Power Management (PWR) Block Data Sheet

PWR 100616

SPECIFICATIONS

> **Voltage Output:** 3.3V (2x) + 1.65V (1x)
> **Output Current:** 250mA (2x) + 50mA (1x)
> **Input Voltage Range:** 3.7-6.0V

FEATURES

> Two regulated VCC=3.3V outputs
> One regulated REF=VCC/2=1.65V output
> On-board LiPo charger
> Standard micro USB plug (charging only)
> Standard JST battery connector
> Battery charging status indicator
> Battery voltage level monitoring pin (ABAT)
> Plug & play operation

APPLICATIONS

> Rapid prototyping of custom hardware
> Biomedical engineering projects

GENERAL DESCRIPTION

Biosignal acquisition sensors often require a reference midpoint voltage (REF=VCC/2) for bipolar differential measurement. Also, two common problems affecting measurements when working with biosignals are the voltage drop associated with the normal battery discharge, and power supply fluctuations introduced by peripherals with high peak currents (e.g. Bluetooth module). Our PWR block was especially designed to address these issues, having biomedical applications in mind. It has two separate regulated VCC=3.3V outputs, which can be used to independently power the analog (AVCC) and digital (DVCC) parts of an acquisition circuit, and also one regulated REF=VCC/2=1.65V output that can be used to provide the reference midpoint voltage for bipolar differential sensors when required. Any 3.7V LiPo battery can be used with this block.

WARNING

The micro USB port is **ONLY USED** for battery charging. **BEFORE OPERATING** BITalino disconnect the charging cable.

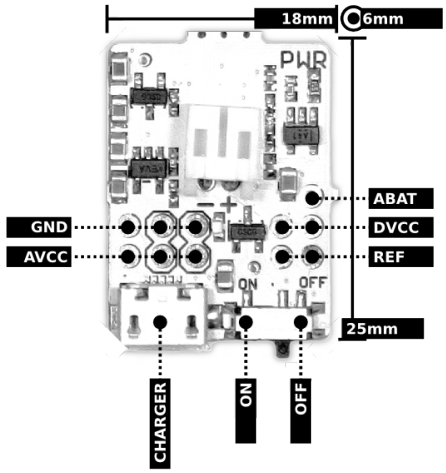

Fig. 1. Pin-out and physical dimensions.

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REV A

BEWARE: DIRECT OR INDIRECT COUPLING TO THE MAINS MAY RESULT IN SHOCKING HAZARD

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CHARGER OPERATION

For greater convenience the BITalino PWR block includes an on-board LiPo charger, with a charging status LED indicator and a standard micro-USB charging port (which can only be used for charging, not for communications).

The charger is only active when the switch is in the OFF position.

Once the charging process begins, an orange LED turns on indicating the charging state (and stays on throughout the duration of the charge). When the battery is fully charged, the LED turns off.

ORDERING GUIDE

Part #	Description
COMP-PWR	Power (PWR) management block