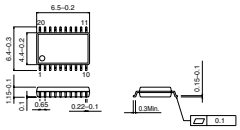
Spindle Motor Driver for CD/MD
BD6609FV

●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)



SSOP-B20

●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

●Applications

CD, MD

Absolute Maximum Ratings (Ta=25˚C)

Parameter	Symbol	Limits	Unit
Power supply voltage	V_{CC}	7	V
Power dissipation	Pd	800 *	mW
Operating temperature range	Topr	–30 ~ +80	˚C
Storage temperature range	Tstg	–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	ICCS	—	10	35	μA	STBY=L
	ICC	—	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