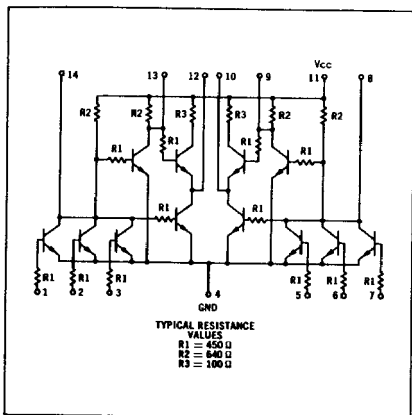
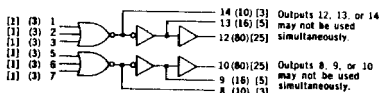


MC788P • MC888P



Two 3-input positive logic NOR gates, each followed by an inverting and non-inverting high fan-out amplifier, are provided in a single package. For each section, the output from each stage is available. If more than one output is used, the full loading factors cannot be employed since each output provides the drive for the succeeding stage.

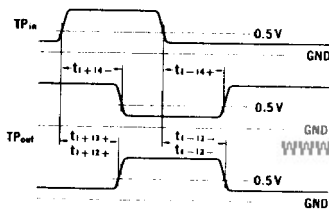
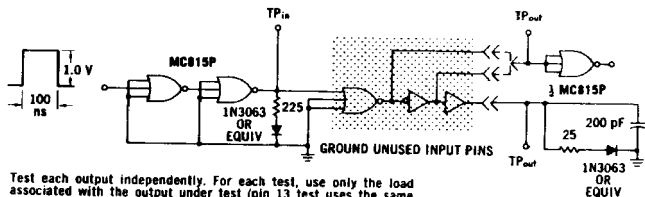


14 = 1 + 2 + 3 13 = 1 + 2 + 3 12 = 1 + 2 + 3

NUMBER IN PARENTHESES INDICATES LOADING FACTOR FOR mW MRTL
 NUMBER IN BRACKETS INDICATES LOADING FACTOR FOR MRTL

$t_{pd} = 24$ ns
 $P_d = 145$ mW (Input Low)
 56 mW (Inputs Low)

SWITCHING TIMES TEST CIRCUIT AND WAVEFORMS



| TEST VOLTAGE VALUES | | | | | | |
|---------------------|-----------|-----------|-----------|----------|------------|------------|
| @ Test Temperatures | | | | | | |
| (Volts) | | | (Ohms) | | | |
| V_{in} | V_{out} | V_{err} | V_{err} | V_{cc} | V_{in}^* | V_{in}^* |
| 0°C | 0.960 | 1.80 | 0.570 | 3.60 | 640 | 640 |
| +25°C | 0.910 | 0.880 | 1.80 | 0.500 | 3.60 | 640 |
| +75°C | 0.820 | 0.790 | 1.80 | 0.450 | 3.60 | 750 |
| +15°C | 0.865 | 0.865 | 1.80 | 0.475 | 3.60 | 640 |
| +25°C | 0.850 | 0.850 | 1.80 | 0.460 | 3.60 | 640 |
| +55°C | 0.800 | 0.800 | 1.80 | 0.430 | 3.60 | 640 |

MC888P

MC788P

ELECTRICAL CHARACTERISTICS

Test procedures are shown for one buffer only. The other buffer is tested in the same manner.

| Characteristic | Symbol | Pin Under Test | MC888P Test Limits | | | | | | MC788P Test Limits | | | | | | | | | | | | | | | | |
|--------------------|---------------|----------------|--------------------|-----|------|-------|-----------|------|--------------------|-----|-------|-----------|-------|------|-------|-----|-----------|-------|-----|------|---------|-----------|----|---|---|
| | | | 0°C | | | +25°C | | | +75°C | | | +15°C | | | +25°C | | | +55°C | | | | | | | |
| | | | Min | Max | Unit | Min | Max | Unit | Min | Max | Unit | Min | Max | Unit | Min | Max | Unit | Min | Max | Unit | | | | | |
| Input Current | I_{in} | 1 | - | 600 | - | 600 | μ Adc | - | 500 | - | 500 | μ Adc | - | 500 | - | 500 | μ Adc | - | 470 | - | 470 | μ Adc | | | |
| | | 2 | - | ↑ | - | ↑ | ↑ | - | ↑ | - | ↑ | ↑ | - | ↑ | - | ↑ | ↑ | - | ↑ | - | ↑ | ↑ | | | |
| | | 3 | - | ↑ | - | ↑ | ↑ | - | ↑ | - | ↑ | ↑ | - | ↑ | - | ↑ | ↑ | - | ↑ | - | ↑ | ↑ | | | |
| Output Current | I_{AB} | 12 | 15.0 | - | 15.0 | - | 14.25 | mAdc | 13.50 | - | 13.75 | - | 12.50 | - | 12.50 | - | mAdc | - | 14 | - | 14 | - | - | | |
| | I_{A5} | 13 | 3.0 | - | 3.0 | - | 2.85 | - | 2.65 | - | 2.65 | - | 2.50 | - | 2.50 | - | mAdc | - | 13 | - | 14 | - | ↑ | | |
| | I_{A3} | 14 | 1.8 | - | 1.8 | - | 1.71 | - | - | - | - | - | - | - | - | - | - | - | 14 | - | 1, 2, 3 | - | ↑ | | |
| | V_{out} | 12 | - | 500 | - | 400 | mVdc | 400 | - | 400 | - | 300 | - | 320 | - | 320 | - | mVdc | 14 | - | 14 | - | 11 | | |
| Output Voltage | V_{out} | 13 | - | ↑ | - | ↑ | ↑ | - | ↑ | - | ↑ | ↑ | - | ↑ | - | ↑ | ↑ | - | 14 | - | 14 | - | ↑ | | |
| | | 14 | - | ↑ | - | ↑ | ↑ | - | ↑ | - | ↑ | ↑ | - | ↑ | - | ↑ | ↑ | - | 1 | - | 2 | - | ↑ | | |
| | | 14 | - | ↑ | - | ↑ | ↑ | - | ↑ | - | ↑ | ↑ | - | ↑ | - | ↑ | ↑ | - | 2 | - | 3 | - | ↑ | | |
| | | 14 | - | ↑ | - | ↑ | ↑ | - | ↑ | - | ↑ | ↑ | - | ↑ | - | ↑ | ↑ | - | 3 | - | 3 | - | ↑ | | |
| Saturation Voltage | $V_{CE(sat)}$ | 12 | - | 400 | - | 300 | mVdc | 300 | - | 300 | - | 290 | - | 320 | - | 320 | - | mVdc | - | - | - | - | - | - | |
| | | 13 | - | ↑ | - | ↑ | ↑ | - | ↑ | - | ↑ | ↑ | - | ↑ | - | ↑ | ↑ | - | 14 | - | 14 | - | 11 | | |
| | | 14 | - | ↑ | - | ↑ | ↑ | - | ↑ | - | ↑ | ↑ | - | ↑ | - | ↑ | ↑ | - | 1 | - | 2 | - | ↑ | | |
| | | 14 | - | ↑ | - | ↑ | ↑ | - | ↑ | - | ↑ | ↑ | - | ↑ | - | ↑ | ↑ | - | 2 | - | 3 | - | ↑ | | |
| Switching Time | t | 1-12+ | - | - | - | 65 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 1-12- | - | - | - | 58 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | 1-13+ | - | - | - | 42.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | 1-13- | - | - | - | 42.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1-14+ | - | - | - | 20 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 1-14- | - | - | - | 28 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Pulse | In | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 12 | - | - | - | 65 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Pulse | Out | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 12 | - | - | - | 58 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Pulse | In | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 12 | - | - | - | 42.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Pulse | Out | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 12 | - | - | - | 42.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Pulse | In | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 12 | - | - | - | 20 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Pulse | Out | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 12 | - | - | - | 28 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

Ground input pins of buffer not under test. Other pins not listed are left open. *Resistor value to V_{CC}