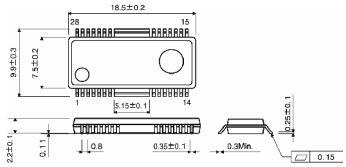
3-Phase Motor Driver For CD-ROM/R-RW,DVD-ROM/RAM

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)



HSOP-M28

●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

●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	Pd	2200 [1]	mW
Operating temperature range	T_{opr}	–20 ~ +75	˚C
Storage temperature range	T_{stg}	–55 ~ +150 [2]	˚C
Maximum output current	Iout	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 Pd, ASO and Tj=150˚C

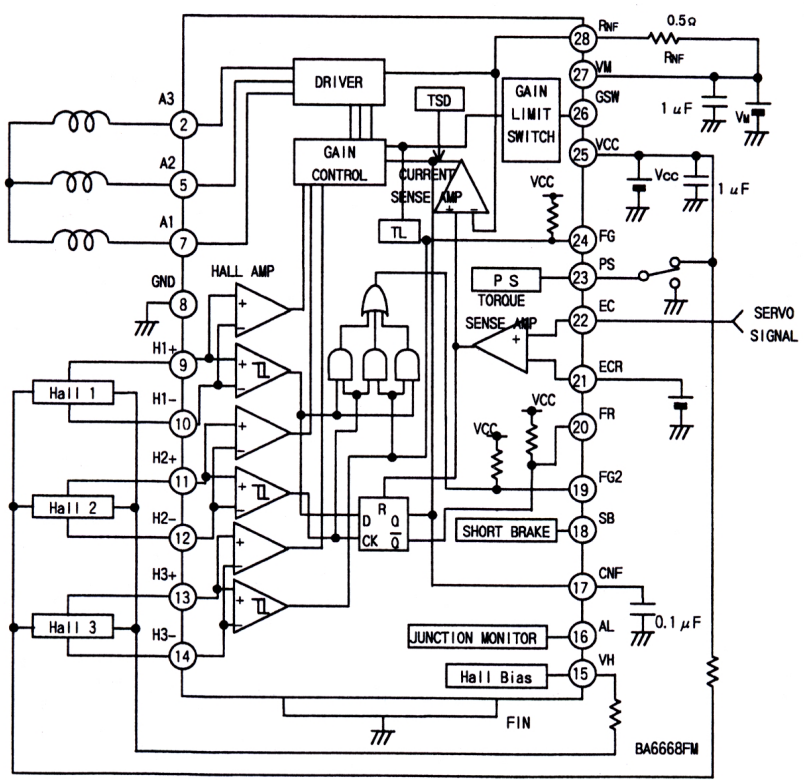
● Recommended Operating Conditions (Ta=25˚C)

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	$I_{CC}1$	—	0.3	0.6	mA	PS=L, GSW=OPEN
Circuit current 2	$I_{CC}2$	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 hysterisis temperature	T_{ALH}	10	15	20	˚C	

● Application circuit



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