

# PMW motor driver IC for slim type CD-ROM

## BH6530KV / BH6534KV

BH6530KV / BH6534KV is a motor driver IC developed for CD-ROM, and DVD-ROM. This IC integrates 3-phase PMW driver for driving spindle motor and PMW driver for driving feed motor.

BH6530KV	FG signal 1 phase output
BH6534KV	FG signal 3 phase synthesis output

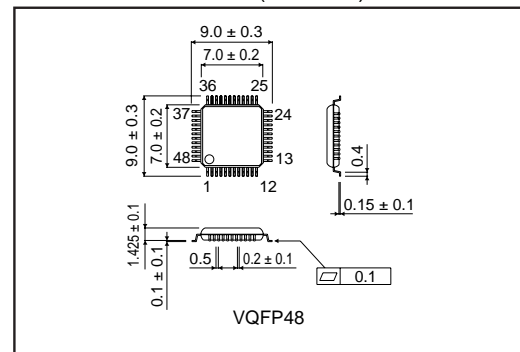
### ●Applications

CD-ROM slim, DVD-ROM slim set

### ●Features

- 1) OP amp. is incorporated for input of each driver to construct filter easily.
- 2) Built-in low ON resistance power MOS.
- 3) Built-in current limit, hall bias, FG output and inversion protection for 3-phase PWM driver.
- 4) Built-in standby circuit.
- 5) Built-in thermal shutdown circuit.
- 6) High-efficient CD drive system achieved by using this IC and 2ch PWM driver BH6526FV in pairs.

### ●External dimensions (Unit : mm)



### ●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Supply voltage	Vcc	9	V
Power dissipation	Pd	1180 *1	mW
Operating temperature range	Topr	-30 to +85	°C
Storage temperature range	Tastg	-55 to +150	°C
Max.output current	IoMAX	3 *2	A

\*1 Derating : 9.5mW/°C for operation above Ta=25°C.

\*2 Intermittent current at maximum applied time of 5 msec, 1/10 duty (max.)

### ●Recommended operating conditions (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Supply voltage	PRE / POW Vcc	4.5	5.0	5.5	V

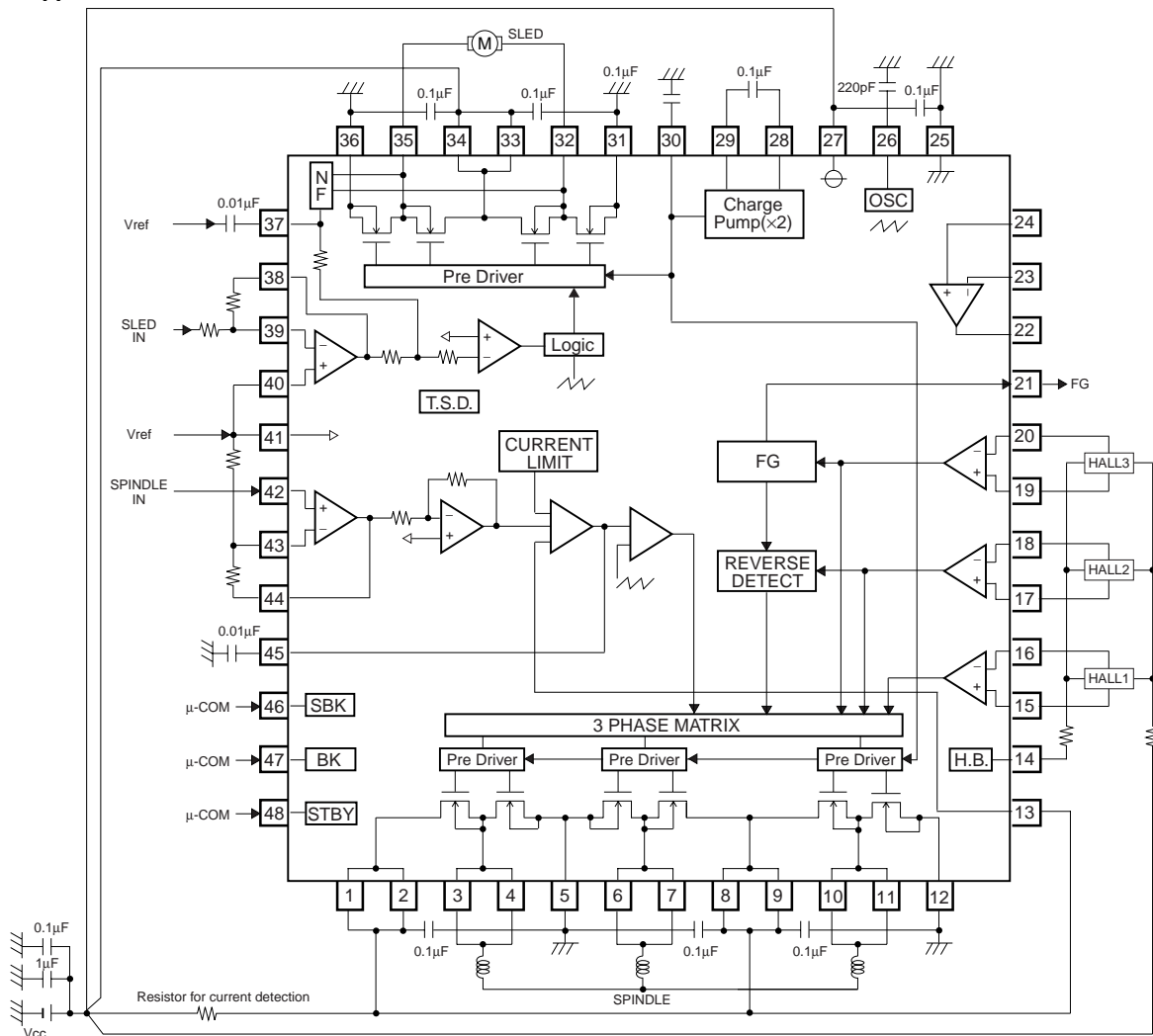
## Optical disc ICs

## ●Electrical characteristics

( Unless otherwise noted,  $T_a=25^{\circ}\text{C}$ ,  $V_{cc}=5\text{V}$ ,  $V_{ref}=1.65\text{V}$ ,  $R_L(\text{SL})=8\Omega+47\mu\text{H}$ ,  $R_L(\text{SP})=2\Omega+47\mu\text{H}$ ,  $R_{NF}=0.33\Omega$  )

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Current in standby mode	I <sub>ST</sub>	–	0	0.1	mA	
< PWM driver >						
Input dead zone (one side)	V <sub>DZ1</sub>	0	20	50	mV	
Voltage gain	G <sub>VC</sub>	12	14	16	dB	
Output ON resistance	R <sub>ON1</sub>	–	0.8	1.6	$\Omega$	I <sub>o</sub> =500mA
< 3-phase motor driver >						
Input dead zone (one side)	V <sub>DZ2</sub>	2	50	150	mV	
Input-output gain	gm <sub>2</sub>	0.40	0.55	0.70	A/V	R <sub>NF</sub> =0.33 $\Omega$
Output ON resistance	R <sub>ON2</sub>	–	0.5	1.0	$\Omega$	I <sub>o</sub> =500mA
Torque limit voltage	V <sub>LIM2</sub>	0.16	0.20	0.24	V	R <sub>NF</sub> =0.33 $\Omega$

## ●Application circuit



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