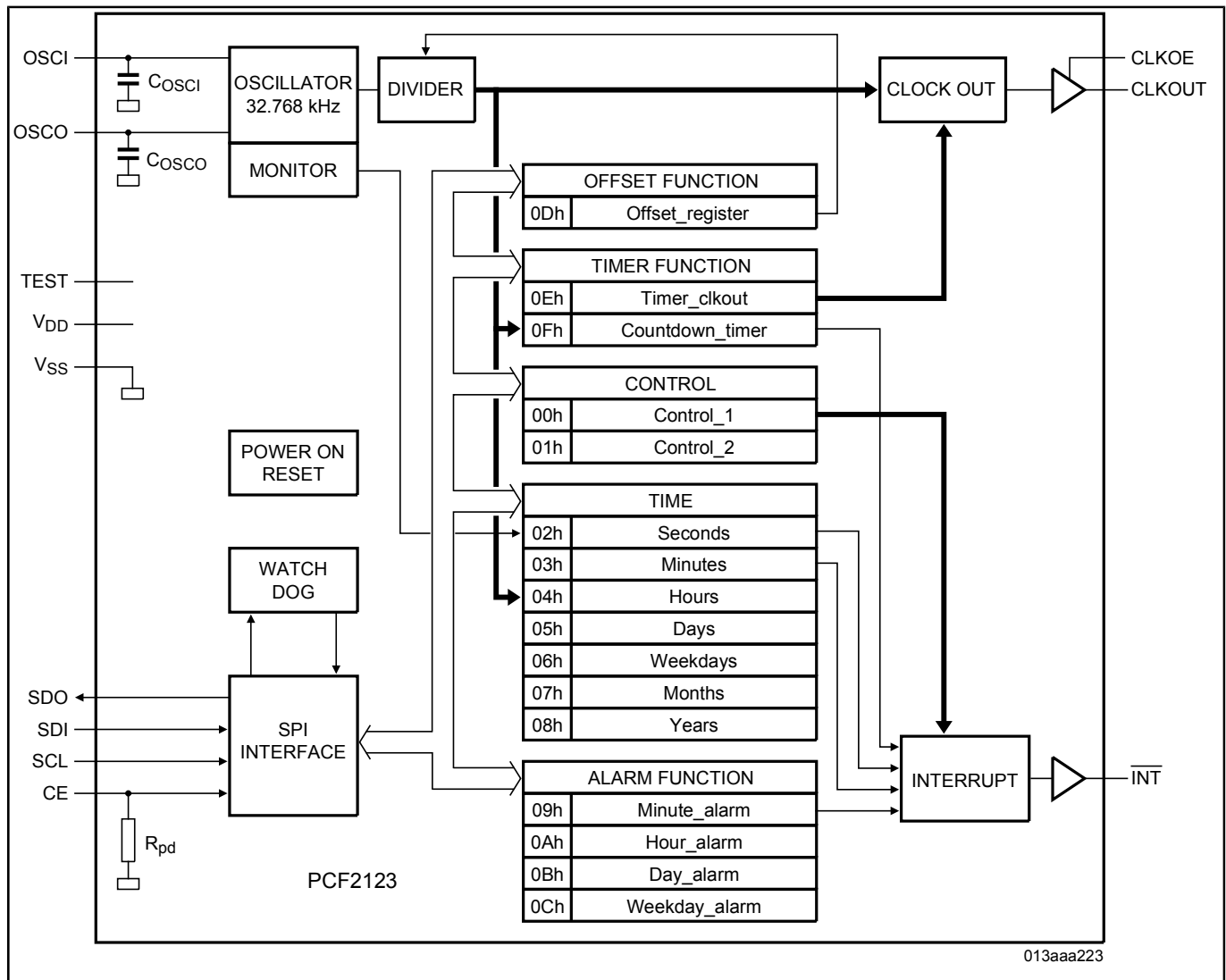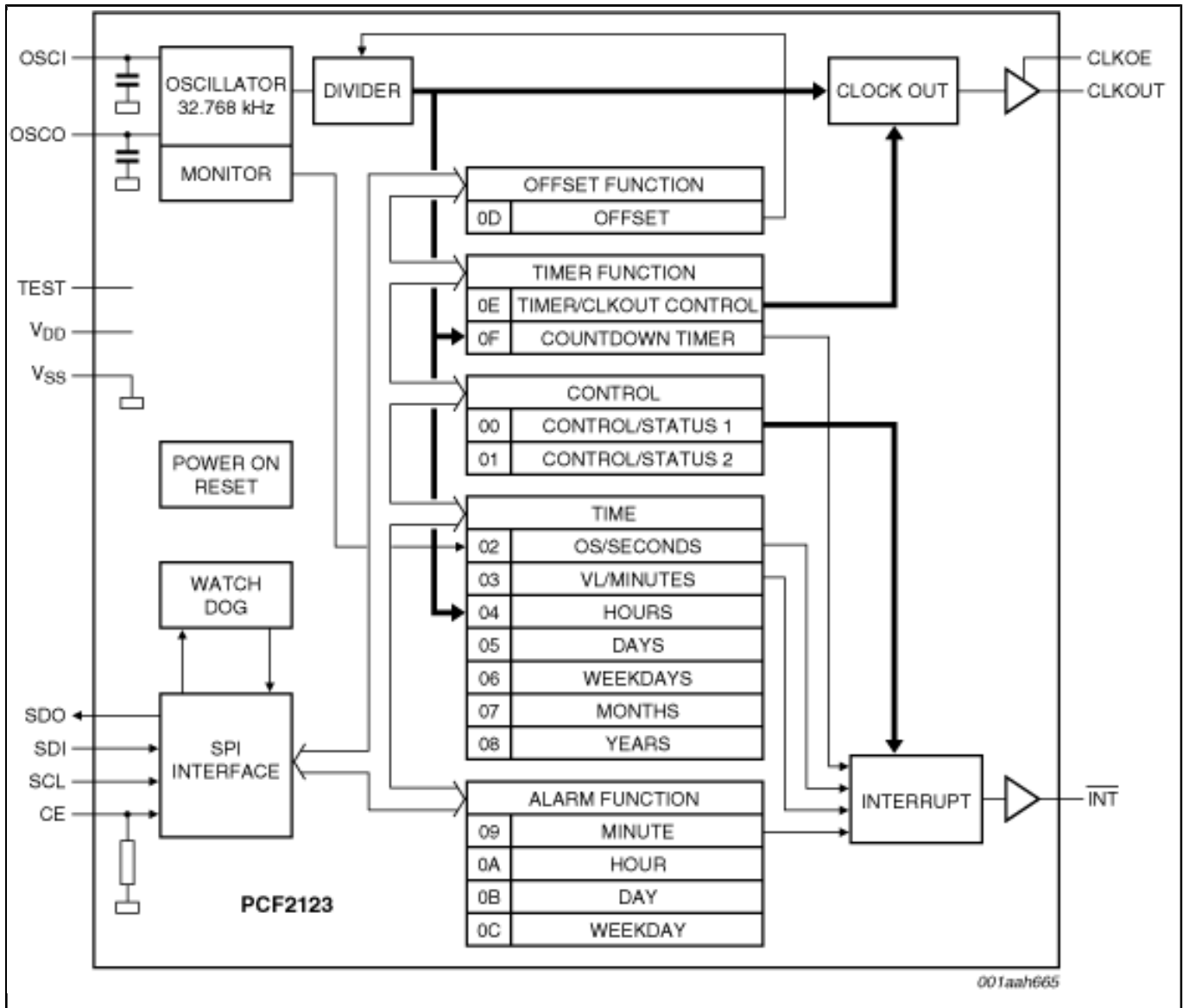# SPI Real-Time Clock/Calendar

PCF2123

Last Updated: Apr 11, 2024

The PCF2123 is a CMOS Real-Time Clock (RTC) and calendar optimized for low power applications. Data is transferred serially via a Serial Peripheral Interface (SPI-bus) with a maximum data rate of 6.25 Mbit/s. An alarm and timer function is also available providing the possibility to generate a wake-up signal on an interrupt pin. An offset register allows fine tuning of the clock.

PCF2123 Block Diagram Block Diagram

013aaa223

Block diagram: PCF2123TS, PCF2123U Block Diagram

OSCI

OSCILLATOR
32.768 kHz

DIVIDER

CLOCK OUT

CLKOE
CLKOUT

OSCO

MONITOR

OFFSET FUNCTION
0D   OFFSET

TEST

V_{DD}

V_{SS}

TIMER FUNCTION
0E   TIMER/CLKOUT CONTROL
0F   COUNTDOWN TIMER

POWER ON
RESET

CONTROL
00   CONTROL/STATUS 1
01   CONTROL/STATUS 2

WATCH
DOG

TIME
02   OS/SECONDS
03   VL/MINUTES
04   HOURS
05   DAYS
06   WEEKDAYS
07   MONTHS
08   YEARS

SDO
SDI
SCL
CE

SPI
INTERFACE

ALARM FUNCTION
09   MINUTE
0A   HOUR
0B   DAY
0C   WEEKDAY

INTERRUPT

$\overline{INT}$

PCF2123

001aah665

View additional information for SPI Real-Time Clock/Calendar.

Note: The information on this document is subject to change without notice.