

Report on the FCC and IC Testing of the Schulte Strathaus GmbH & Co. KG

Model: Starclean® SIM C04

In accordance with FCC 47 CFR Part 15 B
and ICES-003

Prepared for: Schulte Strathaus GmbH & Co. KG
Runtestraße 42
59457 Werl
Germany

FCC ID: 2A9HN-94-C04
IC: 29796-94-C04



Product Service

Add value.
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Date: 2023-03-29

Document Number: TR-713274473-02 | Revision 1

RESPONSIBLE FOR	NAME	DATE	SIGNATURE
Project Management	Alexander Deese	2023-03-29	 SIGN-ID 777284
Authorised Signatory	Alex Fink	2023-03-29	 SIGN-ID 777355

Signatures in this approval box have checked this document in line with the requirements of TÜV SÜD Product Service document control rules.

Engineering Statement:

This measurement shown in this report were made in accordance with the procedures described on test pages.

All reported testing was carried out on a sample equipment to demonstrate limited compliance with FCC 47 CFR Part 15 B and ICES-003.

The sample tested was found to comply with the requirements defined in the applied rules.

RESPONSIBLE FOR	NAME	DATE	SIGNATURE
Testing	Alexander Deese	2023-03-29	 SIGN-ID 777284

Laboratory Accreditation

DAkkS Reg. No. D-PL-11321-11-03

DAkkS Reg. No. D-PL-11321-11-04

Laboratory recognition

Registration No. BNetzA-CAB-16/21-15

Industry Canada test site registration

3050A-2

Executive Statement:

A sample of this product was tested and found to be compliant with FCC 47 CFR Part 15 B:2021 and ICES-003:2020

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1 Report Summary

1.1 Modification Report

Alternations and additions of this report will be issued to the holders of each copy in the form of a complete document.

Issue	Description of changes	Date of Issue
1	First Issue	2023-02-01
2	"Contains" removed from front page Calculation of field strength at 30 meters added on page 13	2023-03-29

Table 1: Report of Modifications

1.2 Introduction

Applicant	Schulte Strathaus GmbH & Co. KG
Manufacturer	Schulte Strathaus GmbH & Co. KG
Model Number(s)	Starclean® SIM C04
Serial Number(s)	09/2022
Hardware Version(s)	94-C04-001 to 94-C04-008
Software Version(s)	---
Number of Samples Tested	1
Test Specification(s) / Issue / Date	FCC 47 CFR Part 15 C: 2021 and ISED RSS-210, Issue 10, Amd. 1: 2019 ISED RSS-Gen, Issue 5, Amd. 1: 2019 FCC 47 CFR Part 15 B: 2021 ICES-003: 2020
Test Plan/Issue/Date	---
Order Number	111685
Date	2022-10-14
Date of Receipt of EUT	2022-11-14
Start of Test	2022-11-17
Finish of Test	2022-11-28
Name of Engineer(s)	Alexander Deese
Related Document(s)	ANSI C63.10:2013



1.3 Brief Summary of Results

A brief summary of the tests carried out in accordance with FCC 47 CFR Part 15 C, ISED RSS-247, RSS-Gen, FCC 47 CFR Part 15 B and ICES-003 is shown below.

Section	Specification Clause	Test Description	Result
2.1	15.215(c)	Bandwidth of Signal	Pass
2.3	15.225(e)	Frequency Tolerance	Pass
2.4	15.207	Conducted Disturbance at Mains Terminal	Pass

Table 2: Results according to FCC 47 CFR Part 15 C

Section	Specification Clause	Test Description	Result
2.3	B.6 b.	Frequency Tolerance	Pass
2.4	7.3	AC Power Line Conducted Emissions	Pass

Table 3: Results according to ISED RSS-210

Section	Specification Clause	Test Description	Result
2.1	6.7	Bandwidth of Signal	Pass
2.3	6.11	Frequency Tolerance	Pass
2.4	8.8	AC Power Line Conducted Emissions	Pass

Table 4: Results according to ISED RSS-Gen

Section	Specification Clause	Test Description	Result
2.2	15.109	Radiated Disturbance	Pass

Table 5: Results according to FCC 47 CFR Part 15 B

Section	Specification Clause	Test Description	Result
2.2	6.2	Radiated Emissions	Pass

Table 6: Results according to ICES-003



1.4 Product Information

1.4.1 Technical Description

The EUT is a control unit for scrapers at conveyor belt machines with LTE, WLAN and RFID

<i>Frequency Band</i>	9j
<i>Number of frequency channels:</i>	1
<i>Emission designator:</i>	13.56 MHz
<i>Supply Voltage:</i>	100 - 240 V
<i>Supply Frequency:</i>	50 / 60 Hz
<i>Highest clock frequency (radio part):</i>	2685 MHz (LTE)
<i>Highest clock frequency (non-radio part):</i>	1400 MHz (Raspberry Pie Inside Edge Controller)

1.5 Test Configuration

Automatic Mode – RFID transmitting continuously.

1.6 Deviations from Standard

1.7 EUT Modifications Record

The table below details modifications made to the EUT during the test program.
The modifications incorporated during each test are recorded on the appropriate test pages.

Modification State	Description of Modification still fitted to EUT	Modification Fitted By	Date Modification Fitted
0	As supplied by the customer	Not Applicable	Not Applicable

Table 7



Product Service

1.8 Test Location

TÜV SÜD Product Service conducted the following tests at our Straubing test laboratory:

Test Name	Name of Engineer(s)
Bandwidth of Signal	Alexander Deese
Radiated Disturbance	Alexander Deese
Frequency Tolerance	Alexander Deese
Conducted Disturbance at Mains Terminal	Alexander Deese

Office Address:

Äußere Frühlingstraße 45
94315 Straubing
Germany



2 Test Details

2.1 Bandwidth of Signal

2.1.1 Specification Reference

FCC 47 CFR Part 15 C, Clause 15.215(c)
ISED RSS-Gen, Clause 6.7

2.1.2 Equipment under Test and Modification State

Starclean® SIM C04; S/N 09/2022; Modification state 0

2.1.3 Date of Test

2022-12-21

2.1.4 Environmental Conditions

Ambient Temperature	22 °C
Relative Humidity	38 %

2.1.5 Specification Limits

No limitation – Bandwidth noted

2.1.6 Test Method

The test was performed according to ANSI C63.10, clauses 6.9
See section 2.2 of this test report for details.



2.1.7 Test Results

<i>Center frequency</i>	<i>20 dB Bandwidth (MHz)</i>
13.55925	0.43428

Table 8: 20 dB bandwidth

<i>Center Frequency</i>	<i>99% Bandwidth (MHz)</i>
13.56004548	0.00419091

Table 9: 99% bandwidth

2.1.8 Test Location and Test Equipment

The test was carried out in a non-shielded room.

<i>Instrument</i>	<i>Manufacturer</i>	<i>Type No</i>	<i>TE No</i>	<i>Calibra- tion Pe- riod (months)</i>	<i>Calibration Due</i>
Signal and Spectrum Analyzer	Rohde & Schwarz	FSV40	20219	24	2024-02-29
Temperature test chamber	Feutron Klimasimulation	KPK200-2	19868	18	2023-02-28

Table 10



2.2 Radiated Emissions

2.2.1 Specification Reference

FCC 47 CFR Part 15 C, Clauses 15.205, 15.209 and 15.225

ISED RSS-210, Clause 7.7 and B.6

ISED RSS-Gen, Clauses 8.9 and 8.10

FCC 47 CFR Part 15 B, Clause 15.109

ICES-003, Clause 3.2.2

2.2.2 Equipment under Test and Modification State

Starclean® SIM C04; S/N 09/2022; Modification state 0

2.2.3 Date of Test

2022-11-17 to 2022-11-24

2.2.4 Environmental Conditions

Ambient Temperature	22 °C
Relative Humidity	44 %



2.2.5 Specification Limits

Required Specification Limits (Class A)		
Frequency Range (MHz)	Field strength at 10 m distance	
	($\mu\text{V/m}$)	(dB $\mu\text{V/m}$)
30 – 88	90	39
88 – 216	150	43.5
126 – 960	210	46.4
above 960	300	49.5

Table 11 § 15.109, Class A emission limits

Required Specification Limits (Class B)		
Frequency Range (MHz)	Field strength at 3 m distance	
	($\mu\text{V/m}$)	(dB $\mu\text{V/m}$)
30 – 88	100	40
88 – 216	150	43.5
126 – 960	200	46
above 960	500	54

Table 12 § 15.109, Class B emission limits

General radiated emission limits:					
Frequency Range (MHz)	Test distance (m)	Field strength		Field strength	
		($\mu\text{A/m}$)	(dB $\mu\text{A/m}$)	($\mu\text{V/m}$)	(dB $\mu\text{V/m}$)
0.009 – 0.49	300	$6.37 / f$	$20 \cdot \lg(6.37 / f)$	$2400 / f$	$20 \cdot \lg(2400 / f)$
0.49 – 1.705	30	$63.7 / f$	$20 \cdot \lg(63.7 / f)$	$24000 / f$	$20 \cdot \lg(24000 / f)$
1.705 - 30	30	0.08	$20 \cdot \lg(0.08 / f)$	30	$20 \cdot \lg(30 / f)$
30 – 88	3	---	---	100	40
88 – 216	3	--	---	150	43.5
126 – 960	3	--	---	200	46
above 960	3	--	---	500	54

Note 1: f in kHz

Table 13 General radiated emission limits acc. To § 15.209

2.2.6 Test Method

The test was performed according to ANSI C63.10, sections 11.11 and 11.12

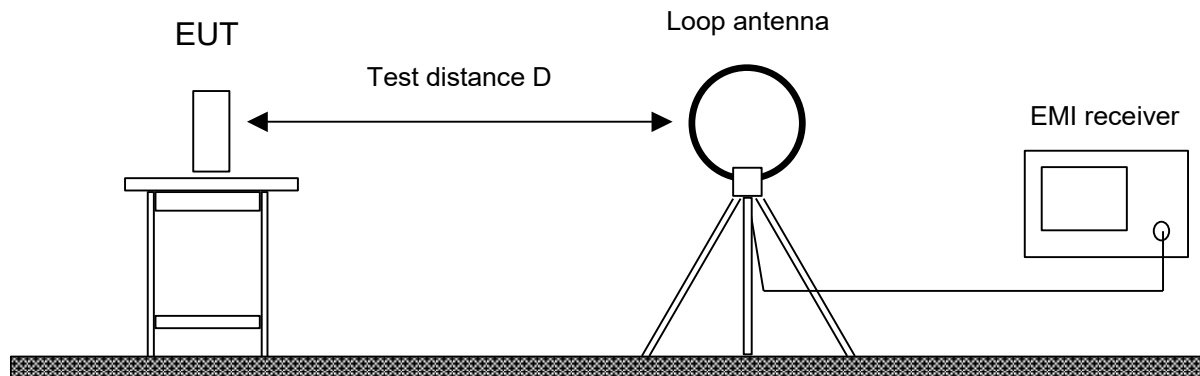
Prescans are performed in six positions of the EUT to get the full spectrum of emission caused by the EUT with the measuring antenna raised and lowered from 1 m to 4 m with vertical and horizontal polarization to find the combination of table position, antenna height and antenna polarization for the maximum emission levels.

Data reduction is applied to these results to select those levels having less margin than 10 dB or exceeding the limit using subranges and limited number of maximums.

Further maximization for adjusting the maximum position is following.

Equipment and cables are placed and moved within the range of position likely to find their maximum emissions.

Frequency range 9 kHz – 30 MHz

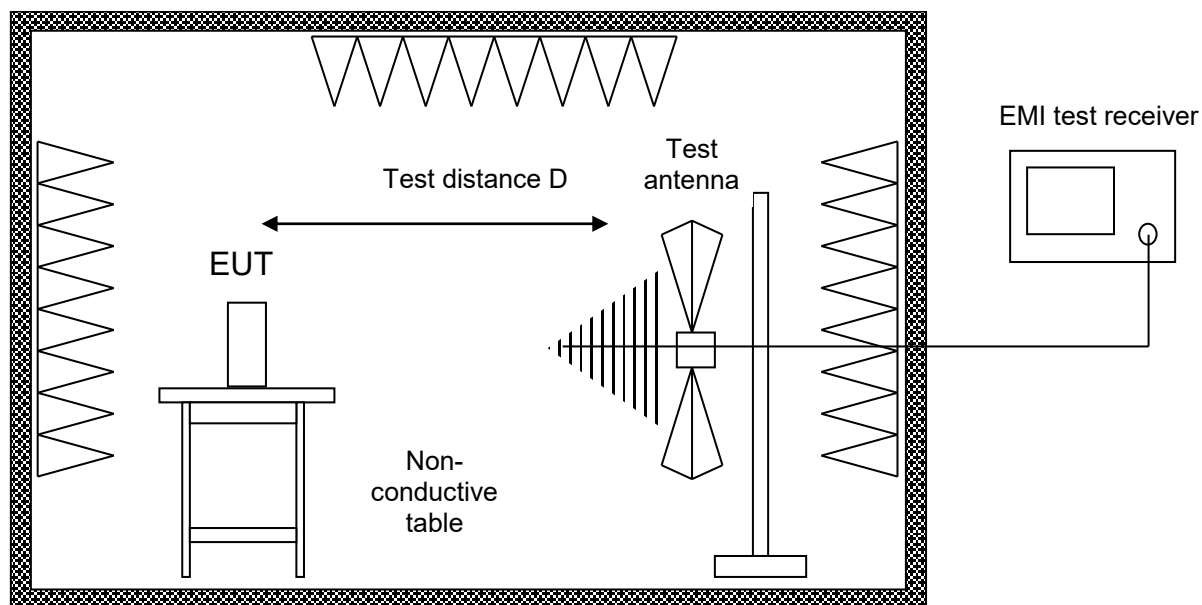


The EUT was placed on a non-conductive table, 0.8 m above the ground.

Radiated emissions in the frequency 9 kHz – 30 MHz is measured within a semi-anechoic room with an active loop antenna with the measurement detector set to peak. In addition, in the frequency range 9 kHz to 490 kHz also an average detector was used. The measurement bandwidth of the receiver was set to 300 Hz in the frequency range 9 kHz to 150 kHz and 10 kHz in the frequency range 150 kHz to 30 MHz. Prescans were performed in six positions of the EUT.

For final measurements the detector was set to CISPR quasi-peak and in addition to CISPR average in the frequency range 9 kHz to 490 kHz with a resolution bandwidth 200 Hz in the frequency range 9 kHz to 150 kHz and 9 kHz in the frequency range 150 kHz to 30 MHz. Final tests were performed immediately after a final frequency and zoom (for drifting disturbances) and maximum adjustment.

2.2.6.1 Frequency range 30 MHz – 1 GHz



Alternate test site (semi anechoic room)

The EUT was placed on a non-conductive table, 0.8 m above the ground plane

Radiated emissions in the frequency range 30 MHz – 1 GHz is measured within a semi-anechoic room with groundplane complying with the NSA requirements of ANSI C63.4. for alternative test sites. A linear polarized logarithmic periodic antenna combined with a 4:1 broadband dipole ("Trilog broadband antenna") is used.

For prescan tests the test receiver is set to peak-detector with a bandwidth of 120 kHz.

With the measurement bandwidth of the test receiver set to 120 kHz CISPR quasi-peak detector is selected for final measurements following immediately after a final frequency zoom (for drifting disturbances) and maximum adjustment.



2.2.7 Test Results

<i>Frequency range</i>	<i>Limit applied</i>	<i>Test distance</i>
9 kHz – 30 MHz	§15.209; RSS-GEN	3 m
30 MHz – 1 GHz	§15.109 (b); ICES-003 3.2.2	3 m

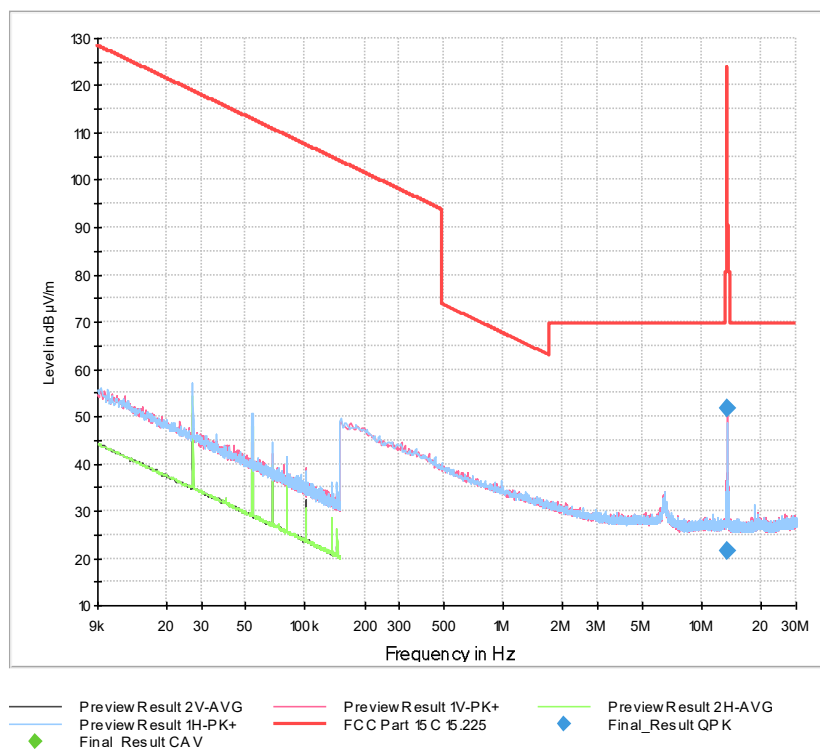
Table 14

Sample calculation:

Final Value (dB μ V/m) = Reading Value (dB μ V) + (Cable attenuation (dB)
+ Antenna Transducer (dB(1/m)))



Frequency range 9 kHz – 30 MHz:



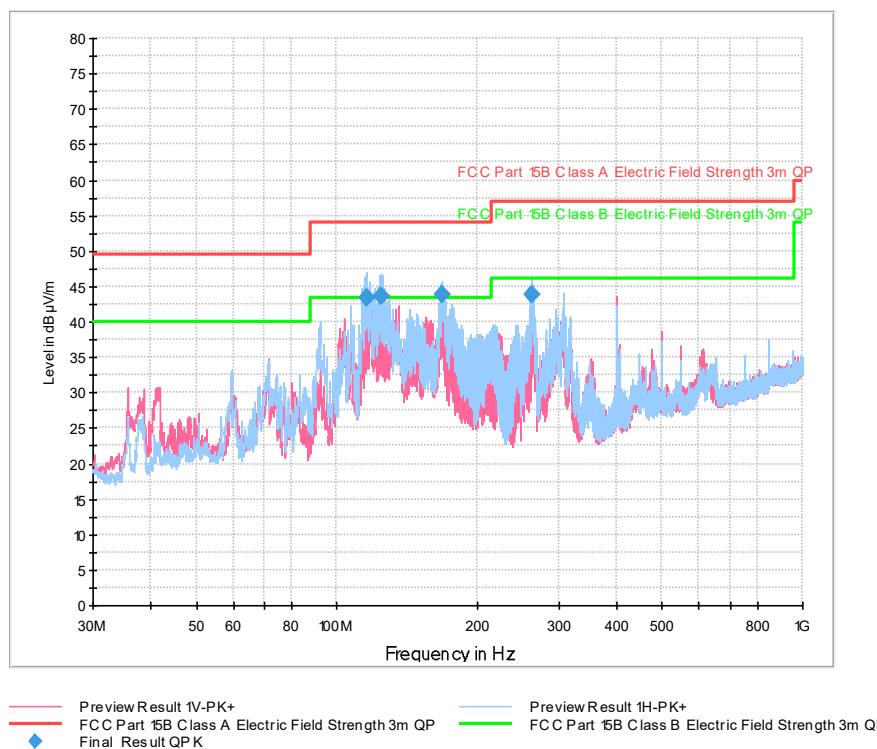
Final Results:

Frequency MHz	Max Peak@3m dBµV/m	Max Peak@30m dBµV/m	Limit@30m dBµV/m	Mar- gin dB	Meas. Time ms	Band- width kHz	Height cm	Pol	Azi- muth deg	Corr. dB/m
13.490250	21.50 ^{#1}	-18.50 ^{#1}	50.48	68.98	1000.0	9.000	100.0	V	13.0	18.9
13.560000	51.68 ^{#1}	11.68 ^{#1}	84.00	72.32	1000.0	9.000	100.0	V	13.0	18.9

#1: Measurement was performed at 3 meters, conversion factor of -40 dB/decade (according to § 15.31(f)(2) of FCC 47 Part 15) was added to test results.



Frequency range 30 MHz – 1 GHz:



Final Results:

Frequency MHz	QuasiPeak dBµV/m	Limit dBµV/m	Margin dB	Meas. Time ms	Bandwidth kHz	Height cm	Pol	Azimuth deg	Corr. dB/m
116.130000	43.30	53.98	10.68	1000.0	120.000	279.0	H	-3.0	15.0
125.190000	43.54	53.98	10.44	1000.0	120.000	250.0	H	16.0	13.7
168.870000	43.75	53.98	10.23	1000.0	120.000	100.0	H	-38.0	13.9
261.840000	43.86	56.90	13.04	1000.0	120.000	100.0	H	115.0	18.5



2.2.8 Test Location and Test Equipment

The test was carried out in semi anechoic room No. 11

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Due
EMI test receiver	Rohde & Schwarz	ESW44	39897	12	2023-04-30
Loop antenna	Schwarzbeck	FMZB 1519 B	44334	36	2023-07-31
TRILOG Broadband Antenna	Schwarzbeck	VULB 9163	19918	36	2025-10-31
Semi anechoic room	Frankonia	Cabin No. 11	42961	36	2024-09-30
EMC measurement software	Rohde & Schwarz	EMC32 Emission - V10.60.20	42986	---	---

Table 15



2.3 Temperature Stability

2.3.1 Specification Reference

FCC 47 CFR Part 15 E, Clause 15.225(e)
ISSED RSS-210, Clause B.6 b.
ISED RSS-Gen, Clause 6.11

2.3.2 Equipment under Test and Modification State

Starclean® SIM C04; S/N 09/2022; Modification state 0

2.3.3 Date of Test

2022-11-21

2.3.4 Environmental Conditions

Ambient Temperature	22 °C
Relative Humidity	38 %

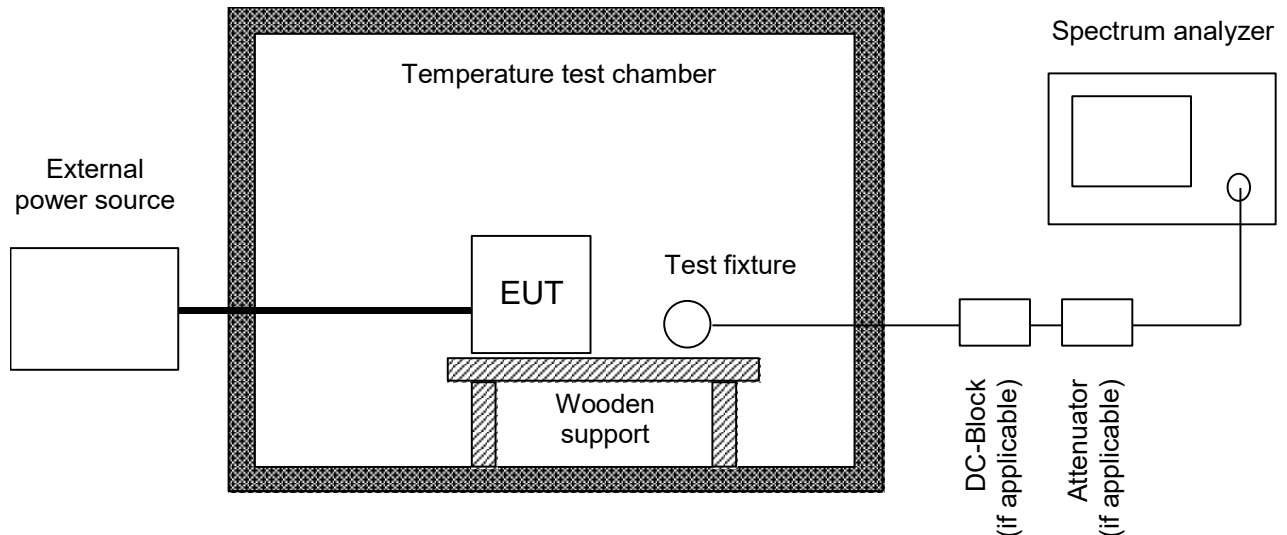
2.3.5 Specification Limits

The frequency tolerance of the carrier signal shall be maintained within ± 0.01 % of the operating frequency over a temperature variation of -20 °C to $+50$ °C at normal supply voltage, and for a variation in the primary supply voltage from 85 % to 115 % of the rated supply voltage at a temperature of 20 °C. For battery operated equipment, the equipment tests shall be performed using a new battery.



2.3.6 Test Method

The test was performed according to ANSI C63.10, section 6.8.



The frequency tolerance of the carrier signal is measured over a temperature variation of -20°C to $+50^{\circ}\text{C}$ at normal supply voltage, and for a variation in the primary supply voltage from 85 % to 115 % of the rated supply voltage at a temperature of 20°C . Temperature and voltage range may vary if the manufacturer states another temperature or voltage range.

If the EUT provides an antenna connector the spectrum analyzer is connected to this port. If required, a resistive matching network equal to the impedance specified or employed for the antenna is used as well as a DC block and appropriate (50 Ω) attenuators. In case where the EUT does not provide an antenna connector, or a test fixture is used.

For battery operated equipment, the test is performed using a new battery. Alternatively, an external supply voltage can be used and is at least set to:

- The maximum battery voltage as delivered by a new battery or 115 % of the battery nominal voltage;
- The battery nominal voltage
- 85 % of the battery nominal voltage
- The battery operating end point voltage which shall be specified by the equipment manufacturer.

The EUT is operating providing an unmodulated carrier for frequency error tests. The peak detector of the spectrum analyzer is selected and resolution as well as video bandwidth are set to values appropriate to shape of the spectrum of the EUT. The frequency counter mode of the spectrum analyzer is used to maximize the accuracy of the measured frequency tolerance.

If an unmodulated carrier is not available a significant and stable point of the spectrum is selected and the span is reduced to a value that delivers an accuracy which shall be better than 1 % of the maximum frequency tolerance allowed for the carrier signal. This method may be performed as long as the margin to the frequency tolerance is larger than the uncertainty of the measured frequency tolerance.



2.3.7 Test Results

<i>Temperature</i>	<i>Supply Voltage</i>	<i>Frequency drift</i>
20 °C	100 V	-31.48 Hz
20 °C	240 V	-17.49 Hz
-20 °C	120 V	-97.955 Hz
55 °C	120 V	-34.985 Hz

Table 16

2.3.8 Test Location and Test Equipment

The test was carried out in a non-shielded room.

<i>Instrument</i>	<i>Manufacturer</i>	<i>Type No</i>	<i>TE No</i>	<i>Calibra- tion Pe- riod (months)</i>	<i>Calibration Due</i>
Signal and Spectrum Analyzer	Rohde & Schwarz	FSV40	20219	24	2024-02-29
Temperature test chamber	Feutron Klimasimulation	KPK200-2	19868	18	2023-02-28

Table 17



2.4 Conducted Emissions on Mains Terminals

2.4.1 Specification Reference

FCC 47 CFR Part 15 C, Clause 15.207
ISED RSS-Gen, Clause 8.8

2.4.2 Equipment under Test and Modification State

Starclean® SIM C04; S/N 09/2022; Modification state 0

2.4.3 Date of Test

2022-11-16

2.4.4 Environmental Conditions

Ambient Temperature 23 °C
Relative Humidity 39 %

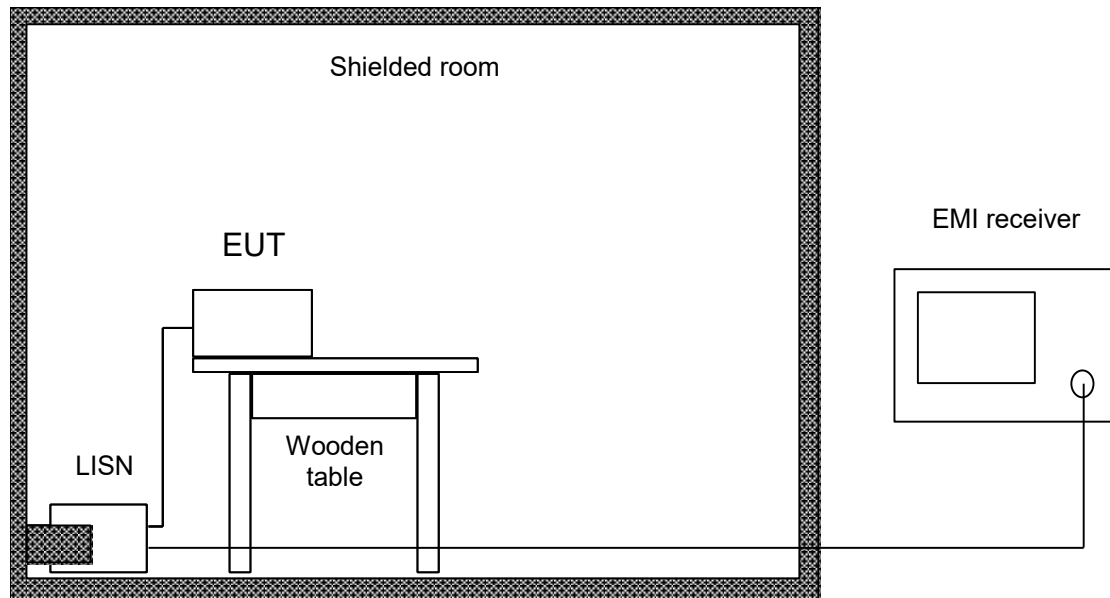
2.4.5 Specification Limits

Required Specification Limits			
Line Under Test	Frequency Range (MHz)	Quasi-peak (dBμV)	Average (dBμV)
AC Power Port	0.15 to 0.5	66 to 56*	56 to 46*
	0.5 to 5	56	46
	5 to 30	60	50
Supplementary information: *Decreases with the logarithm of the frequency.			

Table 18 Emission limits

2.4.6 Test Method

The test was performed according to ANSI C63.10, section 6.2.



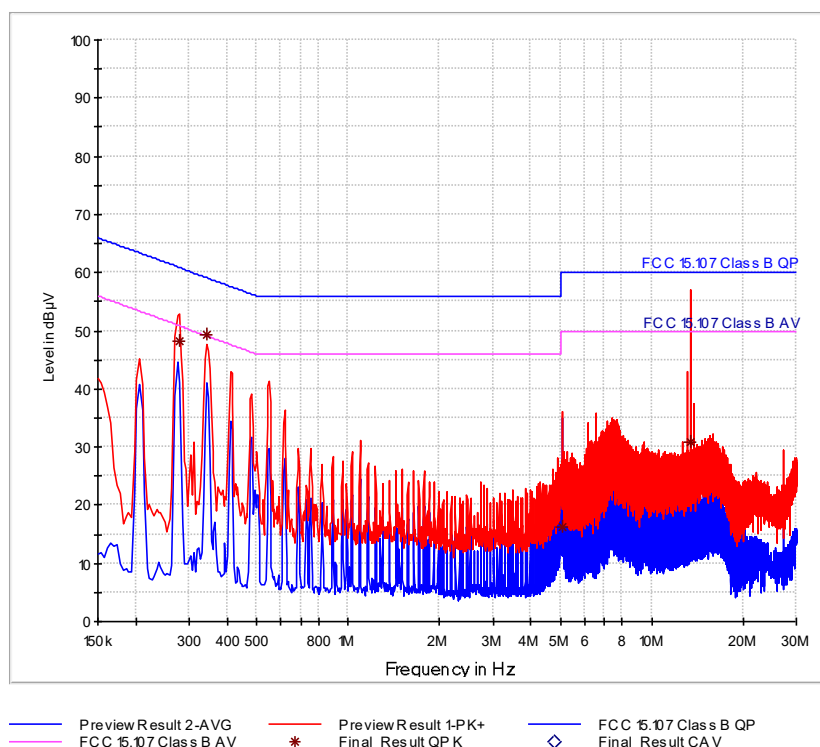
The EUT was placed on a non-conductive table 0.8 m above a reference ground plane and 0.4 m away from a vertical coupling plane. All power was connected to the EUT through an Line Impedance Stabilization Network (LISN). Conducted disturbance voltage measurements on mains lines were made at the output of the LISN. The LISN was placed 0.8 m from the boundary of the EUT and bounded to the reference ground plane. To simplify testing with quasi-peak and linear average (cisp-average) detector the following procedure is used:

First the whole spectrum of emission caused by the equipment under test (EUT) is recorded with the detectors set to peak and average using CISPR bandwidth of 10 kHz. After that all emission levels having less margin than 10 dB to or exceeding the average limit are retested with the detectors set to quasi-peak and average. If the average limit is kept with quasi-peak levels measurement with average detector is optional. In cases of emission levels between quasi-peak and average limit an additional measurement with average detector has to be performed.



2.4.7 Test Results

Phase L1:

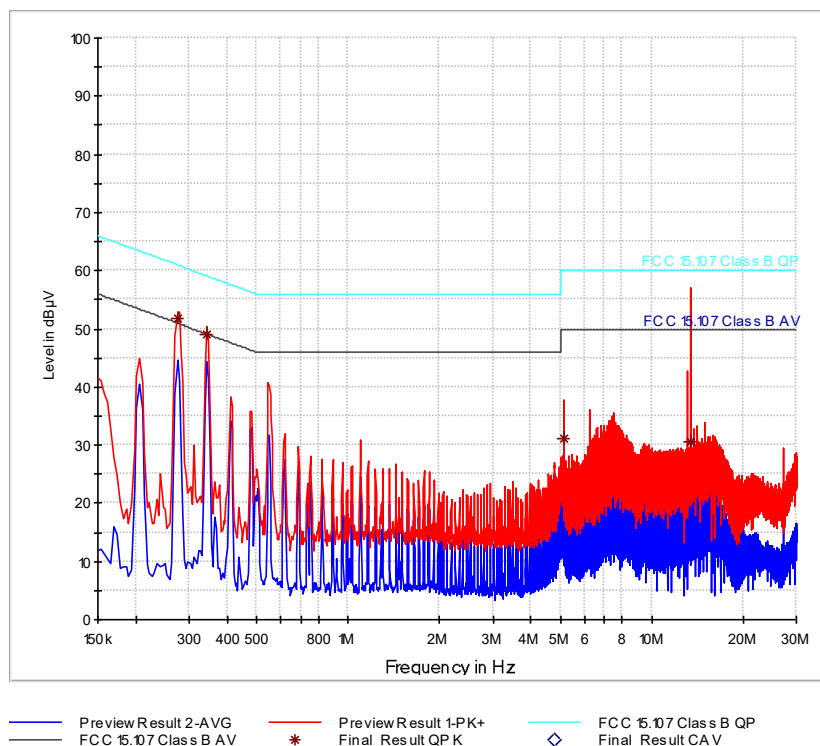


Final Results 1:

Frequency MHz	QuasiPeak dBµV	CAverage dBµV	Limit dBµV	Margin dB	Meas. Time ms	Bandwidth kHz	Line	Filter	Corr. dB
0.278000	48.10	---	61.00	12.90	1000.0	9.000	L1	ON	10.0
0.342000	49.33	---	58.50	9.17	1000.0	9.000	L1	ON	10.0
5.110000	16.16	---	60.00	43.84	1000.0	9.000	L1	ON	10.3
13.442000	30.77	---	60.00	29.23	1000.0	9.000	L1	ON	10.2



Phase N:



Final Results:

Frequency MHz	QuasiPeak dBµV	CAverage dBµV	Limit dBµV	Margin dB	Meas. Time ms	Bandwidth kHz	Line	Filter	Corr. dB
0.274000	51.80	---	61.00	9.20	1000.0	9.000	N	ON	10.0
0.342000	49.16	---	58.50	9.34	1000.0	9.000	N	ON	10.0
5.138000	31.23	---	60.00	28.77	1000.0	9.000	N	ON	10.3
13.442000	30.70	---	60.00	29.30	1000.0	9.000	N	ON	10.2

Sample calculation:

Final Value (dBµV) = Reading Value (dBµV) + (Cable attenuation (dB) + LISN Transducer (dB))



2.4.8 Test Location and Test Equipment

The test was carried out in shielded room no. 9

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Due
EMI test receiver	Rohde & Schwarz	ESU8	19904	12	2023-02-28
EMC measurement software	Rohde & Schwarz	EMC32 Emission K9 – V9.26.01	20090	---	---
Shielded room	Albatross	Cabin no. 9	21083	---	---
Impedance stabilization network ISN	Teseq GmbH	ISN ST08	37435	36	2024-06-30

Table 19



Product Service

3 Photos of test setups

See Annex TR-713274473-02 for photographs.



4 Measurement Uncertainty

For a 95% confidence level, the measurement uncertainties for defined systems are:

<i>Radio Interference Emission Testing</i>		
<i>Test Name</i>	<i>kp</i>	<i>Expanded Uncertainty</i>
Conducted Voltage Emission		
9 kHz to 150 kHz (50Ω/50μH AMN)	2	± 3.8 dB
150 kHz to 30 MHz (50Ω/50μH AMN)	2	± 3.4 dB
100 kHz to 200 MHz (50Ω/5μH AMN)	2	± 3.6 dB
Discontinuous Conducted Emission		
9 kHz to 150 kHz (50Ω/50μH AMN)	2	± 3.8 dB
150 kHz to 30 MHz (50Ω/50μH AMN)	2	± 3.4 dB
Conducted Current Emission		
9 kHz to 200 MHz	2	± 3.5 dB
Magnetic Fieldstrength		
9 kHz to 30 MHz (with loop antenna)	2	± 3.9 dB
9 kHz to 30 MHz (large-loop antenna 2 m)	2	± 3.5 dB
Radiated Emission		
30 MHz to 300 MHz	2	± 4.9 dB
300 MHz to 1 GHz	2	± 5.0 dB
1 GHz to 6 GHz	2	± 4.6 dB
Test distance 10 m		
30 MHz to 300 MHz	2	± 4.9 dB
300 MHz to 1 GHz	2	± 4.9 dB
The expanded uncertainty reported according to CISPR16-4-2: 2011 + A1 + A2 + Cor1 is based on a standard uncertainty multiplied by a coverage factor of $k_p = 2$, providing a level of confidence of $p = 95.45\%$		

Table 20 Measurement uncertainty based on CISPR 16-4-2



<i>Radio Interference Emission Testing</i>		
<i>Test Name</i>	<i>kp</i>	<i>Expanded Uncertainty</i>
Occupied Bandwidth	2	± 5 %
Conducted Power		
9 kHz ≤ f < 30 MHz	2	± 1.0 dB
30 MHz ≤ f < 1 GHz	2	± 1.5 dB
1 GHz ≤ f ≤ 40 GHz	2	± 2.5 dB
1 MS/s power sensor (TS8997)	2	± 1.5 dB
Occupied Bandwidth	2	± 5 %
Power Spectral Density	2	± 3.0 dB
Radiated Power		
25 MHz – 6 GHz	1.96	±4.4 dB
1 GHz – 18 GHz	1.96	±4.7 dB
18 GHz – 40 GHz	1.96	±4.9 dB
40 GHz – 325 GHz	1.96	±6.1 dB
Conducted Spurious Emissions	2	± 3.0 dB
Radiated Spurious Emissions	2	± 6.0 dB
Voltage		
DC	2	± 1.0 %
AC	2	± 2.0 %
Time (automatic)	2	± 5 %
Frequency	2	± 10 ⁻⁷
The expanded uncertainty reported according to ETSI TR 100 028:2001 is based on a standard uncertainty multiplied by a coverage factor of kp = 2, providing a level of confidence of p = 95.45%		

Table 21 Measurement uncertainty based on ETSI TR 100 028

The measurement uncertainty in the laboratory is less than or equal to the maximum measurement uncertainty according to CISPR16-4-2: 2011 + A1 + A2 + Cor1 (U_{CISPR}) and as specified in the test report below. This normative regulation means that the measured value is also the value to be assessed in relation to the limit value.



Test Name	Expanded Uncertainty
Occupied Bandwidth	±5 %
Conducted Power	
9 kHz ≤ f < 30 MHz	±1.0 dB
30 MHz ≤ f < 1 GHz	±1.5 dB
1 GHz ≤ f ≤ 40 GHz	±2.5 dB
1 MS/s power sensor (2.4 / 5 GHz band)	±1.5 dB
Power Spectral Density	±3.0 dB
Radiated Power	
25 MHz – 26.5 GHz	±6.0 dB
26.5 GHz – 66 GHz	±8.0 dB
40 GHz – 325 GHz	±10.0 dB
Conducted Spurious Emissions	±3.0 dB
Radiated Field Strength 9 kHz – 40 GHz	±6.0 dB
Voltage	
DC	± 1.0 %
AC	± 2.0 %
Time (automatic)	± 5 %
Frequency	± 10 ⁻⁷

Table 22 Decision Rule: Maximum allowed measurement uncertainty