

Analysis Report

The equipment under test (EUT) is a 915MHz transmitter (i.e. Soil Moisture & Temperature Sensor System). The sensor is operating at 915MHz and it sends the data to the main console (corresponding receiver unit) for measurement. The EUT is powered by 2 x 3.0V CR2032 batteries.

Antenna Type: Internal integral antenna

Antenna Gain: 0dBi

Nominal rated field strength: 91.5dB μ V/m at 3m

Maximum allowed field strength of production tolerance: +/- 3dB

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 94.5dB μ V/m at 3m in frequency 915MHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.846\text{mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain
So;

Conducted Power = 0.846mW.

The SAR Exclusion Threshold Level:

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

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

= 15.68 mW

Since the above conducted output power is well below the SAR Exclusion threshold level, so the EUT is considered to comply with SAR requirement without testing.