


```

*V_PULSE# NODE_P NODE_N DC VALUE PULSE( VINIT VPULSE TDELAY TRISE TFALL PWIDTH PERIOD )
VIN VIN 0 DC 0 PULSE( 0 5 1n 1n 1n 50u 100u )
XRE VIN VRE RISE_E
XFE VIN VFE FALL_E

```

```

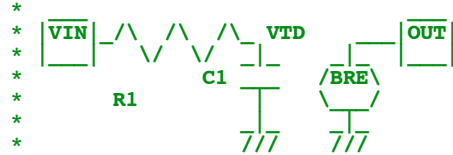
.control
*TRAN TSTEP TSTOP TSTART TMAX
tran 1u 3m 0 1u
set pensize = 2
plot vin vre vfe
plot vfe
.endc

```

```

*====Rising_Edge=====
.SUBCKT RISE_E VIN OUT
R1 VIN VTD 1meg
C1 VTD 0 1p
BRE OUT 0 V = 5*u(V(VIN)-V(VTD)-.1)
.ENDS RISE_E

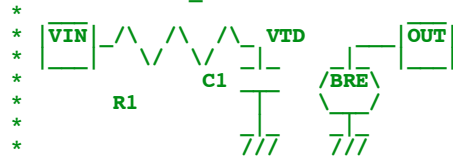
```



```

*====Falling_Edge=====
.SUBCKT FALL_E VIN OUT
R1 VIN VTD 1meg
C1 VTD 0 1p
BRE OUT 0 V = 5*u(V(VTD) -V(VIN)-.1)
.ENDS FALL_E

```



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.end

```

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4.11.10 4.54PM
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```