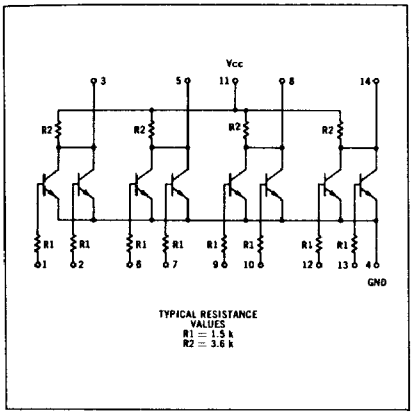
QUAD 2-INPUT GATES

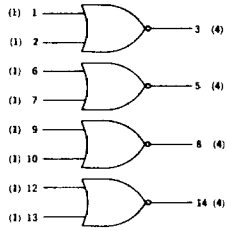
PLASTIC mW MRTL MC700P/800P series

MC717P • MC817P



TYPICAL RESISTANCE VALUES
R1 = 1.5 k
R2 = 3.6 k

Four 2-input positive logic NOR gates in a single package. Each may be used independently, paralleled for increasing the number of inputs (subject to loading rules), or cross-coupled to form bistable elements.

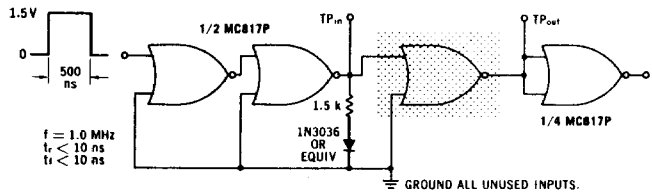


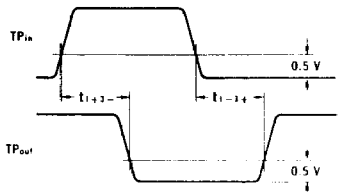
$3 = \overline{1 + 2}$

NUMBER IN PARENTHESES INDICATES LOADING FACTOR

t_{pd} = 27 ns
P_D = 20 mW (Input High)
5.0 mW (Inputs Low)

SWITCHING TIMES TEST CIRCUIT AND WAVEFORMS





	@ Test Temperature	TEST VOLTAGE VALUES (Volts) V_{in}	V_{on}	V_{BOT}	V_{off}	V_{CC}
MC817P	0°C	0.880	0.850	1.80	0.500	3.60
MC817P	+25°C	0.830	0.800	1.80	0.460	3.60
MC817P	+75°C	0.740	0.710	1.80	0.400	3.60
MC717P	+15°C	0.865	0.865	1.80	0.475	3.60
MC717P	+25°C	0.850	0.850	1.80	0.460	3.60
MC717P	+55°C	0.800	0.800	1.80	0.430	3.60

ELECTRICAL CHARACTERISTICS

Test procedures are shown for one gate only.
The other gates are tested in the same manner.

			MC817P Test Limits							MC717P Test Limits							TEST VOLTAGE APPLIED TO PINS LISTED BELOW:					
			0°C		+25°C		+75°C			+15°C		+25°C		+55°C								
Characteristic	Symbol	Pin Under Test	Min	Max	Min	Max	Min	Max	Unit	Min	Max	Min	Max	Min	Max	Unit	V_{in}	V_{on}	V_{BOT}	V_{off}	V_{CC}	Gnd
Input Current	I_{in}	1	-	150	-	140	-	140	μAdc	-	150	-	150	-	150	μAdc	1	-	2	-	11	4
		2	-	150	-	140	-	140	μAdc	-	150	-	150	-	150	μAdc	2	-	1	-	11	4
Output Current	I_{A4}	3	570	-	570	-	535	-	μAdc	570	-	570	-	570	-	μAdc	-	3	-	1, 2	11	4
Output Voltage	V_{out}	3	-	400	-	350	-	300	mVdc	-	400	-	300	-	320	mVdc	-	1	-	-	11	2, 4
		3	-	400	-	350	-	300	mVdc	-	400	-	300	-	320	mVdc	-	2	-	-	11	1, 4
Saturation Voltage	$V_{CE(sat)}$	3	-	250	-	250	-	250	mVdc	-	220	-	230	-	320	mVdc	-	-	1	-	11	2, 4
		3	-	250	-	250	-	250	mVdc	-	220	-	230	-	320	mVdc	-	-	2	-	11	1, 4
																	Pulse In	Pulse Out				
Switching Time	$t_{on} + t_{off}$	1, 3	-	-	-	90	-	-	ns	-	-	-	90	-	-	ns	1	3	-	-	11	2, 4

Ground input pins of gates not under test. Other pins not listed are left open.