

FEATURES

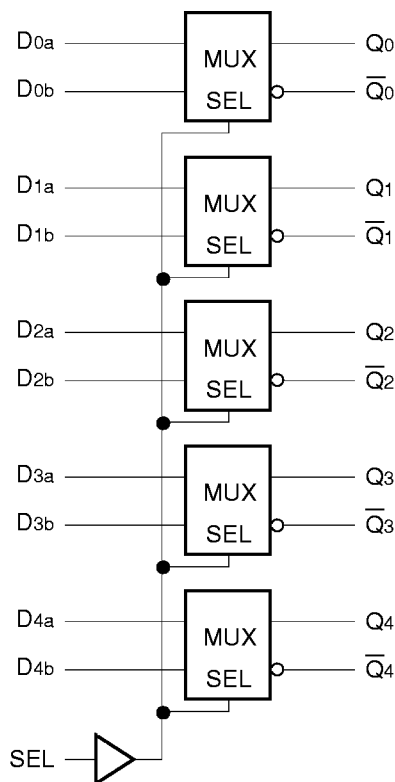
- 550ps max. D to output
- Extended 100E VEE range of -4.2V to -5.5V
- 775ps max. SEL to output
- Differential outputs
- Fully compatible with industry standard 10KH, 100K ECL levels
- Internal 75KΩ input pulldown resistors
- ESD protection of 2000V
- Fully compatible with Motorola MC10E/100E158
- Available in 28-pin PLCC package

DESCRIPTION

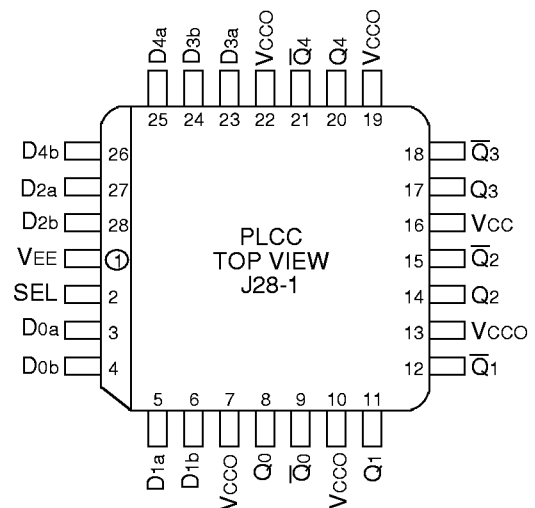
The SY10/100E158 offer five 2:1 multiplexers with differential outputs, designed for use in new, high-performance ECL systems.

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
Q0-bar-Q4-bar	Inverted Outputs
VCCO	Vcc to Output

TRUTH TABLE

SEL	Data
H	a
L	b

DC ELECTRICAL CHARACTERISTICS

VEE = VEE (Min.) to VEE (Max.); VCC = VCCO = GND

Symbol	Parameter	TA = 0°C			TA = +25°C			TA = +85°C			Unit	Condition
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.		
IIH	Input HIGH Current	—	—	200	—	—	200	—	—	200	μA	—
	D	—	—	200	—	—	200	—	—	200		
	SEL	—	—	150	—	—	150	—	—	150		
IEE	Power Supply Current	—	33	40	—	33	40	—	33	40	mA	—
	10E	—	33	40	—	33	40	—	33	40		
	100E	—	33	40	—	33	40	—	38	46		

AC ELECTRICAL CHARACTERISTICS

VEE = VEE (Min.) to VEE (Max.); VCC = VCCO = GND

Symbol	Parameter	TA = 0°C			TA = +25°C			TA = +85°C			Unit	Condition
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.		
tPLH	Propagation Delay to Output	225	385	550	225	385	550	225	385	550	ps	—
tPHL		400	600	775	400	600	775	400	600	775		
	SEL	—	60	—	—	60	—	—	60	—		
t _{skew}	Within-Device Skew	—	60	—	—	60	—	—	60	—	ps	1
t _r	Rise/Fall Time	275	425	650	275	425	650	275	425	650	ps	—
t _f		20% to 80%	—	—	—	—	—	—	—	—		

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 PLASTIC LEADED CHIP CARRIER (J28-1)

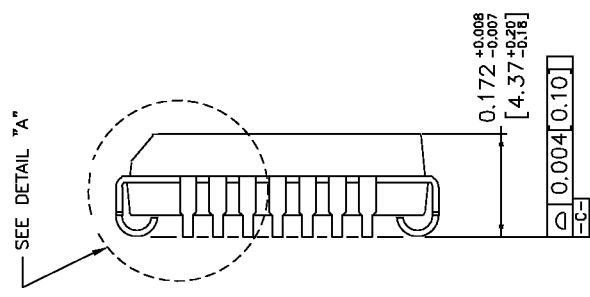
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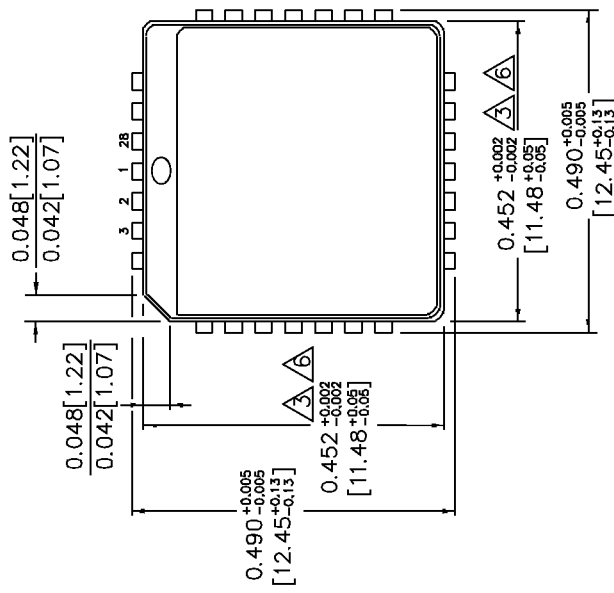
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REV.	REVISION DESCRIPTION	DATE
01	CONVERT TO DESIGNER VERSION A.D. FORMAT AND COVER PAGE TO SPEC. CHANGE BODY WIDTH DIMENSION FROM 0.450(11.43) TO 0.443(11.25) TYP. GEOMETRICAL ERROR.	08/18/94
02	CONVERT DWG FROM DESIGNER TO AUTOCAD REL. 12. REFERENCE AMIKOR DWG. NO. 34653 REV. 00.	02/22/96
03	CONVERT DWG TO REL. 13 AND ONE PAGE DOCUMENT.	02/18/98

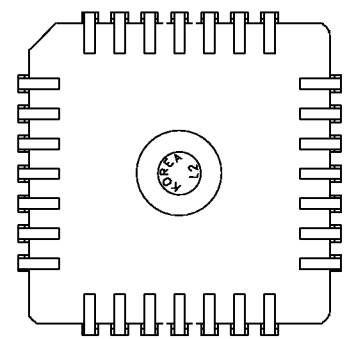
SIDE VIEW



TOP VIEW

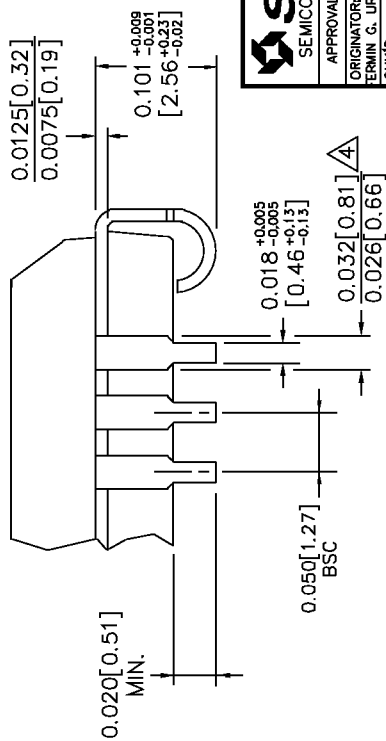


BOTTOM VIEW



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.



DETAIL "A"

SYNERGY
SEMICONDUCTOR

3250 SCOTT BOULEVARD
SANTA CLARA, CA. 95054
TEL: 408-960-9191
FAX: 408-367-7878

APPROVALS	DATE	APPROVALS	DATE	SIZE	PACKAGE OUTLINE
ORIGINATOR: ERMIN G. URRUTIA	02/23/98	QUALITY: MARSHALL WILDER		A	28 LEAD PLCC
CHK'D: WON CHANG		DOCUMENT CONTROL: BRIAN SANFILIPPO			
RELEASE DATE:					

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SCALE: N/A
REVISION: 03