

Groenlo, 28 September 2016

Declaration on radiation safety standard conformance

Return address: PO Box 6, 7140 AA Groenlo, The Netherlands

American Certification Body
Certification Department
6731 Whittier Avenue, Suite C110
McLean, Virginia 22101
USA

To whom it may concern

Description : Reader for 120 kHz and 13.56 MHz cards and also NFC, QR and BT
FCC ID : CGDMACER1
Manufacturer : N.V. Nederlandsche Apparatenfabriek "Nedap"
Brand : Nedap
Model : MACE READER MM and MACE READER MM QR
Antennae : PCB Integrated inductive loop antennae

The MACE READER MM and MACE READER MM QR (also) contain a Bluetooth module model: RN4020 by Microchip, FCC ID: T9JRN4020 with a RF output power of max 8.44 dBm (7 mW). The antenna of the Bluetooth module has a peak gain of 0 dBi.

REPORT NO: 14U17191-1
FCC ID: T9JRN4020

DATE: MARCH 21, 2014
IC: 6514A-RN4020

7.4. OUTPUT POWER

LIMITS

FCC §15.247 (b)

IC RSS-210 A8.4

The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

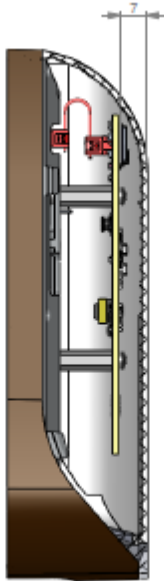
RESULTS

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2402	7.89	30	-22.110
Middle	2442	8.27	30	-21.730
High	2480	8.44	30	-21.560

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SECTION A-A

The enclosure of the MACE READER MM and MACE READER MM QR provides a guaranteed minimum separation distance of 7 mm between the antenna/radiating element and the user.

According to 447498 D01 General RF Exposure Guidance v06, section 4.3.1 a) the SAR exclusion threshold is determined as follows:

$$\frac{[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})]}{\sqrt{f_{\text{(GHz)}}}} \leq 3.0$$

$$[(7 \text{ mW}) / (7 \text{ mm})] \times \sqrt{f_{\text{(2.480 GHz)}}} \leq 3.0$$

$$[(7 \text{ mW}) / (7 \text{ mm})] \times \sqrt{f_{\text{(2.480 GHz)}}} \leq 3.0$$

$$1 \times 1.57 \leq 3.0$$

$$1.57 \leq 3.0$$

$$1.6 \leq 3.0$$

According to 447498 D01 General RF Exposure Guidance v06, section 4.3.1 a) the MACE READER MM and MACE READER MM QR are exempt from standalone SAR testing.

N.V. Nederlandsche Apparatenfabriek "Nedap"



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