
25021-beacon-V1.0
datasheet



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一、 Product Overview

1.1 Scope of Application

- ①push notification
- ②Indoor positioning and navigation
- ③Reverse car search
- ④Office attendance sign in
- ⑤Sensor applications
- ⑥Scenic Area Guide

1.2 Product Overview

25021-beacon-V1.0 is a low-power Bluetooth slave device that can be used in various living and learning scenarios. Its application areas include: pushing messages; Indoor navigation and positioning, asset location tracking and management; Shake WeChat; Identity recognition, access control, attendance, clocking in, etc; Sensor applications; Comprehensive application of beacons in large public places.

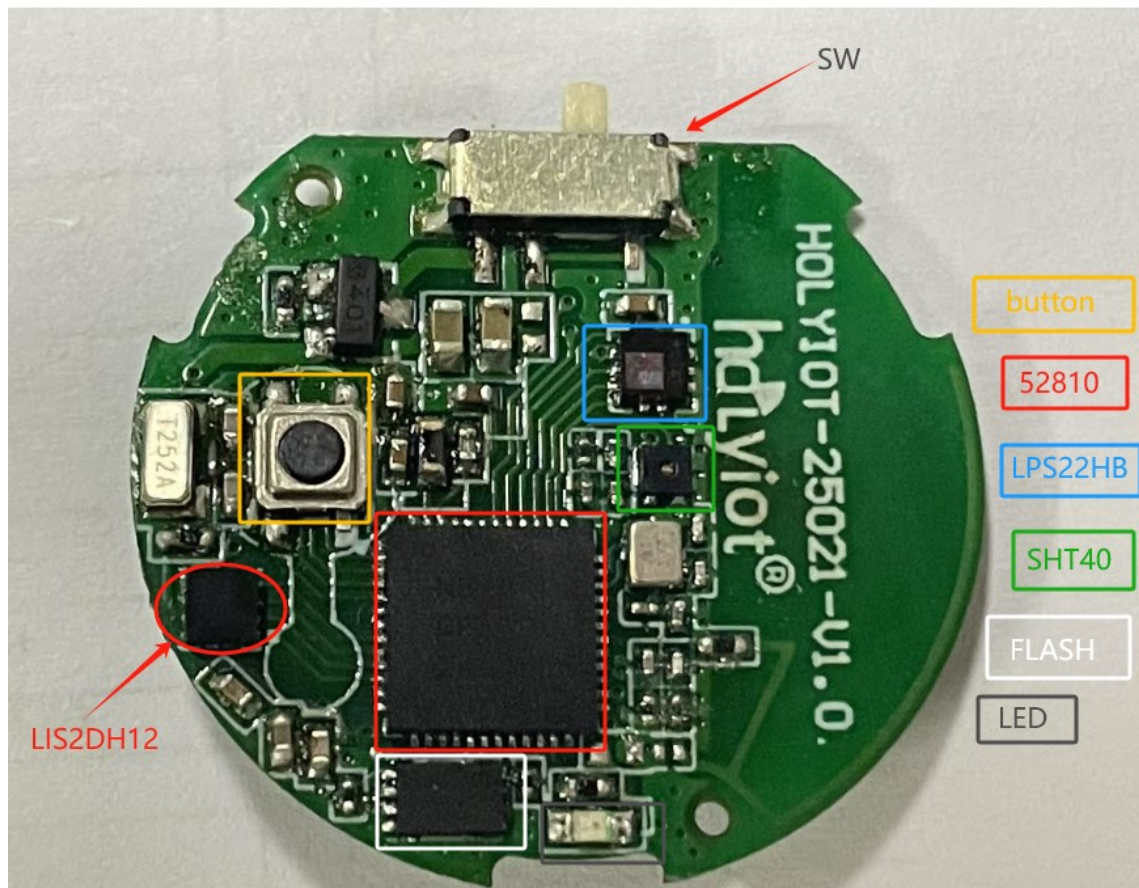
The internal core of 25021-beacon-V1.0 is the nRF52 series chip under Nordic, which has multiple mature low-power Bluetooth 5.0 devices.

1.3 Product Features

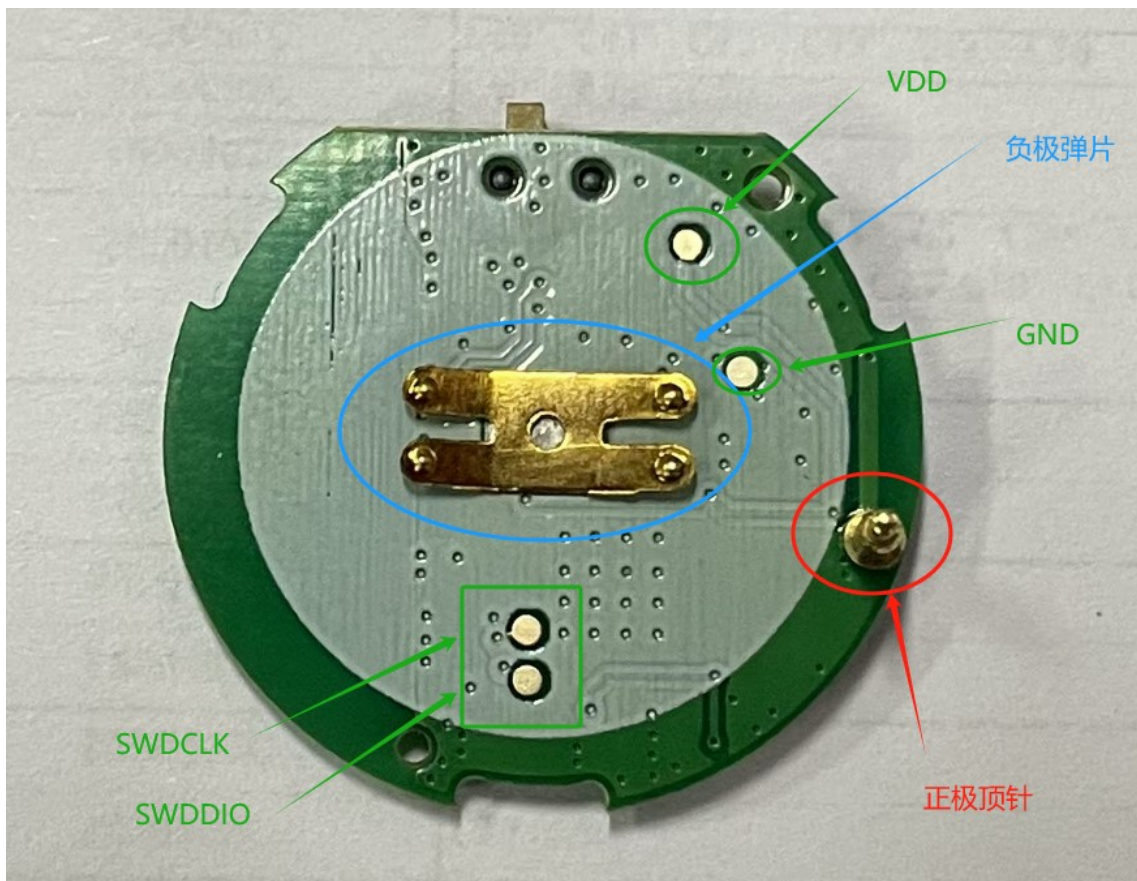
25021-beacon-V1.0 is based on Nordic Bluetooth Low Energy Bluetooth 5.0 chip. Its sensitivity in low-power mode is -96dBm, with a maximum transmission power of 4dBm and on-chip balun. And there is flexible power management. The product is equipped with a 3-axis accelerometer, air pressure sensor, and temperature and humidity sensor internally, FLASH, Can be flexibly applied to other scenarios

1.4 Appearance and Dimensional Drawing

physical object image

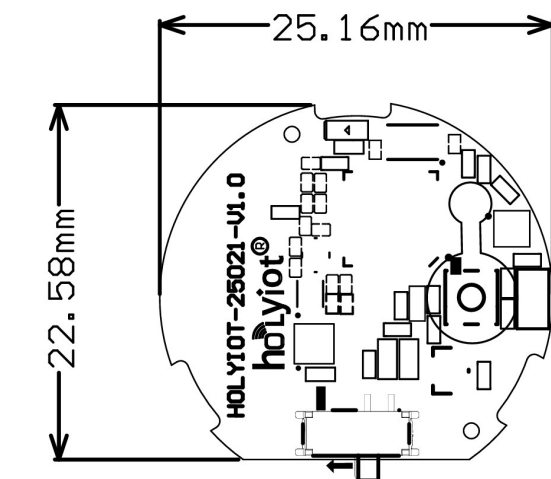


TOP VIEW
size: 2.52cm*2.26cm

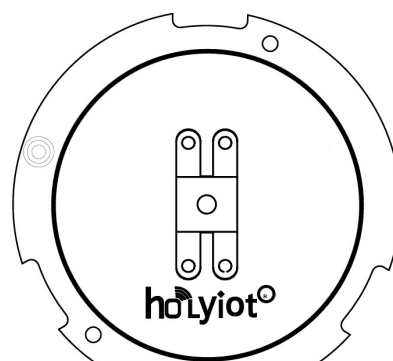


BOTTOM VIEW

Size image



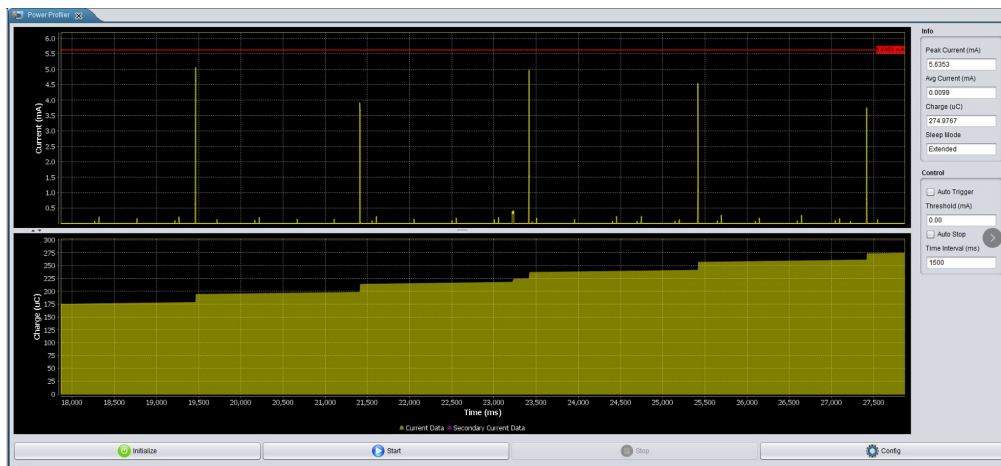
TOP VIEW



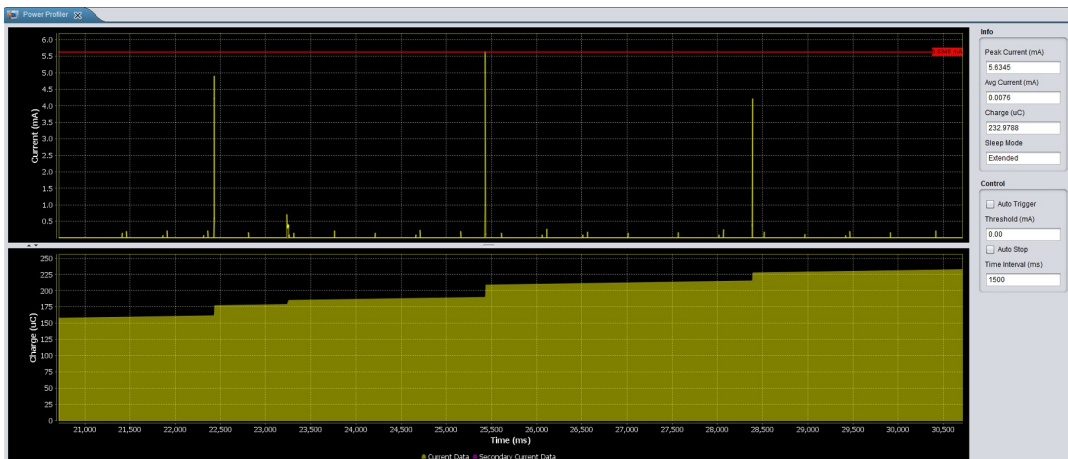
BOTTOM VIEW

二、Electrical characteristics and parameters

- Working Voltage: 2.0V – 3.6V, Typ 3.0V
- Working frequency: 2402 MHz ~ 2483 MHz
- receiver sensitivity: -96dBm
- transmission distance: 30-50 米
- Frequency error: ± 50 kHz
- Power consumption during shutdown: 2.2uA
- Operating Temperature: $-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$
- Storage temperature: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
- 2s 0dBm Power consumption during broadcast time: 9.9uA



- 3s 0dBm Power consumption during broadcast time: 7.6uA



三、 Recommended working conditions

Functional operations beyond the limits of various conditional parameter values in the following table cannot guarantee their performance, and long-term operations beyond these limits may more or less affect the long-term reliability of the module.

Note:

The operating temperature is limited by changes in crystal frequency;

To ensure wireless RF performance, the ripple on the power supply must be less than 30mV.

		Min	Typ	Max	unit
Power supply and IO	Battery Mode	2.0	3.0	3.6	V
operational issues	/	-20	25	60	℃

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected,

- Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction