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NTE2080 Integrated Circuit 7-Stage Driver Array

Features:

- Low Output Saturation Voltage
- Protective Diodes Guard Against Negative Inputs
- Spark Killer Diodes Accommodate L-Loads
- Equipped with a Strobe Terminal to Cut Off Outputs
- With 7 Units, it is Ideal for 14-Digit Printers

Applications:

- Driving Battery-Operated Compact Printers
- 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, $V_{IN(1)}$ | -35V to +20V |
| Strobe Supply Voltage, $V_{IN(2)}$ | 0V to +10V |
| 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 to 20V |
| Input L-Level Voltage ($I_{OUT} = 100\mu\text{A}$), V_{IL} | -30V to +1V |
| ST Input H-Level ($V_{IN} = 20\text{V}$, $I_{OUT} = 100\mu\text{A}$), V_{SH} | 2V to 8V |
| ST Input L-Level ($V_{IN} = 20\text{V}$, $I_{OUT} = 100\mu\text{A}$), V_{SL} | 0V to 0.3V |
| Load Inductance ("L" With Spark-Killer Diodes Employed), L_L | $\leq 100\text{mH}$ |

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

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|------------------------------------|---------------|---|-----|-----|------|---------------|
| Output Voltage | V_{OUT} | $V_{IN} = 8\text{V}, V_{CC} = 6\text{V}, I_{OUT} = 100\text{mA}$ | – | – | 0.25 | V |
| | | $I_{IN} = 300\mu\text{A}, V_{CC} = 6\text{V}, I_{OUT} = 100\text{mA}$ | – | – | 0.25 | V |
| | | $I_{IN} = 300\mu\text{A}, V_{CC} = 8\text{V}, I_{OUT} = 150\text{mA}$ | – | – | 0.5 | 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 | I_{off} | $V_{IN} = 1\text{V}, V_{CC} = 9\text{V}$ | – | – | 100 | μA |
| Input Current | I_{in} | $V_{IN} = 20\text{V}, I_{OUT} = 0$ | – | – | 1.8 | mA |
| Input Leakage Current | I_{Leak} | $V_{IN} = -30\text{V}$ | -10 | – | – | μA |
| Spark-Killer Diode Leakage Current | $I_{leak(s)}$ | $V_{OUT} = 0, V_{CC} = 8\text{V}$ | – | – | 30 | μA |
| Spark-Killer Diode Forward Voltage | $V_{F(s)}$ | $I_{F(s)} = 150\text{mA}$ | – | – | 1.7 | V |
| Power Supply Current Strobe HI | I_{IDL} | $V_{IN} = 20\text{V}, V_{CC} = 9\text{V}$ | – | – | 18 | mA |

Pin Connection Diagram

