PRS LAB S.r.l. Unipersonale
Sede operativa e Laboratori di prova
Headquarter and Testing lab
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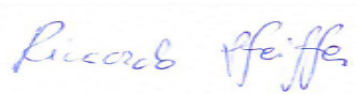
RAPPORTO DI PROVA

TEST REPORT

Rif. / Ref. n.	**MPETR_182885-1**	Data Emissione /Issue Date:	**17/07/2023**	Pagine / Pages:	**11**

Scopo delle prove *Test object*	Prove di tipo in accordo alla Norma *Type test according to standards* **FCC Cfr 47 part 2 - §2.1093**
Richiedente *Applicant*	**DATALOGIC S.r.l.** Via S. Vitalino 13 - 40012 Lippo Di Calderara Di Reno - Bologna - Italy Phone. +39 051 3147196 Fax +39 051 3147561
Marchio commerciale *Trade mark*	DATALOGIC™
Fabbricante *Manufacturer*	DATALOGIC S.r.l.
Prodotto *Product*	Base charger station
Modello *Model*	**JOYA TOUCH 3-SLOT CRADLE**
Identificativo FCC *FCC ID*	**U4G-JNG3SD**
Data ricevimento campioni *Date of test samples receipt*	23/06/2022
Campioni verificati *No. of tested samples*	1 – Sampled by the manufacturer
Data verifiche *Testing date*	From 15/03/2023 to 16/03/2023
Sito di prova *Testing site*	PRSLAB S.r.l. Unipersonale - Via Campagna 92 - 22020 Faloppio - Como - Italy
Esito delle valutazioni *Assessment results*	**CONFORME / COMPLIANT**

Verifiche effettuate da *Verifications carried out by*	**Daniele AOSANI** Tecnico Laboratorio *Laboratory Engineer*	
Approvato *Approved by*	**Riccardo PFEIFFER** Responsabile Laboratorio *Laboratory Manager*	

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.
This report may not be partially reproduced, except with the prior written permission of the issuing Laboratory.
PRS refuses any responsibility about information provided by the customer contained in this test report.

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0. RELEASE CONTROL RECORD

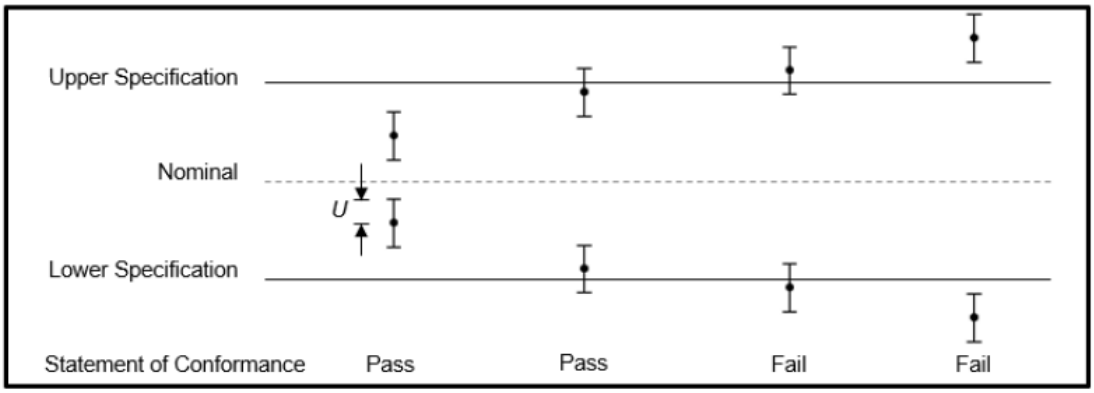
TEST REPORT NUMBER	REASON OF CHANGE	DATE OF ISSUE
MPETR_182885-0	Original release	17/03/2023
MPETR_182885-1	Added simultaneous transmission evaluation	17/07/2023

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



U = 95% expanded measurement uncertainty

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

- The manufacturer DATALOGIC S.r.l. declares, in the document ***"JT_3SC - M1_3SC_alt_IC letter.pdf"*** issue on 01.07.2022, the differences between the previous version of the product and the one tested in this report. The difference lies in the change of the IC controller due to the shortage of the components.

- According to Manufacturer declaration, the tested model is the most representative and the most complex. The differences between the tested one and his variants are described in the table above and are declared by Manufacturer.

Differences between versions declared by manufacturer		
Tested model	**JOYA TOUCH 3-SLOT CRADLE**	The difference between your product versions is in the trade name and color, the tested product is white and the black color variant. The electronic parts are the same for both versions.
Variant	**MEMOR 1 3-SLOT CRADLE**	

3. GENERAL REMARKS

- Tests were performed using 3 identical WPT clients model **JOYA TOUCH A22.**

4. TECHNICAL INFORMATION OF EQUIPMENT UNDER TEST (EUT)

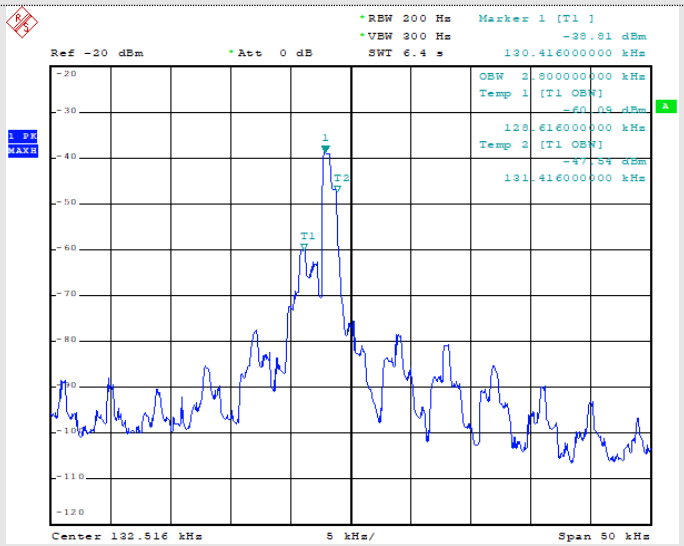
4.1 EUT Identification

DESCRIPTION	Base charger station
MODEL NAME	JOYA TOUCH 3-SLOT CRADLE
FCC ID	U4G-JNG3SD
SERIAL NO.	G22EB98789
PART NO.	91ACC0043
PRS LAB INTERNAL REFERENCE	BC 196/2022 1/1
TRADEMARK	DATALOGIC™
MANUFACTURER	DATALOGIC S.r.l.
COUNTRY OF MANUFACTURER	Vietnam
SINGLE UNIT OR SYSTEM	Single
SOFTWARE VERSION (Information provided by Customer)	2.1.4
HARDWARE VERSION (Information provided by Customer)	DVT
POWER SOURCE	AC/DC adapter (model **EA10681U-120**) powered at 100-240V ~ 50-60Hz
SUPPLY VOLTAGE	12Vdc from AC/DC adapter
MAX POWER or MAX ABSORBED CURRENT	Max 5A
OPERATING TEMPERATURE	0°C ÷ +50°C
DIMENSIONS	See photographic documentation
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

4.1 RFID module technical data

ETS CATEGORY	Radio-Frequency Identification (RFID)
FREQUENCY RANGE	13.553-13.567MHz
OPERATING FREQUENCY	13.56MHz
TRANSMITTER MAX POWER	26.73dBµV/m Peak@30m distance
TYPE OF MODULATION	ASK
ANTENNA TYPE	Internal

4.2 WPT module technical data

CHIP MANUFACTURER	TEXAS INSTRUMENTS
CHIP MODEL	**BQ501210**
ETS CATEGORY	Wireless Power Transmission (WPT)
FREQUENCY RANGE	100-148 kHz f. band
TRANSMITTER MAX POWER	10W
TYPE OF MODULATION	FSK/ASK
ANTENNA TYPE	Internal
MEASURED 99% BW	 99%BW = 2.80kHz

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	Port not present	---	---
☐	Telecomm.port	Port not present	---	---
☐	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

- None.

5. REFERENCE STANDARDS

REFERENCE STANDARD	DESCRIPTION
Title 47 Part 1 Subpart I § 1.1310	Procedures Implementing the National Environmental Policy Act of 1969. Radiofrequency radiation exposure limits.
Title 47 Part 2 Subpart J § 2.1091	Radiofrequency radiation exposure evaluation: mobile devices.
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
FCC KDB 447498 D01	General RF Exposure Guidance v06

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/ cm²)	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/ cm²)	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:

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

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

Configuration #1							
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	65.23	-30	0.001	20	0.0000002	0.9789334
WPT	0.13	3.91	-	-	20	0.000000065	

6.4 Result

Radio	Power Density	Limit	PD/Limit
	mW/cm^2	mW/cm^2	
RFID	0.0000002	0.9789334	0.0000002
WPT	0.000000065	1,0	0.000000065
		∑=	0.0000003

∑<1 → PASS

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END OF TEST REPORT