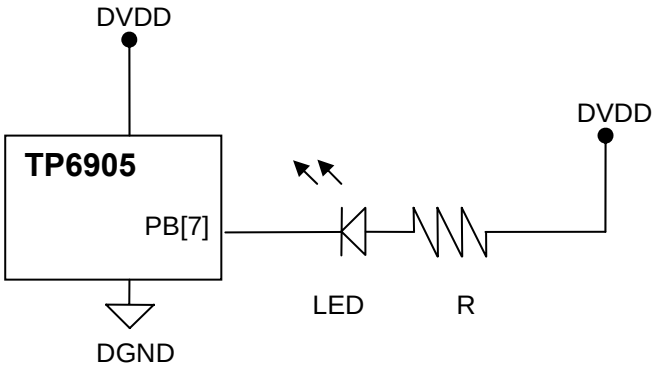
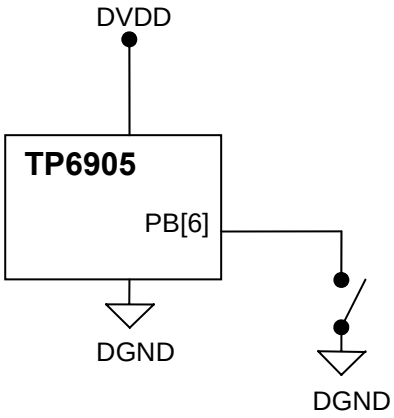
PRODUCT NAME
TP6905

TITLE
Notes for USB Audio 2.1CH & 2CH

APPLICATION NOTE
◆ 2.1CH audio of TP6905
1. LED indicators:



2. LED function (PB6):



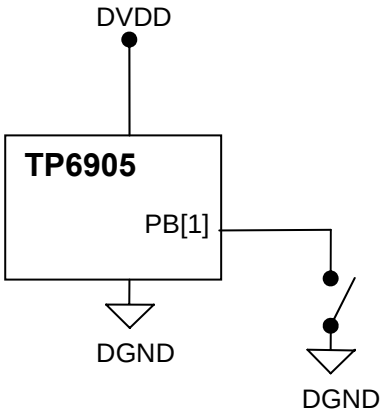
1. Enable LED function:

→ PB[6] Pin connect to GND

2. Disable LED function:

→ PB[6] Pin connect to VDD or floating

3. Loud function (PB1):



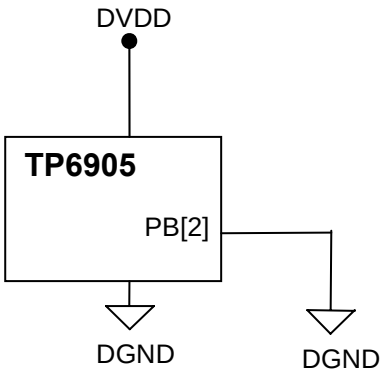
1. Enable Loud function:

→ PB[1] Pin connect to GND

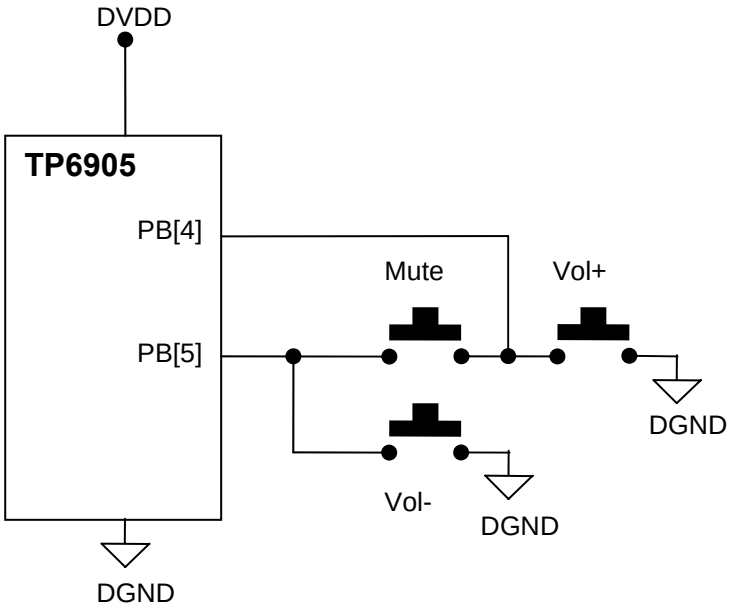
2. Disable Loud function:

→ PB[1] Pin connect to VDD or floating

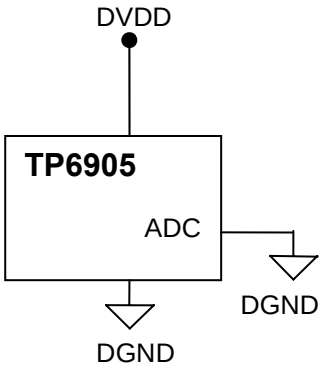
4. Balance Pin (PB2):



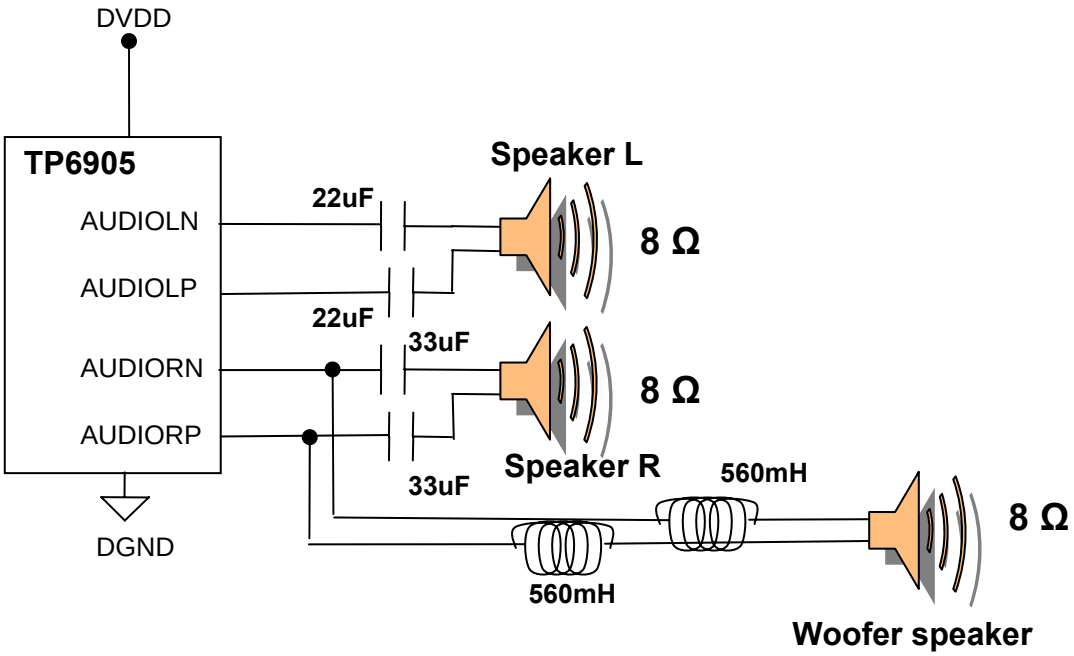
5. Button function (PB4 & PB5):



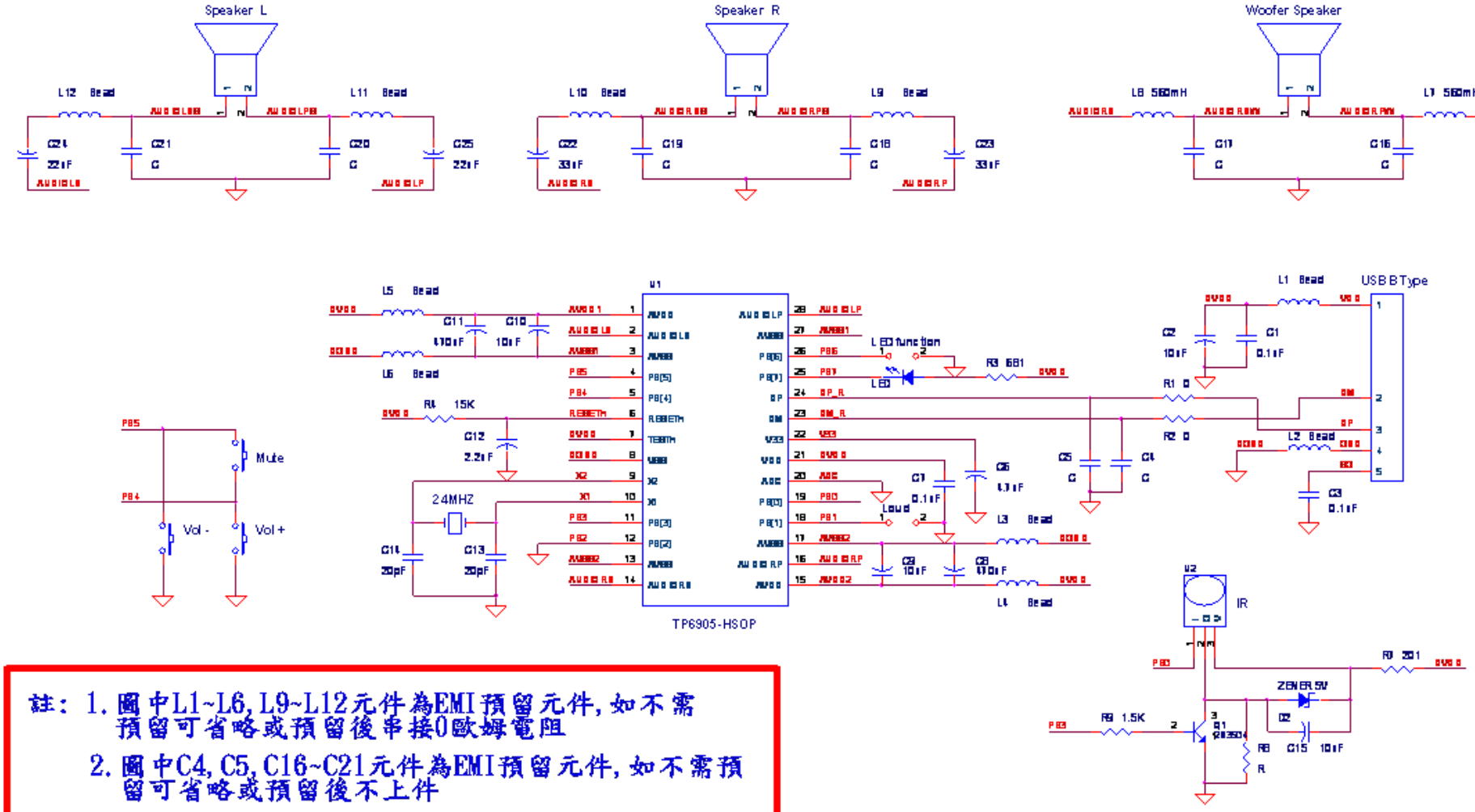
6. ADC pin function:



7. Audio output:



8. Application circuit: (2.1CH audio)



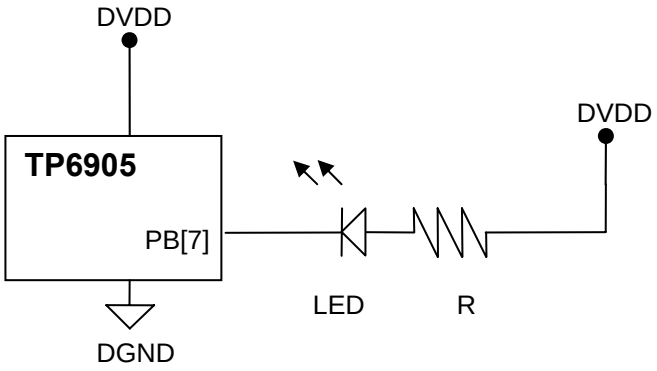
註：1. 圖中L1~L6, L9~L12元件為EMI預留元件, 如不需預留可省略或預留後串接0歐姆電阻

2. 圖中C4, C5, C16~C21元件為EMI預留元件, 如不需預留可省略或預留後不上件

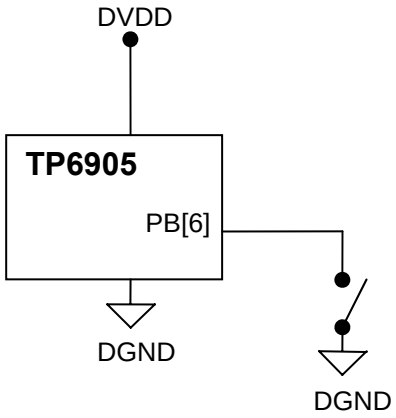
3. 喇叭都必須使用"8歐姆"

◆ 2CH audio of TP6905

1. LED indicators:



2. LED function (PB6):



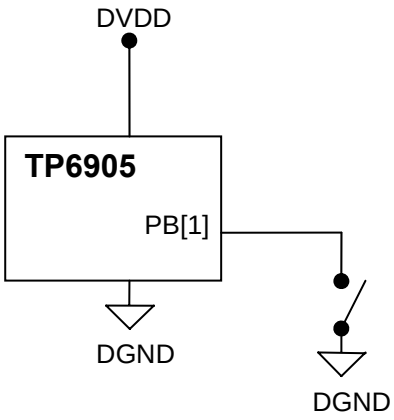
1. Enable LED function:

→ PB[6] Pin connect to GND

2. Disable LED function:

→ PB[6] Pin connect to VDD or floating

3. Loud function (PB1):



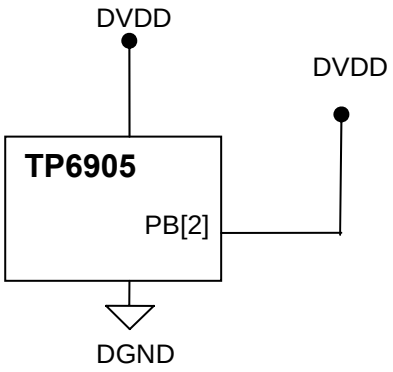
1. Enable Loud function:

→ PB[1] Pin connect to GND

2. Disable Loud function:

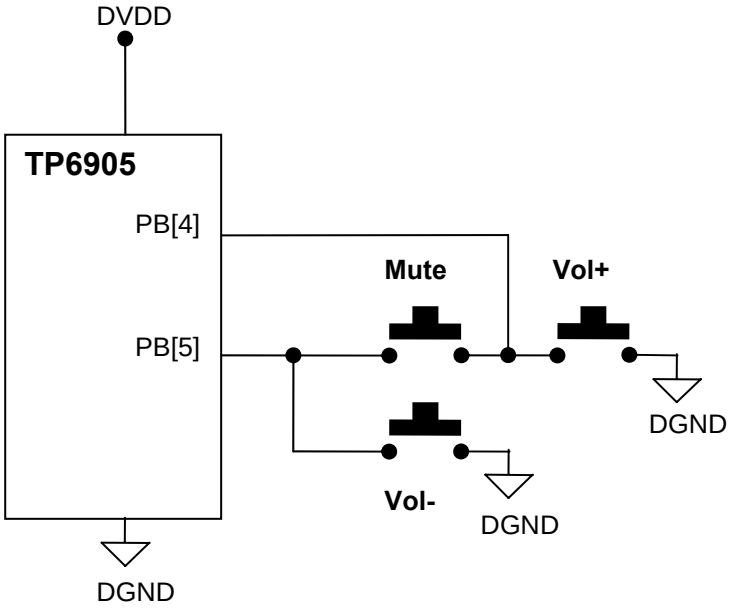
→ PB[1] Pin connect to VDD or floating

4. Balance Pin (PB2):

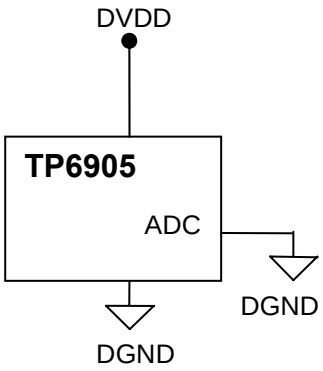


PB[2] Pin connect to VDD or floating

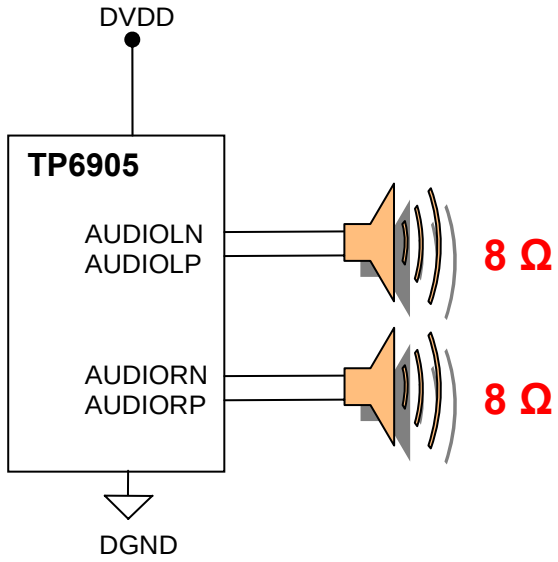
5. Button function (PB4 & PB5):



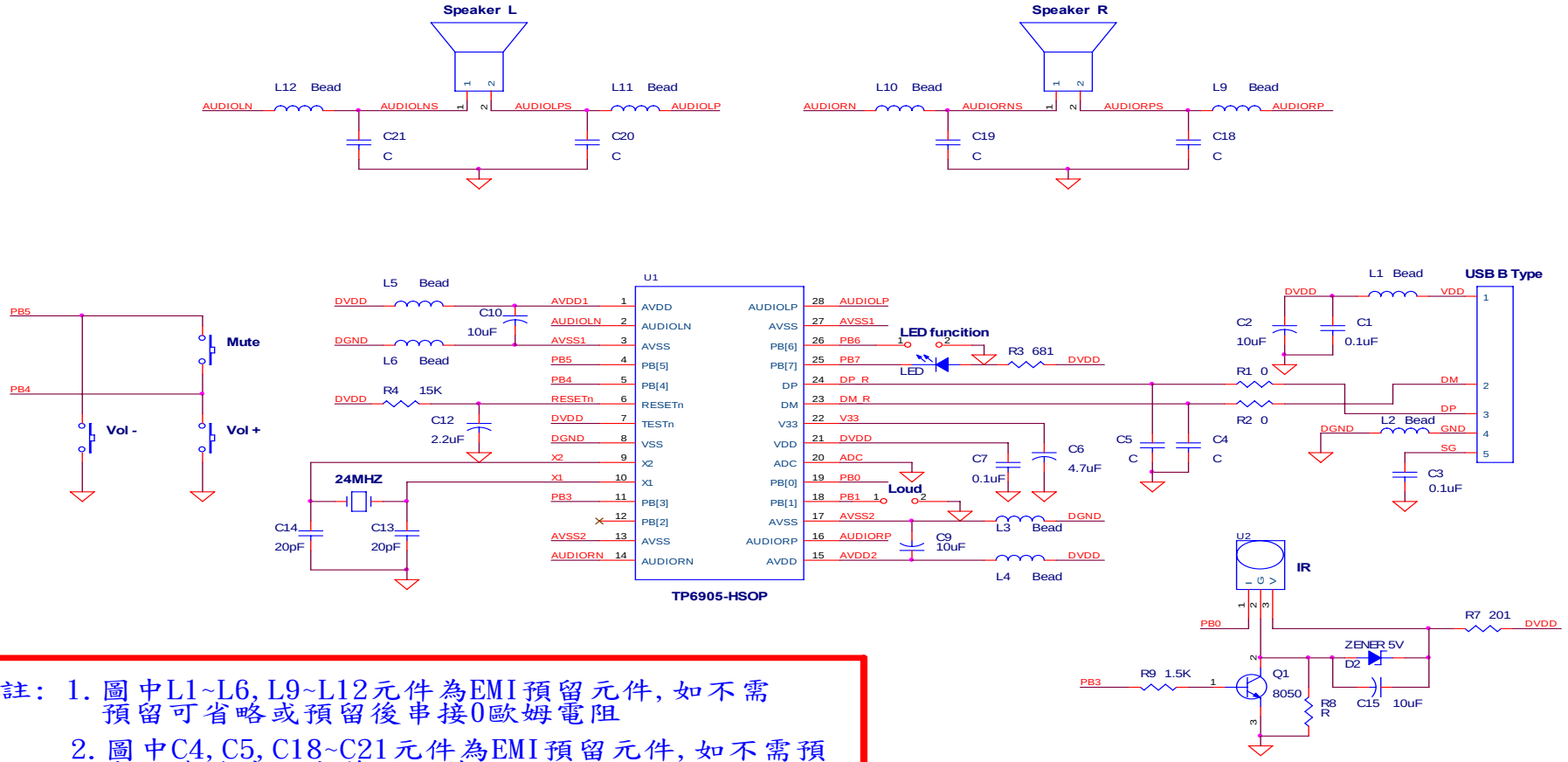
6. ADC pin function:



7. Audio output:



8. Application circuit: (2CH Audio)



註： 1. 圖中L1~L6, L9~L12元件為EMI預留元件, 如不需預留可省略或預留後串接0歐姆電阻

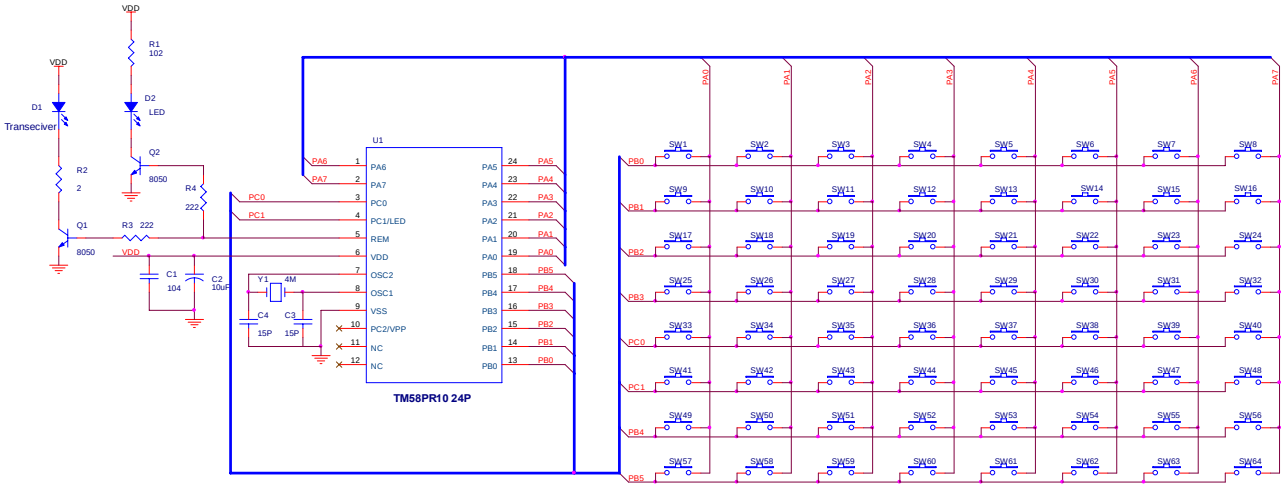
2. 圖中C4, C5, C18~C21元件為EMI預留元件, 如不需預留可省略或預留後不上件

3. 喇叭都必須使用"8歐姆"

◆ There are 64 kinds of button functions of TP6905.

SW1 F1	SW2 F2	SW3 F3	SW4 F4	SW5 F5	SW6 F6	SW7 F7	SW8 F8	SW9 F9	SW10 F10	SW11 F11	SW12 F12
SW13 Up	SW14 Down	SW15 Left	SW16 Right	SW17 Enter	SW18 Esc	SW19 PG_ Up	SW20 PG_ Down	SW21 space	SW22 back space	SW23 Tab	SW24 Home
SW25 End	SW26 Del	SW27 Insert	SW28 Pause	SW29 Power	SW30 N/A	SW31 sleep	SW32 R_ control	SW33 media	SW34 mail	SW35 Calculator	SW36 Local browser
SW37 Next track	SW38 Previous track	SW39 media stop	SW40 Media play / pause	SW41 volume mute	SW42 volume up	SW43 Volume down	SW44 www search	SW45 www home	SW46 www back	SW47 www forward	SW48 www stop
SW49 www refresh	SW50 www bookmark	SW51 N/A	SW52 N/A	SW53 N/A	SW54 Scroll Lock	SW55 0	SW56 1	SW57 2	SW58 3	SW59 4	SW60 5
SW61 6	SW62 7	SW63 8	SW64 9								

◆ Application circuit for 64 keys :



◆ Note:

1. 喇叭必須都使用 8 歐姆喇叭。
2. 發射端部分的 IC，請參考 tenx “TM58PR10 IR controller Datasheet”。
3. LED 控制功能位於 Pin PB[6]，當 PB[6]接地表示撥放音樂時，
   當按下靜音鍵 LED 恆亮，空接或接 VDD 則為 LED 恆暗。
4. Loud 控制功能位於 Pin PB[1]，當 PB[1]接地表示 Loud 功能開啟(音量調整的最後三階開啟)，空接或接 VDD 則表示 Loud 功能關閉。
5. 建議使用雙層 PCB Layout，且 Layout 時盡量讓 HSOP IC 左右兩端之散熱片能有足夠的空間散熱，且旁邊不要有元件阻擋散熱空間，並且將其接到 GND，以利散熱。
6. 建議使用 Crystal 之頻率誤差小於 30 ppm。
7. 建議 PCB Layout 之鋪地銅箔面積能越大越好，且鋪地銅箔面積上之穿透孔 (via) 能盡量多一點，以利散熱。
8. 建議 PCB 與 Housing 之間的空間能大於 8 mm，且 Housing 能有散熱孔，使 IC 較能散熱。