Description

TA6586 is a monolithic IC designed for driving bi-directional DC motor. It has two pins of logic inputs for controlling the direction, forward and backward.
The circuit feature good anti-interference performance, small standby current and low output saturation pressure drop. It has a built-in clamp diode to reverse the impact of the release of inductive load current, making it in the drive relays, DC motors, stepper motors or control the use of switching power safe and reliable.
TA6586 is suitable for toy vehicles, remote-controlled aircraft motor drive, automatic valve motor, electromagnetic lock drive, precision instruments and other circuits.

Features

- Low stand-by current: ≦2uA
- Wide supply voltage range 3.0V~14V
- Built-in Brake Function
- Thermal Shutdown protection
- Over Current Limit and Short Circuit Protect Function
- DIP8 Pb-Free package.

Pin Function

Pin NO	Name	Function
1	BI	Backward input
2	FI	Forward input
3	GND	Ground
4	Vcc	Vcc
5, 6	FO	Forward output
7, 8	BO	Backward output

Input Truth Table

2pin Finput	1pin Binput	5,6pin Foutput	7,8pin Boutput
H	L	H	L
L	H	L	H
H	H	L	L
L	L	Open	Open

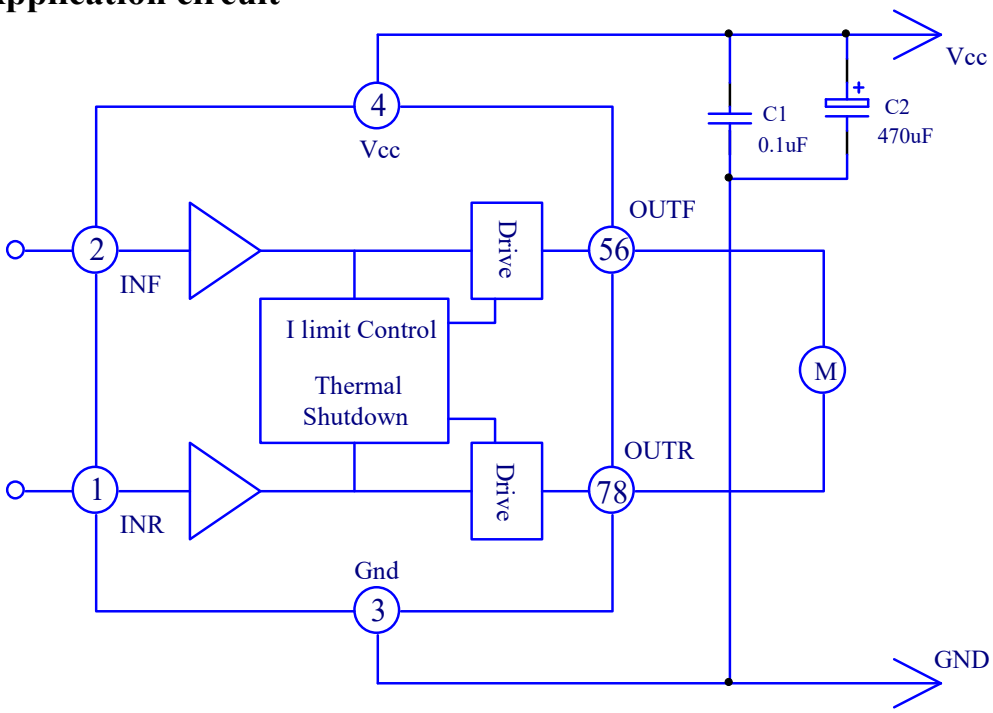
Absolute Maximum Rating

Parameter	Symbol	Rating	Unit
Maximum supply voltage	Vcc	15	V
Output current	Iout	9	A
Operating Temperature	Top	-25~+85	℃
Storage temperature	Tstg	-55~+150	℃

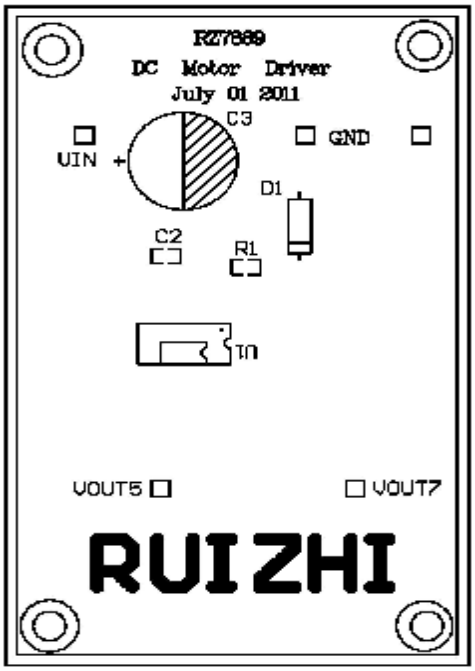
Electrical Characteristics (Vcc=6V,Ta=25°C , unless otherwise specified)

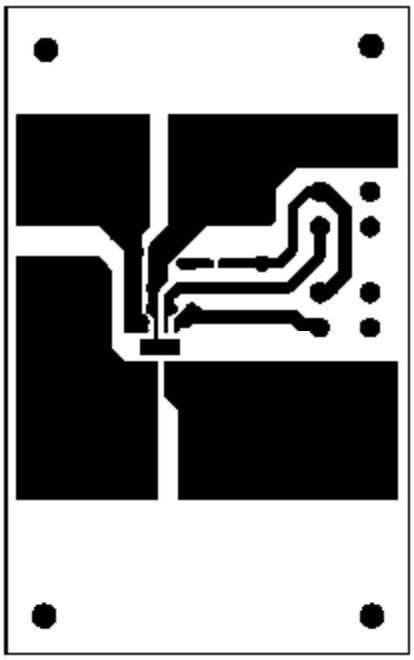
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Operating Voltage	V_{OPR}		3.0	--	14	V
Stand-by Current	Is	Vcc = 9V Vi = 0			2	uA
No-load Operating Current	Icc	Vcc = 6V V1 = 3V Open load	2	4	7	mA
High Output Voltage	VH_{OUT}	Vcc = 6V Io =3A	5.5	5.7	5.9	V
Low Output Voltage	VL_{OUT}	Vcc = 6V Io = 3A	0.05	0.12	0.3	V
High Input Voltage	ViH		2.2	3.5	6	V
Low Input Voltage	ViL			0.5	0.7	V
Input Current (2V)	Ii	Vcc = 6V Vi = 2V		70	100	uA
Input Current (3V)	Ii	Vcc = 6V Vi = 3V		100	150	uA
Continuous Output current	Iout	Around of the no.5.6,7,8 pins needs copper to auxiliary heat dissipation		5	7	A
Thermal shutdown temperature	Totp			130		℃

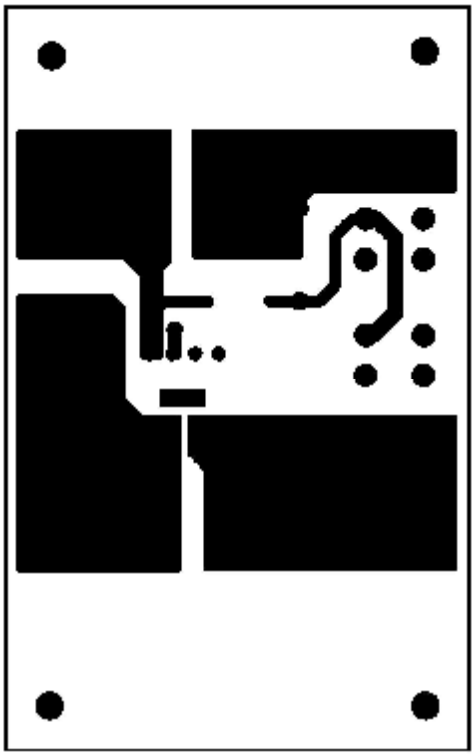
Application circuit



Test PCB Board







Package Type DIP8