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NTE7064 Integrated Circuit Bridge Driver for DC Motor Control

Description:

The NTE7064 is an integrated circuit in a 7-Lead SIP type package designed for use as a bridge driver for brushed DC motor rotation control. Forward rotation, reverse rotation, stop, and braking operations are available. Typical applications include a loading and reel motor driver for VCR and tape deck, and any other consumer and industrial applications.

Features:

- Output Current Up to: 1 Amp (Average), 3 Amp (Peak)
- 4 Function Modes (CW, CCW, STOP, and BRAKE) are Controlled by 2 Logic Signals Fed Into 2 Input Terminals
- Built-In Over Current Protection and Thermal Shut-Down Circuit
- Operating Voltage Range: $V_{CC} = 6V$ to $18V$

Absolute Maximum Ratings: ($T_A = +25^{\circ}C$ unless otherwise specified)

Supply Voltage, V_{CC}

Peak	25V
Operating	18V

Output Current, I_O

Average	1A
Operating	3A

Power Dissipation ($T_C = +75^{\circ}C$), P_D 12.5W

Operating Temperature Range, T_{opr} -30° to $+75^{\circ}C$

Storage Temperature Range, T_{stg} -55° to $+150^{\circ}C$

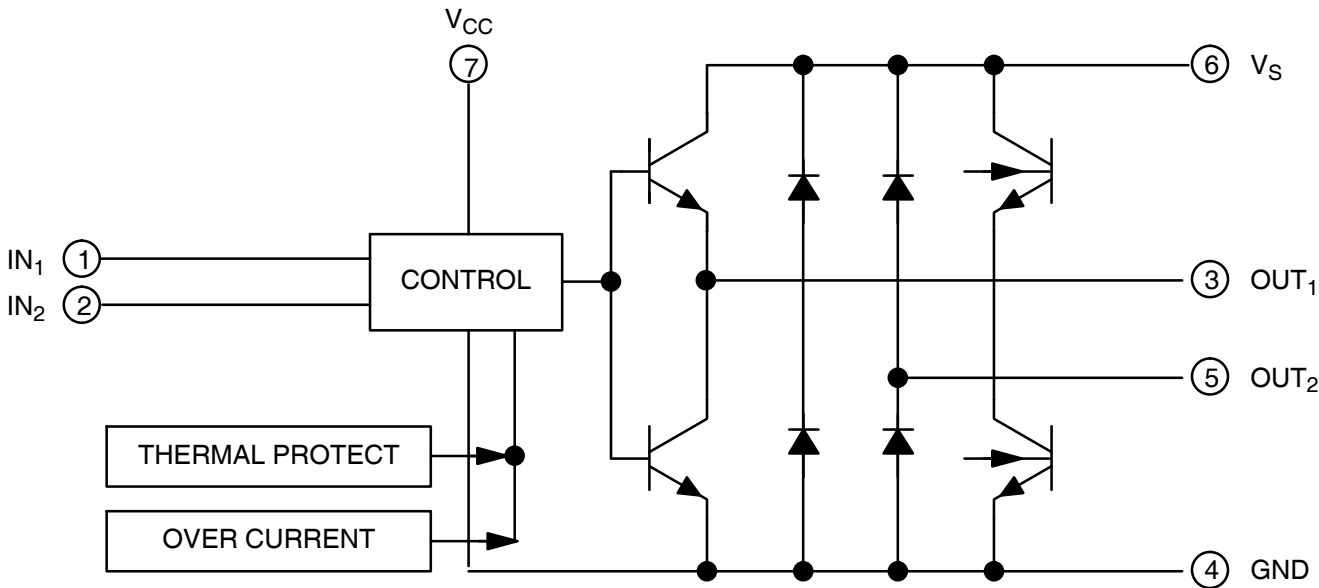
Electrical Characteristics: ($T_A = +25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Current	I_{CC1}	$V_{CC} = 18V$, Output OFF, Stop Mode	–	1.8	3.5	mA
	I_{CC2}	$V_{CC} = 18V$, Output OFF, CW/CCW Mode	–	8.3	12.0	mA
	I_{CC3}	$V_{CC} = 18V$, Brake Mode	–	8.5	13.0	mA

Electrical Characteristics (Cont'd): ($T_A = +25^{\circ}\text{C}$ unless otherwise specified)

Parameter		Symbol	Test Conditions	Min	Typ	Max	Unit
Saturation Voltage	Upper	$V_{S1\ U}$	$V_{CC} = 18\text{V}, I_O = 100\text{mA}$	–	–	1.1	V
	Lower	$V_{S1\ L}$		–	–	1.0	V
	Upper	$V_{S2\ U}$	$V_{CC} = 18\text{V}, I_O = 1\text{A}$	–	1.2	1.5	V
	Lower	$V_{S2\ L}$		–	1.05	1.4	V
Output Transistor Leakage Current	Upper	$I_{L\ U}$	$V = 25\text{V}$	–	–	50	μA
	Lower	$I_{L\ L}$		–	–	50	μA
Input Voltage	IN 1	$V_{IN\ (H)}$	$T_J = +25^{\circ}\text{C}, \text{Pin1 and Pin2}$	3.0	–	–	V
	IN 2	$V_{IN\ (L)}$		–	–	0.8	V
Diode Forward Voltage	Upper	$V_{F\ U}$	$I_F = 1\text{A}$	–	2.0	–	V
	Lower	$V_{F\ L}$		–	1.3	–	V
Limiting Current		I_{SC}		–	2.5	–	A
Input Current 1, 2		$I_{IN\ 1,2}$	$T_J = +25^{\circ}\text{C}, \text{Pin1 and Pin2}$	–	1	30	μA

Block Diagram



IN 1	IN 2	OUT 1	OUT 2	MODE
1	1	L	L	Brake
0	1	L	H	CW/CCW
1	0	H	L	CCW/CW
0	0	High Impedance		Stop

Pin Connection Diagram (Front View)

