

INTERTEK TESTING SERVICES

Analysis Report

The equipment under test (EUT) is a Wireless Water Detector. The EUT was powered by a DC 3.0V (2*1.5V AAA batteries). For more detail information please refer to the user manual.

The equipment under test (EUT) is a 915MHz transmitter operating at 915MHz.

Modulation Type: ASK

Antenna Type: Integral antenna

Antenna Gain: 2dBi

The nominal conducted output power specified: -21.0dBm (Tolerance: +/- 3dB)

The nominal radiated output power (ERP) specified: -21.15dBm (Tolerance: +/- 3dB)

According to the KDB 447498:

The maximum tested radiated emission(ERP) for the EUT is 75.8dBμV/m at 3m in the frequency 915MHz

= $[(FS \cdot D)^2 / 30]$ mW -2.15dB

= -21.58dBm which is within the production variation.

The maximum conducted output power specified is -18.0dBm = 0.02mW

The source- based time-averaging conducted output power

= $0.02 \cdot \text{Duty cycle}$ mW < 0.1 mW (Duty Cycle < 100%)

The SAR Exclusion Threshold Level:

= $3.0 \cdot (\text{min. test separation distance, mm}) / \sqrt{\text{freq. in GHz}}$

= $3.0 \cdot 5 / \sqrt{0.915}$ mW

= 15.7 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.