

31.59. In an L - R - C series circuit the magnitude of the phase angle is 54.0° , with the source voltage lagging the current. The reactance of the capacitor is $350\ \Omega$, and the resistor resistance is $180\ \Omega$. The average power delivered by the source is $140\ \text{W}$. Find (a) the reactance of the inductor; (b) the rms current; (c) the rms voltage of the source.