INTERTEK TESTING SERVICES

Analysis Report

The equipment under test (EUT) is a TV Soundbar. The EUT was powered by AC 110-120V, 60Hz. For more detail information pls. refer to the user manual.

Modulation Type: GFSK, π/4DQPSK, 8DPSK for BT 3.0 with EDR and GFSK for BT 4.0
Bluetooth Version: 4.0 and 3.0 with EDR
Antenna Type: Integral antenna (Gain: 1 dBi)
The nominal radiated output power (e.i.r.p) specified: 3dBm (Tolerance: +/-3dB)

The maximum radiated emission for the EUT is 100.5dBμV/m for BT 4.0 at 3m in the frequency 2.440GHz = [(FS*D) ^2 / 30] mW
= 5.3dBm which is within the production variation
The minimum radiated emission for the EUT is 97.5dBμV/m for BT 3.0 at 3m in the frequency 2.441GHz = [(FS*D) ^2 / 30] mW
= 2.3dBm which is within the production variation.

According to FCC Part 2.1091, this unlicensed transmitting devices is categorically excluded from routine environmental evaluation for RF exposure prior to equipment authorization or use, According to the KDB 447498 and OET 65, the simple calculation as below:

For Maximum Permissible Exposure (MPE) evaluation of the product, the maximum power density at 20 cm from this transmitter shall be less than the General Population / Uncontrolled MPE limit in FCC Part 1.1310.

The maximum radiated output power specified is 6dBm = 4.0mW
The source- based time-averaging conducted output power
=4 .0 * Duty cycle mW <= 4.0 mW (Duty Cycle<=100%)

From above data, the exposed power density at a distance (R) of 20cm from the center of radiation of the antenna can be calculated as follow:
= 4.0 mW / 4πR^2
= 0.0008 mW/cm^2

The MPE limit is 1.0 mWcm-2 for general population and uncontrolled exposure in the Bluetooth frequency range according to FCC Part 1.1310. As the measured power density at 20cm from the transmitter is lower than the MPE limit, the compliance to the MPE limit can be ensured by indicating the minimum 20cm separation between the transmitter's radiating structure and body of the user or nearby persons.

FCC ID: Z8M-SSB-4W