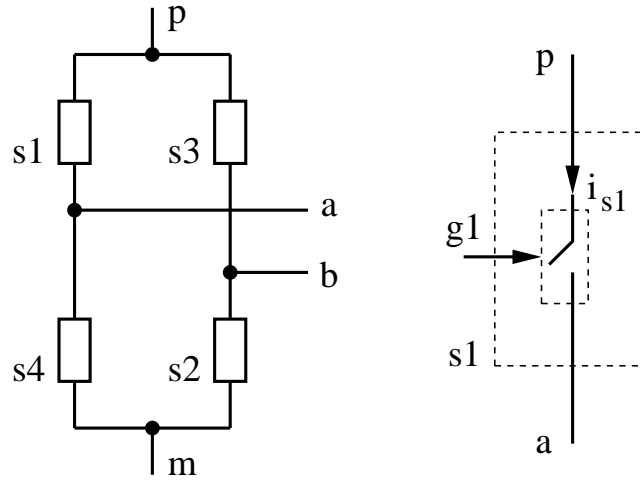


inverter_4q.ece



Attributes

```
mainnodes: a b p m
outvar:
+ is1=is_of_s1
+ is2=is_of_s2
+ is3=is_of_s3
+ is4=is_of_s4
main_var: g1 g2 g3 g4
rparms:
+ ron=0.1
+ roff=10M
+ g_high=1.0
+ cap=1p
```

Description

`inverter_4q.ece` is an inverter circuit (see figure) in which the switches and diodes are $R_{\text{on}}/R_{\text{off}}$ -type, `ron` and `roff` being the on- and off-state resistances, respectively. Switch `s1` is controlled by gate signal `g1`, and so on. If `g1` is greather than `g_high/2`, `s1` is closed; otherwise, it is open. The switch and diode currents are made available as output variables, as shown in the figure.

Two capacitors (not shown in the figure) are connected from `a` to `p`, and `b` to `p`, the capacitance value being given by the real parameter `cap`. These are sometimes useful for convergence of the Newton-Raphson process, since they make the waveforms smoother.

AC behaviour is not implemented.