



Four-Channel I²C-Bus Switch with Reset

PCA9546A

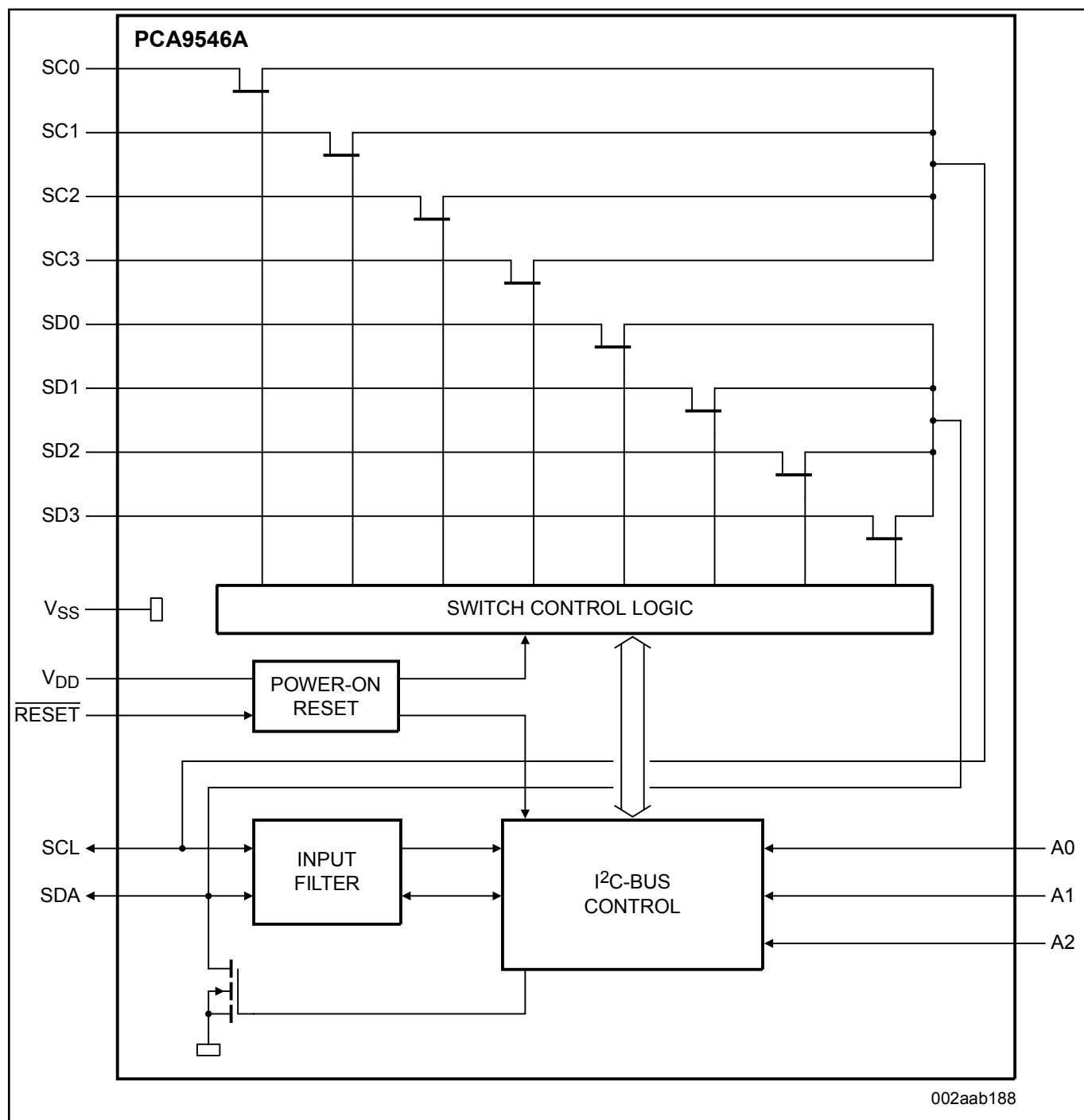
Last Updated: Dec 23, 2025

The PCA9546A is a quad bidirectional translating switch controlled via the I²C-bus. The SCL/SDA upstream pair fans out to four downstream pairs, or channels. Any individual SCx/SDx channel or combination of channels can be selected, determined by the contents of the programmable control register.

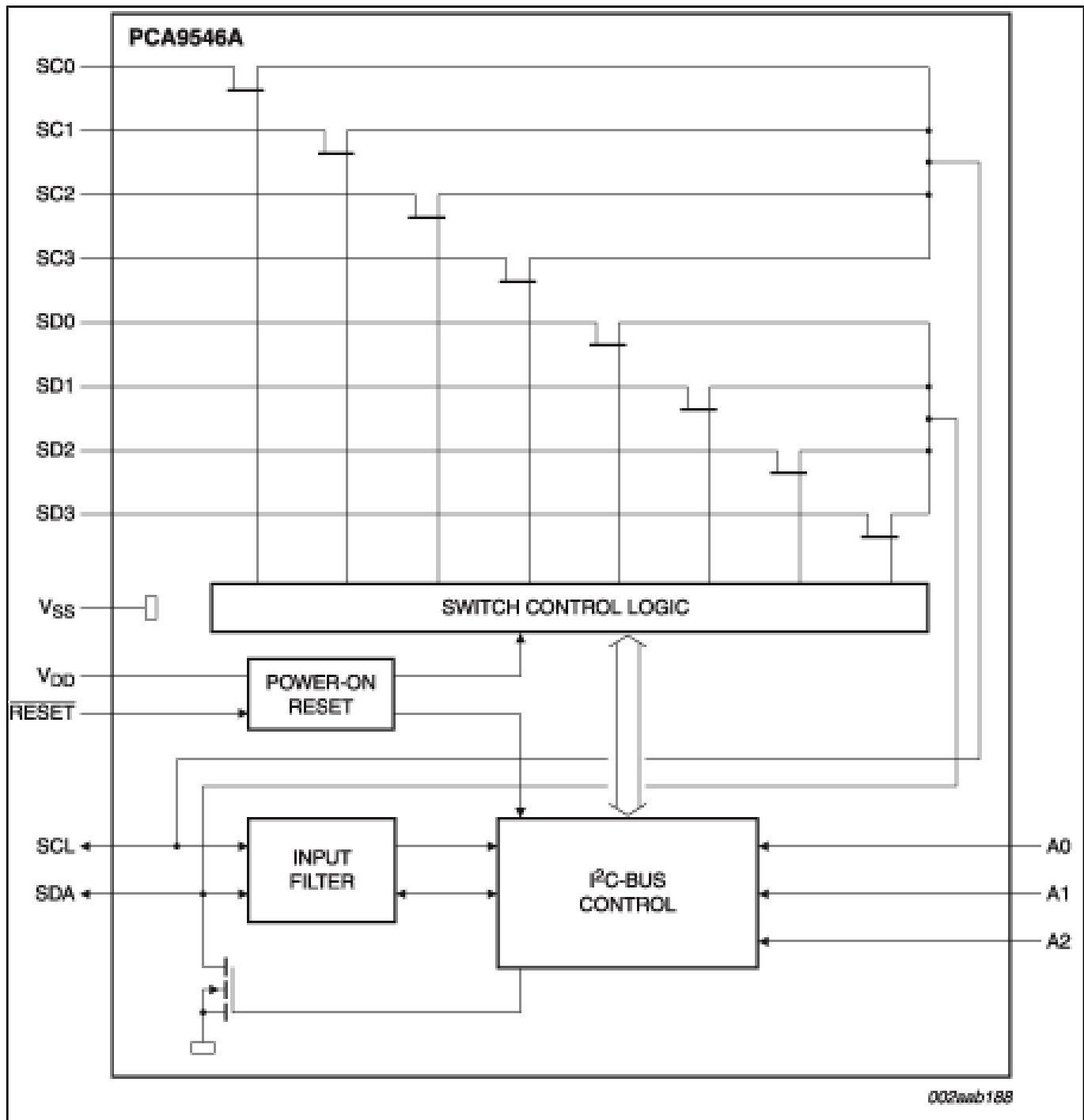
An active LOW reset input allows the PCA9546A to recover from a situation where one of the downstream I²C-buses is stuck in a LOW state. Pulling the RESET pin LOW resets the I²C-bus state machine and causes all the channels to be deselected as does the internal Power-On Reset (POR) function.

The pass gates of the switches are constructed such that the VDD pin can be used to limit the maximum high voltage which is passed by the PCA9546A. This allows the use of different bus voltages on each pair, so that 1.8 V or 2.5 V or 3.3 V parts can communicate with 5 V parts without any additional protection. External pull-up resistors pull the bus up to the desired voltage level for each channel. All I/O pins are 5 V tolerant.

PCA9546A Block Diagram



PCA9546ABS, PCA9546AD, PCA9546APW Block Diagram



View additional information for [Four-Channel I²C-Bus Switch with Reset](#).

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