

Integrated Electronic Circuits - Errata

2025-12-10

1. On page 31, in the second paragraph following equation 2.8, r_{in} should be compared to r_{src} . Corrected:

$$r_{in} \gg r_{src}$$

2. In the earliest version of the book, table 4.5, the rows in the right column are interchanged. Corrected:

Generic Voltage	FET Voltage
$ v_{XZ} _{critical}$	Overdrive voltage $ v_{ov} = v_{GS} - V_{th} $ where V_{th} is the threshold voltage.
$ v_{YZ} _{critical}$	Threshold voltage $ V_{th} $

3. g_m in equation 4.30 is a function of v_{GS} as in the text. Corrected:

$$g_m = \frac{i_{D2} - i_{D1}}{|v_{GS2}| - |v_{GS1}|} \quad (4.30)$$

4. In figures 5.13 and 5.14, the Base and Emitter terminals are interchanged. Corrected:

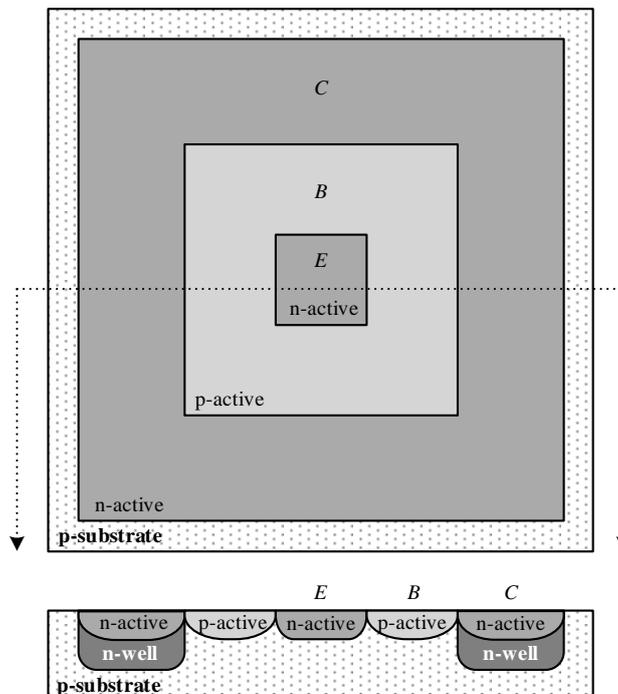


Fig. 5.13 Simplified views of an NPN BJT structure

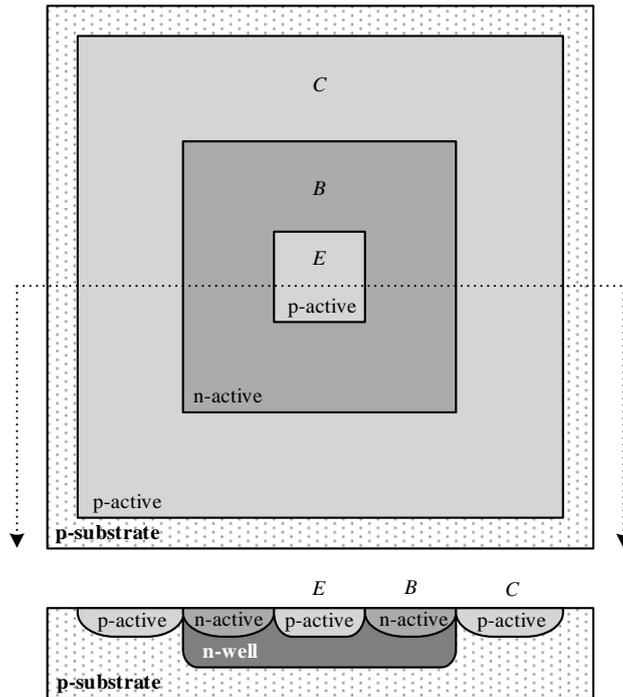


Fig. 5.14 Simplified views of a PNP BJT structure

5. In figure 6.9, a label is missing. Corrected:

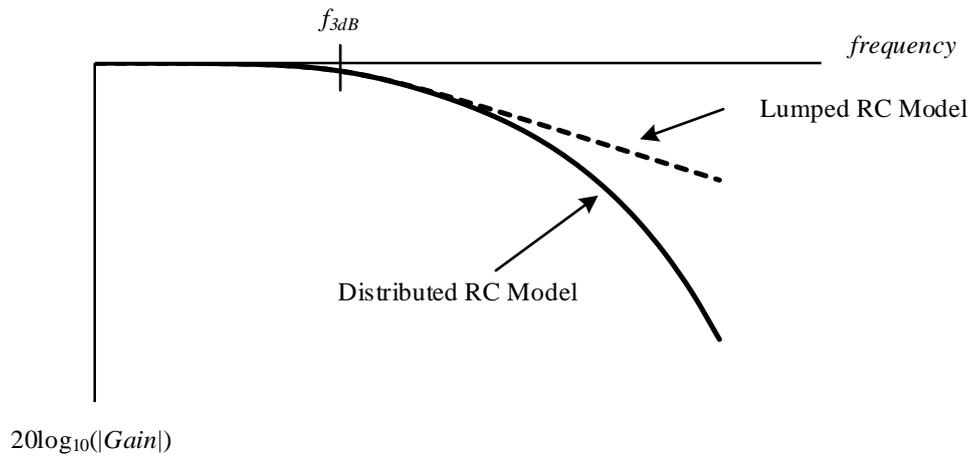


Figure 6.9 Lumped RC model compared to distributed RC model

6. In equation 7.40, v_{gs} should not appear in the denominator. Corrected:

$$\begin{aligned}
 -v_{test} + i_{ro}r_o + (g_m v_{gs} + i_{ro})R_{SRC} &= 0 \\
 -v_{test} + i_{ro}(r_o + R_{SRC}) + g_m v_{gs}R_{SRC} &= 0 \\
 v_{gs} &= \frac{v_{test} - i_{ro}(r_o + R_{SRC})}{g_m R_{SRC}}
 \end{aligned}
 \tag{7.40}$$

7. In equation 10.18, there should not be an R_1 in the denominator. Corrected:

$$V_{R1} = |V_{BE2}| - |V_{BE1}|
 \tag{10.18}$$

8. Equation 10.34 involves transistor Q_2 , not Q_1 . Corrected:

$$r_{out} \approx g_{m4} r_{o4} r_{o2} \quad (10.34)$$

9. In figure 12.19, V_{REF} should be $8V_{LSBIT}$. Corrected:

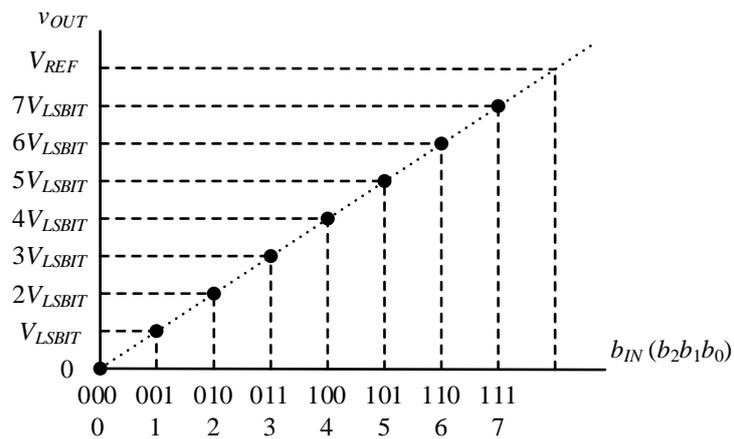


Fig. 12.19 Ideal input-output characteristic of a 3-bit DAC

Consequently, in the paragraph following figure 12.19, the sentence should read: " V_{REF} is the maximum output voltage plus one V_{LSBIT} ."