

INTERTEK TESTING SERVICES

RF Exposure

The Equipment under Test (EUT) is a EQ720 model: EQ720. It is powered by DC 7.4V. For more detail information please refer to the user manual.

Antenna Type: Integral antenna.

Max Antenna Gain: 0dBi.

The nominal conducted output power specified: 7dBm \pm 3dB.

Test radiated output power(e.i.r.p) specified: 4dBm ~ 10dBm

The maximum tested e.i.r.p is 9.37dBm and the minimum tested e.i.r.p is 8.97dBm

Modulation Type: GFSK, $\pi/4$ -DQPSK and 8-DPSK.

According to the KDB 447498:

The maximum conducted output power specified is 10dBm = 10mW

The source-based time-averaging conducted output power
= 10* Duty Cycle mW <8.3mW

The SAR Exclusion Threshold Level:

= 3.0 * (min. test separation distance, mm) / sqrt(freq. in GHz)

= 3.0 * 5 / sqrt (2.480) mW

= 9.5 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.

Transmitter Duty Cycle Calculation

Based on the Bluetooth Specification (BT version: 3.0 + EDR), the duty factor is dependent of packet type (DH1, DH3 and DH5). For one period for a pseudo-random hopping through all 79 RF channels, for DH5:

One hop set consists of 5 TX slot and 1 RX slot.

Duty factor = 5 / 6 = 0.833