

# Edge Triggered Amplified Bleeder

## ■ Description

- ▶ Bleeder circuit for a TRIAC dimmer with an edge detection circuit and variable current source
- ▶ Edge detection circuit includes a high pass filter (HPF) to detect the high frequency transition in the input voltage  $V_{IN}$  when the TRIAC fires
- ▶ The HPF triggers the variable current circuit (Darlington pair Q1, Q2) to provide the bleeder current  $I_B$

## ■ Benefits

- ▶ Bleeder current  $I_B$  maintains the input current  $I_{IN}$  above the TRIAC holding current
- ▶ No efficiency loss due to the bleeder since bleeder current  $I_B$  is only provided when the TRIAC is conducting
- ▶ **Could be used with:** Lighting drivers

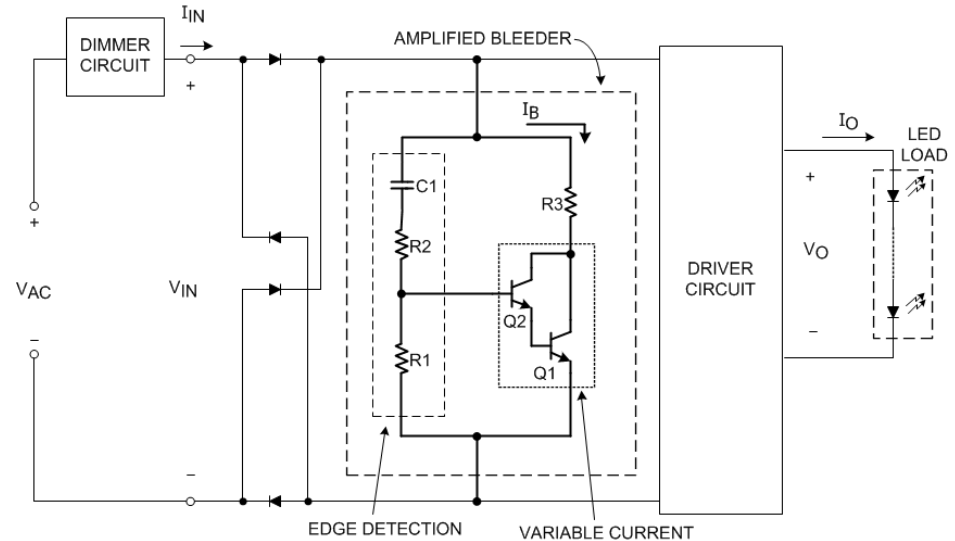


Figure 1. Example amplified bleeder in a lighting system