Reversible motor driver

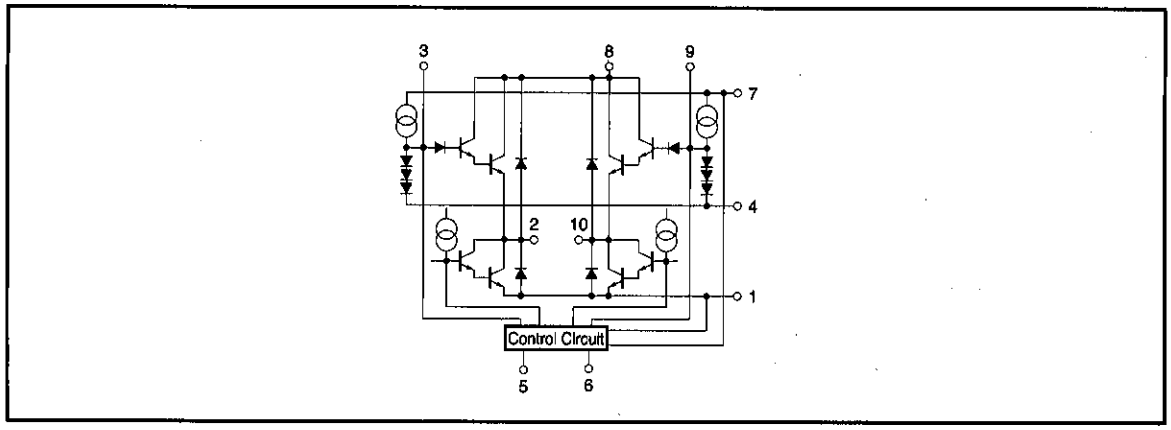
BA6229

The BA6229 is a monolithic IC used for driving reversible motors. The ICs contain a logic section by which brake and open modes can be set and an output power transistor by which forward and reverse operations are controlled.

●Features

1) Built-in power transistor for motor driving (1.2A maximally).
2) Low quiescent current. (V_{CC}=12V, I_Q=1mA)
3) Wide range of operating supply voltage (8 ~ 23V).
4) Interfaces with CMOS devices.
5) Four output modes : forward, reverse, stop (open), and brake.
6) Built-in diode absorbs surge currents.

●Block diagram



●Absolute maximum ratings (Ta=25℃)

Parameter	Symbol	Limits	Unit
Power supply voltage	V_{CC}	24	V
Power dissipation	Pd	2.2*1	W
Operating temperature	Topr	−25~75	℃
Storage temperature	Tstg	−55~125	℃
Output current	I_{OUT}	1.2*2	A
Input voltage	V_{IN}	−0.3~V_{CC}	V

*1 Refer to the power dissipation characteristics for details.

*2 500 μs pulse with a duty ratio of 1%.

●Measurement circuit

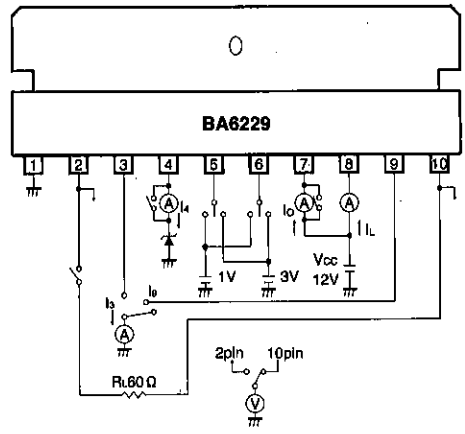
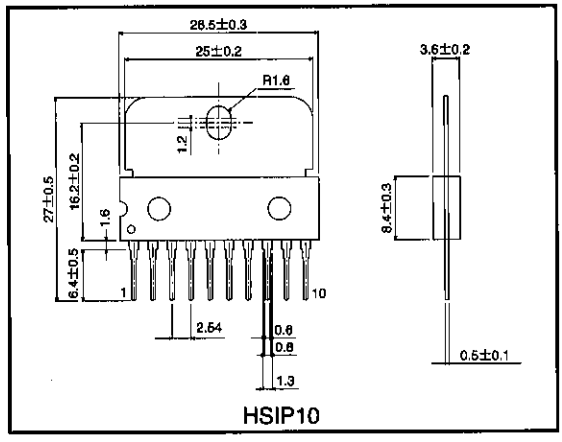


Fig.1

●Electrical characteristics (Unless otherwise noted, Ta=25℃ and V_{CC1}=12V)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions	Measurement Circuit
Operating voltage 1	V_{CC1}	8.0	—	23	V	—	Fig.1
Operating voltage 2	V_{CC2}	8.0	—	23	V	—	Fig.1
Quiescent current	I_Q	—	1	3	mA	R_L=∞	Fig.1
Input threshold voltage of pins 5 and 6	V_T	1	2	3	V	R_L=∞	Fig.1
HIGH level output voltage for pins 2 and 10	V_H	6.5	7.0	8.0	V	R_L=60Ω 5pin= "L", 6pin= "H" 5pin= "H", 6pin= "L"	Fig.1
LOW level output voltage for pins 2 and 10	V_L	—	0.8	1.2	V	R_L=60Ω 5pin= "L", 6pin= "H" 5pin= "H", 6pin= "L"	Fig.1
Output leakage current	I_L	—	—	500	μA	Current flowing into pin 8 when pins 5 and 6 are both HIGH or both LOW	Fig.1
Pin-4 bias current	I_4	0.3	0.7	1.8	mA	R_L=60Ω	Fig.1
Constant current of pins 3 and 9	I_3, I_9	0.4	0.8	2	mA	6pin= "H", 9pin=GND 5pin= "H", 3pin=GND	Fig.1

●External dimensions (Units: mm)



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