Remote Keyless Entry

ICs for remote keyless entry

Philips Semiconductors transponder ICs provide the ideal solution for integrating remote keyless entry functionality into car immobilizer applications. Two RKE transponder products are currently available.

HITAG 2+ (PCF7946) meets the security and performance requirements of modern car immobilizer applications, delivering excellent device sensitivity and short authentication times to ensure easy application and outstanding system performance. The transponder circuitry is fully compatible with the HITAG transponder, does not require a battery supply, and provides full immobilizer functionality even under battery-low conditions.

The remote control circuitry features low power consumption to ensure long battery life. The device supports up to four user buttons and an LED, for transmission acknowledgement, with code hopping performed upon each button press. The device also features automatic re-synchronization of the rolling code, via the transponder interface.

The PCF7942 STARC (Security Transponder and RISC Core) incorporates a microcontroller, based on a RISC architecture, enabling programmable RKE features. This device is compatible with the HITAG2 (PCF7936) transponder stick and HITAG 2PLUS (PCF7946) RKE Transponder.

Product overview

Type number	PCF7942	PCF7946AT
Features		
Compatible with PCF7936AS security transponder	Yes	Yes
Keyless entry features	RISC programmable	Rolling code generator
Package	SO16	SO14
64/32 bit mutual authentication calculation unit	Yes	Yes
32-bit unique device identification number	Yes	Yes
48-bit secret key	Yes	Yes
Fast mutual authentication (39 ms)	Yes	Yes
User memory (EEPROM)	4 kbit	128 bit
EEPROM read/write protection capability	Yes	Yes
Excellent sensitivity in read/write mode (35 μT)	Yes	Yes