

RF Exposure Evaluation

The built_in antenna connected to the applying modular transmitter is located at the left hinge portion under keyboard of the host device (IBM ThinkPad R40 Series). The distance from the antenna to PC's bottom edge is approximately 2.5 cm. i.e. the closest antenna separation from person's body (lap) is 2.5 cm. Therefore the applying transmitter device with the subjected antenna is categorized as a portable device by FCC CFR 47 section 2.1093.

The footnote 14 of the Section 3 in Supplement C to OET Bulletin 65 states “¹⁴ If a device, its antenna or other radiating structures are operating at closer than 2.5 cm from a person's body or in contact with the body, SAR evaluation may be necessary when the output is more than 50–100 mW, depending on the device operating configurations and exposure conditions.”

The conducted output power of the applying Bluetooth transmitter is 2.5mW(4.0dBm) and the antenna gain is 1.52 dBi. Therefore both conducted and radiated powers are far below 50mW, so the applying modular transmitter with this built_in antenna satisfies the RF exposure evaluation regarding CFR 47 Part 15.247(b)(4) without a SAR compliance test report.

