Transponders

Immobilization

Philips Semiconductors' transponders meet the security and performance requirements of modern vehicle immobilizer applications. Excellent device sensitivity (large distance) and short authentication time ensure easy application and outstanding system performance.

Products

The following transponders have been specifically designed for car immobilizers where (re)programming of the identification code or storage of additional data is required.

The PCF7936 (HITAG 2) is a programmable security transponder employing mutual authentication with encrypted data transmission. It is ideally suited for vehicle immobilizer applications which require encrypted data transmission between the basestation and the transponder.

The PCF7931AS (read only) and PCF7930AS (read/write) are immobilizer transponder sticks which transmit data bi-directionally, in half-duplex mode, between the basestation and the transponder.

The PCF7935 (SECT) is a programmable security transponder employing challenge/response authentication and is ideally suited for vehicle immobilizer applications, where encrypted data transmission between basestation and transponder is required.

Product overview

Features	PCF7930AS	PCF7931AS	PCF7935AS	PCF7936AS
Data periodically read out in read only mode	Yes	Yes	Yes	Yes
Non-volatile user memory	768 bit	—	768 bit	128 bit
Operating frequency	125 kHz	125 kHz	125 kHz	125 kHz
Programmable read only operation	Yes	Yes	Yes	Yes
Programmable security transponder	—	—	Yes	Yes
64/32 bit mutual authentication	—	—	—	Yes
48/48 bit challenge/response authentication	—	—	Yes	—
32-bit unique device identification number	Yes	Yes	Yes	Yes
Secret key	—	—	128 bit	48 bit
Fast authentication	—	—	—	39 ms
EEPROM read/write protection capabilities	Yes	Yes	Yes	Yes
Read only modes for downwards compatibility	Yes	Yes	Yes	Yes
Data retention	20 years	20 years	20 years	20 years
Extended temperature range	−40 to +85 °C	−40 to +85 °C	−40 to +85 °C	−40 to +85 °C
Leadless stick plastic package	SOT385	SOT385	SOT385	SOT385

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