

## Single phase full-wave driver IC for fan motor

# BA6428F

### Description

The BA6428F is a single phase full-wave fan motor driver. It has motor protection functions such as a lock detector, automatic restart, and an output terminal that alarms when the motor is locked. This IC makes sets smaller, due to the compact SOP8 package and the requirement of few external components.

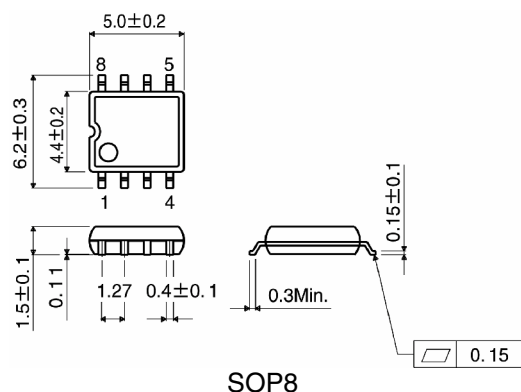
### Features

- 1) Built-in power Tr
- 2) Lock detector, Automatic restart function
- 3) Built-in thermal shut down
- 4) Alarm output terminal

### Applications

Fan motor

### Dimension (Units : mm)



### Absolute Maximum Ratings (Ta=25°C)

| Parameter                   | Symbol    | Limits     | Unit |
|-----------------------------|-----------|------------|------|
| Supply voltage              | $V_{CC}$  | 15         | V    |
| Power dissipation           | $P_d$     | 687        | mW   |
| Operating temperature range | $T_{opr}$ | -40 ~ +85  | °C   |
| Storage temperature range   | $T_{stg}$ | -55 ~ +150 | °C   |

Derating: 5.5mW/°C for operation above Ta=25°C.

### Recommended Operating Conditions (Ta=25°C)

| Parameter      | Symbol   | Min. | Typ. | Max. | Unit |
|----------------|----------|------|------|------|------|
| Supply voltage | $V_{CC}$ | 3.0  | 5.0  | 14.0 | V    |

●Electrical characteristics (Unless otherwise noted, Ta=25°C, Vcc=5V)

| Parameter                          | Symbol          | Min. | Typ. | Max. | Unit | Conditions            |
|------------------------------------|-----------------|------|------|------|------|-----------------------|
| Circuit current                    | I <sub>CC</sub> | 2.2  | 4.5  | 9.0  | mA   | Output=OFF            |
| Capacitor charging current         | ILDC            | 1.60 | 2.90 | 4.64 | μA   | VLD=1.1V              |
| Capacitor discharging current      | ILDD            | 0.24 | 0.48 | 0.80 | μA   | VLD=1.1V              |
| Capacitor charge/discharge current | rCD             | 4.5  | 6.0  | 10.0 | —    | rCD=ILDC/ILDD         |
| Capacitor clamp voltage            | VLDCL           | 1.27 | 1.93 | 2.60 | V    |                       |
| Capacitor comparator voltage       | VLDCP           | 0.47 | 0.76 | 1.06 | V    |                       |
| Output L voltage                   | VOL             | —    | 0.2  | 0.3  | V    | I <sub>O</sub> =200mA |
| Output H voltage                   | VOH             | 3.9  | 4.1  | —    | V    | I <sub>O</sub> =200mA |
| Alarm output terminal L voltage    | VALL            | —    | 0.3  | 0.5  | V    | I <sub>AL</sub> =5mA  |
| Alarm output terminal leak current | IALL            | —    | 0    | 50   | μA   | V <sub>AL</sub> =15V  |

●Block Diagram

