

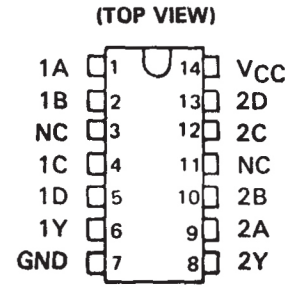
**description**

These devices contain two independent 4-input AND gates.

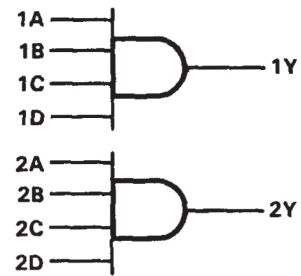
XD74LS21 is characterized for operation from 0°C to 70°C.

**FUNCTION TABLE (each gate)**

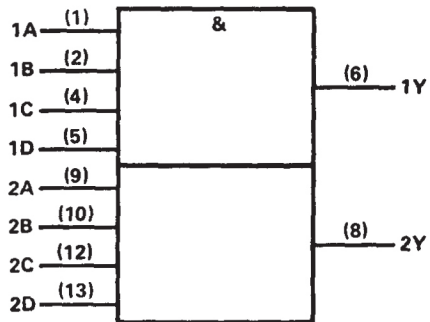
INPUTS				OUTPUT
A	B	C	D	Y
H	H	H	H	H
L	X	X	X	L
X	L	X	X	L
X	X	L	X	L
X	X	X	L	L



**logic diagram**

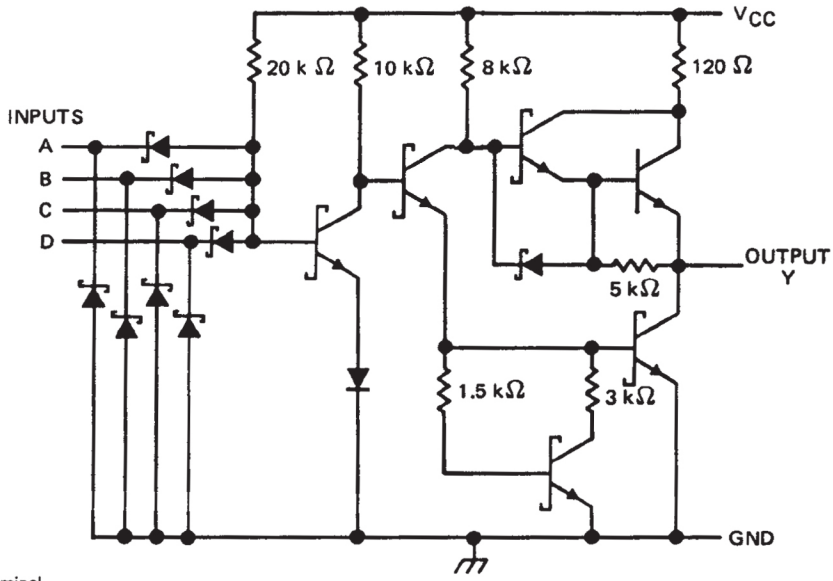


**logic symbol†**



(positive logic)  $Y = A \cdot B \cdot C \cdot D$  or  $Y = \overline{\overline{A} + \overline{B} + \overline{C} + \overline{D}}$

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 .....	7 V
Operating free-air temperature range: XD74' .....	0°C to 70°C
Storage temperature range .....	-65°C to 150°C

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

**recommended operating conditions**

	XD74LS21			UNIT
	MIN	NOM	MAX	
V <sub>CC</sub> Supply voltage	4.75	5	5.25	V
V <sub>IH</sub> High-level input voltage	2			V
V <sub>IL</sub> Low-level input voltage			0.8	V
I <sub>OH</sub> High-level output current			- 0.4	mA
I <sub>OL</sub> Low-level output current			8	mA
T <sub>A</sub> Operating free-air temperature	0		70	°C

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

PARAMETER	TEST CONDITIONS †	XD74LS21			UNIT
		MIN	TYP‡	MAX	
V <sub>IK</sub>	V <sub>CC</sub> = MIN, I <sub>I</sub> = - 18 mA		- 1.5		V
V <sub>OH</sub>	V <sub>CC</sub> = MIN, V <sub>IH</sub> = 2 V, I <sub>OH</sub> = - 0.4 mA	2.7	3.4		V
V <sub>OL</sub>	V <sub>CC</sub> = MIN, V <sub>IL</sub> = MAX, I <sub>OL</sub> = 4 mA	0.25	0.4		V
	V <sub>CC</sub> = MIN, V <sub>IL</sub> = MAX, I <sub>OL</sub> = 8 mA	0.35	0.5		
I <sub>I</sub>	V <sub>CC</sub> = MAX, V <sub>I</sub> = 7 V		0.1		mA
I <sub>IH</sub>	V <sub>CC</sub> = MAX, V <sub>I</sub> = 2.7 V		20		μA
I <sub>IL</sub>	V <sub>CC</sub> = MAX, V <sub>I</sub> = 0.4 V		- 0.4		mA
I <sub>OS</sub> §	V <sub>CC</sub> = MAX	- 20		- 100	mA
I <sub>CCH</sub>	V <sub>CC</sub> = MAX, V <sub>I</sub> = 4.5 V		1.2	2.4	mA
I <sub>CCL</sub>	V <sub>CC</sub> = MAX, V <sub>I</sub> = 0 V		2.2	4.4	mA

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

‡ All typical values are at V<sub>CC</sub> = 5 V, T<sub>A</sub> = 25°C

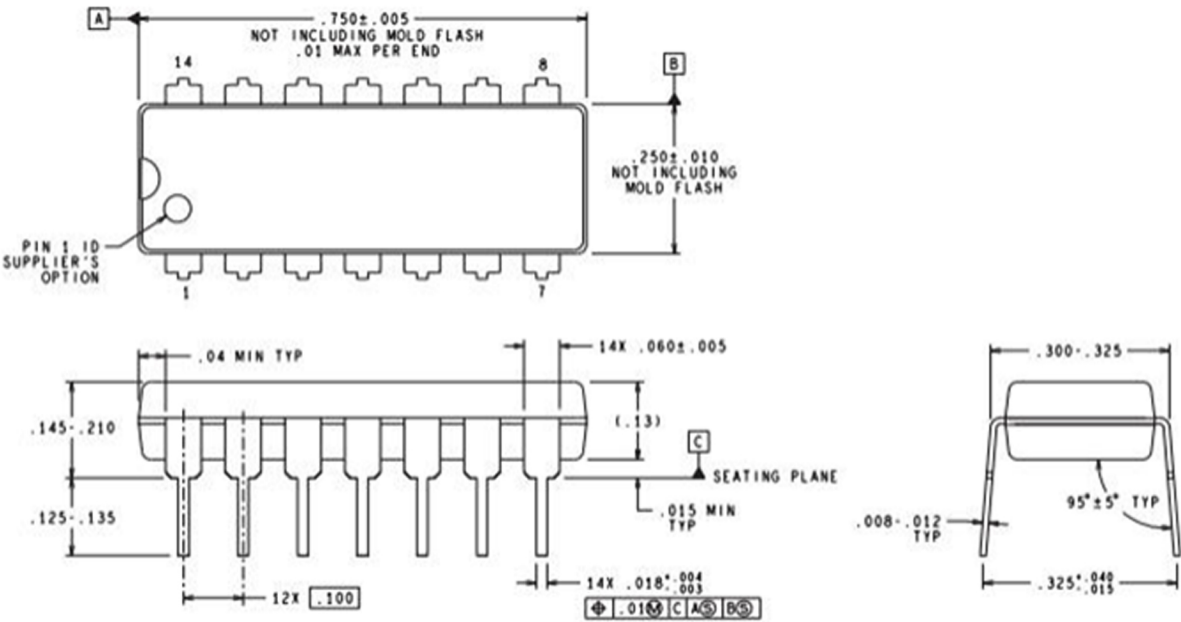
§ Not more than one output should be shorted at a time, and the duration of the short-circuit should not exceed one second.

**switching characteristics, V<sub>CC</sub> = 5 V, T<sub>A</sub> = 25°C (see note 2)**

PARAMETER	FROM (INPUT)	TO (OUTPUT)	TEST CONDITIONS	MIN	TYP	MAX	UNIT
t <sub>PLH</sub>	Any	Y	R <sub>L</sub> = 2 kΩ, C <sub>L</sub> = 15 pF		8	15	ns
t <sub>PHL</sub>					10	20	ns

NOTE 2: Load circuits and voltage waveforms are shown in Section 1.

DIP14



以上信息仅供参考. 如需帮助联系客服人员。谢谢 XINLUDA

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