

Prediction of MPE

1. Declaration of RF exposure compliance for exemption from routine evaluation limits

Applicant:	Siemens Schweiz AG Theilerstrasse 1 6300 Zug Switzerland
Nemko ident. no.:	400939
Number of pages:	2
Product	Climatix WLAN Stick
Model name:	POL903.00/100
FCC ID:	2AVJ7 POL90300
Manufacturer:	emtrion GmbH Alter Schlachthof 45 76131 Karlsruhe Germany
Exposure Conditions:	The USB WLAN stick is intended to provide a temporary WLAN connection between industrial control equipment and an external configuration device (e.g. Tablet, smart phone, PC or notebook). The EUT is intended to be used temporary by service personnel during installation, configuration and service work of industrial control equipment and is to be removed from the control equipment after the work is done. It is not intended to establish a permanent WLAN connection. (see picture below). This equipment complies with FCC and IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.



Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

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

where: S = power density
P = power input to the antenna
G = power gain of the antenna in the direction of interest relative to isotropic radiator
R = distance to the center of radiation of the antenna

4.3.2. Standalone SAR test exclusion considerations:

PWR in dBm	Maximum peak output power at antenna input terminal:	13,5 dBm
	Maximum peak output power at antenna input terminal:	22,1 mW
Ant. gain in dBi	Antenna gain(maximum):	3,6 dBi
	Maximum antenna gain:	2,3 numeric
Use the duty cycle from test report or 100%	Time Averaging:	100 %
Separation distance from antenna to user in cm	Prediction distance:	20 cm
Freq. in MHz	Prediction frequency:	2437 MHz
	FCC MPE limit for uncontrolled exposure at prediction frequency:	1,00 mW/cm ²
	IC MPE limit for uncontrolled exposure at prediction frequency:	5,40 W/m ²
	Power density at prediction frequency:	0,01 mW/cm ²
	This equates to:	0,10 W/m ²



2. Attestation

ATTESTATION: I attest that the testing was performed by a FCC listed test laboratory, that the test measurements were made in accordance with the above-mentioned departmental standard(s), and that the radio equipment identified in this application has been subject to all applicable test conditions specified in the departmental standards and all of the requirements of the standards have been met.

Signature:	
Date:	March 25, 2021
Name:	Peter Lukas, Lab Manager