

RAK13011 WisBlock Magnetic Switch Sensor Module Datasheet

Overview

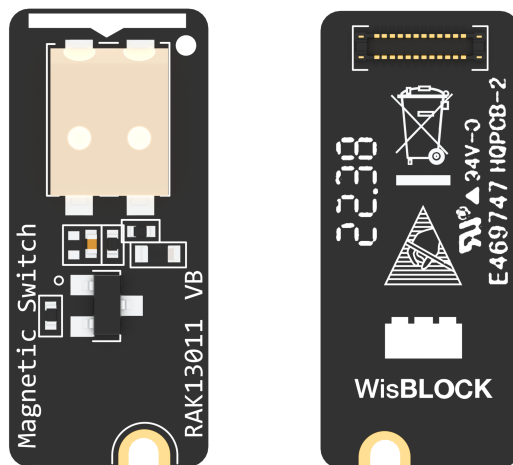


Figure 1: RAK13011 WisBlock Magnetic Switch Sensor Module

Description

RAK13011 is a Magnetic Switch Sensor module, part of the **WisBlock Sensor Series**. This sensor is essentially a reed switch assembly consisting of a magnet and a reed switch whose contacts are normally open. The contacts close when the magnet is less than 13 mm away. Its switch is not affected by nearby (5 cm distance) located electrical motors. The reed switch and magnet are housed in durable ABS plastic and can easily mount to most surfaces with screws. They can also be mounted by using double-sided foam tape.

Applications

- Door & Window Contacts
- Pneumatic or Hydraulic Actuator Position Indication & Others

Features

Module specifications

- Standard Screw Fastening Reed Sensor with Cable Termination
- Push-in termination of solid conductors, easy conductor removal via operating tool
- 3.3 V Power supply
- Operating Temperature: -40° C ~ 85° C

WARNING

RA13011 module is not compatible with the **RAK3372** module when used in any WisBlock base board **Slot B** and **Slot C**. Slot B which uses the **WB_IO2** pin is already dedicated to power control. It will only work in Slots A, D, E, and F.

Specifications

Overview

Mounting

The RAK13011 Magnetic Switch Sensor Module can be mounted to the sensor slot of the WisBlock base board.

Figure 2 shows the mounting mechanism of the RAK13011 on a WisBlock base board module, such as the RAK5005-O.

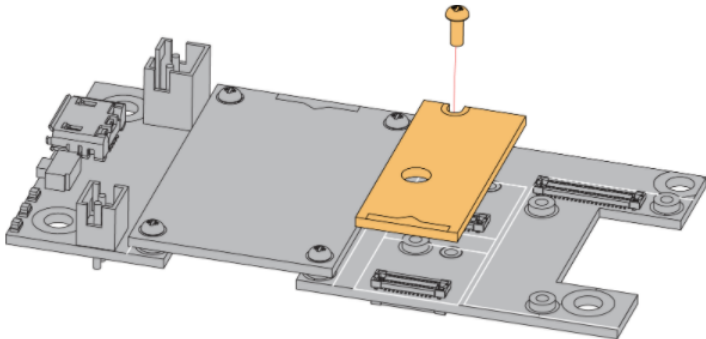


Figure 2: RAK13011 WisBlock Magnetic Switch Sensor Module Mounting

Hardware

The hardware specification is categorized into four (4) parts. It discusses the pinouts and their corresponding functions and diagrams. It also covers the electrical and mechanical parameters that include the tabular data of the functionalities and standard values of the RAK13011 WisBlock Magnetic Switch Sensor Module.

Pin Definition

Switch, **3V3**, and **GND** of RAK13011 are connected to the WisSensor connector, as shown in **Figure 3**.

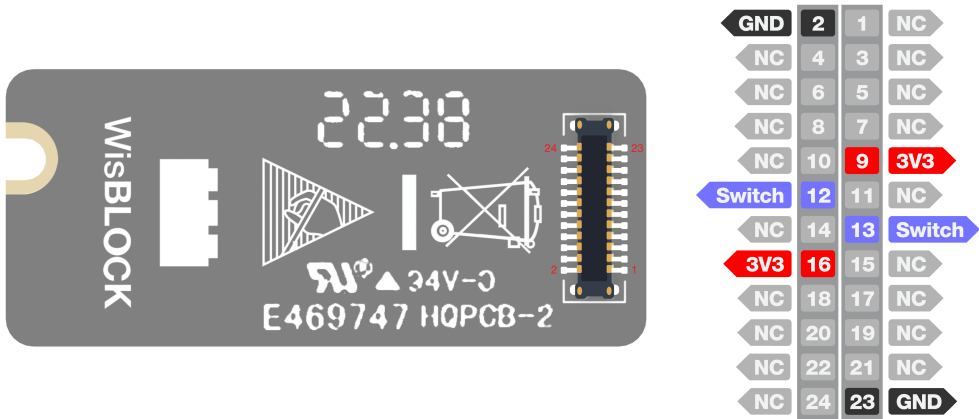


Figure 3: RAK13011 WisBlock Magnetic Switch Sensor Module Pinout

Electrical Characteristics

This table shows the RAK13011 module electrical characteristics.

Symbol	Description	Min.	Nom.	Max.	Unit
3V3	Power Supply Voltage	-	3.3	-	V

Mechanical Characteristic

Board Dimensions

Figure 4 shows the dimensions and the mechanical drawing of the RAK13011 module.

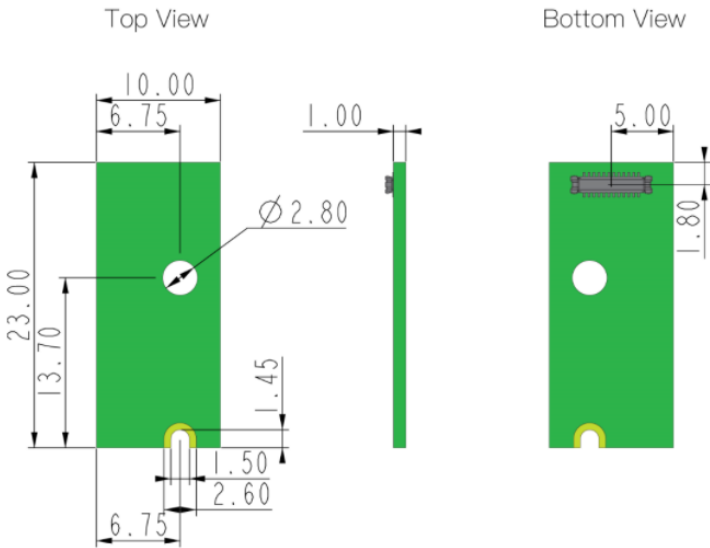


Figure 4: RAK13011 WisBlock Magnetic Switch Sensor Module Mechanical Drawing

WisConnector PCB Layout

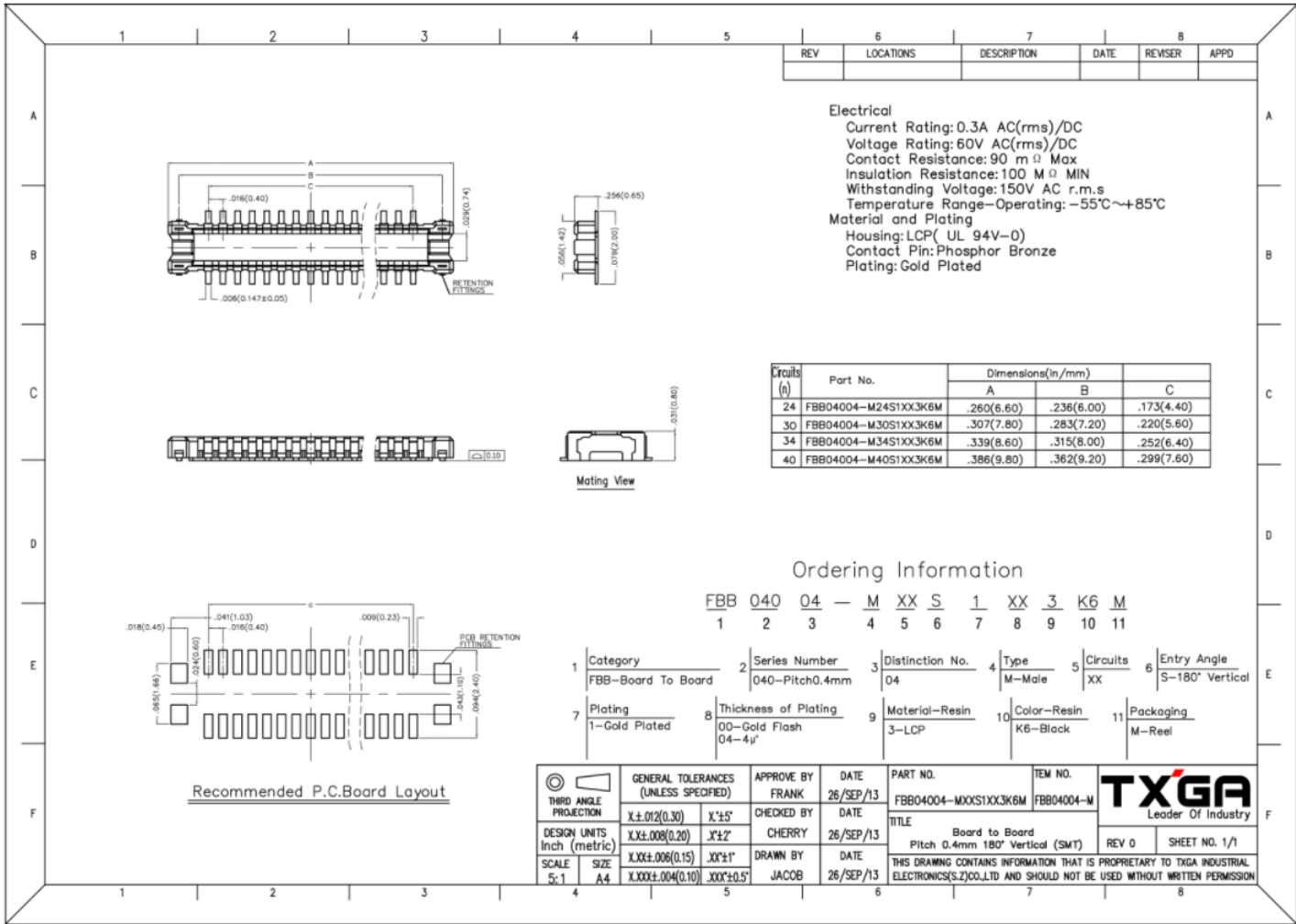


Figure 5: WisConnector PCB footprint and recommendations

Schematic Diagram

Figure 6 shows the schematic diagram of RAK13011 module.

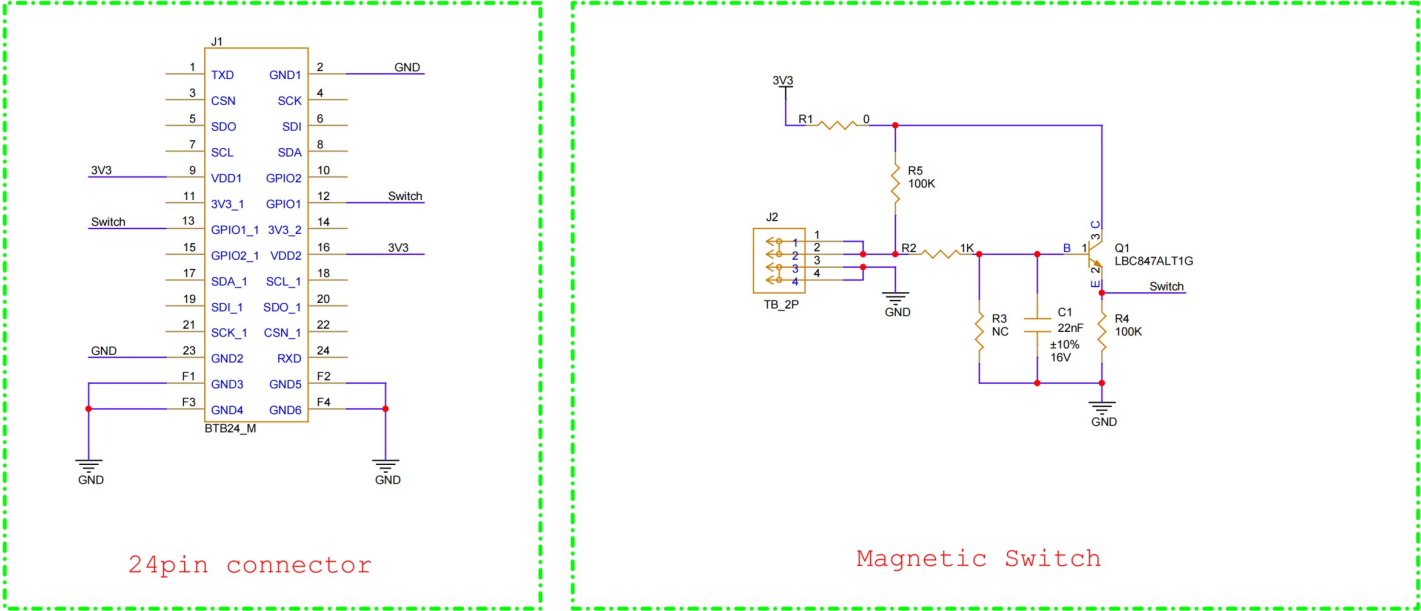


Figure 6: RAK13011 WisBlock Magnetic Switch Sensor Module Schematic