

OP-27 Macromodel

```

*
* Linear Technology OP27 op amp model (with calls for OP227)
* Written: 11-21-1989 Type: Bipolar npn input, internal comp.
* Typical specs:
*   Ref. OP-27 data sheet, LTC 1990 databook p2-345
* Comments:
*   Uses extended phase compensation; input differential mode clamp.
*
* Connections: + - V+V-O
.subckt OP27 3 2 7 4 6
rc1 7 80 6.6315E+02
rc2 7 90 6.6315E+02
q1 80 2 10 qm1
q2 90 3 11 qm2
*
c1 80 91 200e-12
rxcl 91 90 50
cxc1 91 90 500e-12
c2 8 98 4.000e-12
rxcl 8 98 4.00k
cxc2 1 98 27.000e-12
*
cin 3 2 5e-12
ddm1 2 104 dm2
ddm3 104 3 dm2
ddm2 3 105 dm2
ddm4 105 2 dm2
re1 10 12 -2.6233E+01
re2 11 12 -2.6233E+01
iee 12 4 7.5030E-05
re 12 0 2.666E+06
ce 12 0 1.579E-12
gcm 0 8 12 0 7.558E-10
ga 8 0 80 90 1.5080E-03
r2 8 0 1.000E+05
gb 1 0 8 0 1.9176E+03
ro2 1 0 6.900E+01
*
rs 1 6 1
ec1 18 0 1 6 2.828e+01
gcl 0 8 20 0 1
rcl 20 0 1e3
d1 18 20 dm1
d2 20 18 dm1
*
d3a 131 70 dm3
d3b 13 131 dm3
gpl 0 8 70 7 1
vc 13 6 3.0909
rpla 7 70 1e4
rplb 7 131 1e5
d4a 60 141 dm3
d4b 141 14 dm3
gnl 0 8 60 4 1
ve 6 14 3.0909
rnla 60 4 1e4
rn1b 141 4 1e5
*
ip 7 4 2.625E-03
dsub 4 7 dm2
* models
.model qm1 npn (is=8.0000E-16 bf=2.0000E+03)
.model qm2 npn (is=8.0093E-16 bf=4.6667E+03)
.model dm1 d (is=1.000e-19)
.model dm2 d (is=8.000E-16)
.model dm3 d (is=1.000e-20)
.ends OP27
*
.subckt OP227 3 2 7 4 6
x_OP227 3 2 7 4 6 OP27
.ends OP227
*
* - - - - - * fini OP27 family * - - - - - *

```