



Radio Frequency Exposure

EUT INFORMATION

EUT	GPS Sport Watch
Frequency band (Operating)	2.457 GHz
Antenna diversity	<input checked="" type="checkbox"/> Single antenna <input type="checkbox"/> Multiple antennas <input type="checkbox"/> Tx diversity <input type="checkbox"/> Rx diversity <input checked="" type="checkbox"/> Tx/Rx diversity
Field strength	83.82 dBuV/m @3m
Antenna gain (Max)	1 dBi

TEST RESULT

According to KDB 447498 section 4.3.1, the 1-g SAR test exclusion thresholds at test separation distance ≤ 50 mm are determined by:

The min. test separation distance (mm) is 5 mm,

$$e_{irp} = p_t \cdot g_t = (E \cdot d)^2 / 30$$

where:

p_t = transmitter output power in watts,

g_t = numeric gain of the transmitting antenna (unitless),

E = electric field strength in V/m, --- $10^{((dBuV/m)/20)/10^6}$

d = measurement distance in meters (m) --- 3m

$$\text{So } p_t = (E \cdot d)^2 / 30 \cdot g_t$$

Ant. numeric gain, Ant. = 1 dBi = 1.26

$$\text{So } p_t = \{ [10^{(83.82/20)/10^6} \cdot 3]^2 / 30 \cdot 1.26 \} \cdot 1000 \text{ mW} = 0.057 \text{ mW}$$

$$\text{So } (0.057 \text{ mW}/5\text{mm}) \cdot \sqrt{2.457 \text{ GHz}} = \mathbf{0.0178} < 3.0 \text{ for 1-g SAR}$$

Therefore, standalone SAR measurements are not required for both head and body.