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NTE1774 Integrated Circuit Dual, Bi-Directional Motor Driver

Description:

The NTE1774 is a dual bidirectional motor driver. Since each channel has a 2-input logic circuit and performs bidirectional driving and braking functions, it is capable of direct driving motors of various types rated at 6V to 24V. The output voltage can be varied by the use of external zener diodes.

This device is especially suited for dual motor drive (reel motor, loading motor, cassette motor in VCR) and for stepping motor drive applications.

Features:

- Able to Withstand 1A (Max) Dash Current with Contained Motor Drive Power Transistor
- Performs Braking Function at the Motor Stop Mode
- Contains Elements to Absorb Motor Dash Current
- Direct Input Connection for MOS LSI
- Minimum Number of External Parts Required
- Wide Operating Voltage Range

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

Maximum Supply Voltage, V_{CCmax}	25V
Input Voltage, V_{IN}	25V
Output Current, I_O	$\pm 1A$
Allowable Power Dissipation, P_{Dmax}	1.9W
Operating Temperature Range, T_{opr}	-25° to $+75^\circ$
Storage Temperature Range, T_{stg}	-55° to $+125^\circ\text{C}$

Recommended Operating Conditions: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Supply Voltage, V_{CC}	7V to 25V
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Electrical Characteristics: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Current Dissipation	I_{CC}	Braking Mode, $R_L = \infty$ (Per Channel)	–	7	10	mA
Output Leakage Current	I_{OL}	Braking Mode, $R_L = \infty$ (Per Channel)	–	40	120	μA
Input Threshold Voltage	V_{th}	$R_L = \infty$	0.9	1.05	1.20	V
Output Voltage	V_O	$R_L = 60\Omega$, $V_Z = 7.4V$	6.5	7.2	7.5	V
Output Transistor Saturation Voltage Upper	V_{sat1}	$I_{OUT} = 300\text{mA}$	–	1.9	2.3	V
		$I_{OUT} = 500\text{mA}$	–	2.0	2.4	V
Output Transistor Saturation Voltage Lower	V_{sat2}	$I_{OUT} = 300\text{mA}$	–	0.3	0.55	V
		$I_{OUT} = 500\text{mA}$	–	0.5	0.7	V

Pin Connection Diagram

