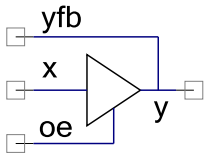
Tri-State Buffer (Bufoe)

1.10

Features



- Buffer with Output Enable signal
- Feedback signal

General Description

The Tri-State Buffer (Bufoe) component is a non-inverting buffer with an active high output enable signal. When the output enable signal is true, the buffer functions as a standard buffer. When the output enable signal is false, the buffer turns off.

When to Use a Tri-State Buffer

The Tri-State Buffer should be used to interface to a shared bus such as I^2C. Tri-State Buffers should not be used for internal logic. Tri-State Buffers can only be used with an I/O pin.

Input/Output Connections

This section describes the various input and output connections for the Tri-State Buffer.

x – Input

Input to the buffer.

oe – Input

This is the output enable connection. When oe is true ('1'), the buffer will be on. When oe is false ('0'), the buffer output is in a high-impedance state.

y – Inout

This connection is connected to the output of the buffer. When oe is true ('1'), this connection is an output, and y has the same value as x. When oe is false ('0'), this connection may be used as an input.

yfb – Output

This is the feedback signal from the y connection. When oe is true ('1') the yfb and y have the same value as x. When oe is false ('0'), yfb has the same value seen at y irrespective of x.

Placement

Each I/O port is limited to four unique output enable signals.

Component Changes

This section lists the major changes in the component from the previous version.

Version	Description of Changes
1.10.f	Minor datasheet edits and updates.
1.10.e	Minor datasheet edits and updates.
1.10.d	Minor datasheet edits and updates.
1.10.c	Minor datasheet edits and updates.
1.10.b	Minor datasheet edits and updates.
1.10.a	Minor datasheet edits and updates.
1.10	The component now consistently has an active high output enable signal. (The previous version was active low for some devices and active high for others.)

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