

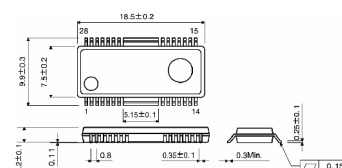
## 3-Phase Motor Driver For CD-ROM/R-RW,DVD-ROM/RAM

# 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 <sub>CC</sub>	7	V
Supply voltage	V <sub>M</sub>	15	V
Power dissipation	P <sub>d</sub>	2200 <sup>1</sup>	mW
Operating temperature range	T <sub>opr</sub>	-20 ~ +75	°C
Storage temperature range	T <sub>stg</sub>	-55 ~ +150 <sup>2</sup>	°C
Maximum output current	I <sub>out</sub>	1500 <sup>2</sup>	mA

<sup>1</sup> Derating : 17.6mW/°C for operation above Ta=25°C.  
70mm 70mm 1.6mm glass epoxy board.

<sup>2</sup> Do not, however exceed P<sub>d</sub>, ASO and T<sub>j</sub>=150°C

● Recommended Operating Conditions (Ta=25°C)

Parameter	Symbol	Limits	Unit
Operating supply voltage range	V <sub>CC</sub>	4.5 ~ 5.5	V
	V <sub>M</sub>	3.0 ~ 14	V

● Electrical characteristics (Unless otherwise noted, Ta=25°C, V<sub>CC</sub>= 5V, V<sub>M</sub>= 12V)

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

● Application circuit

