




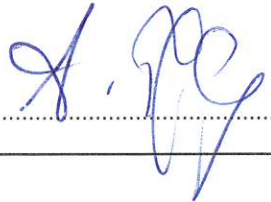


EMC TEST REPORT	
Title 47 CFR Part 15B, ISED ICES-003 Issue 7	
Report Reference No	G0M-2111-1156-EF0115B-V01
Testing Laboratory	Eurofins Product Service GmbH
Address	Storkower Str. 38c 15526 Reichenwalde Germany
Accreditation	    <p> A2LA - Registration number: 1983.01 (ISED)  ISED wireless device testing laboratory: CN 3470A  DAKKS - Registration number : D-PL-12092-01-04 (FCC)  FCC Filed Test Laboratory, Reg.-No.: 96970 </p>
Applicant	BVK TEKNOLOJI ANONIM SIRKETI
Address	Resitpasa Mah., Katar Cad. ITU Teknokent ARI-6 No:2/49/103 Sariyer 34467 Istanbul TURKEY
Test Specification Standard(s)	Title 47 CFR Part 15 Subpart B ISED ICES-003 Issue 7 ANSI C63.4:2014+A1:2017
Non-Standard Test Method	None
<b>Equipment under Test (EUT):</b>	
Product Description	OTCaccess C5 controller / able to control multiple locks.
Model(s)	2CN-105E
Additional Model(s)	None
Brand Name(s)	OTCaccess
Hardware Version(s)	V5.1
Software Version(s)	20211101(C5)
FCC-ID	2A4FC2105
IC	-
Test Result	<b>PASSED</b>

<b>Possible test case verdicts:</b>		
required by standard but not tested	N/T	
not required by standard	N/R	
required by standard but not appl. to test object	N/A	
test object does meet the requirement	P(PASS)	
test object does not meet the requirement	F(FAIL)	
<b>Testing:</b>		
Date of receipt of test item	2021-12-21	
<b>Report:</b>		
Compiled by	Jens Marquardt	
Tested by (+ signature) (Responsible for Test)	Stefan Dose	
Approved by (+ signature) (EMC Test Technician )	Andreas Pflug	
Date of Issue	2022-02-28	
Total number of pages	40	
<b>General Remarks:</b>		
<p>The test results presented in this report relate only to the object tested.</p> <p>The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer to ensure that all production models meet the intent of the requirements detailed within this report.</p> <p>This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.</p>		
<b>Additional Comments:</b>		

## ABBREVIATIONS AND ACRONYMS

Acronyms	
Acronym	Description
EUT	Equipment Under Test
FCC	Federal Communications Commission
ISED	Innovation, Science and Economic Development Canada
T <sub>NOM</sub>	Nominal operating temperature
V <sub>NOM</sub>	Nominal supply voltage

## VERSION HISTORY

Version History			
Version	Issue Date	Remarks	Revised By
01	2022-02-28	Initial Release	-

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## 1 Equipment (Test Item) Under Test

Description	OTCaccess C5 controller / able to control multiple locks.	
Model	2CN-105E	
Additional Model(s)	None	
Brand Name(s)	OTCaccess	
Serial Number(s)	UID 2159001D122100001 (prototype)	
Hardware Version(s)	V5.1	
Software Version(s)	20211101(C5)	
Sample-ID	37896	
EUT Dimensions [cm]	12 x 8 x 3	
FCC-ID	2A4FC2105	
IC	-	
Class	Class B	
Equipment type	Table top	
Highest internal frequency [MHz]	168	
Radio Module	none	
Supply Voltage	V <sub>NOM</sub>	24 VDC (V <sub>min</sub> = +8.5VDC, V <sub>max</sub> =+25VDC)
AC/DC-Adaptor	none	
Manufacturer	BVK TEKNOLOJI ANONIM SIRKETI ISBI SUBE ISBI PLAZA NO:1/310 BAKIRKOY BAKIRKOY Istanbul TURKEY	
Factory	OME ELEKTRONIK SAN.TIC.LTD.STI CAKMAKLI CAD. NO:75-9 AVRUPA OTOYOLU HADIMKOY BAGLANTISI BUYUKCEKMECE 34500 ISTANBUL	

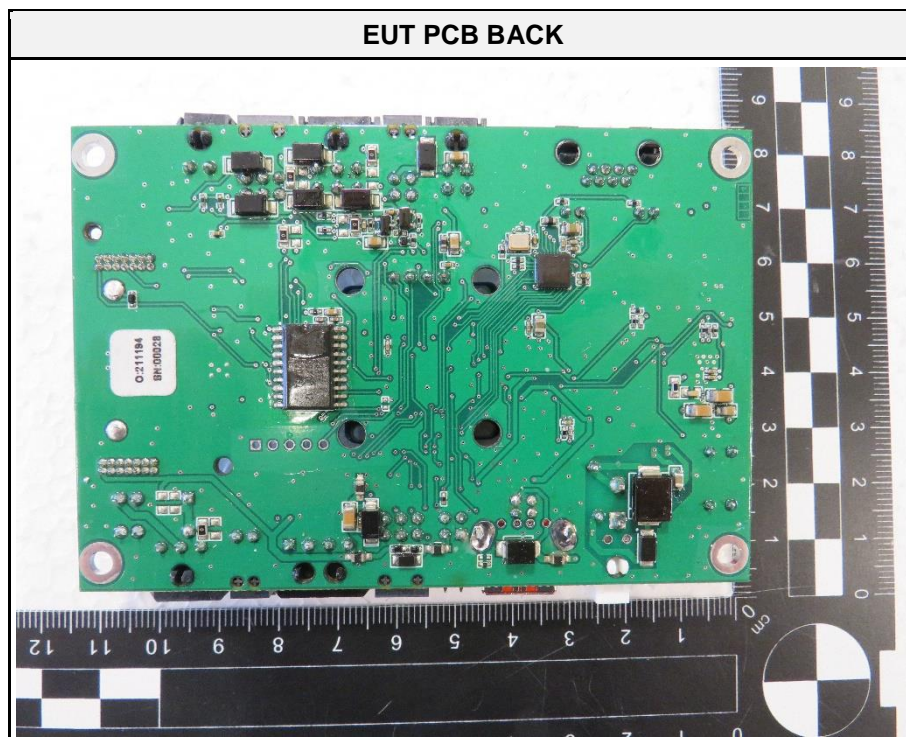
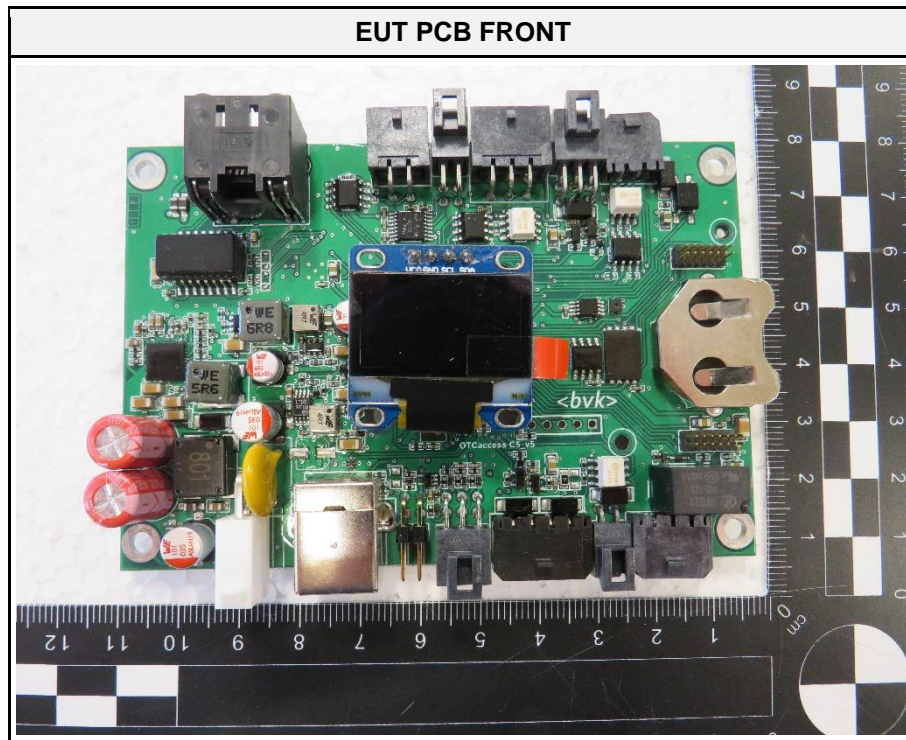
## 1.1 Equipment Ports

Name	Type	Attributes	Comment
Power	DC	Count: 1 Cable length [m]: 2 Direction: IN Service only: No Shielded: No	-
USB	DC/IO	Count: 1 Cable length [m]: 2 Direction: IO Service only: No Shielded: Yes	shield was connected to chamber ground
Ethernet RJ45	IO	Count: 1 Cable length [m]: 2 Direction: IO Service only: No Shielded: No	during the tests a cable with the following specification was used: Cat5 UTP (1m) (with ferrit)
MODBUS RS485	IO	Count: 3 Cable length [m]: 2 Direction: IO Service only: No Shielded: No	There was a ferrite on the cable at a distance of 13 cm from the plug. The cable was led through the ferrite with 2 windings. (cable length 0.8m) 2 of the 4 lines were terminated by a reed relay, the other two by a 220ohm resistor.
Serial TTL/WIEGAND	IO	Count: 1 Cable length [m]: 1 Direction: IO Service only: No Shielded: No	A 6-wire cable (0.8m) was use, 2 lines were shorted, 2 other lines were terminated with a 330Ohm resistor (simulation of Wiegand keypad) and the last 2 lines were not used.
Serial RS232	IO	Count: 1 Cable length [m]: 1 Direction: IO Service only: No Shielded: No	a short (0.35m) 4-wire cable was used, with two of the wires directly shorted and the other two connected together via a resistor.
Analogue Keypad	IO	Count: 1 Cable length [m]: 0.2 Direction: IO Service only: No Shielded: No	1-line analogue input
DC Outputs	IO	Count: 3 Cable length [m]: 1 Direction: Out Service only: No Shielded: No	12VDC output 3 cable with a length of 0.45m, terminated with several resistors (2x220Ohm & 1x 100Ohm) a line had a designation: "<bvk>oyc19 v2"

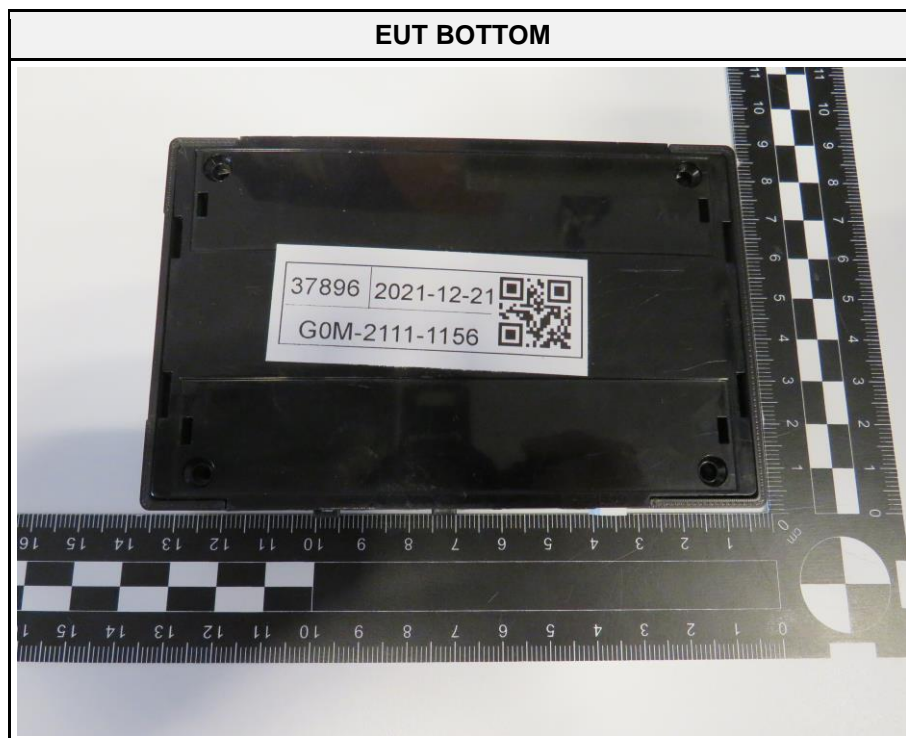
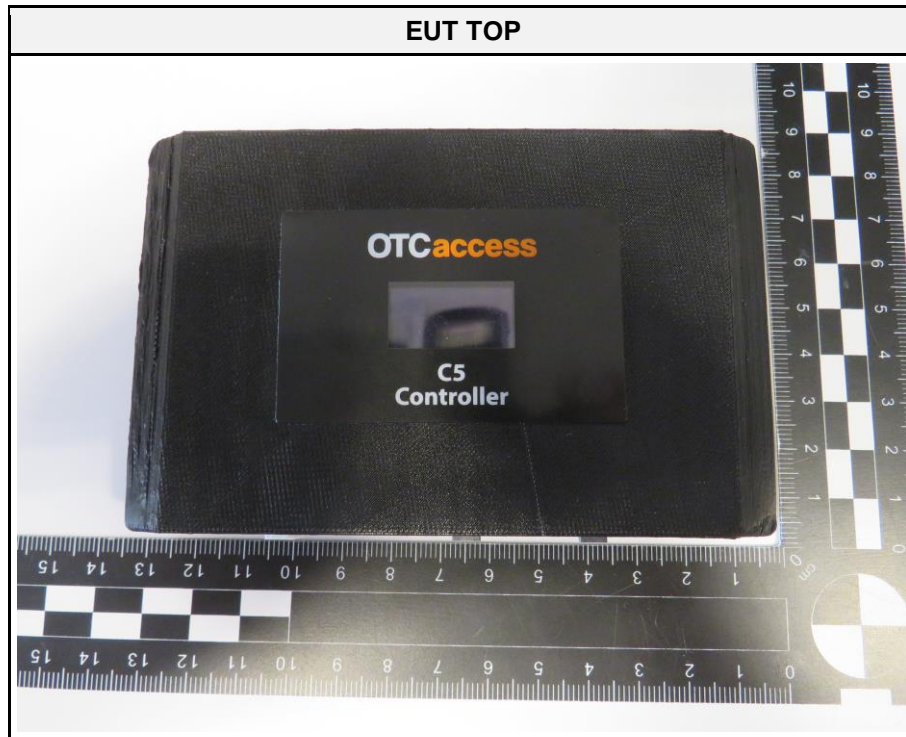
Name	Type	Attributes	Comment
Dry Contact	IO	Count: 1 Cable length [m]: 1 Direction: IN Service only: No Shielded: No	relay output (no cable connected)
Input	IO	Count: 2 Cable length [m]: 1 Direction: IN Service only: No Shielded: No	detects short circuit (no cable connected)
Description:			
AC	AC mains power input/output port		
DC	DC power input/output port		
BAT	DC power input port connected to external battery		
IO	Input/Output port		
TP	Telecommunication port		
NE	Non-electrical port		



## 1.2 Equipment Photos - Internal



### 1.3 Equipment Photos - External



EUT Left



EUT Right



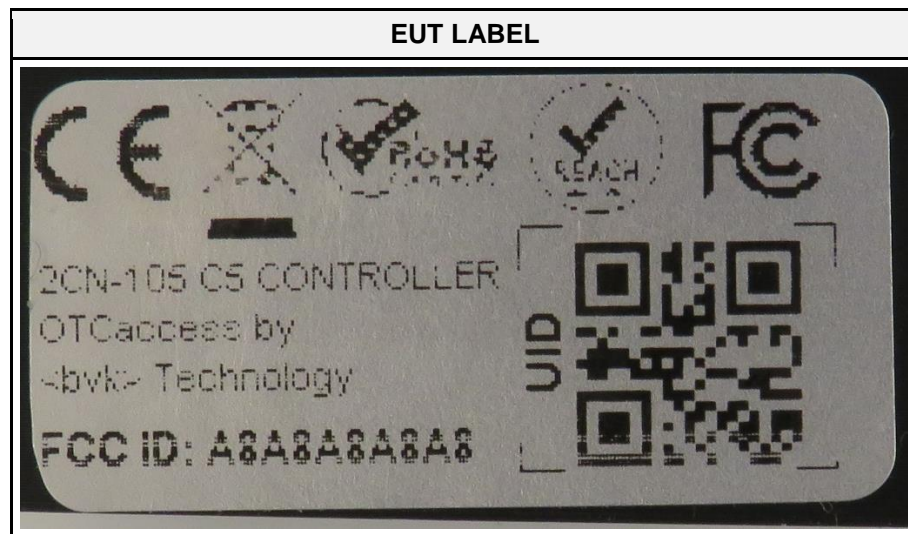
EUT FRONT



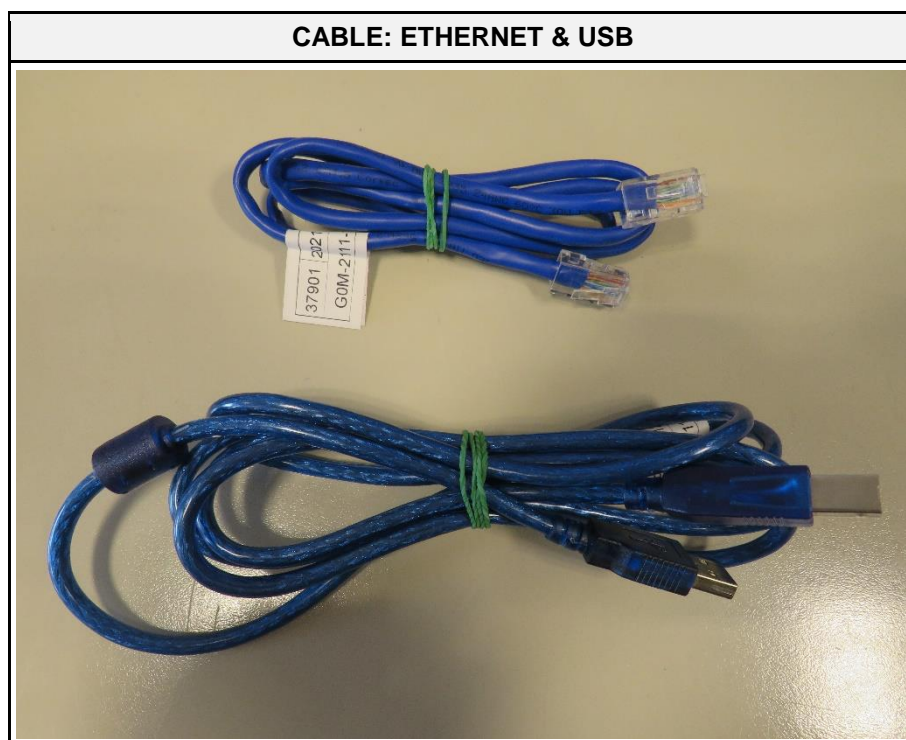
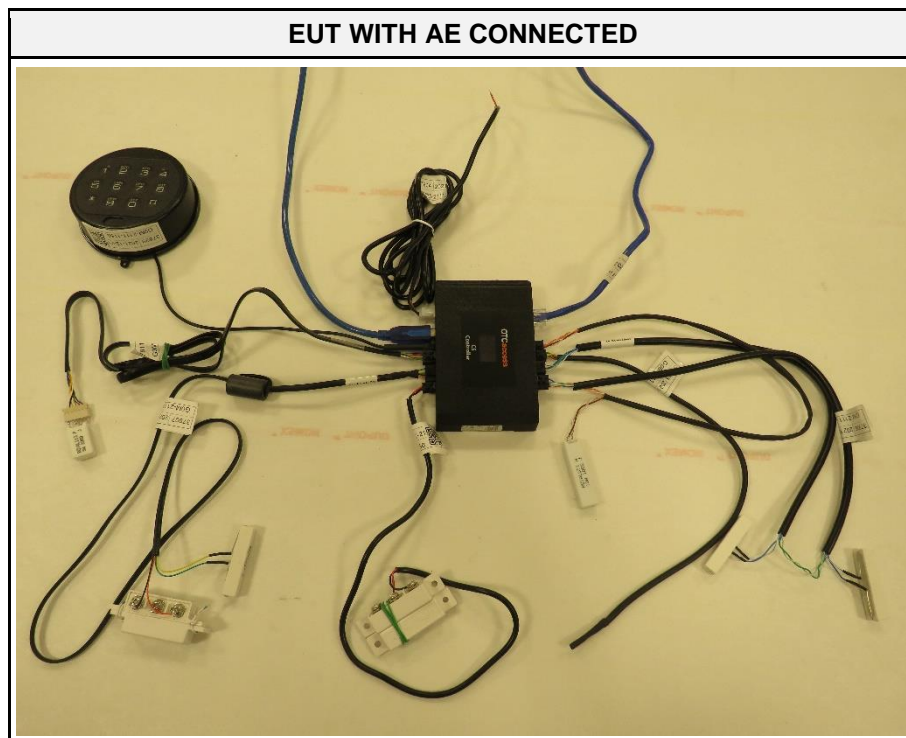
EUT BACK







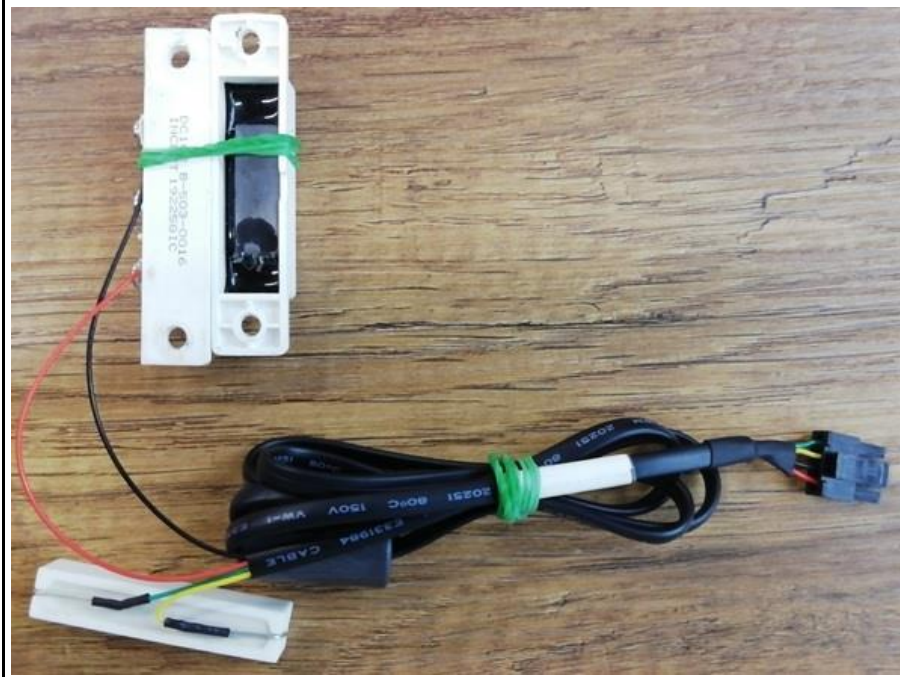
#### 1.4 Auxiliary Equipment Photos



**CABLE: CONNECTOR 4**



**CABLE: CONNECTOR 5**



**CABLE: CONNECTOR 6**

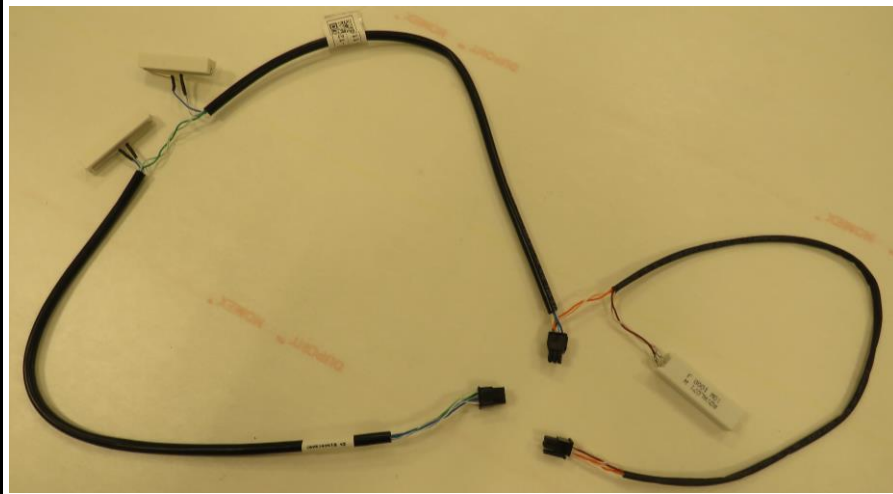




**CABLE: CONNECTOR 9-10-12**



**CABLE: CONNECTOR 9-10-12 (detail)**



**CABLE: CONNECTOR 11**





## 1.5 Support Equipment

Product Type	Device	Manufacturer	Model	Comment
AE	Notebook	Lenovo	Thinkpad T450	provided by Eurofins
AE	Analogue Keypad	Intergard	IG 4715	provided by customer
SW	BVKmanager	BVK	v2.1.9	provided by customer
CBL	Connector no. 1	BVK	24V power	provided by customer
CBL	Connector no. 4	BVK	WIEGAND Keypad	provided by customer (keypad simulated via 330Ohm resistor)
CBL	Connector no. 5	BVK	motor with magnetic contact switch	provided by customer (motor simulated via 22 Ohm resistor and additional ferrit)
CBL	Connector no. 6	BVK	digital input (magnetic contact switch)	provided by customer (cable with reed contact)
CBL	Connector no. 9-10-12	BVK	motors & Modbus	provided by customer (motors simulated with 2x22 Ohm and 1x100 Ohm resistors)
CBL	Connector no. 11	BVK	RS-232	provided by customer (cable with 1 kOhm resistor)
CBL	USB	unspecified	unspecified	provided by customer (with ferrit)
CBL	Ethernet	unspecified	unspecified	provided by customer
AE	AC/DC-Adaptor	Phihong	PSC20R-240	provided by Eurofins
Description:				
AE	Auxiliary Equipment			
SIM	Simulator			
MON	Monitoring Equipment			
CBL	Connecting Cable			
Comment:				

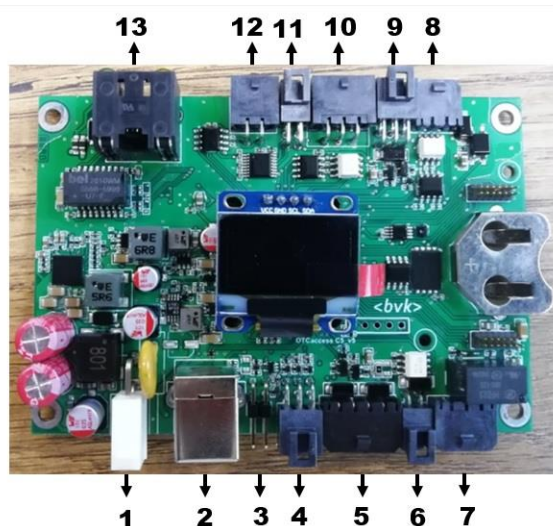
## 1.6 Operational Modes

Mode #	Description
1	<p>"Standalone Test Mode" (see OTCaccess v5 Test.pptx)</p> <p>Button "2" on the analogue keypad starts the test mode: C5 controller sends messages to its interfaces and checks the answers in an infinite loopback and trigger outputs.</p> <p>A continuous ping-command (10 Mb/s) is send from notebook to EUT via network connection.</p> <p>Via USB-cable the status of EUT is shown in BVKManager-Software.</p>
Comment:	

## 1.7 EUT Configuration

Configuration #	Description
1	<p>All cables shown in section 1.4 "Auxiliary Equipment Photos" are connected to the EUT according to the connection diagram below. (see OTCaccess v5 Test.pptx)</p> <p>In addition, the 24V supply cable and the Ethernet and USB cables are connected to the EUT. The last two are connected to the notebook on which the software "BVKManager" is installed and the command console (ping command) is opened.</p> <p>Ports number "7 – dry contact" and "8 – digital input" were not connected.</p> <p>There was no battery inserted in the battery connector.</p>
Comment:	

### CONNECTION DIAGRAMM



NUMBER	FUNCTION
1	POWER (24 VOLTS)
2	USB (TYPE B)
3	ANALOG KEYPAD
4	WIEGAND KEYPAD
5	MOTOR
6	DIGITAL INPUT
7	DRY CONTACT
8	DIGITAL INPUT
9	MOTOR (WITH MODBUS)
10	MOTOR (WITH MODBUS)
11	RS-232
12	RS-485 (MODBUS)
13	ETHERNET 10/100/1000

## 1.8 Sample emission level calculation

The following is a description of terms and a sample calculation, as appears in the radiated emissions data table. The numbers used in the calculation are for example only. There is no direct correlation to the specific data taken for the product described in this document:

Reading:

This is the reading obtained on the spectrum analyser in dBµV. Any external preamplifiers used are taken into account through internal analyser settings.

A.F.:

This is the antenna factor for the receiving antenna. It is a conversion factor, which converts electric fields strengths to voltages, which can be measured directly on the spectrum analyser. It is treated as a loss in dB. Cable losses have been included with the A.F. to simplify the calculations. The antenna factor is used in calculations as follows:

$$\text{Reading on Analyser (dB}\mu\text{V)} + \text{A.F. (dB/m)} = \text{Net field strength (dB}\mu\text{V/m)}$$

Net:

This is the net field strength measurement (as shown above).

Limit:

This is the FCC Class B radiated emission limit (in units of dBµV/m). The FCC limits are given in units of µV/m. The following formula is used to convert the units of µV/m to dBµV/m:

$$\text{Limit (dB}\mu\text{V/m)} = 20 \cdot \log(\mu\text{V/m})$$

Margin:

This is the margin of compliance below the FCC limit. The units are given in dB. A negative margin indicates the emission was below the limit. A positive margin indicates that the emission exceeds the limit.

Example only:

Reading + AF	= Net Reading	:	Net reading - FCC limit	= Margin
+21.5 dBµV + 26 dB/m	= 47.5 dBµV/m	:	47.5 dBµV/m - 57.0 dBµV/m	= -9.5 dB

## 2 Result Summary

Title 47 CFR Part 15B, ISED ICES-003 Issue 7				
Reference	Requirement	Reference Method	Result	Remarks
Emission				
FCC 15.109 ICES-003, 3.2.2	Radiated emissions	ANSI C63.4:2014 +A1:2017	PASS	-
FCC 15.107 ICES-003, 3.2.1	AC power line conducted emissions	ANSI C63.4:2014 +A1:2017	PASS	-
Comment:				

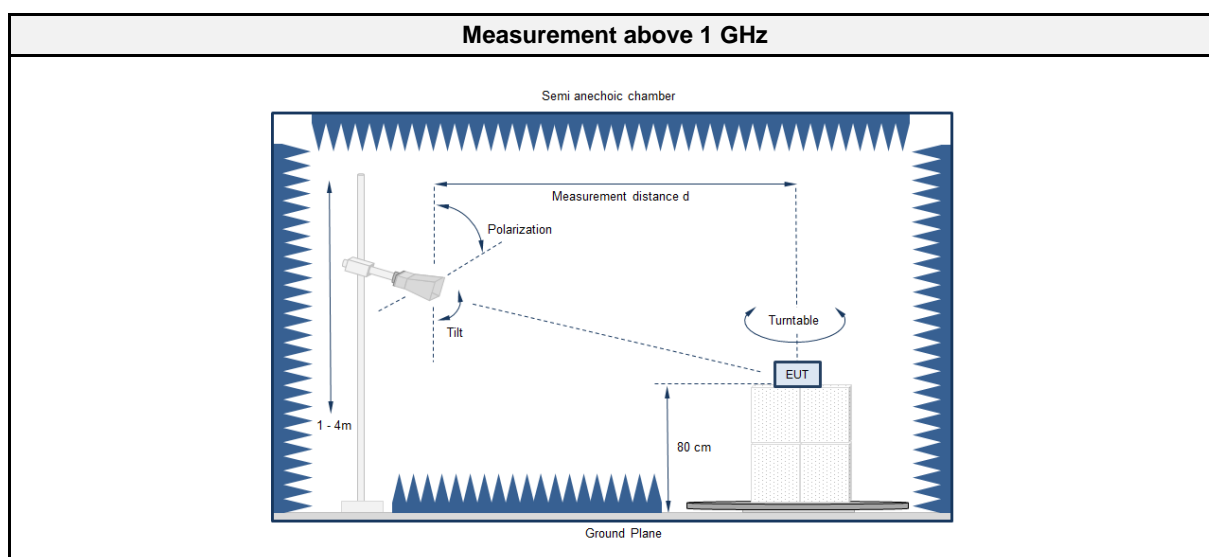
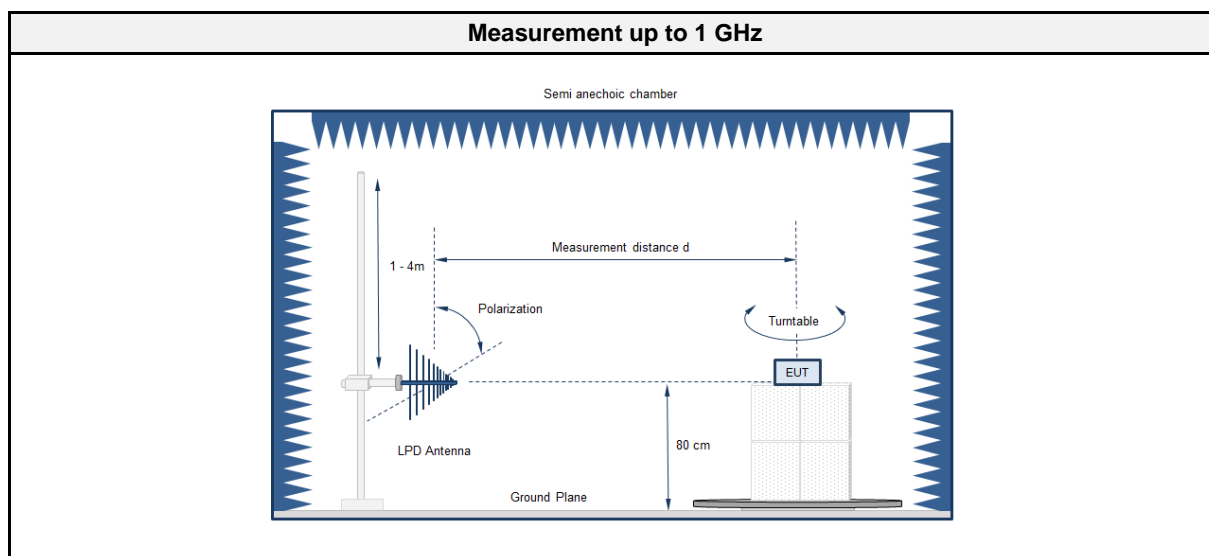
Possible Test Case Verdicts	
PASS	Test object does meet the requirements
FAIL	Test object does not meet the requirements
N/T	Required by standard but not tested
N/R	Not required by standard for the test object

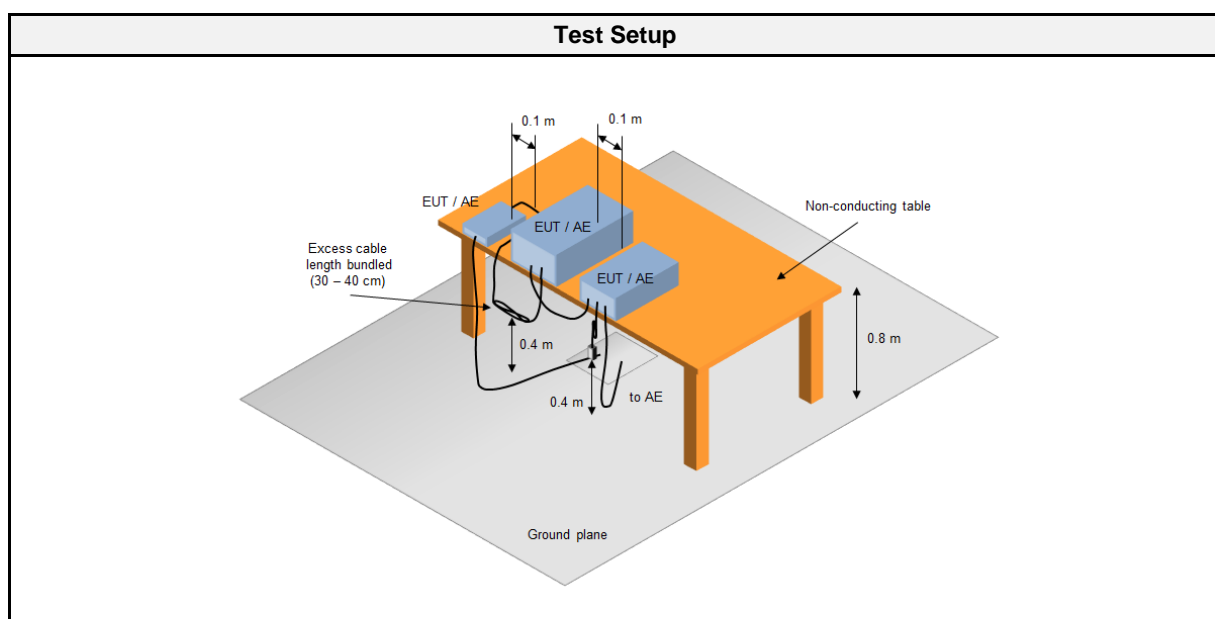
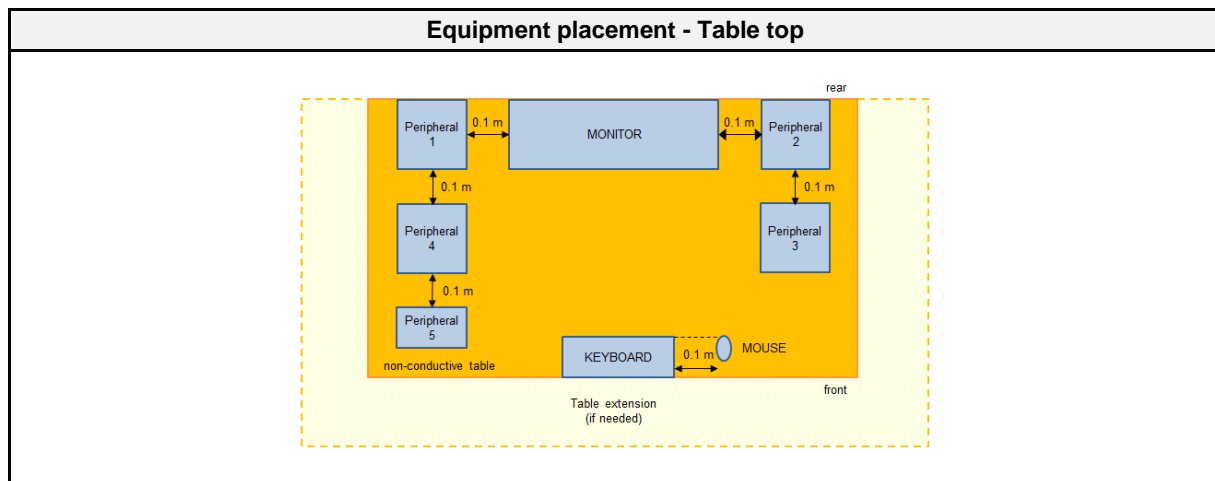
## 2.1 Test Conditions and Results - Radiated emissions acc. to ANSI C63.4

### 2.1.1 Information

Test Information	
Reference	FCC 15.109, ICES-003, 3.2.2
Reference method	ANSI C63.4:2014+A1:2017 Section 8
Equipment class	Class B
Equipment type	Table top
Highest internal frequency [MHz]	168
Measurement range	30 MHz to 2000 MHz
Temperature [°C]	21 ±2
Humidity [%]	31 ±3
Operator	Stefan Dose
Date	2022-01-25

### 2.1.2 Setup





### 2.1.3 Equipment

Test Software			
Description	Manufacturer	Name	Version
EMC Software	DARE Instruments	Radimation	2020.1.8

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic chamber (NSA)	Frankonia	AC1	EF00062	2021-02	2024-02
Anechoic chamber (SVSWR)	Frankonia	AC 1	EF01011	2019-06	2022-06
Programmable AC Source	Chroma ATE Inc.	61604	EF01068	2021-07	2022-07
EMI Test Receiver	Keysight	N9038A-526/WXP	EF01070	2021-07	2022-07
Biconical Antenna	R&S	HK 116	EF00030	2021-05	2024-05
LPD Antenna	R&S	HL 223	EF00187	2019-05	2022-05
Horn antenna	Schwarzbeck	BBHA 9120D (1-18GHz)	EF00018	2019-10	2022-10
Climatic Sensor	Embedded Data Systems, LLC.	280010000025417E	EF01054	2021-03	2022-03

Test Report No.: G0M-2111-1156-EF0115B-V01

Eurofins Product Service GmbH  
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

## 2.1.4 Procedure

Exploratory measurement	
1.	The EUT was placed on a non-conductive table at a height of 0.8m.
2.	The EUT and support equipment, if needed, were set up to simulate typical usage.
3.	Cables, of type and length specified by the manufacturer, were connected to at least one port of each type and were terminated by a device or simulating load of actual usage.
4.	The antenna was placed at a distance of 3 or 10 m.
5.	The received signal was monitored at the measurement receiver.
6.	This procedure has to be performed in both antenna polarizations, horizontal and vertical.
7.	The arrangement of the equipment with the maximum emission level is shown on the setup picture at item 2.1.2

Final measurement	
1.	The EUT was placed on a 0.8 m non-conductive table at a 3 m distance from the receive antenna. The antenna output was connected to the measurement receiver.
2.	A biconical antenna was used for the frequency range 30 – 200 MHz, a logarithmic periodical antenna was used for the frequency range from 200 – 1000 MHz. Above one 1 GHz a Double Ridged Broadband Horn antenna was used. The antenna was placed on an adjustable height antenna mast.
3.	The EUT and cable arrangement were based on the exploratory measurement results.
4.	Emissions were maximized at each frequency by rotating the EUT and adjusting the receive antenna height and polarization. The maximum values were recorded.
5.	The test data of the worst-case conditions were recorded and shown on the next pages.

## 2.1.5 Limits

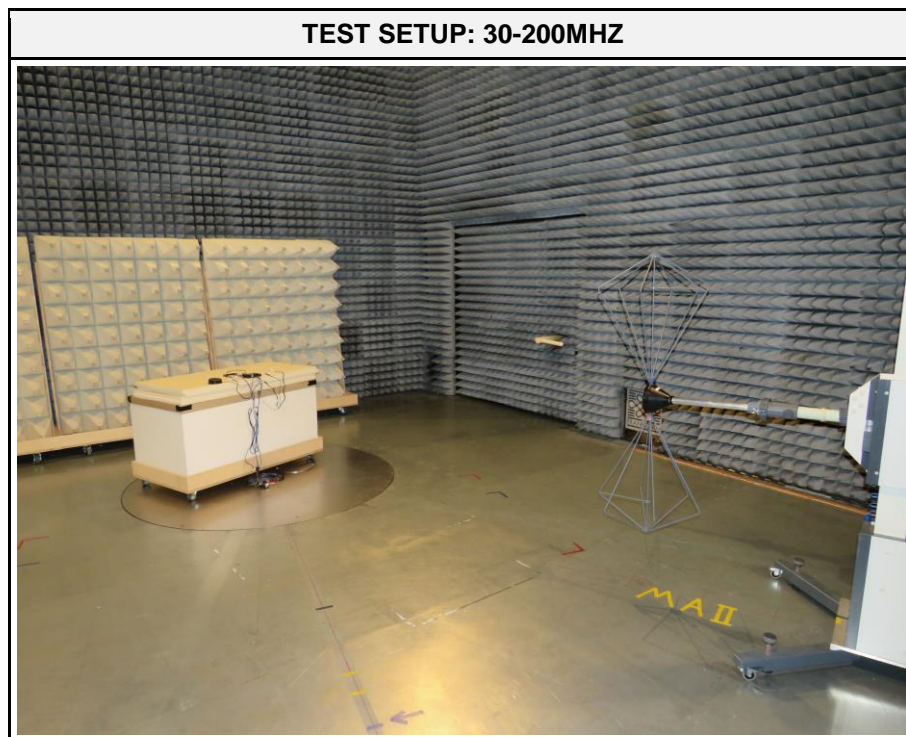
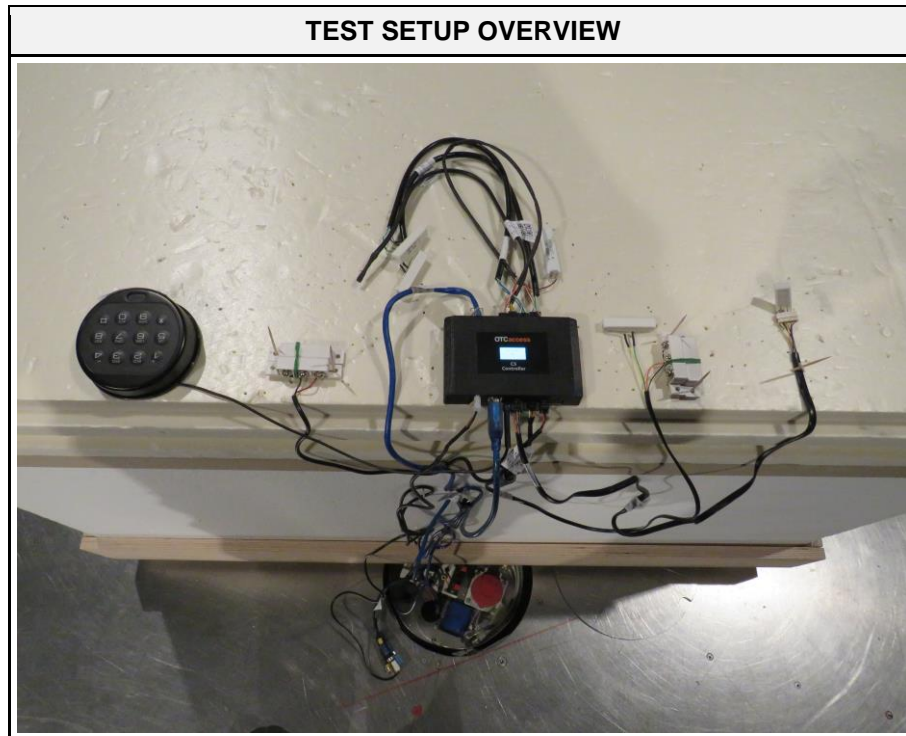
Class B @ 3 m		
Frequency [MHz]	Detector	Limit [dB $\mu$ V/m]
30 - 88	Quasi-peak	40
88 - 216	Quasi-peak	43.5
216 - 960	Quasi-peak	46
960 - 1000	Quasi-peak	54
> 1000	Peak	74
	Average	54

## 2.1.6 Results

Test Results			
Operational mode	EUT Configuration	Verdict	Remark
1	1	PASS	-



### 2.1.7 Setup Photos

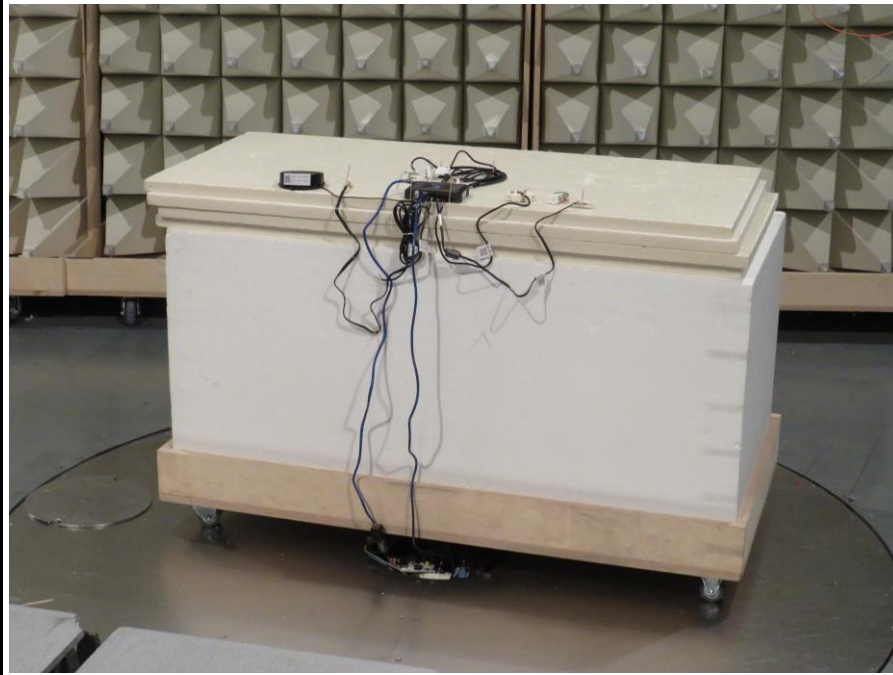




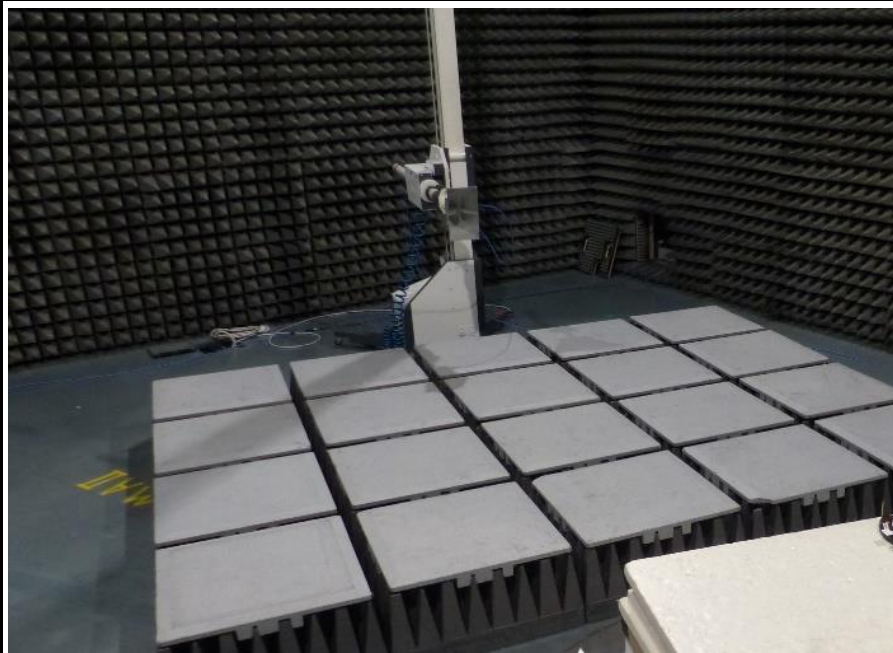
**TEST SETUP: 200-1000MHZ**



**TEST SETUP: 1000-2000MHZ**



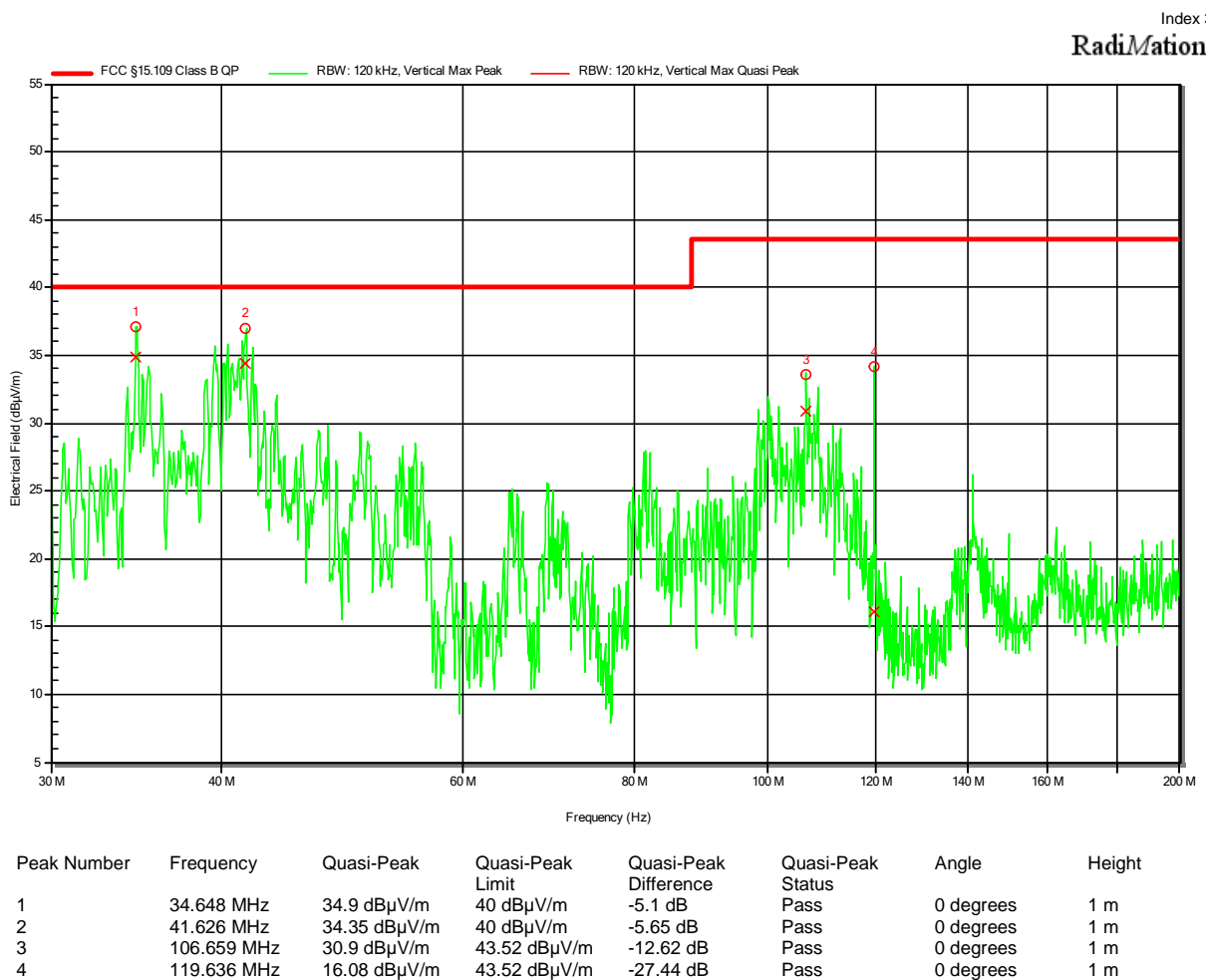
**TEST SETUP: 1000-2000MHZ**



## 2.1.9 Records

### Radiated emissions according to FCC part 15B

Project Number: G0M-2111-1156  
 Applicant: BVK TEKNOLOJI ANONIM SIRKETI  
 Model Description: OTCaccess C5 Controller  
 Model: 2CN-105  
 Test Sample ID: 37896  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Dose  
 Test Date: 2022-01-25  
 Operating Conditions: ambient temperature: 21 °Celsius  
 power input: 24VDC  
 Antenna: Rohde & Schwarz HK 116, Vertical  
 Measurement Distance: 3m  
 Operational Mode: mode 1  
 EUT Configuration: configuration 1  
 Note 1:



Test Report No.: G0M-2111-1156-EF0115B-V01

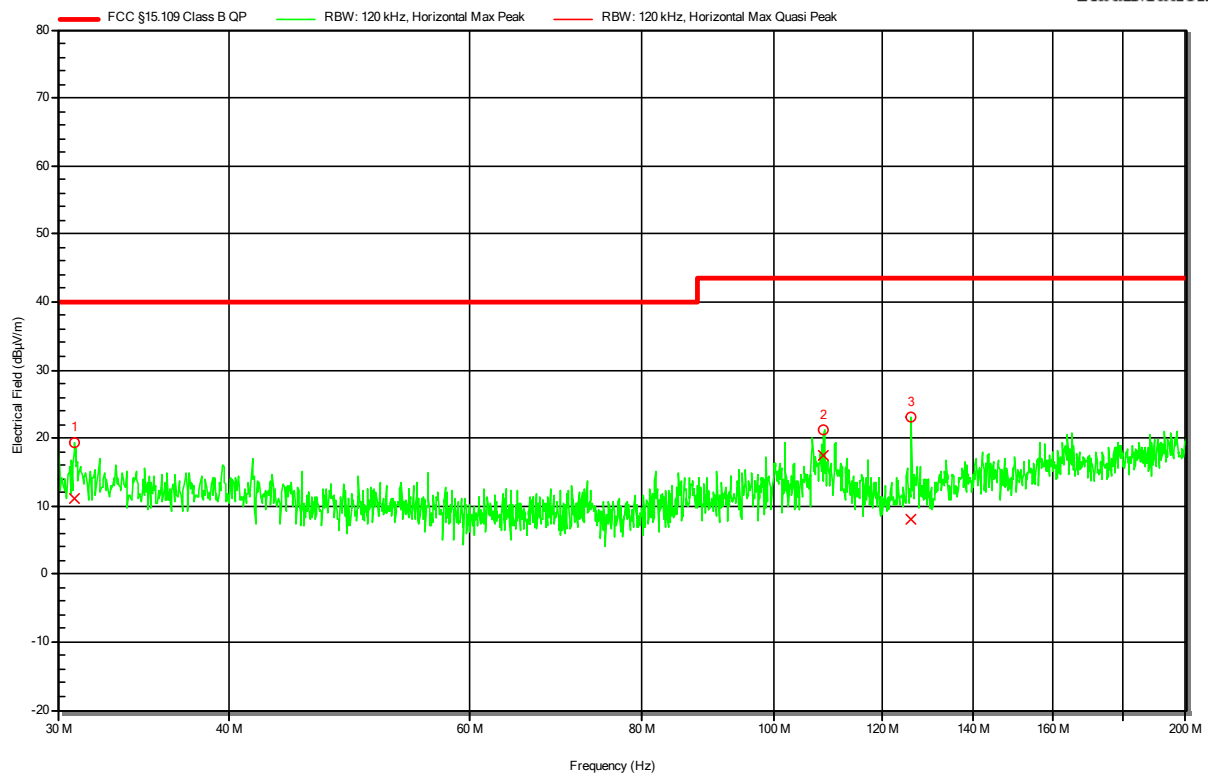
Eurofins Product Service GmbH  
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

## Radiated emissions according to FCC part 15B

Project Number: G0M-2111-1156  
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 Model: 2CN-105  
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 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Dose  
 Test Date: 2022-01-25  
 Operating Conditions: ambient temperature: 21 °Celsius  
 power input: 24VDC  
 Antenna: Rohde & Schwarz HK 116, Horizontal  
 Measurement Distance: 3m  
 Operational Mode: mode 1  
 EUT Configuration: configuration 1  
 Note 1:

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RadiMation



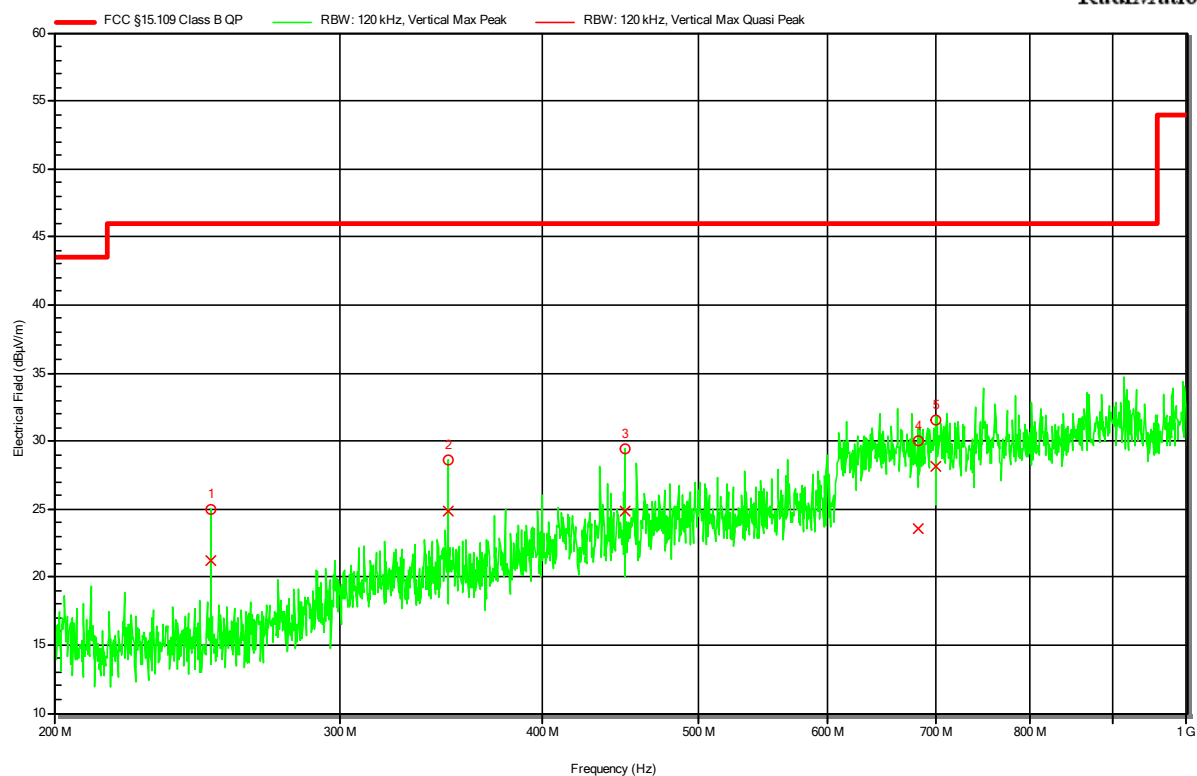
Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height
1	30.871 MHz	11.04 dBµV/m	40 dBµV/m	-28.96 dB	Pass	0 degrees	1 m
2	108.803 MHz	17.43 dBµV/m	43.52 dBµV/m	-26.09 dB	Pass	0 degrees	1 m
3	125.965 MHz	8.07 dBµV/m	43.52 dBµV/m	-35.45 dB	Pass	0 degrees	1 m

# Radiated emissions according to FCC part 15B

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 Model Description: OTCaccess C5 Controller  
 Model: 2CN-105  
 Test Sample ID: 37896  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Dose  
 Test Date: 2022-01-25  
 Operating Conditions: ambient temperature: 21 °Celsius  
 power input: 24VDC  
 Antenna: Rohde & Schwarz HL 223, Vertical  
 Measurement Distance: 3m  
 Operational Mode: mode 1  
 EUT Configuration: configuration 1  
 Note 1:

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RadiMation



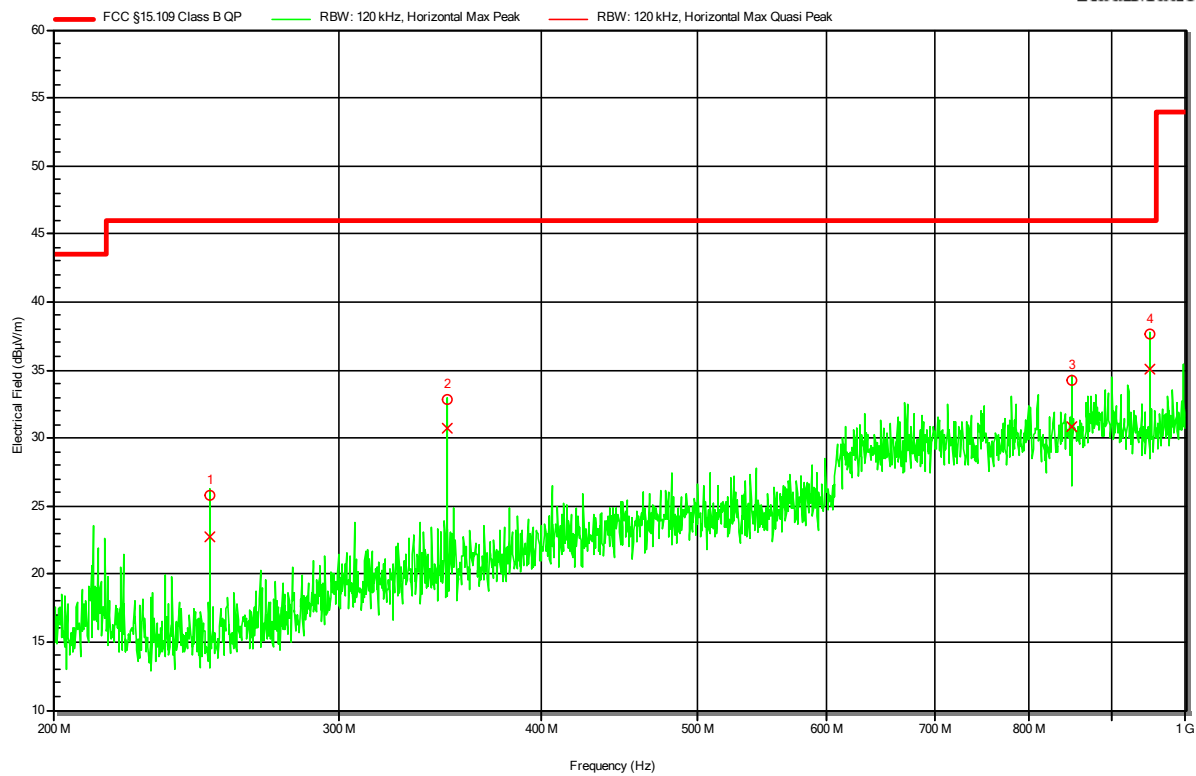
Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height
1	250.003 MHz	21.27 dBμV/m	46.02 dBμV/m	-24.75 dB	Pass	0 degrees	1 m
2	350.003 MHz	24.82 dBμV/m	46.02 dBμV/m	-21.2 dB	Pass	0 degrees	1 m
3	449.991 MHz	24.87 dBμV/m	46.02 dBμV/m	-21.15 dB	Pass	0 degrees	1 m
4	683.272 MHz	23.55 dBμV/m	46.02 dBμV/m	-22.47 dB	Pass	0 degrees	1 m
5	700 MHz	28.09 dBμV/m	46.02 dBμV/m	-17.93 dB	Pass	0 degrees	1 m

## Radiated emissions according to FCC part 15B

Project Number: G0M-2111-1156  
 Applicant: BVK TEKNOLOJI ANONIM SIRKETI  
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 Model: 2CN-105  
 Test Sample ID: 37896  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Dose  
 Test Date: 2022-01-25  
 Operating Conditions: ambient temperature: 21 °Celsius  
 power input: 24VDC  
 Antenna: Rohde & Schwarz HL 223, Horizontal  
 Measurement Distance: 3m  
 Operational Mode: mode 1  
 EUT Configuration: configuration 1  
 Note 1:

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RadiMation



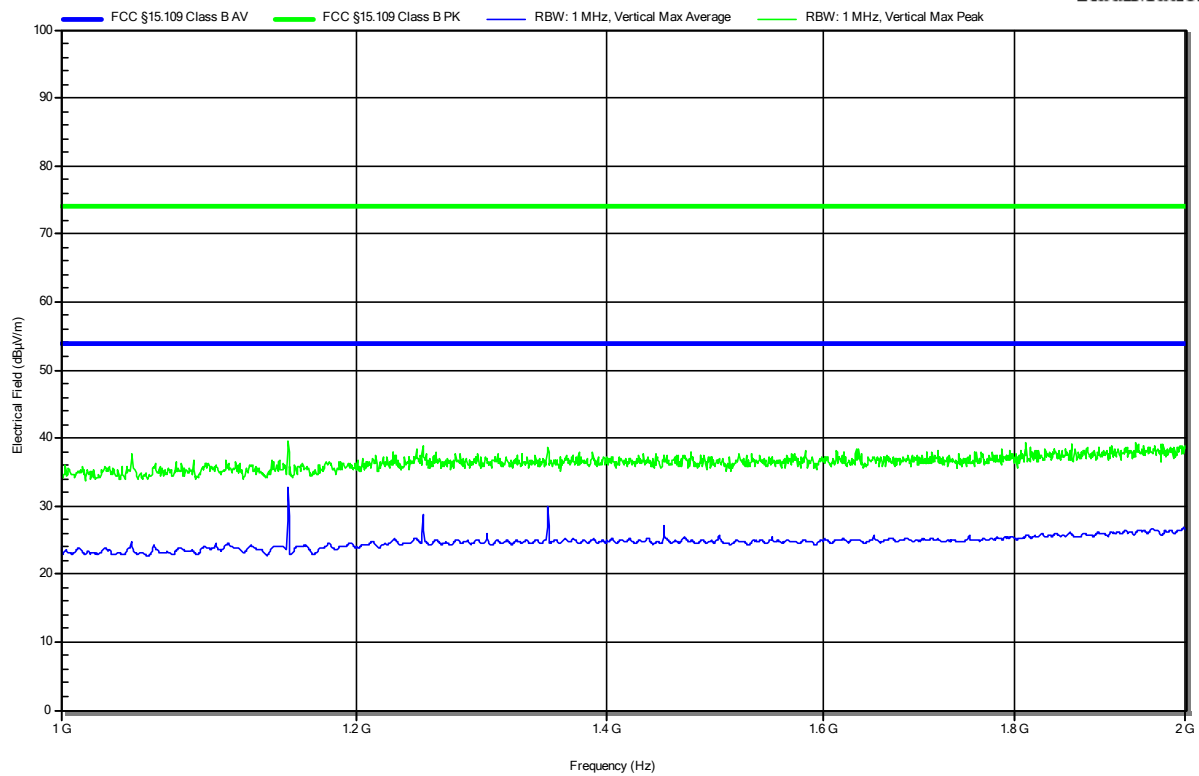
Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height
1	250.009 MHz	22.68 dBµV/m	46.02 dBµV/m	-23.34 dB	Pass	0 degrees	1 m
2	349.997 MHz	30.68 dBµV/m	46.02 dBµV/m	-15.34 dB	Pass	0 degrees	1 m
3	849.997 MHz	30.83 dBµV/m	46.02 dBµV/m	-15.19 dB	Pass	0 degrees	1 m
4	949.985 MHz	35.01 dBµV/m	46.02 dBµV/m	-11.01 dB	Pass	0 degrees	1 m

## Radiated emissions according to FCC part 15B

Project Number: G0M-2111-1156  
 Applicant: BVK TEKNOLOJI ANONIM SIRKETI  
 Model Description: OTCaccess C5 Controller  
 Model: 2CN-105  
 Test Sample ID: 37896  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Dose  
 Test Date: 2022-01-25  
 Operating Conditions: ambient temperature: 21 °Celsius  
 power input: 24VDC  
 Antenna: Schwarzbeck BBHA 9120D, Vertical  
 Measurement Distance: 3m  
 Operational Mode: mode 1  
 EUT Configuration: configuration 1  
 Note 1:

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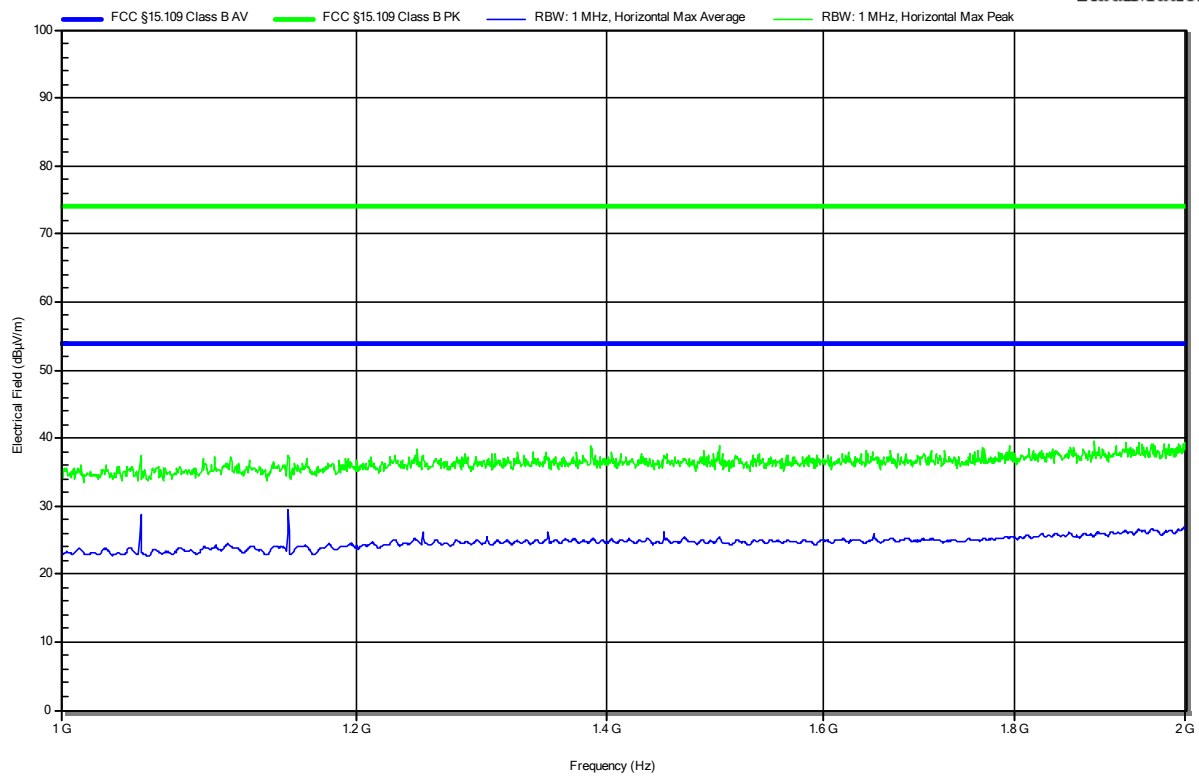


## Radiated emissions according to FCC part 15B

Project Number: G0M-2111-1156  
 Applicant: BVK TEKNOLOJI ANONIM SIRKETI  
 Model Description: OTCaccess C5 Controller  
 Model: 2CN-105  
 Test Sample ID: 37896  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Dose  
 Test Date: 2022-01-25  
 Operating Conditions: ambient temperature: 21 °Celsius  
 power input: 24VDC  
 Antenna: Schwarzbeck BBHA 9120D, Horizontal  
 Measurement Distance: 3m  
 Operational Mode: mode 1  
 EUT Configuration: configuration 1  
 Note 1:

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RadiMation



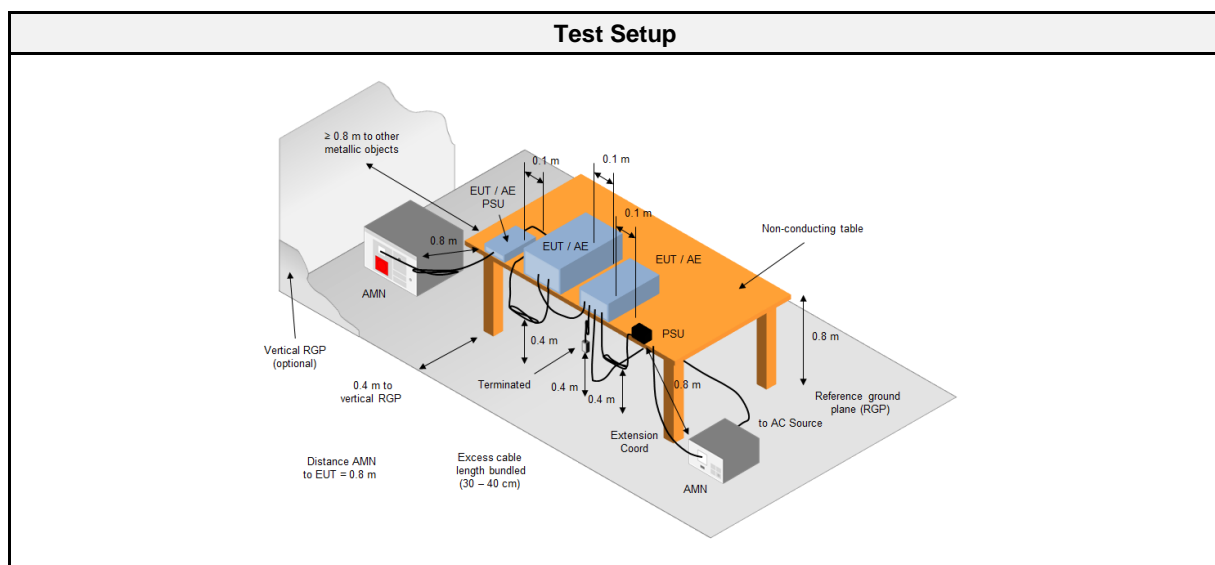
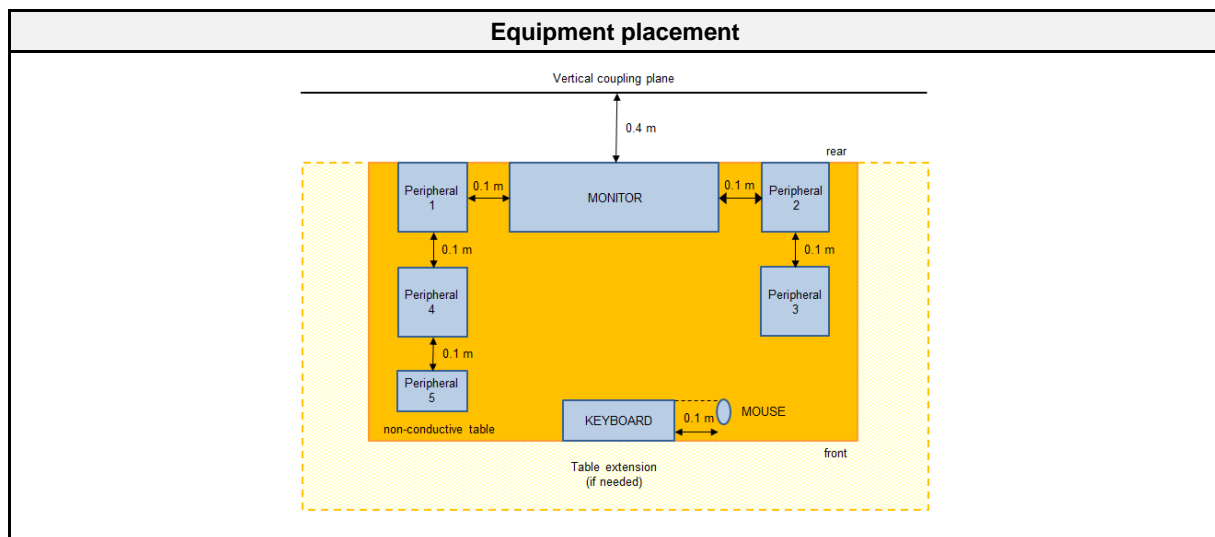


## 2.2 Test Conditions and Results - Conducted emissions acc. to ANSI C63.4

### 2.2.1 Information

Test Information	
Reference	FCC 15.107, ICES-003, 3.2.1
Reference method	ANSI C63.4:2014+A1:2017 Section 12
Measurement range	150 kHz to 30 MHz
Equipment class	Class B
Equipment type	Table top
Temperature [°C]	21 ±2
Humidity [%]	31 ±3
Operator	Stefan Dose
Date	2022-01-25

### 2.2.2 Setup



### 2.2.3 Equipment

Test Software			
Description	Manufacturer	Name	Version
EMC Software	DARE Instruments	Radimation	2020.1.8

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
AMN	Schwarzbeck	NSLK 8127	EF01592	2021-07	2022-07
Pulse Limiter	R&S	ESH3-Z2	EF01063	2021-07	2022-07
EMI Test Receiver	R&S	ESR 7	EF00943	2021-08	2022-08
AC & DC Power Supply	Chroma ATE Inc.	61604	EF01380	2021-07	2022-07
Climatic Sensor	Embedded Data Systems, LLC.	2800100000254 17E	EF01054	2021-03	2022-03

### 2.2.4 Procedure

Exploratory measurement
<ol style="list-style-type: none"> <li>1. The EUT was placed on a non-conductive table 0.8 m above the reference ground plane and 0.4 m away from the vertical conducting plane (ANSI C63.4: 2014 item 7.3.1)</li> <li>2. The power cord that is normally supplied or recommended by the manufacturer was connected to the LISN.</li> <li>3. The distance between the outer edge of the EUT and the LISN shall be set to 0.8 m. A longer power cord shall be bundled to this length (bundling shall not exceed 40 cm in length).</li> <li>4. The LISN measurement port was connected to a measurement receiver</li> <li>5. I/O cables were bundled not longer than 0.4 m</li> <li>6. Measurement was performed in the frequency range 0.15 – 30MHz on each current-carrying conductor</li> <li>7. To maximize the emissions the cable positions were manipulated</li> <li>8. The worst configuration of EUT and cables is shown on a test setup picture at item 2.2.2</li> </ol>

Final measurement
<ol style="list-style-type: none"> <li>1. The EUT was placed on a non-conductive table 0.8 m above the reference ground plane and 0.4 m away from the vertical conducting plane (ANSI C63.4: 2014 item 7.3.1)</li> <li>2. The power cord that is normally supplied or recommended by the manufacturer was connected to the LISN.</li> <li>3. The distance between the outer edge of the EUT and the LISN shall be set to 0.8 m. A longer power cord shall be bundled to this length (bundling shall not exceed 40 cm in length).</li> <li>4. The LISN measurement port was connected to a measurement receiver</li> <li>5. The EUT and cable arrangement were based on the exploratory measurement results</li> <li>6. The test data of the worst-case conditions were recorded and shown on the next pages</li> </ol>

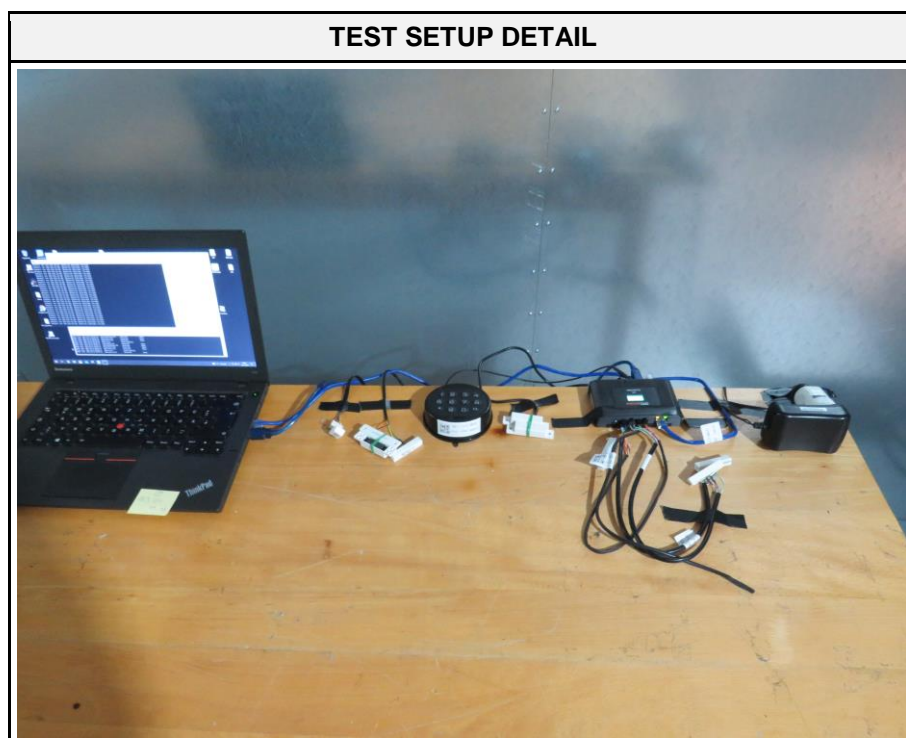
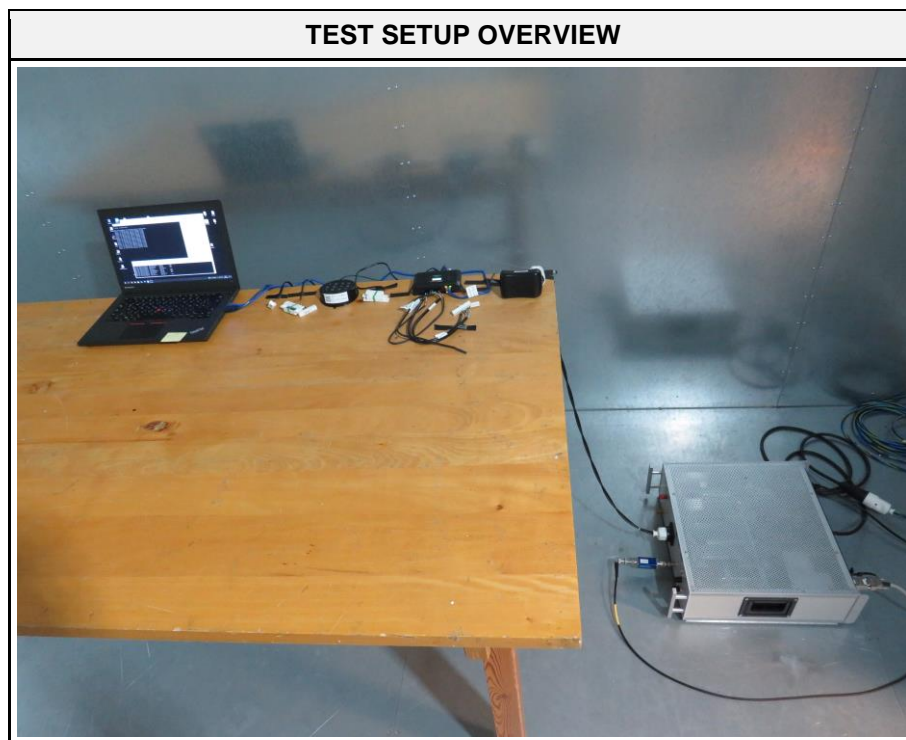
## 2.2.5 Limits

Class B		
Frequency [MHz]	Quasi-peak Limit [dBμV/m]	Average Limit [dBμV/m]
0.15 - 0.5	66 - 56 *	56 - 46 *
0.5 - 5	56	46
5 - 30	60	50
* Decreases with the logarithm of the frequency		

## 2.2.6 Results

AC power line conducted emissions					
Port	Coupling	Operational mode	EUT Configuration	Verdict	Remark
Power	AMN	1	1	PASS	*1
Comment: *1 – measurement was performed with the help of an ac/dc-adaptor “Phihong PSC20R-240” (conversion from 120VAC/60Hz to 24VDC)					

### 2.2.7 Setup Photos



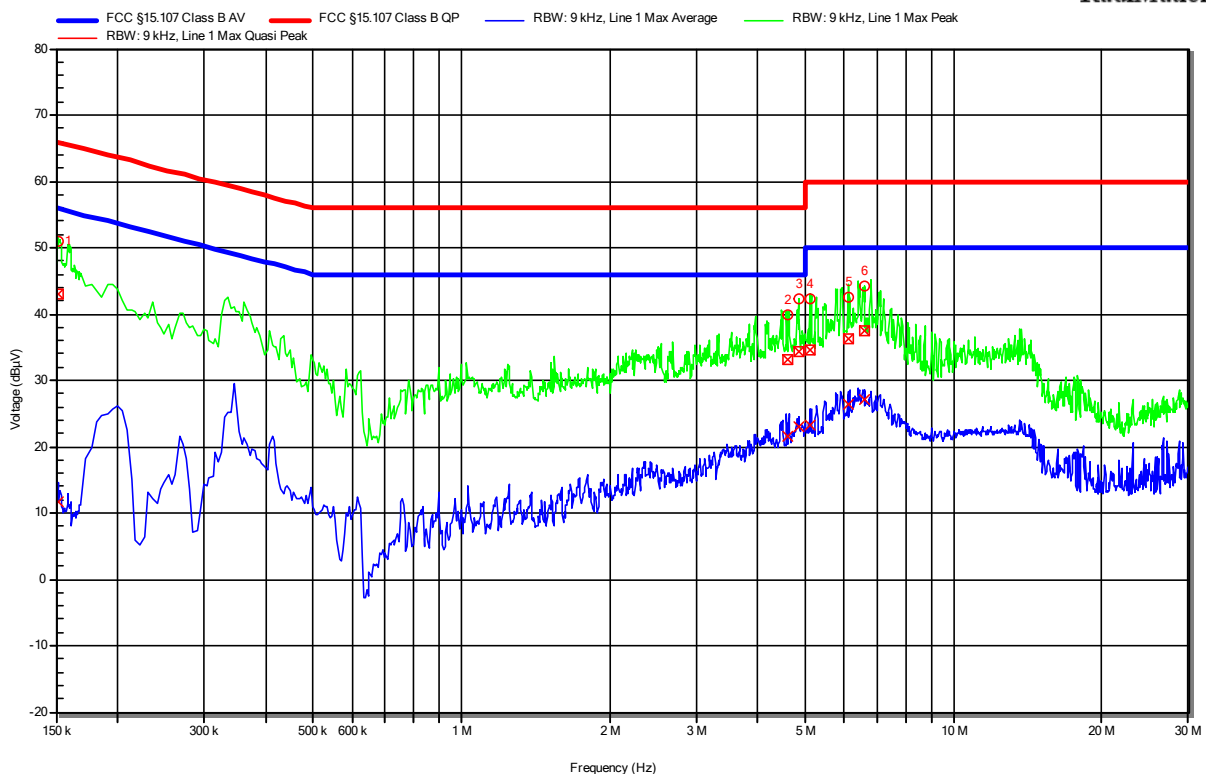
## 2.2.8 Records

**Conducted emissions at the mains power port according to FCC part 15B**

Project Number: G0M-2111-1156  
 Applicant: BVK TEKNOLOJI ANONIM SIRKETI  
 Model Description: OTCaccess C5 Controller  
 Model: 2CN-105  
 Test Sample ID: 37896  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Dose  
 Test Date: 2022-01-25  
 Operating Conditions: ambient temperature: 20 °Celsius  
 power input: 120V AC/60Hz  
 LISN: Schwarzbeck NSLK 8127 RC L  
 Operational Mode: mode 1  
 EUT Configuration: configuration 1  
 Applied to Port: AC mains  
 Note 1:

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Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	LISN
1	152.25 kHz	43.06 dB $\mu$ V	65.88 dB $\mu$ V	-22.81 dB	Pass	Line 1
2	4.592 MHz	33.12 dB $\mu$ V	56 dB $\mu$ V	-22.88 dB	Pass	Line 1
3	4.837 MHz	34.31 dB $\mu$ V	56 dB $\mu$ V	-21.69 dB	Pass	Line 1
4	5.113 MHz	34.67 dB $\mu$ V	60 dB $\mu$ V	-25.33 dB	Pass	Line 1
5	6.104 MHz	36.35 dB $\mu$ V	60 dB $\mu$ V	-23.65 dB	Pass	Line 1
6	6.585 MHz	37.41 dB $\mu$ V	60 dB $\mu$ V	-22.59 dB	Pass	Line 1

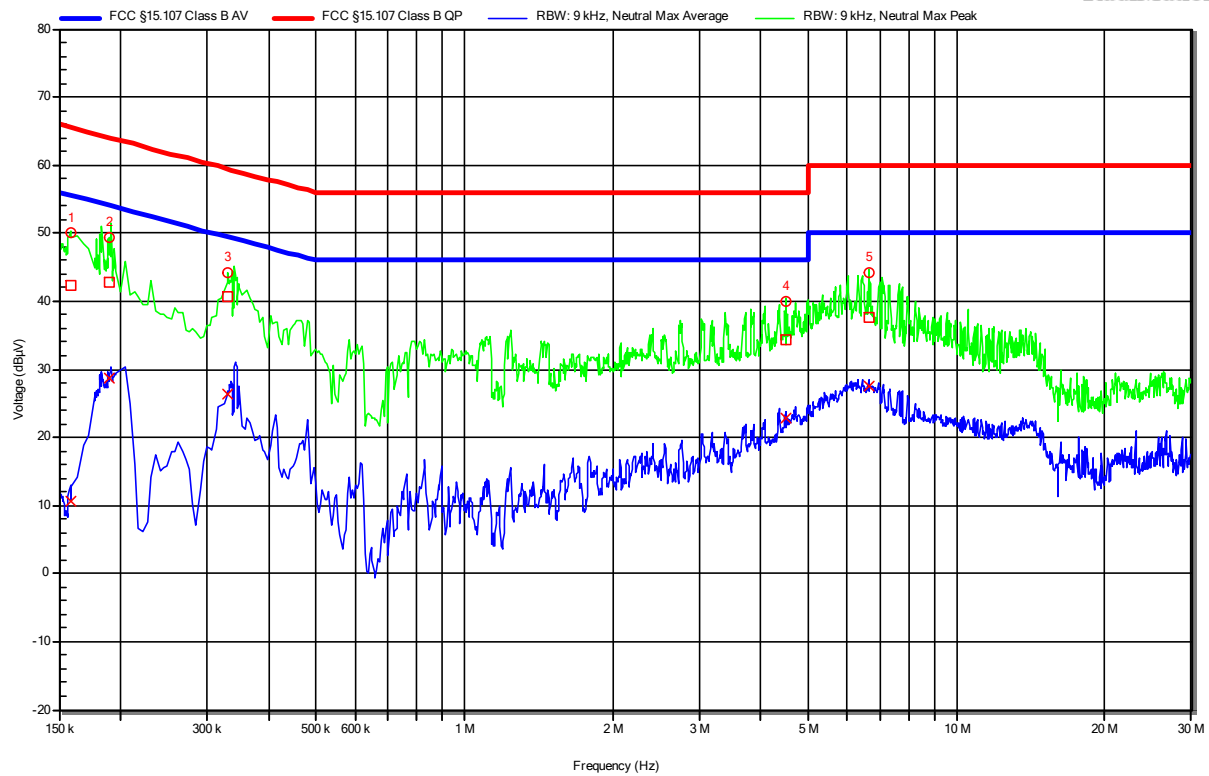
Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	LISN
1	152.25 kHz	11.61 dB $\mu$ V	55.88 dB $\mu$ V	-44.26 dB	Pass	Line 1
2	4.592 MHz	21.67 dB $\mu$ V	46 dB $\mu$ V	-24.33 dB	Pass	Line 1
3	4.837 MHz	23.03 dB $\mu$ V	46 dB $\mu$ V	-22.97 dB	Pass	Line 1
4	5.113 MHz	23.28 dB $\mu$ V	50 dB $\mu$ V	-26.72 dB	Pass	Line 1
5	6.104 MHz	26.33 dB $\mu$ V	50 dB $\mu$ V	-23.67 dB	Pass	Line 1
6	6.585 MHz	27.1 dB $\mu$ V	50 dB $\mu$ V	-22.9 dB	Pass	Line 1

## Conducted emissions at the mains power port according to FCC part 15B

Project Number: G0M-2111-1156  
 Applicant: BVK TEKNOLOJI ANONIM SIRKETI  
 Model Description: OTCaccess C5 Controller  
 Model: 2CN-105  
 Test Sample ID: 37896  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Dose  
 Test Date: 2022-01-25  
 Operating Conditions: ambient temperature: 20 °Celsius  
 power input: 120V AC/60Hz  
 LISN: Schwarzbeck NSLK 8127 RC N  
 Operational Mode: mode 1  
 EUT Configuration: configuration 1  
 Applied to Port: AC mains  
 Note 1:

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**RadiMation**



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	LISN
1	158.55 kHz	42.29 dBµV	65.54 dBµV	-23.25 dB	Pass	Neutral
2	190.05 kHz	42.9 dBµV	64.03 dBµV	-21.13 dB	Pass	Neutral
3	330.9 kHz	40.63 dBµV	59.43 dBµV	-18.79 dB	Pass	Neutral
4	4.493 MHz	34.35 dBµV	56 dBµV	-21.65 dB	Pass	Neutral
5	6.639 MHz	37.73 dBµV	60 dBµV	-22.27 dB	Pass	Neutral

Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	LISN
1	158.55 kHz	10.65 dBµV	55.54 dBµV	-44.89 dB	Pass	Neutral
2	190.05 kHz	28.62 dBµV	54.03 dBµV	-25.41 dB	Pass	Neutral
3	330.9 kHz	26.26 dBµV	49.43 dBµV	-23.17 dB	Pass	Neutral
4	4.493 MHz	22.77 dBµV	46 dBµV	-23.23 dB	Pass	Neutral
5	6.639 MHz	27.45 dBµV	50 dBµV	-22.55 dB	Pass	Neutral

Test Report No.: G0M-2111-1156-EF0115B-V01

Eurofins Product Service GmbH  
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

### 3 Measurement Uncertainty

All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95%, with a coverage factor of 2.

Test Name	Measurement Uncertainty
Conducted emissions at the mains power port	150kHz to 30MHz, 3.35dB
Radiated Emission	30MHz to 200MHz @ 3m, 5.1dB 200MHz to 1GHz @ 3m, 5.3dB >1GHz to 6GHz @ 3m, 5.95dB