3.1.11 Radio frequency radiation exposure, FCC 15.319 (i); RSS-102

UPCS devices are subject to the radio frequency radiation exposure requirements specified in FCC parts 1.1307 (b), 2.1091, 2.1093 and RSS-102, as appropriate. All equipment shall be considered to operate in a "general population / uncontrolled environment. For portable devices tests according to IEEE 1528 are requested, if applicable.

Consideration of radio frequency radiation exposure for EUT is done as

SAR test acc. IEEE 1528	☐
MPE calculation as below	☒

SAR test results: not applicable

MPE calculation:

The EUT is considered as a mobile device according to OET Bulletin 65, Edition – 97 – 01. Therefore distance to human body of min. 20 cm is determined.

The internal / external antennas used for this mobile transmitter must provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

A safety statement concerning minimum separation distances from enclosure of the device will be integrated in the user's manual to provide end-users with transmitter operating conditions for satisfying RFE exposure compliance.

Formula:

$$S = EIRP / 4\pi R^2 \qquad (EIRP = P*G)$$

Calculation:

EIRP	Radiated Power [dBm]	20.78
EIRP	Radiated Power [mW]	119.67
R	Distance [cm]	20
S	Power Density [mW/cm^2]	0.024

Limit:

The limit of Power density for General Population / Uncontrolled Exposure is 1.0 mW/cm^2. Compliance with the requirements will be considered by calculation of power density derived from radiated power value.

Verdict:

Pass	Fail
☒	☐