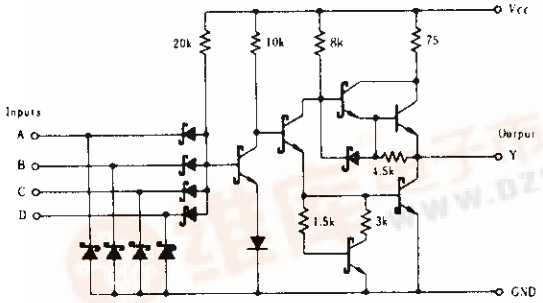
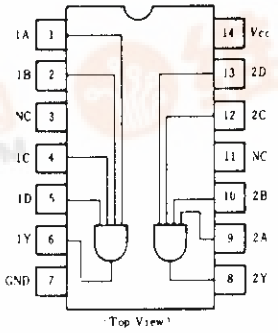
HD74LS21 ●Dual 4-input Positive AND Gates

■CIRCUIT SCHEMATIC(½)



■PIN ARRANGEMENT



■ELECTRICAL CHARACTERISTICS ($Ta=-20\sim+75°C$)

Item	Symbol	Test Conditions		min	typ*	max	Unit
Input voltage	V_{IH}			2.0	—	—	V
	V_{IL}			—	—	0.8	V
Output voltage	V_{OH}	$V_{CC}=4.75V$, $V_{IH}=2V$, $I_{OH}=-400\mu A$		2.7	—	—	V
	V_{OL}	$V_{CC}=4.75V$, $V_{IL}=0.8V$	$I_{OL}=8mA$	—	—	0.5	V
			$I_{OL}=4mA$	—	—	0.4	
Input current	I_{IH}	$V_{CC}=5.25V$, $V_I=2.7V$		—	—	20	μA
	I_{IL}	$V_{CC}=5.25V$, $V_I=0.4V$		—	—	−0.4	mA
	I_I	$V_{CC}=5.25V$, $V_I=7V$		—	—	0.1	mA
Short-circuit output current	I_{OS}	$V_{CC}=5.25V$		−20	—	−100	mA
Supply current	I_{CCH}	$V_{CC}=5.25V$		—	1.2	2.4	mA
	I_{CCL}			—	2.2	4.4	
Input clamp voltage	V_{IK}	$V_{CC}=4.75V$, $I_{IN}=-18mA$		—	—	−1.5	V

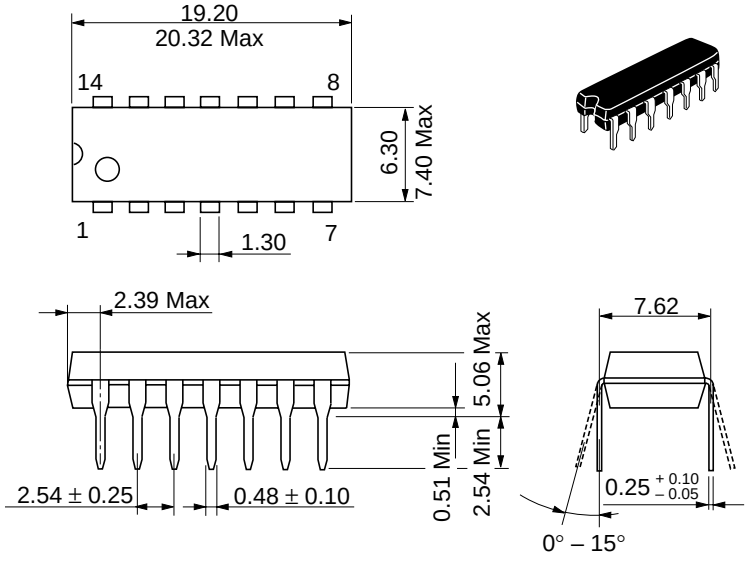
* V_{CC}=5V, Ta=25°C

■SWITCHING CHARACTERISTICS ($V_{CC}=5V$, $Ta=25°C$)

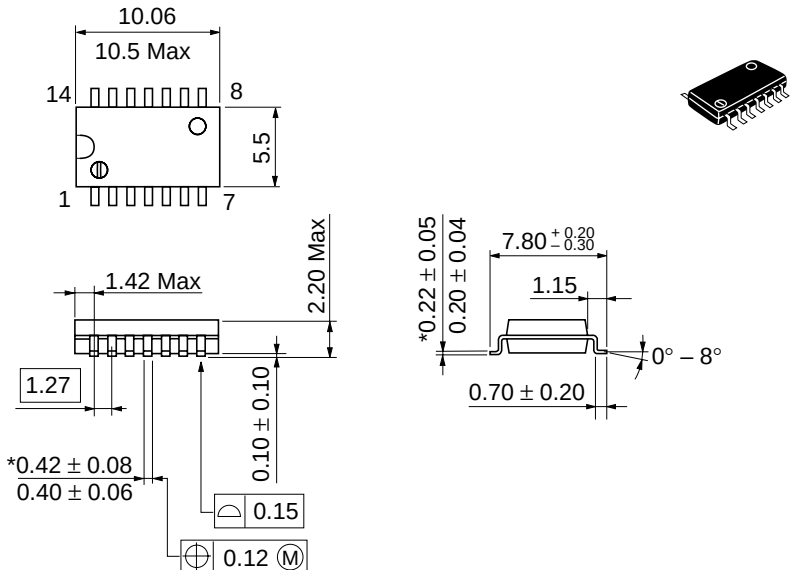
Item	Symbol	Test Conditions	min	typ	max	Unit
Propagation delay time	t_{PLH}	$C_L=15pF$, $R_L=2k\Omega$	—	8	15	ns
	t_{PHL}		—	10	20	

Note) Refer to Test Circuit and Waveform of the Common Item

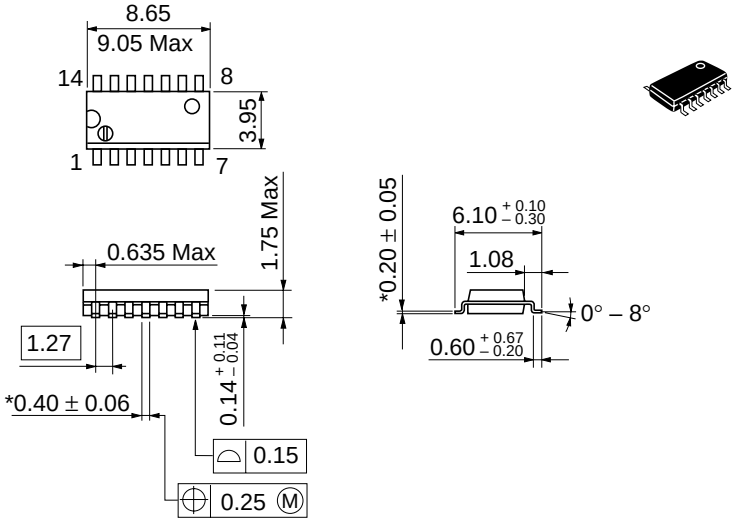
Unit: mm


19.20
20.32 Max
14
8
6.30
7.40 Max
1
1.30
7
2.39 Max
5.06 Max
0.51 Min
2.54 Min
2.54 ± 0.25
0.48 ± 0.10
7.62
0.25 +0.10 −0.05
0° – 15°

Unit: mm


10.06
10.5 Max
14
8
1
7
5.5
1.42 Max
2.20 Max
1.27
0.10 ± 0.10
*0.42 ± 0.08
0.40 ± 0.06
0.15
0.12 M
*0.22 ± 0.05
0.20 ± 0.04
7.80 +0.20 −0.30
1.15
0° – 8°
0.70 ± 0.20

Unit: mm


8.65
9.05 Max
14
8
3.95
1
7
1.75 Max
0.635 Max
1.27
*0.40 ± 0.06
0.14 +0.11 −0.04
0.15
0.25 M
*0.20 ± 0.05
6.10 +0.10 −0.30
1.08
0° – 8°
0.60 +0.67 −0.20

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