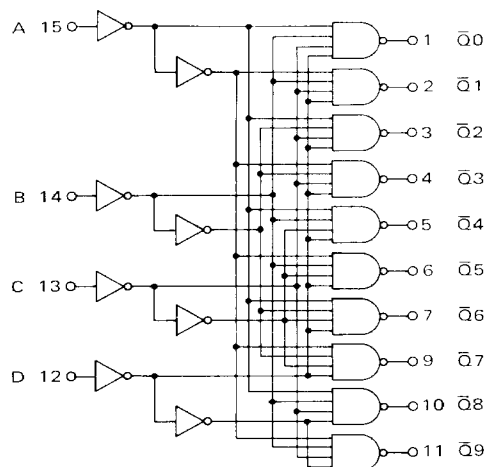




MC5445 • MC7445
MC9345 • MC8345
MC54145 • MC74145
MC93145 • MC83145

Add Suffix L for 16-pin ceramic dual in-line package (Case 620).

Suffix P for 16-pin plastic dual in-line package (Case 648) MC7445/74145, MC8345/83145.



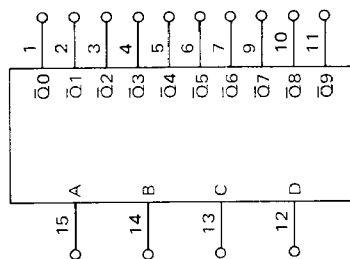
V_{CC} = Pin 16
 GND = Pin 8

These devices are intended for use as drivers for indicators or relays, rather than drivers for MTTL logic gates, as is the case with the MC5442/7442, which is functionally identical. The output transistors of these devices are capable of sinking 80 mA, and have breakdown voltages of 30 V (MC5445/7445, MC9345/8345 and 15 V (MC54145/74145, MC93145/83145). The outputs are suitable for open-collector logic applications, and are compatible for interfacing with most MOS integrated circuits. Since full decoding is included, all outputs remain off for non-BCD inputs

Total Power Dissipation = 215 mW typ/pkg
 Propagation Delay Time = 50 ns max

INPUTS				OUTPUTS									
D	C	B	A	Q9	Q8	Q7	Q6	Q5	Q4	Q3	Q2	Q1	Q0
0	0	0	0	1	1	1	1	1	1	1	1	1	0
0	0	0	1	1	1	1	1	1	1	1	1	0	1
0	0	1	0	1	1	1	1	1	1	1	0	1	1
0	0	1	1	1	1	1	1	1	1	0	1	1	1
0	1	0	0	1	1	1	1	1	0	1	1	1	1
0	1	0	1	1	1	1	1	0	1	1	1	1	1
0	1	1	0	1	1	1	0	1	1	1	1	1	1
0	1	1	1	1	1	0	1	1	1	1	1	1	1
1	0	0	0	1	0	1	1	1	1	1	1	1	1
1	0	0	1	0	1	1	1	1	1	1	1	1	1
1	0	1	0	1	1	1	1	1	1	1	1	1	1
1	0	1	1	1	1	1	1	1	1	1	1	1	1
1	1	0	0	1	1	1	1	1	1	1	1	1	1
1	1	0	1	1	1	1	1	1	1	1	1	1	1
1	1	1	0	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1

Test procedures are shown for only one input and one output. Test other inputs and outputs in the same manner according to the truth table. Test all input-output combinations according to the truth table.



		TEST CURRENT/VOLTAGE VALUES (All Temperatures)										
		Volts										
		mA										
		Volts										
		IOL1	IOL2	ICEX	VIL	VIH	VHH	VILT	VHIT	VCC	VCCL	VCCH
		20	80	0.75	0.4	2.4	5.5	0.8	2.0	5.0	4.5	5.5
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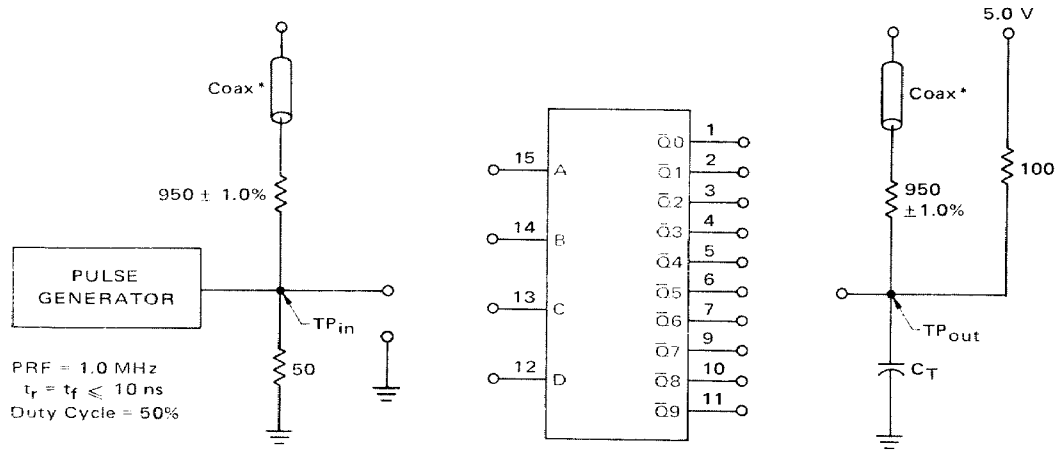
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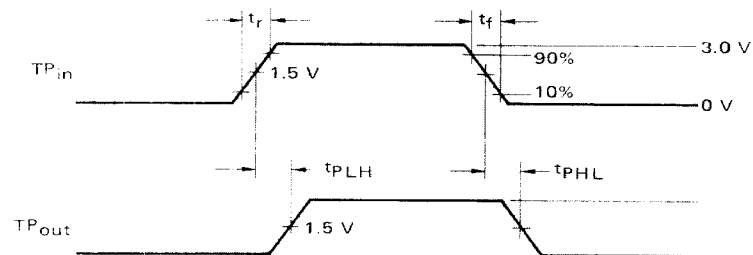
::Tested only at 25°C.

SWITCHING TIME TEST CIRCUIT AND VOLTAGE WAVEFORMS



$C_T = 15$ pF = total parasitic capacitance, which includes probe and wiring capacitances.

- * The coax delays from input to scope and output to scope must be matched. The scope must be terminated in 50-ohm impedance. The 950-ohm resistor and the scope termination impedance constitute a 20:1 attenuator probe.



TYPICAL APPLICATIONS

Two MC5445/7445 (MC9345/8345) or MC54145/74145 (MC93145/83145) decoder/drivers (depending on drive requirements) may be used to perform 4-line to 16-line decoding. Data inputs A, B, and C are applied to both decoder/drivers, while input D is applied to one decoder and D to the other. (See Figure 1.)

In addition to the obvious decoder applications, these circuits can also be used for data distribution (Figure 2). Inputs A, B, and C of the decoder/driver are used as control inputs, while the D input serves as the data input. In a typical compound data routing application, origin data is selected by the control inputs of the MC54151/74151 8-channel data selector. The data is then routed to the proper destination by means of the MC5445/7445 (MC9345/8345) decoder/driver control lines.

FIGURE 1 - BINARY-TO-DECIMAL DECODING USING
MC5445/7445 OR MC54145/74145
MC9345/8345 OR MC93145/83145

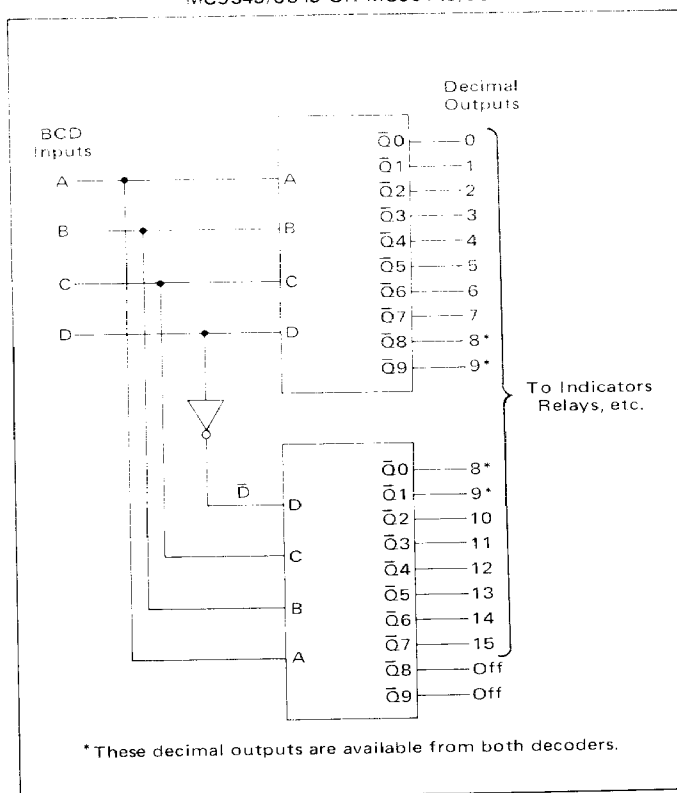
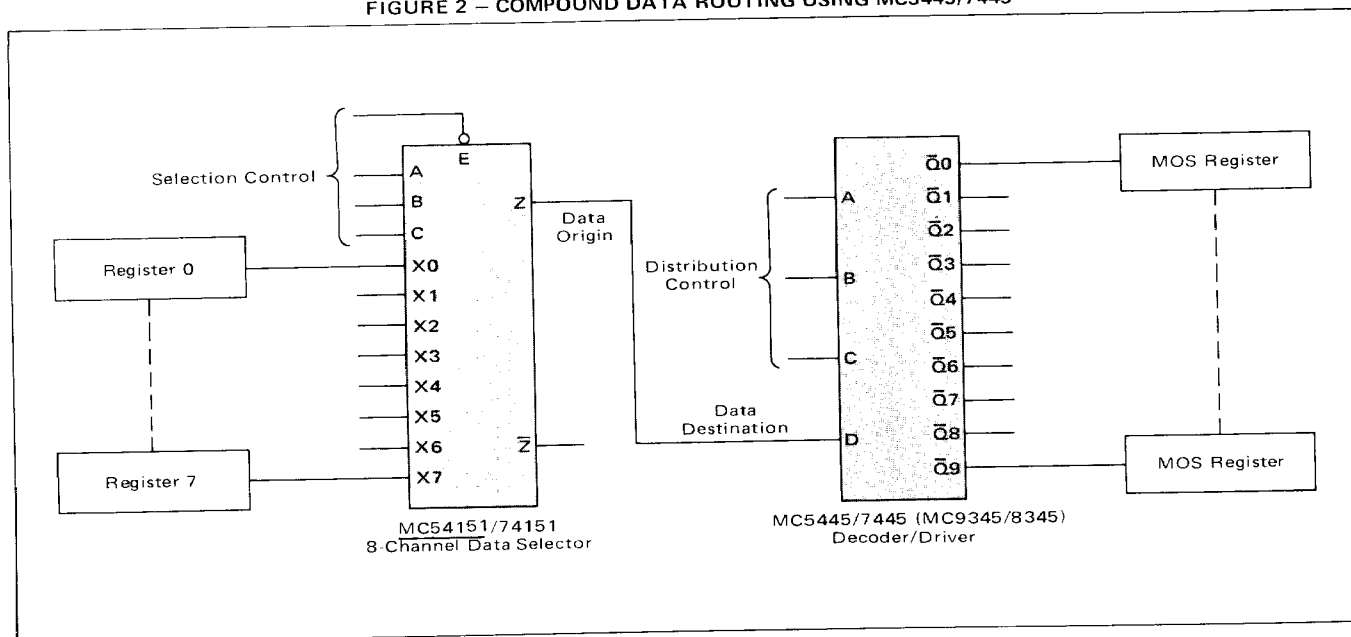


FIGURE 2 - COMPOUND DATA ROUTING USING MC5445/7445



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DS 9108