**Chapter 6, Problem 8.**

A 4-mF capacitor has the terminal voltage

$$v = \begin{cases} 50\ \text{V}, & t \le 0 \\ Ae^{-100t} + Be^{-600t}\ \text{V}, & t \quad 0 \end{cases}$$

If the capacitor has initial current of 2A, find:

(a) the constants A and B,
(b) the energy stored in the capacitor at $t = 0$,
(c) the capacitor current for $t > 0$.