

Test Report

Verified code: 971181

Report No.: E20230717807601-5

Customer: Faurecia Clarion Electronics (Xiamen) Co., Ltd.

Address: 6F, No. 40, Guanri Road, Software Park Stage II, Xiamen City, Fujian Province, P.R. China

Sample Name: RN WCBS

Sample Model: Z0003NI

Receive Sample Date: Jul. 25, 2023

Test Date: Aug. 31, 2023 ~ Aug. 31, 2023

Reference Document: CFR 47, FCC Part 2: Subpart J Section 2.1091

Test Result: Pass

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GRG METROLOGY & TEST GROUP CO., LTD.

Issued Date: 2023-10-26

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REPORT ISSUED HISTORY

Report Version	Report No.	Description	Compile Date
1.0	E20230717807601-5	Original Issue	2023-10-25

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1. GENERAL DESCRIPTION OF EUT

1.1 APPLICANT

Name: Faurecia Clarion Electronics (Xiamen) Co., Ltd.

Address: 6F, No. 40, Guanri Road, Software Park Stage II, Xiamen City, Fujian Province, P.R. China

1.2 MANUFACTURER

Name: Faurecia Clarion Electronics (Xiamen) Co., Ltd.

Address: 6F, No. 40, Guanri Road, Software Park Stage II, Xiamen City, Fujian Province, P.R. China

1.3 FACTORY

Name 1: Faurecia Clarion Electronics (Fengcheng) Co. Ltd.

Address 1: No. 12 High-Tech Road, Fengcheng High Technology Industry Park, Yi chun City, Jiangxi Province, P.R. China.

Name 2: ELECTRÓNICA CLARION, S.A. DE C.V.

Address 2: Av. Nueve Oriente No. 3, Col. Zona Industrial Valle de Oro. 76803 – San Juan del Río (Mexico)

1.4 BASIC DESCRIPTION OF EQUIPMENT UNDER TEST

Product Name: RN WCBS

Product Model: Z0003NI

Adding Model: /

Model Difference: /

Trade Name:



Power Supply: DC 9V-16V by battery, typical voltage DC 12V, Rating current $\leq 2.54A$

Frequency Band: 13.56MHz for NFC

FCC ID: WY2Z0003NI

Antenna Type: Coil Antenna for NFC

Modulation type: ASK for NFC

Sample submitting way: ☒ Provided by customer ☐ Sampling

Sample No: E20230717807601-0001

Temperature Range: -30°C ~ +60°C

Hardware version: 285J95096R

Software version: 283H57049R

Note:

The basic description of the EUT is provided by the applicant. This report is made Solely on the basis of such data and/or information. We accept no responsibility for the authenticity and completeness of the above data and information and the validity of the results and/or conclusions.

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2. LABORATORY AND MEASUREMENT UNCERTAINTY

2.1 LABORATORY

The tests & measurements refer to this report were performed by Shenzhen EMC Laboratory of GRG METROLOGY & TEST group CO., LTD.

Add : No.1301 Guanguang Road Xinlan Community, Guanlan Street, Longhua District
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3. TECHNICAL REQUIREMENTS SPECIFICATION

3.1 TEST LIMIT

According to the KDB 447498 D04 Interim General RF Exposure Guidance v01, General frequency and separation-distance dependent MPE-based effective radiated power (ERP) thresholds are in Table 4.1 to support an exemption from further evaluation from 300 kHz through 100 GHz.

TABLE 4.1—THRESHOLDS FOR SINGLE RF SOURCES SUBJECT TO ROUTINE ENVIRONMENTAL EVALUATION

RF Source Frequency			Minimum Distance			Threshold ERP
f_L MHz		f_H MHz	$\lambda_L / 2\pi$		$\lambda_H / 2\pi$	W
0.3	–	1.34	159 m	–	35.6 m	$1,920 R^2$
1.34	–	30	35.6 m	–	1.6 m	$3,450 R^2/f^2$
30	–	300	1.6 m	–	159 mm	$3.83 R^2$
300	–	1,500	159 mm	–	31.8 mm	$0.0128 R^2 f$
1,500	–	100,000	31.8 mm	–	0.5 mm	$19.2 R^2$
Subscripts L and H are low and high; λ is wavelength. From § 1.1307(b)(3)(i)(C), modified by adding Minimum Distance columns.						

For mobile devices that are not exempt per Table 4.1 at distances from 20 cm to 40 cm and in 0.3 GHz to 6 GHz, evaluation of compliance with the exposure limits in §1.1310 is necessary if the ERP of the device is greater than $ERP_{20\text{cm}}$ in Formula (4.1).

$$P_{\text{th}} (\text{mW}) = ERP_{20\text{ cm}} (\text{mW}) = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases} \quad (4.1)$$

In accordance with KDB447498 D04 Either SAR-based or MPE-based exemption may be considered for test exemption for fixed, mobile, or portable device exposure conditions; therefore, the contributions from each exemption in conjunction with the measured SAR (Evaluated_k term) shall be used to determine exemption for simultaneous transmission according to Formula

$$\text{MPE Ratio} = \sum_{j=1}^b \frac{ERP_j}{ERP_{\text{th},j}} < 1$$

ERP_j : the available maximum time-averaged power or the ERP, whichever is greater, of fixed, mobile, or portable RF source j .

$ERP_{\text{th},j}$: exemption threshold ERP for fixed, mobile, or portable RF source j , at a distance of at least $\lambda/2\pi$, according to the applicable § 1.1307(b)(3)(i)(C) Table 1 formula at the location in question.

the sum of the ratios of the applicable terms for SAR-based, MPE-based and measured SAR or MPE shall be less than 1, to determine simultaneous transmission exposure compliance.

Test Exemption Per § 1.1307(b)(3)(i)(A), a single RF source is exempt RF device (from the requirement to show data demonstrating compliance to RF exposure limits, as previously mentioned) if the available maximum time-averaged power is no more than 1 mW, regardless of separation distance. This exemption applies to all operating configurations and exposure conditions, for the frequency range 100 kHz to 100 GHz, regardless of fixed, mobile, or portable device exposure conditions. This is a standalone exemption, and it cannot be applied in conjunction with any other test exemption.

3.2 TEST RESULT

Frequency Band	Antenna type	Maximum antenna gain
13.56MHz	Coil antenna	-35.66dBi

Maximum E-Field at 3m (dB μ V/m)	Output power (dBm)	Output power (mW)	Limit (mW)
44.67	-50.56	8.79E-6	1

Note:

1. $EIRP = E(dB\mu V/m) @ 3m + 20\log(d) - 104.77 = 44.67 + 20\log(3) - 104.77 = -50.56dBm$;
2. $mW = 10^{(EIRP/10)} = 10^{(-50.56/10)} = 8.79E-6mW$;
3. The EUT antenna gain is provided by the applicant. This report is made solely on the basis of such data and/or information. We accept no responsibility for the authenticity and completeness of the above data and information and the validity of the results and/or conclusions.
4. The Maximum E-Field please refer to the report E20230717807601-3.
The output power is less than 1mw, the measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

4. PHOTOGRAPHS OF THE EUT

Please refer to the attached document E20230717807601-11 EUT photo.

----- End of Report -----