



TABLA DE PARÁMETROS DE CIRCUITO RLC - SERIE

$R \triangleright R_c$	$\xi \triangleright 1$	EXPRESIÓN DE $I(s)$	GRÁFICA DE RAICES DE $I(s)$	EXPRESIÓN DE $i(t)$	GRÁFICA DE $i(t)$	CASO
$R < R_c$	$\xi < 1$	$I_{(s)} = \frac{\frac{E}{L}}{\left(s + \frac{R}{2L} + j\sqrt{\frac{R^2}{4L^2} - \frac{1}{LC}}\right) * \left(s + \frac{R}{2L} - j\sqrt{\frac{R^2}{4L^2} - \frac{1}{LC}}\right)}$ $I_{(s)} = \frac{\frac{E}{L}}{(s + \alpha + j\omega_n) * (s + \alpha - j\omega_n)}$		$i_{(t)} = \frac{E}{\omega_m L} (e^{-\alpha t} \sin \omega_m t)$		SUB AMORTIGUADO
$R = R_c$	$\xi = 1$	$I_{(s)} = \frac{\frac{E}{L}}{\left(s + \frac{R}{2L}\right) * \left(s + \frac{R}{2L}\right)} = \frac{\frac{E}{L}}{\left(s + \frac{R}{2L}\right)^2}$ $I_{(s)} = \frac{\frac{E}{L}}{(s + \alpha)^2}$		$i_{(t)} = \frac{E}{L} t e^{-\alpha t}$		AMORTIG. CRÍTICO
$R > R_c$	$\xi > 1$	$I_{(s)} = \frac{\frac{E}{L}}{\left(s + \frac{R}{2L} + \sqrt{\frac{R^2}{4L^2} - \frac{1}{LC}}\right) * \left(s + \frac{R}{2L} - \sqrt{\frac{R^2}{4L^2} - \frac{1}{LC}}\right)}$ $I_{(s)} = \frac{\frac{E}{L}}{(s + \alpha) * (s + \beta)}$		$i_{(t)} = \frac{E}{L(\alpha - \beta)} (e^{-\alpha t} - e^{-\beta t})$		SOBRE AMORTIGUADO
$R = 0$	$\xi < 0$	$I_{(s)} = \frac{\frac{E}{L}}{\left(s + j\sqrt{\frac{1}{LC}}\right) * \left(s - j\sqrt{\frac{1}{LC}}\right)}$ $I_{(s)} = \frac{\frac{E}{L}}{(s + j\omega_o) * (s - j\omega_o)}$		$i_{(t)} = \frac{E}{\omega_m L} (\sin \omega_m t)$		OSCILATORIO