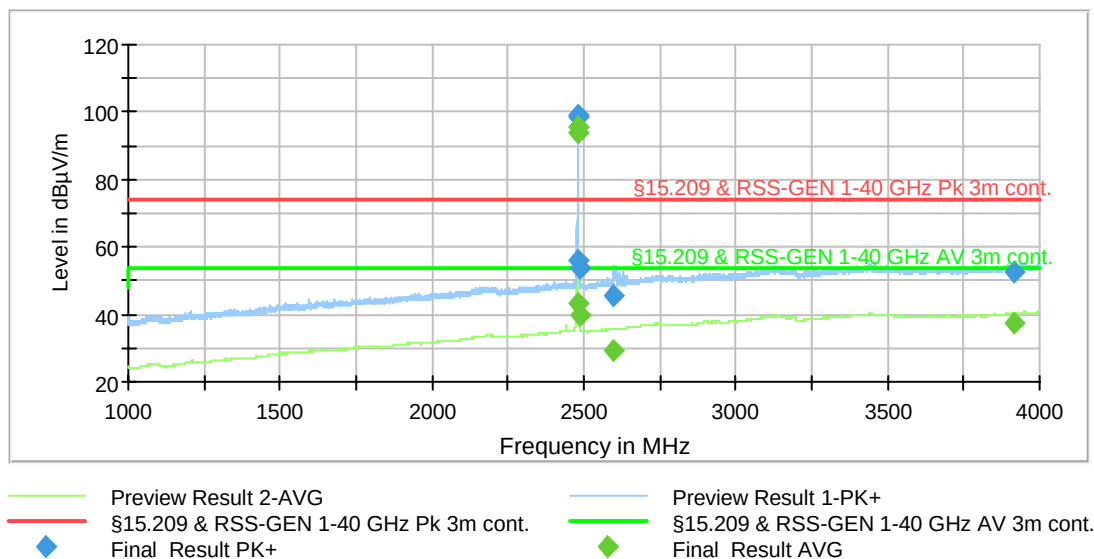
The curves in the diagram only represent the maximum measured value for each frequency point of all preliminary measurements, which were carried out with various EUT and antenna positions.

The top measured curve represents the peak measurement. The measured points marked with "◇" are frequency points for the final peak detector measurement. These values are indicated in the following table.

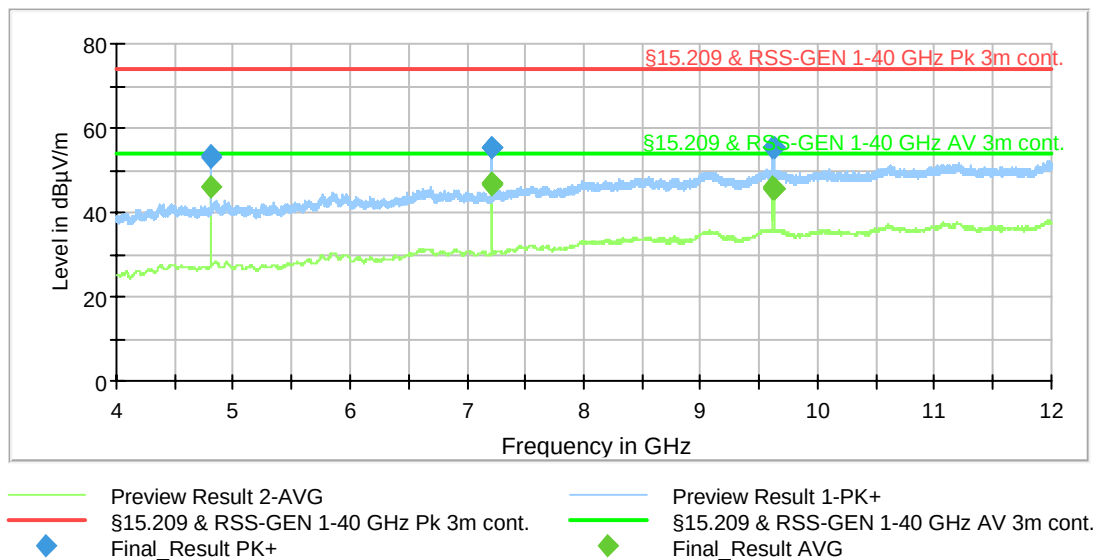
The bottom measured curve represents the average measurement. The measured points marked with "◇" are frequency points for the final average detector measurement.

Worst case plots:

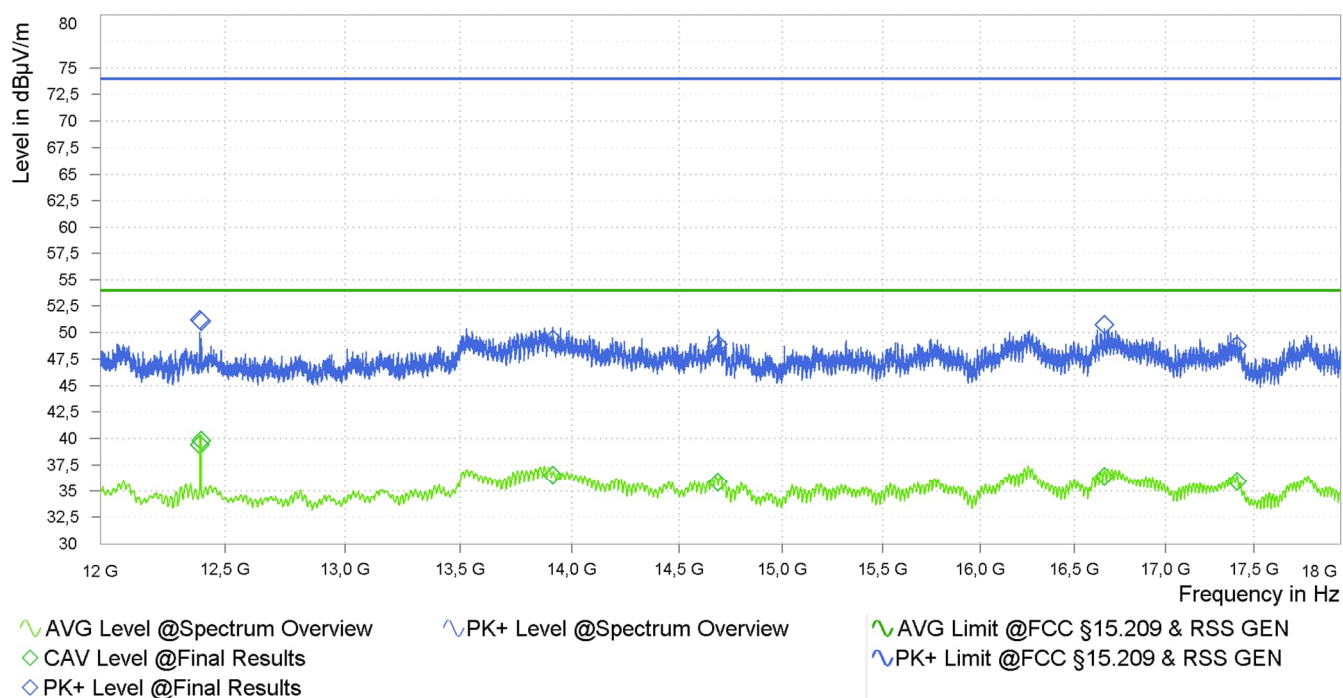
Spurious emissions from 1 GHz to 4 GHz (operation mode 3):



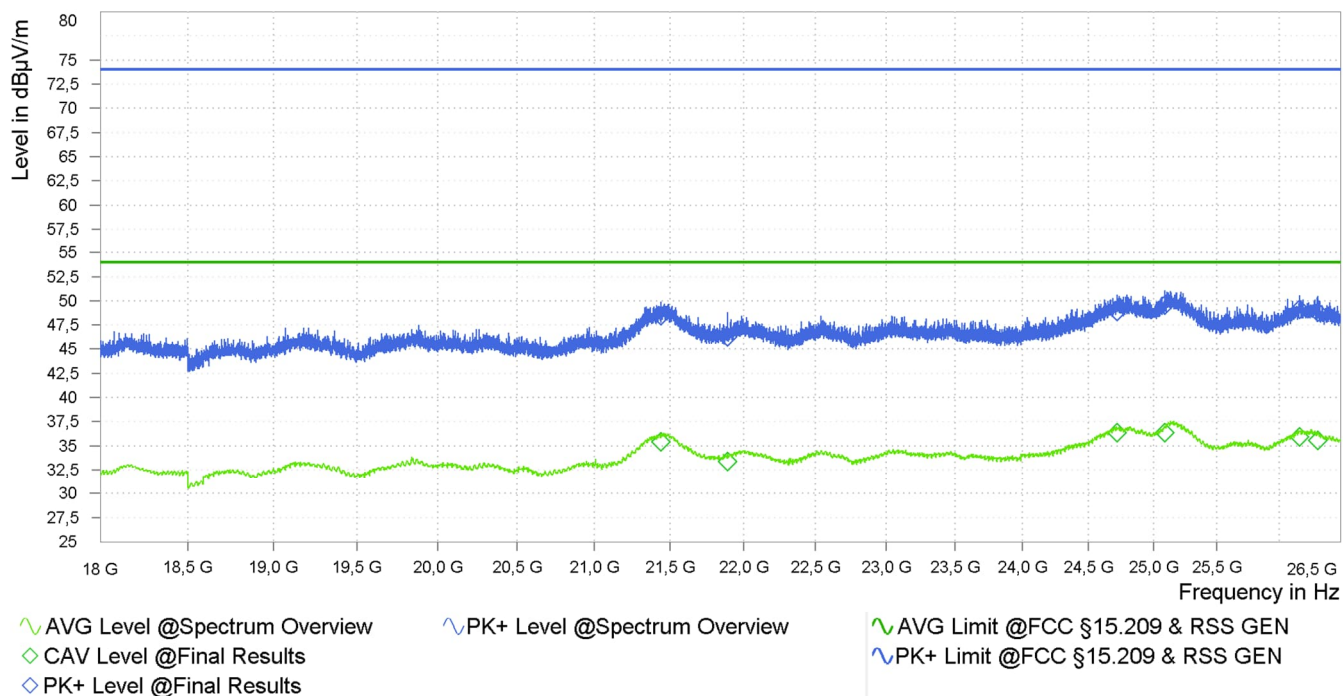
Spurious emissions from 4 GHz to 12 GHz (operation mode 1):



Spurious emissions from 12 GHz to 18 GHz (operation mode 3):



Spurious emissions from 18 GHz to 26.5 GHz (operation mode 3):



Result tables:

Operation mode 1:

Frequency [MHz]	Pk Level [dB(μV/m)]	Pk Limit [dB(μV/m)]	Pk Margin [dB]	AV Level [dB(μV/m)]	AV Limit [dB(μV/m)]	AV Margin [dB]	Corr. [dB/m]	Pol [H/V]	Elevation [deg]	Azimuth [deg]	Restr. Band Y/N
2404.500	96.85	Fund.		91.25	Fund.		33.60	H	0	6	-*
2405.000	96.34	Fund.		93.13	Fund.		33.60	H	0	8	-*
3901.000	51.73	74.00	22.27	37.21	54.00	16.79	38.10	V	30	14	-*
4809.000	53.27	74.00	20.73	45.97	54.00	8.03	-2.50	V	0	272	-*
4811.000	53.19	74.00	20.81	45.98	54.00	8.02	-2.50	V	0	275	-*
7213.250	55.18	74.00	18.82	46.59	54.00	7.41	4.00	H	0	8	-*
7213.500	55.39	74.00	18.61	47.17	54.00	6.83	4.00	H	0	2	-*
7216.500	55.25	74.00	18.75	46.95	54.00	7.05	8.30	H	0	2	-*
9617.750	55.58	74.00	18.42	45.77	54.00	8.23	8.30	V	150	200	-*
9618.000	55.24	74.00	18.76	45.90	54.00	8.10	8.30	V	150	202	-*
9622.000	55.40	74.00	18.60	45.75	54.00	8.25	8.30	V	150	204	-*
9622.250	55.48	74.00	18.52	45.71	54.00	8.29	8.20	V	150	203	-*
12074.000	47.38	74.00	26.62	35.13	54.00	18.87	21.55	V	30	41	-*
13535.500	49.24	74.00	24.76	36.60	54.00	17.40	22.60	H	120	175	-*
13856.750	49.81	74.00	24.19	36.81	54.00	17.19	22.84	V	120	320	-*
16271.000	49.12	74.00	24.88	36.65	54.00	17.35	26.78	V	90	17	-*
16748.000	49.34	74.00	24.66	36.56	54.00	17.44	26.36	H	90	334	-*
17365.250	48.77	74.00	25.23	35.77	54.00	18.23	27.48	V	30	235	-*
21410.750	48.16	74.00	25.84	35.30	54.00	18.70	14.50	H	0	71	-*
21611.250	47.07	74.00	26.93	34.15	54.00	19.85	14.46	H	0	21	-*
22511.750	46.53	74.00	27.47	33.71	54.00	20.29	14.90	H	90	288	-*
24727.250	49.09	74.00	24.91	36.32	54.00	17.68	15.43	H	0	339	-*
25126.750	49.53	74.00	24.47	36.86	54.00	17.14	15.33	H	0	-9	-*
26207.250	48.55	74.00	25.45	35.79	54.00	18.21	15.29	H	0	274	-*

* All results were below the stricter limits for the restricted bands. Therefore, the indication is omitted.

Operation mode 2:

Frequency [MHz]	Pk Level [dB(μV/m)]	Pk Limit [dB(μV/m)]	Pk Margin [dB]	AV Level [dB(μV/m)]	AV Limit [dB(μV/m)]	AV Margin [dB]	Corr. [dB/m]	Pol [H/V]	Elevation [deg]	Azimuth [deg]	Restr. Band Y/N
2440.000	102.41	Fund.		99.22	Fund.		34.00	H	0	355	-*
2440.500	103.10	Fund.		97.53	Fund.		34.00	H	0	354	-*
3904.750	52.03	74.00	21.97	37.30	54.00	16.70	38.10	V	150	34	-*
4879.000	50.27	74.00	23.73	42.40	54.00	11.60	-2.00	V	150	248	-*
7321.5000	51.66	74.00	22.34	42.60	54.00	11.40	4.30	H	0	3	-*
9762.000	55.05	74.00	18.95	45.79	54.00	8.21	7.20	V	0	342	-*
9762.250	54.03	74.00	19.97	44.27	54.00	9.73	7.20	V	120	206	-*
12197.250	48.60	74.00	25.40	35.58	54.00	18.42	20.71	V	120	57	-*
12202.750	50.69	74.00	23.31	39.25	54.00	14.75	20.67	V	30	149	-*
13897.000	49.48	74.00	24.52	36.72	54.00	17.28	22.95	V	120	362	-*
14047.750	49.23	74.00	24.77	35.93	54.00	18.07	23.00	V	120	122	-*
16251.500	49.28	74.00	24.72	36.79	54.00	17.21	26.88	H	150	12	-*
16702.000	49.20	74.00	24.80	36.52	54.00	17.48	26.39	H	90	114	-*
21521.000	47.84	74.00	26.16	35.16	54.00	18.84	14.55	V	0	356	-*
23481.000	46.25	74.00	27.75	33.76	54.00	20.24	15.15	H	120	353	-*
24583.750	48.33	74.00	25.67	35.55	54.00	18.45	15.29	H	90	356	-*
24881.750	48.61	74.00	25.39	35.87	54.00	18.13	15.49	V	150	179	-*
25209.250	49.38	74.00	24.62	36.46	54.00	17.54	15.29	V	60	5	-*
26141.000	48.35	74.00	25.65	35.78	54.00	18.22	15.29	H	30	343	-*

* All results were below the stricter limits for the restricted bands. Therefore, the indication is omitted.

Operation mode 3:

Frequency [MHz]	Pk Level [dB(μV/m)]	Pk Limit [dB(μV/m)]	Pk Margin [dB]	AV Level [dB(μV/m)]	AV Limit [dB(μV/m)]	AV Margin [dB]	Corr. [dB/m]	Pol [H/V]	Elevation [deg]	Azimuth [deg]	Restr. Band Y/N
2480.000	98.76	Fund.		95.59	Fund.		33.70	H	0	358	-*
2480.500	99.36	Fund.		93.82	Fund.		33.70	H	0	357	-*
2483.500	56.22	74.00	17.78	43.42	54.00	10.58	33.70	H	0	-2	-*
2484.000	53.74	74.00	20.26	40.03	54.00	13.97	33.70	H	0	-14	-*
2596.000	45.33	74.00	28.67	29.12	54.00	24.88	34.20	V	0	314	-*
3918.250	52.40	74.00	21.60	37.59	54.00	16.41	38.20	H	120	152	-*
4959.000	49.86	74.00	24.14	41.89	54.00	12.11	-2.20	H	60	130	-*
7438.250	52.78	74.00	21.22	43.53	54.00	10.47	4.90	H	0	-1	-*
7438.500	52.97	74.00	21.03	43.62	54.00	10.38	4.90	H	0	-4	-*
9922.000	53.03	74.00	20.97	43.29	54.00	10.71	7.50	V	30	209	-*
9922.2500	52.25	74.00	21.75	41.81	54.00	12.19	7.50	V	150	213	-*
12397.000	51.19	74.00	22.81	39.43	54.00	14.57	21.27	V	150	134	-*
12402.750	51.07	74.00	22.93	39.77	54.00	14.23	21.29	V	150	137	-*
13915.500	49.32	74.00	24.68	36.47	54.00	17.53	22.96	H	90	193	-*
14684.000	48.89	74.00	25.11	35.81	54.00	18.19	24.50	V	120	8	-*
16664.250	50.71	74.00	23.29	36.35	54.00	17.65	26.18	V	150	287	-*
17403.500	48.71	74.00	25.29	35.92	54.00	18.08	27.47	H	120	250	-*
21441.750	48.45	74.00	25.55	35.41	54.00	18.59	14.51	V	150	282	-*
21891.500	46.28	74.00	27.72	33.41	54.00	20.59	14.60	V	120	79	-*
24717.750	48.90	74.00	25.10	36.35	54.00	17.65	15.45	V	120	255	-*
25090.250	49.54	74.00	24.46	36.39	54.00	17.61	15.31	V	90	2	-*
26163.000	49.09	74.00	24.91	35.91	54.00	18.09	15.36	V	120	0	-*
26312.250	48.81	74.00	25.19	35.58	54.00	18.42	15.56	V	0	106	-*

Test result: Passed

Test equipment (please refer to chapter 7 for details)
1 – 11, 15 – 24

6 Measurement Uncertainties

Conducted measurements		
Measurement method	Standard used for calculating measurement uncertainty	Expanded measurement uncertainty (95 %) U_{lab}
Frequency error	ETSI TR 100 028	4.5×10^{-8}
Bandwidth measurements	-	9.0×10^{-8}
Conducted emissions using a spectrum analyzer		
< 3.6 GHz	ETSI TR 100 028	2.3 dB
3.6 – 8 GHz	ETSI TR 100 028	2.8 dB
8 – 22 GHz	ETSI TR 100 028	3.2 dB
22 – 40 GHz	ETSI TR 100 028	3.6 dB
Power measurements		
Power meter	ETSI TR 100 028	0.9 dB
Conducted emissions from 150 kHz to 30 MHz with LISN		
	CISPR 16-4-2	2.8 dB

Radiated measurements		
Frequency error		
(Semi-) Anechoic chamber	ETSI TR 100 028	4.5×10^{-8}
OATS	ETSI TR 100 028	4.5×10^{-8}
Test fixture	ETSI TR 100 028	4.5×10^{-8}
Bandwidth measurements		
(Semi-) Anechoic chamber	-	9.0×10^{-8}
OATS	-	9.0×10^{-8}
Test fixture	-	9.1×10^{-8}
Radiated field strength M20		
CBL6112B @ 3 m 30 MHz – 1 GHz	CISPR 16-4-2	5.3 dB
R&S HL050 @ 3 m		
1 – 6 GHz	CISPR 16-4-2	5.1 dB
6 – 18 GHz	CISPR 16-4-2	5.4 dB
Flann Standard Gain Horns 12 – 40 GHz	-	5.9 dB
Radiated field strength M276		
R&S HL562E @ 3 m 30 MHz – 1 GHz	CISPR 16-4-2	4.8 dB
R&S HL050 @ 3 m		
1 – 6 GHz	CISPR 16-4-2	5.1 dB
6 – 18 GHz	CISPR 16-4-2	5.4 dB
Flann Standard Gain Horns 12 – 40 GHz	-	5.9 dB
OATS		
Field strength measurements below 30 MHz on OATS without ground plane	-	4.4 dB

7 Test Equipment used for Tests

No.	Test equipment	Type	Manufacturer	Serial No.	PM. No.	Cal. Date	Cal Due
1	Low Noise Amplifier 10 MHz - 18 GHz	LNA-30- 00101800-25- 10P	Narda-Miteq	2110917	482967	04.02.2026	02.2028
2	Low Noise Amplifier 18 GHz - 26.5 GHz	LNA-30- 18002650-20- 10P	Narda-Miteq	2110911	482969	04.02.2026	02.2028
3	Log.-Per. antenna 850 MHz - 26.5 GHz	HL050	Rohde & Schwarz	100908	482977	10.10.2025	10.2028
4	Standard gain horn 18 GHz - 26 GHz	20240-20	Flann	266399	483026	Calibration not necessary	
5	EMC test software	Elektra V5.21	Rohde & Schwarz	---	483755	Calibration not necessary	
6	RF Switch Matrix	OSP220	Rohde & Schwarz	101391	482976	Calibration not necessary	
7	Turntable	TT3.0-3t	Maturo	825/2612/.01	483224	Calibration not necessary	
8	Antenna support tilt mast	BAM 4.5-P- 10kg	Maturo	222/2612.01	483225	Calibration not necessary	
9	Controller	NCD	Maturo	474/2612.01	483226	Calibration not necessary	
10	Semi Anechoic Chamber M276	SAC5-2	Albatross Projects	C62128-A540- A138-10-0006	483227	Calibration not necessary	
11	EMI receiver / Spectrum analyser	ESW44	Rohde & Schwarz	101828	482979	06.02.2026	02.2028
12	Attenuator 6 dB	WA2-6	Weinschel	8254	410119	Calibration not necessary	
13	Ultralog antenna 30 MHz - 6 GHz	HL562E	Rohde & Schwarz	101079	482978	24.04.2024	04.2027
14	Loop antenna	FMZB 1519-60D	Schwarzbeck	00215	484105	25.11.2025	11.2027
15	Fully anechoic chamber M20	B83117-E2439- T232	Albatross Projects	103	480303	Calibration not necessary	
16	Turntable	DS420 HE	Deisel	420/620/00	480315	Calibration not necessary	
17	Antenna support	AS620P	Deisel	620/375	480325	Calibration not necessary	
18	Multiple Control Unit	MCU	Maturo GmbH	MCU/043/97110 7	480832	Calibration not necessary	
19	Log.-Per. antenna 850 MHz - 26.5 GHz	HL050	Rohde & Schwarz	100438	481170	Calibration not necessary	
20	Software	EMC32 V10.60.20	Rohde & Schwarz	---	483261	Calibration not necessary	
21	Preamplifier 100 MHz - 13 GHz	JS3-00101200- 23-5A	MITEQ Hauppauge N.Y.	681851	480337	Calibration not necessary	
22	High-pass filter	WHKX4.0/18G- 8SS	Wainwright	1	480587	Calibration not necessary	
23	Positioner	TDF 1.5- 10Kg	Maturo	15920215	482034	Calibration not necessary	
24	EMI receiver / Spectrum analyser	ESW44	Rohde & Schwarz	101635	482467	29.10.2025	02.2028
25	Signal & Spectrum analyser	FSW43	Rohde & Schwarz	102954	483957	04.02.2026	02.2027

8 Test site Verification

Test equipment	PM. No.	Frequency range	Type of validation	According to	Val. Date	Val Due
Semi anechoic chamber M276	483227	30 – 1000 MHz	NSA	ANSI C63.4-2014 ANSI C63.4a-2017	05.06.2025	05.06.2028
Semi anechoic chamber M276	483227	1 -18 GHz	SVSWR	CISPR 16-1-4 + Cor1:2010 + A1:2012 +A2:2017	21.02.2024	21.02.2027
Fully anechoic chamber M20	480303	1 -18 GHz	SVSWR	CISPR 16-1-4 Amd. 1	04.02.2025	03.02.2028

9 Report History

Report Number	Date	Comment
F251949E9	22.07.2026	Initial test report
-	-	-
-	-	-

10 List of Annexes

Annex A	Test setup photos	11 pages
Annex B	Void	
Annex C	Void	
Annex D	Void	

----- end of test report -----