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6.11 Safety exposure levels

6.11.1 Standard Applicable: FCC 15.319(i) & RSS-102 Section 4

UPCS devices are subject to the radio frequency radiation exposure requirements specified in FCC parts 1.1307 (b), 2.1091 and 2.1093, 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.

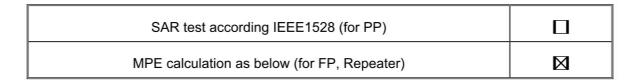
RSS-102 Section 4 and IC Safety Code 6, Section 2.2.1 (a) A person other than an RF and microwave exposed worker shall not be exposed to electromagnetic radiation in a frequency band listed in Column 1 of Table 5, if the field strength exceeds the value given in Column 2 or 3 of Table 5, when averaged spatially and over time, or if the power density exceeds the value given in Column 4 of Table 5, when averaged spatially and over time.

1 Frequency (MHz)	2 Electric Field Strength; rms (V/m)	3 Magnetic Field Strength; rms (A/m)	Power Density (W/m²)	Averaging Time (min)
0.003-1	290	219 6		6
1–10	280/f	2.19/f	2.19/f 6	
10-30	28	2.19/f	19/f 6	
30-300	28	0.073	2.	6
300-1 500	1.585 j 05	0.0042305	J!150	6
1 50C-15 00C	61.4	0.163	1C	6
15 000-150 000	61.4	0.163	10	618 000 //
150 000-300 000	0.158j ^{0.5}	4.21 x 10-4 f 0.5	3:67 x 10-5f	616 000 If

^{*} Power density limit is applicable at frequencies greater than 100 MHz.

6.11.2 Measurement procedure

Consideration of radio frequency radiation exposure for EUT is done as



SAR test results: not applicable

Notes: 1. Frequency, f, is in MHz.
2. A power density of 10 W/m² is equivalent to 1 mW/cm².
3. A magnetic field strength of 1 A/m corresponds to 1.257 microles.a (µ1) or 12.57 milliganss (mG).

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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 limit of Power density for General Population / Umcontrolled Exposure is 1.0 mW/cm². Formula:

 $S = EIRP / 4\pi R^2$

Calculation:

EIRP	Radiated Power (dBm)	19.75
EIRP	Radiated Power (mW)	94.4
R	Distance (cm)	20
S	Power Density (mW/cm²)	0.0188

The Pd at 20 cm distance calculated from the Friis transmission formula is mush smaller than the limit requirement 1 mW/cm² or 10W/m².

The **Installation Manual** instructs the user to install the device such that it has a separation of at least 20 cm from persons to comply with the FCC's requirements. This separation of 20 cm more than meets the FCC's and Industry Canada RF exposure requirements.

6.11.3 Results : Complies