RF Exposure

The equipment under test (EUT) is a KIN operating at 125kHz. The EUT is powered by DC 12V Car battery. For more detail information pls. refer to the user manual.

Antenna Type: Inductor antenna
Modulation: ASK

According to the KDB 447498 D04 Interim General RF Exposure Guidance v01 (D01 447498 General RF Exposure Guidance v07):

The Maximum peak radiated emission for the EUT is 74.5 dBμV/m at 3m in
The frequency 125kHz
The Maximum peak radiated emission for the EUT is -5.5 dBμV/m extrapolated to 300m

The EIRP = (Ed) ^2 /30

E is the field strength in V/m
d is the measurement distance in m

Where

EIRP is the equivalent isotropically radiated power in W
V/m=10^(((dBμV/m)-120)/20)

So, the EIRP = ((10^ ((-5.5-120)/20)) *300) ^2/30 W
= 8.46*10^(-10) W= 8.46*10^(-7) mW
= -60.7 dBm
which is within the production variation.

The nominal radiated output power (e.i.r.p) specified: -60.0 dBm (Tolerance: ±2dB)

The max. nominal radiated output power (e.i.r.p) is -58.0dBm = 0.0000016mW

1-mW Test Exemption:

Since max. effective radiated power is well below the SAR low threshold level, so the EUT is considered to comply with SAR requirement without testing.