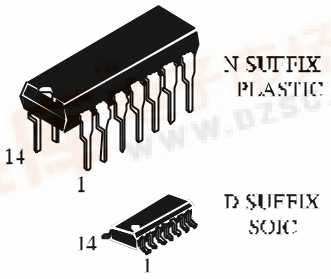
IN7406

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

The IN7406 monolithic TTL hex inverter buffers/drivers feature high-voltage open collector outputs for interfacing with high-level circuits (such as MOS) or for driving high-current loads (such as lamps or relays), and are also characterized for use as inverter buffers for driving TTL inputs.

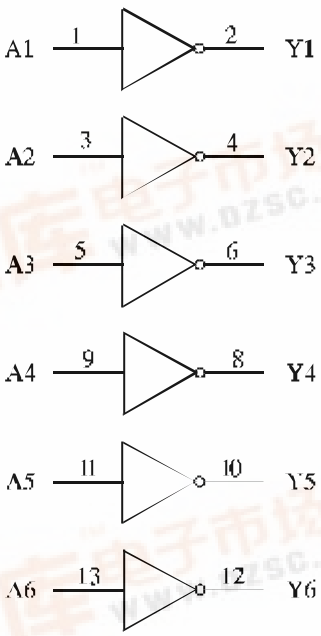
- Minimum breakdown Voltages is 30 V
- Maximum sink Current is 40 mÀ
- Converts TTL Voltage Levels to MOS Levels
- Open-Collector Driver for Indicator Lamps and Relays
- Inputs Fully Compatible with MOST TTL Circuits.



ORDERING INFORMATION

IN7406N Plastic
IN7406D SOIC
IZ7406 Chip
T_A = -10° to 70° C
for all packages

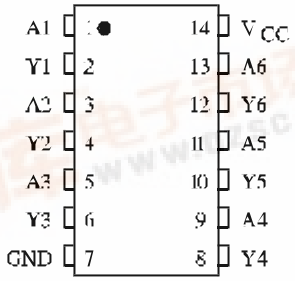
LOGIC DIAGRAM



Y = A

PIN 14 =V_{CC}
PIN 7 = GND

PIN ASSIGNMENT



FUNCTION TABLE

Inputs	Output
A	Y
L	Z
H	L

Z = High Impedance

MAXIMUM RATINGS*

Symbol	Parameter	Value	Unit
V_{CC}	Supply Voltage	7.0	V
V_{IN}	Input Voltage	5.5	V
V_{OUT}	Output Voltage	30	V
Tstg	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_{CC}	Supply Voltage	4.75	5.25	V
V_{IH}	High Level Input Voltage	2.0		V
V_{IL}	Low Level Input Voltage		0.8	V
U_{OH}	High Level Output Voltage		30	V
I_{OL}	Low Level Output Current		40	mA
T_A	Ambient Temperature Range	-10	+70	°C

DC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Test Conditions		Guaranteed Limit		Unit
				Min	Max	
V_{IK}	Input Clamp Voltage	V_{CC} = 4.75V, I_{IN} = -12 mA			-1.5	V
I_{OH}	High Level Output Current	V_{CC} = 4.75V, V_{OH} =30V			0.25	mA
V_{OL}	Low Level Output Voltage	V_{CC} = 4.75V, I_{OL} = 16 mA			0.4	V
		V_{CC} = 4.75V, I_{OL} = 40 mA			0.7	
I_{IH}	High Level Input Current	V_{CC} = 5.25V, V_{IN} = 2.4 V			0.04	mA
I_{IL}	Low Level Input Current	V_{CC} = 5.25V, V_{IN} = 0.4 V			-1.6	mA
I_{CC}	Supply Current	V_{CC} = 5.25V	Outputs High		48	mA
			Outputs Low		51	

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

Symbol	Parameter	Min	Max	Unit
t_{PLH}	Propagation Delay Time, Low to High Level Output (from Input to Output)		18	ns
t_{PHL}	Propagation Delay Time, High to Low Level Output (from Input to Output)		28	ns

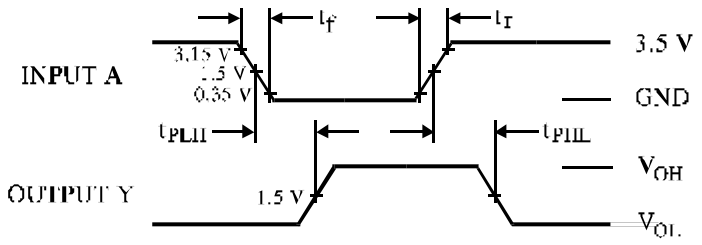
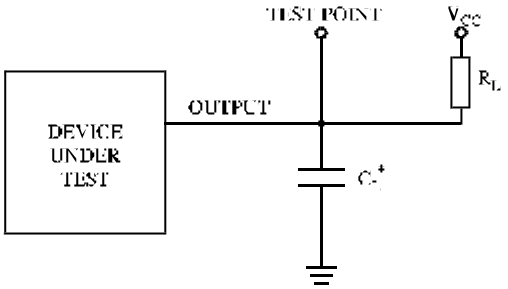


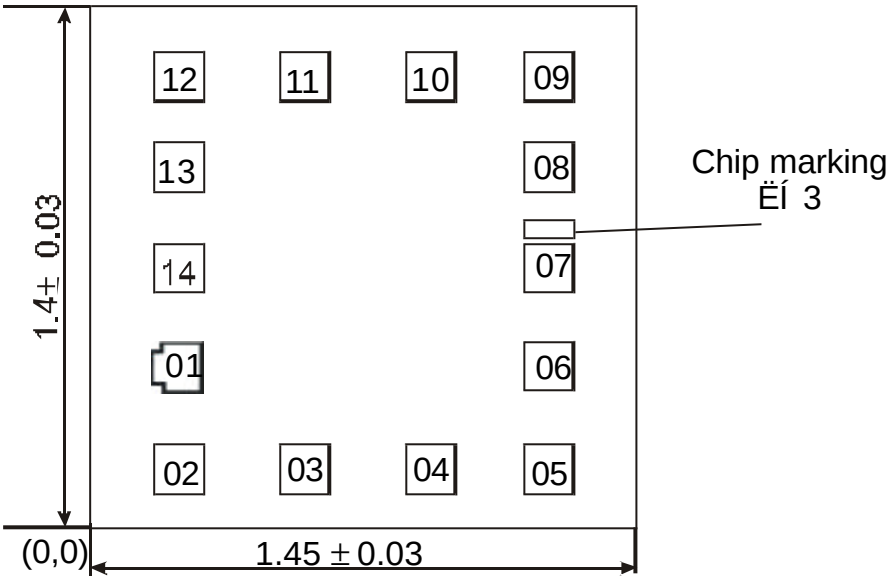
Figure 1. Switching Waveforms



* Includes all probe and jig capacitance

Figure 2. Test Circuit

CHIP PAD DIAGRAM IZ7406



Pad size 0.140 x 0.140 mm (Pad size is given as per metallization layer)
Thickness of chip 0,46±0,02 mm

PAD LOCATION

Pad No	Symbol	X	Y
01	A1	0.090	0.380
02	Y1	0.090	0.090
03	A2	0.460	0.090
04	Y2	0.830	0.090
05	A3	1.220	0.090
06	Y3	1.220	0.380
07	GND	1.220	0.630
08	Y4	1.220	0.880
09	A4	1.220	1.170
10	Y5	0.830	1.170
11	A5	0.460	1.170
12	Y6	0.090	1.170
13	A6	0.090	0.880
14	V_{CC}	0.090	0.630