
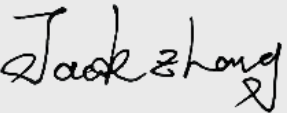




Test report No:
2320418R-RF-US-P20V01

SAR Exemption Evaluation Report

Product Name	Electronic stamp
Trademark	BYSTAMP
FCC ID	2A998-KY2CB3
Model and /or type reference	KEYMO
Applicant's name / address	BYSTAMP SAS 3 RUE LOUIS DE BROGLIE, 56000 VANNES, FRANCE Province
Test method requested, standard	FCC 47CFR §2.1091
Verdict Summary	IN COMPLIANCE
Documented By (name / position & signature)	Tim Cao/Project Manager 
Approved by (name / position & signature)	Jack Zhang/ Manager 
Date of issue	2023-04-25
Report template No	Template_FCC-MPE-RF-V1.0

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COMPETENCES AND GUARANTEES

DEKRA is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

IMPORTANT: No parts of this report may be reproduced or quoted out of context, in any form or by any means, except in full, without the previous written permission of DEKRA.

GENERAL CONDITIONS

Test Location	No. 99, Hongye Road, Suzhou Industrial Park Suzhou, 215006, P.R. China
Date(receive sample)	Feb. 14, 2023
Date (start test)	Feb. 16, 2023
Date (finish test)	Mar. 2, 2023

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or Competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA.

ENVIRONMENTAL CONDITIONS

The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment. The climatic conditions during the tests were within the following limits:

Ambient temperature	15 °C – 35 °C
Relative Humidity air	30% - 60%

If explicitly required in the basic standard or applied product / product family standard the climatic values are recorded and documented separately in this test report.

POSSIBLE TEST CASE VERDICTS

Test case does not apply to test object	N/A
Test object does meet requirement	P (Pass) / PASS
Test object does not meet requirement	F (Fail) / FAIL
Not measured	N/M

ABBREVIATIONS

For the purposes of the present document, the following abbreviations apply:

EUT	: Equipment Under Test
QP	: Quasi-Peak
CAV	: CISPR Average
AV	: Average
CDN	: Coupling Decoupling Network
SAC	: Semi-Anechoic Chamber
OATS	: Open Area Test Site
BW	: Bandwidth
AM	: Amplitude Modulation
PM	: Pulse Modulation
HCP	: Horizontal Coupling Plane
VCP	: Vertical Coupling Plane
U_N	: Nominal voltage
T_x	: Transmitter
R_x	: Receiver
N/A	: Not Applicable
N/M	: Not Measured

DOCUMENT HISTORY

Report No.	Version	Description	Issued Date
2320418R-RF-US-P20V01	V1.0	Initial issue of report.	2023-04-25

REMARKS AND COMMENTS

1. The equipment under test (EUT) does meet the essential requirements of the stated standard(s)/test(s).
2. These test results on a sample of the device are for the purpose of demonstrating Compliance with FCC47CFR Part2.1091
3. The measurement result is considered in conformance with the requirement if it is within the prescribed limit, It is not necessary to account the uncertainty associated with the measurement result.
4. The test results relate only to the samples tested.
5. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification (Suzhou) Co., Ltd.
6. This report will not be used for social proof function in China market.
7. DEKRA declines any responsibility with the following test data provided by customer that may affect the validity of result:
 - Chapter 1.1 General Description of the Item(s);
 - Chapter 1.2 Antenna Informaion;

1.1 General Description of the Item(s)

Product Name..... :	Electronic stamp
Model No. :	KEYMO
FCC ID :	2A998-KY2CB3
Hardware Version :	2.0 Rev. C
Software Version :	1.16
Manufacturer :	BYSTAMP SAS
Manufacturer address :	3 RUE LOUIS DE BROGLIE, 56000 VANNES, FRANCE

Wireless specification :	BLE
Operating frequency range(s)..... :	2400~2483.5MHz
Type of Modulation :	LE 1M/2M
PHYs :	<input checked="" type="checkbox"/> LE 1M <input checked="" type="checkbox"/> LE 2M <input type="checkbox"/> LE Coded S=2/8
Data Rate :	<input checked="" type="checkbox"/> 1Mbit/s <input checked="" type="checkbox"/> 2Mbit/s <input type="checkbox"/> 500/125 Kbit/s
Number of channel..... :	40

Rated power supply :	Voltage and Frequency	
	<input type="checkbox"/>	AC: 220 – 240 V, 50/60 Hz
	<input type="checkbox"/>	AC: 110 – 130 Vac, 50/60 Hz
	<input checked="" type="checkbox"/>	Battery: 1.5V
	<input type="checkbox"/>	Adapter: Input: 100-240V,50/60H, 0.3A Output:5V,2A ,10W
Mounting position..... :	<input type="checkbox"/>	Table top equipment
	<input type="checkbox"/>	Wall/Ceiling mounted equipment
	<input type="checkbox"/>	Floor standing equipment
	<input checked="" type="checkbox"/>	Hand-held equipment
	<input type="checkbox"/>	Other: Watch

1.2 Antenna Information

Antenna model / type number	N/A		
Antenna serial number	N/A		
Antenna Delivery	<input checked="" type="checkbox"/>	1TX + 1RX	
	<input type="checkbox"/>	2TX + 2RX	
	<input type="checkbox"/>	Others:.....	
Antenna technology	<input checked="" type="checkbox"/>	SISO	
	<input type="checkbox"/>	MIMO	<input type="checkbox"/> CDD
			<input type="checkbox"/> Beam-forming
Antenna Type	<input type="checkbox"/>	External	<input type="checkbox"/> Dipole
			<input type="checkbox"/> Sectorized
	<input checked="" type="checkbox"/>	Internal	<input checked="" type="checkbox"/> Ceramic Chip
			<input type="checkbox"/> PCB
			<input type="checkbox"/> Metal Monopole Antenna
			<input type="checkbox"/> Ceramic chip
			<input type="checkbox"/> Others:.....
Antenna Gain.....	2.4dBi		

Note: The General Description of the Item and antenna information are provided and confirmed by the client.

2. RF Exposure Evaluation

2.1. Limits

According to § 1.1307(b)(3)(i)(A)

The available maximum time-averaged power is no more than 1 mW, regardless of separation distance. This exemption may not be used in conjunction with other exemption criteria other than those in paragraph (b)(3)(ii)(A) of this section. Medical implant devices may only use this exemption and that in paragraph (b)(3)(ii)(A);

§ 1.1307(b)(3)(ii)(A)

The available maximum time-averaged power of each source is no more than 1 mW and there is a separation distance of two centimeters between any portion of a radiating structure operating and the nearest portion of any other radiating structure in the same device, except if the sum of multiple sources is less than 1 mW during the time-averaging period, in which case they may be treated as a single source (separation is not required). This exemption may not be used in conjunction with other exemption criteria other than those in paragraph (b)(3)(i)(A) of this section. Medical implant devices may only use this exemption and that in paragraph (b)(3)(i)(A)

2.2. Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

The temperature and related humidity: 18°C and 78% RH.

2.3. Test Result of RF Exposure Evaluation

Product	:	Motion Controller
Test Item	:	RF Exposure Evaluation
Test Site	:	AC-6

The tune-up tolerance is 0.5 dB, the maximum conducted power we used to calculate RF exposure is -5.94dBm.

Frequency Range (MHz)	Pmax (dBm)	Maximum Antenna Gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP (mW)	Limit (mW)	Verdict
2400~2483.5	-5.94	2.4	-3.54	-5.69	0.27	1	SAR test not required

$ERP = EIRP - 2.15 \text{ dBm}$

$EIRP = P_{\text{Conducted}} + \text{Antenna Gain}$

Conclusion: 2.4GHz SAR was not required.

_____ The End _____