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## RF Exposure Calculation

## Exposure of Humans to RF Fields Requirements

Applicant : Toshiba Medical Systems Corporation

Type of Equipment : IASSIST CONTROLLER (incorporated with Bluetooth)

Model No. : UIIA-771A FCC ID : ROKMED001

Regulations Applied : CFR 47 FCC 15.247(b)(5)

References Documents : CFR 47 FCC 1.1307(b), 1.1310, 2.1093 and

OET65 Supplement C

## RF Exposure Calculations:

The following minimum separation distance between the EUT's antenna and the human body was calculated in accordance with FCC OET65 Appendix B Table(B) "Limit for General Population / Uncontrolled Exposure".

The maximum permissible exposure level is defined with 1mW/cm2.

The minimum separation distance where the exposure level reaches the permitted level can be calculated as bellow:

Where:

 $S = P * G / 4\pi R^2$ 

 $\therefore R = \sqrt{P * G / 4\pi S}$ 

R = minimum separation distance in cm

P = 0.574 mW(-2.41dBm) (Max/. conducted output power at antenna terminal)

G = 1.60(numeric gain) 2.044 dBi(Max. antenna Gain)

 $S = 1.0 \text{ mW/cm}^2 \text{ for } 2.4 \text{ GHz (Max. permissible exposure level)}$ 

Then minimum separation distance is 0.270 cm.

## Summary:

The EUT complies with the RF exposure requirement of the above regulation.

Masaaki Takahashi Senior Manager

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