UTN	MEDIOS DE ENLACE	
FAC. REG. CBA.	EXAMEN FINAL — TEMA: 1	

Alumno: Galetto Fernando Jesús — Fecha: 04/02/2013

$$\Gamma_{E_1} = \frac{Z_R - Z_0}{Z_R + Z_0} = \frac{21{,}3 + j24{,}15 - 50}{21{,}3 + j24{,}15 + 50} = \underbrace{0{,}5 \angle 120{,}4}_{\text{En la carga.}}$$

$\theta = 2\pi$

$\theta = 2 \cdot \frac{2\pi}{X} 0{,}125X = 1{,}57 \text{ rad} = 90^\circ \Rightarrow$ Giro 90° de la carga. con $|\Gamma_E|$ cte

$\Gamma_{E_2} = 0{,}5 \angle 30{,}4 =$ coef de reflexion en Z_1

$$\Gamma_{E_2} = \frac{Z_1 - Z_0}{Z_0 + Z_1} \Rightarrow Z_0\Gamma_E + Z_1\Gamma_E = Z_1 - Z_0$$

$$Z_1(1 - \Gamma_{E_2}) = Z_0(1 + \Gamma_{E_2})$$

$$Z_1 = Z_0 \frac{(1+\Gamma_E)}{(1-\Gamma_E)} = 50\Omega \frac{(1 + 0{,}5\angle 30{,}4)}{1 - 0{,}5\angle 30{,}4} = 96{,}77 + j65{,}3$$

$$\boxed{Z_1 = 96{,}77 + j65{,}3}$$

ZICALCULO.XLS Imped. Ent. (6)