

clock_pwl20.xce

Attributes

```
main_vars: y
iparms: n=2
rparms:
+ t1=0    v1=1    t2=2    v2=2
+ t3=3    v3=3    t4=4    v4=4
+ t5=5    v5=5    t6=6    v6=6
+ t7=7    v7=7    t8=8    v8=8
+ t9=9    v9=9    t10=10   v10=10
+ t11=11   v11=11   t12=12   v12=12
+ t13=13   v13=13   t14=14   v14=14
+ t15=15   v15=15   t16=16   v16=16
+ t17=17   v17=17   t18=18   v18=18
+ t19=19   v19=19   t20=20   v20=20
```

Description

clock_pwl20.xce is a clock source in which the waveform for a single period is specified in a piece-wise linear manner. The parameters have the following meaning:

n: The number of points used in defining the waveform for one period.

t1,t2, etc.: Time of break point 1, 2, etc. The first time point must always be specified as 0.

The last time point also decides the period of the waveform. For example, if **n** is 5, and **t5** is 1.5, then the period of the waveform is 1.5 s.

v1,v2, etc.: y value at the corresponding break point.

AC behaviour is not implemented.

A sample circuit file is given below, and the corresponding waveform is shown in Fig. 1.

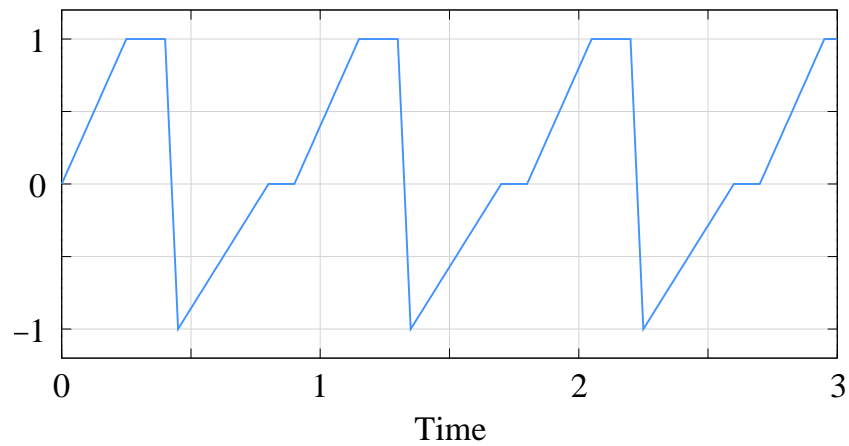


Figure 1: Waveform obtained with `clock_pwl20.xce`.

```

begin_circuit
  xelement type=clock_pwl20 y=y
+   n=6
+   t1=0.0   v1=0
+   t2=0.25  v2=1
+   t3=0.4   v3=1
+   t4=0.45  v4=-1
+   t5=0.8   v5=0
+   t6=0.9   v6=0
  outvar:
+   y=xvar_of_y
end_circuit

begin_solve
  solve_type=trns
  begin_output
    filename=clock.dat
    variables: y
  end_output
  method: forward_euler=yes
+   t_start=0
+   t_end=3.0
+   delt_const_x=0.02
+   delt_min=0.0001
end_solve

```