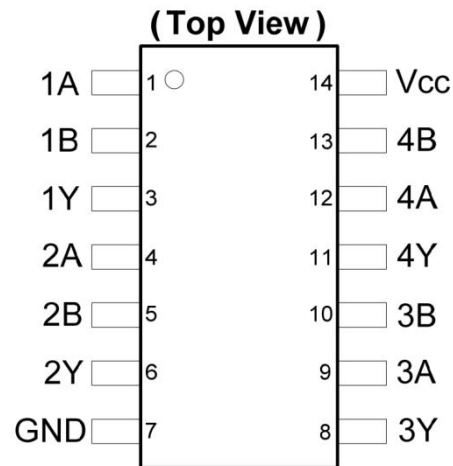


1. DESCRIPTION

These devices contain four independent 2-input OR gates.

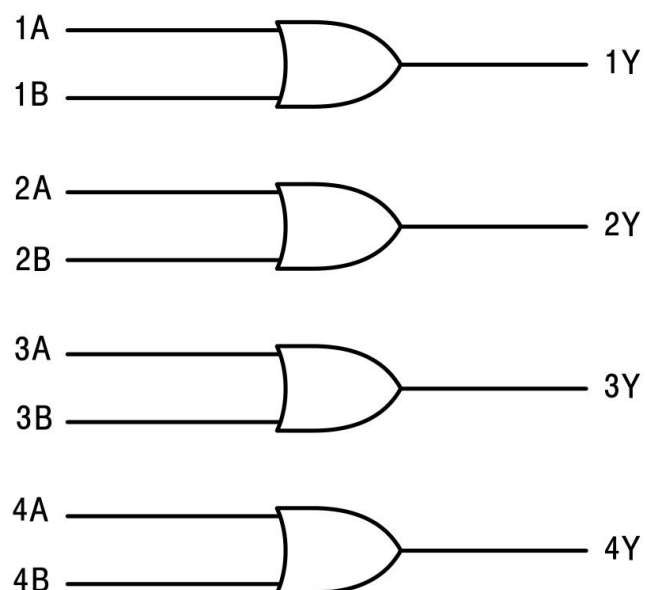
The XL74LS32, XD74LS32 are characterized for operation from 0°C to 70°C.

2. PIN CONFIGURATIONS

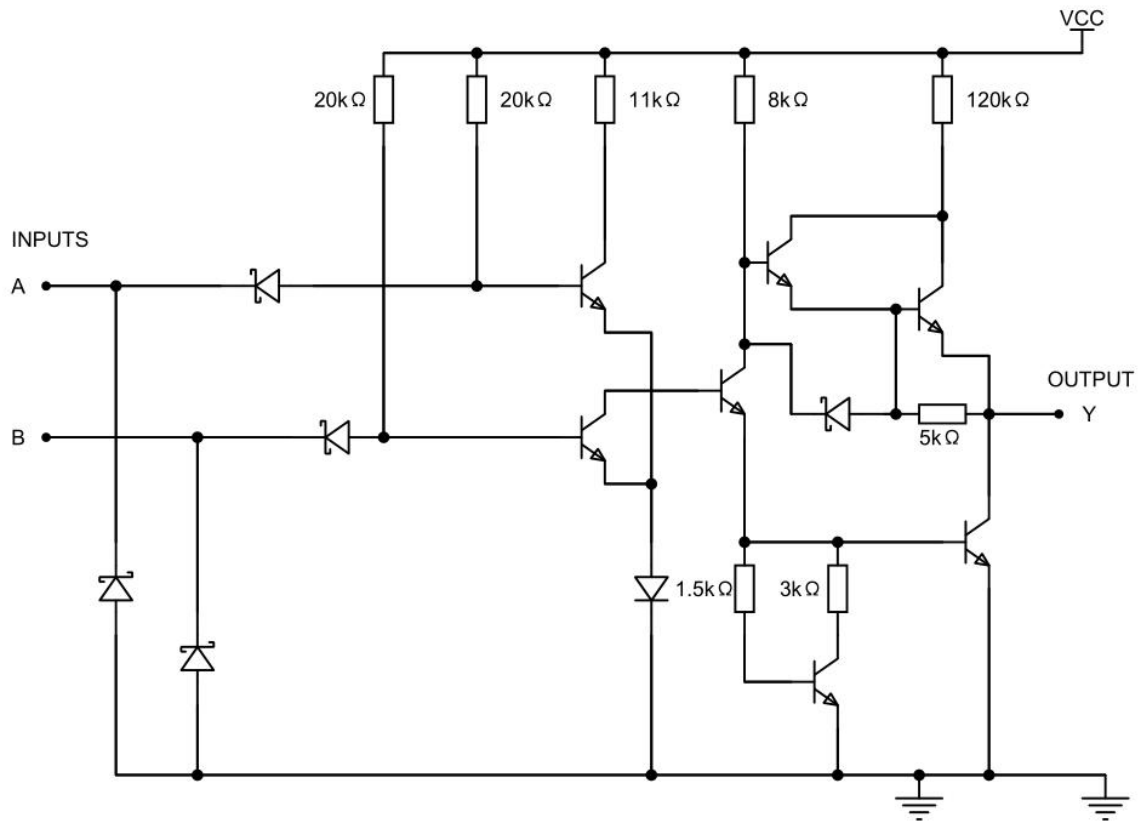


INPUTS		OUTPUT
A	B	Y
H	X	H
X	H	H
L	L	L

3. LOGIC DIAGRAM



4. SCHEMATICS (each gate)



5. ABSOLUTE MAXIMUM RATINGS OVER OPERATING FREE-AIR TEMPERATURE RANGE (UNLESS OTHERWISE NOTES)

Supply voltage, V_{CC} (see Note 1)..... 7V

Input voltage, V_I : 74LS32..... 7V

Operating free-air temperature range: SOP package..... 0°C to 70°C

DIP package..... 0°C to 70°C

Storage temperature range, T_{stg} -65°C to 150°C

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

6. RECOMMENDED OPERATING CONDITIONS

		XL/XD74LS32			UNIT
		MIN	NOM	MAX	
V _{CC}	Supply voltage	4.75	5	5.25	V
V _{IH}	High-level input voltage	2			V
V _{IL}	Low-level input voltage			0.8	V
I _{OH}	High-level output current			-0.4	mA
I _{OL}	Low-level output current			8	mA
T _A	Operating free-air temperature	0		70	°C

7. ELECTRICAL CHARACTERISTICS OVER RECOMMENDED OPERATING FREE-AIR RANGE (UNLESS OTHERWISE NOTED)

PARAMETER	TEST CONDITIONS [†]	XL/XD74LS32			UNIT
		MIN	TYP [‡]	MAX	
V _{IK}	V _{CC} = MIN, I _I = -18 mA			-1.5	V
V _{OH}	V _{CC} = MIN, V _{IL} = MAX, I _{OH} = -0.4 mA	2.7	3.4		V
V _{OL}	V _{CC} = MIN, V _{IH} = 2 V			0.25	V
				0.4	
				0.35	0.5
I _I	V _{CC} = MAX, V _I = 7 V			0.1	mA
I _{IH}	V _{CC} = MAX, V _I = 2.7 V			20	μA
I _{IL}	V _{CC} = MAX, V _I = 0.4 V			-0.4	mA
I _{OS} [§]	V _{CC} = MAX	-20		-100	mA
I _{CCH}	V _{CC} = MAX, V _I = 4.5 V		3.1	6.2	mA
I _{CCL}	V _{CC} = MAX, V _I = 0 V		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 4.5V, all others at GND.

8. SWITCHING CHARACTERISTICS,V_{CC} = 5 V, T_A = 25°C(see note 3)

PARAMETER	FROM (INPUT)	TO (OUTPUT)	TEST CONDITIONS	XL/XD74LS32			UNIT
				MIN	TYP	MAX	
t _{PLH}	A or B	Y	RL = 2 kΩ, CL = 15 pF		14	22	ns
t _{PHL}					14	22	ns

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

9. ORDERING INFORMATION

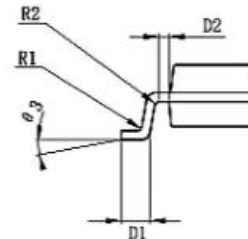
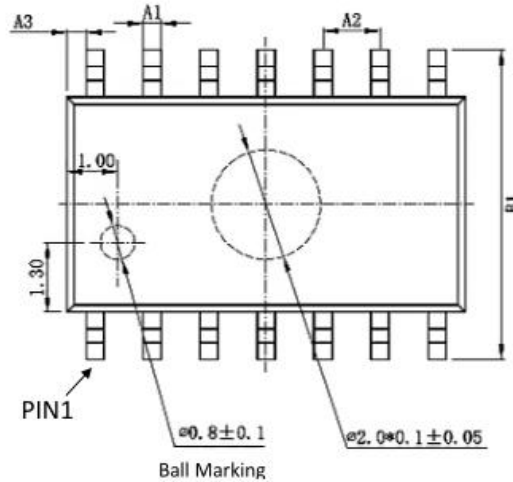
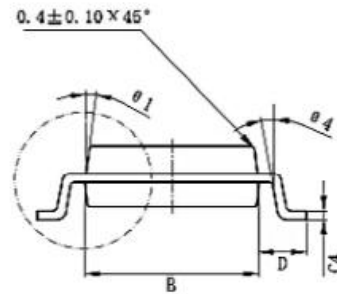
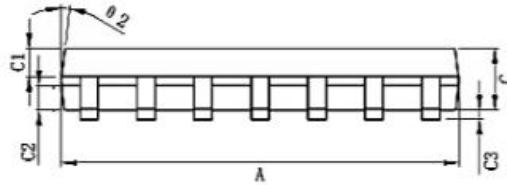
Ordering Information

Part Number	Device Marking	Package Type	Body size (mm)	Temperature (°C)	MSL	Transport Media	Package Quantity
XL74LS32	XL74LS32	SOP14	8.75 * 4.00	-0 to 70	MSL3	T&R	2500
XD74LS32	XD74LS32	DIP14	19.05 * 6.35	-0 to 70	MSL3	Tube 25	1000

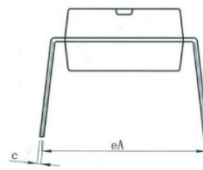
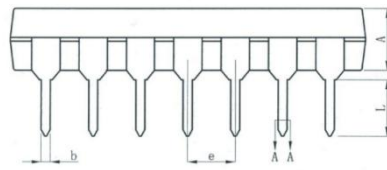
10. DIMENSIONAL DRAWINGS

SOP14

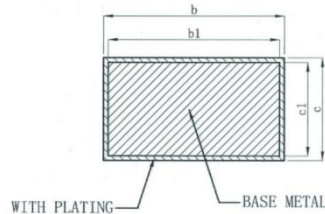
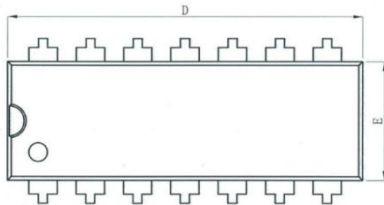
Mark	Size	Min (mm)	Max (mm)	Mark	Size	Min (mm)	Max (mm)
A		8.55	8.75	C4		0.193	0.213
A1		0.356	0.456	D		0.95	1.15
A2		1.27TYP		D1		0.40	0.70
A3		0.312TYP		D2		0.20TYP	
B		3.80	4.00	R1		0.20TYP	
B1		5.80	6.20	R2		0.20TYP	
C		1.40	1.60	θ1		8° ~ 12° TYP4	
C1		0.60	0.70	θ2		8° ~ 12° TYP4	
C2		0.55	0.65	θ3		0° ~ 8°	
C3		0.05	0.25	θ4		4° ~ 12°	



DIP14



symbol	millimeter		
	Min	Nom	Max
A	3.20	3.30	3.40
b	0.44	—	0.53
b1	0.43	0.46	0.49
c	0.25	—	0.30
c1	0.24	0.25	0.26
D	18.95	19.05	19.15
E	6.25	6.35	6.45
e	2.54BSC		
eA	8.30	8.80	9.30
L	3.00	—	—



SECTION A-A