



Radio Frequency Exposure

EUT INFORMATION

EUT	Outdoor shower
Frequency band (Operating)	2410 MHz
Antenna diversity	<input checked="" type="checkbox"/> Single antenna <input type="checkbox"/> Multiple antennas <input type="checkbox"/> Tx diversity <input type="checkbox"/> Rx diversity <input type="checkbox"/> Tx/Rx diversity
Field strength	78.70 dBuV/m @3m
Antenna gain (Max)	1.5 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,

$$\text{eirp} = \text{pt}^* \text{gt} = (\text{E}^* \text{d})^2 / 30$$

where:

pt = transmitter output power in watts,

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

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

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

$$\text{So pt} = (\text{E}^* \text{d})^2 / 30^* \text{gt}$$

Ant. numeric gain, Ant. = 1 dBi = 1.89

$$\text{So pt} = \{ [10^{(78.70/20)} / 10^6 * 3]^2 / 30 * 1.89 \} * 1000 \text{ mW} = 0.057 \text{ mW}$$

$$\text{So } (0.057 \text{ mW}/5\text{mm}) * \sqrt{2.410 \text{ GHz}} = \mathbf{0.0178} < 3.0 \text{ for 1-g SAR}$$

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