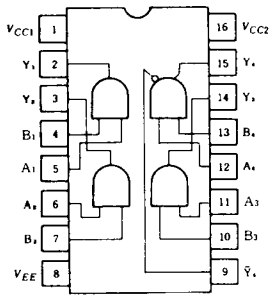
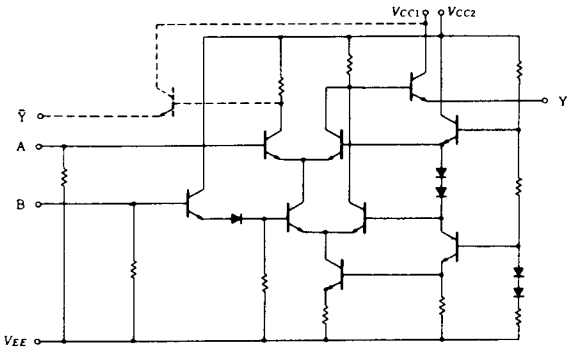
Quadruple 2-input AND Gates

■PIN ARRANGEMENT



(Top View)

■CIRCUIT SCHEMATIC (¼)



■DC CHARACTERISTICS ($V_{EE}=-5.2V$, $Ta=-30\sim+85°C$)

Item	Symbol	Test Condition			min	typ	max	Unit
Supply Current	I_{EE}			25°C	—	28	35	mA
Input Current	I_{IH}	$V_{IH}=-0.810V$, B input $=-0.810V$	A input	25°C	—	—	265	μA
		$V_{IH}=-0.810V$	B input		—	—	220	
	I_{IL}	$V_{IL}=-1.850V$		25°C	0.5	—	—	μA
Output Voltage	V_{OH}	$V_{IH}=-0.890V$ or $V_{IL}=-1.890V$		−30°C	−1.060	—	−0.890	V
		$V_{IH}=-0.810V$ or $V_{IL}=-1.850V$		25°C	−0.960	—	−0.810	
		$V_{IH}=-0.700V$ or $V_{IL}=-1.825V$		85°C	−0.890	—	−0.700	
	V_{OL}	$V_{IL}=-1.890V$ or $V_{IH}=-0.890V$		−30°C	−1.890	—	−1.675	V
		$V_{IL}=-1.850V$ or $V_{IH}=-0.810V$		25°C	−1.850	—	−1.650	
		$V_{IL}=-1.825V$ or $V_{IH}=-0.700V$		85°C	−1.825	—	−1.615	
Output Threshold Voltage	V_{OHA}	$V_{IH}=-0.890V$, $V_{IHA}=-1.205V$ or $V_{ILA}=-1.500V$		−30°C	−1.080	—	—	V
		$V_{IH}=-0.810V$, $V_{IHA}=-1.105V$ or $V_{ILA}=-1.475V$		25°C	−0.980	—	—	
		$V_{IH}=-0.700V$, $V_{IHA}=-1.035V$ or $V_{ILA}=-1.440V$		85°C	−0.910	—	—	
	V_{OLA}	$V_{ILA}=-1.500V$ or $V_{IH}=-0.890V$, $V_{IHA}=-1.205V$		−30°C	—	—	−1.655	V
		$V_{ILA}=-1.475V$ or $V_{IH}=-0.810V$, $V_{IHA}=-1.105V$		25°C	—	—	−1.630	
		$V_{ILA}=-1.440V$ or $V_{IH}=-0.700V$, $V_{IHA}=-1.105V$		85°C	—	—	−1.595	

■AC CHARACTERISTICS (V_{EE} = −3.2V, V_{CC} = +2.0V, Ta = −30 ~ +85°C)

Item	Symbol	Test Condition			min	typ	max	Unit
Propagation Delay Time	t_{PLH}	A input	R_L = 50Ω	−30°C	1.0	—	4.3	ns
				25°C	1.0	2.2	4.0	
				85°C	1.0	—	4.2	
		B input		−30°C	1.0	—	4.3	
				25°C	1.0	2.7	4.0	
				85°C	1.0	—	4.2	
	t_{PHL}	A input		−30°C	1.0	—	4.3	ns
				25°C	1.0	2.2	4.0	
				85°C	1.0	—	4.2	
		B input		−30°C	1.0	—	4.3	
				25°C	1.0	2.7	4.0	
				85°C	1.0	—	4.2	
Rise/Fall Time	t_{TLH}	A, B input		−30°C	1.5	—	3.7	ns
				25°C	1.5	2.0	3.5	
				85°C	1.5	—	3.6	
	t_{THL}			−30°C	1.5	—	3.7	ns
				25°C	1.5	2.0	3.5	
				85°C	1.5	—	3.6	

Note) Please refer to test circuit and waveform of common item.