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risetime

Returns the rise time for a signal measured between percent low and percent high of the difference between the initial and final value.

Syntax

risetime(*sig*[, *initval*[, *finalval* [, *inittype*[, *finaltype*[, *theta1*[, *theta2*[, *xtol*[, *ytol*[, *accuracy*]]]]]]]]] **)**

risetime(sig=*sig*, **initval**=*initval*, **finalval**=*finalval* [, **inittype**=*inittype*] [, **finaltype**=*finaltype*] [, **theta1**=*theta1*] [, **theta2**=*theta2*] , **xtol**=*xtol*] [, **ytol**=*ytol*] [, **accuracy**=*accuracy*] **)**

Arguments

sig	The signal.
initval	The X value (if inittype is 'x) or Y value (if inittype is 'y) that starts the rise time interval. The measurement is always done in ordinate values.
finalval	The X value (if inittype is 'x) or Y value (if inittype is 'y) that ends the rise time interval.
inittype	When 'x, the initial value is an X value. When 'y, the initial value is a Y value. Valid values: 'x, 'y Default: 'y
finaltype	When 'x, the final value is an X value. When 'y, the final value is a Y value. Valid values: 'x, 'y Default: 'y
theta1	The percent low. Default: 10
theta2	The percent high. Default: 90
xtol	The relative tolerance in percentage value in the X direction. Default: 1

*ytol*   The relative tolerance in percentage value in the Y direction.
                              Default: `1`

accuracy   Specifies whether the function should use interpolation, or use
                              iteration controlled by the absolute tolerances to calculate the
                              value. `'interp` directs the function to use interpolation, and
                              `'exact` directs the function to consider the xtol and yval values.
                              Data types: name for scalar
                              Valid values: `'interp`, `'exact`
                              Default: `'exact`

Example 1

```
export real risetimeOut1 = risetime( sig=V(out), initval=19u, finalval=30u,
inittype='x, finaltype='x, theta1=10, theta2=90)
```

The following diagram illustrates how the result from the above example is determined.
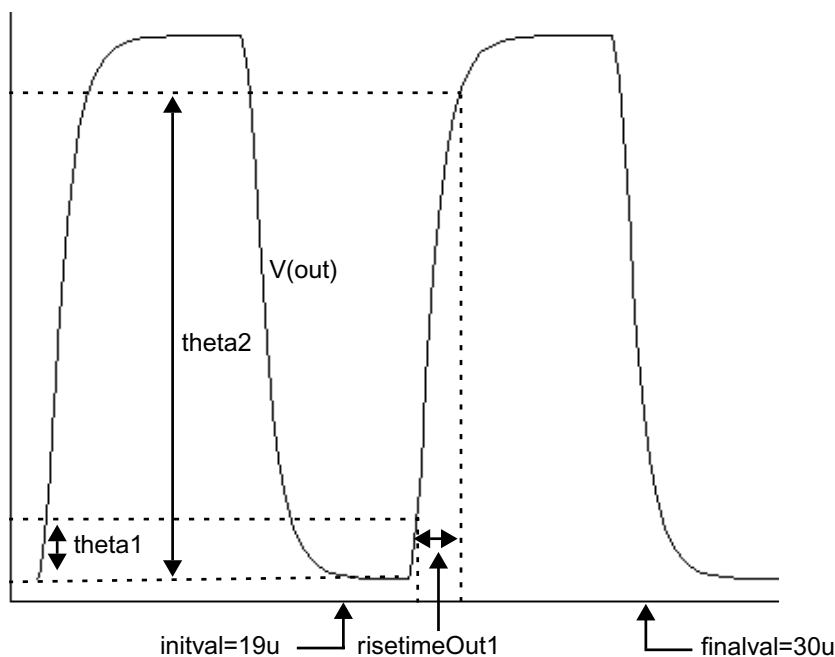
Example 2

```
export real risetimeOut2 = risetime( sig=V(out), initval=0V, finalval=5V,
inittype='y, finaltype='y, theta1=10, theta2=90)
```

The following diagram illustrates how the result from the above example is determined.