



Figure 1: Current-controlled current source element.

*Form:*

**e:** $\langle$ instance name $\rangle$   $n_1$   $n_2$   $n_3$   $n_4$   $\langle$ parameter list $\rangle$

$n_1$   $n_2$   $n_3$   $n_4$  are the element nodes.

$N_+$   $N_-$   $N_{c+}$   $N_{c-}$  is the node declaration order.

*Parameters:*

Parameter	Type	Default value	Required?
a: gain	DOUBLE	1	no
ro: Output resistance value(Ohms)	DOUBLE	0	no

*Example:*

```
cccs:f1 2 3 1 0 a=10 ro=50
```

*Description:*

The current-controlled current source generates an output current that is a instantaneously and linearly-dependent on the input current to the element. The linear scaling is dependent on the gain factor  $a$ , and the output impedance  $r_o$  is connected in shunt with the output terminals.

*Notes:*

This is the F element in the SPICE compatible netlist.

*Version:*

2008.09.18

*Credits:*

Name

Chris Saunders

cssaunde@eos.ncsu.edu

Affiliation

NC State University

Date

September 2008

Links

[NC STATE UNIVERSITY](http://www.ncsu.edu)

[www.ncsu.edu](http://www.ncsu.edu)