Chapter 9, Solution 22.

Let $\quad f(t) = 10v(t) + 4\frac{dv}{dt} - 2\int_{-\infty}^{t} v(t)dt$

$$F = 10V + j\omega 4V - \frac{2V}{j\omega}, \qquad \omega = 5, \qquad V = 55\angle 45^o$$

$$F = 10V + j20V + j0.4V = (10 + j20.4)V = 22.72\angle 63.89°(55\angle 45°) = 1249.6\angle 108.89^o$$

f(t) = **1249.6cos(5t+108.89°)**