



# Eight-Channel I<sup>2</sup>C-Bus Switch with Reset

## PCA9548A

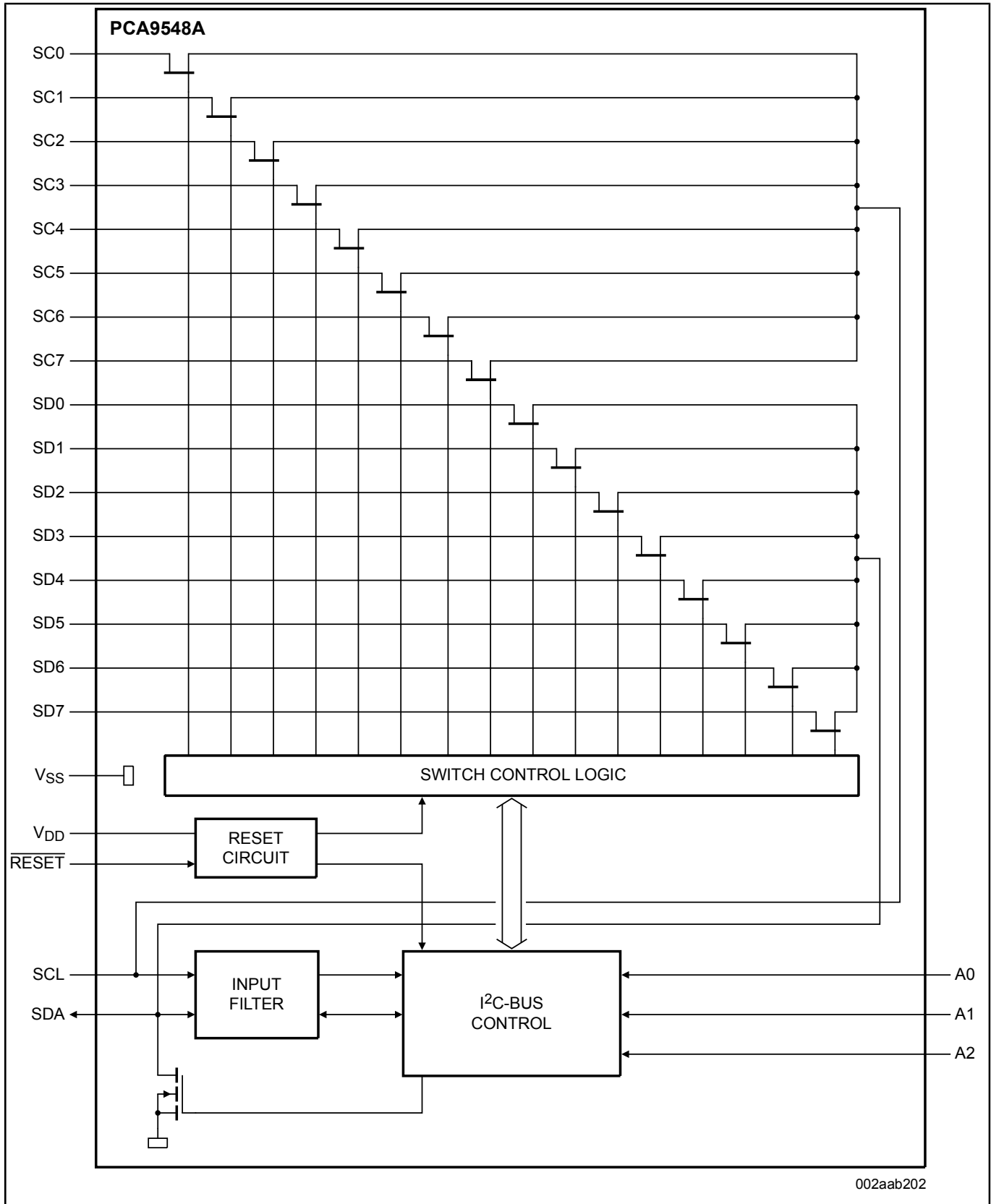
Last Updated: Jun 15, 2022

The PCA9548A is an octal bidirectional translating switch controlled via the I<sup>2</sup>C-bus. The SCL/SDA upstream pair fans out to eight 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.

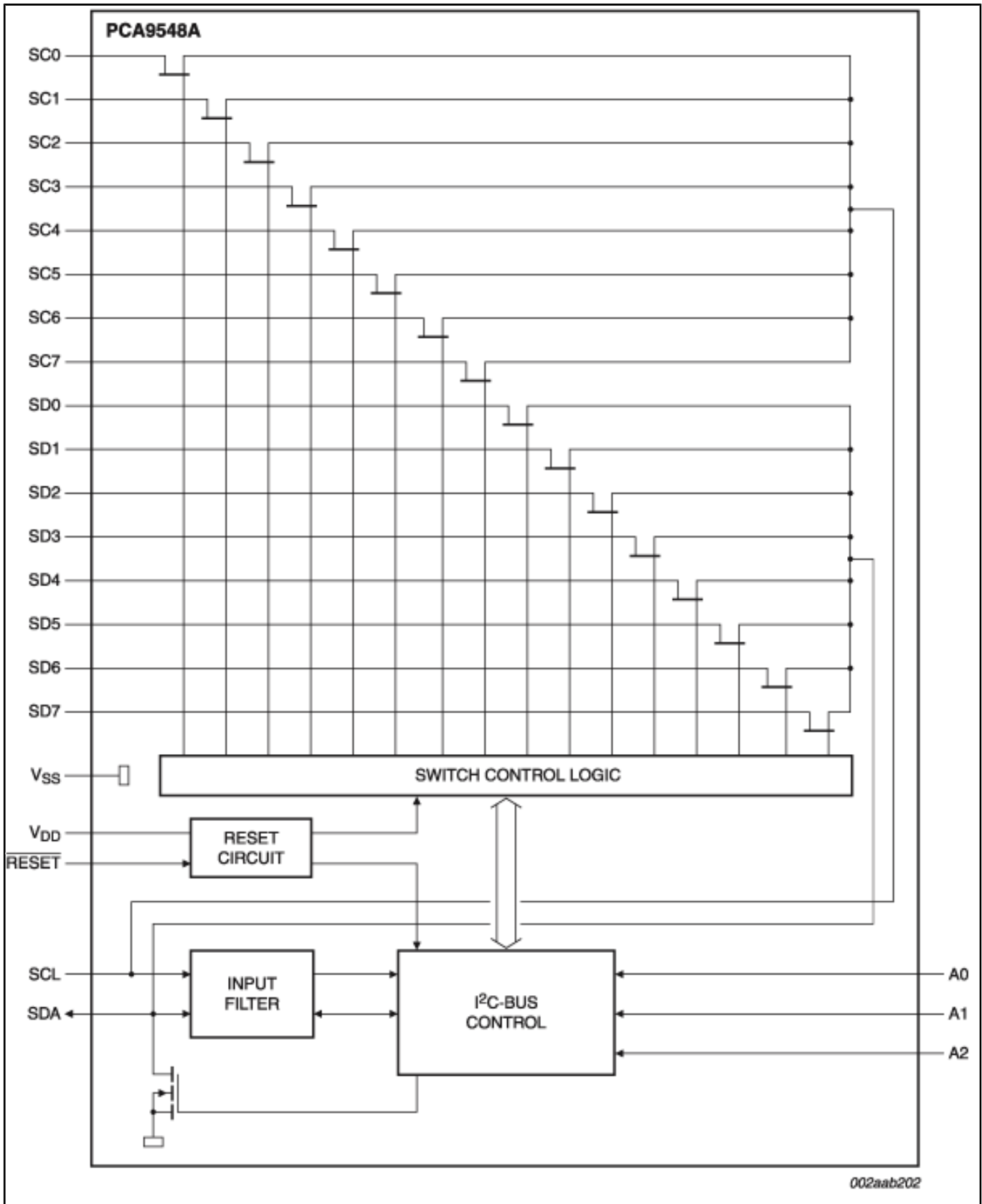
An active LOW reset input allows the PCA9548A to recover from a situation where one of the downstream I<sup>2</sup>C-buses is stuck in a LOW state. Pulling the RESET pin LOW resets the I<sup>2</sup>C-bus state machine and causes all the channels to be deselected as does the internal Power-on reset function.

The pass gates of the switches are constructed such that the VDD pin can be used to limit the maximum high voltage which will be passed by the PCA9548A. 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 6 V tolerant.

# PCA9548A Block Diagram Block Diagram



# PCA9548ABS, PCA9548AD, PCA9548APW Block Diagram Block Diagram



002aab202

View additional information for [Eight-Channel I<sup>2</sup>C-Bus Switch with Reset](#).

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

**[www.nxp.com](http://www.nxp.com)**

NXP and the NXP logo are trademarks of NXP B.V. All other product or service names are the property of their respective owners. The related technology may be protected by any or all of patents, copyrights, designs and trade secrets. All rights reserved. © 2024 NXP B.V.