



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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**QUAD 2:1
MULTIPLEXER**

**SY10E157
SY100E157**

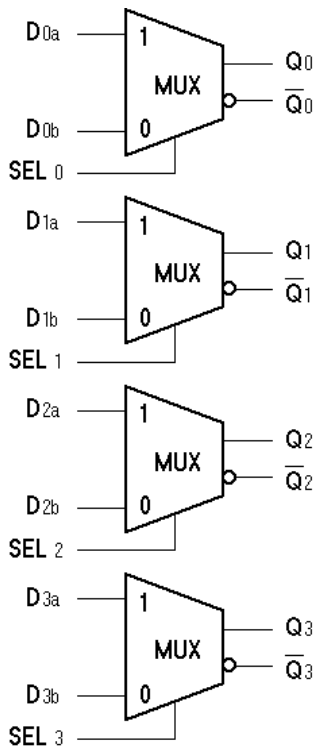
FEATURES

- Individual select controls
- Extended 100E VEE range of -4.2V to -5.5V
- 550ps max. D to Output
- 800ps max. SEL to Output
- Internal 75KΩ input pull-down resistors
- Fully compatible with industry standard 10KH, 100K ECL levels
- Available in 28-pin PLCC package

DESCRIPTION

The SY10/100E157 contain four 2:1 multiplexers with differential outputs. The output data are controlled by the individual Select (SEL) inputs. The individual select control makes the devices well suited for random logic designs.

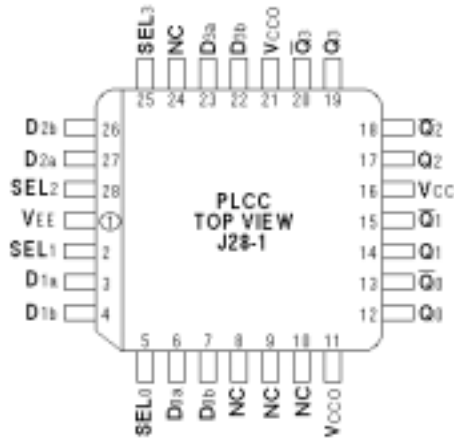
BLOCK DIAGRAM



PIN NAMES

| Pin | Function |
|-----------------|------------------|
| D0a – D3a | Input Data a |
| D0b – D3b | Input Data b |
| SEL0 – SEL3 | Select Inputs |
| Q0 – Q3 | True Outputs |
| Q0-bar – Q3-bar | Inverted 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 |
|---------------------------------|--------------|-----------------|---|-------------|
| SY10E157JI | J28-1 | Industrial | SY10E157JI | Sn-Pb |
| SY10E157JITR ⁽²⁾ | J28-1 | Industrial | SY10E157JI | Sn-Pb |
| SY100E157JI | J28-1 | Industrial | SY100E157JI | Sn-Pb |
| SY100E157JITR ⁽²⁾ | J28-1 | Industrial | SY100E157JI | Sn-Pb |
| SY10E157JC | J28-1 | Commercial | SY10E157JC | Sn-Pb |
| SY10E157JCTR ⁽²⁾ | J28-1 | Commercial | SY10E157JC | Sn-Pb |
| SY100E157JC | J28-1 | Commercial | SY100E157JC | Sn-Pb |
| SY100E157JCTR ⁽²⁾ | J28-1 | Commercial | SY100E157JC | Sn-Pb |
| SY10E157JY ⁽³⁾ | J28-1 | Industrial | SY10E157JY with Pb-Free bar-line indicator | Matte-Sn |
| SY10E157JYTR ^(2, 3) | J28-1 | Industrial | SY10E157JY with Pb-Free bar-line indicator | Matte-Sn |
| SY100E157JY ⁽³⁾ | J28-1 | Industrial | SY100E157JY with Pb-Free bar-line indicator | Matte-Sn |
| SY100E157JYTR ^(2, 3) | J28-1 | Industrial | SY100E157JY with Pb-Free bar-line indicator | Matte-Sn |

Notes:

1. Contact factory for die availability. Dice are guaranteed at T_A = 25°C, DC Electricals only.
2. Tape and Reel.
3. Pb-Free package is recommended for new designs.

TRUTH TABLE

| SEL | Data |
|-----|------|
| H | a |
| L | b |

DC ELECTRICAL CHARACTERISTICS⁽¹⁾

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

| Symbol | Parameter | $T_A = -40^\circ\text{C}$ | | | $T_A = 0^\circ\text{C}$ | | | $T_A = +25^\circ\text{C}$ | | | $T_A = +85^\circ\text{C}$ | | | Unit |
|-----------------|----------------------|---------------------------|------|------|-------------------------|------|------|---------------------------|------|------|---------------------------|------|------|---------------|
| | | Min. | Typ. | Max. | Min. | Typ. | Max. | Min. | Typ. | Max. | Min. | Typ. | Max. | |
| I _{IH} | Input HIGH Current | — | — | 200 | — | — | 200 | — | — | 200 | — | — | 200 | μA |
| | D SEL | — | — | 150 | — | — | 150 | — | — | 150 | — | — | 150 | |
| I _{EE} | Power Supply Current | — | 32 | 38 | — | 32 | 38 | — | 32 | 38 | — | 32 | 38 | mA |
| | 10E | — | 32 | 38 | — | 32 | 38 | — | 32 | 38 | — | 32 | 38 | |
| | 100E | — | 32 | 38 | — | 32 | 38 | — | 32 | 38 | — | 37 | 44 | |

Note:

1. Specification for packaged product only.

AC ELECTRICAL CHARACTERISTICS⁽²⁾

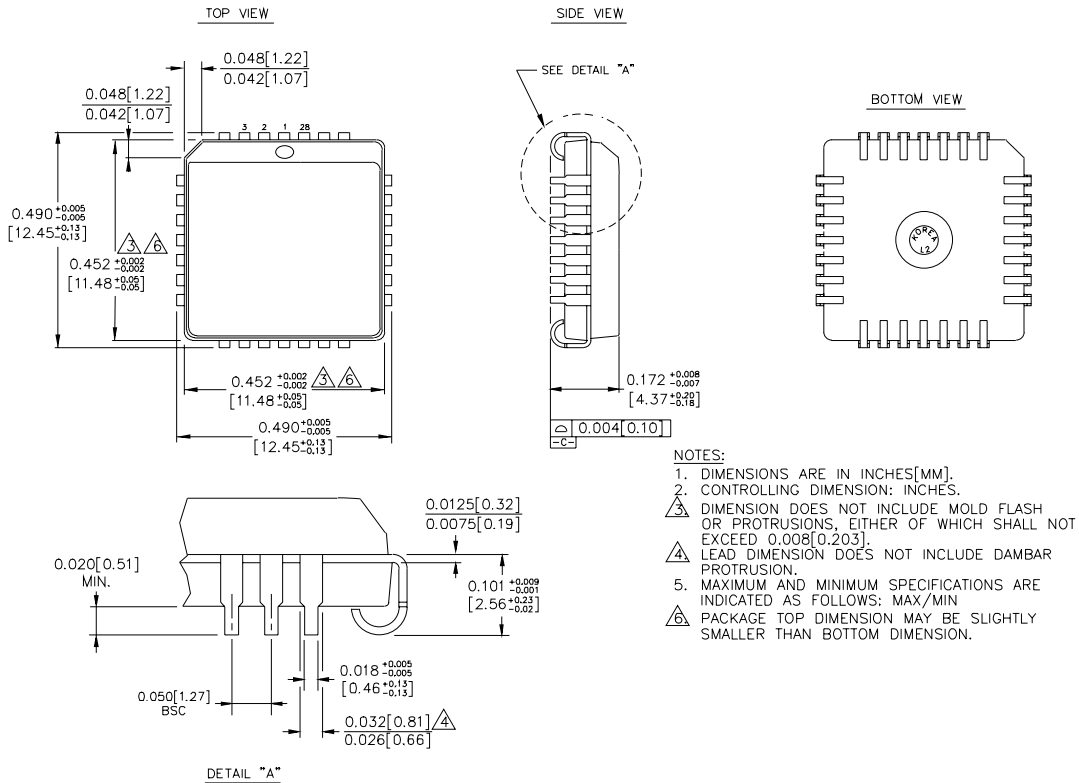
$V_{EE} = V_{EE} \text{ (Min.) to } V_{EE} \text{ (Max.)}; V_{CC} = V_{CCO} = \text{GND}$

| Symbol | Parameter | $T_A = -40^\circ\text{C}$ | | | $T_A = 0^\circ\text{C}$ | | | $T_A = +25^\circ\text{C}$ | | | $T_A = +85^\circ\text{C}$ | | | Unit |
|----------------------------------|-----------------------------------|---------------------------|------|------|-------------------------|------|------|---------------------------|------|------|---------------------------|------|------|---------------|
| | | Min. | Typ. | Max. | Min. | Typ. | Max. | Min. | Typ. | Max. | Min. | Typ. | Max. | |
| t _{PD} | Propagation Delay to | 220 | 380 | 550 | 220 | 380 | 550 | 220 | 380 | 550 | 220 | 380 | 550 | μs |
| | D SEL | 425 | 600 | 800 | 425 | 600 | 800 | 425 | 600 | 800 | 425 | 600 | 800 | |
| t _{skew} | Within-Device Skew ⁽¹⁾ | — | 70 | — | — | 70 | — | — | 70 | — | — | 70 | — | ps |
| t _r t _f | Rise/Fall Time 20% to 80% | 275 | 400 | 650 | 275 | 400 | 650 | 275 | 400 | 650 | 275 | 400 | 650 | ps |

Notes:

1. Within-device skew is defined as identical transitions on similar paths through a device.
2. Specification for packaged product only.

28-PIN PLCC (J28-1)



Rev. 03

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