Radio Frequency Exposure

EUT INFORMATION

EUT	GPS Sport Watch
Frequency band (Operating)	2.457 GHz
Antenna diversity	☒ Single antenna ☐ Multiple antennas ☐ Tx diversity ☐ Rx diversity ☒ 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,

eirp = pt*gt = $(E*d)^2/30$

where:
pt = transmitter output power in watts,
gt = 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
So pt = $(E*d)^2/30*gt$

Ant. numeric gain, Ant. = 1 dBi = 1.26
So pt = { $[10^{(83.82/20)}/10^6*3]^2/30*1.26$ }*1000 mW = 0.057 mW
So (0.057 mW/5mm)* $\sqrt{}$2.457 GHz = **0.0178** <3.0 for 1-g SAR

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