

## Power Minder™ Mini-Board

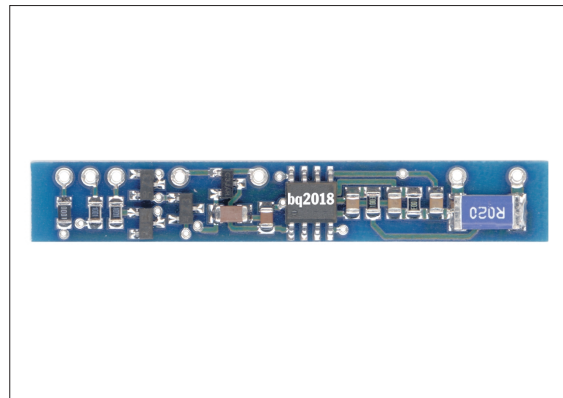
### Features

- Complete and compact charge/discharge counter
- Combines the bq2018, voltage regulator, sense resistor, and backup capacitor on a single PCB
- Communicates charge/discharge information to a host with a single-wire interface
- Designed for battery pack integration
  - Less than 0.5 square inches
  - Small size allows it to fit in the crevice formed by two adjacent cells
  - Low operating current
- Direct connections for the pack cells and communications port

### General Description

The bq2118 Power Minder mini-board provides a complete and compact solution for charge and discharge counting of all types of battery chemistries, including NiCd, NiMH, or Li-Ion batteries. Designed for battery pack integration, the bq2118 incorporates a bq2018 Power Minder IC, supply voltage regulator, sense resistor, and backup capacitor on a small circuit board. The module provides direct connections for the positive and negative terminals of the series cells in the battery pack, and can fit in the crevice formed by two adjacent cells. The bq2118 allows a battery pack to be equipped easily with accurate charge/discharge counting electronics.

Unitrode configures the bq2118 based on the information requested in Table 1. The configuration defines the battery chemistry, the number of series cells, and the charge/discharge current. Figure 1 shows how the module connects to the cells.

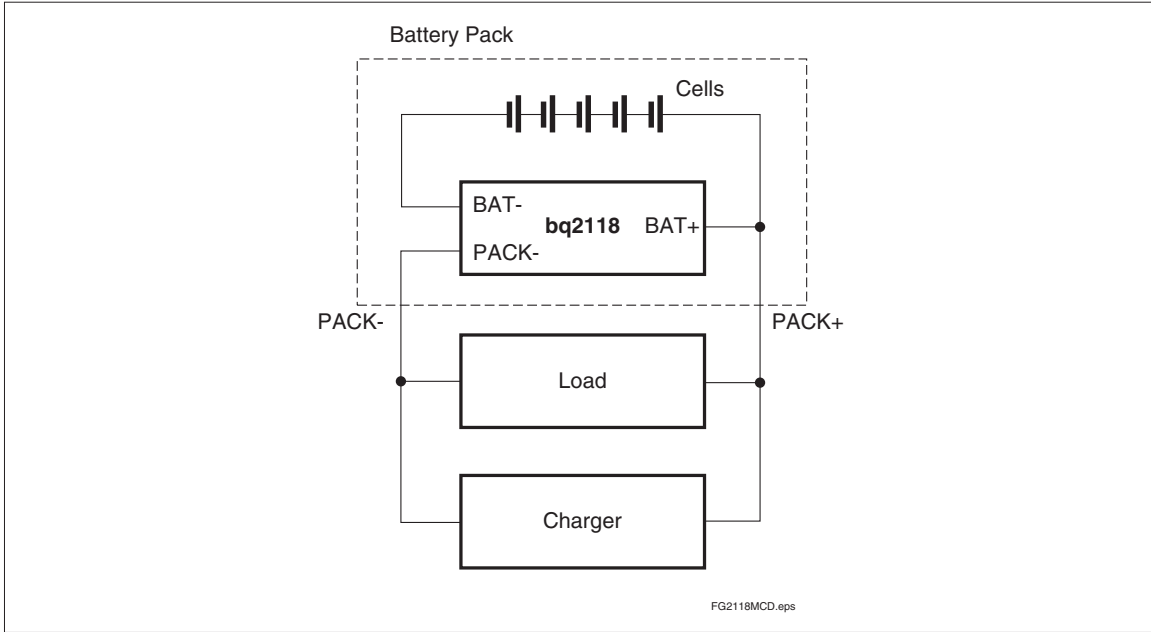


A module development kit is also available for the bq2118. The bq2118B-KT includes one configured module and the following:

1. An EV2200-18 interface board that allows connection to the serial port of an AT-compatible computer.
2. Menu-driven software to display charge/discharge activity and to allow user interface to the bq2118 from any standard Windows 3.1 or 95 PC.

### Pin Descriptions

<b>BAT+</b>	<b>Battery positive/pack positive</b>
<b>BAT-</b>	<b>Battery negative</b>
<b>HDQ</b>	<b>Communications port</b>
<b>PACK-</b>	<b>Pack negative</b>
<b>WAKE</b>	<b>Wakeup output</b>
<b>RBI</b>	<b>Register backup input</b>
<b>VCC</b>	<b>bq2018 supply voltage</b>



**Figure 1. Module Connection Diagram**

**Table 1. bq2118 Module Configuration**

Customer Name: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Sales Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

Number of series battery cells \_\_\_\_\_

Coke or graphite cell anode \_\_\_\_\_

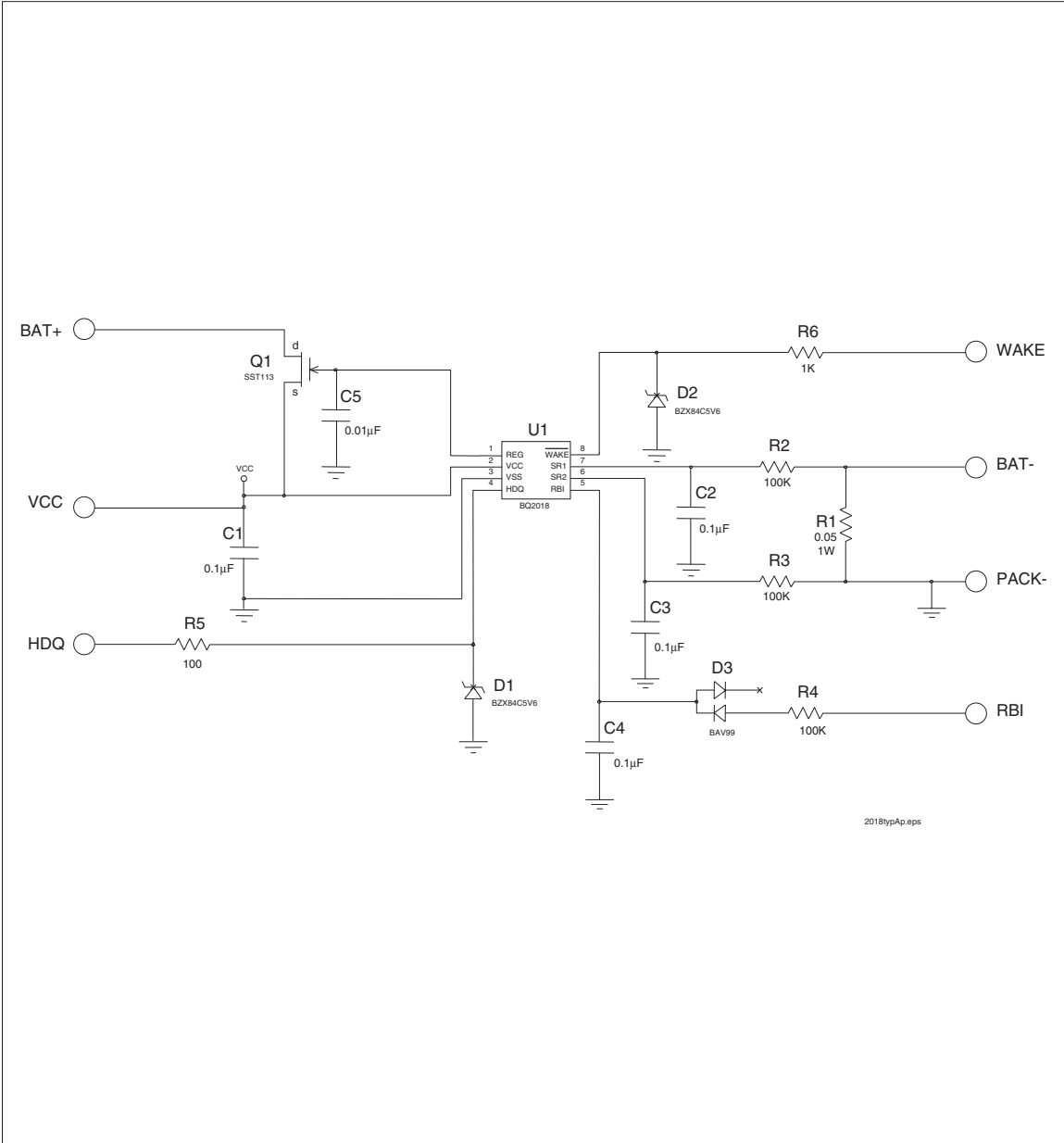
Battery pack capacity (mAh) \_\_\_\_\_

Discharge rate into load (4.0A max) Min. \_\_\_\_\_ Avg. \_\_\_\_\_ Max. \_\_\_\_\_

Charge rate (4.0A max) \_\_\_\_\_

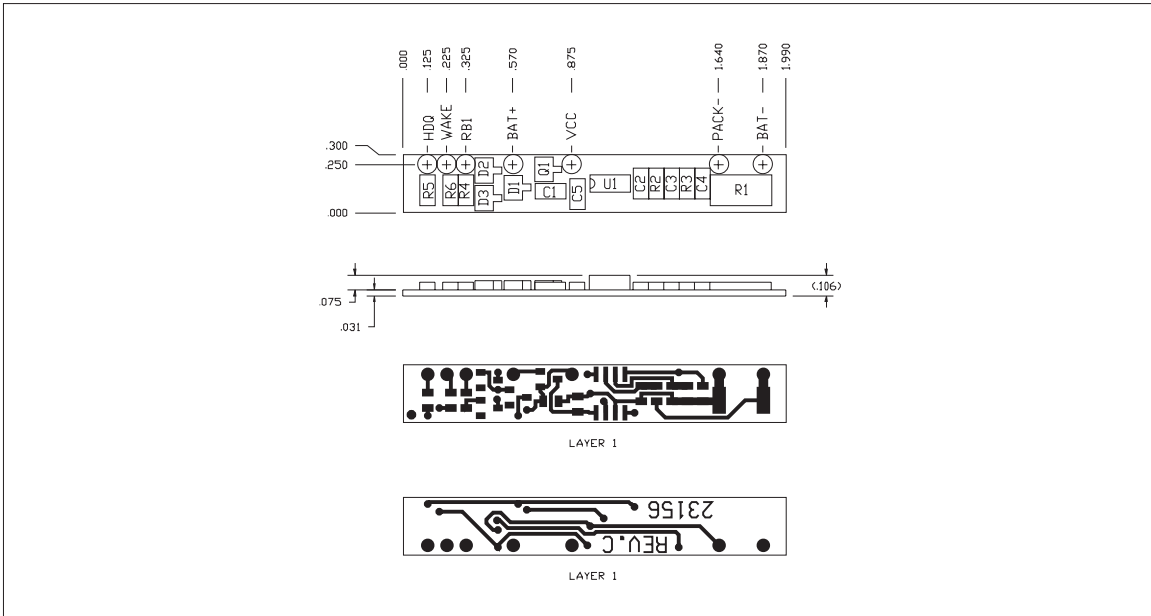
FAE Approval: \_\_\_\_\_ Date: \_\_\_\_\_

bq2118 Schematic



# bq2118 Preliminary

## bq2118 Board



## Ordering Information

**bq2118 B - XXX**

**Customer Code:**

Blank = Sample or Pre-production<sup>1</sup>

KT = Evaluation system

XXX = Customer-specific; assigned by Unitrode<sup>2</sup>

**Package Option:**

B = Board-level product

**Device:**

Power Minder Mini-Board

- Notes:**
1. Requires configuration sheet (see Table 1)
  2. Example production part number: bq2118B-001

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