

Manufacturer Planmeca Oy
Device RFID reader unit, model: PlanID
FCC ID: YIIPID002, IC ID: 9050A-PID002
Test Specification EN 62311:2008
Report No. 287492-2

REFERENCE DOCUMENTS

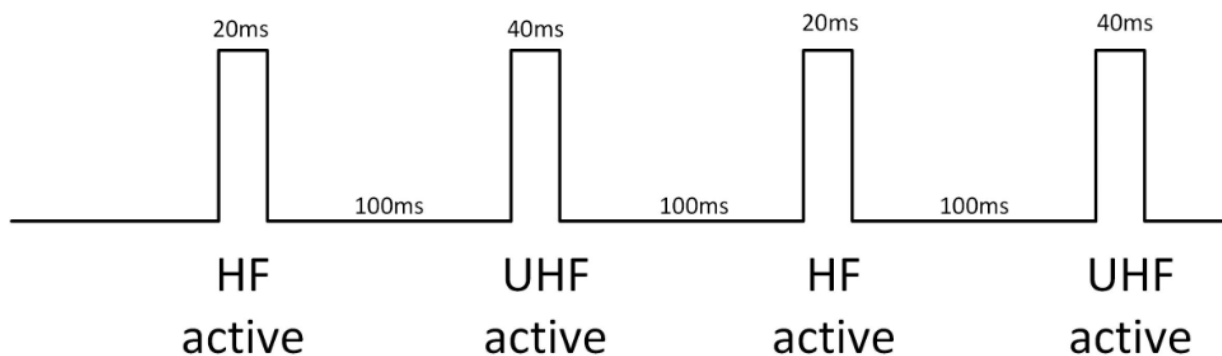
1999/519/EC, European Council Recommendation, 1999-07-30
286927-1-2, EN 302 208 V3.1.1 Test Report, 2017-01-20
286927-1-5, FCC Part 15.247 Test Report, 2017-01-20
FCC Parts 1.1310 and 2.1093
FCC KDB 447498 D01 General RF Exposure Guidance v06
RSS-102, Issue 5

RF EXPOSURE ASSESSMENT

RF characteristics of the assessed radio:

Minimum separation distance declared by the manufacturer: 150 mm.

Duty cycle:



Duty cycle is $40 \text{ ms} / (40 \text{ ms} + 100 \text{ ms} + 20 \text{ ms} + 100 \text{ ms}) = 15,4\%$

Evaluation against 1999/518/EC

Operating Frequency Range (OFR)	EU: 865.7 – 868.5 MHz
Channels	4 (EU)
Channel separation	-
Max. peak conducted output power	22.37 dBm (867.5 MHz)
Effective isotropic radiated power (e.i.r.p.)	14.97 dBm
Duty cycle correction	8.1 dB
Antenna gain (Antenova Kirbii A10472)	0.7 dBi

Assessment result:

$$S = \frac{PG}{4\pi r^2}$$

Limit value $S = f/200 \text{ W/m}^2$, 1999/5/EC

$S = 4.3 \text{ W/m}^2$ ($f = 867.5 \text{ MHz}$)

$r = 0.15 \text{ m}$ (manufacturer specification)

P, G see table above

$$14.97 \text{ dBm} / (4\pi \cdot 0.15\text{m} \cdot 0.15\text{m}) = 0.11 \text{ W/m}^2 \ll 4.3 \text{ W/m}^2$$

Evaluation against FCC Parts 1.1310 and 2.1093 and FCC KDB 447498 D01 General RF Exposure Guidance v06

Operating Frequency Range (OFR)	USA: 917.5 – 922.5 MHz CAN: 917.5 – 922.5 MHz
Channels	51 (USA, CAN)
Channel separation	-
Max. peak conducted output power	22.76 dBm (922.5 MHz)
Effective isotropic radiated power (e.i.r.p.)	16.36 dBm
Duty cycle correction	8.1 dB
Antenna gain (Antenova Kirbii A10472)	1.7 dBi

SAR test exclusion threshold:

FCC KDB 447498 D01 General RF Exposure Guidance v06 chapter 4.3.1 b) 1)

- a) $P_{\text{max}}/d_{\text{min}} \cdot \sqrt{f_{\text{GHz}}} = 3.0 \Rightarrow P_{\text{max}} = 156.17 \text{ mW}$ ($d_{\text{min}} = 50 \text{ mm}$, $f = 922.5 \text{ MHz}$)
- b) $156.17 \text{ mW} + [(150\text{mm} - 50\text{mm}) \cdot (922.5/150)] = 771.17 \text{ mW}$

SAR test exclusion threshold is 771.17 mW

The power of EUT is 16.36 dBm = 43.25 mW

Evaluation against RSS-102, Issue 5

SAR test exclusion threshold:

RSS-102, Issue 5, chapter 2.5.1, Table 1: SAR test exclusion threshold is 130 mW (835 MHz, $d > 50\text{mm}$)

The power of EUT is 16.36 dBm = 43.25 mW

RF EXPOSURE STATEMENT

Based on the assessment above PlanID RFID reader unit in portable use complies with the basic restriction and requirements according to 1999/519/EC, FCC Parts 1.1310 and 2.1093 and RSS-102 Issue 5.

Date: February 10, 2017

SGS Fimko Oy



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