

## NTE2081 Integrated Circuit 7-Stage Driver Array

**Features:**

- Low Output Saturation Voltage
- Built-In Diodes for Absorption of Output Surge
- Built-In Base Current Limiting Resistor (3kΩ Typ)
- With 7 Units, it is Ideal for 14-Digit Printers

**Applications:**

- Driving Battery-Operated Compact Printers (Especially LCD Type)
- Driving Various Relays
- Driving LED Lamps and Other Display Elements
- Interfacing with MOS or Bipolar Logic IC

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

Output Supply Voltage, $V_{OUT}$ .....	-0.3V to +11V
Input Supply Voltage, $V_{IN}$ .....	-0.3V to +8V
Maximum Power Supply Voltage, $V_{CCmax}$ .....	-0.3V to +9V
Output Inflow Current (Per Unit, at $V_{IH}$ ), $I_{OUT}$ .....	100mA
Instantaneous Output Inflow Current (Per Unit, Note 1), $I_{op}$ .....	150mA
Spark-Killer Diode Forward Current (Per Unit, Note 1), $I_{F(s)}$ .....	150mA
GND-Pin Outflow Current (Note 1), $I_g$ .....	-1050mA
$V_{CC}$ Instantaneous Outflow Current (Note 1), $I_{ccp}$ .....	-1050mA
Allowable Power Dissipation ( $T_A = +55^\circ\text{C}$ ), $P_{Dmax}$ .....	500mW
Operating Ambient Temperature Range, $T_{opg}$ .....	-20° to +80°C
Storage Ambient Temperature Range, $T_{stg}$ .....	-40° to +125°C

Note 1. Pulse Width < 35ms at  $V_{IH}$ , Duty Cycle = 10%.

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

Supply Voltage, $V_{CC}$ .....	3.5V to 9V
Input H-Level Voltage ( $I_{OUT} = 100\text{mA}$ ), $V_{IH}$ .....	8V
Input L-Level Voltage ( $I_{OUT} = 100\mu\text{A}$ ), $V_{IL}$ .....	-0.3V to +0.7V
Minimum Input Current At "L" Level Output ( $I_{OUT} = 100\text{mA}$ , $V_{OUT} = 0.25\text{V}$ , $V_{CC} = 6\text{V}$ ), $I_{IN}$ ..	0.2mA
Load Inductance ("L" With Spark-Killer Diodes Employed), $L_L$ .....	≤ 100mH

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage	$V_{OUT}$	$V_{IN} = 3\text{V}, V_{CC} = 6\text{V}, I_{OUT} = 100\text{mA}$	-	-	0.25	V
		$V_{IN} = 3\text{V}, V_{CC} = 8\text{V}, I_{OUT} = 150\text{mA}$	-	-	0.50	V
		$I_{IN} = 0.2\text{mA}, V_{CC} = 6\text{V}, I_{OUT} = 100\text{mA}$	-	-	0.25	V
Output Sustaining Voltage	$V_{O(sus)}$	$V_{IN} = \text{Open}, t < 10\mu\text{s}, I_{OUT} = 150\text{mA}$	11	-	-	V
Output Leakage Current	$t_{off}$	$V_{IN} = 0.7\text{V}, V_{CC} = 9\text{V}$	-	-	100	$\mu\text{A}$
Input Current	$I_{in}$	$V_{IN} = 7\text{V}, I_{OUT} = 0$	-	1.8	3.0	$\text{mA}$
Spark-Killer Diode Leakage Current	$I_{leak(s)}$	$V_{OUT} = 0, V_{CC} = 8\text{V}$	-	-	30	$\mu\text{A}$
Spark-Killer Diode Forward Voltage	$V_{F(s)}$	$I_{F(s)} = 150\text{mA}$	-	-	1.7	V

**Pin Connection Diagram**

