Federal Communications Commission

Authorization and Evaluation Division

7435 Oakland Mills Road

Columbia, Maryland 21046

Re: Attestation letter

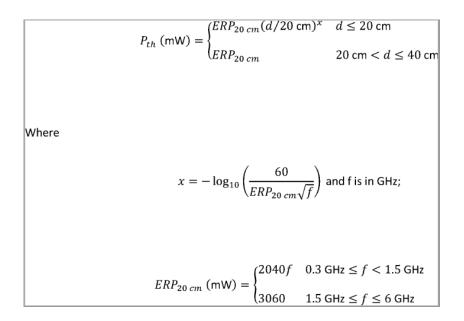FCC ID: WP5TWN4F20

To whom it may concern,

Herby we declare the compliance with human exposure requirements.

Christian Kiermeier (Agent)

According to §2.1093(c)(1):

Evaluation of compliance with the exposure limits in §1.1310 of this chapter, and preparation of an EA if the limits are exceeded, is necessary for portable devices having single RF sources with more than an available maximum time-averaged power of 1 mW, more than the ERP listed in Table 1 to §1.1307(b)(3)(i)(C), or more than the P_{th} in the following formula, whichever is greater. The following formula shall only be used in conjunction with portable devices not exempt by §1.1307(b)(3)(i)(C) at distances from 0.5 centimeters to 20 centimeters and frequencies from 0.3 GHz to 6 GHz.

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20\,cm}(d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20\,cm} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

Where

$$x = -\log_{10}\left(\frac{60}{ERP_{20\,cm}\sqrt{f}}\right) \text{ and f is in GHz;}$$

$$ERP_{20\,cm} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases}$$

d = the minimum separation distance (cm) in any direction from any part of the device antenna(s) or radiating structure(s) to the body of the device user.

RF technology 1:

The following data are based on applicants document: Test report 210716-AU01+W04 of the test laboratory Element Materials Technology Straubing GmbH

Application:	RFID
Operating frequency:	125 kHz
Antenna model	Loop antenna
Antenna connector:	none
Antenna type:	internal
	not detachable
Maximum field strength:	-19.41 dBµV/m at 300 m

Information related to Exposure:

Tune-up tolerance (according to the manufacturer):	4 dB
Separation distance:	< 5 mm
Exposure tier:	general public
Power averaging over time:	not applied

Separation distance (mm)	Channel frequency (kHz)	EIRP + tolerance (dBm)	EIRP + tolerance (mW)	Limit (mW)	Ratio of limit	Result
< 5	125	-70.57	$8.8 * 10^{-8}$	1.00	$8.8 * 10^{-8}$	Passed

Table 1: Result of SAR test exclusion, exposure to the head and body

EIRP is calculated using the formula of ANSI C63.10-2013 clause 9.5:

$$EIRP = E + 20\log(d) - 104.7$$

Where: EIRP = equivalent isotropically radiated power in dBm

E = electric field strength in dBµV/m

d = measurement distance in meters (m)

RF technology 2:

The following data are based on applicants document: Test report 210716-AU01+W05 of the test laboratory Element Materials Technology Straubing GmbH

Application:	RFID
Operating frequency:	13.56 MHz
Antenna model	Loop antenna
Antenna connector:	none
Antenna type:	internal
	not detachable
Maximum field strength:	50.09 dBµV/m at 30 m

Information related to Exposure:

Tune-up tolerance (according to the manufacturer):	4 dB
Separation distance:	< 5 mm
Exposure tier:	general public
Power averaging over time:	not applied

Separation distance (mm)	Channel frequency (MHz)	EIRP + tolerance (dBm)	EIRP + tolerance (mW)	Limit (mW)	Ratio of limit	Result
< 5	13.56	-21.07	0.008	1.00	0.008	Passed

Table 2: Result of SAR test exclusion, exposure to the head and body

EIRP is calculated using the formula of ANSI C63.10-2013 clause 9.5:

$$EIRP = E + 20\log(d) - 104.7$$

Where: EIRP = equivalent isotropically radiated power in dBm

E = electric field strength in dBµV/m

d = measurement distance in meters (m)