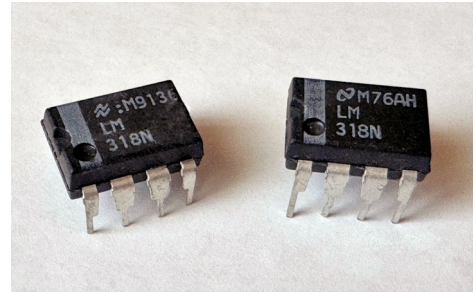
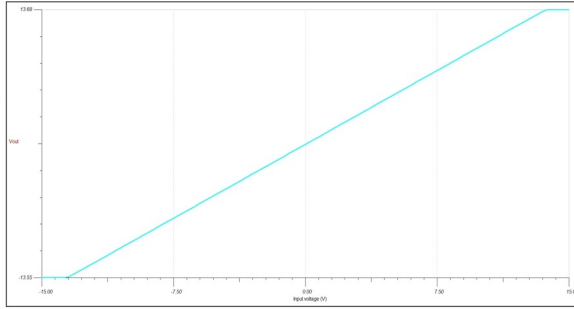
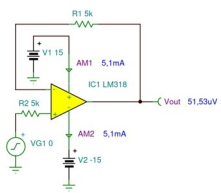
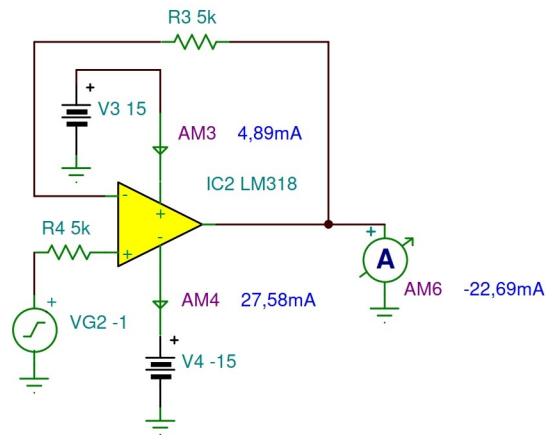
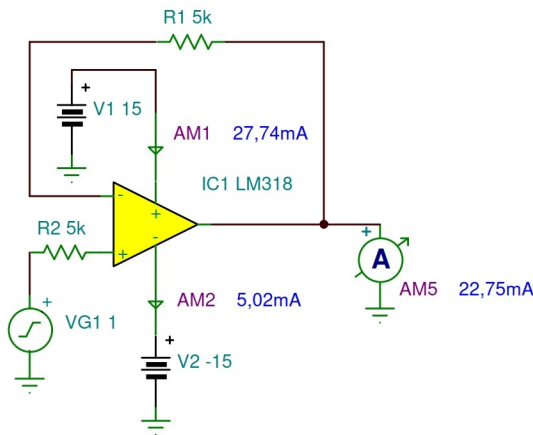


# LM318 Operational Amplifier Macro Model

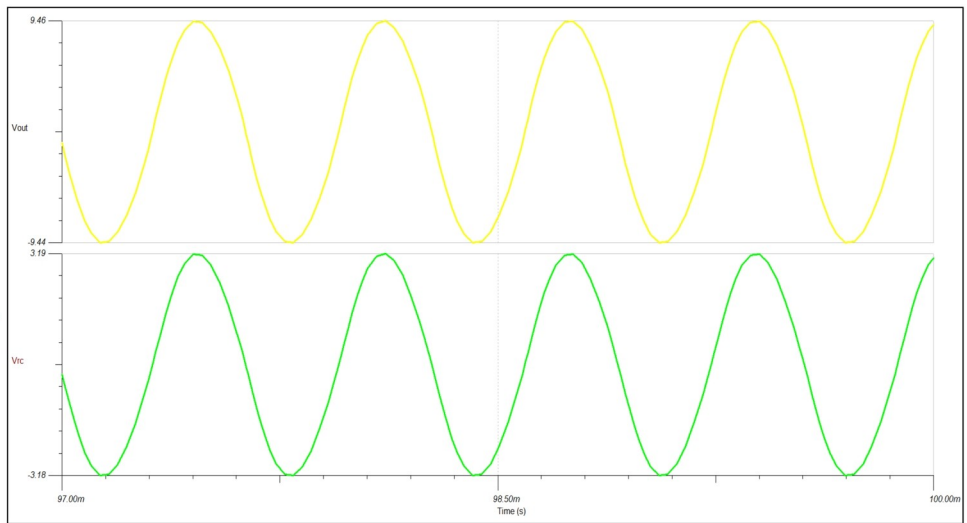
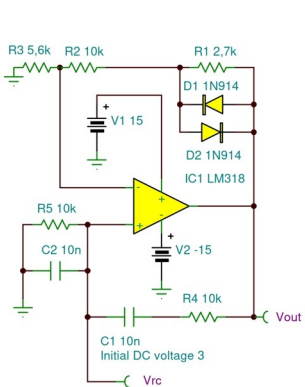
## DC Characteristics



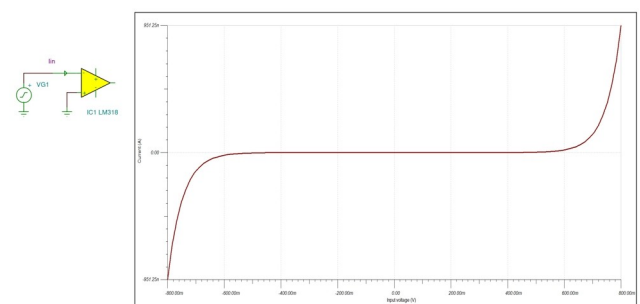
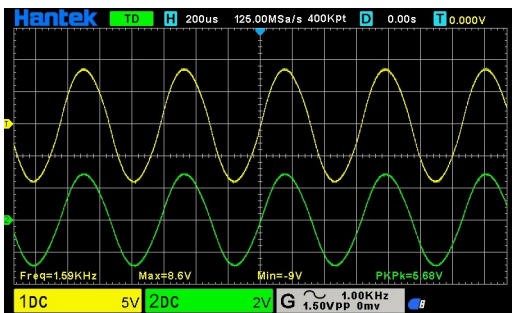
## Short Circuit Current



## Wien Bridge Oscillator

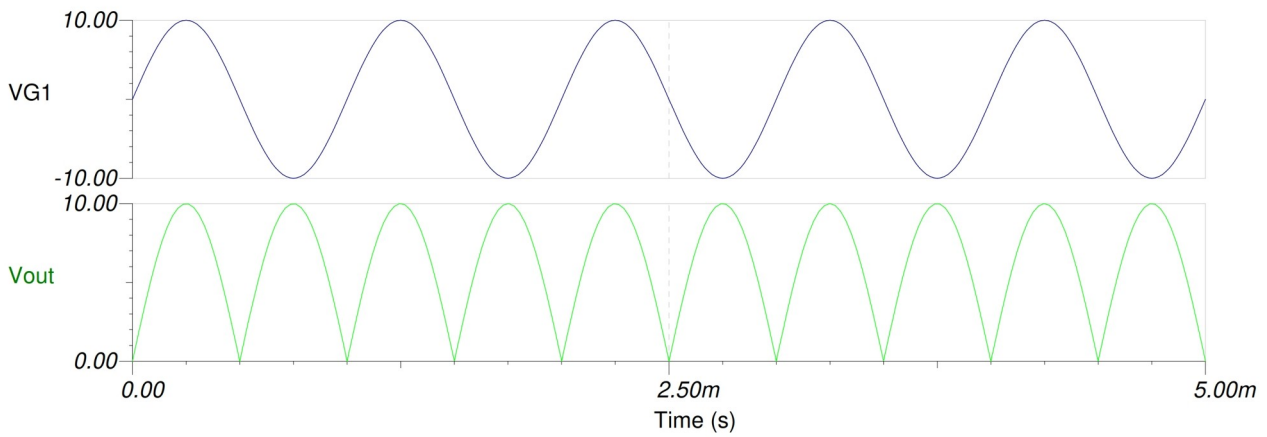
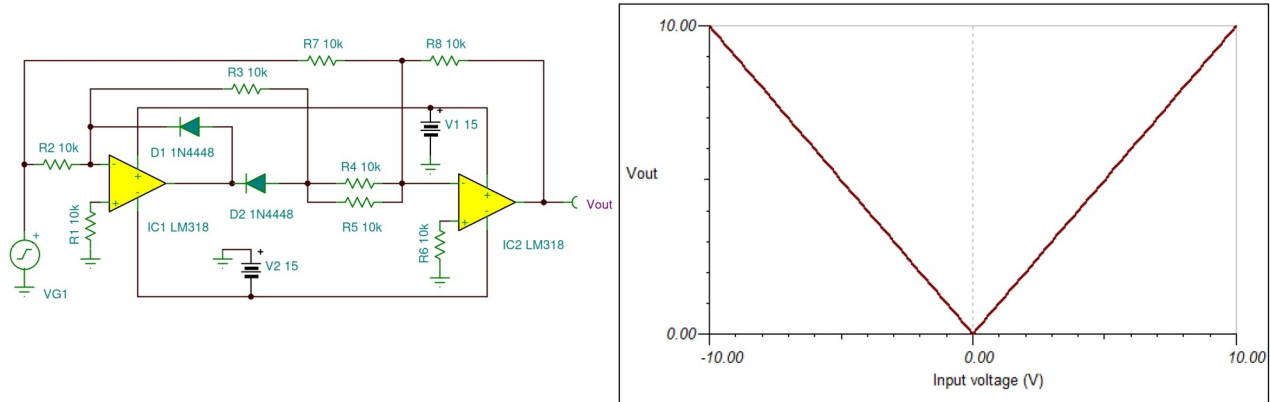


## Input Overvoltage Protection



The inputs are shunted with back-to-back diodes for overvoltage protection. Therefore, excessive current will flow if a differential input voltage in excess of 1V is applied between the inputs unless some limiting resistance is used.

### Precision Full-Wave Rectifier



The precision rectifier circuit is convenient in that it only requires two op amps and that all resistors are the same value. This circuit consists of two parts: an inverting half-wave rectifier and a weighted summing amplifier.

### Phase Shift Oscillator

