Analysis Report

The equipment under test (EUT) consists of a 915MHz receiver portion and Bluetooth 4.0 RF module transceiver, which is a main console for a weather station system. The EUT can receive the data from a sensor via 915MHz (i.e. corresponding 915MHz transmitter) and sends both its own measurements and the sensor modules measurements to the mobile smart device via Bluetooth 4.0. The Bluetooth portion occupies frequency range of 2402MHz to 2480MHz (40 channels with channel spacing of 2MHz). The EUT is powered by an AC/DC adaptor (Model: HK-U-050A050-CP; Input: 100-240VAC, 50/60Hz, 0.2A; Output: 5VDC, 0.5A).

Antenna Type: Internal integral antenna
Antenna Gain: 0dBi
Nominal rated field strength: 85.4 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 88.4dBμV/m at 3m in frequency 2.4GHz, thus;

The EIRP = [(FS*D) ^2*1000 / 30] = 0.208mW

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

Conducted Power = 0.208mW.

The SAR Exclusion Threshold Level:
= 3.0 * (min. test separation distance, mm) / sqrt(freq. in GHz)
= 3.0 * 5 / sqrt (2.480) mW
= 9.53 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.