Analysis Report

WK8000 is an access controller which can be paired with the control panel, being widely used among office, storage room and home, etc. Using password could achieve arming, disarming, setting home mode and SOS functions. You can also use TAG-26 to arm and disarm the system. Every time when an action like arm, disarm, set home mode or SOS is being done at WK8000, it would send a series ASK coded system code to inform the control panel. At the same time WK8000 features tamper device, once it's been removed incorrectly, it would send warning code to the control panel and sound the built-in alarm.

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

Modulation Type: ASK

Antenna Type: Integral antenna

Antenna Gain: 3dBi

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

The nominal radiated output power (ERP) specified: -2.15dBm (Tolerance: +/- 3dB)

According to the KDB 447498:

The maximum tested radiated emission (ERP) for the EUT is 93.3dBμV/m

at 3m in the frequency 915MHz

= [(FS*D) ^2 / 30] mW -2.15dB

= -4.08dBm which is within the production variation.

The maximun conducted output power specified is 0dBm = 1mW

The source- based time-averaging conducted output power

= 1 * Duty cycle mW < 1 mW (Duty Cycle < 100%)

The SAR Exclusion Threshold Level:

= 3.0 * (min. test separation distance, mm) / sqrt(freq. in GHz)

= 3.0 * 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.

The duty cycle is simply the on-time divided by the period:
The duration of one cycle = 72.174 ms
Effective period of the cycle = 1.739 ms x 9 + 0.652 ms x 16 = 26.083 ms
DC = 26.083 ms / 72.174 ms = 0.361 or 36.1%