

## 930 Series DTL

National's DTL family is a complete line of medium speed, medium power and high noise immunity circuits containing a variety of gates and binaries to provide the greatest flexibility to the logic designer. The circuits are available in both a 6k pull-up version for lower power dissipation and a 2k pull-up version for increased speed. The logic gates are augmented by a buffer, a power gate and an extender. All the flip-flops operate on the master-slave principle.

Devices are available in 14-pin moulded dual-in-line packages.

## FEATURES

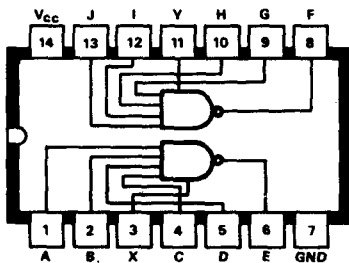
|                                          |      |
|------------------------------------------|------|
| Operating power supply                   | 5.0V |
| Maximum power supply (continuous)        | 8.0V |
| Logic '1' output level (minimum at 25°C) | 2.6V |
| Logic '0' output level (maximum at 25°C) | 0.4V |
| Typical noise immunity                   | 1.0V |
| Logic '1' input level (minimum at 25°C)  | 1.9V |
| Logic '0' input level (maximum at 25°C)  | 1.1V |

REFERENCE TABLE. See outline drawing No. 109 for physical dimensions.

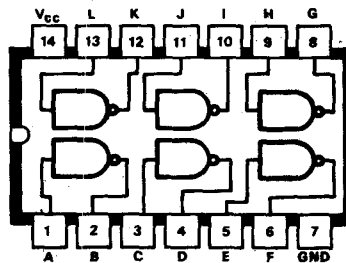
| Code    | Description                             | Stock No. | Connection Diagram No. |
|---------|-----------------------------------------|-----------|------------------------|
| DM930N  | Dual four input gate with expander (6k) | 19636E    | A1                     |
| DM932N  | Dual four input buffer with expander    | 19637C    | A2                     |
| DM933N  | Dual four input extender                | 19638A    | A3                     |
| DM935N  | Hex inverter without input diodes (6k)  | 19749R    | A4                     |
| DM936N  | Hex inverter gate (6k)                  | 19639X    | A5                     |
| DM937N  | Hex inverter gate (2k)                  | 19750A    | A6                     |
| DM944N  | Dual four input power gate              | 19640B    | A8                     |
| DM945N  | RS/JK clocked flip-flop (6k)            | 19641X    | A9                     |
| DM946N  | Quad two input gate (6k)                | 19642R    | A10                    |
| DM948N  | RS/JK clocked flip-flop (2k)            | 19643G    | A11                    |
| DM949N  | Quad two input gate (2k)                | 19751X    | A12                    |
| DM957N  | Quad two input buffer                   | 29003F    | A15                    |
| DM958N  | Quad two input power gate               | 29004D    | A16                    |
| DM961N  | Dual four input gate with expander (2k) | 19644F    | A17                    |
| DM962N  | Triple three input gate (6k)            | 19645C    | A18                    |
| DM963N  | Triple three input gate (2k)            | 19646A    | A19                    |
| DM9093N | Dual JK flip-flop separate clocks (6k)  | 19647X    | A20                    |
| DM9094N | Dual JK flip-flop separate clocks (2k)  | 19649F    | A21                    |
| DM9097N | Dual JK flip-flop common clock (2k)     | 19650R    | A22                    |
| DM9099N | Dual JK flip-flop common clock (6k)     | 19648H    | A23                    |
| DM1800N | Dual 5-input gate (6k)                  | 30997B    | A24                    |
| DM1801N | Dual 5-input gate (2k)                  | 30998X    | A25                    |

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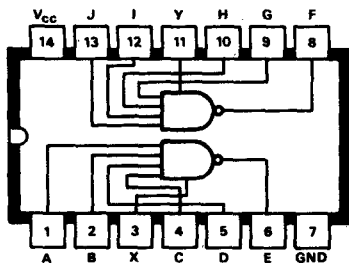
A1 930



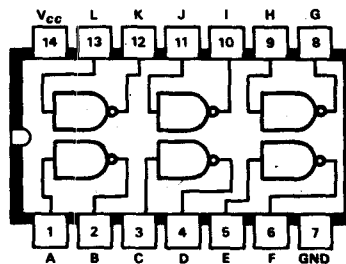
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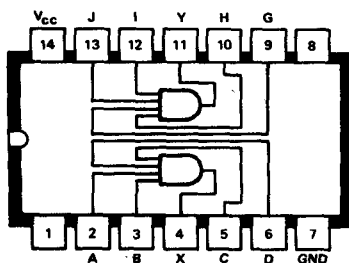
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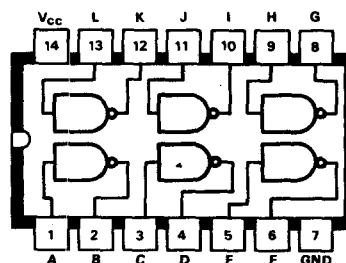
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A3 933



A6 937

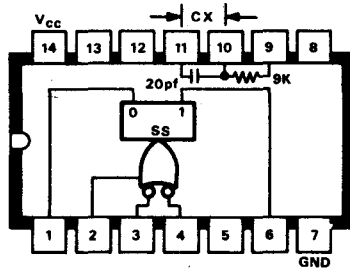


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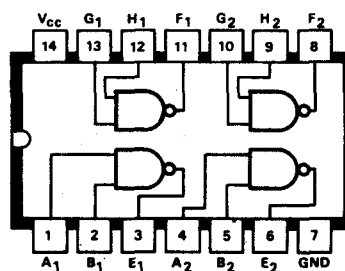
# Semiconductors

## Connection Diagrams

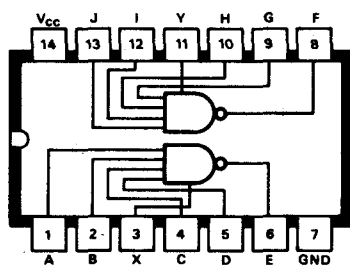
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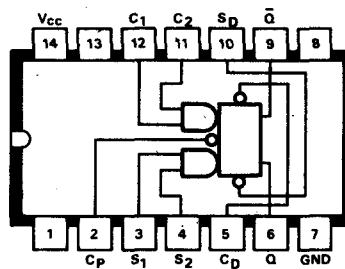
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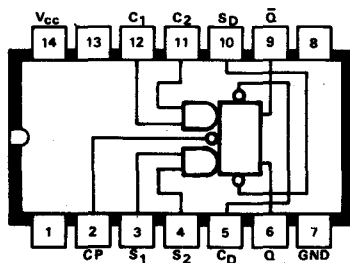
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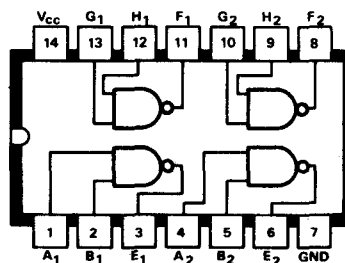
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A9 945

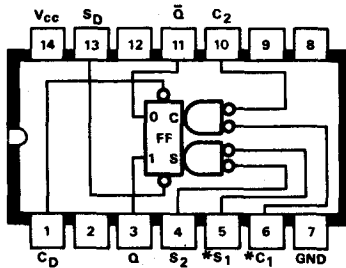


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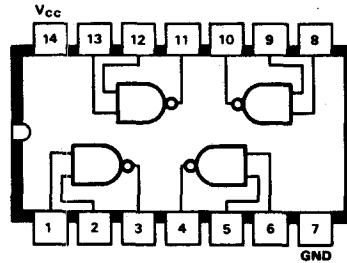


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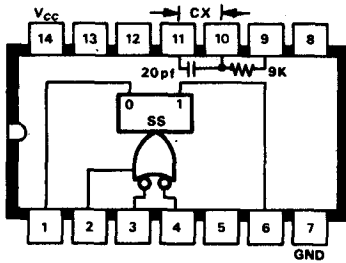
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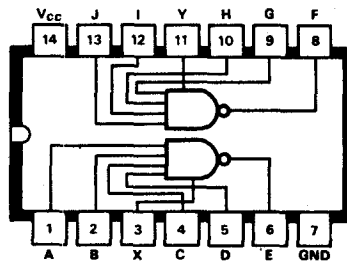
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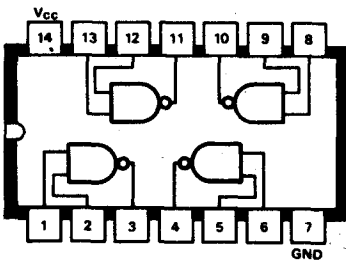
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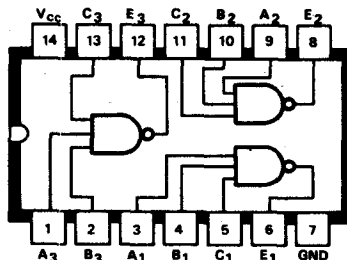
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A15 957



A18 962

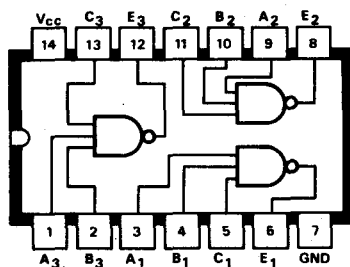


PLEASE QUOTE STOCK NO. AND MANUFACTURER'S CODE WHEN ORDERING

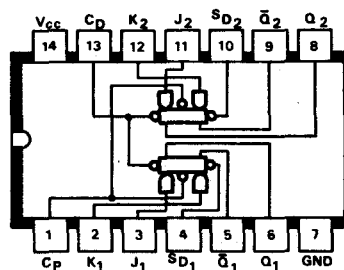
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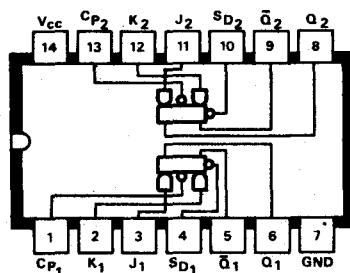
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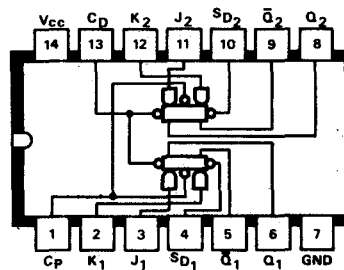
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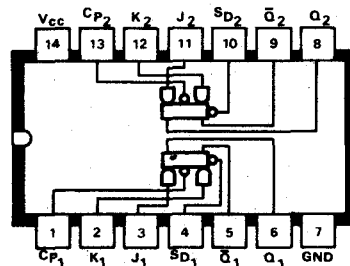
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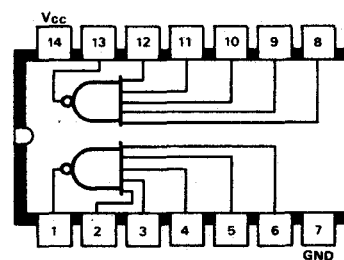
A23 9099



A21 9094



A24 DM 1800 & DM 1801



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