

FEATURES

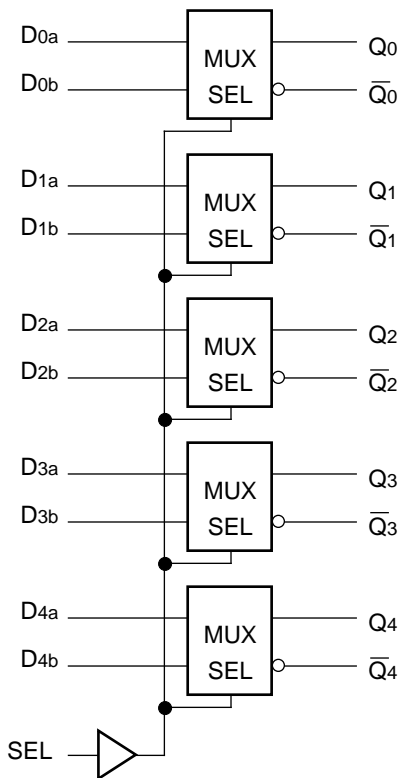
- 550ps max. D to output
- Extended 100E VEE range of -4.2V to -5.5V
- 775ps max. SEL to output
- Differential outputs
- Fully compatible with industry standard 10KH, 100K ECL levels
- Internal 75KΩ input pulldown resistors
- Fully compatible with Motorola MC10E/100E158
- Available in 28-pin PLCC package

DESCRIPTION

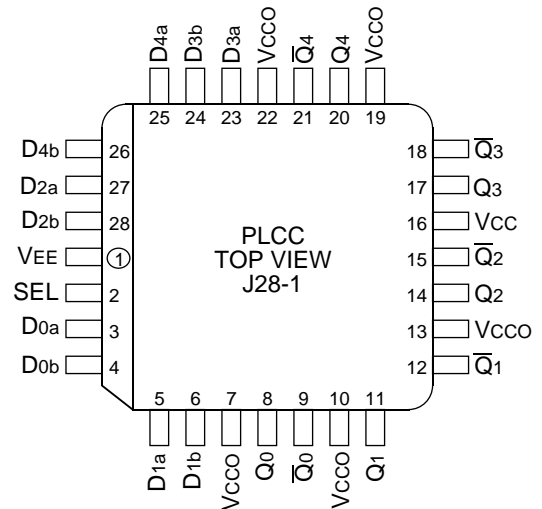
The SY10/100E158 offer five 2:1 multiplexers with differential outputs, designed for use in new, high-performance ECL systems.

The multiplexer operation is controlled by the SEL (Select) signal which selects one of the two bits of input data at each mux to be passed through.

BLOCK DIAGRAM



PIN CONFIGURATION



PIN NAMES

Pin	Function
D0a-D4a	Input Data a
D0b-D4b	Input Data b
SEL	Select Input
Q0-Q4	True Outputs
Q-bar0-Q-bar4	Inverted Outputs
VCCO	Vcc to Outputt

TRUTH TABLE

SEL	Data
H	a
L	b

DC ELECTRICAL CHARACTERISTICS

$V_{EE} = V_{EE} (\text{Min.})$ to $V_{EE} (\text{Max.})$; $V_{CC} = V_{CCO} = \text{GND}$

Symbol	Parameter	$T_A = 0^\circ\text{C}$			$T_A = +25^\circ\text{C}$			$T_A = +85^\circ\text{C}$			Unit	Condition
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.		
I _{IH}	Input HIGH Current										μA	—
	D	—	—	200	—	—	200	—	—	200		
	SEL	—	—	150	—	—	150	—	—	150		
I _{EE}	Power Supply Current										mA	—
	10E	—	33	40	—	33	40	—	33	40		
	100E	—	33	40	—	33	40	—	38	46		

AC ELECTRICAL CHARACTERISTICS

$V_{EE} = V_{EE} (\text{Min.})$ to $V_{EE} (\text{Max.})$; $V_{CC} = V_{CCO} = \text{GND}$

Symbol	Parameter	$T_A = 0^\circ\text{C}$			$T_A = +25^\circ\text{C}$			$T_A = +85^\circ\text{C}$			Unit	Condition
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.		
t _{PLH} t _{PHL}	Propagation Delay to Output D SEL	225 400	385 600	550 775	225 400	385 600	550 775	225 400	385 600	550 775	ps	—
t _{skew}	Within-Device Skew	—	60	—	—	60	—	—	60	—		
t _r t _f	Rise/Fall Time 20% to 80%	275	425	650	275	425	650	275	425	650	ps	—

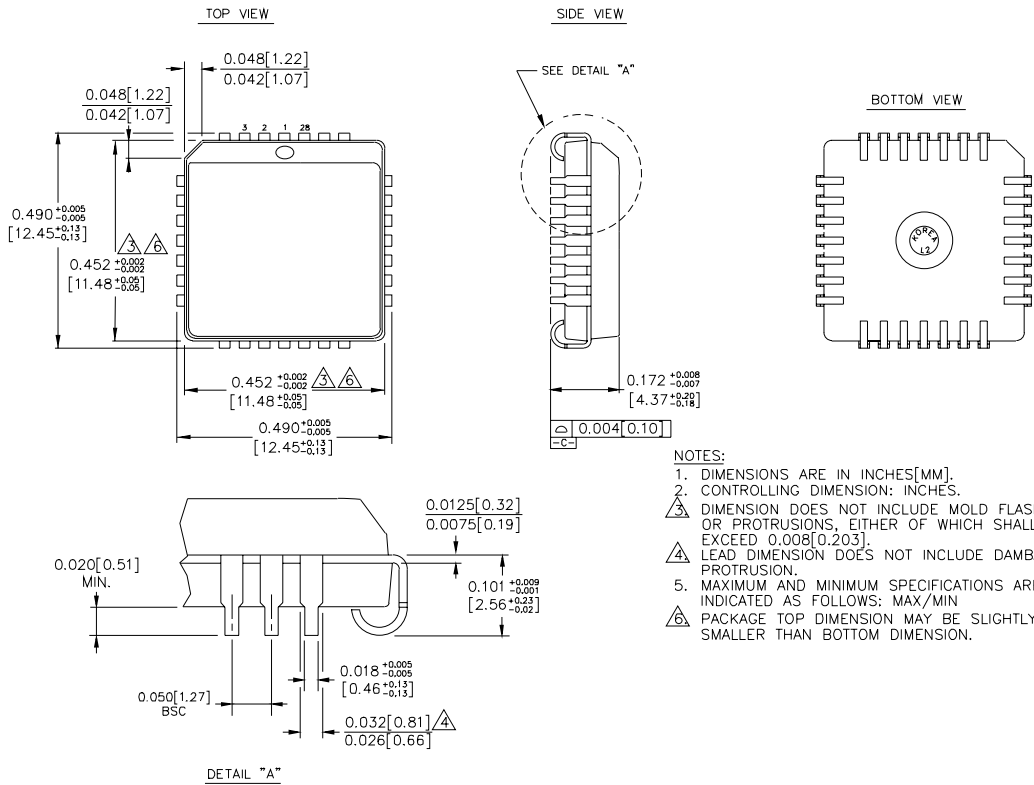
NOTE:

1. Within-device skew is defined as identical transitions on similar paths through a device.

PRODUCT ORDERING CODE

Ordering Code	Package Type	Operating Range
SY10E158JC	J28-1	Commercial
SY10E158JCTR	J28-1	Commercial
SY100E158JC	J28-1	Commercial
SY100E158JCTR	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

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