

opamp_TL082_a.ece

Description

opamp_TL082_a.ece is a macromodel (“sub-circuit”) of the TL082 op-amp. The $\pm V_{CC}$ supply is provided internally.

The following SPICE net-list, available in the public domain, is implemented in opamp_TL082_a.ece:

```
* connections: non-inverting input
* | inverting input
* | | positive power supply
* | | | negative power supply
* | | | | output
* | | | | |
  1 2 3 4 5
.subckt TL082
*
c1 11 12 2.412E-12
c2 6 7 18.00E-12
css 10 99 5.400E-12
dc 5 53 dx
de 54 5 dx
dlp 90 91 dx
dln 92 90 dx
dp 4 3 dx
egnd 99 0 poly(2),(3,0),(4,0) 0 .5 .5
fb 7 99 poly(5) vb vc ve vlp vln 0 3.467E6 -3E6 3E6 3E6 -3E6
ga 6 0 11 12 339.3E-6
gcm 0 6 10 99 17.01E-9
iss 10 4 dc 234.0E-6
hlim 90 0 vlim 1K
j1 11 2 10 jx
j2 12 1 10 jx
r2 6 9 100.0E3
rd1 3 11 2.947E3
rd2 3 12 2.947E3
ro1 8 5 50
ro2 7 99 170
rp 3 4 20.00E3
rss 10 99 854.7E3
vb 9 0 dc 0
vc 3 53 dc 1.500
ve 54 4 dc 1.500
vlim 7 8 dc 0
vlp 91 0 dc 50
vln 0 92 dc 50
.model dx D(Is=800.0E-18 Rs=1)
```

```
.model jx NJF(Is=2.500E-12 Beta=984.2E-6 Vto=-1)
.ends
```

AC (small-signal) implementation of the model is provided, assuming that the op amp is working in the linear region of operation.