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NTE7089 Integrated Circuit Motor Control Circuit

Description:

The NTE7089 is an integrated circuit in a TO126 type package designed for the rotation control of a compact DC motor which is used for a tape recorder, record player, etc.

Features:

- Small, Three-Lead Plastic Package for Compact Motor
- Large Starting Torque
- Wide Range of Operating Voltage
- Stable Standard Voltage: $V_{CC} = 4.5$ to $16V$
- Highly Stable Operation over a Wide Range of Supply Voltages and Temperature

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

Supply Voltage (Note 1), V_{CC}	16V
Supply Current, I_{CC}	1000mA
Power Dissipation (Note 2), P_D	1300mW
Operating Ambient Temperature Range, T_{opr}	-20° to $+70^\circ C$
Storage Temperature Range, T_{stg}	-40° to $+150^\circ C$

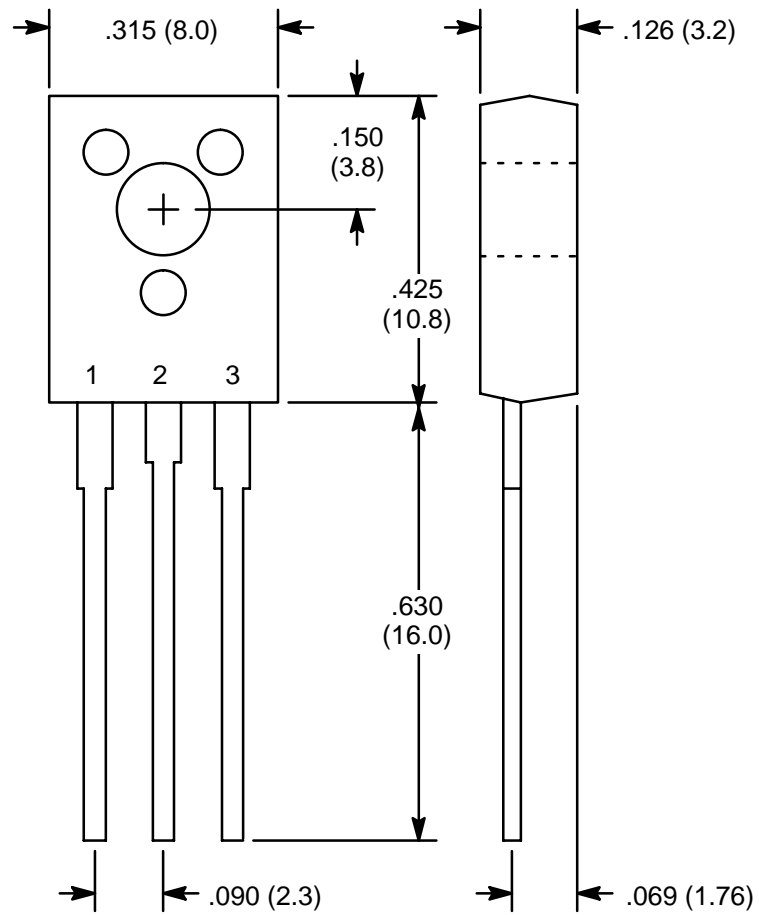
Note 1. Voltage is not directly applied to IC pin. Apply 14.4V to it, if necessary.

Note 2. $T_A = +25^\circ C$, with a 10 x 10mm bakelite printed circuit board (35 μ m Cu leaf).

Electrical Characteristics: ($T_A = +25^\circ C$, $V_{CC} = 12V$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Static Circuit Current	I_{CQ}	$I_1 = 0$	–	–	2.4	mA
Reference Voltage	V_{3-1}	$R_a = 1k\Omega$	1.07	1.22	1.37	V
Starting Current	I_a	$V_{CC} = 4.5V, R_a = 5\Omega$	450	–	–	mA
Voltage Variation Characteristics for Rotating Speed	$ \Delta N_V $	$V_{CC} = 10$ to $16V$	–	–	20	rpm/V
Time Drift Characteristics for Rotating Speed	ΔN_T	$I_{CC} = 64mA$	–	-0.2	–	%
Temperature Variation Characteristics for Rotating Speed	ΔN_A	$T_A = -10^\circ$ to $+60^\circ C$, Note 3	–	± 50	–	ppm/ $^\circ C$

Note 3. In case that only IC temperature is changed.



Pin 1. Motor Pin
2. GND
3. Control Pin