

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.

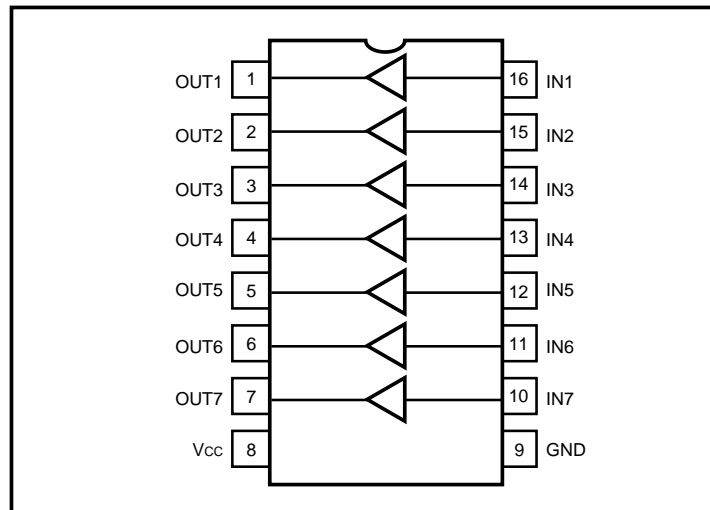
●Applications

- 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

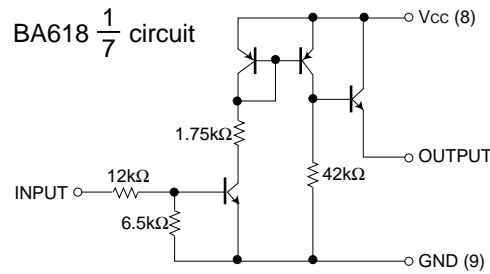


Fig. 1

● 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

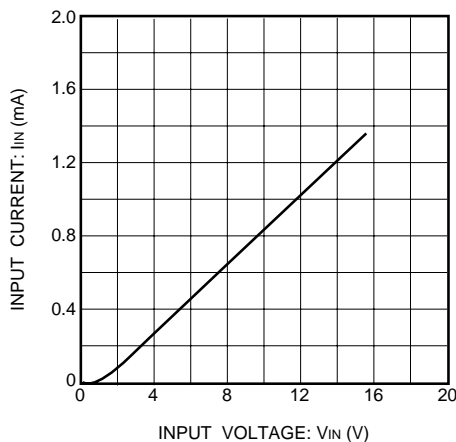


Fig. 2 Input characteristics

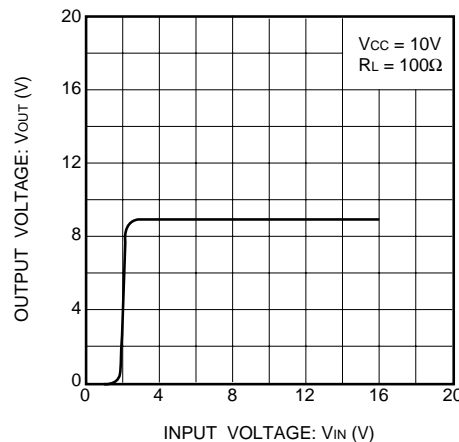


Fig. 3 Input / output characteristics

● Measurement circuit

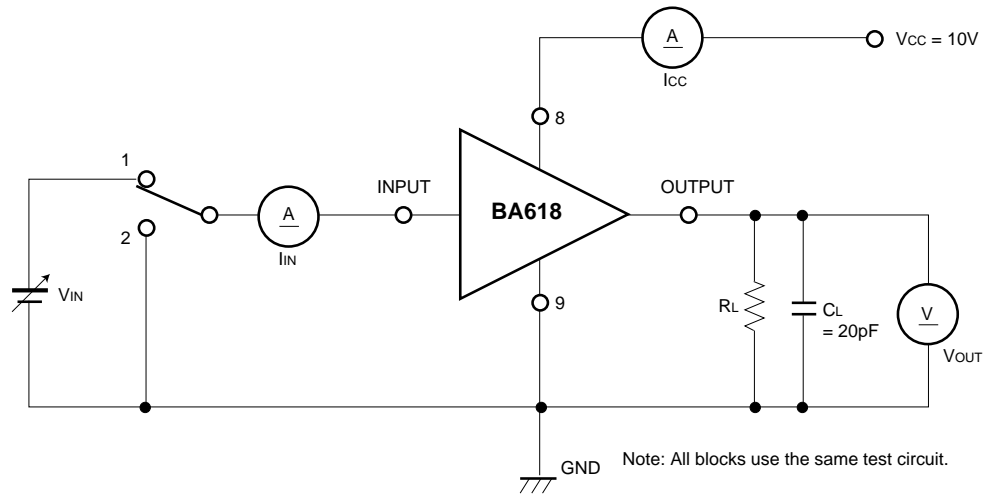


Fig. 4

● Application example

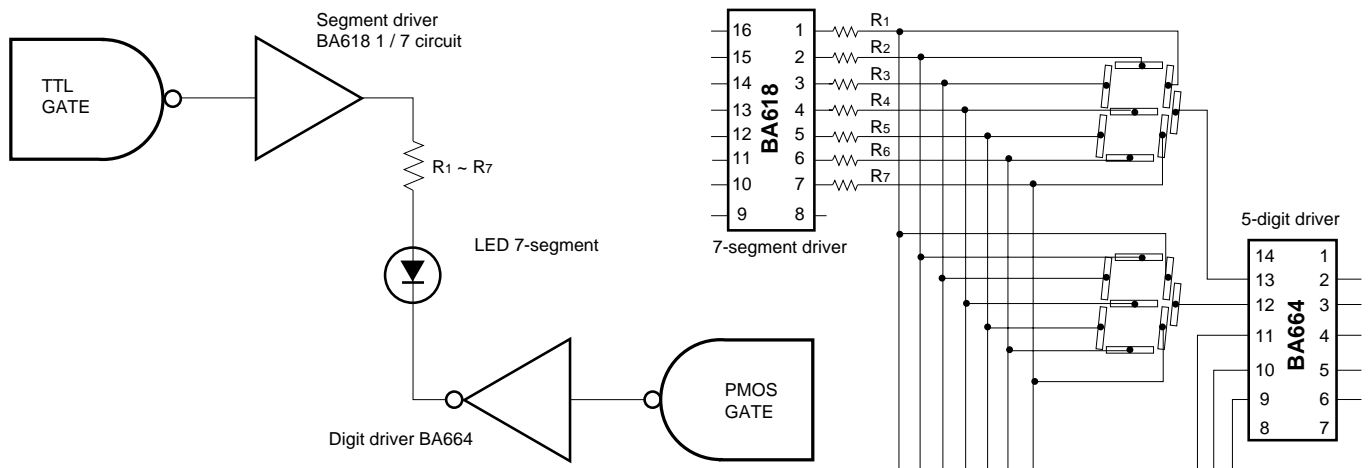


Fig. 5 7-segment, 5-digit LED driver circuit

● External dimensions (Units: mm)

