



```
.tran 10
.ic V(th1)=0 V(th1dt1)=0 V(th2)=0 V(th2dt1)=0
.param kpp=10 kvp=30 kvi=10
.param v_lim=2000/60*2*pi v_min=-v_lim v_max=v_lim
.param t_min=- t_lim t_max=t_lim t_lim=8.76
.param JM=0.00188 JL=0.0196 DM=0.0001 DL=0.01
.param kgb=1000 dbdeg=0.1 dbrad=dbdeg*pi/180
.param azposdeg=180 azposrad=azposdeg*pi/180
.param gretio=81*110/23 mtrposrad=azposrad*gretio
.param mtrrpm=2000 mtrrad=mtrrpm/60*2*pi
.param mtime=mtrposrad/mtrrad
```

