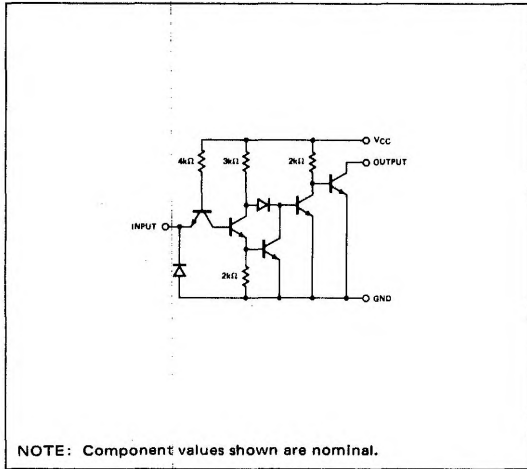


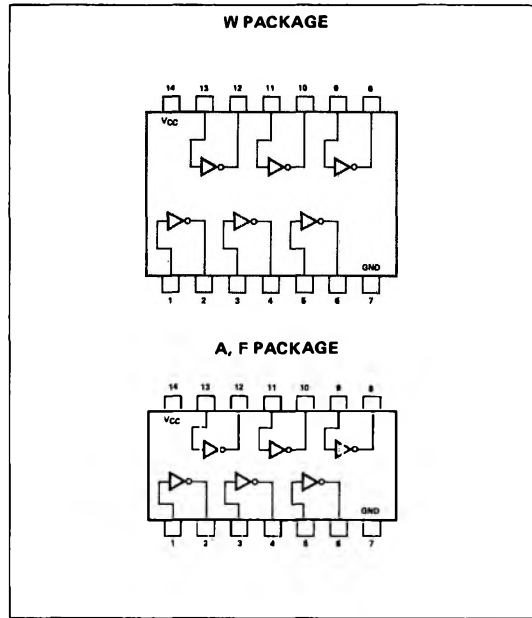
DESCRIPTION

The 54/7406 and 54/7416 Hex Inverter Buffer/Drivers features standard TTL inputs with inverted high voltage, high current, open collector outputs for interface with MOS, lamps or relays. The 54/7406 minimum output breakdown is 30 volts and the 54/7416 minimum output breakdown is 15 volts.

SCHEMATIC (each inverter)



PIN CONFIGURATIONS



RECOMMENDED OPERATING CONDITIONS

	S5406, S5416			N7406, N7416			UNIT
	MIN	NOM	MAX	MIN	NOM	MAX	
Supply Voltage V_{CC}	4.5	5	5.5	4.75	5	5.25	V
Output Voltage, V_{OH} : S5406, N7406			30			30	V
S5416, N7416			15			15	V
Low-level output current, I_{OL}			30			40	mA
Operating Free-air Temperature Range, T_A	-55	25	125	0	25	70	°C

ELECTRICAL CHARACTERISTICS (over recommended operating free-air temperature range unless otherwise noted)

PARAMETER	TEST CONDITIONS*	MIN	TYP**	MAX	UNIT
V_{IH} High-level input voltage		2			V
V_{IL} Low-level input voltage				0.8	V
I_{OH} High-level output current	$V_{CC} = \text{MIN}, V_I = 0.8V, V_{OH} = \text{MAX}$			250	μA
V_{OL} Low-level output voltage	$V_{CC} = \text{MIN}, V_I = 2V, I_{OL} = \text{MAX}$			0.7	V
	$V_{CC} = \text{MIN}, V_I = 2V, I_{OL} = 16\text{mA}$			0.4	V
I_{IH} High-level input current	$V_{CC} = \text{MAX}, V_I = 2.4V$			40	μA
(each input)	$V_{CC} = \text{MAX}, V_I = 5.5V$			1	mA
I_{IL} Low-level input current	$V_{CC} = \text{MAX}, V_I = 0.4V$			-1.6	mA
(each input)					
I_{CCH} Supply current, high-level output	$V_{CC} = \text{MAX}, V_I = 0$		30	42	mA
I_{CCL} Supply current, low-level output	$V_{CC} = \text{MAX}, V_I = 5V$		27	38	mA

DIGITAL 54/74 TTL SERIES ■ S5406, S5416, N7406, N7416

SWITCHING CHARACTERISTICS, $V_{CC} = 5V$, $T_A = 25^\circ C$

PARAMETER		TEST CONDITIONS	MIN	TYP	MAX	UNIT
t_{PLH}	Propagation delay time, low-to-high-level output	$C_L = 15pF$, $R_L = 110 \Omega$		10	15	ns
t_{PHL}	Propagation delay time, high-to-low-level output	$C_L = 15pF$, $R_L = 110 \Omega$		14	23	ns

- * For conditions shown as MIN or MAX, use the appropriate value specified under recommended operating conditions for the applicable device type.
- ** All typical values are at $V_{CC} = 5V$, $T_A = 25^\circ C$.