

## **RF Exposure / MPE Calculation**

No.	:	11084189H
Applicant	:	TOYOTA TECHNICAL DEVELOPMENT CORPORATION
Type of Equipment	:	Realtime radio module
Model No.	:	TM4969
FCC ID	:	2AHC1-TM4969

TOYOTA TECHNICAL DEVELOPMENT CORPORATION declares that Model: TM4969 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 “TM4969“ 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 1mW/cm<sup>2</sup> uncontrolled exposure limit. The Friis formula used was:

$$S = \frac{P \times G}{4 \times \pi \times r^2}$$

Where

$P$  = 1.46 mW (Maximum average output power)  
 $G$  = 6.457 Numerical Antenna gain; equal to 8.1dBi  
 $r$  = 20 cm (Separation distance)

***Power Density Result***  $S = 0.00188 \text{ mW/cm}^2$

Even taking into account the tolerance, this device can be satisfied with the limits.

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