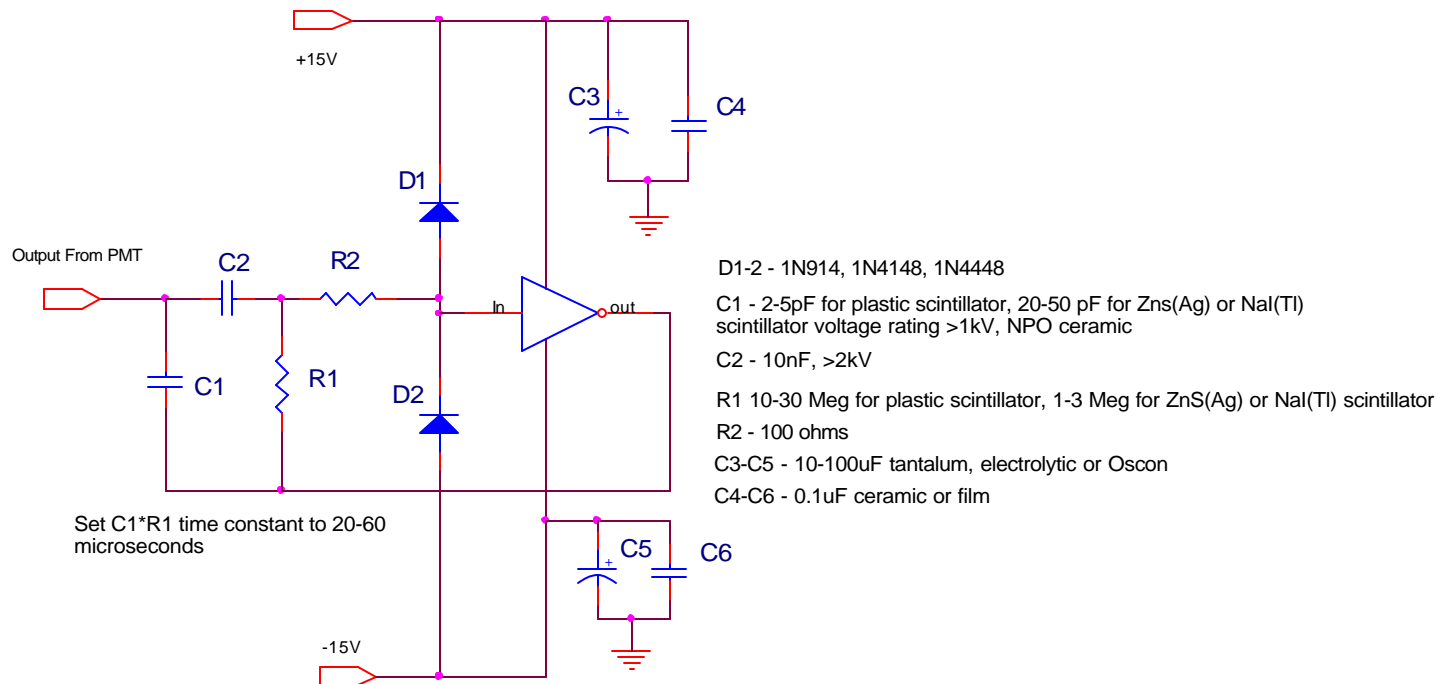


Basic Charge Sensitive Amplifier with Protection Diodes



The schematic above shows the basic configuration of a charge sensitive amplifier with protection diodes. The actual amplifier used is not important, as long as it is inverting, fast, and has high input impedance. D1 and D2 shunt high voltage transients to the supply rails, where they can be absorbed by the power supply decoupling capacitors (C3-C6), preventing damage to the amplifier input. C1 and R1 are the charge storage capacitor and reset resistor, respectively. C2 is a coupling capacitor located inside the amplifier feedback loop. R2 limits the current through the protection diodes.