

PARAMETERS:
 AV 10K
 VRP 1
 VRN 1

$$\frac{(V(\%IN3, \%IN4) - [VRP] - [VRN]) / (\pi)}{ATAN(\frac{[AV] * \pi * V(\%IN1, \%IN2)}{(V(\%IN3, \%IN4) - [VRP] - [VRN])}) + (V(\%IN3) + V(\%IN4) - [VRP] + [VRN]) / 2}$$

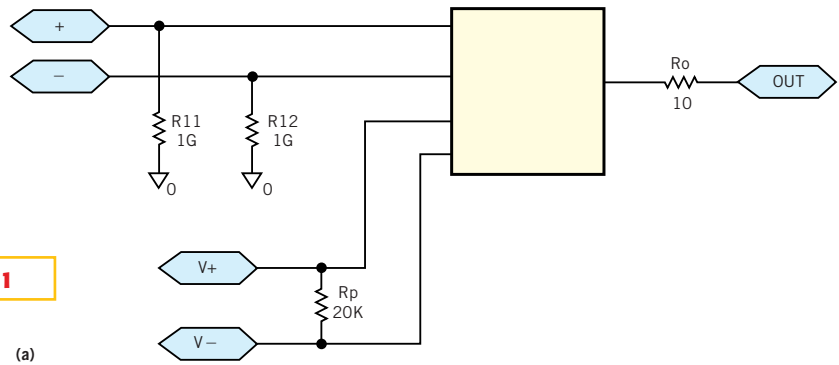


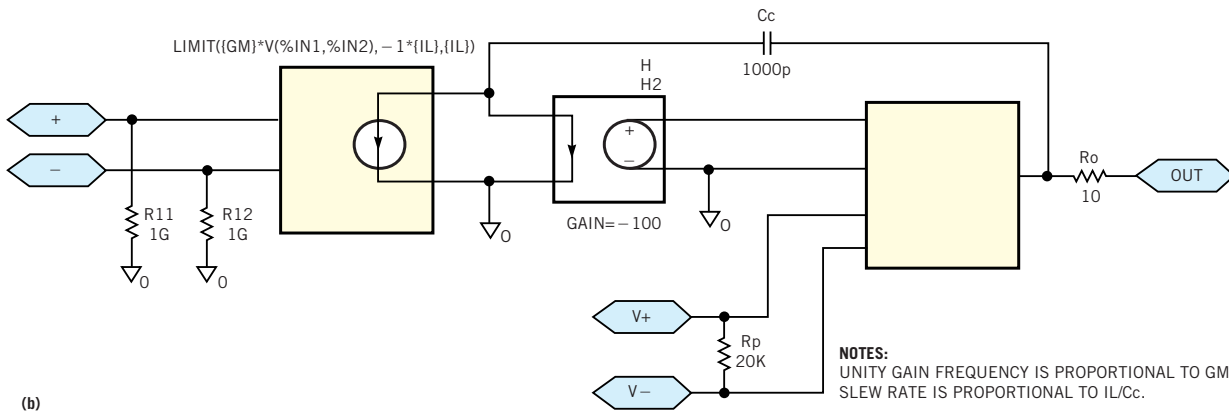
Figure 1

(a)

PARAMETERS:
 GM 10m
 IL 0.5m

PARAMETERS:
 AV 100K
 VRP 1
 VRN 1

$$\frac{(V(\%IN3, \%IN4) - [VRP] - [VRN]) / (\pi)}{ATAN(\frac{[AV] * (([GM] * 100)) * \pi * V(\%IN1, \%IN2)}{(V(\%IN3, \%IN4) - [VRP] - [VRN])}) + (V(\%IN3) + V(\%IN4) - [VRP] + [VRN]) / 2}$$



NOTES:
 UNITY GAIN FREQUENCY IS PROPORTIONAL TO GM/Cc.
 SLEW RATE IS PROPORTIONAL TO IL/Cc.

(b)

A dc op-amp model uses one complex equation to describe most of the op amp's dc behavior (a). An expanded version of this model results in an ac