

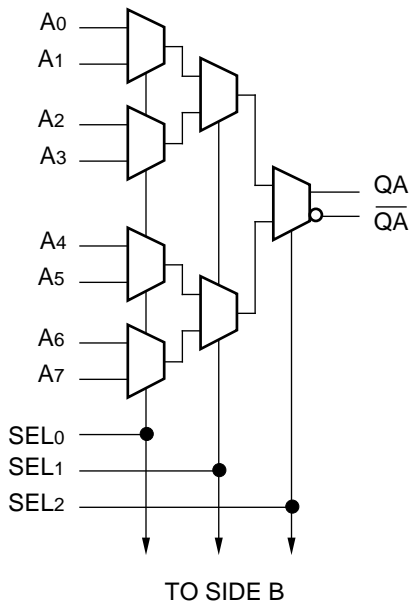
FEATURES

- 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

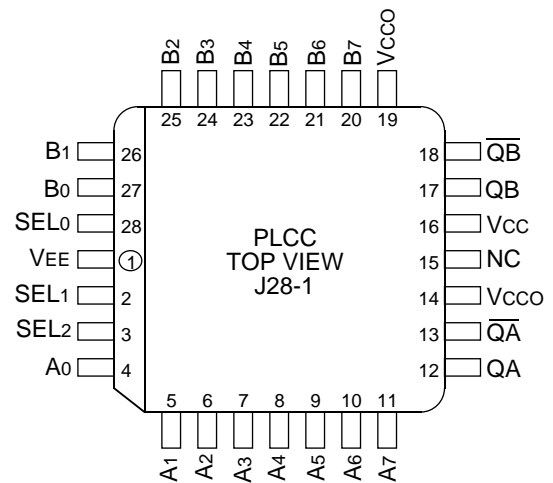
DESCRIPTION

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_{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 _{PLH} t _{PHL}	Propagation Delay to Output D SEL ₀ SEL ₁ SEL ₂	400 525 425 350	550 725 625 525	800 950 850 725	400 525 425 350	550 725 625 525	800 950 850 725	400 525 425 350	550 725 625 525	800 950 850 725	ps	—
t _{skew}	Within-Device Skew A _n , B _n to Q A _n , A _m to QA B _n , B _m to QB	— — —	40 30 30	— — —	— — —	40 30 30	— — —	— — —	40 30 30	— — —	ps	1
t _r t _f	Rise/Fall Time 20% to 80%	275	375	575	275	375	575	275	375	575	ps	—

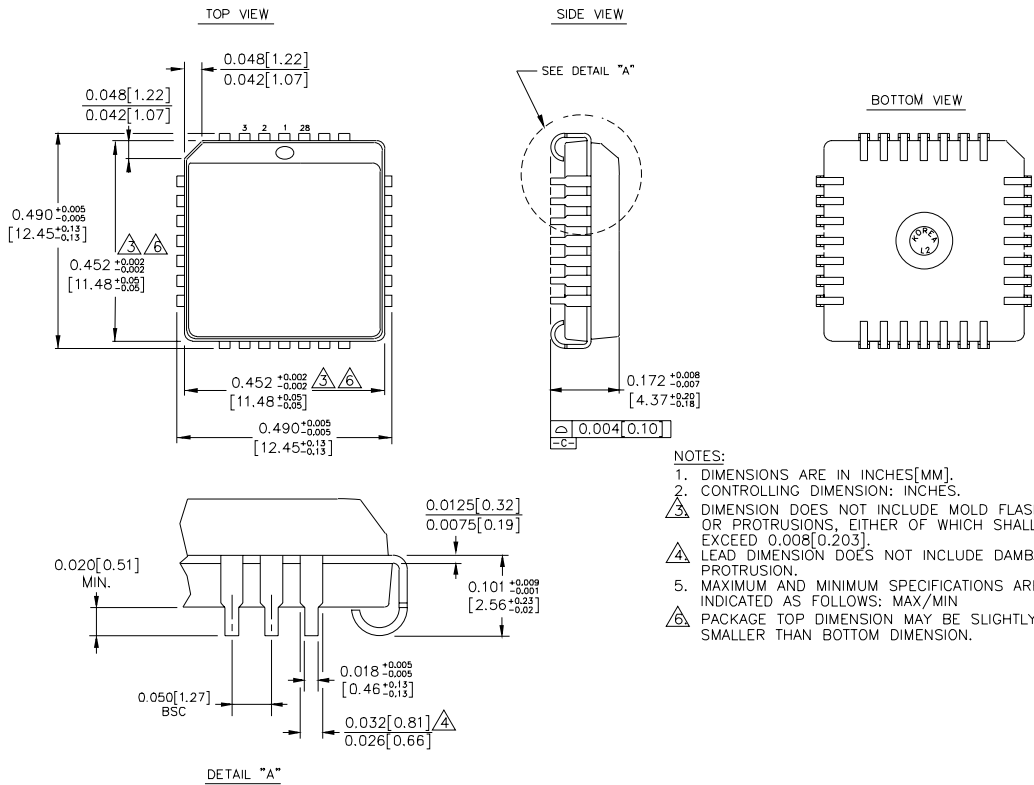
NOTE:

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)



- NOTES:
1. DIMENSIONS ARE IN INCHES[MM].
 2. CONTROLLING DIMENSION: INCHES.
 3. DIMENSION DOES NOT INCLUDE MOLD FLASH OR PROTRUSIONS, EITHER OF WHICH SHALL NOT EXCEED 0.008[0.203].
 4. LEAD DIMENSION DOES NOT INCLUDE DAMBAR PROTRUSION.
 5. MAXIMUM AND MINIMUM SPECIFICATIONS ARE INDICATED AS FOLLOWS: MAX/MIN
 6. PACKAGE TOP DIMENSION MAY BE SLIGHTLY SMALLER THAN BOTTOM DIMENSION.

Rev. 03

MICREL-SYNERGY 3250 SCOTT BOULEVARD SANTA CLARA CA 95054 USA

TEL + 1 (408) 980-9191 FAX + 1 (408) 914-7878 WEB <http://www.micrel.com>

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