

s_igbt_diode_cap (subcircuit)

Attributes

```
inputs: G
outputs:
e_left_nodes:
e_right_nodes:
e_top_nodes: C
e_bottom_nodes: E
b_left_nodes:
b_right_nodes:
b_top_nodes:
b_bottom_nodes:
parameters:
  cap: 10p
  r_off: 1M
  r_on: 1m
  v_on_d: 0
  v_on_s: 0
  x_high: 1
```

Description

s_igbt_diode_cap is an ideal IGBT-diode pair in parallel with a capacitor (see figure). The parameters `r_on` and `r_off` specify the switch or diode resistance in the conducting and non-conducting states, respectively. `v_on_s` is the on-state voltage drop across the IGBT while `v_on_d` is the on-state voltage drop across the diode. `x_high` is the value of `x` which makes the IGBT turn on. The capacitance value is given by the parameter `cap`.

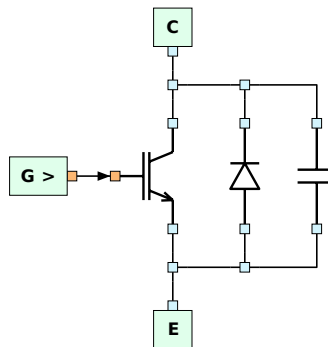


Figure 1: Schematic diagram of s_igbt_diode_cap.