

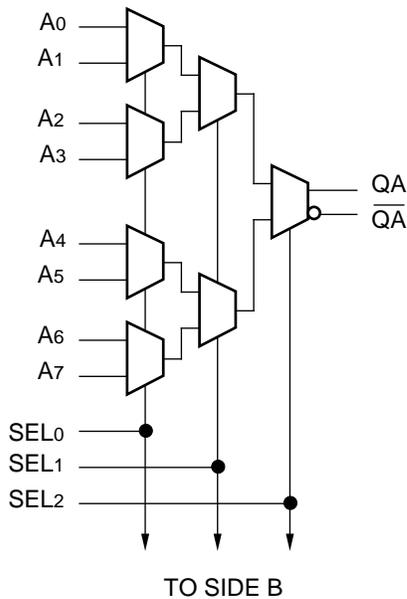
FEATURES

- 850ps max. propagation delay
- Extended 100E VEE range of -4.2V to -5.5V
- Differential outputs
- Internal 75KΩ input pulldown resistors
- Fully compatible with industry standard 10KH, 100K ECL levels
- Fully compatible with Motorola MC10E/100E163
- Available in 28-pin PLCC package

DESCRIPTION

The SY10/100E163 offer two 8:1 multiplexers designed for use in new, high-performance ECL systems. The E163 has differential outputs and common select inputs. The select inputs (SEL0, SEL1, SEL2) determine which one of the eight data inputs (A0-A7, B0-B7) is propagated to the output.

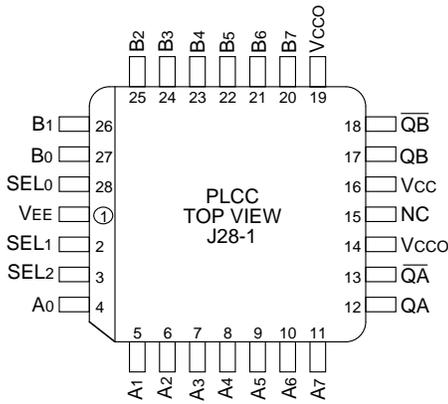
BLOCK DIAGRAM



PIN NAMES

Pin	Function
A0-A7	A Data Inputs (D)
B0-B7	B Data Inputs (D)
SEL0, 1, 2	Select Inputs
QA, QB	True Outputs
\overline{QA} , \overline{QB}	Inverting Outputs
Vcco	Vcc to Output

PACKAGE/ORDERING INFORMATION



28-Pin PLCC (J28-1)

Ordering Information⁽¹⁾

Part Number	Package Type	Operating Range	Package Marking	Lead Finish
SY10E163JC	J28-1	Commercial	SY10E163JC	Sn-Pb
SY10E163JCTR ⁽²⁾	J28-1	Commercial	SY10E163JC	Sn-Pb
SY100E163JC	J28-1	Commercial	SY100E163JC	Sn-Pb
SY100E163JCTR ⁽²⁾	J28-1	Commercial	SY100E163JC	Sn-Pb
SY10E163JZ ⁽³⁾	J28-1	Commercial	SY10E163JZ with Pb-Free bar-line indicator	Matte-Sn
SY10E163JZTR ^(2, 3)	J28-1	Commercial	SY10E163JZ with Pb-Free bar-line indicator	Matte-Sn
SY100E163JZ ⁽³⁾	J28-1	Commercial	SY100E163JZ with Pb-Free bar-line indicator	Matte-Sn
SY100E163JZTR ^(2, 3)	J28-1	Commercial	SY100E163JZ with Pb-Free bar-line indicator	Matte-Sn

Notes:

1. Contact factory for die availability. Dice are guaranteed at T_A = 25°C, DC Electricals only.
2. Tape and Reel.
3. Pb-Free package is recommended for new designs.

TRUTH TABLE

SEL ₂	SEL ₁	SEL ₀	A/B Data
L	L	L	0
L	L	H	1
L	H	L	2
L	H	H	3
H	L	L	4
H	L	H	5
H	H	L	6
H	H	H	7

DC ELECTRICAL CHARACTERISTICSV_{EE} = V_{EE} (Min.) to V_{EE} (Max.); V_{CC} = V_{CCO} = GND

Symbol	Parameter	T _A = 0°C			T _A = +25°C			T _A = +85°C			Unit	Condition	
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.			
I _{IH}	Input HIGH Current	—	—	150	—	—	150	—	—	150	μA	—	
I _{EE}	Power Supply Current	—	73	88	—	73	88	—	73	88	mA	—	
		10E	—	73	88	—	73	88	—	73			88
		100E	—	73	88	—	73	88	—	83			100

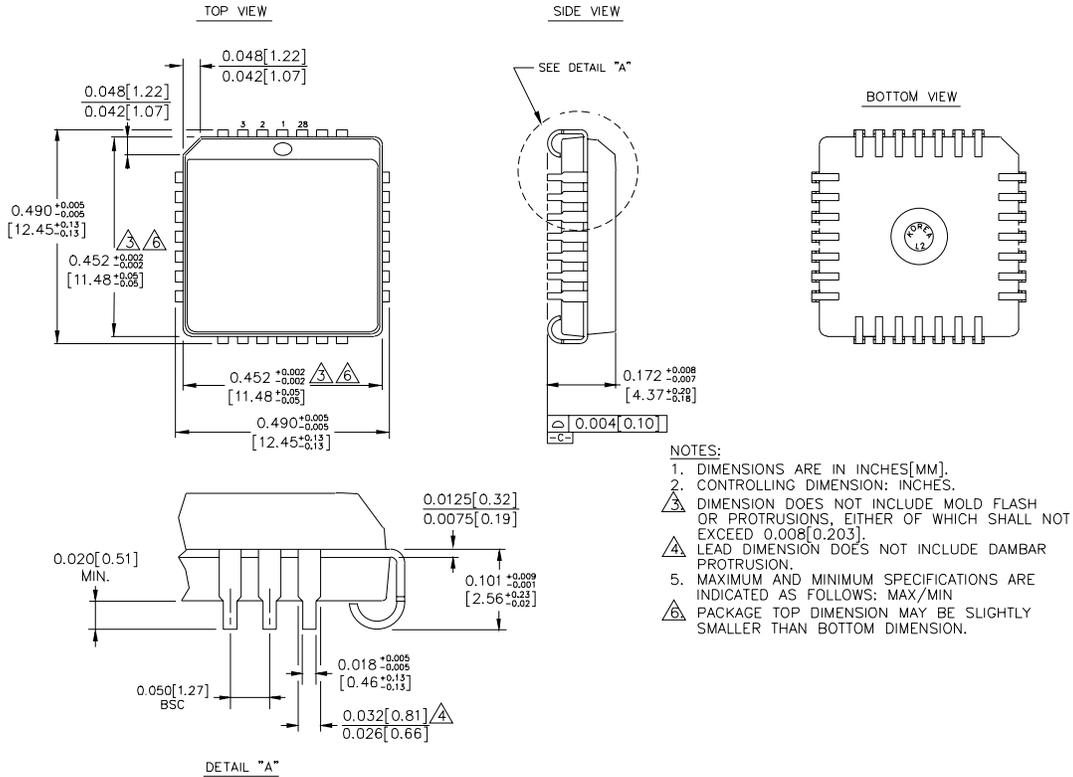
AC ELECTRICAL CHARACTERISTICSV_{EE} = V_{EE} (Min.) to V_{EE} (Max.); V_{CC} = V_{CCO} = GND

Symbol	Parameter	T _A = 0°C			T _A = +25°C			T _A = +85°C			Unit	Condition
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.		
t _{PD}	Propagation Delay to Output D	400	550	800	400	550	800	400	550	800	ps	—
	SEL ₀	525	725	950	525	725	950	525	725	950		
	SEL ₁	425	625	850	425	625	850	425	625	850		
	SEL ₂	350	525	725	350	525	725	350	525	725		
t _{skew}	Within-Device Skew	—	40	—	—	40	—	—	40	—	ps	1
	An, B _n to Q	—	30	—	—	30	—	—	30	—		
	An, Am to QA B _n , B _m to QB	—	30	—	—	30	—	—	30	—		
t _r t _f	Rise/Fall Time 20% to 80%	275	375	575	275	375	575	275	375	575	ps	—

Note:

1. Within-device skew is defined as identical transition on similar paths through a device; n = 0-7, m ≠ n, m = 0-7.

28-PIN PLCC (J28-1)



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