



# Two-Channel I<sup>2</sup>C-Bus Multiplexer

## PCA9540B

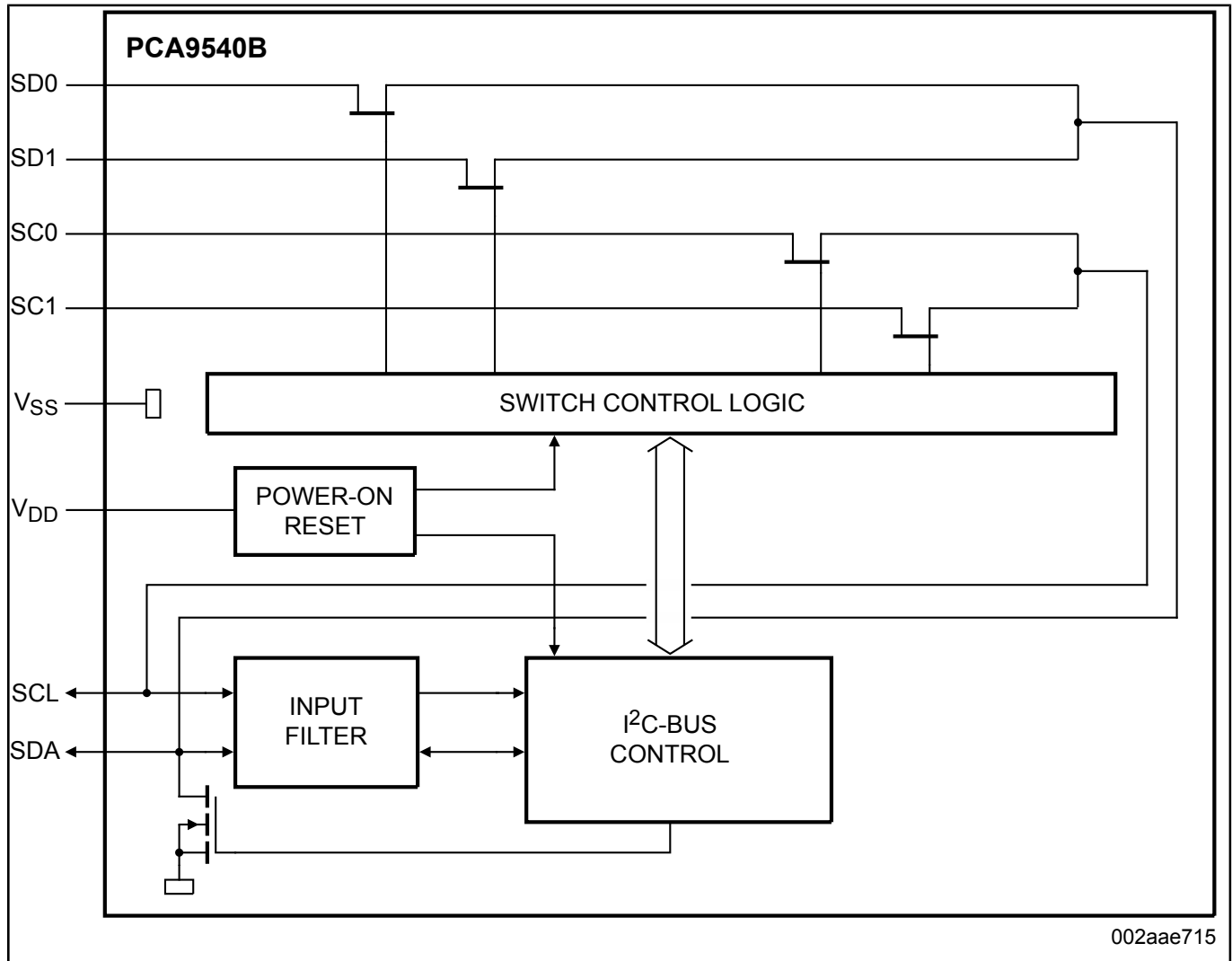
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The PCA9540B is a 1-of-2 bidirectional translating multiplexer, controlled via the I<sup>2</sup>C-bus. The SCL/SDA upstream pair fans out to two SCx/SDx downstream pairs, or channels. Only one SCx/SDx channel is selected at a time, determined by the contents of the programmable control register.

A power-on reset function puts the registers in their default state and initializes the I<sup>2</sup>C-bus state machine with no channels selected.

The pass gates of the multiplexer are constructed such that the VDD pin can be used to limit the maximum high voltage that is passed by the PCA9540B. This allows the use of different bus voltages on each SCx/SDx pair, so that 1.8 V, 2.5 V or 3.3 V parts can communicate with 5 V parts without any additional protection. External pull-up resistors can pull the bus up to the desired voltage level for this channel. All I/O pins are 5 V tolerant.

## PCA9540B Block Diagram



View additional information for [Two-Channel I<sup>2</sup>C-Bus Multiplexer](#).

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

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