AVC16244

16 Bit Buffer/Driver with 3-State Outputs

Preliminary

Product Features

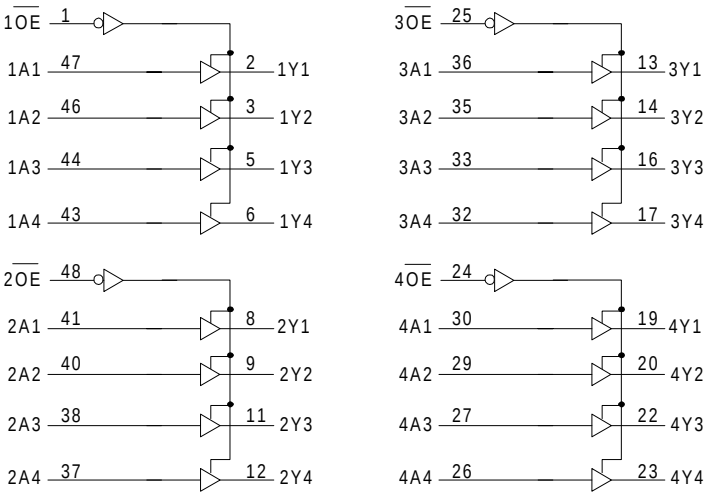
- Less than 1.7 nS maximum propagation delay at 3.3V V_{DD}
- Wide supply voltage range of 1.2V to 3.6 V
- Overvoltage-Tolerant Inputs/Outputs allow mixed-voltage-mode data communications
- Output circuitry with dynamic control minimizes over/undershoot and maximizes output drive
- Extended temp range of -40° to + 85° C
- 2KV ESD
- 48 pin TSSOP and TVSOP package availability

Product Description

The AVC16244 is a 16-bit non-inverting buffer/line driver with 3-state outputs. The device can be used as four 4-bit buffers, two 8-bit buffers or one 16-bit buffer. The 3-state outputs are controlled by the output enable inputs $\overline{1OE}$, $\overline{2OE}$, $\overline{3OE}$, and $\overline{4OE}$. A HIGH on OE causes the outputs to assume a high impedance OFF-state.

This product is designed to have an extremely low propagation delay and a minimum amount of power consumption.

Block Diagram



Product Description (Cont.)

To ensure the high-impedance state during power up or power down, $\overline{OE}$ should be tied V_{DD} through a pullup resistor; the minimum value of the resistor is determined by the current-sinking capability of the $\overline{OE}$ driver.

Output circuitry is dynamically controlled, which, during output transitions, initially lowers the output impedance to effectively drive the load and, subsequently, raises the impedance to reduce noise. Figure 1 shows typical VOL vs. IOL and VOH vs IOH curves to illustrate the output impedance and drive capability of the circuit. At the beginning of the signal transition, the circuit provides a maximum dynamic drive that is equivalent to a high-drive standard-output device.

Pin Configuration