



BG22 Explorer Kit  
EFR32BG22C224F512IM40

| Board Function    | Page |
|-------------------|------|
| Title Page        | 1    |
| EFR32BG22         | 2    |
| User Interface    | 3    |
| Board Power       | 4    |
| On-Board Debugger | 5    |



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Revision History

| Rev. | Description                 |
|------|-----------------------------|
| A00  | Initial production release. |
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| Designed<br><b>MAH</b> | Approved<br><b>RGU</b>                                  |
| Size<br><b>A3</b>      | Sheet Modified Date<br><b>Tuesday, January 12, 2021</b> |

Board Name  
**BG22 Explorer Kit**

Page Title  
**Title Page**

Board Number  
**BRD4108A**

Revision  
**A00**

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Sheet  
1 of 5

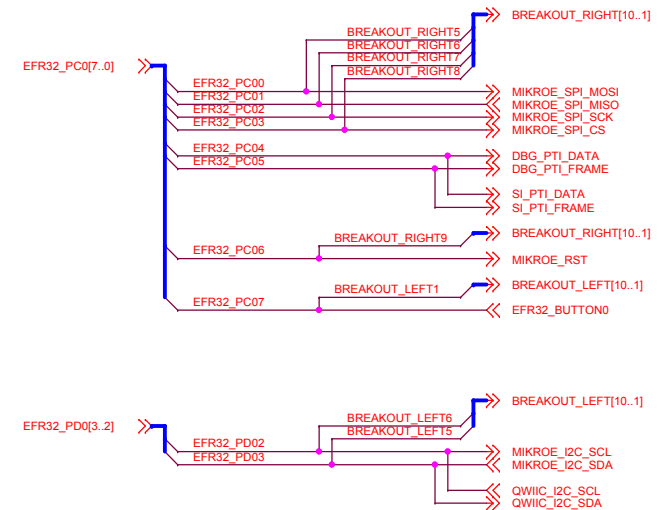
### EFR32BG22 Power Section

The diagram illustrates the power section of the EFR32BG22 microcontroller. It shows the connection of various power pins to the VMCU and VDCDC inputs. The DC/DC Regulator (U1C) is configured with VREGSW (pin 31) connected to VDCDC through an inductor (L3, 2U2) and a 4U7 capacitor (C7) to ground. The Digital Regulator is configured with DVDD (pin 34) connected to ground through a 1U capacitor (C16). The Digital Logic is configured with DECOUPLE (pin 30) connected to ground through a 1U capacitor (C16). The I/O Supply is configured with IOVDD (pin 36) connected to ground through a 1U capacitor (C20). The Analog Supply is configured with AVDD (pin 35) connected to ground through a 10U capacitor (C8). The Digital Supply is configured with VREGVDD (pin 32) connected to ground through a 10U capacitor (C8). The Ground is configured with VREGVSS (pin 33) and VSS\_PAD (pin 0) connected to ground through a 1U capacitor (C16).

The diagram illustrates the pin connections for the EFR32BG22 microcontroller. It is organized into three main sections: PA/PB pins, PC pins, and PD pins.

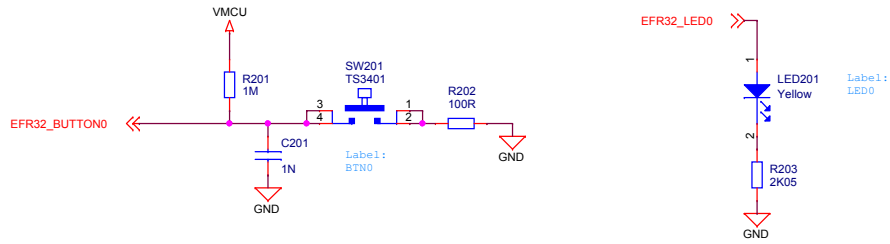
- PA/PB Pins:**
  - PA00-PA08:** Connected to EFR32\_PA0[8..0]. PA00-PA03 are also connected to BREAKOUT\_RIGHT2 (DBG\_SWCLK, DBG\_SWDIO, DBG\_SWO). PA04 is connected to BREAKOUT\_LEFT2 and EFR32\_LED0. PA05-PA08 are connected to BREAKOUT\_RIGHT2 (DBG\_VCOM\_TX, DBG\_VCOM\_RX, DBG\_VCOM\_RTS, DBG\_VCOM\_CTS).
  - PB00-PB04:** Connected to EFR32\_PB0[4..0].
- PC Pins:**
  - PC00-PC07:** Connected to EFR32\_PC0[7..0].
- PD Pins:**
  - PD00-PD03:** Connected to a 32.768 kHz crystal (X2) and EFR32\_PD0[3..2].

Additional connections shown include EFR32\_PA0[8..0] to EFR32\_PA0, EFR32\_PB0[4..0] to EFR32\_PB0, and EFR32\_PC0[7..0] to EFR32\_PC0. The diagram also shows connections to various breakout boards (BREAKOUT\_RIGHT2, BREAKOUT\_LEFT2, BREAKOUT\_RIGHT10, BREAKOUT\_LEFT7, BREAKOUT\_LEFT8, BREAKOUT\_LEFT9, BREAKOUT\_LEFT10) and MikroE boards (MIKROE\_ANALOG, MIKROE\_UART\_TX, MIKROE\_UART\_RX, MIKROE\_INT, MIKROE\_PWM).

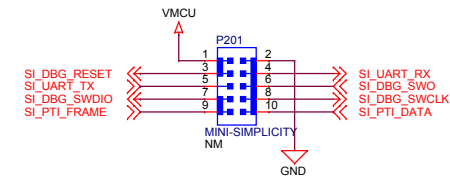


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| <br><b>SILICON LABS</b> |                                                         | Board Name                             |                        |
|                                                                                                              |                                                         | <b>BG22 Explorer Kit</b>               |                        |
| Designed<br><b>MAH</b>                                                                                       |                                                         | Page Title                             |                        |
| Approved<br><b>RGU</b>                                                                                       |                                                         | <b>EFR32BG22</b>                       |                        |
| Size<br><b>A3</b>                                                                                            | Sheet Modified Date<br><b>Tuesday, January 12, 2021</b> | Board Number<br><b>BRD4108A</b>        | Revision<br><b>A00</b> |
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|                                                                                                              |                                                         | Sheet<br>2 of 5                        |                        |

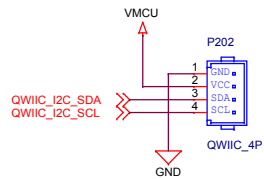
## Push Button & LED



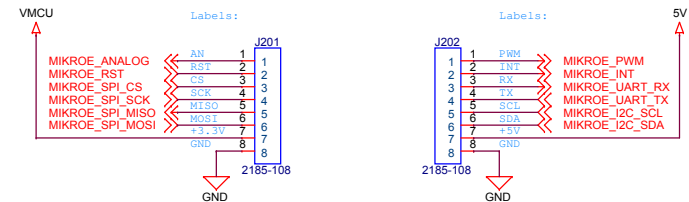
## Mini Simplicity Connector



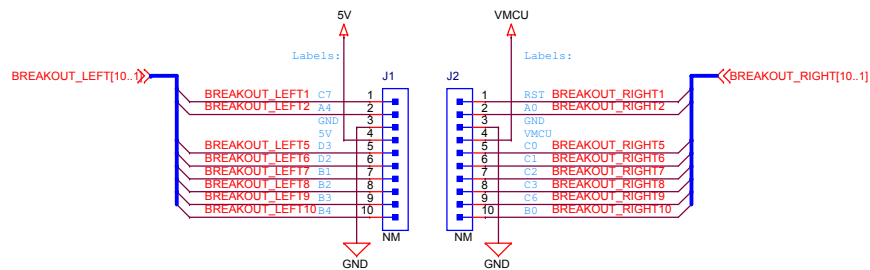
## Qwiic Connector



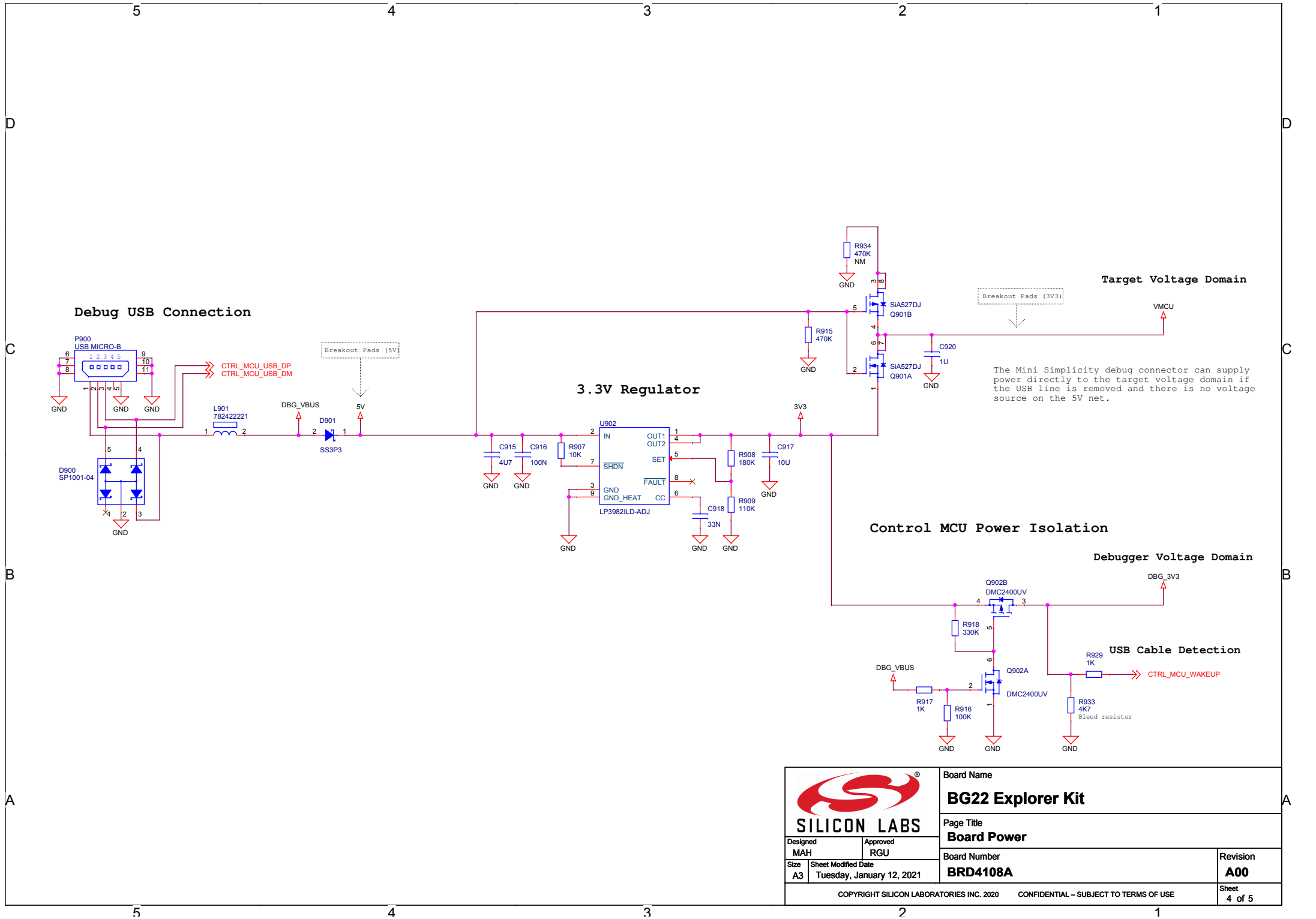
## MikroE Socket



## Breakout Pads



|                                                                                                              |  |                          |                 |
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| <br><b>SILICON LABS</b> |  | Board Name               |                 |
|                                                                                                              |  | <b>BG22 Explorer Kit</b> |                 |
| Designed<br>MAH                                                                                              |  | Page Title               |                 |
| Size<br>A3                                                                                                   |  | <b>User Interface</b>    |                 |
| Sheet Modified Date<br>Tuesday, January 12, 2021                                                             |  | Board Number             | Revision        |
|                                                                                                              |  | <b>BRD4108A</b>          | <b>A00</b>      |
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|                                                                                                              |                                                  |                 |  |                          |                 |
|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-----------------|--|--------------------------|-----------------|
| <br><b>SILICON LABS</b> |                                                  | Board Name      |  | <b>BG22 Explorer Kit</b> |                 |
|                                                                                                              |                                                  | Page Title      |  | <b>Board Power</b>       |                 |
| Designed<br>MAH                                                                                              | Approved<br>RGU                                  | Board Number    |  |                          | Revision        |
| Size<br>A3                                                                                                   | Sheet Modified Date<br>Tuesday, January 12, 2021 | <b>BRD4108A</b> |  |                          | <b>A00</b>      |
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