

### Description

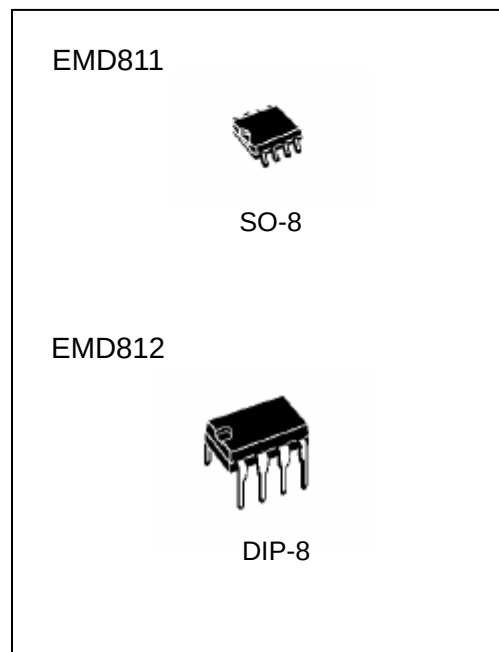
EMD series are monolithic integrated circuit designed for driving bi-directional DC motor, it is suitable for the loading motor of driver for Toys application. It has two pins of logic inputs for controlling the direction as forward and reverse.

### Features

- Built-in element to absorb a dash current derived from changing motor direction.
- Stable motor direction change.
- Interface with CMOS devices.
- Low standby current. ( $<1\mu A$ )

### Applications

- Low current DC motor such as Audio equipment.
- Toys Application.

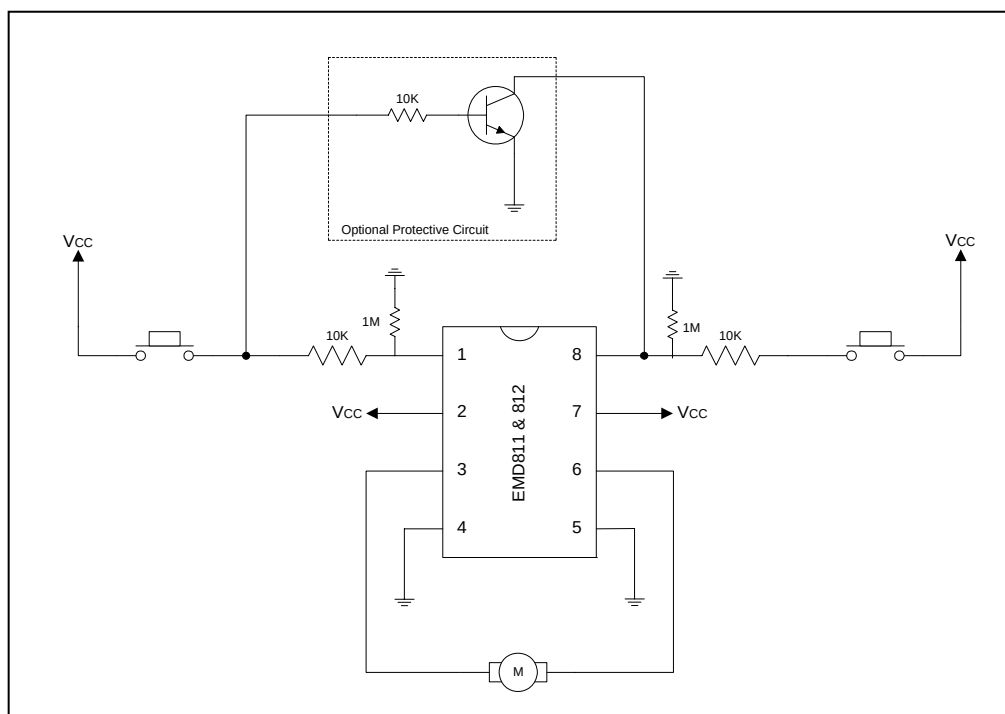


### Absolute Maximum Rating ( $T_a = 25^\circ C$ )

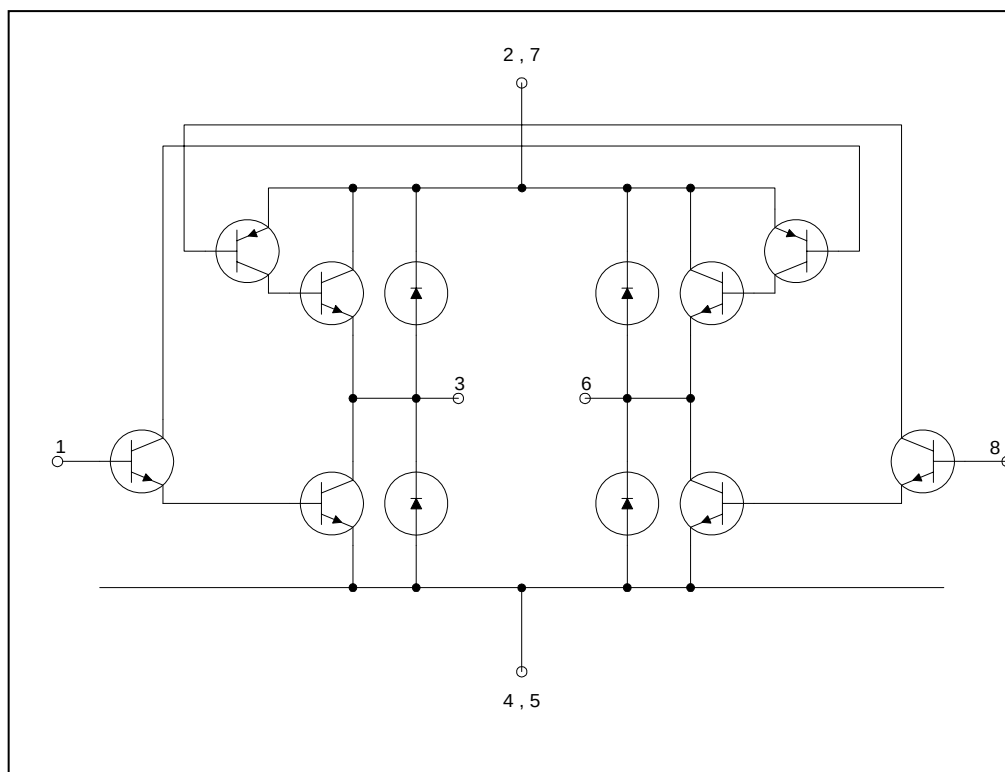
| TEST                         |        | SYMBOL    | CONDITION                                    | RATING     | UNIT       |
|------------------------------|--------|-----------|----------------------------------------------|------------|------------|
| Standby Current              |        | $I_{QC}$  | 0 ~ 15                                       | $< 1$      | $\mu A$    |
| Operation Voltage            |        | $V_{CC}$  | $\frac{V_o}{V_{cc}} \geq \sqrt{\frac{1}{2}}$ | 3 ~ 15     | V          |
| Output Current<br>(Continue) | EMD811 | $I_C$     | Input Current = 6mA                          | 650        | mA         |
|                              | EMD812 |           | Input Current = 10mA                         | 1          | A          |
| *Peak Current                | EMD811 | $I_P$     | $V_{CC} = 15V$                               | 2          | A          |
|                              | EMD812 |           |                                              | 3.5        |            |
| Power Dissipation            | EMD811 | $P_D$     |                                              | 1.5        | W          |
|                              | EMD812 |           |                                              | 2.4        |            |
| Operation Temperature        |        | $T_{opr}$ |                                              | -25 ~ +100 | $^\circ C$ |
| Storage Temperature          |        | $T_{stg}$ |                                              | -55 ~ +125 | $^\circ C$ |

\* Input Pulse : PW = 1s, Duty Cycle = 10%

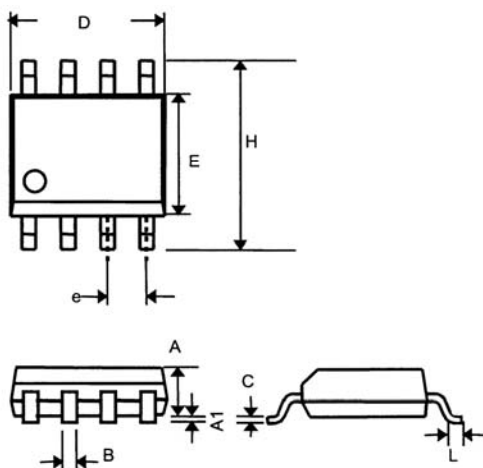
### Application Circuit



### Equivalent Circuit

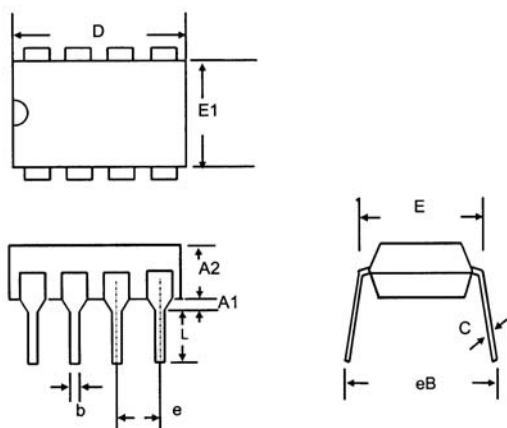


### 8 Lead Plastic SO (Unit: mm)



| SYMBOL | MIN.        | MAX. |
|--------|-------------|------|
| A      | 1.35        | 1.75 |
| A1     | 0.10        | 0.25 |
| B      | 0.33        | 0.51 |
| C      | 0.19        | 0.25 |
| D      | 4.80        | 5.00 |
| E      | 3.80        | 4.00 |
| e      | 1.27 (TYP.) |      |
| H      | 5.80        | 6.20 |
| L      | 0.40        | 0.27 |

### 8 Lead Plastic Dip (Unit: mm)



| SYMBOL | MIN.        | MAX.  |
|--------|-------------|-------|
| A1     | 0.381       | —     |
| A2     | 2.92        | 4.96  |
| b      | 0.35        | 0.56  |
| C      | 0.20        | 0.36  |
| D      | 9.01        | 10.16 |
| E      | 7.62        | 8.26  |
| E1     | 6.09        | 7.12  |
| e      | 2.54 (TYP.) |       |
| eB     | —           | 10.92 |
| L      | 2.92        | 3.81  |