TC1508S(File No:S&CIC1061) Dual Channel DC Motor Driver

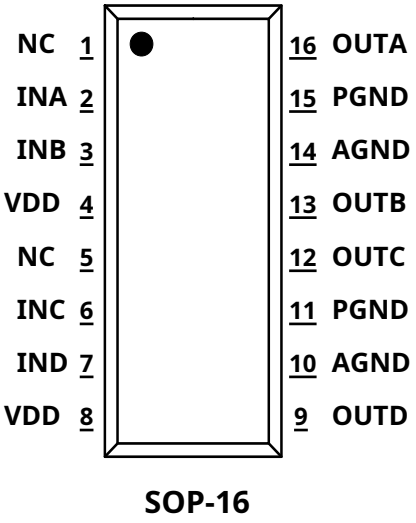
1. Characteristics

- Dual channel built-in powerMOSFull bridge driver
- Drive forward, reverse, stop and brake functions
- Ultra-low standby and operating current
- Low on-resistance (1.0Ω)
- The maximum continuous output current can reach1.8A/per channel, peak2.5A
- Wide voltage operating range
- useSOP-16Package form

2. Product application

- Toy motor drive

3. Pin diagram and pin description



SOP-16

serial number	symbol	Function Description
1	NC	hanging in the air
2	INA	joinINBDetermine status
3	INB	joinINADetermine status
4	VDD	Positive pole of power supply
5	NC	hanging in the air
6	INC	joinINDDetermine status
7	IND	joinINCDetermine status
8	VDD	Positive pole of power supply
9	OUTD	full bridge outputDend
10	AGND	land
11	PGND	land
12	OUTC	full bridge outputCend
13	OUTB	full bridge outputBend
14	AGND	land
15	PGND	land
16	OUTA	full bridge outputAend

Four, absolute maximum ratings

parameter	symbol	Rating	unit
voltage	VCC	5.5	V
control input voltage	VIN	VCC	V
Power consumption	Pd	1.73	W
Thermal resistance	θJA	75	℃/W
Operating temperature	Topr	- 20~85	℃
Junction temperature	Tj	150	℃
storage temperature	Txt	- 55~150	℃
Output current peak value/channel	Iop	2.5	A
Maximum continuous output current/channel	ioc	1.8	A

5. Recommended working conditions(Ta=25℃)

parameter	symbol	Parameter value	unit
voltage	VCC	2.2~5.5	V
control input voltage	VIN	0~VCC	V
Forward and reverse output current	Iout	1.8	A

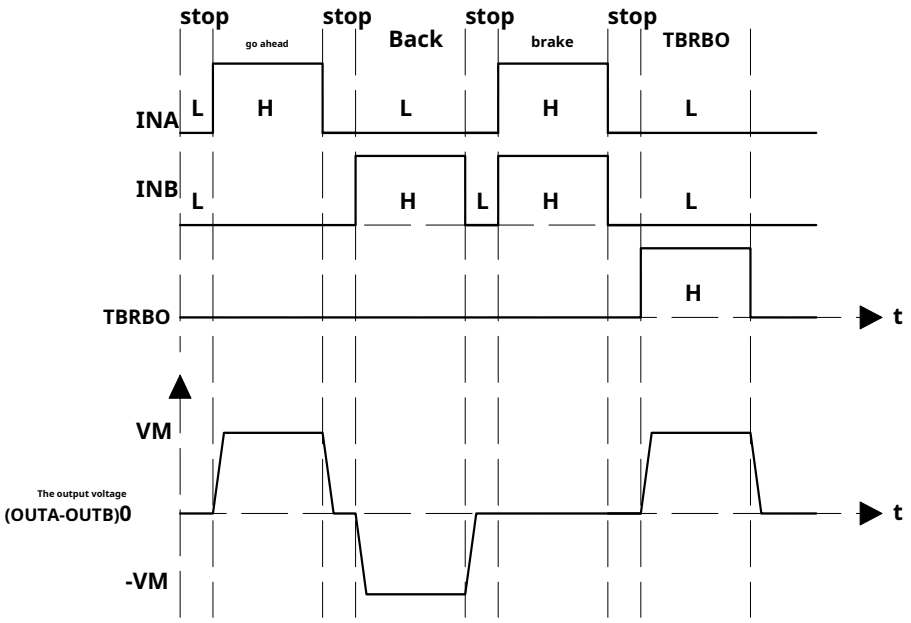
6. Electrical Characteristics(Ta=25℃,VCC=3V,RL=15Ω, except for special instructions.)

parameter	symbol	Test Conditions	minimum value	Typical value	maximum value	unit
Overall line						
circuit shutdown current	ICCST	INA=INB=1	—	0	10	uA
Working current	ICC	INA=H, INB=L or INA=L, INB=H or INA=H, INB=H	—	0.3	1	mA
control input						
High level input voltage	VINH		2.0	—	—	V
low level input voltage	VINL		—	—	0.8	V
High level input current	IINH	VIN=3V	—	5	20	uA
Low level input current	IINL	VIN=0V	- 1	0	—	uA
Pull-down resistor	RIN		—	1.5	—	MΩ
drive						
Output on-resistance	RON	Io=±200mA	—	1	1.6	Ω
diode						
Leakage current	IDLEAK	VCC=5V	—	—	100	uA
Diode conduction voltage	VD	IOUT=400mA	—	—	1.7	V

7. Input/output logic table

enter				output				Way
INA	**INB**	**INC**	**IND**	**OUTA**	**OUTB**	**OUTC**	**OUTD**	
L	L			Hi-Z	Hi-Z			Standby
H	L			H	L			go ahead
L	H			L	H			Back
H	H			L	L			brake
		L	L			Hi-Z	Hi-Z	Standby
		H	L			H	L	go ahead
		L	H			L	H	Back
		H	H			L	L	brake

eight, Input/output waveform

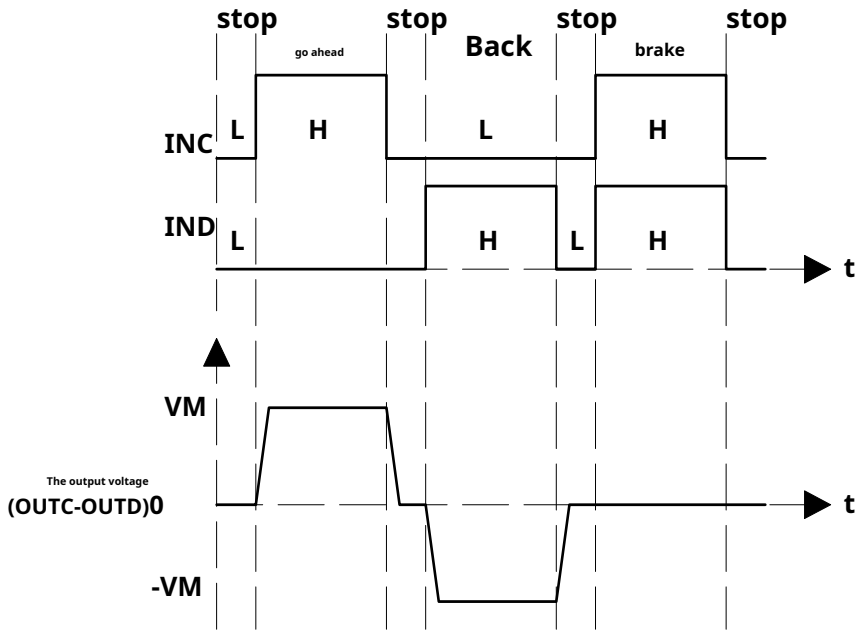


Nine, Precautions for using chips

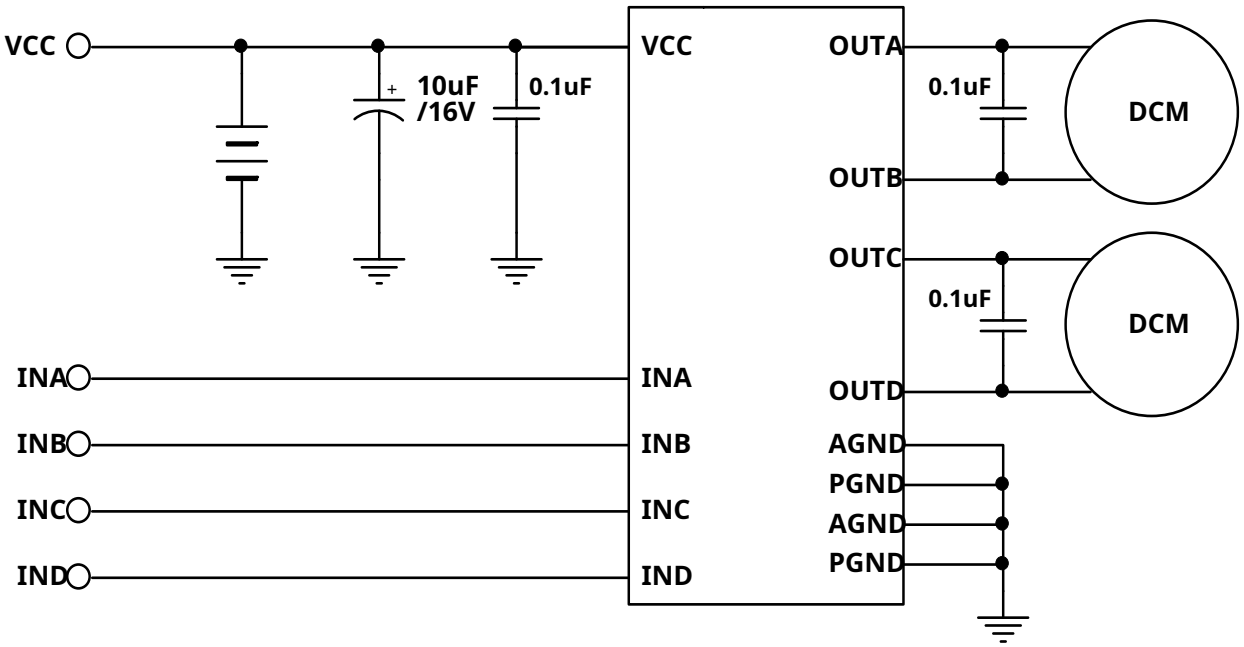
1,above use The recommended circuit and parameters are only suitable for ordinary remote control car toys, other toys and motor drives are usedTC1508SPlease base your decision on the actual situation.

2,continued in reality use, please consider a certain margin according to the product. Current drive capability is affected by package type,VDD,VCC, chip differences and environmental temperature and other factors, the parameters given in the specification are for reference only. In actual

3,TC static electricity 1508SuseMOSThe process design and manufacturing is sensitive to static electricity, so precautions must be taken during the entire process of packaging, transportation, processing and production.



10. Reference circuit



eleven, **Package size chart**