



# 32 KHz Watch Circuit with Programmable Output Period and Pulse Width

## PCA2002

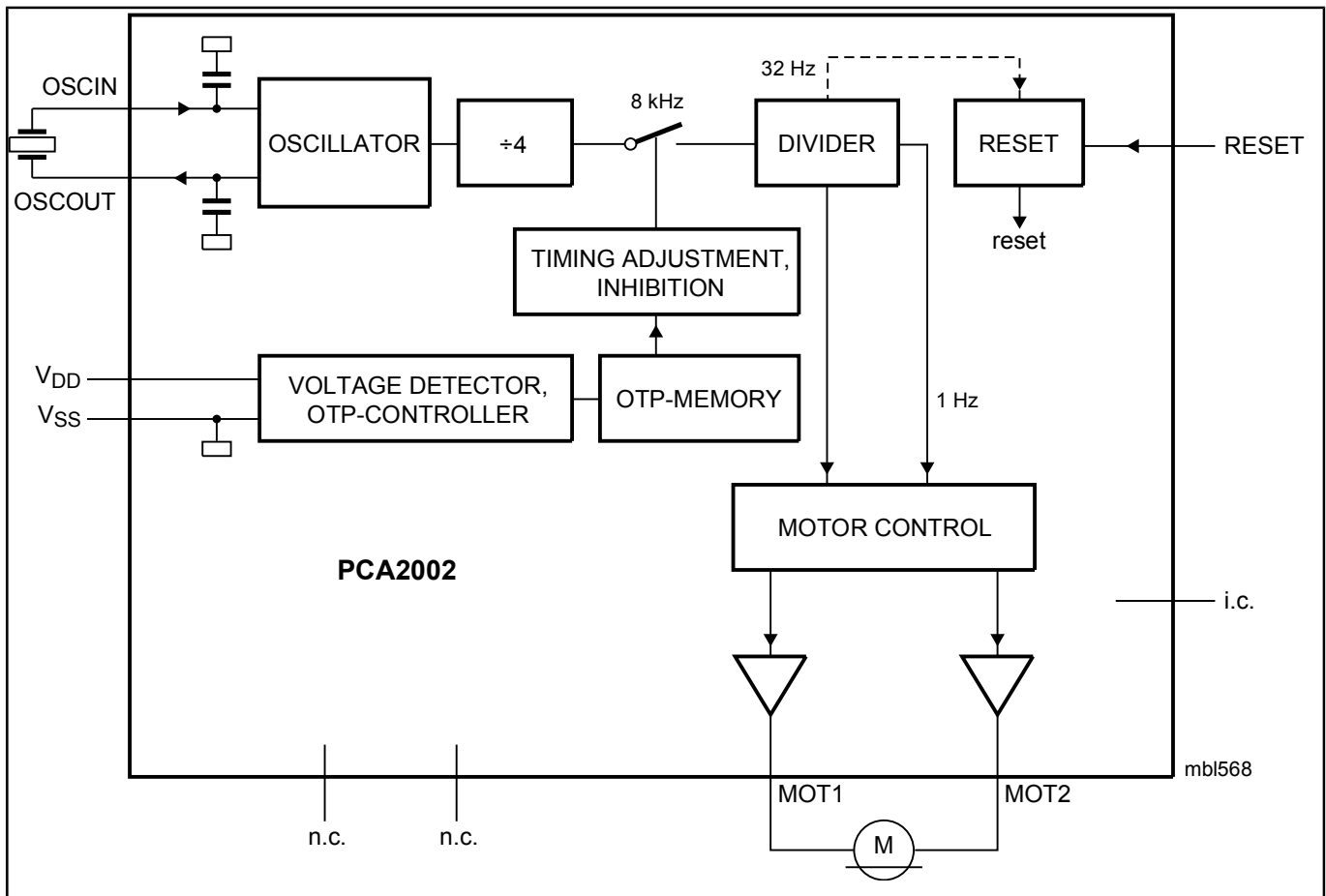
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The PCA2002 is a CMOS integrated circuit for battery operated wrist watches with a 32 kHz quartz crystal as the timing element and a bipolar stepping motor. The quartz crystal oscillator and the frequency divider are optimized for minimum current consumption. A timing accuracy of 1 ppm is achieved with a programmable, digital frequency adjustment.

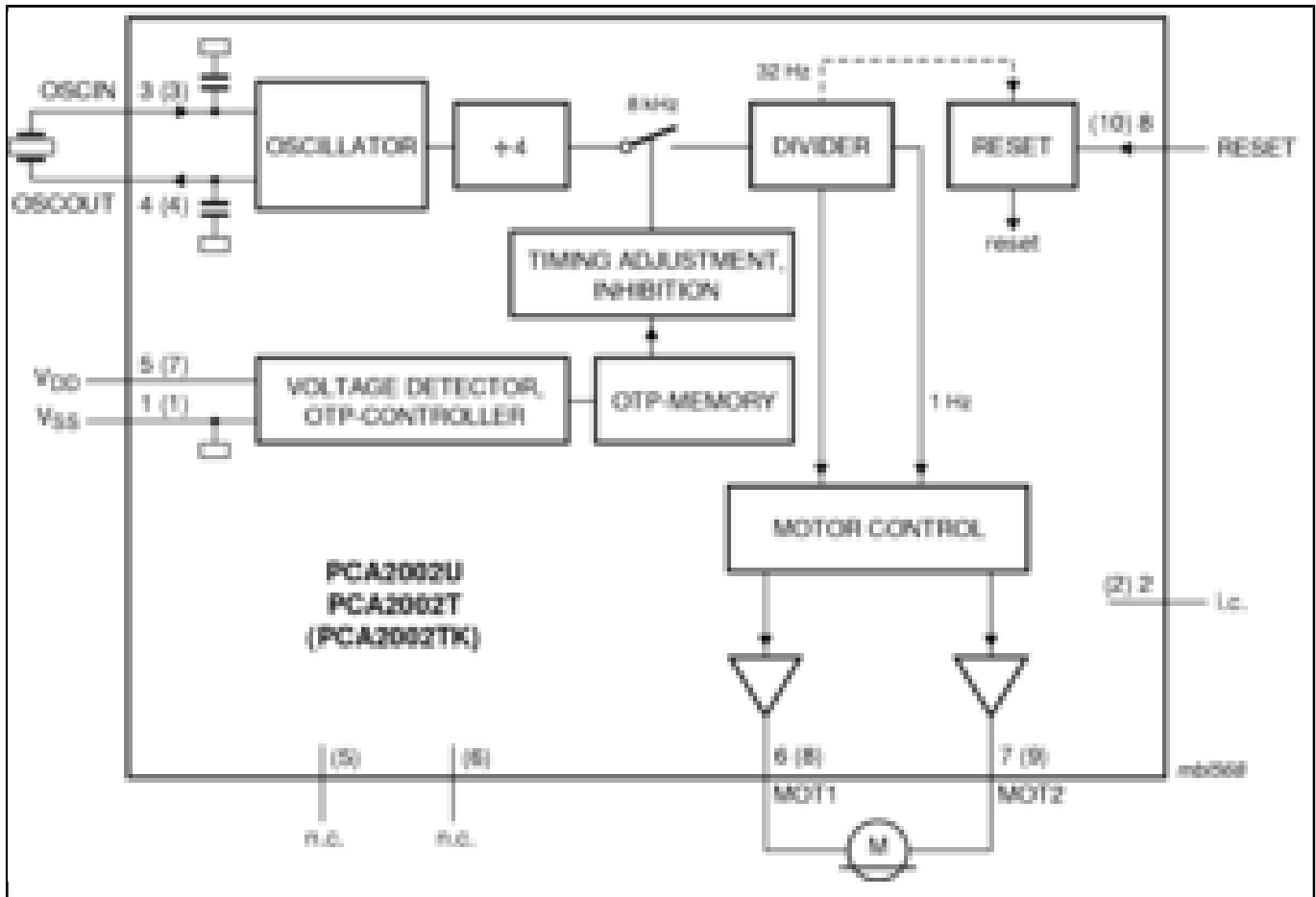
The output period and the output pulse width can be programmed. It can be selected between a full output pulse or a chopped output pulse with a duty cycle of 75 %. In addition, a stretching pulse can be added to the primary driving pulse.

A pad RESET is provided (used for stopping the motor) for accurate time setting and for accelerated testing of the watch.

## PCA2002 Block Diagram Block Diagram



## Block diagram: PCA2002CX8, PCA2002U, PCA2003U Block Diagram



View additional information for [32 KHz Watch Circuit with Programmable Output Period and Pulse Width](#).

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

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