electronic GmbH

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Prüfbericht / Test report

FCC
(Federal Communications Commission)
Test-Firm-Registration-Number: 90870

IC
(Industry Canada)
Company-Number: 6155A
Test site number 6155A-1

SAR

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Prüfbericht Nr./ Test report no.: **14/01-0047**

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1. CLIENT INFORMATION:

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2. EQUIPMENT UNDER TEST (EUT):

2.1 Identification of the EUT

Equipment:	ILR Mobile Reader
Model:	i-Port-USB-BT
Brand name:	-/-
Serial no.:	14031U0004
Manufacturer:	IDENTEC SOLUTIONS AG
Country of origin:	Austria
Rating:	Operated with rechargeable battery, charging with 9 – 24 V DC, 50 mA or by USB.

2.2 Additional information about the EUT:	Included Bluetooth module which is already certified (modular certification) with FCC ID: X3ZBTMOD5 and IC: 8828A-MOD4. The EUT is working on the frequencies: 919 MHz Broadcast (only reception) 920 MHz- Communication (transmitting/receiving of data), Frequency deviation ± 64 kHz @ 115200 bit/s 921 MHz- Wakeup (transmitting/receiving), Frequency deviation ± 20 kHz @ 19200 bit/s

3. SAR

3.1 SAR test exclusion threshold

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* ≤ 50 mm are determined by:
[(*max. power of channel, including tune-up tolerance, mW*)/(*min. test separation distance, mm*)] x [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where
• f(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 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 (447498 D01 General RF Exposure Guidance v05r02) is applied to determine SAR test exclusion.

Using following parameters:

		certified Bluetooth module:
f:	**921 MHz**	**2483.5 MHz**
max. channel power:	**1 mW (including tolerance)**	**1.2 mW (including max. antenna gain)**
separation distance: handheld	**5 mm (worst case)**	**5 mm**
exclusion threshold:	**1/5 x 0.95 = 0.2**	**1.2/5 x 1.58 = 0.4**

With the above mentioned values we get a total value of the numeric threshold of

0.6

which is far below 3 (1-g SAR) and 7.5 (10-g SAR) and the EUT is therefor excluded from SAR.

Applied standards/documents
447498 D01 General RF Exposure Guidance v05r02

3.2 SAR Evaluation

All transmitters are exempt from routine SAR and RF exposure evaluations provided that they comply with the requirements of sections 2.5.1 or 2.5.2 of RSS-102 issue 5.

SAR evaluation is required if the separation distance between the user and/or bystander and the antenna and/or radiating element of the device is less than or equal to 20 cm, except when the device operates at or below the applicable output power level (adjusted for tune-up tolerance) for the specified separation distance defined in Table 1.

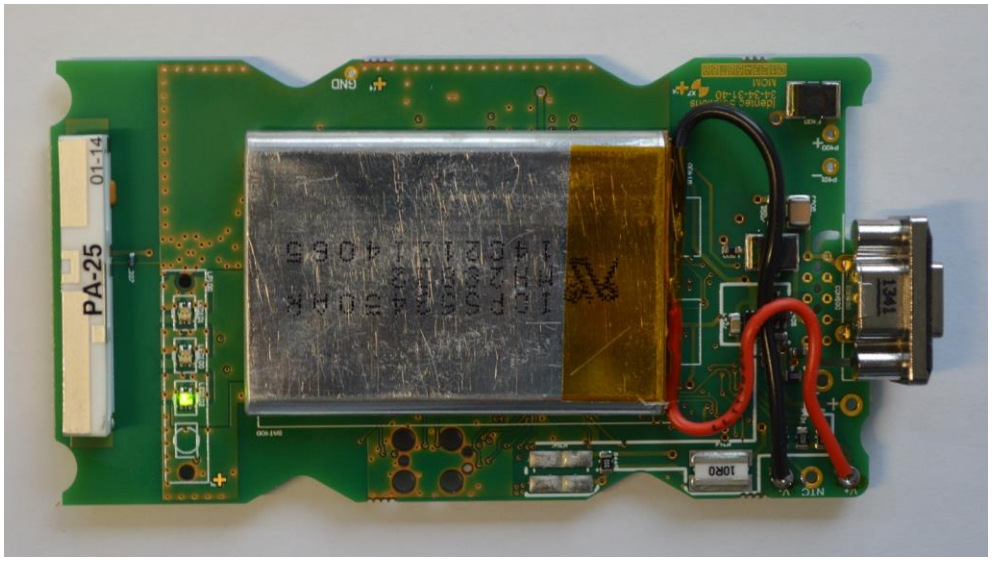
Using following parameters for evaluation:

		certified Bluetooth module:
f:	**921 MHz**	**2483.5 MHz**
max. channel power:	**1 mW (including tolerance)**	**1.2 mW (including max. antenna gain)**
separation distance: handheld	**5 mm (worst case)**	**5 mm**
Exemption limit:	**16.2 mW**	**3.9 mW**

The EUT is exempted from the routine SAR, since the max. power is below the Exemption limit according to Table 1 of RSS-102 issue 5.

Applied standards/documents
RSS-102 issue 5, section 2.5.1

4. Photos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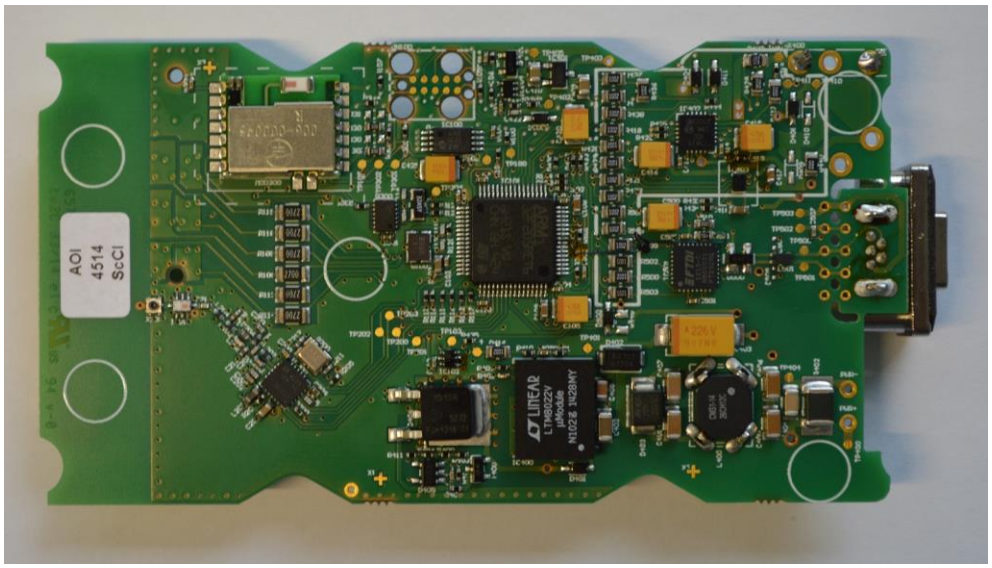
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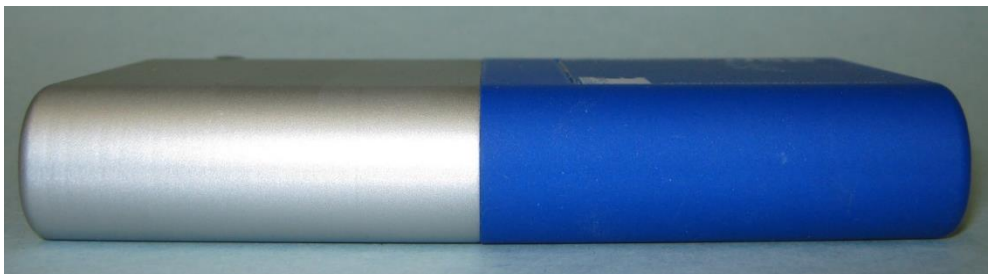

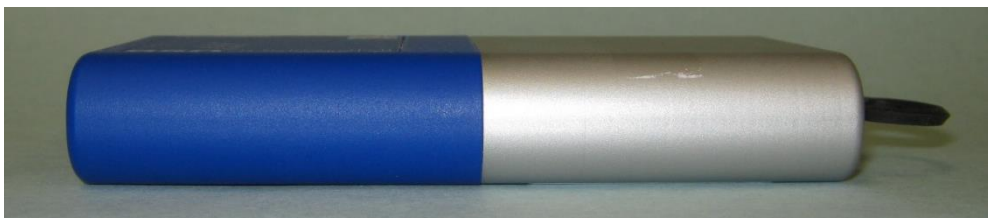

End of test report