

RF Exposure / MPE Calculation

No. : 10007806H

Applicant : FUJITSU TEN LIMITED
Type of Equipment : Car Navigation (WLAN / Bluetooth part)
Model No. : FT0054A
FCC ID : BABFT0054A

FUJITSU TEN LIMITED declares that Model : FT0054A complies with FCC radiation exposure requirement specified in the FCC Rule 2.1091 (for mobile).

RF Exposure Calculations:

The following information provides the minimum separation distance for the highest gain antenna provided with the "FT0054A" as calculated from (B) Limits for General Population / Uncontrolled Exposure of TABLE 1- LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE) of §1.1310 Radiofrequency radiation exposure limits.

This calculation is based on the highest EIRP possible from the system, considering maximum power and antenna gain, and considering a 1.0mW/cm² uncontrolled exposure limit. The Friis formula used was:

$$S = (P * G) / (4 * \pi * r^2)$$

Where

P = 136.58 mW (Maximum peak output power)
G = 1.12 Numerical Antenna gain; equal to 0.49 dBi
r = 20.0 cm

For: FT0054A (WLAN part) S = 0.03042 mW/cm²

$$S = (P * G) / (4 * \pi * r^2)$$

Where

P = 1.23 mW (Maximum peak output power)
G = 1.33 Numerical Antenna gain; equal to 1.23 dBi
r = 20.0 cm

For: FT0054A (Bluetooth part) S = 0.00032 mW/cm²

This product can transmit Bluetooth and WLAN simultaneously, therefore combined power density value is as follows:

$$\begin{aligned} S &= 0.03042 \text{ mW/cm}^2 + 0.00032 \text{ mW/cm}^2 \\ &= 0.03074 \text{ mW/cm}^2 \end{aligned}$$

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