

Chapter 7, Problem 90.

An attenuator probe employed with oscilloscopes was designed to reduce the magnitude of the input voltage v_i by a factor of 10. As shown in Fig. 7.149, the oscilloscope has internal resistance R_s and capacitance C_s , while the probe has an internal resistance R_p . If R_p is fixed at $6\text{ M}\Omega$, find R_s and C_s for the circuit to have a time constant of $15\text{ }\mu\text{s}$.

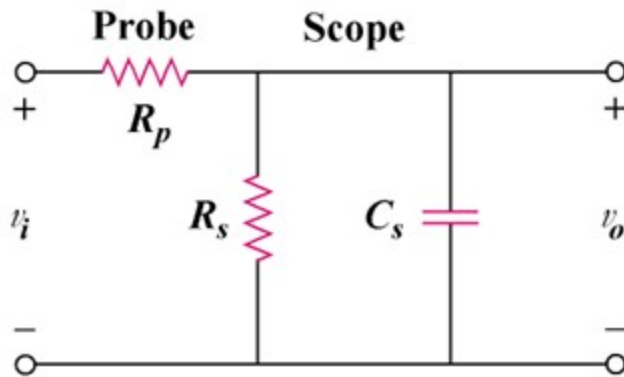


Figure 7.149
For Prob. 7.90.