

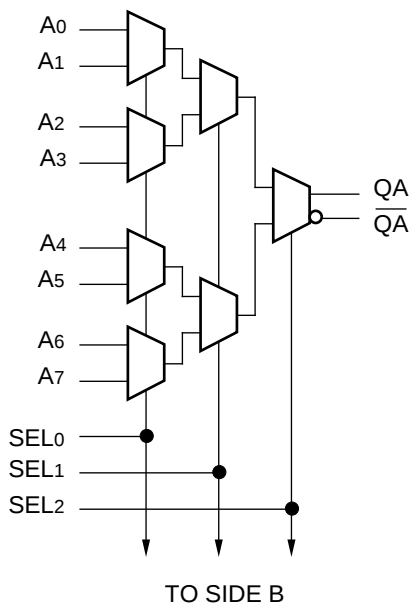
FEATURES

- 850ps max. propagation delay
- Extended 100E VEE range of -4.2V to -5.5V
- Differential outputs
- Internal 75K Ω 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.

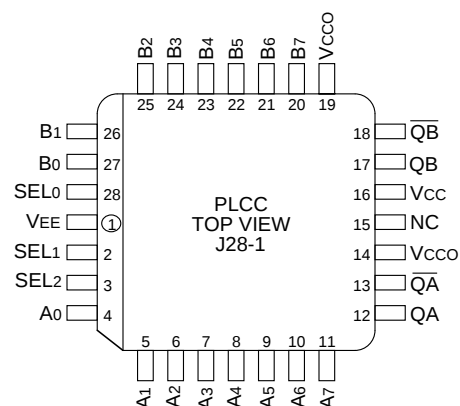
BLOCK DIAGRAM



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 $T_A = 25^\circ\text{C}$, 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

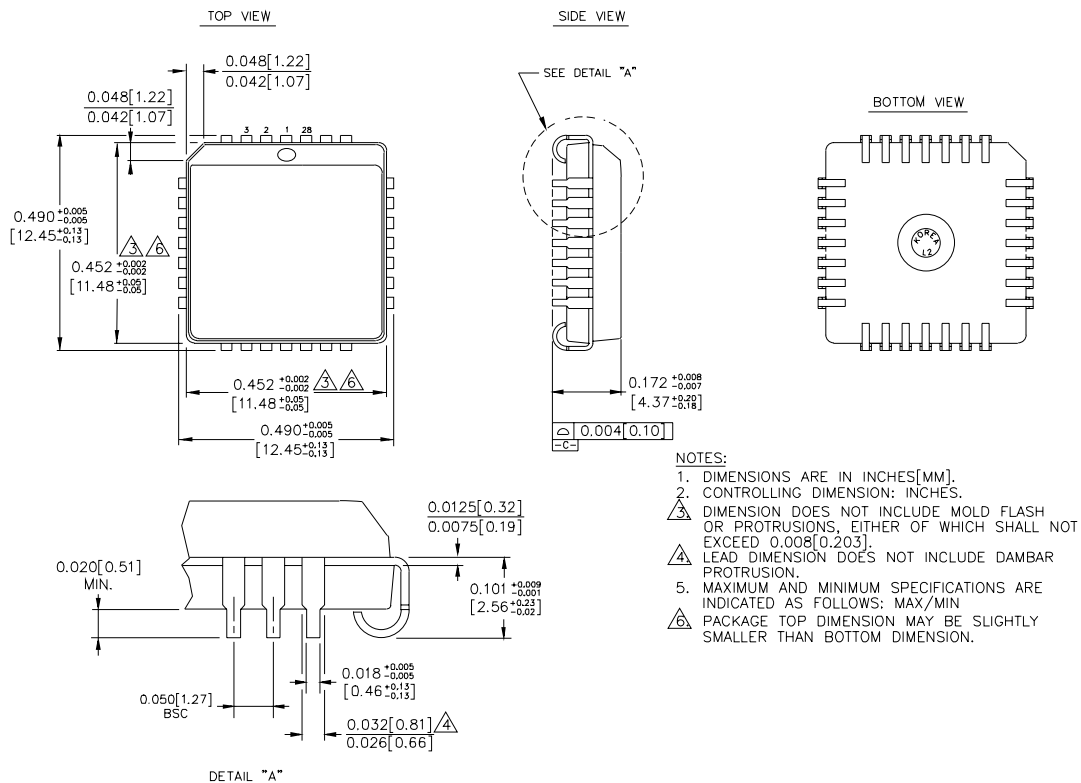
Symbol	Parameter	T _A = 0°C			T _A = +25°C			T _A = +85°C			Unit	Condition
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.		
I _{IH}	Input HIGH Current	—	—	150	—	—	150	—	—	150	μA	—
I _{EE}	Power Supply Current	—	73	88	—	73	88	—	73	88	mA	—
	10E 100E	—	73	88	—	73	88	—	83	100		

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 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.

28-PIN PLCC (J28-1)

Rev. 03

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