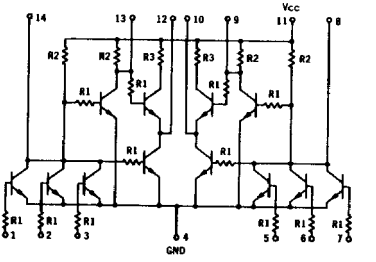
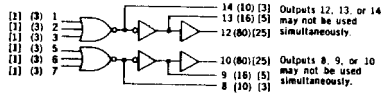
MC788P • MC888P



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.

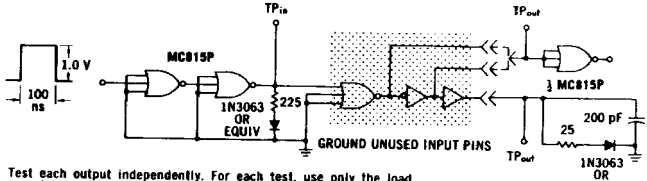


$14 = \overline{1 + 2 + 3}$ $13 = 1 + 2 + 3$ $12 = 1 + 2 + 3$

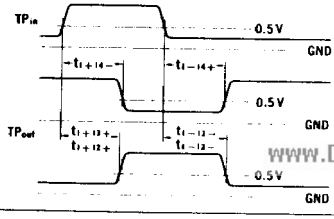
NUMBER IN PARENTHESES INDICATES LOADING FACTOR FOR mW MRTL
NUMBER IN BRACKETS INDICATES LOADING FACTOR FOR MRTL

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

SWITCHING TIMES TEST CIRCUIT AND WAVEFORMS



Test each output independently. For each test, use only the load associated with the output under test (pin 13 test uses the same load as pin 14 test). Outputs not under test should be left open.



ELECTRICAL CHARACTERISTICS

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

	@ Test Temperature	TEST VOLTAGE VALUES (Volts) V_{in}	V_{ee}	V_{BOT}	V_{eff}	V_{CC}	(Ohms) V_R*
MC888P	0°C	0.960	0.930	1.80	0.570	3.60	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
MC788P	+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

Characteristic	Symbol	Pin Under Test	MC888P Test Limits 0°C Min	0°C Max	+25°C Min	+25°C Max	+75°C Min	+75°C Max	Unit	MC788P Test Limits +15°C Min	+15°C Max	+25°C Min	+25°C Max	+55°C Min	+55°C Max	Unit	TEST VOLTAGE APPLIED TO PINS LISTED BELOW: V_{in}	V_{ee}	V_{BOT}	V_{eff}	V_{CC}	V_R*	Gnd
Input Current	I_{in}	1	-	600	-	600	-	570	μAdc	-	500	-	500	-	470	μAdc	1	-	2, 3	-	11	-	4
		2	-	↓	-	↓	-	↓	↓	-	↓	-	↓	-	↓	↓	2	-	1, 3	-	↓	-	↓
		3	-		-		-			-		-		-			3	-	1, 2	-		-	
Output Current	I_{AB}	12	15.0	-	15.0	-	14.25	-	mAdc	13.50	-	13.75	-	12.50	-	mAdc	-	12	-	14	11	-	4
	I_{A5}	13	3.0	-	3.0	-	2.85	-		2.65	-	2.65	-	2.50	-	mAdc	-	13	-	14		-	
	I_{A3}	14	1.8	-	1.8	-	1.71	-	↓	-	-	-	-	-	-	↓	-	14	-	1, 2, 3	↓	-	↓
Output Voltage	V_{out}	12	-	500	-	400	-	400	mVdc	-	400	-	300	-	320	mVdc	-	14	-	-	11	12	1,2,3,4
		13	-	↓	-	↓	-	↓	↓	-	↓	-	↓	-	↓	↓	-	14	-	-	↓	-	1,2,3,4
		14	-		-		-			-		-		-			-	1	-	-		-	2,3,4
		14	-		-		-			-		-		-			-	2	-	-		-	1,3,4
		14	-		-		-			-		-		-			-	3	-	-		-	1,2,4
Saturation Voltage	$V_{CE(sat)}$	12	-	400	-	300	-	350	mVdc	-	300	-	290	-	320	mVdc	-	-	14	-	11	12	1,2,3,4
		13	-	↓	-	↓	-	↓	↓	-	↓	-	↓	-	↓	↓	-	-	14	-	↓	-	1,2,3,4
		14	-		-		-			-		-		-			-	-	1	-		-	2,3,4
		14	-		-		-			-		-		-			-	-	2	-		-	1,3,4
		14	-		-		-			-		-		-			-	-	3	-		-	1,2,4
Switching Time	t	1+12+	-	-	-	65	-	-	-	-	-	-	65	-	-	-	Pulse In 1	Pulse Out 12	-	-	11	-	2,3,4
		1-12-	-	-	-	58	-	-	-	-	-	-	58	-	-	-	1	12	-	-		-	
		1+13+	-	-	-	42.5	-	-	-	-	-	-	42.5	-	-	-	1	13	-	-		-	
		1-13-	-	-	-	42.5	-	-	-	-	-	-	42.5	-	-	-	1	13	-	-		-	
		1+14-	-	-	-	20	-	-	-	-	-	-	20	-	-	-	1	14	-	-		-	
		1-14+	-	-	-	28	-	-	-	-	-	-	28	-	-	-	1	14	-	-	↓	-	↓

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