

0.1 Spice diode model(conserves charge) d

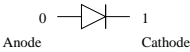


Figure 1: d — SPICE diode Element.

Form:
d:**<instance name>** n_1 n_2 \cdots **<parameter list>**
instance name is the model name,
 $n_1, n_2 \cdots$ are the element nodes.
Parameters:

Parameter	Type	Default value	Required?
is: Saturation current (A)	DOUBLE	1e-14	no
n: Emission coefficient	DOUBLE	1	no
ibv: Current magnitude at the reverse breakdown voltage (A)	DOUBLE	1e-10	no
bv: Breakdown voltage (V)	DOUBLE	0	no
fc: Coefficient for forward-bias depletion capacitance	DOUBLE	0.5	no
cj0: Zero-bias depletion capacitance (F)	DOUBLE	0	no
vj: Built-in junction potential (V)	DOUBLE	1	no
m: PN junction grading coefficient	DOUBLE	0.5	no
tt: Transit time (s)	DOUBLE	0	no
area: Area multiplier	DOUBLE	1	no
charge: Use charge-conserving model	BOOLEAN	true	no
rs: Series resistance (ohms)	DOUBLE	0	no

Example:
.model carlos d (is=2.24e-12 n=1.8307 cj0=1.32767e-15 rs=171.9 + vj=1.27517 m=0.810205
ibv=1.e-5 bv=16. charge=0)
d:d2 102 0 model = "carlos" area=258.63

Notes:
This is the D element in the SPICE compatible netlist.

<i>Credits:</i>			
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