

# TEST REPORT

<b>Application No.:</b>	SUCR2411000446MO
<b>Applicant:</b>	Marquardt GmbH
<b>Address of Applicant:</b>	Schloss-Straße 16, 78604 Rietheim-Weilheim, Germany
<b>Manufacturer:</b>	Marquardt México, S. DE R.L. DE C.V
<b>Address of Manufacturer:</b>	Río Turia No. 505, Parque Industrial Castro del Río, 36814 Irapuato, Guanajuato, Mexico
<b>EUT Description:</b>	NFC Reader Center Console
<b>Model No.:</b>	UR1
<b>Trade Mark:</b>	Marquardt
<b>FCC ID:</b>	IYZUR1
<b>Standards:</b>	FCC 47 CFR Part 1.1307 FCC 47 CFR Part 1.1310 FCC KDB 447498 D01 v06
<b>Date of Receipt:</b>	October 29, 2024
<b>Date of Issue:</b>	November 28, 2024

<b>Test Result:</b>	<b>PASS*</b>
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\* In the configuration tested, the EUT complied with the standards specified above.

Prepared by: Hayley Zhang/ Project Manager

Approved by : Cloud Peng/ Technical Manager

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## 1 Version

**Revision Record**

Version	Chapter	Date	Modifier	Remark
01		November 28, 2024		Original

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## 2 General Information

### 2.1 Client Information

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Manufacturer:	Marquardt México, S. DE R.L. DE C.V
Address of Manufacturer:	Río Turia No. 505, Parque Industrial Castro del Río, 36814 Irapuato, Guanajuato, Mexico

### 2.2 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **A2LA (Certificate No. 6336.01)**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 6336.01.

- **Innovation, Science and Economic Development Canada**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0120.

IC#: 27594.

- **FCC –Designation Number: CN1312**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized as an accredited testing laboratory.

Designation Number: CN1312.

Test Firm Registration Number: 717327

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## 2.3 General Description of EUT

EUT Description:	NFC Reader Center Console
Model No.:	UR1
Trade Mark:	Marquardt
Hardware Version:	24.08.01
Software Version:	2.22.1
Power Supply:	12V
Operation Frequency:	13.56MHz
Modulation Type:	ASK
Antenna Type:	PCB Antenna
Remark:	As above information is provided and confirmed by the applicant. SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.

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### 3 RF Exposure Evaluation

#### 3.1 RF Exposure Compliance Requirement

##### 3.1.1 Limits

Based on KDB447498D01v06 4.3.1 c), SAR test exclusion threshold for NFC (13.56MHz) shall be evaluated as below,

For test separation distances  $\leq$  50 mm, the power threshold determined by the equation in 4.3.1 c) 1) for 50 mm and 100 MHz is multiplied by  $\frac{1}{2}$

The power threshold at 50mm/100 MHz in 4.3.1 b) is multiplied by  $[1 + \log(100/f(\text{MHz}))]$  where f is 13.56MHz

The power threshold in 4.3.1 b) is  $[\text{Power allowed at numeric threshold for 50 mm in 4.3.1 a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot (f(\text{MHz})/150)] \text{ mW}$ , for 100 MHz to 1500 MHz where test separation distance is 50mm, frequency is 100MHz.

Power allowed at numeric threshold for 50 mm in 4.3.1 a) is  $[3/\sqrt{f(\text{GHz})}] \cdot (\text{test separation distance})$

Hence, SAR test exclusion threshold is calculated in reverse sequence:

a):  $[3/\sqrt{0.1}] \cdot 50 = 474.3416 \text{ mW}$

b):  $474.3416 + (50-50) \cdot (100/150) = 474.3416 \text{ mW}$

c):  $474.3416 \cdot [1 + \log(100/13.56)] = 885.9470 \text{ mW}$

d):  $885.9470 \cdot 0.5 = 442.974 \text{ mW}$

So the SAR test exclusion power threshold for NFC(13.56MHz) is 442.974mW(equal to 26.464dBm).

##### 3.1.2 Test Result

Also, the maximum power of NFC is -20.8dBm (converted from 74.40 dBuV/m at 3m) and it is far below the exclusion threshold (26.464dBm), so SAR test for NFC can be excluded.

---End of Report---

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