

Technical Description

Key: 5WK4 9127

User Manual

of the

Siemens VDO

Remote Control System

Type:

5WK4 9125

5WK4 9126

5WK4 9127

5WK4 9128

General description of the RF transmitter PL2 TX

The RF remote control system consists of a RF transmitter and a RF receiver mounted within the control unit. The RF transmitter is mechanically integrated in the head of the key. This transmitter is used to transmit an information for locking or unlocking the vehicle by an unidirectional RF transmission line for normal remote operation by pressing a button.

In general the following functions are provided:

- Lock the car
- Unlock the car
- Unlock the trunk of the car

Power supply

The transmitter is provided with 1 Lithium accumulator (VL 2020) that gives a power supply of +3V.

Buttons

There are three buttons which enable to lock and unlock the doors and to unlock the trunk.

During activation, the button is forced to the ground via a “pull-up” within the microcontroller.

Typical usage pattern (for Europe only)

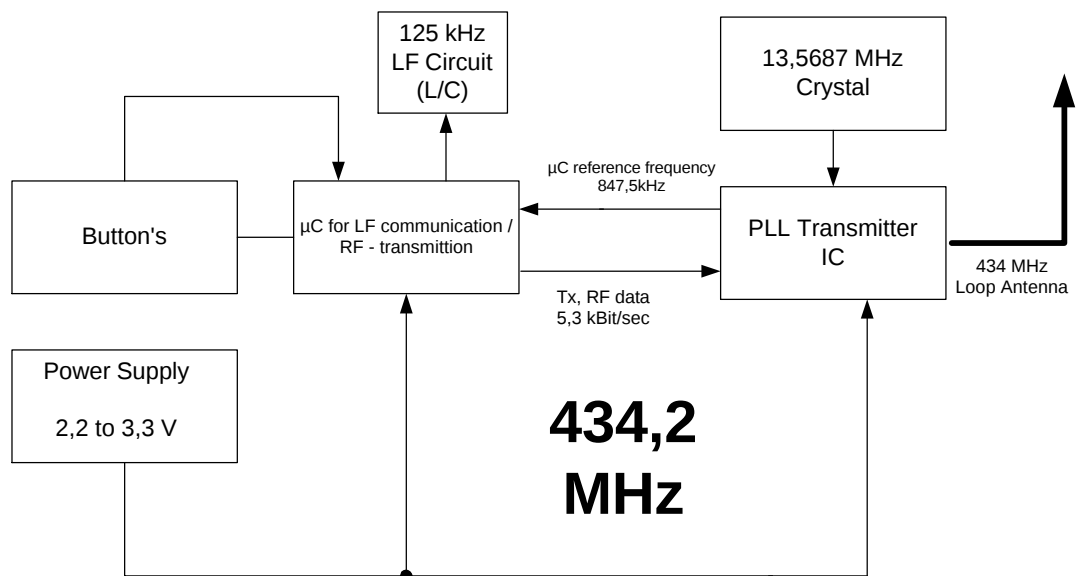
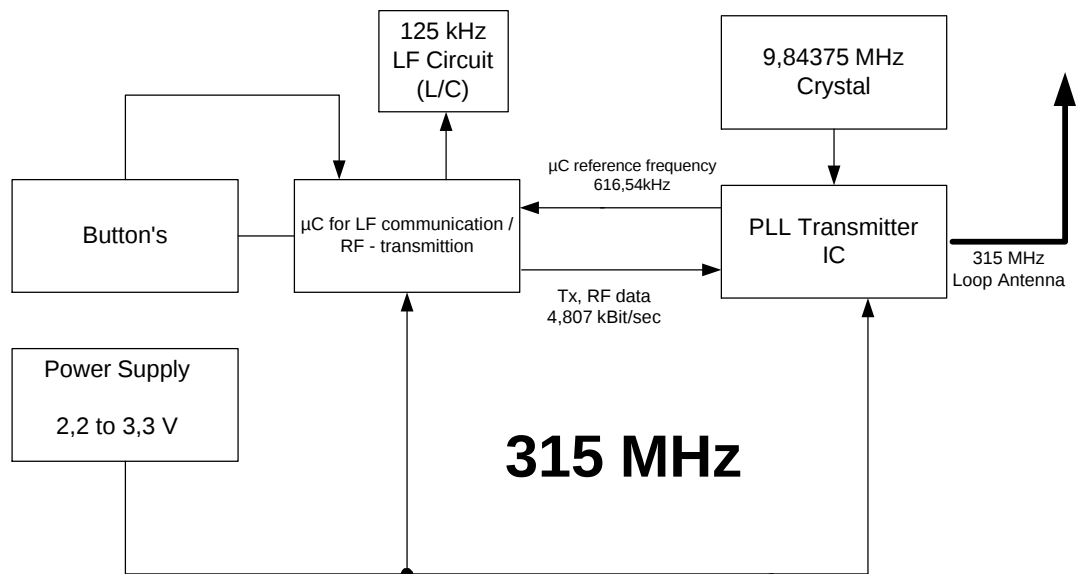
10 lock/unlock operations in 24 hours with typical transmission duration of 2 seconds
→ 0,42 lock/unlock operations with one hour

Transmitter ON 0.84 seconds / hour

Transmitter OFF 3599.16 seconds / hour

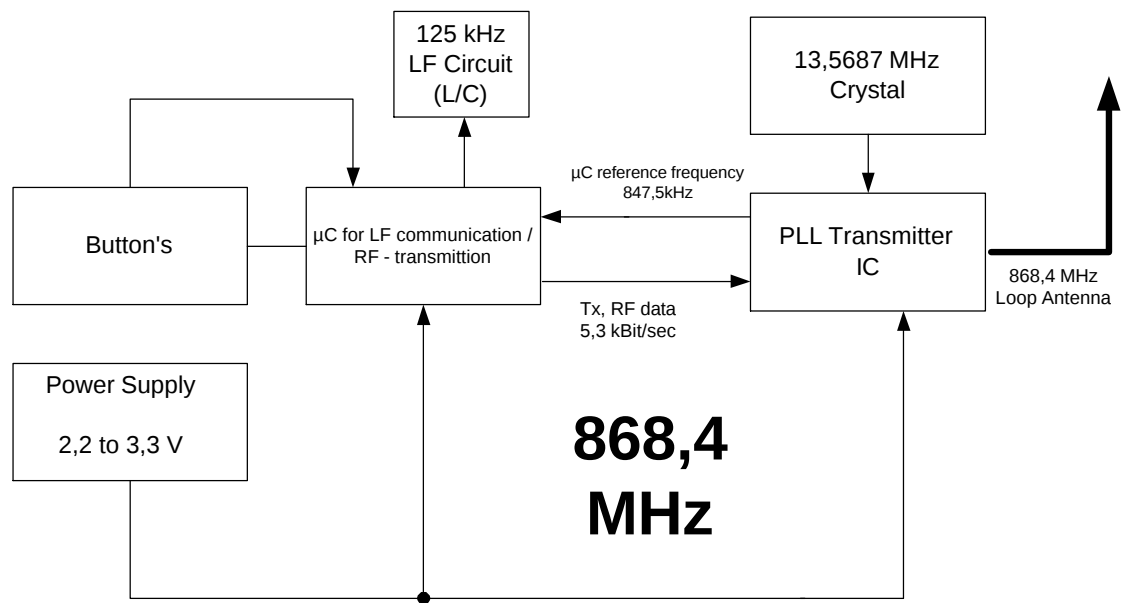
Duty Cycle: $T_{ON} / T_{(ON+OFF)} \times 100\% = 0.84 / 3,600 \times 100 \% = \underline{0.02\%}$

Block diagrams of the transmitter



IC: 267T-5WK49127

FCC ID:KR55WK49127



Variants

Model	Description
5WK4 9125	868.4MHz variant for Europe
5WK4 9126	434.2MHz variant for Europe
5WK4 9127	315MHz variant for USA
5WK4 9128	315MHz variant reduced power for Japan

Technical Data

Carrier frequency model 5WK4 9125:	868.4 MHz $\pm$ 0.05%
Carrier frequency model 5WK4 9126:	434.2 MHz $\pm$ 0.05%
Carrier frequency model 5WK4 9127:	315.0 MHz $\pm$ 0.05%
Carrier frequency model 5WK4 9128:	315 MHz $\pm$ 0.05%
Output power model 5KW4 9125/6/7:	< 10 mW
Field strength model 5WK49128:	< 500 μ V/m @ 3m
Type of modulation model 5KW4 9125/6/7:	FSK
Type of modulation model 5KW4 9128:	ASK
Method of frequency generation:	PLL
Number of channels:	1
Power supply:	accumulator (VL 2020)
- Nominal voltage:	3 V
- Lowest voltage:	2, 1 V
- Highest voltage:	3, 3 V
Type of accumulator:	lithium
Transmission range:	<10 m
Type of RF-antenna:	Loop antenna
Length of RF-antenna:	34 mm

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Label design**Europe: (434 MHz)**

Siemens VDO

5WK4 9126

**Europe: (868 MHz)**

Siemens VDO

5WK4 9125

**Japan: (315 MHz)**

Siemens VDO

5WK4 9128

USA/CAN: (315 MHz)

Siemens VDO

5WK49127

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This device complies with part 15 of the FCC Rules and RSS-210.

Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept interference received, including interference that may cause undesired operation.