

SD995 Dual Tone Melody Generator

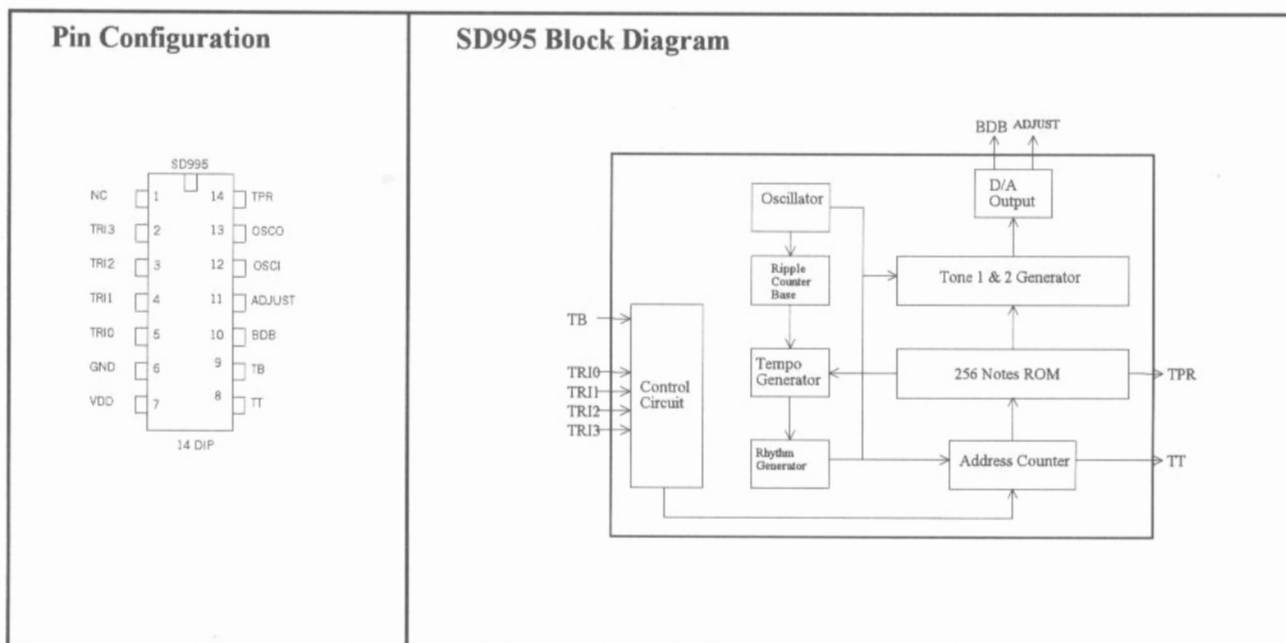
Features

- 1.3V to 3.3V power supply.
- Lower power consumption.
- 256 notes memory.
- 14 tempos available.
- 15 beats available.
- 27 notes (including rest) available.
- RC oscillator with one external resistor.
- On chip envelope modulation.
- One sequence trigger key and 3 direct access keys.
- Power on rest, melody begins from the first note.

General Description

SD995 is a sound generator designed with sound composite system using minimum application circuits. This allows for the production of a wide variety of high

quality sounds. There are level hold mode and oneshot mode for series trigger and oneshot mode for section trigger.



Pin Description

Pin No.	Symbol	Description
1	TRI3	Direct access trigger region 3. The melody within the region 3 will be played if this pin is connected to ground.
2	TRI2	Direct access trigger region 2. The melody within the region 2 will be played if this pin is connected to ground.
3	TRI1	Direct access trigger region 1. The melody within the region 1 will be played if this pin is connected to ground.
4	TRI0	Sequence trigger pin. The melody within the region 1,2 & 3 will be sequentially played if this pin is connected to ground.
5	GND	Negative power supply.
6	VDD	Positive power supply.
7	TT	For testing.
8	TB	For testing.
9	BD	Melody output pin.
10	BDB	Melody output pin.
11	ADJUST	Adjust output bias pin. Adjust BDB output bias to 0.8V with Adjust and BDB pins.
12	OSCI	Oscillator input pin.
13	OSCO	Oscillator output pin.
14	TPR	For testing

Absolute Maximum Ratings

RATING	VALUE
DC Supply Voltage	< 5.5V
Input/Output Voltage	GND-0.3V to VDD+0.3V
Operating Temperature	-0° C to 50° C
Storage Temperature	-25° C to 100° C

Notice:

Stress greater than those listed under **Absolute Maximum Ratings** may cause permanent damage to the device. This is a stress rating only and functional operation of the device at these or any other conditions above those indicated in the operational sections of this specification is not implied, Exposure to absolute maximum rating conditions for extended period may affect reliability.

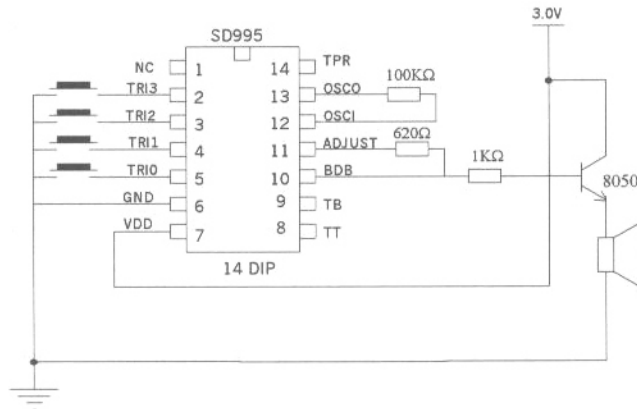
Electrical Characteristics

(VDD = 3.0V, GND = 0V, Ta = 25°C, unless otherwise specified)

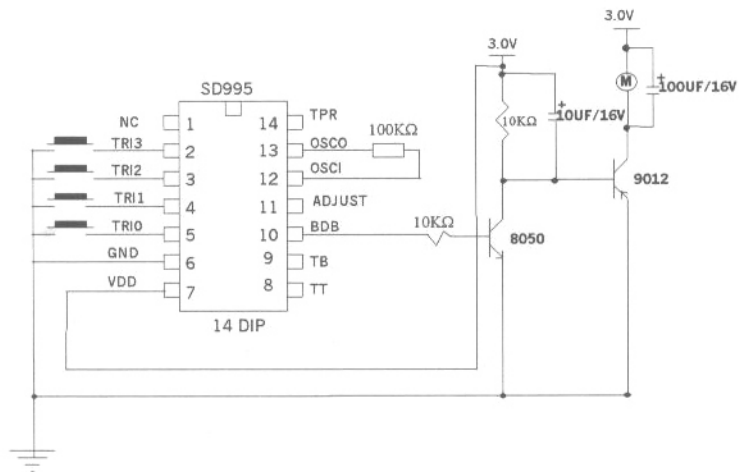
Parameter	Symbol	Min.	Type.	Max.	Condition
Operating Voltage	Vdd	1.3V	3.0V	3.3V	
Standby Current	Istb	---	2μA	10μA	No load
Operating Current	Iop	---	---	13mA	No load

Package Application Circuit

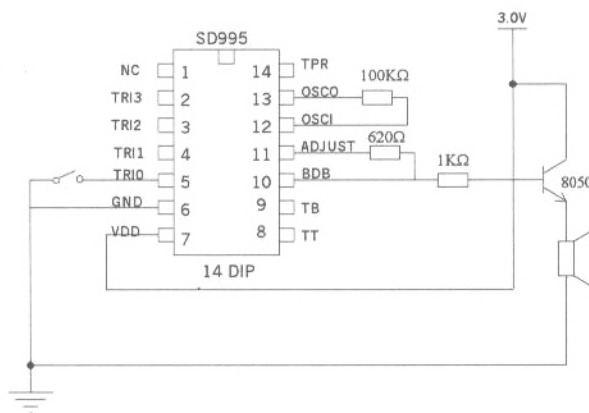
(1) One shot mode for speaker



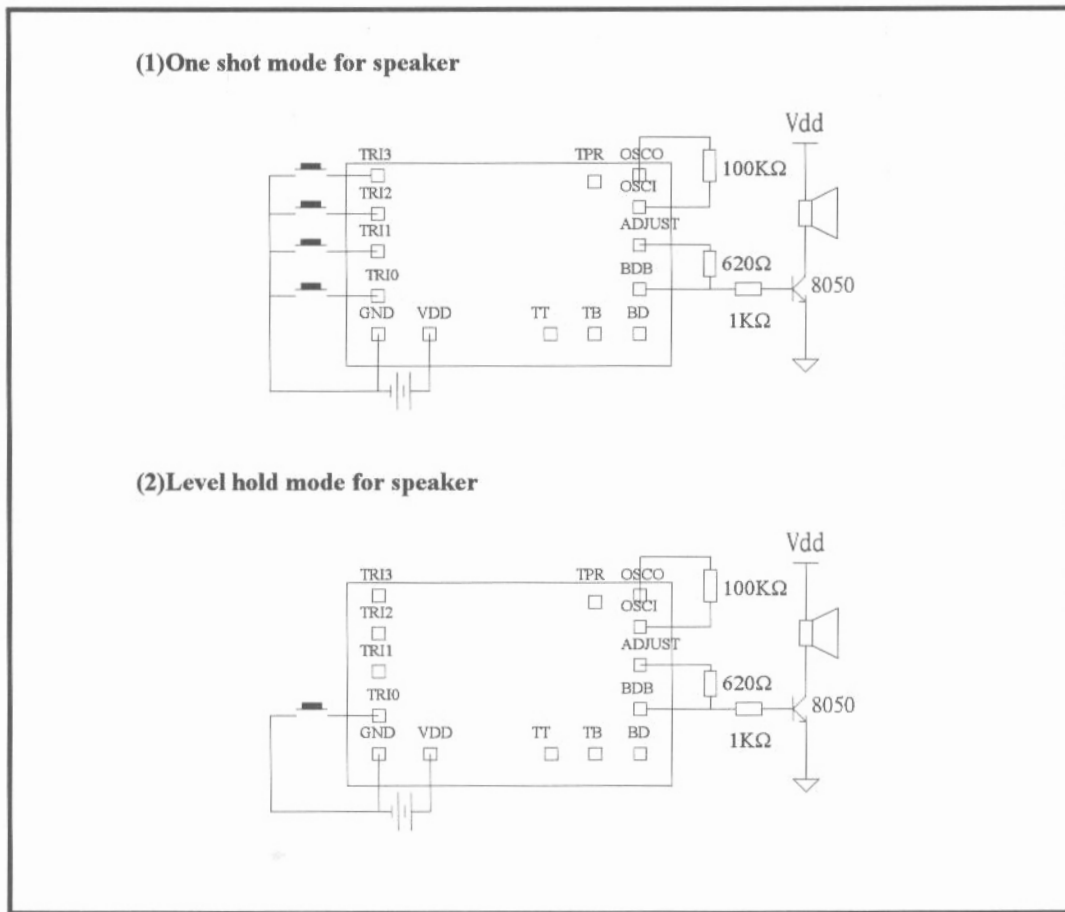
(2) One shot mode for motor



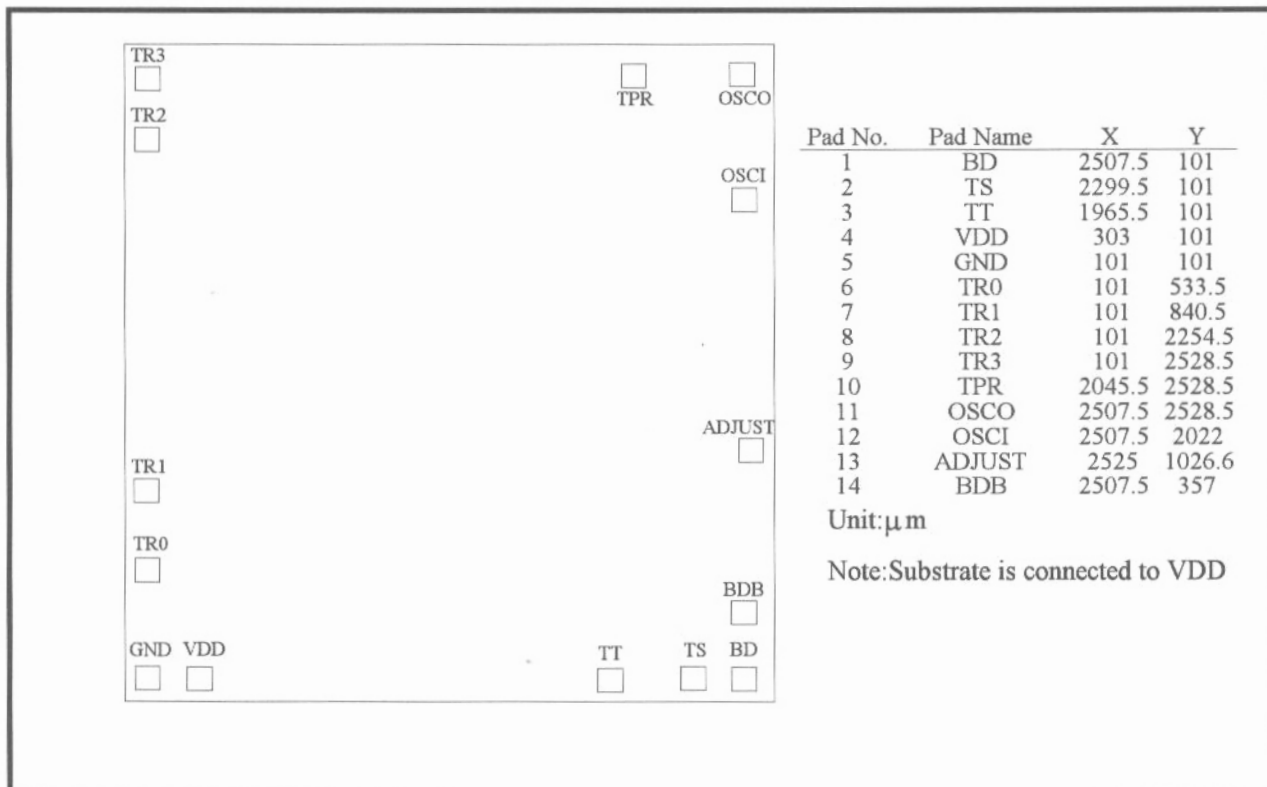
(3) Level hold mode for speaker



Chip on Board Application



Bonding Diagram





Song List

995-01

1. Happy Birthday To You
2. John Is walking
3. You Are My Sunshine

995-02

1. Japanese Lullaby
2. Brahms Lullaby
3. Rockaby Baby

995-04

1. Jingle Bells
2. We Wish You A Merry Christmas
3. Santa Claus Is Coming To Town

995-05

1. London Bridge Is Falling Down
2. Mary Had A Little Lamb
3. Down The Mountain Side We Go

995-09

1. West Minister
2. Ding Dong Ding Dong
3. Ding Ding Ding

995-12

1. Happy Birthday To You
2. John Is Walking
3. You Are My Sunshine

995-C

Customer Codes Are Welcome.