

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

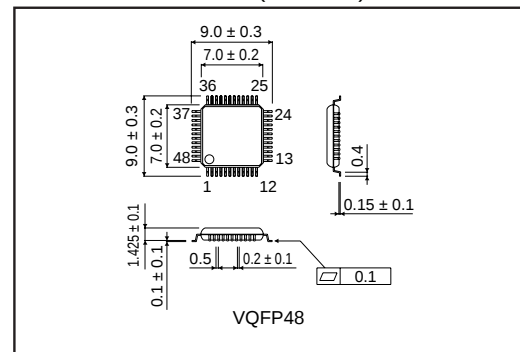
●Applications

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 _{ST}	—	0	0.1	mA	
< PWM driver >						
Input dead zone (one side)	V _{DZ1}	0	20	50	mV	
Voltage gain	G _{VC}	12	14	16	dB	
Output ON resistance	R _{ON1}	—	0.8	1.6	Ω	I _o =500mA
< 3-phase motor driver >						
Input dead zone (one side)	V _{DZ2}	2	50	150	mV	
Input-output gain	gm ₂	0.40	0.55	0.70	A/V	R _{NF} =0.33 Ω
Output ON resistance	R _{ON2}	—	0.5	1.0	Ω	I _o =500mA
Torque limit voltage	V _{LIM2}	0.16	0.20	0.24	V	R _{NF} =0.33 Ω

●Application circuit

