switch_1.ebe

Attributes

```
ebe name=switch_1 x_inputs=yes
Jacobian: variable
nodes: p n
state_vars:
aux_vars:
aux_vars_startup:
x_vars: x
iparms:
sparms:
rparms:
+  r_on=1m
+  r_off=1M
+  v_on=0
+  x_high=1.0
stparms:
igparms:
outparms: i v
```

Description

`switch_1.ebe` is a switch connected between nodes `p` and `n`. Its eqivalent circuit is shown in the figure. When the controlling input `x` is greater than $x_{\text{high}}/2$, R' is equal to `r_on`; otherwise, it is `r_off`. Note that `switch_1` is *bidiretional*; if $V_n > V_p$, it conducts in the reverse direction.

The branch current and branch voltage are made available as output variables `i` and `v`, respectively.

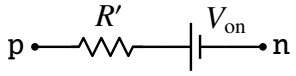

Figure 1: Equivalent circuit of `switch_1.ebe`.