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RF Exposure Calculation

Exposure of Humans to RF Fields Requirements

Applicant	: **Kenwood Corporation**
Type of Equipment	: **GPS NAVIGATION SYSTEM**
Model No.	: **DNX7160**
FCC ID	: **IOM39622B**

Regulations Applied   : **CFR 47 FCC 15.247**

References Documents   : **CFR 47 FCC 2.1091, 2.1093 and OET65 Appendix A**

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 A Table(B) "Limit for General Population / Uncontrolled Exposure".

The maximum permissible exposure level is defined with 1mW/cm^2.

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

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

R = 20.0 cm (Separation distance)

P = 1.205 mW (= 0.81 dBm Max. conducted output power at antenna terminal)

G = 0.646(numeric gain) (= -1.9 dBi Max. antenna Gain)

S = Calculated Value

(S_{Limit} = 1.0 mW/cm^2 for 2.4 GHz (Max. permissible exposure level))

Then **S = 0.000155 mW/cm^2.**

The calculated value is under the Maximum permissible exposure level.

Summary:

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

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