

## Current Sense Amplifier

# BD1423xFVJ-EVK-001 (x:0,1,2)

BD1423xFVJ-EVK-001 is an evaluation board for BD1423xFVJ-C, which is ROHM's current sense amplifier.

This user's guide explains BD1423xFVJ-EVK-001.

## About BD1423xFVJ-C (x:0,1,2)

BD1423xFVJ-C is a current sense amplifier. BD1423xFVJ-C has wide common mode voltage range from -14V to 80V. It measures voltage drops across shunt resistor and outputs analog voltage. Gain is 20 V/V, 50 V/V, 100V/V. The BD1423xFVJ-C key features are:

- Wide Common Mode Voltage Range
- High Accuracy
- Low Offset Voltage
- Low Input Bias Current

For more detailed information about the BD1423xFVJ-C, refer to the datasheet.

## About BD1423xFVJ-EVK-001

### 1. Board Information

- Size : 74mm x 44mm x 1.6mm
- Number of Layers : 2
- Material : FR-4 (~125°C)
- Copper Thickness : 2oz (70μm)

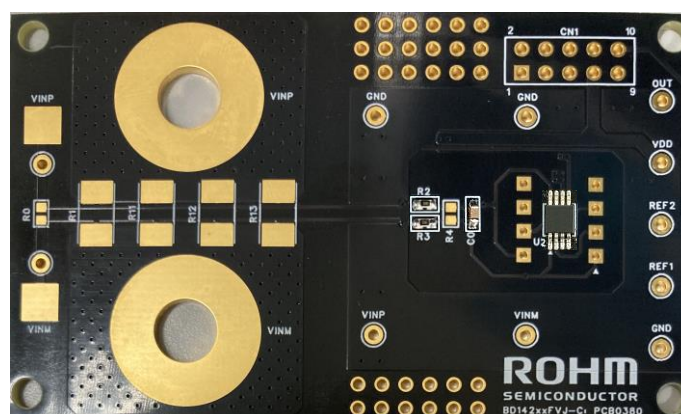


Figure 1. Pictures of BD1423xFVJ-EVK-001

## 2. Schematic Diagram

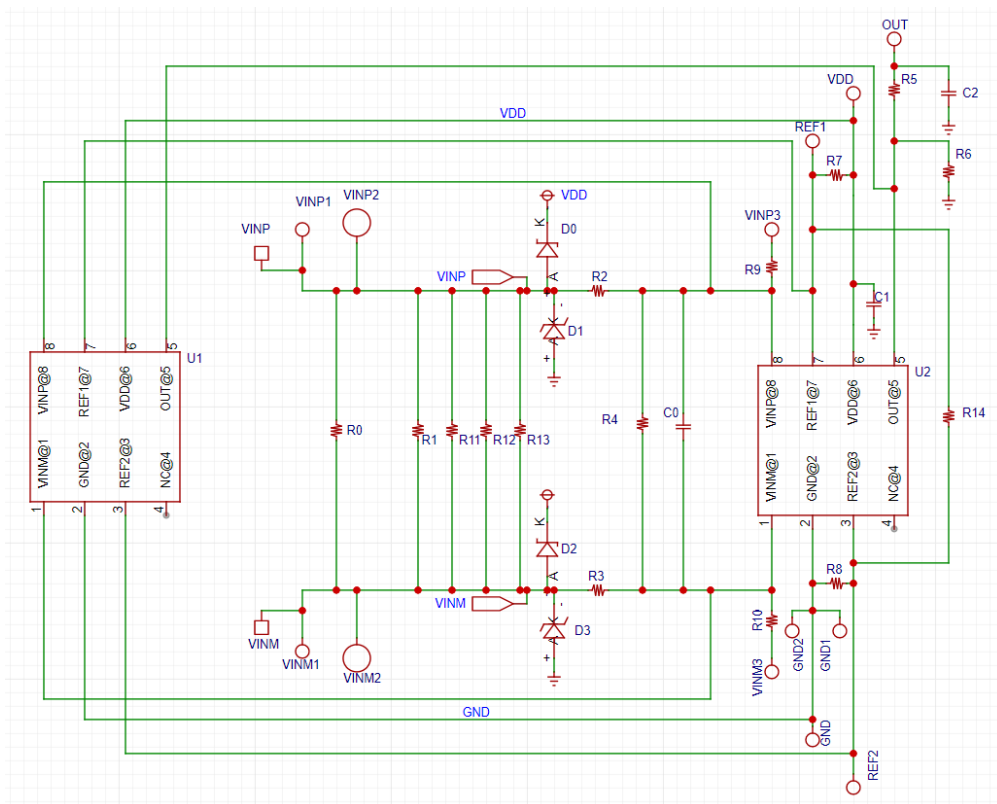


Figure 2. Schematic Diagram of BD1423xFVJ-EVK-001

## 3. Bill of Materials

Table 1. Bill of Materials of BD1423xFVJ-EVK-001

| Part                            | Part Type               | Manufacturer                   | Value   | Size/Package | Description             |
|---------------------------------|-------------------------|--------------------------------|---------|--------------|-------------------------|
| U2                              | BD1423xFVJ-C<br>X:0,1,2 | ROHM Co., Ltd.                 | -       | TSSOP-B8J    | Current Sense Amplifier |
| C0                              | GRM033R71A103KA01D      | Murata Manufacturing Co., Ltd. | 0.01uF  | 1608(0603)   | Capacitor               |
| C1                              | GCM188L81H104KA57D      | -                              | 0.1uF   | 1608(0603)   | Capacitor               |
| C2                              | GRM188R71C102KA01D      | -                              | 0.001uF | 1608(0603)   | Capacitor               |
| R2,R3                           | ESR03EZPF2000           | ROHM Co., Ltd.                 | 200Ω    | 1608(0603)   | Resistor                |
| R5                              | ESR03EZPJ512            | -                              | 5.1kΩ   | 5025(2010)   | Resistor                |
| R7, R8                          | PMR03EZPJ000            | ROHM Co., Ltd.                 | 0Ω      | 5025(2010)   | Resistor                |
| R0,R1,R11,R12,<br>R13,R4,R9,R10 | N.M.                    | -                              | -       | -            | Resistor                |
| D0, D1, D2, D3                  | N.M.                    | -                              | -       | -            | Zener Diode             |

Note: Only the materials used in BD1423xFVJ-EVK-001 are listed.

N.M. = Not Mounted

## 4. Layout (Top View)

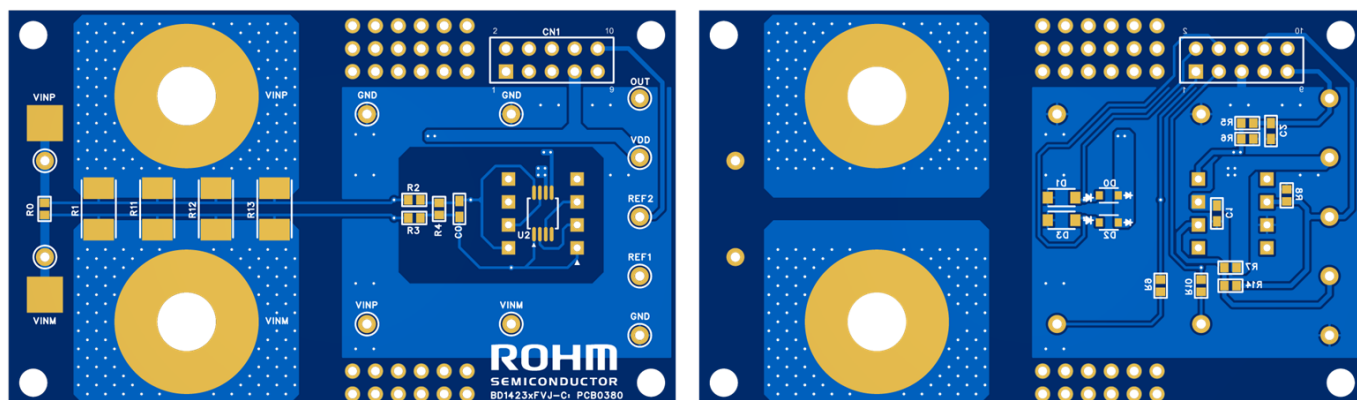


Figure 3. Layouts of BD1423xFVJ-EVK-001

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