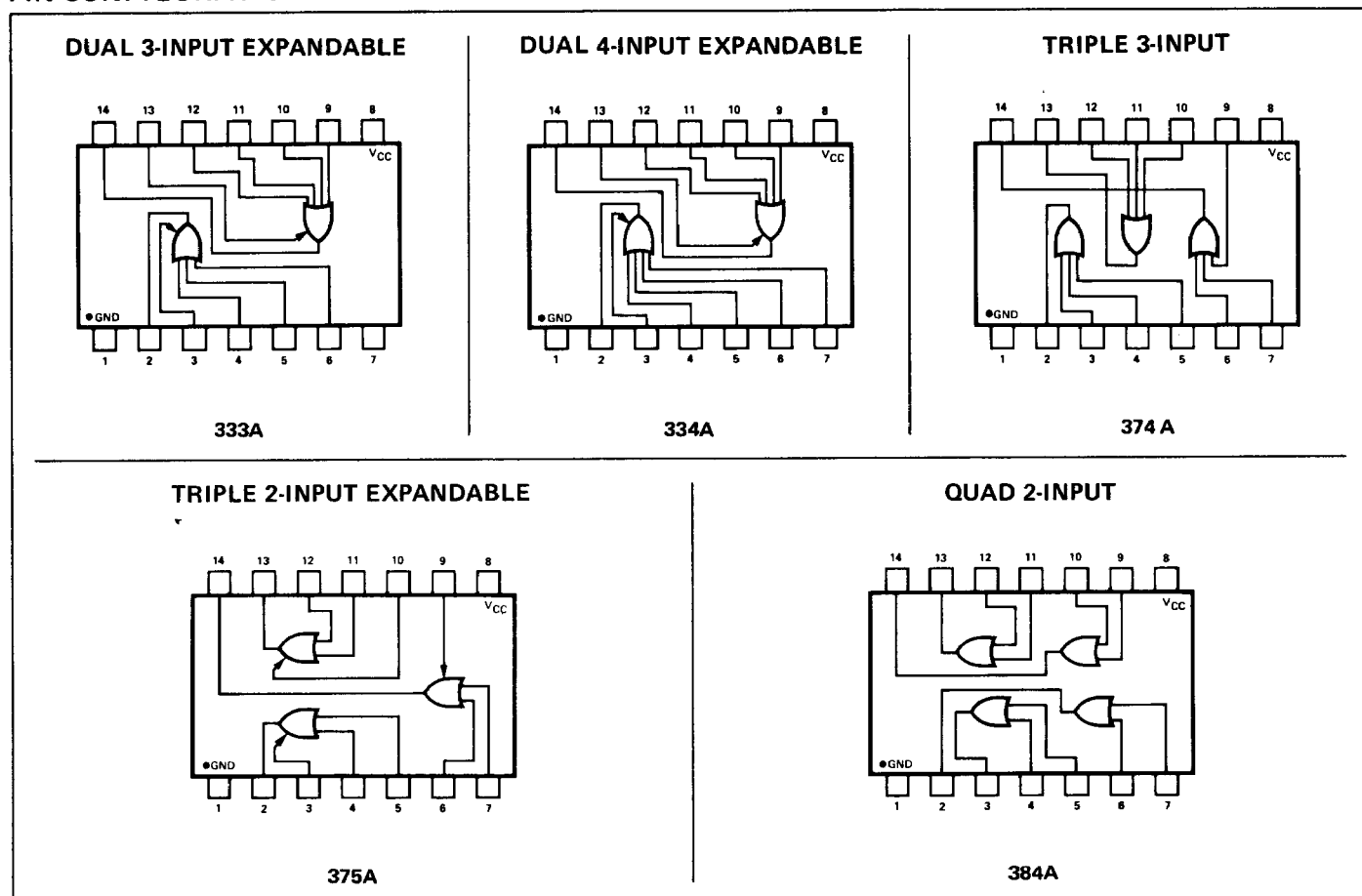


OR GATES

| | |
|--------|-------------------------|
| SP333A | Dual 3-Input Expandable |
| SP334A | Dual 4-Input Expandable |
| SP374A | Triple 3-Input |
| SP375A | Triple 2-Input |
| SP384A | Quad 2-Input |

PIN CONFIGURATIONS



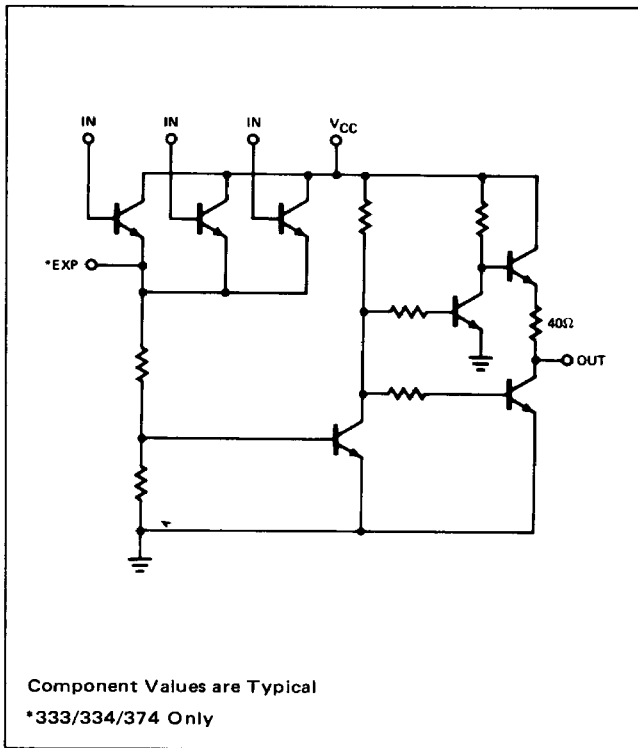
ELECTRICAL CHARACTERISTICS (Notes 1, 2, 3, 5 and 7)

Standard Conditions: $V_{CC} = 5.0V$, $T_A = \text{Operating Temp. Range (Unless Noted)}$

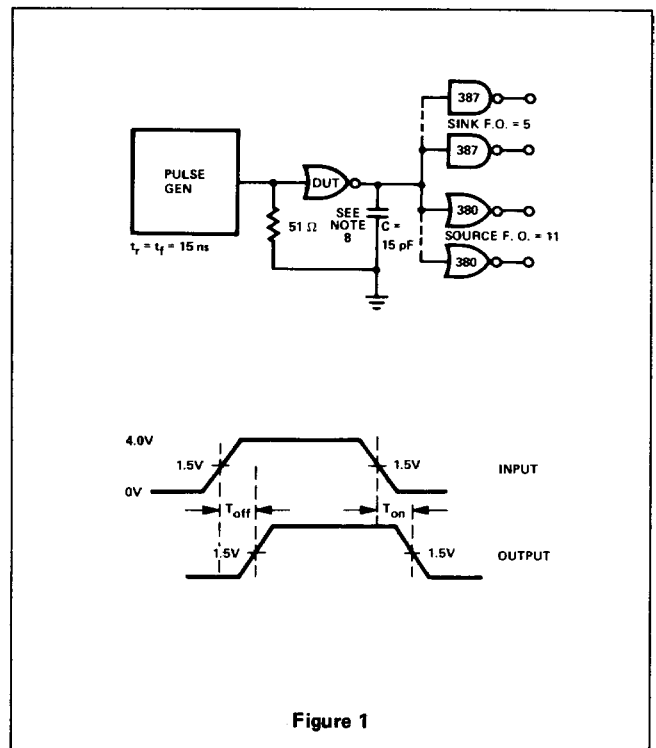
| CHARACTERISTIC | TEST CONDITIONS | MIN. | TYP | MAX. | UNITS |
|--|--|-------------|--------------|--------------|--------------------|
| Noise Immunity for "1" for "0" | See Note 6 See Note 6 | 1100 600 | 1700 1000 | | |
| Output Voltage "1" Level "0" Level | $I_{out} = -2mA, V_{in} = 2.7V$ $I_{out} = 12.5mA, V_{in} = 1.2V$ $I_{out} = 7.5mA, V_{in} = 1.2V$ | 3.8 | | 0.6 0.4 | V V V |
| Input Current - input high | $V_{in} = 2.7V$ | | | 180 | μA |
| Power Supply Current output high output low | $V_{in} = 4.0V, T_A = 25^\circ C$ $V_{in} = 0V, T_A = 25^\circ C$ | | 11.0 11.2 | 14.7 15.2 | mA/gate mA/gate |
| Turn on Delay | See Test Figure 1, $T_A = 25^\circ C$ | | 50 | 80 | ns |
| Turn off Delay | See Test Figure 1, $T_A = 25^\circ C$ | | 40 | 70 | ns |
| Fan-out -To sink loads (2.5mA/load) -To source loads (180 μA /load) | | | | 5 11 | |
| Expander Voltage (333/334/335 only) | $V_{in} = 2.7V$ | 1.85 | | | |

Typical Values are for $T_A = 25^\circ C$. See Page 3 for Notes.

SCHEMATIC DIAGRAM



TEST CIRCUIT AND WAVEFORM



The following curves are normalized, when applicable, to the standard data sheet conditions.

