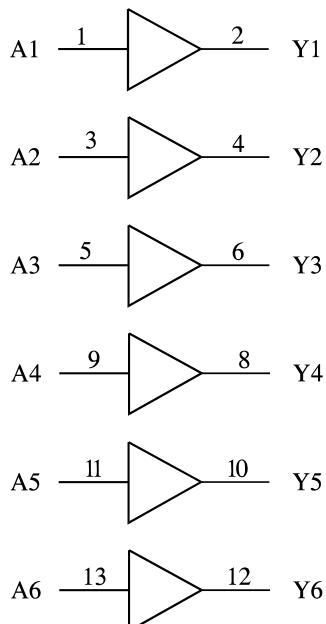


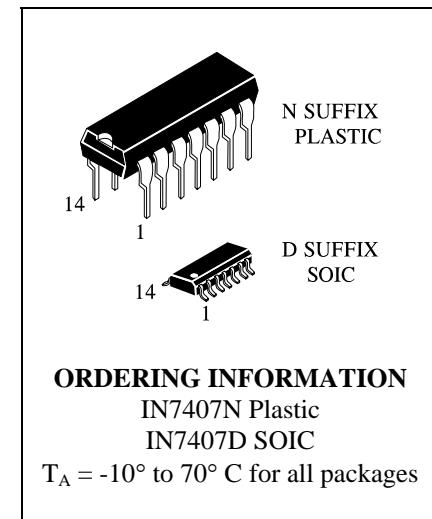
**IN7407**

## Hex Buffers/Drivers with Open-Collector High-Voltage Outputs

### LOGIC DIAGRAM



PIN 14 =V<sub>CC</sub>  
PIN 7 = GND



### PIN ASSIGNMENT

A1	1 ●	14	V <sub>CC</sub>
Y1	2	13	A6
A2	3	12	Y6
Y2	4	11	A5
A3	5	10	Y5
Y3	6	9	A4
GND	7	8	Y4

### FUNCTION TABLE

Inputs	Output
A	Y
H	Z
L	L

Z = High Impedance

**MAXIMUM RATINGS\***

Symbol	Parameter	Value	Unit
V <sub>CC</sub>	Supply Voltage	7.0	V
V <sub>IN</sub>	Input Voltage	5.5	V
V <sub>OUT</sub>	Output Voltage	30	V
T <sub>stg</sub>	Storage Temperature Range	-65 to +150	°C

\*Maximum Ratings are those values beyond which damage to the device may occur.  
Functional operation should be restricted to the Recommended Operating Conditions.

**RECOMMENDED OPERATING CONDITIONS**

Symbol	Parameter	Min	Max	Unit
V <sub>CC</sub>	Supply Voltage	4.75	5.25	V
V <sub>IH</sub>	High Level Input Voltage	2.0		V
V <sub>IL</sub>	Low Level Input Voltage		0.8	V
U <sub>OH</sub>	High Level Output Voltage		30	V
I <sub>OL</sub>	Low Level Output Current		40	mA
T <sub>A</sub>	Ambient Temperature Range	-10	+70	°C

**DC ELECTRICAL CHARACTERISTICS** over full operating conditions

Symbol	Parameter	Test Conditions	Guaranteed Limit		Unit
			Min	Max	
V <sub>IK</sub>	Input Clamp Voltage	V <sub>CC</sub> = min, I <sub>IN</sub> = -12 mA		-1.5	V
I <sub>OH</sub>	High Level Output Current	V <sub>CC</sub> = min, V <sub>OH</sub> = max		0.25	mA
V <sub>OL</sub>	Low Level Output Voltage	V <sub>CC</sub> = min, I <sub>OL</sub> = 16 mA		0.4	V
		V <sub>CC</sub> = min, I <sub>OL</sub> = 40 mA		0.7	
I <sub>IH</sub>	High Level Input Current	V <sub>CC</sub> = max, V <sub>IN</sub> = 2.4 V		0.04	µA
		V <sub>CC</sub> = max, V <sub>IN</sub> = 5.5 V		1.0	mA
I <sub>IL</sub>	Low Level Input Current	V <sub>CC</sub> = max, V <sub>IN</sub> = 0.4 V		-1.6	mA
I <sub>CC</sub>	Supply Current	V <sub>CC</sub> = max	Outputs High	41	mA
			Outputs Low	30	

**AC ELECTRICAL CHARACTERISTICS** ( $T = 25^\circ\text{C}$ ,  $V_{CC} = 5.0 \text{ V}$ ,  $C_L = 15 \text{ pF}$ ,  
 $R_L = 110 \Omega$ , Input  $t_r = t_f = 10 \text{ ns}$ )

Symbol	Parameter	Min	Max	Unit
$t_{PLH}$	Propagation Delay Time, Low to High Level Output (from Input to Output)		10	ns
$t_{PHL}$	Propagation Delay Time, High to Low Level Output (from Input to Output)		35	ns

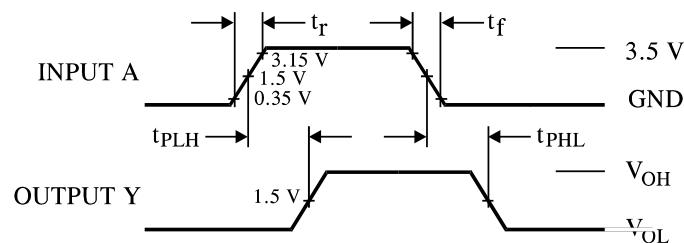
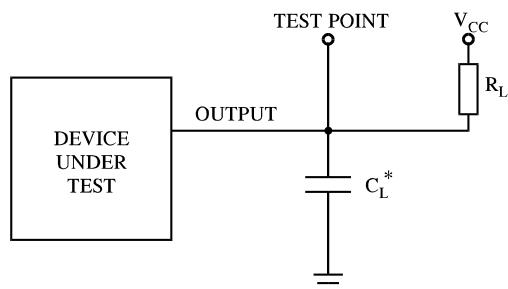


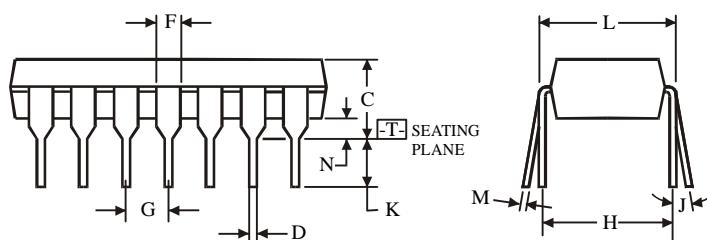
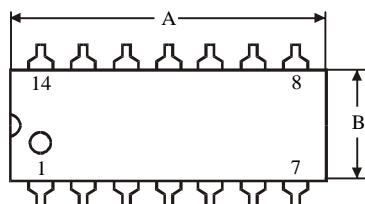
Figure 1. Switching Waveforms



\* Includes all probe and jig capacitance

Figure 2. Test Circuit

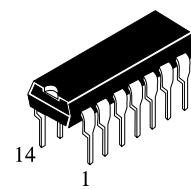
**N SUFFIX PLASTIC DIP  
(MS - 001AA)**



**NOTES:**

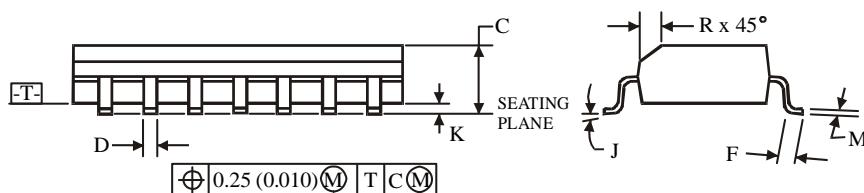
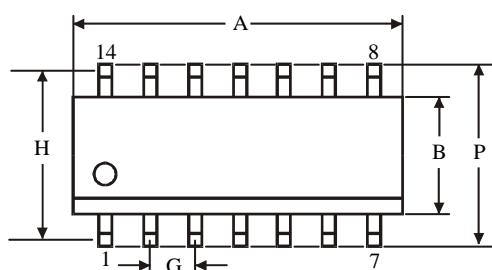
- Dimensions "A", "B" do not include mold flash or protrusions.

Maximum mold flash or protrusions 0.25 mm (0.010) per side.



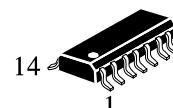
	<b>Dimension, mm</b>	
<b>Symbol</b>	<b>MIN</b>	<b>MAX</b>
<b>A</b>	18.67	19.69
<b>B</b>	6.1	7.11
<b>C</b>		5.33
<b>D</b>	0.36	0.56
<b>F</b>	1.14	1.78
<b>G</b>		2.54
<b>H</b>		7.62
<b>J</b>	0°	10°
<b>K</b>	2.92	3.81
<b>L</b>	7.62	8.26
<b>M</b>	0.2	0.36
<b>N</b>	0.38	

**D SUFFIX SOIC  
(MS - 012AB)**



**NOTES:**

- Dimensions A and B do not include mold flash or protrusion.
- Maximum mold flash or protrusion 0.15 mm (0.006) per side for A; for B - 0.25 mm (0.010) per side.



	<b>Dimension, mm</b>	
<b>Symbol</b>	<b>MIN</b>	<b>MAX</b>
<b>A</b>	8.55	8.75
<b>B</b>	3.8	4
<b>C</b>	1.35	1.75
<b>D</b>	0.33	0.51
<b>F</b>	0.4	1.27
<b>G</b>		1.27
<b>H</b>		5.27
<b>J</b>	0°	8°
<b>K</b>	0.1	0.25
<b>M</b>	0.19	0.25
<b>P</b>	5.8	6.2
<b>R</b>	0.25	0.5