

## LM101A Macromodel

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* Linear Technology LM101A op amp model
* Written: 08-23-1989 15:55:44 Type: Bipolar npn input, external comp.
* Typical specs:
* Vos=7.0E-04, Ib=3.0E-08, Ios=1.5E-09, GBP=9.0E+05Hz, Phase mar.= 70 deg,
* SR(+)=5.0E-01V/us, SR(-)=4.8E-01V/us, Av= 104 dB, CMMR= 96 dB,
* Vsat(+)=1.00V, Vsat(-)=1.00V, Isc=+/-30.0mA, Iq= 1800uA
*
* Connections: + - V+V-O CaCb
.subckt LM101A 3 2 7 4 6 1 8 ; Use C=30 pF in main circuit (Ca to Cb).
* input
rc1 7 80 5.895E+03
rc2 7 90 5.895E+03
q1 80 2 10 qm1
q2 90 3 11 qm2
c1 80 90 5.460E-12
re1 10 12 2.438E+03
re2 11 12 2.438E+03
iee 12 4 1.506E-05
re 12 0 1.328E+07
ce 12 0 1.579E-12
* intermediate
gcm 0 8 12 0 2.689E-09
ga 8 0 80 90 1.696E-04
r2 8 0 1.000E+05
* external comp cap used for c2 (see note above).
gb 1 0 8 0 1.401E+02
* output
ro1 1 6 3.333E+01
ro2 1 0 6.667E+01
rc 17 0 4.758E-05
gc 0 17 6 0 2.102E+04
d1 1 17 dm1
d2 17 1 dm1
d3 6 13 dm2
d4 14 6 dm2
vc 7 13 1.808E+00
ve 14 4 1.808E+00
ip 7 4 1.785E-03
dsub 4 7 dm2
* models
.model qm1 npn (is=8.000E-16 bf=2.439E+02)
.model qm2 npn (is=8.220E-16 bf=2.564E+02)
.model dm1 d (is=3.337E-15)
.model dm2 d (is=8.000E-16)
.ends LM101A
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* - - - - - * fini LM101A * - - - - - * [oamm vn1 8/89]
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