

Errata in Marcel J.M. Pelgrom, 'Analog-to-Digital Conversion, 4th edition,
 Springer ISBN: 978-3-030-90807-2
 Update: 6 July 2024.
 Remarks: pelgromconsult at geemeel dot kom
 Replace phonetics by the usual wording.

page 404 Eq. 8.11:

dB:

$$\text{SNR} = \frac{V_{in,rms}^2}{kT/C_{hold}} = \frac{(0.4/2\sqrt{2})^2}{4 \cdot 10^{-21} C_{hold}} = 10^{64/10} \quad (8.11)$$

So a hold capacitor of $C_{hold} = 0.5 \text{ nF}$ results

C_{hold} has to be in the numerator.

Page 409 above eq. 8.17:

In hold mode, the time-contin
 as in Eq. 8.14. As the circuit is :
 ing and the load capacitor domir
 $\omega_{UGBW} C_{hold}/g_m = 1$:

$$v_{out2,n}^2 =$$

leaving out any transconductance n

$\omega_{UGBW} C_{hold}/g_m=1$, C_{hold} should be C_{load}

p. 439 Eq 9.16

$$\text{SNDR} = 10^{10} \log \left(\frac{\hat{A}^2/2}{10^{HD2/10} + kT/C + A_{LSB}^2/12 + \omega_A^2 \tau_{jitter}^2 A_{rms}^2} \right) \quad (9.16)$$

The denominator should read:

$$10^{THD/10} A_{rms}^2 + kT/C + A_{LSB}^2/12 + \omega_A^2 \tau_{jitter}^2 A_{rms}^2$$

p. 544, example 11.3:

Example 11.3 (continued)

$$\left(-\frac{V_{REF}}{R_{right}^2}\right)^2 \sigma_{Right}^2 + \left(-\frac{V_{REF}}{R_a^2}\right)^2 \sigma_{Ra}^2 =$$

$$\frac{I_{tot}}{4R} (\sigma_{Right}^2 + \sigma_{Ra}^2) = \frac{I_{tot}}{4} \sqrt{0.0115^2 + 0.02^2} = 0.0058 I_{tot}$$

first line of the equation: remove the '=' sign, second line: add square root sign.

last line of equation should be

$$\sigma_{I_{right-down}} = \left(I_{tot}/4R\right) \sqrt{\sigma_{Right}^2 + \sigma_{Ra}^2} = \left(I_{tot}/4\right) \sqrt{0.0115^2 + 0.02^2} = 0.0058 I_{tot}$$

p. 628:

active and generates two differential currents, based on the input voltages, here: V_{in} and V_{REF} . C_1 and C_2 are discharged during the time period T_{int1} . The most used com The voltages V_1 and V_2 are falling until they reach a level of approximately $V_{DD} - V_{T,M3,4}$. Now the NMOS transistors M_3 , M_4 open up and start discharging

remove "the most used com"

p. 688, example 14.1, figs. 14.8 and 14.9: the INL should be mirrored w.r.t the x-axis

p. 864 eq. 19.5 should read as: $\Delta SN_Q R + 10^{10} \log(f_s/f_{s.ny}) = 10^{10} \log(OSR)$

p.880, eq 19.27 the term $X(z)$ should have a coefficient of $1/d$ because d is not yet set to 1.