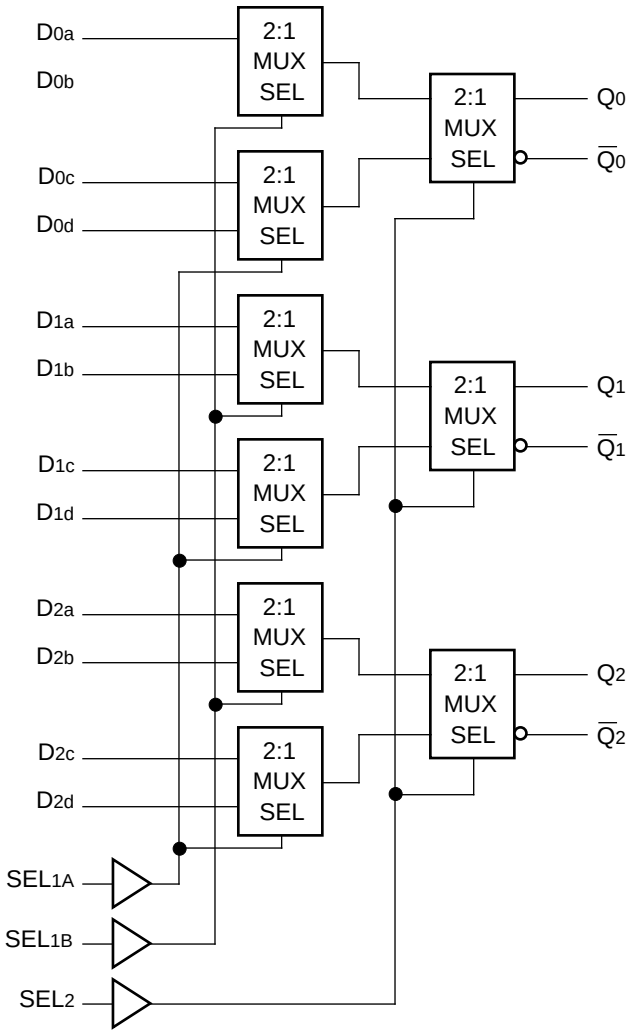
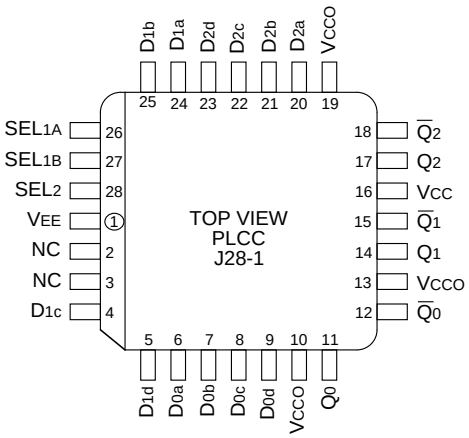
- **725ps max. D to output**
- **Extended 100E V_{EE} range of –4.2V to –5.5V**
- **Differential outputs**
- **Split select architecture**
- **Fully compatible with industry standard 10KH, 100K ECL levels**
- **Internal 75KΩ input pulldown resistors**
- **Fully compatible with Motorola MC10E/100E171**
- **Available in 28-pin PLCC package**

The SY10/100E171 offer three 4:1 multiplexers with differential outputs, designed for use in new, high-performance ECL systems. The leading 4-bit multiplexer operation is organized pairwise, with each pair being a 2-bit multiplexer. Separate select (SEL_{1A}, SEL_{1B}) controls are provided within each pair. The SEL_{1A} and SEL_{1B} signals control the leading multiplexers, while the SEL_2 signal controls the output multiplexer. The three select signals can be used to determine which of the four data inputs will be propagated to the corresponding outputs.



Pin	Function
D_{0x}–D_{2x}	Data Inputs
SEL_{1A}, SEL_{1B}	First-stage Select Inputs
SEL_2	Second-stage Select Input
Q_0–Q_2	True Output
$\overline{Q}_0$–$\overline{Q}_2$	Inverted Output
V_{CCO}	V_{CC} to Output



28-Pin PLCC (J28-1)

(1)

Part Number	Package Type	Operating Range	Package Marking	Lead Finish
SY10E171JC	J28-1	Commercial	SY10E171JC	Sn-Pb
SY10E171JCTR(2)	J28-1	Commercial	SY10E171JC	Sn-Pb
SY100E171JC	J28-1	Commercial	SY100E171JC	Sn-Pb
SY100E171JCTR(2)	J28-1	Commercial	SY100E171JC	Sn-Pb
SY10E171JZ(3)	J28-1	Commercial	SY10E171JZ with Pb-Free bar-line indicator	Matte-Sn
SY10E171JZTR(2, 3)	J28-1	Commercial	SY10E171JZ with Pb-Free bar-line indicator	Matte-Sn
SY100E171JZ(3)	J28-1	Commercial	SY100E171JZ with Pb-Free bar-line indicator	Matte-Sn
SY100E171JZTR(2, 3)	J28-1	Commercial	SY100E171JZ 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.

SEL_2	H	Output c/d data
SEL_{1A}	H	Input d data
SEL_{1B}	H	Input b data

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

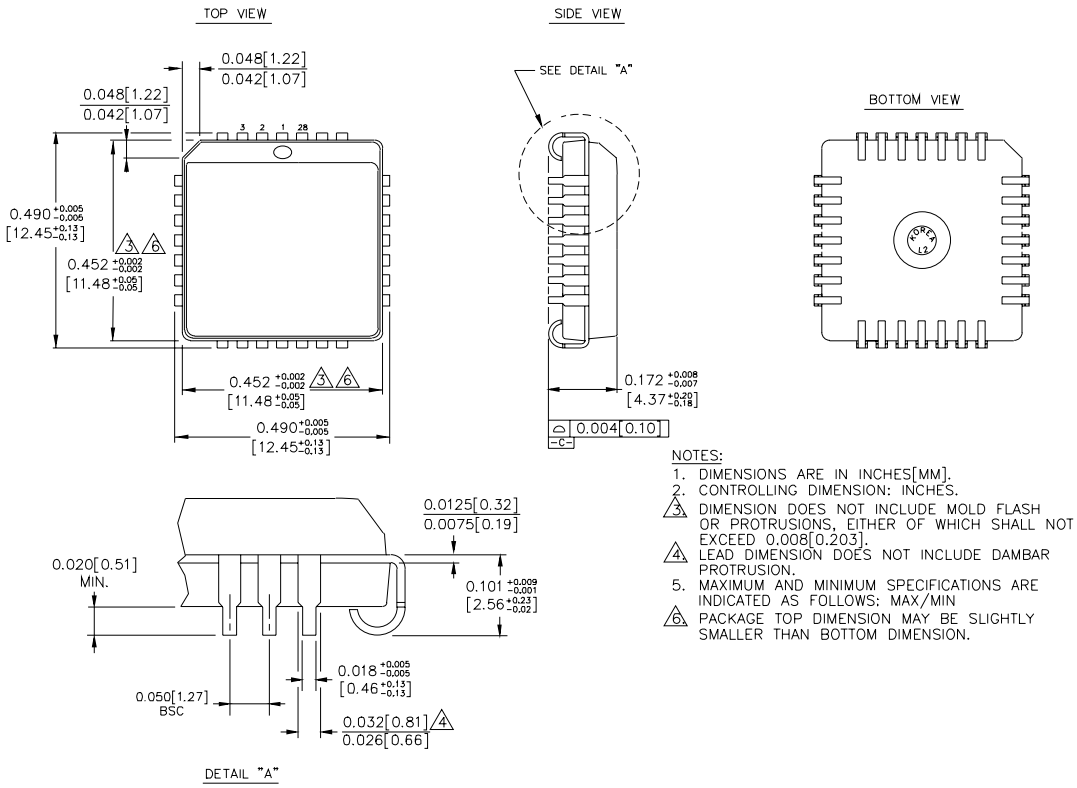
Symbol	Parameter	T_A = 0°C			T_A = +25°C			T_A = +85°C			Unit	Condition
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.		
I_{IH}	Input HIGH Current	—	—	150	—	—	150	—	—	150	µA	—
I_{EE}	Power Supply Current										mA	—
	10E	—	56	67	—	56	67	—	56	67		
	100E	—	56	67	—	56	67	—	65	77		

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

Symbol	Parameter	T_A = 0°C			T_A = +25°C			T_A = +85°C			Unit	Condition
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.		
t_{PD}	Propagation Delay to Output										ps	—
	D	275	480	650	275	480	650	275	480	650		
	SEL_1	450	650	850	450	650	850	450	650	850		
	SEL_2	350	550	700	350	550	700	350	550	700		
t_{skew}	Within-Device Skew										ps	1
	D_{nm}, D_{nm} to Q_n	—	60	—	—	60	—	—	60	—		
	D_a, D_b, D_c, D_d to Q	—	40	—	—	40	—	—	40	—		
t_r	Rise/Fall Time	300	475	650	300	475	650	300	475	650	ps	—
t_f	20% to 80%											

Note:

1. Within-device skew is defined as identical transitions on similar paths through a device; n = 0, 1, 2 m = a, b, c, d.



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.

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