EC-14 Reflection Co-efficient (Δ) :- Mathematically the reflection co-efficient is defined as the ratio of E_{0r} to E_{0i} and it is expressed as

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$$\Delta_E = E_{0r} / E_{0i} = \eta_2 - \eta_1 / \eta_1 + \eta_2 \quad \text{——(1)}$$

The reflection co-eff. is a parameter which describes how much of an EMW is reflected by an impedance discontinuity in the transmission medium.

Transmission Co-efficient (T) : Mathematically, it is defined as the ratio of E_{0t} to E_{0i}

$$T_E = \frac{E_{0t}}{E_{0i}} = \left[\frac{2\eta_2}{\eta_1 + \eta_2}\right] \quad \text{——(2)}$$

Similarly, $T_E = \left(\frac{2\eta_2}{\eta_1 + \eta_2}\right) = \frac{2\sqrt{\frac{\mu_0}{\epsilon_2}}}{\sqrt{\frac{\mu_0}{\epsilon_2}} + \frac{\mu_0}{\epsilon_1}}$

$$T_E = \frac{2\sqrt{\frac{1}{\epsilon_2}}}{\sqrt{\frac{1}{\epsilon_2}} + \sqrt{\frac{1}{\epsilon_1}}} = \frac{2\sqrt{\epsilon_1}}{\sqrt{\epsilon_1} + \sqrt{\epsilon_2}} \quad \text{——(3)}$$

Also, $\Delta_H = \frac{\sqrt{\epsilon_2} - \sqrt{\epsilon_1}}{\sqrt{\epsilon_1} + \sqrt{\epsilon_2}}$ ——(4)

Similarly, $T_H = \frac{2\sqrt{\epsilon_2}}{\sqrt{\epsilon_1} + \sqrt{\epsilon_2}}$ ——(5)

The transmission co-efficient describes the amplitude, intensity or total power of transmitted waves relative to an incident wave.