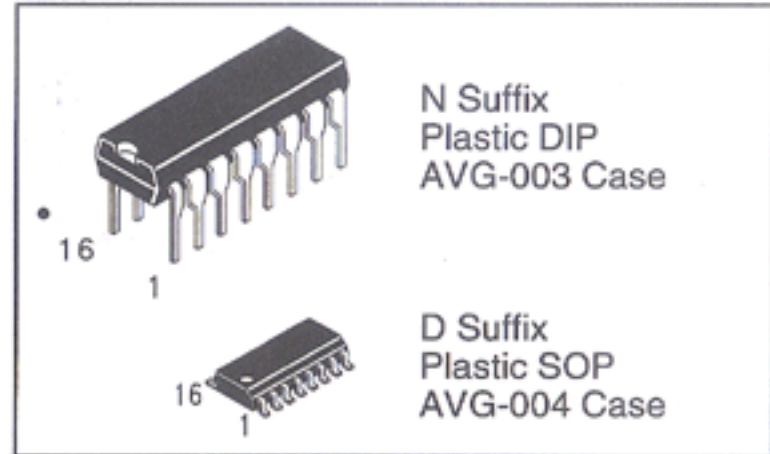


### Hex Inverter/Buffer Hex Non Inverting Buffer

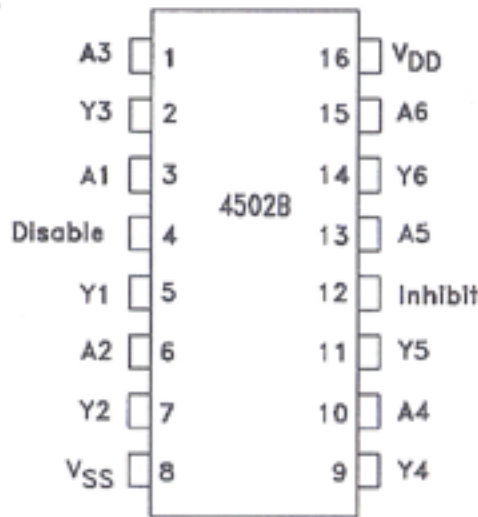
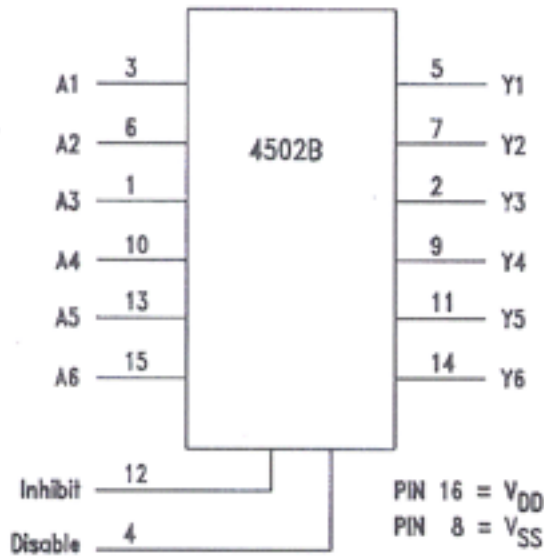
This device is a strobed hex buffer/inverter with 3-State outputs, an inhibit control, and guaranteed TTL drive over the temperature range. The DV14502B includes an input inhibit. The DV14503B has two disables one for two outputs the other for four outputs.

- Supply voltage range = 3.0 Vdc to 18 Vdc
- All outputs buffered
- Capable of driving 4 Low Power TTL loads or one LS TTL load over the rated temperature range
- Diode protection on all inputs
- Highest noise immunity at 12V supply

**DV4502B  
DV4503B**



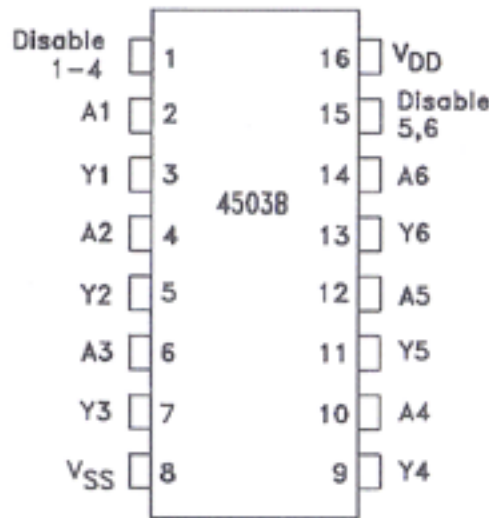
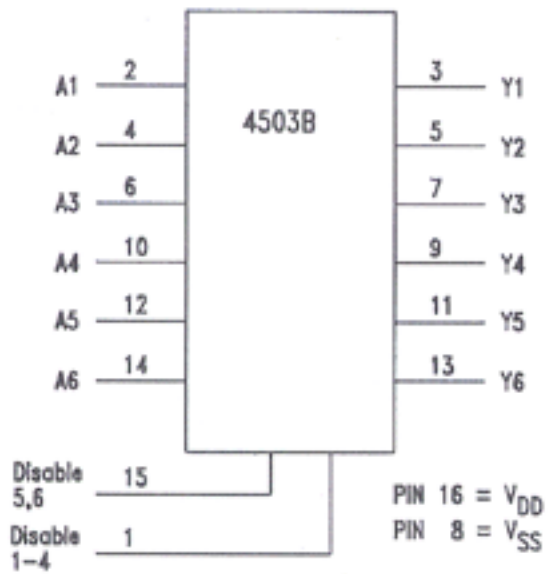
4502B, 4503B



**TRUTH TABLE  
4502B**

A <sub>n</sub>	Inhibit	Disable	Y <sub>n</sub>
0	0	0	1
1	0	0	0
X	1	0	0
X	X	1	High Impedance

X=Don't Care



**TRUTH TABLE  
4503B**

A <sub>n</sub>	Appropriate Disable Input	Y <sub>n</sub>
0	0	0
1	0	1
X	1	High Impedance

X=Don't Care

### ABSOLUTE MAXIMUM RATINGS

Maximum ratings are those values beyond which damage to the device may occur.

Symbol	Parameter	Value	Unit
V <sub>DD</sub>	Supply Voltage (Referenced to V <sub>SS</sub> )	-0.5 to +18.0	V
V <sub>IN</sub> , V <sub>OUT</sub>	Input or Output Voltage	-0.5 to V <sub>DD</sub> +0.5	V
I <sub>IN</sub>	DC Current Into or Out of Any Pin	± 10	mA
I <sub>OUT</sub>	DC Current Into or Out of Any Pin	± 30	mA
P <sub>D</sub>	Power Dissipation in Still Air, Derating: 12 mW/°C from 65° to 85°C	500	mW
T <sub>STG</sub>	Storage Temperature Range	-65 to +150	°C

TL	Lead Temperature, (8 Second Soldering)	260	°C
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**ELECTRICAL CHARACTERISTICS (Voltages Referenced to V<sub>SS</sub>)**

Symbol	Parameter	V <sub>DD</sub>	Guaranteed Limits						Unit	
			-40°C		25°C		85°C			
			Min	Max	Min	Typ	Max	Min		Max
V <sub>OL</sub>	Output Voltage V <sub>IN</sub> =V <sub>DD</sub> or 0 "0" Level	5.0	-	0.05	-	0	0.05	-	0.05	Vdc
		10	-	0.05	-	0	0.05	-	0.05	
		15	-	0.05	-	0	0.05	-	0.05	
V <sub>OH</sub>	V <sub>IN</sub> = 0 or V <sub>DD</sub> "1" Level	5.0	4.95	-	4.95	5.0	-	4.95	-	Vdc
		10	9.95	-	9.95	10	-	9.95	-	
		15	14.95	-	14.95	15	-	14.95	-	
V <sub>IL</sub>	Input Voltage (V <sub>O</sub> =4.5 or 0.5 Vdc) (V <sub>O</sub> =9.0 or 1.0 Vdc) (V <sub>O</sub> =13.5 or 1.5 Vdc) "0" Level	5.0	-	1.5	-	2.25	1.5	-	1.5	Vdc
		10	-	3.0	-	4.50	3.0	-	3.0	
		15	-	4.0	-	6.75	4.0	-	4.0	
V <sub>IH</sub>	(V <sub>O</sub> =0.5 or 4.5 Vdc) (V <sub>O</sub> =1.0 or 9.0 Vdc) (V <sub>O</sub> =1.5 or 13.5 Vdc) "1" Level	5.0	3.5	-	3.5	2.75	-	3.5	-	Vdc
		10	7.0	-	7.0	5.50	-	7.0	-	
		15	11	-	11	8.25	-	11	-	
I <sub>OH</sub>	Output Drive Current (V <sub>OH</sub> = 4.6 Vdc) (V <sub>OH</sub> = 9.5 Vdc) (V <sub>OH</sub> = 13.5 Vdc) Source	5.0	-1.04	-	-0.88	-1.76	-	-0.7	-	mA <sub>dc</sub>
		10	-2.6	-	-2.2	-4.50	-	-1.8	-	
		15	-7.2	-	-6.0	-17.6	-	-4.8	-	
I <sub>OL</sub>	(V <sub>OL</sub> = 0.4 Vdc) (V <sub>OL</sub> = 0.5 Vdc) (V <sub>OL</sub> = 1.5 Vdc) Sink	5.0	5.0	-	2.1	2.75	-	1.75	-	mA <sub>dc</sub>
		10	6.5	-	5.45	7.0	-	4.45	-	
		15	16.5	-	13.8	25	-	11.3	-	
I <sub>IN</sub>	Input Current	15	-	±0.3	-	±0.00001	±0.3	-	±1.0	µA <sub>dc</sub>
C <sub>IN</sub>	Input Capacitance V <sub>IN</sub> =0	-	-	-	-	5.0	7.5	-	-	pF
I <sub>DD</sub>	Quiescent Current (Per Package)	5.0	-	4	-	0.002	4	-	30	µA <sub>dc</sub>
		10	-	8	-	0.004	8	-	60	
		15	-	16	-	0.006	16	-	120	
I <sub>TL</sub>	3-State Output Leakage Current	15	-	±0.8	-	±0.00001	±0.3	-	±1.0	µA <sub>dc</sub>

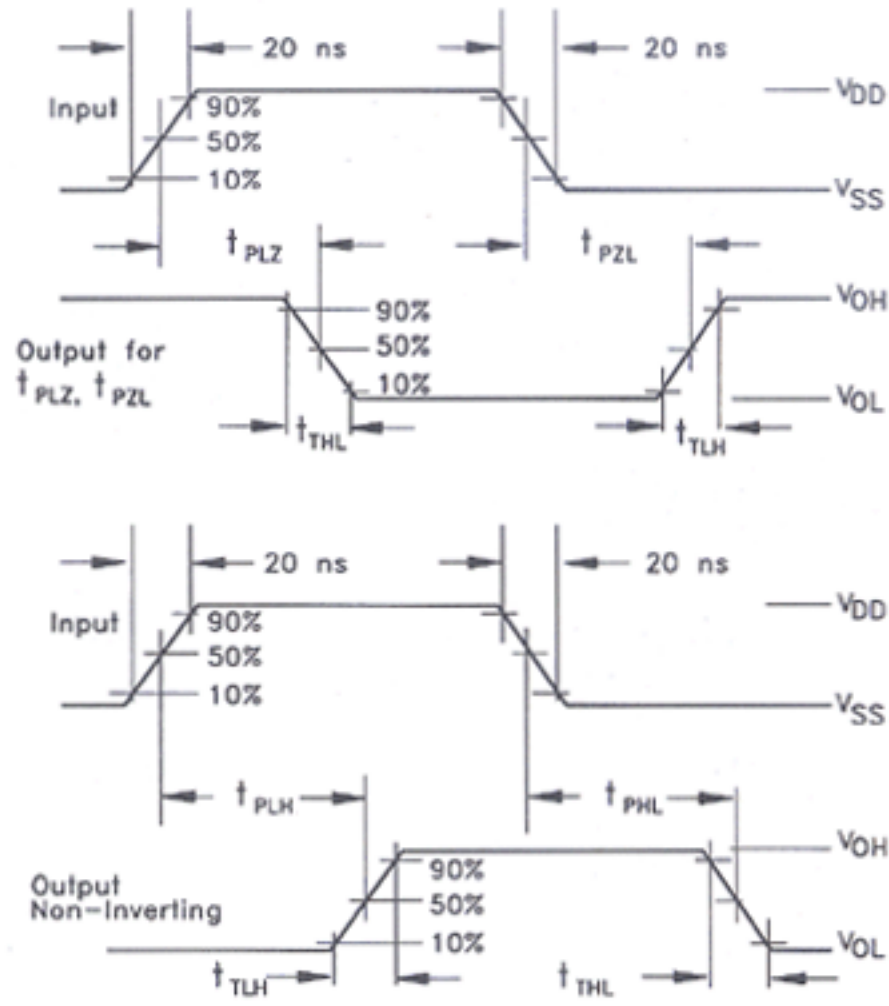
**SWITCHING CHARACTERISTICS (C<sub>L</sub>=50 pF, T<sub>A</sub>=25°C)**

Symbol	Characteristics	V <sub>DD</sub>	Min	Typ	Max	Unit
t <sub>TLH</sub>	Output Rise Time	5.0	-	45	80	ns
		10	-	23	40	
		15	-	18	35	
t <sub>THL</sub>	Output Fall Time	5.0	-	45	80	ns
		10	-	23	40	
		15	-	18	30	
t <sub>PHL</sub>	Propagation Delay Time, A to Y	5.0	-	75	150	ns
		10	-	35	40	
		15	-	25	50	
t <sub>PHZ</sub>	3-State Propagation Delay, Output "1" to High Impedance	5.0	-	75	150	ns
		10	-	40	80	
		15	-	35	70	
t <sub>PZH</sub>	3-State Propagation Delay, High Impedance to "1" Level	5.0	-	65	130	ns
		10	-	25	50	
		15	-	20	40	
t <sub>PLZ</sub>	3-State Propagation Delay, Output "0" to High Impedance	5.0	-	80	160	ns
		10	-	40	80	
		15	-	35	70	
t <sub>PZL</sub>	3-State Propagation Delay, High Impedance to "0" Level	5.0	-	100	200	ns
		10	-	35	70	
		15	-	25	50	

4502B, 4503B



SWITCHING WAVEFORMS



14502B, 14503B