

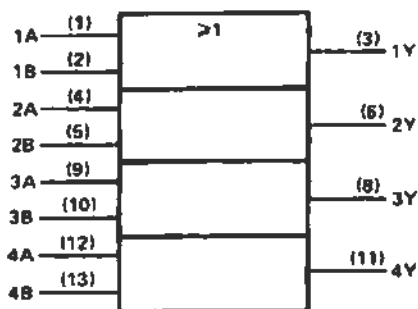
XD74LS32 DIP14 / XL74LS32 SOP14

The XD74LS32 and XL74LS32 are characterized for operation over the full military range of -55°C to 125°C . The XD74LS32 and XL74LS32 are characterized for operation from -30° to 80°C .

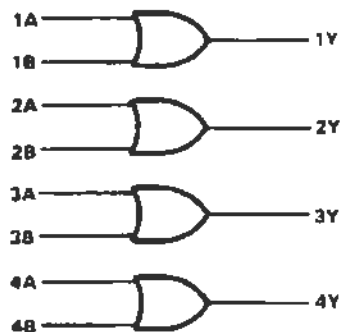
FUNCTION TABLE (each gate)

INPUTS		OUTPUT
A	B	Y
H	X	H
X	H	H
L	L	L

logic symbol†



logic diagram

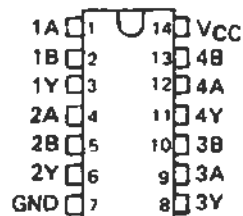


positive logic

$$Y = A + B \text{ or } Y = \overline{\overline{A} \cdot \overline{B}}$$

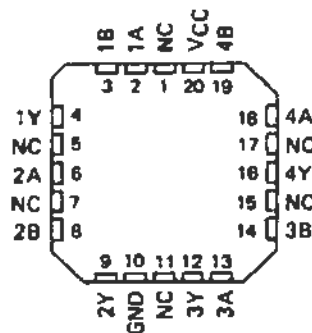
XD74LS32 . . . J OR W PACKAGE
XL74LS32 . . . J OR W PACKAGE

(TOP VIEW)



XD74LS32,XL74LS32 . . . FK PACKAGE

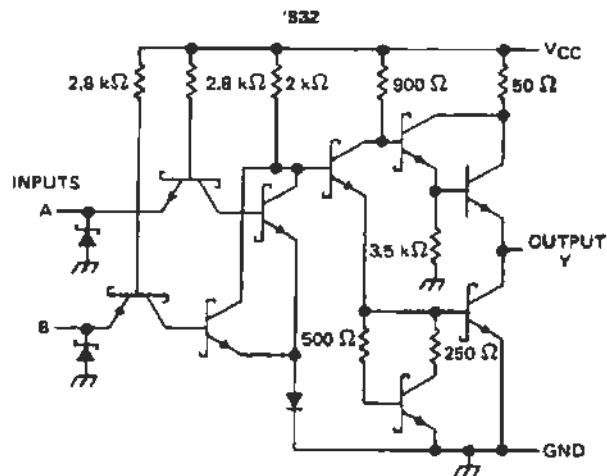
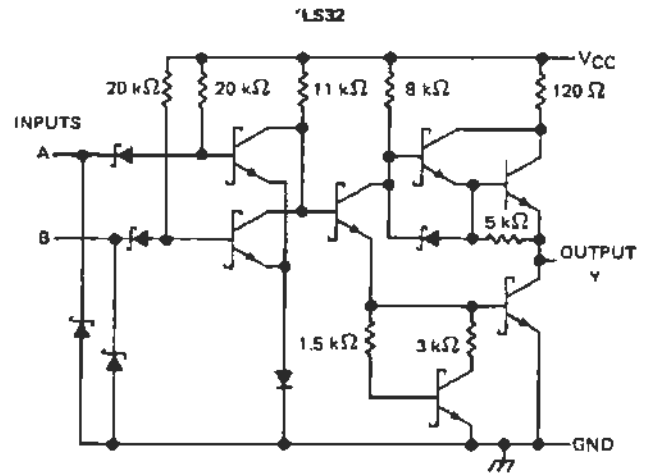
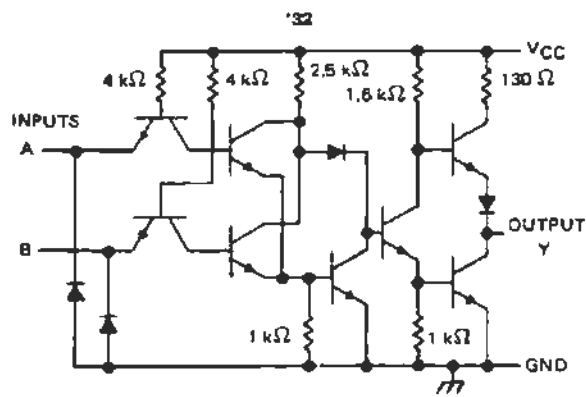
(TOP VIEW)



NC - No internal connection

XD74LS32 DIP14 / XL74LS32 SOP14

schematics (each gate)



Resistor values shown are nominal.

absolute maximum ratings over operating free-air temperature range (unless otherwise noted)

Supply voltage, V_{CC} (see Note 1)	7 V
Input voltage: '32, 'S32	5.5 V
'LS32	7 V
Operating free-air temperature: XD74 '	-55°C to 125°C
XL74 '	-30°C to 80°C
Storage temperature range	-65°C to 150°C

NOTE 1: Voltage values are with respect to network ground terminal.

XD74LS32 DIP14 / XL74LS32 SOP14

recommended operating conditions

		XD74LS32			XL74LS32			UNIT
		MIN	NOM	MAX	MIN	NOM	MAX	
V _{CC}	Supply voltage	4.5	5	5.5	4.75	5	5.25	V
V _{IH}	High-level input voltage	2			2			V
V _{IL}	Low-level input voltage			0.8			0.8	V
I _{OH}	High-level output current			-0.8			-0.8	mA
I _{OL}	Low-level output current			16			16	mA
T _A	Operating free-air temperature	-55		125	-30		80	°C

electrical characteristics over recommended operating free-air temperature range (unless otherwise noted)

PARAMETER	TEST CONDITIONS†	XD74LS32			XL74LS32			UNIT
		MIN	TYP‡	MAX	MIN	TYP‡	MAX	
V _{IK}	V _{CC} = MIN, I _I = -12 mA			-1.5			-1.5	V
V _{OH}	V _{CC} = MIN, V _{IH} = 2 V, I _{OH} = -0.8 mA	2.4	3.4		2.4	3.4		V
V _{OL}	V _{CC} = MIN, V _{IL} = 0.8 V, I _{OL} = 16 mA		0.2	0.4		0.2	0.4	V
I _I	V _{CC} = MAX, V _I = 5.5 V			1			1	mA
I _{IH}	V _{CC} = MAX, V _I = 2.4 V			40			40	µA
I _{IL}	V _{CC} = MAX, V _I = 0.4 V			-1.6			-1.6	mA
I _{OS§}	V _{CC} = MAX	-20		-55	-18		-55	mA
I _{CCH}	V _{CC} = MAX, See Note 2		15	22		15	22	mA
I _{CCL}	V _{CC} = MAX, V _I = 0 V		23	38		23	38	mA

† For conditions shown as MIN or MAX, use the appropriate value specified under recommended operating conditions.

‡ All typical values are at V_{CC} = 5 V, T_A = 25°C.

§ Not more than one output should be shorted at a time.

NOTE 2: One input at 4.5 V, all others at GND.

switching characteristics, V_{CC} = 5 V, T_A = 25°C (see note 3)

PARAMETER	FROM (INPUT)	TO (OUTPUT)	TEST CONDITIONS	MIN	TYP	MAX	UNIT
t _{PLH}	A or B	Y	R _L = 400 Ω, C _L = 15 pF		10	15	ns
t _{PHL}					14	22	ns

NOTE 3: Load circuits and voltage waveforms are shown in Section 1.

XD74LS32 DIP14 / XL74LS32 SOP14

recommended operating conditions

	XD74LS32			XL74LS32			UNIT
	MIN	NOM	MAX	MIN	NOM	MAX	
V _{CC} Supply voltage	4.5	5	5.5	4.75	5	5.25	V
V _{IH} High-level input voltage	2			2			V
V _{IL} Low-level input voltage			0.7			0.8	V
I _{OH} High-level output current			- 0.4			- 0.4	mA
I _{OL} Low-level output current			4			8	mA
T _A Operating free-air temperature	- 55		125	- 30		80	°C

electrical characteristics over recommended operating free-air temperature range (unless otherwise noted)

PARAMETER	TEST CONDITIONS †			XD74LS32		XL74LS32		UNIT
				MIN	TYP‡	MAX	MIN	
V _{IK}	V _{CC} = MIN.	I _I = - 18 mA				- 1.5	- 1.5	V
V _{OH}	V _{CC} = MIN.	V _{IH} = 2 V.	I _{OH} = - 0.4 mA	2.5	3.4		2.7 3.4	V
V _{OL}	V _{CC} = MIN.	V _{IL} = MAX.	I _{OL} = 4 mA		0.25 0.4		0.25 0.4	V
	V _{CC} = MIN.	V _{IL} = MAX.	I _{OL} = 8 mA				0.35 0.5	
I _I	V _{CC} = MAX.	V _I = 7 V				0.1	0.1	mA
I _{IH}	V _{CC} = MAX.	V _I = 2.7 V				20	20	µA
I _{IL}	V _{CC} = MAX.	V _I = 0.4 V				- 0.4	- 0.4	mA
I _{OS} §	V _{CC} = MAX			- 20	- 100	- 20	- 100	mA
I _{CCH}	V _{CC} = MAX.	See Note 2			3.1 6.2		3.1 6.2	mA
I _{CCL}	V _{CC} = MAX.	V _I = 0 V			4.9 9.8		4.9 9.8	mA

† For conditions shown as MIN or MAX, use the appropriate value specified under recommended operating conditions.

‡ All typical values are at V_{CC} = 5 V, T_A = 25°C.

§ Not more than one output should be shorted at a time and the duration of the short circuit should not exceed one second.

NOTE 2: One input at 4.5 V, all others at GND.

switching characteristics, V_{CC} = 5 V, T_A = 25°C (see note 3)

PARAMETER	FROM (INPUT)	TO (OUTPUT)	TEST CONDITIONS		MIN	TYP	MAX	UNIT
t _{PLH}	A or B	Y	R _L = 2 kΩ,	C _L = 15 pF		14	22	ns
t _{PHL}						14	22	ns

NOTE 3: Load circuits and voltage waveforms are shown in Section 1.

XD74LS32 DIP14 / XL74LS32 SOP14

recommended operating conditions

	XD74LS32			XL74LS32			UNIT
	MIN	NOM	MAX	MIN	NOM	MAX	
V _{CC} Supply voltage	4.5	5	5.5	4.75	5	5.25	V
V _{IH} High-level input voltage	2			2			V
V _{IL} Low-level input voltage			0.8			0.8	V
I _{OH} High-level output current			-1			-1	mA
I _{OL} Low-level output current			20			20	mA
T _A Operating free-air temperature	-55		125	-30		80	°C

electrical characteristics over recommended operating free-air temperature range (unless otherwise noted)

PARAMETER	TEST CONDITIONS †	XD74LS32		XL74LS32		UNIT
		MIN	TYP ‡	MIN	TYP ‡	
V _{IK}	V _{CC} = MIN, I _I = -18 mA		-1.2		-1.2	V
V _{OH}	V _{CC} = MIN, V _{IH} = 2 V, I _{OH} = -1 mA	2.5	3.4	2.7	3.4	V
V _{OL}	V _{CC} = MIN, V _{IL} = 0.8 V, I _{OL} = 20 mA		0.5		0.5	V
I _I	V _{CC} = MAX, V _I = 5.5 V		1		1	mA
I _{IH}	V _{CC} = MAX, V _I = 2.7 V		50		50	µA
I _{IL}	V _{CC} = MAX, V _I = 0.5 V		-2		-2	mA
I _{OS} §	V _{CC} = MAX	-40	-100	-40	-100	mA
I _{CCH}	V _{CC} = MAX, See Note 2		18		18	mA
I _{CCL}	V _{CC} = MAX, V _I = 0 V		38		38	mA

† For conditions shown as MIN or MAX, use the appropriate value specified under recommended operating conditions.

‡ All typical values are at V_{CC} = 5 V, T_A = 25°C.

§ Not more than one output should be shorted at a time and the duration of the short-circuit should not exceed one second.

NOTE 2: One input at 4.5 V, all others at GND.

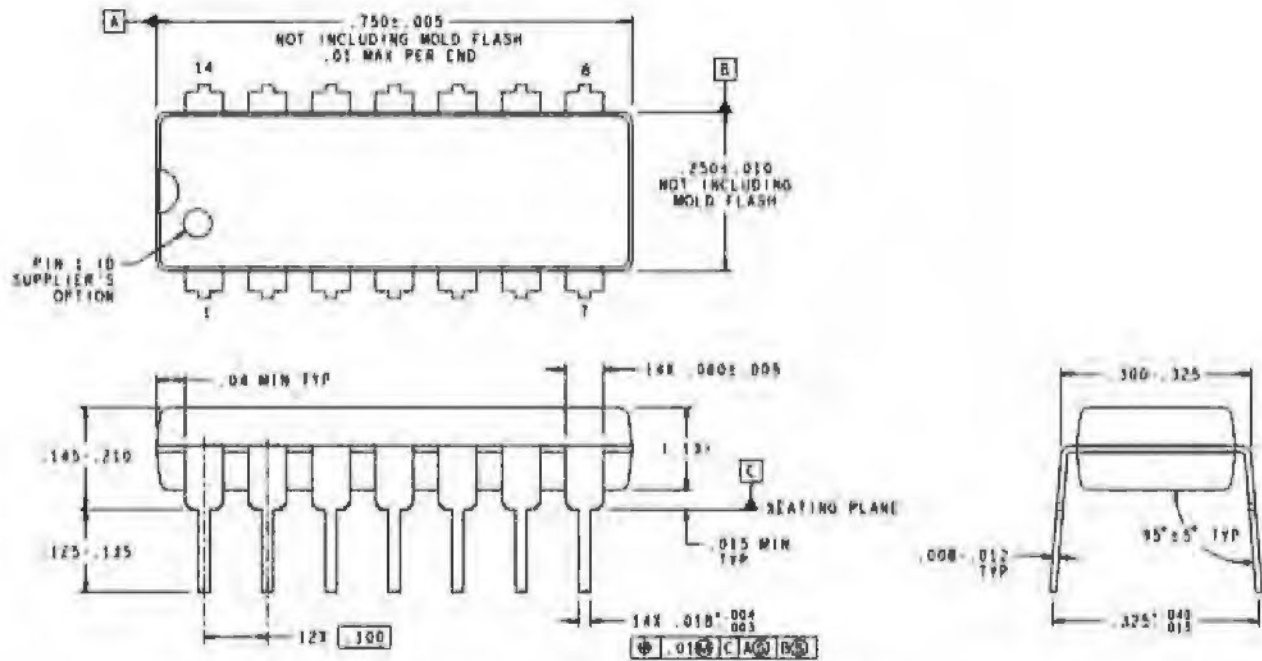
switching characteristics, V_{CC} = 5 V, T_A = 25°C (see note 3)

PARAMETER	FROM (INPUT)	TO (OUTPUT)	TEST CONDITIONS	MIN	TYP	MAX	UNIT
t _{PLH}	A or B	Y	R _L = 280 Ω, C _L = 15 pF		4	7	ns
t _{PHL}					4	7	ns
t _{PLH}	A or B	Y	R _L = 280 Ω, C _L = 50 pF		5		ns
t _{PHL}					5		ns

NOTE 3: Load circuits and voltage waveforms are shown in Section 1.

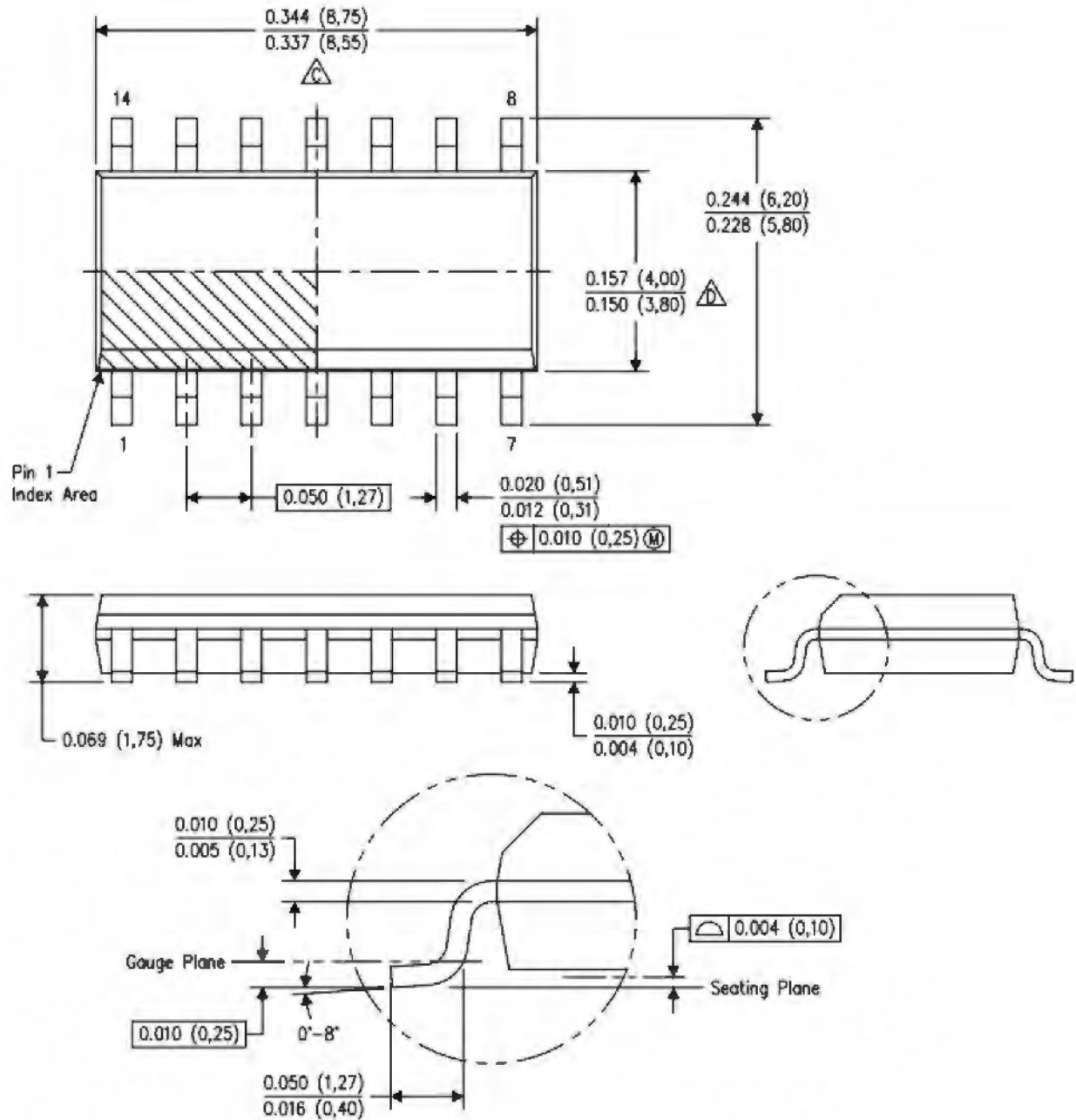
XD74LS32 DIP14 / XL74LS32 SOP14

DIP14



DIMENSIONS ARE IN INCHES
 DIMENSIONS IN () FOR REFERENCE ONLY

XD74LS32 DIP14 / XL74LS32 SOP14



以上信息仅供参考. 如需帮助联系客服人员。谢谢 XINLUDA