Test Report acc. to FCC Title 47 CFR Part 15 B
relating to
Wenzel GmbH
AS-WT-VW

Title 47 - Telecommunication
Part 15 - Radio Frequency Devices
Subpart B – Unintentional Radiators
Measurement Procedure:
ANSI C63.4-2014

ilac-MRA DAkkS Deutsche Akkreditierungsstelle D-PL-12053-01-03 Bundesnetzagentur BNetzA-CAB-13/21-08

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MANUFACTURER	
Manufacturer name	**AS-Wägetechnik GmbH**
Manufacturer's grantee code	**---**
Manufacturer's address	Guiseppe Cavallo, Gutenbergstr. 25, 85748 Garching, Germany
Phone	+49(0)89 3681398-0
Fax	+49(0)89 3681398-20
Email	g.cavallo@as-waegetechnik.de

TESTING LABORATORY	
Test engineer	Mr. Ralf Trepper
Testing laboratory name	**TÜV NORD Hochfrequenztechnik GmbH & Co. KG**
Testing laboratory address	LESKANPARK, Building 10 Waltherstr. 49-51, 51069 Cologne Germany
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Email	**rtrepper@tuev-nord.de**

RELEVANT STANDARD	
Title	**47 - Telecommunication**
Part	**15 - Radio Frequency Devices**
Subpart	**Subpart B – Unintentional Radiators**
Measurement procedure	ANSI C63.4-2014

EQUIPMENT UNDER TEST (EUT)	
Equipment category	Platform Scale
Trade name	AS-Wägetechnik
Type designation	**AS-WT-VW**
Serial no.	108227002115
Variants	---

Test result summary

The following table summarizes the results for the tested EUT corresponding with the essential requirements. Full testing may not be required. If partial testing was performed, this shall be indicated in the relevant column (N.t.[x], not tested, see clause 9) of the table below.

Clause	Requirements headline	Test result
7.1	Conducted emissions limits	**N.t.[1]**
7.2	Radiated emissions limits	**Pass**

* As far as in this report statements on conformity are made, decision rules according to DIN EN ISO/IEC 17025:2018, 7.8.6 have been applied. For more information see clause 8.1.

The equipment passed all the performed tests	
☒ **Yes**	☐ **No**

Signature	TÜVNORD Digital unterschrieben von Shrestha Anup Datum: 2024.02.01 14:46:09 +01'00'	TÜVNORD Digital unterschrieben von Trepper Ralf Datum: 2024.02.01 14:46:42 +01'00'
Name	**Mr. Anup Shrestha**	**Mr. Ralf Trepper**
Designation	**RF Test engineer**	**Laboratory-Manager**
Date of issue	**2024-01-08**	**2024-01-08**

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1. Table of contents

Revision	Date of issue	Creator	Content of change
00	2024-01-08	A Shrestha	Initial release
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Table 1-1: Table of contents

Note: If the document has been changed by revision number, all previous documents are no longer valid and must be destroyed.

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2. Introduction

This test report **is not an expert opinion** and consists of:

- Test result summary
- List of contents
- Introduction and further information
- Equipment application data
- Detailed test information
- List of measurement equipment with calibration validity
- Photographs and further test results (plots, graphs, etc.)

The tests were carried out in a representative assembly and in accordance with the test methods and/or requirements stated in:

Item	Applied Standard
EMC test	**FCC Title 47 CFR Part 15 Subpart B** Technical requirements for Unintentional Radiators
EMC test	**ANSI C63.4-2014** American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

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3. Administrative Data

3.1 Testing laboratory

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Phone: +49 221 8888 950

FCC Registration Number: **763407**

Accredited by:

DAkkS Deutsche Akkreditierungsstelle GmbH
DAkkS accreditation number: D-PL-12053-01

3.2 Applicant´s details

Company name	: Wenzel GmbH
Address	: Altendorfer Tor 23 37574 Einbeck
Country	: Germany
Contact person	: Mr. Andreas Schröder
Telephone	: +49(0)5564 9342-54
Fax	: +49(0)5564 9342-30
Email	: aschroeder@wenzeleinbeck.de
Date of order	: 2023-11-13
Date of receipt	: 2023-12-20
Period of testing time	: 2024-01-04

3.3 Manufacturer´s details

Manufacturer´s name	: (please see Applicant´s details)
Address	: (please see Applicant´s details)

4. Equipment under test (EUT)

4.1 EUT: short description

EUT Type designation	Type of equipment	Trademark	S/N Serial no.	HW Hardware status	SW Software status
AS-WT-VW	Platform Scale	AS-Wägetechnik	108227002115	---	---

ITU emission class	FCC ID
---	2BEKH-AS-WT-VW

For issuing this report the following product documentation was used:

Title	Description	Version
Technical manual-en (v1.07) AS-WT-VW	TECHNICAL MANUAL	V1.07 REV:Y1,March,2020

4.2 Additional Equipment: Short description

Additional Equipment	Type
---	---

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4.3 Additional declaration and description of EUT

(Application´s declaration: ☐= not selected, ☒= selected)

EUT		☒ tabletop unit ☐ floor-standing ☐ wall-mounted ☐ base station ☐ mobile ☐ not defined		Typical use ☒ fixed use ☐ portable use ☐ vehicular use
Operating frequency bands over which the equipment is intended to operate		---		
Generated or used frequencies		--- ---		
Power line				
☐ AC	☐ L1, ☐ L2, ☐ L3, ☐ N, ☐ PE	--- V/ AC	☐ 50 Hz ☐ 60 Hz	EUT grounding: ☒ none ☐ with power supply ☐ additional
☒ DC	6 V/ DC (4xAA Battery)			

Ports

Port type	Function	Shielding	Total cable length used during the test
RS232	Data Communication	☒ screened ☐ unscreened	3 meters
		☐ screened ☐ unscreened	
		☐ screened ☐ unscreened	

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5. Conclusions, observations and comments

The results of the tests as stated in this report are exclusively applicable to the EUT as identified in this report. TÜV NORD Hochfrequenztechnik GmbH & Co. KG cannot be held liable for properties of the EUT that have not been observed during these tests.

TÜV NORD Hochfrequenztechnik GmbH & Co. KG assumes the sample to comply with the requirements of FCC-Title 47 CFR-Part 15, for the respective test sector, if the test results turn out positive.

Comments: ---

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6. Operational description

6.1 EUT details

The EUT is a weighing indicator that amplifies signals from a load cell, converts it to digital data and displays it as a mass value. It is suitable for general weighing or more specialized applications such as check weighing, parts counting, motion weighing and accumulation applications.

6.2 EUT configuration

The weighing indicator is switched on after pressing the ON/OFF key on the device. A warm-up time of 15 minutes stabilizes the measured values after switching on. The available keys on the device can be configured to check weighing and check counting.

6.3 EUT measurement description

Radiated measurements

The EUT was tested in a typical fashion. During preliminary emission tests the EUT was operated in the continuous measuring mode for worst case emission mode investigation. Therefore, the final qualification testing was completed with the EUT operated in continuous measuring mode. All tests were performed with the EUT's typical voltage: 6.0 V DC.

To establish the maximum radiation, firstly, there have been viewed all orthogonal adjustments of the test samples, secondly the test ample have been rotated at all adjustments around the own axis between 0° and 360°, and thirdly, the antenna polarization between horizontal and vertical had been varied.

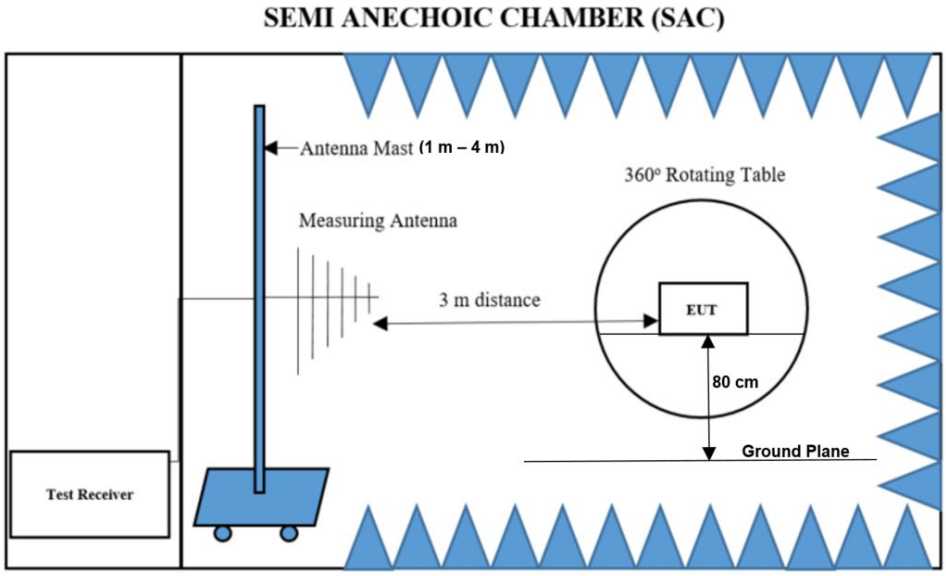

Figure 6.3-1: Radiated measurement setup (30 MHz – 1 GHz)

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Radiated measurement above 1 GHz is made by placing loose-laid RF absorber material on the ground plane as mentioned in ANSI C63.4-2014.

Additionally, radiated emission measurements above 1 GHz are made using calibrated linearly polarized antennas as specified in ANSI C63.4-2014, which may have a smaller beamwidth (main lobe) than do the antennas used for frequencies below 1 GHz. The measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal.

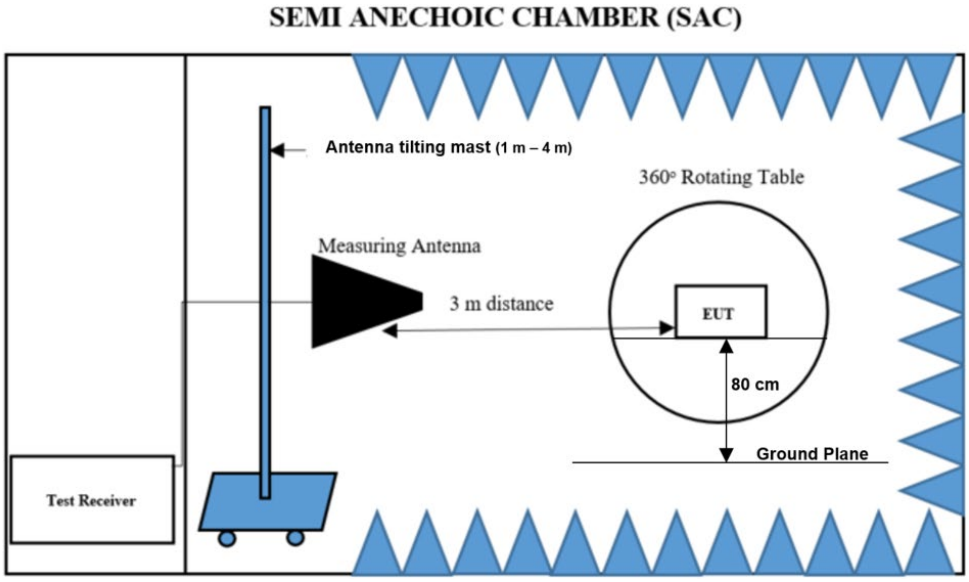

Figure 6.3-2: Radiated measurement setup (above 1 GHz)

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7. Compliance assessment

7.1 Conducted limits

7.1.1 Regulation

(a) Except for Class A digital devices, for equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the band edges.

Conducted Limits		
Frequency of Emission	**Quasi-Peak (QP)**	**Average (AV)**
MHz	**dBμV**	**dBμV**
0.15 - 0.5	66 to 56*	56 to 46*
0.5 - 5	56	46
5 -30	60	50
*Decreases with the logarithm of the frequency		

(b) For a Class A digital device that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms LISN. Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency of emission (MHz)	**Conducted limit (dBμV)**	
	Quasi-peak	**Average**
0.15 - 0.5	79	66
0.5 - 30	73	60

(c) The limits shown in paragraphs (a) and (b) of this section shall not apply to carrier current systems operating as unintentional radiators on frequencies below 30 MHz. In lieu thereof, these carrier current systems shall be subject to the following standards:

(1) For carrier current systems containing their fundamental emission within the frequency band 535-1705 kHz and intended to be received using a standard AM broadcast receiver: no limit on conducted emissions

(2) For all other carrier current systems: 1000 μV within the frequency band 535-1705 kHz, as measured using a 50 μH/50 ohms LISN.

(3) Carrier current systems operating below 30 MHz are also subject to the radiated emission limits in §15.109(e)

(d) Measurements to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines. Devices that include, or make provision for, the use of battery chargers which permit operating while charging, AC adaptors or battery eliminators or that

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connect to the AC power lines indirectly, obtaining their power through another device which is connected to the AC power lines, shall be tested to demonstrate compliance with the conducted limits.

7.1.2 Test procedure

The EUT and the additional equipment (if required) are connected to the main power through a line impedance stabilization network (LISN). The LISN must be appropriate to ANSI C63.4-2014. Additional equipment must also be connected to a second LISN with the same specifications as described above (if required).

7.1.3 Result

Test location and equipment

Test site	Laboratory TÜV NORD Hochfrequenztechnik
Receiver	☐ 665
Additional equipment	☐ 272 ☐ 60 ☐ 71a ☐ 551 ☐ 672
Cable	☐ KISN2

Environmental conditions

Environmental conditions	Temperature [°C]	Air pressure [hPa]	Rel. humidity [%]

Measurement results

Conducted emissions - Tested with external AC PoE power supply

Messplot + Messtabelle

Remarks:

Test setup photograph

Testsetup Foto

The equipment passed the performed tests	☐ **Yes**	☐ **No**	☒ **N.t.**[1]

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7.2 Radiated emission limits

7.2.1 Regulation

(a) Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

radiated emission from unintentional radiator**- limits @ 3 m		
Frequency of emission(MHz)	Field strength	
MHz	µV / m	dBµV / m
30 - 88	100	40.0
88 - 216	150	43.5
216 -960	200	46.0
Above 960	500	54.0
** Except for Class A digital device		

(b) The field strength of radiated emissions from a Class A digital device, as determined at a distance of 10 meters, shall not exceed the following:

radiated emission from unintentional radiator**- limits @ 10 m		
Frequency of emission(MHz)	Field strength	
MHz	µV / m	dBµV / m
30 - 88	90	39.1
88 - 216	150	43.5
216 -960	210	46.4
Above 960	300	49.5
** For Class A digital device		

(c) In the emission tables above, the tighter limit applies at the band edges. Sections 15.33 and 15.35 which specify the frequency range over which radiated emissions are to be measured and the detector functions and other measurement standards apply.

(d) For CB receivers, the field strength of radiated emissions within the frequency range of 25-30 MHz shall not exceed 40 microvolts/meter at a distance of 3 meters. The field strength of radiated emissions above 30 MHz from such devices shall comply with the limits in paragraph (a) of this section.

(e) Carrier current systems used as unintentional radiators or other unintentional radiators that are designed to conduct their radio frequency emissions via connecting wires or cables and that operate in the frequency range of 9 kHz to 30 MHz, including devices that deliver the radio frequency energy to transducers, such as ultrasonic devices not covered under part 18 of this chapter, shall comply with the radiated emission limits for intentional radiators provided in §15.209 for the frequency range of 9 kHz to 30 MHz. As an alternative, carrier current systems used as unintentional radiators and operating in the frequency range of 525 kHz to 1705 kHz may comply with the radiated emission limits provided in §15.221(a). At frequencies above 30 MHz, the limits in paragraph (a), (b), or (g) of this section, as appropriate, apply.

(f) For a receiver which employs terminals for the connection of an external receiving antenna, the receiver shall be tested to demonstrate compliance with the provisions of this section with an antenna connected to the antenna terminals unless the antenna conducted power is measured as specified in §15.111(a). If a permanently attached receiving antenna is used, the receiver shall be tested to demonstrate compliance with the provisions of this section.

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(g) As an alternative to the radiated emission limits shown in paragraphs (a) and (b) of this section, digital devices may be shown to comply with the standards contained in Third Edition of the International Special Committee on Radio Interference (CISPR), Pub. 22, "Information Technology Equipment—Radio Disturbance Characteristics—Limits and Methods of Measurement" (incorporated by reference, see §15.38). In addition:

(1) The test procedure and other requirements specified in this part shall continue to apply to digital devices.

(2) If, in accordance with §15.33 of this part, measurements must be performed above 1000 MHz, compliance above 1000 MHz shall be demonstrated with the emission limit in paragraph (a) or (b) of this section, as appropriate. Measurements above 1000 MHz may be performed at the distance specified in the CISPR 22 publications for measurements below 1000 MHz provided the limits in paragraphs (a) and (b) of this section are extrapolated to the new measurement distance using an inverse linear distance extrapolation factor (20 dB/decade), e.g., the radiated limit above 1000 MHz for a Class B digital device is 150 uV/m, as measured at a distance of 10 meters.

(3) The measurement distances shown in CISPR Pub. 22, including measurements made in accordance with this paragraph above 1000 MHz, are considered, for the purpose of §15.31(f)(4) of this part, to be the measurement distances specified in this part.

(h) Radar detectors shall comply with the emission limits in paragraph (a) of this section over the frequency range of 11.7-12.2 GHz.

7.2.2 Test procedures

The EUT and this peripheral (when additional equipment exists) are placed on a turn table which is 0.8 m above the ground. The turn table would be allowed to rotate 360° to determine the position of the maximum emission level. The test distance between the EUT and the receiving antenna are 3m. To find the maximum emission, the polarization of the receiving antenna is changed in horizontal and vertical polarization; the position of the EUT was changed in different orthogonal determinations.

ANSI C63.4-2014 Section 8 "Radiated Emissions Testing"

Measurement procedures for electric field radiated emissions from 9kHz - 1 GHz & 1 GHz - 40 GHz are covered in Clause 8 of ANSI C63.4-2014. The ANSI C63.4-2014 measurement procedure consists of both an exploratory test and a final measurement. The exploratory test is critical to determine the frequency of all significant emissions. For each mode of operation required to be tested, the frequency spectrum is monitored. Variations in antenna height, antenna orientation, antenna polarization, EUT azimuth, and cable or wire placement is explored to produce the emission that has the highest amplitude relative to the limit.

The final measurements are made based on the findings in the exploratory testing. When making exploratory and final measurements it is necessary to maximize the measured radiated emission. Sub clause 8.3.2 of ANSI C63.4-2014 states that the measurement is to be made "while keeping the antenna in the 'cone of radiation' from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response." We consider the "cone of radiation" to be the 3 dB beam width of the measurement antenna.

While the "bore-sighting" technique is not explicitly mentioned in ANSI C63.4-2014, it is a useful technique for measurements using a directional antenna, such as a double-ridged waveguide antenna. Several precautions must be observed, including: knowledge of the beam width of the antenna and the resulting illumination area relative to the size of the EUT, estimation for source of the emission and general location within larger EUTs, measuring system sensitivity, etc.

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ANSI C63.4-2014 requires that the measurement antenna is kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. That means that if the directional radiation pattern of the EUT results in a maximum emission at an upwards angle from the EUT, when a directional antenna is used to make the measurement it will be necessary for it to be pointed towards the source of the emission within the EUT. This can be done by either pointing the antenna at an angle towards the source of the emission, or by rotating the EUT, in both height and polarization, to maximize the measured emission. The emission must be kept within the illumination area of the 3 dB beamwidth of the antenna so that the maximum emission from the EUT is measured.

Radiated emissions test characteristics	
Frequency range	9 kHz – Above 960 MHz
Test distance	3 m*
Test instrumentation minimum resolution bandwidth	9 kHz (Below 30 MHz)
	120 kHz (30 MHz - 1,000 MHz)
	1 MHz (Above 1000 MHz)
Detector Type	Quasi peak and Average based on frequency range
Receive antenna scan height	1 m - 4 m
Receive antenna polarization	Vertical/horizontal

* According to Section 15.31 (f) (1): At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear distance for field strength measurements; inverse linear distance squared for power density measurements).

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7.2.3 Calculation of the field strength

The field strength is calculated by the following calculation:

Corrected Level = Receiver Level + Correction Factor (without the use of a pre-amplifier)

Corrected Level = Receiver Level + Correction Factor – Pre-amplifier (with the use of a pre-amplifier)

Receiver Level : Receiver reading without correction factors
Correction Factor : Antenna factor + cable loss

For example:
The receiver reading is 32.7 dBµV. The antenna factor for the measured frequency is +2.5 dB (1/m) and the cable factor for the measured frequency is 0.71 dB, giving a field strength of 35.91dBµV/m.
The 35.91dBµV/m value can be mathematically converted to its corresponding level in µV/m.

Level in µV/m = Common Antilogarithm (35.91/20) = 62.44

For test distance other than what is specified, but fulfilling the requirements of Section 15.31 (f) (1) the field strength is calculated by adding additionally an extrapolation factor of 20 dB/decade (inverse linear distance for field strength measurements).

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7.2.4 Result at or below 960 MHz

Test location and equipment

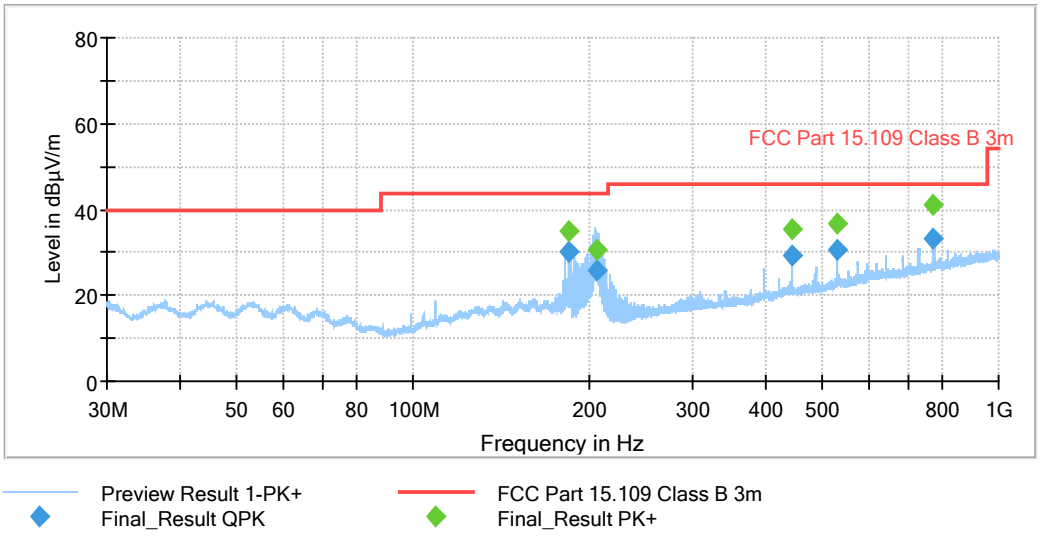
Test site	Laboratory TÜV NORD Hochfrequenztechnik ☒ 660 Semi Anechoic Chamber ☒ 667 ☒ 668 ☒ 669
Receiver	☒ 665 ☐ 666
Antenna	☐ 23 ☒ 406 ☐ 442 ☐ 454a ☐ 169
Additional equipment	
Cable	☒ K190 ☒ K193 ☒ K194

Environmental conditions and operating mode during the test

Environmental conditions	Temperature [°C]	Air pressure [hPa]	Rel. humidity [%]
	20	994	44

Measurement results at or below 960 MHz

Radiated emissions at or below 960 MHz (Section 15.109)



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Transmitter spurious radiation									
Freq. (MHz)	**QuasiPeak (dBµV/m)**	**Max peak (dBµV/m)**	**Limit (dBµV/m)**	**Margin (dB)**	**Meas. Time (ms)**	**Bandwidth (kHz)**	**Height (cm)**	**Pol**	**Azimuth (deg)**
183.9700	30.32	---	43.50	13.18	1000.0	120.000	175.0	H	253.0
183.9700	---	34.79	---	---	1000.0	120.000	175.0	H	253.0
205.4300	25.67	---	43.50	17.83	1000.0	120.000	100.0	H	256.0
205.4300	---	30.42	---	---	1000.0	120.000	100.0	H	256.0
442.9100	29.11	---	46.00	16.89	1000.0	120.000	178.0	H	19.0
442.9100	---	35.35	---	---	1000.0	120.000	178.0	H	19.0
531.5000	30.78	---	46.00	15.22	1000.0	120.000	100.0	V	226.0
531.5000	---	36.91	---	---	1000.0	120.000	100.0	V	226.0
775.1200	---	40.89	---	---	1000.0	120.000	322.0	H	33.0
775.1200	33.14	---	46.00	12.86	1000.0	120.000	322.0	H	33.0
Measurement uncertainty: ± 4 dB									
Note: The blue marked frequencies belong to the restricted bands of operation									

Test setup photograph

The equipment passed the performed tests	☒ **Yes**	☐ **No**	☐ **N.t.x**

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8. Measurement Uncertainty

The total uncertainty of measurement is the result of the mathematically-statistically distribution of the individual measurement uncertainty (MU) of the used measurement equipment. It is supposed that all individual deviations accidentally but not inevitable normally distributed. The total deviation is supposed to be normally distributed (RSS=Root-Sum-of-the-Squares deviation corresponds to a measurement uncertainty which will be not exceeded with a probability of 68 %). Measurement uncertainty Δ, which will be not exceeded with a probability of 95 %, is 2 x RSS. For the following measurements and tests are the values as from the laboratory given:

Measurement /Test	Frequency range	Value of expanded MU	State
Conducted emission disturbing voltage (LISN)	150 kHz – 30 MHz	± 3,31 dB	Apr. 08.2021
Radiated emission (3 m SAC)	30 MHz – 1 GHz	± 4,18 dB	Apr. 08.2021

Table 8-1: Uncertainty of measurement

8.1 Decision rule

As far as in this report statements on conformity are made, decision rules according to DIN EN ISO/IEC 17025:2018, 7.8.6 have been applied. If the report does not state otherwise, procedure 1 according to IEC Guide 115 ed.2.0 2021 (uncertainty of measurement calculated) has been applied on measurement and test procedures which are the base of this report.

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9. Additional information to the test report

N.t.[1]	Not tested, because not applicable to the EUT
N.t.[2]	Not tested, because not ordered

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10. Photographs of EUT

Photographs of EUT - Assembly of units or parts

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Photographs of EUT - Front side of unit

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Photographs of EUT - Rear side of unit

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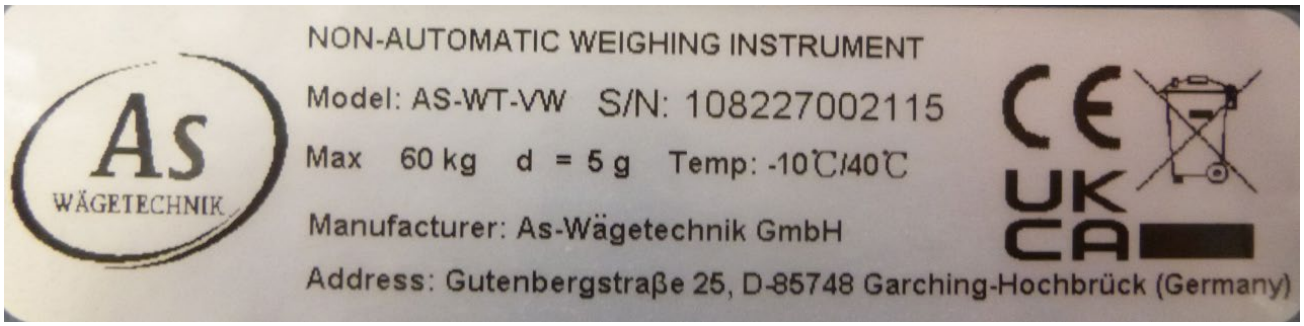
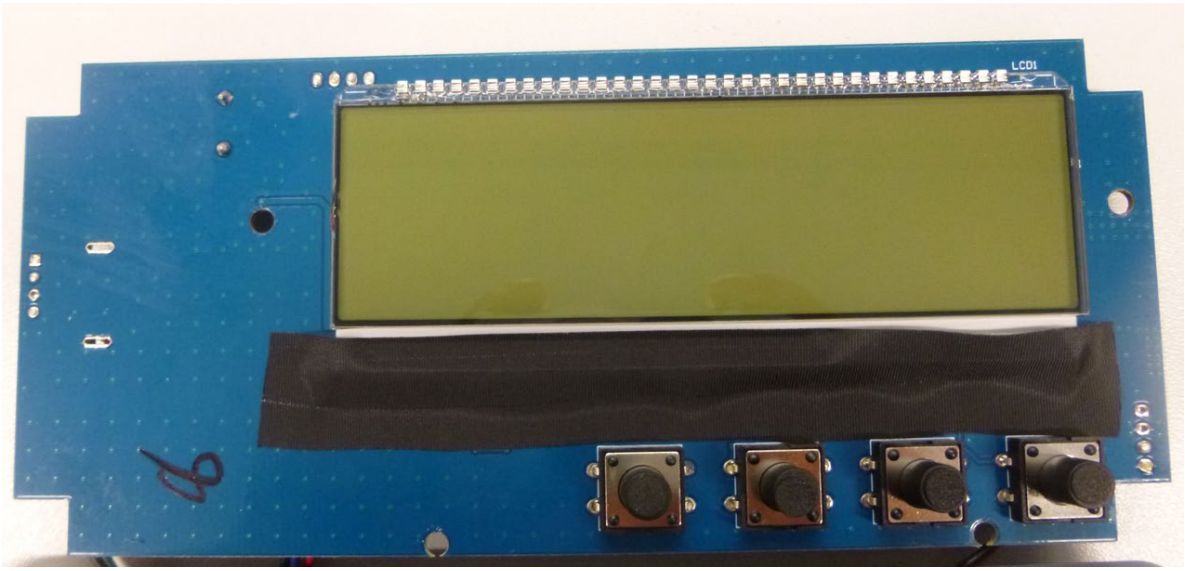
Photographs of EUT - Label or identifying mark



Photographs of EUT - Internal construction upper side



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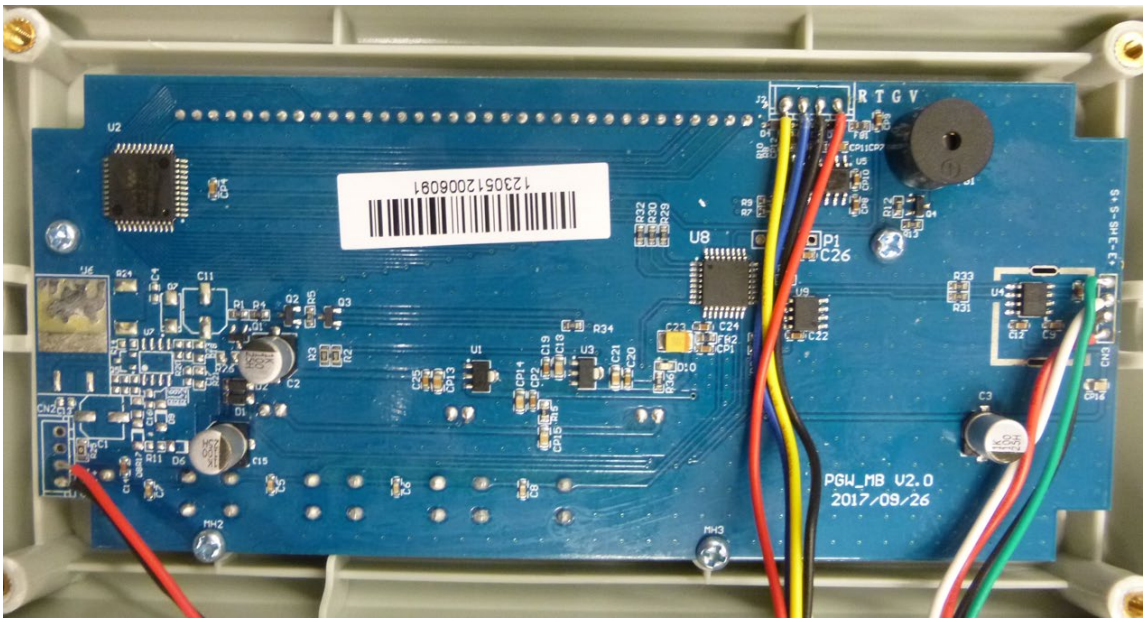
Photographs of EUT - Internal construction lower side



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11. List of test equipment

State January 05, 2024					
Marking	**Manufacturer**	**SW/Type/Serial-No.**	**Last Cal./Val.**	**Next Cal. /Val. (± 1 month)**	**No.**
1 Measuring Instruments					
Attenuator	Radiall	---	Nov 22	Nov 25	62
Attenuator 3dB	Suhner	6803/17	Nov 22	Nov 25	137
Attenuator 3dB / 18 GHz	Suhner	3dB/18GHz	Nov 22	Nov 25	299
Attenuator 6dB / 18 GHz	Suhner	6dB/18GHz	Nov 22	Nov 25	344
Attenuator 20dB / 20GHz	Parzich	40AH-20	Nov 22	Nov 25	354
Terminator	KDI	T173CS	Nov 22	Nov 25	490
Variable transformer	RFT	LS 002	---	---	154a
Variable transformer	Schunt+Ben	---	---	---	155
Power sensor	Marconi	6914	Dec 22	Dec 24	258
Power sensor	Rohde & Schwarz	NRP18SN	Feb 22	Feb 24	651
3-Path Diode Power Sensor 10 MHz to 8 GHz	Rohde & Schwarz	NRP8S	Dec 22	Dec 24	663
3-Path Diode Power Sensor 10 MHz to 18 GHz	Rohde & Schwarz	NRP18S-20	Dec 22	Dec 24	664
Diode Power Sensor 100 kHz – 6 GHz	Rohde & Schwarz	NRV-Z5 S/N: 829562/008	Nov 22	Nov 24	390
Coaxial Directional Coupler	Narda	3003-20	Jan 21	Jan 24	370/342
Coaxial directional coupler	Mini Circuits	ZFDC-20-5	May 22	May 24	434
Coaxial directional coupler	Narda+Suhner	4246B-20	Sep 22	Sep 25	472/492
Coaxial directional coupler	Narda	3045C-10	Sep 22	Sep 25	110a
Coaxial directional coupler	Narda	3044B-10	Sep 22	Sep 25	21a
Coaxial directional coupler	Narda	3044B-30	Sep 22	Sep 25	327
Coaxial directional coupler	Narda	3022 / 50204	Sep 22	Sep 25	303
Coaxial High Pass Filter	Mini circuits	NHP-700	Apr 21	Apr 24	435
Coaxial High Pass Filter	Mini circuits	NHP-200	Apr 21	Apr 24	405
Coaxial High Pass Filter	Mini circuits	NHP-25+	Apr 21	Apr 24	455
High Pass Filter	Mini circuits	VHF-3500+	Sep 22	Sep 25	451
High Pass Filter	Mini circuits	VHF-1200+	Apr 21	Apr 24	452
High Pass Filter	Morita Tech	MT-SCHLC-500/T300-0/0	Oct 23	Oct 26	703
High Pass Filter	Morita Tech	MT-SCHPFF-1000-T855-0/0	Oct 23	Oct 26	704
High Pass Filter	Morita Tech	MT-SCHPF-2000/ T1720-0/0	Oct 23	Oct 26	705
Bandpass Filter	Schomandl	BN86871	Nov 21	Nov 24	66
Bandpass Filter	Schomandl	BN68673	Nov 21	Nov 24	67
Band Reduction Filter	Morita Tech	MT-SC12FVRC-5250/X200-0/0	Oct 23	Oct 26	701
Band Reduction Filter	Morita Tech	MT-SCBRF-5597.5/255-0/0	Oct 23	Oct 26	702
Low Pass Filter	Mini circuits	SLP550	Apr 21	Apr 24	273
Low Pass Filter	Mini circuits	SLP550	Apr 21	Apr 24	274
RF Current Probe 9 kHz – 30 MHz	Rohde & Schwarz	ESH2-Z1	Aug 21	Aug 24	42
Passive Test Probe – 9 kHz – 30 MHz	TÜV NORD	VDE 0876	Apr 21	Apr 24	45
Coaxial Fixed Attenuator DC – 1 GHz	Texscan	HFP50/10	Aug 23	Aug 26	60
8 Wire Impedance Stabilisation Network	Schwarzbeck	CAT5 8158	Nov 21	Nov 23	71a
T-Section - 50 W	Rohde & Schwarz	BN 42441/50	Nov 21	Nov 24	93
RF Current Injection Clamp 0.15 – 1GHz	Lüthi GmbH	EM 101	Jan 23	Jan 25	156
Absorbing Clamp MDS 30MHz – 1GHz	Lüthi GmbH	MDS-21	Jan 23	Jan 26	160
Insertion Unit	Rohde & Schwarz	URV5-Z4	Jul 22	Jul 24	162
Coaxial RF Termination - 0 – 1000 MHz	Telewave Inc.	TWL 35	Nov 21	Nov 24	164
Coaxial RF Termination - 0 – 1000 MHz	Telewave Inc.	TWL 60	Nov 21	Nov 24	165
Fixed Attenuator - DC – 1.5GHz	Bird	Mod/ 8343-060	May 23	May 26	177
CDN up to 230 MHz	MEB	KEN-M 2 /M 3	Oct 22	Oct 24	262

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CDN up to 230 MHz	MEB	KEN-M 2 /M 3	Dec 21	Dec 23	264
Coupling Filter	HAEFELY	FP 16/3-1	Jan 23	Jan 25	366
Impulse limiter 10 dB	Rohde & Schwarz	ESH3 Z2	Jun 22	Jun 24	272
Fixed Attenuator - DC – 18 GHz | 30 dB	MTS	---	Nov 20	Nov 23	275
Fixed Attenuator - DC – 18 GHz | 30 dB	MTS	---	May 22	May 24	276
Passive probe 1.5kΩ	Schwarzbeck	TK 9416	Oct 20	Oct 23	621
Termination Resistor 50 W	Radiall	404011	Nov 21	Nov 23	309
Branching device (4x) 50W	Rohde & Schwarz	892228/20	Sep 22	Sep 25	320
Dummy-Load - 2 – 18 GHz	Narda	MODEL 367NF	Jan 23	Jan 26	343
DC Block Adapter - 0.045 – 26.5 GHz	Hewlett-Packard	11742A	Apr 21	Apr 24	356
RF Probe 0.02 – 1000 MHz	Rohde & Schwarz	URY-Z7	Aug 22	Aug 25	368
150W attenuator	Weinschel	49-20-33	Nov 22	Nov 25	374
Fixed Coaxial Attenuator - DC – 18 GHz	Weinschel	23-6-34	Mar 23	Mar 26	375
Attenuator 60 dB (10 MHz – 8 GHz)	---	---	Mar 23	Mar 26	376
Insertion Unit 100V | 100 kHz – 2 GHz	Rohde & Schwarz	URY-Z4	Jun 22	Jun 24	417
Panoramic Adapter (Monitoring)	Schwarzbeck	PAN1550	---	---	429
DC-BLOCK - DC – 6.0 GHz |50 W	Mini Circuits	BLK-6-N+	Nov 21	Nov 24	462
Terminating resistor 50Ω SMA	---	---	Jan 23	Jan 26	493
Terminating resistor 50Ω SMA	---	SC 60-601-0000-31	Jan 23	Jan 26	497
Fixed Attenuator –0 – 40 GHz	Anritsu	41KC-10	Jan 23	Jan 26	504
Fixed Attenuator – 0 – 40 GHz	Anritsu	41KC-10	Jan 23	Jan 26	505
Fixed Attenuator – 0 – 40 GHz	Anritsu	41KC-3	Jan 23	Jan 26	507
Electric Dummy Load	RA-NAV Lab.	DA-75U	---	---	526
Power Splitter / Combiner	Mini Circuits	ZESC-2-11	Nov 22	Nov 25	527
3 Way Power Splitter / Combiner	Mini Circuits	ZFSC-3-1	Mar 23	Mar 26	529
3 Way Power Splitter / Combiner	Mini Circuits	ZFSC-3-1	Mar 23	Mar 26	530
RF-Attenuator - 6 dB	Haefely	---	Mar 23	Mar 26	540
RF-Attenuator - 1– 120 MHz | 12 dB	Haefely	---	Mar 23	Mar 26	541
RF-Attenuator - 1– 120 MHz | 39 dB	Haefely	---	Mar 23	Mar 26	542
LISN 9kHz – 30 MHz	Schwarzbeck	NNLA 8120 (SN: 8120499A)	Oct 22	Oct 24	551
HV Probe P6013A	Tektronix	P6013A	Jul 22	Jul 24	559
VLISN 5µH	Schwarzbeck	8125-1944	Nov 21	Nov 23	585
VLISN 5µH	Schwarzbeck	8125-1945	Nov 21	Nov 23	586
20dB Attenuator, up to 18 GHz	Mini Circuit	BW-N20W5+	Nov 22	Nov 25	594
Step Attenuator - DC-18 GHz | 0 to 11 dB	Hewlett-Packard	8494B	Nov 22	Nov 25	604
Analyser Reference System	Spitzenberger & Spies	PAS 1000 SyCore + ARS 16/1	Mar 22	Mar 24	606a/b/c
Capacitive Coupling Clamp 5 kV	Schlöder	SFT 415	Jul 23	Jul 26	608
RF Probes for 50 Ω Receivers	Schwarzbeck	TK 9416	Jun 22	Jun 24	612
Current probe TRMS	BEHA APROB	CHB35	Nov 22	Nov 24	652
Semi Anechoic Chamber	COMTEST	SAC-3m	Apr 23	Apr 25	660
Maturo Turntable	Maturo	TT2.0SI (SN: TT2.05SI/817 SW: 1.0.0.4473)	---	---	667
Maturo Antenna Mast	Maturo	TAM4.5-E-10kg (SN: 10011/216/2588.01)	---	---	668
Maturo Controller	Maturo	FCU3.0/009/2588.01 (SN: 10014/2019)	---	---	669
Current probe 20 Hz – 100 MHz	Rohde & Schwarz	EZ-17 (0816.2063.03)	May 23	May 26	670
Coupling Decoupling Network	AMETEK	CDN ST08A	Oct 22	Oct 24	672
BONN HF Switch Matrix DC – 8 GHz	BONN Elektronik	BAS 0080-3	---	---	682
External Directional Coupler	BONN Elektronik	BDC 1060-40/500	Jan 22	Jan 24	683
BI-Directional Coax. Coup. 50-1000 MHz	Narda	3020A	Nov 21	Nov 23	141
Vertical coupling plate	TÜV NORD HFT	---	---	---	265
Measuring table	TÜV NORD HFT	---	---	---	106

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Data line coupling network	EM Test AG	CNV 504/ 508	---	---	285
OSP230 BASE Unit 2HU with TS	OSP230	S/N: 102031	June 23 Factory cal.	June 25	698
2 Generators					
EFT/Burst Generator	Schlöder	SFT 1400	Sep 22	Sep 24	46a
ESD Generator	Schlöder	SESD 216	Dec 21	Dec 23	653
Signal Generator	Rohde & Schwarz	SMB100A SW 4.20.028.58	Sep 22	Sep 24	571
RF Generator	Rohde & Schwarz	SGT100A	Jun 22	Jun 24	636
Signal Generator	Rohde & Schwarz	SMG	Jun 22	Jun 24	136a
Signal Generator	Marconi	2042	Jul 22	Jul 24	6
Signal Generator	Marconi	2024	Jul 22	Jul 24	213
Puls Generator	EM Test	MPG 200	Apr 23	Apr 25	181
Surge Generator	H+H	MIG063 IN S-T	Jun 23	Jun 25	561
Wideband Radio Communication Tester	Rohde & Schwarz	CMW500 S/N: 171332	Aug 22 Factory cal.	Aug 24	691
3. Antennas					
Active Loop Antenna 8.3 kHz – 30 MHz	Rohde & Schwarz	HFH2-Z2E S/N: 101171	May 23	May 25	697
Biconical Ant. 30-300 MHz	Schwarzbeck	VHA9103/BBA9106	May 22	May 24	80/616
Biconical Ant. 20-300 MHz	Schwarzbeck	VHBB 9124 / BBA9106	Jan 23 Factory cal.	Jan 25	692
Biconical Ant. 20-300 MHz	Schwarzbeck	VHBB 9124 / BBA9106	Jan 23 Factory cal.	Jan 25	693
Biconical Antenna 9 kHz – 300 MHz	Schwarzbeck	EFS9218 / 9218-194	Jul 23	Jul 25	523
Double Ridged Horn	Schwarzbeck	BBHA9120C	Feb 22	Feb 24	169
Double Ridged Horn	Schwarzbeck	BBHA 9120A	May 20	May 24	284
Tri-Log Broadband	Schwarzbeck	VULB9168	Jun 23	Jun 25	406
Broadband Horn 14-40 GHz	Schwarzbeck	BBHA9170	Feb 22	Feb 24	442
Log Per Antenna 0.7-20 GHz	Schwarzbeck	STLP9148	Jun 23	Jun 25	445a
Log Per Antenna 0.2 – 3.5 GHz	Schwarzbeck	VUSLP 9111B	Jan 23 Factory cal.	Jan 25	694
Log Per Antenna 0.2 – 3.5 GHz	Schwarzbeck	VUSLP 9111B	Jan 23 Factory cal.	Jan 25	695
Log Per Antenna 1 GHz – 18 GHz	Rohde & Schwarz	S/N 352886/009	Jun 23 (Val. only)	Jun 25	700
Bilog Ant.	CHASE	CBL6111	Cal. before use	Cal. before use	167
Spectrum analyser Mixer 220 – 325 GHz	Radiometer Physics	SAM325 / 20029	Oct 23	Oct 25	591
Dual Mode Potter Horn 220-325 GHz	Radiometer Physics	325-WR2	---	---	592
Dual Mode Potter Horn 75-110 GHz	Radiometer Physics	---	---	---	649
Gain Horn Antenna 50-75 GHz	Dorado	GH-15-20	---	---	511
Standard Gain Horn 1.7 – 2.6 GHz	Narda	645	---	---	514
W-band active Sextupler with input drive amplifier	Spacek Labs Inc.	AW-6XW-0	---	---	221a
60 to 65 GHz active frequency quadrupler	Spacek Labs Inc.	A625-4XW-0	---	---	222a
Harmonic Mixer 40-60 GHz	Rohde & Schwarz	FS-Z60/ 100037	Oct 23	Oct 25	515
Gain Horn Antenna 40-60 GHz	Dorado	GH-19-20 / 070106	---	---	518
Spectrum analyser Mixer 90-140 GHz	Radiometer Physics	SAM140 / 20006	Oct 23	Oct 25	545
Dual Mode Potter Horn 90-140 GHz	Radiometer Physics	140-WR8	---	---	547
Spectrum analyser Mixer 140-220GHz	Radiometer Physics	SAM220 / 20002	Oct 23	Oct 25	546
Dual Mode Potter Horn 140-220 GHz	Radiometer Physics	220-WR5.1	---	---	548
Harmonic Mixer 60-90 GHz	Rohde & Schwarz	FS-Z90 / 100062	Oct 23	Oct 25	501
Dual Mode Potter Horn 60-90 GHz	Radiometer Physics	90-W12	---	---	549
Gain Horn 33-55 GHz	Dorado	040810	---	---	383
Gain Horn 50-75 GHz	Dorado	031003	---	---	384
Gain Horn 75-110 GHz	Dorado	040808	---	---	385
Standard Gain Ant. 26.5-40 GHz	Maury Microwave	U211C	---	---	532/628
Waveguide Harmonic Mixer 50 – 75 GHz	Keysight	M1971V	Jan 22	Jan 24	673

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Waveguide Harmonic Mixer 75 – 110 GHz	Keysight	M1971W	Jan 22	Jan 24	674
Stacked Log.-Per. Antenna 70 MHz – 10 GHz	Schwarzbeck	STLP 9129	---	---	662
Spectrum/Signal Analyzer Extension Module 110 GHz – 170 GHz (WR-6.5)	Virginia Diodes, Inc.	SAX 637	Jun 22	Jun 24	675
Spectrum/Signal Analyzer Extension Module 140 GHz – 220 GHz (WR-5.1)	Virginia Diodes, Inc.	SAX 636	Jun 22	Jun 24	677
Spectrum/Signal Analyzer Extension Module 220 GHz – 330 GHz (WR-3.4)	Virginia Diodes, Inc.	SAX 635	Jun 22	Jun 24	679
Conical Gain Horn Ant. 110 GHz – 170 GHz [21 dBi]	Virginia Diodes, Inc.	Conical Antenna WR-6.5	---	---	687
Conical Gain Horn Ant. 140 GHz – 220 GHz [21 dBi]	Virginia Diodes, Inc.	Conical Antenna WR-5.1	---	---	688
Diagonal Gain Horn Ant. 220 GHz – 330 GHz [26 dBi]	Virginia Diodes, Inc.	Diagonal Antenna WR-3.4	---	---	689
4. Amplifier					
RF-Power Amplifier 250 kHz – 150 MHz	ENI	3100LA	---	---	123
RF pre-amplifier 100kHz-1.3GHz	HP	8447E	Sep 20	Sep 24	166a
Mitteq amplifier 26.5-40 GHz	Mitteq	---	Sep 22	Sep 24	223a
RF pre-amplifier 1-18GHz	Narda	---	Sep 22	Sep 24	345
Mitteq Amplifier 18-26GHz	Mitteq	---	Jun 23	Jun 26	433
Microwave amplifier 12-28GHz	Schwarzbeck	BBV9719	Sep 22	Sep 24	443
Microwave amplifier 0.5-18GHz	Schwarzbeck	BBV9718	Sep 22	Sep 24	444
RF-Power Amplifier 10kHz-1000 MHz	Poetschke	8100 (Band 1) BHED (Band 2) BHED (Band 3)	---	---	684
RF-Power Amplifier 800 MHz – 4,2 GHz	Amplifier Research	10S1G4	---	---	685
RF-Power Amplifier 4 GHz – 8 GHz	Amplifier Research	35S4G8A	---	---	686
RF-Power Amplifier 0.69 GHz – 6 GHz	Rohde & Schwarz	BBA150-D110/E60	---	---	690
5. Power supplies					
Programmable Power Supply	Fluke	PM 2813	---	---	28a
Power Supply	HP	---	---	---	125
Power Supply	Sorensen	LM 30-6	---	---	134a
Power Supply	HP	6034L	---	---	226
Regulated Power Supply	Farnell	AP60-50	---	---	408
Power Supply	EA	PSI 8080-40-DT	---	---	560
Power Supply	HP	6032A	---	---	644
6. Meters					
Microwave Frequency Counter	Hewlett-Packard	5351B	Jun 23	Jun 25	432
Temperature test cabinet	Heraeus Vötsch	VMT04/35	---	---	102a
Temperature and Climate Test Chamber	Weiß Umwelttechnik, WKL 34/40	S.N.: 5667998 // SW: Simpac 1.4.4.0	Nov 21	Nov 23	562
Temperature test cabinet	Brabender	TTE 32/40 H	---	---	87
Digital-Hygro-Thermometer	Greisinger	GFTH95	Feb 23	Feb 25	57a
Volt & RF Power Meter	Rohde & Schwarz	URV35	Jun 22	Jun 25	161
Power Meter	Marconi	6960/ S.N: 1214	Dec 22	Dec 25	139a
Spectrum Analyzer - 9 kHz – 18 GHz	Rohde & Schwarz	FSL18	Cal. before use	Cal. before use	171a
Multimeter	Gossen Metrawatt	Metrahit pro	Nov 21	Nov 23	215a
Humidity/Temperature Measuring device	TESTO	Testo 625	Nov 21	Nov 23	259a
Volt & RF Power Meter	Rohde & Schwarz	URV35	Cal. before use	Cal. before use	271
Multimeter	Gossen Metrawatt	Metrahit 26S	Oct 22	Oct 24	313
Level and Power Meter - 9 kHz – 3 GHz	Rohde & Schwarz	URY	Apr 22	Apr 24	307
Temperature test device	Ahlhorn	Almemo 2390-5 PT100	Apr 23	Apr 26	401/402
Digital-Vacuum-/Barometer	Greisinger	GDH12AN	Jan 22	Jan 25	558
Digital Storage Oscilloscope	Tektronix	TDS 2012C	Nov 22	Nov 24	568

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Miniature Flat, Zero-Biased Schottky Detector –0.1– 18 GHz	Narda	4503A-03	Val. before use	Val. before use	613
Digital-Vacuum-/Barometer	Greisinger	GDH-200-14	Nov 21	Nov 23	632
Network Analyser 9 kHz -6 GHz	Rohde & Schwarz	ZVL6 (SN: 101268)	Sep 22	Sep 24	534
Signal Analyser 10 Hz – 30 GHz	Rohde & Schwarz	FSV 30 S/N: 100932	Oct 23	Oct 25	502
EMI Test receiver ESW26	Rohde & Schwarz	R&S ESW26 (SN: 101383/26 SW: R&S ESW2.10)	Nov 21	Nov 23	665
EMI Test Receiver ESW44	Rohde & Schwarz	R&S ESW44 SN: 103281	May 23	May 25	696
Signal analyser Keysight 50GHz	Keysight	UXA N9040B (SN: MY57213006 SW: A.27.02/2020 1.0)	Jan 22	Jan 24	666
7. test/control software					
EMC32	Rohde & Schwarz	V10.60.20	---	---	---
Maturo mcApp	Maturo	SW: V3.4.9.4537 (19.04.04)	---	---	---
SPS EMC	Spitzenberger & Spies	SW: V4.1.3	---	---	---
EMV-Soft	Schlöder GmbH	SW: V11.95	---	---	---
ISMISO	EM Test AG	SW:V3.63	---	---	---

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12. Cable list

Internal Cable Number	Connector Type	Frequency Range (MHz)	Cable Length (m)	Manufacturer
3	N	0,5 - 8000	3	Cellflex
4	N	0,5 - 8000	3	Cellflex
4a	BNC	10 – 1500	0.50	Telemeter
12a	N	10 – 265000	6	Huber + Suhner
14a	BNC	10 – 1000	1.00	Telemeter
17a	APC3.5	10 – 26500	2.13	Huber + Suhner
18a	APC3.5	10 – 26500	2.13	Huber + Suhner
22	BNC	10 – 1000	1.50	---
27	BNC	10 – 1000	1.00	Fabrica Milanese Cond.
35	N	10 – 2000	1.10	Fujikura
40	BNC	---	0.50	Aircell
43	SMA	10 – 18000	0.50	Rosenberger
44	SMA	---	0.50	Huber + Suhner
45	SMA	10 – 18000	0.50	Huber + Suhner
48	SMA		0.50	Huber + Suhner
49	N	10 – 18000	1.00	Huber + Suhner
50	N	10 – 18000	1.00	Huber + Suhner
51	N	10 – 18000	1.00	Huber + Suhner
52	N	10 – 18000	1.00	Huber + Suhner
54	BNC	10 – 3500	1.00	Aircell
58	N	10 – 18000	2.00	Huber + Suhner
59	N	10 – 18000	1.00	Huber + Suhner
60	N	10 – 18000	2.00	Huber + Suhner
61	N	10 – 18000	1.00	Huber + Suhner
62	SMA	---	0.50	Huber + Suhner
63	SMA	10 – 18000	0.50	Huber + Suhner
64	SMA	10 – 18000	0.50	Huber + Suhner
65	APC3.5	10 – 26500	0.60	---
66	APC3.5	10 – 26500	0.60	---
67	APC3.5	10 – 26500	0.60	---
68	APC3.5	10 – 26500	0.60	---
72	BNC	---	0.40	---
73	BNC	---	0.40	---
76	SMA	10 – 30000	3.00	Gore
79	BNC/N	10 – 1000	5.00	---
80	SMA	---	0.25	Huber + Suhner
87	SMA	10 – 18000	0.15	Huber + Suhner
88	SMA	10 – 18000	0.15	Huber + Suhner
89	SMA	10 – 18000	0.15	Huber + Suhner
90	SMA	10 – 18000	0.15	Huber + Suhner
91	SMA	---	1.50	Huber + Suhner
94	BNC	---	1.10	---
95	BNC	---	0.80	---
96	BNC	---	0.80	---
100	N	10 – 26500	6.00	Rosenberg
101	N	10 – 18000	2.90	Huber + Suhner
102	SMA	10 – 18000	2.00	Huber + Suhner
111	BNC	10 – 1000	0.50	---
112	BNC	10 – 1000	0.50	---
114	SMA	10 – 18000	0.25	Huber + Suhner
116	SMA	10 – 18000	0.25	Huber + Suhner
119	N	10 – 20000	8.00	Jyebao
121	SMA	10 – 18000	1.50	Huber + Suhner
122	SMA	10 – 18000	2.00	Huber + Suhner

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Internal Cable Number	Connector Type	Frequency Range (MHz)	Cable Length (m)	Manufacturer
123	SMA	10 – 18000	2.00	Huber + Suhner
145	SMA	10 – 26500	8.00	Huber + Suhner
147	APC3.5	10 – 40000	1.50	Jyebao
148	APC3.5	10 – 40000	3.00	Jyebao
151	SMA	10 – 18000	0.50	Rosenberger
152	SMA	10 – 18000	0.50	Rosenberger
154	BNC	10 – 1000	1.00	---
155	N/BNC	---	0.85	---
157	BNC	---	0.50	---
158	SMA	10 – 26500	2.00	Huber + Suhner
160	SMA	10 – 18000	0.40	Nortel Networks
161	SMA	10 – 18000	1.00	Huber + Suhner
162	APC3.5	10 – 26500	2.00	Huber + Suhner
163	APC3.5	10 - 26500	2.00	Huber + Suhner
164	APC3.5	10 – 26500	2.00	Huber + Suhner
165	APC2.9	10 – 26500	2.00	Huber + Suhner
166	APC3.5	10 – 26500	5.70	Rosenberger
167	APC3.5	10 – 40000	1.00	Jyebao
168	APC3.5	10 – 40000	1.00	Jyebao
169	APC3.5	10 – 40000	1.00	Jyebao
170	APC3.5	10 – 40000	1.00	Jyebao
171	APC3.5	10 – 40000	1.00	Jyebao
172	SAM	---	0.90	Huber + Suhner
173	APC	10 – 26500	2.00	Huber + Suhner
174	APC	10 – 26500	---	Huber + Suhner
175	SMA	10 – 18000	0.40	Huber + Suhner
176	N-SMA	10 – 18000	0.50	Huber + Suhner
188	N	10 – 18000	5.00	Huber + Suhner
189	PC-PC	10 – 26500	6.00	Jyebao
190	PC-PC	10 – 26500	6.00	Jyebao
192	N-N	10 – 18000	3.0	Jyebao
193	N-N	10 – 18000	3.0	Jyebao
194	N-SMA	10 – 18000	2.0	Jyebao
195	N-SMA	10 – 18000	2.0	Jyebao
EMV 1	BNC	---	2.00	Henn
EMV 2	BNC	10 – 1000	2.00	Henn
EMV 4	BNC	---	9.70	Henn
EMV 5	BNC	---	3.80	Henn
EMV 6	BNC/N	10 – 1000	5.00	Lüthi
EMV 7	BNC	10 – 1000	1.50	Henn
EMV 8	BNC	10 – 1500	1.70	Henn
EMV 9	BNC	10 – 1000	1.70	Henn
EMV 11	BNC	---	5.20	Hasselt
EMV 12	BNC	10 – 1000	2.40	Hasselt
EMV 13	BNC	10 – 1000	4.10	Hasselt
EMV 14	BNC	10 – 1000	2.50	Hasselt
EMV 15	BNC	---	0.90	Henn
EMV 16	Fischer	---	2.00	---
EMV 18a	Fischer	---	1.00	---
EMV 19a	Fischer	---	1.50	---
KISN2	BNC	10 – 2000	4.80	---

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End of test report

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