

ipulse.ece



Attributes

```
mainnodes: p n
outvar: i1=cur(p)_of_i0
rparms:
+ i_1=0
+ i_2=0
+ t_1=0
+ t_2=0
+ delt_1=0
+ delt_2=0
```

Description

`ipulse.ece` is a pulse current source connected between nodes `p` and `n`. The parameters have the following meaning:

`t_1`: time of the first transition (from `v_1` to `v_2`).

`t_2`: time of the second transition (from `v_2` to `v_1`).

`delt_1`: width of the transition at `t_1`.

`delt_2`: width of the transition at `t_2`.

The branch current (from `p` to `n`) is made available as an output variable.

AC behaviour is not implemented.

The effect of the various parameters of `ipulse.ece` on the waveforms is shown in Fig. 1. The corresponding circuit file is given below.

```

title: testing of ipulse.ece

begin_circuit
  eelement type=ipulse p=a n=0 i_1=0 i_2=5
+    t_1=10 t_2=30 delt_1=2 delt_2=4

  eelement type=r p=a n=0 r=1
  outvar: va=nodev_of_a
  refnode=0
end_circuit

begin_solve
  solve_type=trns
  initial_sol initialize
  begin_output
    filename=ipulsetest1a.dat
    variables: va
  end_output
  method: norm_2=1.0e-6 back_euler=yes
+  t_start=0 t_end=40 delt_const=1
end_solve

end_cf

```

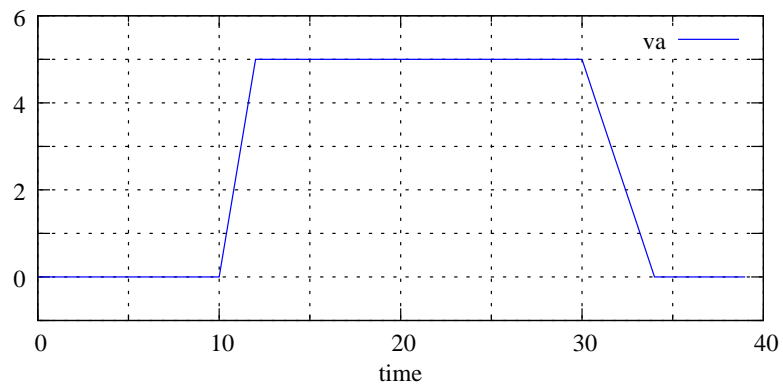


Figure 1: Waveform obtained with `ipulse.ece` (see the circuit file for details).