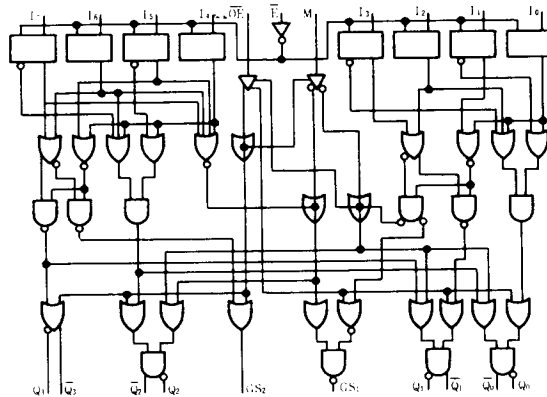


LOGIC DIAGRAM



DC CHARACTERISTICS ($V_{EE} = -4.2\text{V}$ to -4.8V , $V_{CC} = V_{CCA} = \text{GND}$, $T_a = 0$ to $+85^\circ\text{C}$)

Item	Symbol	Test Condition	min	typ	max	Unit
Supply Current	I_{EE}	All input open	77	110	154	mA
Input Current	I_{IH}	$V_{IN} = V_{IH\ max}$	—	—	230	μA

Note) As for other items, refer to the "Common DC Characteristics".

AC CHARACTERISTICS ($V_{EE} = -2.2$ to -2.8V , $V_{CC} = V_{CCA} = 2.0\text{V}$)

HD100165

Item	Symbol	Test Condition	0°C		25°C			85°C		Unit
			min	max	min	typ	max	min	max	
Propagation Delay Time	t_{PLH}, t_{PHL}	In input to $Q_n, \overline{Q_n}$	1.00	3.80	1.10	2.15	3.80	1.20	4.10	ns
		In input to GS_1, GS_2	1.20	3.65	1.30	2.00	3.65	1.40	3.80	
		$\overline{E}$ input to $Q_n, \overline{Q_n}, GS_1, GS_2$	1.50	3.90	1.50	3.00	4.00	1.60	4.10	
		$\overline{OE}$ input to $Q_n, \overline{Q_n}$	0.90	2.45	1.00	1.75	2.60	1.10	2.80	
		$\overline{OE}$ input to GS_1, GS_2	1.00	2.50	1.10	1.70	2.60	1.20	2.60	
		M input to $Q_n, \overline{Q_n}, GS_1, GS_2$	0.90	3.25	1.00	2.00	3.30	1.10	3.50	
Transition Time	t_{TLH}, t_{THL}		0.35	1.30	0.35	0.75	1.30	0.35	1.30	ns
Setup Time	t_{SU}		0.70	—	0.80	—	—	0.80	—	ns
Hold Time	t_h		0.60	—	0.60	—	—	0.70	—	ns

● HD100165F

Item	Symbol	Test Condition		0℃		25℃			85℃		Unit
				min	max	min	typ	max	min	max	
Propagation Delay Time	t_{PLH}, t_{PHL}	See test circuit and waveform	In input to $Q_n, \overline{Q}_n$	1.00	3.60	1.10	2.15	3.70	1.10	3.80	ns
			In input to GS_1, GS_2	1.20	3.60	1.30	2.00	3.70	1.30	3.80	
			$\overline{E}$ input to $Q_n, \overline{Q}_n, GS_1, GS_2$	1.50	3.70	1.60	3.00	3.80	1.70	3.90	
			$\overline{OE}$ input to $Q_n, \overline{Q}_n$	0.90	2.40	1.00	1.75	2.50	1.00	2.50	
			$\overline{OE}$ input to GS_1, GS_2	1.00	2.30	1.10	1.70	2.40	1.10	2.40	
			M input to $Q_n, \overline{Q}_n, GS_1, GS_2$	1.00	3.00	1.00	2.00	3.00	1.00	3.00	
Transition Time	t_{TLH}, t_{THL}			0.40	1.30	0.40	0.80	1.30	0.40	1.30	ns
Setup Time	t_{St}			0.60	—	0.60	—	—	0.60	—	ns
Hold Time	t_h			0.40	—	0.40	—	—	0.40	—	ns

Note) The circuits in a test socket or mounted on a printed circuit board and transverse air flow greater than 2.5m/s (500 linear fpm) is maintained.

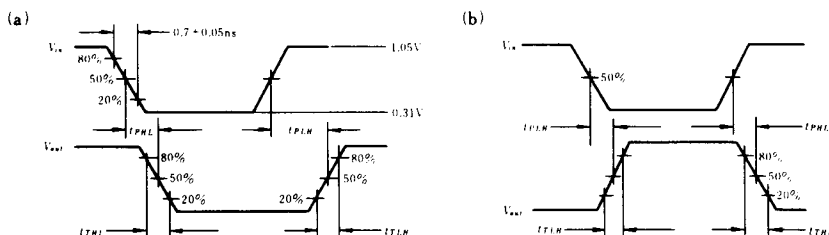


Fig.1 Propagation Delay Time

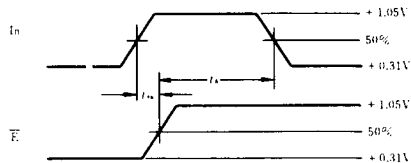


Fig.2 Set-up and Hold Time