

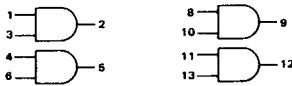
QUAD 2-INPUT
"AND" GATES

MECL II MC1000/1200 series

MC1047
MC1247

Four 2-input gates designed to provide four AND functions. The output is high if and only if the two inputs are at a high logic level.

POSITIVE LOGIC



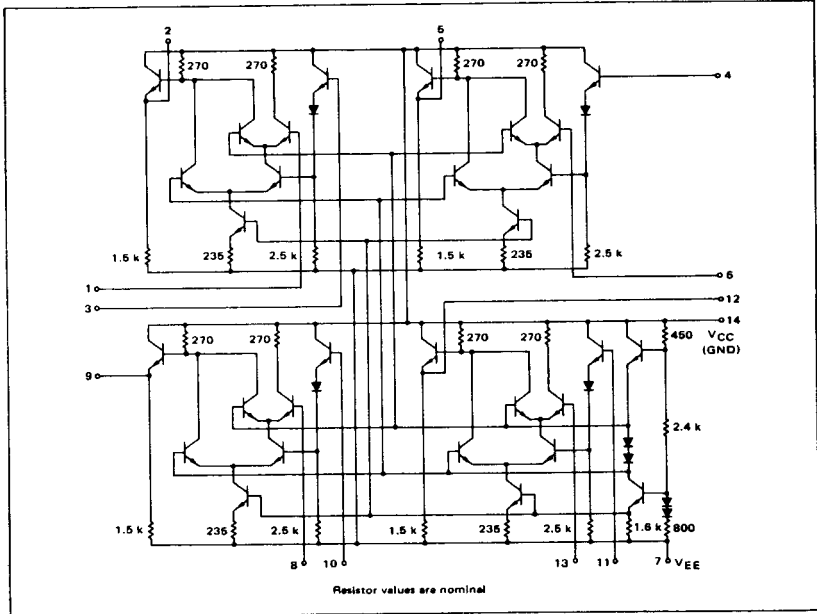
$2 = 1 + 3$

DC Input Loading Factor: Pins 1, 6, 8, 13 = 1.5
Pins 3, 4, 10, 11 = 1
DC Output Loading Factor = 25
Power Dissipation = 130 mW typical

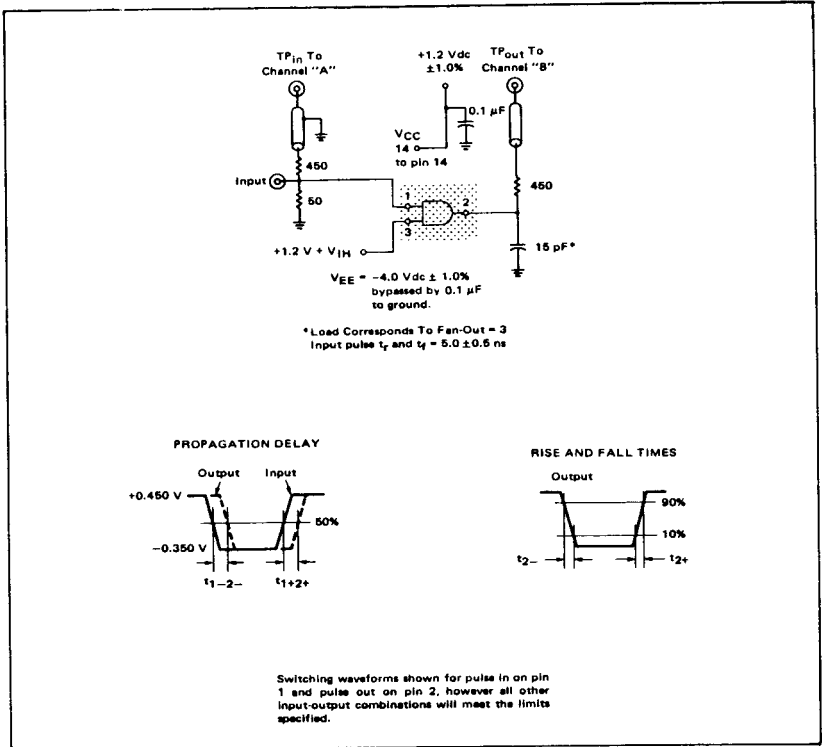
AND GATE
SAMPLE TRUTH TABLE

Pin No.	Inputs		Output
	1	3	2
0	0	0	0
0	1	0	0
1	0	0	0
1	1	1	1

CIRCUIT SCHEMATIC



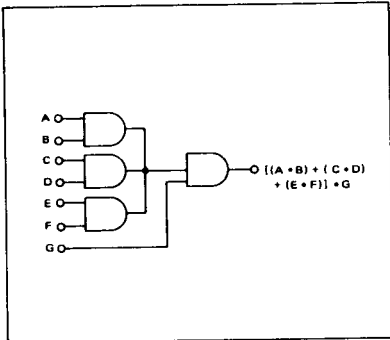
SWITCHING TIME TEST CIRCUIT AND WAVEFORMS @ 25°C



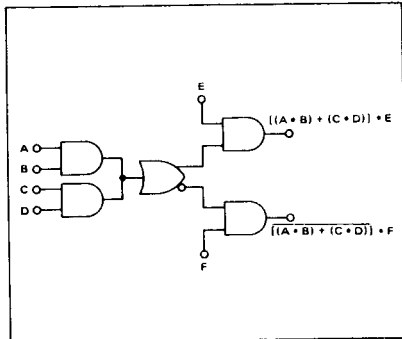
APPLICATIONS INFORMATION

The MC1047/1247 Quad 2-input AND gate offers an additional logic function for the MECL logic family. The AND function is normally performed by putting the complemented variables into a NOR gate. If complemented variables are not available then inverters must be used in each input of the NOR gate. The MC1047/1247 AND gate will perform the AND function with true variables in 5.0 ns typically. Illustrated below are two examples where the AND gate may be used.

3 WIDE 2-INPUT "AND-OR" GATE WITH ENABLE



2 WIDE 2-INPUT "AND-OR-INVERT" GATE WITH GATED COMPLEMENTARY OUTPUTS



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