Application Report
SLUA738 – March 2015

Using an Auxiliary Battery Charger With the bq24166

PWR/BMS/HPC

ABSTRACT

This application note explains how to connect an auxiliary battery charger to the SYS output of the bq24166.

Description

When in Hi-Impedance (Hi-Z) mode either because V(IN) and V(USB) are less than their respective UVLO voltages, and therefore not generating V(DRV), or because the IUSBx lines are pulled high, the bq24166's internal battery FET is turned on to allow the battery to power the system load from the IC's SYS pin. Since the bq24166's battery FET allows bi-directional current flow while in Hi-Z mode, it is acceptable to attach an auxiliary battery charger to the IC's SYS pin, connected to the system load, which can simultaneously power the system and power the load. Figure 1 shows one such implementation.

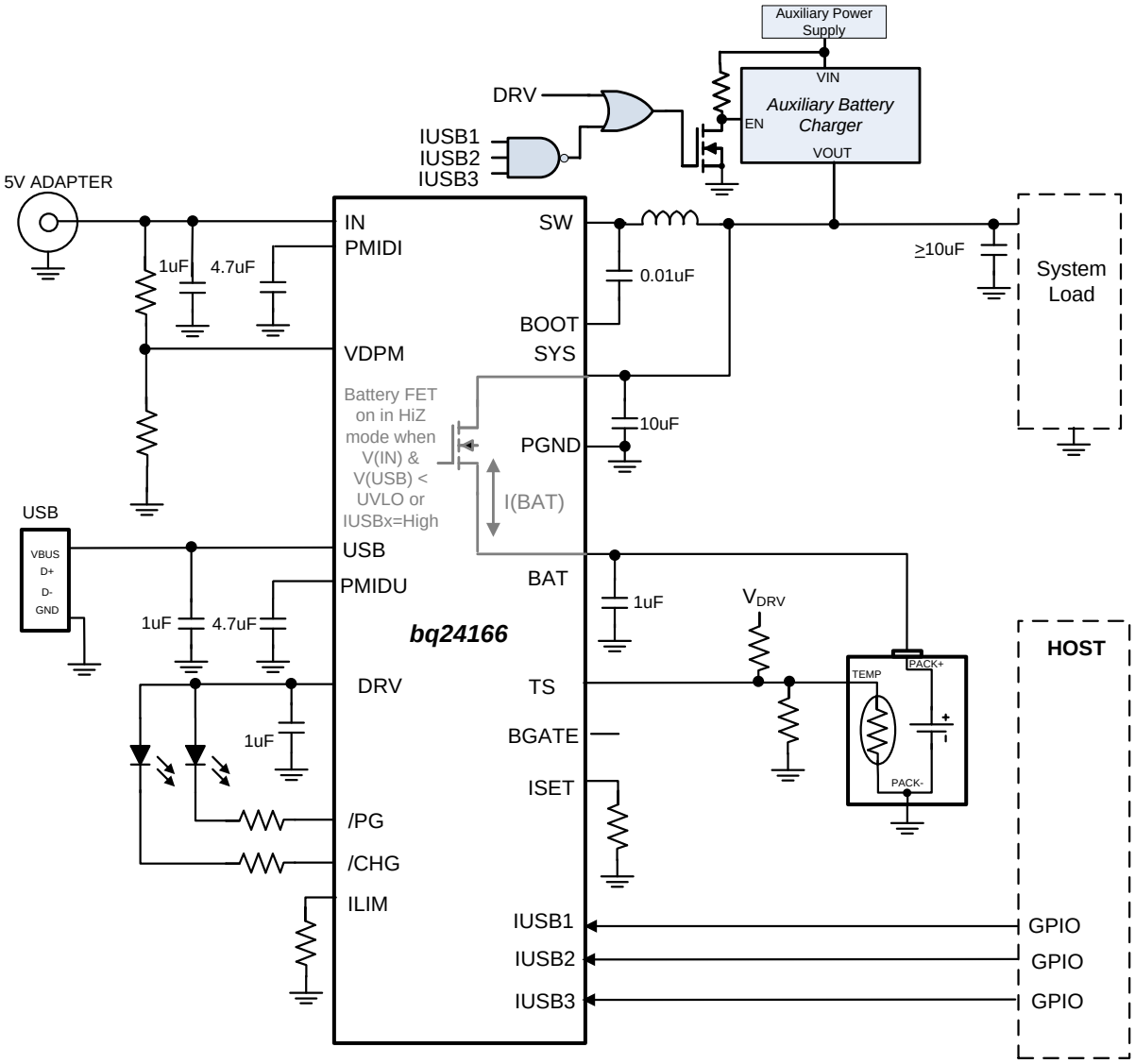

Figure 1. bq24166 With Auxiliary Battery Charger Attached to SYS

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