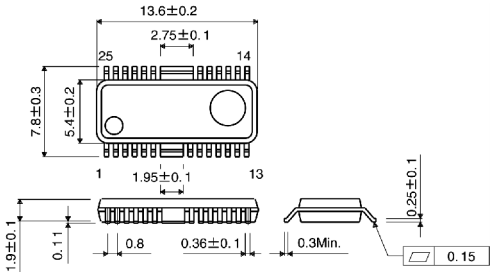
3-phase spindle motor driver
BA6667FP-Y

●Description

ROHM has developed a 3-phase spindle motor driver for slim high-speed CD-ROMs by incorporating a charging pump circuit into a conventional BA6849FP-Y. This IC incorporates a power save, thermal shutdown circuit, FG output, reverse protection, and short brake circuit. Also offered is a multi-function and high performance motor driver operated by 3-phase full-wave pseudo linear driving system.

●Dimension (Units : mm)



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●Features

1) 3-phase, full-wave pseudo linear driving system
2) Built-in power save, thermal shut down circuit
3) Built-in FG output
4) Built-in reverse protection circuit
5) Built-in short brake pin
6) Built-in charging pump circuit

●Applications

CD-ROM/RW, DVD-ROM

●Absolute Maximum Ratings (Ta=25˚C)

Parameter	Symbol	Limits	Unit
Applied voltage (for 5V)	V_{CC}	7	V
Applied voltage (for motor)	V_{M2}	7	V
Power dissipation	Pd	1450	mW
Operating temperature range	Topr	–20 ~ +75	˚C
Storage temperature range	Tstg	–55 ~ +150	˚C
Output current	Iout	1300	mA

70mm 70mm 1.6mm glass epoxy board.
Derating : 11.6mW/˚C for operation above Ta=25˚C.
Do not, however exceed Pd, ASO and Tj=150˚C.

●Recommended Operating Conditions (Ta=25˚C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Power supply voltage	Vcc.VM2	4.5	—	5.5	V

●Electrical characteristics (Unless otherwise noted : Ta=25˚C, Vcc=5V)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Circuit current 1	Icc1	—	0	0.2	mA	PS=L
Circuit current 2	Icc2	—	7.2	10.0	mA	PS=H
H3 hysteresis level	VHYS	10	20	40	mV	
Offset voltage	ECOFF	20	50	80	mV	ECR=2.5V
I/O gain	GEC	0.41	0.51	0.61	A/V	EC=1.5V, 2.0V
Output limit current	ITL	560	700	840	mA	RNF=0.5 , EC=0
Saturation voltage H	VOH	—	1.0	1.4	V	IO=–600mA
Saturation voltage L	VOL	—	0.4	0.7	V	IO=600mA
Charging-pump output	VPUMP	6.2	8.9	11.5	V	

●Block Diagram