



1 部件說明

• 成品圖



• 內部結構圖



- 1 BC68F2123
- 2 LED
- 3 CR2032 Battery

2 系列產品說明與注意事項

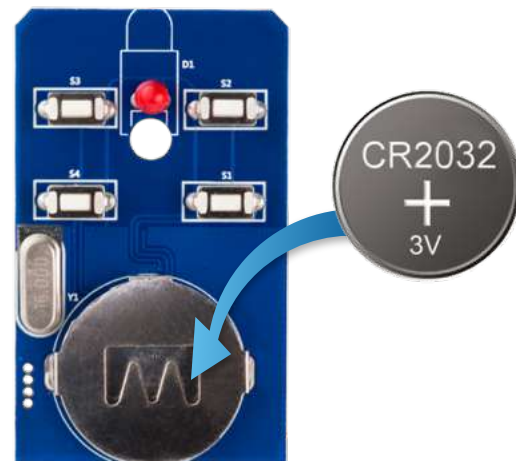
- 採自訂發射訊號協定，需搭配RF無線接收模組配套使用，請另行購買，詳情請參考附錄一：產品系統圖
- 主控MCU BC68F2123為1K Rom MCU，如需更大Rom Size，可參考另一款4鍵 433MHz RF遙控器 (BCR-68F2130-X01)，使用主控 MCU BC68F2130 (內建2K Rom)，可實現較多元功能

3 功能簡述

1. 本產品工作頻率為433.92MHz
2. 按鍵 de-bounce time 40ms
3. 每次按壓確認後，發射兩次以上封包
4. LED燈隨發送訊號亮起，可判斷產品有無運行
5. 使用PCB天線，不須另外加裝
6. 可分別與數個的同類型接收模組對碼，按鍵時可同時控制多個接收器
7. 本模組主控 MCU BC68F2123 內部已寫入程式，使用者無須再自行撰寫
8. RF傳輸封包內容請參考附錄二：HT OOK demo board package format

4 裝入電池

將CR2032電池裝上，無操作時MCU進入省電模式



5 檢視對應訊號

當按下任一按鍵，即發射對應RF信號，同時信號發送指示LED燈將亮起



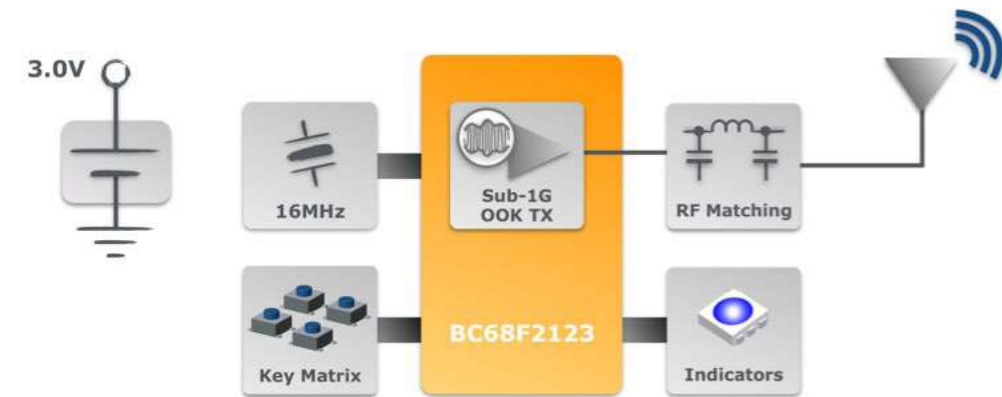
注意:按鍵按壓請至少達40ms，以免系統無法識別

6 省電模式

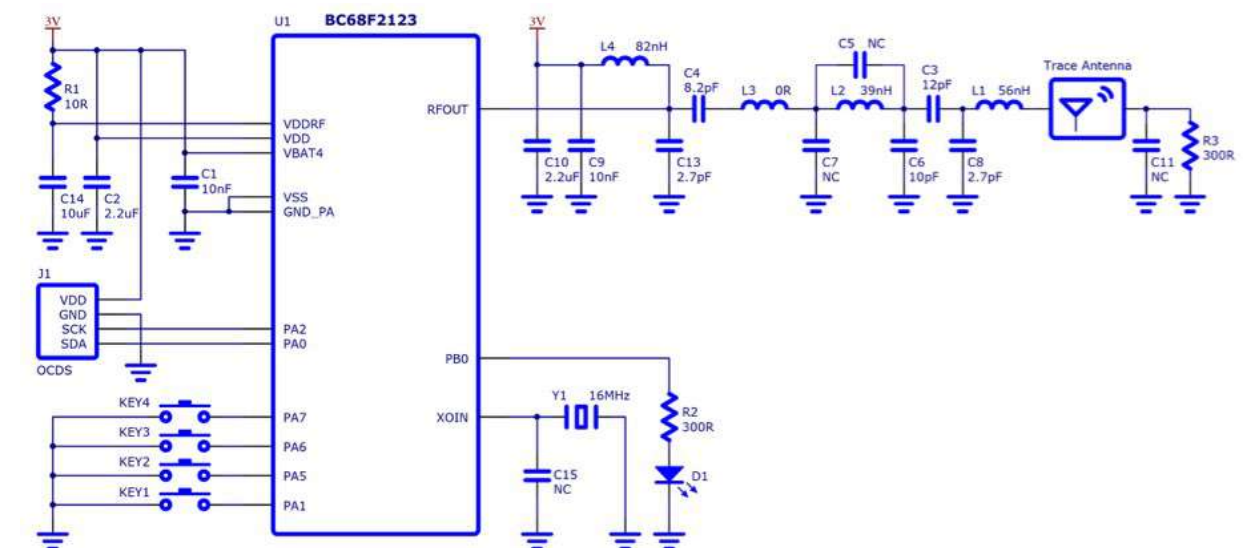
鬆開按鍵後，訊號發送停止，LED燈熄滅，自動進入省電模式



7 方塊圖



8 電路圖



9 簡易排除故障

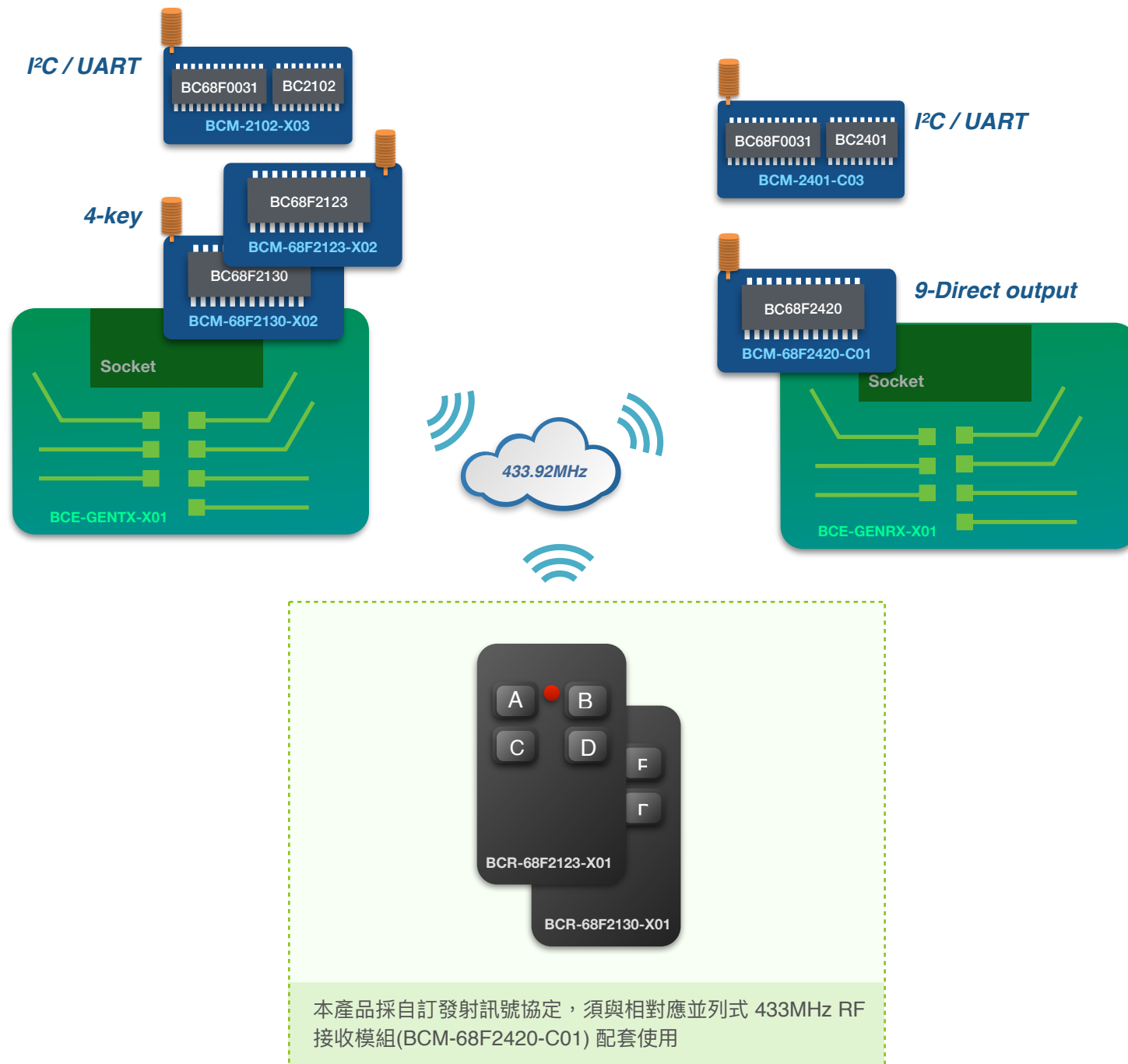
1. 每次按下按鍵時，若LED燈未亮起，請重新檢查電池電量是否正常
2. 若嘗試以上方法後問題仍無法解決，請洽倍創網站「技術支持」

10 規格

- 尺寸(L x W x H)：58 x 36 x 15 (mm)
- 重量：14.8公克(不含電池)
- 工作電壓：2.2~3.6V
- RF頻率：433.92 MHz
- 發射功率：10dBm (10mW)
- 工作溫度：-40 ~ +85°C



11 附錄一：產品系統圖



12 附錄二：HT OOK demo board package format

The “code word” is a group of code bits used in OOK wireless communication. This document describes the code word format used in HT OOK demo boards. A code word consists of leading code, start code, address, data, CRC and end code. Each fields are composed with several symbols. The symbol rate is set as 5Kbps. Each symbol (λ) in table below is 200us.

A. Leading Code + Start code

Leading code: Repeating 1 λ high and 1 λ low for 8 times. Start code: 4 λ high + 2 λ low



B. Address, data & CRC

Each bit is composed with 4 symbols. The format for bit “0” and “1” are shown below:

Bit “0” → 1 λ high + 3 λ low

Bit “1” : 3 λ high + 1 λ low



For TX demo boards / remote controllers, their addresses are pre-programmed in the MCU program ROM. Users do not need to specify the address.

For RX demo boards, they have to be paired with a TX first before being used. The pairing process allows the RX recognize the TX and memorize TX’s address in its non-volatile memory.

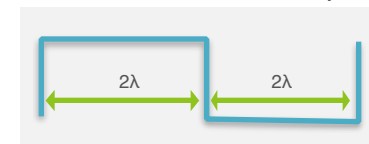
$$CRC = X^8 + X^5 + X^4 + 1$$

Below shows the data when K1~K4 is pressed down

	D7	D6	D5	D4	D3	D2	D1	D0
K1	0	0	0	0	0	0	0	1
K2	0	0	0	0	0	0	1	0
K3	0	0	0	0	0	1	0	0
K4	0	0	0	0	1	0	0	0

C. End code: 2 λ high + 2 λ low

End code is used to separate the sequent two code words.



The code word format is like:

	Leading	Start	Address	Data	CRC	END
length	16 λ	6 λ	4 λ /bit*24bit	4 λ /bit*8bit	4 λ /bit x 8bit	4 λ

The total length for a code word is 200us x (16+6+96+32+32+4) = 37.2ms

Hyper link

BC68F0031

BC68F2123

BC68F2130

BC68F2420

BC2401

BC2102