

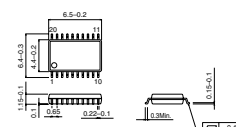
Spindle Motor Driver for CD/MD

BD6609FV

●Description

The BD6609FV is a CD/MD spindle motor driver employing a 3-phase, full-wave, soft switching, driving system. This motor driver reduces switching noise of the output current and enables for smooth motor rotation.

●Dimension (Units:mm)



●Features

- 1) Switching noise reduced due to a soft switching driving system
- 2) Sensorless driving system allows for a small set design
- 3) Built-in start, brake, and standby function
- 4) FG signal output function (with built-in "chatter" prevention circuit)
- 5) Built-in Thermal Shutdown (TSD) circuit

SSOP-B20

●Applications

CD, MD

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Power supply voltage	V _{CC}	7	V
Power dissipation	P _d	800 *	mW
Operating temperature range	T _{opr}	-30 ~ +80	°C
Storage temperature range	T _{stg}	-55 ~ +150	°C
Output current	I _{OMAX}	700	mA

* Derating: 6.4mW/°C for operation above Ta=25°C.

●Recommended Operating Conditions (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Power supply voltage	V _{CC}	2.4	—	6.5	V

●Electrical characteristics (Unless otherwise noted, Ta=25°C, Vcc=3.4V, V_M=0.3V)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Circuit current	I _{CCS}	—	10	35	μA	STBY=L
	I _{CC}	—	11	15	mA	STBY=H IM=20mA
Output saturation voltage H1	VOH1	—	0.85	1	V	VM=VCC Io=400mA
Output saturation voltage H2	VOH2	—	0.2	0.35	V	VM=VCC-1V Io=400mA
Output saturation voltage L	VOL	—	0.25	0.35	V	Io=400mA
~Rotor position detection pin~						
Input offset voltage	VCO	-10	—	+10	mV	
~Standby pin~						
Input current	IST	—	115	155	μA	STBY=VCC
Input "H" level voltage	VSTH	2	—	VCC	V	
Input "L" level voltage	VSTL	—	—	0.3	V	
~FG pin~						
Output "L" voltage	VOLF	—	0.1	0.25	V	Io=500μA
Pull up resistance	RBF	10	20	30	Ω	

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

●Block Diagram

