

LT1001 Macromodel

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* Linear Technology LT1001 op amp model (with calls for LT1002)
* Written: 10-16-1989 15:04:20 Type: Bipolar npn input, internal comp.
* Typical specs:
* Vos=1.80E-05, Ib=7.00E-10, Ios=4.00E-10, GBP=8.0E+05Hz, Phase mar.=60.0deg,
* SR(+)=3.3E-01V/us, SR(-)=3.1E-01V/us, Av=118dB, CMMR=126dB,
* Vsat(+)=1.00V, Vsat(-)=1.00V, Isc=+/-25.0mA, Iq=1600uA
* (input differential mode clamp active)
*
* Connections: + - V+V-O
.subckt LT1001 3 2 7 4 6
* input
rc1 7 80 6.631E+03
rc2 7 90 6.631E+03
q1 80 102 10 qm1
q2 90 103 11 qm2
rb1 2 102 5.000E+02
rb2 3 103 5.000E+02
ddm1 102 104 dm2
ddm3 104 103 dm2
ddm2 103 105 dm2
ddm4 105 102 dm2
c1 80 90 8.660E-12
re1 10 12 1.409E+03
re2 11 12 1.409E+03
iee 12 4 9.901E-06
re 12 0 2.020E+07
ce 12 0 1.579E-12
* intermediate
gcm 0 8 12 0 7.558E-11
ga 8 0 80 90 1.508E-04
r2 8 0 1.000E+05
c2 1 8 3.000E-11
gb 1 0 8 0 1.538E+03
* output
ro1 1 6 2.575E+01
ro2 1 0 3.425E+01
rc 17 0 4.228E-06
gc 0 17 6 0 2.365E+05
d1 1 17 dm1
d2 17 1 dm1
d3 6 13 dm2
d4 14 6 dm2
vc 7 13 1.803E+00
ve 14 4 1.803E+00
ip 7 4 1.590E-03
dsub 4 7 dm2

* models
.model qm1 npn (is=8.000E-16 bf=5.500E+03)
.model qm2 npn (is=8.006E-16 bf=9.900E+03)
.model dm1 d (is=2.331E-08)
.model dm2 d (is=8.000E-16)
.ends LT1001
*
.subckt LT1002 3 2 7 4 6
x_LT1002 3 2 7 4 6 LT1001
.ends LT1002
*
* - - - - - * fini LT1001 family * - - - - - * [oamm vn01 9/89]
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