

Transmittance en $s$	Transmittance en $z$
$\frac{B_0(s)}{s}$	$\frac{T}{z-1}$
$\frac{B_0(s)}{1+\tau s}$	$\frac{1-D}{z-D}, \quad D = e^{-\frac{T}{\tau}}$
$\frac{B_0(s)}{s(1+\tau s)}$	$\frac{(T-\tau(1-D))z-TD+\tau(1-D)}{z^2-(1+D)z+D}$
$\frac{B_0(s)}{s^2(1+\tau s)}$	$\frac{b_2 z^2 + b_1 z + b_0}{D(z)}$ $D(z) = z^3 - (2+D)z^2 + (1+2D)z - D$ $b_2 = \frac{T^2}{2} + T\tau + \tau^2(1-D), \quad D = e^{-\frac{T}{\tau}}$ $b_1 = \left(\frac{T^2}{2} - 2\tau^2\right)(1-D) + T\tau(1+D)$ $b_0 = \tau^2(1-D) - DT\left(\tau + \frac{T}{2}\right)$
$\frac{B_0(s)}{(1+\tau_1 s)(1+\tau_2 s)}$	$\frac{b_1 z + b_0}{z^2 - (D_1 + D_2)z + D_1 D_2},$ $b_1 = \frac{\tau_1(1-D_1) - \tau_2(1-D_2)}{\tau_1 - \tau_2},$ $b_0 = D_1 D_2 - \frac{\tau_1 D_2 - \tau_2 D_1}{\tau_1 - \tau_2},$ $D_i = e^{-\frac{T}{\tau_i}}$
$\frac{B_0(s)}{(1+\tau s)^2}$	$\frac{1-D}{z-D} - \frac{T}{\tau} \frac{D(z-1)}{(z-D)^2}$
$\frac{B_0(s)}{(1+\tau s)^3}$	$\frac{1-D}{z-D} - \frac{T(2\tau+T)D(z-1)}{\tau^2(z-D)^2},$ $-\frac{T^2}{\tau^2} \frac{D^2(z-1)}{(z-D)^3},$
$\frac{B_0(s)}{\prod_{i=1}^n (1+\tau_i s)}$	$\sum_{i=1}^n \frac{\tau_i^{n-1}}{\prod_{j \neq i} (\tau_i - \tau_j)} \frac{(1-D_i)}{(z-D_i)}$

FIGURE A.6 – /9

Transmittance en $s$	Transmittance en $z$ :
$F(s)$	$F(z) = \frac{b_2 z^2 + b_1 z + b_0}{D(z)} \quad \left( \text{avec } D_i = e^{-\frac{T}{\tau_i}} \right)$
$\frac{B_0(s)}{s(1 + \tau_1 s)(1 + \tau_2 s)}$	$D(z) = z^3 - (1 + D_1 + D_2)z^2$ $+ (D_1 + D_2 + D_1 D_2)z - D_1 D_2$ $b_2 = T - \frac{\tau_1^2(1 - D_1) - \tau_2^2(1 - D_2)}{\tau_1 - \tau_2}$ $b_1 = -T(D_1 + D_2)$ $+ \frac{\tau_1^2(1 + D_2)(1 - D_1) - \tau_2^2(1 + D_1)(1 - D_2)}{\tau_1 - \tau_2}$ $b_0 = T D_1 D_2$ $- \frac{\tau_1^2 D_2(1 - D_1) - \tau_2^2 D_1(1 - D_2)}{\tau_1 - \tau_2}$
$\frac{B_0(s)}{(1 + \tau_1 s)(1 + \tau_2 s)(1 + \tau_3 s)}$	$D(z) = z^3 - (D_1 + D_2 + D_3)z^2$ $+ (D_1 D_2 + D_2 D_3 + D_3 D_1)z - D_1 D_2 D_3,$ $b_2 = - \left[ \frac{\tau_1^2(1 - D_1)}{(\tau_1 - \tau_2)(\tau_3 - \tau_1)} + \frac{\tau_2^2(1 - D_2)}{(\tau_2 - \tau_3)(\tau_1 - \tau_2)} \right.$ $\left. + \frac{\tau_3^2(1 - D_3)}{(\tau_3 - \tau_1)(\tau_2 - \tau_3)} \right]$ $b_1 = \frac{\tau_1^2(1 - D_1)(D_2 + D_3)}{(\tau_1 - \tau_2)(\tau_3 - \tau_1)}$ $+ \frac{\tau_2^2(1 - D_2)(D_3 + D_1)}{(\tau_2 - \tau_3)(\tau_1 - \tau_2)}$ $+ \frac{\tau_3^2(1 - D_3)(D_1 + D_2)}{(\tau_3 - \tau_1)(\tau_2 - \tau_3)}$ $b_0 = - \frac{\tau_1^2(1 - D_1)D_2 D_3}{(\tau_1 - \tau_2)(\tau_3 - \tau_1)} - \frac{\tau_2^2(1 - D_2)D_3 D_1}{(\tau_2 - \tau_3)(\tau_1 - \tau_2)}$ $- \frac{\tau_3^2(1 - D_3)D_1 D_2}{(\tau_3 - \tau_1)(\tau_2 - \tau_3)}$

FIGURE A.7 – /9