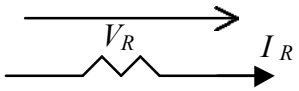
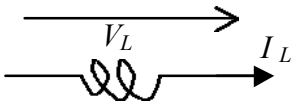
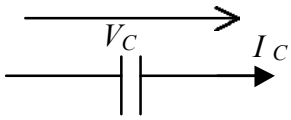
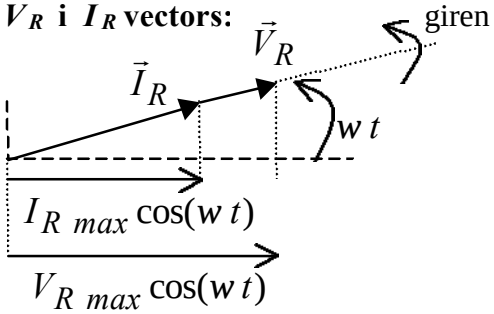
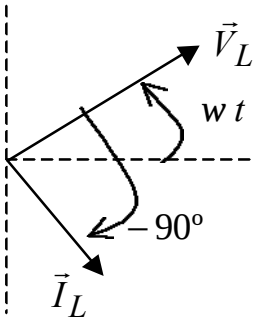
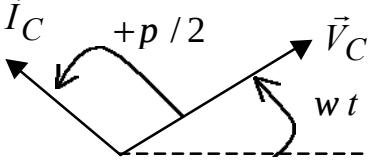
CORRENT ALTERN (Components bàsics)

Resistència	Bobina	Condensador
		
Si $V_R = V_{R\,max}\cos(w\,t)$ $I_R = \frac{V_R}{R} = I_{R\ max}\cos(w\,t)$ $I_{R\,max} = \frac{V_{R\,max}}{R}$	Si $V_L = V_{L\,max}\cos(w\,t)$ $I_L = I_{L\ max}\cos\left(w\,t - \frac{p}{2}\right)$ $I_{L\,max} = \frac{V_{L\,max}}{X_L} = \frac{V_{L\,max}}{Lw}$	Si $V_C = V_{C\,max}\cos(w\,t)$ $I_C = I_{C\ max}\cos\left(w\,t + \frac{p}{2}\right)$ $I_{C\,max} = \frac{V_{C\,max}}{X_C} = \frac{V_{C\,max}}{1/(Cw)}$
Podem associar a V_R i I_R vectors: 		
Podem associar a V_R i I_R complexes: $\bar{I}_R = I_{R\,max}\ \langle w\,t$ $\bar{V}_R = V_{R\,max}\ \langle w\,t$ **Parts reals:** $\mathrm{Re}(\bar{I}_R) = I_{R\ max}\cos(w\,t) = I_R$ $\mathrm{Re}(\bar{V}_R) = ... = V_R$	$\bar{I}_L = I_{L\,max}\ \langle w\,t - \frac{p}{2}$ $\bar{V}_L = V_{L\,max}\ \langle w\,t$ $\mathrm{Re}(\bar{I}_L) = I_{L\ max}\cos\left(w\,t - \frac{p}{2}\right)$ $\mathrm{Re}(\bar{I}_L) = I_L$ $\mathrm{Re}(\bar{V}_L) = ... = V_L$	$\bar{I}_C = I_{C\,max}\ \langle w\,t + \frac{p}{2}$ $\bar{V}_C = V_{C\,max}\ \langle w\,t$ $\mathrm{Re}(\bar{I}_C) = I_{C\ max}\cos\left(w\,t + \frac{p}{2}\right)$ $\mathrm{Re}(\bar{I}_C) = I_C$ $\mathrm{Re}(\bar{V}_C) = ... = V_C$
$\bar{I}_R = I_{R\,max}\ \langle w\,t = \left(\frac{V_{R\,max}}{R}\right)_{\langle w\,t}$ $\bar{I}_R = \frac{(V_{R\,max})_{\langle w\,t}}{R_{\langle 0^o}} = \frac{\bar{V}_R}{R}$	$\bar{I}_L = \left(\frac{V_{L\,max}}{X_L}\right)_{\langle w\,t - \frac{p}{2}}$ $\bar{I}_L = \frac{V_{L\,max\langle w\,t}}{X_{L\langle \frac{p}{2}}} = \frac{\bar{V}_L}{\bar{X}_L}$	$\bar{I}_C = \left(\frac{V_{C\,max}}{X_C}\right)_{\langle w\,t + \frac{p}{2}}$ $\bar{I}_C = \frac{V_{C\,max\langle w\,t}}{X_{C\ \langle -\frac{p}{2}}} = \frac{\bar{V}_C}{\bar{X}_C}$
Definim la impedància $\bar{Z} = \bar{V}/\bar{I}$: $\bar{Z}_R = \frac{\bar{V}_R}{\bar{I}_R} = R = R_{\langle 0^o} = R + 0j$ $(\ j = \sqrt{-1})$	$\bar{Z}_L = \frac{\bar{V}_L}{\bar{I}_L} = \bar{X}_L = X_{L\ \langle \frac{p}{2}}$ $\bar{Z}_L = 0 + jX_L = jX_L = jLw$	$\bar{Z}_C = \frac{\bar{V}_C}{\bar{I}_C} = \bar{X}_C = X_{C\ \langle -\frac{p}{2}}$ $\bar{Z}_C = 0 - jX_C = -jX_C = \frac{-j}{Cw}$

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