

Intertek Testing Services

For SAR evaluation of the handset, refer to TCB Exclusions List Revised on 17 July 2002. 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 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 95339,

Base unit:

The measured peak conducted power was 2.21mW and the source-based time averaged output power was 0.99mW as TX duty cycle of the handset is 44.7%.

The maximum field strength (FS) was $96.2\text{dB}\mu\text{V/m}$ at 925.800MHz. The distance (D) between the antenna and the equipment under test (EUT) was 3 meters.

From these data, the EIRP can be calculated by:

$$\text{EIRP} = (\text{FS} * \text{D})^2 / 30$$

$$= 1.25\text{mW}$$

$$\text{Source-based time averaged output power} = (1.25 \times 0.447)\text{mW}$$

$$= 0.56\text{mW}$$

Handset:

The measured peak conducted power was 1.16mW and the source-based time averaged output power was 0.52mW as TX duty cycle of the handset is 44.7%.

The maximum field strength (FS) was $93.6\text{dB}\mu\text{V/m}$ at 914.400MHz. The distance (D) between the antenna and the equipment under test (EUT) was 3 meters.

From these data, the EIRP can be calculated by:

$$\text{EIRP} = (\text{FS} * \text{D})^2 / 30$$

$$= 0.69\text{mW}$$

$$\text{Source-based time averaged output power} = (0.69 \times 0.447)\text{mW}$$

$$= 0.31\text{mW}$$

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