Lecture 26
EE 2303/001-Electronics I
April 27, 2009

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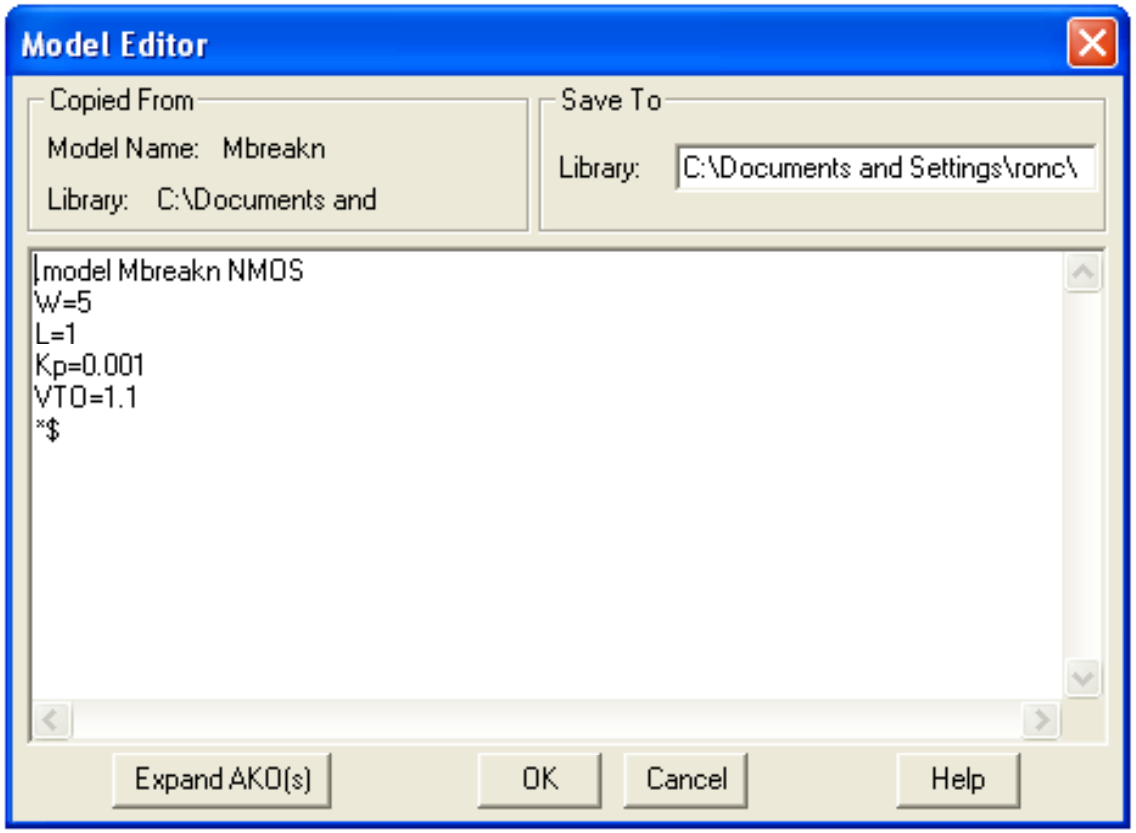

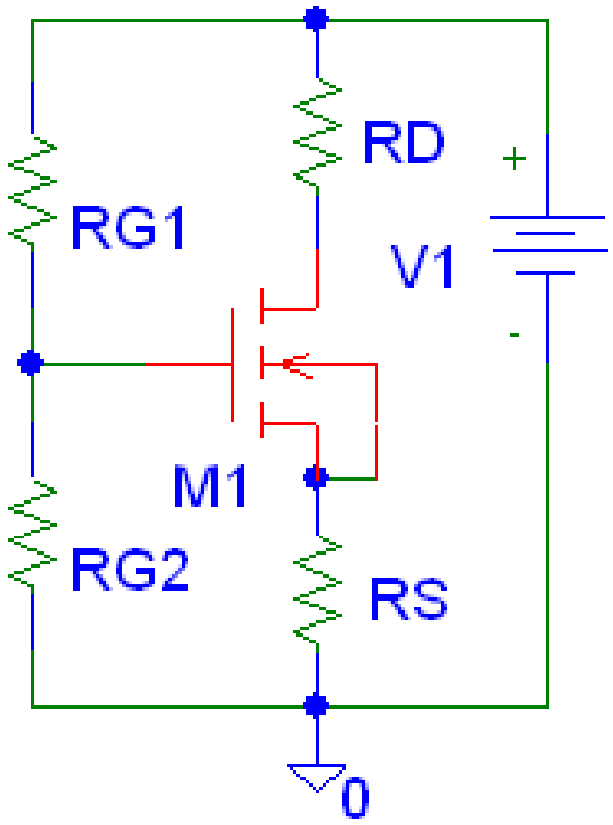

$$KP = \mu C'_{Ox},\ \mu = \text{carrier mobility},\ C'_{Ox} = \frac{\varepsilon_{Ox}}{x_{Ox}}$$

$$K = \frac{KP}{2}\frac{W}{L}$$

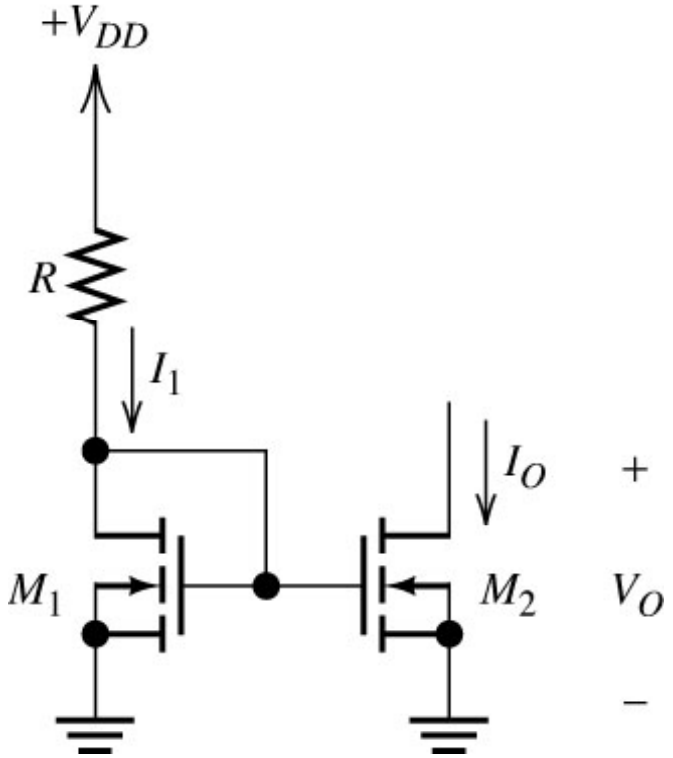

Figure 7.15 NMOS current mirror.

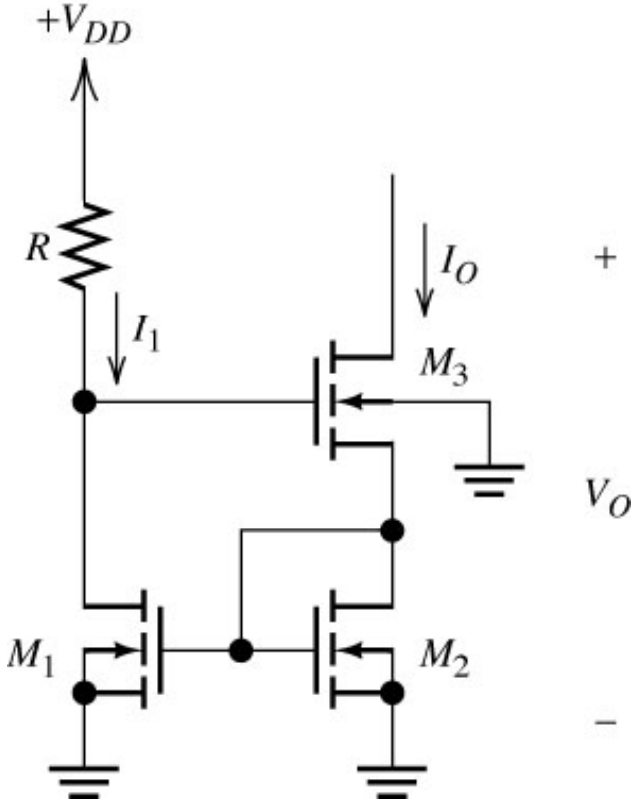

Figure 7.16 NMOS Wilson current source.

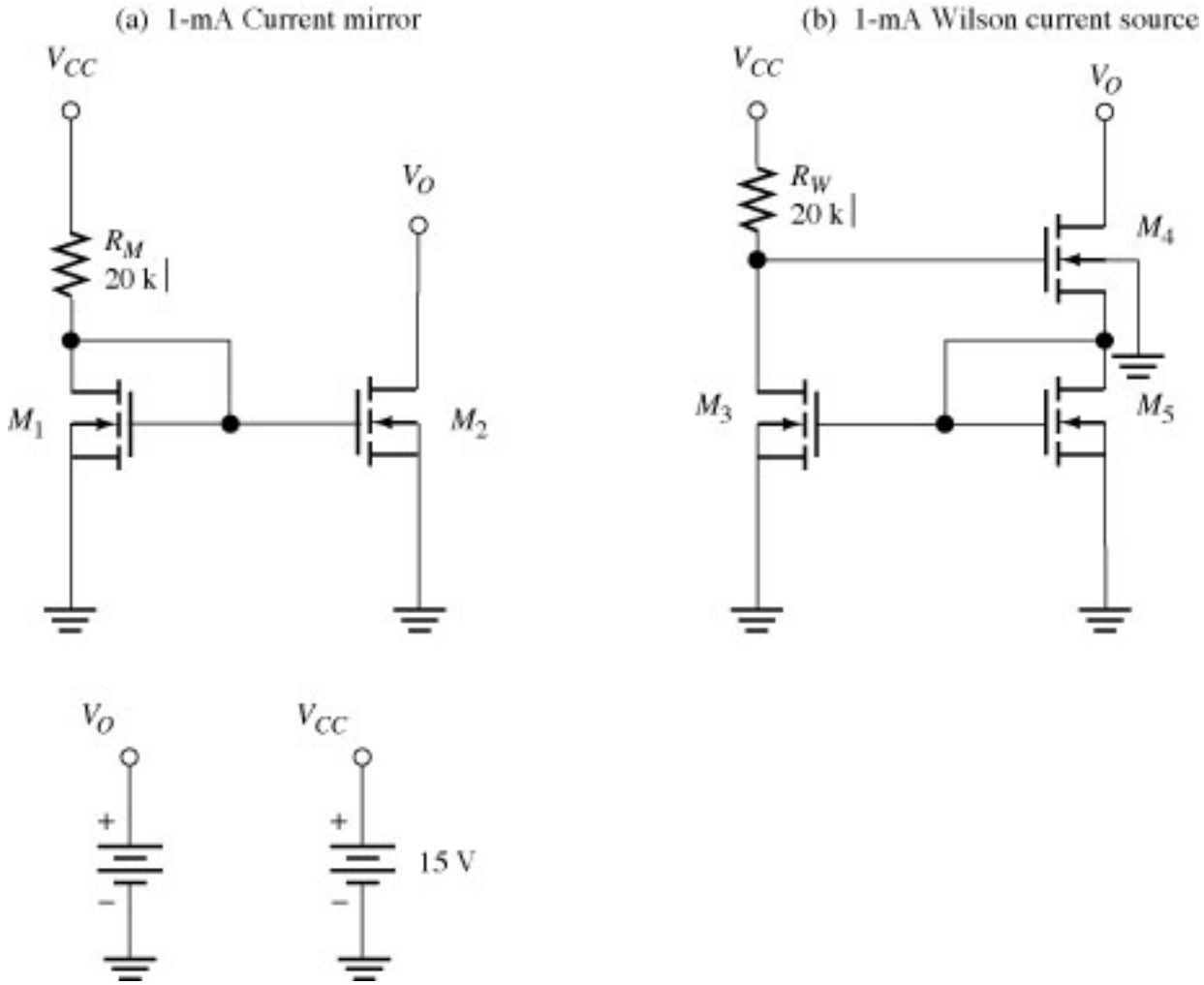

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Figure 7.17 Circuits for Exercise 7.4.

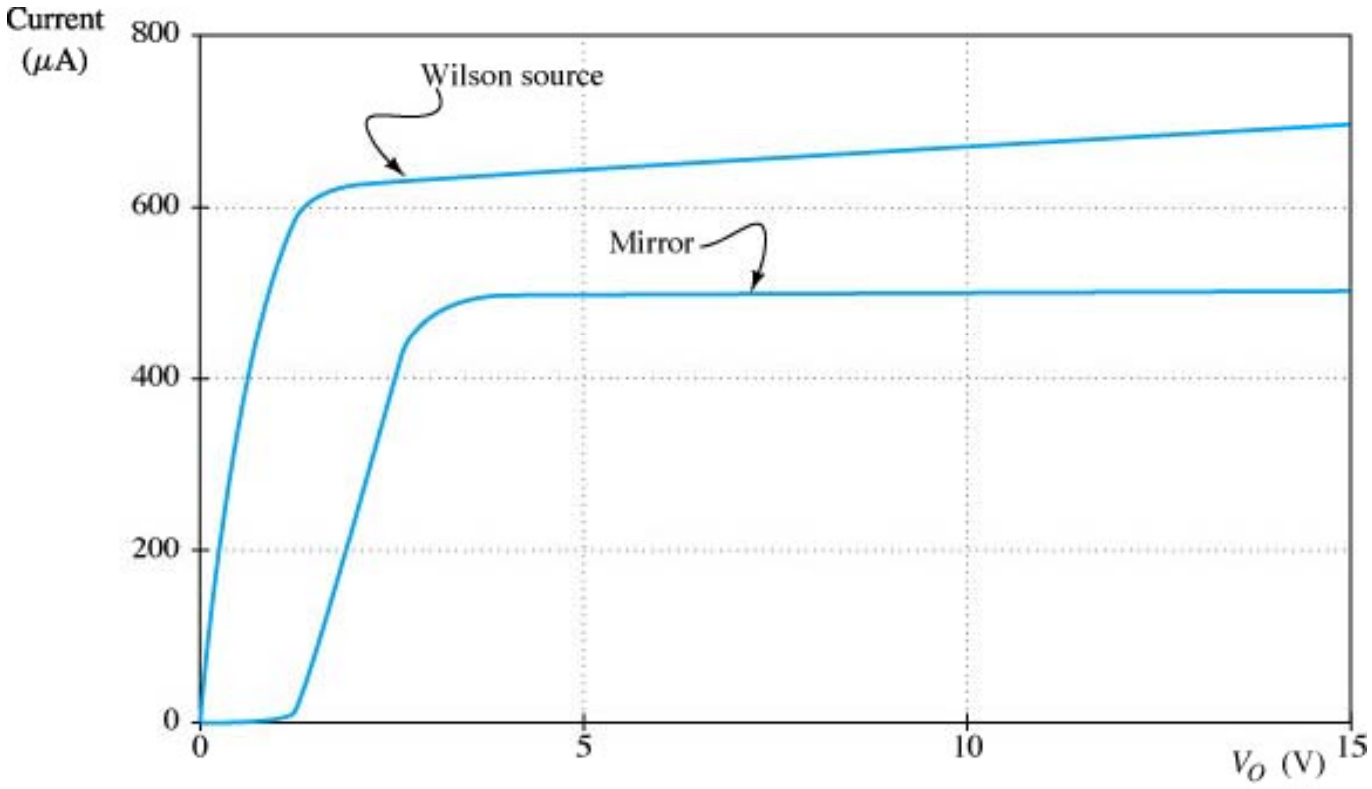
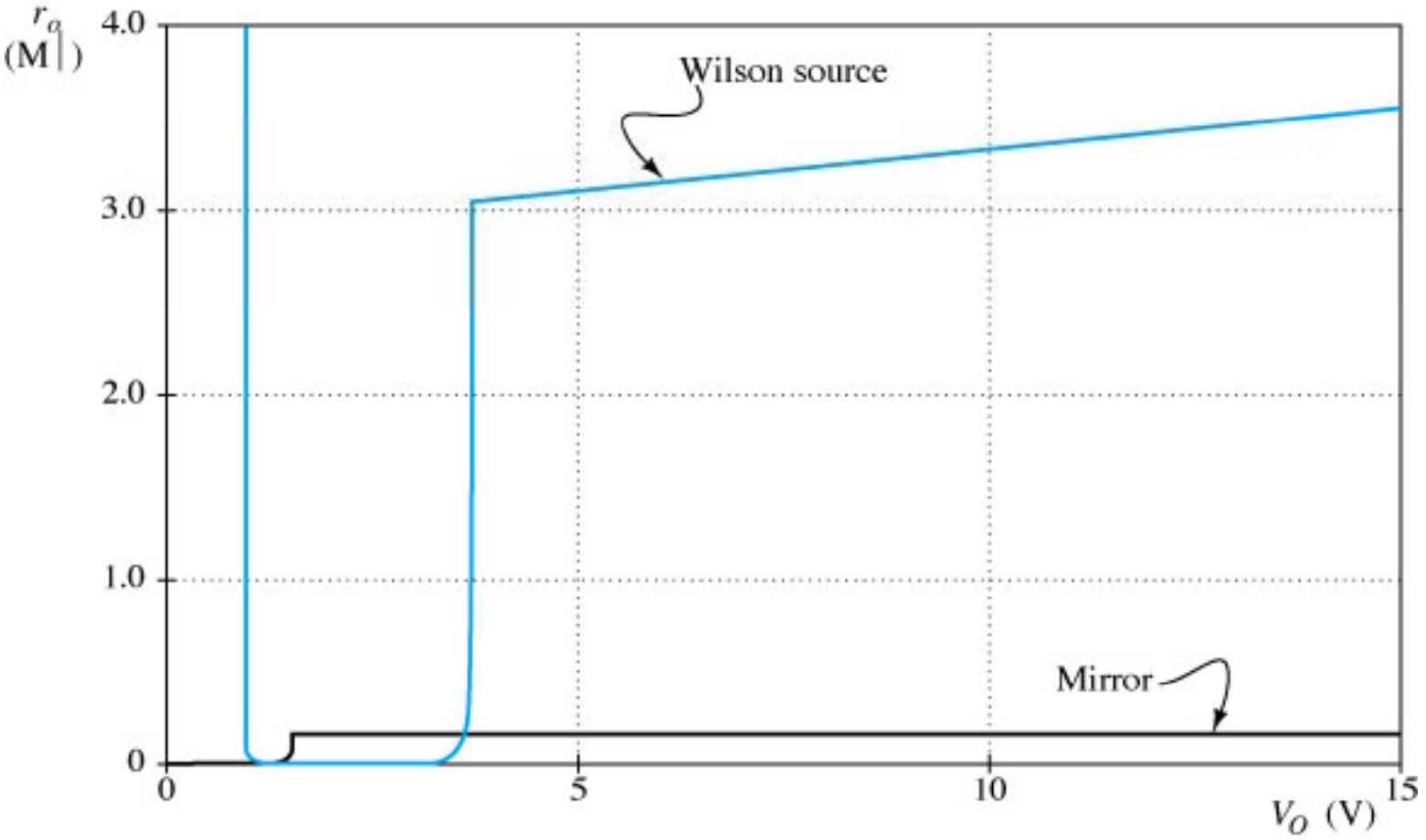


Figure 7.18 Current versus voltage for the circuits of Figure 7.17.



L26 - 27Apr09 **Figure 7.19** Dynamic resistance versus voltage for the circuits of Figure 7.17.

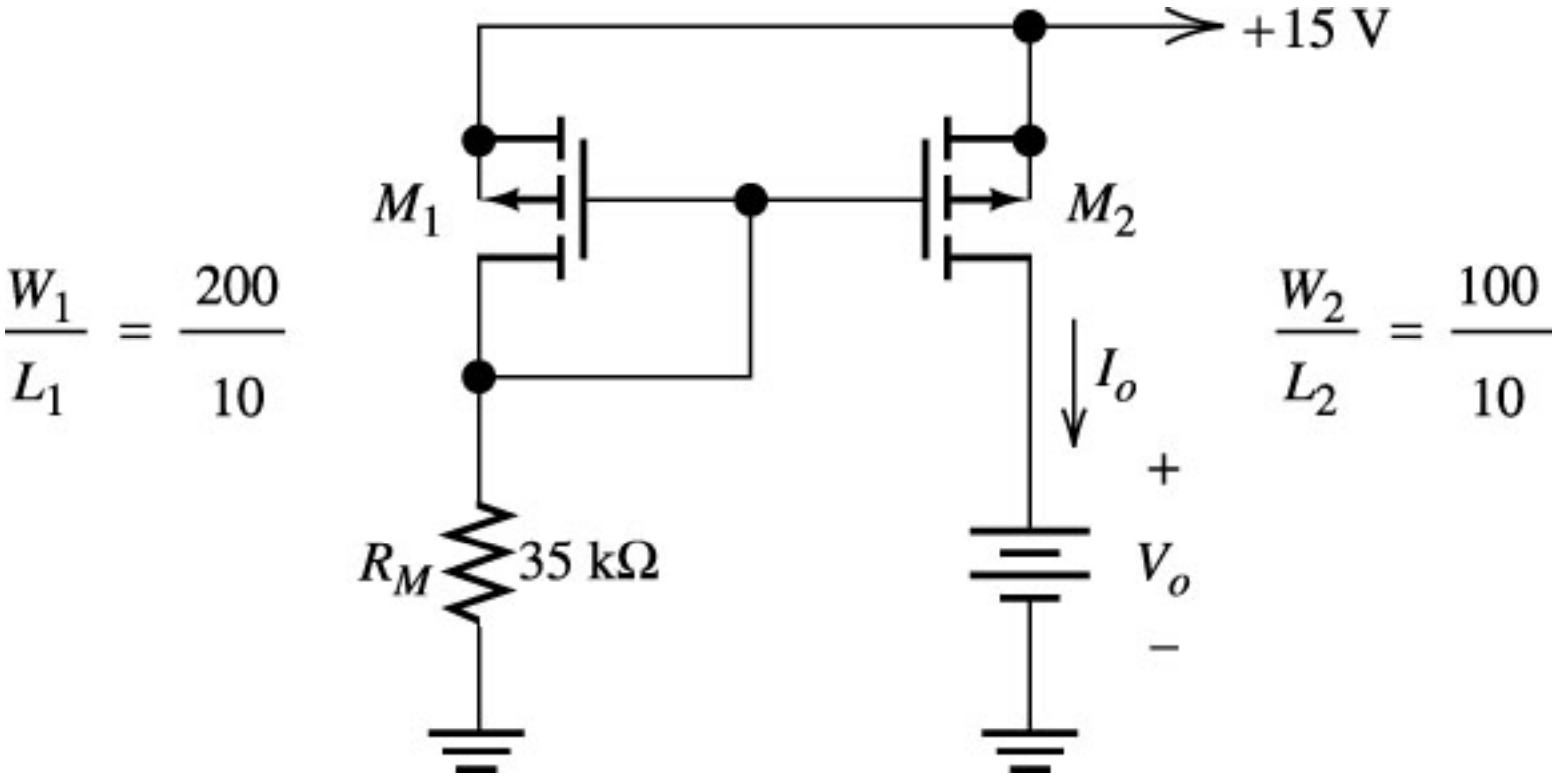


Figure 7.20 One solution for Exercise 7.7.

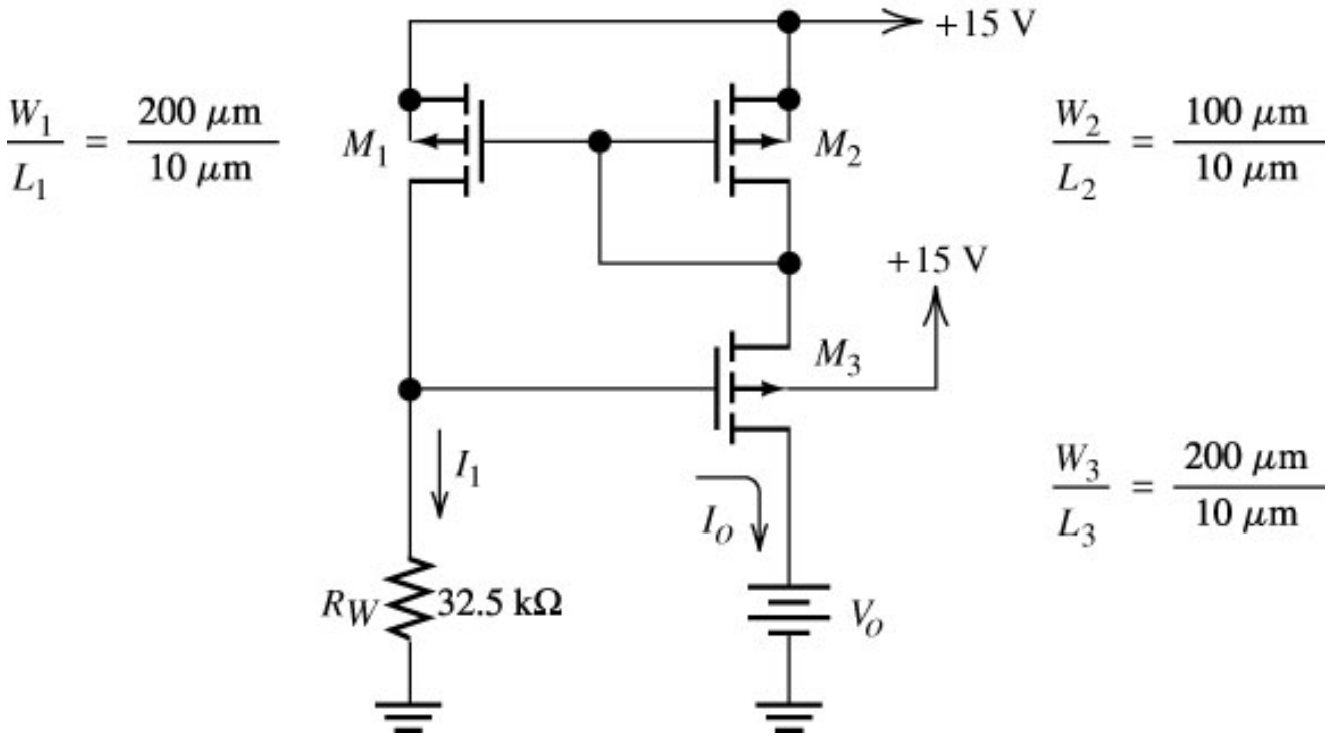
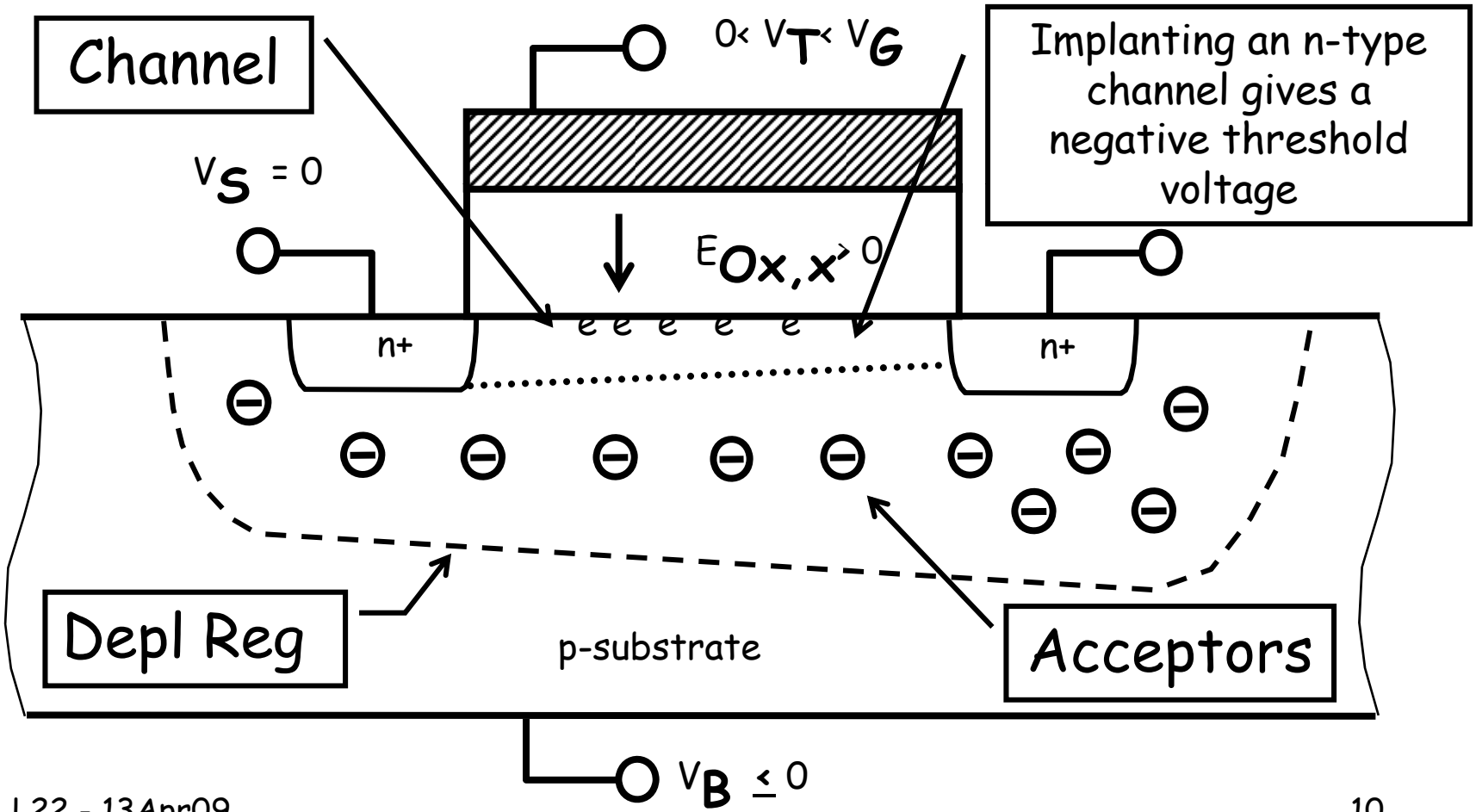


Figure 7.21 One solution for Exercise 7.8.

n-channel depletion MOSFET in ohmic region



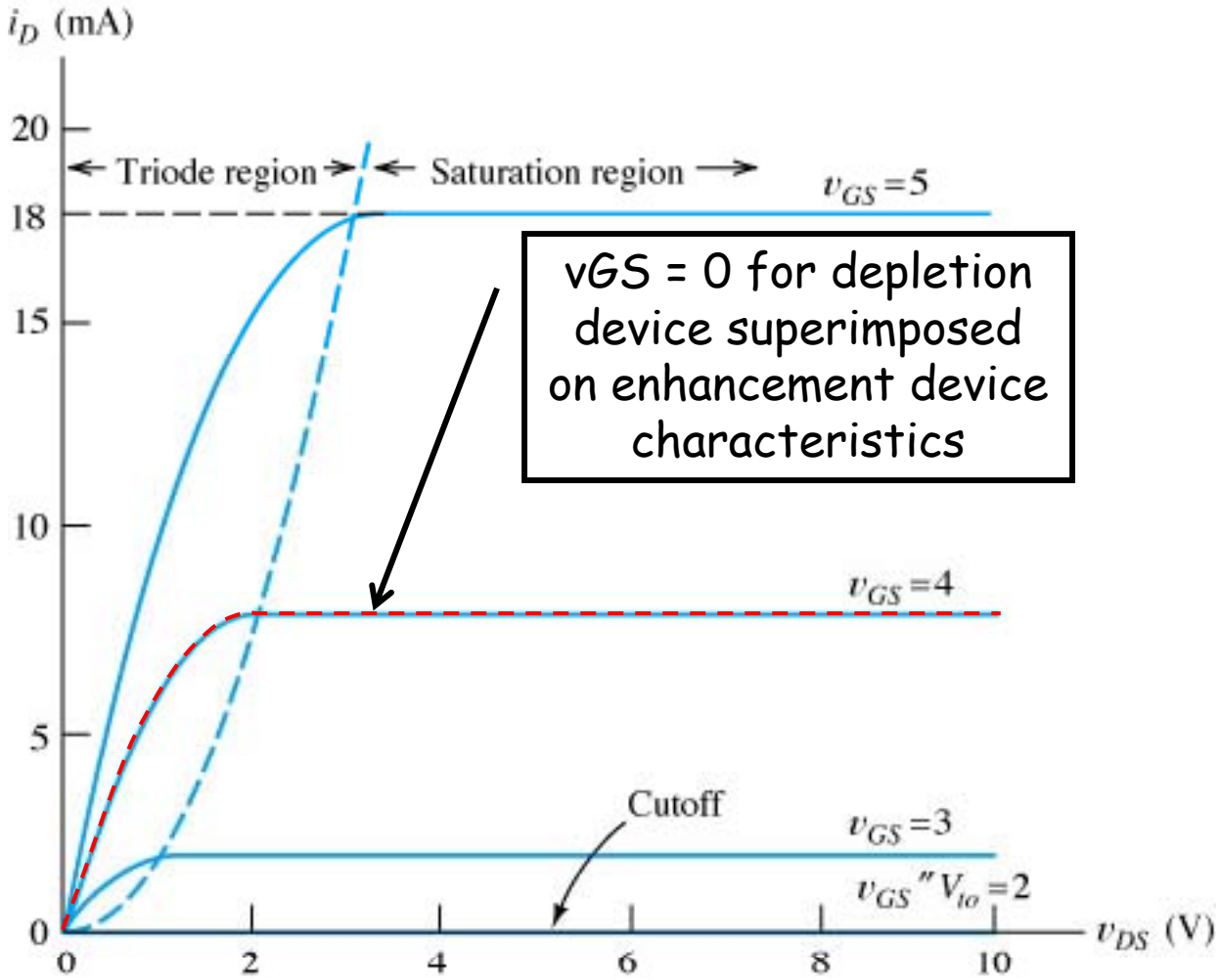
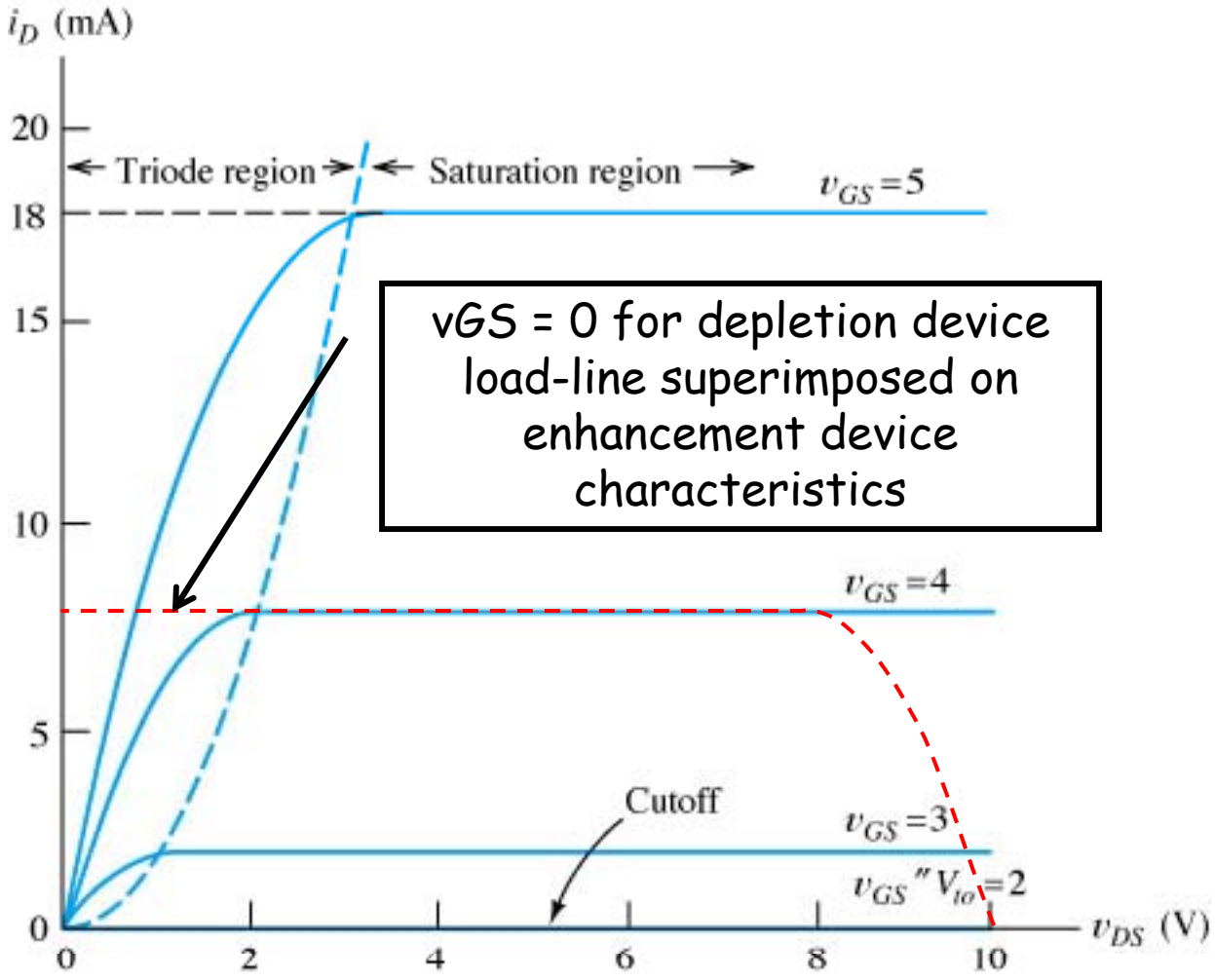


Figure 5.6 adapted to show a depletion load
Characteristic curves for an NMOS transistor.



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Characteristic curves for an NMOS transistor.

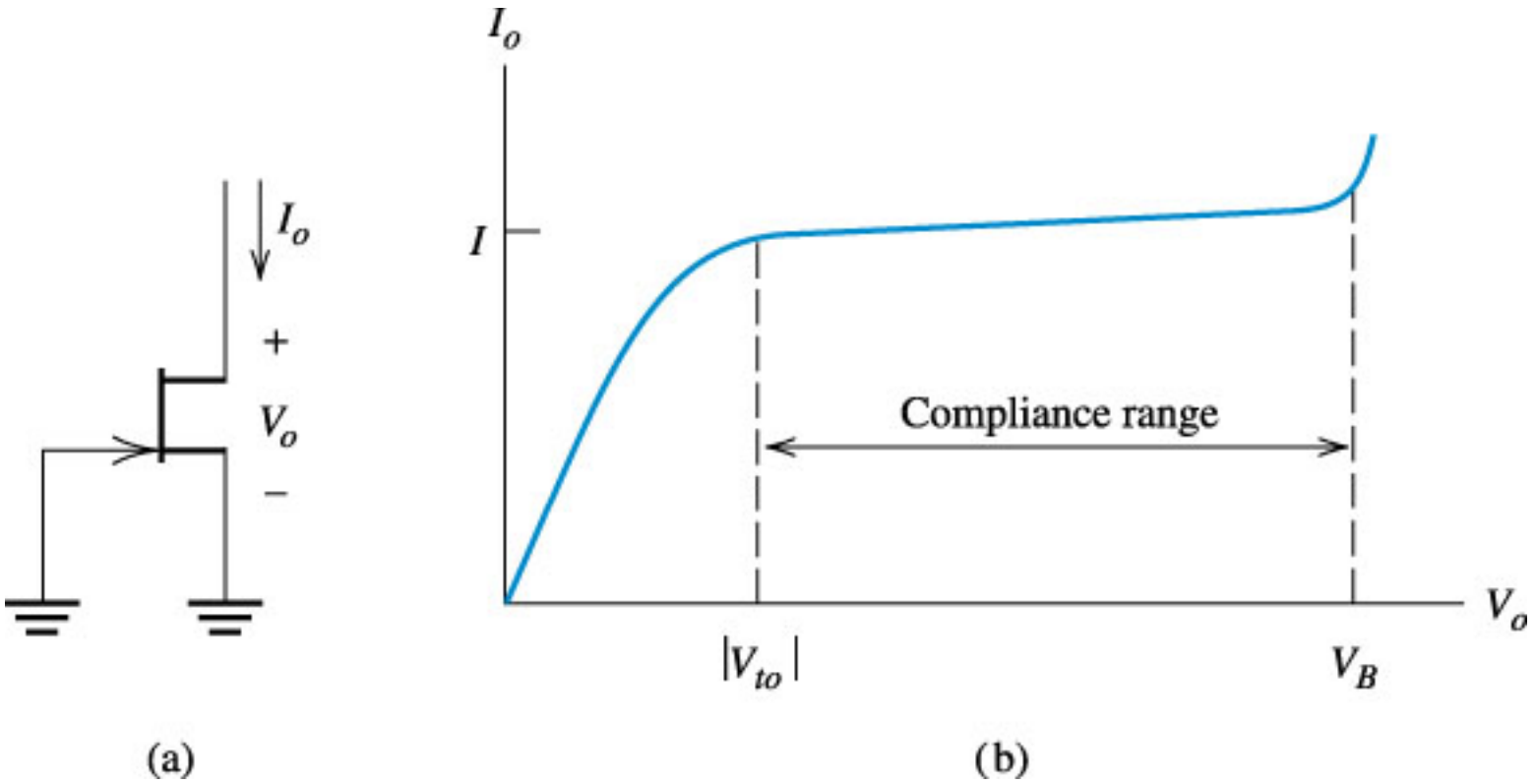

Figure 7.14 JFET as a current source.

References and Endnotes

- Where not otherwise noted, figures with a figure number (e.g., Fig 3.2) are taken from:
  - Electronics, 2nd edition, by Allan R. Hambley, Prentice Hall, Upper Saddle River, NJ, © 2000.