

`vccs.ece`



Attributes

```
mainnodes: p n
outvar: v1=v1_of_i0 i1=cur(p)_of_i0
ind_nodes: vcplus vcminus
rparms: gm=1
outvar_ac: i1ac=cur(p)_of_i0
ind_nodes_ac: vcplus_ac vcminus_ac
```

Description

`vccs.ece` is a voltage-controlled current source connected between nodes `p` and `n`. The current from `n` to `p` is given by $i = g_m[v(\text{vcplus}) - v(\text{vcminus})]$. A similar relation holds for AC except that the voltages involved are complex numbers. Note that the independent nodes for the AC circuit are denoted by `vcplus_ac` and `vcminus_ac`.

The output variable `i1` gives the current through the element from `n` to `p`, and `v1` gives the voltage drop from `p` to `n`. The AC output variable `i1ac` gives the AC branch current.