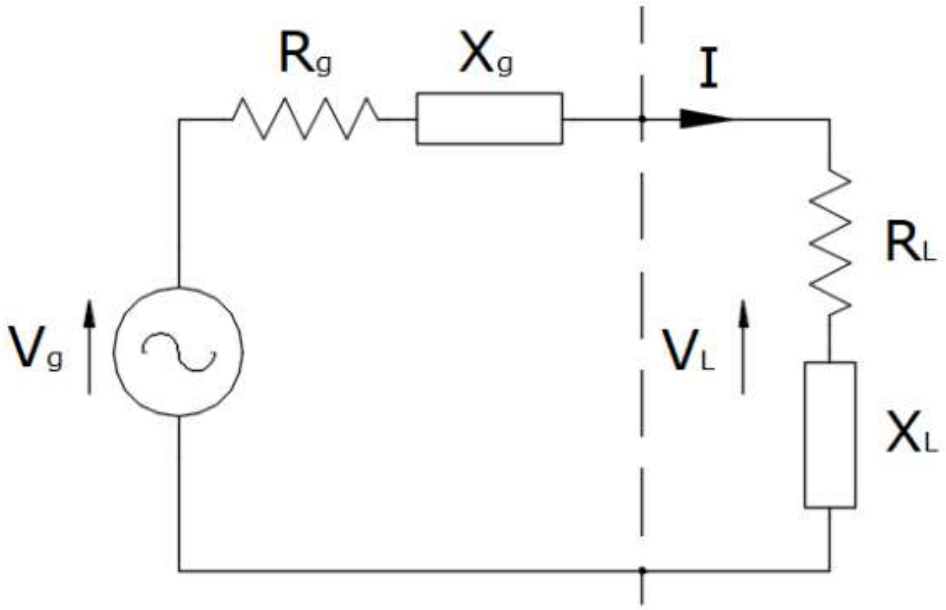
LE RETI DI ADATTAMENTO A "L"

By iw2fnd Lucio

MASSIMO TRASFERIMENTO di ENERGIA

Condizione di massimo

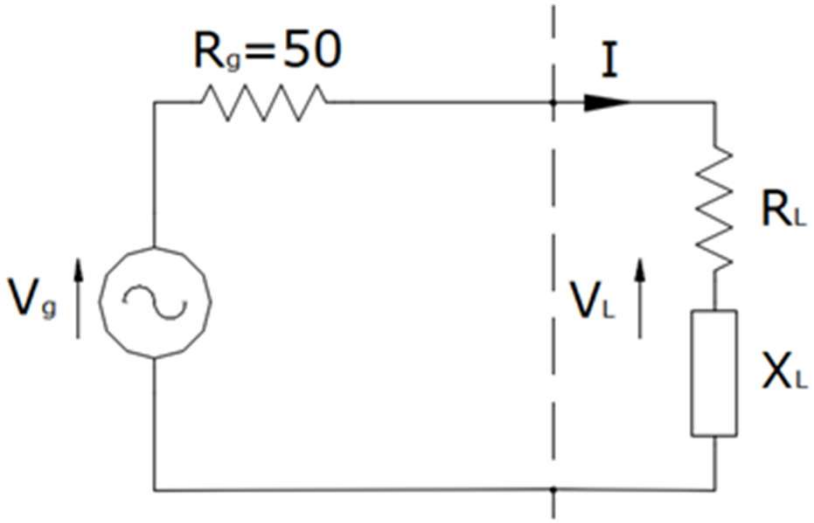
$$\begin{cases} R_g = R_L \\ X_g + X_L = 0 \end{cases}$$



Massima Potenza trasferibile

$$P = \frac{|V_g|^2}{4R_g}$$

MODELLO LINEA - ANTENNA



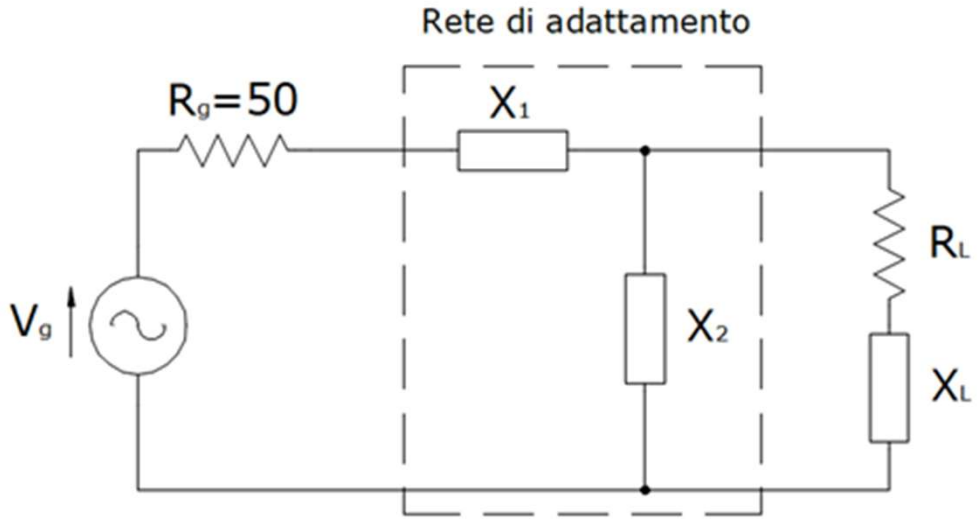
ADATTAMENTO ENERGETICO con RETE ad "L"

Fattore di merito

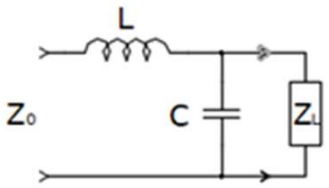
$$Q = \sqrt{\frac{R_{Max}}{R_{min}} - 1}$$

Banda passante

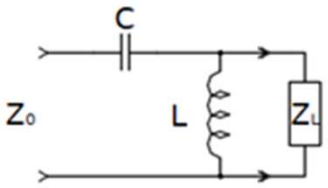
$$BW = \frac{f}{Q}$$



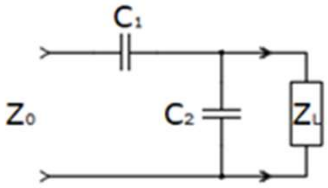
RETI ad "L" POSSIBILI



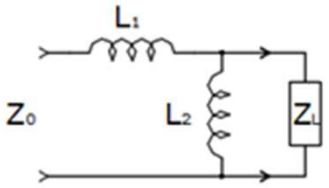
Tipo A



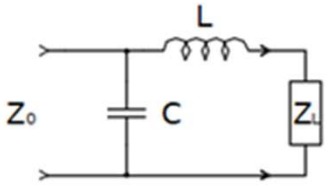
Tipo B



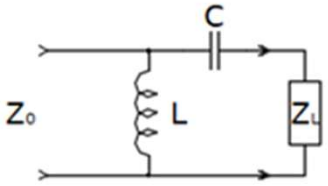
Tipo E



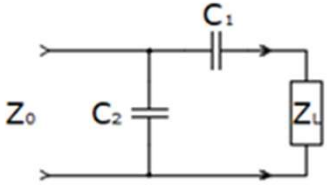
Tipo F



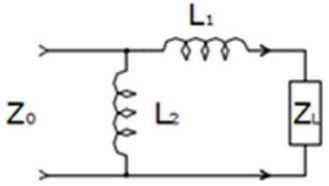
Tipo C



Tipo D



Tipo G



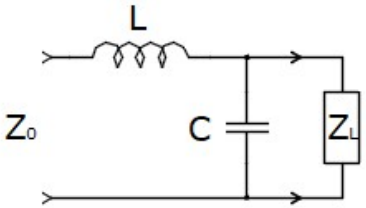
Tipo H

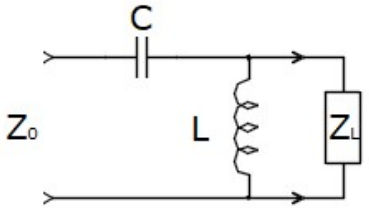
USO delle RETI ad "L"

Passa Basso

Passa Alto

$Z_L > Z_0$

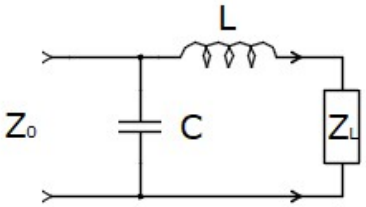


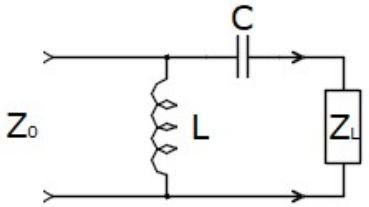


Tipo A

Tipo B

$Z_L < Z_0$

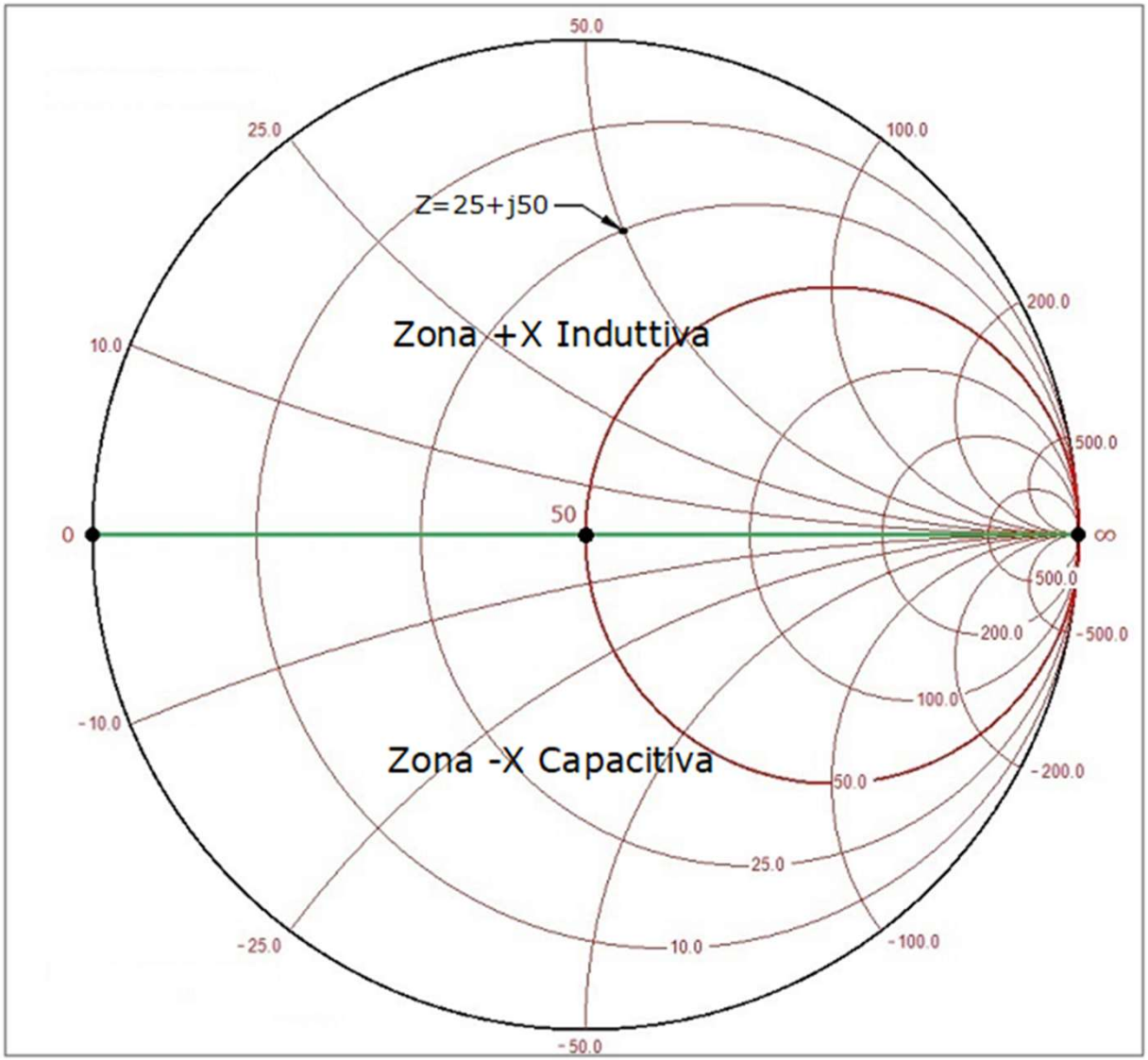




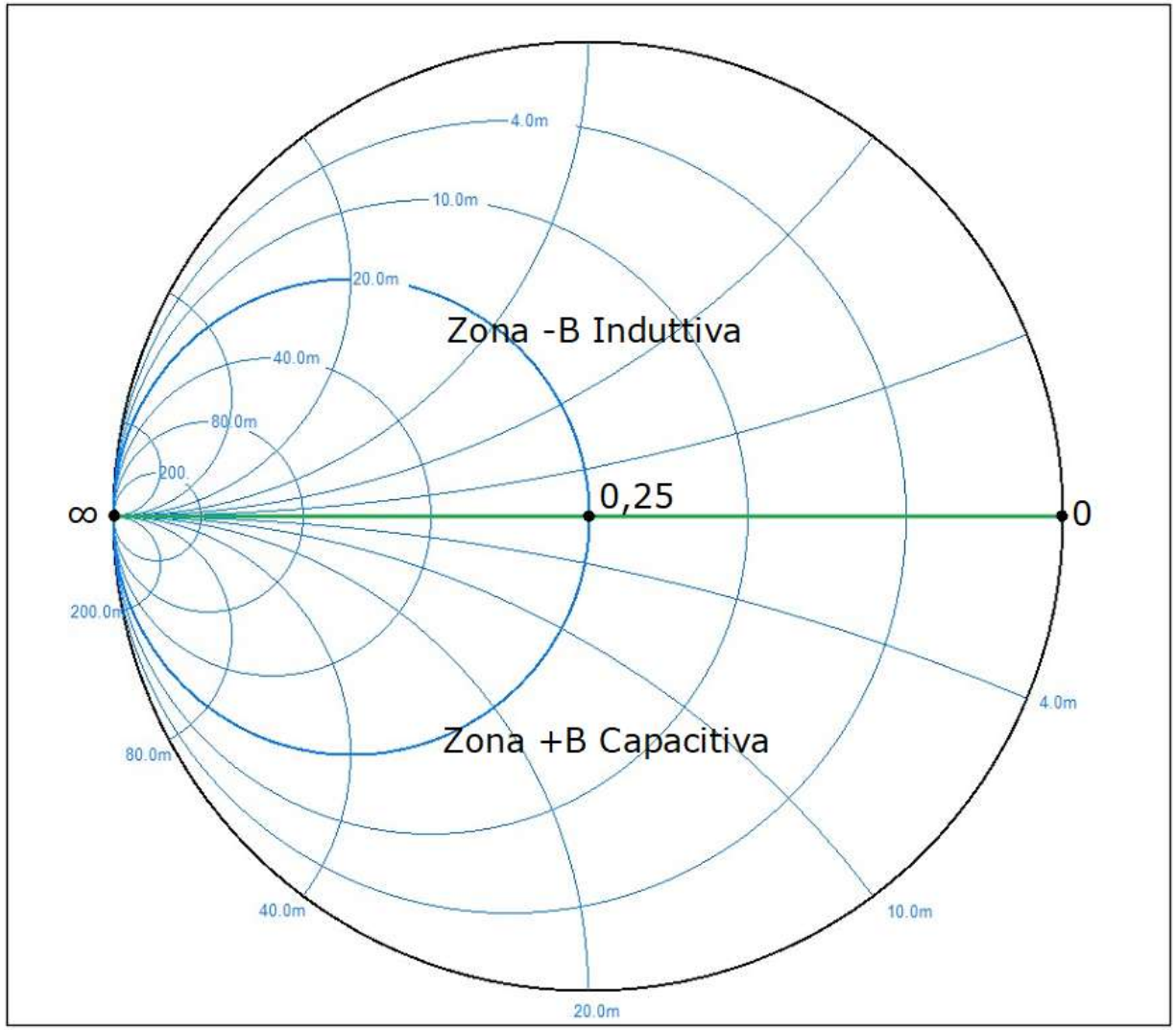
Tipo C

Tipo D

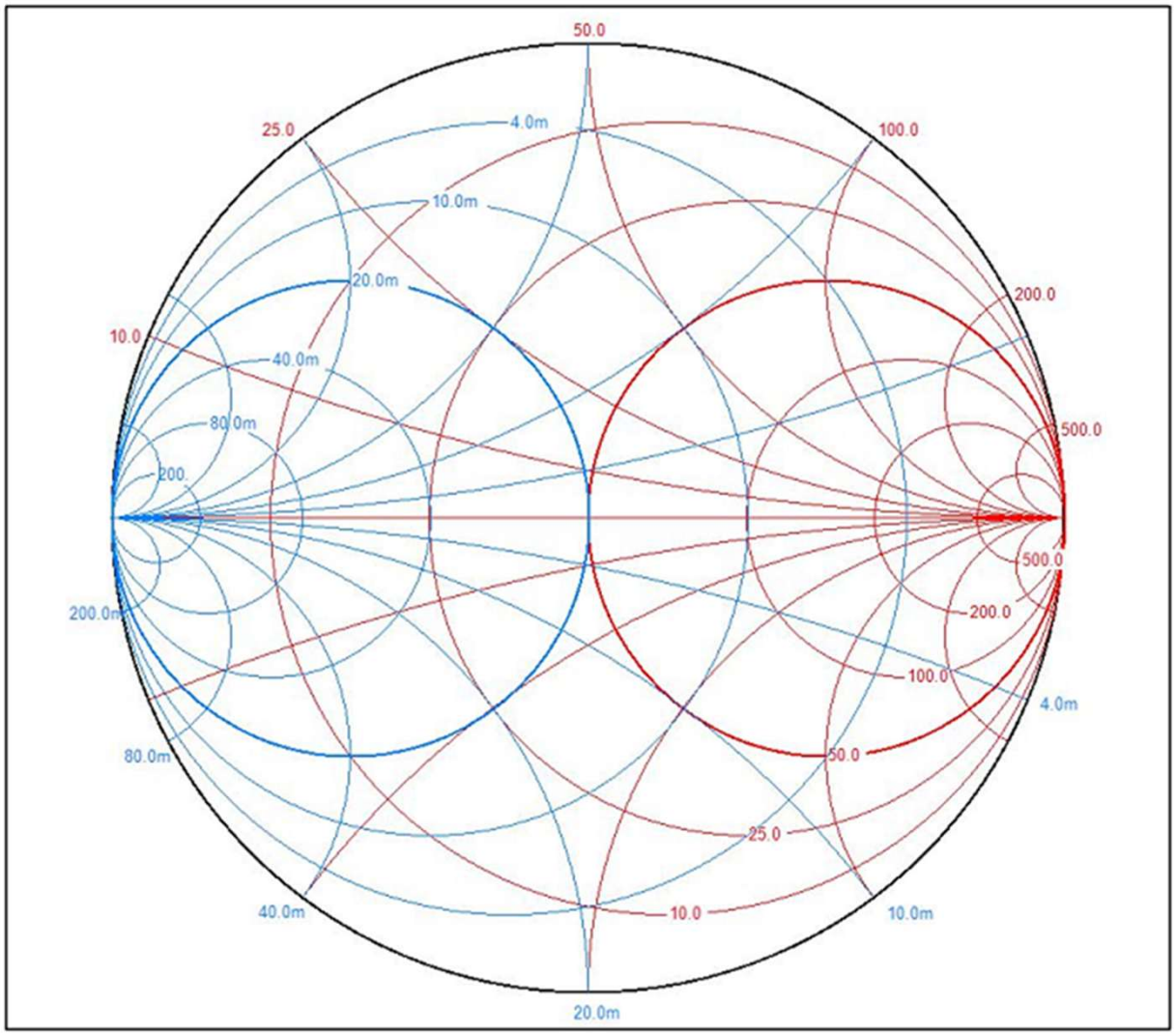
La CARTA di SMITH
delle IMPEDENZE Z



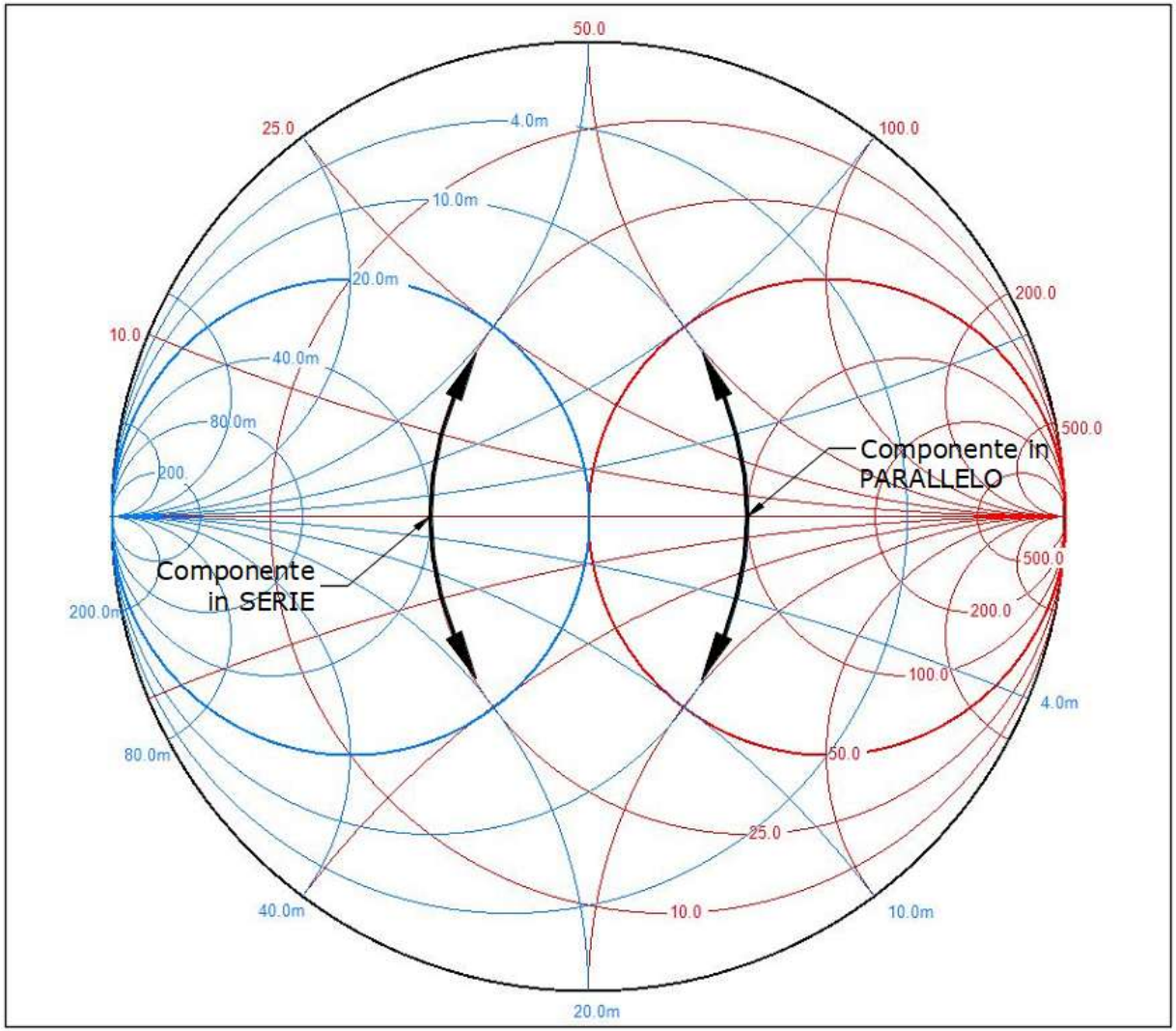
La CARTA di SMITH
delle AMMETTENZE Y



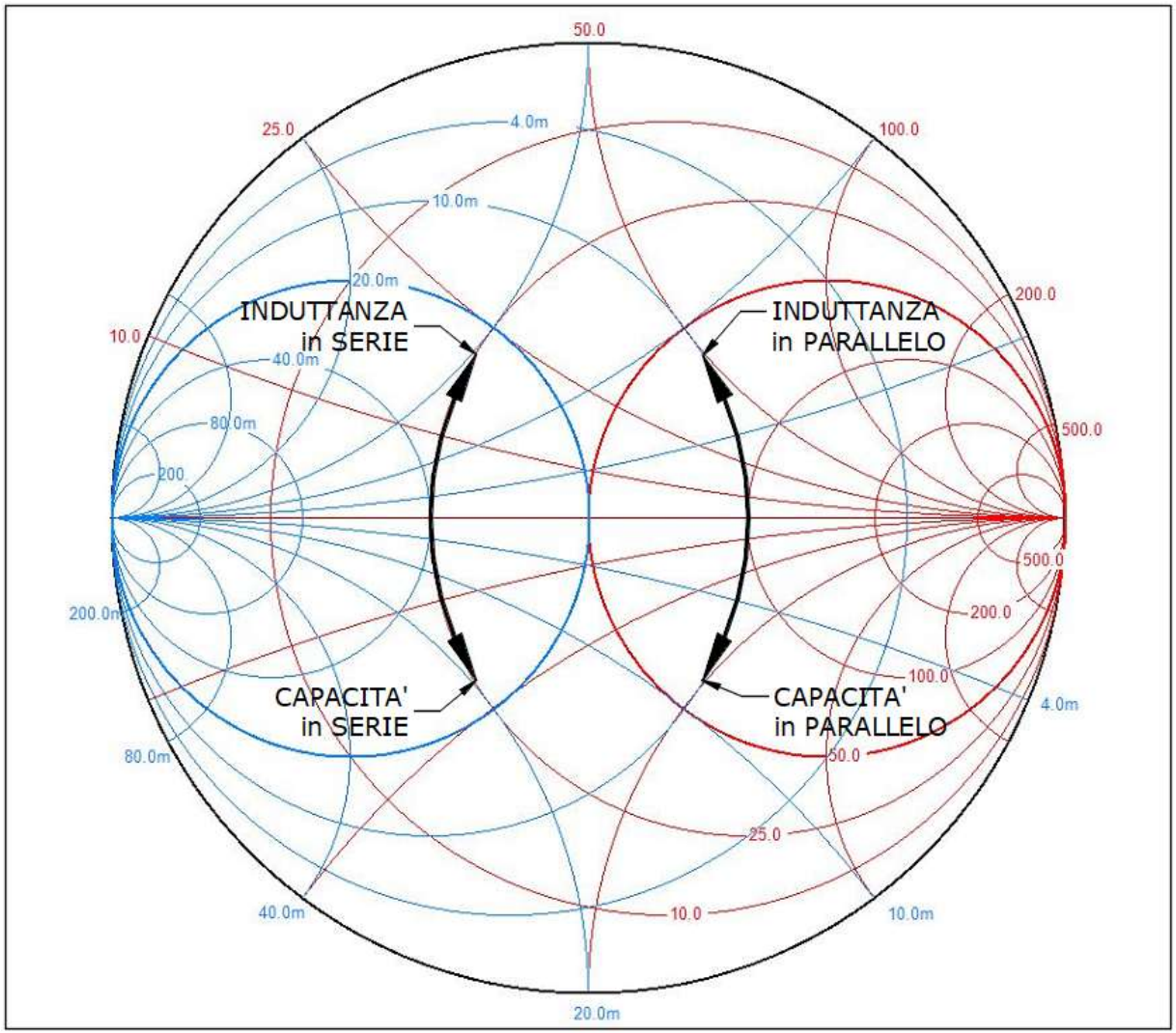
La CARTA di SMITH
COMBINATA Z-Y



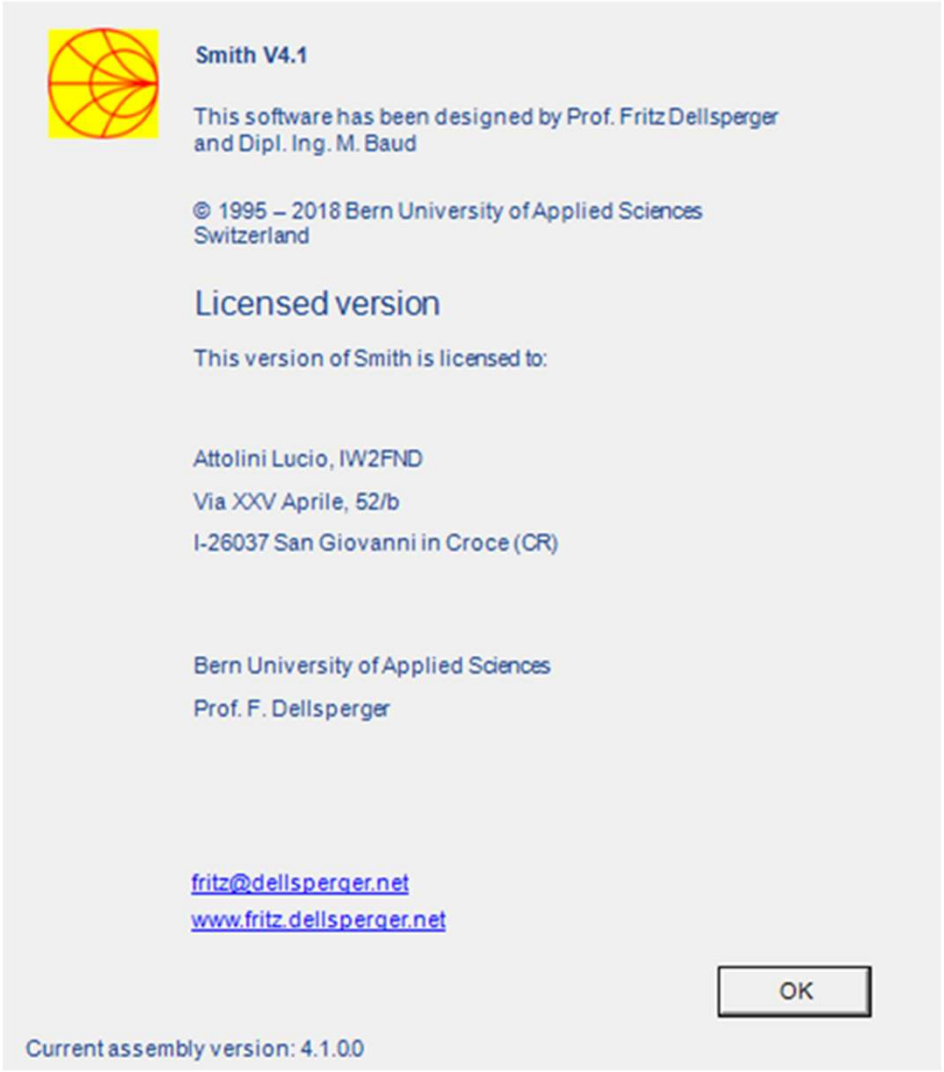
La CARTA di SMITH



La CARTA di SMITH



Il SW Smith V4.1

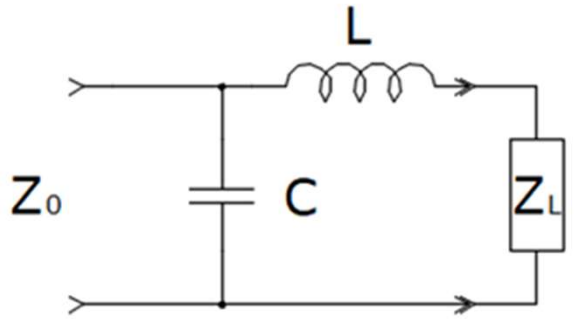


L'ESEMPIO

Antenna per i 40m

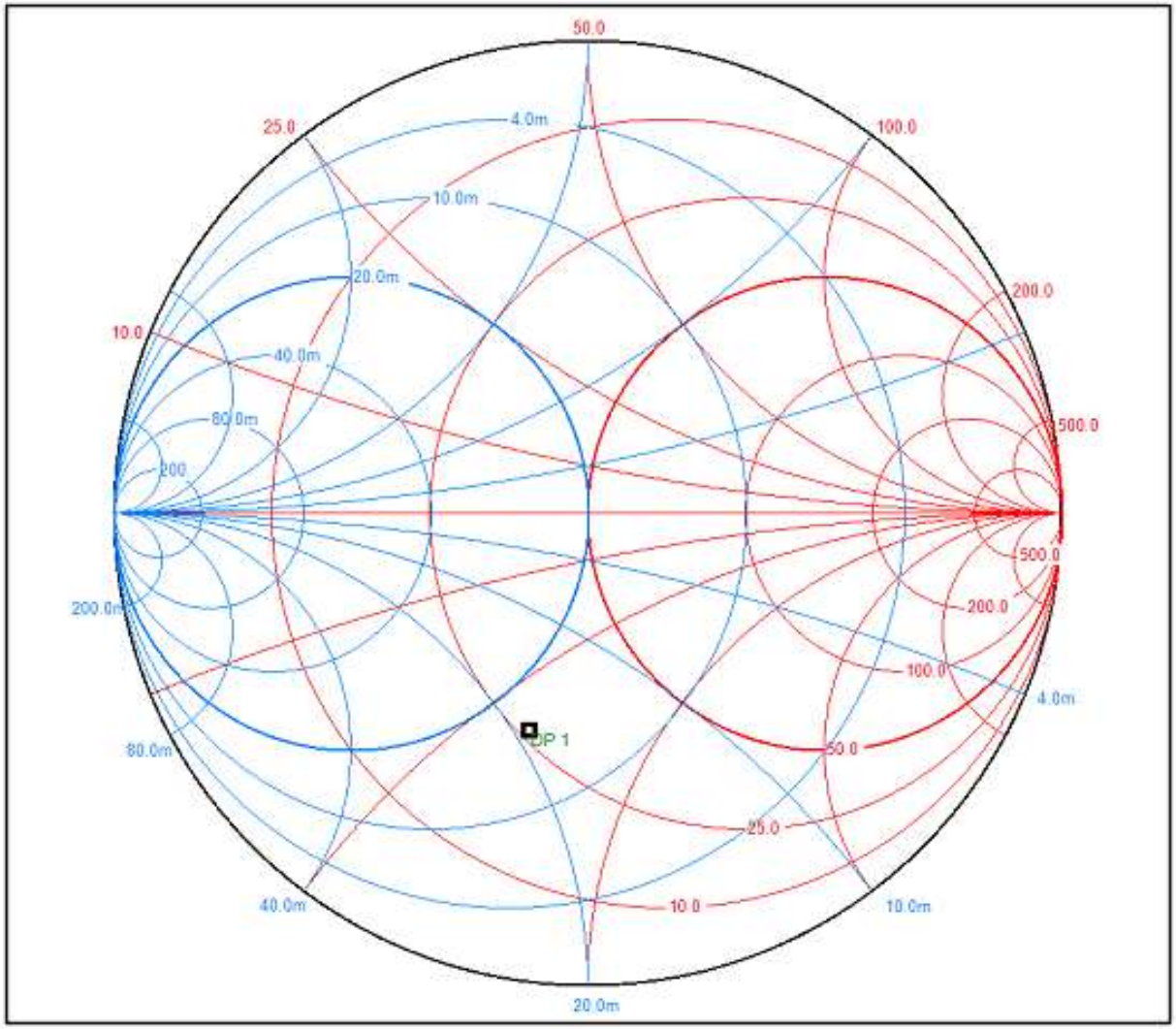
$f = 7{,}100\ MHz$

$Z_L = 27 - j32{,}9$



Tipo C

Adattamenti diversi



RETI a Pi-Greco e a "T"