

HEX INVERTER BUFFER/DRIVER WITH OPEN COLLECTOR HIGH VOLTAGE OUTPUTS

S5406
S5416
N7406
N7416

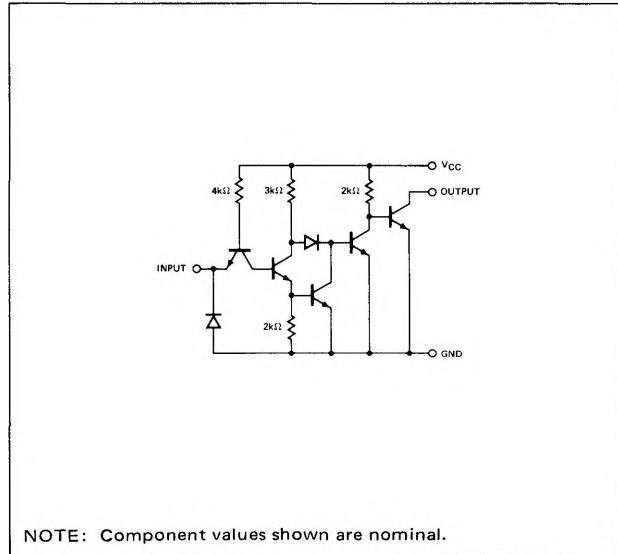
S5406—A,F,W • S5416—A,F,W • N7406—A,F • N7416—A,F

DIGITAL 54/74 TTL SERIES

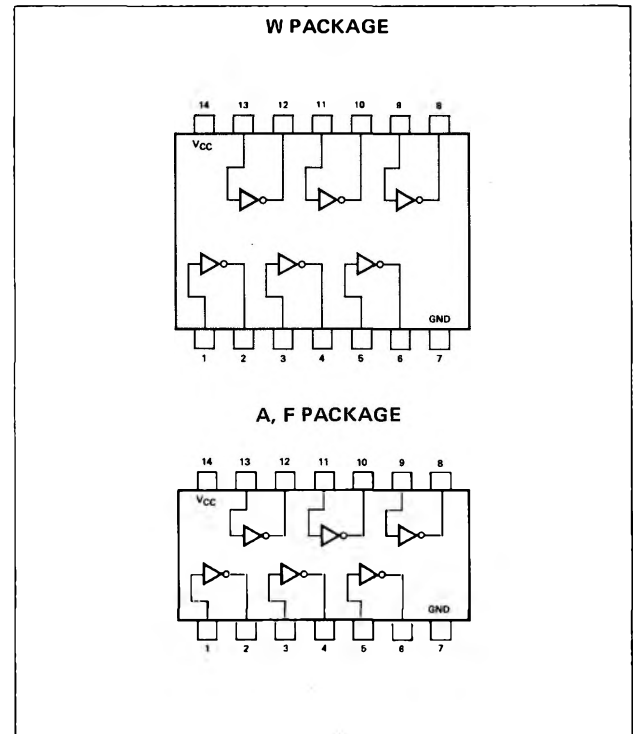
DESCRIPTION

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			250	μA
V_{OL}	Low-level output voltage			0.7	V
I_{IH}	High-level input current (each input)			40	μA
I_{IL}	Low-level input current (each input)			1	mA
I_{CCH}	Supply current, high-level output			30	mA
I_{CCL}	Supply current, low-level output			27	mA

SIGNETICS 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 $V_{CC} = 5V$, $T_A = 25^\circ C$.