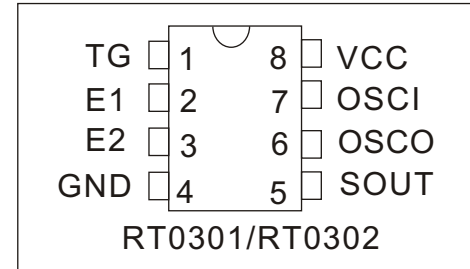


The RT0301/RT0302 is a CMOS Design for Door Bell application

Features

- Low Operator Voltage 3V ~ 4.5V
- Auto Power down function
- CMOS process
- On-Chip RC oscillator
- Low stand by current at 1 uA
- 8-Pin DIP or chip form available

Pin Diagram



Pin Description

| Symbol | Pin Description | Pin | I / O |
|--------|----------------------|-----|-------|
| TG | Trigger Single Input | 1 | I |
| E1 | "Ding" Freq | 2 | O |
| E2 | "Dong" Freq | 3 | I |
| GND | Ground | 4 | O |
| SOUT | Sound output | 5 | O |
| OSCO | Frequency put | 6 | O |
| OSCI | Frequency In | 7 | I |
| Vcc | Power Source Input | 8 | I |

Electrical Characteristics

Vcc = 3V , Temp. = 25°C

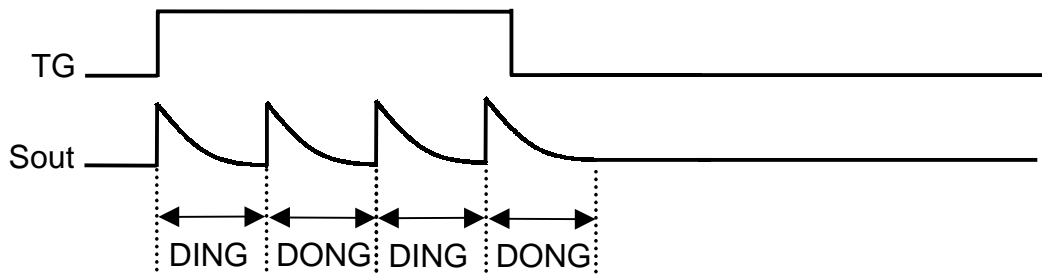
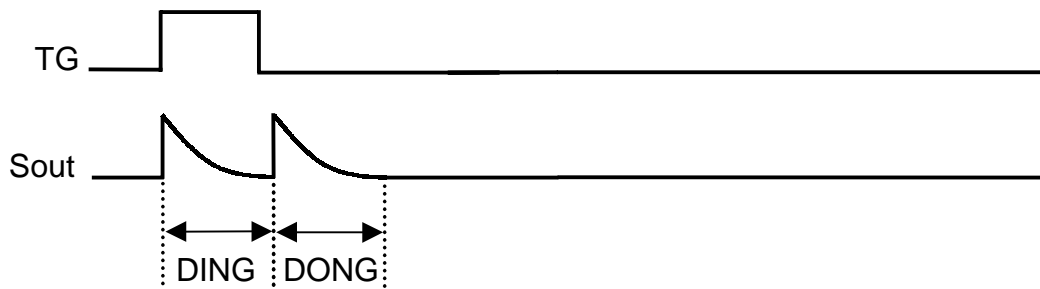
| Characteristics | Symbol | Min. | Typ. | Max. | Unit | Remarks |
|----------------------|-----------------|------|------|------|------|--|
| Operating Voltage | Vcc | - | 3 | 4.5 | V | |
| Operating Current | Iop | - | 0.1 | 0.5 | mA | No Load |
| Quiescent Current | I _{sb} | - | 1 | 5 | uA | |
| SOUT Driving Current | I _{oc} | 1 | - | - | mA | @V _{ds} = 1V |
| Oscillator Freq | F _{op} | - | 50 | - | KHz | External ±30%, R _{osc} = 430K |
| Operating Temp | Temp | 0 | 25 | 70 | °C | |

| P/N | TIMES |
|--------|-------|
| RT0301 | 1 |
| RT0302 | 2 |

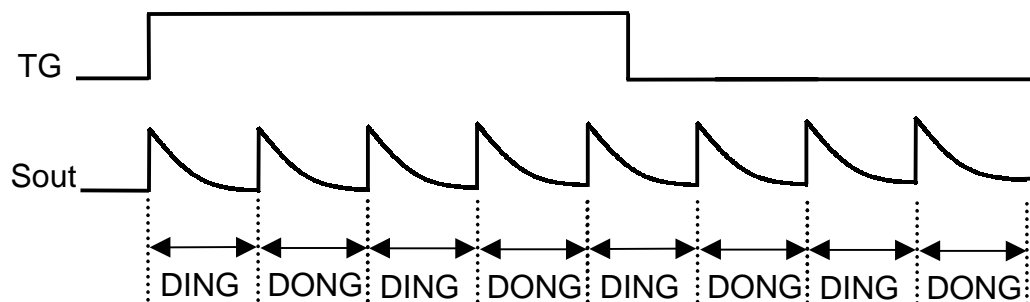
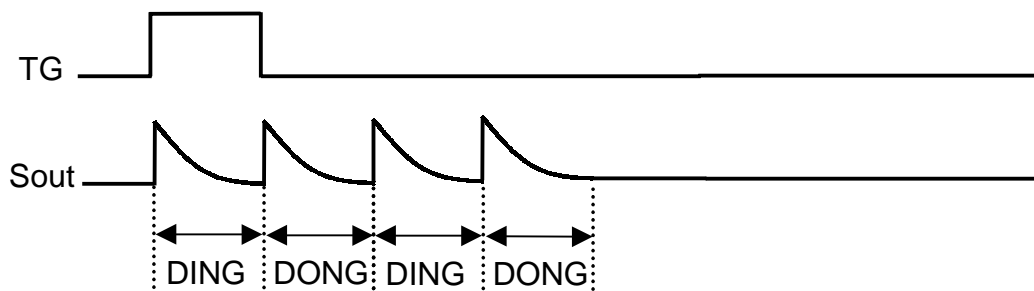
**** Function Description:**

When TG PIN's signal changed from low to high, the RT0301/RT0302 will present Ding-Dong sound from Sout PIN. The waveform will be listed below :

● RT0301:



● RT0302:

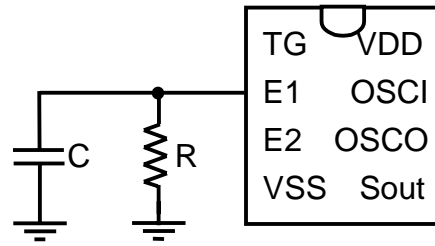


**** Envelope waveform:**

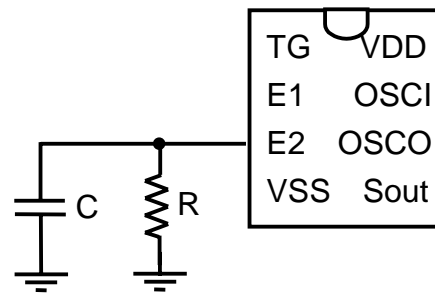
The envelope waveform of DING is controlled by E1's R.C. circuit.

The envelope waveform of DING is controlled by E2's R.C. circuit.

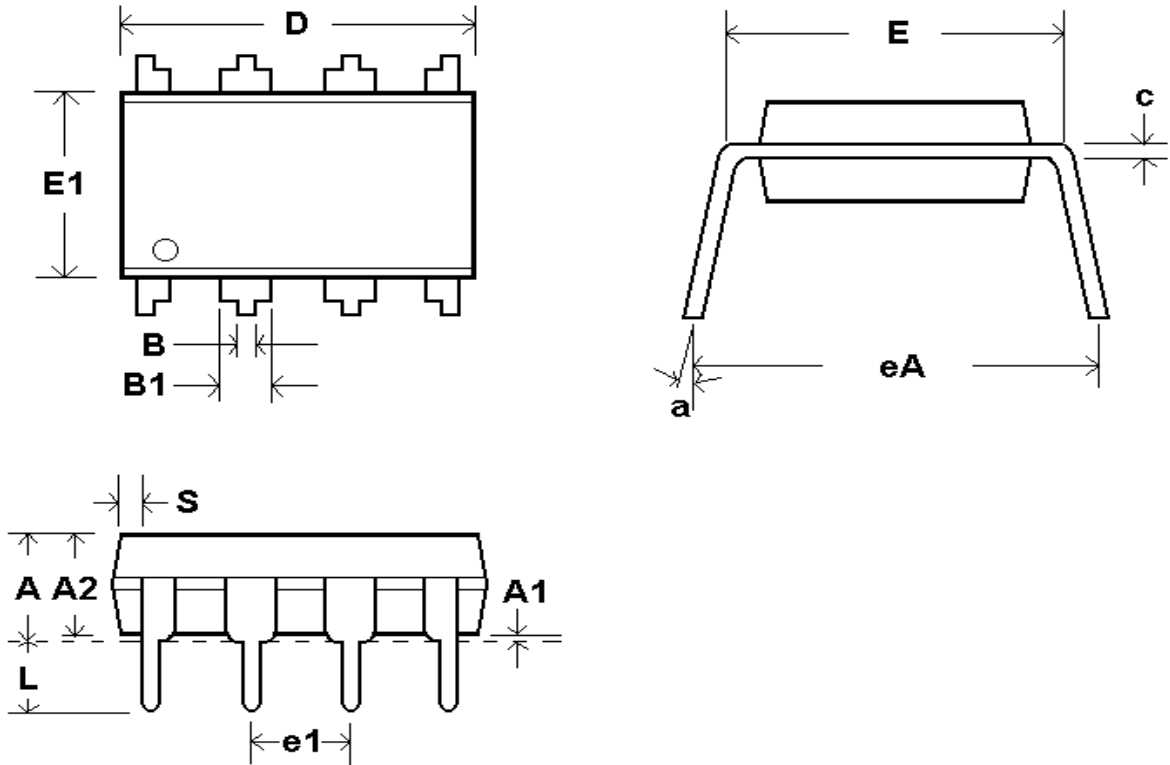
DING:



DONG:



8L P-DIP (300 mil) Dimension:



| Symbol | Dimension in inch | | | Dimension in mm | | |
|--------|-------------------|-------|-------|-----------------|------|------|
| | Min | Typ | Max | Min | Typ | Max |
| A | - | - | 0.210 | - | - | 5.33 |
| A1 | 0.010 | - | - | 0.25 | - | - |
| A2 | 0.124 | 0.130 | 0.136 | 3.15 | 3.30 | 3.45 |
| B | 0.013 | 0.018 | 0.023 | 0.33 | 0.46 | 0.58 |
| B1 | 0.045 | 0.060 | 0.075 | 1.14 | 1.52 | 1.91 |
| c | 0.005 | 0.010 | 0.015 | 0.13 | 0.25 | 0.38 |
| D | 0.340 | 0.360 | 0.380 | 8.64 | 9.14 | 9.65 |
| E | 0.275 | 0.300 | 0.325 | 6.99 | 7.62 | 8.26 |
| E1 | 0.240 | 0.250 | 0.260 | 6.10 | 6.35 | 6.60 |
| e1 | 0.090 | 0.100 | 0.110 | 2.29 | 2.54 | 2.79 |
| L | 0.120 | 0.130 | 0.140 | 3.05 | 3.30 | 3.56 |
| a | 0 | - | 15 | 0 | - | 15 |
| eA | 0.330 | 0.355 | 0.380 | 8.38 | 9.02 | 9.65 |
| S | 0.015 | 0.030 | 0.045 | 0.38 | 0.76 | 1.44 |

NOTE: 1. Controlling dimension : Inch

2. General appearance spec. should be based on final visual inspection spec.