

Trig2pulse

1.0

Features

- Allows the user to use a signal with a rising (Trig2pulse) or falling (`_Trig2pulse`) edge to trigger a digital pulse with a user-specified width, delay and slew-rate.
- You can use multiple instances of the component in the same simulation.
- All the definition for this component is provided in two symbol files (Trig2pulse.qsym and `_Trig2pulse.qsym`)

General description

The Trig2pulse component provides a simple interface to take a signal as input and trigger a pulse of a specified duration, delay and slew-rate on either a rising or falling edge.

This component is created as a symbol with a `.subckt` definition using a voltage source as a PULSE signal.

When to use Trig2pulse component

The Trig2pulse Component was developed to detect the desired edge of input change and force a digital output pulse for reliable use for circuit components downstream.

Trig2pulse Setup

The Trig2pulse Component has 2 versions. Trig2pulse.qsym is the rising edge trigger. `_Trig2pulse.qsym` is the falling edge trigger.

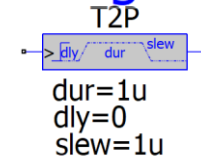
Input-output connections

There are only one hardware input and one hardware output.

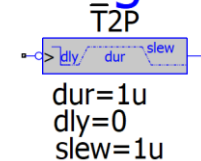
trig (noninverted)

This input is on the left-side of the component and is labelled by the '`>`' clocking character.

Rising-Edge



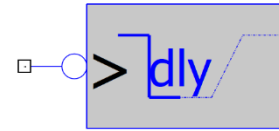
Falling-Edge



The input will detect a rising edge signal.

trig (inverted)

This input is on the left-side of the component and is labelled by the '>' clocking character and the inversion "bubble" icon.



The input will detect a falling edge signal.

out

This output is on the right-side of the component and is not labelled.



The output has a 0V to 1V ranges

Parameters and Settings

This component only has three visible addressable parameters.

dur=

This parameter is the assignable pulse duration.

dly=

This parameter allows the assignable time delay from the detection of the edge having been detected.

slew=

This parameter allows the assignable slew time of the output. This slew applied to both transitions of the output.

Implementation Limitations

This version of the Trig2pulse Component has the following limitations:

- Any signal amplitude rise or fall will trigger the pulse.
- The output is designed to be digital (either 0V or 1V). If other output voltages are needed, the symbol can be modified or the output can be fed into a voltage B-source to level convert.

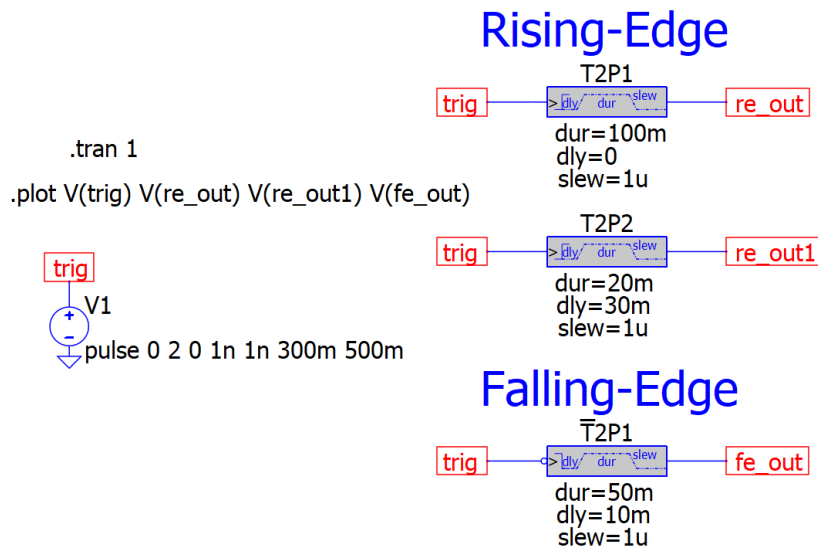
- The output is designed to be a positive pulse. Negative pulses can be achieved by modifying the symbol .subckt or by using a voltage B-source to level convert.

Future Improvements

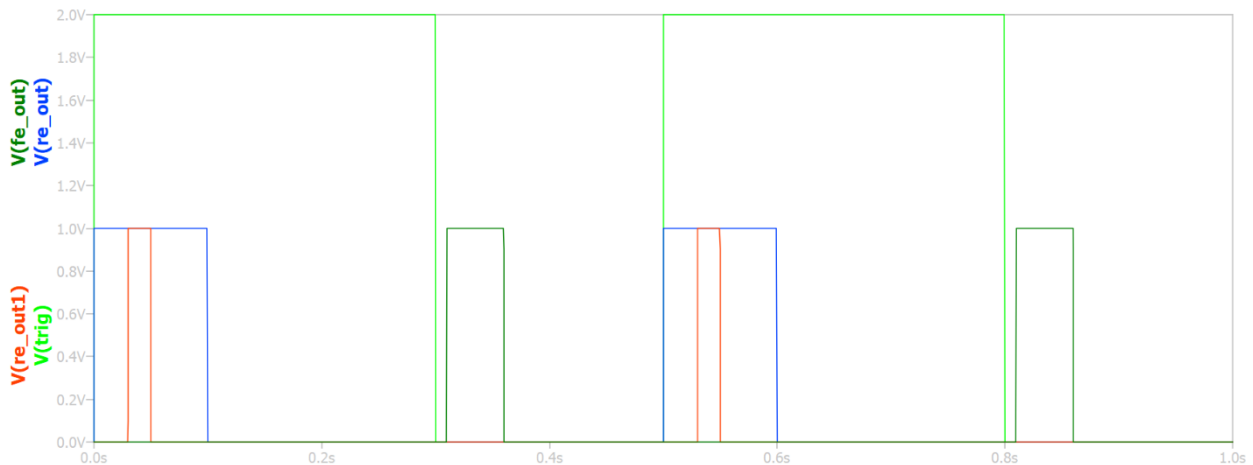
The symbols have all the information needed to place your own “magic”. Have at it!

Examples

Here are very simple example on how to use the Trig2pulse component. In the example are two rising edge triggered pulses of different durations and delays and one falling edge triggered pulse.



Plot Results



Component Changes

Version	Description of changes	Reason for changes/impact
Trig2pulse 1.0	first release of the component	Reuses the same log.dll.

References

--	--

© CONSULTRON, 2026 All Rights Reserved. CONSULTRON allows PUBLIC use of the file(s).

CONSULTRON allows public or commercial use of this product. Please use it for good.

DISCLAIMER: CONSULTRON provides NO WARRANTY expressed or implied.

This product is intended for non-critical or non-safety use and can be used for educational purposes.