

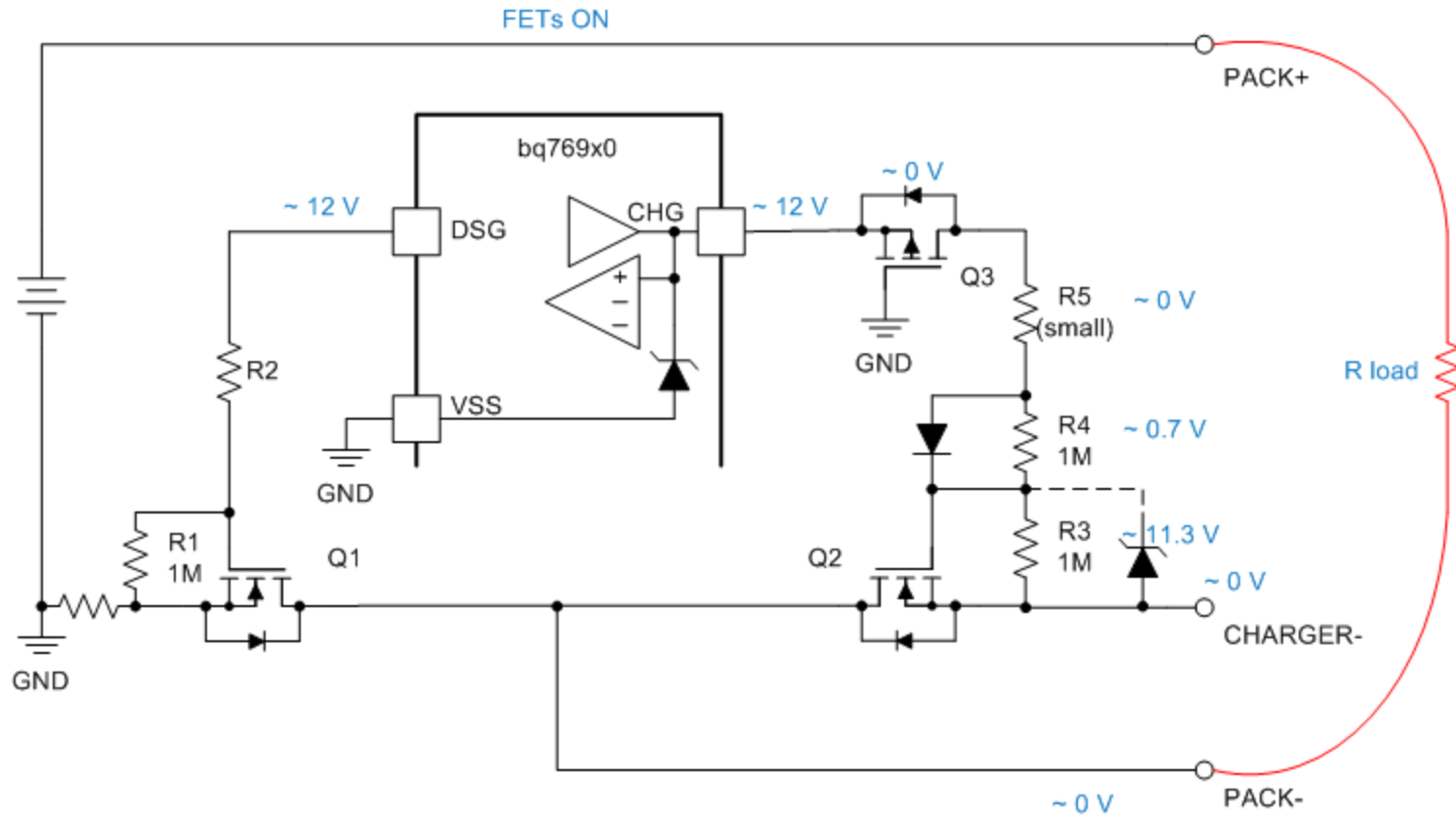
Load detect with split power path

bqMaximo

Willy Massoth

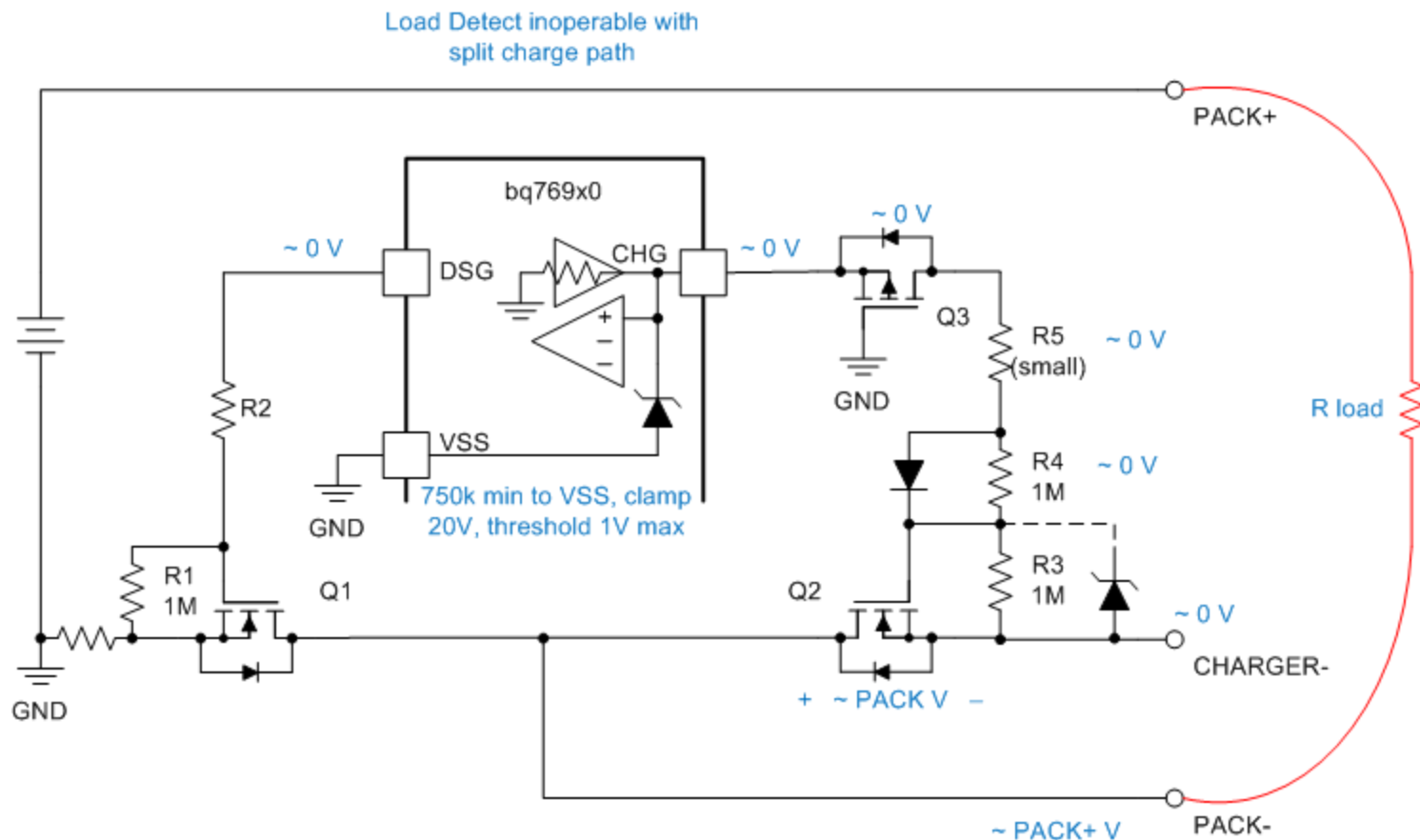
Split power path

- Charge through discharge FET for protection
- Discharge bypassing charge FET



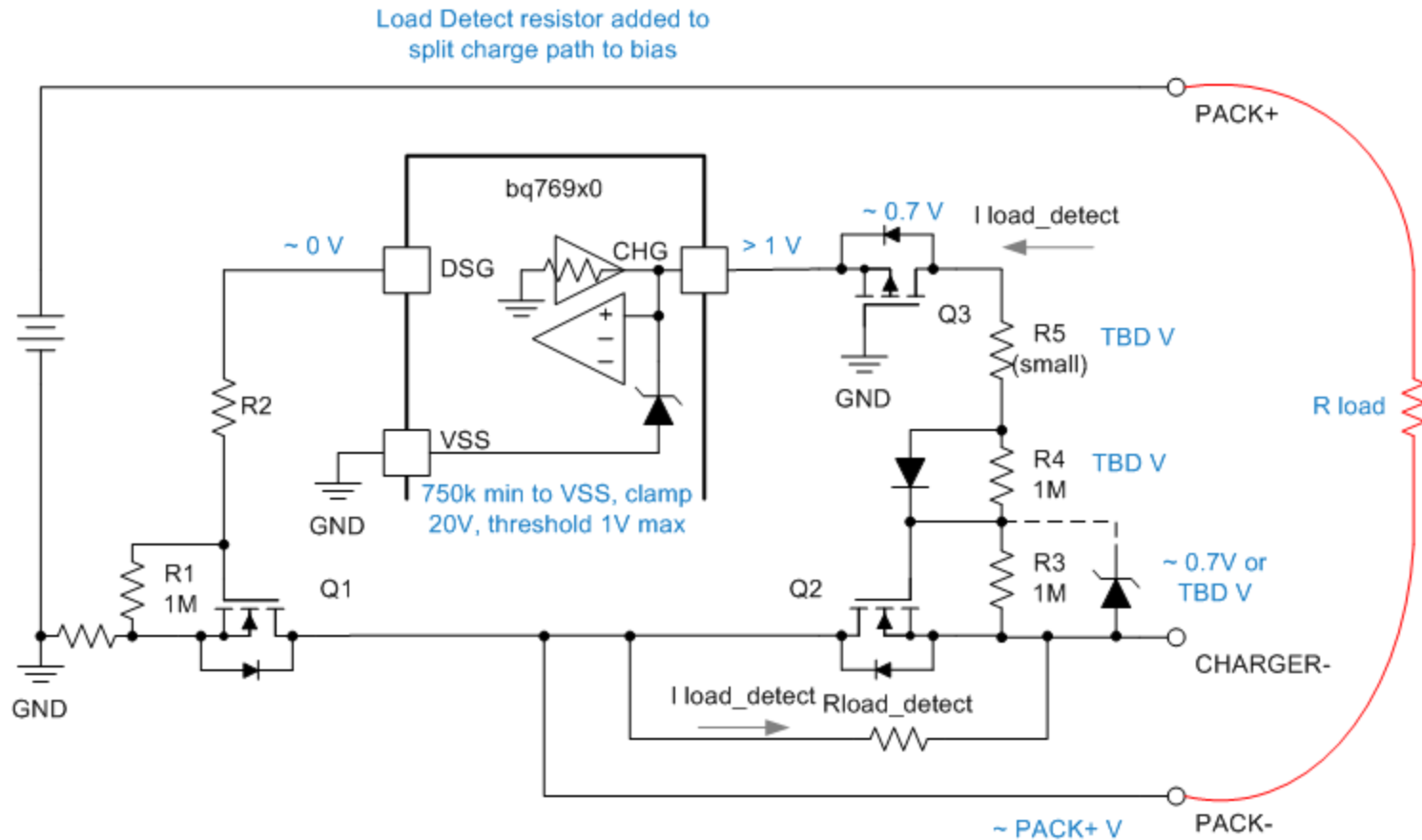
Load detect inoperable with split path

- R load does not pull up CHARGER-, FET leakage typically too low
- Need $\sim 1\text{V}/750\text{k} = 1.4\text{ }\mu\text{A}$ into CHG pin to sense load



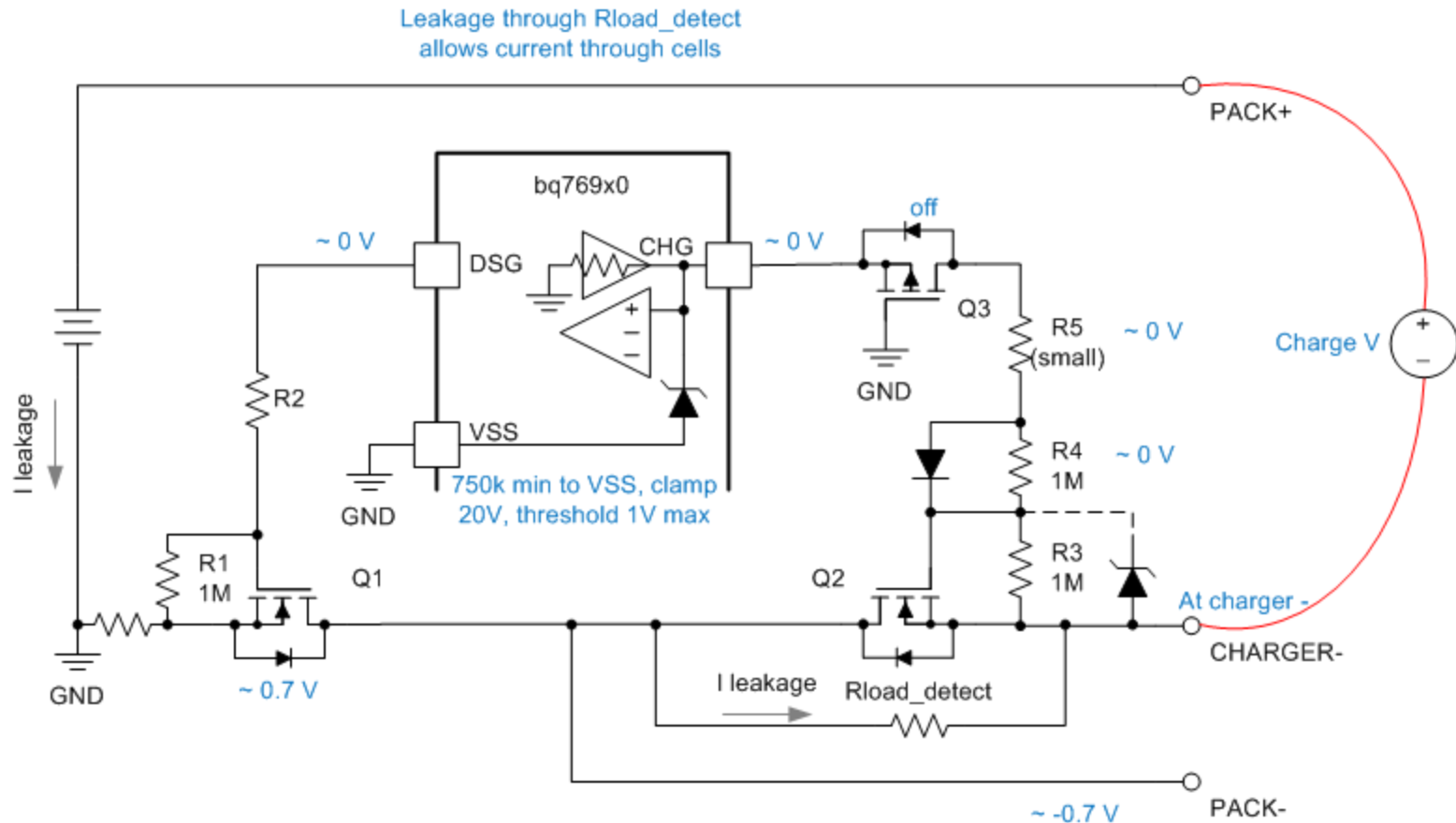
Load detect resistor needed

- Select Rload_detect to provide voltage through divider with minimum allowed PACK+, minimum load for detection and circuit option (zener)



Rload_detect allows charger leakage

- Resistor will allow continued charge current when charger is off. Be sure this is acceptable; $\sim (\text{Charge } V_{\text{max}} - \text{Cells } V_{\text{min}}) / R_{\text{load_detect}}$



Alternate load detect by microcontroller

- May be preferred. Divider will allow continued discharge after protection unless switched. Diode blocks charge current

