

LT1056 Macromodel

```

*
* Linear Technology LT1056 op amp model
* Written: 11-30-1989 Type: PFET input, internal comp.
* Typical specs:
*   Ref. LT1056 data sheet, LTC 1990 databook p2-219
* Comments:
*   Uses input common-mode clamp (comment out if not desired).
*
* Connections: + - V+V-O
.subckt LT1056 3 2 7 4 6
*
rd1 4 80 9.474E+02
rd2 4 90 9.474E+02
j1 80 102 10 jm1
j2 90 103 11 jm2
rg1 2 102 2.000E+00
rg2 3 103 2.000E+00
** cm clamp
dcm1 107 103 dm4
dcm2 105 107 dm4
vcmc 105 4 4.1e0
ecmp 106 4 103 4 1
rcmp 107 106 1e4
dcm3 109 102 dm4
dcm4 105 109 dm4
ecmn 108 4 102 4 1
rcmn 109 108 1e4
**
c1 80 90 1.5e-11
rs1 10 12 1e0
rs2 11 12 1e0
iss 7 12 4.200E-04
rs 12 0 4.762E+05
cs 12 0 1.579E-12
*
gcm 0 8 12 0 1.329E-08
ga 8 0 80 90 1.056E-03
r2 8 0 1.000E+05
c2 1 8 3.000E-11
gb 1 0 8 0 5.097E+01
ro2 1 0 7.400E+01
*
rso 1 6 1.000E+00
ec1 18 0 1 6 1.712e+01
gcl 0 8 20 0 1
rc1 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 2.9515
rpla 7 70 1e4
rplb 7 131 1e5
d4a 60 141 dm3
d4b 141 14 dm3
gn1 0 8 60 4 1
ve 6 14 2.9515
rnla 60 4 1e4
rn1b 141 4 1e5
*
ip 7 4 4.080E-03
dsub 4 7 dm2
* models
.model jm1 pjf (is=10e-12 beta=1.5e-3 vto=-1.0000e+00)
.model jm2 pjf (is=5e-12 beta=1.5e-3 vto=-9.9986e-01)
.model dm1 d (is=1.000e-15)
.model dm2 d (is=8.000E-16)
.model dm3 d (is=1.000e-16)
.model dm4 d (is=1.000e-09)
.ends LT1056
*
* - - - - - * fini LT1056 * - - - - - *

```