

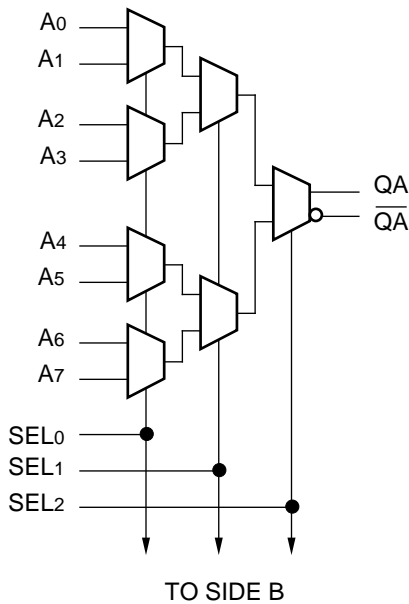
FEATURES

- 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

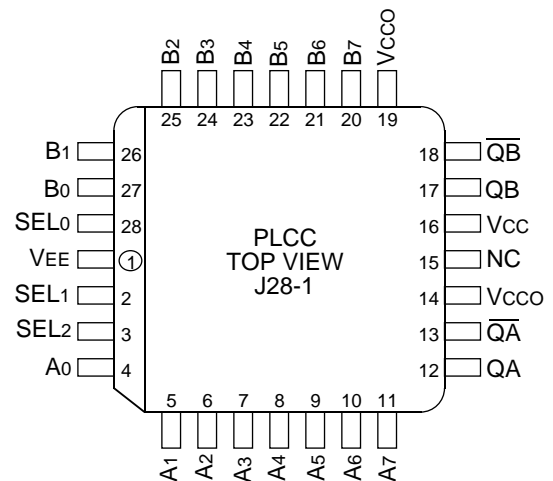
DESCRIPTION

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 CONFIGURATION



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
QA-bar, QB-bar	Inverting Outputs
VCCO	Vcc to Output

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_{CC0} = 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_{CC0} = 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 _{PLH} t _{PHL}	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
	A _n , B _n to Q	—	30	—	—	30	—	—	30	—		
	A _n , A _m 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	—

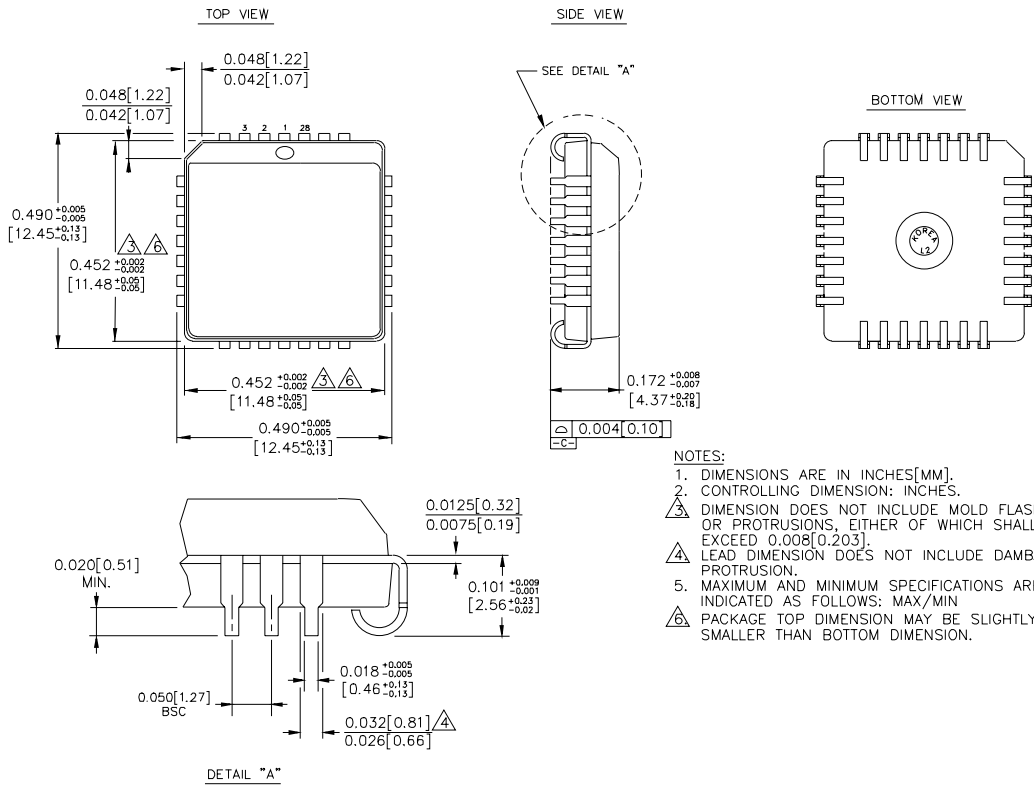
NOTE:

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

PRODUCT ORDERING CODE

Ordering Code	Package Type	Operating Range
SY10E163JC	J28-1	Commercial
SY10E163JCTR	J28-1	Commercial
SY100E163JC	J28-1	Commercial
SY100E163JCTR	J28-1	Commercial

28 LEAD PLCC (J28-1)



Rev. 03

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