

$$F_0 = 900$$

$$X_{1,2} = 4e^{-0.14j\pi}, 4e^{0.33j\pi}, 4, 4e^{-0.33j\pi}, 4e^{0.14j\pi}$$

$$y(t) = 0.23 - 0.43 \frac{dx}{dt} (t - 0.002)$$

$$Y_2 = ?$$

$$u(t) = \frac{dx}{dt}$$

$$v(t) = u(t - 0.002)$$

$$= j14400\pi e$$

$$V_2 = U_2 e^{-j4\pi 900(0.002)}$$

$$W_2 = -0.43 V_2$$

$$Y_2 = W_2$$

$$= -0.43 V_2$$

$$= -0.43 \cdot j14400\pi \cdot$$

$$e^{j0.14\pi} e^{-j4\pi 900(0.002)}$$

$$w(t) = -0.43 v(t)$$

$$y(t) = 0.23 + w(t)$$

$$U_k = j2\pi k F_0 X_k$$

$$V_k = U_k e^{-j2\pi k F_0 T}$$

$$W_k = -0.43 V_k$$

$$Y_k = \begin{cases} W_k & k \neq 0 \\ W_k + 0.23 & k = 0 \end{cases}$$

$$U_2 = j4\pi 900 \cdot 4 e^{j0.14\pi} e^{-j0.14\pi}$$

$$= j(-6239.53\pi) \cdot$$

$$e^{j0.14\pi} e^{-j4\pi(1.8)}$$

$$= e^{j\frac{\pi}{2}} (-6239.53\pi) \cdot$$

$$e^{j0.14\pi} e^{-j7.2\pi}$$

$$= -6239.53\pi$$

$$\dots - 14 - 72 + 0.5$$

$$e^{\sqrt{\pi}(0.4 - 1.2 \dots)}$$

$$= -6239.53\pi e^{\sqrt{\pi}(-6.56)}$$