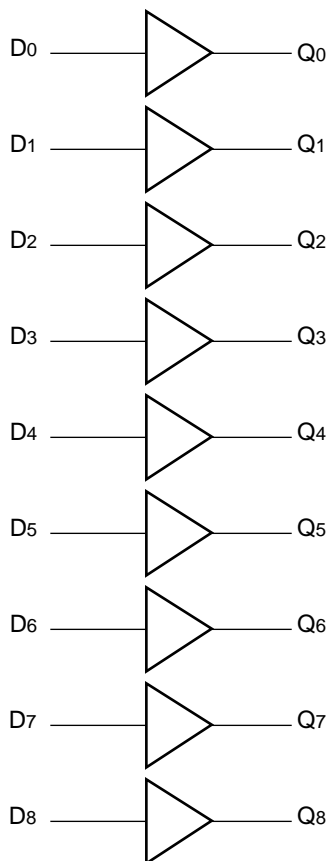


**9-BIT
BUFFER****SY10E122
SY100E122****FEATURES**

- 500ps max. propagation delay
- Extended 100E VEE range of -4.2V to -5.5V
- Fully compatible with industry standard 10KH, 100K I/O levels
- Internal 75K Ω input pulldown resistors
- Fully compatible with Motorola MC10E/100E122
- Available in 28-pin PLCC package

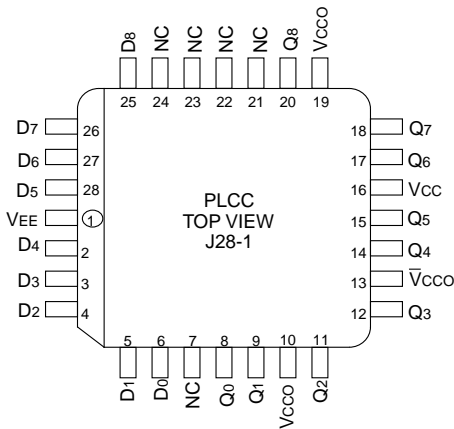
DESCRIPTION

The SY10/100E122 are 9-bit buffers designed for use in new, high-performance ECL systems. The E122 provides nine non-inverting buffers.

BLOCK DIAGRAM**PIN NAMES**

| Pin | Function |
|-------|---------------|
| D0-D8 | Data Inputs |
| Q0-Q8 | Data Outputs |
| VCC0 | VCC to Output |

PACKAGE/ORDERING INFORMATION



28-Pin PLCC (J28-1)

Ordering Information⁽¹⁾

| Part Number | Package Type | Operating Range | Package Marking | Lead Finish |
|---------------------------------|--------------|-----------------|---|-------------|
| SY10E122JI | J28-1 | Industrial | SY10E122JI | Sn-Pb |
| SY10E122JITR ⁽²⁾ | J28-1 | Industrial | SY10E122JI | Sn-Pb |
| SY100E122JI | J28-1 | Industrial | SY100E122JI | Sn-Pb |
| SY100E122JITR ⁽²⁾ | J28-1 | Industrial | SY100E122JI | Sn-Pb |
| SY10E122JC | J28-1 | Commercial | SY10E122JC | Sn-Pb |
| SY10E122JCTR ⁽²⁾ | J28-1 | Commercial | SY10E122JC | Sn-Pb |
| SY100E122JC | J28-1 | Commercial | SY100E122JC | Sn-Pb |
| SY100E122JCTR ⁽²⁾ | J28-1 | Commercial | SY100E122JC | Sn-Pb |
| SY10E122JY ⁽³⁾ | J28-1 | Industrial | SY10E122JY with Pb-Free bar-line indicator | Matte-Sn |
| SY10E122JYTR ^(2, 3) | J28-1 | Industrial | SY10E122JY with Pb-Free bar-line indicator | Matte-Sn |
| SY100E122JY ⁽³⁾ | J28-1 | Industrial | SY100E122JY with Pb-Free bar-line indicator | Matte-Sn |
| SY100E122JYTR ^(2, 3) | J28-1 | Industrial | SY100E122JY 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.

DC ELECTRICAL CHARACTERISTICS

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

| Symbol | Parameter | TA = -40°C | | | TA = 0°C | | | TA = +25°C | | | TA = +85°C | | | Unit |
|-----------------|----------------------|------------|------|------|----------|------|------|------------|------|------|------------|------|------|------|
| | | Min. | Typ. | Max. | Min. | Typ. | Max. | Min. | Typ. | Max. | Min. | Typ. | Max. | |
| I _{IH} | Input HIGH Current | — | — | 200 | — | — | 200 | — | — | 200 | — | — | 200 | μA |
| I _{EE} | Power Supply Current | — | — | — | — | — | — | — | — | — | — | — | — | mA |
| | 10E | — | 41 | 49 | — | 41 | 49 | — | 41 | 49 | — | 41 | 49 | |
| | 100E | — | 41 | 49 | — | 41 | 49 | — | 41 | 49 | — | 47 | 57 | |

AC ELECTRICAL CHARACTERISTICS

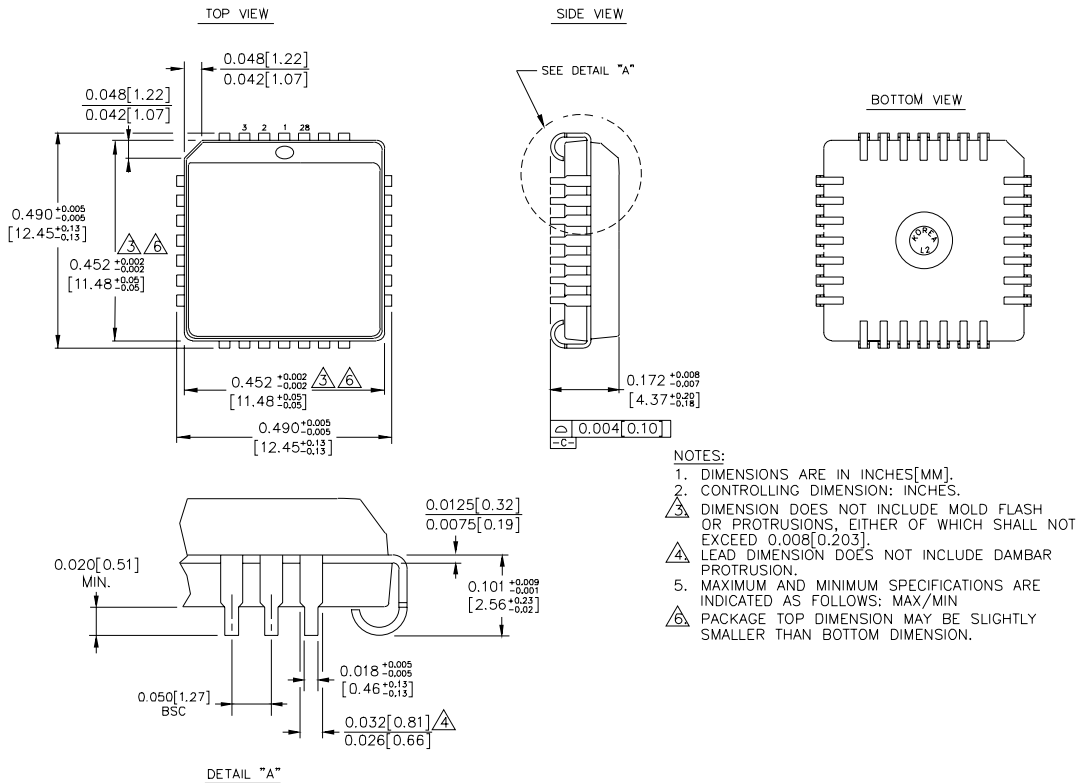
VEE = VEE (Min.) to VEE (Max.); VCC = VCCO = GND

| Symbol | Parameter | TA = -40°C | | | TA = 0°C | | | TA = +25°C | | | TA = +85°C | | | Unit |
|----------------------------------|--|------------|------|------|----------|------|------|------------|------|------|------------|------|------|------|
| | | Min. | Typ. | Max. | Min. | Typ. | Max. | Min. | Typ. | Max. | Min. | Typ. | Max. | |
| t _{PD} | Propagation Delay to D to Q | 150 | 350 | 500 | 150 | 350 | 500 | 150 | 350 | 500 | 150 | 350 | 500 | ps |
| t _{skew} | Within-Device Skew D to Q ⁽¹⁾ | — | 75 | — | — | 75 | — | — | 75 | — | — | 75 | — | ps |
| t _r t _f | Rise/Fall Time 20% to 80% | 300 | 425 | 800 | 300 | 425 | 800 | 300 | 425 | 800 | 300 | 425 | 800 | ps |

Note:

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

28-PIN PLCC (J28-1)



Rev. 03

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