

#Jenny



Finally I get this ebook, thanks for all these I can get now!

#Rio



Cool! I'am really happy

#Markus Jensen



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#Diego Butler



so many fake sites. this is the first one which worked! Many thanks

PROBLEM SOLUTIONS

Link download full: Solution Manual for Design with Operational Amplifiers and Analog Integrated Circuits 4th Edition by Sergio Franco

<http://freebankcollection.com/download/solution-manual-for-design-with-operational-amplifiers-and-analog-integrated-circuits-4th-edition-by-sergio-franco>

Chapter 2: Circuits with Resistive Feedback

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2.11 (a)

$R_2 = \frac{\Delta V_o}{\Delta I_S} = \frac{5 - (-5)}{(1 - 0) \text{ mA}} = 10 \text{ k}\Omega$
 $I_S = 0 \Rightarrow V_o = +5 \text{ V} = -\frac{R_2}{R_1} (-10)$
 $\Rightarrow R_1 = 2 \text{ k}\Omega = 2000 \Omega$

(b) $\beta = \frac{R_2/R_1}{R_2/R_1 + 1} = \frac{10/2}{10/2 + 1} = \frac{2}{3}$, $T = A\beta = \frac{2}{3}A$
 $0.01\% \text{ max deviation} \Rightarrow \frac{1}{T} \leq \frac{0.0001}{2/3} \Rightarrow T > 10^4 \Rightarrow A > 10^4 \times \frac{3}{2} \Rightarrow A > 15,000 \text{ V/V}$
(c) $0.025\% \text{ max deviation with } A = 15,000 \text{ V/V and } R_1 \text{ in place}$
 $\Rightarrow \frac{1}{15,000\beta} \leq \frac{0.00025}{2/3} \Rightarrow \beta \geq \frac{1}{5,750} \Rightarrow \frac{1}{R_1 R_2 + R_1^2} > \frac{1}{5,750} \Rightarrow$
 $\frac{1}{10/R_2 + 0.5} > \frac{1}{5,750} \Rightarrow \frac{1}{R_2} < 2.25 \Rightarrow R_2 > 4.44 \text{ k}\Omega$

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Ch. 2 - Problem solutions - Page 1 of 47

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