

8961724 TEXAS INSTR (LIN/INTFC)

91D 75055 D

T-52-13-07

**SN75494
HEX MOS-TO-LED DIGIT DRIVERS**

D1932, MARCH 1983—REVISED JANUARY 1987

- Low Input Current for MOS Compatibility
- Low Voltage Operation
- Low Standby Power
- Display Blanking Capability
- 250-mA Sink Capability
- Low-Voltage Saturating Outputs
- High-Gain Circuits

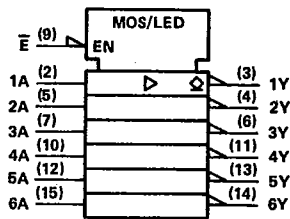
N
DUAL-IN-LINE PACKAGE
(TOP VIEW)

VSS	1	16	VCC
1A	2	15	6A
1Y	3	14	6Y
2Y	4	13	5Y
2A	5	12	5A
3Y	6	11	4Y
3A	7	10	4A
VDD	8	9	\bar{E}

description

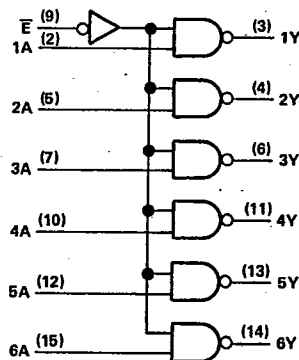
The SN75494 is designed to be used as an interface between MOS integrated circuits and LEDs in serially addressed multidigit displays. This device is similar in operation to the SN75492, but has several advantages over the earlier circuit. The SN75494 can be operated at lower supply voltages therefore, reducing power consumption. The enable (\bar{E}) input is used as a blanking input.

logic symbol

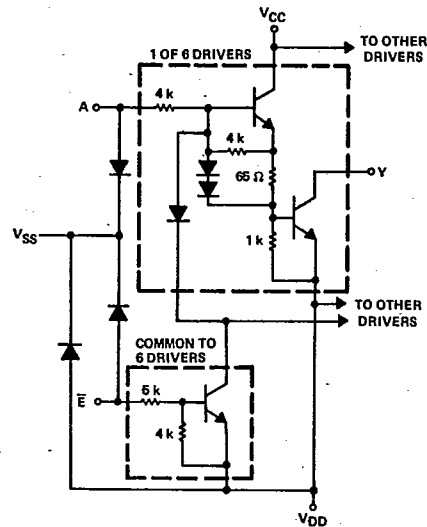


†This symbol is in accordance with ANSI/IEEE Std 91-1984 and IEC Publication 617-12.

logic diagram (positive logic)



schematic



NOTES: A. The VSS terminal must be connected to the most positive voltage that is applied to the device.
B. Resistor values shown are nominal and in ohms.

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Display Drivers

PRODUCTION DATA documents contain information current as of publication date. Products conform to specifications per the terms of Texas Instruments standard warranty. Production processing does not necessarily include testing of all parameters.



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**SN75494
HEX MOS-TO-LED DIGIT DRIVERS**

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absolute maximum ratings over operating free-air temperature (unless otherwise noted)

Supply voltage, V _{CC} (see Note 1)	10 V
Supply voltage, V _{SS} (see Note 2)	10 V
Input voltage	V _{SS}
Off-state output voltage	10 V
Continuous output current (each driver)	250 mA
Continuous V _{DD} current	600 mA
Continuous total dissipation at (or below) 25°C free-air temperature (see Note 3)	800 mW
Operating free-air temperature range	0°C to 70°C
Storage temperature range	-65°C to 150°C
Lead temperature 1,6 mm (1/16 inch) from case for 10 seconds	260°C

Display Drivers

recommended operating conditions

	MIN	MAX	UNIT
Supply voltage, V _{CC}	3.2	8.8	V
Supply voltage, V _{SS}	6.5	8.8	V
Operating free-air temperature, T _A	0	70	°C

electrical characteristics, V_{CC} = 8.8 V, V_{SS} = 8.8 V, T_A = 0°C to 70°C (unless otherwise noted)

PARAMETER		TEST CONDITIONS	MIN	TYP†	MAX	UNIT
I _I	Input current	A at 8.8 V, \bar{E} at 8.8 V		2	3	mA
		V _{CC} = 3.2 V, A at 8.8 V, \bar{E} to 8.8 V thru 100 kΩ		1.8	2.5	
		V _{CC} = 3.2 V, \bar{E} at 8.8 V		1.6	2.5	
I _{O(off)}	Off-state output current (from Y to V _{DD})	A to 8.8 V thru 100 kΩ, \bar{E} at 0 V, Y at 10 V		1	200	μA
		A at 8.8 V, \bar{E} to 6.5 V thru 1 kΩ, Y at 10 V		1	100	
V _{O(on)}	On-state output voltage	V _{CC} = 3.2 V, V _{SS} = 6.5 V, A to 6.5 V thru 1 kΩ, \bar{E} to 8.8 V thru 100 kΩ, I _{OL} = 250 mA		0.25	0.4	V
I _{CC}	Current into V _{CC} terminal	One A input to 8.8 V thru 100 kΩ, \bar{E} at 0 V, All other A inputs at 0 V		10	500	μA
		One A input at 8.8 V, \bar{E} to 6.5 V thru 1 kΩ, All other A inputs at 0 V		60	500	
		One A input at 8.8 V, \bar{E} at 0 V, All other A inputs at 0 V		11	20	mA
I _{SS}	Current into V _{SS} terminal	V _{CC} = 3.2 V, \bar{E} at 0 V, All A inputs at 0 V		10	500	μA

† All typical values are at T_A = 25°C.

NOTES: 1. Voltage values are with respect to the most negative device terminal, V_{DD}, unless otherwise noted.

2. No other terminal on the device may be more positive than V_{SS}.

3. For operation above 25°C free-air temperature, derate linearly from 800 mW at 63°C to 736 mW at 70°C at the rate of 9.2 mW/°C.