



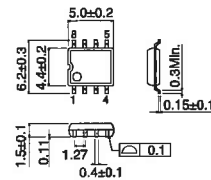
For Brush Motors  
**H-bridge Drivers(18V max.)**

## BD6221F

### ● Description

The BD6221F H-bridge driver for brush motors features a maximum rated voltage of 18V and an output current of 1A. A MOSFET is integrated at the output stage, making control via PWM input signals possible. In addition, the product is compatible with conventional VREF voltage settings, simplifying replacement, while power consumption is reduced.

### ● Dimension (Unit : mm)



SOP8

### ● Features

- 1) Single H-bridge driver configuration
- 2) Low standby current
- 3) Supports PWM control signal input (20kHz to 100kHz)
- 4) VREF voltage setting pin enables PWM duty control
- 5) Cross conduction prevention circuit
- 6) Four protection circuits provided :  
 OCP,OVP,TSD and UVLO

### ● Applications

Audio visual consumer products such as VCR, CD/DVD players  
 PC peripherals such as Optical storage devices, Printers  
 Car audios and Car navigation systems

### ● Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Supply voltage	VCC	18	V
Output current	IOMAX	1.0 *1	A
All other input pins	VIN	-0.3 ~ VCC	V
Operating temperature	TOPR	-40 ~ +85	°C
Storage temperature	TSTG	-55 ~ +150	°C
Power dissipation	Pd	0.687 *2	W
Junction temperature	Tjmax	150	°C

\*1 Do not exceed Pd or ASO

\*2 Derating : 5.5mW/°C for operation above Ta=25°C (70mmx70mm, t=1.6mm glass epoxy mounting.)

- The specifications for the product described in this document are for reference only. Upon actual use, therefore, please request that specifications to be separately delivered.
- The application circuit examples, information, and various data pertaining to the use of the products presented in this documentation are provided for reference purposes only.
- Please note that ROHM cannot bear any responsibility regarding any problems relating to industrial property rights resulting from their use thereof.

The products listed in this catalog are designed to be used with ordinary electronic equipment or devices (such as audio visual equipment, office-automation equipment, communications devices, electrical appliances and electronic toys).  
 Should you intend to use these products with equipment or devices which require an extremely high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), please be sure to consult with our sales representative in advance.

Current specifications in effect of 1st. January 2007.

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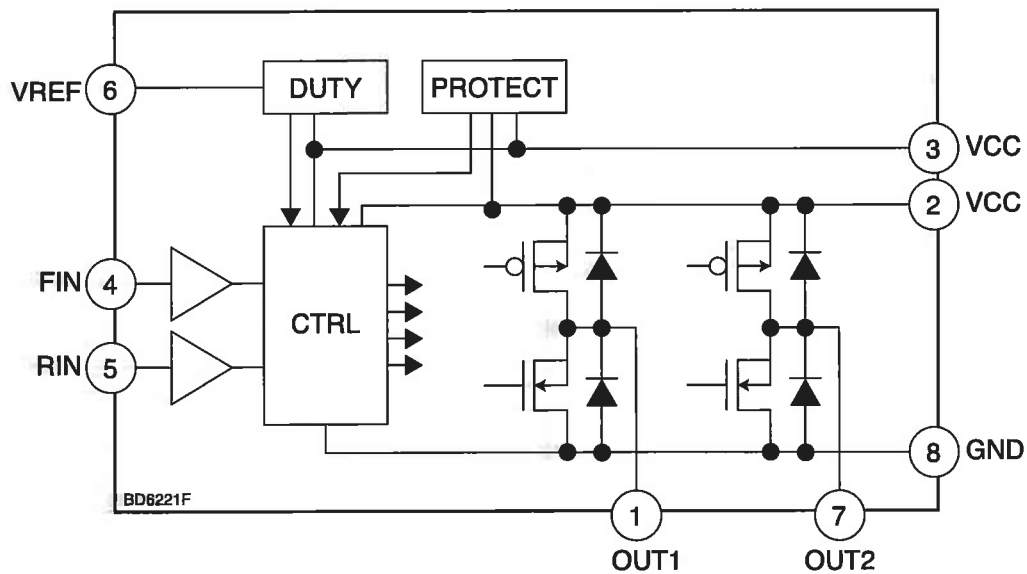
● Operating Conditions (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Supply voltage	VCC	6	-	15	V
Torque setting pin	VREF	3	-	15	V

● Electrical characteristics (Unless otherwise specified; Ta=25°C, VCC=VREF=12V)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Supply current	ICC	0.8	1.3	2.5	mA	Forward / Reverse / Brake
Standby current	ISTBY	-	0	10	μA	Standby
Input high voltage	VIH	2.0	-	-	V	
Input low voltage	VIL	-	-	0.8	V	
Input bias current	IiH	30	50	100	μA	VIN=5.0
Output ON resistance	RON	1.0	1.5	2.5	Ω	Io=0.5A, vertically total
VREF bias current	IvREF	-1.0	0	10	μA	VREF=VCC
PWM input frequency	FPWM	20	25	35	kHz	VREF=9V
Input frequency range	FMAX	20	-	100	kHz	FIN/RIN

● Block Diagram



Pin	Name	Function
1	OUT1	Driver output
2	VCC	Power supply
3	VCC	Power supply
4	FIN	Control Input(forward)
5	RIN	Control Input(reverse)
6	VREF	Duty setting pin
7	OUT2	Driver output
8	GND	GND