

March 7, 2007

RE: Siemens Automotive Corporation

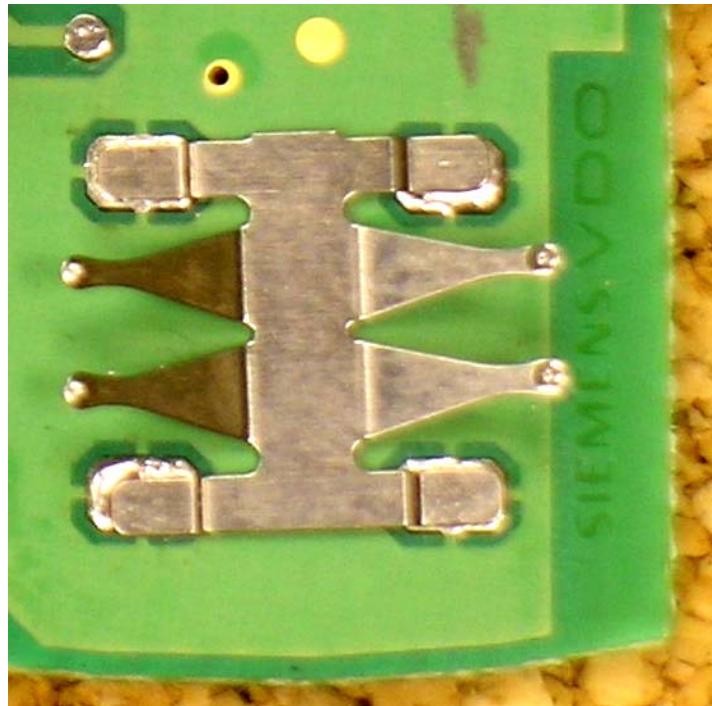
FCC: M3N5WY783X

The following is in response to the comments made on the above referenced application.

1) IC requires 3 items as part of the labeling. While the Certification number is present, model number and Applicant Name as Certified are not found. Please review.

Note that your response cites that the model number is clearly shown on the label. Current labeling appears to show a P/N, which begins with 05. None of the current models begin with 05. Please explain. Your response also cites that the applicant name is shown on the PCB. Internal photographs do not support this fact. Please review.

The drawing has been modified to show where the part number is placed without the misleading "0" precursor. Also, below is a zoom-in on the laser etched trade name next to the battery clip.



2) Regarding previous comments 2 & 3, please note that the 125 kHz circuitry does not appear passive as it attaches directly to a powered microcontroller. Additionally, it is uncertain if this initiates 125 kHz response or 433 MHz response, which is the purpose of understanding previous comment 3. Please review further.

The following datasheet has been provided to detail that the IC operates a passive transponder (operates without battery), as previously stated. Siemens also reiterates that there is no RF response that can be initiated from the Transponder circuit.

Product Profile

PCF7941

Security Transponder and RISC Controller, STARC lite

Features

- Compatible with Security Transponder, PCF7936AS.
- RISC Programmable Keyless Entry features
- 384 Bit EEPROM
- 16-Pin SO package

Transponder

- 64/32 bit mutual authentication calculation unit
- 32 bit unique device identification number
- #8 bit Secre Key
- Fast mutual authentication (39 ms)
- EEPROM read/write protection capability
- Excellent sensitivity in read and write mode (3 μ T)

RISC Controller

- Advanced 8-bit RISC architecture
- 4 Kbyte ROM, 64 Byte RAM
- On-chip RC oscillator ($\pm 10\%$)
- Short instruction execution time (as fast as 1 μ s)
- 11 I/O ports, general purpose
- Code hopping based on transponder calculation unit
- Code hopping synchronization via transponder
- Clock input to serve as external data rate reference
- Programmable battery low detection
- Low power consumption (300 μ A, PD 300 nA)
- Single battery cell operation (2.1V to 5.5V)
- Device supply can be derived from LF Field

General Description

The PCF7941 is a single chip high performance Security Transponder and Keyless Entry controller, ideally suited for vehicle immobilizer applications that incorporate keyless entry functions.

The transponder circuitry is compatible with the Security Transponder PCF7936AS, for use in mixed systems that employ a STARC and a standard Security Transponder, PCF7936AS, at the same time.

The Transponder circuitry meets the security and performance requirements of modern car immobilizer applications. Excellent device sensitivity and short authentication time ensure outstanding system performance. The Transponder circuitry does not require any battery supply and full operation is granted in a Keyless Entry battery low condition.

The RISC Controller circuitry is powered by an advanced low power 8-Bit RISC. The device features 11 I/O ports including up to four wake-up inputs for command button sensing.

Code hopping generation may employ the transponder Calculation Unit, while telegram transmission characteristics are controlled by the RISC. If the same security algorithm is applied for the Transponder and the Code Hopping function, separate Secret Keys are provided to ensure independent code characteristics. Contactless code hopping synchronization may be accomplished via the contactless interface.

The system timing is derived from a low tolerant on-chip RC Oscillator. If desired, an external data rate reference clock may be applied for use with common PLL transmitter devices.

Typical Application

