

EMC TEST REPORT	
FCC 47 CFR Part 15B, ISED ICES-003 Issue 7	
Report Reference No	G0M-2103-9648-EF0115B-V01
Testing Laboratory	Eurofins Product Service GmbH
Address	Storkower Str. 38c 15526 Reichenwalde Germany
Accreditation	    A2LA - Registration number: 1983.01 (ISED) ISED wireless device testing laboratory: CN 3470A FCC Filed Test Laboratory, Reg.-No.: 96970 DAkkS - Registration number : D-PL-12092-01-02
Applicant	iesy GmbH
Address	Darmcher Grund 22 58540 Meinerzhagen GERMANY
Test Specification Standard(s)	47 CFR Part 15 Subpart B ISED ICES-003 Issue 7 ANSI C63.4:2014+A1:2017
Non-Standard Test Method	None
Equipment under Test (EUT):	
Product Description	19" Security Server 1U
Model(s)	SDoT Server V3B
Additional Model(s)	None
Brand Name(s)	none
Hardware Version(s)	V3B
Software Version(s)	SK55jb 1.0.
FCC-ID	2AZ4S-SRV-19U-V3B
IC	-/-
Test Result	PASSED

Possible test case verdicts:		
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)	
Testing:		
Date of receipt of test item	2021-04-15	
Report:		
Compiled by	Stephan Liebich	
Tested by (+ signature) (Responsible for Test)	Stephan Liebich	
Approved by (+ signature) (Test Lab Technician)	Matthias Handrik	
Date of Issue	2021-08-27	
Total number of pages	47	
General Remarks:		
The test results presented in this report relate only to the object tested. 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. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.		
Additional Comments:		
None		

ABBREVIATIONS AND ACRONYMS

Acronyms	
Acronym	Description
EUT	Equipment Under Test
FCC	Federal Communications Commission
ISED	Innovation, Science and Economic Development Canada
T _{NOM}	Nominal operating temperature
V _{NOM}	Nominal supply voltage

VERSION HISTORY

Version History			
Version	Issue Date	Remarks	Revised By
01	2021-08-27	Initial Release	-

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1 Equipment (Test Item) Under Test

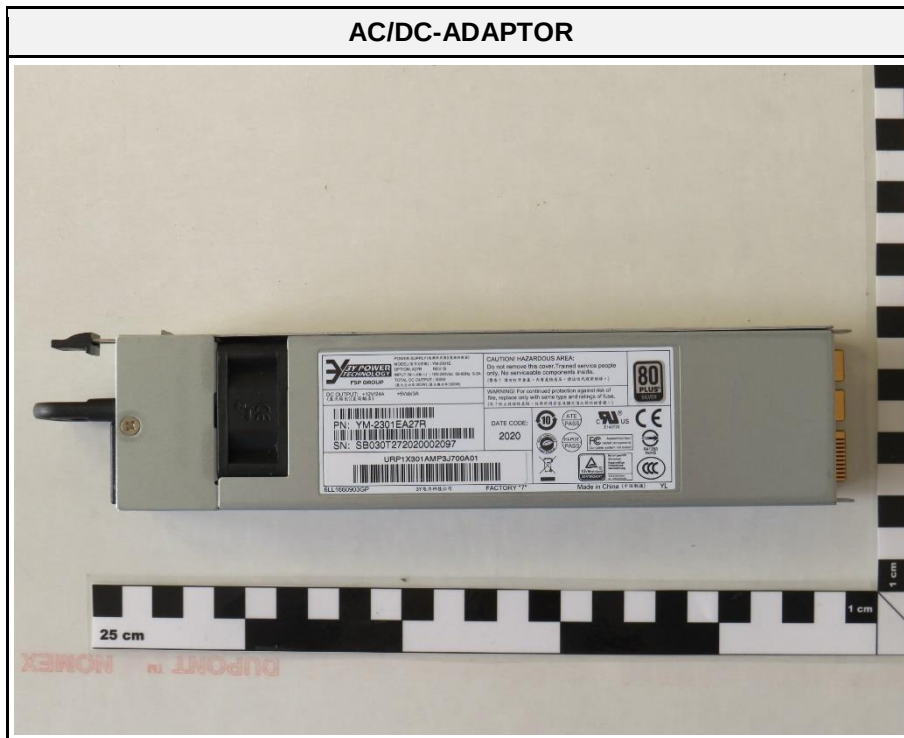
Description	19" Security Server 1U	
Model	SDoT Server V3B	
Additional Model(s)	None	
Brand Name(s)	none	
Serial Number(s)	74JC00029	
Sample-ID	34109	
Hardware Version(s)	V3B	
Software Version(s)	SK55jb 1.0.	
EUT Dimensions [cm]	44 x 4.5 x 53	
FCC-ID	2AZ4S-SRV-19U-V3B	
IC	-/-	
Class	Class B	
Equipment type	Table top	
Highest internal frequency [MHz]	8000	
Radio Module	None	
Supply Voltage	V _{NOM}	2x 120 V / 60 Hz by redundant power supply unit
AC/DC-Adaptor	None	
Manufacturer	iesy GmbH Darmcher Grund 22 58540 Meinerzhagen GERMANY	

1.1 Equipment Ports

Name	Type	Attributes	Comment
AC Mains	AC	Count: 2 Direction: In Max. cable length [m]: 2 Shielded: No Service only: No	--
USB 3.0	IO	Count: 2 Direction: IO Max. cable length [m]: unspecified Shielded: Yes Service only: Yes	Type A USB port
RS232	IO	Count: 1 Direction: IO Max. cable length [m]: unspecified Shielded: Yes Service only: Yes	D-SUB 9 pol; not tested
RJ45	IO	Count: 2 Direction: IO Max. cable length [m]: 5 Shielded: Yes Service only: No	10/100/1000 MBit
LWL 1GBE	IO	Count: 2 Direction: IO Max. cable length [m]: 0.5 Shielded: No Service only: No	1 GBE
LWL 10 GBE	IO	Count: 2 Direction: IO Max. cable length [m]: 0.5 Shielded: No Service only: No	10 GBE
Display Port	IO	Count: 1 Direction: IO Max. cable length [m]: 10 Shielded: Yes Service only: Yes	--
USB 2.0	IO	Count: 1 Direction: IO Max. cable length [m]: unspecified Shielded: No Service only: Yes	Type A; not tested
Ground	GND	Count: 1 Direction: IO Max. cable length [m]: unspecified Shielded: No Service only: No	--

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
GND	Ground

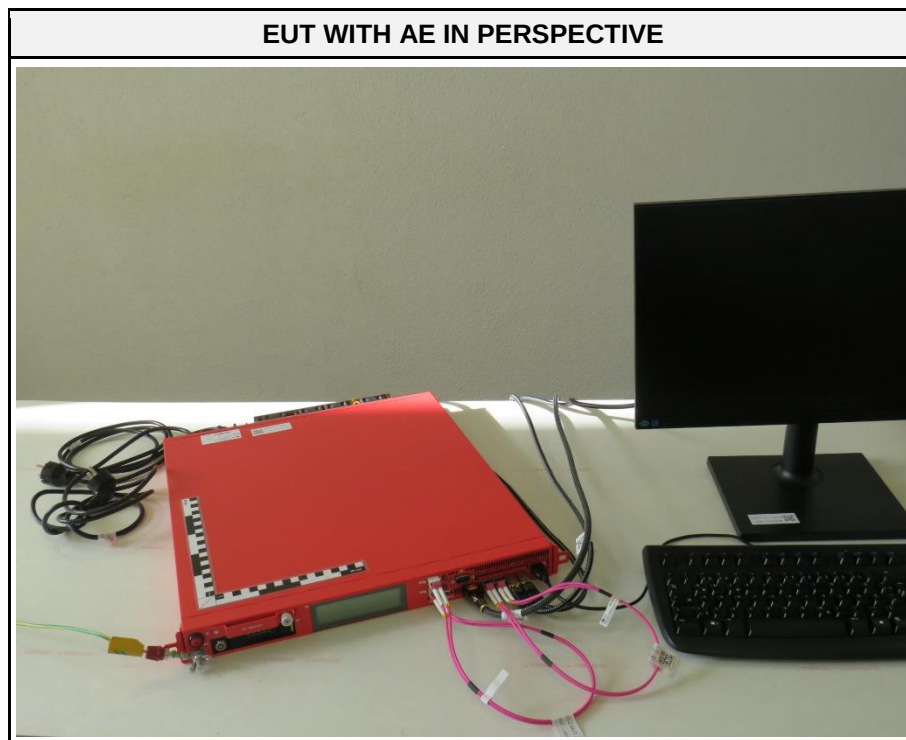
AC/DC-ADAPTOR



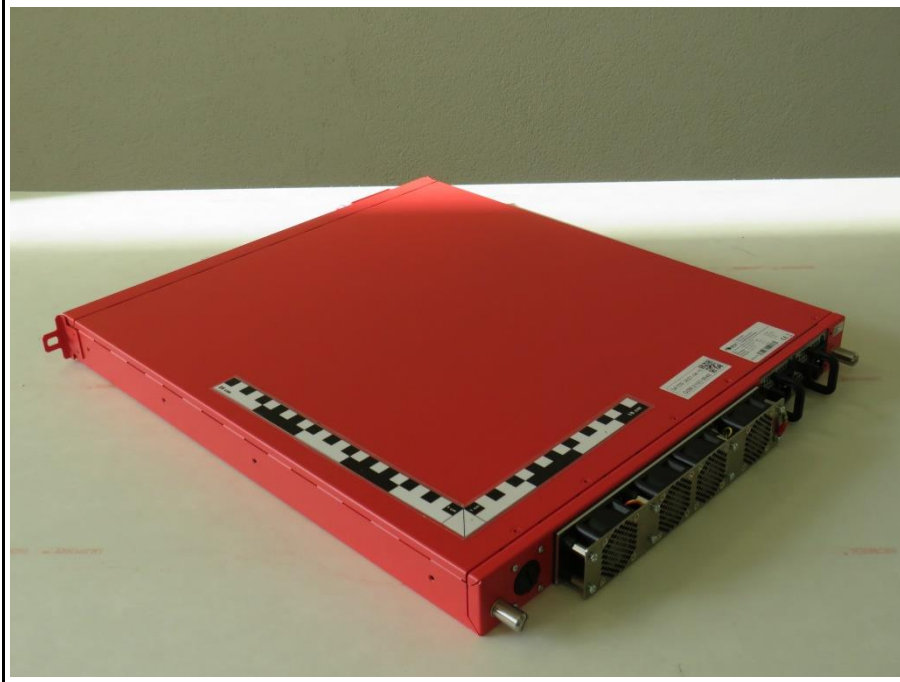
AC/DC-ADAPTOR LABEL



1.3 Equipment Photos - External



EUT IN PERSPECTIVE II



EUT TOP SIDE



EUT FRONT SIDE



EUT FRONT SIDE FOCUS I



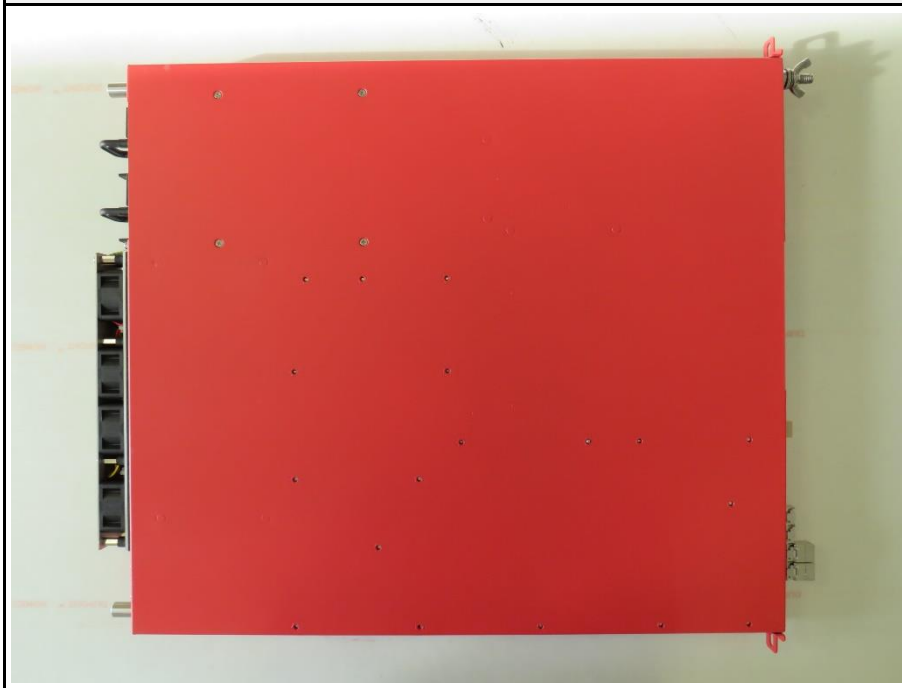
EUT FRONT SIDE FOCUS II



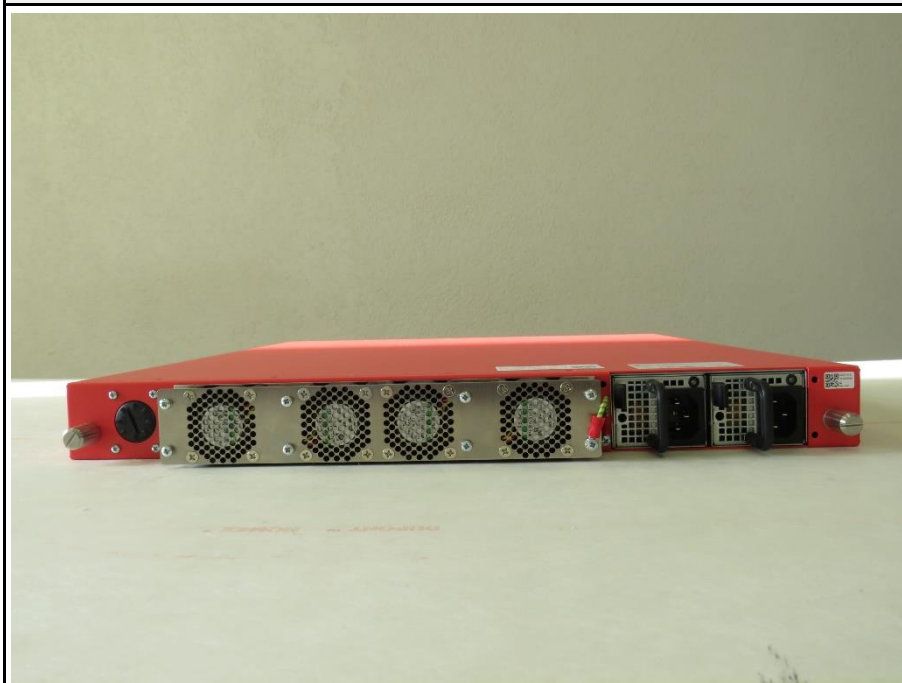
EUT LABEL



EUT BOTTOM SIDE



EUT REAR SIDE



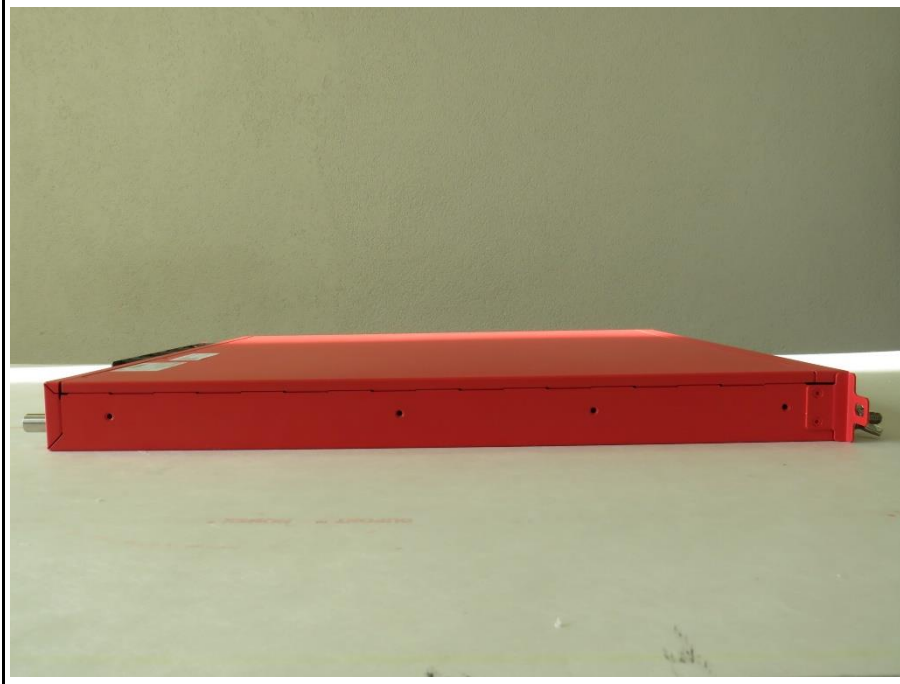
EUT REAR SIDE FOCUS I



EUT REAR SIDE FOCUS II



EUT LEFT SIDE



EUT RIGHT SIDE



1.4 Support Equipment

Product Type	Device	Manufacturer	Model	Comment
AE	Monitor	SAMSUNG	F22T450FQU	Customer Support Equipment
AE	Keyboard	Logitech	Y-UT76	Customer Support Equipment
CBL	LWL cable	Unspecified	Unspecified	0.5 m; Customer Support Equipment
CBL	LWL cable	Unspecified	Unspecified	0.5 m; Customer Support Equipment
CBL	RJ45 cable	Unspecified	Unspecified	5 m; Customer Support Equipment; cable is shielded and connected to ground
CBL	DisplayPort cable	unspecified	Unspecified	10 m; Customer Support Equipment
Description:				
AE	Auxiliary Equipment			
SIM	Simulator			
MON	Monitoring Equipment			
CBL	Connecting Cable			
Comment: --				

1.5 Operational Modes

Mode #	Description
1	EUT works with a special EMC Test Operation mode.
Comment: --	

1.6 EUT Configuration

Configuration #	Description
1	Both power supplies (AC Mains) of EUT are connected with external laboratory power supply unit. EMC Test Operation mode Linux command "test@v3b: ~\$./v_terminal.sh". Port N5 (LWL 10 GBE) is connected with port N6 (LWL 10 GBE) via LWL cable. Port N1 (LWL 1 GBE) is connected with port N2 (LWL 1 GBE) via LWL cable. Port N3 (RJ45) is connected with port N4 (RJ45) via RJ45 cable. Port V1 (Display Port) is connected with Monitor via DisplayPort cable. Keyboard is connected with Port U1 (USB 3.0). EUT is connected with Earth via port Ground. All other ports are not connected or terminated.
Comment: --	

1.7 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

FCC 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:				

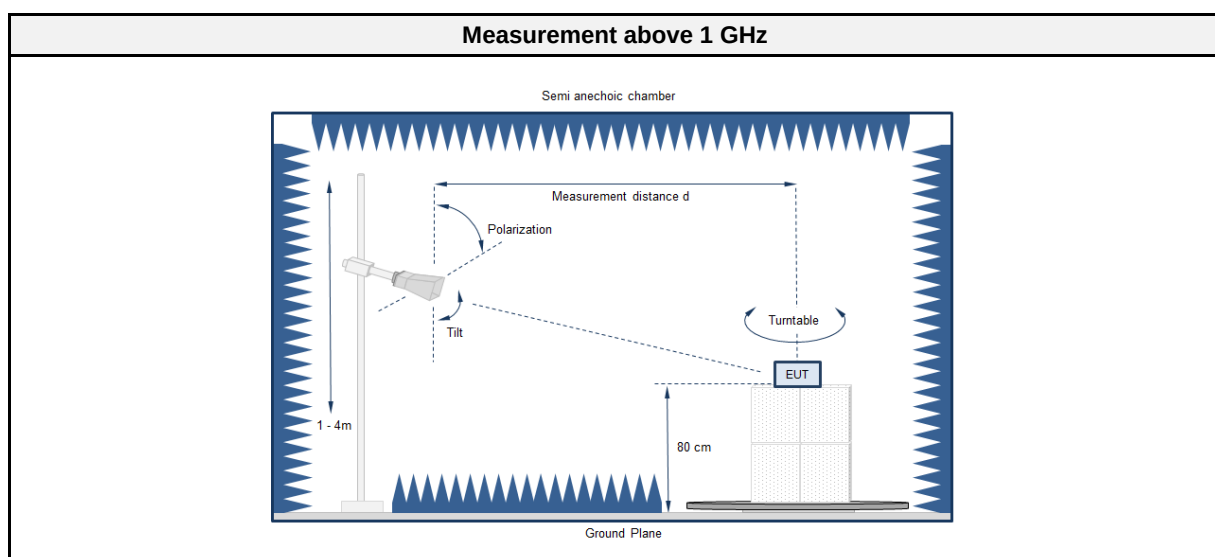
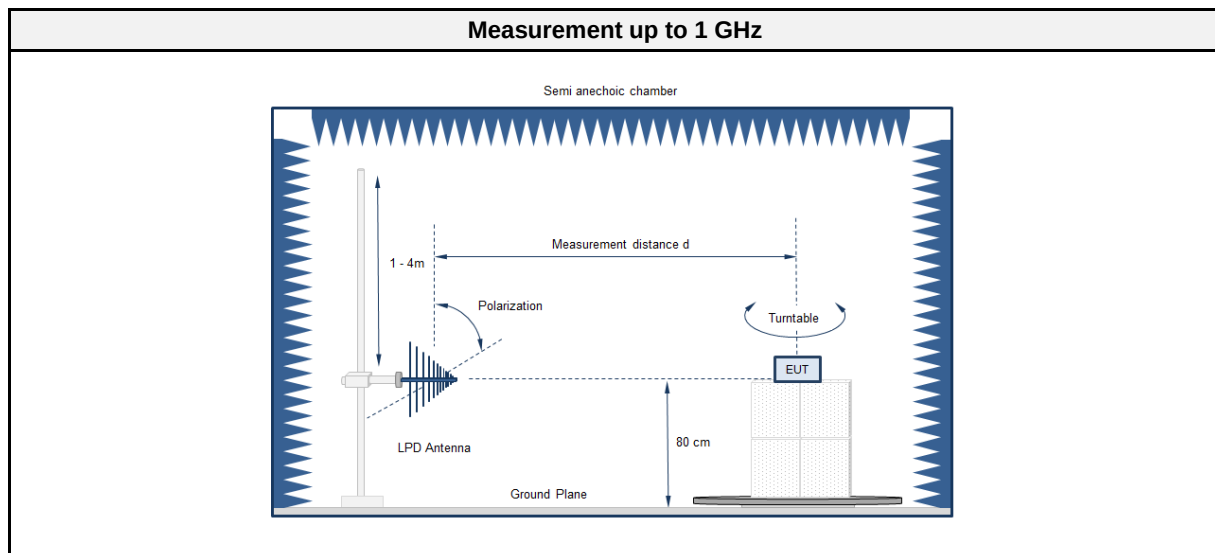
Possible Test Case Verdicts	
PASS	Test object does meet the requirements
FAIL	Test object does not meet the requirements
N/T	Required by standard but not tested
N/R	Not required by standard for the test object

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

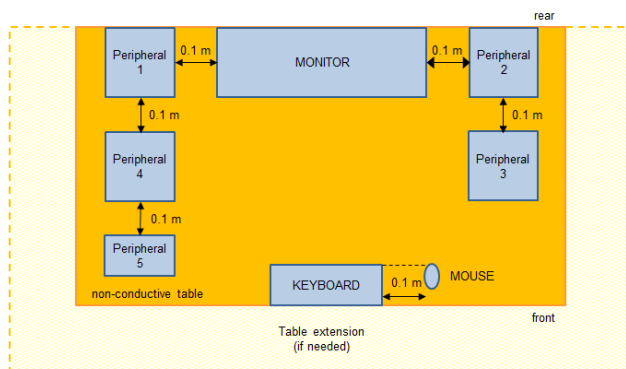
2.1.1 Information

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]	8000
Measurement range	30 MHz to 40000 MHz
Temperature [°C]	22 – 26
Humidity [%]	31 – 36
Operator	Stephan Liebich
Date	2021-04-20

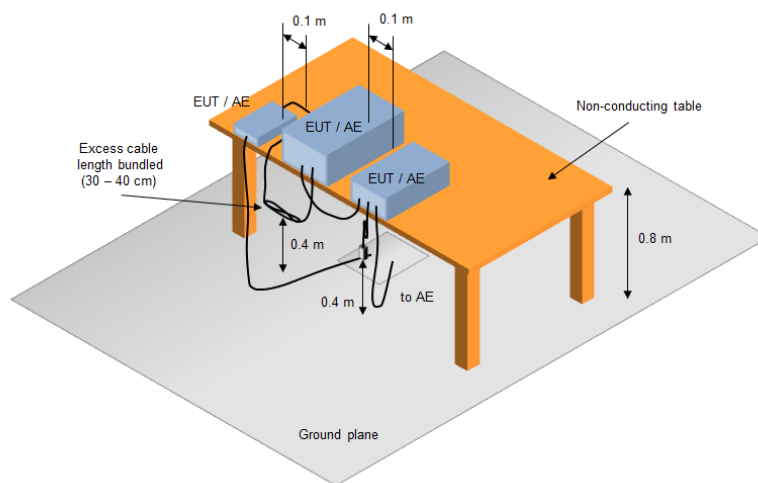
2.1.2 Setup



Equipment placement - Table top



Test 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	Frankonia	AC1	EF00062	2021-02	2024-02
EMI Test Receiver	Keysight	N9038A-526/WXP	EF01070	2020-06	2021-06
Biconical antenna	Rohde & Schwarz Vertriebs GmbH	HK116E	EF01564	2020-03	2023-03
LPD Antenna	R&S	HL 223	EF00187	2019-05	2022-05
Horn Antenna	Schwarzbeck	BBHA9120D	EF00018	2019-10	2022-10
40GHz High Gain Antenna	Amplifier Research	AT4560	EF00302	2019-05	2021-05
Spectrum analyzer	Rohde & Schwarz GmbH & Co. KG	FSU43	EF01631	2020-07	2021-07
40GHz Standard Standard Gain Horn Antenna with Amplifier	Flann Microwave Ltd	22240-25 Amp. CBL26402075	EF00301	2019-12	2022-12
Climatic Sensor	Embedded Data Systems, LLC.	2800100000254 17E	EF01054	2021-03	2022-03

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

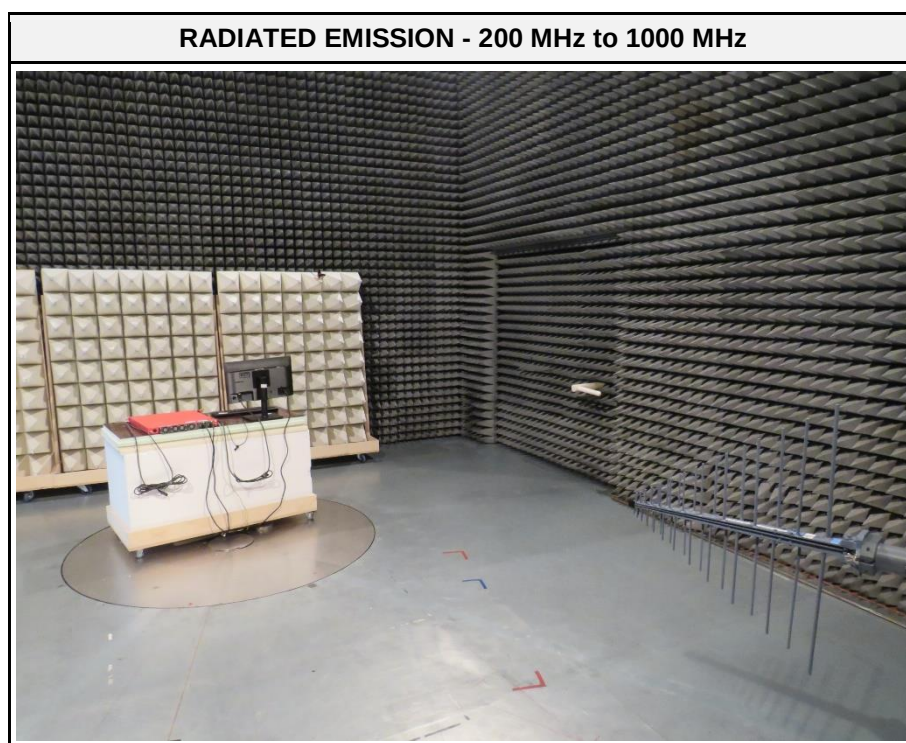
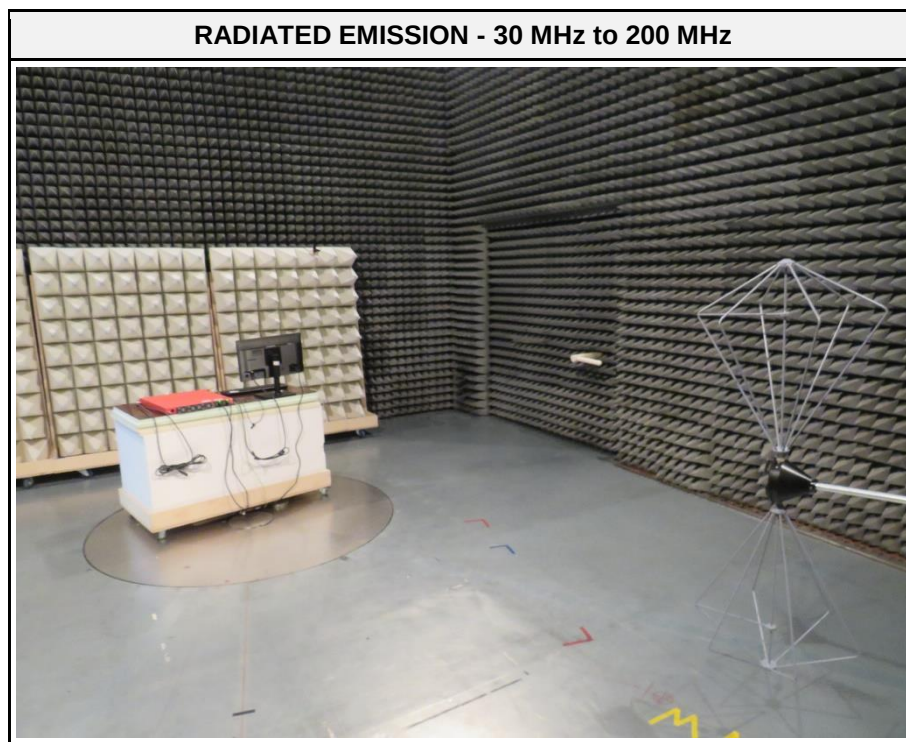
Class B @ 3 m		
Frequency [MHz]	Detector	Limit [dB μ V/m]
30 - 88	Quasi-peak	40
88 - 216	Quasi-peak	43.5
216 - 960	Quasi-peak	46
960 - 1000	Quasi-peak	54
> 1000	Peak	74
	Average	54

Class A @ 10 m		
Frequency [MHz]	Detector	Limit [dB μ V/m]
30 - 88	Quasi-peak	39
88 - 216	Quasi-peak	43.5
216 - 960	Quasi-peak	46.5
960 - 1000	Quasi-peak	49.5
> 1000	Peak	69.5
	Average	49.5

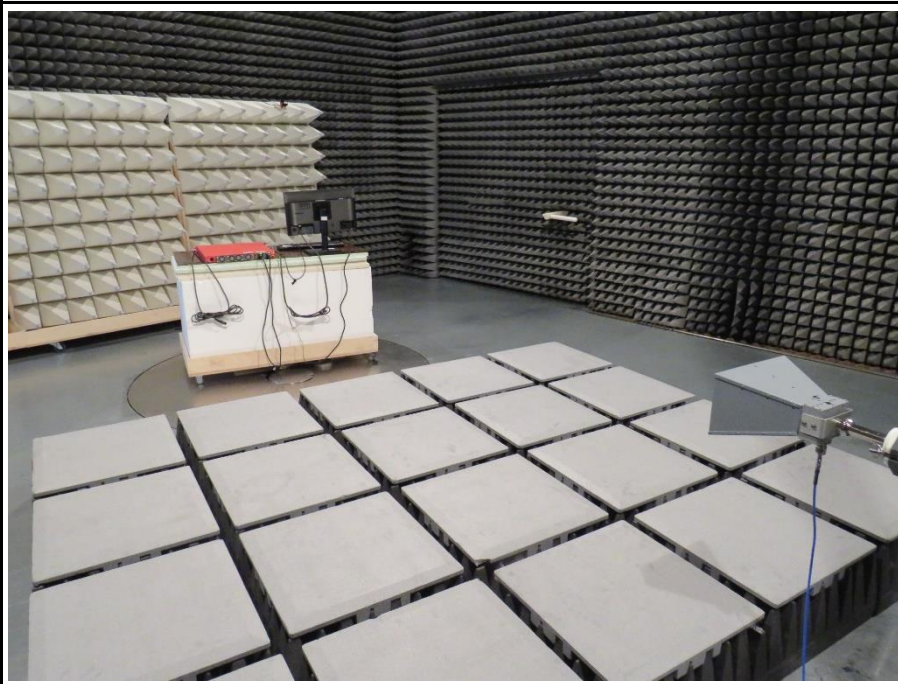
2.1.6 Results

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

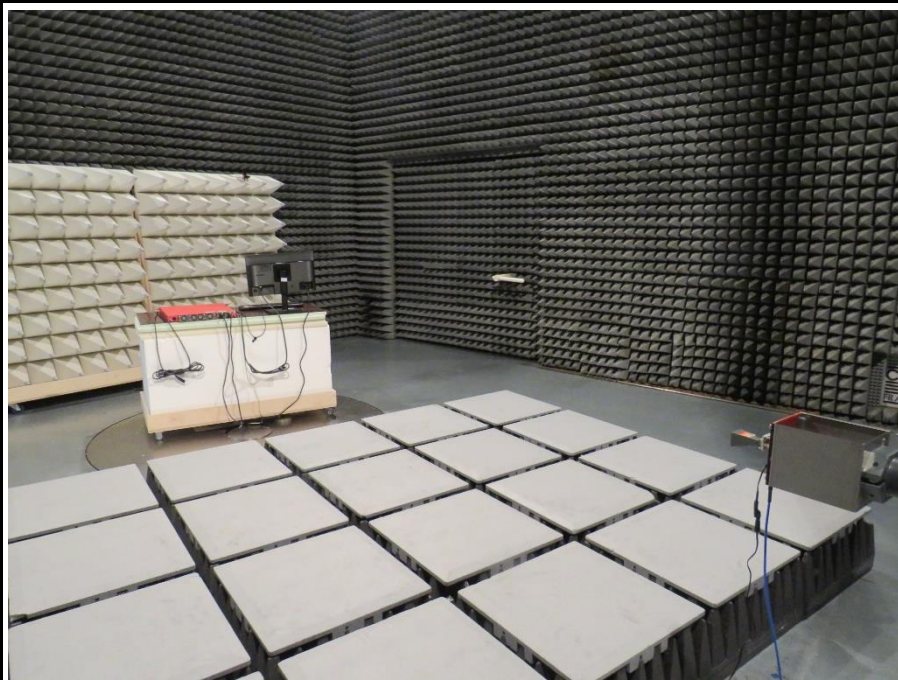
2.1.7 Setup Photos



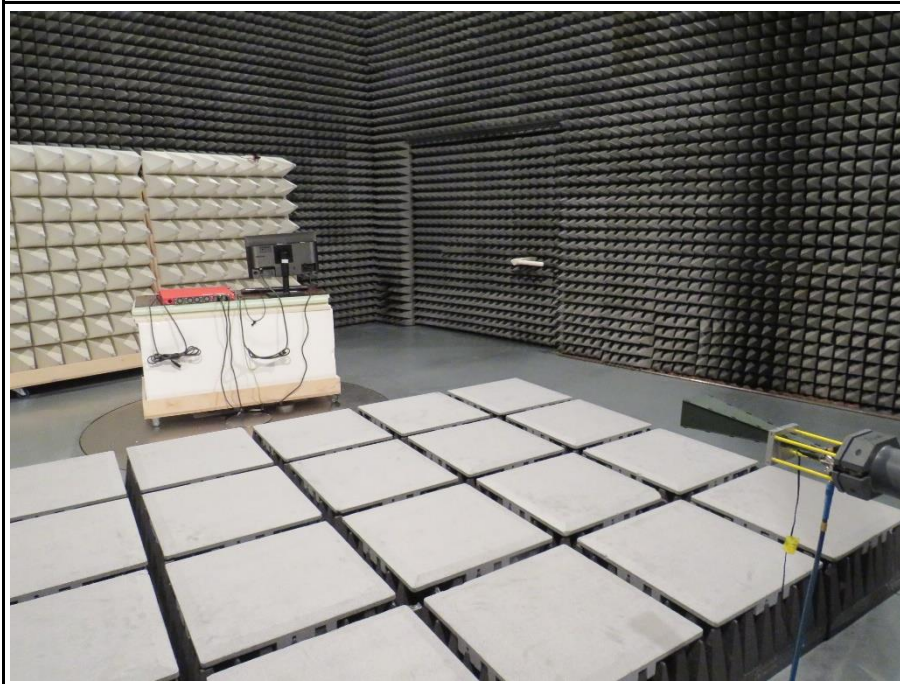
RADIATED EMISSION - 1 GHz to 17 GHz



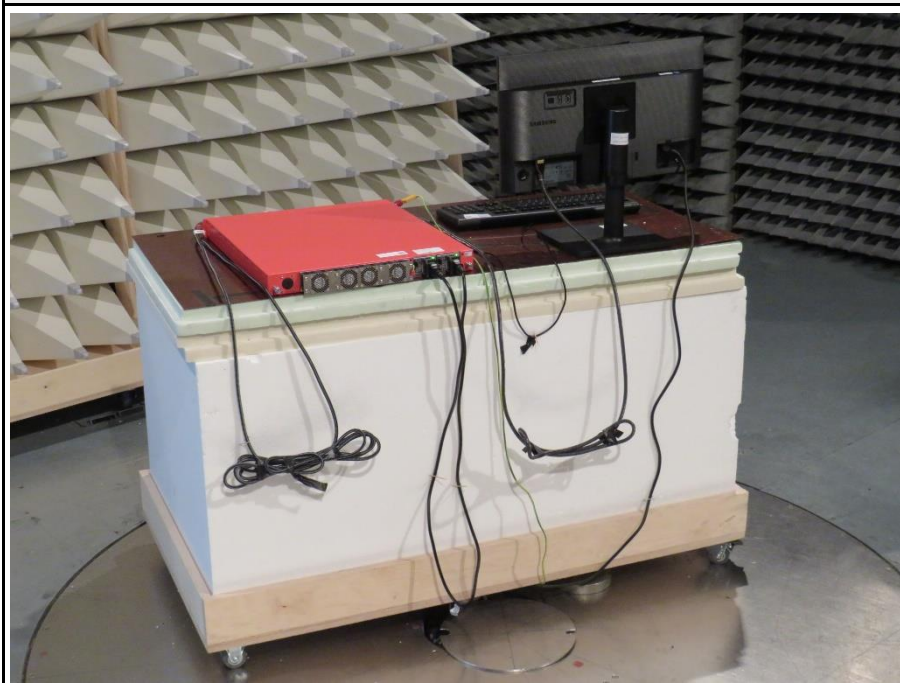
RADIATED EMISSION - 17 GHz to 26.5 GHz



RADIATED EMISSION - 26.5 GHz to 40 MHz



RADIATED EMISSION - FOCUS



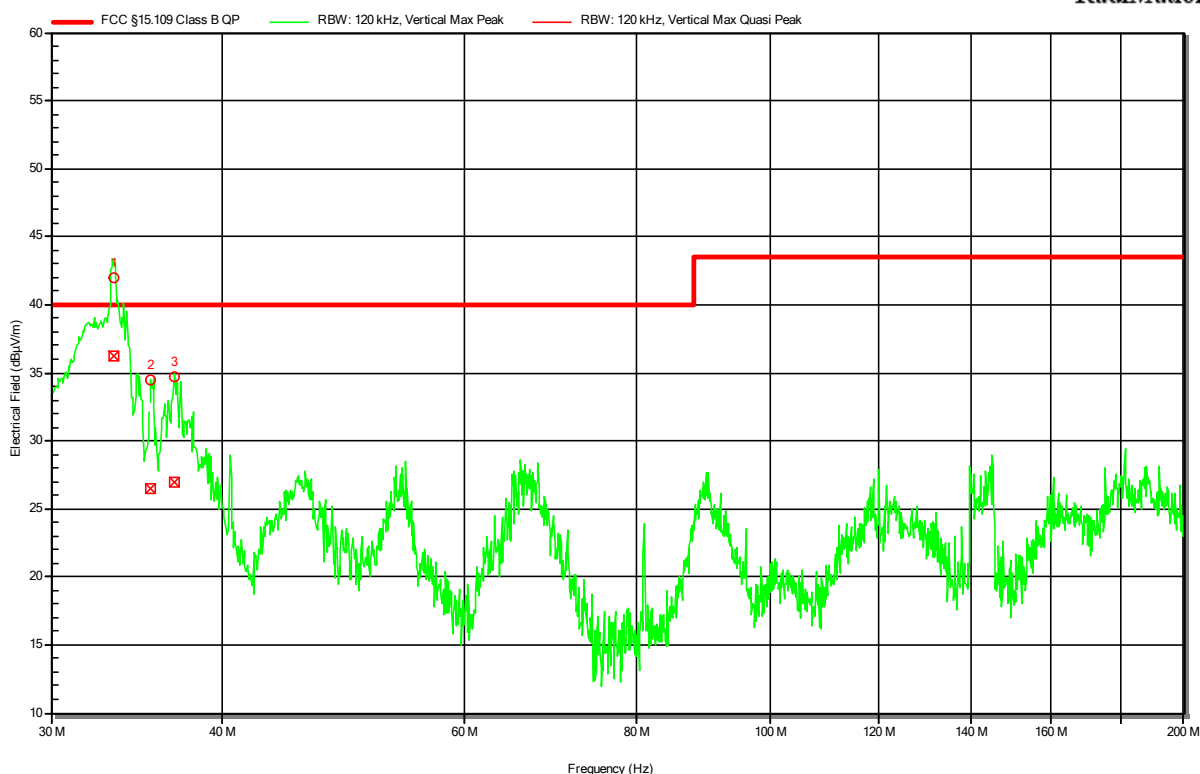
2.1.8 Records

Radiated emissions according to FCC part 15B

Project Number: G0M-2103-9648
 Applicant: iesy GmbH
 Model Description: 19" Security Server 1U
 Model: SDoT Server V3B
 Test Sample ID: 34109
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Liebich
 Test Date: 2021-04-20
 Operating Conditions: ambient temperature: 24 °Celsius
 power input: 2x 120 V / 60 Hz
 Antenna: Rohde & Schwarz HK 116, Vertical
 Measurement Distance: 3m
 Operational Mode & EUT Configuration: Mode 1
 Configuration 1
 Note 1: --

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RadiMation



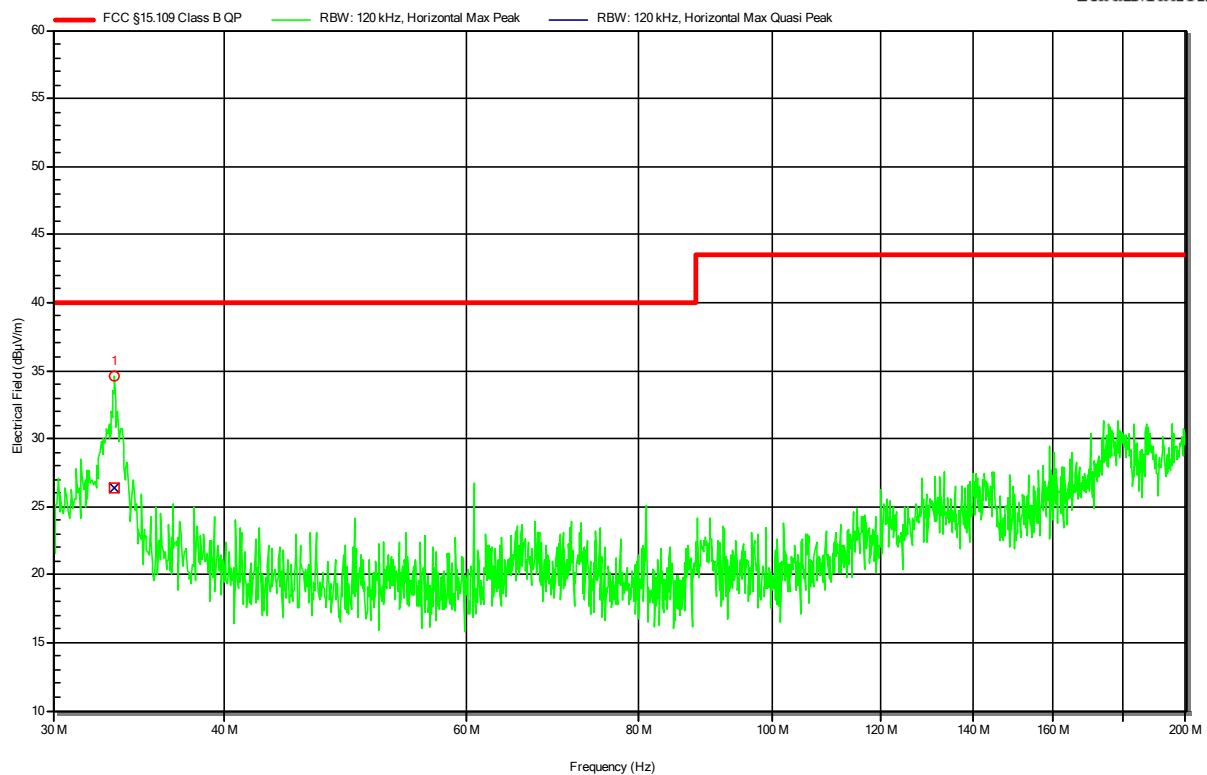
Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height
1	33.303 MHz	36.25 dBµV/m	40 dBµV/m	-3.75 dB	Pass	0 degrees	1 m
2	35.44 MHz	26.54 dBµV/m	40 dBµV/m	-13.46 dB	Pass	0 degrees	1 m
3	36.846 MHz	27 dBµV/m	40 dBµV/m	-13 dB	Pass	0 degrees	1 m

Radiated emissions according to FCC part 15B

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Model: SDoT Server V3B
Test Sample ID: 34109
Test Site: Eurofins Product Service GmbH
Operator: Mr. Liebich
Test Date: 2021-04-20
Operating Conditions: ambient temperature: 24 °Celsius
power input: 2x 120 V / 60 Hz
Antenna: Rohde & Schwarz HK 116, Horizontal
Measurement Distance: 3m
Operational Mode & EUT Configuration: Mode 1
Configuration 1
Note 1: --

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RadiMation



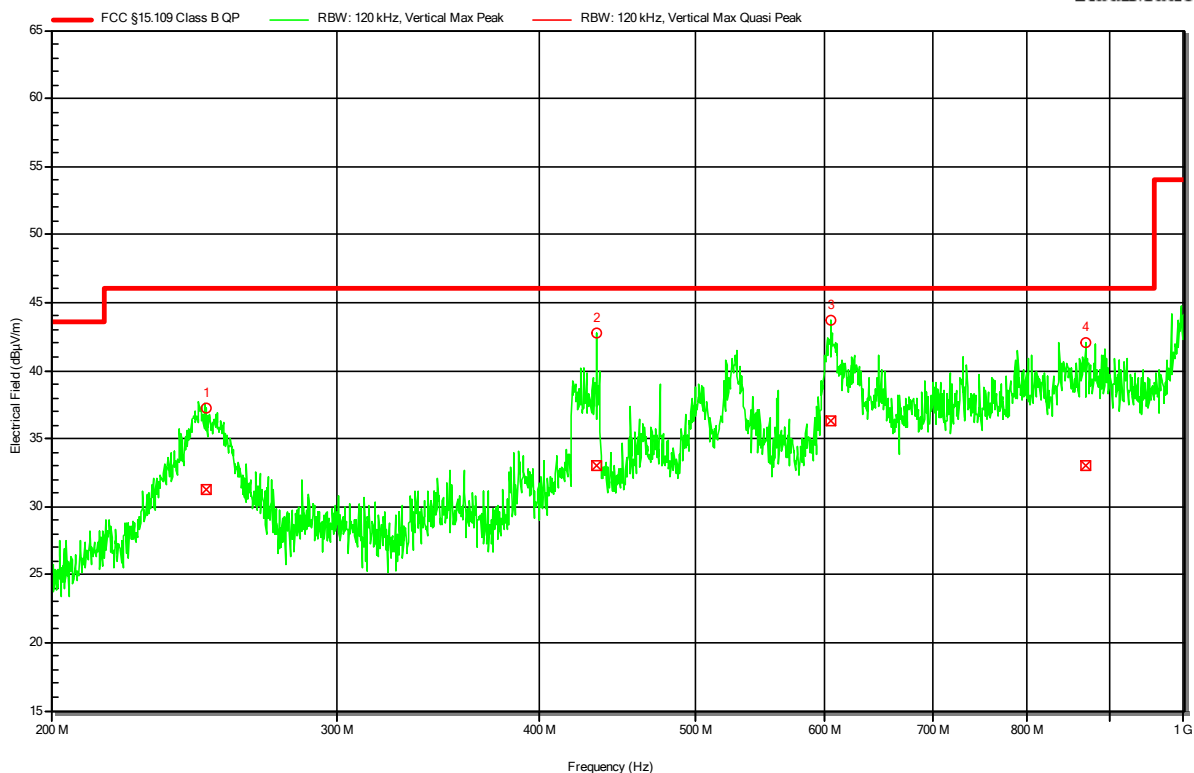
Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height
1	33.273 MHz	26.39 dBµV/m	40 dBµV/m	-13.61 dB	Pass	180 degrees	1 m

Radiated emissions according to FCC part 15B

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Model Description: 19" Security Server 1U
Model: SDoT Server V3B
Test Sample ID: 34109
Test Site: Eurofins Product Service GmbH
Operator: Mr. Liebich
Test Date: 2021-04-20
Operating Conditions: ambient temperature: 24 °Celsius
power input: 2x 120 V / 60 Hz
Antenna: Rohde & Schwarz HL 223, Vertical
Measurement Distance: 3m
Operational Mode & EUT Configuration: Mode 1
Configuration 1
Note 1: --

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RadiMation



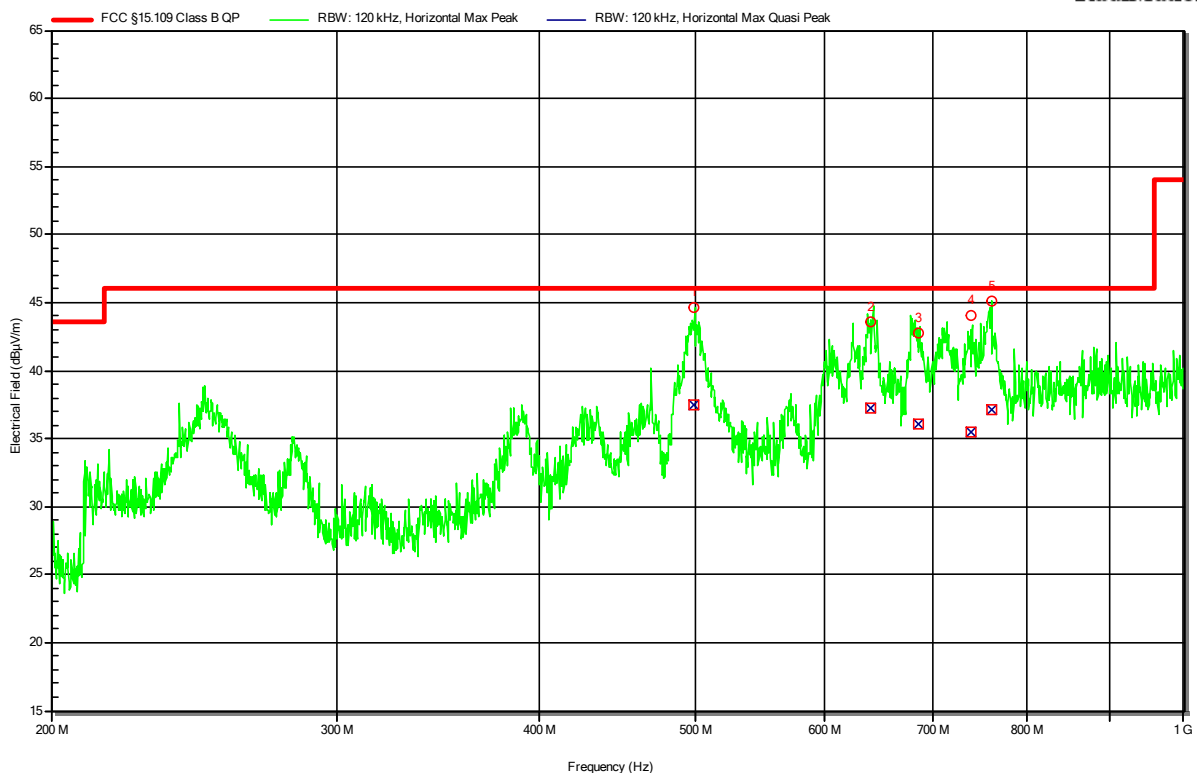
Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height
1	249.541 MHz	31.24 dBμV/m	46.02 dBμV/m	-14.78 dB	Pass	0 degrees	1 m
2	434.038 MHz	32.99 dBμV/m	46.02 dBμV/m	-13.03 dB	Pass	0 degrees	1 m
3	605.884 MHz	36.36 dBμV/m	46.02 dBμV/m	-9.66 dB	Pass	0 degrees	1 m
4	870.621 MHz	33.02 dBμV/m	46.02 dBμV/m	-13 dB	Pass	0 degrees	1 m

Radiated emissions according to FCC part 15B

Project Number: G0M-2103-9648
Applicant: iesy GmbH
Model Description: 19" Security Server 1U
Model: SDoT Server V3B
Test Sample ID: 34109
Test Site: Eurofins Product Service GmbH
Operator: Mr. Liebich
Test Date: 2021-04-20
Operating Conditions: ambient temperature: 24 °Celsius
power input: 2x 120 V / 60 Hz
Antenna: Rohde & Schwarz HL 223, Horizontal
Measurement Distance: 3m
Operational Mode & EUT Configuration: Mode 1
Configuration 1
Note 1: --

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RadiMation



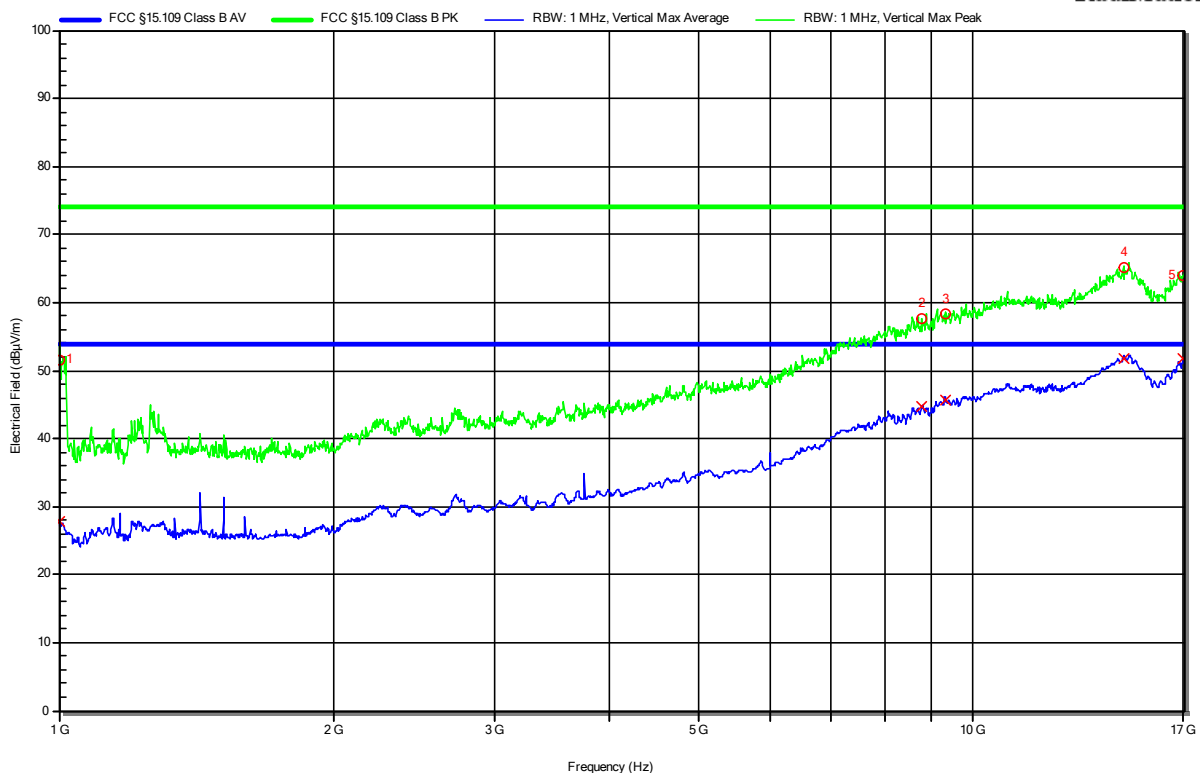
Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height
1	498.979 MHz	37.46 dBμV/m	46.02 dBμV/m	-8.56 dB	Pass	180 degrees	1.1 m
2	641.009 MHz	37.22 dBμV/m	46.02 dBμV/m	-8.8 dB	Pass	180 degrees	1.1 m
3	685.854 MHz	36.13 dBμV/m	46.02 dBμV/m	-9.89 dB	Pass	180 degrees	1.1 m
4	739.418 MHz	35.43 dBμV/m	46.02 dBμV/m	-10.59 dB	Pass	180 degrees	1.1 m
5	761.561 MHz	37.16 dBμV/m	46.02 dBμV/m	-8.86 dB	Pass	180 degrees	1.1 m

Radiated emissions according to FCC part 15B

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 Test Sample ID: 34109
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Liebich
 Test Date: 2021-04-20
 Operating Conditions: ambient temperature: 24 °Celsius
 power input: 2x 120 V / 60 Hz
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement Distance: 3m
 Operational Mode & EUT Configuration: Mode 1
 Configuration 1
 Note 1: --

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RadiMation



Peak Number	Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Angle	Height
1	1.002 GHz	51.62 dBµV/m	73.98 dBµV/m	-22.36 dB	Pass	0 degrees	1 m
2	8.781 GHz	57.57 dBµV/m	73.98 dBµV/m	-16.41 dB	Pass	0 degrees	1 m
3	9.317 GHz	58.35 dBµV/m	73.98 dBµV/m	-15.63 dB	Pass	0 degrees	1 m
4	14.627 GHz	65.05 dBµV/m	73.98 dBµV/m	-8.93 dB	Pass	0 degrees	1 m
5	16.999 GHz	64.06 dBµV/m	73.98 dBµV/m	-9.92 dB	Pass	0 degrees	1 m

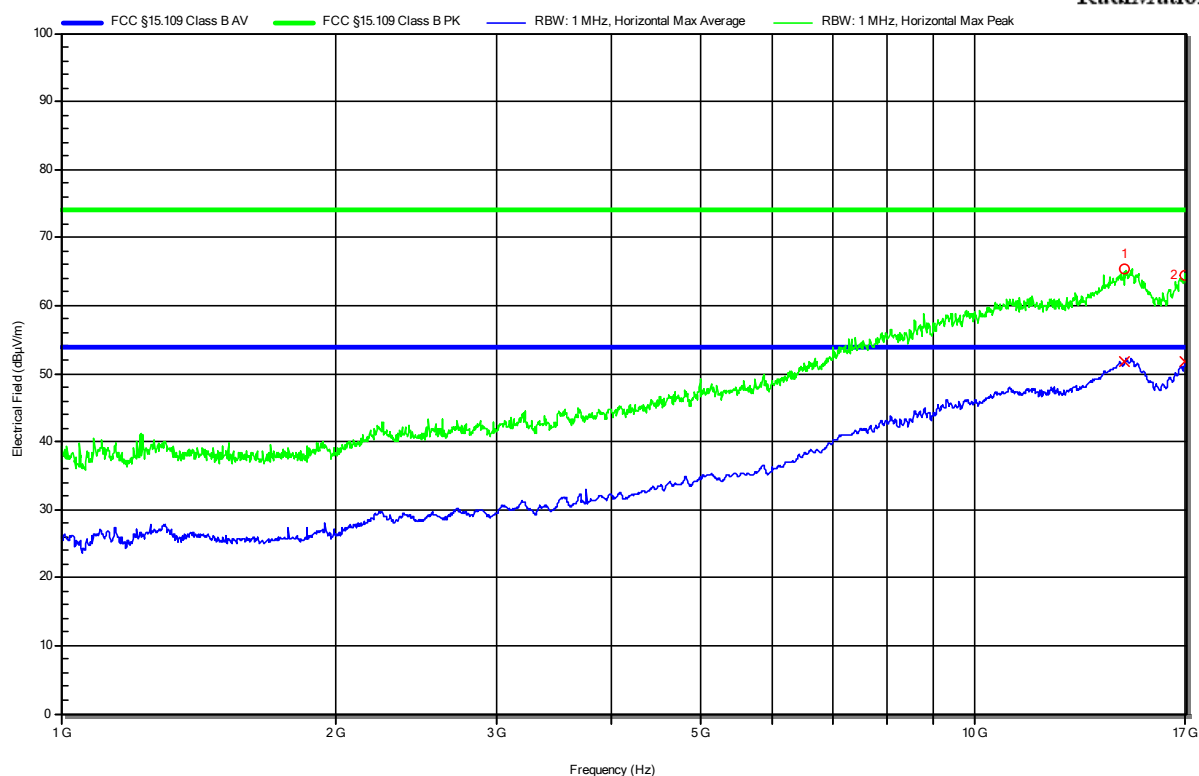
Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	Angle	Height
1	1.002 GHz	27.71 dBµV/m	53.98 dBµV/m	-26.27 dB	Pass	0 degrees	1 m
2	8.781 GHz	44.67 dBµV/m	53.98 dBµV/m	-9.31 dB	Pass	0 degrees	1 m
3	9.317 GHz	45.69 dBµV/m	53.98 dBµV/m	-8.29 dB	Pass	0 degrees	1 m
4	14.627 GHz	51.87 dBµV/m	53.98 dBµV/m	-2.11 dB	Pass	0 degrees	1 m
5	16.999 GHz	51.82 dBµV/m	53.98 dBµV/m	-2.16 dB	Pass	0 degrees	1 m

Radiated emissions according to FCC part 15B

Project Number: G0M-2103-9648
 Applicant: iesy GmbH
 Model Description: 19" Security Server 1U
 Model: SDoT Server V3B
 Test Sample ID: 34109
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 Operating Conditions: ambient temperature: 24 °Celsius
 power input: 2x 120 V / 60 Hz
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement Distance: 3m
 Operational Mode & EUT Configuration: Mode 1
 Configuration 1
 Note 1: --

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RadiMation



Peak Number	Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Angle	Height
1	14.581 GHz	65.49 dBμV/m	73.98 dBμV/m	-8.49 dB	Pass	0 degrees	1 m
2	16.998 GHz	64.36 dBμV/m	73.98 dBμV/m	-9.62 dB	Pass	0 degrees	1 m

Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	Angle	Height
1	14.581 GHz	51.79 dBμV/m	53.98 dBμV/m	-2.19 dB	Pass	0 degrees	1 m
2	16.998 GHz	51.78 dBμV/m	53.98 dBμV/m	-2.2 dB	Pass	0 degrees	1 m

Test Report No.: G0M-2103-9648-EF0115B-V01

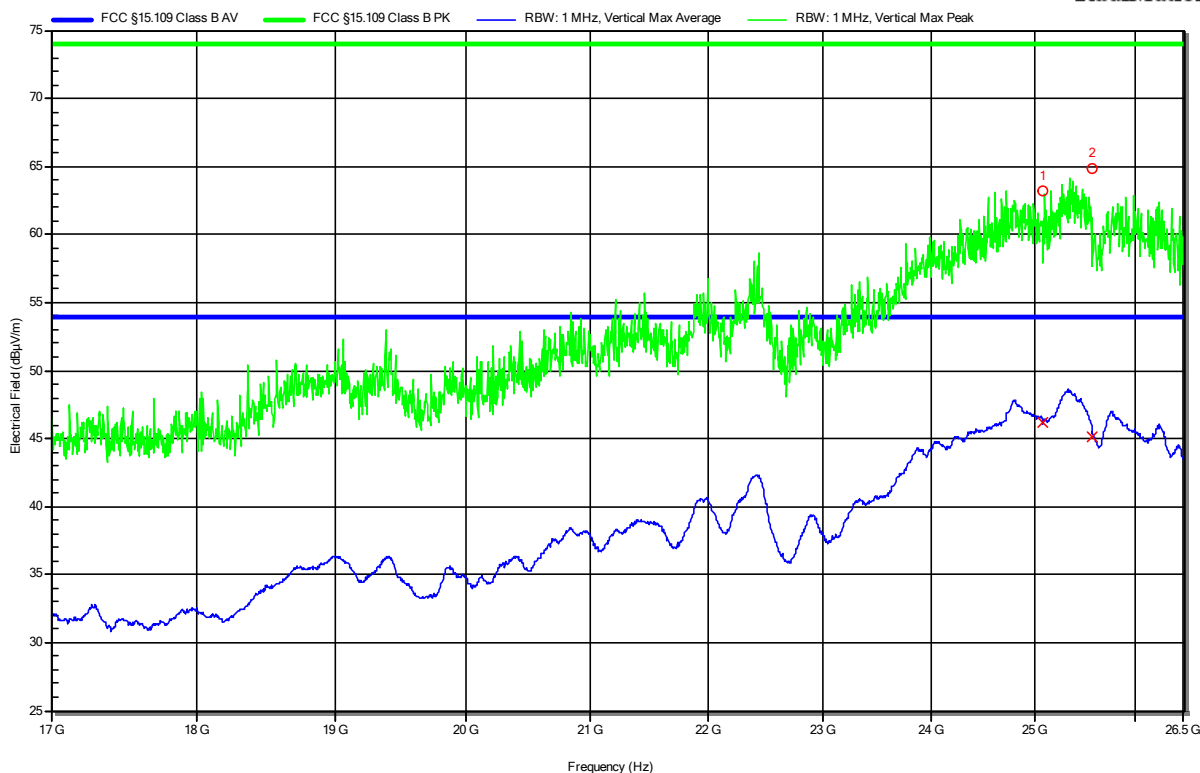
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

**Radiated emissions
according to FCC part 15B**

Project Number: G0M-2103-9648
 Applicant: iesy GmbH
 Model Description: 19" Security Server 1U
 Model: SDoT Server V3B
 Test Sample ID: 34109
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Liebich
 Test Date: 2021-04-20
 Operating Conditions: ambient temperature: 24 °Celsius
 power input: 2x 120 V / 60 Hz
 Antenna: AT4560, Vertical
 Measurement Distance: 3m
 Operational Mode & EUT Configuration: Mode 1
 Configuration 1
 Note 1: --

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Peak Number	Frequency	Peak	Angle	Height
1	25.079 GHz	63.26 dBμV/m	0 degrees	1 m
2	25.57 GHz	64.89 dBμV/m	0 degrees	1 m

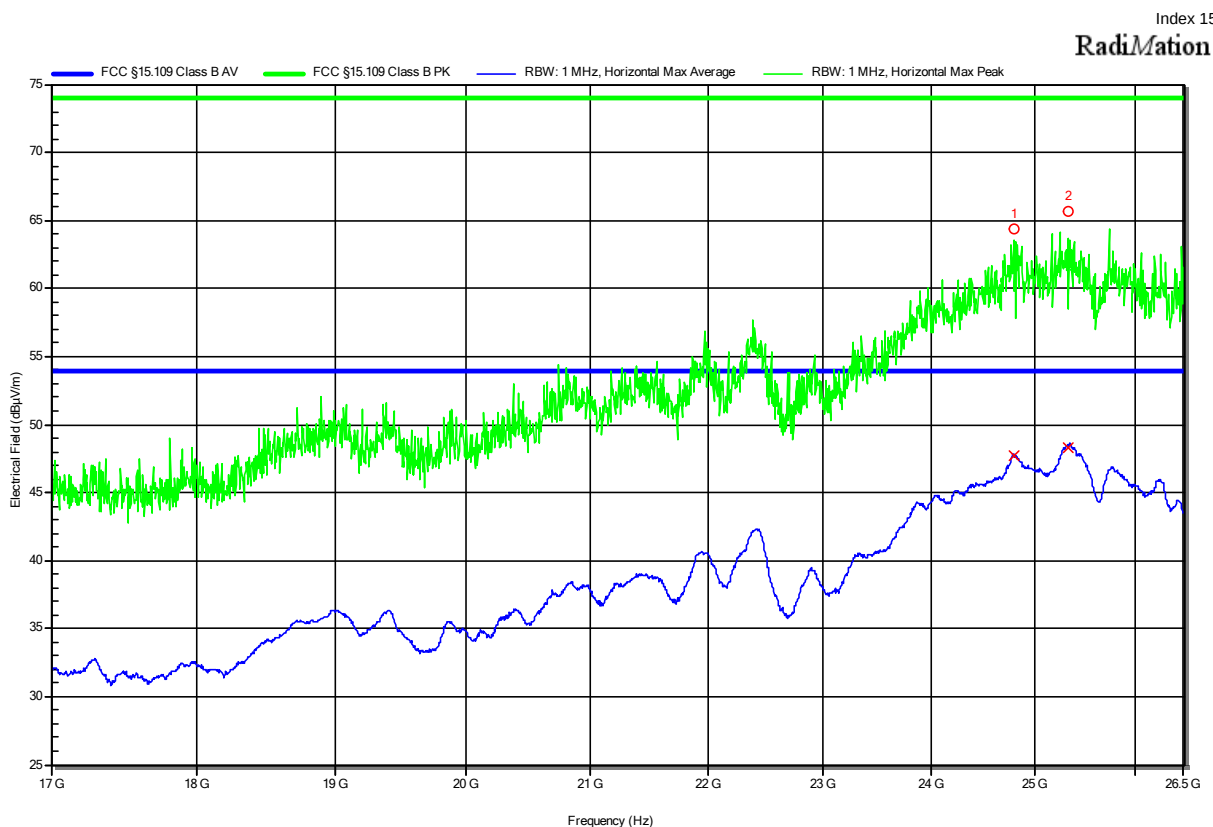
Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	Angle	Height
1	25.079 GHz	46.14 dBμV/m	53.98 dBμV/m	-7.84 dB	Pass	0 degrees	1 m
2	25.57 GHz	45.17 dBμV/m	53.98 dBμV/m	-8.81 dB	Pass	0 degrees	1 m

Test Report No.: G0M-2103-9648-EF0115B-V01

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

Radiated emissions according to FCC part 15B

Project Number: G0M-2103-9648
Applicant: iesy GmbH
Model Description: 19" Security Server 1U
Model: SDoT Server V3B
Test Sample ID: 34109
Test Site: Eurofins Product Service GmbH
Operator: Mr. Liebich
Test Date: 2021-04-20
Operating Conditions: ambient temperature: 24 °Celsius
power input: 2x 120 V / 60 Hz
Antenna: AT4560, Horizontal
Measurement Distance: 3m
Operational Mode & EUT Configuration: Mode 1
Configuration 1
Note 1: --



Peak Number	Frequency	Peak	Angle	Height
1	24.802 GHz	64.33 dBµV/m	0 degrees	1 m
2	25.331 GHz	65.69 dBµV/m	0 degrees	1 m

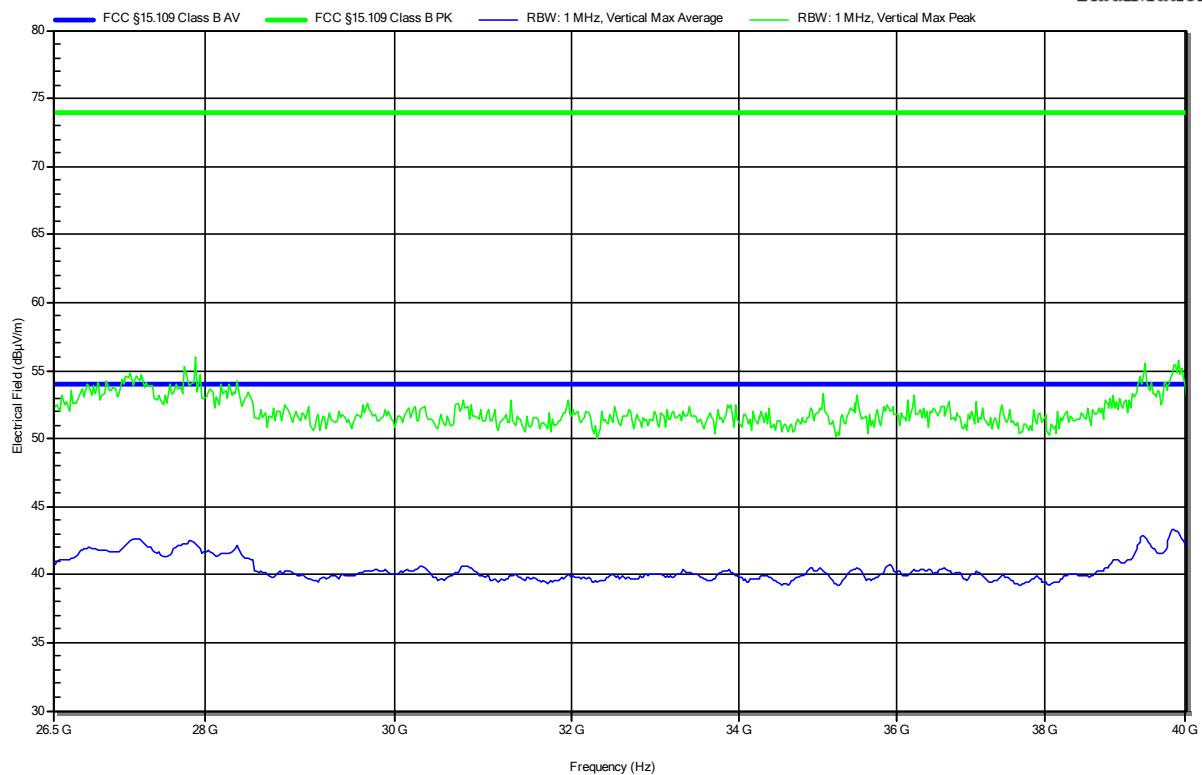
Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	Angle	Height
1	24.802 GHz	47.67 dBµV/m	53.98 dBµV/m	-6.31 dB	Pass	0 degrees	1 m
2	25.331 GHz	48.33 dBµV/m	53.98 dBµV/m	-5.65 dB	Pass	0 degrees	1 m

Radiated emissions according to FCC part 15B

Project Number: G0M-2103-9648
 Applicant: iesy GmbH
 Model Description: 19" Security Server 1U
 Model: SDoT Server V3B
 Test Sample ID: 34109
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Liebich
 Test Date: 2021-04-20
 Operating Conditions: ambient temperature: 24 °Celsius
 power input: 2x 120 V / 60 Hz
 Antenna: 22240-25 Amp. CBL26402075, Vertical
 Measurement Distance: 3m
 Operational Mode & EUT Configuration: Mode 1
 Configuration 1
 Note 1: --

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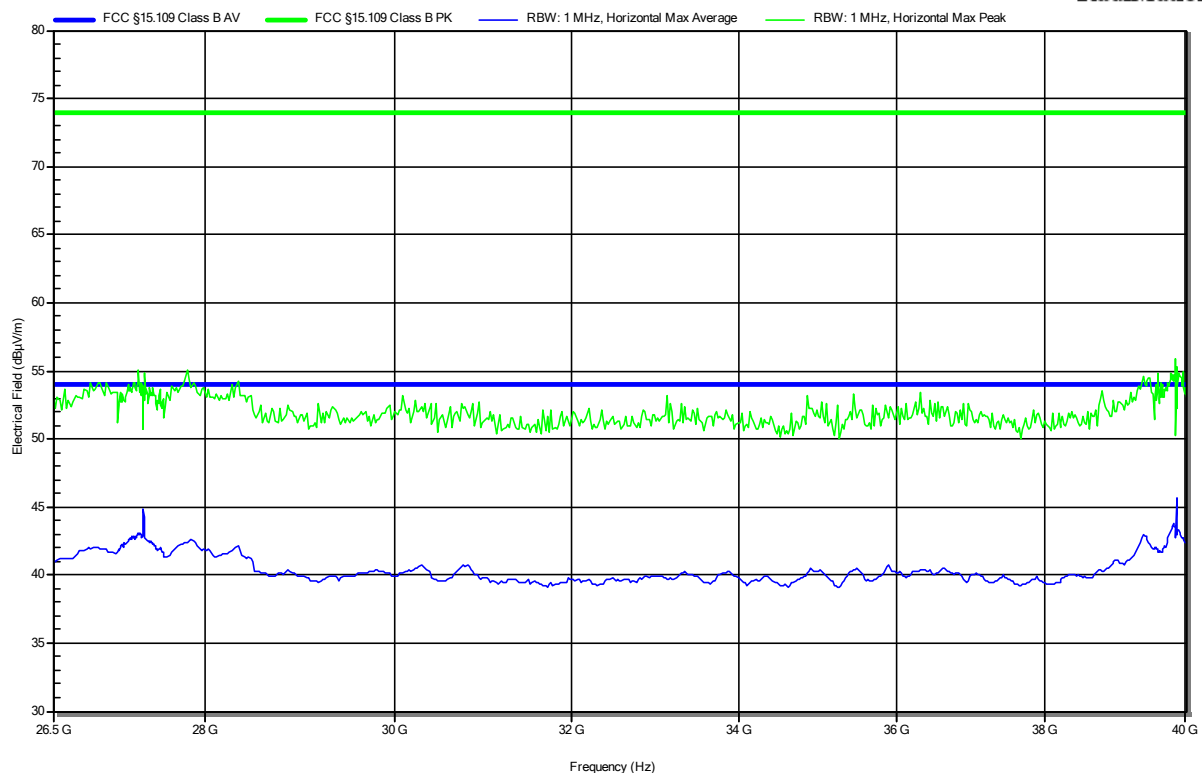


Radiated emissions according to FCC part 15B

Project Number: G0M-2103-9648
 Applicant: iesy GmbH
 Model Description: 19" Security Server 1U
 Model: SDoT Server V3B
 Test Sample ID: 34109
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Liebich
 Test Date: 2021-04-20
 Operating Conditions: ambient temperature: 24 °Celsius
 power input: 2x 120 V / 60 Hz
 Antenna: 22240-25 Amp. CBL26402075, Horizontal
 Measurement Distance: 3m
 Operational Mode & EUT Configuration: Mode 1
 Configuration 1
 Note 1: --

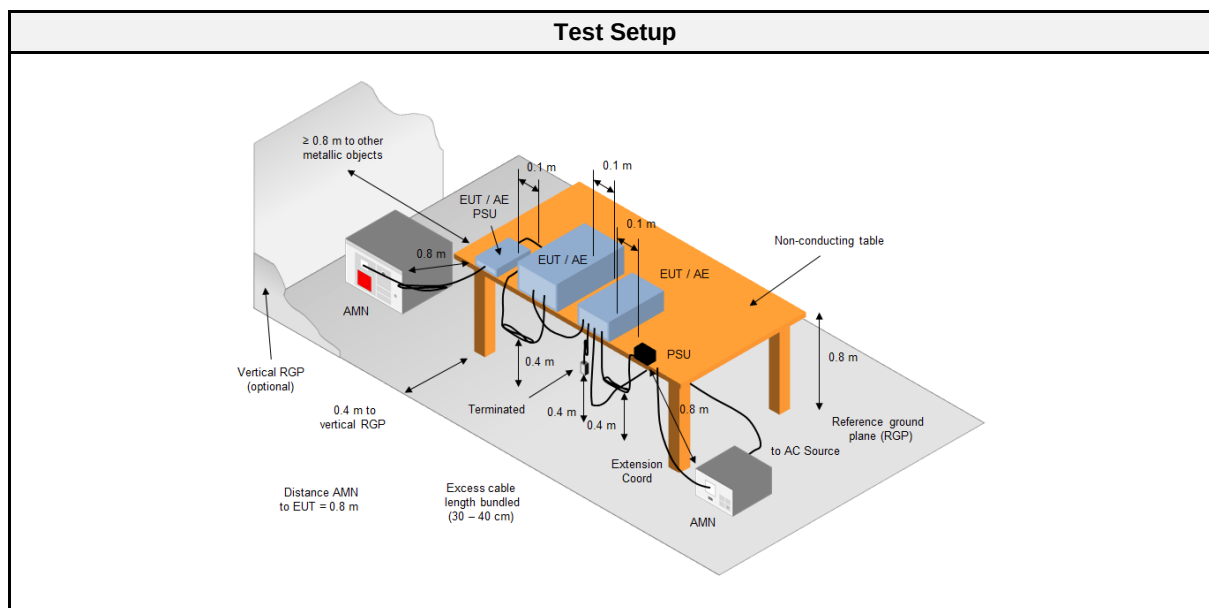
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2.2.1 Information

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	2020-07	2021-07
AMN	R&S	ESH3-Z5	EF00036	2019-07	2021-07
Pulse Limiter	R&S	ESH3-Z2	EF01063	2020-07	2021-07
EMI Test Receiver	R&S	ESR 7	EF00943	2020-07	2021-07
Climatic Sensor	Embedded Data Systems, LLC.	2800100000254 17E	EF01054	2021-03	2022-03

2.2.4 Procedure

Exploratory measurement	
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)
2.	The power cord that is normally supplied or recommended by the manufacturer was connected to the LISN.
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).
4.	The LISN measurement port was connected to a measurement receiver
5.	I/O cables were bundled not longer than 0.4 m
6.	Measurement was performed in the frequency range 0.15 – 30MHz on each current-carrying conductor
7.	To maximize the emissions the cable positions were manipulated
8.	The worst configuration of EUT and cables is shown on a test setup picture at item 2.2.2

Final measurement	
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)
2.	The power cord that is normally supplied or recommended by the manufacturer was connected to the LISN.
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).
4.	The LISN measurement port was connected to a measurement receiver
5.	The EUT and cable arrangement were based on the exploratory measurement results
6.	The test data of the worst-case conditions were recorded and shown on the next pages

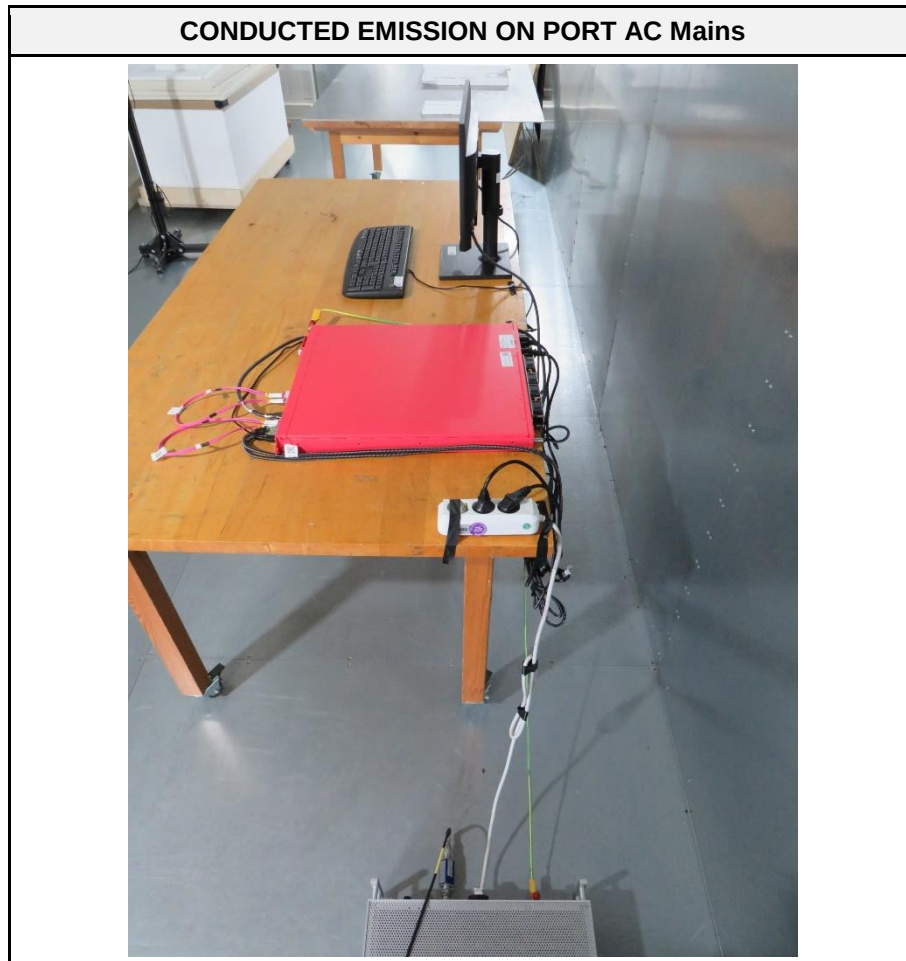
2.2.5 Limits

Class B		
Frequency [MHz]	Quasi-peak Limit [dBμV]	Average Limit [dBμV]
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
AC Mains	AMN	1	1	PASS	--

2.2.7 Setup Photos

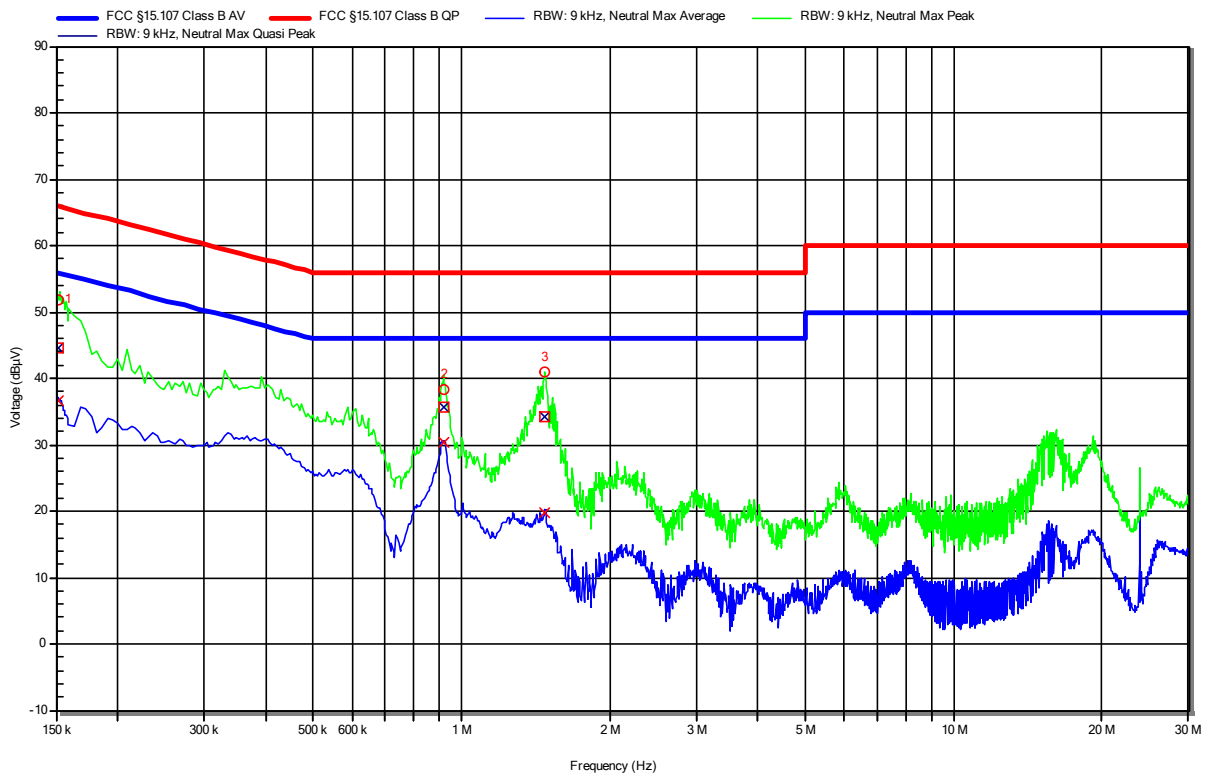


2.2.8 Records

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

Project Number: G0M-2103-9648
 Applicant: iesy GmbH
 Model Description: 19" Security Server 1U
 Model: SDoT Server V3B
 Test Sample ID: 34109
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Liebich
 Test Date: 2021-04-19
 Operating Conditions: ambient temperature: 23 °Celsius
 power input: 2x 120 V / 60 Hz
 LISN: Schwarzbeck NSLK 8127 RC N
 Operational Mode & EUT Configuration: Mode 1
 Configuration 1
 Applied to Port: AC Mains
 Note 1: --

Index 1
RadiMation



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	LISN
1	152.25 kHz	44.59 dBµV	65.88 dBµV	-21.29 dB	Pass	Neutral
2	919.5 kHz	35.61 dBµV	56 dBµV	-20.39 dB	Pass	Neutral
3	1.473 MHz	34.22 dBµV	56 dBµV	-21.78 dB	Pass	Neutral
Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	LISN
1	152.25 kHz	36.74 dBµV	55.88 dBµV	-19.14 dB	Pass	Neutral
2	919.5 kHz	30.48 dBµV	46 dBµV	-15.52 dB	Pass	Neutral
3	1.473 MHz	19.71 dBµV	46 dBµV	-26.29 dB	Pass	Neutral

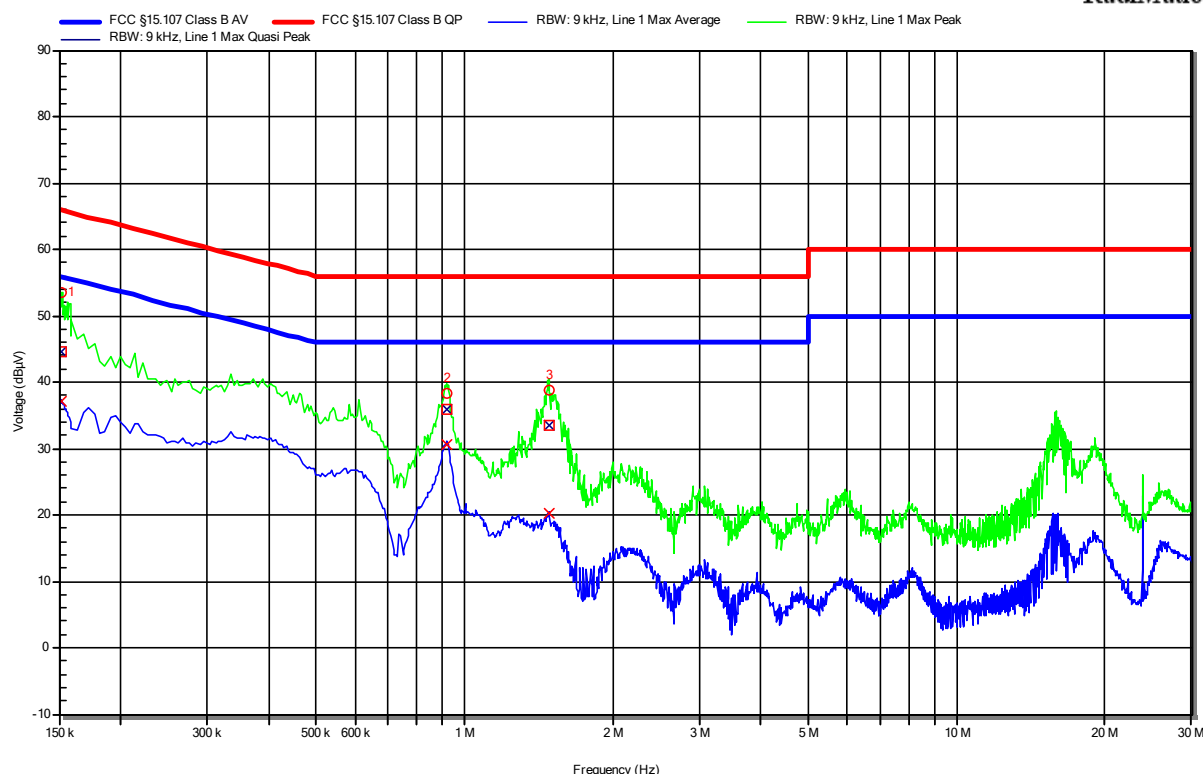
Test Report No.: G0M-2103-9648-EF0115B-V01

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

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

Project Number: G0M-2103-9648
 Applicant: iesy GmbH
 Model Description: 19" Security Server 1U
 Model: SDoT Server V3B
 Test Sample ID: 34109
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Liebich
 Test Date: 2021-04-19
 Operating Conditions: ambient temperature: 23 °Celsius
 power input: 2x 120 V / 60 Hz
 LISN: Schwarzbeck NSLK 8127 RC L
 Operational Mode & EUT Configuration: Mode 1
 Configuration 1
 Applied to Port: AC Mains
 Note 1: --

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Radiation



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	LISN
1	151.8 kHz	44.52 dBμV	65.9 dBμV	-21.38 dB	Pass	Line 1
2	919.5 kHz	35.83 dBμV	56 dBμV	-20.17 dB	Pass	Line 1
3	1.482 MHz	33.61 dBμV	56 dBμV	-22.39 dB	Pass	Line 1
Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	LISN
1	151.8 kHz	37.16 dBμV	55.9 dBμV	-18.74 dB	Pass	Line 1
2	919.5 kHz	30.72 dBμV	46 dBμV	-15.28 dB	Pass	Line 1
3	1.482 MHz	20.18 dBμV	46 dBμV	-25.82 dB	Pass	Line 1

Test Report No.: G0M-2103-9648-EF0115B-V01

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