



Test report issued under the responsibility of:
EMITECH MONTPELLIER laboratory

RF EXPOSURE TEST REPORT

KDB 447498 D01
RSS-102, Issue 5

Company : **STID**
Address..... : 20 PARC D'ACTIVITES DES PRADEAUX
13850 GREASQUE
FRANCE

Test item description : **UHF RFID reader**
Trade Mark : STID
Manufacturer..... : STID
Model/Type reference..... : W55 / ARC
FCC ID..... : OVNAC9
IC : 10520A-ARCU
Ratings..... : 4.5Vdc to 5.5Vdc

Testing Laboratory : **EMITECH MONTPELLIER laboratory**
Address..... : 145 rue de Massacan
34740 VENDARGUES
FRANCE

Report Reference No : **RE-EVE-21C753-2A**
Test procedure : FCC IC Certification
Diffusion..... : Mr SOGOYAN
Applicant's name : STID
Date of issue..... : March 22, 2023
Total number of pages..... : 9
Revision..... : 0
Modified page(s)..... : Creation
Compiled by..... : Olivier AELBRECHT
Approved by (+ signature) : Olivier HEYER (Laboratory Manager)

*Duplication of this test report is only permitted for an integral photographic facsimile. It includes the number of pages referenced here above.
This document is the result of testing a specimen or a sample of the product submitted. It does not imply an assessment of the conformity of
the whole manufactured products of the tested sample.*

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REVISION HISTORY:

Revision	Date	Modified pages	Modifications
0	March 22, 2023	/	Creation

1. GENERAL INFORMATIONS

This document submits the results of ElectroMagnetic Field (EMF) human exposure tests performed on the equipment **UHF RFID reader ARC-W45-G/U04-5AA/1** (denominated hereafter E.U.T.: equipment under test) according to document(s) listed in §2 of this test report.

TESTING PROCEDURE AND TESTING LOCATION:					
Testing Location	EMITECH MONTPELLIER laboratory				
Address.	145 rue de Massacan 34740 VENDARGUES FRANCE				
Test procedure.	FCC IC Certification				
Tested by	Olivier AELBRECHT				
Test supervisor	None				
Date of receipt of test item	N/A				
Date (s) of performance of tests	From May the 25th to June the 11th of 2021				
APPLICANT'S GENERAL INFORMATIONS:					
Company name	STID				
Company address.	20 PARC D'ACTIVITES DES PRADEAUX 13850 GREASQUE FRANCE				
Person(s) present during the tests.	No representative for company attended the tests.				
Responsible.....	Mr SOGOYAN				
GENERAL REMARKS:					
<p>The information in italics is declared by the manufacturer and is under his responsibility 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.</p> <p>"(see Enclosure #)" refers to additional information appended to the report. "(see appended table)" refers to a table appended to the report. Throughout this report the decimal separator is point.</p>					
POSSIBLE TEST CASE VERDICTS:					
Test case does not apply to the test object.:	N/A				
Test case not performed.....	N/P				
Test object does meet the requirement.....	P (Pass)				
Test object does not meet the requirement.	F (Fail)				
.....					
DEFINITIONS AND ABBREVIATIONS:					
E.U.T.	Equipment under test	AE	Ancillary equipment	Pk	Peak detector
RBW	Resolution bandwidth	VBW	Video bandwidth	QP	Quasi-peak detector
OATS	Open area test site	FAR	Full anechoic room	Av	Average detector
VP	Vertical Polarization	HP	Horizontal Polarization	RMS	Root Mean Square
RF	Radio frequency	NTR	Nothing to report	N/C	Not communicated

2. REFERENCE DOCUMENT(S)

NORMATIVE REFERENCES:

The following referenced documents are necessary for the application of the present test report.

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FCC part 15

Code of federal regulations. Title 47- Telecommunication Chapter 1- Federal Communication Commission. Part 15- Radio frequency devices Subpart B- Unintentional Radiators. Limits and methods of measurement of radio disturbance. Characteristic of information technology equipment.

FCC part 15.247

Operation within the bands 902–928 MHz, 2400–2483.5 MHz, and 5725–5850MHz. (frequency hopping and digitally modulated)

RSS-247_Issue 2, February 2017

Digital Transmission Systems (DTSS), Frequency Hopping Systems (FHSs) and Licence Exempt Local Area Network (LE-LAN) Devices

RSS/CNR-Gen, Issue 4, November 2014

Exigences générales et information relatives à la certification du matériel de radiocommunication

KDB 447498 D01 v06

General RF Exposure Guidance

RSS-102, Issue 5, March 2015

Radio Frequency (RF) Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)

RR-EVE-21C753-2A Ed.0

Emitech Montpellier test report.

Although the product standard uses obsolete technical standards, the latest versions of standards achievable by the laboratory will be used for testing.

INFORMATIVE REFERENCES:

The following referenced documents are not necessary for the application of the present test report but they assist the user with regard to a particular subject area.

3. EQUIPMENT TECHNICAL DESCRIPTION

3.1. Test Conditions

Test item description..... : UHF RFID reader
Model/Type reference..... : W55 / ARC
Trade Mark..... : STID
Serial number (S/N)..... : Not communicated
Part number (P/N)..... : Not communicated
Software version..... : 1.1.0.851
Firmware version..... : 2
Type of sample..... : Standard equipment
Function(s)..... : UHF RFID reader
Manufacturer name..... : STID
Address..... : 20 PARC D'ACTIVITES DES PRADEAUX
13850 GREASQUE
FRANCE

General product information:

N/A

3.2. EUT Marking plate



3.3. EUT General view



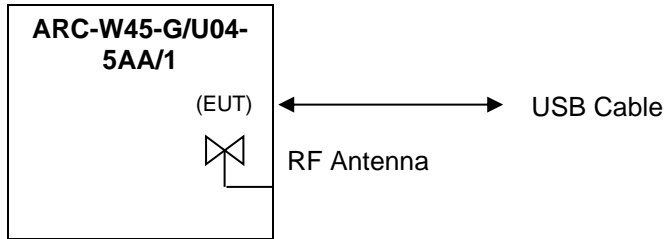
3.4. EUT Mechanical and Electrical Design

Power supply.....	: 5Vdc
Power supply range.....	: 4.5Vdc to 5.5Vdc
Power type.....	: USB
Power (W).....	: 1.7
Nominal current (A).....	: 0.35
Dimensions (L x W x H) (m).....	: 8cmx10cmx2cm
Weight (kg).....	: 0.178
Temperature range (°C).....	: -20°C to +50°C
Ground bounding strap.....	: No

Comments:

N/A

3.5. EUT Input/Output ports



PORT	NAME	TYPE	LENGTH	CABLE TYPE	COMMENTS
0	Main frame	N/E	N/A	Plastic	
1	USB Cable	I/O + DC	1.5m	Not shielded	(5Vdc)
2	RF Antenna	RF	N/A	N/A	

AC/DC		AC		DC	
.....	AC/DC Converter port	Alternative current port	Discontinuous current port
:		:		:	
I/O		TP		RF	
.....	Input or Output port	Telecommunication port	Radio frequency port
:		:		:	
N/E					
.....	Non Electrical port				
:					

3.6. Supporting Equipment Used During Test

Sample subject to the tests was tested with following equipment.

PRODUCT TYPE	MANUFACTURER	MODEL	N°EMITECH / COMMENTS
Laptop	DELL	Latitude 5510	Used to powered the EUT and set it in test mode
AC/DC block	DELL	LA55NM170	Used for conducted emissions measurement

(AE) LAPTOP



(AE) AC/DC BLOCK



3.7. EUT Radio Specifications

a) GENERAL INFORMATIONS	
According to manufacturer's declarations:	
EUT type.....	: <i>Transceiver</i>
Technology	: <i>RFID</i>
Environmental profile.....	: <i>Data transmissions</i>
Temperature range.....	: <i>-20°C to +55°C</i>
Antenna type	: <i>Patch</i>
Antenna Gain.....	: <i>2 dBi</i>
Comments:	
b) TRANSMITTER PARAMETERS (Tx)	
Frequency bands.....	: <i>902MHz to 928MHz</i>
RF Power.....	: <i>Not communicated</i>
Number of channels / Separation	: <i>50 channels / 500kHz</i>
Modulation type	: <i>FHSS</i>
Tested frequency.....	: <i>902.75MHz (Low Channel)</i> <i>915.25MHz (Mid Channel)</i> <i>927.25MHz (High Channel)</i>
c) RECEIVER PARAMETERS (Rx)	
Frequency bands.....	: <i>902MHz to 928MHz</i>
Category/Class	: <i>Not communicated</i>
Bandwidth.....	: <i>Not communicated</i>

4. RF EXPOSURE

Maximum EIRP = 3.52 mW (eirp) at 927.75 MHz (see test report RR-EVE-21C753-2A Ed.0)

In accordance with KDB 447498 D01 General RF Exposure Guidance v06:

$$PSD = EIRP / (4 * \pi * R^2) = 3.52 / (4 * \pi * (20 \text{ cm})^2) = 0.0007 \text{ mW/cm}^2$$

$$\text{Limit} = 0.618 \text{ mW/cm}^2 \text{ (f / 1500 if } 300 < f < 1500 \text{ MHz)}$$

In accordance with RSS-102, Issue 5, Section 2.5.1., as EIRP is lower than 16.13 mW at 927.75 MHz, SAR exemption for ISED can be considered for a distance ≤ 5 cm.

●●● End of test report ●●●