

$$\lambda := 10 \quad j := \sqrt{-1} \quad \eta_0 := 377 \quad \beta := 2 \frac{\pi}{\lambda}$$

$$r := 0.80, 82..20$$

$$Z_E(r) := \frac{\eta_0 \left[1 + \frac{1}{j\beta r} + \frac{1}{(j\beta r)^2} \right]}{\left(1 + \frac{1}{j\beta r} \right)} \quad Z_H(r) := \eta_0 \frac{\left(1 + \frac{1}{j\beta r} \right)}{\left[1 + \frac{1}{j\beta r} + \frac{1}{(j\beta r)^2} \right]}$$

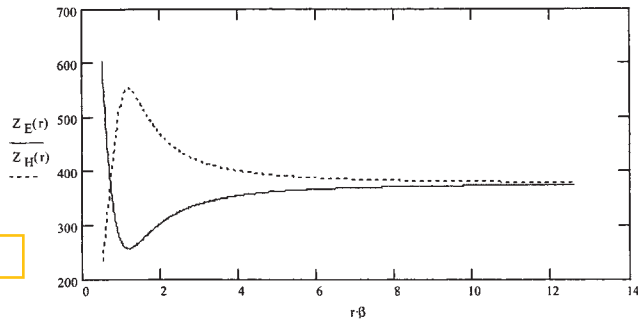


Figure 2

Equations and impedance plots describe elemental dipole and loop antennas.