

For each current & voltage pair in 3), define an impedance as the ratio of phasor voltage to current and determine equations for Z_{max} and Z_{min}.

$$Z_{\max} = \frac{V_{\max}}{I_{\min}} = \frac{|V_0 + | (1 + |\Gamma|)}{\frac{|V_0 + |}{Z_0} (1 - |\Gamma|)}$$

$$\underline{\underline{Z_{\max} = Z_0 \left(\frac{1 + |\Gamma|}{1 - |\Gamma|} \right) = Z_0 (SWR)}}$$

$$Z_{\min} = \frac{V_{\min}}{I_{\max}} = \frac{|V_0 + | (1 - |\Gamma|)}{\frac{|V_0 + |}{Z_0} (1 + |\Gamma|)}$$

$$\underline{\underline{Z_{\min} = Z_0 \left(\frac{1 - |\Gamma|}{1 + |\Gamma|} \right) = \frac{Z_0}{SWR}}}$$

Note, it turns out that we get the same result when we leave the phasor current & voltage in complex form at these locations as the complex parts divide out!