|  |  |
| --- | --- |
| **Overview:**  The IcyBlue Feather V2 is a full featured Field Programmable Gate Array (FPGA) development board designed to provide rapid prototyping capabilities and an educational platform for introductory FPGA development courses and learners. |  |
| **Features:**   * FTDI FT232HQ USB FIFO Programming interface * ICE5LP4K FPGA with 3520 LUT * 2 User LED Outputs * 1 RGB LED * 22 GPIO in a feather compatible pinout * Lithium Polymer Battery Charger w/ 200mA charge current (MCP73831) * JST-PH 2 Pin LiPoly connector * USB Type C Connector * 1.2V, 2.5V, and 3.3V Power Domains * 2MB SPI FLASH (W25Q16JVUX) | **Applications:**   * Educational Learning Kits for Higher Ed & High School Engineering Coursework * Custom ASIC for use with Adafruit Feather Compatible Footprints * High Speed Data Buffer * Off Chip DSP Processor * RISC-V Development * Advanced Low Power ASIC Research |

**Electrical Specifications**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Net Name | min | nom | max | unit |
| VUSB | 4.5 | 5 | 5.5 | V |
| VBAT | 3 | 3.7 | 4.2 | V |
| VBAT Chg Cur | 50 | 100 | 1000 | mA |
| 3.3v Rail | 3 | 3.3 | 3.4 | V |
| 3.3V current |  |  | 500 | mA |
| 2.5V Rail | 2.3 | 2.5 | 2.6 | V |
| 2.5V Current |  |  | 250 | mA |
| 1.2V Rail | 1 | 1.2 | 1.3 | V |
| 1.2V Current |  |  | 150 | mA |
| SPI (FT232H -> FPGA) |  | 3.3 |  | V |
| GPIO | 1.2 | 2.5 | 3.3 | V |
| GPIO CURRENT |  |  | 20 | mA |
| Red LED (FPGA) |  | 1.9 |  | V |
| Blue led (fpga) |  | 2.9 |  | V |
| GREEN LED (FPGA) |  | 2.9 |  | V |
| RGB LED |  |  | 20 | mA |
| SPI FLASH |  | 3.3 |  | V |