

Analysis Report

The equipment under test (EUT) is a 915MHz transmitter (i.e. Sensor) for a weather station 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 3 x AA batteries (4.5VDC).

Antenna Type: Internal antenna

Antenna Gain: 0dBi

Nominal rated field strength: 83.6 dBμV/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 86.6dBμV/m at 3m in frequency 915MHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.137mW$

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

Conducted Power = 0.137mW.

The SAR Exclusion Threshold Level:

$= 3.0 \cdot (\text{min. test separation distance, mm}) / \sqrt{\text{freq. in GHz}}$
 $= 3.0 \cdot 5 / \sqrt{0.915} \text{ mW}$
 $= 15.7 \text{ mW}$

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.