$C1 := 10 \cdot nF$

$C2 := 150 \cdot pF$

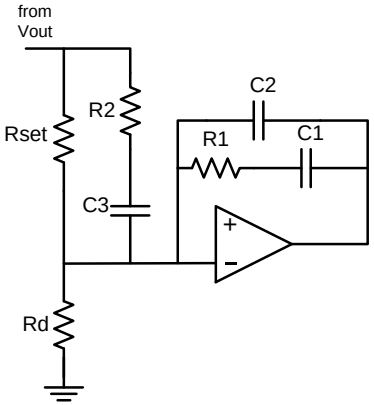
$C3 := 1.8nF$

$Rset := 31.6 \cdot k \cdot \Omega$

$Rd := 5.1 \cdot k\Omega$

$R1 := 7.5 \cdot k \cdot \Omega$

$R2 := 4.4 \cdot k \cdot \Omega$



Voltage Amplifier

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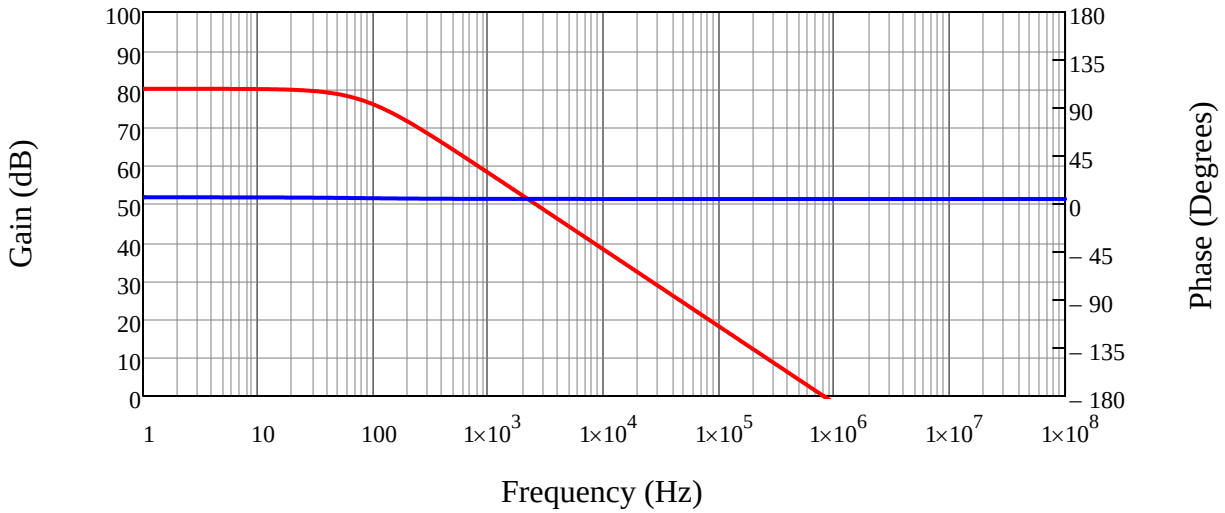
$AVOL := 80$ Voltage Amp open loop gain (dB)

$UGBW_{EA} := .80 \cdot MHz$ Voltage amp unity gain bandwidth

$EAP := \dfrac{UGBW_{EA}}{10^{\frac{AVOL}{20}}} = 80Hz$ Error amp pole

$$Xea_{ol}(f) := \frac{10^{\frac{AVOL}{20}}}{\left(1 + \frac{s(f)}{2\cdot\pi\cdot EAP}\right)}$$

Error amplifier's open loop characteristic. Gain and many poles.



$$X_1(f) := \frac{1}{s(f)\cdot C2} \qquad X_2(f) := R1 + \frac{1}{s(f)\cdot C1} \qquad X_3(f) := R2 + \frac{1}{s(f)\cdot C3} \qquad X_4 := Rset$$

$$Zf(f) := \frac{X_1(f)\cdot X_2(f)}{X_1(f) + X_2(f)} \qquad Zi(f) := \frac{X_3(f)\cdot X_4}{X_3(f) + X_4}$$

$$Xea_{cl}(f) := \frac{-Xea_{ol}(f)}{1 + \frac{Zi(f)}{Rd} + \frac{Zi(f)}{Zf(f)} \cdot \left(1 + Xea_{ol}(f)\right)}$$

This form is used to compensate for gain close to the open loop gain.
Also includes the effect of the divider resistor.