# Amphenol

# UWB Tag Module

# U101B



## Overview

U101B module contains UWB transceiver, high-pass filter and on-board UWB antenna. The module has the advantages of high level of integration and small size, and module has high precision and low power consumption. As a UWB RF unit, it can be widely used in various application scenarios and reduce development time for customers.

## Key Feature

➢ -40°C to +85°C
➢ IEEE 802.15.4z
➢ Channel5 & Channel 9 supported
➢ High level integration
➢ Compact size:19.9mm × 10 mm × 2.3 mm

## Key Benefit

➢ Integrated PCB antenna
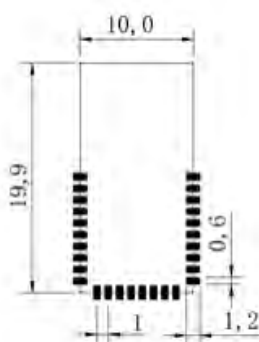➢ Multi-types interface supported
➢ Easy control by MCU and BLE

## Application Interfaces

◆ Secure hands-free access
◆ Indoor Navigation
◆ Hands-free payments

◆ Credential sharing
◆ Item tracking
◆ Industry Control

# Features

| Standard | |
|---|---|
| Standard | IEEE 802.15.4z |
| **RF** | |
| Frequency | 6.5 GHz to 8.0GHz |
| Date rates | 850 kbps and 6.8Mbps |
| Transmit power | -21 dBm/MHz (TYP.) |
| Receiver sensitivity | CH5: <br> -96dBm /MHz @ 850kbps    -92.2dB dBm /MHz @ 6.8Mbps |
| | CH9: <br> -97.2 dBm /MHz @ 850kbps    -91.1dB dBm /MHz @ 6.8Mbps |
| **Current Consumption** | |
| CH5 | 25mA @ -41.3dBm/MHz VDD2 <br> 27mA @ -41.3dBm/MHz VDD3 |
| CH9 | 25mA @ -41.3dBm/MHz VDD2 <br> 37mA @ -41.3dBm/MHz VDD3 |
| RX | 75 mA @CH5    90 mA @CH9 |
| Deep Sleep mode | 260nA in DEEP SLEEP mode |
| | 850nA in SLEEP mode |
| **Electrical Character** | |
| Interfaces | SPI;GPIO; |
| Power supply | 1.6V to 3.6V |
| Operation Temperature | -40 to +85°C |

# Dimension



unit: mm