

Analysis Report

Report No.: 20061602HKG-001

The equipment under test (EUT) is the Weather Sensor (915MHz transmitter) of the weather station operating at 915MHz. The EUT is powered by 4.5VDC (3X 1.5V "AA" batteries). The EUT will transmit RF signal to the corresponding receiver and the receiver will display the humidity and temperature on the screen of the receiver.

Antenna Type: Internal integral antenna

Antenna Gain: 0dBi

Nominal rated field strength: 78.2 dBμV/m at 3m (EIRP -17 dBm)

Maximum allowed field strength of production tolerance: +4 / -4 dB

Frequency range: 915MHz (single channel)

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 82.2 dBμV/m at 3m in frequency 915MHz, thus;

It below calculated field strength according to minimum SAR exclusion threshold level as follows:

The worst case of SAR Exclusion Threshold Level:

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

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

= 15.7 mW

According to the KDB 412172 D01:

$\text{EIRP} = [(\text{FS} * \text{D})^2 * 1000 / 30]$

Calculated Field Strength for 15.7mW is 107.2dBuV/m @3m

Since maximum field strength plus production tolerance $\leq 107.2\text{dBuV/m @3m}$ and antenna gain is $\geq 0.0\text{dBi}$, it is concluded that maximum Conducted Power and Field Strength are well below the SAR Exclusion threshold level, so the EUT is considered to comply with SAR requirement without testing.