

LED driver

BA618

The BA618 is an IC developed for driving 7-segment LED displays, and contains seven positive logic circuits. Input and output are directed in the same direction by DIP Pin 16, with the layout optimized to facilitate mounting.

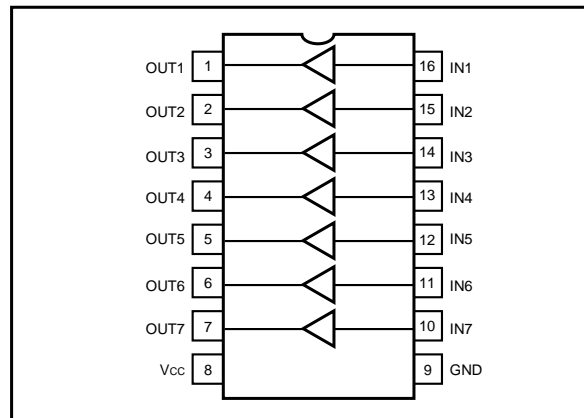
●Applications

LED drivers
Relay drivers

●Features

- 1) Contains seven circuits.
- 2) Current of up to 100mA can be driven.
- 3) Input and output are directed in the same direction, for easy mounting.
- 4) Can be directly coupled with TTL.

●Block diagram



● Absolute maximum ratings (Ta = 25°C)

| Parameter | Symbol | Limits | Unit |
|-------------------------|------------------|------------|------|
| Power supply voltage | V _{CC} | 16 | V |
| Power dissipation | P _d | 500* | mW |
| Operating temperature | T _{opr} | -30 ~ +75 | °C |
| Storage temperature | T _{stg} | -55 ~ +125 | °C |
| Maximum drive current | I _{OUT} | 100 | mA |
| Allowable input voltage | V _{IN} | -0.5 ~ +16 | V |

* Reduced by 5mW for each increase in Ta of 1°C over 25°C.

● Internal circuit configuration

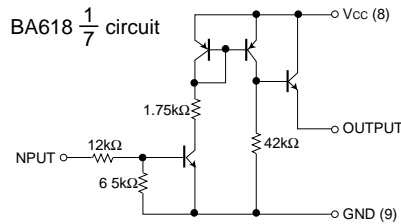


Fig. 1

● Electrical characteristics (unless otherwise noted, Ta = 25°C, V_{CC} = 10V, R_L = 100Ω, C_L = 20pF)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|------------------------------------|-------------------------|------|------|------|------|---|
| Output low level supply current | I _{CC (OFF)} | — | — | 500 | μA | V _{IN} = 0V |
| Output high level input current | I _{IN (ON)} | — | 0.4 | 0.8 | mA | V _{IN} = 5V, V _{OUT} ≧ 8.5V |
| Output high level input voltage | V _{IN (ON)} | — | 1.9 | 2.5 | V | V _{OUT} ≧ 8.5V (R _L = 200Ω) |
| Output low level voltage | V _{IN (OFF)} | 0.8 | 1.5 | — | V | V _{OUT} ≧ 3mV |
| Output high level voltage | V _{OUT (IN)} | 8.5 | 8.9 | — | V | V _{IN} = 2.5V |
| Output low level leakage current | I _{OL (OFF)} | — | — | 30 | μA | V _{IN} = 0.8V |
| Output high level input voltage II | V _{IN II (ON)} | — | 1.9 | 3 | V | V _{OUT} ≧ 8.5V |

● Electrical characteristic curves

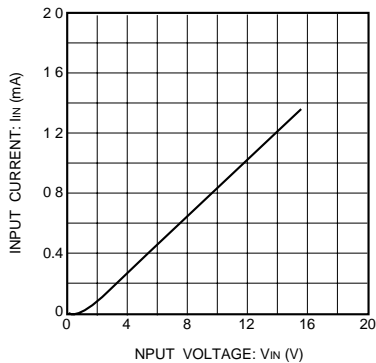


Fig. 2 Input characteristics

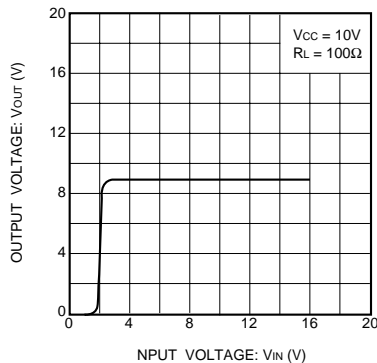


Fig. 3 Input / output characteristics

● Measurement circuit

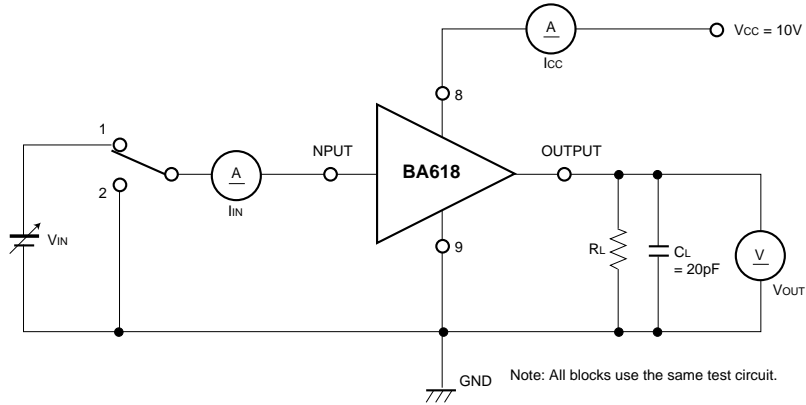


Fig. 4

● Application example

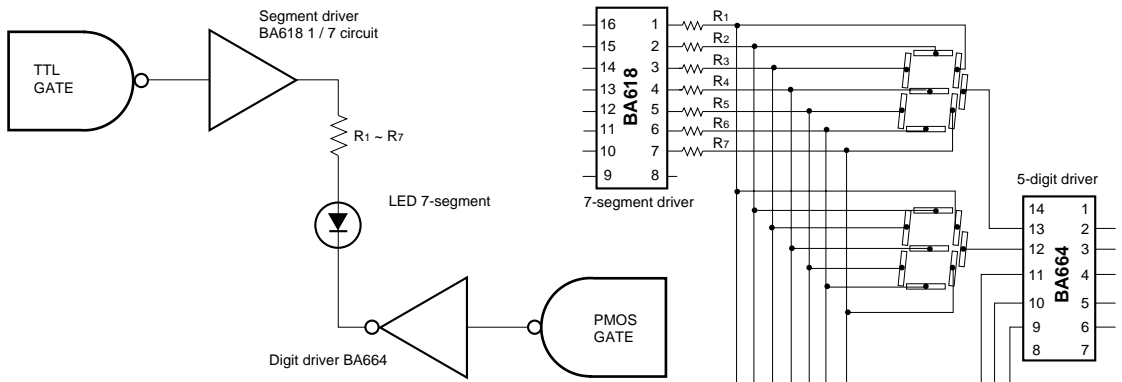


Fig. 5 7-segment, 5-digit LED driver circuit

● External dimensions (Units: mm)

