TÜVRheinland®

Test Report No.: *Prüfbericht-Nr.:*	**DE22UQI5 001**	**Order No.:** *Auftrags-Nr.:*	1110171_110	
Client Reference No.: *Kunden-Referenz-Nr.:*	—	**Order date:** *Auftragsdatum:*	2022-03-08	
Client: *Auftraggeber:*	Robert Bosch GmbH, Markwiesenstraße 58, 72770 Reutlingen, Deutschland			
Test item: *Prüfgegenstand:*	Mini Remote			
Identification / Type No.: *Bezeichnung / Typ-Nr.:*	BRC3300			
Order content: *Auftrags-Inhalt:*	Prüfung der elektromagnetischen Verträglichkeit EMV / Test of electromagnetic compatibility EMC			
Test specification: *Prüfgrundlage:*	Komplettprüfung / Complete test 47 CFR FCC Part 15 Subpart B ICES-003: Issue 7			

Date of receipt: *Wareneingangsdatum:*	2022-07-25
Test sample No.: *Prüfmuster-Nr.:*	A003306767-004
Testing period: *Prüfzeitraum:*	2022-07-29
Place of testing: *Ort der Prüfung:*	Nürnberg / Nuremberg
Testing laboratory: *Prüflaboratorium:*	EMV Labor / EMC test lab
Test result*: *Prüfergebnis*:*	PASS

Photos were removed for confidentiality as demanded by the customer.

tested by: *geprüft von:*	17.08.2022 X Signiert von: Sami Ullah	**authorized by:** *genehmigt von:*	17.08.2022 X Signiert von: Patrick Reusch
Date: *Datum:* 2022-08-17		**Issue Date:** Ausstelldatum: 2022-08-17	
Position / *Stellung*	Expert/Sachverständige(r)	Position / *Stellung*	Expert/Sachverständige(r)

Other / *Sonstiges*:

Condition of the test item at delivery: *Zustand des Prüfgegenstandes bei Anlieferung:*	Test item complete and undamaged *Prüfmuster vollständig und unbeschädigt*

* 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
* Legende:	P(ass) = entspricht o.g. Prüfgrundlage(n)	F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet

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Remarks
Anmerkungen

1	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. *Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibierungsprogramms 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.*
2	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. *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.*
3	Test clauses with remark of * are subcontracted to qualified subcontractors and descripted under the respective test clause in the report. Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report. *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.*
4	The measurement uncertainty of the measurement procedures listed in this test report does not include the compliance of the respective limit values / operating conditions. For emission tests the requirements, CISPR 16-4-2 / EN 55016-4-2 (chapter 4.2) apply in their current form. For immunity tests, the specific dated requirements of the applied measurement and test procedures shall apply. *Die Messunsicherheit der in diesem Prüfbericht aufgeführten Messverfahren wird nicht in die Einhaltung der jeweiligen Grenzwerte / Betriebsbedingungen mit einbezogen. Für Emissionsprüfungen gelten die Anforderungen CISPR 16-4-2 / EN55016-4-2 (Kapitel 4.2) in aktueller Form. Für Störfestigkeitsprüfungen gelten die speziellen datierten Anforderungen der angewendeten Mess- und Prüfverfahren.*

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5	Unless otherwise agreed with the customer, a conformity assessment is always carried out based on the applied standards. At the customer's request, the statement on the conformity of the product tested in this test report is carried out according to the criteria/requirements of the applied standards. Evaluation conditions deviating from these are documented separately in the respective chapters. *Sofern mit dem Kunden keine abweichende Regelung getroffen wurde, wird eine Konformitätsbewertung grundsätzlich auf Basis der angewendeten Normen durchgeführt.* *Auf Kundenwunsch wird die Aussage zur Konformität des in diesem Prüfbericht geprüften Produktes nach den Kriterien/Anforderungen der angewendeten Normen durchgeführt.* *Davon abweichende Bewertungsbedingungen werden in den jeweiligen Kapiteln gesondert dokumentiert.*

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Product description

6	**Identical types**	—
7	**Description**	Refer to technical documentation and user manual
8	**Serial number**	—
9	**Manufacturer**	identisch mit Auftraggeber / same as client
10	**Rated voltage**	3 V DC
11	**Rated frequency**	—
12	**Rated current**	< 1,5 mA
13	**Rated power consumption**	—
14	**Equipment type**	Sonstiges/Other
15	**Equipment categorie**	—
16	**Number of phases**	Battery operated
17	**Protection class**	—
18	**Hardware version**	1.2.0
19	**Software version**	1.2.13
20	**Other**	—
21	**Test sample obtaining:**	☒ Sending by customer ☐ Sampling by TÜV Rheinland Group ☐ others:

Clause	Requirements – Tests	Measuring results - Remarks	Result
22	**Radiated disturbance (30 MHz - 1 GHz)** 47 CFR FCC Part 15 Section 15.109 ICES-003: Issue 7	*Details in protocol number:* 1277 *Operating mode*: Continuous operation *EUT:* BRC3300 (A003306767-004) *Terminals:* Gehäuse / Enclosure *Remarks:*	P ☒ F ☐ N/A ☐ N/T ☐
23	**Radiated disturbance (> 1 GHz)** 47 CFR FCC Part 15 Section 15.109 ICES-003: Issue 7	*Details in protocol number:* 1278 *Operating mode*: Continuous operation *EUT:* BRC3300 (A003306767-004) *Terminals:* Gehäuse / Enclosure *Remarks:*	P ☒ F ☐ N/A ☐ N/T ☐
24	**Conducted voltage emissions** FCC Part 15 Subpart B section 15.107	*Remarks:* Battery operated device	P ☐ F ☐ N/A ☒ N/T ☐

Limits

47 CFR FCC Part 15 Subpart B section §15.109
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

Frequency [MHz]	Quasi-peak [dB(µV)/m]
30 – 88	40
88 – 216	43.5
216 – 960	46
Above 960	54

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, using measurement instrumentation employing a CISPR quasi-peak detector.

Frequency [MHz]	Quasi-peak [dB(µV)/m]

Clause	Requirements – Tests	Measuring results - Remarks	Result

30 – 88	39.1
88 – 216	43.5
216 – 960	46.4
Above 960	49.5

Note: For frequencies above 1000 MHz, the radiated emission limits are based on the use of measurement instrumentation employing an average detector function.
When average radiated emission measurements are specified, there also is a limit on the peak level of the radio frequency emissions which is 20 dB above the maximum permitted average emission limit. (see § 15.35 Measurement detector functions and bandwidths)

As an alternative to the radiated emission limits shown above, 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 (acc. §15.109 (g)).
The field strength of radiated emissions from Class B devices at a distance of 10 meters shall not exceed the following values

Frequency [MHz]	Quasi-peak [dB(µV)/m]
30 – 230	30
230 - 1000	37

The field strength of radiated emissions from Class A devices at a distance of 10 meters shall not exceed the following values

Frequency [MHz]	Quasi-peak [dB(µV)/m]
30 – 230	40
230 - 1000	47

ICES-003 section 3.2.2
Radiated emissions limits (30 MHz to 1 GHz)

Frequency [MHz]	Class A (3 m) Quasi-peak [dB(µV)/m]	Class A (10 m) Quasi-peak [dB(µV)/m]	Class B (3 m) Quasi-peak [dB(µV)/m]	Class B (10 m) Quasi-peak [dB(µV)/m]
30 – 88	50.0	40.0	40.0	30.0
88 – 216	54.0	43.5	43.5	33.1
216 – 230	56.9	46.4	46.0	35.6
230 – 960	57.0	47.0	47.0	37.0
960 – 1000	60.0	49.5	54.0	43.5

Radiated emission limits at 3 m distance (at and above 1 GHz)

Frequency [GHz]	Class A Average [dB(µV)/m]	Class A Peak [dB(µV)/m]	Class B Average [dB(µV)/m]	Class B Peak [dB(µV)/m]
1 – F_M	60	80	54	74

The highest measurement frequency, F_M, in GHz, shall be determined as

Clause	Requirements – Tests	Measuring results - Remarks	Result

Highest internal frequency (F_X)	Highest measurement frequency (F_M)
$F_X \leq 108$ MHz	1 GHz
108 MHz < $F_X \leq 500$ MHz	2 GHz
500 MHz < $F_X \leq 1$ GHz	5 GHz
$F_X > 1$ GHz	5 x F_X up to a maximum of 40 GHz

F_X is the highest fundamental frequency generated and/or used in the ITE or digital apparatus under test These limit levels apply for a measurement distance of 3 m. If using a different measurement distance, the measured levels shall be extrapolated to the 3 m limit distance using a factor of 20 dB per decade of distance. The measurement distance shall place the measurement antenna in the far field of the ITE or digital apparatus under test

Clause	Requirements – Tests	Measuring results - Remarks	Result

Method of measurement of radiated emission

Measurements were made in a 10-meter semi-anechoic chamber that complies to ANSI C63.4:2014. Floor-standing equipment was placed on a non-conducting support (0.1 ± 0.01) m over the reference ground plane. Tabletop equipment was placed on a table at a height of (0.8 ± 0.05) m above the reference ground plane. Preliminary measurements were performed with a receiver employing a peak detector at an antenna to EUT distance of 10 m or 3 m (as defined in the standard). The EUT was rotated in 45° steps for frequencies below 1 GHz and 22.5° steps for frequencies over 1GHz about its azimuth to determine the position of the highest emissions. The measurement antenna was adjusted between 1 m and 4 m above ground to find the maximum signal strength. These measurements were done and in both horizontal and vertical polarizations. After this, final measurements with a receiver employing a quasi-peak detector for frequencies below 1 GHz and with a peak and an average detector for frequencies above 1 GHz were performed by rotating the EUT by 360° and adjusting the receive antenna height from 1 m to 4 m. All frequencies were investigated in both horizontal and vertical antenna polarity. For frequencies over 1 GHz floor absorbers were used between antenna and EUT to fulfil the SVSWR requirements.
The whole required frequency range was investigated for maximum radiated interferences. After data reduction, a final measurement of the highest emissions was made with quasi-peak, peak and average detector with a measurement time of at least 1 s per single frequency.
The emission limits are calculated from the field strength limit of this section using this formula:

$$Emission\ level\ \left(\frac{dB\mu V}{m}\right) = 20\ log\ Emission\ level\ \left(\frac{\mu V}{m}\right)$$

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 as per §15.31(f)(1). For this documentation a distance extrapolation factor was added to the limit that was calculated using this formula:

$$Emission\ limit_{new}\left(\frac{dB\mu V}{m}\right) = Emission\ limit_{old} + 20\ log\left(\frac{d_1}{d_2}\right)$$

Where
d_1: $old\ distance (e.g. 3\ m)$
d_2: $new\ distance\ (e.g. 10\ m)$

The field strength is calculated by adding the antenna factor and cable loss. The basic equation with a sample calculation is as follows:

$$E = U + AF + CA$$

Where
E: $Field\ strength$
U: $Receiver\ reading$
AF: $Antenna\ factor$
CA: $Cable\ loss$

For example:

Frequency (MHz)	Receiver reading U (dBµV)	Correction antenna factor AF + cable loss CA (dB)	Field strength E (dBµV/m)
320	15.9	15.8	31.7

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25	**Accreditations & Endorsements**
26	**US Federal Communications Commission** TUV Rheinland LGA Products GmbH located at, Tillystraße 2, 90431 Nuremberg is recognized by the Bundesnetzagentur (Federal Network Agency for Electricity, Gas, Telecommunications, Post and Railway) as conformity assessment body.

FCC designation number	DE0016
Bundesnetzagentur registration number	BNetzA-CAB-17/21-16

27	**Applied basic standards**
	According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards: - Title 47 CFR FCC Part 15 Subpart B - ANSI C63.4-2014 (Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9kHz to 40GHz) - ICES-003:2020 (Issue 7) (Information Technology Equipment (Including Digital Apparatus) — Limits and Methods of Measurement) The test setup and test was done according to ANSI C63.4-2014.

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28 Equipment used during test

Equipment under test

Product type	Manufacturer	Model	Comments
Mini Remote	identisch mit Auftraggeber / same as client	BRC3300	EUT

Auxiliary Equipment / Peripherals

Product type	Manufacturer	Model	Comments
—	—	—	—

29 Input/Output ports

Name	Type*	Cable length	Shielded		Comments
Enclosure	N/E	—	—	None	
—	—	—	—	NO	

* AC = AC Power Port
DC = DC Power Port
N/E = Non-Electrical
I/O = Signal Input or Output Port (Not Involved in Process Control)
TP = Telecommunication Ports

30 Internal operating frequencies

Frequency	Description
f = 2.4 GHz	Bluetooth

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31	**Operating modes**
	No. **Description** 1 Continuous operation For details see the corresponding protocol
32	**Special EMC measures**
	Radiated disturbance (30 MHz - 1 GHz)

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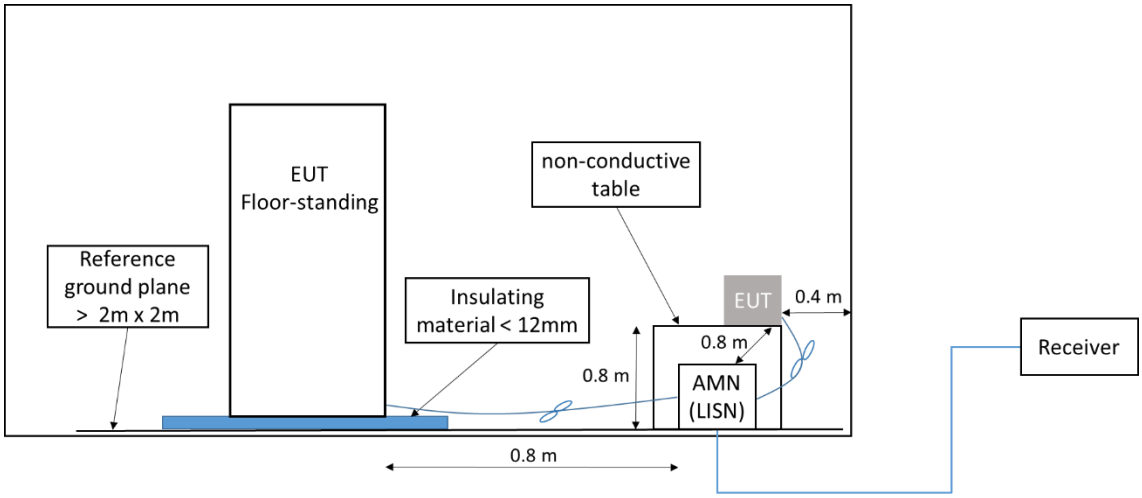
33	**EUT configuration**
	The test setup was made in accordance with mentioned EMC standards. Measurements and tests were executed under ”worst case” conditions. Typical EUT arrangements or operating modes were chosen or assumed which let suspect maximum emission or susceptibility (a so called ”unfavourable configuration”). Details of test setup or adjustments are (particularly) shown inside the photo documentation. As far as not mentioned otherwise these statements are valid for all following tests.
34	**Conducted emission (9kHz – 30 MHz) acc. ANSI C63.4**
	

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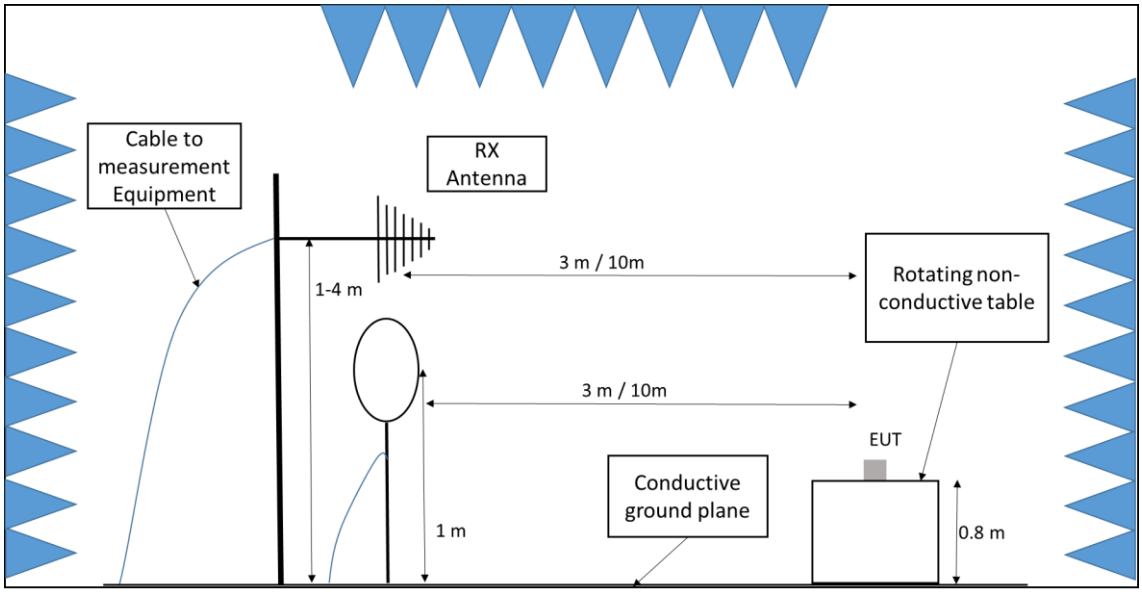
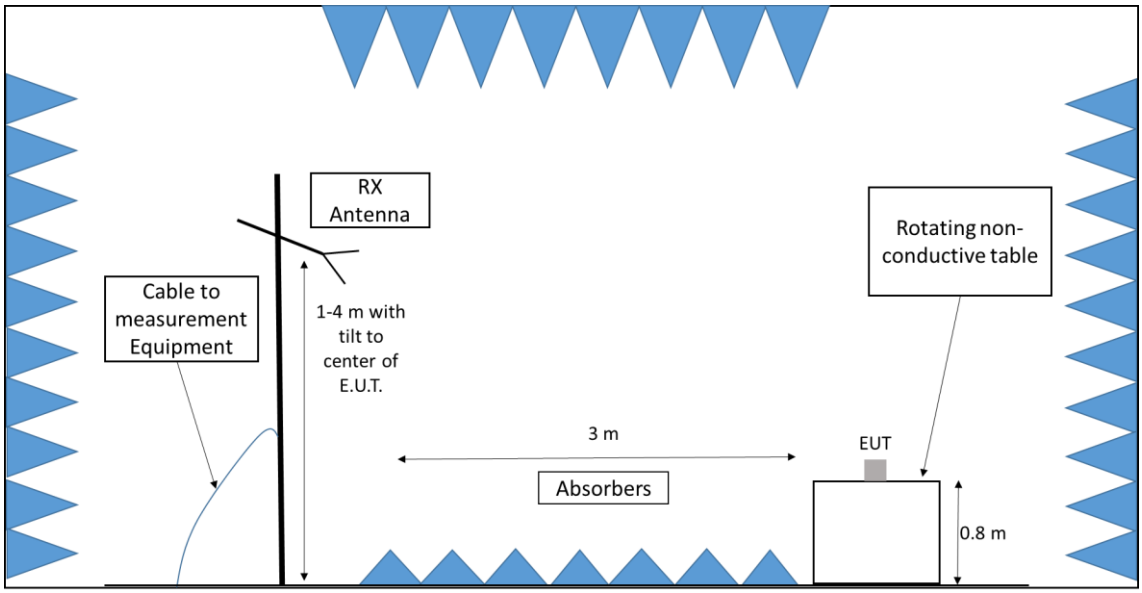
35	**Field strength measurement (9 kHz – 30 MHz) with loop antenna** **Field strength measurement (30 MHz – 1000 MHz) with log-per antenna acc. ANSI C63.4**
	
36	**Field strength measurement (>1 GHz) horn antenna acc. ANSI C63.4**
	

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37	**Climatic conditions**	
	Ambient Temperature	15 - 35 °C
	Relative Humidity	30 - 60 %
	Air pressure	860 - 1060 mbar

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38 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 4 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the quality system acc. to ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation.

The manufacturer has the sole responsibility of continued compliance of the device.

Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Measurement procedure	**U_{Lab}**
Measurement of conducted emissions at the power supply connection to LISN in the frequency range 9k-150kHz (CISPR Band A)	2.3 dB
Measurement of conducted emissions at the power supply connection to LISN in the frequency range 150k-30MHz (CISPR Band B) with 150 ohm Delta LISN	3.3 dB
Measurement of conducted emissions at the power supply connection to LISN in the frequency range 150k-30MHz (CISPR Band B)	2.2 dB
Measurement of conducted emissions at the power supply connection to voltage probes in the frequency range 9k-30MHz (CISPR Band A and B)	2.0 dB
Measurement of conducted emissions at telecommunication connection to ISN in the frequency range 150k-30MHz (CISPR Band B) ISN CAT 5	3.3 dB
Measurement of conducted emissions at the telecommunication connection to ISN in the frequency range 150k-30MHz (CISPR Band B) ISN CAT 6 Shielded	2.6 dB
Measurement of conducted emissions at the telecommunications connection to current clamps in the frequency range 150k-30MHz (CISPR Band B)	2.2 dB
Measurement of interference power in the frequency range 30-300MHz (CISPR Band C)	2.9 dB
Measurement of interference power in the frequency range 30-300MHz (CISPR Band C) CDNE	2.6 dB

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Measurement procedure	**U_{Lab}**
Measurement of magnetic emissions in the frequency range 9k-150kHz (CISPR Band A) with frame antenna HFH2 (small loop antenna)	1.6 dB
Measurement of magnetic emissions in the frequency range 9k-150kHz (CISPR Band A) with frame antenna HL562 (3-axis loop antenna)	1.6 dB
Measurement of the field strength in the frequency range 30-1000MHz (CISPR Band C and D) with 10m distance with VULB 9168 Vertical	4.5 dB
Measurement of the field strength in the frequency range 30-1000MHz (CISPR band C and D) with 10m distance with VULB 9168 Horizontal	4.4 dB
Measurement of the field strength in the frequency range 1-18GHz (CISPR Band E) with 3m distance with HL025 1-6GHz	5.0 dB
Measurement of the field strength in the frequency range 1-18GHz (CISPR Band E) with 3m distance with HL025 6-18GHz	5.3 dB
Limits for harmonic measurements ≤ 16A per conductor (Worst Case Estimation)	10.7%
Limits for voltage fluctuations and flicker ≤ 16A per conductor (Worst Case Estimation)	15.7%
Immunity to discharge of static electricity	18.1%
Immunity to high-frequency electromagnetic fields in the frequency range of 80-6000MHz calibration	1.2 dB
Immunity to high-frequency electromagnetic fields in the frequency range of 80-6000MHz level adjustment	2.6 dB
Immunity to fast transient disturbances	—
Immunity to surge voltages	—
Immunity to conducted electromagnetic fields in the frequency range of 0.150-30MHz Calibration CDN	1.4 dB
Immunity to conducted electromagnetic fields in the frequency range of 0.150-30MHz Level setting CDN	1.5 dB
Immunity to conducted electromagnetic fields in the frequency range of 0.150-30MHz Level adjustment EM coupling path	3.3 dB
Immunity to conducted electromagnetic fields in the frequency range of 0.150-30MHz Calibration Clamp	1.6 dB
Immunity to conducted electromagnetic fields in the frequency range of 0.150-30MHz Level adjustment Clamp	3.3 dB

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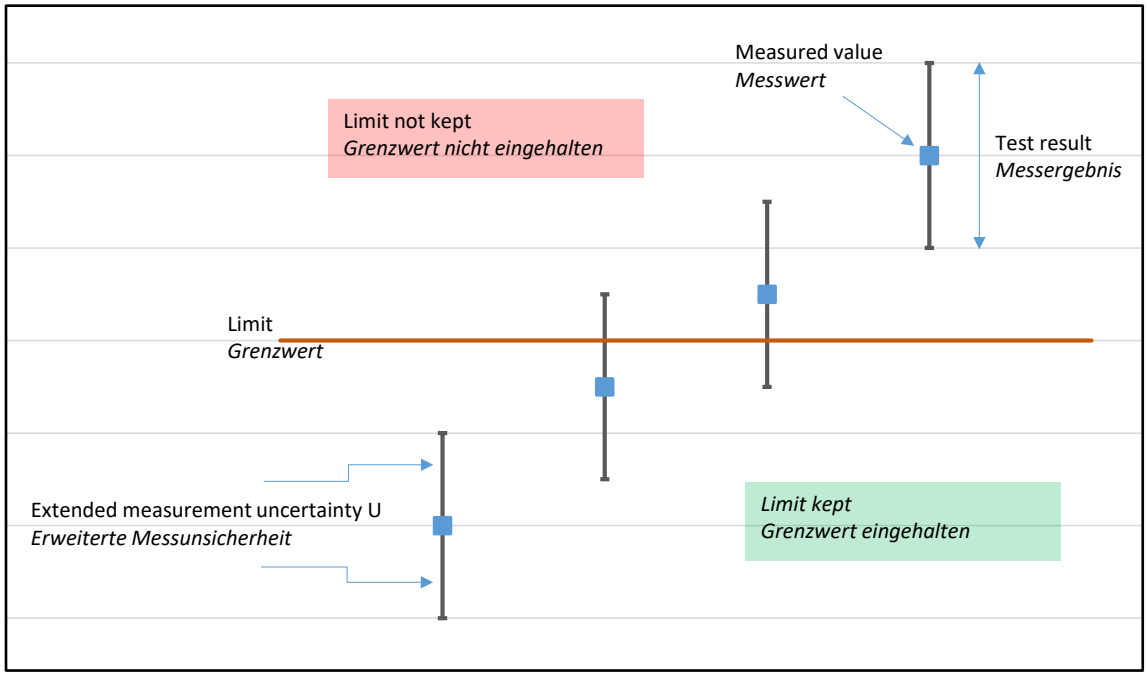
39	**Example for interpretation of measuring results**



Measured value	Limit	Extended measurement uncertainty (k=2)	Test result
48.9 dBµV @ 16.5 MHz	50 dBµV	2.2 dB	46.7 dBµV – 51.1 dBµV

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Protocol number		**1277**
Radiated disturbance (30 MHz - 1 GHz)		**PASS**
Applied Standard	47 CFR FCC Part 15 Section 15.109 ICES-003: Issue 7	
Test method	ANSI C63.4-2014	
Test sample No.	A003306767-004	
Model	BRC3300	
Tested terminals	Gehäuse / Enclosure	
Supply voltage	3 V DC	
Operating mode	Continuous operation	
Test setup	nach Norm (siehe Foto) / according to standard (see picture)	
EMC measures	None	
Remarks	—	
Temperature (°C)	15 - 35	
Humidity (% rH)	30 - 60	
Air pressure (mbar)	860 - 1060	
Test Software	BAT-EMC 2022.0.8.0	
Tested by	Sami Ullah	
Test date	2022-07-29	

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Used test equipment

Type	Manufacturer	Model	ID	Last calibration	Next calibration
Turntable	INN-CO	CO 3000	2869231	---	---
Antenna mast	INN-CO	CO 3000	2869231	---	---
Receiver	Rohde & Schwarz	ESU 8	2728844	2021-12-23	2022-12-23
Anechoic chamber	Siemens	SAC 10 (NSA 30-1000MHz)	2729645	2020-06-19	2023-06-19
Antenna	Schwarzbeck	VULB 9168	2728787	2019-09-24	2022-09-24

Test parameter of Radiated disturbance (30 MHz - 1 GHz) #1277

Sample number:A003306767-004
Model name:BRC3300

Subrange 1 (Horizontal)	30 MHz … 1 GHz
IF Bandwidth	120 kHz
Step Size	30 kHz
Preamplifier	ON
Preamplifier Auto Ranging	ON
LN-Preamplifier	OFF
RF Attenuation	Auto
Sweep Time	20 ms
Reference Level	80 dBµV
VBW	Auto
EMI Filter	6dB
Subrange 2 (Vertical)	**30 MHz … 1 GHz**
IF Bandwidth	120 kHz
Step Size	30 kHz
Preamplifier	ON
Preamplifier Auto Ranging	ON
LN-Preamplifier	OFF
RF Attenuation	Auto
Sweep Time	20 ms
Reference Level	80 dBµV
VBW	Auto
EMI Filter	6dB

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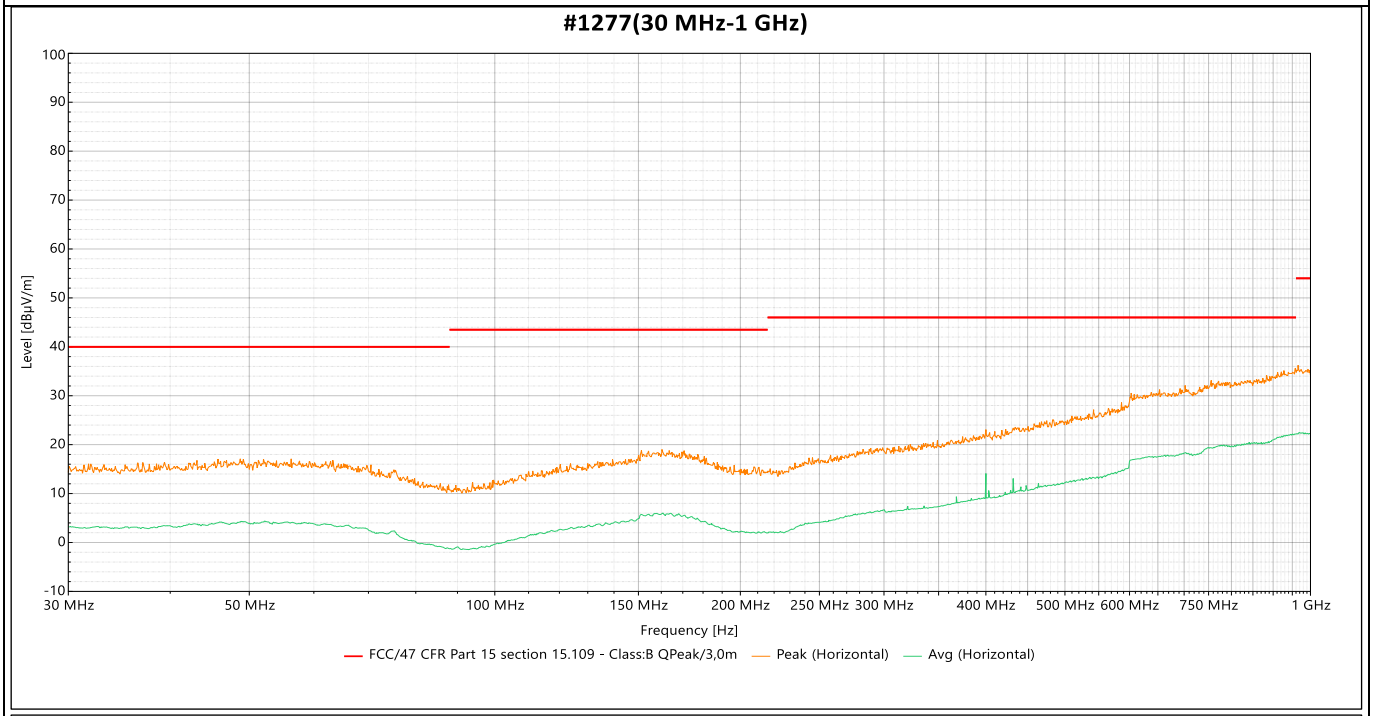
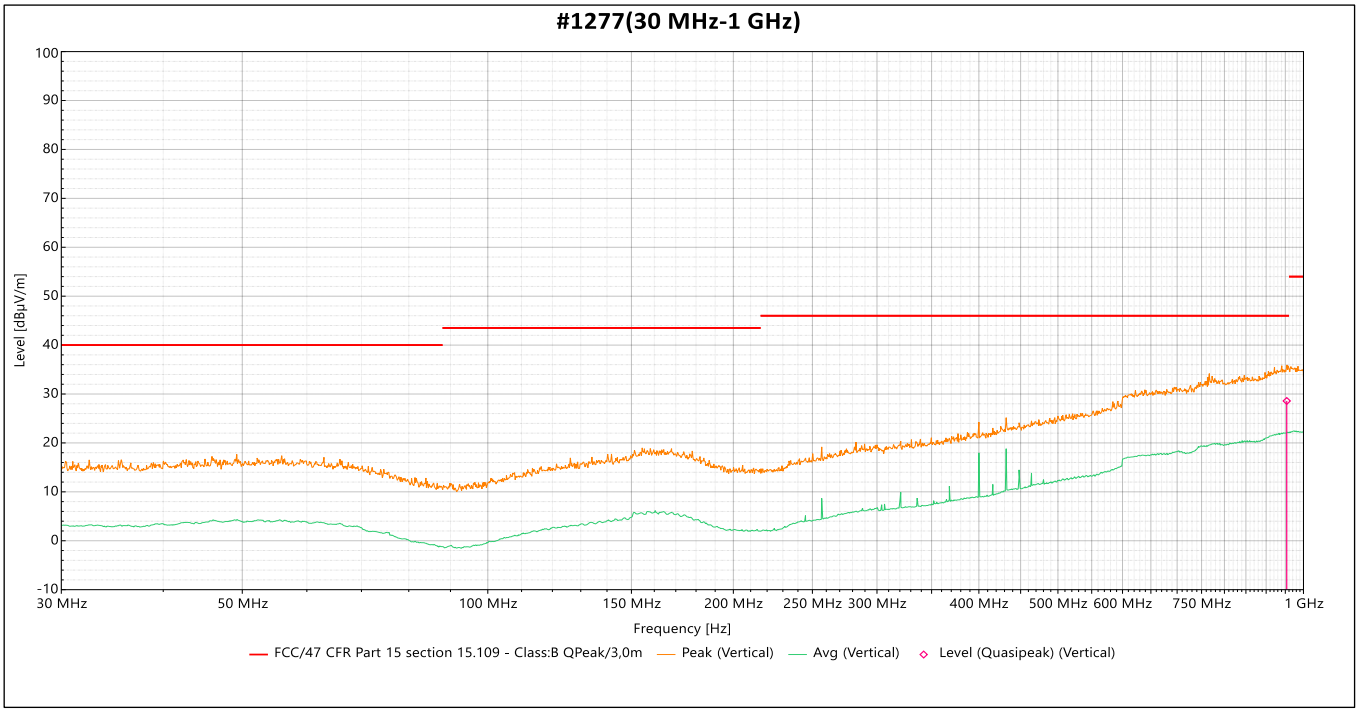
Graphical presentation of Radiated disturbance (30 MHz - 1 GHz) **#1277**
Sample number: A003306767-004
Model name: BRC3300





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Measurement data of Radiated disturbance (30 MHz - 1 GHz) **#1277**
Sample number:A003306767-004
Model name:BRC3300

Source	Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Polarity	Azimuth (°)	Height (m)	M. time (s)	Comments	Correction (dB)
Quasipeak	953.880	28.58	46.00	-17.42	V	347.8	1.00	1	Pass	28.66

Remarks:

Measurement values which are more than 20 dB below the limit value were not detected or evaluated.

Margin value = Measurement value – Limit value

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Protocol number		**1278**
Radiated disturbance (> 1 GHz)		**PASS**
Applied Standard	47 CFR FCC Part 15 Section 15.109 ICES-003: Issue 7	
Test method	ANSI C63.4-2014	
Test sample No.	A003306767-004	
Model	BRC3300	
Tested terminals	Gehäuse / Enclosure	
Supply voltage	3 V DC	
Operating mode	Continuous operation	
Test setup	nach Norm (siehe Foto) / according to standard (see picture)	
EMC measures	None	
Remarks	—	
Temperature (°C)	15 - 35	
Humidity (% rH)	30 - 60	
Air pressure (mbar)	860 - 1060	
Test Software	BAT-EMC 2022.0.8.0	
Tested by	Sami Ullah	
Test date	2022-08-01	

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Used test equipment

Type	Manufacturer	Model	ID	Last calibration	Next calibration
Preamplifier	Schwarzbeck	BBV 9718B	2888179	2021-10-13	2023-10-13
Turntable	INN-CO	CO3000	2732515	---	---
Antenna	EMCO	3115	2728607	2020-02-10	2023-02-10
Receiver	Rohde & Schwarz	ESU 26	2728898	2021-08-17	2022-08-17
Cable	TRLP	N-SMA	LTG_1815	---	---
Antenna mast	Maturo	NCD	2733253	---	---
Anechoic chamber	TDK	SAC 10 (SVSWR 1-40GHz)	2766607	2020-04-03	2023-04-03

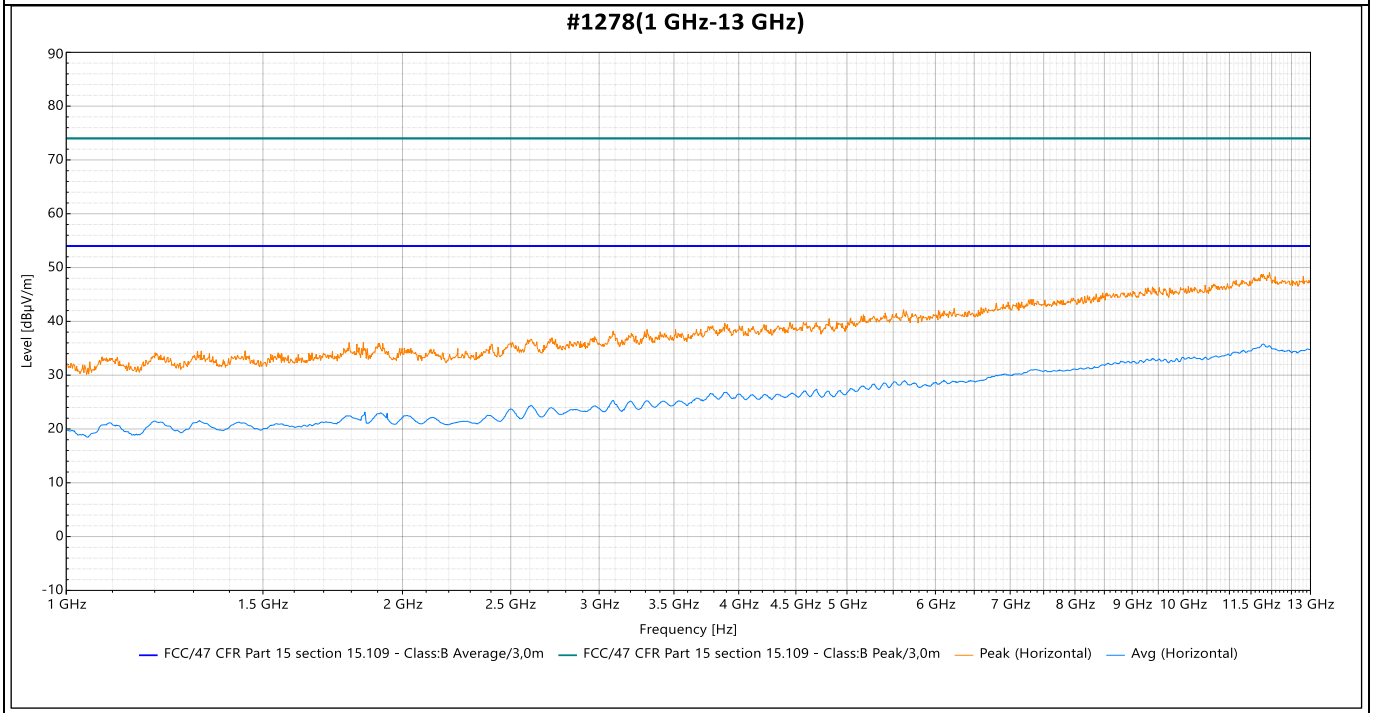
Test parameter of Radiated disturbance (> 1 GHz) #1278

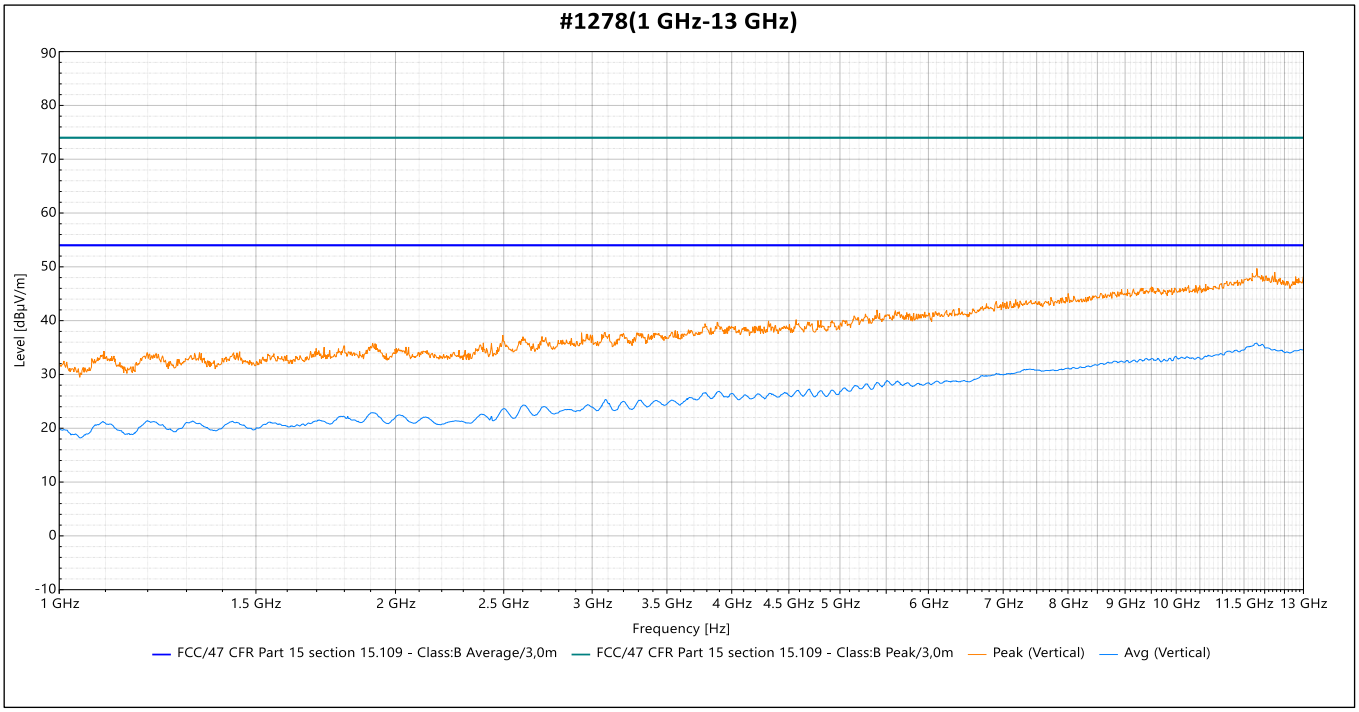
Sample number:A003306767-004
Model name:BRC3300

Subrange 1 (Horizontal)	1 GHz … 13 GHz
IF Bandwidth	1 MHz
Step Size	250 kHz
Preamplifier	ON
Preamplifier Auto Ranging	ON
LN-Preamplifier	OFF
RF Attenuation	Auto
Sweep Time	5 ms
Reference Level	80 dBµV
VBW	Auto
EMI Filter	6dB
Subrange 2 (Vertical)	**1 GHz … 13 GHz**
IF Bandwidth	1 MHz
Step Size	250 kHz
Preamplifier	ON
Preamplifier Auto Ranging	ON
LN-Preamplifier	OFF
RF Attenuation	Auto
Sweep Time	5 ms
Reference Level	80 dBµV
VBW	Auto
EMI Filter	6dB

PHOTO DOCUMENTATION

Graphical presentation of Radiated disturbance (> 1 GHz) **#1278**
Sample number: A003306767-004
Model name: BRC3300





Appendix to Test Report No.: DE22UQI5 001

PHOTO DOCUMENTATION

Measurement data of Radiated disturbance (> 1 GHz) **#1278**
Sample number:A003306767-004
Model name:BRC3300

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Remarks:

Measurement values which are more than 20 dB below the limit value were not detected or evaluated.

Margin value = Measurement value – Limit value

Appendix to Test Report No.: DE22UQI5 001

REVISION HISTORY

40 **Change history**

Rev. No.	List of changes	Date Author
001	First edition (DE22UQI5 001)	2022-08-17 Sami Ullah

End of test report