

## RTS0072

### VOICE CHANGER

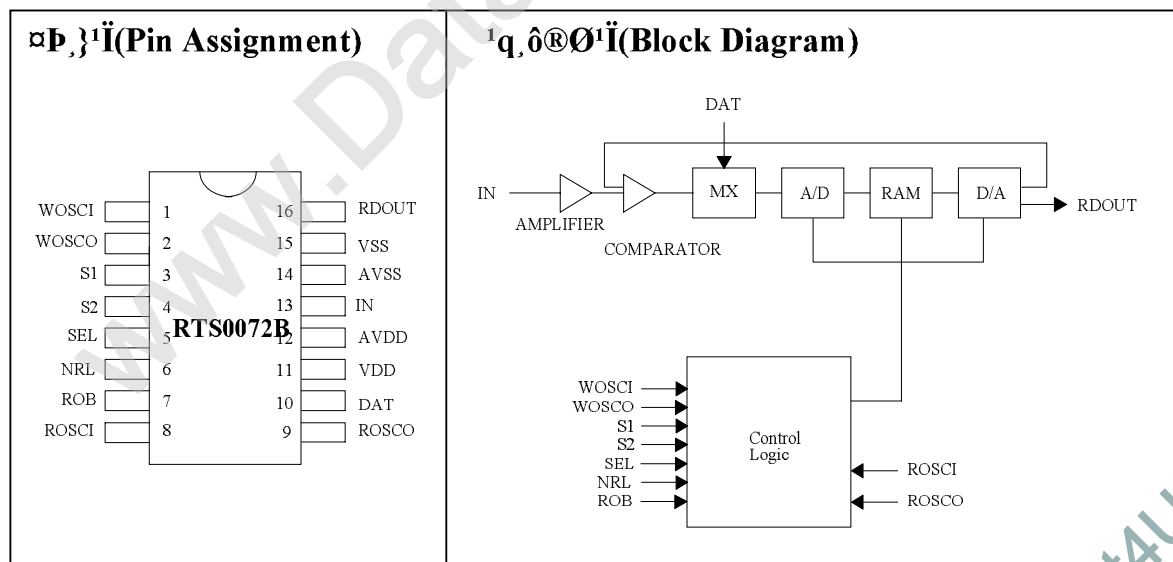
#### Features

- Wide operating voltage range 3.0V ~ 5.0V
- and low power consumption.
- Several voice effects selectable
  - Transposing voice (higher or lower)
  - Amplifying voice
  - Robot voice
- No need of external memory.
- Variable resistor or switch can be used to adjust the transposed voice effect.
- For applications in toy, mask, telephone system and other voice fields.
- With a silence function

Low power consumption

#### General Description

The RTS0072B is a single chip CMOS LSI designed for voice changer, which can transpose or distort one voice into another voice by encoding the input audio signals in normal speed and transmit the output audio signals with unusual speed. That is accomplished by sampling the input audio signals into digital signals and re-arranges the digital signals to generate different voice from the user normal voice.



## MAX RATINGS

Operating Voltage range     -0.3V ~ 5.0V

輸入/輸出電壓            GND-0.2V ~ VDD+0.2V

Operating Temperature   -10°C ~ 60°C

Storage Temperature       -25°C ~ 125°C

## 說明\*

本欄參數範圍絕對不允許超出，否則元件將受到永久性的損壞。同樣不允許在臨界條件下停留太長時間，否則即使不損壞元件，也將影響元件的可靠性。

**電氣特性**

(VDD = 4.0V , TA = 25°C , FOSC = 800KHz , )

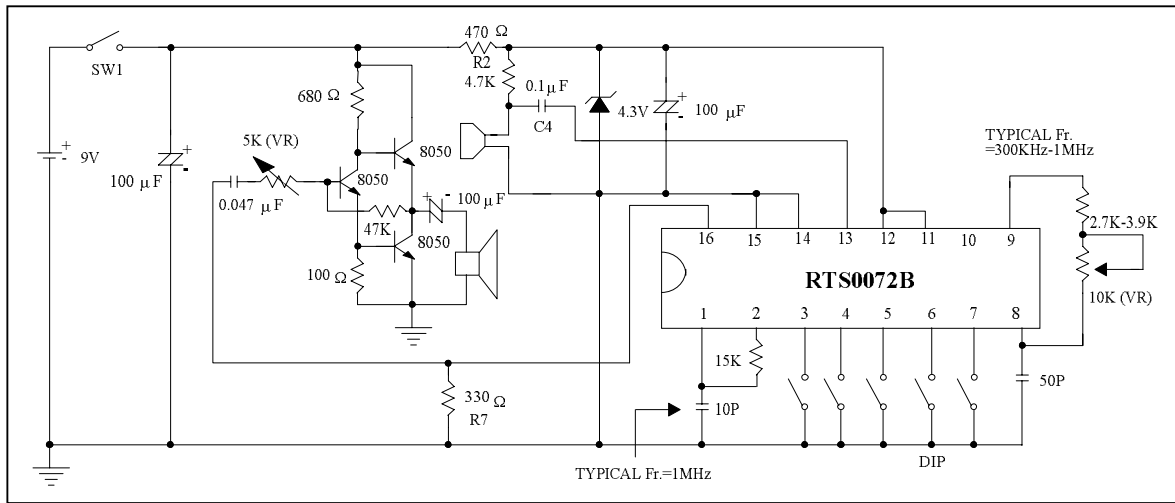
參數	符號	Min	典型值	Max
Operating Voltage	VDD	3.0V	4,0V	5.0V
Power Consumption	IDD	--	--	10.0mA
Input Audio Level	Vin p-p	0.5V	1.5V	2.0V
Output Audio Level	Vout p-p	--	1.67V	--

**ELECTRICAL CHARACTERISTICS**

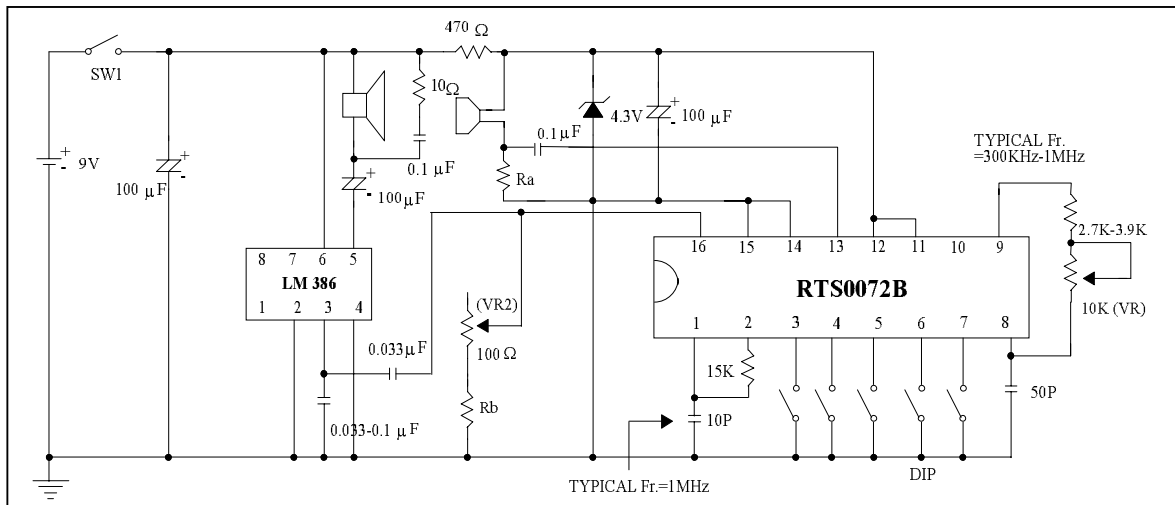
Pin No.	Designation	Description																				
1	WOSCI	Write (sampling) oscillator input pin.																				
2	WOSCO	Write (sampling) oscillator output pin.																				
3,4	S1,S2	Output tone select pins; these pins define the output tone frequency. Selection table is as follows: <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black; padding: 2px 10px;">S1</td> <td style="padding: 2px 10px;">0</td> <td style="padding: 2px 10px;">0</td> <td style="padding: 2px 10px;">1</td> <td style="padding: 2px 10px;">1</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 2px 10px;">S2</td> <td style="padding: 2px 10px;">0</td> <td style="padding: 2px 10px;">1</td> <td style="padding: 2px 10px;">0</td> <td style="padding: 2px 10px;">1</td> </tr> <tr style="border-top: 1px solid black;"> <td style="border-right: 1px solid black; padding: 2px 10px;">Output</td> <td style="padding: 2px 10px;">L</td> <td style="padding: 2px 10px;">H</td> <td style="padding: 2px 10px;">VL</td> <td style="padding: 2px 10px;">VH</td> </tr> <tr> <td style="padding: 2px 10px;">*freq</td> <td style="padding: 2px 10px;">800Hz</td> <td style="padding: 2px 10px;">1333Hz</td> <td style="padding: 2px 10px;">660Hz</td> <td style="padding: 2px 10px;">2KHz</td> </tr> </table> <p>* Input Frequency 1KHz</p>	S1	0	0	1	1	S2	0	1	0	1	Output	L	H	VL	VH	*freq	800Hz	1333Hz	660Hz	2KHz
S1	0	0	1	1																		
S2	0	1	0	1																		
Output	L	H	VL	VH																		
*freq	800Hz	1333Hz	660Hz	2KHz																		
5	SEL	The voice effect are adjusted by variable resistor if this pin is connected to GND.																				
6	NRL	Amplifying voice effect is selected if this pin is connected to GND. Transposing voice effect is selected if this pin is floating.																				
7	ROB	Robot voice effect is selected if this pin is connected to GND.																				
8	ROSCI	Read (re-arranging) oscillator input pin.																				
9	ROSCO	Read (re-arranging) oscillator output pin.																				
10	DAT	This pin is for internal use. (For testing only)																				
11	VDD	Positive power supply.																				
12	AVDD	Analog positive power supply.																				
13	IN	Audio signal input pin.																				
14	AVSS	Analog positive power supply.																				
15	VSS	Negative power supply.																				
16	RDOUT	Audio signal output pin.																				

**TYPICAL APPLICATIONS**

1.



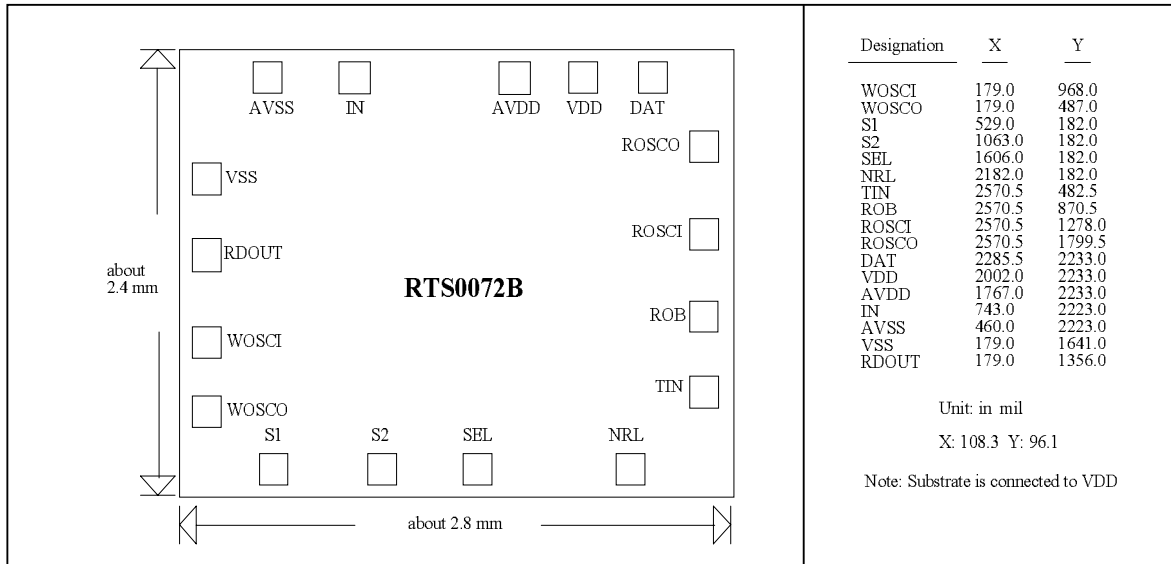
2.帶 386 放大器的可調電阻調節方式



Ra:麥克風調節控制,(40K – 20K)

VR2: 音量控制

Rb: 最小音量設定(22-120Ω)

**DIE**


<http://www.cbtricks.com>