Reduced system cost for high-security immobilizer designs

NXP's leading portfolio for immobilizer system includes a full range of security options for the transponder side, perfectly complemented by advanced basestation solutions.

PCF7938 features

▶ Immobilizer transponder with 96-bit secret key
▶ 448 Byte of EEPROM with versatile access configuration options

Benefits

▶ Easy migration from PCF7936/37
▶ High security
▶ Fast authentication time

The NXP PCF7938, an immobilizer transponder for advanced security, builds on the success of the field-proven PCF7936/37 and PCF7939 (AES-128-Bit). It offers advanced security with a 96-bit secret key, enabling an easy migration path for customers using the PCF7936. It offers more memory to store user data, with versatile access configuration options. As with other NXP immobilizer transponders, NXP offers keyless entry/go and remote keyless entry solutions fully compatible to PCF7938.

ABIC2 features

▶ Fully integrated single-chip basestation (PJF7992, PJF7993)
▶ High-performance adaptive sampling time AM/PM demodulator
▶ Integrated voltage regulator with wide supply-voltage range (5.6 to 27 V)
▶ Antenna driver with wave shaping for improved spectral purity
▶ Serial interface featuring SPI and single-wire operation
▶ Integrated LIN 2.0/SAE J2602 transceiver (compatible with LIN 1.3)
▶ LIN 2.0-tolerant protocol optimized for reliable transponder data handling
▶ Buffered communication via single wire interface possible for easier system design
▶ Watchdog and Power On Reset functions
▶ Temperature sensor to protect the device against overheating
▶ 20-pin Heatsink TSSOP (HTSSOP) package

Benefits

▶ Reduced system cost through high level of integration
▶ Facilitated system design and shorter time to market
▶ Low power consumption

The NXP ABIC2 (PJF7992) is a next-generation immobilizer basestation with a high level of integration. It provides read and write access to an identification transponder. It offers a number of enhancements over the ABIC (PCF7991), including an on-chip voltage regulator and single-wire communication using the integrated LIN Transceiver

Bidirectional communication with the device uses a serial interface that operates in SPI or single-wire fashion, according to the application needs. ABIC2 makes an external

microcontroller at the basestation obsolete by integrating a single-wire protocol that is LIN "tolerant" and does not influence or affect further LIN slaves in the same LIN network. An external microcontroller can be added to implement another protocol layer, such as LIN 2.0. For this kind of application the ABIC2 derivative PJF7993 is offered.

The ABIC2 IC is optimized for easy application, featuring a high level of integration in a small HTSSOP20 package and requiring very few external components.

Immobilizer transponder in NXP's stick package
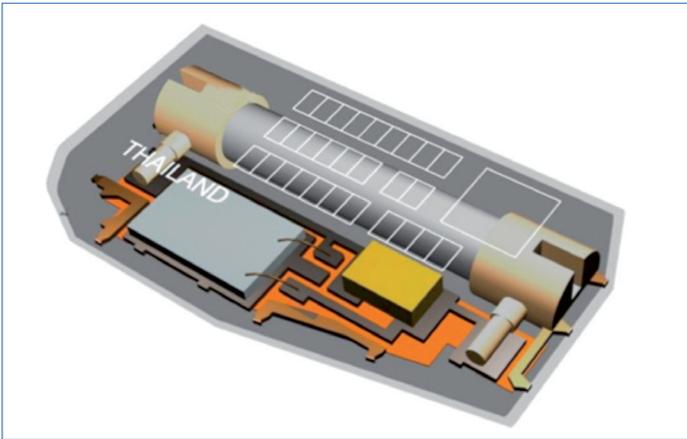
Next-generation immobilizer basestation with high level of integration

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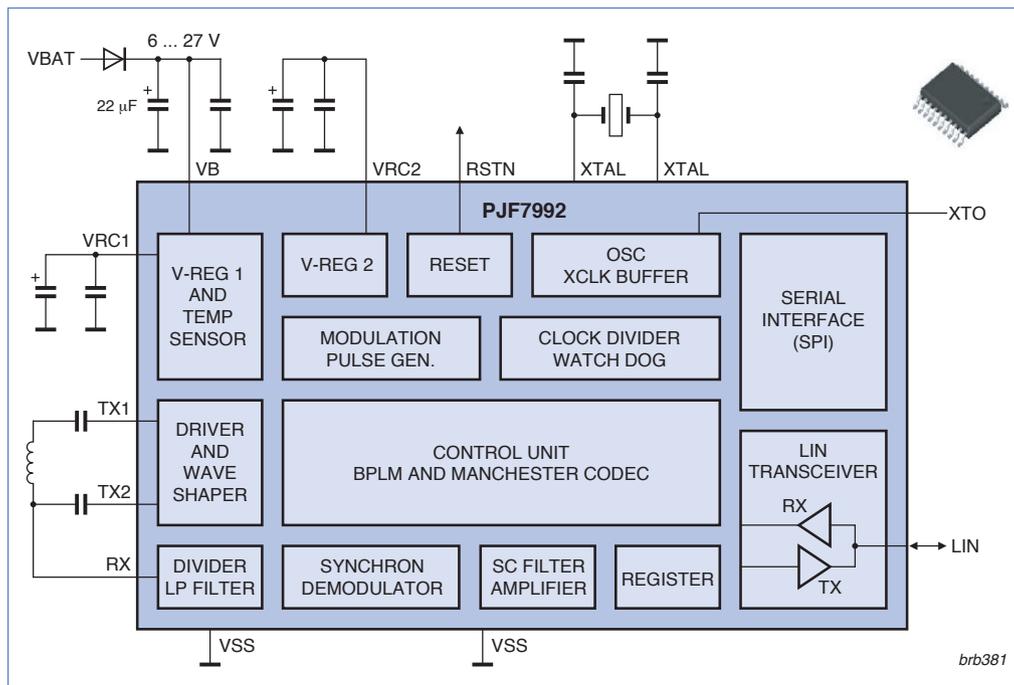
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