

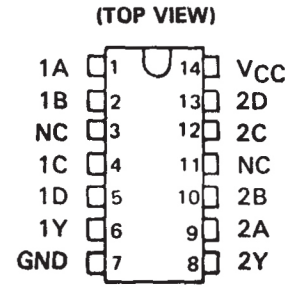
description

These devices contain two independent 4-input AND gates.

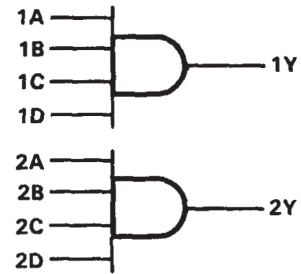
XD74LS21 is characterized for operation from 0°C to 70°C.

FUNCTION TABLE (each gate)

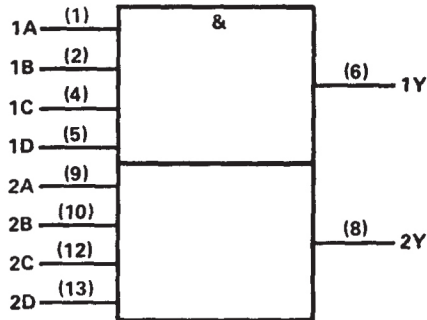
INPUTS				OUTPUT
A	B	C	D	Y
H	H	H	H	H
L	X	X	X	L
X	L	X	X	L
X	X	L	X	L
X	X	X	L	L



logic diagram

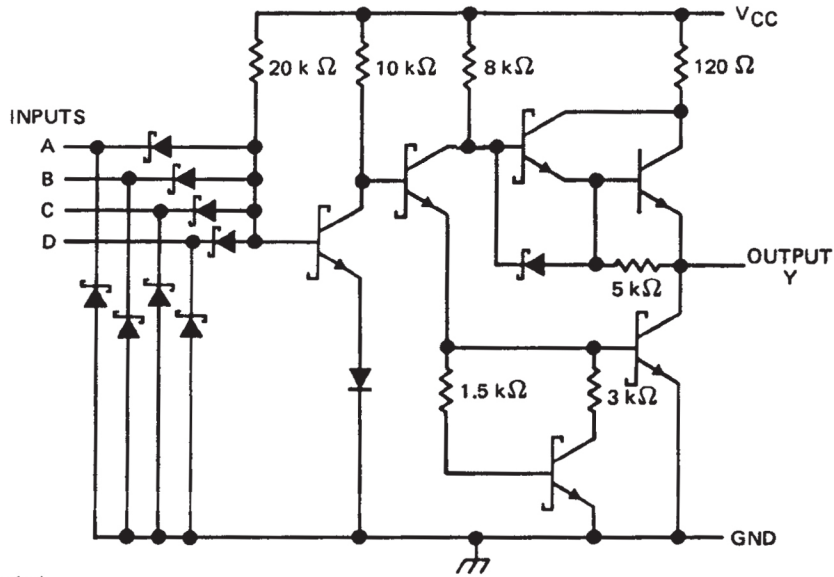


logic symbol†



(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 _{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

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

PARAMETER	TEST CONDITIONS †	XD74LS21			UNIT
		MIN	TYP‡	MAX	
V _{IK}	V _{CC} = MIN, I _I = - 18 mA		- 1.5		V
V _{OH}	V _{CC} = MIN, V _{IH} = 2 V, I _{OH} = - 0.4 mA	2.7	3.4		V
V _{OL}	V _{CC} = MIN, V _{IL} = MAX, I _{OL} = 4 mA	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		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		1.2	2.4	mA
I _{CCL}	V _{CC} = MAX, V _I = 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_{CC} = 5 V, T_A = 25°C

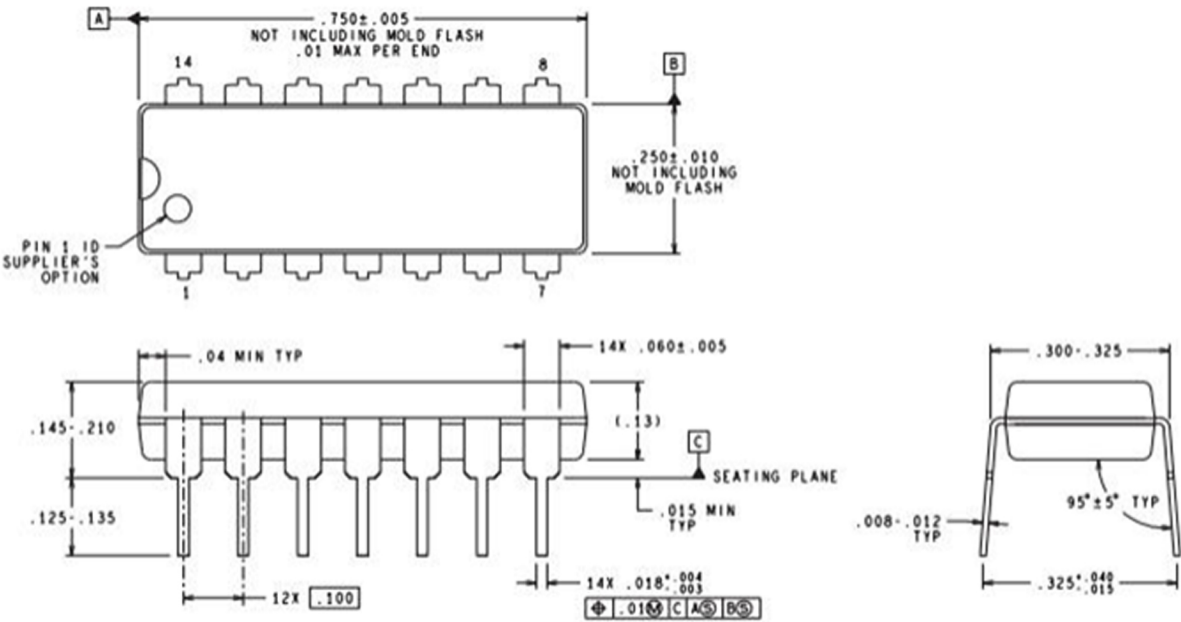
§ Not more than one output should be shorted at a time, and the duration of the short-circuit should not exceed one second.

switching characteristics, V_{CC} = 5 V, T_A = 25°C (see note 2)

PARAMETER	FROM (INPUT)	TO (OUTPUT)	TEST CONDITIONS	MIN	TYP	MAX	UNIT
t _{PLH}	Any	Y	R _L = 2 kΩ, C _L = 15 pF		8	15	ns
t _{PHL}					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