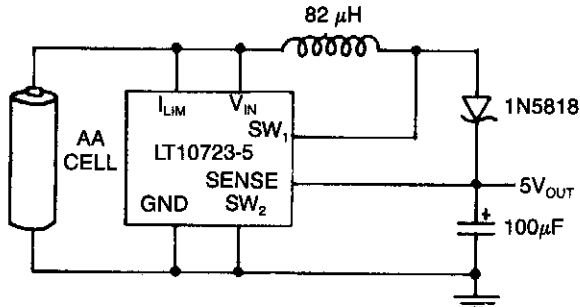


### 1-TO-5 V dc/dc CONVERTER

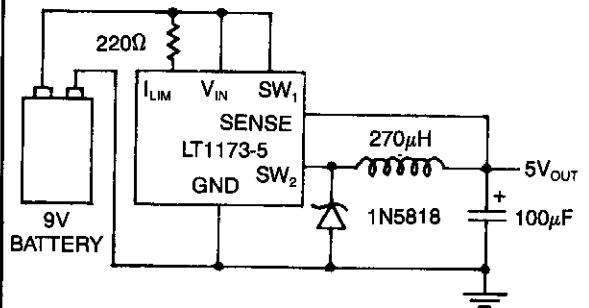


LINEAR TECHNOLOGY

Fig. 21-10

This circuit, using the Linear Technology LT1173, produces 5 V at 40 mA from a 1.5-V AA cell.

### 9-TO-5-V CONVERTER

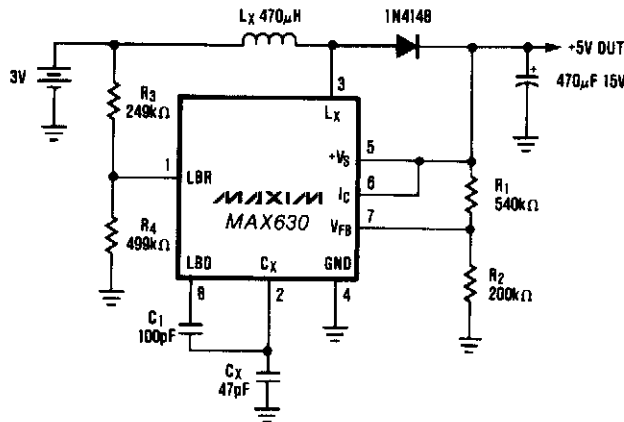


LINEAR TECHNOLOGY

Fig. 21-11

Using a Linear Technology LT1173-5, this converter produces regulated 5 V from a 9-V battery.

### +3-V BATTERY TO +5-V dc/dc CONVERTER



MAXIM

Fig. 21-12

A common power-supply requirement involves converting a 2.4- or 3-V battery voltage to a 5-V logic supply. This circuit converts 3 V to 5 V at 40 mA with 85% efficiency. When  $I_C$  (pin 6) is driven low, the output voltage will be the battery voltage minus the drop across diode D1. The optional circuitry that uses C1, R3, and R4 lowers the oscillator frequency when the battery voltage falls to 2.0 V. This lower frequency maintains the output-power capability of the circuit by increasing the peak inductor current, which compensates for the reduced battery voltage.