



中认信通
CHINA CERTIFICATION ICT CO., LTD (DONGGUAN)



RF EXPOSURE EVALUATION

Applicant: Ingenico Inc.

Address: 101 Federal St, Suite 700, 7th flr, Boston, MA 02110 United States

FCC ID: 2ABY6-MOB55CL3

Product Name: Mobile Payment Terminal

**Standard(s): 47 CFR §1.1310, 47 CFR §2.1093
447498 D01 General RF Exposure Guidance v06**

The above equipment has been tested and found compliant with the requirement of the relative standards by China Certification ICT Co., Ltd (Dongguan)

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Test Facility

The Test site used by China Certification ICT Co., Ltd (Dongguan) to collect test data is located on the No. 113, Pingkang Road, Dalang Town, Dongguan, Guangdong, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 442868, the FCC Designation No. : CN1314.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0123.

Declarations

China Certification ICT Co., Ltd (Dongguan) is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol “▲”. Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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CONTENTS

TEST FACILITY	2
DECLARATIONS.....	2
DOCUMENT REVISION HISTORY	4
FCC§1.1310 & §2.1093- RF Exposure	5
1.1 APPLICABLE STANDARD.....	5
1.2 EUT INFORMATION▲:.....	5
1.3 MEASUREMENT RESULT	6

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	CR230529072-00E	Original Report	2023/7/5
2.0	CR230529072-00EM1	Update RF Exposure	2023/7/10

FCC§1.1310 & §2.1093- RF Exposure

1.1 Applicable Standard

According to subpart §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to KDB447498 D01 General RF Exposure Guidance v06:

- a) For 100 MHz to 6 GHz and *test separation distances* ≤ 50 mm, the 1-g and 10-g SAR *test exclusion thresholds* are determined by the following:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

- $f(\text{GHz})$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

- c) For frequencies below 100 MHz, the following may be considered for SAR test exclusion (also illustrated in Appendix C):

- 1) For *test separation distances* > 50 mm and < 200 mm, the power threshold at the corresponding test separation distance at 100 MHz in step b) is multiplied by $[1 + \log(100/f_{(\text{MHz})})]$
- 2) For *test separation distances* ≤ 50 mm, the power threshold determined by the equation in c) 1) for 50 mm and 100 MHz is multiplied by $\frac{1}{2}$
- 3) SAR measurement procedures are not established below 100 MHz

1.2 EUT Information ▲ :

Operation Modes	Operation Frequency (MHz)	Max Conducted output power including Tune-up Tolerance (dBm)	Maximum Antenna Gain (dBi)
Bluetooth BDR/EDR	2402-2480	3.5	-1.27
Bluetooth LE	2402-2480	7	-1.27
NFC	13.56	-32.52	/

Note:

For Bluetooth BDR/EDR/LE modes, the above parameters were provided by the manufacturer.
For NFC, field strength is $62.68 \mu\text{V/m}$ @ 3m = -32.52 dBm(0.0006mW) EIRP, which was used for RF exposure calculation.

$E[\text{dB}\mu\text{V/m}] = \text{EIRP} [\text{dBm}] + 95.2$ for $d = 3$ m.

1.3 Measurement Result

For bluetooth(BDR/EDR/LE):

The max conducted power including tune-up tolerance is 7.5 dBm (5.62 mW).
[(max. power of channel, mW)/(min. test separation distance, mm)][$\sqrt{f(\text{GHz})}$]
 $= 5.62/5 * (\sqrt{2.480}) = 1.77 < 3.0$

For NFC:

SAR test exclusion threshold for NFC(13.56MHz) separation distance < 50m

$$= [474 * (1 + \log(100/f_{\text{MHz}}))] / 2$$

$$= 443 \text{mW}$$

$$> 0.0006 \text{mW}$$

Note: No need Simultaneous Transmission evaluation, considering the NFC RF exposure result is far below the threshold.

===== END OF REPORT =====