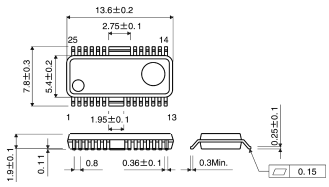
Reversible Motor Driver
BA6920FP-Y

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)



HSOP25

Features

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 V_{REF} 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℃)

Parameter	Symbol	Limits	Unit
Supply voltage	V_{CC}	36	V
Power dissipation	Pd	1450 *1	mW
Operating temperature range	Topr	-30 ~ +85	deg
Storage temperature range	Tstg	-55 ~ +150	℃
Output current	IOUT	1000 *2	mA

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

*2 Do not exceed PD and ASO.

Recommended Operating Conditions (Ta=25℃)

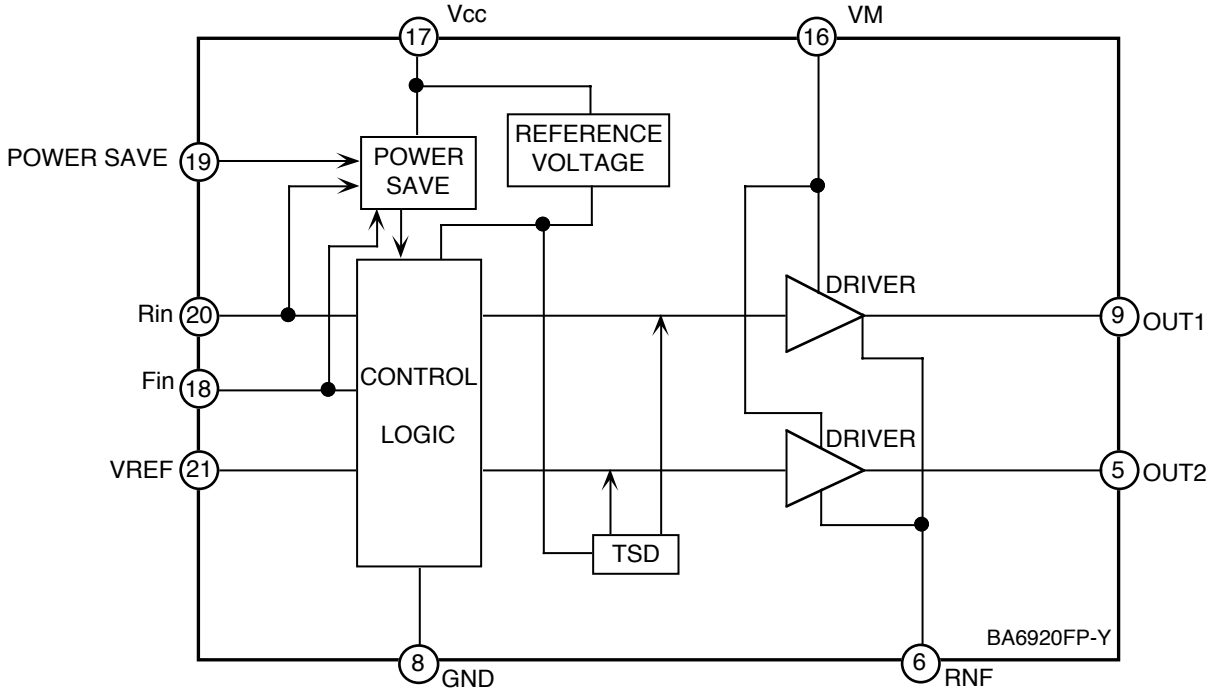
Parameter	Symbol	Min.	Typ.	Max.	Unit
Operating voltage range	V_{CC}	6.5	-	34	V
	V_M	6.5	-	34	V

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Circuit current 1	Icc1	5	8	12	mA	Forward or reverse mode
Circuit current 2	Icc2	3	5	8	mA	Brake mode
Standby circuit current	IST	-	-	15	μA	Standby mode
Input voltage "H" level	VIH	3.0	-	-	V	
Input voltage "L" level	VIL	-	-	0.8	V	
"H" level input current	IIH	100	200	300	μA	VIN=3.0V
Output saturation voltage	VCE	-	2.2	3.3	V	Io=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	IREF	-	12	35	μA	VREF=6V, Io=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.

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