



## MPE/RF EXPOSURE REPORT

FCC CFR 47 Part 1.1310

Report No.: SATE01-U2A Rev A MPE FCC

**Company:** SATEL OY

**Model Name:** SATEL-TR49 SnapOn



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**To:** FCC CFR 47 Part 1.1310

**Report Serial No.:** SATE01-U2A Rev A MPE FCC

This report supersedes: NONE

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## 1. MAXIMUM PERMISSABLE EXPOSURE

### Calculations for Maximum Permissible Exposure Levels

$$\text{Power Density} = P_d \text{ (mW/cm}^2\text{)} = \text{EIRP}/(4\pi d^2)$$

$$\text{EIRP} = P * G$$

P = Peak output power (mW)

G = Antenna numeric gain (numeric)

d = Separation distance (cm)

$$\text{Numeric Gain} = 10^{\text{G (dBi)}}/10$$

These calculations represent worst case in terms of the exposure levels: Table 1 of **FCC §1.1310 (E)(i)** Limits for Occupational/Controlled Exposure.

Freq. Band (MHz)	Ant Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Power Density (mW/cm <sup>2</sup> ) @ 20cm	Power Density Limit (mW/cm <sup>2</sup> )	Min Calculated safe distance for Limit (cm)	Calculated Power Density (mW/cm <sup>2</sup> ) @ Safe Distance
410.0 - 470.0	4.0	2.51	29.97	993.12	0.496	1.367	12.05	1.367
410.0 - 470.0	14.0	25.12	29.97	993.12	4.963	1.367	38.11	1.367
902.0 - 928.0	6.0	3.98	29.10	812.83	0.644	3.05	9.19	3.05

Note: for mobile or fixed location transmitters the minimum separation distance is 0.20m, even if calculations indicate the MPE distance to be less.

Based on the calculations above the minimum safe distance for the 14 dBi antenna gain is 39 cm.

### Specification

#### Maximum Permissible Exposure Limits

**FCC §1.1310 Limits for power density** 300-1,500 MHz = f/300

(where f = frequency in MHz. \* = Plane-wave equivalent power density)

410 MHz to 470 MHz: 1.367 mW/cm<sup>2</sup> and 902 MHz to 930 MHz 3.05 mW/cm<sup>2</sup>



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