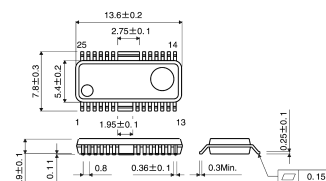


Reversible Motor Driver BA6920FP-Y

Description

The BA6920FP-Y is an IC for small DC motor drive which has a wide operating voltage range. It has four output modes such as forward, reverse, stop and brake. When the motor is stopped, all circuits turn off automatically. A power save circuit that reduces current consumption and a power save terminal is included. This IC has 34V maximum operating voltage, so that it is useful for wide varieties of applications.

Dimension(Units:mm)



Features

HSOP25

- 1)Wide operating voltage range : 6.5~34V
- 2)Can be operated directly by TTL and CMOS
- 3)Low power consumption while the motor is stopping due to built-in power save circuit
- 4)Output high voltage can be set externally by VREF pin.
- 5)Built-in surge absorbing diode
- 6)Built-in TSD (Thermal shut down) circuit
- 7) A signal ground and a power ground are provided separately, so that reversible/variable speed control is available by adding an electronic governor.

Applications

VCR, Audio system applications, Office automation equipment, Industrial applications

Absolute Maximum Ratings(Ta=25°C)

| Parameter | Symbol | Limits | Unit |
|-----------------------------|------------------|--------------------|------|
| Supply voltage | V _{CC} | 36 | V |
| Power dissipation | P _d | 1450 ^{*1} | mW |
| Operating temperature range | T _{opr} | -30 ~ +85 | deg |
| Storage temperature range | T _{stg} | -55 ~ +150 | °C |
| Output current | I _{OUT} | 1000 ^{*2} | mA |

*1 Derating : 11.6mW/°C for operation above Ta=25°C
(Mounted on a 70.0mm*70.0mm*1.6mm glass epoxy PCB.)

*2 Do not exceed PD and ASO.

Recommended Operating Conditions (Ta=25°C)

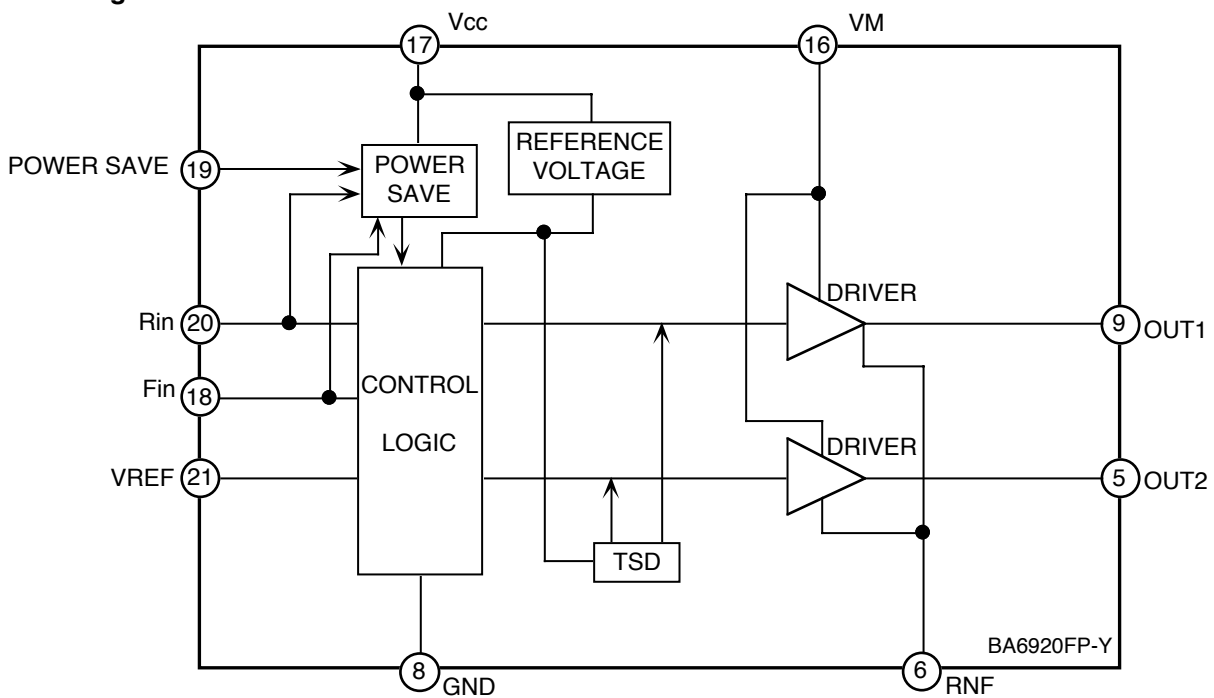
| Parameter | Symbol | Min. | Typ. | Max. | Unit |
|-------------------------|-----------------|------|------|------|------|
| Operating voltage range | V _{CC} | 6.5 | - | 34 | V |
| | V _M | 6.5 | - | 34 | V |

Electrical characteristics (Unless otherwise noted, Ta=25°C, Vcc=12V, VM=12V)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|---------------------------|------------------|------|------|------|------|---|
| Circuit current 1 | I _{cc1} | 5 | 8 | 12 | mA | Forward or reverse mode |
| Circuit current 2 | I _{cc2} | 3 | 5 | 8 | mA | Brake mode |
| Standby circuit current | I _{ST} | - | - | 15 | μA | Standby mode |
| Input voltage "H" level | V _{IH} | 3.0 | - | - | V | |
| Input voltage "L" level | V _{IL} | - | - | 0.8 | V | |
| "H" level input current | I _{IH} | 100 | 200 | 300 | μA | V _{IN} =3.0V |
| Output saturation voltage | V _{CE} | - | 2.2 | 3.3 | V | I _o =200mA (Sum of C-E voltage on upper and lower output Tr) |
| Power save OFF voltage | VPS OFF | - | - | 0.8 | V | Operate mode |
| Power save ON voltage | VPS ON | 2.0 | - | - | V | Standby mode |
| REF bias current | I _{REF} | - | 12 | 35 | μA | V _{REF} =6V, I _o =100mA |

*This product is not designed for protection against radioactive rays.

Block diagram



1~4.7.10~15.22~25 : N.C.
 *Radiation fin must connect with GND.