



**9-BIT  
BUFFER**

**SY10E122  
SY100E122**

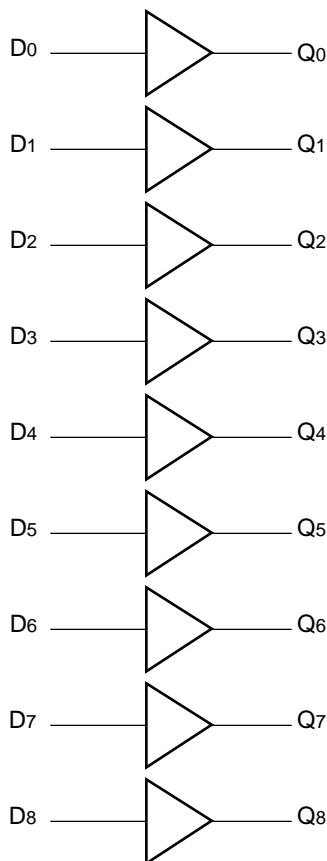
**FEATURES**

- 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 75KΩ 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.

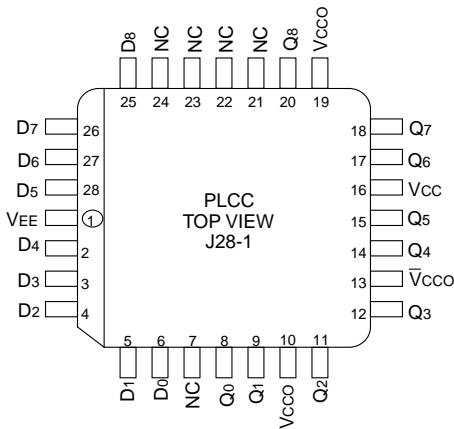
**BLOCK DIAGRAM**



**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<sup>(1)</sup>**

Part Number	Package Type	Operating Range	Package Marking	Lead Finish
SY10E122JI	J28-1	Industrial	SY10E122JI	Sn-Pb
SY10E122JITR <sup>(2)</sup>	J28-1	Industrial	SY10E122JI	Sn-Pb
SY100E122JI	J28-1	Industrial	SY100E122JI	Sn-Pb
SY100E122JITR <sup>(2)</sup>	J28-1	Industrial	SY100E122JI	Sn-Pb
SY10E122JC	J28-1	Commercial	SY10E122JC	Sn-Pb
SY10E122JCTR <sup>(2)</sup>	J28-1	Commercial	SY10E122JC	Sn-Pb
SY100E122JC	J28-1	Commercial	SY100E122JC	Sn-Pb
SY100E122JCTR <sup>(2)</sup>	J28-1	Commercial	SY100E122JC	Sn-Pb
SY10E122JY <sup>(3)</sup>	J28-1	Industrial	SY10E122JY with Pb-Free bar-line indicator	Matte-Sn
SY10E122JYTR <sup>(2, 3)</sup>	J28-1	Industrial	SY10E122JY with Pb-Free bar-line indicator	Matte-Sn
SY100E122JY <sup>(3)</sup>	J28-1	Industrial	SY100E122JY with Pb-Free bar-line indicator	Matte-Sn
SY100E122JYTR <sup>(2, 3)</sup>	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 <sub>IH</sub>	Input HIGH Current	—	—	200	—	—	200	—	—	200	—	—	200	μA	
I <sub>EE</sub>	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**

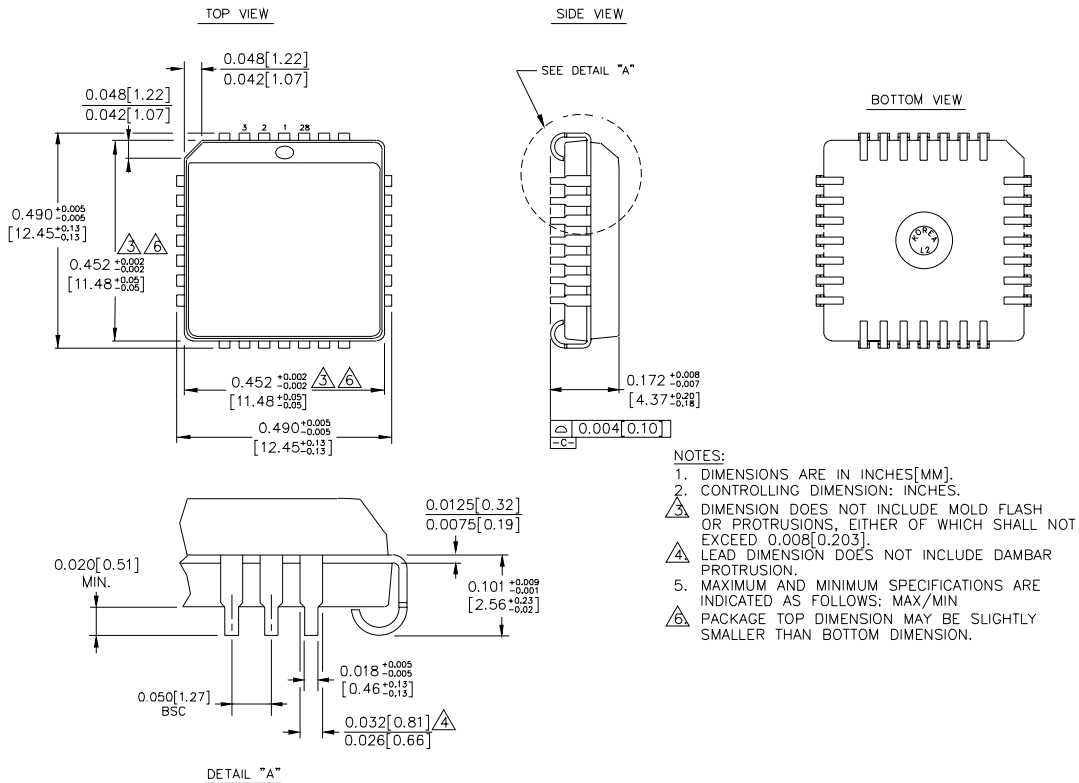
VEE = VEE (Min.) to VEE (Max.); VCC = VCCO = GND

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 <sub>PD</sub>	Propagation Delay to D to Q	150	350	500	150	350	500	150	350	500	150	350	500	ps
t <sub>skew</sub>	Within-Device Skew D to Q <sup>(1)</sup>	—	75	—	—	75	—	—	75	—	—	75	—	ps
t <sub>r</sub> t <sub>f</sub>	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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