EMC TEST REPORT

FCC CFR Title 47 / Chapter I / Subchapter A / Part 15 / Subpart B

ISED ICES-003 Issue 7

Report Reference No	G0M-2302-1931-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 DAkkS - Registration number : D-PL-12092-01-04 (FCC) FCC Filed Test Laboratory, Reg.-No.: 96970
Applicant	Access Ltd
Address	18-19 Suttons Business Park Earley Reading RG6 1AZ Reading UNITED KINGDOM
Test Specification Standard(s)	FCC CFR Title 47 / Chapter I / Subchapter A / Part 15 / Subpart B ISED ICES-Gen Issue 1; Amendment 1 (February 2021) ISED ICES-003 Issue 7 ANSI C63.4:2014+A1:2017
Non-Standard Test Method	None
Equipment under Test (EUT):	
Product Description	Full-Page Document Imager & MRTD Reader with Contactless Capabilities
Model(s)	OCR640-E-NCRCO02-01
Additional Model(s)	None
Brand Name(s)	None
Hardware Version(s)	Rev.3
Software Version(s)	Version.0039
FCC-ID	ZEROCR640E
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	2024-03-18	
Report:		
Compiled by	Brahima Drabo	
Tested by (+ signature)	Brahima Drabo	
Responsible for Test (+ signature)	Matthias Handrik	
Approved by (+ signature) (Deputy Head of Lab)	Jens Marquardt	
Date of Issue	2024-07-19	
Total number of pages	39	

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.

Statement concerning the uncertainty of the measurement systems used for decisions on conformity (decision rule):
The Decision Rule is applied on the basis of CISPR 16-4-2 and/or IEC 61000-4-x (TR 61000-1-6) and their national publications. These standards provide guidance on how to calculate and apply measurement uncertainty whilst providing maximum uncertainties allowance. In all cases due consideration will be given to ILAC-G8:09/2019.
Compliance or non-compliance with a disturbance limit is determined in the following manner.

- If U_{lab} is less than or equal to U_{cispr}, then: compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit; non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.
- If U_{lab} is greater than U_{cispr}, then: compliance is deemed to occur if no measured disturbance level, increased by (U_{lab} - U_{cispr}), exceeds the disturbance limit; non-compliance is deemed to occur if any measured disturbance level, increased by (U_{lab} - U_{cispr}), exceeds the disturbance limit.

Where appropriate for the test, for example for EMC pulsed immunity tests, the laboratory has demonstrated, by calibrating its equipment and facilities, that it complies with the above requirements and therefore no allowance of uncertainties has been given to the tolerances.

Additional Comments:

None

Additional variants have been declared by the manufacturer. The listed models were not tested, evaluated or assessed in no way.		
Additional Model 1	Product Type Description	Full-Page Document Imager & MRTD Reader with Contactless Capabilities
	Model Name	OCR640-E-DESKTOP
	Brand Name (optional)	None
	Hardware Version	Rev.5
	Software Version	Version.0039
Additional Model 2	Product Type Description	Full-Page Document Imager & MRTD Reader with Contactless Capabilities
	Model Name	OCR640-E
	Brand Name (optional)	None
	Hardware Version	Rev.5
	Software Version	Version.0039

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	2024-07-19	Initial Release	-

REPORT INDEX

1 Equipment (Test Item) Under Test

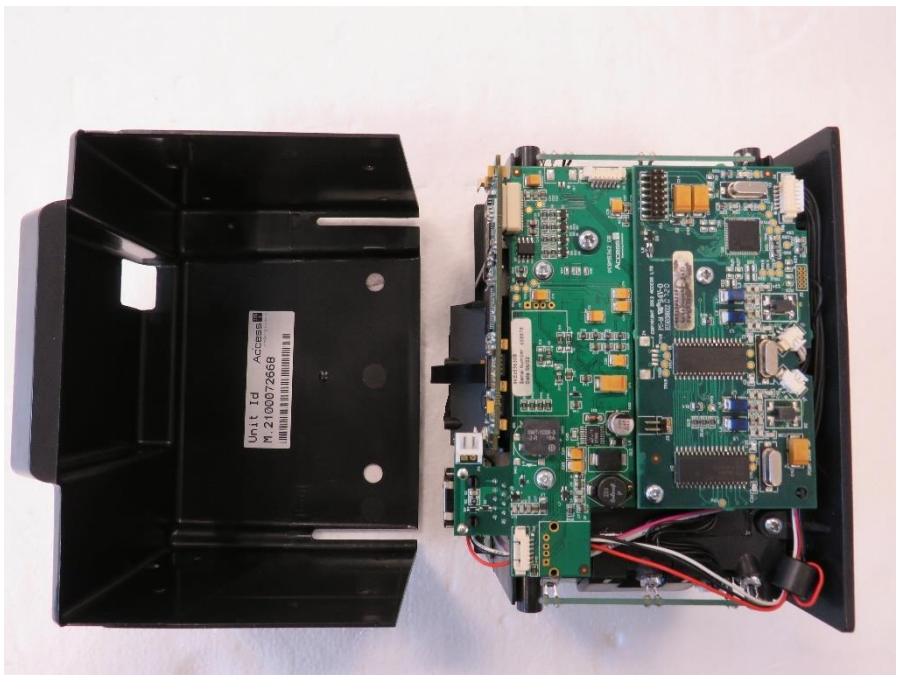
Description	Full-Page Document Imager & MRTD Reader with Contactless Capabilities		
Intended Use	The OCR640-E-NCRCO02-01 is a full-page, multi-illumination document reader. It captures ultraviolet and infrared images as well the full page of a document in color. In a simultaneous single action, the reader also decodes the machine-readable zone (MRZ) and processes RFID data.		
Model	OCR640-E-NCRCO02-01		
Additional Model(s)	None		
Brand Name(s)	None		
Hardware Version(s)	Rev.3		
Software Version(s)	Version.0039		
Number of tested samples	1		
Sample Identification	EUT #	Sample-ID	Serial Number
	EUT 1	48084	1852172371
EUT Dimensions [cm]	12.1 x 14.3		
FCC-ID	ZEROCR640E		
IC	-		
Class	Class B		
Equipment type	Table top		
Highest internal frequency [MHz]	400		
Protective Earth	No		
Functional Earth	No		
Radio Module	Type	RFID	
	Model	unspecified	
	Manufacturer	unspecified	
	FCC-ID	unspecified	
	IC	unspecified	
Supply Voltage	V_{NOM}	24 V DC via dedicated AC/DC-Adapter	
AC/DC-Adaptor	Model	GS25A24-P1J	
	Vendor	Meanwell	
	Input	90 - 264 V AC	
	Output	24 V; 1.04 A	
Manufacturer	Access Ltd 18-19 Suttons Business Park Earley Reading RG6 1AZ Reading UNITED KINGDOM		

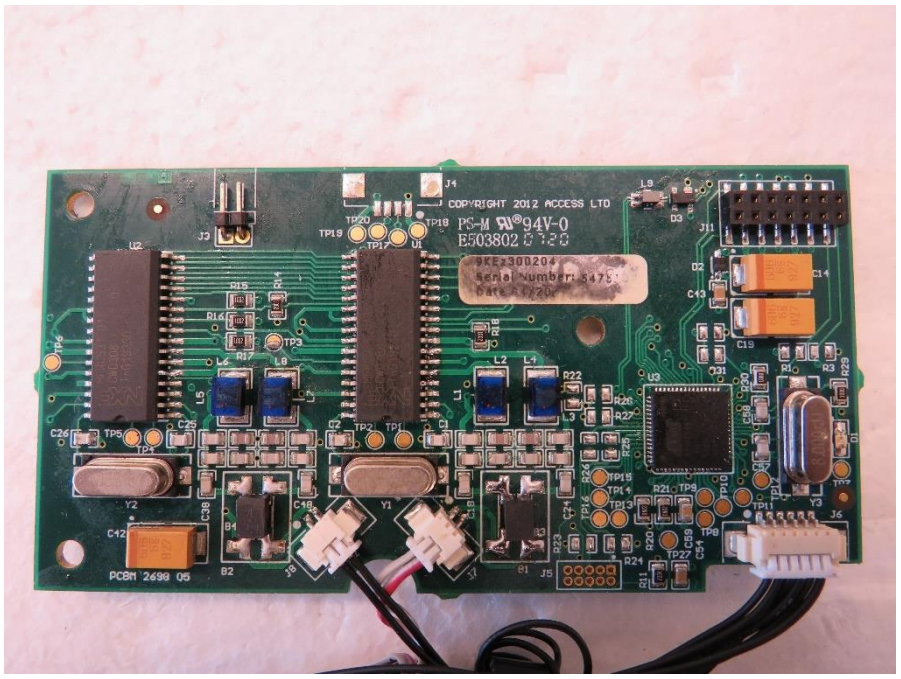
1.1 Equipment Ports

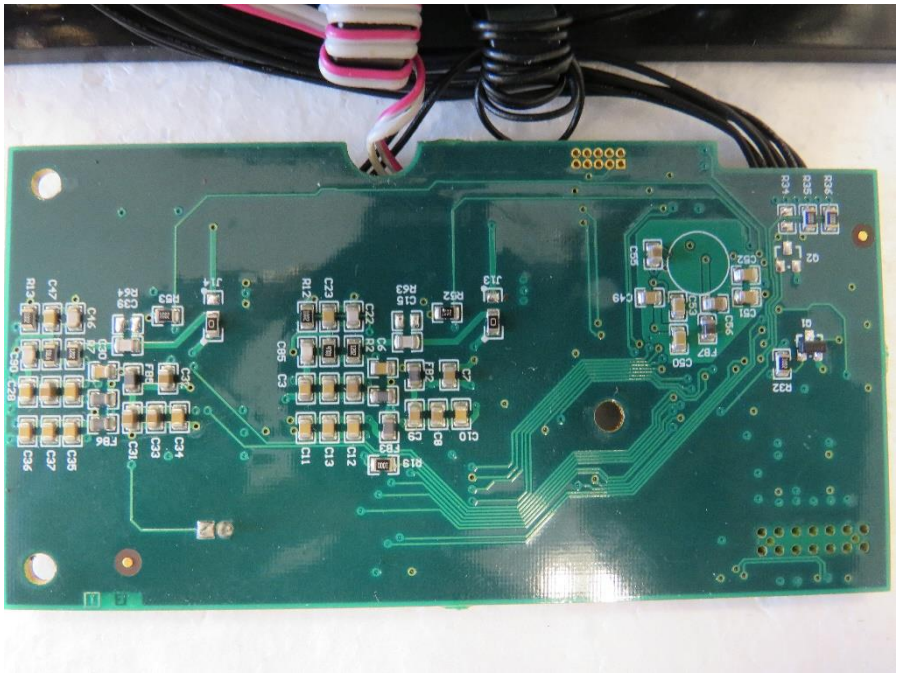
Name	Type	Attributes		Comment
AC Mains	AC	Count: Cable length [m]: Direction: Service only: Shielded:	1 3 In No No	Port of dedicated AC DC-adapter Voltage range from 90 to 264 V AC
USB	IO	Count: Cable length [m]: Direction: Service only: Shielded:	1 3 IO No Yes	Connection to USB host

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	Functional Earth

1.2 Equipment Photos - Internal

EUT OPEN


EUT PCB 1 TOP SIDE


EUT PCB 1 BOTTOM SIDE


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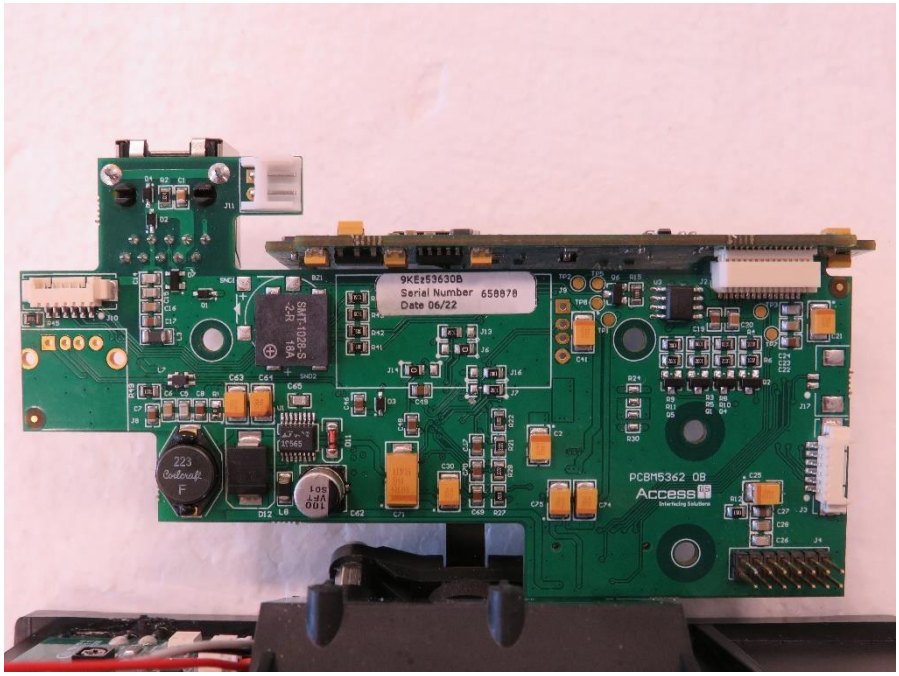
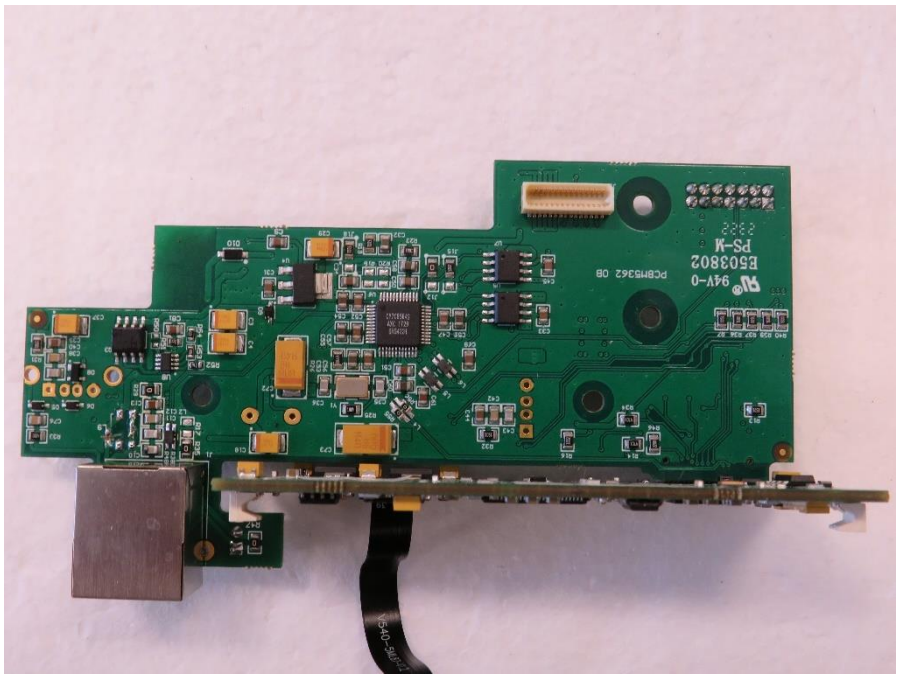
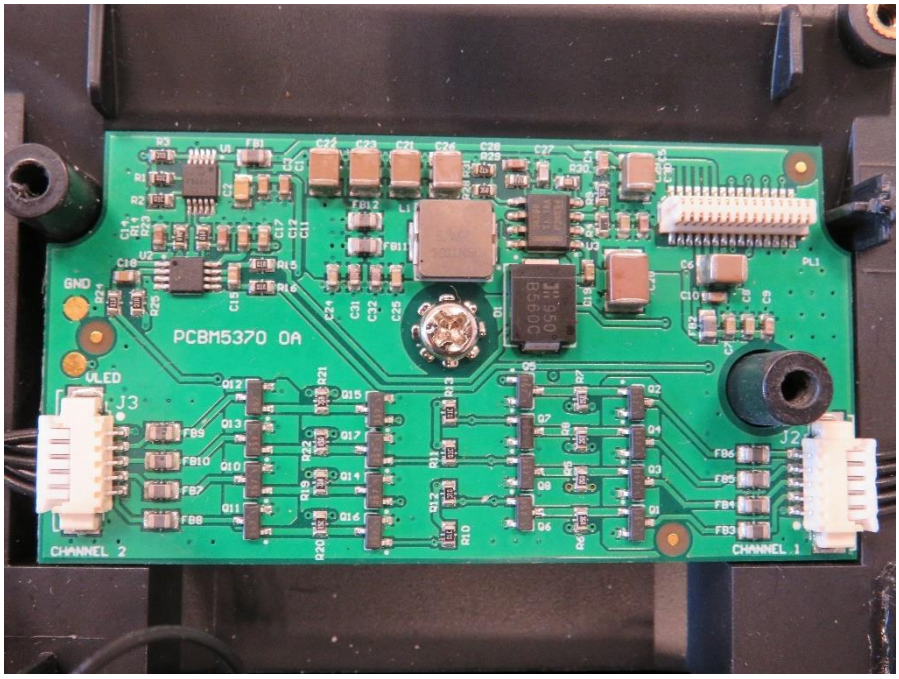
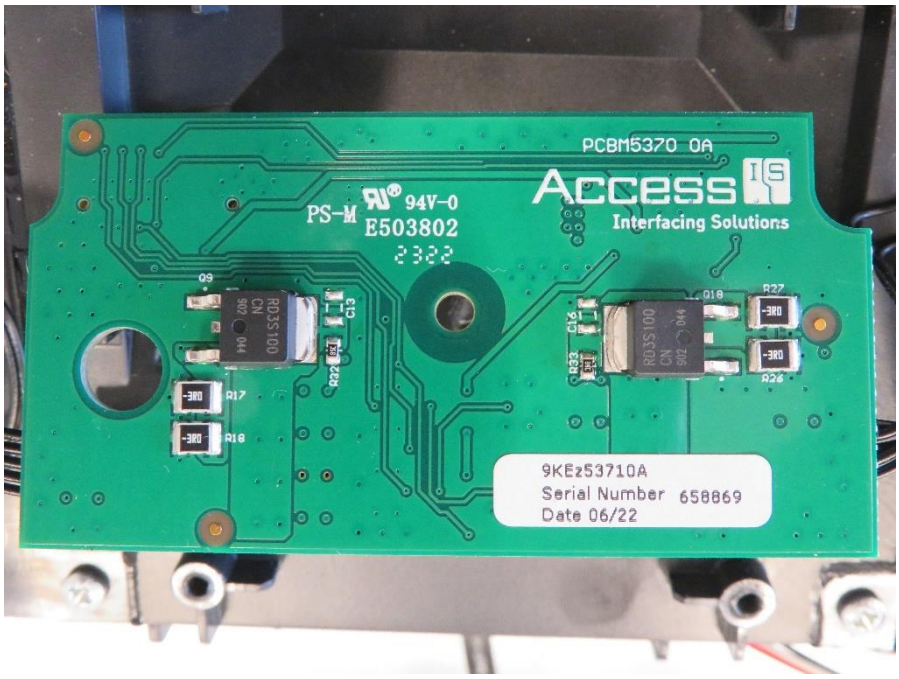


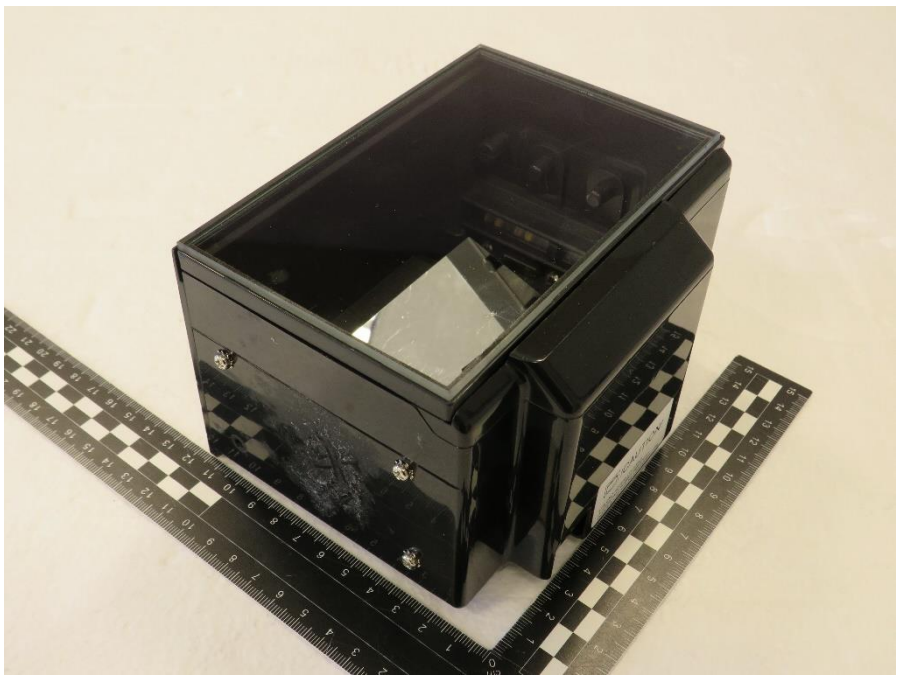
EUT PCB 2 BOTTOM SIDE


EUT PCB 3 TOP SIDE


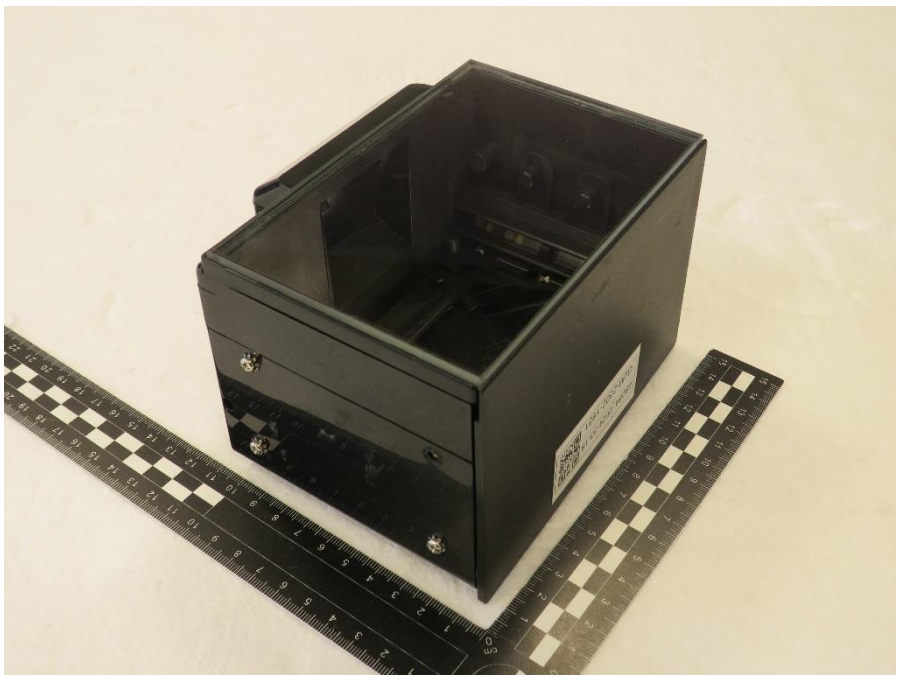
EUT PCB 3 BOTTOM SIDE


1.3 Equipment Photos - External

EUT IN PERSPECTIVE I



EUT IN PERSPECTIVE II

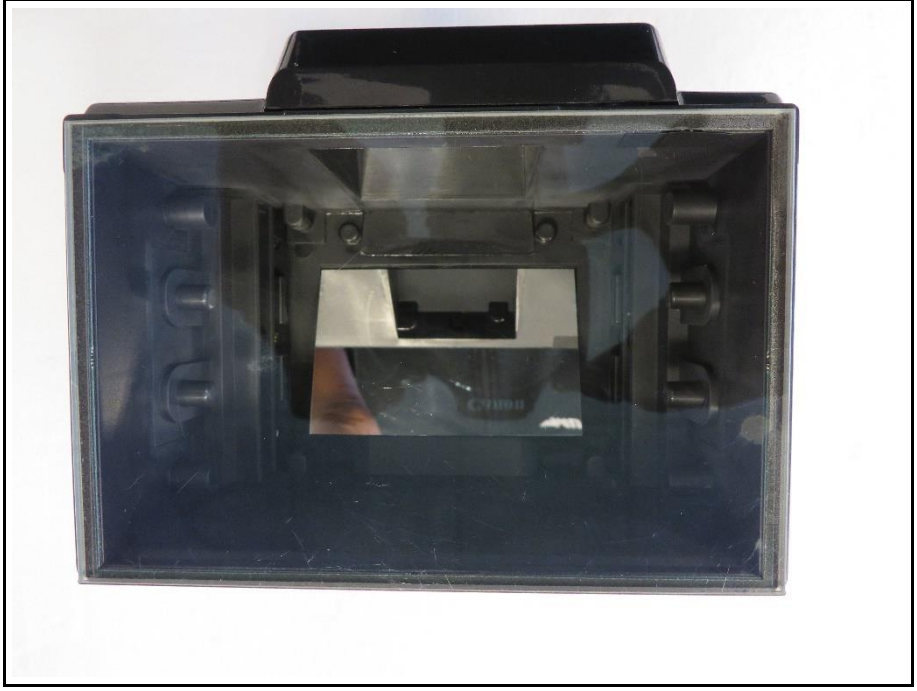


EUT FRONT SIDE


EUT REAR SIDE


EUT RIGHT SIDE

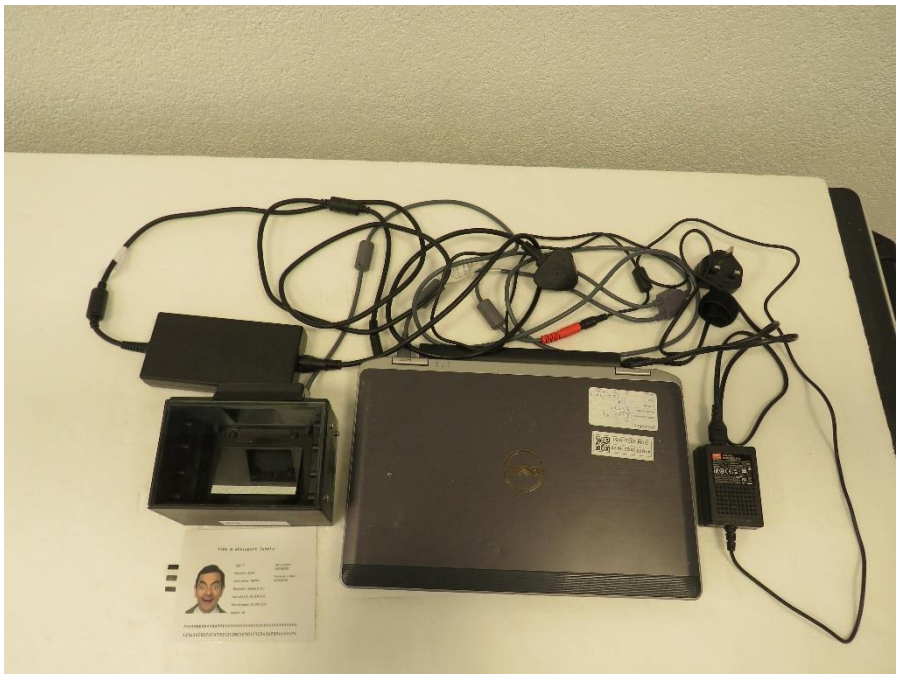

EUT LEFT SIDE


EUT TOP SIDE


EUT BOTTOM SIDE


EUT LABEL

EUT WITH ALL ACCESSORIES



DEDICATED AC / DC ADAPTER


DEDICATED AC / DC ADAPTER LABEL


1.4 Support Equipment

Product Type	Device	Manufacturer	Model	Comment
AE	Laptop	Dell	Latitude E6330	Customer support equipment: Sample ID: 44678
AE	Test Card	-	Typ B Mr. Bean	Customer support equipment: Sample ID: 48148 S/N: 1234567897UTO7501012M2501017123456789
AE	Power supply	Meanwell	GS25A24-P1J	Customer support equipment
CBL	USB	-	5KBD3701	Customer support equipment: Connection to USB host
SW	ScannerDemo	Eurofins E&E Hursley Limited	-	Customer support equipment

Description:	
AE	Auxiliary Equipment
SIM	Simulator
MON	Monitoring Equipment
CBL	Connecting Cable
SW	Software
Comment: --	

1.5 Operational Modes

Mode #	Description
1	EUT is powered by 24 V DC. EUT read of machine-readable zone of ID document and send the data to the laptop. The RFID software "ScannerDemo" is used to set the EUT to test mode.
Comment: --	

1.6 EUT Configuration

Configuration #	Description
1	EUT is powered by 24 V DC via dedicated AC/DC-Adapter. Dedicated AC/DC-Adapter is powered via external laboratory power supply unit. EUT is connected to the laptop via USB cable. The Test card is placed on the EUT (Document reader) for reading.
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:

Reading on Analyser (dBµV) + A.F. (dB/m) = Net field strength (dBµV/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:

Limit (dBµV/m) = 20*log (µV/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

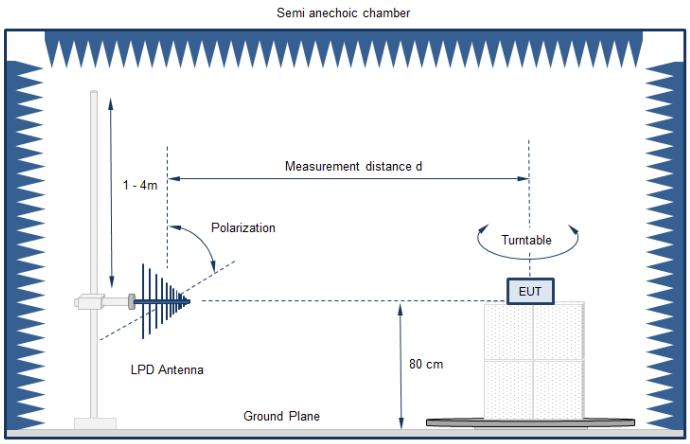
2.1 Test Conditions and Results - Radiated emissions acc. to ANSI C63.4

2.1.1 Information

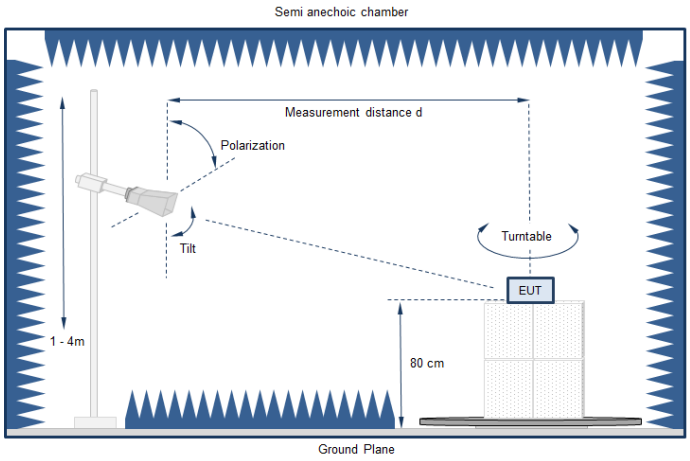
Test Information	
Reference	FCC 15.109, ICES-003, 3.2.2
Reference method	ANSI C63.4 Section 8
Equipment class	Class B
Equipment type	Table top
Highest internal frequency [MHz]	400
Measurement range	30 MHz to 2000 MHz
Temperature [°C]	22 ± 3
Humidity [%]	31 ± 3
Operator	Brahima Drabo
Date	2024-04-16

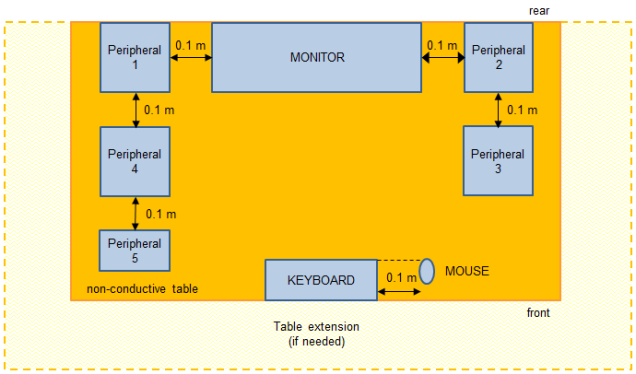
2.1.2 Setup *Table top:*

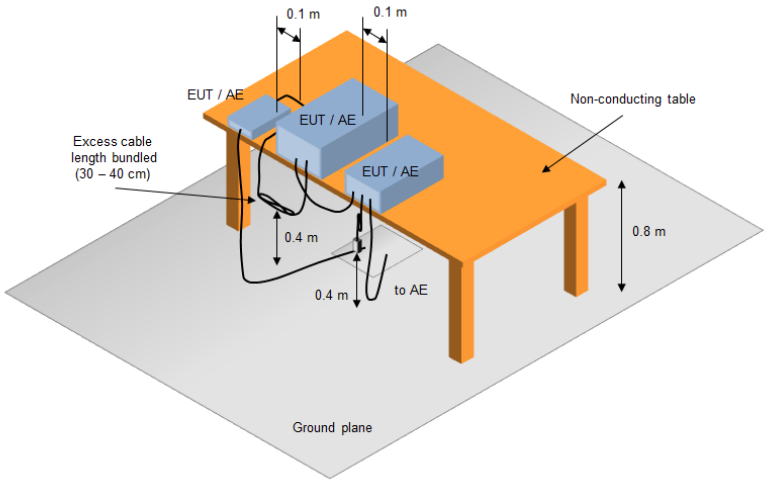
Measurement up to 1 GHz



Measurement above 1 GHz



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 (NSA)	Frankonia	AC1	EF00062	2022-11	2025-11
Anechoic chamber (SVSWR)	Frankonia	AC 1	EF01011	2022-11	2024-11
Programmable AC Source	Chroma ATE Inc.	61604	EF01068	2023-08	2025-08
EMI Test Receiver	Rohde & Schwarz Vertriebs GmbH	ESU26	EF00887	2024-01	2025-01
Trilog Broadband Antenna	Schwarzbeck	VULB 9168	EF01824	2022-10	2025-10
Horn Antenna	Schwarzbeck	BBHA9120D	EF00018	2022-12	2025-12
Climatic Sensor	Embedded Data Systems, LLC.	2800100000254 17E	EF01054	2023-07	2024-07

2.1.4 Procedure

Exploratory measurement Table top
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 3m Table top
1. The EUT was placed on a 0.8 m non-conductive table at a 3 or 10 m distance from the receive antenna. The antenna output was connected to the measurement receiver. 2. A broadband hybrid antenna was used for the frequency range 30 – 1000 MHz. Above one 1 GHz a Double Ridged Broadband Horn antenna was used. The antenna was placed on an adjustable height antenna mast. If required, in the range 1- 18 GHz a Double Ridged Broadband Horn antenna, in the range 18 – 40 GHz a High Gain / Standard Gain Horn 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

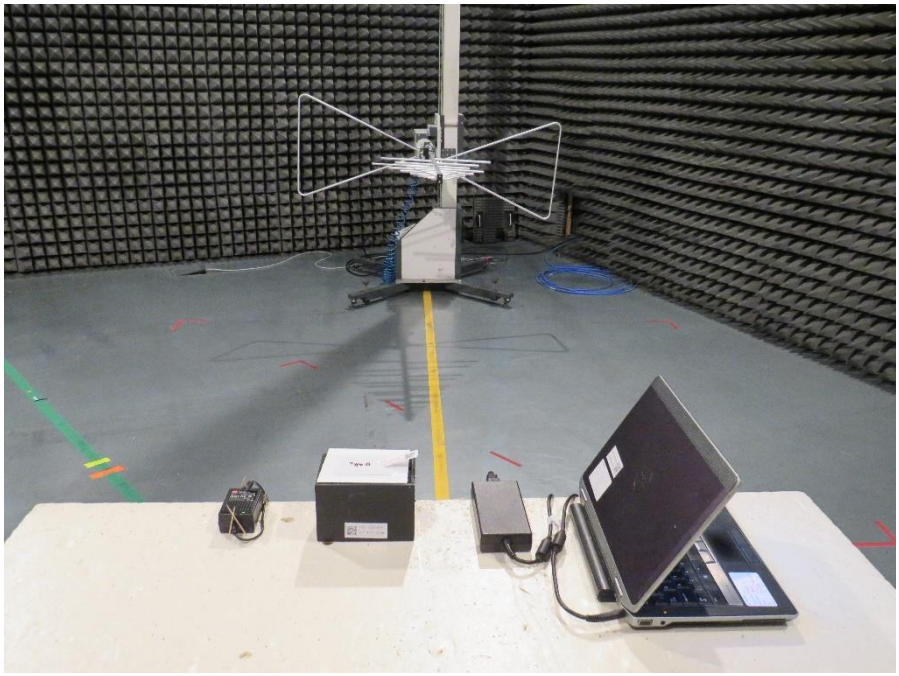
Class B @ 3 m		
Frequency [MHz]	Detector	Limit [dBµV/m]
30 - 88	Quasi-peak	40
88 - 216	Quasi-peak	43.5
216 - 960	Quasi-peak	46
960 - 1000	Quasi-peak	54
> 1000	Peak Average	74 54

2.1.6 Results

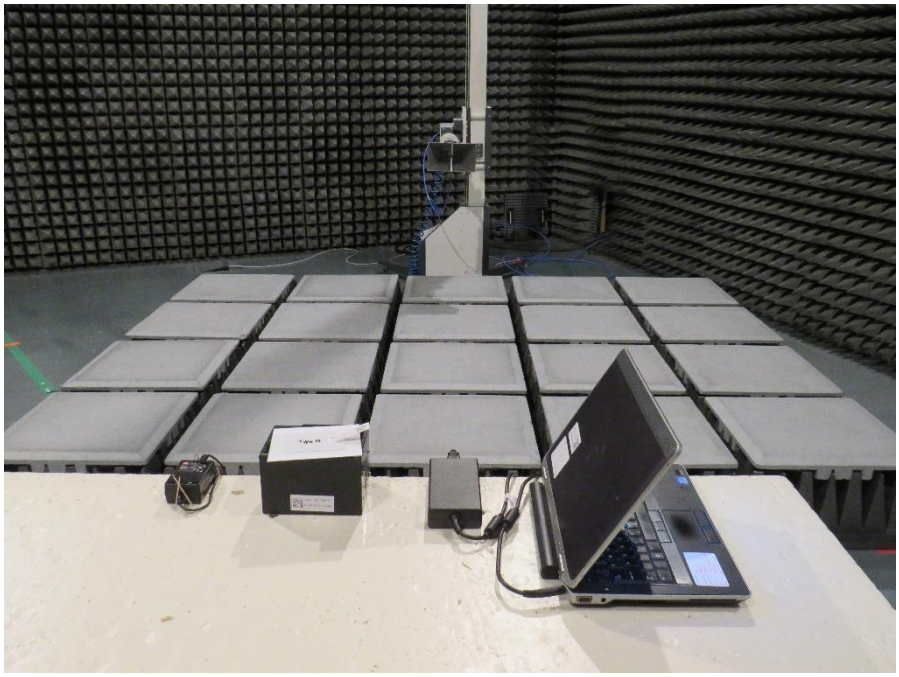
Test Results			
Operational mode	EUT Configuration	Verdict	Remark
1	1	PASS	120 V AC / 60 Hz
Note: AC Mains cable length and USB cable is 3 m.			

2.1.7 Setup Photos

TEST SETUP – FOCUS


TEST SETUP – 30 MHz to 1 GHz


TEST SETUP – 1 GHz to 2 GHz



2.1.8 Records

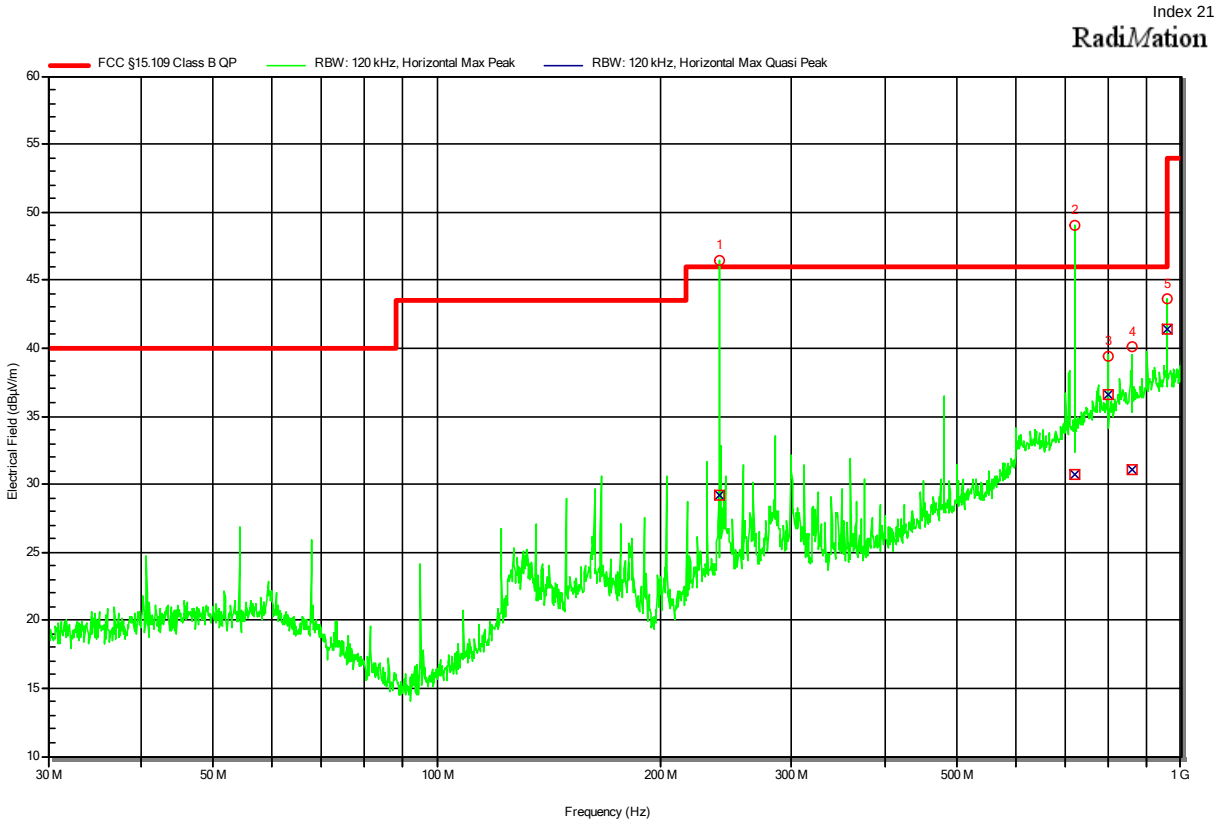
Radiated emissions
according to FCC part 15B

Project Number:	G0M-2302-1931
Applicant:	Access Ltd
Model Description:	Full-Page Document Imager & MRTD Reader with Contactless Capabilities
Model:	OCR640-E-NCRCO02-01
Test Sample ID:	48084
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Drabo
Test Date:	2024-04-16
Operating Conditions:	ambient temperature: 22 °Celsius power input: 120 V AC / 60 Hz
Antenna:	Schwarzbeck VULB 9168, Vertical
Measurement Distance:	3 m
Operational Mode:	Mode 1
EUT Configuration:	Configuration 1
Note 1:	--

Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height
1	40.68 MHz	36.3 dBµV/m	40 dBµV/m	-3.7 dB	Pass	-70 degrees	1 m
2	180.06 MHz	35.71 dBµV/m	43.52 dBµV/m	-7.81 dB	Pass	-70 degrees	1 m
3	190.926 MHz	32.36 dBµV/m	43.52 dBµV/m	-11.16 dB	Pass	-70 degrees	1 m
4	240.012 MHz	30.3 dBµV/m	46.02 dBµV/m	-15.72 dB	Pass	-70 degrees	1 m
5	855.84 MHz	31.34 dBµV/m	46.02 dBµV/m	-14.68 dB	Pass	-70 degrees	1 m

Radiated emissions
according to FCC part 15B

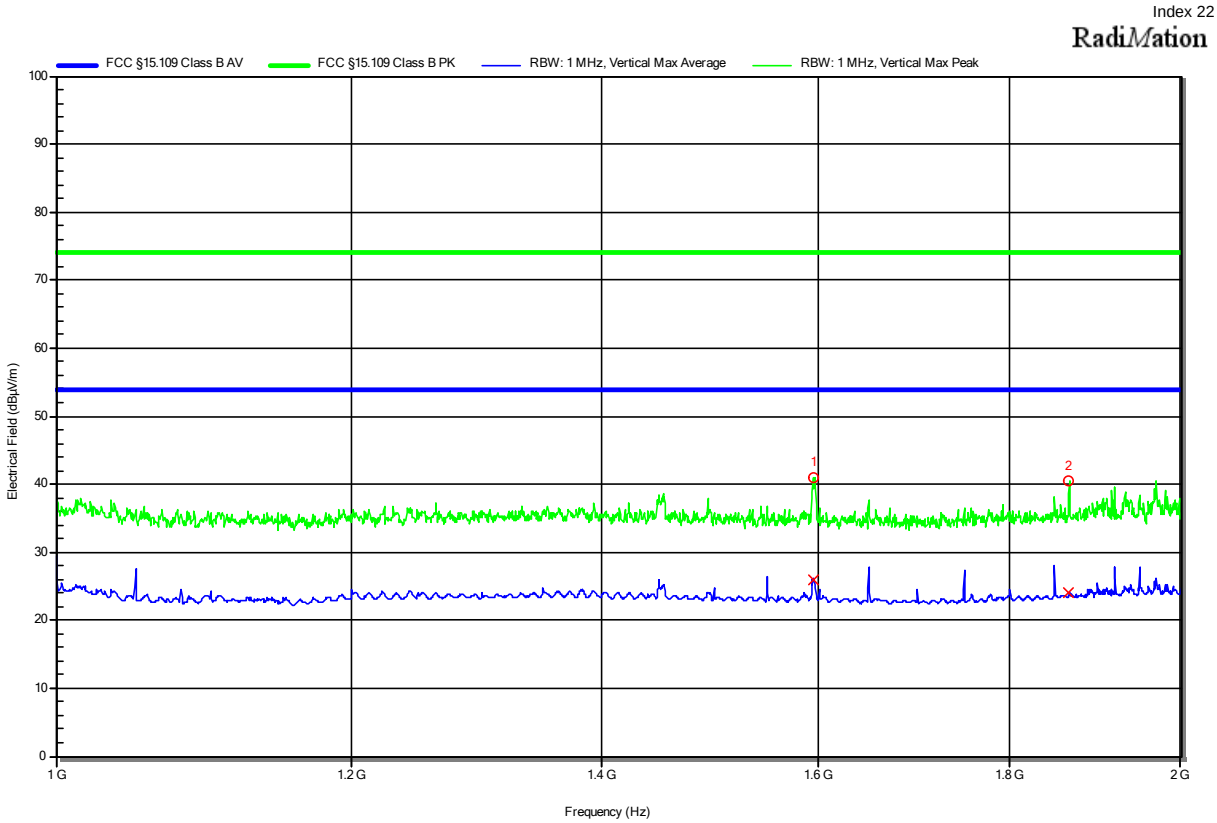
Project Number:	G0M-2302-1931
Applicant:	Access Ltd
Model Description:	Full-Page Document Imager & MRTD Reader with Contactless Capabilities
Model:	OCR640-E-NCRCO02-01
Test Sample ID:	48084
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Drabo
Test Date:	2024-04-16
Operating Conditions:	ambient temperature: 22 °Celsius power input: 120 V AC / 60 Hz
Antenna:	Schwarzbeck VULB 9168, Horizontal
Measurement Distance:	3 m
Operational Mode:	Mode 1
EUT Configuration:	Configuration 1
Note 1:	--



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height
1	239.994 MHz	29.23 dBµV/m	46.02 dBµV/m	-16.8 dB	Pass	-20 degrees	1 m
2	720.03 MHz	30.77 dBµV/m	46.02 dBµV/m	-15.25 dB	Pass	-20 degrees	1 m
3	800.016 MHz	36.57 dBµV/m	46.02 dBµV/m	-9.45 dB	Pass	-20 degrees	1 m
4	859.98 MHz	31.11 dBµV/m	46.02 dBµV/m	-14.91 dB	Pass	-20 degrees	1 m
5	960.054 MHz	41.45 dBµV/m	54 dBµV/m	-12.55 dB	Pass	-20 degrees	1 m

Radiated emissions
according to FCC part 15B

Project Number:	G0M-2302-1931
Applicant:	Access Ltd
Model Description:	Full-Page Document Imager & MRTD Reader with Contactless Capabilities
Model:	OCR640-E-NCRCO02-01
Test Sample ID:	48084
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Drabo
Test Date:	2024-04-16
Operating Conditions:	ambient temperature: 22 °Celsius power input: 120 V AC / 60 Hz
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement Distance:	3 m
Operational Mode:	Mode 1
EUT Configuration:	Configuration 1
Note 1:	--

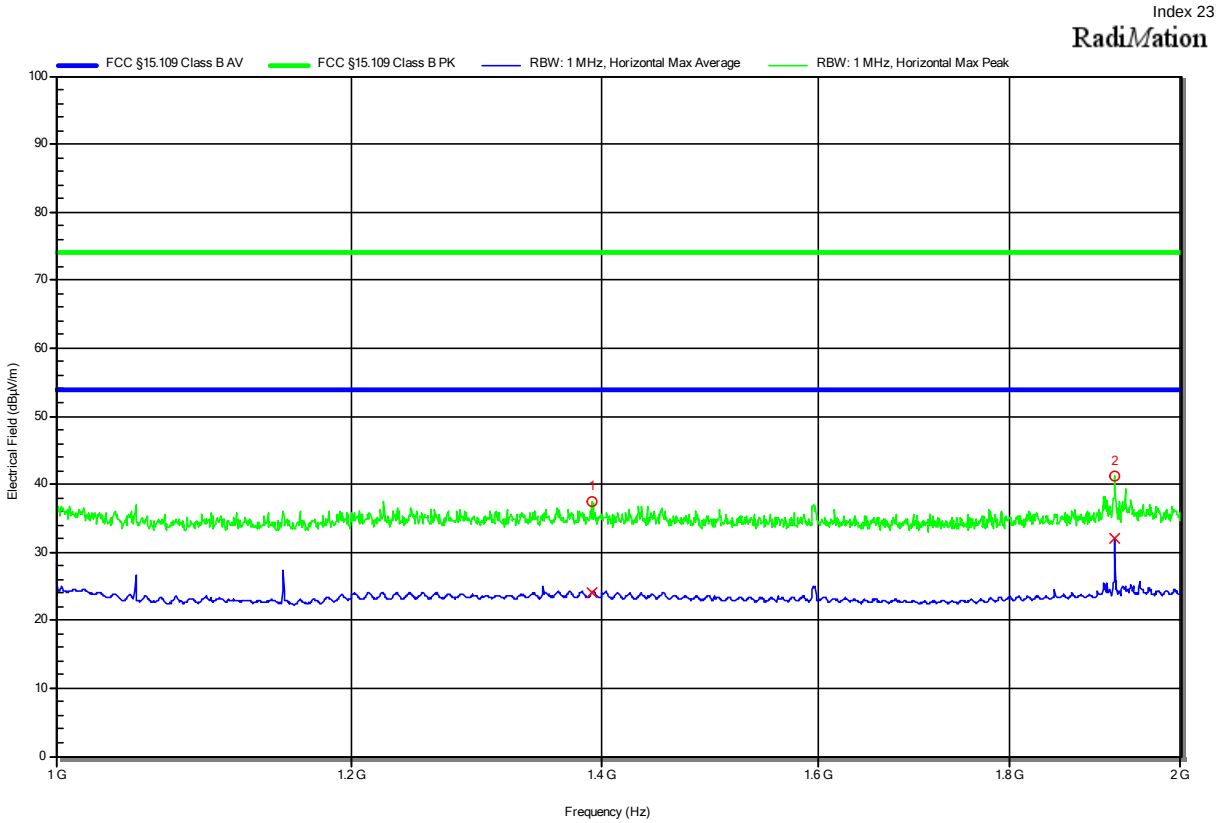


Peak Number	Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Angle	Height
1	1.595 GHz	40.89 dBµV/m	73.98 dBµV/m	-33.09 dB	Pass	0 degrees	1 m
2	1.867 GHz	40.57 dBµV/m	73.98 dBµV/m	-33.41 dB	Pass	0 degrees	1 m

Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	Angle	Height
1	1.595 GHz	26 dBµV/m	53.98 dBµV/m	-27.98 dB	Pass	0 degrees	1 m
2	1.867 GHz	24.04 dBµV/m	53.98 dBµV/m	-29.94 dB	Pass	0 degrees	1 m

Radiated emissions
according to FCC part 15B

Project Number:	G0M-2302-1931
Applicant:	Access Ltd
Model Description:	Full-Page Document Imager & MRTD Reader with Contactless Capabilities
Model:	OCR640-E-NCRCO02-01
Test Sample ID:	48084
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Drabo
Test Date:	2024-04-16
Operating Conditions:	ambient temperature: 22 °Celsius power input: 120 V AC / 60 Hz
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement Distance:	3 m
Operational Mode:	Mode 1
EUT Configuration:	Configuration 1
Note 1:	--



Peak Number	Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Angle	Height
1	1.391 GHz	37.47 dBµV/m	73.98 dBµV/m	-36.51 dB	Pass	0 degrees	1 m
2	1.92 GHz	41.31 dBµV/m	73.98 dBµV/m	-32.67 dB	Pass	0 degrees	1 m

Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	Angle	Height
1	1.391 GHz	23.95 dBµV/m	53.98 dBµV/m	-30.03 dB	Pass	0 degrees	1 m
2	1.92 GHz	32.07 dBµV/m	53.98 dBµV/m	-21.91 dB	Pass	0 degrees	1 m

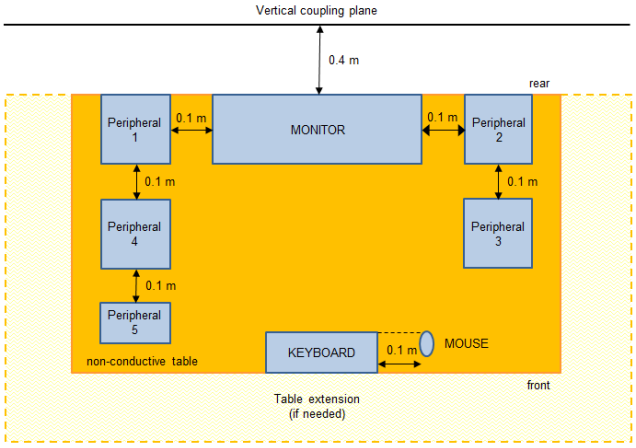
2.2 Test Conditions and Results - Conducted emissions acc. to ANSI C63.4

2.2.1 Information

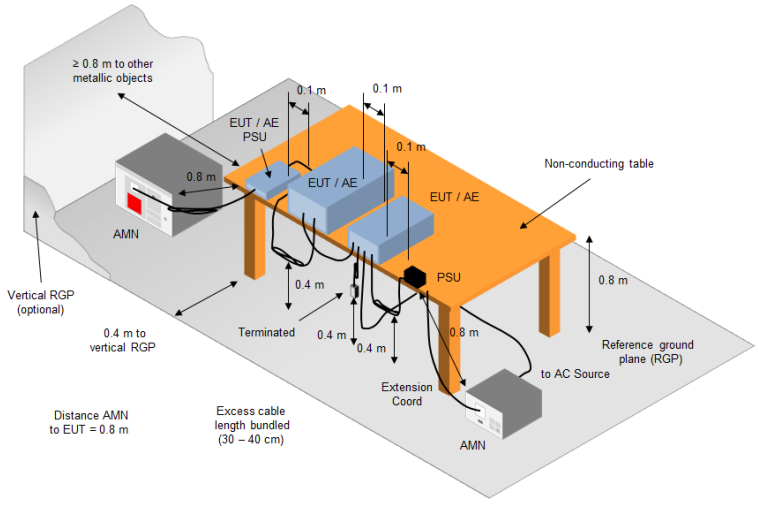
Test Information	
Reference	FCC 15.107, ICES-003, 3.2.1
Reference method	ANSI C63.4 Section 12
Measurement range	150 kHz to 30 MHz
Equipment class	Class B
Equipment type	Table top
Temperature [°C]	23 ± 3
Humidity [%]	32 ± 3
Operator	Brahima Drabo
Date	2024-04-16

2.2.2 Setup *Table top*

Equipment placement



Test 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	2023-06	2024-06
AMN	R&S	ESH3-Z5	EF00036	2023-09	2025-09
Pulse Limiter	R&S	ESH3-Z2	EF01063	2023-08	2025-08
EMI Test Receiver	Rohde & Schwarz Vertriebs GmbH	ESCS 30	EF00297	2023-08	2024-08
Climatic Sensor	Embedded Data Systems, LLC.	2800100000254 17E	EF01054	2023-07	2024-07

2.2.4 Procedure

Exploratory measurement Table top
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 Table Top
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	120 V AC / 60 Hz
Note: AC Mains cable length cable is 80 cm.					

2.2.7 Setup Photos

TEST SETUP AC Mains

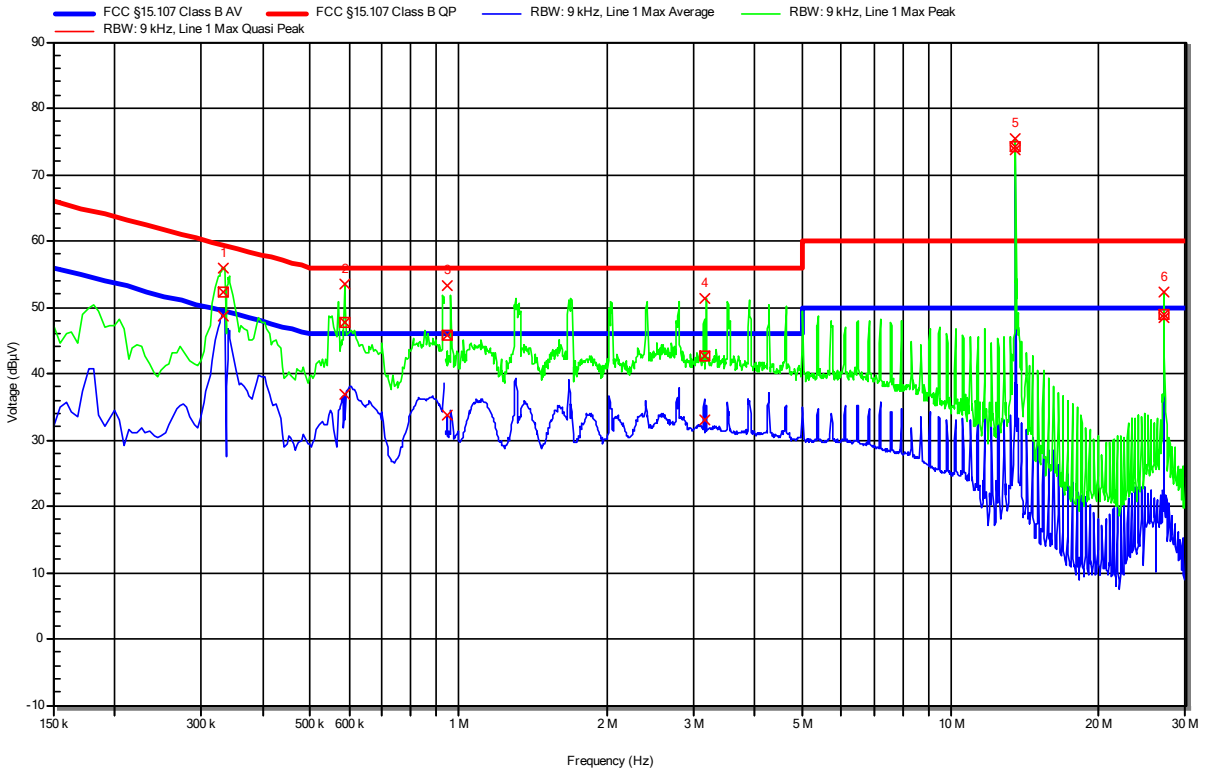

2.2.8 Records

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

Project Number:	G0M-2302-1931
Applicant:	Access Ltd
Model Description:	Full-Page Document Imager & MRTD Reader with Contactless Capabilities
Model:	OCR640-E-NCRCO02-01
Test Sample ID:	48084
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Drabo
Test Date:	2024-04-16
Operating Conditions:	ambient temperature: 23 °Celsius power input: 120 V AC / 60 Hz
LISN:	Schwarzbeck NSLK 8127 RC L1
Operational Mode:	Mode 1
EUT Configuration:	Configuration 1
Applied to Port:	AC Mains
Note 1:	--

Index 19

RadiMation



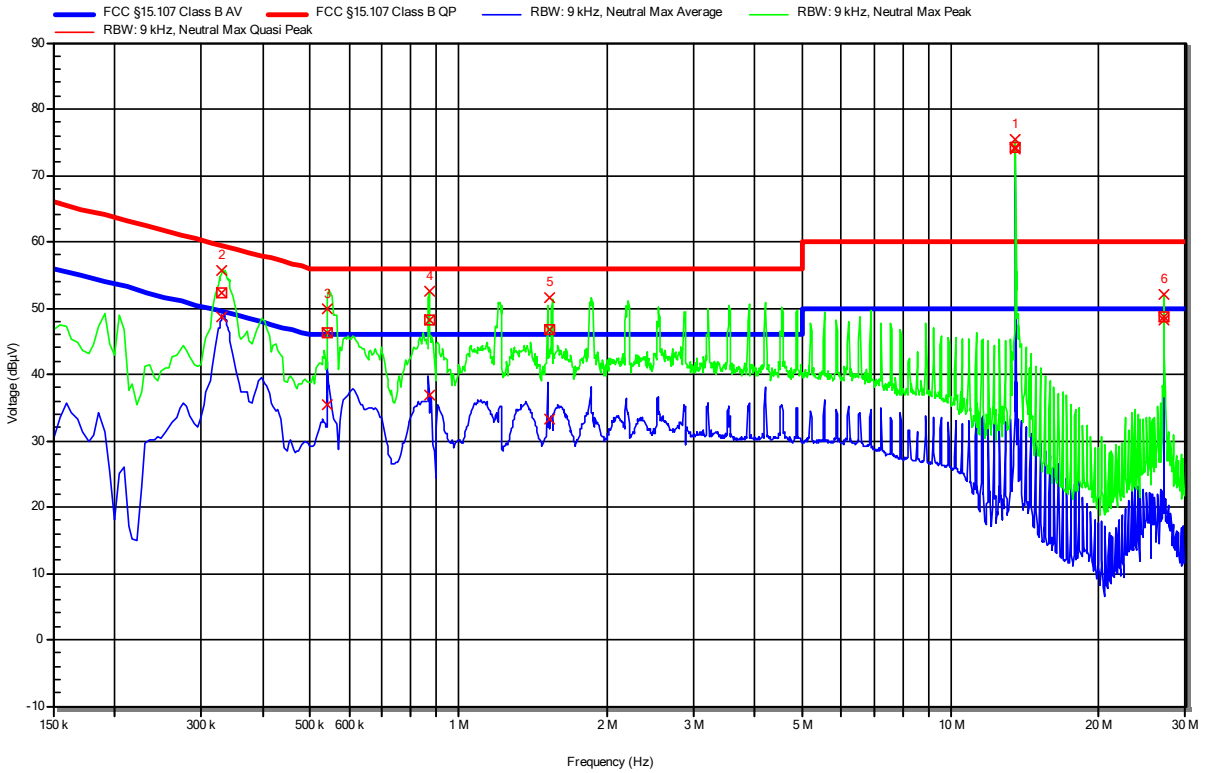
Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	LISN
1	334.05 kHz	52.32 dBµV	59.35 dBµV	-7.03 dB	Pass	Line 1
2	586.95 kHz	47.61 dBµV	56 dBµV	-8.39 dB	Pass	Line 1
3	951 kHz	45.89 dBµV	56 dBµV	-10.11 dB	Pass	Line 1
4	3.17 MHz	42.76 dBµV	56 dBµV	-13.24 dB	Pass	Line 1
5	13.559 MHz	RFID – carrier				Line 1
6	27.119 MHz	2nd harmonic RFID				Line 1

Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	LISN
1	334.05 kHz	48.79 dBµV	49.35 dBµV	-0.56 dB	Pass	Line 1
2	586.95 kHz	36.75 dBµV	46 dBµV	-9.25 dB	Pass	Line 1
3	951 kHz	33.76 dBµV	46 dBµV	-12.24 dB	Pass	Line 1
4	3.17 MHz	33.02 dBµV	46 dBµV	-12.98 dB	Pass	Line 1
5	13.559 MHz	RFID – carrier				Line 1
6	27.119 MHz	2nd harmonic RFID				Line 1

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

Project Number:	G0M-2302-1931
Applicant:	Access Ltd
Model Description:	Full-Page Document Imager & MRTD Reader with Contactless Capabilities
Model:	OCR640-E-NCRCO02-01
Test Sample ID:	48084
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Drabo
Test Date:	2024-04-16
Operating Conditions:	ambient temperature: 23 °Celsius power input: 120 V AC / 60H Hz
LISN:	Schwarzbeck NSLK 8127
Operational Mode:	Mode 1
EUT Configuration:	Configuration 1
Applied to Port:	AC Mains
Note 1:	--

Index 18
RadiMation



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	LISN
1	13.559 MHz	RFID – carrier				Neutral
2	331.35 kHz	52.21 dBµV	59.42 dBµV	-7.21 dB	Pass	Neutral
3	542.85 kHz	46.37 dBµV	56 dBµV	-9.63 dB	Pass	Neutral
4	870.9 kHz	48.09 dBµV	56 dBµV	-7.91 dB	Pass	Neutral
5	1.531 MHz	46.76 dBµV	56 dBµV	-9.24 dB	Pass	Neutral
6	27.119 MHz	2nd harmonic RFID				Neutral

Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	LISN
1	13.559 MHz	RFID – carrier				Neutral
2	331.35 kHz	48.66 dBµV	49.42 dBµV	-0.76 dB	Pass	Neutral
3	542.85 kHz	35.39 dBµV	46 dBµV	-10.61 dB	Pass	Neutral
4	870.9 kHz	36.95 dBµV	46 dBµV	-9.05 dB	Pass	Neutral
5	1.531 MHz	33.34 dBµV	46 dBµV	-12.66 dB	Pass	Neutral
6	27.119 MHz	2nd harmonic RFID				Neutral

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	150 kHz to 30 MHz, 3.35dB
Radiated Emission	30 MHz to 200 MHz @ 3m, 5.1dB 200 MHz to 1G Hz @ 3m, 5.3dB >1G Hz to 2 GHz @3m, 5.95dB