

Intertek Testing Services

For SAR evaluation of the headset, refer to TCB Exclusions List Revised on 17 July 2002. Portable transmitter with output power less than $60/f\text{GHz}$ ($d < 2.5\text{cm}$) can be certified by TCB without the SAR evaluation.

In fact, the Output power for portable transmitters is the higher of the conducted or radiated (EIRP) source-based time-averaged output. And the $f\text{GHz}$ is mid-band frequency in GHz, and d is the distance to a person's body, excluding hands, wrists, feet, and ankles.

For the tested model of BT25, the conducted source-based time averaged output power was $(1.2 * 0.34)\text{mW} = 0.4\text{mW}$.

The maximum field strength (FS) was $93.9\text{dB}\mu\text{V/m}$ at 2480.000MHz . The distance (D) between the antenna and the equipment under test (EUT) was 3 meters.

From these data, the EIRP can be calculated by:

$$\begin{aligned}\text{EIRP} &= (\text{FS} * \text{D})^2 / 30 \\ &= 0.7\text{mW}\end{aligned}$$

$$\begin{aligned}\text{Radiated (EIRP) Source-based time averaged output power} &= (0.7 * 0.34)\text{mW} \\ &= 0.24\text{mW}\end{aligned}$$

Based on the above calculation, it is concluded that the handset can be certified by TCB without the SAR evaluation.