

RF Exposure / MPE Calculation

No. : 28KE0141-HO

Applicant : Sony Corporation
Type of Equipment : Wireless Link
Model No. : DMX-WL1T (Transmitter Unit)
FCC ID : AK8DMXWL1T
IC Number : 409B-DMXWL1T

Sony Corporation declares that Model : DMX-WL1T (Transmitter Unit) complies with FCC radiation exposure requirement specified in the FCC Rules 2.1091 (for mobile).

[WHDI]

RF Exposure Calculations:

The following information provides the minimum separation distance for the highest gain antenna provided with the “DMX-WL1T (Transmitter Unit)” as calculated from FCC OET Bulletin 65 Appendix A, Table (B) Limits for General Population / Uncontrolled Exposure. 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 = 37.25 mW (Maximum peak output power)
G = 2.05 Numerical Antenna gain; equal to 3.12 dBi
r = 20.0 cm

For: DMX-WL1T (Transmitter Unit) S = 0.01520 mW/cm²

[Zigbee]

RF Exposure Calculations:

The following information provides the minimum separation distance for the highest gain antenna provided with the “DMX-WL1T (Transmitter Unit)” as calculated from FCC OET Bulletin 65 Appendix A, Table (B) Limits for General Population / Uncontrolled Exposure. 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 = 1.02 mW (Maximum peak output power)
G = 1.26 Numerical Antenna gain; equal to 1.00 dBi
r = 20.0 cm

For: DMX-WL1T (Transmitter Unit) S = 0.00025 mW/cm²

The individual antennas cannot be separated by 20cm from each other.
The combination for power density of WHDI and Zigbee is as follows;

Namely; **Power Density(WHDI) + Power Density(Zigbee) < 1.0**

In this case the TOTAL POWER DENSITY would be **0.01520 + 0.00025 = 0.01545 < 1.0**.

Therefore, this device complies with FCC’s RF radiation exposure limit for general population for a mobile device.