

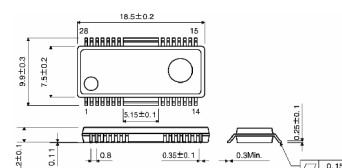
3-Phase Motor Driver For CD-ROM/R-RW, DVD-ROM/RAM

BA6668FM

● Description

The BA6668FM is a motor driver developed for CD-R RW spindle motors. This IC has a junction temperature alarm pin, a gain switch and a limit switch pin. A power save, thermal shut down, current limit, rotation detector, and a reverse protection circuit are all included. Gain and Limit can be switched by the control pin.

● Dimension (Units:mm)



● Features

- 1)3-phase, full-wave pseudo linear driving system
- 2)Built-in power save, thermal shut down circuit
- 3)Built-in current limit, Hall Bias circuit
- 4)Built-in FG-output, FG3-phase synthesized output
- 5)Built-in rotation detector
- 6)Built-in reverse protection circuit
- 7)Built-in Limit switch and Gain switch pin
- 8)Built-in Short Brake pin
- 9)Built-in junction temperature alarm pin
- 10)Suitable for 3.3V DSP

HSOP-M28

● Applications

CD-R/RW, DVD-ROM/RAM, CD-ROM

● Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Supply voltage	V _{CC}	7	V
Supply voltage	V _M	15	V
Power dissipation	P _d	2200 ¹	mW
Operating temperature range	T _{opr}	-20 ~ +75	°C
Storage temperature range	T _{stg}	-55 ~ +150 ²	°C
Maximum output current	I _{out}	1500 ²	mA

¹ Derating : 17.6mW/°C for operation above Ta=25°C.

70mm 70mm 1.6mm glass epoxy board.

² Do not, however exceed P_d, ASO and T_j=150°C

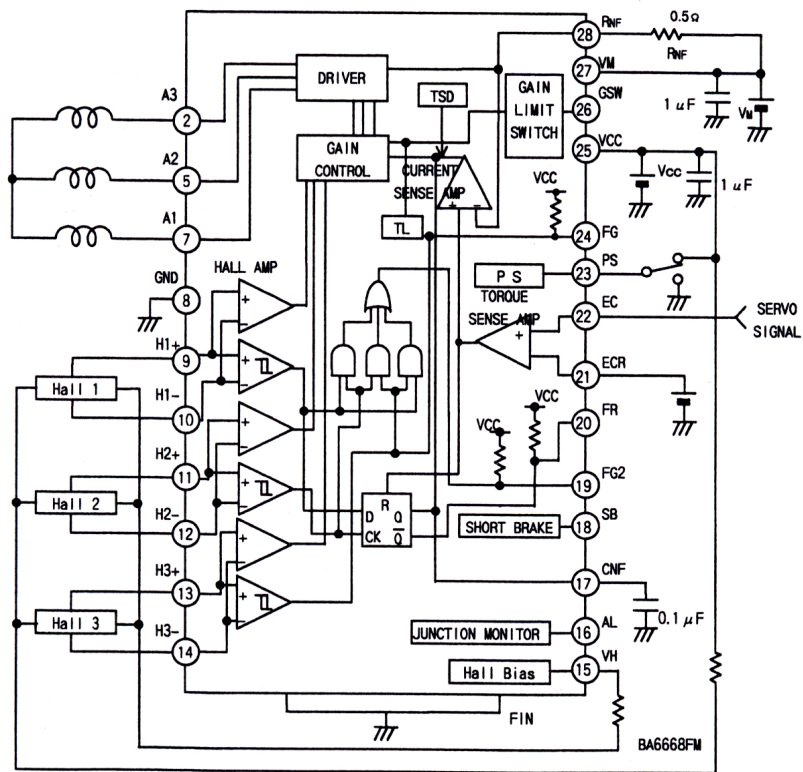
● Recommended Operating Conditions (Ta=25°C)

Parameter	Symbol	Limits	Unit
Operating supply voltage range	V _{CC}	4.5 ~ 5.5	V
	V _M	3.0 ~ 14	V

● Electrical characteristics (Unless otherwise noted, Ta=25°C, V_{CC}= 5V, V_M= 12V)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Circuit current 1	I _{CC1}	—	0.3	0.6	mA	PS=L, GSW=OPEN
Circuit current 2	I _{CC2}	5.2	7.5	9.8	mA	PS=H, GSW=OPEN
Input-output gainL	G _{ECL}	0.28	0.35	0.42	A/V	R _{NF} =0.5, GSW=L
Input-output gain M	G _{ECM}	0.56	0.70	0.84	A/V	R _{NF} =0.5, GSW=M
Input-output gain H	G _{ECH}	1.12	1.40	1.68	A/V	R _{NF} =0.5, GSW=H
Torque limit current1	I _{TL1}	300	400	500	mA	R _{NF} =0.5z, GSW=L
Torque limit current2	I _{TL2}	510	600	690	mA	R _{NF} =0.5, GSW=M
Torque limit current3	I _{TL3}	1020	1200	1380	mA	R _{NF} =0.5, GSW=H
Alarm ON temperature	T _{ALON}	120	135	150	°C	
Alarm hysteresis temperature	T _{ALH}	10	15	20	°C	

● Application circuit



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