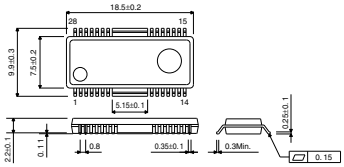
Spindle motor driver IC for CD-ROM/RW
BD6667FM

●Description

The BD6667FM has achieved in high-efficiency and low power consumption due to the adoption of MOSFET output and direct PWM drive.
Power save circuit, current limit circuit, FG output hall bias, reverse protection circuit, short brake SW, and rotation direction detection terminal are incorporated.
The result is a multi-function and high-performance IC.

●Dimension (Units : mm)



HSOP-M28

●Features

1) Direct PWM drive
2) Built-in power save circuit
3) Built-in current limit circuit
4) Built-in FG output
5) Built-in hall bias
6) Built-in reverse protection circuit
7) Low power consumption due to MOSFET output
8) Built-in short brake SW
9) Built-in rotation direction detection terminal

●Applications

CD-ROM/RW

● Absolute Maximum Ratings (Ta=25˚C)

Parameter	Symbol	Limits	Unit
Applied voltage (For 5V power supply)	Vcc	7	V
Applied voltage (For motor power supply)	V_M	15	V
Power dissipation	Pd	2200 *1	mW
Operating temperature range	Topr	–20 ~ +75	˚C
Storage temperature range	Tstg	–55 ~ +150 *2	˚C
Output current	I_{OMAX}	3000 *2	mA

*1 Mounted on a glass epoxy board (70mm×70mm×1.6mm)
*1 Derating:17.6mW/˚C for operation above Ta=25˚C.
*2 Do not exceed Pd, ASO and Tj=150˚C.

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●Recommended Operating Conditions (Ta=25˚C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Operating supply voltage	V_{CC}	4.5	—	5.5	V
	V_M	3	—	14	V

●Electrical characteristics (Unless otherwise noted ; Ta=25˚C, Vcc=5V, V_M=12V)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Circuit current 1	Icc1	—	—	0.2	mA	Stand-by mode
Circuit current 2	Icc2	3.0	7.5	14	mA	
Power save ON voltage	V_{PSON}	—	—	1.0	V	Stand-by mode
Power save OFF voltage	V_{PSOFF}	2.5	—	—	V	
Input bias current	I_{HA}	–8.0	–1.8	—	μA	
Minimum input level	V_{INH}	60	—	—	mVpp	
Offset voltage (+)	$Ecofs_+$	10	40	70	mV	
Offset voltage (–)	$Ecofs_-$	–70	–40	–10	mV	
Output ON resistance	R_{ON}	—	0.7	1.0	Ω	Io=±600mA (upper+ower)
Output limit voltage	V_{TL}	0.15	0.21	0.27	V	R_{NF}=0.33Ω

●Application Circuit