

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is an Audio effects processor with 2.4G Transmitter function operating in 2403-2465MHz. The EUT is powered by DC 3.7V rechargeable battery. For more detailed features description, please refer to the user's manual.

Antenna Type: Integral Antenna.

Antenna Gain: 1dBi.

Modulation Type: GFSK.

The nominal conducted output power specified: -9dBm (+/-3dB).

The nominal radiated output power (e.i.r.p) specified: -8dBm (+/-3dB)

According to the KDB 447498:

The minimum peak radiated emission for the EUT is 84.7dBμV/m at 3m in the frequency 2465MHz

The EIRP = $[(FS * D)^2 / 30]$ mW = -10.53dBm

which is within the production variation.

The maximum peak radiated emission for the EUT is 89.1dBμV/m at 3m in the frequency 2432MHz

The EIRP = $[(FS * D)^2 / 30]$ mW = -6.13dBm

which is within the production variation.

The maximum conducted output power specified is -6dBm = 0.251mW

The source- based time-averaging conducted output power

= $0.251 * \text{Duty factor mW}$ (where Duty Factor ≤ 1)

= 0.251mW

The SAR Exclusion Threshold Level:

= $3.0 * (\text{min. test separation distance, mm}) / \text{sqrt}(\text{freq. in GHz})$

= $3.0 * 5 / \text{sqrt}(2.465)$ mW

= 9.55 mW

Since the source-based time-averaging conducted output power is well below the SAR low threshold level, so the EUT is considered to comply with SAR requirement without testing.