

**SERIES UHD-400, UHD-400-1, AND UHD-500  
POWER AND RELAY DRIVERS**

**MIL-STD-883 Compliant**

**FEATURES**

- 500 mA Output Current-Sink Capability
- Four Logic Types
- Pinning Compatible with 54/74 Logic Series
- High-Voltage Output:
  - 100 V Series UHD-500
  - 70 V Series UHD-400-1
  - 40 V Series UHD-400

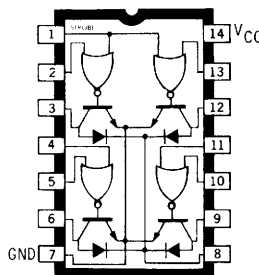
COMBINING LOGIC GATES and high-current switching transistors, these hermetically packaged, monolithic devices are used to drive incandescent or LED lamps, relays, solenoids, small dc motors, and other peripheral power loads in military and aerospace applications. Drivers with internal transient-suppression diodes are recommended for use with inductive loads.

Three minimum output-breakdown voltage ratings are available: 40 V (Series UHD-400), 70 V (Series UHD-400-1), and 100 V (Series UHD-500). All devices can sink 250 mA continuous, or 500 mA peak.

The inputs are compatible with standard TTL and CMOS logic levels. Four of eight available logic/output configurations are shown at right.

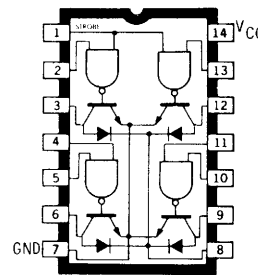
These devices are supplied in ceramic/metal side-brazed 14-pin hermetic packages. The package conforms to the dimensional requirements of MIL-M-38510 and is rated for operation over the full military temperature range of  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ . Power and relay drivers in flat-pack packages, Series UHC-400, UHC-400-1, and UHC-500, continue to be available on special order.

Monolithic construction enables cost-effective and reliable systems design. Reverse-bias burn-in and 100% high-reliability screening to MIL-STD-883, Class B, is standard for all devices.



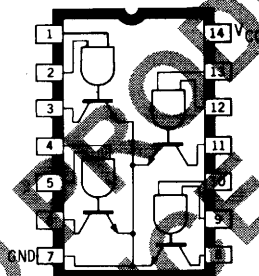
Dwg. No. A-9130B

**UHD-403  
UHD-403-1  
UHD-503**



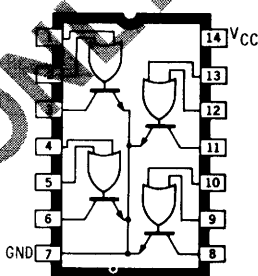
Dwg. No. A-7880B

**UHD-406  
UHD-406-1  
UHD-506**



Dwg. No. A-12,388

**UHD-408  
UHD-408-1  
UHD-508**



Dwg. No. A-12,389

**UHD-432  
UHD-432-1  
UHD-532**

**Device Part Number Designation**

Part Numbers*			Function
400	400-1	500	Quad 2-Input AND
402	402-1	502	Quad 2-Input OR
403	403-1	503	Quad OR for Inductive Loads
406	406-1	506	Quad AND for Inductive Loads
407	407-1	507	Quad NAND for Inductive Loads
408	408-1	508	Quad 2-Input NAND
432	432-1	532	Quad 2-Input NOR
433	433-1	533	Quad NOR for Inductive Loads

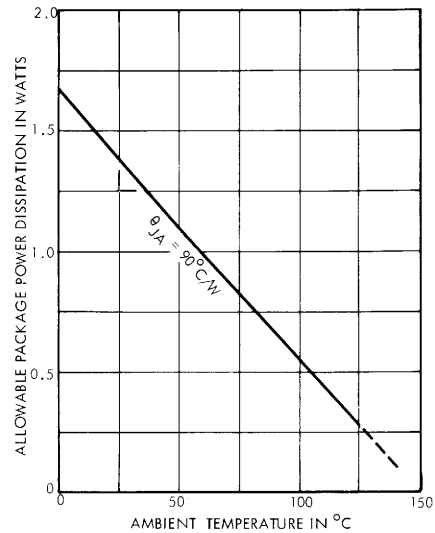
\*Complete part number includes the prefix UHD.

**SERIES UHD-400, UHD-400-1, AND UHD-500  
POWER AND RELAY DRIVERS**

**ABSOLUTE MAXIMUM RATINGS**

Supply Voltage, $V_{CC}$ .....	7 V
Output Voltage, $V_{IN}$ .....	5.5 V
Output Off-State Voltage, $V_{OFF}$	
Series UHD-400 .....	40 V
Series UHD-400-1 .....	70 V
Series UHD-500 .....	100 V
Output On-State Sink Current, $I_{ON}$	
(one driver) .....	500 mA
(total package) .....	1 A
Suppression Diode Off-State Voltage, $V_R$	
Series UHD-400 .....	40 V
Series UHD-400-1 .....	70 V
Series UHD-500 .....	100 V
Suppression Diode On-State Current, $I_F$ .....	500 mA
Operating Free-Air Temperature Range, $T_A$ .....	-55°C to +125°C
Storage Temperature Range, $T_S$ .....	-65°C to +150°C

**ALLOWABLE PACKAGE POWER DISSIPATION**



Dwg. No. A-10.884B

**RECOMMENDED OPERATING CONDITIONS**

	Min.	Nom.	Max.	Units
Supply Voltage ( $V_{CC}$ )	4.5	5.0	5.5	V
Operating Temperature Range	-55	+25	+125	°C
Current into Any Output (ON State)	—	—	250	mA

**SWITCHING CHARACTERISTICS at  $T_A = +25^\circ\text{C}$ ,  $V_{CC} = 5.0\text{ V}$**

Characteristic	Series	Test Conditions (Note 3)	Limits			Units
			Min.	Typ.	Max.	
Turn-On Delay Time ( $t_{pd0}$ )	UHD-400	$V_S = 40\text{ V}$ , $R_L = 265\Omega$ (6 W)	—	200	500	ns
	UHD-400-1	$V_S = 70\text{ V}$ , $R_L = 465\Omega$ (10 W)	—	200	500	ns
	UHD-500	$V_S = 100\text{ V}$ , $R_L = 670\Omega$ (15 W)	—	200	500	ns
Turn-Off Delay Time ( $t_{pd1}$ )	UHD-400	$V_S = 40\text{ V}$ , $R_L = 265\Omega$ (6 W)	—	300	750	ns
	UHD-400-1	$V_S = 70\text{ V}$ , $R_L = 465\Omega$ (10 W)	—	300	750	ns
	UHD-500	$V_S = 100\text{ V}$ , $R_L = 670\Omega$ (15 W)	—	300	750	ns

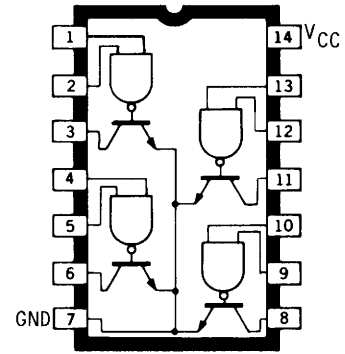
NOTES:

- Each input tested separately.
- Voltage values shown in the test-circuit waveforms are with respect to network ground terminal.
- $C_i = 15\text{ pF}$ . Capacitance value specified includes probe and test fixture capacitance.

**INPUT PULSE CHARACTERISTICS**

$V_{in(0)} = 0\text{ V}$	$t_f \leq 7.0\text{ ns}$	$t_p = 1.0\text{ }\mu\text{s}$
$V_{in(1)} = 3.5\text{ V}$	$t_r \leq 14\text{ ns}$	PRR = 500 kHz

## UHD-400, UHD-400-1, UHD-500 Quad 2-Input AND Power Drivers



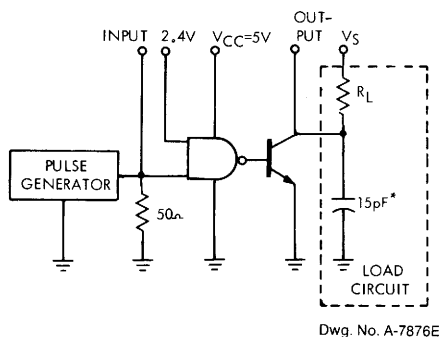
Dwg. No. A-7606

### ELECTRICAL CHARACTERISTICS over operating temperature range (unless otherwise noted)

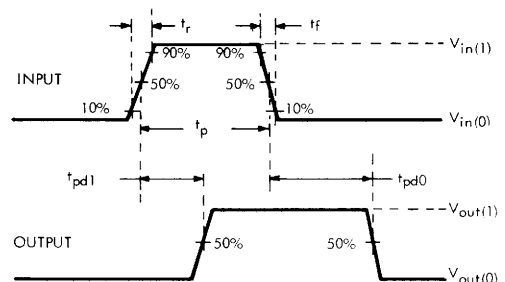
Characteristic	Symbol	Temp.	Applicable Devices	Test Conditions			Limits				
				V <sub>CC</sub>	Driven Input	Other Input	Output	Min.	Typ.	Max.	Units
Output Reverse Current	I <sub>CEX</sub>	—	UHD-400	4.5 V	2.0 V	2.0 V	40 V	—	—	100	μA
			UHD-400-1	4.5 V	2.0 V	2.0 V	70 V	—	—	100	μA
			UHD-500	4.5 V	2.0 V	2.0 V	100 V	—	—	100	μA
Output Voltage	V <sub>CE(SAT)</sub>	-55°C to +25°C	All	4.5 V	0.8 V	4.5 V	150 mA	—	—	0.5	V
				4.5 V	0.8 V	4.5 V	250 mA	—	—	0.7	V
			All	4.5 V	0.8 V	4.5 V	150 mA	—	—	0.6	V
				4.5 V	0.8 V	4.5 V	250 mA	—	—	0.8	V
Input Voltage	V <sub>IN(1)</sub>	—	All	4.5 V	—	—	—	2.0	—	—	V
	V <sub>IN(0)</sub>	—	All	4.5 V	—	—	—	—	—	0.8	V
Input Current (Note 2)	I <sub>IN(0)</sub>	—	All	5.5 V	0.4 V	4.5 V	—	—	—	-800	μA
	I <sub>IN(1)</sub>	—	All	5.5 V	2.4 V	0 V	—	—	—	40	μA
				5.5 V	5.5 V	0 V	—	—	—	1000	μA
Supply Current (Each Gate)	I <sub>CC(1)</sub>	+25°C	All	5.5 V	5.0 V	5.0 V	—	—	4.0	7.5	mA
	I <sub>CC(0)</sub>	+25°C	All	5.5 V	0 V	0 V	—	—	17.5	26.5	mA

**NOTES:**

1. All typical values are at V<sub>CC</sub> = 5.0 V, T<sub>A</sub> = +25°C.
2. Each input is tested separately.



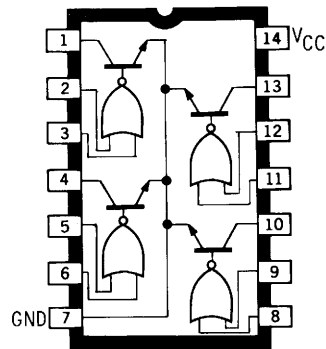
Dwg. No. A-7876E



Dwg. No. A-7628C

\*Includes probe and test fixture capacitance.

**UHD-402, UHD-402-1, UHD-502  
Quad 2-Input OR Power Drivers**



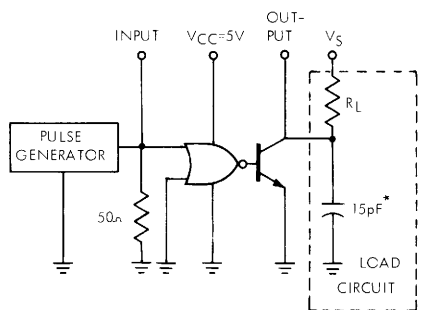
Dwg. No. A-7608

**ELECTRICAL CHARACTERISTICS over operating temperature range (unless otherwise noted)**

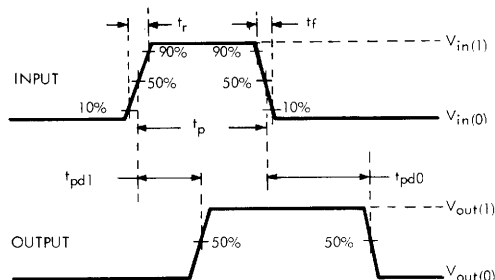
Characteristic	Symbol	Temp.	Applicable Devices	Test Conditions				Limits			
				V <sub>CC</sub>	Driven Input	Other Input	Output	Min.	Typ.	Max.	Units
Output Reverse Current	I <sub>CEX</sub>	—	UHD-402	4.5 V	2.0 V	0 V	40 V	—	—	100	μA
			UHD-402-1	4.5 V	2.0 V	0 V	70 V	—	—	100	μA
			UHD-502	4.5 V	2.0 V	0 V	100 V	—	—	100	μA
Output Voltage	V <sub>CE(SAT)</sub>	-55°C to +25°C	All	4.5 V	0.8 V	0.8 V	150 mA	—	—	0.5	V
				4.5 V	0.8 V	0.8 V	250 mA	—	—	0.7	V
		+125°C	All	4.5 V	0.8 V	0.8 V	150 mA	—	—	0.6	V
				4.5 V	0.8 V	0.8 V	250 mA	—	—	0.8	V
Input Voltage	V <sub>IN(1)</sub>	—	All	4.5 V	—	—	—	2.0	—	—	V
	V <sub>IN(0)</sub>	—	All	4.5 V	—	—	—	—	—	0.8	V
Input Current (Note 2)	I <sub>IN(0)</sub>	—	All	5.5 V	0.4 V	4.5 V	—	—	—	-800	μA
	I <sub>IN(1)</sub>	—	All	5.5 V	2.4 V	0 V	—	—	—	40	μA
				5.5 V	5.5 V	0 V	—	—	—	1000	μA
Supply Current (Each Gate)	I <sub>CC(1)</sub>	+25°C	All	5.5 V	5.0 V	5.0 V	—	—	4.1	7.5	mA
	I <sub>CC(0)</sub>	+25°C	All	5.5 V	0 V	0 V	—	—	18	26.5	mA

**NOTES:**

1. All typical values are at V<sub>CC</sub> = 5.0 V, T<sub>A</sub> = +25°C.
2. Each input is tested separately.



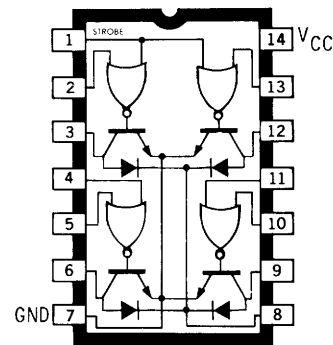
Dwg. No. A-7877C



Dwg. No. A-7628C

\*Includes probe and test fixture capacitance.

## UHD-403, UHD-403-1, UHD-503 Quad OR Relay Drivers



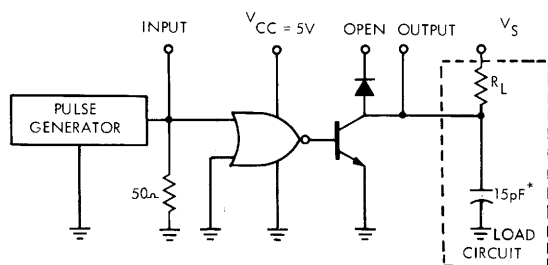
Dwg. No. A-9130B

### ELECTRICAL CHARACTERISTICS over operating temperature range (unless otherwise noted)

Characteristic	Symbol	Temp.	Applicable Devices	Test Conditions				Limits			
				V <sub>CC</sub>	Driven Input	Other Input	Output	Min.	Typ.	Max.	Units
Output Reverse Current	I <sub>CEX</sub>	—	UHD-403	4.5 V	2.0 V	0 V	40 V	—	—	100	μA
			UHD-403-1	4.5 V	2.0 V	0 V	70 V	—	—	100	μA
			UHD-503	4.5 V	2.0 V	0 V	100 V	—	—	100	μA
Output Voltage	V <sub>CE(SAT)</sub>	-55°C to +25°C	All	4.5 V	0.8 V	0.8 V	150 mA	—	—	0.5	V
				4.5 V	0.8 V	0.8 V	250 mA	—	—	0.7	V
			All	4.5 V	0.8 V	0.8 V	150 mA	—	—	0.6	V
				4.5 V	0.8 V	0.8 V	250 mA	—	—	0.8	V
Input Voltage	V <sub>IN(1)</sub>	—	All	4.5 V	—	—	—	2.0	—	—	V
	V <sub>IN(0)</sub>	—	All	4.5 V	—	—	—	—	—	0.8	V
Input Current (Note 2)	I <sub>IN(0)</sub>	—	All	5.5 V	0.4 V	4.5 V	—	—	—	-800	μA
				5.5 V	2.4 V	0 V	—	—	—	40	μA
				5.5 V	5.5 V	0 V	—	—	—	1000	μA
Strobe Input Current	I <sub>IN(0)</sub>	—	All	5.5 V	0.4 V	4.5 V	—	—	—	-1.6	mA
				5.5 V	2.4 V	0 V	—	—	—	100	μA
				5.5 V	5.5 V	0 V	—	—	—	1000	μA
Diode Leakage Current (Note 3)	I <sub>R</sub>	—	All	5.0 V	0 V	0 V	Open	—	—	200	μA
Diode Forward Voltage	V <sub>F</sub>	—	All	5.0 V	5.0 V	5.0 V	200 mA	—	1.5	1.75	V
Supply Current (Each Gate)	I <sub>CC(1)</sub>	+25°C	All	5.5 V	5.0 V	5.0 V	—	—	6.0	7.5	mA
		I <sub>CC(0)</sub>	+25°C	All	5.5 V	0 V	0 V	—	—	20	26.5

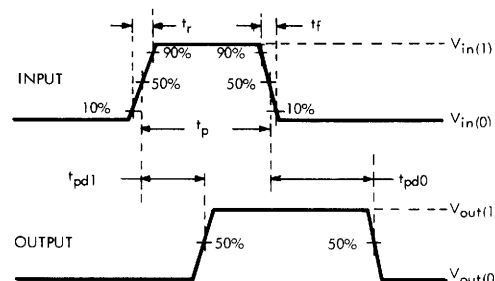
**NOTES:**

1. All typical values are at V<sub>CC</sub> = 5.0 V, T<sub>A</sub> = +25°C.
2. Excluding strobe input; each input is tested separately.
3. All diodes tested simultaneously at pin 8 at rated V<sub>OFF</sub>.



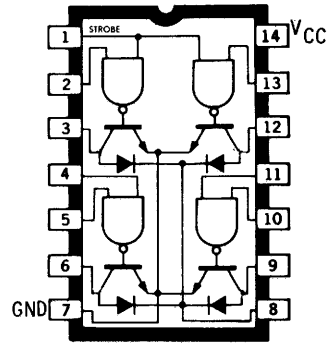
Dwg. No. A-9123C

\*Includes probe and test fixture capacitance.



Dwg. No. A-7628C

**UHD-406, UHD-406-1, UHD-506  
Quad AND Relay Drivers**



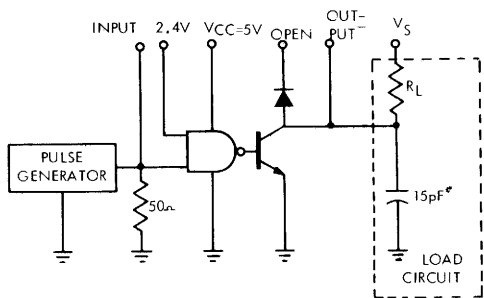
Dwg. No. A-7880B

**ELECTRICAL CHARACTERISTICS over operating temperature range (unless otherwise noted)**

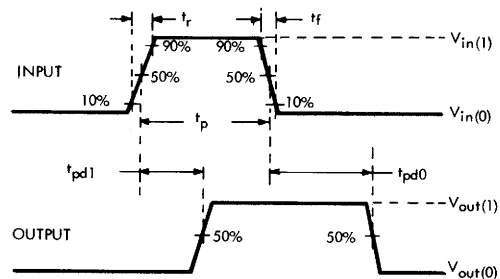
Characteristic	Symbol	Temp.	Applicable Devices	Test Conditions				Limits			
				V <sub>CC</sub>	Driven Input	Other Input	Output	Min.	Typ.	Max.	Units
Output Reverse Current	I <sub>CEX</sub>	—	UHD-406	4.5 V	2.0 V	2.0 V	40 V	—	—	100	μA
			UHD-406-1	4.5 V	2.0 V	2.0 V	70 V	—	—	100	μA
			UHD-506	4.5 V	2.0 V	2.0 V	100 V	—	—	100	μA
Output Voltage	V <sub>CE(SAT)</sub>	-55°C to +25°C	All	4.5 V	0.8 V	4.5 V	150 mA	—	—	0.5	V
				4.5 V	0.8 V	4.5 V	250 mA	—	—	0.7	V
			All	4.5 V	0.8 V	4.5 V	150 mA	—	—	0.6	V
				4.5 V	0.8 V	4.5 V	250 mA	—	—	0.8	V
Input Voltage	V <sub>IN(1)</sub>	—	All	4.5 V	—	—	—	2.0	—	—	V
	V <sub>IN(0)</sub>	—	All	4.5 V	—	—	—	—	—	0.8	V
Input Current (Note 2)	I <sub>IN(0)</sub>	—	All	5.5 V	0.4 V	4.5 V	—	—	—	-800	μA
	I <sub>IN(1)</sub>	—	All	5.5 V	2.4 V	0 V	—	—	—	40	μA
				5.5 V	5.5 V	0 V	—	—	—	1000	μA
Strobe Input Current	I <sub>IN(0)</sub>	—	All	5.5 V	0.4 V	4.5 V	—	—	—	-1.6	mA
	I <sub>IN(1)</sub>	—	All	5.5 V	2.4 V	0 V	—	—	—	100	μA
				5.5 V	5.5 V	0 V	—	—	—	1000	μA
Diode Leakage Current (Note 3)	I <sub>R</sub>	—	All	5.0 V	0 V	0 V	Open	—	—	200	μA
Diode Forward Voltage	V <sub>F</sub>	—	All	5.0 V	5.0 V	5.0 V	200 mA	—	1.5	1.75	V
Supply Current (Each Gate)	I <sub>CC(1)</sub>	+25°C	All	5.5 V	5.0 V	5.0 V	—	—	4.0	7.5	mA
	I <sub>CC(0)</sub>	+25°C	All	5.5 V	0 V	0 V	—	—	17.5	26.5	mA

**NOTES:**

1. All typical values are at V<sub>CC</sub> = 5.0 V, T<sub>A</sub> = +25°C.
2. Excluding strobe input; each input is tested separately.
3. All diodes tested simultaneously at pin 8 at rated V<sub>OFF</sub>.



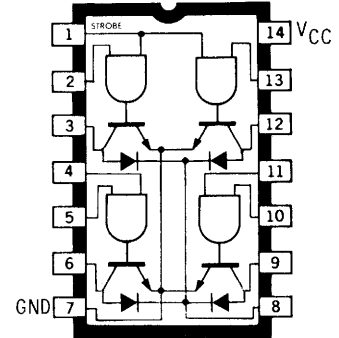
Dwg. No. A-7878C



Dwg. No. A-7628C

\*Includes probe and test fixture capacitance.

## UHD-407, UHD-407-1, UHD-507 Quad NAND Relay Drivers



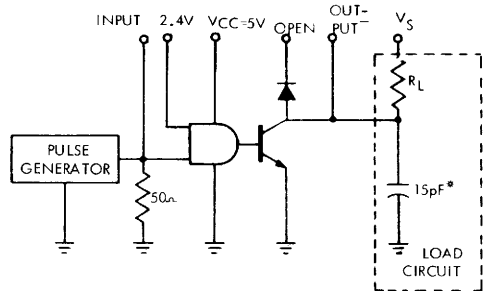
Dwg. No. A-7973B

### ELECTRICAL CHARACTERISTICS over operating temperature range (unless otherwise noted)

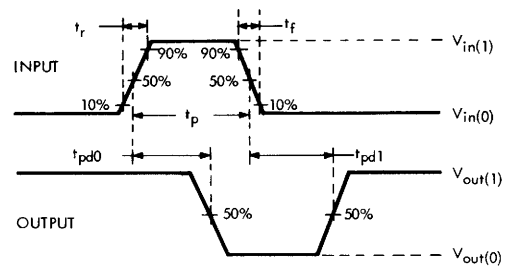
Characteristic	Symbol	Temp.	Applicable Devices	Test Conditions				Limits			
				V <sub>CC</sub>	Driven Input	Other Input	Output	Min.	Typ.	Max.	Units
Output Reverse Current	I <sub>CEX</sub>	—	UHD-407	4.5 V	0.8 V	4.5 V	40 V	—	—	100	μA
			UHD-407-1	4.5 V	0.8 V	4.5 V	70 V	—	—	100	μA
			UHD-507	4.5 V	0.8 V	4.5 V	100 V	—	—	100	μA
Output Voltage	V <sub>CE(SAT)</sub>	-55°C to +25°C	All	4.5 V	2.0 V	2.0 V	150 mA	—	—	0.5	V
			All	4.5 V	2.0 V	2.0 V	250 mA	—	—	0.7	V
		+125°C	All	4.5 V	2.0 V	2.0 V	150 mA	—	—	0.6	V
			All	4.5 V	2.0 V	2.0 V	250 mA	—	—	0.8	V
Input Voltage	V <sub>IN(1)</sub>	—	All	4.5 V	—	—	—	2.0	—	—	V
	V <sub>IN(0)</sub>	—	All	4.5 V	—	—	—	—	—	0.8	V
Input Current (Note 2)	I <sub>IN(0)</sub>	—	All	5.5 V	0.4 V	4.5 V	—	—	—	-800	μA
	I <sub>IN(1)</sub>	—	All	5.5 V	2.4 V	0 V	—	—	—	40	μA
			All	5.5 V	5.5 V	0 V	—	—	—	1000	μA
Strobe Input Current	I <sub>IN(0)</sub>	—	All	5.5 V	0.4 V	4.5 V	—	—	—	-1.6	mA
			All	5.5 V	2.4 V	0 V	—	—	—	100	μA
	I <sub>IN(1)</sub>	—	All	5.5 V	5.5 V	0 V	—	—	—	1000	μA
Diode Leakage Current (Note 3)	I <sub>R</sub>	—	All	5.0 V	5.0 V	5.0 V	Open	—	—	200	μA
Diode Forward Voltage	V <sub>F</sub>	—	All	5.0 V	0 V	0 V	200 mA	—	1.5	1.75	V
Supply Current (Each Gate)	I <sub>CC(1)</sub>	+25°C	All	5.5 V	0 V	0 V	—	—	6.0	7.5	mA
	I <sub>CC(0)</sub>	+25°C	All	5.5 V	5.0 V	5.0 V	—	—	20	26.5	mA

**NOTES:**

1. All typical values are at V<sub>CC</sub> = 5.0 V, T<sub>A</sub> = +25°C.
2. Excluding strobe input; each input is tested separately.
3. All diodes tested simultaneously at pin 8 at rated V<sub>OFF</sub>.



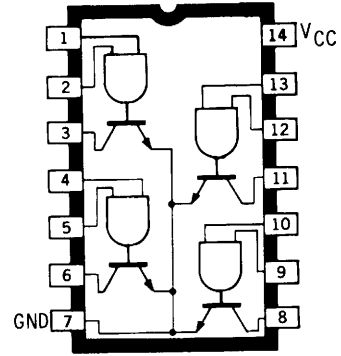
Dwg. No. A-7899C



Dwg. No. A-7900A

\*Includes probe and text fixture capacitance.

**UHD-408, UHD-408-1, UHD-508  
Quad 2-Input NAND Power Drivers**



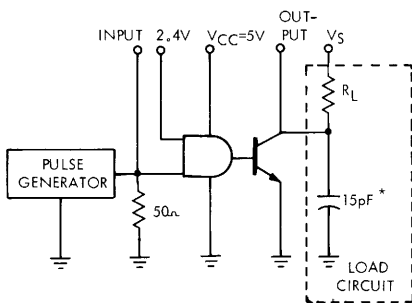
Dwg. No. 12,388

**ELECTRICAL CHARACTERISTICS over operating temperature range (unless otherwise noted)**

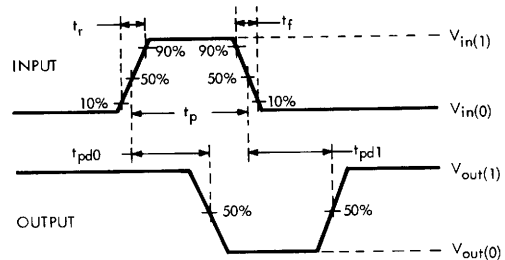
Characteristic	Symbol	Temp.	Applicable Devices	Test Conditions				Limits			
				V <sub>CC</sub>	Driven Input	Other Input	Output	Min.	Typ.	Max.	Units
Output Reverse Current	I <sub>CEX</sub>	—	UHD-408	4.5 V	0.8 V	4.5 V	40 V	—	—	100	μA
			UHD-408-1	4.5 V	0.8 V	4.5 V	70 V	—	—	100	μA
			UHD-508	4.5 V	0.8 V	4.5 V	100 V	—	—	100	μA
Output Voltage	V <sub>CE(SAT)</sub>	-55°C to +25°C	All	4.5 V	2.0 V	2.0 V	150 mA	—	—	0.5	V
				4.5 V	2.0 V	2.0 V	250 mA	—	—	0.7	V
		+125°C	All	4.5 V	2.0 V	2.0 V	150 mA	—	—	0.6	V
				4.5 V	2.0 V	2.0 V	250 mA	—	—	0.8	V
Input Voltage	V <sub>IN(1)</sub>	—	All	4.5 V	—	—	—	2.0	—	—	V
	V <sub>IN(0)</sub>	—	All	4.5 V	—	—	—	—	—	0.8	V
Input Current (Note 2)	I <sub>IN(0)</sub>	—	All	5.5 V	0.4 V	4.5 V	—	—	—	-800	μA
	I <sub>IN(1)</sub>	—	All	5.5 V	2.4 V	0 V	—	—	—	40	μA
				5.5 V	5.5 V	0 V	—	—	—	1000	μA
Supply Current (Each Gate)	I <sub>CC(1)</sub>	+25°C	All	5.5 V	0 V	0 V	—	—	6.0	7.5	mA
	I <sub>CC(0)</sub>	+25°C	All	5.5 V	5.0 V	5.0 V	—	—	20	26.5	mA

**NOTES:**

1. All typical values are at V<sub>CC</sub> = 5.0 V, T<sub>A</sub> = +25°C.
2. Each input is tested separately.



Dwg. No. A-9638A

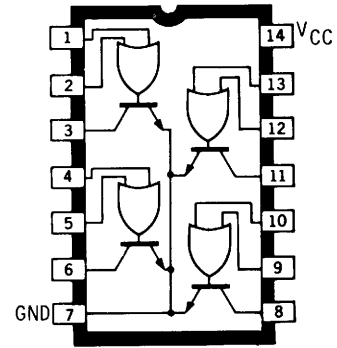


Dwg. No. A-7900A

\*Includes probe and test fixture capacitance.



**UHD-432, UHD-432-1, UHD-532  
Quad 2-Input NOR Power Drivers**



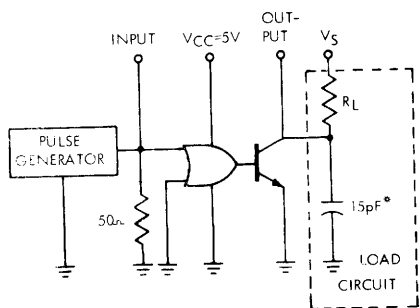
Dwg. No. A-12,389

**ELECTRICAL CHARACTERISTICS over operating temperature range (unless otherwise noted)**

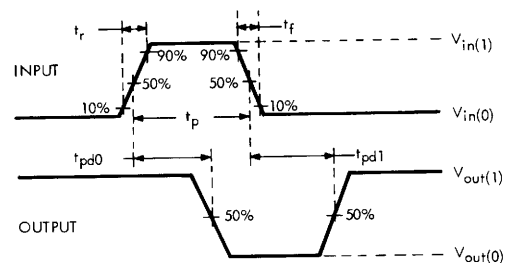
Characteristic	Symbol	Temp.	Applicable Devices	Test Conditions				Limits			
				V <sub>CC</sub>	Driven Input	Other Input	Output	Min.	Typ.	Max.	Units
Output Reverse Current	I <sub>CEX</sub>	—	UHD-432	4.5 V	0.8 V	0.8 V	40 V	—	—	100	μA
			UHD-432-1	4.5 V	0.8 V	0.8 V	70 V	—	—	100	μA
			UHD-532	4.5 V	0.8 V	0.8 V	100 V	—	—	100	μA
Output Voltage	V <sub>CE(SAT)</sub>	-55°C to +25°C	All	4.5 V	2.0 V	0 V	150 mA	—	—	0.5	V
				4.5 V	2.0 V	0 V	250 mA	—	—	0.7	V
			All	4.5 V	2.0 V	0 V	150 mA	—	—	0.6	V
				4.5 V	2.0 V	0 V	250 mA	—	—	0.8	V
Input Voltage	V <sub>IN(1)</sub>	—	All	4.5 V	—	—	—	2.0	—	—	V
	V <sub>IN(0)</sub>	—	All	4.5 V	—	—	—	—	—	0.8	V
Input Current (Note 2)	I <sub>IN(0)</sub>	—	All	5.5 V	0.4 V	4.5 V	—	—	—	-800	μA
	I <sub>IN(1)</sub>	—	All	5.5 V	2.4 V	0 V	—	—	—	40	μA
				5.5 V	5.5 V	0 V	—	—	—	1000	μA
Supply Current (Each Gate)	I <sub>CC(1)</sub>	+25°C	All	5.5 V	0 V	0 V	—	—	6.0	7.5	mA
	I <sub>CC(0)</sub>	+25°C	All	5.5 V	5.0 V	5.0 V	—	—	20	26.5	mA

**NOTES:**

1. All typical values are at V<sub>CC</sub> = 5.0 V, T<sub>A</sub> = +25°C.
2. Each input is tested separately.



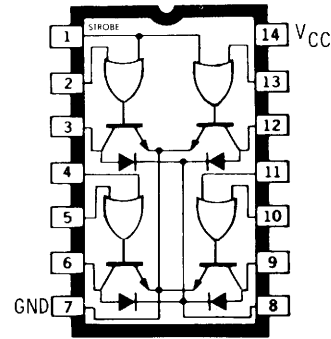
Dwg. No. A-7902C



Dwg. No. A-7900A

\*Includes probe and test fixture capacitance.

**UHD-433, UHD-433-1, UHD-533**  
**Quad NOR Relay Drivers**



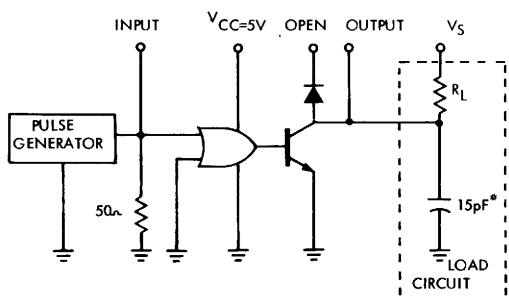
Dwg. No. A-12.390A

**ELECTRICAL CHARACTERISTICS over operating temperature range (unless otherwise noted)**

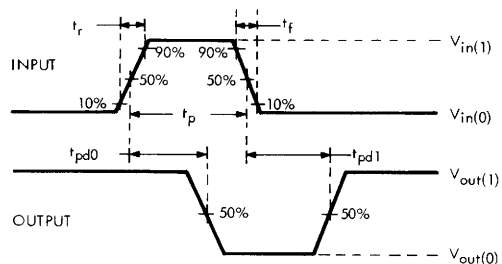
Characteristic	Symbol	Temp.	Applicable Devices	Test Conditions				Limits			
				V <sub>CC</sub>	Driven Input	Other Input	Output	Min.	Typ.	Max.	Units
Output Reverse Current	I <sub>CEX</sub>	—	UHD-433	4.5 V	0.8 V	0.8 V	40 V	—	—	100	μA
			UHD-433-1	4.5 V	0.8 V	0.8 V	70 V	—	—	100	μA
			UHD-533	4.5 V	0.8 V	0.8 V	100 V	—	—	100	μA
Output Voltage	V <sub>CE(SAT)</sub>	-55°C to +25°C	All	4.5 V	2.0 V	0 V	150 mA	—	—	0.5	V
				4.5 V	2.0 V	0 V	250 mA	—	—	0.7	V
			All	4.5 V	2.0 V	0 V	150 mA	—	—	0.6	V
				4.5 V	2.0 V	0 V	250 mA	—	—	0.8	V
Input Voltage	V <sub>IN(1)</sub>	—	All	4.5 V	—	—	—	2.0	—	—	V
	V <sub>IN(0)</sub>	—	All	4.5 V	—	—	—	—	—	0.8	V
Input Current (Note 2)	I <sub>IN(0)</sub>	—	All	5.5 V	0.4 V	4.5 V	—	—	—	-800	μA
				5.5 V	2.4 V	0 V	—	—	—	40	μA
					5.5 V	5.5 V	0 V	—	—	—	1000
Strobe Input Current	I <sub>IN(0)</sub>	—	All	5.5 V	0.4 V	4.5 V	—	—	—	-1.6	mA
				5.5 V	2.4 V	0 V	—	—	—	100	μA
					5.5 V	5.5 V	0 V	—	—	—	1000
Diode Leakage Current (Note 3)	I <sub>R</sub>	—	All	5.0 V	5.0 V	5.0 V	Open	—	—	200	μA
Diode Forward Voltage	V <sub>F</sub>	—	All	5.0 V	0 V	0 V	200 mA	—	1.5	1.75	V
Supply Current (Each Gate)	I <sub>CC(1)</sub>	+25°C	All	5.5 V	0 V	0 V	—	—	6.0	7.5	mA
		+25°C	All	5.5 V	5.0 V	5.0 V	—	—	20	26.5	mA

NOTES:

1. All typical values at are V<sub>CC</sub> = 5.0 V, T<sub>a</sub> = +25°C.
2. Excluding strobe input; each input is tested separately.
3. All diodes tested simultaneously at pin 8 at rated V<sub>OFF</sub>.



Dwg. No. A-9135C

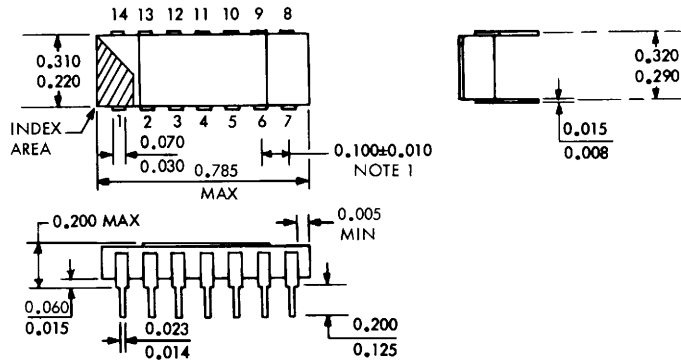


Dwg. No. A-7900A

\*Includes probe and test fixture capacitance.

## HERMETIC CERAMIC/METAL PACKAGE

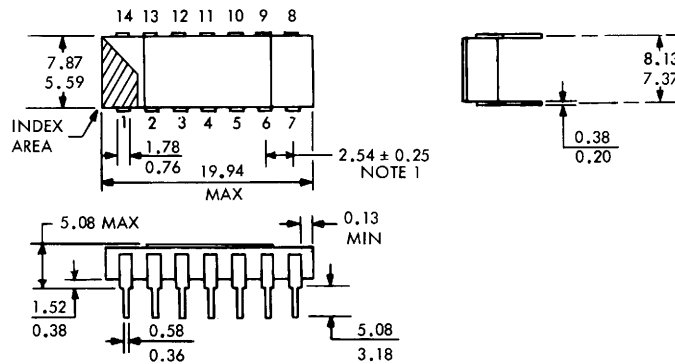
### DIMENSIONS IN INCHES



Dwg. No. A-9767C IN

### DIMENSIONS IN MILLIMETERS

Based on 1" = 25.4 mm



Dwg. No. A-9767C MM

This package conforms to military specification MIL-M-38510, case outline D-1, Configuration 3.

These devices are marked to indicate compliance to the latest issue of MIL-STD-883. For example: UHD400-883 or UHD433-1-883.

**NOTES:**

1. Lead spacing tolerance is non-cumulative.
2. Exact body and lead configuration at vendor's option within limits shown.
3. Lead gauge plane is 0.030 in. (0.76 mm) max. below seating plane.



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A UNIT OF THE PENN CENTRAL CORPORATION

WORCESTER, MASSACHUSETTS 01606-1224

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Tel. 617/853-5000

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Suite 117 — 10721 Treena Street  
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Cherry Hill, NJ 08034 — 0460  
Tel. 609/795-4200

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Altamonte Springs 32715 — 1410  
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Tampa 33614 — 3265  
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Tel. 315/437-7311

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2002 Teall Ave.  
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Tel. 315/437-2843

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TLX 21422

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