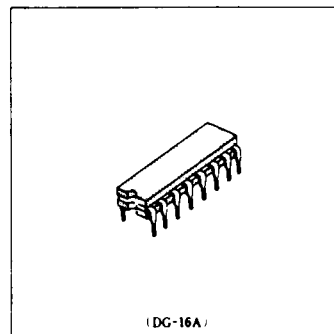


HD2923

Quadruple ECL to TTL Drivers

The HD2923 is a monolithic, high speed Quadruple ECL to TTL Driver which accepts ECL input signals. It provides high output current suitable for driving the TTL clock inputs or other address multiplexing inputs of N-channel MOS memories such as the HM4816A of MK4116. Power supply requirements are ground, +5.0 Volts and -5.2 Volts. The HD2923 requires no particular power supply sequencing in order to assure standby mode of memories, because the outputs are always "high" at applying the power. Propagation delay is 10ns MAX.

The HD2923 is fabricated by means of HITACHI's Schottky Bipolar technology to assure high performance over the 0°C to 75°C ambient temperature range.



FEATURES

- High Speed $t_{pd} = 10\text{ns MAX. (50\% to 2.2V dc out or to +1.0V dc out, 200pF Load)}$
- Low Power 250mW typ. (DC)
- 10K ECL Compatible Inputs
- Pin Compatibility MC10125 or HD10125

ABSOLUTE MAXIMUM RATINGS

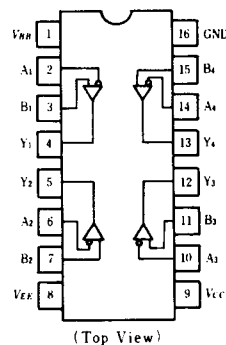
Item	Symbol	Value	Unit
Supply Voltage	V_{CC}	-0.5 to +7	V
	V_{EE}	-7 to +0.5	V
Input Voltage	V_{in}	V_{EE} to +0.5	V
Output Voltage	V_{out}	-1.0 to $V_{CC}+1$	V
Power Dissipation	P_T	1.0	W
Operating Temperature*	T_{op}	-10 to +85	°C
Storage Temperature	T_{stg}	-65 to +150	°C

* under bias

RECOMMENDED OPERATING CONDITIONS

Item	Symbol	min	typ	max	Unit
Supply Voltage	V_{CC}	4.75	5.0	5.25	V
	V_{EE}	-5.46	-5.2	-4.94	V
Input Voltage	V_{IH}	-1.025	—	—	V
	V_{IL}	—	—	-1.520	V
Operating Temperature	T_{op}	0	—	75	°C

PIN ARRANGEMENT



The V_{BB} reference voltage is available on pin 1 for use in single ended input biasing

TRUTH TABLE

Input		Output
A	B	Y
H	V_{BB}	L
L	V_{BB}	H
H	L	L
L	H	H
V_{BB}	H	H
V_{BB}	L	L
Open	Open	H

■ DC CHARACTERISTICS

Item	Symbol	Test Condition	min	typ	max	Unit
Power Supply Drain Current	$-I_{EE}$	$V_{EE} = -5.2V, V_{CC} = 5.0V$	—	22	27	mA
	I_{CCN}		—	23.5	29	mA
	I_{CCL}		—	34.5	42	mA
Input Current	I_{iN}	$V_{iN} = -0.81V$	—	—	115	μA
Input Leakage Current	I_{CBO}	$V_{iN} = -5.2V$	—	—	1.0	μA
Output Voltage	V_{OH}	$I_{OH} = -1.0mA$	2.7	—	—	V
	V_{OL}	$I_{OL} = 5.0mA$	—	—	0.5	V
Threshold Voltage	$V_{OH\Delta}$	$V_{iN} = -1.1V, I_{OH} = -1.0mA$	2.7	—	—	V
	$V_{OL\Delta}$	$V_{iN} = -1.48V, I_{OL} = 5.0mA$	—	—	0.5	V
Indeterminate Input Protection Tests	V_{ONS}	All inputs = V_{EE}	2.7	—	—	V
		All inputs = Open	2.7	—	—	
Reference Voltage	V_{BB}		-1.420	—	-1.150	V
Common Mode Rejection Tests	V_{OHC}	$V_{iNH} = 0.300V, V_{iNL} = -0.825V$	2.7	—	—	V
		$V_{iNH} = -1.890V, V_{iNL} = -2.890V$	2.7	—	—	
	V_{OLC}	$V_{iNH} = 0.300V, V_{iNL} = -0.825V$	—	—	0.5	V
		$V_{iNH} = -1.890V, V_{iNL} = -2.890V$	—	—	0.5	

■ AC CHARACTERISTICS

Item	Symbol	Test Condition	min	typ	max	Unit
Propagation Delay Time	t_{DR}	50% to +2.2V, $C_L = 200pF$	—	—	10	ns
	t_{DF}	50% to +1.0V, $C_L = 200pF$	—	—	10	ns
Rise Time	t^+	+1.0V to +2.2V, $C_L = 200pF$	—	—	5	ns
Fall Time	t^-	+2.2V to +1.0V, $C_L = 200pF$	—	—	5	ns

