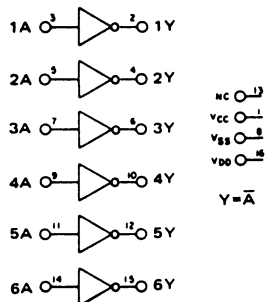
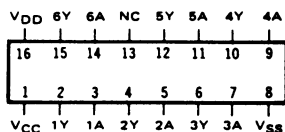
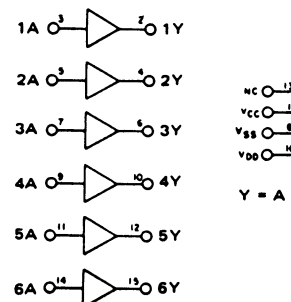
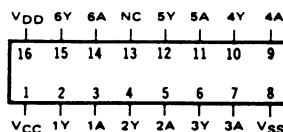


SCL4009UB

HEX INVERTING BUFFER/LEVEL SHIFTER

**SCL4010B**

HEX BUFFER/LEVEL SHIFTER

**STATIC CHARACTERISTICS: ($V_{SS} = 0\text{ V}$)**

PARAMETER	CONDITIONS	V_{DD} (Vdc)	T_{LOW}^*		+25°C			T_{HIGH}^{**}		UNIT
			MIN	MAX	MIN	TYP	MAX	MIN	MAX	
QUIESCENT DEVICE CURRENT I_{DD} SCL4009UB	$V_{IN} = V_{SS} \text{ OR } V_{DD}$	5		0.25		0.005	0.25		7.5	μAdc
		10		0.5		0.01	0.5		15	
		15		1		0.02	1		30	
QUIESCENT DEVICE CURRENT I_{DD} SCL4010B	$V_{IN} = V_{SS} \text{ OR } V_{DD}$	5		1		0.005	1		30	μAdc
		10		2		0.01	2		60	
		15		4		0.02	4		120	
MINIMUM INPUT HIGH VOLTAGE V_{IH} SCL4009UB $ I_O \leq 1\mu\text{A}$	$V_{OL} = 0.5\text{V}$ $V_{OL} = 1.0\text{V}$ $V_{OL} = 1.5\text{V}$	5		4		2.75	4		4	Vdc
		10		8		5.5	8		8	
		15		12		8.25	12		12	
MAXIMUM INPUT LOW VOLTAGE V_{IL} SCL4009UB $ I_O \leq 1\mu\text{A}$	$V_{OH} = 3.6\text{V}$ $V_{OH} = 7.2\text{V}$ $V_{OH} = 10.8\text{V}$	5	1		1	2.25		1		Vdc
		10	2		2	4.5		2		
		15	2.5		2.5	6.75		2.5		
OUTPUT HIGH CURRENT (SOURCE) I_{OH}	$V_{OH} = 4.6\text{V}$ $V_{OH} = 9.5\text{V}$ $V_{OH} = 13.5\text{V}$	5	-0.25	-0.2				-0.14		mAdc
		10	-0.62	-0.5				-0.35		
		15	-1.9	-1.5				-1.1		
OUTPUT LOW CURRENT (SINK) I_{OL}	$V_{OL} = 0.4\text{V}$ $V_{OL} = 0.5\text{V}$ $V_{OL} = 1.5\text{V}$	5	3.7		3	4		2.1		mAdc
		10	9.9		8	10		5.6		
		15	29.8		24	36		16.8		

Note: $*T_{LOW} = -55^\circ\text{C}$ for C / H devices, -40°C for E / S devices, $**T_{HIGH} = +125^\circ\text{C}$ for C / H devices, $+85^\circ\text{C}$ for E / S devices.

SCL4009UB

HEX INVERTING BUFFER/LEVEL SHIFTER

SCL4010B

HEX BUFFER/LEVEL SHIFTER

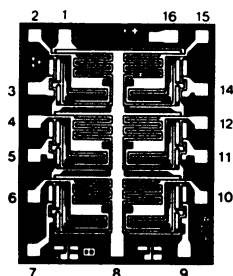
DYNAMIC CHARACTERISTICS: (CL = 50pF, TA = 25°C)

PARAMETER	V _{DD} V _{dc}	V _{CC} V _{dc}	MINIMUM	TYPICAL	MAXIMUM	UNIT
PROPAGATION DELAY TIME t_{PLH} DRIVING CMOS	5 10 15	5 10 15		60 35 28	120 70 56	ns
PROPAGATION DELAY TIME t_{PHL} DRIVING CMOS	5 10 15	5 10 15		45 20 15	90 40 30	
PROPAGATION DELAY TIME t_{PLH} DRIVING TTL/DTL	5 10 15	5 5 5		30 18 12	60 36 24	
PROPAGATION DELAY TIME t_{PHL} DRIVING TTL/DTL	5 10 15	5 5 5		35 15 10	70 30 20	ns
OUTPUT TRANSITION TIME t_{TLH}	5 10 15	5 10 15		150 75 60	300 150 120	
OUTPUT TRANSITION TIME t_{THL}	5 10 15	5 10 15		30 20 12	60 40 24	
INPUT CAPACITANCE C _{IN} SCL4009UB SCL4010B				10 5	15 7.5	pF

DIE DRAWING

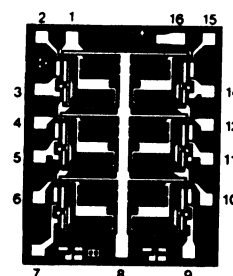
SCL4009UB

60 x 74 mils


DIE DRAWING

SCL4010B

60 x 74 mils



Note: Refer to "SCL4000B SERIES FAMILY SPECIFICATIONS" for remaining Dynamic & Static Characteristics, and, for recommended and maximum operating conditions.