

RAPPORTO DI PROVA

TEST REPORT

Rif. / Ref. n.	MPETR_183732-1	Data Emissione /Issue Date:	22/11/2023	Pagine / Pages:	10
Scopo delle prove <i>Test object</i>	Prove di tipo in accordo alla Norma <i>Type test according to standards</i> FCC Cfr 47 part 2 - §2.1093				
Richiedente <i>Applicant</i>	PANINI S.p.A. Via Varallo 24b - 10153 Torino - Italy Phone: +39.011.8176011				
Marchio commerciale <i>Trade mark</i>					
Fabbricante <i>Manufacturer</i>	PANINI S.p.A.				
Prodotto <i>Product</i>	Identity Verification Platform				
Modello <i>Model</i>	BioCred				
Identificativo FCC <i>FCC ID</i>	2BCXDPN000001				
Data ricevimento campioni <i>Date of test samples receipt</i>	20/09/2023				
Campioni verificati <i>No. of tested samples</i>	1 – Sampled by the manufacturer				
Data verifiche <i>Testing date</i>	20/09/2023				
Sito di prova <i>Testing site</i>	PRSLAB S.r.l. Unipersonale - Via Campagna 92 - 22020 Faloppio - Como - Italy				
Testing site ID	IT0012				
Esito delle valutazioni <i>Assessment results</i>	CONFORME / COMPLIANT				
Verifiche effettuate da <i>Verifications carried out by</i>	Daniele AOSANI Tecnico Laboratorio <i>Laboratory Engineer</i>				
Approvato <i>Approved by</i>	Riccardo PFEIFFER Responsabile Laboratorio <i>Laboratory Manager</i>				

The test results reported in this test report shall refer only to the samples tested.

The sample has been provided by the customer and the results apply to the sample as received.

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PRS refuses any responsibility about information provided by the customer contained in this test report.

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0. RELEASE CONTROL RECORD

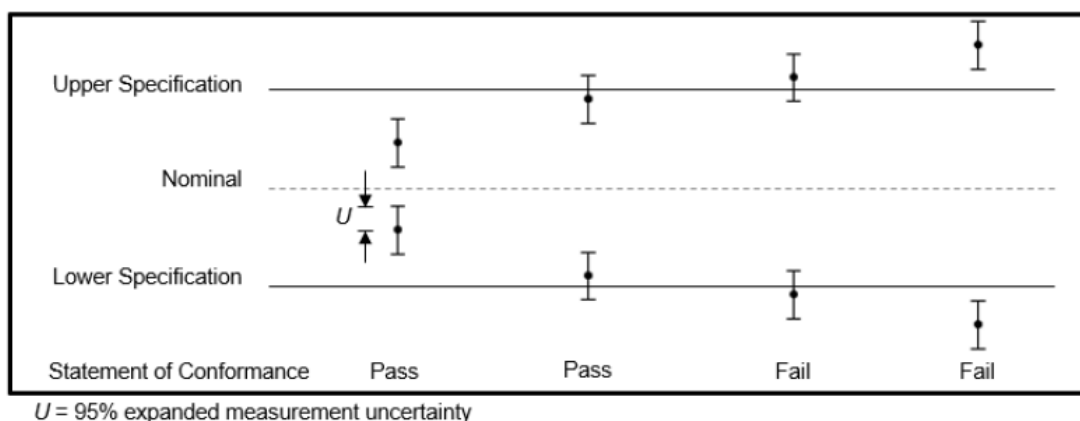
TEST REPORT NUMBER	REASON OF CHANGE	DATE OF ISSUE
MPETR_183732-0	Original release	13/11/2023
MPETR_183732-1	Edited product description	22/11/2023

This document is valid in last revision that deletes and replaces the previous one

1. DECISION RULE

PRS LAB specifies that, if the decision rules of conformity of the test results are not indicated in detail in the standard/s object of tests, it takes as a decision rule for the declaration of conformity the simple binary system ($w = 0$) stated in the ILAC-G8-09:2019 document.

The decision rule is applicable for all parts of standard



Statements of conformity are reported as:

- Pass: the measured value is below the acceptance limit, $AL=TL$.
- Fail: the measured value is above the acceptance limit, $AL=TL$.

Definitions

- Guard Band (w): interval between a tolerance limit and a corresponding acceptance limit where length $w=|TL-AL|$.
- Tolerance Limit (TL) (Specification Limit): specified upper or lower bound of permissible values of a property.
- Acceptance Limit (AL): specified upper or lower bound of permissible measured quantity values.

2. INFORMATION PROVIDED BY CUSTOMER

- n/a

3. GENERAL REMARKS

- n/a

4. TECHNICAL INFORMATION OF EQUIPMENT UNDER TEST (EUT)

4.1 EUT Identification

DESCRIPTION	Identity Verification Platform
MODEL NAME	BioCred
FCC ID	2BCXDPN000001
SERIAL NO.	717001026
PRS LAB INTERNAL REFERENCE	BC 272/2023 1/2
TRADEMARK	
MANUFACTURER	PANINI S.p.A.
COUNTRY OF MANUFACTURER	Italy
SINGLE UNIT OR SYSTEM	Single
SOFTWARE VERSION (Information provided by Customer)	N/A
HARDWARE VERSION (Information provided by Customer)	N/A
POWER SOURCE	AC/DC adapter (model QJ15WD-0550200DP) powered at 100-240V ~ 50-60Hz
SUPPLY VOLTAGE	5Vdc from AC/DC adapter
MAX POWER or MAX ABSORBED CURRENT	2A
OPERATING TEMPERATURE	0-40°C
DIMENSIONS	See photographic documentation
ENVIRONMENT CLASS	Class A
EUT STANDING	☐ WALL; ☐ CEILING; ☒ TABLE; ☐ FLOOR; ☒ RACK MOUNTED; ☐ BODY WORN; ☐ HANDELD; ☐ PORTABLE; ☐ MOBILE
HIGHEST INTERNAL FREQUENCY (Information provided by Customer)	☐ <108MHz; ☒ 108MHz<F<500MHz; ☐ 500MHz<F<1GHz; ☐ F>1GHz

4.2 RFID module technical data

ETS CATEGORY	Radio-Frequency Identification (RFID)
FREQUENCY RANGE	13.553-13.567MHz
OPERATING FREQUENCY	13.56MHz
TRANSMITTER MAX POWER	18.90dBμV/m Peak@30m distance
TYPE OF MODULATION	ASK
ANTENNA TYPE	Internal

4.3 Ports identification

	PORT	DESCRIPTION	CONNECTION	NOTES
☒	Enclosure	Plastic	Screw	---
☒	AC Power input	115V ~ 60Hz by AC/DC adapter	---	---
☐	DC Power input	Port not present	---	---
☒	Signal / Control port	USB	Type A	<3m
☒	Telecomm.port	LAN	RJ45	<3m
☐	Antenna port	☒ Internal; ☐ External	---	---

Note: During the tests all cables must be what provided the manufacturer or the same that used in the real employment of the EUT.

4.4 Modifications incorporated in E.U.T.

The following items are the modifications introduced in the equipment under test:

- None.

4.5 Auxiliary equipment

- Auxiliary laboratory laptop used to generate RFID carrier.

5. REFERENCE STANDARDS

CODE OF FEDERAL REGULATIONS	DESCRIPTION
Title 47 Part 15 Subpart C	Radio frequency devices - Intentional Radiators
Title 47 Part 15 Subpart C § 15.207	Radio frequency devices - Intentional Radiators Conducted Limits
Title 47 Part 15 Subpart C § 15.209	Radio frequency devices - Intentional Radiators Radiated emission limits; general requirements.
Title 47 Part 15 Subpart C § 15.225	Radio frequency devices - Intentional Radiators Operation within the band 13.110-14.010MHz.
ANSI C63.4: 2014	American National Standard for Methods of Measuring of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz – 40 GHz
ANSI C63.10:2013	American National Standard for Testing Unlicensed Wireless Devices

6. MEASUREMENTS AND CALCULATION RESULTS

6.1 Maximum Permissible Exposure - Limit

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f ²)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ; *Plane-wave equivalent power density

6.2 Maximum Permissible Exposure – MPE Calculation Method

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

E = Electric field (V/m)

P = RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$

6.3 Calculation method, results and limits

Radio	Frequency	E-Field	EIRP	EIRP	Distance	Power Density	Limit
	MHz	dBuV/m	dBm	mW	cm	mW/cm ²	mW/cm ²
RFID	13.56	58.9	-36.3	0.00237	20	0.0000003	0.9789334

PASS

END OF TEST REPORT