MPE Evaluation

WiFi Radio:

The EUT is a wireless device used in a mobile application, at least 20 cm from any body part of the user or nearby persons.

The maximum EIRP calculated is +20.34 dBm or 108.14 mW; therefore, to comply with RF Exposure Requirement, the MPE is calculated.

The Power Density can be calculated using the formula

$$S = EIRP/ 4\pi D^2$$

Where: S is Power Density in W/m^2
D is the distance from the antenna.

It is considered that 20 cm is the minimum distance that user can go closest to the EUT.

At 20 cm, S =0.215 W/m^2, which is below the MPE Limit of 10 W/m^2

Bluetooth (DTS) Radio

The EUT is a wireless device used in a mobile application and will be at least 20 cm from any body part of the user or nearby persons.

The maximum EIRP calculated is +9.13 dBm or 8.185 mW; therefore, to comply with RF Exposure Requirement, the MPE is calculated.

The Power Density can be calculated using the formula

$$S = EIRP/ 4\pi D^2$$

Where: S is Power Density in W/m^2
D is the distance from the antenna.

It is considered that 20 cm is the minimum distance that user can go closest to the EUT.

At 0.2 m, S = 0.0163 W/m^2, which is below the MPE Limit of 10 W/m^2

Bluetooth (FHSS) Radio

The EUT is a wireless device used in a mobile application, at least 20 cm from any body part of the user or nearby persons.

The maximum EIRP calculated is +6.99 dBm or 5.00 mW; therefore, to comply with RF Exposure Requirement, the MPE is calculated.

The Power Density can be calculated using the formula

$$S = EIRP/ 4\pi D^2$$

Where: S is Power Density in W/m^2
D is the distance from the antenna.

It is considered that 20 cm is the minimum distance that user can go closest to the EUT.

At 0.2 m, $S = 0.00995\ W/m^2$, which is below the MPE Limit of $10\ W/m^2$