EMC Test Report 21-0093

Designation:	WCS2
Manufacturer:	CommScope
Serial No(s):	SN: US233720-02
Regulation(s):	FCC 47 CFR Part 15 Subpart B
Measurement Procedure(s):	ANSI C63.4:2014
Test Plan:	Not provided.
Test Result:	**Passed**

Date of issue:	22.06.2021		Signature:
Version:	02	Technical Reviewer:	Thomas Hufnagel Test Engineer Digitally signed by Thomas Hufnagel DN: cn=Thomas Hufnagel, o=Bureau Veritas CPS Germany GmbH, ou=ECL, email=thomas.hufnagel@de.bureauveritas.com, c=DE Date: 2021.06.22 13:17:41 +02'00'
Date of delivery:	28.04.2021		
Performance Date:	30.04. – 01.06.2021	Report Reviewer:	Florian Mosandl Lab Manager Digitally signed by Florian Mosandl DN: cn=Florian Mosandl, l=DE, o=Bureau Veritas CPS, ou=ECL, email=Florian.Mosandl@BureauVeritas.com, c=Germany, givenName=Florian Mosandl Date: 2021.06.24 07:23:36 +02'00'

Bundesnetzagentur

BNetzA-CAB-19/21-20

DAkkS Deutsche Akkreditierungsstelle D-PL-12024-06-04

Bureau Veritas
Consumer Products Services Germany GmbH
www.bureauveritas.de/cps
Phone: +49 (0)40 – 740 41 – 0

Managing Director: Sebastian Doose, Stefan Kischka
Reg.No.: Schwerin HRB 3564

Schwerin
Wilhelm-Hennemann-Str. 8, 19061 Schwerin
cps-schwerin@bureauveritas.com

Hamburg
Oehleckerring 40, 22419 Hamburg
cps-hamburg@bureauveritas.com

Tuerkheim
Businesspark A96, 86842 Tuerkheim
cps-tuerkheim@bureauveritas.com

Nuremberg
Thurn-und-Taxis-Str. 18, 90411 Nuremberg
cps-nuernberg@bureauveritas.com

Client:	Andrew Wireless Systems GmbH Industriering 10 D-86675 Buchdorf Germany

Test Laboratory:	Bureau Veritas Consumer Products Services Germany GmbH Thurn-und-Taxis-Straße 18 D-90411 Nürnberg Tel.: +49 40 74041 0 Fax: +49 40 74041-2755

Laboratory accreditation no:	DAkkS D-PL-12024-06-04 BNETZA-CAB-19/21-20
FCC Designation Number:	DE0023
FCC Test Firm Registration:	366481
ISED CAB Identifier	DE0016
ISED Company Number	3475A

Versions management:

V 01	Initial release
V 02	Registration number added; Test setup photos moved to external photo report

Table of Contents

1 General

1.1 Purpose

This report documents the qualification testing for the Drive-Over-Reader system to FCC 47CFR Part 15 Subpart B Class B. The system is referred to as the EUT from here on for the purpose of this report. All emission testing was performed per ANSI C63.4 (methods of measurement of radio-noise emissions from low-voltage electrical and electronic equipment in the range of 9 kHz to 40 GHz).

(a) For a Class A digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

1.2 Requirements according to FCC 47 CFR Part 15 Subpart B

Test Description	Regulation	Remarks	Test Result
AC powerline conducted emission	§15.107	Refer to corresponding test chapter for details.	Pass
Electric field radiated emission 30 – 1000 MHz	§15.109	Refer to corresponding test chapter for details.	Pass
Electric field radiated emission above 1 GHz	§15.109	Refer to corresponding test chapter for details.	Pass

2 DUT Description

The following information and instructions of this chapter was provided by client.
The performance and statements of applicability of the tests is based on this information and this may therefore have an impact on the validity of the test verdict.

2.1 General Information

Designation	WCS2
Manufacturer	CommScope
Serial No(s)	SN: US233720-02
Hardware Version	ID No: 7844067-00 Rev: 02
Soft-/Firmware Version	Version: 2.8.2.46
Device Type	Table top
Equipment classification	Industrial environment
Highest internal frequency	Gb Transceiver Clock: 644.3125 MHz
Supply voltage(s)	48 V DC
Supply voltage used for testing [1]	48 V DC via AC/DC-Adaptor (powered by 120 V / 60 Hz)

Ports:			
Designation	Type	Shielding	Remarks
DC Mains	L, N	Unshielded	

Test Plan:
Not provided.

[1] If not otherwise specified in the corresponding test chapter

2.2 DUT Description

The WCS is the head-end hardware platform for ERA/ION-E. It is available in height unit variants of 2U and 4U. The original WCS design required two DC power inputs from an external PSU. One 12Vdc input for powering the WCS chassis and plug-in cards and a second 57Vdc input for powering isolated PoE remotes connected to the system.

The purpose of this project is to provide a new chassis power configuration that will support a -48Vdc direct power input in place of the original 12Vdc input. This will be accomplished by adding a new DC-DC power conversion stage inside the WCS chassis that utilizes the existing internal WCS chassis airflow to cool it. The WCS chassis will also need to incorporate a new rear panel and duct plate to accommodate this power converter board. The -48Vdc input will be the new source of power for the original 12Vdc circuits residing inside the WCS and on the plug-in cards. No 57Vdc input is planned for supporting the isolated PoE remotes of the ION-E system. As a result of not having the 57Vdc isolated input, this chassis will not provide full CAT card support.

Mechanically, this project includes a new rear panel, airflow duct, and interior connector shields in the WCS chassis. Electrically, the project will include two new DC-DC power conversion PCBA's and two new BOM revisions of the existing DSP board assembly to support these changes. One each for the 4U and the 2U WCS chassis respectively. PMBus/I2C communications will be supported internally using a cable between the existing DSP board interface and the power conversion PCBA. This bus will provide PSU alarming and power metrics to the ERA/ION-E system software.

The WCS chassis regulatory compliance levels will be maintained from the original design except for safety compliance which will now also include IEC/EN/UL 62368-1 requirements. This design will not support N+1 redundancy. No design provisioning is being planned to support an AC input variant of the power conversion PCBA at this time. The WCS4 and WCS2 will have different power conversion PCBA's with a higher power solution provided in the WCS4 chassis. The existing WCS DSP board will be reused in two different BOM variants to support the WCS4 and WCS2 respectively.

2.3 Grounding

The DUT was connected to ground during the test by a separate ground bonding stip connected to the EUT's dedicated grounding point.

2.4 Operating Modes

Mode	Description
Normal operation	Idle mode.

2.5 Modifications

The following modifications were performed by the client between start and end of all measurements.

None.

2.6 Ancillary equipment

No ancillary equipment used.

3 Description of EMC test laboratory

3.1 Climatic conditions during measurements

The climatic conditions were within the following ranges.
For ESD testing, the conditions during the test were denoted in the corresponding chapter.

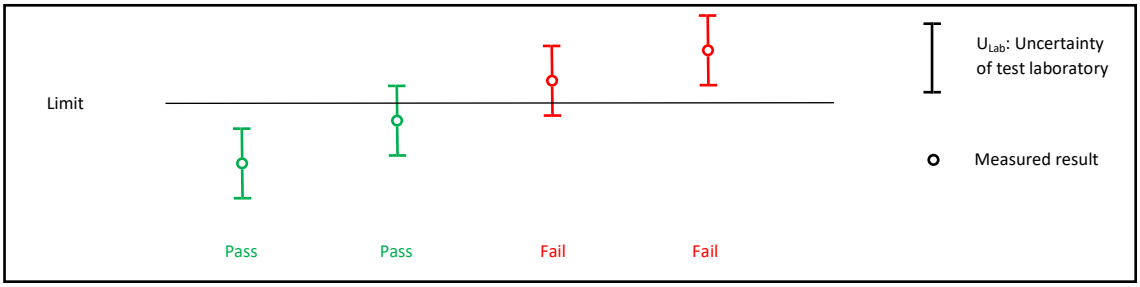
Ambient temperature:	15 – 35 °C
Relative humidity:	30 – 60 %
Air pressure:	860 – 1060 hPa

3.2 Decision of Conformity

The laboratory applies a decision rule following the "Binary Statement for Simple Acceptance Rule (*w*=0)" (chapter 4.2.1) of ILAC Guidelines on Decision Rules and Statements of Conformity (ILAC-G8:09/2019) or CISPR 16-4-2:2014, chapter 4.2. The client has agreed with application of the decision rule prior testing and demanded a statement of conformity by the test laboratory.
The calculations of the measurement uncertainty were performed in line with the requirements of ISO/IEC 17025:2017.

Statements of conformity are reported as:

- Pass - the measured value is below the acceptance limit
- Fail - the measured value is above the acceptance limit



There is a risk of a "False Accept" as well as a "False Reject" when the measured value plus the measurement uncertainty U_{Lab} is above respectively below the specification limit.

3.3 Measurement uncertainty

The table below shows the measurement uncertainties for each measurement method. The expanded uncertainty was calculated with worst case values over the complete frequency area.

Measurement method	Parameter	Description	Exp. Uncertainty (k=2)
Radiated emission	30 MHz – 1 GHz	Semi anechoic chamber	± 5,3 dB
	1 GHz – 6/40 GHz	Fully/Semi anechoic chamber	± 4,7/ 4,4 dB
Conducted emission	9 kHz - 150 kHz 150 kHz - 30 MHz	Semi anechoic chamber	± 3,8 dB ± 3,4 dB

4 Measurements acc. to FCC 47 CFR Part 15 Subpart B

4.1 AC powerline conducted emission

4.1.1 Overview

DUT	WCS2
Serial No.	SN: US233720-02
Modification	None
Mode(s)	Normal operation (refer to chapter 2.4 for detailed information)

	Test Parameter	**Remarks**
Requirement(s)	§15.107	
Test method	ANSI C63.4:2014	
Limit	Class B	
Frequency Range	150 kHz – 30 MHz	
Resolution Bandwidth	9 kHz	
Detector (Final)	Quasipeak / CISPR-Average	
Coupling Device	V-LISN	
Supply Voltage	48 V DC via AC/DC-Adaptor (powered by 120 V / 60 Hz)	
Port(s)	AC mains port	
Line(s)	L, N	

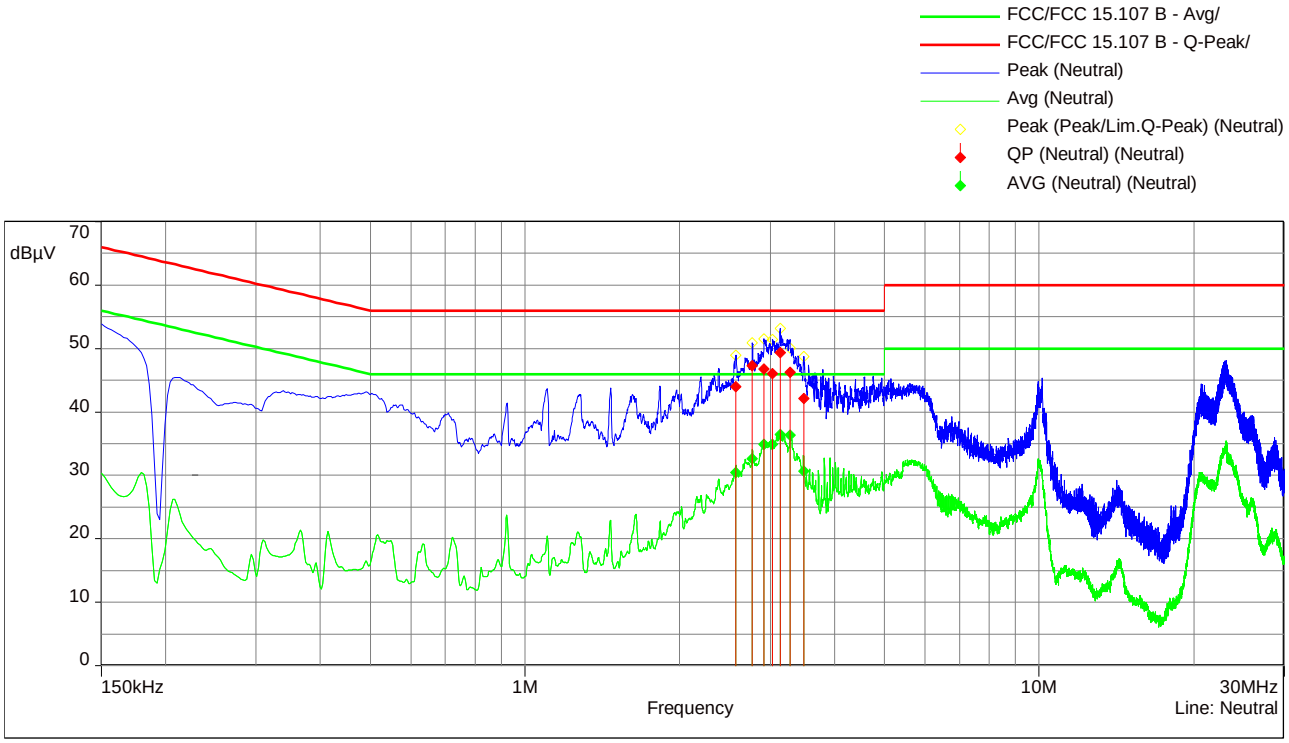
4.1.2 Result

Test location	SAC
Test engineer	Conrad
Test Date	30.04.2021
Verdict	Pass

4.1.3 Test equipment

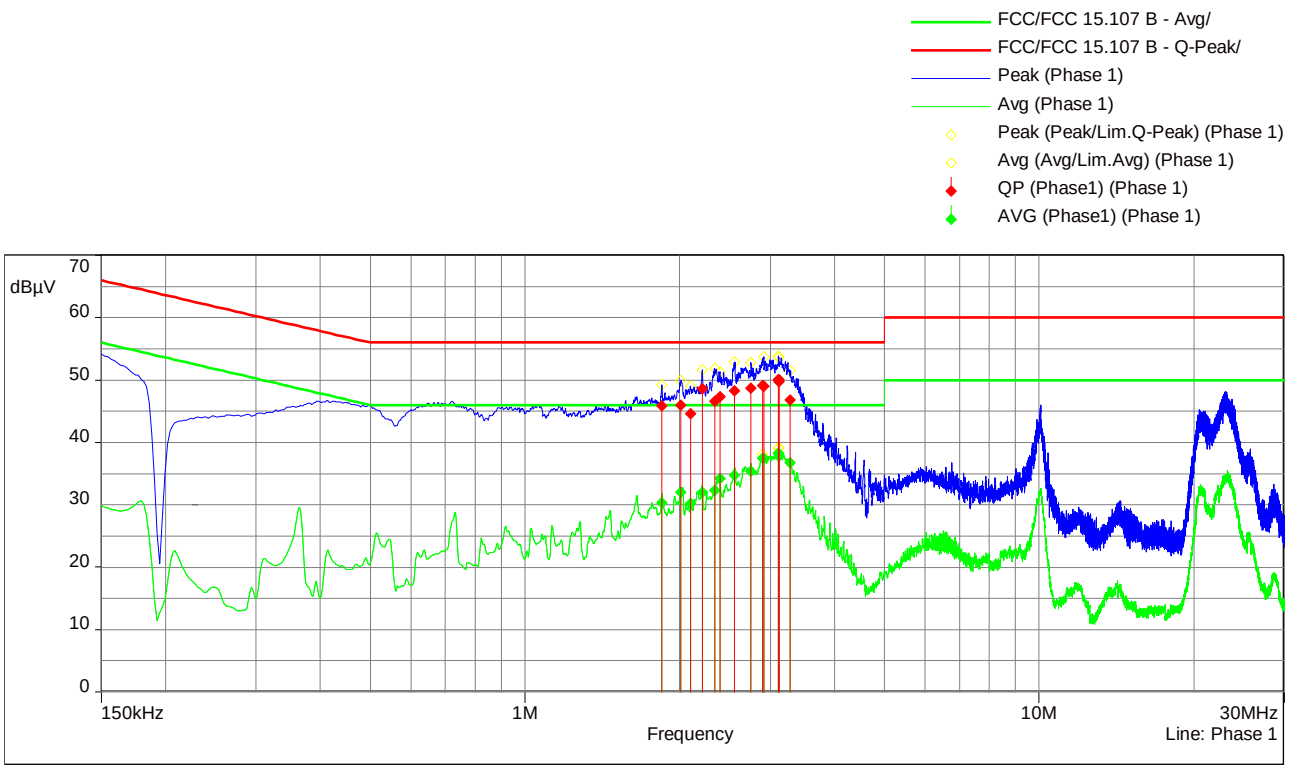
Designation	Type	Manufacturer	Inventory No.	Cal. Date	Next Cal.
EMI test receiver	ESU40	Rohde & Schwarz	E2025	08.12.2020	08.12.2021
Transient Limiter	ESH3-Z2	Rohde & Schwarz	K877	19.12.2019	19.12.2021
LISN (2x10 A)	ESH3-Z5	Rohde & Schwarz	K 679	23.03.2021	23.03.2023
Measurement Software	BAT-EMC, V3.20.0.10	Nexio	---	---	---

4.1.4 Detailed measurement data



Frequency (MHz)	QP (dBµV)	Limit QP (dBµV)	Margin QP (dB)	AVG (dBµV)	Limit AVG (dBµV)	Margin AVG (dB)
2.571	44.00	56.00	12.00	30.46	46.00	15.54
2.769	47.32	56.00	8.68	32.62	46.00	13.38
2.9175	46.77	56.00	9.23	34.91	46.00	11.09
3.03	46.01	56.00	9.99	34.92	46.00	11.08
3.1335	49.41	56.00	6.59	36.49	46.00	9.51
3.282	46.24	56.00	9.76	36.30	46.00	9.70
3.489	42.15	56.00	13.85	30.70	46.00	15.30

Measurement 1: Line N



Frequency (MHz)	QP (dBµV)	Limit QP (dBµV)	Margin QP (dB)	AVG (dBµV)	Limit AVG (dBµV)	Margin AVG (dB)
1.8465	45.84	56.00	10.16	30.37	46.00	15.63
2.01075	45.93	56.00	10.07	32.01	46.00	13.99
2.0985	44.66	56.00	11.34	30.22	46.00	15.78
2.211	48.56	56.00	7.44	31.99	46.00	14.01
2.33925	46.60	56.00	9.40	32.32	46.00	13.68
2.39325	47.36	56.00	8.64	34.21	46.00	11.79
2.553	48.31	56.00	7.69	34.78	46.00	11.22
2.751	48.73	56.00	7.27	35.38	46.00	10.62
2.90175	49.14	56.00	6.86	37.52	46.00	8.48
2.913	49.01	56.00	6.99	37.48	46.00	8.52
3.111	50.04	56.00	5.96	38.27	46.00	7.73
3.1155	50.11	56.00	5.89	37.93	46.00	8.07
3.11775	49.79	56.00	6.21	37.77	46.00	8.23
3.282	46.84	56.00	9.16	36.77	46.00	9.23

Measurement 2: Line L

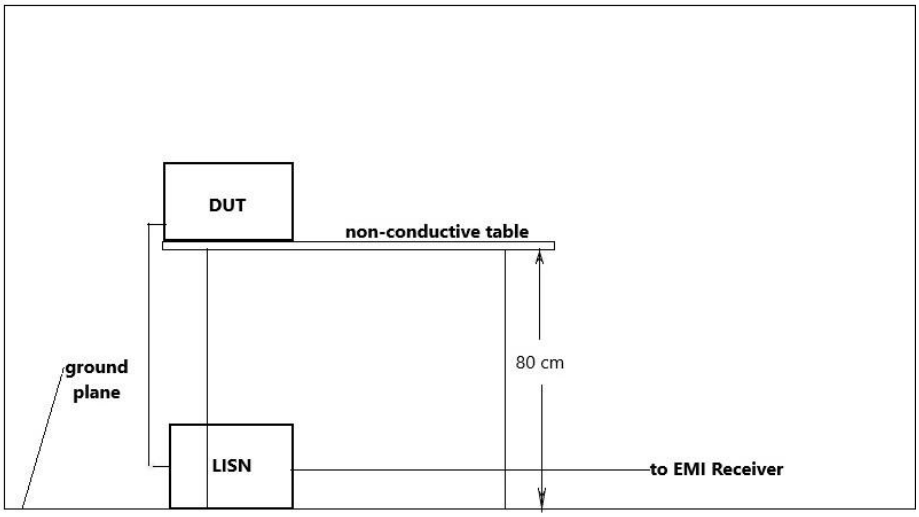
4.1.5 Measurement Procedure

The measurements were performed in line with ANSI C63.4:2014 with the DUT operating in the mode as indicated in the table above causing maximum emissions according to clients declaration, consistent with normal applications. The DUT load was adjusted within the range specified by client in order to maximize the emissions.

For this test, the DUT was placed at a distance of 80 cm from the LISN. A vertical ground reference plane was not used.

The 50 Ω measuring port is terminated into a 50 Ω EMI receiver and all other ports are terminated into 50 Ω loads.

Details are as indicated below:



4.2 Electric field radiated emission in the frequency range 30 – 1000 MHz

4.2.1 Overview

DUT	WCS2
Serial No.	SN: US233720-02
Modification	None
Mode(s)	Normal operation (refer to chapter 2.4 for detailed information)

	Test Parameter	**Remarks**
Requirement(s)	§15.109	
Test method	ANSI C63.4:2014	
Limit	Class B	
Frequency Range	30 – 1000 MHz	
Resolution Bandwidth	120 kHz	
Detector (Final)	Quasipeak	
Distance	10 m	Limit has been adjusted to correspond with measurement distance
Scan Heights	1 – 4 m	
Polarizations	horizontal & vertical	
Test site	Semi anechoic chamber (SAC)	
DUT Orientation(s)	1	DUT has a defined orientation
Supply Voltage	48 V DC via AC/DC-Adaptor (powered by 120 V / 60 Hz)	

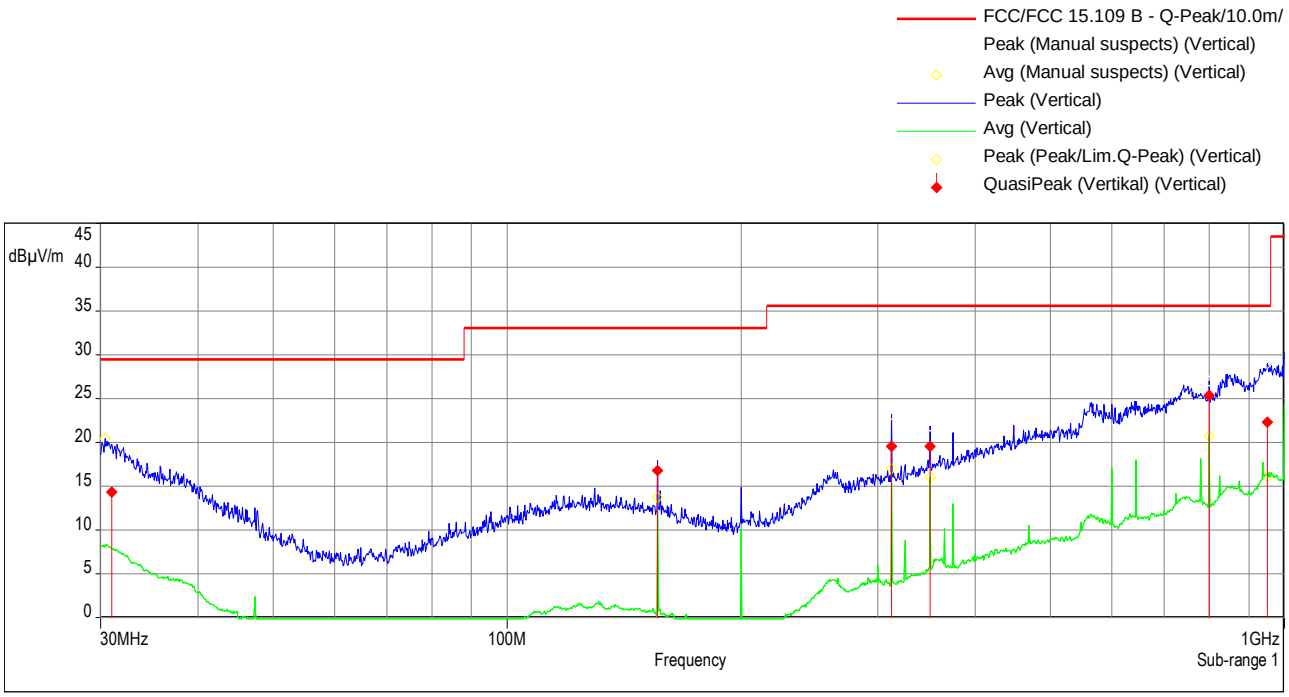
4.2.2 Result

Test location	SAC
Test engineer	Gass
Test Date	06.05.2021
Verdict	Pass

4.2.3 Test equipment

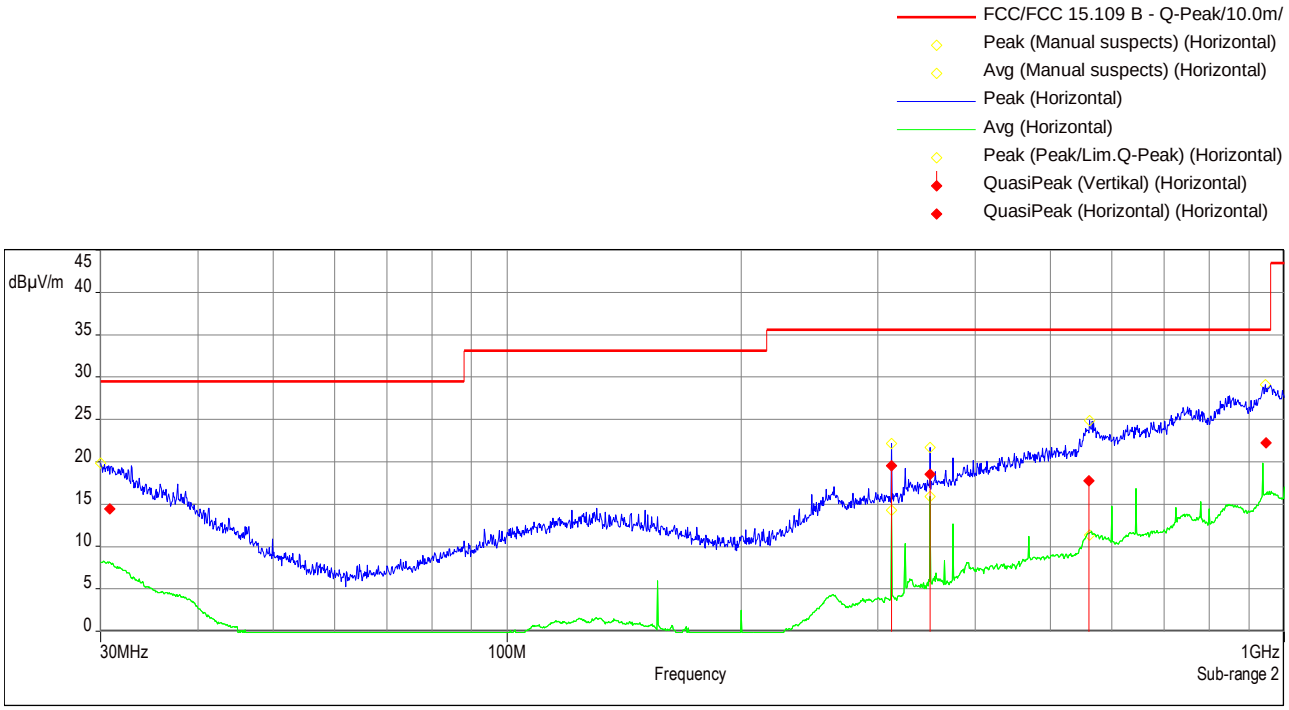
Designation	Type	Manufacturer	Inventory No.	Cal. Date	Next Cal.
EMI test receiver	ESU40	Rohde & Schwarz	E2025	08.12.2020	08.12.2021
Antenna	CBL 6111	Chase	K1026	19.02.2021	19.02.2023
Preamplifier	AM1431	Miteq	K1721	10.12.2020	10.12.2021
Measurement Software	BAT-EMC, V3.20.0.10	Nexio	---	---	---

4.2.4 Detailed measurement data



Frequency (MHz)	QuasiPeak (dBµV/m)	Margin (dB)	Average (dBµV/m)	Angle (°)	Height (m)	Polarization
31.02	14.36	15.14	7.58	-120.00	1.23	Vertical
156.26	16.79	16.31	14.77	-11.00	1.00	Vertical
312.49	19.57	16.03	13.88	-88.00	1.36	Vertical
350.01	19.56	16.04	15.37	9.60	1.11	Vertical
800.01	25.37	10.23	22.15	-17.10	2.16	Vertical
951.24	22.29	13.31	15.55	120.50	2.53	Vertical

Measurement 3: Vertical polarization



Frequency (MHz)	QuasiPeak (dBµV/m)	Margin (dB)	Average (dBµV/m)	Angle (°)	Height (m)	Polarization
30.85	14.41	15.09	7.64	-50.40	3.38	Horizontal
312.51	19.54	16.06	12.35	-98.00	3.03	Horizontal
350.02	18.52	17.08	14.21	98.60	2.15	Horizontal
561.07	17.79	17.81	11.04	115.60	1.31	Horizontal
946.6	22.22	13.38	15.54	-100.50	3.30	Horizontal

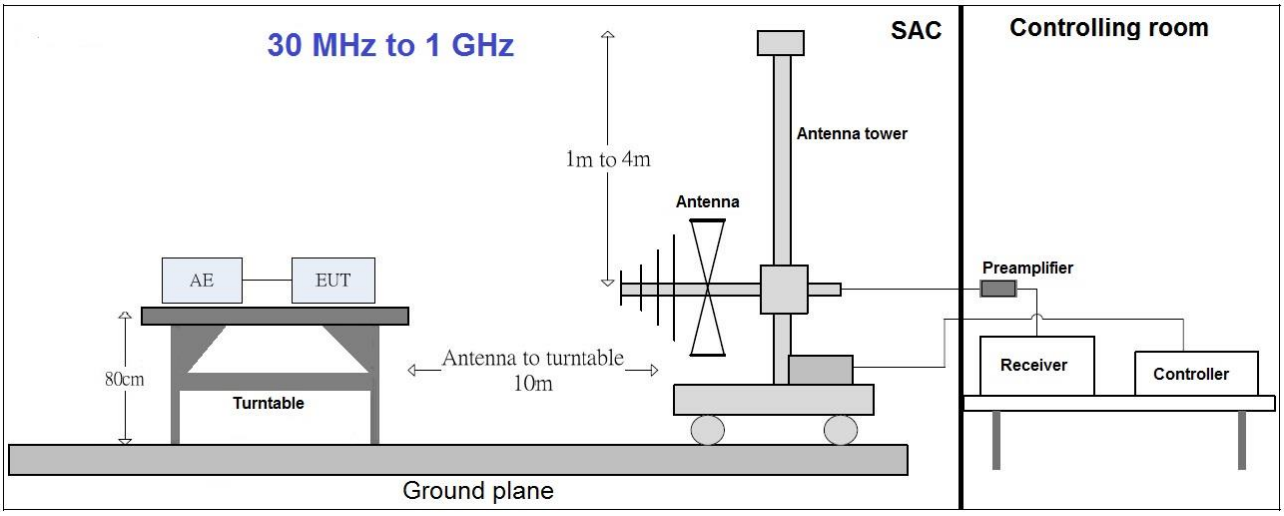
Measurement 4: Horizontal polarization

4.2.5 Measurement Procedure

The measurements were made in the operating mode, with the EUT producing the maximum emission, consistent with normal applications. The EUT load was adjusted within the range specified by manufacturer in order to maximize the emission.

For this test, the EUT was placed on the turntable at a distance of 10 m from the receive antenna. The EUT was positioned on a 10 cm high wooden pallet or on a nonconductive table. The connecting lines to the EUT were fed in from above (as in the installation). The system ground was connected to the ground plane. The turntable was connected directly to the ground system of the test chamber.

While EUT power is on, an operator manually scans the selected frequency range using an EMI test receiver to identify signals being generated by the EUT. At this time the operator determines which signals generated by EUT are significant enough to assign to the final data list in the computer. The signals on the final list are automatically characterized while the antenna is in both horizontal and vertical polarity. The tower and turntable are controlled by the operator. The maximized signal indication on the receiver is then combined with the calibration factors, cable insertion loss and the proper antenna factors to provide the emission level in dB µV/m which is compared directly with the requirement stored in the program libraries. The maximum RFI field strength was determined during the measurement by rotating the turntable (±180 degrees) and varying the height of the receive antenna (h = 1 ... 4 m).



Step 1: Preliminary scan
This is a preliminary test to identify the highest amplitudes relative to the limit.
Settings for step 1:
- Antenna distance: 10 m
- Detector: Peak-Maxhold / Quasipeak (FFT-based)
- Frequency range: 30 – 1000 MHz
- Frequency steps: 30 kHz
- IF–Bandwidth: 120 kHz
- Measuring time / Frequency step: 100 ms
- Turntable angle range: –180° to 180°
- Turntable step size: 15°
- Height variation range: 1 – 4 m
- Height variation step size: 2 m
- Polarisation: Horizontal + Vertical

Intention of this step is, to determine the radiated EMI-profile of the EUT. Afterwards the relevant emissions for the final measurement are identified.

Step 2: Adjustment measurement
In this step the accuracy of the turntable azimuth and antenna height will be improved. This is necessary to find out the maximum value of every frequency.
For each frequency, which was determined the turntable azimuth and antenna height will be adjusted. The turntable azimuth will slowly vary by ± 45° around this value. During this action, the value of emission is continuously measured. The turntable azimuth at the highest emission will be recorded and adjusted. In this position, the antenna height will also slowly vary by ± 100 cm around the antenna height determined. During this action, the value of emission is also continuously measured. The antenna height of the highest emission will also be recorded and adjusted.
- Detector: Peak – Maxhold
- Measured frequencies: in step 1 determined frequencies
- IF – Bandwidth: 120 kHz
- Measuring time: 100 ms
- Turntable angle range: ± 30 ° around the determined value
- Antenna Polarisation: max. value determined in step 1

Step 3: Final measurement with QP detector
With the settings determined in step 3, the final measurement will be performed:
EMI receiver settings for step 4:
- Detector: Quasi-Peak
- Measured frequencies: in step 1 determined frequencies
- IF – Bandwidth: 120 kHz
- Measuring time: 1 s

After the measurement a plot will be generated which contains a diagram with the results of the preliminary scan and a chart with the frequencies and values of the results of the final measurement.

4.2.6 Field Strength Calculations

FS = SA + AF + CL

Where:

FS = Total Field Strength
SA = EMC test receiver Reading
AF = Antenna Factor
CL = Cable Loss

4.3 Electric field radiated emission in the frequency range 1 – 40 GHz

4.3.1 Overview

DUT	WCS2
Serial No.	SN: US233720-02
Modification	None
Mode(s)	Normal operation (refer to chapter 2.4 for detailed information)

	Test Parameter	**Remarks**
Requirement(s)	§15.109	
Test method	ANSI C63.4:2014	
Limit	Class B	
Frequency Range	1 – 40 GHz	5th harmonic of the highest frequency acc. to §15.33(b)
Resolution Bandwidth	1 MHz	
Detector (Final)	Peak / Average	
Distance	3 m	
Scan Heights	1 – 4 m	
Polarizations	horizontal & vertical	
Test site	Semi anechoic chamber (SAC) with rf absorbers on floor	
DUT Orientation(s)	1	DUT has a defined orientation
Supply Voltage	48 V DC via AC/DC-Adaptor (powered by 120 V / 60 Hz)	

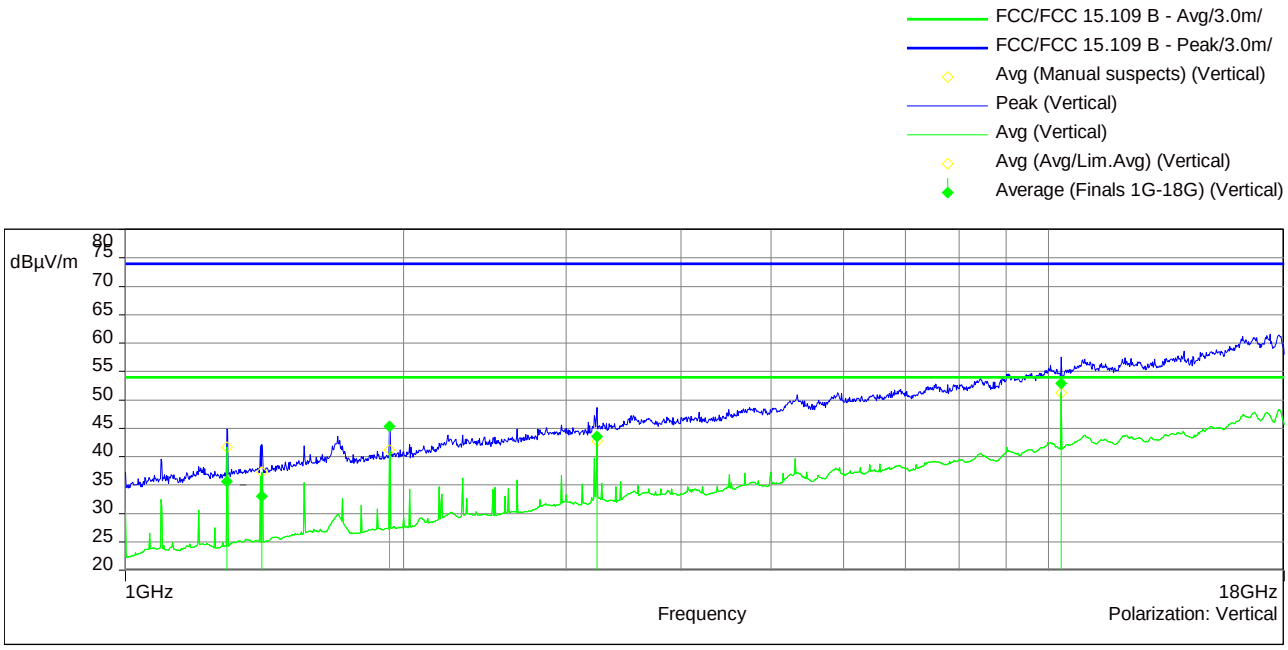
4.3.2 Result

Test location	SAC
Test engineer	Gass
Test Date	01.06.2021
Verdict	Pass

4.3.3 Test equipment

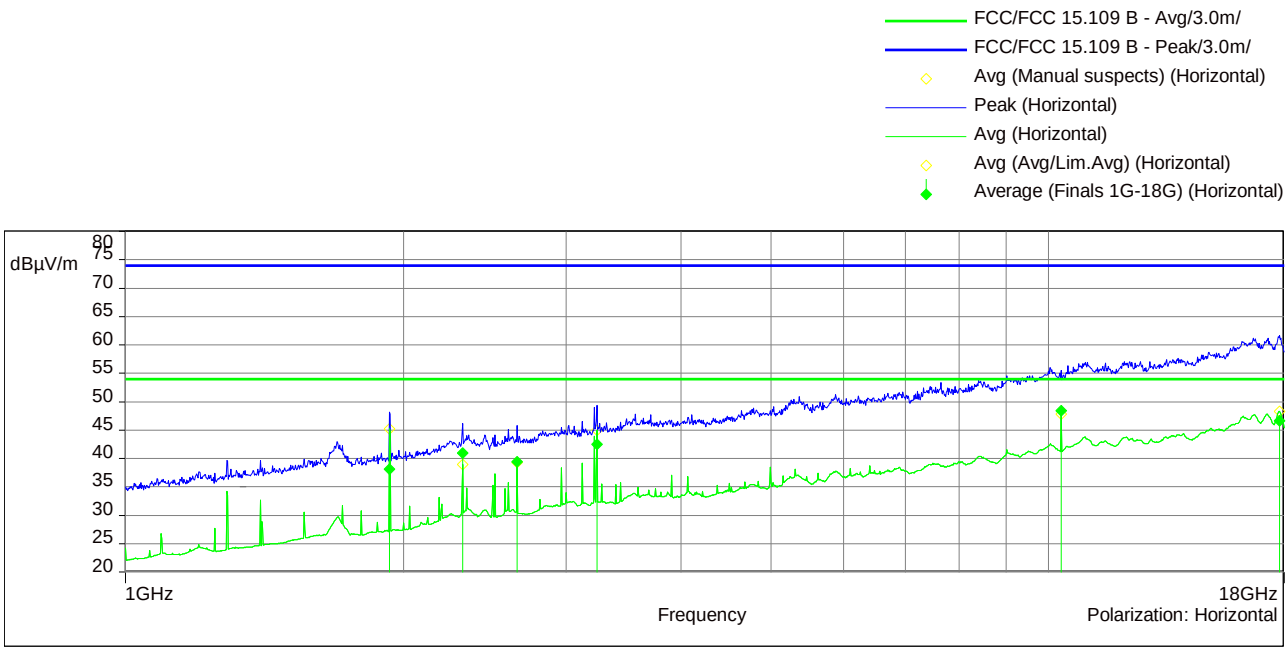
Designation	Type	Manufacturer	Inventory No.	Cal. Date	Next Cal.
EMI test receiver	ESU40	Rohde & Schwarz	E2025	12.2020	12.2021
Antenna	HL025	Rohde & Schwarz	K1114	02.2021	02.2022
Antenna	MWH-1826 / B	ARA Inc.	K1042	10.2020	10.2022
Antenna	MWH-2640 / B	ARA Inc.	K1043	10.2020	10.2022
Preamplifier	AFS4-00102000	Miteq	K838	12.2020	12.2021
Preamplifier	JS43-1800-4000	Miteq	K1104	04.2021	04.2023
Measurement Software	BAT-EMC, V3.20.0.10	Nexio	---	---	---

4.3.4 Detailed measurement data



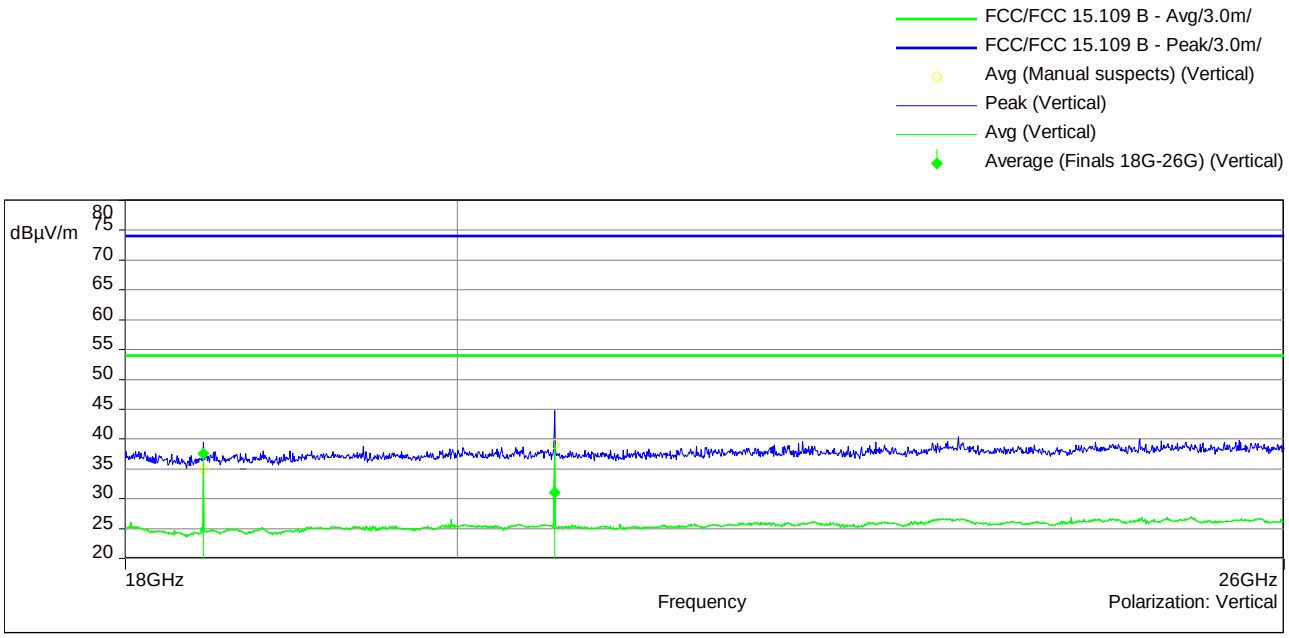
Frequency (MHz)	Average (dBµV/m)	Margin AVG	Limit AV (dBµV/m)	Height (m)	Angle (°)	Polarization
1289	35.67	18.33	54.00	1.79	-103.60	vertical
1406.25	33.05	20.95	54.00	1.00	72.10	vertical
1933.5	45.29	8.71	54.00	2.75	-153.50	vertical
3240	43.58	10.42	54.00	1.63	-38.90	vertical
10312.5	52.89	1.11	54.00	1.00	-64.00	vertical

Measurement 5: 1 - 18 GHz Vertical polarization



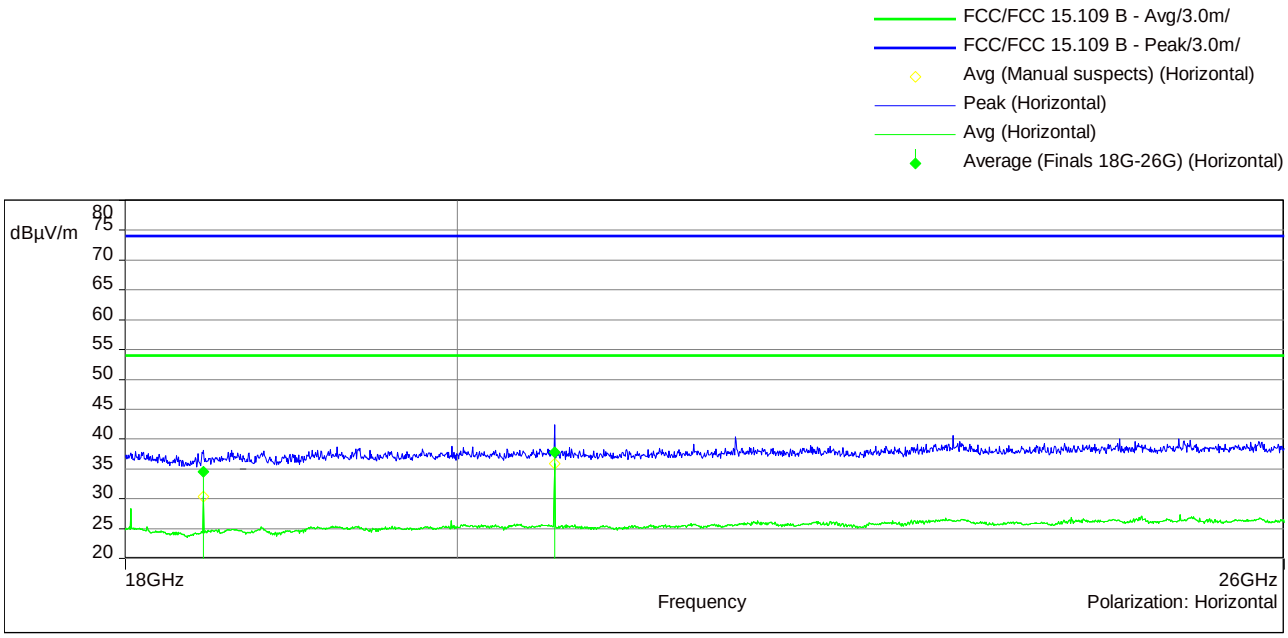
Frequency (MHz)	Average (dBµV/m)	Margin AVG	Limit AV (dBµV/m)	Height (m)	Angle (°)	Polarization
1933.5	38.11	15.89	54.00	1.37	-68.10	horizontal
2317.5	40.96	13.04	54.00	1.00	-79.80	horizontal
2656.25	39.42	14.58	54.00	1.06	-118.40	horizontal
3240	42.44	11.56	54.00	1.70	-36.60	horizontal
10312.5	48.43	5.57	54.00	2.53	-167.60	horizontal
17777.5	46.59	7.41	54.00	4.00	90.00	horizontal

Measurement 6: 1 - 18 GHz Horizontal polarization



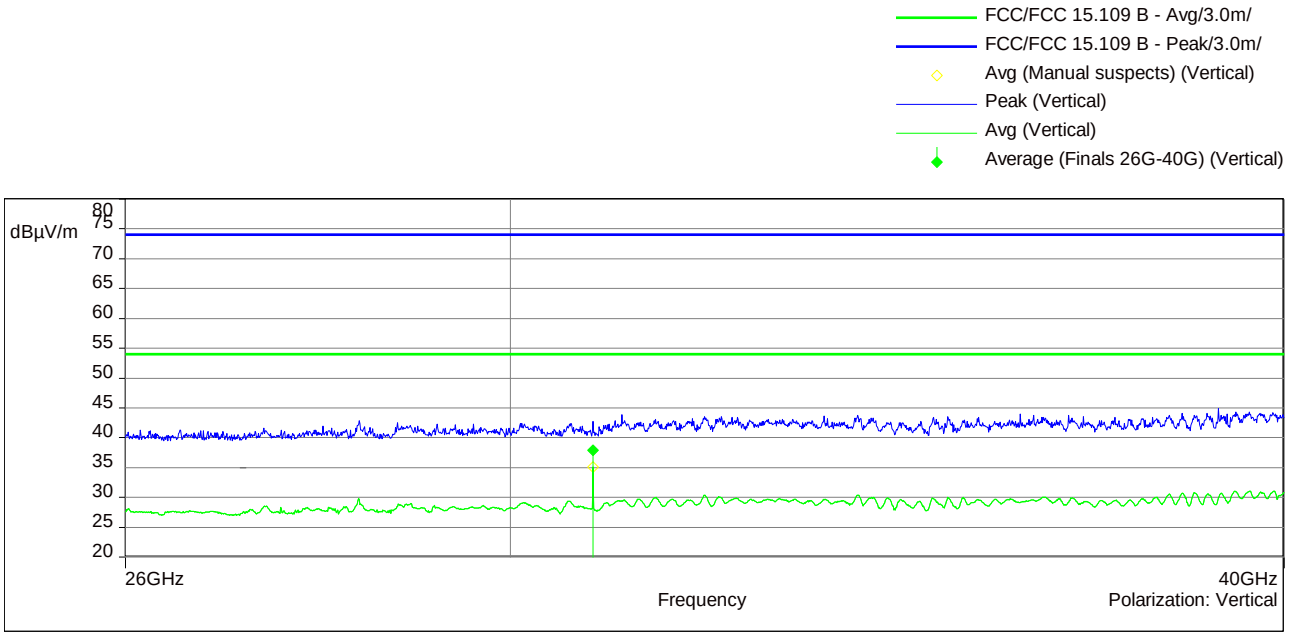
Frequency (MHz)	Average (dBµV/m)	Margin AVG	Limit AV (dBµV/m)	Height (m)	Angle (°)	Polarization
18450	37.56	16.44	54.00	2.04	-11.40	vertical
20625	31.00	23.00	54.00	2.48	-90.70	vertical

Measurement 7: 18 – 26 GHz vertical polarization



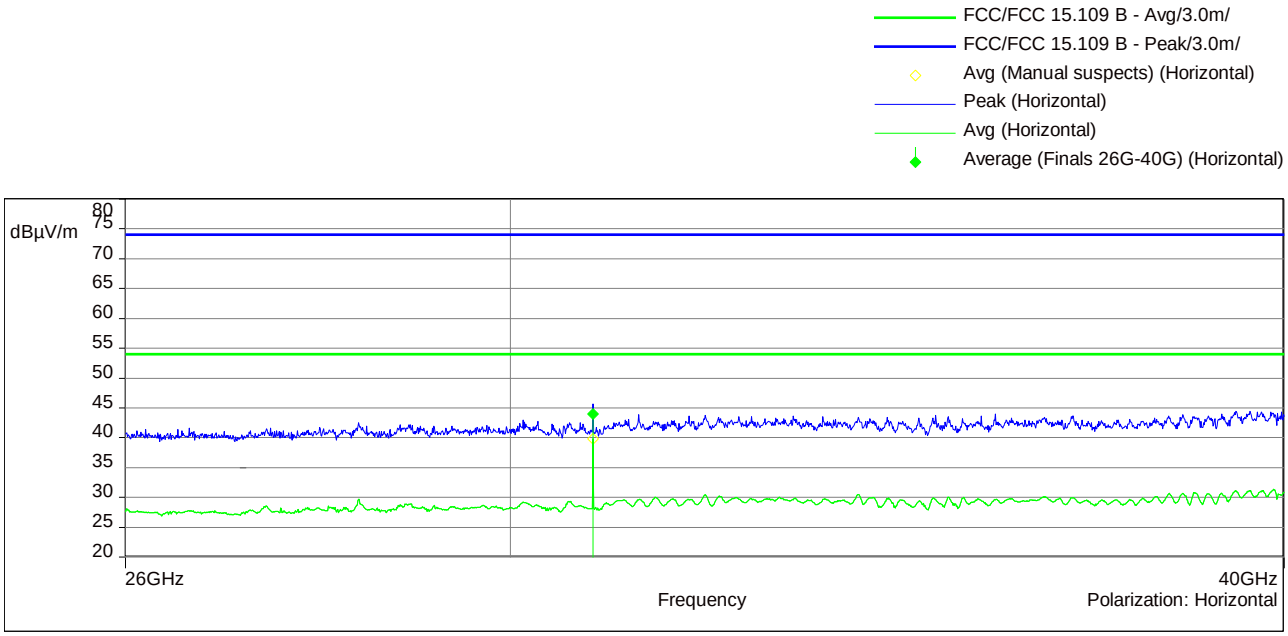
Frequency (MHz)	Average (dBµV/m)	Margin AVG	Limit AV (dBµV/m)	Height (m)	Angle (°)	Polarization
18450	34.50	19.50	54.00	3.52	-39.10	horizontal
20625	37.82	16.18	54.00	1.54	70.60	horizontal

Measurement 8: 18 - 26 GHz Horizontal polarization



Frequency (MHz)	Average (dBµV/m)	Margin AVG	Limit AV (dBµV/m)	Height (m)	Angle (°)	Polarization
30937.5	37.95	16.05	54.00	1.64	-30.00	vertical

Measurement 9: 26 – 40 GHz vertical polarization



Frequency (MHz)	Average (dBµV/m)	Margin AVG	Limit AV (dBµV/m)	Height (m)	Angle (°)	Polarization
30937.5	43.99	10.01	54.00	2.04	-112.80	horizontal

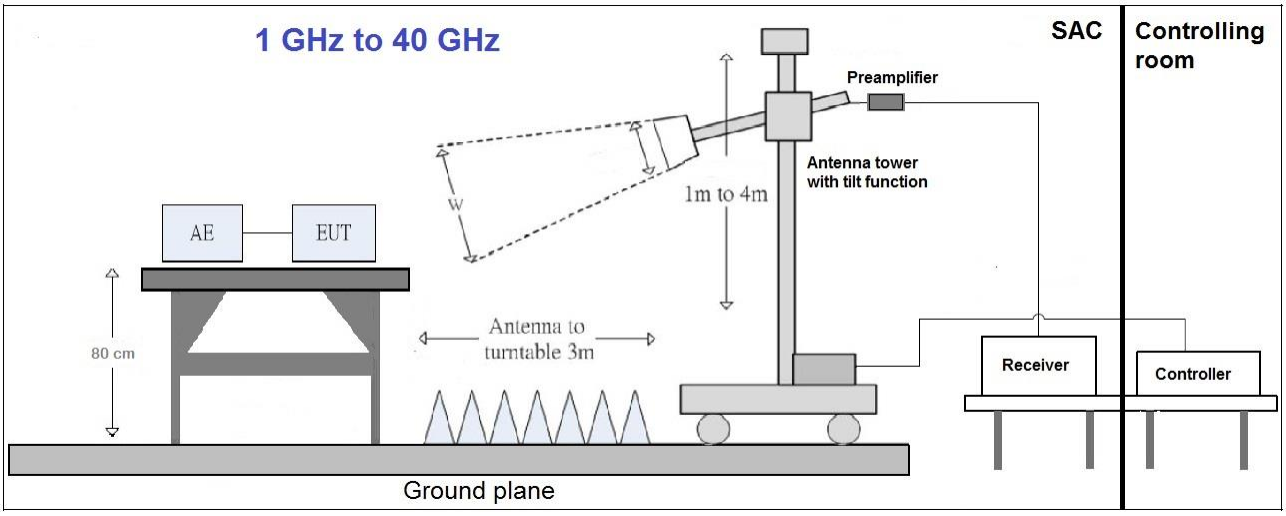
Measurement 10: 26 - 40 GHz Horizontal polarization

4.3.5 Measurement Procedure

The measurements were made in the operating mode, with the EUT producing the maximum emission, consistent with normal applications. The EUT load was adjusted within the range specified by manufacturer in order to maximize the emission.

For this test, the EUT was placed on the turntable at a distance of 3 m from the receive antenna. The EUT was positioned on a 10 cm high wooden pallet or on a non-conductive table. The connecting lines to the EUT were fed in from above (as in the installation). The system ground was connected to the ground plane. The turntable was connected directly to the ground system of the test chamber.

While EUT power is on, an operator manually scans the selected frequency range using an EMI test receiver to identify signals being generated by the EUT. At this time the operator determines which signals generated by EUT are significant enough to assign to the final data list in the computer. The signals on the final list are automatically characterized while the antenna is in both horizontal and vertical polarity. The tower and turntable are controlled by the operator. The maximized signal indication on the receiver is then combined with the calibration factors, cable insertion loss and the proper antenna factors to provide the emission level in dB µV/m which is compared directly with the requirement stored in the program libraries. The maximum RFI field strength was determined during the measurement by rotating the turntable (±180 degrees) and varying the height of the receive antenna (h = 1 ... 4 m).



The following modifications apply to the measurement procedure for the frequency range above 1 GHz:

Step 1:
The Equipment Under Test (EUT) was set up on a non-conductive support at 0.8 m height in the semi-anechoic chamber. Absorbers are placed around and between the turn table and the antenna tower.
The turn table step size (azimuth angle) for the preliminary measurement is 15 °.

Step 2:
The maximum RFI field strength was determined during the measurement by rotating the turntable (±180 degrees) and varying the height of the receive antenna (h = 1 ... 4 m) with an additional tilt function of the antenna. The turn table azimuth will slowly vary by ± 15°.
EMI receiver settings (for all steps):
- Detector: Peak, Average
- IF Bandwidth = 1 MHz

Step 3:
Spectrum analyzer settings for step 3:
- Detector: Peak / Average
- Measured frequencies: in step 1 determined frequencies
- IF – Bandwidth: 1 MHz
- Measuring time: 1 s

4.3.6 Field Strength Calculations

FS = SA + AF + CL

Where:
FS = Total Field Strength
SA = EMC test receiver Reading
AF = Antenna Factor
CL = Cable Loss

5 PHOTO REPORT

Please see separate photo report.

Annex A: Accreditation certificate (for information)

The accreditation relates to competences stated on the accreditation certificate. The current certificate is available on the homepage of the DAkkS and can be downloaded under accredited bodies with the processing number:
https://www.dakks.de/en

Annex B: Additional information provided by client

None.

****** End of test report *****