



Excellence in Compliance Testing

Certification Exhibit

**FCC ID: U4A-SCYICLS1
IC: 6982A-SCYICLS1**

**FCC Rule Part: 15.247 / 15.225
IC Radio Standards Specification: RSS-210**

ACS Project Number: 10-0345

Manufacturer: Assa Abloy
Model: N2-IA/IK

RF Exposure

General Information:

Applicant: Assa Abloy, Inc.
 ACS Project: 10-0345
 Device Category: Mobile
 Environment: General Population/Uncontrolled Exposure

Technical Information:

Note: The 13.56MHz RFID radio is categorically excluded from RF exposure, therefore only information and calculations related to the 2.4GHz radio operating under Part 15.247 is provided.

Antenna Information:

Laird Technologies PCB model NanoBlue-IP04
 Gain: 2 dBi
 Frequency Range: 2.4-2.5GHZ
 Polarization: Linear
 VSWR: <2.5:1
 Dimensions: 1.88" x 0.5" x 0.032"

Linx Technologies Chip model ANT-2.45-CHP
 Gain: 0.5 dBi
 Frequency Range: 2.45GHz
 VSWR: <2:1
 Dimensions: 0.26" x 0.09" x 0.04"

Taoglas Limited PCB FXP73.07.0100A
 Gain: 2.5 dBi
 Frequency Range: 2400-2483.5MHz
 VSWR: <1.5:1
 Dimensions 47x7x0.1mm

Power Determination:

Maximum Antenna Gain: 2.5dBi
 Maximum Transmitter Conducted Power: -1.50dBm, 0.71mW
 Maximum System EIRP: 1.0dBm, 1.26mW

MPE Calculation

The Power Density (mW/cm²) is calculated as follows:

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

Where:

- S = power density (in appropriate units, e.g. mW/cm²)
- P = power input to the antenna (in appropriate units, e.g., mW)
- G = power gain of the antenna in the direction of interest relative to an isotropic radiator
- R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

MPE Calculator for Mobile Equipment Limits for General Population/Uncontrolled Exposure*							
Transmit Frequency (MHz)	Radio Power (dBm)	Power Density Limit (mW/Cm2)	Radio Power (mW)	Antenna Gain (dBi)	Antenna Gain (mW eq.)	Distance (cm)	Power Density (mW/cm^2)
2405	-1.5	1.00	0.71	2.5	1.778	20	0.0003

Installation Guidelines

The installation manual should contain text similar to the following advising how to install the equipment to maintain compliance with the FCC RF exposure requirements:

RF Exposure

In accordance with FCC requirements of human exposure to radio frequency fields, the radiating element shall be installed such that a minimum separation distance of 20 centimeters will be maintained.

Conclusion

This device complies with the MPE requirements by providing adequate separation between the device, any radiating structure and the general population.