

# Reversible motor driver

## BA6208 / BA6208F

The BA6208 and BA6208F are monolithic ICs used for driving reversible motors. They allow control of reversible motors in cassette players and other electrical equipment by using TTL-level logic signals.

The ICs contain a logic section, which controls forward and reverse rotations as well as forced stop, and an output power section, which can supply an output current of up to 100mA (typical) according to the logic control.

●Features

- 1) Motor driving power transistors are built in (100mA typically).
- 2) Brake is applied when stopping the motor (when inputs A and B are both HIGH level).
- 3) Built-in diode to absorb surge currents.
- 4) Very low standby circuit current when inputs A and B are both LOW level.
- 5) Wide range of operating supply voltage (4.5 ~ 15.0V).
- 6) Direct control with the TTL logic.

●Absolute maximum ratings (Ta = 25°C)

Parameter		Symbol	Limits	Unit
Power supply voltage		V <sub>CC</sub>	18	V
Power dissipation	BA6208	P <sub>d</sub>	700* <sup>1</sup>	mW
	BA6208F	P <sub>d</sub>	450* <sup>2</sup>	
Operating temperature		T <sub>opr</sub>	-20~+60	°C
Storage temperature		T <sub>stg</sub>	-55~+125	°C
Maximum output current		I <sub>OUT</sub>	500	mA

\* 1 Reduced by 7 mW for each increase in Ta of 1°C over 25°C.

\* 2 Reduced by 4.5 mW for each increase in Ta of 1°C over 25°C.

●Recommended operating conditions (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Power supply voltage	V <sub>CC</sub>	4.5	—	15	V

●Input truth table

3pin (Ain)	2pin (Bin)	8pin (Aout)	7pin (Bout)
H	L	H	L
L	H	L	H
H	H	L	L
L	L	OPEN	OPEN

Note : HIGH level input is 2.0 V or more.

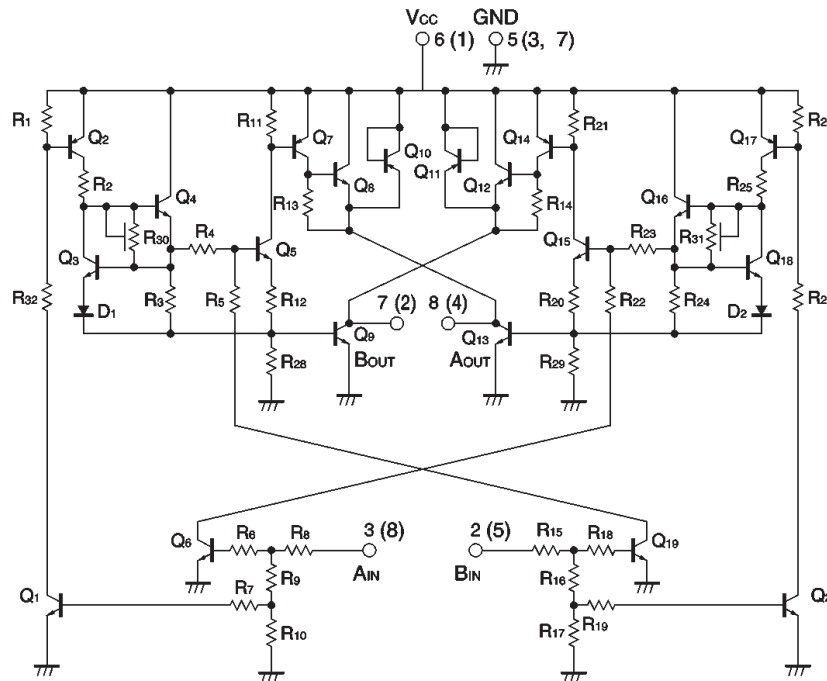
LOW level input is 0.8 V or less.

●Electrical characteristics (unless otherwise noted,  $T_a = 25^\circ\text{C}$  and  $V_{CC} = 9\text{V}$ )

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Output current	$I_o$	200	—	—	mA	
Output saturation voltage	$V_{CE}$	—	—	1.6	V	$I_o=100\text{mA}$
Input high level voltage	$V_{IH}$	2.0	—	—	V	
Input low level voltage	$V_{IL}$	—	—	0.8	V	
Standby supply current	$I_{ST}$	—	—	0.4	mA	When inputs A and B are both LOW level
Input high level current	$I_{IH}$	—	—	400	$\mu\text{A}$	$V_{IH}=4.5\text{V}$

A diode that absorbs at least 500 mA is built in to give protection against surge currents with a pulse width of 10 ms and a duty ratio of 10% or less.

●Internal circuit configuration



Note : Figures in parentheses are for the BA6208F

Fig.1

●External dimensions (Units: mm)

