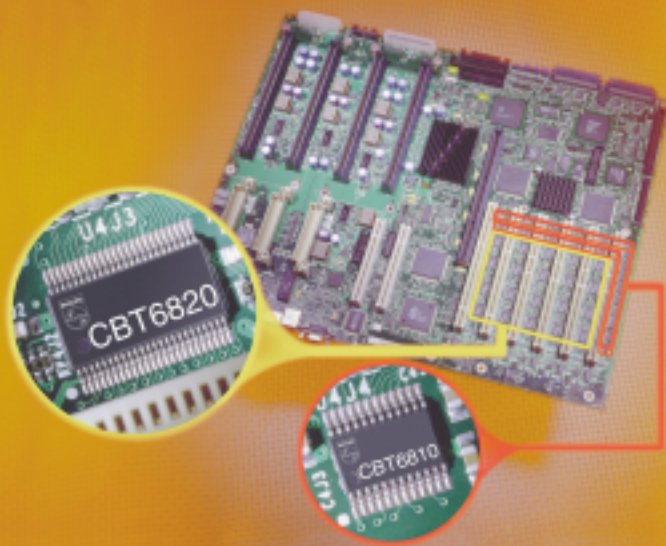


Philips Family of Live Insertion Bus Switches



The 10-bit CBT6800, the 10-bit CBT6810 and the 20-bit CBT6820, both with Schottky diodes, make up the Philips family of precharged, live insertion bus switches.

CBT6800

10-Bit Bus Switch with Precharged Outputs

CBT6810

10-Bit Bus Switch with Precharged Outputs and Schottky Undershoot Protection

CBT6820

20-Bit Bus Switch with Precharged Outputs and Schottky Undershoot Protection

Family Description

Philips Semiconductors' family of Cross Bar Technology (CBT) precharged output bus switches includes the 10-bit CBT6800 and CBT6810 with [Schottky diodes](#) and the 20-bit CBT6820 with [Schottky diodes](#). These devices are typically used for live-insertion applications, such as PCI hot-plug, where slots are pre-charged to minimum system voltage levels and isolated from the remainder of the system. Slot isolation allows PCI cards to be inserted or extracted while the rest of the system is still powered. Voltage biases avoid signal distortions when the system is connected to the slot.

The CBT6800 is a 10-bit bus switch optimized for systems that do not exhibit undershoot. The CBT6810 is also a 10-bit bus switch with [Schottky diodes](#) and is optimized for systems that exhibit inadvertent undershoots. The CBT6820 is a 20-bit bus switch with [Schottky diodes](#).

CBT6800 Advantages

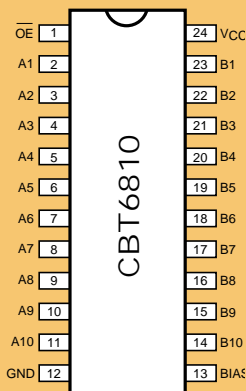
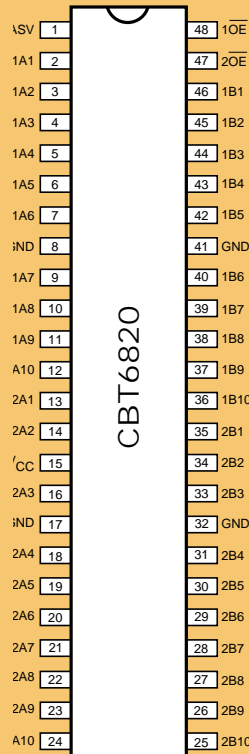
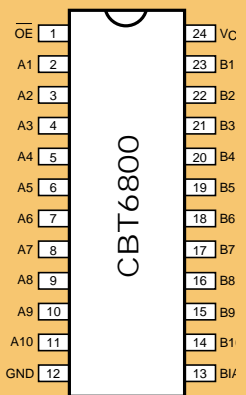
- Supports 10-bit live-insertion isolation and voltage biasing
- 5.0 V operation
- 5Ω typical R_{ON} switch connection
- 3.7ns typical enable/disable times
- Bleedthrough current < 200mV
- Undershoot protection down to -0.5 V
- 3.5pF input capacitance
- 24-pin plastic TSSOP package

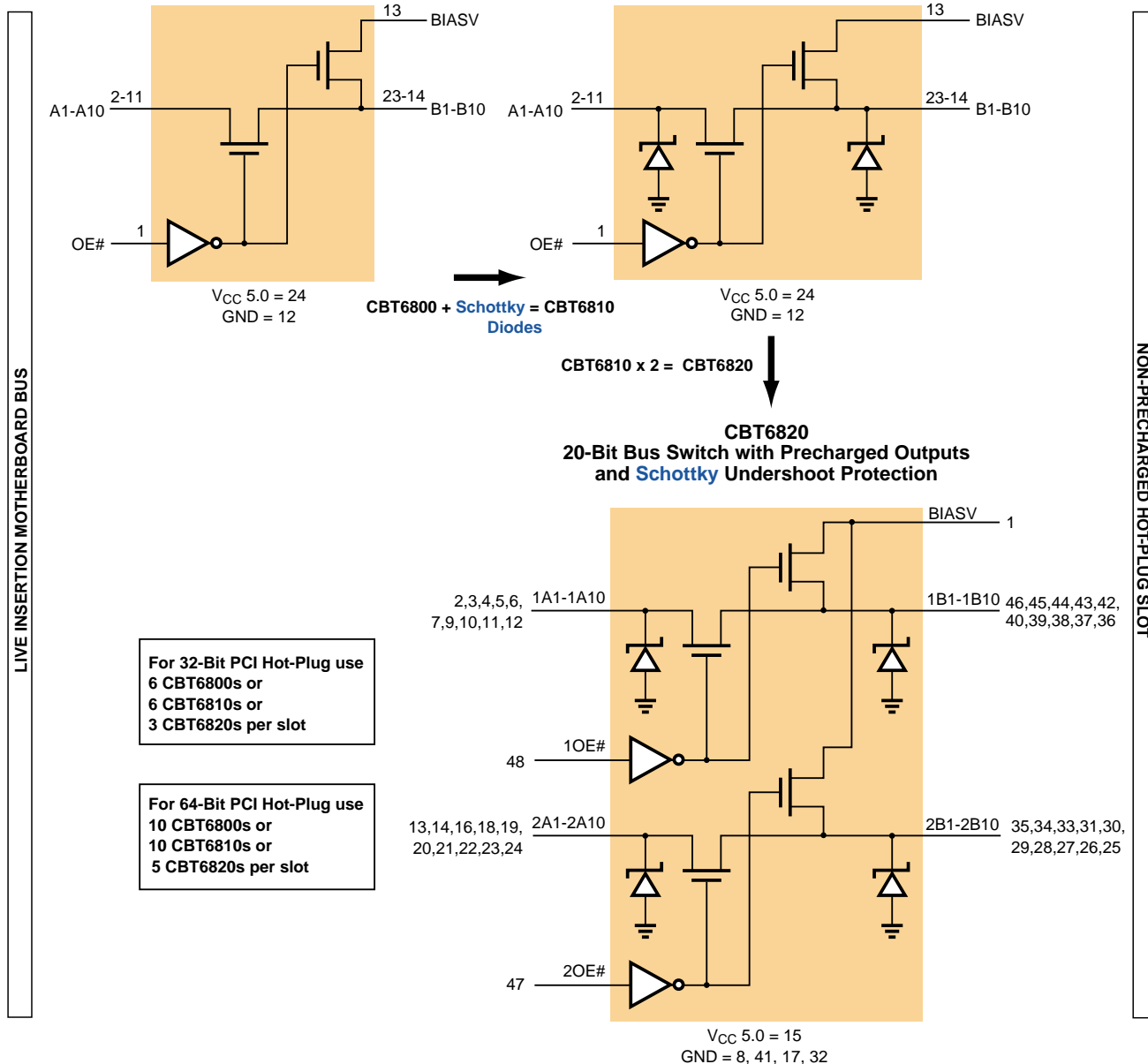
CBT6810 Advantages

- Supports 10-bit live-insertion isolation and voltage biasing
- 5.0 V operation
- 5Ω typical R_{ON} switch connection
- 3.7ns typical enable/disable times
- Bleedthrough current < 200mV
- Undershoot protection down to -2 V via [Schottky diodes](#)
- Pin-to-pin compatible with CBT6800
- 3.5pF input capacitance
- 24-pin plastic TSSOP package

CBT6820 Advantages

- Supports 20-bit-live insertion isolation and voltage biasing
- 5.0 V operation
- 5Ω typical R_{ON} switch connection between input and output
- 3.1ns typical enable/ disable times
- Bleedthrough current < 200mV
- Undershoot protection down to -2 V via [Schottky diodes](#)
- 4.5pF input capacitance
- 48-pin plastic TSSOP package





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