

NTE2076 Integrated Circuit 7–Segment Darlington Transistor Array w/Clamp Diode

Description:

The NTE2076 is constructed with a 7–circuit Darlington Transistor Array by a NPN Transistor and is a semi–conductor integrated circuit (IC) which can drive large electric current with very small input current.

Features:

- High Electric Voltage Endurance ($BV_{CEO} \geq 40V$)
- Large Electric Current Drive ($I_C (\text{max}) = 150\text{mA}$)
- Convenient for Practical Attachment
- Available to Drive with PMOS IC Output
- Clamp Diode Attached
- Wide Input Voltage Range ($-40V$ to $+40V$)
- Wide Operating Temperature Range ($T_A = -20^\circ$ to $+75^\circ\text{C}$)

Applications:

Attachment relay or printer drive, digit drive of LED and lamps indicator device, interface of MOS bipolar–logic IC, etc.

Absolute Maximum Ratings: ($T_A = -20^\circ$ to $+75^\circ\text{C}$ unless otherwise specified)

Voltage Between Collector and Emitter when Output is “High”, V_{CEO}	–0.5 to +40V
Collector Current when Output is “Low”, each Current for a Circuit, I_C	150mA
Input Voltage, V_i	–40 to +40V
Clamp Diode Positive–Direction Current, I_r	150mA
Clamp Diode Negative–Direction Voltage, V_a	40V
Power Consumption ($T_A = +25^\circ\text{C}$), P_d	1.47W
Operating Ambient Temperature Range, T_{opr}	–20° to +75°C
Storage Temperature Range, T_{stg}	–55° to +125°C

Electrical Characteristics: ($T_A = -20^\circ$ to $+75^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage	V_O		0	–	40	V
Collector Current	I_C	Duty Cycle 40% or less (each current for a circuit)	0	–	150	mA
“High” Input Voltage	$V_{“H”}$	$I_C = 150\text{mA}$	7	–	35	V
“Low” Input Voltage	$V_{“L”}$	$I_{O(\text{Leak})} = 50\mu\text{A}$	0	–	1	V

Pin Connection Diagram

