Figure 1. Block diagram

1.1 Pinout PowerSSO-36

- Control Logic
  - DI
  - DO
  - CSN
  - CLK
  - DIR
  - PWM
  - SPI
  - MOSFET Control
  - Wake up from Sleepmode
  - SPI Interface
  - Watch Dog

- Gate Driver
  - HS
  - LS (x2)

- Temperature Prewarning & Temperature Shutdown
- Undervoltage Overvoltage Det.
- Central 2 Step Charge Pump

- Diode

- Differential Current Sense Amplifier

- Current Sense MUX
  - Programmable Gain: 10 / 20 / 50

- Programmable
  - V_DITH & $t_{\text{dead}}$

- Watch Dog

- Optional control:
  - TS / ACT_OFF

Table 2. Pin definitions and functions

<table>
<thead>
<tr>
<th>Pin Symbol</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1G N D</td>
<td>Ground. Reference potential, connected to slug.</td>
</tr>
<tr>
<td>2 GNDD</td>
<td>Digital ground. Reference potential.</td>
</tr>
<tr>
<td>3V CCD</td>
<td>Logic voltage supply 3.3 V/5 V: for this input a ceramic capacitor as close as possible to GND is recommended.</td>
</tr>
<tr>
<td>4V CC</td>
<td>Analog voltage supply 3.3 V/5 V: for this input a ceramic capacitor as close as possible to GND is recommended.</td>
</tr>
<tr>
<td>5 EN</td>
<td>Enable input. The enable input has a pull-down resistor.</td>
</tr>
<tr>
<td>6 DIR</td>
<td>Direction select input for H-bridge control. This input has a pull-down current.</td>
</tr>
<tr>
<td>7 PWM</td>
<td>PWM input for H-bridge control. This input has a pull-down current.</td>
</tr>
</tbody>
</table>

$V_{\text{REG}}$ 5V / 3.3V

$V_{\text{BAT}}$

$\mu$C

$V_{\text{cc}}$

$V_{\text{ccd}}$

$V_{\text{s}}$

$100nF$

$\mu$C $5V / 3.3V$

Temp. diodes

100nF 100nF 100nF

VBAT

NReset